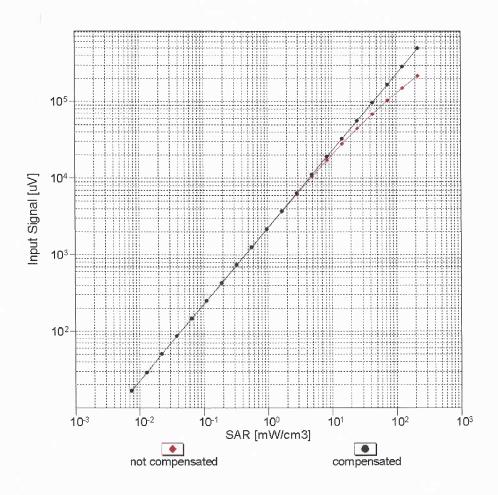
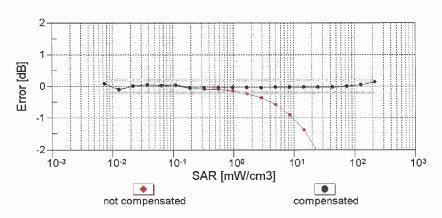
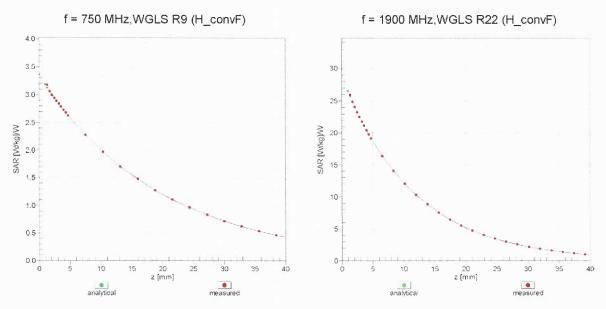
Dynamic Range f(SAR_{head}) (TEM cell , f_{eval}= 1900 MHz)



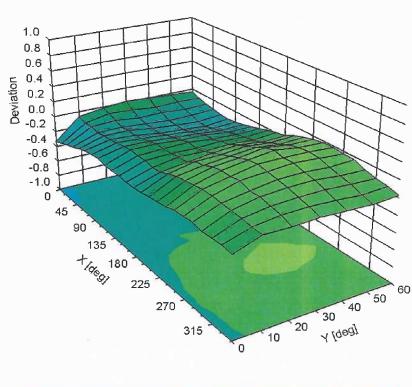


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Liquid Error (ϕ, ϑ) , f = 900 MHz



DASY/EASY - Parameters of Probe: EX3DV4 - SN:3693

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	107.3
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 dBõV	С	D dB	VR mV	Max Unc ^E (k=2)
0	CW	Х	0.00	0.00	1.00	0.00	153.2	± 3.5 %
		Υ	0.00	0.00	1.00		144.5	
40040	0.4577/101/101/101/101/101/101/101/101/101/1	Ζ	0.00	0.00	1.00		151.4	
10010- CAA	SAR Validation (Square, 100ms, 10ms)	X	2.46	65.57	10.33	10.00	20.0	± 9.6 %
		Υ	2.58	66.85	10.94		20.0	
40044	LIMTO EDD (MODAM)	Z	1.86	62.99	8.17		20.0	
10011- CAB	UMTS-FDD (WCDMA)	X	0.96	69.29	15.51	0.00	150.0	± 9.6 %
		Y	0.93	66.88	14.68		150.0	
10012-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1	Z	0.96	69.60	15.68	0.44	150.0	
CAB	Mbps)	X	1.07	64.52	15.65	0.41	150.0	± 9.6 %
		Y	1.12	63.74	15.00		150.0	
10013-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	Z	1.05 4.64	64.42 67.04	15.37	1.46	150.0 150.0	1060/
CAB	OFDM, 6 Mbps)				17.28	1.46		± 9.6 %
		Y	4.69	66.78	16.99		150.0	
10021- DAC	GSM-FDD (TDMA, GMSK)	Z X	4.48 100.00	67.08 113.55	16.97 27.40	9.39	150.0 50.0	± 9.6 %
D/ 10		Υ	100.00	113.18	27.01		50.0	
		Ż	100.00	106.64	23.61		50.0	
10023- DAC	GPRS-FDD (TDMA, GMSK, TN 0)	X	100.00	113.06	27.24	9.57	50.0	± 9.6 %
		Υ	100.00	112.70	26.84		50.0	
		Z	32.97	94.20	20.54		50.0	
10024- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	Х	100.00	111.50	25.18	6.56	60.0	± 9.6 %
		Υ	100.00	111.79	25.25		60.0	
		Z	100.00	104.88	21.52		60.0	
10025- DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	Х	3.89	66.96	23.84	12.57	50.0	± 9.6 %
		Υ	4.25	70.19	25.75		50.0	
		Z	3.28	63.68	21.63		50.0	
10026- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	8.05	89.16	31.60	9.56	60.0	± 9.6 %
		Y	7.77	88.25	31.17		60.0	
10027-	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	Z	5.87 100.00	82.94 110.68	28.96 23.90	4.80	60.0 80.0	± 9.6 %
DAC		\ \ <u>\</u>	100.00	110.16	24.60	-	90.0	
		Z	100.00 100.00	112.16 104.54	24.62 20.49		80.0	
10028- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	100.00	109.55	22.62	3.55	100.0	± 9.6 %
		Y	100.00	113.50	24.48		100.0	
		Z	100.00	104.05	19.54		100.0	
10029- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	5.29	80.16	27.01	7.80	80.0	± 9.6 %
		Υ	5.14	79.09	26.35		80.0	
		Z	3.96	74.93	24.59		80.0	
10030- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	100.00	108.68	23.35	5.30	70.0	± 9.6 %
		Υ	100.00	109.67	23.80		70.0	
		Z	100.00	101.79	19.60		70.0	
10031- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Х	0.42	62.17	5.93	1.88	100.0	± 9.6 %
		Υ	100.00	107.91	20.81		100.0	
		Z	0.20	60.00	3.98		100.0	

10032- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Х	0.21	60.00	3.06	1.17	100.0	± 9.6 %
		Y	100.00	108.51	20.18	 	100.0	
****		Z	17.50	60.55	1.43		100.0	
10033- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	26.75	102.90	26.12	5.30	70.0	± 9.6 %
		Υ	11.41	91.98	23.49		70.0	
		Z	8.40	86.52	20.27		70.0	~
10034- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	X	3.04	75.65	15.32	1.88	100.0	± 9.6 %
		Υ	2.84	75.48	16.17		100.0	
		Z	1.44	68.36	11.69		100.0	
10035- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Х	1.53	69.13	12.32	1.17	100.0	± 9.6 %
		Υ	1.81	71.22	14.21		100.0	
		Z	0.97	65.45	10.03		100.0	
10036- CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	X	68.65	116.35	29.55	5.30	70.0	± 9.6 %
		Y	17.31	98.26	25.40		70.0	
4000=	LEEE 000 4E 4 E	Z	14.64	93.89	22.52		70.0	
10037- CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	2.53	73.73	14.61	1.88	100.0	± 9.6 %
		Υ	2.51	74.11	15.65		100.0	
10000		Z	1.27	67.18	11.19		100.0	
10038- CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Х	1.60	69.92	12.78	1.17	100.0	± 9.6 %
		Y	1.84	71.62	14.51		100.0	
10000		Z	0.99	65.91	10.38		100.0	
10039- CAB	CDMA2000 (1xRTT, RC1)	X	0.74	63.41	8.92	0.00	150.0	± 9.6 %
		Υ	1.23	68.14	12.51		150.0	
		Z	0.60	62.45	7.98		150.0	
10042- CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4- DQPSK, Halfrate)	X	100.00	108.18	24.00	7.78	50.0	± 9.6 %
		Υ	100.00	108.88	24.22		50.0	
		Z	10.97	81.94	15.63		50.0	
10044- CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	Х	0.00	65.90	22.17	0.00	150.0	± 9.6 %
		Y	0.01	122.92	0.71		150.0	
		Z	0.13	128.48	4.69		150.0	
10048- CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	14.87	85.35	21.09	13.80	25.0	± 9.6 %
		Υ	23.17	91.69	22.64		25.0	-"
		Z	6.22	71.44	14.68		25.0	
10049- CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	24.31	94.02	22.62	10.79	40.0	± 9.6 %
		Υ	43.77	101.49	24.30		40.0	
		Z	6.49	74.97	14.88		40.0	
10056- CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	X	18.56	94.19	24.49	9.03	50.0	± 9.6 %
		Υ	19.55	95.88	25.17		50.0	
40050	FROE FRE (TRIM)	Z	13.54	87.88	21.18		50.0	
10058- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	Х	4.17	75.85	24.49	6.55	100.0	± 9.6 %
		Y	4.09	74.81	23.76		100.0	
10059- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	X	3.25 1.13	71.57 66.04	22.39 16.48	0.61	100.0 110.0	± 9.6 %
UND	(NIDPO)	Y	1 16	64.00	15.50	ļ	1100	
		Z	1.16 1.07	64.80	15.58		110.0	ļ
10060-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5	X	100.00	65.37	15.92	4 20	110.0	1000
CAB	Mbps)			137.72	34.95	1.30	110.0	± 9.6 %
 -		Y	14.15	108.54	28.54		110.0	
		Z	100.00	142.16	36.45		110.0	

10061- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	Х	5.68	93.99	26.90	2.04	110.0	± 9.6 %
		Y	2.72	79.85	21.80	· · · · · · · · · · · · · · · · · · ·	110.0	
		Z	2.32	80.40	22.21		110.0	
10062- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	4.40	66.89	16.61	0.49	100.0	± 9.6 %
		Υ	4.48	66.72	16.41		100.0	
		Z	4.27	67.05	16.40		100.0	
10063- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	Х	4.43	67.03	16.74	0.72	100.0	± 9.6 %
		Υ	4.50	66.82	16.51		100.0	
		Z	4.29	67.16	16.50		100.0	
10064- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	Х	4.66	67.22	16.93	0.86	100.0	± 9.6 %
		Υ	4.74	67.02	16.71		100.0	
		Z	4.50	67.31	16.67		100.0	
10065- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	4.55	67.11	17.04	1.21	100.0	± 9.6 %
		Υ	4.62	66.89	16.79		100.0	
		Z	4.38	67.12	16.73		100.0	
10066- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	Х	4.57	67.14	17.22	1.46	100.0	± 9.6 %
		Y	4.64	66.91	16.95		100.0	
		Z	4.38	67.08	16.86		100.0	
10067- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	Х	4.87	67.48	17.74	2.04	100.0	± 9.6 %
		Υ	4.93	67.19	17.44		100.0	
		Z	4.65	67.30	17.29		100.0	
10068- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	Х	4.92	67.43	17.92	2.55	100.0	± 9.6 %
		Υ	4.97	67.13	17.61		100.0	
		Z	4.70	67.27	17.49		100.0	
10069- CAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	Х	4.98	67.46	18.11	2.67	100.0	± 9.6 %
		Υ	5.04	67.15	17.79		100.0	
7.04		Z	4.74	67.23	17.63		100.0	
10071- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	Х	4.75	67.16	17.60	1.99	100.0	± 9.6 %
		Υ	4.79	66.87	17.29		100.0	
		Z	4.57	67.14	17.25		100.0	
10072- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	Х	4.72	67.47	17.83	2.30	100.0	± 9.6 %
		Y	4.76	67.14	17.49		100.0	
		Z	4.51	67.32	17.42		100.0	
10073- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	4.81	67.75	18.22	2.83	100.0	± 9.6 %
		Υ	4.83	67.34	17.84		100.0	
		Z	4.58	67.54	17.76		100.0	
10074- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	Х	4.84	67.77	18.41	3.30	100.0	± 9.6 %
		Υ	4.84	67.30	18.00		100.0	
		Z	4.61	67.56	17.94		100.0	
10075- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	Х	4.88	67.82	18.68	3.82	90.0	± 9.6 %
		Y	4.87	67.35	18.27		90.0	
		Z	4.64	67.56	18.18		90.0	
10076- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	Х	4.93	67.72	18.87	4.15	90.0	± 9.6 %
		Υ	4.91	67.23	18.44		90.0	
		Z	4.68	67.42	18.33		90.0	
10077- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	Х	4.97	67.84	18.99	4.30	90.0	± 9.6 %
	, , , , , , , , , , , , , , , , , , , ,	Y	4.95	67.34	18.55	<u> </u>	90.0	İ
	+	Ż	4.72	67.54	18.46	1	90.0	t

10081- CAB	CDMA2000 (1xRTT, RC3)	X	0.36	60.00	6.17	0.00	150.0	± 9.6 %
		Y	0.59	63.42	9.69		150.0	-
		Z	0.32	60.00	5.85		150.0	
10082- CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4- DQPSK, Fullrate)	Х	0.70	60.00	4.28	4.77	80.0	± 9.6 %
		Υ	0.71	60.00	4.47		80.0	
		Z	0.69	60.00	2.91		80.0	
10090- DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	×	100.00	111.63	25.26	6.56	60.0	± 9.6 %
		Υ	100.00	111.84	25.29		60.0	
40007	LIMITO EDD (LIODDA)	Z	100.00	104.97	21.57		60.0	
10097- CAB	UMTS-FDD (HSDPA)	X	1.79	69.48	15.83	0.00	150.0	± 9.6 %
		Y	1.75	68.01	15.37		150.0	
10000	LIMTS EDD (HSUDA Subtrat S)	Z	1.85	70.58	16.07		150.0	
10098- CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.75	69.43	15.81	0.00	150.0	± 9.6 %
		Y	1.71	67.95	15.34		150.0	
10000	EDOE EDD (TDMA OBOX THEO II)	Z	1.81	70.51	16.05		150.0	
10099- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	Х	8.10	89.27	31.64	9.56	60.0	± 9.6 %
		Y	7.82	88.37	31.21		60.0	
40400	LITE EDD (OO ED) AA 10000 DD 00	Z	5.91	83.06	29.00		60.0	
10100- CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	Х	2.93	70.65	16.93	0.00	150.0	± 9.6 %
		Υ	2.91	69.88	16.50		150.0	
40404	LTE EDD (OG ED) A (OG)	Z	2.88	71.00	17.02		150.0	
10101- CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	Х	3.00	67.51	15.97	0.00	150.0	± 9.6 %
		Υ	3.06	67.25	15.75		150.0	
		Z	2.95	67.78	15.94		150.0	
10102- CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	Х	3.11	67.54	16.09	0.00	150.0	± 9.6 %
		Y	3.17	67.28	15.86		150.0	
		Z	3.06	67.84	16.07		150.0	
10103- CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	6.12	76.61	21.08	3.98	65.0	± 9.6 %
		Υ	6.02	75.69	20.46		65.0	
		Ζ	5.04	74.42	19.98		65.0	
10104- CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	Х	5.76	73.36	20.41	3.98	65.0	± 9.6 %
		Υ	5.82	73.01	20.04		65.0	"
···		Z	4.97	71.67	19.37		65.0	
10105- CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	Х	5.43	72.01	20.10	3.98	65.0	± 9.6 %
		Υ	5.60	72.12	19.94		65.0	
40466	LTE EDD (OO ED)	Z	4.63	70.08	18.95		65.0	
10108- CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	2.52	70.18	16.82	0.00	150.0	± 9.6 %
		Υ	2.51	69.21	16.32		150.0	
40465	1 77 75 75 75 75 75 75 75 75 75 75 75 75	Z	2.46	70.52	16.90		150.0	
10109- CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	2.65	67.63	15.85	0.00	150.0	± 9.6 %
		Y	2.71	67.20	15.60		150.0	
40440		Z	2.60	68.02	15.83		150.0	
10110- CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	Х	2.00	69.56	16.26	0.00	150.0	± 9.6 %
		Υ	2.00	68.38	15.78		150.0	· · · · · · · · · · · · · · · · · · ·
		Z	1.95	69.96	16.28	, and the second	150.0	
10111- CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.44	69.32	16.14	0.00	150.0	± 9.6 %
		Υ	2.45	68.42	15.85	<u> </u>	150.0	
		Z	2.47	70.27				1

10112-	LTE-FDD (SC-FDMA, 100% RB, 10	Х	2.78	67.70	15.93	0.00	150.0	± 9.6 %
CAE	MHz, 64-QAM)	^	2.70	07.70	15.95	0.00	150.0	I 9.0 %
		Υ	2.84	67.29	15.69		150.0	
		Z	2.74	68.15	15.94		150.0	
10113- CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	Х	2.59	69.51	16.30	0.00	150.0	± 9.6 %
		Υ	2.60	68.63	16.01		150.0	
		Z	2.62	70.47	16.44		150.0	****
10114- CAB	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	Х	4.85	67.15	16.53	0.00	150.0	± 9.6 %
		Υ	4.92	67.07	16.34		150.0	
		Z	4.74	67.31	16.39		150.0	
10115- CAB	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	Х	5.09	67.20	16.55	0.00	150.0	± 9.6 %
		Υ	5.17	67.14	16.39		150.0	
		Z	4.96	67.32	16.38		150.0	
10116- CAB	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	X	4.93	67.32	16.54	0.00	150.0	± 9.6 %
		Υ	5.01	67.26	16.37		150.0	
		Z	4.80	67.45	16.39		150.0	
10117- CAB	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	4.83	67.05	16.49	0.00	150.0	± 9.6 %
		Υ	4.92	67.03	16.34		150.0	
		Z	4.72	67.21	16.36		150.0	
10118- CAB	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	Х	5.18	67.45	16.68	0.00	150.0	± 9.6 %
		Υ	5.24	67.32	16.48		150.0	
		Z	5.01	67.45	16.45		150.0	
10119- CAB	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	X	4.93	67.35	16.56	0.00	150.0	± 9.6 %
		Y	5.00	67.26	16.38		150.0	
		Z	4.81	67.49	16.41		150.0	
10140- CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	3.12	67.54	15.99	0.00	150.0	± 9.6 %
		Υ	3.19	67.29	15.77		150.0	
		Z	3.06	67.85	15.96		150.0	
10141- CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	3.25	67.75	16.21	0.00	150.0	± 9.6 %
		Υ	3.32	67.47	15.98		150.0	
		Z	3.20	68.12	16.21		150.0	
10142- CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	Х	1.74	69.31	15.23	0.00	150.0	± 9.6 %
		Υ	1.76	68.27	15.08		150.0	
		Z	1.70	69.77	15.16		150.0	
10143- CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	Х	2.16	69.07	14.68	0.00	150.0	± 9.6 %
		Υ	2.25	68.80	15.00		150.0	
		Z	2.14	69.68	14.51		150.0	
10144- CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	Х	1.74	65.28	12.23	0.00	150.0	± 9.6 %
		Υ	1.92	65.76	12.95		150.0	
		Z	1.60	65.02	11.63		150.0	
10145- CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	0.58	60.00	6.08	0.00	150.0	± 9.6 %
		Υ	0.77	61.39	8.08		150.0	
		Z	0.51	60.00	5.48		150.0	
10146- CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	0.86	60.00	5.96	0.00	150.0	± 9.6 %
		Υ	1.06	60.98	7.22		150.0	
		Z	0.74	60.00	5.02		150.0	
10147- CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	Х	0.87	60.00	6.02	0.00	150.0	± 9.6 %
		Υ	1.11	61.42	7.56		150.0	
		Z	0.75	60.00	5.07		150.0	

10149-	LTE-FDD (SC-FDMA, 50% RB, 20 MHz,	Х	2.66	67.71	15.91	0.00	150.0	± 9.6 %
CAD	16-QAM)	-	0.70	07.00				
		Y	2.72	67.28	15.65		150.0	
10150-	LTE-FDD (SC-FDMA, 50% RB, 20 MHz,	Z	2.62 2.79	68.12 67.78	15.90 15.99	0.00	150.0 150.0	± 9.6 %
CAD	64-QAM)						100.0	2 0.0 70
		Υ	2.84	67.35	15.74		150.0	
		Z	2.75	68.24	16.00		150.0	
10151- CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	6.77	80.29	22.54	3.98	65.0	± 9.6 %
		Υ	6.33	78.29	21.53		65.0	
		Z	5.47	77.85	21.33		65.0	
10152- CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	Х	5.33	73.49	19.97	3.98	65.0	± 9.6 %
		Y	5.34	72.96	19.59		65.0	
		Ζ	4.49	71.58	18.77		65.0	
10153- CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	Х	5.80	74.93	21.00	3.98	65.0	± 9.6 %
		Υ	5.76	74.19	20.51		65.0	
		Z	4.93	73.13	19.88		65.0	
10154- CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	2.06	70.10	16.57	0.00	150.0	± 9.6 %
		Υ	2.05	68.80	16.03		150.0	
		Z	2.02	70.56	16.62		150.0	
10155- CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	Х	2.44	69.38	16.19	0.00	150.0	± 9.6 %
		Υ	2.45	68.46	15.88		150.0	
		Ζ	2.48	70.36	16.35		150.0	
10156- CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	Х	1.50	68.47	14.19	0.00	150.0	± 9.6 %
		Y	1.57	67.97	14.49		150.0	
		Ζ	1.45	68.72	13.95		150.0	
10157- CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	Х	1.49	64.88	11.44	0.00	150.0	± 9.6 %
		Y	1.72	65.90	12.60		150.0	†
		Z	1.33	64.34	10.66		150.0	
10158- CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	Х	2.60	69.64	16.38	0.00	150.0	± 9.6 %
		Y	2.61	68.72	16.07		150.0	
		Z	2.64	70.64	16.53		150.0	
10159- CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	1.55	65.11	11.61	0.00	150.0	± 9.6 %
		Y	1.80	66.26	12.82		150.0	
		Ζ	1.39	64.54	10.79		150.0	
10160- CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	Х	2.57	69.60	16.63	0.00	150.0	± 9.6 %
		Υ	2.56	68.57	16.14		150.0	
		Z	2.47	69.70	16.54		150.0	
10161- CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	2.67	67.78	15.84	0.00	150.0	± 9.6 %
		Υ	2.73	67.32	15.62		150.0	
		Ζ	2.63	68.26	15.83		150.0	
10162- CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	Х	2.79	68.04	16.00	0.00	150.0	± 9.6 %
		Υ	2.85	67.55	15.77		150.0	
		Z	2.75	68.57	16.01		150.0	
10166- CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	Х	3.17	69.79	19.57	3.01	150.0	± 9.6 %
		Y	3.20	68.89	18.78		150.0	
		Ζ	2.95	69.14	18.87		150.0	
10167- CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	Х	3.80	72.70	19.93	3.01	150.0	± 9.6 %
		Y	3.79	71.51	19.09		150.0	-

10168- CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	4.49	76.44	22.00	3.01	150.0	± 9.6 %
		Y	4.31	74.34	20.75		150.0	
		Z	4.29	76.38	21.59		150.0	
10169- CAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	Х	2.59	68.04	18.76	3.01	150.0	± 9.6 %
		Y	2.62	67.42	18.09		150.0	
		Z	2.53	67.98	18.27		150.0	
10170- CAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	Х	3.49	74.23	21.37	3.01	150.0	± 9.6 %
		Υ	3.41	72.75	20.32		150.0	
		Z	3.58	75.13	21.26		150.0	
10171- AAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	2.78	69.29	18.02	3.01	150.0	± 9.6 %
		Y	2.80	68.69	17.44		150.0	
10172-	LITE TOD (SC EDMA 4 DD 20 MILE	Z	2.71	69.37	17.54	6.00	150.0	1069/
CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	5.88	87.05 83.58	27.69 25.79	6.02	65.0 65.0	± 9.6 %
10173-	LTE-TDD (SC-FDMA, 1 RB, 20 MHz,	Z X	3.26 13.70	76.76 99.60	23.19 29.81	6.02	65.0 65.0	± 9.6 %
CAD	16-QAM)	Y	8.94	90.25	26.22	0.02	65.0	± 9.0 %
		_	7.04	88.51	25.48		65.0	
10174-	LTE-TDD (SC-FDMA, 1 RB, 20 MHz,	Z X	8.59	90.19	26.23	6.02	65.0	± 9.6 %
CAD	64-QAM)					0.02		1 9.0 %
		Y	7.13	85.48	24.05		65.0	<u> </u>
10175-	LTE EDD (CC EDMA 4 DD 40 MILE	Z	3.88	78.05	21.26	2.04	65.0	1069/
CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)		2.56	67.69	18.48	3.01	150.0	± 9.6 %
		Y	2.59	67.13	17.84		150.0	
40470		Z	2.49	67.60	17.97	0.04	150.0	1000
10176- CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	3.50	74.26	21.39	3.01	150.0	± 9.6 %
		Y	3.41	72.77	20.34		150.0	
40477	LTE EDD (OO EDMA 4 DD E MILE	Z	3.59	75.16	21.28	2.04	150.0	1000
10177- CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	2.58	67.83	18.56	3.01	150.0	± 9.6 %
		Y	2.61	67.26	17.92		150.0	
40470	1 TE EDD (00 ED)	Z	2.51	67.74	18.05	2.04	150.0	1000
10178- CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	3.47	74.07	21.28	3.01	150.0	± 9.6 %
		Y Z	3.39 3.55	72.61 74.95	20.24	-	150.0 150.0	
10179- CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	3.09	71.56	19.53	3.01	150.0	± 9.6 %
		Y	3.06	70.57	18.74	1	150.0	
		Z	3.07	71.92	19.18		150.0	
10180- CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	Х	2.77	69.24	17.98	3.01	150.0	± 9.6 %
		Υ	2.80	68.64	17.41		150.0	
		Z	2.71	69.32	17.51		150.0	
10181- CAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	Х	2.57	67.81	18.56	3.01	150.0	± 9.6 %
		Υ	2.61	67.24	17.92		150.0	
		Z	2.50	67.72	18.05		150.0	
10182- CAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	Х	3.47	74.04	21.27	3.01	150.0	± 9.6 %
		Υ	3.38	72.59	20.23		150.0	
		Z	3.55	74.92	21.15		150.0	
10183- AAC	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	2.77	69.22	17.97	3.01	150.0	± 9.6 %
		Υ	2.79	68.62	17.39		150.0	
		Z	2.70	69.30	17.49		150.0	

AAD QAM Y 2.80 68.68 17.43 150.0 10187- LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz. X 2.59 67.95 18.68 3.01 150.0	10184-	LTE-FDD (SC-FDMA, 1 RB, 3 MHz,	Х	2.58	67.85	18.58	3.01	150.0	± 9.6 %
CAD	CAD	QPSK)				ļ			
10185- LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16- X 3.48									
CAD QAM Y 3.40 72.66 20.27 150.0	10105	LTE EDD (CO EDMA 4 DD O MIL 40							
10186-							3.01		± 9.6 %
10186- LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64- X 2.78 69.28 18.01 3.01 150.0 ±9.6 9									
AAD QAM) Y 2.80 68.68 17.43 150.0 10187- CAE QPSK) LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, CAE QPSK) LTE-FD (SC-FDMA								150.0	
Total				2.78	69.28	18.01	3.01	150.0	± 9.6 %
10187- CAE OPSK)						17.43		150.0	
CAB				2.72		17.53		150.0	
TLF-FDD (SC-FDMA, 1 RB, 1.4 MHz, CAE 16-QAM)					67.95	18.68	3.01	150.0	± 9.6 %
10188- CAE			Υ			18.02		150.0	
CAE				2.53	67.88	18.18		150.0	
TE-FDD (SC-FDMA, 1 RB, 1.4 MHz, AB			Х	3.60	74.88	21.75	3.01	150.0	± 9.6 %
Time				3.49	73.27	20.64		150.0	
10189- AAE			Ζ	3.72	75.91	21.69			
Total			Х	2.84	69.72		3.01		± 9.6 %
Total				2.86	69.05	17.69		150.0	
LEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)			Z	2.78			***		**
Total			Х	4.24	66.83		0.00		± 9.6 %
Total			Y	4.33	66.71	16.05		150.0	
LEEE 802.11n (HT Greenfield, 39 Mbps, X 4.38 67.05 16.33 0.00 150.0 ±9.6 %			Z						
Total Tota			Х	4.38			0.00		± 9.6 %
Total Tota			Y	4.48	66.96	16.18		150.0	
Tell									
Y 4.51 66.98 16.20 150.0 150.0 150.0 150.0 2 4.31 67.35 16.24 150.0							0.00		± 9.6 %
Total			Y	4.51	66.98	16.20		150.0	
Total Tota									
Total							0.00		± 9.6 %
Total			Y	4.32	66.72	16.04	 	150 0	
Total									,
Y 4.48 66.96 16.19 150.0 10198-							0.00		± 9.6 %
10198- IEEE 802.11n (HT Mixed, 65 Mbps, 64- X 4.40 67.05 16.34 0.00 150.0 ± 9.6 %			Y	4.48	66.96	16.19		150.0	
10198- IEEE 802.11n (HT Mixed, 65 Mbps, 64- X 4.40 67.05 16.34 0.00 150.0 ± 9.6 %			Z						
Total Tota			Х				0.00		± 9.6 %
Total			Y	4.51	66.98	16.20		150.0	
10219- CAB BPSK) IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK) X 4.18 66.86 16.15 0.00 150.0 ± 9.6 % 10.20									
Total Column							0.00		± 9.6 %
Total Column			Υ	4.27	66.75	16.01		150.0	
10220- CAB QAM) EEE 802.11n (HT Mixed, 43.3 Mbps, 16- X 4.38 67.01 16.32 0.00 150.0 ± 9.6 %			-						
Total Tota							0.00		± 9.6 %
Total Care Total Care Care Care Care Care Care Care Care				4.48		16.17		150.0	
10221- CAB QAM) Y 4.52 66.92 16.19 150.0 10222- CAB BPSK) Y 4.89 67.00 16.33 0.00 150.0 ± 9.6 % 150.0 ± 9.6 % 150.0 ± 9.6 % 150.0 ± 9.6 % 150.0 ± 9.6 % 150.0 ± 9.6 % 150.0 ± 9.6 % 150.0 ± 9.6 % 150.0 ± 9.6 %			Z						
Z 4.32 67.30 16.23 150.0 10222-			X				0.00		± 9.6 %
Z 4.32 67.30 16.23 150.0 10222- CAB BPSK) Z 4.32 67.30 16.23 150.0 X 4.81 67.05 16.49 0.00 150.0 ± 9.6 % Y 4.89 67.00 16.32 150.0			Y	4.52	66.92	16.19		150.0	
10222- CAB BPSK) X 4.81 67.05 16.49 0.00 150.0 ± 9.6 % Y 4.89 67.00 16.32 150.0									
Y 4.89 67.00 16.32 150.0							0.00		± 9.6 %
				4.89	67.00	16.32		150.0	
			Z	4.70	67.21	16.35		150.0	

10223-	IEEE 802.11n (HT Mixed, 90 Mbps, 16-	Х	5.06	67.21	16.57	0.00	150.0	± 9.6 %
CAB	QAM)							<u>-</u>
		Y	5.16	67.20	16.44	.,,	150.0	
		Z	4.91	67.28	16.38		150.0	
10224- CAB	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	X	4.85	67.17	16.47	0.00	150.0	± 9.6 %
		Υ	4.93	67.12	16.31		150.0	
		Z	4.74	67.36	16.35		150.0	
10225- CAB	UMTS-FDD (HSPA+)	Х	2.51	66.34	14.80	0.00	150.0	± 9.6 %
		Υ	2.61	66.13	14.83		150.0	1
		Z	2.46	66.75	14.59		150.0	
10226- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	Х	15.41	101.95	30.62	6.02	65.0	± 9.6 %
		Υ	9.61	91.66	26.78		65.0	
		Z	7.80	90.47	26.24		65.0	
10227- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	Х	15.19	100.12	29.36	6.02	65.0	± 9.6 %
		Y	9.40	90.05	25.60		65.0	
		Z	7.35	88.27	24.80		65.0	
10228- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	Х	7.70	93.10	29.94	6.02	65.0	± 9.6 %
		Υ	6.07	86.55	26.97		65.0	
		Z	4.20	82.08	25.39		65.0	
10229- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	Х	13.82	99.74	29.86	6.02	65.0	± 9.6 %
		Y	9.01	90.36	26.26		65.0	
		Z	7.11	88.67	25.54		65.0	
10230- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	X	13.48	97.89	28.61	6.02	65.0	± 9.6 %
		Υ	8.74	88.75	25.10		65.0	
		Z	6.65	86.51	24.13		65.0	
10231- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	7.23	91.68	29.37	6.02	65.0	± 9.6 %
0, 12	Q, Oily	Y	5.81	85.62	26.55		65.0	
		Z	4.00	81.04	24.89		65.0	
10232- CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	X	13.79	99.72	29.85	6.02	65.0	± 9.6 %
CAD	G/NVI)	Y	8.99	90.35	26.26		65.0	
		Z	7.09	88.64	25.54		65.0	
10233- CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-	X	13.43	97.83	28.60	6.02	65.0	± 9.6 %
CAD	QAM)	Y	8.72	88.71	25.09		65.0	
		+	6.62	86.46	24.12		65.0	
10234- CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	6.91	90.59	28.86	6.02	65.0	± 9.6 %
		Y	5.61	84.84	26.14		65.0	
.,		Z	3.86	80.24	24.45		65.0	
10235- CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	13.83	99.78	29.87	6.02	65.0	± 9.6 %
	1	Y	9.00	90.38	26.27		65.0	
		Ż	7.09	88.66	25.55		65.0	
10236- CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	13.62	98.04	28.65	6.02	65.0	± 9.6 %
		Y	8.81	88.86	25.13		65.0	1
		Z	6.70	86.60	24.16		65.0	
10237- CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	7.24	91.74	29.39	6.02	65.0	± 9.6 %
		Y	5.81	85.65	26.56		65.0	
		Ż	3.99	81.03	24.90		65.0	1
10238- CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	13.76	99.70	29.84	6.02	65.0	± 9.6 %
J, (D	10 00 mm	Y	8.97	90.32	26.25		65.0	<u> </u>
		Z	7.07	88.61			+	
			1.01	1 00.01	25.52	L	65.0	L

Y	0239-	LTE-TDD (SC-FDMA, 1 RB, 15 MHz,	Х	13.37	97.78	28.58	6.02	65.0	± 9.6 %
TO240- LTE-TDD (SC-FDMA, 1 RB, 15 MHz, X 7.22 91.71 29.38 6.02 CAD CAD CPSK)	AD	64-QAM)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	- 0.00	00.07	05.00			
10240								65.0	
Y 5.80 85.63 26.55 2 3.99 81.03 24.89 24.81							6.02	65.0 65.0	± 9.6 %
10241- LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, X 7.92 83.31 26.43 6.98	<u> </u>	QF SI()	Y	5.80	85.63	26.55		65.0	
10241- CAA								65.0	1
CAA	0241-	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz,					6.98	65.0	± 9.6 %
Total	AA		Y					65.0	
10242- LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, X 7.05 80.89 25.37 6.98								65.0	
Y 6.86 79.38 24.43							6.98	65.0	± 9.6 %
Total			Υ	6.86	79.38	24.43		65.0	
10243- CAA QPSK CAA QPSK CAA QPSK CAA QPSK QP								65.0	
The first color of the first c			Х	5.61			6.98	65.0	± 9.6 %
10244- CAB				5.60	75.93	23.88		65.0	
CAB 16-QAM) Y 4.13 70.49 14.93 14.93 10.245- CAB 64-QAM) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, X 3.85 69.59 14.25 3.98 64-QAM) Y 4.01 69.84 14.58 2 2.45 64.72 10.74 10.74 16.98 17.06 16.51 3.98 16.51				4.41	73.05	22.53		65.0	
Tender T			Х	4.02	70.41	14.69	3.98	65.0	± 9.6 %
10245- CAB								65.0	
CAB 64-QAM) Y 4.01 69.84 14.58 Z 2.45 64.72 10.74 10246- QPSK) Y 4.21 74.30 17.06 Z 2.46 68.40 13.32 10247- CAD 16-QAM) Y 4.26 71.62 16.65 Z 3.07 68.30 14.10 10248- CAD 64-QAM) Y 4.18 70.90 16.31 Z 2.99 67.51 13.71 10249- CAD QPSK) Y 6.04 80.32 20.70 QPSK) Y 6.04 80.32 20.70								65.0	
Total							3.98	65.0	± 9.6 %
10246- CAB QPSK CAB QPSK QPSK QPSK QPSK Y 4.21 74.30 17.06 Z 2.46 68.40 13.32 Z 2.46 68.40 13.32 Z 2.46					69.84	14.58		65.0	
CAB QPSK) Y 4.21 74.30 17.06 Z 2.46 68.40 13.32 10247- LTE-TDD (SC-FDMA, 50% RB, 5 MHz, CAD 16-QAM) Y 4.26 71.62 16.65 Z 3.07 68.30 14.10 10248- LTE-TDD (SC-FDMA, 50% RB, 5 MHz, CAD 64-QAM) Y 4.18 70.90 16.31 Z 2.99 67.51 13.71 10249- LTE-TDD (SC-FDMA, 50% RB, 5 MHz, CAD QPSK) Y 6.04 80.32 20.70 Z 4.60 77.74 18.93 10250- LTE-TDD (SC-FDMA, 50% RB, 10 MHz, CAD 16-QAM) Y 5.49 75.70 20.56 Z 4.71 74.90 19.83 10251- LTE-TDD (SC-FDMA, 50% RB, 10 MHz, CAD 64-QAM) Y 5.08 73.10 19.02						·		65.0	
Tender T			Х	4.04	73.92	16.51	3.98	65.0	± 9.6 %
10247- CAD 16-QAM) Y 4.26 71.62 16.65 Z 3.07 68.30 14.10 10248- CAD 64-QAM) Y 4.18 70.90 16.31 Z 2.99 67.51 13.71 10249- CAD QPSK) Y 6.04 80.32 20.70 Z 4.60 77.74 18.93 10250- CAD 16-QAM) Y 5.49 75.70 20.56 Z 4.71 74.90 19.83 10251- CAD 64-QAM) Y 5.08 73.10 19.02 Y 5.08 73.10 19.02						17.06		65.0	
CAD 16-QAM) Y 4.26 71.62 16.65 Z 3.07 68.30 14.10 10248- CAD 64-QAM) Y 4.18 70.90 16.31 Z 2.99 67.51 13.71 10249- CAD QPSK) Y 6.04 80.32 20.70 Z 4.60 77.74 18.93 10250- CAD 16-QAM) Y 5.49 75.70 20.56 Z 4.71 74.90 19.83 10251- CAD 64-QAM) Y 5.08 73.10 19.02								65.0	
Terror T					71.43		3.98	65.0	± 9.6 %
10248-CAD LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) X 3.99 70.52 15.86 3.98 Y 4.18 70.90 16.31 2 2.99 67.51 13.71 10249-CAD LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) X 7.21 83.53 21.70 3.98 10250-CAD LTE-TDD (SC-FDMA, 50% RB, 10 MHz, CAD X 5.73 77.74 18.93 10250-CAD LTE-TDD (SC-FDMA, 50% RB, 10 MHz, CAD X 5.73 77.13 21.21 3.98 10251-CAD LTE-TDD (SC-FDMA, 50% RB, 10 MHz, CAD X 5.08 73.68 19.28 3.98 10251-CAD LTE-TDD (SC-FDMA, 50% RB, 10 MHz, CAD X 5.08 73.68 19.28 3.98								65.0	
CAD 64-QAM) Y 4.18 70.90 16.31 10249- CAD LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) X 7.21 83.53 21.70 3.98 Y 6.04 80.32 20.70 20								65.0	
Tender T							3.98	65.0	± 9.6 %
10249- CAD LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) X 7.21 83.53 21.70 3.98 Y 6.04 80.32 20.70 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>65.0</td><td></td></td<>								65.0	
CAD QPSK) Y 6.04 80.32 20.70 10250- CAD LTE-TDD (SC-FDMA, 50% RB, 10 MHz, CAD X 5.73 77.13 21.21 3.98 Y 5.49 75.70 20.56 2 4.71 74.90 19.83 10251- CAD LTE-TDD (SC-FDMA, 50% RB, 10 MHz, CAD X 5.08 73.68 19.28 3.98 Y 5.08 73.10 19.02 19.02			Z	2.99	67.51	13.71		65.0	
Tender T				7.21	83.53	21.70	3.98	65.0	± 9.6 %
10250- CAD LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) X 5.73 77.13 21.21 3.98 Y 5.49 75.70 20.56 2 4.71 74.90 19.83 10251- CAD LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) X 5.08 73.68 19.28 3.98 Y 5.08 73.10 19.02 19.02 19.02				6.04	80.32	20.70		65.0	
CAD 16-QAM) Y 5.49 75.70 20.56 20.5			Z		77.74	18.93		65.0	
Z 4.71 74.90 19.83 10251- LTE-TDD (SC-FDMA, 50% RB, 10 MHz, X 5.08 73.68 19.28 3.98 10.28 10					77.13		3.98	65.0	± 9.6 %
10251- LTE-TDD (SC-FDMA, 50% RB, 10 MHz, X 5.08 73.68 19.28 3.98 CAD 64-QAM) Y 5.08 73.10 19.02								65.0	
CAD 64-QAM) Y 5.08 73.10 19.02	2054	LTE TOD (OO FDL)						65.0	
							3.98	65.0	± 9.6 %
Z 4.15 71.43 17.80								65.0	
	2052	LTE TOD (OO EDIM 500) DD 40 :::						65.0	
CAD QPSK)							3.98	65.0	± 9.6 %
								65.0	
							3.98	65.0 65.0	± 9.6 %
	<u> </u>	IO-WAIVI)	-	5 27	70 57	10.22		GE O	
							 	65.0	
							3.98	65.0 65.0	± 9.6 %
		V 1 50 1111)	V	5.63	73.63	20 11	 	65.0	
			-					65.0	

10255- CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	6.41	79.52	22.36	3.98	65.0	± 9.6 %
···-		Y	6.03	77.61	21.41		65.0	
		Z	5.18	77.05	21.09		65.0	
10256- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	2.62	64.77	10.66	3.98	65.0	± 9.6 %
		Y	2.89	65.71	11.45		65.0	
		Z	1.74	61.55	7.76		65.0	
10257- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	Х	2.56	64.22	10.26	3.98	65.0	± 9.6 %
		Υ	2.83	65.16	11.06		65.0	
		Z	1.73	61.29	7.50		65.0	
10258- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	Х	2.33	65.98	11.67	3.98	65.0	± 9.6 %
		Υ	2.74	67.85	13.09		65.0	
10070		Z	1.55	62.66	9.04		65.0	
10259- CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	4.78	73.82	18.19	3.98	65.0	± 9.6 %
		Υ	4.76	73.30	18.14		65.0	
40000	LITE TOD (OO EDIA)	Z	3.71	70.96	16.29		65.0	
10260- CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	4.75	73.36	17.98	3.98	65.0	± 9.6 %
•		Y	4.77	72.96	17.98		65.0	
40004	LITE TOD (OO EDIN 1000) ED	Z	3.71	70.59	16.10		65.0	
10261- CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	7.00	83.14	22.24	3.98	65.0	± 9.6 %
· · · · · · · · · · · · · · · · · · ·		Y	5.96	79.88	21.10		65.0	
10000		Ζ	4.89	78.58	20.00		65.0	
10262- CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	5.70	77.00	21.13	3.98	65.0	± 9.6 %
		Υ	5.47	75.60	20.50		65.0	
		Ζ	4.68	74.76	19.75		65.0	
10263- CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	Х	5.08	73.66	19.27	3.98	65.0	± 9.6 %
	·	Υ	5.07	73.07	19.02		65.0	
		Z	4.15	71.42	17.80		65.0	
10264- CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	7.58	84.58	23.79	3.98	65.0	± 9.6 %
		Υ	6.49	81.02	22.35		65.0	
		Z	5.63	80.83	22.06		65.0	
10265- CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	Х	5.33	73.50	19.98	3.98	65.0	± 9.6 %
		Υ	5.34	72.96	19.60		65.0	
		Z	4.49	71.58	18.78		65.0	
10266- CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	Х	5.80	74.91	20.98	3.98	65.0	± 9.6 %
		Υ	5.76	74.17	20.50		65.0	
		Z	4.93	73.11	19.87		65.0	
10267- CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	Х	6.75	80.22	22.51	3.98	65.0	± 9.6 %
		Y	6.31	78.24	21.51		65.0	
		Z	5.45	77.78	21.30	<u> </u>	65.0	
10268- CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	5.93	73.37	20.49	3.98	65.0	± 9.6 %
		Y	5.99	73.01	20.12		65.0	
		Z	5.16	71.83	19.50		65.0	
10269- CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	Х	5.93	72.96	20.33	3.98	65.0	± 9.6 %
		Υ	5.99	72.64	20.00		65.0	
		Z	5.19	71.51	19.38		65.0	
10270- CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	Х	6.27	76.42	21.20	3.98	65.0	± 9.6 %
		Y	6.15	75.42	20.55		65.0	
		Z	5.37	74.84	20.32		65.0	

10274- CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	Х	2.38	67.09	14.90	0.00	150.0	± 9.6 %
		Υ	2.44	66.67	14.85		150.0	
		Z	2.34	67.57	14.77		150.0	
10275- CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.49	69.19	15.59	0.00	150.0	± 9.6 %
		Υ	1.48	67.68	15.09		150.0	
		Ζ	1.49	69.77	15.72		150.0	
10277- CAA	PHS (QPSK)	X	2.09	60.92	6.52	9.03	50.0	± 9.6 %
		Y	1.99	60.88	6.43		50.0	
		Z	1.56	59.12	4.50		50.0	
10278- CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	Х	3.33	66.21	11.58	9.03	50.0	± 9.6 %
		Y	3.45	67.40	12.36		50.0	
40070	DUO (ODOIC DIA OCALALLE D. II. (CO.OO)	Z	2.52	63.38	9.00		50.0	
10279- CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	X	3.39	66.39	11.72	9.03	50.0	± 9.6 %
		Y	3.53	67.62	12.52		50.0	
10200	CDMA2000 DC4 COEE 5 "D 1	Z	2.56	63.50	9.12		50.0	
10290- AAB	CDMA2000, RC1, SO55, Full Rate	X	0.61	61.53	7.60	0.00	150.0	± 9.6 %
		Y	0.95	65.07	10.75		150.0	
10001	CDMAROOD BOO COSS 5 H.D.	Z	0.49	60.68	6.68		150.0	
10291- AAB	CDMA2000, RC3, SO55, Full Rate	X	0.35	60.00	6.15	0.00	150.0	± 9.6 %
		Y	0.58	63.25	9.58		150.0	
10292-	CDMA2000 DC2 CO20 Full D-4-	Z	0.32	60.00	5.83		150.0	
AAB	CDMA2000, RC3, SO32, Full Rate	Х	0.39	61.31	7.18	0.00	150.0	± 9.6 %
		Y	0.79	67.34	11.99		150.0	
40000	071410000 700 700 710	Z	0.36	61.33	6.91		150.0	
10293- AAB	CDMA2000, RC3, SO3, Full Rate	Х	0.70	66.46	10.24	0.00	150.0	± 9.6 %
		Υ	1.84	77.49	16.58		150.0	
10005	071410000 704 700 404	Ζ	0.96	69.80	11.25		150.0	
10295- AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	Х	24.25	96.58	25.60	9.03	50.0	± 9.6 %
· · · · ·		Υ	13.21	88.89	23.79		50.0	
		Z	17.74	90.30	22.44		50.0	
10297- AAC	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	Х	2.54	70.33	16.91	0.00	150.0	± 9.6 %
		Υ	2.52	69.32	16.40		150.0	
40000		Z	2.48	70.69	17.00		150.0	
10298- AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	Х	0.87	62.84	9.39	0.00	150.0	± 9.6 %
		Υ	1.14	64.99	11.49		150.0	
40000	LITE EDD (OO EDL)	Z	0.74	62.03	8.44		150.0	
10299- AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	1.31	62.98	9.06	0.00	150.0	± 9.6 %
	741,	Υ	1.60	64.50	10.42		150.0	
10000	TE EDD (0.0 ==	Ζ	0.95	60.67	6.76		150.0	
10300- AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	1.06	60.58	7.00	0.00	150.0	± 9.6 %
		Y	1.28	61.71	8.21		150.0	
40004	IEEE 000 40 MINANY (CC.)	Ζ	0.80	59.16	5.20		150.0	
10301- AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	4.72	67.05	17.86	4.17	50.0	± 9.6 %
		Υ	4.49	65.52	17.15		50.0	
40000	IEEE 000 40 11111111111111111111111111111	Z	4.22	65.84	16.97		50.0	
10302- AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	Х	5.04	66.76	18.08	4.96	50.0	± 9.6 %
A/VA							+	
		Υ	5.00	66.22	17.91		50.0	

10303-	IEEE 802.16e WiMAX (31:15, 5ms,	Х	4.99	67.71	18.65	4.96	50.0	± 9.6 %
AAA	10MHz, 64QAM, PUSC)	-	4 70	25.00	4==0			
		Y	4.76 4.52	65.90	17.73 17.75		50.0	
10304-	IEEE 802.16e WiMAX (29:18, 5ms,	X	4.61	66.56 66.36	17.75	4.17	50.0 50.0	± 9.6 %
AAA	10MHz, 64QAM, PUSC)							
	7	Y	4.57	65.80	17.25		50.0	
10005		Z	4.26	65.88	16.92		50.0	
10305- AAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	5.19	72.10	20.50	6.02	35.0	± 9.6 %
		Y	4.47	68.84	19.43		35.0	
10306-	IEEE 802.16e WiMAX (29:18, 10ms,	Z X	4.13 5.03	68.52 69.52	18.41 19.81	6.02	35.0	1000
AAA	10MHz, 64QAM, PUSC, 18 symbols)					0.02	35.0	± 9.6 %
		Y	4.66	67.41	19.03		35.0	
10307-	IEEE 802.16e WiMAX (29:18, 10ms,	Z	4.34 4.97	67.36 69.79	18.35 19.79	6.02	35.0 35.0	± 9.6 %
AAA	10MHz, QPSK, PUSC, 18 symbols)					0.02		± 9.6 %
		Y	4.56	67.54	18.97		35.0	<u> </u>
10308-	IEEE 802.16e WiMAX (29:18, 10ms,	Z	4.24 5.00	67.41 70.20	18.25 20.02	6.02	35.0 35.0	± 9.6 %
AAA	10MHz, 16QAM, PUSC)					6.02		£ 9.6 %
1-1-		Y	4.56	67.81	19.14		35.0	
10309-	IEEE 802.16e WiMAX (29:18, 10ms,	$\frac{2}{X}$	4.23 5.04	67.67 69.58	18.42 19.90	6.02	35.0 35.0	± 9.6 %
AAA	10MHz, 16QAM, AMC 2x3, 18 symbols)					6.02		± 9.0 %
		Y	4.68	67.50	19.12		35.0	
10010	IEEE 000 40 - M/MAN / (20:40, 40	Z	4.34	67.37	18.43	0.00	35.0	. 0 0 0/
10310- AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	Х	5.02	69.73	19.86	6.02	35.0	± 9.6 %
- · · · · · · · · · · · · · · · · · · ·		Y	4.62	67.52	19.04		35.0	
40044	LTE EDD (00 ED)	Z	4.31	67.48	18.38	0.00	35.0	
10311- AAC	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	2.89	69.32	16.51	0.00	150.0	± 9.6 %
		Y	2.88	68.58	16.07		150.0	
10313-	IDEN 4.2	Z	2.84	69.69 73.80	16.60	6.00	150.0 70.0	1069/
AAA	iDEN 1:3		3.64		16.25	6.99		± 9.6 %
		Y	3.53	73.47	16.27		70.0 70.0	
10314-	iDEN 1:6	X	2.54	70.98	14.85	10.00		+06%
AAA	IDEN 1:0		11.36	92.32	25.29	10.00	30.0	± 9.6 %
		Y	6.23	84.01	23.01 26.22		30.0	
10315- AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	14.41 0.98	96.78 64.50	15.61	0.17	30.0 150.0	± 9.6 %
	inspo, cope daty cycle)	Y	1.03	63.67	14.93		150.0	
		Z	0.98	64.65	15.49		150.0	
10316- AAB	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 96pc duty cycle)	X	4.29	66.82	16.34	0.17	150.0	± 9.6 %
		Υ	4.37	66.68	16.16		150.0	
		Z	4.17	67.03	16.16		150.0	
10317- AAB	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	Х	4.29	66.82	16.34	0.17	150.0	± 9.6 %
		Υ	4.37	66.68	16.16		150.0	
		Z	4.17	67.03	16.16		150.0	
10400- AAC	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	Х	4.33	67.02	16.29	0.00	150.0	± 9.6 %
		~	4.44	66.95	16.15		150.0	
		Z	4.21	67.24	16.15		150.0	
10401- AAC	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	4.99	66.73	16.28	0.00	150.0	± 9.6 %
		Y	5.10	66.79	16.18		150.0	
		Z	4.87	66.89	16.13	T	150.0	

10402- AAC	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	5.36	67.33	16.49	0.00	150.0	± 9.6 %
		Υ	5.44	67.34	16.35		150.0	
		Z	5.26	67.52	16.37		150.0	
10403- AAB	CDMA2000 (1xEV-DO, Rev. 0)	Х	0.61	61.53	7.60	0.00	115.0	± 9.6 %
		Y	0.95	65.07	10.75		115.0	
		Z	0.49	60.68	6.68		115.0	
10404- AAB	CDMA2000 (1xEV-DO, Rev. A)	X	0.61	61.53	7.60	0.00	115.0	± 9.6 %
		Y	0.95	65.07	10.75		115.0	
10406-	CDMAROOD BOO COMO COMO E II	Z	0.49	60.68	6.68		115.0	
AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	100.00	120.88	29.11	0.00	100.0	± 9.6 %
		Y	100.00	119.48	28.73		100.0	
40440	LTE TER (CO EDIM 4 DE 40 LIL	Z	100.00	111.63	24.58		100.0	
10410- AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	127.51	32.08	3.23	80.0	± 9.6 %
		Y	31.82	108.36	26.95		80.0	
10445	IEEE 000 44h MEE' 0 4 000 (2000)	Z	62.35	116.51	27.82		80.0	
10415- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	0.90	63.50	14.92	0.00	150.0	± 9.6 %
		Υ	0.97	62.93	14.41		150.0	
40440		Z	0.93	63.99	15.00		150.0	
10416- AAA	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 99pc duty cycle)	X	4.23	66.80	16.26	0.00	150.0	± 9.6 %
		Y	4.33	66.70	16.12		150.0	
		Z	4.15	67.12	16.17		150.0	
10417- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	4.23	66.80	16.26	0.00	150.0	± 9.6 %
		Υ	4.33	66.70	16.12		150.0	
		Z	4.15	67.12	16.17		150.0	
10418- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	X	4.23	67.03	16.33	0.00	150.0	± 9.6 %
		Υ	4.32	66.91	16.17		150.0	
		Z	4.14	67.37	16.26		150.0	
10419- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	X	4.24	66.95	16.31	0.00	150.0	± 9.6 %
		Υ	4.34	66.84	16.16		150.0	
		Z	4.16	67.28	16.23	-	150.0	
10422- AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	4.35	66.91	16.32	0.00	150.0	± 9.6 %
		Υ	4.45	66.82	16.17		150.0	
		Z	4.26	67.23	16.23		150.0	-
10423- AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	Х	4.47	67.16	16.40	0.00	150.0	± 9.6 %
		Υ	4.57	67.08	16.26		150.0	
10.15:		Z	4.36	67.46	16.30		150.0	
10424- AAA	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	Х	4.40	67.11	16.38	0.00	150.0	± 9.6 %
		Υ	4.50	67.03	16.24		150.0	
10.15=		Z	4.30	67.40	16.28		150.0	
10425- AAA	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	X	5.04	67.26	16.58	0.00	150.0	± 9.6 %
		Υ	5.13	67.22	16.42		150.0	
		Z	4.89	67.32	16.38		150.0	
10426- AAA	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	Х	5.08	67.43	16.66	0.00	150.0	± 9.6 %
		Υ	5.14	67.30	16.46		150.0	
		Z	4.92	67.46	16.45		150.0	-

10427- AAA	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	Х	5.02	67.13	16.51	0.00	150.0	± 9.6 %
		Y	5.11	67.10	16.36		150.0	
	- White	Z	4.90	67.29	16.36		150.0	·
10430- AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	4.47	74.13	19.05	0.00	150.0	± 9.6 %
		Υ	4.27	72.47	18.45		150.0	
		Ζ	5.08	77.10	19.89		150.0	
10431- AAB	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	3.84	67.47	16.10	0.00	150.0	± 9.6 %
		Υ	3.94	67.28	15.99		150.0	
		Z	3.74	67.83	15.98		150.0	
10432- AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	X	4.16	67.25	16.30	0.00	150.0	± 9.6 %
		Υ	4.27	67.12	16.16		150.0	
		Z	4.06	67.58	16.20		150.0	
10433- AAB	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	4.42	67.15	16.40	0.00	150.0	± 9.6 %
		Y	4.52	67.06	16.26		150.0	
10.15:		Z	4.32	67.45	16.31		150.0	
10434- AAA	W-CDMA (BS Test Model 1, 64 DPCH)	X	4.64	75.00	18.70	0.00	150.0	± 9.6 %
		Y	4.40	73.39	18.26		150.0	
		Z	5.41	78.17	19.50		150.0	
10435- AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	127.19	31.93	3.23	80.0	± 9.6 %
		Υ	27.78	106.36	26.40		80.0	
		Z	42.85	111.62	26.64		80.0	
10447- AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	3.04	67.08	14.65	0.00	150.0	± 9.6 %
		Υ	3.18	67.05	14.85		150.0	
		Z	2.91	67.25	14.30		150.0	
10448- AAB	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	X	3.71	67.27	15.98	0.00	150.0	± 9.6 %
		Y	3.81	67.07	15.86		150.0	
		Z	3.62	67.65	15.87		150.0	
10449- AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	X	4.01	67.09	16.21	0.00	150.0	± 9.6 %
		Y	4.11	66.95	16.06		150.0	
		Z	3.92	67.43	16.12		150.0	
10450- AAB	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	Х	4.22	66.93	16.26	0.00	150.0	± 9.6 %
		Υ	4.32	66.84	16.11		150.0	
		Z	4.14	67.24	16.18		150.0	
10451- AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	Х	2.79	66.50	13.63	0.00	150.0	± 9.6 %
		Υ	2.98	66.79	14.09		150.0	
		Z	2.59	66.31	13.04		150.0	
10456- AAA	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	Х	6.00	67.78	16.73	0.00	150.0	± 9.6 %
4		Υ	6.04	67.74	16.57		150.0	
		Z	6.02	68.38	16.82		150.0	
10457- AAA	UMTS-FDD (DC-HSDPA)	Х	3.60	65.57	16.01	0.00	150.0	± 9.6 %
		Y	3.68	65.45	15.84		150.0	
		Z	3.57	66.00	15.95		150.0	
10458- AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	Х	2.28	64.00	11.72	0.00	150.0	± 9.6 %
		Υ	2.41	64.11	12.28		150.0	
		Z	1.90	62.62	10.39		150.0	
10459- AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	X	4.90	70.07	18.22	0.00	150.0	± 9.6 %
		Y	4.93	69.48	18.09		150.0	
		Z	5.05	71.41	18.27		150.0	

10460- AAA	UMTS-FDD (WCDMA, AMR)	Х	0.94	72.42	17.37	0.00	150.0	± 9.6 %
		Υ	0.82	67.88	15.60		150.0	-
		Z	0.96	72.94	17.69	11	150.0	
10461- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	100.00	133.76	34.95	3.29	80.0	± 9.6 %
		Υ	22.54	106.56	27.45		80.0	
		Z	100.00	126.80	31.21		80.0	
10462- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.53	66.28	11.09	3.23	80.0	± 9.6 %
		Υ	0.98	61.72	9.01		80.0	
10100		Z	0.66	60.00	6.84		80.0	
10463- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	0.79	60.00	7.60	3.23	80.0	± 9.6 %
	191	Y	0.83	60.00	7.56		80.0	
40404	1.75.755.400.55144.4.75	Z	0.36	55.81	3.91		80.0	
10464- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	100.00	130.06	33.08	3.23	80.0	± 9.6 %
		Υ	13.20	97.62	24.36		80.0	
40465	LITE TOP (OR EDIA)	Ζ	92.51	120.86	28.60		80.0	
10465- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	1.21	64.05	10.09	3.23	80.0	± 9.6 %
		Y	0.92	61.09	8.63		80.0	
10100		Z	0.66	60.00	6.77		80.0	
10466- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	Х	0.79	60.00	7.55	3.23	80.0	± 9.6 %
		Υ	0.83	60.00	7.52		80.0	
40407	LTE TOD (OO EDIA) A DD CAN	Z	0.35	55.73	3.83		80.0	
10467- AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	130.58	33.30	3.23	80.0	± 9.6 %
		Υ	16.52	100.70	25.21		80.0	
		Z	100.00	122.35	29.03		80.0	
10468- AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	1.29	64.72	10.40	3.23	80.0	± 9.6 %
		Υ	0.94	61.28	8.75		80.0	
10.100		Z	0.66	60.00	6.80		80.0	
10469- AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	X	0.79	60.00	7.55	3.23	80.0	± 9.6 %
		Υ	0.83	60.00	7.52		80.0	
/		Z	0.35	55.73	3.83		80.0	
10470- AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	×	100.00	130.62	33.31	3.23	80.0	± 9.6 %
		Υ	16.78	100.92	25.26		80.0	
40474	175 700 (00 501)	Z	100.00	122.35	29.02		80.0	
10471- AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	1.27	64.59	10.33	3.23	80.0	± 9.6 %
		Y	0.93	61.24	8.72		80.0	
10470	LITE TOD (00 FDM) 1 DD 10 H	Z	0.66	60.00	6.79		80.0	
10472- AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	X	0.79	60.00	7.53	3.23	80.0	± 9.6 %
		Υ	0.83	60.00	7.50		80.0	
10470	LITE TOD (OO FOLIA A ST. ATT.)	Z	0.35	55.70	3.80		80.0	
10473- AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	130.57	33.29	3.23	80.0	± 9.6 %
		Y	16.58	100.74	25.21		80.0	
10474-	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-	Z X	100.00 1.26	122.30 64.53	29.00 10.31	3.23	80.0 80.0	± 9.6 %
AAC	QAM, UL Subframe=2,3,4,7,8,9)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0.00	04.00	0 = :			
		Y	0.93	61.22	8.71		80.0	
10475-	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-	Z	0.66	60.00	6.78	0.00	80.0	
AAC	QAM, UL Subframe=2,3,4,7,8,9)	X	0.79	60.00	7.54	3.23	80.0	± 9.6 %
		Y	0.83	60.00	7.50		80.0	
		Z	0.35	55.70	3.80		80.0	

10477- AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	1.20	64.02	10.06	3.23	80.0	± 9.6 %
		Υ	0.91	61.06	8.60		80.0	
		Z	0.66	60.00	6.75		80.0	
10478- AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	Х	0.79	60.00	7.52	3.23	80.0	± 9.6 %
		Υ	0.83	60.00	7.49		80.0	
		Z	0.35	55.68	3.77		80.0	
10479- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	100.00	126.79	33.21	3.23	80.0	± 9.6 %
		Υ	10.38	91.55	23.92		80.0	
		Z	100.00	123.17	30.88		80.0	
10480- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	100.00	111.12	25.93	3.23	80.0	± 9.6 %
		Y	4.86	75.90	16.60		80.0	
40404	LTE TOD (OO FDMA 500) DD 4 4 MU	Z	2.50	69.40	12.93	0.00	80.0	. 0 0 0/
10481- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	17.33	89.29	19.94	3.23	80.0	± 9.6 %
		Y	3.20	70.44	14.16		80.0	
40400	LITE TOD (OO FOMA FOO) OF CAST	Z	1.42	63.47	9.98	0.00	80.0	
10482- AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.01	67.85	13.24	2.23	80.0	± 9.6 %
		Y	2.00	67.46	13.68		80.0	
		Z	1.08	62.21	9.90		80.0	
10483- AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	2.20	65.59	11.72	2.23	80.0	± 9.6 %
		Y	2.17	65.07	11.85		80.0	
40404	1 TE TOO (00 FOLK) 500/ FO 0 1/11	Z	1.15	60.00	7.79	0.00	80.0	
10484- AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.02	64.43	11.18	2.23	80.0	± 9.6 %
		Υ	2.09	64.36	11.51		80.0	
		Z	1.17	60.00	7.77		80.0	
10485- AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.53	79.22	19.45	2.23	80.0	± 9.6 %
		Υ	2.84	72.10	17.06		80.0	
		Z	2.60	72.67	16.45		80.0	
10486- AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.56	67.74	14.01	2.23	80.0	± 9.6 %
		Υ	2.53	67.08	14.11		80.0	
		Z	1.74	64.04	11.62		80.0	
10487- AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	2.49	67.00	13.65	2.23	80.0	± 9.6 %
		Υ	2.51	66.63	13.88		80.0	
		Z	1.72	63.54	11.33		80.0	
10488- AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.03	76.67	20.22	2.23	80.0	± 9.6 %
		Y	3.18	71.86	18.18		80.0	
40400	LITE TOD (OC EDIM FOO) DE ACCES	Z	2.98	73.13	18.53	0.00	80.0	1000
10489- AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.48	70.97	17.69	2.23	80.0	± 9.6 %
		Y	3.17	68.69	16.67	-	80.0	
40.400	LITE TOD (OC EDIM FOR DE 1011)	Z	2.92	69.30	16.55	0.00	80.0	1.00%
10490- AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.52	70.58	17.52	2.23	80.0	± 9.6 %
		Y	3.25	68.52	16.59		80.0	
10491-	LTE-TDD (SC-FDMA, 50% RB, 15 MHz,	Z X	2.96 3.82	68.98 73.14	16.39 19.18	2.23	80.0 80.0	± 9.6 %
AAC	QPSK, UL Subframe=2,3,4,7,8,9)	 \	2.40	70.20	17.04		90.0	1
		Z	3.42	70.39	17.81	1	80.0 80.0	
10402	LITE TOD (SC EDMA 500/ DB 45 MU)	Z	3.09	70.86 69.39	17.98 17.61	2.23	80.0	± 9.6 %
10492- AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)		3.66			2.23		1 5.0 %
		Y	3.51	67.96	16.83	ļ	80.0	-
		Z	3.20	68.22	16.75	L	80.0	1

10493- AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.70	69.16	17.50	2.23	80.0	± 9.6 %
		Y	3.57	67.83	16.77	[80.0	
-		Z	3.24	68.04	16.65		80.0	
10494- AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	4.24	74.94	19.81	2.23	80.0	± 9.6 %
		Υ	3.67	71.70	18.26		80.0	
		Z	3.36	72.30	18.54		80.0	
10495- AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.69	69.69	17.88	2.23	80.0	± 9.6 %
		Υ	3.54	68.22	17.04		80.0	
		Z	3.22	68.45	17.03		80.0	-
10496- AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.75	69.34	17.76	2.23	80.0	± 9.6 %
		Υ	3.62	68.01	16.98		80.0	
		Z	3.30	68.22	16.94		80.0	
10497- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	0.96	60.00	7.89	2.23	80.0	± 9.6 %
		Υ	1.15	61.18	9.30		80.0	***
		Z	0.83	60.00	6.90	``	80.0	
10498- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	1.15	60.00	6.67	2.23	80.0	± 9.6 %
		Υ	1.20	60.00	7.47		80.0	
		Z	1.06	60.00	5.55		80.0	
10499- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	1.17	60.00	6.51	2.23	80.0	± 9.6 %
		Y	1.22	60.00	7.31		80.0	
		Z	1.10	60.00	5.36	-	80.0	
10500- AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	4.27	78.15	19.77	2.23	80.0	± 9.6 %
		Υ	2.97	71.96	17.50		80.0	
		Z	2.82	73.28	17.46		80.0	
10501- AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.13	69.97	15.82	2.23	80.0	± 9.6 %
		Y	2.87	68.14	15.28		80.0	
		Z	2.33	67.02	13.92		80.0	
10502- AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.10	69.46	15.52	2.23	80.0	± 9.6 %
		Υ	2.89	67.91	15.09		80.0	
		Z	2.32	66.58	13.62		80.0	
10503- AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	3.94	76.31	20.06	2.23	80.0	± 9.6 %
		Υ	3.14	71.64	18.07		80.0	
		Z	2.92	72.80	18.38		80.0	
10504- AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.45	70.79	17.60	2.23	80.0	± 9.6 %
		Υ	3.15	68.57	16.60		80.0	
		Z	2.89	69.12	16.44		80.0	
10505- AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.49	70.43	17.43	2.23	80.0	± 9.6 %
		Υ	3.23	68.41	16.53		80.0	
40555		Z	2.93	68.82	16.30		80.0	
10506- AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	4.19	74.72	19.70	2.23	80.0	± 9.6 %
		Y	3.64	71.54	18.18		80.0	l
		Z	3.32	72.09	18.43		80.0	
10507- AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	3.67	69.60	17.83	2.23	80.0	± 9.6 %
		X	3.67	69.60 68.16	17.83	2.23	80.0	± 9.6 %

10508- AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.73	69.24	17.70	2.23	80.0	± 9.6 %
	- CGS/14110-2,0,7,7,0,0)	Υ	3.60	67.93	16.93		80.0	
		Z	3.28	68.12	16.88		80.0	
10509- AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.33	72.38	18.83	2.23	80.0	± 9.6 %
	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Y	4.02	70.46	17.77		80.0	
7.7.		Ż	3.67	70.70	17.93		80.0	
10510- AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	4.06	68.76	17.68	2.23	80.0	± 9.6 %
		Υ	3.99	67.84	17.05		80.0	
		Z	3.63	67.77	16.97		80.0	
10511- AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	4.12	68.51	17.60	2.23	80.0	± 9.6 %
		Υ	4.06	67.66	17.00		80.0	
		Ζ	3.70	67.61	16.92	***************************************	80.0	
10512- AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Х	4.60	74.13	19.39	2.23	80.0	± 9.6 %
		Υ	4.14	71.72	18.16		80.0	
		Z	3.79	72.01	18.34		80.0	
10513- AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	3.97	68.97	17.79	2.23	80.0	± 9.6 %
		Υ	3.88	67.99	17.12		80.0	
		Z	3.53	67.87	17.05		80.0	
10514- AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.99	68.53	17.64	2.23	80.0	± 9.6 %
		Y	3.92	67.65	17.02		80.0	
		Z	3.57	67.54	16.93		80.0	
10515- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	Х	0.86	63.76	15.01	0.00	150.0	± 9.6 %
		Υ	0.93	63.09	14.45		150.0	
		Ζ	0.89	64.24	15.10		150.0	
10516- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	1.36	87.46	22.75	0.00	150.0	± 9.6 %
		Y	0.54	69.72	16.60		150.0	
10517-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11	Z	0.87	81.18	21.47	0.00	150.0	1060
AAA	Mbps, 99pc duty cycle)		0.73	66.61	16.01	0.00	150.0	± 9.6 %
		Z	0.76 0.75	64.78 66.85	14.94 16.09	-	150.0 150.0	
10518- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	4.22	66.92	16.26	0.00	150.0	± 9.6 %
		Υ	4.32	66.81	16.11		150.0	
		Z	4.14	67.26	16.18		150.0	
10519- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	Х	4.36	67.07	16.34	0.00	150.0	± 9.6 %
		Y	4.47	66.97	16.20		150.0	
10500	LEEF 000 44 - F WEET F COL (CETAL)	Z	4.26	67.39	16.25	0.00	150.0	1000
10520- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	4.22	67.01	16.26	0.00	150.0 150.0	± 9.6 %
		Y	4.32	66.91	16.11	ļ		
10521- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	Z	4.13 4.15	67.32 66.96	16.17 16.24	0.00	150.0 150.0	± 9.6 %
		Υ	4.26	66.88	16.09		150.0	
		Z	4.06	67.26	16.14		150.0	
10522- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	Х	4.20	67.07	16.32	0.00	150.0	± 9.6 %
		Υ	4.31	66.99	16.18		150.0	
		Z	4.08	67.30	16.18		150.0	

AAA Mbps, 99pc duty 10525- AAA 99pc duty cycle) 10526- AAA 99pc duty cycle) 10527- AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)	1a/h WiFi 5 GHz (OFDM, 48	Х	4.14	67.14	16.28	0.00	150.0	± 9.6 %
AAA Mbps, 99pc duty 10525- AAA 99pc duty cycle) 10526- AAA 99pc duty cycle) 10527- AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)	duty cycle)	Y	4.00	67.00	40.44		450.0	
AAA Mbps, 99pc duty 10525- AAA 99pc duty cycle) 10526- AAA 99pc duty cycle) 10527- AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Z	4.23 4.06	67.00 67.51	16.11		150.0	
AAA Mbps, 99pc duty 10525- AAA 99pc duty cycle) 10526- AAA 99pc duty cycle) 10527- AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)	1a/h WiFi 5 GHz (OFDM, 54	X	4.06	67.07	16.23 16.34	0.00	150.0	1000
AAA 99pc duty cycle) 10526- AAA 99pc duty cycle) 10527- AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)						0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10526- AAA 99pc duty cycle) 10527- AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Y	4.26	66.95	16.18		150.0	
AAA 99pc duty cycle) 10526- AAA 99pc duty cycle) 10527- AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)	4 W/:F: (00) ALL - \$4000	Z	4.06	67.37	16.24		150.0	
AAA 99pc duty cycle) 10527- AAA 199pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Х	4.20	66.19	15.97	0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10527- AAA IEEE 802.11ac V 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Υ	4.29	66.07	15.81		150.0	
AAA 99pc duty cycle) 10527- AAA IEEE 802.11ac V 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Z	4.13	66.56	15.92		150.0	
AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)	1ac WiFi (20MHz, MCS1, cycle)	X	4.31	66.45	16.08	0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Y	4.41	66.35	15.92		150.0	
10528- AAA 99pc duty cycle) 10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Z	4.22	66.77	16.00		150.0	
10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Х	4.25	66.43	16.02	0.00	150.0	± 9.6 %
10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Y	4.34	66.31	15.86		150.0	
10529- AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Z	4.16	66.77	15.96		150.0	
AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)	1ac WiFi (20MHz, MCS3, cycle)	Х	4.26	66.44	16.06	0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Υ	4.36	66.33	15.89		150.0	
AAA 99pc duty cycle) 10531- AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Z	4.17	66.77	15.98		150.0	
AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)	1ac WiFi (20MHz, MCS4, cycle)	Х	4.26	66.44	16.06	0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Y	4.36	66.33	15.89		150.0	
AAA 99pc duty cycle) 10532- AAA 99pc duty cycle) 10533- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Z	4.17	66.77	15.98		150.0	
AAA 99pc duty cycle) 10533- IEEE 802.11ac V 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)	1ac WiFi (20MHz, MCS6, cycle)	X	4.22	66.45	16.02	0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10533- IEEE 802.11ac V 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Υ	4.32	66.35	15.87		150.0	
AAA 99pc duty cycle) 10533- IEEE 802.11ac V 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle)		Z	4.12	66.75	15.94		150.0	
10533- IEEE 802.11ac V 99pc duty cycle) 10534- IEEE 802.11ac V 99pc duty cycle) 10535- IEEE 802.11ac V 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- IEEE 802.11ac V 99pc duty cycle) 10538- AAA 99pc duty cycle)	1ac WiFi (20MHz, MCS7, ycle)	Х	4.11	66.31	15.96	0.00	150.0	± 9.6 %
10534- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 1EEE 802.11ac V 99pc duty cycle) 10538- AAA 99pc duty cycle) 10540- IEEE 802.11ac V		Υ	4.21	66.22	15.80		150.0	-
10534- AAA 99pc duty cycle) 10534- AAA 99pc duty cycle) 10535- AAA 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 1EEE 802.11ac V 99pc duty cycle) 10538- AAA 99pc duty cycle) 10540- IEEE 802.11ac V		Z	4.02	66.64	15.89		150.0	
10535- IEEE 802.11ac V 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 1EEE 802.11ac V 99pc duty cycle)	1ac WiFi (20MHz, MCS8, ycle)	Х	4.27	66.54	16.06	0.00	150.0	± 9.6 %
10535- IEEE 802.11ac V 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 1EEE 802.11ac V 99pc duty cycle)		Υ	4.36	66.41	15.90		150.0	,
10535- IEEE 802.11ac V 99pc duty cycle) 10536- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10538- AAA 1EEE 802.11ac V 99pc duty cycle)		Z	4.17	66.88	15.99		150.0	
AAA 99pc duty cycle) 10536- IEEE 802.11ac V 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- IEEE 802.11ac V 99pc duty cycle) 10540- IEEE 802.11ac V	1ac WiFi (40MHz, MCS0, ycle)	Х	4.83	66.36	16.12	0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10536- IEEE 802.11ac V 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- IEEE 802.11ac V 99pc duty cycle) 10540- IEEE 802.11ac V		Υ	4.92	66.33	15.96	-	150.0	*
AAA 99pc duty cycle) 10536- IEEE 802.11ac V 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- IEEE 802.11ac V 99pc duty cycle) 10540- IEEE 802.11ac V		Z	4.73	66.59	16.01	*-	150.0	
AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 10538- AAA 99pc duty cycle) 10540- IEEE 802.11ac V	1ac WiFi (40MHz, MCS1, ycle)	X	4.87	66.48	16.17	0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 10538- AAA 99pc duty cycle) 10540- IEEE 802.11ac V		Υ	4.96	66.46	16.02	-	150.0	
AAA 99pc duty cycle) 10537- AAA 99pc duty cycle) 10538- AAA 10538- AAA 99pc duty cycle) 10540- IEEE 802.11ac V		Z	4.75	66.66	16.05		150.0	
AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10540- IEEE 802.11ac V	1ac WiFi (40MHz, MCS2, ycle)	Х	4.76	66.48	16.15	0.00	150.0	± 9.6 %
10538- AAA 99pc duty cycle) 10540- IEEE 802.11ac V 9pc duty cycle)		Y	4.85	66.46	16.00	•	150.0	<u></u>
AAA 99pc duty cycle) 10538- AAA 99pc duty cycle) 10540- IEEE 802.11ac V		Z	4.66	66.70	16.05		150.0	
AAA 99pc duty cycle) 10540- IEEE 802.11ac V	1ac WiFi (40MHz, MCS3, ycle)	X	4.84	66.54	16.18	0.00	150.0	± 9.6 %
AAA 99pc duty cycle) 10540- IEEE 802.11ac V		Y	4.91	66.45	16.00		150.0	
AAA 99pc duty cycle) 10540- IEEE 802.11ac V		Ζ	4.73	66.74	16.07		150.0	
10540- IEEE 802.11ac V	1ac WiFi (40MHz, MCS4, ycle)	Х	4.89	66.44	16.17	0.00	150.0	± 9.6 %
		Y	4.98	66.41	16.02		150.0	
		Z	4.77	66.62	16.04		150.0	
AAA 99pc duty cycle)	1ac WiFi (40MHz, MCS6, ycle)	X	4.82	66.39	16.17	0.00	150.0	± 9.6 %
		Y	4.91	66.37	16.02	-	150.0	
		Ż	4.71	66.59	16.05		150.0	

10541-	IEEE 802.11ac WiFi (40MHz, MCS7,	ТХТ	4.81	66.32	10.11	0.00	450.0	1000
AAA	99pc duty cycle)	^	4.01	00.32	16.11	0.00	150.0	± 9.6 %
		Y	4.89	66.29	15.96		150.0	
		Z	4.71	66.57	16.02		150.0	
10542- AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	Х	4.96	66.42	16.18	0.00	150.0	± 9.6 %
		Υ	5.05	66.39	16.03		150.0	******
		Z	4.85	66.63	16.06		150.0	
10543- AAA	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	Х	5.05	66.57	16.28	0.00	150.0	± 9.6 %
		Υ	5.12	66.46	16.09		150.0	
40544	VEEE 000 44 - 14551 (001 11 - 1400 0	Z	4.92	66.71	16.13		150.0	
10544- AAA	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	5.19	66.38	16.08	0.00	150.0	± 9.6 %
		<u> </u>	5.26	66.41	15.96		150.0	
10545-	IEEE 000 44 WiEi (00MI - MOO4	Z	5.09	66.58	15.97	0.00	150.0	
AAA	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	X	5.38	66.91	16.31	0.00	150.0	± 9.6 %
		Y	5.43	66.83	16.13		150.0	
10546-	IEEE 902 11aa WiE: (20MI I- MCCC	Z	5.23	66.94	16.11	0.00	150.0	1000
AAA	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	5.22	66.50	16.11	0.00	150.0	± 9.6 %
		Y	5.29 5.11	66.53 66.68	15.99 15.99		150.0 150.0	
10547-	IEEE 802.11ac WiFi (80MHz, MCS3,	X	5.11	66.73	16.22	0.00	150.0	± 9.6 %
AAA	99pc duty cycle)	^ Y				0.00		I 9.0 %
			5.37	66.64	16.03		150.0	
10548- AAA	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	Z X	5.21 5.45	66.86 67.31	16.08 16.49	0.00	150.0 150.0	± 9.6 %
7001	OSPO daty Cycle)	Y	5.51	67.24	16.31		150.0	
		Ż	5.25	67.19	16.22		150.0	
10550- AAA	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	5.32	66.85	16.30	0.00	150.0	± 9.6 %
		Y	5.35	66.71	16.09		150.0	
		Z	5.18	66.94	16.14		150.0	
10551- AAA	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	Х	5.20	66.44	16.06	0.00	150.0	± 9.6 %
		Υ	5.29	66.50	15.95		150.0	
		Z	5.09	66.62	15.94		150.0	
10552- AAA	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	Х	5.19	66.51	16.09	0.00	150.0	± 9.6 %
		Y	5.27	66.53	15.96		150.0	
		Z	5.10	66.75	16.00		150.0	
10553- AAA	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	5.24	66.43	16.08	0.00	150.0	± 9.6 %
		Y	5.33	66.48	15.97		150.0	
4055		Z	5.14	66.64	15.98		150.0	
10554- AAB	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	X	5.62	66.70	16.16	0.00	150.0	± 9.6 %
		Y	5.68	66.74	16.03		150.0	
40555	IEEE 000 44 - NAVET (400 NILL 1400 4	Z	5.52	66.86	16.02	0.00	150.0	1000
10555- AAB	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	5.71	66.93	16.26	0.00	150.0	± 9.6 %
		Y	5.77	66.97	16.13	-	150.0	
10556- AAB	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	Z	5.58 5.77	67.01 67.11	16.08 16.34	0.00	150.0 150.0	± 9.6 %
770	aapo duty cycle)	Y	5.81	67.07	16.17		150.0	
		Z	5.62	67.15	16.14	+	150.0	
10557- AAB	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	X	5.70	66.90	16.25	0.00	150.0	± 9.6 %
7770	oopo daty cycle)	+		 	10.10	1	1500	
	l l	Υ	5.77	66.95	16.13		150.0	

10558- AAB	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	X	5.69	66.90	16.26	0.00	150.0	± 9.6 %
		Υ	5.78	67.01	16.18		150.0	
		Z	5.56	67.00	16.10		150.0	
10560- AAB	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	Х	5.72	66.86	16.28	0.00	150.0	± 9.6 %
		Υ	5.80	66.93	16.18		150.0	
		Z	5.60	66.99	16.14		150.0	
10561- AAB	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	5.66	66.87	16.32	0.00	150.0	± 9.6 %
-114		Υ	5.73	66.92	16.20		150.0	
		Z	5.53	66.96	16.15		150.0	
10562- AAB	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	X	5.70	66.99	16.38	0.00	150.0	± 9.6 %
	11,77	Y	5.78	67.08	16.28		150.0	
10500		Z	5.57	67.08	16.21	,	150.0	
10563- AAB	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	Х	5.83	67.06	16.38	0.00	150.0	± 9.6 %
		Y	5.88	67.05	16.23		150.0	
		Z	5.69	67.13	16.21		150.0	
10564- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 9 Mbps, 99pc duty cycle)	X	4.54	66.89	16.37	0.46	150.0	± 9.6 %
		Υ	4.63	66.82	16.23		150.0	
		Z	4.43	67.15	16.24		150.0	
10565- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 12 Mbps, 99pc duty cycle)	X	4.73	67.33	16.71	0.46	150.0	± 9.6 %
		Υ	4.83	67.24	16.56		150.0	
		Z	4.62	67.61	16.60		150.0	
10566- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 18 Mbps, 99pc duty cycle)	Х	4.57	67.12	16.50	0.46	150.0	± 9.6 %
		Υ	4.67	67.04	16.35		150.0	
		Z	4.45	67.36	16.36		150.0	
10567- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 24 Mbps, 99pc duty cycle)	Х	4.61	67.61	16.94	0.46	150.0	± 9.6 %
		Y	4.71	67.49	16.76		150.0	
		Z	4.52	67.92	16.85		150.0	
10568- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 36 Mbps, 99pc duty cycle)	X	4.44	66.77	16.18	0.46	150.0	± 9.6 %
		Υ	4.56	66.75	16.07		150.0	
		Z	4.30	66.87	15.96		150.0	
10569- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 48 Mbps, 99pc duty cycle)	X	4.62	67.93	17.13	0.46	150.0	± 9.6 %
		Υ	4.70	67.74	16.91		150.0	
		Z	4.54	68.30	17.08		150.0	
10570- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 54 Mbps, 99pc duty cycle)	Х	4.60	67.62	16.96	0.46	150.0	± 9.6 %
		Υ	4.69	67.48	16.77		150.0	
1055		Z	4.49	67.91	16.87		150.0	
10571- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	Х	1.06	65.12	15.94	0.46	130.0	± 9.6 %
		Υ	1.10	64.13	15.18		130.0	
		Z	1.03	64.76	15.54		130.0	
10572- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	Х	1.08	65.91	16.43	0.46	130.0	± 9.6 %
		Υ	1.12	64.69	15.54		130.0	
		Z	1.04	65.49	16.01		130.0	
10573- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	Х	100.00	148.16	38.24	0.46	130.0	± 9.6 %
		Υ	1.56	82.04	21.65		130.0	
		Z	5.25	106.01	29.47		130.0	
10574- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	Х	1.42	75.83	21.21	0.46	130.0	± 9.6 %
		Y	1.20	70.29	18.45		130.0	
		Z	1.26	74.01	20.40		130.0	

40E7E	IEEE 000 44 - WEE 0 4 OU - (D000	T V T	4.00	00.00	10.10			r
10575- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 90pc duty cycle)	X	4.33	66.73	16.43	0.46	130.0	± 9.6 %
AAA	OFDIVI, 6 Midps, 90pc duty cycle)	Y	4.42	66.50	46.05		420.0	
		Z	4.42	66.59 66.91	16.25 16.24		130.0 130.0	
10576-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.21	66.97	16.54	0.46	130.0	± 9.6 %
AAA	OFDM, 9 Mbps, 90pc duty cycle)	^	4.57	00.97	10.54	0.40	130.0	I 9.0 %
,,,,,	or bin, o impo, cope daty cycle)	Y	4.45	66.81	16.35		130.0	
		ż	4.25	67.19	16.37		130.0	
10577-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.52	67.20	16.69	0.46	130.0	± 9.6 %
AAA	OFDM, 12 Mbps, 90pc duty cycle)	^	7.02	01.20	10.00	0.40	130.0	2 3.0 %
	, , , , , , , , , , , , , , , , , , , ,	Υ	4.61	67.05	16.50		130.0	
		Z	4.39	67.40	16.51		130.0	
10578-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.44	67.39	16.83	0.46	130.0	± 9.6 %
AAA	OFDM, 18 Mbps, 90pc duty cycle)							
		Y	4.52	67.21	16.62		130.0	
		Z	4.32	67.63	16.68		130.0	
10579-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.17	66.41	15.97	0.46	130.0	± 9.6 %
AAA	OFDM, 24 Mbps, 90pc duty cycle)							
a.		Υ	4.27	66.33	15.82		130.0	
		Z	4.03	66.48	15.71		130.0	
10580-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.20	66.45	15.97	0.46	130.0	± 9.6 %
AAA	OFDM, 36 Mbps, 90pc duty cycle)							
		Y	4.30	66.37	15.83		130.0	
	Value of a second of the secon	Z	4.03	66.43	15.66		130.0	
10581-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.36	67.52	16.83	0.46	130.0	± 9.6 %
AAA	OFDM, 48 Mbps, 90pc duty cycle)	1						
		Y	4.43	67.28	16.58		130.0	
40500		Z	4.25	67.77	16.69	0.40	130.0	
10582- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-	Х	4.09	66.15	15.71	0.46	130.0	± 9.6 %
AAA	OFDM, 54 Mbps, 90pc duty cycle)	 	4.40	66.07	45.50		120.0	
		Y 7	4.19	66.07	15.58		130.0	
10583-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6	Z	3.93 4.33	66.16 66.73	15.43 16.43	0.46	130.0 130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)	^	4.33	00.73	10.43	0.46	130.0	19.0%
7/7/1	Wibbs, sope daty cycle)	Y	4.42	66.59	16.25		130.0	
		Z	4.21	66.91	16.24		130.0	
10584-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9	+ Z	4.37	66.97	16.54	0.46	130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)	^	4.07	00.07	10.04	0.40	100.0	2 0.0 70
		Υ	4.45	66.81	16.35		130.0	
		Z	4.25	67.19	16.37		130.0	
10585-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12	X	4.52	67.20	16.69	0.46	130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)							
		Y	4.61	67.05	16.50		130.0	
		Z	4.39	67.40	16.51		130.0	
10586-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18	Х	4.44	67.39	16.83	0.46	130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)			1				
		Υ	4.52	67.21	16.62		130.0	
		Z	4.32	67.63	16.68		130.0	
10587-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24	X	4.17	66.41	15.97	0.46	130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)							
		Y	4.27	66.33	15.82		130.0	
		Z	4.03	66.48	15.71		130.0	
10588-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36	Х	4.20	66.45	15.97	0.46	130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)	1	4.00	00.0=	45.00		400.0	ļ
		Y	4.30	66.37	15.83		130.0	-
40500	IEEE 000 444 / 14/15/ 5 011 (055) 4 (0	Z	4.03	66.43	15.66	0.40	130.0	1000
10589-	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48	X	4.36	67.52	16.83	0.46	130.0	± 9.6 %
AAA	Mbps, 90pc duty cycle)	Y	4.42	67.00	16.50		120.0	-
			4.43	67.28	16.58		130.0	
10500	IEEE 802 11a/b M/IE: 5 CU- /OEDM 54	Z	4.25	67.77	16.69	0.46	130.0	+06%
10590- AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	4.09	66.15	15.71	0.46	130.0	± 9.6 %
/7//1	iviops, sope duty cycle)	Y	4.19	66.07	15.58		130.0	1
		Z					130.0	1
	<u> </u>	1 4	3.93	66.16	15.43	1	130.0	J

10591- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	X	4.49	66.83	16.58	0.46	130.0	± 9.6 %
		Y	4.58	66.69	16.39	,	130.0	
		Z	4.38	67.05	16.41		130.0	1
10592- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	X	4.60	67.11	16.70	0.46	130.0	± 9.6 %
		Υ	4.70	66.98	16.51		130.0	
		Z	4.47	67.30	16.52		130.0	,,,,,
10593- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	Х	4.52	66.97	16.54	0.46	130.0	± 9.6 %
		Y	4.61	66.85	16.36		130.0	
		Z	4.39	67.15	16.35		130.0	
10594- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	X	4.58	67.18	16.73	0.46	130.0	± 9.6 %
		Y	4.67	67.04	16.54		130.0	
	744	Z	4.45	67.37	16.56		130.0	
10595- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	Х	4.54	67.16	16.64	0.46	130.0	± 9.6 %
		Υ	4.63	67.01	16.44		130.0	
		Z	4.41	67.33	16.45		130.0	
10596- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	Х	4.47	67.10	16.62	0.46	130.0	± 9.6 %
		Y	4.56	66.97	16.43		130.0	
		Z	4.33	67.23	16.41		130.0	
10597- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	Х	4.42	66.95	16.45	0.46	130.0	± 9.6 %
		Y	4.51	66.83	16.28		130.0	
		Z	4.29	67.09	16.24		130.0	
10598- AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	X	4.43	67.26	16.77	0.46	130.0	± 9.6 %
		Y	4.51	67.10	16.57		130.0	
		Z	4.32	67.48	16.62		130.0	-
10599- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	X	5.20	67.31	16.86	0.46	130.0	± 9.6 %
		Y	5.25	67.14	16.63	*	130.0	
		Z	5.07	67.41	16.66		130.0	
10600- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	Х	5.32	67.75	17.05	0.46	130.0	± 9.6 %
		Y	5.35	67.47	16.76		130.0	
		Z	5.09	67.50	16.68	- **	130.0	
10601- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	Х	5.22	67.51	16.96	0.46	130.0	± 9.6 %
		Y	5.25	67.27	16.68		130.0	**
		Z	5.07	67.56	16.73		130.0	
10602- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	X	5.29	67.46	16.84	0.46	130.0	± 9.6 %
		Y	5.35	67.29	16.61		130.0	
		Z	5.08	67.29	16.50		130.0	
10603- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	X	5.35	67.74	17.13	0.46	130.0	± 9.6 %
		Y	5.42	67.61	16.91		130.0	
		Z	5.13	67.56	16.79		130.0	"
10604- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	X	5.20	67.21	16.84	0.46	130.0	± 9.6 %
		Y	5.30	67.25	16.71		130.0	
		Z	5.02	67.15	16.55		130.0	
10605- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	Х	5.28	67.48	16.97	0.46	130.0	± 9.6 %
		Y	5.34	67.34	16.74		130.0	
		Z	5.07_	67.33	16.64		130.0	
10606- AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	Х	5.08	66.97	16.56	0.46	130.0	± 9.6 %
		Y	5.12	66.78	16.32		130.0	
		Z	4.92	66.93	16.28			

10607-	IEEE 802.11ac WiFi (20MHz, MCS0,	Х	4.35	66.22	16.25	0.46	130.0	± 9.6 %
AAA	90pc duty cycle)	_						
<u>,</u>		Υ	4.42	66.04	16.04		130.0	
		Z	4.24	66.46	16.10		130.0	
10608- AAA	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	X	4.48	66.53	16.39	0.46	130.0	± 9.6 %
		Υ	4.56	66.36	16.18		130.0	
		Z	4.35	66.73	16.22		130.0	
10609- AAA	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	Х	4.38	66.34	16.19	0.46	130.0	± 9.6 %
		Y	4.46	66.19	15.99		130.0	
		Z	4.25	66.53	16.02		130.0	
10610- AAA	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	Х	4.43	66.55	16.39	0.46	130.0	± 9.6 %
		Υ	4.51	66.37	16.17		130.0	
		Z	4.31	66.77	16.23		130.0	
10611- AAA	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	×	4.34	66.31	16.21	0.46	130.0	± 9.6 %
		Y	4.42	66.16	16.01		130.0	
		Z	4.21	66.50	16.03		130.0	
10612- AAA	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	×	4.32	66.43	16.24	0.46	130.0	± 9.6 %
		Υ	4.41	66.27	16.04		130.0	
		Z	4.18	66.54	16.03		130.0	
10613- AAA	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	X	4.31	66.21	16.06	0.46	130.0	± 9.6 %
		Υ	4.40	66.08	15.88		130.0	
		Z	4.17	66.33	15.85		130.0	
10614- AAA	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	X	4.30	66.52	16.37	0.46	130.0	± 9.6 %
		7	4.38	66.35	16.16		130.0	
		Z	4.18	66.74	16.22		130.0	
10615- AAA	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	X	4.32	66.10	15.94	0.46	130.0	± 9.6 %
		Υ	4.41	65.96	15.76		130.0	
		Z	4.18	66.24	15.73		130.0	
10616- AAA	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	X	4.99	66.43	16.42	0.46	130.0	± 9.6 %
		Υ	5.06	66.34	16.22		130.0	
		Z	4.86	66.54	16.23		130.0	
10617- AAA	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	X	5.03	66.54	16.45	0.46	130.0	± 9.6 %
		Y	5.10	66.46	16.25		130.0	
		Z	4.87	66.58	16.22		130.0	
10618- AAA	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	X	4.94	66.60	16.49	0.46	130.0	± 9.6 %
		Y	5.02	66.54	16.31		130.0	
		Z	4.80	66.71	16.31		130.0	
10619- AAA	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	X	4.99	66.52	16.38	0.46	130.0	± 9.6 %
		Υ	5.03	66.34	16.14		130.0	1
		Z	4.83	66.55	16.15		130.0	
10620- AAA	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	5.03	66.43	16.38	0.46	130.0	± 9.6 %
		Y	5.10	66.34	16.19		130.0	ļ
		Z	4.87	66.44	16.14		130.0	
10621- AAA	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	X	5.04	66.55	16.58	0.46	130.0	± 9.6 %
		Y	5.11	66.48	16.39		130.0	
		Z	4.92	66.71	16.42		130.0	
10622- AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	Х	5.03	66.66	16.63	0.46	130.0	± 9.6 %
		Y	5.10	66.57	16.42		130.0	
		Z	4.89	66.76	16.44		130.0	

10623- AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	4.92	66.17	16.23	0.46	130.0	± 9.6 %
		Y	4.99	66.10	16.04		130.0	
		Z	4.79	66.29	16.04		130.0	
10624- AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	5.11	66.45	16.44	0.46	130.0	± 9.6 %
		Y	5.19	66.37	16.25		130.0	
		Z	4.97	66.53	16.23		130.0	
10625-	IEEE 802.11ac WiFi (40MHz, MCS9,	$\frac{1}{x}$	5.22	66.67	16.62	0.46	130.0	± 9.6 %
AAA	90pc duty cycle)	Y	5.28			0.40		± 9.6 %
		Z		66.51	16.38		130.0	
10626-	IEEE 802.11ac WiFi (80MHz, MCS0,	$\frac{1}{X}$	5.06	66.71	16.39	0.40	130.0	
AAA	90pc duty cycle)		5.33	66.38	16.34	0.46	130.0	± 9.6 %
		Y	5.39	66.36	16.17		130.0	
1000=		Z	5.21	66.49	16.15		130.0	
10627- AAA	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	5.59	67.13	16.68	0.46	130.0	± 9.6 %
		Y	5.61	66.95	16.43		130.0	
		Z	5.40	67.02	16.39		130.0	
10628- AAA	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	Х	5.32	66.34	16.21	0.46	130.0	± 9.6 %
		Y	5.38	66.33	16.05		130.0	
		Z	5.18	66.39	16.00		130.0	
10629- AAA	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	5.47	66.71	16.39	0.46	130.0	± 9.6 %
		Y	5.48	66.50	16.13		130.0	
···		Z	5.31	66.69	16.14		130.0	
10630- AAA	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	X	5.68	67.55	16.82	0.46	130.0	± 9.6 %
		Y	5.71	67.40	16.59		130.0	
		Z	5.39	67.16	16.39		130.0	
10631- AAA	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	5.64	67.57	17.04	0.46	130.0	± 9.6 %
		Y	5.70	67.49	16.83		130.0	
		Z	5.46	67.53	16.79		130.0	
10632- AAA	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	X	5.63	67.44	16.99	0.46	130.0	± 9.6 %
		Y	5.62	67.15	16.68		130.0	-
		Z	5.46	67.43	16.75	·	130.0	~
10633- AAA	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	Х	5.33	66.40	16.29	0.46	130.0	± 9.6 %
		Y	5.42	66.45	16.15		130.0	
		Z	5.20	66.49	16.10		130.0	
10634- AAA	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	5.37	66.64	16.46	0.46	130.0	± 9.6 %
		Y	5.44	66.63	16.29		130.0	<u> </u>
		Ż	5.25	66.79	16.30		130.0	
						l		
10635- AAA	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	5.21	65.78	15.73	0.46	130.0	± 9.6 %
		Х	5.21	65.78	15.73	0.46		± 9.6 %
		X	5.21 5.29	65.78 65.83	15.73 15.61	0.46	130.0	± 9.6 %
		Х	5.21	65.78	15.73	0.46		± 9.6 %
AAA 10636-	90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS0,	X Y Z X	5.21 5.29 5.07	65.78 65.83 65.82	15.73 15.61 15.50 16.42		130.0 130.0 130.0	
10636- AAB	90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X Y Z X	5.21 5.29 5.07 5.77	65.78 65.83 65.82 66.72	15.73 15.61 15.50 16.42		130.0 130.0 130.0	
AAA 10636-	90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS0,	X Y Z X	5.21 5.29 5.07 5.77 5.82	65.78 65.83 65.82 66.72	15.73 15.61 15.50 16.42		130.0 130.0 130.0	
10636- AAB	90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS1,	X Y Z X Y Z X	5.21 5.29 5.07 5.77 5.82 5.64 5.90	65.78 65.83 65.82 66.72 66.71 66.78 67.05	15.73 15.61 15.50 16.42 16.25 16.21 16.57	0.46	130.0 130.0 130.0 130.0 130.0 130.0	± 9.6 %
10636- AAB	90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS1,	X Y Z X Y Z X Y Y Z Y	5.21 5.29 5.07 5.77 5.82 5.64 5.90 5.94	65.78 65.83 65.82 66.72 66.71 66.78 67.05	15.73 15.61 15.50 16.42 16.25 16.21 16.57	0.46	130.0 130.0 130.0 130.0 130.0 130.0 130.0	± 9.6 %
10636- AAB 10637- AAB	JEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X Y Z X Y Z X	5.21 5.29 5.07 5.77 5.82 5.64 5.90	65.78 65.83 65.82 66.72 66.71 66.78 67.05	15.73 15.61 15.50 16.42 16.25 16.21 16.57	0.46	130.0 130.0 130.0 130.0 130.0 130.0	± 9.6 %
10636- AAB 10637- AAB	90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X Y Z X Y Z X Y Z X	5.21 5.29 5.07 5.77 5.82 5.64 5.90 5.94 5.72	65.78 65.83 65.82 66.72 66.71 66.78 67.05	15.73 15.61 15.50 16.42 16.25 16.21 16.57 16.39 16.30	0.46	130.0 130.0 130.0 130.0 130.0 130.0 130.0 130.0	± 9.6 % ± 9.6 %

10639- AAB	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	Х	5.87	66.96	16.54	0.46	130.0	± 9.6 %
	oope daty cycle)	Y	5.92	66.95	16.38		130.0	
		Z	5.72	67.01	16.33		130.0	
10640- AAB	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	Х	5.80	66.76	16.38	0.46	130.0	± 9.6 %
		Υ	5.88	66.84	16.27		130.0	
		Z	5.64	66.74	16.13		130.0	
10641- AAB	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	5.94	66.98	16.51	0.46	130.0	± 9.6 %
		Y	5.97	66.91	16.32		130.0	
10010		Z	5.75	66.87	16.22		130.0	
10642- AAB	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	Х	5.94	67.12	16.76	0.46	130.0	± 9.6 %
		Υ	6.00	67.14	16.61		130.0	
40040		Z	5.80	67.17	16.56		130.0	
10643- AAB	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	5.79	66.79	16.48	0.46	130.0	± 9.6 %
		Υ	5.85	66.80	16.33		130.0	
10011		Z	5.62	66.75	16.21		130.0	
10644- AAB	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	Х	5.83	66.94	16.57	0.46	130.0	± 9.6 %
***-		Υ	5.90	67.00	16.44		130.0	
40045	1555 000 44 W/5: (400 H) 14000	Z	5.67	66.93	16.32		130.0	
10645- AAB	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	Х	5.99	67.10	16.62	0.46	130.0	± 9.6 %
		Υ	6.03	67.04	16.43		130.0	
10010	1.TE TDD (00 EDM) 4.DD 5.441	Z	5.79	66.98	16.32		130.0	
10646- AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	Х	10.99	100.29	34.81	9.30	60.0	± 9.6 %
		Y	9.88	96.69	33.11		60.0	
10647-	LTE-TDD (SC-FDMA, 1 RB, 20 MHz,	Z	5.76	86.83	29.52	0.00	60.0	
AAC	QPSK, UL Subframe=2,7)	X	9.57	97.81	34.14	9.30	60.0	± 9.6 %
		Y	8.70	94.40	32.46		60.0	
10648-	CDMA2000 (1x Advanced)	Z	5.05	84.45	28.75	0.00	60.0	
AAA	CDIVIAZUUU (1x Advanced)	X	0.33	60.00	5.57	0.00	150.0	± 9.6 %
		Y	0.47	61.19	7.86		150.0	
10652-	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1,	Z	0.30	60.00	5.23	0.00	150.0	1000
AAB	Clipping 44%)		3.46	67.89	16.64	2.23	80.0	± 9.6 %
		Y	3.39	66.82	16.12		80.0	
10653-	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1,	Z	3.15	67.36	16.00	2.22	80.0	1000
AAB	Clipping 44%)		3.92	66.65	16.80	2.23	80.0	± 9.6 %
		Y	3.92	66.10	16.41		80.0	
10654-	LTE TDD (OEDMA 45 MUL 5 TM 0.4	Z	3.65	66.30	16.32	0.00	80.0	1000
AAB	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	3.93	66.16	16.82	2.23	80.0	± 9.6 %
		1 <	3.94	65.72	16.45	ļ	80.0	
10055	LITE TOD (OFDMA COARL E TAGE)	Z	3.68	65.81	16.36	0.00	80.0	
10655- AAB	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	4.00	66.00	16.84	2.23	80.0	± 9.6 %
******		Y	4.01	65.63	16.48		80.0	
		Z	3.76	65.63	16.38		80.0	

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



Report Number: SAR.20180720

Appendix E – Dipole Calibration Data Sheets



Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





C

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Swiss Calibration Service

Accreditation No.: SCS 0108

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

Client

RF Exposure Lab

Certificate No: D2450V2-881_Aug15

CALIBRATION CERTIFICATE

Object

D2450V2 - SN: 881

Calibration procedure(s)

QA CAL-05.v9

Calibration procedure for dipole validation kits above 700 MHz

Calibration date:

August 10, 2015

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 EPM-442A	GB37480704	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP 8481A	US37292783	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP 8481A	MY41092317	07-Oct-14 (No. 217-02021)	Oct-15
Reference 20 dB Attenuator	SN: 5058 (20k)	01-Apr-15 (No. 217-02131)	Mar-16
Type-N mismatch combination	SN: 5047.2 / 06327	01-Apr-15 (No. 217-02134)	Mar-16
Reference Probe ES3DV3	SN: 3205	30-Dec-14 (No. ES3-3205_Dec14)	Dec-15
DAE4	SN: 601	18-Aug-14 (No. DAE4-601_Aug14)	Aug-15
Secondary Standards	ID#	Check Date (in house)	Scheduled Check
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-13)	In house check: Oct-16
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-14)	In house check: Oct-15

Calibrated by:

Name Michael Weber Function

Laboratory Technician

Approved by:

Katja Pokovic

Technical Manager

Issued: August 12, 2015

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D2450V2-881_Aug15

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Calibration Laboratory of

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Zeughausstrasse 43, 8004 Zurich, Switzerland





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Glossary:

TSL

tissue simulating liquid

ConvF N/A

sensitivity in TSL / NORM x,y,z not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) 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
- d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point.
 No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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%.

Certificate No: D2450V2-881_Aug15

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.1 ± 6 %	1.87 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.7 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	53.5 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.43 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	25.4 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.6 ± 6 %	2.03 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.4 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	52.1 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.27 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	24.7 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.5 Ω + 2.4 jΩ			
Return Loss	- 26.2 dB			

Antenna Parameters with Body TSL

Impedance, transformed to feed point	50.9 Ω + 4.4 jΩ			
Return Loss	- 27.0 dB			

General Antenna Parameters and Design

Electrical Delay (one direction)	1.154 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	August 18, 2010

Extended Calibration

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss (< -20 dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB Publication 865664 D01 v01r04.

D2450V2 SN: 881 - Head						
Date of Measurement	Return Loss (dB)	Δ%	Impedance Real (Ω)	ΔΩ	Impedance Imaginary (jΩ)	ΔΩ
8/10/2015	-26.2		54.5		2.4	
8/9/2016	-25.4	-3.1	52.8	-1.7	2.9	0.5
8/10/2017	-26.8	2.3	53.4	-1.1	2.6	0.2

D2450V2 SN: 881 - Body						
Date of Measurement	Return Loss (dB)	Δ%	Impedance Real (Ω)	ΔΩ	Impedance Imaginary (jΩ)	ΔΩ
8/10/2015	-27.0		50.9		4.4	
8/9/2016	-27.5	1.9	51.6	0.7	5.2	0.8
8/10/2017	-26.4	-2.2	50.2	-0.7	4.9	0.5

Cortifi

DASY5 Validation Report for Head TSL

Date: 10.08.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 881

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 1.87 \text{ S/m}$; $\varepsilon_r = 38.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

• Probe: ES3DV3 - SN3205; ConvF(4.54, 4.54, 4.54); Calibrated: 30.12.2014;

• Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 18.08.2014

Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001

• DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

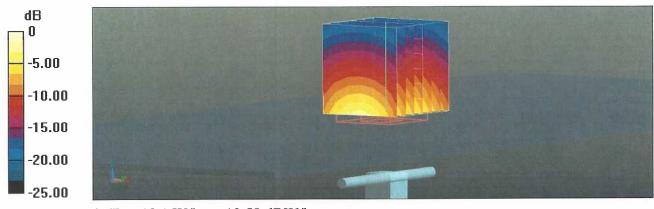
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.8 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 28.0 W/kg

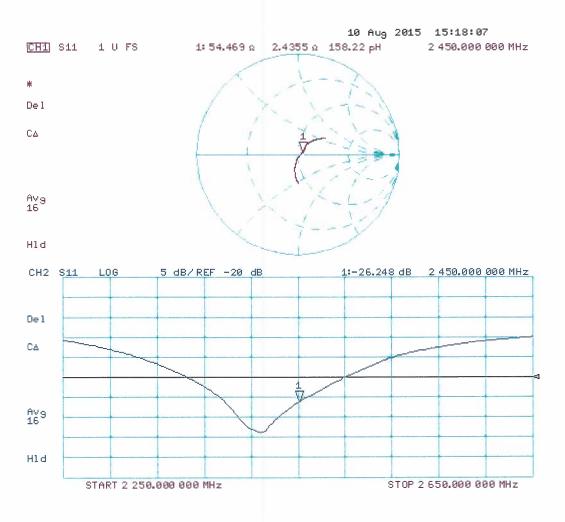
SAR(1 g) = 13.7 W/kg; SAR(10 g) = 6.43 W/kg

Maximum value of SAR (measured) = 18.1 W/kg



0 dB = 18.1 W/kg = 12.58 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 10.08.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 881

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; $\sigma = 2.03 \text{ S/m}$; $\varepsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

• Probe: ES3DV3 - SN3205; ConvF(4.32, 4.32, 4.32); Calibrated: 30.12.2014;

• Sensor-Surface: 3mm (Mechanical Surface Detection)

• Electronics: DAE4 Sn601; Calibrated: 18.08.2014

Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002

• DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

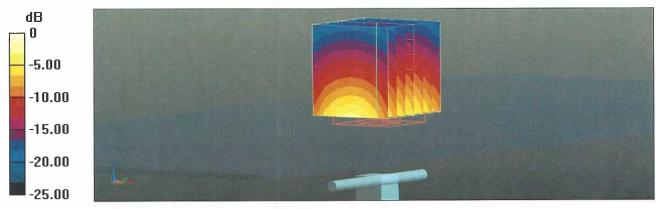
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.26 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 27.7 W/kg

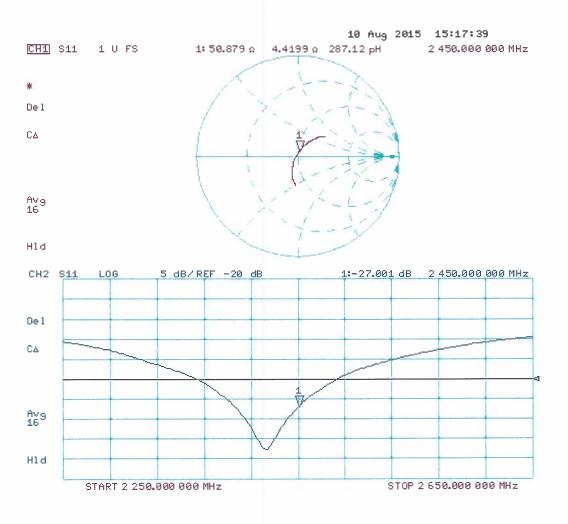
SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.27 W/kg

Maximum value of SAR (measured) = 17.7 W/kg



0 dB = 17.7 W/kg = 12.48 dBW/kg

Impedance Measurement Plot for Body TSL





Calibration Laboratory of Schmid & Partner Engineering AG

Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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Client

RF Exposure Lab

Certificate No: D5GHzV2-1119_Aug15

CALIBRATION CERTIFICATE

Object

D5GHzV2 - SN: 1119

Calibration procedure(s)

QA CAL-22.v2

Calibration procedure for dipole validation kits between 3-6 GHz

Calibration date:

August 11, 2015

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 EPM-442A	GB37480704	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP 8481A	US37292783	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP 8481A	MY41092317	07-Oct-14 (No. 217-02021)	Oct-15
Reference 20 dB Attenuator	SN: 5058 (20k)	01-Apr-15 (No. 217-02131)	Mar-16
Type-N mismatch combination	SN: 5047.2 / 06327	01-Apr-15 (No. 217-02134)	Mar-16
Reference Probe EX3DV4	SN: 3503	30-Dec-14 (No. EX3-3503_Dec14)	Dec-15
DAE4	SN: 601	18-Aug-14 (No. DAE4-601_Aug14)	Aug-15
Secondary Standards	ID#	Check Date (in house)	Scheduled Check
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-13)	In house check: Oct-16
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-14)	In house check: Oct-15

Calibrated by:

Name

Function

Laboratory Technician

Approved by:

Katja Pokovic

Israe Elnaouq

Technical Manager

Issued: August 11, 2015

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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Calibration Laboratory of

Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizio svizzero di taratura
Swiss Calibration Service

Accreditation No.: SCS 0108

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

Glossary:

TSL

tissue simulating liquid

ConvF N/A sensitivity in TSL / NORM x,y,z not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) 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
- b) 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
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end
 of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed
 point exactly below the center marking of the flat phantom section, with the arms oriented
 parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole
 positioned under the liquid filled phantom. The impedance stated is transformed from the
 measurement at the SMA connector to the feed point. The Return Loss ensures low
 reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point.
 No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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%.

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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	10210.0
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, $dy = 4.0$ mm, $dz = 1.4$ mm	Graded Ratio = 1.4 (Z direction)
Frequency	5200 MHz ± 1 MHz 5300 MHz ± 1 MHz 5500 MHz ± 1 MHz 5600 MHz ± 1 MHz 5800 MHz ± 1 MHz	

Head TSL parameters at 5200 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	36.0	4.66 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.5 ± 6 %	4.53 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5200 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.11 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.8 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.32 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.1 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5300 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.76 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.4 ± 6 %	4.63 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5300 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.46 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	84.3 W / kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.42 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.1 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5500 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.6	4.96 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.1 ± 6 %	4.82 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5500 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.50 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	84.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.42 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.1 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.9 ± 6 %	4.93 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.46 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	84.2 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.0 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.3	5.27 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.7 ± 6 %	5.14 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5800 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.10 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	80.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.31 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.0 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5200 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	49.0	5.30 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.9 ± 6 %	5.43 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5200 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.77 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	77.4 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.17 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.6 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5300 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.9	5.42 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.7 ± 6 %	5.56 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5300 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.79 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	77.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.17 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.6 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5500 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.6	5.65 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.3 ± 6 %	5.82 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5500 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	8.30 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	82.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.30 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.9 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.5	5.77 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.2 ± 6 %	5.95 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	8.10 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	80.7 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.25 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.4 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.2	6.00 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.9 ± 6 %	6.23 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL at 5800 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.91 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	78.8 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.19 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.8 W/kg ± 19.5 % (k=2)

Extended Calibration

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss (< -20 dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB Publication 865664 D01 v01r04.

		D5GH	zV2 SN	l: 1119 - Head			
Date of Measurement	Frequency	Return Loss (dB)	Δ%	Impedance (Ω)	ΔΩ	Impedance Imaginary (jΩ)	ΔΩ
8/11/2015		-21.5		51.6		-8.4	
8/10/2016	5200 MHz	-21.3	-0.9	51,2	-0.4	-8.7	-0.3
8/11/2017		-22.1	2.8	50.8	-0.8	-8.1	0.3
8/11/2015		-27.8		51.4		-3.9	
8/10/2016	5300 MHz	-26.4	-5.0	49.8	-1.6	-4.8	-0.9
8/11/2017		-26.9	-3.2	50.2	-1.2	-4.2	-0.3
8/11/2015		-25.8		54.2		-3.4	
8/10/2016	5500 MHz	-24.3	-5.8	52.6	-1.6	-3.9	-0.5
8/11/2017	1	-25.2	-2.3	53.7	-0.5	-4.4	-1.0
8/11/2015		-24.3		56.3		-1.5	
8/10/2016	5600 MHz	-23.9	-1.6	55.0	-1.3	-2.1	-0.6
8/11/2017		-23.5	-3.3	55.9	-0.4	-1.8	-0,3
8/11/2015		-23.4		56.6		-2.8	
8/10/2016	5800 MHz	-24.3	3.8	54.9	-1.7	-4.1	-1.3
8/11/2017	1 50002	-24.6	5.1	55,3	-1.3	-3,5	-0.7
Date of Return Loss Impedance Impedance							
Date of	Frequency	Return Loss	۸%	Impedance	ΔΩ	1 '	ΔΩ
Measurement	Frequency	Return Loss (dB)	Δ%	Real (Ω)	ΔΩ	Imaginary (jΩ)	ΔΩ
	•	(dB) -22.8		Real (Ω) 51.6		Imaginary (jΩ)	
Measurement	Frequency 5200 MHz	(dB)	Δ%	Real (Ω)	-0.4	Imaginary (jΩ) -7.2 -7.9	-0.7
Measurement 8/11/2015	•	(dB) -22.8		Real (Ω) 51.6 51.2 50.8		Imaginary (jΩ) -7.2 -7.9 -7.5	
Measurement 8/11/2015 8/10/2016	•	(dB) -22.8 -21.5	-5.7 -2.6	Real (Ω) 51.6 51.2 50.8 51.1	-0.4 -0.8	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7	-0.7 -0.3
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015	•	(dB) -22.8 -21.5 -22.2 -30.8 -29.6	-5.7 -2.6	Real (Ω) 51.6 51.2 50.8 51.1 51.3	-0.4 -0.8	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2	-0.7 -0.3
Measurement 8/11/2015 8/10/2016 8/11/2017	5200 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.6 -29.3	-5.7 -2.6	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2	-0.4 -0.8	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4	-0.7 -0.3
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016	5200 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.6	-5.7 -2.6	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2 54.3	-0.4 -0.8 0.2 -0.9	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4 -1.3	-0.7 -0.3 -0.5 0.3
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017	5200 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.6 -29.3 -27.4 -26.3	-5.7 -2.6 -3.9 -4.9	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2 54.3 53.3	-0.4 -0.8 0.2 -0.9	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4 -1.3 -2.0	-0.7 -0.3 -0.5 0.3
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2015	5200 MHz 5300 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.6 -29.3 -27.4 -26.3 -27.8	-5.7 -2.6 -3.9 -4.9	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2 54.3 53.3 52.5	-0.4 -0.8 0.2 -0.9	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4 -1.3 -2.0 -1.7	-0.7 -0.3 -0.5 0.3
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016	5200 MHz 5300 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.6 -29.3 -27.4 -26.3 -27.8 -24.4	-5.7 -2.6 -3.9 -4.9 -4.0 1.5	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2 54.3 53.3 52.5 56.4	-0.4 -0.8 0.2 -0.9 -1.0 -1.8	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4 -1.3 -2.0 -1.7 -0.1	-0.7 -0.3 -0.5 0.3 -0.7 -0.4
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2017 8/11/2017	5200 MHz 5300 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.6 -29.3 -27.4 -26.3 -27.8	-5.7 -2.6 -3.9 -4.9	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2 54.3 53.3 52.5	-0.4 -0.8 0.2 -0.9 -1.0 -1.8	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4 -1.3 -2.0 -1.7 -0.1 -0.9	-0.7 -0.3 -0.5 0.3 -0.7 -0.4
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2017 8/11/2015 8/10/2016	5200 MHz 5300 MHz 5500 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.6 -29.3 -27.4 -26.3 -27.8 -24.4	-5.7 -2.6 -3.9 -4.9 -4.0 1.5	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2 54.3 53.3 52.5 56.4 55.9 56.9	-0.4 -0.8 0.2 -0.9 -1.0 -1.8	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4 -1.3 -2.0 -1.7 -0.1 -0.9 -0.5	-0.7 -0.3 -0.5 0.3 -0.7 -0.4
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2015 8/10/2016 8/11/2017	5200 MHz 5300 MHz 5500 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.3 -27.4 -26.3 -27.8 -24.4 -23.6	-5.7 -2.6 -3.9 -4.9 -4.0 1.5	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2 54.3 53.3 52.5 56.4 55.9	-0.4 -0.8 0.2 -0.9 -1.0 -1.8 -0.5	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4 -1.3 -2.0 -1.7 -0.1 -0.9 -0.5 -0.9	-0.7 -0.3 -0.5 0.3 -0.7 -0.4 -0.8 -0.4
Measurement 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2015 8/10/2016 8/11/2017 8/11/2017 8/11/2015 8/10/2016	5200 MHz 5300 MHz 5500 MHz	(dB) -22.8 -21.5 -22.2 -30.8 -29.6 -29.3 -27.4 -26.3 -27.8 -24.4 -23.6 -24.5	-5.7 -2.6 -3.9 -4.9 -4.0 1.5	Real (Ω) 51.6 51.2 50.8 51.1 51.3 50.2 54.3 53.3 52.5 56.4 55.9 56.9	-0.4 -0.8 0.2 -0.9 -1.0 -1.8	Imaginary (jΩ) -7.2 -7.9 -7.5 -2.7 -3.2 -2.4 -1.3 -2.0 -1.7 -0.1 -0.9 -0.5	-0.7 -0.3 -0.5 0.3 -0.7 -0.4

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 5200 MHz

Impedance, transformed to feed point	51.6 Ω - 8.4 jΩ
Return Loss	- 21.5 dB

Antenna Parameters with Head TSL at 5300 MHz

Impedance, transformed to feed point	51.4 Ω - 3.9 jΩ
Return Loss	- 27.8 dB

Antenna Parameters with Head TSL at 5500 MHz

Impedance, transformed to feed point	54.2 Ω - 3.4 jΩ
Return Loss	- 25.8 dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	56.3 Ω - 1.5 ϳΩ
Return Loss	- 24.3 dB

Antenna Parameters with Head TSL at 5800 MHz

Impedance, transformed to feed point	56.6 Ω - 2.8 jΩ
Return Loss	- 23.4 dB

Antenna Parameters with Body TSL at 5200 MHz

Impedance, transformed to feed point	51.6 Ω - 7.2 jΩ
Return Loss	- 22.8 dB

Antenna Parameters with Body TSL at 5300 MHz

Impedance, transformed to feed point	51.1 Ω - 2.7 jΩ
Return Loss	- 30.8 dB

Antenna Parameters with Body TSL at 5500 MHz

Impedance, transformed to feed point	54.3 Ω - 1.3 jΩ
Return Loss	- 27.4 dB

Antenna Parameters with Body TSL at 5600 MHz

Impedance, transformed to feed point	56.4 Ω - 0.1 jΩ
Return Loss	- 24.4 dB

Antenna Parameters with Body TSL at 5800 MHz

Impedance, transformed to feed point	57.5 Ω - 0.9 jΩ
Return Loss	- 23.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	
Licothodi Delay (one direction)	1.206 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG					
Manufactured on	September 08, 2011					

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DASY5 Validation Report for Head TSL

Date: 10.08.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1119

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5500

MHz, Frequency: 5600 MHz, Frequency: 5800 MHz

Medium parameters used: f=5200 MHz; $\sigma=4.53$ S/m; $\epsilon_r=35.5;$ $\rho=1000$ kg/m 3 , Medium parameters used: f=5300 MHz; $\sigma=4.63$ S/m; $\epsilon_r=35.4;$ $\rho=1000$ kg/m 3 , Medium parameters used: f=5500 MHz; $\sigma=4.82$ S/m; $\epsilon_r=35.1;$ $\rho=1000$ kg/m 3 , Medium parameters used: f=5600 MHz; $\sigma=4.93$ S/m; $\epsilon_r=34.9;$ $\rho=1000$ kg/m 3 , Medium parameters used: f=5600 MHz; $\sigma=4.93$ S/m; $\epsilon_r=34.9;$ $\rho=1000$ kg/m 3 , Medium parameters used: f=5800 MHz; $\sigma=5.14$ S/m; $\epsilon_r=34.7;$ $\rho=1000$ kg/m 3

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.51, 5.51, 5.51); Calibrated: 30.12.2014, ConvF(5.21, 5.21, 5.21); Calibrated: 30.12.2014, ConvF(5.12, 5.12, 5.12); Calibrated: 30.12.2014, ConvF(4.92, 4.92, 4.92); Calibrated: 30.12.2014, ConvF(4.9, 4.9, 4.9); Calibrated: 30.12.2014;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.84 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 29.5 W/kg

SAR(1 g) = 8.11 W/kg; SAR(10 g) = 2.32 W/kg

Maximum value of SAR (measured) = 18.6 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 67.35 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 32.1 W/kg

SAR(1 g) = 8.46 W/kg; SAR(10 g) = 2.42 W/kg

Maximum value of SAR (measured) = 19.8 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5500 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.30 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 33.6 W/kg

SAR(1 g) = 8.5 W/kg; SAR(10 g) = 2.42 W/kg

Maximum value of SAR (measured) = 20.2 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 65.73 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 33.5 W/kg

SAR(1 g) = 8.46 W/kg; SAR(10 g) = 2.41 W/kg

Maximum value of SAR (measured) = 20.0 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan,

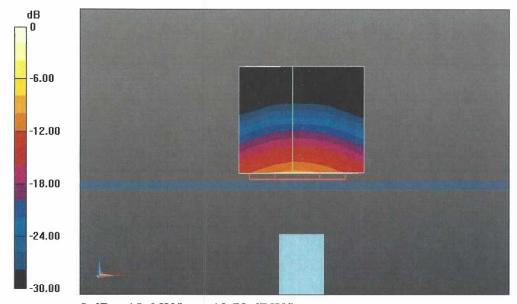
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 63.40 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 33.5 W/kg

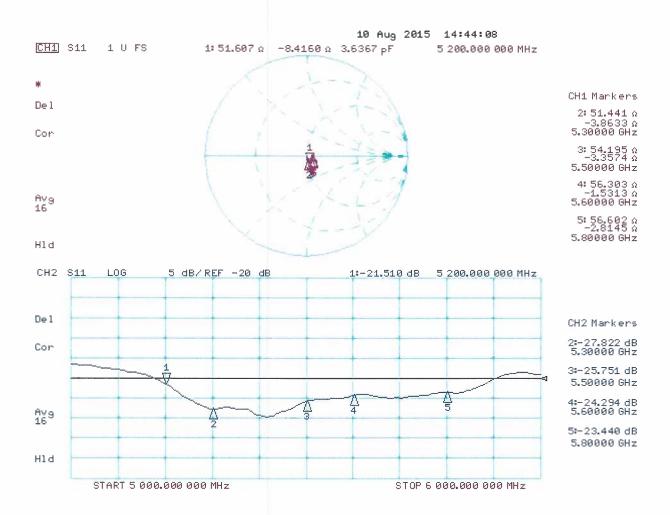
SAR(1 g) = 8.1 W/kg; SAR(10 g) = 2.31 W/kg

Maximum value of SAR (measured) = 19.7 W/kg



0 dB = 18.6 W/kg = 12.70 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 11.08.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1119

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5300 MHz, Frequency: 5500

MHz, Frequency: 5600 MHz, Frequency: 5800 MHz

Medium parameters used: f=5200 MHz; $\sigma=5.43$ S/m; $\epsilon_r=47.9$; $\rho=1000$ kg/m³, Medium parameters used: f=5300 MHz; $\sigma=5.56$ S/m; $\epsilon_r=47.7$; $\rho=1000$ kg/m³, Medium parameters used: f=5500 MHz; $\sigma=5.82$ S/m; $\epsilon_r=47.3$; $\rho=1000$ kg/m³, Medium parameters used: f=5600 MHz; $\sigma=5.95$ S/m; $\epsilon_r=47.2$; $\rho=1000$ kg/m³, Medium parameters used: f=5800 MHz; $\sigma=6.23$ S/m; $\epsilon_r=46.9$; $\rho=1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(4.95, 4.95, 4.95); Calibrated: 30.12.2014, ConvF(4.78, 4.78, 4.78); Calibrated: 30.12.2014, ConvF(4.45, 4.45, 4.45); Calibrated: 30.12.2014, ConvF(4.35, 4.35, 4.35); Calibrated: 30.12.2014, ConvF(4.32, 4.32, 4.32); Calibrated: 30.12.2014;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 60.11 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 30.4 W/kg

SAR(1 g) = 7.77 W/kg; SAR(10 g) = 2.17 W/kg

Maximum value of SAR (measured) = 18.1 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 59.89 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 31.4 W/kg

SAR(1 g) = 7.79 W/kg; SAR(10 g) = 2.17 W/kg

Maximum value of SAR (measured) = 18.3 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5500 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 60.26 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 35.5 W/kg

SAR(1 g) = 8.3 W/kg; SAR(10 g) = 2.3 W/kg

Maximum value of SAR (measured) = 19.9 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 59.24 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 35.5 W/kg

SAR(1 g) = 8.1 W/kg; SAR(10 g) = 2.25 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan,

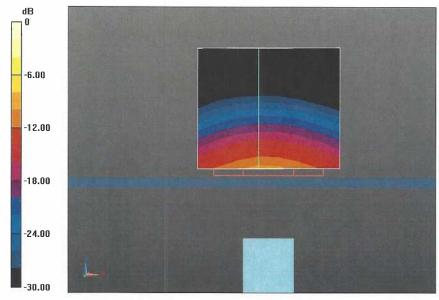
dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 57.15 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 36.5 W/kg

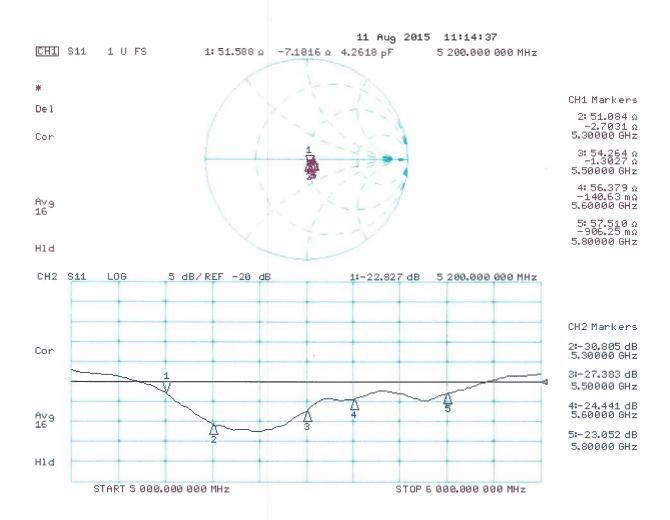
SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.19 W/kg

Maximum value of SAR (measured) = 19.6 W/kg



0 dB = 18.1 W/kg = 12.58 dBW/kg

Impedance Measurement Plot for Body TSL





Report Number: SAR.20180720

Appendix F – Phantom Calibration Data Sheets

Zeughausstrasse 43, 8004 Zurich, Switzerland Phone +41 44 245 9700, Fax +41 44 245 9779 info@speag.com, http://www.speag.com

Certificate of Conformity / First Article Inspection

Item	Oval Flat Phantom ELI 4.0
Type No	QD OVA 001 B
Series No	1003 and higher
Manufacturer	Untersee Composites
	Knebelstrasse 8
	CH-8268 Mannenbach, Switzerland

Tests

Complete tests were made on the prototype units QD OVA 001 AA 1001, QD OVA 001 AB 1002, pre-series units QD OVA 001 BA 1003-1005 as well as on the series units QD OVA 001 BB, 1006 ff.

Test	Requirement	Details	Units tested
Material	Compliant with the standard	Bottom plate:	all
thickness	requirements	2.0mm +/- 0.2mm	
Material	Dielectric parameters for required	< 6 GHz: Rel. permittivity = 4	Material
parameters	frequencies	+/-1, Loss tangent ≤ 0.05	sample
Material	The material has been tested to be	DGBE based simulating	Equivalent
resistivity	compatible with the liquids defined in	liquids.	phantoms,
	the standards if handled and cleaned	Observe Technical Note for	Material
	according to the instructions.	material compatibility.	sample
Shape	Thickness of bottom material,	Bottom elliptical 600 x 400 mm	Prototypes,
	Internal dimensions,	Depth 190 mm,	Sample
	Sagging	Shape is within tolerance for	testing
	compatible with standards from	filling height up to 155 mm,	
	minimum frequency	Eventual sagging is reduced or	
		eliminated by support via DUT	

Standards

- [1] CENELEC EN 50361-2001, « Basic standard for the measurement of the Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz – 3 GHz) », July 2001
- [2] IEEE 1528-2003, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques, December 2003
- [3] IEC 62209 1, "Specific Absorption Rate (SAR) in the frequency range of 300 MHz to 3 GHz Measurement Procedure, Part 1: Hand-held mobile wireless communication devices", February 2005
- [4] IEC 62209 2, Draft, "Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices Human models, Instrumentation and Procedures Part 2: Procedure to determine the Specific Absorption Rate (SAR) in the head and body for 30 MHz to 6 GHz Handheld and Body-Mounted Devices used in close proximity to the Body.", February 2005
- [5] OET Bulletin 65, Supplement C, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition January 2001

Based on the tests above, we certify that this item is in compliance with the standards [1] to [5] if operated according to the specific requirements and considering the thickness. The dimensions are fully compliant with [4] from 30 MHz to 6 GHz. For the other standards, the minimum lower frequency limit is limited due to the dimensional requirements ([1]: 450 MHz, [2]: 300 MHz, [3]: 800 MHz, [5]: 375 MHz) and possibly further by the dimensions of the DUT.

Date

28.4.2008

Signature / Stamp

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland Phone +41 44 245 9709, Fax+41,44 245 9779 info@speag.com; http://www.speag.com



Report Number: SAR.20180720

Appendix G – Validation Summary

Per FCC KDB 865664 D02 v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue equivalent media for system validation according to the procedures outlined in FCC KDB 865664 D01 v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point using the system that normally operates with the probe for routine SAR measurements and according to the required tissue equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

Table G-1 SAR System Validation Summary

SAR	F	eg Probe Probe Probe Cal. Cond.		Canal	Perm.	CW Validation			Modulation Valildation					
System #	Freq. (MHz)	Date	Probe S/N	Probe Type		e Cal. int			Sens- itivity	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR
1	2450	9/06/2017	3693	EX3DV4	2450	Body	1.96	52.64	Pass	Pass	Pass	OFDM/TDD	Pass	Pass
3	2450	1/22/2015	3833	EX3DV4	2450	Body	1.97	52.53	Pass	Pass	Pass	OFDM/TDD	Pass	Pass
1	5200	9/05/2017	3693	EX3DV4	5200	Body	5.30	48.93	Pass	Pass	Pass	OFDM	N/A	Pass
3	5200	1/23/2015	3833	EX3DV4	5200	Body	5.32	48.94	Pass	Pass	Pass	OFDM	N/A	Pass
1	5300	9/05/2017	3693	EX3DV4	5300	Body	5.41	48.88	Pass	Pass	Pass	OFDM	N/A	Pass
3	5300	1/23/2015	3833	EX3DV4	5300	Body	5.45	48.74	Pass	Pass	Pass	OFDM	N/A	Pass
1	5500	9/05/2017	3693	EX3DV4	5500	Body	5.62	48.58	Pass	Pass	Pass	OFDM	N/A	Pass
3	5600	1/24/2015	3833	EX3DV4	5600	Body	5.79	48.33	Pass	Pass	Pass	OFDM	N/A	Pass
1	5600	9/05/2017	3693	EX3DV4	5600	Body	5.74	48.43	Pass	Pass	Pass	OFDM	N/A	Pass
3	5600	1/24/2015	3833	EX3DV4	5600	Body	5.79	48.33	Pass	Pass	Pass	OFDM	N/A	Pass
1	5800	9/05/2017	3693	EX3DV4	5800	Body	5.97	48.13	Pass	Pass	Pass	OFDM	N/A	Pass
3	5800	1/24/2015	3833	EX3DV4	5800	Body	6.03	48.14	Pass	Pass	Pass	OFDM	N/A	Pass