FCC Test Report (Part 96)

Report No.:	RF200605C24-15
FCC ID:	V65E7110
Test Model:	E7110
Received Date:	Jun. 29, 2020
Test Date:	Jul. 27, 2020 ~ Nov. 13, 2020
Issued Date:	Nov. 20, 2020
Applicant:	Kyocera Corporation c/o Kyocera International, Inc.
Address:	8611 Balboa Avenue, San Diego, CA 92123
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:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration/ Designation Number:	788550 / TW0003

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RF200605C24-15	Original release	Nov. 20, 2020

1 Certificate of Conformity

Product:	Smart Phone
Brand:	Kyocera
Test Model:	E7110
Sample Status:	Identical Prototype
Applicant:	Kyocera Corporation c/o Kyocera International, Inc.
Test Date:	Jul. 27, 2020 ~ Nov. 13, 2020
Standards:	FCC 47 CFR Part 96

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 : Vera Huang , **Date:** Nov. 20, 2020

Vera Huang / Specialist

Approved by : , **Date:** Nov. 20, 2020

Dylan Chiou / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 96			
FCC Clause	Test Item	Result	Remarks
2.1046 96.41(b)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1047 96.41(a)	Modulation Characteristics	Pass	Meet the requirement
2.1046 96.41(b)	Maximum Power Spectral Density	Pass	Meet the requirement of limit.
96.41(g)	Peak to Average Ration	Pass	Meet the requirement of limit.
2.1049	Emission Bandwidth	Pass	Meet the requirement of limit.
2.1055	Frequency Stability	Pass	Meet the requirement of limit.
2.1051 96.41(e)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 96.41(e)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -3.50 dB at 97.48 MHz.

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	9 kHz ~ 30MHz	3.04 dB
	30 MHz ~ 200 MHz	3.59 dB
	200 MHz ~ 1000 MHz	3.60 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Smart Phone				
Brand	Kyocera				
Test Model	E7110				
Status of EUT	Identical Prototype				
Power Supply Rating	3.85 Vdc (Battery) 5 Vdc / 9 Vdc / 15 Vdc / 20 Vdc (Adapter)				
Modulation Type	QPSK, 16QAM, 64QAM				
Operating Frequency	LTE Band 48	Channel Bandwidth 5MHz	TX: 3552.5 ~ 3697.5 MHz		
			RX: 3552.5 ~ 3697.5 MHz		
		Channel Bandwidth 10MHz	TX: 3555 ~ 3695 MHz		
			RX: 3555 ~ 3695 MHz		
		Channel Bandwidth 15MHz	TX: 3557.5 ~ 3692.5 MHz		
			RX: 3557.5 ~ 3692.5 MHz		
		Channel Bandwidth 20MHz	TX: 3560 ~ 3690 MHz		
			RX: 3560 ~ 3690 MHz		
Max. EIRP Power	LTE Band 48		QPSK	16QAM	64QAM
		Per 10M			
		Channel Bandwidth 5MHz	165.959mW (22.20dBm)	131.826mW (21.20dBm)	117.490mW (20.70dBm)
		Channel Bandwidth 10MHz	173.780mW (22.40dBm)	138.038mW (21.40dBm)	125.893mW (21.00dBm)
		Channel Bandwidth 15MHz	169.824mW (22.30dBm)	134.896mW (21.30dBm)	114.815mW (20.60dBm)
		Channel Bandwidth 20MHz	177.828mW (22.50dBm)	141.254mW (21.50dBm)	125.893mW (21.00dBm)
		Full Power			
		Channel Bandwidth 5MHz	169.824mW (22.30dBm)	134.896mW (21.30dBm)	125.893mW (21.00dBm)
		Channel Bandwidth 10MHz	177.828mW (22.50dBm)	141.254mW (21.50dBm)	125.893mW (21.00dBm)
		Channel Bandwidth 15MHz	177.828mW (22.50dBm)	141.254mW (21.50dBm)	123.027mW (20.90dBm)
		Channel Bandwidth 20MHz	181.970mW (22.60dBm)	144.544mW (21.60dBm)	128.825mW (21.10dBm)
Emission Designator	LTE Band 48	Channel Bandwidth 5MHz	4M49G7D	4M49D7W	4M48D7W
		Channel Bandwidth 10MHz	8M96G7D	8M97D7W	8M97D7W
		Channel Bandwidth 15MHz	13M5G7D	13M5D7W	13M5D7W
		Channel Bandwidth 20MHz	17M9G7D	17M9D7W	17M9D7W
Antenna Type	Monopole Antenna with 1.7 dBi gain				
Accessory Device	Refer to Note as below				
Data Cable Supplied	Refer to Note as below				

Note:
1. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	Kyocera	SCP-53ADT	I/P: 100-240 Vac, 50/60 Hz, 0.6 A O/P: 5 Vdc, 3 A; 9 Vdc, 3 A; 15 Vdc, 1.8 A; 20 Vdc, 1.35 A
USB Cable	Kyocera	SCP-27SDC	-

2. 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. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 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 on X-plane. Following channel(s) was (were) selected for the final test as listed below:

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Maximum Output Power	55265 to 56715	55265 (3552.5MHz), 55990 (3625.0MHz), 56715 (3697.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
	55290 to 56690	55290 (3555.0MHz), 55990 (3625.0MHz), 56690 (3695.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
	55315 to 56665	55315 (3557.5MHz), 55990 (3625.0MHz), 56665 (3692.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
	55340 to 56640	55340 (3560.0MHz), 55990 (3625.0MHz), 56640 (3690.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
Modulation Characteristics	55340 to 56640	55990 (3625.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset
Frequency Stability	55265 to 56715	55265 (3552.5MHz), 56715 (3697.5MHz)	5MHz	QPSK	25 RB / 0 RB Offset
	55290 to 56690	55290 (3555.0MHz), 56690 (3695.0MHz)	10MHz	QPSK	50 RB / 0 RB Offset
	55315 to 56665	55315 (3557.5MHz), 56665 (3692.5MHz)	15MHz	QPSK	75 RB / 0 RB Offset
	55340 to 56640	55340 (3560.0MHz), 56640 (3690.0MHz)	20MHz	QPSK	100 RB / 0 RB Offset
Occupied Bandwidth	55265 to 56715	55265 (3552.5MHz), 55990 (3625.0MHz), 56715 (3697.5MHz)	5MHz	QPSK / 16QAM / 64QAM	25 RB / 0 RB Offset
	55290 to 56690	55290 (3555.0MHz), 55990 (3625.0MHz), 56690 (3695.0MHz)	10MHz	QPSK / 16QAM / 64QAM	50 RB / 0 RB Offset
	55315 to 56665	55315 (3557.5MHz), 55990 (3625.0MHz), 56665 (3692.5MHz)	15MHz	QPSK / 16QAM / 64QAM	75 RB / 0 RB Offset
	55340 to 56640	55340 (3560.0MHz), 55990 (3625.0MHz), 56640 (3690.0MHz)	20MHz	QPSK / 16QAM / 64QAM	100 RB / 0 RB Offset

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Peak to Average Ratio	55265 to 56715	55265 (3552.5MHz), 55990 (3625.0MHz), 56715 (3697.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
	55290 to 56690	55290 (3555.0MHz), 55990 (3625.0MHz), 56690 (3695.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
	55315 to 56665	55315 (3557.5MHz), 55990 (3625.0MHz), 56665 (3692.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
	55340 to 56640	55340 (3560.0MHz), 55990 (3625.0MHz), 56640 (3690.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
Conducted Emission	55265 to 56715	55265 (3552.5MHz), 55990 (3625.0MHz), 56715 (3697.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
	55290 to 56690	55290 (3555.0MHz), 55990 (3625.0MHz), 56690 (3695.0MHz)	10MHz	QPSK	1 RB / 0 RB Offset
	55315 to 56665	55315 (3557.5MHz), 55990 (3625.0MHz), 56665 (3692.5MHz)	15MHz	QPSK	1 RB / 0 RB Offset
	55340 to 56640	55340 (3560.0MHz), 55990 (3625.0MHz), 56640 (3690.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset
Radiated Emission Below 1GHz	55265 to 56715	55265 (3552.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
Radiated Emission Above 1GHz	55265 to 56715	55265 (3552.5MHz), 55990 (3625.0MHz), 56715 (3697.5MHz)	5MHz	QPSK	1 RB / 0 RB Offset
	55340 to 56640	55340 (3560.0MHz), 55990 (3625.0MHz), 56640 (3690.0MHz)	20MHz	QPSK	1 RB / 0 RB Offset

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. For radiated emission below 1GHz, low, mid and high channels were pre-tested in chamber. Low channel in 5MHz was found to be the worst case and therefore had been chosen for all final tests.
3. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.

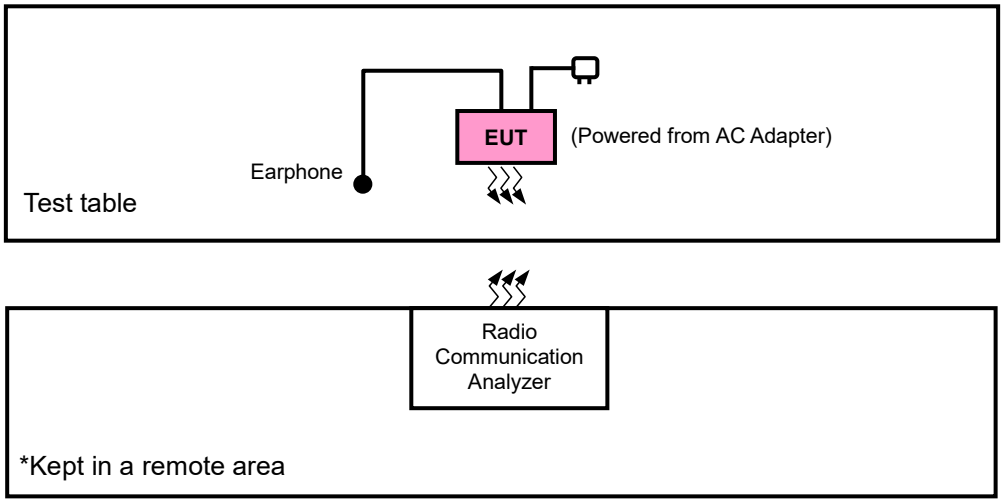
Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
Maximum Output Power	23deg. C, 67%RH	3.85Vdc	Adair Peng
Modulation characteristics	24deg. C, 64%RH	3.85Vdc	Getaz Yang
Frequency Stability	24deg. C, 64%RH	3.85Vdc	Getaz Yang
Occupied Bandwidth	24deg. C, 64%RH	3.85Vdc	Getaz Yang
Peak to Average Ratio	24deg. C, 64%RH	3.85Vdc	Getaz Yang
Condcudeted Emission	24deg. C, 64%RH	3.85Vdc	Getaz Yang
Radiated Emission	23deg. C, 67%RH	120Vac, 60Hz	Adair Peng

3.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.3.1 Configuration of System under Test



3.4 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 96
ANSI/TIA/EIA-603-D-2010
All test items have been performed and recorded as per the above standards.

References Test Guidance:
KDB 971168 D01 Power Meas License Digital Systems v03r01
KDB 940660 D01 Part 96 CBRS Eqpt v02

All test items have been performed as a reference to the above KDB test guidance.

TEST TYPES AND RESULTS

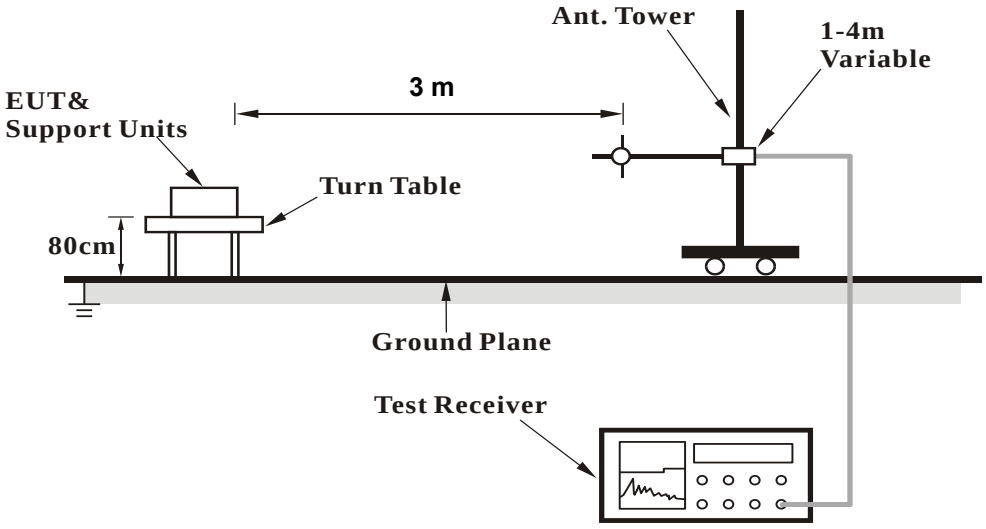
3.5 Maximum Output Power Measurement

3.5.1 Limits of Maximum Output Power Measurement

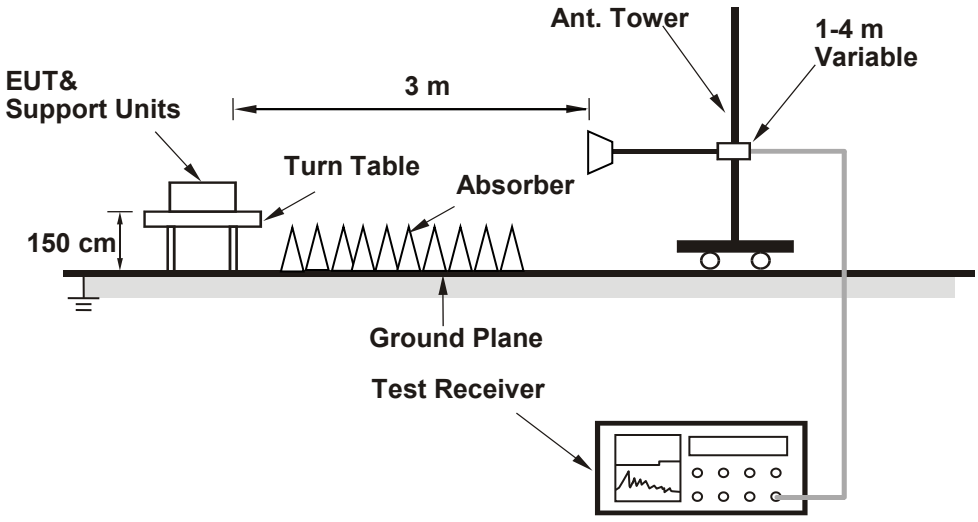
Device		Maximum Output Power (dBm/10 MHz)
☒	End User Device	23
☐	Category A CBSD	30
☐	Category B CBSD	47

3.5.2 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



3.5.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Dec. 31, 2019	Dec. 30, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 23, 2019	Sep. 22, 2020
			Sep. 16, 2020	Sep. 15, 2021
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Nov. 11, 2019	Nov. 10, 2020
			Nov. 03, 2020	Nov. 02, 2021
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
Loop Antenna EMCI	EM-6879	269	Sep. 16, 2019	Sep. 15, 2020
			Sep. 17, 2020	Sep. 16, 2021
Radio Communication Analyzer Anritsu	MT8821C	6261806803	Jan. 18, 2020	Jan. 17, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10631	Jun. 08, 2020	Jun. 07, 2021
Preamplifier KEYSIGHT (Above 1GHz)	83017A	MY53270295	Jun. 08, 2020	Jun. 07, 2021
RF Coaxial Cable WORKEN With 5dB PAD	8D-FB	Cable-CH4-01	Aug. 20, 2019	Aug. 19, 2020
			Aug. 16, 2020	Aug. 15, 2021
RF Coaxial Cable EMCI	EMC102-KM-KM-3000	150929	Aug. 20, 2019	Aug. 19, 2020
			Aug. 16, 2020	Aug. 15, 2021
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	Aug. 20, 2019	Aug. 19, 2020
			Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Jun. 08, 2020	Jun. 07, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Jun. 08, 2020	Jun. 07, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Standard Temperature And Humidity Chamber GIANT FORCE	GTH-120-40-CP-AR	MAA1306-019	Sep. 09, 2020	Sep. 08, 2021
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	325	31130711WS	Jun. 06, 2020	Jun. 05, 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 HwaYa Chamber 4.

3.5.4 Test Procedures

EIRP radiated power measurement

1. Set span to at least 1.5 times the OBW.
2. Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
3. Set VBW ≥ 3 × RBW.
4. Set number of points in sweep ≥ 2 × span / RBW.
5. Sweep time = auto-couple.
6. Detector = RMS (power averaging).
7. If the EUT can be configured to transmit continuously (i.e., burst duty cycle ≥ 98%), then set the trigger to free run.
8. If the EUT cannot be configured to transmit continuously (i.e., burst duty cycle < 98 %), then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Ensure that the sweep time is less than or equal to the transmission burst duration.
9. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
10. Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges. If the instrument does not have a band or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
11. For per 10MHz method, channel power integrating bandwidth 10MHz is used for bandwidth 5M, 10M, 15M and 20M. For full power method, channel power integrating bandwidth 10MHz is used for bandwidth 5M, 10M, integrating bandwidth 15MHz is used for bandwidth 15M, integrating bandwidth 20MHz is used for bandwidth 20M.
12. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
13. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15 dB. Correction Factor (includes EIRP and ERP unit conversion factor) = Antenna gain of substitution horn. – Tx cable loss.
14. Measurement method refers to ANSI C63.26 section 5.2.7 & 5.2.4.

3.5.5 Deviation from Test Standard

No deviation.

3.5.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.5.7 Test Results

Conducted Output Power (dBm) / Per 10M

ps: Conducted output power is for reference, and its EIRP power is mainly tested in radiated mode.

Band / BW	RB Size	RB Offset	QPSK			16QAM			64QAM		
			Low CH 55265 3552.5 MHz	Mid CH 55990 3625 MHz	High CH 56715 3697.5 MHz	Low CH 55265 3552.5 MHz	Mid CH 55990 3625 MHz	High CH 56715 3697.5 MHz	Low CH 55265 3552.5 MHz	Mid CH 55990 3625 MHz	High CH 56715 3697.5 MHz
48 / 5M	1	0	24.46	24.40	24.43	23.38	23.34	23.39	22.46	22.37	22.41
	1	12	24.33	24.37	24.40	23.26	23.40	23.45	22.26	22.32	22.38
	1	24	24.33	24.31	24.33	23.36	23.20	23.24	22.40	22.25	22.27
	12	0	23.63	23.60	23.64	22.55	22.56	22.61	21.61	21.60	21.64
	12	6	23.40	23.57	23.59	22.46	22.53	22.57	21.44	21.50	21.56
	12	13	23.42	23.54	23.60	22.45	22.52	22.57	21.43	21.46	21.51
	25	0	23.42	23.52	23.62	22.42	22.54	22.60	21.43	21.50	21.55

Band / BW	RB Size	RB Offset	QPSK			16QAM			64QAM		
			Low CH 55290 3555 MHz	Mid CH 55990 3625 MHz	High CH 56690 3695 MHz	Low CH 55290 3555 MHz	Mid CH 55990 3625 MHz	High CH 56690 3695 MHz	Low CH 55290 3555 MHz	Mid CH 55990 3625 MHz	High CH 56690 3695 MHz
48 / 10M	1	0	24.42	24.32	24.36	23.35	23.30	23.34	22.41	22.35	22.37
	1	24	24.42	24.25	24.30	23.44	23.27	23.29	22.41	22.23	22.28
	1	49	24.31	23.30	24.33	23.29	23.32	23.36	22.24	22.31	22.35
	25	0	23.52	23.57	23.59	22.58	22.54	22.59	21.56	21.56	21.59
	25	12	23.48	23.56	23.60	22.45	22.53	22.56	21.45	21.54	21.59
	25	25	23.44	23.45	23.48	22.41	22.47	22.52	21.38	21.48	21.52
	50	0	23.50	23.44	23.48	22.50	22.46	22.53	21.50	21.42	21.47

Band / BW	RB Size	RB Offset	QPSK			16QAM			64QAM		
			Low CH 55315 3557.5 MHz	Mid CH 55990 3625 MHz	High CH 56665 3692.5 MHz	Low CH 55315 3557.5 MHz	Mid CH 55990 3625 MHz	High CH 56665 3692.5 MHz	Low CH 55315 3557.5 MHz	Mid CH 55990 3625 MHz	High CH 56665 3692.5 MHz
48 / 15M	1	0	24.36	24.34	24.36	23.36	23.26	23.30	22.30	22.23	22.25
	1	37	24.11	24.32	24.35	23.10	23.21	23.25	22.05	22.19	22.23
	1	74	24.17	24.27	24.29	23.15	23.24	23.29	22.13	22.18	22.22
	36	0	23.50	23.50	23.52	22.44	22.44	22.50	21.40	21.27	21.30
	36	19	23.21	23.17	23.20	22.20	22.15	22.20	21.15	21.16	21.20
	36	39	23.25	23.33	23.36	22.22	22.31	22.33	21.20	21.20	21.23
	75	0	23.07	23.44	23.46	22.01	22.40	22.43	21.00	21.01	21.03

Band / BW	RB Size	RB Offset	QPSK			16QAM			64QAM		
			Low CH 55340 3560 MHz	Mid CH 55990 3625 MHz	High CH 56640 3690 MHz	Low CH 55340 3560 MHz	Mid CH 55990 3625 MHz	High CH 56640 3690 MHz	Low CH 55340 3560 MHz	Mid CH 55990 3625 MHz	High CH 56640 3690 MHz
48 / 20M	1	0	24.37	24.38	24.40	23.35	23.27	23.30	22.31	22.29	22.31
	1	50	24.27	24.28	24.30	23.25	23.22	23.25	22.22	22.21	22.25
	1	99	24.26	24.11	24.12	23.22	23.09	23.12	22.20	22.07	22.11
	50	0	23.53	23.34	23.39	22.43	22.32	22.34	21.41	21.26	21.30
	50	25	23.51	23.58	23.60	22.41	22.47	22.50	21.40	21.30	21.34
	50	50	23.49	23.46	23.52	22.40	22.40	22.42	21.36	21.23	21.25
	100	0	23.19	23.44	23.50	22.22	22.38	22.40	21.20	21.24	21.26

Full Conducted Output Power

Band / BW	RB Size	RB Offset	QPSK			16QAM			64QAM		
			Low CH 55265 3552.5 MHz	Mid CH 55990 3625 MHz	High CH 56715 3697.5 MHz	Low CH 55265 3552.5 MHz	Mid CH 55990 3625 MHz	High CH 56715 3697.5 MHz	Low CH 55265 3552.5 MHz	Mid CH 55990 3625 MHz	High CH 56715 3697.5 MHz
48 / 5M	1	0	24.46	24.40	24.43	23.38	23.35	23.39	22.46	22.37	22.41
	1	12	24.33	24.37	24.40	23.26	23.40	23.45	22.26	22.35	22.38
	1	24	24.33	24.30	24.33	23.36	23.20	23.24	22.40	22.24	22.27
	12	0	23.63	23.60	23.64	22.55	22.57	22.61	21.61	21.60	21.64
	12	6	23.40	23.56	23.59	22.46	22.55	22.57	21.44	21.53	21.56
	12	13	23.42	23.57	23.60	22.45	22.55	22.57	21.43	21.47	21.51
	25	0	23.42	23.57	23.62	22.42	22.54	22.60	21.43	21.50	21.55

Band / BW	RB Size	RB Offset	QPSK			16QAM			64QAM		
			Low CH 55290 3555 MHz	Mid CH 55990 3625 MHz	High CH 56690 3695 MHz	Low CH 55290 3555 MHz	Mid CH 55990 3625 MHz	High CH 56690 3695 MHz	Low CH 55290 3555 MHz	Mid CH 55990 3625 MHz	High CH 56690 3695 MHz
48 / 10M	1	0	24.42	24.30	24.36	23.35	23.30	23.34	22.41	22.35	22.37
	1	24	24.42	24.25	24.30	23.44	23.25	23.29	22.41	22.25	22.28
	1	49	24.31	24.30	24.33	23.29	23.30	23.36	22.24	22.30	22.35
	25	0	23.52	23.54	23.59	22.58	22.56	22.59	21.56	21.56	21.59
	25	12	23.48	23.55	23.60	22.45	22.53	22.56	21.45	21.55	21.59
	25	25	23.44	23.45	23.48	22.41	22.50	22.52	21.38	21.49	21.52
	50	0	23.50	23.44	23.48	22.50	22.49	22.53	21.50	21.45	21.47

Band / BW	RB Size	RB Offset	QPSK			16QAM			64QAM		
			Low CH 55315 3557.5 MHz	Mid CH 55990 3625 MHz	High CH 56665 3692.5 MHz	Low CH 55315 3557.5 MHz	Mid CH 55990 3625 MHz	High CH 56665 3692.5 MHz	Low CH 55315 3557.5 MHz	Mid CH 55990 3625 MHz	High CH 56665 3692.5 MHz
48 / 15M	1	0	24.44	24.37	24.41	23.41	23.36	23.39	22.36	22.45	22.48
	1	37	24.45	24.34	24.41	23.40	23.33	23.36	22.42	22.35	22.39
	1	74	24.41	24.35	24.38	23.42	23.40	23.42	22.35	22.38	22.41
	36	0	23.62	23.58	23.61	22.62	22.62	22.65	21.65	21.65	21.68
	36	19	23.53	23.57	23.60	22.49	22.60	22.64	21.51	21.45	21.55
	36	39	23.53	23.54	23.56	22.48	22.47	22.52	21.51	21.44	21.57
	75	0	23.45	23.53	23.55	22.48	22.56	22.59	21.45	21.43	21.54

Band / BW	RB Size	RB Offset	QPSK			16QAM			64QAM		
			Low CH 55340 3560 MHz	Mid CH 55990 3625 MHz	High CH 56640 3690 MHz	Low CH 55340 3560 MHz	Mid CH 55990 3625 MHz	High CH 56640 3690 MHz	Low CH 55340 3560 MHz	Mid CH 55990 3625 MHz	High CH 56640 3690 MHz
48 / 20M	1	0	24.46	24.46	24.48	23.64	23.58	23.61	22.37	22.40	22.44
	1	50	24.45	24.42	24.46	23.60	23.52	23.55	22.45	22.44	22.46
	1	99	24.42	24.40	24.43	23.57	23.51	23.53	22.33	22.30	22.34
	50	0	23.67	23.60	23.68	22.72	22.65	22.68	21.67	21.56	21.61
	50	25	23.56	23.62	23.64	22.62	22.62	22.65	21.52	21.50	21.57
	50	50	23.53	23.60	23.62	22.57	22.60	22.64	21.48	21.57	21.61
	100	0	23.55	23.59	23.63	22.62	22.57	22.66	21.50	21.54	21.62

EIRP Power (dBm) / Per 10M

Modulation Type: QPSK

LTE Band 48, Channel Bandwidth: 5MHz

Mode		TX channel 55265					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-12.00	21.70	0.50	22.20	23.00	-0.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-22.40	14.70	0.50	15.20	23.00	-7.80

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-12.10	21.70	0.40	22.10	23.00	-0.90
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-21.50	15.70	0.40	16.10	23.00	-6.90

Mode		TX channel 56715					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-12.30	21.30	0.60	21.90	23.00	-1.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-21.60	15.40	0.60	16.00	23.00	-7.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 10MHz

Mode		TX channel 55290					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-11.80	21.90	0.50	22.40	23.00	-0.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-21.40	15.70	0.50	16.20	23.00	-6.80

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-11.80	22.00	0.40	22.40	23.00	-0.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-21.20	16.00	0.40	16.40	23.00	-6.60

Mode		TX channel 56690					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-12.20	21.40	0.60	22.00	23.00	-1.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-20.60	16.40	0.60	17.00	23.00	-6.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 15MHz

Mode		TX channel 55315					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-12.00	21.70	0.50	22.20	23.00	-0.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-21.40	15.70	0.50	16.20	23.00	-6.80

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-11.90	21.90	0.40	22.30	23.00	-0.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-21.30	15.90	0.40	16.30	23.00	-6.70

Mode		TX channel 56665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-12.30	21.30	0.60	21.90	23.00	-1.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-20.80	16.20	0.60	16.80	23.00	-6.20

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 20MHz

Mode		TX channel 55340					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-12.20	21.50	0.50	22.00	23.00	-1.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-21.10	16.00	0.50	16.50	23.00	-6.50

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-11.70	22.10	0.40	22.50	23.00	-0.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-21.30	15.90	0.40	16.30	23.00	-6.70

Mode		TX channel 56640					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-12.00	21.60	0.60	22.20	23.00	-0.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-21.40	15.60	0.60	16.20	23.00	-6.80

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

Modulation Type: 16QAM

LTE Band 48, Channel Bandwidth: 5MHz

Mode		TX channel 55265					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-13.00	20.70	0.50	21.20	23.00	-1.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-23.40	13.70	0.50	14.20	23.00	-8.80

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.10	20.70	0.40	21.10	23.00	-1.90
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.50	14.70	0.40	15.10	23.00	-7.90

Mode		TX channel 56715					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-13.30	20.30	0.60	20.90	23.00	-2.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-22.60	14.40	0.60	15.00	23.00	-8.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 10MHz

Mode		TX channel 55290					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-12.80	20.90	0.50	21.40	23.00	-1.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-22.40	14.70	0.50	15.20	23.00	-7.80

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-12.80	21.00	0.40	21.40	23.00	-1.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.20	15.00	0.40	15.40	23.00	-7.60

Mode		TX channel 56690					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-13.20	20.40	0.60	21.00	23.00	-2.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-21.60	15.40	0.60	16.00	23.00	-7.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 15MHz

Mode		TX channel 55315					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-13.00	20.70	0.50	21.20	23.00	-1.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-22.40	14.70	0.50	15.20	23.00	-7.80

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-12.90	20.90	0.40	21.30	23.00	-1.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.30	14.90	0.40	15.30	23.00	-7.70

Mode		TX channel 56665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-13.30	20.30	0.60	20.90	23.00	-2.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-21.80	15.20	0.60	15.80	23.00	-7.20

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 20MHz

Mode		TX channel 55340					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-13.20	20.50	0.50	21.00	23.00	-2.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-22.10	15.00	0.50	15.50	23.00	-7.50

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-12.70	21.10	0.40	21.50	23.00	-1.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.30	14.90	0.40	15.30	23.00	-7.70

Mode		TX channel 56640					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-13.00	20.60	0.60	21.20	23.00	-1.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-22.40	14.60	0.60	15.20	23.00	-7.80

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

Modulation Type: 64QAM

LTE Band 48, Channel Bandwidth: 5MHz

Mode		TX channel 55265					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-13.50	20.20	0.50	20.70	23.00	-2.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-24.10	13.00	0.50	13.50	23.00	-9.50

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.70	20.10	0.40	20.50	23.00	-2.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-23.50	13.70	0.40	14.10	23.00	-8.90

Mode		TX channel 56715					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-13.90	19.70	0.60	20.30	23.00	-2.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-23.60	13.40	0.60	14.00	23.00	-9.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 10MHz

Mode		TX channel 55290					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-13.30	20.40	0.50	20.90	23.00	-2.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-23.10	14.00	0.50	14.50	23.00	-8.50

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.20	20.60	0.40	21.00	23.00	-2.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.90	14.30	0.40	14.70	23.00	-8.30

Mode		TX channel 56690					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-13.70	19.90	0.60	20.50	23.00	-2.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-22.60	14.40	0.60	15.00	23.00	-8.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 15MHz

Mode		TX channel 55315					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-13.70	20.00	0.50	20.50	23.00	-2.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-23.00	14.10	0.50	14.60	23.00	-8.40

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.60	20.20	0.40	20.60	23.00	-2.40
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.80	14.40	0.40	14.80	23.00	-8.20

Mode		TX channel 56665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-14.00	19.60	0.60	20.20	23.00	-2.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-23.10	13.90	0.60	14.50	23.00	-8.50

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 20MHz

Mode		TX channel 55340					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-13.70	20.00	0.50	20.50	23.00	-2.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-22.60	14.50	0.50	15.00	23.00	-8.00

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.20	20.60	0.40	21.00	23.00	-2.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.70	14.50	0.40	14.90	23.00	-8.10

Mode		TX channel 56640					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-14.00	19.60	0.60	20.20	23.00	-2.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-23.00	14.00	0.60	14.60	23.00	-8.40

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

EIRP Power (dBm) / Full Power

Modulation Type: QPSK

LTE Band 48, Channel Bandwidth: 5MHz

Mode		TX channel 55265					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-11.90	21.80	0.50	22.30	23.00	-0.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-22.30	14.80	0.50	15.30	23.00	-7.70

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-12.00	21.80	0.40	22.20	23.00	-0.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-21.40	15.80	0.40	16.20	23.00	-6.80

Mode		TX channel 56715					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-12.20	21.40	0.60	22.00	23.00	-1.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-21.60	15.40	0.60	16.00	23.00	-7.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 10MHz

Mode		TX channel 55290					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-11.80	21.90	0.50	22.40	23.00	-0.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-21.20	15.90	0.50	16.40	23.00	-6.60

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-11.70	22.10	0.40	22.50	23.00	-0.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-21.10	16.10	0.40	16.50	23.00	-6.50

Mode		TX channel 56690					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-12.10	21.50	0.60	22.10	23.00	-0.90
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-20.50	16.50	0.60	17.10	23.00	-5.90

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 15MHz

Mode		TX channel 55315					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-11.80	21.90	0.50	22.40	23.00	-0.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-21.20	15.90	0.50	16.40	23.00	-6.60

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-11.70	22.10	0.40	22.50	23.00	-0.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-21.10	16.10	0.40	16.50	23.00	-6.50

Mode		TX channel 56665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-12.00	21.60	0.60	22.20	23.00	-0.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-20.60	16.40	0.60	17.00	23.00	-6.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 20MHz

Mode		TX channel 55340					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-11.70	22.00	0.50	22.50	23.00	-0.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-20.80	16.30	0.50	16.80	23.00	-6.20

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-11.60	22.20	0.40	22.60	23.00	-0.40
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-21.00	16.20	0.40	16.60	23.00	-6.40

Mode		TX channel 56640					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-11.90	21.70	0.60	22.30	23.00	-0.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-21.10	15.90	0.60	16.50	23.00	-6.50

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

Modulation Type: 16QAM

LTE Band 48, Channel Bandwidth: 5MHz

Mode		TX channel 55265					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-12.90	20.80	0.50	21.30	23.00	-1.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-23.30	13.80	0.50	14.30	23.00	-8.70

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.00	20.80	0.40	21.20	23.00	-1.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.40	14.80	0.40	15.20	23.00	-7.80

Mode		TX channel 56715					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-13.20	20.40	0.60	21.00	23.00	-2.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-22.60	14.40	0.60	15.00	23.00	-8.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 10MHz

Mode		TX channel 55290					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-12.80	20.90	0.50	21.40	23.00	-1.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-22.20	14.90	0.50	15.40	23.00	-7.60

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-12.70	21.10	0.40	21.50	23.00	-1.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.10	15.10	0.40	15.50	23.00	-7.50

Mode		TX channel 56690					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-13.10	20.50	0.60	21.10	23.00	-1.90
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-21.60	15.40	0.60	16.00	23.00	-7.00

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 15MHz

Mode		TX channel 55315					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-12.80	20.90	0.50	21.40	23.00	-1.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-22.20	14.90	0.50	15.40	23.00	-7.60

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-12.70	21.10	0.40	21.50	23.00	-1.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.10	15.10	0.40	15.50	23.00	-7.50

Mode		TX channel 56665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-13.00	20.60	0.60	21.20	23.00	-1.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-21.50	15.50	0.60	16.10	23.00	-6.90

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 20MHz

Mode		TX channel 55340					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-12.70	21.00	0.50	21.50	23.00	-1.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-21.80	15.30	0.50	15.80	23.00	-7.20

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-12.60	21.20	0.40	21.60	23.00	-1.40
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.00	15.20	0.40	15.60	23.00	-7.40

Mode		TX channel 56640					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-12.90	20.70	0.60	21.30	23.00	-1.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-22.10	14.90	0.60	15.50	23.00	-7.50

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

Modulation Type: 64QAM

LTE Band 48, Channel Bandwidth: 5MHz

Mode		TX channel 55265					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-13.20	20.50	0.50	21.00	23.00	-2.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3552.50	-24.00	13.10	0.50	13.60	23.00	-9.40

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.50	20.30	0.40	20.70	23.00	-2.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.90	14.30	0.40	14.70	23.00	-8.30

Mode		TX channel 56715					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-13.60	20.00	0.60	20.60	23.00	-2.40
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3697.50	-23.20	13.80	0.60	14.40	23.00	-8.60

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 10MHz

Mode		TX channel 55290					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-13.30	20.40	0.50	20.90	23.00	-2.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3555.00	-22.60	14.50	0.50	15.00	23.00	-8.00

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.20	20.60	0.40	21.00	23.00	-2.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.70	14.50	0.40	14.90	23.00	-8.10

Mode		TX channel 56690					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-13.60	20.00	0.60	20.60	23.00	-2.40
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3695.00	-22.20	14.80	0.60	15.40	23.00	-7.60

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 15MHz

Mode		TX channel 55315					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-13.40	20.30	0.50	20.80	23.00	-2.20
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3557.50	-22.80	14.30	0.50	14.80	23.00	-8.20

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.30	20.50	0.40	20.90	23.00	-2.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.50	14.70	0.40	15.10	23.00	-7.90

Mode		TX channel 56665					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-13.50	20.10	0.60	20.70	23.00	-2.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-22.20	14.80	0.60	15.40	23.00	-7.60

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth: 20MHz

Mode		TX channel 55340					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-13.30	20.40	0.50	20.90	23.00	-2.10
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3560.00	-22.40	14.70	0.50	15.20	23.00	-7.80

Mode		TX channel 55990					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-13.10	20.70	0.40	21.10	23.00	-1.90
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3625.00	-22.60	14.60	0.40	15.00	23.00	-8.00

Mode		TX channel 56640					
Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-13.50	20.10	0.60	20.70	23.00	-2.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3692.50	-22.70	14.30	0.60	14.90	23.00	-8.10

Note: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

3.6 Modulation Characteristics Measurement

3.6.1 Limits of Modulation Characteristics

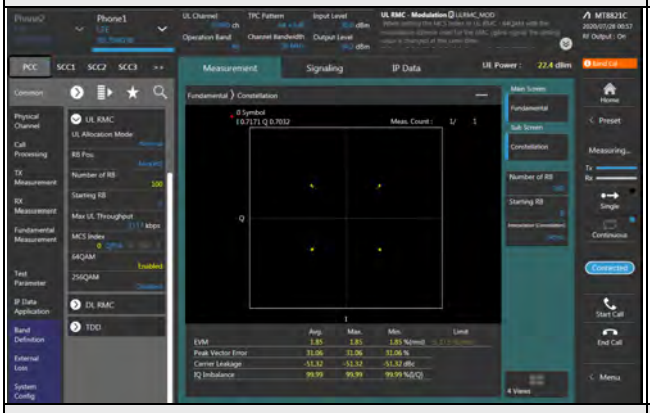
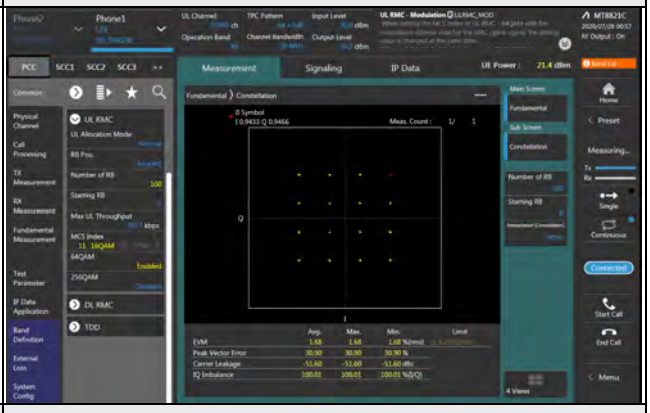
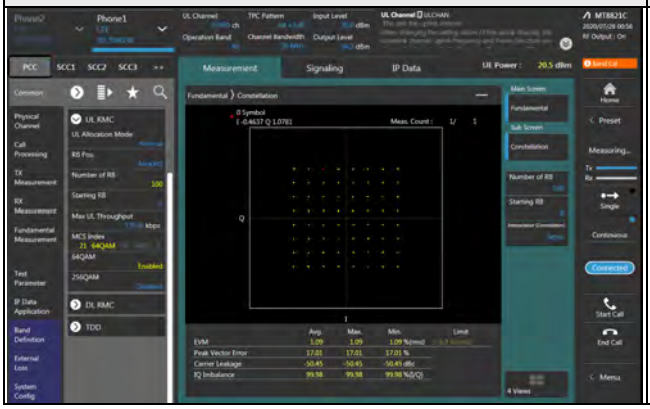
N/A

3.6.2 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.

3.6.3 Test Setup

3.6.4 Test Results

LTE Band 48	
Spectrum Plot of Measurement Value	
Channel: 55990 / Frequency (MHz): 3625.0MHz	
QPSK	16QAM
	
64QAM	
	

3.7 Frequency Stability Measurement

3.7.1 Limits of Frequency Stabiliity Measurement

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

3.7.2 Test Procedure

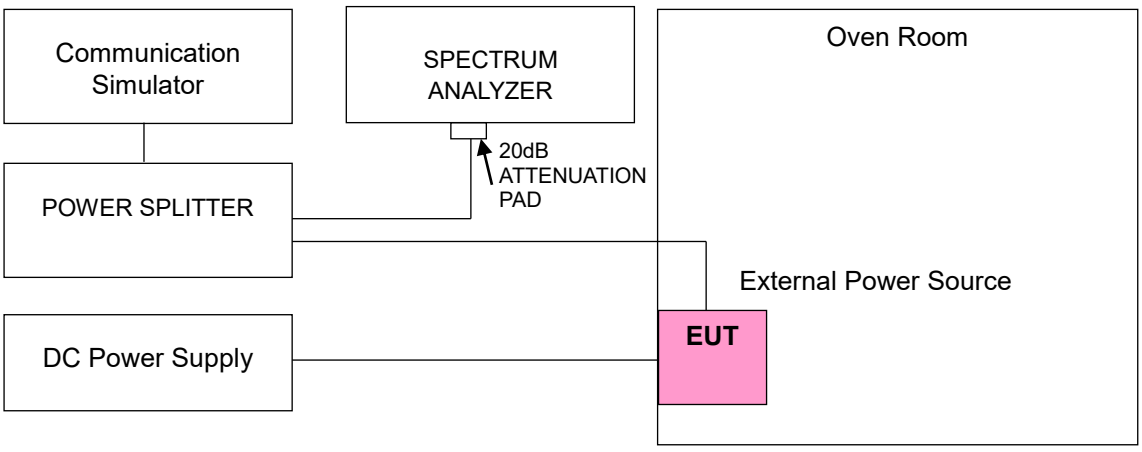
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

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

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

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

3.7.3 Test Setup



3.7.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 48			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	3552.500004	0.001	3697.500000	0.001
3.45	3552.500003	0.001	3697.500000	0.000
4.23	3552.500003	0.001	3697.500000	0.001

Note: The applicant defined the normal working voltage is from 3.45Vdc to 4.23Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 48			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-20	3552.500004	0.001	3697.500000	0.001
-10	3552.499998	0.000	3697.500000	0.001
0	3552.499999	0.000	3697.500000	0.001
10	3552.499998	-0.001	3697.500000	0.001
20	3552.499997	-0.001	3697.500000	-0.001
30	3552.499998	-0.001	3697.500000	-0.001
40	3552.499997	-0.001	3697.500000	-0.001
50	3552.499998	-0.001	3697.500000	0.000
60	3552.499999	0.000	3697.500000	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 48			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	3555.000001	0.000	3695.000000	0.001
3.45	3555.000003	0.001	3695.000000	0.000
4.23	3555.000001	0.000	3695.000000	0.001

Note: The applicant defined the normal working voltage is from 3.45Vdc to 4.23Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 48			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-20	3555.000002	0.001	3695.000000	0.000
-10	3554.999997	-0.001	3695.000000	0.001
0	3554.999998	-0.001	3695.000000	0.001
10	3554.999998	-0.001	3695.000000	0.000
20	3554.999996	-0.001	3695.000000	0.000
30	3554.999999	0.000	3695.000000	-0.001
40	3554.999996	-0.001	3695.000000	0.000
50	3554.999997	-0.001	3695.000000	-0.001
60	3554.999999	0.000	3695.000000	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 48			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	3557.500002	0.001	3692.500000	0.000
3.45	3557.500002	0.001	3692.500000	0.001
4.23	3557.500003	0.001	3692.500000	0.001

Note: The applicant defined the normal working voltage is from 3.45Vdc to 4.23Vdc.

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 48			
	Channel Bandwidth: 15 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-20	3557.500001	0.000	3692.500000	0.000
-10	3557.499999	0.000	3692.500000	0.001
0	3557.499998	-0.001	3692.500000	0.001
10	3557.499999	0.000	3692.500000	0.000
20	3557.499998	-0.001	3692.500000	-0.001
30	3557.499999	0.000	3692.500000	-0.001
40	3557.499997	-0.001	3692.500000	-0.001
50	3557.499997	-0.001	3692.500000	-0.001
60	3557.499999	0.000	3692.500000	-0.001

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 48			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	3555.000002	0.001	3555.000000	0.000
3.45	3555.000002	0.001	3555.000000	0.001
4.23	3555.000001	0.001	3555.000000	0.001

Note: The applicant defined the normal working voltage is from 3.45Vdc to 4.23Vdc.

Frequency Error vs. Temperature

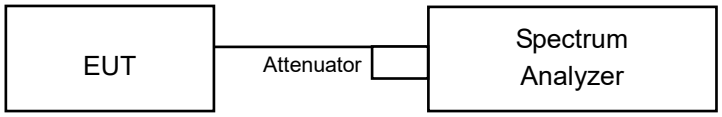
Temp. (℃)	LTE Band 48			
	Channel Bandwidth: 20 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-20	3555.000004	0.001	3555.000000	0.001
-10	3554.999996	-0.001	3555.000000	0.001
0	3554.999997	-0.001	3555.000000	0.000
10	3554.999999	0.000	3555.000000	0.001
20	3554.999999	0.000	3555.000000	-0.001
30	3554.999996	-0.001	3555.000000	-0.001
40	3554.999999	0.000	3555.000000	-0.001
50	3554.999999	0.000	3555.000000	-0.001
60	3554.999997	-0.001	3555.000000	0.000

3.8 Emission Bandwidth Measurement

3.8.1 Emission Bandwidth Measurement

Reference only

3.8.2 Test Setup



3.8.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

3.8.4 Test Procedure

Occupied Bandwidth:
All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth. For the 99% bandwidth measurement method, please refer to section 5.4.4 of ANSI C63.26.

26dBc Bandwidth:
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW =51 kHz (5 MHz bandwidth), 100 kHz (10 MHz bandwidth), 150 kHz (15 MHz bandwidth), 200 kHz (20 MHz bandwidth). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. For the 26dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

3.8.5 Deviation fromTest Standard

No deviation.

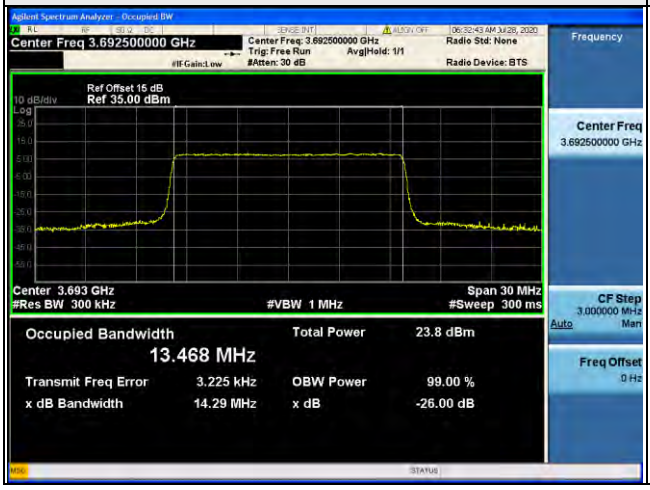
3.8.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.8.7 Test Result (-26dB Bandwidth)

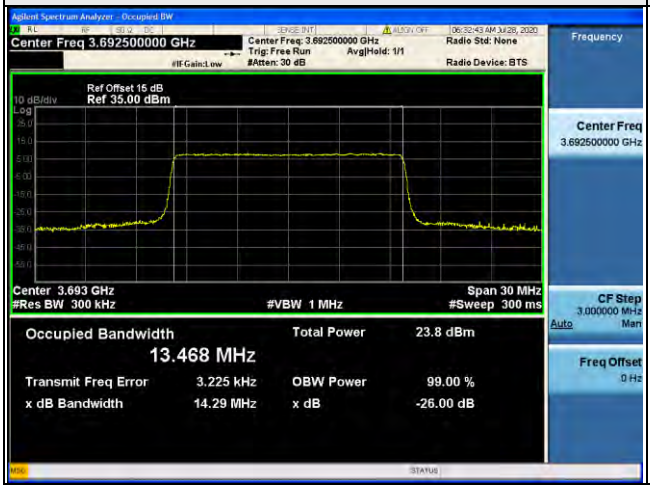
LTE Band 48

LTE Band 48, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
55265	3552.5	4.801	4.782	4.787
55990	3625.0	4.788	4.805	4.783
56715	3697.5	4.799	4.768	4.785
LTE Band 48, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
55290	3555.0	9.497	9.503	9.519
55990	3625.0	9.482	9.496	9.505
56690	3695.0	9.486	9.495	9.514
LTE Band 48, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
55315	3557.5	14.24	14.24	14.25
55990	3625.0	14.26	14.23	14.25
56665	3692.5	14.29	14.25	14.25
LTE Band 48, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		
		QPSK	16QAM	64QAM
55340	3560.0	19.03	19.02	19.02
55990	3625.0	19.01	19.00	19.02
56640	3690.0	19.01	19.01	19.01

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

3.8.8 Test Result (Occupied Bandwidth)

LTE Band 48, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
55265	3552.5	4.4900	4.4899	4.4837
55990	3625.0	4.4921	4.4903	4.4848
56715	3697.5	4.4883	4.4857	4.4836
LTE Band 48, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
55290	3555.0	8.9551	8.9688	8.9676
55990	3625.0	8.9571	8.9643	8.9663
56690	3695.0	8.9588	8.9654	8.9641
LTE Band 48, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
55315	3557.5	13.461	13.451	13.452
55990	3625.0	13.460	13.451	13.454
56665	3692.5	13.468	13.452	13.450
LTE Band 48, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)		
		QPSK	16QAM	64QAM
55340	3560.0	17.929	17.919	17.937
55990	3625.0	17.927	17.919	17.938
56640	3690.0	17.929	17.924	17.937

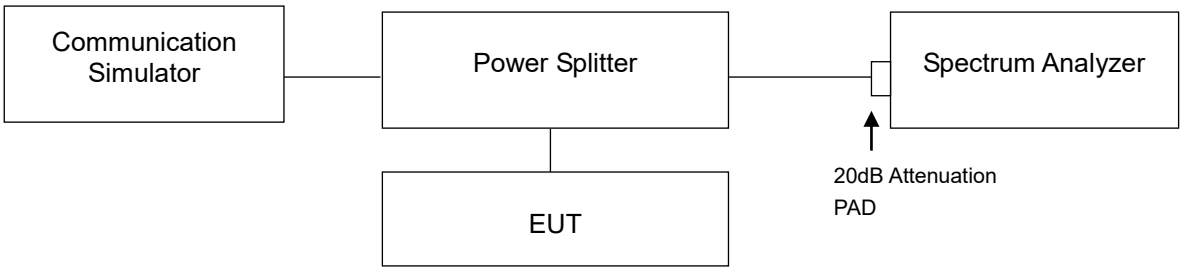
Spectrum Plot of Worst Value	
5MHz / QPSK	10MHz / 16QAM
	
15MHz / QPSK	20MHz / 64QAM
	

3.9 Peak to Average Ratio Measurement

3.9.1 Limits of Peak to Average Ratio Measurement

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

3.9.2 Test Setup



3.9.3 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%.

3.9.4 Test Results

LTE Band 48

LTE Band 48, Channel Bandwidth 5MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
55265	3552.5	3.54	5.39	6.94
55990	3625.0	3.97	5.60	7.02
56715	3697.5	3.65	5.11	6.70
LTE Band 48, Channel Bandwidth 10MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
55290	3555.0	3.82	5.97	6.83
55990	3625.0	3.86	5.66	7.09
56690	3695.0	4.16	5.10	6.67
LTE Band 48, Channel Bandwidth 15MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
55315	3557.5	3.86	5.62	6.67
55990	3625.0	4.51	6.14	7.07
56665	3692.5	3.88	5.13	6.71
LTE Band 48, Channel Bandwidth 20MHz				
Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		QPSK	16QAM	64QAM
55340	3560.0	4.04	5.31	6.72
55990	3625.0	4.74	6.30	7.11
56640	3690.0	4.18	5.30	7.15

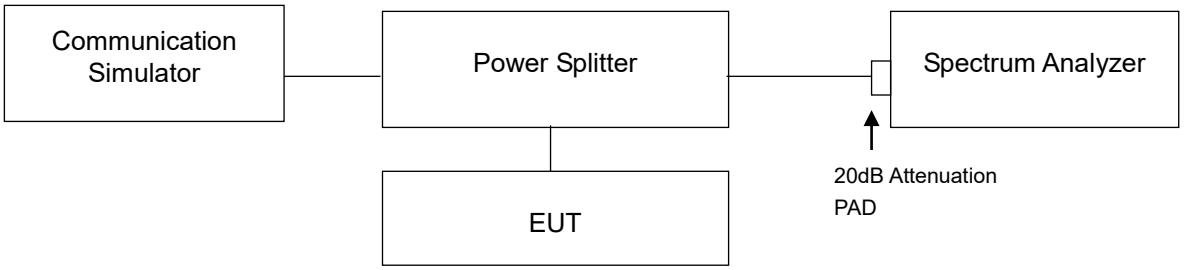
Spectrum Plot of Worst Value	
5MHz / 64QAM	10MHz / 64QAM
	
15MHz / 64QAM	20MHz / 64QAM
	

3.10 Conducted Spurious Emissions

3.10.1 Limits of Conducted Spurious Emissions Measurement

Power of any emissions outside the Fundamental	Limit
Within 0-10MHz above the Assigned Channel	-13 dBm/MHz
Within 0-10MHz below the Assigned Channel	
Greater than 0-10MHz above the Assigned Channel	-25 dBm/MHz
Greater than 0-10MHz below the Assigned Channel	
Power of any emission below 3530MHz	-40 dBm/MHz
Power of any emission above 3720MHz	

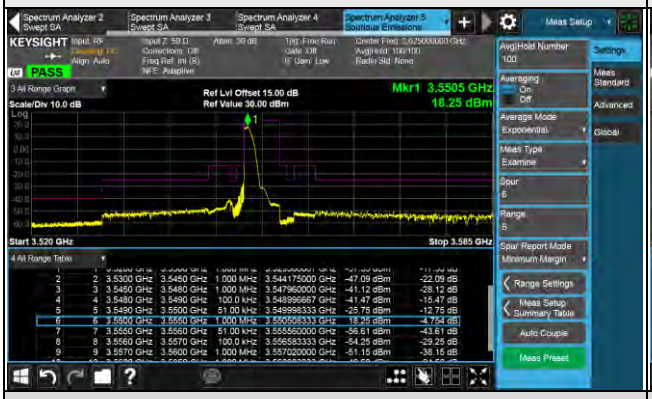
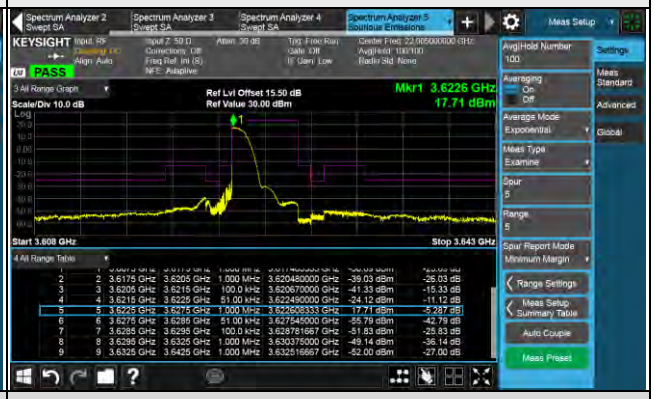
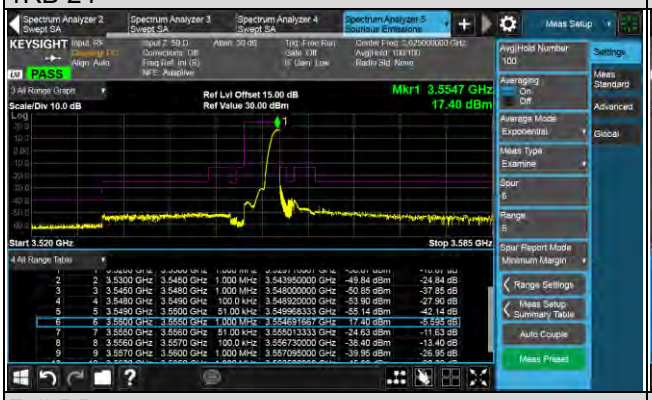
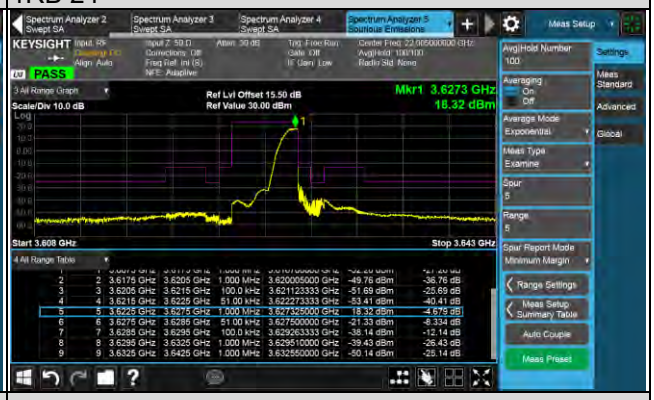
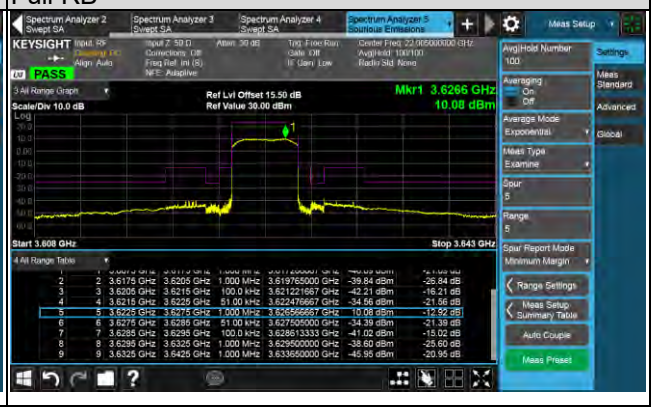
3.10.2 Test Setup

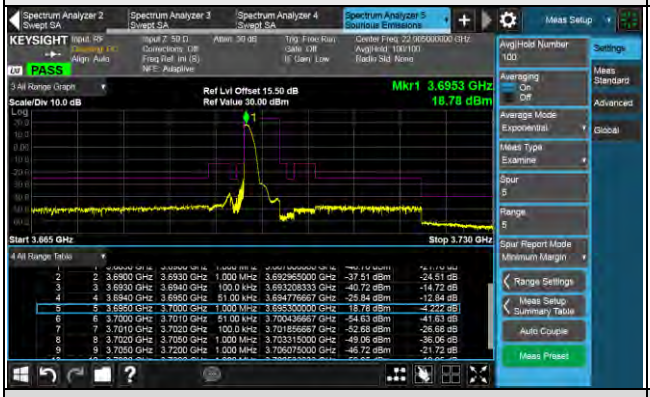
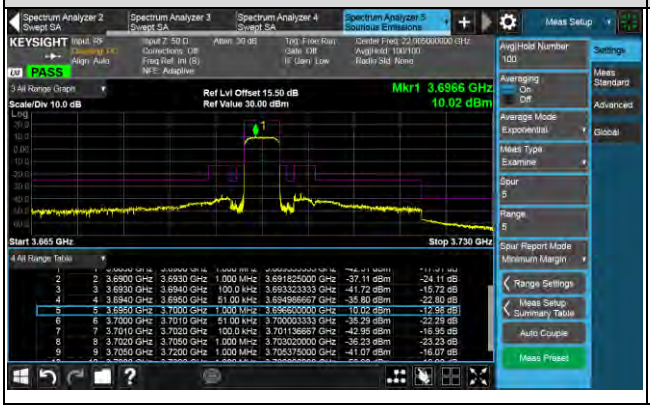


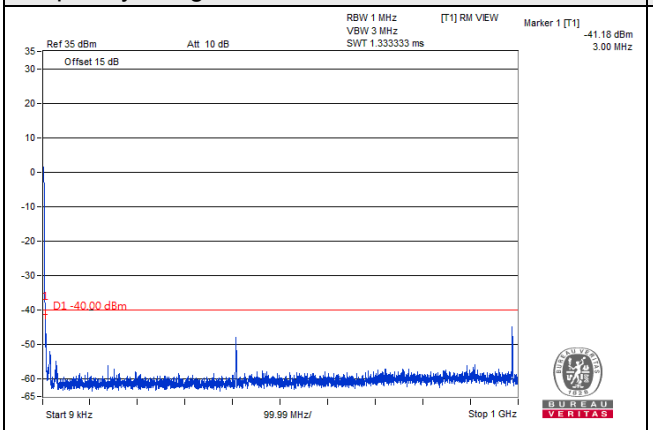
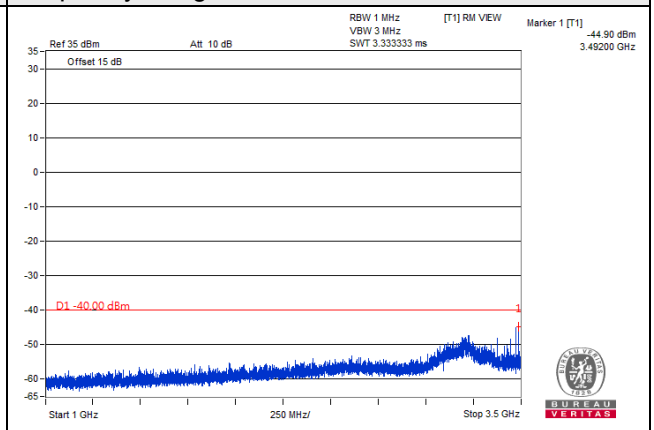
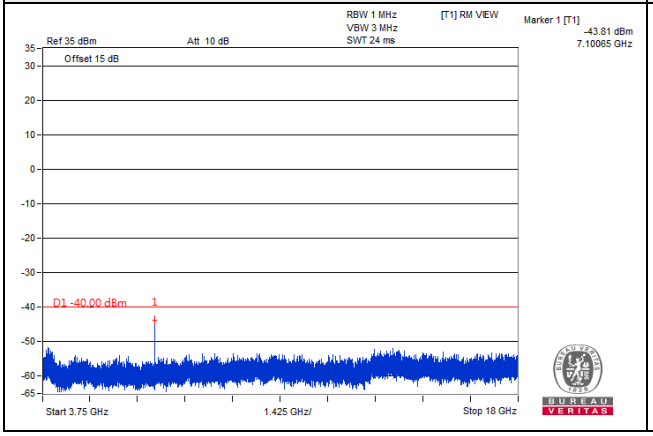
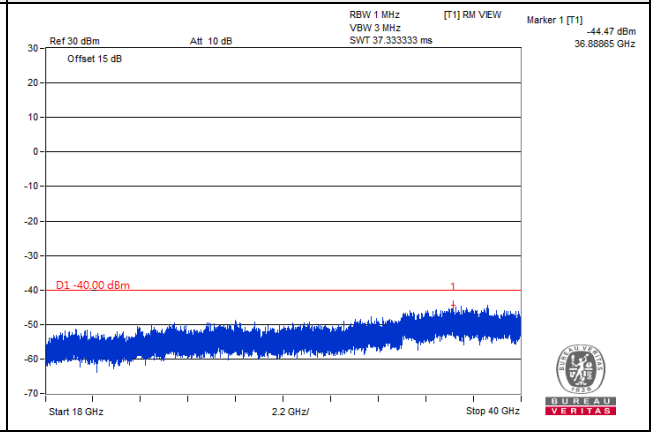
3.10.3 Test Procedure

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. Measuring frequency range is from 9 kHz to 40 GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement. Measurement method refers to FCC Part96 section 96.41 (e)(3).

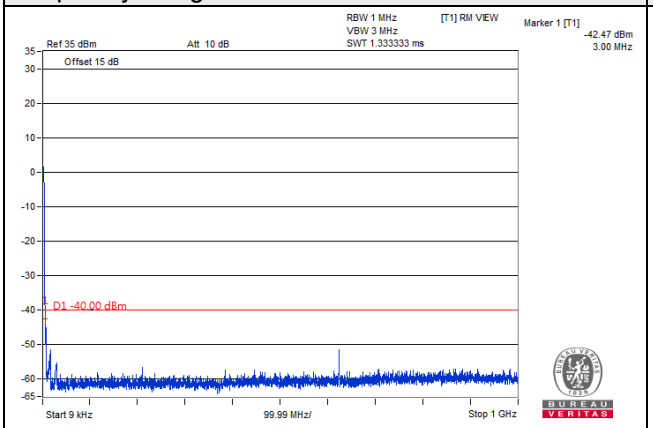
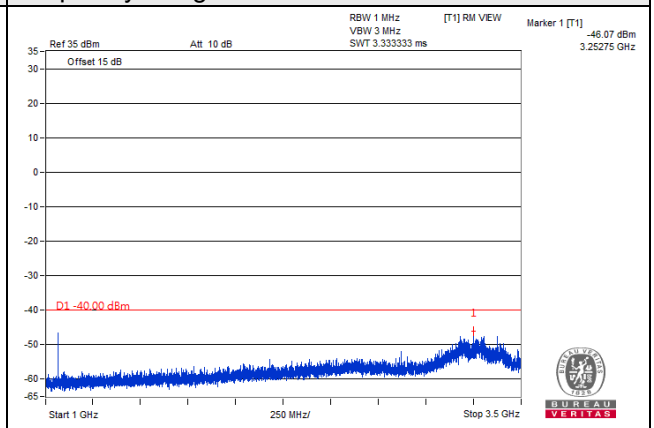
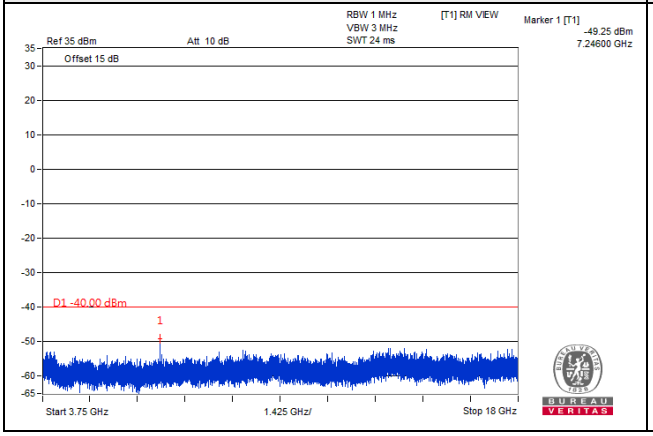
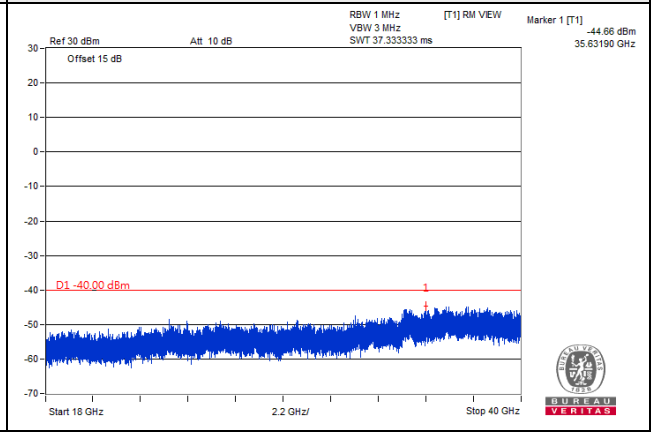
3.10.4 Test Results

LTE Band 48, Channel Bandwidth 5MHz	
Channel 55265 (3552.5MHz)	Channel 55990 (3625.0MHz)
1RB	1RB
	
1RB 24	1RB 24
	
Full RB	Full RB
	

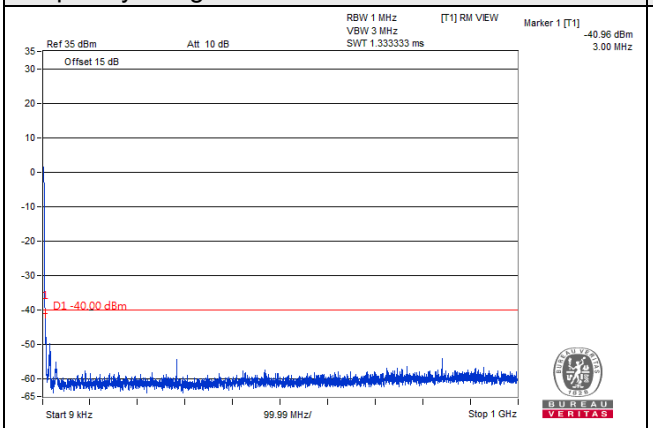
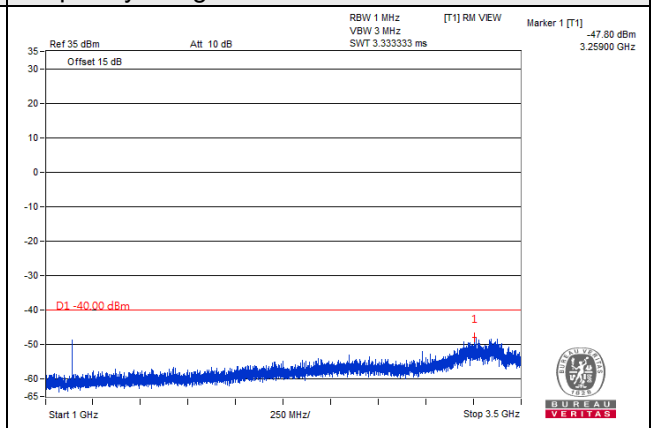
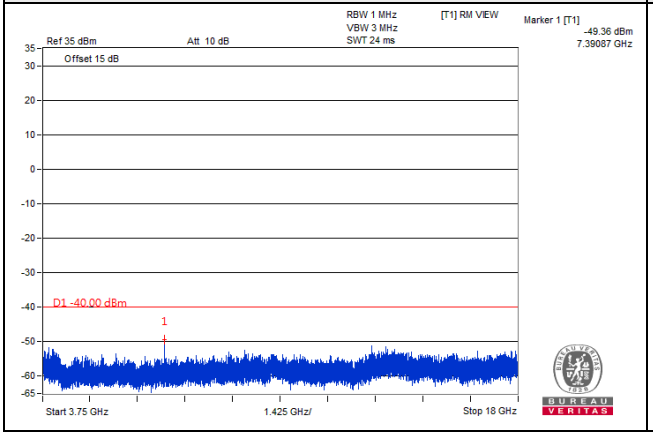
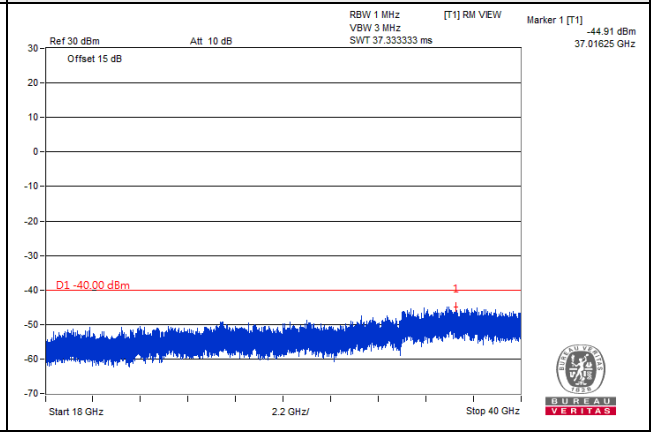
LTE Band 48, Channel Bandwidth 5MHz	
Channel 56715 (3697.5MHz)	
1RB	
	
1RB 24	
	
Full RB	
	

LTE Band 48, Channel Bandwidth 5MHz	
Channel 55265 (3552.5MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

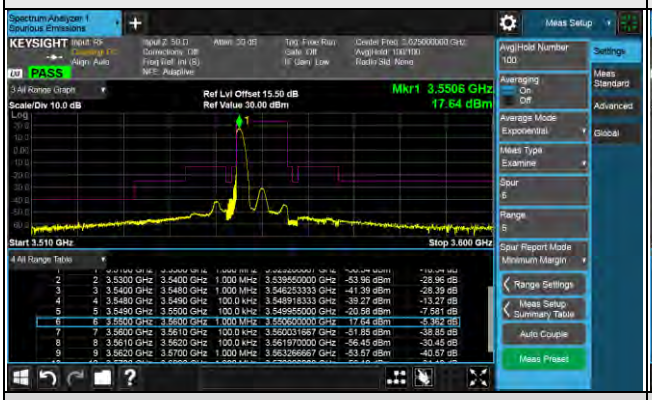
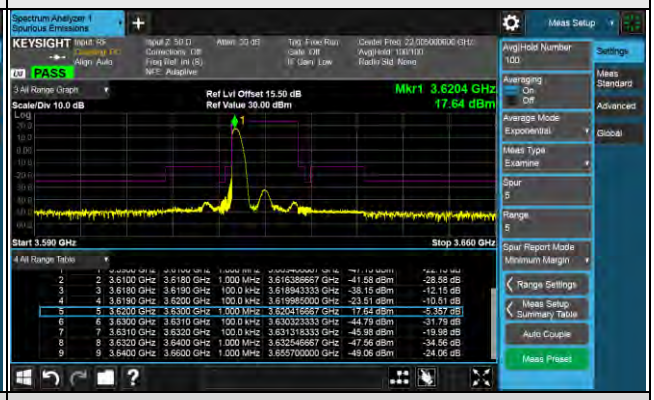
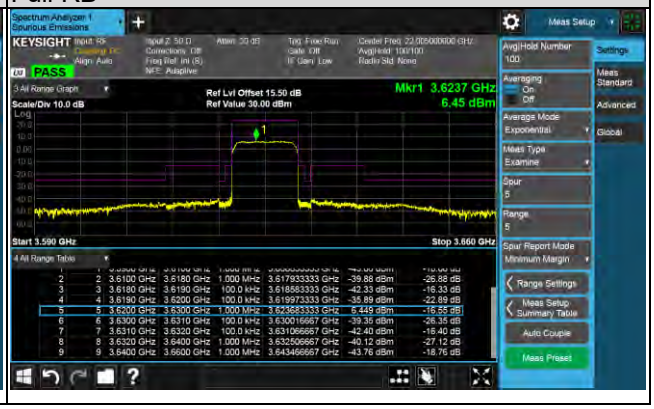
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

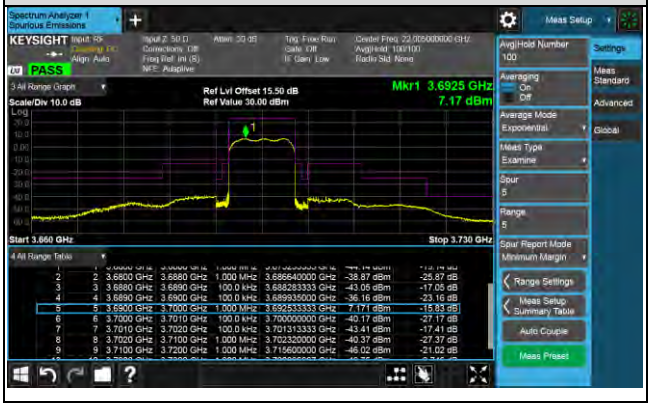
LTE Band 48, Channel Bandwidth 5MHz	
Channel 55990 (3625.0MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

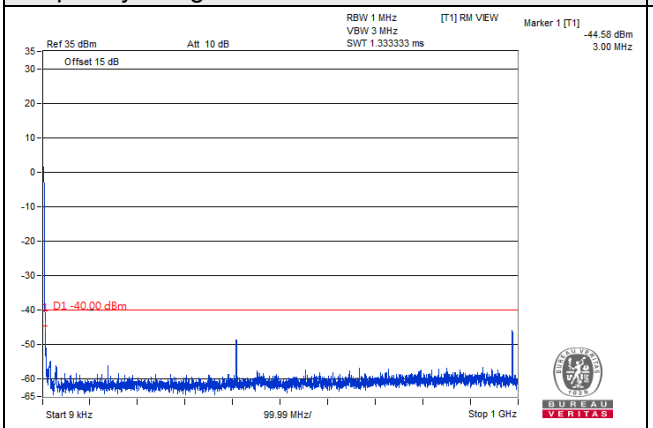
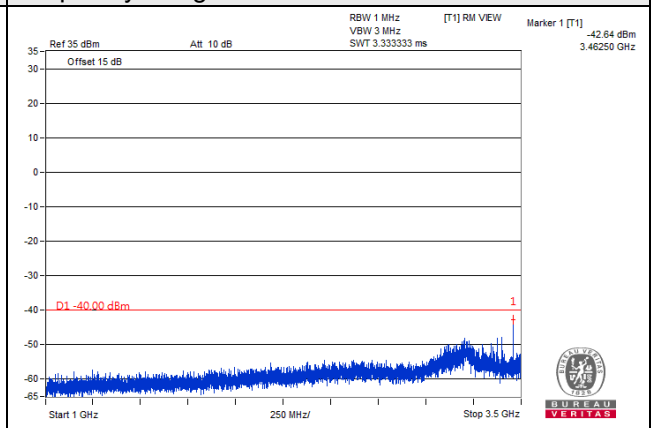
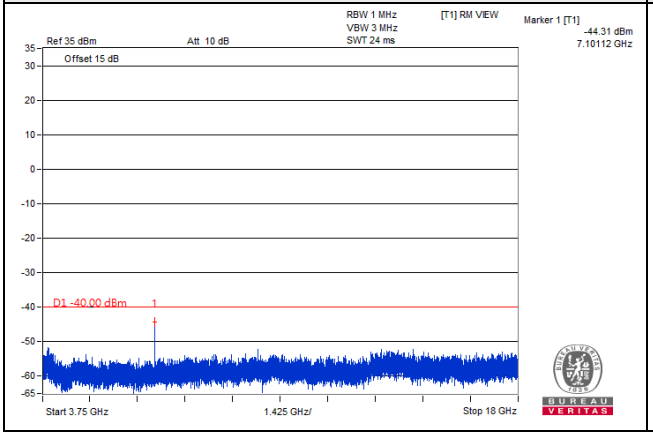
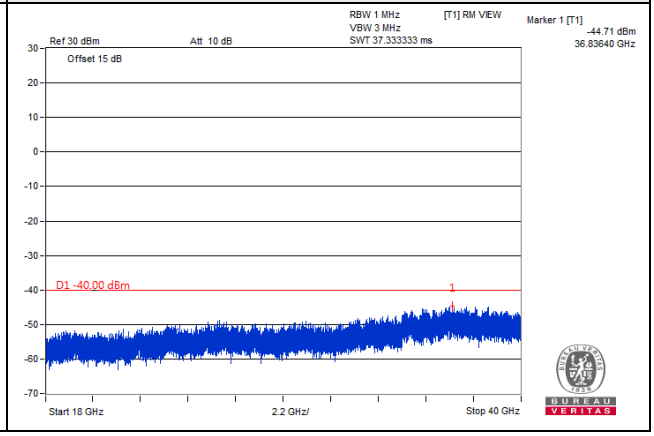
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

LTE Band 48, Channel Bandwidth 5MHz	
Channel 56715 (3697.50MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

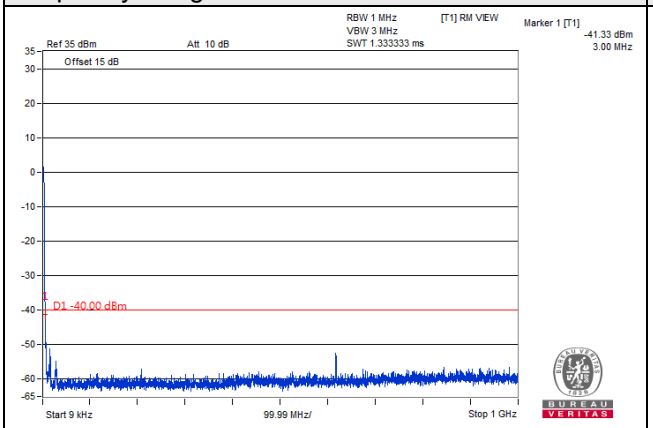
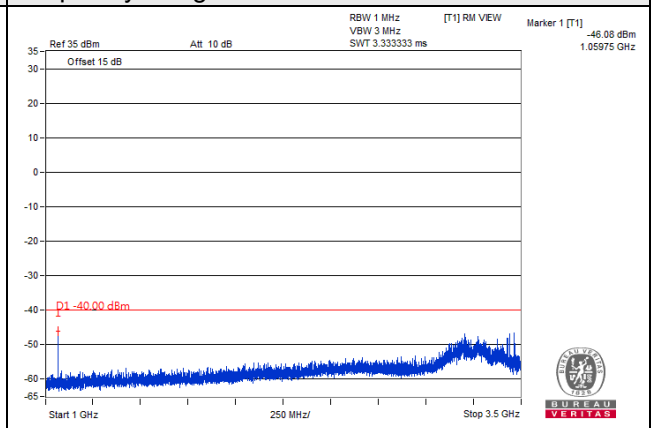
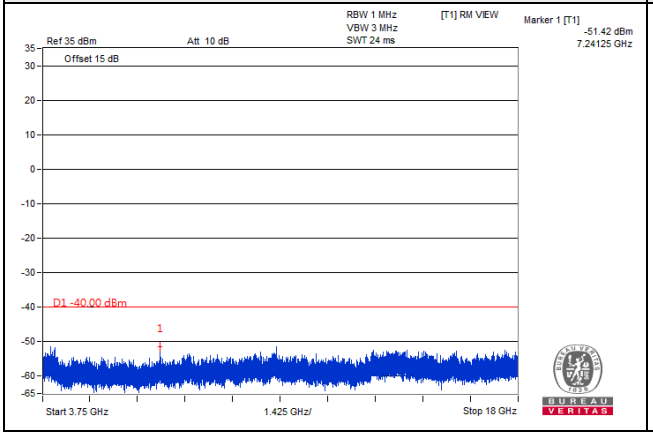
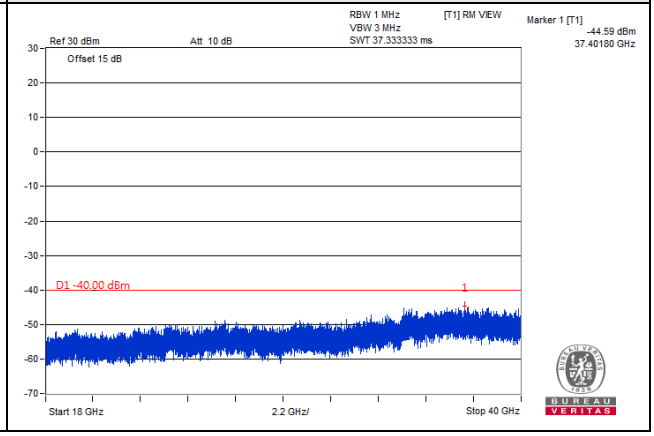
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

LTE Band 48, Channel Bandwidth 10MHz	
Channel 55290 (3555.0MHz)	Channel 55990 (3625.0MHz)
1RB	1RB
	
1RB 49	1RB 49
	
Full RB	Full RB
	

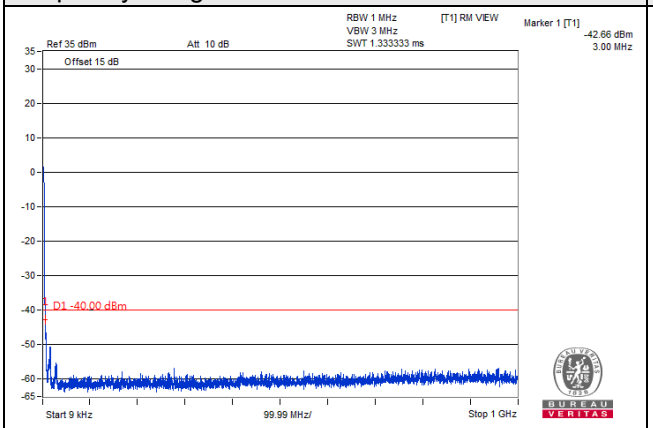
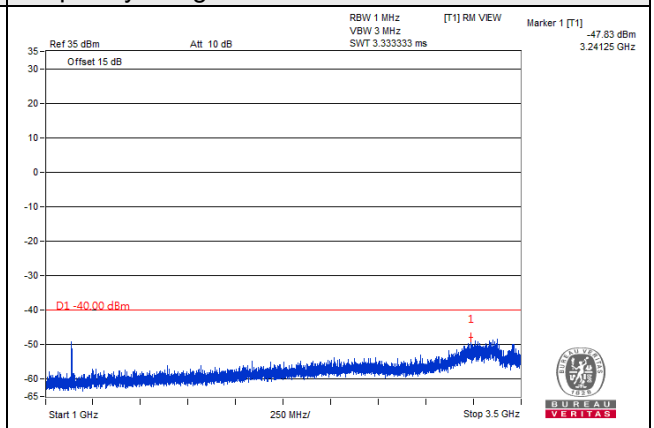
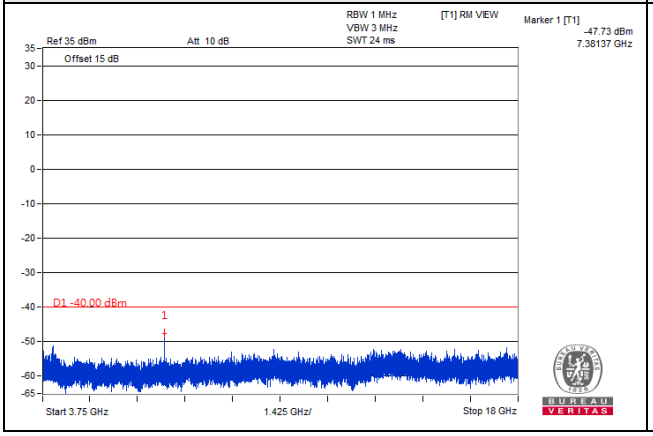
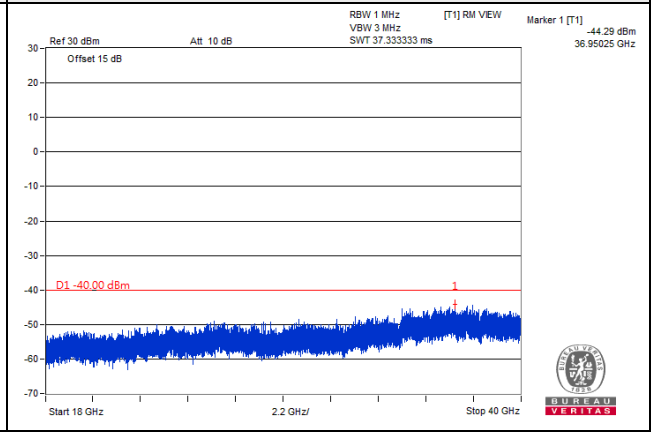
LTE Band 48, Channel Bandwidth 10MHz	
Channel 56690 (3695.0MHz)	
1RB	
	
1RB 49	
	
Full RB	
	

LTE Band 48, Channel Bandwidth 10MHz	
Channel 55290 (3555.0MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

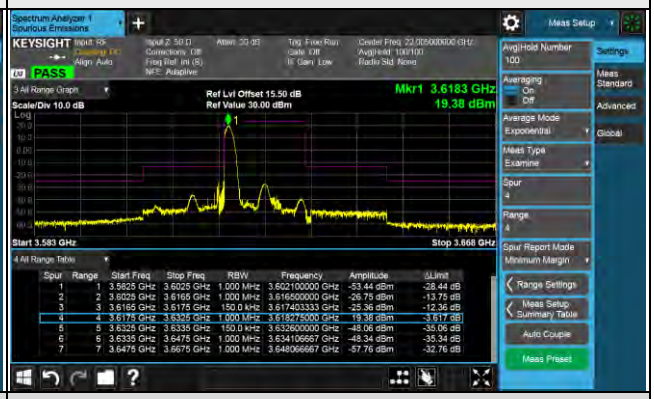
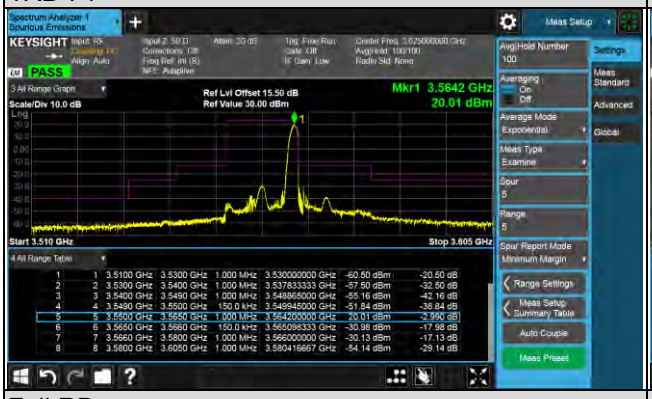
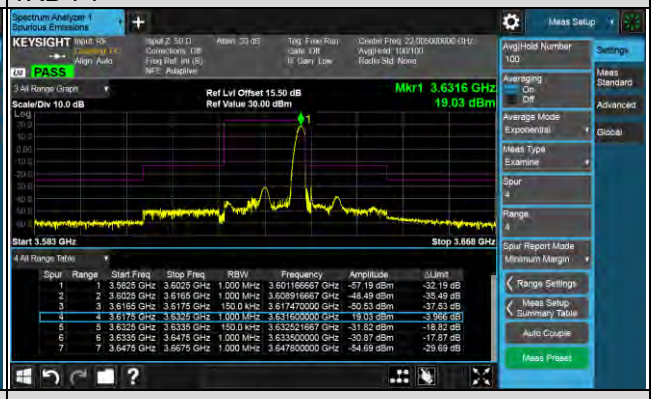
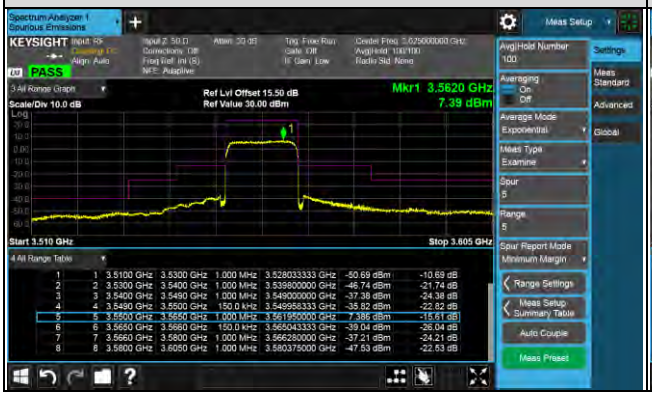
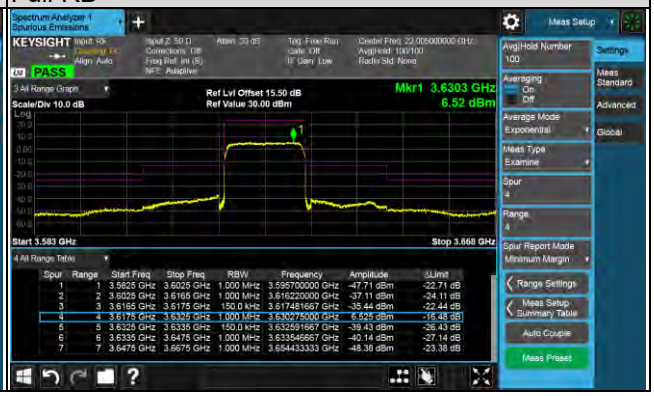
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

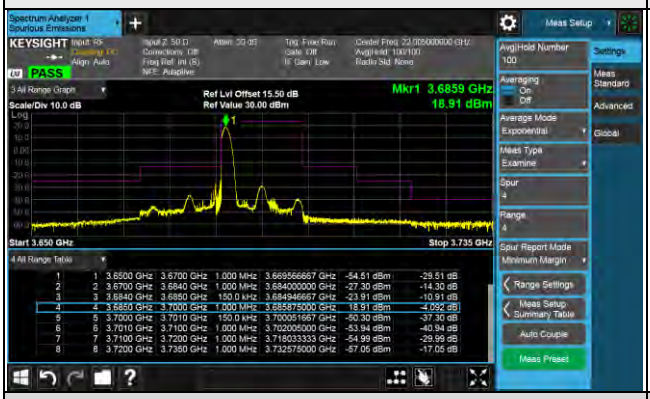
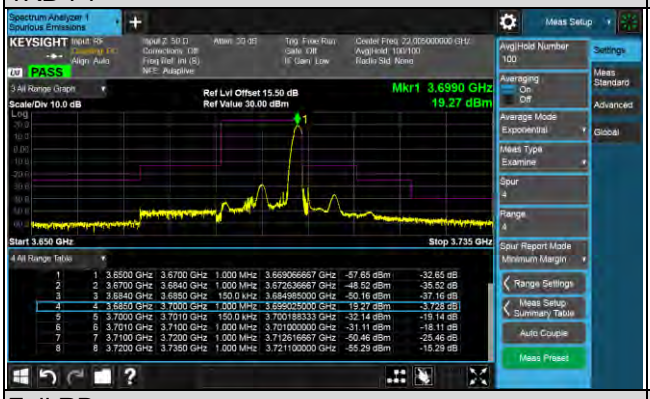
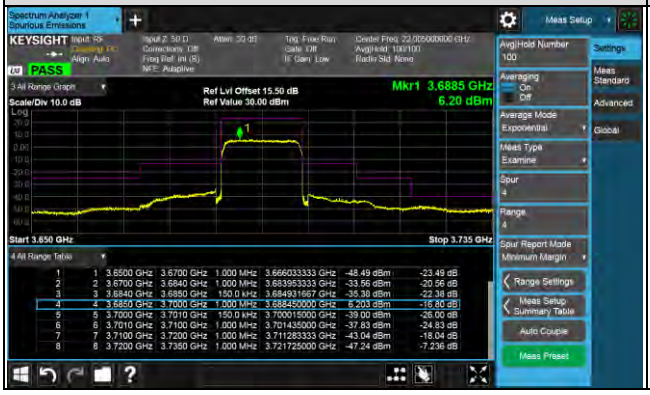
LTE Band 48, Channel Bandwidth 10MHz	
Channel 55990 (3625.00MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

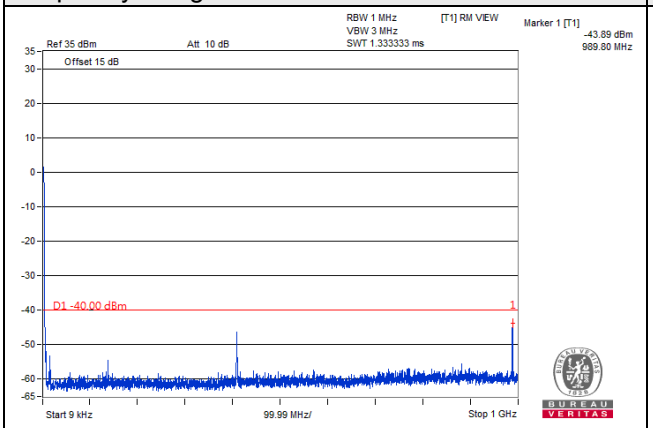
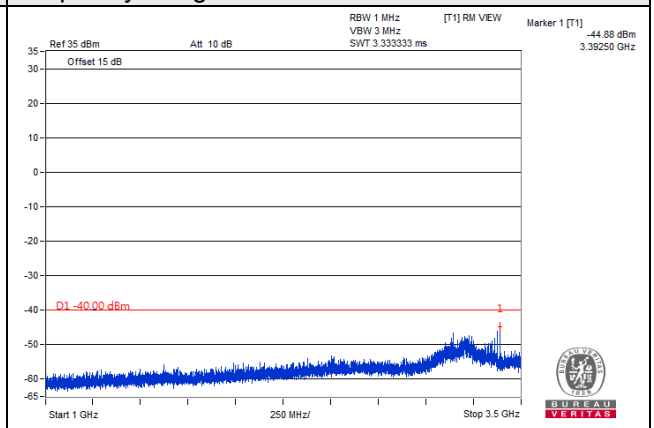
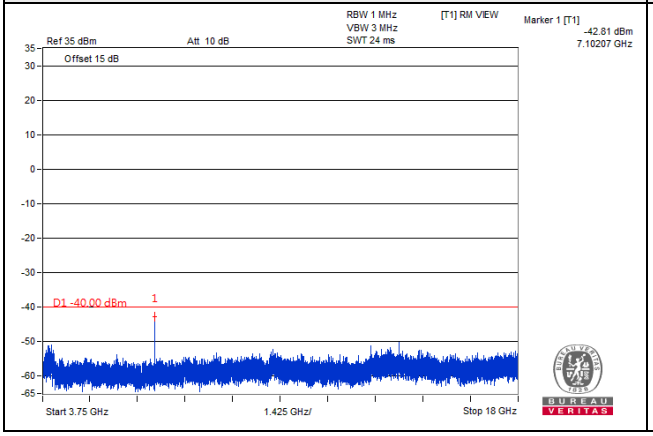
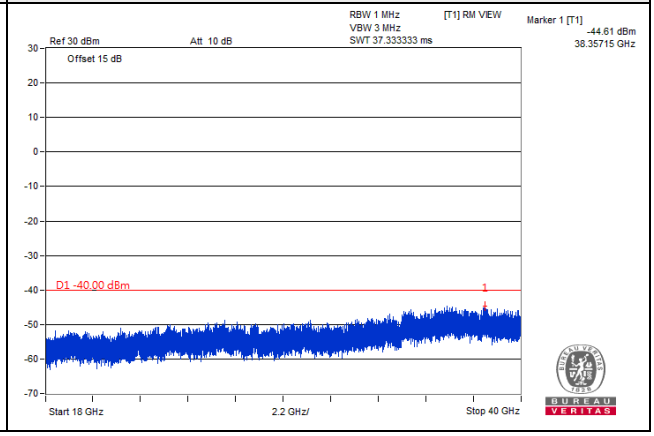
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

LTE Band 48, Channel Bandwidth 10MHz	
Channel 56690 (3695.0MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

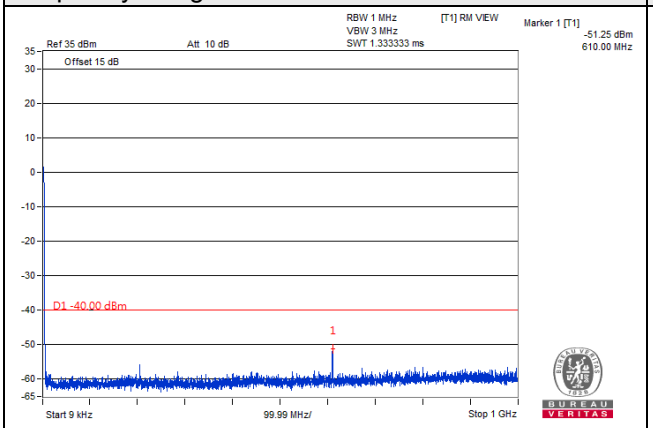
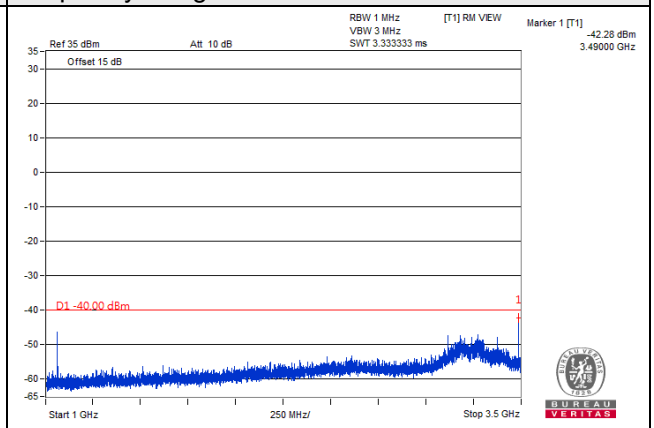
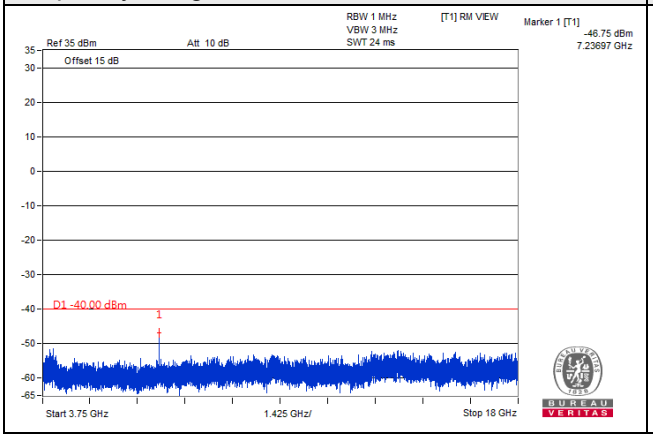
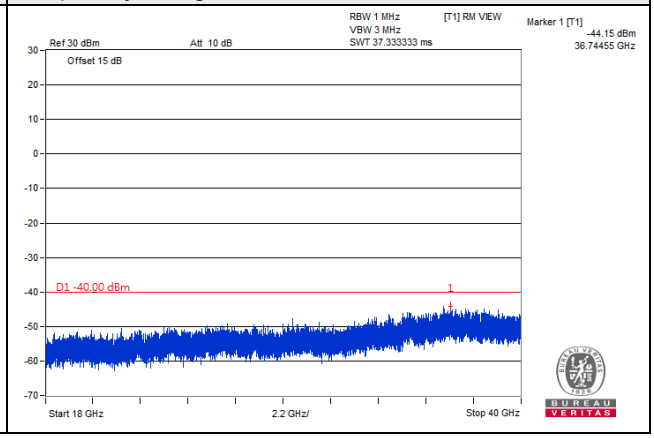
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

LTE Band 48, Channel Bandwidth 15MHz	
Channel 55315 (3557.50MHz)	Channel 55990 (3625.0MHz)
1RB	1RB
	
1RB 74	1RB 74
	
Full RB	Full RB
	

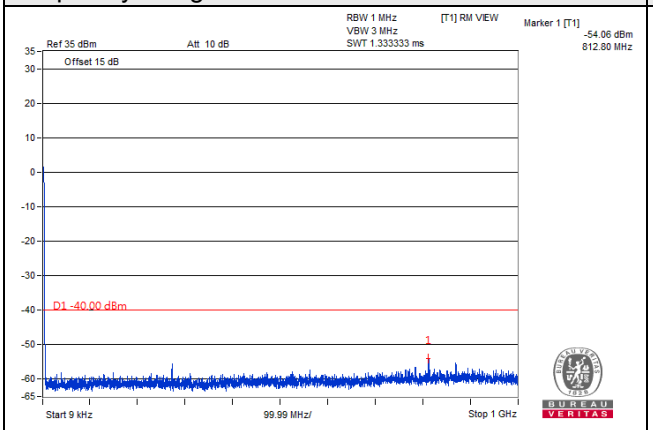
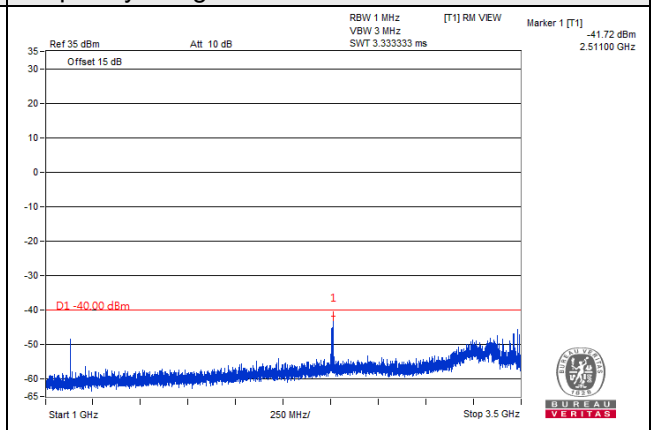
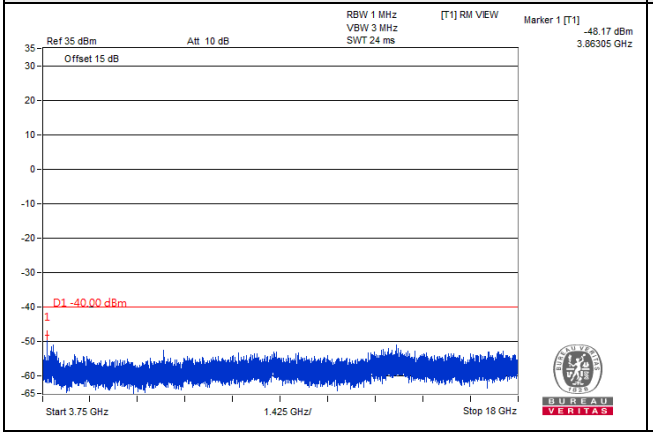
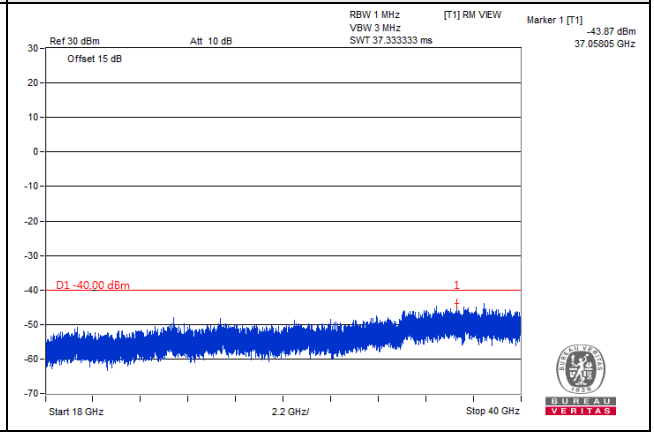
LTE Band 48, Channel Bandwidth 15MHz	
Channel 56665 (3692.5MHz)	
1RB	
	
1RB 74	
	
Full RB	
	

LTE Band 48, Channel Bandwidth 15MHz	
Channel 55315 (3557.50MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

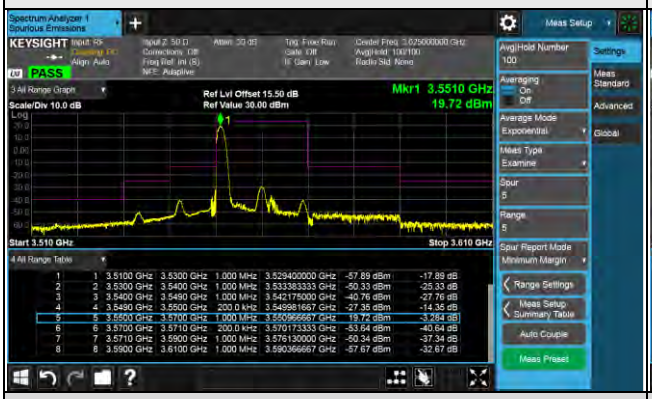
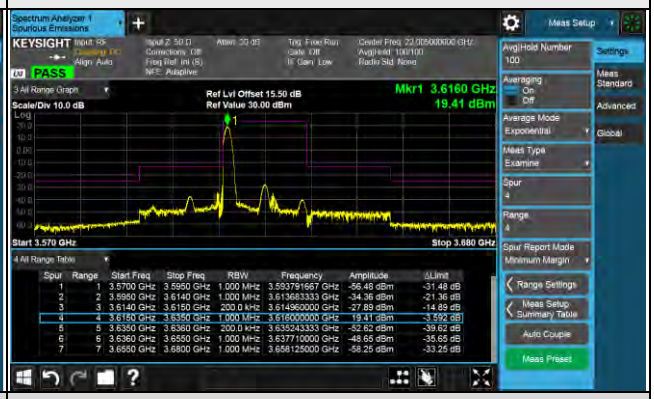
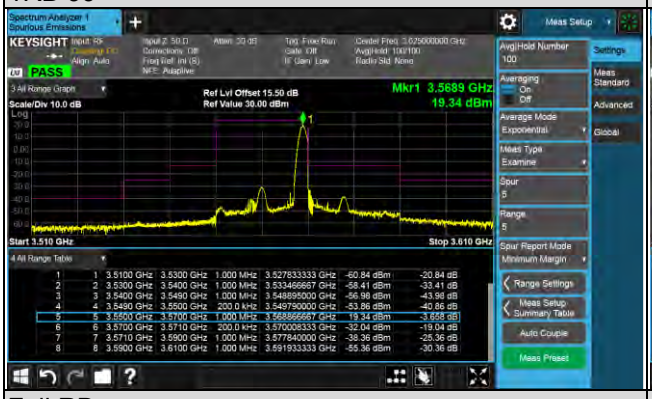
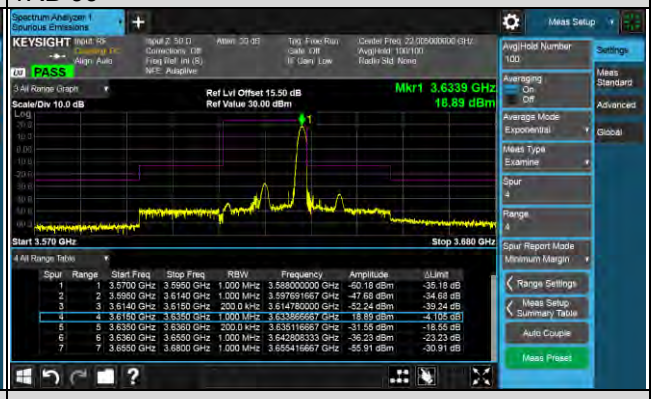
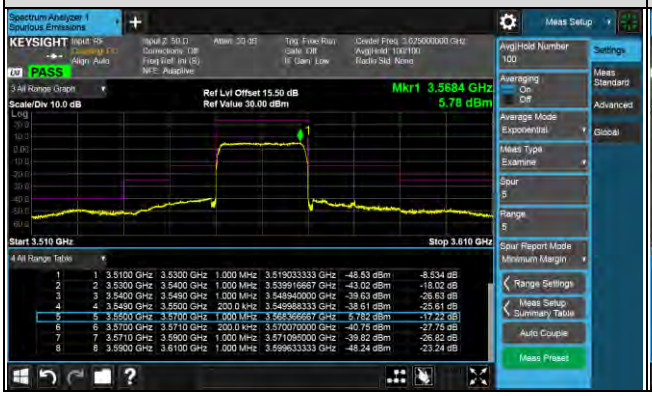
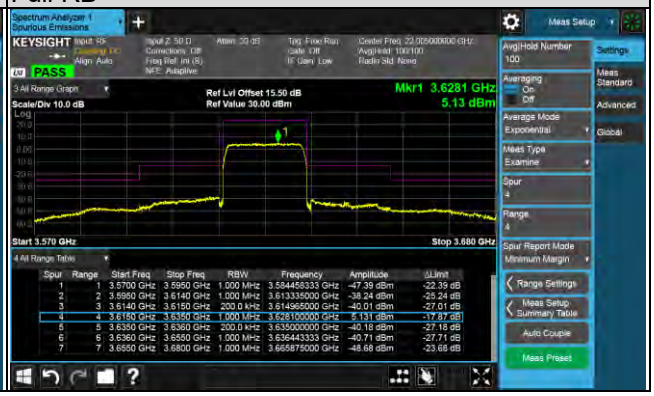
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

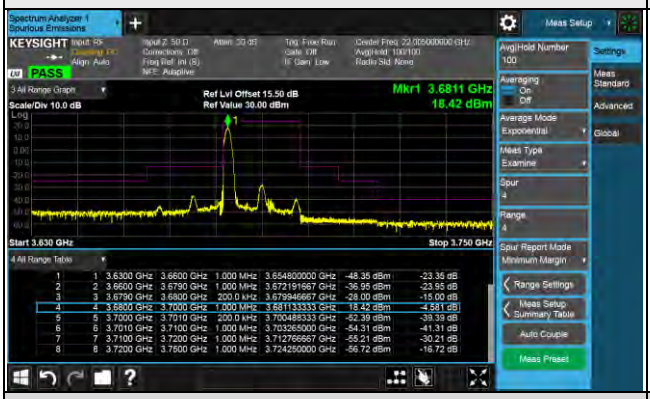
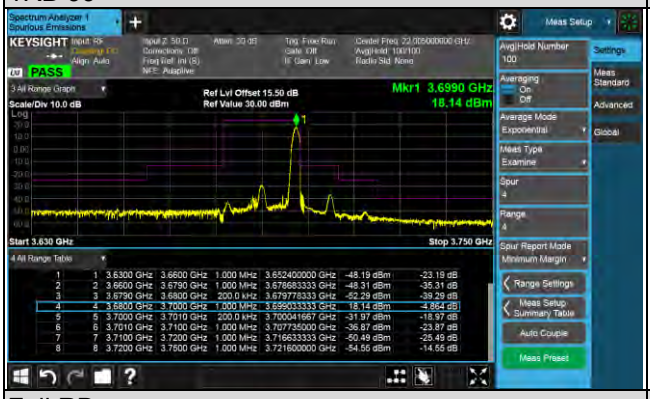
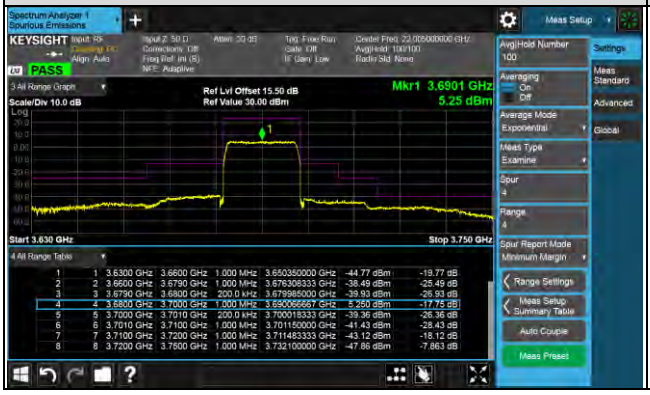
LTE Band 48, Channel Bandwidth 15MHz	
Channel 55990 (3625.0MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

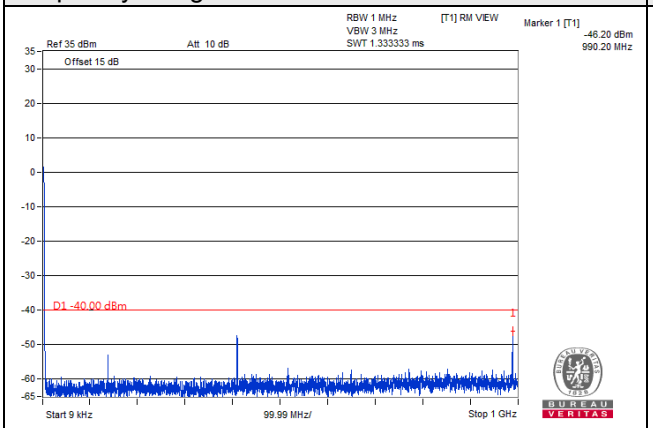
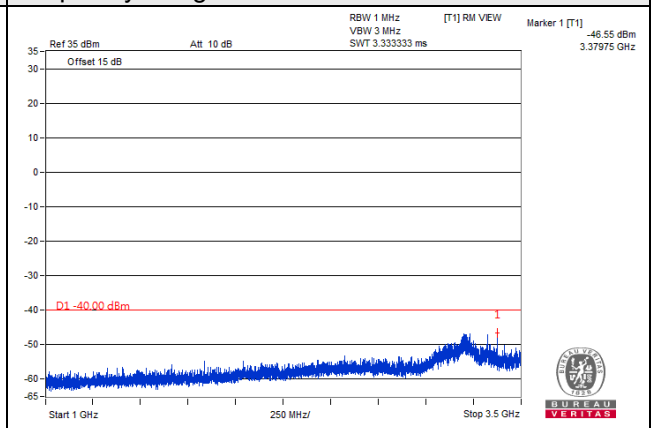
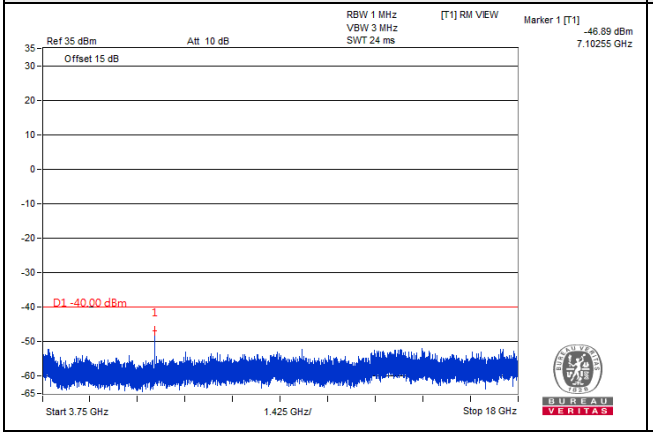
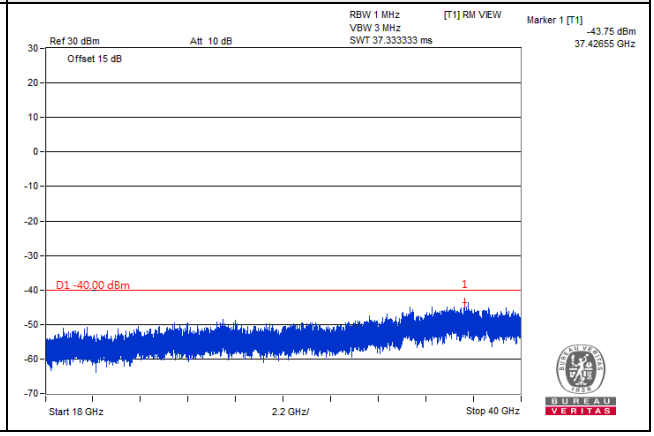
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

LTE Band 48, Channel Bandwidth 15MHz	
Channel 56665 (3692.50MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

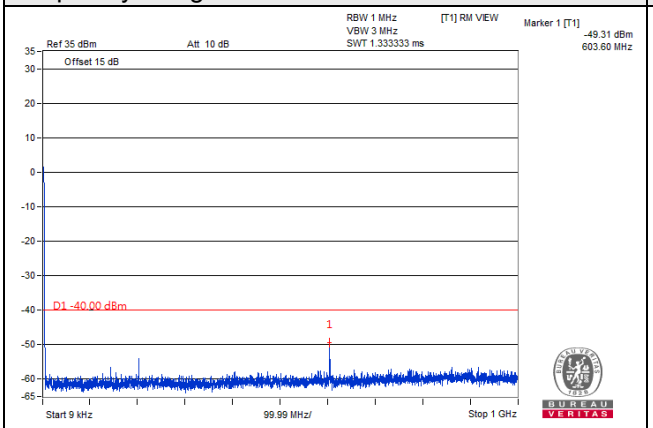
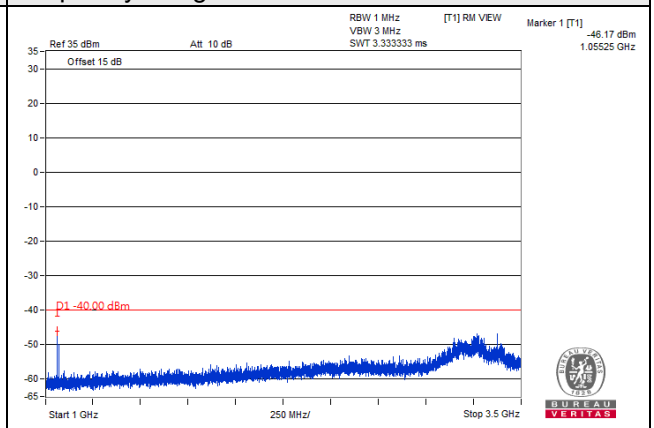
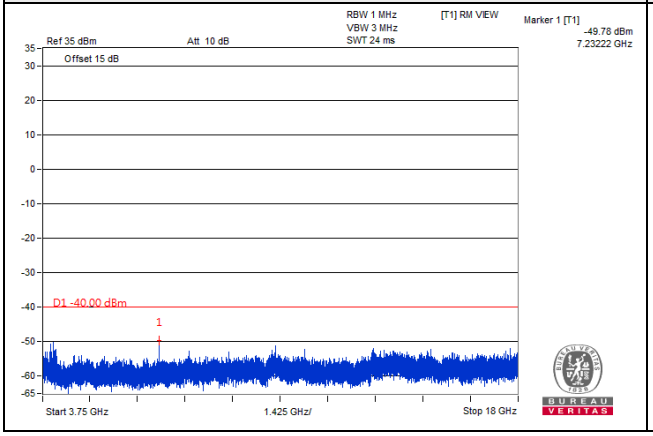
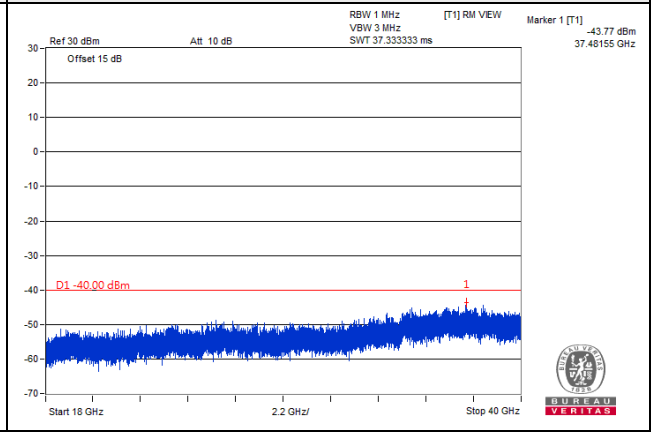
Note: The signal at 9 kHz is IF signal from spectrum analyzer.

LTE Band 48, Channel Bandwidth 20MHz	
Channel 55340 (3560.0MHz)	Channel 55990 (3625.0MHz)
1RB	1RB
	
1RB 99	1RB 99
	
Full RB	Full RB
	

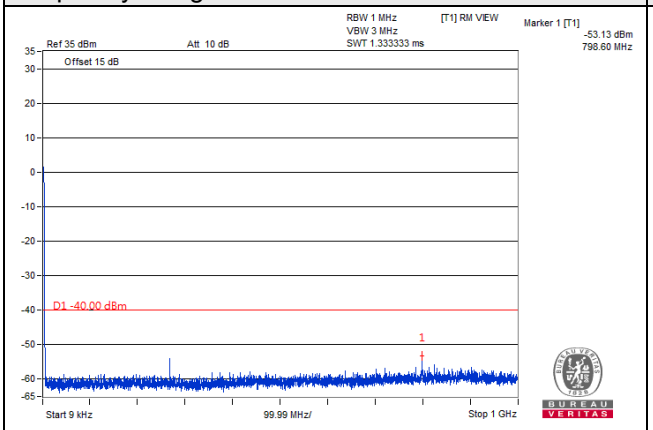
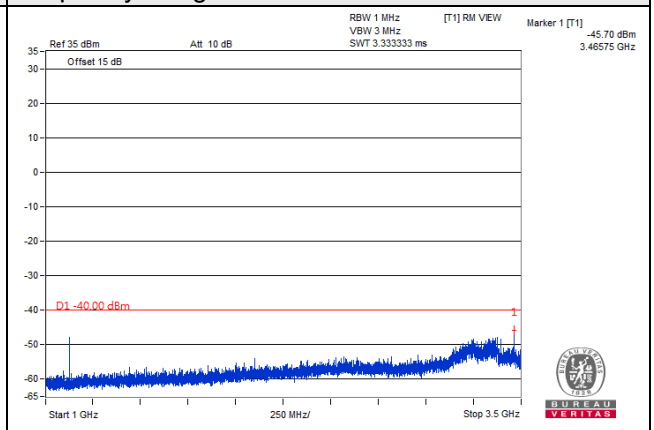
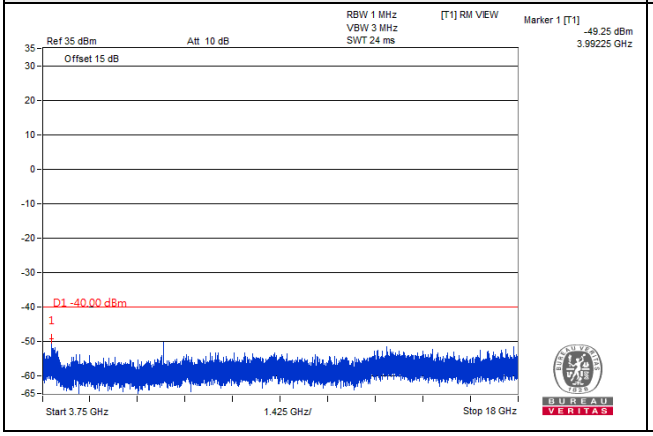
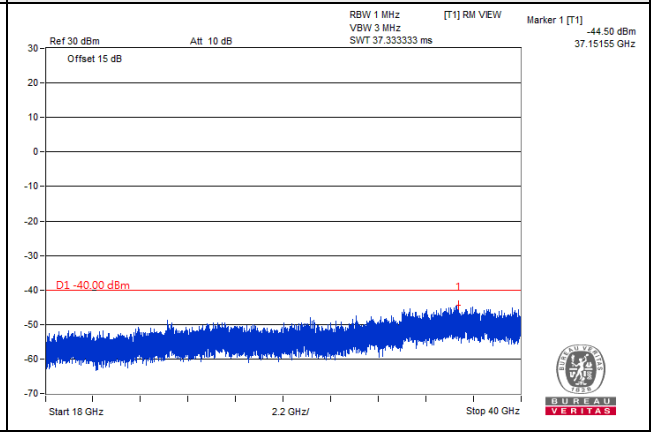
LTE Band 48, Channel Bandwidth 20MHz	
Channel 56640 (3690.0MHz)	
1RB	
	
1RB 99	
	
Full RB	
	

LTE Band 48, Channel Bandwidth 20MHz	
Channel 55340 (3560.0MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

Note: The signal at 9 kHz is IF signal from spectrum analyzer.

LTE Band 48, Channel Bandwidth 20MHz	
Channel 55990 (3625.0MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

Note: The signal at 9 kHz is IF signal from spectrum analyzer.

LTE Band 48, Channel Bandwidth 20MHz	
Channel 56640 (3690.0MHz)	
Frequency Range: 9 kHz ~ 1 GHz	Frequency Range: 1 GHz ~ 3.5 GHz
	
Frequency Range: 3.75 GHz ~ 18 GHz	Frequency Range: 18 GHz ~ 40 GHz
	

Note: The signal at 9 kHz is IF signal from spectrum analyzer.

3.11 Radiated Emission Measurement

3.11.1 Limits of Radiated Emission Measurement

The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz.

3.11.2 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

3.11.3 Test Procedures

a. Substitution method is used for EIRP measurement. In the semi-anechoic chamber, EUT placed on the 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn. Correction Factor (includes EIRP and ERP unit conversion factor) = Antenna gain of substitution horn. – Tx cable loss. Measurement method refers to ANSI C63.26 section 5.5.3.2.

c. ERP power can be calculated form EIRP power by subtracting the gain of dipole, ERP power = EIRP power - 2.15dBi.

Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:

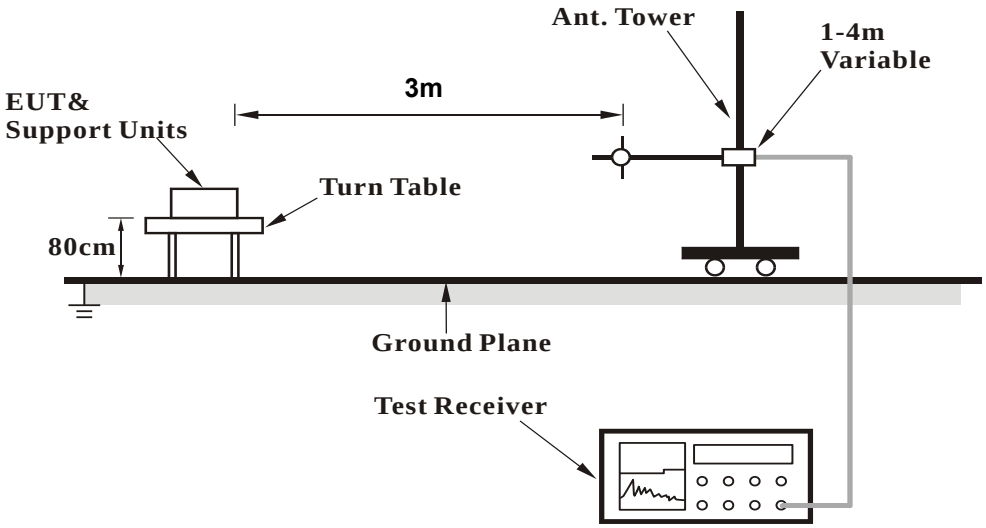
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

3.11.4 Deviation from Test Standard

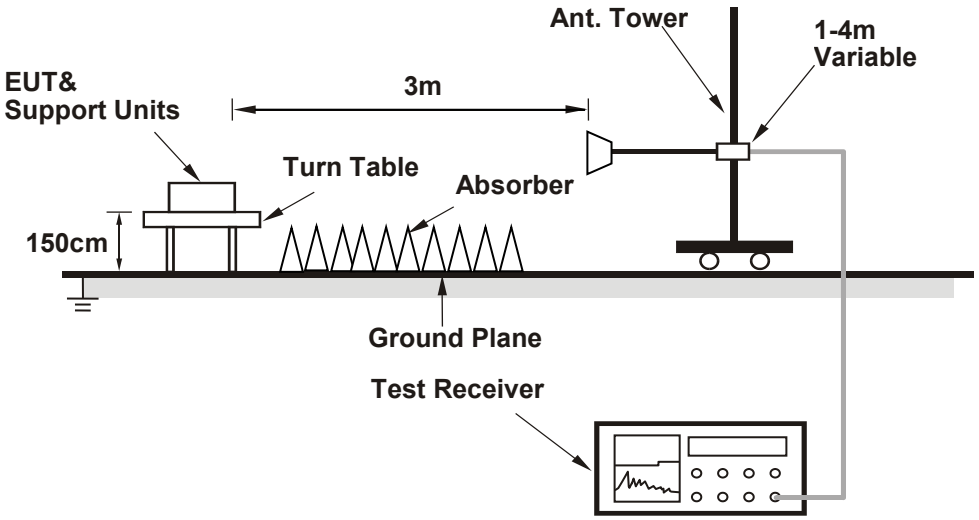
No deviation.

3.11.5 Test Set Up

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

3.11.6 Test Results

Below 1GHz Data：

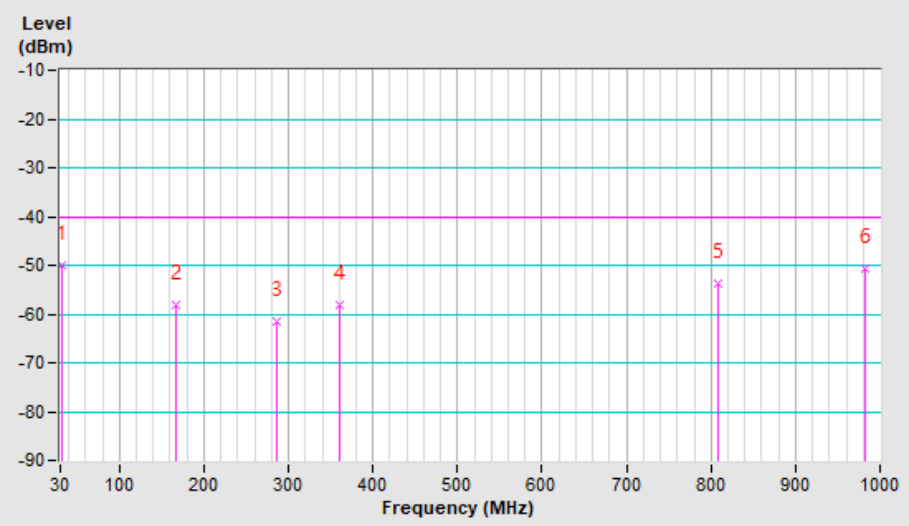
LTE Band 48

Channel Bandwidth: 5 MHz / QPSK

Mode	TX channel 55265 (3552.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	32.81	-53.30	-38.20	-11.80	-50.00	-40.00	-10.00
2	167.77	-51.70	-59.60	1.30	-58.30	-40.00	-18.30
3	285.86	-58.00	-66.60	5.20	-61.40	-40.00	-21.40
4	360.36	-55.50	-63.40	5.20	-58.20	-40.00	-18.20
5	807.41	-59.20	-57.70	4.00	-53.70	-40.00	-13.70
6	981.72	-58.30	-54.50	3.90	-50.60	-40.00	-10.60

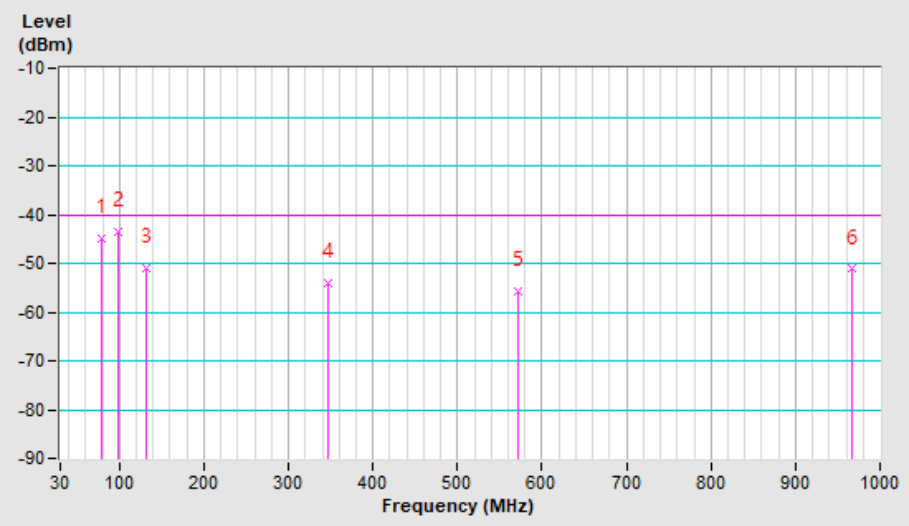
Remarks:
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).



Mode	TX channel 55265 (3552.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	79.20	-41.10	-42.80	-2.00	-44.80	-40.00	-4.80
2	**97.48**	**-37.90**	**-44.50**	**1.00**	**-43.50**	**-40.00**	**-3.50**
3	131.22	-45.70	-50.80	-0.10	-50.90	-40.00	-10.90
4	347.71	-52.60	-59.20	5.20	-54.00	-40.00	-14.00
5	572.64	-57.70	-60.20	4.50	-55.70	-40.00	-15.70
6	967.67	-60.40	-55.10	3.90	-51.20	-40.00	-11.20

Remarks:
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).



Above 1GHz

LTE Band 48, Channel Bandwidth 5MHz

Mode	TX channel 55265 (3552.5MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7105.00	-53.70	-51.00	4.70	-46.30	-40.00	-6.30
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7105.00	-58.70	-52.80	4.70	-48.10	-40.00	-8.10

Remarks:
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).

Mode	TX channel 55990 (3625.0MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7250.00	-53.90	-51.00	4.50	-46.50	-40.00	-6.50
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7250.00	-60.10	-54.00	4.50	-49.50	-40.00	-9.50

Remarks:
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).

Mode	TX channel 56715 (3697.5MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7395.00	-54.00	-50.90	4.30	-46.60	-40.00	-6.60
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7395.00	-59.50	-53.20	4.30	-48.90	-40.00	-8.90

Remarks:
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).

LTE Band 48, Channel Bandwidth 20MHz

Mode	TX channel 55340 (3560.0MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7120.00	-53.60	-50.90	4.70	-46.20	-40.00	-6.20
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7120.00	-59.60	-53.70	4.70	-49.00	-40.00	-9.00

Remarks:
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).

Mode	TX channel 55990 (3625.00MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7250.00	-53.10	-50.20	4.50	-45.70	-40.00	-5.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7250.00	-60.00	-53.90	4.50	-49.40	-40.00	-9.40

Remarks:
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).

Mode	TX channel 56640 (3690.00MHz)	Frequency Range	1GHz ~ 40GHz
Environmental Conditions	23deg. C, 67%RH	Input Power	120Vac, 60Hz
Tested By	Adair Peng		

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7380.00	-53.30	-50.20	4.30	-45.90	-40.00	-5.90
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	7380.00	-58.40	-52.10	4.30	-47.80	-40.00	-7.80

Remarks:
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).

4 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

--- END ---