

VARIANT FCC TEST REPORT

(PART 27)

Applicant:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States

Manufacturer or Supplier:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Product:	Mobile Computer
Brand Name:	Honeywell
Model Name:	CT45P-L1N-2
FCC ID	HD5-CT45PL1N2
Date of tests	Oct, 09, 2025 ~ Nov. 18, 2025

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

- | | |
|---|---|
| ☒ FCC Part 27 | ☒ ANSI/TIA/EIA-603-E |
| ☒ ANSI/TIA/EIA-603-D | ☒ ANSI C63.26-2015 |
| ☒ FCC Part 2 | |

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

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
	
Date: Nov. 18, 2025	Date: Nov. 18, 2025

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P21080006RF17	Original release	Sep. 01, 2021
PSU-NQN2509250114RF08	Based on the original report W7L-P21080006RF17(FCC ID: HD5-CT45PL1N2). The new product add alternate parts, the electrical specs of the alternate part is equivalent to the current part. This report update the SW version, retest power and RF, verify RSE worst case. So this report updates power, RF and RSE worst case(LTE B38 20MHz_CH38150), other data please refer to original report.	Nov. 18, 2025



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 27 & PART 2			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	TEST LAB*
§2.1046	Conducted Output Power	Compliance	A
§27.50(d)(4) §27.50(h)(2)	Equivalent Isotropically Radiated Power (WCMDA Band 4) (Band 7) (LTE Band CA_7C) (Band 38) (Band 41)	Compliance	A
§2.1055 §27.54	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§2.1051 §27.53(h) §27.53(m)(4)(6)	Conducted Band Edge Measurements (WCMDA Band 4) (Band 7) (LTE Band CA_7C) (Band 38) (Band 41)	Compliance	A
§2.1051 §27.53(h) §27.53(m)(4)(6)	Conducted Spurious Emissions (WCMDA Band 4) (Band 7) (LTE Band CA_7C) (Band 38) (Band 41)	Compliance	A
§2.1053 §27.53(h) §27.53(m)(4)(6)	Radiated Spurious Emissions (WCMDA Band 4) (Band 7) (LTE Band CA_7C) (Band 38) (Band 41)	Compliance	A
§27.50	Peak to average ratio	Compliance	A

* Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

*Test Lab Information Reference

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province, China

Accredited Test Lab Cert 6613.01

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

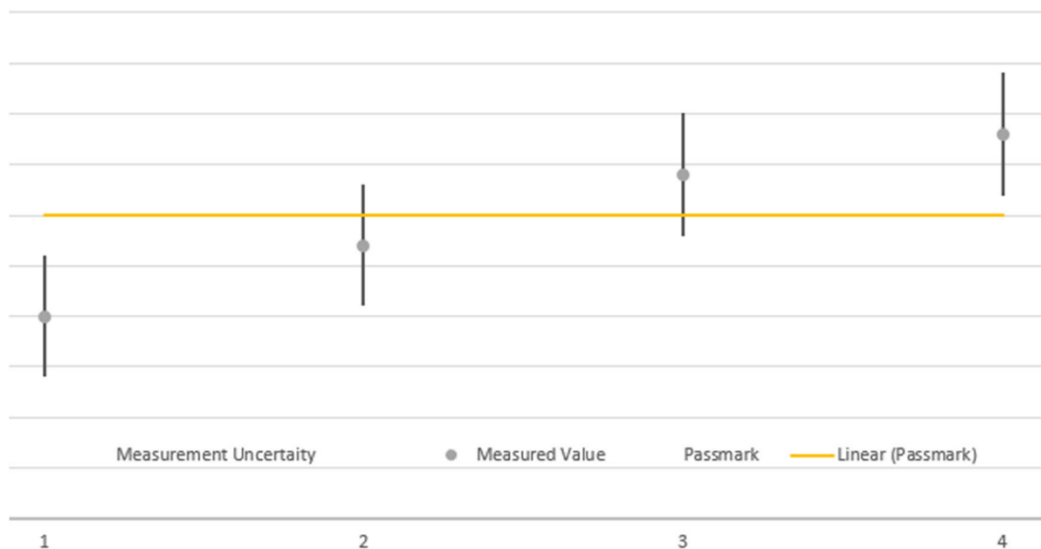


1.1 MEASUREMENT UNCERTAINTY

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
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions & Radiated Power (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions & Radiated Power (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Band Edge Measurements	$\pm 4.70\text{dB}$

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



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.



1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.29,25	Aug.28,27
Pre-Amplifier	R&S	SCU08F1	101028	Jan.22,24	Jan.21,26
Vector Signal Generator	R&S	SMBV100B	102176	Mar.29,24	Mar.28,26
Signal Generator	R&S	SMB100A	182185	Mar.29,24	Mar.28,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.24,22	Nov.23,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Aug.20,25	Aug.19,28
EMI TEST Receiver	R&S	ESR26	101734	Mar.28,24	Mar.27,26
EMI TEST Receiver	R&S	ESW44	101973	Mar.28,24	Mar.27,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Jul.04,25	Jul.03,27
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.20,25	Aug.19,27
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Jul.15,24	Jul.14,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Mar.22,25	Mar.21,27
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.22,25	Feb.21,27
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.19,24	Jun.18,26
Test Software	EMC32	EMC32	N/A	N/A	N/A
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	N/A	N/A
DC Source	HYELEC	HY3010B	551016	Aug.30,25	Aug.29,27
Hygrothermograph	DELI	20210528	SZ014	Mar.18,25	Mar.17,27
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.26,25	Apr.25,26
CABLE	R&S	W12.14	N/A	Apr.26,25	Apr.25,26
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Apr.26,25	Apr.25,26
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Apr.26,25	Apr.25,26
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, GREGT/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*	Mobile Computer	
BRAND NAME*	Honeywell	
MODEL NAME*	CT45P-L1N-2	
NOMINAL VOLTAGE*	5Vdc (adapter) 3.85Vdc (Lithium-ion cell, battery)	
MODULATION TECHNOLOGY	WCDMA IV	BPSK, QPSK
	LTE	QPSK, 16QAM, 64QAM
FREQUENCY RANGE	WCDMA IV	1712.4MHz ~ 1752.6MHz
	LTE Band 7 Channel Bandwidth: 5MHz	2502.5MHz ~ 2567.5MHz
	LTE Band 7 Channel Bandwidth: 10MHz	2505MHz ~ 2565MHz
	LTE Band 7 Channel Bandwidth: 15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band 7 Channel Bandwidth: 20MHz	2510MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz	2505.5MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz	2507.5MHz ~ 2564.7MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz	2507.8MHz ~ 2560MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz	2510MHz ~ 2564.5MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz	2510MHz ~ 2562.5MHz
	LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz	2510MHz ~ 2560MHz
	LTE Band 38 Channel Bandwidth: 5MHz	2572.5MHz ~ 2617.5MHz
	LTE Band 38 Channel Bandwidth: 10MHz	2575MHz ~ 2615MHz
	LTE Band 38 Channel Bandwidth: 15MHz	2577.5MHz ~ 2612.5MHz
	LTE Band 38 Channel Bandwidth: 20MHz	2580MHz ~ 2610MHz



	LTE Band 41 Channel Bandwidth: 5MHz	2498.5MHz ~ 2687.5MHz
	LTE Band 41 Channel Bandwidth: 10MHz	2501MHz ~ 2685MHz
	LTE Band 41 Channel Bandwidth: 15MHz	2503.5MHz ~ 2682.5MHz
	LTE Band 41 Channel Bandwidth: 20MHz	2506MHz ~ 2680MHz
MAX. EIRP POWER	WCDMA IV	248.89mW
	LTE Band 7 Channel Bandwidth: 5MHz	239.33mW
	LTE Band 7 Channel Bandwidth: 10MHz	238.23mW
	LTE Band 7 Channel Bandwidth: 15MHz	239.33mW
	LTE Band 7 Channel Bandwidth: 20MHz	237.14mW
	LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz	238.78mW
	LTE Band 38 Channel Bandwidth: 5MHz	238.23mW
	LTE Band 38 Channel Bandwidth: 10MHz	242.10mW
	LTE Band 38 Channel Bandwidth: 15MHz	241.55mW
	LTE Band 38 Channel Bandwidth: 20MHz	242.66mW
	LTE Band 41 Channel Bandwidth: 5MHz	276.06mW
	LTE Band 41 Channel Bandwidth: 10MHz	274.79mW
	LTE Band 41 Channel Bandwidth: 15MHz	274.16mW
	LTE Band 41 Channel Bandwidth: 20MHz	277.97mW
EMISSION DESIGNATOR	WCDMA IV	4M13F9W
	LTE Band 7 Channel Bandwidth: 5MHz	QPSK: 4M50G7D
		16QAM: 4M50W7D
		64QAM: 4M50W7D
	LTE Band 7 Channel Bandwidth: 10MHz	QPSK: 8M97G7D
		16QAM: 8M96W7D
		64QAM: 8M95W7D
	LTE Band 7 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
	LTE Band 7 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
		64QAM: 17M9W7D
	LTE Band CA_7C	QPSK: 28M3G7D



	Channel Bandwidth: 10MHz+20MHz	16QAM: 28M2W7D
		64QAM: 28M3W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +10MHz	QPSK: 23M4G7D
		16QAM: 23M4W7D
		64QAM: 23M3W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +15MHz	QPSK: 28M8G7D
		16QAM: 28M9W7D
		64QAM: 28M8W7D
	LTE Band CA_7C Channel Bandwidth: 15MHz +20MHz	QPSK: 33M0G7D
		16QAM: 33M0W7D
		64QAM: 33M1W7D
	LTE Band CA_7C Channel Bandwidth: 20MHz +10MHz	QPSK: 28M3G7D
		16QAM: 28M2W7D
		64QAM: 28M2W7D
	LTE Band CA_7C Channel Bandwidth: 20MHz +15MHz	QPSK: 33M1G7D
		16QAM: 33M0W7D
		64QAM: 33M0W7D
	LTE Band CA_7C Channel Bandwidth: 20MHz +20MHz	QPSK: 37M9G7D
		16QAM: 37M8W7D
		64QAM: 37M8W7D
	LTE Band 41 Channel Bandwidth: 5MHz	QPSK: 4M50G7D
		16QAM: 4M49W7D
		64QAM: 4M49W7D
ANTENNA GAIN*	LTE Band 41 Channel Bandwidth: 10MHz	QPSK: 8M97G7D
		16QAM: 8M96W7D
		64QAM: 8M97W7D
	LTE Band 41 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
	LTE Band 41 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
		64QAM: 17M9W7D
	☒ Provided by client	
	WCDMA IV	2.55dBi
	LTE B7/7C	2.02dBi
	LTE B38	1.73dBi
	LTE B41	2.02dBi



ANTENNA TYPE*	PIFA Antenna
HW VERSION*	V1.0
SW VERSION*	OS.11.003-HON.11.003
I/O PORTS*	Refer to user's manual
CABLE SUPPLIED*	USB cable: shielded without ferrite, 1.25 meter Earphone cable: unshielded without ferrite, 1.27 meter
EXTREME TEMPERATURE*	-10-55 °C
EXTREME VOLTAGE*	3.4V- 4.4V

NOTE:

- *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
WCDMA	1TX/1RX
LTE	1TX/1RX

- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
- This product includes the following three SKU which hardware is exactly same, the difference is described as following, Sample 1 was full test, sample 2 verify the worst case, check worst case Radiated emission:

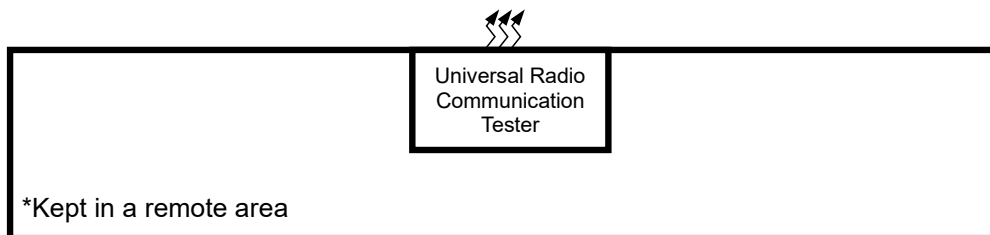
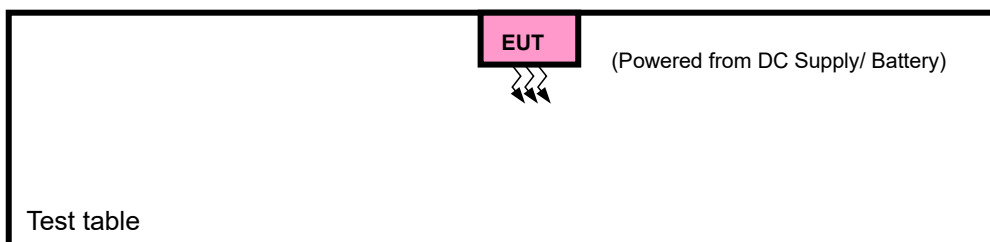
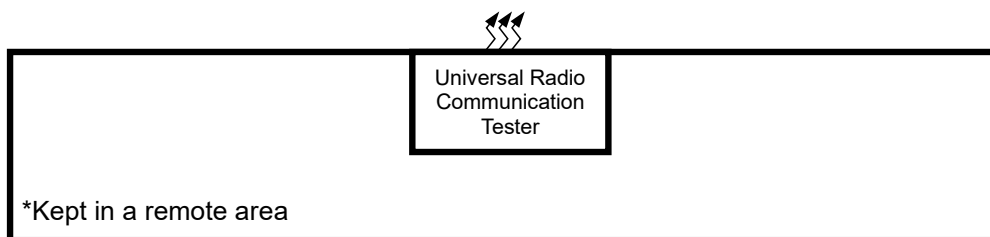
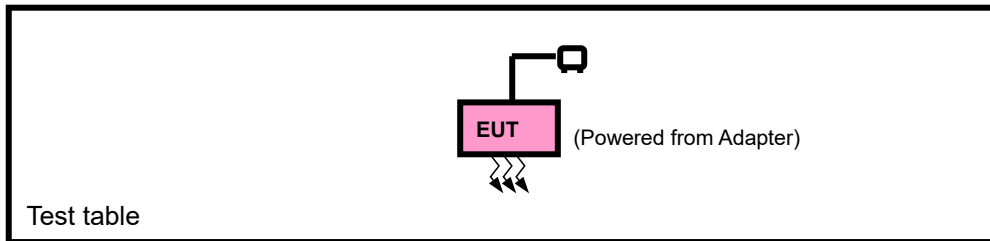
SAMPLE	EUT CONFIGURATION INFORMATION
1	SKU ID:CT45-L1N-37D120G ,Assembled Scanner Imager: 7-S0703
2	SKU ID:CT45-L1N-38D120G ,Assembled Scanner Imager: 8 - N6803/S0803
3	SKU ID: CT45-L1N-37D220G , Assembled with Scanner: 7-S0703 for China Only with Android non-GMS

6. List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
Battery	Honeywell	CT50-BTSC	Capacity: 3.85vdc 4020mAh
AC Adapter	HONOR	ADS-12B-06 05010E	I/P:100-240Vac, 0.3A O/P: 5Vdc, 2A
USB Cable	Honeywell	CT40-SN	Shielded, 1.25meter
Earphone	VIVO	NA	Shielded, 1.27meter
LCD Panel	CASIL	CTM10801920T01	5.0" FHD(1928*1080)

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	HYELEC	HY3010B	551016	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: shielded, Detachable, 1.25m;
2	USB 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 was found when positioned on Y-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

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

WCDMA MODE				
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
A	EIRP	1312 to 1513	1312, 1413, 1513	WCDMA
B	FREQUENCY STABILITY	1312 to 1513	1312, 1413, 1513	WCDMA
A	OCCUPIED BANDWIDTH	1312 to 1513	1312, 1413, 1513	WCDMA
A	BAND EDGE	1312 to 1513	1312, 1513	WCDMA
A	PEAK TO AVERAGE RATIO	1312 to 1513	1312, 1413, 1513	WCDMA
A	CONDUCTED EMISSION	1312 to 1513	1312, 1413, 1513	WCDMA
A	RADIATED EMISSION	1312 to 1513	1312, 1413, 1513	WCDMA



LTE BAND 7 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
B	FREQUENCY STABILITY	20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB offset
A	OCCUPIED BANDWIDTH	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB offset
A	PEAK TO AVERAGE RATIO	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 25 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 50 RB / 0 RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 75 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 100 RB / 0 RB offset
A	BAND EDGE	20775 to 21425	20775	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 25 RB / 0 RB offset
			21425	5MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB offset 25 RB / 0 RB offset
		20800 to 21400	20800	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 50 RB / 0 RB offset
			21400	10MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB offset 50 RB / 0 RB offset
		20825 to 21375	20825	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 75 RB / 0 RB offset
			21375	15MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB offset 75 RB / 0 RB offset
		20850 to 21350	20850	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset 100 RB / 0 RB offset
			21350	20MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB offset



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						100 RB / 0 RB offset
A	CONDUCTED EMISSION	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK	1 RB / 0RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK	1 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	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.

LTE BAND CA_7C MODE

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	AVAILABLE SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	EIRP	20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	20805 to 21206	20949 to 21350	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	50RB/ 0RB Offset	100RB/ 0RB Offset
		20825 to 21277	20945 to 21397	Low, Middle, High	15MHz+10MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	50RB/ 0RB Offset
		20825 to 21225	20975 to 21375	Low, Middle, High	15MHz+15MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	75RB/ 0RB Offset
		20828 to 21179	20999 to 21350	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	100RB/ 0RB Offset
		20850 to 21251	20994 to 21395	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	50RB/ 0RB Offset
		20850 to 21201	21201 to 21372	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	75RB/ 0RB Offset
		20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	100RB/ 0RB Offset
A	BAND EDGE	20850 to 21152	21048 to 21350	Low	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 25RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
				High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
A	CONDUCTED EMISSION	20850 to 21152	21048 to 21350	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset

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



LTE BAND 38 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB Offset
		37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		37850 to 38150	37850, 38000, 38150	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	37850 to 38150	37850, 38000, 38150	20MHz	QPSK	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 38 are covered by LTE Band 41, Because it is a subset of LTE Band 41 with the same output power and supported bandwidths, So the conducted test data please refer to LTE Band 41

LTE BAND 41 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB Offset
		39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
B	FREQUENCY STABILITY	39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
A	OCCUPIED BANDWIDTH	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
A	PEAK TO AVERAGE RATIO	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset



		39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset
		39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 75 RB / 0 RB Offset
		39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset
A	BAND EDGE	39675 to 41565	39675	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset
			41565	5MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset 25 RB / 0 RB Offset
		39700 to 41540	39700	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset
			41540	10MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB Offset 50 RB / 0 RB Offset
		39725 to 41515	39725	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 75 RB / 0 RB Offset
			41515	15MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB Offset 75 RB / 0 RB Offset
		39750 to 41490	39750	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset
			41490	20MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB Offset 100 RB / 0 RB Offset
A	CONDCUDED EMISSION	39675 to 41565	39675, 40620, 41565	5MHz	QPSK	1 RB / 0 RB Offset
		39700 to 41540	39700, 40620, 41540	10MHz	QPSK	1 RB / 0 RB Offset
		39725 to 41515	39725, 40620, 41515	15MHz	QPSK	1 RB / 0 RB Offset
		39750 to 41490	39750, 40620, 41490	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	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.4V/ 3.85V/ 4.4V By DC Source	Hanwen Xu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
BAND EDGE	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
CONDCUDED EMISSION	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
RADIATED EMISSION	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu



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 27

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

The radiated average output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

§27.50(d)(4):

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt 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 determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

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.

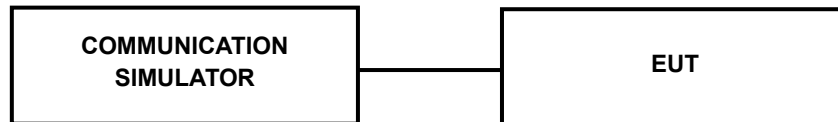
CONDUCTED POWER MEASUREMENT:

- The EUT was set up for the maximum power with LTE 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

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)

Band	WCDMA IV		
TX Channel	1312	1413	1513
Rx Channel	1537	1638	1738
Frequency (MHz)	1712.4	1732.6	1752.6
RMC 12.2K	21.40	21.38	21.41
HSDPA Subtest-1	20.33	20.35	20.37
HSDPA Subtest-2	20.31	20.30	20.33
HSDPA Subtest-3	19.88	19.85	19.86
HSDPA Subtest-4	19.86	19.84	19.85
DC-HSDPA Subtest-1	20.31	20.29	20.36
DC-HSDPA Subtest-2	20.33	20.29	20.32
DC-HSDPA Subtest-3	19.89	19.87	19.82
DC-HSDPA Subtest-4	19.89	19.86	19.87
HSUPA Subtest-1	20.32	20.33	20.31
HSUPA Subtest-2	19.33	19.35	19.32
HSUPA Subtest-3	20.31	20.34	20.35
HSUPA Subtest-4	19.37	19.36	19.34
HSUPA Subtest-5	20.33	20.30	20.32



LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Low	Mid	High
		Channel		20850	21100	21350
		Frequency (MHz)		2510	2535	2560
20	QPSK	1	0	21.55	21.73	21.71
		1	50	21.52	21.60	21.59
		1	99	21.46	21.47	21.45
		50	0	20.83	20.89	20.88
		50	25	20.52	20.57	20.55
		50	50	20.67	20.75	20.74
		100	0	20.65	20.74	20.71
	16QAM	1	0	20.68	20.94	21.00
		1	50	20.84	20.96	20.99
		1	99	20.50	20.64	20.34
		50	0	19.66	19.74	19.84
		50	25	19.60	19.72	19.77
		50	50	19.68	19.70	19.78
		100	0	19.75	19.82	19.83
	64QAM	1	0	19.44	19.94	19.98
		1	50	19.96	19.97	19.99
		1	99	19.67	19.69	19.46
		50	0	18.69	18.75	18.84
		50	25	18.65	18.74	18.80
		50	50	18.55	18.63	18.76
		100	0	18.46	18.56	18.71



LTE Band 7						
BW [MHz]	Modulation	Channel		20825	21100	21375
		Frequency (MHz)		2507.5	2535	2562.5
15	QPSK	1	0	21.54	21.72	21.77
		1	37	21.48	21.58	21.69
		1	74	21.33	21.44	21.45
		36	0	20.81	20.78	20.87
		36	19	20.41	20.49	20.62
		36	39	20.65	20.68	20.64
		75	0	20.59	20.69	20.84
	16QAM	1	0	20.66	20.91	20.91
		1	37	20.80	20.90	20.85
		1	74	20.41	20.55	20.30
		36	0	19.62	19.65	19.83
		36	19	19.47	19.60	19.72
		36	39	19.60	19.55	19.69
		75	0	19.65	19.70	19.69
	64QAM	1	0	19.30	19.88	19.94
		1	37	19.92	19.89	19.94
		1	74	19.55	19.62	19.38
		36	0	18.63	18.70	18.79
		36	19	18.52	18.68	18.74
		36	39	18.41	18.56	18.69
		75	0	18.31	18.41	18.68



LTE Band 7						
BW [MHz]	Modulation	Channel		20800	21100	21400
		Frequency (MHz)		2505	2535	2565
10	QPSK	1	0	21.49	21.63	21.75
		1	24	21.38	21.57	21.64
		1	49	21.32	21.32	21.45
		25	0	20.75	20.84	20.83
		25	12	20.49	20.51	20.67
		25	25	20.53	20.67	20.66
		50	0	20.61	20.59	20.71
	16QAM	1	0	20.64	20.81	20.99
		1	24	20.72	20.88	20.85
		1	49	20.43	20.53	20.33
		25	0	19.56	19.68	19.76
		25	12	19.46	19.69	19.75
		25	25	19.66	19.69	19.77
		50	0	19.72	19.81	19.81
	64QAM	1	0	19.37	19.83	19.93
		1	24	19.81	19.82	19.90
		1	49	19.59	19.64	19.43
		25	0	18.61	18.73	18.71
		25	12	18.64	18.72	18.72
		25	25	18.54	18.55	18.74
		50	0	18.38	18.45	18.64



LTE Band 7						
BW [MHz]	Modulation	Channel		20775	21100	21425
		Frequency (MHz)		2502.5	2535	2567.5
5	QPSK	1	0	21.49	21.67	21.77
		1	12	21.37	21.55	21.57
		1	24	21.33	21.46	21.44
		12	0	20.80	20.80	20.78
		12	6	20.40	20.43	20.63
		12	13	20.65	20.60	20.73
		25	0	20.60	20.69	20.75
	16QAM	1	0	20.53	20.80	20.89
		1	12	20.79	20.81	20.91
		1	24	20.35	20.57	20.19
		12	0	19.59	19.69	19.83
		12	6	19.50	19.70	19.62
		12	13	19.59	19.64	19.72
		25	0	19.66	19.67	19.70
	64QAM	1	0	19.34	19.80	19.85
		1	12	19.82	19.93	19.97
		1	24	19.55	19.61	19.35
		12	0	18.64	18.68	18.82
		12	6	18.64	18.69	18.75
		12	13	18.49	18.53	18.62
		25	0	18.39	18.54	18.61



CA_7C								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	1	21.68
		16QAM	1	99	1	0	1	20.93
		64QAM	1	99	1	0	1	19.96
21100	21298	QPSK	1	99	1	0	1	21.73
		16QAM	1	99	1	0	1	20.96
		64QAM	1	99	1	0	1	19.94
21350	21152	QPSK	1	99	1	0	1	21.76
		16QAM	1	99	1	0	1	20.98
		64QAM	1	99	1	0	1	19.99



LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Low	Mid	High
		Channel		37850	38000	38150
		Frequency (MHz)		2580	2595	2610
20	QPSK	1	0	22.06	22.10	22.07
		1	50	22.07	22.11	22.09
		1	99	22.10	22.12	22.10
		50	0	21.32	21.34	21.24
		50	25	21.35	21.38	21.26
		50	50	21.25	21.26	21.19
		100	0	21.28	21.35	21.22
	16QAM	1	0	21.62	21.54	21.43
		1	50	21.54	21.49	21.44
		1	99	21.64	21.50	21.40
		50	0	20.55	20.50	20.46
		50	25	20.51	20.44	20.42
		50	50	20.48	20.40	20.36
		100	0	20.57	20.43	20.37
	64QAM	1	0	20.28	20.13	20.11
		1	50	20.18	20.17	20.09
		1	99	20.04	20.00	19.96
		50	0	19.58	19.51	19.54
		50	25	19.47	19.36	19.46
		50	50	19.42	19.39	19.33
		100	0	19.55	19.41	19.53



LTE Band 38						
BW [MHz]	Modulation	Channel		37825	38000	38175
		Frequency (MHz)		2577.5	2595	2612.5
15	QPSK	1	0	22.05	21.95	21.96
		1	37	22.04	22.10	22.00
		1	74	22.06	22.02	21.99
		36	0	21.20	21.28	21.11
		36	19	21.18	21.21	21.12
		36	39	21.16	21.25	21.15
		75	0	21.21	21.24	21.12
	16QAM	1	0	21.61	21.44	21.38
		1	37	21.50	21.41	21.36
		1	74	21.60	21.37	21.36
		36	0	20.53	20.41	20.39
		36	19	20.37	20.36	20.38
		36	39	20.34	20.39	20.31
		75	0	20.48	20.35	20.34
	64QAM	1	0	20.19	20.12	20.04
		1	37	20.11	20.04	20.02
		1	74	19.90	19.89	19.92
		36	0	19.56	19.50	19.51
		36	19	19.44	19.27	19.36
		36	39	19.31	19.34	19.19
		75	0	19.42	19.38	19.51



LTE Band 38						
BW [MHz]	Modulation	Channel		37800	38000	38200
		Frequency (MHz)		2575	2595	2615
10	QPSK	1	0	22.00	22.01	22.02
		1	24	21.98	21.96	21.99
		1	49	21.99	22.11	21.95
		25	0	21.17	21.19	21.19
		25	12	21.19	21.18	21.13
		25	25	21.20	21.23	21.14
		50	0	21.19	21.21	21.19
	16QAM	1	0	21.48	21.42	21.34
		1	24	21.46	21.41	21.39
		1	49	21.58	21.49	21.36
		25	0	20.51	20.49	20.44
		25	12	20.48	20.43	20.39
		25	25	20.34	20.32	20.28
		50	0	20.52	20.39	20.28
	64QAM	1	0	20.22	20.06	20.06
		1	24	20.03	20.11	19.94
		1	49	19.99	19.89	19.93
		25	0	19.57	19.39	19.53
		25	12	19.46	19.33	19.39
		25	25	19.36	19.35	19.24
		50	0	19.45	19.36	19.43



LTE Band 38						
BW [MHz]	Modulation	Channel		37775	38000	38225
		Frequency (MHz)		2572.5	2595	2617.5
5	QPSK	1	0	22.03	21.96	22.00
		1	12	22.02	22.00	22.03
		1	24	22.00	21.97	22.04
		12	0	21.25	21.27	21.19
		12	6	21.26	21.29	21.17
		12	13	21.20	21.15	21.08
		25	0	21.15	21.31	21.08
	16QAM	1	0	21.56	21.46	21.38
		1	12	21.44	21.48	21.29
		1	24	21.56	21.41	21.33
		12	0	20.47	20.42	20.39
		12	6	20.45	20.38	20.34
		12	13	20.47	20.30	20.34
		25	0	20.51	20.40	20.31
	64QAM	1	0	20.17	20.12	19.98
		1	12	20.14	20.11	19.98
		1	24	19.89	19.98	19.81
		12	0	19.51	19.38	19.53
		12	6	19.42	19.29	19.41
		12	13	19.34	19.33	19.32
		25	0	19.45	19.32	19.44



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Low	Mid	High
		Channel		39750	40620	41490
		Frequency (MHz)		2506	2593	2680
20	QPSK	1	0	22.27	22.42	22.35
		1	50	22.25	22.40	22.31
		1	99	22.03	22.17	21.74
		50	0	21.32	21.52	21.80
		50	25	21.28	21.49	21.45
		50	50	21.11	21.44	21.42
		100	0	21.10	21.53	21.52
	16QAM	1	0	21.49	21.64	21.87
		1	50	21.47	21.62	21.99
		1	99	21.32	21.56	21.02
		50	0	20.27	20.59	20.80
		50	25	20.43	20.62	20.83
		50	50	20.22	20.40	20.70
		100	0	20.28	20.41	20.75
	64QAM	1	0	20.20	20.31	20.40
		1	50	20.22	20.32	20.47
		1	99	19.88	19.66	19.55
		50	0	18.88	19.05	19.26
		50	25	18.80	18.88	19.25
		50	50	18.71	18.85	19.15
		100	0	18.73	18.89	19.21



LTE Band 41						
BW [MHz]	Modulation	Channel		39725	40620	41515
		Frequency (MHz)		2503.5	2593	2682.5
15	QPSK	1	0	22.12	22.36	22.34
		1	37	22.13	22.25	22.29
		1	74	21.89	22.04	21.63
		36	0	21.27	21.42	21.76
		36	19	21.15	21.42	21.39
		36	39	20.98	21.41	21.28
		75	0	20.97	21.49	21.46
	16QAM	1	0	21.47	21.49	21.74
		1	37	21.37	21.59	21.87
		1	74	21.27	21.53	20.96
		36	0	20.15	20.56	20.76
		36	19	20.30	20.61	20.74
		36	39	20.08	20.35	20.59
		75	0	20.21	20.31	20.64
	64QAM	1	0	20.18	20.16	20.33
		1	37	20.21	20.26	20.45
		1	74	19.81	19.63	19.42
		36	0	18.77	18.98	19.16
		36	19	18.67	18.87	19.14
		36	39	18.69	18.78	19.08
		75	0	18.63	18.83	19.10



LTE Band 41						
BW [MHz]	Modulation	Channel		39700	40620	41540
		Frequency (MHz)		2501	2593	2685
10	QPSK	1	0	22.12	22.34	22.28
		1	24	22.23	22.37	22.26
		1	49	22.00	22.13	21.67
		25	0	21.22	21.49	21.66
		25	12	21.19	21.47	21.40
		25	25	21.05	21.38	21.32
		50	0	21.01	21.40	21.50
	16QAM	1	0	21.38	21.52	21.74
		1	24	21.41	21.59	21.95
		1	49	21.24	21.47	20.87
		25	0	20.22	20.51	20.70
		25	12	20.30	20.59	20.72
		25	25	20.17	20.25	20.61
		50	0	20.18	20.35	20.65
	64QAM	1	0	20.05	20.29	20.25
		1	24	20.11	20.18	20.35
		1	49	19.81	19.61	19.47
		25	0	18.82	18.94	19.14
		25	12	18.79	18.75	19.13
		25	25	18.70	18.70	19.10
		50	0	18.66	18.83	19.17



LTE Band 41						
BW [MHz]	Modulation	Channel		39675	40620	41565
		Frequency (MHz)		2498.5	2593	2687.5
5	QPSK	1	0	22.24	22.39	22.21
		1	12	22.20	22.29	22.18
		1	24	22.01	22.12	21.64
		12	0	21.29	21.41	21.74
		12	6	21.16	21.42	21.34
		12	13	21.03	21.33	21.41
		25	0	21.03	21.41	21.50
	16QAM	1	0	21.45	21.62	21.74
		1	12	21.33	21.53	21.92
		1	24	21.22	21.43	20.94
		12	0	20.22	20.45	20.74
		12	6	20.41	20.57	20.75
		12	13	20.20	20.30	20.68
		25	0	20.19	20.32	20.71
	64QAM	1	0	20.08	20.19	20.38
		1	12	20.14	20.30	20.43
		1	24	19.83	19.59	19.54
		12	0	18.75	19.03	19.21
		12	6	18.69	18.85	19.20
		12	13	18.61	18.78	19.06
		25	0	18.68	18.79	19.13



EIRP

WCDMA IV						
Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
1312	1712.4	21.40	2.55	23.95	248.31	1
1413	1732.6	21.38	2.55	23.93	247.17	1
1513	1752.6	21.41	2.55	23.96	248.89	1

LTE Band 7

LTE Band 7							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20M-QPSK	20850	2510	21.55	2.02	23.57	227.51	2
	21100	2535	21.73	2.02	23.75	237.14	2
	21350	2560	21.71	2.02	23.73	236.05	2
20M-16QAM	20850	2510	20.84	2.02	22.86	193.20	2
	21100	2535	20.96	2.02	22.98	198.61	2
	21350	2560	21.00	2.02	23.02	200.45	2
20M-64QAM	20850	2510	19.96	2.02	21.98	157.76	2
	21100	2535	19.97	2.02	21.99	158.12	2
	21350	2560	19.99	2.02	22.01	158.85	2
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
15M-QPSK	20825	2507.5	21.54	2.02	23.56	226.99	2
	21100	2535	21.72	2.02	23.74	236.59	2
	21375	2562.5	21.77	2.02	23.79	239.33	2
15M-16QAM	20825	2507.5	20.80	2.02	22.82	191.43	2
	21100	2535	20.91	2.02	22.93	196.34	2
	21375	2562.5	20.91	2.02	22.93	196.34	2
15M-64QAM	20825	2507.5	19.92	2.02	21.94	156.31	2
	21100	2535	19.89	2.02	21.91	155.24	2
	21375	2562.5	19.94	2.02	21.96	157.04	2



LTE Band 7							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
10M-QPSK	20800	2505	21.49	2.02	23.51	224.39	2
	21100	2535	21.63	2.02	23.65	231.74	2
	21400	2565	21.75	2.02	23.77	238.23	2
10M- 16QAM	20800	2505	20.72	2.02	22.74	187.93	2
	21100	2535	20.88	2.02	22.90	194.98	2
	21400	2565	20.99	2.02	23.01	199.99	2
10M- 64QAM	20800	2505	19.81	2.02	21.83	152.41	2
	21100	2535	19.83	2.02	21.85	153.11	2
	21400	2565	19.93	2.02	21.95	156.68	2
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
5M-QPSK	20775	2502.5	21.49	2.02	23.51	224.39	2
	21100	2535	21.67	2.02	23.69	233.88	2
	21425	2567.5	21.77	2.02	23.79	239.33	2
5M-16QAM	20775	2502.5	20.79	2.02	22.81	190.99	2
	21100	2535	20.81	2.02	22.83	191.87	2
	21425	2567.5	20.91	2.02	22.93	196.34	2
5M-64QAM	20775	2502.5	19.82	2.02	21.84	152.76	2
	21100	2535	19.93	2.02	21.95	156.68	2
	21425	2567.5	19.97	2.02	21.99	158.12	2

**CA_7C**

PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (W)
			RB Size	RB offset	RB Size	RB offset					
20850	21048	QPSK	1	99	1	0	21.68	2.02	23.70	234.42	2
		16QAM	1	99	1	0	20.93	2.02	22.95	197.24	2
		64QAM	1	99	1	0	19.96	2.02	21.98	157.76	2
21001	21199	QPSK	1	99	1	0	21.73	2.02	23.75	237.14	2
		16QAM	1	99	1	0	20.96	2.02	22.98	198.61	2
		64QAM	1	99	1	0	19.94	2.02	21.96	157.04	2
21152	21350	QPSK	1	99	1	0	21.76	2.02	23.78	238.78	2
		16QAM	1	99	1	0	20.98	2.02	23.00	199.53	2
		64QAM	1	99	1	0	19.99	2.02	22.01	158.85	2



LTE Band 38

LTE Band 38							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20M-QPSK	37850	2580	22.10	1.73	23.83	241.55	2
	38000	2595	22.12	1.73	23.85	242.66	2
	38150	2610	22.10	1.73	23.83	241.55	2
20M- 16QAM	37850	2580	21.64	1.73	23.37	217.27	2
	38000	2595	21.54	1.73	23.27	212.32	2
	38150	2610	21.44	1.73	23.17	207.49	2
20M- 64QAM	37850	2580	20.28	1.73	22.01	158.85	2
	38000	2595	20.17	1.73	21.90	154.88	2
	38150	2610	20.11	1.73	21.84	152.76	2
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
15M-QPSK	37825	2577.5	22.06	1.73	23.79	239.33	2
	38000	2595	22.10	1.73	23.83	241.55	2
	38175	2612.5	22.00	1.73	23.73	236.05	2
15M- 16QAM	37825	2577.5	21.61	1.73	23.34	215.77	2
	38000	2595	21.44	1.73	23.17	207.49	2
	38175	2612.5	21.38	1.73	23.11	204.64	2
15M- 64QAM	37825	2577.5	20.19	1.73	21.92	155.60	2
	38000	2595	20.12	1.73	21.85	153.11	2
	38175	2612.5	20.04	1.73	21.77	150.31	2



LTE Band 38							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
10M-QPSK	37800	2575	22.00	1.73	23.73	236.05	2
	38000	2595	22.11	1.73	23.84	242.10	2
	38200	2615	22.02	1.73	23.75	237.14	2
10M- 16QAM	37800	2575	21.58	1.73	23.31	214.29	2
	38000	2595	21.49	1.73	23.22	209.89	2
	38200	2615	21.39	1.73	23.12	205.12	2
10M- 64QAM	37800	2575	20.22	1.73	21.95	156.68	2
	38000	2595	20.11	1.73	21.84	152.76	2
	38200	2615	20.06	1.73	21.79	151.01	2
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
5M-QPSK	37775	2572.5	22.03	1.73	23.76	237.68	2
	38000	2595	22.00	1.73	23.73	236.05	2
	38225	2617.5	22.04	1.73	23.77	238.23	2
5M-16QAM	37775	2572.5	21.56	1.73	23.29	213.30	2
	38000	2595	21.48	1.73	23.21	209.41	2
	38225	2617.5	21.38	1.73	23.11	204.64	2
5M-64QAM	37775	2572.5	20.17	1.73	21.90	154.88	2
	38000	2595	20.12	1.73	21.85	153.11	2
	38225	2617.5	19.98	1.73	21.71	148.25	2



LTE Band 41							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20M-QPSK	39750	2506	22.27	2.02	24.29	268.53	2
	40620	2593	22.42	2.02	24.44	277.97	2
	41490	2680	22.35	2.02	24.37	273.53	2
20M- 16QAM	39750	2506	21.49	2.02	23.51	224.39	2
	40620	2593	21.64	2.02	23.66	232.27	2
	41490	2680	21.99	2.02	24.01	251.77	2
20M- 64QAM	39750	2506	20.22	2.02	22.24	167.49	2
	40620	2593	20.32	2.02	22.34	171.4	2
	41490	2680	20.47	2.02	22.49	177.42	2
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
15M-QPSK	39725	2503.5	22.13	2.02	24.15	260.02	2
	40620	2593	22.36	2.02	24.38	274.16	2
	41515	2682.5	22.34	2.02	24.36	272.9	2
15M- 16QAM	39725	2503.5	21.47	2.02	23.49	223.36	2
	40620	2593	21.59	2.02	23.61	229.61	2
	41515	2682.5	21.87	2.02	23.89	244.91	2
15M- 64QAM	39725	2503.5	20.21	2.02	22.23	167.11	2
	40620	2593	20.26	2.02	22.28	169.04	2
	41515	2682.5	20.45	2.02	22.47	176.6	2



LTE Band 41							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
10M-QPSK	39700	2501	22.23	2.02	24.25	266.07	2
	40620	2593	22.37	2.02	24.39	274.79	2
	41540	2685	22.28	2.02	24.3	269.15	2
10M-16QAM	39700	2501	21.41	2.02	23.43	220.29	2
	40620	2593	21.59	2.02	23.61	229.61	2
	41540	2685	21.95	2.02	23.97	249.46	2
10M-64QAM	39700	2501	20.11	2.02	22.13	163.31	2
	40620	2593	20.29	2.02	22.31	170.22	2
	41540	2685	20.35	2.02	22.37	172.58	2
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
5M-QPSK	39675	2498.5	22.24	2.02	24.26	266.69	2
	40620	2593	22.39	2.02	24.41	276.06	2
	41565	2687.5	22.21	2.02	24.23	264.85	2
5M-16QAM	39675	2498.5	21.45	2.02	23.47	222.33	2
	40620	2593	21.62	2.02	23.64	231.21	2
	41565	2687.5	21.92	2.02	23.94	247.74	2
5M-64QAM	39675	2498.5	20.14	2.02	22.16	164.44	2
	40620	2593	20.30	2.02	22.32	170.61	2
	41565	2687.5	20.43	2.02	22.45	175.79	2

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



3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

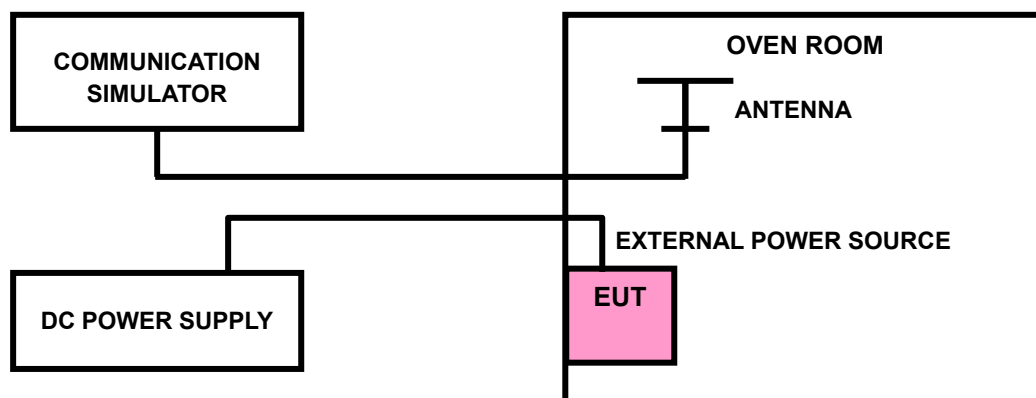
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

- 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.
- 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.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ 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 Of this test report.

Note: VL = Low voltage(3.4V); VN/NV = Normal voltage(3.85V); VH = High voltage(4.4V); NT = Normal temperature (25°C)

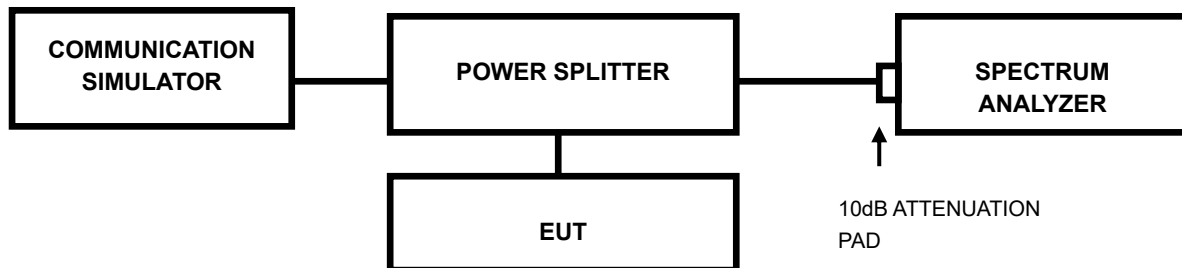


3.3 OCCUPIED BANDWIDTH MEASUREMENT

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

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

3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.



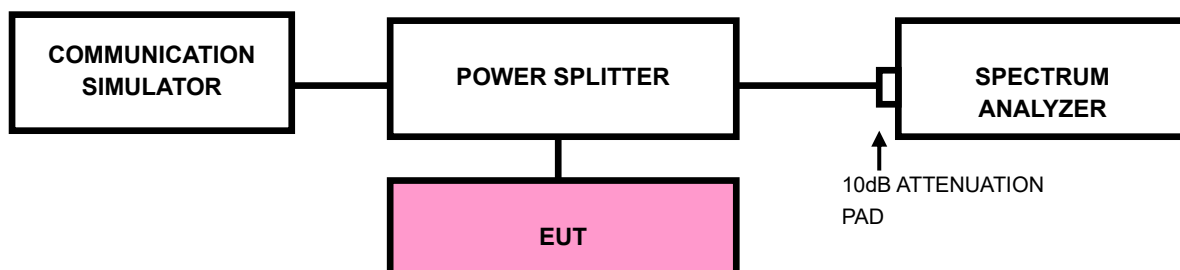
3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC Part 27.53(h) specified that For operations in the 1710-1755 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

According to FCC Part 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

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) $\geq 1\%$ 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 $\geq 3 \times$ 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 Of this test report.



3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

For WCDMA IV

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 is equal to -13dBm .

For: LTE Band7/7C

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

For LTE Band38/41

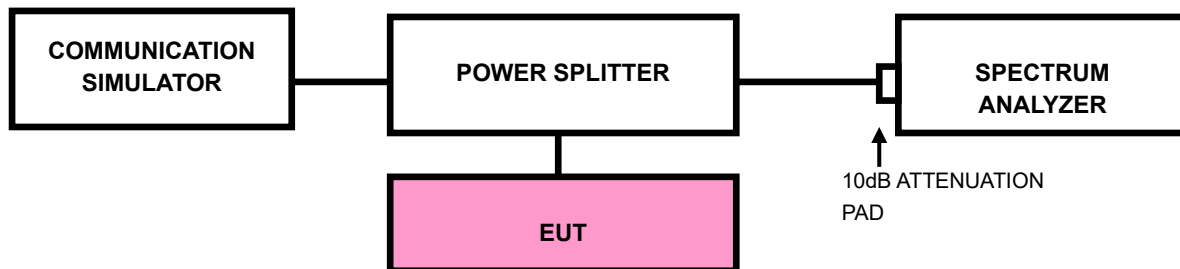
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

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 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 Of this test report.

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

For WCDMA IV

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 is equal to -13dBm .

For: LTE Band7/7C

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

For LTE Band38/41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $55 + 10 \log_{10}(P)$ dB. The limit of emission is equal to -25dBm .

3.6.2 TEST PROCEDURES

- 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.
- 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.
- $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,
 $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$.

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

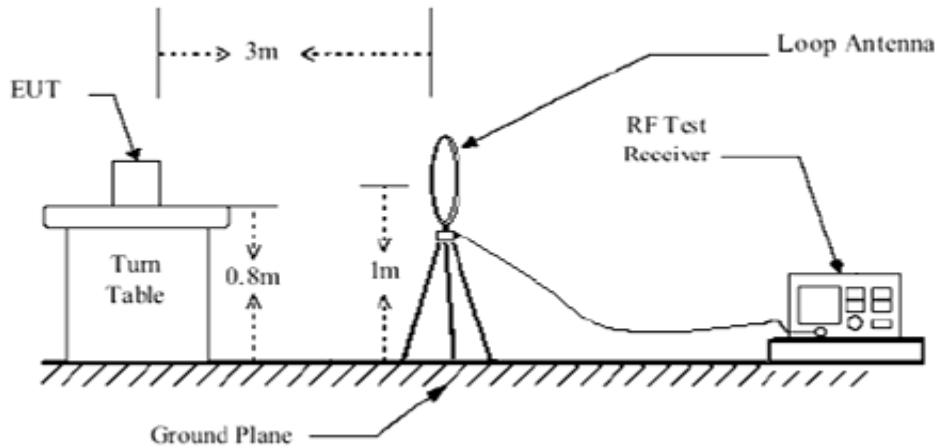
3.6.3 DEVIATION FROM TEST STANDARD

No deviation

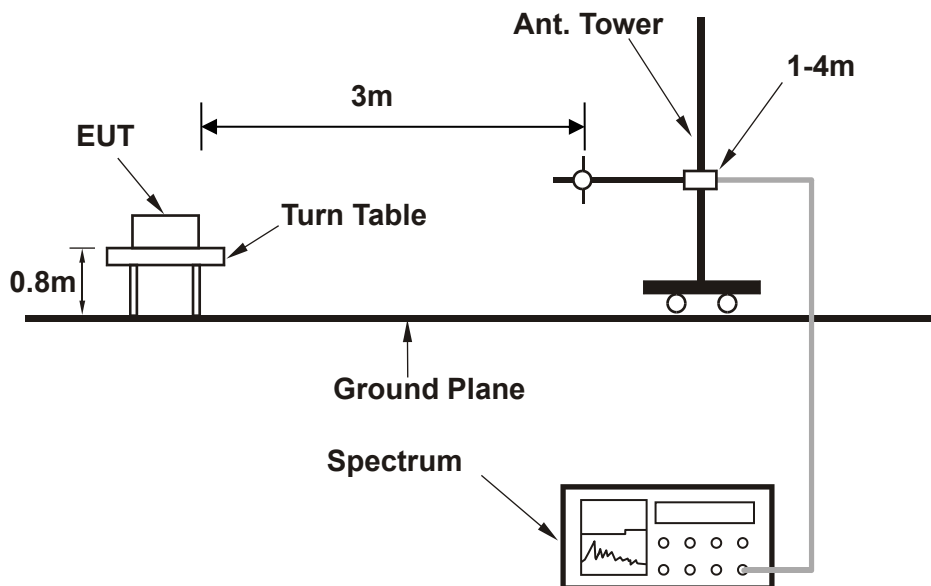


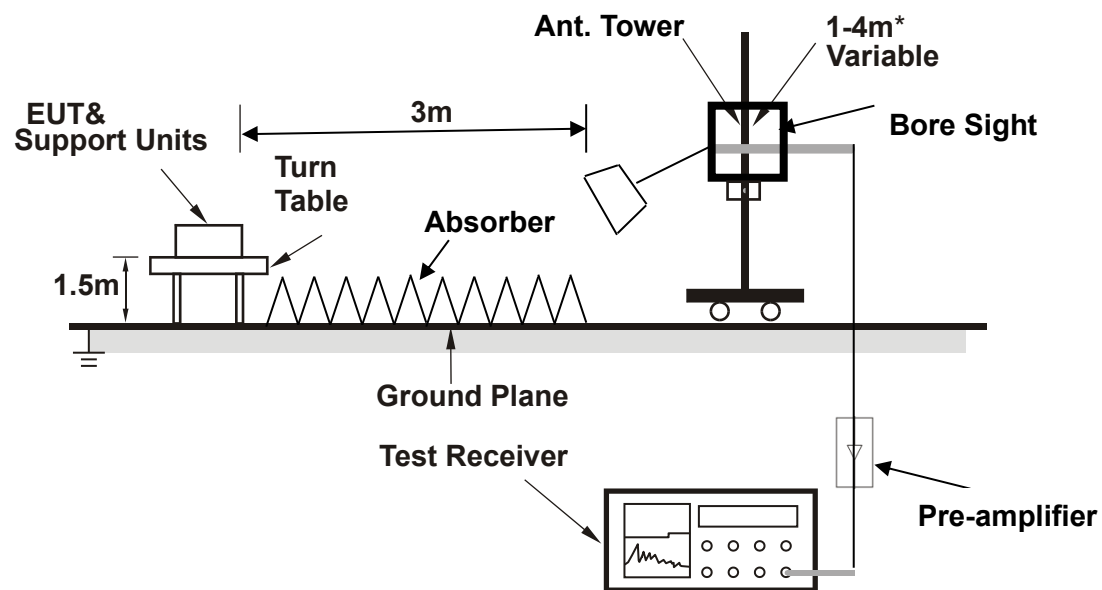
3.6.4 TEST SETUP

< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >





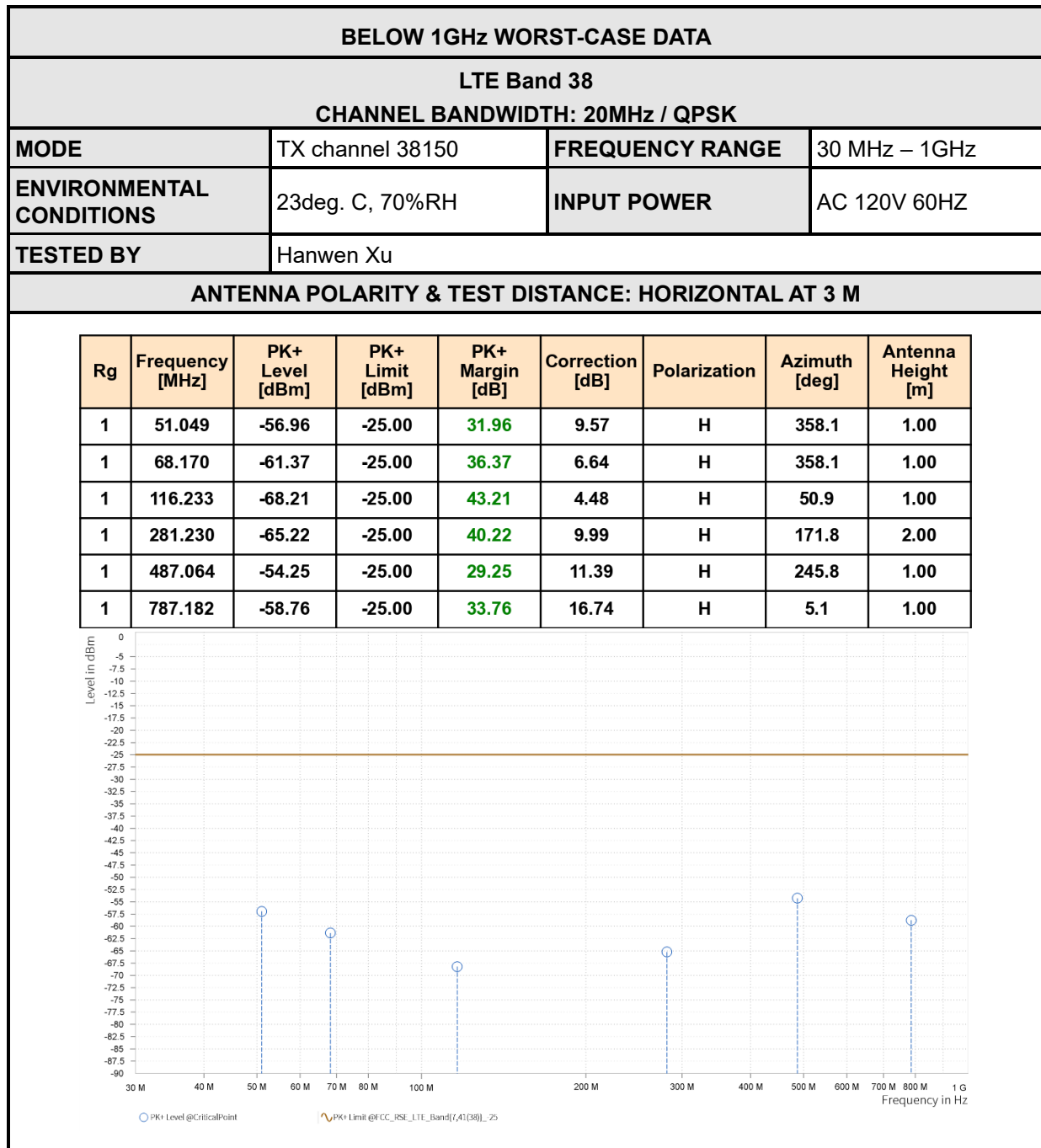
Note: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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.

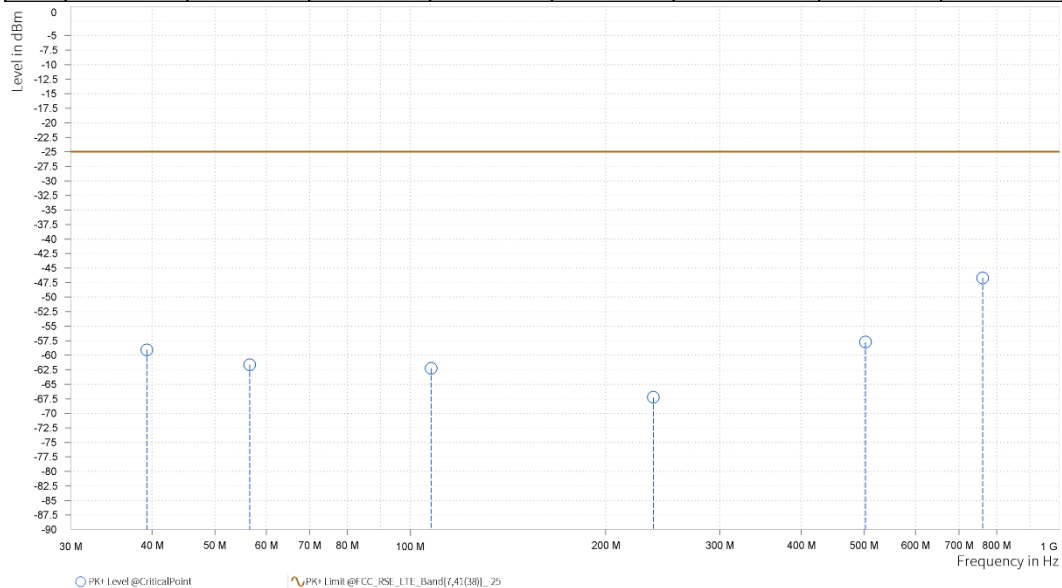




MODE	TX channel 38150	FREQUENCY RANGE	30 MHz – 1GHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V 60HZ
TESTED BY	Hanwen Xu		

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	39.264	-59.08	-25.00	34.08	8.50	V	286.4	1.00
1	56.578	-61.63	-25.00	36.63	8.40	V	359	2.00
1	107.697	-62.26	-25.00	37.26	7.81	V	355.6	2.00
1	236.756	-67.24	-25.00	42.24	8.56	V	5.1	1.00
1	502.390	-57.72	-25.00	32.72	11.30	V	355.6	2.00
1	761.041	-46.71	-25.00	21.71	17.46	V	355.6	2.00





ABOVE 1GHz

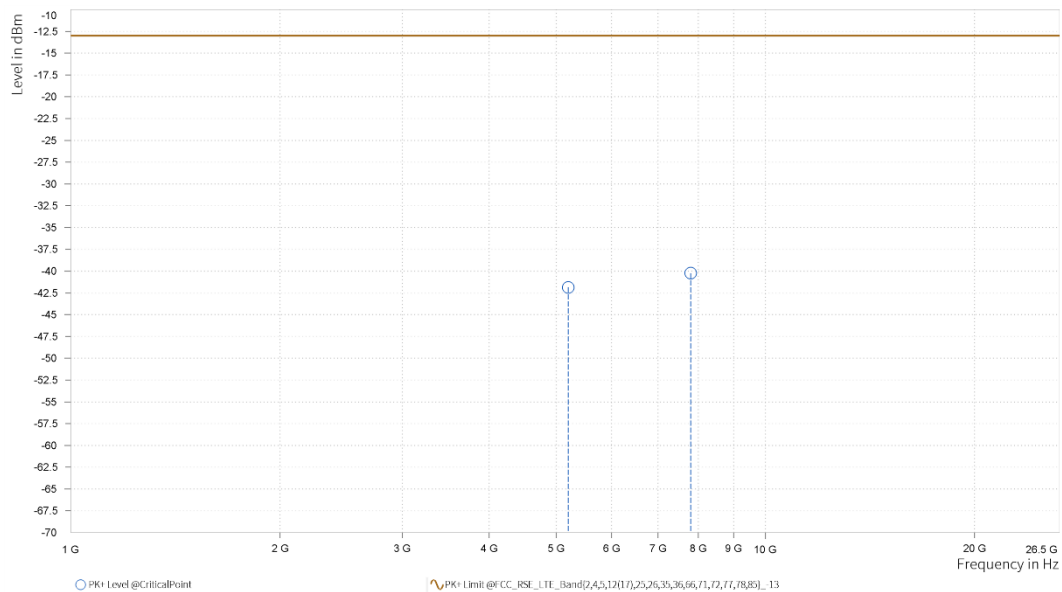
Note: For higher frequency, the emission is too low to be detected.

LTE BAND 38

CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 38150
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

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	5,202.000	-41.87	-13.00	28.87	32.13	H	1	1.00
4	7,803.000	-40.24	-13.00	27.24	36.35	H	117.9	2.00

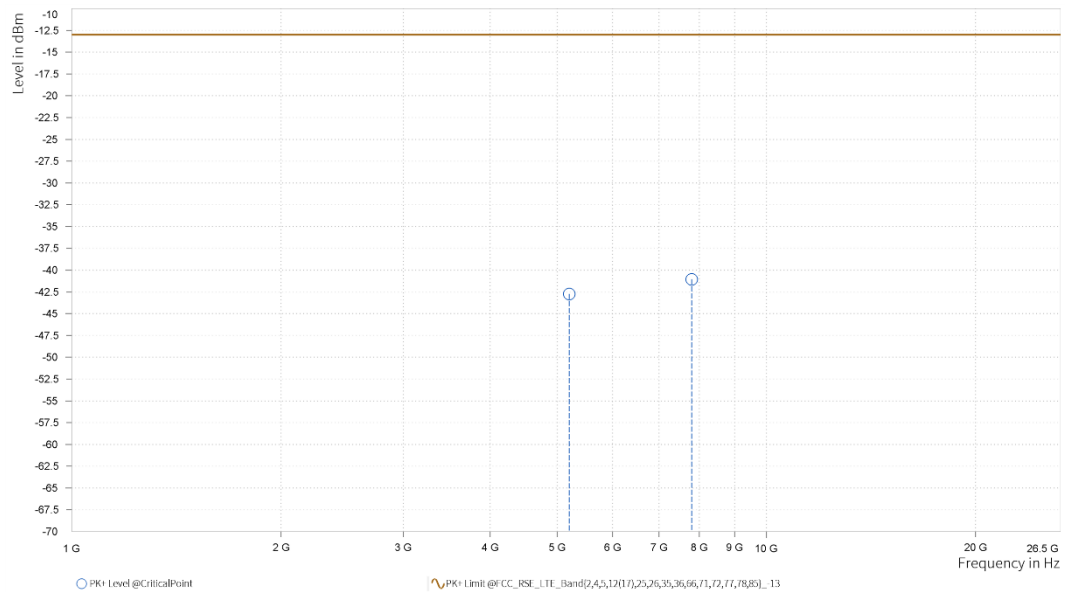




CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 38150
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	AC 120V 60HZ	TESTED BY	Hanwen Xu

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	5,202.000	-42.74	-13.00	29.74	32.10	V	359	2.00
4	7,803.000	-41.06	-13.00	28.06	36.42	V	1	1.00

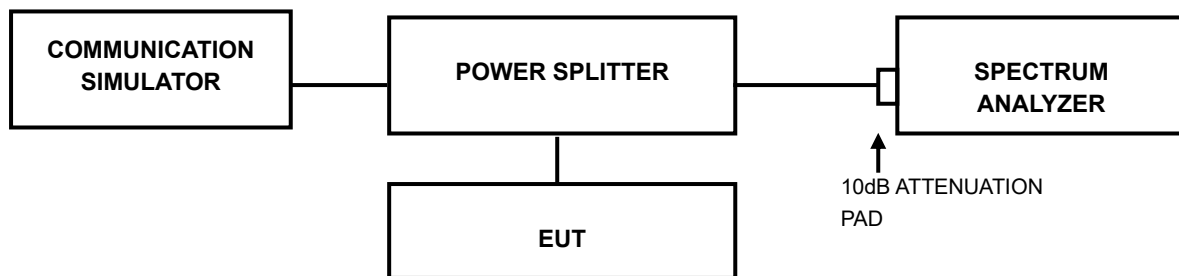


3.7 PEAK TO AVERAGE RATIO

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 $\geq$ 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 Of this test report.



4 INFORMATION ON THE TESTING LABORATORIES

We, Huarui 7layers High Technology (Suzhou) Co., Ltd. ,were founded in 2020 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province, China

Accredited Test Lab Cert 6613.01

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

Suzhou EMC/RF Lab:

Tel: +86 (0557) 368 1008



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

No any modifications are made to the EUT by the lab during the test.

6 Appendix

WCDMA BAND IV

PEAK-TO-AVERAGE RATIO(CCDF)

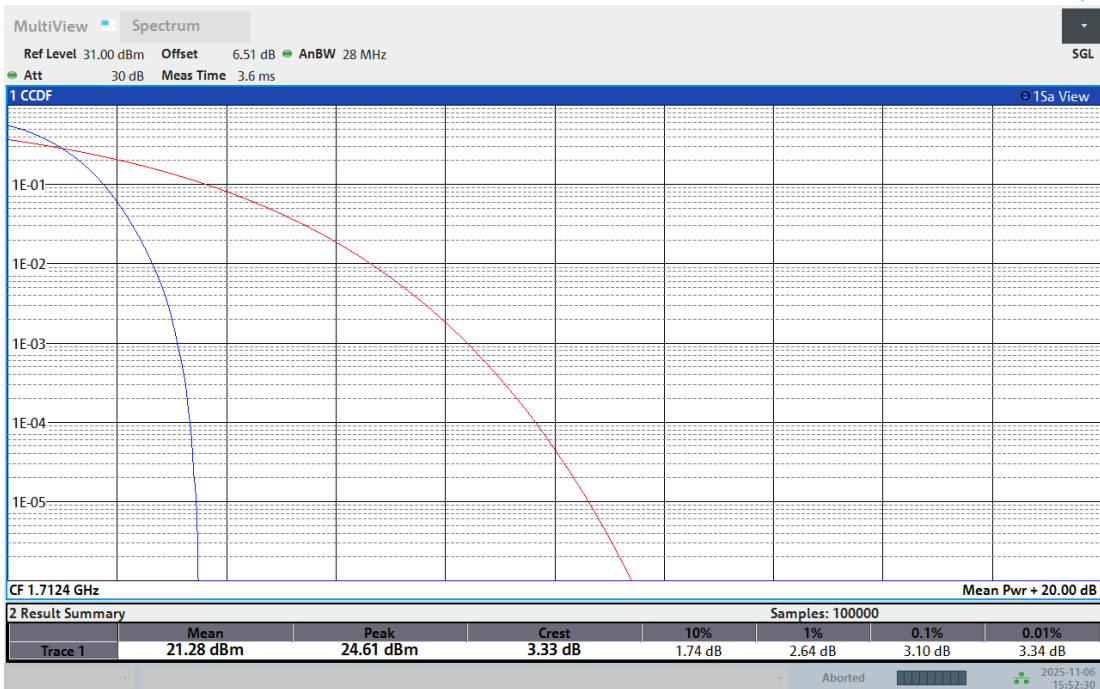
Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
Band IV	1312	3.10	13	PASS
Band IV	1413	3.04	13	PASS
Band IV	1513	3.06	13	PASS

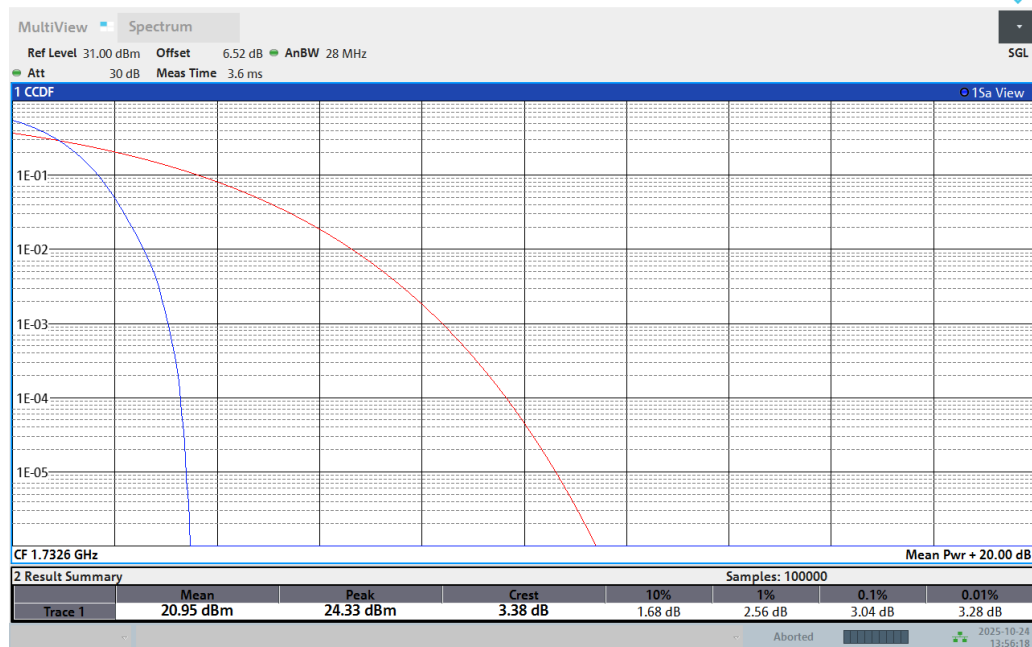


Test Graphs

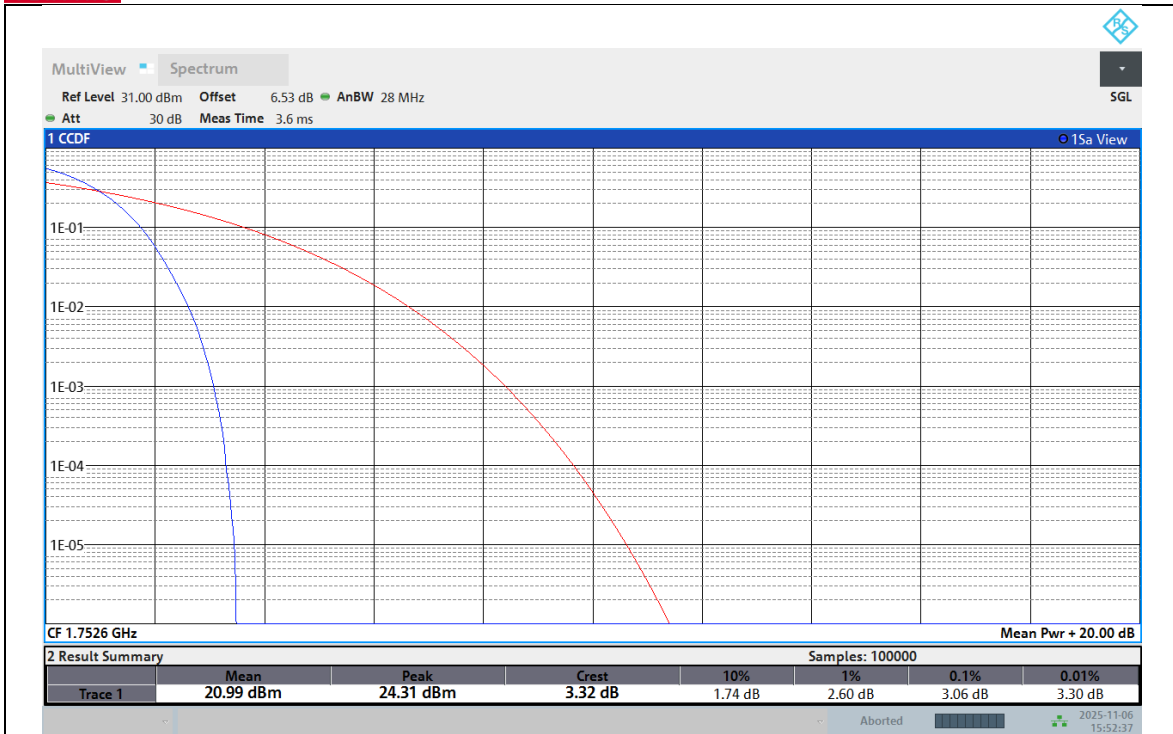
Channel-1312-PASS



Channel-1413-PASS



Channel-1513-PASS





26DB BANDWIDTH AND OCCUPIED BANDWIDTH

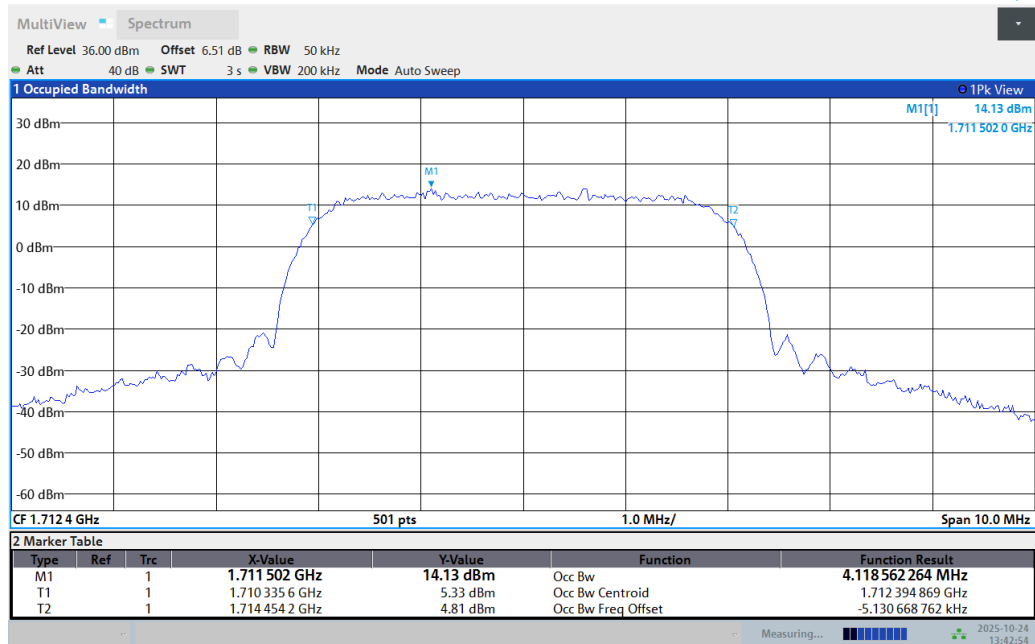
Test Result

Frequency (MHz)	Occupied Bandwidth (99%) (MHz)
1712.4	4.119
1732.6	4.128
1752.6	4.122

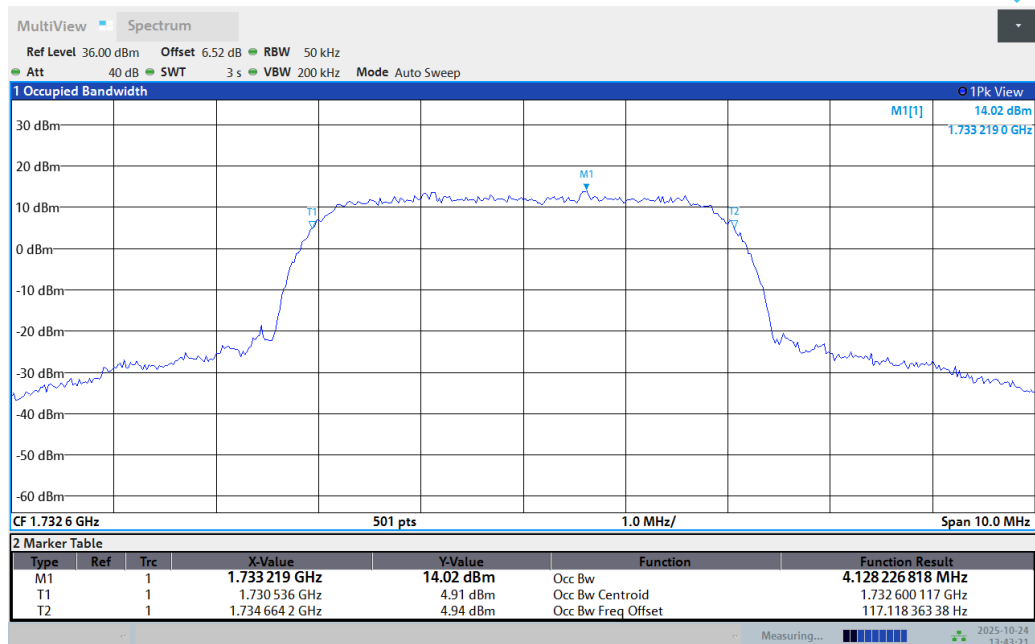


Test Graphs

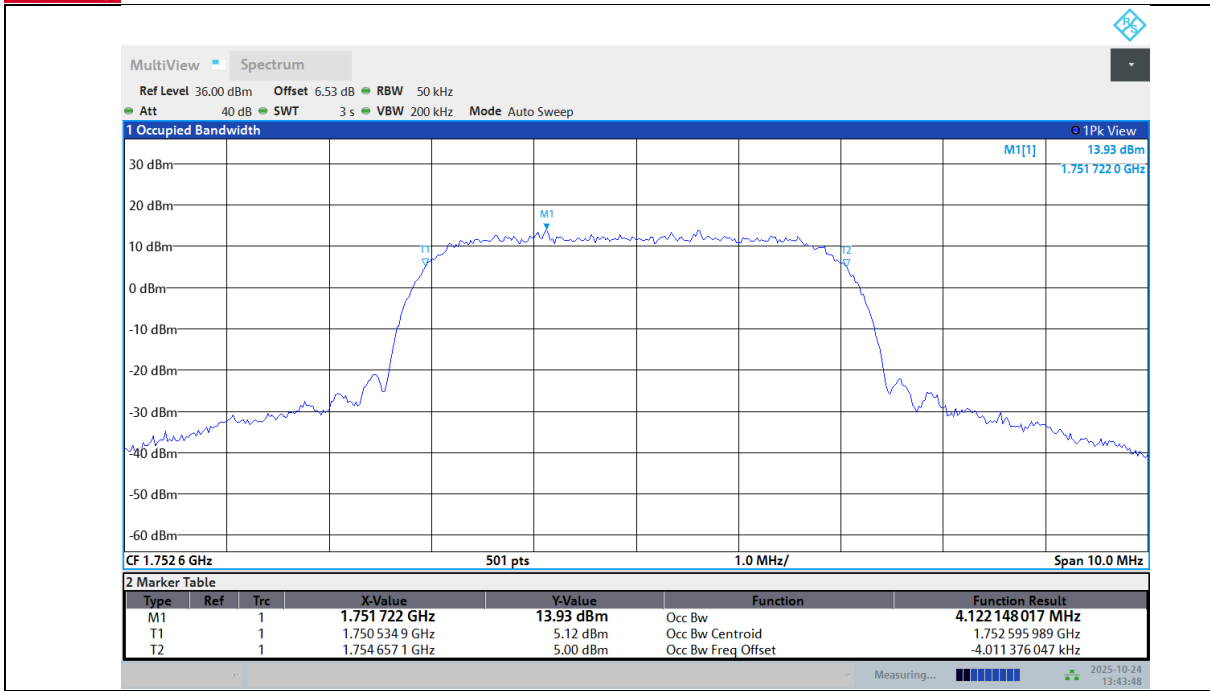
Channel 1312-Occupied Bandwidth (99% BW)



Channel 1413-Occupied Bandwidth (99% BW)



Channel 1513-Occupied Bandwidth (99% BW)

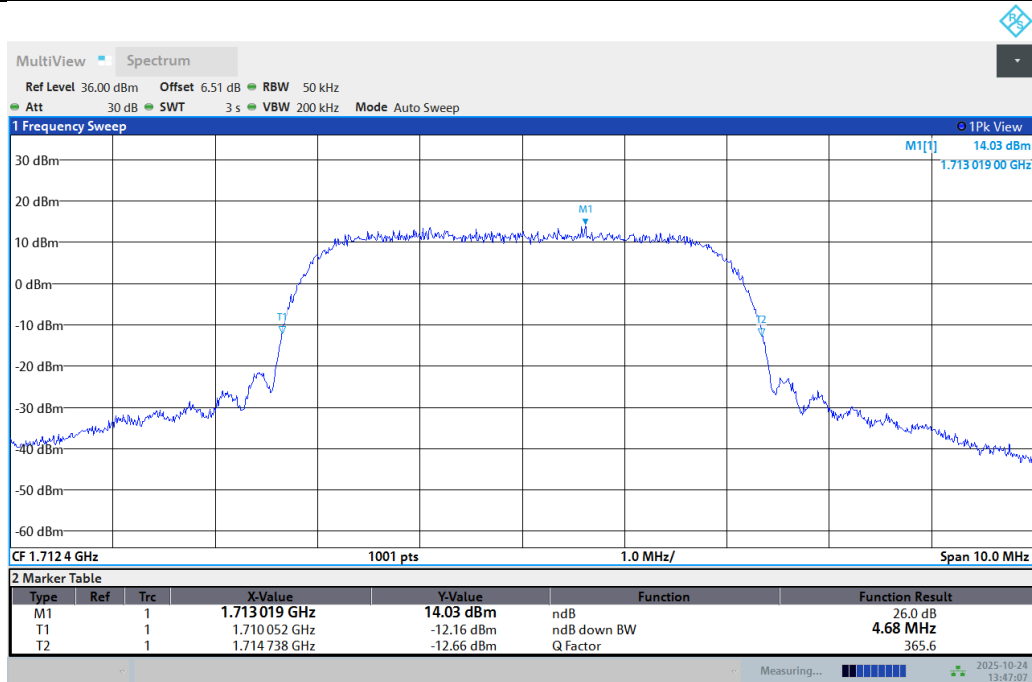




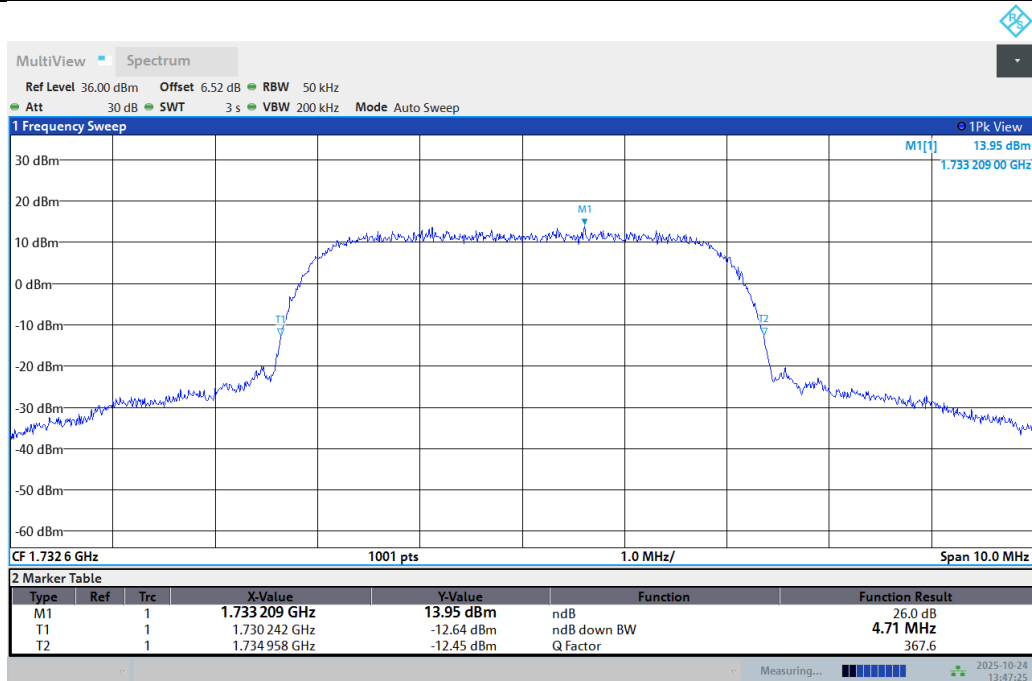
Frequency (MHz)	Emission Bandwidth (-26dBc)(MHz)
1712.4	4.68
1732.6	4.71
1752.6	4.68



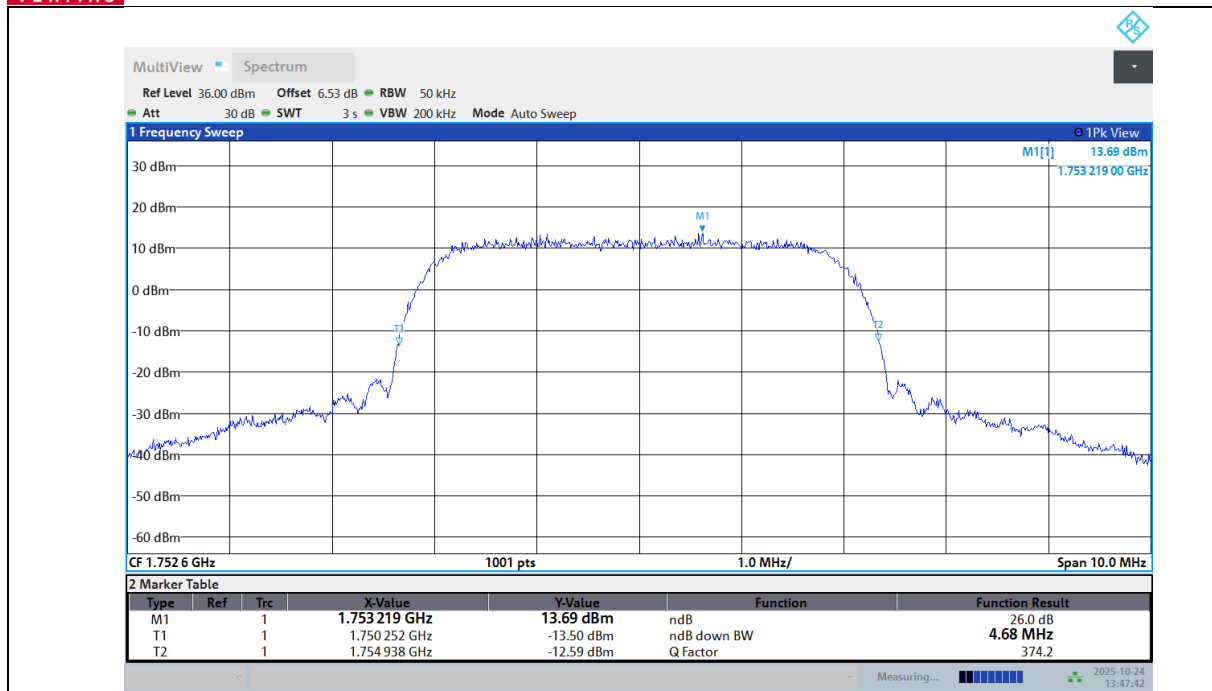
Channel 1312-Emission Bandwidth (-26dBc BW)



Channel 1413-Emission Bandwidth (-26dBc BW)



Channel 1513-Emission Bandwidth (-26dBc BW)





BAND EDGE

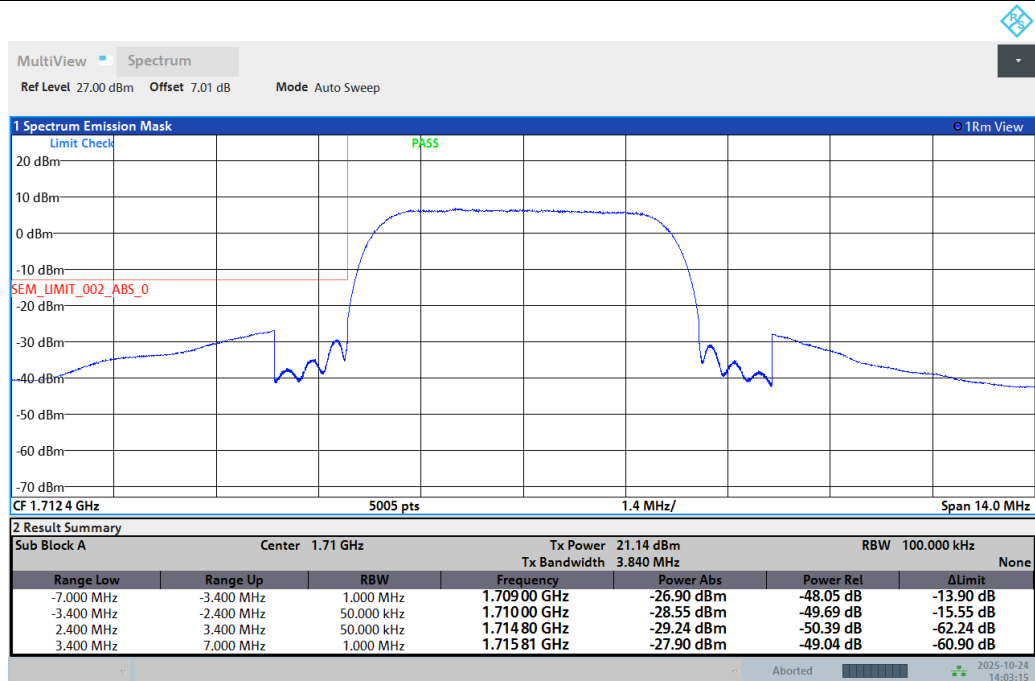
Test Result

Band	Channel	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band IV	1312	1710.00	-28.55	-13	PASS
Band IV	1513	1756.01	-26.93	-13	PASS

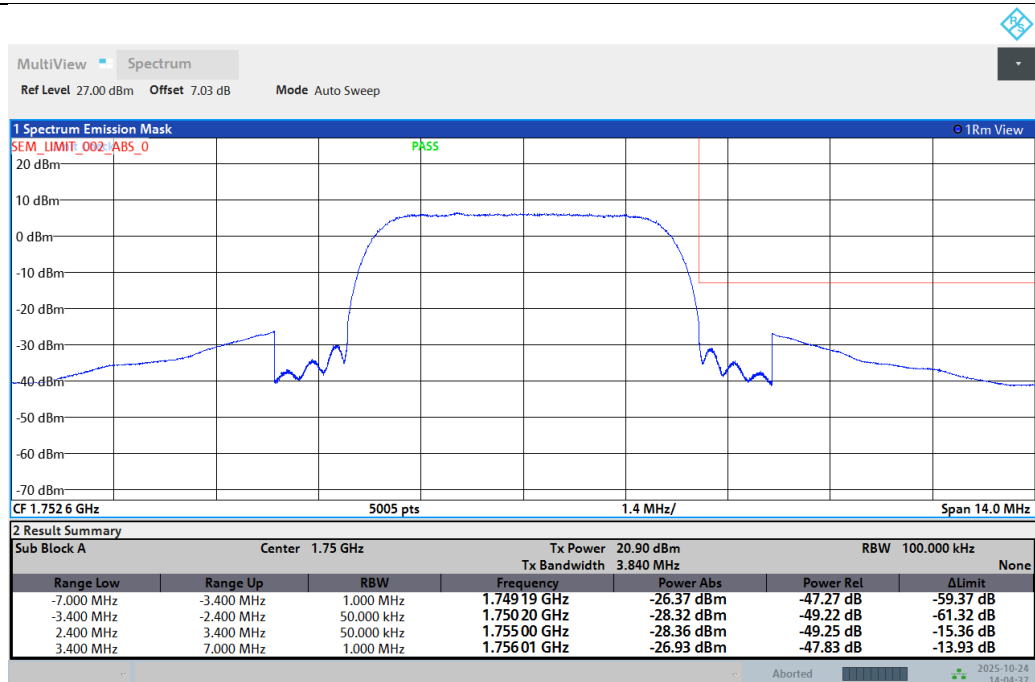


Test Graphs

Channel 1312



Channel 1513





BUREAU VERITAS Test Report No.: PSU-NQN2509250114RF08
CONDUCTED SPURIOUS EMISSION

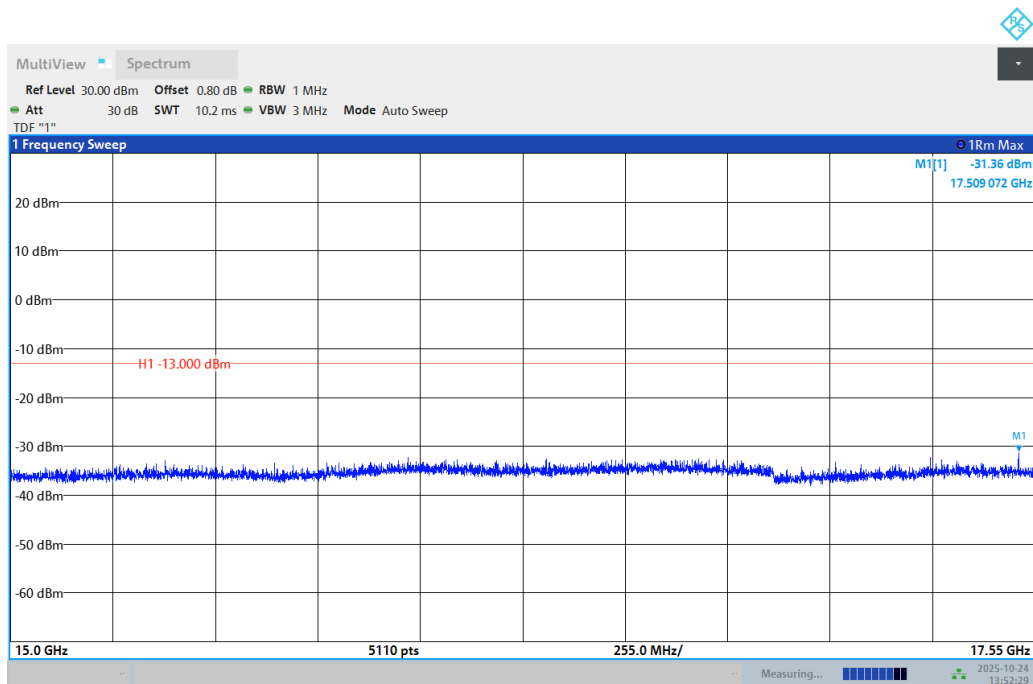
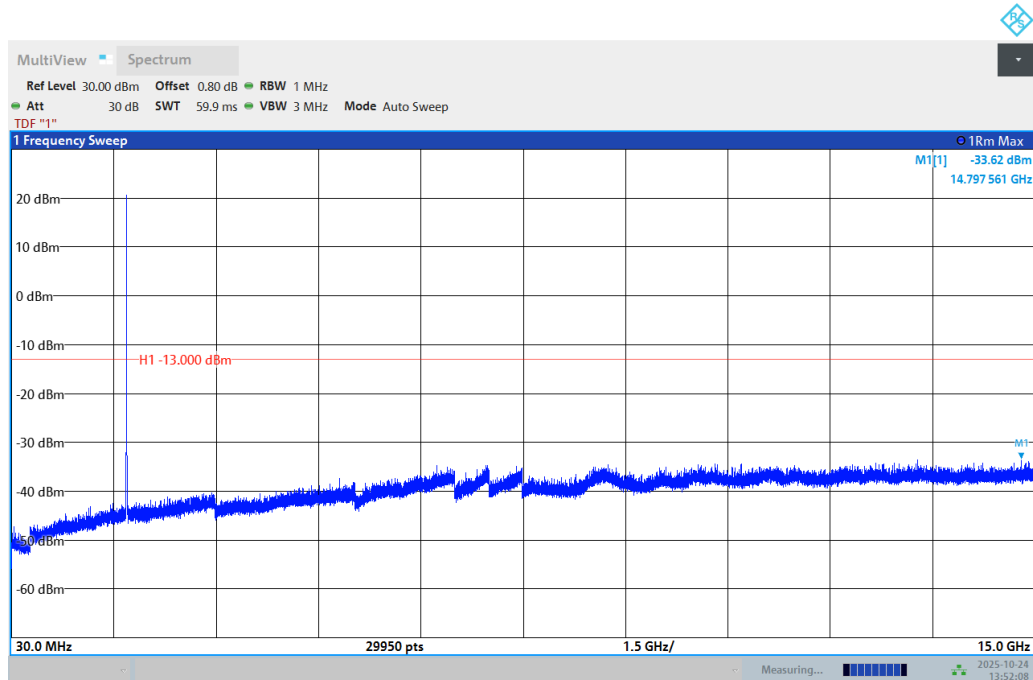
Test Result

Band	Channel	Frequency Range (Mhz)	Result (dBm)	Limit (dBm)	Verdict
Band IV	1312	30~15000MHz	See Graph	-13	PASS
Band IV	1312	15000~17550MHz	See Graph	-13	PASS
Band IV	1413	30~15000MHz	See Graph	-13	PASS
Band IV	1413	15000~17550MHz	See Graph	-13	PASS
Band IV	1513	30~15000MHz	See Graph	-13	PASS
Band IV	1513	15000~17550MHz	See Graph	-13	PASS



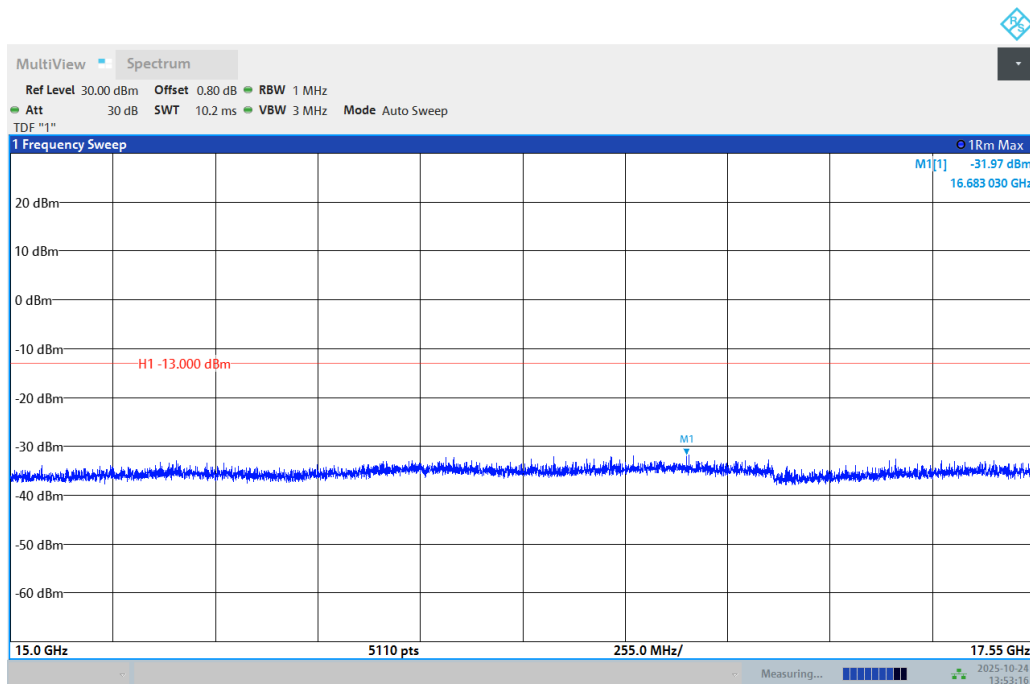
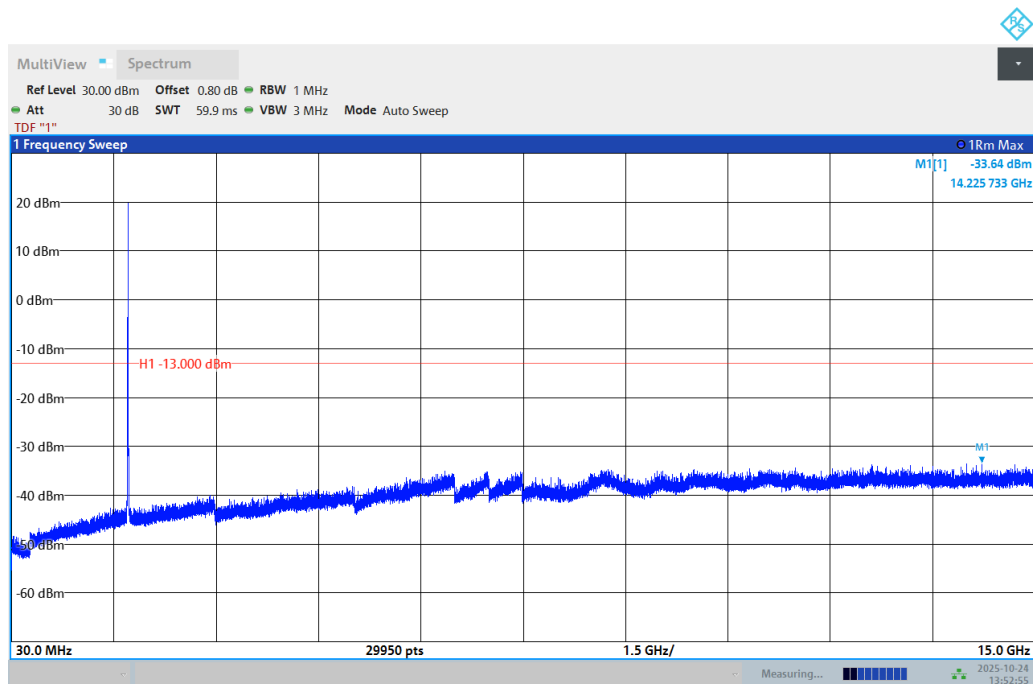
Test Graphs

Channel 1312:30MHZ - 17550MHZ



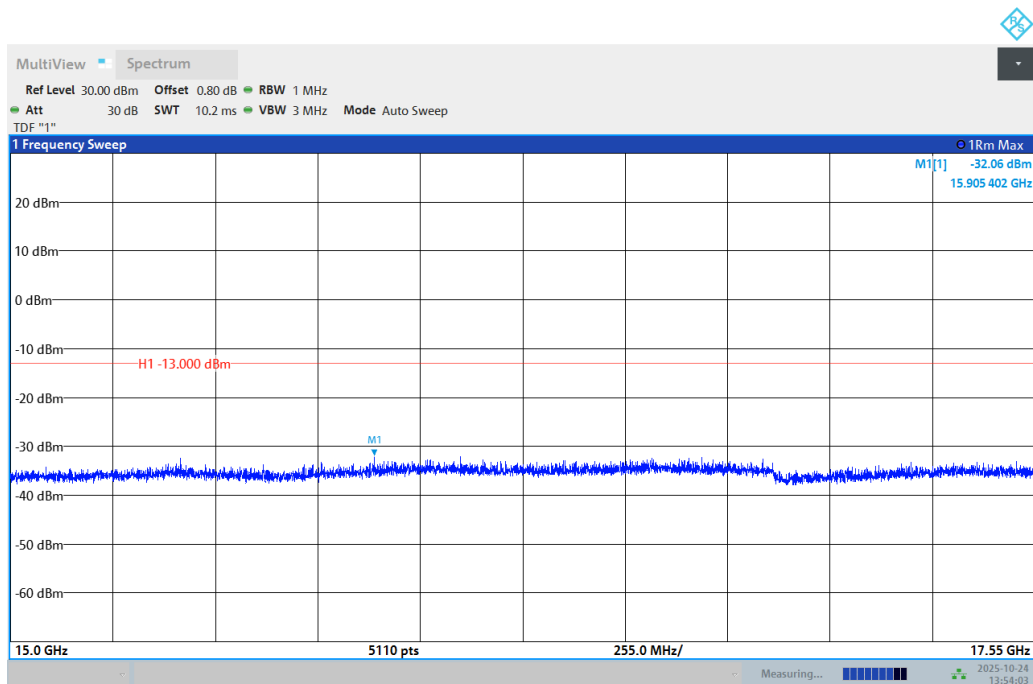
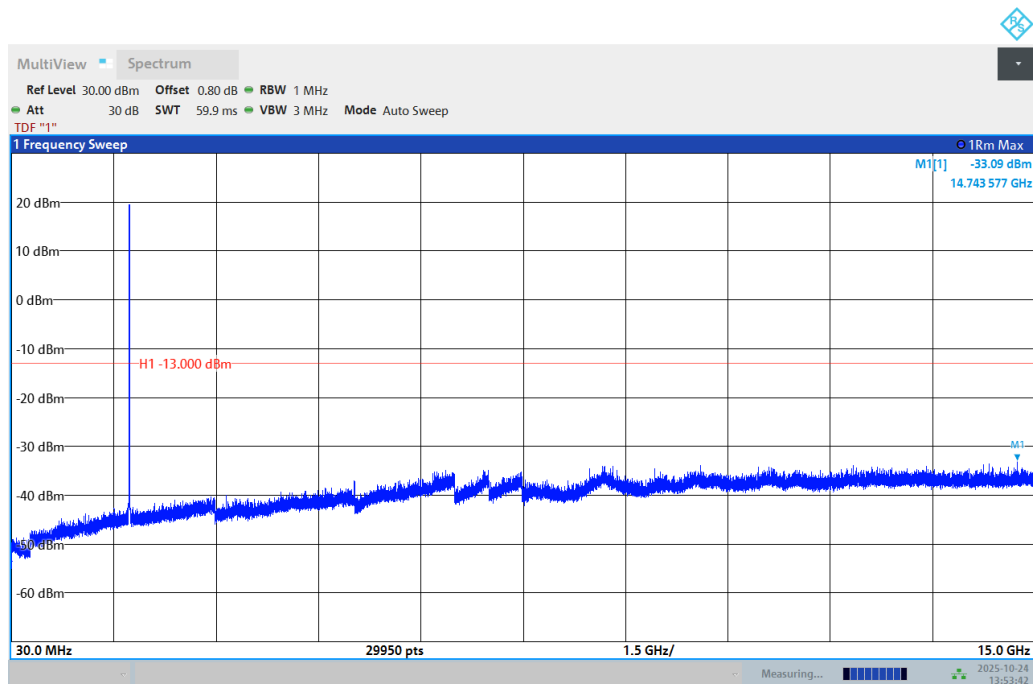


Channel 1413:30MHZ - 17550MHz





Channel 1513:30MHZ - 17550MHZ





Frequency Stability

Test Result

Voltage						
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band IV	1312	LV	NT	-152.25	-0.0889	PASS
Band IV	1312	NV	NT	-25.85	-0.0151	PASS
Band IV	1312	HV	NT	-31.35	-0.0183	PASS
Band IV	1413	LV	NT	-81.64	-0.0467	PASS
Band IV	1413	NV	NT	-100.63	-0.0576	PASS
Band IV	1413	HV	NT	-142.39	-0.0815	PASS
Band IV	1513	LV	NT	-64.55	-0.0362	PASS
Band IV	1513	NV	NT	-20.94	-0.0117	PASS
Band IV	1513	HV	NT	-130.76	-0.0734	PASS



Temperature						
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Verdict
Band IV	1312	NV	-30	-147.05	-0.0859	PASS
Band IV	1312	NV	-20	-15.37	0.0009	PASS
Band IV	1312	NV	-10	-72.80	-0.0425	PASS
Band IV	1312	NV	0	-13.64	-0.0080	PASS
Band IV	1312	NV	10	-44.41	-0.0259	PASS
Band IV	1312	NV	20	-54.57	-0.0319	PASS
Band IV	1312	NV	30	-43.75	-0.0255	PASS
Band IV	1312	NV	40	18.05	0.0105	PASS
Band IV	1312	NV	50	-98.28	-0.0574	PASS
Band IV	1413	NV	-30	-174.15	-0.0997	PASS
Band IV	1413	NV	-20	-104.69	-0.0599	PASS
Band IV	1413	NV	-10	-91.92	-0.0526	PASS
Band IV	1413	NV	0	-156.13	-0.0893	PASS
Band IV	1413	NV	10	-50.43	-0.0289	PASS
Band IV	1413	NV	20	-94.52	-0.0541	PASS
Band IV	1413	NV	30	-53.97	-0.0309	PASS
Band IV	1413	NV	40	-57.90	-0.0331	PASS
Band IV	1413	NV	50	-166.04	-0.0950	PASS
Band IV	1513	NV	-30	5.98	0.0034	PASS
Band IV	1513	NV	-20	-41.61	-0.0233	PASS
Band IV	1513	NV	-10	-48.22	-0.0271	PASS
Band IV	1513	NV	0	-148.44	-0.0833	PASS
Band IV	1513	NV	10	-152.81	-0.0857	PASS
Band IV	1513	NV	20	-113.14	-0.0635	PASS
Band IV	1513	NV	30	-107.90	-0.0605	PASS
Band IV	1513	NV	40	-172.59	-0.0968	PASS
Band IV	1513	NV	50	-159.72	-0.0896	PASS

Note: The fundamental emission stays within the authorized frequency block based on the frequency stability is small.



LTE BAND 7

PEAK-TO-AVERAGE RATIO(CCDF)

Test Result

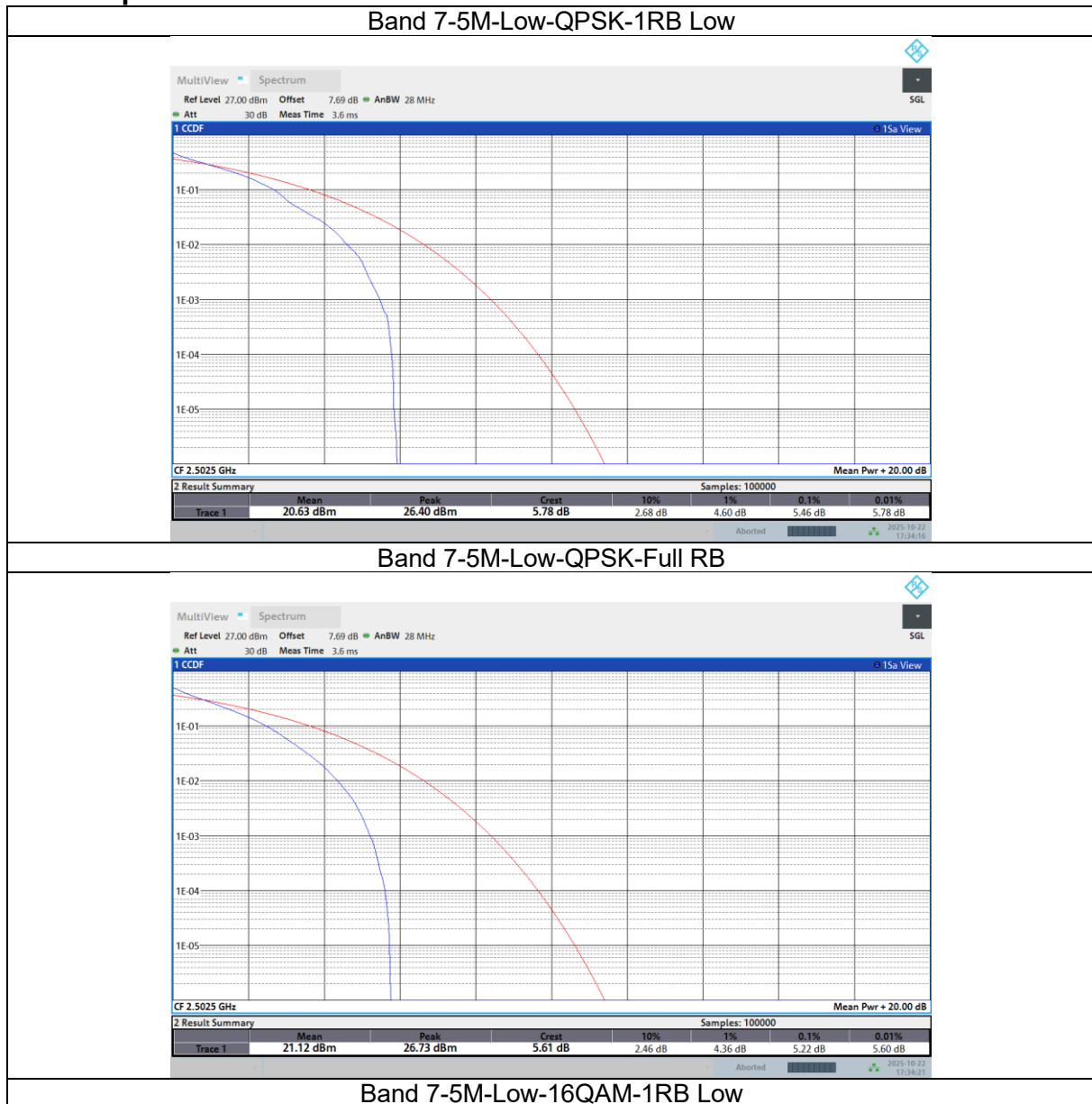
Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
5MHz	QPSK	20775	1RB Low	5.46	13	PASS
5MHz	QPSK	20775	Full RB	5.22	13	PASS
5MHz	16QAM	20775	1RB Low	5.92	13	PASS
5MHz	16QAM	20775	Full RB	5.92	13	PASS
5MHz	64QAM	20775	1RB Low	6.46	13	PASS
5MHz	64QAM	20775	Full RB	6.48	13	PASS
5MHz	QPSK	21100	1RB Low	5.16	13	PASS
5MHz	QPSK	21100	Full RB	5.68	13	PASS
5MHz	16QAM	21100	1RB Low	5.82	13	PASS
5MHz	16QAM	21100	Full RB	6.28	13	PASS
5MHz	64QAM	21100	1RB Low	6.22	13	PASS
5MHz	64QAM	21100	Full RB	6.72	13	PASS
5MHz	QPSK	21425	1RB Low	4.62	13	PASS
5MHz	QPSK	21425	Full RB	5.30	13	PASS
5MHz	16QAM	21425	1RB Low	5.30	13	PASS
5MHz	16QAM	21425	Full RB	6.14	13	PASS
5MHz	64QAM	21425	1RB Low	6.44	13	PASS
5MHz	64QAM	21425	Full RB	6.64	13	PASS
10MHz	QPSK	20800	1RB Low	5.28	13	PASS
10MHz	QPSK	20800	Full RB	5.06	13	PASS
10MHz	16QAM	20800	1RB Low	6.24	13	PASS
10MHz	16QAM	20800	Full RB	5.98	13	PASS
10MHz	64QAM	20800	1RB Low	6.10	13	PASS
10MHz	64QAM	20800	Full RB	6.42	13	PASS
10MHz	QPSK	21100	1RB Low	4.98	13	PASS
10MHz	QPSK	21100	Full RB	5.46	13	PASS
10MHz	16QAM	21100	1RB Low	6.14	13	PASS
10MHz	16QAM	21100	Full RB	6.26	13	PASS
10MHz	64QAM	21100	1RB Low	6.76	13	PASS
10MHz	64QAM	21100	Full RB	6.70	13	PASS
10MHz	QPSK	21400	1RB Low	4.50	13	PASS
10MHz	QPSK	21400	Full RB	5.22	13	PASS
10MHz	16QAM	21400	1RB Low	5.26	13	PASS
10MHz	16QAM	21400	Full RB	6.18	13	PASS
10MHz	64QAM	21400	1RB Low	6.32	13	PASS
10MHz	64QAM	21400	Full RB	6.52	13	PASS
15MHz	QPSK	20825	1RB Low	4.90	13	PASS
15MHz	QPSK	20825	Full RB	5.26	13	PASS
15MHz	16QAM	20825	1RB Low	5.92	13	PASS
15MHz	16QAM	20825	Full RB	5.88	13	PASS
15MHz	64QAM	20825	1RB Low	6.08	13	PASS
15MHz	64QAM	20825	Full RB	6.28	13	PASS
15MHz	QPSK	21100	1RB Low	4.90	13	PASS
15MHz	QPSK	21100	Full RB	5.76	13	PASS

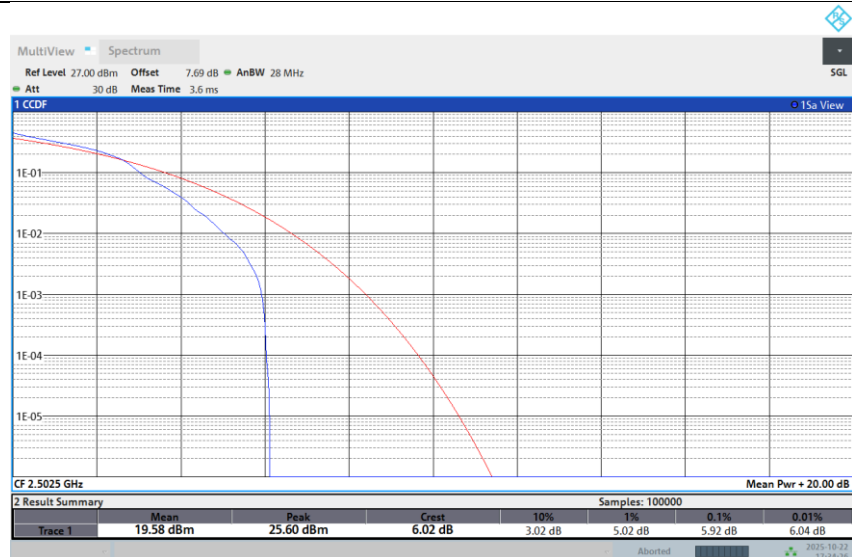
**BUREAU VERITAS** Test Report No.: PSU-NQN2509250114RF08

15MHz	16QAM	21100	1RB Low	5.74	13	PASS
15MHz	16QAM	21100	Full RB	6.34	13	PASS
15MHz	64QAM	21100	1RB Low	6.66	13	PASS
15MHz	64QAM	21100	Full RB	6.62	13	PASS
15MHz	QPSK	21375	1RB Low	4.86	13	PASS
15MHz	QPSK	21375	Full RB	5.56	13	PASS
15MHz	16QAM	21375	1RB Low	5.68	13	PASS
15MHz	16QAM	21375	Full RB	6.14	13	PASS
15MHz	64QAM	21375	1RB Low	6.40	13	PASS
15MHz	64QAM	21375	Full RB	6.54	13	PASS
20MHz	QPSK	20850	1RB Low	5.12	13	PASS
20MHz	QPSK	20850	Full RB	5.18	13	PASS
20MHz	16QAM	20850	1RB Low	5.50	13	PASS
20MHz	16QAM	20850	Full RB	5.98	13	PASS
20MHz	64QAM	20850	1RB Low	6.74	13	PASS
20MHz	64QAM	20850	Full RB	6.46	13	PASS
20MHz	QPSK	21100	1RB Low	4.88	13	PASS
20MHz	QPSK	21100	Full RB	5.42	13	PASS
20MHz	16QAM	21100	1RB Low	5.70	13	PASS
20MHz	16QAM	21100	Full RB	6.32	13	PASS
20MHz	64QAM	21100	1RB Low	6.28	13	PASS
20MHz	64QAM	21100	Full RB	6.54	13	PASS
20MHz	QPSK	21350	1RB Low	4.80	13	PASS
20MHz	QPSK	21350	Full RB	5.38	13	PASS
20MHz	16QAM	21350	1RB Low	6.14	13	PASS
20MHz	16QAM	21350	Full RB	6.16	13	PASS
20MHz	64QAM	21350	1RB Low	6.26	13	PASS
20MHz	64QAM	21350	Full RB	6.60	13	PASS

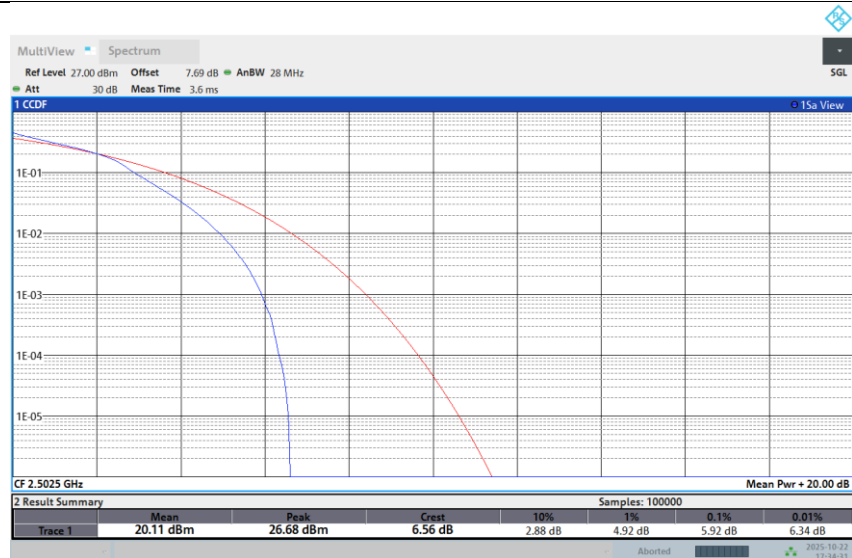


Test Graphs

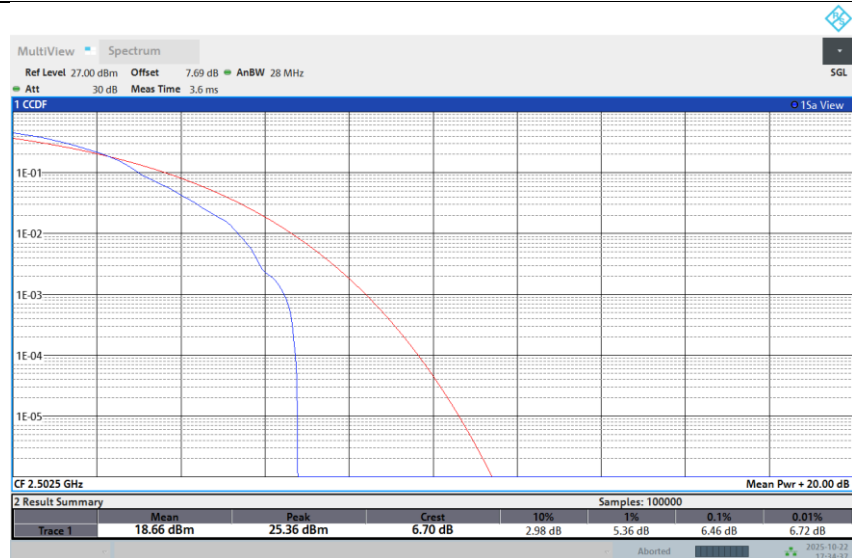




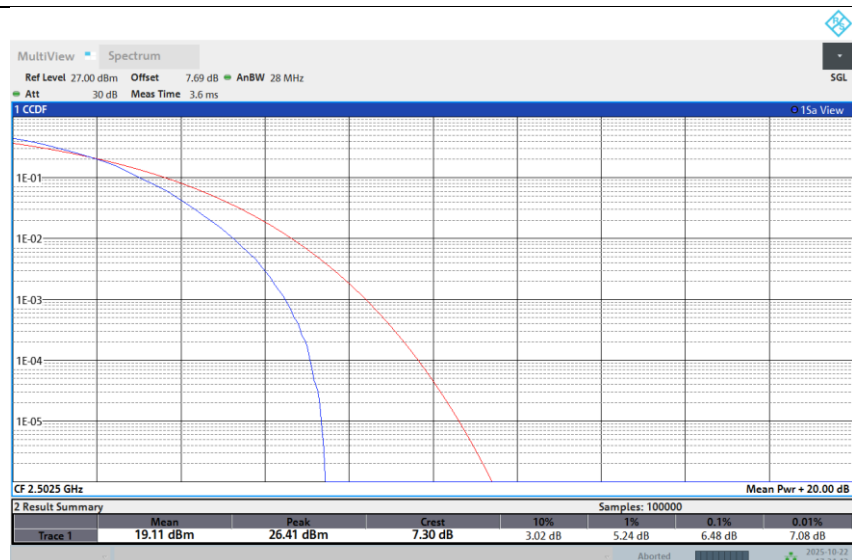
Band 7-5M-Low-16QAM-Full RB



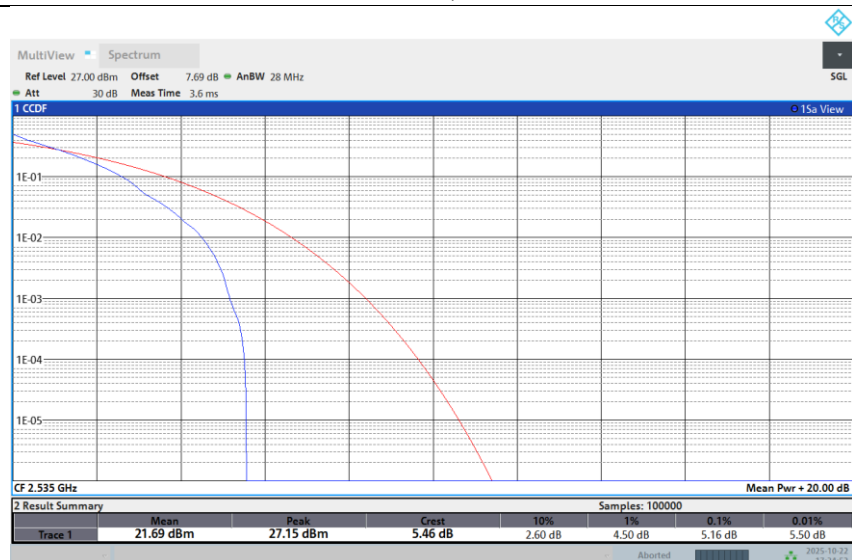
Band 7-5M-Low-64QAM-1RB Low



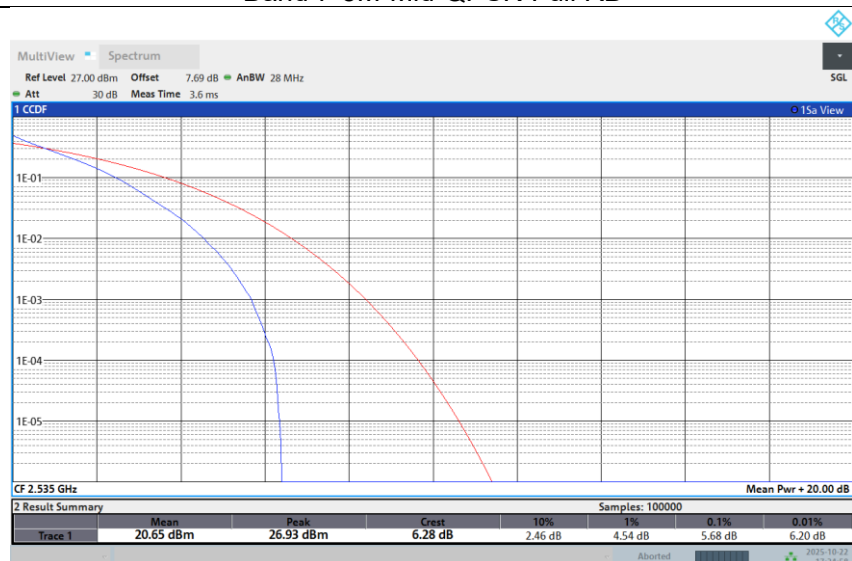
Band 7-5M-Low-64QAM-Full RB



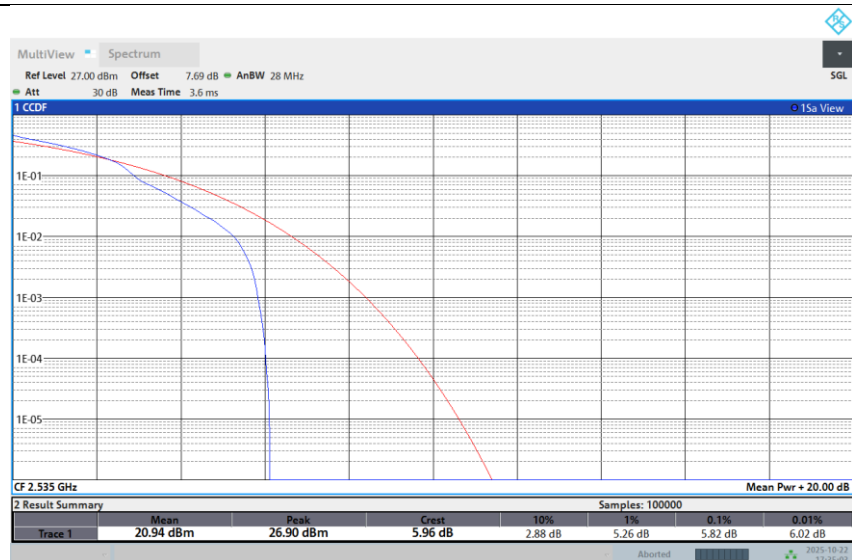
Band 7-5M-Mid-QPSK-1RB Low



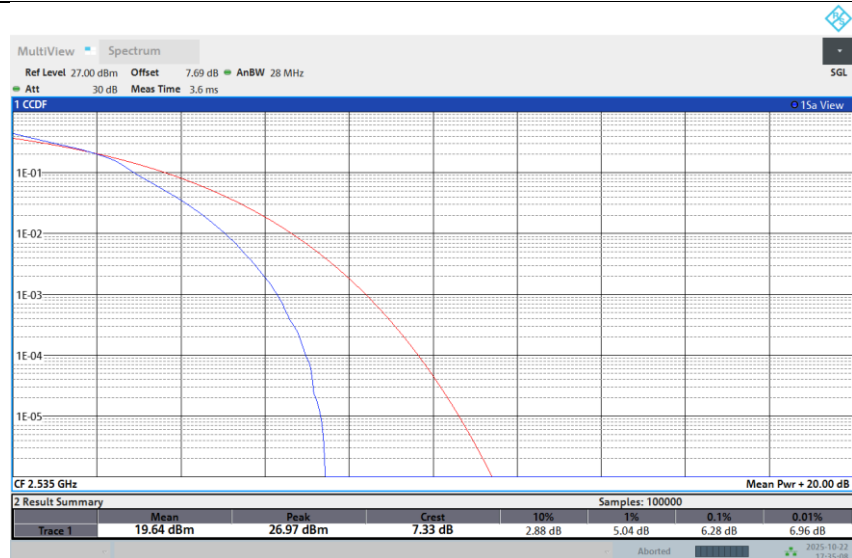
Band 7-5M-Mid-QPSK-Full RB



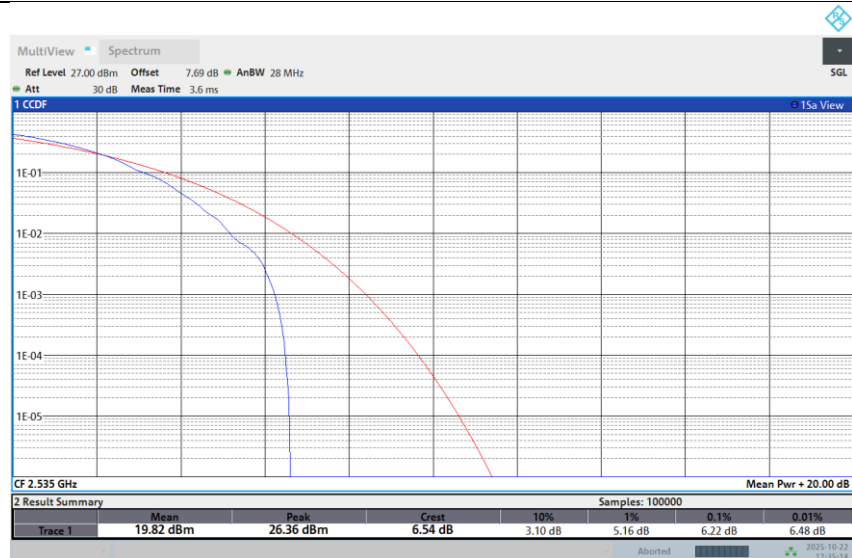
Band 7-5M-Mid-16QAM-1RB Low



Band 7-5M-Mid-16QAM-Full RB



Band 7-5M-Mid-64QAM-1RB Low



Band 7-5M-Mid-64QAM-Full RB