FCC TEST REPORT

(PART 90)

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 90, Subpart R, S** ☒ **ANSI/TIA/EIA-603- D**
☒ **FCC Part 2** ☒ **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

TABLE OF CONTENTS

RELEASE CONTROL RECORD 4

1 SUMMARY OF TEST RESULTS 5

1.1 MEASUREMENT UNCERTAINTY 6
1.2 TEST SITE AND INSTRUMENTS 7

2 GENERAL INFORMATION 10

2.1 GENERAL DESCRIPTION OF EUT 10
2.2 CONFIGURATION OF SYSTEM UNDER TEST 14
2.3 DESCRIPTION OF SUPPORT UNITS 15
2.4 DESCRIPTION OF TEST MODES 15
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS 17

3 TEST TYPES AND RESULTS 18

3.1 OUTPUT POWER MEASUREMENT 18
3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT 18
3.1.2 TEST PROCEDURES 18
3.1.3 TEST SETUP 19
3.1.4 TEST RESULTS 20
3.2 FREQUENCY STABILITY MEASUREMENT 28
3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT 28
3.2.2 TEST PROCEDURE 28
3.2.3 TEST SETUP 28
3.2.4 TEST RESULTS 29
3.3 OCCUPIED BANDWIDTH MEASUREMENT 30
3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT 30
3.3.2 TEST SETUP 30
3.3.3 TEST PROCEDURES 30
3.3.4 TEST RESULTS 31
3.4 EMISSION MASK MEASUREMENT 32
3.4.1 LIMITS OF EMISSION MASK MEASUREMENT 32
3.4.2 TEST SETUP 32
3.4.3 TEST PROCEDURES 33
3.4.4 TEST RESULTS 34
3.5 CONDUCTED SPURIOUS EMISSIONS 35
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT 35
3.5.2 TEST PROCEDURE 35
3.5.3 TEST SETUP 35
3.5.4 TEST RESULTS 36
3.6 RADIATED EMISSION MEASUREMENT 37
3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT 37
3.6.2 TEST PROCEDURES 37
3.6.3 DEVIATION FROM TEST STANDARD 37
3.6.4 TEST SETUP 38
3.6.5 TEST RESULTS 40
3.7 PEAK TO AVERAGE RATIO 54
3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT 54
3.7.2 TEST SETUP 54
3.7.3 TEST PROCEDURES 54
3.7.4 TEST RESULTS 55

4 INFORMATION ON THE TESTING LABORATORIES 56

5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB 57

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-NQN2403180115RF10	Original release	May. 31, 2024

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 90 & Part 2			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**TEST LAB***
§2.1046 §90.635(b)	Conducted Output Power (Band26)	PASS	B
§2.1055 §90.213	Frequency Stability	PASS	A
§2.1049 §90.209	Occupied Bandwidth	PASS	A
§2.1051 §90.691(a)	Emission Masks	PASS	A
§2.1051 §90.691(a)	Conducted Spurious Emissions	PASS	A
§2.1053 §90.691	Radiated Spurious Emissions	PASS	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.

1.1 MEASUREMENT 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
Maximum Peak Output Power	±2.06dB
Frequency Stability	±76.97Hz
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions (30MHz~1GHz)	±4.98dB
Radiated emissions (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
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-03-20-070	Apr.27,24	Apr.26,25
Temperature Chamber	votsch	VT4002	585660781000050	May.31,22	May.30,24
Temperature Chamber	votsch	VT4002	585660781000050	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 TECHNOLOGY	**LTE**	QPSK, 16QAM, 64QAM
FREQUENCY RANGE	**LTE Band 26 (Channel Bandwidth: 1.4MHz)**	814.7MHz ~ 823.3MHz
	LTE Band 26 (Channel Bandwidth: 3MHz)	815.5MHz ~ 822.5MHz
	LTE Band 26 (Channel Bandwidth: 5MHz)	816.5MHz ~ 821.5MHz
	LTE Band 26 (Channel Bandwidth: 10MHz)	819MHz
EMISSION DESIGNATOR	**LTE Band 26 (Channel Bandwidth: 1.4MHz)**	QPSK: 1M11G7D
		16QAM: 1M11W7D
	LTE Band 26 (Channel Bandwidth: 3MHz)	QPSK: 2M70G7D
		16QAM: 2M71W7D
	LTE Band 26 (Channel Bandwidth: 5MHz)	QPSK: 4M52G7D
		16QAM: 4M52W7D
	LTE Band 26 (Channel Bandwidth: 10MHz)	QPSK: 9M00G7D
		16QAM: 9M00W7D
MAX. EIRP POWER	**LTE Band 26 (Channel Bandwidth: 1.4MHz)**	29.24mW
	LTE Band 26 (Channel Bandwidth: 3MHz)	28.71mW
	LTE Band 26 (Channel Bandwidth: 5MHz)	28.91mW
	LTE Band 26 (Channel Bandwidth: 10MHz)	27.93mW
ANTENNA TYPE	ANT0: PIFA Antenna with -7.18dBi gain for GSM850/WCDMA V/LTE B5/LTE B26	
HW VERSION	V2	
SW VERSION	00WW_0_340	
I/O PORTS	Refer to user's manual	
DATA CABLE	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
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_LPDD R4X_64Gb_SMT
eMMC2 (=ROM2)	Samsung	Samsung	KM8F9001JM-B813T07	uMCP_254-ball FBGA_256GB_LPDD R4X_64Gb_SMT
eMMC3 (=ROM3)	Samsung	Samsung	KM8F9001MM-B830T07	uMCP_254-ball FBGA_256GB_LPDD R4X_96Gb_SMT
Battery	HMD	Gaoyuan	HBA4633AA	RatedCapacity:4500mAh/17.51Wh

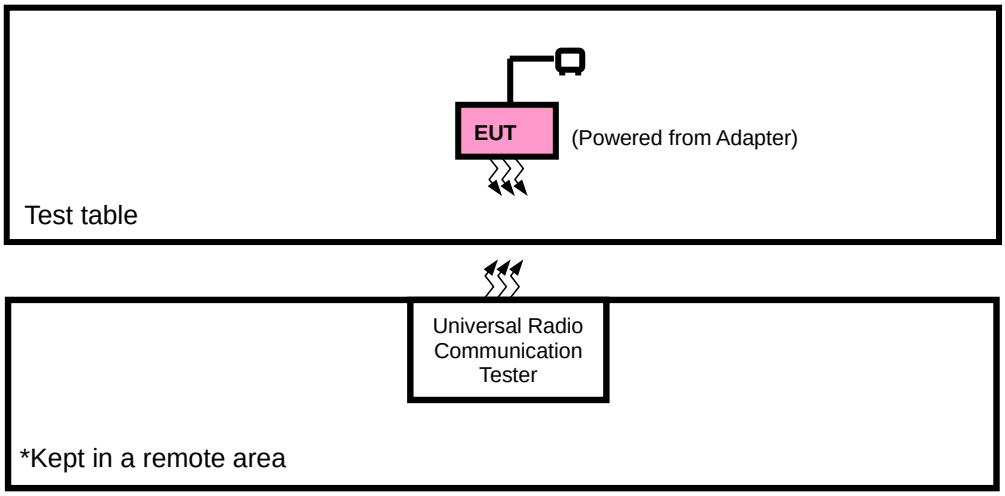
7. The differences between the first and second supply as follows and the specifications and RF parameters are the same.

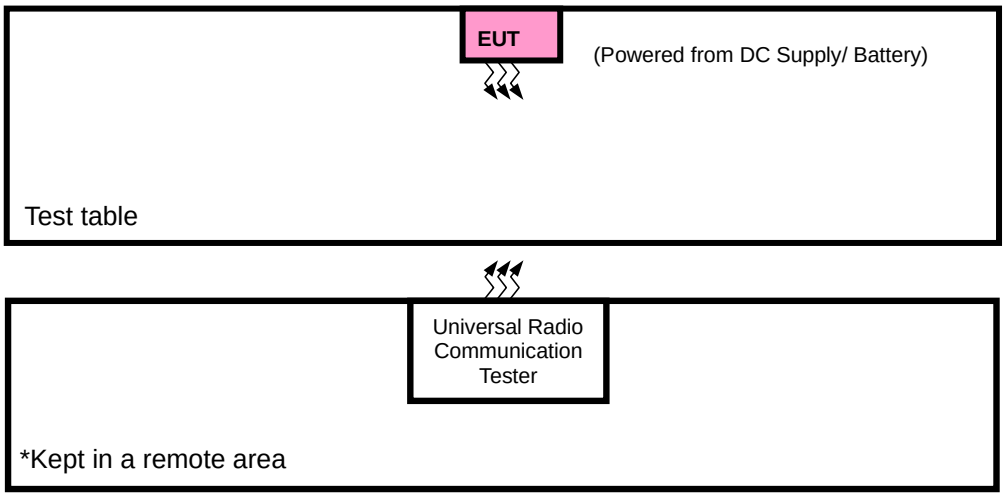
Key Component list						
No.	Component	Description	First supply		Second supply	
			Supplier	Spec	Supplier	Spec
1	USB/ Analog audio headsets	Analog Audio Switch	Dioo	DIO4480WL25 Analog switch & MUX_WLCSP25_2.7-5.5V_3-Channel_1000MHz _SMT	Will	WAS4780C-25/TR Analog switch & MUX_CSP-25L_2.7-5.5V_2-Channel_950MHz_ 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

8.

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 DESCRIPTION OF TEST MODES

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 ERP/EIRP and radiated emission was found when positioned on X-plane for LTE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	**EUT + Adapter with LTE link**
B	**EUT + DC Supply with LTE link**

LTE BAND 26 MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26705 to 26775	26705, 26740, 26775	3MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26715 to 26765	26715, 26740, 26765	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		26740	26740	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	26740	26740	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		26705 to 26775	26705, 26740, 26775	3MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
		26715 to 26765	26715, 26740, 26765	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		26740	26740	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	26740	26740	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset
A	BAND EDGE	26697 to 26783	26697	1.4MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
						6 RB / 0 RB Offset
			26783	1.4MHz	QPSK,16QAM,64QAM	1 RB / 5 RB Offset
						6 RB / 0 RB Offset
		26705 to 26775	26705	3MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
						15 RB / 0 RB Offset
			26775	3MHz	QPSK,16QAM,64QAM	1 RB / 14 RB Offset
						15 RB / 0 RB Offset
		26715 to 26765	26715	5MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
						25 RB / 0 RB Offset
			26765	5MHz	QPSK,16QAM,64QAM	1 RB / 24 RB Offset
						25 RB / 0 RB Offset
		26740	26740	10MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
						50 RB / 0 RB Offset
			26740	10MHz	QPSK,16QAM,64QAM	1 RB / 49 RB Offset
						50 RB / 0 RB Offset
A	CONDUCTED EMISSION	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
		26705 to 26775	26705, 26740, 26775	3MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
		26715 to 26765	26715, 26740, 26765	5MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
		26740	26740	10MHz	QPSK,16QAM,64QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	26697 to 26783	26740	1.4MHz	QPSK	1 RB / 0 RB Offset
		26705 to 26775	26740	3MHz	QPSK	1 RB / 0 RB Offset
		26715 to 26765	26740	5MHz	QPSK	1 RB / 0 RB Offset
		26740	26740	10MHz	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(ERP)	24deg. C, 60%RH	DC 9V By Adapter	Jace Hu
FREQUENCY STABILITY	24deg. C, 61%RH	DC 3.5V/3.89V/4.48V By DC Supply	James Fu
OCCUPIED BANDWIDTH	24deg. C, 61%RH	DC 9V By Adapter	James Fu
BAND EDGE	24deg. C, 61%RH	DC 9V By Adapter	James Fu
CONDUCTED EMISSION	24deg. C, 61%RH	DC 9V By Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC 9V By Adapter	Jace Hu

2.5 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 90

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

Portable stations (hand-held devices) transmitting in the 758–768 MHz band and the 788–798 MHz band are limited to 3 watts ERP.
Per FCC Part 90.635(a)(b)

The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

3.1.2 TEST PROCEDURES

EIRP / ERP 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);

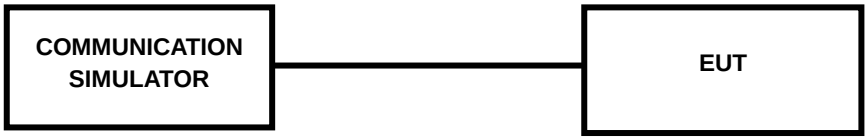
L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB

CONDUCTED POWER MEASUREMENT:

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

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



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

3.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

LTE BAND 26

LTE Band 26

Band/BW	Modulation	RB Size	RB Offset	Low CHG 26697	Mid CH 26740	High CH 26783
				Frequency 814.7 MHz	Frequency 819 MHz	Frequency 823.3 MHz
26/ 1.4	QPSK	1	0	23.69	23.64	23.74
		1	2	23.67	23.68	23.99
		1	5	23.58	23.65	23.60
		3	0	23.53	23.67	23.67
		3	1	23.64	23.56	23.76
		3	3	23.53	23.64	23.72
		6	0	22.53	22.64	22.85
	16QAM	1	0	22.83	22.85	22.78
		1	2	22.97	22.96	22.95
		1	5	22.77	22.83	22.91
		3	0	22.67	22.69	22.55
		3	1	22.56	22.63	22.68
		3	3	22.51	22.59	22.57
		6	0	21.82	21.64	21.86
	64QAM	1	0	21.72	21.83	22.20
		1	2	21.83	21.73	22.47
		1	5	21.70	21.67	22.21
		3	0	21.69	21.55	21.87
		3	1	21.58	21.75	21.83
		3	3	21.71	21.69	21.57
		6	0	20.76	20.64	20.85

Band/BW	Modulation	RB Size	RB Offset	Low CHG 26705	Mid CH 26740	High CH 26775
				Frequency 815.5 MHz	Frequency 819 MHz	Frequency 822.5 MHz
26/ 3	QPSK	1	0	23.64	23.69	23.87
		1	7	23.72	23.53	23.91
		1	14	23.66	23.67	23.73
		8	0	22.72	22.61	22.91
		8	3	22.70	22.53	22.87
		8	7	22.60	22.61	22.80
		15	0	22.53	22.58	22.91
	16QAM	1	0	22.83	22.89	22.78
		1	7	22.96	22.96	23.00
		1	14	22.82	22.80	22.97
		8	0	21.51	21.71	21.74
		8	3	21.65	21.65	21.92
		8	7	21.74	21.72	21.76
		15	0	21.80	21.57	21.78
	64QAM	1	0	21.83	21.88	22.19
		1	7	21.80	21.77	22.44
		1	14	21.79	21.74	22.19
		8	0	20.55	20.67	20.96
		8	3	20.78	20.62	21.15
		8	7	20.67	20.70	20.83
		15	0	20.64	20.52	20.92

Band/BW	Modulation	RB Size	RB Offset	Low CHG 26715	Mid CH 26740	High CH 26765
				Frequency 816.5 MHz	Frequency 819 MHz	Frequency 821.5 MHz
26/ 5	QPSK	1	0	23.77	23.74	23.94
		1	12	23.70	23.55	23.92
		1	24	23.62	23.67	23.70
		12	0	22.76	22.67	22.92
		12	6	22.60	22.67	22.90
		12	13	22.63	22.60	22.84
		25	0	22.57	22.66	22.86
	16QAM	1	0	22.85	22.83	22.82
		1	12	22.90	22.89	22.97
		1	24	22.83	22.74	22.96
		12	0	21.61	21.59	21.80
		12	6	21.64	21.68	21.89
		12	13	21.69	21.71	21.82
		25	0	21.79	21.56	21.87
	64QAM	1	0	21.72	21.94	22.18
		1	12	21.84	21.73	22.38
		1	24	21.82	21.67	22.26
		12	0	20.60	20.67	20.87
		12	6	20.79	20.62	21.01
		12	13	20.61	20.62	20.87
		25	0	20.67	20.57	20.89

Band/BW	Modulation	RB Size	RB Offset	/	Mid CH 26740	/
				/	Frequency 819 MHz	/
26/ 10	QPSK	1	0	/	**23.79**	/
		1	24	/	23.54	/
		1	49	/	23.75	/
		25	0	/	22.58	/
		25	12	/	22.59	/
		25	25	/	22.54	/
		50	0	/	22.62	/
	16QAM	1	0	/	22.90	/
		1	24	/	22.84	/
		1	49	/	22.75	/
		25	0	/	21.63	/
		25	12	/	21.70	/
		25	25	/	21.68	/
		50	0	/	21.60	/
	64QAM	1	0	/	21.88	/
		1	24	/	21.75	/
		1	49	/	21.76	/
		25	0	/	20.63	/
		25	12	/	20.62	/
		25	25	/	20.66	/
		50	0	/	20.62	/

ERP

LTE BAND 26

CHANNEL BANDWIDTH: 1.4MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26697	814.7	23.69	-7.18	14.36	27.29	100
26740	819	23.68	-7.18	14.35	27.23	100
26783	823.3	23.99	-7.18	14.66	29.24	100

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

CHANNEL BANDWIDTH: 1.4MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26697	814.7	22.97	-7.18	13.64	23.12	100
26740	819	22.96	-7.18	13.63	23.07	100
26783	823.3	22.95	-7.18	13.62	23.01	100

CHANNEL BANDWIDTH: 1.4MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26697	814.7	21.83	-7.18	12.5	17.78	100
26740	819	21.83	-7.18	12.5	17.78	100
26783	823.3	22.47	-7.18	13.14	20.61	100

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

LTE BAND 26

CHANNEL BANDWIDTH: 3MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26705	815.5	23.72	-7.18	14.39	27.48	100
26740	819	23.69	-7.18	14.36	27.29	100
26775	822.5	23.91	-7.18	14.58	28.71	100

CHANNEL BANDWIDTH: 3MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26705	815.5	22.96	-7.18	13.63	23.07	100
26740	819	22.96	-7.18	13.63	23.07	100
26775	822.5	23	-7.18	13.67	23.28	100

CHANNEL BANDWIDTH: 3MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26705	815.5	21.83	-7.18	12.5	17.78	100
26740	819	21.88	-7.18	12.55	17.99	100
26775	822.5	22.44	-7.18	13.11	20.46	100

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

LTE BAND 26

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26715	816.5	23.77	-7.18	14.44	27.8	100
26740	819	23.74	-7.18	14.41	27.61	100
26765	821.5	23.94	-7.18	14.61	28.91	100

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26715	816.5	22.9	-7.18	13.57	22.75	100
26740	819	22.89	-7.18	13.56	22.7	100
26765	821.5	22.97	-7.18	13.64	23.12	100

CHANNEL BANDWIDTH: 5MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
26715	816.5	21.84	-7.18	12.51	17.82	100
26740	819	21.94	-7.18	12.61	18.24	100
26765	821.5	22.38	-7.18	13.05	20.18	100

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

LTE BAND 26

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
-	-	-	-	-	-	-
26740	819	23.79	-7.18	14.46	27.93	100
-	-	-	-	-	-	-

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
-	-	-	-	-	-	-
26740	819	22.9	-7.18	13.57	22.75	100
-	-	-	-	-	-	-

CHANNEL BANDWIDTH: 10MHz 64QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G_T-L_C (dB)	ERP (dBm)	ERP (mW)	Limit (W)
-	-	-	-	-	-	-
26740	819	21.88	-7.18	12.55	17.99	100
-	-	-	-	-	-	-

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 of mobile, portable and control transmitters operating in the wideband segment must be 1.25 parts per million or better when AFC is locked to a base station, and 5 parts per million or better when AFC is not locked

3.2.2 TEST PROCEDURE

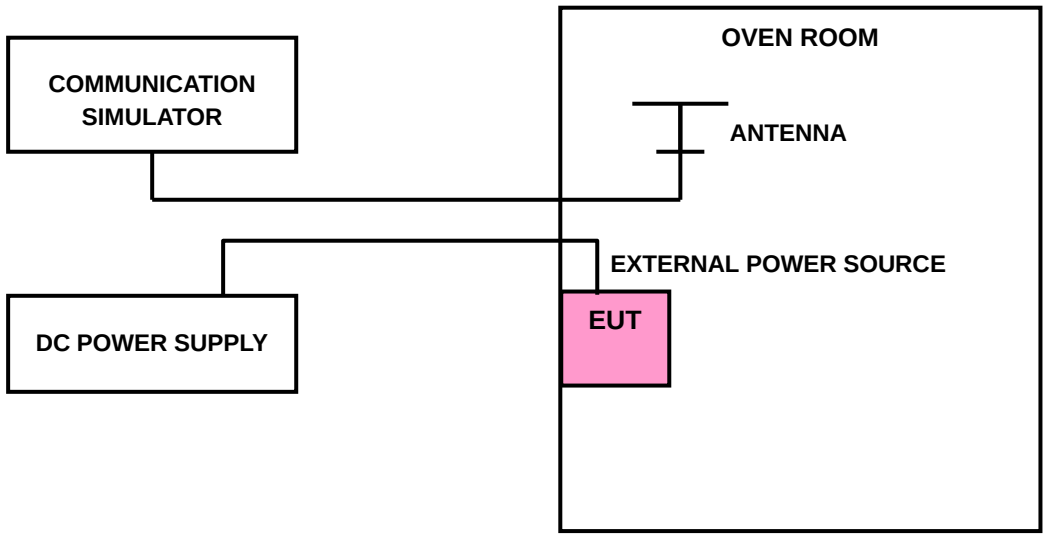
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

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 J Of this test report.

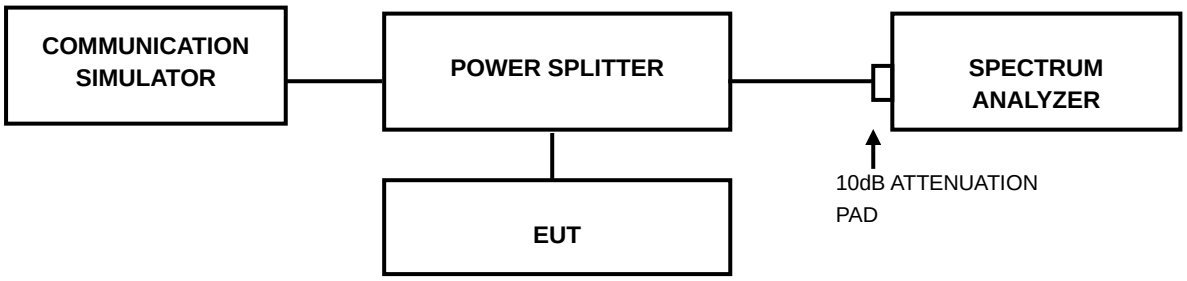
Note: VL = Low voltage(3.5V); VN/NV = Normal voltage(3.89V); VH = High voltage(4.48V);
NT = Normal temperature (25℃)

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 J Of this test report.

3.4 EMISSION MASK MEASUREMENT

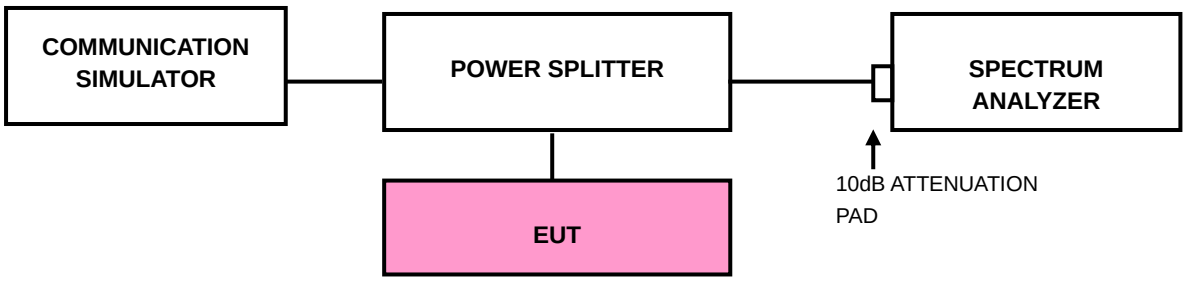
3.4.1 LIMITS OF EMISSION MASK MEASUREMENT

LTE Band26:

According to FCC part 90.691 shall be tested the emission mask. For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

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

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

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

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

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

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

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

h) Use auto-coupled sweep time.

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

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

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

3.4.4 TEST RESULTS

Please Refer to Appendix J Of this test report.

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

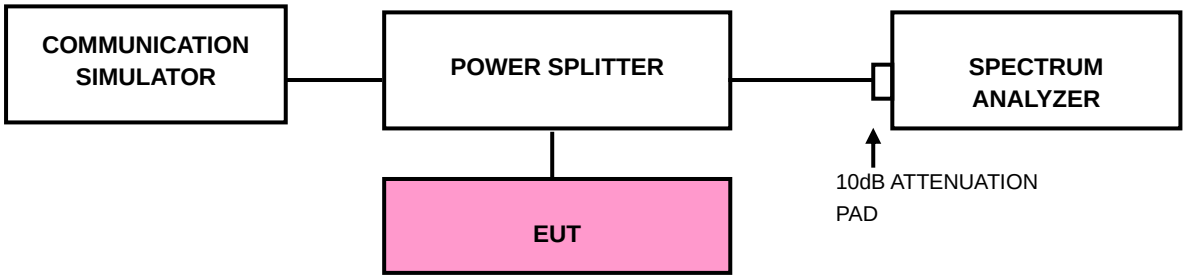
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to –13dBm

3.5.2 TEST PROCEDURE

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

b. Measuring frequency range is from 9kHz 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 J Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission 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.

d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15dBi.

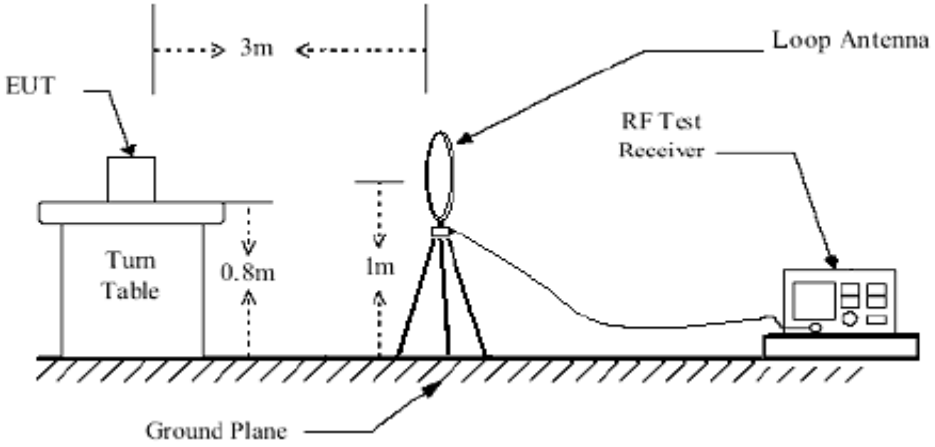
NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.6.3 DEVIATION FROM TEST STANDARD

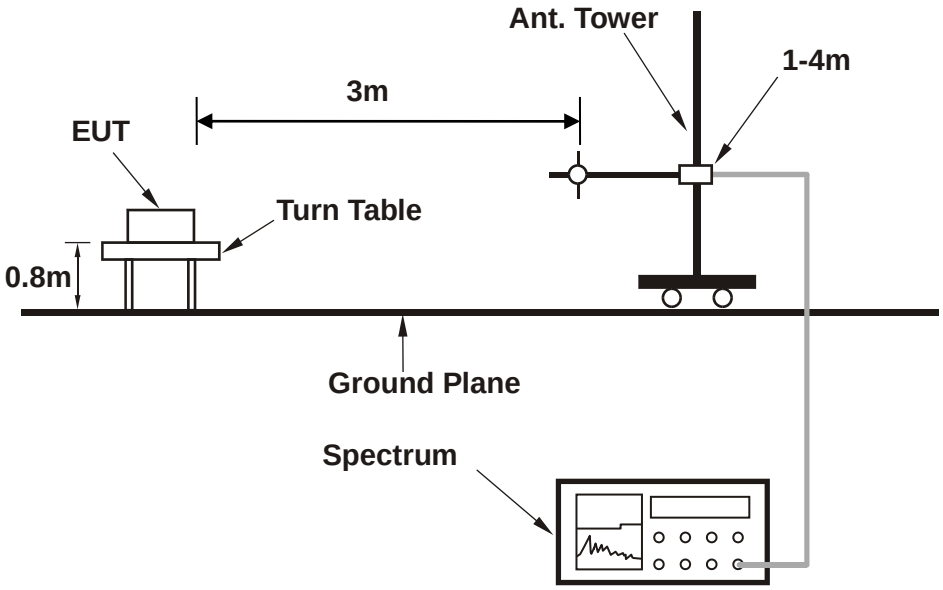
No deviation

3.6.4 TEST SETUP

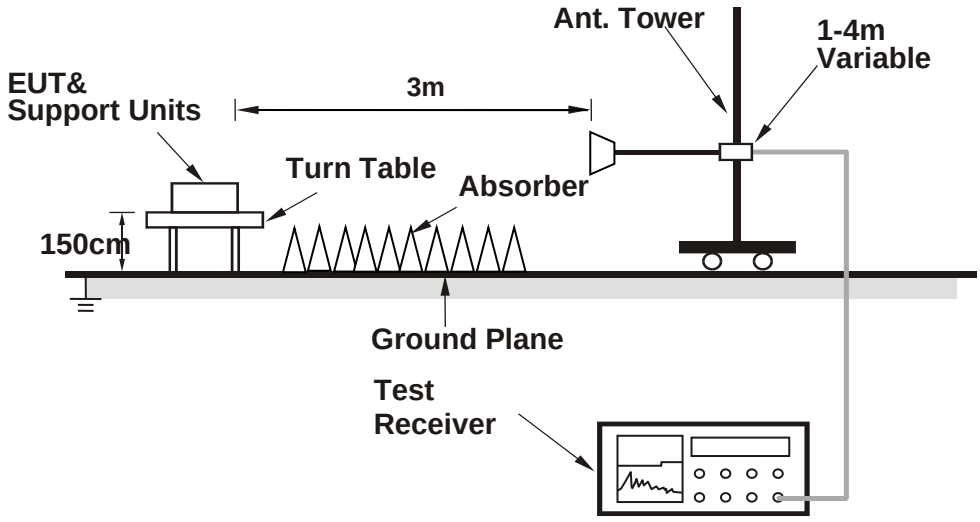
<Below 30MHz>



< Frequency Range 30MHz~1GHz >



< Frequency Range above 1GHz >



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:

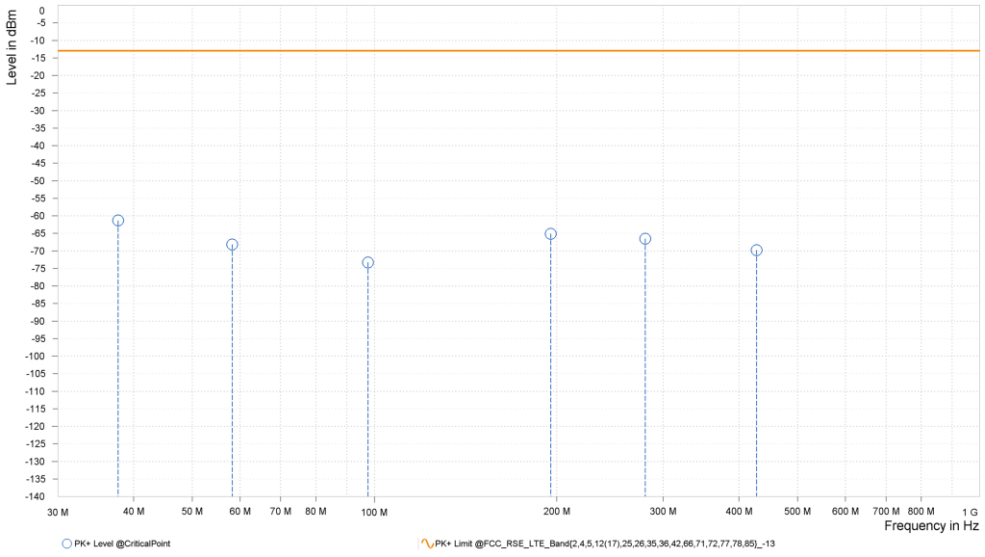
LTE Band 26:

CHANNEL BANDWIDTH: 10MHz / QPSK

CH23330

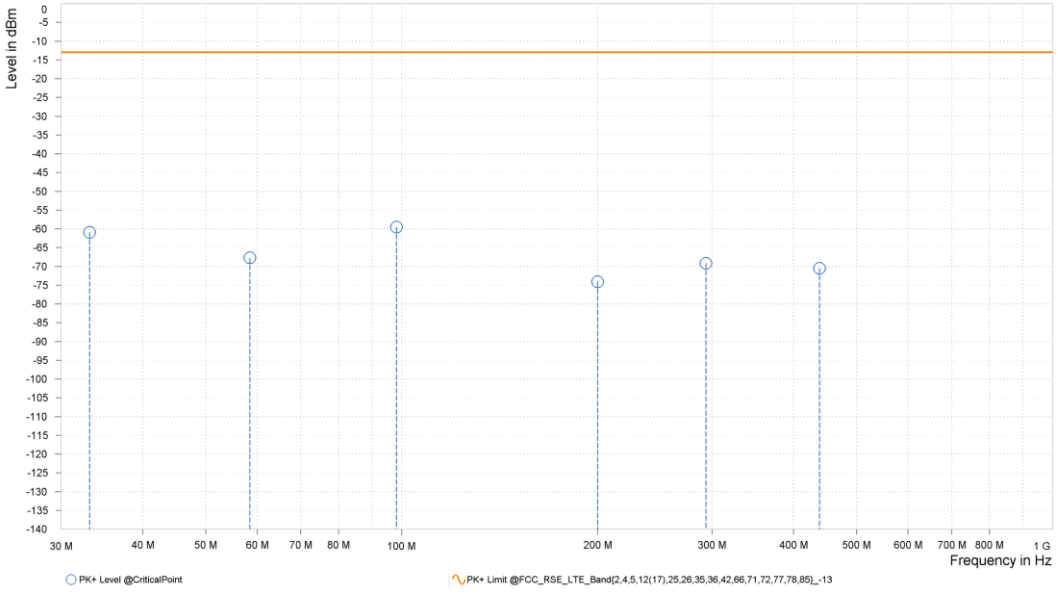
MODE	TX channel 26740	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace HU		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	37.750	-61.33	-13.00	48.33	5.33	H	185.8	1.00
1	58.200	-68.16	-13.00	55.16	1.52	H	97.7	2.00
1	97.550	-73.27	-13.00	60.27	-6.03	H	359	2.00
1	195.600	-65.12	-13.00	52.12	0.06	H	221.7	1.00
1	280.200	-66.53	-13.00	53.53	3.70	H	298.2	1.00
1	427.950	-69.77	-13.00	56.77	7.63	H	286.6	2.00



MODE	TX channel 26740	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	33.150	-60.93	-13.00	47.93	-1.55	V	289.8	1.00
1	58.450	-67.72	-13.00	54.72	1.68	V	359.1	1.00
1	98.150	-59.53	-13.00	46.53	9.06	V	109.2	1.00
1	200.000	-74.07	-13.00	61.07	-1.57	V	209.7	1.00
1	293.400	-69.17	-13.00	56.17	3.54	V	146.3	1.00
1	438.600	-70.48	-13.00	57.48	6.96	V	103.7	2.00



ABOVE 1GHz

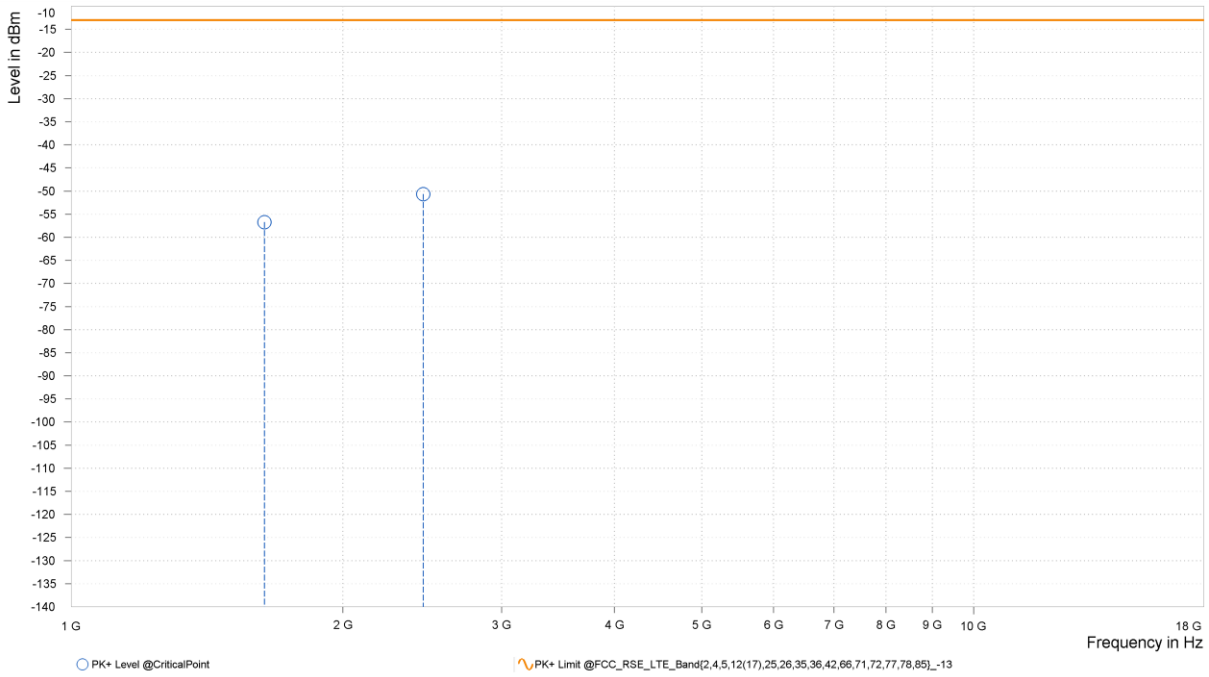
Note: For higher frequency, the emission is too low to be detected.

LTE BAND 26

CHANNEL BANDWIDTH: 1.4MHz / QPSK

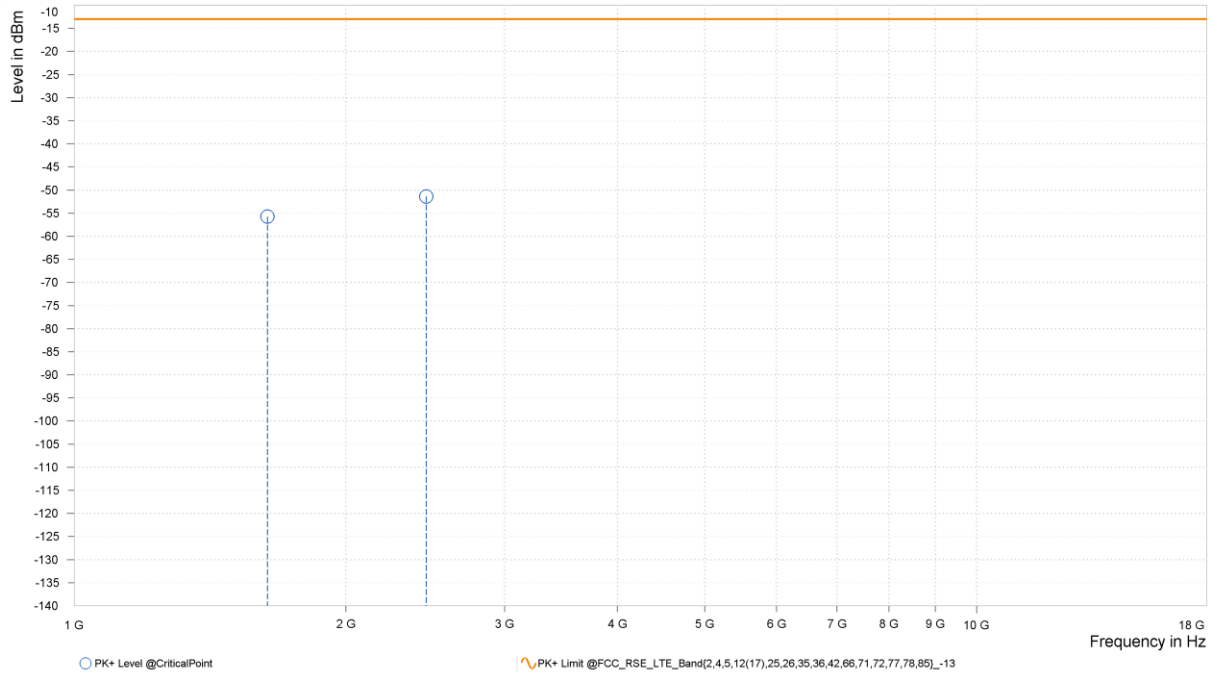
MODE	TX channel 26697	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,636.740	-56.75	-13.00	43.75	13.64	H	1.1	2.00
3	2,455.110	-50.66	-13.00	37.66	19.40	H	359.1	1.00



MODE	TX channel 26697	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			

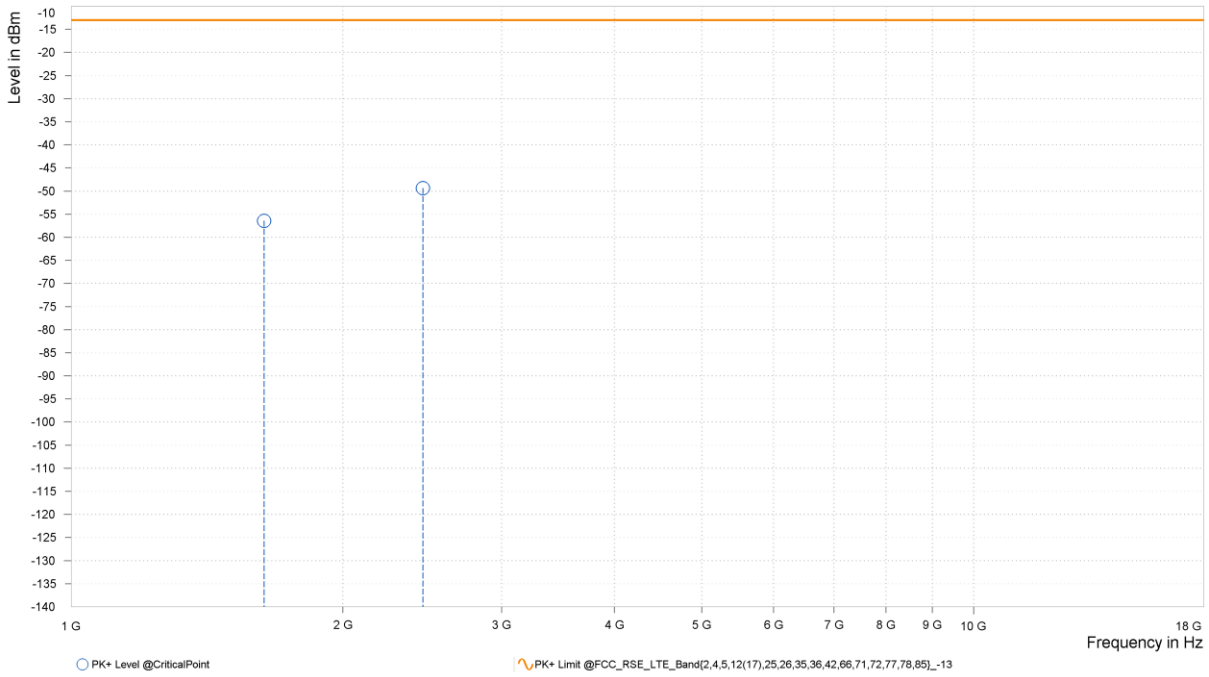
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,636.740	-55.77	-13.00	42.77	13.69	V	1	2.00
3	2,455.110	-51.37	-13.00	38.37	19.41	V	111.6	1.00



CHANNEL BANDWIDTH: 3MHz / QPSK

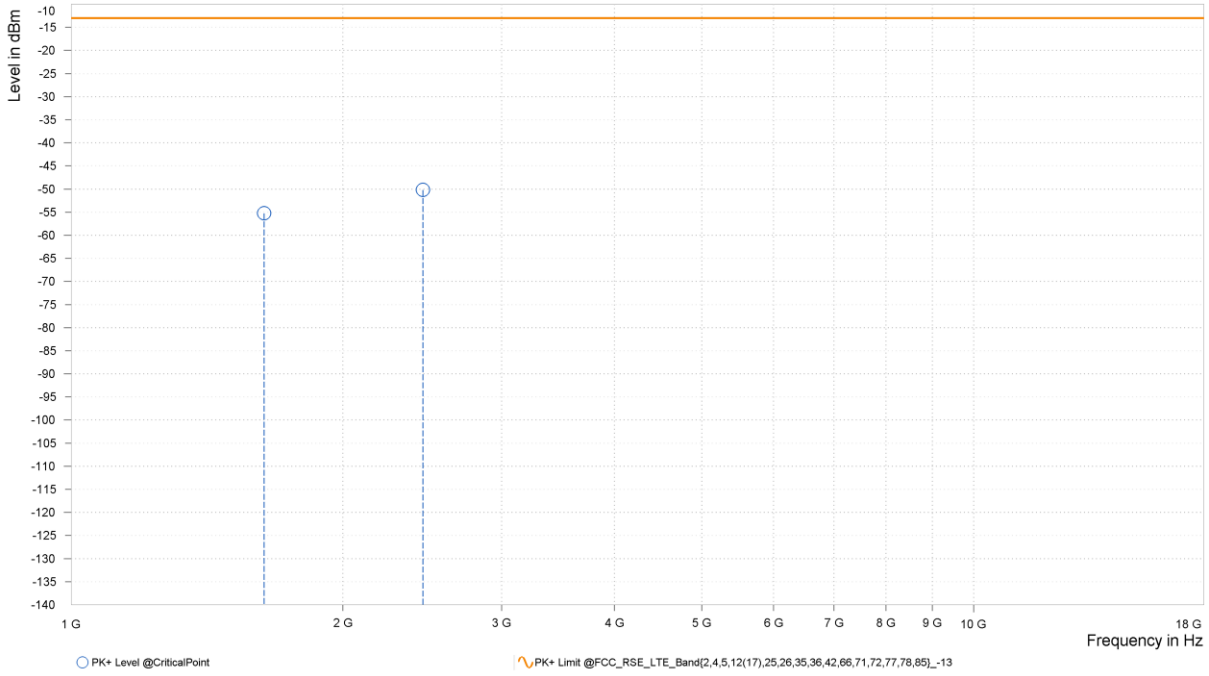
MODE	TX channel 26740	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,635.300	-56.43	-13.00	43.43	13.61	H	357.6	1.00
3	2,452.950	-49.36	-13.00	36.36	19.44	H	359	2.00



MODE	TX channel 26740	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			

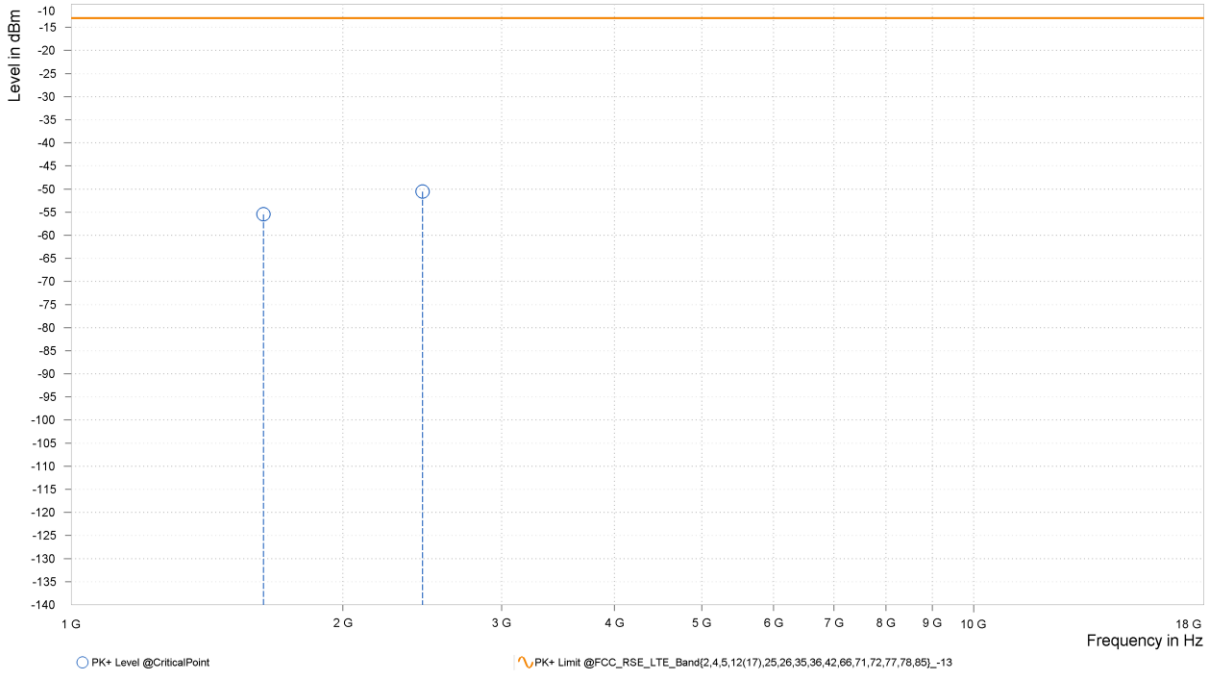
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,635.300	-55.26	-13.00	42.26	13.68	V	67.4	1.00
3	2,452.950	-50.20	-13.00	37.20	19.42	V	359	2.00



CHANNEL BANDWIDTH: 5MHz / QPSK

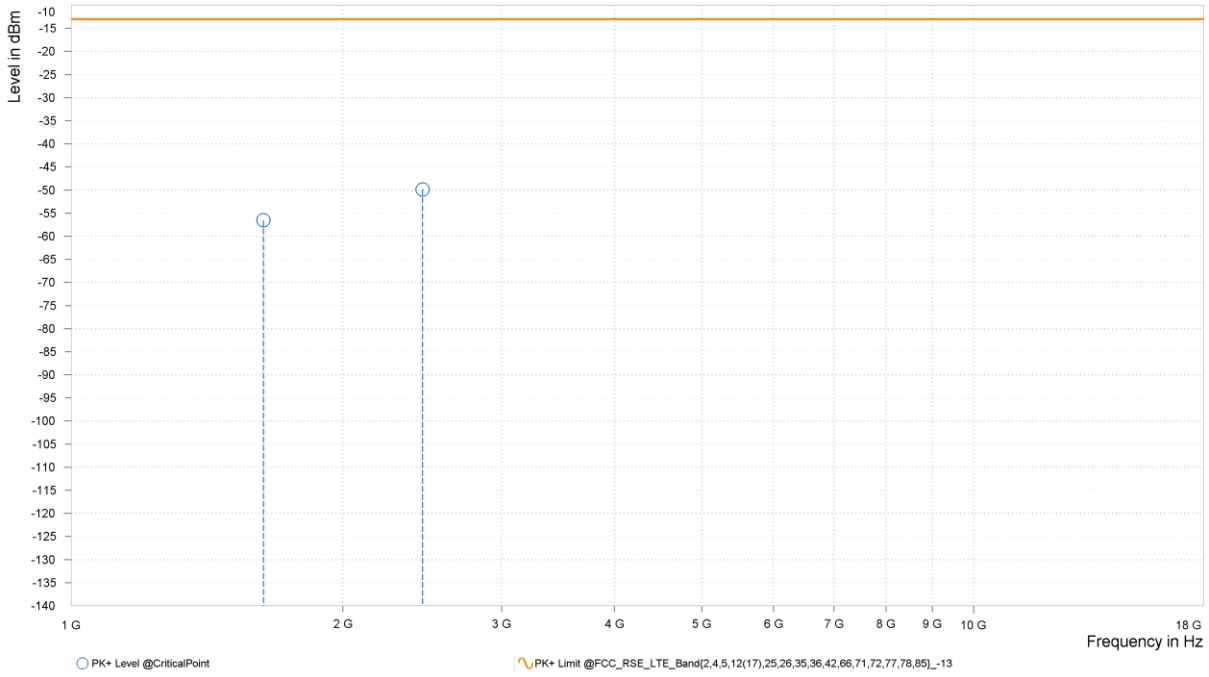
MODE	TX channel 26740	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,633.500	-55.47	-13.00	42.47	13.57	H	77	1.00
3	2,450.250	-50.55	-13.00	37.55	19.51	H	129.6	1.00



MODE	TX channel 26740	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]
2	1,633.500	-56.57	-13.00	43.57	13.68	V	28.4	2.00
3	2,450.250	-49.87	-13.00	36.87	19.43	V	1	2.00

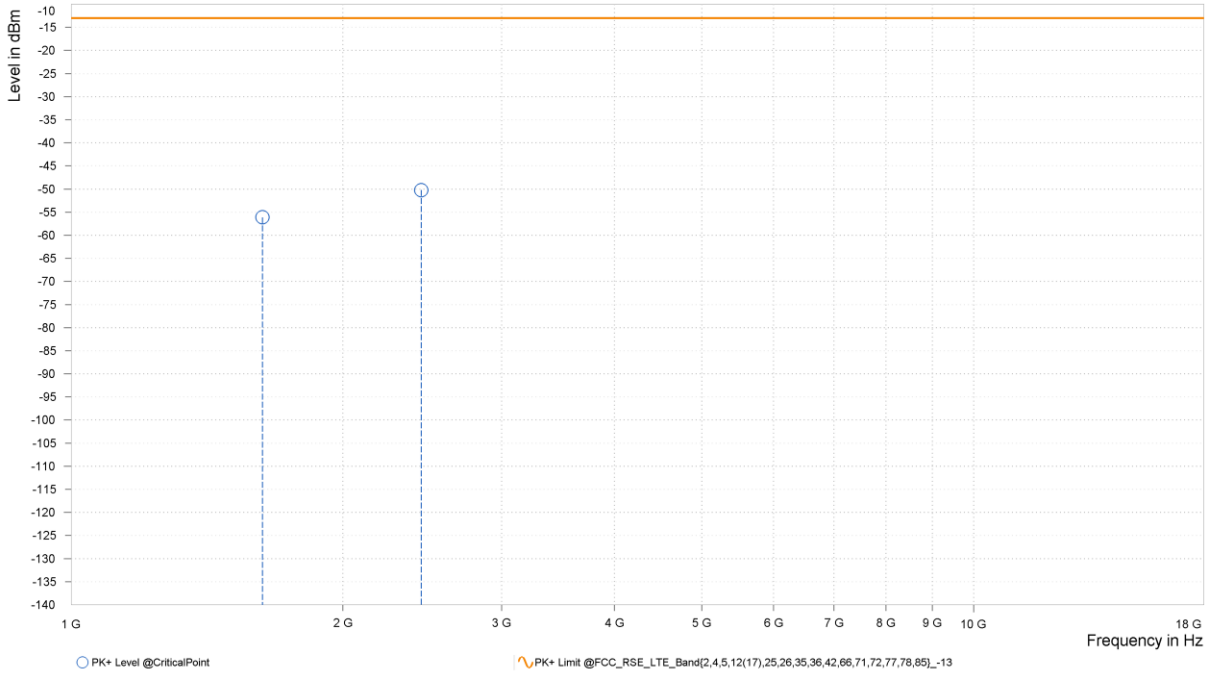


CHANNEL BANDWIDTH: 10MHz / QPSK

CH26740

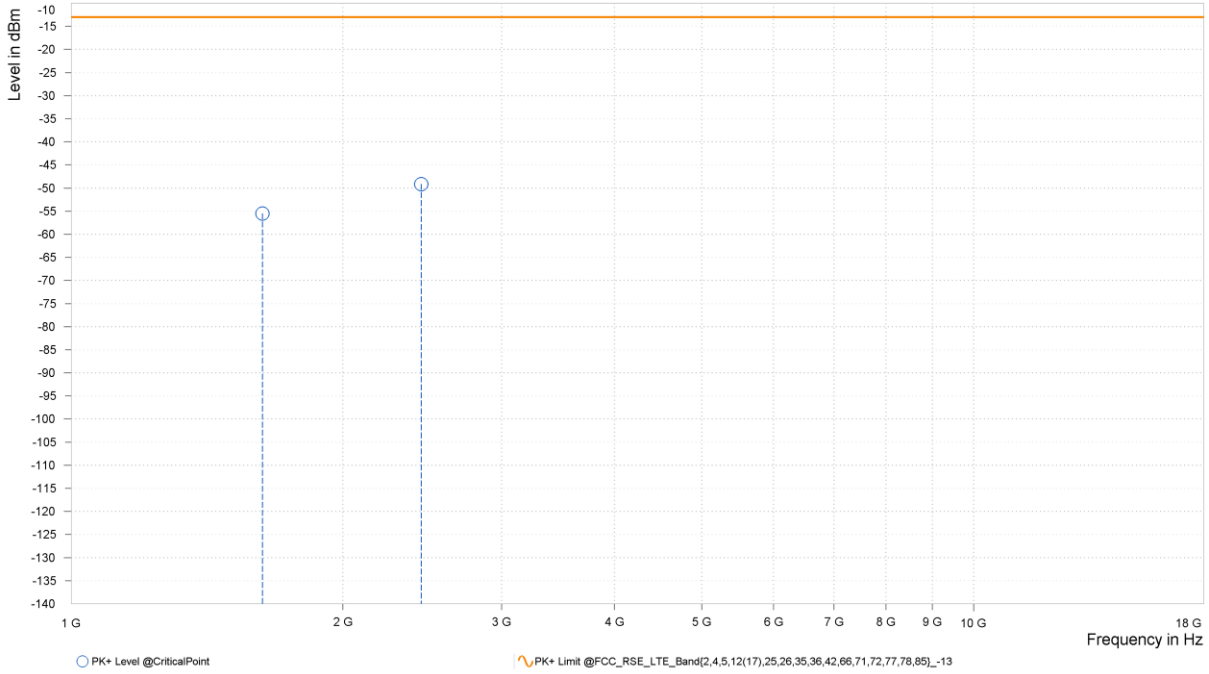
MODE	TX channel 26740	**FREQUENCY RANGE**	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	**INPUT POWER**	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,629.000	-56.11	-13.00	43.11	13.48	H	359.1	1.00
3	2,443.500	-50.23	-13.00	37.23	19.64	H	249.5	2.00



MODE	TX channel 26740	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			

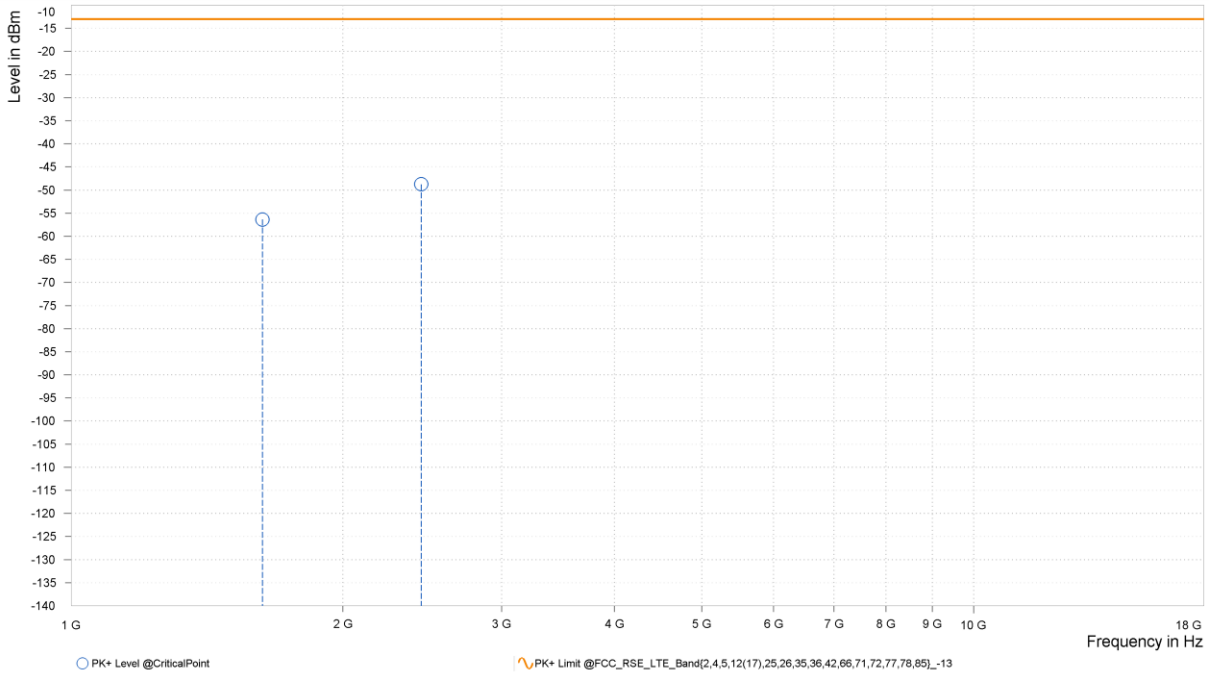
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,629.000	-55.49	-13.00	42.49	13.68	V	304.5	2.00
3	2,443.500	-49.15	-13.00	36.15	19.45	V	357.7	1.00



CH26740

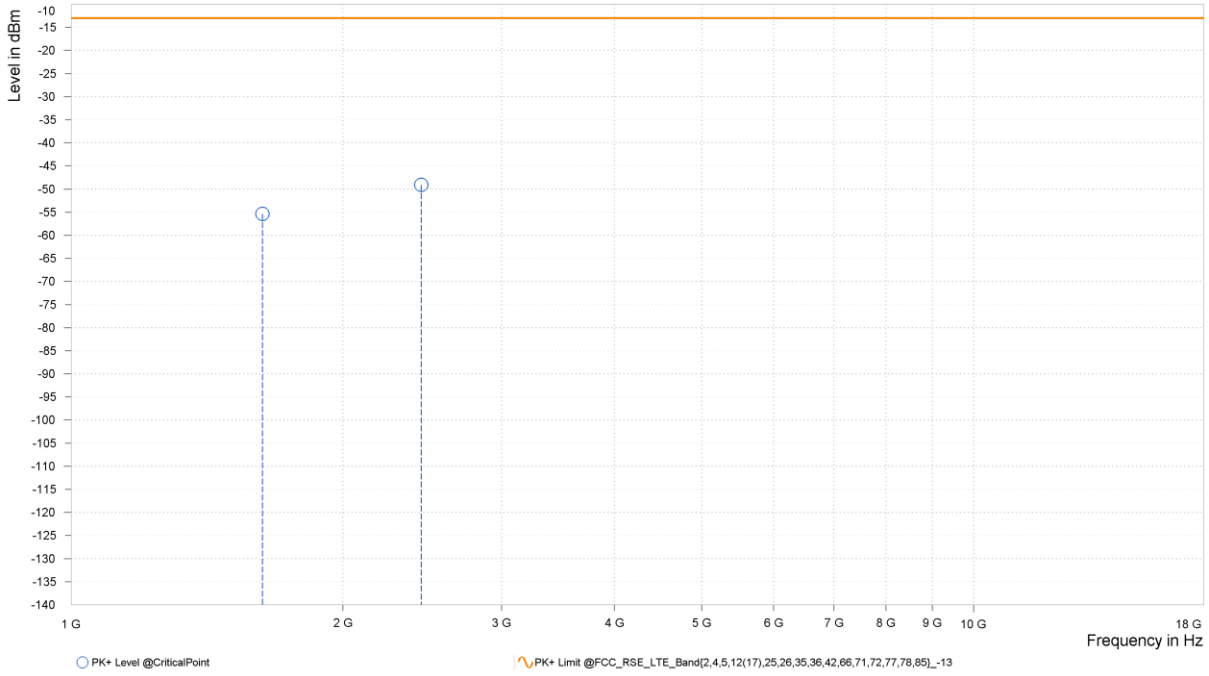
MODE	TX channel 26740	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,629.000	-56.39	-13.00	43.39	13.48	H	41.5	2.00
3	2,443.500	-48.74	-13.00	35.74	19.64	H	0.9	2.00



MODE	TX channel 26740	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			

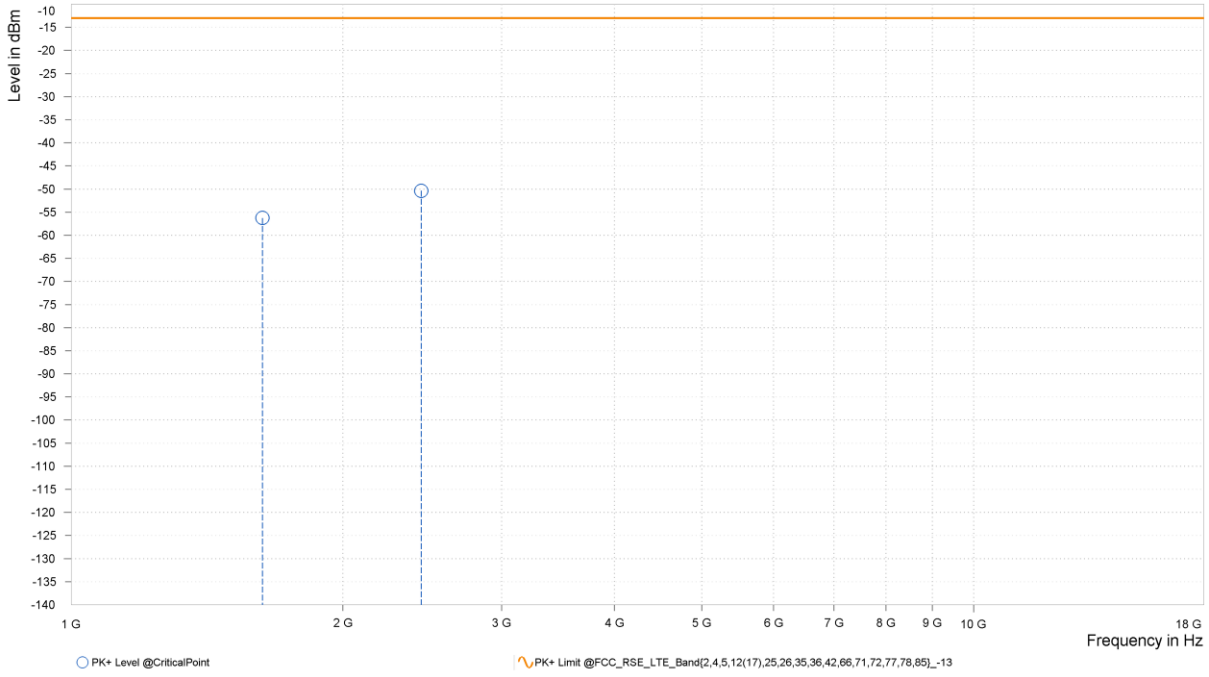
Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,629.000	-55.40	-13.00	42.40	13.68	V	54.2	1.00
3	2,443.500	-49.11	-13.00	36.11	19.45	V	333.9	1.00



CH26740

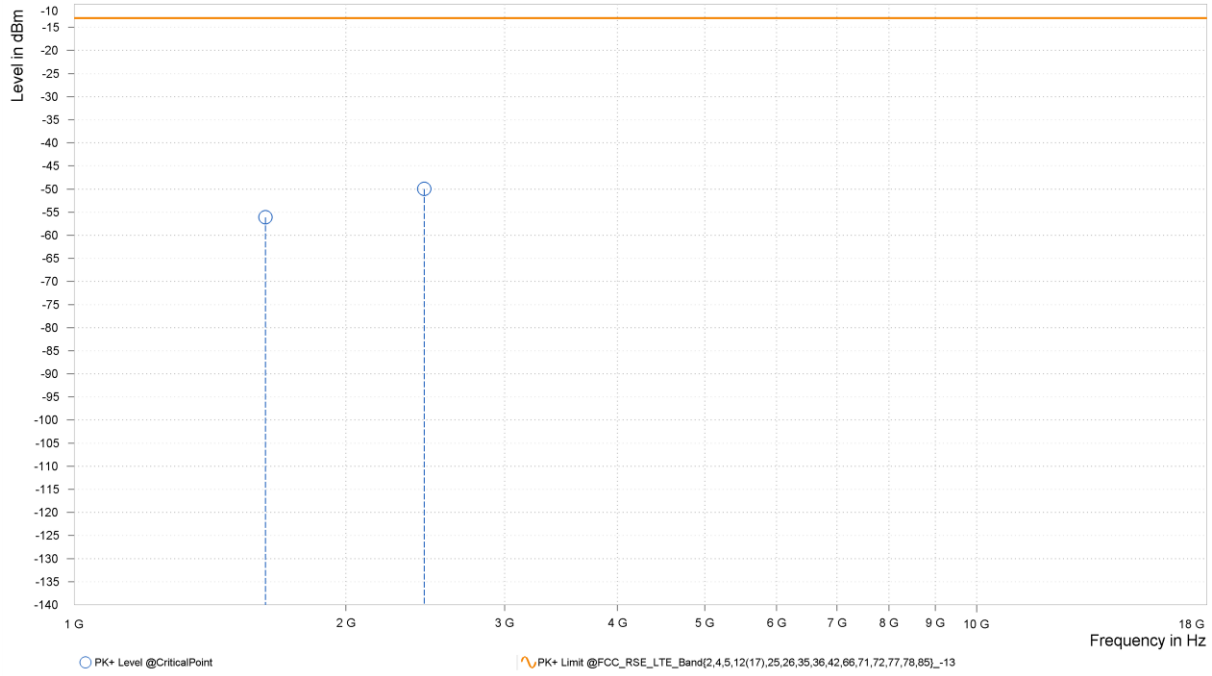
MODE	TX channel 26740	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
2	1,629.000	-56.28	-13.00	43.28	13.48	H	2.6	2.00
3	2,443.500	-50.39	-13.00	37.39	19.64	H	1.8	2.00



MODE	TX channel 26740	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]
2	1,629.000	-56.13	-13.00	43.13	13.68	V	303.4	2.00
3	2,443.500	-49.97	-13.00	36.97	19.45	V	359	2.00

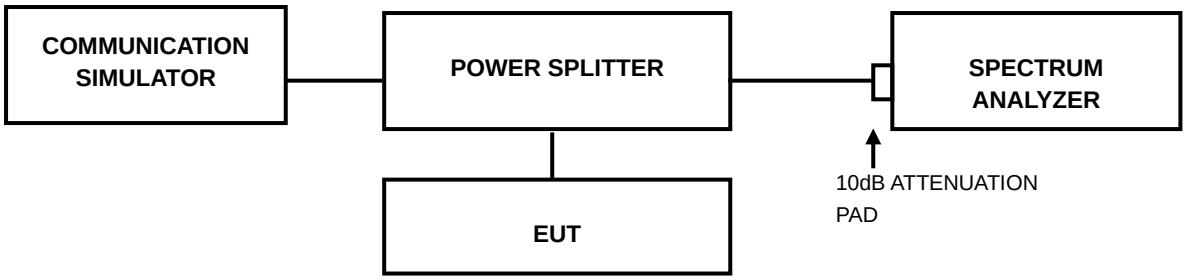


3.7 PEAK TO AVERAGE RATIO

3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.7.2 TEST SETUP



3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

3.7.4 TEST RESULTS

Please Refer to Appendix J Of this test report.

4 INFORMATION ON THE TESTING LABORATORIES

We, BV 7LAYERS COMMUNICATIONS TECHNOLOGY (SHENZHEN) CO. LTD., were founded in 2015 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Tel: +86-755-88696566
Fax: +86-755-88696577

Email: customerservice.sw@bureauveritas.com
Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

---END---