FCC Test Report
(Part 96: CA mode)

Report No.:	RF200605C24-18
FCC ID:	V65E7110
Test Model:	E7110
Received Date:	Jun. 29, 2020
Test Date:	Nov. 02 ~ Nov. 12, 2020
Issued Date:	Nov. 19, 2020

Applicant:	Kyocera Corporation ℅ 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

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Release Control Record

Issue No.	Description	Date Issued
RF200605C24-18	Original release	Nov. 19, 2020

1 Certificate of Conformity

Product:	Smart Phone
Brand:	Kyocera
Test Model:	E7110
Sample Status:	Identical Prototype
Applicant:	Kyocera Corporation ℅ Kyocera International, Inc.
Test Date:	Nov. 02 ~ Nov. 12, 2020
Standards:	47 CFR FCC 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 : Pettie Chen , **Date:** Nov. 19, 2020

Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Nov. 19, 2020

Bruce Chen / 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	Refer to Note 2
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 -4.3dB at 53.90MHz.

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. LTE CA mode is similar to digital modulation in LTE single frequency band, so please refer to BV CPS report no.: RF200109E02-15 for the modulation characteristics data of CA mode.

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 / 12 Vdc (Adapter)			
Modulation Type	QPSK, 16QAM, 64QAM			
Operating Frequency	LTE Band 48C	3560 ~ 3690 MHz		
Max. EIRP Power		QPSK	16QAM	64QAM
	LTE Band 48C (Full Power) (20MHz+20MHz)	177.828mW (22.5dBm)	141.254mW (21.5dBm)	128.825mW (21.1dBm)
	LTE Band 48C (Per 10M Power) (20MHz+20MHz)	173.780mW (22.4dBm)	134.896mW (21.3dBm)	114.815mW (20.6dBm)
Emission Designator	LTE Band 48C (20MHz+20MHz)	37M7G7D	37M7D7W	37M6D7W
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	1.0m

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.
4. For CA mode configuration, please consult the manufacturer to declare the test mode.
5. E-UTRA CA configuration / Bandwidth combination set.

E-UTRA CA configuration / Bandwidth combination set					
E-UTRA CA configuration	Uplink CA configurations	Component carriers in order of increasing carrier frequency		Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_48C	CA_48C	5, 10, 15, 20	20	40	0
		20	5, 10, 15		

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:

LTE Band 48 (CA 48C)

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Maximum Output Power	55340 to 56442 55538 to 56640	55340 (3560.0MHz)+ 55538 (3579.8MHz), 55891 (3615.1MHz)+ 56089 (3634.9MHz), 56642 (3670.2MHz)+ 56640 (3690.0MHz)	20MHz+20MHz	QPSK / 16QAM / 64QAM
	55340 to 56491 55511 to 56662	55340 (3560.0MHz)+ 55511 (3577.1MHz), 55916 (3617.6MHz)+ 56087 (3634.7MHz), 56491 (3675.1MHz)+ 56662 (3692.2MHz)	20MHz+15MHz	QPSK / 16QAM / 64QAM
	55340 to 56541 55484 to 56685	55340 (3560.0MHz)+ 55484 (3574.4MHz), 55941 (3620.1MHz)+ 56085 (3634.5MHz), 56541 (3680.1MHz)+ 56685 (3694.5MHz)	20MHz+10MHz	QPSK / 16QAM / 64QAM
	55340 to 56590 55457 to 56707	55340 (3560.0MHz)+ 55457 (3571.7MHz), 55965 (3622.5MHz)+ 56082 (3634.2MHz), 56590 (3685.0MHz)+ 56707 (3696.7MHz)	20MHz+5MHz	QPSK / 16QAM / 64QAM
	55273 to 56523 55390 to 56640	55273 (3553.3MHz)+ 55390 (3565.0MHz), 55898 (3615.8MHz)+ 56015 (3627.5MHz), 56523 (3678.3MHz)+ 56640 (3690.0MHz)	5MHz+20MHz	QPSK / 16QAM / 64QAM
	55295 to 56496 55439 to 56640	55295 (3555.5MHz)+ 55439 (3569.9MHz), 55896 (3615.6MHz)+ 56040 (3630.0MHz), 56496 (3675.6MHz)+ 56640 (3690.0MHz)	10MHz+20MHz	QPSK / 16QAM / 64QAM
	55318 to 56469 55489 to 56640	55318 (3557.8MHz)+ 55489 (3574.9MHz), 55893 (3615.3MHz)+ 56064 (3632.4MHz), 56469 (3672.9MHz)+ 56640 (3690.0MHz)	15MHz+20MHz	QPSK / 16QAM / 64QAM
Frequency Stability	55340 to 56442 55538 to 56640	55891 (3615.1MHz)+ 56089 (3634.9MHz)	20MHz+20MHz	QPSK

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Occupied Bandwidth	55340 to 56442 55538 to 56640	55340 (3560.0MHz)+ 55538 (3579.8MHz), 55891 (3615.1MHz)+ 56089 (3634.9MHz), 56642 (3670.2MHz)+ 56640 (3690.0MHz)	20MHz+20MHz	QPSK / 16QAM / 64QAM
	55340 to 56491 55511 to 56662	55340 (3560.0MHz)+ 55511 (3577.1MHz), 55916 (3617.6MHz)+ 56087 (3634.7MHz), 56491 (3675.1MHz)+ 56662 (3692.2MHz)	20MHz+15MHz	QPSK / 16QAM / 64QAM
	55340 to 56541 55484 to 56685	55340 (3560.0MHz)+ 55484 (3574.4MHz), 55941 (3620.1MHz)+ 56085 (3634.5MHz), 56541 (3680.1MHz)+ 56685 (3694.5MHz)	20MHz+10MHz	QPSK / 16QAM / 64QAM
	55340 to 56590 55457 to 56707	55340 (3560.0MHz)+ 55457 (3571.7MHz), 55965 (3622.5MHz)+ 56082 (3634.2MHz), 56590 (3685.0MHz)+ 56707 (3696.7MHz)	20MHz+5MHz	QPSK / 16QAM / 64QAM
	55273 to 56523 55390 to 56640	55273 (3553.3MHz)+ 55390 (3565.0MHz), 55898 (3615.8MHz)+ 56015 (3627.5MHz), 56523 (3678.3MHz)+ 56640 (3690.0MHz)	5MHz+20MHz	QPSK / 16QAM / 64QAM
	55295 to 56496 55439 to 56640	55295 (3555.5MHz)+ 55439 (3569.9MHz), 55896 (3615.6MHz)+ 56040 (3630.0MHz), 56496 (3675.6MHz)+ 56640 (3690.0MHz)	10MHz+20MHz	QPSK / 16QAM / 64QAM
	55318 to 56469 55489 to 56640	55318 (3557.8MHz)+ 55489 (3574.9MHz), 55893 (3615.3MHz)+ 56064 (3632.4MHz), 56469 (3672.9MHz)+ 56640 (3690.0MHz)	15MHz+20MHz	QPSK / 16QAM / 64QAM
Peak to Average Ratio	55340 to 56442 55538 to 56640	55340 (3560.0MHz)+ 55538 (3579.8MHz), 55891 (3615.1MHz)+ 56089 (3634.9MHz), 56642 (3670.2MHz)+ 56640 (3690.0MHz)	20MHz+20MHz	QPSK
Conducted Emission	55340 to 56442 55538 to 56640	55340 (3560.0MHz)+ 55538 (3579.8MHz), 55891 (3615.1MHz)+ 56089 (3634.9MHz), 56642 (3670.2MHz)+ 56640 (3690.0MHz)	20MHz+20MHz	QPSK
Radiated Emission Below 1GHz	55340 to 56442 55538 to 56640	55340 (3560.0MHz)+ 55538 (3579.8MHz)	20MHz+20MHz	QPSK
Radiated Emission Above 1GHz	55340 to 56442 55538 to 56640	55340 (3560.0MHz)+ 55538 (3579.8MHz), 55891 (3615.1MHz)+ 56089 (3634.9MHz), 56642 (3670.2MHz)+ 56640 (3690.0MHz)	20MHz+20MHz	QPSK

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 1 GHz, choose the maximum EIRP power worst mode for final test.
3. LTE CA mode is similar to digital modulation in LTE single frequency band, so please refer to BV CPS report no.: RF200605C24-15 for the modulation characteristics data of CA mode.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
Maximum Output Power	25deg. C, 70%RH	120Vac, 60Hz	Getaz Yang
Modulation characteristics	25deg. C, 70%RH	120Vac, 60Hz	Getaz Yang
Frequency Stability	25deg. C, 70%RH	120Vac, 60Hz	Getaz Yang
Occupied Bandwidth	25deg. C, 70%RH	120Vac, 60Hz	Getaz Yang
Peak to Average Ratio	25deg. C, 70%RH	120Vac, 60Hz	Getaz Yang
Condcudeted Emission	25deg. C, 70%RH	120Vac, 60Hz	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. The following support units or accessories were used to form a representative test configuration during the tests.

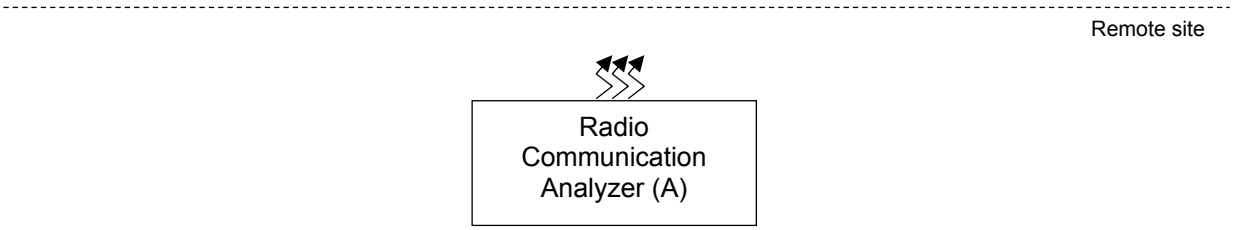
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Radio Communication Analyzer	Anritsu	MT8821C	6261806803	NA	-
B.	Earphone	APPLE	A1748	NA	NA	-

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB cable	1	1.0	Y	0	Accessory
2.	Audio cable	1	1.15	N	0	-

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.

4 Test Types and Results

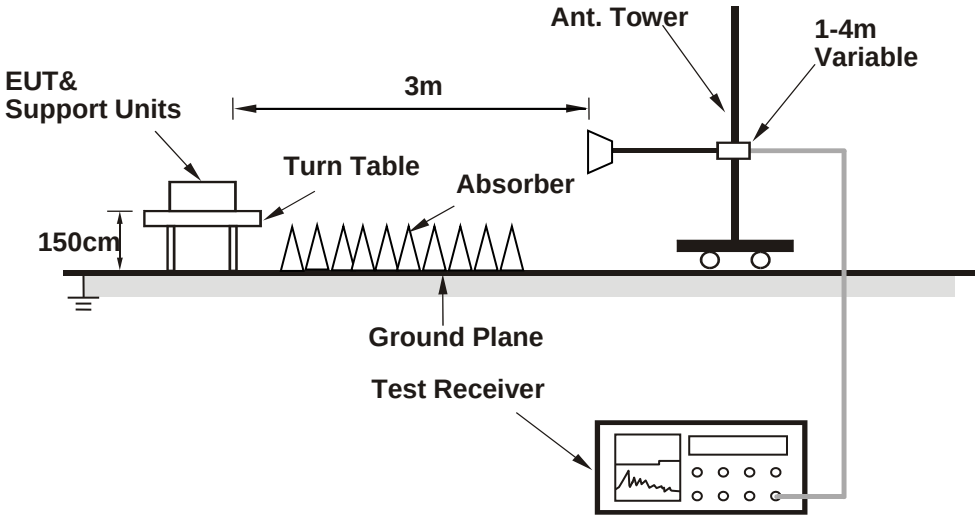
4.1 Maximum Output Power Measurement

4.1.1 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

4.1.2 Test Setup

Radiated Measurement Method



4.1.3 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. 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
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 07, 2019	Nov. 06, 2020
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
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 WOKEN With 5dB PAD	8D-FB	Cable-CH4-01	Aug. 16, 2020	Aug. 15, 2021
RF Coaxial Cable EMCI	EMC102-KM-KM-3000	150929	Aug. 16, 2020	Aug. 15, 2021
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	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 BV ADT	TT100	TT93021703	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
DC power supply	U8002A	MY56330015	NA	NA
Radio Communication Analyzer Anritsu	MT8821C	6201462755	Feb. 13, 2020	Feb. 12, 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.

4.1.4 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.
12. 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.
13. 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.
14. 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.
15. Measurement method refers to ANSI C63.26 section 5.2.7 & 5.2.4.

4.1.5 Deviation from Test Standard

No deviation.

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results

Conducted Output Power (dBm)

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

LTE Band 48 (CA 48C)_Full Power

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_48C	48	20	QPSK	1	0	55340	3560	48	20	QPSK	1	99	55538	3579.8	16.08
					1	99						1	0			24.40
		48	20	QPSK	1	0	55891	3615.1	48	20	QPSK	1	99	56089	3634.9	15.77
					1	99						1	0			24.15
		48	20	QPSK	1	0	56442	3670.2	48	20	QPSK	1	99	56640	3690	15.92
					1	99						1	0			24.31
Intra Band Conti-guous	CA_48C	48	20	QPSK	1	0	55340	3560	48	15	QPSK	1	99	55511	3577.1	15.83
					1	99						1	0			24.23
		48	20	QPSK	1	0	55916	3617.6	48	15	QPSK	1	99	56087	3634.7	15.34
					1	99						1	0			24.13
		48	20	QPSK	1	0	56491	3675.1	48	15	QPSK	1	99	56662	3692.2	15.15
					1	99						1	0			23.96
Intra Band Conti-guous	CA_48C	48	20	QPSK	1	0	55340	3560	48	10	QPSK	1	99	55484	3574.4	15.70
					1	99						1	0			24.21
		48	20	QPSK	1	0	55941	3620.1	48	10	QPSK	1	99	56085	3634.5	15.18
					1	99						1	0			24.08
		48	20	QPSK	1	0	56541	3680.1	48	10	QPSK	1	99	56685	3694.5	14.76
					1	99						1	0			24.11
Intra Band Conti-guous	CA_48C	48	20	QPSK	1	0	55340	3560	48	5	QPSK	1	24	55457	3571.7	15.53
					1	99						1	0			24.25
		48	20	QPSK	1	0	55965	3622.5	48	5	QPSK	1	24	56082	3634.2	15.69
					1	99						1	0			23.83
		48	20	QPSK	1	0	56590	3685	48	5	QPSK	1	24	56707	3696.7	15.52
					1	99						1	0			23.65
Intra Band Conti-guous	CA_48C	48	15	QPSK	1	0	55318	3557.8	48	20	QPSK	1	99	55489	3574.9	15.54
					1	74						1	0			24.24
		48	15	QPSK	1	0	55893	3615.3	48	20	QPSK	1	99	56064	3632.4	15.42
					1	74						1	0			23.53
		48	15	QPSK	1	0	56469	3672.9	48	20	QPSK	1	99	56640	3690	15.41
					1	74						1	0			24.29
Intra Band Conti-guous	CA_48C	48	10	QPSK	1	0	55295	3555.5	48	20	QPSK	1	99	55439	3569.9	15.55
					1	49						1	0			24.18
		48	10	QPSK	1	0	55896	3615.6	48	20	QPSK	1	99	56040	3630	15.29
					1	49						1	0			23.49
		48	10	QPSK	1	0	56496	3675.6	48	20	QPSK	1	99	56640	3690	15.50
					1	49						1	0			23.74
Intra Band Conti-guous	CA_48C	48	5	QPSK	1	0	55273	3553.3	48	20	QPSK	1	99	55390	3565	15.33
					1	24						1	0			24.34
		48	5	QPSK	1	0	55898	3615.8	48	20	QPSK	1	99	56015	3627.5	15.35
					1	24						1	0			23.97
		48	5	QPSK	1	0	56523	3678.3	48	20	QPSK	1	99	56640	3690	15.54
					1	24						1	0			24.25

Confugure	Combination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Contiguous	CA_48C	48	20	16QAM	1	0	55340	3560	48	20	16QAM	1	99	55538	3579.8	15.17
					1	99						1	0			23.61
		48	20	16QAM	1	0	55891	3615.1	48	20	16QAM	1	99	56089	3634.9	14.87
					1	99						1	0			23.28
		48	20	16QAM	1	0	56442	3670.2	48	20	16QAM	1	99	56640	3690	15.12
					1	99						1	0			23.44
Intra Band Contiguous	CA_48C	48	20	16QAM	1	0	55340	3560	48	15	16QAM	1	99	55511	3577.1	14.96
					1	99						1	0			23.41
		48	20	16QAM	1	0	55916	3617.6	48	15	16QAM	1	99	56087	3634.7	14.39
					1	99						1	0			23.24
		48	20	16QAM	1	0	56491	3675.1	48	15	16QAM	1	99	56662	3692.2	14.33
					1	99						1	0			23.20
Intra Band Contiguous	CA_48C	48	20	16QAM	1	0	55340	3560	48	10	16QAM	1	99	55484	3574.4	14.83
					1	99						1	0			23.49
		48	20	16QAM	1	0	55941	3620.1	48	10	16QAM	1	99	56085	3634.5	14.80
					1	99						1	0			23.20
		48	20	16QAM	1	0	56541	3680.1	48	10	16QAM	1	99	56685	3694.5	15.00
					1	99						1	0			23.35
Intra Band Contiguous	CA_48C	48	20	16QAM	1	0	55340	3560	48	5	16QAM	1	24	55457	3571.7	14.59
					1	99						1	0			23.57
		48	20	16QAM	1	0	55965	3622.5	48	5	16QAM	1	24	56082	3634.2	14.67
					1	99						1	0			23.20
		48	20	16QAM	1	0	56590	3685	48	5	16QAM	1	24	56707	3696.7	14.59
					1	99						1	0			23.40
Intra Band Contiguous	CA_48C	48	15	16QAM	1	0	55318	3557.8	48	20	16QAM	1	99	55489	3574.9	14.69
					1	74						1	0			23.56
		48	15	16QAM	1	0	55893	3615.3	48	20	16QAM	1	99	56064	3632.4	14.53
					1	74						1	0			23.17
		48	15	16QAM	1	0	56469	3672.9	48	20	16QAM	1	99	56640	3690	14.55
					1	74						1	0			23.27
Intra Band Contiguous	CA_48C	48	10	16QAM	1	0	55295	3555.5	48	20	16QAM	1	99	55439	3569.9	14.61
					1	49						1	0			23.56
		48	10	16QAM	1	0	55896	3615.6	48	20	16QAM	1	99	56040	3630	14.45
					1	49						1	0			23.25
		48	10	16QAM	1	0	56496	3675.6	48	20	16QAM	1	99	56640	3690	14.71
					1	49						1	0			23.24
Intra Band Contiguous	CA_48C	48	5	16QAM	1	0	55273	3553.3	48	20	16QAM	1	99	55390	3565	14.42
					1	24						1	0			23.42
		48	5	16QAM	1	0	55898	3615.8	48	20	16QAM	1	99	56015	3627.5	14.51
					1	24						1	0			23.22
		48	5	16QAM	1	0	56523	3678.3	48	20	16QAM	1	99	56640	3690	14.70
					1	24						1	0			23.42

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_48C	48	20	64QAM	1	0	55340	3560	48	20	64QAM	1	99	55538	3579.8	13.78
					1	99						1	0			22.83
		48	20	64QAM	1	0	55891	3615.1	48	20	64QAM	1	99	56089	3634.9	13.91
					1	99						1	0			22.87
		48	20	64QAM	1	0	56442	3670.2	48	20	64QAM	1	99	56640	3690	13.62
					1	99						1	0			22.68
Intra Band Conti-guous	CA_48C	48	20	64QAM	1	0	55340	3560	48	15	64QAM	1	99	55511	3577.1	13.77
					1	99						1	0			22.72
		48	20	64QAM	1	0	55916	3617.6	48	15	64QAM	1	99	56087	3634.7	13.84
					1	99						1	0			22.50
		48	20	64QAM	1	0	56491	3675.1	48	15	64QAM	1	99	56662	3692.2	13.57
					1	99						1	0			22.58
Intra Band Conti-guous	CA_48C	48	20	64QAM	1	0	55340	3560	48	10	64QAM	1	99	55484	3574.4	13.25
					1	99						1	0			20.88
		48	20	64QAM	1	0	55941	3620.1	48	10	64QAM	1	99	56085	3634.5	13.48
					1	99						1	0			22.34
		48	20	64QAM	1	0	56541	3680.1	48	10	64QAM	1	99	56685	3694.5	13.29
					1	99						1	0			21.76
Intra Band Conti-guous	CA_48C	48	20	64QAM	1	0	55340	3560	48	5	64QAM	1	24	55457	3571.7	12.92
					1	99						1	0			21.71
		48	20	64QAM	1	0	55965	3622.5	48	5	64QAM	1	24	56082	3634.2	12.63
					1	99						1	0			22.85
		48	20	64QAM	1	0	56590	3685	48	5	64QAM	1	24	56707	3696.7	13.21
					1	99						1	0			22.10
Intra Band Conti-guous	CA_48C	48	15	64QAM	1	0	55318	3557.8	48	20	64QAM	1	99	55489	3574.9	12.12
					1	74						1	0			21.43
		48	15	64QAM	1	0	55893	3615.3	48	20	64QAM	1	99	56064	3632.4	10.46
					1	74						1	0			21.71
		48	15	64QAM	1	0	56469	3672.9	48	20	64QAM	1	99	56640	3690	11.73
					1	74						1	0			21.80
Intra Band Conti-guous	CA_48C	48	10	64QAM	1	0	55295	3555.5	48	20	64QAM	1	99	55439	3569.9	12.87
					1	49						1	0			21.61
		48	10	64QAM	1	0	55896	3615.6	48	20	64QAM	1	99	56040	3630	12.29
					1	49						1	0			21.56
		48	10	64QAM	1	0	56496	3675.6	48	20	64QAM	1	99	56640	3690	12.40
					1	49						1	0			21.92
Intra Band Conti-guous	CA_48C	48	5	64QAM	1	0	55273	3553.3	48	20	64QAM	1	99	55390	3565	12.68
					1	24						1	0			21.85
		48	5	64QAM	1	0	55898	3615.8	48	20	64QAM	1	99	56015	3627.5	12.50
					1	24						1	0			21.39
		48	5	64QAM	1	0	56523	3678.3	48	20	64QAM	1	99	56640	3690	12.17
					1	24						1	0			21.39

LTE Band 48 (CA 48C)_Per 10M Power

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_48C	48	20	QPSK	1	0	55340	3560	48	20	QPSK	1	99	55538	3579.8	15.75
					1	99						1	0			24.14
		48	20	QPSK	1	0	55891	3615.1	48	20	QPSK	1	99	56089	3634.9	15.41
					1	99						1	0			23.97
		48	20	QPSK	1	0	56442	3670.2	48	20	QPSK	1	99	56640	3690	15.69
					1	99						1	0			24.08
Intra Band Conti-guous	CA_48C	48	20	QPSK	1	0	55340	3560	48	15	QPSK	1	99	55511	3577.1	15.63
					1	99						1	0			24.00
		48	20	QPSK	1	0	55916	3617.6	48	15	QPSK	1	99	56087	3634.7	15.08
					1	99						1	0			23.94
		48	20	QPSK	1	0	56491	3675.1	48	15	QPSK	1	99	56662	3692.2	14.82
					1	99						1	0			23.73
Intra Band Conti-guous	CA_48C	48	20	QPSK	1	0	55340	3560	48	10	QPSK	1	99	55484	3574.4	15.51
					1	99						1	0			24.06
		48	20	QPSK	1	0	55941	3620.1	48	10	QPSK	1	99	56085	3634.5	14.87
					1	99						1	0			23.73
		48	20	QPSK	1	0	56541	3680.1	48	10	QPSK	1	99	56685	3694.5	14.47
					1	99						1	0			23.79
Intra Band Conti-guous	CA_48C	48	20	QPSK	1	0	55340	3560	48	5	QPSK	1	24	55457	3571.7	15.35
					1	99						1	0			23.93
		48	20	QPSK	1	0	55965	3622.5	48	5	QPSK	1	24	56082	3634.2	15.37
					1	99						1	0			23.46
		48	20	QPSK	1	0	56590	3685	48	5	QPSK	1	24	56707	3696.7	15.22
					1	99						1	0			23.37
Intra Band Conti-guous	CA_48C	48	15	QPSK	1	0	55318	3557.8	48	20	QPSK	1	99	55489	3574.9	15.20
					1	74						1	0			23.94
		48	15	QPSK	1	0	55893	3615.3	48	20	QPSK	1	99	56064	3632.4	15.25
					1	74						1	0			23.27
		48	15	QPSK	1	0	56469	3672.9	48	20	QPSK	1	99	56640	3690	15.18
					1	74						1	0			23.94
Intra Band Conti-guous	CA_48C	48	10	QPSK	1	0	55295	3555.5	48	20	QPSK	1	99	55439	3569.9	15.37
					1	49						1	0			23.93
		48	10	QPSK	1	0	55896	3615.6	48	20	QPSK	1	99	56040	3630	15.11
					1	49						1	0			23.34
		48	10	QPSK	1	0	56496	3675.6	48	20	QPSK	1	99	56640	3690	15.17
					1	49						1	0			23.55
Intra Band Conti-guous	CA_48C	48	5	QPSK	1	0	55273	3553.3	48	20	QPSK	1	99	55390	3565	15.05
					1	24						1	0			24.16
		48	5	QPSK	1	0	55898	3615.8	48	20	QPSK	1	99	56015	3627.5	15.10
					1	24						1	0			23.75
		48	5	QPSK	1	0	56523	3678.3	48	20	QPSK	1	99	56640	3690	15.36
					1	24						1	0			24.10

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_48C	48	20	16QAM	1	0	55340	3560	48	20	16QAM	1	99	55538	3579.8	14.89
					1	99						1	0			23.32
		48	20	16QAM	1	0	55891	3615.1	48	20	16QAM	1	99	56089	3634.9	14.63
					1	99						1	0			23.02
		48	20	16QAM	1	0	56442	3670.2	48	20	16QAM	1	99	56640	3690	14.86
					1	99						1	0			23.22
Intra Band Conti-guous	CA_48C	48	20	16QAM	1	0	55340	3560	48	15	16QAM	1	99	55511	3577.1	14.79
					1	99						1	0			23.15
		48	20	16QAM	1	0	55916	3617.6	48	15	16QAM	1	99	56087	3634.7	14.20
					1	99						1	0			23.09
		48	20	16QAM	1	0	56491	3675.1	48	15	16QAM	1	99	56662	3692.2	14.04
					1	99						1	0			23.03
Intra Band Conti-guous	CA_48C	48	20	16QAM	1	0	55340	3560	48	10	16QAM	1	99	55484	3574.4	14.66
					1	99						1	0			23.20
		48	20	16QAM	1	0	55941	3620.1	48	10	16QAM	1	99	56085	3634.5	14.65
					1	99						1	0			22.98
		48	20	16QAM	1	0	56541	3680.1	48	10	16QAM	1	99	56685	3694.5	14.80
					1	99						1	0			23.02
Intra Band Conti-guous	CA_48C	48	20	16QAM	1	0	55340	3560	48	5	16QAM	1	24	55457	3571.7	14.25
					1	99						1	0			23.31
		48	20	16QAM	1	0	55965	3622.5	48	5	16QAM	1	24	56082	3634.2	14.48
					1	99						1	0			23.00
		48	20	16QAM	1	0	56590	3685	48	5	16QAM	1	24	56707	3696.7	14.36
					1	99						1	0			23.06
Intra Band Conti-guous	CA_48C	48	15	16QAM	1	0	55318	3557.8	48	20	16QAM	1	99	55489	3574.9	14.55
					1	74						1	0			23.31
		48	15	16QAM	1	0	55893	3615.3	48	20	16QAM	1	99	56064	3632.4	14.26
					1	74						1	0			22.91
		48	15	16QAM	1	0	56469	3672.9	48	20	16QAM	1	99	56640	3690	14.30
					1	74						1	0			23.04
Intra Band Conti-guous	CA_48C	48	10	16QAM	1	0	55295	3555.5	48	20	16QAM	1	99	55439	3569.9	14.47
					1	49						1	0			23.29
		48	10	16QAM	1	0	55896	3615.6	48	20	16QAM	1	99	56040	3630	14.15
					1	49						1	0			23.13
		48	10	16QAM	1	0	56496	3675.6	48	20	16QAM	1	99	56640	3690	14.51
					1	49						1	0			23.06
Intra Band Conti-guous	CA_48C	48	5	16QAM	1	0	55273	3553.3	48	20	16QAM	1	99	55390	3565	14.26
					1	24						1	0			23.18
		48	5	16QAM	1	0	55898	3615.8	48	20	16QAM	1	99	56015	3627.5	14.30
					1	24						1	0			22.91
		48	5	16QAM	1	0	56523	3678.3	48	20	16QAM	1	99	56640	3690	14.51
					1	24						1	0			23.16

Con fugure	Com-bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
																Total
Intra Band Conti-guous	CA_48C	48	20	64QAM	1	0	55340	3560	48	20	64QAM	1	99	55538	3579.8	13.47
					1	99						1	0			22.65
		48	20	64QAM	1	0	55891	3615.1	48	20	64QAM	1	99	56089	3634.9	13.67
					1	99						1	0			22.63
		48	20	64QAM	1	0	56442	3670.2	48	20	64QAM	1	99	56640	3690	13.33
					1	99						1	0			22.45
Intra Band Conti-guous	CA_48C	48	20	64QAM	1	0	55340	3560	48	15	64QAM	1	99	55511	3577.1	13.49
					1	99						1	0			22.53
		48	20	64QAM	1	0	55916	3617.6	48	15	64QAM	1	99	56087	3634.7	13.65
					1	99						1	0			22.18
		48	20	64QAM	1	0	56491	3675.1	48	15	64QAM	1	99	56662	3692.2	13.34
					1	99						1	0			22.30
Intra Band Conti-guous	CA_48C	48	20	64QAM	1	0	55340	3560	48	10	64QAM	1	99	55484	3574.4	13.02
					1	99						1	0			20.68
		48	20	64QAM	1	0	55941	3620.1	48	10	64QAM	1	99	56085	3634.5	13.20
					1	99						1	0			22.12
		48	20	64QAM	1	0	56541	3680.1	48	10	64QAM	1	99	56685	3694.5	13.10
					1	99						1	0			21.40
Intra Band Conti-guous	CA_48C	48	20	64QAM	1	0	55340	3560	48	5	64QAM	1	24	55457	3571.7	12.53
					1	99						1	0			21.49
		48	20	64QAM	1	0	55965	3622.5	48	5	64QAM	1	24	56082	3634.2	12.39
					1	99						1	0			22.65
		48	20	64QAM	1	0	56590	3685	48	5	64QAM	1	24	56707	3696.7	13.04
					1	99						1	0			21.95
Intra Band Conti-guous	CA_48C	48	15	64QAM	1	0	55318	3557.8	48	20	64QAM	1	99	55489	3574.9	11.86
					1	74						1	0			21.18
		48	15	64QAM	1	0	55893	3615.3	48	20	64QAM	1	99	56064	3632.4	10.27
					1	74						1	0			21.49
		48	15	64QAM	1	0	56469	3672.9	48	20	64QAM	1	99	56640	3690	11.46
					1	74						1	0			21.54
Intra Band Conti-guous	CA_48C	48	10	64QAM	1	0	55295	3555.5	48	20	64QAM	1	99	55439	3569.9	12.64
					1	49						1	0			21.44
		48	10	64QAM	1	0	55896	3615.6	48	20	64QAM	1	99	56040	3630	12.11
					1	49						1	0			21.22
		48	10	64QAM	1	0	56496	3675.6	48	20	64QAM	1	99	56640	3690	12.08
					1	49						1	0			21.66
Intra Band Conti-guous	CA_48C	48	5	64QAM	1	0	55273	3553.3	48	20	64QAM	1	99	55390	3565	12.39
					1	24						1	0			21.61
		48	5	64QAM	1	0	55898	3615.8	48	20	64QAM	1	99	56015	3627.5	12.25
					1	24						1	0			21.23
		48	5	64QAM	1	0	56523	3678.3	48	20	64QAM	1	99	56640	3690	12.01
					1	24						1	0			21.10

EIRP Power (dBm)
LTE Band 48 (CA 48C)_Full Power
Modulation Type: QPSK
Channel Bandwidth: 20MHz+20MHz

MODE	TX channel 55340 (3560.0MHz)+55538 (3579.8MHz), TX channel 55891 (3615.1MHz)+56089 (3634.9MHz), TX channel 56642 (3670.2MHz)+56640 (3690.0MHz)

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	**3569.90**	**-23.2**	**22.0**	**0.5**	**22.5**	**23.0**	**-0.5**
2	3625.00	-23.7	21.9	0.4	22.3	23.0	-0.7
3	3680.10	-24.1	21.6	0.6	22.2	23.0	-0.8
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	3569.90	-30.4	14.9	0.5	15.4	23.0	-7.6
2	3625.00	-30.9	14.6	0.4	15.0	23.0	-8.0
3	3680.10	-31.1	14.5	0.6	15.1	23.0	-7.9

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

Modulation Type: 16QAM
Channel Bandwidth: 20MHz+20MHz

MODE	TX channel 55340 (3560.0MHz)+55538 (3579.8MHz), TX channel 55891 (3615.1MHz)+56089 (3634.9MHz), TX channel 56642 (3670.2MHz)+56640 (3690.0MHz)

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	**3569.90**	**-24.2**	**21.0**	**0.5**	**21.5**	**23.0**	**-1.5**
2	3625.00	-24.7	20.9	0.4	21.3	23.0	-1.7
3	3680.10	-25.2	20.5	0.6	21.1	23.0	-1.9
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	3569.90	-31.4	13.9	0.5	14.4	23.0	-8.6
2	3625.00	-31.9	13.6	0.4	14.0	23.0	-9.0
3	3680.10	-32.1	13.5	0.6	14.1	23.0	-8.9

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

Modulation Type: 64QAM

Channel Bandwidth: 20MHz+20MHz

MODE	TX channel 55340 (3560.0MHz)+55538 (3579.8MHz), TX channel 55891 (3615.1MHz)+56089 (3634.9MHz), TX channel 56642 (3670.2MHz)+56640 (3690.0MHz)

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	**3569.90**	**-24.6**	**20.6**	**0.5**	**21.1**	**23.0**	**-1.9**
2	3625.00	-25.3	20.3	0.4	20.7	23.0	-2.3
3	3680.10	-25.7	20.0	0.6	20.6	23.0	-2.4
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	3569.90	-32.0	13.3	0.5	13.8	23.0	-9.2
2	3625.00	-32.4	13.1	0.4	13.5	23.0	-9.5
3	3680.10	-32.6	13.0	0.6	13.6	23.0	-9.4

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

LTE Band 48 (CA 48C)_Per 10M Power

Modulation Type: QPSK

Channel Bandwidth: 20MHz+20MHz

MODE	TX channel 55340 (3560.0MHz)+55538 (3579.8MHz), TX channel 55891 (3615.1MHz)+56089 (3634.9MHz), TX channel 56642 (3670.2MHz)+56640 (3690.0MHz)

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	**3569.90**	**-23.3**	**21.9**	**0.5**	**22.4**	**23.0**	**-0.6**
2	3625.00	-23.8	21.8	0.4	22.2	23.0	-0.8
3	3680.10	-24.3	21.4	0.6	22.0	23.0	-1.0
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	3569.90	-30.6	14.7	0.5	15.2	23.0	-7.8
2	3625.00	-30.9	14.6	0.4	15.0	23.0	-8.0
3	3680.10	-31.2	14.4	0.6	15.0	23.0	-8.0

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

Modulation Type: 16QAM

Channel Bandwidth: 20MHz+20MHz

MODE	TX channel 55340 (3560.0MHz)+55538 (3579.8MHz), TX channel 55891 (3615.1MHz)+56089 (3634.9MHz), TX channel 56642 (3670.2MHz)+56640 (3690.0MHz)

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	3569.90	-24.4	20.8	0.5	21.3	23.0	-1.7
2	3625.00	-24.9	20.7	0.4	21.1	23.0	-1.9
3	3680.10	-25.3	20.4	0.6	21.0	23.0	-2.0
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	3569.90	-31.8	13.5	0.5	14.0	23.0	-9.0
2	3625.00	-32.4	13.1	0.4	13.5	23.0	-9.5
3	3680.10	-32.6	13.0	0.6	13.6	23.0	-9.4

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

Modulation Type: 64QAM

Channel Bandwidth: 20MHz+20MHz

MODE	TX channel 55340 (3560.0MHz)+55538 (3579.8MHz), TX channel 55891 (3615.1MHz)+56089 (3634.9MHz), TX channel 56642 (3670.2MHz)+56640 (3690.0MHz)

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	3569.90	-25.1	20.1	0.5	20.6	23.0	-2.4
2	3625.00	-25.7	19.9	0.4	20.3	23.0	-2.7
3	3680.10	-26.2	19.5	0.6	20.1	23.0	-2.9
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	3569.90	-32.4	12.9	0.5	13.4	23.0	-9.6
2	3625.00	-32.9	12.6	0.4	13.0	23.0	-10.0
3	3680.10	-33.1	12.5	0.6	13.1	23.0	-9.9

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

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stabiliity Measurement

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

4.2.2 Test Procedure

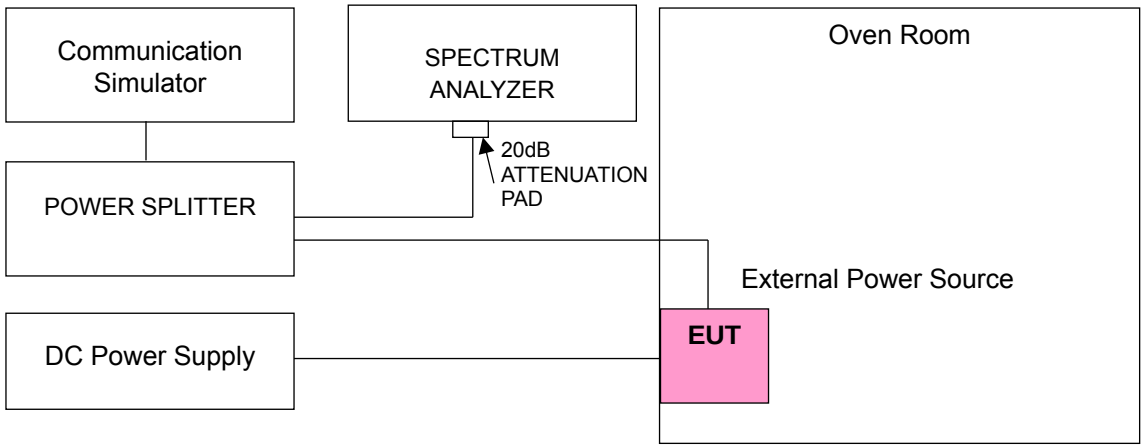
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

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

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

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

4.2.3 Test Setup



4.2.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 48 (CA48C)			
	Channel Bandwidth: 20MHz+20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	3615.100002	0.000	3634.900002	0.000
3.45	3615.100002	0.001	3634.900003	0.001
4.23	3615.100004	0.001	3634.900001	0.000

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

Frequency Error vs. Temperature

Temp. (℃)	LTE Band 48 (CA48C)			
	Channel Bandwidth: 20MHz+20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-20	3615.100003	0.001	3634.900002	0.001
-10	3615.100004	0.001	3634.900003	0.001
0	3615.100001	0.000	3634.900002	0.000
10	3615.099998	-0.001	3634.899997	-0.001
20	3615.099997	-0.001	3634.899996	-0.001
30	3615.099997	-0.001	3634.899998	-0.001
40	3615.099999	0.000	3634.899997	-0.001
50	3615.099996	-0.001	3634.899997	-0.001
60	3615.099999	0.000	3634.899996	-0.001

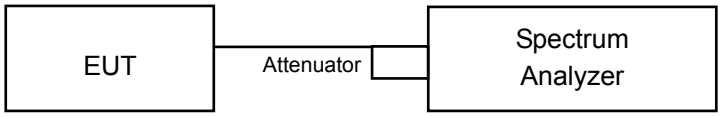
Note: When the EUT temperature is below -20°C, it will shut down and will not work.

4.3 Emission Bandwidth Measurement

4.3.1 Emission Bandwidth Measurement

Reference only

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.3.4 Test Procedure

Occupied Bandwdith:
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.

4.3.5 Deviation fromTest Standard

No deviation.

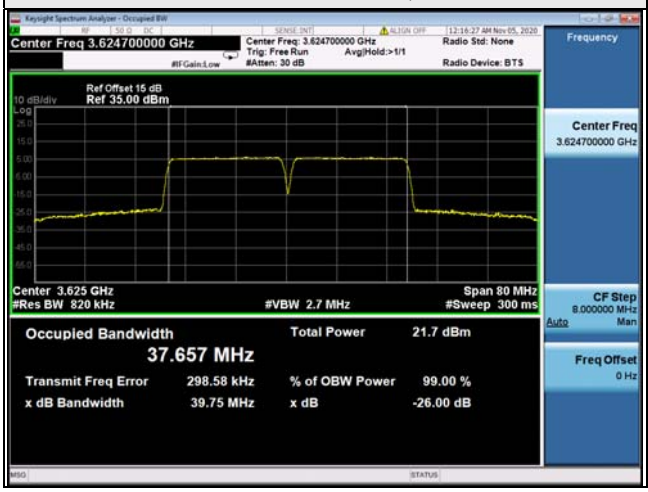
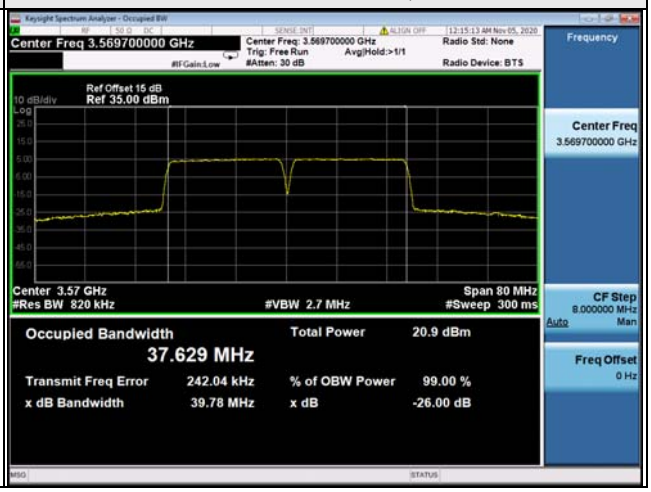
4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

LTE Band 48 (CA 48C)

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK_Full RB	QPSK_Full RB
55340+55538	3560.0+3579.8	37.63	39.78
55891+56089	3615.1+3634.9	37.66	39.75
56442+56640	3670.2+3690.0	37.64	39.75

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+20MHz / QPSK	20MHz+20MHz / QPSK
	

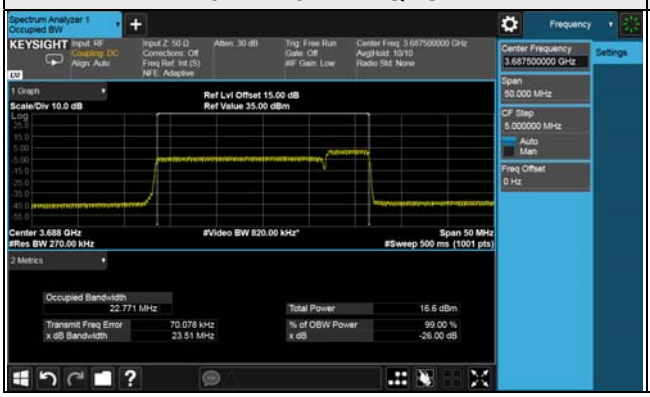
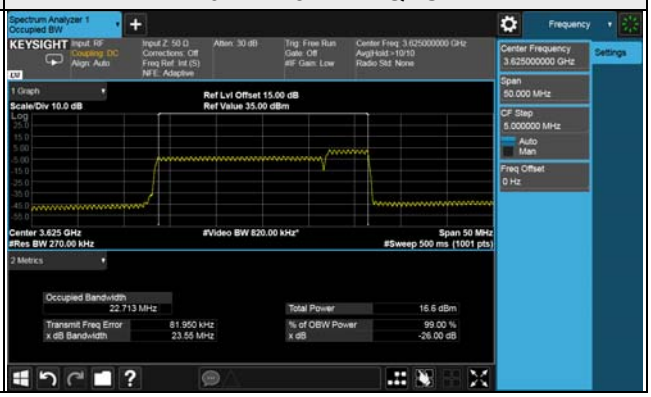
LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+15MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK_Full RB	QPSK_Full RB
55340+55511	3560.0+3577.1	32.52	33.67
55916+56087	3617.6+3634.7	32.55	33.66
56491+56662	3675.1+3692.2	32.55	33.68

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+15MHz / QPSK	20MHz+15MHz / QPSK
	

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+10MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK_Full RB	QPSK_Full RB
55340+55484	3560.0+3574.4	27.63	28.54
55941+56085	3620.1+3634.5	27.63	28.58
56541+56685	3680.1+3694.5	27.64	28.57

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+10MHz / QPSK	20MHz+10MHz / QPSK
	

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+5MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK_Full RB	QPSK_Full RB
55340+55457	3560.0+3571.7	22.74	23.53
55965+56082	3622.5+3634.2	22.71	23.55
56590+56707	3685.0+3696.7	22.77	23.51

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+5MHz / QPSK	20MHz+5MHz / QPSK
	

LTE Band 48 (CA 48C), Channel Bandwidth 5MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK_Full RB	QPSK_Full RB
55273+55390	3553.3+3565.0	22.85	23.99
55898+56015	3615.8+3627.5	22.83	23.98
56523+56640	3678.3+3690.0	22.83	23.97

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
5MHz+20MHz / QPSK	5MHz+20MHz / QPSK
	

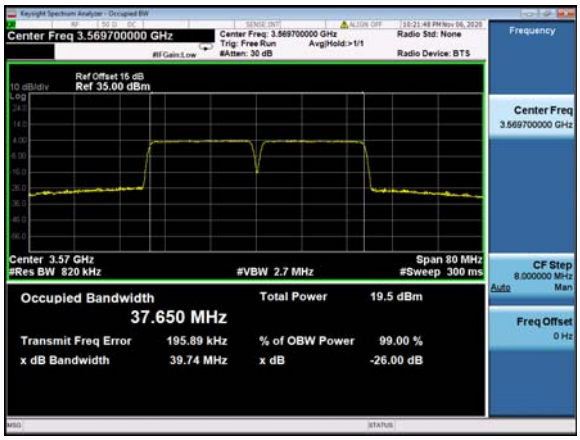
LTE Band 48 (CA 48C), Channel Bandwidth 10MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK_Full RB	QPSK_Full RB
55295+55439	3555.5+3569.9	27.75	29.22
55896+56040	3615.6+3630.0	27.74	29.21
56496+56640	3675.6+3690.0	27.76	29.20

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
10MHz+20MHz / QPSK	10MHz+20MHz / QPSK
	

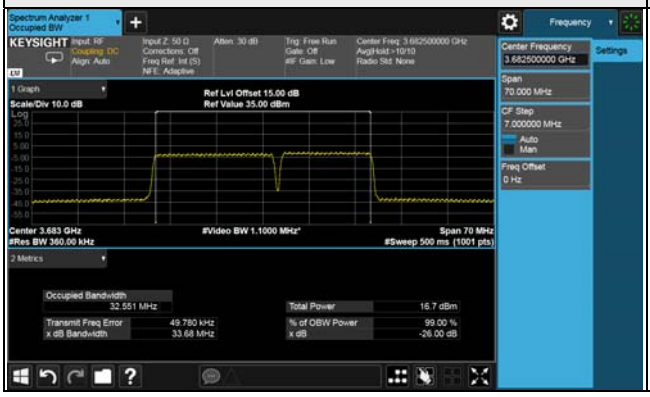
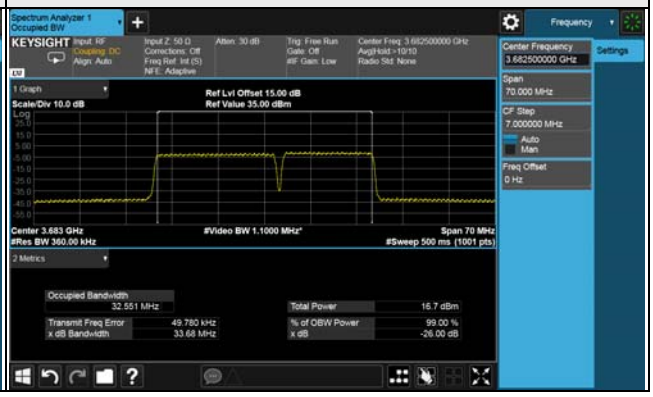
LTE Band 48 (CA 48C), Channel Bandwidth 15MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		QPSK_Full RB	QPSK_Full RB
55318+55489	3557.8+3574.9	32.55	33.67
55893+56064	3615.3+3632.4	32.52	33.68
56469+56640	3672.9+3690.0	32.52	33.69

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
15MHz+20MHz / QPSK	15MHz+20MHz / QPSK
	

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		16QAM_Full RB	16QAM_Full RB
55340+55538	3560.0+3579.8	37.65	39.74
55891+56089	3615.1+3634.9	37.63	39.72
56442+56640	3670.2+3690.0	37.61	39.71

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+20MHz / 16QAM	20MHz+20MHz / 16QAM
	

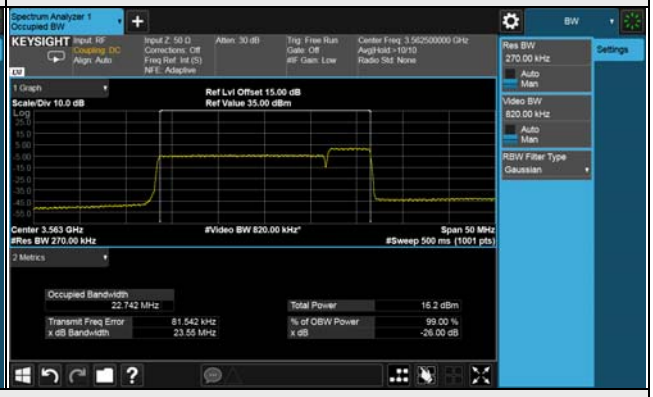
LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+15MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		16QAM_Full RB	16QAM_Full RB
55340+55511	3560.0+3577.1	32.52	33.67
55916+56087	3617.6+3634.7	32.55	33.66
56491+56662	3675.1+3692.2	32.55	33.68

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+15MHz / 16QAM	20MHz+15MHz / 16QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+10MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		16QAM_Full RB	16QAM_Full RB
55340+55484	3560.0+3574.4	27.63	28.55
55941+56085	3620.1+3634.5	27.63	28.58
56541+56685	3680.1+3694.5	27.65	28.57

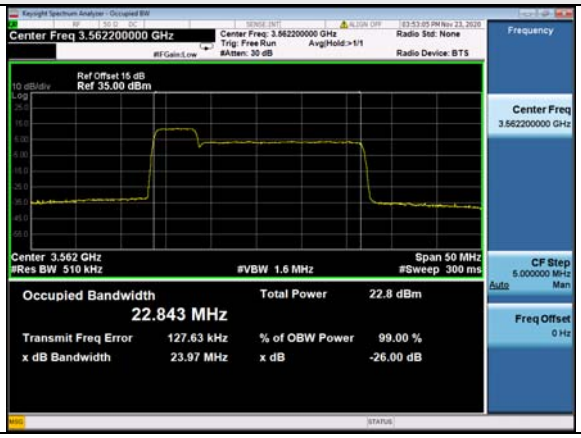
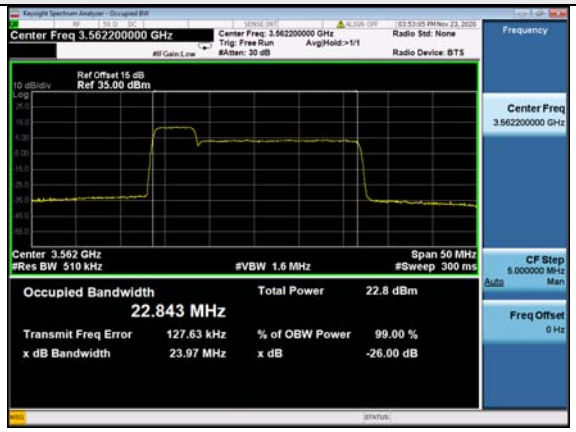
99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+10MHz / 16QAM	20MHz+10MHz / 16QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+5MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		16QAM_Full RB	16QAM_Full RB
55340+55457	3560.0+3571.7	22.74	23.55
55965+56082	3622.5+3634.2	22.77	23.50
56590+56707	3685.0+3696.7	22.76	23.49

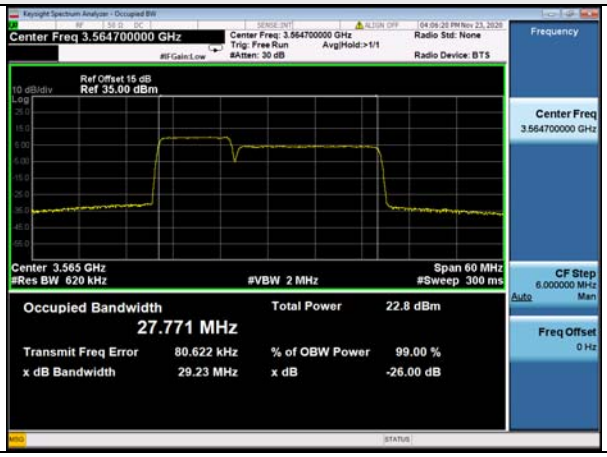
99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+5MHz / 16QAM	20MHz+5MHz / 16QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 5MHz+20MHz

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		16QAM_Full RB	16QAM_Full RB
55273+55390	3553.3+3565.0	22.84	23.97
55898+56015	3615.8+3627.5	22.81	23.97
56523+56640	3678.3+3690.0	22.84	23.96

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
5MHz+20MHz / 16QAM	5MHz+20MHz / 16QAM
	

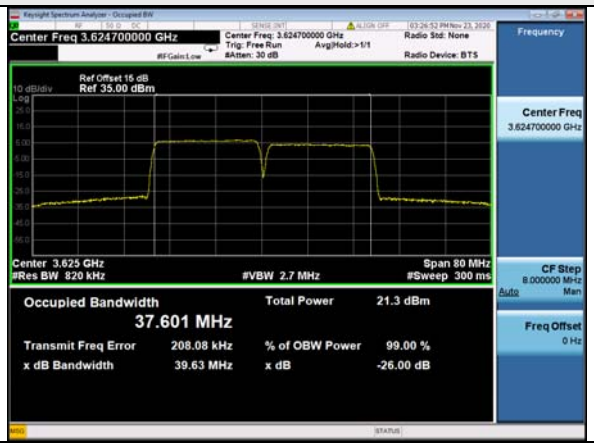
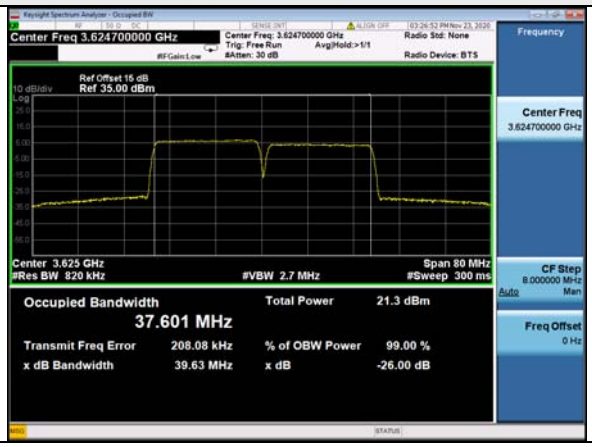
LTE Band 48 (CA 48C), Channel Bandwidth 10MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		16QAM_Full RB	16QAM_Full RB
55295+55439	3555.5+3569.9	27.77	29.23
55896+56040	3615.6+3630.0	27.75	29.21
56496+56640	3675.6+3690.0	27.74	29.19

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
10MHz+20MHz / 16QAM	10MHz+20MHz / 16QAM
	

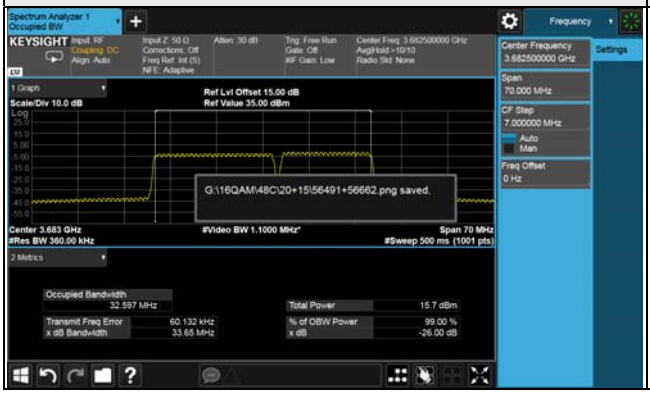
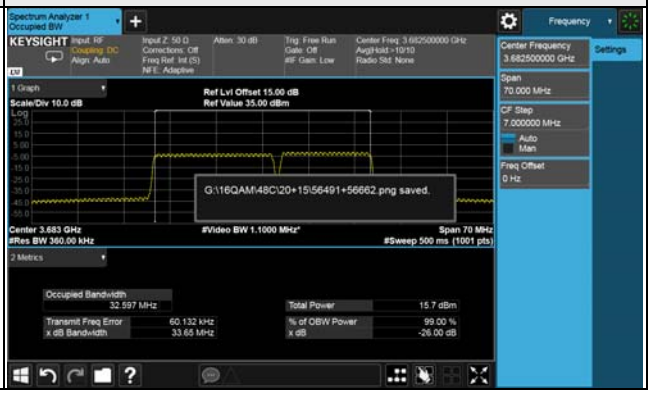
LTE Band 48 (CA 48C), Channel Bandwidth 15MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		16QAM_Full RB	16QAM_Full RB
55318+55489	3557.8+3574.9	32.58	33.67
55893+56064	3615.3+3632.4	32.54	33.69
56469+56640	3672.9+3690.0	32.57	33.66

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
15MHz+20MHz / 16QAM	15MHz+20MHz / 16QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		64QAM_Full RB	64QAM_Full RB
55340+55538	3560.0+3579.8	37.60	39.63
55891+56089	3615.1+3634.9	37.60	39.63
56442+56640	3670.2+3690.0	37.56	39.60

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+20MHz / 64QAM	20MHz+20MHz / 64QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+15MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		64QAM_Full RB	64QAM_Full RB
55340+55511	3560.0+3577.1	32.46	33.65
55916+56087	3617.6+3634.7	32.59	33.65
56491+56662	3675.1+3692.2	32.60	33.65

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+15MHz / 64QAM	20MHz+15MHz / 64QAM
	

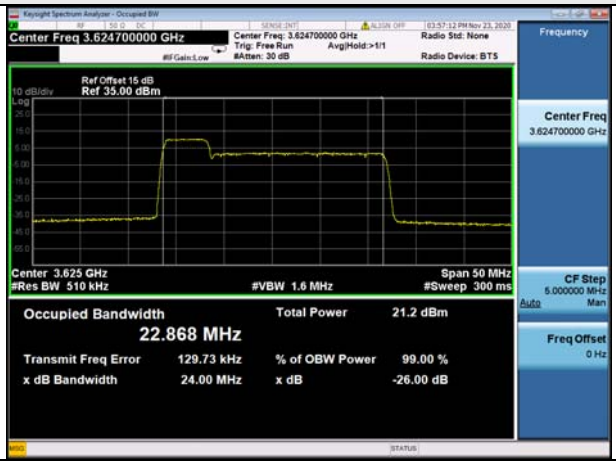
LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+10MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		64QAM_Full RB	64QAM_Full RB
55340+55484	3560.0+3574.4	27.63	28.57
55941+56085	3620.1+3634.5	27.63	28.58
56541+56685	3680.1+3694.5	27.61	28.57

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+10MHz / 64QAM	20MHz+10MHz / 64QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+5MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		64QAM_Full RB	64QAM_Full RB
55340+55457	3560.0+3571.7	22.75	23.51
55965+56082	3622.5+3634.2	22.71	23.53
56590+56707	3685.0+3696.7	22.76	23.53

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
20MHz+5MHz / 64QAM	20MHz+5MHz / 64QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 5MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		64QAM_Full RB	64QAM_Full RB
55273+55390	3553.3+3565.0	22.88	23.99
55898+56015	3615.8+3627.5	22.87	24.00
56523+56640	3678.3+3690.0	22.87	23.99

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
5MHz+20MHz / 64QAM	5MHz+20MHz / 64QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 10MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		64QAM_Full RB	64QAM_Full RB
55295+55439	3555.5+3569.9	27.76	29.23
55896+56040	3615.6+3630.0	27.75	29.23
56496+56640	3675.6+3690.0	27.75	29.21

99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
10MHz+20MHz / 64QAM	10MHz+20MHz / 64QAM
	

LTE Band 48 (CA 48C), Channel Bandwidth 15MHz+20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
		64QAM_Full RB	64QAM_Full RB
55318+55489	3557.8+3574.9	32.51	33.70
55893+56064	3615.3+3632.4	32.51	33.70
56469+56640	3672.9+3690.0	32.54	33.70

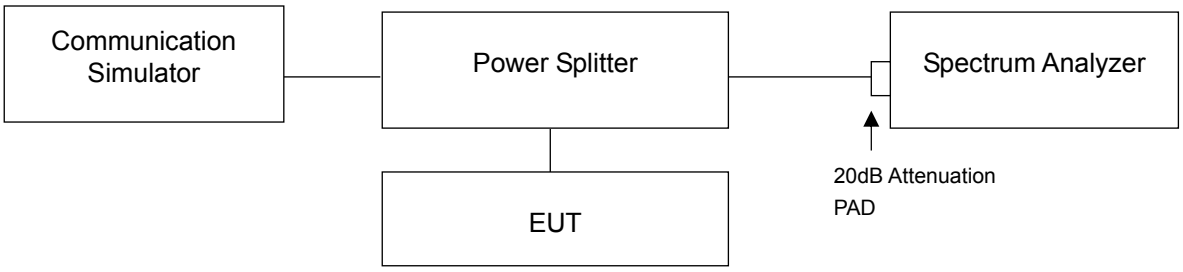
99% Occupied Bandwidth	26dB Bandwidth
Spectrum Plot of Worst Value	Spectrum Plot of Worst Value
15MHz+20MHz / 64QAM	15MHz+20MHz / 64QAM
	

4.4 Peak to Average Ratio Measurement

4.4.1 Limits of Peak to Average Ratio Measurement

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

4.4.2 Test Setup



4.4.3 Test Procedures

a. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;

b. Set the number of counts to a value that stabilizes the measured CCDF curve;

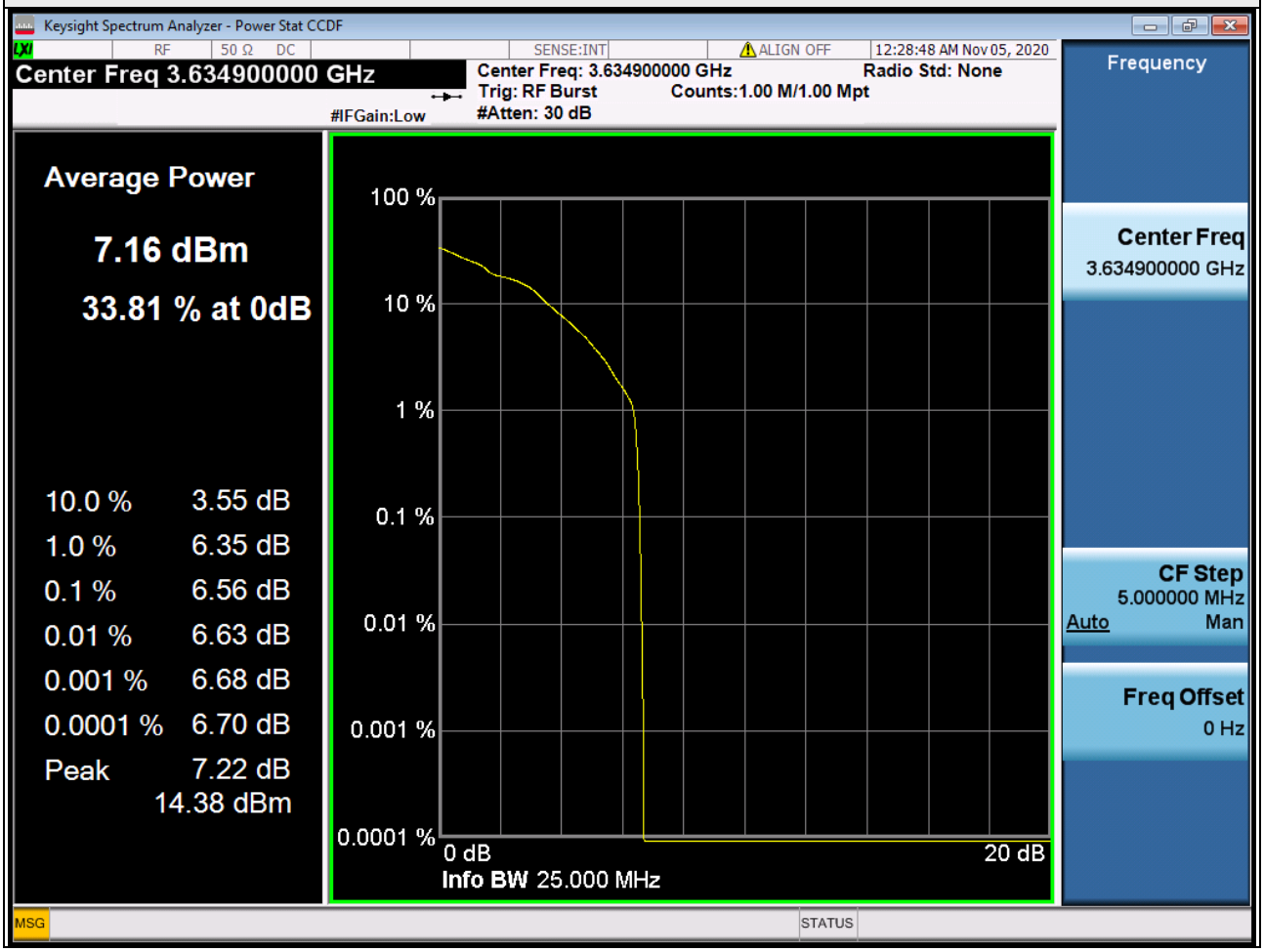
c. Record the maximum PAPR level associated with a probability of 0.1%.

4.4.4 Test Results

LTE Band 48 (CA 48C)

LTE Band 48 (CA 48C), Channel Bandwidth 20MHz+20MHz		
Channel	Frequency (MHz)	Peak To Average Ratio (dB)
		QPSK_Full RB
55340+55538	3560.0+3579.8	5.26
55891+56089	3615.1+3634.9	6.56
56442+56640	3670.2+3690.0	6.07

Peak To Average Ratio
Spectrum Plot of Worst Value
20MHz+20MHz / QPSK

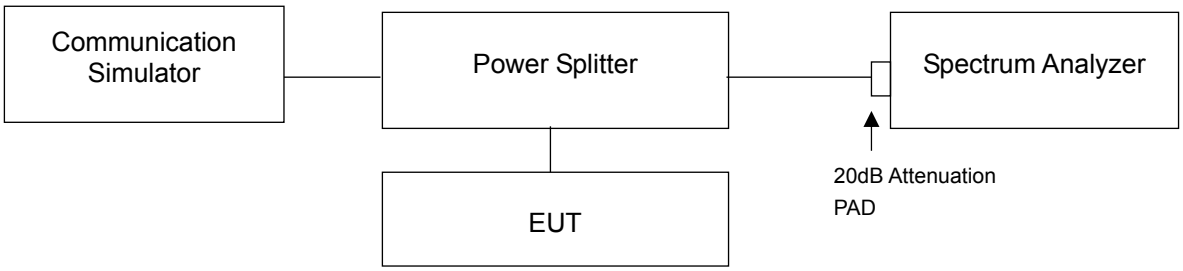


4.5 Conducted Spurious Emissions

4.5.1 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	

4.5.2 Test Setup

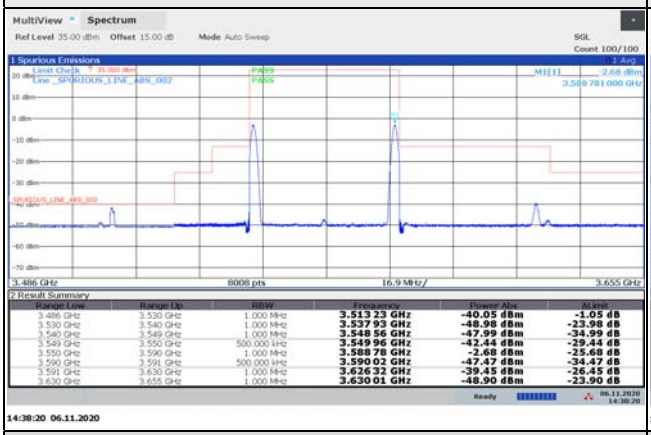
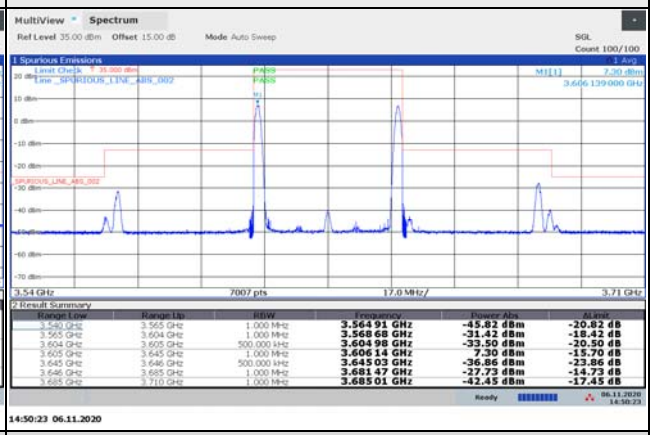
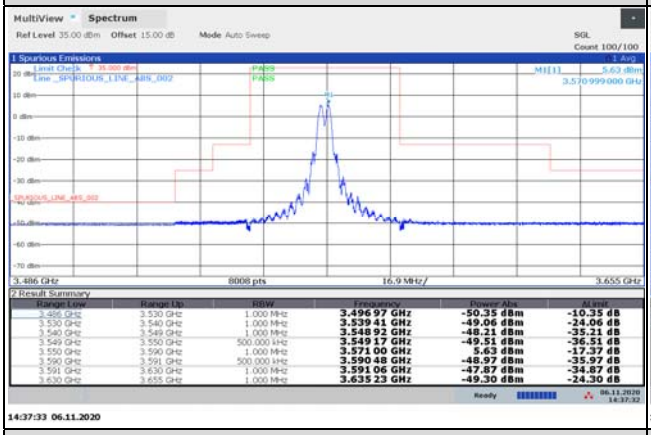
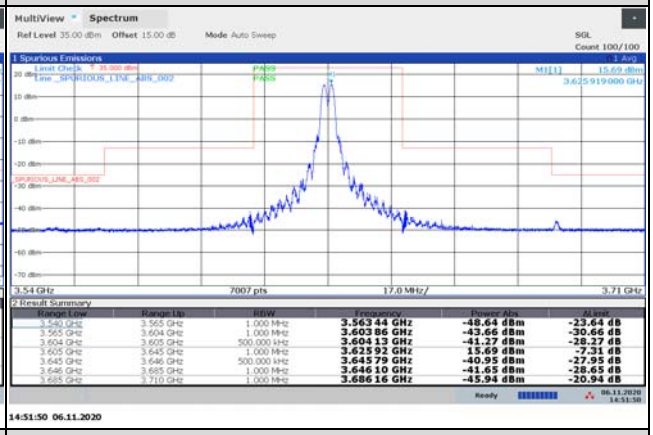
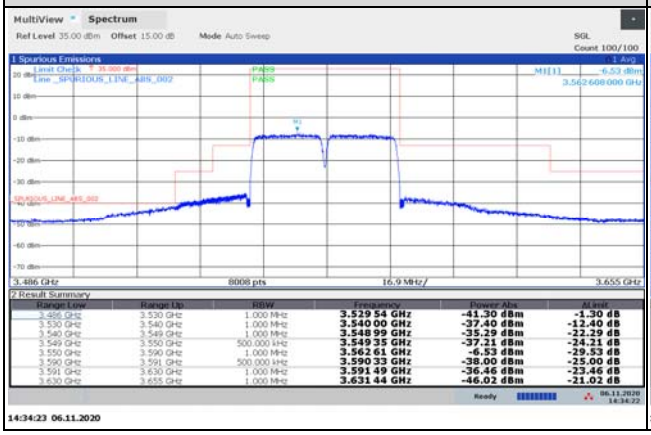
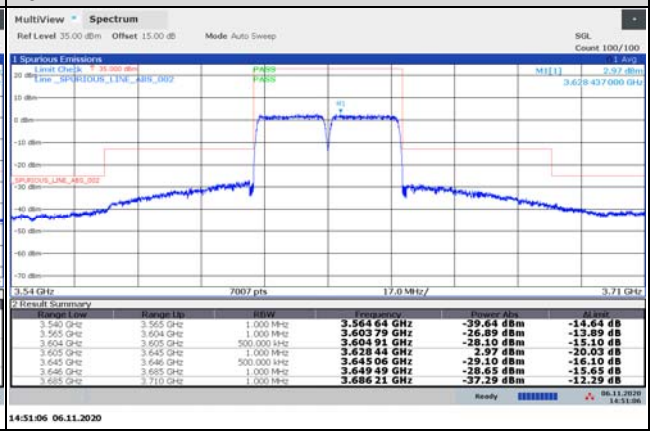


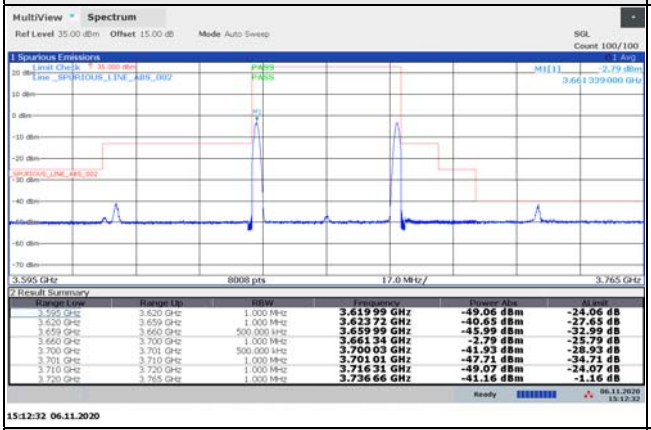
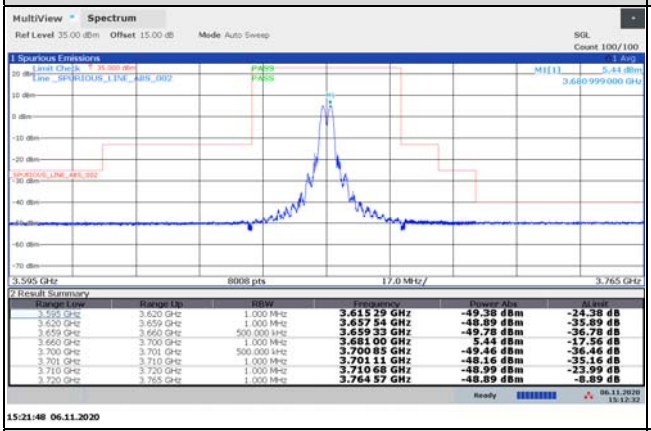
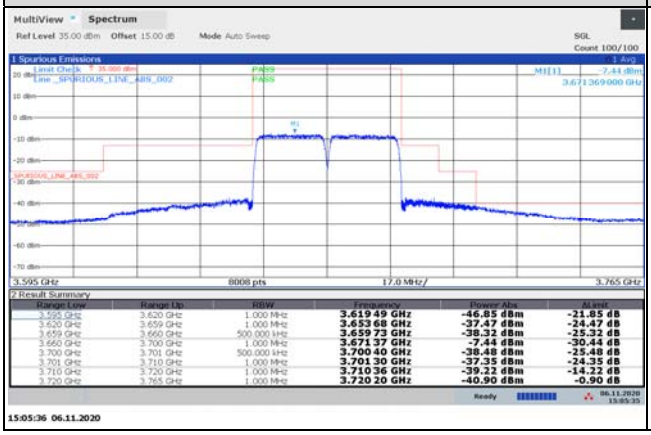
4.5.3 Test Procedure

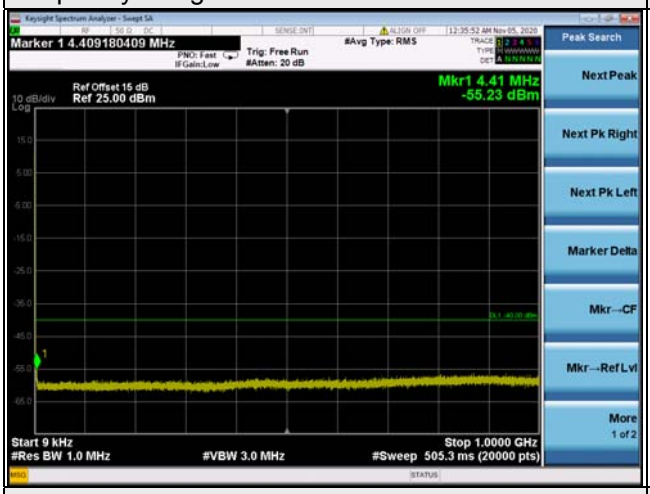
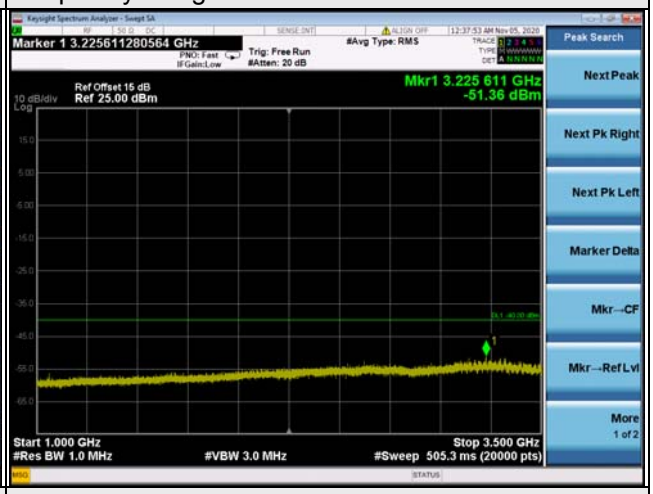
a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. Measuring frequency range is from 9 kHz to 40 GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.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

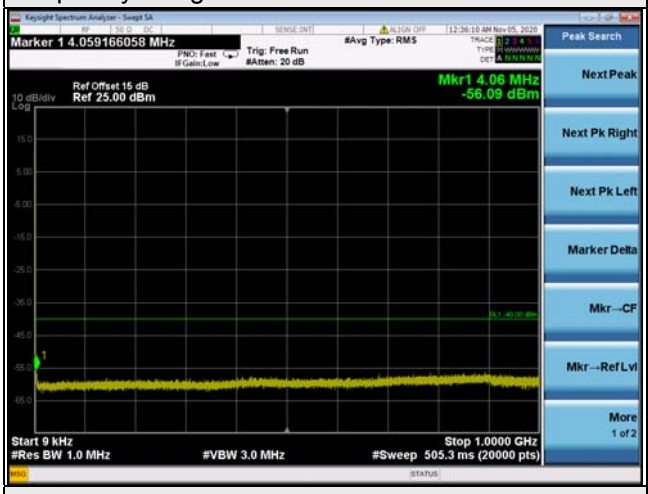
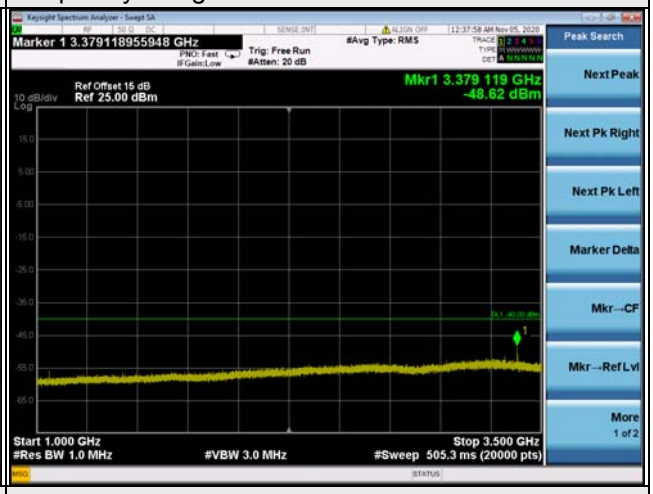
4.5.4 Test Results

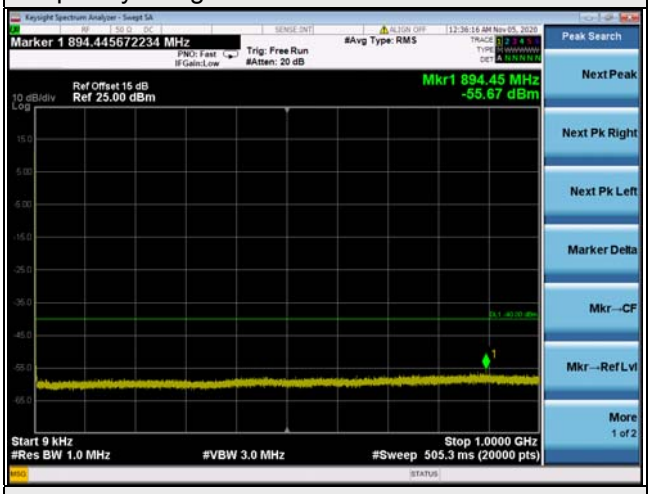
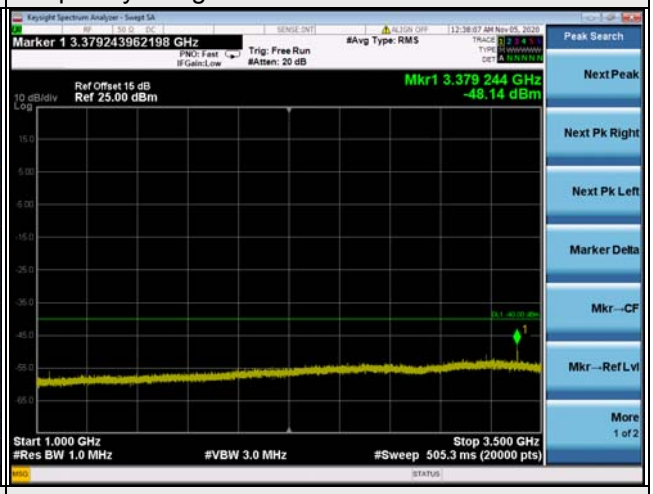
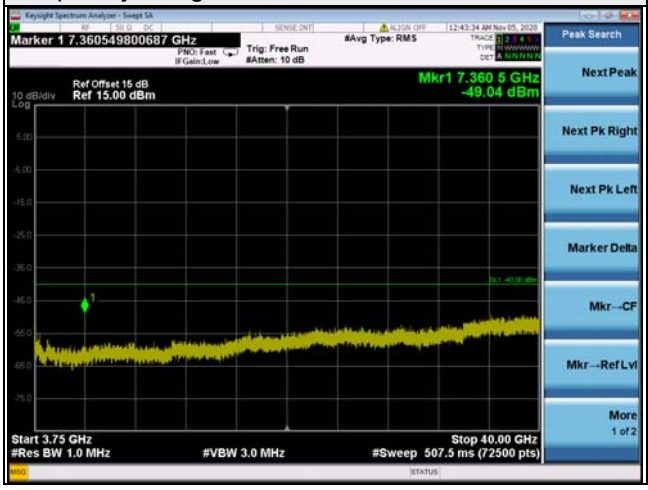
LTE Band 48 (CA 48C)

LTE Band 48, Channel Bandwidth 20MHz+20MHz	
Channel 55340 (3560.0MHz)+55538 (3579.8MHz)	Channel 55891 (3615.1MHz)+56089 (3634.9MHz)
1RB	1RB
	
1RB 99	1RB 99
	
Full RB	Full RB
	

LTE Band 48, Channel Bandwidth 20MHz+20MHz	
Channel 56642 (3670.2MHz)+56640 (3690.0MHz)	
1RB	
	
1RB 99	
	
Full RB	
	

Channel Band width: 20MHz+20MHz	
Channel 55340 (3560.0MHz)+55538 (3579.8MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~3.5GHz
	
Frequency Range : 3.75GHz~40GHz	
	

Channel 55891 (3615.1MHz)+56089 (3634.9MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~3.5GHz
	
Frequency Range : 3.75GHz~40GHz	
	

Channel 56642 (3670.2MHz)+56640 (3690.0MHz)	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz~3.5GHz
	
Frequency Range : 3.75GHz~40GHz	
	

4.6 Radiated Emission Measurement

4.6.1 Limits of Radiated Emission Measurement

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

4.6.2 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.6.3 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:

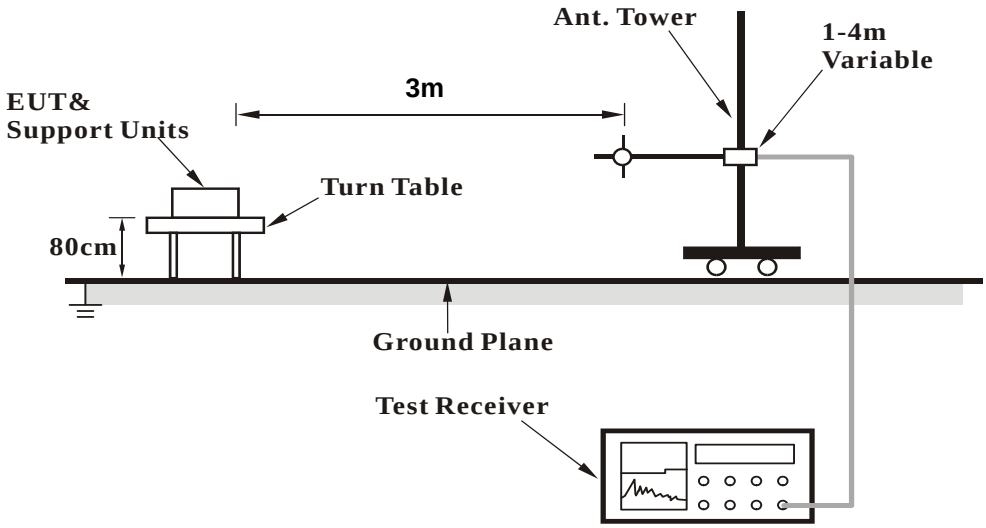
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
   The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report

4.6.4 Deviation from Test Standard

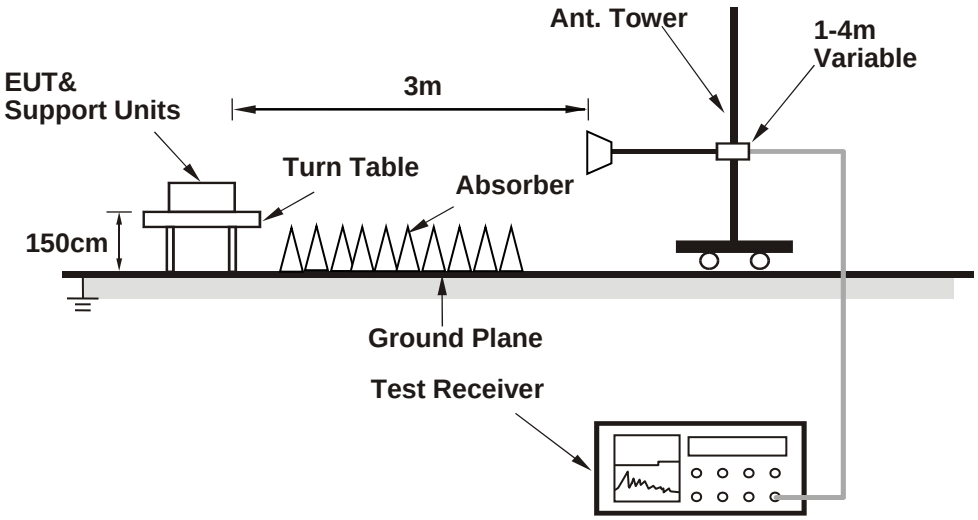
No deviation.

4.6.5 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).

4.6.6 Test Results

Below 1GHz Data：

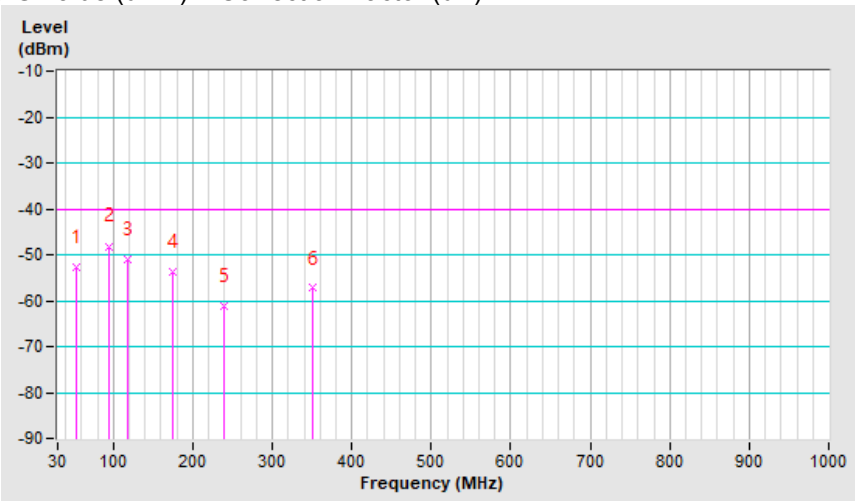
LTE Band 48 (CA 48C)

Mode	TX channel 55340 (3560.0MHz)+ TX channel 55538 (3579.8MHz)	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	52.49	-51.7	-44.0	-8.7	-52.7	-40.0	-12.7
2	94.67	-39.1	-49.1	1.0	-48.1	-40.0	-8.1
3	118.57	-42.9	-51.0	0.1	-50.9	-40.0	-10.9
4	174.80	-46.0	-55.8	2.2	-53.6	-40.0	-13.6
5	239.46	-54.2	-66.6	5.4	-61.2	-40.0	-21.2
6	350.52	-54.4	-62.5	5.2	-57.3	-40.0	-17.3

Remarks:

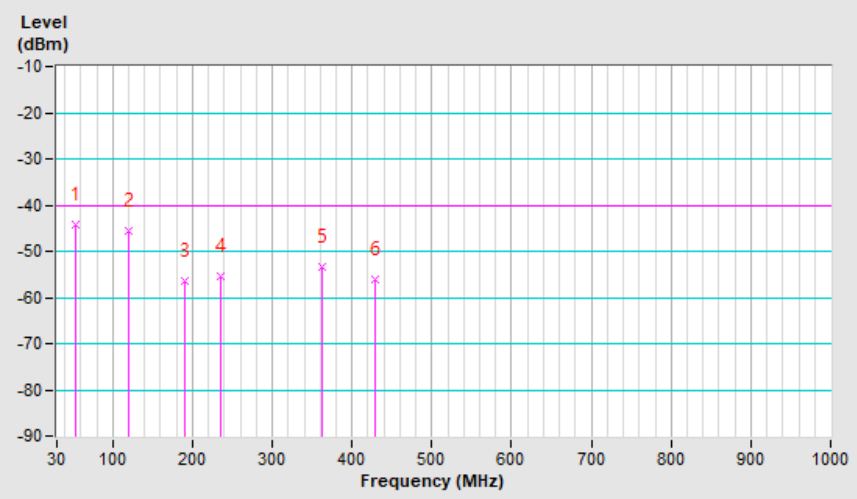
1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).



Mode	TX channel 55340 (3560.0MHz)+ TX channel 55538 (3579.8MHz)	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	**53.90**	**-37.5**	**-35.9**	**-8.4**	**-44.3**	**-40.0**	**-4.3**
2	119.97	-38.6	-45.7	0.1	-45.6	-40.0	-5.6
3	190.26	-53.6	-60.7	4.2	-56.5	-40.0	-16.5
4	235.25	-53.4	-60.9	5.4	-55.5	-40.0	-15.5
5	363.17	-52.9	-58.6	5.2	-53.4	-40.0	-13.4
6	429.25	-56.4	-61.4	5.2	-56.2	-40.0	-16.2

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



Above 1GHz

LTE Band 48 (CA 48C)

Mode	TX channel 55340 (3560.0MHz)+ TX channel 55538 (3579.8MHz)	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	7139.80	-69.5	-51.3	4.6	-46.7	-40.0	-6.7
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	7139.80	-69.8	-53.1	4.6	-48.5	-40.0	-8.5

Remarks:

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

Mode	TX channel 55891 (3615.1MHz)+ TX channel 56089 (3634.9MHz)	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	-70.2	-51.6	4.5	-47.1	-40.0	-7.1
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	-70.6	-53.0	4.5	-48.5	-40.0	-8.5

Remarks:

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

Mode	TX channel 56642 (3670.2MHz)+ TX channel 56640 (3690.0MHz)	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	7360.20	-70.3	-51.1	4.4	-46.7	-40.0	-6.7
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	7360.20	-70.9	-52.9	4.4	-48.5	-40.0	-8.5

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

5 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:

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Fax: 886-2-26051924

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

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