FCC Test Report

(Part 24 – GPRS, EDGE, WCDMA B2, LTE B2/B25)

Report No.:	RFBEAD-WTW-P21060534-7
FCC ID:	M82-AIM78S6
Test Model:	AIM-78S-6
Series Model:	AIM-78H-6, AIM-78H-6XXXXXXXXXXXXXXXX, AIM-78S-6XXXXXXXXXXXXXXXX (X: maybe 1-9, A-Z, or blank) (refer to item 3.1 for more details)
Received Date:	Jun. 16, 2021
Test Date:	Aug. 12 ~ Sep. 16, 2021
Issued Date:	Dec. 27, 2021
Applicant:	ADVANTECH CO., LTD
Address:	No. 1, Alley 20, Lane 26, Rueiguang Rd, Neihu District, Taipei, Taiwan 114
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location(1):	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number(1):	788550 / TW0003
Test Location(2):	B2F., No. 215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan
FCC Registration / Designation Number(2):	427177 / TW0011

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RFBEAD-WTW-P21060534-7	Original release.	Dec. 27, 2021

1 Certificate of Conformity

Product:	10.1” Tablet PC
Brand:	ADVANTECH
Test Model:	AIM-78S-6
Series Model:	AIM-78H-6, AIM-78H-6XXXXXXXXXXXXXXXX, AIM-78S-6XXXXXXXXXXXXXXXX (X: maybe 1-9, A-Z, or blank) (refer to item 3.1 for more details)
Sample Status:	Engineering sample
Applicant:	ADVANTECH CO., LTD
Test Date:	Aug. 12 ~ Sep. 16, 2021
Standards:	FCC Part 24, Subpart E

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample’s RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Dec. 27, 2021

Celine Chou / Senior Specialist

Approved by : Jeremy Lin , **Date:** Dec. 27, 2021

Jeremy Lin / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Effective Isotropically Radiated Power	Pass	Meet the requirement of limit.
2.1046 24.232 (d)	Peak To Average Ratio	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	Pass	Meet the requirement
2.1055 24.235	Frequency Stability	Pass	Meet the requirement of limit.
2.1049	Occupied Bandwidth	Pass	Meet the requirement of limit.
24.238	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -24.30dB at 9412.50MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 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	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	2.0153 dB
	200MHz ~1000MHz	2.0224 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	1.0121 dB
	18GHz ~ 40GHz	1.1508 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver Agilent Technologies	N9038A	MY52260177	Aug. 24, 2020	Aug. 23, 2021
			Sep. 01, 2021	Aug. 31, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSW43	101582	Apr. 01, 2021	Mar. 31, 2022
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 22, 2020	Nov. 21, 2021
BILOG Antenna SCHWARZBECK	VULB 9168	9168-616	Nov. 09, 2020	Nov. 08, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 22, 2020	Nov. 21, 2021
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 13, 2021	Apr. 12, 2022
Loop Antenna	EM-6879	269	Sep. 17, 2020	Sep. 16, 2021
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 25, 2020	Nov. 24, 2021
Preamplifier Agilent	310N	187226	Jun. 17, 2021	Jun. 16, 2022
Preamplifier Agilent	83017A	MY39501357	Jun. 17, 2021	Jun. 16, 2022
Preamplifier EMCI	EMC 184045	980116	Oct. 07, 2020	Oct. 06, 2021
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 17, 2021	Jun. 16, 2022
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 17, 2021	Jun. 16, 2022
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA
Temperature & Humidity Chamber TERCHY	HRM-120RF	931022	Dec. 24, 2020	Dec. 23, 2021
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	325	31130711WS	Jun. 02, 2021	Jun. 01, 2022
DC power supply Keysight	U8002A	MY56330015	NA	NA
Radio Communication Analyzer Anritsu	MT8820C	6201010284	Dec. 28, 2020	Dec. 27, 2021
Universal Radio Communication Tester R&S	CMU200	101095	Nov. 18, 2020	Nov. 17, 2021

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Xindian Chamber 6.

3 General Information

3.1 General Description of EUT

Product	10.1” Tablet PC	
Brand	ADVANTECH	
Test Model	AIM-78S-6	
Series Model	AIM-78H-6, AIM-78H-6XXXXXXXXXXXXXXX, AIM-78S-6XXXXXXXXXXXXXXX (X: maybe 1-9, A-Z, or blank)	
Model Difference	Refer to note	
Sample Status	Engineering sample	
Power Supply Rating	10.8Vdc (Battery) 19Vdc (Adapter)	
Modulation Type	GPRS: GMSK EDGE: 8PSK WCDMA: BPSK, QPSK HSDPA: BPSK HSUPA: QPSK LTE: QPSK, 16QAM, 64QAM	
Operating Frequency	GPRS, EDGE	1850.2MHz ~ 1909.8MHz
	WCDMA Band 2	1852.4MHz ~ 1907.6MHz
	LTE Band 2 (Channel Bandwidth 1.4MHz)	1850.7MHz ~ 1909.3MHz
	LTE Band 2 (Channel Bandwidth 3MHz)	1851.5MHz ~ 1908.5MHz
	LTE Band 2 (Channel Bandwidth 5MHz)	1852.5MHz ~ 1907.5MHz
	LTE Band 2 (Channel Bandwidth 10MHz)	1855.0MHz ~ 1905.0MHz
	LTE Band 2 (Channel Bandwidth 15MHz)	1857.5MHz ~ 1902.5MHz
	LTE Band 2 (Channel Bandwidth 20MHz)	1860.0MHz ~ 1900.0MHz
	LTE Band 25 (Channel Bandwidth 1.4MHz)	1850.7MHz ~ 1914.3MHz
	LTE Band 25 (Channel Bandwidth 3MHz)	1851.5MHz ~ 1913.5MHz
	LTE Band 25 (Channel Bandwidth 5MHz)	1852.5MHz ~ 1912.5MHz
	LTE Band 25 (Channel Bandwidth 10MHz)	1855.0MHz ~ 1910.0MHz
	LTE Band 25 (Channel Bandwidth 15MHz)	1857.5MHz ~ 1907.5MHz
	LTE Band 25 (Channel Bandwidth 20MHz)	1860.0MHz ~ 1905.0MHz

Max. EIRP Power	GPRS	1291.219mW (31.11dBm)		
	EDGE	540.754mW (27.33dBm)		
	WCDMA Band 2	368.129mW (25.66dBm)		
		QPSK	16QAM	64QAM
	LTE Band 2 (Channel Bandwidth 1.4MHz)	338.844mW (25.30dBm)	261.818mW (24.18dBm)	209.894mW (23.22dBm)
	LTE Band 2 (Channel Bandwidth 3MHz)	331.131mW (25.20dBm)	261.818mW (24.18dBm)	208.449mW (23.19dBm)
	LTE Band 2 (Channel Bandwidth 5MHz)	337.287mW (25.28dBm)	260.016mW (24.15dBm)	210.863mW (23.24dBm)
	LTE Band 2 (Channel Bandwidth 10MHz)	333.426mW (25.23dBm)	261.216mW (24.17dBm)	207.014mW (23.16dBm)
	LTE Band 2 (Channel Bandwidth 15MHz)	337.287mW (25.28dBm)	265.461mW (24.24dBm)	211.349mW (23.25dBm)
	LTE Band 2 (Channel Bandwidth 20MHz)	340.408mW (25.32dBm)	269.774mW (24.31dBm)	213.796mW (23.30dBm)
	LTE Band 25 (Channel Bandwidth 1.4MHz)	341.193mW (25.33dBm)	271.019mW (24.33dBm)	214.289mW (23.31dBm)
	LTE Band 25 (Channel Bandwidth 3MHz)	344.350mW (25.37dBm)	272.270mW (24.35dBm)	214.289mW (23.31dBm)
	LTE Band 25 (Channel Bandwidth 5MHz)	341.979mW (25.34dBm)	271.644mW (24.34dBm)	218.776mW (23.40dBm)
	LTE Band 25 (Channel Bandwidth 10MHz)	349.140mW (25.43dBm)	264.241mW (24.22dBm)	212.814mW (23.28dBm)
	LTE Band 25 (Channel Bandwidth 15MHz)	348.337mW (25.42dBm)	272.898mW (24.36dBm)	215.774mW (23.34dBm)
	LTE Band 25 (Channel Bandwidth 20MHz)	353.183mW (25.48dBm)	276.694mW (24.42dBm)	219.280mW (23.41dBm)
Emission Designator	GPRS	254KGXW		
	EDGE	255KG7W		
	WCDMA Band 2	4M15F9W		
		QPSK	16QAM	64QAM
	LTE Band 2 (Channel Bandwidth 1.4MHz)	1M09G7D	1M09D7W	1M09D7W
	LTE Band 2 (Channel Bandwidth 3MHz)	2M70G7D	2M70D7W	2M70D7W
	LTE Band 2 (Channel Bandwidth 5MHz)	4M49G7D	4M50D7W	4M51D7W
	LTE Band 2 (Channel Bandwidth 10MHz)	8M97G7D	8M98D7W	8M99D7W
	LTE Band 2 (Channel Bandwidth 15MHz)	13M5G7D	13M5D7W	13M5D7W
	LTE Band 2 (Channel Bandwidth 20MHz)	18M0G7D	18M0D7W	18M0D7W
	LTE Band 25 (Channel Bandwidth 1.4MHz)	1M09G7D	1M09D7W	1M09D7W
	LTE Band 25 (Channel Bandwidth 3MHz)	2M70G7D	2M70D7W	2M71D7W
	LTE Band 25 (Channel Bandwidth 5MHz)	4M49G7D	4M50D7W	4M50D7W
	LTE Band 25 (Channel Bandwidth 10MHz)	8M97G7D	8M97D7W	8M97D7W
	LTE Band 25 (Channel Bandwidth 15MHz)	13M5G7D	13M5D7W	13M4D7W
	LTE Band 25 (Channel Bandwidth 20MHz)	17M9G7D	18M0D7W	17M9D7W

Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	Refer to note
Cable Supplied	Refer to note

Note:

1. The following models are provided to this EUT. The model of the AIM-78S-6 was chosen for final test.

Model	Description
AIM-78S-6, AIM-78H-6, AIM-78H-6XXXXXXXXXXXXXXX, AIM-78S-6XXXXXXXXXXXXXXX (X: maybe 1-9, A-Z, or blank)	For marketing purpose

2. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter 1	Tamura	XEW1934N	Input: 100-240Vac~1.5A , 50/60Hz Output: 19Vdc / 3.42A Power Line: AC: 1.5m cable without core DC: 1.2m cable without core
Adapter 2 (option)	FSP	FSP065-DBCM1	Input: 100-240Vac~ 2.0-1.0A, 50-60Hz Output: 19Vdc / 3.43A Power Line: AC: 1.5m cable without core DC: 1.5m cable with 1 core
Battery	Advantech	AIM-BAT-10	Rating: 10.8Vdc, 24.84Wh, 2300mAh
WWAN+WLAN module	USI	MS-01 Pro	-
Docking Station (option)	Advantech	AIM-DOC-0001	Rating: 19Vdc, 3.42A (VESA Dock)
Docking Station (option)	Advantech	AIM-VED0	Rating: 9 ~ 32Vdc (Vehicle Dock)
Docking Station (option)	Advantech	AIM-OFD-0000	Rating: 19Vdc (Office Dock)
Extension Modules-Barcode scanner (20°) (option)	Advantech	AIM-EXT0-0040 (20 degree)	Sensor: 640 x 480 CMOS sensor
Extension Modules-Barcode scanner (70°) (option)	Advantech	AIM-EXT0-0041 (70 degree)	Sensor: 640 x 480 CMOS sensor

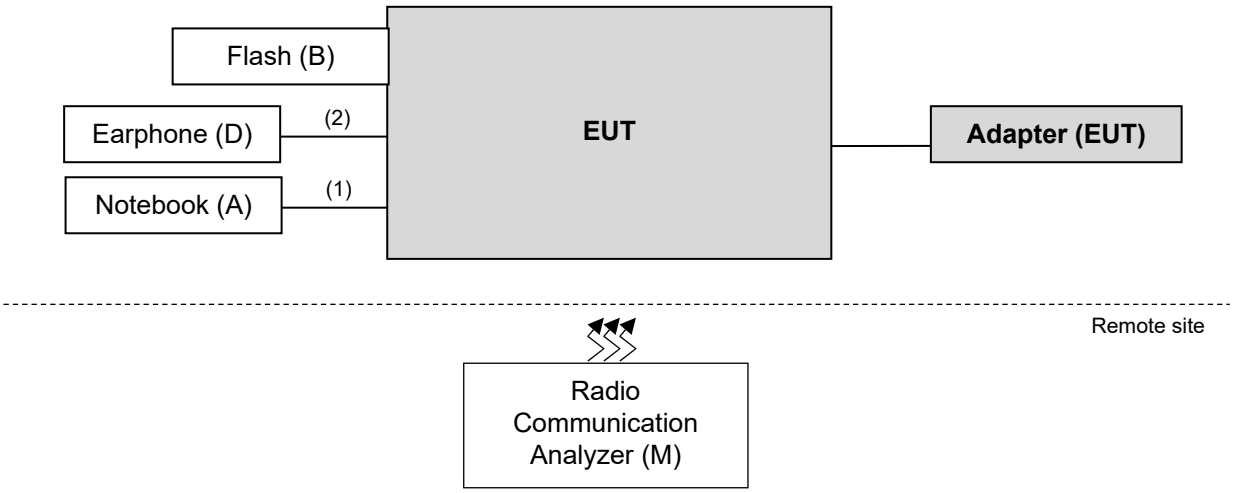
3. The following antennas were provided to the EUT.

Ant. Type	PIFA														
Ant. Connector	I-PEX_IV														
WWAN_Main															
Frequency (MHz)	704	710	716	734	740	746	751	756	777	782	787	791	806	821	824
Gain (dBi)	-3.77	-3.47	-3.24	-1.68	-1.24	-0.99	-0.45	-0.07	0.40	0.44	0.57	0.52	0.76	0.51	0.37
Frequency (MHz)	836	849	862	869	880	894	900	915	925	940	960	1710	1730	1750	1770
Gain (dBi)	0.02	0.10	0.10	0.16	0.19	-0.35	-0.83	-1.68	-2.29	-2.41	-2.39	1.67	2.19	2.73	3.25
Frequency (MHz)	1785	1805	1840	1850	1880	1910	1920	1930	1950	1960	1980	1990	2010	2018	2025
Gain (dBi)	3.52	3.43	2.63	1.99	-0.63	-0.88	-0.47	-0.20	0.84	1.18	2.07	2.17	2.48	2.14	1.91
Frequency (MHz)	2110	2140	2170	2300	2325	2350	2375	2400	2500	2515	2535	2555	2570	2595	2620
Gain (dBi)	1.08	1.00	1.14	0.05	-0.28	0.23	0.70	1.43	0.57	0.31	0.05	0.51	0.86	1.38	1.37
Frequency (MHz)	2630	2655	2680	2690											
Gain (dBi)	1.47	1.92	1.95	1.87											
WWAN_Aux (only RX)															
Frequency (MHz)	704	710	716	734	740	746	751	756	777	782	787	791	806	821	824
Gain (dBi)	-11.59	-11.10	-11.03	-9.89	-9.75	-9.54	-9.49	-9.59	-9.46	-9.38	-9.51	-9.28	-8.58	-7.57	-7.56
Frequency (MHz)	836	849	862	869	880	894	900	915	925	940	960	1710	1730	1750	1770
Gain (dBi)	-7.09	-6.80	-6.17	-5.74	-5.00	-4.53	-4.54	-4.52	-4.55	-4.26	-3.49	1.68	1.77	2.06	2.35
Frequency (MHz)	1785	1805	1840	1850	1880	1910	1920	1930	1950	1960	1980	1990	2010	2018	2025
Gain (dBi)	2.73	2.82	2.96	3.11	3.31	3.84	4.01	4.13	4.51	4.59	4.37	4.23	4.09	4.06	3.90
Frequency (MHz)	2110	2140	2170	2300	2325	2350	2375	2400	2500	2515	2535	2555	2570	2595	2620
Gain (dBi)	3.30	3.55	3.24	2.93	2.63	2.47	2.11	2.67	3.99	3.94	3.96	3.89	3.48	3.40	3.31
Frequency (MHz)	2630	2655	2680	2690											
Gain (dBi)	3.01	3.16	3.57	3.27											

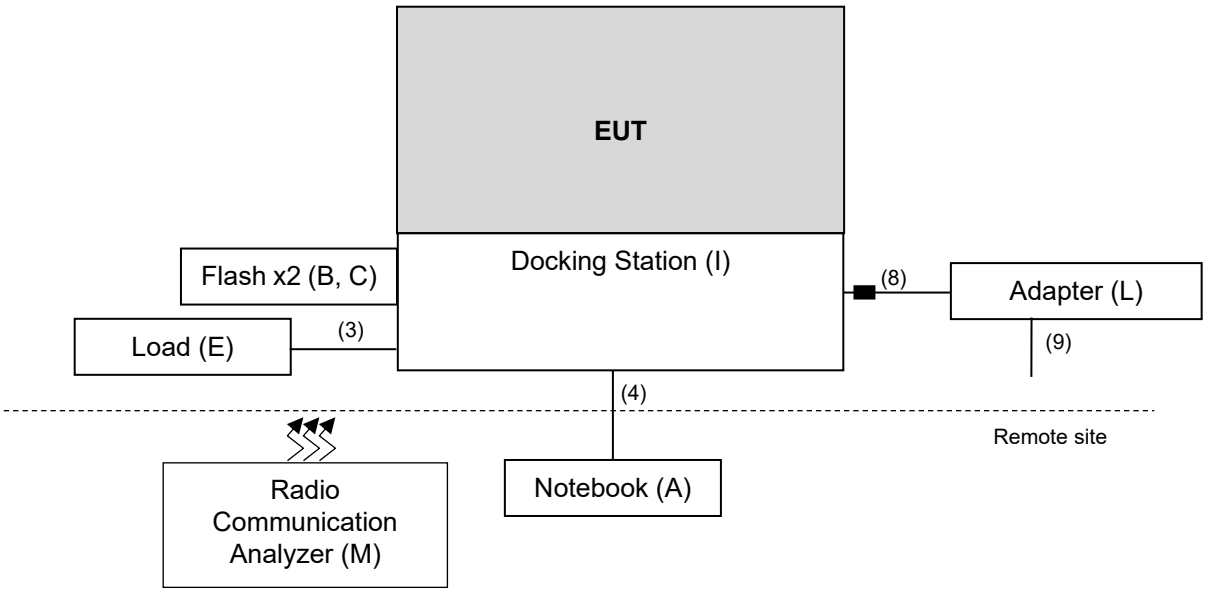
* The max. gain (Main Antenna) was chosen for final tests.
* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.2 Configuration of System under Test

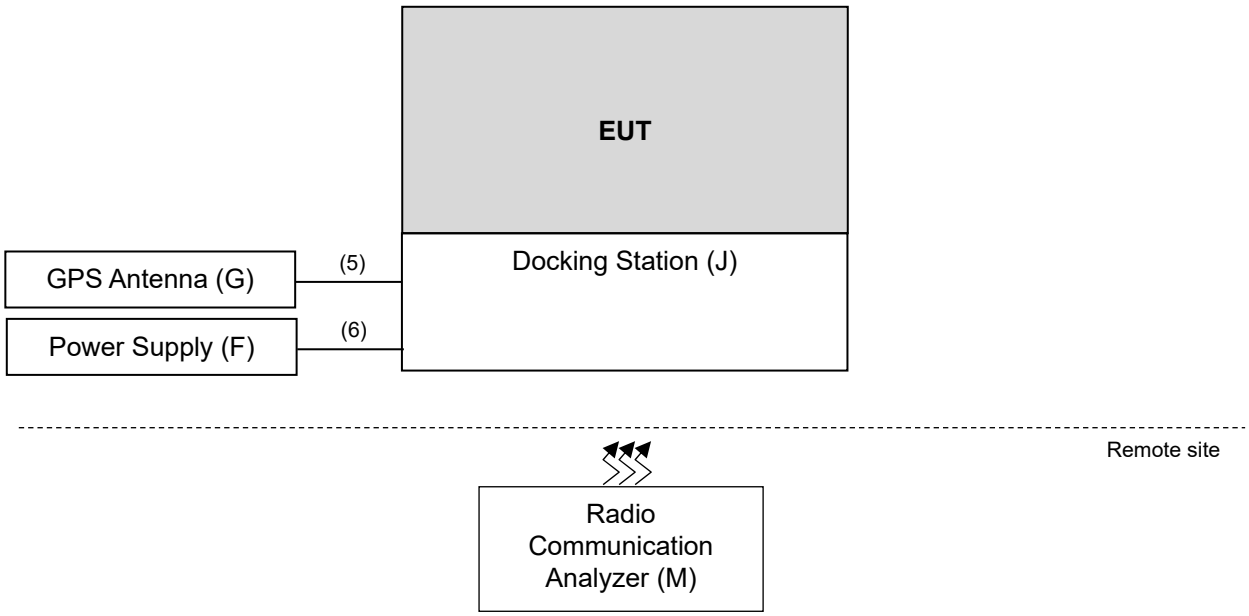
Test Mode A



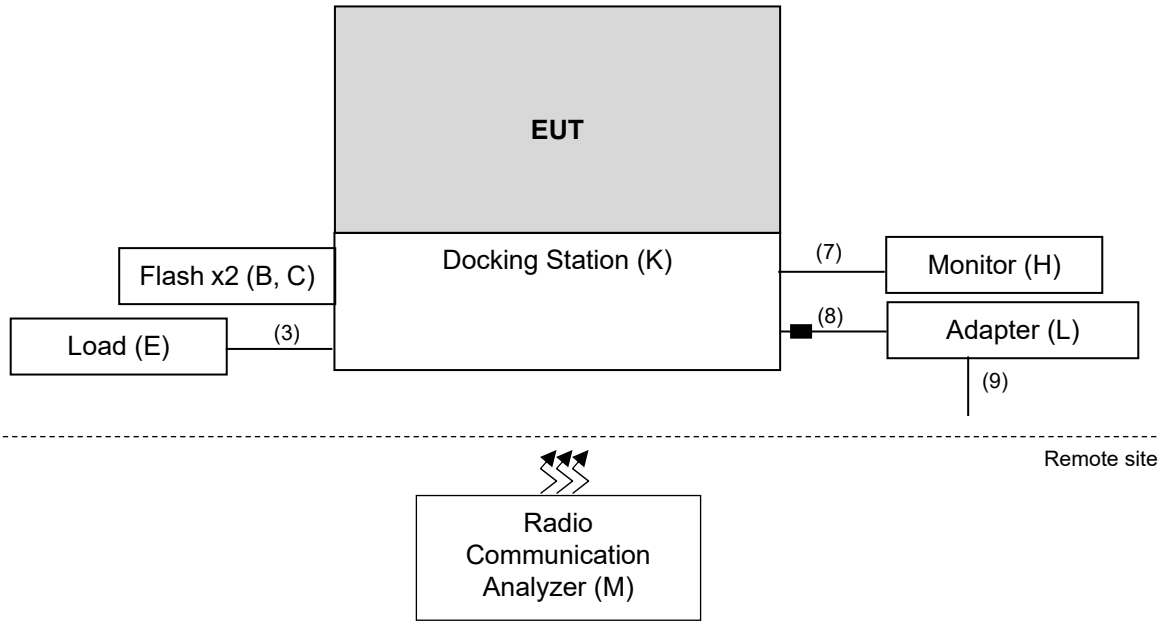
Test Mode B



Test Mode C



Test Mode D



3.2.1 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.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	Lenovo	20J4 MD A003TW	PF-11H9AK	FCC DoC Approved	-
B.	Flash	HP	v250W	05	NA	Type-A
C.	Flash	HP	v250W	03	NA	Type-A
D.	Earphone	APPLE	NA	NA	NA	-
E.	Load	NA	NA	NA	NA	-
F.	Power Supply	TOPWARD	6306D	809760	NA	-
G.	GPS Antenna	Connectec	SP070809-001	3-6004-031R000	NA	Provided by client
H.	Monitor	DELL	SE2416Hc	CN-OWJKMC-64180-66D-013B-A00	NA	-
I.	Docking Station	Advantech	AIM-DOC-0001	NA	NA	Provided by client
J.	Docking Station	Advantech	AIM-VED0	NA	NA	Provided by client
K.	Docking Station	Advantech	AIM-OFD-0000	NA	NA	Provided by client
L.	Adapter	FSP	FSP065-DBCM1	NA	NA	Provided by client
M.	Radio Communication Analyzer	Anritsu	MT8821C	6261806803	NA	-
			MT8820C	6201010284	NA	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A and M acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Type C cable	1	1	Y	0	-
2.	Audio cable	1	1.2	N	0	-
3.	RS232 cable	1	1.5	N	0	-
4.	LAN cable	1	7	N	0	RJ45, Cat.5e
5.	Antenna cable	1	5	N	0	Provided by client
6.	Power cable	1	1	N	0	Provided by client
7.	HDMI cable	1	2.0	Y	0	Provided by Lab. (Brand: Amber, Model: HDMI-AA120)
8.	DC Power cable	1	1.28	N	1	Provided by client
9.	AC Power cable	1	0.93	N	0	Provided by client

Note: The core(s) is(are) originally attached to the cable(s).

3.3 Test Mode Applicability and Tested Channel Detail

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 as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	Radiated Emission
GPRS, EDGE	Z-plane
WCDMA Band 2	Z-plane
LTE Band 2	Z-plane
LTE Band 25	Z-plane

For radiated emission test item, the worst case (Test Mode A) was tested under radiated emission below 1GHz and above 1GHz. Test mode B, C and D were select the worst radiated emission mode (LTE Band 25 mode) for radiated emission below 1GHz tested only.

Test Mode	Test Condition
A	EUT + Adapter
B	EUT + VESA Dock
C	EUT + Vehicle Dock
D	EUT + Office Dock

GPRS, EDGE Mode

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	512 to 810	512 (1850.2MHz), 661 (1880.0MHz), 810 (1909.8MHz)	GPRS, EDGE
-	Modulation Characteristics	512 to 810	661 (1880.0MHz)	GPRS, EDGE
-	Frequency Stability	512 to 810	512 (1850.2MHz), 810 (1909.8MHz)	EDGE
-	Occupied Bandwidth	512 to 810	512 (1850.2MHz), 661 (1880.0MHz), 810 (1909.8MHz)	GPRS, EDGE
-	Band Edge	512 to 810	512(1850.2MHz), 810(1909.8MHz)	GPRS, EDGE
-	Peak To Average Ratio	512 to 810	512 (1850.2MHz), 661 (1880.0MHz), 810 (1909.8MHz)	GPRS, EDGE
-	Conducted Emission	512 to 810	512 (1850.2MHz), 661 (1880.0MHz), 810 (1909.8MHz)	GPRS, EDGE
-	Radiated Emission	512 to 810	512 (1850.2MHz), 661 (1880.0MHz), 810 (1909.8MHz)	GPRS, EDGE

Note: For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.

WCDMA Band 2

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	EIRP	9262 to 9538	9262 (1852.4MHz), 9400 (1880.0MHz), 9538 (1907.6MHz)	WCDMA, HSDPA, HSUPA
-	Modulation Characteristics	9262 to 9538	9400 (1880.0MHz)	WCDMA, HSDPA, HSUPA
-	Frequency Stability	9262 to 9538	9262 (1852.4MHz), 9538 (1907.6MHz)	WCDMA
-	Occupied Bandwidth	9262 to 9538	9262 (1852.4MHz), 9400 (1880.0MHz), 9538 (1907.6MHz)	WCDMA, HSDPA, HSUPA
-	Band Edge	9262 to 9538	9262 (1852.4MHz), 9538 (1907.6MHz)	WCDMA, HSDPA, HSUPA
-	Peak To Average Ratio	9262 to 9538	9262 (1852.4MHz), 9400 (1880.0MHz), 9538 (1907.6MHz)	WCDMA, HSDPA, HSUPA
-	Conducted Emission	9262 to 9538	9262 (1852.4MHz), 9400 (1880.0MHz), 9538 (1907.6MHz)	WCDMA, HSDPA, HSUPA
-	Radiated Emission	9262 to 9538	9262 (1852.4MHz), 9400 (1880.0MHz), 9538 (1907.6MHz)	WCDMA

Note: For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.

LTE Band 2

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	18607 to 19193	18607 (1850.7MHz), 18900 (1880.0MHz), 19193 (1909.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		18615 to 19185	18615 (1851.5MHz), 18900 (1880.0MHz), 19185 (1908.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		18625 to 19175	18625 (1852.5MHz), 18900 (1880.0MHz), 19175 (1907.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		18650 to 19150	18650 (1855.0MHz), 18900 (1880.0MHz), 19150 (1905.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		18675 to 19125	18675 (1857.5MHz), 18900 (1880.0MHz), 19125 (1902.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		18700 to 19100	18700 (1860.0MHz), 18900 (1880.0MHz), 19100 (1900.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset
-	Modulation Characteristics	18700 to 19100	18900 (1880.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Frequency Stability	18607 to 19193	18607 (1850.7MHz), 19193 (1909.3MHz)	1.4MHz	QPSK	6 RB / 0 RB Offset
		18615 to 19185	18615 (1851.5MHz), 19185 (1908.5MHz)	3MHz	QPSK	15 RB / 0 RB Offset
		18625 to 19175	18625 (1852.5MHz), 19175 (1907.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		18650 to 19150	18650 (1855.0MHz), 19150 (1905.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
		18675 to 19125	18675 (1857.5MHz), 19125 (1902.5MHz)	15MHz	QPSK	75 RB / 0 RB Offset
		18700 to 19100	18700 (1860.0MHz), 19100 (1900.0MHz)	20MHz	QPSK	100 RB / 0 RB Offset
-	Occupied Bandwidth	18607 to 19193	18607 (1850.7MHz), 18900 (1880.0MHz), 19193 (1909.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	6 RB / 0RB Offset
		18615 to 19185	18615 (1851.5MHz), 18900 (1880.0MHz), 19185 (1908.5MHz)	3MHz	QPSK / 16QAM / 64QAM	15 RB / 0RB Offset
		18625 to 19175	18625 (1852.5MHz), 18900 (1880.0MHz), 19175 (1907.5MHz)	5MHz	QPSK / 16QAM / 64QAM	25RB / 0RB Offset
		18650 to 19150	18650 (1855.0MHz), 18900 (1880.0MHz), 19150 (1905.0MHz)	10MHz	QPSK / 16QAM / 64QAM	50RB / 0RB Offset
		18675 to 19125	18675 (1857.5MHz), 18900 (1880.0MHz), 19125 (1902.5MHz)	15MHz	QPSK / 16QAM / 64QAM	75 RB / 0 RB Offset
		18700 to 19100	18700 (1860.0MHz), 18900 (1880.0MHz), 19100 (1900.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
-	Band Edge	18607 to 19193	18607 (1850.7MHz), 19193 (1909.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset 1 RB / 5 RB Offset 6 RB / 0 RB Offset
		18615 to 19185	18615 (1851.5MHz), 19185 (1908.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset 1 RB / 14 RB Offset 15 RB / 0 RB Offset
		18625 to 19175	18625 (1852.5MHz), 19175 (1907.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		18650 to 19150	18650 (1855.0MHz), 19150 (1905.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
		18675 to 19125	18675 (1857.5MHz), 19125 (1902.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset 1 RB / 74 RB Offset 75 RB / 0 RB Offset
		18700 to 19100	18700 (1860.0MHz), 19100 (1900.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 99 RB Offset 100 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Peak to Average Ratio	18607 to 19193	18607 (1850.7MHz), 18900 (1880.0MHz), 19193 (1909.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		18615 to 19185	18615 (1851.5MHz), 18900 (1880.0MHz), 19185 (1908.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 14 RB Offset
		18625 to 19175	18625 (1852.5MHz), 18900 (1880.0MHz), 19175 (1907.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		18650 to 19150	18650 (1855.0MHz), 18900 (1880.0MHz), 19150 (1905.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		18675 to 19125	18675 (1857.5MHz), 18900 (1880.0MHz), 19125 (1902.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 37 RB Offset
		18700 to 19100	18700 (1860.0MHz), 18900 (1880.0MHz), 19100 (1900.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
-	Conducted Emission	18607 to 19193	18607 (1850.7MHz), 18900 (1880.0MHz), 19193 (1909.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		18615 to 19185	18615 (1851.5MHz), 18900 (1880.0MHz), 19185 (1908.5MHz)	3MHz	QPSK	1 RB / 14 RB Offset
		18625 to 19175	18625 (1852.5MHz), 18900 (1880.0MHz), 19175 (1907.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		18650 to 19150	18650 (1855.0MHz), 18900 (1880.0MHz), 19150 (1905.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
		18675 to 19125	18675 (1857.5MHz), 18900 (1880.0MHz), 19125 (1902.5MHz)	15MHz	QPSK	1 RB / 37 RB Offset
		18700 to 19100	18700 (1860.0MHz), 18900 (1880.0MHz), 19100 (1900.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission	18607 to 19193	18607 (1850.7MHz), 18900 (1880.0MHz), 19193 (1909.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		18625 to 19175	18625 (1852.5MHz), 18900 (1880.0MHz), 19175 (1907.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
		18700 to 19100	18700 (1860.0MHz), 18900 (1880.0MHz), 19100 (1900.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, according to 3GPP 36.521-1 Section 6.6.3.1.4.1, choose the lowest, 5MHz & highest channel bandwidth for final test.
3. The output power for QPSK, 16QAM and 64QAM, measured value of QPSK is higher than 16QAM, and 64QAM mode. Therefore, only Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM and 64QAM modes, the other test items were performed under worse mode according to the maximum output power.

LTE Band 25

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	26047 to 26683	26047 (1850.7MHz), 26365 (1882.5MHz), 26683 (1914.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 2 RB Offset 1 RB / 5 RB Offset 3 RB / 0 RB Offset 3 RB / 1 RB Offset 3 RB / 3 RB Offset 6 RB / 0 RB Offset
		26055 to 26675	26055 (1851.5MHz), 26365 (1882.5MHz), 26675 (1913.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 7 RB Offset 1 RB / 14 RB Offset 8 RB / 0 RB Offset 8 RB / 3 RB Offset 8 RB / 7 RB Offset 15 RB / 0 RB Offset
		26065 to 26665	26065 (1852.5MHz), 26365 (1882.5MHz), 26665 (1912.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 12 RB Offset 1 RB / 24 RB Offset 12 RB / 0 RB Offset 12 RB / 6 RB Offset 12 RB / 13 RB Offset 25 RB / 0 RB Offset
		26090 to 26640	26090 (1855.0MHz), 26365 (1882.5MHz), 26640 (1910.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 24 RB Offset 1 RB / 49 RB Offset 25 RB / 0 RB Offset 25 RB / 12 RB Offset 25 RB / 25 RB Offset 50 RB / 0 RB Offset
		26115 to 26615	26115 (1857.5MHz), 26365 (1882.5MHz), 26615 (1907.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 37 RB Offset 1 RB / 74 RB Offset 36 RB / 0 RB Offset 36 RB / 19 RB Offset 36 RB / 39 RB Offset 75 RB / 0 RB Offset
		26140 to 26590	26140 (1860.0MHz), 26365 (1882.5MHz), 26590 (1905.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset 1 RB / 50 RB Offset 1 RB / 99 RB Offset 50 RB / 0 RB Offset 50 RB / 25 RB Offset 50 RB / 50 RB Offset 100 RB / 0 RB Offset
-	Modulation Characteristics	26140 to 26590	26365 (1882.5MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Frequency Stability	26047 to 26683	26047 (1850.7MHz), 26683 (1914.3MHz)	1.4MHz	QPSK	6 RB / 0 RB Offset
		26055 to 26675	26055 (1851.5MHz), 26675 (1913.5MHz)	3MHz	QPSK	15 RB / 0 RB Offset
		26065 to 26665	26065 (1852.5MHz), 26665 (1912.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
		26090 to 26640	26090 (1855.0MHz), 26640 (1910.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
		26115 to 26615	26115 (1857.5MHz), 26615 (1907.5MHz)	15MHz	QPSK	75 RB / 0 RB Offset
		26140 to 26590	26140 (1860.0MHz), 26590 (1905.0MHz)	20MHz	QPSK	100 RB / 0 RB Offset
-	Occupied Bandwidth	26047 to 26683	26047 (1850.7MHz), 26365 (1882.5MHz), 26683 (1914.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	6 RB / 0RB Offset
		26055 to 26675	26055 (1851.5MHz), 26365 (1882.5MHz), 26675 (1913.5MHz)	3MHz	QPSK / 16QAM / 64QAM	15 RB / 0RB Offset
		26065 to 26665	26065 (1852.5MHz), 26365 (1882.5MHz), 26665 (1912.5MHz)	5MHz	QPSK / 16QAM / 64QAM	25RB / 0RB Offset
		26090 to 26640	26090 (1855.0MHz), 26365 (1882.5MHz), 26640 (1910.0MHz)	10MHz	QPSK / 16QAM / 64QAM	50RB / 0RB Offset
		26115 to 26615	26115 (1857.5MHz), 26365 (1882.5MHz), 26615 (1907.5MHz)	15MHz	QPSK / 16QAM / 64QAM	75 RB / 0 RB Offset
		26140 to 26590	26140 (1860.0MHz), 26365 (1882.5MHz), 26590 (1905.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
-	Band Edge	26047 to 26683	26047 (1850.7MHz), 26683 (1914.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset 1 RB / 5 RB Offset 6 RB / 0 RB Offset
		26055 to 26675	26055 (1851.5MHz), 26675 (1913.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset 1 RB / 14 RB Offset 15 RB / 0 RB Offset
		26065 to 26665	26065 (1852.5MHz), 26665 (1912.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset 1 RB / 24 RB Offset 25 RB / 0 RB Offset
		26090 to 26640	26090 (1855.0MHz), 26640 (1910.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset 1 RB / 49 RB Offset 50 RB / 0 RB Offset
		26115 to 26615	26115 (1857.5MHz), 26615 (1907.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset 1 RB / 74 RB Offset 75 RB / 0 RB Offset
		26140 to 26590	26140 (1860.0MHz), 26590 (1905.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset 1 RB / 99 RB Offset 100 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Peak to Average Ratio	26047 to 26683	26047 (1850.7MHz), 26365 (1882.5MHz), 26683 (1914.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		26055 to 26675	26055 (1851.5MHz), 26365 (1882.5MHz), 26675 (1913.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		26065 to 26665	26065 (1852.5MHz), 26365 (1882.5MHz), 26665 (1912.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 24 RB Offset
		26090 to 26640	26090 (1855.0MHz), 26365 (1882.5MHz), 26640 (1910.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		26115 to 26615	26115 (1857.5MHz), 26365 (1882.5MHz), 26615 (1907.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		26140 to 26590	26140 (1860.0MHz), 26365 (1882.5MHz), 26590 (1905.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
-	Conducted Emission	26047 to 26683	26047 (1850.7MHz), 26365 (1882.5MHz), 26683 (1914.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		26055 to 26675	26055 (1851.5MHz), 26365 (1882.5MHz), 26675 (1913.5MHz)	3MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26065 (1852.5MHz), 26365 (1882.5MHz), 26665 (1912.5MHz)	5MHz	QPSK	1 RB / 24 RB Offset
		26090 to 26640	26090 (1855.0MHz), 26365 (1882.5MHz), 26640 (1910.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
		26115 to 26615	26115 (1857.5MHz), 26365 (1882.5MHz), 26615 (1907.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26140 (1860.0MHz), 26365 (1882.5MHz), 26590 (1905.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

EUT Configure Mode	Test item	Available channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission	26047 to 26683	26047 (1850.7MHz), 26365 (1882.5MHz), 26683 (1914.3MHz)	1.4MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26065 (1852.5MHz), 26365 (1882.5MHz), 26665 (1912.5MHz)	5MHz	QPSK	1 RB / 24 RB Offset
		26140 to 26590	26140 (1860.0MHz), 26365 (1882.5MHz), 26590 (1905.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:

1. For radiated emission below 1GHz, select the worst radiated emission channel (above 1GHz) for final testing.
2. For radiated emission above 1GHz, according to 3GPP 36.521-1 Section 6.6.3.1.4.1, choose the lowest, 5MHz & highest channel bandwidth for final test.
3. The output power for QPSK, 16QAM and 64QAM, measured value of QPSK is higher than 16QAM, and 64QAM mode. Therefore, only Modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM and 64QAM modes, the other test items were performed under worse mode according to the maximum output power.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	25deg. C, 60%RH	120Vac, 60Hz	Willy Cheng
Modulation Characteristics	25deg. C, 60%RH	120Vac, 60Hz	Willy Cheng
Frequency Stability	25deg. C, 60%RH	10.80Vdc	Willy Cheng
Occupied Bandwidth	25deg. C, 60%RH	120Vac, 60Hz	Willy Cheng
Band Edge	25deg. C, 60%RH	120Vac, 60Hz	Willy Cheng
Peak To Average Ratio	25deg. C, 60%RH	120Vac, 60Hz	Willy Cheng
Conducted Emission	25deg. C, 60%RH	120Vac, 60Hz	Willy Cheng
Radiated Emission	22deg. C, 66%RH	120Vac, 60Hz	Charles Hsiao Karl Lee

3.4 EUT Operating Conditions

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

3.5 General Description of Applied Standards and References

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

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 24

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

References Test Guidance:

KDB 971168 D01 Power Meas License Digital Systems v03r01

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 2 watts e.i.r.p.

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with GPRS, EDGE, WCDMA, 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.

Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$EIRP = P_{Meas} + G_T$

$ERP = P_{Meas} + G_T - 2.15$

where

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

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)

4.1.3 Test Setup

Conducted Power Measurement:

4.1.4 Test Results

Conducted Output Power (dBm)

Band	GPRS, EDGE 1900		
Channel	512	661	810
Frequency	1850.2	1880	1909.8
GPRS 1Tx Slot	29.04	29.05	29.12
GPRS 2Tx Slot	26.43	26.39	26.58
GPRS 3Tx Slot	24.58	24.63	24.67
GPRS 4Tx Slot	23.22	23.14	23.32
DTM 9 (GPRS)	26.35	26.29	26.49
DTM 11 (GPRS)	24.51	24.52	24.58
EDGE 1Tx Slot (MCS9)	25.28	25.25	25.34
EDGE 2Tx Slot (MCS9)	22.67	22.76	22.78
EDGE 3Tx Slot (MCS9)	21.38	21.32	21.47
EDGE 4Tx Slot (MCS9)	19.37	19.30	19.45
DTM 9 (EDGE)	22.61	22.72	22.73
DTM 11 (EDGE)	21.31	21.28	21.41

Band	WCDMA II		
TX Channel	9262	9400	9538
Rx Channel	9662	9800	9938
Frequency	1852.4	1880	1907.6
RMC 12.2K	23.55	23.67	23.53
HSDPA Subtest-1	22.90	22.92	22.91
HSDPA Subtest-2	22.90	22.92	22.91
HSDPA Subtest-3	22.44	22.46	22.45
HSDPA Subtest-4	22.41	22.43	22.42
DC-HSDPA Subtest-1	22.87	22.89	22.88
DC-HSDPA Subtest-2	22.87	22.89	22.88
DC-HSDPA Subtest-3	22.41	22.43	22.42
DC-HSDPA Subtest-4	22.38	22.40	22.39
HSUPA Subtest-1	22.47	22.49	22.48
HSUPA Subtest-2	20.46	20.48	20.47
HSUPA Subtest-3	21.52	21.54	21.53
HSUPA Subtest-4	20.43	20.45	20.44
HSUPA Subtest-5	22.48	22.50	22.49
HSPA+ Subtest-1	19.96	19.98	19.97

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18700	18900	19100
		Frequency (MHz)		1860	1880	1900
20M	QPSK	1	0	23.29	23.33	23.27
		1	50	23.22	23.31	23.25
		1	99	23.12	23.30	23.23
		50	0	22.35	22.39	22.33
		50	25	22.18	22.33	22.24
		50	50	22.25	22.37	22.28
		100	0	22.21	22.38	22.29
20M	16QAM	1	0	22.29	22.32	22.23
		1	50	22.20	22.28	22.16
		1	99	22.08	22.25	22.20
		50	0	21.27	21.31	21.25
		50	25	21.17	21.27	21.22
		50	50	21.17	21.35	21.19
		100	0	21.21	21.37	21.28
20M	64QAM	1	0	21.24	21.23	21.19
		1	50	21.22	21.31	21.24
		1	99	21.08	21.22	21.14
		50	0	20.27	20.27	20.29
		50	25	20.08	20.30	20.19
		50	50	20.19	20.30	20.20
		100	0	20.21	20.33	20.21

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18675	18900	19125
		Frequency (MHz)		1857.5	1880	1902.5
15M	QPSK	1	0	23.21	23.26	23.20
		1	37	23.17	23.29	23.21
		1	74	23.08	23.20	23.23
		36	0	22.33	22.30	22.28
		36	19	22.18	22.31	22.19
		36	39	22.20	22.32	22.27
		75	0	22.17	22.31	22.27
15M	16QAM	1	0	22.17	22.25	22.10
		1	37	22.10	22.15	22.18
		1	74	21.97	22.16	22.19
		36	0	21.25	21.26	21.15
		36	19	21.01	21.19	21.20
		36	39	21.23	21.27	21.20
		75	0	21.12	21.30	21.12
15M	64QAM	1	0	21.20	21.26	21.16
		1	37	21.18	21.25	21.11
		1	74	21.07	21.19	21.11
		36	0	20.30	20.18	20.28
		36	19	20.11	20.25	20.15
		36	39	20.12	20.24	20.20
		75	0	20.12	20.36	20.18

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18650	18900	19150
		Frequency (MHz)		1855	1880	1905
10M	QPSK	1	0	23.19	23.24	23.12
		1	24	23.15	23.20	23.16
		1	49	23.02	23.16	23.15
		25	0	22.17	22.30	22.23
		25	12	21.97	22.18	22.17
		25	25	22.20	22.32	22.13
		50	0	22.16	22.24	22.23
10M	16QAM	1	0	22.15	22.10	22.18
		1	24	22.10	22.17	21.96
		1	49	21.97	21.99	21.99
		25	0	21.15	21.20	21.05
		25	12	20.91	21.21	21.08
		25	25	20.98	21.18	21.13
		50	0	21.01	21.14	21.04
10M	64QAM	1	0	21.10	21.15	21.13
		1	24	20.97	21.14	21.06
		1	49	20.94	21.17	20.95
		25	0	20.23	20.10	20.09
		25	12	20.07	20.19	20.00
		25	25	19.95	20.20	20.12
		50	0	19.90	20.23	20.07

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18625	18900	19175
		Frequency (MHz)		1852.5	1880	1907.5
5M	QPSK	1	0	23.25	23.29	23.07
		1	12	23.16	23.20	23.09
		1	24	23.04	23.22	22.85
		12	0	22.18	22.22	22.22
		12	6	22.02	22.15	21.97
		12	13	22.18	22.24	22.12
		25	0	22.11	22.30	22.08
5M	16QAM	1	0	22.05	22.15	22.05
		1	12	21.95	22.16	22.04
		1	24	22.08	22.10	22.08
		12	0	21.18	21.17	21.06
		12	6	20.92	21.08	20.97
		12	13	21.08	21.20	21.02
		25	0	21.10	21.20	21.19
5M	64QAM	1	0	21.15	21.22	21.04
		1	12	20.95	21.25	21.11
		1	24	21.03	21.03	20.99
		12	0	20.11	20.16	20.23
		12	6	20.02	20.19	20.16
		12	13	20.14	20.08	20.15
		25	0	20.12	20.03	20.22

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18615	18900	19185
		Frequency (MHz)		1851.5	1880	1908.5
3M	QPSK	1	0	23.14	23.17	23.19
		1	7	23.18	23.19	23.11
		1	14	23.02	23.21	23.09
		8	0	22.23	22.13	22.27
		8	3	21.93	22.28	22.11
		8	7	22.22	22.33	22.22
		15	0	21.99	22.24	22.08
3M	16QAM	1	0	22.13	22.15	22.02
		1	7	22.04	22.19	21.95
		1	14	21.93	22.03	22.09
		8	0	21.19	21.17	21.25
		8	3	20.90	21.20	21.06
		8	7	21.08	21.27	21.01
		15	0	20.97	21.29	21.17
3M	64QAM	1	0	21.05	21.14	21.12
		1	7	21.11	21.11	21.18
		1	14	20.97	21.20	20.96
		8	0	20.20	20.24	20.25
		8	3	19.96	20.26	20.08
		8	7	19.95	20.24	20.20
		15	0	20.05	20.09	20.12

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18607	18900	19193
		Frequency (MHz)		1850.7	1880	1909.3
1.4M	QPSK	1	0	23.15	23.31	23.19
		1	2	23.09	23.09	23.16
		1	5	23.02	23.13	23.13
		3	0	23.29	23.19	23.14
		3	1	23.03	23.23	23.13
		3	3	23.16	23.15	23.11
		6	0	22.07	22.26	22.17
1.4M	16QAM	1	0	22.12	22.15	22.02
		1	2	22.05	22.12	22.01
		1	5	21.87	22.09	22.05
		3	0	22.19	22.16	22.16
		3	1	22.01	22.17	22.08
		3	3	22.19	22.11	22.06
		6	0	21.00	21.16	21.21
1.4M	64QAM	1	0	21.01	21.12	21.09
		1	2	21.02	21.19	21.04
		1	5	20.90	21.11	21.03
		3	0	21.23	21.22	21.12
		3	1	20.91	21.11	21.02
		3	3	21.12	21.22	21.05
		6	0	19.97	20.23	20.05

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26140	26365	26590
		Frequency (MHz)		1860	1882.5	1905
20M	QPSK	1	0	23.44	23.49	23.32
		1	50	23.30	23.35	23.18
		1	99	23.39	23.44	23.27
		50	0	22.32	22.39	22.20
		50	25	22.29	22.34	22.17
		50	50	22.33	22.38	22.21
		100	0	22.31	22.36	22.19
20M	16QAM	1	0	22.40	22.43	22.30
		1	50	22.21	22.26	22.17
		1	99	22.33	22.36	22.27
		50	0	21.29	21.33	21.13
		50	25	21.22	21.33	21.15
		50	50	21.26	21.37	21.15
		100	0	21.23	21.35	21.13
20M	64QAM	1	0	21.37	21.42	21.28
		1	50	21.26	21.34	21.18
		1	99	21.31	21.38	21.18
		50	0	20.31	20.33	20.12
		50	25	20.27	20.33	20.14
		50	50	20.23	20.38	20.16
		100	0	20.31	20.26	20.11

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26115	26365	26615
		Frequency (MHz)		1857.5	1882.5	1907.5
15M	QPSK	1	0	23.43	23.43	23.28
		1	37	23.29	23.35	23.10
		1	74	23.36	23.37	23.22
		36	0	22.31	22.31	22.14
		36	19	22.26	22.28	22.09
		36	39	22.31	22.38	22.19
		75	0	22.30	22.30	22.18
15M	16QAM	1	0	22.37	22.35	22.20
		1	37	22.19	22.23	22.10
		1	74	22.24	22.36	22.19
		36	0	21.21	21.23	21.19
		36	19	21.15	21.29	21.07
		36	39	21.16	21.29	21.11
		75	0	21.20	21.23	21.12
15M	64QAM	1	0	21.30	21.35	21.30
		1	37	21.19	21.29	21.13
		1	74	21.23	21.28	21.15
		36	0	20.25	20.19	20.03
		36	19	20.18	20.16	20.03
		36	39	20.28	20.18	20.13
		75	0	20.23	20.26	20.12

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26090	26365	26640
		Frequency (MHz)		1855	1882.5	1910
10M	QPSK	1	0	23.37	23.39	23.22
		1	24	23.28	23.32	23.09
		1	49	23.27	23.44	23.17
		25	0	22.23	22.25	22.13
		25	12	22.08	22.17	22.00
		25	25	22.21	22.34	22.14
		50	0	22.11	22.17	21.97
10M	16QAM	1	0	22.21	22.16	22.10
		1	24	22.03	22.23	21.97
		1	49	22.17	22.19	22.16
		25	0	21.21	21.24	21.14
		25	12	21.18	21.11	20.94
		25	25	21.20	21.24	21.08
		50	0	21.12	21.28	21.09
10M	64QAM	1	0	21.29	21.26	21.20
		1	24	21.18	21.19	20.96
		1	49	21.26	21.27	21.08
		25	0	20.17	20.22	19.99
		25	12	20.15	20.15	19.97
		25	25	20.12	20.19	20.03
		50	0	20.01	20.15	19.99

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26065	26365	26665
		Frequency (MHz)		1852.5	1882.5	1912.5
5M	QPSK	1	0	23.32	23.30	23.12
		1	12	23.23	23.19	22.95
		1	24	23.21	23.35	23.06
		12	0	22.20	22.21	22.14
		12	6	22.26	22.25	21.86
		12	13	22.22	22.29	22.05
		25	0	22.24	22.32	21.88
5M	16QAM	1	0	22.18	22.35	22.26
		1	12	22.04	22.16	22.03
		1	24	22.18	22.21	22.16
		12	0	21.10	21.16	21.09
		12	6	20.99	21.24	20.88
		12	13	21.19	21.28	21.06
		25	0	21.09	21.25	20.97
5M	64QAM	1	0	21.41	21.25	21.20
		1	12	21.20	21.13	21.05
		1	24	21.19	21.30	21.12
		12	0	20.24	20.21	19.93
		12	6	20.14	20.16	19.93
		12	13	20.24	20.23	20.14
		25	0	20.12	20.28	20.06

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26055	26365	26675
		Frequency (MHz)		1851.5	1882.5	1913.5
3M	QPSK	1	0	23.28	23.38	23.19
		1	7	23.10	23.20	23.13
		1	14	23.33	23.36	23.12
		8	0	22.13	22.17	22.02
		8	3	22.12	22.13	22.01
		8	7	22.20	22.33	22.11
		15	0	22.12	22.16	22.07
3M	16QAM	1	0	22.36	22.30	22.18
		1	7	22.16	22.16	21.88
		1	14	22.12	22.29	21.99
		8	0	21.11	21.26	21.01
		8	3	21.10	21.30	20.98
		8	7	21.06	21.19	21.14
		15	0	21.19	21.21	21.06
3M	64QAM	1	0	21.17	21.30	21.09
		1	7	21.07	21.12	21.02
		1	14	21.32	21.32	21.01
		8	0	20.17	20.17	19.99
		8	3	20.10	20.21	19.97
		8	7	20.20	20.24	20.11
		15	0	20.17	20.22	20.13

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26047	26365	26683
		Frequency (MHz)		1850.7	1882.5	1914.3
1.4M	QPSK	1	0	23.34	23.31	23.22
		1	2	23.12	23.21	23.06
		1	5	23.29	23.33	23.22
		3	0	23.19	23.34	23.07
		3	1	23.15	23.24	22.96
		3	3	23.19	23.33	23.08
		6	0	22.22	22.23	22.09
1.4M	16QAM	1	0	22.25	22.34	22.23
		1	2	22.12	22.18	22.09
		1	5	22.29	22.24	22.17
		3	0	22.21	22.26	21.95
		3	1	22.17	22.09	21.97
		3	3	22.12	22.21	21.97
		6	0	21.11	21.25	21.00
1.4M	64QAM	1	0	21.30	21.30	21.24
		1	2	21.13	21.17	20.98
		1	5	21.32	21.25	21.11
		3	0	21.17	21.11	20.99
		3	1	21.19	21.22	21.02
		3	3	21.14	21.17	21.11
		6	0	20.16	20.24	20.03

EIRP Power (dBm)

Band	GPRS, EDGE 1900		
Channel	512	661	810
Frequency	1850.2	1880	1909.8
GPRS 1Tx Slot	31.03	31.04	31.11
GPRS 2Tx Slot	28.42	28.38	28.57
GPRS 3Tx Slot	26.57	26.62	26.66
GPRS 4Tx Slot	25.21	25.13	25.31
DTM 9 (GPRS)	28.34	28.28	28.48
DTM 11 (GPRS)	26.50	26.51	26.57
EDGE 1Tx Slot (MCS9)	27.27	27.24	27.33
EDGE 2Tx Slot (MCS9)	24.66	24.75	24.77
EDGE 3Tx Slot (MCS9)	23.37	23.31	23.46
EDGE 4Tx Slot (MCS9)	21.36	21.29	21.44
DTM 9 (EDGE)	24.60	24.71	24.72
DTM 11 (EDGE)	23.30	23.27	23.40

Band	WCDMA II		
TX Channel	9262	9400	9538
Rx Channel	9662	9800	9938
Frequency	1852.4	1880	1907.6
RMC 12.2K	25.54	25.66	25.52
HSDPA Subtest-1	24.89	24.91	24.90
HSDPA Subtest-2	24.89	24.91	24.90
HSDPA Subtest-3	24.43	24.45	24.44
HSDPA Subtest-4	24.40	24.42	24.41
DC-HSDPA Subtest-1	24.86	24.88	24.87
DC-HSDPA Subtest-2	24.86	24.88	24.87
DC-HSDPA Subtest-3	24.40	24.42	24.41
DC-HSDPA Subtest-4	24.37	24.39	24.38
HSUPA Subtest-1	24.46	24.48	24.47
HSUPA Subtest-2	22.45	22.47	22.46
HSUPA Subtest-3	23.51	23.53	23.52
HSUPA Subtest-4	22.42	22.44	22.43
HSUPA Subtest-5	24.47	24.49	24.48
HSPA+ Subtest-1	21.95	21.97	21.96

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18700	18900	19100
		Frequency (MHz)		1860	1880	1900
20M	QPSK	1	0	25.28	25.32	25.26
		1	50	25.21	25.30	25.24
		1	99	25.11	25.29	25.22
		50	0	24.34	24.38	24.32
		50	25	24.17	24.32	24.23
		50	50	24.24	24.36	24.27
		100	0	24.20	24.37	24.28
20M	16QAM	1	0	24.28	24.31	24.22
		1	50	24.19	24.27	24.15
		1	99	24.07	24.24	24.19
		50	0	23.26	23.30	23.24
		50	25	23.16	23.26	23.21
		50	50	23.16	23.34	23.18
		100	0	23.20	23.36	23.27
20M	64QAM	1	0	23.23	23.22	23.18
		1	50	23.21	23.30	23.23
		1	99	23.07	23.21	23.13
		50	0	22.26	22.26	22.28
		50	25	22.07	22.29	22.18
		50	50	22.18	22.29	22.19
		100	0	22.20	22.32	22.20

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18675	18900	19125
		Frequency (MHz)		1857.5	1880	1902.5
15M	QPSK	1	0	25.20	25.25	25.19
		1	37	25.16	25.28	25.20
		1	74	25.07	25.19	25.22
		36	0	24.32	24.29	24.27
		36	19	24.17	24.30	24.18
		36	39	24.19	24.31	24.26
		75	0	24.16	24.30	24.26
15M	16QAM	1	0	24.16	24.24	24.09
		1	37	24.09	24.14	24.17
		1	74	23.96	24.15	24.18
		36	0	23.24	23.25	23.14
		36	19	23.00	23.18	23.19
		36	39	23.22	23.26	23.19
		75	0	23.11	23.29	23.11
15M	64QAM	1	0	23.19	23.25	23.15
		1	37	23.17	23.24	23.10
		1	74	23.06	23.18	23.10
		36	0	22.29	22.17	22.27
		36	19	22.10	22.24	22.14
		36	39	22.11	22.23	22.19
		75	0	22.11	22.35	22.17

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18650	18900	19150
		Frequency (MHz)		1855	1880	1905
10M	QPSK	1	0	25.18	25.23	25.11
		1	24	25.14	25.19	25.15
		1	49	25.01	25.15	25.14
		25	0	24.16	24.29	24.22
		25	12	23.96	24.17	24.16
		25	25	24.19	24.31	24.12
		50	0	24.15	24.23	24.22
10M	16QAM	1	0	24.14	24.09	24.17
		1	24	24.09	24.16	23.95
		1	49	23.96	23.98	23.98
		25	0	23.14	23.19	23.04
		25	12	22.90	23.20	23.07
		25	25	22.97	23.17	23.12
		50	0	23.00	23.13	23.03
10M	64QAM	1	0	23.09	23.14	23.12
		1	24	22.96	23.13	23.05
		1	49	22.93	23.16	22.94
		25	0	22.22	22.09	22.08
		25	12	22.06	22.18	21.99
		25	25	21.94	22.19	22.11
		50	0	21.89	22.22	22.06

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18625	18900	19175
		Frequency (MHz)		1852.5	1880	1907.5
5M	QPSK	1	0	25.24	25.28	25.06
		1	12	25.15	25.19	25.08
		1	24	25.03	25.21	24.84
		12	0	24.17	24.21	24.21
		12	6	24.01	24.14	23.96
		12	13	24.17	24.23	24.11
		25	0	24.10	24.29	24.07
5M	16QAM	1	0	24.04	24.14	24.04
		1	12	23.94	24.15	24.03
		1	24	24.07	24.09	24.07
		12	0	23.17	23.16	23.05
		12	6	22.91	23.07	22.96
		12	13	23.07	23.19	23.01
		25	0	23.09	23.19	23.18
5M	64QAM	1	0	23.14	23.21	23.03
		1	12	22.94	23.24	23.10
		1	24	23.02	23.02	22.98
		12	0	22.10	22.15	22.22
		12	6	22.01	22.18	22.15
		12	13	22.13	22.07	22.14
		25	0	22.11	22.02	22.21

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18615	18900	19185
		Frequency (MHz)		1851.5	1880	1908.5
3M	QPSK	1	0	25.13	25.16	25.18
		1	7	25.17	25.18	25.10
		1	14	25.01	25.20	25.08
		8	0	24.22	24.12	24.26
		8	3	23.92	24.27	24.10
		8	7	24.21	24.32	24.21
		15	0	23.98	24.23	24.07
3M	16QAM	1	0	24.12	24.14	24.01
		1	7	24.03	24.18	23.94
		1	14	23.92	24.02	24.08
		8	0	23.18	23.16	23.24
		8	3	22.89	23.19	23.05
		8	7	23.07	23.26	23.00
		15	0	22.96	23.28	23.16
3M	64QAM	1	0	23.04	23.13	23.11
		1	7	23.10	23.10	23.17
		1	14	22.96	23.19	22.95
		8	0	22.19	22.23	22.24
		8	3	21.95	22.25	22.07
		8	7	21.94	22.23	22.19
		15	0	22.04	22.08	22.11

LTE Band 2						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		18607	18900	19193
		Frequency (MHz)		1850.7	1880	1909.3
1.4M	QPSK	1	0	25.14	25.30	25.18
		1	2	25.08	25.08	25.15
		1	5	25.01	25.12	25.12
		3	0	25.28	25.18	25.13
		3	1	25.02	25.22	25.12
		3	3	25.15	25.14	25.10
		6	0	24.06	24.25	24.16
1.4M	16QAM	1	0	24.11	24.14	24.01
		1	2	24.04	24.11	24.00
		1	5	23.86	24.08	24.04
		3	0	24.18	24.15	24.15
		3	1	24.00	24.16	24.07
		3	3	24.18	24.10	24.05
		6	0	22.99	23.15	23.20
1.4M	64QAM	1	0	23.00	23.11	23.08
		1	2	23.01	23.18	23.03
		1	5	22.89	23.10	23.02
		3	0	23.22	23.21	23.11
		3	1	22.90	23.10	23.01
		3	3	23.11	23.21	23.04
		6	0	21.96	22.22	22.04

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26140	26365	26590
		Frequency (MHz)		1860	1882.5	1905
20M	QPSK	1	0	25.43	25.48	25.31
		1	50	25.29	25.34	25.17
		1	99	25.38	25.43	25.26
		50	0	24.31	24.38	24.19
		50	25	24.28	24.33	24.16
		50	50	24.32	24.37	24.20
		100	0	24.30	24.35	24.18
20M	16QAM	1	0	24.39	24.42	24.29
		1	50	24.20	24.25	24.16
		1	99	24.32	24.35	24.26
		50	0	23.28	23.32	23.12
		50	25	23.21	23.32	23.14
		50	50	23.25	23.36	23.14
		100	0	23.22	23.34	23.12
20M	64QAM	1	0	23.36	23.41	23.27
		1	50	23.25	23.33	23.17
		1	99	23.30	23.37	23.17
		50	0	22.30	22.32	22.11
		50	25	22.26	22.32	22.13
		50	50	22.22	22.37	22.15
		100	0	22.30	22.25	22.10

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26115	26365	26615
		Frequency (MHz)		1857.5	1882.5	1907.5
15M	QPSK	1	0	25.42	25.42	25.27
		1	37	25.28	25.34	25.09
		1	74	25.35	25.36	25.21
		36	0	24.30	24.30	24.13
		36	19	24.25	24.27	24.08
		36	39	24.30	24.37	24.18
		75	0	24.29	24.29	24.17
15M	16QAM	1	0	24.36	24.34	24.19
		1	37	24.18	24.22	24.09
		1	74	24.23	24.35	24.18
		36	0	23.20	23.22	23.18
		36	19	23.14	23.28	23.06
		36	39	23.15	23.28	23.10
		75	0	23.19	23.22	23.11
15M	64QAM	1	0	23.29	23.34	23.29
		1	37	23.18	23.28	23.12
		1	74	23.22	23.27	23.14
		36	0	22.24	22.18	22.02
		36	19	22.17	22.15	22.02
		36	39	22.27	22.17	22.12
		75	0	22.22	22.25	22.11

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26090	26365	26640
		Frequency (MHz)		1855	1882.5	1910
10M	QPSK	1	0	25.36	25.38	25.21
		1	24	25.27	25.31	25.08
		1	49	25.26	25.43	25.16
		25	0	24.22	24.24	24.12
		25	12	24.07	24.16	23.99
		25	25	24.20	24.33	24.13
		50	0	24.10	24.16	23.96
10M	16QAM	1	0	24.20	24.15	24.09
		1	24	24.02	24.22	23.96
		1	49	24.16	24.18	24.15
		25	0	23.20	23.23	23.13
		25	12	23.17	23.10	22.93
		25	25	23.19	23.23	23.07
		50	0	23.11	23.27	23.08
10M	64QAM	1	0	23.28	23.25	23.19
		1	24	23.17	23.18	22.95
		1	49	23.25	23.26	23.07
		25	0	22.16	22.21	21.98
		25	12	22.14	22.14	21.96
		25	25	22.11	22.18	22.02
		50	0	22.00	22.14	21.98

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26065	26365	26665
		Frequency (MHz)		1852.5	1882.5	1912.5
5M	QPSK	1	0	25.31	25.29	25.11
		1	12	25.22	25.18	24.94
		1	24	25.20	25.34	25.05
		12	0	24.19	24.20	24.13
		12	6	24.25	24.24	23.85
		12	13	24.21	24.28	24.04
		25	0	24.23	24.31	23.87
5M	16QAM	1	0	24.17	24.34	24.25
		1	12	24.03	24.15	24.02
		1	24	24.17	24.20	24.15
		12	0	23.09	23.15	23.08
		12	6	22.98	23.23	22.87
		12	13	23.18	23.27	23.05
		25	0	23.08	23.24	22.96
5M	64QAM	1	0	23.40	23.24	23.19
		1	12	23.19	23.12	23.04
		1	24	23.18	23.29	23.11
		12	0	22.23	22.20	21.92
		12	6	22.13	22.15	21.92
		12	13	22.23	22.22	22.13
		25	0	22.11	22.27	22.05

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26055	26365	26675
		Frequency (MHz)		1851.5	1882.5	1913.5
3M	QPSK	1	0	25.27	25.37	25.18
		1	7	25.09	25.19	25.12
		1	14	25.32	25.35	25.11
		8	0	24.12	24.16	24.01
		8	3	24.11	24.12	24.00
		8	7	24.19	24.32	24.10
		15	0	24.11	24.15	24.06
3M	16QAM	1	0	24.35	24.29	24.17
		1	7	24.15	24.15	23.87
		1	14	24.11	24.28	23.98
		8	0	23.10	23.25	23.00
		8	3	23.09	23.29	22.97
		8	7	23.05	23.18	23.13
		15	0	23.18	23.20	23.05
3M	64QAM	1	0	23.16	23.29	23.08
		1	7	23.06	23.11	23.01
		1	14	23.31	23.31	23.00
		8	0	22.16	22.16	21.98
		8	3	22.09	22.20	21.96
		8	7	22.19	22.23	22.10
		15	0	22.16	22.21	22.12

LTE Band 25						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26047	26365	26683
		Frequency (MHz)		1850.7	1882.5	1914.3
1.4M	QPSK	1	0	25.33	25.30	25.21
		1	2	25.11	25.20	25.05
		1	5	25.28	25.32	25.21
		3	0	25.18	25.33	25.06
		3	1	25.14	25.23	24.95
		3	3	25.18	25.32	25.07
		6	0	24.21	24.22	24.08
1.4M	16QAM	1	0	24.24	24.33	24.22
		1	2	24.11	24.17	24.08
		1	5	24.28	24.23	24.16
		3	0	24.20	24.25	23.94
		3	1	24.16	24.08	23.96
		3	3	24.11	24.20	23.96
		6	0	23.10	23.24	22.99
1.4M	64QAM	1	0	23.29	23.29	23.23
		1	2	23.12	23.16	22.97
		1	5	23.31	23.24	23.10
		3	0	23.16	23.10	22.98
		3	1	23.18	23.21	23.01
		3	3	23.13	23.16	23.10
		6	0	22.15	22.23	22.02

4.2 Modulation Characteristics Measurement

4.2.1 Limits of Modulation Characteristics

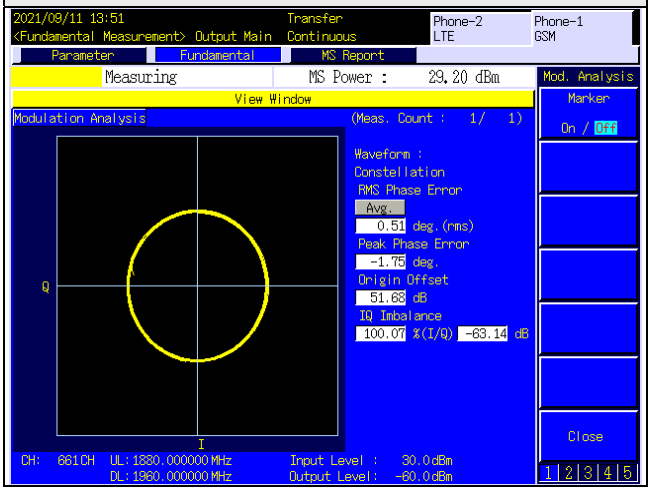
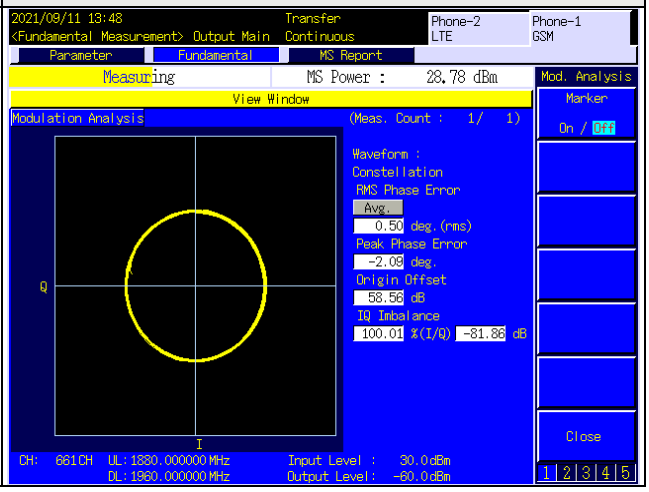
N/A

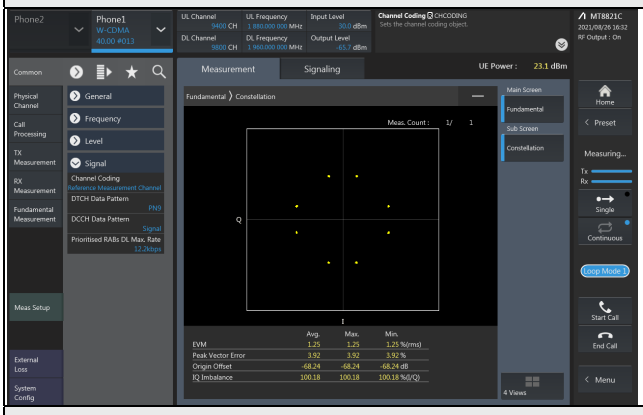
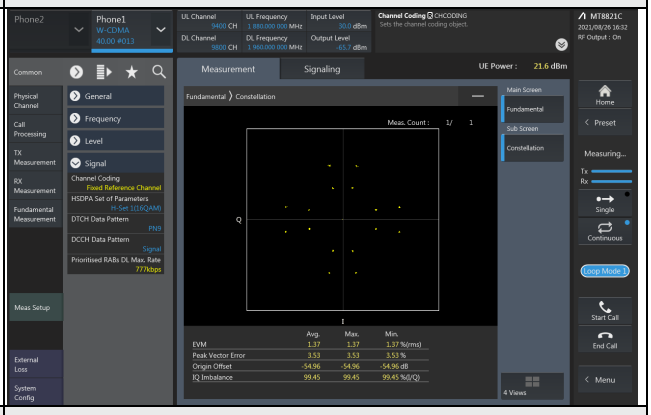
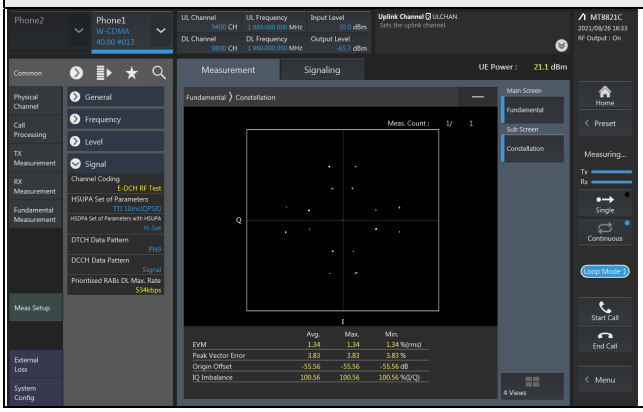
4.2.2 Test Procedure

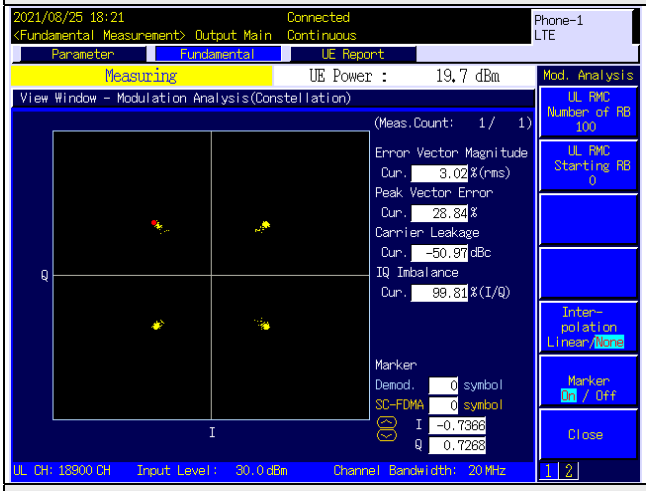
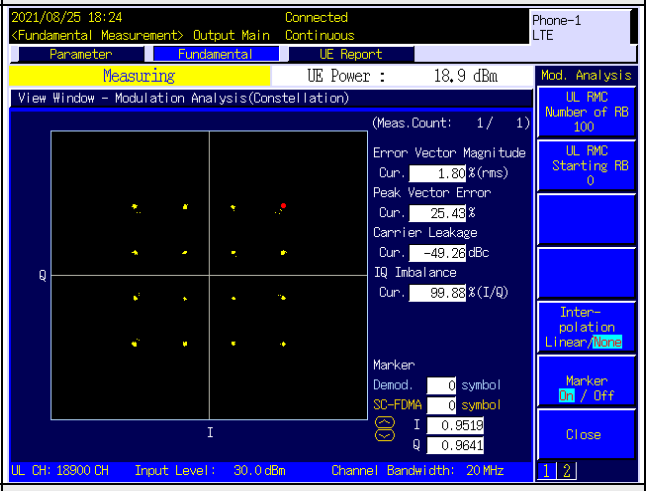
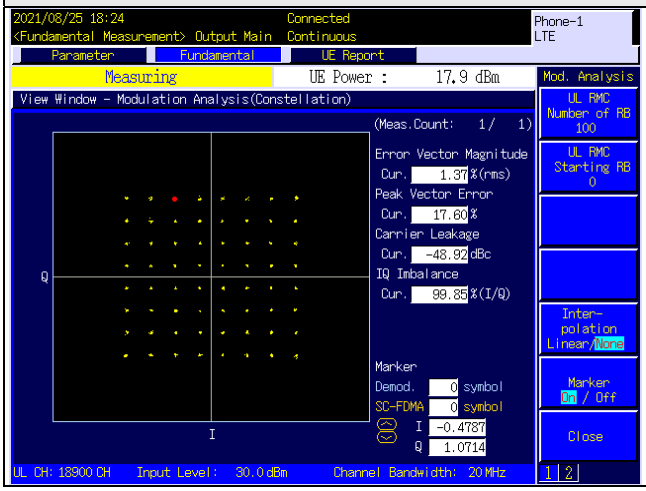
Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

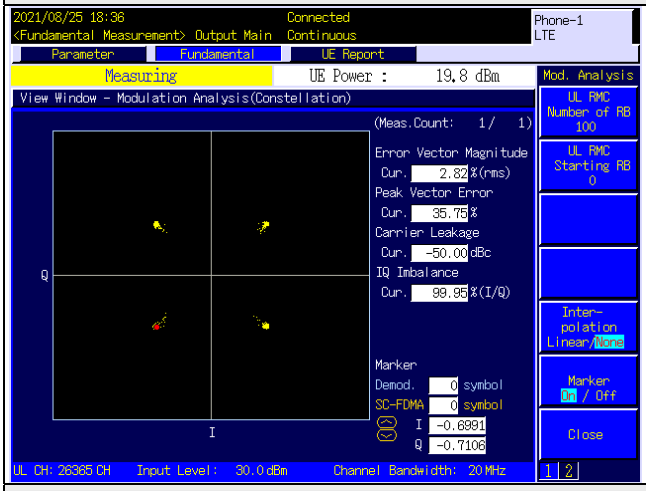
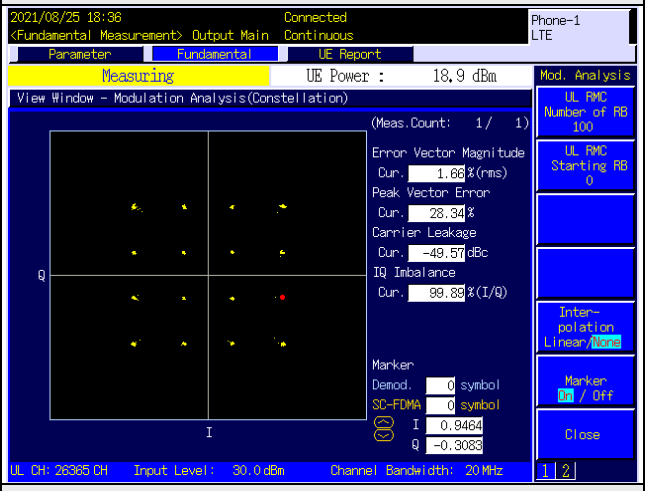
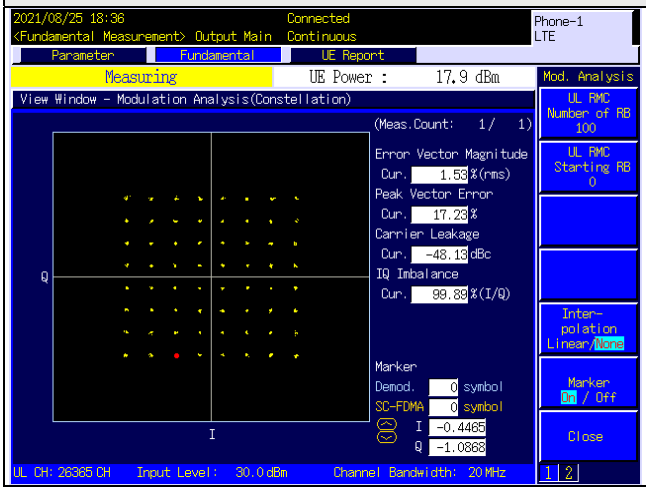
4.2.3 Test Setup

4.2.4 Test Results

GPRS, EDGE	
Spectrum Plot of Measurement Value	
Channel: 661 / Frequency (MHz): 1880.0MHz	
GPRS	EDGE
	

WCDMA Band 2	
Spectrum Plot of Measurement Value	
Channel: 9400 / Frequency (MHz): 1880.0MHz	
WCDMA	HSDPA
	
HSUPA	
	

LTE Band 2	
Spectrum Plot of Measurement Value	
Channel: 18900 / Frequency (MHz): 1880.0MHz	
QPSK	16QAM
	
64QAM	
	

LTE Band 25	
Spectrum Plot of Measurement Value	
Channel: 26365 / Frequency (MHz): 1882.5MHz	
QPSK	16QAM
	
64QAM	
	

4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stabiliity Measurement

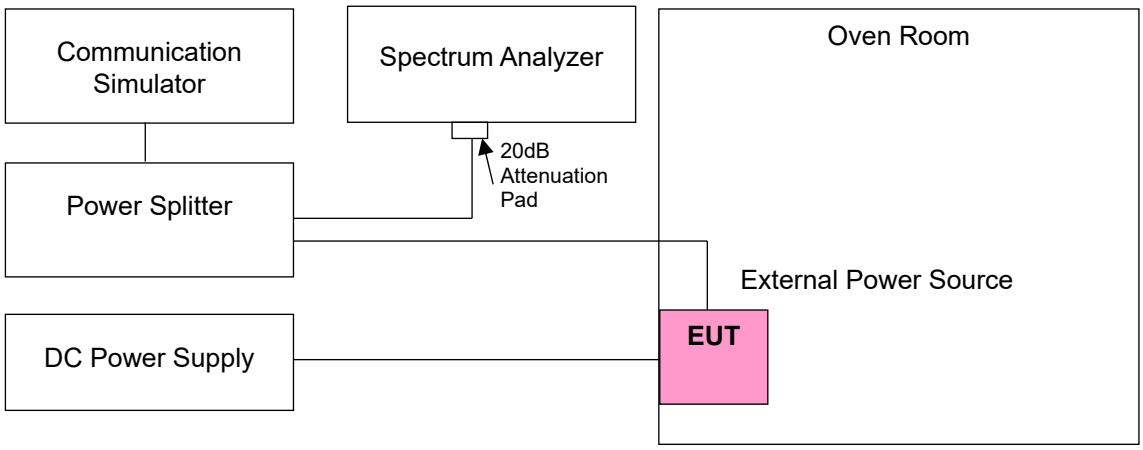
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.3.2 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.

4.3.3 Conducted Setup



4.3.4 Test Results

Frequency Error vs. Voltage

Voltage (Vdc)	EDGE			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1850.200002	0.0011	1909.800002	0.0010
10.80	1850.200003	0.0016	1909.800004	0.0021
12.42	1850.200001	0.0005	1909.800002	0.0010

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	EDGE			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1850.200002	0.0011	1909.800004	0.0021
-20	1850.200004	0.0022	1909.800003	0.0016
-10	1850.200004	0.0022	1909.800004	0.0021
0	1850.200002	0.0011	1909.800003	0.0016
10	1850.200001	0.0005	1909.800003	0.0016
20	1850.199997	-0.0016	1909.799997	-0.0016
30	1850.199998	-0.0011	1909.799999	-0.0005
40	1850.199998	-0.0011	1909.799996	-0.0021
50	1850.199998	-0.0011	1909.799997	-0.0016

Frequency Error vs. Voltage

Voltage (Vdc)	WCDMA Band 2			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1852.400001	0.0005	1907.600002	0.0010
10.80	1852.400004	0.0022	1907.600004	0.0021
12.42	1852.400001	0.0005	1907.600003	0.0016

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	WCDMA Band 2			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1852.400002	0.0011	1907.600002	0.0010
-20	1852.400003	0.0016	1907.600002	0.0010
-10	1852.400002	0.0011	1907.600003	0.0016
0	1852.400002	0.0011	1907.600001	0.0005
10	1852.400001	0.0005	1907.600004	0.0021
20	1852.399997	-0.0016	1907.599997	-0.0016
30	1852.399997	-0.0016	1907.599998	-0.0010
40	1852.399997	-0.0016	1907.599998	-0.0010
50	1852.399996	-0.0022	1907.599996	-0.0021

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 2			
	Channel Bandwidth 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1850.700003	0.0016	1909.300002	0.0010
10.80	1850.700003	0.0016	1909.300004	0.0021
12.42	1850.700002	0.0011	1909.300002	0.0010

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2			
	Channel Bandwidth 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1850.700003	0.0016	1909.300003	0.0016
-20	1850.700002	0.0011	1909.300002	0.0010
-10	1850.700004	0.0022	1909.300003	0.0016
0	1850.700004	0.0022	1909.300003	0.0016
10	1850.700001	0.0005	1909.300003	0.0016
20	1850.699999	-0.0005	1909.299997	-0.0016
30	1850.699996	-0.0022	1909.299996	-0.0021
40	1850.699996	-0.0022	1909.299997	-0.0016
50	1850.699999	-0.0005	1909.299998	-0.0010

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 2			
	Channel Bandwidth 3MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1851.500002	0.0011	1908.500003	0.0016
10.80	1851.500003	0.0016	1908.500004	0.0021
12.42	1851.500002	0.0011	1908.500003	0.0016

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2			
	Channel Bandwidth 3MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1851.500001	0.0005	1908.500004	0.0021
-20	1851.500003	0.0016	1908.500001	0.0005
-10	1851.500004	0.0022	1908.500002	0.0010
0	1851.500002	0.0011	1908.500001	0.0005
10	1851.500002	0.0011	1908.500001	0.0005
20	1851.499998	-0.0011	1908.499997	-0.0016
30	1851.499996	-0.0022	1908.499997	-0.0016
40	1851.499996	-0.0022	1908.499997	-0.0016
50	1851.499998	-0.0011	1908.499997	-0.0016

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 2			
	Channel Bandwidth 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1852.500001	0.0005	1907.500004	0.0021
10.80	1852.500001	0.0005	1907.500003	0.0016
12.42	1852.500004	0.0022	1907.500002	0.0010

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2			
	Channel Bandwidth 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1852.500002	0.0011	1907.500002	0.0010
-20	1852.500003	0.0016	1907.500002	0.0010
-10	1852.500002	0.0011	1907.500003	0.0016
0	1852.500002	0.0011	1907.500003	0.0016
10	1852.500001	0.0005	1907.500002	0.0010
20	1852.499997	-0.0016	1907.499997	-0.0016
30	1852.499998	-0.0011	1907.499997	-0.0016
40	1852.499998	-0.0011	1907.499998	-0.0010
50	1852.499996	-0.0022	1907.499998	-0.0010

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 2			
	Channel Bandwidth 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1855.000003	0.0016	1905.000001	0.0005
10.80	1855.000003	0.0016	1905.000002	0.0010
12.42	1855.000002	0.0011	1905.000003	0.0016

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2			
	Channel Bandwidth 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1855.000002	0.0011	1905.000001	0.0005
-20	1855.000003	0.0016	1905.000003	0.0016
-10	1855.000002	0.0011	1905.000002	0.0010
0	1855.000002	0.0011	1905.000004	0.0021
10	1855.000001	0.0005	1905.000002	0.0010
20	1854.999997	-0.0016	1904.999998	-0.0010
30	1854.999998	-0.0011	1904.999997	-0.0016
40	1854.999997	-0.0016	1904.999998	-0.0010
50	1854.999997	-0.0016	1904.999997	-0.0016

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 2			
	Channel Bandwidth 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1857.500003	0.0016	1902.500003	0.0016
10.80	1857.500003	0.0016	1902.500004	0.0021
12.42	1857.500001	0.0005	1902.500002	0.0011

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2			
	Channel Bandwidth 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1857.500002	0.0011	1902.500004	0.0021
-20	1857.500002	0.0011	1902.500001	0.0005
-10	1857.500004	0.0022	1902.500002	0.0011
0	1857.500004	0.0022	1902.500003	0.0016
10	1857.500002	0.0011	1902.500003	0.0016
20	1857.499999	-0.0005	1902.499997	-0.0016
30	1857.499999	-0.0005	1902.499999	-0.0005
40	1857.499998	-0.0011	1902.499998	-0.0011
50	1857.499998	-0.0011	1902.499998	-0.0011

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 2			
	Channel Bandwidth 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1860.000004	0.0022	1900.000003	0.0016
10.80	1860.000001	0.0005	1900.000004	0.0021
12.42	1860.000002	0.0011	1900.000003	0.0016

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 2			
	Channel Bandwidth 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1860.000001	0.0005	1900.000003	0.0016
-20	1860.000001	0.0005	1900.000003	0.0016
-10	1860.000003	0.0016	1900.000001	0.0005
0	1860.000001	0.0005	1900.000002	0.0011
10	1860.000004	0.0022	1900.000002	0.0011
20	1859.999996	-0.0022	1899.999999	-0.0005
30	1859.999997	-0.0016	1899.999997	-0.0016
40	1859.999997	-0.0016	1899.999998	-0.0011
50	1859.999998	-0.0011	1899.999998	-0.0011

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 25			
	Channel Bandwidth 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1850.700002	0.0011	1914.300003	0.0016
10.80	1850.700002	0.0011	1914.300002	0.0010
12.42	1850.700004	0.0022	1914.300003	0.0016

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 25			
	Channel Bandwidth 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1850.700003	0.0016	1914.300004	0.0021
-20	1850.700003	0.0016	1914.300001	0.0005
-10	1850.700003	0.0016	1914.300003	0.0016
0	1850.700003	0.0016	1914.300003	0.0016
10	1850.700003	0.0016	1914.300004	0.0021
20	1850.699997	-0.0016	1914.299998	-0.0010
30	1850.699999	-0.0005	1914.299997	-0.0016
40	1850.699997	-0.0016	1914.299999	-0.0005
50	1850.699999	-0.0005	1914.299998	-0.0010

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 25			
	Channel Bandwidth 3MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1851.500003	0.0016	1913.500004	0.0021
10.80	1851.500004	0.0022	1913.500003	0.0016
12.42	1851.500001	0.0005	1913.500003	0.0016

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 25			
	Channel Bandwidth 3MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1851.500002	0.0011	1913.500003	0.0016
-20	1851.500003	0.0016	1913.500002	0.0010
-10	1851.500003	0.0016	1913.500003	0.0016
0	1851.500003	0.0016	1913.500002	0.0010
10	1851.500003	0.0016	1913.500002	0.0010
20	1851.499998	-0.0011	1913.499998	-0.0010
30	1851.499998	-0.0011	1913.499997	-0.0016
40	1851.499998	-0.0011	1913.499999	-0.0005
50	1851.499998	-0.0011	1913.499997	-0.0016

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 25			
	Channel Bandwidth 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1852.500002	0.0011	1912.500004	0.0021
10.80	1852.500003	0.0016	1912.500003	0.0016
12.42	1852.500003	0.0016	1912.500001	0.0005

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 25			
	Channel Bandwidth 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1852.500001	0.0005	1912.500002	0.0010
-20	1852.500002	0.0011	1912.500004	0.0021
-10	1852.500003	0.0016	1912.500003	0.0016
0	1852.500002	0.0011	1912.500001	0.0005
10	1852.500004	0.0022	1912.500003	0.0016
20	1852.499999	-0.0005	1912.499998	-0.0010
30	1852.499999	-0.0005	1912.499999	-0.0005
40	1852.499996	-0.0022	1912.499999	-0.0005
50	1852.499996	-0.0022	1912.499996	-0.0021

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 25			
	Channel Bandwidth 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1855.000002	0.0011	1910.000001	0.0005
10.80	1855.000002	0.0011	1910.000003	0.0016
12.42	1855.000003	0.0016	1910.000002	0.0010

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 25			
	Channel Bandwidth 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1855.000002	0.0011	1910.000002	0.0010
-20	1855.000002	0.0011	1910.000001	0.0005
-10	1855.000002	0.0011	1910.000002	0.0010
0	1855.000002	0.0011	1910.000002	0.0010
10	1855.000003	0.0016	1910.000001	0.0005
20	1854.999999	-0.0005	1909.999997	-0.0016
30	1854.999998	-0.0011	1909.999998	-0.0010
40	1854.999997	-0.0016	1909.999996	-0.0021
50	1854.999998	-0.0011	1909.999997	-0.0016

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 25			
	Channel Bandwidth 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1857.500002	0.0011	1907.500004	0.0021
10.80	1857.500002	0.0011	1907.500002	0.0010
12.42	1857.500002	0.0011	1907.500002	0.0010

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 25			
	Channel Bandwidth 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1857.500003	0.0016	1907.500004	0.0021
-20	1857.500002	0.0011	1907.500002	0.0010
-10	1857.500002	0.0011	1907.500003	0.0016
0	1857.500003	0.0016	1907.500001	0.0005
10	1857.500001	0.0005	1907.500002	0.0010
20	1857.499999	-0.0005	1907.499997	-0.0016
30	1857.499998	-0.0011	1907.499996	-0.0021
40	1857.499998	-0.0011	1907.499996	-0.0021
50	1857.499997	-0.0016	1907.499998	-0.0010

Frequency Error vs. Voltage

Voltage (Vdc)	LTE Band 25			
	Channel Bandwidth 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
9.18	1860.000003	0.0016	1905.000003	0.0016
10.80	1860.000003	0.0016	1905.000003	0.0016
12.42	1860.000004	0.0022	1905.000003	0.0016

Note: The applicant defined the normal working voltage is from 9.18Vdc to 12.42Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 25			
	Channel Bandwidth 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	1860.000003	0.0016	1905.000003	0.0016
-20	1860.000004	0.0022	1905.000002	0.0010
-10	1860.000004	0.0022	1905.000002	0.0010
0	1860.000003	0.0016	1905.000001	0.0005
10	1860.000003	0.0016	1905.000001	0.0005
20	1859.999997	-0.0016	1904.999997	-0.0016
30	1859.999996	-0.0022	1904.999998	-0.0010
40	1859.999996	-0.0022	1904.999997	-0.0016
50	1859.999997	-0.0016	1904.999998	-0.0010

4.4 Occupied Bandwidth Measurement

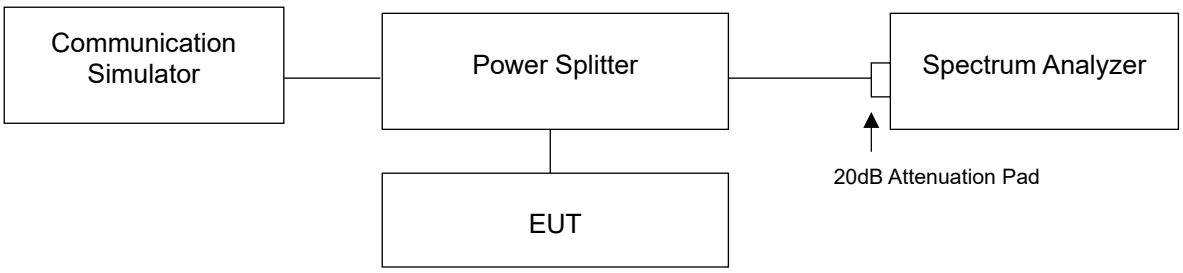
4.4.1 Test Procedure

For the 26dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be wide enough to see sufficient roll off of the signal to make the measurement.
b) The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW, and the VBW shall be set ≥ 3 × RBW.
c) Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
d) The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target "−X dB" requirement, i.e., if the requirement calls for measuring the −26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference level.
e) Set spectrum analyzer detection mode to peak, and the trace mode to max hold.
f) Determine the following reference values: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
g) Determine the "−X dB amplitude" as equal to (Reference Value − X). Alternatively, this calculation can be performed on the spectrum analyzer using the delta-marker measurement function.
h) Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the "−X dB amplitude" determined in step f). If a marker is below this "−X dB amplitude" value it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers.
i) The OBW shall be reported by providing plot(s) of the measuring instrument display, to include markers depicting the relevant frequency and amplitude information (e.g., marker table). The frequency and amplitude axis and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

For the occupied bandwidth measurement method, please refer to section 5.4.4 of ANSI C63.26.

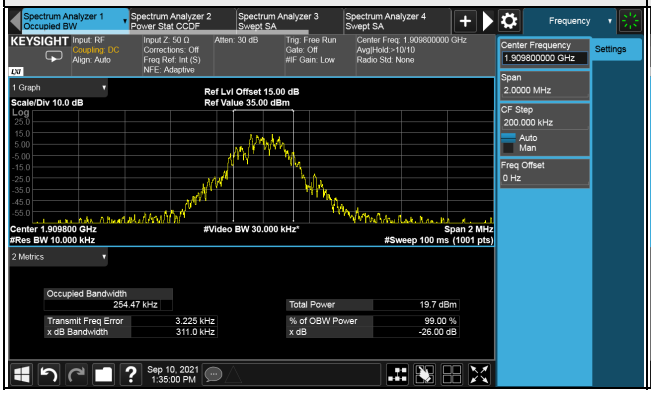
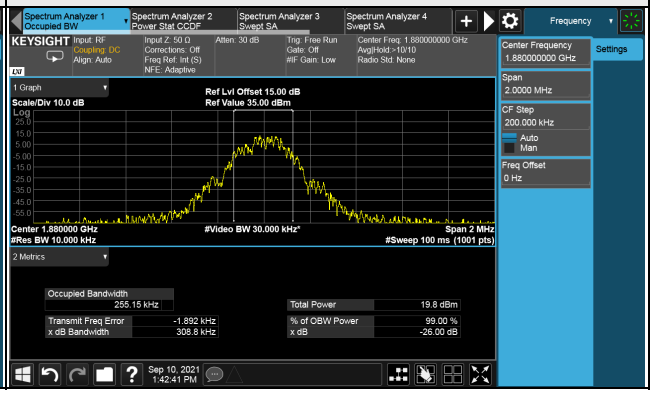
4.4.2 Test Setup



4.4.3 Test Result

Occupied Bandwidth

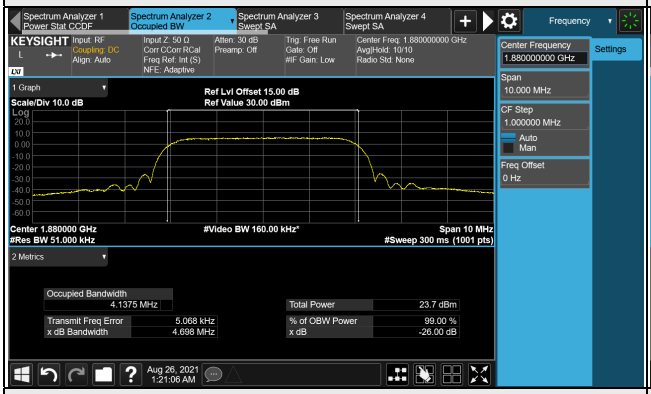
Channel	Frequency (MHz)	99% Occupied Bandwidth (kHz)	
		GPRS	EDGE
512	1850.2	244.45	251.60
661	1880.0	249.48	255.15
810	1909.8	254.47	254.41

Spectrum Plot of Worst Value	
GPRS	EDGE
	

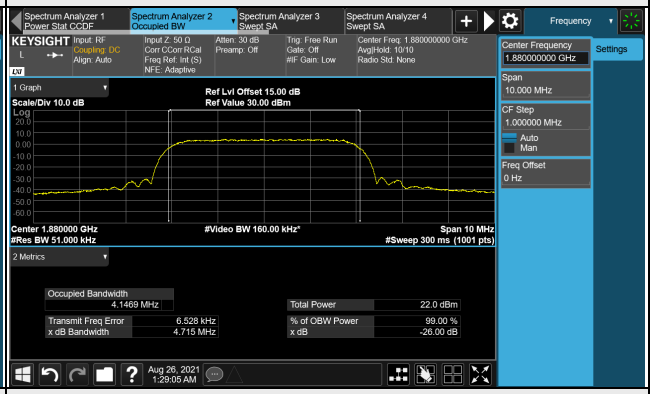
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		WCDMA	HSDPA	HSUPA
9262	1852.4	4.13	4.14	4.14
9400	1880.0	4.14	4.15	4.14
9538	1907.6	4.12	4.14	4.13

Spectrum Plot of Worst Value

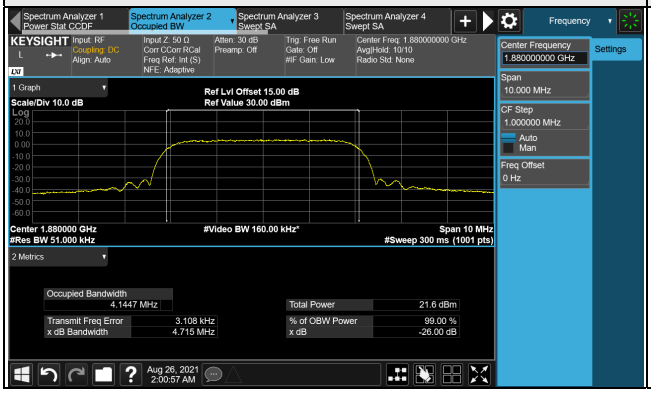
WCDMA



HSDPA



HSUPA

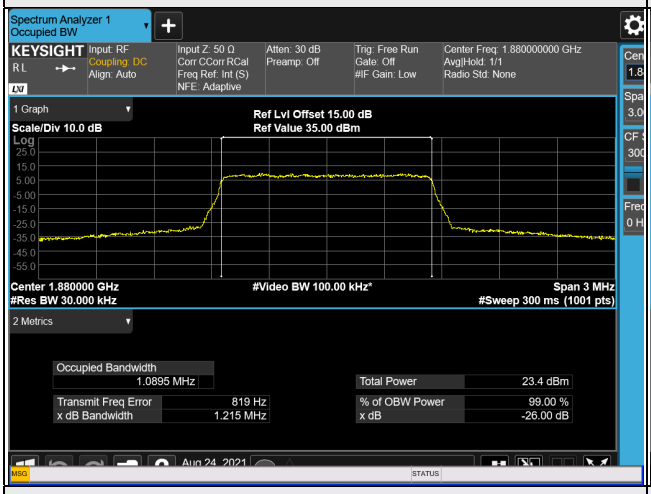


LTE Band 2, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18607	1850.7	1.09	1.09	1.09
18900	1880.0	1.09	1.09	1.09
19193	1909.3	1.09	1.09	1.09
LTE Band 2, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18615	1851.5	2.70	2.70	2.70
18900	1880.0	2.70	2.70	2.70
19185	1908.5	2.70	2.70	2.70
LTE Band 2, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18625	1852.5	4.49	4.49	4.50
18900	1880.0	4.49	4.50	4.50
19175	1907.5	4.49	4.49	4.51
LTE Band 2, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18650	1855.0	8.97	8.96	8.97
18900	1880.0	8.97	8.97	8.98
19150	1905.0	8.97	8.98	8.99
LTE Band 2, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18675	1857.5	13.44	13.43	13.43
18900	1880.0	13.46	13.45	13.44
19125	1902.5	13.48	13.46	13.46

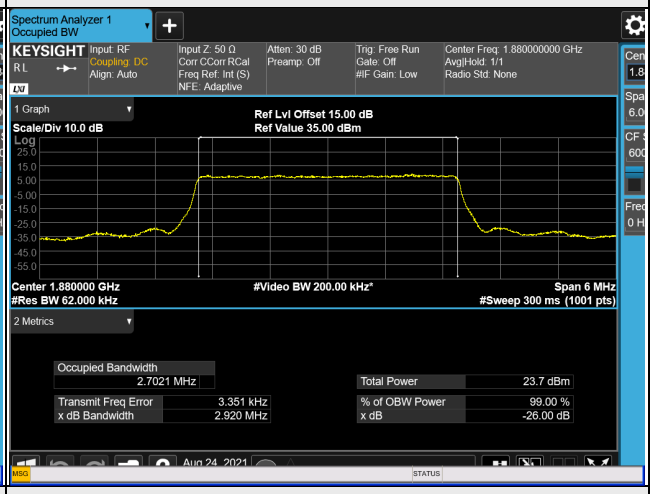
LTE Band 2, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18700	1860.0	17.90	17.93	17.92
18900	1880.0	17.92	17.94	17.94
19100	1900.0	17.96	17.97	17.97

Spectrum Plot of Worst Value

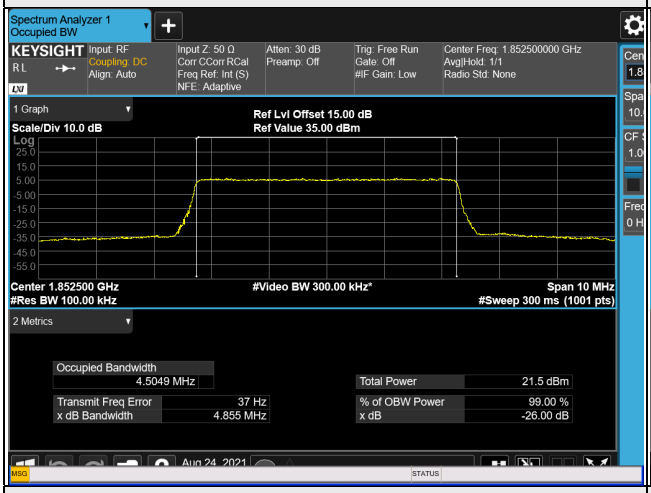
1.4MHz / 16QAM



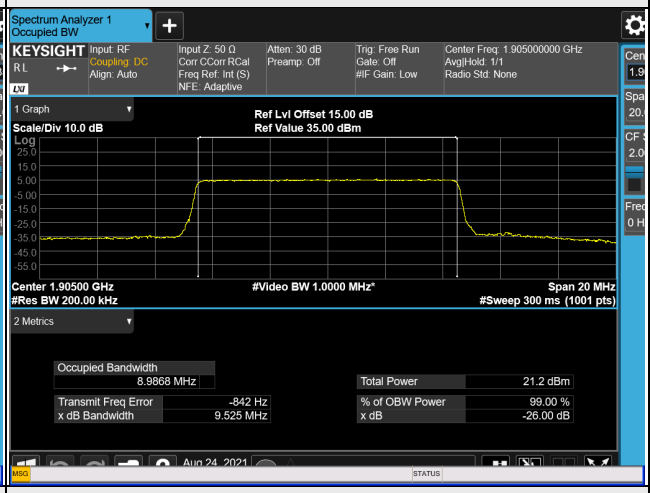
3MHz / QPSK



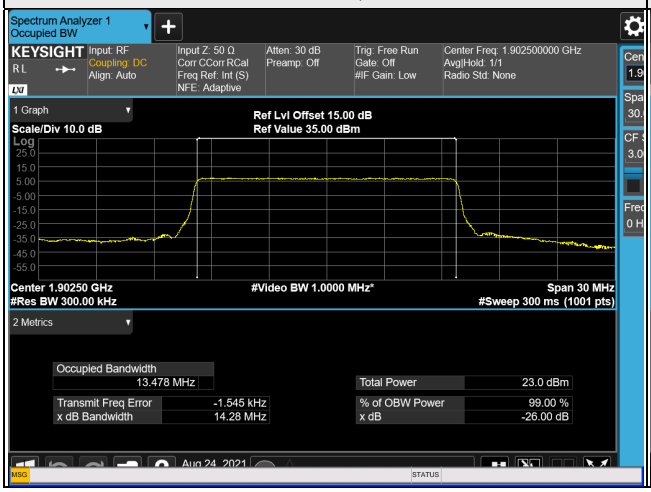
5MHz / 64QAM



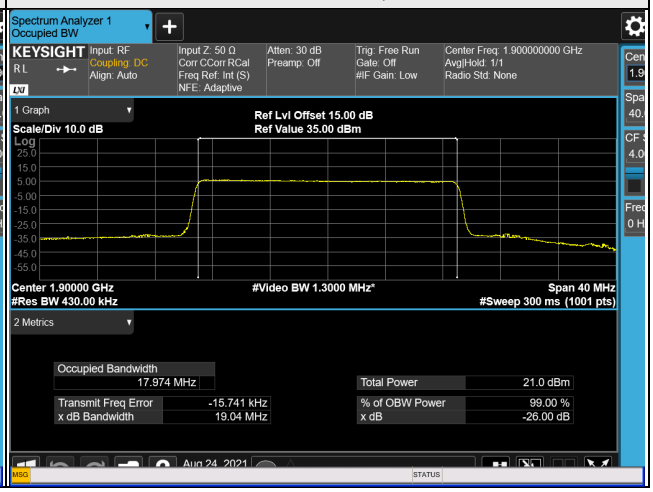
10MHz / 64QAM



15MHz / QPSK



20MHz / 64QAM

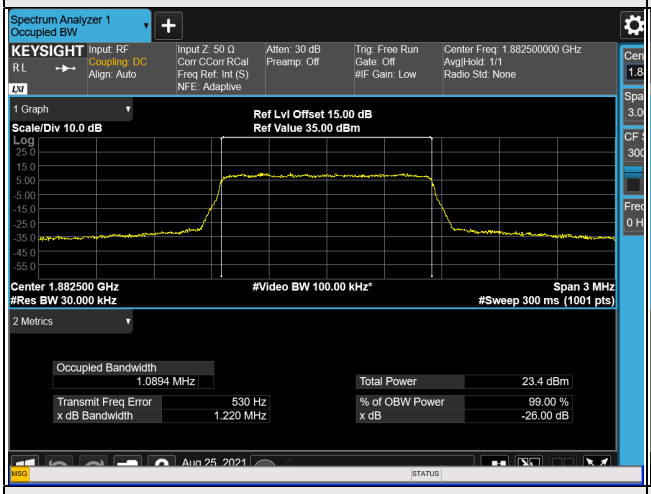


LTE Band 25, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26047	1850.7	1.09	1.09	1.09
26365	1882.5	1.09	1.09	1.09
26683	1914.3	1.09	1.09	1.09
LTE Band 25, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26055	1851.5	2.70	2.70	2.70
26365	1882.5	2.70	2.70	2.70
26675	1913.5	2.70	2.70	2.71
LTE Band 25, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26065	1852.5	4.49	4.49	4.49
26365	1882.5	4.49	4.50	4.50
26665	1912.5	4.49	4.50	4.50
LTE Band 25, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26090	1855.0	8.96	8.97	8.96
26365	1882.5	8.97	8.97	8.97
26640	1910.0	8.94	8.95	8.94
LTE Band 25, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26115	1857.5	13.43	13.42	13.41
26365	1882.5	13.45	13.45	13.44
26615	1907.5	13.39	13.39	13.38

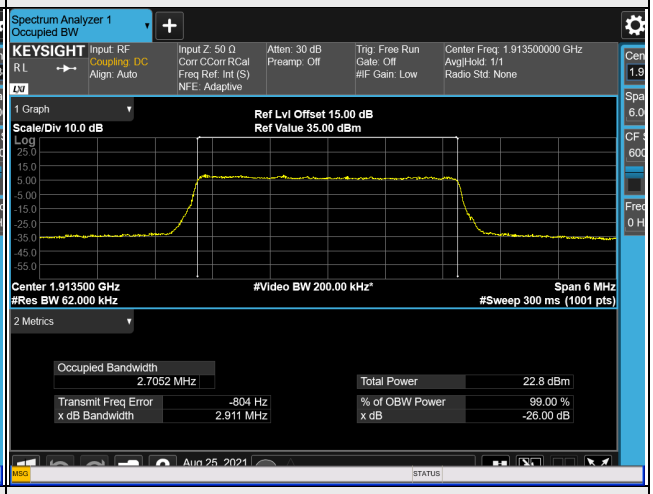
LTE Band 25, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26140	1860.0	17.87	17.89	17.89
26365	1882.5	17.92	17.95	17.92
26590	1905.0	17.86	17.89	17.88

Spectrum Plot of Worst Value

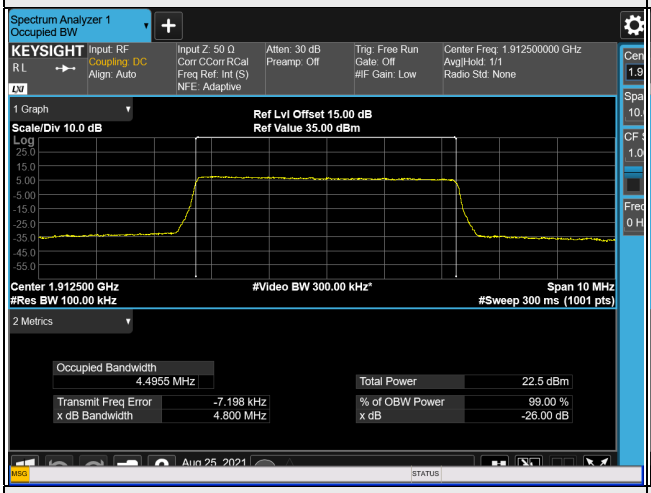
1.4MHz / 16QAM



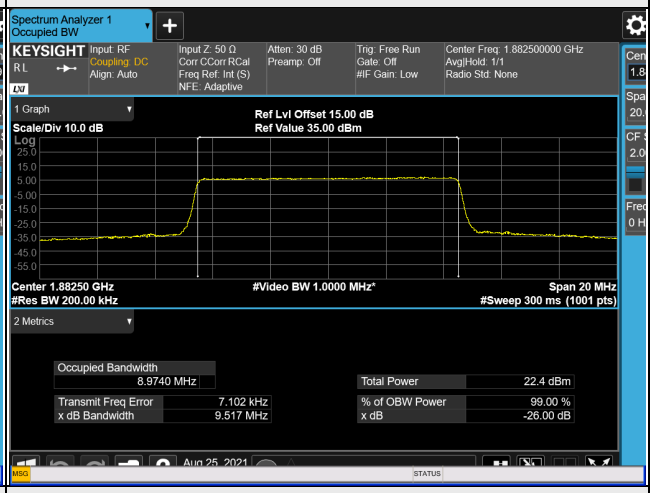
3MHz / 64QAM



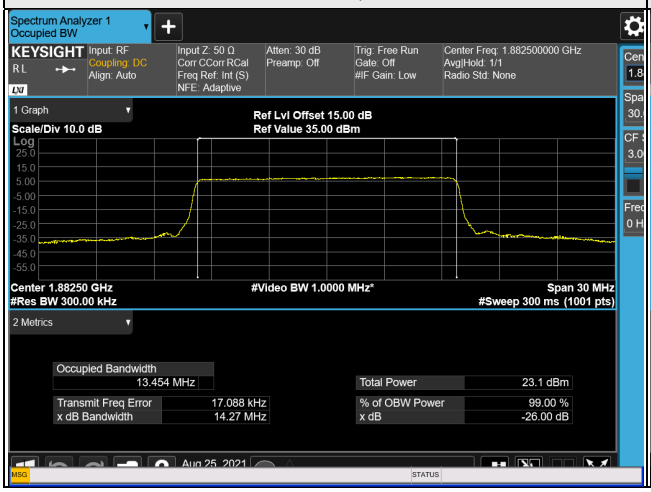
5MHz / 64QAM



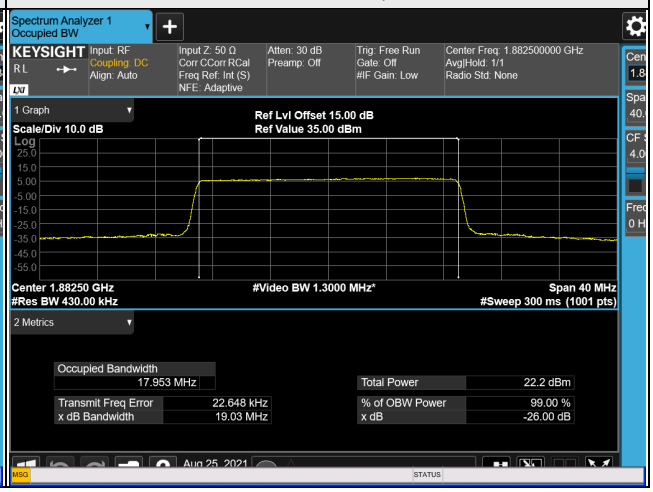
10MHz / 16QAM



15MHz / QPSK

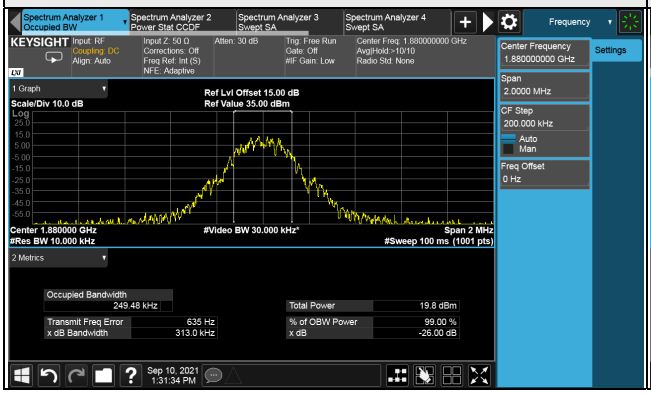
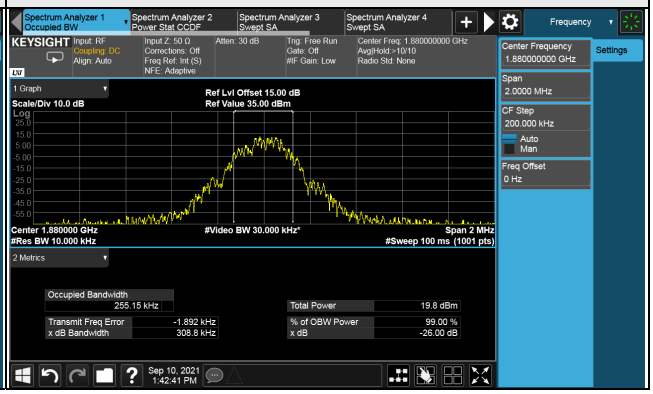


20MHz / 16QAM



26dB Bandwidth

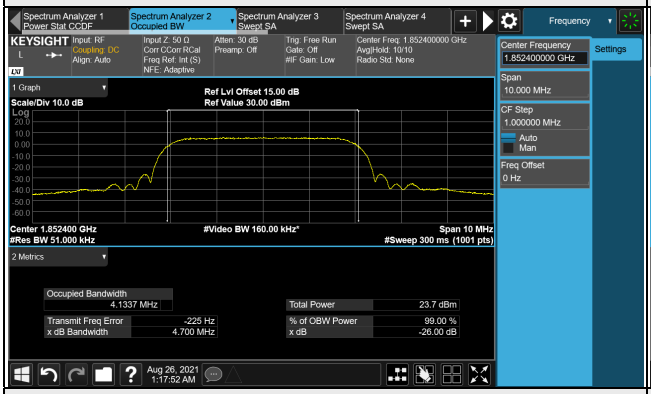
Channel	Frequency (MHz)	26dB Bandwidth (kHz)	
		GPRS	EDGE
512	1850.2	307.00	308.20
661	1880.0	313.00	308.80
810	1909.8	311.00	308.60

Spectrum Plot of Worst Value	
GPRS	EDGE
	

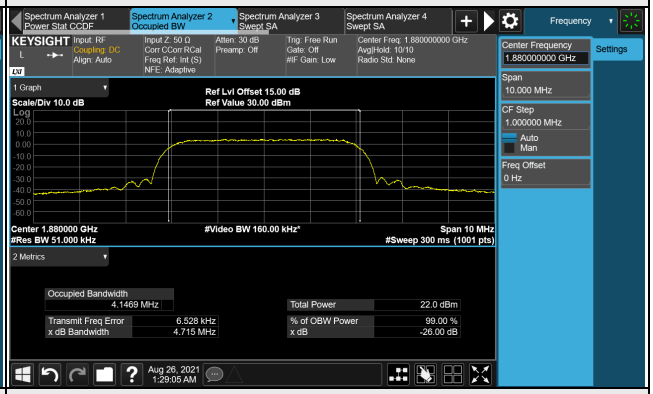
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		WCDMA	HSDPA	HSUPA
9262	1852.4	4.70	4.71	4.71
9400	1880.0	4.70	4.72	4.72
9538	1907.6	4.69	4.71	4.71

Spectrum Plot of Worst Value

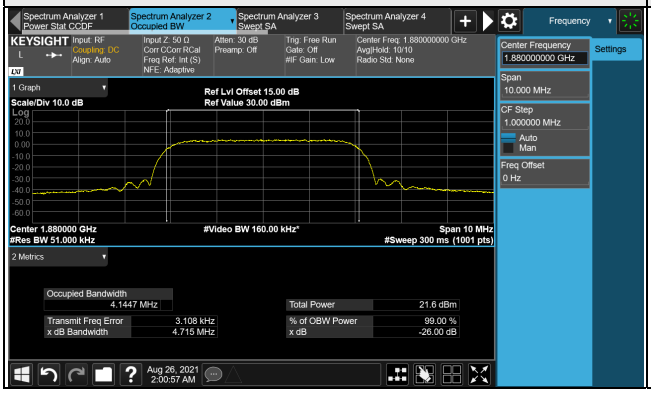
WCDMA



HSDPA



HSUPA

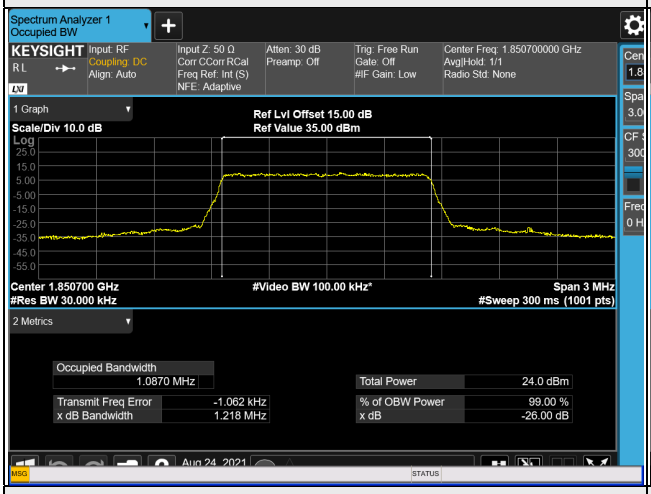


LTE Band 2, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18607	1850.7	1.22	1.22	1.22
18900	1880.0	1.21	1.22	1.22
19193	1909.3	1.22	1.21	1.22
LTE Band 2, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18615	1851.5	2.92	2.92	2.90
18900	1880.0	2.92	2.93	2.91
19185	1908.5	2.93	2.93	2.91
LTE Band 2, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18625	1852.5	4.82	4.81	4.86
18900	1880.0	4.84	4.80	4.84
19175	1907.5	4.83	4.81	4.82
LTE Band 2, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18650	1855.0	9.54	9.52	9.54
18900	1880.0	9.51	9.51	9.52
19150	1905.0	9.52	9.51	9.53
LTE Band 2, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18675	1857.5	14.24	14.23	14.24
18900	1880.0	14.28	14.24	14.24
19125	1902.5	14.28	14.25	14.26

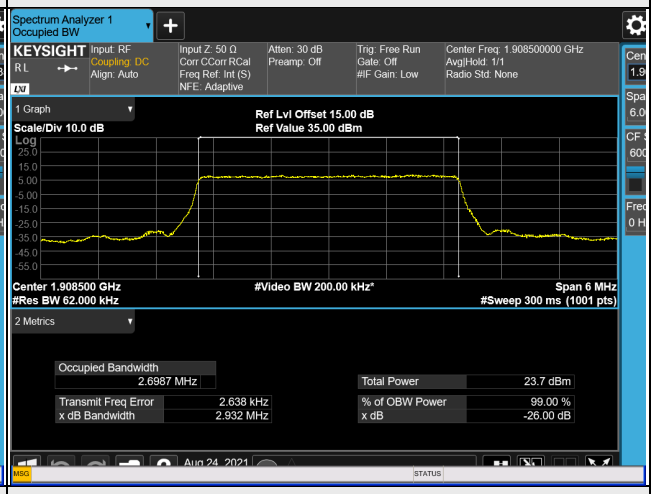
LTE Band 2, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
18700	1860.0	19.03	19.02	19.02
18900	1880.0	19.03	19.02	19.01
19100	1900.0	19.07	19.04	19.04

Spectrum Plot of Worst Value

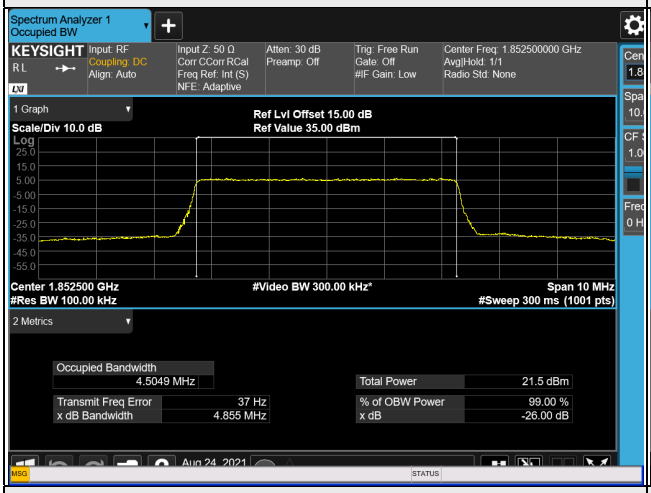
1.4MHz / QPSK



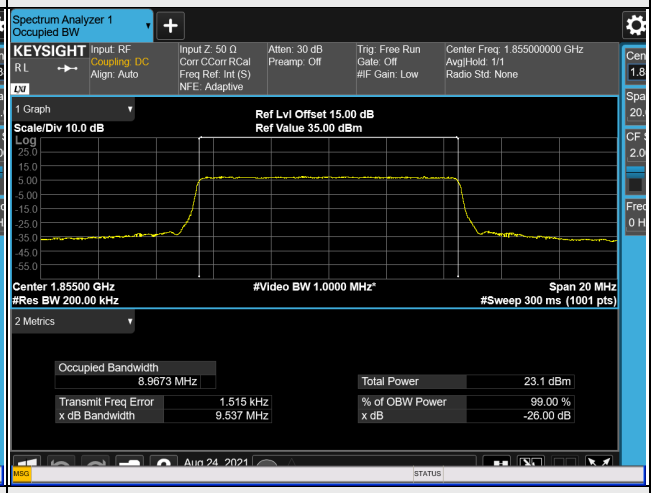
3MHz / QPSK



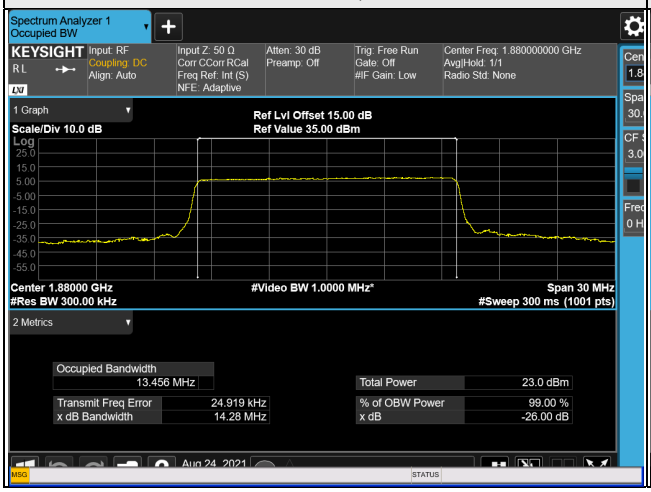
5MHz / 64QAM



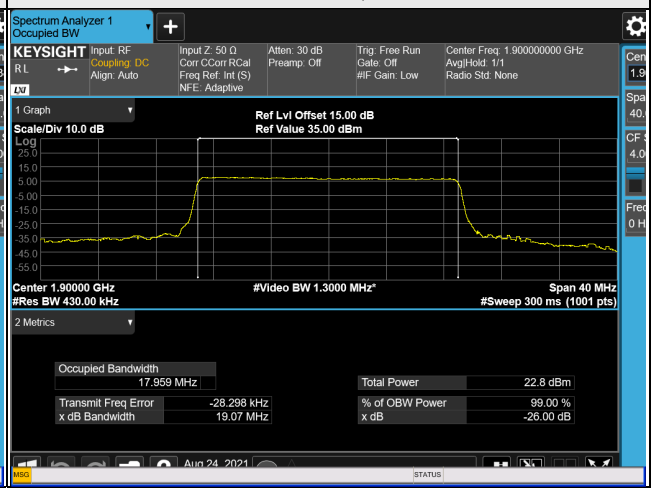
10MHz / QPSK



15MHz / QPSK



20MHz / QPSK

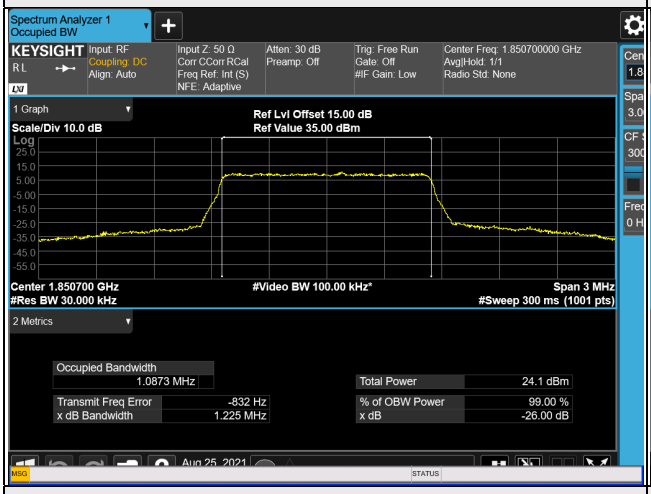


LTE Band 25, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26047	1850.7	1.23	1.22	1.21
26365	1882.5	1.22	1.22	1.22
26683	1914.3	1.23	1.22	1.22
LTE Band 25, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26055	1851.5	2.92	2.93	2.93
26365	1882.5	2.92	2.93	2.93
26675	1913.5	2.93	2.93	2.91
LTE Band 25, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26065	1852.5	4.81	4.81	4.81
26365	1882.5	4.83	4.81	4.82
26665	1912.5	4.79	4.79	4.80
LTE Band 25, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26090	1855.0	9.51	9.51	9.51
26365	1882.5	9.52	9.52	9.51
26640	1910.0	9.49	9.49	9.50
LTE Band 25, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26115	1857.5	14.26	14.23	14.24
26365	1882.5	14.27	14.25	14.25
26615	1907.5	14.22	14.21	14.20

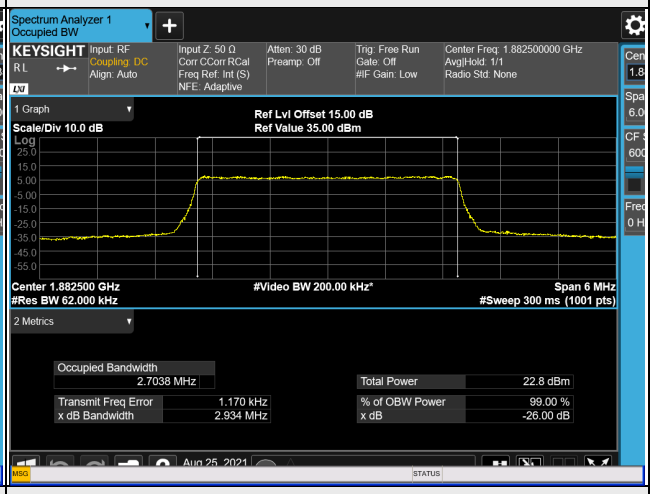
LTE Band 25, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
26140	1860.0	18.99	19.01	19.02
26365	1882.5	19.04	19.03	19.03
26590	1905.0	19.00	18.98	19.00

Spectrum Plot of Worst Value

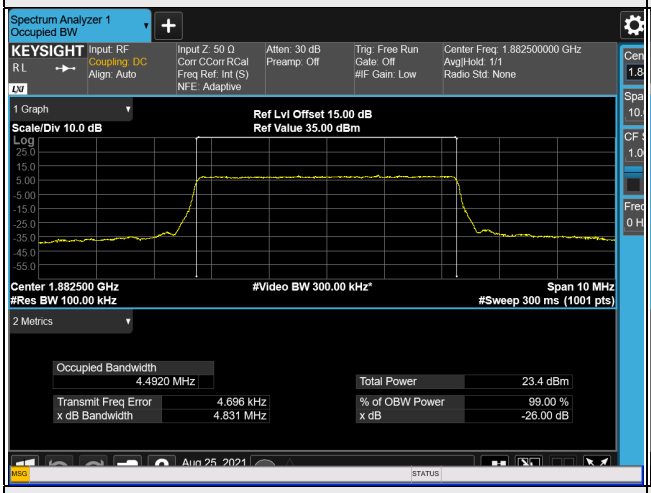
1.4MHz / QPSK



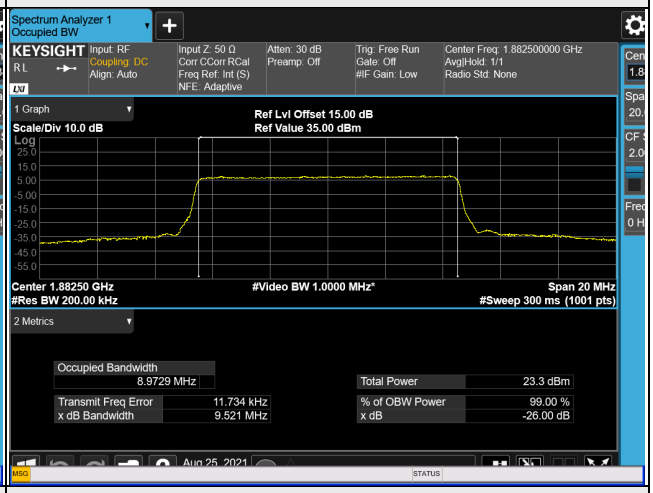
3MHz / 64QAM



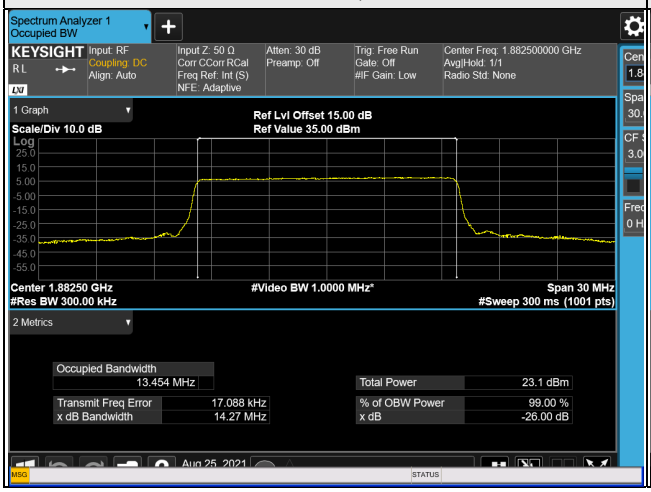
5MHz / QPSK



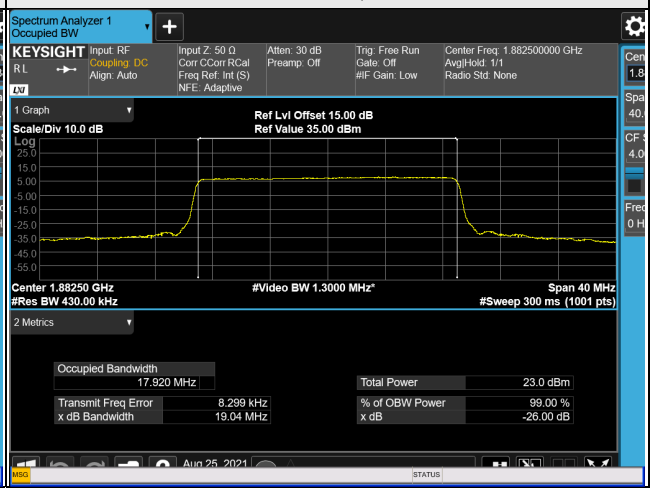
10MHz / QPSK



15MHz / QPSK



20MHz / QPSK

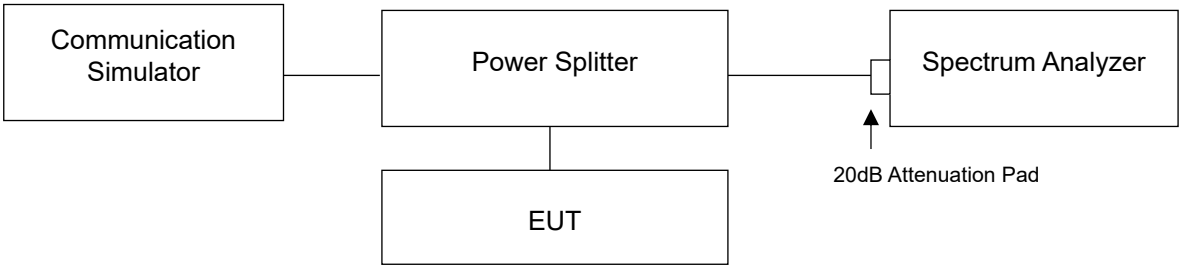


4.5 Band Edge Measurement

4.5.1 Limits of Band Edge Measurement

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

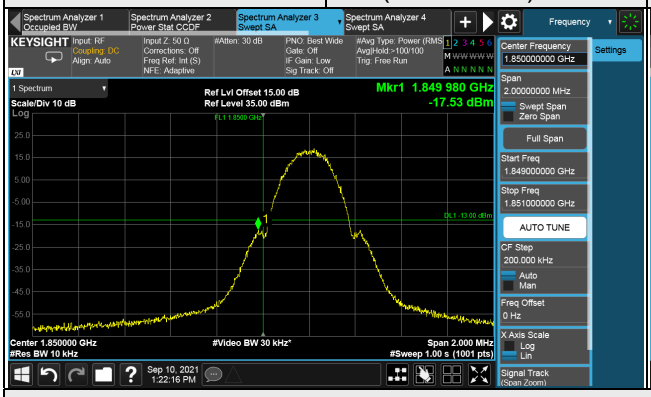
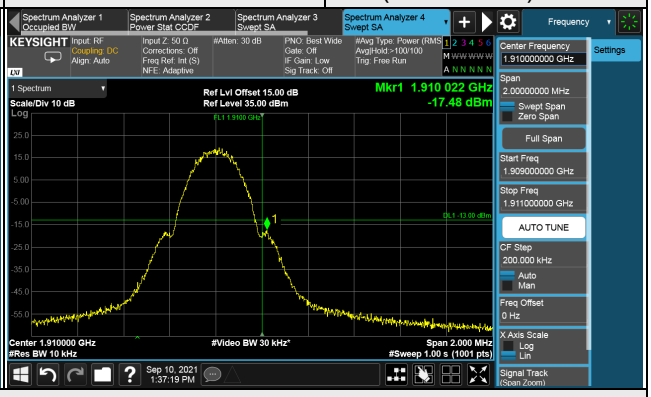
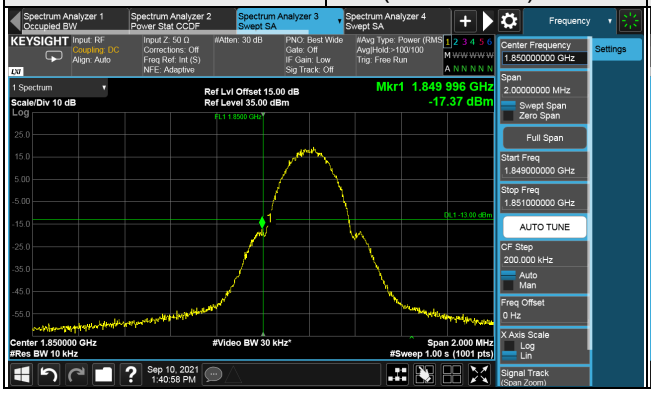
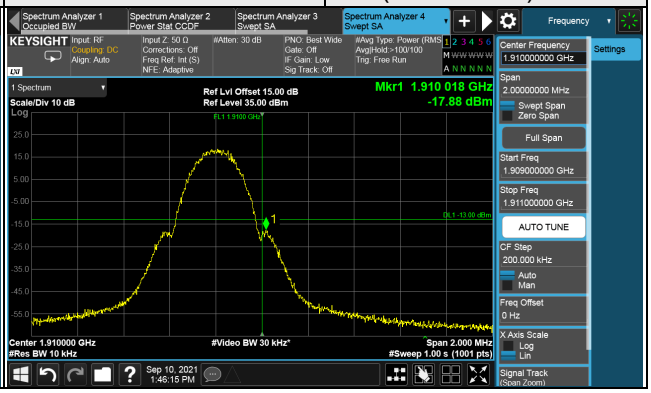
4.5.2 Test Setup

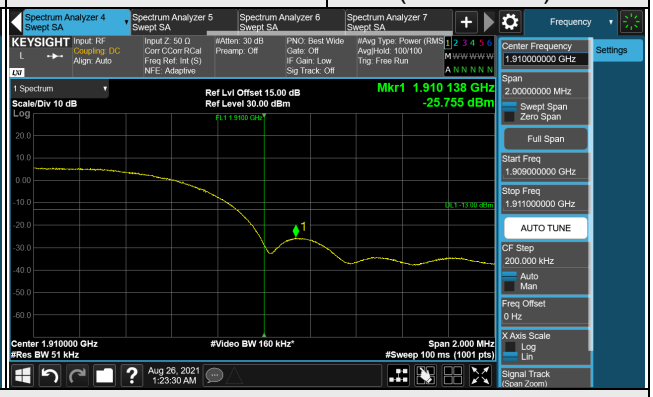
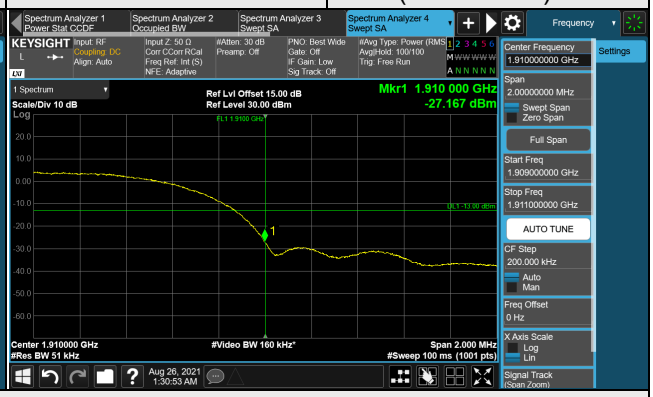
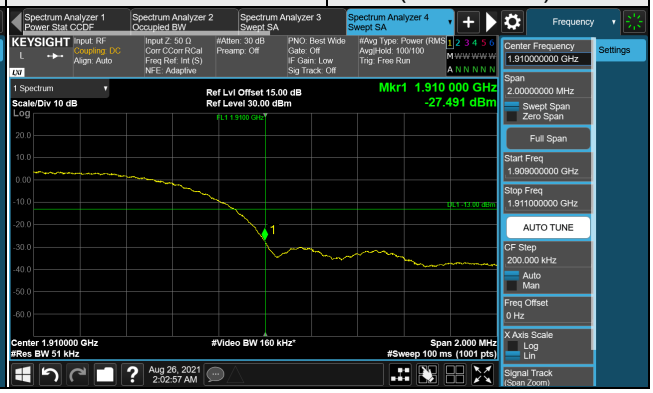


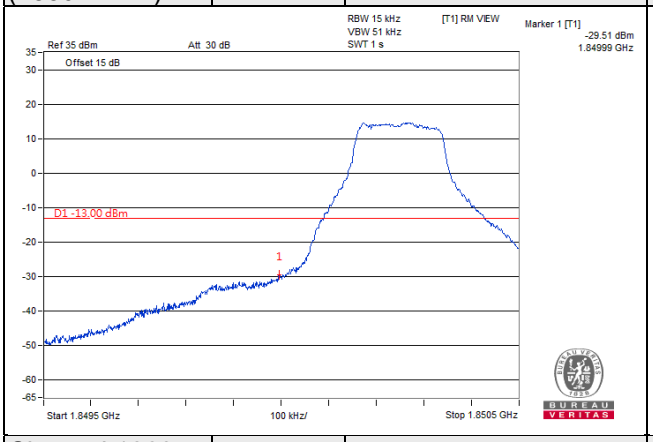
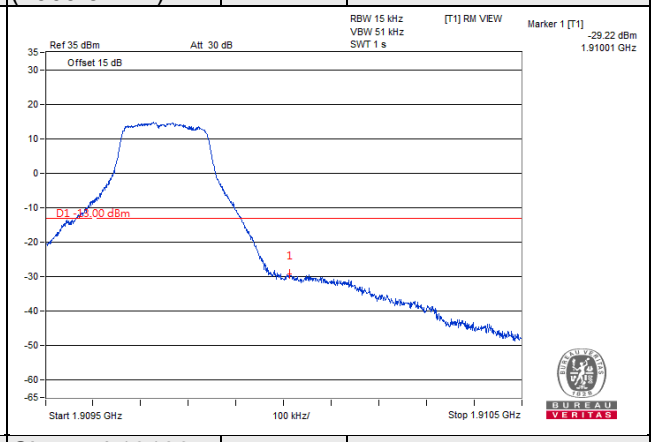
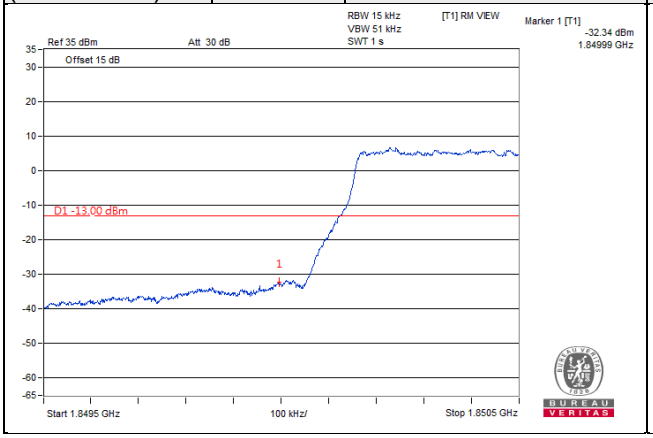
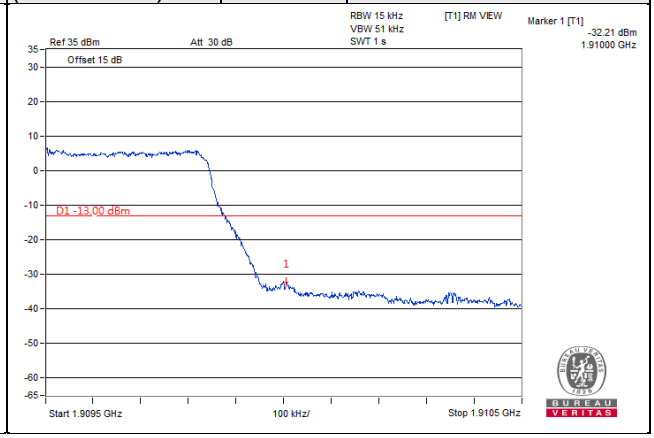
4.5.3 Test Procedures

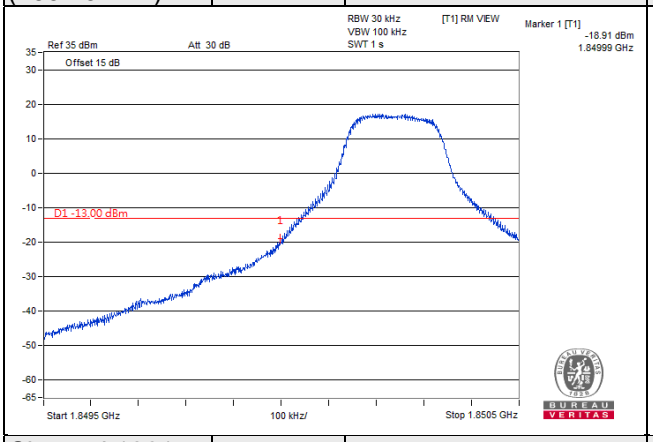
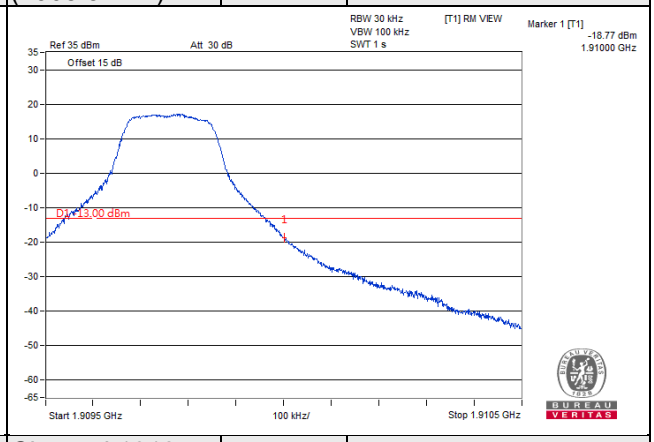
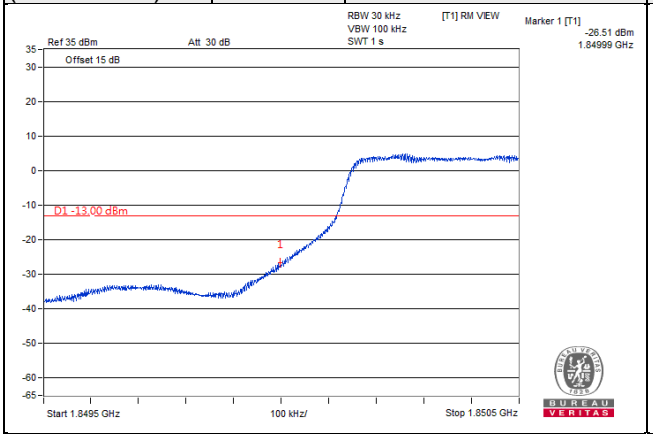
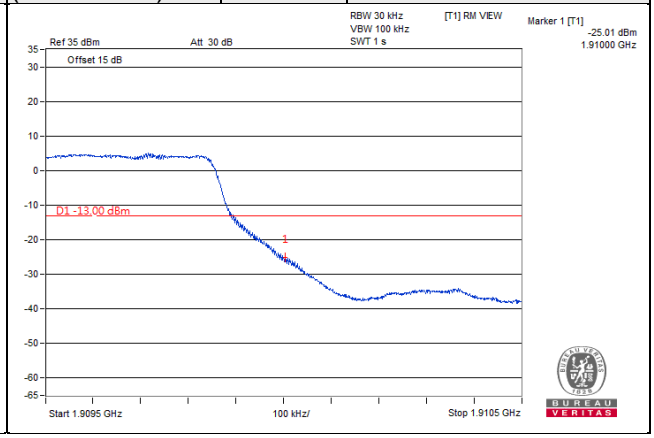
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 10kHz and VB of the spectrum is 30kHz (GPRS / EDGE).
c. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 51kHz and VB of the spectrum is 160kHz (WCDMA / HSDPA / HSUPA).
d. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 15kHz and VB of the spectrum is 51kHz (LTE Channel Bandwidth 1.4MHz).
e. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 30kHz and VB of the spectrum is 100kHz (LTE Channel Bandwidth 3MHz).
f. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 51kHz and VB of the spectrum is 160kHz (LTE Channel Bandwidth 5MHz).
g. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (LTE Channel Bandwidth 10MHz).
h. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 150kHz and VB of the spectrum is 470kHz (LTE Channel Bandwidth 15MHz).
i. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 200kHz and VB of the spectrum is 1MHz (LTE Channel Bandwidth 20MHz).
j. Record the max trace plot into the test report.

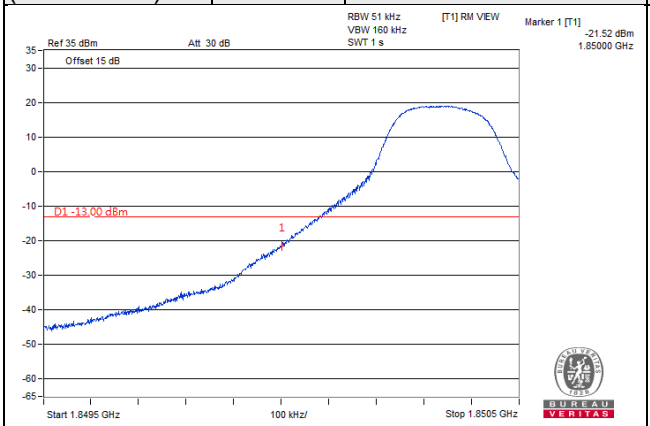
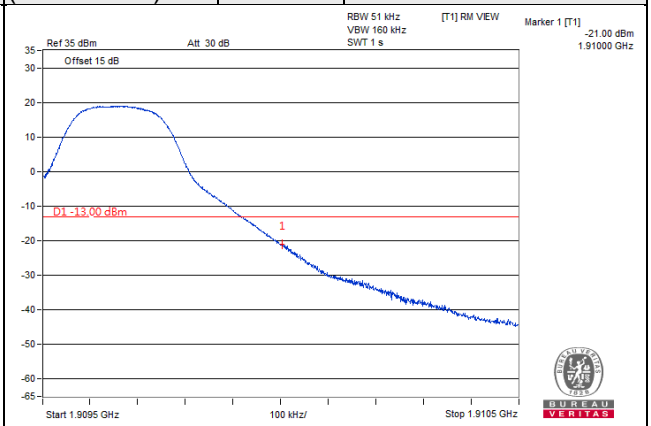
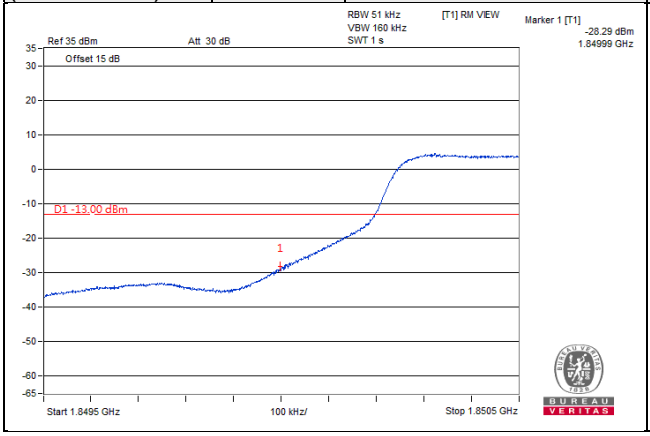
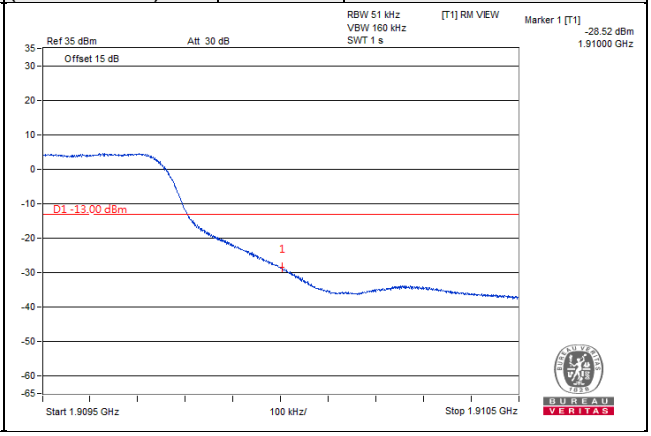
4.5.4 Test Results

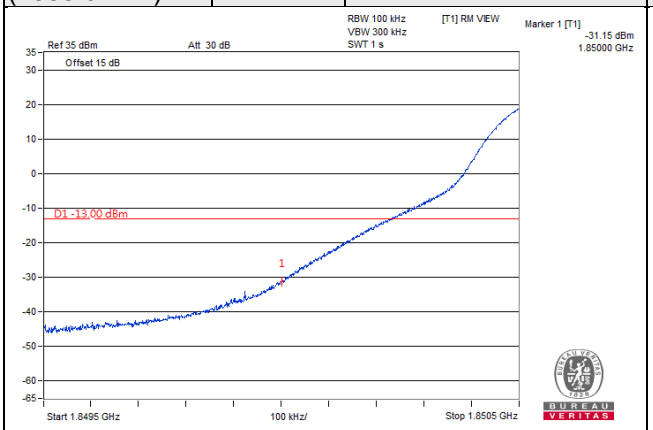
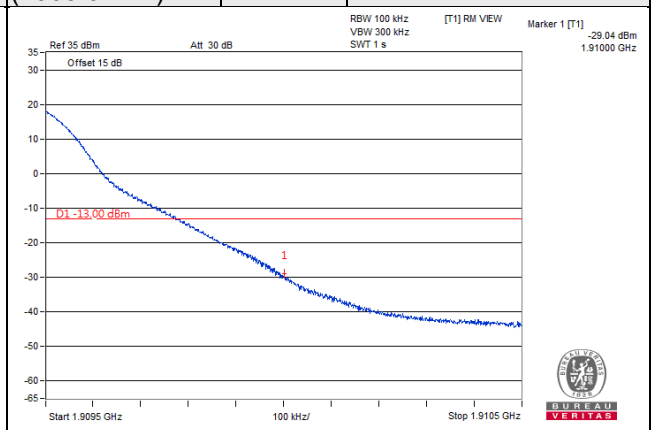
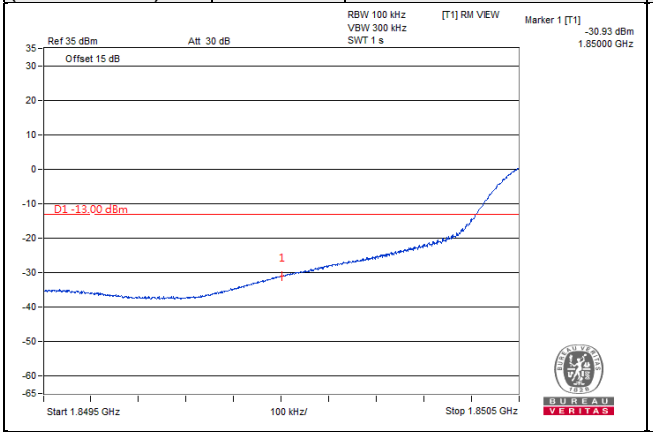
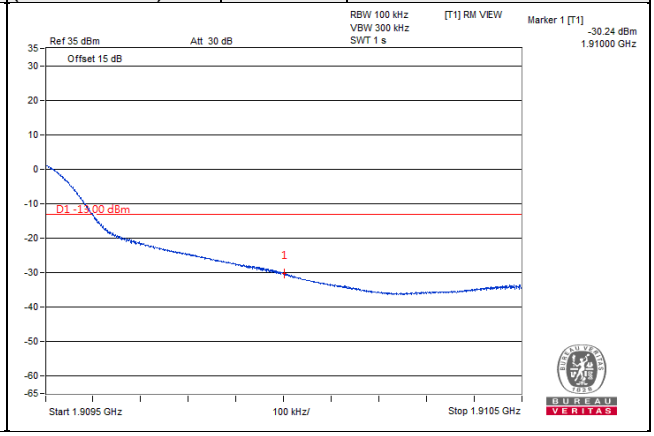
GPRS			
Channel	512 (1850.2MHz)	Channel	810 (1909.8MHz)
			
EDGE			
Channel	512 (1850.2MHz)	Channel	810 (1909.8MHz)
			

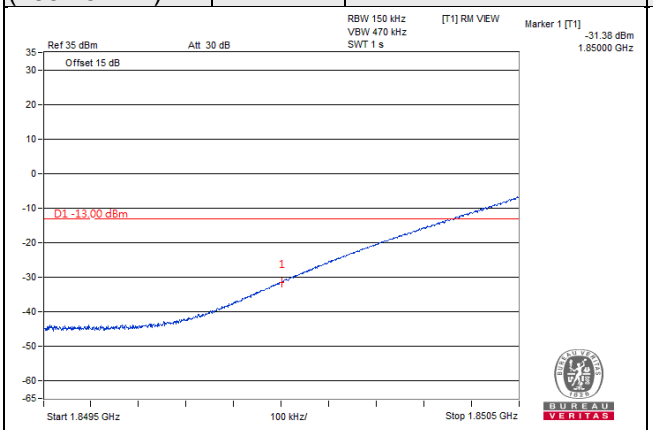
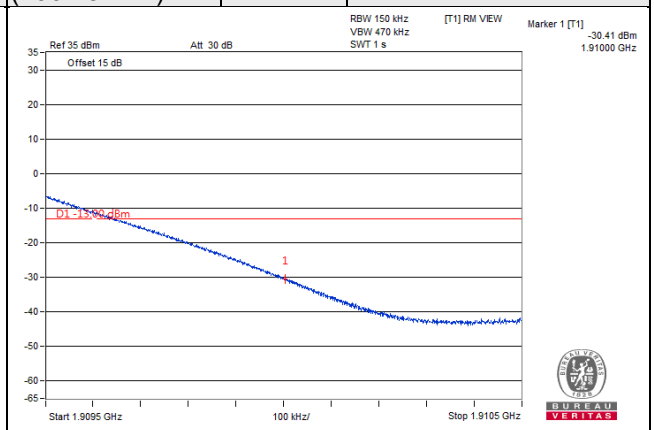
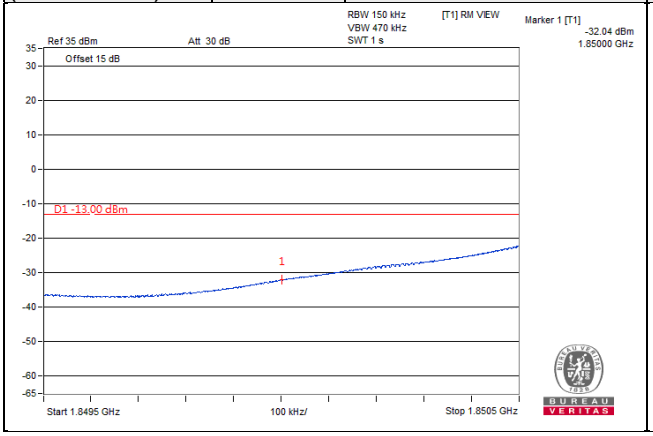
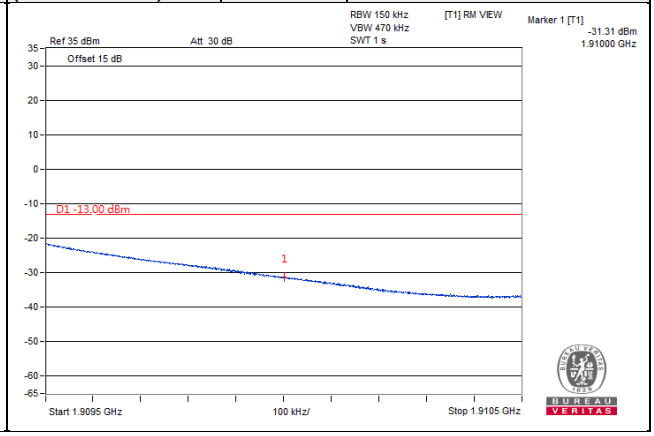
WCDMA			
Channel	9262 (1852.4MHz)	Channel	9538 (1907.6MHz)
			
HSDPA			
Channel	9262 (1852.4MHz)	Channel	9538 (1907.6MHz)
			
HSUPA			
Channel	9262 (1852.4MHz)	Channel	9538 (1907.6MHz)
			

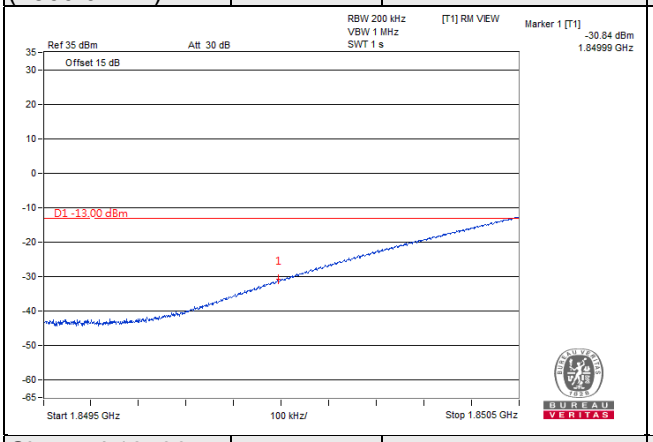
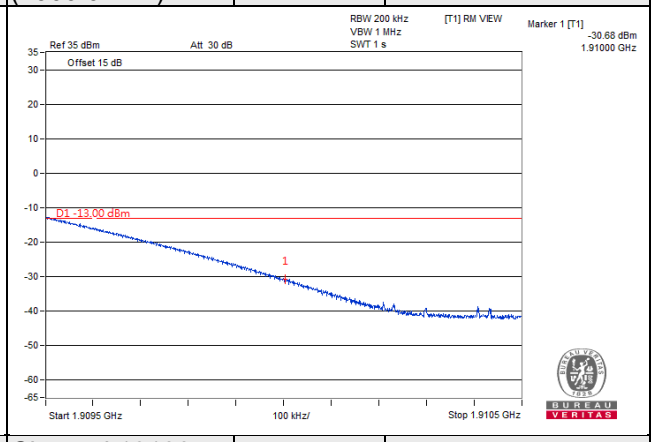
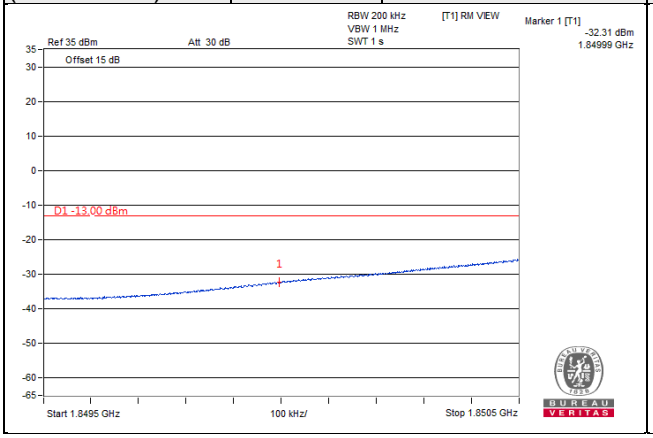
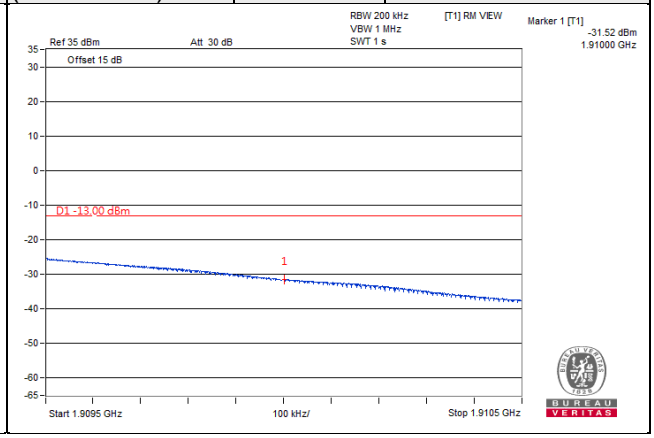
LTE Band 2, Channel Bandwidth 1.4MHz					
Channel 18607 (1850.7MHz)	QPSK	1 RB / 0 RB Offset	Channel 19193 (1909.3MHz)	QPSK	1 RB / 5 RB Offset
					
Channel 18607 (1850.7MHz)	QPSK	6 RB / 0 RB Offset	Channel 19193 (1909.3MHz)	QPSK	6 RB / 0 RB Offset
					

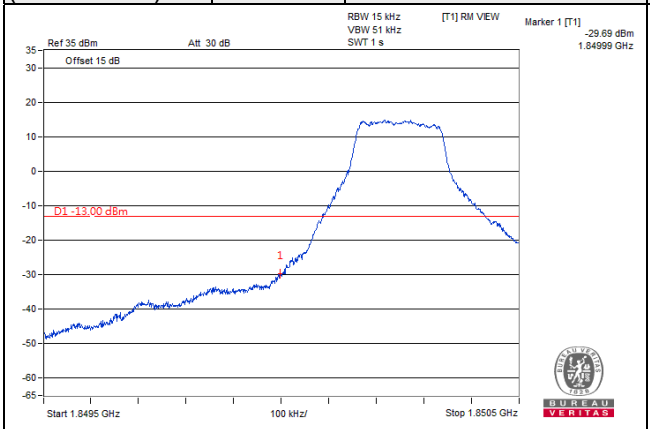
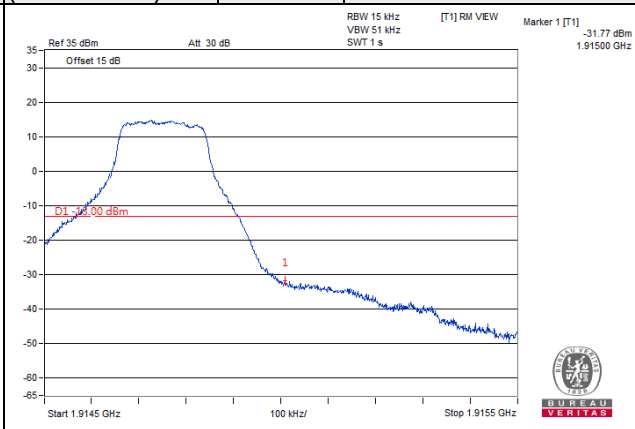
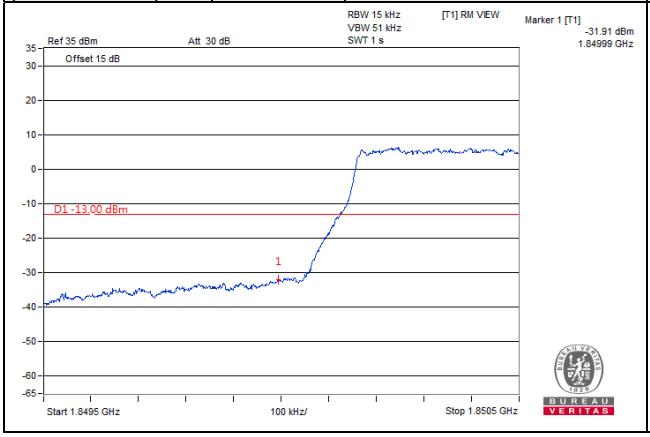
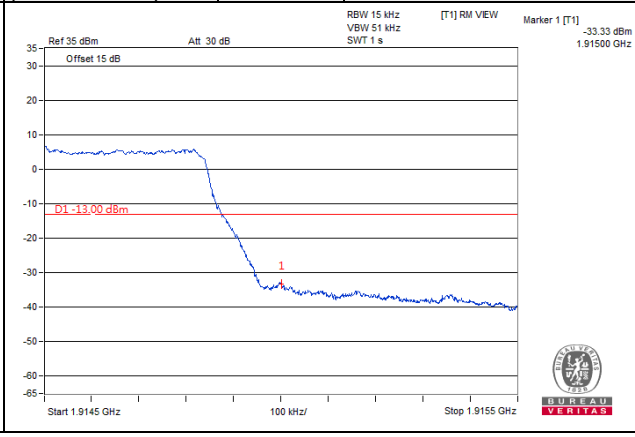
LTE Band 2, Channel Bandwidth 3MHz					
Channel 18615 (1851.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 19185 (1908.5MHz)	QPSK	1 RB / 14 RB Offset
					
Channel 18615 (1851.5MHz)	QPSK	15 RB / 0 RB Offset	Channel 19185 (1908.5MHz)	QPSK	15 RB / 0 RB Offset
					

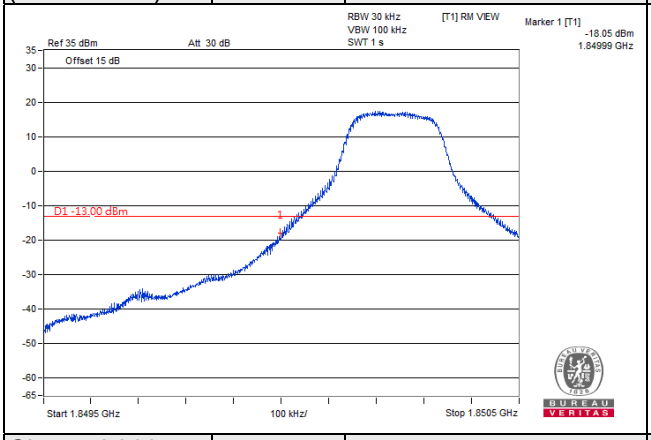
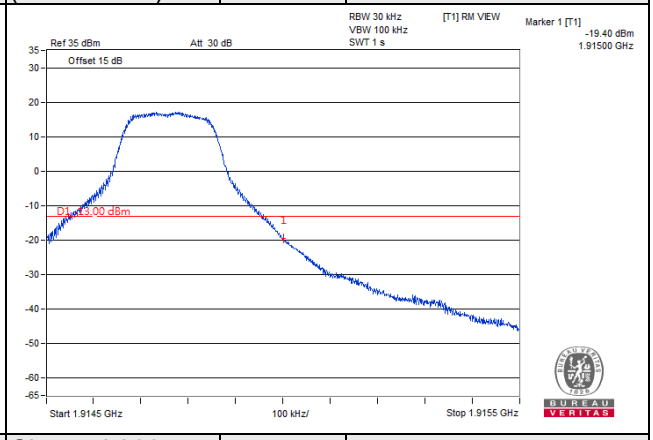
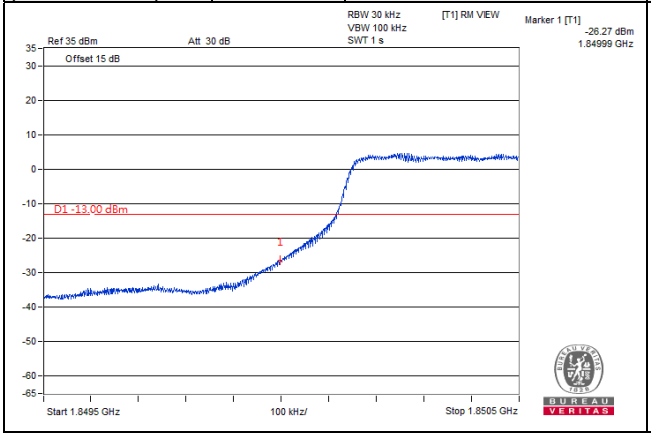
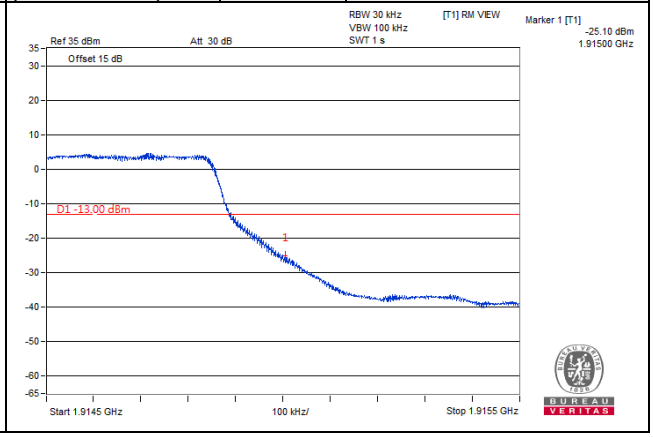
LTE Band 2, Channel Bandwidth 5MHz					
Channel 18625 (1852.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 19175 (1907.5MHz)	QPSK	1 RB / 24 RB Offset
					
Channel 18625 (1852.5MHz)	QPSK	25 RB / 0 RB Offset	Channel 19175 (1907.5MHz)	QPSK	25 RB / 0 RB Offset
					

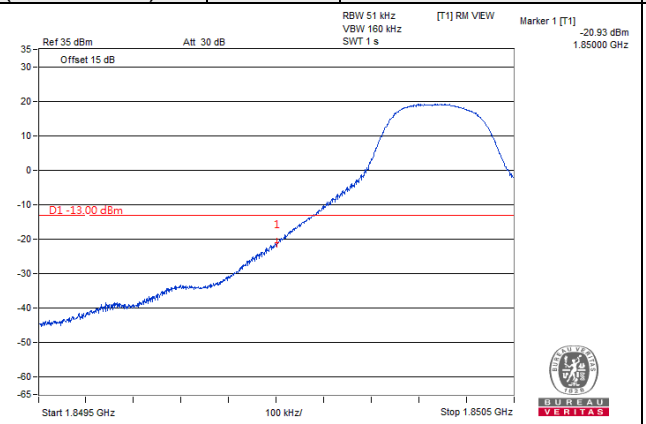
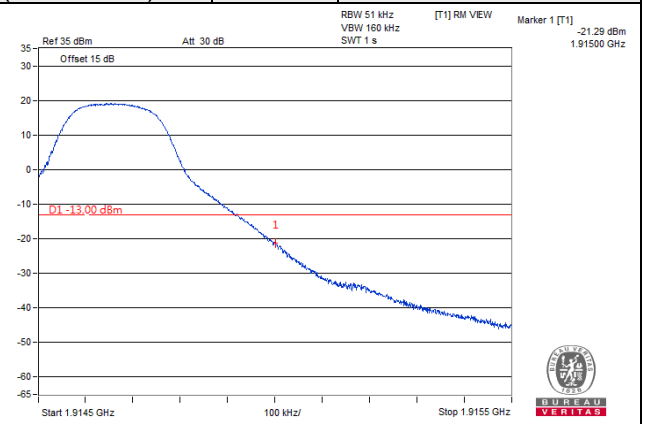
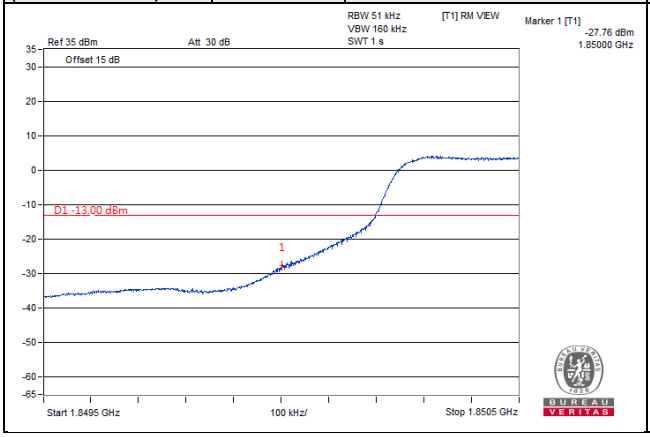
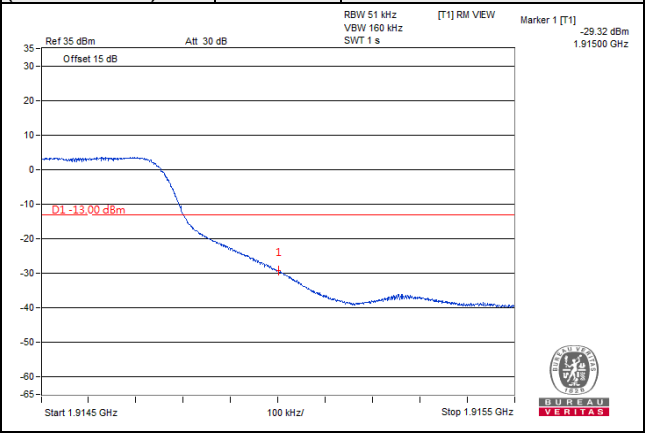
LTE Band 2, Channel Bandwidth 10MHz					
Channel 18650 (1855.0MHz)	QPSK	1 RB / 0 RB Offset	Channel 19150 (1905.0MHz)	QPSK	1 RB / 49 RB Offset
					
Channel 18650 (1855.0MHz)	QPSK	50 RB / 0 RB Offset	Channel 19150 (1905.0MHz)	QPSK	50 RB / 0 RB Offset
					

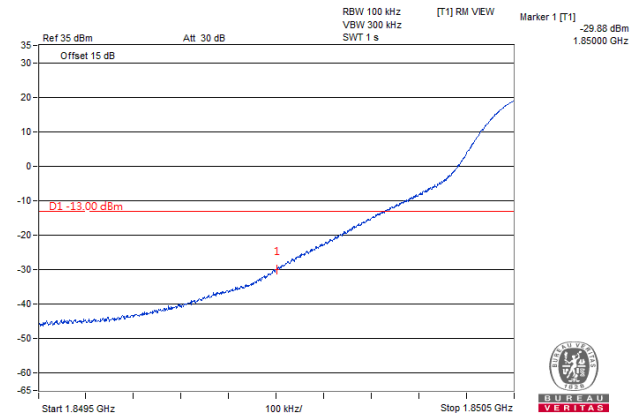
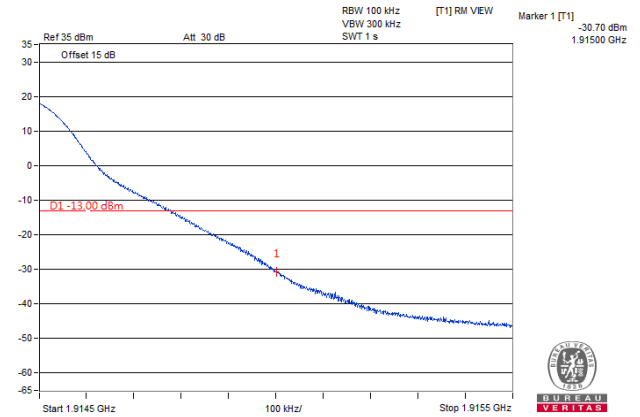
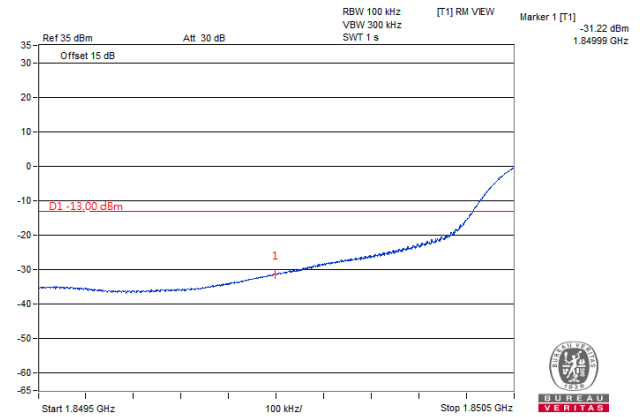
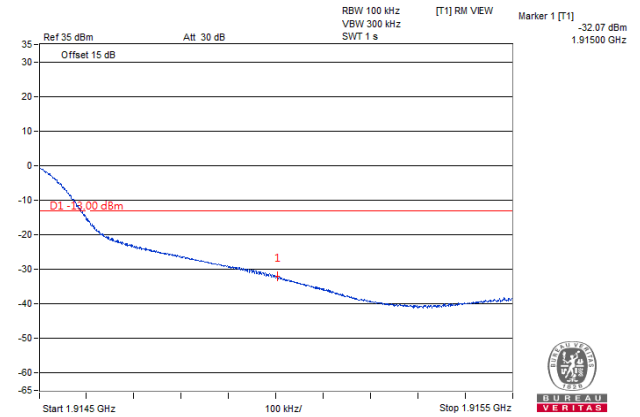
LTE Band 2, Channel Bandwidth 15MHz					
Channel 18675 (1857.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 19125 (1902.5MHz)	QPSK	1 RB / 74 RB Offset
					
Channel 18675 (1857.5MHz)	QPSK	75 RB / 0 RB Offset	Channel 19125 (1902.5MHz)	QPSK	75 RB / 0 RB Offset
					

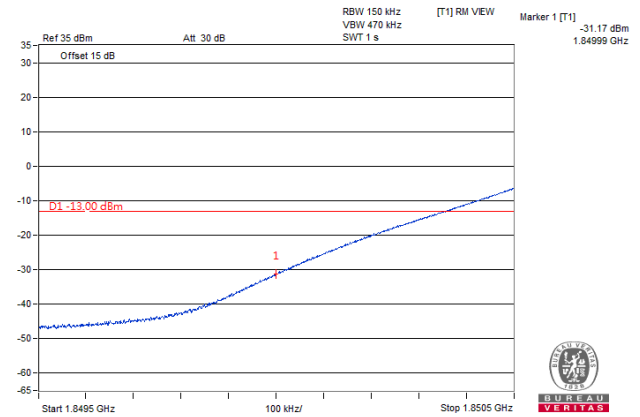
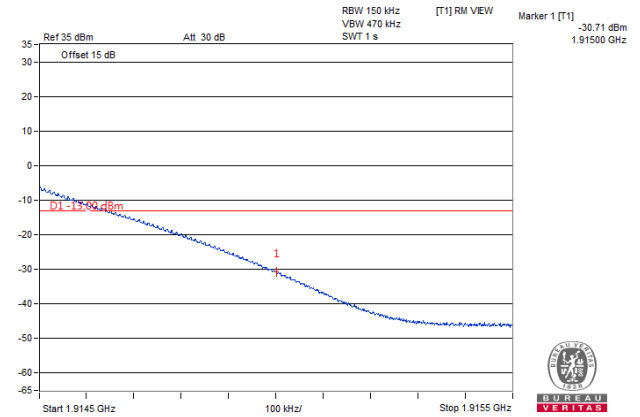
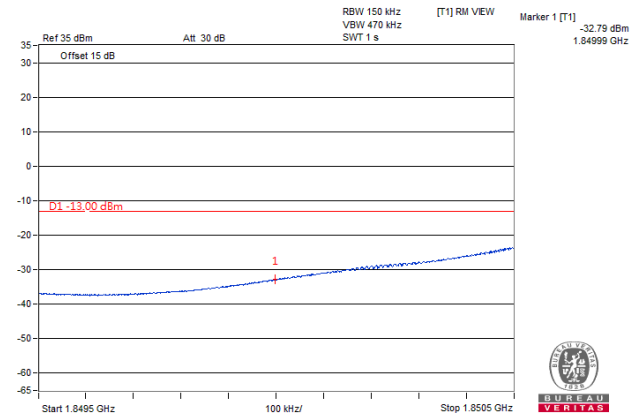
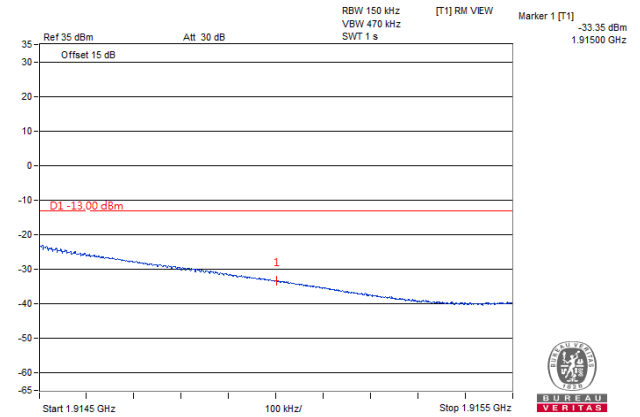
LTE Band 2, Channel Bandwidth 20MHz					
Channel 18700 (1860.0MHz)	QPSK	1 RB / 0 RB Offset	Channel 19100 (1900.0MHz)	QPSK	1 RB / 99 RB Offset
					
Channel 18700 (1860.0MHz)	QPSK	100 RB / 0 RB Offset	Channel 19100 (1900.0MHz)	QPSK	100 RB / 0 RB Offset
					

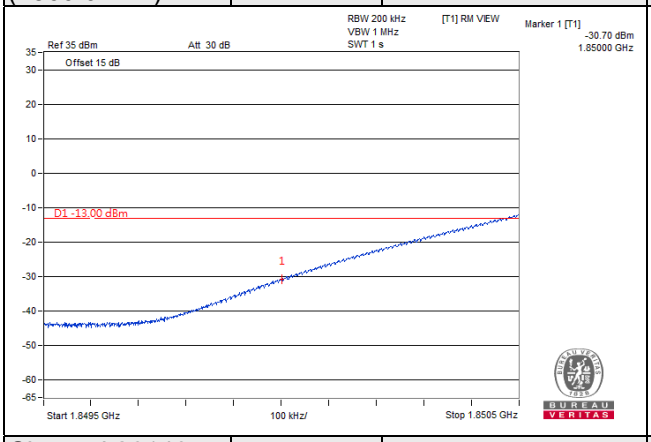
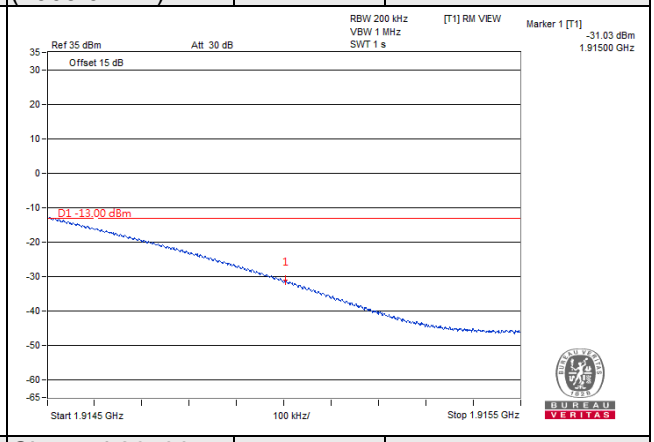
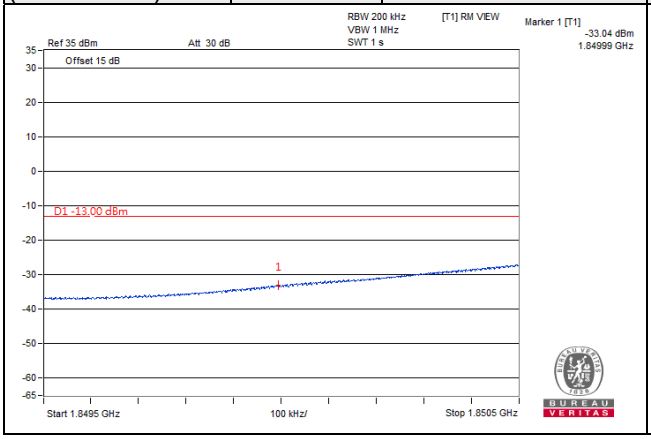
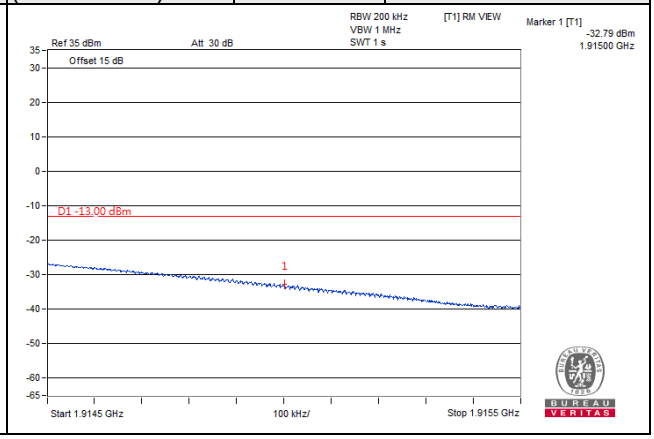
LTE Band 25, Channel Bandwidth 1.4MHz					
Channel 26047 (1850.7MHz)	QPSK	1 RB / 0 RB Offset	Channel 26683 (1914.3MHz)	QPSK	1 RB / 5 RB Offset
					
Channel 26047 (1850.7MHz)	QPSK	6 RB / 0 RB Offset	Channel 26683 (1914.3MHz)	QPSK	6 RB / 0 RB Offset
					

LTE Band 25, Channel Bandwidth 3MHz					
Channel 26055 (1851.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 26675 (1913.5MHz)	QPSK	1 RB / 14 RB Offset
					
Channel 26055 (1851.5MHz)	QPSK	15 RB / 0 RB Offset	Channel 26675 (1913.5MHz)	QPSK	15 RB / 0 RB Offset
					

LTE Band 25, Channel Bandwidth 5MHz					
Channel 26065 (1852.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 26665 (1912.5MHz)	QPSK	1 RB / 24 RB Offset
					
Channel 26065 (1852.5MHz)	QPSK	25 RB / 0 RB Offset	Channel 26665 (1912.5MHz)	QPSK	25 RB / 0 RB Offset
					

LTE Band 25, Channel Bandwidth 10MHz					
Channel 26090 (1855.0MHz)	QPSK	1 RB / 0 RB Offset	Channel 26640 (1910.0MHz)	QPSK	1 RB / 49 RB Offset
					
Channel 26090 (1855.0MHz)	QPSK	50 RB / 0 RB Offset	Channel 26640 (1910.0MHz)	QPSK	50 RB / 0 RB Offset
					

LTE Band 25, Channel Bandwidth 15MHz					
Channel 26115 (1857.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 26615 (1907.5MHz)	QPSK	1 RB / 74 RB Offset
					
Channel 26115 (1857.5MHz)	QPSK	75 RB / 0 RB Offset	Channel 26615 (1907.5MHz)	QPSK	75 RB / 0 RB Offset
					

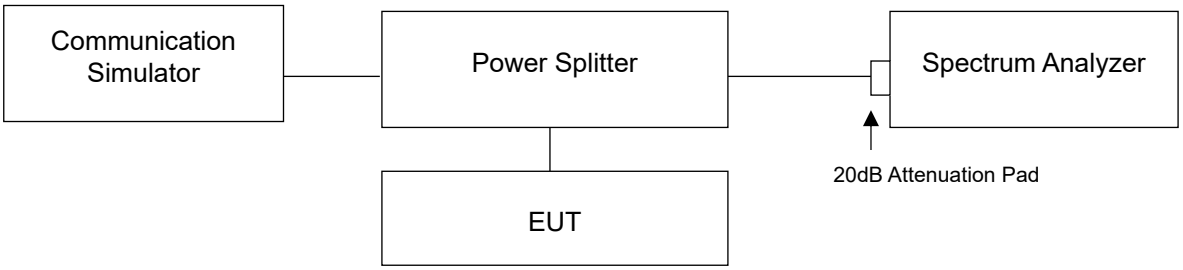
LTE Band 25, Channel Bandwidth 20MHz					
Channel 26140 (1860.0MHz)	QPSK	1 RB / 0 RB Offset	Channel 26590 (1905.0MHz)	QPSK	1 RB / 99 RB Offset
					
Channel 26140 (1860.0MHz)	QPSK	100 RB / 0 RB Offset	Channel 26590 (1905.0MHz)	QPSK	100 RB / 0 RB Offset
					

4.6 Peak to Average Ratio

4.6.1 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

4.6.2 Test Setup

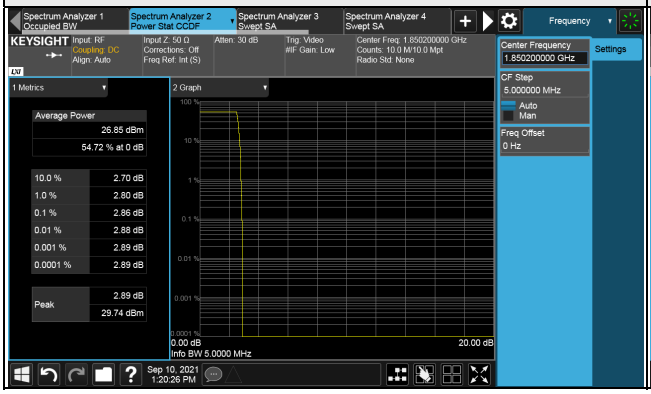
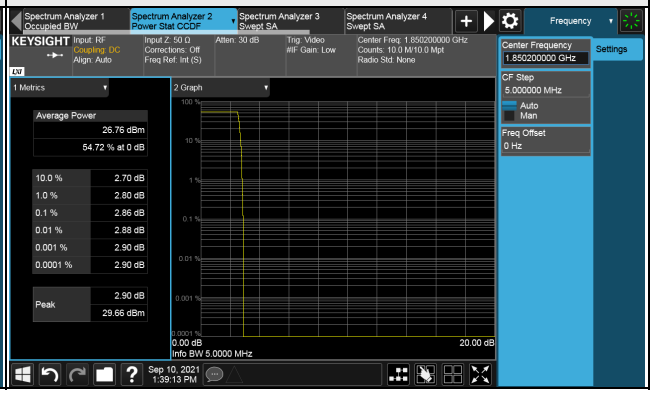


4.6.3 Test Procedures

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

4.6.4 Test Results

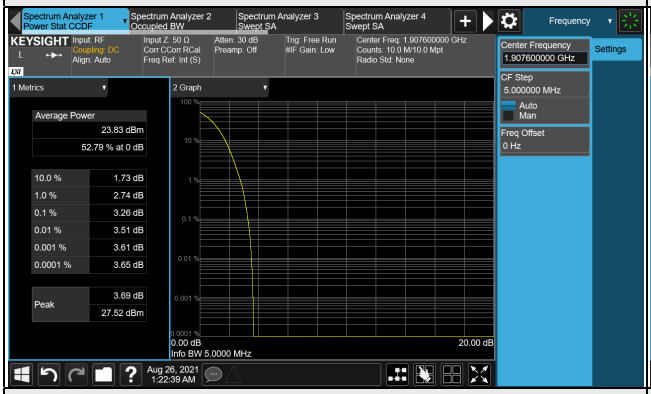
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		GPRS	EDGE
512	1850.2	2.86	2.86
661	1880.0	2.85	2.84
810	1909.8	2.84	2.84

Spectrum Plot of Worst Value	
GPRS	EDGE
	

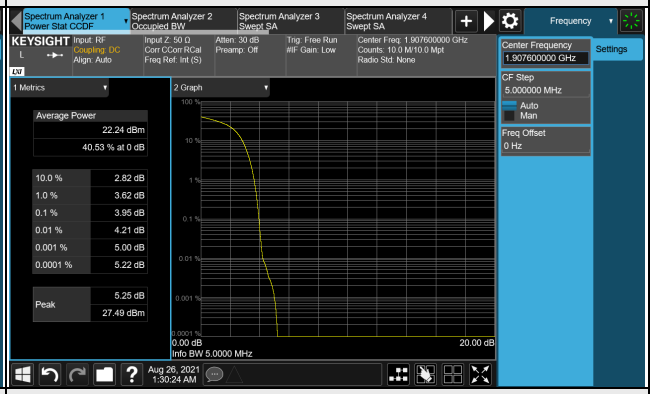
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		WCDMA	HSDPA	HSUPA
9262	1852.4	3.20	3.81	3.78
9400	1880.0	3.21	3.88	3.86
9538	1907.6	3.26	3.95	3.89

Spectrum Plot of Worst Value

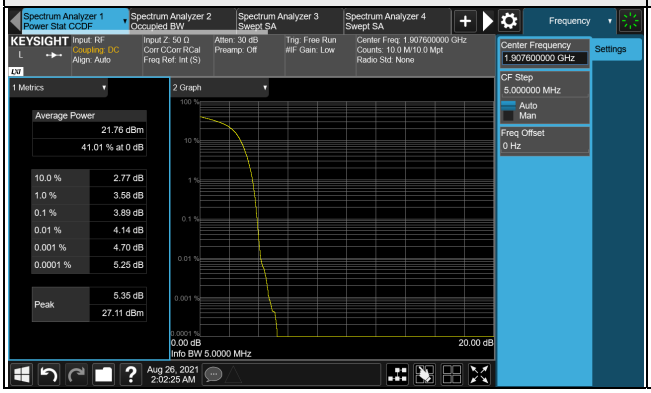
WCDMA



HSDPA

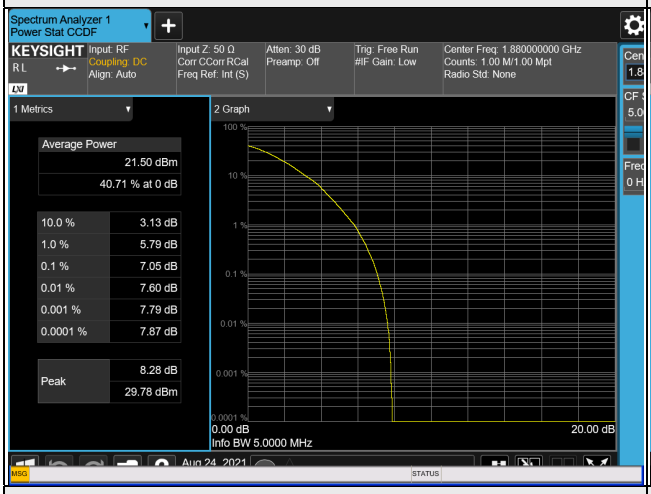
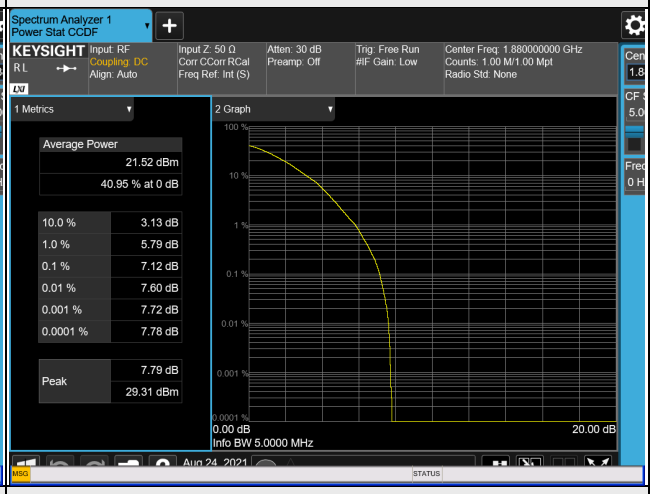
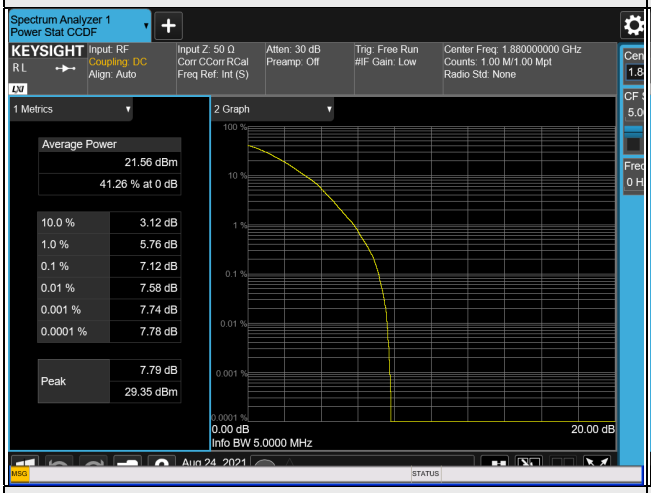
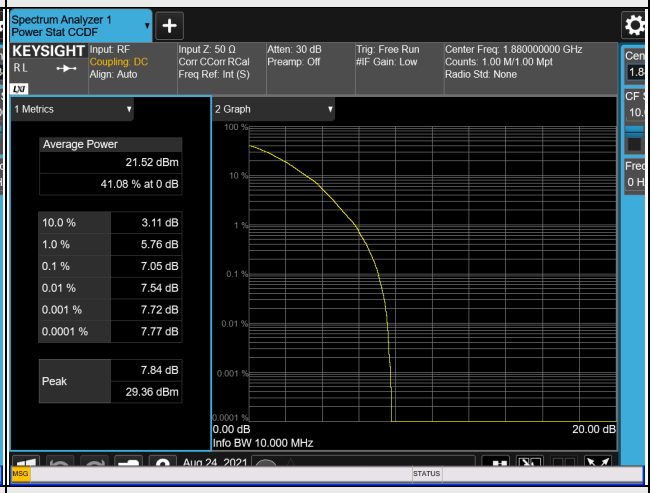
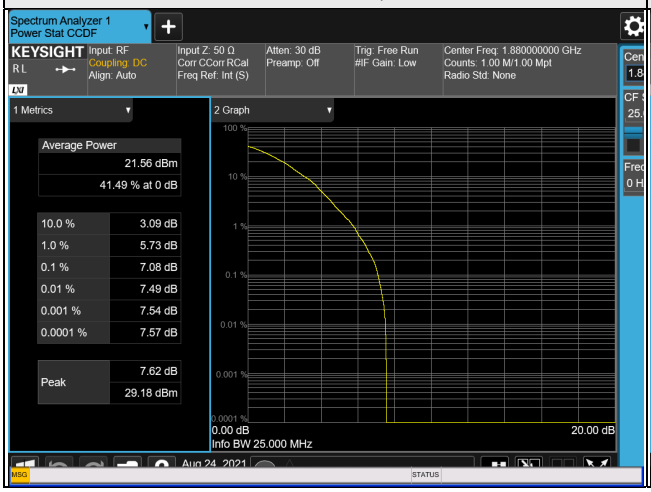
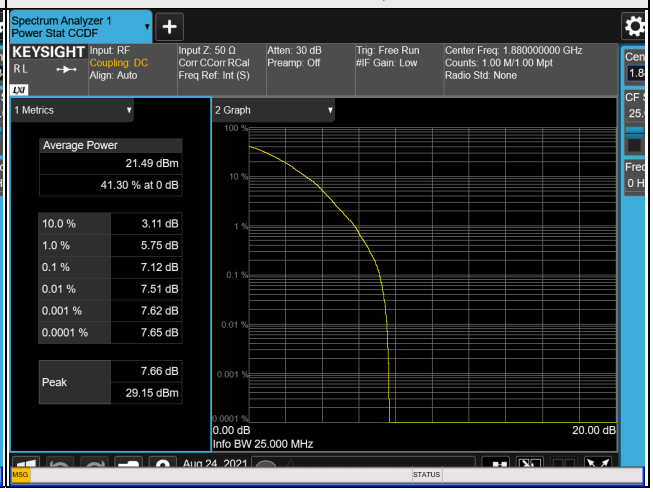


HSUPA



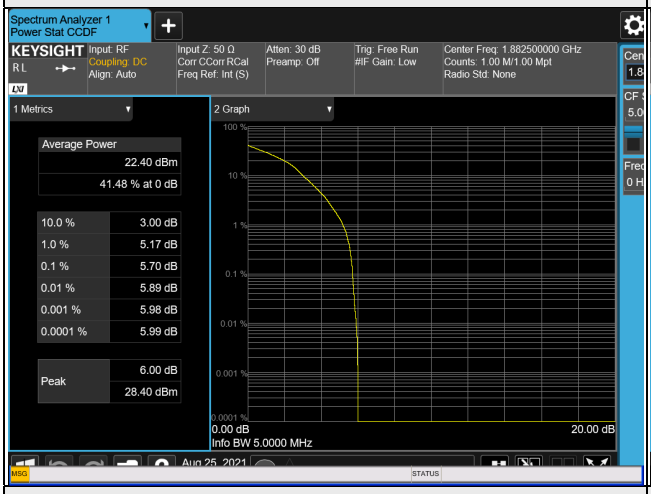
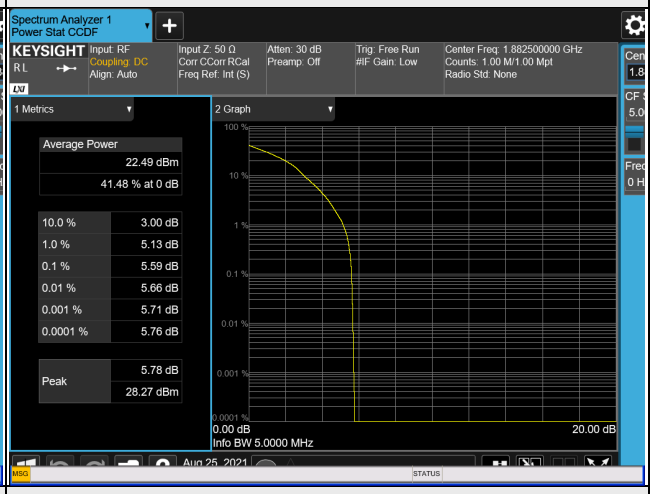
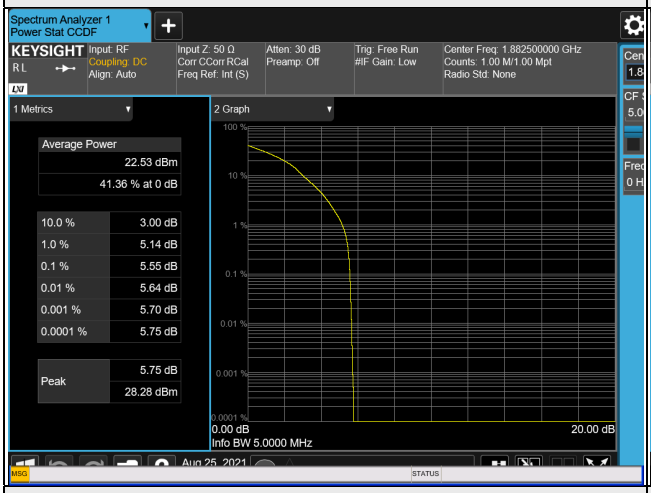
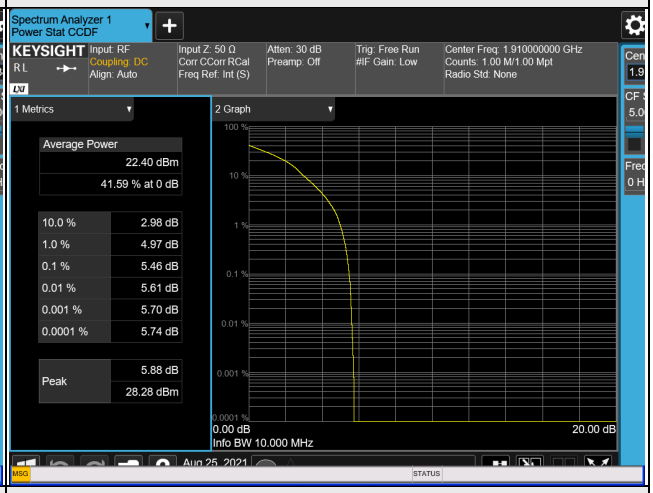
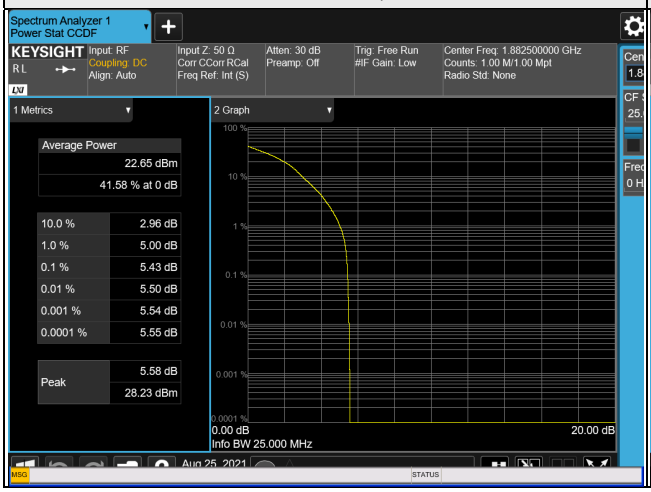
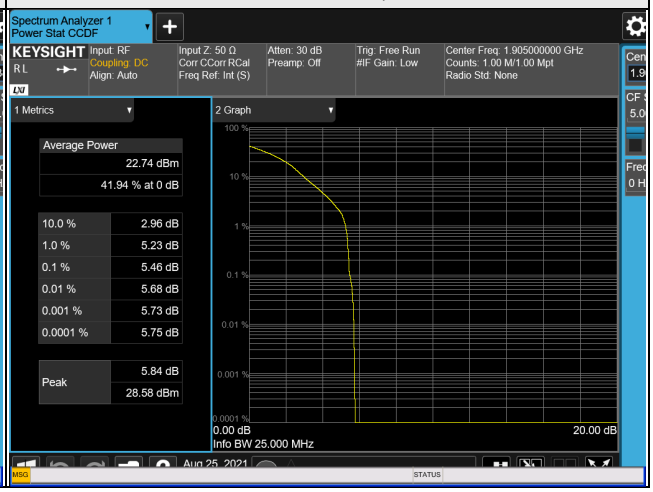
LTE Band 2, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
18607	1850.7	4.15	5.65	6.69
18900	1880.0	4.16	5.80	7.05
19193	1909.3	3.91	5.50	6.50
LTE Band 2, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
18615	1851.5	3.87	5.57	6.75
18900	1880.0	3.88	5.65	7.12
19185	1908.5	3.83	5.47	6.70
LTE Band 2, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
18625	1852.5	3.87	5.57	6.69
18900	1880.0	3.91	5.62	7.12
19175	1907.5	3.75	5.50	6.89
LTE Band 2, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
18650	1855.0	3.89	5.59	6.64
18900	1880.0	3.89	5.69	7.05
19150	1905.0	3.69	5.42	6.89
LTE Band 2, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
18675	1857.5	3.72	5.49	6.64
18900	1880.0	3.79	5.54	7.08
19125	1902.5	3.69	5.38	7.03

LTE Band 2, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
18700	1860.0	3.72	5.54	6.72
18900	1880.0	3.72	5.51	7.12
19100	1900.0	3.72	5.49	6.73

Spectrum Plot of Worst Value	
1.4MHz / 64QAM	3MHz / 64QAM
	
5MHz / 64QAM	10MHz / 64QAM
	
15MHz / 64QAM	20MHz / 64QAM
	

LTE Band 25, Channel Bandwidth 1.4MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
26047	1850.7	3.88	5.43	5.46
26365	1882.5	4.04	5.66	5.70
26683	1914.3	3.91	5.39	5.40
LTE Band 25, Channel Bandwidth 3MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
26055	1851.5	3.67	5.28	5.39
26365	1882.5	3.75	5.51	5.59
26675	1913.5	3.70	5.31	5.31
LTE Band 25, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
26065	1852.5	3.64	5.27	5.33
26365	1882.5	3.74	5.40	5.55
26665	1912.5	3.72	5.33	5.29
LTE Band 25, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
26090	1855.0	3.56	5.19	5.22
26365	1882.5	3.63	5.37	5.39
26640	1910.0	3.67	5.46	5.46
LTE Band 25, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
26115	1857.5	3.61	5.24	5.30
26365	1882.5	3.61	5.43	5.43
26615	1907.5	3.63	5.31	5.41

LTE Band 25, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
26140	1860.0	3.57	5.19	5.21
26365	1882.5	3.62	5.31	5.36
26590	1905.0	3.61	5.46	5.35

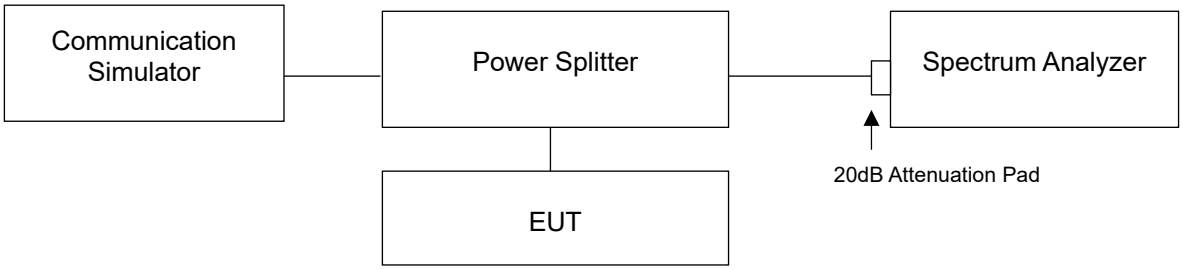
Spectrum Plot of Worst Value	
1.4MHz / 64QAM	3MHz / 64QAM
	
5MHz / 64QAM	10MHz / 64QAM
	
15MHz / 64QAM	20MHz / 16QAM
	

4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

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

4.7.2 Test Setup



4.7.3 Test Procedure

a. All measurements were done at low, middle and high channels operational frequency range.

a. Measuring frequency range is from 9kHz to 20GHz / 26.5GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.