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RF Exposure report





The following samples were submitted and identified on behalf of the client as:

POS Terminal Product Name CASTLES TECHNOLOGY **Brand Name**

Model No.

CASTLES TECHNOLOGY CO., LTD. **Applicant**

6F, NO. 207-5, SEC. 3, BEIXIN RD., XINDIAN DISTRICT,

NEW TAIPEI CITY 23143, TAIWAN (R.O.C)

Standards IEEE/ANSI C95.1-1992, IEEE 1528-2013

FCC ID WIYS1E2L001 **Date of EUT Receipt** Jul. 19, 2022

Sep. 09, 2022 ~ Sep. 12, 2022 Date of Test(s)

Date of Issue Oct. 24, 2022

In the configuration tested, the EUT complied with the standards specified above.

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan Ltd. Central RF Lab or testing done by SGS Taiwan Ltd. Central RF Lab in connection with distribution or use of the product described in this report must be approved by SGS Taiwan Ltd. Central RF Lab in writing.

Signed on behalf of SGS

Clerk / Kimmy Chiou	PM / Tom Chiang	Approved By / John Yeh
Kimmy Chiou	Tom Chiang	John Teh

Date: Oct. 24, 2022

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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TESA2210000417E5	00	Initial creation of document	Oct. 24, 2022	Kimmy Chiou	

Note:

- 1. The mark " * " is the revised version of the report due to comments submitted by the certification.
- 2. Please be noted that the report TESA2210000417E5 will replace the previous TESA2207000221E5 as the new version. Also be pay attention that TESA2207000221E5 is ineffective anymore from now on.

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GENERAL INFORMATION

1.1 Test Methodology

The SAR testing method and procedure for this device is in accordance with the following standards:

IEEE/ANSI C95.1-1992

IEEE 1528-2013

KDB447498D01v06

KDB865664D01v01r04

KDB865664D02v01r02

KDB941225D07v01r02

KDB941225D01v03r01

KDB941225D05v02r05

KDB248227D01v02r01

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1.2 Description of EUT

Product Name	POS Terminal			
Brand Name	CASTLES			
Model No.	S1E2-L			
FCC ID	WIYS1E2L001			
Integrated Module	Brand Name: MEIGLink Model Name: SLM758			
	WCDMA	1		
Duty Cycle	LTE FDD	1		
Duty Cycle	WLAN802.11	Please refer to page 58-59		
	Bluetooth	1		
	WCDMA Band II	1850-1910		
	WCDMA Band IV	1710-1755		
	WCDMA Band V	824-849		
	LTE FDD Band 2	1850-1910		
	LTE FDD Band 4	1710-1755		
	LTE FDD Band 5	824-849		
Supported radios (TX Frequency Range, MHz)	LTE FDD Band 7	2500-2570		
requestoy runge, wii iz)	LTE FDD Band 12	699-716		
	LTE FDD Band 13	777-787		
	LTE FDD Band 17	704-716		
	802.11 b/g/n	2.4GHz		
	802.11a	5.2GHz 5.8GHz		
	Bluetooth	2.4GHz		

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1.3 Maximum value

WWAN

V V V V V V V V V V V V V V V V V V V				
Summary of Maximum SAR Value				
	Highest SAR 1g			
Mode	Body			
	(W/kg)			
LTE _Band 4	1.05			

WLAN

772,01				
Summary of Maximum SAR Value				
	Highest SAR 1g			
Mode	Body			
	(W/kg)			
Bluetooth(GFSK)	0.18			
2.4G WLAN	0.97			
5G WLAN	1.01			

1.4 Antenna Information

WWAN

Vendor	PIFA Antenna for LTE application				
Antenna		Main			
Part Number		ALF6P-100002			
Frequency(MHz)	699~716 777~798 814~849 1710~1780 1850~1915 2300~2400 2496~2690				2496~2690
Gain (dBi)	-6.541 -1.131 -0.372 3.131 2.088 -1.817 2.534				

WLAN

Vendor	DIPOLE Antenna for WIFI application			
Antenna	Main			
Part Number	ALF6P-100000			
Frequency(MHz)	2400~2500 5150~5250 5725~5850			
Gain (dBi)	0.611	0.658	2.402	

Note: Antenna information is provided by the applicant.

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2 MEASUREMENT SYSTEM

2.1 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designation number	IC CAB identifier
	1F, No. 8, Alley 15, Lane 120, Sec. 1, NeiHu Road, Neihu	SAR 2		
	District, Taipei City, 11493, Taiwan.		TW0029	
SGS Taiwan Ltd.	, · · - · · · · · · · · · · · · · ·	SAR 1		
Central RF Lab. (TAF code 3702)	1 2	SAR 4	TW0028	TW3702
	No.134, Wu Kung Road, New Taipei Industrial Park, Wuku	SAR 3		
	District, New Taipei City, Taiwan	SAR 7	TW0027	

Note: Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

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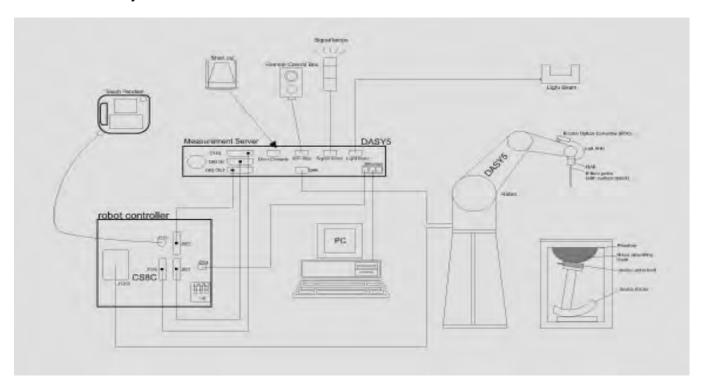


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SAR System

Block Diagram (DASY5)

A block diagram of the SAR measurement System is given in below. This SAR measurement system uses a computer-controlled 3-D stepper motor system (SPEAG DASY 5 professional system). The model EX3DV4 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|²)/ ρ where σ and ρ are the conductivity and mass density of the tissue-simulant.



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X3DV4 E-Field Probe

V2DA4 F-I IG	1000		
Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)		
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 750/835/1750/1900/2450/2600/5250/5750 MHz Additional CF for other liquids and frequencies upon request		
Frequency	10 MHz to > 6 GHz		
Directivity	± 0.3 dB in HSL (rotation around probe axis)		
_	± 0.5 dB in tissue material (rotation normal to probe axis)		
Dynamic	$10 \mu \text{W/g to} > 100 \text{mW/g}$		
Range	Linearity: ± 0.2 dB (noise: typically < 1 μW/g)		
Dimensions	Tip diameter: 2.5 mm		
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.		

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PHANTOM (ELI)

I HANTON (E	=· <i>J</i>
Model	ELI
Construction	The ELI phantom is used for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.
Shell	2 ± 0.2 mm
Thickness	
Filling Volume	Approx. 30 liters
Dimensions	Major axis: 600 mm
	Minor axis: 400 mm

DEVICE HOLDER (ELI)

DEVICE HOLDE	K (ELI)	
Construction	The device holder (Supporter) for Notebook is made by POM (polyoxymethylene resin), which is non-metal and non-conductive. The height can be adjusted to fit varies kind of notebooks.	

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3 SAR SYSTEM VERIFICATION

3.1 Tissue Simulating Liquid

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with homogeneous tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15cm.

3.2 Tissue Simulant Liquid measurement

The dielectric properties for this Head-simulant fluid were measured by using the SPEAG Dielectric Assessment Kit (DAKS-3.5)

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The measured conductivity and permittivity are all within \pm 5% of the target values.

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Measurement results of Tissue Simulant Liquid 3.3

			Target	Target	Measured	Measured		
Tissue	Measurement	Measured	_	Conductivi	Dielectric	Conductivi	0/ 1	0/ 1
Туре	Date	Frequency	Constant,	ty,	Constant,	ty,	% dev εr	% dev σ
		(MHz)	εr	σ (S/m)	εr	σ (S/m)		
		704	42.145	0.887	41.948	0.885	-0.47%	-0.20%
		707.5	42.127	0.887	41.927	0.886	-0.47%	-0.17%
		709	42.119	0.887	41.922	0.886	-0.47%	-0.17%
		710	42.113	0.887	41.916	0.886	-0.47%	-0.16%
		711	42.108	0.887	41.911	0.886	-0.47%	-0.16%
		750	41.900	0.890	41.709	0.888	-0.46%	-0.22%
	Sep, 09. 2022	782	41.749	0.894	41.542	0.891	-0.50%	-0.29%
	3ep, 03. 2022	826.4	41.540	0.899	41.354	0.902	-0.45%	0.32%
		829	41.528	0.899	41.343	0.903	-0.45%	0.41%
		835	41.500	0.900	41.322	0.905	-0.43%	0.57%
		836.5	41.500	0.902	41.314	0.906	-0.45%	0.47%
		836.6	41.500	0.902	41.314	0.906	-0.45%	0.45%
		844	41.500	0.910	41.289	0.908	-0.51%	-0.16%
L		846.6	41.500	0.912	41.278	0.909	-0.54%	-0.36%
		1712.4	40.125	1.350	39.906	1.359	-0.55%	0.65%
		1720	40.114	1.354	39.893	1.363	-0.55%	0.67%
		1732.4	40.097	1.361	39.874	1.371	-0.55%	0.67%
		1732.5	40.096	1.361	39.873	1.371	-0.56%	0.71%
		1745	40.079	1.369	39.854	1.378	-0.56%	0.70%
	Com 10 2022	1750	40.071	1.371	39.846	1.381	-0.56%	0.70%
	Sep, 10. 2022	1752.6	40.068	1.373	39.841	1.383	-0.57%	0.72%
Head		1852.4	40.000	1.400	39.767	1.413	-0.58%	0.95%
rieau		1860	40.000	1.400	39.767	1.414	-0.58%	0.97%
		1880	40.000	1.400	39.767	1.414	-0.58%	1.01%
		1900	40.000	1.400	39.767	1.414	-0.58%	1.03%
		1907.6	40.000	1.400	39.767	1.414	-0.58%	1.03%
		2402	39.282	1.757	39.052	1.786	-0.59%	1.59%
		2412	39.265	1.766	39.035	1.794	-0.59%	1.57%
		2437	39.222	1.788	38.990	1.816	-0.59%	1.52%
		2450	39.200	1.800	38.967	1.827	-0.59%	1.50%
	Sep, 11. 2022	2462	39.184	1.813	38.952	1.838	-0.59%	1.38%
		2510	39.120	1.864	38.891	1.881	-0.59%	0.91%
		2535	39.087	1.891	38.859	1.903	-0.58%	0.68%
		2560	39.053	1.917	38.827	1.926	-0.58%	0.46%
		2600	39.000	1.960	38.776	1.963	-0.57%	0.13%
Г		5180	36.020	4.639	35.776	4.633	-0.68%	-0.13%
		5200	36.000	4.660	35.753	4.654	-0.69%	-0.14%
		5220	35.980	4.680	35.730	4.674	-0.70%	-0.13%
		5240	35.960	4.700	35.707	4.695	-0.70%	-0.12%
	Sep, 12. 2022	5250	35.950	4.710	35.696	4.705	-0.71%	-0.11%
		5745	35.355	5.215	35.130	5.213	-0.64%	-0.05%
		5750	35.350	5.220	35.124	5.218	-0.64%	-0.04%
		5785	35.315	5.255	35.084	5.254	-0.65%	-0.03%
		5825	35.275	5.296	35.038	5.295	-0.67%	-0.03%

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The composition of the tissue simulating liquid:

Simulating Liquids for 600 MHz -10 GHz. Manufactured by SPEAG:

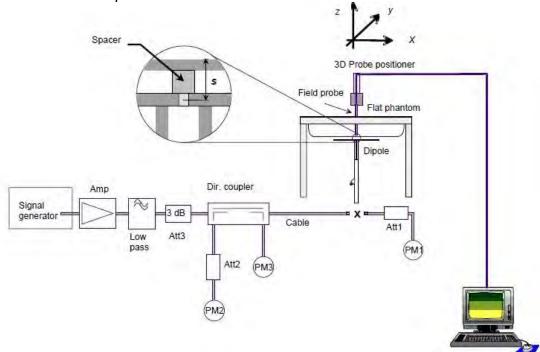
Broad-band head tissue simulating	SPEAG Product	Frequency range (MHz)	Main Ingredients
liquids	HBBL600- 10000V6	600 - 10000	Water, Oil

3.5 System check

The microwave circuit arrangement for system check is sketched in below. The daily system accuracy verification occurs within the flat section of the SAM phantom and ELI phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target

The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed with SAR values normalized to 1W forward power delivered to the dipole.

During the tests, the liquid depth from the center of the flat phantom to the liquid top surface was 15 cm above in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.



The block diagram of system check

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3.6 System check results

	•							
Validation Kit	S/N	Frequency (MHz)	1W Target 1g-SAR (W/kg)	pin=250mW Measured 1g-SAR (W/kg)	Normalized to 1W 1g-SAR (W/kg)	Deviation (%)	Limit	Measurement Date
D750V3	1015	750	8.51	2.15	8.6	1.06	± 10%	Sep.09,2022
D835V2	4d063	835	9.64	2.35	9.4	-2.49	± 10%	Sep.09,2022
D1750V2	1008	1750	36.6	8.94	35.76	-2.30	± 10%	Sep.10,2022
D1900V2	5d173	1900	39.6	10.2	40.8	3.03	± 10%	Sep.10,2022
D2450V2	727	2450	52.8	13.4	53.6	1.52	± 10%	Sep.11,2022
D2600V2	1005	2600	56.8	14.2	56.8	0.00	± 10%	Sep.11,2022
Validation Kit	S/N	Frequency (MHz)	1W Target 1g-SAR (W/kg)	pin=100mW Measured 1g-SAR (W/kg)	Normalized to 1W 1g-SAR (W/kg)	Deviation (%)	Limit	Measurement Date
D5GHzV2	1023	5250	81	8.25	82.5	1.85	± 10%	Sep.12,2022
D5GHzV2	1023	5750	81	8	80	-1.23	± 10%	Sep.12,2022

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TEST CONFIGURATIONS

4.1 **Test Environment**

Ambient Temperature: 22±2° C Tissue Simulating Liquid: 22±2° C

4.2 **Test Note**

- General: Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s).
- General: The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.
- General: During the SAR testing, the DASY system checks power drift by comparing the e-field strength of one specific location measured at the beginning with that measured at the end of the SAR testing.
- **General:** According to KDB447498D01v06, testing of other required channels is not required when the reported 1-g SAR for the highest output channel is ≤ 0.8 W/kg, when the transmission band is ≤ 100 MHz.
- **General:** According to KDB865664D01v01r04, SAR measurement variability must be assessed for each frequency band. When the original highest measured SAR is ≥ 0.8 W/kg, repeated that measurement once. Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
- **UMTS (HSDPA):** The 3G SAR test reduction procedure is applied to HSDPA with 12.2 kbps RMC as the primary mode. Since the maximum output power in a secondary mode (HSDPA) is ≤ ¼ dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (HSDPA). The following 4 subtests were completed according to Release 5 procedures in section 5.2 of 3GPP TS 34.121. A summary of these setting are illustrated below:

Sub-test	βε	βa	βa (SF)	$\beta c/\beta a$	$\beta_{hs}^{(I)}$	CM (dB)(2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{lss} = \beta_{lss}/\beta_c = 30/15 \Leftrightarrow \beta_{lss} = 30/15 *\beta_c$

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$.

Note 3: For subtest 2 the βc/βa ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

• UMTS (HSPA): The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) with 12.2 kbps RMC as the primary mode. Since the maximum output power in a secondary mode (HSPA) is $\leq \frac{1}{4}$ dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (HSPA). The following 5 sub-tests were completed according to Release 6 procedures in section 5.2 of 3GPP TS 34.121. A summary of these setting are illustrated below:

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Sub- test	βς	β_{d}	β _d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	β _{ed} (SF)	β _{ed} (codes)	CM ⁽²⁾ (dB)	MPR (dB)	AG ⁽⁴⁾ Index	E- TFCI
1	11/15(3)	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15		2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 *\beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_b/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.

Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

• UMTS (HSPA+): The 3G SAR test reduction procedure is applied to HSPA+ with 12.2 kbps RMC as the primary mode. Since the maximum output power in a secondary mode (HSPA+) is ≤ ¼ dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (HSPA+). The following 1 subtest was completed according to Release 7 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM-

	Sub- test	β _c ↓ (Note3)↓	β _d ⊲	β _{HS} ↓ (Note1)↓	β _{ec} ₊ ₊∂	β _{ed} (2xSF2) (Note 4)	β _{ed} ↓ (2xSF4)↓ (Note 4)↓	CM -/ (dB)-/ (Note 2)-/	MPR. (dB). (Note 2).		E-TFCI (Note 5)«	E-TFCI (boost)∂
	1.₽	1₽	0₽	30/15₽	30/15₽	βed1: 30/15√	βed3: 24/15₽	3.5₽	2.5₽	14₽	105₽	105₽
						βed2: 30/15₽	βed4: 24/15₽					
- [00145	0						

Note 1: Δ ACK, Δ NACK and Δ CQI = 30/15 with eta_{hs} = 30/15 \ralpha_c .4

CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).4 Note 2:

Note 3: DPDCH is not configured, therefore the β_0 is set to 1 and β_d = 0 by default.

Note 4: βed can not be set directly; it is set by Absolute Grant Value. ₽ Note 5:

All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

• UMTS (DC-HSDPA): The 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable. Since the maximum output power in a secondary mode (DC-HSDPA) is ≤ ¼ dB higher than the primary mode (WCDMA), SAR measurement is not required for the secondary mode (DC-HSDPA). The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0. A summary of these setting are illustrated below:

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122

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Table C.8.1.12: Fixed Reference Channel H-Set 12

-	Parameter <i>₀</i>	Unit₽	Value₽
	Avg. Inf. Bit Rate₽	kbps₽	60₽
Inter-TTI	Distance₽	TTI's₽	1₽
Number	of HARQ Processes₽	Proces	6₽
		ses₽	00
Informati	on Bit Payload ($N_{ extit{INF}}$) $^{\wp}$	Bits₽	120₽
Number	Code Blocks₽	Blocks₽	1₽
Binary C	hannel Bits Per TTI₽	Bits₽	960₽
■ Total Ava	ailable SML's in UE₽	SML's₽	19200₽
Number	of SML's per HARQ Proc.₽	SML's₽	3200₽
Coding F	Rate₽	÷.	0.15₽
Number	of Physical Channel Codes₽	Codes₽	1₽
 Modulation 	on₽	÷.	QPSK₽
■ Note 1:	The RMC is intended to be used f	or DC-HSD	PA
	mode and both cells shall transmi	t with identi	cal
	parameters as listed in the table.		
Note 2:	Maximum number of transmission	is limited to	o 1, i.e.,
	retransmission is not allowed. TI	ne redunda	ncy and

Inf. Bit Payload 120 CRC Addition 24 CRC 120 Code Block 144 Segmentation Turbo-Encoding 12 Tail Bits 432 (R=1/3)1st Rate Matching 432 RV Selection 960 Physical Channel Segmentation

constellation version 0 shall be used.

Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

The following 4 sub-tests for HSDPA were completed according to Release 8 procedures in section 5.2 of 3GPP TS34.121. A summary of subtest settings are illustrated below:

Sub-test	βε	βa	βa (SF)	$\beta c/\beta a$	βhs (1)	CM (dB)(2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 *\beta_c$

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$.

Note 3: For subtest 2 the βc/βd ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

- LTE: LTE modes test according to KDB 941225D05v02r05.
- a. Per Section 5.2.1, the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation.

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- Using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
- When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel.
- When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel. b. Per Section 5.2.2, the largest channel bandwidth and measure SAR for QPSK with 50% RB allocation
- The procedures required for 1 RB allocation in 5.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.
- c. Per Section 5.2.3, the largest channel bandwidth and measure SAR for QPSK with 100% RB allocation
- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are ≤ 0.8 W/kg.
- Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
- d. Per Section 5.2.4, Higher order modulations
- For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in sections 5.2.1, 5.2.2 and 5.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.
- e. Per Section 5.3, other channel bandwidth standalone SAR test requirements
- For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section 5.2 to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > $\frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the

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reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg. The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth.

■ TDD LTE was tested at highest duty factor using UL-DL configuration 0 with 6 UL subframes and 2 special subframes using extended cyclic prefix only and special subframe configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Section 4.2, the duty factor for UL-DL configuration 0/special subframe configuration 6 using extended cyclic prefix is 0.633.

According to KDB 941225 D05, SAR testing for TDD LTE must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP TDD LTE configurations. The TDD-LTE of this device supports frame structure type 2 defined in 3GPP TS 36.211 section 4.2, and the frame structure configuration can be tabulated as below.

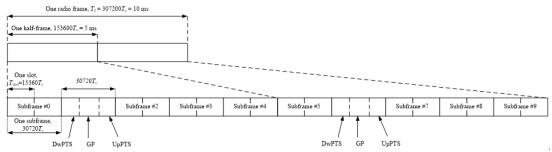


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

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Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

- Consider	No.	ormal cyclic prefix in	downlink.	Ext	tended cyclic prefix in	n downlink∂
 Special subframe 	DwPTS.	Upl	ets-	DwPTS.	Upl	ets.
configuratio n _e	ą	Normal cyclic prefix↓ in uplink∂	Extended cyclic prefix ↓ in uplink	ę	Normal cyclic prefix in uplink∂	Extended cyclic prefix in uplink
■ 0€	6592 · T _s ₽			7680 ⋅ T _s ₽		
■ 1€	19760· <i>T</i> _s ₽			20480·T _s		
■ 24	21952·T _s	(1+X)·2192·T.	$(1+X)\cdot 2560\cdot T_s$	23040 · T.	$(1+X)\cdot 2192\cdot T_{s}$	$(1+X)\cdot 2560\cdot T_s$
■ 3€	24144·T _s	()s	()	25600·T _s		
■ 4.	26336·T _s			7680 · T _s «		
■ 5€	6592 · T _s ₽			20480·T _s	$(2+X)\cdot 2192\cdot T_s$	$(2+X)\cdot 2560\cdot T_s$
- 6₽	19760 · T _s ₽	()	()	23040 · T _s	e e	e e
■ 7₽	21952·T _s	$(2+X)\cdot 2192\cdot T_s$	$(2+X)\cdot 2560\cdot T_s$	12800 · T _s &		
■ 8₽	24144·T _s			- ¢	-4	- \$
■ 9₽	13168 · T _s φ			- -2	- 0	-4

Table 4.2-2: Uplink-downlink configurations

-	Uplink-downlink .	Downlink-to-Uplink -				Sub	fram	num	ber₽			
	configuration∂	Switch-point periodicity⊮	0.	1₽	2₽	3₽	4₽	5₽	6₽	7₽	8₽	9₽
•	0€	5 <u>ms</u> -	D₽	S₽	U₽	U₽	U₽	D₽	S₽	U₽	U₽	Π÷
•	1₽	5 <u>ms</u> -	D₽	S₽	U₽	U₽	D₽	D₽	S₽	U₽	U₽	D₽
•	2₽	5 ms ∘	D₊∍	S₽	U₽	D₽	D₽	D₽	S₽	U₽	D₽	D₽
•	3₽	10 <u>ms</u> -	D₽	S₽	U₽	U₽	U₽	D₽	D₽	D₽	D₽	D₽
•	4₽	10 <u>ms</u> -	D₽	S₽	U₽	U₽	D₽	D₽	D₽	D₽	D₽	D₽
•	5₽	10 ms ₋	D₽	S₽	U₽	D₽	D₽	D₽	D₽	D₽	D₽	D₽
-	6₽	5 ms.	D₽	S₽	U₽	U₽	U₽	D₽	S₽	U₽	U₽	D₽

Considering the highest transmission duty cycle, TDD LTE was tested using Uplink-Downlink configuration 0 with 6 uplink subframe and 2 special subframe. The special subframe was set to special subframe configuration 6 using extended cyclic prefix uplink. Therefore, SAR testing for TDD LTE was measured at the maximum output power with highest transmission duty cycle of 63.33%.

- WLAN 2.4GHz: 802.11b DSSS SAR Test Requirements: SAR is measured for 2.4 GHz 802.11b DSSS mode using the highest measured maximum output power channel, when the reported SAR of the highest measured maximum output power channel for the exposure configuration is \leq 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.
- WLAN 2.4GHz: 802.11g/n OFDM SAR Test Exclusion Requirements: SAR is not required for 802.11g/n since the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

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• WLAN 5GHz: Initial Test Configuration: An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. When the reported SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for the subsequent next highest measured output power channel(s) in the initial test configuration until the reported SAR is ≤ 1.2 W/kg or all required channels are tested. Since the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for subsequent test configuration.

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Test position

Body SAR test position (5mm)

Body SAR is measured for all surfaces/edges with test separation distance 5mm.

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4.4 Test limit

§ 2.1093(d)(1)

Applications for equipment authorization of portable RF sources subject to routine environmental evaluation must contain a statement confirming compliance with the limits specified in § 1.1310 as part of their application. Technical information showing the basis for this statement must be submitted to the Commission upon request. The SAR limits specified in § 1.1310(a) through (c) of this chapter shall be used for evaluation of portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz shall be evaluated in terms of the MPE limits specified in Table 1 to § 1.1310(e)(1). A minimum separation distance applicable to the operating configurations and exposure conditions of the device shall be used for the evaluation. In general, maximum time-averaged power levels must be used for evaluation. All unlicensed personal communications service (PCS) devices and unlicensed NII devices shall be subject to the limits for general population/uncontrolled exposure.

Radiofrequency radiation exposure limits.

§ 1.1310(a)

Specific absorption rate (SAR) shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in § 1.1307(b) within the frequency range of 100 kHz to 6 GHz (inclusive).

§ 1.1310(b)

The SAR limits for occupational/controlled exposure are 0.4 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 8 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit for occupational/controlled exposure is 20 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 6 minutes to determine compliance with occupational/controlled SAR limits. 8 1 1310(c)

The SAR limits for general population/uncontrolled exposure are 0.08 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 1.6 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit is 4 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 30 minutes to determine compliance with general population/uncontrolled SAR limits.

Note to paragraphs (a) through (c):

SAR is a measure of the rate of energy absorption due to exposure to RF electromagnetic energy. These SAR limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized SAR in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE Std C95.1-1992, copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radiofrequency

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Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5, copyright 1986 by NCRP, Bethesda, Maryland 20814. Limits for whole body SAR and peak spatial-average SAR are based on recommendations made in both of these documents. The MPE limits in Table 1 are based generally on criteria published by the NCRP in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Sections 17.4.1, 17.4.1.1, 17.4.2 and 17.4.3, copyright 1986 by NCRP, Bethesda, Maryland 20814. In the frequency range from 100 MHz to 1500 MHz, these MPE exposure limits for field strength and power density are also generally based on criteria recommended by the ANSI in Section 4.1 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE Std C95.1-1992, copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017.

Portable devices that transmit at frequencies above 6 GHz shall be evaluated in terms of the MPE limits specified in Table 1 to § 1.1310(e)(1).

According to ANSI/IEEE C95.1-1992, the criteria listed in the following Table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4cm2 per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

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Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
	(i) Limits for Oc	cupational/Controlled Ex	posure	
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500- 100,000			5	<6
	(ii) Limits for Genera	l Population/Uncontrolle	d Exposure	
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500- 100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density. Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

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MAXIMUM OUTPUT POWER

5.1 **WCDMA**

	Band		WCDMA II	
	TX Channel	9262	9400	9538
F	requency (MHz)	1852.4	1880	1907.6
Max. Rated Avg.	Power+Max. Tolerance (dBm)		24.00	
3GPP Rel 99	RMC 12.2Kbps	23.61	23.77	23.87
	HSDPA Subtest-1	23.24	23.41	23.46
3GPP Rel 5	HSDPA Subtest-2	23.21	23.50	23.49
SGPP Rei S	HSDPA Subtest-3	22.94	22.74	22.85
	HSDPA Subtest-4	22.90	22.90	22.93
	HSUPA Subtest-1	23.32	23.38	23.35
	HSUPA Subtest-2	21.50	21.35	21.55
3GPP Rel 6	HSUPA Subtest-3	22.31	22.49	22.37
	HSUPA Subtest-4	21.12	21.19	21.32
	HSUPA Subtest-5	23.18	23.42	23.44
	DC-HSDPA Subtest-1	23.29	23.48	23.50
2CDD D-10	DC-HSDPA Subtest-2	23.16	23.50	23.37
3GPP Rel 8	DC-HSDPA Subtest-3	22.69	22.96	22.81
	DC-HSDPA Subtest-4	22.69	22.88	22.96
			4/0D144 B	
	Band		WCDMA I\	/
	Band TX Channel	1312	WCDMA N 1413	/ 1513
F				
	TX Channel	1312	1413	1513
	TX Channel requency (MHz)	1312	1413 1732.6	1513
Max. Rated Avg.	TX Channel requency (MHz) Power+Max. Tolerance (dBm)	1312 1712.4	1413 1732.6 23.00	1513 1752.6
Max. Rated Avg. 3GPP Rel 99	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps	1312 1712.4 22.78	1413 1732.6 23.00 22.89	1513 1752.6 22.84
Max. Rated Avg.	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1	1312 1712.4 22.78 22.64	1413 1732.6 23.00 22.89 22.64	1513 1752.6 22.84 22.63
Max. Rated Avg. 3GPP Rel 99	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2	1312 1712.4 22.78 22.64 22.59	1413 1732.6 23.00 22.89 22.64 22.61	1513 1752.6 22.84 22.63 22.63
Max. Rated Avg. 3GPP Rel 99	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2 HSDPA Subtest-3	1312 1712.4 22.78 22.64 22.59 22.22	1413 1732.6 23.00 22.89 22.64 22.61 22.22	1513 1752.6 22.84 22.63 22.63 22.20
Max. Rated Avg. 3GPP Rel 99	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2 HSDPA Subtest-3 HSDPA Subtest-4	1312 1712.4 22.78 22.64 22.59 22.22 22.28	1413 1732.6 23.00 22.89 22.64 22.61 22.22 22.27	1513 1752.6 22.84 22.63 22.63 22.20 22.29
Max. Rated Avg. 3GPP Rel 99	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2 HSDPA Subtest-3 HSDPA Subtest-4 HSUPA Subtest-1	1312 1712.4 22.78 22.64 22.59 22.22 22.28 22.77	1413 1732.6 23.00 22.89 22.64 22.61 22.22 22.27 22.76	1513 1752.6 22.84 22.63 22.63 22.20 22.29 22.75
Max. Rated Avg. 3GPP Rel 99 3GPP Rel 5	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2 HSDPA Subtest-3 HSDPA Subtest-4 HSUPA Subtest-1 HSUPA Subtest-1	1312 1712.4 22.78 22.64 22.59 22.22 22.28 22.77 21.90	1413 1732.6 23.00 22.89 22.64 22.61 22.22 22.27 22.76 22.00	1513 1752.6 22.84 22.63 22.63 22.20 22.29 22.75 21.80
Max. Rated Avg. 3GPP Rel 99 3GPP Rel 5	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2 HSDPA Subtest-3 HSDPA Subtest-4 HSUPA Subtest-1 HSUPA Subtest-1 HSUPA Subtest-2	1312 1712.4 22.78 22.64 22.59 22.22 22.28 22.77 21.90 22.59	1413 1732.6 23.00 22.89 22.64 22.61 22.22 22.27 22.76 22.00 22.65	1513 1752.6 22.84 22.63 22.63 22.20 22.29 22.75 21.80 22.65
Max. Rated Avg. 3GPP Rel 99 3GPP Rel 5	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2 HSDPA Subtest-3 HSDPA Subtest-4 HSUPA Subtest-1 HSUPA Subtest-1 HSUPA Subtest-2 HSUPA Subtest-2 HSUPA Subtest-3	1312 1712.4 22.78 22.64 22.59 22.22 22.28 22.77 21.90 22.59 21.78	1413 1732.6 23.00 22.89 22.64 22.61 22.22 22.27 22.76 22.00 22.65 21.99	1513 1752.6 22.84 22.63 22.63 22.20 22.29 22.75 21.80 22.65 21.88
Max. Rated Avg. 3GPP Rel 99 3GPP Rel 5 3GPP Rel 6	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2 HSDPA Subtest-3 HSDPA Subtest-4 HSUPA Subtest-1 HSUPA Subtest-1 HSUPA Subtest-2 HSUPA Subtest-3 HSUPA Subtest-3 HSUPA Subtest-3	1312 1712.4 22.78 22.64 22.59 22.22 22.28 22.77 21.90 22.59 21.78 22.29	1413 1732.6 23.00 22.89 22.64 22.61 22.22 22.27 22.76 22.00 22.65 21.99 22.19	1513 1752.6 22.84 22.63 22.63 22.20 22.29 22.75 21.80 22.65 21.88 22.29
Max. Rated Avg. 3GPP Rel 99 3GPP Rel 5	TX Channel requency (MHz) Power+Max. Tolerance (dBm) RMC 12.2Kbps HSDPA Subtest-1 HSDPA Subtest-2 HSDPA Subtest-3 HSDPA Subtest-4 HSUPA Subtest-1 HSUPA Subtest-1 HSUPA Subtest-2 HSUPA Subtest-2 HSUPA Subtest-3 HSUPA Subtest-3 HSUPA Subtest-4 HSUPA Subtest-5 DC-HSDPA Subtest-1	1312 1712.4 22.78 22.64 22.59 22.22 22.28 22.77 21.90 22.59 21.78 22.29 22.81	1413 1732.6 23.00 22.89 22.64 22.61 22.22 22.27 22.76 22.00 22.65 21.99 22.19 22.84	1513 1752.6 22.84 22.63 22.63 22.20 22.29 22.75 21.80 22.65 21.88 22.29 22.86

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	Band		WCDMA\	/	
	TX Channel			4233	
F	Frequency (MHz)	cy (MHz) 826.4 836.6 84			
Max. Rated Avg	. Power+Max. Tolerance (dBm)	Tolerance (dBm) 24.00			
3GPP Rel 99	RMC 12.2Kbps	RMC 12.2Kbps 23.68 23.65			
	HSDPA Subtest-1	23.41	23.28	23.35	
3GPP Rel 5	HSDPA Subtest-2	23.26	23.39	23.26	
JOFF Nei J	HSDPA Subtest-3	22.93	22.81	22.93	
	HSDPA Subtest-4	22.96	23.00	22.88	
	HSUPA Subtest-1	23.29	23.29	23.22	
	HSUPA Subtest-2	21.47	21.31	21.22	
3GPP Rel 6	HSUPA Subtest-3	22.46	22.39	22.38	
	HSUPA Subtest-4	21.10	21.10	21.06	
	HSUPA Subtest-5	23.43	23.36	23.31	
	DC-HSDPA Subtest-1	23.34	23.34	23.26	
3GPP Rel 8	DC-HSDPA Subtest-2	23.39	23.35	23.19	
SGFF Rel o	DC-HSDPA Subtest-3	22.75	22.84	22.84	
	DC-HSDPA Subtest-4	22.87	22.80	22.87	

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J.Z	IDD LIL											
	LTE Band 2											
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD				
	Frequenc	cy (MHz)		1860	1880	1900	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)				
	Char	18700	18900	19100	(dBm)	JGFF(UD)						
		1	0	22.42	22.45	22.47	23.00	0				
		1	50	22.39	22.36	22.43	23.00	0				
	QPSK	1	99	22.42	22.39	22.46	23.00	0				
20		50	0	21.43	21.42	21.42	22.00	1				
		50	25	21.41	21.38	21.43	22.00	1				
		50	50	21.41	21.44	21.38	22.00	1				
		100	0	21.47	21.40	21.39	22.00	1				
		1	0	21.41	21.40	21.45	22.00	1				
		1	50	21.39	21.44	21.46	22.00	1				
		1	99	21.45	21.42	21.44	22.00	1				
20	16-QAM	50	0	20.45	20.38	20.45	21.00	2				
		50	25	20.40	20.38	20.40	21.00	2				
		50	50	20.46	20.41	20.47	21.00	2				
		100	0	20.45	20.46	20.38	21.00	2				
		1	0	20.44	20.43	20.44	21.00	2				
		1	50	20.43	20.43	20.38	21.00	2				
	64-QAM	1	99	20.46	20.37	20.38	21.00	2				
20		50	0	19.38	19.44	19.44	20.00	3				
		50	25	19.42	19.39	19.43	20.00	3				
		50	50	19.44	19.44	19.39	20.00	3				
1			_									

19.46

19.47

19.39

20.00

3

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			LTE	Band 2				
		I	Г					
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	
	Frequency (MHz)				1880	1902.5	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
Channel			18675	18900	19125	(dBm)	JOFF(GD)	
		1	0	22.42	22.38	22.43	23.00	0
		1	36	22.44	22.40	22.42	23.00	0
		1	74	22.44	22.46	22.37	23.00	0
15	QPSK	36	0	21.39	21.40	21.39	22.00	1
		36	18	21.46	21.43	21.43	22.00	1
		36	37	21.42	21.38	21.44	22.00	1
		75	0	21.39	21.38	21.41	22.00	1
		1	0	21.41	21.44	21.44	22.00	1
		1	36	21.44	21.38	21.41	22.00	1
		1	74	21.40	21.45	21.39	22.00	1
15	16-QAM	36	0	20.44	20.38	20.42	21.00	2
		36	18	20.38	20.41	20.39	21.00	2
		36	37	20.41	20.43	20.39	21.00	2
		75	0	20.45	20.40	20.40	21.00	2
		1	0	20.44	20.37	20.41	21.00	2
		1	36	20.42	20.47	20.40	21.00	2
		1	74	20.42	20.37	20.39	21.00	2
15	64-QAM	36	0	19.39	19.38	19.38	20.00	3
		36	18	19.38	19.46	19.38	20.00	3
		36	37	19.46	19.38	19.44	20.00	3
		75	0	19.41	19.46	19.41	20.00	3

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			LTE	Band 2				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	Target			
Frequency (MHz)				1855	1880	1905	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
Channel			18650	18900	19150	(dBm)	JGPP(UB)	
		1	0	22.40	22.39	22.45	23.00	0
		1	25	22.39	22.44	22.43	23.00	0
		1	49	22.46	22.41	22.42	23.00	0
10	QPSK	25	0	21.42	21.45	21.40	22.00	1
		25	12	21.43	21.41	21.44	22.00	1
		25	25	21.41	21.42	21.40	22.00	1
		50	0	21.44	21.45	21.46	22.00	1
	16-QAM	1	0	21.42	21.41	21.47	22.00	1
		1	25	21.38	21.45	21.46	22.00	1
		1	49	21.38	21.45	21.41	22.00	1
10		25	0	20.41	20.43	20.39	21.00	2
		25	12	20.45	20.37	20.45	21.00	2
		25	25	20.41	20.47	20.43	21.00	2
		50	0	20.47	20.43	20.39	21.00	2
		1	0	20.41	20.40	20.42	21.00	2
		1	25	20.43	20.39	20.47	21.00	2
		1	49	20.47	20.37	20.44	21.00	2
10	64-QAM	25	0	19.39	19.43	19.46	20.00	3
		25	12	19.45	19.40	19.37	20.00	3
		25	25	19.40	19.37	19.37	20.00	3
		50	0	19.46	19.43	19.42	20.00	3

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			LTE	Band 2				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	Target	MDD	
	Frequenc	1852.5	1880	1907.5	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)		
	Channel			18625	18900	19175	(dBm)	33i i (db)
		1	0	22.39	22.41	22.40	23.00	0
		1	12	22.42	22.43	22.42	23.00	0
		1	24	22.42	22.38	22.46	23.00	0
5	QPSK	12	0	21.42	21.42	21.40	22.00	1
		12	6	21.47	21.43	21.38	22.00	1
		12	13	21.44	21.39	21.46	22.00	1
		25	0	21.42	21.41	21.44	22.00	1
		1	0	21.39	21.42	21.41	22.00	1
		1	12	21.47	21.47	21.45	22.00	1
		1	24	21.47	21.38	21.40	22.00	1
5	16-QAM	12	0	20.40	20.46	20.42	21.00	2
		12	6	20.38	20.37	20.43	21.00	2
		12	13	20.47	20.37	20.46	21.00	2
		25	0	20.43	20.41	20.43	21.00	2
		1	0	20.47	20.41	20.44	21.00	2
		1	12	20.40	20.46	20.41	21.00	2
		1	24	20.44	20.38	20.40	21.00	2
5	64-QAM	12	0	19.40	19.42	19.42	20.00	3
		12	6	19.37	19.37	19.45	20.00	3
		12	13	19.39	19.43	19.42	20.00	3
		25	0	19.41	19.44	19.41	20.00	3

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			LTE	Band 2				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target Power +	MDD
Frequency (MHz)				1851.5	1880	1908.5	Max. Tolerance	MPR Allowed per 3GPP(dB)
Channel				18615	18900	19185	(dBm)	JOI I (db)
		1	0	22.42	22.38	22.44	23.00	0
		1	7	22.44	22.43	22.44	23.00	0
		1	14	22.41	22.39	22.44	23.00	0
3	QPSK	8	0	21.40	21.46	21.40	22.00	1
		8	4	21.43	21.40	21.46	22.00	1
		8	7	21.44	21.45	21.45	22.00	1
		15	0	21.41	21.44	21.43	22.00	1
		1	0	21.41	21.43	21.47	22.00	1
		1	7	21.42	21.45	21.45	22.00	1
		1	14	21.38	21.37	21.40	22.00	1
3	16-QAM	8	0	20.40	20.39	20.38	21.00	2
		8	4	20.47	20.42	20.46	21.00	2
		8	7	20.45	20.44	20.42	21.00	2
		15	0	20.45	20.43	20.40	21.00	2
		1	0	20.41	20.41	20.37	21.00	2
		1	7	20.37	20.38	20.37	21.00	2
		1	14	20.39	20.47	20.41	21.00	2
3	64-QAM	8	0	19.42	19.43	19.44	20.00	3
		8	4	19.46	19.47	19.40	20.00	3
		8	7	19.46	19.41	19.39	20.00	3
		15	0	19.40	19.45	19.40	20.00	3

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			LTE	Band 2				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc	1850.7	1880	1909.3	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)		
	Channel				18900	19193	(dBm)	JGFF(UB)
		1	0	22.45	22.38	22.42	23.00	0
		1	2	22.38	22.35	22.45	23.00	0
		1	5	22.40	22.38	22.42	23.00	0
1.4	QPSK	3	0	21.40	21.39	21.44	23.00	0
		3	2	21.46	21.46	21.45	23.00	0
		3	3	21.45	21.43	21.43	23.00	0
		6	0	21.45	21.39	21.43	22.00	1
		1	0	21.46	21.40	21.46	22.00	1
		1	2	21.39	21.43	21.44	22.00	1
		1	5	21.39	21.47	21.40	22.00	1
1.4	16-QAM	3	0	20.38	20.45	20.38	22.00	1
		3	2	20.46	20.40	20.40	22.00	1
		3	3	20.46	20.43	20.42	22.00	1
		6	0	20.37	20.39	20.47	21.00	2
		1	0	20.41	20.41	20.43	21.00	2
		1	2	20.39	20.42	20.38	21.00	2
		1	5	20.39	20.43	20.40	21.00	2
1.4	64-QAM	3	0	19.45	19.44	19.47	21.00	2
		3	2	19.39	19.47	19.44	21.00	2
		3	3	19.44	19.40	19.39	21.00	2
		6	0	19.47	19.37	19.47	20.00	3

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			LTE	Band 4				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
Frequency (MHz)				1720	1732.5	1745	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
Channel			20050	20175	20300	(dBm)	301 T (db)	
		1	0	22.49	22.60	22.52	23.00	0
		1	50	22.42	22.54	22.52	23.00	0
		1	99	22.43	22.56	22.56	23.00	0
20	QPSK	50	0	21.45	21.49	21.49	22.00	1
		50	25	21.43	21.40	21.47	22.00	1
		50	50	21.40	21.48	21.42	22.00	1
		100	0	21.43	21.49	21.48	22.00	1
		1	0	21.42	21.43	21.40	22.00	1
		1	50	21.42	21.44	21.41	22.00	1
		1	99	21.50	21.45	21.41	22.00	1
20	16-QAM	50	0	20.43	20.48	20.43	21.00	2
		50	25	20.43	20.47	20.45	21.00	2
		50	50	20.48	20.50	20.48	21.00	2
		100	0	20.40	20.48	20.42	21.00	2
		1	0	20.44	20.48	20.42	21.00	2
		1	50	20.45	20.48	20.44	21.00	2
		1	99	20.42	20.50	20.45	21.00	2
20	64-QAM	50	0	19.40	19.41	19.47	20.00	3
		50	25	19.47	19.43	19.50	20.00	3
		50	50	19.42	19.43	19.44	20.00	3
		100	0	19.45	19.41	19.45	20.00	3

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			LTE	Band 4				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	
	Frequency (MHz)				1732.5	1747.5	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
	Channel			20025	20175	20325	(dBm)	JGFF(UB)
		1	0	22.41	22.59	22.52	23.00	0
		1	36	22.48	22.60	22.55	23.00	0
		1	74	22.48	22.53	22.53	23.00	0
15	QPSK	36	0	21.42	21.40	21.50	22.00	1
		36	18	21.49	21.40	21.40	22.00	1
		36	37	21.44	21.49	21.42	22.00	1
		75	0	21.44	21.48	21.40	22.00	1
	16-QAM	1	0	21.48	21.40	21.43	22.00	1
		1	36	21.46	21.46	21.46	22.00	1
		1	74	21.48	21.40	21.49	22.00	1
15		36	0	20.47	20.48	20.41	21.00	2
		36	18	20.46	20.45	20.49	21.00	2
		36	37	20.49	20.49	20.41	21.00	2
		75	0	20.44	20.44	20.45	21.00	2
		1	0	20.49	20.46	20.42	21.00	2
		1	36	20.40	20.48	20.48	21.00	2
		1	74	20.43	20.50	20.40	21.00	2
15	64-QAM	36	0	19.42	19.44	19.48	20.00	3
		36	18	19.41	19.45	19.41	20.00	3
		36	37	19.46	19.50	19.41	20.00	3
		75	0	19.47	19.41	19.41	20.00	3

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			LTE	Band 4				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	
	Frequenc	1715	1732.5	1750	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)		
	Channel			20000	20175	20350	(dBm)	JGFF(UD)
		1	0	22.46	22.52	22.56	23.00	0
		1	25	22.41	22.55	22.59	23.00	0
		1	49	22.40	22.58	22.55	23.00	0
10	QPSK	25	0	21.46	21.45	21.46	22.00	1
		25	12	21.47	21.43	21.41	22.00	1
		25	25	21.50	21.42	21.42	22.00	1
		50	0	21.49	21.45	21.47	22.00	1
		1	0	21.50	21.48	21.41	22.00	1
		1	25	21.47	21.42	21.46	22.00	1
		1	49	21.45	21.46	21.43	22.00	1
10	16-QAM	25	0	20.50	20.47	20.45	21.00	2
		25	12	20.40	20.48	20.44	21.00	2
		25	25	20.45	20.40	20.49	21.00	2
		50	0	20.42	20.44	20.42	21.00	2
		1	0	20.40	20.45	20.41	21.00	2
		1	25	20.49	20.42	20.49	21.00	2
		1	49	20.48	20.45	20.44	21.00	2
10	64-QAM	25	0	19.47	19.42	19.44	20.00	3
		25	12	19.44	19.42	19.40	20.00	3
		25	25	19.40	19.50	19.44	20.00	3
		50	0	19.50	19.48	19.46	20.00	3

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			LTE	Band 4				
BW(MHz)	Modulation	RB Size	RB Offset	Conducted power (dBm) Targe				
	Frequenc		1712.5	1732.5	1752.5	Power + Max.	Allowed per	
	Channel				20175	20375	Tolerance (dBm)	3GPP(dB)
		1	0	22.49	22.57	22.54	23.00	0
		1	12	22.42	22.55	22.55	23.00	0
		1	24	22.44	22.58	22.60	23.00	0
5	QPSK	12	0	21.40	21.45	21.42	22.00	1
		12	6	21.41	21.50	21.44	22.00	3GPP(dB) 0 0 0 1 1 1 1 1 1 2 2 2 2 2 2 2 3 3 3 3
		12	13	21.47	21.46	21.47	22.00	1
		25	0	21.42	21.48	21.42	22.00	1
		1	0	21.46	21.48	21.50	22.00	1
		1	12	21.41	21.40	21.42	22.00	1
		1	24	21.42	21.47	21.44	22.00	1
5	16-QAM	12	0	20.50	20.49	20.40	21.00	2
		12	6	20.41	20.40	20.49	21.00	Allowed per 3GPP(dB) 0 0 0 1 1 1 1 1 2 2 2 2 2 2 2 3 3 3
		12	13	20.46	20.40	20.41	21.00	2
		25	0	20.46	20.50	20.47	21.00	2
		1	0	20.48	20.48	20.47	21.00	2
		1	12	20.42	20.47	20.49	21.00	2
		1	24	20.49	20.40	20.49	21.00	2
5	64-QAM	12	0	19.47	19.45	19.40	20.00	
		12	6	19.47	19.50	19.42	20.00	3
		12	13	19.41	19.50	19.41	20.00	
	16-QAM	25	0	19.41	19.47	19.40	20.00	3

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			LTE	Band 4				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	
	Frequenc	1711.5	1732.5	1753.5	Power + Max. Tolerance	Allowed per		
	Channel				20175	20385	(dBm)	JGFF(UB)
		1	0	22.44	22.58	22.54	23.00	0
		1	7	22.46	22.59	22.54	23.00	0
		1	14	22.42	22.55	22.51	23.00	0
3	QPSK	8	0	21.47	21.50	21.46	22.00	1
		8	4	21.47	21.44	21.49	22.00	1
		8	7	21.47	21.41	21.41	22.00	1
		15	0	21.44	21.43	21.45	22.00	1
		1	0	21.48	21.41	21.40	22.00	1
		1	7	21.40	21.42	21.46	22.00	1
		1	14	21.40	21.50	21.40	22.00	1
3	16-QAM	8	0	20.40	20.48	20.48	21.00	2
		8	4	20.47	20.49	20.50	21.00	2
		8	7	20.48	20.46	20.44	21.00	2
		15	0	20.49	20.49	20.40	21.00	2
		1	0	20.43	20.49	20.49	21.00	2
		1	7	20.47	20.41	20.41	21.00	2
		1	14	20.47	20.50	20.44	21.00	2
3	64-QAM	8	0	19.42	19.50	19.49	20.00	3
		8	4	19.46	19.48	19.46	20.00	3
		8	7	19.41	19.43	19.49	20.00	3GPP(dB) 0 0 1 1 1 1 1 1 2 2 2 2 2 2 3
		15	0	19.46	19.40	19.42	20.00	3

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			LTC	D I.4				
			LIE	Band 4				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target Power + MPF	MDD
	Frequenc		1710.7	1732.5	1754.3	Max. Tolerance	Allowed per	
	Channel 1 0				20175	20393	(dBm)	OOI I (db)
		22.41	22.56	22.50	23.00	0		
		1	2	22.50	22.55	22.53	23.00	0
		1	5	22.50	22.56	22.53	23.00	0
1.4	QPSK	3	0	21.44	21.41	21.50	23.00	0
		3	2	21.42	21.48	21.49	23.00	0
		3	3	21.49	21.44	21.50	23.00	0
		6	0	21.47	21.43	21.46	22.00	1
		1	0	21.43	21.49	21.45	22.00	1
		1	2	21.42	21.43	21.45	22.00	1
		1	5	21.40	21.48	21.48	22.00	1
1.4	16-QAM	3	0	20.40	20.46	20.50	22.00	1
		3	2	20.47	20.46	20.49	22.00	1
		3	3	20.45	20.48	20.48	22.00	1
		6	0	20.42	20.46	20.50	21.00	2
		1	0	20.43	20.47	20.46	21.00	2
		1	2	20.49	20.40	20.48	21.00	2
		1	5	20.42	20.46	20.40	21.00	2
1.4	64-QAM	3	0	19.49	19.42	19.49	21.00	2
		3	2	19.40	19.47	19.50	21.00	2
		3	3	19.50	19.49	19.48	21.00	3GPP(dB) 0 0 0 0 0 1 1 1 1 1 2 2 2 2 2 2
		6	0	19.47	19.49	19.45	20.00	3

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			LTE	Band 5				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	Target Power + MF	MDD	
	Frequenc	cy (MHz)		829	836.5	844	Max. Tolerance	Allowed per
	Channel				20525	20600	(dBm)	JGFF(UD)
		1	0	23.81	23.85	23.74	24.50	0
		1	25	23.73	23.81	23.57	24.50	0
		1	49	23.65	23.67	23.66	24.50	0
10	QPSK	25	0	22.70	22.86	22.74	23.50	1
		25	12	22.70	22.83	22.70	23.50	1
		25	25	22.66	22.82	22.64	23.50	1
		50	0	22.64	22.74	22.59	23.50	1
		1	0	22.73	22.84	22.68	23.50	1
		1	25	22.64	22.83	22.68	23.50	1
		1	49	22.62	22.72	22.73	23.50	1
10	16-QAM	25	0	21.74	21.76	21.66	22.50	2
		25	12	21.64	21.84	21.70	22.50	0 0 0 1 1 1 1 1 1 2 2 2 2 2 2 2 2 3
		25	25	21.66	21.84	21.69	22.50	2
		50	0	21.65	21.75	21.59	22.50	2
		1	0	21.73	21.75	21.64	22.50	2
		1	25	21.69	21.78	21.62	22.50	2
		1	49	21.76	21.71	21.67	22.50	2
10	64-QAM	25	0	20.80	20.72	20.75	21.50	3
		25	12	20.71	20.83	20.65	21.50	3
		25	25	20.70	20.74	20.74	21.50	3GPP(dB) 0 0 0 1 1 1 1 1 1 2 2 2 2 2 2 3
		50	0	20.79	20.72	20.60	21.50	3

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			LTE	Band 5				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc		826.5	836.5	846.5	Power + Max. Tolerance	Allowed per	
	Channel				20525	20625	(dBm)	3GI I (db)
		1	0	23.67	23.66	23.71	24.50	0
		1	12	23.70	23.71	23.66	24.50	0
		1	24	23.74	23.68	23.58	24.50	0
5	QPSK	12	0	22.66	22.75	22.60	23.50	1
		12	6	22.69	22.80	22.75	23.50	1
		12	13	22.63	22.81	22.67	23.50	1
		25	0	22.66	22.78	22.73	23.50	1
		1	0	22.71	22.76	22.69	23.50	1
		1	12	22.73	22.82	22.60	23.50	1
		1	24	22.68	22.71	22.64	23.50	1
5	16-QAM	12	0	21.80	21.68	21.58	22.50	2
		12	6	21.71	21.83	21.60	22.50	1 1 1 1 2 2 2
		12	13	21.62	21.81	21.59	22.50	2
		25	0	21.72	21.84	21.68	22.50	2
		1	0	21.74	21.83	21.66	22.50	2
		1	12	21.61	21.70	21.63	22.50	2
		1	24	21.72	21.74	21.59	22.50	2
5	64-QAM	12	0	20.79	20.74	20.73	21.50	3
		12	6	20.74	20.82	20.64	21.50	3
		12	13	20.63	20.77	20.59	21.50	3GPP(dB) 0 0 0 1 1 1 1 1 1 2 2 2 2 2 2 3
		25	0	20.70	20.81	20.68	21.50	3

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			LTE	Band 5				
				Danu 5				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc		825.5	836.5	847.5	Power + Max. Tolerance	Allowed per	
	Channel				20525	20635	(dBm)	JGPP(UB)
		1	0	23.71	23.74	23.73	24.50	0
		1	7	23.66	23.81	23.63	24.50	0
		1	14	23.68	23.78	23.59	24.50	0
3	QPSK	8	0	22.63	22.84	22.65	23.50	1
		8	4	22.75	22.70	22.61	23.50	3GPP(dB) 0 0 0 1 1 1 1 1 1 2 2 2 2 2 2 2 3 3 3 3
		8	7	22.64	22.66	22.62	23.50	1
		15	0	22.63	22.80	22.68	23.50	1
		1	0	22.74	22.73	22.56	23.50	1
		1	7	22.75	22.72	22.75	23.50	1
		1	14	22.76	22.71	22.72	23.50	1
3	16-QAM	8	0	21.69	21.70	21.59	22.50	2
		8	4	21.80	21.83	21.59	22.50	2
		8	7	21.79	21.80	21.73	22.50	2
		15	0	21.70	21.78	21.64	22.50	2
		1	0	21.64	21.75	21.74	22.50	2
		1	7	21.64	21.73	21.58	22.50	2
		1	14	21.67	21.77	21.61	22.50	2
3	64-QAM	8	0	20.81	20.83	20.69	21.50	3
		8	4	20.64	20.81	20.62	21.50	3
		8	7	20.71	20.71	20.62	21.50	3
		15	0	20.61	20.80	20.75	21.50	3

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			LTE	Band 5				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target Power +	MDD
	Frequenc	824.7	836.5	848.3	Max. Tolerance	Allowed per		
	Channel				20525	20643	(dBm)	3011 (db)
		1	0	23.68	23.83	23.76	24.50	0
		1	2	23.62	23.71	23.73	24.50	0
		1	5	23.62	23.68	23.70	24.50	0
1.4	QPSK	3	0	23.76	23.76	23.58	24.50	0
		3	2	23.64	23.82	23.60	24.50	3GPP(dB) 0 0 0 0 0 0 1 1 1 1 1 1 2 2 2 2 2 2 2
		3	3	23.74	23.76	23.71	24.50	0
		6	0	22.70	22.81	22.58	23.50	1
		1	0	22.75	22.75	22.56	23.50	1
		1	2	22.70	22.82	22.68	23.50	1
		1	5	22.64	22.77	22.58	23.50	1
1.4	16-QAM	3	0	22.69	22.69	22.61	23.50	1
		3	2	22.77	22.68	22.67	23.50	1
		3	3	22.72	22.74	22.62	23.50	1
		6	0	21.75	21.75	21.71	22.50	2
		1	0	21.70	21.75	21.65	22.50	2
		1	2	21.76	21.82	21.70	22.50	2
		1	5	21.78	21.66	21.67	22.50	2
1.4	64-QAM	3	0	21.71	21.75	21.59	22.50	2
		3	2	21.74	21.78	21.64	22.50	2
		3	3	21.72	21.84	21.62	22.50	2
		6	0	20.64	20.78	20.60	21.50	3

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			LTE	Band 7				
		T		T			I	I
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	
	Frequenc	2510	2535	2560	Power + Max. Tolerance	MPR Allowed per		
	Channel				21100	21350	(dBm)	JOFF (db)
		1	0	23.01	23.62	23.22	24.50	0
		1	50	22.88	23.52	23.09	24.50	0
		1	99	22.86	23.31	23.05	24.50	0
20	QPSK	50	0	22.01	22.42	22.10	23.50	1
		50	25	21.99	22.35	22.05	23.50	1
		50	50	21.88	22.26	22.20	23.50	1
		100	0	22.00	22.33	22.09	23.50	1
		1	0	21.98	22.42	22.20	23.50	1
		1	50	21.84	22.51	22.09	23.50	1
		1	99	21.95	22.47	22.22	23.50	1
20	16-QAM	50	0	20.86	21.51	21.18	22.50	2
		50	25	20.90	21.42	21.20	22.50	2
		50	50	20.83	21.53	21.04	22.50	2
		100	0	20.97	21.42	21.19	22.50	2
		1	0	21.00	21.42	21.21	22.50	2
		1	50	20.89	21.49	21.10	22.50	2
		1	99	21.01	21.59	21.15	22.50	2
20	64-QAM	50	0	19.95	20.61	20.19	21.50	3
		50	25	19.85	20.47	20.20	21.50	3
		50	50	19.84	20.43	20.11	21.50	Allowed per 3GPP(dB) 0 0 0 1 1 1 1 1 2 2 2 2 2 2 2 3
		100	0	19.94	20.59	20.11	21.50	3

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	LTE Band 7											
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target					
	Frequenc	2507.5	2535	2562.5	Power + Max. Tolerance	Allowed per						
	Channel				21100	21375	(dBm)	JGFF(UB)				
		0	22.97	23.59	23.09	24.50	0					
		1	36	22.93	23.43	23.14	24.50	0				
		1	74	22.92	23.53	23.03	24.50	0				
15	QPSK	36	0	21.99	22.56	22.16	23.50	1				
		36	18	21.83	22.55	22.20	23.50	1				
		36	37	21.84	22.49	22.04	23.50	1				
		75	0	21.85	22.49	22.13	23.50	1				
		1	0	21.90	22.58	22.12	23.50	1				
		1	36	21.94	22.47	22.17	23.50	1				
		1	74	21.93	22.56	22.06	23.50	1				
15	16-QAM	36	0	20.95	21.51	21.08	22.50	2				
		36	18	20.95	21.44	21.04	22.50	2				
		36	37	20.90	21.51	21.21	22.50	2				
		75	0	20.87	21.47	21.07	22.50	2				
		1	0	20.99	21.61	21.09	22.50	2				
		1	36	20.81	21.45	21.06	22.50	2				
		1	74	20.99	21.51	21.09	22.50	2				
15	64-QAM	36	0	19.85	20.47	20.12	21.50	3				
		36	18	19.84	20.62	20.03	21.50	3				
		36	37	19.87	20.49	20.07	21.50	3GPP(dB) 0 0 1 1 1 1 1 2 2 2 2 2 2 3				
		75	0	19.86	20.62	20.09	21.50	3				

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			LTE	Band 7				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	Target	MDD	
	Frequenc	cy (MHz)	2505	2535	2565	Power + Max. Tolerance	Allowed per	
	Channel				21100	21400	(dBm)	3311 (db)
		1	0	22.86	23.56	23.21	24.50	0
		1	25	22.83	23.48	23.08	24.50	0
		1	49	22.91	23.45	23.17	24.50	0
10	QPSK	25	0	21.87	22.46	22.19	23.50	1
		25	12	21.99	22.45	22.11	23.50	1
		25	25	21.97	22.54	22.06	23.50	1
		50	0	21.81	22.55	22.22	23.50	1
		1	0	21.97	22.44	22.20	23.50	1
		1	25	21.94	22.45	22.12	23.50	1
		1	49	21.85	22.52	22.21	23.50	1
10	16-QAM	25	0	20.84	21.56	21.02	22.50	2
		25	12	20.99	21.47	21.12	22.50	3GPP(dB) 0 0 1 1 1 1 1 1 1 1
		25	25	20.90	21.42	21.14	22.50	2
		50	0	20.83	21.58	21.15	22.50	2
		1	0	20.97	21.58	21.09	22.50	2
		1	25	20.84	21.54	21.18	22.50	2
		1	49	20.85	21.58	21.15	22.50	2
10	64-QAM	25	0	19.93	20.60	20.05	21.50	3
		25	12	19.92	20.57	.57 20.04	21.50	3
		25	25	19.85	20.45	20.03	21.50	3GPP(dB) 0 0 0 1 1 1 1 1 1 2 2 2 2 2 2 2 3 3 3
		50	0	19.86	20.46	20.17	21.50	3

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			LTE	Band 7				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc	2502.5	2535	2567.5	Power + Max. Tolerance	Allowed per		
	Channel				21100	21425	(dBm)	3311 (db)
		1	0	22.91	23.42	23.09	24.50	0
		1	12	22.91	23.49	23.13	24.50	0
		1	24	22.82	23.56	23.19	24.50	0
5	QPSK	12	0	21.83	22.58	22.03	23.50	1
		12	6	21.92	22.46	22.09	23.50	1
		12	13	22.01	22.61	22.08	23.50	1
		25	0	21.88	22.55	22.06	23.50	1
		1	0	21.94	22.51	22.15	23.50	1
		1	12	21.91	22.56	22.03	23.50	1
		1	24	21.95	22.49	22.11	23.50	1
5	16-QAM	12	0	21.01	21.62	21.20	22.50	2
		12	6	20.91	21.52	21.05	22.50	2
		12	13	20.83	21.57	21.17	22.50	2
		25	0	20.85	21.50	21.14	22.50	2
		1	0	20.87	21.43	21.08	22.50	2
		1	12	20.96	21.55	21.05	22.50	2
		1	24	20.85	21.61	21.10	22.50	2
5	64-QAM	12	0	19.92	20.56	20.06	21.50	3
		12	6	19.86	20.51	20.10	21.50	3
		12	13	20.00	20.44	20.13	21.50	3GPP(dB) 0 0 1 1 1 1 1 1 2 2 2 2 2 2 3
		25	0	19.99	20.50	20.02	21.50	3

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			LTE	Band 12				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc	cy (MHz)		704	707.5	711	Power + Max. Tolerance	Allowed per
	Channel				23095	23130	(dBm)	JGFF(UD)
		0	23.02	23.17	23.04	24.50	0	
		1	25	22.87	23.04	22.95	24.50	0
		1	49	22.95	23.07	22.93	24.50	0
10	QPSK	25	0	21.89	22.09	21.95	23.50	1
		25	12	22.00	22.00	21.86	23.50	1
		25	25	21.84	22.01	22.03	23.50	1
		50	0	21.95	22.03	21.89	23.50	1
		1	0	21.98	21.93	21.97	23.50	1
		1	25	21.88	22.09	21.97	23.50	1
		1	49	21.98	22.02	21.89	23.50	1
10	16-QAM	25	0	20.96	20.99	20.93	22.50	2
		25	12	20.83	21.12	20.96	22.50	Allowed per 3GPP(dB) 0 0 0 1 1 1 1 1 2 2 2 2 2 2 2 3 3 3 3
		25	25	20.96	20.95	20.90	22.50	
		50	0	20.88	21.06	20.86	22.50	2
		1	0	20.97	21.01	21.03	22.50	2
		1	25	20.86	21.06	20.96	22.50	2
		1	49	20.89	21.10	20.91	22.50	2
10	64-QAM	25	0	19.96	20.08	19.86	21.50	3
		25	12	19.95	20.10	19.97 2	21.50	3
		25	25	19.88	19.93	20.03	21.50	3GPP(dB) 0 0 0 1 1 1 1 1 1 2 2 2 2 2 2 2 3 3 3
		50	0	19.93	20.09	19.89	21.50	3

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			LTE	Band 12				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc	y (MHz)		701.5	707.5	713.5	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
	Char	nnel		23035	23095	23155	(dBm)	3311 (db)
	1 0				22.97	22.96	24.50	0
		1	12	22.89	23.10	22.90	24.50	0
		1	24	22.84	22.97	22.99	24.50	0
5	QPSK	12	0	21.92	21.97	22.04	23.50	1
		12	6	21.87	22.04	21.94	23.50	1
		12	13	22.01	21.98	21.86	23.50	1
		25	0	21.84	21.98	21.92	23.50	1
		1	0	21.99	21.96	21.87	23.50	1
		1	12	22.00	22.04	21.84	23.50	1
		1	24	21.99	22.09	21.86	23.50	1
5	16-QAM	12	0	20.89	21.09	20.85	22.50	2
		12	6	21.02	21.11	20.96	22.50	2
		12	13	20.89	21.01	20.93	22.50	2
		25	0	20.93	21.05	20.95	22.50	2
		1	0	21.02	20.99	20.96	22.50	2
		1	12	20.88	20.99	21.01	22.50	2
		1	24	20.88	21.10	20.93	22.50	2
5	64-QAM	12	0	19.98	20.10	19.96	21.50	3
		12	6	19.82	19.96	19.96	21.50	3
		12	13	19.89	20.00	19.96	21.50	3
		25	0	19.89	19.98	20.02	21.50	3

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			LTE	Band 12				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc	y (MHz)		700.5	707.5	714.5	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
	Char	nnel		23025	23095	23165	(dBm)	3011 (db)
		1	0	22.91	23.12	23.04	24.50	0
		1	7	22.89	23.07	22.96	24.50	0
		1	14	22.99	23.09	23.04	24.50	0
3	QPSK	8	0	21.84	22.06	21.90	23.50	1
		8	4	22.02	22.12	21.85	23.50	1
		8	7	21.87	22.09	21.84	23.50	1
		15	0	21.89	21.94	21.88	23.50	1
		1	0	21.93	21.96	21.86	23.50	1
		1	7	21.88	22.09	21.98	23.50	1
		1	14	21.83	22.13	21.94	23.50	1
3	16-QAM	8	0	20.98	21.01	20.99	22.50	2
		8	4	20.98	21.03	20.90	22.50	2
		8	7	20.83	21.01	20.96	22.50	2
		15	0	20.87	21.12	20.90	22.50	2
		1	0	20.99	20.94	20.86	22.50	2
		1	7	20.84	20.95	20.89	22.50	2
		1	14	20.87	20.95	21.02	22.50	2
3	64-QAM	8	0	20.00	20.01	20.01	21.50	3
		8	4	19.99	20.05	19.98	21.50	3
		8	7	19.93	19.97	20.04	21.50	3
		15	0	20.01	20.09	19.91	21.50	3

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			LTE	Band 12						
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power ((dBm)	Target			
	Frequenc	y (MHz)		699.7	707.5	715.3				
	Char	nnel		23017	23095	23173	Tolerance (dBm)	3GPP(dB)		
		1	0	22.84	23.08	22.91	24.50	0		
		1	2	22.97	23.05	22.89	24.50	0		
		1	5	23.01	23.01	23.00	24.50	0		
1.4	QPSK	3	0	22.98	23.07	22.86	24.50	0		
		3	2	23.00	23.06	22.86	24.50	0		
		3	3	22.93	22.97	22.95	24.50	0		
		6	0	21.82	22.05	21.93	23.50	1		
		1	0	21.88	21.96	22.00	23.50	1		
		1	2	22.01	22.02	21.91	23.50	1		
		1	5	21.99	22.11	22.02	23.50	1		
1.4	16-QAM	3	0	21.83	21.96	21.95	23.50	1		
		3	2	21.87	22.00	21.91	23.50	1		
		3	3	21.84	21.96	21.95	23.50	1		
		6	0	20.98	20.93	20.98	22.50	2		
		1	0	20.95	21.13	20.95	22.50	2		
		1	2	20.94	21.08	20.88	22.50	2		
		1	5	20.91	20.96	20.99	22.50	2		
1.4	64-QAM	3	0	20.85	20.95	20.94	22.50	2		
		3	2	20.95	20.96	20.84	22.50	2		
		3	3	20.88	21.10	21.00	22.50	2		
		6	0	19.85	20.13	19.97	21.50	3		

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	4 10					
			LTE B	and 13		
BW(MHz)	Modulation	RB Size	RB Offset	Conducted power (dBm)	Target	MDD
	Frequen	cy (MHz)		782	Power + Max. Tolerance	MPR Allowed per
	Cha	nnel		23230	(dBm)	3GPP(dB)
		1	0	23.20	24.50	0
		1	25	23.16	24.50	0
		1	49	23.18	24.50	0
10	QPSK	25	0	22.07	23.50	1
		25	12	22.04	23.50	1
		25	25	22.11	23.50	1
		50	0	22.05	23.50	1
		1	0	22.04	23.50	1
		1	25	22.10	23.50	1
		1	49	22.03	23.50	1
10	16-QAM	25	0	21.07	22.50	2
		25	12	21.05	22.50	2
		25	25	21.06	22.50	2
		50	0	21.13	22.50	2
		1	0	21.17	22.50	2
		1	25	21.07	22.50	2
		1	49	21.02	22.50	2
10	64-QAM	25	0	20.11	21.50	3
		25	12	20.15	21.50	3
		25	25	20.03	21.50	3
		50	0	20.12	21.50	3

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			LTE	Band 13				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc	y (MHz)		779.5	782	784.5	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
	Char	nnel		23205	23230	23255	(dBm)	33i i (db)
	1 0				23.03	23.07	24.50	0
		1	12	23.08	23.14	23.14	24.50	0
		1	24	23.04	23.06	23.03	24.50	0
5	QPSK	12	0	22.10	22.12	22.13	23.50	1
		12	6	22.15	22.05	22.09	23.50	1
		12	13	22.15	22.06	22.02	23.50	1
		25	0	22.14	22.11	22.18	23.50	1
		1	0	22.10	22.04	22.06	23.50	1
		1	12	21.98	22.14	22.02	23.50	1
		1	24	21.96	22.14	22.03	23.50	1
5	16-QAM	12	0	21.08	21.12	21.20	22.50	2
		12	6	20.98	21.01	21.12	22.50	2
		12	13	21.12	21.13	21.14	22.50	2
		25	0	20.98	21.04	21.03	22.50	2
		1	0	21.06	21.17	21.04	22.50	2
		1	12	21.00	21.18	21.11	22.50	2
		1	24	21.08	21.18	21.05	22.50	2
5	64-QAM	12	0	20.08	20.15	20.13	21.50	3
		12	6	20.07	20.09	20.13	21.50	3
		12	13	20.01	20.11	20.17	21.50	3
		25	0	20.11	20.17	20.06	21.50	3

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			LTE	Band 17				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	1400
	Frequenc	y (MHz)		709	710	711	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
	Char	nnel		23780	23790	23800	(dBm)	JGFF(UB)
		1	0	23.03	23.00	22.76	24.50	0
		1	25	22.97	22.94	22.67	24.50	0
		1	49	23.02	22.89	22.72	24.50	0
10	QPSK	25	0	21.79	21.94	21.56	23.50	1
		25	12	21.74	21.80	21.56	23.50	1
		25	25	21.82	21.85	21.58	23.50	1
		50	0	21.76	21.92	21.60	23.50	1
		1	0	22.02	21.92	21.66	23.50	1
		1	25	21.86	21.88	21.58	23.50	1
		1	49	21.86	21.94	21.61	23.50	1
10	16-QAM	25	0	20.99	20.80	20.64	22.50	2
		25	12	20.92	20.85	20.72	22.50	2
		25	25	20.91	20.85	20.69	22.50	2
		50	0	21.03	20.94	20.67	22.50	2
		1	0	20.85	20.86	20.67	22.50	2
		1	25	20.97	20.82	20.63	22.50	2
		1	49	20.95	20.97	20.63	22.50	2
10	64-QAM	25	0	20.02	19.83	19.63	21.50	3
		25	12	19.88	19.81	19.72	21.50	3
		25	25	19.93	19.95	19.66	21.50	3
		50	0	19.94	19.89	19.60	21.50	3

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			LTE	Band 17				
BW(MHz)	Modulation	RB Size	RB Offset	Cond	ucted power	(dBm)	Target	MDD
	Frequenc	y (MHz)		706.5	710	713.5	Power + Max. Tolerance	MPR Allowed per 3GPP(dB)
	Char	nnel		23755	23790	23825	(dBm)	3011 (db)
		1	0	22.99	22.86	22.55	24.50	0
		1	12	22.99	23.00	22.72	24.50	0
		1	24	22.96	22.94	22.60	24.50	0
5	QPSK	12	0	21.97	21.90	21.59	23.50	1
		12	6	22.02	21.82	21.58	23.50	1
		12	13	21.94	21.91	21.67	23.50	1
		25	0	21.85	21.99	21.58	23.50	1
		1	0	21.86	21.85	21.65	23.50	1
		1	12	21.86	21.83	21.64	23.50	1
		1	24	21.97	21.87	21.71	23.50	1
5	16-QAM	12	0	20.94	20.94	20.64	22.50	2
		12	6	20.88	20.94	20.61	22.50	2
		12	13	20.83	20.87	20.55	22.50	2
		25	0	20.84	20.86	20.71	22.50	2
		1	0	21.03	20.80	20.64	22.50	2
		1	12	21.00	20.93	20.57	22.50	2
		1	24	20.96	20.80	20.68	22.50	2
5	64-QAM	12	0	19.88	19.83	19.69	21.50	3
		12	6	19.92	19.97	19.57	21.50	3
		12	13	19.85	19.95	19.73	21.50	3
		25	0	19.99	19.95	19.70	21.50	3

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			\nt 1			
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
	802.11b	1 6 11	2412 2437 2462	1Mbps	14.97 14.25 14.89	14.88 14.19 14.75
2.45GHz	802.11g	1 6 11	2412 2437 2462	6Mbps	13.91 13.19 13.64	13.88 13.13 13.57
	802.11n20-HT0	1 6 11	2412 2437 2462	MCS0	12.11 12.37 12.16	11.88 12.31 12.14
		P	Ant 1			
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.15-5.25 GHz	802.11a	36 40 44 48	5180 5200 5220 5240	6Mbps	12.28 12.28 11.75 11.67	12.08 12.04 11.72 11.21
		P	Ant 1			
Mode	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
5.8GHz	802.11a	149 157 165	5745 5785 5825	6Mbps	11.93 12.48 12.42	11.73 12.26 12.15

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5.4 Bluetooth

			1Mbps		2Mbps		3Mbps		
Mode	Channel	Frequency (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)	
	CH 00	2402		11.16		9.74		9.82	
BR/EDR	CH 39	2441	11.50	10.43	10.00	9.48	10.00	9.44	
	CH 78	2480		9.81		8.36		8.32	

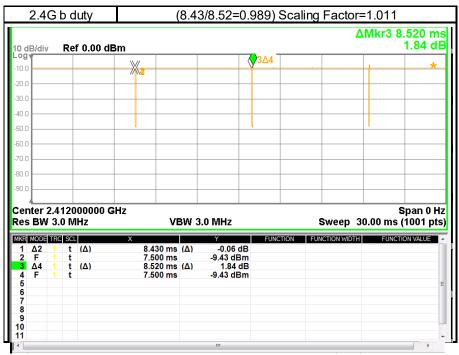
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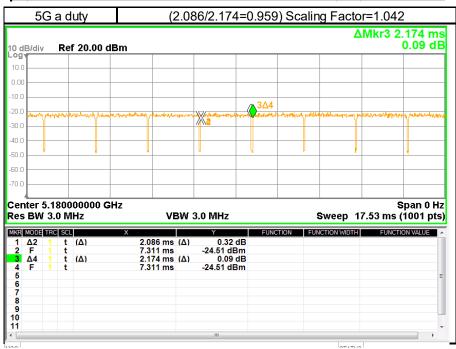
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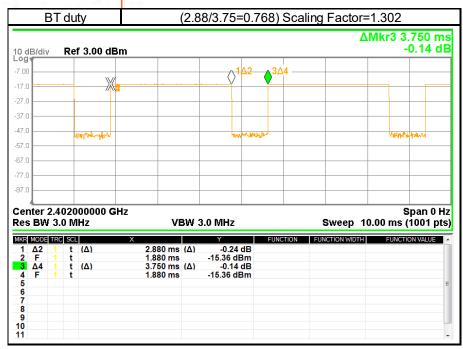


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6 SUMMARY OF RESULTS

6.1 Decision rules

Reported measurement data comply with Test Methodology in section 1.1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

6.2 Summary of SAR Results

Band	Position	Distance	СН	Freq.	Max. Rated Avg. Power + Max.	Measured Avg. Power	Scaling		SAR over 1g /kg)	ID
		(mm)		(MHz)	Tolerance (dBm)	(dBm)		Measured	Reported	
WCDMA Band II	Front Surface	5	9262	1852.4	24.0	23.61	109.40%	0.872	0.954	-
WCDMA Band II	Front Surface	5	9400	1880	24.0	23.77	105.44%	0.976	1.029	001
Repeated	Front Surface	5	9400	1880	24.0	23.77	105.44%	0.952	1.004	-
WCDMA Band II	Front Surface	5	9538	1907.6	24.0	23.87	103.04%	0.924	0.952	-
WCDMA Band II	Back Surface	5	9538	1907.6	24.0	23.87	103.04%	0.322	0.332	-
WCDMA Band II	Top Edge	5	9262	1852.4	24.0	23.61	109.40%	0.723	0.791	-
WCDMA Band II	Top Edge	5	9400	1880	24.0	23.77	105.44%	0.754	0.795	-
WCDMA Band II	Top Edge	5	9538	1907.6	24.0	23.87	103.04%	0.809	0.834	-
WCDMA Band II	Bottom Edge	5	9538	1907.6	24.0	23.87	103.04%	0.001	0.001	-
WCDMA Band II	Left Edge	5	9538	1907.6	24.0	23.87	103.04%	0.141	0.145	-
WCDMA Band II	Right Edge	5	9538	1907.6	24.0	23.87	103.04%	0.120	0.124	-
WCDMA Band IV	Front Surface	5	1412	1732.4	23.0	22.89	102.57%	0.257	0.264	-
WCDMA Band IV	Back Surface	5	1412	1732.4	23.0	22.89	102.57%	0.220	0.226	-
WCDMA Band IV	Top Edge	5	1312	1712.4	23.0	22.78	105.20%	0.661	0.695	-
WCDMA Band IV	Top Edge	5	1412	1732.4	23.0	22.89	102.57%	0.739	0.758	-
WCDMA Band IV	Top Edge	5	1513	1752.6	23.0	22.84	103.75%	0.941	0.976	002
WCDMA Band IV	Bottom Edge	5	1412	1732.4	23.0	22.89	102.57%	0.001	0.001	-
WCDMA Band IV	Left Edge	5	1412	1732.4	23.0	22.89	102.57%	0.064	0.066	-
WCDMA Band IV	Right Edge	5	1412	1732.4	23.0	22.89	102.57%	0.053	0.054	-
WCDMA Band V	Front Surface	5	4132	826.4	24.0	23.68	107.65%	0.165	0.178	-
WCDMA Band V	Back Surface	5	4132	826.4	24.0	23.68	107.65%	0.373	0.402	003
WCDMA Band V	Back Surface	5	4183	836.6	24.0	23.65	108.39%	0.363	0.393	-
WCDMA Band V	Back Surface	5	4233	846.6	24.0	23.64	108.64%	0.351	0.381	-
WCDMA Band V	Top Edge	5	4132	826.4	24.0	23.68	107.65%	0.001	0.001	-
WCDMA Band V	Bottom Edge	5	4132	826.4	24.0	23.68	107.65%	0.001	0.001	-
WCDMA Band V	Left Edge	5	4132	826.4	24.0	23.68	107.65%	0.198	0.213	-
WCDMA Band V	Right Edge	5	4132	826.4	24.0	23.68	107.65%	0.137	0.147	-

^{* -} repeated at the highest SAR measurement according to the KDB 865664 D01

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Mode	Bandwidth	Modulation	RB	RB	Position	Distance	СН	Freq.	Max. Rated Avg.	Measured Avg. Power	Averaged SAR	over 1g (W/kg)	ID
wode	(MHz)	Modulation	Size	start	Position	(mm)	СП	(MHz)	Tolerance (dBm)	(dBm)	Measured	Reported	ID
LTE Band 2			1	0	Front Surface	5	19100	1900	23.00	22.47	0.648	0.732	-
LTE Band 2			50	50	Front Surface	5	18900	1860	22.00	21.44	0.540	0.614	-
LTE Band 2			1	0	Back Surface	5	19100	1900	23.00	22.47	0.352	0.398	-
LTE Band 2			50	50	Back Surface	5	18900	1860	22.00	21.44	0.259	0.295	
LTE Band 2			1	0	Top Edge	5	18700	1860	23.00	22.42	0.802	0.917	004
LTE Band 2			1	0	Top Edge	5	18900 19100	1880	23.00	22.45 22.47	0.724	0.822	-
LTE Band 2 LTE Band 2	20MHz	QPSK	50	50	Top Edge Top Edge	5	18900	1900 1860	23.00 22.00	21.44	0.633 0.539	0.715 0.613	-
LTE Band 2	ZOWITZ	QFSK		ORB	Top Edge	5	18700	1860	22.00	21.44	0.539	0.609	
LTE Band 2			1	0	Bottom Edge	5	19100	1900	23.00	22.47	0.001	0.001	-
LTE Band 2			50	50	Bottom Edge	5	18900	1860	22.00	21.44	0.001	0.001	
LTE Band 2			1	0	Left Edge	5	19100	1900	23.00	22.47	0.134	0.151	-
LTE Band 2			50	50	Left Edge	5	18900	1860	22.00	21.44	0.127	0.144	-
LTE Band 2			1	0	Right Edge	5	19100	1900	23.00	22.47	0.141	0.159	-
LTE Band 2			50	50	Right Edge	5	18900	1860	22.00	21.44	0.132	0.150	-
LTE Band 4			1	0	Front Surface	5	20175	1732.5	23.00	22.60	0.274	0.300	-
LTE Band 4			50	0	Front Surface	5	20175	1732.5	22.00	21.49	0.256	0.288	-
LTE Band 4			1	0	Back Surface	5	20175	1732.5	23.00	22.60	0.254	0.279	-
LTE Band 4			50	0	Back Surface	5	20175	1732.5	22.00	21.49	0.203	0.228	-
LTE Band 4 LTE Band 4			1	0	Top Edge	5	20050 20175	1720 1732.5	23.00 23.00	22.49	0.679 0.824	0.764 0.903	-
LTE Band 4			1	99	Top Edge Top Edge	5	201/5	1732.5	23.00	22.60 22.56	0.824	1.048	005
Repeated			1	99	Top Edge	5	20300	1745	23.00	22.56	0.947	1.048	- 000
ITF Band 4			50	0	Top Edge	5	20050	1720	22.00	21.45	0.670	0.760	-
LTE Band 4	20MHz	QPSK	50	0	Top Edge	5	20175	1732.5	22.00	21.49	0.684	0.769	-
LTE Band 4			50	0	Top Edge	5	20300	1745	22.00	21.49	0.806	0.906	-
LTE Band 4			10	0RB	Top Edge	5	20175	1732.5	22.00	21.49	0.726	0.816	-
LTE Band 4			1	0	Bottom Edge	5	20175	1732.5	23.00	22.60	0.001	0.001	-
LTE Band 4			50	0	Bottom Edge	5	20175	1732.5	22.00	21.49	0.001	0.001	-
LTE Band 4			1	0	Left Edge	5	20175	1732.5	23.00	22.60	0.092	0.101	-
LTE Band 4			50	0	Left Edge	5	20175	1732.5	22.00	21.49	0.087	0.098	-
LTE Band 4			1	0	Right Edge	5	20175	1732.5	23.00	22.60	0.093	0.102	-
LTE Band 4			50	0	Right Edge	5	20175	1732.5	22.00	21.49	0.080	0.090	-
											4.171		
LTE Band 5 LTE Band 5			1 25	0	Front Surface Front Surface	5	20525 20525	836.5 836.5	24.50 23.50	23.85 22.86	0.174 0.161	0.202 0.187	-
LTE Band 5	_		1	0	Back Surface	5	20525	829	23.50	23.81	0.402	0.107	
LTE Band 5			1	0	Back Surface	5	20525	836.5	24.50	23.85	0.401	0.466	
LTE Band 5			1	0	Back Surface	5	20600	844	24.50	23.74	0.402	0.479	006
LTE Band 5			25	0	Back Surface	5	20525	836.5	23.50	22.86	0.316	0.366	
LTE Band 5			1	0	Top Edge	5	20525	836.5	24.50	23.85	0.001	0.001	-
LTE Band 5	10MHz	QPSK	25	0	Top Edge	5	20525	836.5	23.50	22.86	0.001	0.001	-
LTE Band 5			1	0	Bottom Edge	5	20525	836.5	24.50	23.85	0.001	0.001	-
LTE Band 5			25	0	Bottom Edge	5	20525	836.5	23.50	22.86	0.001	0.001	-
LTE Band 5			1	0	Left Edge	5	20525	836.5	24.50	23.85	0.195	0.226	-
LTE Band 5			25	0	Left Edge	5	20525	836.5	23.50	22.86	0.182	0.211	-
LTE Band 5			1	0	Right Edge	5	20525	836.5	24.50	23.85	0.260	0.302	-
LTE Band 5			25	0	Right Edge	5	20525	836.5	23.50	22.86	0.248	0.287	-
ITF Band 7		-	1	0	Front Surface	5	20850	2510	24.50	23.01	0.559	0.788	
LTE Band 7			1	0	Front Surface	5	20850	2535	24.50	23.01	0.559	0.788	007
LTE Band 7			1	0	Front Surface Front Surface	5	21100	2535	24.50	23.62	0.440	0.712	- 007
LTE Band 7			50	0	Front Surface	5	21100	2535	23.50	23.22	0.399	0.591	-
LTE Band 7			1	0	Back Surface	5	21100	2535	24.50	23.62	0.180	0.220	-
LTE Band 7			50	0	Back Surface	5	21100	2535	23.50	22.42	0.167	0.214	-
LTE Band 7		05011	1	0	Top Edge	5	21100	2535	24.50	23.62	0.180	0.220	-
LTE Band 7	20MHz	QPSK	50	0	Top Edge	5	21100	2535	23.50	22.42	0.169	0.217	-
			1	0	Bottom Edge	5	21100	2535	24.50	23.62	0.001	0.001	-
LTE Band 7		l .		0	Bottom Edge	5	21100	2535	23.50	22.42	0.001	0.001	-
			50										
LTE Band 7			1	0	Left Edge	5	21100	2535	24.50	23.62	0.287	0.351	-
LTE Band 7 LTE Band 7				0		5 5	21100 21100	2535	23.50	23.62 22.42	0.287 0.274	0.351	-
LTE Band 7 LTE Band 7 LTE Band 7			1	0	Left Edge	5							-

^{* -} repeated at the highest SAR measurement according to the KDB 865664 D01

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Mode	Bandwidth	Modulation	RB	RB	Position	Distance	CH	Freq.	Max. Rated Avg. Power + Max.	Measured Avg. Power	Averaged SAR	R over 1g (W/kg)	ID																
	(MHz)		Size	start		(mm)		(MHz)	Tolerance (dBm)	(dBm)	Measured	Reported																	
LTE Band 12			1	0	Front Surface	5	23095	707.5	24.50	23.17	0.070	0.095	-																
LTE Band 12			25	0	Front Surface	5	23095	707.5	23.50	22.09	0.058	0.080	-																
LTE Band 12			1	0	Back Surface	5	23060	704	24.50	23.02	0.094	0.132	800																
LTE Band 12			1	0	Back Surface	5	23095	707.5	24.50	23.17	0.090	0.122	-																
LTE Band 12			1	0	Back Surface	5	23130	711	24.50	23.04	0.087	0.122	-																
LTE Band 12			25	0	Back Surface	5	23095	707.5	23.50	22.09	0.037	0.051	-																
LTE Band 12	10MHz	QPSK	1	0	Top Edge	5	23095	707.5	24.50	23.17	0.001	0.001	-																
LTE Band 12	TOWITZ	QFSK	25	0	Top Edge	5	23095	707.5	23.50	22.09	0.001	0.001	-																
LTE Band 12			1	0	Bottom Edge	5	23095	707.5	24.50	23.17	0.001	0.001	-																
LTE Band 12			25	0	Bottom Edge	5	23095	707.5	23.50	22.09	0.001	0.001	-																
LTE Band 12			1	0	Left Edge	5	23095	707.5	24.50	23.17	0.001	0.001	-																
LTE Band 12			25	0	Left Edge	5	23095	707.5	23.50	22.09	0.001	0.001	-																
LTE Band 12			1	0	Right Edge	5	23095	707.5	24.50	23.17	0.001	0.001	-																
LTE Band 12			25	0	Right Edge	5	23095	707.5	23.50	22.09	0.001	0.001	-																
LTE Band 13			1	0	Front Surface	5	23230	782	24.50	23.20	0.058	0.078	-																
LTE Band 13			25	25	Front Surface	5	23230	782	23.50	22.11	0.045	0.062	-																
LTE Band 13			1	0	Back Surface	5	23230	782	24.50	23.20	0.298	0.402	009																
LTE Band 13			25	50	Back Surface	5	23230	782	23.50	22.11	0.264	0.364	-																
LTE Band 13			1	0	Top Edge	5	23230	782	24.50	23.20	0.001	0.001	-																
LTE Band 13	10MHz	QPSK	QPSK	QPSK	25	50	Top Edge	5	23230	782	23.50	22.11	0.001	0.001	-														
LTE Band 13	TOWINZ				QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	QPSK	1	0	Bottom Edge	5	23230	782	24.50	23.20	0.001	0.001	-
LTE Band 13															25	50	Bottom Edge	5	23230	782	23.50	22.11	0.001	0.001	-				
LTE Band 13												1	0	Left Edge	5	23230	782	24.50	23.20	0.170	0.229	-							
LTE Band 13												ļ	25	50	Left Edge	5	23230	782	23.50	22.11	0.140	0.193	-						
LTE Band 13			1	0	Right Edge	5	23230	782	24.50	23.20	0.159	0.214	-																
LTE Band 13			25	50	Right Edge	5	23230	782	23.50	22.11	0.132	0.182	-																
LTE Band 17			1	0	Front Surface	5	23780	709	24.50	23.03	0.046	0.065	-																
LTE Band 17			25	0	Front Surface	5	23790	710	23.50	21.94	0.031	0.044	-																
LTE Band 17			1	0	Back Surface	5	23780	709	24.50	23.03	0.069	0.096	-																
LTE Band 17			1	0	Back Surface	5	23790	710	24.50	23.00	0.072	0.101	010																
LTE Band 17			1	0	Back Surface	5	23800	711	24.50	22.76	0.071	0.106																	
LTE Band 17			25	0	Back Surface	5	23790	710	23.50	21.94	0.057	0.081	-																
LTE Band 17	400411-	QPSK	1	0	Top Edge	5	23780	709	24.50	23.03	0.001	0.001	-																
LTE Band 17	10MHz	QPSK	25	0	Top Edge	5	23790	710	23.50	21.94	0.001	0.001	-																
LTE Band 17			1	0	Bottom Edge	5	23780	709	24.50	23.03	0.001	0.001	-																
LTE Band 17			25	0	Bottom Edge	5	23790	710	23.50	21.94	0.001	0.001	-																
LTE Band 17			1	0	Left Edge	5	23780	709	24.50	23.03	0.001	0.001	-																
LTE Band 17			25	0	Left Edge	5	23790	710	23.50	21.94	0.001	0.001	-																
LTE Band 17			1	0	Right Edge	5	23780	709	24.50	23.03	0.001	0.001	-																
LTE Band 17			25	0	Right Edge	5	23790	710	23.50	21.94	0.001	0.001	-																

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Mode	Position	Distance	СН	Freq.	Max. Rated Avg. Power + Max.	Measured Avg. Power	Duty cycle	Power	Averaged SAR	over 1g (W/kg)	ID
		(mm)		(MHz)	Tolerance (dBm)	(dBm)	scaling	scaling	Measured	Reported	
WLAN 802.11b	Front Surface	5	1	2412	14.97	14.88	1.01	102.09%	0.001	0.001	-
WLAN 802.11b	Back Surface	5	1	2412	14.97	14.88	1.01	102.09%	0.442	0.456	-
WLAN 802.11b	Back Surface	5	6	2437	14.25	14.19	1.01	101.39%	0.950	0.974	011
Repeated	Back Surface	5	6	2437	14.25	14.19	1.01	101.39%	0.822	0.843	-
WLAN 802.11b	Back Surface	5	11	2462	14.89	14.75	1.01	103.28%	0.795	0.830	-
WLAN 802.11b	Top Edge	5	1	2412	14.97	14.88	1.01	102.09%	0.001	0.001	-
WLAN 802.11b	Bottom Edge	5	1	2412	14.97	14.88	1.01	102.09%	0.001	0.001	-
WLAN 802.11b	Left Edge	5	1	2412	14.97	14.88	1.01	102.09%	0.001	0.001	-
WLAN 802.11b	Right Edge	5	1	2412	14.97	14.88	1.01	102.09%	0.593	0.612	-

Mode	Position	Distance	СН	Freq.	Max. Rated Avg. Power + Max.	Measured Avg. Power	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		ID
		(mm)		(MHz)	Tolerance (dBm)	(dBm)	scaling	scaling	Measured	Reported	
Bluetooth(GFSK)	Front Surface	5	0	2402	11.50	11.16	1.30	108.14%	0.001	0.001	-
Bluetooth(GFSK)	Back Surface	5	0	2402	11.50	11.16	1.30	108.14%	0.118	0.166	012
Bluetooth(GFSK)	Back Surface	5	39	2441	11.50	10.43	1.30	127.94%	0.089	0.148	-
Bluetooth(GFSK)	Back Surface	5	78	2480	11.50	9.81	1.30	147.57%	0.093	0.179	-
Bluetooth(GFSK)	Top Edge	5	0	2402	11.50	11.16	1.30	108.14%	0.001	0.001	-
Bluetooth(GFSK)	Bottom Edge	5	0	2402	11.50	11.16	1.30	108.14%	0.001	0.001	-
Bluetooth(GFSK)	Left Edge	5	0	2402	11.50	11.16	1.30	108.14%	0.001	0.001	-
Bluetooth(GFSK)	Right Edge	5	0	2402	11.50	11.16	1.30	108.14%	0.001	0.001	-

Mode	Position	Distance	СН	Freq.	Max. Rated Avg. Power + Max.	Measured Avg. Power	Duty cycle	Power	Averaged SAR	over 1g (W/kg)	ID
		(mm)		(MHz)	Tolerance (dBm)	(dBm)	scaling	scaling	Measured	Reported	
WLAN 802.11a 5.2G	Front Surface	5	36	5180	12.28	12.08	1.04	104.71%	0.055	0.060	-
WLAN 802.11a 5.2G	Back Surface	5	36	5180	12.28	12.08	1.04	104.71%	0.593	0.647	-
WLAN 802.11a 5.2G	Back Surface	5	40	5200	12.28	12.04	1.04	105.68%	0.635	0.699	-
WLAN 802.11a 5.2G	Back Surface	5	44	5220	11.75	11.72	1.04	100.69%	0.654	0.686	-
WLAN 802.11a 5.2G	Back Surface	5	48	5240	11.67	11.21	1.04	111.17%	0.871	1.009	013
Repeated	Back Surface	5	48	5240	11.67	11.21	1.04	111.17%	0.806	0.934	-
WLAN 802.11a 5.2G	Top Edge	5	36	5180	12.28	12.08	1.04	104.71%	0.057	0.062	-
WLAN 802.11a 5.2G	Bottom Edge	5	36	5180	12.28	12.08	1.04	104.71%	0.001	0.001	-
WLAN 802.11a 5.2G	Left Edge	5	36	5180	12.28	12.08	1.04	104.71%	0.050	0.055	-
WLAN 802.11a 5.2G	Right Edge	5	36	5180	12.28	12.08	1.04	104.71%	0.394	0.430	-

Mode	Position	tion Distance (mm)		CH Freq. (MHz)	Max. Rated Avg. Power + Max.	Measured Avg. Power	Duty cycle	Power	Averaged SAR	over 1g (W/kg)	ID
		(mm)		(MHZ)	Tolerance (dBm)	(dBm)	scaling	scaling	Measured	Reported	
WLAN 802.11a 5.8G	Front Surface	5	157	5785	12.48	12.26	1.04	105.20%	0.051	0.056	-
WLAN 802.11a 5.8G	Back Surface	5	149	5745	11.93	11.73	1.04	104.71%	0.791	0.863	-
WLAN 802.11a 5.8G	Back Surface	5	157	5785	12.48	12.26	1.04	105.20%	0.843	0.924	014
WLAN 802.11a 5.8G	Back Surface	5	165	5825	12.42	12.15	1.04	106.41%	0.821	0.910	-
Repeated	Back Surface	5	157	5785	12.42	12.26	1.04	103.75%	0.812	0.878	-
WLAN 802.11a 5.8G	Top Edge	5	157	5785	12.48	12.26	1.04	105.20%	0.067	0.073	-
WLAN 802.11a 5.8G	Bottom Edge	5	157	5785	12.48	12.26	1.04	105.20%	0.058	0.064	-
WLAN 802.11a 5.8G	Left Edge	5	157	5785	12.48	12.26	1.04	105.20%	0.065	0.071	-
WLAN 802.11a 5.8G	Right Edge	5	157	5785	12.48	12.26	1.04	105.20%	0.356	0.390	-

^{* -} repeated at the highest SAR measurement according to the KDB 865664 D01

Note:

Reported SAR = measured SAR * Power scaling * Duty cycle scaling

6.3 Reporting statements of conformity

The conformity statement in this report is based solely on the test results, measurement uncertainty is excluded.

6.4 Conclusion

The device is compliant because all the standalone results are less than their corresponding criteria.

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SIMULTANEOUS TRANSMISSION ANALYSIS

7.1 **Simultaneous Transmission Scenarios:**

Simultaneous Transmit Configurations	Body
WWAN+WLAN 2.4GHz	YES
WWAN+ BT	YES
WWAN+WLAN 2.4GHz+ BT	YES
WWAN+WLAN 5GHz	YES
WWAN+WLAN 5GHz + BT	YES

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7.2 Estimated SAR calculation

According to KDB447498 D01v06 – When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

Estimated SAR =
$$\frac{\text{Max. tune up power (mW)}}{\text{Min. test separation distance(mm)}} \times \frac{\sqrt{\text{f(GHz)}}}{7.5}$$

If the minimum test separation distance is < 5mm, a distance of 5mm is used for estimated SAR calculation. When the test separation distance is >50mm, the 0.4W/kg is used for SAR-1g.

7.3 SPLSR evaluation and analysis

Per KDB447498D01, when the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR sum to peak location separation ratio(SPLSR).

The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion.

The ratio is determined by (SAR1 + SAR2)^1.5/Ri, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

SAR1 and SAR2 are the highest reported or estimated SAR for each antenna in the pair, and Ri is the separation distance between the peak SAR locations for the antenna pair in mm.

When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna.

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Simultaneous Transmission Combination

				FCC Rep	orted SAR		Scenario1	Scenario2	Scenario3	Scenario4	Scenario5
			1	2	4	6	1+2	1+6	1+2+6	1+4	1+4+6
	Exposure Position	n	WWAN	2.4GHz WLAN Ant 1	5GHz WLAN Ant 1	Bluetooth Ant 1	Summed	Summed	Summed	Summed	Summed
	ZAPODUTO T GOILLO		1g SAR	1g SAR	1g SAR	1g SAR	1g SAR (W/kg)				
		-	(W/kg)	(W/kg)	(W/kg)	(W/kg)					
	Front Surface	5	1.029	0.001	0.060	0.001	1.030	1.030	1.031	1.089	1.090
	Back Surface	5	0.332	0.974	1.009	0.179	1.306	0.511	1.485	1.341	1.520
WCDMA Band II	Top Edge	5	0.834	0.001	0.073	0.001	0.835	0.835	0.836	0.907	0.908
	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.145	0.001	0.071	0.001	0.146	0.146	0.147	0.216	0.217
	Right Edge	5	0.124	0.612	0.430	0.001	0.736	0.125	0.737	0.554	0.555
	Front Surface	5	0.264	0.001	0.060	0.001	0.265	0.265	0.266	0.324	0.325
	Back Surface	5	0.226	0.974	1.009	0.179	1.200	0.405	1.379	1.235	1.414
WCDMA Band IV	Top Edge	5	0.976	0.001	0.073	0.001	0.977	0.977	0.978	1.049	1.050
	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.066	0.001	0.071	0.001	0.067	0.067	0.068	0.137	0.138
	Right Edge	5	0.054	0.612	0.430	0.001	0.666	0.055	0.667	0.484	0.485
	Front Surface	5	0.178	0.001	0.060	0.001	0.179	0.179	0.180	0.238	0.239
	Back Surface	5	0.402	0.974	1.009	0.179	1.376	0.581	1.555	1.411	1.590
WCDMA Band V	Top Edge	5	0.001	0.001	0.073	0.001	0.002	0.002	0.003	0.074	0.075
	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.213	0.001	0.071	0.001	0.214	0.214	0.215	0.284	0.285
	Right Edge	5	0.147	0.612	0.430	0.001	0.759	0.148	0.760	0.577	0.578
	Front Surface	5	0.732	0.001	0.060	0.001	0.733	0.733	0.734	0.792	0.793
	Back Surface	5	0.398	0.974	1.009	0.179	1.372	0.577	1.551	1.407	1.586
LTE Band 2	Top Edge	5	0.917	0.001	0.073	0.001	0.918	0.918	0.919	0.990	0.991
	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.151	0.001	0.071	0.001	0.152	0.152	0.153	0.222	0.223
	Right Edge	5	0.159	0.612	0.430	0.001	0.771	0.160	0.772	0.589	0.590
	Front Surface	5	0.300	0.001	0.060	0.001	0.301	0.301	0.302	0.360	0.361
LTE Band 4	Back Surface	5	0.279	0.974	1.009	0.179	1.253	0.458	1.432	1.288	1.467
	Top Edge	5	1.048	0.001	0.073	0.001	1.049	1.049	1.050	1.121	1.122
	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.101	0.001	0.071	0.001	0.102	0.102	0.103	0.172	0.173
	Right Edge	5	0.102	0.612	0.430	0.001	0.714	0.103	0.715	0.532	0.533
	Front Surface	5	0.202	0.001	0.060	0.001	0.203	0.203	0.204	0.262	0.263
	Back Surface	5	0.479	0.974	1.009	0.179	1.453	0.658	1.632	1.488	1.667
LTE Band 5	Top Edge	5	0.001	0.001	0.073	0.001	0.002	0.002	0.003	0.074	0.075
LIL Dand 5	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.226	0.001	0.071	0.001	0.227	0.227	0.228	0.297	0.298
	Right Edge	5	0.302	0.612	0.430	0.001	0.914	0.303	0.915	0.732	0.733
	Front Surface	5	0.788	0.001	0.060	0.001	0.789	0.789	0.790	0.848	0.849
	Back Surface	5	0.220	0.974	1.009	0.179	1.194	0.399	1.373	1.229	1.408
1TE D 17	Top Edge	5	0.220	0.001	0.073	0.001	0.221	0.221	0.222	0.293	0.294
LTE Band 7	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.351	0.001	0.071	0.001	0.352	0.352	0.353	0.422	0.423
	Right Edge	5	0.087	0.612	0.430	0.001	0.699	0.088	0.700	0.517	0.518
	Front Surface	5	0.095	0.001	0.060	0.001	0.096	0.096	0.097	0.155	0.156
	Back Surface	5	0.132	0.974	1.009	0.179	1.106	0.311	1.285	1.141	1.320
	Top Edge	5	0.001	0.001	0.073	0.001	0.002	0.002	0.003	0.074	0.075
LTE Band 12	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.001	0.001	0.071	0.001	0.002	0.002	0.003	0.072	0.073
	Right Edge	5	0.001	0.612	0.430	0.001	0.613	0.002	0.614	0.431	0.432
	Front Surface	5	0.078	0.001	0.060	0.001	0.079	0.079	0.080	0.138	0.139
	Back Surface	5	0.402	0.974	1.009	0.179	1.376	0.581	1.555	1.411	1.590
	Top Edge	5	0.001	0.001	0.073	0.001	0.002	0.002	0.003	0.074	0.075
LTE Band 13	Bottom Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.066
	Left Edge	5	0.229	0.001	0.071	0.001	0.230	0.230	0.231	0.300	0.301
	Right Edge	5	0.214	0.612	0.430	0.001	0.826	0.215	0.827	0.644	0.645
	Front Surface	5	0.065	0.001	0.060	0.001	0.066	0.066	0.027	0.125	0.126
	Back Surface	5	0.106	0.974	1.009	0.179	1.080	0.285	1.259	1.115	1.294
	Top Edge	5	0.100	0.001	0.073	0.179	0.002	0.265	0.003	0.074	0.075
LTE Band 17	Bottom Edge	5	0.001	0.001	0.073	0.001	0.002	0.002	0.003	0.074	0.075
	Left Edge	5	0.001	0.001	0.064	0.001	0.002	0.002	0.003	0.065	0.000
		5	0.001	0.612	0.430	0.001	0.613	0.002	0.614	0.072	0.073
	Right Edge	5	0.001	0.012	0.430	0.001	0.013	0.002	0.014	0.431	0.432

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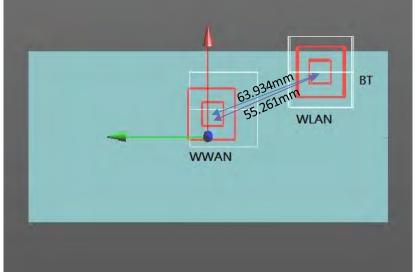
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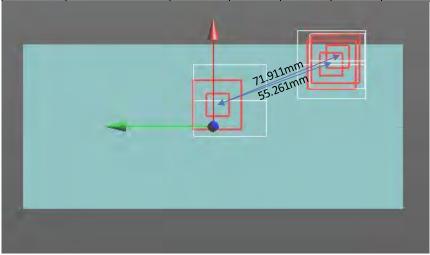


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	Scenario 1: 1+2+6												
Position	SAR Conditions Value		Coordinates (cm)			ΣSAR	Peak Location	SPLSR	Simultaneous Transmission SAR				
Position Co	Conditions	(W/kg)	х	у	Z	(W/kg)	Separation Distance (mm)	SFLSIX	Test				
Bottom	LTE Band 5	0.479	1.153	0.048	0.318		-	-	-				
Surface	WLAN 2.4G+BT	1.153	2.744	-5.244	0.356	1.632	55.261	0.038	SPLSR ≤ 0.04, Not required				



	Scenario 1: 1+4+6											
Position	Conditions	SAR Value	Coordinates (cm)			ΣSAR	Peak Location	SPLSR	Simultaneous Transmission SAR			
Position Conditions	Conditions	(W/kg)	х	У	Z	(W/kg)	Separation Distance (mm)	SPLSK	Test			
Bottom	LTE Band 5	0.479	1.153	0.048	0.318	-	-	-	-			
Surface	WLAN 5G+BT	1.188	2.744	-5.244	0.356	1.667	55.261	0.039	SPLSR ≤ 0.04, Not required			



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Conclusion

The simultaneous transmission is compliant because both SAR sum and/or SPLSR are less than their corresponding criteria.

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INSTRUMENTS LIST

Equipment List												
Manufacturer	Device	Туре	Serial number	Date of last calibration	Date of next calibration							
SPEAG	Data acquisition Electronics	DAE4	547	Mar/23/2022	Mar/22/2023							
SPEAG	Dosimetric E-Field Probe	EX3DV4	3938	Jan/25/2022	Jan/24/2023							
SPEAG	System Validation Dipole	D750V3	1015	Oct/14/2021	Oct/13/2022							
SPEAG	System Validation Dipole	D835V2	4d063	Oct/18/2021	Oct/17/2022							
SPEAG	System Validation Dipole	D1750V2	1008	Oct/19/2021	Oct/18/2022							
SPEAG	System Validation Dipole	D1900V2	5d173	Apr/28/2022	Apr/27/2023							
SPEAG	System Validation Dipole	D2450V2	727	Apr/25/2022	Apr/24/2023							
SPEAG	System Validation Dipole	D2600V2	1005	Jan/18/2022	Jan/17/2023							
SPEAG	System Validation Dipole	D5GHzV2	1023	Jan/27/2022	Jan/26/2023							
SPEAG	Dielectric Assessment Kit	DAKS-3.5	1053	Feb/28/2022	Feb/27/2023							
Agilent	MXG Analog Signal Generator	N5181A	MY50144143	May/19/2022	May/18/2023							
Agilent	Dual-directional coupler	772D	MY52180142	Nov/02/2021	Nov/01/2022							
Agilent	Dual-directional coupler	778D	MY52180302	Oct/29/2021	Oct/28/2022							
EMCI	Amplifier	ZHL-42	980189	Calibration not required	Calibration not required							
EMCI	Amplifier	ZVE-8G	980190	Calibration not required	Calibration not required							
R&S	Power Sensor	NRP18S	101973	Jan/22/2022	Jan/21/2023							
R&S	Power Meter	NRX	102191	Jan/22/2022	Jan/21/2023							
R&S	Power Sensor	NRP18S	101358	Jan/22/2022	Jan/21/2023							
SPEAG	Software	DASY 52 V52.10.4.152 7	N/A	Calibration not required	Calibration not required							
SPEAG	Phantom	ELI	N/A	Calibration not required	Calibration not required							
R&S	Radio Communication Test	CMW 500	165070	Oct/12/2021	Oct/11/2022							
LKM	Digital thermometer	DTM3000	EC14010603	Nov/09/2021	Nov/08/2022							
TECPEL	Digital thermometer	DTM-303A	TP130075	Oct/28/2021	Oct/27/2022							

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9 UNCERTAINTY BUDGET

Measurement Uncertainty evaluation template for DUT SAR test (3-6G)

A	С	D	е		f	g	h=c * f/e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration	6.55%	N	1	1	1	1	6.55%	6.55%	∞0
Isotropy , Axial	3.50%	R	√3	1.732	1	1	2.02%	2.02%	∞
Isotropy, Hemispherical	9.60%	R	√3	1.732	1	1	5.54%	5.54%	∞
Modulation Response	2.40%	R	√3	1.732	1	1	1.40%	1.40%	00
Boundary Effect	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Linearity	4.70%	R	√3	1.732	1	1	2.71%	2.71%	∞
Detection Limits	1.00%	R	√3	1.732	1	1	0.58%	0.58%	8
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	8
Response time	0.80%	R	√3	1.732	1	1	0.46%	0.46%	8
Integration Time	2.60%	R	√3	1.732	1	1	1.50%	1.50%	8
Measurement drift (class A evaluation)	1.75%	R	√3	1.732	1	1	1.01%	1.01%	8
RF ambient condition - noise	3.00%	R	√3	1.732	1	1	1.73%	1.73%	80
RF ambient conditions - reflections	3.00%	R	√3	1.732	1	1	1.73%	1.73%	80
Probe positioner Mechanical restrictions	0.40%	R	√3	1.732	1	1	0.23%	0.23%	80
Probe Positioning with respect to phantom shell	2.90%	R	√3	1.732	1	1	1.67%	1.67%	∞
Post-processing	1.00%	R	√3	1.732	1	1	0.58%	0.58%	œ
Max SAR Eval	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Test Sample related									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	√3	1.732	1	1	2.89%	2.89%	∞
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3	1.732	1	1	2.31%	2.31%	∞
Liquid permittivity (mea.)	0.71%	N	1	1	0.64	0.43	0.45%	0.31%	М
Liquid Conductivity (mea.)	0.14%	N	1	1	0.6	0.49	0.08%	0.07%	М
Combined standard uncertainty		RSS					11.73%	11.71%	
Expant uncertainty (95% confidence interval), K=2							23.45%	23.42%	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除北只方的时,此就是处理度保护的关键与合意,同时此类只度保护的大型电流设置,不可如心控制。

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Measurement Uncertainty evaluation template for DUT SAR test (0.3-3G)

А	С	D	е		f	g	h=c * f / e	i=c * g / e	k
Source of Uncertainty	Tolerance/ Uncertainty	Probability Distributio	Div	Div Value	ci (1g)	ci (10g)	Standard uncertainty	Standard uncertainty	vi, or Veff
Measurement system									
Probe calibration	6.00%	N	1	1	1	1	6.00%	6.00%	∞
Isotropy , Axial	3.50%	R	√3	1.732	1	1	2.02%	2.02%	∞
Isotropy, Hemispherical	9.60%	R	√3	1.732	1	1	5.54%	5.54%	∞
Modulation Response	2.40%	R	√3	1.732	1	1	1.40%	1.40%	∞
Boundary Effect	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Linearity	4.70%	R	√3	1.732	1	1	2.71%	2.71%	∞
Detection Limits	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Readout Electronics	0.30%	N	1	1	1	1	0.30%	0.30%	∞
Response time	0.80%	R	√3	1.732	1	1	0.46%	0.46%	∞
Integration Time	2.60%	R	√3	1.732	1	1	1.50%	1.50%	∞
Measurement drift (class A evaluation)	1.75%	R	√3	1.732	1	1	1.01%	1.01%	∞
RF ambient condition - noise	3.00%	R	√3	1.732	1	1	1.73%	1.73%	∞
RF ambient conditions - reflections	3.00%	R	√3	1.732	1	1	1.73%	1.73%	∞
Probe positioner Mechanical restrictions	0.40%	R	√3	1.732	1	1	0.23%	0.23%	∞
Probe Positioning with respect to phantom shell	2.90%	R	√3	1.732	1	1	1.67%	1.67%	∞
Post-processing	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Max SAR Eval	1.00%	R	√3	1.732	1	1	0.58%	0.58%	∞
Test Sample related									
Test sample positioning	2.90%	N	1	1	1	1	2.90%	2.90%	M-1
Device Holder Uncertainty	3.60%	N	1	1	1	1	3.60%	3.60%	M-1
Drift of output power	5.00%	R	√3	1.732	1	1	2.89%	2.89%	8
Phantom and Setup									
Phantom Uncertainty	4.00%	R	√3	1.732	1	1	2.31%	2.31%	∞
Liquid permittivity (mea.)	0.59%	N	1	1	0.64	0.43	0.38%	0.25%	М
Liquid Conductivity (mea.)	1.59%	N	1	1	0.6	0.49	0.95%	0.78%	М
Combined standard uncertainty		RSS					11.46%	11.44%	
Expant uncertainty (95% confidence interval), K=2							22.93%	22.87%	

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10 SAR MEASUREMENT RESULTS

Date: 2022/9/10

ID: 001

Report No.: TESA2207000221E5

WCDMA Band II_Body_Front Surface_CH 9400_5mm

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1880 MHz; $\sigma = 1.414 \text{ S/m}$; $\epsilon_r = 39.767$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.6°C; Liquid temperature: 21.5°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.92, 7.92, 7.92); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.41 W/kg

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

Reference Value = 8.531 V/m; Power Drift = 0.03 dB

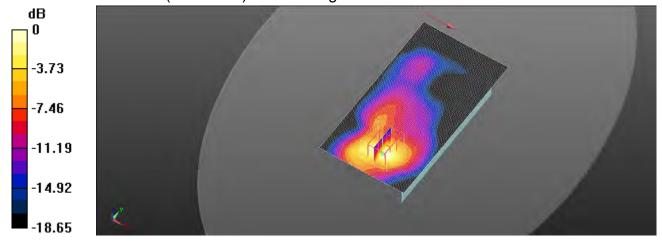
Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 0.976 W/kg; SAR(10 g) = 0.500 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 57.2%

Maximum value of SAR (measured) = 1.41 W/kg



0 dB = 1.41 W/kg = 1.48 dBW/kg

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Date: 2022/9/10

ID: 002

Report No.: TESA2207000221E5

WCDMA Band IV Body Top Edge CH 1513 5mm

Communication System: WCDMA; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1752.6 MHz; σ = 1.383 S/m; $ε_r$ = 39.841; ρ = 1000 kg/m³

Phantom section: Flat Section

Ambient temperature: 22.6°C; Liquid temperature: 21.5°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(8.33, 8.33, 8.33); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x81x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.09 W/kg

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

Reference Value = 7.269 V/m; Power Drift = 0.02 dB

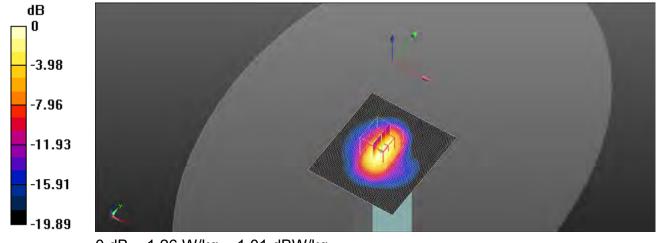
Peak SAR (extrapolated) = 1.64 W/kg

SAR(1 q) = 0.941 W/kq; SAR(10 q) = 0.488 W/kq

Smallest distance from peaks to all points 3 dB below = 8.4 mm

Ratio of SAR at M2 to SAR at M1 = 61.8%

Maximum value of SAR (measured) = 1.26 W/kg



0 dB = 1.26 W/kg = 1.01 dBW/kg

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Date: 2022/9/9

ID: 003

Report No.: TESA2207000221E5

WCDMA Band V Body Back Surface CH 4132 5mm

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used: f = 826.4 MHz; σ = 0.902 S/m; ε_r = 41.354; ρ = 1000 kg/m³

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 22.4°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(9.29, 9.29, 9.29); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.437 W/kg

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

Reference Value = 22.42 V/m; Power Drift = -0.02 dB

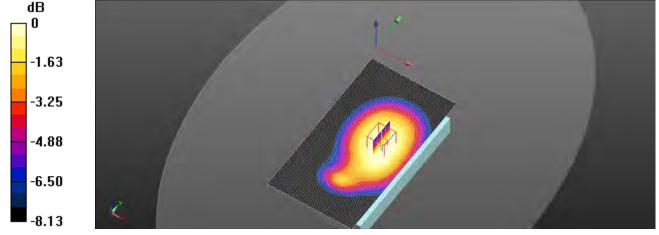
Peak SAR (extrapolated) = 0.469 W/kg

SAR(1 q) = 0.373 W/kq; SAR(10 q) = 0.286 W/kq

Smallest distance from peaks to all points 3 dB below = 9.5 mm

Ratio of SAR at M2 to SAR at M1 = 79.4%

Maximum value of SAR (measured) = 0.428 W/kg



0 dB = 0.428 W/kg = -3.68 dBW/kg

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Date: 2022/9/10

ID: 004

Report No.: TESA2207000221E5

LTE Band 2 (20MHz) Body Top Edge CH 18700 QPSK 1-0 5mm Communication System: LTE; Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1860 MHz; $\sigma = 1.414 \text{ S/m}$; $\epsilon_r = 39.767$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.6°C; Liquid temperature: 21.5°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.92, 7.92, 7.92); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (61x81x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.12 W/kg

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

Reference Value = 14.33 V/m; Power Drift = 0.04 dB

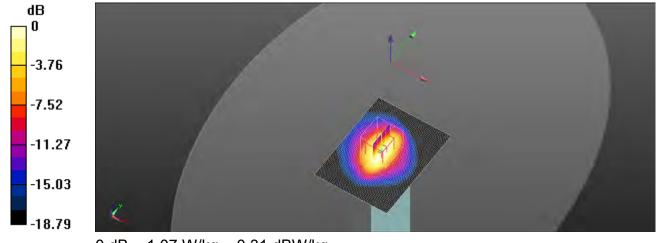
Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 q) = 0.802 W/kq; SAR(10 q) = 0.442 W/kq

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 63.5%

Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 1.07 W/kg = 0.31 dBW/kg

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Date: 2022/9/10

ID: 005

Report No.: TESA2207000221E5

LTE Band 4 (20MHz) Body Top Edge CH 20300 1-99 QPSK 5mm

Communication System: LTE; Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1745 MHz; $\sigma = 1.378 \text{ S/m}$; $\epsilon_r = 39.854$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.6°C; Liquid temperature: 21.5°C

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(8.33, 8.33, 8.33); Calibrated: 2022/1/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2022/3/23
- Phantom: ELI
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x81x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 1.16 W/kg

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

Reference Value = 7.575 V/m; Power Drift = 0.03 dB

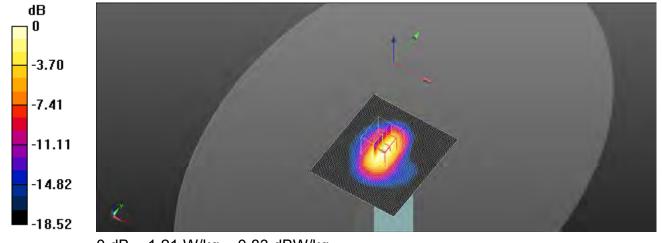
Peak SAR (extrapolated) = 1.70 W/kg

SAR(1 q) = 0.947 W/kq; SAR(10 q) = 0.495 W/kq

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 63.2%

Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.21 W/kg = 0.83 dBW/kg

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Date: 2022/9/9

ID: 006

Report No.: TESA2207000221E5

LTE Band 5 (10MHz) Body Back Surface CH 20600 QPSK 1-0 5mm

Communication System: LTE; Frequency: 844 MHz; Duty Cycle: 1:1

Medium parameters used: f = 844 MHz; $\sigma = 0.908$ S/m; $\varepsilon_r = 41.289$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(9.29, 9.29, 9.29); Calibrated: 2022/1/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2022/3/23
- Phantom: ELI
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.464 W/kg

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

Reference Value = 22.78 V/m; Power Drift = -0.02 dB

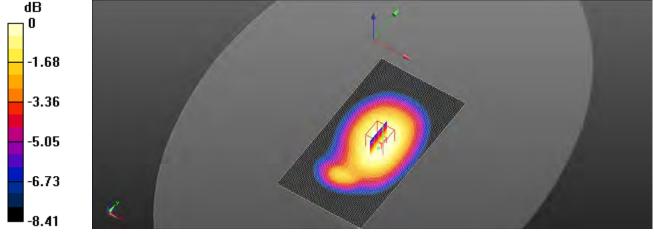
Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 q) = 0.402 W/kq; SAR(10 q) = 0.308 W/kq

Smallest distance from peaks to all points 3 dB below = 10.6 mm

Ratio of SAR at M2 to SAR at M1 = 80.4%

Maximum value of SAR (measured) = 0.457 W/kg



0 dB = 0.457 W/kg = -3.40 dBW/kg

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Date: 2022/9/11

ID: 007

Report No.: TESA2207000221E5

LTE Band 7 (20MHz) Body Front Surface CH 21100 QPSK 1-0 5mm

Communication System: LTE; Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: f = 2535 MHz; $\sigma = 1.903 \text{ S/m}$; $\varepsilon_r = 38.859$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 22.6°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.15, 7.15, 7.15); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (91x161x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.832 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.819 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 q) = 0.581 W/kq; SAR(10 q) = 0.310 W/kq

Smallest distance from peaks to all points 3 dB below = 11.7 mm

Ratio of SAR at M2 to SAR at M1 = 57%

Maximum value of SAR (measured) = 0.833 W/kg

Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.819 V/m; Power Drift = 0.03 dB

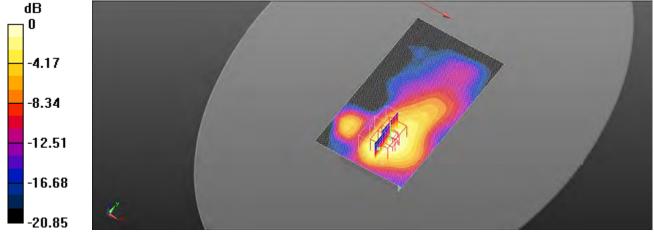
Peak SAR (extrapolated) = 0.936 W/kg

SAR(1 g) = 0.469 W/kg; SAR(10 g) = 0.237 W/kg

Smallest distance from peaks to all points 3 dB below = 13.2 mm

Ratio of SAR at M2 to SAR at M1 = 59.3%

Maximum value of SAR (measured) = 0.748 W/kg



0 dB = 0.748 W/kg = -1.26 dBW/kg

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Date: 2022/9/9

ID: 008

Report No.: TESA2207000221E5

LTE Band 12 (10MHz) Body Back Surface CH 23060 QPSK 1-0 5mm

Communication System: LTE; Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used: f = 704 MHz; σ = 0.885 S/m; ε_r = 41.948; ρ = 1000 kg/m³

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 22.4°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(9.6, 9.6, 9.6); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.128 W/kg

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

Reference Value = 4.085 V/m; Power Drift = -0.03 dB

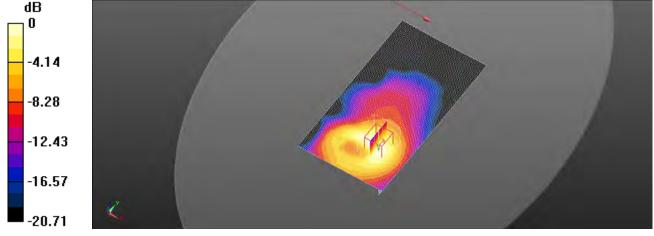
Peak SAR (extrapolated) = 0.167 W/kg

SAR(1 q) = 0.094 W/kq; SAR(10 q) = 0.053 W/kq

Smallest distance from peaks to all points 3 dB below = 10.2 mm

Ratio of SAR at M2 to SAR at M1 = 56.7%

Maximum value of SAR (measured) = 0.131 W/kg



0 dB = 0.131 W/kg = -8.82 dBW/kg

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Date: 2022/9/9

ID: 009

Report No.: TESA2207000221E5

LTE Band 13 (10MHz) Body Back Surface CH 23230 QPSK 1-0 5mm

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium parameters used: f = 782 MHz; σ = 0.891 S/m; ε_r = 41.542; ρ = 1000 kg/m³

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 22.4°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(9.6, 9.6, 9.6); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.381 W/kg

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

Reference Value = 21.18 V/m; Power Drift = 0.03 dB

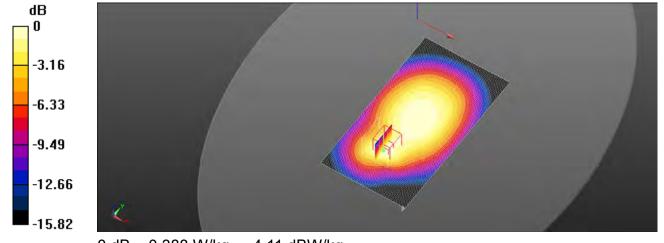
Peak SAR (extrapolated) = 0.471 W/kg

SAR(1 q) = 0.298 W/kq; SAR(10 q) = 0.192 W/kq

Smallest distance from peaks to all points 3 dB below = 12.2 mm

Ratio of SAR at M2 to SAR at M1 = 63.1%

Maximum value of SAR (measured) = 0.388 W/kg



0 dB = 0.388 W/kg = -4.11 dBW/kg

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Date: 2022/9/9

ID: 010

Report No.: TESA2207000221E5

LTE Band 17 (10MHz) Body Back Surface CH 23790 QPSK 1-0 5mm

Communication System: LTE; Frequency: 710 MHz; Duty Cycle: 1:1

Medium parameters used: f = 710 MHz; σ = 0.886 S/m; ε_r = 41.916; ρ = 1000 kg/m³

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 22.4°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(9.6, 9.6, 9.6); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x131x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 0.0881 W/kg

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

Reference Value = 4.537 V/m; Power Drift = 0.04 dB

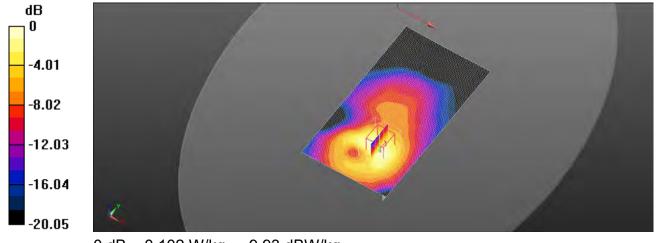
Peak SAR (extrapolated) = 0.132 W/kg

SAR(1 q) = 0.072 W/kq; SAR(10 q) = 0.041 W/kq

Smallest distance from peaks to all points 3 dB below = 10.2 mm

Ratio of SAR at M2 to SAR at M1 = 54%

Maximum value of SAR (measured) = 0.102 W/kg



0 dB = 0.102 W/kg = -9.93 dBW/kg

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Date: 2022/9/11

ID: 011

Report No.: TESA2207000221E5

WLAN 802.11b Body Back Surface CH 6 5mm Ant 1

Communication System: WLAN; Frequency: 2437 MHz; Duty Cycle: 1:01

Medium parameters used: f = 2437 MHz; $\sigma = 1.816 \text{ S/m}$; $\varepsilon_r = 38.990$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 22.6°C

DASY5 Configuration:

- Probe: EX3DV4 SN3938; ConvF(7.39, 7.39, 7.39); Calibrated: 2022/1/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn547; Calibrated: 2022/3/23
- Phantom: ELI
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (91x161x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 1.42 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.415 V/m; Power Drift = 0.04 dB

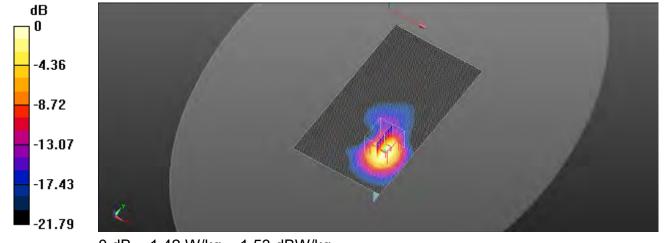
Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 q) = 0.950 W/kq; SAR(10 q) = 0.433 W/kq

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 52.6%

Maximum value of SAR (measured) = 1.42 W/kg



0 dB = 1.42 W/kg = 1.53 dBW/kg

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Date: 2022/9/11

ID: 012

Report No.: TESA2207000221E5

Bluetooth(GFSK) Body Back Surface CH 0 5mm Ant 1

Communication System: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:30

Medium parameters used: f = 2402 MHz; $\sigma = 1.786 \text{ S/m}$; $\varepsilon_r = 39.052$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 22.6°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.39, 7.39, 7.39); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (91x171x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 0.183 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.8840 V/m; Power Drift = 0.01 dB

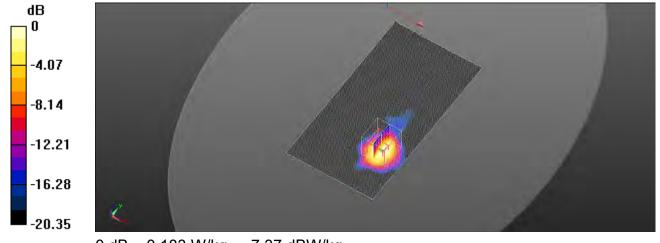
Peak SAR (extrapolated) = 0.244 W/kg

SAR(1 q) = 0.118 W/kq; SAR(10 q) = 0.052 W/kq

Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 51%

Maximum value of SAR (measured) = 0.183 W/kg



0 dB = 0.183 W/kg = -7.37 dBW/kg

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Date: 2022/9/12

ID: 013

Report No.: TESA2207000221E5

WLAN 802.11a 5.2G Body Back Surface CH 48 5mm Ant 1

Communication System: WLAN; Frequency: 5240 MHz; Duty Cycle: 1:04

Medium parameters used: f = 5240 MHz; $\sigma = 4.695 \text{ S/m}$; $\varepsilon_r = 35.707$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.5°C; Liquid temperature: 22.6°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(5.05, 5.05, 5.05); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (111x201x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.81 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.3460 V/m; Power Drift = -0.02 dB

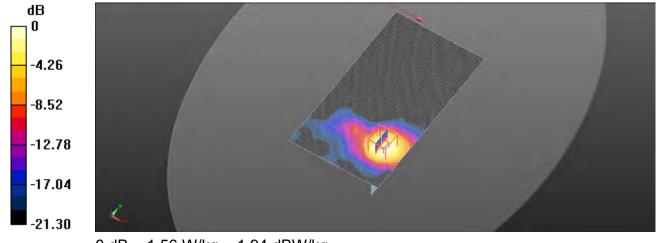
Peak SAR (extrapolated) = 2.65 W/kg

SAR(1 q) = 0.871 W/kq; SAR(10 q) = 0.337 W/kq

Smallest distance from peaks to all points 3 dB below = 10.2 mm

Ratio of SAR at M2 to SAR at M1 = 61%

Maximum value of SAR (measured) = 1.56 W/kg



0 dB = 1.56 W/kg = 1.94 dBW/kg

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Date: 2022/9/12

ID: 014

Report No.: TESA2207000221E5

WLAN 802.11a 5.8G Body Back Surface CH 157 5mm Ant 1

Communication System: WLAN; Frequency: 5785 MHz; Duty Cycle: 1:04

Medium parameters used: f = 5785 MHz; $\sigma = 5.254 \text{ S/m}$; $\varepsilon_r = 35.084$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.5°C; Liquid temperature: 22.6°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(4.65, 4.65, 4.65); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1719; Calibrated: 2022/3/25

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (111x201x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 1.51 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.851 V/m; Power Drift = 0.01 dB

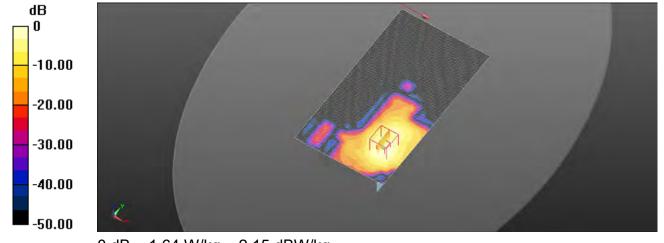
Peak SAR (extrapolated) = 3.10 W/kg

SAR(1 q) = 0.843 W/kq; SAR(10 q) = 0.295 W/kq

Smallest distance from peaks to all points 3 dB below = 8.6 mm

Ratio of SAR at M2 to SAR at M1 = 56.9%

Maximum value of SAR (measured) = 1.64 W/kg



0 dB = 1.64 W/kg = 2.15 dBW/kg

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11 SAR SYSTEM CHECK RESULTS

Date: 2022/9/9

Report No.: TESA2207000221E5

Dipole 750 MHz SN:1015

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used: f = 750 MHz; σ = 0.888 S/m; ε_r = 41.709; ρ = 1000 kg/m³

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 22.4°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(9.6, 9.6, 9.6); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (51x71x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.69 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.50 V/m: Power Drift = 0.03 dB

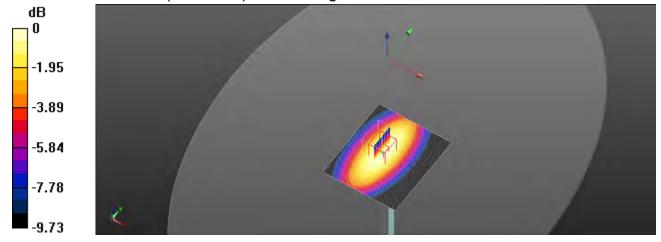
Peak SAR (extrapolated) = 3.17 W/kg

SAR(1 g) = 2.15 W/kg; SAR(10 g) = 1.42 W/kg

Smallest distance from peaks to all points 3 dB below = 15.2 mm

Ratio of SAR at M2 to SAR at M1 = 69%

Maximum value of SAR (measured) = 2.73 W/kg



0 dB = 2.73 W/kg = 4.37 dBW/kg

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Date: 2022/9/9

Report No.: TESA2207000221E5 Dipole 835 MHz SN:4d063

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: f = 835 MHz; σ = 0.905 S/m; ε_r = 41.322; ρ = 1000 kg/m³

Phantom section: Flat Section

Ambient temperature: 22.2°C; Liquid temperature: 22.4°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(9.29, 9.29, 9.29); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (61x71x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 2.91 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.54 V/m; Power Drift = 0.02 dB

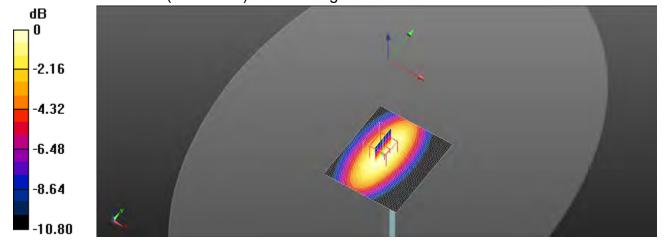
Peak SAR (extrapolated) = 3.50 W/kg

SAR(1 g) = 2.35 W/kg; SAR(10 g) = 1.55 W/kg

Smallest distance from peaks to all points 3 dB below = 21.2 mm

Ratio of SAR at M2 to SAR at M1 = 66%

Maximum value of SAR (measured) = 2.97 W/kg



0 dB = 2.97 W/kq = 4.72 dBW/kq

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Date: 2022/9/10

Report No.: TESA2207000221E5 **Dipole 1750 MHz_SN:1008**

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1750 MHz; $\sigma = 1.381 \text{ S/m}$; $\varepsilon_r = 39.846$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.6C; Liquid temperature: 21.5℃

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(8.33, 8.33, 8.33); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (61x101x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 13.0 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.89 V/m; Power Drift = 0.01 dB

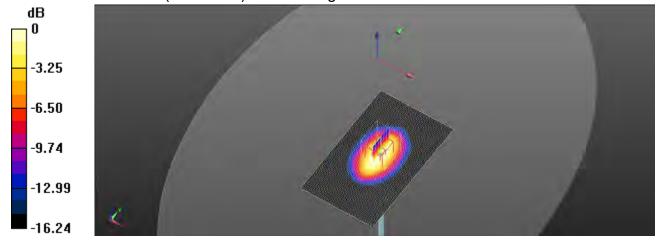
Peak SAR (extrapolated) = 15.6 W/kg

SAR(1 g) = 8.94 W/kg; SAR(10 g) = 4.88 W/kg

Smallest distance from peaks to all points 3 dB below = 10 mm

Ratio of SAR at M2 to SAR at M1 = 57.6%

Maximum value of SAR (measured) = 12.4 W/kg



0 dB = 12.4 W/kq = 10.93 dBW/kq

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Date: 2022/9/10

Report No.: TESA2207000221E5 **Dipole 1900 MHz_SN:5d173**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; $\sigma = 1.414 \text{ S/m}$; $\epsilon_r = 39.767$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.6°C; Liquid temperature: 21.5°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.92, 7.92, 7.92); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (61x81x1): Interpolated grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 15.7 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 98.61 V/m; Power Drift = 0.01 dB

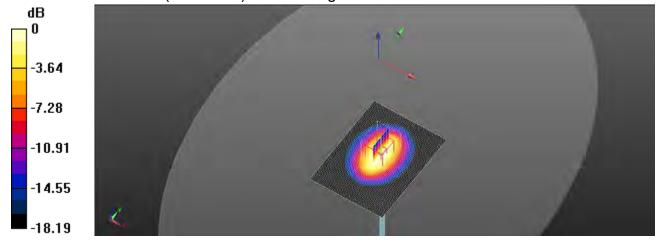
Peak SAR (extrapolated) = 19.2 W/kg

SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.28 W/kg

Smallest distance from peaks to all points 3 dB below = 10 mm

Ratio of SAR at M2 to SAR at M1 = 53%

Maximum value of SAR (measured) = 14.8 W/kg



0 dB = 14.8 W/kq = 11.70 dBW/kq

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Date: 2022/9/11

Report No.: TESA2207000221E5

Dipole 2450 MHz_SN:727

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; $\sigma = 1.827 \text{ S/m}$; $\epsilon_r = 38.967$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 22.6°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.39, 7.39, 7.39); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (71x91x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 20.6 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 99.01 V/m; Power Drift = 0.01 dB

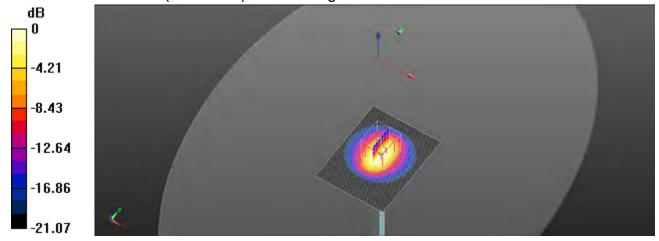
Peak SAR (extrapolated) = 26.8 W/kg

SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.35 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 51.9%

Maximum value of SAR (measured) = 20.3 W/kg



0 dB = 20.3 W/kq = 13.07 dBW/kq

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Date: 2022/9/11

Report No.: TESA2207000221E5 Dipole 2600 MHz_SN:1005

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used: f = 2600 MHz; $\sigma = 1.963 \text{ S/m}$; $\varepsilon_r = 38.776$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 22.6°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(7.15, 7.15, 7.15); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (91x111x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 22.8 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.31 V/m; Power Drift = 0.04 dB

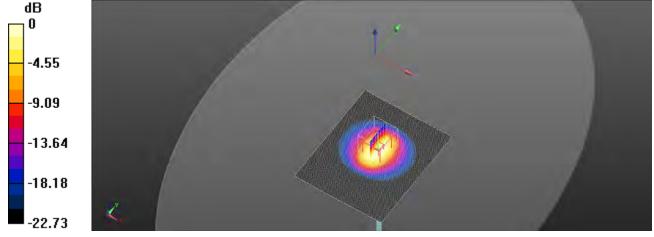
Peak SAR (extrapolated) = 29.3 W/kg

SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.49 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 54.9%

Maximum value of SAR (measured) = 21.6 W/kg



0 dB = 21.6 W/kq = 13.35 dBW/kq

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Date: 2022/9/12

Report No.: TESA2207000221E5 Dipole 5250 MHz_SN:1023

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: f = 5250 MHz; $\sigma = 4.705 \text{ S/m}$; $\varepsilon_r = 35.696$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.5°C; Liquid temperature: 22.6°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(5.05, 5.05, 5.05); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (61x81x1): Interpolated grid: dx=10 mm, dy=10 mm

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

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 57.52 V/m; Power Drift = 0.03 dB

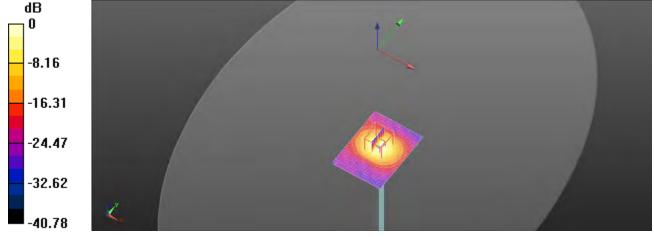
Peak SAR (extrapolated) = 32.0 W/kg

SAR(1 g) = 8.25 W/kg; SAR(10 g) = 2.41 W/kg

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 55.8%

Maximum value of SAR (measured) = 16.6 W/kg



0 dB = 16.6 W/kq = 12.21 dBW/kq

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Date: 2022/9/12

Report No.: TESA2207000221E5 Dipole 5750 MHz_SN:1023

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: f = 5750 MHz; $\sigma = 5.218 \text{ S/m}$; $\varepsilon_r = 35.124$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient temperature: 22.3°C; Liquid temperature: 22.6°C

DASY5 Configuration:

Probe: EX3DV4 - SN3938; ConvF(4.65, 4.65, 4.65); Calibrated: 2022/1/25

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn547; Calibrated: 2022/3/23

Phantom: ELI

DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Area Scan (81x101x1): Interpolated grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 17.2 W/kg

Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 43.11 V/m; Power Drift = 0.02 dB

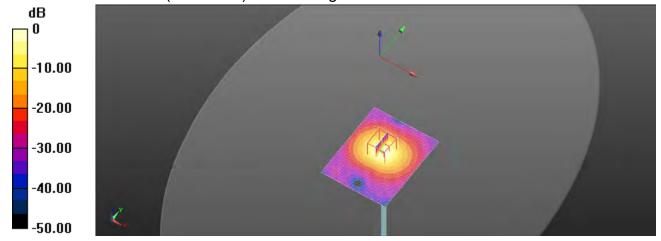
Peak SAR (extrapolated) = 35.3 W/kg

SAR(1 g) = 8 W/kg; SAR(10 g) = 2.26 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 52%

Maximum value of SAR (measured) = 16.9 W/kg



0 dB = 16.9 W/kq = 12.28 dBW/kq

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Refer to separated files for the following appendixes.

- 12.1 SAR_Appendix A Photographs
- 12.2 SAR Appendix B DAE & Probe Cal. Certificate
- 12.3 SAR_Appendix C Phantom Description & Dipole Cal. Certificate

- End of report -

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