

10860	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10861	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	± 9.6 %
10863	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10864	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
10865	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10866	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10868	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	± 9.6 %
10869	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10870	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	± 9.6 %
10871	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10872	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	± 9.6 %
10873	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	± 9.6 %
10874	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	± 9.6 %
10875	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	± 9.6 %
10876	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	± 9.6 %
10877	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	± 9.6 %
10878	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	± 9.6 %
10879	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	± 9.6 %
10880	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	± 9.6 %
10881	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10882	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	± 9.6 %
10883	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	± 9.6 %
10884	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	± 9.6 %
10885	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	± 9.6 %
10886	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	± 9.6 %
10887	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	± 9.6 %
10888	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	± 9.6 %
10889	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	± 9.6 %
10890	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	± 9.6 %
10891	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	± 9.6 %
10892	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	± 9.6 %
10897	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.66	± 9.6 %
10898	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %
10899	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %
10900	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10901	AAD	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10902	AAD	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10903	AAD	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10904	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10905	AAD	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10906	AAD	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10907	AAD	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	± 9.6 %
10908	AAD	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	± 9.6 %
10909	AAD	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.96	± 9.6 %
10910	AAD	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	± 9.6 %
10911	AAD	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	± 9.6 %
10912	AAD	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10913	AAD	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10914	AAD	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.85	± 9.6 %
10915	AAD	5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	± 9.6 %
10916	AAD	5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	± 9.6 %
10917	AAD	5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	± 9.6 %
10918	AAD	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	± 9.6 %
10919	AAD	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	± 9.6 %
10920	AAD	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	± 9.6 %
10921	AAD	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %

10922	AAD	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	± 9.6 %
10923	AAD	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10924	AAD	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10925	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	± 9.6 %
10926	AAD	5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10927	AAD	5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	± 9.6 %
10928	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10929	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10930	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10931	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10932	AAB	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10933	AAA	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10934	AAA	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10935	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10936	AAC	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	± 9.6 %
10937	AAB	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	± 9.6 %
10938	AAB	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	± 9.6 %
10939	AAB	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	± 9.6 %
10940	AAB	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	± 9.6 %
10941	AAB	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	± 9.6 %
10942	AAB	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	± 9.6 %
10943	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	± 9.6 %
10944	AAB	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	± 9.6 %
10945	AAB	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	± 9.6 %
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	± 9.6 %
10947	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	± 9.6 %
10948	AAB	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	± 9.6 %
10949	AAB	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	± 9.6 %
10950	AAB	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	± 9.6 %
10951	AAB	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	± 9.6 %
10952	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.25	± 9.6 %
10953	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.15	± 9.6 %
10954	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.23	± 9.6 %
10955	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.42	± 9.6 %
10956	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.14	± 9.6 %
10957	AAC	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.31	± 9.6 %
10958	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.61	± 9.6 %
10959	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.33	± 9.6 %
10960	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	± 9.6 %
10961	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.36	± 9.6 %
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.40	± 9.6 %
10963	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.55	± 9.6 %
10964	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	± 9.6 %
10965	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.37	± 9.6 %
10966	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.55	± 9.6 %
10967	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.42	± 9.6 %
10968	AAB	5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.49	± 9.6 %
10972	AAB	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	11.59	± 9.6 %
10973	AAB	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	9.06	± 9.6 %
10974	AAB	5G NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)	5G NR FR1 TDD	10.28	± 9.6 %

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



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Client **Sporton**

Certificate No: **ES3-3293_Sep20**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3293**

Calibration procedure(s) **QA CAL-01.v9, QA CAL-23.v5, QA CAL-25.v7**
 Calibration procedure for dosimetric E-field probes

Calibration date: **September 23, 2020**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	01-Apr-20 (No. 217-03100/03101)	Apr-21
Power sensor NRP-Z91	SN: 103244	01-Apr-20 (No. 217-03100)	Apr-21
Power sensor NRP-Z91	SN: 103245	01-Apr-20 (No. 217-03101)	Apr-21
Reference 20 dB Attenuator	SN: CC2552 (20x)	31-Mar-20 (No. 217-03106)	Apr-21
DAE4	SN: 660	27-Dec-19 (No. DAE4-660_Dec19)	Dec-20
Reference Probe ES3DV2	SN: 3013	31-Dec-19 (No. ES3-3013_Dec19)	Dec-20
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-20)	In house check: Jun-22
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-19)	In house check: Oct-20

	Name	Function	Signature
Calibrated by:	Michael Weber	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	
Issued: September 29, 2020			
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			



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Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization ϕ	ϕ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3293

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	1.10	0.90	0.73	± 10.1 %
DCP (mV) ^B	102.3	109.5	106.9	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB/ μV	C	D dB	VR mV	Max dev.	Unc ^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	199.2	± 3.5 %	± 4.7 %
		Y	0.0	0.0	1.0		179.4		
		Z	0.0	0.0	1.0		183.6		

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Page 5).

^B Numerical linearization parameter: uncertainty not required.

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

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3293

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-5.0
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm

Note: Measurement distance from surface can be increased to 3-4 mm for an *Area Scan* job.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3293

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth (mm) ^G	Unc (k=2)
750	41.9	0.89	6.51	6.51	6.51	0.80	1.18	± 12.0 %
835	41.5	0.90	6.43	6.43	6.43	0.78	1.16	± 12.0 %
900	41.5	0.97	6.24	6.24	6.24	0.80	1.18	± 12.0 %
1750	40.1	1.37	5.37	5.37	5.37	0.63	1.28	± 12.0 %
1900	40.0	1.40	5.14	5.14	5.14	0.50	1.44	± 12.0 %
2000	40.0	1.40	5.11	5.11	5.11	0.72	1.25	± 12.0 %
2300	39.5	1.67	4.81	4.81	4.81	0.65	1.34	± 12.0 %
2450	39.2	1.80	4.51	4.51	4.51	0.57	1.50	± 12.0 %
2600	39.0	1.96	4.38	4.38	4.38	0.80	1.23	± 12.0 %

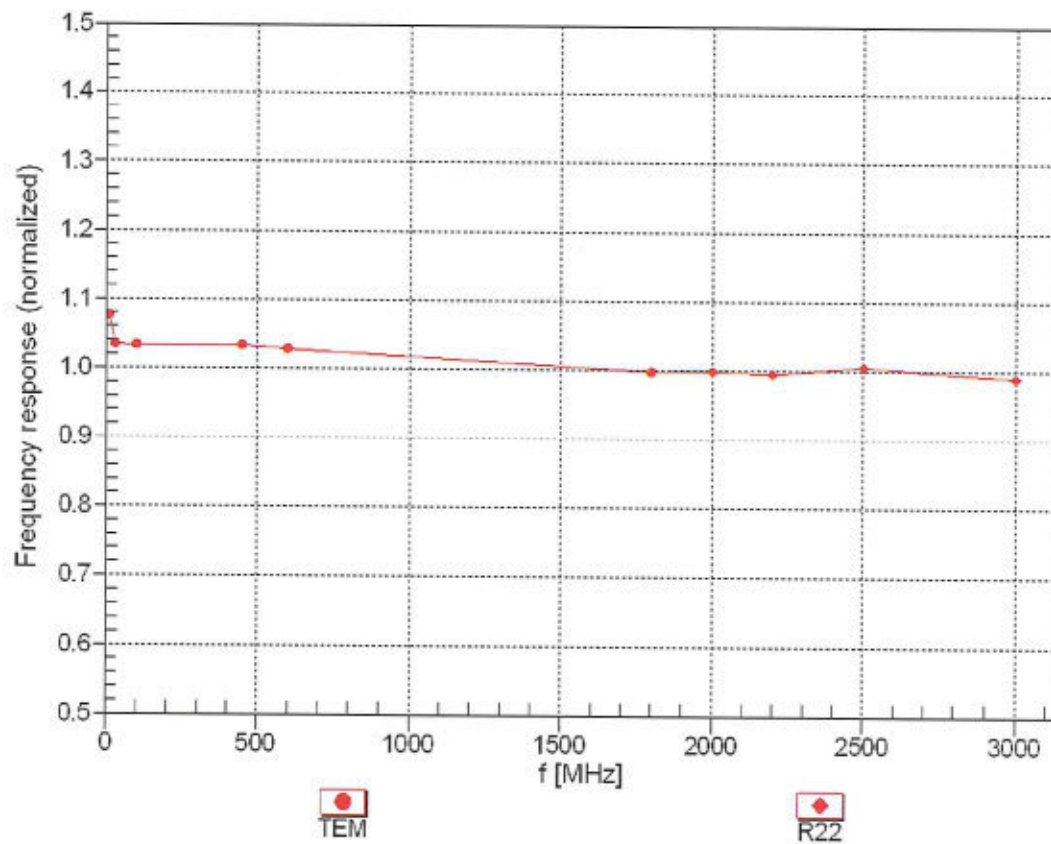
^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

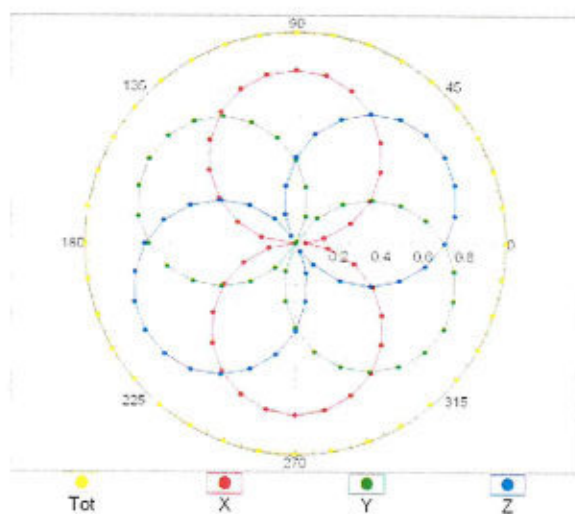
(TEM-Cell:ifi110 EXX, Waveguide: R22)



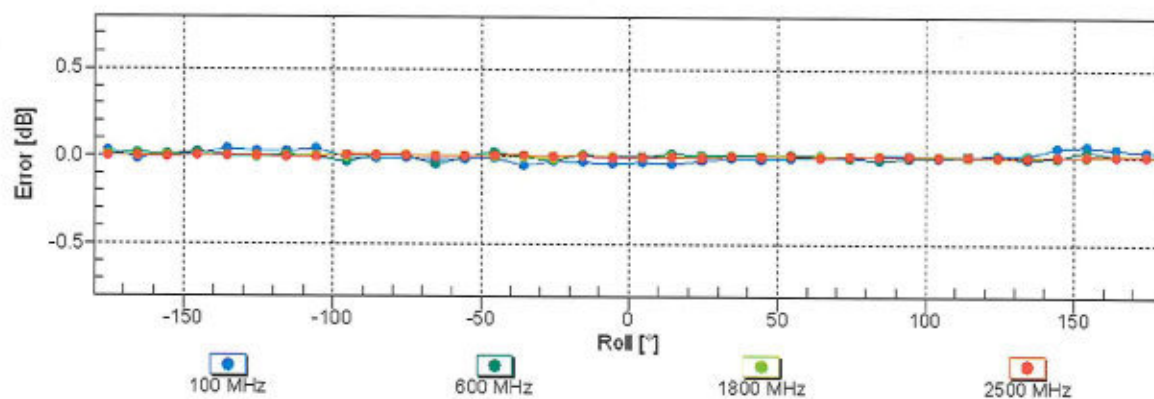
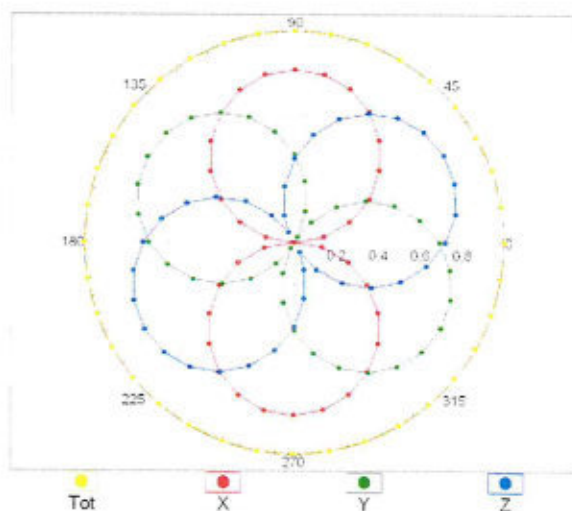
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\vartheta = 0^\circ$

f=600 MHz,TEM

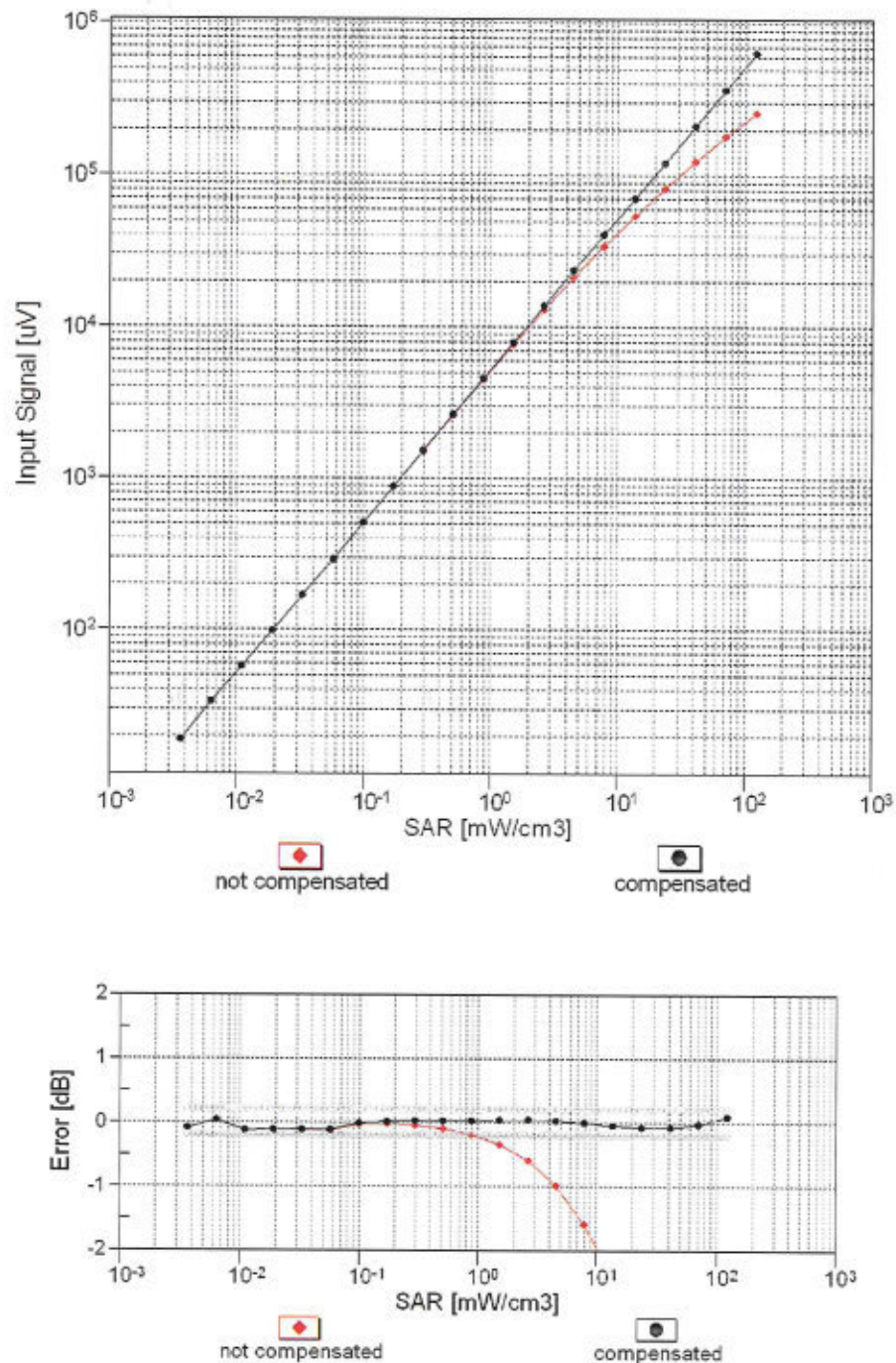


f=1800 MHz,R22



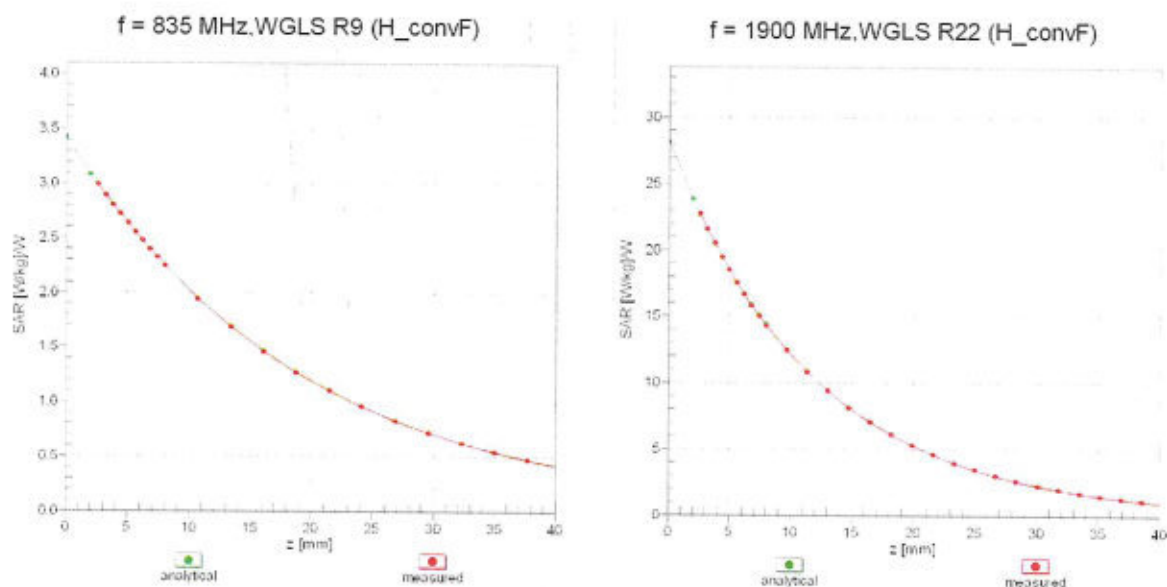
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f_{\text{eval}} = 1900 \text{ MHz}$)



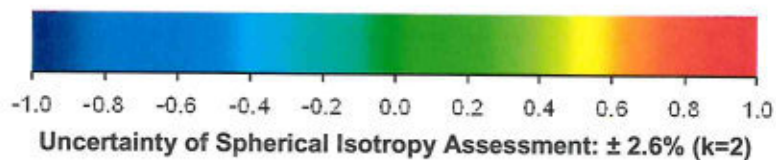
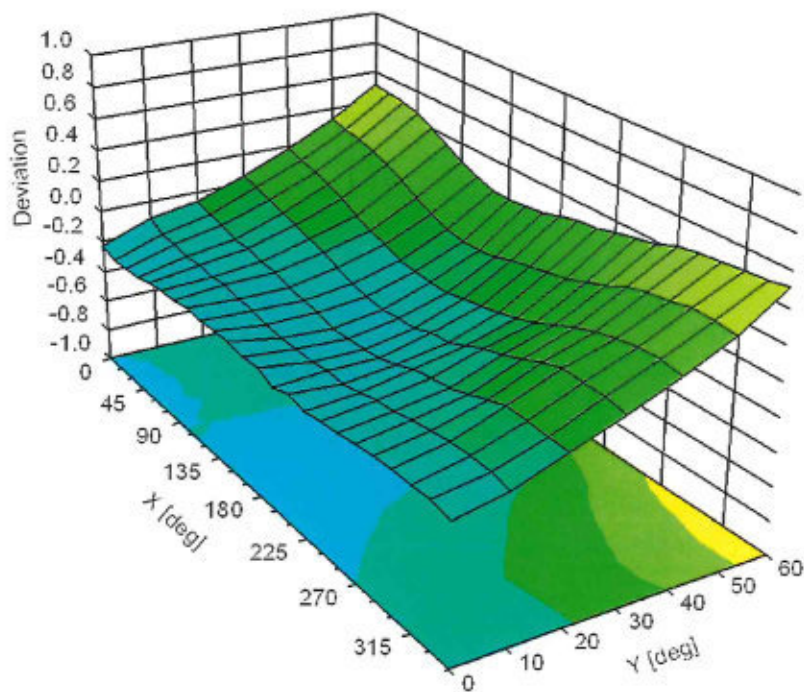
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), $f = 900 \text{ MHz}$





Appendix E. Conducted RF Output Power Table

The detailed power table are shown as follows.

Full Power level/Default Power level for WWAN

Ant1 DS1&3&4&5				Ant4 DS14					
GSM850_Ant1&4									
GSM850		Burst Average Power (dbm)		Tune-up Limit (dbm)	Frame-Average Power (dbm)		Tune-up Limit (dbm)		
TX Channel		128	189		251	128		189	251
Frequency (MHz)		824.2	836.4	848.8		824.2	836.4	848.8	
GSM 1 Tx slot		32.62	32.95	32.86	33.50	23.82	23.95	23.86	24.50
GPRS 1 Tx slot		32.81	32.93	32.85	33.50	23.81	23.93	23.85	24.50
GPRS 2 Tx slots		30.01	29.83	29.81	31.00	24.01	23.83	23.81	25.00
GPRS 3 Tx slots		28.44	28.14	28.33	29.00	24.18	23.88	24.07	24.74
GPRS 4 Tx slots		26.72	26.83	26.81	28.00	23.72	23.83	23.81	25.00
EDGE 1 Tx slot		26.62	26.54	26.34	27.50	17.62	17.54	17.34	18.50
EDGE 2 Tx slots		24.05	23.98	24.10	25.00	18.05	17.98	18.10	19.00
EDGE 3 Tx slots		22.44	22.41	22.14	23.00	18.18	18.15	17.88	18.74
EDGE 4 Tx slots		21.10	21.05	20.99	22.00	18.10	18.05	17.99	19.00

Ant2 DS1&3&4&5				Ant3 DS1&4&5				
GSM1900_Ant2&3								
GSM1900 TX Channel	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame-Average Power (dBm)			Tune-up Limit (dBm)
	512	661	810		512	661	810	
Frequency (MHz)	1850.2	1880	1909.8	1850.2	1880	1909.8	1850.2	
GSM 1 Tx slot	29.71	30.09	29.89	30.50	20.71	21.09	20.89	
GPRS 1 Tx slot	26.09	26.08	26.88	30.50	20.69	21.08	20.88	
GPRS 2 Tx slots	26.31	26.43	26.28	27.50	20.31	20.43	20.28	
GPRS 3 Tx slots	24.51	24.81	24.71	25.50	20.25	20.55	20.45	
GPRS 4 Tx slots	23.25	23.45	23.22	24.50	20.25	20.45	20.22	
EDGE 1 Tx slot	25.74	25.81	25.56	26.50	16.74	16.81	16.56	
EDGE 2 Tx slots	22.95	22.91	22.73	23.50	16.95	16.91	16.73	
EDGE 3 Tx slots	21.43	21.31	20.94	21.50	17.17	17.05	16.68	
EDGE 4 Tx slots	20.04	19.77	19.55	20.50	17.04	16.77	16.55	

Ant2 DS1&4 Ant3 DS1&4												Ant2 DS1&4 Ant3 DS1&4&5						Ant1 DS1&4 Ant1 DS4					
WCDMA II_Ant2&3												WCDMA IV_Ant2&3						WCDMA V_Ant1&4					
Band		WCDMA II				Tune-up Limit (dBm)		WCDMA IV				Tune-up Limit (dBm)		WCDMA V				Tuneup Limit (dBm)					
TX Channel		9262	9400	9538				1312	1413	1513			4132	4182	4233								
Rx Channel		9662	9800	9938				1537	1638	1738			4357	4407	4458								
Frequency (MHz)		1852.4	1880	1907.6				1712.4	1732.6	1752.6			826.4	836.4	846.6								
3GPP Rel 99	AMR 12.2Kbps	24.61	24.65	24.60	25.50	24.48	24.50	24.30	25.50	24.39	24.42	24.33	25.50										
3GPP Rel 99	RMC 12.2Kbps	24.63	24.66	24.61	25.50	24.50	24.51	24.32	25.50	24.40	24.44	24.35	25.50										
3GPP Rel 6	HSDPA Subtest-1	23.67	23.86	23.80	24.50	23.85	23.78	23.59	24.50	23.54	23.54	23.47	24.50										
3GPP Rel 6	HSDPA Subtest-2	23.70	23.89	23.80	24.50	23.82	23.79	23.64	24.50	23.53	23.52	23.48	24.50										
3GPP Rel 6	HSDPA Subtest-3	23.19	23.43	23.36	24.00	23.32	23.27	23.11	24.00	23.03	23.03	22.96	24.00										
3GPP Rel 6	HSDPA Subtest-4	23.20	23.39	23.29	24.00	23.30	23.31	23.12	24.00	23.04	23.03	23.01	24.00										
3GPP Rel 6	DC-HSDPA Subtest-1	23.51	23.80	23.67	24.50	23.73	23.59	23.42	24.50	23.48	23.44	23.35	24.50										
3GPP Rel 6	DC-HSDPA Subtest-2	23.61	23.77	23.62	24.50	23.69	23.63	23.58	24.50	23.42	23.33	23.39	24.50										
3GPP Rel 6	DC-HSDPA Subtest-3	23.00	23.23	23.27	24.00	23.21	23.20	22.99	24.00	22.84	22.87	22.79	24.00										
3GPP Rel 6	DC-HSDPA Subtest-4	23.14	23.34	23.14	24.00	23.10	23.24	22.98	24.00	22.99	22.88	22.83	24.00										
3GPP Rel 6	HSUPA Subtest-1	23.80	23.93	23.84	24.50	23.83	23.82	23.64	24.50	23.54	23.51	23.47	24.50										
3GPP Rel 6	HSUPA Subtest-2	21.82	21.96	21.86	22.50	21.79	21.83	21.62	22.50	21.49	21.51	21.44	22.50										
3GPP Rel 6	HSUPA Subtest-3	22.79	22.95	22.85	23.50	22.80	22.81	22.63	23.50	22.50	22.50	22.44	23.50										
3GPP Rel 6	HSUPA Subtest-4	21.76	21.89	21.81	22.50	21.75	21.80	21.65	22.50	21.51	21.45	21.46	22.50										
3GPP Rel 6	HSUPA Subtest-5	23.80	23.90	23.80	24.50	23.80	23.80	23.70	24.50	23.50	23.50	23.40	24.50										

Reduced power level for WWAN

		WCDMA V Ant1_DS13			WCDMA V Ant1_DS15				
Band		WCDMA V			WCDMA V				
TX Channel		4132	4182	4233	Tune-up Limit (dBm)	4132	4182	4233	Tune-up Limit (dBm)
Rx Channel		4357	4407	4458		4357	4407	4458	
Frequency (MHz)		826.4	836.4	846.6		826.4	836.4	846.6	
3GPP Rel 99	AMR 12.2Kbps	22.52	22.67	22.64	23.50	23.55	23.56	23.56	24.50
3GPP Rel 99	AMR 12.2Kbps	22.61	22.70	22.45	23.50	23.56	23.58	23.57	24.50
3GPP Rel 6	HSDPA Subtest-1	21.38	21.46	21.55	22.50	22.43	22.46	22.64	23.50
3GPP Rel 6	HSDPA Subtest-2	21.69	21.69	21.37	22.50	22.59	22.66	22.44	23.50
3GPP Rel 6	HSDPA Subtest-3	21.09	21.35	20.87	22.00	22.15	22.28	21.93	23.00
3GPP Rel 6	HSDPA Subtest-4	21.11	21.26	20.87	22.00	22.01	22.20	21.95	23.00
3GPP Rel 8	DC-HSDPA Subtest-1	21.61	21.51	21.59	22.50	22.58	22.63	22.53	23.50
3GPP Rel 8	DC-HSDPA Subtest-2	21.59	21.81	21.53	22.50	22.48	22.74	22.46	23.50
3GPP Rel 8	DC-HSDPA Subtest-3	21.12	21.13	21.03	22.00	22.21	22.08	21.95	23.00
3GPP Rel 8	DC-HSDPA Subtest-4	20.91	21.22	21.01	22.00	22.02	22.10	21.92	23.00
3GPP Rel 6	HSUPA Subtest-1	21.48	21.68	21.42	22.50	22.57	22.72	22.49	23.50
3GPP Rel 6	HSUPA Subtest-2	19.72	19.49	19.52	20.50	20.66	20.60	20.41	21.50
3GPP Rel 6	HSUPA Subtest-3	20.47	20.62	20.67	21.50	21.47	21.69	21.57	22.50
3GPP Rel 6	HSUPA Subtest-4	19.43	19.75	19.51	20.50	20.55	20.65	20.39	21.50
3GPP Rel 6	HSUPA Subtest-5	21.57	21.62	21.51	22.50	22.62	22.58	22.62	23.50

		WCDMA II Ant2_DSI3&5			WCDMA IV Ant2_DSI3&5			
Band		WCDMA II			Tune-up Limit (dBm)	WCDMA IV		
TX Channel		9262	9400	9538		1312	1413	1513
Rx Channel		9662	9800	9938		1537	1638	1738
Frequency (MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6
3GPP Rel 99	AMR 12.2Kbps	20.97	21.04	20.98	22.00	21.30	21.45	21.42
3GPP Rel 99	RMC 12.2Kbps	20.98	21.05	21.00	22.00	21.32	21.46	21.44
3GPP Rel 6	HSDPA Subtest-1	19.87	19.97	19.98	21.00	20.79	20.78	20.77
3GPP Rel 6	HSDPA Subtest-2	19.95	20.00	19.92	21.00	20.79	20.76	20.76
3GPP Rel 6	HSDPA Subtest-3	19.43	19.47	19.38	20.50	20.28	20.30	20.32
3GPP Rel 6	HSDPA Subtest-4	19.42	19.44	19.40	20.50	20.38	20.33	20.31
3GPP Rel 8	DC-HSDPA Subtest-1	19.87	20.05	20.02	21.00	20.86	20.79	20.81
3GPP Rel 8	DC-HSDPA Subtest-2	20.02	20.08	19.84	21.00	20.69	20.66	20.80
3GPP Rel 8	DC-HSDPA Subtest-3	19.38	19.39	19.37	20.50	20.23	20.34	20.28
3GPP Rel 8	DC-HSDPA Subtest-4	19.36	19.44	19.41	20.50	20.44	20.27	20.39
3GPP Rel 6	HSUPA Subtest-1	19.90	20.02	19.87	21.00	20.76	20.81	20.74
3GPP Rel 6	HSUPA Subtest-2	17.95	18.02	17.89	19.00	18.82	18.79	18.73
3GPP Rel 6	HSUPA Subtest-3	18.91	18.99	18.89	20.00	19.85	19.80	19.78
3GPP Rel 6	HSUPA Subtest-4	17.99	18.01	17.87	19.00	18.76	18.83	18.78
3GPP Rel 6	HSUPA Subtest-5	20.00	20.03	19.90	21.00	20.80	20.77	20.75

		WCDMA II Ant3_DSI1&5			
Band		WCDMA II			Tune-up Limit (dBm)
TX Channel		9262	9400	9538	
Rx Channel		9662	9800	9938	
Frequency (MHz)		1852.4	1880	1907.6	
3GPP Rel 99	AMR 12.2Kbps	20.97	21.04	20.98	22.00
3GPP Rel 99	RMC 12.2Kbps	20.91	21.05	20.99	22.00
3GPP Rel 6	HSDPA Subtest-1	20.02	20.03	19.88	21.00
3GPP Rel 6	HSDPA Subtest-2	19.91	20.03	19.88	21.00
3GPP Rel 6	HSDPA Subtest-3	20.01	19.98	19.92	20.50
3GPP Rel 6	HSDPA Subtest-4	19.96	19.97	19.86	20.50
3GPP Rel 8	DC-HSDPA Subtest-1	20.10	19.97	19.89	21.00
3GPP Rel 8	DC-HSDPA Subtest-2	19.80	20.11	19.78	21.00
3GPP Rel 8	DC-HSDPA Subtest-3	19.93	19.98	19.76	20.50
3GPP Rel 8	DC-HSDPA Subtest-4	20.06	19.86	19.95	20.50
3GPP Rel 6	HSUPA Subtest-1	19.97	20.04	20.01	21.00
3GPP Rel 6	HSUPA Subtest-2	17.94	17.91	18.03	19.00
3GPP Rel 6	HSUPA Subtest-3	19.02	18.89	18.95	20.00
3GPP Rel 6	HSUPA Subtest-4	17.97	18.01	17.92	19.00
3GPP Rel 6	HSUPA Subtest-5	20.03	19.98	19.95	21.00

GSM850 Ant4_DS11&5

	Burst Average Power (dBm)			Tune-up Limit (dBm)	Frame Average Power (dBm)			Tune-up Limit (dBm)
	128	189	251		128	189	251	
TX Channel	824.2	836.4	848.8		824.2	836.4	848.8	
Frequency (MHz)	824.2	836.4	848.8		824.2	836.4	848.8	
GSM 1 Tx slot	28.90	28.48	28.78	29.50	19.90	19.48	19.78	20.50
GPRS 1 Tx slot	28.89	28.46	28.77	29.50	19.89	19.46	19.77	20.50
GPRS 2 Tx slots	25.71	25.76	25.76	27.00	19.71	19.76	19.76	21.00
GPRS 3 Tx slots	23.92	24.27	24.20	25.00	19.66	20.01	19.94	20.74
GPRS 4 Tx slots	23.24	23.28	23.22	24.00	20.24	20.28	20.22	21.00
EDGE 1 Tx slot	26.64	26.63	26.65	27.50	17.64	17.63	17.65	18.50
EDGE 2 Tx slots	23.81	23.72	23.98	25.00	17.81	17.72	17.98	19.00
EDGE 3 Tx slots	22.32	22.42	22.06	23.00	18.06	18.16	17.80	18.74
EDGE 4 Tx slots	21.02	20.97	21.01	22.00	18.02	17.97	18.01	19.00

WCDMA V Ant4_DS11&5

Band	WCDMA V			Tune-up Limit (dBm)
	4132	4182	4233	
TX Channel	4357	4407	4458	
Rx Channel	4357	4407	4458	
Frequency (MHz)	826.4	836.4	846.6	
3GPP Rel 99 AMR 12.2Kbps	20.99	20.98	20.95	22.00
3GPP Rel 99 AMR 12.2Kbps	21.00	21.01	20.96	22.00
3GPP Rel 6 HSDPA Subtest-1	19.98	20.03	19.92	21.00
3GPP Rel 6 HSDPA Subtest-2	20.01	19.84	19.85	21.00
3GPP Rel 6 HSDPA Subtest-3	19.55	19.36	19.49	20.50
3GPP Rel 6 HSDPA Subtest-4	19.66	19.34	19.46	20.50
3GPP Rel 8 DC-HSDPA Subtest-1	19.88	20.07	20.02	21.00
3GPP Rel 8 DC-HSDPA Subtest-2	20.03	19.80	19.78	21.00
3GPP Rel 8 DC-HSDPA Subtest-3	19.58	19.39	19.47	20.50
3GPP Rel 8 DC-HSDPA Subtest-4	19.78	19.32	19.40	20.50
3GPP Rel 6 HSUPA Subtest-1	19.96	19.93	19.97	21.00
3GPP Rel 6 HSUPA Subtest-2	18.08	17.88	18.04	19.00
3GPP Rel 6 HSUPA Subtest-3	19.06	18.94	18.96	20.00
3GPP Rel 6 HSUPA Subtest-4	18.12	17.86	17.96	19.00
3GPP Rel 6 HSUPA Subtest-5	20.01	19.89	19.96	21.00



Downlink CA Power
2CA DL

Configure	PCC								SCC				Power			
	LTE	Ant	BW (MHz)	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	With CA	Without CA		
	Band			Freq. (MHz)	Channel		RB	RB	Band	(MHz)	Freq. (MHz)	Channel	Tx. Power (dBm)	Tx. Power (dBm)		
CA_7A-42A	Band 7	2	20M	2535	21100	QPSK	1	0	Band 42	20M	3500	42590	25.02	25.10		
	Band 7	3	20M	2535	21100	QPSK	1	0	Band 42	20M	3500	42590	25.04	25.10		
	Band 42	6	20M	3500	42590	QPSK	1	0	Band 7	20M	2655	3100	24.31	24.28		
	Band 42	12	20M	3500	42590	QPSK	1	0	Band 7	20M	2655	3100	24.29	24.28		
CA_38C	Band 38	2	20M	2595	38000	QPSK	1	0	Band 38	20M	2614.8	38198	24.94	25.00		
	Band 38	3	20M	2595	38000	QPSK	1	0	Band 38	20M	2614.8	38198	24.96	25.00		
CA_4A_7A	Band 4	2	20M	1732.5	20175	QPSK	1	0	Band 7	20M	2555	3100	24.93	24.99		
	Band 4	3	20M	1732.5	20175	QPSK	1	0	Band 7	20M	2555	3100	24.52	24.99		
	Band 7	2	20M	2535	21100	QPSK	1	0	Band 4	20M	2132.5	2175	25.08	25.10		
	Band 7	3	20M	2535	21100	QPSK	1	0	Band 4	20M	2132.5	2175	25.03	25.10		

3CA DL

Configure	PCC								SCC1				SCC2				Power	
	LTE	Ant	BW	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	LTE	BW	DL	DL	With CA	Without CA
	Band		(MHz)	Freq.	Channel		RB	RB Offset	Band	(MHz)	Freq.	Channel	Band	(MHz)	Freq.	Channel	Tx. Power (dBm)	Tx. Power (dBm)
			(MHz)	(MHz)														
CA_5A-7A-7A	Band 5	1	10M	836.5	20525	QPSK	1	0	Band 7	20M	2655	3100	Band 7	5M	2687.5	3425	24.88	24.89
	Band 5	4	10M	836.5	20525	QPSK	1	0	Band 7	20M	2655	3100	Band 7	5M	2687.5	3425	24.91	24.89
	Band 7	2	20M	2535	21100	QPSK	1	0	Band 7	5M	2687.5	3425	Band 5	10M	881.5	2525	25.03	25.10
	Band 7	3	20M	2535	21100	QPSK	1	0	Band 7	5M	2687.5	3425	Band 5	10M	881.5	2525	25.09	25.10
CA_12-66A-66A	Band 12	1	10M	704	23060	QPSK	1	0	Band 66	20M	2155	66886	Band 66	5M	2197.5	67311	24.96	24.95
	Band 12	4	10M	704	23060	QPSK	1	0	Band 66	20M	2155	66886	Band 66	5M	2197.5	67311	24.93	24.95
	Band 66	2	20M	1745	132322	QPSK	1	0	Band 66	5M	2197.5	67311	Band 12	10M	737.5	5095	25.03	24.97
	Band 66	3	20M	1745	132322	QPSK	1	0	Band 66	5M	2197.5	67311	Band 12	10M	737.5	5095	24.95	24.97



4CA DL

Configure	PCC								SCC1				SCC2				SCC3				Power	
	LTE	Ant	BW	UL	UL	Mod.	UL#	UL	LTE	BW	DL	DL	LTE	BW	DL	DL	LTE	BW	DL	DL	With CA	Without CA
	Band		(MHz)	Freq.	Channel		RB	RB Offset	Band	(MHz)	Freq.	Channel	Band	(MHz)	Freq.	Channel	Band	(MHz)	Freq.	Channel	Tx. Power	Tx. Power
			(MHz)	(MHz)						(MHz)	(MHz)				(MHz)	(MHz)			(MHz)	(MHz)	(dBm)	(dBm)
CA_5A-7A-66A-66A	Band 5	1	10M	836.5	20525	QPSK	1	0	Band 66	20M	2155	66866	Band 66	5M	2197.5	67311	Band 7	20M	2655	3100	24.79	24.89
	Band 5	4	10M	836.5	20525	QPSK	1	0	Band 66	20M	2155	66866	Band 66	5M	2197.5	67311	Band 7	20M	2655	3100	24.93	24.89
	Band 7	2	20M	2535	21100	QPSK	1	0	Band 5	10M	881.5	2525	Band 66	20M	2155	66866	Band 66	5M	2197.5	67311	25.00	25.10
	Band 7	3	20M	2535	21100	QPSK	1	0	Band 5	10M	881.5	2525	Band 66	20M	2155	66866	Band 66	5M	2197.5	67311	25.05	25.10
	Band 66	2	20M	1745	132322	QPSK	1	0	Band 66	5M	2197.5	67311	Band 5	10M	881.5	2525	Band 7	20M	2655	3100	25.01	24.97
CA_7C-66A-66A	Band 66	3	20M	1745	132322	QPSK	1	0	Band 66	5M	2197.5	67311	Band 5	10M	881.5	2525	Band 7	20M	2655	3100	24.93	24.97
	Band 7	2	20M	2535	21100	QPSK	1	0	Band 7	20M	2674.8	3298	Band 66	20M	2155	66866	Band 66	5M	2197.5	67311	24.98	25.10
	Band 7	3	20M	2535	21100	QPSK	1	0	Band 7	20M	2674.8	3298	Band 66	20M	2155	66866	Band 66	5M	2197.5	67311	25.07	25.10
	Band 66	2	20M	1745	132322	QPSK	1	0	Band 66	5M	2197.5	67311	Band 7	20M	2655	3100	Band 7	20M	2674.8	3298	24.98	24.97
	Band 66	3	20M	1745	132322	QPSK	1	0	Band 66	5M	2197.5	67311	Band 7	20M	2655	3100	Band 7	20M	2674.8	3298	24.91	24.97
CA_5A-7C-66A	Band 7	2	20M	2535	21100	QPSK	1	0	Band 7	20M	2674.8	3298	Band 5	10M	881.5	2525	Band 66	20M	2155	66866	25.02	25.10
	Band 7	3	20M	2535	21100	QPSK	1	0	Band 7	20M	2674.8	3298	Band 5	10M	881.5	2525	Band 66	20M	2155	66866	25.08	25.10
	Band 5	1	10M	836.5	20525	QPSK	1	0	Band 66	20M	2155	66866	Band 7	20M	2655	3100	Band 7	20M	2674.8	3298	24.95	24.89
	Band 5	4	10M	836.5	20525	QPSK	1	0	Band 66	20M	2155	66866	Band 7	20M	2655	3100	Band 7	20M	2674.8	3298	24.93	24.89
	Band 66	2	20M	1745	132322	QPSK	1	0	Band 5	10M	881.5	2525	Band 7	20M	2655	3100	Band 7	20M	2674.8	3298	24.89	24.97
	Band 66	3	20M	1745	132322	QPSK	1	0	Band 5	10M	881.5	2525	Band 7	20M	2655	3100	Band 7	20M	2674.8	3298	24.88	24.97

Full Power level/Default Power level for 5G NR

n5 Ant1 DSI 1&4									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch./Freq	Power Middle Ch./Freq	Power High Ch./Freq	Tune-up limit (dBm)	MPR (dB)	
Channel				166800	167300	167800			
Frequency (MHz)				834	836.5	839			
20	PI/2 BPSK	1	1	25.03	25.07	25.04	25.5	0.0	
20	PI/2 BPSK	1	53	25.04	25.10	25.11			
20	PI/2 BPSK	1	104	25.14	25.25	25.24			
20	PI/2 BPSK	50	0	24.53	24.56	24.60	25.0	0.5	
20	PI/2 BPSK	50	28	24.92	25.06	25.14	25.5	0.0	
20	PI/2 BPSK	50	56	24.43	24.56	24.62	25.0	0.5	
20	PI/2 BPSK	100	0	24.37	24.48	24.45			
20	QPSK	1	1	25.09	25.26	25.14	25.5	0.0	
20	QPSK	1	53	24.96	25.13	25.08			
20	QPSK	1	104	25.11	25.25	25.23			
20	QPSK	50	0	24.02	24.07	24.08	24.5	1.0	
20	QPSK	50	28	25.02	25.11	25.08	25.5	0.0	
20	QPSK	50	56	23.99	24.05	24.07	24.5	1.0	
20	QPSK	100	0	23.86	24.00	23.99			
20	16QAM	1	1	24.23	24.27	24.32	24.5	1.0	
20	64QAM	1	1	22.46	22.63	22.68	23.0	2.5	
20	256QAM	1	1	20.32	20.38	20.33	21.0	4.5	
Channel				166300	167300	168300	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				831.5	836.5	841.5			
15	QPSK	1	1	25.14	25.19	25.20	25.5	0.0	
Channel				165800	167300	168800	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				829	836.5	844			
10	QPSK	1	1	25.07	25.11	25.11	25.5	0.0	
Channel				165300	167300	169300	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				826.5	836.5	846.5			
5	QPSK	1	1	25.01	25.19	25.07	25.5	0.0	

n7 Ant1 DSI 1&4									
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch./Freq	Power Middle Ch./Freq	Power High Ch./Freq	Tune-up limit (dBm)	MPR (dB)	
Channel				502000	507000	512000			
Frequency (MHz)				2510	2535	2560			
20	PI/2 BPSK	1	1	23.35	23.40	23.24	25.0	0.0	
20	PI/2 BPSK	1	53	23.18	23.35	23.19			
20	PI/2 BPSK	1	104	23.36	23.42	23.26			
20	PI/2 BPSK	50	0	22.72	22.77	22.71	24.5	0.5	
20	PI/2 BPSK	50	28	23.19	23.35	23.32	25.0	0.0	
20	PI/2 BPSK	50	56	22.73	22.86	22.77	24.5	0.5	
20	PI/2 BPSK	100	0	22.68	22.79	22.68			
20	QPSK	1	1	23.50	23.51	23.45	25.0	0.0	
20	QPSK	1	53	23.43	23.50	23.41			
20	QPSK	1	104	23.33	23.45	23.38			
20	QPSK	50	0	22.13	22.32	22.25	24.0	1.0	
20	QPSK	50	28	23.30	23.35	23.33	25.0	0.0	
20	QPSK	50	56	22.19	22.36	22.33	24.0	1.0	
20	QPSK	100	0	22.16	22.33	22.22			
20	16QAM	1	1	22.08	22.26	22.17	24.0	1.0	
20	64QAM	1	1	20.84	20.95	20.90	22.5	2.5	
20	256QAM	1	1	18.76	18.86	18.82	20.5	4.5	
Channel				501500	507000	512500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2507.5	2535	2562.5			
15	QPSK	1	1	23.04	23.22	23.06	25.0	0.0	
Channel				501000	507000	513000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2505	2535	2565			
10	QPSK	1	1	23.05	23.32	23.17	25.0	0.0	
Channel				500500	507000	513500	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2502.5	2535	2567.5			
5	QPSK	1	1	23.08	23.29	23.13	25.0	0.0	

n38 Ant1 DSI 1&4								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				516000	519000	522000	25.5	0.0
Frequency (MHz)				2580	2595	2610		
20	PI/2 BPSK	1	1	23.54	23.71	23.50	25.5	0.0
20	PI/2 BPSK	1	26	23.54	23.66	23.52		
20	PI/2 BPSK	1	49	23.44	23.69	23.37		
20	PI/2 BPSK	25	0	22.90	23.17	22.90	25.0	0.5
20	PI/2 BPSK	25	13	23.44	23.67	23.38	25.5	0.0
20	PI/2 BPSK	25	26	22.94	23.19	22.95	25.0	0.5
20	PI/2 BPSK	50	0	22.86	23.07	22.96		
20	QPSK	1	1	23.43	23.74	23.51	25.5	0.0
20	QPSK	1	26	23.22	23.34	23.22		
20	QPSK	1	49	23.47	23.71	23.42		
20	QPSK	25	0	22.44	22.75	22.58	24.5	1.0
20	QPSK	25	13	23.58	23.70	23.51	25.5	0.0
20	QPSK	25	26	22.47	22.71	22.41	24.5	1.0
20	QPSK	50	0	22.64	22.81	22.69		
20	16QAM	1	1	22.67	22.80	22.54	24.5	1.0
20	64QAM	1	1	21.19	21.47	21.16	23.0	2.5
20	256QAM	1	1	19.39	19.58	19.42	21.0	4.5

n41 Ant1 DSI 1&4								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000	25.5	0.0
Frequency (MHz)				2546.01	2592.99	2640		
100	PI/2 BPSK	1	1	23.80	23.91	23.78	25.5	0.0
100	PI/2 BPSK	1	137	23.66	23.90	23.77		
100	PI/2 BPSK	1	271	23.64	23.82	23.61		
100	PI/2 BPSK	135	0	23.07	23.32	23.00	25.0	0.5
100	PI/2 BPSK	135	69	23.67	23.99	23.82	25.5	0.0
100	PI/2 BPSK	135	138	23.35	23.48	23.28	25.0	0.5
100	PI/2 BPSK	270	0	23.15	23.31	23.18		
100	QPSK	1	1	23.91	24.00	23.85	25.5	0.0
100	QPSK	1	137	23.69	23.98	23.78		
100	QPSK	1	271	23.65	23.91	23.75		
100	QPSK	135	0	22.80	22.89	22.68	24.5	1.0
100	QPSK	135	69	23.72	23.99	23.65	25.5	0.0
100	QPSK	135	138	22.71	23.03	22.82	24.5	1.0
100	QPSK	270	0	22.81	22.96	22.75		
100	16QAM	1	1	22.82	22.94	22.73	24.5	1.0
100	64QAM	1	1	21.48	21.61	21.42	23.0	2.5
100	256QAM	1	1	19.46	19.77	19.66	21.0	4.5
Channel				508200	518598	528996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2541	2592.99	2644.98		
90	QPSK	1	1	23.78	23.68	23.62	25.5	0.0
Channel				507204	518598	529998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2536.02	2592.99	2649.99		
80	QPSK	1	1	23.71	23.73	23.66	25.5	0.0
Channel				505200	518598	531996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2526	2592.99	2659.98		
60	QPSK	1	1	23.65	23.69	23.60	25.5	0.0
Channel				504204	518598	532998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2521.02	2592.99	2664.99		
50	QPSK	1	1	23.59	23.73	23.72	25.5	0.0
Channel				503202	518598	534000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2516.01	2592.99	2670		
40	QPSK	1	1	23.63	23.87	23.80	25.5	0.0
Channel				502200	518598	534996	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2511	2592.99	2674.98		
30	QPSK	1	1	23.66	23.68	23.76	25.5	0.0
Channel				501204	518598	535998	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				2506.02	2592.99	2679.99		
20	QPSK	1	1	23.81	23.89	23.82	25.5	0.0

n66 Ant2 DSI 1&4 Ant3 DSI 1&4&5								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				346000	349000	352000	25.5	0.0
Frequency (MHz)				1730	1745	1760		
40	PI/2 BPSK	1	1	24.85	24.95	24.82	25.5	0.0
40	PI/2 BPSK	1	108	24.75	24.83	24.79		
40	PI/2 BPSK	1	214	24.66	24.82	24.70		
40	PI/2 BPSK	108	0	24.28	24.39	24.27	25.0	0.5
40	PI/2 BPSK	108	54	24.75	24.82	24.70	25.5	0.0
40	PI/2 BPSK	108	108	24.31	24.41	24.34	25.0	0.5
40	PI/2 BPSK	216	0	24.29	24.45	24.41		
40	QPSK	1	1	25.17	25.24	24.97	25.5	0.0
40	QPSK	1	108	24.91	24.94	24.80		
40	QPSK	1	214	24.86	24.93	24.81		
40	QPSK	108	0	23.85	23.96	23.83	24.5	1.0
40	QPSK	108	54	25.11	25.22	25.03	25.5	0.0
40	QPSK	108	108	23.92	23.99	23.85	24.5	1.0
40	QPSK	216	0	23.95	24.01	23.95		
40	16QAM	1	1	23.86	23.95	23.90	24.5	1.0
40	64QAM	1	1	22.43	22.50	22.39	23.0	2.5
40	256QAM	1	1	20.33	20.36	20.34	21.0	4.5
Channel				345000	349000	353000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1725	1745	1765		
30	QPSK	1	1	24.59	24.79	24.67	25.5	0.0
Channel				344000	349000	354000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1720	1745	1770		
20	QPSK	1	1	25.04	25.10	24.95	25.5	0.0
Channel				343500	349000	354500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1772.5		
15	QPSK	1	1	24.72	24.84	24.72	25.5	0.0
Channel				343000	349000	355000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1715	1745	1775		
10	QPSK	1	1	24.69	24.75	24.59	25.5	0.0
Channel				342500	349000	355500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1712.5	1745	1777.5		
5	QPSK	1	1	24.62	24.86	24.62	25.5	0.0

n5 Ant4 DSI 4								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				166800	167300	167800	25.5	0.0
Frequency (MHz)				834	836.5	839		
20	PI/2 BPSK	1	1	25.03	25.07	25.04	25.5	0.0
20	PI/2 BPSK	1	53	25.04	25.10	25.11		
20	PI/2 BPSK	1	104	25.14	25.25	25.24		
20	PI/2 BPSK	50	0	24.53	24.56	24.60	25.0	0.5
20	PI/2 BPSK	50	28	24.92	25.06	25.14	25.5	0.0
20	PI/2 BPSK	50	56	24.43	24.56	24.62	25.0	0.5
20	PI/2 BPSK	100	0	24.37	24.48	24.45		
20	QPSK	1	1	25.08	25.26	25.14	25.5	0.0
20	QPSK	1	53	24.96	25.13	25.08		
20	QPSK	1	104	25.11	25.25	25.23		
20	QPSK	50	0	24.02	24.07	24.08	24.5	1.0
20	QPSK	50	28	25.02	25.11	25.08	25.5	0.0
20	QPSK	50	56	23.99	24.05	24.07	24.5	1.0
20	QPSK	100	0	23.86	24.00	23.99		
20	16QAM	1	1	24.23	24.27	24.32	24.5	1.0
20	64QAM	1	1	22.46	22.63	22.68	23.0	2.5
20	256QAM	1	1	20.32	20.38	20.33	21.0	4.5
Channel				166300	167300	168300	Tune-up limit	MPR
Frequency (MHz)				831.5	836.5	841.5	(dBm)	(dB)
15	QPSK	1	1	25.14	25.19	25.20	25.5	0.0
Channel				165800	167300	168800	Tune-up limit	MPR
Frequency (MHz)				829	836.5	844	(dBm)	(dB)
10	QPSK	1	1	25.07	25.11	25.11	25.5	0.0
Channel				165300	167300	169300	Tune-up limit	MPR
Frequency (MHz)				826.5	836.5	846.5	(dBm)	(dB)
5	QPSK	1	1	25.01	25.19	25.07	25.5	0.0

n7 Ant5 DSI4								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				502000	507000	512000	25.0	0.0
Frequency (MHz)				2510	2535	2560		
20	PI/2 BPSK	1	1	24.27	24.35	24.20	25.0	0.0
20	PI/2 BPSK	1	53	24.18	24.35	24.22		
20	PI/2 BPSK	1	104	24.21	24.33	24.14		
20	PI/2 BPSK	50	0	23.58	23.73	23.62	24.5	0.5
20	PI/2 BPSK	50	28	24.11	24.29	24.21	25.0	0.0
20	PI/2 BPSK	50	56	23.59	23.77	23.59	24.5	0.5
20	PI/2 BPSK	100	0	23.54	23.71	23.57		
20	QPSK	1	1	24.49	24.56	24.44	25.0	0.0
20	QPSK	1	53	24.35	24.52	24.32		
20	QPSK	1	104	24.36	24.45	24.32		
20	QPSK	50	0	23.01	23.21	23.09	24.0	1.0
20	QPSK	50	28	24.22	24.30	24.27	25.0	0.0
20	QPSK	50	56	23.16	23.25	23.04	24.0	1.0
20	QPSK	100	0	23.11	23.26	23.10		
20	16QAM	1	1	23.35	23.44	23.35	24.0	1.0
20	64QAM	1	1	21.89	22.00	21.82	22.5	2.5
20	256QAM	1	1	19.64	19.83	19.75	20.5	4.5
Channel				501500	507000	512500	Tune-up limit	MPR
Frequency (MHz)				2507.5	2535	2562.5	(dBm)	(dB)
15	QPSK	1	1	24.15	24.28	24.00	25.0	0.0
Channel				501000	507000	513000	Tune-up limit	MPR
Frequency (MHz)				2505	2535	2565	(dBm)	(dB)
10	QPSK	1	1	24.07	24.18	24.07	25.0	0.0
Channel				500500	507000	513500	Tune-up limit	MPR
Frequency (MHz)				2502.5	2535	2567.5	(dBm)	(dB)
5	QPSK	1	1	24.09	24.24	23.99	25.0	0.0

n38 Ant5 DSI4								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				516000	519000	522000	25.5	0.0
Frequency (MHz)				2580	2595	2610		
20	PI/2 BPSK	1	1	24.10	24.39	24.15		
20	PI/2 BPSK	1	26	24.07	24.30	24.07	25.5	0.5
20	PI/2 BPSK	1	49	24.12	24.23	23.93		
20	PI/2 BPSK	25	0	23.56	23.68	23.47		
20	PI/2 BPSK	25	13	23.98	24.27	24.15	25.0	0.0
20	PI/2 BPSK	25	26	23.56	23.64	23.38		
20	PI/2 BPSK	50	0	23.35	23.62	23.37		
20	QPSK	1	1	24.31	24.47	24.27	25.5	0.0
20	QPSK	1	26	24.36	24.46	24.18		
20	QPSK	1	49	24.10	24.37	24.16		
20	QPSK	25	0	23.75	23.84	23.65	24.5	1.0
20	QPSK	25	13	24.13	24.40	24.30		
20	QPSK	25	26	23.38	23.56	23.26		
20	QPSK	50	0	23.33	23.65	23.54	24.5	1.0
20	16QAM	1	1	23.01	23.17	22.86		
20	64QAM	1	1	21.68	21.99	21.69		
20	256QAM	1	1	19.81	20.07	19.99	21.0	4.5

n41 Ant5								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				509202	518598	528000	25.5	0.0
Frequency (MHz)				2546.01	2592.99	2640		
100	PI/2 BPSK	1	1	24.49	24.59	24.36		
100	PI/2 BPSK	1	137	24.37	24.52	24.39	25.0	0.5
100	PI/2 BPSK	1	271	24.33	24.43	24.26		
100	PI/2 BPSK	135	0	23.74	23.97	23.83		
100	PI/2 BPSK	135	69	24.24	24.42	24.16	25.0	0.5
100	PI/2 BPSK	135	138	23.91	24.07	23.80		
100	PI/2 BPSK	270	0	23.95	24.08	23.95		
100	QPSK	1	1	24.52	24.66	24.50	25.5	0.0
100	QPSK	1	137	24.47	24.65	24.37		
100	QPSK	1	271	24.04	24.35	24.20		
100	QPSK	135	0	23.90	24.17	23.92	24.5	1.0
100	QPSK	135	69	24.48	24.63	24.41		
100	QPSK	135	138	23.13	23.41	23.13		
100	QPSK	270	0	23.32	23.42	23.23	24.5	1.0
100	16QAM	1	1	23.16	23.36	23.26		
100	64QAM	1	1	21.66	21.81	21.73		
100	256QAM	1	1	19.74	19.88	19.58	21.0	4.5
Channel				508200	518598	528996	25.5	0.0
Frequency (MHz)				2541	2592.99	2644.98		
90	QPSK	1	1	24.27	24.37	24.36		
Channel				507204	518598	529998	25.5	0.0
Frequency (MHz)				2536.02	2592.99	2649.99		
80	QPSK	1	1	24.23	24.36	24.34		
Channel				505200	518598	531996	25.5	0.0
Frequency (MHz)				2526	2592.99	2659.98		
60	QPSK	1	1	24.37	24.55	24.10		
Channel				504204	518598	532998	25.5	0.0
Frequency (MHz)				2521.02	2592.99	2664.99		
50	QPSK	1	1	24.44	24.43	24.30		
Channel				503202	518598	534000	25.5	0.0
Frequency (MHz)				2516.01	2592.99	2670		
40	QPSK	1	1	24.23	24.50	24.32		
Channel				502200	518598	534996	25.5	0.0
Frequency (MHz)				2511	2592.99	2674.98		
30	QPSK	1	1	24.39	24.41	24.39		
Channel				501204	518598	535998	25.5	0.0
Frequency (MHz)				2506.02	2592.99	2679.99		
20	QPSK	1	1	24.43	24.49	24.29		

n7 Ant1_DSI 5									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)	
Channel				502000	507000	512000	Tune-up limit (dBm)	MPR (dB)	
Frequency (MHz)				2510	2535	2560			
20	PI/2 BPSK	1	1	21.97	21.95	21.91	23.5	0.0	
20	PI/2 BPSK	1	53	21.79	21.85	21.81			
20	PI/2 BPSK	1	104	21.75	21.81	21.72			
20	PI/2 BPSK	50	0	21.72	21.91	21.94	23.5	0.0	
20	PI/2 BPSK	50	28	21.95	21.84	21.97	23.5	0.0	
20	PI/2 BPSK	50	56	21.95	21.73	21.87	23.5	0.0	
20	PI/2 BPSK	100	0	21.73	21.83	21.86			
20	QPSK	1	1	21.75	22.05	21.73	23.5	0.0	
20	QPSK	1	53	21.81	21.98	21.97			
20	QPSK	1	104	21.86	21.97	21.96			
20	QPSK	50	0	21.95	21.99	21.96	23.5	0.0	
20	QPSK	50	28	21.98	22.00	21.81	23.5	0.0	
20	QPSK	50	56	21.81	21.77	21.79	23.5	0.0	
20	QPSK	100	0	21.89	21.95	21.87			
20	16QAM	1	1	21.84	21.98	21.93	23.5	0.0	
20	64QAM	1	1	20.87	20.81	20.89	22.5	1.0	
20	256QAM	1	1	18.89	18.82	18.91	20.5	3.0	
Channel				501500	507000	512500	Tune-up limit	MPR	
Frequency (MHz)				2507.5	2535	2562.5	(dBm)	(dB)	
15	QPSK	1	1	21.84	21.93	21.94	23.5	0.0	
Channel				501000	507000	513000	Tune-up limit	MPR	
Frequency (MHz)				2505	2535	2565	(dBm)	(dB)	
10	QPSK	1	1	21.44	21.81	21.57	23.5	0.0	
Channel				500500	507000	513500	Tune-up limit	MPR	
Frequency (MHz)				2492.5	2535	2577.5	(dBm)	(dB)	
5	QPSK	1	1	21.60	21.80	21.55	23.5	0.0	

n41 Ant1_DSI 5								
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				5050.02	51899.8	53950.0		
Frequency (MHz)				2546.01	2592.99	2640		
100	PI2 BPSK	1	1	22.86	22.86	22.78	24.5	0.0
100	PI2 BPSK	1	137	22.57	22.90	22.70		
100	PI2 BPSK	1	271	22.60	22.72	22.51		
100	PI2 BPSK	135	0	21.98	22.87	21.92	24.5	0.0
100	PI2 BPSK	135	69	22.70	22.87	22.81	24.5	0.0
100	PI2 BPSK	135	138	22.82	22.74	22.78	24.5	0.0
100	PI2 BPSK	270	0	22.84	22.80	22.83		
100	QPSK	1	1	22.89	22.82	22.80	24.5	0.0
100	QPSK	1	137	22.71	22.87	22.80		
100	QPSK	1	271	22.72	22.86	22.83		
100	QPSK	135	0	21.77	21.86	21.64	24.5	0.0
100	QPSK	135	69	22.84	22.86	22.73	24.5	0.0
100	QPSK	135	138	22.62	22.74	22.73	24.5	0.0
100	QPSK	270	0	22.80	22.85	22.79		
100	16QAM	1	1	22.82	22.83	22.70	24.5	0.0
100	64QAM	1	1	21.51	21.49	21.40	23.0	1.5
100	256QAM	1	1	18.46	18.46	18.47	21.0	3.5
Channel				508200	51899.8	52899.8	Tune-up limit	MPR
Frequency (MHz)				2541	2592.99	2644.98	(dBm)	(dB)
90	QPSK	1	1	22.58	22.85	22.83	24.5	0.0
Channel				50720.1	51899.8	52999.8	Tune-up limit	MPR
Frequency (MHz)				2536.02	2592.99	2648.99	(dBm)	(dB)
80	QPSK	1	1	22.79	22.75	22.86	24.5	0.0
Channel				505200	51899.8	53199.8	Tune-up limit	MPR
Frequency (MHz)				2562	2592.99	2649.98	(dBm)	(dB)
60	QPSK	1	1	22.78	22.85	22.82	24.5	0.0
Channel				50420.4	51899.8	53299.8	Tune-up limit	MPR
Frequency (MHz)				2521.02	2592.99	2664.99	(dBm)	(dB)
50	QPSK	1	1	22.84	22.79	22.68	24.5	0.0
Channel				50320.2	51899.8	53300.0	Tune-up limit	MPR
Frequency (MHz)				2516.01	2592.99	2670	(dBm)	(dB)
40	QPSK	1	1	22.76	22.85	22.86	24.5	0.0
Channel				502200	51899.8	53499.8	Tune-up limit	MPR
Frequency (MHz)				2511	2592.99	2674.95	(dBm)	(dB)
30	QPSK	1	1	22.87	22.78	22.89	24.5	0.0
Channel				50120.4	51899.8	53599.8	Tune-up limit	MPR
Frequency (MHz)				2506.02	2592.99	2675.99	(dBm)	(dB)
20	QPSK	1	1	22.87	22.78	22.89	24.5	0.0

n5 Ant4 DSI 1									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)	
Channel				166800	167300	167800	20.5	0.0	
Frequency (MHz)				834	836.5	839			
20	PI/2 BPSK	1	1	19.98	19.95	20.11			
20	PI/2 BPSK	1	53	20.20	20.11	20.15	20.5	0.0	
20	PI/2 BPSK	1	104	19.64	19.81	19.85			
20	PI/2 BPSK	50	0	20.04	20.14	20.08			
20	PI/2 BPSK	50	28	20.08	20.09	19.92	20.5	0.0	
20	PI/2 BPSK	50	56	19.94	19.95	20.00			
20	PI/2 BPSK	100	0	19.90	20.15	20.08			
20	QPSK	1	1	20.12	20.27	20.18	20.5	0.0	
20	QPSK	1	53	20.08	20.23	20.21			
20	QPSK	1	104	20.17	20.00	20.02			
20	QPSK	50	0	20.16	20.17	20.15	20.5	0.0	
20	QPSK	50	28	19.92	20.23	20.22			
20	QPSK	50	56	20.14	20.19	20.05			
20	QPSK	100	0	20.13	20.24	20.07	20.5	0.0	
20	16QAM	1	1	20.24	20.11	20.00			
20	64QAM	1	1	19.88	20.16	20.17			
20	256QAM	1	1	20.07	20.09	20.10	20.5	0.0	
Channel				166300	167300	168300			
Frequency (MHz)				831.5	836.5	841.5		0.0	
15	QPSK	1	1	19.93	20.10	19.91			
Channel				165800	167300	168800	20.5	0.0	
Frequency (MHz)				829	836.5	844			
10	QPSK	1	1	19.94	20.07	19.92		0.0	
Channel				165300	167300	167300	20.5	0.0	
Frequency (MHz)				826.5	836.5	846.5			
5	QPSK	1	1	19.92	20.17	19.91			

n5 Ant4 DSI 5									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)	
Channel				166800	167300	167800	22.0	0.0	
Frequency (MHz)				834	836.5	839			
20	PI/2 BPSK	1	1	21.52	21.44	21.52			
20	PI/2 BPSK	1	53	21.61	21.53	21.57	22.0	0.0	
20	PI/2 BPSK	1	104	21.23	21.35	21.33			
20	PI/2 BPSK	50	0	21.58	21.57	21.55			
20	PI/2 BPSK	50	28	21.61	21.52	21.50	22.0	0.0	
20	PI/2 BPSK	50	56	21.39	21.44	21.47			
20	PI/2 BPSK	100	0	21.43	21.54	21.57			
20	QPSK	1	1	21.55	21.67	21.66	22.0	0.0	
20	QPSK	1	53	21.58	21.64	21.64			
20	QPSK	1	104	21.55	21.51	21.57			
20	QPSK	50	0	21.62	21.62	21.64	22.0	0.0	
20	QPSK	50	28	21.53	21.65	21.63			
20	QPSK	50	56	21.64	21.59	21.55			
20	QPSK	100	0	21.57	21.64	21.57	22.0	0.0	
20	16QAM	1	1	21.66	21.57	21.59			
20	64QAM	1	1	21.50	21.55	21.62			
20	256QAM	1	1	20.60	20.56	20.59	21.0	1.0	
Channel				166300	167300	168300			
Frequency (MHz)				831.5	836.5	841.5		0.0	
15	QPSK	1	1	21.64	21.44	21.45			
Channel				165800	167300	168800	20.5	0.0	
Frequency (MHz)				829	836.5	844			
10	QPSK	1	1	21.65	21.59	21.63		0.0	
Channel				165300	167300	167300	20.5	0.0	
Frequency (MHz)				826.5	836.5	846.5			
5	QPSK	1	1	21.62	21.60	21.50			

n41 Ant5 DSI 5								
BW (MHz)	Modulation	RB Size	RB Offset	Power Low Ch. 1 Freq.	Power Middle Ch. 1 Freq.	Power High Ch. 1 Freq.	Tune-up limit (dBm)	MFR (dB)
Channel				609002	518998	538900	17.5	0.0
Frequency (MHz)				2548.01	2592.99	2640		
100	PI2 BPSK	1	1	16.87	16.91	16.76	17.5	0.0
100	PI2 BPSK	1	137	16.75	16.69	16.53		
100	PI2 BPSK	1	271	16.16	16.13	16.01		
100	PI2 BPSK	135	0	16.85	16.78	16.63		
100	PI2 BPSK	135	69	16.73	16.75	16.67	17.5	0.0
100	PI2 BPSK	135	138	16.72	16.69	16.73	17.5	0.0
100	PI2 BPSK	270	0	16.61	16.58	16.41		
100	QPSK	1	1	16.55	16.59	16.86	17.5	0.0
100	QPSK	1	137	16.50	16.64	16.65		
100	QPSK	1	271	16.23	16.17	16.07		
100	QPSK	135	0	16.75	16.71	16.75		
100	QPSK	135	69	16.76	16.77	16.75	17.5	0.0
100	QPSK	135	138	16.41	16.35	16.35	17.5	0.0
100	QPSK	270	0	16.53	16.59	16.43		
100	16QAM	1	1	16.93	16.96	16.86	17.5	0.0
100	64QAM	1	1	16.87	16.89	16.86	17.5	0.0
100	256QAM	1	1	16.78	16.78	16.82	17.5	0.0
Channel				609000	518998	538996	Tune-up limit	MFR
Frequency (MHz)				2541	2592.99	2644.98	(dBm)	(dB)
90	QPSK	1	1	16.19	16.81	18.01	17.5	0.0
Channel				507204	518998	529998	Tune-up limit	MFR
Frequency (MHz)				2536.02	2592.99	2649.99	(dBm)	(dB)
80	QPSK	1	1	16.82	16.97	16.70	17.5	0.0
Channel				505203	518998	531999	Tune-up limit	MFR
Frequency (MHz)				2526	2592.99	2659.98	(dBm)	(dB)
60	QPSK	1	1	16.91	16.75	16.70	17.5	0.0
Channel				504204	518998	532998	Tune-up limit	MFR
Frequency (MHz)				2621.02	2592.99	2664.99	(dBm)	(dB)
50	QPSK	1	1	16.81	16.77	16.76	17.5	0.0
Channel				503202	518998	534900	Tune-up limit	MFR
Frequency (MHz)				2616.01	2592.99	2674	(dBm)	(dB)
40	QPSK	1	1	16.73	16.91	16.90	17.5	0.0
Channel				502200	518998	534996	Tune-up limit	MFR
Frequency (MHz)				2511	2592.99	2674.98	(dBm)	(dB)
30	QPSK	1	1	16.76	16.50	16.52	17.5	0.0
Channel				501204	518998	535998	Tune-up limit	MFR
Frequency (MHz)				2606.02	2592.99	2679.99	(dBm)	(dB)
20	QPSK	1	1	16.88	16.93	16.68	17.5	0.0

NSA PC3 Part27Q n78 Ant6 DSI 5									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. f. Freq.	Power Middle Ch. f. Freq.	Power High Ch. f. Freq.	Tune-up limit (dBm)	MPR (dB)	
Channel				633334		3500.01	20.5	0.0	
Frequency [MHz]				19.63					
100	PI2 BPSK	1	1	19.63					
100	PI2 BPSK	1	137	19.65					
100	PI2 BPSK	1	271	19.66			20.5	0.0	
100	PI2 BPSK	135	0	19.77					
100	PI2 BPSK	135	46	19.77			20.5	0.0	
100	PI2 BPSK	135	136	19.40					
100	PI2 BPSK	270	0	19.31			20.5	0.0	
100	QPSK	1	1	19.79					
100	QPSK	1	137	19.45					
100	QPSK	1	271	19.56					
100	QPSK	135	0	19.42			20.5	0.0	
100	QPSK	135	69	19.75					
100	QPSK	135	136	19.61			20.5	0.0	
100	QPSK	270	0	19.70					
100	16QAM	1	1	19.63			20.5	0.0	
100	16QAM	1	1	19.66					
100	256QAM	1	1	19.59			20.5	0.0	
Channel				633000	633334	633668	Tune-up limit	MPR	
Frequency [MHz]				3485	3500.01	3505.02	(dBm)	(dB)	
99	QPSK	1	1	19.40	19.63	19.54	20.5	0.0	
Channel				632668	633334	634000	Tune-up limit	MPR	
Frequency [MHz]				3460.02	3500.01	3510	(dBm)	(dB)	
80	QPSK	1	1	19.47	19.64	19.55	20.5	0.0	
Channel				632334	633334	634334	Tune-up limit	MPR	
Frequency [MHz]				3485.01	3500.01	3515.01	(dBm)	(dB)	
70	QPSK	1	1	19.32	19.61	19.51	20.5	0.0	
Channel				632000	633334	634668	Tune-up limit	MPR	
Frequency [MHz]				3440	3500.01	3505.02	(dBm)	(dB)	
60	QPSK	1	1	19.38	19.61	19.42	20.5	0.0	
Channel				631668	633334	635000	Tune-up limit	MPR	
Frequency [MHz]				3475.02	3500.01	3505	(dBm)	(dB)	
50	QPSK	1	1	19.40	19.58	19.49	20.5	0.0	
Channel				631334	633334	635334	Tune-up limit	MPR	
Frequency [MHz]				3470.01	3500.01	3530.01	(dBm)	(dB)	
40	QPSK	1	1	19.34	19.58	19.48	20.5	0.0	
Channel				631000	633334	635668	Tune-up limit	MPR	
Frequency [MHz]				3465	3500.01	3535.02	(dBm)	(dB)	
30	QPSK	1	1	19.51	19.74	19.48	20.5	0.0	
Channel				630668	633334	636000	Tune-up limit	MPR	
Frequency [MHz]				3460.02	3500.01	3540	(dBm)	(dB)	
20	QPSK	1	1	19.40	19.60	19.60	20.5	0.0	

SA PC2 Part27Q n78 Ant8 DSI 4 NSA PC3 n78 Ant8 DSI4									
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)	
Channel				633334		3500.01			
Frequency [MHz]				17.54					
100	PV2 BPSK	1	1	17.54				18.0	0.0
100	PV2 BPSK	1	137	17.33					
100	PV2 BPSK	1	271	17.08					
100	PV2 BPSK	135	0	17.34				18.0	0.0
100	PV2 BPSK	135	66	17.30				18.0	0.0
100	PV2 BPSK	135	138	17.18				18.0	0.0
100	PV2 BPSK	270	0	17.33				18.0	0.0
100	QPSK	1	1	17.42					
100	QPSK	1	137	17.41					
100	QPSK	1	271	17.16				18.0	0.0
100	QPSK	135	0	17.27				18.0	0.0
100	QPSK	135	66	17.30				18.0	0.0
100	QPSK	135	138	17.19				18.0	0.0
100	QPSK	270	0	17.28				18.0	0.0
100	16QAM	1	1	17.35				18.0	0.0
100	16QAM	1	1	17.38				18.0	0.0
100	256QAM	1	1	17.31				18.0	0.0
Channel				633000	633334	633668	Tune-up limit	MPR	
Freq/CU/DIA/Frequency [MHz]				3485	3500.01	3505.02	(dBm)	(dB)	
90	QPSK	1	1	17.31	17.19	17.28	18.0	0.0	
Channel				632668	633334	634000	Tune-up limit	MPR	
Frequency [MHz]				3480.02	3500.01	3510	(dBm)	(dB)	
80	QPSK	1	1	17.40	17.17	17.06	18.0	0.0	
Channel				632334	633334	634334	Tune-up limit	MPR	
Frequency [MHz]				3485.01	3500.01	3515.01	(dBm)	(dB)	
70	QPSK	1	1	17.21	17.18	17.16	18.0	0.0	
Channel				632000	633334	634668	Tune-up limit	MPR	
Frequency [MHz]				3480	3500.01	3505.02	(dBm)	(dB)	
60	QPSK	1	1	17.21	17.18	17.16	18.0	0.0	
Channel				631668	633334	635000	Tune-up limit	MPR	
Frequency [MHz]				3475.02	3500.01	3505	(dBm)	(dB)	
50	QPSK	1	1	17.21	17.18	17.16	18.0	0.0	
Channel				631334	633334	635334	Tune-up limit	MPR	
Frequency [MHz]				3470.01	3500.01	3505.01	(dBm)	(dB)	
40	QPSK	1	1	17.21	17.18	17.16	18.0	0.0	
Channel				631000	633334	635668	Tune-up limit	MPR	
Frequency [MHz]				3465	3500.01	3505.02	(dBm)	(dB)	
30	QPSK	1	1	17.21	17.18	17.16	18.0	0.0	
Channel				630668	633334	636000	Tune-up limit	MPR	
Frequency [MHz]				3460.02	3500.01	3500	(dBm)	(dB)	
20	QPSK	1	1	17.22	17.36	17.15	18.0	0.0	

NSA PC3 Part27Q n78 Ant12 DSI 5							
BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	MPR (dB)
Channel				633334	633334		
Frequency (MHz)				3000.01			
100	PI2 BPSK	1	1	18.21			
100	PI2 BPSK	1	137	18.21		18.5	0.0
100	PI2 BPSK	1	271	18.12			
100	PI2 BPSK	135	0	18.14		18.5	0.0
100	PI2 BPSK	135	69	18.09		18.5	0.0
100	PI2 BPSK	135	138	18.21		18.5	0.0
100	PI2 BPSK	270	0	18.16			
100	QPSK	1	1	18.34			
100	QPSK	1	137	18.27		18.5	0.0
100	QPSK	1	271	18.20			
100	QPSK	135	0	18.06		18.5	0.0
100	QPSK	135	69	18.27		18.5	0.0
100	QPSK	135	138	18.22			
100	QPSK	270	0	18.19		18.5	0.0
100	16QAM	1	1	18.33		18.5	0.0
100	64QAM	1	1	18.11		18.5	0.0
100	256QAM	1	1	18.23		18.5	0.0
Channel				630000	633334	633668	MPR
Frequency (MHz)				3485	3000.01	3005.02	(dBm)
90	QPSK	1	1	17.65	17.84	18.15	18.5
Channel				632668	633334	634000	MPR
Frequency (MHz)				3480.02	3000.01	3510	(dBm)
80	QPSK	1	1	18.14	18.21	18.04	18.5
Channel				632334	633334	635334	MPR
Frequency (MHz)				3485.01	3000.01	3515.01	(dBm)
70	QPSK	1	1	17.97	18.23	17.82	18.5
Channel				632000	633334	634668	MPR
Frequency (MHz)				3480	3000.01	3520.02	(dBm)
60	QPSK	1	1	18.00	18.02	17.92	18.5
Channel				631668	633334	635000	MPR
Frequency (MHz)				3475.02	3000.01	3525	(dBm)
50	QPSK	1	1	18.01	17.95	18.24	18.5
Channel				631334	633334	635334	MPR
Frequency (MHz)				3470.01	3000.01	3530.01	(dBm)
40	QPSK	1	1	17.92	18.14	18.22	18.5
Channel				631000	633334	635668	MPR
Frequency (MHz)				3465	3000.01	3535.02	(dBm)
30	QPSK	1	1	18.00	18.14	17.98	18.5
Channel				630668	633334	635000	MPR
Frequency (MHz)				3460.02	3000.01	3540	(dBm)
20	QPSK	1	1	17.93	18.10	18.22	18.5

WLAN/Bluetooth Power

Ant-V9 Full power						For Head Standalone		For Head Simultaneous		For Hotspot		For Body worn Standalone&Simultaneous		Duty Cycle %
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
	802.11b (Mbps)	1	2412	21.22	22.50	18.45	19.00	15.38	16.00	21.22	22.50	21.22	22.00	85.00
		6	2437	21.21	22.00	18.39	19.00	15.36	16.00	21.21	22.00	21.21	22.00	
		11	2462	20.82	22.00	18.35	19.00	15.33	16.00	20.82	22.00	20.82	22.00	
	802.11g (Mbps)	1	2412	19.18	20.00		19.00		16.00	19.18	20.00	19.18	20.00	85.00
		6	2437	19.23	20.00		19.00		16.00	19.23	20.00	19.23	20.00	
		11	2462	18.87	20.00		19.00		16.00	18.87	20.00	18.87	20.00	
	802.11n-HT20 MCS9	1	2412	19.03	20.00		19.00		16.00	19.03	20.00	19.03	20.00	94.00
		6	2437	19.02	20.00		19.00		16.00	19.02	20.00	19.02	20.00	
		11	2462	18.62	20.00		19.00		16.00	18.62	20.00	18.62	20.00	
	802.11n-HT40 MCS9	3	2422	18.21	19.50		19.00		16.00	18.21	19.50	18.21	19.50	97.10
		6	2437	18.97	20.00		19.00	Not Required	16.00	18.97	20.00	18.97	20.00	
		9	2452	18.27	19.50		19.00		16.00	18.27	19.50	18.27	19.50	
	802.11ax-HE20 MCS9	1	2412	19.13	20.00		19.00		16.00	19.13	20.00	19.13	20.00	97.60
		6	2437	19.22	20.00		19.00		16.00	19.22	20.00	19.22	20.00	
		11	2462	18.72	20.00		19.00		16.00	18.72	20.00	18.72	20.00	
	802.11ax-HE40 MCS9	3	2422	18.31	19.50		19.00		16.00	18.31	19.50	18.31	19.50	97.40
		6	2437	19.07	20.00		19.00		16.00	19.07	20.00	19.07	20.00	
		9	2452	18.37	19.50		19.00		16.00	18.37	19.50	18.37	19.50	

Ant-V9 Full power						For Head Standalone		For Head Simultaneous		For Hotspot		For Body worn Standalone&Simultaneous		Duty Cycle %
5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
	802.11a (Mbps)	36	5180	19.31	20.50		18.50		12.50		19.00	19.31	20.50	85.00
		44	5220	19.31	20.50		18.50		12.50		19.00	19.31	20.50	
		48	5240	19.36	20.50		18.50		12.50		19.00	19.36	20.50	
	802.11n-HT20 MCS9	36	5180	19.06	20.00		18.50		12.50		19.00	19.06	20.00	94.00
		44	5220	19.12	20.00		18.50		12.50		19.00	19.12	20.00	
		48	5240	18.96	20.00		18.50		12.50		19.00	18.96	20.00	
	802.11n-HT40 MCS9	38	5190	16.31	17.50		17.50		12.50		17.50	16.31	17.50	97.20
		46	5230	18.92	20.00		18.50		12.50		19.00	18.92	20.00	
		36	5180	18.96	20.00		18.50		12.50		19.00	18.96	20.00	
	802.11ac-VHT20 MCS9	44	5220	19.02	20.00		18.50		12.50		19.00	19.02	20.00	97.10
		48	5240	18.86	20.00		18.50	Not Required	12.50		19.00	18.86	20.00	
		38	5190	16.21	17.50		17.50		12.50	16.21	17.50	16.21	17.50	97.20
	802.11ac-VHT40 MCS9	46	5230	19.82	20.00		18.50		12.50	17.66	19.00	19.82	20.00	
		42	5210	16.76	18.00		18.00		12.50		18.00	16.76	18.00	
	802.11ac-VHT80 MCS9	36	5180	19.16	20.00		18.50		12.50		19.00	19.16	20.00	97.70
		44	5220	19.22	20.00		18.50		12.50		19.00	19.22	20.00	
		48	5240	19.06	20.00		18.50		12.50		19.00	19.06	20.00	
	802.11ax-HE20 MCS9	38	5190	16.41	17.50		17.50		12.50		17.50	16.41	17.50	97.60
		46	5230	19.02	20.00		18.50		12.50		19.00	19.02	20.00	
		42	5210	16.86	18.00		18.00		12.50		18.00	16.86	18.00	

Ant-V9 Full power						For Head Standalone		For Head Simultaneous		For Extremity Standalone&Simultaneous		For Body worn Standalone&Simultaneous		Duty Cycle %
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
	802.11a (Mbps)	52	5260	19.34	20.50		18.50		12.50	19.34	20.50	19.34	20.50	85.00
		60	5300	19.31	20.50		18.50		12.50	19.31	20.50	19.31	20.50	
		64	5320	19.08	20.50		18.50		12.50	19.08	20.50	19.08	20.50	
	802.11n-HT20 MCS9	52	5260	19.21	20.00		18.50		12.50	19.21	20.00	19.21	20.00	94.00
		60	5300	19.18	20.00		18.50		12.50	19.18	20.00	19.18	20.00	
		64	5320	18.74	20.00		18.50		12.50	18.74	20.00	18.74	20.00	
	802.11n-HT40 MCS9	54	5270	18.08	20.00	17.61	18.50	Not Required	12.50	18.08	20.00	18.08	20.00	97.20
		62	5310	16.54	17.50		16.54		12.50	16.54	17.50	16.54	17.50	
		52	5260	19.11	20.00		18.50		12.50	19.11	20.00	19.11	20.00	97.10
	802.11ac-VHT20 MCS9	60	5300	19.08	20.00		18.50		12.50	19.08	20.00	19.08	20.00	
		64	5320	18.64	20.00		18.50		12.50	18.64	20.00	18.64	20.00	
	802.11ac-VHT40 MCS9	54	5270	18.88	20.00		18.50		12.50	18.88	20.00	18.88	20.00	97.20
		62	5310	16.44	17.50		17.50		12.50	16.44	17.50	16.44	17.50	
	802.11ac-VHT80 MCS9	58	5290	16.43	17.50		17.50	11.65	12.50	16.43	17.50	16.43	17.50	97.40
		50	5250	14.27	15.50		15.50		12.50	14.27	15.50	14.27	15.50	
		52	5260	19.31	20.00	Not Required	18.50		12.50	19.31	20.00	19.31	20.00	97.70
	802.11ax-HE20 MCS9	60	5300	19.28	20.00		18.50		12.50	19.28	20.00	19.28	20.00	
		64	5320	18.84	20.00		18.50		12.50	18.84	20.00	18.84	20.00	
	802.11ax-HE40 MCS9	54	5270	19.08	20.00		18.50		12.50	19.08	20.00	19.08	20.00	97.60
		62	5310	16.64	17.50		17.50		12.50	16.64	17.50	16.64	17.50	
		58	5290	16.53	17.50		17.50		12.50	16.53	17.50	16.53	17.50	
	802.11ax-HE80 MCS9	50	5250	14.37	15.50		15.50		12.50	14.37	15.50	14.37	15.50	96.40
		50	5250	14.37	15.50		15.50		12.50	14.37	15.50	14.37	15.50	

Model	Ant-V9 Full power					For Head Standalone		For Head Simultaneous		For Extremity Standalone&Simultaneous		For Body worn Standalone&Simultaneous		Duty Cycle %
	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit		Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	
5.5GHz WLAN	802.11a (Mbps)	100	5500	18.34	19.50		19.00		14.50	18.34	19.50	18.34	19.50	85.00
		116	5580	18.87	20.00		19.00		14.50	18.87	20.00	18.87	20.00	
		140	5700	18.57	19.50		19.00		14.50	18.57	19.50	18.57	19.50	
		144	5720	18.17	19.00		19.00		14.50	18.17	19.00	18.17	19.00	
	802.11n-HT20 MCS9	100	5500	17.94	19.00		19.00		14.50	17.94	19.00	17.94	19.00	94.00
		116	5580	18.57	19.50		19.00		14.50	18.57	19.50	18.57	19.50	
		140	5700	18.38	19.50		19.00		14.50	18.38	19.50	18.38	19.50	
		144	5720	17.92	19.00		19.00		14.50	17.92	19.00	17.92	19.00	
	802.11n-HT40 MCS9	102	5510	17.90	19.00		19.00		14.50	17.90	19.00	17.90	19.00	97.20
		110	5550	18.27	19.50	Not Required		Not Required	14.50	18.27	19.50	18.27	19.50	
		134	5670	18.38	19.50		19.00		14.50	18.38	19.50	18.38	19.50	
		142	5710	18.07	19.00		19.00		14.50	18.07	19.00	18.07	19.00	
	802.11ac-VHT20 MCS9	100	5500	17.84	19.00		19.00		14.50	17.84	19.00	17.84	19.00	97.10
		116	5580	18.47	19.50		19.00		14.50	18.47	19.50	18.47	19.50	
		140	5700	18.28	19.50		19.00		14.50	18.28	19.50	18.28	19.50	
	802.11ac-VHT40 MCS9	102	5510	17.80	19.00		19.00		14.50	17.80	19.00	17.80	19.00	97.20
110		5550	18.17	19.00		19.00		14.50	18.17	19.00	18.17	19.00		
134		5670	18.28	19.50		19.00		14.50	18.28	19.50	18.28	19.50		
142		5710	17.97	19.00		19.00		14.50	17.97	19.00	17.97	19.00		
802.11ac-VHT80 MCS9	100	5500	16.18	17.00	16.18	17.00	13.75	14.50	16.18	17.00	16.18	17.00	97.40	
	122	5610	19.21	19.50	17.86	19.00	13.36	14.50	19.21	19.50	19.21	19.50		
	138	5660	18.13	19.00	17.75	19.00	13.34	14.50	18.13	19.00	18.13	19.50		
802.11ac-VHT160 MCS9	114	5570	13.78	15.00		15.00		14.50	13.78	15.00	13.78	15.00	96.40	
	100	5500	18.04	19.00		19.00		14.50	18.04	19.00	18.04	19.00		
	116	5580	18.67	19.50		19.00		14.50	18.67	19.50	18.67	19.50		
	140	5700	18.48	19.50		19.00		14.50	18.48	19.50	18.48	19.50		
802.11ax-HE20 MCS9	144	5720	18.02	19.00		19.00		14.50	18.02	19.00	18.02	19.00	97.70	
	102	5510	18.00	19.00		19.00		14.50	18.00	19.00	18.00	19.00		
	110	5550	18.37	19.50		19.00		14.50	18.37	19.50	18.37	19.50		
	134	5670	18.48	19.50	Not Required		Not Required	14.50	18.48	19.50	18.48	19.50		
802.11ax-HE40 MCS9	142	5710	18.17	19.50		19.00		14.50	18.17	19.50	18.17	19.50	97.60	
	100	5500	16.28	17.50		17.50		14.50	16.28	17.50	16.28	17.50		
	122	5610	18.31	19.50		19.00		14.50	18.31	19.50	18.31	19.50		
	138	5660	18.23	19.50		19.00		14.50	18.23	19.50	18.23	19.50		
802.11ax-HE80 MCS9	114	5570	13.88	15.00		15.00		14.50	13.88	15.00	13.88	15.00	96.40	

ANT7:

BT BR/EDR		Ant 7 Full power			For Head Standalone			For Head Simultaneous			Hotspot/Body worn Standalone&Simultaneous			
Mode	Channel	Frequency (MHz)	Average power (dBm)			Average power (dBm)			Average power (dBm)			Average power (dBm)		
			1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	17.99	14.92	15.02	15.48	13.12	13.21	9.47	7.20	7.26	17.35	14.92	15.02
	CH 39	2441	18.41	15.47	15.52	15.99	13.58	13.75	10.10	7.65	7.68	17.86	15.47	15.52
	CH 78	2480	17.66	14.77	14.87	15.34	13.12	13.24	9.35	6.95	7.10	17.06	14.77	14.87
	Tune-up Limit		19	16.5	16.5	17	14.5	14.5	11	8.5	8.5	19	16.5	16.5

BT LE

Mode	Channel	Frequency (MHz)	Average power (dBm)
			GFSK
LE	CH 00	2402	4.00
	CH 19	2440	5.10
	CH 39	2480	4.30
Tune-up Limit			6

BT LE V5.0

Mode	Channel	Frequency (MHz)	Average power (dBm)
			1Mbps
LE	CH 00	2402	4.00
	CH 19	2440	5.10
	CH 39	2480	4.30
Tune-up Limit			6

ANT9:

BT BR/EDR			Ant 9 Full power			For Head Standalone			For Head Simultaneous			For Body worn Standalone			For Hotspot		
Mode	Channel	Frequency (MHz)	Average power (dBm)			Average power (dBm)			Average power (dBm)			Average power (dBm)			Average power (dBm)		
			1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	16.03	14.41	14.47	14.25	12.62	12.68	7.24	5.68	5.70	16.03	14.41	14.47	11.21	9.63	9.63
	CH 39	2441	16.18	14.57	14.59	14.42	12.76	12.76	7.35	5.73	5.83	16.18	14.57	14.59	11.32	9.76	9.72
	CH 78	2480	14.93	13.37	13.38	13.18	11.57	11.62	6.25	4.56	4.56	14.93	13.37	13.38	10.10	8.57	8.56
	Tune-up Limit		17	15.5	15.5	15	13.5	13.5	8	6.5	6.5	17	15.5	15.5	12	10.5	10.5

BT LE

Mode	Channel	Frequency (MHz)	Average power (dBm)
			GFSK
LE	CH 00	2402	5.60
	CH 19	2440	6.80
	CH 39	2480	5.50
Tune-up Limit			8

BT LE V5.0

Mode	Channel	Frequency (MHz)	Average power (dBm)
			1Mbps
LE	CH 00	2402	5.40
	CH 19	2440	6.60
	CH 39	2480	5.50
Tune-up Limit			8