



SAR EVALUATION REPORT

Applicant Name:

Samsung Electronics Co., Ltd.
129, Samsung-ro, Maetan dong,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:

06/10/19 - 07/10/19

Test Site/Location:

PCTEST Lab, Columbia, MD, USA

Document Serial No.:

1M1906070094-01-R1.A3L

FCC ID:

A3LSMT865

APPLICANT:

SAMSUNG ELECTRONICS CO., LTD.

DUT Type:

Portable Tablet

Application Type:

Certification

FCC Rule Part(s):

CFR §2.1093

Model:

SM-T865

Additional Model(s):

SM-T867

Equipment Class	Band & Mode	Tx Frequency	SAR
			1g Body (W/kg)
PCB	GSM/GPRS/EDGE 850	824.20 - 848.80 MHz	1.03
PCB	GSM/GPRS/EDGE 1900	1850.20 - 1909.80 MHz	1.03
PCB	UMTS 850	826.40 - 846.60 MHz	1.21
PCB	UMTS 1750	1712.4 - 1752.6 MHz	1.28
PCB	UMTS 1900	1852.4 - 1907.6 MHz	1.19
PCB	LTE Band 12	699.7 - 715.3 MHz	0.80
PCB	LTE Band 17	706.5 - 713.5 MHz	1.00
PCB	LTE Band 13	779.5 - 784.5 MHz	1.29
PCB	LTE Band 26 (Cell)	814.7 - 848.3 MHz	1.18
PCB	LTE Band 5 (Cell)	824.7 - 848.3 MHz	1.20
PCB	LTE Band 66 (AWS)	1710.7 - 1779.3 MHz	1.30
PCB	LTE Band 4 (AWS)	1710.7 - 1754.3 MHz	N/A
PCB	LTE Band 2 (PCS)	1850.7 - 1909.3 MHz	1.23
PCB	LTE Band 25 (PCS)	1850.7 - 1914.3 MHz	1.18
PCB	LTE Band 41	2498.5 - 2687.5 MHz	1.05
DTS	2.4 GHz WLAN	2412 - 2472 MHz	1.00
NII	U-NII-1	5180 - 5240 MHz	N/A
NII	U-NII-2A	5260 - 5320 MHz	0.84
NII	U-NII-2C	5500 - 5720 MHz	1.18
NII	U-NII-3	5745 - 5825 MHz	0.76
DSS/DTS	Bluetooth	2402 - 2480 MHz	0.93
Simultaneous SAR per KDB 690783 D01v01r03:			1.59

Note: This revised Test Report (S/N: 1M1906070094-01-R1.A3L) supersedes and replaces the previously issued test report on the same subject device for the same type of testing as indicated. Please discard or destroy the previously issued test report(s) and dispose of it accordingly.

This wireless portable device has been shown to be capable of compliance for localized specific absorption rate (SAR) for uncontrolled environment/general population exposure limits specified in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in Section 1.7 of this report; for North American frequency bands only.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them. Test results reported herein relate only to the item(s) tested.


Randy Ortanez
President



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FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 1 of 124	

T A B L E O F C O N T E N T S

1	DEVICE UNDER TEST	3
2	LTE INFORMATION	12
3	INTRODUCTION	13
4	DOSIMETRIC ASSESSMENT	14
5	TEST CONFIGURATION POSITIONS	15
6	RF EXPOSURE LIMITS	16
7	FCC MEASUREMENT PROCEDURES.....	17
8	RF CONDUCTED POWERS.....	22
9	SYSTEM VERIFICATION.....	72
10	SAR DATA SUMMARY	74
11	FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS.....	87
12	SAR MEASUREMENT VARIABILITY	116
13	ADDITIONAL TESTING PER FCC GUIDANCE	117
14	EQUIPMENT LIST	120
15	MEASUREMENT UNCERTAINTIES.....	121
16	CONCLUSION.....	122
17	REFERENCES	123
APPENDIX A: SAR TEST PLOTS		
APPENDIX B: SAR DIPOLE VERIFICATION PLOTS		
APPENDIX C: PROBE AND DIPOLE CALIBRATION CERTIFICATES		
APPENDIX D: SAR TISSUE SPECIFICATIONS		
APPENDIX E: SAR SYSTEM VALIDATION		
APPENDIX F: DUT ANTENNA DIAGRAM & SAR TEST SETUP PHOTOGRAPHS		
APPENDIX G: POWER REDUCTION VERIFICATION		
APPENDIX H: DOWNLINK LTE CA RF CONDUCTED POWERS		

FCC ID: A3LSMT865	 PCTEST ENGINEERING LABORATORY, INC.	SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 2 of 124	

1 DEVICE UNDER TEST

1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 12	Data	699.7 - 715.3 MHz
LTE Band 17	Data	706.5 - 713.5 MHz
LTE Band 13	Data	779.5 - 784.5 MHz
LTE Band 26 (Cell)	Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Data	1710.7 - 1754.3 MHz
LTE Band 2 (PCS)	Data	1850.7 - 1909.3 MHz
LTE Band 25 (PCS)	Data	1850.7 - 1914.3 MHz
LTE Band 41	Data	2498.5 - 2687.5 MHz
2.4 GHz WLAN	Data	2412 - 2472 MHz
U-NII-1	Data	5180 - 5240 MHz
U-NII-2A	Data	5260 - 5320 MHz
U-NII-2C	Data	5500 - 5720 MHz
U-NII-3	Data	5745 - 5825 MHz
Bluetooth	Data	2402 - 2480 MHz
ANT+	Data	2402 - 2480 MHz

1.2 Power Reduction for SAR

This device uses a power reduction mechanism for SAR compliance. The power reduction mechanism is activated when the device is used in close proximity to the user's body. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device. Detailed descriptions of the power reduction mechanism are included in the operational description.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 3 of 124

1.3 Nominal and Maximum Output Power Specifications

This device operates using the following maximum and nominal output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 447498 D01v06.

1.3.1 Maximum Output Power

Mode / Band		Voice (dBm)	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
GSM/GPRS/EDGE 850	Maximum	33.5	33.5	32.5	30.5	28.5	28.0	26.0	24.0	22.5
	Nominal	32.5	32.5	31.5	29.5	27.5	27.0	25.0	23.0	21.5
GSM/GPRS/EDGE 1900	Maximum	30.0	30.0	29.0	27.0	25.0	25.5	24.5	22.5	21.5
	Nominal	29.0	29.0	28.0	26.0	24.0	24.5	23.5	21.5	20.5

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	3GPP HSDPA	3GPP HSUPA	3GPP DC-HSDPA
UMTS Band 5 (850 MHz)	Maximum	25.0	24.0	24.0	24.0
	Nominal	24.0	23.0	23.0	23.0
UMTS Band 4 (1750 MHz)	Maximum	24.5	23.5	23.5	23.5
	Nominal	23.5	22.5	22.5	22.5
UMTS Band 2 (1900 MHz)	Maximum	24.5	23.5	23.5	23.5
	Nominal	23.5	22.5	22.5	22.5

Mode / Band		Modulated Average (dBm)
LTE Band 12	Maximum	25.0
	Nominal	24.0
LTE Band 17	Maximum	25.5
	Nominal	24.5
LTE Band 13	Maximum	25.0
	Nominal	24.0
LTE Band 26 (Cell)	Maximum	23.0
	Nominal	22.0
LTE Band 5 (Cell)	Maximum	25.0
	Nominal	24.0
LTE Band 66 (AWS)	Maximum	24.5
	Nominal	23.5
LTE Band 4 (AWS)	Maximum	24.5
	Nominal	23.5
LTE Band 2 (PCS)	Maximum	24.5
	Nominal	23.5
LTE Band 25 (PCS)	Maximum	24.0
	Nominal	23.0
LTE Band 41	Maximum	24.5
	Nominal	23.5

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 4 of 124	

Mode / Band		Modulated Average - Single Tx Chain (dBm)							
Channel		1	2	3 - 8	9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	18.5	20.0				18.5	6.0	6.0
	Nominal	17.5	19.0				17.5	5.0	5.0
IEEE 802.11g (2.4 GHz)	Maximum	15.0	16.5	18.0		16.0	14.5	6.0	3.5
	Nominal	14.0	15.5	17.0		15.0	13.5	5.0	2.5
IEEE 802.11n (2.4 GHz)	Maximum	13.5	17.5	19.0	17.0	16.5	13.5	6.0	2.0
	Nominal	12.5	16.5	18.0	16.0	15.5	12.5	5.0	1.0
Mode / Band					Modulated Average (dBm)				
Bluetooth	Maximum	13.0							
	Nominal	12.0							
Bluetooth LE	Maximum	6.0							
	Nominal	5.0							

Mode / Band		Modulated Average - Single Tx Chain (dBm)		
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth
IEEE 802.11a (5 GHz)	Maximum	18.0		
	Nominal	17.0		
IEEE 802.11n (5 GHz)	Maximum	18.0		
	Nominal	17.0		
IEEE 802.11ac (5 GHz)	Maximum	13.0	13.0	13.0
	Nominal	12.0	12.0	12.0

Mode / Band		Modulated Average - MIMO (dBm)							
Channel		1	2	3 - 8	9	10	11	12	13
IEEE 802.11g (2.4 GHz)	Maximum	18.0	19.5	21.0	19.0	17.5	9.0	6.5	
	Nominal	17.0	18.5	20.0	18.0	16.5	8.0	5.5	
IEEE 802.11n (2.4 GHz)	Maximum	16.5	20.5	22.0	20.0	19.5	16.5	9.0	5.0
	Nominal	15.5	19.5	21.0	19.0	18.5	15.5	8.0	4.0

Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth
IEEE 802.11a (5 GHz)	Maximum	21.0		
	Nominal	20.0		
IEEE 802.11n (5 GHz)	Maximum	21.0		
	Nominal	20.0		
IEEE 802.11ac (5 GHz)	Maximum	16.0	16.0	16.0
	Nominal	15.0	15.0	15.0

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 5 of 124

1.3.2

Reduced Output Power

Mode / Band		Voice (dBm)	Burst Average GMSK (dBm)				Burst Average 8-PSK (dBm)			
		1 TX Slot	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots	1 TX Slots	2 TX Slots	3 TX Slots	4 TX Slots
GSM/GPRS/EDGE 850	Maximum	24.5	24.5	23.5	22.0	20.0	25.0	23.5	21.5	19.5
	Nominal	23.5	23.5	22.5	21.0	19.0	24.0	22.5	20.5	18.5
GSM/GPRS/EDGE 1900	Maximum	21.0	21.0	20.0	18.5	16.5	21.0	20.0	18.0	16.0
	Nominal	20.0	20.0	19.0	17.5	15.5	20.0	19.0	17.0	15.0

Mode / Band		Modulated Average (dBm)			
		3GPP WCDMA	3GPP HSDPA	3GPP HSUPA	3GPP DC-HSDPA
UMTS Band 5 (850 MHz)	Maximum	18.0	18.0	18.0	18.0
	Nominal	17.0	17.0	17.0	17.0
UMTS Band 4 (1750 MHz)	Maximum	14.0	13.5	13.5	13.5
	Nominal	13.0	12.5	12.5	12.5
UMTS Band 2 (1900 MHz)	Maximum	14.0	14.0	14.5	14.0
	Nominal	13.0	13.0	13.5	13.0

Mode / Band		Modulated Average (dBm)
LTE Band 12	Maximum	18.0
	Nominal	17.0
LTE Band 17	Maximum	18.5
	Nominal	17.5
LTE Band 13	Maximum	19.0
	Nominal	18.0
LTE Band 26 (Cell)	Maximum	18.0
	Nominal	17.0
LTE Band 5 (Cell)	Maximum	18.0
	Nominal	17.0
LTE Band 66 (AWS)	Maximum	14.5
	Nominal	13.5
LTE Band 4 (AWS)	Maximum	14.5
	Nominal	13.5
LTE Band 2 (PCS)	Maximum	14.5
	Nominal	13.5
LTE Band 25 (PCS)	Maximum	14.5
	Nominal	13.5
LTE Band 41	Maximum	15.5
	Nominal	14.5

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 6 of 124	

Mode / Band		Modulated Average - Single Tx Chain (dBm)							
Channel		1	2	3 - 8	9	10	11	12	13
IEEE 802.11b (2.4 GHz)	Maximum	13.5						6.0	6.0
	Nominal	12.5						5.0	5.0
IEEE 802.11g (2.4 GHz)	Maximum	13.5						6.0	3.5
	Nominal	12.5						5.0	2.5
IEEE 802.11n (2.4 GHz)	Maximum	13.5						6.0	2.0
	Nominal	12.5						5.0	1.0

Mode / Band		Modulated Average - Single Tx Chain (dBm)		
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth
IEEE 802.11a (5 GHz)	Maximum	10.0		
	Nominal	9.0		
IEEE 802.11n (5 GHz)	Maximum	10.0	10.0	
	Nominal	9.0	9.0	
IEEE 802.11ac (5 GHz)	Maximum	10.0	10.0	10.0
	Nominal	9.0	9.0	9.0

Mode / Band		Modulated Average - MIMO (dBm)							
Channel		1	2	3 - 8	9	10	11	12	13
IEEE 802.11g (2.4 GHz)	Maximum	16.5						9.0	6.5
	Nominal	15.5						8.0	5.5
IEEE 802.11n (2.4 GHz)	Maximum	16.5						9.0	5.0
	Nominal	15.5						8.0	4.0

Mode / Band		Modulated Average - MIMO (dBm)		
		20 MHz Bandwidth	40 MHz Bandwidth	80 MHz Bandwidth
IEEE 802.11a (5 GHz)	Maximum	10.0		
	Nominal	9.0		
IEEE 802.11n (5 GHz)	Maximum	10.0	10.0	
	Nominal	9.0	9.0	
IEEE 802.11ac (5 GHz)	Maximum	10.0	10.0	10.0
	Nominal	9.0	9.0	9.0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 7 of 124	

1.4 DUT Antenna Locations

The overall diagonal dimension of the device is > 200 mm. A diagram showing the location of the device antennas can be found in Appendix F. Exact antenna dimensions and separation distances are shown in the Technical Descriptions in the FCC filings.

Table 1-1
Device Edges/Sides for SAR Testing

Mode	Back	Top	Bottom	Right	Left
GPRS 850	Yes	Yes	No	Yes	Yes
GPRS 1900	Yes	Yes	No	Yes	Yes
UMTS 850	Yes	Yes	No	Yes	Yes
UMTS 1750	Yes	Yes	No	Yes	Yes
UMTS 1900	Yes	Yes	No	Yes	Yes
LTE Band 12	Yes	Yes	No	Yes	Yes
LTE Band 17	Yes	Yes	No	Yes	Yes
LTE Band 13	Yes	Yes	No	Yes	Yes
LTE Band 26 (Cell)	Yes	Yes	No	Yes	Yes
LTE Band 5 (Cell)	Yes	Yes	No	Yes	Yes
LTE Band 66 (AWS)	Yes	Yes	No	Yes	Yes
LTE Band 2 (PCS)	Yes	Yes	No	Yes	Yes
LTE Band 25 (PCS)	Yes	Yes	No	Yes	Yes
LTE Band 41	Yes	Yes	No	Yes	Yes
2.4 GHz WLAN Ant 1	Yes	Yes	No	No	Yes
2.4 GHz WLAN Ant 2	Yes	Yes	No	Yes	No
5 GHz WLAN Ant 1	Yes	Yes	No	No	Yes
5 GHz WLAN Ant 2	Yes	Yes	No	Yes	No
Bluetooth	Yes	Yes	No	No	Yes

Note: Per FCC KDB Publication 616217 D04v01r01, particular edges were not required to be evaluated for SAR based on the SAR exclusion threshold in KDB 447498 D01V06. Additional edges may have been evaluated for simultaneous transmission analysis.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 8 of 124

1.5 Simultaneous Transmission Capabilities

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06 4.3.2 procedures.

Table 1-2
Simultaneous Transmission Scenarios

No.	Capable Transmit Configuration	Body
1	GSM voice + 2.4 GHz WI-FI	Yes
2	GSM voice + 5 GHz WI-FI	Yes
3	GSM voice + 2.4 GHz Bluetooth	Yes
4	GSM voice + 2.4 GHz WI-FI MIMO	Yes
5	GSM voice + 5 GHz WI-FI MIMO	Yes
6	GSM voice + 2.4 GHz WI-FI Ant 1 + 5 GHz WI-FI Ant 2	Yes
7	GSM voice + 2.4 GHz Bluetooth + 5 GHz WI-FI Ant 2	Yes
8	GPRS/EDGE + 2.4 GHz WI-FI	Yes
9	GPRS/EDGE + 5 GHz WI-FI	Yes
10	GPRS/EDGE + 2.4 GHz Bluetooth	Yes
11	GPRS/EDGE + 2.4 GHz WI-FI MIMO	Yes
12	GPRS/EDGE + 5 GHz WI-FI MIMO	Yes
13	GPRS/EDGE + 2.4 GHz WI-FI Ant 1 + 5 GHz WI-FI Ant 2	Yes
14	GPRS/EDGE + 2.4 GHz Bluetooth + 5 GHz WI-FI Ant 2	Yes
15	UMTS + 2.4 GHz WI-FI	Yes
16	UMTS + 5 GHz WI-FI	Yes
17	UMTS + 2.4 GHz Bluetooth	Yes
18	UMTS + 2.4 GHz WI-FI MIMO	Yes
19	UMTS + 5 GHz WI-FI MIMO	Yes
20	UMTS + 2.4 GHz WI-FI Ant 1 + 5 GHz WI-FI Ant 2	Yes
21	UMTS + 2.4 GHz Bluetooth + 5 GHz WI-FI Ant 2	Yes
22	LTE + 2.4 GHz WI-FI	Yes
23	LTE + 5 GHz WI-FI	Yes
24	LTE + 2.4 GHz Bluetooth	Yes
25	LTE + 2.4 GHz WI-FI MIMO	Yes
26	LTE + 5 GHz WI-FI MIMO	Yes
27	LTE + 2.4 GHz WI-FI Ant 1 + 5 GHz WI-FI Ant 2	Yes
28	LTE + 2.4 GHz Bluetooth + 5 GHz WI-FI Ant 2	Yes

- 2.4 GHz WLAN Ant 1, 5 GHz WLAN Ant 1, and 2.4 GHz Bluetooth share the same antenna path and cannot transmit simultaneously.
- All licensed modes share the same antenna path and cannot transmit simultaneously.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 9 of 124

3. This device supports 2x2 MIMO Tx for WLAN 802.11a/g/n/ac. 802.11a/g/n/ac supports CDD and STBC and 802.11n/ac additionally supports SDM. Each WLAN antenna can transmit independently or together when operating with MIMO.

1.6 Miscellaneous SAR Test Considerations

(A) WIFI/BT

Since U-NII-1 and U-NII-2A bands have the same maximum output power and the highest reported SAR for U-NII-2A is less than 1.2 W/kg, SAR is not required for U-NII-1 band according to FCC KDB Publication 248227 D01v02r02.

This device supports IEEE 802.11ac with the following features:

- a) Up to 80 MHz Bandwidth only
- b) No aggregate channel configurations
- c) 2 Tx antenna output
- d) 256 QAM is supported
- e) TDWR and Band gap channels are supported

(B) Licensed Transmitter(s)

GSM/GPRS/EDGE DTM is not supported for US bands. Therefore, the GSM Voice modes in this report do not transmit simultaneously with GPRS/EDGE Data.

This device is only capable of QPSK HSUPA in the uplink. Therefore, no additional SAR tests are required beyond that described for devices with HSUPA in KDB 941225 D01v03r01.

LTE SAR for the higher modulations and lower bandwidths were not tested since the maximum average output power of all required channels and configurations was not more than 0.5 dB higher than the highest bandwidth; and the reported LTE SAR for the highest bandwidth was less than 1.45 W/kg for all configurations according to FCC KDB 941225 D05v02r04.

This device supports LTE Carrier Aggregation (CA) in the downlink. All uplink communications are identical to Release 8 specifications. Per FCC KDB Publication 941225 D05A v01r02, SAR for LTE CA operations was not needed since the maximum average output power in LTE CA mode was not >0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive. The downlink carrier aggregation exclusion analysis can be found in Appendix H.

This device supports LTE capabilities with overlapping transmission frequency ranges. When the supported frequency range of an LTE Band falls completely within an LTE band with a larger transmission frequency range, both LTE bands have the same target power (or the band with the larger transmission frequency range has a higher target power), and both LTE bands share the same transmission path and signal characteristics, SAR was only assessed for the band with the larger transmission frequency range.

This device supports downlink 4x4 MIMO operations for some LTE Bands. Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

This device supports 64QAM on the uplink and 256QAM on the downlink for LTE Operations. Conducted powers for 64QAM uplink configurations were measured per Section 5.1 of FCC KDB Publication 941225

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 10 of 124

D05v02r05. SAR was not required for 64QAM since the highest maximum output power for 64QAM is $\leq \frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is $\leq 1.45\text{W/kg}$, per Section 5.2.4 of FCC KDB Publication 941225 D05v02r05.

1.7 Guidance Applied

- FCC KDB Publication 941225 D01v03r01, D05v02r04, D05Av01r02, D06v02r01 (2G/3G/4G)
- FCC KDB Publication 248227 D01v02r02 (SAR Considerations for 802.11 Devices)
- FCC KDB Publication 447498 D01v06 (General SAR Guidance)
- FCC KDB Publication 865664 D01v01r04, D02v01r02 (SAR Measurements up to 6 GHz)
- FCC KDB Publication 616217 D04v01r02 (Tablet)
- October 2013 TCB Workshop Notes (GPRS Testing Considerations)
- May 2017 TCB Workshop Notes (LTE 4x4 Downlink MIMO)
- April 2018 TCB Workshop Notes (LTE Carrier Aggregation)
- April 2019 TCB Workshop Notes (Dynamic Antenna Tuning)

1.8 Device Serial Numbers

Several samples with identical hardware were used to support SAR testing. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units. The serial numbers used for each test are indicated alongside the results in Section 10.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 11 of 124

LTE Information					
Form Factor	Portable Tablet				
Frequency Range of each LTE transmission band	LTE Band 12 (699.7 - 715.3 MHz)				
	LTE Band 17 (706.5 - 713.5 MHz)				
	LTE Band 13 (779.5 - 784.5 MHz)				
	LTE Band 26 (Cell) (814.7 - 848.3 MHz)				
	LTE Band 5 (Cell) (824.7 - 848.3 MHz)				
	LTE Band 66 (AWS) (1710.7 - 1779.3 MHz)				
	LTE Band 4 (AWS) (1710.7 - 1754.3 MHz)				
	LTE Band 2 (PCS) (1850.7 - 1909.3 MHz)				
	LTE Band 25 (PCS) (1850.7 - 1914.3 MHz)				
	LTE Band 41 (2498.5 - 2687.5 MHz)				
Channel Bandwidths	LTE Band 12: 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 17: 5 MHz, 10 MHz				
	LTE Band 13: 5 MHz, 10 MHz				
	LTE Band 26 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz				
	LTE Band 5 (Cell): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz				
	LTE Band 66 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 4 (AWS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 2 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 25 (PCS): 1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz				
	LTE Band 41: 5 MHz, 10 MHz, 15 MHz, 20 MHz				
Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 12: 1.4 MHz	699.7 (23017)		707.5 (23095)		715.3 (23173)
LTE Band 12: 3 MHz	700.5 (23025)		707.5 (23095)		714.5 (23165)
LTE Band 12: 5 MHz	701.5 (23035)		707.5 (23095)		713.5 (23155)
LTE Band 12: 10 MHz	704 (23060)		707.5 (23095)		711 (23130)
LTE Band 17: 5 MHz	706.5 (23755)		710 (23790)		713.5 (23825)
LTE Band 17: 10 MHz	709 (23780)		710 (23790)		711 (23800)
LTE Band 13: 5 MHz	779.5 (23205)		782 (23230)		784.5 (23255)
LTE Band 13: 10 MHz	N/A		782 (23230)		N/A
LTE Band 26 (Cell): 1.4 MHz	814.7 (26697)		831.5 (26865)		848.3 (27033)
LTE Band 26 (Cell): 3 MHz	815.5 (26705)		831.5 (26865)		847.5 (27025)
LTE Band 26 (Cell): 5 MHz	816.5 (26715)		831.5 (26865)		846.5 (27015)
LTE Band 26 (Cell): 10 MHz	819 (26740)		831.5 (26865)		844 (26990)
LTE Band 26 (Cell): 15 MHz	821.5 (26765)		831.5 (26865)		841.5 (26965)
LTE Band 5 (Cell): 1.4 MHz	824.7 (20407)		836.5 (20525)		848.3 (20643)
LTE Band 5 (Cell): 3 MHz	825.5 (20415)		836.5 (20525)		847.5 (20635)
LTE Band 5 (Cell): 5 MHz	826.5 (20425)		836.5 (20525)		846.5 (20625)
LTE Band 5 (Cell): 10 MHz	829 (20450)		836.5 (20525)		844 (20600)
LTE Band 66 (AWS): 1.4 MHz	1710.7 (131979)		1745 (132322)		1779.3 (132665)
LTE Band 66 (AWS): 3 MHz	1711.5 (131987)		1745 (132322)		1778.5 (132657)
LTE Band 66 (AWS): 5 MHz	1712.5 (131997)		1745 (132322)		1777.5 (132647)
LTE Band 66 (AWS): 10 MHz	1715 (132022)		1745 (132322)		1775 (132622)
LTE Band 66 (AWS): 15 MHz	1717.5 (132047)		1745 (132322)		1772.5 (132597)
LTE Band 66 (AWS): 20 MHz	1720 (132072)		1745 (132322)		1770 (132572)
LTE Band 4 (AWS): 1.4 MHz	1710.7 (19957)		1732.5 (20175)		1754.3 (20393)
LTE Band 4 (AWS): 3 MHz	1711.5 (19965)		1732.5 (20175)		1753.5 (20385)
LTE Band 4 (AWS): 5 MHz	1712.5 (19975)		1732.5 (20175)		1752.5 (20375)
LTE Band 4 (AWS): 10 MHz	1715 (20000)		1732.5 (20175)		1750 (20350)
LTE Band 4 (AWS): 15 MHz	1717.5 (20025)		1732.5 (20175)		1747.5 (20325)
LTE Band 4 (AWS): 20 MHz	1720 (20050)		1732.5 (20175)		1745 (20300)
LTE Band 2 (PCS): 1.4 MHz	1850.7 (18607)		1880 (18900)		1909.3 (19193)
LTE Band 2 (PCS): 3 MHz	1851.5 (18615)		1880 (18900)		1908.5 (19185)
LTE Band 2 (PCS): 5 MHz	1852.5 (18625)		1880 (18900)		1907.5 (19175)
LTE Band 2 (PCS): 10 MHz	1855 (18650)		1880 (18900)		1905 (19150)
LTE Band 2 (PCS): 15 MHz	1857.5 (18675)		1880 (18900)		1902.5 (19125)
LTE Band 2 (PCS): 20 MHz	1860 (18700)		1880 (18900)		1900 (19100)
LTE Band 25 (PCS): 1.4 MHz	1850.7 (26047)		1882.5 (26365)		1914.3 (26683)
LTE Band 25 (PCS): 3 MHz	1851.5 (26055)		1882.5 (26365)		1913.5 (26675)
LTE Band 25 (PCS): 5 MHz	1852.5 (26065)		1882.5 (26365)		1912.5 (26665)
LTE Band 25 (PCS): 10 MHz	1855 (26090)		1882.5 (26365)		1910 (26640)
LTE Band 25 (PCS): 15 MHz	1857.5 (26115)		1882.5 (26365)		1907.5 (26615)
LTE Band 25 (PCS): 20 MHz	1860 (26140)		1882.5 (26365)		1905 (26590)
LTE Band 41: 5 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 10 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 15 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
LTE Band 41: 20 MHz	2506 (39750)	2549.5 (40185)	2593 (40620)	2636.5 (41055)	2680 (41490)
UE Category	DL UE Cat 15 (QPSK, 16QAM, 64QAM, 256QAM) UL UE Cat 5 (QPSK, 16QAM, 64QAM)				
Modulations Supported in UL	QPSK, 16QAM, 64QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3-6.2.5? (manufacturer attestation to be provided)	YES				
A-MPR (Additional MPR) disabled for SAR Testing?	YES				
LTE Carrier Aggregation Possible Combinations	The technical description includes all the possible carrier aggregation combinations				
LTE Additional Information	This device does not support full CA features on 3GPP Release 12. It supports carrier aggregation and downlink MIMO features as shown in Appendix H. All uplink communications are identical to the Release 8 Specifications. Uplink communications are done on the PCC. The following LTE Release 12 Features are not supported: Relay, HetNet, Enhanced MIMO, eCIC, WiFi Offloading, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

FCC ID: A3LSMT865			SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 12 of 124		

3 INTRODUCTION

The FCC and Innovation, Science, and Economic Development Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices. [1]

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz [3] and Health Canada RF Exposure Guidelines Safety Code 6 [22]. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave [4] is used for guidance in measuring the Specific Absorption Rate (SAR) due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” Report No. Vol 74. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

3.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 3-1).

Equation 3-1
SAR Mathematical Equation

$$SAR = \frac{d}{dt} \left(\frac{dU}{dm} \right) = \frac{d}{dt} \left(\frac{dU}{\rho dv} \right)$$

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

- σ = conductivity of the tissue-simulating material (S/m)
- ρ = mass density of the tissue-simulating material (kg/m³)
- E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relation to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.[6]

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 13 of 124

4 DOSIMETRIC ASSESSMENT

4.1 Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.
3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 4-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):
 - a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table 4-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).
 - b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.
 - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

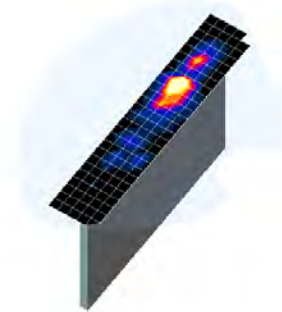


Figure 4-1
Sample SAR Area Scan

Table 4-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

Frequency	Maximum Area Scan Resolution (mm) (Δx_{area} , Δy_{area})	Maximum Zoom Scan Resolution (mm) (Δx_{zoom} , Δy_{zoom})	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
			$\Delta z_{zoom}(n)$	$\Delta z_{zoom}(1)^*$	$\Delta z_{zoom}(n>1)^*$	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	$\leq 1.5^* \Delta z_{zoom}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	$\leq 1.5^* \Delta z_{zoom}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	$\leq 1.5^* \Delta z_{zoom}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	$\leq 1.5^* \Delta z_{zoom}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	$\leq 1.5^* \Delta z_{zoom}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 14 of 124

5 TEST CONFIGURATION POSITIONS

5.1 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon = 3$ and loss tangent $\delta = 0.02$.

5.2 SAR Testing for Tablet per KDB Publication 616217 D04v01r02

Per FCC KDB Publication 616217 D04v01r02, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Exclusion Threshold in KDB 447498 D01v06 can be applied to determine SAR test exclusion for adjacent edge configurations. The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

5.3 Proximity Sensor Considerations

This device uses a power reduction mechanism to reduce output powers in certain use conditions when the device is used close the user's body.

When the device's antenna is within a certain distance of the user, the sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, additional evaluation is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional test positions. Sensor triggering distance summary data is included in Appendix G.

The sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the sensor entirely covers the antennas.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 15 of 124

6.1 Uncontrolled Environment

UNCONTROLLED ENVIRONMENTS are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

6.2 Controlled Environment

CONTROLLED ENVIRONMENTS are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Table 6-1
SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT <i>General Population</i> (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT <i>Occupational</i> (W/kg) or (mW/g)
Peak Spatial Average SAR Head	1.6	8.0
Whole Body SAR	0.08	0.4
Peak Spatial Average SAR Hands, Feet, Ankle, Wrists, etc.	4.0	20

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 16 of 124

7 FCC MEASUREMENT PROCEDURES

Power measurements for licensed transmitters are performed using a base station simulator under digital average power.

7.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, when SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as *reported* SAR. The highest *reported* SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

7.2 3G SAR Test Reduction Procedure

In FCC KDB Publication 941225 D01v03r01, certain transmission modes within a frequency band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is ≤ 0.25 dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is ≤ 1.2 W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

7.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.”

The device is placed into a simulated call using a base station simulator in a RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test are evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device is tested throughout the SAR test at maximum output power, the SAR measurement system measures a “point SAR” at an arbitrary reference point at the start and end of the 1 gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviates by more than 5%, the SAR test and drift measurements are repeated.

7.4 SAR Measurement Conditions for UMTS

7.4.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 17 of 124

7.4.2 Body SAR Measurements

SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits all “1s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCH_n configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCH_n, for the highest reported SAR configuration in 12.2 kbps RMC.

7.4.3 SAR Measurements with Rel 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, for the highest reported SAR configuration in 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

7.4.4 SAR Measurements with Rel 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

7.4.5 SAR Measurement Conditions for DC-HSDPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

7.5 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r04 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

7.5.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 18 of 124

7.5.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

7.5.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

7.5.4 Required RB Size and RB Offsets for SAR Testing

According to FCC KDB 941225 D05v02r04:

- a. Per Section 5.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
 - i. The required channel and offset combination with the highest maximum output power is required for SAR.
 - ii. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
 - iii. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel.
- b. Per Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
- c. Per Section 5.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 0.8 W/kg.
- d. Per Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to $\frac{1}{2}$ dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/kg.

7.5.5 TDD

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05v02r04. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05v02r04. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4.

7.5.6 Downlink Only Carrier Aggregation

Conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band. Per FCC KDB Publication 941225 D05Av01r02, no SAR

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 19 of 124

measurements are required for downlink only carrier aggregation configurations when the average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.

7.6 SAR Testing with 802.11 Transmitters

The normal network operating configurations of 802.11 transmitters are not suitable for SAR measurements. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable. See KDB Publication 248227 D01v02r02 for more details.

7.6.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters.

A periodic duty factor is required for current generation SAR systems to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

7.6.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg. When different maximum output powers are specified for the bands, SAR measurement for the U-NII band with the lower maximum output power is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is > 1.2 W/kg.

7.6.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 MHz (5.47 – 5.85 GHz), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 – 5.65 GHz in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification. Unless band gap channels are permanently disabled, SAR must be considered for these channels. Each band is tested independently according to the normally required OFDM SAR measurement and probe calibration frequency points requirements.

7.6.4 2.4 GHz SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 20 of 124

- 2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test Configuration Procedures should be followed.

7.6.5 OFDM Transmission Mode and SAR Test Channel Selection

When the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac or 802.11g and 802.11n with the same channel bandwidth, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When the maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

7.6.6 Initial Test Configuration Procedure

For OFDM, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order IEEE 802.11 mode. The channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements (See Section 7.6.5).

7.6.7 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg, no additional SAR tests for the subsequent test configurations are required.

7.6.8 MIMO SAR considerations

Per KDB Publication 248227 D01v02r02, the simultaneous SAR provisions in KDB Publication 447498 D01v06 should be applied to determine simultaneous transmission SAR test exclusion for WIFI MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6 W/kg, no additional SAR measurements for MIMO are required. Alternatively, SAR for MIMO can be measured with all antennas transmitting simultaneously at the specified maximum output power of MIMO operation.

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 21 of 124 REV 21.3 M 02/15/2019

8 RF CONDUCTED POWERS

8.1 GSM Conducted Powers

Table 8-1
Maximum Conducted Power

Maximum Burst-Averaged Output Power										
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GSM [dBm] CS (1 Slot)	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 850	128	32.82	32.76	31.73	29.80	27.74	27.00	25.26	23.01	21.95
	190	32.83	32.78	31.84	29.65	27.72	27.36	25.33	23.10	22.24
	251	32.74	32.53	31.82	29.79	27.65	26.95	24.96	23.08	22.03
GSM 1900	512	29.21	29.07	27.74	26.28	24.29	25.30	23.88	21.66	20.50
	661	29.05	29.09	27.60	26.15	24.17	25.02	23.66	21.77	20.76
	810	29.05	28.86	27.81	26.16	24.13	24.85	23.41	21.51	20.49

Calculated Maximum Frame-Averaged Output Power										
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GSM [dBm] CS (1 Slot)	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 850	128	23.79	23.73	25.71	25.54	24.73	17.97	19.24	18.75	18.94
	190	23.80	23.75	25.82	25.39	24.71	18.33	19.31	18.84	19.23
	251	23.71	23.50	25.80	25.53	24.64	17.92	18.94	18.82	19.02
GSM 1900	512	20.18	20.04	21.72	22.02	21.28	16.27	17.86	17.40	17.49
	661	20.02	20.06	21.58	21.89	21.16	15.99	17.64	17.51	17.75
	810	20.02	19.83	21.79	21.90	21.12	15.82	17.39	17.25	17.48

GSM 850	Frame Avg.Targets:	23.47	23.47	25.48	25.24	24.49	17.97	18.98	18.74	18.49
GSM 1900		19.97	19.97	21.98	21.74	20.99	15.47	17.48	17.24	17.49

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 				Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet			Page 22 of 124

Table 8-2
Reduced Conducted Power

Maximum Burst-Averaged Output Power										
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GSM [dBm] CS (1 Slot)	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 850	128	24.01	24.04	22.88	20.86	19.02	23.90	22.64	20.71	18.45
	190	23.67	23.66	22.55	20.93	19.15	23.80	22.84	20.99	18.83
	251	23.71	23.69	22.72	20.80	19.21	23.63	22.67	20.69	18.74
GSM 1900	512	20.25	20.21	19.15	17.25	15.02	20.24	19.26	17.19	15.19
	661	20.02	20.30	19.22	17.45	15.08	20.28	19.26	17.29	15.26
	810	20.01	20.01	18.82	17.08	15.00	20.01	18.82	17.06	14.51

Calculated Maximum Frame-Averaged Output Power										
		Voice	GPRS/EDGE Data (GMSK)				EDGE Data (8-PSK)			
Band	Channel	GSM [dBm] CS (1 Slot)	GPRS [dBm] 1 Tx Slot	GPRS [dBm] 2 Tx Slot	GPRS [dBm] 3 Tx Slot	GPRS [dBm] 4 Tx Slot	EDGE [dBm] 1 Tx Slot	EDGE [dBm] 2 Tx Slot	EDGE [dBm] 3 Tx Slot	EDGE [dBm] 4 Tx Slot
GSM 850	128	14.98	15.01	16.86	16.60	16.01	14.87	16.62	16.45	15.44
	190	14.64	14.63	16.53	16.67	16.14	14.77	16.82	16.73	15.82
	251	14.68	14.66	16.70	16.54	16.20	14.60	16.65	16.43	15.73
GSM 1900	512	11.22	11.18	13.13	12.99	12.01	11.21	13.24	12.93	12.18
	661	10.99	11.27	13.20	13.19	12.07	11.25	13.24	13.03	12.25
	810	10.98	10.98	12.80	12.82	11.99	10.98	12.80	12.80	11.50

GSM 850	Frame Avg.Targets:	14.47	14.47	16.48	16.74	15.99	14.97	16.48	16.24	15.49
GSM 1900		10.97	10.97	12.98	13.24	12.49	10.97	12.98	12.74	11.99

Note:

- Both burst-averaged and calculated frame-averaged powers are included. Frame-averaged power was calculated from the measured burst-averaged power by converting the slot powers into linear units and calculating the energy over 8 timeslots.
- GPRS/EDGE (GMSK) output powers were measured with coding scheme setting of 1 (CS1) on the base station simulator. CS1 was configured to measure GPRS output power measurements and SAR to ensure GMSK modulation in the signal. Our Investigation has shown that CS1 - CS4 settings do not have any impact on the output levels or modulation in the GPRS modes.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 23 of 124

3. EDGE (8-PSK) output powers were measured with MCS7 on the base station simulator. MCS7 coding scheme was used to measure the output powers for EDGE since investigation has shown that choosing MCS7 coding scheme will ensure 8-PSK modulation. It has been shown that MCS levels that produce 8PSK modulation do not have an impact on output power.

GSM Class: B
GPRS Multislot class: 33 (Max 4 Tx uplink slots)
EDGE Multislot class: 33 (Max 4 Tx uplink slots)
DTM Multislot Class: N/A



Figure 8-1
Power Measurement Setup

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 24 of 124

8.2 UMTS Conducted Powers

Table 8-3
Maximum Conducted Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	24.16	24.25	24.21	23.03	23.32	23.41	23.39	23.42	23.16	-
99		12.2 kbps AMR	24.18	24.25	24.19	23.07	23.31	23.46	23.39	23.40	23.14	-
6	HSDPA	Subtest 1	23.06	23.16	23.11	21.98	22.20	22.23	22.44	22.54	22.27	0
6		Subtest 2	23.05	23.20	23.21	21.93	22.17	22.21	22.50	22.49	22.22	0
6		Subtest 3	22.54	22.64	22.67	21.45	21.67	21.74	21.96	22.04	21.70	0.5
6		Subtest 4	22.57	22.67	22.65	21.47	21.68	21.72	21.92	22.02	21.68	0.5
6	HSUPA	Subtest 1	22.84	23.07	22.96	22.02	22.26	22.35	22.37	22.45	22.12	0
6		Subtest 2	20.85	20.91	20.95	20.03	20.29	20.36	20.36	20.48	20.17	2
6		Subtest 3	21.90	21.94	21.95	21.01	21.28	21.33	21.34	21.45	21.12	1
6		Subtest 4	20.89	20.96	20.93	20.04	20.27	20.35	20.38	20.49	20.15	2
6		Subtest 5	23.03	23.22	23.08	22.08	22.30	22.43	22.44	22.55	22.28	0
8	DC-HSDPA	Subtest 1	22.81	22.97	22.99	22.00	22.18	22.26	22.43	22.51	22.22	0
8		Subtest 2	22.90	22.96	23.02	21.96	22.12	22.23	22.54	22.50	22.18	0
8		Subtest 3	22.36	22.48	22.47	21.43	21.59	21.72	21.96	22.02	21.72	0.5
8		Subtest 4	22.34	22.45	22.49	21.44	21.56	21.71	21.93	21.99	21.64	0.5

Table 8-4
Reduced Conducted Power

3GPP Release Version	Mode	3GPP 34.121 Subtest	Cellular Band [dBm]			AWS Band [dBm]			PCS Band [dBm]			3GPP MPR [dB]
			4132	4183	4233	1312	1412	1513	9262	9400	9538	
99	WCDMA	12.2 kbps RMC	17.73	17.84	17.82	12.83	13.07	13.21	13.33	13.36	13.02	-
99		12.2 kbps AMR	17.66	17.77	17.81	12.84	13.11	13.27	13.35	13.37	13.04	-
6	HSDPA	Subtest 1	16.74	16.80	16.79	11.95	12.18	12.25	12.90	12.94	12.98	0
6		Subtest 2	16.71	16.76	16.80	11.92	12.17	12.22	12.88	12.95	12.92	0
6		Subtest 3	16.23	16.29	16.30	11.46	11.67	11.73	12.37	12.41	12.46	0.5
6		Subtest 4	16.18	16.30	16.29	11.43	11.66	11.72	12.36	12.38	12.41	0.5
6	HSUPA	Subtest 1	16.72	16.83	16.82	11.99	12.20	12.37	12.85	13.00	12.70	0
6		Subtest 2	14.74	14.83	14.83	10.03	10.27	10.34	10.88	10.95	10.87	2
6		Subtest 3	15.74	15.83	15.82	11.00	11.28	11.34	11.94	12.01	11.85	1
6		Subtest 4	14.69	14.82	14.83	10.02	10.30	10.33	10.94	10.99	10.86	2
6		Subtest 5	16.78	16.81	16.80	12.00	12.26	12.43	12.88	13.04	12.78	0
8	DC-HSDPA	Subtest 1	16.69	16.80	16.79	11.71	11.97	12.02	12.91	12.98	12.76	0
8		Subtest 2	16.64	16.79	16.80	11.68	11.96	12.03	12.77	12.99	12.80	0
8		Subtest 3	16.19	16.31	16.35	11.26	11.45	11.50	12.39	12.44	12.26	0.5
8		Subtest 4	16.26	16.37	16.29	11.24	11.44	11.45	12.38	12.43	12.25	0.5

It is expected by the manufacturer that MPR for some HSPA subtests may be up to 2 dB more than specified by 3GPP, but also as low as 0 dB according to the chipset implementation in this model.

DC-HSDPA considerations

- 3GPP Specification 34.121-1 Release 8 Ver 8.10.0 was used for DC-HSDPA guidance
- H-Set 12 (QPSK) was confirmed to be used during DC-HSDPA measurements
- The DUT supports UE category 24 for HSDPA

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 25 of 124



Figure 8-2
Power Measurement Setup

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 26 of 124

8.3 LTE Conducted Powers

8.3.1 LTE Band 12

Table 8-5
LTE Band 12 Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23095 (707.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	24.23	0	0
	1	25	24.20		0
	1	49	24.22		0
	25	0	23.37	0-1	1
	25	12	23.43		1
	25	25	23.44		1
	50	0	23.39		1
16QAM	1	0	23.38	0-1	1
	1	25	23.64		1
	1	49	23.41		1
	25	0	22.42	0-2	2
	25	12	22.51		2
	25	25	22.46		2
	50	0	22.36		2
64QAM	1	0	22.42	0-2	2
	1	25	22.26		2
	1	49	22.84		2
	25	0	21.45	0-3	3
	25	12	21.41		3
	25	25	21.28		3
	50	0	21.37		3

Note: LTE Band 12 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-6
LTE Band 12 Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 12 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23035 (701.5 MHz)	23095 (707.5 MHz)	23155 (713.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	24.20	24.21	24.25	0	0
	1	12	24.33	24.32	24.26		0
	1	24	24.24	24.25	24.17		0
	12	0	23.35	23.41	23.34	0-1	1
	12	6	23.42	23.47	23.37		1
	12	13	23.38	23.46	23.33		1
	25	0	23.38	23.40	23.31		1
16QAM	1	0	23.42	23.45	23.48	0-1	1
	1	12	23.48	23.60	23.45		1
	1	24	23.56	23.45	23.38		1
	12	0	22.31	22.42	22.36	0-2	2
	12	6	22.49	22.50	22.36		2
	12	13	22.39	22.45	22.36		2
	25	0	22.35	22.37	22.30		2
64QAM	1	0	22.40	22.41	22.44	0-2	2
	1	12	22.50	22.56	22.46		2
	1	24	22.43	22.55	22.03		2
	12	0	21.33	21.41	21.29	0-3	3
	12	6	21.47	21.56	21.22		3
	12	13	21.38	21.43	21.09		3
	25	0	21.38	21.38	21.15		3

FCC ID: A3LSMT865			SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet			Page 27 of 124

Table 8-7
LTE Band 12 Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 12 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23025 (700.5 MHz)	23095 (707.5 MHz)	23165 (714.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	24.20	24.24	24.20	0	0
	1	7	24.27	24.29	24.24		0
	1	14	24.26	24.33	24.21		0
	8	0	23.32	23.39	23.37	0-1	1
	8	4	23.42	23.45	23.40		1
	8	7	23.33	23.45	23.35		1
	15	0	23.36	23.46	23.38		1
16QAM	1	0	23.41	23.44	23.43	0-1	1
	1	7	23.50	23.51	23.40		1
	1	14	23.40	23.50	23.40		1
	8	0	22.34	22.42	22.40	0-2	2
	8	4	22.45	22.50	22.46		2
	8	7	22.39	22.43	22.35		2
	15	0	22.38	22.45	22.32		2
64QAM	1	0	22.44	22.45	22.29	0-2	2
	1	7	22.49	22.58	22.18		2
	1	14	22.35	22.50	22.01		2
	8	0	21.35	21.43	21.28	0-3	3
	8	4	21.42	21.54	21.17		3
	8	7	21.40	21.46	21.07		3
	15	0	21.36	21.44	21.11		3

Table 8-8
LTE Band 12 Maximum Conducted Powers - 1.4 MHz Bandwidth

LTE Band 12 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23017 (699.7 MHz)	23095 (707.5 MHz)	23173 (715.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	24.12	24.14	24.07	0	0
	1	2	24.24	24.24	24.33		0
	1	5	24.18	24.23	24.16		0
	3	0	24.20	24.17	24.11		0
	3	2	24.26	24.28	24.21		0
	3	3	24.20	24.25	24.15		0
	6	0	23.30	23.38	23.24	0-1	1
16QAM	1	0	23.36	23.45	23.35	0-1	1
	1	2	23.55	23.49	23.49		1
	1	5	23.38	23.54	23.40		1
	3	0	23.33	23.32	23.26		1
	3	2	23.37	23.44	23.35		1
	3	3	23.30	23.39	23.30		1
	6	0	22.37	22.35	22.30	0-2	2
64QAM	1	0	22.35	22.42	22.02	0-2	2
	1	2	22.45	22.46	22.05		2
	1	5	22.40	22.40	21.94		2
	3	0	22.33	22.40	21.99		2
	3	2	22.42	22.45	22.03		2
	3	3	22.39	22.40	22.00		2
	6	0	21.29	21.34	20.90	0-3	3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 28 of 124

Table 8-9
LTE Band 12 Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 12 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23095 (707.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	17.30	0	0
	1	25	17.13		0
	1	49	17.14		0
	25	0	17.37	0-1	0
	25	12	17.25		0
	25	25	17.30		0
	50	0	17.29		0
16QAM	1	0	17.42	0-1	0
	1	25	17.25		0
	1	49	17.31		0
	25	0	17.35	0-2	0
	25	12	17.35		0
	25	25	17.42		0
	50	0	17.27		0
64QAM	1	0	17.44	0-2	0
	1	25	17.42		0
	1	49	17.31		0
	25	0	17.35	0-3	0
	25	12	17.36		0
	25	25	17.30		0
	50	0	17.34		0

Note: LTE Band 12 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-10
LTE Band 12 Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 12 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23035 (701.5 MHz)	23095 (707.5 MHz)	23155 (713.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.30	17.49	17.35	0	0
	1	12	17.42	17.55	17.36		0
	1	24	17.33	17.49	17.33		0
	12	0	17.60	17.63	17.60	0-1	0
	12	6	17.73	17.76	17.62		0
	12	13	17.66	17.69	17.59		0
	25	0	17.69	17.70	17.58		0
16QAM	1	0	17.62	17.70	17.70	0-1	0
	1	12	17.80	17.79	17.77		0
	1	24	17.74	17.71	17.69		0
	12	0	17.60	17.62	17.61	0-2	0
	12	6	17.73	17.73	17.62		0
	12	13	17.65	17.66	17.60		0
	25	0	17.62	17.60	17.57		0
64QAM	1	0	17.67	17.63	17.69	0-2	0
	1	12	17.75	17.80	17.72		0
	1	24	17.71	17.77	17.69		0
	12	0	17.60	17.66	17.62	0-3	0
	12	6	17.74	17.74	17.67		0
	12	13	17.67	17.70	17.63		0
	25	0	17.64	17.68	17.59		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 29 of 124

Table 8-11
LTE Band 12 Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 12 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23025 (700.5 MHz)	23095 (707.5 MHz)	23165 (714.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.50	17.46	17.34	0	0
	1	7	17.50	17.52	17.39		0
	1	14	17.54	17.51	17.31		0
	8	0	17.63	17.63	17.58	0-1	0
	8	4	17.73	17.71	17.60		0
	8	7	17.63	17.65	17.60		0
	15	0	17.70	17.72	17.62		0
16QAM	1	0	17.70	17.51	17.65	0-1	0
	1	7	17.75	17.79	17.76		0
	1	14	17.76	17.70	17.68		0
	8	0	17.61	17.67	17.59	0-2	0
	8	4	17.70	17.74	17.65		0
	8	7	17.67	17.73	17.62		0
	15	0	17.61	17.67	17.55		0
64QAM	1	0	17.65	17.69	17.66	0-2	0
	1	7	17.74	17.77	17.70		0
	1	14	17.72	17.77	17.66		0
	8	0	17.62	17.65	17.60	0-3	0
	8	4	17.72	17.71	17.64		0
	8	7	17.68	17.66	17.63		0
	15	0	17.66	17.72	17.60		0

Table 8-12
LTE Band 12 Reduced Conducted Powers - 1.4 MHz Bandwidth

LTE Band 12 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23017 (699.7 MHz)	23095 (707.5 MHz)	23173 (715.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.30	17.28	17.28	0	0
	1	2	17.37	17.28	17.35		0
	1	5	17.32	17.35	17.29		0
	3	0	17.36	17.31	17.32		0
	3	2	17.42	17.43	17.27		0
	3	3	17.35	17.38	17.25		0
	6	0	17.57	17.62	17.56	0-1	0
16QAM	1	0	17.63	17.62	17.62	0-1	0
	1	2	17.76	17.71	17.72		0
	1	5	17.68	17.77	17.66		0
	3	0	17.58	17.59	17.58		0
	3	2	17.65	17.65	17.64		0
	3	3	17.61	17.62	17.55		0
	6	0	17.62	17.65	17.60	0-2	0
64QAM	1	0	17.67	17.67	17.68	0-2	0
	1	2	17.72	17.76	17.71		0
	1	5	17.68	17.71	17.68		0
	3	0	17.64	17.65	17.65		0
	3	2	17.71	17.73	17.63		0
	3	3	17.65	17.70	17.62		0
	6	0	17.73	17.59	17.54	0-3	0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 30 of 124

8.3.2

LTE Band 17

Table 8-13
LTE Band 17 Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 17 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23790 (710.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
QPSK	1	0	24.93	0	0
	1	25	24.87		0
	1	49	24.74		0
	25	0	24.31	0-1	1
	25	12	23.68		1
	25	25	23.54		1
	50	0	23.66		1
16QAM	1	0	23.88	0-1	1
	1	25	24.00		1
	1	49	23.80		1
	25	0	22.66	0-2	2
	25	12	22.62		2
	25	25	22.56		2
	50	0	22.60		2
64QAM	1	0	23.09	0-2	2
	1	25	22.73		2
	1	49	22.32		2
	25	0	21.68	0-3	3
	25	12	21.59		3
	25	25	21.32		3
	50	0	21.41		3

Note: LTE Band 17 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-14
LTE Band 17 Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 17 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23790 (710.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
QPSK	1	0	24.55	0	0
	1	12	24.82		0
	1	24	24.40		0
	12	0	23.80	0-1	1
	12	6	23.90		1
	12	13	23.83		1
	25	0	23.79		1
16QAM	1	0	23.80	0-1	1
	1	12	24.01		1
	1	24	23.55		1
	12	0	22.87	0-2	2
	12	6	22.92		2
	12	13	22.71		2
	25	0	22.78		2
64QAM	1	0	22.74	0-2	2
	1	12	22.57		2
	1	24	22.15		2
	12	0	21.65	0-3	3
	12	6	21.58		3
	12	13	21.31		3
	25	0	21.48		3

Note: LTE Band 17 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 31 of 124

Table 8-15
LTE Band 17 Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 17 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23790 (710.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
QPSK	1	0	17.57	0	0
	1	25	17.67		0
	1	49	17.69		0
	25	0	17.63	0-1	0
	25	12	17.75		0
	25	25	17.54		0
	50	0	17.47		0
16QAM	1	0	18.02	0-1	0
	1	25	17.89		0
	1	49	17.93		0
	25	0	17.64	0-2	0
	25	12	17.80		0
	25	25	17.56		0
	50	0	17.49		0
64QAM	1	0	17.82	0-2	0
	1	25	17.86		0
	1	49	17.76		0
	25	0	17.53	0-3	0
	25	12	17.72		0
	25	25	17.44		0
	50	0	17.53		0

Note: LTE Band 17 at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-16
LTE Band 17 Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 17 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel 23790 (710.0 MHz)	MPR Allowed per 3GPP [dB]	MPR [dB]
			Conducted Power [dBm]		
QPSK	1	0	17.44	0	0
	1	12	17.56		0
	1	24	17.30		0
	12	0	17.71	0-1	0
	12	6	17.71		0
	12	13	17.62		0
	25	0	17.64		0
16QAM	1	0	17.66	0-1	0
	1	12	17.85		0
	1	24	17.53		0
	12	0	17.70	0-2	0
	12	6	17.73		0
	12	13	17.62		0
	25	0	17.62		0
64QAM	1	0	17.65	0-2	0
	1	12	17.79		0
	1	24	17.54		0
	12	0	17.74	0-3	0
	12	6	17.80		0
	12	13	17.66		0
	25	0	17.66		0

Note: LTE Band 17 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 32 of 124	

8.3.3

LTE Band 13

Table 8-17
LTE Band 13 Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23230 (782.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	24.46	0	0
	1	25	24.23		0
	1	49	24.01		0
	25	0	23.39	0-1	1
	25	12	23.44		1
	25	25	23.38		1
16QAM	50	0	23.43	0-1	1
	1	0	23.60		1
	1	25	23.52		1
	1	49	23.35	0-2	1
	25	0	22.44		2
	25	12	22.36		2
64QAM	25	25	22.42	0-2	2
	50	0	22.43		2
	1	0	22.13	0-2	2
	1	25	22.29		2
	1	49	22.38	0-3	2
	25	0	21.00		3
	25	12	21.25		3
	25	25	21.26		3
	50	0	21.27		3

Table 8-18
LTE Band 13 Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 13 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23230 (782.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	24.18	0	0
	1	12	24.22		0
	1	24	24.12		0
	12	0	23.37	0-1	1
	12	6	23.38		1
	12	13	23.32		1
16QAM	25	0	23.35	0-1	1
	1	0	23.43		1
	1	12	23.44	0-2	1
	1	24	23.29		2
	12	0	22.37		2
	12	6	22.36	0-2	2
64QAM	12	13	22.30		2
	25	0	22.32	0-2	2
	1	0	22.40		2
	1	12	22.44	0-3	2
	1	24	22.35		2
	12	0	21.11		3
	12	6	21.35	0-3	3
	12	13	21.35		3
	25	0	21.34		3

Note: LTE Band 13 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 33 of 124	

Table 8-19
LTE Band 13 Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 13 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23230 (782.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	18.21	0	0
	1	25	18.15		0
	1	49	18.06		0
	25	0	18.30	0-1	0
	25	12	18.29		0
	25	25	18.25		0
16QAM	50	0	18.21	0	0
	1	0	18.52		0
	1	25	18.44	0-1	0
	1	49	18.41		0
	25	0	18.31	0-2	0
	25	12	18.29		0
64QAM	25	25	18.25		0
	50	0	18.27	0	0
	1	0	18.49	0-2	0
	1	25	18.41		0
	1	49	18.28	0-3	0
	25	0	18.31		0
	25	12	18.28		0
	25	25	18.26		0
	50	0	18.33		0

Table 8-20
LTE Band 13 Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 13 5 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			23230 (782.0 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	18.05	0	0
	1	12	18.05		0
	1	24	17.94		0
	12	0	18.18	0-1	0
	12	6	18.18		0
	12	13	18.10		0
16QAM	25	0	18.15	0	0
	1	0	18.28	0-1	0
	1	12	18.28		0
	1	24	18.08	0-2	0
	12	0	18.22		0
	12	6	18.19		0
64QAM	12	13	18.13	0	0
	25	0	18.17		0
	1	0	18.33	0-2	0
	1	12	18.28		0
	1	24	18.13	0-3	0
	12	0	18.25		0
	12	6	18.25		0
	12	13	18.16		0
	25	0	18.20		0

Note: LTE Band 13 at 5 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 34 of 124	

8.3.4

LTE Band 26 (Cell)

Table 8-21
LTE Band 26 (Cell) Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26865 (831.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	22.43	0	0
	1	36	22.25		0
	1	74	22.20		0
	36	0	21.42	0-1	1
	36	18	21.41		1
	36	37	21.32		1
	75	0	21.37		1
16QAM	1	0	21.63	0-1	1
	1	36	21.41		1
	1	74	21.46		1
	36	0	20.41	0-2	2
	36	18	20.40		2
	36	37	20.34		2
	75	0	20.38		2
64QAM	1	0	20.73	0-2	2
	1	36	20.35		2
	1	74	20.50		2
	36	0	19.42	0-3	3
	36	18	19.45		3
	36	37	19.41		3
	75	0	19.37		3

Note: LTE Band 26 (Cell) at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-22
LTE Band 26 (Cell) Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 26 (Cell) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26740 (819.0 MHz)	26865 (831.5 MHz)	26990 (844.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	22.36	22.35	22.47	0	0
	1	25	22.34	22.29	22.35		0
	1	49	22.25	22.26	22.29		0
	25	0	21.45	21.39	21.45	0-1	1
	25	12	21.47	21.41	21.49		1
	25	25	21.43	21.40	21.43		1
	50	0	21.44	21.44	21.44		1
16QAM	1	0	21.66	21.61	21.64	0-1	1
	1	25	21.55	21.45	21.60		1
	1	49	21.55	21.50	21.51		1
	25	0	20.45	20.44	20.44	0-2	2
	25	12	20.45	20.43	20.44		2
	25	25	20.41	20.37	20.44		2
	50	0	20.45	20.37	20.43		2
64QAM	1	0	20.66	20.53	20.57	0-2	2
	1	25	20.55	20.55	20.66		2
	1	49	20.46	20.44	20.58		2
	25	0	19.45	19.42	19.45	0-3	3
	25	12	19.50	19.43	19.50		3
	25	25	19.43	19.40	19.43		3
	50	0	19.45	19.41	19.45		3

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 			Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 35 of 124

Table 8-23
LTE Band 26 (Cell) Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 26 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26715 (816.5 MHz)	26865 (831.5 MHz)	27015 (846.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	22.25	22.25	22.32	0	0
	1	12	22.31	22.30	22.36		0
	1	24	22.34	22.29	22.33		0
	12	0	21.39	21.39	21.40	0-1	1
	12	6	21.48	21.45	21.45		1
	12	13	21.45	21.43	21.41		1
	25	0	21.44	21.41	21.37		1
16QAM	1	0	21.40	21.45	21.51	0-1	1
	1	12	21.59	21.51	21.60		1
	1	24	21.62	21.45	21.50		1
	12	0	20.43	20.41	20.43	0-2	2
	12	6	20.54	20.47	20.50		2
	12	13	20.45	20.43	20.40		2
	25	0	20.48	20.37	20.34		2
64QAM	1	0	20.44	20.46	20.58	0-2	2
	1	12	20.60	20.54	20.69		2
	1	24	20.57	20.47	20.44		2
	12	0	19.45	19.43	19.44	0-3	3
	12	6	19.52	19.50	19.50		3
	12	13	19.45	19.44	19.43		3
	25	0	19.47	19.42	19.37		3

Table 8-24
LTE Band 26 (Cell) Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 26 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26705 (815.5 MHz)	26865 (831.5 MHz)	27025 (847.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	22.24	22.64	22.36	0	0
	1	7	22.29	22.29	22.31		0
	1	14	22.30	22.31	22.31		0
	8	0	21.45	21.35	21.43	0-1	1
	8	4	21.48	21.39	21.39		1
	8	7	21.44	21.34	21.43		1
	15	0	21.45	21.38	21.41		1
16QAM	1	0	21.55	21.36	21.64	0-1	1
	1	7	21.53	21.53	21.55		1
	1	14	21.51	21.50	21.55		1
	8	0	20.46	20.36	20.43	0-2	2
	8	4	20.51	20.45	20.46		2
	8	7	20.46	20.38	20.41		2
	15	0	20.45	20.37	20.41		2
64QAM	1	0	20.48	20.44	20.62	0-2	2
	1	7	20.50	20.55	20.54		2
	1	14	20.51	20.50	20.51		2
	8	0	19.50	19.37	19.44	0-3	3
	8	4	19.50	19.44	19.48		3
	8	7	19.49	19.38	19.33		3
	15	0	19.49	19.41	19.42		3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 36 of 124

Table 8-25
LTE Band 26 (Cell) Maximum Conducted Powers - 1.4 MHz Bandwidth

LTE Band 26 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26697 (814.7 MHz)	26865 (831.5 MHz)	27033 (848.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	22.15	22.24	22.22	0	0
	1	2	22.30	22.38	22.30		0
	1	5	22.24	22.36	22.23		0
	3	0	22.26	22.27	22.26		0
	3	2	22.27	22.26	22.30		0
	3	3	22.22	22.30	22.26		0
	6	0	21.38	21.36	21.34	0-1	1
16QAM	1	0	21.42	21.39	21.53	0-1	1
	1	2	21.55	21.55	21.51		1
	1	5	21.44	21.60	21.41		1
	3	0	21.40	21.36	21.38		1
	3	2	21.40	21.43	21.42		1
	3	3	21.36	21.42	21.31	1	
64QAM	6	0	20.38	20.42	20.36	0-2	2
	1	0	20.40	20.46	20.45	0-2	2
	1	2	20.47	20.46	20.50		2
	1	5	20.48	20.59	20.43		2
	3	0	20.40	20.39	20.46		2
	3	2	20.49	20.45	20.46		2
	3	3	20.38	20.47	20.40	2	
6	0	19.34	19.39	19.32	0-3	3	

Table 8-26
LTE Band 26 (Cell) Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 26 (Cell) 15 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26865 (831.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	17.54	0	0
	1	36	17.40		0
	1	74	17.48		0
	36	0	17.55	0-1	0
	36	18	17.58		0
	36	37	17.51		0
16QAM	75	0	17.50	0-1	0
	1	0	17.80		0
	1	36	17.80		0
	1	74	17.72	0-2	0
	36	0	17.55		0
	36	18	17.62		0
64QAM	36	37	17.59	0-2	0
	75	0	17.60		0
	1	0	17.72	0-2	0
	1	36	17.80		0
	1	74	17.66		0
	36	0	17.60	0-3	0
64QAM	36	18	17.64		0
	36	37	17.57		0
	75	0	17.58		0

Note: LTE Band 26 (Cell) at 15 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 37 of 124	

Table 8-27
LTE Band 26 (Cell) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 26 (Cell) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26740 (819.0 MHz)	26865 (831.5 MHz)	26990 (844.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.40	17.42	17.48	0	0
	1	25	17.25	17.25	17.20		0
	1	49	17.25	17.29	17.20		0
	25	0	17.44	17.36	17.38	0-1	0
	25	12	17.47	17.37	17.41		0
	25	25	17.47	17.37	17.40		0
	50	0	17.46	17.35	17.41		0
16QAM	1	0	17.46	17.50	17.90	0-1	0
	1	25	17.42	17.37	17.90		0
	1	49	17.42	17.42	17.74		0
	25	0	17.43	17.40	17.44	0-2	0
	25	12	17.53	17.43	17.46		0
	25	25	17.49	17.41	17.45		0
	50	0	17.50	17.38	17.40		0
64QAM	1	0	17.48	17.51	17.90	0-2	0
	1	25	17.41	17.50	17.89		0
	1	49	17.47	17.44	17.85		0
	25	0	17.62	17.52	17.50	0-3	0
	25	12	17.45	17.54	17.56		0
	25	25	17.53	17.53	17.56		0
	50	0	17.50	17.42	17.50		0

Table 8-28
LTE Band 26 (Cell) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 26 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26715 (816.5 MHz)	26865 (831.5 MHz)	27015 (846.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.31	17.34	17.34	0	0
	1	12	17.42	17.39	17.44		0
	1	24	17.40	17.37	17.38		0
	12	0	17.49	17.35	17.36	0-1	0
	12	6	17.57	17.46	17.48		0
	12	13	17.52	17.40	17.41		0
	25	0	17.52	17.42	17.38		0
16QAM	1	0	17.49	17.51	17.70	0-1	0
	1	12	17.57	17.58	17.75		0
	1	24	17.62	17.58	17.68		0
	12	0	17.50	17.33	17.37	0-2	0
	12	6	17.57	17.44	17.42		0
	12	13	17.53	17.38	17.37		0
	25	0	17.51	17.41	17.35		0
64QAM	1	0	17.46	17.54	17.78	0-2	0
	1	12	17.54	17.55	17.88		0
	1	24	17.56	17.53	17.74		0
	12	0	17.57	17.15	17.42	0-3	0
	12	6	17.56	17.56	17.50		0
	12	13	17.56	17.50	17.39		0
	25	0	17.59	17.51	17.46		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 38 of 124

Table 8-29
LTE Band 26 (Cell) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 26 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26705 (815.5 MHz)	26865 (831.5 MHz)	27025 (847.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.30	17.23	17.17	0	0
	1	7	17.35	17.24	17.20		0
	1	14	17.39	17.26	17.21		0
	8	0	17.50	17.33	17.32	0-1	0
	8	4	17.51	17.38	17.41		0
	8	7	17.48	17.37	17.37		0
	15	0	17.49	17.36	17.38		0
16QAM	1	0	17.48	17.73	17.47	0-1	0
	1	7	17.57	17.77	17.49		0
	1	14	17.48	17.79	17.53		0
	8	0	17.48	17.43	17.34	0-2	0
	8	4	17.47	17.49	17.42		0
	8	7	17.42	17.46	17.37		0
	15	0	17.52	17.42	17.40		0
64QAM	1	0	17.49	17.53	17.44	0-2	0
	1	7	17.63	17.57	17.47		0
	1	14	17.60	17.52	17.45		0
	8	0	17.55	17.39	17.32	0-3	0
	8	4	17.58	17.44	17.42		0
	8	7	17.54	17.41	17.35		0
	15	0	17.64	17.51	17.40		0

Table 8-30
LTE Band 26 (Cell) Reduced Conducted Powers – 1.4 MHz Bandwidth

LTE Band 26 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26697 (814.7 MHz)	26865 (831.5 MHz)	27033 (848.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.38	17.13	17.22	0	0
	1	2	17.50	17.21	17.29		0
	1	5	17.44	17.15	17.22		0
	3	0	17.39	17.24	17.20		0
	3	2	17.40	17.30	17.26		0
	3	3	17.32	17.18	17.21		0
	6	0	17.43	17.36	17.30	0-1	0
16QAM	1	0	17.22	17.46	17.35	0-1	0
	1	2	17.37	17.50	17.41		0
	1	5	17.30	17.46	17.33		0
	3	0	17.42	17.15	17.25		0
	3	2	17.46	17.20	17.30		0
	3	3	17.43	17.15	17.21		0
	6	0	17.63	17.41	17.40	0-2	0
64QAM	1	0	17.91	17.37	17.44	0-2	0
	1	2	17.95	17.45	17.54		0
	1	5	17.92	17.42	17.38		0
	3	0	17.71	17.45	17.39		0
	3	2	17.72	17.55	17.38		0
	3	3	17.64	17.47	17.30		0
	6	0	17.45	17.36	17.42	0-3	0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 39 of 124

8.3.5

LTE Band 5 (Cell)

Table 8-31
LTE Band 5 (Cell) Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20525 (836.5 MHz) Conducted Power [dBm]		
QPSK	1	0	24.52	0	0
	1	25	24.37		0
	1	49	24.40		0
	25	0	23.51	0-1	1
	25	12	23.50		1
	25	25	23.47		1
16QAM	50	0	23.48	0-1	1
	1	0	23.71		1
	1	25	23.50		1
	1	49	23.56	0-2	1
	25	0	22.59		2
	25	12	22.55		2
64QAM	25	25	22.50	0-2	2
	50	0	22.42		2
	1	0	22.74	0-2	2
	1	25	22.61		2
	1	49	22.56		2
	25	0	21.57	0-3	3
	25	12	21.54		3
	25	25	21.51		3
	50	0	21.47		3

Note: LTE Band 5 (Cell) at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-32
LTE Band 5 (Cell) Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 5 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20425 (826.5 MHz) Conducted Power [dBm]	20525 (836.5 MHz) Conducted Power [dBm]	20625 (846.5 MHz) Conducted Power [dBm]		
QPSK	1	0	24.26	24.36	24.31	0	0
	1	12	24.38	24.45	24.40		0
	1	24	24.36	24.42	24.34		0
	12	0	23.38	23.46	23.46	0-1	1
	12	6	23.52	23.59	23.50		1
	12	13	23.50	23.59	23.51		1
16QAM	25	0	23.46	23.57	23.44	0-1	1
	1	0	23.51	23.51	23.53		1
	1	12	23.56	23.70	23.53		1
	1	24	23.63	23.61	23.54	0-2	1
	12	0	22.38	22.48	22.42		2
	12	6	22.47	22.57	22.47		2
64QAM	12	13	22.51	22.60	22.53	0-2	2
	25	0	22.45	22.56	22.43		2
	1	0	22.44	22.52	22.52	0-2	2
	1	12	22.57	22.59	22.57		2
	1	24	22.57	22.55	22.49		2
	12	0	21.33	21.48	21.45	0-3	3
	12	6	21.52	21.62	21.51		3
	12	13	21.51	21.59	21.51		3
	25	0	21.45	21.55	21.43		3

FCC ID: A3LSMT865			SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet			Page 40 of 124

Table 8-33
LTE Band 5 (Cell) Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 5 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20415 (825.5 MHz)	20525 (836.5 MHz)	20635 (847.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	24.24	24.34	24.22	0	0
	1	7	24.34	24.42	24.35		0
	1	14	24.37	24.42	24.40		0
	8	0	23.36	23.50	23.44	0-1	1
	8	4	23.49	23.61	23.43		1
	8	7	23.48	23.56	23.49		1
15	0	23.44	23.60	23.44	1		
16QAM	1	0	23.48	23.53	23.45	0-1	1
	1	7	23.55	23.45	23.56		1
	1	14	23.70	23.66	23.50		1
	8	0	22.46	22.49	22.43	0-2	2
	8	4	22.54	22.59	22.50		2
	8	7	22.53	22.57	22.53		2
15	0	22.42	22.54	22.42	2		
64QAM	1	0	22.40	22.55	22.48	0-2	2
	1	7	22.53	22.56	22.50		2
	1	14	22.71	22.58	22.52		2
	8	0	21.40	21.47	21.43	0-3	3
	8	4	21.50	21.59	21.48		3
	8	7	21.44	21.61	21.51		3
15	0	21.45	21.55	21.44	3		

Table 8-34
LTE Band 5 (Cell) Maximum Conducted Powers -1.4 MHz Bandwidth

LTE Band 5 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20407 (824.7 MHz)	20525 (836.5 MHz)	20643 (848.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	24.33	24.30	24.23	0	0
	1	2	24.42	24.38	24.33		0
	1	5	24.39	24.37	24.28		0
	3	0	24.34	24.32	24.26		0
	3	2	24.42	24.40	24.36		0
	3	3	24.40	24.35	24.28		0
	6	0	23.50	23.50	23.40	0-1	1
16QAM	1	0	23.55	23.53	23.50	0-1	1
	1	2	23.59	23.65	23.58		1
	1	5	23.62	23.60	23.50		1
	3	0	23.42	23.44	23.36		1
	3	2	23.51	23.51	23.39		1
	3	3	23.46	23.45	23.39		1
	6	0	22.53	22.56	22.44	0-2	2
64QAM	1	0	22.52	22.50	22.48	0-2	2
	1	2	22.55	22.60	22.20		2
	1	5	22.52	22.56	22.40		2
	3	0	22.48	22.48	22.40		2
	3	2	22.56	22.53	22.42		2
	3	3	22.54	22.48	22.28		2
	6	0	21.45	21.47	21.36	0-3	3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 41 of 124

Table 8-35
LTE Band 5 (Cell) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 5 (Cell) 10 MHz Bandwidth					
Modulation	RB Size	RB Offset	Mid Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20525 (836.5 MHz)		
			Conducted Power [dBm]		
QPSK	1	0	17.61	0	0
	1	25	17.55		0
	1	49	17.50		0
	25	0	17.66	0-1	0
	25	12	17.65		0
	25	25	17.63		0
	50	0	17.64		0
16QAM	1	0	17.90	0-1	0
	1	25	17.73		0
	1	49	17.67		0
	25	0	17.47	0-2	0
	25	12	17.47		0
	25	25	17.43		0
	50	0	17.41		0
64QAM	1	0	17.62	0-2	0
	1	25	17.59		0
	1	49	17.52		0
	25	0	17.56	0-3	0
	25	12	17.51		0
	25	25	17.46		0
	50	0	17.48		0

Note: LTE Band 5 (Cell) at 10 MHz bandwidth does not support three non-overlapping channels. Per KDB Publication 941225 D05v02, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.

Table 8-36
LTE Band 5 (Cell) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 5 (Cell) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20425 (826.5 MHz)	20525 (836.5 MHz)	20625 (846.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.20	17.22	17.02	0	0
	1	12	17.29	17.27	17.14		0
	1	24	17.34	17.29	17.11		0
	12	0	17.30	17.36	17.34	0-1	0
	12	6	17.44	17.42	17.39		0
	12	13	17.40	17.46	17.42		0
	25	0	17.36	17.36	17.34		0
16QAM	1	0	17.36	17.47	17.45	0-1	0
	1	12	17.53	17.51	17.56		0
	1	24	17.55	17.55	17.38		0
	12	0	17.27	17.36	17.35	0-2	0
	12	6	17.48	17.41	17.38		0
	12	13	17.42	17.43	17.40		0
	25	0	17.36	17.32	17.29		0
64QAM	1	0	17.36	17.46	17.52	0-2	0
	1	12	17.50	17.54	17.53		0
	1	24	17.56	17.52	17.40		0
	12	0	17.35	17.41	17.38	0-3	0
	12	6	17.45	17.48	17.42		0
	12	13	17.58	17.49	17.42		0
	25	0	17.39	17.37	17.35		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 42 of 124

Table 8-37
LTE Band 5 (Cell) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 5 (Cell) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20415 (825.5 MHz)	20525 (836.5 MHz)	20635 (847.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	17.00	17.21	17.00	0	0
	1	7	17.07	17.28	17.09		0
	1	14	17.18	17.31	17.12		0
	8	0	17.30	17.33	17.28	0-1	0
	8	4	17.42	17.42	17.40		0
	8	7	17.39	17.47	17.37		0
	15	0	17.41	17.39	17.45		0
16QAM	1	0	17.30	17.39	17.37	0-1	0
	1	7	17.50	17.48	17.50		0
	1	14	17.60	17.54	17.48		0
	8	0	17.32	17.36	17.33	0-2	0
	8	4	17.46	17.44	17.36		0
	8	7	17.43	17.42	17.39		0
	15	0	17.33	17.33	17.36		0
64QAM	1	0	17.33	17.56	17.44	0-2	0
	1	7	17.44	17.53	17.49		0
	1	14	17.54	17.57	17.45		0
	8	0	17.26	17.39	17.34	0-3	0
	8	4	17.44	17.53	17.44		0
	8	7	17.46	17.49	17.41		0
	15	0	17.39	17.38	17.42		0

Table 8-38
LTE Band 5 (Cell) Reduced Conducted Powers – 1.4 MHz Bandwidth

LTE Band 5 (Cell) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			20407 (824.7 MHz)	20525 (836.5 MHz)	20643 (848.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	16.94	16.97	17.00	0	0
	1	2	16.96	17.10	17.04		0
	1	5	17.03	17.12	17.06		0
	3	0	16.93	17.01	16.99		0
	3	2	17.04	17.19	17.08		0
	3	3	17.05	17.13	17.03		0
	6	0	17.29	17.28	17.28	0-1	0
16QAM	1	0	17.28	17.38	17.38	0-1	0
	1	2	17.40	17.54	17.45		0
	1	5	17.40	17.43	17.37		0
	3	0	17.22	17.28	17.26		0
	3	2	17.35	17.41	17.33		0
	3	3	17.33	17.36	17.36		0
	6	0	17.32	17.35	17.36	0-2	0
64QAM	1	0	17.24	17.40	17.43	0-2	0
	1	2	17.36	17.55	17.43		0
	1	5	17.37	17.41	17.44		0
	3	0	17.25	17.32	17.36		0
	3	2	17.40	17.45	17.38		0
	3	3	17.37	17.38	17.36		0
	6	0	17.26	17.31	17.31	0-3	0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 43 of 124

8.3.6

LTE Band 66 (AWS)

Table 8-39
LTE Band 66 (AWS) Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132072 (1720.0 MHz)	132322 (1745.0 MHz)	132572 (1770.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.22	23.52	23.71	0	0
	1	50	23.32	23.51	23.78		0
	1	99	23.59	23.93	23.71		0
	50	0	22.52	22.81	22.94	0-1	1
	50	25	22.51	22.82	22.95		1
	50	50	22.56	22.77	22.78		1
	100	0	22.53	22.82	22.90		1
16QAM	1	0	22.45	22.98	22.97	0-1	1
	1	50	22.48	22.77	23.00		1
	1	99	22.87	22.98	23.15		1
	50	0	21.60	21.79	21.78	0-2	2
	50	25	21.48	21.78	21.89		2
	50	50	21.51	21.64	21.80		2
	100	0	21.43	21.69	21.82		2
64QAM	1	0	21.32	21.64	21.85	0-2	2
	1	50	21.51	21.79	21.99		2
	1	99	21.76	22.16	21.89		2
	50	0	20.55	20.82	20.93	0-3	3
	50	25	20.48	20.78	20.97		3
	50	50	20.56	20.73	20.83		3
	100	0	20.55	20.75	20.95		3

Table 8-40
LTE Band 66 (AWS) Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132047 (1717.5 MHz)	132322 (1745.0 MHz)	132597 (1772.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.33	23.65	23.82	0	0
	1	36	23.35	23.64	23.87		0
	1	74	23.38	23.58	23.62		0
	36	0	22.54	22.82	22.91	0-1	1
	36	18	22.52	22.75	22.88		1
	36	37	22.48	22.70	22.83		1
	75	0	22.50	22.77	22.89		1
16QAM	1	0	22.65	22.90	23.11	0-1	1
	1	36	22.60	22.85	23.11		1
	1	74	22.50	22.80	22.87		1
	36	0	21.52	21.77	21.88	0-2	2
	36	18	21.48	21.73	21.87		2
	36	37	21.42	21.66	21.83		2
	75	0	21.50	21.75	21.90		2
64QAM	1	0	21.60	21.86	22.15	0-2	2
	1	36	21.60	21.80	22.07		2
	1	74	21.48	21.77	21.58		2
	36	0	20.55	20.83	20.97	0-3	3
	36	18	20.52	20.77	20.88		3
	36	37	20.45	20.72	20.85		3
	75	0	20.50	20.74	20.90		3

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 44 of 124

Table 8-41
LTE Band 66 (AWS) Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132022 (1715.0 MHz)	132322 (1745.0 MHz)	132622 (1775.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.10	23.40	23.60	0	0
	1	25	23.20	23.48	23.60		0
	1	49	23.29	23.45	23.55		0
	25	0	22.32	22.60	22.70	0-1	1
	25	12	22.33	22.58	22.73		1
	25	25	22.26	22.54	22.67		1
50	0	22.30	22.58	22.70	1		
16QAM	1	0	22.33	22.66	22.88	0-1	1
	1	25	22.44	22.69	22.84		1
	1	49	22.49	22.64	22.80		1
	25	0	21.33	21.61	21.77	0-2	2
	25	12	21.29	21.55	21.70		2
	25	25	21.24	21.50	21.66		2
50	0	21.30	21.55	21.72	2		
64QAM	1	0	21.33	21.63	21.84	0-2	2
	1	25	21.35	21.66	21.84		2
	1	49	21.44	21.66	21.63		2
	25	0	20.33	20.60	20.75	0-3	3
	25	12	20.33	20.59	20.73		3
	25	25	20.28	20.54	20.63		3
	50	0	20.31	20.56	20.73		3

Table 8-42
LTE Band 66 (AWS) Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			131997 (1712.5 MHz)	132322 (1745.0 MHz)	132647 (1777.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.13	23.37	23.55	0	0
	1	12	23.20	23.59	23.60		0
	1	24	23.29	23.55	23.66		0
	12	0	22.22	22.51	22.69	0-1	1
	12	6	22.34	22.58	22.80		1
	12	13	22.33	22.60	22.77		1
16QAM	25	0	22.31	22.53	22.76	0-1	1
	1	0	22.38	22.66	22.90		1
	1	12	22.44	22.72	22.91		1
	1	24	22.50	22.83	23.00	0-2	1
	12	0	21.20	21.54	21.77		2
	12	6	21.33	21.60	21.83		2
64QAM	12	13	21.32	21.60	21.80	0-2	2
	25	0	21.29	21.52	21.75		2
	1	0	21.33	21.65	21.79	0-2	2
	1	12	21.44	21.66	21.66		2
	1	24	21.49	21.75	21.44		2
	12	0	20.26	20.55	20.73	0-3	3
	12	6	20.39	20.59	20.71		3
12	13	20.38	20.62	20.41	3		
	25	0	20.31	20.55	20.44		3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 45 of 124

Table 8-43
LTE Band 66 (AWS) Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			131987 (1711.5 MHz)	132322 (1745.0 MHz)	132657 (1778.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.13	23.37	23.56	0	0
	1	7	23.16	23.43	23.61		0
	1	14	23.22	23.51	23.64		0
	8	0	22.18	22.50	22.70	0-1	1
	8	4	22.29	22.63	22.80		1
	8	7	22.29	22.60	22.76		1
16QAM	15	0	22.28	22.51	22.73	0-1	1
	1	0	22.29	22.59	22.90		1
	1	7	22.37	22.66	22.89		1
	1	14	22.45	22.72	22.90	0-2	1
	8	0	21.20	21.55	21.78		2
	8	4	21.31	21.65	21.83		2
64QAM	8	7	21.31	21.61	21.83	0-2	2
	15	0	21.27	21.46	21.70		2
	1	0	21.29	21.62	21.46		0-2
	1	7	21.35	21.66	21.60	2	
	1	14	21.42	21.69	21.30	2	
	8	0	20.22	20.55	20.39	0-3	3
8	4	20.33	20.66	20.44	3		
8	7	20.33	20.58	20.30	3		
64QAM	15	0	20.26	20.55	20.27		3

Table 8-44
LTE Band 66 (AWS) Maximum Conducted Powers -1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			131979 (1710.7 MHz)	132322 (1745.0 MHz)	132665 (1779.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.05	23.28	23.55	0	0
	1	2	23.15	23.48	23.62		0
	1	5	23.12	23.35	23.54		0
	3	0	23.07	23.35	23.53		0
	3	2	23.17	23.52	23.61		0
	3	3	23.14	23.40	23.50		0
	6	0	22.22	22.46	22.68	0-1	1
16QAM	1	0	22.27	22.57	22.88	0-1	1
	1	2	22.30	22.70	22.90		1
	1	5	22.30	22.67	22.81		1
	3	0	22.14	22.50	22.72		1
	3	2	22.30	22.60	22.81		1
	3	3	22.25	22.54	22.73	1	
6	0	21.26	21.51	21.74	0-2	2	
64QAM	1	0	21.28	21.55	21.16	0-2	2
	1	2	21.30	21.67	21.12		2
	1	5	21.31	21.59	21.10		2
	3	0	21.24	21.55	21.16		2
	3	2	21.34	21.60	21.20		2
	3	3	21.27	21.57	21.16		2
	6	0	20.20	20.45	20.05	0-3	3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 46 of 124

Table 8-45
LTE Band 66 (AWS) Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 66 (AWS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132072 (1720.0 MHz)	132322 (1745.0 MHz)	132572 (1770.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.42	13.58	13.74	0	0
	1	50	13.39	13.55	13.70		0
	1	99	13.45	13.66	13.72		0
	50	0	13.64	13.88	14.01	0-1	0
	50	25	13.60	13.83	13.93		0
	50	50	13.55	13.76	13.89		0
16QAM	100	0	13.60	13.65	13.73	0-1	0
	1	0	13.70	13.82	14.02		0
	1	50	13.66	13.85	14.04		0
	1	99	13.70	14.01	13.95	0-2	0
	50	0	13.61	13.83	13.97		0
	50	25	13.58	13.78	13.94		0
64QAM	50	50	13.52	13.74	13.87	0-2	0
	100	0	13.54	13.79	13.90		0
	1	0	13.49	13.77	14.07		0-2
	1	50	13.62	13.91	14.06	0	
	1	99	13.77	14.05	14.01	0	
	64QAM	50	0	13.60	13.92	14.07	0-3
50		25	13.58	13.89	14.00	0	
50		50	13.63	13.85	13.96	0	
100		0	13.59	13.90	13.95	0	

Table 8-46
LTE Band 66 (AWS) Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 66 (AWS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132047 (1717.5 MHz)	132322 (1745.0 MHz)	132597 (1772.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.40	13.50	13.60	0	0
	1	36	13.38	13.50	13.43		0
	1	74	13.40	13.44	13.45		0
	36	0	13.55	13.70	13.81	0-1	0
	36	18	13.48	13.66	13.72		0
	36	37	13.45	13.60	13.66		0
	75	0	13.49	13.66	13.73		0
16QAM	1	0	13.65	13.70	13.80	0-1	0
	1	36	13.65	13.70	13.79		0
	1	74	13.56	13.65	13.60		0
	36	0	13.50	13.66	13.80	0-2	0
	36	18	13.47	13.62	13.70		0
	36	37	13.39	13.55	13.68		0
	75	0	13.44	13.60	13.73		0
64QAM	1	0	13.55	13.85	14.02	0-2	0
	1	36	13.55	13.88	14.00		0
	1	74	13.54	13.76	13.77		0
	36	0	13.58	13.85	13.95	0-3	0
	36	18	13.56	13.83	13.91		0
	36	37	13.50	13.70	13.85		0
	75	0	13.50	13.77	13.88		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 47 of 124	

Table 8-47
LTE Band 66 (AWS) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 66 (AWS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			132022 (1715.0 MHz)	132322 (1745.0 MHz)	132622 (1775.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.14	13.45	13.46	0	0
	1	25	13.00	13.35	13.40		0
	1	49	13.01	13.25	13.36		0
	25	0	13.27	13.55	13.57	0-1	0
	25	12	13.24	13.51	13.60		0
	25	25	13.25	13.50	13.58		0
16QAM	50	0	13.20	13.50	13.59	0-1	0
	1	0	13.39	13.75	13.66		0
	1	25	13.29	13.62	13.66		0
	1	49	13.30	13.50	13.55	0-2	0
	25	0	13.28	13.49	13.62		0
	25	12	13.33	13.45	13.60		0
64QAM	25	25	13.26	13.44	13.55	0-2	0
	50	0	13.24	13.48	13.62		0
	1	0	13.37	13.60	13.72	0-2	0
	1	25	13.32	13.66	13.82		0
	1	49	13.49	13.65	13.77		0
	25	0	13.32	13.63	13.72	0-3	0
	25	12	13.33	13.60	13.71		0
	25	25	13.26	13.56	13.65		0
	50	0	13.30	13.60	13.71		0

Table 8-48
LTE Band 66 (AWS) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 66 (AWS) 5 MHz Bandwidth								
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]	
			131997 (1712.5 MHz)	132322 (1745.0 MHz)	132647 (1777.5 MHz)			
			Conducted Power [dBm]					
QPSK	1	0	12.90	13.28	13.32	0	0	
	1	12	13.03	13.40	13.43		0	
	1	24	12.92	13.30	13.39		0	
	12	0	13.15	13.43	13.48	0-1	0	
	12	6	13.29	13.50	13.58		0	
	12	13	13.23	13.45	13.61		0	
16QAM	25	0	13.22	13.42	13.55	0-1	0	
	1	0	13.20	13.50	13.44		0	
	1	12	13.31	13.69	13.63		0	
	1	24	13.20	13.62	13.51	0-2	0	
	12	0	13.17	13.45	13.60		0	
	12	6	13.33	13.47	13.55		0	
	12	13	13.26	13.49	13.54		0	
64QAM	25	0	13.24	13.42	13.55	0-2	0	
	1	0	13.29	13.65	13.77		0-3	0
	1	12	13.40	13.74	13.85			0
	1	24	13.45	13.80	13.83	0		
	12	0	13.27	13.60	13.72	0-3	0	
	12	6	13.39	13.66	13.76		0	
	12	13	13.41	13.70	13.79		0	
	25	0	13.31	13.60	13.72		0	

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 48 of 124

Table 8-49
LTE Band 66 (AWS) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 66 (AWS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			131987 (1711.5 MHz)	132322 (1745.0 MHz)	132657 (1778.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	12.94	13.14	13.34	0	0
	1	7	13.03	13.25	13.44		0
	1	14	13.00	13.24	13.30		0
	8	0	13.15	13.36	13.55	0-1	0
	8	4	13.24	13.49	13.65		0
	8	7	13.26	13.39	13.57		0
	15	0	13.22	13.35	13.62		0
16QAM	1	0	13.19	13.33	13.53	0-1	0
	1	7	13.25	13.52	13.55		0
	1	14	13.25	13.44	13.56		0
	8	0	13.22	13.44	13.55	0-2	0
	8	4	13.31	13.50	13.58		0
	8	7	13.25	13.45	13.57		0
	15	0	13.20	13.36	13.58		0
64QAM	1	0	13.32	13.64	13.74	0-2	0
	1	7	13.33	13.70	13.78		0
	1	14	13.40	13.78	13.77		0
	8	0	13.27	13.60	13.65	0-3	0
	8	4	13.39	13.72	13.76		0
	8	7	13.31	13.63	13.75		0
	15	0	13.31	13.55	13.72		0

Table 8-50
LTE Band 66 (AWS) Reduced Conducted Powers – 1.4 MHz Bandwidth

LTE Band 66 (AWS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			131979 (1710.7 MHz)	132322 (1745.0 MHz)	132665 (1779.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.05	13.25	13.39	0	0
	1	2	13.18	13.43	13.45		0
	1	5	13.09	13.31	13.37		0
	3	0	13.13	13.28	13.41		0
	3	2	13.15	13.39	13.46		0
	3	3	13.09	13.33	13.39		0
	6	0	13.23	13.40	13.55	0-1	0
16QAM	1	0	13.32	13.52	13.54	0-1	0
	1	2	13.44	13.62	13.44		0
	1	5	13.40	13.59	13.56		0
	3	0	13.26	13.44	13.48		0
	3	2	13.33	13.55	13.54		0
	3	3	13.25	13.48	13.52		0
	6	0	13.29	13.50	13.65	0-2	0
64QAM	1	0	13.24	13.65	13.77	0-2	0
	1	2	13.31	13.70	13.72		0
	1	5	13.30	13.66	13.74		0
	3	0	13.21	13.58	13.74		0
	3	2	13.32	13.65	13.73		0
	3	3	13.29	13.64	13.75		0
	6	0	13.20	13.50	13.65	0-3	0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 49 of 124

8.3.7

LTE Band 2 (PCS)

Table 8-51
LTE Band 2 (PCS) Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18700 (1860.0 MHz)	18900 (1880.0 MHz)	19100 (1900.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.75	23.70	23.67	0	0
	1	50	23.64	23.70	23.58		0
	1	99	23.73	23.68	23.54		0
	50	0	22.89	22.81	22.67	0-1	1
	50	25	22.87	22.85	22.70		1
	50	50	22.88	22.84	22.69		1
	100	0	22.88	22.84	22.68		1
16QAM	1	0	23.30	22.94	23.16	0-1	1
	1	50	23.21	22.94	23.03		1
	1	99	23.28	22.91	23.02		1
	50	0	21.86	21.92	21.68	0-2	2
	50	25	21.88	21.90	21.68		2
	50	50	21.86	21.92	21.67		2
	100	0	21.92	21.87	21.70		2
64QAM	1	0	22.06	22.00	21.96	0-2	2
	1	50	21.92	22.01	22.16		2
	1	99	22.01	21.79	22.14		2
	50	0	20.91	20.90	20.66	0-3	3
	50	25	20.90	20.91	20.68		3
	50	50	20.89	20.95	20.67		3
	100	0	20.91	20.91	20.69		3

Table 8-52
LTE Band 2 (PCS) Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 2 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18675 (1857.5 MHz)	18900 (1880.0 MHz)	19125 (1902.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.66	23.58	23.45	0	0
	1	36	23.60	23.58	23.43		0
	1	74	23.71	23.65	23.41		0
	36	0	22.88	22.94	22.62	0-1	1
	36	18	22.92	22.97	22.58		1
	36	37	22.92	22.98	22.58		1
	75	0	22.90	22.96	22.63		1
16QAM	1	0	23.11	23.24	22.96	0-1	1
	1	36	22.97	23.30	22.86		1
	1	74	23.00	23.34	22.80		1
	36	0	21.88	22.02	21.68	0-2	2
	36	18	21.88	22.01	21.67		2
	36	37	21.91	22.03	21.62		2
	75	0	21.93	21.99	21.59		2
64QAM	1	0	21.55	22.25	21.88	0-2	2
	1	36	21.88	22.25	21.62		2
	1	74	22.02	21.75	21.09		2
	36	0	20.97	20.99	20.15	0-3	3
	36	18	20.98	21.00	20.54		3
	36	37	20.98	20.63	20.58		3
	75	0	20.96	21.01	20.43		3

FCC ID: A3LSMT865				Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 50 of 124

Table 8-53
LTE Band 2 (PCS) Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 2 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18650 (1855.0 MHz)	18900 (1880.0 MHz)	19150 (1905.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.58	23.73	23.48	0	0
	1	25	23.59	23.68	23.32		0
	1	49	23.66	23.74	23.27		0
	25	0	22.80	22.85	22.48	0-1	1
	25	12	22.80	22.85	22.45		1
	25	25	22.75	22.81	22.40		1
16QAM	50	0	22.77	22.79	22.40	0-1	1
	1	0	22.82	22.91	23.01		1
	1	25	22.84	22.84	22.81		1
	1	49	22.93	22.89	22.81	0-2	1
	25	0	21.86	21.90	21.48		2
	25	12	21.85	21.90	21.49		2
64QAM	25	25	21.81	21.86	21.42	0-2	2
	50	0	21.79	21.82	21.45		2
	1	0	21.80	21.96	21.88		0-2
	1	25	21.75	21.90	21.71	2	
	1	49	21.80	21.93	21.31	2	
	64QAM	25	0	20.88	20.96	20.54	0-3
25		12	20.87	20.99	20.54	3	
25		25	20.80	20.86	20.47	3	
50		0	20.82	20.87	20.46		3

Table 8-54
LTE Band 2 (PCS) Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 2 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18625 (1852.5 MHz)	18900 (1880.0 MHz)	19175 (1907.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.62	23.63	23.26	0	0
	1	12	23.61	23.74	23.34		0
	1	24	23.64	23.66	23.39		0
	12	0	22.75	22.71	22.42	0-1	1
	12	6	22.80	22.77	22.49		1
	12	13	22.77	22.75	22.47		1
16QAM	25	0	22.75	22.76	22.43	0-1	1
	1	0	22.87	22.90	22.68		1
	1	12	22.89	22.95	22.54		1
	1	24	22.80	22.93	22.52	0-2	1
	12	0	21.80	21.73	21.45		2
	12	6	21.82	21.83	21.50		2
64QAM	12	13	21.80	21.83	21.46	0-2	2
	25	0	21.73	21.75	21.42		2
	1	0	21.41	21.82	21.56		0-2
	1	12	21.85	21.85	21.40	2	
	1	24	21.81	21.95	20.87	2	
	64QAM	12	0	20.78	20.78	20.52	0-3
12		6	20.87	20.84	20.52	3	
12		13	20.84	20.80	20.22	3	
25		0	20.77	20.75	20.30		3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 51 of 124

Table 8-55
LTE Band 2 (PCS) Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 2 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18615 (1851.5 MHz)	18900 (1880.0 MHz)	19185 (1908.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.63	23.61	23.27	0	0
	1	7	23.66	23.70	23.35		0
	1	14	23.69	23.70	23.31		0
	8	0	22.74	22.71	22.39	0-1	1
	8	4	22.80	22.75	22.45		1
	8	7	22.78	22.74	22.43		1
	15	0	22.80	22.77	22.45		1
16QAM	1	0	22.88	22.79	22.50	0-1	1
	1	7	22.81	22.95	22.55		1
	1	14	22.85	22.90	22.56		1
	8	0	21.82	21.76	21.43	0-2	2
	8	4	21.83	21.83	21.50		2
	8	7	21.83	21.80	21.52		2
	15	0	21.78	21.77	21.40		2
64QAM	1	0	21.44	21.79	21.40	0-2	2
	1	7	21.85	21.94	21.11		2
	1	14	21.93	21.93	20.89		2
	8	0	20.63	20.79	20.33	0-3	3
	8	4	20.84	20.81	20.25		3
	8	7	20.85	20.85	20.04		3
	15	0	20.80	20.80	20.15		3

Table 8-56
LTE Band 2 (PCS) Maximum Conducted Powers -1.4 MHz Bandwidth

LTE Band 2 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18607 (1850.7 MHz)	18900 (1880.0 MHz)	19193 (1909.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.59	23.57	23.22	0	0
	1	2	23.65	23.70	23.39		0
	1	5	23.66	23.70	23.29		0
	3	0	23.57	23.60	23.25		0
	3	2	23.68	23.75	23.28		0
	3	3	23.58	23.67	23.26		0
	6	0	22.73	22.70	22.33	0-1	1
16QAM	1	0	22.80	22.76	22.50	0-1	1
	1	2	22.90	22.94	22.55		1
	1	5	22.88	22.92	22.52		1
	3	0	22.74	22.71	22.40		1
	3	2	22.80	22.90	22.45		1
	3	3	22.78	22.80	22.43		1
	6	0	21.80	21.78	21.43	0-2	2
64QAM	1	0	21.44	21.81	21.09	0-2	2
	1	2	21.69	21.90	21.06		2
	1	5	21.80	21.90	20.88		2
	3	0	21.56	21.76	21.10		2
	3	2	21.83	21.91	21.04		2
	3	3	21.82	21.87	20.88		2
	6	0	20.51	20.73	19.92	0-3	3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 52 of 124

Table 8-57
LTE Band 2 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 2 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18700 (1860.0 MHz)	18900 (1880.0 MHz)	19100 (1900.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.87	13.76	13.70	0	0
	1	50	13.72	13.79	13.57		0
	1	99	13.75	13.77	13.54		0
	50	0	13.93	13.93	13.72	0-1	0
	50	25	13.92	13.95	13.72		0
	50	50	13.87	13.90	13.65		0
	100	0	13.80	13.85	13.61		0
16QAM	1	0	14.35	14.22	14.25	0-1	0
	1	50	14.24	14.25	14.24		0
	1	99	14.30	14.24	14.25		0
	50	0	13.83	13.95	13.75	0-2	0
	50	25	13.87	13.98	13.72		0
	50	50	13.82	13.96	13.66		0
	100	0	13.87	13.96	13.68		0
64QAM	1	0	13.99	14.00	14.21	0-2	0
	1	50	13.92	14.03	14.17		0
	1	99	13.99	14.05	14.14		0
	50	0	13.86	13.89	13.68	0-3	0
	50	25	13.87	13.90	13.65		0
	50	50	13.83	13.92	13.65		0
	100	0	13.84	13.90	13.64		0

Table 8-58
LTE Band 2 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 2 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18675 (1857.5 MHz)	18900 (1880.0 MHz)	19125 (1902.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.57	13.75	13.56	0	0
	1	36	13.50	13.73	13.41		0
	1	74	13.45	13.70	13.48		0
	36	0	13.71	13.85	13.69	0-1	0
	36	18	13.75	13.89	13.72		0
	36	37	13.73	13.90	13.80		0
	75	0	13.73	13.86	13.69		0
16QAM	1	0	13.85	14.01	13.75	0-1	0
	1	36	13.75	13.90	13.77		0
	1	74	13.70	13.77	13.71		0
	36	0	13.75	13.85	13.64	0-2	0
	36	18	13.80	13.88	13.67		0
	36	37	13.73	13.86	13.65		0
	75	0	13.78	13.88	13.65		0
64QAM	1	0	13.94	13.84	13.65	0-2	0
	1	36	13.83	13.90	13.59		0
	1	74	13.77	13.90	13.67		0
	36	0	13.81	13.85	13.65	0-3	0
	36	18	13.78	13.88	13.68		0
	36	37	13.79	13.90	13.70		0
	75	0	13.80	13.93	13.65		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 53 of 124

Table 8-59
LTE Band 2 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 2 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18650 (1855.0 MHz)	18900 (1880.0 MHz)	19150 (1905.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.42	13.45	13.22	0	0
	1	25	13.54	13.56	13.21		0
	1	49	13.30	13.40	13.12		0
	25	0	13.58	13.70	13.40	0-1	0
	25	12	13.57	13.70	13.41		0
	25	25	13.53	13.66	13.34		0
16QAM	50	0	13.56	13.68	13.37	0-1	0
	1	0	13.70	13.65	13.35		0
	1	25	13.66	13.65	13.38		0
	1	49	13.50	13.57	13.24	0-2	0
	25	0	13.63	13.68	13.35		0
	25	12	13.64	13.80	13.36		0
64QAM	25	25	13.58	13.60	13.32	0-2	0
	50	0	13.60	13.68	13.32		0
	1	0	13.64	13.88	13.52		0-2
	1	25	13.75	13.85	13.52	0	
	1	49	13.58	13.85	13.42	0-3	
	25	0	13.62	13.80	13.40		0
25	12	13.63	13.81	13.41	0		
64QAM	25	25	13.55	13.77	13.34	0-3	0
	50	0	13.60	13.80	13.41		0

Table 8-60
LTE Band 2 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 2 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18625 (1852.5 MHz)	18900 (1880.0 MHz)	19175 (1907.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.30	13.34	13.18	0	0
	1	12	13.33	13.44	13.30		0
	1	24	13.25	13.40	13.16		0
	12	0	13.52	13.53	13.34	0-1	0
	12	6	13.55	13.63	13.41		0
	12	13	13.53	13.64	13.35		0
	25	0	13.52	13.56	13.39		0
16QAM	1	0	13.59	13.54	13.39	0-1	0
	1	12	13.62	13.67	13.35		0
	1	24	13.58	13.55	13.22		0
	12	0	13.55	13.55	13.31	0-2	0
	12	6	13.67	13.55	13.41		0
	12	13	13.58	13.59	13.37		0
	25	0	13.53	13.51	13.36		0
64QAM	1	0	13.66	13.72	13.46	0-2	0
	1	12	13.66	13.77	13.44		0
	1	24	13.70	13.70	13.41		0
	12	0	13.61	13.65	13.37	0-3	0
	12	6	13.69	13.67	13.42		0
	12	13	13.66	13.67	13.39		0
	25	0	13.64	13.67	13.40		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 54 of 124

Table 8-61
LTE Band 2 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 2 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18615 (1851.5 MHz)	18900 (1880.0 MHz)	19185 (1908.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.27	13.28	13.09	0	0
	1	7	13.35	13.44	13.15		0
	1	14	13.32	13.43	13.15		0
	8	0	13.47	13.49	13.32	0-1	0
	8	4	13.55	13.59	13.37		0
	8	7	13.56	13.64	13.37		0
	15	0	13.49	13.57	13.35		0
16QAM	1	0	13.55	13.44	13.27	0-1	0
	1	7	13.60	13.66	13.35		0
	1	14	13.61	13.59	13.28		0
	8	0	13.53	13.49	13.29	0-2	0
	8	4	13.65	13.56	13.34		0
	8	7	13.58	13.58	13.36		0
	15	0	13.55	13.50	13.31		0
64QAM	1	0	13.65	13.66	13.70	0-2	0
	1	7	13.68	13.74	13.66		0
	1	14	13.73	13.72	13.73		0
	8	0	13.61	13.61	13.42	0-3	0
	8	4	13.68	13.68	13.45		0
	8	7	13.63	13.66	13.43		0
	15	0	13.64	13.66	13.20		0

Table 8-62
LTE Band 2 (PCS) Reduced Conducted Powers – 1.4 MHz Bandwidth

LTE Band 2 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			18607 (1850.7 MHz)	18900 (1880.0 MHz)	19193 (1909.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.53	13.49	13.13	0	0
	1	2	13.65	13.64	13.24		0
	1	5	13.64	13.60	13.20		0
	3	0	13.50	13.46	13.05		0
	3	2	13.58	13.57	13.16		0
	3	3	13.57	13.52	13.13		0
	6	0	13.65	13.62	13.30	0-1	0
16QAM	1	0	13.48	13.38	12.99	0-1	0
	1	2	13.59	13.51	13.10		0
	1	5	13.60	13.50	13.08		0
	3	0	13.65	13.49	13.16		0
	3	2	13.74	13.64	13.24		0
	3	3	13.72	13.61	13.20		0
	6	0	13.70	13.58	13.25	0-2	0
64QAM	1	0	13.95	13.94	13.53	0-2	0
	1	2	14.08	14.10	13.62		0
	1	5	14.10	14.08	13.61		0
	3	0	13.83	13.76	13.34		0
	3	2	13.90	13.90	13.40		0
	3	3	13.85	13.86	13.35		0
	6	0	13.66	13.58	13.17	0-3	0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 55 of 124	

8.3.8

LTE Band 25 (PCS)

Table 8-63
LTE Band 25 (PCS) Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26140 (1860.0 MHz)	26365 (1882.5 MHz)	26590 (1905.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.30	23.17	23.17	0	0
	1	50	23.20	23.17	23.03		0
	1	99	23.38	23.20	23.07		0
	50	0	22.34	22.30	22.24	0-1	1
	50	25	22.29	22.27	22.23		1
	50	50	22.28	22.31	22.22		1
	100	0	22.33	22.33	22.23		1
16QAM	1	0	22.71	22.38	22.47	0-1	1
	1	50	22.11	22.41	22.30		1
	1	99	22.47	22.30	22.29		1
	50	0	21.33	21.31	21.18	0-2	2
	50	25	21.32	21.35	21.21		2
	50	50	21.26	21.30	21.18		2
	100	0	21.27	21.30	21.20		2
64QAM	1	0	21.53	21.57	21.04	0-2	2
	1	50	21.45	21.35	21.28		2
	1	99	21.43	20.89	21.38		2
	50	0	20.48	20.32	20.24	0-3	3
	50	25	20.36	20.33	20.29		3
	50	50	20.32	20.31	20.24		3
	100	0	20.33	20.31	20.20		3

Table 8-64
LTE Band 25 (PCS) Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26115 (1857.5 MHz)	26365 (1882.5 MHz)	26615 (1907.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.03	23.14	23.10	0	0
	1	36	23.02	23.10	23.06		0
	1	74	23.05	23.15	23.03		0
	36	0	22.26	22.28	22.26	0-1	1
	36	18	22.28	22.38	22.32		1
	36	37	22.28	22.36	22.28		1
	75	0	22.30	22.36	22.31		1
16QAM	1	0	22.46	22.57	22.43	0-1	1
	1	36	22.45	22.51	22.45		1
	1	74	22.45	22.50	22.40		1
	36	0	21.29	21.31	21.26	0-2	2
	36	18	21.32	21.36	21.32		2
	36	37	21.29	21.38	21.30		2
	75	0	21.28	21.33	21.31		2
64QAM	1	0	21.48	21.56	21.51	0-2	2
	1	36	21.40	21.44	21.40		2
	1	74	21.36	20.90	20.71		2
	36	0	20.31	20.35	20.31	0-3	3
	36	18	20.33	20.41	20.33		3
	36	37	20.30	20.34	20.12		3
	75	0	20.30	20.36	20.31		3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 56 of 124

Table 8-65
LTE Band 25 (PCS) Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26090 (1855.0 MHz)	26365 (1882.5 MHz)	26640 (1910.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.18	23.14	23.08	0	0
	1	25	23.10	23.10	23.05		0
	1	49	23.09	23.11	23.06		0
	25	0	22.12	22.15	22.05	0-1	1
	25	12	22.11	22.15	22.08		1
	25	25	22.10	22.18	22.05		1
	50	0	22.15	22.17	22.08		1
16QAM	1	0	22.37	22.35	22.15	0-1	1
	1	25	22.24	22.29	22.19		1
	1	49	22.09	22.25	22.22		1
	25	0	21.13	21.13	21.06	0-2	2
	25	12	21.13	21.16	21.07		2
	25	25	21.10	21.17	21.09		2
	50	0	21.11	21.17	21.08		2
64QAM	1	0	21.31	21.30	21.22	0-2	2
	1	25	21.25	21.22	21.13		2
	1	49	21.20	21.20	20.70		2
	25	0	20.13	20.18	20.08	0-3	3
	25	12	20.14	20.18	20.09		3
	25	25	20.10	20.16	19.77		3
	50	0	20.16	20.19	20.06		3

Table 8-66
LTE Band 25 (PCS) Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26065 (1852.5 MHz)	26365 (1882.5 MHz)	26665 (1912.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.12	23.05	22.96	0	0
	1	12	23.17	23.19	23.11		0
	1	24	23.20	23.26	22.80		0
	12	0	22.11	22.08	22.01	0-1	1
	12	6	22.21	22.00	22.12		1
	12	13	22.15	22.19	22.08		1
	25	0	22.14	22.10	22.09		1
16QAM	1	0	22.28	22.11	22.08	0-1	1
	1	12	22.30	22.20	22.24		1
	1	24	22.30	22.26	22.28		1
	12	0	21.18	21.07	21.02	0-2	2
	12	6	21.20	21.14	21.13		2
	12	13	21.21	21.16	21.15		2
	25	0	21.15	21.08	21.09		2
64QAM	1	0	21.27	21.22	21.08	0-2	2
	1	12	21.30	21.32	20.78		2
	1	24	21.30	21.35	20.72		2
	12	0	20.20	20.12	19.90	0-3	3
	12	6	20.22	20.18	19.82		3
	12	13	20.20	20.23	19.74		3
	25	0	20.16	20.11	19.70		3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 57 of 124

Table 8-67
LTE Band 25 (PCS) Maximum Conducted Powers - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26055 (1851.5 MHz)	26365 (1882.5 MHz)	26675 (1913.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.23	23.10	23.04	0	0
	1	7	23.26	23.26	23.18		0
	1	14	23.24	23.24	23.17		0
	8	0	22.22	22.11	22.06	0-1	1
	8	4	22.24	22.20	22.21		1
	8	7	22.23	22.23	22.19		1
16QAM	15	0	22.24	22.16	22.19	0-1	1
	1	0	22.32	22.25	22.18		1
	1	7	22.33	22.38	22.30		1
	1	14	22.40	22.34	22.30	0-2	1
	8	0	21.27	21.21	21.14		2
	8	4	21.33	21.23	21.28		2
64QAM	8	7	21.30	21.28	21.24	0-2	2
	15	0	21.24	21.16	21.16		2
	1	0	21.33	21.25	21.02	0-2	2
	1	7	21.37	21.36	21.00		2
	1	14	21.44	21.50	21.00		2
	64QAM	8	0	20.29	20.18	19.90	0-3
8		4	20.33	20.28	19.93	3	
8		7	20.21	20.32	19.95	3	
15		0	20.28	20.21	19.80	3	

Table 8-68
LTE Band 25 (PCS) Maximum Conducted Powers -1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26047 (1850.7 MHz)	26365 (1882.5 MHz)	26683 (1914.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	23.21	23.13	23.03	0	0
	1	2	23.28	23.23	23.16		0
	1	5	23.23	23.19	23.11		0
	3	0	22.82	22.80	22.68		0
	3	2	22.88	22.86	22.80		0
	3	3	22.85	22.82	22.76		0
	6	0	22.20	22.18	22.05	0-1	1
16QAM	1	0	22.29	22.28	22.14	0-1	1
	1	2	22.42	22.40	22.30		1
	1	5	22.33	22.35	22.20		1
	3	0	22.22	22.19	22.04		1
	3	2	22.28	22.26	22.18		1
	3	3	22.21	22.21	22.14	1	
64QAM	6	0	21.25	21.26	21.09	0-2	2
	1	0	21.33	21.27	20.84	0-2	2
	1	2	21.39	21.37	20.88		2
	1	5	21.30	21.29	20.78		2
	3	0	21.31	21.27	20.95		2
	3	2	21.37	21.31	21.00		2
	3	3	21.31	21.26	20.93		2
	6	0	20.21	20.20	19.75	0-3	3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 58 of 124

Table 8-69
LTE Band 25 (PCS) Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 25 (PCS) 20 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26140 (1860.0 MHz)	26365 (1882.5 MHz)	26590 (1905.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.34	13.50	13.49	0	0
	1	50	13.25	13.41	13.36		0
	1	99	13.29	13.38	13.41		0
	50	0	13.45	13.51	13.46	0-1	0
	50	25	13.43	13.49	13.48		0
	50	50	13.36	13.45	13.36		0
	100	0	13.45	13.40	13.42		0
16QAM	1	0	13.50	13.66	13.80	0-1	0
	1	50	13.37	13.61	13.71		0
	1	99	13.38	13.49	13.61		0
	50	0	13.43	13.57	13.49	0-2	0
	50	25	13.38	13.44	13.45		0
	50	50	13.37	13.36	13.34		0
	100	0	13.38	13.44	13.45		0
64QAM	1	0	13.87	13.73	13.66	0-2	0
	1	50	13.69	13.65	13.65		0
	1	99	13.85	13.64	13.59		0
	50	0	13.67	13.59	13.54	0-3	0
	50	25	13.75	13.63	13.59		0
	50	50	13.68	13.62	13.54		0
	100	0	13.63	13.59	13.55		0

Table 8-70
LTE Band 25 (PCS) Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 25 (PCS) 15 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26115 (1857.5 MHz)	26365 (1882.5 MHz)	26615 (1907.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.44	13.42	13.43	0	0
	1	36	13.37	13.50	13.32		0
	1	74	13.35	13.33	13.30		0
	36	0	13.58	13.64	13.60	0-1	0
	36	18	13.55	13.63	13.60		0
	36	37	13.48	13.58	13.53		0
	75	0	13.54	13.64	13.60		0
16QAM	1	0	13.74	13.70	13.64	0-1	0
	1	36	13.61	13.65	13.52		0
	1	74	13.55	13.69	13.49		0
	36	0	13.58	13.60	13.60	0-2	0
	36	18	13.55	13.58	13.60		0
	36	37	13.48	13.56	13.55		0
	75	0	13.50	13.63	13.58		0
64QAM	1	0	13.60	13.58	13.73	0-2	0
	1	36	13.61	13.71	13.63		0
	1	74	13.55	13.60	13.65		0
	36	0	13.57	13.55	13.59	0-3	0
	36	18	13.59	13.65	13.63		0
	36	37	13.57	13.65	13.59		0
	75	0	13.55	13.61	13.56		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 59 of 124

Table 8-71
LTE Band 25 (PCS) Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 25 (PCS) 10 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26090 (1855.0 MHz)	26365 (1882.5 MHz)	26640 (1910.0 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.18	13.27	13.22	0	0
	1	25	13.15	13.17	13.21		0
	1	49	13.08	13.19	13.20		0
	25	0	13.40	13.38	13.40	0-1	0
	25	12	13.36	13.41	13.43		0
	25	25	13.26	13.39	13.44		0
	50	0	13.32	13.38	13.42		0
16QAM	1	0	13.48	13.44	13.47	0-1	0
	1	25	13.29	13.35	13.41		0
	1	49	13.30	13.30	13.33		0
	25	0	13.34	13.36	13.48	0-2	0
	25	12	13.40	13.40	13.49		0
	25	25	13.31	13.36	13.42		0
	50	0	13.30	13.36	13.46		0
64QAM	1	0	13.57	13.60	13.44	0-2	0
	1	25	13.44	13.51	13.46		0
	1	49	13.35	13.48	13.48		0
	25	0	13.43	13.46	13.40	0-3	0
	25	12	13.44	13.47	13.40		0
	25	25	13.40	13.48	13.42		0
	50	0	13.44	13.48	13.40		0

Table 8-72
LTE Band 25 (PCS) Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 25 (PCS) 5 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26065 (1852.5 MHz)	26365 (1882.5 MHz)	26665 (1912.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.18	13.15	13.33	0	0
	1	12	13.19	13.22	13.40		0
	1	24	13.12	13.17	13.39		0
	12	0	13.40	13.33	13.43	0-1	0
	12	6	13.45	13.40	13.48		0
	12	13	13.38	13.40	13.52		0
	25	0	13.32	13.37	13.50		0
16QAM	1	0	13.41	13.35	13.55	0-1	0
	1	12	13.43	13.45	13.53		0
	1	24	13.35	13.32	13.62		0
	12	0	13.44	13.35	13.45	0-2	0
	12	6	13.50	13.31	13.50		0
	12	13	13.38	13.36	13.50		0
	25	0	13.36	13.32	13.48		0
64QAM	1	0	13.49	13.46	13.34	0-2	0
	1	12	13.55	13.56	13.56		0
	1	24	13.53	13.63	13.46		0
	12	0	13.44	13.40	13.33	0-3	0
	12	6	13.53	13.49	13.46		0
	12	13	13.53	13.46	13.48		0
	25	0	13.47	13.42	13.42		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 60 of 124

Table 8-73
LTE Band 25 (PCS) Reduced Conducted Powers - 3 MHz Bandwidth

LTE Band 25 (PCS) 3 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26055 (1851.5 MHz)	26365 (1882.5 MHz)	26675 (1913.5 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.35	13.28	13.17	0	0
	1	7	13.32	13.34	13.24		0
	1	14	13.32	13.37	13.20		0
	8	0	13.43	13.39	13.36	0-1	0
	8	4	13.45	13.49	13.40		0
	8	7	13.42	13.40	13.40		0
	15	0	13.48	13.46	13.39		0
16QAM	1	0	13.56	13.49	13.36	0-1	0
	1	7	13.56	13.52	13.44		0
	1	14	13.61	13.54	13.50		0
	8	0	13.45	13.36	13.39	0-2	0
	8	4	13.49	13.44	13.40		0
	8	7	13.50	13.38	13.49		0
	15	0	13.42	13.41	13.39		0
64QAM	1	0	13.44	13.40	13.36	0-2	0
	1	7	13.53	13.56	13.48		0
	1	14	13.50	13.53	13.55		0
	8	0	13.45	13.42	13.33	0-3	0
	8	4	13.55	13.46	13.44		0
	8	7	13.47	13.54	13.45		0
	15	0	13.48	13.42	13.50		0

Table 8-74
LTE Band 25 (PCS) Reduced Conducted Powers – 1.4 MHz Bandwidth

LTE Band 25 (PCS) 1.4 MHz Bandwidth							
Modulation	RB Size	RB Offset	Low Channel	Mid Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			26047 (1850.7 MHz)	26365 (1882.5 MHz)	26683 (1914.3 MHz)		
			Conducted Power [dBm]				
QPSK	1	0	13.14	13.23	13.32	0	0
	1	2	13.19	13.34	13.40		0
	1	5	13.10	13.30	13.35		0
	3	0	13.09	13.25	13.32		0
	3	2	13.16	13.36	13.39		0
	3	3	13.08	13.30	13.32		0
	6	0	13.27	13.36	13.49	0-1	0
16QAM	1	0	13.40	13.45	13.54	0-1	0
	1	2	13.38	13.50	13.56		0
	1	5	13.30	13.44	13.58		0
	3	0	13.26	13.33	13.50		0
	3	2	13.35	13.42	13.51		0
	3	3	13.30	13.34	13.48		0
	6	0	13.40	13.33	13.49	0-2	0
64QAM	1	0	13.49	13.44	13.35	0-2	0
	1	2	13.53	13.54	13.52		0
	1	5	13.52	13.47	13.35		0
	3	0	13.42	13.47	13.35		0
	3	2	13.52	13.50	13.47		0
	3	3	13.47	13.43	13.42		0
	6	0	13.40	13.40	13.30	0-3	0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 61 of 124

8.3.9

LTE Band 41

Table 8-75
LTE Band 41 Maximum Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.34	23.21	23.28	23.27	23.16	0	0
	1	50	23.24	23.15	23.29	23.04	23.31		0
	1	99	23.16	23.07	23.13	22.87	23.38		0
	50	0	22.41	22.36	22.46	22.31	22.46	0-1	1
	50	25	22.39	22.38	22.39	22.29	22.50		1
	50	50	22.41	22.32	22.33	22.24	22.55		1
	100	0	22.39	22.34	22.41	22.34	22.49		1
16QAM	1	0	22.37	22.37	22.34	22.33	22.29	0-1	1
	1	50	22.31	22.23	22.28	22.16	22.36		1
	1	99	22.25	22.19	22.16	21.97	22.51		1
	50	0	21.47	21.43	21.46	21.42	21.46	0-2	2
	50	25	21.48	21.45	21.43	21.36	21.53		2
	50	50	21.49	21.36	21.38	21.27	21.56		2
	100	0	21.42	21.41	21.44	21.36	21.57		2
64QAM	1	0	21.13	21.06	21.06	21.02	21.08	0-2	2
	1	50	21.01	20.96	21.00	20.89	21.04		2
	1	99	20.99	20.89	20.82	20.72	21.20		2
	50	0	20.53	20.46	20.48	20.44	20.52	0-3	3
	50	25	20.55	20.46	20.51	20.38	20.58		3
	50	50	20.52	20.38	20.43	20.28	20.62		3
	100	0	20.48	20.33	20.42	20.34	20.46		3

Table 8-76
LTE Band 41 Maximum Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.51	23.55	23.42	23.62	23.40	0	0
	1	36	23.45	23.50	23.40	23.48	23.40		0
	1	74	23.45	23.36	23.36	23.36	23.51		0
	36	0	22.66	22.76	22.56	22.75	22.57	0-1	1
	36	18	22.69	22.70	22.58	22.69	22.60		1
	36	37	22.66	22.74	22.54	22.62	22.60		1
	75	0	22.70	22.68	22.58	22.68	22.59		1
16QAM	1	0	22.93	22.93	22.78	22.98	22.36	0-1	1
	1	36	22.87	22.82	22.72	22.85	22.71		1
	1	74	22.84	22.69	22.63	22.69	22.76		1
	36	0	21.76	21.73	21.60	21.75	21.58	0-2	2
	36	18	21.74	21.72	21.63	21.73	21.59		2
	36	37	21.75	21.66	21.57	21.65	21.61		2
	75	0	21.74	21.70	21.59	21.68	21.58		2
64QAM	1	0	21.65	21.67	21.51	21.69	21.44	0-2	2
	1	36	21.57	21.60	21.46	21.57	21.44		2
	1	74	21.58	21.44	21.36	21.44	21.52		2
	36	0	20.71	20.72	20.54	20.73	20.55	0-3	3
	36	18	20.73	20.72	20.58	20.69	20.59		3
	36	37	20.71	20.62	20.55	20.62	20.57		3
	75	0	20.73	20.71	20.58	20.70	20.60		3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 62 of 124

Table 8-77
LTE Band 41 Maximum Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.33	23.52	23.36	23.49	23.36	0	0
	1	25	23.49	23.49	23.30	23.45	23.33		0
	1	49	23.46	23.44	23.25	23.38	23.28		0
	25	0	22.64	22.68	22.52	22.63	22.50	0-1	1
	25	12	22.62	22.64	22.53	22.63	22.49		1
	25	25	22.60	22.61	22.45	22.55	22.44		1
	50	0	22.61	22.65	22.50	22.60	22.49		1
16QAM	1	0	22.82	22.84	22.71	22.78	22.66	0-1	1
	1	25	22.75	22.77	22.64	22.74	22.61		1
	1	49	22.73	22.71	22.58	22.69	22.54		1
	25	0	21.57	21.57	21.45	21.53	21.40	0-2	2
	25	12	21.57	21.60	21.46	21.52	21.38		2
	25	25	21.52	21.55	21.39	21.50	21.35		2
	50	0	21.66	21.68	21.53	21.62	21.50		2
64QAM	1	0	21.57	21.61	21.46	21.54	21.40	0-2	2
	1	25	21.51	21.52	21.40	21.47	21.36		2
	1	49	21.50	21.47	21.33	21.41	21.28		2
	25	0	20.70	20.73	20.59	20.68	20.55	0-3	3
	25	12	20.69	20.70	20.57	20.67	20.55		3
	25	25	20.65	20.66	20.51	20.64	20.50		3
	50	0	20.63	20.67	20.54	20.62	20.49		3

Table 8-78
LTE Band 41 Maximum Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	23.45	23.53	23.43	23.47	23.32	0	0
	1	12	23.48	23.56	23.47	23.51	23.38		0
	1	24	23.51	23.54	23.44	23.49	23.40		0
	12	0	22.62	22.67	22.48	22.53	22.41	0-1	1
	12	6	22.67	22.69	22.60	22.58	22.45		1
	12	13	22.63	22.63	22.54	22.61	22.46		1
	25	0	22.64	22.64	22.53	22.55	22.40		1
16QAM	1	0	22.81	22.86	22.73	22.80	22.68	0-1	1
	1	12	22.85	22.82	22.74	22.78	22.70		1
	1	24	22.87	22.84	22.74	22.79	22.64		1
	12	0	21.71	21.72	21.55	21.59	21.46	0-2	2
	12	6	21.69	21.78	21.62	21.60	21.50		2
	12	13	21.68	21.74	21.55	21.64	21.51		2
	25	0	21.58	21.63	21.48	21.48	21.37		2
64QAM	1	0	21.62	21.57	21.48	21.50	21.43	0-2	2
	1	12	21.58	21.59	21.49	21.53	21.42		2
	1	24	21.62	21.60	21.51	21.54	21.44		2
	12	0	20.67	20.75	20.53	20.57	20.50	0-3	3
	12	6	20.75	20.74	20.63	20.64	20.51		3
	12	13	20.69	20.72	20.61	20.64	20.56		3
	25	0	20.70	20.70	20.60	20.59	20.48		3

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 63 of 124

Table 8-79
LTE Band 41 Reduced Conducted Powers - 20 MHz Bandwidth

LTE Band 41 20 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	14.72	14.47	14.64	14.41	14.43	0	0
	1	50	14.59	14.48	14.39	14.25	14.32		0
	1	99	14.64	14.57	14.26	14.23	14.20		0
	50	0	14.82	14.66	14.71	14.44	14.57	0-1	0
	50	25	14.85	14.69	14.61	14.47	14.54		0
	50	50	14.80	14.70	14.52	14.50	14.49		0
	100	0	14.71	14.60	14.63	14.45	14.51		0
16QAM	1	0	14.87	14.61	14.49	14.39	14.36	0-1	0
	1	50	14.77	14.48	14.45	14.28	14.39		0
	1	99	14.74	14.47	14.36	14.11	14.58		0
	50	0	14.90	14.64	14.61	14.45	14.64	0-2	0
	50	25	14.91	14.63	14.59	14.41	14.52		0
	50	50	14.89	14.57	14.52	14.33	14.61		0
	100	0	14.91	14.59	14.58	14.35	14.48		0
64QAM	1	0	14.50	14.28	14.14	14.07	14.10	0-2	0
	1	50	14.43	14.16	14.10	13.95	14.05		0
	1	99	14.37	14.11	13.95	13.87	14.23		0
	50	0	14.91	14.67	14.61	14.54	14.51	0-3	0
	50	25	14.93	14.66	14.60	14.42	14.56		0
	50	50	14.92	14.57	14.57	14.35	14.62		0
	100	0	14.85	14.57	14.55	14.41	14.48		0

Table 8-80
LTE Band 41 Reduced Conducted Powers - 15 MHz Bandwidth

LTE Band 41 15 MHz Bandwidth										
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]	
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)			
			Conducted Power [dBm]							
QPSK	1	0	14.58	14.69	14.72	14.69	14.52	0	0	
	1	36	14.56	14.60	14.56	14.57	14.50		0-1	0
	1	74	14.55	14.64	14.40	14.58	14.40			0
	36	0	14.70	14.76	14.77	14.76	14.66	0		
	36	18	14.72	14.80	14.74	14.78	14.65	0-1		0
	36	37	14.70	14.80	14.62	14.79	14.57		0	
	75	0	14.70	14.81	14.68	14.77	14.60		0	
16QAM	1	0	15.08	15.05	14.93	15.11	14.84	0-1	0	
	1	36	14.97	15.01	14.90	14.95	14.87		0-2	0
	1	74	14.99	14.85	14.81	14.82	14.95			0
	36	0	14.77	14.78	14.66	14.74	14.61	0		
	36	18	14.78	14.78	14.69	14.73	14.66	0-2		0
	36	37	14.78	14.70	14.65	14.66	14.65		0	
	75	0	14.78	14.76	14.67	14.72	14.63		0	
64QAM	1	0	14.67	14.70	14.58	14.68	14.46	0-2	0	
	1	36	14.56	14.60	14.49	14.59	14.49		0-3	0
	1	74	14.56	14.48	14.43	14.41	14.54			0
	36	0	14.74	14.75	14.67	14.78	14.61	0		
	36	18	14.74	14.73	14.68	14.75	14.63	0-3		0
	36	37	14.74	14.67	14.64	14.67	14.64		0	
	75	0	14.79	14.75	14.67	14.74	14.65		0	

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 64 of 124

Table 8-81
LTE Band 41 Reduced Conducted Powers - 10 MHz Bandwidth

LTE Band 41 10 MHz Bandwidth										
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]	
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)			
			Conducted Power [dBm]							
QPSK	1	0	14.48	14.57	14.42	14.55	14.37	0	0	
	1	25	14.47	14.51	14.40	14.50	14.37		0-1	0
	1	49	14.39	14.42	14.25	14.40	14.23			0
	25	0	14.60	14.63	14.59	14.66	14.54	0		
	25	12	14.57	14.65	14.55	14.60	14.50	0		
	25	25	14.51	14.59	14.48	14.55	14.46	0		
	50	0	14.59	14.62	14.53	14.60	14.67	0		
16QAM	1	0	14.89	14.93	14.81	14.88	14.79	0-1	0	
	1	25	14.86	14.93	14.77	14.86	14.76		0-2	0
	1	49	14.83	14.91	14.68	14.81	14.69			0
	25	0	14.55	14.85	14.47	14.54	14.42	0		
	25	12	14.54	14.59	14.48	14.52	14.44	0		
	25	25	14.50	14.60	14.40	14.47	14.36	0		
	50	0	14.63	14.68	14.57	14.62	14.51	0		
64QAM	1	0	14.54	14.58	14.45	14.50	14.42	0-2	0	
	1	25	14.45	14.52	14.37	14.45	14.36		0-3	0
	1	49	14.44	14.45	14.30	14.41	14.30			0
	25	0	14.69	14.72	14.59	14.67	14.60	0		
	25	12	14.65	14.73	14.60	14.68	14.55	0		
	25	25	14.61	14.67	14.54	14.62	14.50	0		
	50	0	14.62	14.65	14.57	14.64	14.53	0		

Table 8-82
LTE Band 41 Reduced Conducted Powers - 5 MHz Bandwidth

LTE Band 41 5 MHz Bandwidth									
Modulation	RB Size	RB Offset	Low Channel	Low-Mid Channel	Mid Channel	Mid-High Channel	High Channel	MPR Allowed per 3GPP [dB]	MPR [dB]
			39750 (2506.0 MHz)	40185 (2549.5 MHz)	40620 (2593.0 MHz)	41055 (2636.5 MHz)	41490 (2680.0 MHz)		
			Conducted Power [dBm]						
QPSK	1	0	14.39	14.44	14.54	14.42	14.24	0	0
	1	12	14.42	14.52	14.39	14.52	14.36		0
	1	24	14.35	14.46	14.26	14.38	14.24		0
	12	0	14.50	14.61	14.43	14.55	14.38	0-1	0
	12	6	14.50	14.60	14.47	14.53	14.50		0
	12	13	14.48	14.58	14.48	14.56	14.40		0
	25	0	14.52	14.57	14.44	14.50	14.45		0
16QAM	1	0	14.88	14.90	14.78	14.90	14.79	0-1	0
	1	12	14.87	14.91	14.79	14.88	14.79		0
	1	24	14.90	14.90	14.75	14.87	14.74		0
	12	0	14.61	14.68	14.47	14.55	14.44	0-2	0
	12	6	14.62	14.66	14.54	14.55	14.45		0
	12	13	14.60	14.65	14.51	14.60	14.51		0
	25	0	14.50	14.56	14.41	14.46	14.36		0
64QAM	1	0	14.46	14.53	14.37	14.41	14.37	0-2	0
	1	12	14.41	14.52	14.40	14.51	14.42		0
	1	24	14.46	14.52	14.40	14.50	14.42		0
	12	0	14.60	14.69	14.47	14.58	14.51	0-3	0
	12	6	14.68	14.67	14.60	14.61	14.51		0
	12	13	14.63	14.66	14.57	14.65	14.51		0
	25	0	14.63	14.67	14.55	14.56	14.47		0

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 65 of 124

8.4 WLAN Conducted Powers

Table 8-83
2.4 GHz WLAN Maximum Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11b	802.11g	802.11n
		Average	Average	Average
2412	1	17.84	14.75	12.35
2417	2	19.22	16.27	17.42
2422	3	N/A	17.34	18.84
2437	6	19.67	17.66	18.90
2447	8	N/A	N/A	18.86
2452	9	N/A	17.43	16.57
2457	10	19.53	15.58	16.28
2462	11	18.12	14.12	13.25

Table 8-84
2.4 GHz WLAN Maximum Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11b	802.11g	802.11n
		Average	Average	Average
2412	1	18.49	14.96	12.82
2417	2	19.73	16.37	17.32
2422	3	N/A	17.51	18.81
2437	6	19.65	17.62	18.95
2447	8	N/A	N/A	18.91
2452	9	N/A	17.54	16.64
2457	10	19.86	15.79	16.44
2462	11	18.25	13.75	13.28

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 66 of 124

Table 8-85
5 GHz WLAN Maximum Average RF Power – Ant 1

5GHz (20MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11a	802.11n	802.11ac
		Average	Average	Average
5180	36	17.59	17.98	12.98
5200	40	17.58	17.96	12.44
5220	44	17.76	17.85	12.79
5240	48	17.73	17.93	12.71
5260	52	17.82	17.95	12.83
5280	56	17.62	17.83	12.98
5300	60	17.67	17.94	12.62
5320	64	17.81	17.92	12.77
5500	100	17.72	17.99	12.64
5600	120	17.38	17.84	12.94
5620	124	17.49	17.80	12.50
5720	144	17.40	17.61	12.46
5745	149	17.51	17.81	12.61
5785	157	17.77	17.94	12.76
5825	165	17.50	17.64	12.53

Table 8-86
5 GHz WLAN Maximum Average RF Power – Ant 2

5GHz (20MHz) Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11a	802.11n	802.11ac
		Average	Average	Average
5180	36	17.82	17.86	12.64
5200	40	17.61	17.95	12.91
5220	44	17.57	17.99	12.94
5240	48	17.93	17.94	12.90
5260	52	17.80	17.89	12.64
5280	56	17.93	17.97	12.85
5300	60	17.57	17.70	12.50
5320	64	17.71	17.85	12.55
5500	100	17.70	17.83	12.59
5600	120	17.64	17.65	12.51
5620	124	17.93	17.86	12.82
5720	144	17.96	17.93	12.53
5745	149	17.95	17.94	12.57
5785	157	17.95	17.96	12.57
5825	165	17.58	17.87	12.62

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 67 of 124

Table 8-87
2.4 GHz WLAN Reduced Average RF Power – Ant 1

2.4GHz Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11b	802.11g	802.11n
		Average	Average	Average
2412	1	12.84	12.86	12.74
2437	6	12.80	12.84	12.75
2462	11	13.46	13.36	13.24

Table 8-88
2.4 GHz WLAN Reduced Average RF Power – Ant 2

2.4GHz Conducted Power [dBm]				
Freq [MHz]	Channel	IEEE Transmission Mode		
		802.11b	802.11g	802.11n
		Average	Average	Average
2412	1	13.03	13.00	12.90
2437	6	12.94	12.77	12.63
2462	11	12.87	12.84	12.67

Table 8-89
5 GHz WLAN Reduced Average RF Power – Ant 1

5GHz (80MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11ac
		Average
5210	42	9.98
5290	58	9.94
5530	106	9.95
5610	122	9.79
5690	138	9.74
5775	155	9.90

Table 8-90
5 GHz WLAN Reduced Average RF Power – Ant 2

5GHz (80MHz) Conducted Power [dBm]		
Freq [MHz]	Channel	IEEE Transmission Mode
		802.11ac
		Average
5210	42	9.98
5290	58	9.99
5530	106	9.91
5610	122	9.87
5690	138	9.98
5775	155	9.99

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 68 of 124

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission modes with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

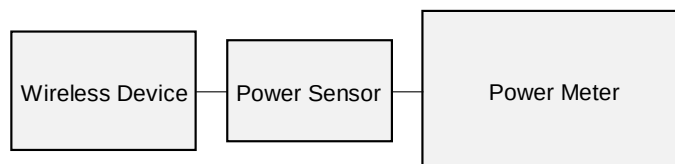


Figure 8-3
Power Measurement Setup

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 69 of 124

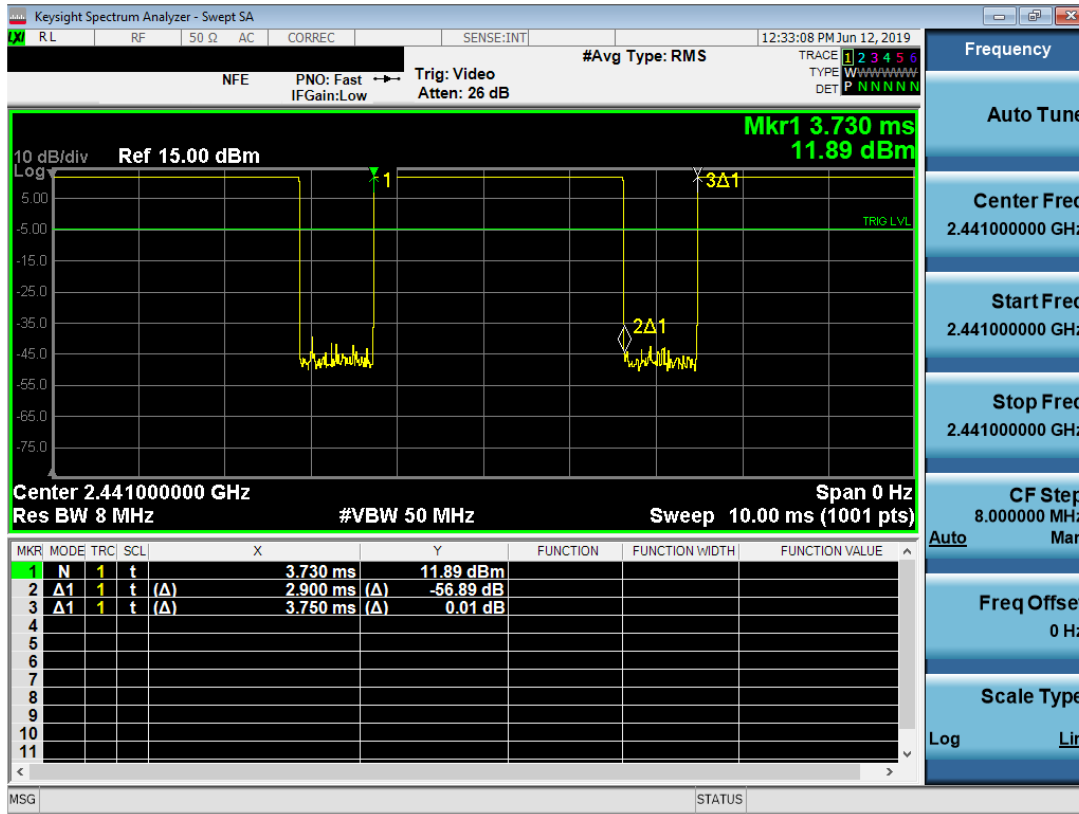
8.5 Bluetooth Conducted Powers

Table 8-91
Bluetooth Average RF Power

Frequency [MHz]	Data Rate [Mbps]	Channel No.	Avg Conducted Power	
			[dBm]	[mW]
2402	1.0	0	12.82	19.157
2441	1.0	39	12.98	19.844
2480	1.0	78	12.48	17.683
2402	2.0	0	10.73	11.837
2441	2.0	39	10.37	10.883
2480	2.0	78	10.08	10.195
2402	3.0	0	10.78	11.979
2441	3.0	39	10.42	11.019
2480	3.0	78	10.14	10.326

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 70 of 124

Figure 8-4
Bluetooth Transmission Plot



Equation 8-1
Bluetooth Duty Cycle Calculation

$$Duty\ Cycle = \frac{Pulse\ Width}{Period} * 100\% = \frac{2.90\ ms}{3.75\ ms} * 100\% = 77.3\%$$

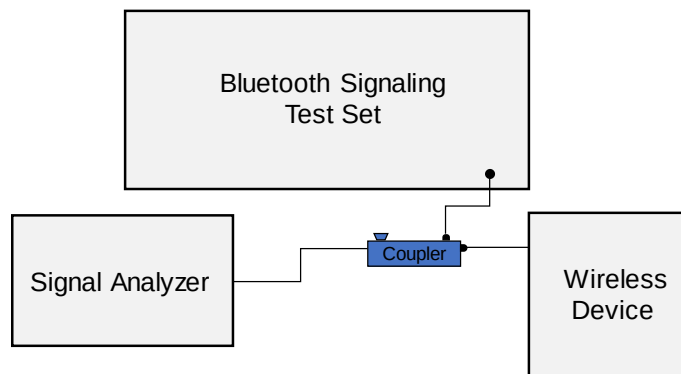


Figure 8-5
Power Measurement Setup

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 71 of 124	

9.1 Tissue Verification

Table 9-1
Measured Tissue Properties

Calibrated for Tests Performed on:	Tissue Type	Tissue Temp During Calibration (°C)	Measured Frequency (MHz)	Measured Conductivity, σ (S/m)	Measured Dielectric Constant, ϵ	TARGET Conductivity, σ (S/m)	TARGET Dielectric Constant, ϵ	% dev σ	% dev ϵ
7/2/2019	750B	23.6	695	0.923	57.653	0.959	55.745	-3.75%	3.42%
			700	0.924	57.619	0.959	55.726	-3.65%	3.40%
			710	0.929	57.629	0.960	55.687	-3.23%	3.49%
			740	0.940	57.563	0.963	55.570	-2.39%	3.59%
			755	0.947	57.543	0.964	55.512	-1.76%	3.66%
			770	0.951	57.523	0.965	55.453	-1.45%	3.73%
			785	0.956	57.480	0.966	55.395	-1.04%	3.76%
6/10/2019	835B	20.0	820	0.977	54.093	0.969	55.258	0.83%	-2.11%
			835	0.983	54.072	0.970	55.200	1.34%	-2.04%
			850	0.990	54.043	0.988	55.154	0.20%	-2.01%
7/1/2019	835B	22.1	820	0.945	56.950	0.969	55.258	-2.48%	3.06%
			835	0.951	56.942	0.970	55.200	-1.96%	3.16%
			850	0.957	56.918	0.988	55.154	-3.14%	3.20%
7/3/2019	835B	20.4	820	0.967	55.380	0.969	55.258	-0.21%	0.22%
			835	0.972	55.349	0.970	55.200	0.21%	0.27%
			850	0.978	55.303	0.988	55.154	-1.01%	0.27%
7/9/2019	835B	20.0	820	0.965	55.272	0.969	55.258	-0.41%	0.03%
			835	0.971	55.240	0.970	55.200	0.10%	0.07%
			850	0.977	55.186	0.988	55.154	-1.11%	0.06%
7/1/2019	1750B	21.5	1710	1.460	52.571	1.463	53.537	-0.21%	-1.80%
			1750	1.505	52.424	1.488	53.432	1.14%	-1.89%
			1790	1.551	52.287	1.514	53.326	2.44%	-1.95%
6/10/2019	1900B	23.7	1850	1.519	52.304	1.520	53.300	-0.07%	-1.87%
			1880	1.554	52.184	1.520	53.300	2.24%	-2.09%
			1910	1.588	52.087	1.520	53.300	4.47%	-2.28%
6/12/2019	1900B	23.2	1850	1.510	51.888	1.520	53.300	-0.66%	-2.65%
			1880	1.542	51.791	1.520	53.300	1.45%	-2.83%
			1910	1.575	51.706	1.520	53.300	3.62%	-2.99%
7/1/2019	1900B	22.7	1850	1.503	51.182	1.520	53.300	-1.12%	-3.97%
			1880	1.536	51.067	1.520	53.300	1.05%	-4.19%
			1910	1.570	50.971	1.520	53.300	3.29%	-4.37%
6/12/2019	2450B	21.8	2400	1.988	52.651	1.902	52.767	4.52%	-0.22%
			2450	2.033	52.570	1.950	52.700	4.26%	-0.25%
			2500	2.080	52.522	2.021	52.636	2.92%	-0.22%
			2550	2.127	52.435	2.092	52.573	1.67%	-0.26%
			2600	2.177	52.375	2.163	52.509	0.65%	-0.26%
			2650	2.227	52.291	2.234	52.445	-0.31%	-0.29%
			2700	2.276	52.194	2.305	52.382	-1.26%	-0.36%
7/10/2019	2450B	23.0	2400	1.979	51.763	1.902	52.767	4.05%	-1.90%
			2450	2.035	51.648	1.950	52.700	4.36%	-2.00%
			2500	2.094	51.512	2.021	52.636	3.61%	-2.14%
06/27/2019	5200B-5800B	22.1	5180	5.352	48.703	5.276	49.041	1.44%	-0.69%
			5200	5.385	48.659	5.299	49.014	1.62%	-0.72%
			5220	5.415	48.610	5.323	48.987	1.73%	-0.77%
			5240	5.442	48.567	5.346	48.960	1.80%	-0.80%
			5260	5.465	48.532	5.369	48.933	1.79%	-0.82%
			5280	5.493	48.504	5.393	48.906	1.85%	-0.82%
			5300	5.524	48.466	5.416	48.879	1.99%	-0.84%
			5320	5.560	48.429	5.439	48.851	2.22%	-0.86%
			5500	5.813	48.090	5.650	48.607	2.88%	-1.06%
			5520	5.850	48.051	5.673	48.580	3.12%	-1.09%
			5540	5.886	47.997	5.696	48.553	3.34%	-1.15%
			5560	5.917	47.968	5.720	48.526	3.44%	-1.15%
			5580	5.951	47.943	5.743	48.499	3.62%	-1.15%
			5600	5.972	47.912	5.766	48.471	3.57%	-1.15%
			5620	5.998	47.848	5.790	48.444	3.59%	-1.23%
			5640	6.033	47.789	5.813	48.417	3.78%	-1.30%
			5660	6.071	47.763	5.837	48.390	4.01%	-1.30%
			5680	6.102	47.735	5.860	48.363	4.13%	-1.30%
			5700	6.135	47.729	5.883	48.336	4.28%	-1.26%
			5745	6.197	47.605	5.936	48.275	4.40%	-1.39%
			5765	6.228	47.556	5.959	48.248	4.51%	-1.43%
			5785	6.268	47.514	5.982	48.220	4.78%	-1.46%
			5800	6.292	47.512	6.000	48.200	4.87%	-1.43%
			5805	6.298	47.519	6.006	48.193	4.86%	-1.40%
			5825	6.323	47.483	6.029	48.166	4.88%	-1.42%

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies (per KDB Publication 865664 D01v01r04 and IEEE 1528-2013 6.6.1.2). The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 72 of 124

9.2 Test System Verification

Prior to SAR assessment, the system is verified to $\pm 10\%$ of the SAR measurement on the reference dipole at the time of calibration by the calibration facility. Full system validation status and result summary can be found in Appendix E.

Table 9-2
System Verification Results

System Verification TARGET & MEASURED												
SAR System #	Tissue Frequency (MHz)	Tissue Type	Date	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (W)	Source SN	Probe SN	Measured SAR _{1g} (W/kg)	1 W Target SAR _{1g} (W/kg)	1 W Normalized SAR _{1g} (W/kg)	Deviation _{1g} (%)
D	750	BODY	07/02/2019	23.6	22.6	0.200	1003	3914	1.690	8.580	8.450	-1.52%
J	835	BODY	06/10/2019	20.5	20.0	0.200	4d132	7488	1.900	9.670	9.500	-1.76%
D	835	BODY	07/01/2019	22.8	22.1	0.200	4d132	3914	2.030	9.670	10.150	4.96%
O	835	BODY	07/03/2019	22.0	20.4	0.200	4d047	7538	1.950	9.470	9.750	2.96%
O	835	BODY	07/09/2019	20.3	20.0	0.200	4d047	7538	2.040	9.470	10.200	7.71%
I	1750	BODY	07/01/2019	22.7	21.0	0.100	1150	7357	3.970	36.600	39.700	8.47%
G	1900	BODY	06/10/2019	22.0	22.1	0.100	5d148	7410	4.030	39.100	40.300	3.07%
G	1900	BODY	06/12/2019	22.6	22.0	0.100	5d149	7410	3.980	39.400	39.800	1.02%
J	1900	BODY	07/01/2019	20.7	22.7	0.100	5d080	7488	4.080	39.200	40.800	4.08%
L	2450	BODY	06/12/2019	22.8	21.8	0.100	981	7308	5.130	50.900	51.300	0.79%
K	2450	BODY	07/10/2019	22.7	22.5	0.100	719	7417	5.140	50.100	51.400	2.59%
L	2600	BODY	06/12/2019	22.8	21.8	0.100	1004	7308	5.730	54.800	57.300	4.56%
L	5250	BODY	06/27/2019	23.5	21.1	0.050	1191	7308	3.710	77.000	74.200	-3.64%
L	5600	BODY	06/27/2019	23.5	21.1	0.050	1191	7308	3.890	79.200	77.800	-1.77%
L	5750	BODY	06/27/2019	23.5	21.1	0.050	1191	7308	3.580	76.100	71.600	-5.91%

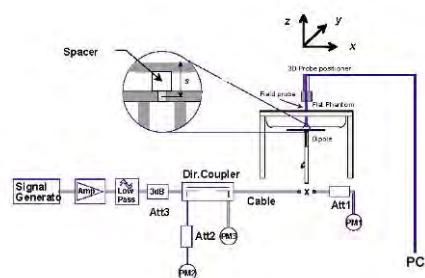


Figure 9-1
System Verification Setup Diagram



Figure 9-2
System Verification Setup Photo

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 73 of 124

10 SAR DATA SUMMARY

10.1 Standalone Body SAR Data

Table 10-1
GPRS/UMTS Body SAR Data

MEASUREMENT RESULTS																	
FREQUENCY		Mode	Service	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Power Drift (dB)	Spacing	Ant State	Device Serial Number	# of Time Slots	Duty Cycle	Side	SAR (lg)	Scaling Factor	Reported SAR (lg)	Plot #	
MHz	Ch.												(W/kg)		(W/kg)		
824.20	128	GSM 850	GPRS	30.5	29.80	-0.08	16 mm	N/A	29093	3	1.2/76	back	0.712	1.175	0.837		
836.60	190	GSM 850	GPRS	30.5	29.65	-0.02	16 mm	N/A	29093	3	1.2/76	back	0.677	1.216	0.823		
848.80	251	GSM 850	GPRS	30.5	29.79	-0.12	16 mm	N/A	29093	3	1.2/76	back	0.707	1.178	0.833		
824.20	128	GSM 850	GPRS	30.5	29.80	-0.05	17 mm	N/A	29093	3	1.2/76	top	0.876	1.175	1.029	A1	
836.60	190	GSM 850	GPRS	30.5	29.65	0.01	17 mm	N/A	29093	3	1.2/76	top	0.795	1.216	0.967		
848.80	251	GSM 850	GPRS	30.5	29.79	-0.11	17 mm	N/A	29093	3	1.2/76	top	0.758	1.178	0.893		
836.60	190	GSM 850	GPRS	30.5	29.65	-0.01	0 mm	N/A	29093	3	1.2/76	right	0.228	1.216	0.277		
836.60	190	GSM 850	GPRS	30.5	29.65	0.10	0 mm	N/A	29093	3	1.2/76	left	0.200	1.216	0.243		
836.60	190	GSM 850	GPRS	22.0	20.93	0.01	0 mm	N/A	29093	3	1.2/76	back	0.409	1.279	0.523		
836.60	190	GSM 850	GPRS	22.0	20.93	-0.05	0 mm	N/A	29093	3	1.2/76	top	0.404	1.279	0.517		
1880.00	661	GSM 1900	GPRS	27.0	26.15	0.02	16 mm	N/A	29143	3	1.2/76	back	0.458	1.216	0.557		
1880.00	661	GSM 1900	GPRS	27.0	26.15	0.05	17 mm	N/A	29143	3	1.2/76	top	0.549	1.216	0.668		
1880.00	661	GSM 1900	GPRS	27.0	26.15	0.18	0 mm	N/A	29143	3	1.2/76	right	0.023	1.216	0.028		
1880.00	661	GSM 1900	GPRS	27.0	26.15	0.08	0 mm	N/A	29143	3	1.2/76	left	0.146	1.216	0.178		
1850.20	512	GSM 1900	GPRS	18.5	17.25	-0.04	0 mm	N/A	29143	3	1.2/76	back	0.768	1.334	1.025	A2	
1880.00	661	GSM 1900	GPRS	18.5	17.45	-0.01	0 mm	N/A	29143	3	1.2/76	back	0.753	1.274	0.959		
1909.80	810	GSM 1900	GPRS	18.5	17.08	-0.03	0 mm	N/A	29143	3	1.2/76	back	0.686	1.387	0.951		
1880.00	661	GSM 1900	GPRS	18.5	17.45	-0.06	0 mm	N/A	29143	3	1.2/76	top	0.433	1.274	0.552		
836.60	4183	UMTS 850	RMC	25.0	24.25	-0.01	16 mm	54	29143	N/A	1.1	back	0.463	1.189	0.551		
836.60	4183	UMTS 850	RMC	25.0	24.25	0.00	17 mm	54	29143	N/A	1.1	top	0.656	1.189	0.780		
836.60	4183	UMTS 850	RMC	25.0	24.25	0.00	0 mm	54	29143	N/A	1.1	right	0.194	1.189	0.231		
836.60	4183	UMTS 850	RMC	25.0	24.25	0.04	0 mm	54	29143	N/A	1.1	left	0.131	1.189	0.156		
826.40	4132	UMTS 850	RMC	18.0	17.73	-0.02	0 mm	54	29168	N/A	1.1	back	0.970	1.064	1.032		
836.60	4183	UMTS 850	RMC	18.0	17.84	-0.02	0 mm	54	29168	N/A	1.1	back	1.020	1.038	1.059		
846.60	4233	UMTS 850	RMC	18.0	17.82	-0.03	0 mm	54	29168	N/A	1.1	back	0.987	1.042	1.028		
826.40	4132	UMTS 850	RMC	18.0	17.73	-0.01	0 mm	54	29168	N/A	1.1	top	1.140	1.064	1.213	A3	
836.60	4183	UMTS 850	RMC	18.0	17.84	-0.01	0 mm	54	29168	N/A	1.1	top	1.100	1.038	1.142		
846.60	4233	UMTS 850	RMC	18.0	17.82	0.00	0 mm	54	29168	N/A	1.1	top	1.030	1.042	1.073		
826.40	4132	UMTS 850	RMC	18.0	17.73	-0.02	0 mm	54	29168	N/A	1.1	top	1.110	1.064	1.181		
1712.40	1312	UMTS 1750	RMC	24.5	23.03	0.03	16 mm	25	29085	N/A	1.1	back	0.672	1.403	0.943		
1732.40	1412	UMTS 1750	RMC	24.5	23.32	0.01	16 mm	25	29085	N/A	1.1	back	0.735	1.312	0.964		
1752.60	1513	UMTS 1750	RMC	24.5	23.41	-0.01	16 mm	25	29085	N/A	1.1	back	0.754	1.285	0.969		
1712.40	1312	UMTS 1750	RMC	24.5	23.03	-0.02	17 mm	25	29085	N/A	1.1	top	0.888	1.403	1.246		
1732.40	1412	UMTS 1750	RMC	24.5	23.32	0.00	17 mm	25	29085	N/A	1.1	top	0.978	1.312	1.283		
1752.60	1513	UMTS 1750	RMC	24.5	23.41	-0.02	17 mm	25	29085	N/A	1.1	top	0.990	1.285	1.272	A4	
1732.40	1412	UMTS 1750	RMC	24.5	23.32	0.12	0 mm	25	29085	N/A	1.1	right	0.070	1.312	0.092		
1732.40	1412	UMTS 1750	RMC	24.5	23.32	0.07	0 mm	25	29085	N/A	1.1	left	0.127	1.312	0.167		
1712.40	1312	UMTS 1750	RMC	14.0	12.83	0.00	0 mm	25	29085	N/A	1.1	back	0.846	1.309	1.107		
1732.40	1412	UMTS 1750	RMC	14.0	13.07	-0.01	0 mm	25	29085	N/A	1.1	back	0.875	1.239	1.084		
1752.60	1513	UMTS 1750	RMC	14.0	13.21	0.01	0 mm	25	29085	N/A	1.1	back	0.861	1.199	1.032		
1732.40	1412	UMTS 1750	RMC	14.0	13.07	0.06	0 mm	25	29085	N/A	1.1	top	0.426	1.239	0.528		
1880.00	9400	UMTS 1900	RMC	24.5	23.42	-0.02	16 mm	34	29085	N/A	1.1	back	0.614	1.282	0.787		
1852.40	9262	UMTS 1900	RMC	24.5	23.39	-0.03	17 mm	34	29085	N/A	1.1	top	0.650	1.291	0.839		
1880.00	9400	UMTS 1900	RMC	24.5	23.42	-0.01	17 mm	34	29085	N/A	1.1	top	0.827	1.282	1.060		
1907.60	9538	UMTS 1900	RMC	24.5	23.16	-0.03	17 mm	34	29085	N/A	1.1	top	0.872	1.361	1.187		
1880.00	9400	UMTS 1900	RMC	24.5	23.42	-0.01	0 mm	34	29085	N/A	1.1	right	0.039	1.282	0.050		
1880.00	9400	UMTS 1900	RMC	24.5	23.42	-0.12	0 mm	34	29085	N/A	1.1	left	0.182	1.282	0.233		
1852.40	9262	UMTS 1900	RMC	14.0	13.33	-0.03	0 mm	34	29143	N/A	1.1	back	0.875	1.167	1.021	A5	
1880.00	9400	UMTS 1900	RMC	14.0	13.36	0.01	0 mm	34	29143	N/A	1.1	back	0.864	1.159	1.001		
1907.60	9538	UMTS 1900	RMC	14.0	13.02	-0.03	0 mm	34	29143	N/A	1.1	back	0.779	1.253	0.976		
1880.00	9400	UMTS 1900	RMC	14.0	13.36	-0.04	0 mm	34	29143	N/A	1.1	top	0.403	1.159	0.467		
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body							
Spatial Peak										1.6 W/kg (mW/g)							
Uncontrolled Exposure/General Population										averaged over 1 gram							

Note: Blue entry represents variability measurement.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 74 of 124

Table 10-2
LTE Band 12 Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Ant State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
707.50	23095	Mid	LTE Band 12	10	50	25.0	24.23	-0.05	0	29168	QPSK	1	0	16 mm	back	1:1	0.245	1.194	0.293	
707.50	23095	Mid	LTE Band 12	10	50	24.0	23.44	0.03	1	29168	QPSK	25	25	16 mm	back	1:1	0.191	1.138	0.217	
707.50	23095	Mid	LTE Band 12	10	50	25.0	24.23	0.03	0	29168	QPSK	1	0	17 mm	top	1:1	0.204	1.194	0.244	
707.50	23095	Mid	LTE Band 12	10	50	24.0	23.44	0.01	1	29168	QPSK	25	25	17 mm	top	1:1	0.187	1.138	0.213	
707.50	23095	Mid	LTE Band 12	10	50	25.0	24.23	0.11	0	29168	QPSK	1	0	0 mm	right	1:1	0.107	1.194	0.128	
707.50	23095	Mid	LTE Band 12	10	50	24.0	23.44	0.09	1	29168	QPSK	25	25	0 mm	right	1:1	0.079	1.138	0.090	
707.50	23095	Mid	LTE Band 12	10	50	25.0	24.23	-0.10	0	29168	QPSK	1	0	0 mm	left	1:1	0.092	1.194	0.110	
707.50	23095	Mid	LTE Band 12	10	50	24.0	23.44	0.00	1	29168	QPSK	25	25	0 mm	left	1:1	0.067	1.138	0.076	
707.50	23095	Mid	LTE Band 12	10	50	18.0	17.30	-0.07	0	29168	QPSK	1	0	0 mm	back	1:1	0.610	1.175	0.717	
707.50	23095	Mid	LTE Band 12	10	50	18.0	17.37	-0.03	0	29168	QPSK	25	0	0 mm	back	1:1	0.633	1.156	0.732	
707.50	23095	Mid	LTE Band 12	10	50	18.0	17.30	-0.17	0	29168	QPSK	1	0	0 mm	top	1:1	0.659	1.175	0.774	
707.50	23095	Mid	LTE Band 12	10	50	18.0	17.37	-0.13	0	29168	QPSK	25	0	0 mm	top	1:1	0.691	1.156	0.799	A6
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram											

Table 10-3
LTE Band 17 Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Ant State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
710.00	23790	Mid	LTE Band 17	10	50	25.5	24.93	0.06	0	29168	QPSK	1	0	16 mm	back	1:1	0.271	1.140	0.309	
710.00	23790	Mid	LTE Band 17	10	50	24.5	24.31	0.00	1	29168	QPSK	25	0	16 mm	back	1:1	0.215	1.045	0.225	
710.00	23790	Mid	LTE Band 17	10	50	25.5	24.93	-0.01	0	29168	QPSK	1	0	17 mm	top	1:1	0.238	1.140	0.271	
710.00	23790	Mid	LTE Band 17	10	50	24.5	24.31	0.01	1	29168	QPSK	25	0	17 mm	top	1:1	0.189	1.045	0.198	
710.00	23790	Mid	LTE Band 17	10	50	25.5	24.93	0.02	0	29168	QPSK	1	0	0 mm	right	1:1	0.123	1.140	0.140	
710.00	23790	Mid	LTE Band 17	10	50	24.5	24.31	0.00	1	29168	QPSK	25	0	0 mm	right	1:1	0.097	1.045	0.101	
710.00	23790	Mid	LTE Band 17	10	50	25.5	24.93	-0.14	0	29168	QPSK	1	0	0 mm	left	1:1	0.108	1.140	0.123	
710.00	23790	Mid	LTE Band 17	10	50	24.5	24.31	0.01	1	29168	QPSK	25	0	0 mm	left	1:1	0.080	1.045	0.084	
710.00	23790	Mid	LTE Band 17	10	50	18.5	17.69	-0.08	0	29168	QPSK	1	49	0 mm	back	1:1	0.658	1.205	0.793	
710.00	23790	Mid	LTE Band 17	10	50	18.5	17.75	-0.01	0	29168	QPSK	25	12	0 mm	back	1:1	0.687	1.189	0.817	
710.00	23790	Mid	LTE Band 17	10	50	18.5	17.47	-0.04	0	29168	QPSK	50	0	0 mm	back	1:1	0.666	1.268	0.844	
710.00	23790	Mid	LTE Band 17	10	50	18.5	17.69	-0.11	0	29168	QPSK	1	49	0 mm	top	1:1	0.823	1.205	0.992	A7
710.00	23790	Mid	LTE Band 17	10	50	18.5	17.75	-0.03	0	29168	QPSK	25	12	0 mm	top	1:1	0.805	1.189	0.957	
710.00	23790	Mid	LTE Band 17	10	50	18.5	17.47	-0.02	0	29168	QPSK	50	0	0 mm	top	1:1	0.786	1.268	0.997	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT									Body											
Spatial Peak									1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population									averaged over 1 gram											

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 75 of 124

Table 10-4
LTE Band 13 Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Ant State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
782.00	23230	Mid	LTE Band 13	10	52	25.0	24.46	-0.01	0	29168	QPSK	1	0	16 mm	back	1:1	0.374	1.132	0.423	
782.00	23230	Mid	LTE Band 13	10	52	24.0	23.44	0.00	1	29168	QPSK	25	12	16 mm	back	1:1	0.304	1.138	0.346	
782.00	23230	Mid	LTE Band 13	10	52	25.0	24.46	-0.02	0	29168	QPSK	1	0	17 mm	top	1:1	0.442	1.132	0.500	
782.00	23230	Mid	LTE Band 13	10	52	24.0	23.44	0.00	1	29168	QPSK	25	12	17 mm	top	1:1	0.351	1.138	0.399	
782.00	23230	Mid	LTE Band 13	10	52	25.0	24.46	0.04	0	29168	QPSK	1	0	0 mm	right	1:1	0.143	1.132	0.162	
782.00	23230	Mid	LTE Band 13	10	52	24.0	23.44	0.08	1	29168	QPSK	25	12	0 mm	right	1:1	0.124	1.138	0.141	
782.00	23230	Mid	LTE Band 13	10	52	25.0	24.46	-0.01	0	29168	QPSK	1	0	0 mm	left	1:1	0.119	1.132	0.135	
782.00	23230	Mid	LTE Band 13	10	52	24.0	23.44	0.02	1	29168	QPSK	25	12	0 mm	left	1:1	0.094	1.138	0.107	
782.00	23230	Mid	LTE Band 13	10	52	19.0	18.21	0.04	0	29168	QPSK	1	0	0 mm	back	1:1	0.852	1.199	1.022	
782.00	23230	Mid	LTE Band 13	10	52	19.0	18.30	-0.01	0	29168	QPSK	25	0	0 mm	back	1:1	0.849	1.175	0.998	
782.00	23230	Mid	LTE Band 13	10	52	19.0	18.21	-0.01	0	29168	QPSK	50	0	0 mm	back	1:1	0.846	1.199	1.014	
782.00	23230	Mid	LTE Band 13	10	52	19.0	18.21	-0.07	0	29168	QPSK	1	0	0 mm	top	1:1	1.070	1.199	1.283	
782.00	23230	Mid	LTE Band 13	10	52	19.0	18.30	-0.15	0	29168	QPSK	25	0	0 mm	top	1:1	1.100	1.175	1.293	A8
782.00	23230	Mid	LTE Band 13	10	52	19.0	18.21	-0.08	0	29168	QPSK	50	0	0 mm	top	1:1	1.060	1.199	1.271	
782.00	23230	Mid	LTE Band 13	10	52	19.0	18.30	0.13	0	29168	QPSK	25	0	0 mm	top	1:1	1.060	1.175	1.246	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram											

Note: Blue entry represents variability measurement.

Table 10-5
LTE Band 26 (Cell) Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Ant State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	23.0	22.43	-0.01	0	29119	QPSK	1	0	16 mm	back	1:1	0.348	1.140	0.397	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	22.0	21.42	0.03	1	29119	QPSK	36	0	16 mm	back	1:1	0.272	1.143	0.311	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	23.0	22.43	0.00	0	29119	QPSK	1	0	17 mm	top	1:1	0.389	1.140	0.443	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	22.0	21.42	-0.02	1	29119	QPSK	36	0	17 mm	top	1:1	0.306	1.143	0.350	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	23.0	22.43	-0.04	0	29119	QPSK	1	0	0 mm	right	1:1	0.138	1.140	0.157	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	22.0	21.42	-0.02	1	29119	QPSK	36	0	0 mm	right	1:1	0.108	1.143	0.123	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	23.0	22.43	0.04	0	29119	QPSK	1	0	0 mm	left	1:1	0.087	1.140	0.099	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	22.0	21.42	0.02	1	29119	QPSK	36	0	0 mm	left	1:1	0.066	1.143	0.075	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	18.0	17.54	-0.03	0	29119	QPSK	1	0	0 mm	back	1:1	1.060	1.112	1.179	A9
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	18.0	17.58	-0.01	0	29119	QPSK	36	18	0 mm	back	1:1	1.040	1.102	1.146	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	18.0	17.50	-0.01	0	29119	QPSK	75	0	0 mm	back	1:1	1.020	1.122	1.144	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	18.0	17.54	-0.12	0	29119	QPSK	1	0	0 mm	top	1:1	0.920	1.112	1.023	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	18.0	17.58	-0.15	0	29119	QPSK	36	18	0 mm	top	1:1	0.876	1.102	0.965	
831.50	26865	Mid	LTE Band 26 (Cell)	15	55	18.0	17.50	-0.04	0	29119	QPSK	75	0	0 mm	top	1:1	0.895	1.122	1.004	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram											

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 76 of 124

Table 10-6
LTE Band 5 (Cell) Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Ant State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	25.0	24.52	0.01	0	29101	QPSK	1	0	16 mm	back	1:1	0.548	1.117	0.612	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	24.0	23.51	0.02	1	29101	QPSK	25	0	16 mm	back	1:1	0.453	1.119	0.507	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	25.0	24.52	-0.02	0	29101	QPSK	1	0	17 mm	top	1:1	0.832	1.117	0.929	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	24.0	23.51	0.06	1	29101	QPSK	25	0	17 mm	top	1:1	0.667	1.119	0.746	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	24.0	23.48	-0.03	1	29101	QPSK	50	0	17 mm	top	1:1	0.641	1.127	0.722	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	25.0	24.52	-0.10	0	29101	QPSK	1	0	0 mm	right	1:1	0.198	1.117	0.221	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	24.0	23.51	0.03	1	29101	QPSK	25	0	0 mm	right	1:1	0.161	1.119	0.180	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	25.0	24.52	0.10	0	29101	QPSK	1	0	0 mm	left	1:1	0.110	1.117	0.123	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	24.0	23.51	0.09	1	29101	QPSK	25	0	0 mm	left	1:1	0.098	1.119	0.110	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	18.0	17.61	-0.02	0	29101	QPSK	1	0	0 mm	back	1:1	1.070	1.094	1.171	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	18.0	17.66	-0.01	0	29101	QPSK	25	0	0 mm	back	1:1	1.110	1.081	1.200	A10
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	18.0	17.64	-0.03	0	29101	QPSK	50	0	0 mm	back	1:1	1.100	1.086	1.195	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	18.0	17.61	-0.04	0	29101	QPSK	1	0	0 mm	top	1:1	0.991	1.094	1.084	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	18.0	17.66	-0.03	0	29101	QPSK	25	0	0 mm	top	1:1	1.060	1.081	1.146	
836.50	20525	Mid	LTE Band 5 (Cell)	10	55	18.0	17.64	-0.04	0	29101	QPSK	50	0	0 mm	top	1:1	1.060	1.086	1.151	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram											

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 77 of 124

Table 10-7
LTE Band 66 (AWS) Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Ant State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
1720.00	132072	Low	LTE Band 66 (AWS)	20	24	24.5	23.59	0.03	0	29085	QPSK	1	99	16 mm	back	1:1	0.730	1.233	0.900	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24	24.5	23.93	0.02	0	29085	QPSK	1	99	16 mm	back	1:1	0.747	1.140	0.852	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	24.5	23.78	-0.12	0	29085	QPSK	1	50	16 mm	back	1:1	0.729	1.180	0.860	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	23.5	22.95	-0.03	1	29085	QPSK	50	25	16 mm	back	1:1	0.598	1.135	0.679	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	23.5	22.90	0.01	1	29085	QPSK	100	0	16 mm	back	1:1	0.589	1.148	0.676	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24	24.5	23.59	0.08	0	29085	QPSK	1	99	17 mm	top	1:1	1.050	1.233	1.295	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24	24.5	23.93	0.07	0	29085	QPSK	1	99	17 mm	top	1:1	1.080	1.140	1.231	A11
1770.00	132572	High	LTE Band 66 (AWS)	20	24	24.5	23.78	-0.05	0	29085	QPSK	1	50	17 mm	top	1:1	1.020	1.180	1.204	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24	23.5	22.56	0.02	1	29085	QPSK	50	50	17 mm	top	1:1	0.829	1.242	1.030	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24	23.5	22.82	0.02	1	29085	QPSK	50	25	17 mm	top	1:1	0.884	1.169	1.033	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	23.5	22.95	0.00	1	29085	QPSK	50	25	17 mm	top	1:1	0.846	1.135	0.960	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	23.5	22.90	-0.02	1	29085	QPSK	100	0	17 mm	top	1:1	0.845	1.148	0.970	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24	24.5	23.93	0.04	0	29085	QPSK	1	99	0 mm	right	1:1	0.058	1.140	0.066	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	23.5	22.95	0.19	1	29085	QPSK	50	25	0 mm	right	1:1	0.038	1.135	0.043	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24	24.5	23.93	-0.07	0	29085	QPSK	1	99	0 mm	left	1:1	0.164	1.140	0.187	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	23.5	22.95	0.02	1	29085	QPSK	50	25	0 mm	left	1:1	0.127	1.135	0.144	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24	14.5	13.45	0.02	0	29085	QPSK	1	99	0 mm	back	1:1	0.843	1.274	1.074	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24	14.5	13.66	-0.03	0	29085	QPSK	1	99	0 mm	back	1:1	0.827	1.213	1.003	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	14.5	13.74	-0.04	0	29085	QPSK	1	0	0 mm	back	1:1	0.834	1.191	0.993	
1720.00	132072	Low	LTE Band 66 (AWS)	20	24	14.5	13.64	0.13	0	29085	QPSK	50	0	0 mm	back	1:1	0.896	1.219	1.092	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24	14.5	13.88	-0.02	0	29085	QPSK	50	0	0 mm	back	1:1	0.884	1.153	1.019	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	14.5	14.01	0.00	0	29085	QPSK	50	0	0 mm	back	1:1	0.833	1.119	0.932	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	14.5	13.73	0.15	0	29085	QPSK	100	0	0 mm	back	1:1	0.822	1.194	0.981	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	14.5	13.74	0.04	0	29085	QPSK	1	0	0 mm	top	1:1	0.423	1.191	0.504	
1770.00	132572	High	LTE Band 66 (AWS)	20	24	14.5	14.01	0.05	0	29085	QPSK	50	0	0 mm	top	1:1	0.434	1.119	0.486	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	24	24.5	23.93	-0.13	0	29085	QPSK	1	99	17 mm	top	1:1	1.080	1.140	1.231	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT									Body											
Spatial Peak									1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population									averaged over 1 gram											

Note: Blue entry represents variability measurement.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 78 of 124

Table 10-8
LTE Band 2 (PCS) Body SAR

MEASUREMENT RESULTS																				
FREQUENCY		Mode	Bandwidth [MHz]	Ant State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.															(W/kg)		(W/kg)		
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	24.5	23.75	0.00	0	29093	QPSK	1	0	16 mm	back	1:1	0.673	1.189	0.800	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18	24.5	23.70	0.02	0	29093	QPSK	1	0	16 mm	back	1:1	0.651	1.202	0.783	
1900.00	19100	High	LTE Band 2 (PCS)	20	18	24.5	23.67	-0.03	0	29093	QPSK	1	0	16 mm	back	1:1	0.704	1.211	0.853	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	23.5	22.89	-0.01	1	29093	QPSK	50	0	16 mm	back	1:1	0.545	1.151	0.627	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	23.5	22.88	0.01	1	29093	QPSK	100	0	16 mm	back	1:1	0.537	1.153	0.619	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	24.5	23.75	0.02	0	29093	QPSK	1	0	17 mm	top	1:1	1.020	1.189	1.213	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18	24.5	23.70	-0.10	0	29093	QPSK	1	0	17 mm	top	1:1	0.965	1.202	1.160	
1900.00	19100	High	LTE Band 2 (PCS)	20	18	24.5	23.67	-0.09	0	29093	QPSK	1	0	17 mm	top	1:1	0.873	1.211	1.057	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	23.5	22.89	-0.05	1	29093	QPSK	50	0	17 mm	top	1:1	0.849	1.151	0.977	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18	23.5	22.85	-0.05	1	29093	QPSK	50	25	17 mm	top	1:1	0.897	1.161	1.041	
1900.00	19100	High	LTE Band 2 (PCS)	20	18	23.5	22.70	-0.07	1	29093	QPSK	50	25	17 mm	top	1:1	0.675	1.202	0.811	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	23.5	22.88	-0.09	1	29093	QPSK	100	0	17 mm	top	1:1	0.840	1.153	0.969	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	24.5	23.75	0.01	0	29093	QPSK	1	0	0 mm	right	1:1	0.208	1.189	0.247	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	23.5	22.89	0.10	1	29093	QPSK	50	0	0 mm	right	1:1	0.163	1.151	0.188	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	24.5	23.75	-0.12	0	29093	QPSK	1	0	0 mm	left	1:1	0.183	1.189	0.218	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	23.5	22.89	-0.02	1	29093	QPSK	50	0	0 mm	left	1:1	0.155	1.151	0.178	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	14.5	13.87	0.04	0	29093	QPSK	1	0	0 mm	back	1:1	0.763	1.156	0.882	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18	14.5	13.79	0.03	0	29093	QPSK	1	50	0 mm	back	1:1	0.718	1.178	0.846	
1900.00	19100	High	LTE Band 2 (PCS)	20	18	14.5	13.70	-0.01	0	29093	QPSK	1	0	0 mm	back	1:1	0.721	1.202	0.867	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	14.5	13.93	0.02	0	29093	QPSK	50	0	0 mm	back	1:1	0.769	1.140	0.877	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18	14.5	13.95	0.03	0	29093	QPSK	50	25	0 mm	back	1:1	0.747	1.135	0.848	
1900.00	19100	High	LTE Band 2 (PCS)	20	18	14.5	13.72	0.00	0	29093	QPSK	50	25	0 mm	back	1:1	0.695	1.197	0.832	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18	14.5	13.85	-0.01	0	29093	QPSK	100	0	0 mm	back	1:1	0.763	1.161	0.886	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	14.5	13.87	-0.10	0	29093	QPSK	1	0	0 mm	top	1:1	0.401	1.156	0.464	
1880.00	18900	Mid	LTE Band 2 (PCS)	20	18	14.5	13.95	-0.12	0	29093	QPSK	50	25	0 mm	top	1:1	0.403	1.135	0.457	
1860.00	18700	Low	LTE Band 2 (PCS)	20	18	24.5	23.75	-0.13	0	29093	QPSK	1	0	17 mm	top	1:1	1.030	1.189	1.225	A12
ANSI / IEEE C95.1 1992 - SAFETY LIMIT										Body										
Spatial Peak										1.6 W/kg (mW/g)										
Uncontrolled Exposure/General Population										averaged over 1 gram										

Note: Blue entry represents variability measurement.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 79 of 124

Table 10-9
LTE Band 25 (PCS) Body SAR

MEASUREMENT RESULTS																				
FREQUENCY			Mode	Bandwidth [MHz]	Ant State	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #
MHz	Ch.	(W/kg)															(W/kg)			
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	24.0	23.38	0.02	0	29093	QPSK	1	99	16 mm	back	1:1	0.707	1.153	0.815	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	24.0	23.20	-0.04	0	29093	QPSK	1	99	16 mm	back	1:1	0.695	1.202	0.835	
1905.00	26590	High	LTE Band 25 (PCS)	20	19	24.0	23.17	-0.01	0	29093	QPSK	1	0	16 mm	back	1:1	0.693	1.211	0.839	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	23.0	22.34	0.00	1	29093	QPSK	50	0	16 mm	back	1:1	0.666	1.164	0.775	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	23.0	22.33	-0.03	1	29093	QPSK	100	0	16 mm	back	1:1	0.694	1.167	0.810	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	24.0	23.38	0.02	0	29085	QPSK	1	99	17 mm	top	1:1	0.994	1.153	1.146	A13
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	24.0	23.20	0.05	0	29085	QPSK	1	99	17 mm	top	1:1	0.981	1.202	1.179	
1905.00	26590	High	LTE Band 25 (PCS)	20	19	24.0	23.17	-0.04	0	29085	QPSK	1	0	17 mm	top	1:1	0.967	1.211	1.171	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	23.0	22.34	-0.01	1	29085	QPSK	50	0	17 mm	top	1:1	0.806	1.164	0.938	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	23.0	22.31	-0.04	1	29085	QPSK	50	50	17 mm	top	1:1	0.804	1.172	0.942	
1905.00	26590	High	LTE Band 25 (PCS)	20	19	23.0	22.24	0.01	1	29085	QPSK	50	0	17 mm	top	1:1	0.779	1.191	0.928	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	23.0	22.33	-0.01	1	29085	QPSK	100	0	17 mm	top	1:1	0.808	1.167	0.943	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	24.0	23.38	0.12	0	29085	QPSK	1	99	0 mm	right	1:1	0.075	1.153	0.086	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	23.0	22.34	0.04	1	29085	QPSK	50	0	0 mm	right	1:1	0.058	1.164	0.068	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	24.0	23.38	-0.17	0	29085	QPSK	1	99	0 mm	left	1:1	0.107	1.153	0.123	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	23.0	22.34	0.13	1	29085	QPSK	50	0	0 mm	left	1:1	0.098	1.164	0.114	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	14.5	13.34	-0.02	0	29093	QPSK	1	0	0 mm	back	1:1	0.755	1.306	0.986	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	14.5	13.50	-0.03	0	29093	QPSK	1	0	0 mm	back	1:1	0.727	1.259	0.915	
1905.00	26590	High	LTE Band 25 (PCS)	20	19	14.5	13.49	-0.02	0	29093	QPSK	1	0	0 mm	back	1:1	0.704	1.262	0.888	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	14.5	13.45	-0.01	0	29093	QPSK	50	0	0 mm	back	1:1	0.765	1.274	0.975	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	14.5	13.51	-0.03	0	29093	QPSK	50	0	0 mm	back	1:1	0.743	1.256	0.933	
1905.00	26590	High	LTE Band 25 (PCS)	20	19	14.5	13.48	0.00	0	29093	QPSK	50	25	0 mm	back	1:1	0.709	1.265	0.897	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19	14.5	13.45	-0.03	0	29093	QPSK	100	0	0 mm	back	1:1	0.745	1.274	0.949	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	14.5	13.50	-0.03	0	29093	QPSK	1	0	0 mm	top	1:1	0.411	1.259	0.517	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19	14.5	13.51	-0.03	0	29093	QPSK	50	0	0 mm	top	1:1	0.427	1.256	0.536	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg (mW/g) averaged over 1 gram											

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 80 of 124

Table 10-10
LTE Band 41 Body SAR

MEASUREMENT RESULTS																			
FREQUENCY		Mode	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	MPR [dB]	Device Serial Number	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (1g)	Scaling Factor	Reported SAR (1g)	Plot #	
MHz	Ch.														(W/kg)		(W/kg)		
2680.00	41490	High	LTE Band 41	20	24.5	23.38	-0.07	0	29150	QPSK	1	99	16 mm	back	1:1.58	0.141	1.294	0.182	
2680.00	41490	High	LTE Band 41	20	23.5	22.55	-0.06	1	29150	QPSK	50	50	16 mm	back	1:1.58	0.112	1.245	0.139	
2680.00	41490	High	LTE Band 41	20	24.5	23.38	-0.06	0	29150	QPSK	1	99	17 mm	top	1:1.58	0.221	1.294	0.286	
2680.00	41490	High	LTE Band 41	20	23.5	22.55	-0.14	1	29150	QPSK	50	50	17 mm	top	1:1.58	0.177	1.245	0.220	
2680.00	41490	High	LTE Band 41	20	24.5	23.38	-0.10	0	29150	QPSK	1	99	0 mm	right	1:1.58	0.243	1.294	0.314	
2680.00	41490	High	LTE Band 41	20	23.5	22.55	-0.07	1	29150	QPSK	50	50	0 mm	right	1:1.58	0.201	1.245	0.250	
2680.00	41490	High	LTE Band 41	20	24.5	23.38	-0.18	0	29150	QPSK	1	99	0 mm	left	1:1.58	0.388	1.294	0.502	
2680.00	41490	High	LTE Band 41	20	23.5	22.55	-0.07	1	29150	QPSK	50	50	0 mm	left	1:1.58	0.310	1.245	0.386	
2506.00	39750	Low	LTE Band 41	20	15.5	14.72	-0.15	0	29150	QPSK	1	0	0 mm	back	1:1.58	0.740	1.197	0.886	
2549.50	40185	Low-Mid	LTE Band 41	20	15.5	14.57	-0.08	0	29150	QPSK	1	99	0 mm	back	1:1.58	0.685	1.239	0.849	
2593.00	40620	Mid	LTE Band 41	20	15.5	14.64	-0.07	0	29150	QPSK	1	0	0 mm	back	1:1.58	0.731	1.219	0.891	
2636.50	41055	Mid-High	LTE Band 41	20	15.5	14.41	-0.11	0	29150	QPSK	1	0	0 mm	back	1:1.58	0.741	1.285	0.952	
2680.00	41490	High	LTE Band 41	20	15.5	14.43	-0.15	0	29150	QPSK	1	0	0 mm	back	1:1.58	0.763	1.279	0.976	
2506.00	39750	Low	LTE Band 41	20	15.5	14.85	-0.18	0	29150	QPSK	50	25	0 mm	back	1:1.58	0.738	1.161	0.857	
2549.50	40185	Low-Mid	LTE Band 41	20	15.5	14.70	-0.16	0	29150	QPSK	50	50	0 mm	back	1:1.58	0.691	1.202	0.831	
2593.00	40620	Mid	LTE Band 41	20	15.5	14.71	-0.10	0	29150	QPSK	50	0	0 mm	back	1:1.58	0.744	1.199	0.892	
2636.50	41055	Mid-High	LTE Band 41	20	15.5	14.50	-0.10	0	29150	QPSK	50	50	0 mm	back	1:1.58	0.764	1.259	0.962	
2680.00	41490	High	LTE Band 41	20	15.5	14.57	-0.06	0	29150	QPSK	50	0	0 mm	back	1:1.58	0.772	1.239	0.957	
2506.00	39750	Low	LTE Band 41	20	15.5	14.71	-0.18	0	29150	QPSK	100	0	0 mm	back	1:1.58	0.697	1.199	0.836	
2506.00	39750	Low	LTE Band 41	20	15.5	14.72	-0.07	0	29150	QPSK	1	0	0 mm	top	1:1.58	0.769	1.197	0.920	
2549.50	40185	Low-Mid	LTE Band 41	20	15.5	14.57	-0.05	0	29150	QPSK	1	99	0 mm	top	1:1.58	0.739	1.239	0.916	
2593.00	40620	Mid	LTE Band 41	20	15.5	14.64	-0.07	0	29150	QPSK	1	0	0 mm	top	1:1.58	0.789	1.219	0.962	
2636.50	41055	Mid-High	LTE Band 41	20	15.5	14.41	-0.06	0	29150	QPSK	1	0	0 mm	top	1:1.58	0.816	1.285	1.049	
2680.00	41490	High	LTE Band 41	20	15.5	14.43	-0.04	0	29150	QPSK	1	0	0 mm	top	1:1.58	0.819	1.279	1.048	
2506.00	39750	Low	LTE Band 41	20	15.5	14.85	-0.07	0	29150	QPSK	50	25	0 mm	top	1:1.58	0.776	1.161	0.901	
2549.50	40185	Low-Mid	LTE Band 41	20	15.5	14.70	-0.06	0	29150	QPSK	50	50	0 mm	top	1:1.58	0.782	1.202	0.940	
2593.00	40620	Mid	LTE Band 41	20	15.5	14.71	-0.05	0	29150	QPSK	50	0	0 mm	top	1:1.58	0.821	1.199	0.984	
2636.50	41055	Mid-High	LTE Band 41	20	15.5	14.50	-0.06	0	29150	QPSK	50	50	0 mm	top	1:1.58	0.819	1.259	1.031	
2680.00	41490	High	LTE Band 41	20	15.5	14.57	-0.06	0	29150	QPSK	50	0	0 mm	top	1:1.58	0.834	1.239	1.033	A14
2506.00	39750	Low	LTE Band 41	20	15.5	14.71	-0.06	0	29150	QPSK	100	0	0 mm	top	1:1.58	0.779	1.199	0.934	
2680.00	41490	High	LTE Band 41	20	15.5	14.57	-0.06	0	29150	QPSK	50	0	0 mm	top	1:1.58	0.832	1.239	1.031	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT								Body											
Spatial Peak								1.6 W/kg (mW/g)											
Uncontrolled Exposure/General Population								averaged over 1 gram											

Note: Blue entry represents variability measurement.

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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 81 of 124

**Table 10-11
DTS Body SAR**

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.													(W/kg)			(W/kg)	
2437	6	802.11b	DSSS	22	20.0	19.67	-0.05	15 mm	1	29333	1	back	99.1	0.100	1.079	1.009	0.109	
2437	6	802.11b	DSSS	22	20.0	19.67	-0.09	14 mm	1	29333	1	top	99.1	0.042	1.079	1.009	0.046	
2437	6	802.11b	DSSS	22	20.0	19.67	0.10	0 mm	1	29333	1	right	99.1	0.007	1.079	1.009	0.008	
2437	6	802.11b	DSSS	22	20.0	19.67	-0.02	6 mm	1	29333	1	left	99.1	0.372	1.079	1.009	0.405	
2462	11	802.11b	DSSS	22	13.5	13.46	0.04	0 mm	1	29143	1	back	99.1	0.569	1.009	1.009	0.579	
2462	11	802.11b	DSSS	22	13.5	13.46	-0.15	0 mm	1	29143	1	top	99.1	0.119	1.009	1.009	0.121	
2412	1	802.11b	DSSS	22	13.5	12.84	0.11	0 mm	1	29143	1	left	99.1	0.722	1.164	1.009	0.848	
2437	6	802.11b	DSSS	22	13.5	12.80	0.14	0 mm	1	29143	1	left	99.1	0.694	1.175	1.009	0.823	
2462	11	802.11b	DSSS	22	13.5	13.46	0.05	0 mm	1	29143	1	left	99.1	0.979	1.009	1.009	0.997	A15
2457	10	802.11b	DSSS	22	20.0	19.86	-0.01	15 mm	2	29333	1	back	99.0	0.141	1.033	1.010	0.147	
2457	10	802.11b	DSSS	22	20.0	19.86	-0.09	14 mm	2	29333	1	top	99.0	0.253	1.033	1.010	0.264	
2457	10	802.11b	DSSS	22	20.0	19.86	0.00	6 mm	2	29333	1	right	99.0	0.386	1.033	1.010	0.403	
2457	10	802.11b	DSSS	22	20.0	19.86	0.19	0 mm	2	29333	1	left	99.0	0.001	1.033	1.010	0.001	
2412	1	802.11b	DSSS	22	13.5	13.03	0.00	0 mm	2	29143	1	back	99.0	0.689	1.114	1.010	0.775	
2437	6	802.11b	DSSS	22	13.5	12.94	0.06	0 mm	2	29143	1	back	99.0	0.383	1.138	1.010	0.440	
2462	11	802.11b	DSSS	22	13.5	12.87	-0.02	0 mm	2	29143	1	back	99.0	0.508	1.156	1.010	0.593	
2412	1	802.11b	DSSS	22	13.5	13.03	0.09	0 mm	2	29143	1	top	99.0	0.377	1.114	1.010	0.424	
2412	1	802.11b	DSSS	22	13.5	13.03	-0.01	0 mm	2	29143	1	right	99.0	0.647	1.114	1.010	0.728	
2462	11	802.11b	DSSS	22	13.5	13.46	-0.08	0 mm	1	29143	1	left	99.1	0.902	1.009	1.009	0.918	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT								Body										
Spatial Peak								1.6 W/kg (mW/g)										
Uncontrolled Exposure/General Population								averaged over 1 gram										

Note: Blue entry represents variability measurement.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 82 of 124

Table 10-12
U-NII Body SAR

MEASUREMENT RESULTS																		
FREQUENCY		Mode	Service	Bandwidth [MHz]	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Antenna Config.	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g) (W/kg)	Plot #
MHz	Ch.													(W/kg)				
5260	52	802.11a	OFDM	20	18.0	17.82	0.20	15 mm	1	29333	6	back	98.8	0.015	1.042	1.012	0.016	
5260	52	802.11a	OFDM	20	18.0	17.82	0.20	14 mm	1	29333	6	top	98.8	0.017	1.042	1.012	0.018	
5260	52	802.11a	OFDM	20	18.0	17.82	0.19	0 mm	1	29333	6	right	98.8	0.002	1.042	1.012	0.002	
5260	52	802.11a	OFDM	20	18.0	17.82	-0.10	6 mm	1	29333	6	left	98.8	0.177	1.042	1.012	0.187	
5290	58	802.11ac	OFDM	80	10.0	9.94	-0.18	0 mm	1	29333	29.3	back	94.5	0.375	1.014	1.058	0.402	
5290	58	802.11ac	OFDM	80	10.0	9.94	0.17	0 mm	1	29333	29.3	top	94.5	0.090	1.014	1.058	0.097	
5290	58	802.11ac	OFDM	80	10.0	9.94	-0.03	0 mm	1	29333	29.3	left	94.5	0.218	1.014	1.058	0.234	
5280	56	802.11a	OFDM	20	18.0	17.93	-0.13	15 mm	2	29333	6	back	98.7	0.098	1.016	1.013	0.101	
5280	56	802.11a	OFDM	20	18.0	17.93	0.17	14 mm	2	29333	6	top	98.7	0.058	1.016	1.013	0.060	
5260	52	802.11a	OFDM	20	18.0	17.80	0.00	6 mm	2	29333	6	right	98.7	0.731	1.047	1.013	0.775	
5280	56	802.11a	OFDM	20	18.0	17.93	0.00	6 mm	2	29333	6	right	98.7	0.815	1.016	1.013	0.839	
5280	56	802.11a	OFDM	20	18.0	17.93	0.14	0 mm	2	29333	6	left	98.7	0.009	1.016	1.013	0.009	
5290	58	802.11ac	OFDM	80	10.0	9.99	-0.15	0 mm	2	29333	29.3	back	94.5	0.620	1.002	1.058	0.657	
5290	58	802.11ac	OFDM	80	10.0	9.99	-0.08	0 mm	2	29333	29.3	top	94.5	0.368	1.002	1.058	0.390	
5290	58	802.11ac	OFDM	80	10.0	9.99	-0.15	0 mm	2	29333	29.3	right	94.5	0.545	1.002	1.058	0.578	
5500	100	802.11a	OFDM	20	18.0	17.72	0.15	15 mm	1	29333	6	back	98.8	0.026	1.067	1.012	0.028	
5500	100	802.11a	OFDM	20	18.0	17.72	0.11	14 mm	1	29333	6	top	98.8	0.024	1.067	1.012	0.026	
5500	100	802.11a	OFDM	20	18.0	17.72	-0.18	0 mm	1	29333	6	right	98.8	0.004	1.067	1.012	0.004	
5500	100	802.11a	OFDM	20	18.0	17.72	-0.03	6 mm	1	29333	6	left	98.8	0.373	1.067	1.012	0.403	
5530	106	802.11ac	OFDM	80	10.0	9.95	0.15	0 mm	1	29333	29.3	back	94.5	0.433	1.012	1.058	0.464	
5530	106	802.11ac	OFDM	80	10.0	9.95	0.16	0 mm	1	29333	29.3	top	94.5	0.157	1.012	1.058	0.168	
5530	106	802.11ac	OFDM	80	10.0	9.95	-0.04	0 mm	1	29333	29.3	left	94.5	0.396	1.012	1.058	0.424	
5720	144	802.11a	OFDM	20	18.0	17.96	-0.14	15 mm	2	29333	6	back	98.7	0.090	1.009	1.013	0.092	
5720	144	802.11a	OFDM	20	18.0	17.96	-0.19	14 mm	2	29333	6	top	98.7	0.040	1.009	1.013	0.041	
5500	100	802.11a	OFDM	20	18.0	17.70	-0.01	6 mm	2	29333	6	right	98.7	1.050	1.072	1.013	1.140	
5620	124	802.11a	OFDM	20	18.0	17.93	-0.10	6 mm	2	29333	6	right	98.7	1.150	1.016	1.013	1.184	A16
5720	144	802.11a	OFDM	20	18.0	17.96	-0.15	6 mm	2	29333	6	right	98.7	0.941	1.009	1.013	0.962	
5720	144	802.11a	OFDM	20	18.0	17.96	0.12	0 mm	2	29333	6	left	98.7	0.010	1.009	1.013	0.010	
5690	138	802.11ac	OFDM	80	10.0	9.98	0.13	0 mm	2	29333	29.3	back	94.5	0.540	1.005	1.058	0.574	
5690	138	802.11ac	OFDM	80	10.0	9.98	0.01	0 mm	2	29333	29.3	top	94.5	0.269	1.005	1.058	0.286	
5690	138	802.11ac	OFDM	80	10.0	9.98	-0.10	0 mm	2	29333	29.3	right	94.5	0.661	1.005	1.058	0.703	
5785	157	802.11a	OFDM	20	18.0	17.77	-0.12	15 mm	1	29333	6	back	98.8	0.027	1.054	1.012	0.029	
5785	157	802.11a	OFDM	20	18.0	17.77	-0.11	14 mm	1	29333	6	top	98.8	0.023	1.054	1.012	0.025	
5785	157	802.11a	OFDM	20	18.0	17.77	0.18	0 mm	1	29333	6	right	98.8	0.000	1.054	1.012	0.000	
5785	157	802.11a	OFDM	20	18.0	17.77	-0.10	6 mm	1	29333	6	left	98.8	0.342	1.054	1.012	0.365	
5775	155	802.11ac	OFDM	80	10.0	9.90	-0.18	0 mm	1	29333	29.3	back	94.5	0.318	1.023	1.058	0.344	
5775	155	802.11ac	OFDM	80	10.0	9.90	0.10	0 mm	1	29333	29.3	top	94.5	0.061	1.023	1.058	0.066	
5775	155	802.11ac	OFDM	80	10.0	9.90	0.05	0 mm	1	29333	29.3	left	94.5	0.363	1.023	1.058	0.393	
5785	157	802.11a	OFDM	20	18.0	17.95	0.10	15 mm	2	29333	6	back	98.7	0.064	1.012	1.013	0.066	
5785	157	802.11a	OFDM	20	18.0	17.95	-0.17	14 mm	2	29333	6	top	98.7	0.031	1.012	1.013	0.032	
5785	157	802.11a	OFDM	20	18.0	17.95	-0.10	6 mm	2	29333	6	right	98.7	0.745	1.012	1.013	0.764	
5785	157	802.11a	OFDM	20	18.0	17.95	0.12	0 mm	2	29333	6	left	98.7	0.006	1.012	1.013	0.006	
5775	155	802.11ac	OFDM	80	10.0	9.99	-0.17	0 mm	2	29333	29.3	back	94.5	0.370	1.002	1.058	0.392	
5775	155	802.11ac	OFDM	80	10.0	9.99	-0.03	0 mm	2	29333	29.3	top	94.5	0.186	1.002	1.058	0.197	
5775	155	802.11ac	OFDM	80	10.0	9.99	-0.10	0 mm	2	29333	29.3	right	94.5	0.507	1.002	1.058	0.537	
5280	56	802.11a	OFDM	20	18.0	17.93	-0.08	6 mm	2	29333	6	right	98.7	0.814	1.016	1.013	0.838	
5620	124	802.11a	OFDM	20	18.0	17.93	-0.13	6 mm	2	29333	6	right	98.7	1.150	1.016	1.013	1.184	
5720	144	802.11a	OFDM	20	18.0	17.96	-0.11	6 mm	2	29333	6	right	98.7	0.920	1.009	1.013	0.940	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT								Body										
Spatial Peak								1.6 W/kg (mW/g)										
Uncontrolled Exposure/General Population								averaged over 1 gram										

Note: Blue entries represent variability measurements.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 83 of 124

Table 10-13
DSS Body SAR

MEASUREMENT RESULTS																
FREQUENCY		Mode	Service	Maximum Allowed Power [dBm]	Conducted Power [dBm]	Power Drift [dB]	Spacing	Device Serial Number	Data Rate (Mbps)	Side	Duty Cycle (%)	SAR (1g)	Scaling Factor (Cond Power)	Scaling Factor (Duty Cycle)	Reported SAR (1g)	Plot #
MHz	Ch.											(W/kg)			(W/kg)	
2441	39	Bluetooth	FHSS	13.0	12.98	-0.16	0 mm	29119	1	back	77.3	0.286	1.005	1.294	0.372	
2441	39	Bluetooth	FHSS	13.0	12.98	0.12	0 mm	29333	1	top	77.3	0.071	1.005	1.294	0.092	
2441	39	Bluetooth	FHSS	13.0	12.98	0.00	0 mm	29119	1	right	77.3	0.000	1.005	1.294	0.000	
2402	0	Bluetooth	FHSS	13.0	12.82	-0.04	0 mm	29333	1	left	77.3	0.582	1.042	1.294	0.785	
2441	39	Bluetooth	FHSS	13.0	12.98	-0.16	0 mm	29333	1	left	77.3	0.642	1.005	1.294	0.835	A17
2480	78	Bluetooth	FHSS	13.0	12.48	-0.08	0 mm	29333	1	left	77.3	0.634	1.127	1.294	0.925	
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population							Body 1.6 W/kg (mW/g) averaged over 1 gram									

10.2 SAR Test Notes

General Notes:

- The test data reported are the worst-case SAR values according to test procedures specified in FCC KDB Publication 616217 D04v01r02 and FCC KDB Publication 447498 D01v06.
- Batteries are fully charged at the beginning of the SAR measurements.
- Liquid tissue depth was at least 15.0 cm for all frequencies.
- The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
- SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
- Per FCC KDB 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than or equal to 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see Section 12 for variability analysis.
- FCC KDB Publication 616217 D04v01r02 Section 4.3, SAR tests are required for the back surface and edges of the tablet with the tablet touching the phantom. The SAR Exclusion Threshold in FCC KDB 447498 D01v06 was applied to determine SAR test exclusion for adjacent edge configurations.
- This device supports dynamic antenna tuning for some bands. Per April 2019 Workshop Notes, SAR was measured according to the normally required SAR measurement configurations with tuner active. The auto-tune state determined by the device was verified before and after each SAR measurement and is listed in tables above. Please see Section 13 for supplemental data.

GSM Test Notes:

- Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
- Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is $> \frac{1}{2}$ dB, instead of the middle channel, the highest output power channel was used.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 84 of 124

UMTS Notes:

1. UMTS mode in was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
2. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is $> \frac{1}{2}$ dB, instead of the middle channel, the highest output power channel was used.

LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r04. The general test procedures used for testing can be found in Section 7.5.4.
2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.
3. A-MPR was disabled for all SAR tests by setting NS=01 and MCC=001 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
4. Per FCC KDB Publication 447498 D01v06, when the reported LTE Band 41 SAR measured at the highest output power channel in a given a test configuration was > 0.6 W/kg for 1g evaluations, testing at the other channels was required for such test configurations.
5. TDD LTE was tested per the guidance provided in FCC KDB Publication 941225 D05v02r04. Testing was performed using UL-DL configuration 0 with 6 UL subframes and 2 S subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4, the duty factor for special subframe configuration 6 using extended cyclic prefix is 0.633.
6. Per KDB Publication 941225 D05Av01r02, SAR for downlink only LTE CA operations was not needed since the maximum average output power in LTE CA mode was not > 0.25 dB higher than the maximum output power when downlink carrier aggregation was inactive.

WLAN Notes:

1. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4 GHz WIFI single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 7.6.4 for more information.
2. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 5 GHz WIFI single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission modes were not investigated since the highest reported SAR for initial test configuration adjusted by the ratio of maximum output powers is less than 1.2 W/kg for 1g evaluations. See Section 7.6.5 for more information.
3. Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D01v06 by either evaluating the sum of the 1g SAR values of each antenna transmitting independently or making a SAR measurement with both antennas transmitting simultaneously. Please see Section 11 for complete analysis.
4. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
5. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 85 of 124

reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated EMC test reports.

Bluetooth Notes

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests test mode type. Per October 2016 TCB Workshop Notes, the reported SAR was scaled to the 100% transmission duty factor to determine compliance. See Section 8.5 for the time domain plot and calculation for the duty factor of the device.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 86 of 124

11 FCC MULTI-TX AND ANTENNA SAR CONSIDERATIONS

11.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D01v06 are applicable to devices with built-in unlicensed transmitters such as 802.11 and Bluetooth devices which may simultaneously transmit with the licensed transmitter.

11.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D01v06 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g SAR for all the simultaneous transmitting antennas in a specific physical test configuration is ≤ 1.6 W/kg. The different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1g SAR.

Table 11-1
Simultaneous Transmission Scenario with 2.4 GHz WLAN

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.837	0.579	0.775	1.416	See Note 1	See Note 1	0.02	0.03	0.01
	Top	1.029	0.121	0.424	1.150	1.453	1.574	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.277	0.008	0.728	0.285	1.005	1.013	N/A	N/A	N/A
	Left	0.243	0.997	0.001	1.240	0.244	1.241	N/A	N/A	N/A
Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.025	0.579	0.775	See Note 1	See Note 1	See Note 1	0.04	0.03	0.01
	Top	0.668	0.121	0.424	0.789	1.092	1.213	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.028	0.008	0.728	0.036	0.756	0.764	N/A	N/A	N/A
	Left	0.178	0.997	0.001	1.175	0.179	1.176	N/A	N/A	N/A
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.059	0.579	0.775	See Note 1	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.213	0.121	0.424	1.334	See Note 1	See Note 1	0.02	0.03	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.231	0.008	0.728	0.239	0.959	0.967	N/A	N/A	N/A
	Left	0.156	0.997	0.001	1.153	0.157	1.154	N/A	N/A	N/A

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 87 of 124

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.107	0.579	0.775	See Note 1	See Note 1	See Note 1	0.04	0.03	0.01
	Top	1.283	0.121	0.424	1.404	See Note 1	See Note 1	0.02	0.03	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.092	0.008	0.728	0.100	0.820	0.828	N/A	N/A	N/A
	Left	0.167	0.997	0.001	1.164	0.168	1.165	N/A	N/A	N/A
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.021	0.579	0.775	See Note 1	See Note 1	See Note 1	0.04	0.03	0.01
	Top	1.187	0.121	0.424	1.308	See Note 1	See Note 1	0.02	0.02	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.050	0.008	0.728	0.058	0.778	0.786	N/A	N/A	N/A
	Left	0.233	0.997	0.001	1.230	0.234	1.231	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.732	0.579	0.775	1.311	1.507	See Note 1	0.02	0.03	0.01
	Top	0.799	0.121	0.424	0.920	1.223	1.344	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.128	0.008	0.728	0.136	0.856	0.864	N/A	N/A	N/A
	Left	0.110	0.997	0.001	1.107	0.111	1.108	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 17 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.844	0.579	0.775	1.423	See Note 1	See Note 1	0.02	0.03	0.01
	Top	0.997	0.121	0.424	1.118	1.421	1.542	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.140	0.008	0.728	0.148	0.868	0.876	N/A	N/A	N/A
	Left	0.123	0.997	0.001	1.120	0.124	1.121	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.022	0.579	0.775	See Note 1	See Note 1	See Note 1	0.03	0.04	0.01
	Top	1.293	0.121	0.424	1.414	See Note 1	See Note 1	0.03	0.03	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.162	0.008	0.728	0.170	0.890	0.898	N/A	N/A	N/A
	Left	0.135	0.997	0.001	1.132	0.136	1.133	N/A	N/A	N/A

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 88 of 124

Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.179	0.579	0.775	See Note 1	See Note 1	See Note 1	0.04	0.04	0.01
	Top	1.023	0.121	0.424	1.144	1.447	1.568	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.157	0.008	0.728	0.165	0.885	0.893	N/A	N/A	N/A
	Left	0.099	0.997	0.001	1.096	0.100	1.097	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.200	0.579	0.775	See Note 1	See Note 1	See Note 1	0.03	0.04	0.01
	Top	1.151	0.121	0.424	1.272	1.575	See Note 1	0.02	0.02	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.221	0.008	0.728	0.229	0.949	0.957	N/A	N/A	N/A
	Left	0.123	0.997	0.001	1.120	0.124	1.121	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.092	0.579	0.775	See Note 1	See Note 1	See Note 1	0.04	0.03	0.01
	Top	1.295	0.121	0.424	1.416	See Note 1	See Note 1	0.02	0.03	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.066	0.008	0.728	0.074	0.794	0.802	N/A	N/A	N/A
	Left	0.187	0.997	0.001	1.184	0.188	1.185	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.886	0.579	0.775	1.465	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.225	0.121	0.424	1.346	See Note 1	See Note 1	0.02	0.03	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.247	0.008	0.728	0.255	0.975	0.983	N/A	N/A	N/A
	Left	0.218	0.997	0.001	1.215	0.219	1.216	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.986	0.579	0.775	1.565	See Note 1	See Note 1	0.04	0.03	0.01
	Top	1.179	0.121	0.424	1.300	See Note 1	See Note 1	0.02	0.03	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.086	0.008	0.728	0.094	0.814	0.822	N/A	N/A	N/A
	Left	0.123	0.997	0.001	1.120	0.124	1.121	N/A	N/A	N/A

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 89 of 124

Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	2.4 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.976	0.579	0.775	1.555	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.049	0.121	0.424	1.170	1.473	1.594	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.314	0.008	0.728	0.322	1.042	1.050	N/A	N/A	N/A
	Left	0.502	0.997	0.001	1.499	0.503	1.500	N/A	N/A	N/A

Table 11-2
Simultaneous Transmission Scenario with 5 GHz WLAN

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.837	0.464	0.657	1.301	1.494	See Note 1	0.02	0.04	0.01
	Top	1.029	0.168	0.390	1.197	1.419	1.587	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.277	0.004	1.184	0.281	1.461	1.465	N/A	N/A	N/A
	Left	0.243	0.424	0.010	0.667	0.253	0.677	N/A	N/A	N/A
Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.025	0.464	0.657	1.489	See Note 1	See Note 1	0.03	0.03	0.01
	Top	0.668	0.168	0.390	0.836	1.058	1.226	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.028	0.004	1.184	0.032	1.212	1.216	N/A	N/A	N/A
	Left	0.178	0.424	0.010	0.602	0.188	0.612	N/A	N/A	N/A
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.059	0.464	0.657	1.523	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.213	0.168	0.390	1.381	See Note 1	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.231	0.004	1.184	0.235	1.415	1.419	N/A	N/A	N/A
	Left	0.156	0.424	0.010	0.580	0.166	0.590	N/A	N/A	N/A
Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.107	0.464	0.657	1.571	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.283	0.168	0.390	1.451	See Note 1	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.092	0.004	1.184	0.096	1.276	1.280	N/A	N/A	N/A
	Left	0.167	0.424	0.010	0.591	0.177	0.601	N/A	N/A	N/A

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 90 of 124

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.021	0.464	0.657	1.485	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.187	0.168	0.390	1.355	1.577	See Note 1	0.04	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.050	0.004	1.184	0.054	1.234	1.238	N/A	N/A	N/A
	Left	0.233	0.424	0.010	0.657	0.243	0.667	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.732	0.464	0.657	1.196	1.389	See Note 1	0.02	0.03	0.01
	Top	0.799	0.168	0.390	0.967	1.189	1.357	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.128	0.004	1.184	0.132	1.312	1.316	N/A	N/A	N/A
	Left	0.110	0.424	0.010	0.534	0.120	0.544	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 17 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.844	0.464	0.657	1.308	1.501	See Note 1	0.02	0.03	0.01
	Top	0.997	0.168	0.390	1.165	1.387	1.555	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.140	0.004	1.184	0.144	1.324	1.328	N/A	N/A	N/A
	Left	0.123	0.424	0.010	0.547	0.133	0.557	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.022	0.464	0.657	1.486	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.293	0.168	0.390	1.461	See Note 1	See Note 1	0.04	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.162	0.004	1.184	0.166	1.346	1.350	N/A	N/A	N/A
	Left	0.135	0.424	0.010	0.559	0.145	0.569	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.179	0.464	0.657	See Note 1	See Note 1	See Note 1	0.03	0.04	0.01
	Top	1.023	0.168	0.390	1.191	1.413	1.581	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.157	0.004	1.184	0.161	1.341	1.345	N/A	N/A	N/A
	Left	0.099	0.424	0.010	0.523	0.109	0.533	N/A	N/A	N/A

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 91 of 124

Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.200	0.464	0.657	See Note 1	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.151	0.168	0.390	1.319	1.541	See Note 1	0.04	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.221	0.004	1.184	0.225	1.405	1.409	N/A	N/A	N/A
	Left	0.123	0.424	0.010	0.547	0.133	0.557	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.092	0.464	0.657	1.556	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.295	0.168	0.390	1.463	See Note 1	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.066	0.004	1.184	0.070	1.250	1.254	N/A	N/A	N/A
	Left	0.187	0.424	0.010	0.611	0.197	0.621	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.886	0.464	0.657	1.350	1.543	See Note 1	0.02	0.03	0.01
	Top	1.225	0.168	0.390	1.393	See Note 1	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.247	0.004	1.184	0.251	1.431	1.435	N/A	N/A	N/A
	Left	0.218	0.424	0.010	0.642	0.228	0.652	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.986	0.464	0.657	1.450	See Note 1	See Note 1	0.02	0.03	0.01
	Top	1.179	0.168	0.390	1.347	1.569	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.086	0.004	1.184	0.090	1.270	1.274	N/A	N/A	N/A
	Left	0.123	0.424	0.010	0.547	0.133	0.557	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	5 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.976	0.464	0.657	1.440	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.049	0.168	0.390	1.217	1.439	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.314	0.004	1.184	0.318	1.498	1.502	N/A	N/A	N/A
	Left	0.502	0.424	0.010	0.926	0.512	0.936	N/A	N/A	N/A

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 92 of 124

Table 11-3
Simultaneous Transmission Scenario with 2.4 GHz WLAN Ant 1 and 5 GHz WLAN Ant 2

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.837	0.579	0.657	1.416	1.494	See Note 1	0.02	0.04	0.01
	Top	1.029	0.121	0.390	1.150	1.419	1.540	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.277	0.008	1.184	0.285	1.461	1.469	N/A	N/A	N/A
	Left	0.243	0.997	0.010	1.240	0.253	1.250	N/A	N/A	N/A
Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.025	0.579	0.657	See Note 1	See Note 1	See Note 1	0.04	0.03	0.01
	Top	0.668	0.121	0.390	0.789	1.058	1.179	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.028	0.008	1.184	0.036	1.212	1.220	N/A	N/A	N/A
	Left	0.178	0.997	0.010	1.175	0.188	1.185	N/A	N/A	N/A
Simult Tx	Configuration	UMTS 850 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.059	0.579	0.657	See Note 1	See Note 1	See Note 1	0.03	0.04	0.01
	Top	1.213	0.121	0.390	1.334	See Note 1	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.231	0.008	1.184	0.239	1.415	1.423	N/A	N/A	N/A
	Left	0.156	0.997	0.010	1.153	0.166	1.163	N/A	N/A	N/A
Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.107	0.579	0.657	See Note 1	See Note 1	See Note 1	0.04	0.03	0.01
	Top	1.283	0.121	0.390	1.404	See Note 1	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.092	0.008	1.184	0.100	1.276	1.284	N/A	N/A	N/A
	Left	0.167	0.997	0.010	1.164	0.177	1.174	N/A	N/A	N/A
Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.021	0.579	0.657	See Note 1	See Note 1	See Note 1	0.04	0.03	0.01
	Top	1.187	0.121	0.390	1.308	1.577	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.050	0.008	1.184	0.058	1.234	1.242	N/A	N/A	N/A
	Left	0.233	0.997	0.010	1.230	0.243	1.240	N/A	N/A	N/A

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 93 of 124

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.732	0.579	0.657	1.311	1.389	See Note 1	0.02	0.03	0.01
	Top	0.799	0.121	0.390	0.920	1.189	1.310	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.128	0.008	1.184	0.136	1.312	1.320	N/A	N/A	N/A
	Left	0.110	0.997	0.010	1.107	0.120	1.117	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 17 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.844	0.579	0.657	1.423	1.501	See Note 1	0.02	0.03	0.01
	Top	0.997	0.121	0.390	1.118	1.387	1.508	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.140	0.008	1.184	0.148	1.324	1.332	N/A	N/A	N/A
	Left	0.123	0.997	0.010	1.120	0.133	1.130	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.022	0.579	0.657	See Note 1	See Note 1	See Note 1	0.03	0.04	0.01
	Top	1.293	0.121	0.390	1.414	See Note 1	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.162	0.008	1.184	0.170	1.346	1.354	N/A	N/A	N/A
	Left	0.135	0.997	0.010	1.132	0.145	1.142	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.179	0.579	0.657	See Note 1	See Note 1	See Note 1	0.04	0.04	0.01
	Top	1.023	0.121	0.390	1.144	1.413	1.534	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.157	0.008	1.184	0.165	1.341	1.349	N/A	N/A	N/A
	Left	0.099	0.997	0.010	1.096	0.109	1.106	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.200	0.579	0.657	See Note 1	See Note 1	See Note 1	0.03	0.04	0.01
	Top	1.151	0.121	0.390	1.272	1.541	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.221	0.008	1.184	0.229	1.405	1.413	N/A	N/A	N/A
	Left	0.123	0.997	0.010	1.120	0.133	1.130	N/A	N/A	N/A

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 94 of 124

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.092	0.579	0.657	See Note 1	See Note 1	See Note 1	0.04	0.03	0.01
	Top	1.295	0.121	0.390	1.416	See Note 1	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.066	0.008	1.184	0.074	1.250	1.258	N/A	N/A	N/A
	Left	0.187	0.997	0.010	1.184	0.197	1.194	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.886	0.579	0.657	1.465	1.543	See Note 1	0.03	0.03	0.01
	Top	1.225	0.121	0.390	1.346	See Note 1	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.247	0.008	1.184	0.255	1.431	1.439	N/A	N/A	N/A
	Left	0.218	0.997	0.010	1.215	0.228	1.225	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.986	0.579	0.657	1.565	See Note 1	See Note 1	0.04	0.03	0.01
	Top	1.179	0.121	0.390	1.300	1.569	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.086	0.008	1.184	0.094	1.270	1.278	N/A	N/A	N/A
	Left	0.123	0.997	0.010	1.120	0.133	1.130	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	2.4 GHz WLAN Ant 1 SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.976	0.579	0.657	1.555	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.049	0.121	0.390	1.170	1.439	1.560	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.314	0.008	1.184	0.322	1.498	1.506	N/A	N/A	N/A
	Left	0.502	0.997	0.010	1.499	0.512	1.509	N/A	N/A	N/A

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 			Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 95 of 124

Table 11-4
Simultaneous Transmission Scenario with Bluetooth and 5 GHz WLAN Ant 2

Simult Tx	Configuration	GPRS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.837	0.372	0.657	1.209	1.494	See Note 1	0.02	0.04	0.01
	Top	1.029	0.092	0.390	1.121	1.419	1.511	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.277	0.000	1.184	0.277	1.461	1.461	N/A	N/A	N/A
	Left	0.243	0.925	0.010	1.168	0.253	1.178	N/A	N/A	N/A

Simult Tx	Configuration	GPRS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.025	0.372	0.657	1.397	See Note 1	See Note 1	0.03	0.03	0.01
	Top	0.668	0.092	0.390	0.760	1.058	1.150	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.028	0.000	1.184	0.028	1.212	1.212	N/A	N/A	N/A
	Left	0.178	0.925	0.010	1.103	0.188	1.113	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 850 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.059	0.372	0.657	1.431	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.213	0.092	0.390	1.305	See Note 1	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.231	0.000	1.184	0.231	1.415	1.415	N/A	N/A	N/A
	Left	0.156	0.925	0.010	1.081	0.166	1.091	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1750 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.107	0.372	0.657	1.479	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.283	0.092	0.390	1.375	See Note 1	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.092	0.000	1.184	0.092	1.276	1.276	N/A	N/A	N/A
	Left	0.167	0.925	0.010	1.092	0.177	1.102	N/A	N/A	N/A

Simult Tx	Configuration	UMTS 1900 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.021	0.372	0.657	1.393	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.187	0.092	0.390	1.279	1.577	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.050	0.000	1.184	0.050	1.234	1.234	N/A	N/A	N/A
	Left	0.233	0.925	0.010	1.158	0.243	1.168	N/A	N/A	N/A

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 96 of 124

Simult Tx	Configuration	LTE Band 12 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.732	0.372	0.657	1.104	1.389	See Note 1	0.02	0.03	0.01
	Top	0.799	0.092	0.390	0.891	1.189	1.281	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.128	0.000	1.184	0.128	1.312	1.312	N/A	N/A	N/A
	Left	0.110	0.925	0.010	1.035	0.120	1.045	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 17 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.844	0.372	0.657	1.216	1.501	See Note 1	0.02	0.03	0.01
	Top	0.997	0.092	0.390	1.089	1.387	1.479	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.140	0.000	1.184	0.140	1.324	1.324	N/A	N/A	N/A
	Left	0.123	0.925	0.010	1.048	0.133	1.058	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 13 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.022	0.372	0.657	1.394	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.293	0.092	0.390	1.385	See Note 1	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.162	0.000	1.184	0.162	1.346	1.346	N/A	N/A	N/A
	Left	0.135	0.925	0.010	1.060	0.145	1.070	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 26 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.179	0.372	0.657	1.551	See Note 1	See Note 1	0.03	0.04	0.01
	Top	1.023	0.092	0.390	1.115	1.413	1.505	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.157	0.000	1.184	0.157	1.341	1.341	N/A	N/A	N/A
	Left	0.099	0.925	0.010	1.024	0.109	1.034	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 5 (Cell) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.200	0.372	0.657	1.572	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.151	0.092	0.390	1.243	1.541	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.221	0.000	1.184	0.221	1.405	1.405	N/A	N/A	N/A
	Left	0.123	0.925	0.010	1.048	0.133	1.058	N/A	N/A	N/A

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 97 of 124

Simult Tx	Configuration	LTE Band 66 (AWS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	1.092	0.372	0.657	1.464	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.295	0.092	0.390	1.387	See Note 1	See Note 1	0.03	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.066	0.000	1.184	0.066	1.250	1.250	N/A	N/A	N/A
	Left	0.187	0.925	0.010	1.112	0.197	1.122	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 2 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.886	0.372	0.657	1.258	1.543	See Note 1	0.02	0.03	0.01
	Top	1.225	0.092	0.390	1.317	See Note 1	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.247	0.000	1.184	0.247	1.431	1.431	N/A	N/A	N/A
	Left	0.218	0.925	0.010	1.143	0.228	1.153	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 25 (PCS) SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.986	0.372	0.657	1.358	See Note 1	See Note 1	0.03	0.03	0.01
	Top	1.179	0.092	0.390	1.271	1.569	See Note 1	0.02	0.01	0.00
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.086	0.000	1.184	0.086	1.270	1.270	N/A	N/A	N/A
	Left	0.123	0.925	0.010	1.048	0.133	1.058	N/A	N/A	N/A
Simult Tx	Configuration	LTE Band 41 SAR (W/kg)	Bluetooth SAR (W/kg)	5 GHz WLAN Ant 2 SAR (W/kg)	Σ SAR (W/kg)			SPLSR		
		1	2	3	1+2	1+3	1+2+3	1+2	1+3	2+3
Body SAR	Back	0.976	0.372	0.657	1.348	See Note 1	See Note 1	0.02	0.04	0.01
	Top	1.049	0.092	0.390	1.141	1.439	1.531	N/A	N/A	N/A
	Bottom	0.400	0.400	0.400	0.800	0.800	1.200	N/A	N/A	N/A
	Right	0.314	0.000	1.184	0.314	1.498	1.498	N/A	N/A	N/A
	Left	0.502	0.925	0.010	1.427	0.512	1.437	N/A	N/A	N/A

Notes:

1. No evaluation was performed to determine the aggregate 1g SAR for these configurations as the SPLS ratio between the antenna pairs was not greater than 0.04 per FCC KDB 447498 D01v06. See Section 12.3 for detailed SPLS ratio analysis.
2. For SAR summation, the highest reported SAR across all test distances was used as the most conservative evaluation for simultaneous transmission analysis for each device edge.
3. When the antenna separation distance was > 50 mm, an estimated SAR of 0.4 W/kg was used to determine the simultaneous transmission SAR exclusion for test positions excluded per FCC KDB Publication 447498 D01v06.

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 98 of 124

11.3 SPLSR Evaluation and Analysis

Per FCC KDB Publication 447498 D01v06, when the sum of the standalone transmitters is more than 1.6 W/kg for 1g, the SAR sum to peak locations can be analyzed to determine SAR distribution overlaps. When the SAR peak to location ratio (shown below) for each pair of antennas is ≤ 0.04 for 1g, simultaneous SAR evaluation is not required. The distance between the transmitters was calculated using the following formula.

$$\text{Distance}_{\text{Tx1} - \text{Tx2}} = R_i = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2} \text{ (Body)}$$

$$\text{SPLS Ratio} = \frac{(SAR_1 + SAR_2)^{1.5}}{R_i}$$

11.3.1 Back Side SPLSR Evaluation and Analysis

Table 11-5
Peak SAR Locations for Body Back Side

Mode/Band	x (mm)	y (mm)	Reported SAR (W/kg)
2.4 GHz WLAN Ant 1	5.40	-64.20	0.579
2.4 GHz WLAN Ant 2	5.40	75.00	0.775
5 GHz WLAN Ant 1	5.00	-81.00	0.464
5 GHz WLAN Ant 2	7.00	66.00	0.657
Bluetooth	4.60	-69.60	0.372
GPRS 850	10.50	15.50	0.837
GPRS 1900	13.50	-16.50	1.025
UMTS 850	18.00	3.00	1.059
UMTS 1750	10.50	-3.50	1.107
UMTS 1900	12.00	-17.00	1.021
LTE Band 12	20.00	4.50	0.732
LTE Band 17	20.00	4.50	0.844
LTE Band 13	18.50	11.00	1.022
LTE Band 26 (Cell)	10.50	-2.50	1.179
LTE Band 5 (Cell)	25.00	12.00	1.200
LTE Band 66 (AWS)	12.00	-8.00	1.092
LTE Band 2 (PCS)	12.50	-6.00	0.886
LTE Band 25 (PCS)	14.00	-11.00	0.986
LTE Band 41	15.70	13.00	0.976

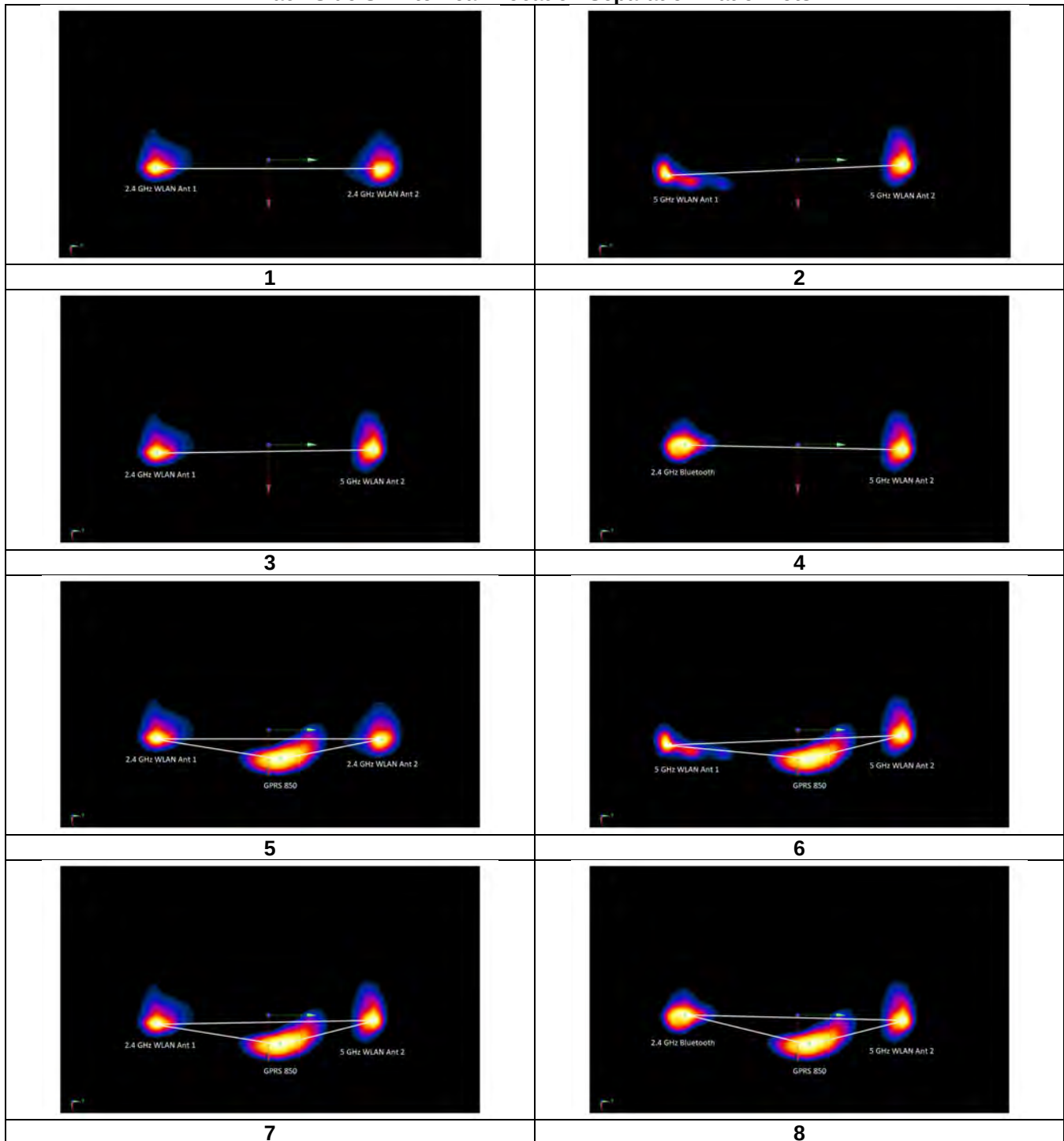
FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 99 of 124

Table 11-6
Back Side SAR to Peak Location Separation Ratio Calculations

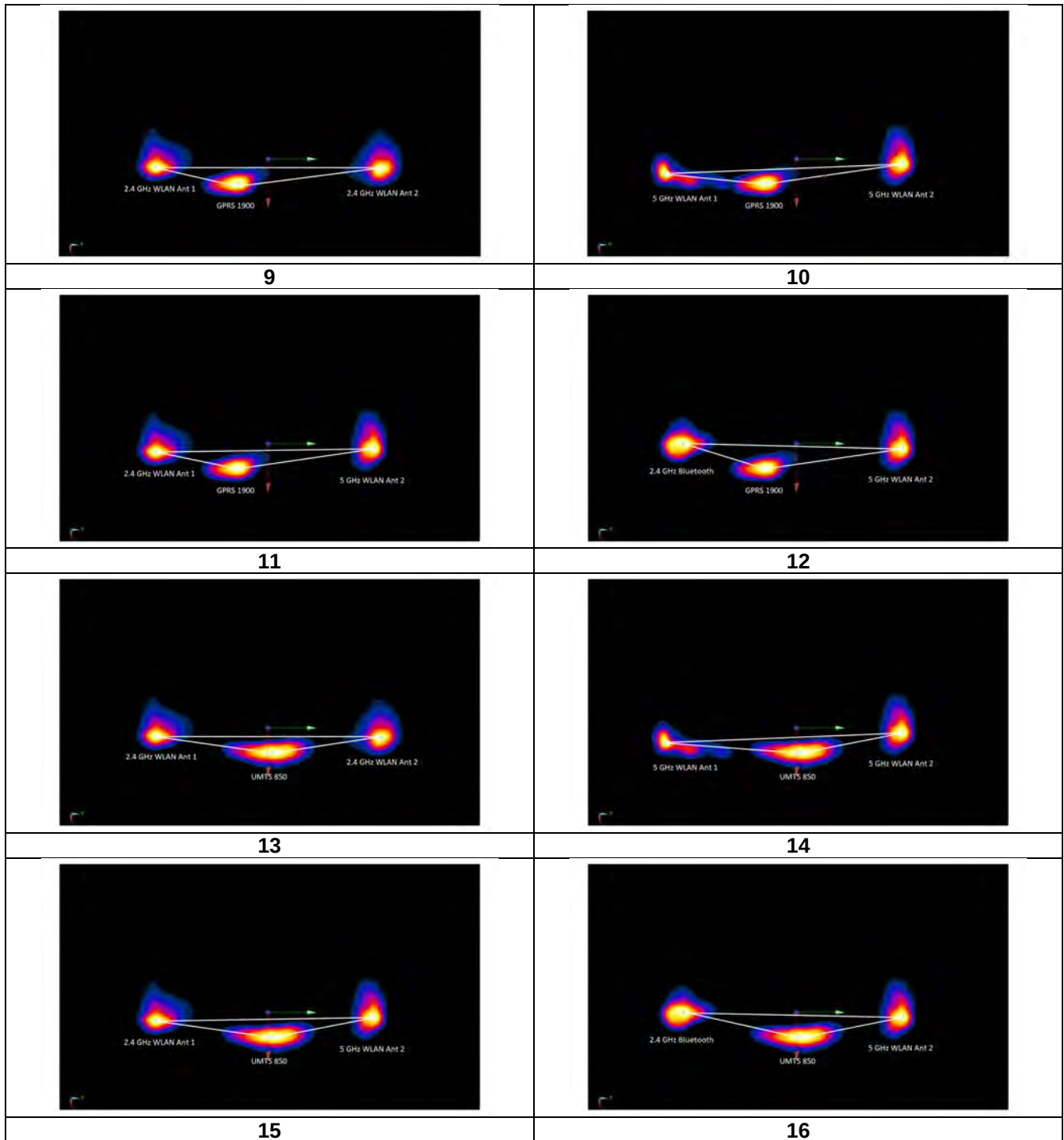
Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D _{a-b}	(a+b) ^{1.5} /D _{a-b}	
2.4 GHz WLAN Ant 1	2.4 GHz WLAN Ant 2	0.579	0.775	1.354	139.20	0.01	1
5 GHz WLAN Ant 1	5 GHz WLAN Ant 2	0.464	0.657	1.121	147.01	0.01	2
2.4 GHz WLAN Ant 1	5 GHz WLAN Ant 2	0.579	0.657	1.236	130.21	0.01	3
Bluetooth	5 GHz WLAN Ant 2	0.372	0.657	1.029	135.62	0.01	4
GPRS 850	2.4 GHz WLAN Ant 1	0.837	0.579	1.416	79.86	0.02	5, 7
GPRS 850	2.4 GHz WLAN Ant 2	0.837	0.775	1.612	59.72	0.03	5
GPRS 850	5 GHz WLAN Ant 1	0.837	0.464	1.301	96.66	0.02	6
GPRS 850	5 GHz WLAN Ant 2	0.837	0.657	1.494	50.62	0.04	6, 7, 8
GPRS 850	Bluetooth	0.837	0.372	1.209	85.30	0.02	8
GPRS 1900	2.4 GHz WLAN Ant 1	1.025	0.579	1.604	48.38	0.04	9, 11
GPRS 1900	2.4 GHz WLAN Ant 2	1.025	0.775	1.8	91.86	0.03	9
GPRS 1900	5 GHz WLAN Ant 1	1.025	0.464	1.489	65.06	0.03	10
GPRS 1900	5 GHz WLAN Ant 2	1.025	0.657	1.682	82.76	0.03	10, 11, 12
GPRS 1900	Bluetooth	1.025	0.372	1.397	53.84	0.03	12
UMTS 850	2.4 GHz WLAN Ant 1	1.059	0.579	1.638	68.37	0.03	13, 15
UMTS 850	2.4 GHz WLAN Ant 2	1.059	0.775	1.834	73.09	0.03	13
UMTS 850	5 GHz WLAN Ant 1	1.059	0.464	1.523	85.00	0.02	14
UMTS 850	5 GHz WLAN Ant 2	1.059	0.657	1.716	63.95	0.04	14, 15, 16
UMTS 850	Bluetooth	1.059	0.372	1.431	73.83	0.02	16
UMTS 1750	2.4 GHz WLAN Ant 1	1.107	0.579	1.686	60.91	0.04	17, 19
UMTS 1750	2.4 GHz WLAN Ant 2	1.107	0.775	1.882	78.67	0.03	17
UMTS 1750	5 GHz WLAN Ant 1	1.107	0.464	1.571	77.69	0.03	18
UMTS 1750	5 GHz WLAN Ant 2	1.107	0.657	1.764	69.59	0.03	18, 19, 20
UMTS 1750	Bluetooth	1.107	0.372	1.479	66.36	0.03	20
UMTS 1900	2.4 GHz WLAN Ant 1	1.021	0.579	1.6	47.66	0.04	21, 23
UMTS 1900	2.4 GHz WLAN Ant 2	1.021	0.775	1.796	92.24	0.03	21
UMTS 1900	5 GHz WLAN Ant 1	1.021	0.464	1.485	64.38	0.03	22
UMTS 1900	5 GHz WLAN Ant 2	1.021	0.657	1.678	83.15	0.03	22, 23, 24
UMTS 1900	Bluetooth	1.021	0.372	1.393	53.12	0.03	24
LTE Band 12	2.4 GHz WLAN Ant 1	0.732	0.579	1.311	70.23	0.02	25, 27
LTE Band 12	2.4 GHz WLAN Ant 2	0.732	0.775	1.507	72.00	0.03	25
LTE Band 12	5 GHz WLAN Ant 1	0.732	0.464	1.196	86.81	0.02	26
LTE Band 12	5 GHz WLAN Ant 2	0.732	0.657	1.389	62.86	0.03	26, 27, 28
LTE Band 12	Bluetooth	0.732	0.372	1.104	75.68	0.02	28
LTE Band 17	2.4 GHz WLAN Ant 1	0.844	0.579	1.423	70.23	0.02	29, 31
LTE Band 17	2.4 GHz WLAN Ant 2	0.844	0.775	1.619	72.00	0.03	29
LTE Band 17	5 GHz WLAN Ant 1	0.844	0.464	1.308	86.81	0.02	30
LTE Band 17	5 GHz WLAN Ant 2	0.844	0.657	1.501	62.86	0.03	30, 31, 32
LTE Band 17	Bluetooth	0.844	0.372	1.216	75.68	0.02	32
LTE Band 13	2.4 GHz WLAN Ant 1	1.022	0.579	1.601	76.33	0.03	33, 35
LTE Band 13	2.4 GHz WLAN Ant 2	1.022	0.775	1.797	65.33	0.04	33
LTE Band 13	5 GHz WLAN Ant 1	1.022	0.464	1.486	92.99	0.02	34
LTE Band 13	5 GHz WLAN Ant 2	1.022	0.657	1.679	56.19	0.04	34, 35, 36
LTE Band 13	Bluetooth	1.022	0.372	1.394	81.79	0.02	36
LTE Band 26 (Cell)	2.4 GHz WLAN Ant 1	1.179	0.579	1.758	61.91	0.04	37, 39
LTE Band 26 (Cell)	2.4 GHz WLAN Ant 2	1.179	0.775	1.954	77.67	0.04	37
LTE Band 26 (Cell)	5 GHz WLAN Ant 1	1.179	0.464	1.643	78.69	0.03	38
LTE Band 26 (Cell)	5 GHz WLAN Ant 2	1.179	0.657	1.836	68.59	0.04	38, 39, 40
LTE Band 26 (Cell)	Bluetooth	1.179	0.372	1.551	67.36	0.03	40
LTE Band 5 (Cell)	2.4 GHz WLAN Ant 1	1.200	0.579	1.779	78.68	0.03	41, 43
LTE Band 5 (Cell)	2.4 GHz WLAN Ant 2	1.200	0.775	1.975	65.98	0.04	41
LTE Band 5 (Cell)	5 GHz WLAN Ant 1	1.200	0.464	1.664	95.13	0.02	42
LTE Band 5 (Cell)	5 GHz WLAN Ant 2	1.200	0.657	1.857	56.92	0.04	42, 43, 44
LTE Band 5 (Cell)	Bluetooth	1.200	0.372	1.572	84.11	0.02	44
LTE Band 66 (AWS)	2.4 GHz WLAN Ant 1	1.092	0.579	1.671	56.59	0.04	45, 47
LTE Band 66 (AWS)	2.4 GHz WLAN Ant 2	1.092	0.775	1.867	83.26	0.03	45
LTE Band 66 (AWS)	5 GHz WLAN Ant 1	1.092	0.464	1.556	73.33	0.03	46
LTE Band 66 (AWS)	5 GHz WLAN Ant 2	1.092	0.657	1.749	74.17	0.03	46, 47, 48
LTE Band 66 (AWS)	Bluetooth	1.092	0.372	1.464	62.04	0.03	48
LTE Band 2 (PCS)	2.4 GHz WLAN Ant 1	0.886	0.579	1.465	58.63	0.03	49, 51
LTE Band 2 (PCS)	2.4 GHz WLAN Ant 2	0.886	0.775	1.661	81.31	0.03	49
LTE Band 2 (PCS)	5 GHz WLAN Ant 1	0.886	0.464	1.35	75.37	0.02	50
LTE Band 2 (PCS)	5 GHz WLAN Ant 2	0.886	0.657	1.543	72.21	0.03	50, 51, 52
LTE Band 2 (PCS)	Bluetooth	0.886	0.372	1.258	64.09	0.02	52
LTE Band 25 (PCS)	2.4 GHz WLAN Ant 1	0.986	0.579	1.565	53.89	0.04	53, 55
LTE Band 25 (PCS)	2.4 GHz WLAN Ant 2	0.986	0.775	1.761	86.43	0.03	53
LTE Band 25 (PCS)	5 GHz WLAN Ant 1	0.986	0.464	1.45	70.58	0.02	54
LTE Band 25 (PCS)	5 GHz WLAN Ant 2	0.986	0.657	1.643	77.32	0.03	54, 55, 56
LTE Band 25 (PCS)	Bluetooth	0.986	0.372	1.358	59.35	0.03	56
LTE Band 41	2.4 GHz WLAN Ant 1	0.976	0.579	1.555	77.88	0.02	57, 59
LTE Band 41	2.4 GHz WLAN Ant 2	0.976	0.775	1.751	62.85	0.04	57
LTE Band 41	5 GHz WLAN Ant 1	0.976	0.464	1.44	94.61	0.02	58
LTE Band 41	5 GHz WLAN Ant 2	0.976	0.657	1.633	53.71	0.04	58, 59, 60
LTE Band 41	Bluetooth	0.976	0.372	1.348	83.34	0.02	60

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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 100 of 124	

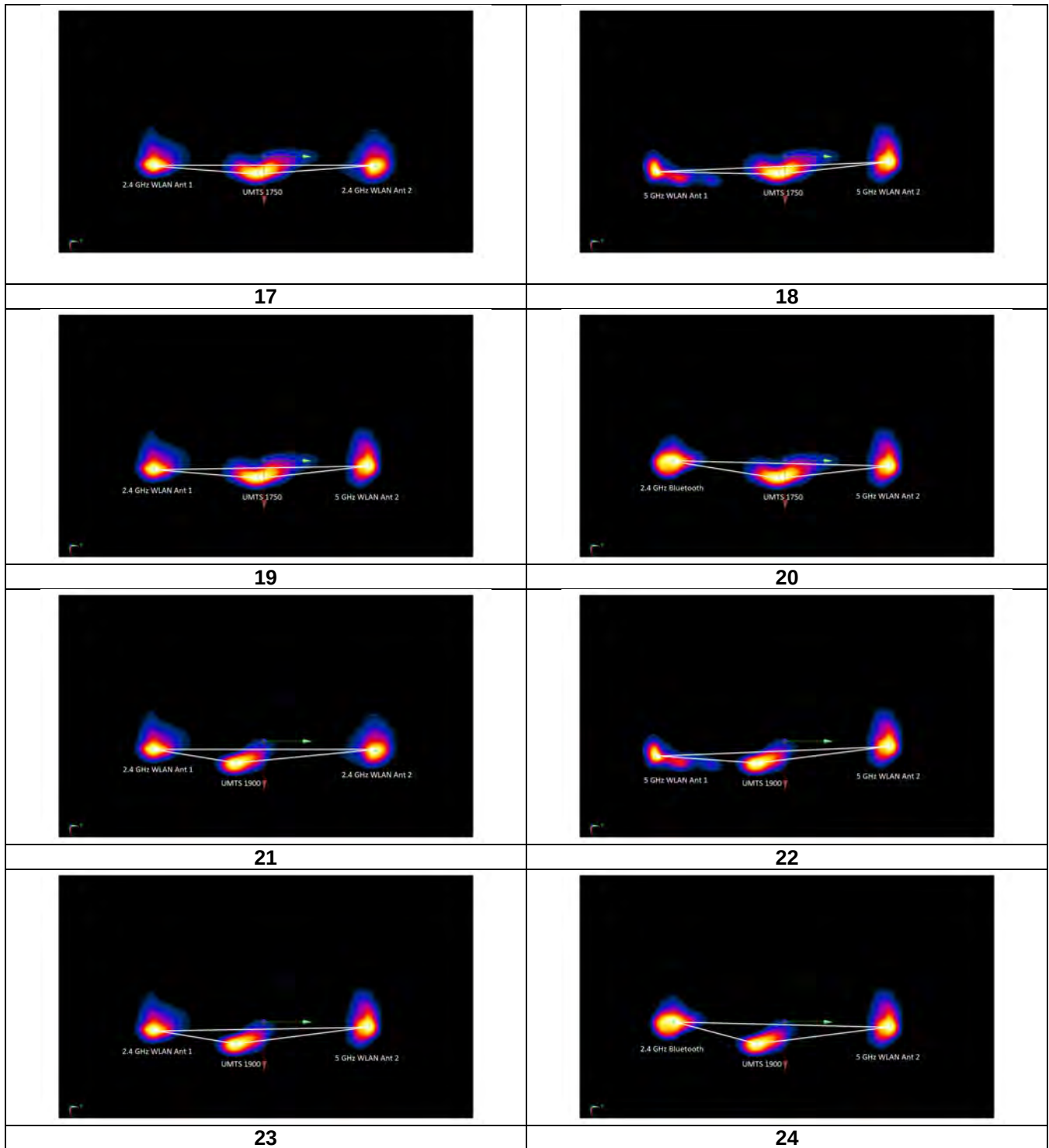
Table 11-7
Back Side SAR to Peak Location Separation Ratio Plots



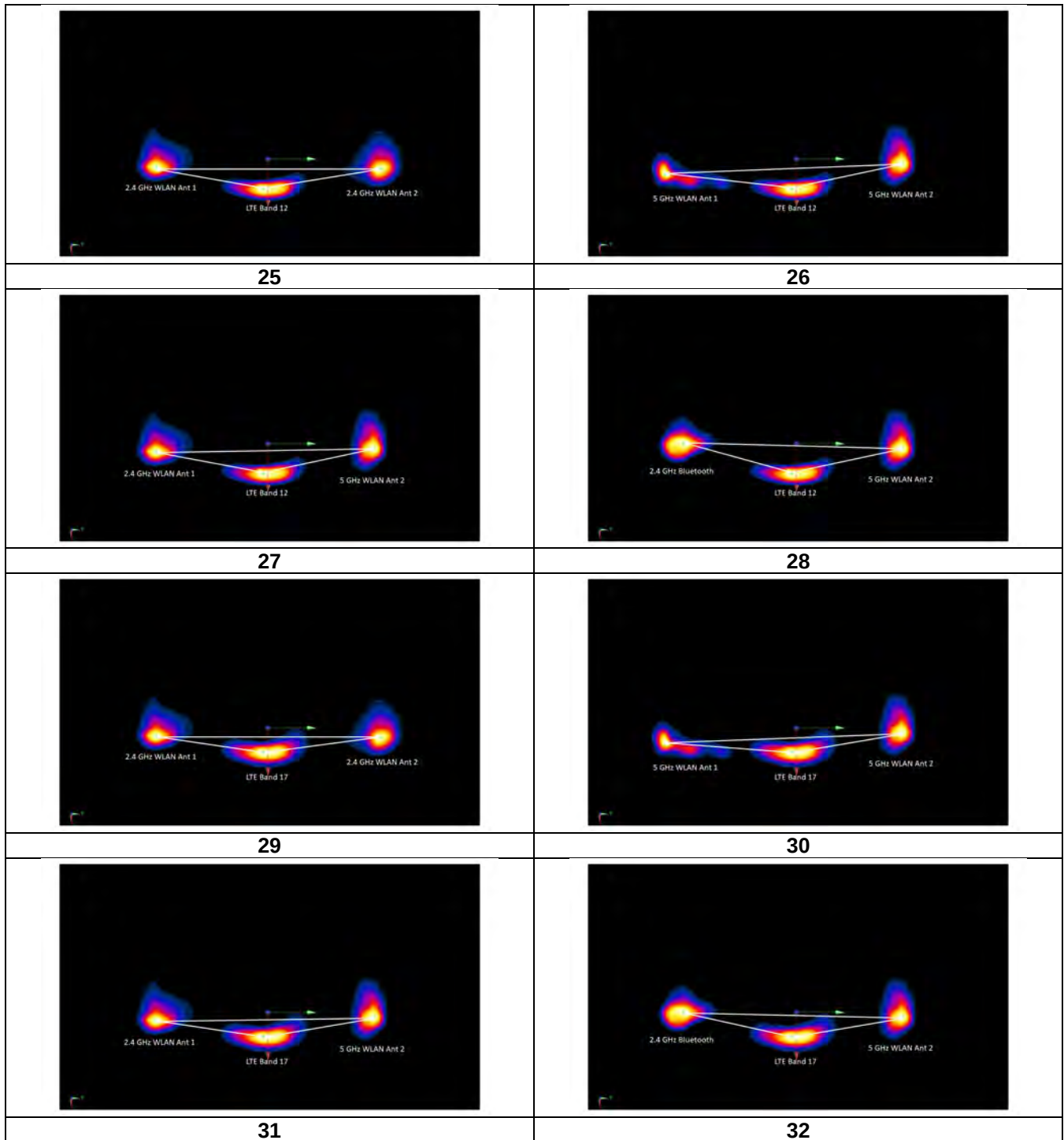
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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 101 of 124



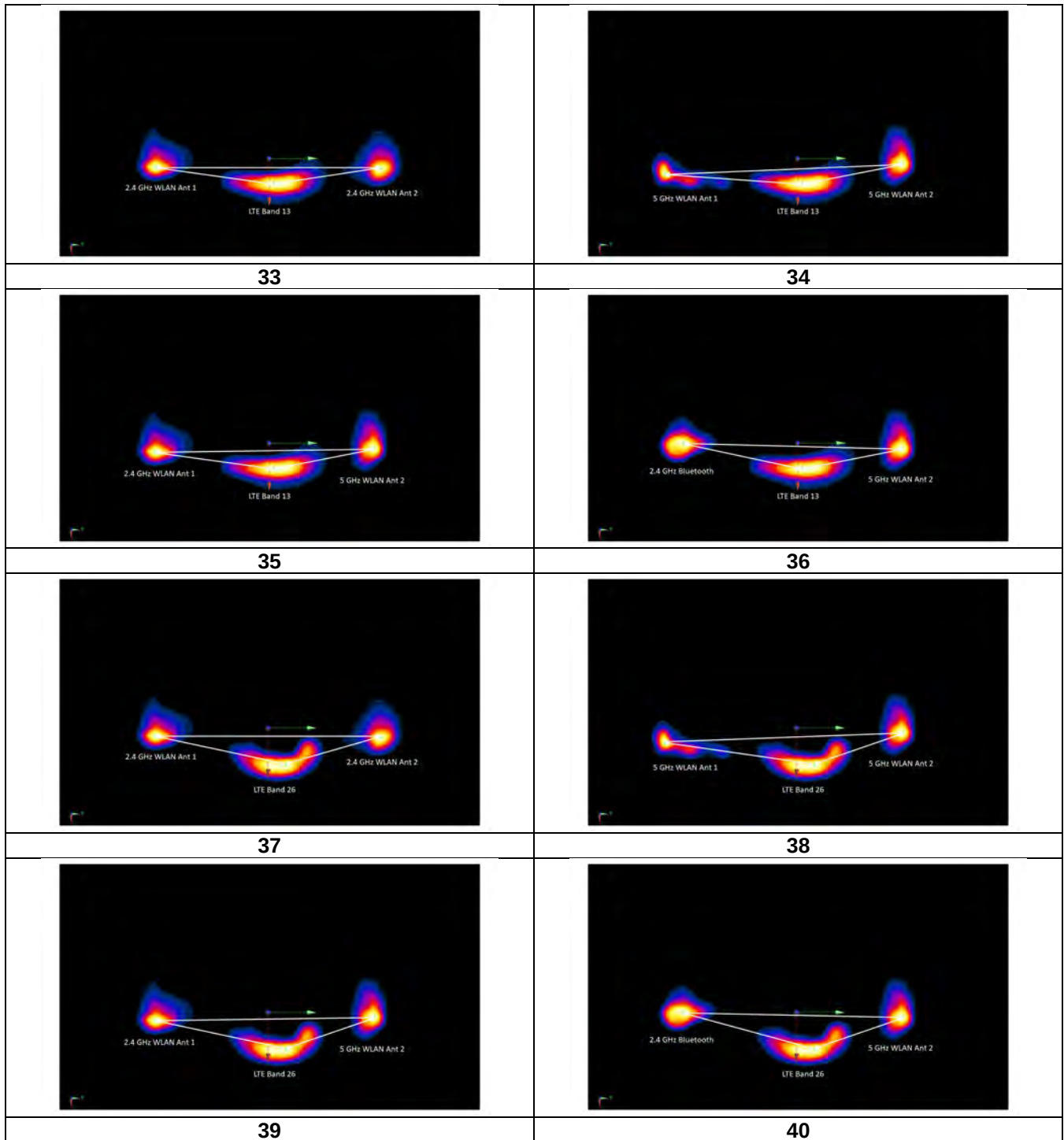
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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 102 of 124



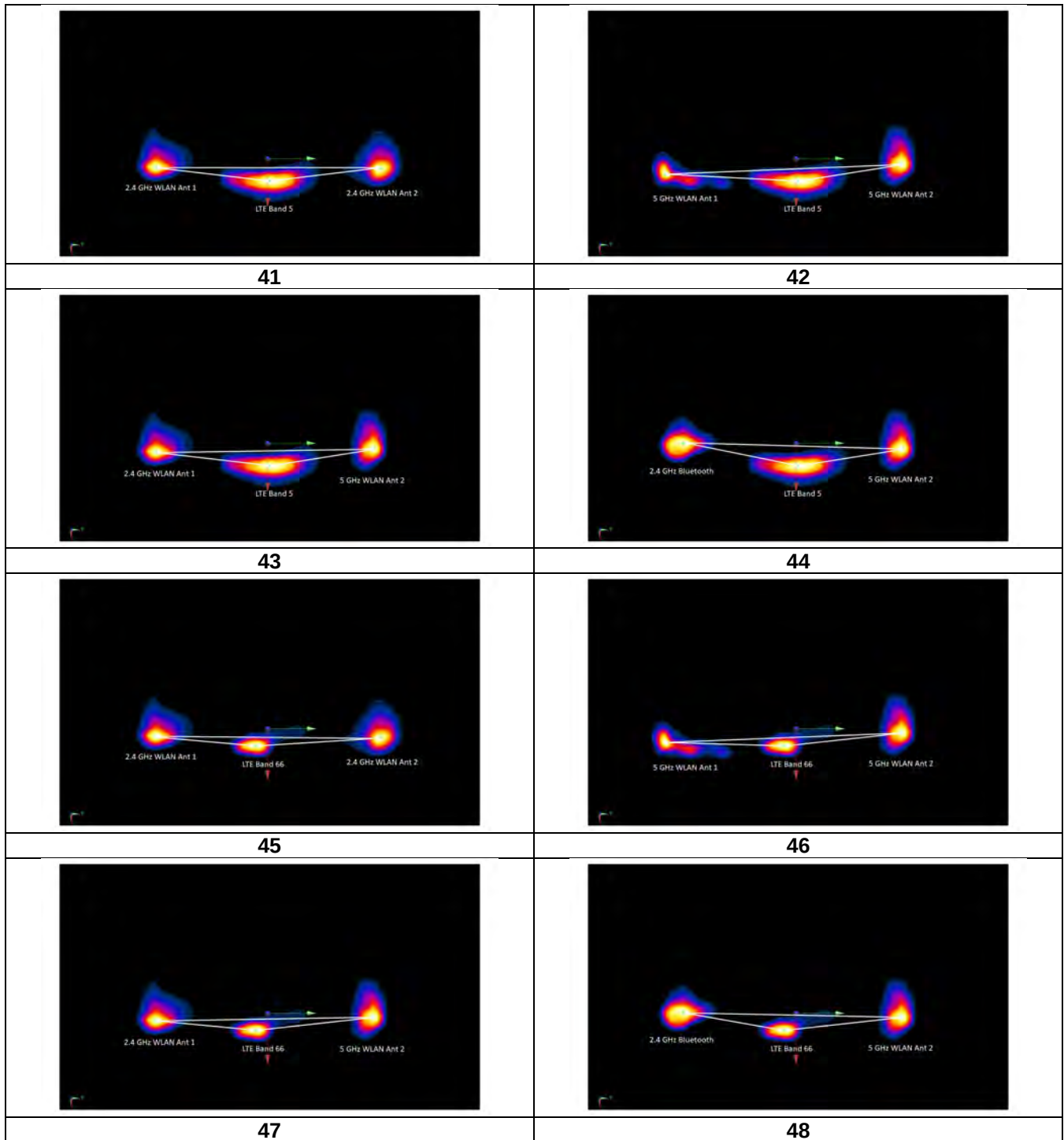
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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 103 of 124



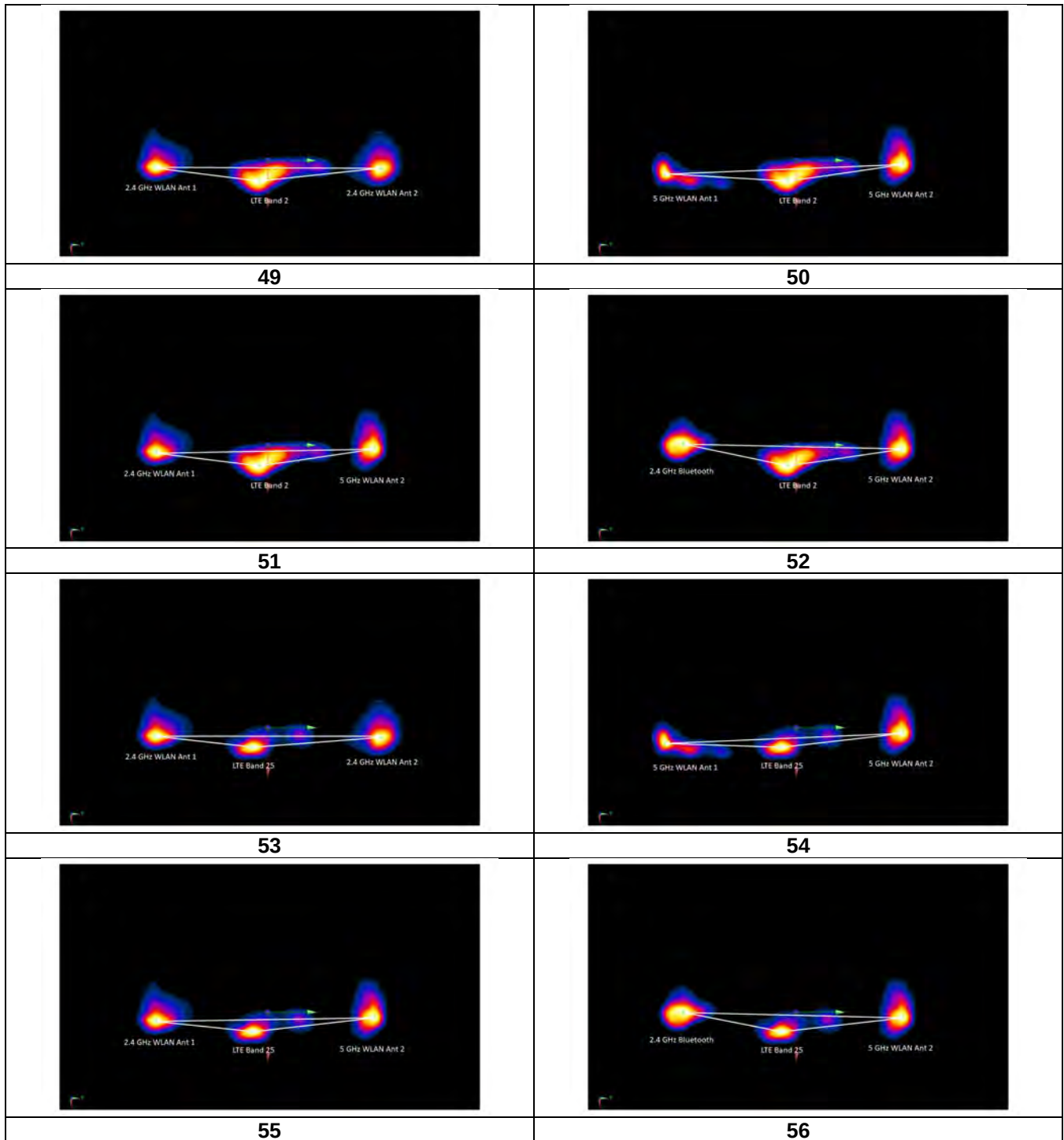
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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 104 of 124



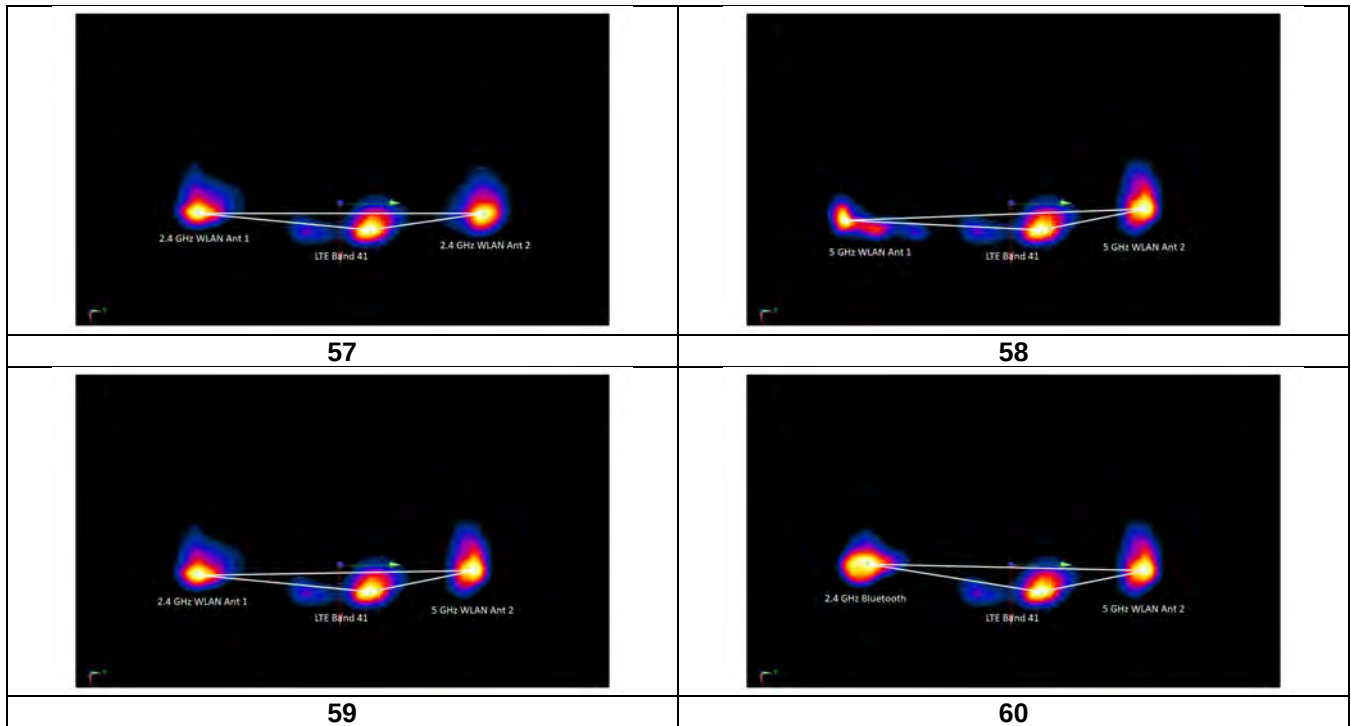
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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 105 of 124



FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 106 of 124



FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 107 of 124



FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 108 of 124

11.3.2 Top Edge SPLSR Evaluation and Analysis

Table 11-8
Peak SAR Locations for Body Top Edge

Mode/Band	x (mm)	y (mm)	Reported SAR (W/kg)
2.4 GHz WLAN Ant 1	-29.00	-74.40	0.121
2.4 GHz WLAN Ant 2	-31.00	68.40	0.424
5 GHz WLAN Ant 1	-24.00	-57.00	0.168
5 GHz WLAN Ant 2	59.00	-206.25	0.390
Bluetooth	-26.50	-68.40	0.092
UMTS 850	-26.00	-5.00	1.213
UMTS 1750	-25.00	0.00	1.283
UMTS 1900	-29.50	-13.50	1.187
LTE Band 13	-24.50	-16.00	1.293
LTE Band 5 (Cell)	-17.00	-16.00	1.151
LTE Band 66 (AWS)	-28.00	-6.00	1.295
LTE Band 2 (PCS)	-27.00	0.00	1.225
LTE Band 25 (PCS)	-29.50	-10.50	1.179
LTE Band 41	-24.50	30.20	1.049

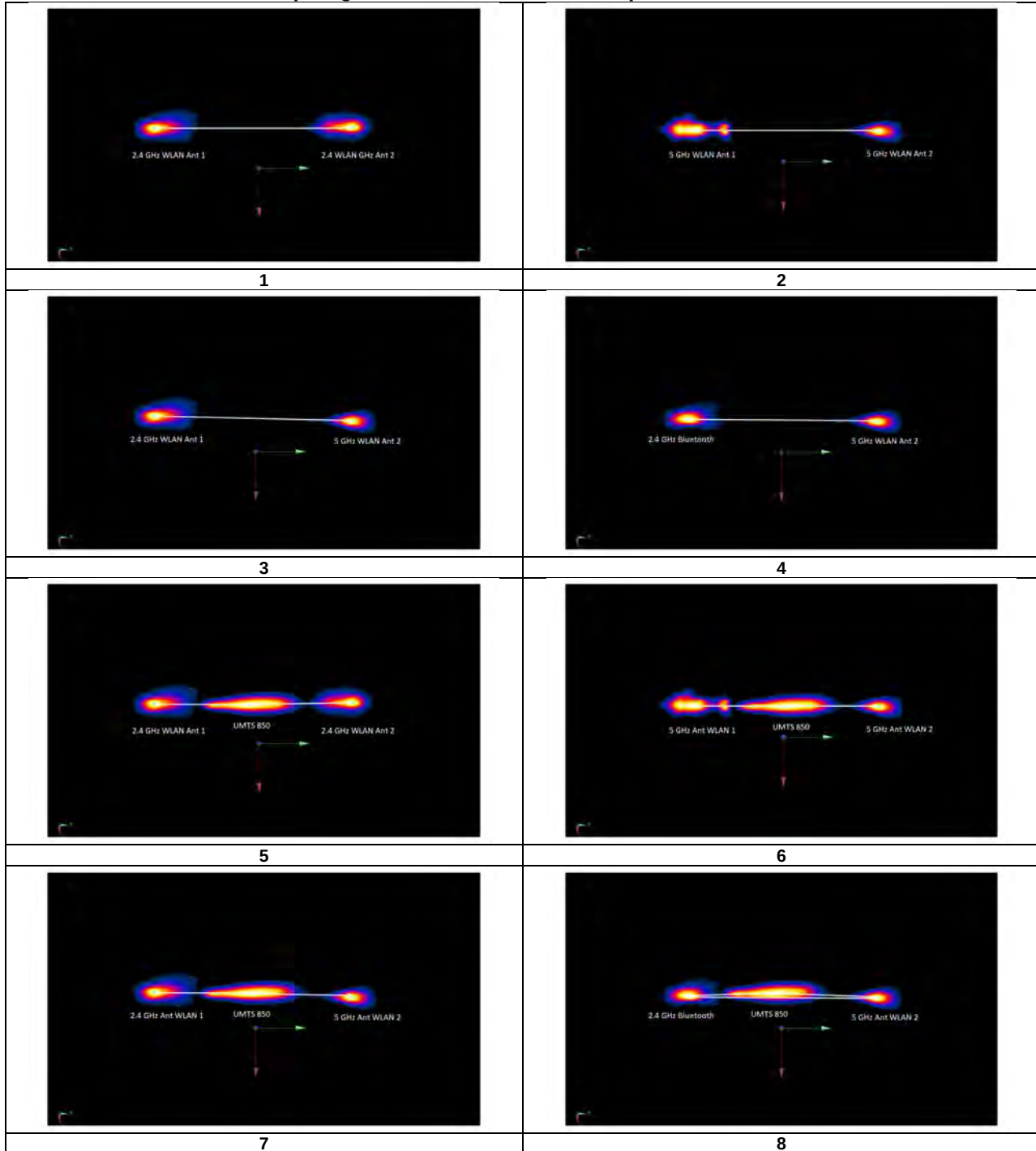
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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 109 of 124

Table 11-9
Top Edge SAR to Peak Location Separation Ratio Calculations

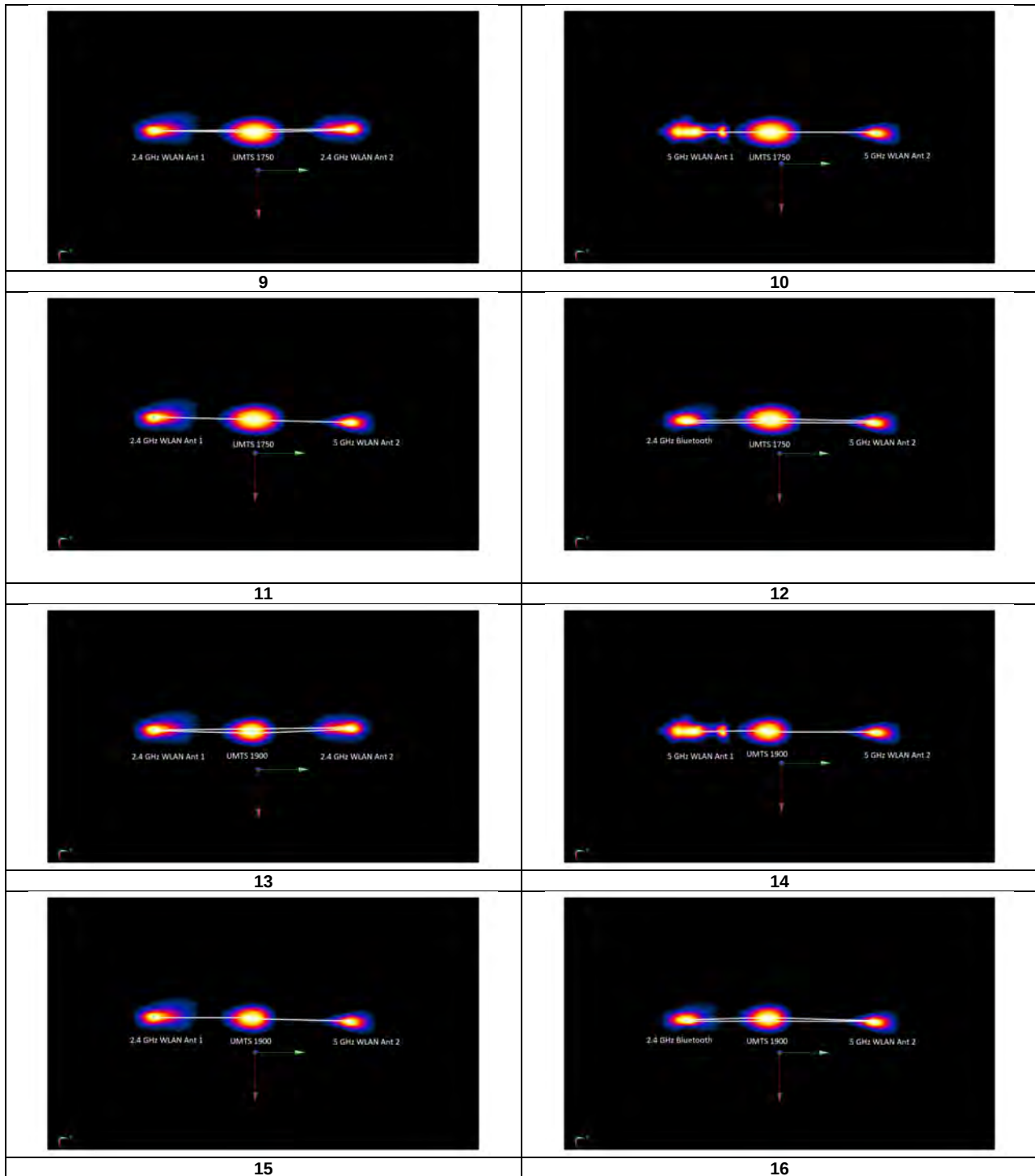
Antenna Pair		Standalone SAR (W/kg)		Standalone SAR Sum (W/kg)	Peak SAR Separation Distance (mm)	SPLS Ratio	Plot Number
Ant "a"	Ant "b"	a	b	a+b	D _{a-b}	$(a+b)^{1.5}/D_{a-b}$	
2.4 GHz WLAN Ant 1	2.4 GHz WLAN Ant 2	0.121	0.424	0.545	142.81	0.00	1
5 GHz WLAN Ant 1	5 GHz WLAN Ant 2	0.168	0.390	0.558	170.78	0.00	2
2.4 GHz WLAN Ant 1	5 GHz WLAN Ant 2	0.121	0.390	0.511	158.52	0.00	3
Bluetooth	5 GHz WLAN Ant 2	0.092	0.390	0.482	162.21	0.00	4
UMTS 850	2.4 GHz WLAN Ant 1	1.213	0.121	1.334	69.46	0.02	5, 7
UMTS 850	2.4 GHz WLAN Ant 2	1.213	0.424	1.637	73.57	0.03	5
UMTS 850	5 GHz WLAN Ant 1	1.213	0.168	1.381	52.04	0.03	6
UMTS 850	5 GHz WLAN Ant 2	1.213	0.390	1.603	218.46	0.01	6, 7, 8
UMTS 850	Bluetooth	1.213	0.092	1.305	63.40	0.02	8
UMTS 1750	2.4 GHz WLAN Ant 1	1.283	0.121	1.404	74.51	0.02	9, 11
UMTS 1750	2.4 GHz WLAN Ant 2	1.283	0.424	1.707	68.66	0.03	9
UMTS 1750	5 GHz WLAN Ant 1	1.283	0.168	1.451	57.01	0.03	10
UMTS 1750	5 GHz WLAN Ant 2	1.283	0.390	1.673	222.70	0.01	10, 11, 12
UMTS 1750	Bluetooth	1.283	0.092	1.375	68.42	0.02	12
UMTS 1900	2.4 GHz WLAN Ant 1	1.187	0.121	1.308	60.90	0.02	13, 15
UMTS 1900	2.4 GHz WLAN Ant 2	1.187	0.424	1.611	81.91	0.02	13
UMTS 1900	5 GHz WLAN Ant 1	1.187	0.168	1.355	43.85	0.04	14
UMTS 1900	5 GHz WLAN Ant 2	1.187	0.390	1.577	212.10	0.01	14, 15, 16
UMTS 1900	Bluetooth	1.187	0.092	1.279	54.98	0.03	16
LTE Band 13	2.4 GHz WLAN Ant 1	1.293	0.121	1.414	58.57	0.03	17, 19
LTE Band 13	2.4 GHz WLAN Ant 2	1.293	0.424	1.717	84.65	0.03	17
LTE Band 13	5 GHz WLAN Ant 1	1.293	0.168	1.461	41.00	0.04	18
LTE Band 13	5 GHz WLAN Ant 2	1.293	0.390	1.683	207.77	0.01	18, 19, 20
LTE Band 13	Bluetooth	1.293	0.092	1.385	52.44	0.03	20
LTE Band 5 (Cell)	2.4 GHz WLAN Ant 1	1.151	0.121	1.272	59.62	0.02	21, 23
LTE Band 5 (Cell)	2.4 GHz WLAN Ant 2	1.151	0.424	1.575	85.55	0.02	21
LTE Band 5 (Cell)	5 GHz WLAN Ant 1	1.151	0.168	1.319	41.59	0.04	22
LTE Band 5 (Cell)	5 GHz WLAN Ant 2	1.151	0.390	1.541	204.87	0.01	22, 23, 24
LTE Band 5 (Cell)	Bluetooth	1.151	0.092	1.243	53.25	0.03	24
LTE Band 66 (AWS)	2.4 GHz WLAN Ant 1	1.295	0.121	1.416	68.41	0.02	25, 27
LTE Band 66 (AWS)	2.4 GHz WLAN Ant 2	1.295	0.424	1.719	74.46	0.03	25
LTE Band 66 (AWS)	5 GHz WLAN Ant 1	1.295	0.168	1.463	51.16	0.03	26
LTE Band 66 (AWS)	5 GHz WLAN Ant 2	1.295	0.390	1.685	218.33	0.01	26, 27, 28
LTE Band 66 (AWS)	Bluetooth	1.295	0.092	1.387	62.42	0.03	28
LTE Band 2 (PCS)	2.4 GHz WLAN Ant 1	1.225	0.121	1.346	74.43	0.02	29, 31
LTE Band 2 (PCS)	2.4 GHz WLAN Ant 2	1.225	0.424	1.649	68.52	0.03	29
LTE Band 2 (PCS)	5 GHz WLAN Ant 1	1.225	0.168	1.393	57.08	0.03	30
LTE Band 2 (PCS)	5 GHz WLAN Ant 2	1.225	0.390	1.615	223.46	0.01	30, 31, 32
LTE Band 2 (PCS)	Bluetooth	1.225	0.092	1.317	68.40	0.02	32
LTE Band 25 (PCS)	2.4 GHz WLAN Ant 1	1.179	0.121	1.3	63.90	0.02	33, 35
LTE Band 25 (PCS)	2.4 GHz WLAN Ant 2	1.179	0.424	1.603	78.91	0.03	33
LTE Band 25 (PCS)	5 GHz WLAN Ant 1	1.179	0.168	1.347	46.82	0.03	34
LTE Band 25 (PCS)	5 GHz WLAN Ant 2	1.179	0.390	1.569	214.83	0.01	34, 35, 36
LTE Band 25 (PCS)	Bluetooth	1.179	0.092	1.271	57.98	0.02	36
LTE Band 41	5 GHz WLAN Ant 1	1.049	0.168	1.217	87.20	0.02	37
LTE Band 41	5 GHz WLAN Ant 2	1.049	0.390	1.439	250.76	0.01	37

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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 110 of 124	

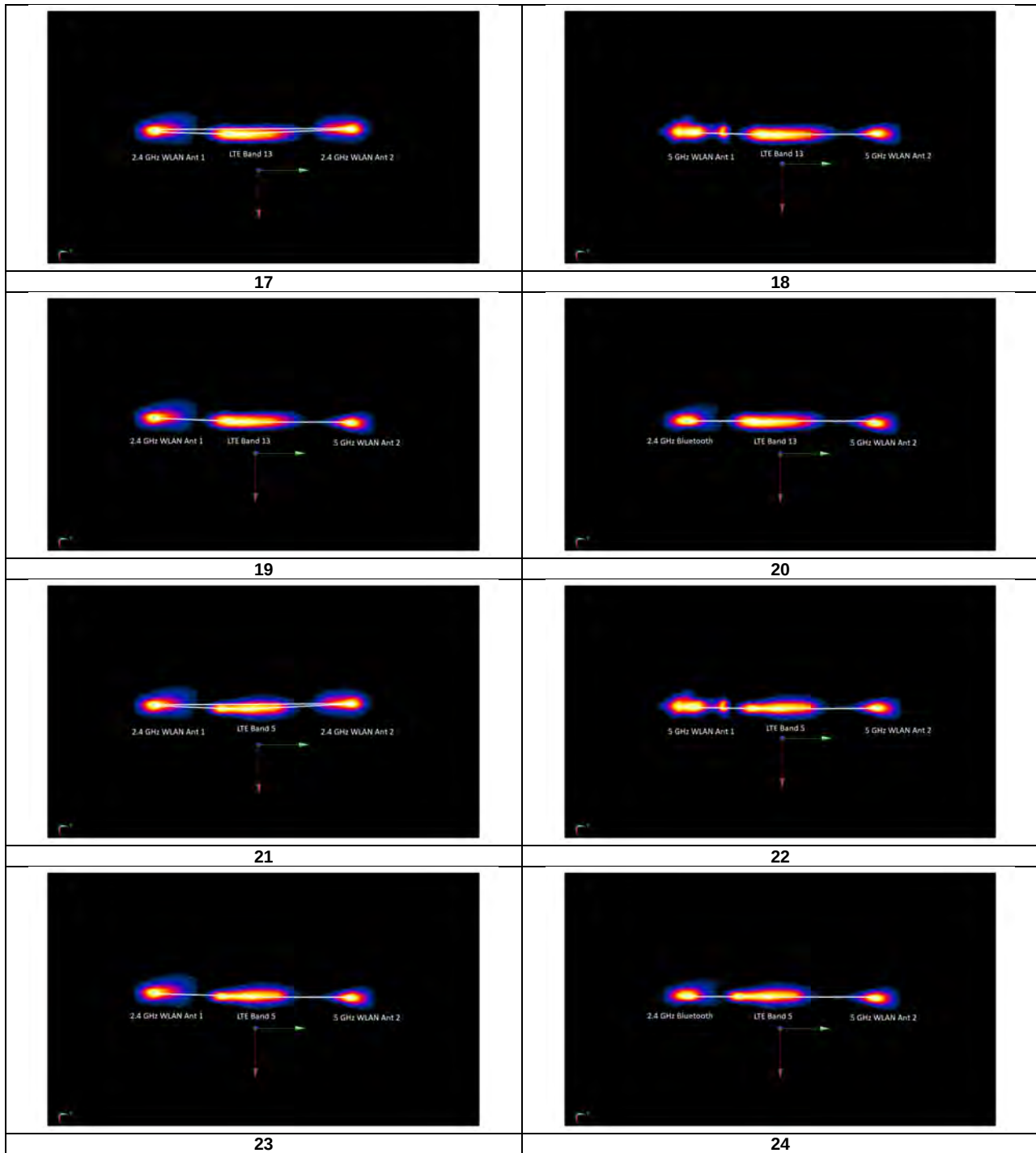
Table 11-10
Top Edge SAR to Peak Location Separation Ratio Plots



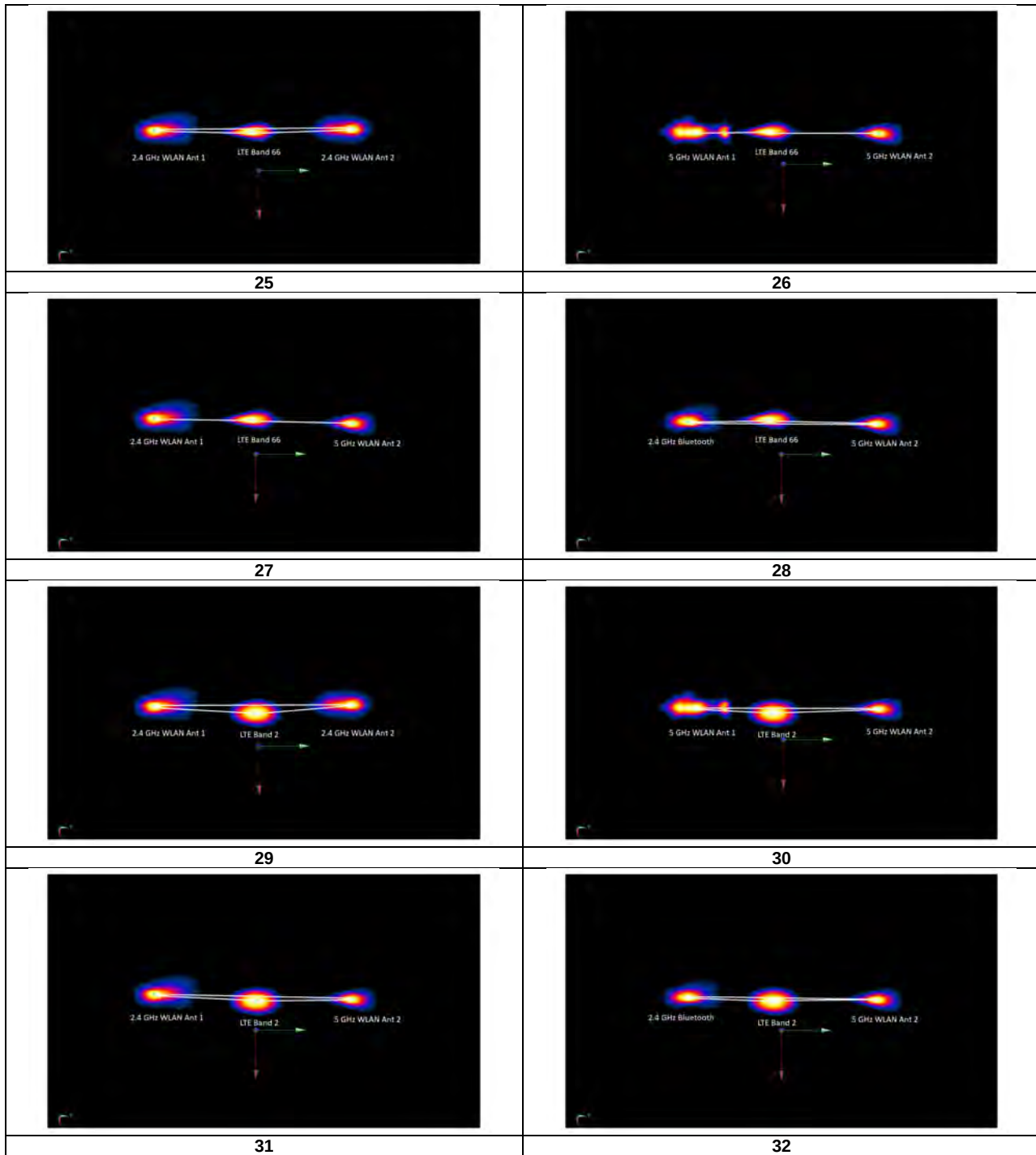
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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 111 of 124



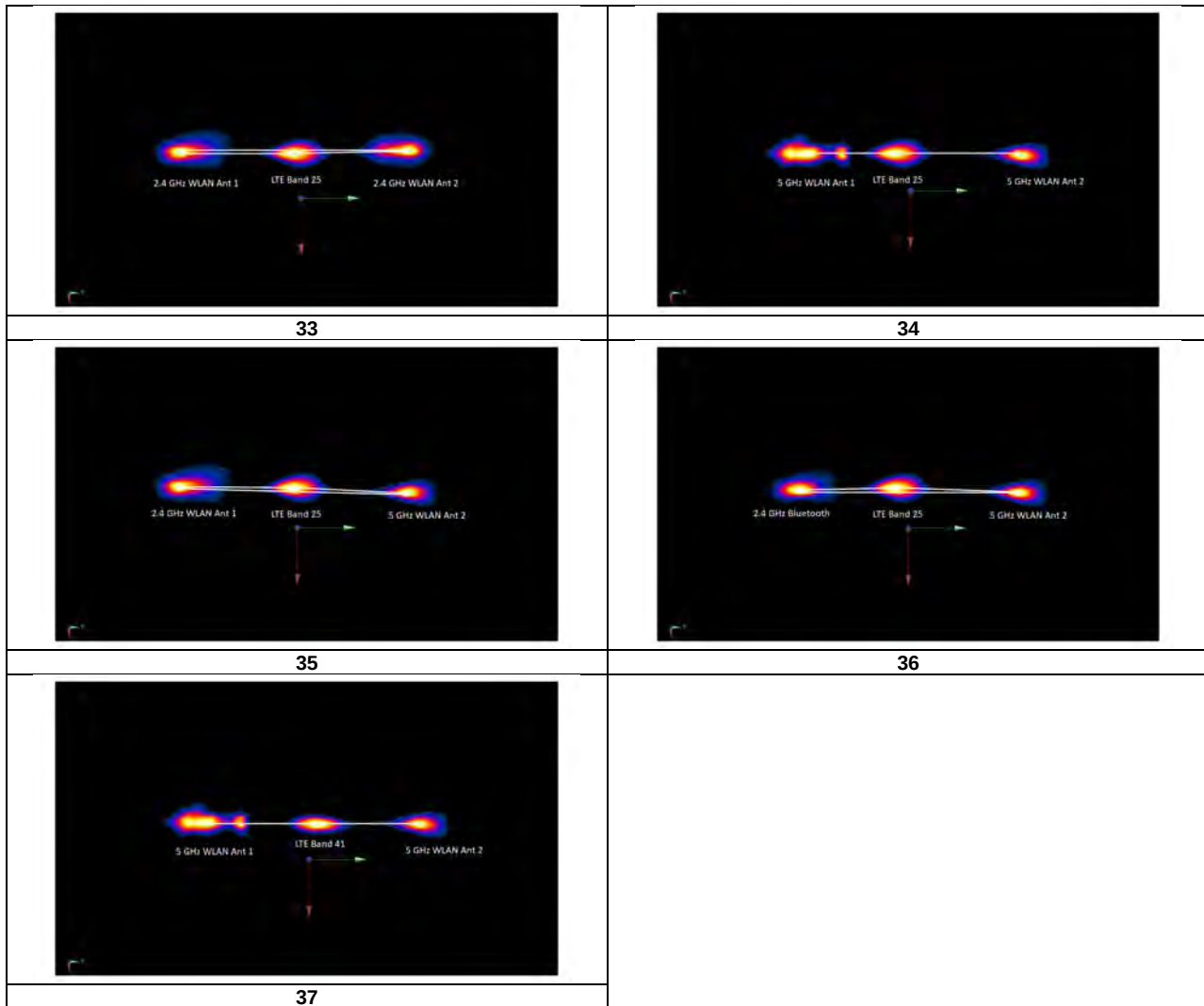
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Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 112 of 124



FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 113 of 124



FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 114 of 124



11.4 Simultaneous Transmission Conclusion

The above numerical summed SAR results and SPLSR analysis are sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06 and IEEE 1528- 2013 Section 6.3.4.1.

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 115 of 124

12 SAR MEASUREMENT VARIABILITY

12.1 Measurement Variability

Per FCC KDB Publication 865664 D01v01r04, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

- 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
- 2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1g SAR limit).
- 3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .
- 4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg

Table 12-1
Body SAR Measurement Variability Results

BODY VARIABILITY RESULTS													
Band	FREQUENCY		Mode	Service	Data Rate (Mbps)	Side	Spacing	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	Ratio	3rd Repeated SAR (1g)
	MHz	Ch.						(W/kg)	(W/kg)		(W/kg)		(W/kg)
835	826.40	4132	UMTS 850	RMC	N/A	top	0 mm	1.140	1.110	1.03	N/A	N/A	N/A
750	782.00	23230	LTE Band 13, 10 MHz Bandwidth	QPSK, 25 RB, 0 RB Offset	N/A	top	0 mm	1.100	1.060	1.04	N/A	N/A	N/A
1750	1745.00	132322	LTE Band 66 (AWS), 20 MHz Bandwidth	QPSK, 1 RB, 99 RB Offset	N/A	top	17 mm	1.080	1.080	1.00	N/A	N/A	N/A
1900	1860.00	18700	LTE Band 2 (PCS), 20 MHz Bandwidth	QPSK, 1 RB, 0 RB Offset	N/A	top	17 mm	1.020	1.030	1.01	N/A	N/A	N/A
2600	2680.00	41490	LTE Band 41, 20 MHz Bandwidth	QPSK, 50 RB, 0 RB Offset	N/A	top	0 mm	0.834	0.832	1.00	N/A	N/A	N/A
2450	2462.00	11	802.11b, 22 MHz Bandwidth	DSSS, ANT 1	1	left	0 mm	0.979	0.902	1.09	N/A	N/A	N/A
5250	5280.00	56	802.11a, 20 MHz Bandwidth	OFDM, ANT 2	6	right	6 mm	0.815	0.814	1.00	N/A	N/A	N/A
5600	5620.00	124	802.11a, 20 MHz Bandwidth	OFDM, ANT 2	6	right	6 mm	1.150	1.150	1.00	N/A	N/A	N/A
5750	5720.00	144	802.11a, 20 MHz Bandwidth	OFDM, ANT 2	6	right	6 mm	0.941	0.920	1.02	N/A	N/A	N/A
ANSI / IEEE C95.1 1992 - SAFETY LIMIT							Body						
Spatial Peak							1.6 W/kg (mW/g)						
Uncontrolled Exposure/General Population							averaged over 1 gram						

12.2 Measurement Uncertainty

The measured SAR was < 1.5 W/kg for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE 1528-2013 was not required.

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 116 of 124

13 ADDITIONAL TESTING PER FCC GUIDANCE

13.1 Tuner Testing

The following test procedures were followed to demonstrate that the SAR results in Section 11 represented the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR was measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements were evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence to the antenna characteristics, other than impedance matching.

Per April 2019 TCB Workshop notes, in order to evaluate all the tuner states, the 60 tuner states were divided among evenly among each supported band and exposure condition combination. Single point time-sweep measurements were performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state was able to be established remotely so that the device was not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe remained stationary at the same position throughout the entire series of single point measurements for each combination. When the single point SAR or 1g SAR was > 1.2 W/kg for a particular band/mode/exposure condition, point SAR measurements were made for all 60 states.

The operational description contains more information about the design and implementation of the dynamic antenna tuning.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 117 of 124

Table 13-1
UMTS Supplemental Body SAR Data

Supplemental Body SAR Data					
UMTS 850		UMTS 1750		UMTS 1900	
RMC		RMC		RMC	
Test Position	Top	Test Position	Top	Test Position	Top
Spacing	0 mm	Spacing	17 mm	Spacing	17 mm
Frequency (MHz)	826.40	Frequency (MHz)	1732.40	Frequency (MHz)	1907.60
Channel	4132	Channel	1412	Channel	9538
Measured 1g SAR (W/kg)	1.140	Measured 1g SAR (W/kg)	0.978	Measured 1g SAR (W/kg)	0.872
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 54)	2.112	Auto-tune (State 25)	1.431	Auto-tune (State 34)	1.585
Default (State 48)	1.823	Default (State 24)	1.397	Default (State 24)	1.113
State 0	1.180	State 0	1.259	State 0	1.293
State 1	1.164	State 1	1.251	State 1	1.286
State 2	1.485	State 2	1.147	State 2	1.304
State 3	1.528	State 3	1.093	State 3	1.305
State 4	1.650	State 4	1.025	State 4	1.301
State 5	1.667	State 5	0.888	State 5	1.295
State 6	1.586	State 6	0.798	State 6	1.289
State 7	1.394	State 7	0.669	State 7	1.275
State 8	1.044	State 8	0.523	State 8	1.247
State 9	0.812	State 9	0.434	State 9	1.216
State 10	0.569	State 10	0.335	State 10	1.165
State 11	0.348	State 11	0.235	State 11	1.074
State 12	0.358	State 12	1.320	State 12	1.129
State 13	0.352	State 13	1.293	State 13	1.121
State 14	0.590	State 14	1.316	State 14	1.153
State 15	0.677	State 15	1.269	State 15	1.159
State 16	0.937	State 16	1.219	State 16	1.156
State 17	1.405	State 17	1.089	State 17	1.163
State 18	1.901	State 18	0.986	State 18	1.162
State 19	1.969	State 19	0.836	State 19	1.163
State 20	1.118	State 20	0.645	State 20	1.147
State 21	0.647	State 21	0.525	State 21	1.131
State 22	0.334	State 22	0.396	State 22	1.097
State 23	0.154	State 23	0.269	State 23	1.025
State 24	0.487	State 24	1.397	State 24	1.113
State 25	0.480	State 25	1.386	State 25	1.092
State 26	0.566	State 26	1.280	State 26	1.192
State 27	0.558	State 27	1.225	State 27	1.218
State 28	0.541	State 28	1.159	State 28	1.238
State 29	0.473	State 29	1.022	State 29	1.298
State 30	0.398	State 30	0.925	State 30	1.336
State 31	0.317	State 31	0.796	State 31	1.390
State 32	0.217	State 32	0.634	State 32	1.456
State 33	0.165	State 33	0.529	State 33	1.491
State 34	0.115	State 34	0.415	State 34	1.514
State 35	0.072	State 35	0.297	State 35	1.464
State 36	0.185	State 36	1.424	State 36	0.879
State 37	0.181	State 37	1.397	State 37	0.864
State 38	0.389	State 38	1.416	State 38	0.953
State 39	0.437	State 39	1.385	State 39	0.979
State 40	0.771	State 40	1.338	State 40	1.001
State 41	1.039	State 41	1.216	State 41	1.065
State 42	0.775	State 42	1.116	State 42	1.106
State 43	0.413	State 43	0.966	State 43	1.172
State 44	0.162	State 44	0.762	State 44	1.263
State 45	0.095	State 45	0.627	State 45	1.325
State 46	0.053	State 46	0.483	State 46	1.389
State 47	0.026	State 47	0.333	State 47	1.412
State 48	1.823	State 48	0.562	State 48	0.256
State 49	1.777	State 49	0.536	State 49	0.237
State 50	1.926	State 50	0.514	State 50	0.239
State 51	1.946	State 51	0.478	State 51	0.224
State 52	2.006	State 52	0.461	State 52	0.225
State 53	2.046	State 53	0.383	State 53	0.195
State 54	2.096	State 54	0.341	State 54	0.181
State 55	2.054	State 55	0.276	State 55	0.154
State 56	1.969	State 56	0.206	State 56	0.121
State 57	1.858	State 57	0.163	State 57	0.099
State 58	1.661	State 58	0.121	State 58	0.075
State 59	1.331	State 59	0.079	State 59	0.050

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 118 of 124

Table 13-2
LTE Supplemental Body SAR Data

Supplemental Body SAR Data															
LTE Band 12		LTE Band 17		LTE Band 13		LTE Band 5		LTE Band 26		LTE Band 66		LTE Band 2		LTE Band 25	
QPSK, 10 MHz Bandwidth, 25 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 50 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 25 RB, 0 RB Offsets		QPSK, 10 MHz Bandwidth, 25 RB, 0 RB Offsets		QPSK, 15 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offsets		QPSK, 20 MHz Bandwidth, 1 RB, 0 RB Offsets		QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offsets	
Test Position	Top	Test Position	Top	Test Position	Top	Test Position	Back	Test Position	Back	Test Position	Top	Test Position	Top	Test Position	Top
Spacing	0 mm	Spacing	0 mm	Spacing	0 mm	Spacing	0 mm	Spacing	0 mm	Spacing	17 mm	Spacing	17 mm	Spacing	17 mm
Frequency (MHz)	707.50	Frequency (MHz)	710.00	Frequency (MHz)	782.00	Frequency (MHz)	836.50	Frequency (MHz)	831.50	Frequency (MHz)	1720.00	Frequency (MHz)	1860.00	Frequency (MHz)	1882.50
Channel	23095	Channel	23790	Channel	23230	Channel	20525	Channel	26865	Channel	132072	Channel	18700	Channel	26365
Measured 1g SAR (W/kg)	0.691	Measured 1g SAR (W/kg)	0.786	Measured 1g SAR (W/kg)	1.100	Measured 1g SAR (W/kg)	1.110	Measured 1g SAR (W/kg)	1.060	Measured 1g SAR (W/kg)	1.050	Measured 1g SAR (W/kg)	1.030	Measured 1g SAR (W/kg)	0.981
Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)		Average Value of Time Sweep (W/kg)	
Auto-tune (State 50)	1.856	Auto-tune (State 50)	1.949	Auto-tune (State 52)	2.129	Auto-tune (State 55)	1.944	Auto-tune (State 55)	2.083	Auto-tune (State 24)	1.560	Auto-tune (State 18)	1.487	Auto-tune (State 19)	1.461
Default (State 0)	1.159	Default (State 0)	1.160	Default (State 48)	1.718	Default (State 48)	1.530	Default (State 48)	1.583	Default (State 24)	1.557	Default (State 24)	1.535	Default (State 24)	1.378
State 0	1.159	State 0	1.160	State 0	1.122	State 0	0.846	State 0	0.954	State 0	1.339	State 0	1.314	State 0	1.342
State 1	1.142	State 1	1.149	State 1	1.108	State 1	0.836	State 1	0.944	State 1	1.341	State 1	1.294	State 1	1.317
State 2	1.538	State 2	1.602	State 2	1.475	State 2	1.061	State 2	1.192	State 2	1.212	State 2	1.235	State 2	1.342
State 3	1.584	State 3	1.645	State 3	1.545	State 3	1.054	State 3	1.211	State 3	1.160	State 3	1.202	State 3	1.323
State 4	1.596	State 4	1.655	State 4	1.653	State 4	1.152	State 4	1.283	State 4	1.086	State 4	1.162	State 4	1.301
State 5	1.403	State 5	1.461	State 5	1.655	State 5	1.130	State 5	1.252	State 5	0.941	State 5	1.043	State 5	1.222
State 6	1.133	State 6	1.190	State 6	1.527	State 6	1.043	State 6	1.149	State 6	0.849	State 6	0.966	State 6	1.157
State 7	0.846	State 7	0.894	State 7	1.291	State 7	0.888	State 7	0.978	State 7	0.722	State 7	0.846	State 7	1.045
State 8	0.534	State 8	0.568	State 8	0.905	State 8	0.643	State 8	0.702	State 8	0.567	State 8	0.694	State 8	0.876
State 9	0.385	State 9	0.411	State 9	0.678	State 9	0.494	State 9	0.541	State 9	0.470	State 9	0.586	State 9	0.753
State 10	0.255	State 10	0.273	State 10	0.460	State 10	0.344	State 10	0.375	State 10	0.365	State 10	0.463	State 10	0.602
State 11	0.152	State 11	0.162	State 11	0.274	State 11	0.211	State 11	0.230	State 11	0.258	State 11	0.333	State 11	0.434
State 12	0.440	State 12	0.450	State 12	0.364	State 12	0.296	State 12	0.305	State 12	1.434	State 12	1.361	State 12	1.259
State 13	0.433	State 13	0.443	State 13	0.359	State 13	0.291	State 13	0.300	State 13	1.403	State 13	1.321	State 13	1.216
State 14	0.966	State 14	0.983	State 14	0.662	State 14	0.506	State 14	0.535	State 14	1.405	State 14	1.390	State 14	1.365
State 15	1.163	State 15	1.201	State 15	0.789	State 15	0.551	State 15	0.581	State 15	1.367	State 15	1.377	State 15	1.383
State 16	1.601	State 16	1.634	State 16	1.152	State 16	0.836	State 16	0.904	State 16	1.307	State 16	1.351	State 16	1.391
State 17	1.438	State 17	1.509	State 17	1.734	State 17	1.280	State 17	1.395	State 17	1.165	State 17	1.260	State 17	1.377
State 18	0.891	State 18	0.949	State 18	1.936	State 18	1.529	State 18	1.743	State 18	1.054	State 18	1.490	State 18	1.347
State 19	0.492	State 19	0.526	State 19	1.400	State 19	1.471	State 19	1.447	State 19	0.898	State 19	1.043	State 19	1.497
State 20	0.277	State 20	0.245	State 20	0.622	State 20	0.750	State 20	0.680	State 20	0.693	State 20	0.839	State 20	1.071
State 21	0.143	State 21	0.152	State 21	0.359	State 21	0.425	State 21	0.389	State 21	0.563	State 21	0.701	State 21	0.912
State 22	0.083	State 22	0.089	State 22	0.192	State 22	0.218	State 22	0.204	State 22	0.426	State 22	0.540	State 22	0.718
State 23	0.044	State 23	0.047	State 23	0.093	State 23	0.101	State 23	0.097	State 23	0.288	State 23	0.373	State 23	0.498
State 24	0.577	State 24	0.589	State 24	0.490	State 24	0.404	State 24	0.415	State 24	1.557	State 24	1.535	State 24	1.378
State 25	0.570	State 25	0.580	State 25	0.486	State 25	0.400	State 25	0.409	State 25	1.488	State 25	1.430	State 25	1.345
State 26	0.750	State 26	0.765	State 26	0.609	State 26	0.457	State 26	0.474	State 26	1.366	State 26	1.380	State 26	1.382
State 27	0.479	State 27	0.763	State 27	0.615	State 27	0.456	State 27	0.475	State 27	1.310	State 27	1.341	State 27	1.370
State 28	0.677	State 28	0.691	State 28	0.595	State 28	0.426	State 28	0.452	State 28	1.241	State 28	1.296	State 28	1.343
State 29	0.523	State 29	0.536	State 29	0.515	State 29	0.368	State 29	0.395	State 29	1.101	State 29	1.186	State 29	1.275
State 30	0.384	State 30	0.398	State 30	0.419	State 30	0.307	State 30	0.330	State 30	0.997	State 30	1.104	State 30	1.215
State 31	0.269	State 31	0.282	State 31	0.320	State 31	0.241	State 31	0.260	State 31	0.862	State 31	0.979	State 31	1.104
State 32	0.164	State 32	0.172	State 32	0.208	State 32	0.166	State 32	0.177	State 32	0.692	State 32	0.813	State 32	0.939
State 33	0.117	State 33	0.123	State 33	0.153	State 33	0.126	State 33	0.135	State 33	0.584	State 33	0.693	State 33	0.806
State 34	0.078	State 34	0.082	State 34	0.104	State 34	0.089	State 34	0.094	State 34	0.460	State 34	0.559	State 34	0.653
State 35	0.047	State 35	0.049	State 35	0.063	State 35	0.056	State 35	0.059	State 35	0.333	State 35	0.407	State 35	0.474
State 36	0.255	State 36	0.265	State 36	0.198	State 36	0.158	State 36	0.164	State 36	1.487	State 36	1.470	State 36	1.265
State 37	0.249	State 37	0.259	State 37	0.193	State 37	0.155	State 37	0.161	State 37	1.480	State 37	1.436	State 37	1.227
State 38	0.796	State 38	0.818	State 38	0.482	State 38	0.335	State 38	0.359	State 38	1.543	State 38	1.499	State 38	1.377
State 39	1.042	State 39	1.069	State 39	0.627	State 39	0.375	State 39	0.405	State 39	1.498	State 39	1.492	State 39	1.397
State 40	1.140	State 40	1.208	State 40	1.025	State 40	0.650	State 40	0.722	State 40	1.452	State 40	1.459	State 40	1.409
State 41	0.541	State 41	0.597	State 41	0.981	State 41	0.843	State 41	0.896	State 41	1.311	State 41	1.377	State 41	1.411
State 42	0.253	State 42	0.282	State 42	0.523	State 42	0.625	State 42	0.606	State 42	1.204	State 42	1.301	State 42	1.386
State 43	0.130	State 43	0.145	State 43	0.251	State 43	0.333	State 43	0.309	State 43	1.040	State 43	1.162	State 43	1.301
State 44	0.059	State 44	0.062	State 44	0.103	State 44	0.137	State 44	0.126	State 44	0.826	State 44	0.958	State 44	1.125
State 45	0.037	State 45	0.039	State 45	0.062	State 45	0.081	State 45	0.075	State 45	0.680	State 45	0.808	State 45	0.973
State 46	0.022	State 46	0.023	State 46	0.035	State 46	0.044	State 46	0.042	State 46	0.527	State 46	0.638	State 46	0.773
State 47	0.011	State 47	0.012	State 47	0.017	State 47	0.022	State 47	0.021	State 47	0.363	State 47	0.446	State 47	0.541
State 48	1.547	State 48	1.621	State 48	1.718	State 48	1.530	State 48	1.583	State 48	0.577	State 48	0.487	State 48	0.704
State 49	1.531	State 49	1.606	State 49	1.697	State 49	1.521	State 49	1.573	State 49	0.550	State 49	0.454	State 49	0.658
State 50	1.894	State 50	1.979	State 50	1.960	State 50	1.727	State 50	1.800	State 50	0.522	State 50	0.473	State 50	0.700
State 51	1.776	State 51	1.999	State 51	2.017	State 51	1.752	State 51	1.833	State 51	0.483	State 51	0.447	State 51	0.667
State 52	1.800	State 52	2.026	State 52	2.132	State 52	1.852	State 52	1.946	State 52	0.466	State 52	0.450	State 52	0.681
State 53	1.699	State 53	1.904	State 53	2.196	State 53	1.920	State 53	2.027	State 53	0.386	State 53	0.392	State 53	0.610
State 54	1.656	State 54	1.694	State 54	2.220	State 54	1.954	State 54	2.064	State 54	0.343	State 54	0.363	State 54	0.573
State 55	1.369	State 55	1.404	State 55	2.167	State 55	1.956	State 55	2.043	State 55	0.280	State 55	0.306	State 55	0.494
State 56	0.960	State 56	1.010	State 56	1.958	State 56	1.850	State 56	1.896	State 56	0.211	State 56	0.237	State 56	0.399
State 57	0.731	State 57	0.764	State 57	1.737	State 57	1.700	State 57	1.716	State 57	0.167	State 57	0.191	State 57	0.319
State 58	0.511	State 58	0.535	State 58	1.409	State 58	1.440	State 58	1.421	State 58	0.124	State 58	0.142	State 58	0.243
State 59	0.315	State 59	0.330	State 59	0.985	State 59	1.070	State 59	1.021	State 59	0.082	State 59	0.094	State 59	0.163

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 119 of 124	

14 EQUIPMENT LIST

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Network Analyzer	7/30/2018	Annual	7/30/2019	MY40000670
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/30/2018	Annual	8/30/2019	MY40003841
Agilent	N5182A	MXG Vector Signal Generator	11/28/2018	Annual	11/28/2019	MY47420603
Agilent	E5515C	8960 Series 10 Wireless Communications Test Set	12/18/2018	Annual	12/18/2019	GB42230325
Agilent	N9020A	MXA Signal Analyzer	4/20/2019	Annual	4/20/2020	US46470561
Agilent	E4438C	ESG Vector Signal Generator	5/22/2019	Annual	5/22/2020	MY45091346
Agilent	E4438C	ESG Vector Signal Generator	5/23/2019	Annual	5/23/2020	MY47270002
Agilent	E5515C	Wireless Communications Test Set	2/7/2018	Triennial	2/7/2021	GB43304447
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	150A100C	DC Amplifier	CBT	N/A	CBT	348812
Amplifier Research	1551G6	Amplifier	CBT	N/A	CBT	433972
Anritsu	MA2411B	Pulse Power Sensor	11/20/2018	Annual	11/20/2019	1339008
Anritsu	MA24106A	USB Power Sensor	1/31/2019	Annual	1/31/2020	1244524
Anritsu	MA24106A	USB Power Sensor	3/5/2019	Annual	3/5/2020	1349501
Anritsu	MA2411B	Pulse Power Sensor	3/6/2019	Annual	3/6/2020	1339018
Anritsu	MT8821C	Radio Communication Analyzer	3/6/2019	Annual	3/6/2020	6201381794
Anritsu	MT8820C	Radio Communication Analyzer	3/29/2019	Annual	3/29/2020	6201300731
Anritsu	MT8821C	Radio Communication Analyzer	5/13/2019	Annual	5/13/2020	6201524637
Anritsu	ML2495A	Power Meter	10/5/2018	Annual	10/5/2019	1328004
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647811
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647802
Control Company	4352	Ultra Long Stem Thermometer	11/29/2018	Biennial	11/29/2020	181766816
Control Company	4352	Ultra Long Stem Thermometer	11/29/2018	Biennial	11/29/2020	181766817
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R897950903
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Pasternack	NC-100	Torque Wrench	11/1/2017	Biennial	11/1/2019	N/A
Pasternack	NC-100	Torque Wrench	11/7/2017	Biennial	11/7/2019	N/A
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	4/15/2019	Annual	4/15/2020	167283
Rohde & Schwarz	CMW500	Radio Communication Tester	4/19/2019	Annual	4/19/2020	128633
Rohde & Schwarz	CMW500	Radio Communication Tester	5/17/2019	Annual	5/17/2020	128635
Rohde & Schwarz	CMW500	Radio Communication Tester	6/6/2019	Annual	6/6/2020	140148
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	6/6/2019	Annual	6/6/2020	161662
SPEAG	D750V3	750 MHz SAR Dipole	1/15/2018	Biennial	1/15/2020	1003
SPEAG	D835V2	835 MHz SAR Dipole	1/22/2019	Annual	1/22/2020	46132
SPEAG	D835V2	835 MHz SAR Dipole	3/13/2019	Annual	3/13/2020	46047
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2018	Annual	10/22/2019	1150
SPEAG	D1900V2	1900 MHz SAR Dipole	2/21/2019	Annual	2/21/2020	56148
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Annual	10/23/2019	56149
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Annual	10/23/2019	50080
SPEAG	D2450V2	2450 MHz SAR Dipole	8/16/2018	Annual	8/16/2019	981
SPEAG	D2450V2	2450 MHz SAR Dipole	8/17/2017	Biennial	8/17/2019	719
SPEAG	D2600V2	2600 MHz SAR Dipole	4/11/2018	Biennial	4/11/2020	1004
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/21/2016	Triennial	9/21/2019	1191
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/14/2019	Annual	2/14/2020	1272
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/15/2019	Annual	1/15/2020	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2018	Annual	7/11/2019	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/8/2019	Annual	5/8/2020	728
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/18/2019	Annual	4/18/2020	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/3/2018	Annual	10/3/2019	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/13/2019	Annual	2/13/2020	665
SPEAG	EX3DV4	SAR Probe	2/19/2019	Annual	2/19/2020	3914
SPEAG	EX3DV4	SAR Probe	1/24/2019	Annual	1/24/2020	7488
SPEAG	EX3DV4	SAR Probe	7/20/2018	Annual	7/20/2019	7410
SPEAG	EX3DV4	SAR Probe	5/16/2019	Annual	5/16/2020	7538
SPEAG	EX3DV4	SAR Probe	4/24/2019	Annual	4/24/2020	7357
SPEAG	EX3DV4	SAR Probe	8/23/2018	Annual	8/23/2019	7308
SPEAG	EX3DV4	SAR Probe	2/19/2019	Annual	2/19/2020	7417

Each equipment was used solely within its calibration period.

Note: CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 120 of 124

15 MEASUREMENT UNCERTAINTIES

a	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	Tol. (± %)	Prob. Dist.	Div.	c _i 1gm	c _i 10 gms	1gm u _i (± %)	10gms u _i (± %)	v _i
Measurement System								
Probe Calibration	6.55	N	1	1.0	1.0	6.6	6.6	∞
Axial Isotropy	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	2.0	R	1.73	1.0	1.0	1.2	1.2	∞
Linearity	0.3	N	1	1.0	1.0	0.3	0.3	∞
System Detection Limits	0.25	R	1.73	1.0	1.0	0.1	0.1	∞
Readout Electronics	0.3	N	1	1.0	1.0	0.3	0.3	∞
Response Time	0.8	R	1.73	1.0	1.0	0.5	0.5	∞
Integration Time	2.6	R	1.73	1.0	1.0	1.5	1.5	∞
RF Ambient Conditions - Noise	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
RF Ambient Conditions - Reflections	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	R	1.73	1.0	1.0	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	6.7	R	1.73	1.0	1.0	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	4.0	R	1.73	1.0	1.0	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	2.7	N	1	1.0	1.0	2.7	2.7	35
Device Holder Uncertainty	1.67	N	1	1.0	1.0	1.7	1.7	5
Output Power Variation - SAR drift measurement	5.0	R	1.73	1.0	1.0	2.9	2.9	∞
SAR Scaling	0.0	R	1.73	1.0	1.0	0.0	0.0	∞
Phantom & Tissue Parameters								
Phantom Uncertainty (Shape & Thickness tolerances)	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	4.2	N	1	0.78	0.71	3.3	3.0	10
Liquid Permittivity - measurement uncertainty	4.1	N	1	0.23	0.26	1.0	1.1	10
Liquid Conductivity - Temperature Uncertainty	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Uncertainty	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)	RSS					11.5	11.3	60
Expanded Uncertainty (95% CONFIDENCE LEVEL)	k=2					23.0	22.6	

FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 121 of 124

16 CONCLUSION

16.1 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Innovation, Science, and Economic Development Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables. [3]

FCC ID: A3LSMT865		SAR EVALUATION REPORT		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet		Page 122 of 124

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FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 123 of 124

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FCC ID: A3LSMT865	 SAR EVALUATION REPORT 		Approved by: Quality Manager
Document S/N: 1M1906070094-01-R1.A3L	Test Dates: 06/10/19 - 07/10/19	DUT Type: Portable Tablet	Page 124 of 124

APPENDIX A: SAR TEST DATA

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29093

Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 824.2 MHz; Duty Cycle: 1:2.76

Medium: 835 Body Medium parameters used (interpolated):

$f = 824.2 \text{ MHz}$; $\sigma = 0.979 \text{ S/m}$; $\epsilon_r = 54.087$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.7 cm

Test Date: 06-10-2019; Ambient Temp: 20.5°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 824.2 MHz; Calibrated: 1/24/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1530; Calibrated: 1/15/2019

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 850, Body SAR, Top Edge, Low.ch, 3 Tx Slots

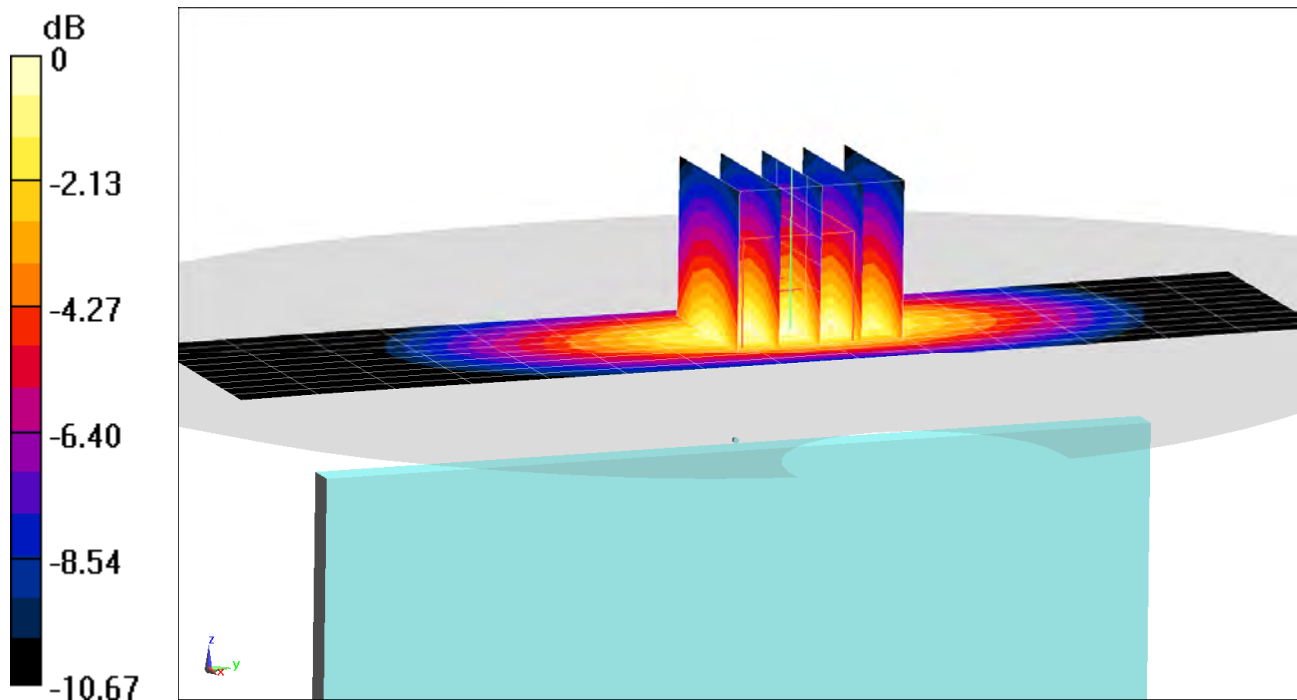
Area Scan (11x15x1): Measurement grid: dx=5mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 30.95 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.876 W/kg



0 dB = 1.15 W/kg = 0.61 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29143

Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 1850.2 MHz; Duty Cycle: 1:2.76

Medium: 1900 Body Medium parameters used:

$f = 1850.2 \text{ MHz}$; $\sigma = 1.51 \text{ S/m}$; $\epsilon_r = 51.887$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-12-2019; Ambient Temp: 22.6°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1850.2 MHz; Calibrated: 7/20/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2018

Phantom: Front; Type: QD 000 P40 CD; Serial: 1686

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Mode: GPRS 1900, Body SAR, Back side, Low.ch, 3 Tx Slots

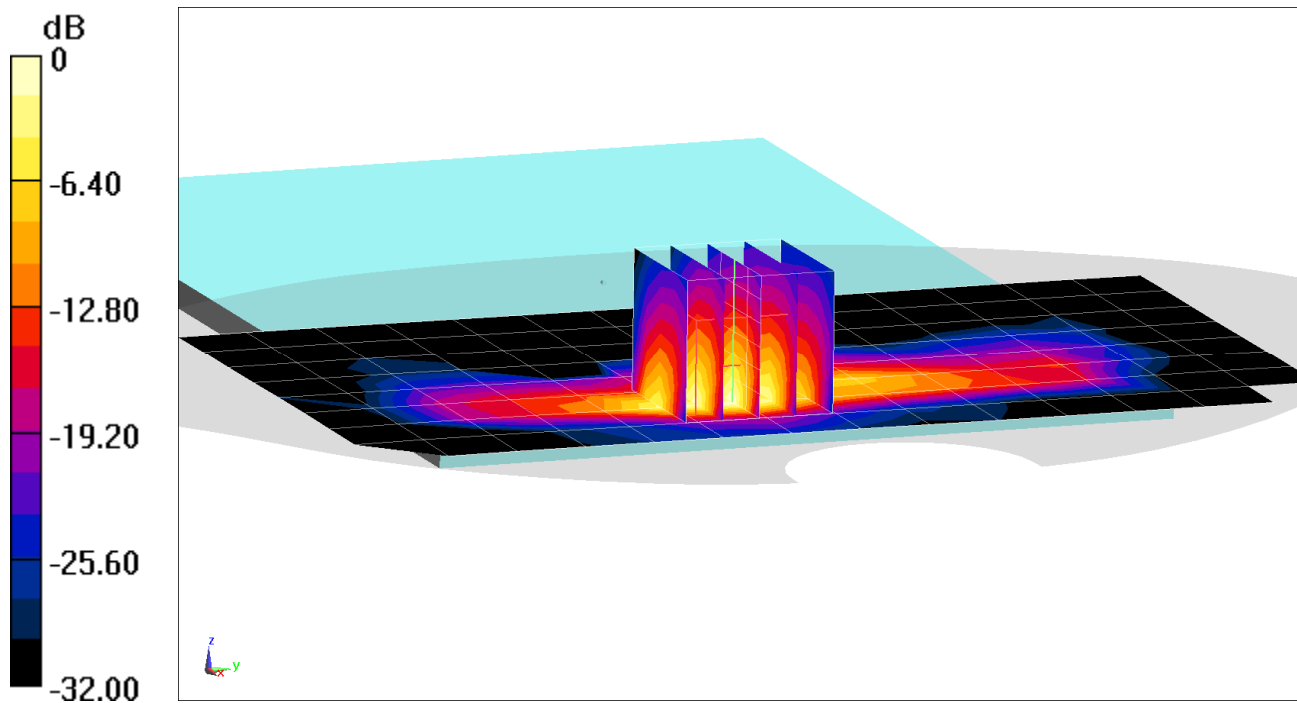
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 25.55 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.77 W/kg

SAR(1 g) = 0.768 W/kg



0 dB = 1.40 W/kg = 1.46 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29168

Communication System: UID 0, UMTS; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used (interpolated):

$f = 826.4 \text{ MHz}$; $\sigma = 0.968 \text{ S/m}$; $\epsilon_r = 55.258$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-09-2019; Ambient Temp: 20.3°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7538; ConvF(9.85, 9.85, 9.85) @ 826.4 MHz; Calibrated: 5/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn728; Calibrated: 5/8/2019

Phantom: Left Twin-SAM V5.0 30; Type: QD 000 P40 CD; Serial: 1792

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 850, Body SAR, Top Edge, Low.ch

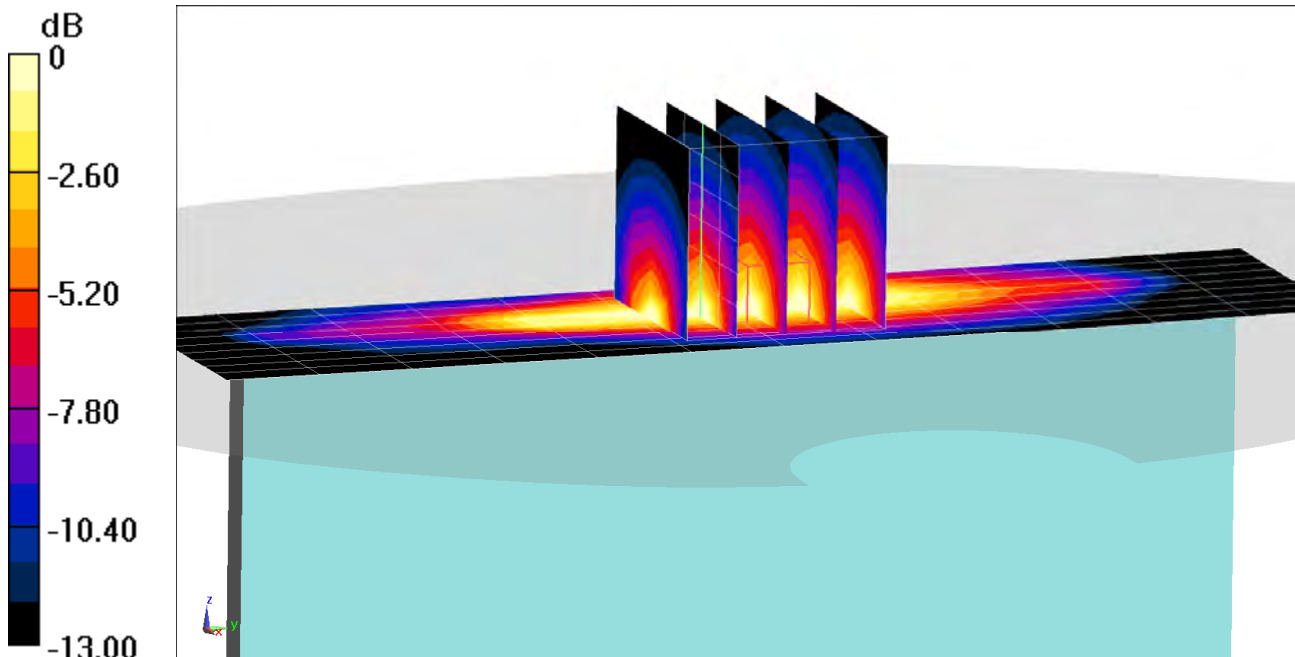
Area Scan (10x13x1): Measurement grid: $dx=5\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.83 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.05 W/kg

SAR(1 g) = 1.14 W/kg



0 dB = 1.43 W/kg = 1.55 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29085

Communication System: UID 0, UMTS, Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used (interpolated):

$f = 1752.6$ MHz; $\sigma = 1.508$ S/m; $\epsilon_r = 52.415$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.7 cm

Test Date: 07-01-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7357; ConvF(8.26, 8.26, 8.26) @ 1752.6 MHz; Calibrated: 4/24/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1407; Calibrated: 4/18/2019

Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1750, Body SAR, Top Edge, High.ch

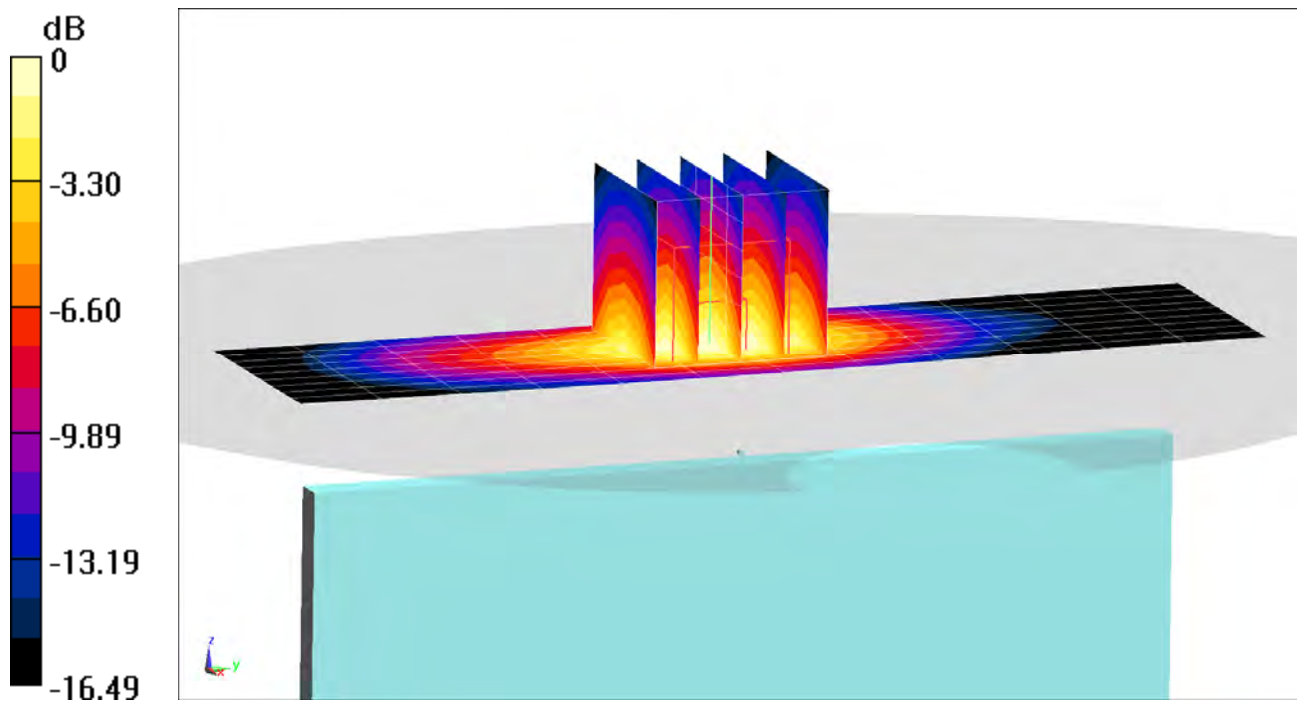
Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm

Zoom Scan 1 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.90 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.69 W/kg

SAR(1 g) = 0.990 W/kg



0 dB = 1.44 W/kg = 1.58 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29143

Communication System: UID 0, UMTS; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used:

$f = 1852.4 \text{ MHz}$; $\sigma = 1.513 \text{ S/m}$; $\epsilon_r = 51.88$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-12-2019; Ambient Temp: 22.6°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1852.4 MHz; Calibrated: 7/20/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2018

Phantom: Front; Type: QD 000 P40 CD; Serial: 1686

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Mode: UMTS 1900, Body SAR, Back side, Low.ch

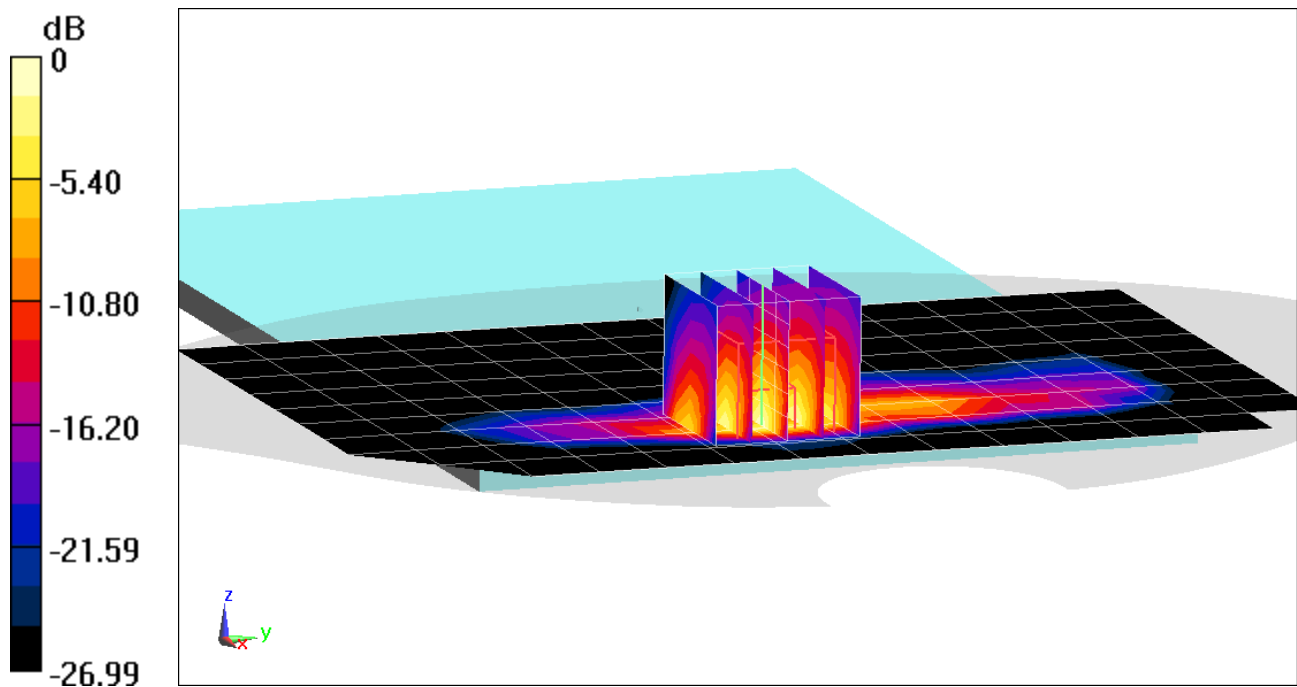
Area Scan (10x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.67 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.07 W/kg

SAR(1 g) = 0.875 W/kg



0 dB = 1.69 W/kg = 2.28 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29168

Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 707.5 \text{ MHz}$; $\sigma = 0.928 \text{ S/m}$; $\epsilon_r = 57.627$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-02-2019; Ambient Temp: 23.6°C; Tissue Temp: 22.6°C

Probe: EX3DV4 – SN3914; ConvF(9.73, 9.73, 9.73) @ 707.5 MHz; Calibrated: 2/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1272; Calibrated: 2/14/2019

Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1687

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 12, Body SAR, Top Edge, Mid.ch, 10 MHz Bandwidth,
QPSK, 25 RB, 0 RB Offset**

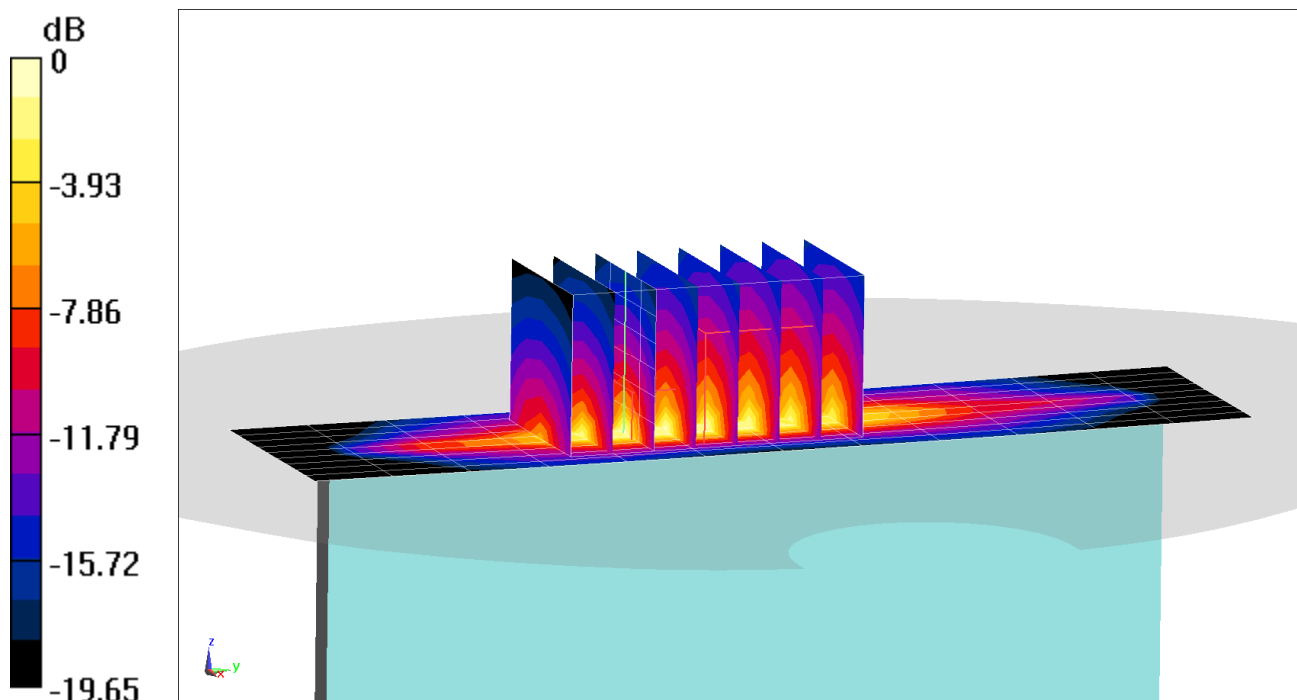
Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm

Zoom Scan (5x8x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.95 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 2.57 W/kg

SAR(1 g) = 0.691 W/kg



0 dB = 1.75 W/kg = 2.43 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29168

Communication System: UID 0, LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used:

$f = 710 \text{ MHz}$; $\sigma = 0.929 \text{ S/m}$; $\epsilon_r = 57.629$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-02-2019; Ambient Temp: 23.6°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN3914; ConvF(9.73, 9.73, 9.73) @ 710 MHz; Calibrated: 2/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1272; Calibrated: 2/14/2019

Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1687

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 17, Body SAR, Top Edge, Mid.ch, 10 MHz Bandwidth,
QPSK, 1 RB, 49 RB Offset**

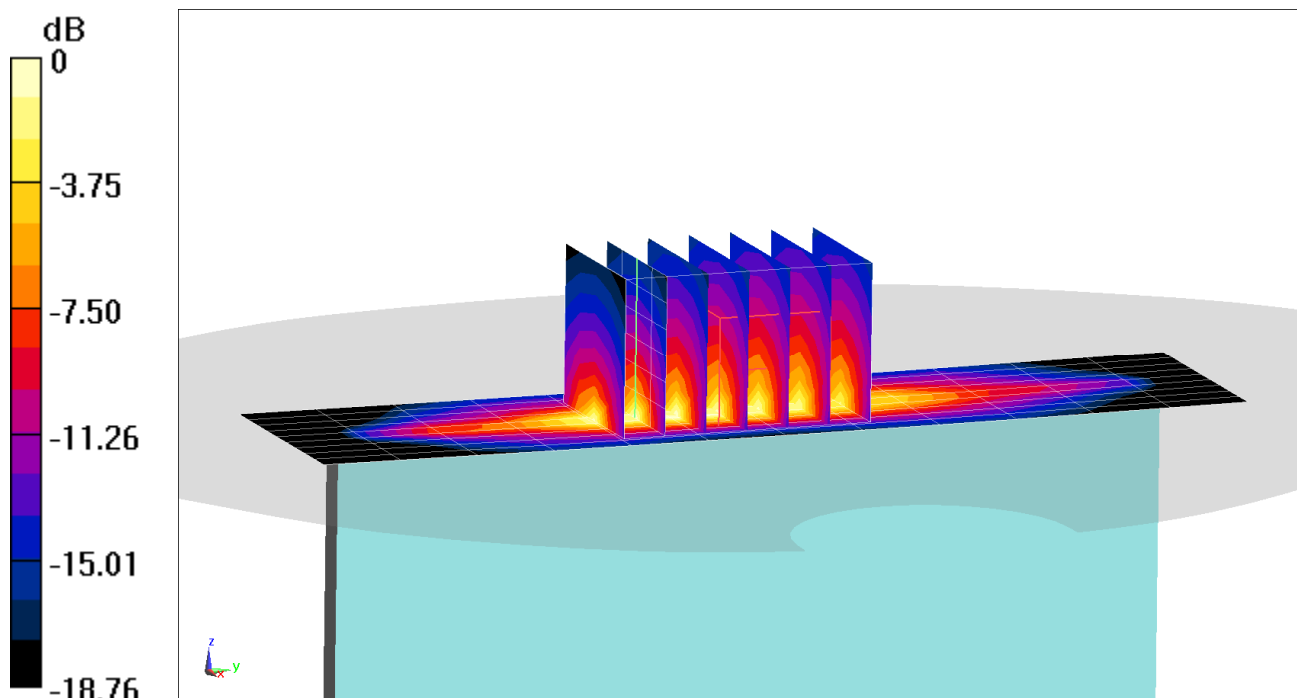
Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm

Zoom Scan (5x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.93 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 2.77 W/kg

SAR(1 g) = 0.823 W/kg



0 dB = 1.96 W/kg = 2.92 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29168

Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 782 \text{ MHz}$; $\sigma = 0.955 \text{ S/m}$; $\epsilon_r = 57.489$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-02-2019; Ambient Temp: 23.6°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN3914; ConvF(9.73, 9.73, 9.73) @ 782 MHz; Calibrated: 2/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1272; Calibrated: 2/14/2019

Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1687

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 13, Body SAR, Top Edge, Mid.ch, 10 MHz Bandwidth,
QPSK, 25 RB, 0 RB Offset**

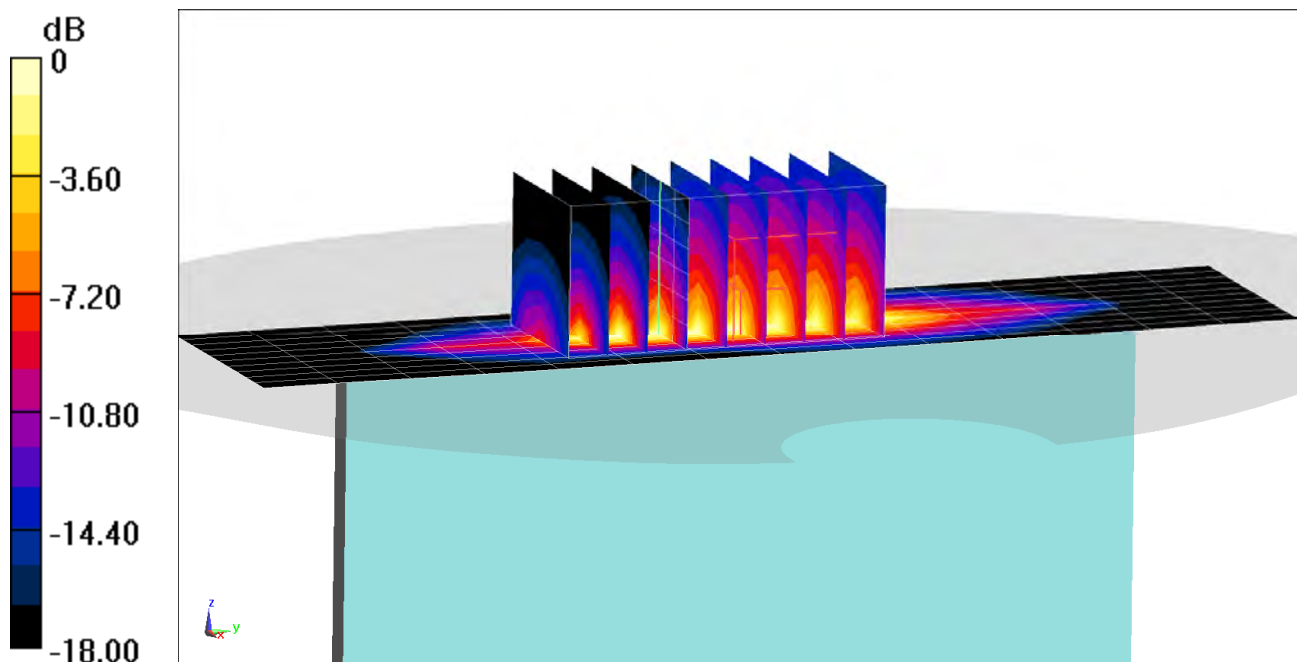
Area Scan (11x15x1): Measurement grid: $dx=5\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x9x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.94 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 3.55 W/kg

SAR(1 g) = 1.1 W/kg



0 dB = 2.44 W/kg = 3.87 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29119

Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used (interpolated):

$f = 831.5 \text{ MHz}$; $\sigma = 0.95 \text{ S/m}$; $\epsilon_r = 56.944$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-01-2019; Ambient Temp: 22.8°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN3914; ConvF(9.46, 9.46, 9.46) @ 831.5 MHz; Calibrated: 2/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1272; Calibrated: 2/14/2019

Phantom: SAM with CRP v5.0 Left; Type: QD000P40CD; Serial: 1687

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 26 (Cell.), Body SAR, Back side, Mid.ch, 15 MHz Bandwidth,
QPSK, 1 RB, 0 RB Offset**

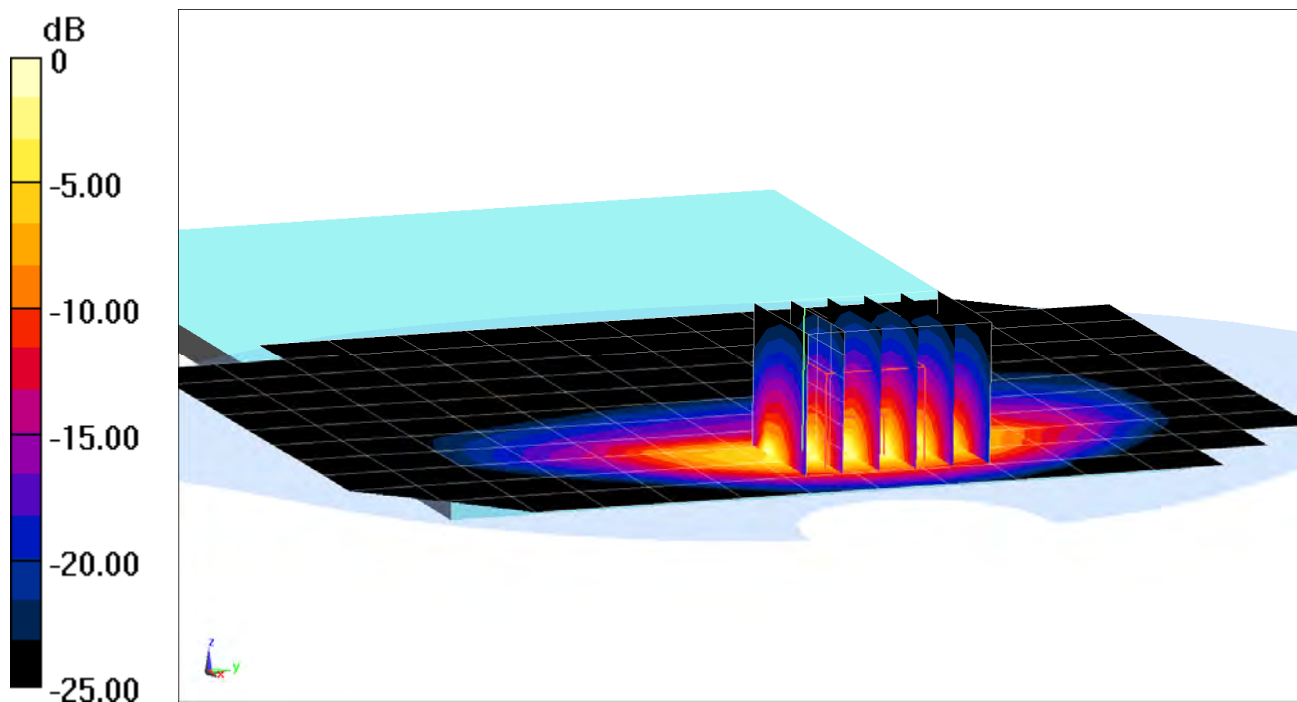
Area Scan (12x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x6x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 31.26 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.06 W/kg

SAR(1 g) = 1.06 W/kg



0 dB = 1.73 W/kg = 2.38 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29101

Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used (interpolated):

$f = 836.5 \text{ MHz}$; $\sigma = 0.972 \text{ S/m}$; $\epsilon_r = 55.235$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-09-2019; Ambient Temp: 20.3°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7538; ConvF(9.85, 9.85, 9.85) @ 836.5 MHz; Calibrated: 5/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn728; Calibrated: 5/8/2019

Phantom: Left Twin-SAM V5.0 30; Type: QD 000 P40 CD; Serial: 1792

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 5 (Cell.), Body SAR, Back side, Mid.ch, 10 MHz Bandwidth,
QPSK, 25 RB, 0 RB Offset**

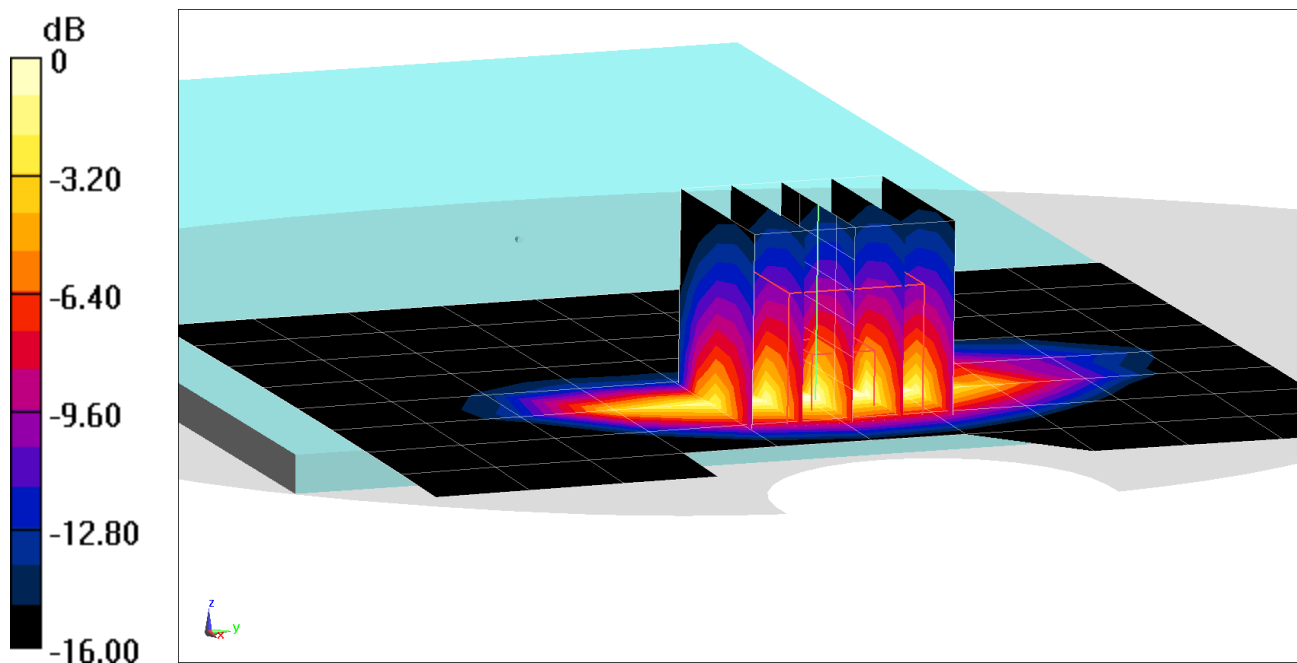
Area Scan (9x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 34.74 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 2.35 W/kg

SAR(1 g) = 1.11 W/kg



0 dB = 1.89 W/kg = 2.76 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29085

Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used (interpolated):

$f = 1745 \text{ MHz}$; $\sigma = 1.499 \text{ S/m}$; $\epsilon_r = 52.442$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.7 cm

Test Date: 07-01-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7357; ConvF(8.26, 8.26, 8.26) @ 1745 MHz; Calibrated: 4/24/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1407; Calibrated: 4/18/2019

Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 66 (AWS), Body SAR, Top Edge, Mid.ch, 20 MHz Bandwidth,
QPSK, 1 RB, 99 RB Offset**

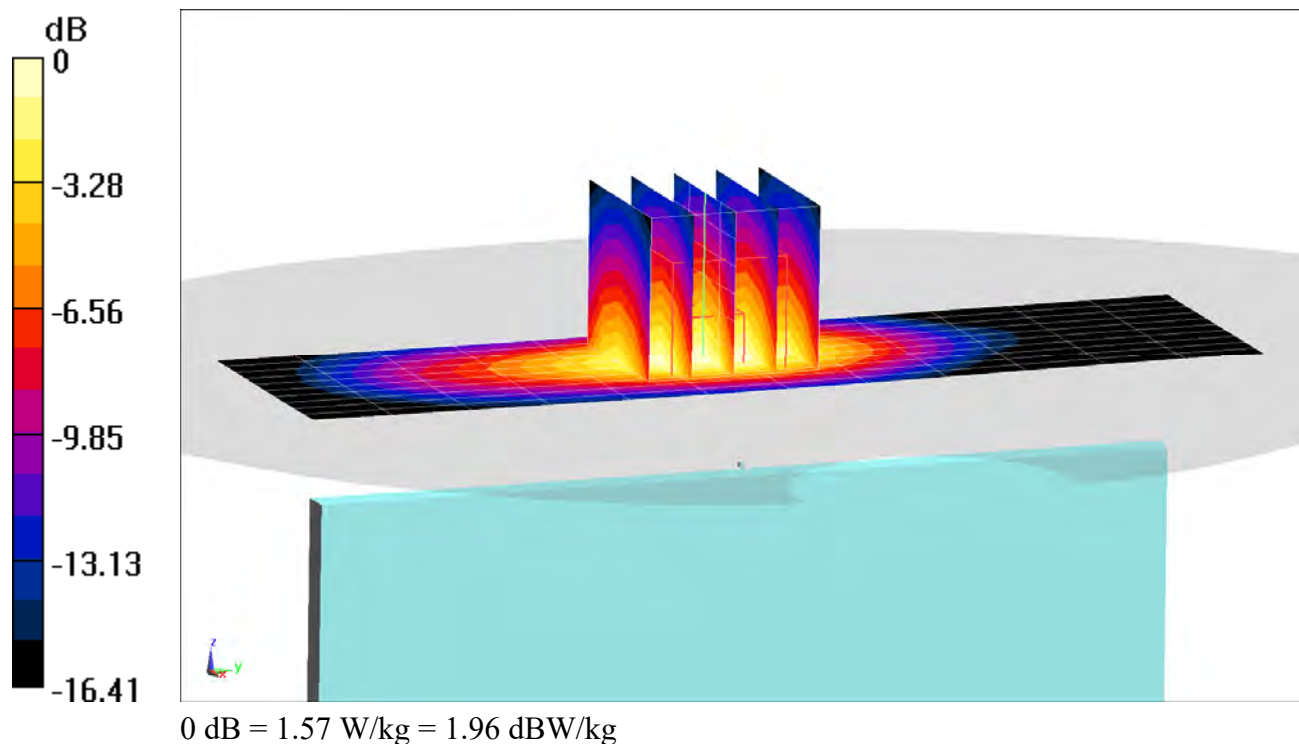
Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.98 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.84 W/kg

SAR(1 g) = 1.08 W/kg



PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29093

Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1860 \text{ MHz}$; $\sigma = 1.514 \text{ S/m}$; $\epsilon_r = 51.144$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.7 cm

Test Date: 07-01-2019; Ambient Temp: 20.7°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1860 MHz; Calibrated: 1/24/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1530; Calibrated: 1/15/2019

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 2 (PCS), Body SAR, Top Edge, Low.ch, 20 MHz Bandwidth,
QPSK, 1 RB, 0 RB Offset**

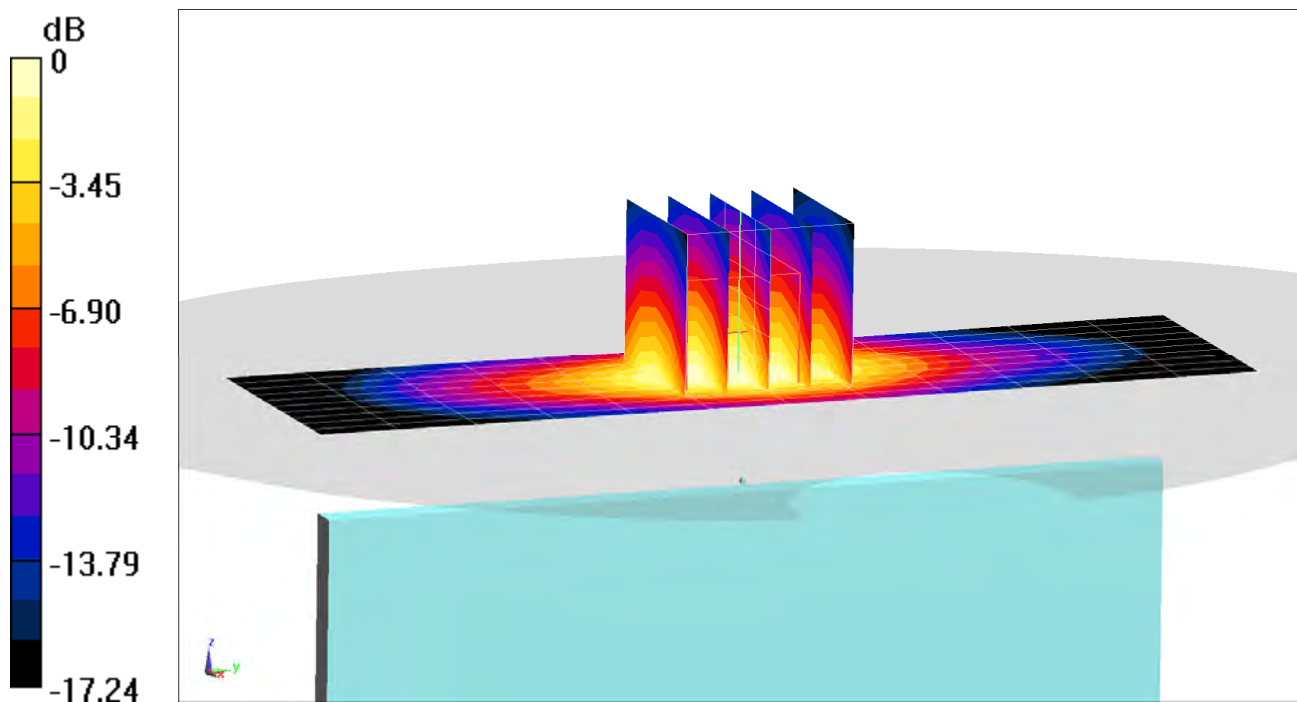
Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.27 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.79 W/kg

SAR(1 g) = 1.03 W/kg



0 dB = 1.47 W/kg = 1.67 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29085

Communication System: UID 0,LTE Band 25 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1860 \text{ MHz}$; $\sigma = 1.531 \text{ S/m}$; $\epsilon_r = 52.264$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.7 cm

Test Date:06-10-2019; Ambient Temp: 22.0°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1860 MHz; Calibrated: 7/20/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2018

Phantom: Front; Type: QD 000 P40 CD; Serial: 1686

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 25 (PCS), Body SAR, Top Edge, Low.ch, 20 MHz Bandwidth,
QPSK, 1 RB, 99 RB Offset**

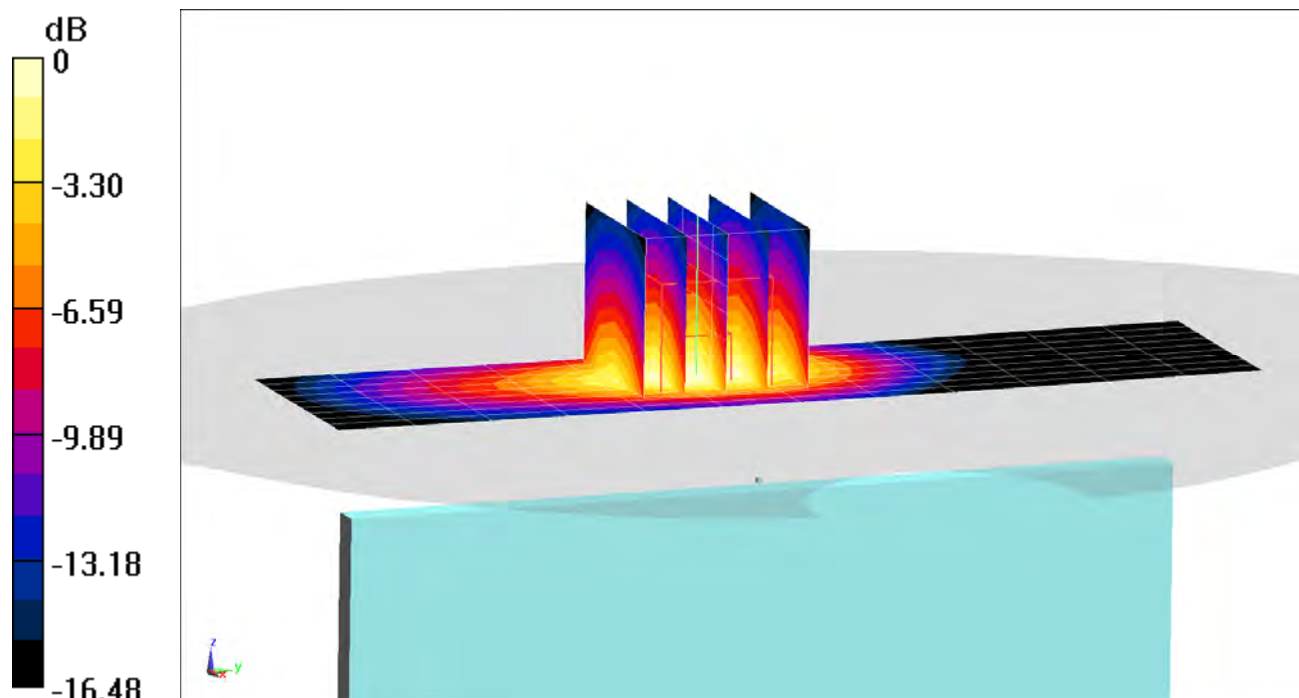
Area Scan (10x13x1): Measurement grid: dx=5mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.81 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.69 W/kg

SAR(1 g) = 0.994 W/kg



0 dB = 1.45 W/kg = 1.61 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29150

Communication System: UID 0, LTE Band 41; Frequency: 2680 MHz; Duty Cycle: 1:1.58

Medium: 2450 MHz Body Medium parameters used (interpolated):

$f = 2680 \text{ MHz}$; $\sigma = 2.256 \text{ S/m}$; $\epsilon_r = 52.233$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-12-2019; Ambient Temp: 22.8°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7308; ConvF(7.4, 7.4, 7.4) @ 2680 MHz; Calibrated: 8/23/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 10/3/2018

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

**Mode: LTE Band 41, Body SAR, Top Edge, High.ch, 20 MHz Bandwidth,
QPSK, 50 RB, 0 RB Offset**

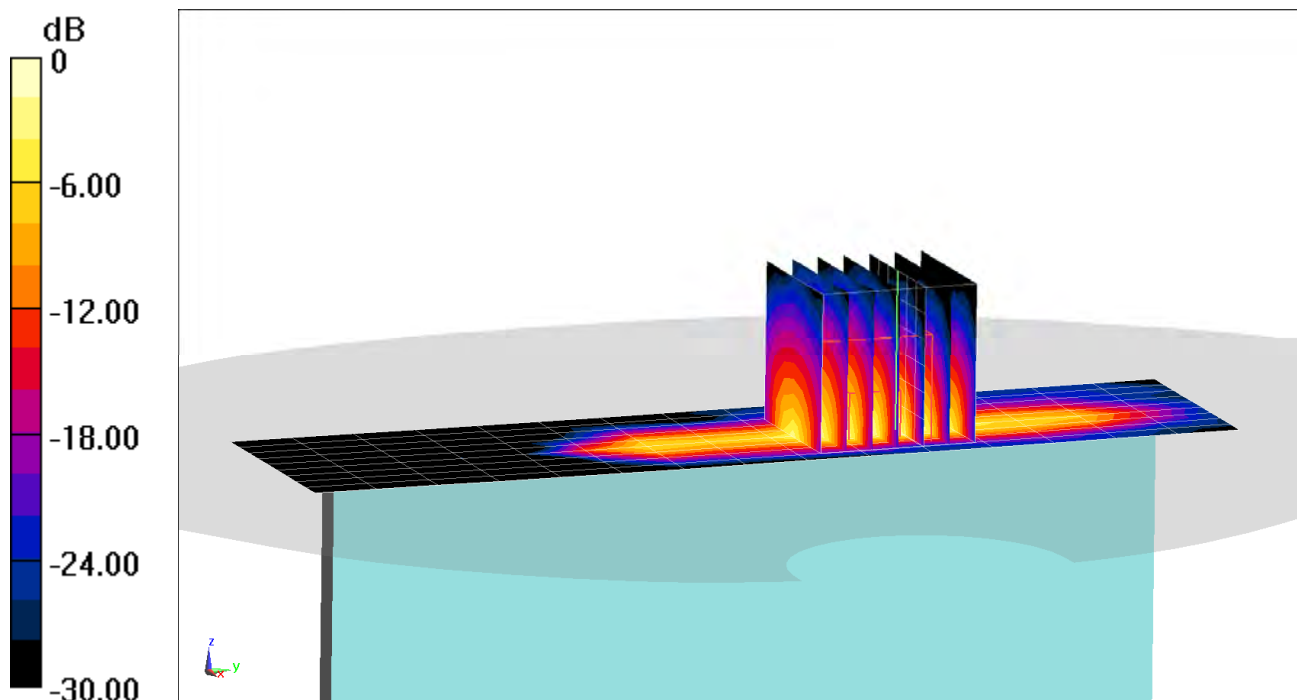
Area Scan (10x16x1): Measurement grid: $dx=5\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 21.23 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.21 W/kg

SAR(1 g) = 0.834 W/kg



0 dB = 2.13 W/kg = 3.28 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29143

Communication System: UID 0, _IEEE 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: 2450 Body Medium parameters used (interpolated):

$f = 2462 \text{ MHz}$; $\sigma = 2.049 \text{ S/m}$; $\epsilon_r = 51.615$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-10-2019; Ambient Temp: 22.7°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2462 MHz; Calibrated: 2/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/13/2019

Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

**Mode: IEEE 802.11b, 22 MHz Bandwidth, Body SAR, Ch 11, 1 Mbps,
Left Edge, Antenna 1**

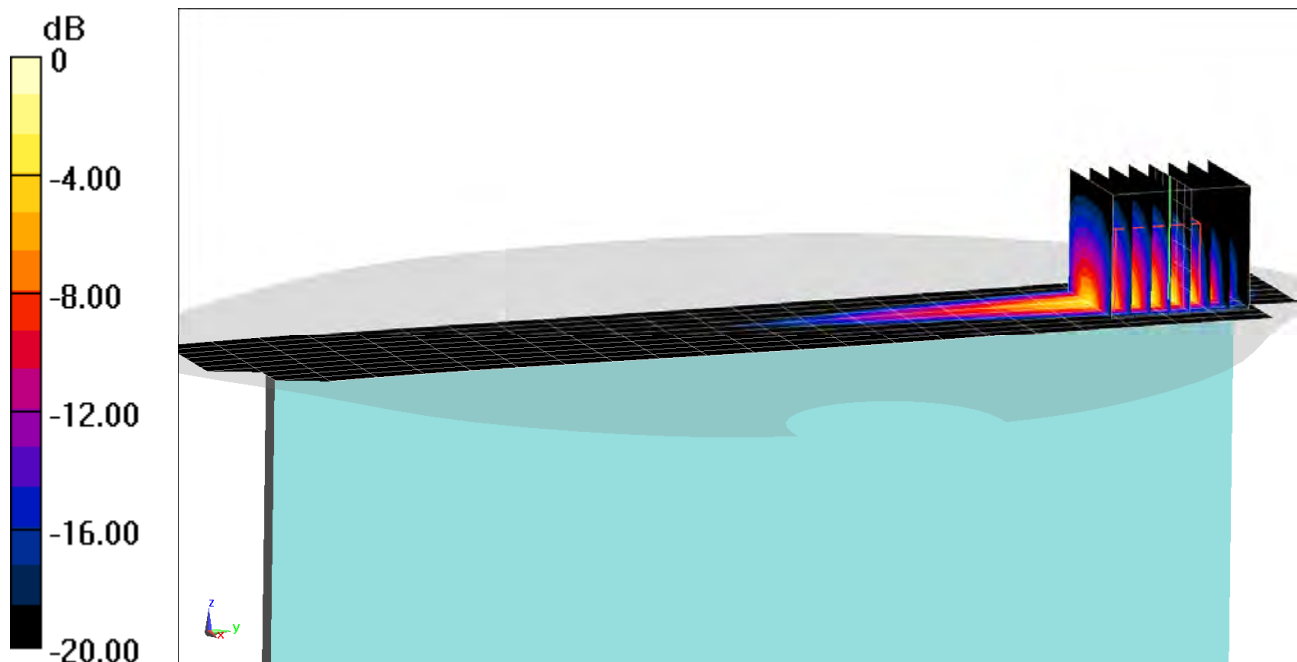
Area Scan (11x24x1): Measurement grid: $dx=5\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x8x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.01 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 3.48 W/kg

SAR(1 g) = 0.979 W/kg



0 dB = 2.35 W/kg = 3.71 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29333

Communication System: UID 0, 802.11a 5.2-5.8 GHz Band; Frequency: 5620 MHz; Duty Cycle: 1:1

Medium: 5GHz Body Medium parameters used:

$f = 5620 \text{ MHz}$; $\sigma = 5.998 \text{ S/m}$; $\epsilon_r = 47.848$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.6 cm

Test Date: 06-27-2019; Ambient Temp: 23.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7308; ConvF(4, 4, 4) @ 5620 MHz; Calibrated: 8/23/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 10/3/2018

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

**Mode: IEEE 802.11a, U-NII-2C, 20 MHz Bandwidth, Body SAR, Ch 124, 6 Mbps,
Right Edge, Antenna 2**

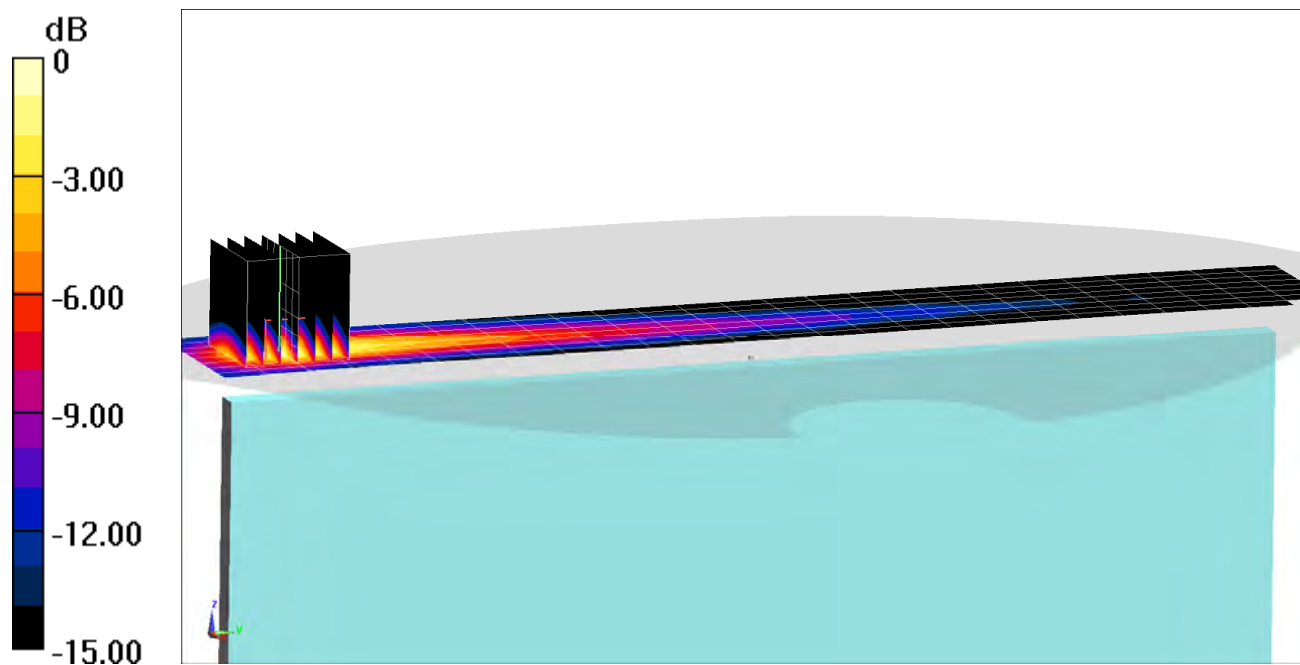
Area Scan (9x27x1): Measurement grid: dx=5mm, dy=10mm

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Reference Value = 14.69 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 5.07 W/kg

SAR(1 g) = 1.15 W/kg



0 dB = 2.95 W/kg = 4.70 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: A3LSMT865; Type: Portable Tablet; Serial: 29333

Communication System: UID 0, Bluetooth; Frequency: 2441 MHz; Duty Cycle: 1:1.294

Medium: 2450 MHz Body Medium parameters used (interpolated):

$f = 2441 \text{ MHz}$; $\sigma = 2.025 \text{ S/m}$; $\epsilon_r = 52.585$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-12-2019; Ambient Temp: 22.8°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7308; ConvF(7.57, 7.57, 7.57) @ 2441 MHz; Calibrated: 8/23/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 10/3/2018

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Mode: Bluetooth, Body SAR, Ch 39, 1 Mbps, Left Edge

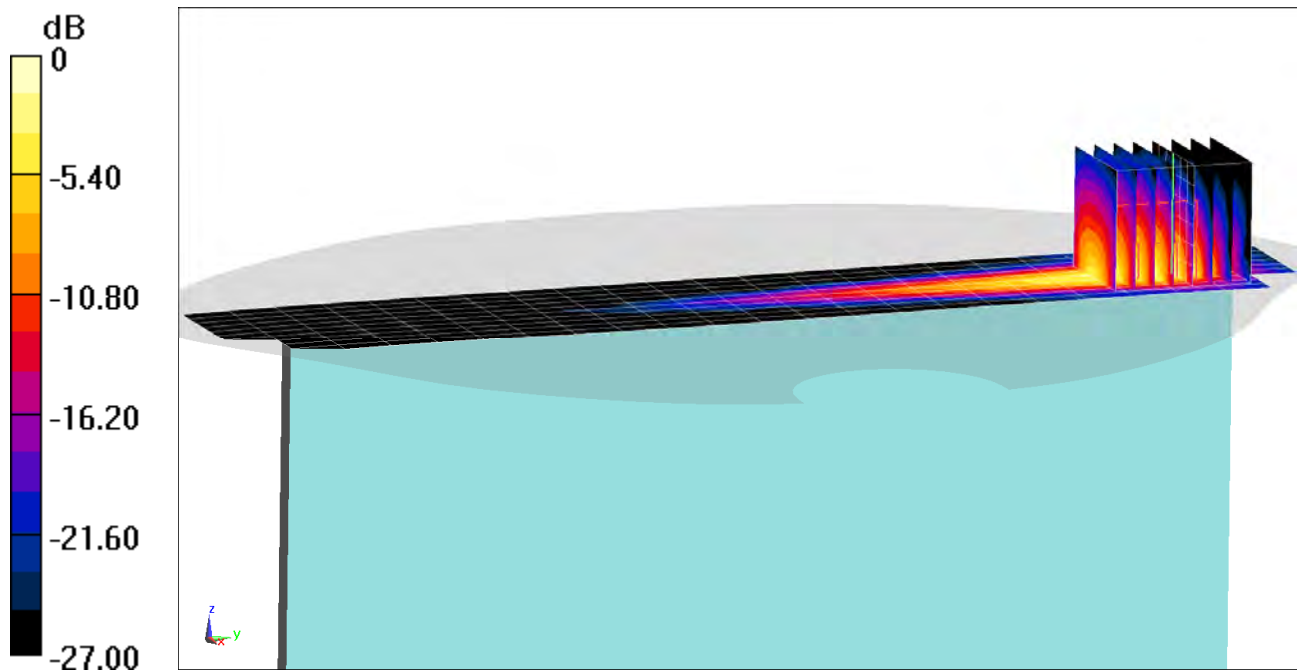
Area Scan (11x24x1): Measurement grid: $dx=5\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x8x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.43 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 2.13 W/kg

SAR(1 g) = 0.642 W/kg



0 dB = 1.47 W/kg = 1.67 dBW/kg

APPENDIX B: SYSTEM VERIFICATION

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1003

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 750 \text{ MHz}$; $\sigma = 0.945 \text{ S/m}$; $\epsilon_r = 57.55$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07-02-2019; Ambient Temp: 23.6°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN3914; ConvF(9.73, 9.73, 9.73) @ 750 MHz; Calibrated: 2/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1272; Calibrated: 2/14/2019

Phantom: SAM with CRP v5.0 Left; Type: QD000P40CD; Serial: 1687

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

750 MHz System Verification at 23.0 dBm (200 mW)

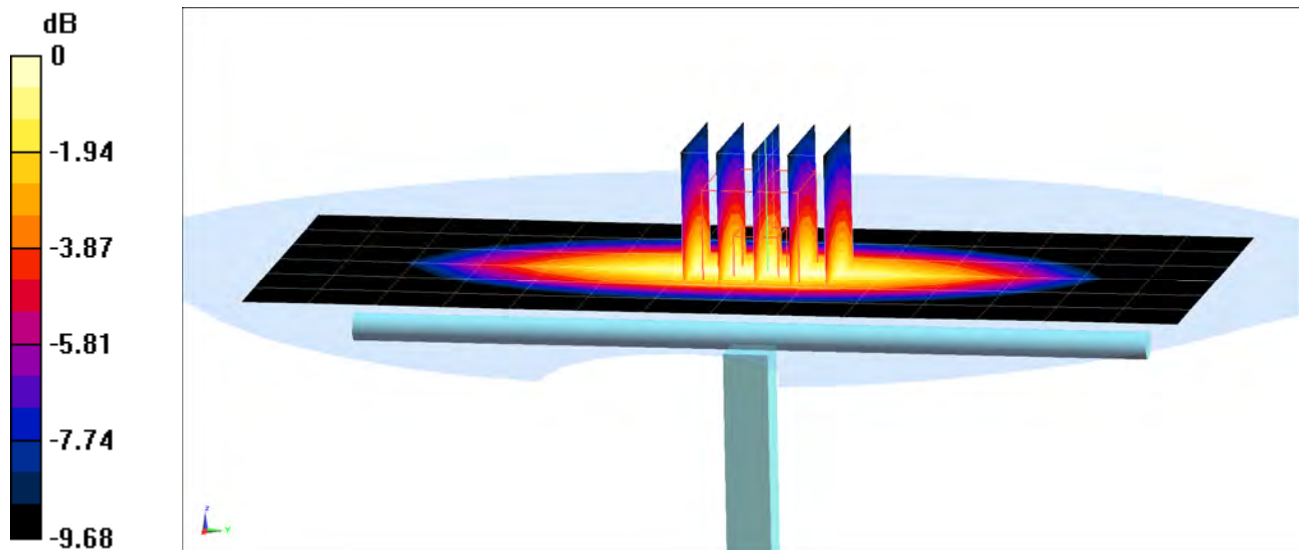
Area Scan (7x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 2.48 W/kg

SAR(1 g) = 1.69 W/kg

Deviation(1 g) = -1.52%



0 dB = 2.22 W/kg = 3.46 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.983 \text{ S/m}$; $\epsilon_r = 54.072$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-10-2019; Ambient Temp: 20.5°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7488; ConvF(11.03, 11.03, 11.03) @ 835 MHz; Calibrated: 1/24/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1530; Calibrated: 1/15/2019

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

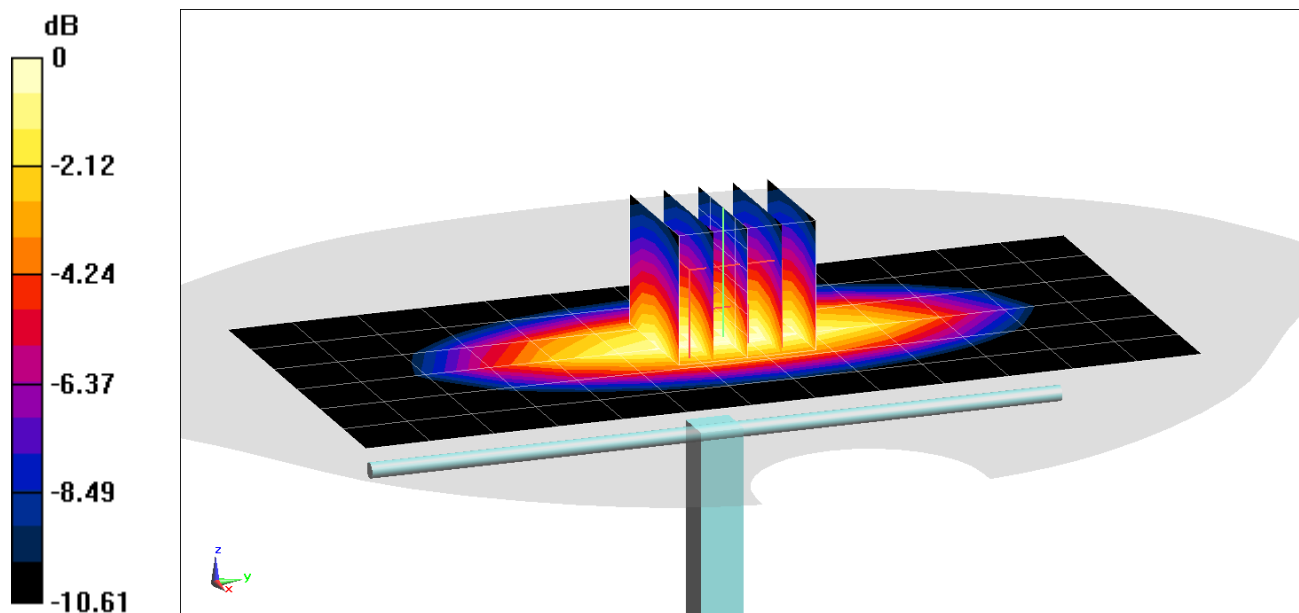
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 2.99 W/kg

SAR(1 g) = 1.9 W/kg

Deviation(1 g) = -1.76%



0 dB = 2.59 W/kg = 4.13 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.951 \text{ S/m}$; $\epsilon_r = 56.942$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07-01-2019; Ambient Temp: 22.8°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN3914; ConvF(9.46, 9.46, 9.46) @ 835 MHz; Calibrated: 2/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1272; Calibrated: 2/14/2019

Phantom: SAM with CRP v5.0 Left; Type: QD000P40CD; Serial: 1687

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

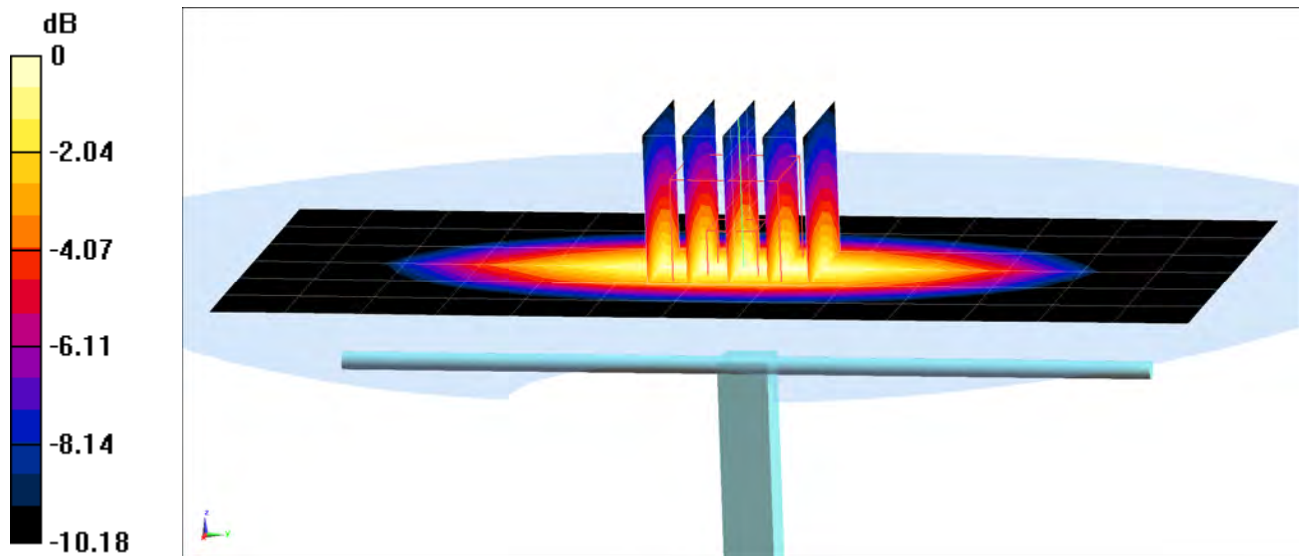
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 3.05 W/kg

SAR(1 g) = 2.03 W/kg

Deviation(1 g) = 4.96%



0 dB = 2.70 W/kg = 4.31 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d047

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.972 \text{ S/m}$; $\epsilon_r = 55.349$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07-03-2019; Ambient Temp: 22.0°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7538; ConvF(9.85, 9.85, 9.85) @ 835 MHz; Calibrated: 5/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn728; Calibrated: 5/8/2019

Phantom: SAM V5.0 Left; Type: QD000P40CA; Serial: TP: 1018

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

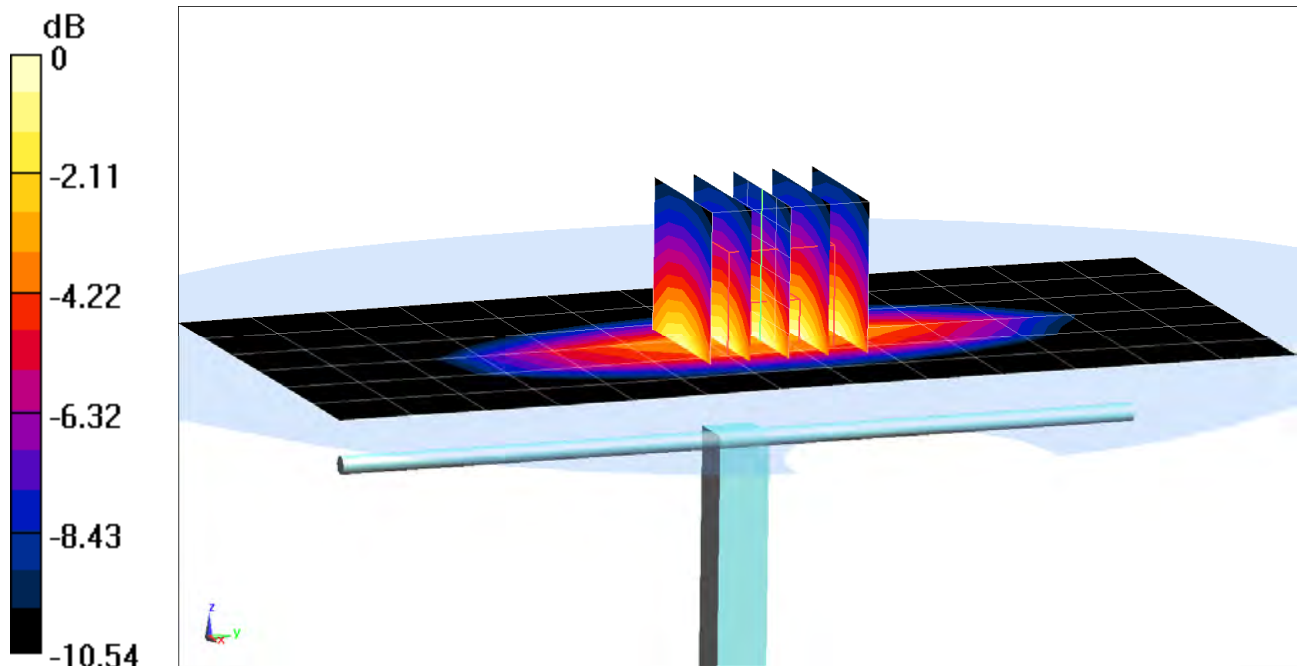
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 3.01 W/kg

SAR(1 g) = 1.95 W/kg

Deviation(1 g) = 2.96%



0 dB = 2.61 W/kg = 4.17 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d047

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.971 \text{ S/m}$; $\epsilon_r = 55.24$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07-09-2019; Ambient Temp: 20.3°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7538; ConvF(9.85, 9.85, 9.85) @ 835 MHz; Calibrated: 5/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn728; Calibrated: 5/8/2019

Phantom: Left Twin-SAM V5.0 30; Type: QD 000 P40 CD; Serial: 1792

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

835 MHz System Verification at 23.0 dBm (200 mW)

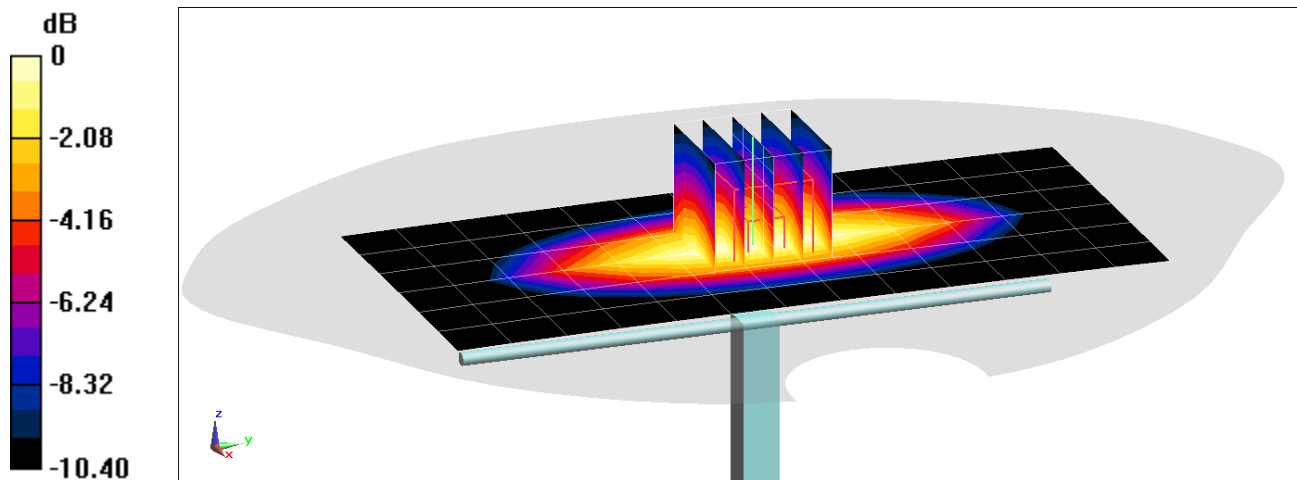
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 3.08 W/kg

SAR(1 g) = 2.04 W/kg

Deviation(1 g) = 7.71%



0 dB = 2.72 W/kg = 4.35 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1150

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: 1750 Body; Medium parameters used:

$f = 1750 \text{ MHz}$; $\sigma = 1.505 \text{ S/m}$; $\epsilon_r = 52.424$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-01-2019; Ambient Temp: 22.7°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7357; ConvF(8.26, 8.26, 8.26) @ 1750 MHz; Calibrated: 4/24/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1407; Calibrated: 4/18/2019

Phantom: Twin-SAM V4.0 Front Right; Type: QD 000 P40 CC; Serial: 1167

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

1750 MHz System Verification at 20.0 dBm (100 mW)

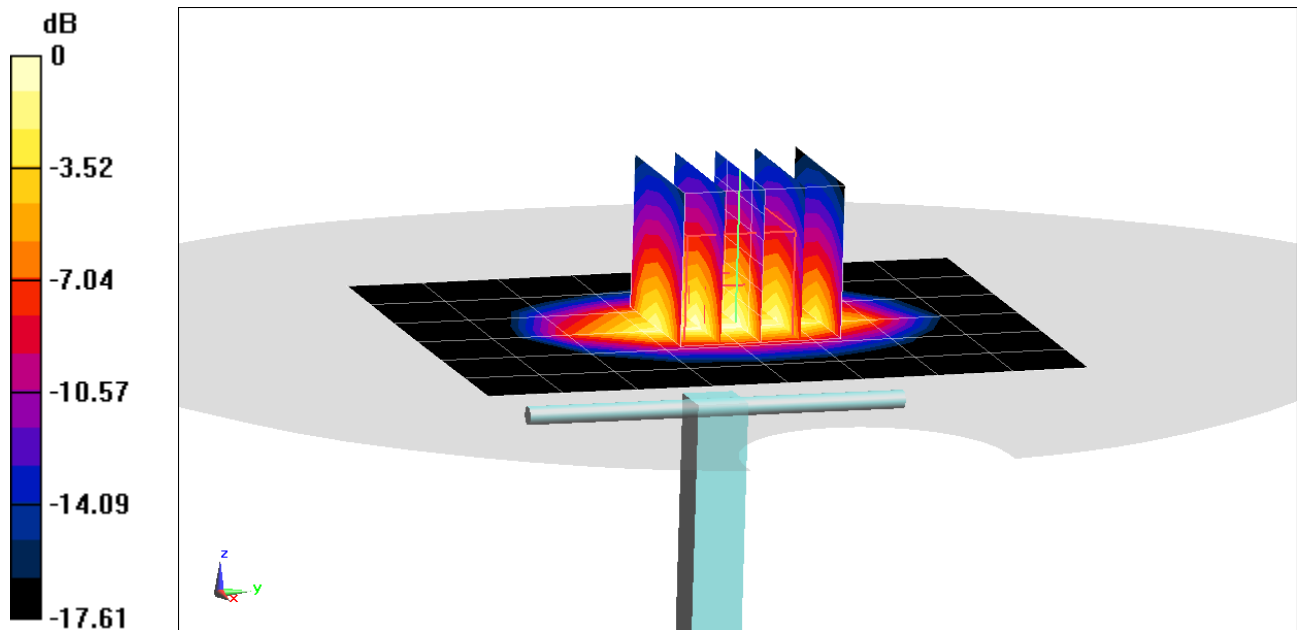
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 7.26 W/kg

SAR(1 g) = 3.97 W/kg

Deviation(1 g) = 8.47%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d148

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.577 \text{ S/m}$; $\epsilon_r = 52.119$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date:06-10-2019; Ambient Temp: 22.0°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1900 MHz; Calibrated: 7/20/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2018

Phantom: Front; Type: QD 000 P40 CD; Serial: 1686

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

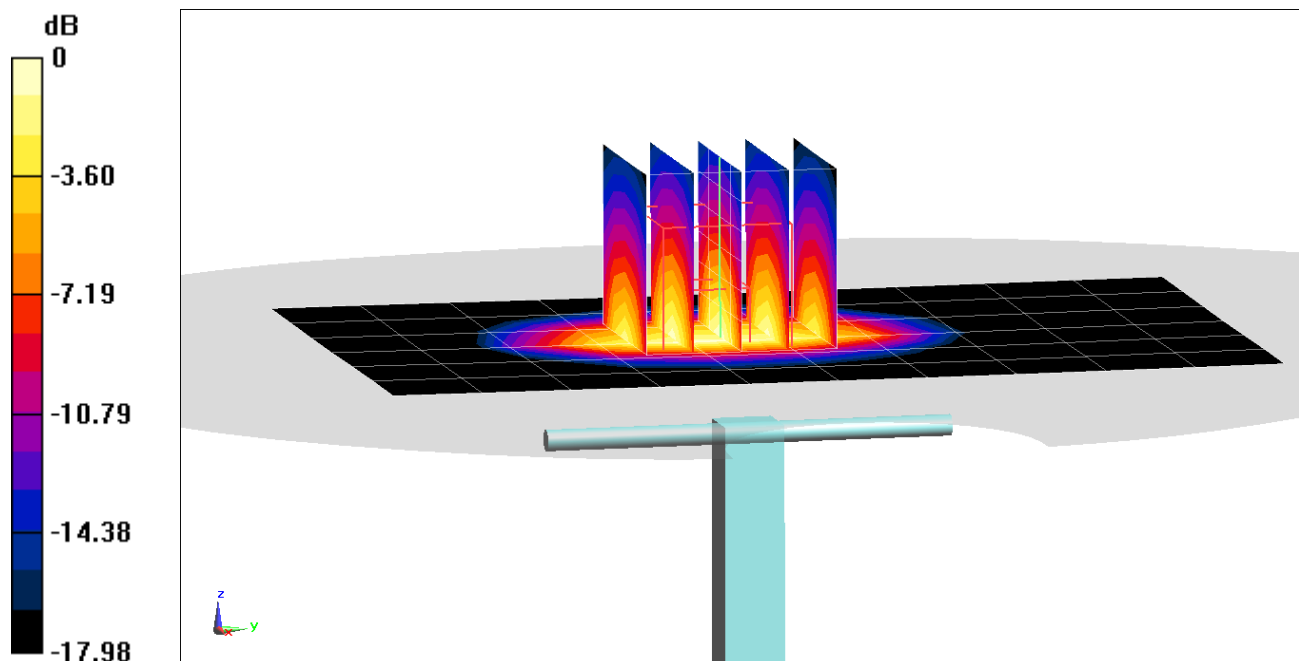
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 7.44 W/kg

SAR(1 g) = 4.03 W/kg

Deviation(1 g) = 3.07%



0 dB = 6.25 W/kg = 7.96 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.564 \text{ S/m}$; $\epsilon_r = 51.734$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-12-2019; Ambient Temp: 22.6°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7410; ConvF(7.78, 7.78, 7.78) @ 1900 MHz; Calibrated: 7/20/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2018

Phantom: Front; Type: QD 000 P40 CD; Serial: 1686

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

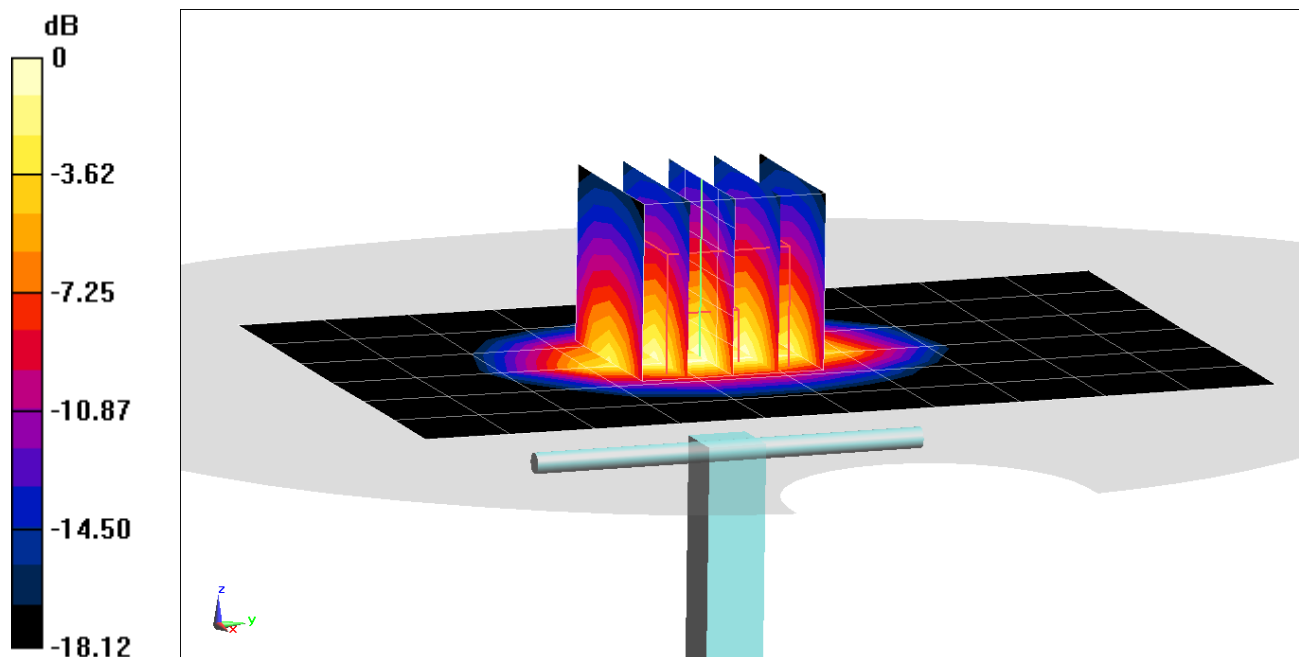
Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 7.41 W/kg

SAR(1 g) = 3.98 W/kg

Deviation(1 g) = 1.02%



0 dB = 6.24 W/kg = 7.95 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.559 \text{ S/m}$; $\epsilon_r = 51.003$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-01-2019; Ambient Temp: 20.7°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7488; ConvF(8.37, 8.37, 8.37) @ 1900 MHz; Calibrated: 1/24/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1530; Calibrated: 1/15/2019

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1800

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

1900 MHz System Verification at 20.0 dBm (100 mW)

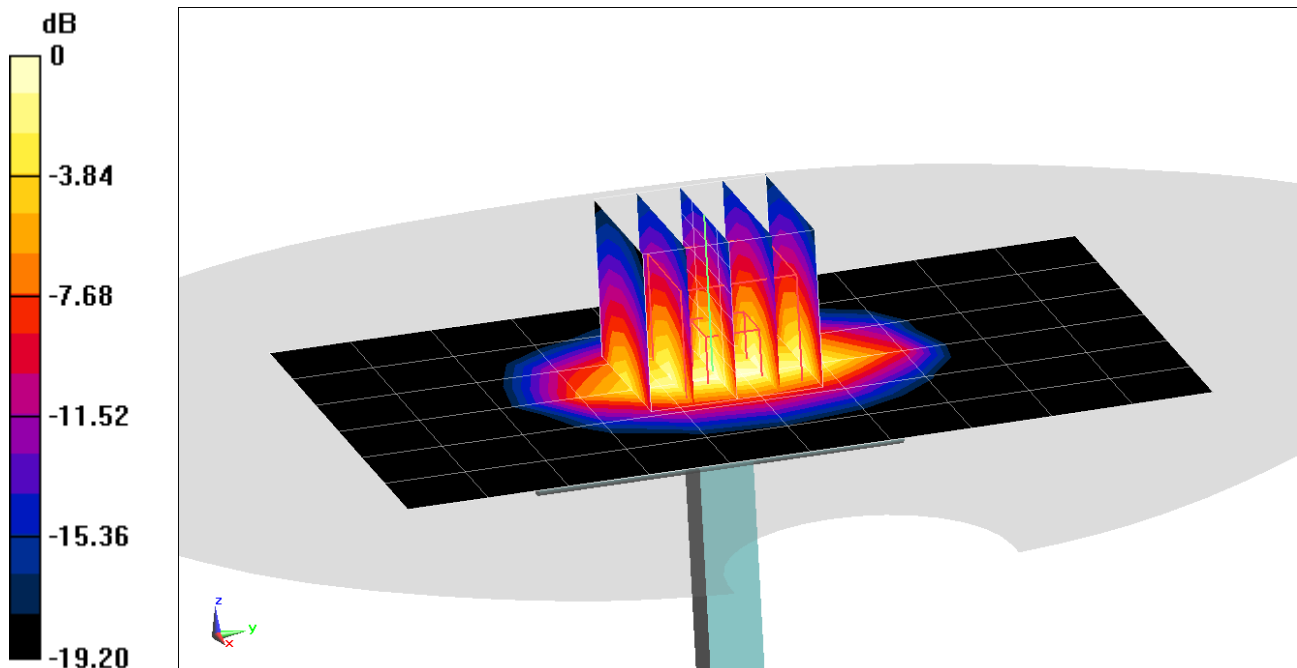
Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 7.84 W/kg

SAR(1 g) = 4.08 W/kg

Deviation(1 g) = 4.08%



0 dB = 6.39 W/kg = 8.06 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450 MHz Body Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 2.033 \text{ S/m}$; $\epsilon_r = 52.57$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-12-2019; Ambient Temp: 22.8°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7308; ConvF(7.57, 7.57, 7.57) @ 2450 MHz; Calibrated: 8/23/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 10/3/2018

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

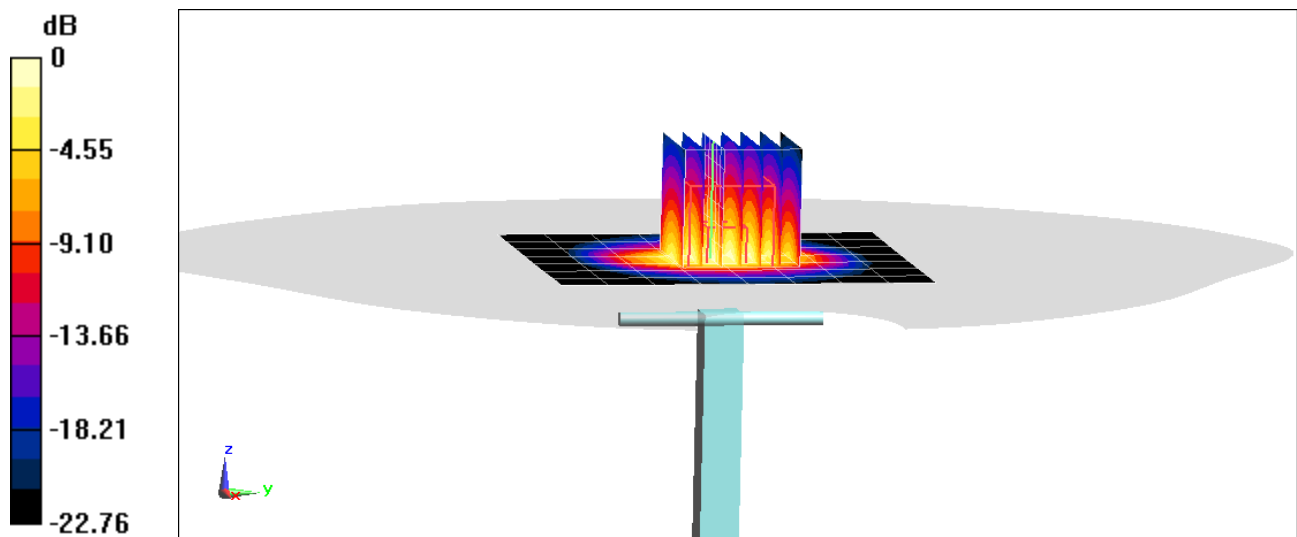
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 11.0 W/kg

SAR(1 g) = 5.13 W/kg

Deviation(1 g) = 0.79%



0 dB = 8.62 W/kg = 9.36 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450 Body; Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 2.035 \text{ S/m}$; $\epsilon_r = 51.648$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-10-2019; Ambient Temp: 22.7°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7417; ConvF(7.51, 7.51, 7.51) @ 2450 MHz; Calibrated: 2/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn665; Calibrated: 2/13/2019

Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

2450 MHz System Verification at 20.0 dBm (100 mW)

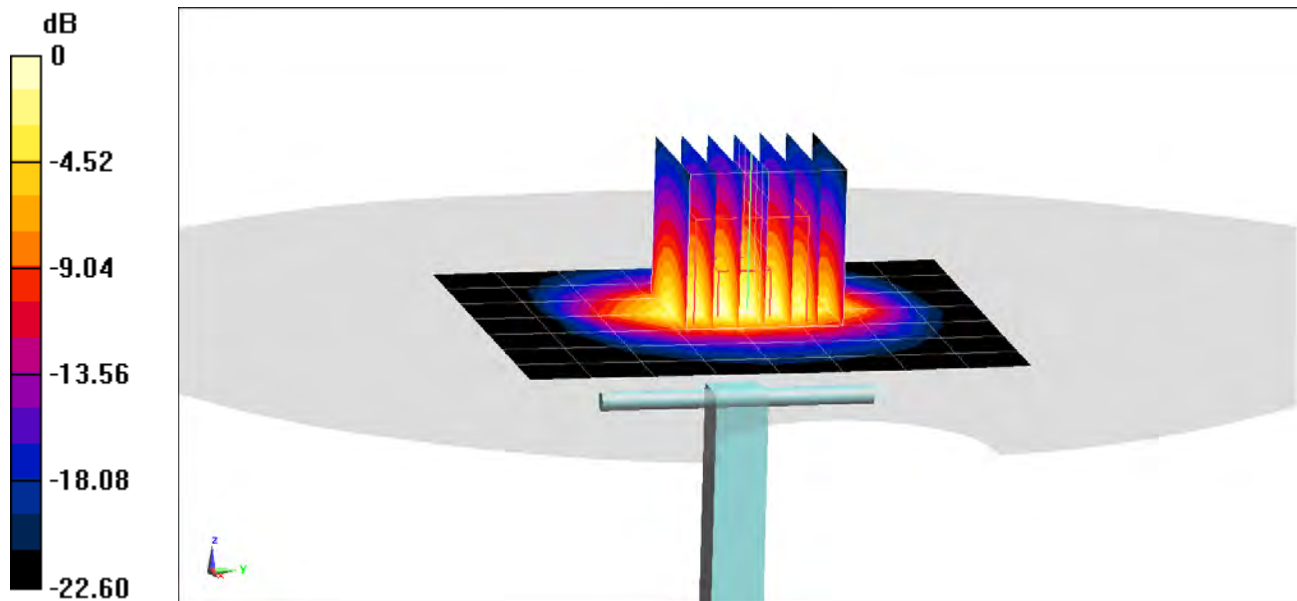
Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 10.7 W/kg

SAR(1 g) = 5.14 W/kg

Deviation(1 g) = 2.59%



0 dB = 8.63 W/kg = 9.36 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1004

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: 2450 MHz Body Medium parameters used:

$f = 2600$ MHz; $\sigma = 2.177$ S/m; $\epsilon_r = 52.375$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-12-2019; Ambient Temp: 22.8°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7308; ConvF(7.4, 7.4, 7.4) @ 2600 MHz; Calibrated: 8/23/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 10/3/2018

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

2600 MHz System Verification at 20.0 dBm (100 mW)

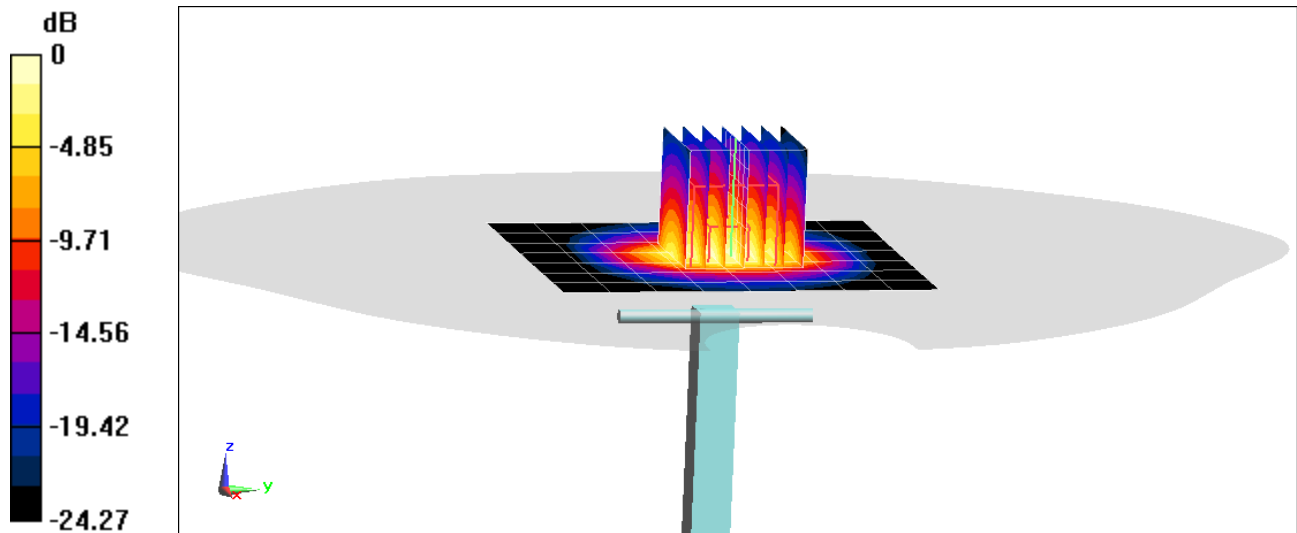
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 12.8 W/kg

SAR(1 g) = 5.73 W/kg

Deviation(1 g) = 4.56%



0 dB = 9.96 W/kg = 9.98 dBW/kg

PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1191

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: 5GHz Body; Medium parameters used (interpolated):

$f = 5250 \text{ MHz}$; $\sigma = 5.453 \text{ S/m}$; $\epsilon_r = 48.55$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-27-2019; Ambient Temp: 23.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7308; ConvF(4.48, 4.48, 4.48) @ 5250 MHz; Calibrated: 8/23/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 10/3/2018

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

5250 MHz System Verification at 17.0 dBm (50 mW)

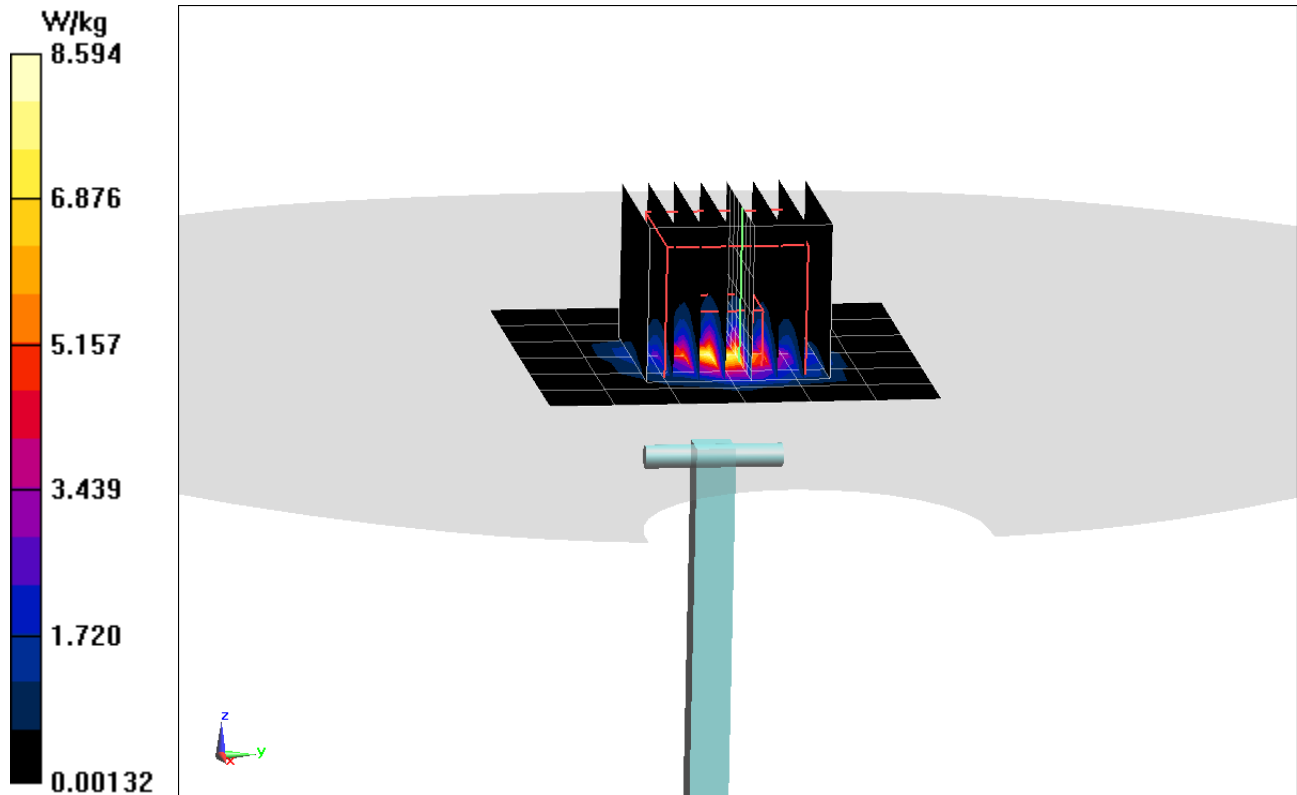
Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 14.9 W/kg

SAR(1 g) = 3.71 W/kg

Deviation(1 g) = -3.64%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1191

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: 5GHz Body; Medium parameters used:

$f = 5600 \text{ MHz}$; $\sigma = 5.972 \text{ S/m}$; $\epsilon_r = 47.912$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-27-2019; Ambient Temp: 23.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7308; ConvF(4, 4, 4) @ 5600 MHz; Calibrated: 8/23/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 10/3/2018

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

Measurement SW: DASY52, Version 52.10 (2);SEMCAD X Version 14.6.12 (7450)

5600 MHz System Verification at 17.0 dBm (50 mW)

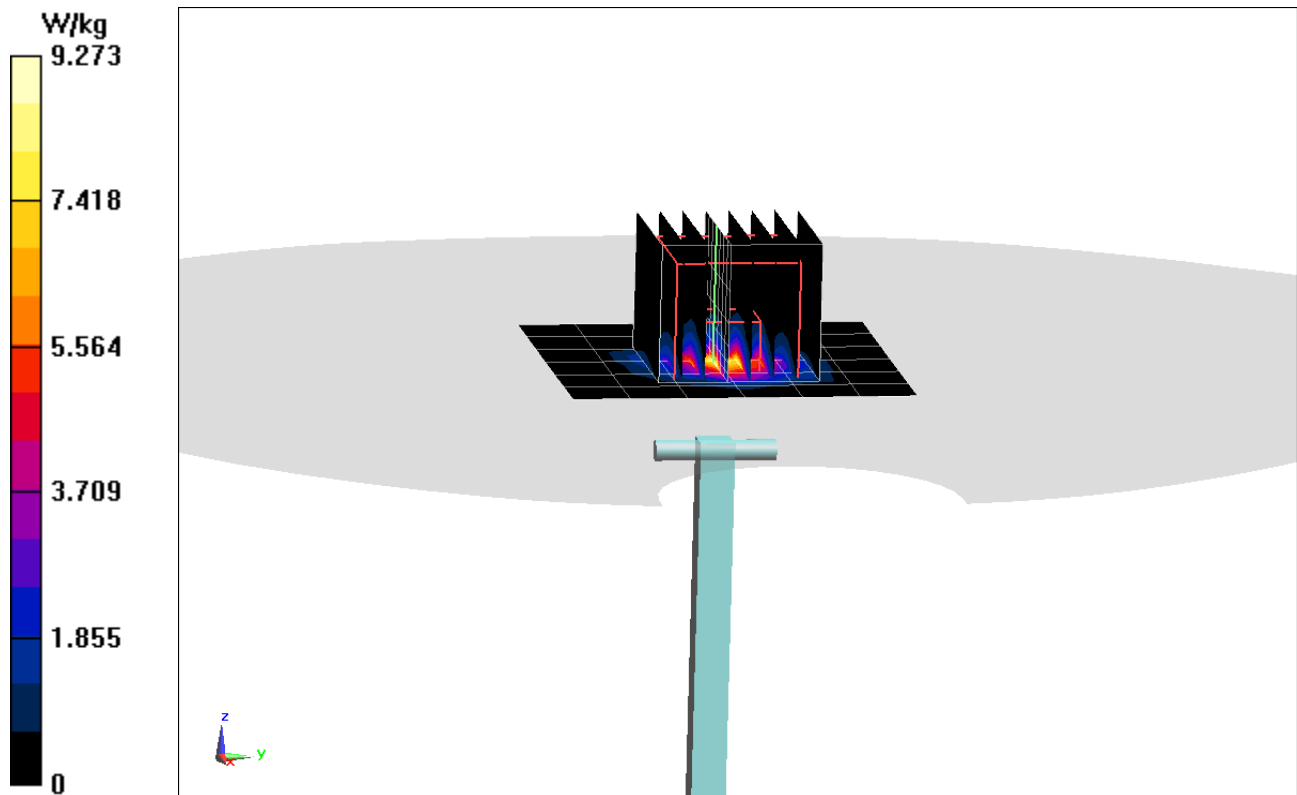
Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 3.89 W/kg

Deviation(1 g) = -1.77%



PCTEST ENGINEERING LABORATORY, INC.

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1191

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: 5GHz Body; Medium parameters used (interpolated):

$f = 5750 \text{ MHz}$; $\sigma = 6.205 \text{ S/m}$; $\epsilon_r = 47.593$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-27-2019; Ambient Temp: 23.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7308; ConvF(4.18, 4.18, 4.18) @ 5750 MHz; Calibrated: 8/23/2018

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 10/3/2018

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

5750 MHz System Verification at 17.0 dBm (50 mW)

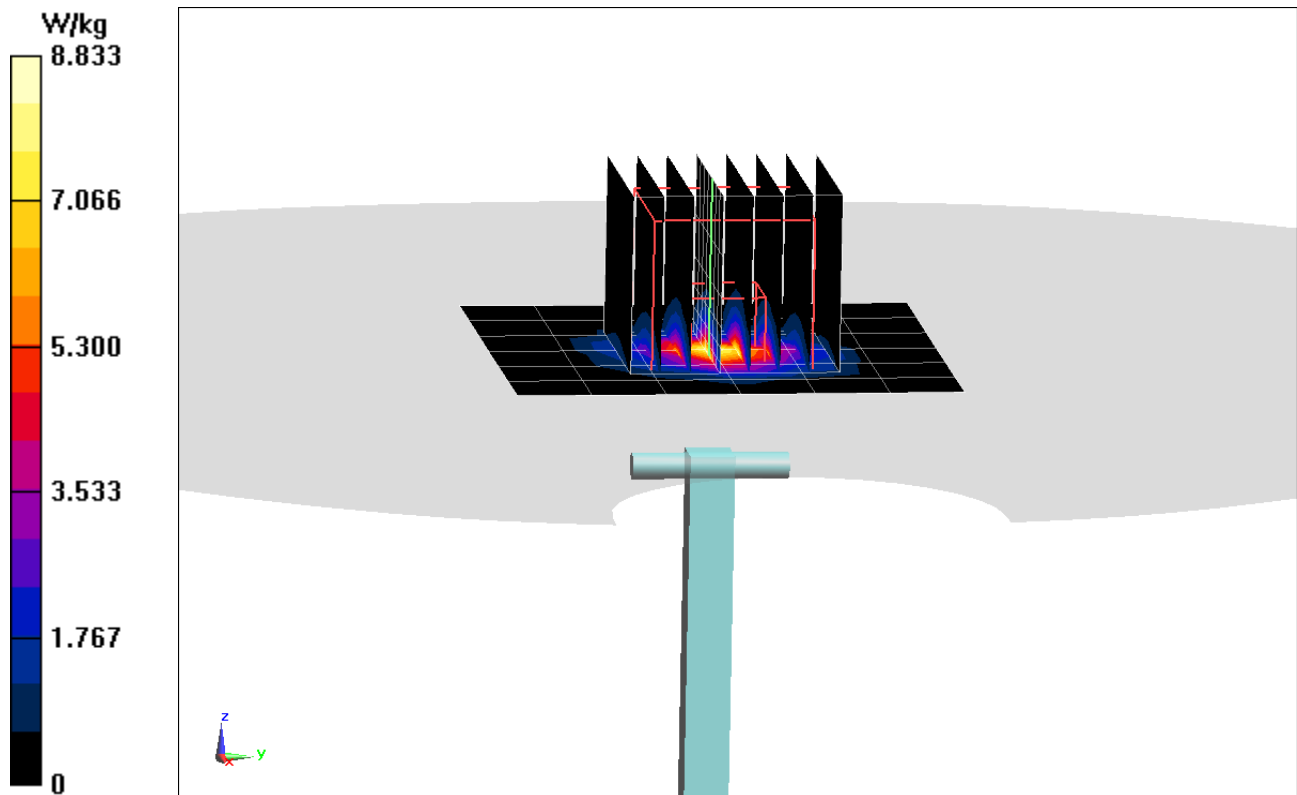
Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.7 W/kg

SAR(1 g) = 3.58 W/kg

Deviation(1 g) = -5.91%



APPENDIX C: PROBE CALIBRATION



Accredited by the Swiss Accreditation Service (SAS)
 The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **EX3-3914_Feb19**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3914**

Calibration procedure(s) **QA CAL-01 v5, QA CAL-12 v5, QA CAL-14 v5, QA CAL-23 v5,
 QA CAL-25 v7
 Calibration procedure for dosimetric E-field probes**

Calibration date: **February 19, 2019**

02-26-2019

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
DAE4	SN: 660	19-Dec-18 (No. DAE4-660_Dec18)	Dec-19
Reference Probe ES3DV2	SN: 3013	31-Dec-18 (No. ES3-3013_Dec18)	Dec-19
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	
Issued: February 20, 2019			
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization ϕ	ϕ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3914

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.46	0.41	0.44	± 10.1 %
DCP (mV) ^B	98.0	104.4	100.8	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB $\sqrt{\mu\text{V}}$	C	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	135.8	± 3.3 %	± 4.7 %
		Y	0.00	0.00	1.00		149.1		
		Z	0.00	0.00	1.00		130.4		
10352- AAA	Pulse Waveform (200Hz, 10%)	X	11.50	82.25	17.46	10.00	60.0	± 2.9 %	± 9.6 %
		Y	13.06	84.85	18.88		60.0		
		Z	15.00	85.74	19.04		60.0		
10353- AAA	Pulse Waveform (200Hz, 20%)	X	15.00	85.61	17.12	6.99	80.0	± 1.7 %	± 9.6 %
		Y	15.00	87.20	18.40		80.0		
		Z	15.00	86.88	18.11		80.0		
10354- AAA	Pulse Waveform (200Hz, 40%)	X	15.00	85.07	15.18	3.98	95.0	± 1.1 %	± 9.6 %
		Y	15.00	89.57	18.09		95.0		
		Z	15.00	87.22	16.52		95.0		
10355- AAA	Pulse Waveform (200Hz, 60%)	X	0.82	65.05	7.38	2.22	120.0	± 1.2 %	± 9.6 %
		Y	15.00	94.17	19.03		120.0		
		Z	15.00	84.14	13.59		120.0		
10387- AAA	QPSK Waveform, 1 MHz	X	0.56	60.35	7.26	0.00	150.0	± 2.8 %	± 9.6 %
		Y	0.80	64.04	10.54		150.0		
		Z	0.51	60.00	6.79		150.0		
10388- AAA	QPSK Waveform, 10 MHz	X	2.18	68.24	15.67	0.00	150.0	± 1.2 %	± 9.6 %
		Y	2.41	70.06	16.91		150.0		
		Z	2.04	67.38	15.28		150.0		
10396- AAA	64-QAM Waveform, 100 kHz	X	2.71	69.05	18.06	3.01	150.0	± 0.7 %	± 9.6 %
		Y	3.50	74.05	20.22		150.0		
		Z	2.76	69.32	18.16		150.0		
10399- AAA	64-QAM Waveform, 40 MHz	X	3.50	67.38	15.86	0.00	150.0	± 2.2 %	± 9.6 %
		Y	3.57	67.89	16.25		150.0		
		Z	3.38	66.82	15.58		150.0		
10414- AAA	WLAN CCDF, 64-QAM, 40MHz	X	4.87	65.94	15.72	0.00	150.0	± 4.2 %	± 9.6 %
		Y	4.84	65.99	15.74		150.0		
		Z	4.71	65.47	15.46		150.0		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3914

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	42.5	324.17	36.82	9.95	0.55	5.06	0.00	0.49	1.01
Y	42.9	310.45	33.81	12.34	0.63	5.02	2.00	0.15	1.01
Z	39.7	301.66	36.55	9.75	0.75	5.05	0.45	0.44	1.01

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	0.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3914

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
6	55.5	0.75	21.24	21.24	21.24	0.00	1.00	± 13.3 %
13	55.5	0.75	18.06	18.06	18.06	0.00	1.00	± 13.3 %
750	41.9	0.89	10.00	10.00	10.00	0.54	0.82	± 12.0 %
835	41.5	0.90	9.50	9.50	9.50	0.50	0.86	± 12.0 %
1750	40.1	1.37	8.16	8.16	8.16	0.41	0.80	± 12.0 %
1900	40.0	1.40	7.80	7.80	7.80	0.40	0.84	± 12.0 %
2300	39.5	1.67	7.44	7.44	7.44	0.37	0.84	± 12.0 %
2450	39.2	1.80	7.13	7.13	7.13	0.39	0.86	± 12.0 %
2600	39.0	1.96	7.11	7.11	7.11	0.39	0.89	± 12.0 %
3500	37.9	2.91	6.99	6.99	6.99	0.25	1.20	± 13.1 %
3700	37.7	3.12	6.75	6.75	6.75	0.25	1.20	± 13.1 %
5250	35.9	4.71	5.19	5.19	5.19	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.73	4.73	4.73	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.90	4.90	4.90	0.40	1.80	± 13.1 %

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3914

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	9.73	9.73	9.73	0.54	0.84	± 12.0 %
835	55.2	0.97	9.46	9.46	9.46	0.50	0.80	± 12.0 %
1750	53.4	1.49	7.89	7.89	7.89	0.38	0.84	± 12.0 %
1900	53.3	1.52	7.60	7.60	7.60	0.29	1.03	± 12.0 %
2300	52.9	1.81	7.43	7.43	7.43	0.38	0.84	± 12.0 %
2450	52.7	1.95	7.34	7.34	7.34	0.33	0.87	± 12.0 %
2600	52.5	2.16	7.15	7.15	7.15	0.26	0.97	± 12.0 %
3500	51.3	3.31	6.88	6.88	6.88	0.25	1.15	± 13.1 %
3700	51.0	3.55	6.58	6.58	6.58	0.30	1.15	± 13.1 %
5250	48.9	5.36	4.61	4.61	4.61	0.50	1.90	± 13.1 %
5600	48.5	5.77	3.92	3.92	3.92	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.05	4.05	4.05	0.50	1.90	± 13.1 %

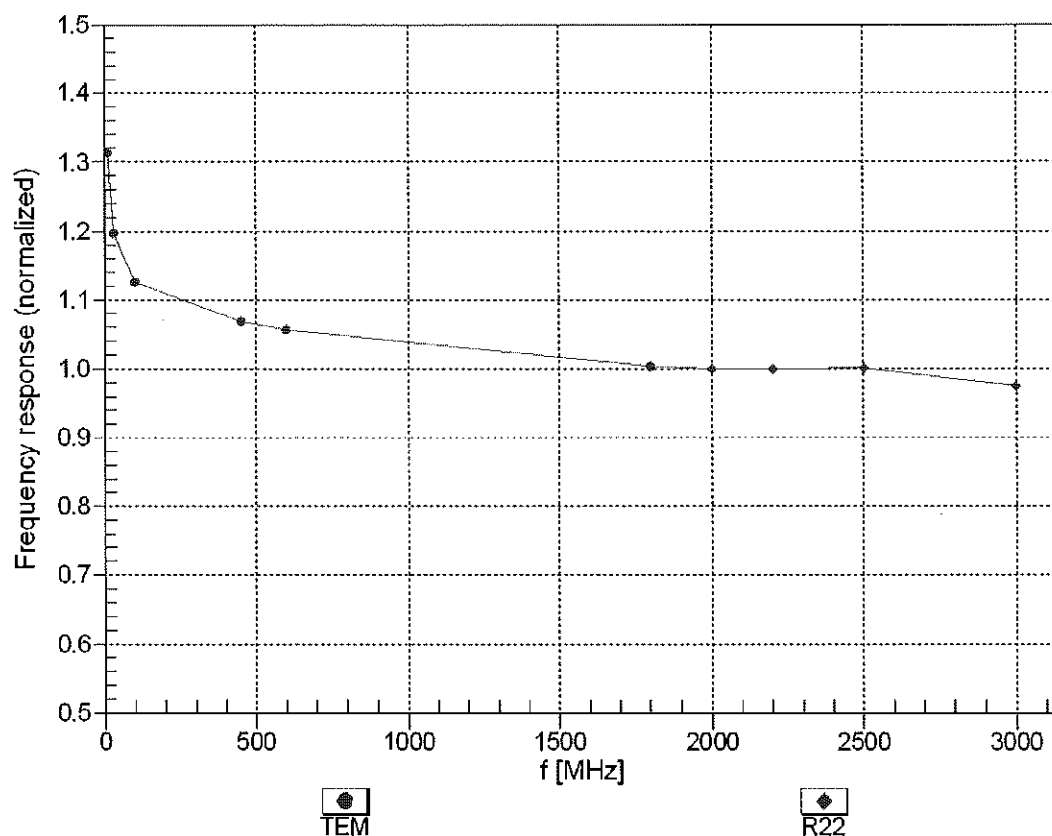
^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

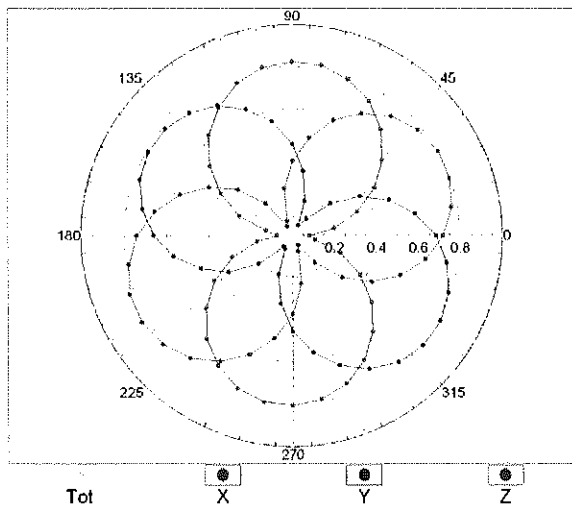
(TEM-Cell:ifi110 EXX, Waveguide: R22)



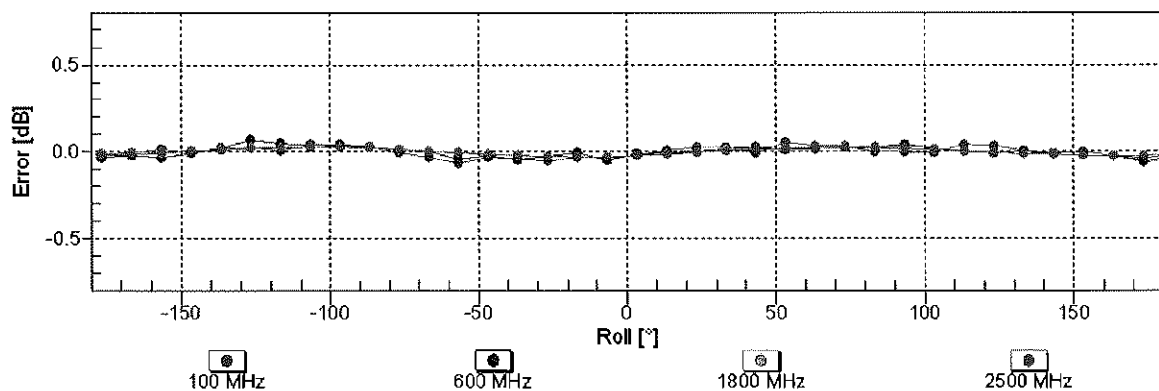
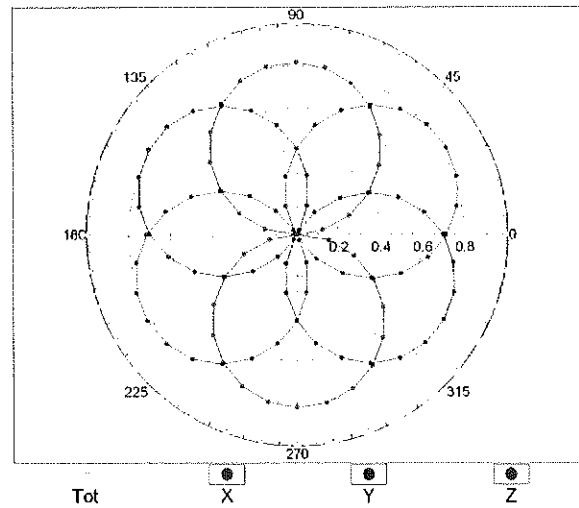
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

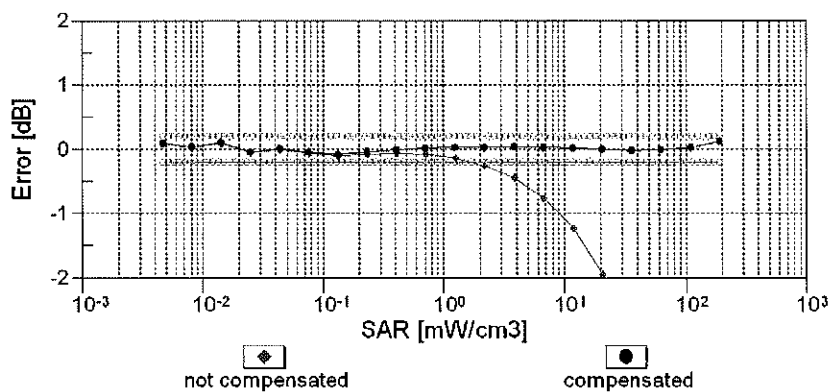
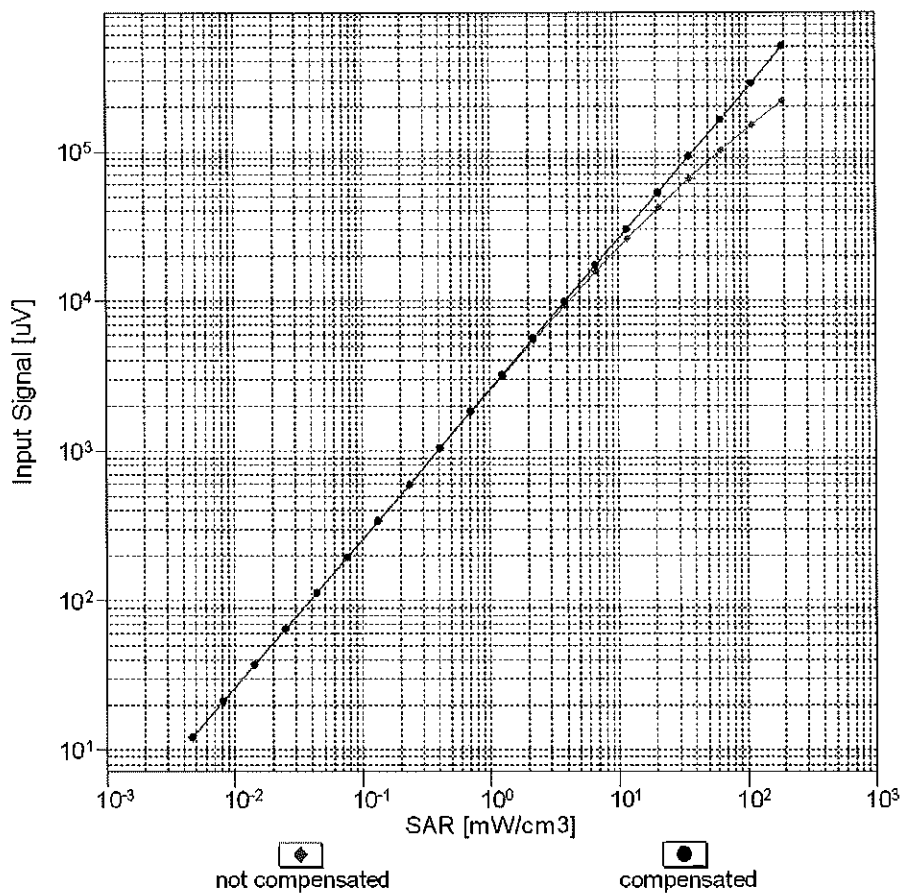


f=1800 MHz,R22



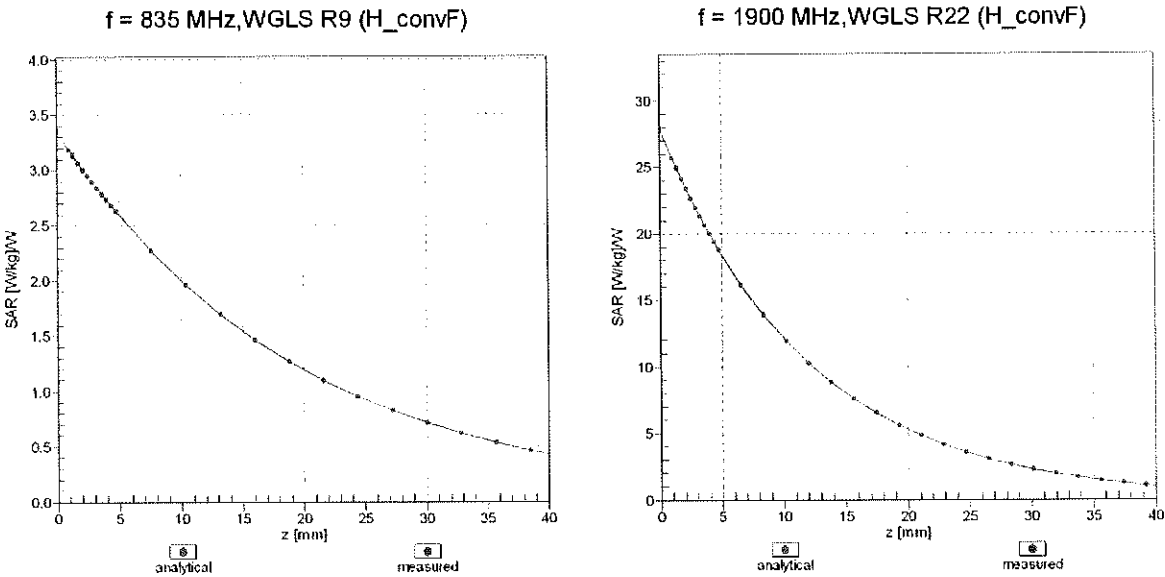
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell , $f_{\text{eval}} = 1900 \text{ MHz}$)

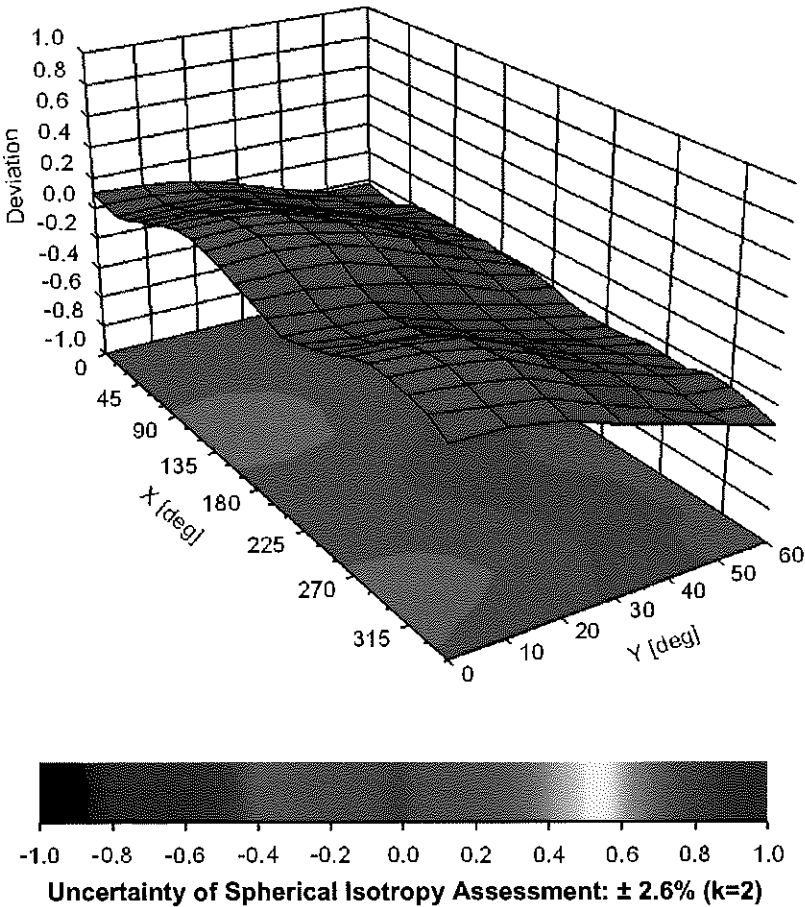


Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid
Error (ϕ, θ), f = 900 MHz



Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E (k=2)
0		CW	CW	0.00	± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 %
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	± 9.6 %
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	± 9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	± 9.6 %
10062	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	± 9.6 %
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	± 9.6 %
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	± 9.6 %
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 %
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	± 9.6 %
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	± 9.6 %
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	± 9.6 %
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 %
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 %
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	± 9.6 %
10097	CAB	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10098	CAB	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10102	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %

10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10114	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10181	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10188	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %

10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
10223	CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAB	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
10226	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
10232	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10233	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10238	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10245	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
10246	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	± 9.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10269	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
10275	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAA	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
10295	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %

10300	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WiMAX	12.03	± 9.6 %
10302	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	WiMAX	12.57	± 9.6 %
10303	AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 %
10304	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11.86	± 9.6 %
10305	AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	WiMAX	15.24	± 9.6 %
10306	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	WiMAX	14.67	± 9.6 %
10307	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	WiMAX	14.49	± 9.6 %
10308	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WiMAX	14.46	± 9.6 %
10309	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	WiMAX	14.58	± 9.6 %
10310	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	WiMAX	14.57	± 9.6 %
10311	AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
10313	AAA	IDEN 1:3	IDEN	10.51	± 9.6 %
10314	AAA	IDEN 1:6	IDEN	13.48	± 9.6 %
10315	AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	WLAN	1.71	± 9.6 %
10316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9.6 %
10317	AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10401	AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	± 9.6 %
10402	AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10417	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	WLAN	8.19	± 9.6 %
10422	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426	AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6 %
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	± 9.6 %
10430	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	± 9.6 %
10431	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6 %
10432	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10434	AAA	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10435	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10447	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6 %
10448	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	± 9.6 %

10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10456	AAB	IEEE 802.11ac WIFI (160MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	± 9.6 %
10457	AAA	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	± 9.6 %
10460	AAA	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
10461	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10462	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	± 9.6 %
10463	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10464	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10465	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10466	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10467	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10468	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10469	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10470	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10471	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10472	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10473	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10477	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10478	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10479	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10480	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	± 9.6 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	± 9.6 %
10482	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	± 9.6 %
10483	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	± 9.6 %
10485	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	± 9.6 %
10486	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	± 9.6 %
10487	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	± 9.6 %
10488	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	± 9.6 %
10489	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	± 9.6 %
10490	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10491	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %

10492	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	± 9.6 %
10493	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	± 9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	± 9.6 %
10496	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10497	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	± 9.6 %
10498	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.40	± 9.6 %
10499	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.68	± 9.6 %
10500	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	± 9.6 %
10501	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	± 9.6 %
10502	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	± 9.6 %
10503	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	± 9.6 %
10504	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	± 9.6 %
10505	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10506	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10507	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.36	± 9.6 %
10508	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	± 9.6 %
10509	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.99	± 9.6 %
10510	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.49	± 9.6 %
10511	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	± 9.6 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	± 9.6 %
10514	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	± 9.6 %
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	± 9.6 %
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10518	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10519	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	7.97	± 9.6 %
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10523	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.08	± 9.6 %
10524	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10525	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10526	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10527	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	WLAN	8.21	± 9.6 %
10528	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10529	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10531	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10532	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10533	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	WLAN	8.38	± 9.6 %
10534	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	WLAN	8.45	± 9.6 %

10535	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10536	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	WLAN	8.32	± 9.6 %
10537	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.44	± 9.6 %
10538	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10540	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10541	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	WLAN	8.46	± 9.6 %
10542	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10543	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10544	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	WLAN	8.47	± 9.6 %
10545	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10546	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	WLAN	8.35	± 9.6 %
10547	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	WLAN	8.49	± 9.6 %
10548	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10550	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	WLAN	8.38	± 9.6 %
10551	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	WLAN	8.50	± 9.6 %
10552	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10553	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	WLAN	8.47	± 9.6 %
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	WLAN	8.50	± 9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	WLAN	8.52	± 9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	WLAN	8.61	± 9.6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	WLAN	8.73	± 9.6 %
10561	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	WLAN	8.56	± 9.6 %
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	WLAN	8.69	± 9.6 %
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10564	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.13	± 9.6 %
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.00	± 9.6 %
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.10	± 9.6 %
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.30	± 9.6 %
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	± 9.6 %
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	± 9.6 %
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN	1.98	± 9.6 %
10574	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN	1.98	± 9.6 %
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	± 9.6 %
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	± 9.6 %
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	± 9.6 %
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	± 9.6 %
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	± 9.6 %
10583	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10584	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	± 9.6 %
10585	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10586	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	± 9.6 %
10587	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	± 9.6 %

10588	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10589	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	± 9.6 %
10590	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	± 9.6 %
10591	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	WLAN	8.63	± 9.6 %
10592	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10593	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10594	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10595	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10596	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	WLAN	8.71	± 9.6 %
10597	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10598	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	WLAN	8.50	± 9.6 %
10599	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10600	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	WLAN	8.88	± 9.6 %
10601	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10603	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	WLAN	9.03	± 9.6 %
10604	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10605	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	WLAN	8.97	± 9.6 %
10606	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10607	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10608	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10609	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	WLAN	8.57	± 9.6 %
10610	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10611	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10612	AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10613	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10614	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10615	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10616	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10617	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10618	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	WLAN	8.58	± 9.6 %
10619	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10620	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	WLAN	8.87	± 9.6 %
10621	AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10622	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	WLAN	8.68	± 9.6 %
10623	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10624	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	WLAN	8.96	± 9.6 %
10625	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	WLAN	8.96	± 9.6 %
10626	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10627	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	WLAN	8.88	± 9.6 %
10628	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	WLAN	8.71	± 9.6 %
10629	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10630	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10631	AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10632	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10633	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10634	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	± 9.6 %
10635	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10636	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10637	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10638	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10639	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10640	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	WLAN	8.98	± 9.6 %
10641	AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10642	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10643	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	9.05	± 9.6 %
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.11	± 9.6 %
10646	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
10647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	± 9.6 %
10652	AAD	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	± 9.6 %
10653	AAD	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	± 9.6 %
10654	AAD	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	± 9.6 %

10655	AAE	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	± 9.6 %
10658	AAA	Pulse Waveform (200Hz, 10%)	Test	10.00	± 9.6 %
10659	AAA	Pulse Waveform (200Hz, 20%)	Test	6.99	± 9.6 %
10660	AAA	Pulse Waveform (200Hz, 40%)	Test	3.98	± 9.6 %
10661	AAA	Pulse Waveform (200Hz, 60%)	Test	2.22	± 9.6 %
10662	AAA	Pulse Waveform (200Hz, 80%)	Test	0.97	± 9.6 %
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	± 9.6 %

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC-Test**

Certificate No: **EX3-7308_Aug18**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7308**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6**
Calibration procedure for dosimetric E-field probes

Calibration date: **August 23, 2018**

BN ✓
09-06-2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
Reference Probe ES3DV2	SN: 3013	30-Dec-17 (No. ES3-3013_Dec17)	Dec-18
DAE4	SN: 660	21-Dec-17 (No. DAE4-660_Dec17)	Dec-18
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-17)	In house check: Oct-18

Calibrated by:	Name Jeton Kastrati	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Issued: August 24, 2018



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

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Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization ϕ	ϕ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

Probe EX3DV4

SN:7308

Manufactured: March 11, 2014
Calibrated: August 23, 2018

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$) ^A	0.49	0.60	0.44	$\pm 10.1 \%$
DCP (mV) ^B	99.6	97.1	102.5	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB $\sqrt{\mu V}$	C	D dB	VR mV	Unc ^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	177.2	$\pm 3.5 \%$
		Y	0.0	0.0	1.0		165.4	
		Z	0.0	0.0	1.0		159.6	

Note: For details on UID parameters see Appendix.

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	53.71	401.2	35.76	12.80	0.351	5.077	0.717	0.413	1.005
Y	56.67	439.8	38.08	13.44	0.524	5.100	0.000	0.597	1.012
Z	40.98	304.1	35.29	8.573	0.334	5.045	1.531	0.174	1.005

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	10.23	10.23	10.23	0.57	0.81	± 12.0 %
835	41.5	0.90	9.96	9.96	9.96	0.58	0.81	± 12.0 %
1750	40.1	1.37	8.66	8.66	8.66	0.36	0.80	± 12.0 %
1900	40.0	1.40	8.26	8.26	8.26	0.29	0.85	± 12.0 %
2300	39.5	1.67	7.81	7.81	7.81	0.29	0.85	± 12.0 %
2450	39.2	1.80	7.45	7.45	7.45	0.35	0.91	± 12.0 %
2600	39.0	1.96	7.30	7.30	7.30	0.35	0.87	± 12.0 %
5250	35.9	4.71	5.10	5.10	5.10	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.85	4.85	4.85	0.40	1.80	± 13.1 %
5750	35.4	5.22	5.04	5.04	5.04	0.40	1.80	± 13.1 %

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^c	Relative Permittivity ^f	Conductivity (S/m) ^f	ConvF X	ConvF Y	ConvF Z	Alpha ^g	Depth ^g (mm)	Unc (k=2)
750	55.5	0.96	10.38	10.38	10.38	0.36	0.99	± 12.0 %
835	55.2	0.97	10.19	10.19	10.19	0.50	0.82	± 12.0 %
1750	53.4	1.49	8.13	8.13	8.13	0.27	1.04	± 12.0 %
1900	53.3	1.52	7.79	7.79	7.79	0.38	0.85	± 12.0 %
2300	52.9	1.81	7.73	7.73	7.73	0.37	0.80	± 12.0 %
2450	52.7	1.95	7.57	7.57	7.57	0.34	0.88	± 12.0 %
2600	52.5	2.16	7.40	7.40	7.40	0.29	0.95	± 12.0 %
5250	48.9	5.36	4.48	4.48	4.48	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.00	4.00	4.00	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.18	4.18	4.18	0.50	1.90	± 13.1 %

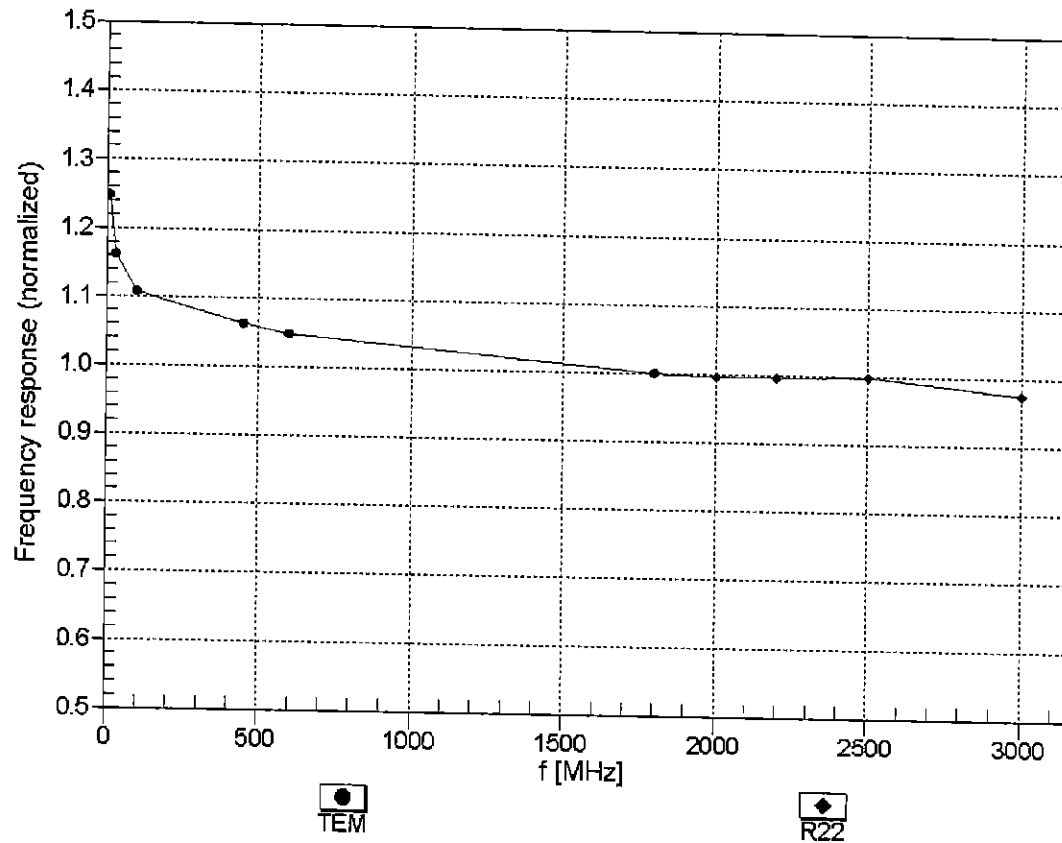
^c Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^f At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^g Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

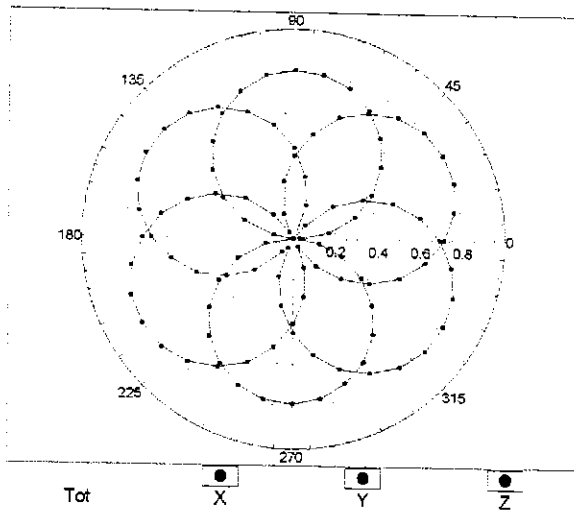
(TEM-Cell:ifi110 EXX, Waveguide: R22)



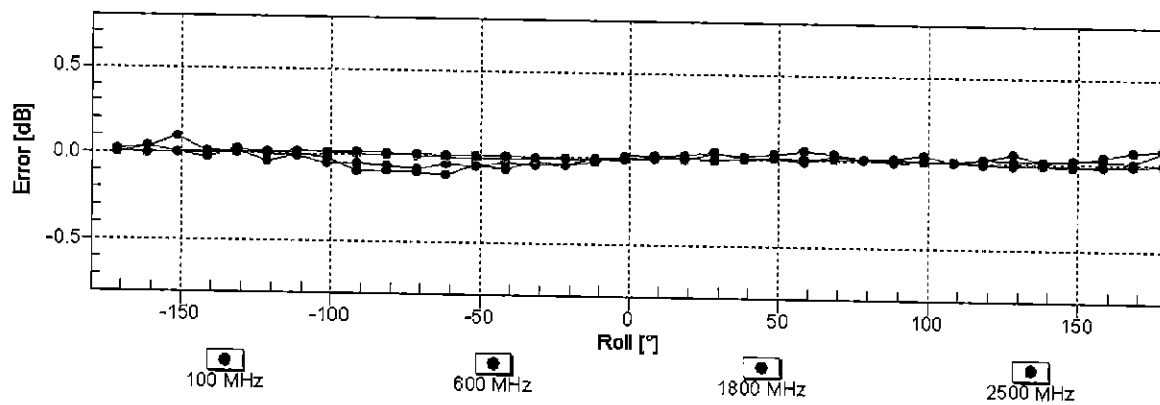
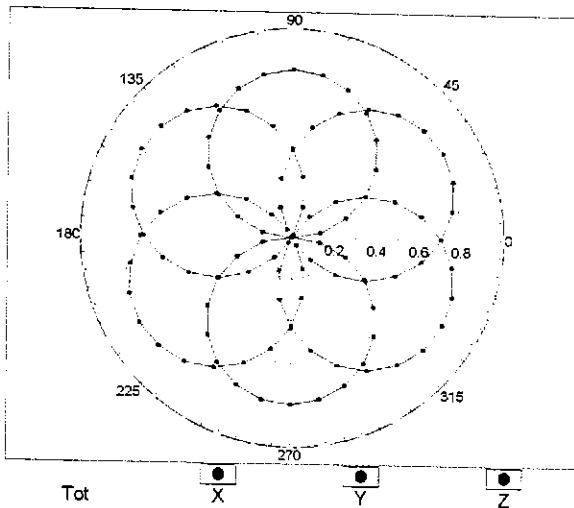
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

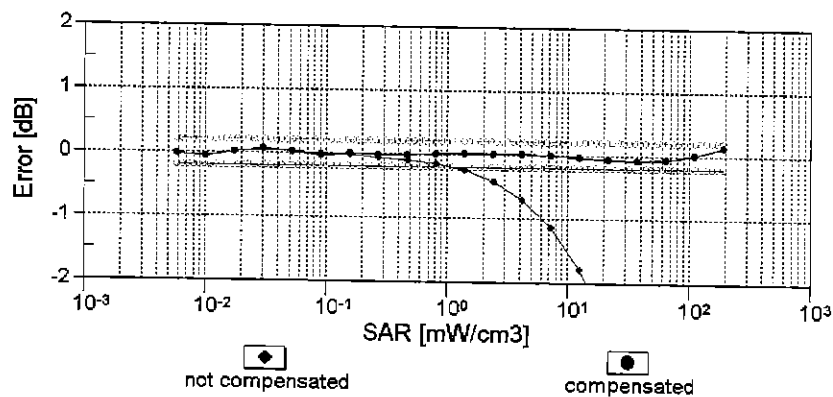
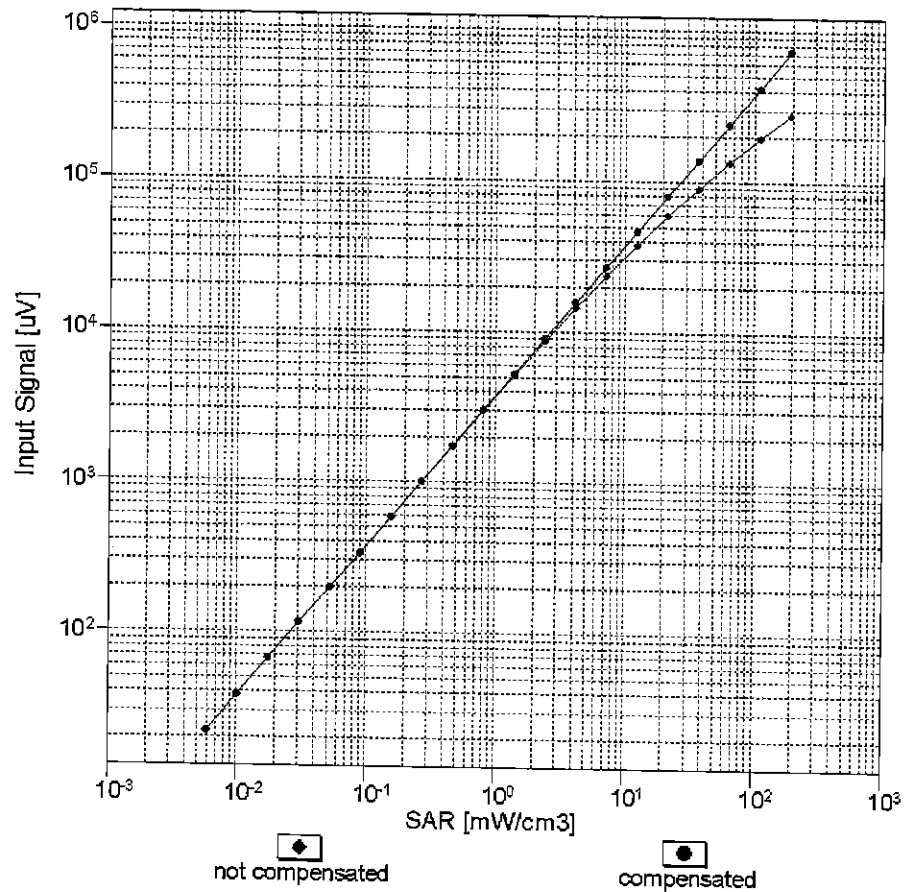


f=1800 MHz,R22



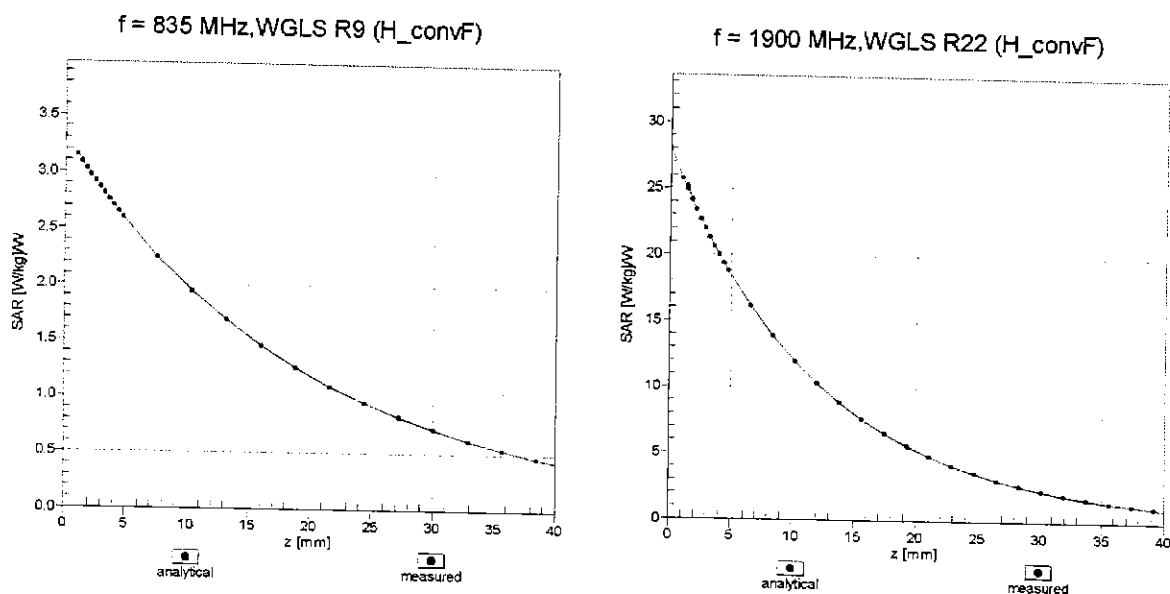
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell , $f_{\text{eval}} = 1900 \text{ MHz}$)



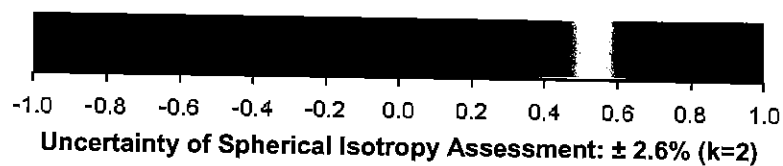
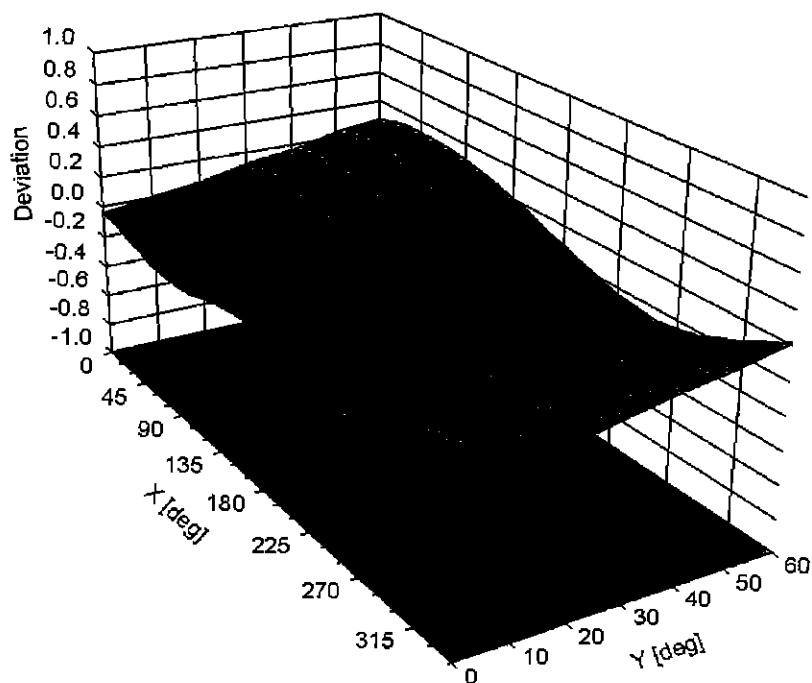
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), $f = 900 \text{ MHz}$



DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	108.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Appendix: Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB $\sqrt{\mu V}$	C	D dB	VR mV	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	177.2	$\pm 3.5\%$
		Y	0.00	0.00	1.00		165.4	
		Z	0.00	0.00	1.00		159.6	
10010- CAA	SAR Validation (Square, 100ms, 10ms)	X	2.71	68.17	11.26	10.00	20.0	$\pm 9.6\%$
		Y	2.39	66.64	10.67		20.0	
		Z	1.90	64.26	9.03		20.0	
10011- CAB	UMTS-FDD (WCDMA)	X	1.19	70.37	17.06	0.00	150.0	$\pm 9.6\%$
		Y	0.96	66.50	14.51		150.0	
		Z	1.05	68.92	16.00		150.0	
10012- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	X	1.18	64.67	16.08	0.41	150.0	$\pm 9.6\%$
		Y	1.11	63.43	15.04		150.0	
		Z	1.13	64.11	15.48		150.0	
10013- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	X	4.93	66.75	17.26	1.46	150.0	$\pm 9.6\%$
		Y	4.92	66.47	17.15		150.0	
		Z	4.74	66.75	17.08		150.0	
10021- DAC	GSM-FDD (TDMA, GMSK)	X	100.00	114.38	27.28	9.39	50.0	$\pm 9.6\%$
		Y	100.00	114.83	27.64		50.0	
		Z	100.00	109.69	24.90		50.0	
10023- DAC	GPRS-FDD (TDMA, GMSK, TN 0)	X	100.00	113.94	27.13	9.57	50.0	$\pm 9.6\%$
		Y	100.00	114.49	27.54		50.0	
		Z	100.00	109.21	24.74		50.0	
10024- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	X	100.00	115.48	26.77	6.56	60.0	$\pm 9.6\%$
		Y	100.00	114.18	26.29		60.0	
		Z	100.00	109.85	23.86		60.0	
10025- DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	X	6.22	84.66	34.29	12.57	50.0	$\pm 9.6\%$
		Y	4.94	76.24	29.94		50.0	
		Z	5.36	79.88	31.57		50.0	
10026- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	11.81	100.22	36.35	9.56	60.0	$\pm 9.6\%$
		Y	11.10	97.75	35.30		60.0	
		Z	7.89	90.81	32.78		60.0	
10027- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	X	100.00	118.27	27.22	4.80	80.0	$\pm 9.6\%$
		Y	100.00	114.44	25.61		80.0	
		Z	100.00	111.67	23.86		80.0	
10028- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	122.72	28.40	3.55	100.0	$\pm 9.6\%$
		Y	100.00	114.80	25.04		100.0	
		Z	100.00	114.83	24.49		100.0	
10029- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	6.56	85.50	29.56	7.80	80.0	$\pm 9.6\%$
		Y	6.53	84.80	29.16		80.0	
		Z	4.80	79.03	26.78		80.0	
10030- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	100.00	114.96	26.10	5.30	70.0	$\pm 9.6\%$
		Y	100.00	112.69	25.18		70.0	
		Z	100.00	108.37	22.73		70.0	
10031- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	100.00	126.84	28.53	1.88	100.0	$\pm 9.6\%$
		Y	100.00	105.21	19.68		100.0	
		Z	100.00	108.61	20.59		100.0	

10032-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	X	100.00	146.53	35.02	1.17	100.0	± 9.6 %
		Y	100.00	95.65	15.05		100.0	
		Z	100.00	112.23	21.08		100.0	
10033-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	100.00	133.98	36.90	5.30	70.0	± 9.6 %
		Y	94.91	132.14	36.35		70.0	
		Z	24.70	106.96	28.52		70.0	
10034-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	X	8.70	95.28	25.33	1.88	100.0	± 9.6 %
		Y	4.18	83.23	21.11		100.0	
		Z	3.97	82.01	19.44		100.0	
10035-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	X	3.83	83.82	21.38	1.17	100.0	± 9.6 %
		Y	2.23	74.99	17.69		100.0	
		Z	2.33	75.94	16.98		100.0	
10036-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	100.00	134.50	37.14	5.30	70.0	± 9.6 %
		Y	100.00	133.48	36.76		70.0	
		Z	56.60	119.91	31.85		70.0	
10037-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	7.69	93.53	24.78	1.88	100.0	± 9.6 %
		Y	3.89	82.31	20.76		100.0	
		Z	3.40	80.12	18.77		100.0	
10038-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	3.93	84.59	21.78	1.17	100.0	± 9.6 %
		Y	2.28	75.57	18.03		100.0	
		Z	2.38	76.51	17.34		100.0	
10039-CAB	CDMA2000 (1xRTT, RC1)	X	2.78	78.14	18.71	0.00	150.0	± 9.6 %
		Y	1.67	70.12	14.94		150.0	
		Z	2.00	74.01	15.76		150.0	
10042-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	X	100.00	110.92	24.96	7.78	50.0	± 9.6 %
		Y	100.00	110.22	24.75		50.0	
		Z	100.00	106.01	22.46		50.0	
10044-CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.00	112.58	4.43	0.00	150.0	± 9.6 %
		Y	0.07	121.95	9.84		150.0	
		Z	0.01	118.94	9.83		150.0	
10048-CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	100.00	111.48	27.44	13.80	25.0	± 9.6 %
		Y	100.00	112.85	28.28		25.0	
		Z	18.65	86.54	19.90		25.0	
10049-CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	100.00	112.40	26.75	10.79	40.0	± 9.6 %
		Y	100.00	113.42	27.38		40.0	
		Z	46.23	99.19	22.45		40.0	
10056-CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	100.00	126.85	34.82	9.03	50.0	± 9.6 %
		Y	100.00	126.84	34.96		50.0	
		Z	73.14	116.99	30.84		50.0	
10058-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	X	4.87	79.06	26.07	6.55	100.0	± 9.6 %
		Y	4.89	78.72	25.82		100.0	
		Z	3.78	74.24	23.87		100.0	
10059-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	X	1.24	66.08	16.89	0.61	110.0	± 9.6 %
		Y	1.15	64.70	15.80		110.0	
		Z	1.15	65.12	16.08		110.0	
10060-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	X	100.00	145.11	38.67	1.30	110.0	± 9.6 %
		Y	100.00	138.14	35.54		110.0	
		Z	100.00	143.13	37.45		110.0	

10061-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	5.01	92.44	27.34	2.04	110.0	± 9.6 %
		Y	3.88	86.79	24.94		110.0	
		Z	2.64	81.37	23.02		110.0	
10062-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	4.74	66.80	16.70	0.49	100.0	± 9.6 %
		Y	4.72	66.44	16.52		100.0	
		Z	4.55	66.78	16.53		100.0	
10063-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	4.76	66.90	16.81	0.72	100.0	± 9.6 %
		Y	4.74	66.55	16.64		100.0	
		Z	4.57	66.86	16.62		100.0	
10064-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	X	5.07	67.18	17.05	0.86	100.0	± 9.6 %
		Y	5.06	66.88	16.91		100.0	
		Z	4.83	67.08	16.83		100.0	
10065-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	4.93	67.08	17.15	1.21	100.0	± 9.6 %
		Y	4.92	66.80	17.03		100.0	
		Z	4.69	66.95	16.91		100.0	
10066-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	X	4.95	67.11	17.33	1.46	100.0	± 9.6 %
		Y	4.94	66.84	17.22		100.0	
		Z	4.70	66.94	17.07		100.0	
10067-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	X	5.22	67.17	17.72	2.04	100.0	± 9.6 %
		Y	5.23	66.94	17.65		100.0	
		Z	4.99	67.15	17.52		100.0	
10068-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	X	5.28	67.31	17.99	2.55	100.0	± 9.6 %
		Y	5.30	67.12	17.95		100.0	
		Z	5.01	67.08	17.69		100.0	
10069-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	X	5.36	67.24	18.15	2.67	100.0	± 9.6 %
		Y	5.38	67.05	18.11		100.0	
		Z	5.09	67.11	17.88		100.0	
10071-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	5.01	66.83	17.56	1.99	100.0	± 9.6 %
		Y	5.01	66.58	17.48		100.0	
		Z	4.83	66.80	17.36		100.0	
10072-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	X	5.00	67.20	17.81	2.30	100.0	± 9.6 %
		Y	5.01	66.96	17.73		100.0	
		Z	4.79	67.07	17.56		100.0	
10073-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	5.05	67.32	18.13	2.83	100.0	± 9.6 %
		Y	5.06	67.11	18.07		100.0	
		Z	4.84	67.21	17.87		100.0	
10074-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	5.01	67.17	18.27	3.30	100.0	± 9.6 %
		Y	5.03	66.98	18.23		100.0	
		Z	4.82	67.10	18.01		100.0	
10075-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	5.05	67.33	18.61	3.82	90.0	± 9.6 %
		Y	5.08	67.18	18.60		90.0	
		Z	4.84	67.13	18.28		90.0	
10076-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	X	5.04	67.01	18.67	4.15	90.0	± 9.6 %
		Y	5.06	66.85	18.66		90.0	
		Z	4.86	66.95	18.41		90.0	
10077-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	5.05	67.06	18.76	4.30	90.0	± 9.6 %
		Y	5.07	66.89	18.74		90.0	
		Z	4.89	67.03	18.52		90.0	

10081-CAB	CDMA2000 (1xRTT, RC3)	X	1.10	69.87	14.99	0.00	150.0	± 9.6 %
		Y	0.78	64.74	11.83		150.0	
		Z	0.78	66.34	11.97		150.0	
10082-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	X	0.69	60.00	4.39	4.77	80.0	± 9.6 %
		Y	0.71	60.00	4.39		80.0	
		Z	7.97	68.50	6.36		80.0	
10090-DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	100.00	115.53	26.81	6.56	60.0	± 9.6 %
		Y	100.00	114.29	26.36		60.0	
		Z	100.00	109.90	23.90		60.0	
10097-CAB	UMTS-FDD (HSDPA)	X	1.95	68.97	16.62	0.00	150.0	± 9.6 %
		Y	1.75	66.81	15.24		150.0	
		Z	1.87	68.90	16.13		150.0	
10098-CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.91	68.95	16.60	0.00	150.0	± 9.6 %
		Y	1.71	66.77	15.20		150.0	
		Z	1.83	68.86	16.11		150.0	
10099-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	11.93	100.45	36.42	9.56	60.0	± 9.6 %
		Y	11.20	97.95	35.37		60.0	
		Z	7.96	90.99	32.84		60.0	
10100-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	3.40	71.76	17.45	0.00	150.0	± 9.6 %
		Y	3.10	69.82	16.33		150.0	
		Z	3.12	70.91	17.03		150.0	
10101-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	3.36	68.15	16.35	0.00	150.0	± 9.6 %
		Y	3.24	67.23	15.77		150.0	
		Z	3.17	67.74	16.07		150.0	
10102-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	3.45	68.05	16.42	0.00	150.0	± 9.6 %
		Y	3.34	67.19	15.87		150.0	
		Z	3.28	67.71	16.16		150.0	
10103-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	6.86	77.75	21.56	3.98	65.0	± 9.6 %
		Y	6.56	76.62	21.10		65.0	
		Z	5.69	75.27	20.45		65.0	
10104-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	6.41	74.58	21.07	3.98	65.0	± 9.6 %
		Y	6.33	74.04	20.86		65.0	
		Z	5.58	72.74	20.11		65.0	
10105-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	6.09	73.43	20.88	3.98	65.0	± 9.6 %
		Y	6.03	72.95	20.69		65.0	
		Z	5.24	71.29	19.75		65.0	
10108-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	2.97	70.94	17.29	0.00	150.0	± 9.6 %
		Y	2.72	69.08	16.17		150.0	
		Z	2.70	70.20	16.88		150.0	
10109-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	3.02	68.05	16.32	0.00	150.0	± 9.6 %
		Y	2.90	67.02	15.66		150.0	
		Z	2.83	67.71	15.99		150.0	
10110-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	2.42	70.09	17.00	0.00	150.0	± 9.6 %
		Y	2.21	68.14	15.78		150.0	
		Z	2.18	69.46	16.49		150.0	
10111-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.76	69.06	16.78	0.00	150.0	± 9.6 %
		Y	2.59	67.59	15.88		150.0	
		Z	2.59	68.99	16.39		150.0	

10112-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	3.14	67.97	16.35	0.00	150.0	± 9.6 %
		Y	3.03	67.00	15.72		150.0	
		Z	2.95	67.72	16.05		150.0	
10113-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.92	69.11	16.87	0.00	150.0	± 9.6 %
		Y	2.75	67.72	16.02		150.0	
		Z	2.74	69.14	16.51		150.0	
10114-CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	5.18	67.31	16.57	0.00	150.0	± 9.6 %
		Y	5.14	66.93	16.36		150.0	
		Z	5.02	67.26	16.48		150.0	
10115-CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	5.52	67.57	16.70	0.00	150.0	± 9.6 %
		Y	5.51	67.29	16.56		150.0	
		Z	5.27	67.30	16.50		150.0	
10116-CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	5.29	67.56	16.61	0.00	150.0	± 9.6 %
		Y	5.27	67.21	16.43		150.0	
		Z	5.10	67.44	16.50		150.0	
10117-CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	5.16	67.25	16.55	0.00	150.0	± 9.6 %
		Y	5.13	66.89	16.36		150.0	
		Z	4.99	67.15	16.44		150.0	
10118-CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	X	5.59	67.74	16.79	0.00	150.0	± 9.6 %
		Y	5.60	67.49	16.67		150.0	
		Z	5.34	67.49	16.60		150.0	
10119-CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	X	5.26	67.49	16.59	0.00	150.0	± 9.6 %
		Y	5.24	67.15	16.41		150.0	
		Z	5.09	67.40	16.49		150.0	
10140-CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	3.50	68.05	16.33	0.00	150.0	± 9.6 %
		Y	3.39	67.19	15.79		150.0	
		Z	3.30	67.72	16.07		150.0	
10141-CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.62	68.10	16.48	0.00	150.0	± 9.6 %
		Y	3.51	67.27	15.96		150.0	
		Z	3.43	67.85	16.25		150.0	
10142-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	2.22	70.35	16.88	0.00	150.0	± 9.6 %
		Y	1.98	67.98	15.45		150.0	
		Z	1.97	69.67	16.10		150.0	
10143-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	2.70	70.21	16.79	0.00	150.0	± 9.6 %
		Y	2.44	68.12	15.58		150.0	
		Z	2.48	69.97	16.00		150.0	
10144-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	2.42	67.64	15.07	0.00	150.0	± 9.6 %
		Y	2.26	66.15	14.15		150.0	
		Z	2.13	66.86	13.96		150.0	
10145-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	1.54	68.23	14.00	0.00	150.0	± 9.6 %
		Y	1.25	64.93	12.03		150.0	
		Z	1.00	63.72	10.21		150.0	
10146-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	2.38	68.67	13.30	0.00	150.0	± 9.6 %
		Y	2.63	70.03	14.41		150.0	
		Z	1.37	62.94	8.80		150.0	
10147-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	3.01	71.74	14.81	0.00	150.0	± 9.6 %
		Y	3.44	73.73	16.16		150.0	
		Z	1.50	63.86	9.38		150.0	

10149-CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	3.03	68.12	16.37	0.00	150.0	± 9.6 %
		Y	2.91	67.08	15.71		150.0	
		Z	2.84	67.78	16.04		150.0	
10150-CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	3.15	68.03	16.39	0.00	150.0	± 9.6 %
		Y	3.03	67.05	15.76		150.0	
		Z	2.96	67.78	16.09		150.0	
10151-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	7.33	80.62	22.85	3.98	65.0	± 9.6 %
		Y	6.93	79.21	22.28		65.0	
		Z	6.07	78.22	21.74		65.0	
10152-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	5.98	74.73	20.92	3.98	65.0	± 9.6 %
		Y	5.89	74.12	20.68		65.0	
		Z	5.12	72.74	19.78		65.0	
10153-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	6.33	75.57	21.65	3.98	65.0	± 9.6 %
		Y	6.23	74.94	21.41		65.0	
		Z	5.49	73.78	20.61		65.0	
10154-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	2.49	70.63	17.32	0.00	150.0	± 9.6 %
		Y	2.26	68.57	16.06		150.0	
		Z	2.24	69.92	16.77		150.0	
10155-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	2.77	69.07	16.79	0.00	150.0	± 9.6 %
		Y	2.59	67.59	15.89		150.0	
		Z	2.59	69.02	16.41		150.0	
10156-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	2.11	70.85	16.93	0.00	150.0	± 9.6 %
		Y	1.83	68.04	15.26		150.0	
		Z	1.82	69.80	15.80		150.0	
10157-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	2.31	68.61	15.35	0.00	150.0	± 9.6 %
		Y	2.08	66.62	14.16		150.0	
		Z	1.98	67.47	13.92		150.0	
10158-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.92	69.17	16.92	0.00	150.0	± 9.6 %
		Y	2.75	67.77	16.06		150.0	
		Z	2.75	69.22	16.57		150.0	
10159-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	2.44	69.17	15.69	0.00	150.0	± 9.6 %
		Y	2.19	67.06	14.45		150.0	
		Z	2.09	67.96	14.21		150.0	
10160-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	2.90	69.57	16.90	0.00	150.0	± 9.6 %
		Y	2.74	68.24	16.05		150.0	
		Z	2.70	69.25	16.60		150.0	
10161-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	3.05	67.98	16.35	0.00	150.0	± 9.6 %
		Y	2.93	66.95	15.69		150.0	
		Z	2.86	67.77	16.01		150.0	
10162-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	3.15	68.06	16.42	0.00	150.0	± 9.6 %
		Y	3.03	67.06	15.79		150.0	
		Z	2.97	67.96	16.14		150.0	
10166-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	3.67	69.77	19.22	3.01	150.0	± 9.6 %
		Y	3.71	69.61	19.37		150.0	
		Z	3.45	70.11	19.35		150.0	
10167-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	4.61	72.92	19.78	3.01	150.0	± 9.6 %
		Y	4.57	72.37	19.78		150.0	
		Z	4.42	74.02	20.14		150.0	

10168-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	5.13	75.25	21.12	3.01	150.0	± 9.6 %
		Y	5.05	74.54	21.07		150.0	
		Z	5.13	77.22	21.87		150.0	
10169-CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	3.12	70.03	19.37	3.01	150.0	± 9.6 %
		Y	3.15	69.73	19.46		150.0	
		Z	2.86	69.57	19.15		150.0	
10170-CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	4.58	77.10	22.08	3.01	150.0	± 9.6 %
		Y	4.39	75.79	21.81		150.0	
		Z	4.44	78.23	22.53		150.0	
10171-AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	3.64	72.24	19.05	3.01	150.0	± 9.6 %
		Y	3.59	71.47	18.98		150.0	
		Z	3.36	72.39	19.02		150.0	
10172-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	12.64	100.34	31.84	6.02	65.0	± 9.6 %
		Y	12.97	100.68	32.37		65.0	
		Z	5.77	87.24	27.51		65.0	
10173-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	36.96	114.71	33.67	6.02	65.0	± 9.6 %
		Y	30.92	112.16	33.64		65.0	
		Z	22.36	108.00	31.61		65.0	
10174-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	22.92	104.35	30.17	6.02	65.0	± 9.6 %
		Y	21.96	104.04	30.70		65.0	
		Z	11.65	95.24	27.25		65.0	
10175-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	3.08	69.68	19.10	3.01	150.0	± 9.6 %
		Y	3.11	69.39	19.20		150.0	
		Z	2.82	69.22	18.88		150.0	
10176-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	4.59	77.13	22.09	3.01	150.0	± 9.6 %
		Y	4.40	75.82	21.82		150.0	
		Z	4.45	78.26	22.55		150.0	
10177-CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	3.11	69.85	19.21	3.01	150.0	± 9.6 %
		Y	3.14	69.56	19.30		150.0	
		Z	2.84	69.38	18.97		150.0	
10178-CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	4.53	76.83	21.94	3.01	150.0	± 9.6 %
		Y	4.34	75.53	21.68		150.0	
		Z	4.39	77.99	22.42		150.0	
10179-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	4.06	74.50	20.40	3.01	150.0	± 9.6 %
		Y	3.95	73.49	20.26		150.0	
		Z	3.83	75.09	20.61		150.0	
10180-CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	3.62	72.15	18.99	3.01	150.0	± 9.6 %
		Y	3.58	71.38	18.93		150.0	
		Z	3.35	72.32	18.97		150.0	
10181-CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	3.10	69.83	19.20	3.01	150.0	± 9.6 %
		Y	3.13	69.54	19.29		150.0	
		Z	2.84	69.36	18.97		150.0	
10182-CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	4.52	76.80	21.93	3.01	150.0	± 9.6 %
		Y	4.33	75.51	21.66		150.0	
		Z	4.38	77.96	22.40		150.0	
10183-AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	3.62	72.12	18.97	3.01	150.0	± 9.6 %
		Y	3.57	71.35	18.91		150.0	
		Z	3.34	72.29	18.96		150.0	

10184-CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	3.11	69.88	19.22	3.01	150.0	± 9.6 %
		Y	3.14	69.58	19.32		150.0	
		Z	2.85	69.41	18.99		150.0	
10185-CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	4.54	76.88	21.97	3.01	150.0	± 9.6 %
		Y	4.35	75.59	21.70		150.0	
		Z	4.41	78.06	22.45		150.0	
10186-AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	3.64	72.20	19.01	3.01	150.0	± 9.6 %
		Y	3.59	71.42	18.95		150.0	
		Z	3.36	72.37	19.00		150.0	
10187-CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	3.12	69.93	19.28	3.01	150.0	± 9.6 %
		Y	3.15	69.63	19.37		150.0	
		Z	2.86	69.48	19.07		150.0	
10188-CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	4.72	77.70	22.40	3.01	150.0	± 9.6 %
		Y	4.51	76.33	22.11		150.0	
		Z	4.61	78.98	22.92		150.0	
10189-AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	3.73	72.70	19.32	3.01	150.0	± 9.6 %
		Y	3.67	71.88	19.24		150.0	
		Z	3.46	72.92	19.33		150.0	
10193-CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	4.59	66.76	16.33	0.00	150.0	± 9.6 %
		Y	4.55	66.31	16.09		150.0	
		Z	4.42	66.80	16.19		150.0	
10194-CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	X	4.77	67.10	16.45	0.00	150.0	± 9.6 %
		Y	4.74	66.66	16.21		150.0	
		Z	4.58	67.08	16.32		150.0	
10195-CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	4.82	67.12	16.46	0.00	150.0	± 9.6 %
		Y	4.78	66.69	16.22		150.0	
		Z	4.62	67.10	16.34		150.0	
10196-CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	4.60	66.84	16.36	0.00	150.0	± 9.6 %
		Y	4.56	66.40	16.12		150.0	
		Z	4.41	66.83	16.20		150.0	
10197-CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	X	4.79	67.12	16.46	0.00	150.0	± 9.6 %
		Y	4.75	66.69	16.22		150.0	
		Z	4.59	67.09	16.33		150.0	
10198-CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	X	4.82	67.14	16.47	0.00	150.0	± 9.6 %
		Y	4.78	66.71	16.24		150.0	
		Z	4.61	67.11	16.35		150.0	
10219-CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	4.55	66.86	16.33	0.00	150.0	± 9.6 %
		Y	4.51	66.41	16.08		150.0	
		Z	4.37	66.86	16.17		150.0	
10220-CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	X	4.79	67.10	16.45	0.00	150.0	± 9.6 %
		Y	4.75	66.67	16.22		150.0	
		Z	4.58	67.05	16.32		150.0	
10221-CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	X	4.83	67.06	16.45	0.00	150.0	± 9.6 %
		Y	4.79	66.64	16.23		150.0	
		Z	4.62	67.04	16.33		150.0	
10222-CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	5.14	67.26	16.55	0.00	150.0	± 9.6 %
		Y	5.11	66.90	16.36		150.0	
		Z	4.97	67.15	16.43		150.0	

10223-CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	X	5.45	67.43	16.65	0.00	150.0	± 9.6 %
		Y	5.45	67.18	16.52		150.0	
		Z	5.25	67.35	16.55		150.0	
10224-CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	X	5.19	67.37	16.53	0.00	150.0	± 9.6 %
		Y	5.15	66.99	16.33		150.0	
		Z	5.01	67.26	16.42		150.0	
10225-CAB	UMTS-FDD (HSPA+)	X	2.89	66.55	15.78	0.00	150.0	± 9.6 %
		Y	2.80	65.71	15.24		150.0	
		Z	2.72	66.49	15.32		150.0	
10226-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	42.12	117.30	34.47	6.02	65.0	± 9.6 %
		Y	34.39	114.35	34.35		65.0	
		Z	25.78	110.75	32.49		65.0	
10227-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	33.34	110.83	32.01	6.02	65.0	± 9.6 %
		Y	29.14	109.23	32.25		65.0	
		Z	23.91	107.08	30.63		65.0	
10228-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	15.66	105.06	33.38	6.02	65.0	± 9.6 %
		Y	15.84	105.37	33.95		65.0	
		Z	7.75	93.33	29.68		65.0	
10229-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	37.28	114.84	33.72	6.02	65.0	± 9.6 %
		Y	31.13	112.26	33.67		65.0	
		Z	22.62	108.17	31.67		65.0	
10230-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	29.88	108.76	31.36	6.02	65.0	± 9.6 %
		Y	26.58	107.43	31.66		65.0	
		Z	20.85	104.61	29.86		65.0	
10231-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	14.65	103.59	32.85	6.02	65.0	± 9.6 %
		Y	14.88	103.95	33.43		65.0	
		Z	7.34	92.15	29.19		65.0	
10232-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	37.25	114.84	33.71	6.02	65.0	± 9.6 %
		Y	31.10	112.26	33.67		65.0	
		Z	22.58	108.16	31.67		65.0	
10233-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	29.82	108.74	31.35	6.02	65.0	± 9.6 %
		Y	26.53	107.41	31.66		65.0	
		Z	20.76	104.56	29.85		65.0	
10234-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	13.83	102.21	32.30	6.02	65.0	± 9.6 %
		Y	14.10	102.64	32.91		65.0	
		Z	7.03	91.14	28.71		65.0	
10235-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	37.39	114.93	33.74	6.02	65.0	± 9.6 %
		Y	31.21	112.34	33.70		65.0	
		Z	22.65	108.24	31.69		65.0	
10236-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	30.43	109.05	31.43	6.02	65.0	± 9.6 %
		Y	27.03	107.71	31.73		65.0	
		Z	21.22	104.87	29.93		65.0	
10237-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	14.73	103.74	32.90	6.02	65.0	± 9.6 %
		Y	14.96	104.11	33.48		65.0	
		Z	7.35	92.21	29.22		65.0	
10238-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	37.20	114.83	33.71	6.02	65.0	± 9.6 %
		Y	31.07	112.26	33.67		65.0	
		Z	22.51	108.13	31.66		65.0	

10239-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	29.73	108.72	31.35	6.02	65.0	± 9.6 %
		Y	26.48	107.40	31.66		65.0	
		Z	20.66	104.50	29.83		65.0	
10240-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	14.67	103.66	32.88	6.02	65.0	± 9.6 %
		Y	14.89	104.03	33.46		65.0	
		Z	7.33	92.17	29.20		65.0	
10241-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	8.22	81.62	25.84	6.98	65.0	± 9.6 %
		Y	8.21	81.11	25.93		65.0	
		Z	7.55	81.89	25.74		65.0	
10242-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	7.60	79.92	25.06	6.98	65.0	± 9.6 %
		Y	7.70	79.68	25.24		65.0	
		Z	6.63	79.21	24.57		65.0	
10243-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	6.06	76.28	24.43	6.98	65.0	± 9.6 %
		Y	6.20	76.29	24.69		65.0	
		Z	5.27	75.02	23.70		65.0	
10244-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	6.94	79.13	20.40	3.98	65.0	± 9.6 %
		Y	7.61	80.93	21.65		65.0	
		Z	4.63	73.01	16.54		65.0	
10245-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	6.74	78.35	20.03	3.98	65.0	± 9.6 %
		Y	7.38	80.11	21.28		65.0	
		Z	4.46	72.20	16.14		65.0	
10246-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	8.26	86.16	23.38	3.98	65.0	± 9.6 %
		Y	7.07	83.23	22.34		65.0	
		Z	4.76	77.46	19.00		65.0	
10247-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	5.60	76.50	20.35	3.98	65.0	± 9.6 %
		Y	5.37	75.45	19.96		65.0	
		Z	4.29	72.64	17.71		65.0	
10248-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	5.54	75.70	19.98	3.98	65.0	± 9.6 %
		Y	5.35	74.79	19.65		65.0	
		Z	4.24	71.91	17.36		65.0	
10249-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	9.19	88.24	24.95	3.98	65.0	± 9.6 %
		Y	7.96	85.32	23.90		65.0	
		Z	6.28	82.28	22.02		65.0	
10250-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	6.20	77.76	22.32	3.98	65.0	± 9.6 %
		Y	6.01	76.85	21.97		65.0	
		Z	5.20	75.42	20.86		65.0	
10251-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	5.85	75.32	20.92	3.98	65.0	± 9.6 %
		Y	5.73	74.58	20.63		65.0	
		Z	4.92	73.12	19.45		65.0	
10252-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	8.09	84.95	24.58	3.98	65.0	± 9.6 %
		Y	7.42	82.94	23.81		65.0	
		Z	6.31	81.52	22.96		65.0	
10253-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	5.80	74.00	20.63	3.98	65.0	± 9.6 %
		Y	5.72	73.40	20.39		65.0	
		Z	5.04	72.28	19.52		65.0	
10254-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	6.14	74.84	21.30	3.98	65.0	± 9.6 %
		Y	6.05	74.22	21.07		65.0	
		Z	5.36	73.21	20.25		65.0	

10255-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	6.81	79.50	22.67	3.98	65.0	± 9.6 %
		Y	6.50	78.25	22.16		65.0	
		Z	5.72	77.37	21.59		65.0	
10256-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	5.54	75.38	17.88	3.98	65.0	± 9.6 %
		Y	6.45	78.02	19.55		65.0	
		Z	3.15	67.52	12.83		65.0	
10257-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	5.31	74.31	17.34	3.98	65.0	± 9.6 %
		Y	6.14	76.80	18.96		65.0	
		Z	3.05	66.79	12.37		65.0	
10258-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	6.24	81.13	20.76	3.98	65.0	± 9.6 %
		Y	5.52	78.91	19.97		65.0	
		Z	3.09	70.62	15.05		65.0	
10259-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	5.84	76.93	21.04	3.98	65.0	± 9.6 %
		Y	5.63	75.94	20.66		65.0	
		Z	4.68	73.82	18.92		65.0	
10260-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	5.84	76.54	20.88	3.98	65.0	± 9.6 %
		Y	5.65	75.62	20.54		65.0	
		Z	4.68	73.47	18.76		65.0	
10261-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	7.94	85.32	24.30	3.98	65.0	± 9.6 %
		Y	7.17	83.07	23.45		65.0	
		Z	5.90	80.89	22.01		65.0	
10262-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	6.19	77.72	22.28	3.98	65.0	± 9.6 %
		Y	6.00	76.81	21.93		65.0	
		Z	5.19	75.36	20.81		65.0	
10263-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	5.84	75.30	20.91	3.98	65.0	± 9.6 %
		Y	5.72	74.57	20.63		65.0	
		Z	4.91	73.09	19.44		65.0	
10264-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	8.00	84.72	24.48	3.98	65.0	± 9.6 %
		Y	7.34	82.73	23.71		65.0	
		Z	6.24	81.28	22.84		65.0	
10265-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	5.98	74.73	20.93	3.98	65.0	± 9.6 %
		Y	5.89	74.12	20.69		65.0	
		Z	5.12	72.74	19.78		65.0	
10266-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	6.33	75.56	21.64	3.98	65.0	± 9.6 %
		Y	6.22	74.93	21.40		65.0	
		Z	5.49	73.76	20.60		65.0	
10267-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	7.32	80.56	22.82	3.98	65.0	± 9.6 %
		Y	6.92	79.16	22.26		65.0	
		Z	6.05	78.17	21.72		65.0	
10268-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	6.52	74.24	21.04	3.98	65.0	± 9.6 %
		Y	6.45	73.73	20.85		65.0	
		Z	5.74	72.63	20.16		65.0	
10269-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	6.46	73.71	20.87	3.98	65.0	± 9.6 %
		Y	6.39	73.22	20.69		65.0	
		Z	5.73	72.22	20.02		65.0	
10270-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	6.79	76.82	21.42	3.98	65.0	± 9.6 %
		Y	6.57	75.90	21.04		65.0	
		Z	5.88	75.11	20.59		65.0	

10274-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	2.66	66.98	15.73	0.00	150.0	± 9.6 %
		Y	2.54	65.90	15.04		150.0	
		Z	2.55	67.07	15.35		150.0	
10275-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.78	69.77	16.72	0.00	150.0	± 9.6 %
		Y	1.55	67.13	15.03		150.0	
		Z	1.62	69.04	16.02		150.0	
10277-CAA	PHS (QPSK)	X	2.12	61.97	7.55	9.03	50.0	± 9.6 %
		Y	2.25	62.30	7.96		50.0	
		Z	1.72	60.31	5.78		50.0	
10278-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	10.93	86.19	21.29	9.03	50.0	± 9.6 %
		Y	9.64	84.41	20.95		50.0	
		Z	3.57	69.00	13.15		50.0	
10279-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	11.22	86.49	21.46	9.03	50.0	± 9.6 %
		Y	9.91	84.71	21.11		50.0	
		Z	3.69	69.35	13.38		50.0	
10290-AAB	CDMA2000, RC1, SO55, Full Rate	X	1.95	72.86	16.32	0.00	150.0	± 9.6 %
		Y	1.38	67.46	13.46		150.0	
		Z	1.34	68.81	13.27		150.0	
10291-AAB	CDMA2000, RC3, SO55, Full Rate	X	1.06	69.47	14.79	0.00	150.0	± 9.6 %
		Y	0.76	64.53	11.71		150.0	
		Z	0.76	66.05	11.81		150.0	
10292-AAB	CDMA2000, RC3, SO32, Full Rate	X	1.83	78.35	18.94	0.00	150.0	± 9.6 %
		Y	0.91	67.73	13.68		150.0	
		Z	1.34	73.93	15.68		150.0	
10293-AAB	CDMA2000, RC3, SO3, Full Rate	X	4.73	93.04	24.47	0.00	150.0	± 9.6 %
		Y	1.31	72.72	16.40		150.0	
		Z	6.43	94.81	23.11		150.0	
10295-AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	10.60	89.87	26.40	9.03	50.0	± 9.6 %
		Y	10.25	88.78	26.08		50.0	
		Z	12.25	89.80	24.68		50.0	
10297-AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	2.99	71.06	17.36	0.00	150.0	± 9.6 %
		Y	2.73	69.18	16.24		150.0	
		Z	2.72	70.32	16.96		150.0	
10298-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	1.90	70.47	15.90	0.00	150.0	± 9.6 %
		Y	1.56	67.01	13.91		150.0	
		Z	1.44	67.67	13.50		150.0	
10299-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	3.07	71.64	15.53	0.00	150.0	± 9.6 %
		Y	3.23	72.42	16.33		150.0	
		Z	2.17	67.61	12.32		150.0	
10300-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	2.19	66.26	12.34	0.00	150.0	± 9.6 %
		Y	2.31	66.80	13.02		150.0	
		Z	1.57	63.33	9.50		150.0	
10301-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.82	65.43	17.57	4.17	50.0	± 9.6 %
		Y	4.87	65.32	17.50		50.0	
		Z	4.60	65.72	17.49		50.0	
10302-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	5.31	66.17	18.35	4.96	50.0	± 9.6 %
		Y	5.36	66.00	18.25		50.0	
		Z	5.00	66.00	18.02		50.0	

10303-AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	5.06	65.83	18.21	4.96	50.0	± 9.6 %
		Y	5.11	65.70	18.12		50.0	
		Z	4.75	65.61	17.82		50.0	
10304-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	X	4.87	65.69	17.69	4.17	50.0	± 9.6 %
		Y	4.90	65.47	17.55		50.0	
		Z	4.58	65.56	17.35		50.0	
10305-AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	4.43	67.35	19.83	6.02	35.0	± 9.6 %
		Y	4.56	67.70	19.98		35.0	
		Z	4.15	67.17	19.10		35.0	
10306-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	4.77	66.43	19.36	6.02	35.0	± 9.6 %
		Y	4.86	66.61	19.45		35.0	
		Z	4.49	66.31	18.82		35.0	
10307-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.67	66.65	19.36	6.02	35.0	± 9.6 %
		Y	4.78	66.88	19.46		35.0	
		Z	4.37	66.39	18.75		35.0	
10308-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	4.64	66.81	19.48	6.02	35.0	± 9.6 %
		Y	4.74	67.03	19.58		35.0	
		Z	4.35	66.60	18.90		35.0	
10309-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	4.84	66.72	19.54	6.02	35.0	± 9.6 %
		Y	4.94	66.92	19.63		35.0	
		Z	4.52	66.47	18.95		35.0	
10310-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	4.71	66.49	19.33	6.02	35.0	± 9.6 %
		Y	4.81	66.68	19.42		35.0	
		Z	4.43	66.37	18.80		35.0	
10311-AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	3.36	70.26	16.95	0.00	150.0	± 9.6 %
		Y	3.08	68.46	15.91		150.0	
		Z	3.08	69.51	16.57		150.0	
10313-AAA	IDEN 1:3	X	5.95	81.40	19.48	6.99	70.0	± 9.6 %
		Y	4.30	76.35	17.48		70.0	
		Z	3.21	73.80	16.43		70.0	
10314-AAA	IDEN 1:6	X	12.17	97.07	27.72	10.00	30.0	± 9.6 %
		Y	7.44	87.94	24.60		30.0	
		Z	6.18	85.76	23.72		30.0	
10315-AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	1.10	64.61	16.02	0.17	150.0	± 9.6 %
		Y	1.01	63.21	14.85		150.0	
		Z	1.05	64.14	15.48		150.0	
10316-AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	X	4.65	66.81	16.47	0.17	150.0	± 9.6 %
		Y	4.62	66.42	16.27		150.0	
		Z	4.46	66.78	16.31		150.0	
10317-AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	4.65	66.81	16.47	0.17	150.0	± 9.6 %
		Y	4.62	66.42	16.27		150.0	
		Z	4.46	66.78	16.31		150.0	
10400-AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	X	4.78	67.16	16.44	0.00	150.0	± 9.6 %
		Y	4.74	66.73	16.21		150.0	
		Z	4.55	67.11	16.31		150.0	
10401-AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	5.43	67.23	16.53	0.00	150.0	± 9.6 %
		Y	5.42	66.92	16.38		150.0	
		Z	5.24	67.11	16.40		150.0	

10402-AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.71	67.66	16.59	0.00	150.0	± 9.6 %
		Y	5.70	67.34	16.43		150.0	
		Z	5.52	67.48	16.45		150.0	
10403-AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	1.95	72.86	16.32	0.00	115.0	± 9.6 %
		Y	1.38	67.46	13.46		115.0	
		Z	1.34	68.81	13.27		115.0	
10404-AAB	CDMA2000 (1xEV-DO, Rev. A)	X	1.95	72.86	16.32	0.00	115.0	± 9.6 %
		Y	1.38	67.46	13.46		115.0	
		Z	1.34	68.81	13.27		115.0	
10406-AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	100.00	122.38	30.73	0.00	100.0	± 9.6 %
		Y	81.48	123.67	32.28		100.0	
		Z	100.00	114.83	26.66		100.0	
10410-AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	X	100.00	123.65	31.04	3.23	80.0	± 9.6 %
		Y	100.00	127.30	33.02		80.0	
		Z	100.00	122.18	29.60		80.0	
10415-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	1.02	63.74	15.40	0.00	150.0	± 9.6 %
		Y	0.94	62.36	14.20		150.0	
		Z	0.99	63.49	14.99		150.0	
10416-AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	X	4.59	66.79	16.39	0.00	150.0	± 9.6 %
		Y	4.55	66.36	16.15		150.0	
		Z	4.42	66.82	16.27		150.0	
10417-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.59	66.79	16.39	0.00	150.0	± 9.6 %
		Y	4.55	66.36	16.15		150.0	
		Z	4.42	66.82	16.27		150.0	
10418-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)	X	4.58	66.96	16.41	0.00	150.0	± 9.6 %
		Y	4.54	66.49	16.15		150.0	
		Z	4.42	67.01	16.31		150.0	
10419-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	X	4.61	66.90	16.41	0.00	150.0	± 9.6 %
		Y	4.56	66.45	16.16		150.0	
		Z	4.43	66.95	16.30		150.0	
10422-AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.73	66.90	16.41	0.00	150.0	± 9.6 %
		Y	4.69	66.47	16.18		150.0	
		Z	4.54	66.92	16.31		150.0	
10423-AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.91	67.24	16.54	0.00	150.0	± 9.6 %
		Y	4.87	66.82	16.31		150.0	
		Z	4.68	67.21	16.40		150.0	
10424-AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	4.82	67.19	16.51	0.00	150.0	± 9.6 %
		Y	4.79	66.76	16.28		150.0	
		Z	4.61	67.16	16.38		150.0	
10425-AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.41	67.47	16.65	0.00	150.0	± 9.6 %
		Y	5.40	67.17	16.50		150.0	
		Z	5.21	67.35	16.53		150.0	
10426-AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	5.41	67.47	16.65	0.00	150.0	± 9.6 %
		Y	5.40	67.19	16.50		150.0	
		Z	5.23	67.42	16.56		150.0	

10427-AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	5.42	67.47	16.64	0.00	150.0	± 9.6 %
		Y	5.41	67.16	16.48		150.0	
		Z	5.22	67.32	16.51		150.0	
10430-AAC	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.40	71.17	18.58	0.00	150.0	± 9.6 %
		Y	4.23	70.08	17.99		150.0	
		Z	4.30	72.10	18.56		150.0	
10431-AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	4.31	67.42	16.46	0.00	150.0	± 9.6 %
		Y	4.26	66.88	16.15		150.0	
		Z	4.07	67.45	16.24		150.0	
10432-AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	4.60	67.26	16.49	0.00	150.0	± 9.6 %
		Y	4.56	66.79	16.22		150.0	
		Z	4.38	67.26	16.33		150.0	
10433-AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.84	67.23	16.53	0.00	150.0	± 9.6 %
		Y	4.80	66.80	16.30		150.0	
		Z	4.63	67.20	16.40		150.0	
10434-AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	4.54	72.17	18.64	0.00	150.0	± 9.6 %
		Y	4.31	70.81	17.94		150.0	
		Z	4.47	73.20	18.53		150.0	
10435-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	123.43	30.93	3.23	80.0	± 9.6 %
		Y	100.00	127.09	32.93		80.0	
		Z	100.00	121.88	29.46		80.0	
10447-AAC	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.63	67.60	15.97	0.00	150.0	± 9.6 %
		Y	3.55	66.82	15.51		150.0	
		Z	3.36	67.49	15.39		150.0	
10448-AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	4.14	67.21	16.33	0.00	150.0	± 9.6 %
		Y	4.08	66.64	16.00		150.0	
		Z	3.93	67.24	16.11		150.0	
10449-AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	4.40	67.10	16.39	0.00	150.0	± 9.6 %
		Y	4.35	66.60	16.11		150.0	
		Z	4.21	67.10	16.24		150.0	
10450-AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.59	67.00	16.40	0.00	150.0	± 9.6 %
		Y	4.54	66.54	16.14		150.0	
		Z	4.41	66.98	16.27		150.0	
10451-AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	3.56	67.91	15.68	0.00	150.0	± 9.6 %
		Y	3.45	67.01	15.16		150.0	
		Z	3.21	67.51	14.85		150.0	
10456-AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	X	6.26	68.01	16.78	0.00	150.0	± 9.6 %
		Y	6.26	67.75	16.66		150.0	
		Z	6.13	67.97	16.72		150.0	
10457-AAA	UMTS-FDD (DC-HSDPA)	X	3.81	65.42	16.11	0.00	150.0	± 9.6 %
		Y	3.77	64.98	15.86		150.0	
		Z	3.73	65.50	15.98		150.0	
10458-AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	4.16	71.37	18.08	0.00	150.0	± 9.6 %
		Y	3.92	69.91	17.32		150.0	
		Z	4.02	72.11	17.63		150.0	
10459-AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	5.19	68.40	18.36	0.00	150.0	± 9.6 %
		Y	5.10	67.75	18.06		150.0	
		Z	5.01	69.18	18.25		150.0	

10460-AAA	UMTS-FDD (WCDMA, AMR)	X	1.07	72.05	18.39	0.00	150.0	± 9.6 %
		Y	0.81	67.05	15.17		150.0	
		Z	0.95	70.49	17.24		150.0	
10461-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	129.11	33.59	3.29	80.0	± 9.6 %
		Y	100.00	132.68	35.56		80.0	
		Z	100.00	128.17	32.38		80.0	
10462-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	29.76	94.39	20.32	3.23	80.0	± 9.6 %
		Y	100.00	112.07	25.94		80.0	
		Z	0.79	60.49	7.76		80.0	
10463-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.50	68.97	12.20	3.23	80.0	± 9.6 %
		Y	100.00	107.58	23.85		80.0	
		Z	0.77	60.00	6.89		80.0	
10464-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.29	32.12	3.23	80.0	± 9.6 %
		Y	100.00	130.29	34.26		80.0	
		Z	100.00	124.25	30.42		80.0	
10465-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	9.13	82.53	17.12	3.23	80.0	± 9.6 %
		Y	100.00	111.30	25.58		80.0	
		Z	0.75	60.00	7.44		80.0	
10466-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.98	66.71	11.27	3.23	80.0	± 9.6 %
		Y	99.88	106.88	23.53		80.0	
		Z	0.78	60.00	6.83		80.0	
10467-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.60	32.25	3.23	80.0	± 9.6 %
		Y	100.00	130.59	34.40		80.0	
		Z	100.00	124.67	30.60		80.0	
10468-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	11.66	85.00	17.83	3.23	80.0	± 9.6 %
		Y	100.00	111.53	25.68		80.0	
		Z	0.75	60.09	7.51		80.0	
10469-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.98	66.75	11.28	3.23	80.0	± 9.6 %
		Y	100.00	106.90	23.54		80.0	
		Z	0.77	60.00	6.83		80.0	
10470-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.64	32.26	3.23	80.0	± 9.6 %
		Y	100.00	130.65	34.41		80.0	
		Z	100.00	124.69	30.60		80.0	
10471-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	11.32	84.67	17.72	3.23	80.0	± 9.6 %
		Y	100.00	111.46	25.64		80.0	
		Z	0.75	60.04	7.47		80.0	
10472-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.96	66.63	11.22	3.23	80.0	± 9.6 %
		Y	100.00	106.82	23.49		80.0	
		Z	0.77	60.00	6.81		80.0	
10473-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.60	32.24	3.23	80.0	± 9.6 %
		Y	100.00	130.61	34.39		80.0	
		Z	100.00	124.64	30.58		80.0	
10474-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	11.06	84.45	17.66	3.23	80.0	± 9.6 %
		Y	100.00	111.47	25.64		80.0	
		Z	0.74	60.02	7.45		80.0	
10475-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.95	66.59	11.20	3.23	80.0	± 9.6 %
		Y	99.99	106.84	23.50		80.0	
		Z	0.77	60.00	6.81		80.0	

10477-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	9.10	82.47	17.07	3.23	80.0	± 9.6 %
		Y	100.00	111.24	25.54		80.0	
		Z	0.74	60.00	7.42		80.0	
10478-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.93	66.47	11.14	3.23	80.0	± 9.6 %
		Y	96.81	106.44	23.40		80.0	
		Z	0.77	60.00	6.80		80.0	
10479-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	9.68	90.97	25.10	3.23	80.0	± 9.6 %
		Y	13.83	97.37	27.65		80.0	
		Z	12.23	94.71	25.17		80.0	
10480-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	11.91	88.02	22.17	3.23	80.0	± 9.6 %
		Y	19.25	95.65	25.10		80.0	
		Z	7.50	81.30	18.54		80.0	
10481-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	9.15	83.59	20.38	3.23	80.0	± 9.6 %
		Y	15.12	91.18	23.39		80.0	
		Z	4.40	74.24	15.71		80.0	
10482-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.76	79.70	20.44	2.23	80.0	± 9.6 %
		Y	3.53	74.74	18.45		80.0	
		Z	2.62	71.60	16.13		80.0	
10483-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	5.87	78.17	19.16	2.23	80.0	± 9.6 %
		Y	8.24	83.44	21.55		80.0	
		Z	2.93	69.04	14.15		80.0	
10484-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	5.35	76.61	18.60	2.23	80.0	± 9.6 %
		Y	7.24	81.28	20.83		80.0	
		Z	2.73	67.94	13.69		80.0	
10485-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.47	78.87	21.04	2.23	80.0	± 9.6 %
		Y	3.68	75.23	19.49		80.0	
		Z	3.15	74.27	18.50		80.0	
10486-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.79	72.50	18.04	2.23	80.0	± 9.6 %
		Y	3.38	70.29	17.05		80.0	
		Z	2.84	69.02	15.57		80.0	
10487-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.74	71.89	17.77	2.23	80.0	± 9.6 %
		Y	3.37	69.86	16.85		80.0	
		Z	2.81	68.50	15.32		80.0	
10488-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.24	75.86	20.43	2.23	80.0	± 9.6 %
		Y	3.83	73.65	19.40		80.0	
		Z	3.28	72.72	18.85		80.0	
10489-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.72	70.49	18.27	2.23	80.0	± 9.6 %
		Y	3.53	69.26	17.66		80.0	
		Z	3.19	68.97	17.14		80.0	
10490-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.79	70.18	18.14	2.23	80.0	± 9.6 %
		Y	3.62	69.04	17.58		80.0	
		Z	3.27	68.77	17.05		80.0	
10491-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.23	73.19	19.42	2.23	80.0	± 9.6 %
		Y	3.95	71.65	18.67		80.0	
		Z	3.47	70.90	18.25		80.0	
10492-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.97	69.24	17.95	2.23	80.0	± 9.6 %
		Y	3.85	68.36	17.51		80.0	
		Z	3.50	68.04	17.11		80.0	

10493-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.03	69.04	17.87	2.23	80.0	± 9.6 %
		Y	3.92	68.21	17.46		80.0	
		Z	3.56	67.90	17.04		80.0	
10494-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.79	75.46	20.14	2.23	80.0	± 9.6 %
		Y	4.38	73.53	19.24		80.0	
		Z	3.78	72.48	18.78		80.0	
10495-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.03	69.76	18.19	2.23	80.0	± 9.6 %
		Y	3.90	68.85	17.73		80.0	
		Z	3.53	68.35	17.31		80.0	
10496-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.08	69.35	18.04	2.23	80.0	± 9.6 %
		Y	3.97	68.51	17.62		80.0	
		Z	3.60	68.09	17.22		80.0	
10497-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.72	75.87	18.08	2.23	80.0	± 9.6 %
		Y	2.64	70.76	15.98		80.0	
		Z	1.51	64.60	11.77		80.0	
10498-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.30	66.27	12.99	2.23	80.0	± 9.6 %
		Y	2.02	64.31	12.06		80.0	
		Z	1.20	60.00	8.21		80.0	
10499-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.18	65.35	12.41	2.23	80.0	± 9.6 %
		Y	1.97	63.70	11.62		80.0	
		Z	1.22	60.00	8.05		80.0	
10500-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.19	76.87	20.53	2.23	80.0	± 9.6 %
		Y	3.63	74.04	19.27		80.0	
		Z	3.15	73.35	18.54		80.0	
10501-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.74	71.57	18.07	2.23	80.0	± 9.6 %
		Y	3.44	69.83	17.26		80.0	
		Z	3.03	69.25	16.29		80.0	
10502-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.79	71.34	17.92	2.23	80.0	± 9.6 %
		Y	3.50	69.66	17.14		80.0	
		Z	3.07	69.05	16.12		80.0	
10503-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.18	75.62	20.32	2.23	80.0	± 9.6 %
		Y	3.77	73.43	19.30		80.0	
		Z	3.23	72.50	18.74		80.0	
10504-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.70	70.40	18.21	2.23	80.0	± 9.6 %
		Y	3.52	69.18	17.61		80.0	
		Z	3.17	68.86	17.07		80.0	
10505-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.77	70.08	18.09	2.23	80.0	± 9.6 %
		Y	3.60	68.95	17.53		80.0	
		Z	3.25	68.67	16.99		80.0	
10506-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.74	75.29	20.06	2.23	80.0	± 9.6 %
		Y	4.34	73.37	19.17		80.0	
		Z	3.74	72.32	18.70		80.0	
10507-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.01	69.69	18.15	2.23	80.0	± 9.6 %
		Y	3.88	68.79	17.69		80.0	
		Z	3.51	68.29	17.27		80.0	

10508-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.07	69.28	18.00	2.23	80.0	± 9.6 %
		Y	3.96	68.45	17.58		80.0	
		Z	3.59	68.02	17.17		80.0	
10509-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.87	73.12	19.15	2.23	80.0	± 9.6 %
		Y	4.57	71.69	18.46		80.0	
		Z	4.08	70.95	18.12		80.0	
10510-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.46	69.19	17.97	2.23	80.0	± 9.6 %
		Y	4.36	68.46	17.61		80.0	
		Z	3.98	67.93	17.23		80.0	
10511-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.49	68.83	17.85	2.23	80.0	± 9.6 %
		Y	4.40	68.15	17.52		80.0	
		Z	4.03	67.70	17.16		80.0	
10512-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	5.35	75.53	19.95	2.23	80.0	± 9.6 %
		Y	4.89	73.64	19.09		80.0	
		Z	4.27	72.56	18.64		80.0	
10513-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.37	69.62	18.15	2.23	80.0	± 9.6 %
		Y	4.26	68.83	17.75		80.0	
		Z	3.86	68.15	17.33		80.0	
10514-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.36	69.04	17.95	2.23	80.0	± 9.6 %
		Y	4.26	68.32	17.60		80.0	
		Z	3.89	67.75	17.20		80.0	
10515-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	0.98	64.01	15.52	0.00	150.0	± 9.6 %
		Y	0.90	62.52	14.23		150.0	
		Z	0.95	63.71	15.08		150.0	
10516-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	0.96	80.43	22.24	0.00	150.0	± 9.6 %
		Y	0.52	69.16	15.73		150.0	
		Z	0.74	75.71	19.80		150.0	
10517-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.87	66.95	16.73	0.00	150.0	± 9.6 %
		Y	0.75	64.30	14.64		150.0	
		Z	0.81	66.10	15.98		150.0	
10518-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.59	66.88	16.37	0.00	150.0	± 9.6 %
		Y	4.55	66.43	16.12		150.0	
		Z	4.41	66.91	16.25		150.0	
10519-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	4.79	67.13	16.49	0.00	150.0	± 9.6 %
		Y	4.75	66.71	16.26		150.0	
		Z	4.57	67.10	16.35		150.0	
10520-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.64	67.11	16.43	0.00	150.0	± 9.6 %
		Y	4.60	66.67	16.18		150.0	
		Z	4.43	67.05	16.27		150.0	
10521-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	4.57	67.12	16.42	0.00	150.0	± 9.6 %
		Y	4.53	66.66	16.16		150.0	
		Z	4.36	67.04	16.26		150.0	
10522-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	4.63	67.16	16.48	0.00	150.0	± 9.6 %
		Y	4.59	66.70	16.22		150.0	
		Z	4.42	67.17	16.36		150.0	

10523-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	4.51	67.05	16.34	0.00	150.0	± 9.6 %
		Y	4.46	66.56	16.06		150.0	
		Z	4.33	67.10	16.24		150.0	
10524-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.58	67.09	16.46	0.00	150.0	± 9.6 %
		Y	4.53	66.64	16.20		150.0	
		Z	4.37	67.10	16.33		150.0	
10525-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	4.55	66.14	16.05	0.00	150.0	± 9.6 %
		Y	4.50	65.66	15.78		150.0	
		Z	4.38	66.18	15.95		150.0	
10526-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.74	66.53	16.19	0.00	150.0	± 9.6 %
		Y	4.69	66.05	15.93		150.0	
		Z	4.52	66.50	16.07		150.0	
10527-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.66	66.50	16.15	0.00	150.0	± 9.6 %
		Y	4.61	66.01	15.87		150.0	
		Z	4.45	66.47	16.02		150.0	
10528-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	4.67	66.52	16.18	0.00	150.0	± 9.6 %
		Y	4.62	66.03	15.91		150.0	
		Z	4.47	66.48	16.05		150.0	
10529-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.67	66.52	16.18	0.00	150.0	± 9.6 %
		Y	4.62	66.03	15.91		150.0	
		Z	4.47	66.48	16.05		150.0	
10531-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.67	66.65	16.20	0.00	150.0	± 9.6 %
		Y	4.63	66.16	15.93		150.0	
		Z	4.44	66.54	16.04		150.0	
10532-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	X	4.53	66.51	16.14	0.00	150.0	± 9.6 %
		Y	4.48	66.01	15.86		150.0	
		Z	4.32	66.41	15.98		150.0	
10533-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	4.68	66.56	16.16	0.00	150.0	± 9.6 %
		Y	4.63	66.06	15.89		150.0	
		Z	4.48	66.56	16.05		150.0	
10534-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	5.19	66.60	16.20	0.00	150.0	± 9.6 %
		Y	5.16	66.20	15.99		150.0	
		Z	5.01	66.50	16.09		150.0	
10535-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	5.26	66.75	16.27	0.00	150.0	± 9.6 %
		Y	5.22	66.35	16.06		150.0	
		Z	5.06	66.65	16.16		150.0	
10536-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	5.13	66.73	16.24	0.00	150.0	± 9.6 %
		Y	5.09	66.32	16.02		150.0	
		Z	4.95	66.64	16.13		150.0	
10537-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	5.19	66.69	16.22	0.00	150.0	± 9.6 %
		Y	5.15	66.30	16.01		150.0	
		Z	5.00	66.59	16.11		150.0	
10538-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	5.28	66.73	16.28	0.00	150.0	± 9.6 %
		Y	5.26	66.36	16.08		150.0	
		Z	5.08	66.58	16.14		150.0	
10540-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	5.21	66.72	16.29	0.00	150.0	± 9.6 %
		Y	5.17	66.33	16.08		150.0	
		Z	5.01	66.56	16.15		150.0	

10541-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	5.18	66.60	16.22	0.00	150.0	± 9.6 %
		Y	5.14	66.20	16.01		150.0	
		Z	4.99	66.47	16.09		150.0	
10542-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	5.33	66.65	16.26	0.00	150.0	± 9.6 %
		Y	5.31	66.28	16.07		150.0	
		Z	5.14	66.55	16.15		150.0	
10543-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.41	66.68	16.29	0.00	150.0	± 9.6 %
		Y	5.39	66.31	16.11		150.0	
		Z	5.20	66.56	16.18		150.0	
10544-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	5.49	66.70	16.18	0.00	150.0	± 9.6 %
		Y	5.45	66.31	15.98		150.0	
		Z	5.34	66.58	16.07		150.0	
10545-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.68	67.09	16.32	0.00	150.0	± 9.6 %
		Y	5.66	66.76	16.15		150.0	
		Z	5.51	66.98	16.23		150.0	
10546-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.57	66.94	16.26	0.00	150.0	± 9.6 %
		Y	5.54	66.57	16.08		150.0	
		Z	5.38	66.73	16.11		150.0	
10547-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	5.64	66.98	16.27	0.00	150.0	± 9.6 %
		Y	5.63	66.66	16.11		150.0	
		Z	5.45	66.79	16.14		150.0	
10548-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	5.90	67.92	16.71	0.00	150.0	± 9.6 %
		Y	5.97	67.87	16.68		150.0	
		Z	5.63	67.50	16.47		150.0	
10550-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.59	66.92	16.26	0.00	150.0	± 9.6 %
		Y	5.55	66.54	16.07		150.0	
		Z	5.42	66.82	16.17		150.0	
10551-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.60	66.98	16.25	0.00	150.0	± 9.6 %
		Y	5.56	66.60	16.06		150.0	
		Z	5.40	66.75	16.10		150.0	
10552-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	5.51	66.77	16.16	0.00	150.0	± 9.6 %
		Y	5.47	66.37	15.96		150.0	
		Z	5.35	66.67	16.06		150.0	
10553-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.60	66.81	16.21	0.00	150.0	± 9.6 %
		Y	5.56	66.43	16.01		150.0	
		Z	5.41	66.65	16.08		150.0	
10554-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.89	67.05	16.26	0.00	150.0	± 9.6 %
		Y	5.86	66.69	16.08		150.0	
		Z	5.75	66.91	16.14		150.0	
10555-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	6.02	67.35	16.38	0.00	150.0	± 9.6 %
		Y	6.00	67.02	16.22		150.0	
		Z	5.86	67.17	16.25		150.0	
10556-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	6.04	67.39	16.40	0.00	150.0	± 9.6 %
		Y	6.02	67.06	16.23		150.0	
		Z	5.88	67.24	16.28		150.0	
10557-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	6.01	67.32	16.38	0.00	150.0	± 9.6 %
		Y	5.99	66.98	16.22		150.0	
		Z	5.85	67.13	16.24		150.0	

10558-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	6.07	67.49	16.48	0.00	150.0	± 9.6 %
		Y	6.05	67.17	16.33		150.0	
		Z	5.88	67.26	16.33		150.0	
10560-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	6.06	67.34	16.44	0.00	150.0	± 9.6 %
		Y	6.04	66.99	16.28		150.0	
		Z	5.88	67.13	16.30		150.0	
10561-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	5.98	67.30	16.46	0.00	150.0	± 9.6 %
		Y	5.96	66.96	16.30		150.0	
		Z	5.81	67.11	16.32		150.0	
10562-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	6.11	67.72	16.67	0.00	150.0	± 9.6 %
		Y	6.12	67.46	16.55		150.0	
		Z	5.89	67.37	16.45		150.0	
10563-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	6.43	68.23	16.87	0.00	150.0	± 9.6 %
		Y	6.50	68.16	16.85		150.0	
		Z	5.96	67.23	16.35		150.0	
10564-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	X	4.91	66.93	16.51	0.46	150.0	± 9.6 %
		Y	4.88	66.54	16.31		150.0	
		Z	4.73	66.93	16.37		150.0	
10565-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	X	5.16	67.40	16.83	0.46	150.0	± 9.6 %
		Y	5.13	67.02	16.64		150.0	
		Z	4.93	67.35	16.69		150.0	
10566-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	X	4.99	67.26	16.66	0.46	150.0	± 9.6 %
		Y	4.96	66.87	16.45		150.0	
		Z	4.77	67.18	16.50		150.0	
10567-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	X	5.02	67.67	17.02	0.46	150.0	± 9.6 %
		Y	4.98	67.25	16.79		150.0	
		Z	4.81	67.60	16.88		150.0	
10568-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	X	4.90	67.00	16.42	0.46	150.0	± 9.6 %
		Y	4.87	66.62	16.22		150.0	
		Z	4.67	66.94	16.26		150.0	
10569-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	X	4.97	67.73	17.07	0.46	150.0	± 9.6 %
		Y	4.93	67.29	16.83		150.0	
		Z	4.78	67.78	16.99		150.0	
10570-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	X	5.01	67.57	17.00	0.46	150.0	± 9.6 %
		Y	4.97	67.15	16.77		150.0	
		Z	4.80	67.57	16.89		150.0	
10571-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	1.17	65.22	16.39	0.46	130.0	± 9.6 %
		Y	1.09	63.89	15.30		130.0	
		Z	1.10	64.48	15.68		130.0	
10572-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.19	65.91	16.81	0.46	130.0	± 9.6 %
		Y	1.10	64.45	15.65		130.0	
		Z	1.12	65.08	16.07		130.0	
10573-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	11.95	118.97	33.95	0.46	130.0	± 9.6 %
		Y	2.10	86.50	22.92		130.0	
		Z	2.78	93.83	26.37		130.0	
10574-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	1.42	73.69	20.72	0.46	130.0	± 9.6 %
		Y	1.20	70.19	18.52		130.0	
		Z	1.24	71.54	19.44		130.0	

10575-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	X	4.69	66.71	16.57	0.46	130.0	± 9.6 %
		Y	4.67	66.34	16.38		130.0	
		Z	4.50	66.68	16.40		130.0	
10576-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	X	4.72	66.88	16.64	0.46	130.0	± 9.6 %
		Y	4.69	66.50	16.44		130.0	
		Z	4.53	66.88	16.48		130.0	
10577-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	X	4.94	67.20	16.81	0.46	130.0	± 9.6 %
		Y	4.91	66.83	16.62		130.0	
		Z	4.71	67.13	16.63		130.0	
10578-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	X	4.83	67.37	16.92	0.46	130.0	± 9.6 %
		Y	4.81	66.98	16.72		130.0	
		Z	4.61	67.29	16.74		130.0	
10579-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	X	4.60	66.66	16.24	0.46	130.0	± 9.6 %
		Y	4.57	66.30	16.05		130.0	
		Z	4.37	66.49	16.00		130.0	
10580-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	X	4.64	66.67	16.25	0.46	130.0	± 9.6 %
		Y	4.62	66.31	16.06		130.0	
		Z	4.41	66.55	16.03		130.0	
10581-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	X	4.73	67.42	16.87	0.46	130.0	± 9.6 %
		Y	4.70	67.02	16.65		130.0	
		Z	4.52	67.36	16.71		130.0	
10582-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	X	4.54	66.41	16.03	0.46	130.0	± 9.6 %
		Y	4.53	66.07	15.85		130.0	
		Z	4.30	66.25	15.78		130.0	
10583-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	4.69	66.71	16.57	0.46	130.0	± 9.6 %
		Y	4.67	66.34	16.38		130.0	
		Z	4.50	66.68	16.40		130.0	
10584-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	4.72	66.88	16.64	0.46	130.0	± 9.6 %
		Y	4.69	66.50	16.44		130.0	
		Z	4.53	66.88	16.48		130.0	
10585-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	4.94	67.20	16.81	0.46	130.0	± 9.6 %
		Y	4.91	66.83	16.62		130.0	
		Z	4.71	67.13	16.63		130.0	
10586-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	4.83	67.37	16.92	0.46	130.0	± 9.6 %
		Y	4.81	66.98	16.72		130.0	
		Z	4.61	67.29	16.74		130.0	
10587-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	4.60	66.66	16.24	0.46	130.0	± 9.6 %
		Y	4.57	66.30	16.05		130.0	
		Z	4.37	66.49	16.00		130.0	
10588-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	4.64	66.67	16.25	0.46	130.0	± 9.6 %
		Y	4.62	66.31	16.06		130.0	
		Z	4.41	66.55	16.03		130.0	
10589-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	4.73	67.42	16.87	0.46	130.0	± 9.6 %
		Y	4.70	67.02	16.65		130.0	
		Z	4.52	67.36	16.71		130.0	
10590-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	4.54	66.41	16.03	0.46	130.0	± 9.6 %
		Y	4.53	66.07	15.85		130.0	
		Z	4.30	66.25	15.78		130.0	

10591-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	X	4.84	66.77	16.66	0.46	130.0	± 9.6 %
		Y	4.82	66.41	16.48		130.0	
		Z	4.66	66.76	16.51		130.0	
10592-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	X	5.01	67.12	16.79	0.46	130.0	± 9.6 %
		Y	4.99	66.76	16.61		130.0	
		Z	4.79	67.07	16.64		130.0	
10593-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	X	4.93	67.04	16.68	0.46	130.0	± 9.6 %
		Y	4.91	66.69	16.51		130.0	
		Z	4.71	66.95	16.50		130.0	
10594-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	4.98	67.20	16.83	0.46	130.0	± 9.6 %
		Y	4.96	66.84	16.65		130.0	
		Z	4.76	67.13	16.67		130.0	
10595-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	X	4.95	67.16	16.73	0.46	130.0	± 9.6 %
		Y	4.93	66.80	16.55		130.0	
		Z	4.73	67.10	16.57		130.0	
10596-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	X	4.89	67.16	16.74	0.46	130.0	± 9.6 %
		Y	4.87	66.79	16.55		130.0	
		Z	4.66	67.08	16.56		130.0	
10597-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	X	4.84	67.08	16.63	0.46	130.0	± 9.6 %
		Y	4.82	66.71	16.44		130.0	
		Z	4.61	66.96	16.43		130.0	
10598-AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.82	67.33	16.90	0.46	130.0	± 9.6 %
		Y	4.80	66.95	16.70		130.0	
		Z	4.60	67.20	16.70		130.0	
10599-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	5.51	67.30	16.83	0.46	130.0	± 9.6 %
		Y	5.50	67.04	16.72		130.0	
		Z	5.31	67.18	16.69		130.0	
10600-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	X	5.66	67.75	17.03	0.46	130.0	± 9.6 %
		Y	5.70	67.66	17.00		130.0	
		Z	5.42	67.55	16.85		130.0	
10601-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	X	5.54	67.49	16.91	0.46	130.0	± 9.6 %
		Y	5.55	67.29	16.83		130.0	
		Z	5.33	67.34	16.76		130.0	
10602-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	5.62	67.47	16.82	0.46	130.0	± 9.6 %
		Y	5.64	67.27	16.74		130.0	
		Z	5.46	67.51	16.77		130.0	
10603-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	5.72	67.83	17.13	0.46	130.0	± 9.6 %
		Y	5.72	67.56	17.01		130.0	
		Z	5.53	67.80	17.05		130.0	
10604-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	5.51	67.26	16.84	0.46	130.0	± 9.6 %
		Y	5.51	67.00	16.72		130.0	
		Z	5.40	67.44	16.85		130.0	
10605-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	X	5.62	67.58	16.99	0.46	130.0	± 9.6 %
		Y	5.63	67.37	16.91		130.0	
		Z	5.43	67.48	16.86		130.0	
10606-AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	X	5.39	67.04	16.59	0.46	130.0	± 9.6 %
		Y	5.38	66.75	16.46		130.0	
		Z	5.18	66.82	16.39		130.0	

10607-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	X	4.69	66.11	16.30	0.46	130.0	± 9.6 %
		Y	4.65	65.70	16.09		130.0	
		Z	4.51	66.12	16.16		130.0	
10608-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.89	66.54	16.47	0.46	130.0	± 9.6 %
		Y	4.86	66.13	16.26		130.0	
		Z	4.67	66.48	16.32		130.0	
10609-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X	4.78	66.40	16.32	0.46	130.0	± 9.6 %
		Y	4.74	65.99	16.10		130.0	
		Z	4.56	66.32	16.14		130.0	
10610-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	X	4.83	66.56	16.48	0.46	130.0	± 9.6 %
		Y	4.80	66.15	16.27		130.0	
		Z	4.61	66.49	16.31		130.0	
10611-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	X	4.74	66.37	16.33	0.46	130.0	± 9.6 %
		Y	4.71	65.96	16.12		130.0	
		Z	4.52	66.28	16.15		130.0	
10612-AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	X	4.76	66.53	16.38	0.46	130.0	± 9.6 %
		Y	4.73	66.12	16.16		130.0	
		Z	4.52	66.43	16.20		130.0	
10613-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	4.76	66.43	16.27	0.46	130.0	± 9.6 %
		Y	4.74	66.03	16.06		130.0	
		Z	4.52	66.26	16.05		130.0	
10614-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	4.70	66.62	16.50	0.46	130.0	± 9.6 %
		Y	4.67	66.19	16.28		130.0	
		Z	4.48	66.49	16.31		130.0	
10615-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.74	66.19	16.10	0.46	130.0	± 9.6 %
		Y	4.72	65.79	15.90		130.0	
		Z	4.52	66.11	15.92		130.0	
10616-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	5.34	66.61	16.47	0.46	130.0	± 9.6 %
		Y	5.32	66.28	16.32		130.0	
		Z	5.14	66.47	16.32		130.0	
10617-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	5.40	66.74	16.51	0.46	130.0	± 9.6 %
		Y	5.38	66.41	16.35		130.0	
		Z	5.21	66.65	16.39		130.0	
10618-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	5.29	66.79	16.56	0.46	130.0	± 9.6 %
		Y	5.27	66.46	16.39		130.0	
		Z	5.11	66.70	16.43		130.0	
10619-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	X	5.31	66.61	16.40	0.46	130.0	± 9.6 %
		Y	5.30	66.30	16.25		130.0	
		Z	5.11	66.46	16.24		130.0	
10620-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	5.41	66.67	16.47	0.46	130.0	± 9.6 %
		Y	5.41	66.38	16.34		130.0	
		Z	5.19	66.48	16.30		130.0	
10621-AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.40	66.76	16.64	0.46	130.0	± 9.6 %
		Y	5.38	66.43	16.48		130.0	
		Z	5.21	66.64	16.50		130.0	
10622-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	X	5.41	66.91	16.70	0.46	130.0	± 9.6 %
		Y	5.39	66.60	16.55		130.0	
		Z	5.20	66.74	16.55		130.0	

10623-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	5.29	66.45	16.36	0.46	130.0	± 9.6 %
		Y	5.27	66.12	16.20		130.0	
		Z	5.08	66.28	16.19		130.0	
10624-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	5.48	66.64	16.51	0.46	130.0	± 9.6 %
		Y	5.47	66.35	16.38		130.0	
		Z	5.28	66.51	16.36		130.0	
10625-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	X	5.87	67.67	17.07	0.46	130.0	± 9.6 %
		Y	5.92	67.56	17.03		130.0	
		Z	5.48	66.99	16.66		130.0	
10626-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	X	5.62	66.65	16.41	0.46	130.0	± 9.6 %
		Y	5.59	66.32	16.26		130.0	
		Z	5.46	66.52	16.28		130.0	
10627-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	5.86	67.19	16.64	0.46	130.0	± 9.6 %
		Y	5.87	66.96	16.54		130.0	
		Z	5.68	67.07	16.52		130.0	
10628-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	5.67	66.78	16.37	0.46	130.0	± 9.6 %
		Y	5.65	66.49	16.24		130.0	
		Z	5.47	66.52	16.18		130.0	
10629-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	5.76	66.87	16.41	0.46	130.0	± 9.6 %
		Y	5.74	66.55	16.26		130.0	
		Z	5.55	66.62	16.22		130.0	
10630-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	6.21	68.41	17.17	0.46	130.0	± 9.6 %
		Y	6.36	68.57	17.26		130.0	
		Z	5.84	67.72	16.78		130.0	
10631-AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	6.11	68.22	17.27	0.46	130.0	± 9.6 %
		Y	6.15	68.07	17.21		130.0	
		Z	5.81	67.73	16.97		130.0	
10632-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	5.83	67.26	16.81	0.46	130.0	± 9.6 %
		Y	5.82	66.98	16.68		130.0	
		Z	5.67	67.19	16.73		130.0	
10633-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	X	5.73	66.95	16.48	0.46	130.0	± 9.6 %
		Y	5.72	66.66	16.35		130.0	
		Z	5.54	66.74	16.32		130.0	
10634-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	5.72	66.98	16.56	0.46	130.0	± 9.6 %
		Y	5.70	66.65	16.41		130.0	
		Z	5.52	66.78	16.40		130.0	
10635-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	5.60	66.32	15.97	0.46	130.0	± 9.6 %
		Y	5.59	66.03	15.84		130.0	
		Z	5.39	66.04	15.76		130.0	
10636-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	6.03	67.02	16.50	0.46	130.0	± 9.6 %
		Y	6.02	66.74	16.37		130.0	
		Z	5.89	66.87	16.36		130.0	
10637-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	6.19	67.40	16.66	0.46	130.0	± 9.6 %
		Y	6.19	67.15	16.56		130.0	
		Z	6.02	67.21	16.51		130.0	
10638-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	X	6.19	67.38	16.63	0.46	130.0	± 9.6 %
		Y	6.19	67.12	16.52		130.0	
		Z	6.03	67.21	16.49		130.0	

10639-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	X	6.18	67.36	16.66	0.46	130.0	± 9.6 %
		Y	6.17	67.09	16.55		130.0	
		Z	6.00	67.13	16.50		130.0	
10640-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	X	6.19	67.39	16.62	0.46	130.0	± 9.6 %
		Y	6.20	67.16	16.53		130.0	
		Z	5.99	67.11	16.43		130.0	
10641-AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	6.21	67.22	16.56	0.46	130.0	± 9.6 %
		Y	6.20	66.94	16.44		130.0	
		Z	6.05	67.08	16.43		130.0	
10642-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	6.27	67.52	16.87	0.46	130.0	± 9.6 %
		Y	6.26	67.23	16.75		130.0	
		Z	6.09	67.31	16.72		130.0	
10643-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	6.10	67.19	16.61	0.46	130.0	± 9.6 %
		Y	6.09	66.93	16.50		130.0	
		Z	5.93	67.00	16.46		130.0	
10644-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	6.29	67.77	16.92	0.46	130.0	± 9.6 %
		Y	6.32	67.61	16.86		130.0	
		Z	6.02	67.30	16.63		130.0	
10645-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	X	6.72	68.61	17.29	0.46	130.0	± 9.6 %
		Y	6.81	68.60	17.31		130.0	
		Z	6.13	67.29	16.58		130.0	
10646-AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	26.22	119.06	40.53	9.30	60.0	± 9.6 %
		Y	23.98	116.77	40.23		60.0	
		Z	13.39	105.96	36.68		60.0	
10647-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	21.91	115.56	39.67	9.30	60.0	± 9.6 %
		Y	20.79	114.08	39.59		60.0	
		Z	11.12	102.25	35.63		60.0	
10648-AAA	CDMA2000 (1x Advanced)	X	0.80	65.60	12.34	0.00	150.0	± 9.6 %
		Y	0.65	62.69	10.17		150.0	
		Z	0.58	62.96	9.61		150.0	
10652-AAC	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.70	67.38	17.08	2.23	80.0	± 9.6 %
		Y	3.59	66.56	16.66		80.0	
		Z	3.39	66.83	16.41		80.0	
10653-AAC	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	4.17	66.50	17.03	2.23	80.0	± 9.6 %
		Y	4.11	65.95	16.76		80.0	
		Z	3.90	66.02	16.55		80.0	
10654-AAC	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	4.13	66.12	17.00	2.23	80.0	± 9.6 %
		Y	4.07	65.60	16.75		80.0	
		Z	3.90	65.62	16.55		80.0	
10655-AAD	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.19	66.12	17.04	2.23	80.0	± 9.6 %
		Y	4.13	65.62	16.79		80.0	
		Z	3.96	65.57	16.58		80.0	
10658-AAA	Pulse Waveform (200Hz, 10%)	X	100.00	111.27	26.15	10.00	50.0	± 9.6 %
		Y	100.00	112.15	26.71		50.0	
		Z	14.35	85.50	18.40		50.0	
10659-AAA	Pulse Waveform (200Hz, 20%)	X	100.00	110.66	24.83	6.99	60.0	± 9.6 %
		Y	100.00	110.25	24.76		60.0	
		Z	100.00	105.29	22.07		60.0	

10660-AAA	Pulse Waveform (200Hz, 40%)	X	100.00	112.93	24.53	3.98	80.0	± 9.6 %
		Y	100.00	108.47	22.64		80.0	
		Z	100.00	104.83	20.58		80.0	
10661-AAA	Pulse Waveform (200Hz, 60%)	X	100.00	118.71	25.68	2.22	100.0	± 9.6 %
		Y	100.00	104.33	19.70		100.0	
		Z	100.00	104.48	19.32		100.0	
10662-AAA	Pulse Waveform (200Hz, 80%)	X	100.00	138.66	31.49	0.97	120.0	± 9.6 %
		Y	0.19	60.00	4.09		120.0	
		Z	100.00	91.23	12.90		120.0	

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Client **PC Test**

Certificate No: **EX3-7357_Apr19**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7357**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-12.v9, QA CAL-14.v5, QA CAL-23.v5,
 QA CAL-25.v7
 Calibration procedure for dosimetric E-field probes**

Calibration date: **April 24, 2019**

*BN ✓
 4-29-2019*

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-19 (No. 217-02894)	Apr-20
DAE4	SN: 660	19-Dec-18 (No. DAE4-660_Dec18)	Dec-19
Reference Probe ES3DV2	SN: 3013	31-Dec-18 (No. ES3-3013_Dec18)	Dec-19
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

Calibrated by:	Name Claudio Leubler	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature

Issued: April 24, 2019

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization ϕ	ϕ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7357

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.37	0.48	0.41	$\pm 10.1 \%$
DCP (mV) ^B	87.5	101.0	95.2	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB/ μV	C	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	175.5	$\pm 2.7 \%$	$\pm 4.7 \%$
		Y	0.00	0.00	1.00		162.7		
		Z	0.00	0.00	1.00		160.1		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	1.63	60.99	8.59	10.00	60.0	$\pm 3.2 \%$	$\pm 9.6 \%$
		Y	15.00	88.78	20.10		60.0		
		Z	1.92	62.77	9.39		60.0		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	1.28	62.05	7.66	6.99	80.0	$\pm 2.1 \%$	$\pm 9.6 \%$
		Y	15.00	92.12	20.60		80.0		
		Z	1.44	63.37	8.24		80.0		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	0.53	60.00	5.08	3.98	95.0	$\pm 1.2 \%$	$\pm 9.6 \%$
		Y	15.00	98.74	22.38		95.0		
		Z	0.50	60.00	4.96		95.0		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	0.34	60.00	3.46	2.22	120.0	$\pm 1.3 \%$	$\pm 9.6 \%$
		Y	15.00	122.09	31.59		120.0		
		Z	0.32	60.00	3.17		120.0		
10387-AAA	QPSK Waveform, 1 MHz	X	0.47	60.00	5.85	0.00	150.0	$\pm 3.4 \%$	$\pm 9.6 \%$
		Y	0.84	63.60	10.73		150.0		
		Z	0.47	60.00	5.64		150.0		
10388-AAA	QPSK Waveform, 10 MHz	X	2.22	69.17	16.45	0.00	150.0	$\pm 1.2 \%$	$\pm 9.6 \%$
		Y	2.39	69.28	16.48		150.0		
		Z	2.05	67.86	15.44		150.0		
10396-AAA	64-QAM Waveform, 100 kHz	X	1.74	66.32	18.65	3.01	150.0	$\pm 6.4 \%$	$\pm 9.6 \%$
		Y	3.21	72.13	19.45		150.0		
		Z	2.50	68.64	18.00		150.0		
10399-AAA	64-QAM Waveform, 40 MHz	X	3.50	67.46	16.21	0.00	150.0	$\pm 2.5 \%$	$\pm 9.6 \%$
		Y	3.59	67.57	16.11		150.0		
		Z	3.40	67.11	15.75		150.0		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	4.79	65.80	15.93	0.00	150.0	$\pm 4.6 \%$	$\pm 9.6 \%$
		Y	4.92	65.80	15.71		150.0		
		Z	4.73	65.72	15.66		150.0		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7357

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	37.3	299.85	40.64	5.98	0.77	5.00	0.00	0.00	1.02
Y	48.9	366.83	35.90	10.43	0.11	5.09	1.58	0.24	1.01
Z	37.8	294.77	38.42	5.12	0.55	5.04	0.00	0.43	1.01

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	14.2
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7357

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
64	54.2	0.75	14.77	14.77	14.77	0.00	1.00	± 13.3 %
750	41.9	0.89	10.26	10.26	10.26	0.45	0.95	± 12.0 %
835	41.5	0.90	9.91	9.91	9.91	0.53	0.85	± 12.0 %
1750	40.1	1.37	8.69	8.69	8.69	0.35	0.80	± 12.0 %
1900	40.0	1.40	8.26	8.26	8.26	0.33	0.84	± 12.0 %
2300	39.5	1.67	7.70	7.70	7.70	0.33	0.85	± 12.0 %
2450	39.2	1.80	7.57	7.57	7.57	0.39	0.85	± 12.0 %
2600	39.0	1.96	7.31	7.31	7.31	0.40	0.80	± 12.0 %
5250	35.9	4.71	5.45	5.45	5.45	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.85	4.85	4.85	0.40	1.80	± 13.1 %
5750	35.4	5.22	5.06	5.06	5.06	0.40	1.80	± 13.1 %

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7357

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	10.19	10.19	10.19	0.37	0.96	± 12.0 %
835	55.2	0.97	9.95	9.95	9.95	0.47	0.80	± 12.0 %
1750	53.4	1.49	8.26	8.26	8.26	0.35	0.85	± 12.0 %
1900	53.3	1.52	7.93	7.93	7.93	0.32	0.90	± 12.0 %
2300	52.9	1.81	7.72	7.72	7.72	0.30	0.85	± 12.0 %
2450	52.7	1.95	7.59	7.59	7.59	0.35	0.86	± 12.0 %
2600	52.5	2.16	7.39	7.39	7.39	0.32	0.89	± 12.0 %
5250	48.9	5.36	4.61	4.61	4.61	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.03	4.03	4.03	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.15	4.15	4.15	0.50	1.90	± 13.1 %

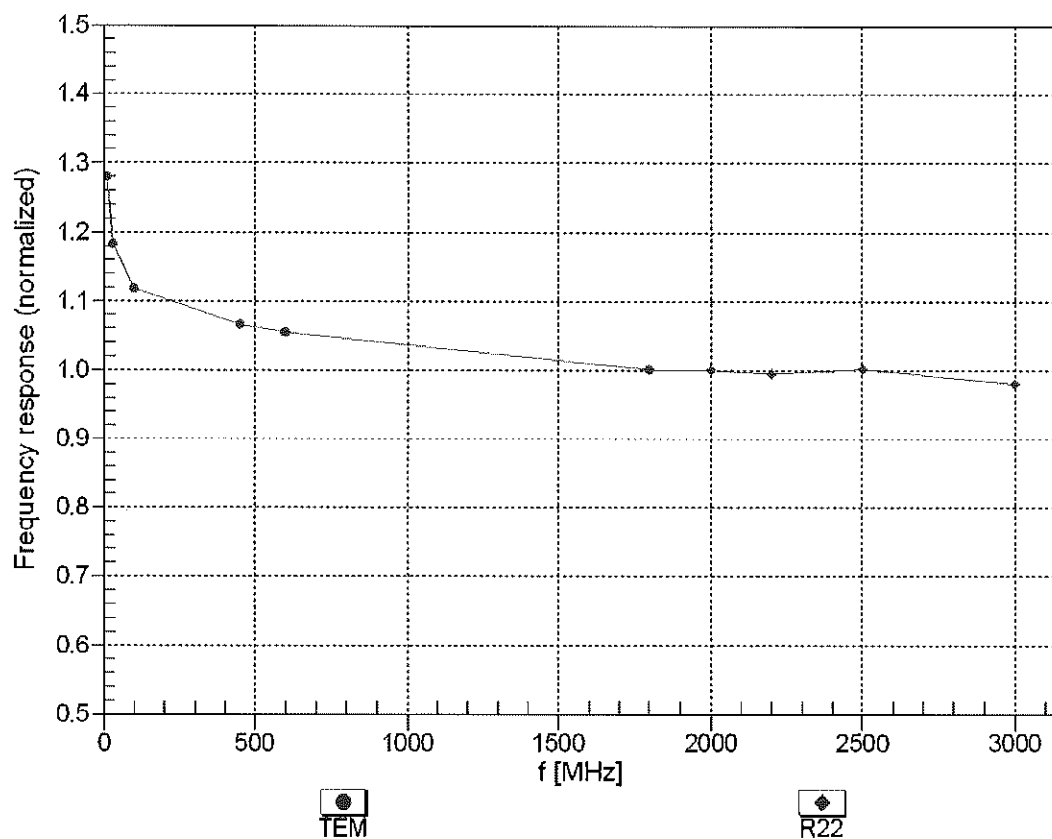
^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

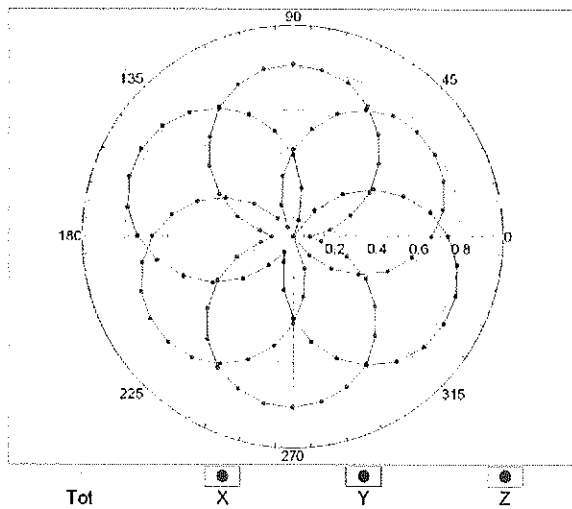
(TEM-Cell:ifi110 EXX, Waveguide: R22)



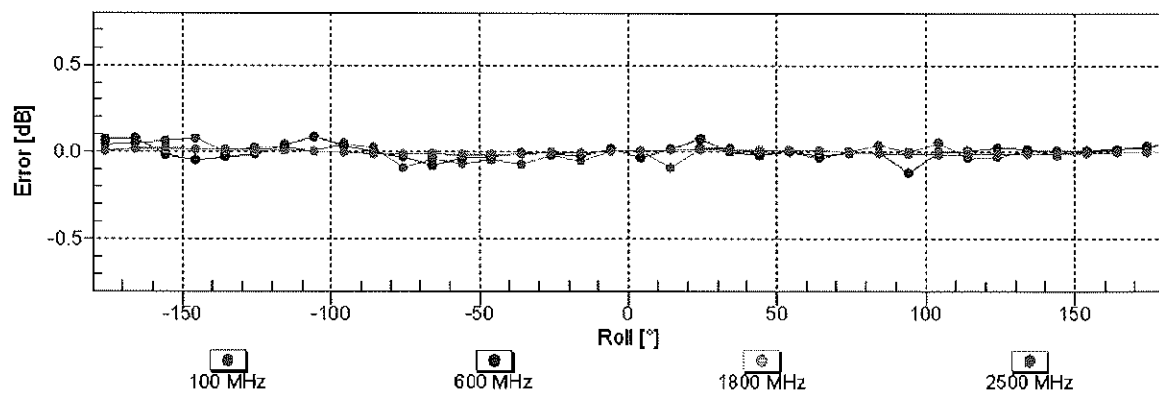
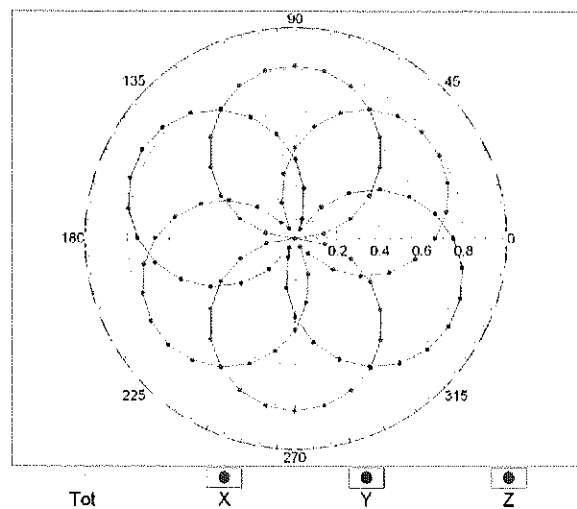
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

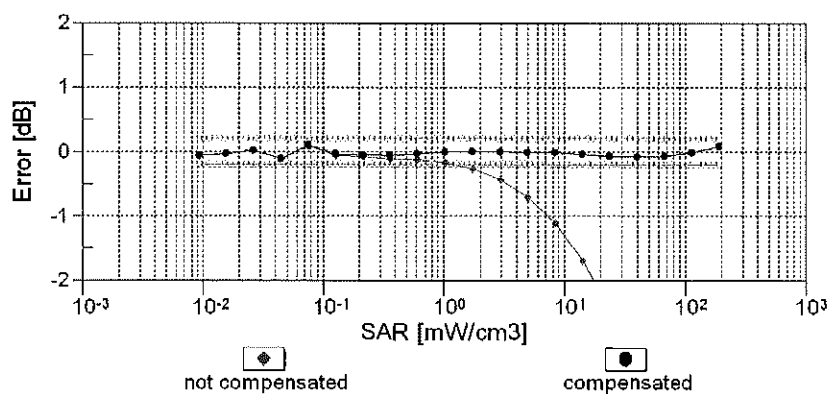
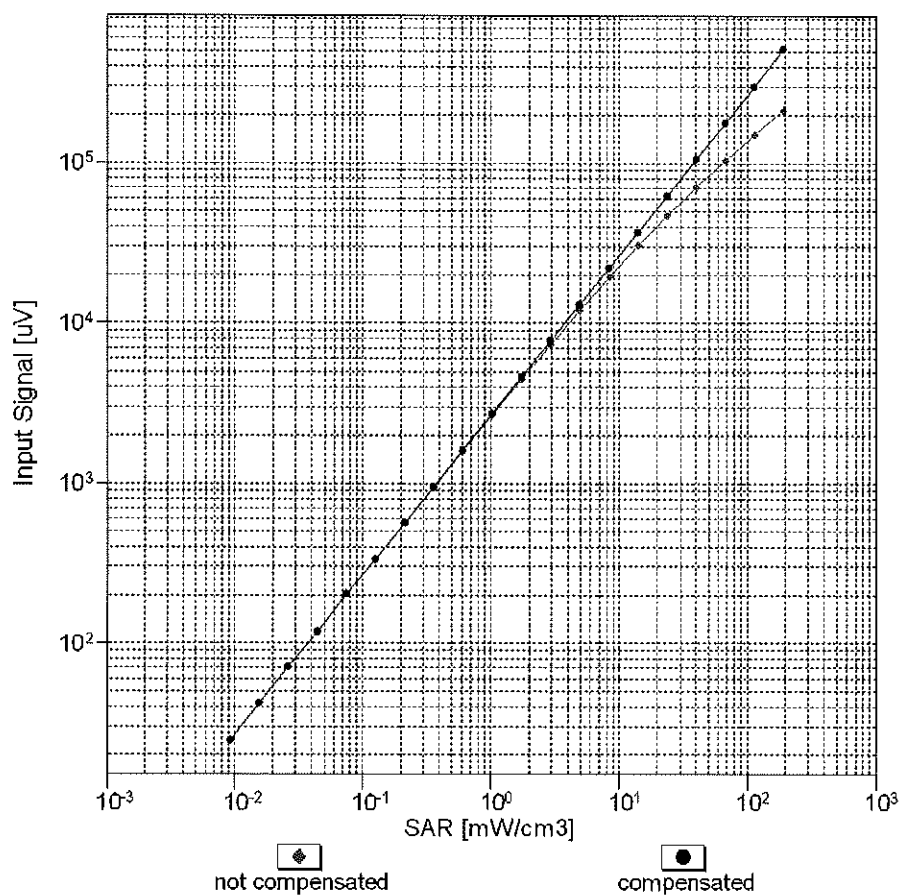


f=1800 MHz,R22



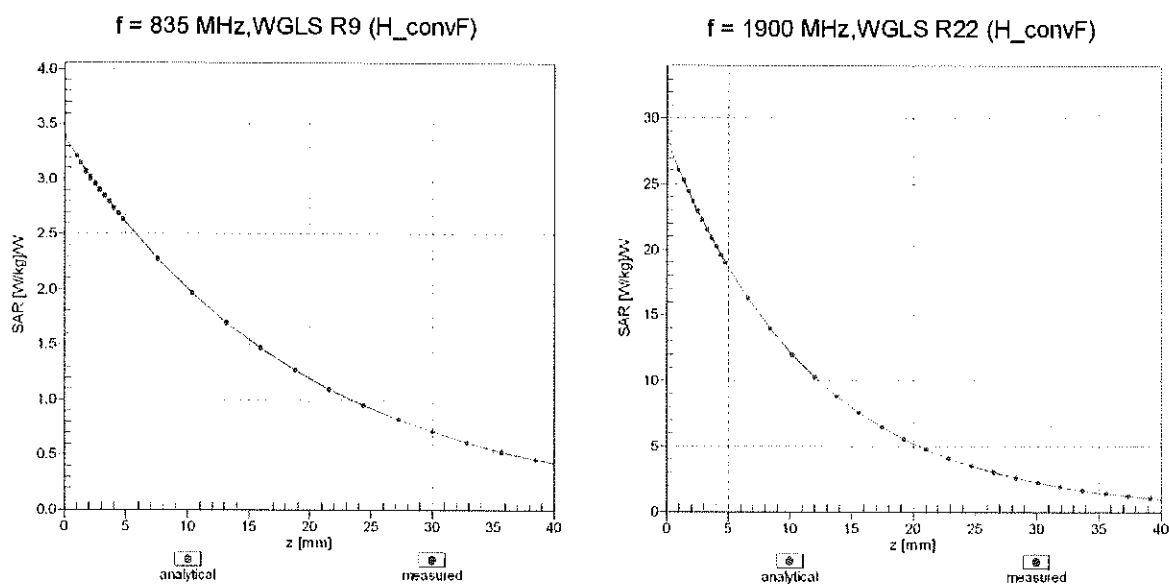
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f_{\text{eval}} = 1900 \text{ MHz}$)



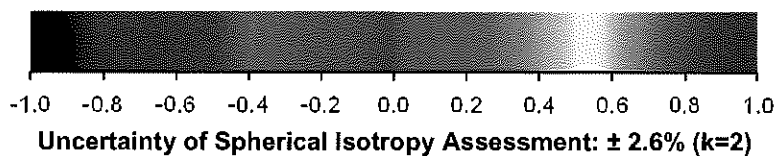
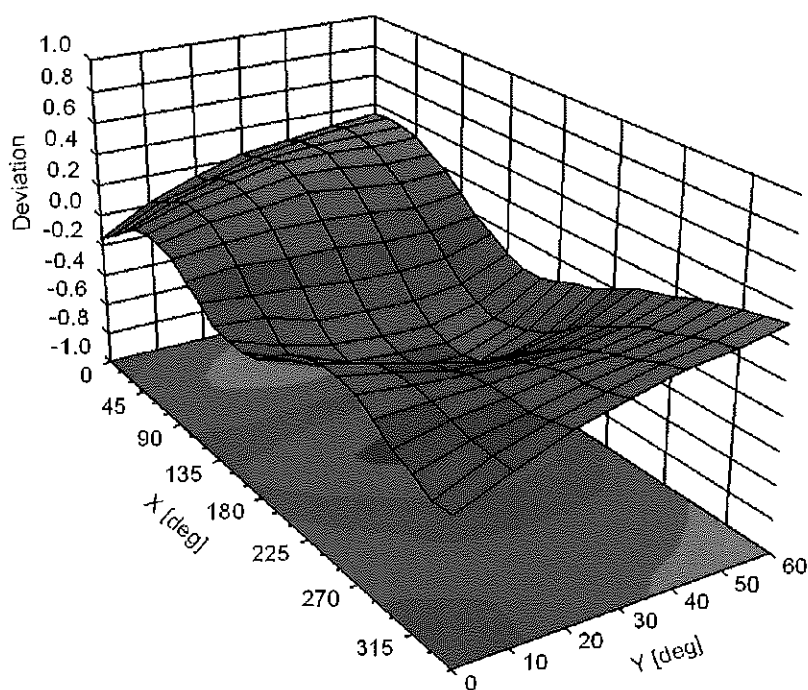
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ , θ), $f = 900 \text{ MHz}$



Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E (k=2)
0		CW	CW	0.00	± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 %
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	± 9.6 %
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	± 9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	± 9.6 %
10062	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	± 9.6 %
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	± 9.6 %
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	± 9.6 %
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 %
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	± 9.6 %
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	± 9.6 %
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	± 9.6 %
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 %
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 %
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	± 9.6 %
10097	CAB	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10098	CAB	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10102	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %

10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10114	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10181	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10188	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %

10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
10223	CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAB	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
10226	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
10232	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10233	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10238	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10245	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
10246	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	± 9.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10269	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
10275	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAA	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
10295	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %

10300	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WiMAX	12.03	± 9.6 %
10302	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	WiMAX	12.57	± 9.6 %
10303	AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 %
10304	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11.86	± 9.6 %
10305	AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	WiMAX	15.24	± 9.6 %
10306	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	WiMAX	14.67	± 9.6 %
10307	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	WiMAX	14.49	± 9.6 %
10308	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WiMAX	14.46	± 9.6 %
10309	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	WiMAX	14.58	± 9.6 %
10310	AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	WiMAX	14.57	± 9.6 %
10311	AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
10313	AAA	iDEN 1:3	iDEN	10.51	± 9.6 %
10314	AAA	iDEN 1:6	iDEN	13.48	± 9.6 %
10315	AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	WLAN	1.71	± 9.6 %
10316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9.6 %
10317	AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10401	AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	± 9.6 %
10402	AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10417	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	WLAN	8.19	± 9.6 %
10422	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426	AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6 %
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	± 9.6 %
10430	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	± 9.6 %
10431	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6 %
10432	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10434	AAA	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10435	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10447	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6 %
10448	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	± 9.6 %

10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10456	AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	± 9.6 %
10457	AAA	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	± 9.6 %
10460	AAA	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
10461	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10462	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	± 9.6 %
10463	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10464	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10465	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10466	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10467	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10468	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10469	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10470	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10471	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10472	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10473	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10477	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10478	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10479	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10480	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	± 9.6 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	± 9.6 %
10482	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	± 9.6 %
10483	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	± 9.6 %
10485	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	± 9.6 %
10486	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	± 9.6 %
10487	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	± 9.6 %
10488	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	± 9.6 %
10489	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	± 9.6 %
10490	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10491	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %

10492	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	± 9.6 %
10493	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	± 9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	± 9.6 %
10496	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10497	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	± 9.6 %
10498	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.40	± 9.6 %
10499	AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.68	± 9.6 %
10500	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	± 9.6 %
10501	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	± 9.6 %
10502	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	± 9.6 %
10503	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	± 9.6 %
10504	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	± 9.6 %
10505	AAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10506	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10507	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.36	± 9.6 %
10508	AAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	± 9.6 %
10509	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.99	± 9.6 %
10510	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.49	± 9.6 %
10511	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	± 9.6 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	± 9.6 %
10514	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	± 9.6 %
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	± 9.6 %
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10518	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10519	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	7.97	± 9.6 %
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10523	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.08	± 9.6 %
10524	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10525	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10526	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10527	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	WLAN	8.21	± 9.6 %
10528	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10529	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10531	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10532	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10533	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	WLAN	8.38	± 9.6 %
10534	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	WLAN	8.45	± 9.6 %

10535	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10536	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	WLAN	8.32	± 9.6 %
10537	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.44	± 9.6 %
10538	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10540	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10541	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	WLAN	8.46	± 9.6 %
10542	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10543	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	WLAN	8.65	± 9.6 %
10544	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	WLAN	8.47	± 9.6 %
10545	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10546	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	WLAN	8.35	± 9.6 %
10547	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	WLAN	8.49	± 9.6 %
10548	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10550	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	WLAN	8.38	± 9.6 %
10551	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	WLAN	8.50	± 9.6 %
10552	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10553	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	WLAN	8.47	± 9.6 %
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	WLAN	8.50	± 9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	WLAN	8.52	± 9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	WLAN	8.61	± 9.6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	WLAN	8.73	± 9.6 %
10561	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	WLAN	8.56	± 9.6 %
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	WLAN	8.69	± 9.6 %
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10564	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.13	± 9.6 %
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.00	± 9.6 %
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.10	± 9.6 %
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.30	± 9.6 %
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	± 9.6 %
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	± 9.6 %
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN	1.98	± 9.6 %
10574	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN	1.98	± 9.6 %
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	± 9.6 %
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	± 9.6 %
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	± 9.6 %
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	± 9.6 %
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	± 9.6 %
10583	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10584	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	± 9.6 %
10585	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10586	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	± 9.6 %
10587	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	± 9.6 %

10588	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10589	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	± 9.6 %
10590	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	± 9.6 %
10591	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	WLAN	8.63	± 9.6 %
10592	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10593	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10594	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10595	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10596	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	WLAN	8.71	± 9.6 %
10597	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10598	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	WLAN	8.50	± 9.6 %
10599	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10600	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	WLAN	8.88	± 9.6 %
10601	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10603	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	WLAN	9.03	± 9.6 %
10604	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10605	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	WLAN	8.97	± 9.6 %
10606	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10607	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10608	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10609	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	WLAN	8.57	± 9.6 %
10610	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10611	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10612	AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10613	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10614	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10615	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10616	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10617	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10618	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	WLAN	8.58	± 9.6 %
10619	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10620	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	WLAN	8.87	± 9.6 %
10621	AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10622	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	WLAN	8.68	± 9.6 %
10623	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10624	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	WLAN	8.96	± 9.6 %
10625	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	WLAN	8.96	± 9.6 %
10626	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10627	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	WLAN	8.88	± 9.6 %
10628	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	WLAN	8.71	± 9.6 %
10629	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10630	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10631	AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10632	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10633	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10634	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	± 9.6 %
10635	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10636	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10637	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10638	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10639	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10640	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	WLAN	8.98	± 9.6 %
10641	AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10642	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	WLAN	9.06	± 9.6 %
10643	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	9.05	± 9.6 %
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.11	± 9.6 %
10646	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
10647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	± 9.6 %
10652	AAD	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	± 9.6 %
10653	AAD	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	± 9.6 %
10654	AAD	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	± 9.6 %

10655	AAE	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	± 9.6 %
10658	AAA	Pulse Waveform (200Hz, 10%)	Test	10.00	± 9.6 %
10659	AAA	Pulse Waveform (200Hz, 20%)	Test	6.99	± 9.6 %
10660	AAA	Pulse Waveform (200Hz, 40%)	Test	3.98	± 9.6 %
10661	AAA	Pulse Waveform (200Hz, 60%)	Test	2.22	± 9.6 %
10662	AAA	Pulse Waveform (200Hz, 80%)	Test	0.97	± 9.6 %
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	± 9.6 %
10671	AAA	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	WLAN	9.09	± 9.6 %
10672	AAA	IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	± 9.6 %
10673	AAA	IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10674	AAA	IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10675	AAA	IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10676	AAA	IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10677	AAA	IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle)	WLAN	8.73	± 9.6 %
10678	AAA	IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10679	AAA	IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10680	AAA	IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle)	WLAN	8.80	± 9.6 %
10681	AAA	IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle)	WLAN	8.62	± 9.6 %
10682	AAA	IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10683	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10684	AAA	IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle)	WLAN	8.26	± 9.6 %
10685	AAA	IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10686	AAA	IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle)	WLAN	8.28	± 9.6 %
10687	AAA	IEEE 802.11ax (20MHz, MCS4, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10688	AAA	IEEE 802.11ax (20MHz, MCS5, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10689	AAA	IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10690	AAA	IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10691	AAA	IEEE 802.11ax (20MHz, MCS8, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10692	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10693	AAA	IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10694	AAA	IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle)	WLAN	8.57	± 9.6 %
10695	AAA	IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10696	AAA	IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle)	WLAN	8.91	± 9.6 %
10697	AAA	IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle)	WLAN	8.61	± 9.6 %
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10699	AAA	IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10700	AAA	IEEE 802.11ax (40MHz, MCS5, 90pc duty cycle)	WLAN	8.73	± 9.6 %
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle)	WLAN	8.56	± 9.6 %
10705	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle)	WLAN	8.69	± 9.6 %
10706	AAA	IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle)	WLAN	8.66	± 9.6 %
10707	AAA	IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle)	WLAN	8.32	± 9.6 %
10708	AAA	IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10709	AAA	IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10710	AAA	IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10711	AAA	IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10712	AAA	IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle)	WLAN	8.67	± 9.6 %
10713	AAA	IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10714	AAA	IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle)	WLAN	8.26	± 9.6 %
10715	AAA	IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10716	AAA	IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle)	WLAN	8.30	± 9.6 %
10717	AAA	IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10718	AAA	IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle)	WLAN	8.24	± 9.6 %
10719	AAA	IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10720	AAA	IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle)	WLAN	8.87	± 9.6 %
10721	AAA	IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10722	AAA	IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle)	WLAN	8.55	± 9.6 %
10723	AAA	IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10724	AAA	IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10725	AAA	IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10726	AAA	IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10727	AAA	IEEE 802.11ax (80MHz, MCS8, 90pc duty cycle)	WLAN	8.66	± 9.6 %

10728	AAA	IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle)	WLAN	8.65	± 9.6 %
10729	AAA	IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10730	AAA	IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle)	WLAN	8.67	± 9.6 %
10731	AAA	IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10732	AAA	IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle)	WLAN	8.46	± 9.6 %
10733	AAA	IEEE 802.11ax (80MHz, MCS2, 99pc duty cycle)	WLAN	8.40	± 9.6 %
10734	AAA	IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10735	AAA	IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10736	AAA	IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10737	AAA	IEEE 802.11ax (80MHz, MCS6, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10738	AAA	IEEE 802.11ax (80MHz, MCS7, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10739	AAA	IEEE 802.11ax (80MHz, MCS8, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10740	AAA	IEEE 802.11ax (80MHz, MCS9, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10741	AAA	IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle)	WLAN	8.40	± 9.6 %
10742	AAA	IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10743	AAA	IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10744	AAA	IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle)	WLAN	9.16	± 9.6 %
10745	AAA	IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle)	WLAN	8.93	± 9.6 %
10746	AAA	IEEE 802.11ax (160MHz, MCS3, 90pc duty cycle)	WLAN	9.11	± 9.6 %
10747	AAA	IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle)	WLAN	9.04	± 9.6 %
10748	AAA	IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle)	WLAN	8.93	± 9.6 %
10749	AAA	IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10750	AAA	IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10751	AAA	IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10752	AAA	IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10753	AAA	IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle)	WLAN	9.00	± 9.6 %
10754	AAA	IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10755	AAA	IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle)	WLAN	8.64	± 9.6 %
10756	AAA	IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10757	AAA	IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10758	AAA	IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle)	WLAN	8.69	± 9.6 %
10759	AAA	IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle)	WLAN	8.58	± 9.6 %
10760	AAA	IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle)	WLAN	8.49	± 9.6 %
10761	AAA	IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle)	WLAN	8.58	± 9.6 %
10762	AAA	IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle)	WLAN	8.49	± 9.6 %
10763	AAA	IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10764	AAA	IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10765	AAA	IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle)	WLAN	8.54	± 9.6 %
10766	AAA	IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle)	WLAN	8.51	± 9.6 %

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Client **PC Test**

Certificate No: **EX3-7410_Jul18**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7410**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-23.v5, QA CAL-25.v6**
Calibration procedure for dosimetric E-field probes

BN ✓
07/26/2018

Calibration date: **July 20, 2018**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
Reference Probe ES3DV2	SN: 3013	30-Dec-17 (No. ES3-3013_Dec17)	Dec-18
DAE4	SN: 660	21-Dec-17 (No. DAE4-660_Dec17)	Dec-18
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-17)	In house check: Oct-18

Calibrated by:	Name Michael Weber	Function Laboratory Technician	Signature
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			Issued: July 21, 2018



Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

Probe EX3DV4

SN:7410

Manufactured: November 24, 2015
Calibrated: July 20, 2018

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.41	0.47	0.43	$\pm 10.1 \%$
DCP (mV) ^B	93.6	99.2	96.3	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB $\sqrt{\mu\text{V}}$	C	D dB	VR mV	Unc ^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	142.1	$\pm 2.5 \%$
		Y	0.0	0.0	1.0		157.1	
		Z	0.0	0.0	1.0		143.0	

Note: For details on UID parameters see Appendix.

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $\text{ms}\cdot\text{V}^{-2}$	T2 $\text{ms}\cdot\text{V}^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	32.22	246.3	37.01	4.015	0.380	5.018	0.000	0.327	1.006
Y	34.20	252.5	34.94	7.011	0.000	5.034	0.846	0.193	1.003
Z	38.58	298.4	37.77	5.097	0.373	5.059	0.000	0.338	1.011

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	10.13	10.13	10.13	0.37	0.98	± 12.0 %
835	41.5	0.90	9.81	9.81	9.81	0.47	0.80	± 12.0 %
1750	40.1	1.37	8.40	8.40	8.40	0.60	0.80	± 12.0 %
1900	40.0	1.40	8.16	8.16	8.16	0.56	0.80	± 12.0 %
2300	39.5	1.67	7.78	7.78	7.78	0.32	0.85	± 12.0 %
2450	39.2	1.80	7.50	7.50	7.50	0.34	0.84	± 12.0 %
2600	39.0	1.96	7.24	7.24	7.24	0.32	0.89	± 12.0 %

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	9.87	9.87	9.87	0.33	1.02	± 12.0 %
835	55.2	0.97	9.63	9.63	9.63	0.42	0.86	± 12.0 %
1750	53.4	1.49	8.06	8.06	8.06	0.35	0.85	± 12.0 %
1900	53.3	1.52	7.78	7.78	7.78	0.39	0.80	± 12.0 %
2300	52.9	1.81	7.64	7.64	7.64	0.35	0.85	± 12.0 %
2450	52.7	1.95	7.45	7.45	7.45	0.32	0.86	± 12.0 %
2600	52.5	2.16	7.34	7.34	7.34	0.31	0.94	± 12.0 %

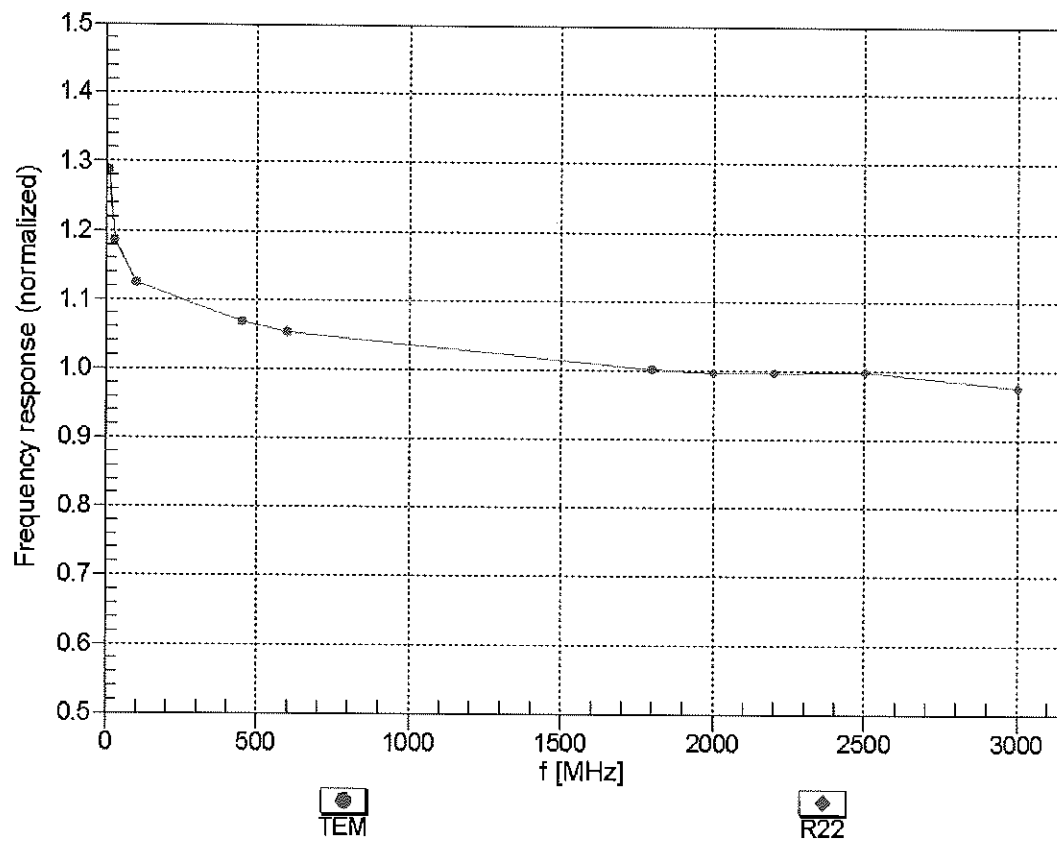
^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

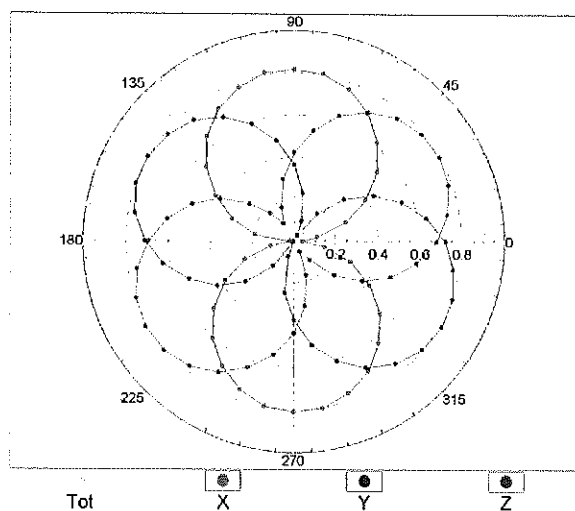
(TEM-Cell:ifi110 EXX, Waveguide: R22)



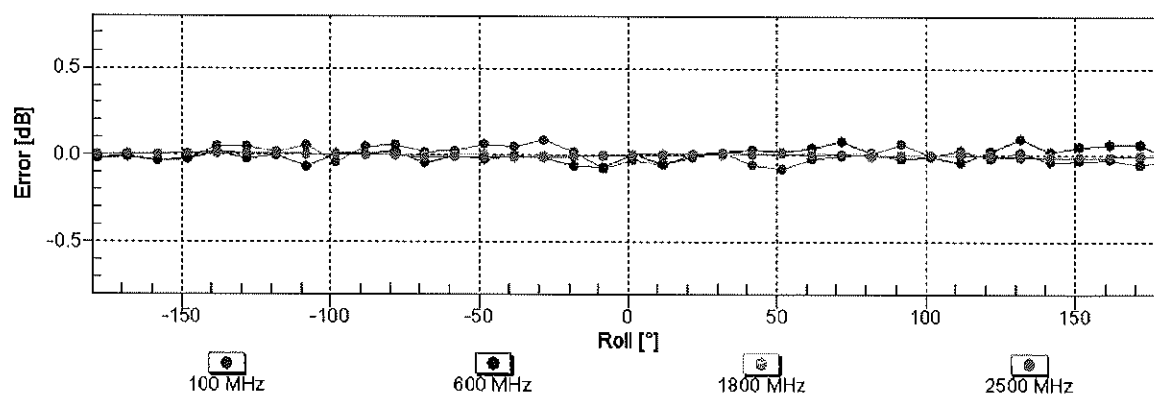
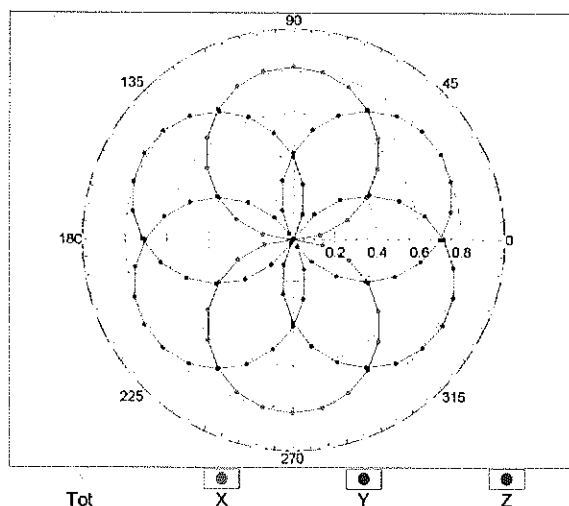
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM

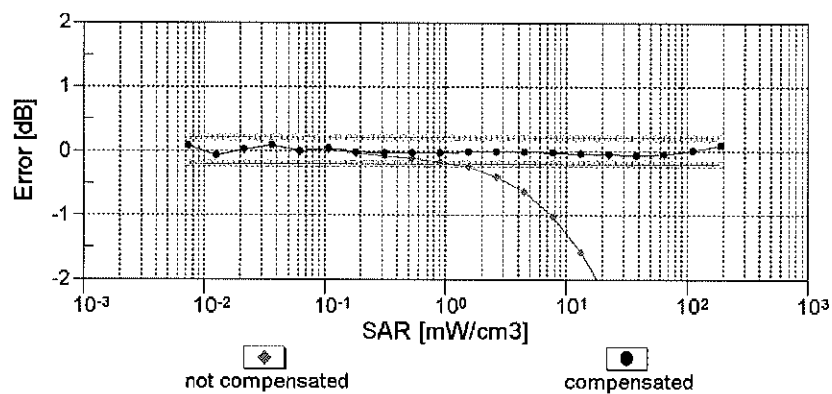
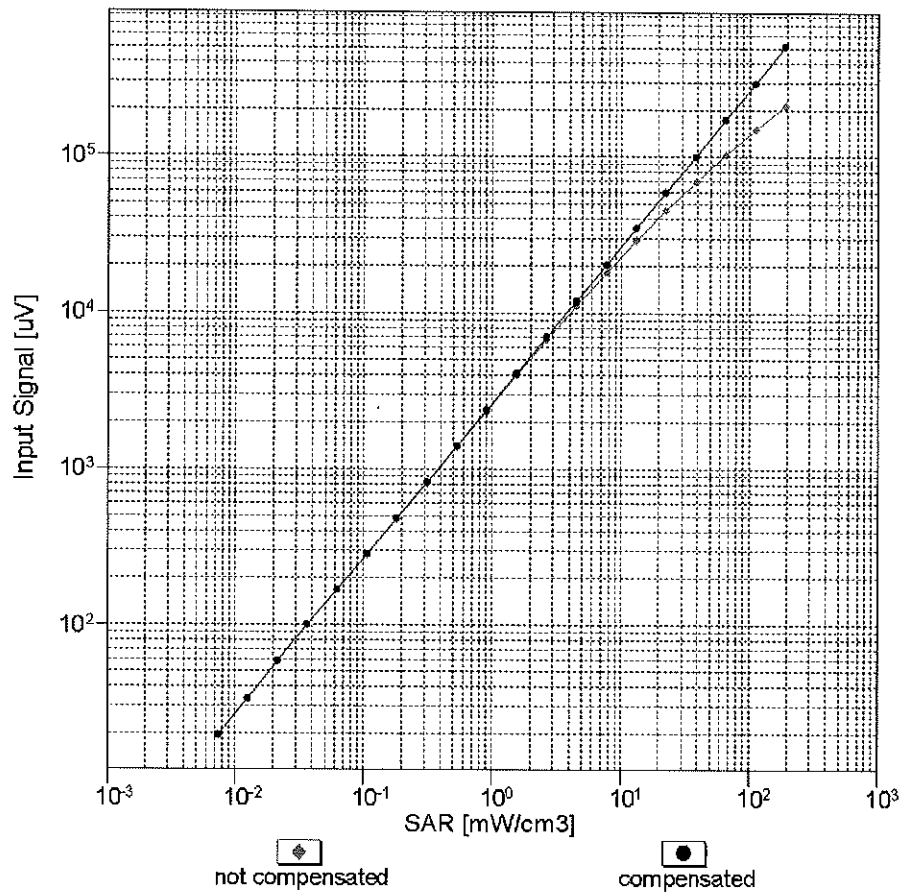


f=1800 MHz,R22



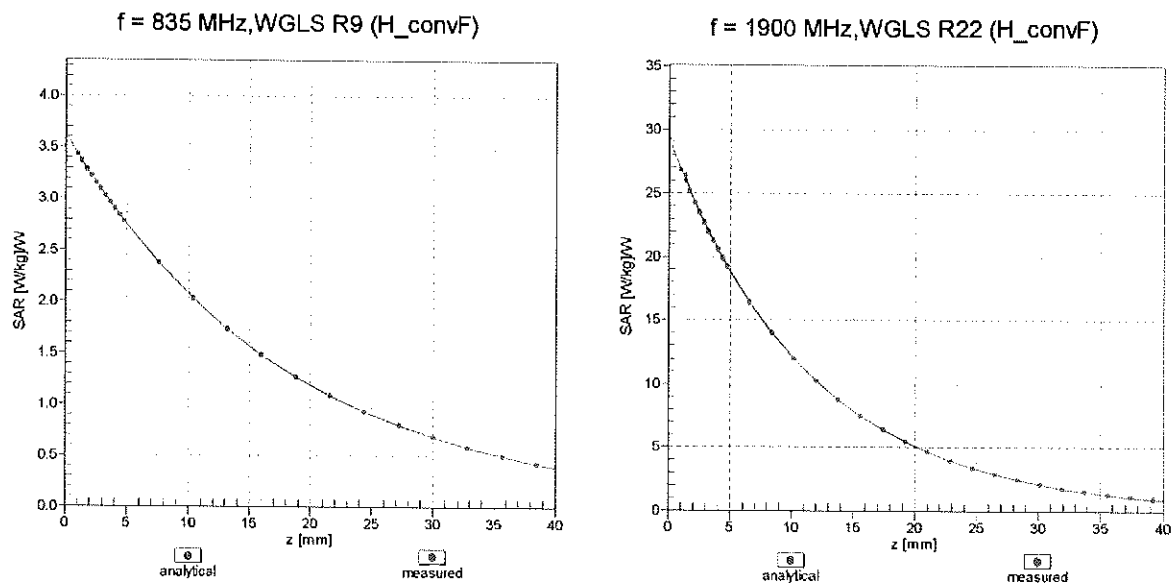
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell , $f_{\text{eval}} = 1900 \text{ MHz}$)



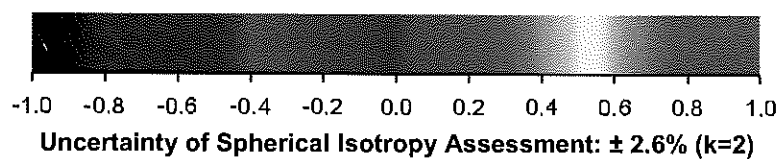
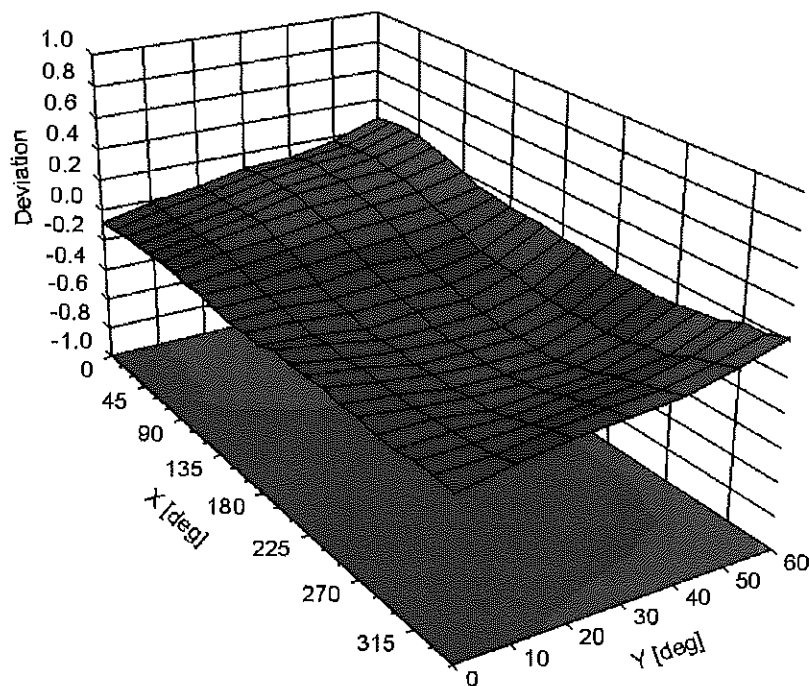
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), $f = 900 \text{ MHz}$



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ ($k=2$)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	1.8
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Appendix: Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB μ V	C	D dB	VR mV	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	142.1	$\pm 2.5\%$
		Y	0.00	0.00	1.00		157.1	
		Z	0.00	0.00	1.00		143.0	
10010- CAA	SAR Validation (Square, 100ms, 10ms)	X	1.62	62.34	7.74	10.00	20.0	$\pm 9.6\%$
		Y	1.47	62.51	7.58		20.0	
		Z	1.74	63.23	8.42		20.0	
10011- CAB	UMTS-FDD (WCDMA)	X	0.82	65.36	13.43	0.00	150.0	$\pm 9.6\%$
		Y	1.01	68.19	15.53		150.0	
		Z	0.83	64.89	13.22		150.0	
10012- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	X	1.03	62.67	14.19	0.41	150.0	$\pm 9.6\%$
		Y	1.12	63.85	15.21		150.0	
		Z	1.03	62.50	14.16		150.0	
10013- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	X	4.54	66.46	16.76	1.46	150.0	$\pm 9.6\%$
		Y	4.63	66.78	17.00		150.0	
		Z	4.66	66.40	16.88		150.0	
10021- DAC	GSM-FDD (TDMA, GMSK)	X	13.15	84.51	17.52	9.39	50.0	$\pm 9.6\%$
		Y	100.00	105.54	22.55		50.0	
		Z	100.00	109.08	24.59		50.0	
10023- DAC	GPRS-FDD (TDMA, GMSK, TN 0)	X	7.05	77.63	15.35	9.57	50.0	$\pm 9.6\%$
		Y	100.00	104.89	22.31		50.0	
		Z	100.00	108.55	24.42		50.0	
10024- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	X	100.00	103.12	20.53	6.56	60.0	$\pm 9.6\%$
		Y	100.00	106.39	21.86		60.0	
		Z	100.00	108.56	23.07		60.0	
10025- DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	X	3.34	64.62	22.65	12.57	50.0	$\pm 9.6\%$
		Y	5.12	80.55	32.48		50.0	
		Z	3.40	65.03	23.22		50.0	
10026- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	5.08	79.74	27.91	9.56	60.0	$\pm 9.6\%$
		Y	6.12	86.23	31.42		60.0	
		Z	5.62	82.16	29.24		60.0	
10027- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	X	100.00	101.64	19.06	4.80	80.0	$\pm 9.6\%$
		Y	100.00	109.60	22.50		80.0	
		Z	100.00	108.56	22.18		80.0	
10028- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	99.62	17.55	3.55	100.0	$\pm 9.6\%$
		Y	100.00	115.32	24.21		100.0	
		Z	100.00	107.61	21.03		100.0	
10029- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	3.55	72.28	23.51	7.80	80.0	$\pm 9.6\%$
		Y	3.97	75.71	25.59		80.0	
		Z	3.84	73.87	24.49		80.0	
10030- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	2.93	72.58	11.67	5.30	70.0	$\pm 9.6\%$
		Y	100.00	104.73	20.69		70.0	
		Z	100.00	105.98	21.40		70.0	
10031- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	0.19	60.00	3.86	1.88	100.0	$\pm 9.6\%$
		Y	100.00	108.46	20.17		100.0	
		Z	0.20	60.00	4.39		100.0	

10032-CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	X	8.28	60.36	1.45	1.17	100.0	± 9.6 %
		Y	100.00	125.60	25.79		100.0	
		Z	9.15	64.10	3.12		100.0	
10033-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	3.18	74.95	16.76	5.30	70.0	± 9.6 %
		Y	16.17	99.83	25.75		70.0	
		Z	6.70	87.29	22.45		70.0	
10034-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	X	1.10	65.34	10.90	1.88	100.0	± 9.6 %
		Y	2.67	76.50	16.58		100.0	
		Z	1.54	69.44	13.90		100.0	
10035-CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	X	0.87	63.89	9.87	1.17	100.0	± 9.6 %
		Y	1.73	72.02	14.58		100.0	
		Z	1.13	66.49	12.17		100.0	
10036-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	3.74	77.33	17.73	5.30	70.0	± 9.6 %
		Y	34.06	110.90	28.74		70.0	
		Z	9.80	93.25	24.40		70.0	
10037-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	1.04	64.82	10.64	1.88	100.0	± 9.6 %
		Y	2.27	74.65	15.89		100.0	
		Z	1.43	68.68	13.56		100.0	
10038-CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	0.88	64.05	10.08	1.17	100.0	± 9.6 %
		Y	1.75	72.43	14.90		100.0	
		Z	1.13	66.71	12.40		100.0	
10039-CAB	CDMA2000 (1xRTT, RC1)	X	0.74	62.99	8.94	0.00	150.0	± 9.6 %
		Y	1.38	69.75	13.20		150.0	
		Z	0.98	64.89	10.73		150.0	
10042-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	X	2.54	68.84	11.04	7.78	50.0	± 9.6 %
		Y	100.00	102.42	20.46		50.0	
		Z	100.00	104.71	21.76		50.0	
10044-CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.06	120.88	5.44	0.00	150.0	± 9.6 %
		Y	0.00	104.37	4.38		150.0	
		Z	0.08	121.43	6.73		150.0	
10048-CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	4.91	69.00	13.47	13.80	25.0	± 9.6 %
		Y	7.93	75.14	15.14		25.0	
		Z	10.77	79.26	17.66		25.0	
10049-CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	4.71	71.69	13.37	10.79	40.0	± 9.6 %
		Y	12.12	82.16	16.51		40.0	
		Z	15.08	85.95	18.75		40.0	
10056-CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	9.20	83.60	20.05	9.03	50.0	± 9.6 %
		Y	100.00	119.47	30.42		50.0	
		Z	26.92	101.32	26.50		50.0	
10058-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	X	2.97	69.27	21.35	6.55	100.0	± 9.6 %
		Y	3.27	71.77	22.91		100.0	
		Z	3.17	70.45	22.11		100.0	
10059-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	X	1.02	63.20	14.50	0.61	110.0	± 9.6 %
		Y	1.12	64.64	15.70		110.0	
		Z	1.03	63.16	14.59		110.0	
10060-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	X	1.55	78.45	19.20	1.30	110.0	± 9.6 %
		Y	11.63	111.29	30.45		110.0	
		Z	2.11	82.91	21.03		110.0	

10061-CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	1.39	70.50	17.86	2.04	110.0	± 9.6 %
		Y	1.94	76.74	21.24		110.0	
		Z	1.58	72.59	19.16		110.0	
10062-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	4.34	66.44	16.20	0.49	100.0	± 9.6 %
		Y	4.45	66.80	16.45		100.0	
		Z	4.46	66.35	16.27		100.0	
10063-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	4.35	66.52	16.28	0.72	100.0	± 9.6 %
		Y	4.46	66.88	16.54		100.0	
		Z	4.47	66.44	16.36		100.0	
10064-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	X	4.58	66.71	16.48	0.86	100.0	± 9.6 %
		Y	4.69	67.07	16.73		100.0	
		Z	4.73	66.68	16.59		100.0	
10065-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	4.45	66.52	16.53	1.21	100.0	± 9.6 %
		Y	4.56	66.89	16.79		100.0	
		Z	4.60	66.53	16.67		100.0	
10066-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	X	4.45	66.48	16.65	1.46	100.0	± 9.6 %
		Y	4.56	66.86	16.93		100.0	
		Z	4.61	66.54	16.84		100.0	
10067-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	X	4.73	66.77	17.13	2.04	100.0	± 9.6 %
		Y	4.84	67.12	17.40		100.0	
		Z	4.90	66.81	17.33		100.0	
10068-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	X	4.76	66.66	17.29	2.55	100.0	± 9.6 %
		Y	4.86	67.00	17.55		100.0	
		Z	4.92	66.73	17.50		100.0	
10069-CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	X	4.81	66.68	17.46	2.67	100.0	± 9.6 %
		Y	4.92	67.01	17.74		100.0	
		Z	5.00	66.78	17.71		100.0	
10071-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	4.62	66.50	17.03	1.99	100.0	± 9.6 %
		Y	4.72	66.82	17.28		100.0	
		Z	4.75	66.47	17.18		100.0	
10072-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	X	4.56	66.67	17.18	2.30	100.0	± 9.6 %
		Y	4.66	67.03	17.45		100.0	
		Z	4.70	66.70	17.36		100.0	
10073-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	4.61	66.83	17.49	2.83	100.0	± 9.6 %
		Y	4.71	67.17	17.77		100.0	
		Z	4.75	66.85	17.68		100.0	
10074-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	4.62	66.77	17.64	3.30	100.0	± 9.6 %
		Y	4.70	67.09	17.92		100.0	
		Z	4.74	66.75	17.83		100.0	
10075-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	4.63	66.75	17.86	3.82	90.0	± 9.6 %
		Y	4.71	67.06	18.15		90.0	
		Z	4.76	66.76	18.09		90.0	
10076-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	X	4.68	66.63	18.04	4.15	90.0	± 9.6 %
		Y	4.74	66.91	18.31		90.0	
		Z	4.79	66.61	18.24		90.0	
10077-CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	4.71	66.72	18.15	4.30	90.0	± 9.6 %
		Y	4.77	66.99	18.42		90.0	
		Z	4.82	66.69	18.35		90.0	

10081-CAB	CDMA2000 (1xRTT, RC3)	X	0.41	60.41	6.86	0.00	150.0	± 9.6 %
		Y	0.64	64.39	10.26		150.0	
		Z	0.51	61.51	8.28		150.0	
10082-CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	X	6.37	60.67	1.90	4.77	80.0	± 9.6 %
		Y	0.58	60.00	3.05		80.0	
		Z	0.60	60.00	3.10		80.0	
10090-DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	100.00	103.19	20.57	6.56	60.0	± 9.6 %
		Y	100.00	106.40	21.88		60.0	
		Z	100.00	108.67	23.14		60.0	
10097-CAB	UMTS-FDD (HSDPA)	X	1.61	66.98	14.45	0.00	150.0	± 9.6 %
		Y	1.83	68.94	15.87		150.0	
		Z	1.61	66.33	14.36		150.0	
10098-CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.57	66.91	14.41	0.00	150.0	± 9.6 %
		Y	1.80	68.88	15.85		150.0	
		Z	1.57	66.26	14.32		150.0	
10099-DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	5.11	79.85	27.95	9.56	60.0	± 9.6 %
		Y	6.18	86.42	31.49		60.0	
		Z	5.66	82.29	29.29		60.0	
10100-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	2.72	68.86	15.96	0.00	150.0	± 9.6 %
		Y	2.98	70.42	16.85		150.0	
		Z	2.77	68.66	15.78		150.0	
10101-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	2.94	66.71	15.42	0.00	150.0	± 9.6 %
		Y	3.09	67.54	15.94		150.0	
		Z	3.00	66.60	15.35		150.0	
10102-CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	3.05	66.78	15.55	0.00	150.0	± 9.6 %
		Y	3.19	67.54	16.04		150.0	
		Z	3.11	66.65	15.49		150.0	
10103-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	4.63	72.33	19.10	3.98	65.0	± 9.6 %
		Y	5.31	74.95	20.40		65.0	
		Z	5.01	73.33	19.72		65.0	
10104-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	4.71	70.15	18.78	3.98	65.0	± 9.6 %
		Y	5.12	71.87	19.74		65.0	
		Z	4.99	70.84	19.32		65.0	
10105-CAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	4.62	69.52	18.79	3.98	65.0	± 9.6 %
		Y	4.98	71.08	19.67		65.0	
		Z	4.89	70.18	19.31		65.0	
10108-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	2.32	68.23	15.74	0.00	150.0	± 9.6 %
		Y	2.56	69.77	16.68		150.0	
		Z	2.39	67.99	15.57		150.0	
10109-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	2.57	66.62	15.17	0.00	150.0	± 9.6 %
		Y	2.73	67.56	15.82		150.0	
		Z	2.64	66.42	15.13		150.0	
10110-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	1.82	67.31	15.00	0.00	150.0	± 9.6 %
		Y	2.06	69.08	16.19		150.0	
		Z	1.89	67.03	14.94		150.0	
10111-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.27	67.56	15.11	0.00	150.0	± 9.6 %
		Y	2.50	68.95	16.11		150.0	
		Z	2.32	67.14	15.12		150.0	

10112-CAF	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	2.70	66.75	15.29	0.00	150.0	± 9.6 %
		Y	2.86	67.62	15.89		150.0	
		Z	2.77	66.52	15.24		150.0	
10113-CAF	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.41	67.80	15.29	0.00	150.0	± 9.6 %
		Y	2.64	69.12	16.24		150.0	
		Z	2.47	67.38	15.32		150.0	
10114-CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	4.85	66.91	16.28	0.00	150.0	± 9.6 %
		Y	4.92	67.20	16.42		150.0	
		Z	4.93	66.80	16.23		150.0	
10115-CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	5.08	66.97	16.31	0.00	150.0	± 9.6 %
		Y	5.16	67.24	16.44		150.0	
		Z	5.19	66.91	16.30		150.0	
10116-CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	4.91	67.06	16.28	0.00	150.0	± 9.6 %
		Y	5.00	67.37	16.44		150.0	
		Z	5.02	67.01	16.26		150.0	
10117-CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	4.82	66.80	16.24	0.00	150.0	± 9.6 %
		Y	4.91	67.14	16.41		150.0	
		Z	4.92	66.75	16.22		150.0	
10118-CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	X	5.15	67.18	16.42	0.00	150.0	± 9.6 %
		Y	5.23	67.42	16.54		150.0	
		Z	5.28	67.15	16.43		150.0	
10119-CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	X	4.92	67.09	16.30	0.00	150.0	± 9.6 %
		Y	5.00	67.37	16.45		150.0	
		Z	5.02	67.00	16.27		150.0	
10140-CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	3.06	66.79	15.45	0.00	150.0	± 9.6 %
		Y	3.21	67.57	15.95		150.0	
		Z	3.13	66.66	15.40		150.0	
10141-CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.19	67.01	15.68	0.00	150.0	± 9.6 %
		Y	3.34	67.73	16.14		150.0	
		Z	3.26	66.83	15.61		150.0	
10142-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	1.53	66.71	13.85	0.00	150.0	± 9.6 %
		Y	1.82	69.13	15.54		150.0	
		Z	1.62	66.60	14.09		150.0	
10143-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	1.93	66.97	13.55	0.00	150.0	± 9.6 %
		Y	2.31	69.49	15.29		150.0	
		Z	2.06	67.05	14.07		150.0	
10144-CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	1.68	64.38	11.67	0.00	150.0	± 9.6 %
		Y	1.94	66.13	13.09		150.0	
		Z	1.85	64.82	12.42		150.0	
10145-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	0.61	60.00	6.25	0.00	150.0	± 9.6 %
		Y	0.75	61.41	7.98		150.0	
		Z	0.75	60.75	7.63		150.0	
10146-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	0.82	60.00	5.83	0.00	150.0	± 9.6 %
		Y	0.92	60.25	6.35		150.0	
		Z	1.12	61.59	7.98		150.0	
10147-CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	0.84	60.00	5.89	0.00	150.0	± 9.6 %
		Y	0.96	60.55	6.61		150.0	
		Z	1.20	62.21	8.43		150.0	

10149-CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	2.58	66.69	15.22	0.00	150.0	± 9.6 %
		Y	2.74	67.63	15.87		150.0	
		Z	2.65	66.49	15.18		150.0	
10150-CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	2.71	66.82	15.33	0.00	150.0	± 9.6 %
		Y	2.87	67.69	15.94		150.0	
		Z	2.78	66.58	15.28		150.0	
10151-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	4.58	74.10	19.83	3.98	65.0	± 9.6 %
		Y	5.45	77.40	21.46		65.0	
		Z	5.00	75.19	20.56		65.0	
10152-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	4.21	69.89	18.16	3.98	65.0	± 9.6 %
		Y	4.65	71.84	19.30		65.0	
		Z	4.51	70.68	18.85		65.0	
10153-CAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	4.55	71.06	19.09	3.98	65.0	± 9.6 %
		Y	5.01	72.96	20.18		65.0	
		Z	4.85	71.76	19.74		65.0	
10154-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	1.85	67.65	15.22	0.00	150.0	± 9.6 %
		Y	2.10	69.48	16.44		150.0	
		Z	1.92	67.37	15.16		150.0	
10155-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	2.27	67.61	15.14	0.00	150.0	± 9.6 %
		Y	2.50	69.00	16.15		150.0	
		Z	2.33	67.17	15.15		150.0	
10156-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	1.31	65.90	12.85	0.00	150.0	± 9.6 %
		Y	1.64	68.88	14.94		150.0	
		Z	1.43	66.11	13.38		150.0	
10157-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	1.43	63.96	10.91	0.00	150.0	± 9.6 %
		Y	1.74	66.31	12.74		150.0	
		Z	1.63	64.73	11.94		150.0	
10158-CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	2.42	67.89	15.35	0.00	150.0	± 9.6 %
		Y	2.65	69.22	16.31		150.0	
		Z	2.48	67.46	15.37		150.0	
10159-CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	1.49	64.13	11.04	0.00	150.0	± 9.6 %
		Y	1.82	66.66	12.95		150.0	
		Z	1.70	65.00	12.13		150.0	
10160-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	2.41	67.89	15.65	0.00	150.0	± 9.6 %
		Y	2.60	69.05	16.44		150.0	
		Z	2.48	67.64	15.56		150.0	
10161-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	2.59	66.74	15.14	0.00	150.0	± 9.6 %
		Y	2.76	67.68	15.82		150.0	
		Z	2.66	66.50	15.14		150.0	
10162-CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	2.70	67.00	15.31	0.00	150.0	± 9.6 %
		Y	2.87	67.91	15.97		150.0	
		Z	2.77	66.73	15.29		150.0	
10166-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	2.91	67.87	18.41	3.01	150.0	± 9.6 %
		Y	3.09	68.81	18.75		150.0	
		Z	3.17	68.75	19.02		150.0	
10167-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	3.24	69.92	18.52	3.01	150.0	± 9.6 %
		Y	3.65	71.74	19.22		150.0	
		Z	3.63	71.08	19.26		150.0	

10168-CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	3.66	72.66	20.22	3.01	150.0	± 9.6 %
		Y	4.14	74.51	20.83		150.0	
		Z	4.11	73.91	20.95		150.0	
10169-CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	2.32	65.83	17.44	3.01	150.0	± 9.6 %
		Y	2.49	67.28	18.07		150.0	
		Z	2.46	66.70	18.14		150.0	
10170-CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	2.74	70.01	19.35	3.01	150.0	± 9.6 %
		Y	3.21	72.95	20.48		150.0	
		Z	3.00	71.51	20.32		150.0	
10171-AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	2.31	66.53	16.58	3.01	150.0	± 9.6 %
		Y	2.63	68.93	17.60		150.0	
		Z	2.50	67.67	17.42		150.0	
10172-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	2.90	74.23	22.35	6.02	65.0	± 9.6 %
		Y	3.68	79.90	24.98		65.0	
		Z	3.91	80.19	25.56		65.0	
10173-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	3.92	78.79	22.40	6.02	65.0	± 9.6 %
		Y	6.85	89.50	26.38		65.0	
		Z	6.70	89.11	27.06		65.0	
10174-CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	2.90	73.28	19.67	6.02	65.0	± 9.6 %
		Y	5.51	84.77	24.11		65.0	
		Z	4.93	82.66	24.17		65.0	
10175-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	2.30	65.58	17.20	3.01	150.0	± 9.6 %
		Y	2.47	67.02	17.83		150.0	
		Z	2.44	66.43	17.89		150.0	
10176-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	2.74	70.03	19.36	3.01	150.0	± 9.6 %
		Y	3.21	72.97	20.49		150.0	
		Z	3.00	71.53	20.33		150.0	
10177-CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.31	65.68	17.27	3.01	150.0	± 9.6 %
		Y	2.48	67.13	17.91		150.0	
		Z	2.45	66.56	17.98		150.0	
10178-CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	2.73	69.91	19.28	3.01	150.0	± 9.6 %
		Y	3.19	72.83	20.41		150.0	
		Z	2.98	71.36	20.23		150.0	
10179-CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	2.50	68.14	17.82	3.01	150.0	± 9.6 %
		Y	2.89	70.84	18.91		150.0	
		Z	2.72	69.48	18.74		150.0	
10180-CAF	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	2.31	66.50	16.56	3.01	150.0	± 9.6 %
		Y	2.63	68.90	17.57		150.0	
		Z	2.50	67.63	17.39		150.0	
10181-CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	2.31	65.67	17.27	3.01	150.0	± 9.6 %
		Y	2.48	67.11	17.90		150.0	
		Z	2.45	66.54	17.97		150.0	
10182-CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	2.73	69.88	19.27	3.01	150.0	± 9.6 %
		Y	3.19	72.81	20.40		150.0	
		Z	2.98	71.34	20.21		150.0	
10183-AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	2.31	66.48	16.55	3.01	150.0	± 9.6 %
		Y	2.63	68.87	17.56		150.0	
		Z	2.49	67.61	17.37		150.0	

10184-CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	2.32	65.70	17.29	3.01	150.0	± 9.6 %
		Y	2.49	67.15	17.92		150.0	
		Z	2.46	66.58	17.99		150.0	
10185-CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	2.74	69.95	19.31	3.01	150.0	± 9.6 %
		Y	3.20	72.88	20.43		150.0	
		Z	2.99	71.41	20.26		150.0	
10186-AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	2.32	66.53	16.58	3.01	150.0	± 9.6 %
		Y	2.64	68.94	17.60		150.0	
		Z	2.51	67.67	17.41		150.0	
10187-CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	2.33	65.78	17.37	3.01	150.0	± 9.6 %
		Y	2.50	67.22	18.00		150.0	
		Z	2.47	66.64	18.07		150.0	
10188-CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	2.80	70.47	19.65	3.01	150.0	± 9.6 %
		Y	3.29	73.46	20.79		150.0	
		Z	3.07	72.01	20.64		150.0	
10189-AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	2.35	66.85	16.82	3.01	150.0	± 9.6 %
		Y	2.69	69.31	17.86		150.0	
		Z	2.55	68.03	17.68		150.0	
10193-CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	4.23	66.54	15.90	0.00	150.0	± 9.6 %
		Y	4.33	66.90	16.14		150.0	
		Z	4.32	66.32	15.87		150.0	
10194-CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	X	4.36	66.75	16.04	0.00	150.0	± 9.6 %
		Y	4.47	67.12	16.27		150.0	
		Z	4.47	66.58	16.01		150.0	
10195-CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	4.39	66.76	16.05	0.00	150.0	± 9.6 %
		Y	4.50	67.13	16.28		150.0	
		Z	4.50	66.61	16.03		150.0	
10196-CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	4.21	66.52	15.87	0.00	150.0	± 9.6 %
		Y	4.32	66.89	16.12		150.0	
		Z	4.31	66.33	15.87		150.0	
10197-CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	X	4.37	66.75	16.04	0.00	150.0	± 9.6 %
		Y	4.48	67.12	16.28		150.0	
		Z	4.48	66.59	16.02		150.0	
10198-CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	X	4.38	66.75	16.05	0.00	150.0	± 9.6 %
		Y	4.50	67.13	16.28		150.0	
		Z	4.50	66.62	16.04		150.0	
10219-CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	4.16	66.56	15.85	0.00	150.0	± 9.6 %
		Y	4.27	66.93	16.10		150.0	
		Z	4.26	66.35	15.83		150.0	
10220-CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	X	4.36	66.72	16.03	0.00	150.0	± 9.6 %
		Y	4.47	67.08	16.26		150.0	
		Z	4.47	66.56	16.01		150.0	
10221-CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	X	4.40	66.71	16.04	0.00	150.0	± 9.6 %
		Y	4.51	67.07	16.27		150.0	
		Z	4.51	66.56	16.03		150.0	
10222-CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	4.80	66.80	16.23	0.00	150.0	± 9.6 %
		Y	4.88	67.12	16.39		150.0	
		Z	4.89	66.72	16.20		150.0	

10223-CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	X	5.04	66.95	16.32	0.00	150.0	± 9.6 %
		Y	5.14	67.29	16.49		150.0	
		Z	5.18	66.99	16.36		150.0	
10224-CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	X	4.84	66.92	16.22	0.00	150.0	± 9.6 %
		Y	4.92	67.24	16.38		150.0	
		Z	4.93	66.82	16.18		150.0	
10225-CAB	UMTS-FDD (HSPA+)	X	2.46	65.56	14.20	0.00	150.0	± 9.6 %
		Y	2.62	66.44	14.96		150.0	
		Z	2.55	65.41	14.45		150.0	
10226-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	4.12	79.74	22.87	6.02	65.0	± 9.6 %
		Y	7.38	90.96	26.97		65.0	
		Z	7.19	90.56	27.66		65.0	
10227-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	4.10	78.95	21.90	6.02	65.0	± 9.6 %
		Y	7.43	89.71	25.78		65.0	
		Z	7.75	90.70	26.99		65.0	
10228-CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	3.12	75.94	23.15	6.02	65.0	± 9.6 %
		Y	4.06	82.01	25.85		65.0	
		Z	4.25	82.24	26.47		65.0	
10229-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	X	3.94	78.88	22.44	6.02	65.0	± 9.6 %
		Y	6.91	89.62	26.42		65.0	
		Z	6.76	89.24	27.11		65.0	
10230-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	3.89	78.03	21.47	6.02	65.0	± 9.6 %
		Y	6.86	88.27	25.23		65.0	
		Z	7.16	89.19	26.40		65.0	
10231-CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	3.03	75.32	22.81	6.02	65.0	± 9.6 %
		Y	3.92	81.25	25.48		65.0	
		Z	4.10	81.44	26.07		65.0	
10232-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	3.94	78.86	22.44	6.02	65.0	± 9.6 %
		Y	6.89	89.60	26.42		65.0	
		Z	6.74	89.21	27.10		65.0	
10233-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	X	3.88	77.99	21.46	6.02	65.0	± 9.6 %
		Y	6.83	88.22	25.21		65.0	
		Z	7.13	89.13	26.38		65.0	
10234-CAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.96	74.84	22.48	6.02	65.0	± 9.6 %
		Y	3.82	80.66	25.12		65.0	
		Z	4.00	80.82	25.70		65.0	
10235-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	3.94	78.87	22.44	6.02	65.0	± 9.6 %
		Y	6.90	89.63	26.43		65.0	
		Z	6.75	89.23	27.11		65.0	
10236-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	3.92	78.11	21.50	6.02	65.0	± 9.6 %
		Y	6.93	88.43	25.27		65.0	
		Z	7.23	89.34	26.44		65.0	
10237-CAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	3.03	75.32	22.81	6.02	65.0	± 9.6 %
		Y	3.92	81.27	25.49		65.0	
		Z	4.10	81.45	26.08		65.0	
10238-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	3.93	78.83	22.43	6.02	65.0	± 9.6 %
		Y	6.87	89.57	26.41		65.0	
		Z	6.72	89.17	27.08		65.0	

10239-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	3.87	77.95	21.45	6.02	65.0	± 9.6 %
		Y	6.80	88.17	25.20		65.0	
		Z	7.10	89.08	26.37		65.0	
10240-CAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	3.02	75.30	22.81	6.02	65.0	± 9.6 %
		Y	3.91	81.25	25.48		65.0	
		Z	4.09	81.42	26.07		65.0	
10241-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	5.47	76.60	23.52	6.98	65.0	± 9.6 %
		Y	6.28	79.70	24.95		65.0	
		Z	6.08	77.98	24.56		65.0	
10242-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	5.17	75.55	22.99	6.98	65.0	± 9.6 %
		Y	5.96	78.71	24.47		65.0	
		Z	5.82	77.10	24.09		65.0	
10243-CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	4.47	72.66	22.57	6.98	65.0	± 9.6 %
		Y	4.85	74.66	23.64		65.0	
		Z	4.89	73.70	23.43		65.0	
10244-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	2.59	65.60	11.95	3.98	65.0	± 9.6 %
		Y	3.16	68.30	13.59		65.0	
		Z	3.94	71.58	16.14		65.0	
10245-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	2.56	65.23	11.69	3.98	65.0	± 9.6 %
		Y	3.08	67.71	13.25		65.0	
		Z	3.80	70.75	15.70		65.0	
10246-CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	2.30	67.33	13.29	3.98	65.0	± 9.6 %
		Y	3.40	73.14	16.55		65.0	
		Z	3.20	71.92	16.41		65.0	
10247-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	2.93	67.28	14.07	3.98	65.0	± 9.6 %
		Y	3.57	70.51	16.14		65.0	
		Z	3.50	69.72	16.15		65.0	
10248-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	2.93	66.83	13.84	3.98	65.0	± 9.6 %
		Y	3.51	69.74	15.76		65.0	
		Z	3.49	69.17	15.87		65.0	
10249-CAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	3.40	72.89	17.31	3.98	65.0	± 9.6 %
		Y	5.05	79.62	20.60		65.0	
		Z	4.35	76.73	19.72		65.0	
10250-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	4.07	71.77	18.68	3.98	65.0	± 9.6 %
		Y	4.65	74.35	20.17		65.0	
		Z	4.43	72.91	19.73		65.0	
10251-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	3.86	69.66	17.25	3.98	65.0	± 9.6 %
		Y	4.37	71.98	18.68		65.0	
		Z	4.24	70.85	18.35		65.0	
10252-CAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	4.28	75.56	20.13	3.98	65.0	± 9.6 %
		Y	5.50	80.28	22.41		65.0	
		Z	4.84	77.34	21.32		65.0	
10253-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	4.17	69.62	17.88	3.98	65.0	± 9.6 %
		Y	4.59	71.50	19.03		65.0	
		Z	4.46	70.34	18.61		65.0	
10254-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	4.46	70.60	18.66	3.98	65.0	± 9.6 %
		Y	4.90	72.45	19.77		65.0	
		Z	4.75	71.28	19.37		65.0	

10255-CAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	4.40	73.51	19.69	3.98	65.0	± 9.6 %
		Y	5.16	76.59	21.27		65.0	
		Z	4.77	74.49	20.43		65.0	
10256-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	1.88	62.21	8.80	3.98	65.0	± 9.6 %
		Y	2.16	63.72	9.95		65.0	
		Z	2.68	66.18	12.27		65.0	
10257-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	1.87	61.92	8.53	3.98	65.0	± 9.6 %
		Y	2.13	63.28	9.61		65.0	
		Z	2.60	65.47	11.78		65.0	
10258-CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	1.63	62.98	9.76	3.98	65.0	± 9.6 %
		Y	2.11	66.24	12.11		65.0	
		Z	2.20	66.42	12.68		65.0	
10259-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	3.37	69.09	15.81	3.98	65.0	± 9.6 %
		Y	4.03	72.21	17.73		65.0	
		Z	3.88	71.08	17.53		65.0	
10260-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	3.41	68.89	15.70	3.98	65.0	± 9.6 %
		Y	4.05	71.86	17.55		65.0	
		Z	3.92	70.83	17.40		65.0	
10261-CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	3.65	73.54	18.24	3.98	65.0	± 9.6 %
		Y	4.99	79.08	21.01		65.0	
		Z	4.36	76.25	20.08		65.0	
10262-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	4.05	71.68	18.62	3.98	65.0	± 9.6 %
		Y	4.63	74.27	20.11		65.0	
		Z	4.42	72.84	19.67		65.0	
10263-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	3.85	69.65	17.25	3.98	65.0	± 9.6 %
		Y	4.36	71.96	18.67		65.0	
		Z	4.23	70.83	18.35		65.0	
10264-CAE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	4.23	75.35	20.01	3.98	65.0	± 9.6 %
		Y	5.43	80.04	22.29		65.0	
		Z	4.79	77.13	21.21		65.0	
10265-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	4.21	69.90	18.16	3.98	65.0	± 9.6 %
		Y	4.65	71.84	19.30		65.0	
		Z	4.51	70.68	18.86		65.0	
10266-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	4.55	71.05	19.08	3.98	65.0	± 9.6 %
		Y	5.00	72.95	20.16		65.0	
		Z	4.85	71.75	19.72		65.0	
10267-CAE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	4.57	74.06	19.81	3.98	65.0	± 9.6 %
		Y	5.43	77.35	21.43		65.0	
		Z	4.99	75.14	20.54		65.0	
10268-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	4.89	70.28	18.92	3.98	65.0	± 9.6 %
		Y	5.29	71.90	19.82		65.0	
		Z	5.16	70.86	19.41		65.0	
10269-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	4.93	70.03	18.82	3.98	65.0	± 9.6 %
		Y	5.31	71.54	19.69		65.0	
		Z	5.18	70.53	19.29		65.0	
10270-CAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	4.82	72.26	19.25	3.98	65.0	± 9.6 %
		Y	5.40	74.50	20.39		65.0	
		Z	5.12	72.93	19.74		65.0	

10274-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	2.30	66.08	14.21	0.00	150.0	± 9.6 %
		Y	2.48	67.13	15.07		150.0	
		Z	2.37	65.78	14.35		150.0	
10275-CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.33	66.42	14.09	0.00	150.0	± 9.6 %
		Y	1.55	68.66	15.67		150.0	
		Z	1.35	65.99	13.99		150.0	
10277-CAA	PHS (QPSK)	X	1.44	58.96	4.35	9.03	50.0	± 9.6 %
		Y	1.29	58.94	4.16		50.0	
		Z	1.60	59.77	5.29		50.0	
10278-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	2.42	63.55	9.32	9.03	50.0	± 9.6 %
		Y	2.50	65.00	10.23		50.0	
		Z	3.00	66.61	11.73		50.0	
10279-CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	2.47	63.72	9.48	9.03	50.0	± 9.6 %
		Y	2.58	65.28	10.45		50.0	
		Z	3.09	66.89	11.94		50.0	
10290-AAB	CDMA2000, RC1, SO55, Full Rate	X	0.64	61.56	7.87	0.00	150.0	± 9.6 %
		Y	0.98	65.79	11.09		150.0	
		Z	0.84	63.19	9.57		150.0	
10291-AAB	CDMA2000, RC3, SO55, Full Rate	X	0.41	60.33	6.79	0.00	150.0	± 9.6 %
		Y	0.62	64.18	10.12		150.0	
		Z	0.50	61.40	8.20		150.0	
10292-AAB	CDMA2000, RC3, SO32, Full Rate	X	0.46	61.89	7.99	0.00	150.0	± 9.6 %
		Y	1.01	70.37	13.40		150.0	
		Z	0.57	63.19	9.51		150.0	
10293-AAB	CDMA2000, RC3, SO3, Full Rate	X	0.64	65.03	10.07	0.00	150.0	± 9.6 %
		Y	4.97	89.66	20.54		150.0	
		Z	0.76	66.38	11.57		150.0	
10295-AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	14.73	88.54	22.30	9.03	50.0	± 9.6 %
		Y	21.95	97.75	26.07		50.0	
		Z	14.97	91.80	24.79		50.0	
10297-AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	2.34	68.34	15.82	0.00	150.0	± 9.6 %
		Y	2.58	69.89	16.76		150.0	
		Z	2.40	68.08	15.64		150.0	
10298-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	0.86	62.29	9.16	0.00	150.0	± 9.6 %
		Y	1.16	65.45	11.69		150.0	
		Z	1.05	63.56	10.60		150.0	
10299-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	1.14	61.76	8.21	0.00	150.0	± 9.6 %
		Y	1.41	63.51	9.50		150.0	
		Z	1.73	65.72	11.49		150.0	
10300-AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	0.97	60.07	6.55	0.00	150.0	± 9.6 %
		Y	1.14	61.11	7.49		150.0	
		Z	1.33	62.21	8.89		150.0	
10301-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.13	64.55	16.56	4.17	50.0	± 9.6 %
		Y	4.26	65.00	16.97		50.0	
		Z	4.39	64.86	16.90		50.0	
10302-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	4.66	65.38	17.39	4.96	50.0	± 9.6 %
		Y	4.76	65.70	17.72		50.0	
		Z	4.88	65.46	17.59		50.0	

10303-AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	4.45	65.36	17.40	4.96	50.0	± 9.6 %
		Y	4.51	65.30	17.48		50.0	
		Z	4.62	65.06	17.37		50.0	
10304-AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	X	4.25	64.98	16.73	4.17	50.0	± 9.6 %
		Y	4.36	65.33	17.07		50.0	
		Z	4.45	64.98	16.90		50.0	
10305-AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	3.81	66.28	17.81	6.02	35.0	± 9.6 %
		Y	3.76	65.91	18.03		35.0	
		Z	4.04	66.66	18.48		35.0	
10306-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	4.18	65.73	17.92	6.02	35.0	± 9.6 %
		Y	4.17	65.55	18.11		35.0	
		Z	4.39	65.94	18.38		35.0	
10307-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	4.05	65.69	17.78	6.02	35.0	± 9.6 %
		Y	4.04	65.48	17.96		35.0	
		Z	4.27	65.96	18.27		35.0	
10308-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	4.03	65.87	17.91	6.02	35.0	± 9.6 %
		Y	4.01	65.64	18.09		35.0	
		Z	4.25	66.15	18.40		35.0	
10309-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	4.18	65.77	18.00	6.02	35.0	± 9.6 %
		Y	4.19	65.61	18.20		35.0	
		Z	4.42	66.06	18.49		35.0	
10310-AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	4.13	65.78	17.90	6.02	35.0	± 9.6 %
		Y	4.12	65.57	18.08		35.0	
		Z	4.34	65.98	18.35		35.0	
10311-AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	2.69	67.62	15.56	0.00	150.0	± 9.6 %
		Y	2.94	69.08	16.39		150.0	
		Z	2.75	67.40	15.38		150.0	
10313-AAA	IDEN 1:3	X	1.80	67.21	13.40	6.99	70.0	± 9.6 %
		Y	2.78	73.35	16.36		70.0	
		Z	2.09	69.09	14.51		70.0	
10314-AAA	IDEN 1:6	X	3.26	75.39	19.57	10.00	30.0	± 9.6 %
		Y	5.56	85.97	24.05		30.0	
		Z	4.04	79.23	21.39		30.0	
10315-AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	0.96	62.72	14.16	0.17	150.0	± 9.6 %
		Y	1.05	63.94	15.22		150.0	
		Z	0.96	62.45	14.04		150.0	
10316-AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	X	4.24	66.42	15.96	0.17	150.0	± 9.6 %
		Y	4.35	66.80	16.22		150.0	
		Z	4.36	66.32	16.01		150.0	
10317-AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	4.24	66.42	15.96	0.17	150.0	± 9.6 %
		Y	4.35	66.80	16.22		150.0	
		Z	4.36	66.32	16.01		150.0	
10400-AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	X	4.31	66.71	15.99	0.00	150.0	± 9.6 %
		Y	4.43	67.11	16.24		150.0	
		Z	4.43	66.60	15.99		150.0	
10401-AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	4.98	66.52	16.05	0.00	150.0	± 9.6 %
		Y	5.08	66.87	16.24		150.0	
		Z	5.16	66.70	16.18		150.0	

10402-AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.36	67.14	16.28	0.00	150.0	± 9.6 %
		Y	5.44	67.45	16.42		150.0	
		Z	5.45	67.07	16.25		150.0	
10403-AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	0.64	61.56	7.87	0.00	115.0	± 9.6 %
		Y	0.98	65.79	11.09		115.0	
		Z	0.84	63.19	9.57		115.0	
10404-AAB	CDMA2000 (1xEV-DO, Rev. A)	X	0.64	61.56	7.87	0.00	115.0	± 9.6 %
		Y	0.98	65.79	11.09		115.0	
		Z	0.84	63.19	9.57		115.0	
10406-AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	100.00	119.53	28.08	0.00	100.0	± 9.6 %
		Y	100.00	115.68	26.57		100.0	
		Z	100.00	126.19	31.47		100.0	
10410-AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	X	2.86	79.80	18.70	3.23	80.0	± 9.6 %
		Y	25.09	107.33	26.44		80.0	
		Z	100.00	133.23	34.42		80.0	
10415-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	0.92	62.32	13.80	0.00	150.0	± 9.6 %
		Y	1.00	63.42	14.80		150.0	
		Z	0.91	61.96	13.60		150.0	
10416-AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	X	4.22	66.50	15.96	0.00	150.0	± 9.6 %
		Y	4.32	66.87	16.21		150.0	
		Z	4.32	66.33	15.95		150.0	
10417-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.22	66.50	15.96	0.00	150.0	± 9.6 %
		Y	4.32	66.87	16.21		150.0	
		Z	4.32	66.33	15.95		150.0	
10418-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)	X	4.21	66.71	16.02	0.00	150.0	± 9.6 %
		Y	4.32	67.09	16.27		150.0	
		Z	4.31	66.51	15.99		150.0	
10419-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	X	4.23	66.64	16.01	0.00	150.0	± 9.6 %
		Y	4.34	67.01	16.25		150.0	
		Z	4.33	66.45	15.98		150.0	
10422-AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.33	66.62	16.03	0.00	150.0	± 9.6 %
		Y	4.44	66.98	16.26		150.0	
		Z	4.44	66.45	16.00		150.0	
10423-AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	4.45	66.86	16.11	0.00	150.0	± 9.6 %
		Y	4.56	67.23	16.34		150.0	
		Z	4.57	66.72	16.10		150.0	
10424-AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	4.38	66.81	16.08	0.00	150.0	± 9.6 %
		Y	4.50	67.18	16.32		150.0	
		Z	4.50	66.66	16.07		150.0	
10425-AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.03	67.03	16.34	0.00	150.0	± 9.6 %
		Y	5.11	67.32	16.49		150.0	
		Z	5.14	66.98	16.33		150.0	
10426-AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	5.06	67.16	16.40	0.00	150.0	± 9.6 %
		Y	5.13	67.40	16.52		150.0	
		Z	5.17	67.10	16.39		150.0	

10427-AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	5.01	66.91	16.27	0.00	150.0	± 9.6 %
		Y	5.09	67.19	16.41		150.0	
		Z	5.13	66.90	16.28		150.0	
10430-AAC	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.07	72.07	17.91	0.00	150.0	± 9.6 %
		Y	4.24	72.56	18.40		150.0	
		Z	4.04	71.02	17.78		150.0	
10431-AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	3.79	66.99	15.69	0.00	150.0	± 9.6 %
		Y	3.94	67.49	16.09		150.0	
		Z	3.92	66.79	15.76		150.0	
10432-AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	4.13	66.89	15.96	0.00	150.0	± 9.6 %
		Y	4.26	67.30	16.25		150.0	
		Z	4.25	66.71	15.96		150.0	
10433-AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.40	66.85	16.11	0.00	150.0	± 9.6 %
		Y	4.51	67.22	16.34		150.0	
		Z	4.51	66.70	16.09		150.0	
10434-AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	4.05	72.38	17.35	0.00	150.0	± 9.6 %
		Y	4.37	73.48	18.19		150.0	
		Z	4.07	71.60	17.46		150.0	
10435-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.72	79.05	18.38	3.23	80.0	± 9.6 %
		Y	21.44	105.07	25.81		80.0	
		Z	100.00	132.91	34.27		80.0	
10447-AAC	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	2.96	66.34	14.12	0.00	150.0	± 9.6 %
		Y	3.18	67.31	14.92		150.0	
		Z	3.13	66.39	14.53		150.0	
10448-AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	3.67	66.79	15.57	0.00	150.0	± 9.6 %
		Y	3.81	67.30	15.97		150.0	
		Z	3.78	66.58	15.62		150.0	
10449-AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	3.98	66.71	15.86	0.00	150.0	± 9.6 %
		Y	4.10	67.14	16.16		150.0	
		Z	4.09	66.52	15.85		150.0	
10450-AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.21	66.62	15.96	0.00	150.0	± 9.6 %
		Y	4.32	67.01	16.21		150.0	
		Z	4.30	66.46	15.93		150.0	
10451-AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	2.70	65.75	13.11	0.00	150.0	± 9.6 %
		Y	2.96	67.00	14.12		150.0	
		Z	2.94	66.14	13.79		150.0	
10456-AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	X	5.99	67.61	16.55	0.00	150.0	± 9.6 %
		Y	6.02	67.80	16.61		150.0	
		Z	6.11	67.72	16.61		150.0	
10457-AAA	UMTS-FDD (DC-HSDPA)	X	3.61	65.32	15.70	0.00	150.0	± 9.6 %
		Y	3.69	65.64	15.94		150.0	
		Z	3.65	65.04	15.66		150.0	
10458-AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	3.19	69.07	15.08	0.00	150.0	± 9.6 %
		Y	3.69	71.30	16.62		150.0	
		Z	3.53	69.92	16.16		150.0	
10459-AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	4.69	69.03	17.48	0.00	150.0	± 9.6 %
		Y	4.79	69.11	17.75		150.0	
		Z	4.84	68.73	17.83		150.0	

10460-AAA	UMTS-FDD (WCDMA, AMR)	X	0.72	66.02	14.12	0.00	150.0	± 9.6 %
		Y	0.91	69.57	16.66		150.0	
		Z	0.71	65.26	13.72		150.0	
10461-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.93	75.92	18.31	3.29	80.0	± 9.6 %
		Y	6.83	93.43	24.06		80.0	
		Z	100.00	137.66	36.58		80.0	
10462-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.27	3.23	80.0	± 9.6 %
		Y	0.63	60.00	7.19		80.0	
		Z	1.15	65.31	10.99		80.0	
10463-AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.55	3.23	80.0	± 9.6 %
		Y	0.66	60.00	6.45		80.0	
		Z	0.67	60.00	7.76		80.0	
10464-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.38	71.32	15.83	3.23	80.0	± 9.6 %
		Y	4.54	86.66	21.20		80.0	
		Z	100.00	134.26	34.80		80.0	
10465-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.20	3.23	80.0	± 9.6 %
		Y	0.63	60.00	7.11		80.0	
		Z	0.94	63.37	10.05		80.0	
10466-AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.50	3.23	80.0	± 9.6 %
		Y	0.66	60.00	6.41		80.0	
		Z	0.68	60.00	7.70		80.0	
10467-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.47	72.19	16.22	3.23	80.0	± 9.6 %
		Y	5.30	88.83	21.91		80.0	
		Z	100.00	134.76	35.02		80.0	
10468-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.22	3.23	80.0	± 9.6 %
		Y	0.63	60.00	7.14		80.0	
		Z	0.99	63.90	10.32		80.0	
10469-AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.51	3.23	80.0	± 9.6 %
		Y	0.66	60.00	6.41		80.0	
		Z	0.68	60.00	7.70		80.0	
10470-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.46	72.21	16.22	3.23	80.0	± 9.6 %
		Y	5.35	88.98	21.94		80.0	
		Z	100.00	134.82	35.03		80.0	
10471-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.21	3.23	80.0	± 9.6 %
		Y	0.63	60.00	7.12		80.0	
		Z	0.98	63.79	10.26		80.0	
10472-AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.49	3.23	80.0	± 9.6 %
		Y	0.66	60.00	6.39		80.0	
		Z	0.67	60.00	7.68		80.0	
10473-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.46	72.15	16.20	3.23	80.0	± 9.6 %
		Y	5.31	88.87	21.90		80.0	
		Z	100.00	134.77	35.01		80.0	
10474-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.20	3.23	80.0	± 9.6 %
		Y	0.63	60.00	7.12		80.0	
		Z	0.97	63.74	10.23		80.0	
10475-AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.49	3.23	80.0	± 9.6 %
		Y	0.66	60.00	6.39		80.0	
		Z	0.67	60.00	7.69		80.0	

10477-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	0.63	60.00	7.17	3.23	80.0	± 9.6 %
		Y	0.63	60.00	7.08		80.0	
		Z	0.93	63.31	10.01		80.0	
10478-AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.65	60.00	6.47	3.23	80.0	± 9.6 %
		Y	0.66	60.00	6.37		80.0	
		Z	0.67	60.00	7.67		80.0	
10479-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.26	80.69	20.19	3.23	80.0	± 9.6 %
		Y	7.01	87.70	22.71		80.0	
		Z	21.27	105.57	28.88		80.0	
10480-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.88	66.39	12.32	3.23	80.0	± 9.6 %
		Y	3.13	71.95	14.74		80.0	
		Z	13.52	90.52	21.87		80.0	
10481-AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.43	63.16	10.40	3.23	80.0	± 9.6 %
		Y	2.06	66.80	12.23		80.0	
		Z	6.11	79.62	18.02		80.0	
10482-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.06	61.11	9.78	2.23	80.0	± 9.6 %
		Y	1.73	66.89	13.39		80.0	
		Z	1.53	64.78	12.61		80.0	
10483-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.23	60.00	8.50	2.23	80.0	± 9.6 %
		Y	1.57	62.45	10.22		80.0	
		Z	2.78	68.98	14.19		80.0	
10484-AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.26	60.00	8.49	2.23	80.0	± 9.6 %
		Y	1.54	61.98	9.97		80.0	
		Z	2.53	67.57	13.58		80.0	
10485-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.66	65.74	13.74	2.23	80.0	± 9.6 %
		Y	2.52	71.78	17.06		80.0	
		Z	2.10	68.47	15.70		80.0	
10486-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.66	62.56	11.27	2.23	80.0	± 9.6 %
		Y	2.26	66.58	13.85		80.0	
		Z	2.12	65.12	13.38		80.0	
10487-AAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.67	62.33	11.12	2.23	80.0	± 9.6 %
		Y	2.24	66.10	13.59		80.0	
		Z	2.14	64.83	13.21		80.0	
10488-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.26	67.65	16.13	2.23	80.0	± 9.6 %
		Y	2.82	71.24	18.12		80.0	
		Z	2.57	69.00	17.08		80.0	
10489-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.49	65.85	15.07	2.23	80.0	± 9.6 %
		Y	2.90	68.21	16.54		80.0	
		Z	2.74	66.70	15.91		80.0	
10490-AAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.57	65.79	15.03	2.23	80.0	± 9.6 %
		Y	2.97	68.04	16.46		80.0	
		Z	2.83	66.63	15.88		80.0	
10491-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.64	67.24	16.30	2.23	80.0	± 9.6 %
		Y	3.09	69.79	17.74		80.0	
		Z	2.92	68.21	16.96		80.0	
10492-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.93	65.80	15.66	2.23	80.0	± 9.6 %
		Y	3.24	67.45	16.69		80.0	
		Z	3.14	66.35	16.22		80.0	

10493-AAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.99	65.74	15.62	2.23	80.0	± 9.6 %
		Y	3.29	67.32	16.63		80.0	
		Z	3.21	66.28	16.18		80.0	
10494-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.77	68.16	16.65	2.23	80.0	± 9.6 %
		Y	3.31	71.10	18.21		80.0	
		Z	3.09	69.31	17.33		80.0	
10495-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.95	66.01	15.89	2.23	80.0	± 9.6 %
		Y	3.25	67.67	16.91		80.0	
		Z	3.16	66.59	16.41		80.0	
10496-AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.04	65.92	15.89	2.23	80.0	± 9.6 %
		Y	3.34	67.48	16.84		80.0	
		Z	3.25	66.45	16.38		80.0	
10497-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.90	60.00	7.56	2.23	80.0	± 9.6 %
		Y	0.94	60.22	8.59		80.0	
		Z	0.98	60.00	8.77		80.0	
10498-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.09	60.00	6.33	2.23	80.0	± 9.6 %
		Y	1.09	60.00	7.12		80.0	
		Z	1.16	60.00	7.58		80.0	
10499-AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.11	60.00	6.17	2.23	80.0	± 9.6 %
		Y	1.11	60.00	6.94		80.0	
		Z	1.17	60.00	7.42		80.0	
10500-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.91	66.68	14.78	2.23	80.0	± 9.6 %
		Y	2.64	71.54	17.49		80.0	
		Z	2.29	68.68	16.26		80.0	
10501-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.02	64.23	12.91	2.23	80.0	± 9.6 %
		Y	2.60	67.75	15.11		80.0	
		Z	2.42	66.09	14.51		80.0	
10502-AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.05	64.07	12.75	2.23	80.0	± 9.6 %
		Y	2.63	67.51	14.92		80.0	
		Z	2.46	65.95	14.37		80.0	
10503-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.23	67.47	16.03	2.23	80.0	± 9.6 %
		Y	2.79	71.03	18.01		80.0	
		Z	2.54	68.82	16.98		80.0	
10504-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.48	65.75	15.00	2.23	80.0	± 9.6 %
		Y	2.88	68.10	16.48		80.0	
		Z	2.73	66.60	15.85		80.0	
10505-AAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.55	65.70	14.97	2.23	80.0	± 9.6 %
		Y	2.95	67.94	16.40		80.0	
		Z	2.81	66.54	15.82		80.0	
10506-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.76	68.04	16.58	2.23	80.0	± 9.6 %
		Y	3.29	70.96	18.14		80.0	
		Z	3.07	69.18	17.26		80.0	
10507-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.93	65.95	15.85	2.23	80.0	± 9.6 %
		Y	3.24	67.61	16.87		80.0	
		Z	3.14	66.53	16.37		80.0	

10508-AAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.03	65.86	15.84	2.23	80.0	± 9.6 %
		Y	3.33	67.40	16.79		80.0	
		Z	3.24	66.38	16.33		80.0	
10509-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.24	67.72	16.53	2.23	80.0	± 9.6 %
		Y	3.69	69.96	17.72		80.0	
		Z	3.51	68.56	17.03		80.0	
10510-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.43	65.97	16.12	2.23	80.0	± 9.6 %
		Y	3.71	67.32	16.91		80.0	
		Z	3.64	66.47	16.52		80.0	
10511-AAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.52	65.89	16.12	2.23	80.0	± 9.6 %
		Y	3.78	67.15	16.86		80.0	
		Z	3.71	66.32	16.49		80.0	
10512-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.22	68.47	16.72	2.23	80.0	± 9.6 %
		Y	3.79	71.22	18.12		80.0	
		Z	3.54	69.57	17.32		80.0	
10513-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.32	66.00	16.15	2.23	80.0	± 9.6 %
		Y	3.60	67.43	16.98		80.0	
		Z	3.52	66.56	16.56		80.0	
10514-AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.39	65.79	16.10	2.23	80.0	± 9.6 %
		Y	3.64	67.11	16.88		80.0	
		Z	3.57	66.28	16.49		80.0	
10515-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	0.88	62.44	13.81	0.00	150.0	± 9.6 %
		Y	0.96	63.62	14.88		150.0	
		Z	0.87	62.07	13.59		150.0	
10516-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	0.45	66.98	14.48	0.00	150.0	± 9.6 %
		Y	0.65	72.72	18.47		150.0	
		Z	0.42	65.95	13.66		150.0	
10517-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	X	0.70	63.68	13.97	0.00	150.0	± 9.6 %
		Y	0.81	65.65	15.62		150.0	
		Z	0.69	63.23	13.65		150.0	
10518-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.21	66.61	15.96	0.00	150.0	± 9.6 %
		Y	4.32	66.98	16.20		150.0	
		Z	4.31	66.42	15.93		150.0	
10519-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	4.34	66.77	16.04	0.00	150.0	± 9.6 %
		Y	4.46	67.14	16.28		150.0	
		Z	4.46	66.61	16.03		150.0	
10520-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.20	66.68	15.95	0.00	150.0	± 9.6 %
		Y	4.32	67.07	16.20		150.0	
		Z	4.31	66.53	15.94		150.0	
10521-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	4.13	66.63	15.92	0.00	150.0	± 9.6 %
		Y	4.25	67.04	16.18		150.0	
		Z	4.24	66.49	15.91		150.0	
10522-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	4.17	66.72	15.99	0.00	150.0	± 9.6 %
		Y	4.29	67.14	16.26		150.0	
		Z	4.30	66.63	16.02		150.0	

10523-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	4.12	66.80	15.96	0.00	150.0	± 9.6 %
		Y	4.24	67.19	16.22		150.0	
		Z	4.21	66.57	15.90		150.0	
10524-AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	4.13	66.73	16.01	0.00	150.0	± 9.6 %
		Y	4.25	67.13	16.27		150.0	
		Z	4.25	66.57	15.99		150.0	
10525-AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	4.18	65.86	15.65	0.00	150.0	± 9.6 %
		Y	4.29	66.26	15.91		150.0	
		Z	4.27	65.65	15.61		150.0	
10526-AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	4.28	66.10	15.76	0.00	150.0	± 9.6 %
		Y	4.41	66.52	16.01		150.0	
		Z	4.40	65.94	15.73		150.0	
10527-AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	4.22	66.07	15.69	0.00	150.0	± 9.6 %
		Y	4.34	66.49	15.96		150.0	
		Z	4.33	65.90	15.66		150.0	
10528-AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	4.23	66.08	15.73	0.00	150.0	± 9.6 %
		Y	4.36	66.51	15.99		150.0	
		Z	4.34	65.91	15.70		150.0	
10529-AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	4.23	66.08	15.73	0.00	150.0	± 9.6 %
		Y	4.36	66.51	15.99		150.0	
		Z	4.34	65.91	15.70		150.0	
10531-AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	4.19	66.07	15.68	0.00	150.0	± 9.6 %
		Y	4.32	66.52	15.96		150.0	
		Z	4.31	65.94	15.68		150.0	
10532-AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	X	4.08	65.93	15.61	0.00	150.0	± 9.6 %
		Y	4.20	66.39	15.90		150.0	
		Z	4.19	65.79	15.60		150.0	
10533-AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	4.23	66.16	15.73	0.00	150.0	± 9.6 %
		Y	4.36	66.60	16.00		150.0	
		Z	4.35	65.98	15.69		150.0	
10534-AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	4.82	66.10	15.85	0.00	150.0	± 9.6 %
		Y	4.91	66.46	16.04		150.0	
		Z	4.91	66.02	15.83		150.0	
10535-AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	4.85	66.20	15.91	0.00	150.0	± 9.6 %
		Y	4.94	66.56	16.09		150.0	
		Z	4.97	66.17	15.90		150.0	
10536-AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	4.74	66.19	15.87	0.00	150.0	± 9.6 %
		Y	4.84	66.58	16.08		150.0	
		Z	4.85	66.14	15.86		150.0	
10537-AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	4.82	66.26	15.91	0.00	150.0	± 9.6 %
		Y	4.91	66.59	16.08		150.0	
		Z	4.91	66.13	15.86		150.0	
10538-AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	4.87	66.17	15.91	0.00	150.0	± 9.6 %
		Y	4.97	66.52	16.09		150.0	
		Z	4.98	66.12	15.90		150.0	
10540-AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	4.80	66.12	15.90	0.00	150.0	± 9.6 %
		Y	4.90	66.49	16.09		150.0	
		Z	4.91	66.07	15.89		150.0	

10541-AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	4.79	66.06	15.85	0.00	150.0	± 9.6 %
		Y	4.89	66.43	16.04		150.0	
		Z	4.89	65.96	15.82		150.0	
10542-AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	X	4.94	66.17	15.92	0.00	150.0	± 9.6 %
		Y	5.04	66.51	16.10		150.0	
		Z	5.05	66.09	15.90		150.0	
10543-AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	5.03	66.31	16.03	0.00	150.0	± 9.6 %
		Y	5.11	66.60	16.17		150.0	
		Z	5.12	66.17	15.97		150.0	
10544-AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	5.18	66.16	15.86	0.00	150.0	± 9.6 %
		Y	5.26	66.52	16.02		150.0	
		Z	5.26	66.12	15.84		150.0	
10545-AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.36	66.65	16.06	0.00	150.0	± 9.6 %
		Y	5.42	66.93	16.19		150.0	
		Z	5.45	66.61	16.04		150.0	
10546-AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.20	66.27	15.88	0.00	150.0	± 9.6 %
		Y	5.29	66.63	16.05		150.0	
		Z	5.29	66.25	15.87		150.0	
10547-AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	5.31	66.50	15.99	0.00	150.0	± 9.6 %
		Y	5.37	66.75	16.11		150.0	
		Z	5.38	66.37	15.93		150.0	
10548-AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	5.41	66.98	16.21	0.00	150.0	± 9.6 %
		Y	5.49	67.30	16.36		150.0	
		Z	5.57	67.13	16.28		150.0	
10550-AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.30	66.60	16.06	0.00	150.0	± 9.6 %
		Y	5.35	66.83	16.16		150.0	
		Z	5.37	66.46	15.99		150.0	
10551-AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	5.19	66.21	15.83	0.00	150.0	± 9.6 %
		Y	5.28	66.60	16.01		150.0	
		Z	5.30	66.24	15.84		150.0	
10552-AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	5.18	66.29	15.86	0.00	150.0	± 9.6 %
		Y	5.27	66.65	16.04		150.0	
		Z	5.26	66.20	15.82		150.0	
10553-AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.23	66.22	15.86	0.00	150.0	± 9.6 %
		Y	5.32	66.58	16.03		150.0	
		Z	5.32	66.18	15.85		150.0	
10554-AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.62	66.51	15.95	0.00	150.0	± 9.6 %
		Y	5.68	66.84	16.09		150.0	
		Z	5.69	66.48	15.94		150.0	
10555-AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	5.69	66.71	16.04	0.00	150.0	± 9.6 %
		Y	5.76	67.04	16.18		150.0	
		Z	5.79	66.75	16.05		150.0	
10556-AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	5.75	66.88	16.11	0.00	150.0	± 9.6 %
		Y	5.80	67.16	16.23		150.0	
		Z	5.83	66.85	16.10		150.0	
10557-AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	5.69	66.70	16.04	0.00	150.0	± 9.6 %
		Y	5.76	67.04	16.19		150.0	
		Z	5.77	66.69	16.03		150.0	

10558-AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	5.67	66.68	16.05	0.00	150.0	± 9.6 %
		Y	5.76	67.07	16.22		150.0	
		Z	5.80	66.79	16.10		150.0	
10560-AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	X	5.71	66.66	16.07	0.00	150.0	± 9.6 %
		Y	5.79	67.02	16.23		150.0	
		Z	5.81	66.69	16.09		150.0	
10561-AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	5.65	66.65	16.10	0.00	150.0	± 9.6 %
		Y	5.72	67.00	16.25		150.0	
		Z	5.75	66.69	16.12		150.0	
10562-AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	5.68	66.77	16.16	0.00	150.0	± 9.6 %
		Y	5.77	67.15	16.33		150.0	
		Z	5.80	66.87	16.21		150.0	
10563-AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	X	5.80	66.82	16.15	0.00	150.0	± 9.6 %
		Y	5.88	67.15	16.29		150.0	
		Z	5.91	66.85	16.17		150.0	
10564-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	X	4.52	66.62	16.09	0.46	150.0	± 9.6 %
		Y	4.63	66.97	16.32		150.0	
		Z	4.63	66.48	16.09		150.0	
10565-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	X	4.71	67.05	16.42	0.46	150.0	± 9.6 %
		Y	4.82	67.38	16.63		150.0	
		Z	4.83	66.91	16.42		150.0	
10566-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	X	4.54	66.82	16.20	0.46	150.0	± 9.6 %
		Y	4.65	67.19	16.43		150.0	
		Z	4.66	66.71	16.22		150.0	
10567-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	X	4.58	67.25	16.61	0.46	150.0	± 9.6 %
		Y	4.69	67.60	16.82		150.0	
		Z	4.69	67.12	16.60		150.0	
10568-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	X	4.42	66.46	15.88	0.46	150.0	± 9.6 %
		Y	4.54	66.88	16.15		150.0	
		Z	4.56	66.45	15.95		150.0	
10569-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	X	4.58	67.53	16.78	0.46	150.0	± 9.6 %
		Y	4.68	67.86	16.97		150.0	
		Z	4.68	67.31	16.72		150.0	
10570-AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	X	4.57	67.27	16.64	0.46	150.0	± 9.6 %
		Y	4.68	67.61	16.85		150.0	
		Z	4.69	67.12	16.62		150.0	
10571-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	0.99	62.81	14.23	0.46	130.0	± 9.6 %
		Y	1.09	64.12	15.35		130.0	
		Z	1.00	62.69	14.25		130.0	
10572-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	1.00	63.25	14.53	0.46	130.0	± 9.6 %
		Y	1.10	64.66	15.71		130.0	
		Z	1.00	63.12	14.54		130.0	
10573-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	0.77	71.94	17.18	0.46	130.0	± 9.6 %
		Y	1.53	83.79	23.08		130.0	
		Z	0.78	71.84	17.05		130.0	
10574-AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	X	0.97	67.27	16.73	0.46	130.0	± 9.6 %
		Y	1.16	70.12	18.67		130.0	
		Z	0.98	67.08	16.66		130.0	