ACCREDITED
Certificate # 3939.01

FCC TEST REPORT
(PART 24)

Applicant:	HMD Global Oy
Address:	Bertel Jungin aukio 9,02600 Espoo, Finland

Manufacturer or Supplier:	HMD Global Oy
Address:	Bertel Jungin aukio 9,02600 Espoo, Finland
Product:	Smart phone
Brand Name:	HMD
Model Name:	TA-1600/TA-1688
FCC ID:	2AJOTTA-1600
Date of tests:	Apr. 08, 2024 ~ May. 31, 2024

The tests have been carried out according to the requirements of the following standard:

☒ **FCC PART 24, Subpart E** ☒ **FCC PART 2**
☒ **ANSI/TIA/EIA-603-D** ☒ **ANSI/TIA/EIA-603-E** ☒ **ANSI C63.26-2015**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
Simon Wang Date: May. 31, 2024	Luke Lu Date: May. 31, 2024

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/ and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-NQN2403180115RF06	Original release	May. 31, 2024

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 24 & Part 2			
STANDARD SECTION	**TEST TYPE**	**RESULT**	**Test lab***
§2.1046	Conducted Output Power	Compliance	B
§24.232(c)	Equivalent Isotropic Radiated Power	Compliance	B
§2.1055 §24.235	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§24.232(d)	Peak to average ratio	Compliance	A
§24.238(a)(b)	Band Edge Measurements	Compliance	A
§2.1051 §24.238(a)(b)	Conducted Spurious Emissions	Compliance	A
§2.1053 §24.238(a)(b)	Radiated Spurious Emissions	Compliance	B

***Test Lab Information Reference**

Lab A:
BV 7Layers Communications Technology (Shenzhen) Co. Ltd
Lab Address:
Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District Shenzhen, Guangdong, People's Republic of China
Accredited Test Lab Cert 3939.01

The FCC Site Registration No. is 525120; The Designation No. is CN1171.

Lab B:
Huarui 7Layers High Technology (Suzhou) Co., Ltd.
Lab Address:
Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province
Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

1.1MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
Frequency Stability	±76.97Hz
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions & Radiated Power (30MHz~1GHz)	±4.98dB
Radiated emissions & Radiated Power (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Band Edge Measurements	±4.70dB
Peak to average ratio	±0.76dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 28,23	Mar. 27,24
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 27,24	Mar. 26,25
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May. 10,23	May. 09,24
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May. 09,24	May. 08,25
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep. 02,23	Sep. 01,24
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Feb. 17,24	Feb. 16,25
Horn Antenna	ETS-LINDGREN	3117	00168692	Feb. 17,24	Feb. 16,25
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Sep. 03,23	Sep. 03,24
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 13,24	Feb. 12,25
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 06,23	May. 05,24
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May. 05,24	May. 04,25
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May. 10,23	May.09,24
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May. 09,24	May.08,25
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 16,24	Feb. 15,25
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	Nov. 14,23	Nov. 13,26
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 06,23	May. 05,24
10dB Attenuator	JFW/USA	50HF-010-SMA	50HF-010-SMA	May. 05,24	May. 04,25
Power Meter	Anritsu	ML2495A	1506002	Feb. 13,24	Feb. 12,25
Power Sensor	Anritsu	MA2411B	1339352	Feb. 13,24	Feb. 12,25
Temperature Chamber	ESPEC	SH-242	93000855	May. 06,23	May. 05,24
Temperature Chamber	ESPEC	SH-242	93000855	May. 05,24	May. 04,25
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 13,24	Feb. 12,25
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May.10,23	May.09,24
Base station R&S CMW500	Rohde&Schwarz	CMW500	153085	May. 09,24	May.08,25
DC Source	Kikusui/JP	PMX18-5A	N/A	Aug. 11,23	Aug. 10,24

NOTE: 1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.

3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,22	Aug.29,24
Pre-Amplifier	R&S	SCU08F1	101028	Sep.16,22	Sep.15,24
Vector Signal Generator	R&S	SMBV100B	102176	Feb.15,24	Feb.14,26
Signal Generator	R&S	SMB100A	182185	Feb.15,24	Feb.14,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Feb.24,24	Feb.23,26
EMI TEST Receiver	R&S	ESW44	101973	Feb.24,24	Feb.23,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.27,24	Feb.26,26
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,22	Aug.21,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.22,24	Feb.21,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,22	Aug.21,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,24	Feb.21,26
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.27,22	Jun.26,24
Test Software	EMC32	EMC32	N/A	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	Oct.01,22	Sep.30,24
DC Source	HYELEC	HY3010B	551016	Aug.31,22	Aug.30,24
Hygrothermograph	DELI	20210528	SZ014	Sep.06,22	Sep.05,24
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W13.02	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	W12.14	N/A	Apr.28,23	Apr.27,24
CABLE	R&S	W12.14	N/A	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.28,23	Apr.27,24
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.27,24	Apr.26,25
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.28,23	Apr.27,24
CABLE	R&S	J12J103539-00-1	SEP-03-20-0	Apr.27,24	Apr.26,25

			70		
Temperature Chamber	votsch	VT4002	58566078100050	May.31,22	May.30,24
Temperature Chamber	votsch	VT4002	58566078100050	May.30,24	May.29,26

NOTE: 1. The calibration interval of the above test instruments is 12/ 24 / 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.

3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 434559; The Designation No. is CN1325.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Smart phone	
BRAND NAME	HMD	
MODEL NAME	TA-1600/TA-1688	
NOMINAL VOLTAGE	5.0Vdc/9.0Vdc /12.0Vdc(adapter) 3.89Vdc (battery)	
MODULATION TYPE	**GSM:** GMSK **EDGE:** 8PSK **WCDMA:** BPSK, QPSK **LTE Band 2/25:** QPSK, 16QAM, 64QAM	
FREQUENCY RANGE	**GSM, EDGE**	1850.2MHz ~ 1909.8MHz
	WCDMA	1852.4MHz ~ 1907.6MHz
	LTE Band 2 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1909.3MHz
	LTE Band 2 Channel Bandwidth: 3MHz	1851.5MHz ~ 1908.5MHz
	LTE Band 2 Channel Bandwidth: 5MHz	1852.5MHz ~ 1907.5MHz
	LTE Band 2 Channel Bandwidth: 10MHz	1855.0MHz ~ 1905.0MHz
	LTE Band 2 Channel Bandwidth: 15MHz	1857.5MHz ~ 1902.5MHz
	LTE Band 2 Channel Bandwidth: 20MHz	1860.0MHz ~ 1900.0MHz
	LTE Band 25 Channel Bandwidth: 1.4MHz	1850.7MHz ~ 1914.3MHz
	LTE Band 25 Channel Bandwidth: 3MHz	1851.5MHz ~ 1913.5MHz
	LTE Band 25 Channel Bandwidth: 5MHz	1852.5MHz ~ 1912.5MHz
	LTE Band 25 Channel Bandwidth: 10MHz	1855.0MHz ~ 1910.0MHz
	LTE Band 25 Channel Bandwidth: 15MHz	1857.5MHz ~ 1907.5MHz
	LTE Band 25 Channel Bandwidth: 20MHz	1860.0MHz ~ 1905.0MHz

MAX. EIRP POWER	GSM	711.21mW
	EDGE	282.49mW
	WCDMA	142.56mW
	LTE Band 2 Channel Bandwidth: 1.4MHz	132.74mW
	LTE Band 2 Channel Bandwidth: 3MHz	129.42mW
	LTE Band 2 Channel Bandwidth: 5MHz	130.02mW
	LTE Band 2 Channel Bandwidth: 10MHz	129.72mW
	LTE Band 2 Channel Bandwidth: 15MHz	130.02mW
	LTE Band 2 Channel Bandwidth: 20MHz	133.66mW
	LTE Band 25 Channel Bandwidth: 1.4MHz	132.74mW
	LTE Band 25 Channel Bandwidth: 3MHz	131.52mW
	LTE Band 25 Channel Bandwidth: 5MHz	130.92mW
	LTE Band 25 Channel Bandwidth: 10MHz	130.92mW
	LTE Band 25 Channel Bandwidth: 15MHz	131.83mW
	LTE Band 25 Channel Bandwidth: 20MHz	133.05mW
EMISSION DESIGNATOR	GSM	246KGXW
	EDGE	246KG7W
	WCDMA	4M15F9W
	LTE Band 25 Channel Bandwidth: 1.4MHz	QPSK: 1M11G7D
		16QAM: 1M10W7D
	LTE Band 25 Channel Bandwidth: 3MHz	QPSK: 2M70G7D
		16QAM: 2M71W7D

EMISSION DESIGNATOR	**LTE Band 25 Channel Bandwidth: 5MHz**	QPSK: 4M53G7D
		16QAM: 4M53W7D
	LTE Band 25 Channel Bandwidth: 10MHz	QPSK: 9M02G7D
		16QAM: 9M03W7D
	LTE Band 25 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
	LTE Band 25 Channel Bandwidth: 20MHz	QPSK: 18M0G7D
		16QAM: 18M0W7D
ANTENNA TYPE	ANT1: PIFA Antenna with -2.07dBi gain for GSM1900/ WCDMA II/LTE B2/ LTE B25 ANT3: PIFA Antenna with -2.31dBi gain for GSM1900/ WCDMA II/LTE B2/ LTE B25	
HW VERSION	V2	
SW VERSION	00WW_0_340	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	N/A	
EXTREME TEMPERATURE	-10-55℃	
EXTREME VOLTAGE	3.5V - 4.48V	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and four receivers.

MODULATION MODE	TX FUNCTION
GSM/GPRS/EDGE	1TX/4RX
WCDMA	1TX/4RX
LTE	1TX/4RX

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.
5. The worst-case scenario for all measurements is based on an engineering evaluation made on different modulations. Then, QPSK and 16QAM were observed as the worst mode to LTE bands respectively and set for all conducted and radiated. Output power measurements were measured on QPSK, 16QAM, 64QAM, and 256QAM modulations, and tests other than output power are performed only in worse-case QPSK and 16QAM modulations.

6. List of Accessory:

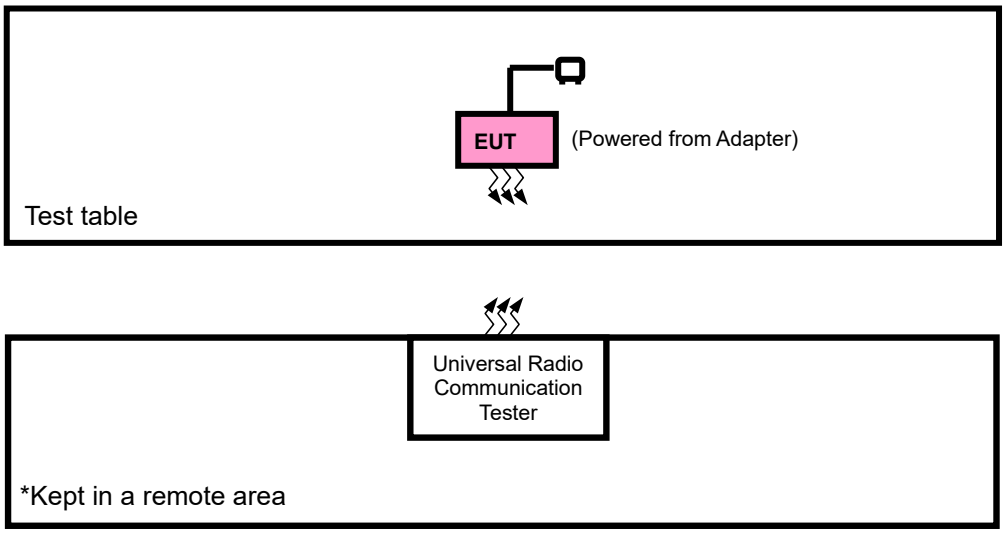
ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
LCD Panel	BOE	BOE	BF066XMM-TL4-F900	6.55inch, AMOLED;
Back cover	BIEL	BIEL	Panda-X	158 mm*73 mm*0.6 mm
Bezel	BIEL	BIEL	6103HG02-T6	160 mm_76 mm_8.5 mm
Photo Camera 1	AAC	AAC	P50AD01	50MP,AF
Photo Camera 2	AAC	AAC	W13FD02	13MP Ultra Wide, FF
Video Camera 1	AAC	AAC	T50AD01	50MP Tele, AF
Video Camera 2	AAC	AAC	MA8SD01	108MP+OIS, AF
CPU	Qualcomm	Qualcomm	SM-7435-1-PSP1026-TR-00-0-AB	Platform Baseband Chip_PSP_mmW_8 core_SMT
eMMC1 (=ROM1)	Samsung	Samsung	KM8L9001JM-B624T07	uMCP_254-ball FBGA_128GB_LPDDR4X_64Gb_SMT
eMMC2 (=ROM2)	Samsung	Samsung	KM8F9001JM-B813T07	uMCP_254-ball FBGA_256GB_LPDDR4X_64Gb_SMT
eMMC3 (=ROM3)	Samsung	Samsung	KM8F9001MM-B830T07	uMCP_254-ball FBGA_256GB_LPDDR4X_96Gb_SMT
Battery	HMD	Gaoyuan	HBA4633AA	RatedCapacity:4500mAh/17.51Wh

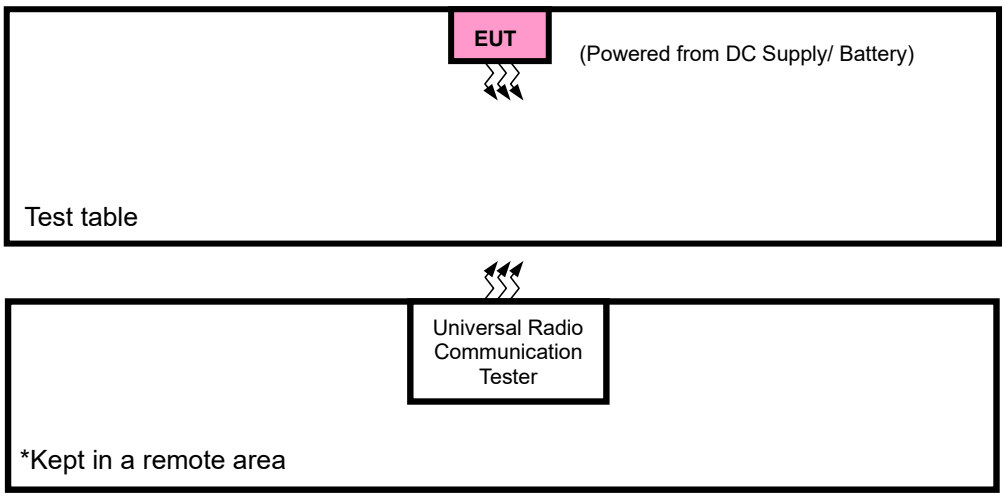
7. The differences between the first and second supply as follows and the specifications and RF parameters are the same.

Key Component list						
No.	Component	Description	First supply		Second supply	
			Supplier	Spec	Supplier	Spec
1	USB/ Analog audio headsets	Analog Audio Switch	Dioo	DIO4480WL25 Analog switch & MUX_WLCSP25_2.7-5.5V_3-Channel_1000MHz _SMT	Will	WAS4780C-25/TR Analog switch & MUX_CSP-25L_2.7-5.5V_2-Channel_950MHz_ SMT
2	Wireless charge	Load Switch	SGM	SGM2575ADYG/TR Load Switch_34 mΩ_11 W_WLCSP_SGM2575ADY G/TR_SGM	Dioo	DIO7290WL4 Load Switch_85 mΩ_11 W_WLCSP-4
3	Sensor	Barometer	Bosch	BMP580 Baroceptor _LGA-10_±0.05 hPa_48 bit_ SMT	Go er mic ro	SPL07-003 Baroceptor_10pin LGA_0.5Pa/°C_24 bit_SMT
4	Sensor	eCOMPASS	VTC	AF6837 Magnetic field sensor_WLCSP_10 LSB/μT_16 bit_I2C_SMT	Memsic	MMC5603NJL Ecompass_MMC56 03NJL_M EMSIC_MCOs
5	RF IC	LNA	Will	WS7916DF-6/TR RF_LNA_6-pin DFN_1150 MHz to 1615_SMT	Awinic	AW5005EDNR RF_LNA_AW5005 EDNR_Awi nic
6	Receiver	SP2T	Will	WS78022D-6/TR DFN-6_0.1GHz - 3.8GHz_SPDT_GPIO_SMT	Champ hill	QX8612GD 0.7 to 2.7GHz_SPDT_2 W_GPIO
7	USB connector	USB type-C connector	LETCON	15-16815-105-M1 USB TYPE C Connector_0.9 mm_16 pin_Female Head (elastic end)_Horizontal_None-waterproof_4.27 mm_Gold_SMT_480M	HRD	UC141-0B100DR0 USB TYPE C Connector_0.9 mm_16 pin_Female Head (elastic end)_Horizontal_No ne- waterproof_4.3 mm_Gold_SMT_48 0M

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST





2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	Kikusui/JP	PMX18-5A	0000001	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable 1.0m

2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports The worst case in EIRP and radiated emission was found when positioned on X-plane for GSM/EDGE/ LTE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter with GSM or WCDMA or LTE link
B	EUT + DC Supply with GSM or WCDMA or LTE link

GSM MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	EIRP	512 to 810	512, 661, 810	GSM,EDGE
B	FREQUENCY STABILITY	512 to 810	512, 661, 810	GSM,EDGE
A	OCCUPIED BANDWIDTH	512 to 810	512, 661, 810	GSM,EDGE
A	PEAK TO AVERAGE RATIO	512 to 810	512, 661, 810	GSM,EDGE
A	BAND EDGE	512 to 810	512, 810	GSM,EDGE
A	CONDUCTED EMISSION	512 to 810	512, 661, 810	GSM,EDGE
A	RADIATED EMISSION	512 to 810	512, 661, 810	GSM,EDGE

WCDMA

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	EIRP	9262 to 9538	9262, 9400, 9538	WCDMA
B	FREQUENCY STABILITY	9262 to 9538	9262, 9400, 9538	WCDMA
A	OCCUPIED BANDWIDTH	9262 to 9538	9262, 9400, 9538	WCDMA
A	PEAK TO AVERAGE RATIO	9262 to 9538	9262, 9400, 9538	WCDMA
A	BAND EDGE	9262 to 9538	9262, 9538	WCDMA
A	CONDUCTED EMISSION	9262 to 9538	9262, 9400, 9538	WCDMA
A	RADIATED EMISSION	9262 to 9538	9262, 9400, 9538	WCDMA

LTE BAND 2 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset

Note: 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. LTE Band 2 are covered by LTE Band 25, Because it is a subset of LTE Band 25 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE Band 25

LTE BAND 25 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM, 64QAM	50 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM, 64QAM	6 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM, 64QAM	15 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM, 64QAM	25 RB / 0 RB Offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM, 64QAM	50 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM, 64QAM	75 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM, 64QAM	100 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset

A	BAND EDGE	26047 to 26683	26047	1.4MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			26683	1.4MHz	QPSK,16QAM, 64QAM	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		26055 to 26675	26055	3MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
			26675	3MHz	QPSK,16QAM, 64QAM	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		26065 to 26665	26065	5MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			26665	5MHz	QPSK,16QAM, 64QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		26090 to 26640	26090	10MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			26640	10MHz	QPSK,16QAM, 64QAM	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
		26115 to 26615	26115	15MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						75 RB / 0 RB Offset
			26615	15MHz	QPSK,16QAM, 64QAM	1 RB / 74 RB Offset
						75 RB / 0 RB Offset
		26140 to 26590	26140	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
						100 RB / 0 RB Offset
			26590	20MHz	QPSK,16QAM, 64QAM	1 RB / 99 RB Offset
						100 RB / 0 RB Offset
A	CONDUCTED EMISSION	26047 to 26683	26047, 26365, 26683	1.4MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365 26640	10MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20MHz	QPSK,16QAM, 64QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	26047 to 26683	26365	1.4MHz	QPSK	1 RB / 0 RB Offset
		26055 to 26675	26365	3MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26365	5MHz	QPSK	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10MHz	QPSK	1 RB / 0 RB Offset
		26115 to 26615	26365	15MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26365	20MHz	QPSK	1 RB / 0 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP	25deg. C, 57%RH	DC5.0V/ 9.0V/12.0V By Adapter	Jace Hu
FREQUENCY STABILITY	23deg. C, 61%RH	DC 3.5V/3.89V/4.48V By DC Supply	James Fu
OCCUPIED BANDWIDTH	23deg. C, 61%RH	DC5.0V/ 9.0V/12.0V By Adapter	James Fu
PEAK TO AVERAGE RATIO	23deg. C, 61%RH	DC5.0V/ 9.0V/12.0V By Adapter	James Fu
BAND EDGE	23deg. C, 61%RH	DC5.0V/ 9.0V/12.0V By Adapter	James Fu
CONDUCTED EMISSION	23deg. C, 61%RH	DC5.0V/ 9.0V/12.0V By Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC5.0V/ 9.0V/12.0V By Adapter	Jace Hu

2.5 EUT OPERATING CONDITIONS

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

2.6 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 24

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

NOTE: All test items have been performed and recorded as per the above standards.

3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile and portable stations are limited to 2 watts EIRP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determing the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

ERP or EIRP = $P_{Meas} + G_T - L_C$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

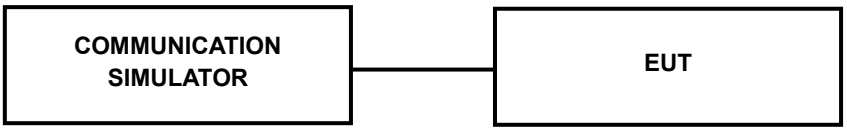
CONDUCTED POWER MEASUREMENT:

The EUT was set up for the maximum power with WCDMA link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

3.1.3 TEST SETUP

EIRP / ERP Measurement:

CONDUCTED POWER MEASUREMENT:



3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

Band	GSM1900(ANT1)		
Channel	512	661	810
Frequency (MHz)	1850.2	1880	1909.8
GSM	29.39	30.27	**30.59**
GPRS 1Tx Slot	29.48	30.31	30.52
GPRS 2Tx Slot	27.21	28.26	28.12
GPRS 3Tx Slot	25.18	25.94	25.99
GPRS 4Tx Slot	24.07	24.69	24.62
EDGE 1Tx Slot	25.08	26.12	26.23
EDGE 2Tx Slot	23.21	23.97	24.07
EDGE 3Tx Slot	21.13	21.82	21.98
EDGE 4Tx Slot	20.11	20.86	21.05

Band	WCDMA II(ANT1)		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880	1907.6
RMC 12.2K	23.53	**23.61**	23.58
HSDPA Subtest-1	22.86	22.89	22.83
HSDPA Subtest-2	22.74	22.75	22.78
HSDPA Subtest-3	22.31	22.32	22.27
HSDPA Subtest-4	22.17	22.35	22.24
DC-HSDPA Subtest-1	22.76	22.85	22.82
DC-HSDPA Subtest-2	22.57	22.69	22.88
DC-HSDPA Subtest-3	22.38	22.26	22.19
DC-HSDPA Subtest-4	22.23	22.24	22.33
HSUPA Subtest-1	22.81	22.73	22.77
HSUPA Subtest-2	21.76	21.87	21.72
HSUPA Subtest-3	22.28	22.43	22.26
HSUPA Subtest-4	21.76	21.79	21.66
HSUPA Subtest-5	22.76	22.84	22.68

LTE BAND 2(ANT1)

Band/BW	Modulation	RB Size	RB Offset	Low CH 18607	Mid CH 18900	High CH 19193
				Frequency 1850.7 MHz	Frequency 1880 MHz	Frequency 1909.3 MHz
2/ 1.4	QPSK	1	0	23.06	23.24	23.20
		1	2	23.13	23.13	23.21
		1	5	23.03	23.10	23.13
		3	0	23.06	23.13	23.14
		3	1	23.20	23.15	23.14
		3	3	23.13	23.11	23.30
		6	0	22.19	22.22	22.31
	16QAM	1	0	22.36	22.24	22.30
		1	2	22.16	22.28	22.36
		1	5	22.34	22.33	22.20
		3	0	22.07	22.13	22.09
		3	1	22.11	22.00	22.06
		3	3	22.15	22.06	22.12
		6	0	21.16	21.10	21.10
	64QAM	1	0	21.04	21.18	21.27
		1	2	21.25	21.19	21.14
		1	5	21.17	21.14	21.11
		3	0	21.05	21.03	21.13
		3	1	21.05	21.05	21.08
		3	3	21.04	21.08	21.10
		6	0	20.06	20.10	20.13

Band/BW	Modulation	RB Size	RB Offset	Low CH 18615	Mid CH 18900	High CH 19185
				Frequency 1851.5 MHz	Frequency 1880 MHz	Frequency 1908.5 MHz
2/ 3	QPSK	1	0	23.09	23.19	23.19
		1	7	23.12	23.17	23.11
		1	14	23.10	23.09	23.15
		8	0	22.21	22.26	22.12
		8	3	22.23	22.25	22.26
		8	7	22.19	22.30	22.28
		15	0	22.16	22.18	22.31
	16QAM	1	0	22.36	22.23	22.27
		1	7	22.21	22.35	22.24
		1	14	22.32	22.23	22.19
		8	0	21.09	21.09	21.01
		8	3	21.06	21.15	21.19
		8	7	21.09	21.10	21.21
		15	0	21.15	21.01	21.23
	64QAM	1	0	21.10	21.19	21.24
		1	7	21.28	21.17	21.18
		1	14	21.08	21.14	21.11
		8	0	20.07	20.10	20.09
		8	3	20.03	20.17	20.04
		8	7	20.04	20.13	20.10
		15	0	20.12	20.11	20.19

Band/BW	Modulation	RB Size	RB Offset	Low CH 18625	Mid CH 18900	High CH 19175
				Frequency 1852.5 MHz	Frequency 1880 MHz	Frequency 1907.5 MHz
2/ 5	QPSK	1	0	23.17	23.21	23.15
		1	12	23.14	23.07	23.16
		1	24	23.09	23.03	23.14
		12	0	22.18	22.30	22.12
		12	6	22.16	22.22	22.34
		12	13	22.14	22.25	22.25
		25	0	22.20	22.20	22.33
	16QAM	1	0	22.33	22.34	22.20
		1	12	22.17	22.34	22.33
		1	24	22.27	22.24	22.26
		12	0	21.04	21.07	21.10
		12	6	21.17	21.28	21.19
		12	13	21.11	21.20	21.25
		25	0	21.11	21.09	21.19
	64QAM	1	0	21.08	21.20	21.24
		1	12	21.34	21.19	21.24
		1	24	21.18	21.12	21.17
		12	0	20.13	20.19	20.16
		12	6	20.18	20.14	20.11
		12	13	20.22	20.11	20.17
		25	0	20.08	20.15	20.21

Band/BW	Modulation	RB Size	RB Offset	Low CH 18650	Mid CH 18900	High CH 19150
				Frequency 1855 MHz	Frequency 1880 MHz	Frequency 1905 MHz
2/ 10	QPSK	1	0	23.05	23.20	23.19
		1	24	23.04	23.08	23.14
		1	49	23.06	23.07	23.08
		25	0	22.16	22.27	22.26
		25	12	22.25	22.26	22.24
		25	25	22.20	22.20	22.28
		50	0	22.17	22.16	22.23
	16QAM	1	0	22.28	22.22	22.21
		1	24	22.15	22.30	22.26
		1	49	22.27	22.29	22.18
		25	0	21.10	21.11	21.10
		25	12	21.17	21.09	21.23
		25	25	21.05	21.11	21.12
		50	0	21.13	21.15	21.10
	64QAM	1	0	21.02	21.22	21.13
		1	24	21.23	21.25	21.07
		1	49	21.19	21.14	21.16
		25	0	20.04	20.09	20.12
		25	12	20.05	20.13	20.15
		25	25	20.07	20.16	20.11
		50	0	20.04	20.11	20.17

Band/BW	Modulation	RB Size	RB Offset	Low CH 18675	Mid CH 18900	High CH 19125
				Frequency 1857.5 MHz	Frequency 1880 MHz	Frequency 1902.5 MHz
2/ 15	QPSK	1	0	23.11	23.20	23.21
		1	37	23.09	23.17	23.17
		1	74	23.04	23.03	23.09
		36	0	22.20	22.22	22.26
		36	19	22.20	22.23	22.26
		36	39	22.32	22.26	22.28
		75	0	22.29	22.24	22.28
	16QAM	1	0	22.40	22.33	22.30
		1	37	22.25	22.45	22.28
		1	74	22.29	22.29	22.29
		36	0	21.07	21.12	21.05
		36	19	21.11	21.25	21.29
		36	39	21.02	21.19	21.13
		75	0	21.11	21.10	21.16
	64QAM	1	0	21.14	21.13	21.22
		1	37	21.25	21.29	21.14
		1	74	21.23	21.18	21.18
		36	0	20.17	20.07	20.07
		36	19	20.11	20.22	20.11
		36	39	20.11	20.17	20.18
		75	0	20.08	20.17	20.18

Band/BW	Modulation	RB Size	RB Offset	Low CH 18700	Mid CH 18900	High CH 19100
				Frequency 1860 MHz	Frequency 1880 MHz	Frequency 1900 MHz
2/ 20	QPSK	1	0	23.26	23.31	**23.33**
		1	50	23.24	23.28	23.30
		1	99	23.18	23.17	23.22
		50	0	22.29	22.37	22.33
		50	25	22.36	22.34	22.43
		50	50	22.35	22.39	22.45
		100	0	22.33	22.32	22.42
	16QAM	1	0	22.44	22.43	22.39
		1	50	22.29	22.48	22.43
		1	99	22.41	22.41	22.35
		50	0	21.19	21.18	21.17
		50	25	21.27	21.29	21.32
		50	50	21.18	21.28	21.28
		100	0	21.26	21.22	21.30
	64QAM	1	0	21.22	21.30	21.34
		1	50	21.35	21.32	21.28
		1	99	21.28	21.24	21.25
		50	0	20.21	20.17	20.17
		50	25	20.24	20.27	20.24
		50	50	20.23	20.21	20.26
		100	0	20.22	20.24	20.27

LTE BAND 25(ANT1)

Band/BW	Modulation	RB Size	RB Offset	Low CH 26047	Mid CH 26365	High CH 26683
				Frequency 1850.7 MHz	Frequency 1882.5 MHz	Frequency 1914.3 MHz
25/ 1.4	QPSK	1	0	23.09	23.05	23.10
		1	2	23.14	23.11	23.13
		1	5	23.18	23.14	23.20
		3	0	23.17	23.10	23.06
		3	1	23.21	23.23	23.23
		3	3	23.26	23.30	23.21
		6	0	22.31	22.32	22.23
	16QAM	1	0	22.35	22.50	22.20
		1	2	22.42	22.35	22.28
		1	5	22.33	22.42	22.37
		3	0	22.13	22.15	22.20
		3	1	22.11	22.19	22.13
		3	3	22.17	22.17	22.07
		6	0	21.14	21.21	21.08
	64QAM	1	0	21.13	21.29	21.15
		1	2	21.16	21.21	21.14
		1	5	21.19	21.16	21.23
		3	0	21.08	21.24	21.13
		3	1	21.12	21.31	21.21
		3	3	21.24	21.22	21.18
		6	0	20.06	20.22	20.13

Band/BW	Modulation	RB Size	RB Offset	Low CH 26055	Mid CH 26365	High CH 26675
				Frequency 1851.5 MHz	Frequency 1882.5 MHz	Frequency 1913.5 MHz
25/ 3	QPSK	1	0	23.13	23.14	23.13
		1	7	23.13	23.22	23.22
		1	14	23.12	23.26	23.18
		8	0	22.14	22.24	22.22
		8	3	22.23	22.33	22.31
		8	7	22.34	22.36	22.26
		15	0	22.18	22.36	22.19
	16QAM	1	0	22.26	22.48	22.24
		1	7	22.39	22.39	22.24
		1	14	22.32	22.37	22.34
		8	0	21.12	21.18	21.15
		8	3	21.13	21.12	21.13
		8	7	21.11	21.02	21.09
		15	0	21.08	21.23	21.11
	64QAM	1	0	21.16	21.26	21.05
		1	7	21.26	21.23	21.15
		1	14	21.26	21.12	21.21
		8	0	20.18	20.13	20.06
		8	3	20.06	20.16	20.16
		8	7	20.20	20.04	20.13
		15	0	20.05	20.08	20.09

Band/BW	Modulation	RB Size	RB Offset	Low CH 26065	Mid CH 26365	High CH 26665
				Frequency 1852.5 MHz	Frequency 1882.5 MHz	Frequency 1912.5 MHz
25/ 5	QPSK	1	0	23.15	23.04	23.08
		1	12	23.07	23.19	23.17
		1	24	23.16	23.24	23.17
		12	0	22.20	22.27	22.16
		12	6	22.29	22.26	22.32
		12	13	22.35	22.30	22.31
		25	0	22.22	22.25	22.31
	16QAM	1	0	22.36	22.50	22.29
		1	12	22.41	22.44	22.35
		1	24	22.27	22.31	22.39
		12	0	21.09	21.19	21.08
		12	6	21.10	21.15	21.10
		12	13	21.12	21.14	21.12
		25	0	21.10	21.15	21.08
	64QAM	1	0	21.13	21.22	21.13
		1	12	21.28	21.21	21.07
		1	24	21.29	21.15	21.23
		12	0	20.07	20.15	20.06
		12	6	20.12	20.19	20.18
		12	13	20.20	20.09	20.12
		25	0	20.05	20.10	20.13

Band/BW	Modulation	RB Size	RB Offset	Low CH 26090	Mid CH 26365	High CH 26640
				Frequency 1855 MHz	Frequency 1882.5 MHz	Frequency 1910 MHz
25/ 10	QPSK	1	0	23.14	23.10	23.05
		1	24	23.07	23.12	23.15
		1	49	23.10	23.21	23.24
		25	0	22.19	22.26	22.22
		25	12	22.20	22.37	22.30
		25	25	22.22	22.29	22.27
		50	0	22.32	22.31	22.19
	16QAM	1	0	22.32	22.38	22.20
		1	24	22.41	22.43	22.36
		1	49	22.21	22.39	22.33
		25	0	21.06	21.13	21.09
		25	12	21.15	21.19	21.11
		25	25	21.22	21.07	21.04
		50	0	21.00	21.19	21.05
	64QAM	1	0	21.14	21.28	21.05
		1	24	21.15	21.16	21.13
		1	49	21.26	21.05	21.17
		25	0	20.08	20.03	20.11
		25	12	20.09	20.15	20.10
		25	25	20.06	20.07	20.19
		50	0	20.12	20.17	20.10

Band/BW	Modulation	RB Size	RB Offset	Low CH 26115	Mid CH 26365	High CH 26615
				Frequency 1857.5 MHz	Frequency 1882.5 MHz	Frequency 1907.5 MHz
25/ 15	QPSK	1	0	23.09	23.16	23.15
		1	37	23.06	23.20	23.22
		1	74	23.14	23.27	23.19
		36	0	22.20	22.27	22.22
		36	19	22.30	22.25	22.23
		36	39	22.36	22.39	22.33
		75	0	22.24	22.28	22.28
	16QAM	1	0	22.32	22.40	22.19
		1	37	22.31	22.31	22.29
		1	74	22.29	22.41	22.44
		36	0	21.06	21.10	21.18
		36	19	21.14	21.07	21.18
		36	39	21.18	21.13	21.00
		75	0	21.05	21.19	21.03
	64QAM	1	0	21.14	21.34	21.05
		1	37	21.20	21.15	21.11
		1	74	21.23	21.10	21.26
		36	0	20.03	20.07	20.06
		36	19	20.04	20.15	20.12
		36	39	20.06	20.08	20.09
		75	0	20.04	20.08	20.04

Band/BW	Modulation	RB Size	RB Offset	Low CH 26140	Mid CH 26365	High CH 26590
				Frequency 1860 MHz	Frequency 1882.5 MHz	Frequency 1905 MHz
25/ 20	QPSK	1	0	23.18	23.19	23.22
		1	50	23.23	23.28	23.25
		1	99	23.26	**23.31**	23.29
		50	0	22.31	22.34	22.31
		50	25	22.34	22.41	22.38
		50	50	22.39	22.42	22.40
		100	0	22.35	22.40	22.34
	16QAM	1	0	22.40	22.55	22.35
		1	50	22.47	22.47	22.39
		1	99	22.37	22.45	22.47
		50	0	21.16	21.24	21.24
		50	25	21.22	21.22	21.27
		50	50	21.28	21.19	21.15
		100	0	21.17	21.28	21.13
	64QAM	1	0	21.22	21.39	21.19
		1	50	21.31	21.26	21.21
		1	99	21.36	21.20	21.29
		50	0	20.14	20.19	20.14
		50	25	20.17	20.26	20.23
		50	50	20.23	20.17	20.22
		100	0	20.12	20.25	20.18

Band	GSM1900(ANT3)		
Channel	512	661	810
Frequency (MHz)	1850.2	1880	1909.8
GSM	29.38	30.21	30.65
GPRS 1Tx Slot	29.52	**30.68**	30.64
GPRS 2Tx Slot	27.35	28.21	28.11
GPRS 3Tx Slot	25.23	25.88	26.03
GPRS 4Tx Slot	24.09	25.02	24.86
EDGE 1Tx Slot	25.54	26.82	26.55
EDGE 2Tx Slot	23.26	24.22	24.26
EDGE 3Tx Slot	21.32	22.35	22.24
EDGE 4Tx Slot	20.14	21.10	21.08

Band	WCDMA II(ANT3)		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880	1907.6
RMC 12.2K	23.66	**23.72**	23.71
HSDPA Subtest-1	23.02	23.05	22.99
HSDPA Subtest-2	22.92	23.10	22.84
HSDPA Subtest-3	22.38	22.49	22.51
HSDPA Subtest-4	22.32	22.45	22.52
DC-HSDPA Subtest-1	22.79	22.91	22.89
DC-HSDPA Subtest-2	22.70	22.87	22.91
DC-HSDPA Subtest-3	22.34	22.29	22.47
DC-HSDPA Subtest-4	22.41	22.25	22.30
HSUPA Subtest-1	22.92	22.88	23.02
HSUPA Subtest-2	21.83	21.87	22.00
HSUPA Subtest-3	22.49	22.35	22.33
HSUPA Subtest-4	21.72	22.04	21.99
HSUPA Subtest-5	22.80	22.92	22.78

LTE BAND 2(ANT3)

Band/BW	Modulation	RB Size	RB Offset	Low CH 18607	Mid CH 18900	High CH 19193
				Frequency 1850.7 MHz	Frequency 1880 MHz	Frequency 1909.3 MHz
2/ 1.4	QPSK	1	0	23.08	23.06	23.11
		1	2	23.04	23.09	23.12
		1	5	23.16	23.21	23.21
		3	0	23.02	23.16	23.20
		3	1	23.12	23.16	23.23
		3	3	23.13	23.27	23.28
		6	0	22.26	22.27	22.35
	16QAM	1	0	22.37	22.44	22.48
		1	2	22.37	22.33	22.46
		1	5	22.24	22.33	22.26
		3	0	22.04	22.02	22.10
		3	1	22.08	22.14	22.16
		3	3	22.12	22.11	22.29
		6	0	21.15	21.17	21.31
	64QAM	1	0	21.26	21.12	21.23
		1	2	21.44	21.26	21.33
		1	5	21.25	21.20	21.36
		3	0	21.05	21.08	21.09
		3	1	21.09	21.09	21.12
		3	3	21.13	21.12	21.24
		6	0	20.21	20.14	20.30

Band/BW	Modulation	RB Size	RB Offset	Low CH 18615	Mid CH 18900	High CH 19185
				Frequency 1851.5 MHz	Frequency 1880 MHz	Frequency 1908.5 MHz
2/ 3	QPSK	1	0	23.12	23.09	23.11
		1	7	23.04	23.08	23.10
		1	14	23.12	23.12	23.17
		8	0	22.14	22.27	22.21
		8	3	22.27	22.31	22.25
		8	7	22.33	22.33	22.44
		15	0	22.17	22.30	22.29
	16QAM	1	0	22.35	22.43	22.55
		1	7	22.35	22.40	22.47
		1	14	22.18	22.27	22.23
		8	0	21.19	21.15	21.23
		8	3	21.17	21.22	21.34
		8	7	21.20	21.27	21.37
		15	0	21.18	21.22	21.32
	64QAM	1	0	21.28	21.24	21.23
		1	7	21.45	21.24	21.39
		1	14	21.17	21.18	21.33
		8	0	20.21	20.19	20.25
		8	3	20.20	20.21	20.20
		8	7	20.30	20.25	20.35
		15	0	20.13	20.14	20.32

Band/BW	Modulation	RB Size	RB Offset	Low CH 18625	Mid CH 18900	High CH 19175
				Frequency 1852.5 MHz	Frequency 1880 MHz	Frequency 1907.5 MHz
2/ 5	QPSK	1	0	23.08	23.06	23.12
		1	12	23.05	23.17	23.15
		1	24	23.14	23.18	23.12
		12	0	22.16	22.26	22.18
		12	6	22.16	22.30	22.38
		12	13	22.30	22.38	22.38
		25	0	22.22	22.32	22.33
	16QAM	1	0	22.30	22.45	22.47
		1	12	22.33	22.30	22.40
		1	24	22.17	22.26	22.29
		12	0	21.09	21.12	21.27
		12	6	21.16	21.16	21.26
		12	13	21.28	21.24	21.33
		25	0	21.10	21.14	21.31
	64QAM	1	0	21.31	21.18	21.28
		1	12	21.43	21.24	21.41
		1	24	21.21	21.14	21.37
		12	0	20.15	20.16	20.29
		12	6	20.09	20.22	20.28
		12	13	20.24	20.25	20.34
		25	0	20.13	20.21	20.32

Band/BW	Modulation	RB Size	RB Offset	Low CH 18650	Mid CH 18900	High CH 19150
				Frequency 1855 MHz	Frequency 1880 MHz	Frequency 1905 MHz
2/ 10	QPSK	1	0	23.06	23.13	23.11
		1	24	23.04	23.19	23.05
		1	49	23.11	23.09	23.12
		25	0	22.11	22.25	22.21
		25	12	22.29	22.27	22.23
		25	25	22.20	22.38	22.40
		50	0	22.27	22.32	22.37
	16QAM	1	0	22.30	22.43	22.42
		1	24	22.33	22.35	22.45
		1	49	22.22	22.32	22.32
		25	0	21.09	21.10	21.19
		25	12	21.21	21.16	21.29
		25	25	21.19	21.30	21.29
		50	0	21.23	21.21	21.22
	64QAM	1	0	21.31	21.20	21.27
		1	24	21.40	21.18	21.35
		1	49	21.18	21.27	21.38
		25	0	20.16	20.18	20.17
		25	12	20.10	20.17	20.26
		25	25	20.19	20.33	20.29
		50	0	20.20	20.12	20.39

Band/BW	Modulation	RB Size	RB Offset	Low CH 18675	Mid CH 18900	High CH 19125
				Frequency 1857.5 MHz	Frequency 1880 MHz	Frequency 1902.5 MHz
2/ 15	QPSK	1	0	23.09	23.08	23.12
		1	37	23.04	23.12	23.17
		1	74	23.10	23.23	23.20
		36	0	22.21	22.23	22.29
		36	19	22.18	22.23	22.35
		36	39	22.22	22.29	22.49
		75	0	22.23	22.32	22.35
	16QAM	1	0	22.30	22.40	22.52
		1	37	22.31	22.43	22.47
		1	74	22.17	22.37	22.34
		36	0	21.13	21.19	21.19
		36	19	21.13	21.16	21.20
		36	39	21.19	21.33	21.25
		75	0	21.12	21.09	21.35
	64QAM	1	0	21.31	21.15	21.21
		1	37	21.34	21.14	21.33
		1	74	21.24	21.16	21.31
		36	0	20.14	20.12	20.19
		36	19	20.08	20.13	20.24
		36	39	20.24	20.25	20.36
		75	0	20.26	20.09	20.25

Band/BW	Modulation	RB Size	RB Offset	Low CH 18700	Mid CH 18900	High CH 19100
				Frequency 1860 MHz	Frequency 1880 MHz	Frequency 1900 MHz
2/ 20	QPSK	1	0	23.17	23.23	23.21
		1	50	23.13	23.24	23.22
		1	99	23.22	23.26	**23.28**
		50	0	22.26	22.35	22.34
		50	25	22.32	22.40	22.41
		50	50	22.36	22.43	22.52
		100	0	22.34	22.37	22.46
	16QAM	1	0	22.40	22.55	22.58
		1	50	22.47	22.46	22.52
		1	99	22.32	22.41	22.39
		50	0	21.23	21.27	21.31
		50	25	21.29	21.31	21.37
		50	50	21.35	21.37	21.42
		100	0	21.27	21.25	21.39
	64QAM	1	0	21.41	21.28	21.34
		1	50	21.49	21.30	21.48
		1	99	21.31	21.31	21.42
		50	0	20.25	20.27	20.32
		50	25	20.23	20.29	20.37
		50	50	20.33	20.36	20.39
		100	0	20.30	20.26	20.42

LTE BAND 25(ANT3)

Band/BW	Modulation	RB Size	RB Offset	Low CH 26047	Mid CH 26365	High CH 26683
				Frequency 1850.7 MHz	Frequency 1882.5 MHz	Frequency 1914.3 MHz
25/ 1.4	QPSK	1	0	23.27	23.24	23.24
		1	2	23.22	23.28	23.29
		1	5	23.31	23.31	23.32
		3	0	23.08	23.16	23.15
		3	1	23.16	23.18	23.24
		3	3	23.19	23.32	23.20
		6	0	22.35	22.40	22.40
	16QAM	1	0	22.85	22.86	22.69
		1	2	22.75	22.87	22.80
		1	5	22.72	22.89	22.65
		3	0	22.20	22.23	22.25
		3	1	22.34	22.32	22.43
		3	3	22.33	22.22	22.33
		6	0	21.41	21.56	21.43
	64QAM	1	0	21.59	21.58	21.65
		1	2	21.62	21.48	21.64
		1	5	21.60	21.44	21.51
		3	0	21.19	21.18	21.35
		3	1	21.21	21.35	21.33
		3	3	21.32	21.28	21.36
		6	0	20.52	20.62	20.51

Band/BW	Modulation	RB Size	RB Offset	Low CH 26055	Mid CH 26365	High CH 26675
				Frequency 1851.5 MHz	Frequency 1882.5 MHz	Frequency 1913.5 MHz
25/ 3	QPSK	1	0	23.19	23.33	23.29
		1	7	23.22	23.25	23.40
		1	14	23.36	23.31	23.39
		8	0	22.27	22.28	22.43
		8	3	22.39	22.41	22.47
		8	7	22.38	22.49	22.50
		15	0	22.41	22.44	22.45
	16QAM	1	0	22.82	22.91	22.66
		1	7	22.81	22.88	22.82
		1	14	22.68	22.81	22.57
		8	0	21.41	21.49	21.53
		8	3	21.50	21.51	21.64
		8	7	21.55	21.42	21.57
		15	0	21.55	21.59	21.51
	64QAM	1	0	21.47	21.65	21.65
		1	7	21.61	21.53	21.53
		1	14	21.54	21.45	21.54
		8	0	20.40	20.45	20.46
		8	3	20.48	20.59	20.56
		8	7	20.56	20.43	20.49
		15	0	20.47	20.62	20.47

Band/BW	Modulation	RB Size	RB Offset	Low CH 26065	Mid CH 26365	High CH 26665
				Frequency 1852.5 MHz	Frequency 1882.5 MHz	Frequency 1912.5 MHz
25/ 5	QPSK	1	0	23.22	23.31	23.23
		1	12	23.31	23.21	23.30
		1	24	23.27	23.36	23.36
		12	0	22.36	22.28	22.41
		12	6	22.47	22.34	22.46
		12	13	22.40	22.45	22.38
		25	0	22.44	22.54	22.38
	16QAM	1	0	22.85	22.85	22.63
		1	12	22.81	22.91	22.77
		1	24	22.67	22.88	22.62
		12	0	21.45	21.42	21.52
		12	6	21.51	21.60	21.54
		12	13	21.50	21.52	21.49
		25	0	21.52	21.49	21.40
	64QAM	1	0	21.57	21.59	21.60
		1	12	21.64	21.57	21.56
		1	24	21.58	21.50	21.49
		12	0	20.45	20.39	20.50
		12	6	20.47	20.50	20.64
		12	13	20.52	20.44	20.55
		25	0	20.43	20.48	20.54

Band/BW	Modulation	RB Size	RB Offset	Low CH 26090	Mid CH 26365	High CH 26640
				Frequency 1855 MHz	Frequency 1882.5 MHz	Frequency 1910 MHz
25/ 10	QPSK	1	0	23.27	23.25	23.25
		1	24	23.17	23.31	23.39
		1	49	23.30	23.33	23.40
		25	0	22.29	22.32	22.33
		25	12	22.45	22.43	22.38
		25	25	22.45	22.44	22.50
		50	0	22.41	22.42	22.51
	16QAM	1	0	22.90	22.85	22.70
		1	24	22.79	22.88	22.88
		1	49	22.68	22.88	22.63
		25	0	21.46	21.48	21.47
		25	12	21.58	21.51	21.57
		25	25	21.57	21.39	21.48
		50	0	21.54	21.53	21.39
	64QAM	1	0	21.56	21.58	21.67
		1	24	21.61	21.62	21.56
		1	49	21.52	21.41	21.58
		25	0	20.49	20.53	20.47
		25	12	20.54	20.50	20.58
		25	25	20.55	20.52	20.59
		50	0	20.51	20.55	20.48

Band/BW	Modulation	RB Size	RB Offset	Low CH 26115	Mid CH 26365	High CH 26615
				Frequency 1857.5 MHz	Frequency 1882.5 MHz	Frequency 1907.5 MHz
25/ 15	QPSK	1	0	23.19	23.31	23.23
		1	37	23.30	23.18	23.27
		1	74	23.29	23.35	23.33
		36	0	22.33	22.38	22.39
		36	19	22.46	22.36	22.39
		36	39	22.42	22.50	22.44
		75	0	22.33	22.49	22.48
	16QAM	1	0	22.84	22.90	22.73
		1	37	22.85	22.90	22.90
		1	74	22.69	22.91	22.61
		36	0	21.48	21.47	21.46
		36	19	21.55	21.52	21.56
		36	39	21.53	21.39	21.58
		75	0	21.50	21.59	21.49
	64QAM	1	0	21.56	21.68	21.63
		1	37	21.60	21.60	21.53
		1	74	21.59	21.46	21.49
		36	0	20.45	20.36	20.49
		36	19	20.45	20.63	20.52
		36	39	20.46	20.52	20.54
		75	0	20.50	20.48	20.50

Band/BW	Modulation	RB Size	RB Offset	Low CH 26140	Mid CH 26365	High CH 26590
				Frequency 1860 MHz	Frequency 1882.5 MHz	Frequency 1905 MHz
25/ 20	QPSK	1	0	23.34	23.37	23.35
		1	50	23.33	23.33	23.42
		1	99	23.39	**23.45**	23.43
		50	0	22.42	22.43	22.45
		50	25	22.52	22.49	22.51
		50	50	22.54	22.57	22.54
		100	0	22.49	22.56	22.54
	16QAM	1	0	22.93	23.01	22.79
		1	50	22.87	22.93	22.92
		1	99	22.83	22.94	22.70
		50	0	21.53	21.58	21.55
		50	25	21.60	21.63	21.67
		50	50	21.61	21.55	21.61
		100	0	21.57	21.64	21.55
	64QAM	1	0	21.63	21.74	21.76
		1	50	21.70	21.64	21.66
		1	99	21.64	21.55	21.65
		50	0	20.55	20.52	20.58
		50	25	20.57	20.65	20.67
		50	50	20.61	20.59	20.63
		100	0	20.55	20.64	20.58

EIRP POWER (dBm)

GSM (ANT1)

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
512	1850.2	29.48	-2.07	27.41	550.81	2
661	1880.0	30.31	-2.07	28.24	666.81	2
810	1909.8	30.59	-2.07	28.52	711.21	2

EDGE(ANT1)

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
512	1850.2	25.08	-2.07	23.01	199.99	2
661	1880.0	26.12	-2.07	24.05	254.1	2
810	1909.8	26.23	-2.07	24.16	260.62	2

WCDMA(ANT1)

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
9262	1852.4	23.53	-2.07	21.46	139.96	2
9400	1880	23.61	-2.07	21.54	142.56	2
9538	1907.6	23.58	-2.07	21.51	141.58	2

LTE BAND 2(ANT1)

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	23.2	-2.07	21.13	129.72	2
18900	1880.0	23.24	-2.07	21.17	130.92	2
19193	1909.3	23.3	-2.07	21.23	132.74	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	22.36	-2.07	20.29	106.91	2
18900	1880.0	22.33	-2.07	20.26	106.17	2
19193	1909.3	22.36	-2.07	20.29	106.91	2

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	21.25	-2.07	19.18	82.79	2
18900	1880.0	21.19	-2.07	19.12	81.66	2
19193	1908.3	21.27	-2.07	19.2	83.18	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	23.12	-2.07	21.05	127.35	2
18900	1880.0	23.19	-2.07	21.12	129.42	2
19185	1908.5	23.19	-2.07	21.12	129.42	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	22.36	-2.07	20.29	106.91	2
18900	1880.0	22.35	-2.07	20.28	106.66	2
19185	1908.5	22.27	-2.07	20.2	104.71	2

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	21.28	-2.07	19.21	83.37	2
18900	1880.0	21.19	-2.07	19.12	81.66	2
19185	1908.5	21.24	-2.07	19.17	82.6	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	23.17	-2.07	21.1	128.82	2
18900	1880.0	23.21	-2.07	21.14	130.02	2
19175	1907.5	23.16	-2.07	21.09	128.53	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	22.33	-2.07	20.26	106.17	2
18900	1880.0	22.34	-2.07	20.27	106.41	2
19175	1907.5	22.33	-2.07	20.26	106.17	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	21.34	-2.07	19.27	84.53	2
18900	1880.0	21.2	-2.07	19.13	81.85	2
19175	1907.5	21.24	-2.07	19.17	82.6	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	23.06	-2.07	20.99	125.6	2
18900	1880.0	23.2	-2.07	21.13	129.72	2
19150	1905.0	23.19	-2.07	21.12	129.42	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	22.28	-2.07	20.21	104.95	2
18900	1880.0	22.3	-2.07	20.23	105.44	2
19150	1905.0	22.26	-2.07	20.19	104.47	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	21.23	-2.07	19.16	82.41	2
18900	1880.0	21.25	-2.07	19.18	82.79	2
19150	1905.0	21.16	-2.07	19.09	81.1	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	23.11	-2.07	21.04	127.06	2
18900	1880.0	23.2	-2.07	21.13	129.72	2
19125	1902.5	23.21	-2.07	21.14	130.02	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	22.4	-2.07	20.33	107.89	2
18900	1880.0	22.45	-2.07	20.38	109.14	2
19125	1902.5	22.3	-2.07	20.23	105.44	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	21.25	-2.07	19.18	82.79	2
18900	1880.0	21.29	-2.07	19.22	83.56	2
19125	1902.5	21.22	-2.07	19.15	82.22	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	23.26	-2.07	21.19	131.52	2
18900	1880	23.31	-2.07	21.24	133.05	2
19100	1900	23.33	-2.07	21.26	133.66	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	22.44	-2.07	20.37	108.89	2
18900	1880	22.48	-2.07	20.41	109.9	2
19100	1900	22.43	-2.07	20.36	108.64	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	21.35	-2.07	19.28	84.72	2
18900	1880	21.32	-2.07	19.25	84.14	2
19100	1900	21.34	-2.07	19.27	84.53	2

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

LTE BAND 25(ANT1)

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	23.26	-2.07	21.19	131.52	2
26365	1882.5	23.3	-2.07	21.23	132.74	2
26683	1914.3	23.23	-2.07	21.16	130.62	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	22.42	-2.07	20.35	108.39	2
26365	1882.5	22.5	-2.07	20.43	110.41	2
26683	1914.3	22.37	-2.07	20.3	107.15	2

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	21.24	-2.07	19.17	82.6	2
26365	1882.5	21.31	-2.07	19.24	83.95	2
26683	1914.3	21.23	-2.07	19.16	82.41	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	23.13	-2.07	21.06	127.64	2
26365	1882.5	23.26	-2.07	21.19	131.52	2
26675	1913.5	23.22	-2.07	21.15	130.32	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	22.39	-2.07	20.32	107.65	2
26365	1882.5	22.48	-2.07	20.41	109.9	2
26675	1913.5	22.34	-2.07	20.27	106.41	2

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1851.5	21.26	-2.07	19.19	82.99	2
26365	1882.5	21.26	-2.07	19.19	82.99	2
26683	1913.5	21.21	-2.07	19.14	82.04	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	23.16	-2.07	21.09	128.53	2
26365	1882.5	23.24	-2.07	21.17	130.92	2
26665	1912.5	23.17	-2.07	21.1	128.82	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	22.41	-2.07	20.34	108.14	2
26365	1882.5	22.5	-2.07	20.43	110.41	2
26665	1912.5	22.39	-2.07	20.32	107.65	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	21.29	-2.07	19.22	83.56	2
26365	1882.5	21.22	-2.07	19.15	82.22	2
26665	1912.5	21.23	-2.07	19.16	82.41	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	23.14	-2.07	21.07	127.94	2
26365	1882.5	23.21	-2.07	21.14	130.02	2
26640	1910	23.24	-2.07	21.17	130.92	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	22.41	-2.07	20.34	108.14	2
26365	1882.5	22.43	-2.07	20.36	108.64	2
26640	1910	22.36	-2.07	20.29	106.91	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	21.26	-2.07	19.19	82.99	2
26365	1882.5	21.28	-2.07	19.21	83.37	2
26640	1910	21.17	-2.07	19.1	81.28	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	23.14	-2.07	21.07	127.94	2
26365	1882.5	23.27	-2.07	21.2	131.83	2
26615	1907.5	23.22	-2.07	21.15	130.32	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	22.32	-2.07	20.25	105.93	2
26365	1882.5	22.41	-2.07	20.34	108.14	2
26615	1907.5	22.44	-2.07	20.37	108.89	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	21.23	-2.07	19.16	82.41	2
26365	1882.5	21.34	-2.07	19.27	84.53	2
26615	1907.5	21.26	-2.07	19.19	82.99	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	23.26	-2.07	21.19	131.52	2
26365	1882.5	23.31	-2.07	21.24	133.05	2
26590	1905	23.29	-2.07	21.22	132.43	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	22.47	-2.07	20.4	109.65	2
26365	1882.5	22.55	-2.07	20.48	111.69	2
26590	1905	22.47	-2.07	20.4	109.65	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	21.36	-2.07	19.29	84.92	2
26365	1882.5	21.39	-2.07	19.32	85.51	2
26590	1905	21.29	-2.07	19.22	83.56	2

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

GSM (ANT3)

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
512	1850.2	29.52	-2.31	27.21	526.02	2
661	1880.0	30.68	-2.31	28.37	687.07	2
810	1909.8	30.65	-2.31	28.34	682.34	2

EDGE(ANT3)

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
512	1850.2	25.54	-2.31	23.23	210.38	2
661	1880.0	26.82	-2.31	24.51	282.49	2
810	1909.8	26.55	-2.31	24.24	265.46	2

WCDMA(ANT3)

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
9262	1852.4	23.66	-2.31	21.35	136.46	2
9400	1880	23.72	-2.31	21.41	138.36	2
9538	1907.6	23.71	-2.31	21.4	138.04	2

LTE BAND 2(ANT3)

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	23.16	-2.31	20.85	121.62	2
18900	1880.0	23.27	-2.31	20.96	124.74	2
19193	1909.3	23.28	-2.31	20.97	125.03	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	22.37	-2.31	20.06	101.39	2
18900	1880.0	22.44	-2.31	20.13	103.04	2
19193	1909.3	22.48	-2.31	20.17	103.99	2

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18607	1850.7	21.44	-2.31	19.13	81.85	2
18900	1880.0	21.26	-2.31	18.95	78.52	2
19193	1908.3	21.36	-2.31	19.05	80.35	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	23.12	-2.31	20.81	120.5	2
18900	1880.0	23.12	-2.31	20.81	120.5	2
19185	1908.5	23.17	-2.31	20.86	121.9	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	22.35	-2.31	20.04	100.93	2
18900	1880.0	22.43	-2.31	20.12	102.8	2
19185	1908.5	22.55	-2.31	20.24	105.68	2

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18615	1851.5	21.45	-2.31	19.14	82.04	2
18900	1880.0	21.24	-2.31	18.93	78.16	2
19185	1908.5	21.39	-2.31	19.08	80.91	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	23.14	-2.31	20.83	121.06	2
18900	1880.0	23.18	-2.31	20.87	122.18	2
19175	1907.5	23.15	-2.31	20.84	121.34	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	22.33	-2.31	20.02	100.46	2
18900	1880.0	22.45	-2.31	20.14	103.28	2
19175	1907.5	22.47	-2.31	20.16	103.75	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18625	1852.5	21.43	-2.31	19.12	81.66	2
18900	1880.0	21.24	-2.31	18.93	78.16	2
19175	1907.5	21.41	-2.31	19.1	81.28	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	23.11	-2.31	20.8	120.23	2
18900	1880.0	23.19	-2.31	20.88	122.46	2
19150	1905.0	23.12	-2.31	20.81	120.5	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	22.33	-2.31	20.02	100.46	2
18900	1880.0	22.43	-2.31	20.12	102.8	2
19150	1905.0	22.45	-2.31	20.14	103.28	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18650	1855.0	21.4	-2.31	19.09	81.1	2
18900	1880.0	21.27	-2.31	18.96	78.7	2
19150	1905.0	21.38	-2.31	19.07	80.72	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	23.1	-2.31	20.79	119.95	2
18900	1880.0	23.23	-2.31	20.92	123.59	2
19125	1902.5	23.2	-2.31	20.89	122.74	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	22.31	-2.31	20	100	2
18900	1880.0	22.43	-2.31	20.12	102.8	2
19125	1902.5	22.52	-2.31	20.21	104.95	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18675	1857.5	21.34	-2.31	19.03	79.98	2
18900	1880.0	21.16	-2.31	18.85	76.74	2
19125	1902.5	21.33	-2.31	19.02	79.8	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	23.22	-2.31	20.91	123.31	2
18900	1880	23.26	-2.31	20.95	124.45	2
19100	1900	23.28	-2.31	20.97	125.03	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	22.47	-2.31	20.16	103.75	2
18900	1880	22.55	-2.31	20.24	105.68	2
19100	1900	22.58	-2.31	20.27	106.41	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
18700	1860	21.49	-2.31	19.18	82.79	2
18900	1880	21.31	-2.31	19	79.43	2
19100	1900	21.48	-2.31	19.17	82.6	2

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

LTE BAND 25(ANT3)

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	23.31	-2.31	21	125.89	2
26365	1882.5	23.32	-2.31	21.01	126.18	2
26683	1914.3	23.32	-2.31	21.01	126.18	2

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	22.85	-2.31	20.54	113.24	2
26365	1882.5	22.89	-2.31	20.58	114.29	2
26683	1914.3	22.8	-2.31	20.49	111.94	2

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1850.7	21.62	-2.31	19.31	85.31	2
26365	1882.5	21.58	-2.31	19.27	84.53	2
26683	1914.3	21.65	-2.31	19.34	85.9	2

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	23.36	-2.31	21.05	127.35	2
26365	1882.5	23.33	-2.31	21.02	126.47	2
26675	1913.5	23.4	-2.31	21.09	128.53	2

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26055	1851.5	22.82	-2.31	20.51	112.46	2
26365	1882.5	22.91	-2.31	20.6	114.82	2
26675	1913.5	22.82	-2.31	20.51	112.46	2

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26047	1851.5	21.61	-2.31	19.3	85.11	2
26365	1882.5	21.65	-2.31	19.34	85.9	2
26683	1913.5	21.65	-2.31	19.34	85.9	2

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	23.31	-2.31	21	125.89	2
26365	1882.5	23.36	-2.31	21.05	127.35	2
26665	1912.5	23.36	-2.31	21.05	127.35	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	22.85	-2.31	20.54	113.24	2
26365	1882.5	22.91	-2.31	20.6	114.82	2
26665	1912.5	22.77	-2.31	20.46	111.17	2

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26065	1852.5	21.64	-2.31	19.33	85.7	2
26365	1882.5	21.59	-2.31	19.28	84.72	2
26665	1912.5	21.6	-2.31	19.29	84.92	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	23.3	-2.31	20.99	125.6	2
26365	1882.5	23.33	-2.31	21.02	126.47	2
26640	1910	23.4	-2.31	21.09	128.53	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	22.9	-2.31	20.59	114.55	2
26365	1882.5	22.88	-2.31	20.57	114.02	2
26640	1910	22.88	-2.31	20.57	114.02	2

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26090	1855	21.61	-2.31	19.3	85.11	2
26365	1882.5	21.62	-2.31	19.31	85.31	2
26640	1910	21.67	-2.31	19.36	86.3	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	23.3	-2.31	20.99	125.6	2
26365	1882.5	23.35	-2.31	21.04	127.06	2
26615	1907.5	23.33	-2.31	21.02	126.47	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	22.85	-2.31	20.54	113.24	2
26365	1882.5	22.91	-2.31	20.6	114.82	2
26615	1907.5	22.9	-2.31	20.59	114.55	2

CHANNEL BANDWIDTH: 15MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26115	1857.5	21.6	-2.31	19.29	84.92	2
26365	1882.5	21.68	-2.31	19.37	86.5	2
26615	1907.5	21.63	-2.31	19.32	85.51	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	23.39	-2.31	21.08	128.23	2
26365	1882.5	23.45	-2.31	21.14	130.02	2
26590	1905	23.43	-2.31	21.12	129.42	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	22.93	-2.31	20.62	115.35	2
26365	1882.5	23.01	-2.31	20.7	117.49	2
26590	1905	22.92	-2.31	20.61	115.08	2

CHANNEL BANDWIDTH: 20MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
26140	1860	21.7	-2.31	19.39	86.9	2
26365	1882.5	21.74	-2.31	19.43	87.7	2
26590	1905	21.76	-2.31	19.45	88.1	2

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

3.2.2 TEST PROCEDURE

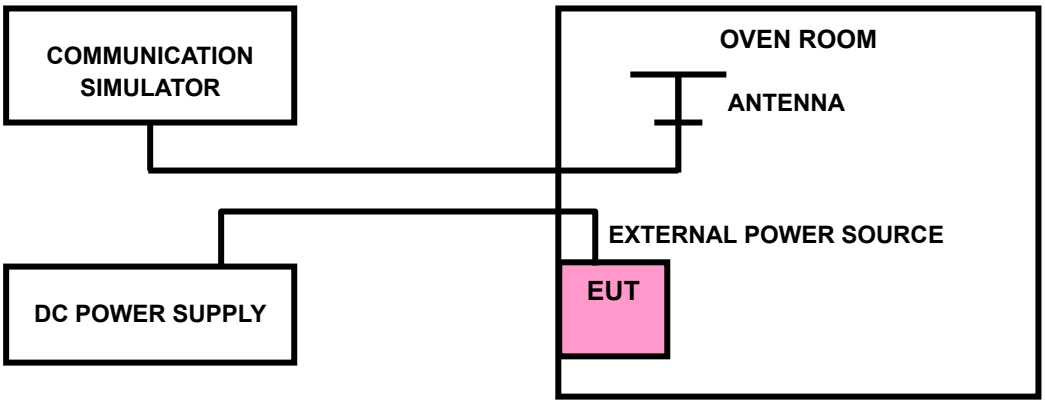
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

Please Refer to Appendix F Of this test report.

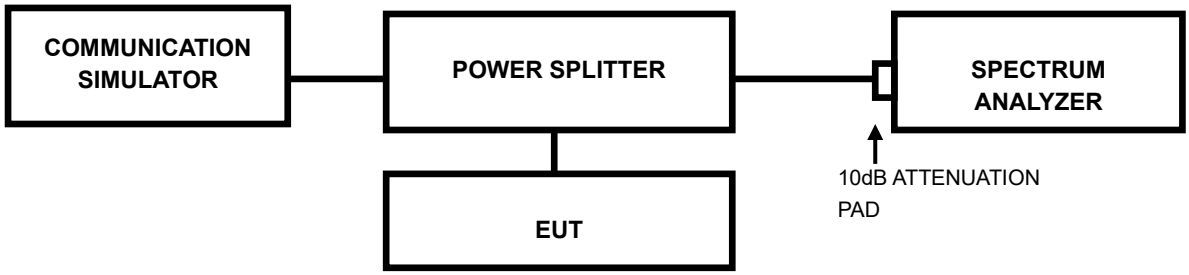
Note: VL = Low voltage(3.5V); VN/NV = Normal voltage(3.89V); VH = High voltage(4.48V);
NT = Normal temperature (25℃)

3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage
0.5 %of the total mean power of a given emission.

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

a. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
b. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

3.3.4 TEST RESULTS

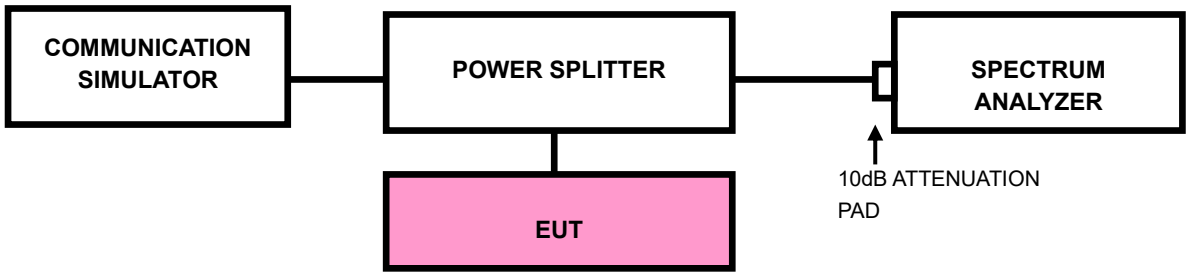
Please Refer to Appendix F Of this test report.

3.4 BAND EDGE MEASUREMENTC

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

a) All measurements were done at low and high operational frequency range

b) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.

c) Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW)

d) .Set the resolution bandwidth (RBW) ≧ 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

e) Beyond the 1MHz band from the band edge, RBW=1MHz was used.

f) Set the video bandwidth (VBW) to ≧3 x RBW.

g) Select the average power (RMS) display detector.

h) Set the number of measurement points to ≧ 1001.

i) Use auto-coupled sweep time.

j) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.

k) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.

l) Record the max trace plot into the test report.

3.4.4. TEST RESULTS

Please Refer to Appendix F Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

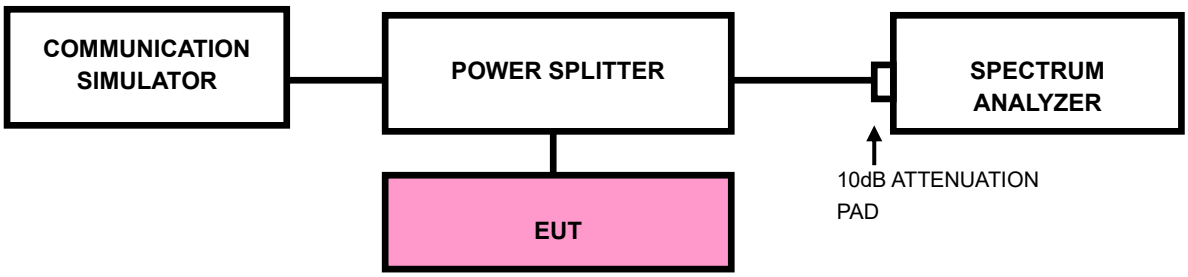
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

3.5.2 TEST PROCEDURE

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.

b. Measuring frequency range is from 30MHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.3 TEST SETUP



3.5.4 TEST RESULTS

NOTE ：The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix F Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

3.6.2 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.

b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G

c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

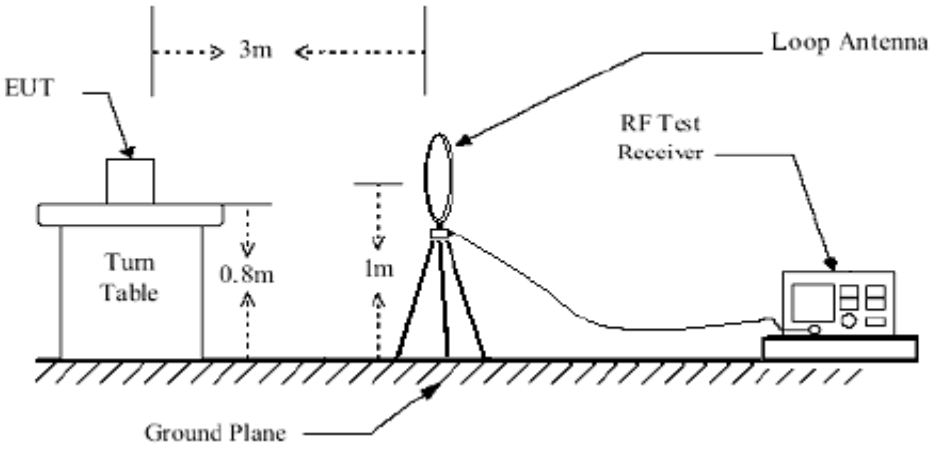
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

3.6.3 DEVIATION FROM TEST STANDARD

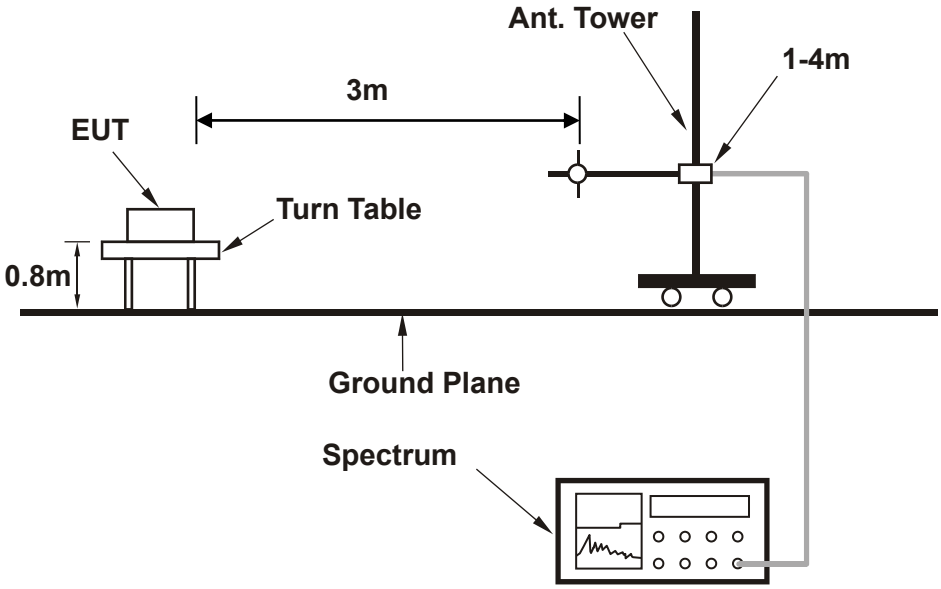
No deviation

3.6.4 TEST SETUP

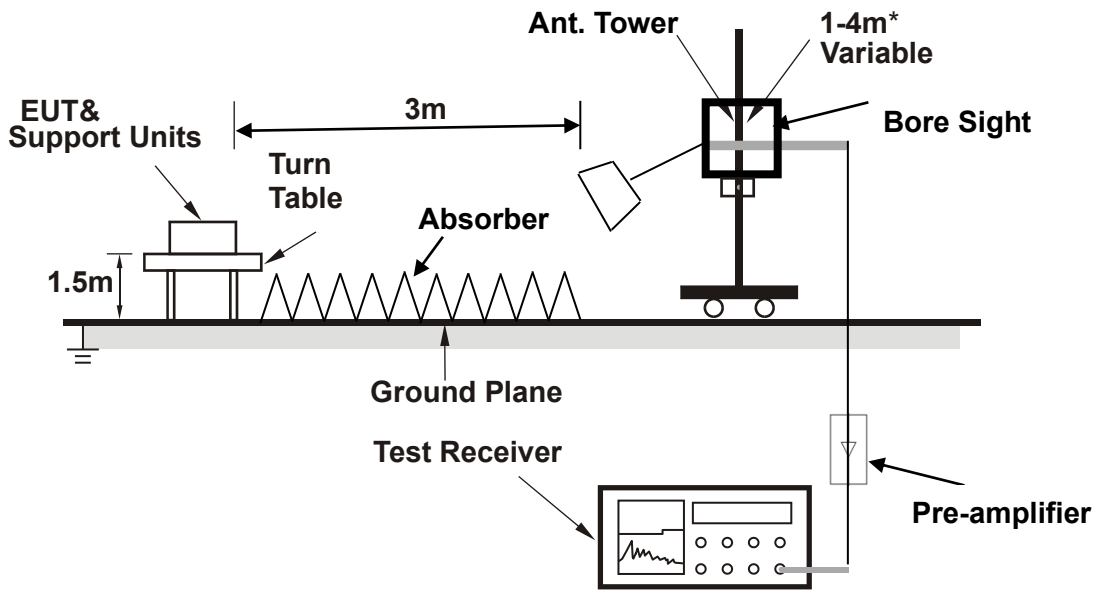
< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.6.5 TEST RESULTS

NOTE ：The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA

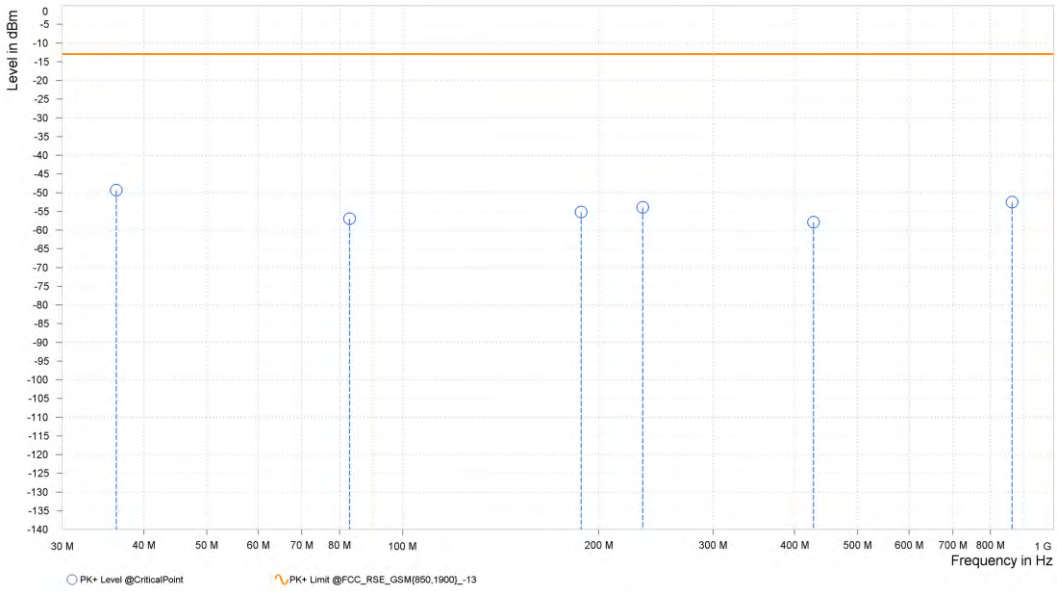
30 MHz – 1GHz data:

EDGE1900(ANT 3):

CHANNEL BANDWIDTH: 512 ~810

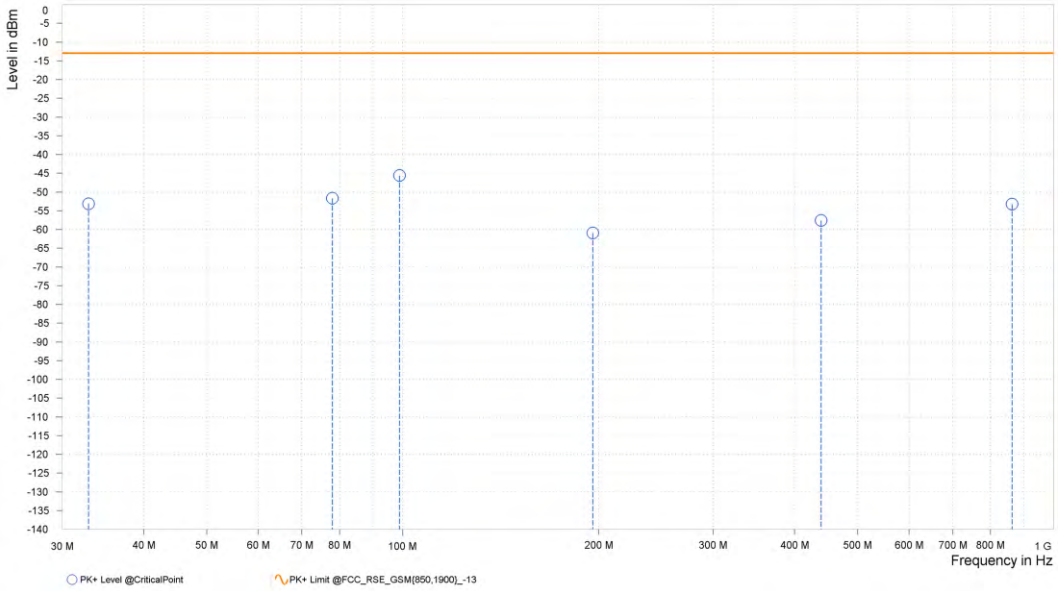
MODE	TX channel 661	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	36.305	-49.36	-13.00	36.36	4.55	H	5	2.00
1	82.865	-56.99	-13.00	43.99	-8.21	H	151.5	2.00
1	188.110	-55.19	-13.00	42.19	0.27	H	102.1	1.00
1	233.700	-53.94	-13.00	40.94	7.63	H	1	1.00
1	427.700	-57.90	-13.00	44.90	8.62	H	355	1.00
1	863.715	-52.53	-13.00	39.53	11.96	H	257.9	2.00



MODE	TX channel 661	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	32.910	-53.12	-13.00	40.12	-1.18	V	356.1	1.00
1	78.015	-51.71	-13.00	38.71	-5.29	V	356.1	1.00
1	98.870	-45.61	-13.00	32.61	10.66	V	95.3	2.00
1	195.870	-60.95	-13.00	47.95	-0.78	V	48.2	1.00
1	439.340	-57.61	-13.00	44.61	7.85	V	212	1.00
1	863.715	-53.24	-13.00	40.24	11.71	V	149.1	2.00



ABOVE 1GHz DATA

Note: For higher frequency, the emission is too low to be detected.

WORST-CASE DATA

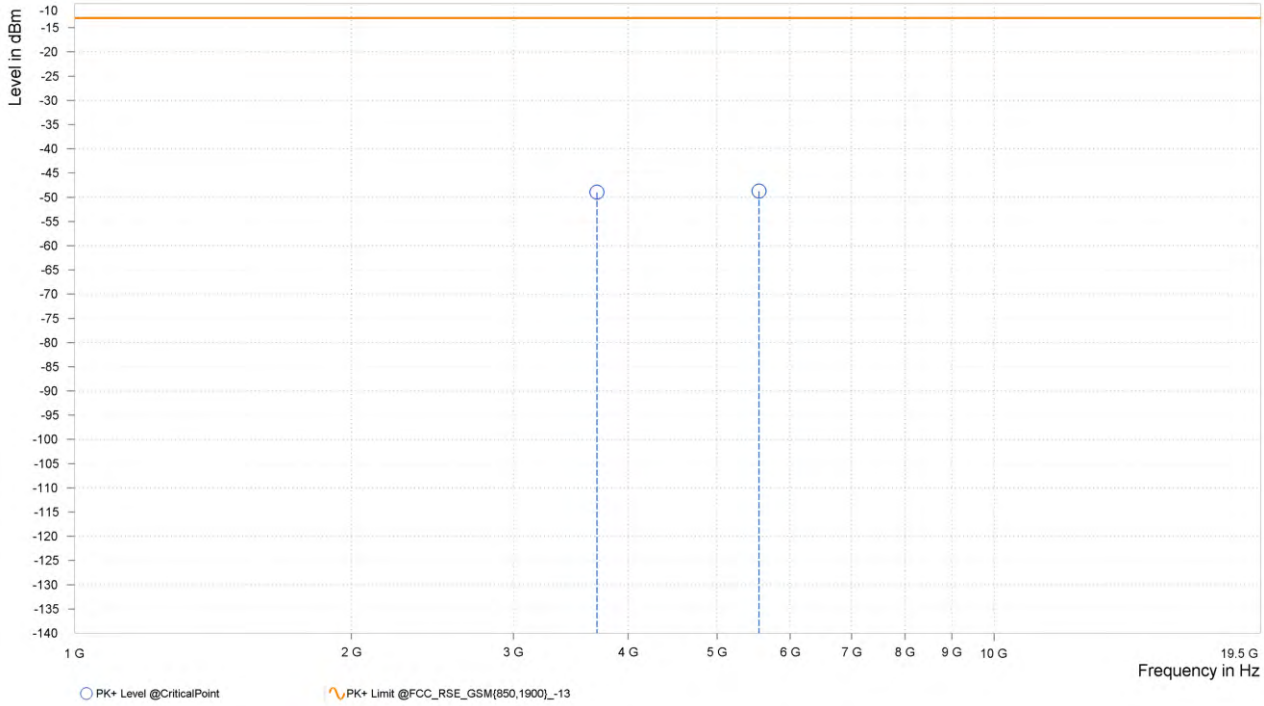
ANT1:

GSM 1900:

CH 512

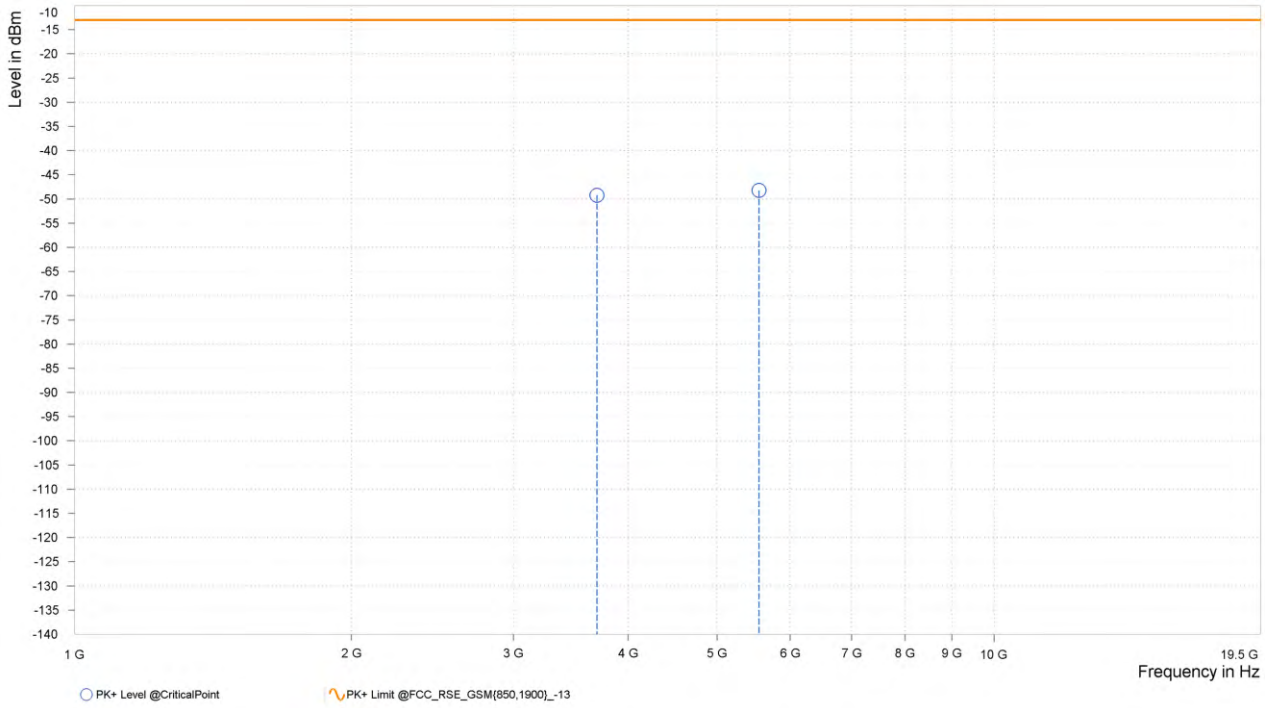
MODE	TX channel 512	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,700.000	-48.97	-13.00	35.97	20.98	H	359	1.00
4	5,550.000	-48.74	-13.00	35.74	23.76	H	359	2.00



MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

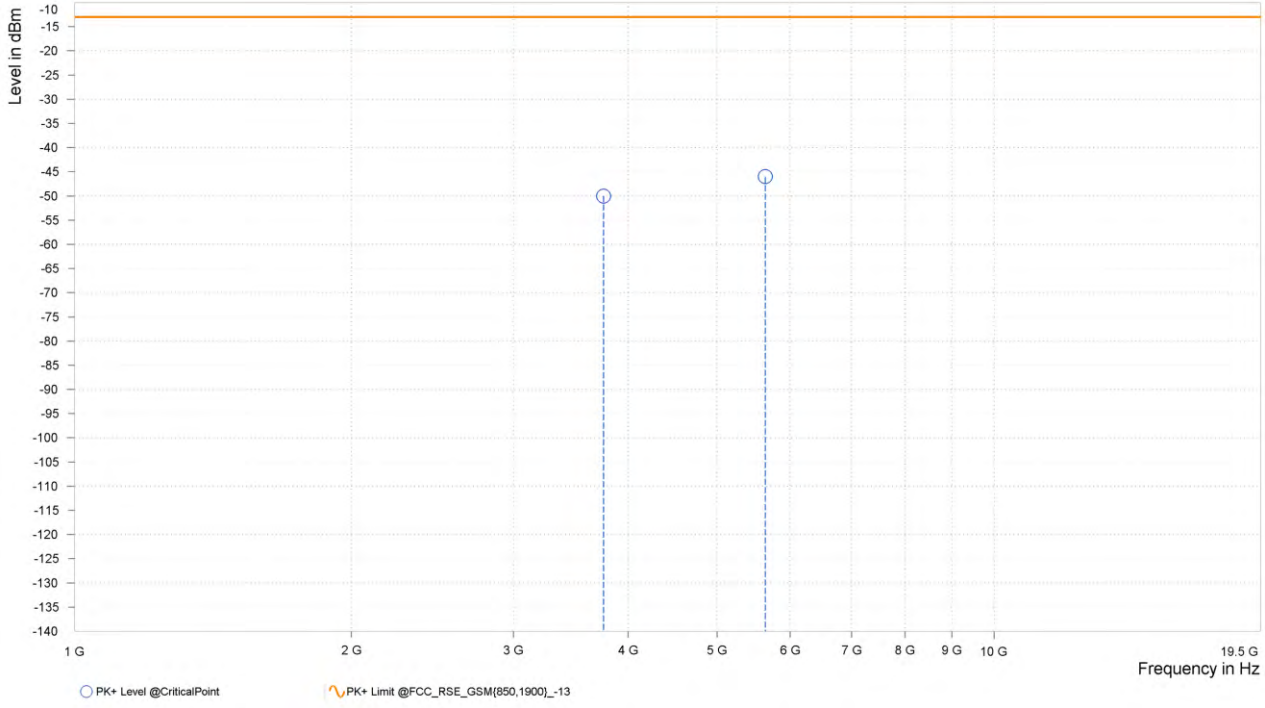
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,700.000	-49.24	-13.00	36.24	21.57	V	81.5	2.00
4	5,550.000	-48.24	-13.00	35.24	24.45	V	359	1.00



CH 661

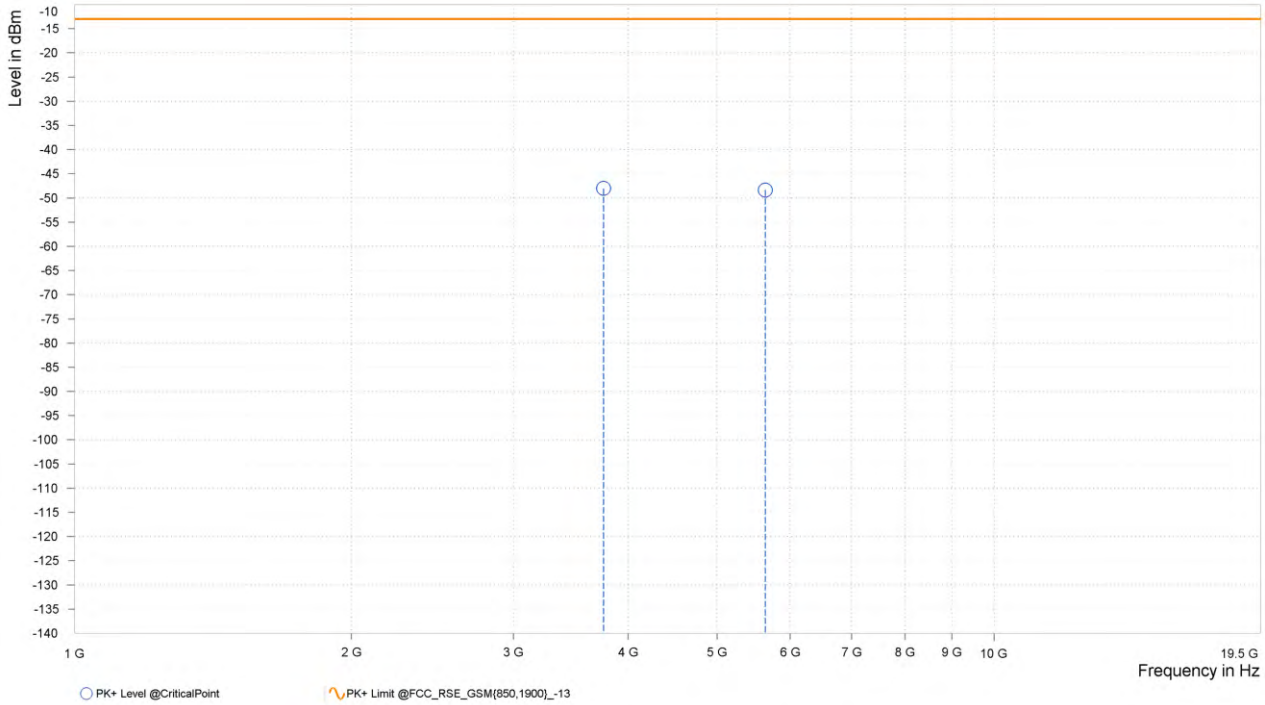
MODE	TX channel 661	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-50.02	-13.00	37.02	21.19	H	235.9	1.00
4	5,640.000	-46.00	-13.00	33.00	24.12	H	235.9	1.00



MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

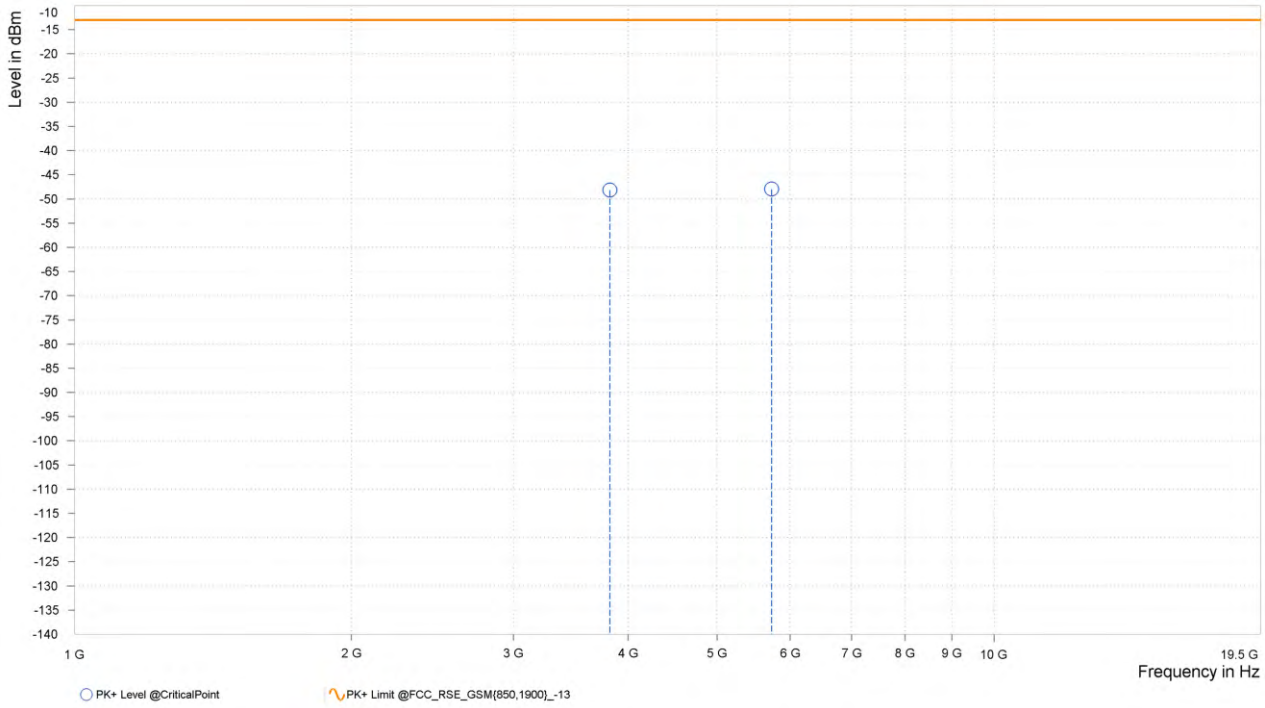
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-48.03	-13.00	35.03	21.68	V	1	1.00
4	5,640.000	-48.35	-13.00	35.35	24.46	V	0.9	2.00



CH 810

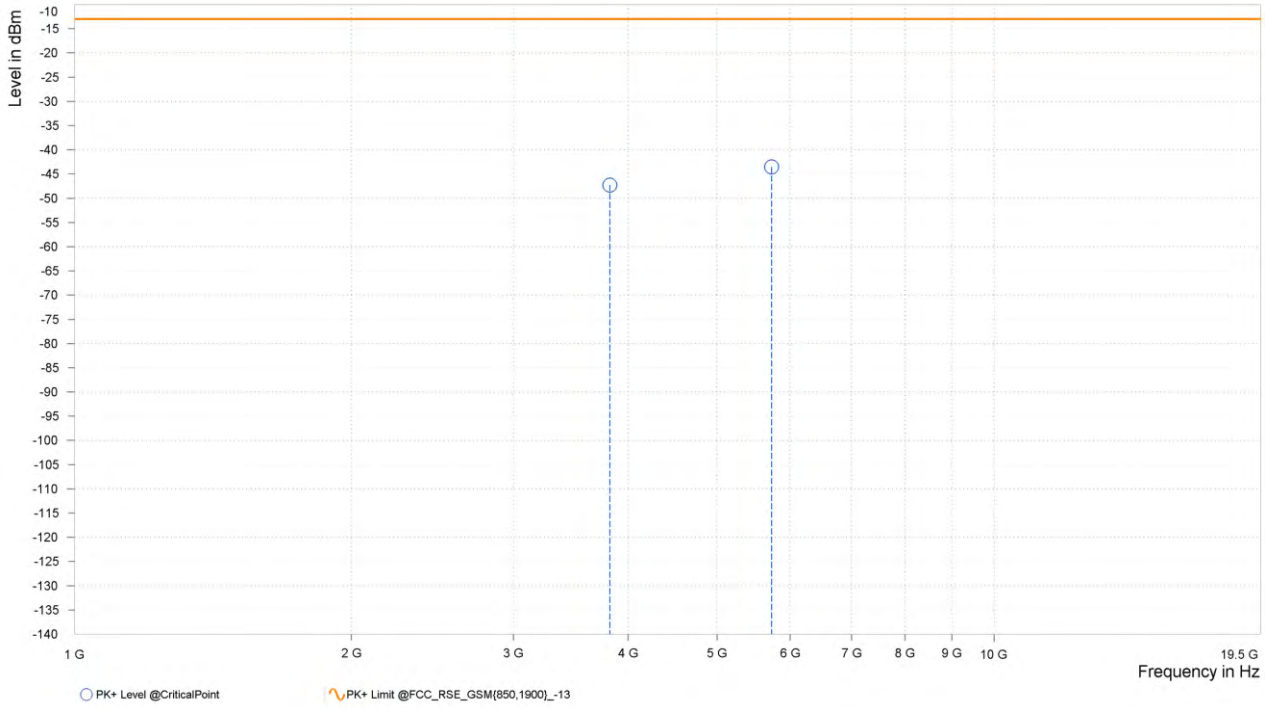
MODE	TX channel 810	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,819.500	-48.16	-13.00	35.16	21.85	H	1	1.00
4	5,729.000	-47.96	-13.00	34.96	24.45	H	1	1.00



MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,819.500	-47.27	-13.00	34.27	22.20	V	359	2.00
4	5,729.000	-43.54	-13.00	30.54	24.91	V	125.3	2.00

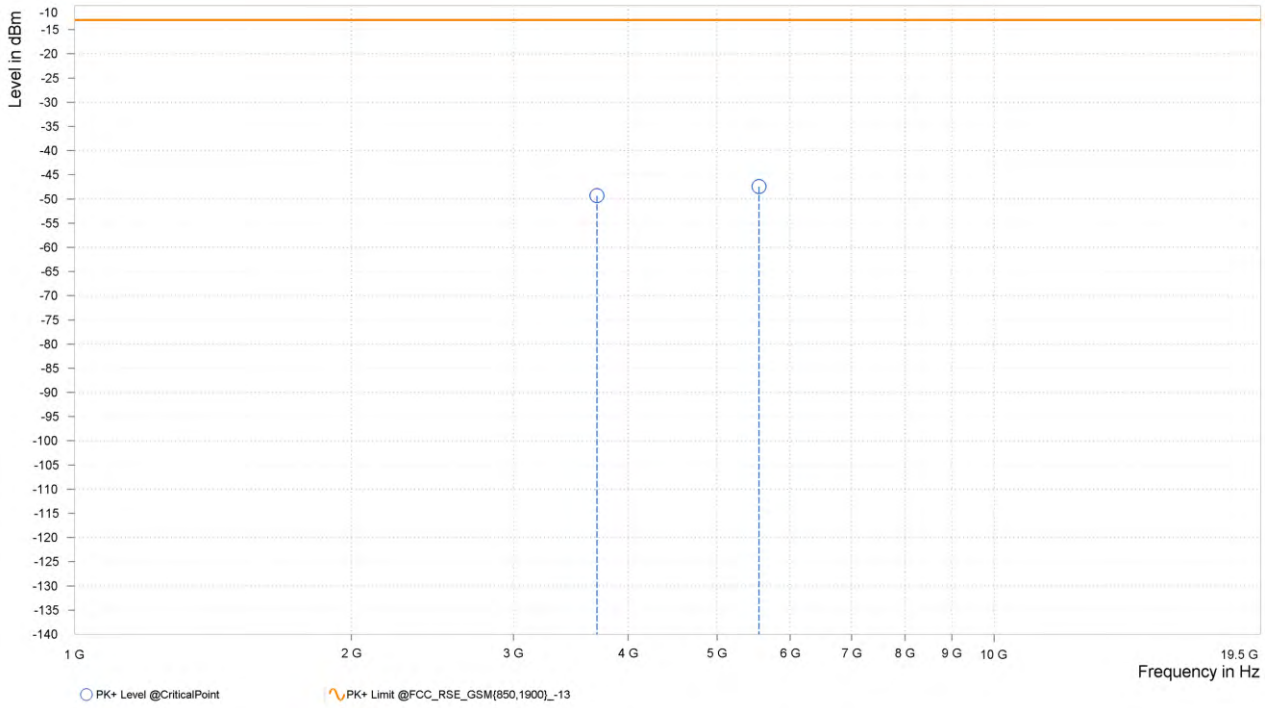


EDGE 1900:

CH 512

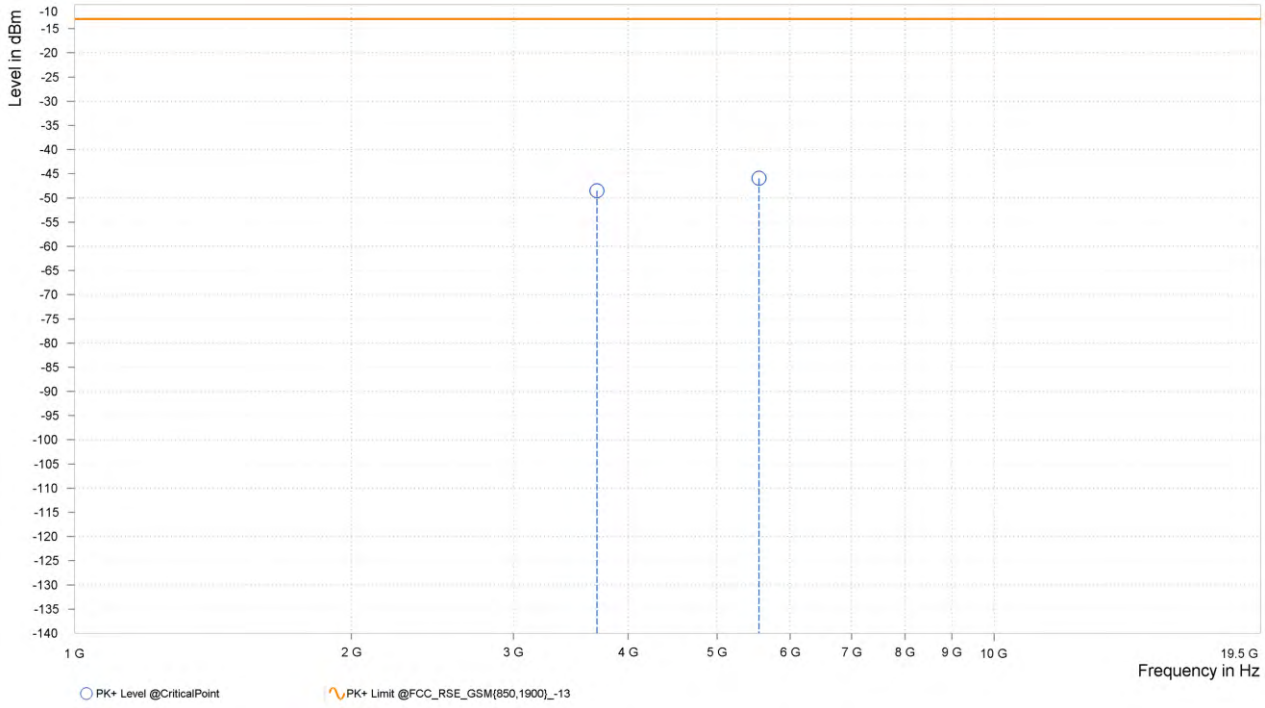
MODE	TX channel 512	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,700.000	-49.35	-13.00	36.35	20.98	H	1	1.00
4	5,550.600	-47.43	-13.00	34.43	23.76	H	359	1.00



MODE	TX channel 512	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

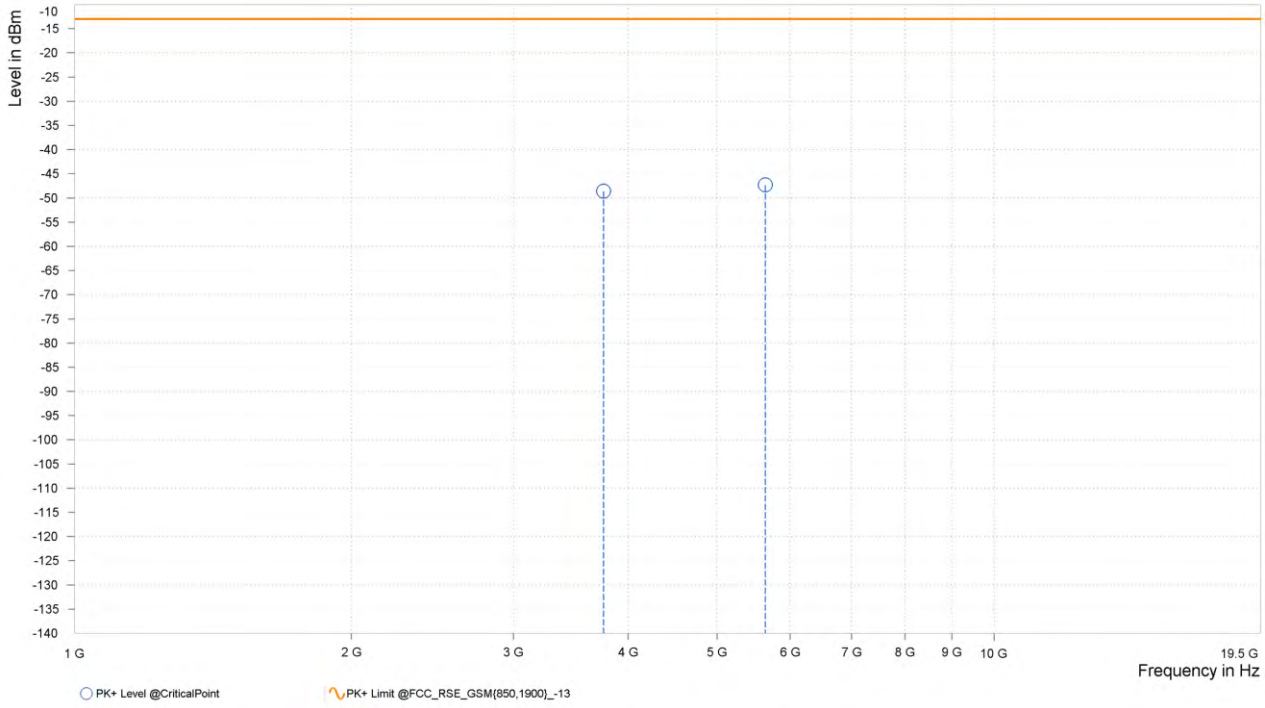
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,700.000	-48.50	-13.00	35.50	21.57	V	359.2	1.00
4	5,550.600	-45.95	-13.00	32.95	24.45	V	1	2.00



CH 661

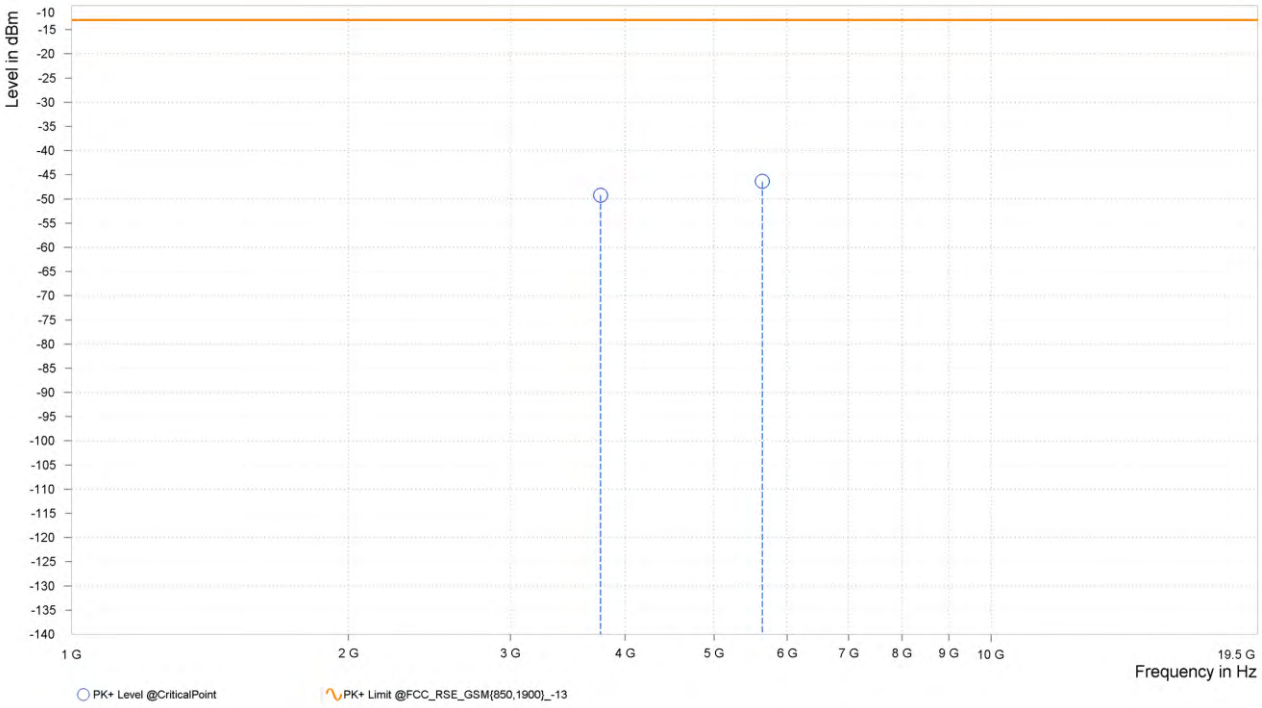
MODE	TX channel 661	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-48.62	-13.00	35.62	21.19	H	359	2.00
4	5,640.000	-47.29	-13.00	34.29	24.12	H	237.1	1.00



MODE	TX channel 661	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

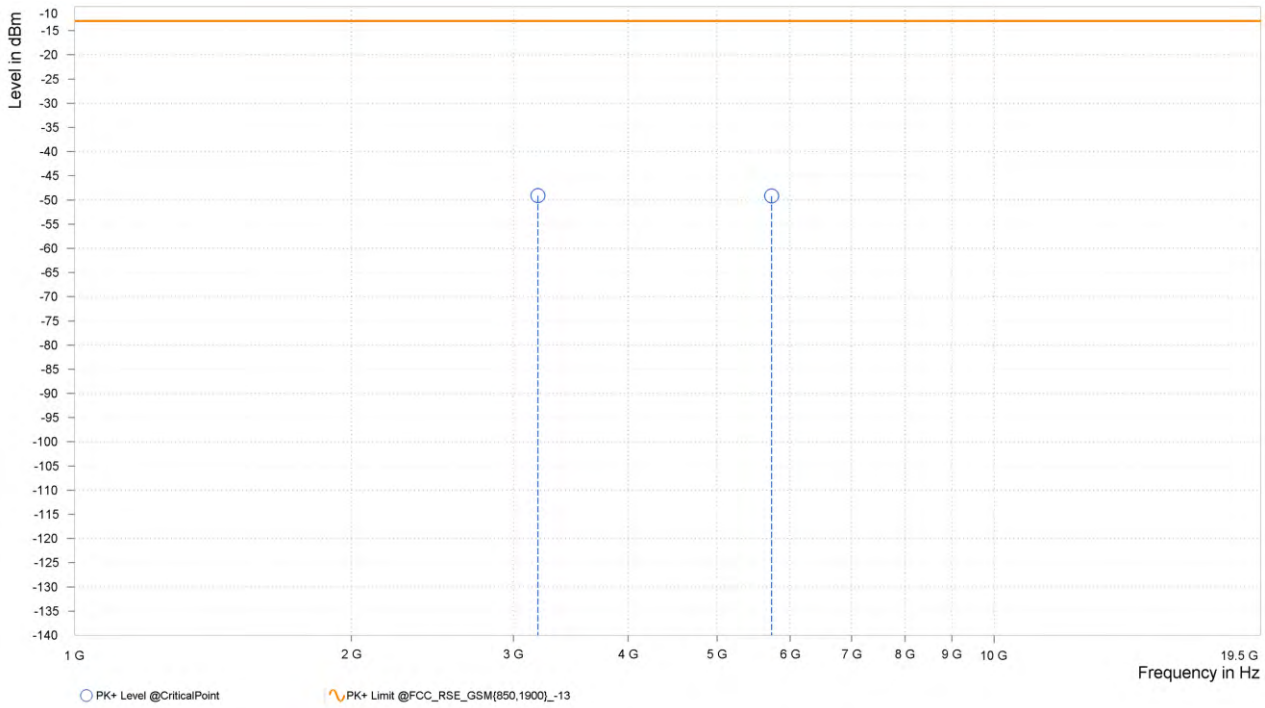
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-49.21	-13.00	36.21	21.68	V	124.1	2.00
4	5,640.000	-46.35	-13.00	33.35	24.46	V	0.9	2.00



CH 810

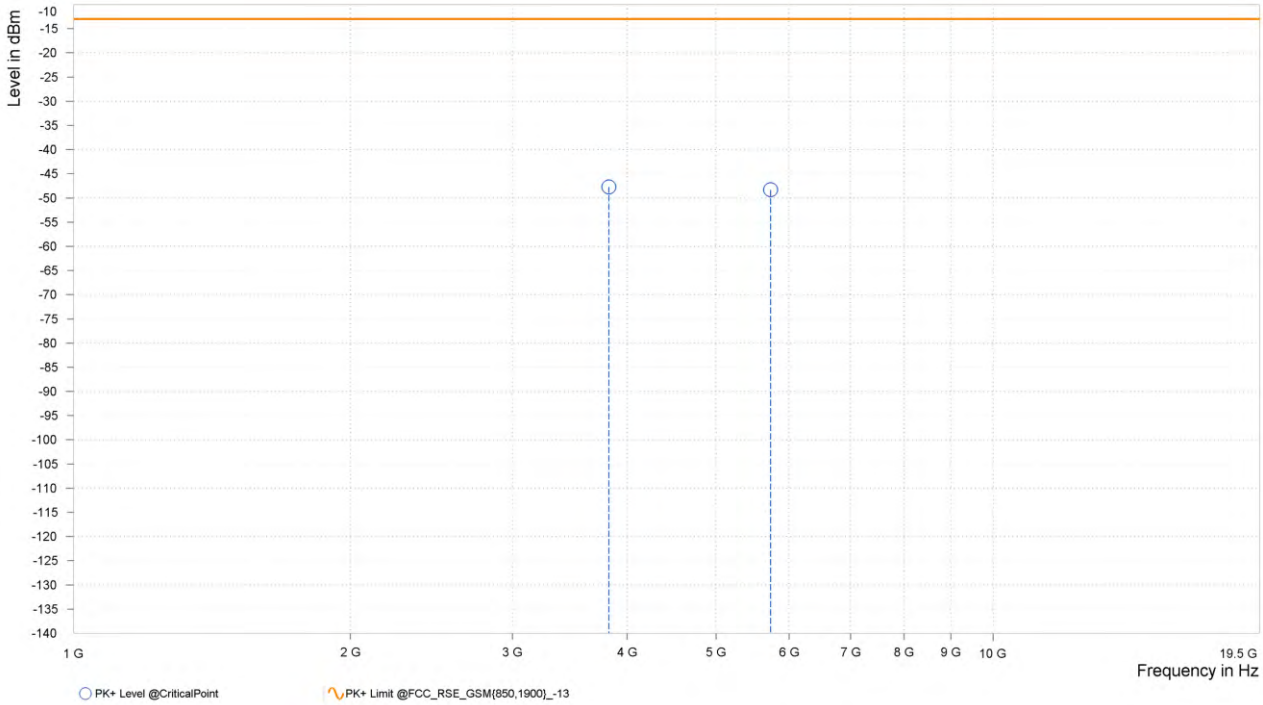
MODE	TX channel 810	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,189.600	-49.10	-13.00	36.10	20.82	H	1	2.00
4	5,729.400	-49.19	-13.00	36.19	24.45	H	1	1.00



MODE	TX channel 810	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,819.600	-47.69	-13.00	34.69	22.20	V	359	2.00
4	5,729.400	-48.32	-13.00	35.32	24.92	V	1	2.00

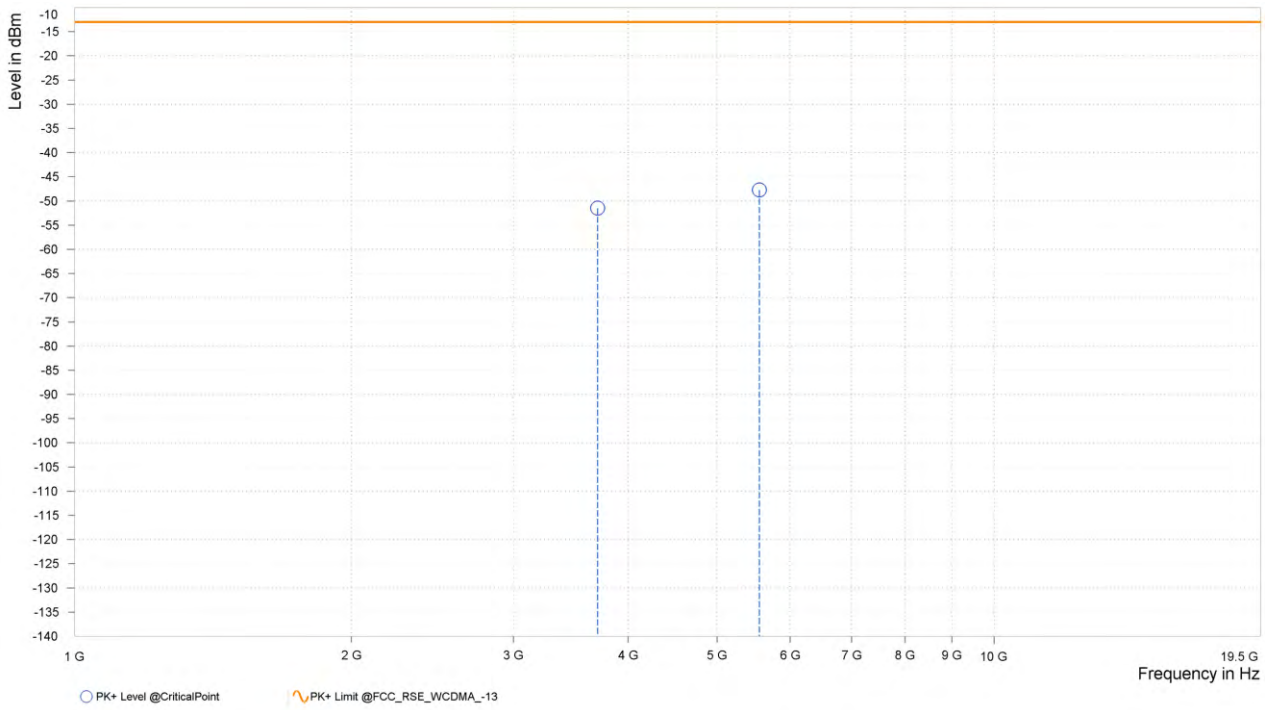


WCDMA Band II

CH 9262

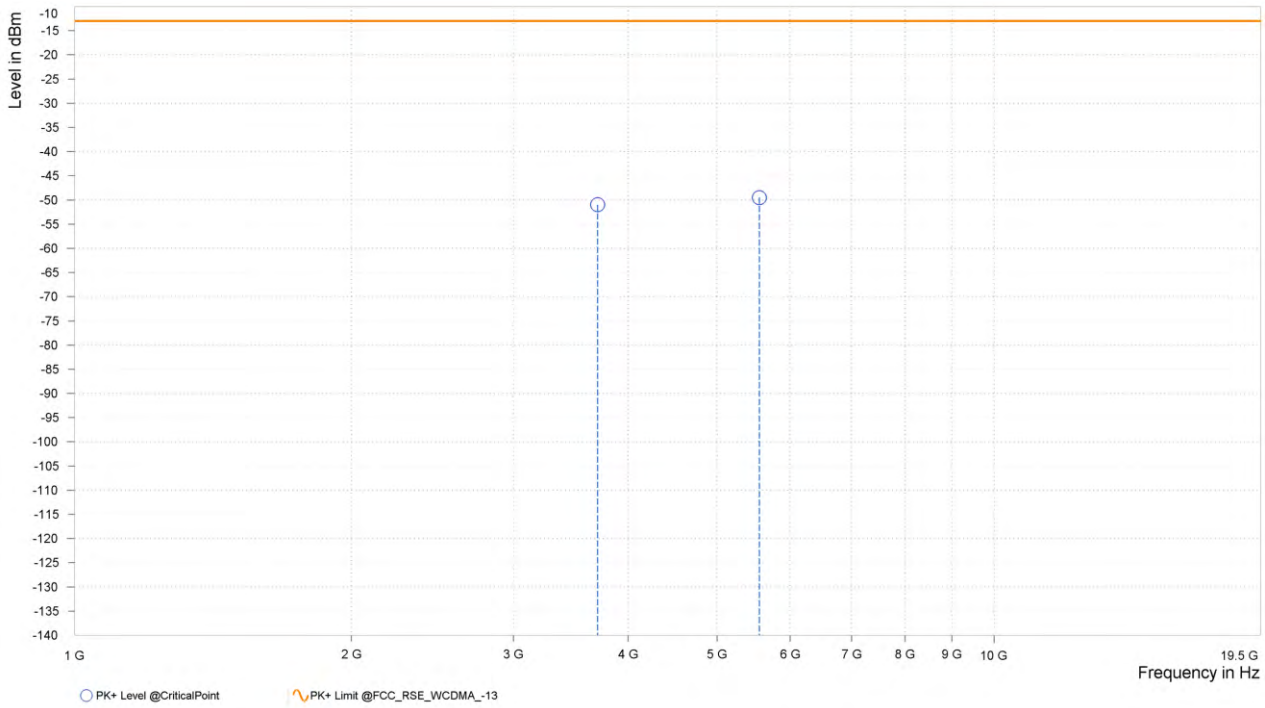
MODE	TX channel 9262	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,704.800	-51.49	-13.00	38.49	20.95	H	6.2	2.00
4	5,557.200	-47.74	-13.00	34.74	23.75	H	1	1.00



MODE	TX channel 9262	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

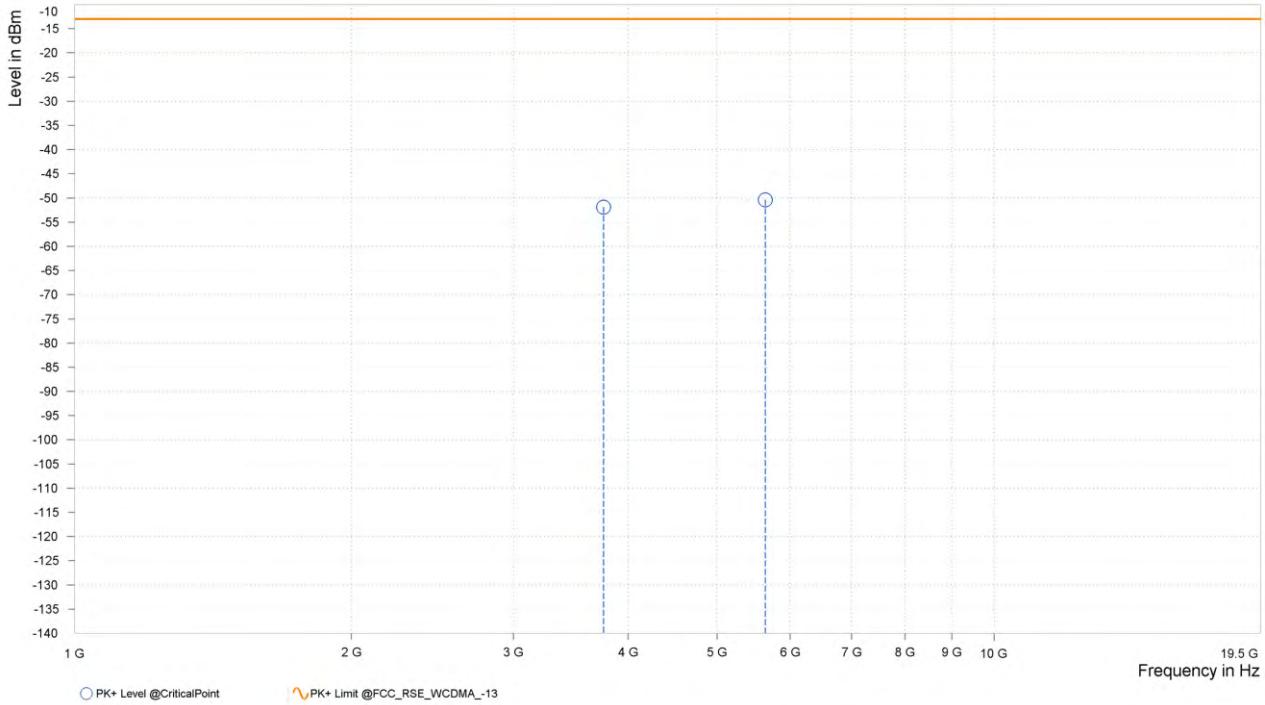
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,704.800	-50.97	-13.00	37.97	21.55	V	0.9	2.00
4	5,557.200	-49.49	-13.00	36.49	24.45	V	0.9	2.00



CH 9400

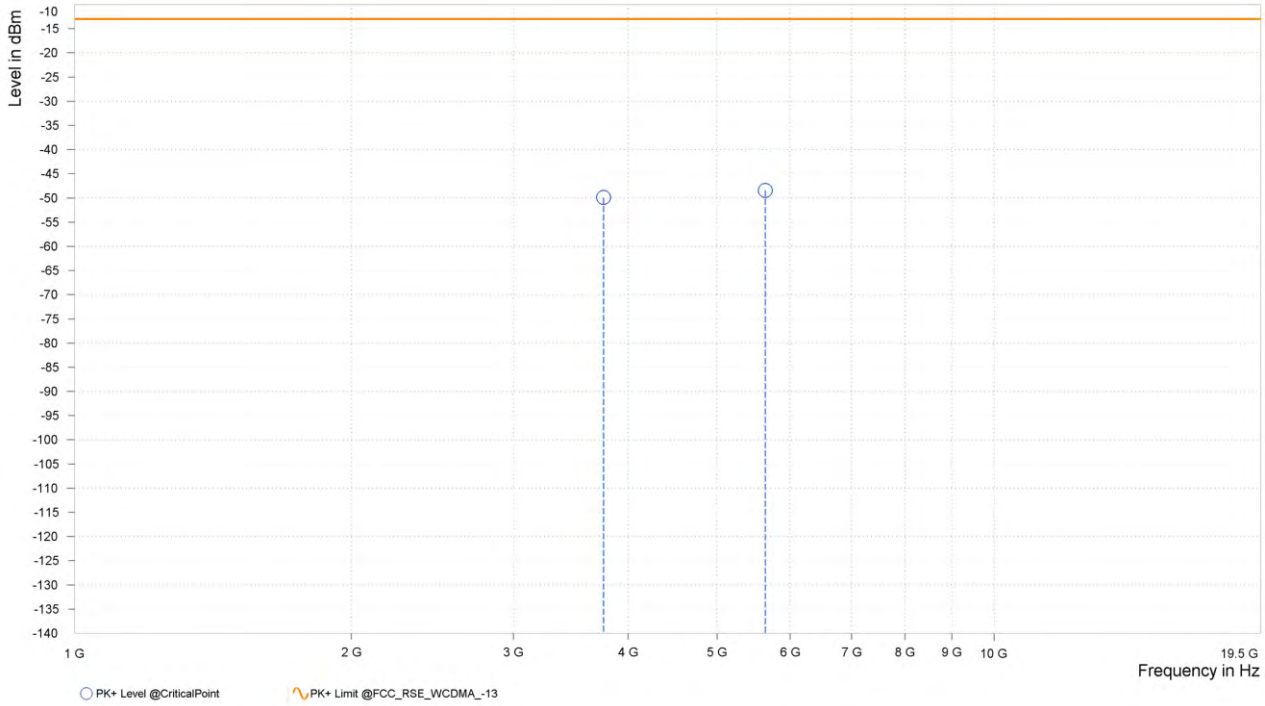
MODE	TX channel 9400	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-51.90	-13.00	38.90	21.19	H	351.2	1.00
4	5,640.000	-50.37	-13.00	37.37	24.12	H	359	1.00



MODE	TX channel 9400	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

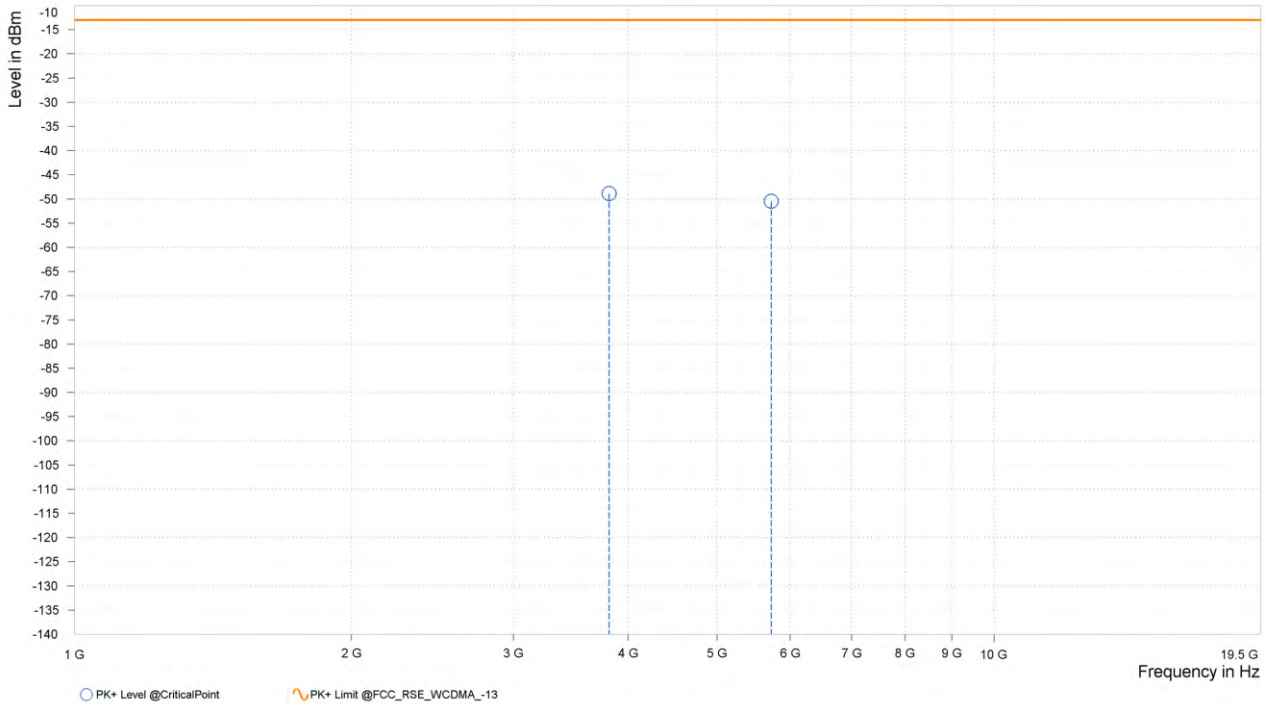
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,760.000	-49.92	-13.00	36.92	21.68	V	337.4	1.00
4	5,640.000	-48.44	-13.00	35.44	24.46	V	26	2.00



CH 9538

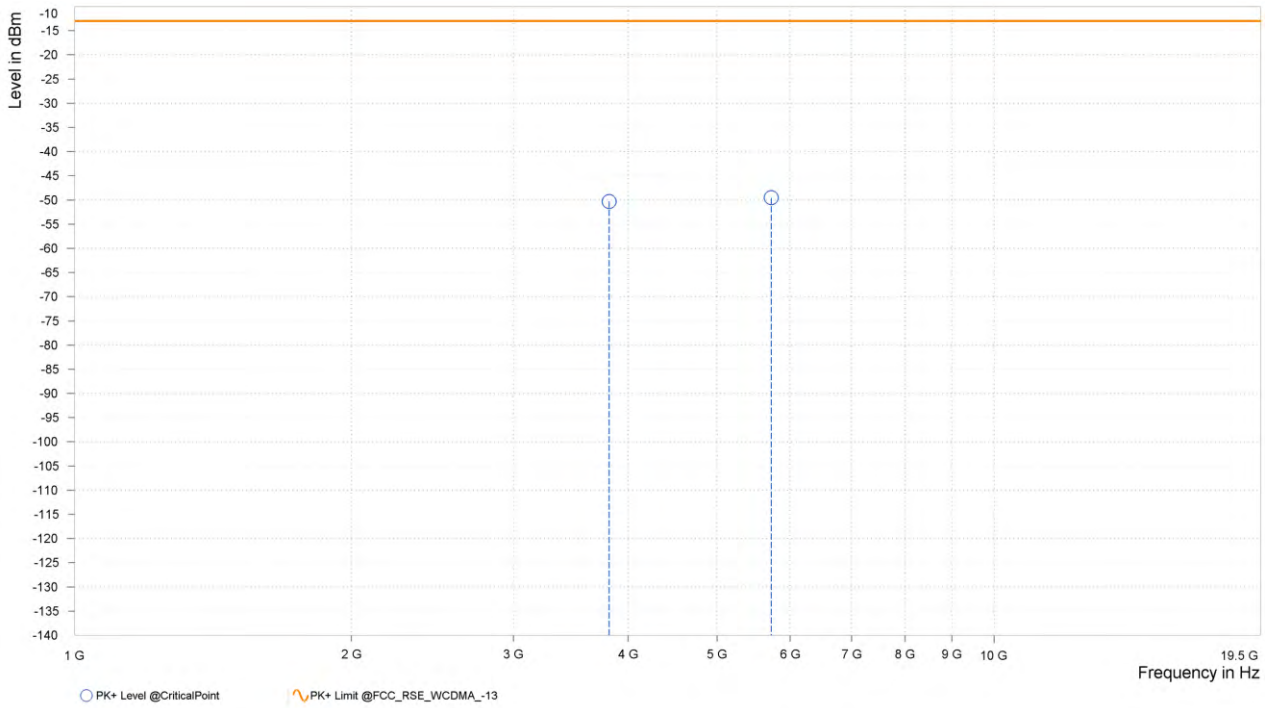
MODE	TX channel 9538	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,815.200	-48.88	-13.00	35.88	21.82	H	1	2.00
4	5,722.800	-50.50	-13.00	37.50	24.42	H	160.6	1.00



MODE	TX channel 9538	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,815.200	-50.31	-13.00	37.31	22.15	V	194.6	2.00
4	5,722.800	-49.53	-13.00	36.53	24.88	V	179.8	1.00

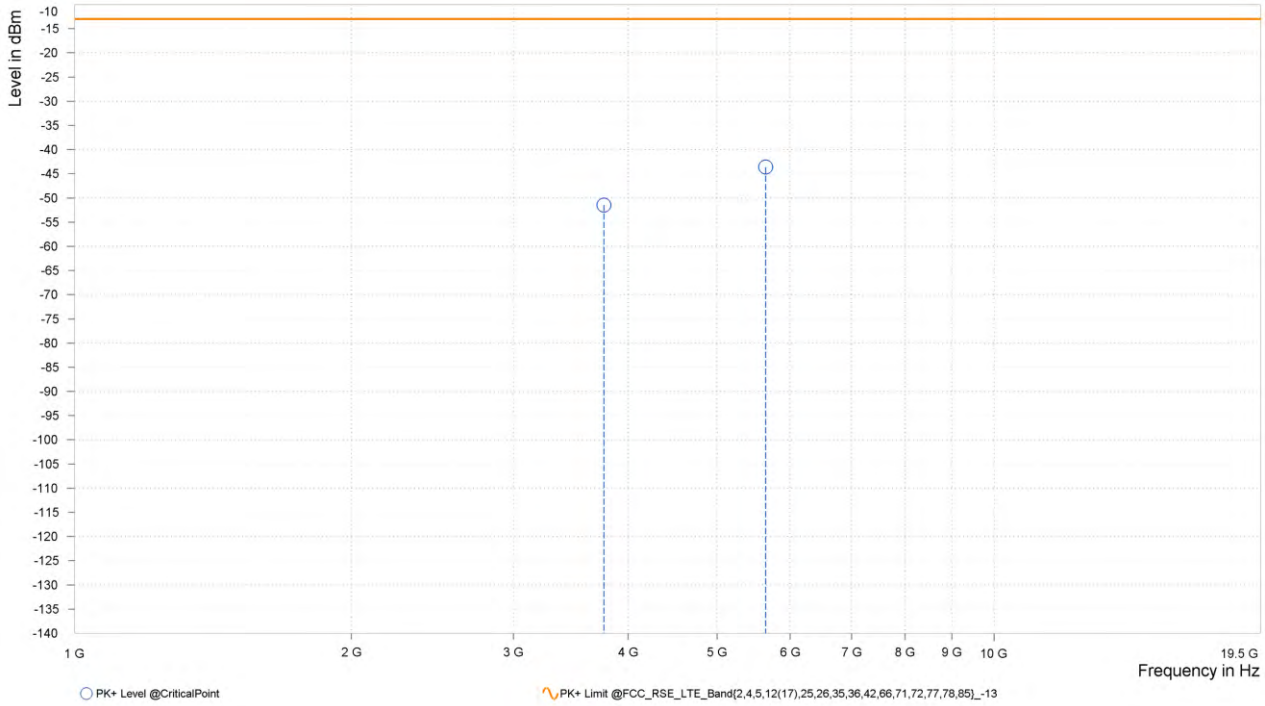


LTE Band 25

CHANNEL BANDWIDTH: 1.4MHz / QPSK

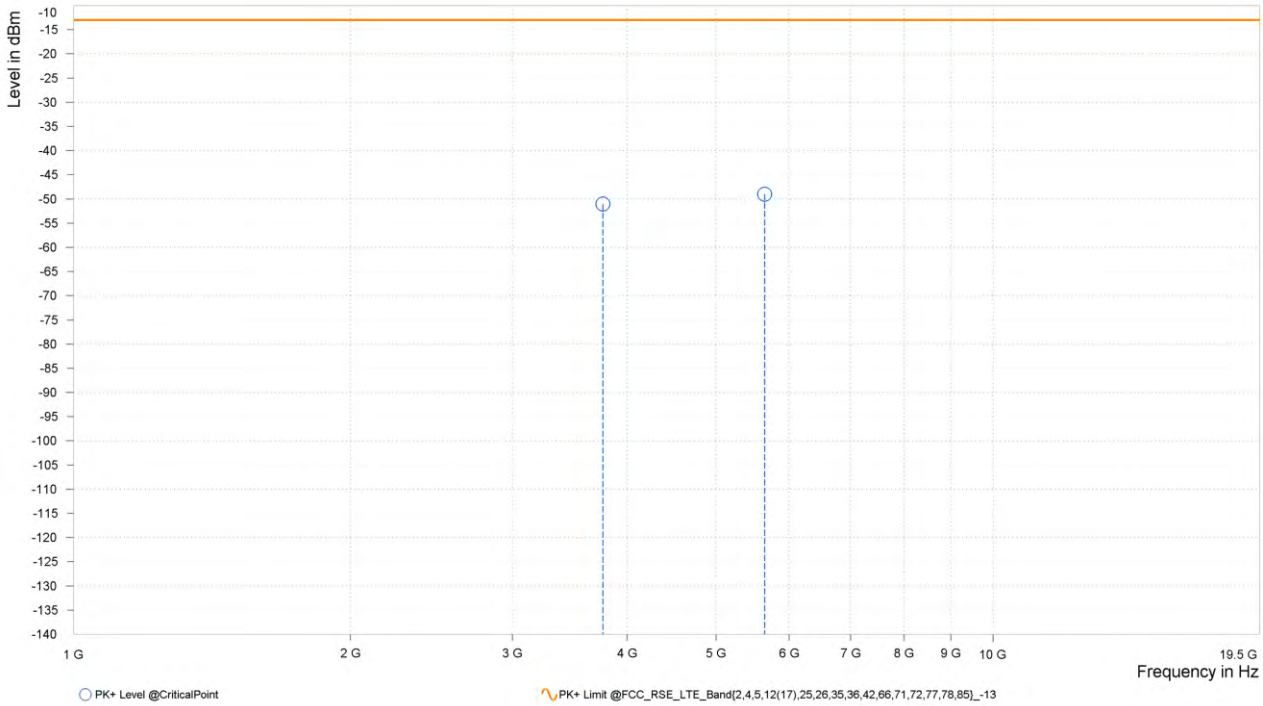
MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,763.740	-51.45	-13.00	38.45	21.25	H	152.3	1.00
4	5,646.000	-43.60	-13.00	30.60	24.13	H	0.9	2.00

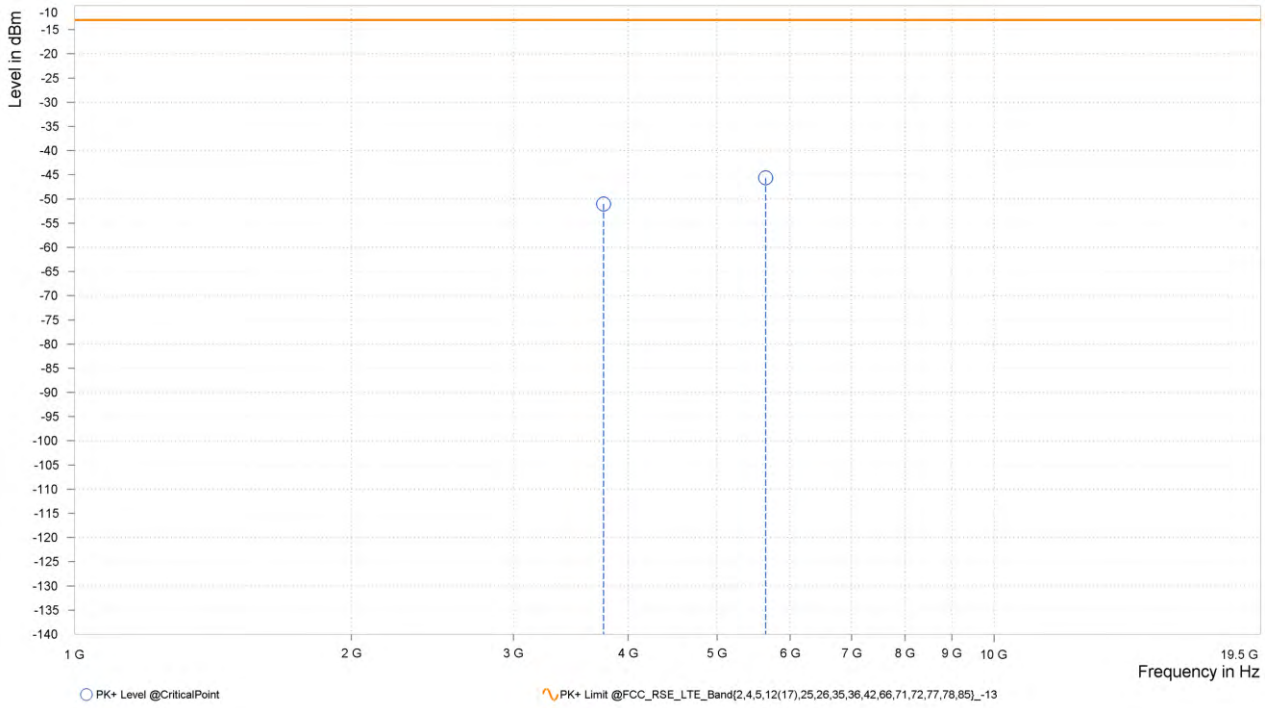


MODE	TX channel 26365	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,763.740	-51.07	-13.00	38.07	21.70	V	331.6	1.00
4	5,645.610	-49.01	-13.00	36.01	24.48	V	34.3	2.00



CHANNEL BANDWIDTH: 3MHz / QPSK

MODE	TX channel 26365	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	3,762.300	-51.04	-13.00	38.04	21.24	H	359.1	1.00
4	5,643.450	-45.62	-13.00	32.62	24.13	H	1	2.00