

FCC Test Report (Part 96: CA mode)

Report No.: RFBHQN-WTW-P20120273-5

FCC ID: MCLT77W968

Test Model: T77W968

Received Date: Dec. 09, 2020

Test Date: Mar. 18 to 26, 2021

Issued Date: Apr. 08, 2021

Applicant: HON HAI PRECISION IND. CO., LTD.

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R.O.C.

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan

Test Location : E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan

**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
RFBHQN-WTW-P20120273-5	Original release.	Apr. 08, 2021

1 Certificate of Conformity

Product: LTE M.2 Module
Brand: FOXCONN
Test Model: T77W968
Sample Status: Engineering sample
Applicant: HON HAI PRECISION IND. CO., LTD.
Test Date: Mar. 18 to 26, 2021
Standards: 47 CFR FCC Part 96, Subpart E

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

Prepared by : Joyce Kuo , **Date:** Apr. 08, 2021
Joyce Kuo / Specialist

Approved by : Clark Lin , **Date:** Apr. 08, 2021
Clark Lin / Technical Manager

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 and Maximum EIRP	Pass	Meet the requirement of limit.
2.1047 96.41(a)	Modulation characteristics	Pass	Meet the requirement.
96.41(g)	Peak to Average Ratio	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 -22.17dB at 16020MHz.

Note:

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

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.4 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	LTE M.2 Module		
Brand	FOXCONN		
Test Model	T77W968		
Status of EUT	Engineering sample		
Power Supply Rating	DC 3.3V from host equipment		
Modulation Type	QPSK, 16QAM, 64QAM		
Operating Frequency	LTE Band 42C		TX: 3552.5 ~ 3597.5 MHz
			RX: 3552.5 ~ 3597.5 MHz
Channel Bandwidth	5MHz, 10MHz, 15MHz & 20MHz		
Max. EIRP Power (dBm/10MHz)	LTE Band 42C	Channel Bandwidth 20+20MHz	QPSK: 22.68 dBm
			16QAM: 22.26 dBm
			64QAM: 21.84 dBm
Max. EIRP Power (Full Power)	LTE Band 42C	Channel Bandwidth 20+20MHz	QPSK: 22.74 dBm
			16QAM: 22.54 dBm
			64QAM: 21.98 dBm
Emission Designator	LTE Band 42C	Channel Bandwidth 20+20MHz	QPSK: 37M5G7D
			16QAM: 37M6D7W
			64QAM: 37M4D7W
Antenna Type	Refer to Note		
Antenna Connector	Refer to Note		
Accessory Device	NA		
Data Cable Supplied	NA		

Note:

- This report is prepared for FCC Class II permissive change. The difference compared with the original report is as the following information:
 - ◆ Added the LTE Band 42, LTE Band 42C and LTE Band 48.
- According to above condition, all test items need to be performed. And all data are verified to meet the requirements. Only LTE Band 42C test data was records this test report, for LTE Band 42 and LTE Band 48 test data refer to the other test report (Report No.: RFBHQN-WTW-P20120273-4)
- The EUT incorporates a 1T4R function.

4. The antennas provided to the EUT, please refer to the following table:

Antenna No.	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length
1	Please refer to below table	699~803	PIFA	i-pex(MHF)	100mm
2	Please refer to below table	791~960 1447.9~1606	PIFA	i-pex(MHF)	100mm
3	Please refer to below table	1710~2170 2500~2690	PIFA	i-pex(MHF)	100mm
4	Please refer to below table	5110~5925 (for LAA RX)	PIFA	i-pex(MHF)	100mm
5	Please refer to below table	2305~2315	Dipole	i-pex(MHF)	80mm
6	Please refer to below table	3500~3700	PCB	i-pex(MHF)	100mm

Antenna gain list			
Antenna No.	Band	Freq. Range (MHz)	Gain (dBi)
3	WCDMA II (B2)	1850~1910	4.92
3	WCDMA IV (B4)	1710~1755	5.99
2	WCDMA V (B5)	824~849	2.68
3	LTE Band (2)	1850~1910	4.92
3	LTE Band (4)	1710~1755	5.99
2	LTE Band (5)	824~849	2.68
3	LTE Band (7)	2500~2570	5.2
1	LTE Band (12)	698~716	4.17
1	LTE Band (13)	777~787	3.05
1	LTE Band (14)	788~798	2.87
1	LTE Band (17)	704~716	4.17
3	LTE Band (25)	1850~1915	4.92
2	LTE Band (26)	814~849	2.92
5	LTE Band (30)	2305~2315	3.02
3	LTE Band (38)	2570~2620	4.82
3	LTE Band (41)	2496~2690	5.38
6	LTE Band 42	3550~3700	0.92
6	LTE Band 48	3550~3700	0.92
3	LTE Band (66)	1710~1780	5.99

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_42C	CA_42C	5, 10, 15, 20	20	40	0
		20	5, 10, 15		
		10, 15, 20	20	40	1
		20	10, 15		

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

7. 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.

3.1.1 Test Mode Applicability and Tested Channel Detail

In the original test report, 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:

Band 42 (CA 42C)

Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation
Maximum Output Power	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	QPSK, 16QAM, 64QAM
	43190 to 43341 43361 to 43512	43190 (3560.0MHz)+ 43361 (3577.1MHz), 43265 (3567.5MHz)+ 43436 (3584.6MHz), 43341 (3575.1MHz)+ 43512 (3592.2MHz)	20MHz+15MHz	QPSK, 16QAM, 64QAM
	43190 to 43391 43334 to 43535	43190 (3560.0MHz)+ 43334 (3574.4MHz), 43335 (3574.5MHz)+ 43479 (3588.9MHz), 43391 (3580.1MHz)+ 43535 (3594.5MHz)	20MHz+10MHz	QPSK, 16QAM, 64QAM
	43190 to 43440 43307 to 43557	43190 (3560.0MHz)+ 43307 (3571.7MHz), 43315 (3572.5MHz)+ 43432 (3584.2MHz), 43440 (3585.0MHz)+ 43557 (3596.7MHz)	20MHz+5MHz	QPSK, 16QAM, 64QAM
	43115 to 43373 43232 to 43490	43115 (3553.3MHz)+ 43232 (3565.0MHz), 43244 (3565.4MHz)+ 43361 (3577.1MHz), 43373 (3578.3MHz)+ 43490 (3590.0MHz)	5MHz+20MHz	QPSK, 16QAM, 64QAM
	43140 to 43346 43284 to 43490	43140 (3555.5MHz)+ 43284 (3569.9MHz), 43242 (3565.2MHz)+ 43386 (3579.6MHz), 43346 (3575.6MHz)+ 43490 (3590.0MHz)	10MHz+20MHz	QPSK, 16QAM, 64QAM
	43165 to 43319 43336 to 43490	43165 (3557.8MHz)+ 43336 (3574.9MHz), 43242 (3565.2MHz)+ 43413 (3582.3MHz), 43319 (3572.9MHz)+ 43490 (3590.0MHz)	15MHz+20MHz	QPSK, 16QAM, 64QAM
Frequency Stability	43190 to 43292 43388 to 43490	43241 (3565.1MHz)+ 43439 (3584.9MHz)	20MHz+20MHz	QPSK

Occupied Bandwidth	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	QPSK
	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	16QAM
	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	64QAM
Peak to Average Ratio	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	QPSK
	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	16QAM
	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	64QAM
Conducted Emission	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	QPSK
Radiated Emission	43190 to 43292 43388 to 43490	43190 (3560.0MHz)+ 43388 (3579.8MHz), 43241 (3565.1MHz)+ 43439 (3584.9MHz), 43292 (3570.2MHz)+ 43490 (3590.0MHz)	20MHz+20MHz	QPSK

Note:

1. All supported modulation types were evaluated. The Worst case of QPSK was selected. Therefore, the Frequency Stability, Peak to Average Ratio, Conducted Emission and Radiated Emission were presented under QPSK mode only.
2. All test items were performed on worst combination modes and record in test report, except RF output power.
3. LTE CA mode is similar to digital modulation in LTE single frequency band, so please refer to BV CPS report no.: RFBHQN-WTW-P20120273-4 for the modulation characteristics data of CA mode.

Test Condition:

Test Item	Environmental Conditions	Input Power (System)	Tested By
Maximum Output Power	24deg. C, 63%RH	120Vac, 60Hz	Charlie Yang
Modulation Characteristics	24deg. C, 58%RH	120Vac, 60Hz	Charlie Yang
Frequency Stability	24deg. C, 58%RH	120Vac, 60Hz	Charlie Yang
Occupied Bandwidth	24deg. C, 58%RH	120Vac, 60Hz	Charlie Yang
Peak to Average Ratio	24deg. C, 58%RH	120Vac, 60Hz	Charlie Yang
Conducted Emission	24deg. C, 58%RH	120Vac, 60Hz	Charlie Yang
Radiated Emission	25deg. C, 75%RH	120Vac, 60Hz	Ryan Du

3.2 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.

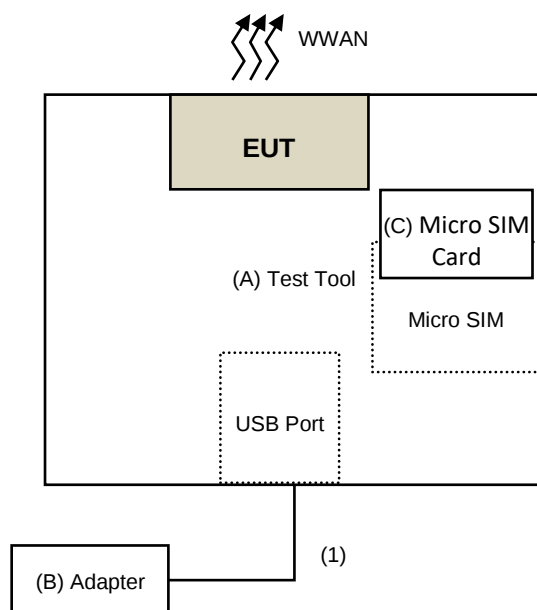
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Test Tool	Foxconn	NA	NA	NA	Supplied by client
B.	Adapter	ASUS	EXA1205UA	NA	NA	Provided by Lab
C.	Micro SIM Card	NA	NA	NA	NA	Provided by Lab
D.	Simulator	Keysight	E7515A	MY56030229	NA	Provided by Lab

Note:

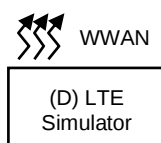
1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	1	Yes	0	Provided by Lab

3.2.1 Configuration of System under Test



Remote Site



3.3 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 and references:

Test Standard:

47 CFR FCC Part 2

47 CFR FCC Part 96, Subpart E

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

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 and recorded as per the above standards and KDB test guidance.

4 Test Types and Results

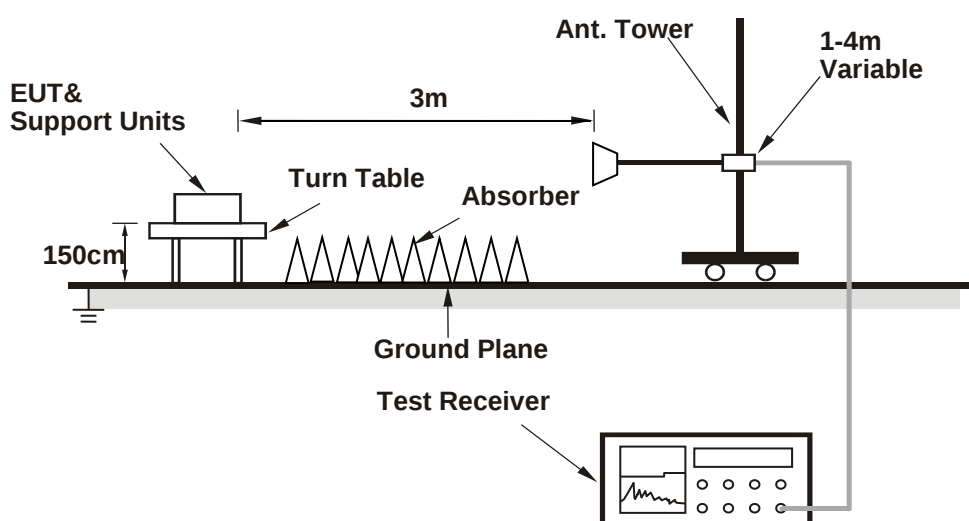
4.1 Maximum Output Power Measurement

4.1.1 Limits of Maximum Output Power Measurement

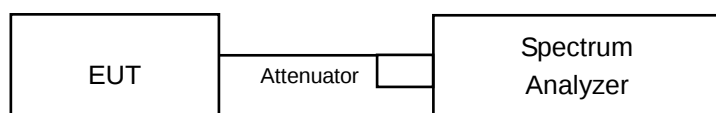
Device		Maximum EIRP (dBm/10 MHz)
☒	End User Device	23
☐	Category A CBSD	30
☐	Category B CBSD	47

4.1.2 Test Setup

Radiated Measurement Method



Conducted Measurement Method



4.1.3 Test Instruments

For radiated emissions test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 06, 2020	July 05, 2021
Pre-Amplifier EMCi	EMC001340	980142	May 25, 2020	May 24, 2021
Loop Antenna Electro-Metrics	EM-6879	264	Mar. 05, 2021	Mar. 04, 2022
RF Cable	5D-FB	LOOPCAB-001	Jan. 07, 2021	Jan. 06, 2022
RF Cable	5D-FB	LOOPCAB-002	Jan. 07, 2021	Jan. 06, 2022
Pre-Amplifier Mini-Circuits	ZFL-1000VH2	QA0838008	Oct. 20, 2020	Oct. 19, 2021
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 05, 2020	Nov. 04, 2021
RF Cable	8D	966-3-1	Mar. 16, 2021	Mar. 15, 2022
RF Cable	8D	966-3-2	Mar. 16, 2021	Mar. 15, 2022
RF Cable	8D	966-3-3	Mar. 16, 2021	Mar. 15, 2022
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 24, 2020	Sep. 23, 2021
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 22, 2020	Nov. 21, 2021
Pre-Amplifier EMCi	EMC12630SE	980384	Jan. 11, 2021	Jan. 10, 2022
RF Cable	EMC104-SM-SM-1500	180504	Apr. 29, 2020	Apr. 28, 2021
RF Cable	EMC104-SM-SM-2000	180601	June 09, 2020	June 08, 2021
RF Cable	EMC104-SM-SM-6000	180602	June 09, 2020	June 08, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Pre-Amplifier EMCi	EMC184045SE	980387	Jan. 11, 2021	Jan. 10, 2022
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 22, 2020	Nov. 21, 2021
RF Cable	EMC102-KM-KM-1200	160924	Jan. 11, 2021	Jan. 10, 2022
RF Cable	EMC-KM-KM-4000	200214	Mar. 10, 2021	Mar. 09, 2022
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA

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 966 Chamber No. 3.
3. Tested Date: Mar. 26, 2021

For other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	May 29, 2020	May 28, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Power meter Anritsu	ML2495A	1529002	July 22, 2020	July 21, 2021
Power sensor Anritsu	MA2411B	1339443	July 22, 2020	July 21, 2021
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
Mech Switch Absorptive Mini-Circuits	MSP4TA-18+	0140	Feb. 05, 2021	Feb. 04, 2022
FXD ATTEN Mini-Circuits	BW-S3W2+	MN71981	Feb. 05, 2021	Feb. 04, 2022
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Mar. 18, 2021

4.1.4 Test Procedures

Conducted output power measurement

1. Connect the DUT transmitter output to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
2. Set span to at least 2 times the OBW.
3. Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
4. Set VBW $\geq 3 \times$ RBW.
5. Set number of points in sweep $\geq 2 \times$ span / RBW.
6. Sweep time = auto-couple.
7. Detector = RMS (power averaging).
8. If the EUT can be configured to transmit continuously (i.e., burst duty cycle $\geq 98\%$), then set the trigger to free run.
9. 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.
10. Trace average at least 100 traces in power averaging (i.e., RMS) mode.
11. For conducted output power, compute the power by integrating the spectrum across the 10 MHz of the signal using the instrument's band power measurement function. If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the 10MHz of the spectrum.
12. For full power measurement, compute the power by integrating the spectrum across the EBW of the signal using the instrument's band power measurement function. If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the EBW of the spectrum.
13. EIRP = Conducted Power + Antenna Gain

Maximum EIRP

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

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T$$

where

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

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

4.1.5 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)

LTE Band 42CA_Full Power

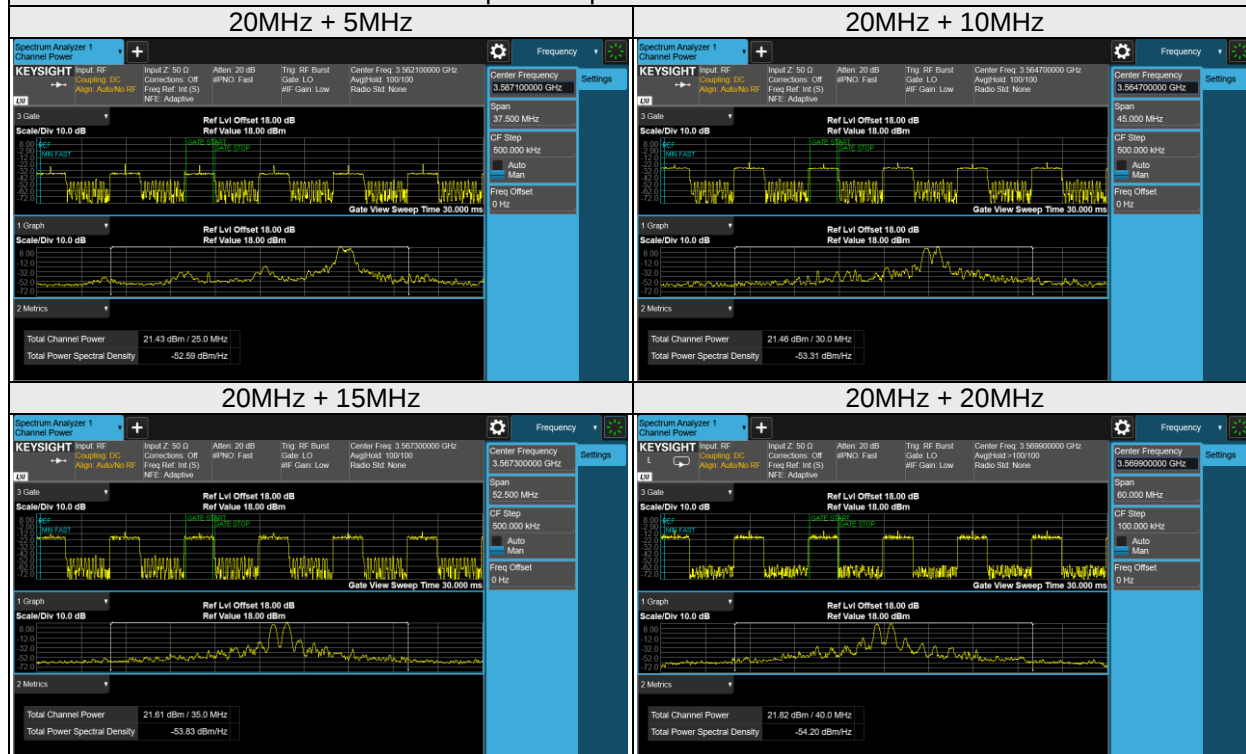
Con- figure	Com- bination	PCC							SCC							Measurement Power
		Band	BW (MHz)	Modu- lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu- lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
		Total														
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	20	QPSK	1	99	43388	3579.8	7.43
					1	99						1	0			21.82
		42	20	QPSK	1	0	43241	3565.1	42	20	QPSK	1	99	43439	3584.9	7.56
					1	99						1	0			21.71
		42	20	QPSK	1	0	43292	3570.2	42	20	QPSK	1	99	43490	3590	7.64
					1	99						1	0			21.67
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	15	QPSK	1	74	43361	3577.1	7.45
					1	99						1	0			21.61
		42	20	QPSK	1	0	43265	3567.5	42	15	QPSK	1	74	43436	3584.6	7.49
					1	99						1	0			21.56
		42	20	QPSK	1	0	43341	3575.1	42	15	QPSK	1	74	43512	3592.2	7.23
					1	99						1	0			21.51
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	10	QPSK	1	49	43334	3574.4	7.32
					1	99						1	0			21.46
		42	20	QPSK	1	0	43335	3574.5	42	10	QPSK	1	49	43479	3588.9	7.54
					1	99						1	0			21.41
		42	20	QPSK	1	0	43391	3580.1	42	10	QPSK	1	49	43535	3594.5	7.48
					1	99						1	0			21.21
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	5	QPSK	1	24	43307	3571.7	7.39
					1	99						1	0			21.39
		42	20	QPSK	1	0	43315	3572.5	42	5	QPSK	1	24	43432	3584.2	7.47
					1	99						1	0			21.27
		42	20	QPSK	1	0	43440	3585	42	5	QPSK	1	24	43557	3596.7	7.56
					1	99						1	0			21.43
Intra Band Conti- guous	42C	42	5	QPSK	1	0	43115	3552.5	42	20	QPSK	1	99	43232	3564.2	7.62
					1	24						1	0			21.41
		42	5	QPSK	1	0	43244	3565.4	42	20	QPSK	1	99	43361	3577.1	7.47
					1	24						1	0			21.36
		42	5	QPSK	1	0	43373	3578.3	42	20	QPSK	1	99	43490	3590	7.56
					1	24						1	0			21.19
Intra Band Conti- guous	42C	42	10	QPSK	1	0	43140	3555	42	20	QPSK	1	99	43284	3569.4	7.44
					1	49						1	0			20.35
		42	10	QPSK	1	0	43242	3565.2	42	20	QPSK	1	99	43386	3579.6	7.42
					1	49						1	0			20.22
		42	10	QPSK	1	0	43346	3575.6	42	20	QPSK	1	99	43490	3590	7.58
					1	49						1	0			20.33
Intra Band Conti- guous	42C	42	15	QPSK	1	0	43165	3557.5	42	20	QPSK	1	99	43336	3574.6	7.39
					1	74						1	0			21.23
		42	15	QPSK	1	0	43242	3565.2	42	20	QPSK	1	99	43413	3582.3	7.41
					1	74						1	0			20.62
		42	15	QPSK	1	0	43319	3572.9	42	20	QPSK	1	99	43490	3590	7.47
					1	74						1	0			21.55

Con- figure	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	42C	42	20	16QAM	1	0	43190	3560	42	20	16QAM	1	99	43388	3579.8	7.03
					1	99						1	0			21.62
		42	20	16QAM	1	0	43241	3565.1	42	20	16QAM	1	99	43439	3584.9	7.18
					1	99						1	0			21.46
		42	20	16QAM	1	0	43292	3570.2	42	20	16QAM	1	99	43490	3590	7.26
					1	99						1	0			21.35
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	15	16QAM	1	99	43361	3577.1	7.05
					1	99						1	0			20.92
		42	20	16QAM	1	0	43265	3567.5	42	15	16QAM	1	99	43436	3584.6	7.10
					1	99						1	0			21.40
		42	20	16QAM	1	0	43341	3575.1	42	15	16QAM	1	99	43512	3592.2	6.87
					1	99						1	0			21.26
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	10	16QAM	1	99	43334	3574.4	6.92
					1	99						1	0			21.16
		42	20	16QAM	1	0	43335	3574.5	42	10	16QAM	1	99	43479	3588.9	7.16
					1	99						1	0			21.12
		42	20	16QAM	1	0	43391	3580.1	42	10	16QAM	1	99	43535	3594.5	7.10
					1	99						1	0			21.00
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	5	16QAM	1	24	43307	3571.7	7.03
					1	99						1	0			20.90
		42	20	16QAM	1	0	43315	3572.5	42	5	16QAM	1	24	43432	3584.2	7.08
					1	99						1	0			21.07
		42	20	16QAM	1	0	43440	3585	42	5	16QAM	1	24	43557	3596.7	7.15
					1	99						1	0			21.14
Intra Band Conti- guous	42C	42	5	16QAM	1	0	43115	3552.5	42	20	16QAM	1	99	43232	3564.2	7.23
					1	24						1	0			20.59
		42	5	16QAM	1	0	43244	3565.4	42	20	16QAM	1	99	43361	3577.1	7.06
					1	24						1	0			21.20
		42	5	16QAM	1	0	43373	3578.3	42	20	16QAM	1	99	43490	3590	7.18
					1	24						1	0			20.94
Intra Band Conti- guous	42C	42	10	16QAM	1	0	43140	3555	42	20	16QAM	1	99	43284	3569.4	7.06
					1	49						1	0			19.71
		42	10	16QAM	1	0	43242	3565.2	42	20	16QAM	1	99	43386	3579.6	7.05
					1	49						1	0			19.93
		42	10	16QAM	1	0	43346	3575.6	42	20	16QAM	1	99	43490	3590	7.22
					1	49						1	0			20.12
Intra Band Conti- guous	42C	42	15	16QAM	1	0	43165	3557.5	42	20	16QAM	1	99	43336	3574.6	7.00
					1	74						1	0			20.98
		42	15	16QAM	1	0	43242	3565.2	42	20	16QAM	1	99	43413	3582.3	7.00
					1	74						1	0			20.30
		42	15	16QAM	1	0	43319	3572.9	42	20	16QAM	1	99	43490	3590	7.04
					1	74						1	0			21.26

Con- figure	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	42C	42	20	64QAM	1	0	43190	3560	42	20	64QAM	1	99	43388	3579.8	6.63
					1	99						1	0			21.06
		42	20	64QAM	1	0	43241	3565.1	42	20	64QAM	1	99	43439	3584.9	6.80
					1	99						1	0			20.83
		42	20	64QAM	1	0	43292	3570.2	42	20	64QAM	1	99	43490	3590	6.88
					1	99						1	0			20.90
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	15	64QAM	1	99	43361	3577.1	6.65
					1	99						1	0			20.48
		42	20	64QAM	1	0	43265	3567.5	42	15	64QAM	1	99	43436	3584.6	6.71
					1	99						1	0			20.68
		42	20	64QAM	1	0	43341	3575.1	42	15	64QAM	1	99	43512	3592.2	6.51
					1	99						1	0			20.53
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	10	64QAM	1	99	43334	3574.4	6.52
					1	99						1	0			20.67
		42	20	64QAM	1	0	43335	3574.5	42	10	64QAM	1	99	43479	3588.9	6.78
					1	99						1	0			20.59
		42	20	64QAM	1	0	43391	3580.1	42	10	64QAM	1	99	43535	3594.5	6.72
					1	99						1	0			20.27
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	5	64QAM	1	24	43307	3571.7	6.67
					1	99						1	0			20.28
		42	20	64QAM	1	0	43315	3572.5	42	5	64QAM	1	24	43432	3584.2	6.69
					1	99						1	0			20.53
		42	20	64QAM	1	0	43440	3585	42	5	64QAM	1	24	43557	3596.7	6.74
					1	99						1	0			20.40
Intra Band Conti- guous	42C	42	5	64QAM	1	0	43115	3552.5	42	20	64QAM	1	99	43232	3564.2	6.84
					1	24						1	0			20.01
		42	5	64QAM	1	0	43244	3565.4	42	20	64QAM	1	99	43361	3577.1	6.65
					1	24						1	0			20.48
		42	5	64QAM	1	0	43373	3578.3	42	20	64QAM	1	99	43490	3590	6.80
					1	24						1	0			20.25
Intra Band Conti- guous	42C	42	10	64QAM	1	0	43140	3555	42	20	64QAM	1	99	43284	3569.4	6.68
					1	49						1	0			19.05
		42	10	64QAM	1	0	43242	3565.2	42	20	64QAM	1	99	43386	3579.6	6.68
					1	49						1	0			19.56
		42	10	64QAM	1	0	43346	3575.6	42	20	64QAM	1	99	43490	3590	6.86
					1	49						1	0			19.40
Intra Band Conti- guous	42C	42	15	64QAM	1	0	43165	3557.5	42	20	64QAM	1	99	43336	3574.6	6.61
					1	74						1	0			20.25
		42	15	64QAM	1	0	43242	3565.2	42	20	64QAM	1	99	43413	3582.3	6.59
					1	74						1	0			19.74
		42	15	64QAM	1	0	43319	3572.9	42	20	64QAM	1	99	43490	3590	6.61
					1	74						1	0			20.78

Band 42C

Spectrum plot of worst case



LTE Band 42CA_Per 10M Power

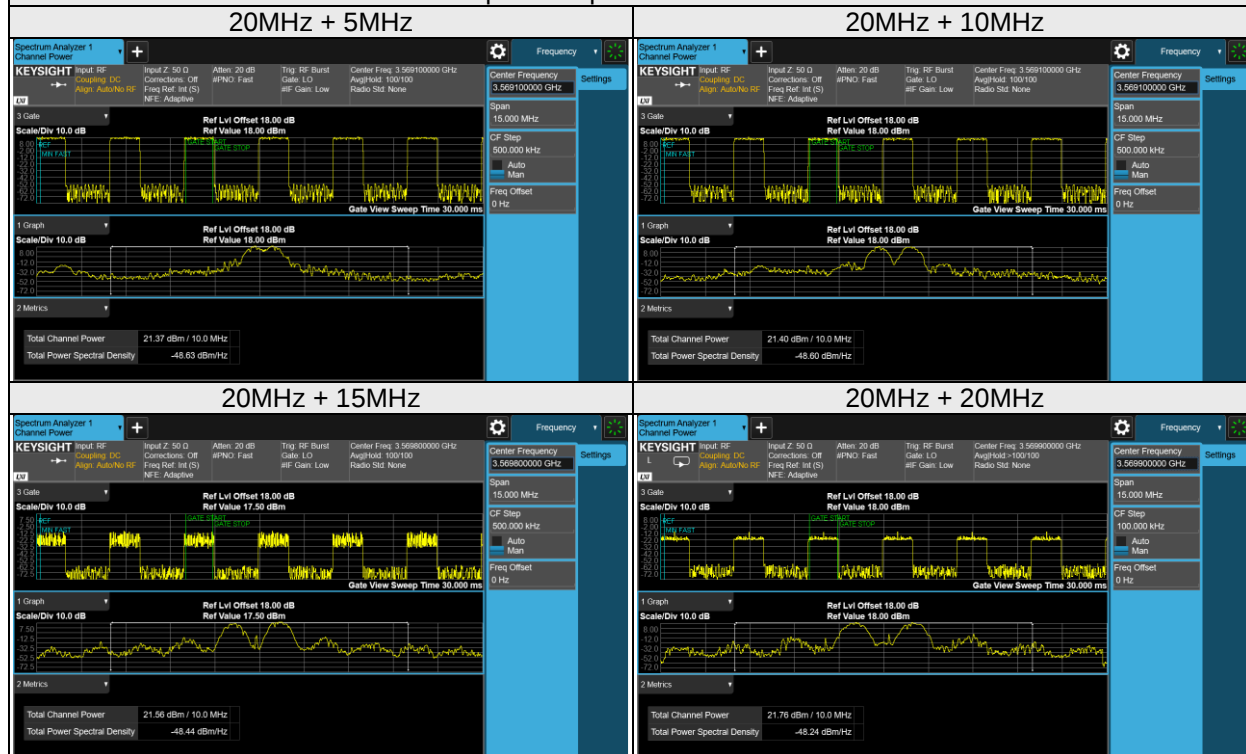
Con- figure	Com- bination	PCC							SCC							Measurement Power	
		Band	BW (MHz)	Modu- lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Band	BW (MHz)	Modu- lation	RB Size	RB Offset	UL Chan.	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	
																Total	
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	20	QPSK	1	99	43388	3579.8	4.56	
					1	99						1	0			21.76	
		42	20	QPSK	1	0	43241	3565.1	42	20	QPSK	1	99	43439	3584.9	4.44	
					1	99						1	0			21.63	
		42	20	QPSK	1	0	43292	3570.2	42	20	QPSK	1	99	43490	3590	4.37	
					1	99						1	0			21.58	
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	15	QPSK	1	74	43361	3577.1	4.75	
					1	99						1	0			21.56	
		42	20	QPSK	1	0	43265	3567.5	42	15	QPSK	1	74	43436	3584.6	4.63	
					1	99						1	0			21.54	
		42	20	QPSK	1	0	43341	3575.1	42	15	QPSK	1	74	43512	3592.2	4.59	
					1	99						1	0			21.48	
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	10	QPSK	1	49	43334	3574.4	4.44	
					1	99						1	0			21.40	
		42	20	QPSK	1	0	43335	3574.5	42	10	QPSK	1	49	43479	3588.9	4.49	
					1	99						1	0			21.36	
		42	20	QPSK	1	0	43391	3580.1	42	10	QPSK	1	49	43535	3594.5	4.61	
					1	99						1	0			21.21	
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	5	QPSK	1	24	43307	3571.7	4.62	
					1	99						1	0			21.37	
		42	20	QPSK	1	0	43315	3572.5	42	5	QPSK	1	24	43432	3584.2	4.37	
					1	99						1	0			21.33	
		42	20	QPSK	1	0	43440	3585	42	5	QPSK	1	24	43557	3596.7	4.64	
					1	99						1	0			21.07	
Intra Band Conti- guous	42C	42	5	QPSK	1	0	43115	3552.5	42	20	QPSK	1	99	43232	3564.2	4.45	
					1	24						1	0			21.31	
		42	5	QPSK	1	0	43244	3565.4	42	20	QPSK	1	99	43361	3577.1	4.49	
					1	24						1	0			21.08	
		42	5	QPSK	1	0	43373	3578.3	42	20	QPSK	1	99	43490	3590	4.48	
					1	24						1	0			21.03	
Intra Band Conti- guous	42C	42	10	QPSK	1	0	43140	3555	42	20	QPSK	1	99	43284	3569.4	4.46	
					1	49						1	0			20.21	
		42	10	QPSK	1	0	43242	3565.2	42	20	QPSK	1	99	43386	3579.6	4.41	
					1	49						1	0			19.58	
		42	10	QPSK	1	0	43346	3575.6	42	20	QPSK	1	99	43490	3590	4.38	
					1	49						1	0			20.21	
Intra Band Conti- guous	42C	42	15	QPSK	1	0	43165	3557.5	42	20	QPSK	1	99	43336	3574.6	4.47	
					1	74						1	0			21.33	
		42	15	QPSK	1	0	43242	3565.2	42	20	QPSK	1	99	43413	3582.3	4.65	
					1	74						1	0			20.57	
		42	15	QPSK	1	0	43319	3572.9	42	20	QPSK	1	99	43490	3590	4.55	
					1	74						1	0			21.21	

Con- figure	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	42C	42	20	16QAM	1	0	43190	3560	42	20	16QAM	1	99	43388	3579.8	4.36
					1	99						1	0			21.34
		42	20	16QAM	1	0	43241	3565.1	42	20	16QAM	1	99	43439	3584.9	4.05
					1	99						1	0			21.32
		42	20	16QAM	1	0	43292	3570.2	42	20	16QAM	1	99	43490	3590	4.04
					1	99						1	0			21.31
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	15	16QAM	1	99	43361	3577.1	4.03
					1	99						1	0			20.70
		42	20	16QAM	1	0	43265	3567.5	42	15	16QAM	1	99	43436	3584.6	4.06
					1	99						1	0			21.30
		42	20	16QAM	1	0	43341	3575.1	42	15	16QAM	1	99	43512	3592.2	4.20
					1	99						1	0			21.12
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	10	16QAM	1	99	43334	3574.4	4.07
					1	99						1	0			21.02
		42	20	16QAM	1	0	43335	3574.5	42	10	16QAM	1	99	43479	3588.9	4.07
					1	99						1	0			20.99
		42	20	16QAM	1	0	43391	3580.1	42	10	16QAM	1	99	43535	3594.5	4.03
					1	99						1	0			20.85
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	5	16QAM	1	24	43307	3571.7	4.01
					1	99						1	0			20.55
		42	20	16QAM	1	0	43315	3572.5	42	5	16QAM	1	24	43432	3584.2	4.12
					1	99						1	0			20.87
		42	20	16QAM	1	0	43440	3585	42	5	16QAM	1	24	43557	3596.7	4.21
					1	99						1	0			20.93
Intra Band Conti- guous	42C	42	5	16QAM	1	0	43115	3552.5	42	20	16QAM	1	99	43232	3564.2	4.12
					1	24						1	0			20.36
		42	5	16QAM	1	0	43244	3565.4	42	20	16QAM	1	99	43361	3577.1	4.04
					1	24						1	0			20.82
		42	5	16QAM	1	0	43373	3578.3	42	20	16QAM	1	99	43490	3590	3.93
					1	24						1	0			20.65
Intra Band Conti- guous	42C	42	10	16QAM	1	0	43140	3555	42	20	16QAM	1	99	43284	3569.4	4.01
					1	49						1	0			19.21
		42	10	16QAM	1	0	43242	3565.2	42	20	16QAM	1	99	43386	3579.6	4.10
					1	49						1	0			19.52
		42	10	16QAM	1	0	43346	3575.6	42	20	16QAM	1	99	43490	3590	4.06
					1	49						1	0			19.77
Intra Band Conti- guous	42C	42	15	16QAM	1	0	43165	3557.5	42	20	16QAM	1	99	43336	3574.6	4.06
					1	74						1	0			20.76
		42	15	16QAM	1	0	43242	3565.2	42	20	16QAM	1	99	43413	3582.3	4.02
					1	74						1	0			20.14
		42	15	16QAM	1	0	43319	3572.9	42	20	16QAM	1	99	43490	3590	4.10
					1	74						1	0			20.81

Con- figure	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	42C	42	20	64QAM	1	0	43190	3560	42	20	64QAM	1	99	43388	3579.8	3.84
					1	99						1	0			20.92
		42	20	64QAM	1	0	43241	3565.1	42	20	64QAM	1	99	43439	3584.9	3.77
					1	99						1	0			20.89
		42	20	64QAM	1	0	43292	3570.2	42	20	64QAM	1	99	43490	3590	3.71
					1	99						1	0			20.87
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	15	64QAM	1	99	43361	3577.1	3.54
					1	99						1	0			20.28
		42	20	64QAM	1	0	43265	3567.5	42	15	64QAM	1	99	43436	3584.6	3.64
					1	99						1	0			20.35
		42	20	64QAM	1	0	43341	3575.1	42	15	64QAM	1	99	43512	3592.2	3.67
					1	99						1	0			20.85
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	10	64QAM	1	99	43334	3574.4	3.61
					1	99						1	0			20.60
		42	20	64QAM	1	0	43335	3574.5	42	10	64QAM	1	99	43479	3588.9	3.61
					1	99						1	0			20.75
		42	20	64QAM	1	0	43391	3580.1	42	10	64QAM	1	99	43535	3594.5	3.53
					1	99						1	0			20.49
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	5	64QAM	1	24	43307	3571.7	3.73
					1	99						1	0			20.55
		42	20	64QAM	1	0	43315	3572.5	42	5	64QAM	1	24	43432	3584.2	3.56
					1	99						1	0			20.87
		42	20	64QAM	1	0	43440	3585	42	5	64QAM	1	24	43557	3596.7	3.66
					1	99						1	0			20.77
Intra Band Conti- guous	42C	42	5	64QAM	1	0	43115	3552.5	42	20	64QAM	1	99	43232	3564.2	3.65
					1	24						1	0			19.94
		42	5	64QAM	1	0	43244	3565.4	42	20	64QAM	1	99	43361	3577.1	3.59
					1	24						1	0			20.33
		42	5	64QAM	1	0	43373	3578.3	42	20	64QAM	1	99	43490	3590	3.63
					1	24						1	0			20.27
Intra Band Conti- guous	42C	42	10	64QAM	1	0	43140	3555	42	20	64QAM	1	99	43284	3569.4	3.71
					1	49						1	0			18.69
		42	10	64QAM	1	0	43242	3565.2	42	20	64QAM	1	99	43386	3579.6	3.71
					1	49						1	0			19.06
		42	10	64QAM	1	0	43346	3575.6	42	20	64QAM	1	99	43490	3590	3.74
					1	49						1	0			19.33
Intra Band Conti- guous	42C	42	15	64QAM	1	0	43165	3557.5	42	20	64QAM	1	99	43336	3574.6	3.65
					1	74						1	0			20.34
		42	15	64QAM	1	0	43242	3565.2	42	20	64QAM	1	99	43413	3582.3	3.56
					1	74						1	0			19.65
		42	15	64QAM	1	0	43319	3572.9	42	20	64QAM	1	99	43490	3590	3.53
					1	74						1	0			20.43

Band 42C

Spectrum plot of worst case



EIRP Power (dBm)

LTE Band 42CA_Full Power

Con- figure	Com- bination	PCC							SCC							Antenna gain (dBi)
		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)	0.92
																EIRP
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	20	QPSK	1	99	43388	3579.8	8.35
					1	99						1	0			22.74
		42	20	QPSK	1	0	43241	3565.1	42	20	QPSK	1	99	43439	3584.9	8.48
					1	99						1	0			22.63
		42	20	QPSK	1	0	43292	3570.2	42	20	QPSK	1	99	43490	3590	8.56
					1	99						1	0			22.59
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	15	QPSK	1	74	43361	3577.1	8.37
					1	99						1	0			22.53
		42	20	QPSK	1	0	43265	3567.5	42	15	QPSK	1	74	43436	3584.6	8.41
					1	99						1	0			22.48
		42	20	QPSK	1	0	43341	3575.1	42	15	QPSK	1	74	43512	3592.2	8.15
					1	99						1	0			22.43
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	10	QPSK	1	49	43334	3574.4	8.24
					1	99						1	0			22.38
		42	20	QPSK	1	0	43335	3574.5	42	10	QPSK	1	49	43479	3588.9	8.46
					1	99						1	0			22.33
		42	20	QPSK	1	0	43391	3580.1	42	10	QPSK	1	49	43535	3594.5	8.40
					1	99						1	0			22.13
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	5	QPSK	1	24	43307	3571.7	8.31
					1	99						1	0			22.31
		42	20	QPSK	1	0	43315	3572.5	42	5	QPSK	1	24	43432	3584.2	8.39
					1	99						1	0			22.19
		42	20	QPSK	1	0	43440	3585	42	5	QPSK	1	24	43557	3596.7	8.48
					1	99						1	0			22.35
Intra Band Conti- guous	42C	42	5	QPSK	1	0	43115	3552.5	42	20	QPSK	1	99	43232	3564.2	8.54
					1	24						1	0			22.33
		42	5	QPSK	1	0	43244	3565.4	42	20	QPSK	1	99	43361	3577.1	8.39
					1	24						1	0			22.28
		42	5	QPSK	1	0	43373	3578.3	42	20	QPSK	1	99	43490	3590	8.48
					1	24						1	0			22.11
Intra Band Conti- guous	42C	42	10	QPSK	1	0	43140	3555	42	20	QPSK	1	99	43284	3569.4	8.36
					1	49						1	0			21.27
		42	10	QPSK	1	0	43242	3565.2	42	20	QPSK	1	99	43386	3579.6	8.34
					1	49						1	0			21.14
		42	10	QPSK	1	0	43346	3575.6	42	20	QPSK	1	99	43490	3590	8.50
					1	49						1	0			21.25
Intra Band Conti- guous	42C	42	15	QPSK	1	0	43165	3557.5	42	20	QPSK	1	99	43336	3574.6	8.31
					1	74						1	0			22.15
		42	15	QPSK	1	0	43242	3565.2	42	20	QPSK	1	99	43413	3582.3	8.33
					1	74						1	0			21.54
		42	15	QPSK	1	0	43319	3572.9	42	20	QPSK	1	99	43490	3590	8.39
					1	74						1	0			22.47

Con- figure	Com- bination	PCC							SCC							Antenna gain (dBi)	
		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)	0.92	
																EIRP	
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	20	16QAM	1	99	43388	3579.8	7.95	
					1	99						1	0			22.54	
		42	20	16QAM	1	0	43241	3565.1	42	20	16QAM	1	99	43439	3584.9	8.10	
					1	99						1	0			22.38	
		42	20	16QAM	1	0	43292	3570.2	42	20	16QAM	1	99	43490	3590	8.18	
					1	99						1	0			22.27	
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	15	16QAM	1	99	43361	3577.1	7.97	
					1	99						1	0			21.84	
		42	20	16QAM	1	0	43265	3567.5	42	15	16QAM	1	99	43436	3584.6	8.02	
					1	99						1	0			22.32	
		42	20	16QAM	1	0	43341	3575.1	42	15	16QAM	1	99	43512	3592.2	7.79	
					1	99						1	0			22.18	
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	10	16QAM	1	99	43334	3574.4	7.84	
					1	99						1	0			22.08	
		42	20	16QAM	1	0	43335	3574.5	42	10	16QAM	1	99	43479	3588.9	8.08	
					1	99						1	0			22.04	
		42	20	16QAM	1	0	43391	3580.1	42	10	16QAM	1	99	43535	3594.5	8.02	
					1	99						1	0			21.92	
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	5	16QAM	1	24	43307	3571.7	7.95	
					1	99						1	0			21.82	
		42	20	16QAM	1	0	43315	3572.5	42	5	16QAM	1	24	43432	3584.2	8.00	
					1	99						1	0			21.99	
		42	20	16QAM	1	0	43440	3585	42	5	16QAM	1	24	43557	3596.7	8.07	
					1	99						1	0			22.06	
Intra Band Conti- guous	42C	42	5	16QAM	1	0	43115	3552.5	42	20	16QAM	1	99	43232	3564.2	8.15	
					1	24						1	0			21.51	
		42	5	16QAM	1	0	43244	3565.4	42	20	16QAM	1	99	43361	3577.1	7.98	
					1	24						1	0			22.12	
		42	5	16QAM	1	0	43373	3578.3	42	20	16QAM	1	99	43490	3590	8.10	
					1	24						1	0			21.86	
Intra Band Conti- guous	42C	42	10	16QAM	1	0	43140	3555	42	20	16QAM	1	99	43284	3569.4	7.98	
					1	49						1	0			20.63	
		42	10	16QAM	1	0	43242	3565.2	42	20	16QAM	1	99	43386	3579.6	7.97	
					1	49						1	0			20.85	
		42	10	16QAM	1	0	43346	3575.6	42	20	16QAM	1	99	43490	3590	8.14	
					1	49						1	0			21.04	
Intra Band Conti- guous	42C	42	15	16QAM	1	0	43165	3557.5	42	20	16QAM	1	99	43336	3574.6	7.92	
					1	74						1	0			21.90	
		42	15	16QAM	1	0	43242	3565.2	42	20	16QAM	1	99	43413	3582.3	7.92	
					1	74						1	0			21.22	
		42	15	16QAM	1	0	43319	3572.9	42	20	16QAM	1	99	43490	3590	7.96	
					1	74						1	0			22.18	

Con- figure	Com- bination	PCC							SCC							Antenna gain (dBi)	
		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)	0.92	
																EIRP	
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	20	64QAM	1	99	43388	3579.8	7.55	
					1	99						1	0			21.98	
		42	20	64QAM	1	0	43241	3565.1	42	20	64QAM	1	99	43439	3584.9	7.72	
					1	99						1	0			21.75	
		42	20	64QAM	1	0	43292	3570.2	42	20	64QAM	1	99	43490	3590	7.80	
					1	99						1	0			21.82	
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	15	64QAM	1	99	43361	3577.1	7.57	
					1	99						1	0			21.40	
		42	20	64QAM	1	0	43265	3567.5	42	15	64QAM	1	99	43436	3584.6	7.63	
					1	99						1	0			21.60	
		42	20	64QAM	1	0	43341	3575.1	42	15	64QAM	1	99	43512	3592.2	7.43	
					1	99						1	0			21.45	
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	10	64QAM	1	99	43334	3574.4	7.44	
					1	99						1	0			21.59	
		42	20	64QAM	1	0	43335	3574.5	42	10	64QAM	1	99	43479	3588.9	7.70	
					1	99						1	0			21.51	
		42	20	64QAM	1	0	43391	3580.1	42	10	64QAM	1	99	43535	3594.5	7.64	
					1	99						1	0			21.19	
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	5	64QAM	1	24	43307	3571.7	7.59	
					1	99						1	0			21.20	
		42	20	64QAM	1	0	43315	3572.5	42	5	64QAM	1	24	43432	3584.2	7.61	
					1	99						1	0			21.45	
		42	20	64QAM	1	0	43440	3585	42	5	64QAM	1	24	43557	3596.7	7.66	
					1	99						1	0			21.32	
Intra Band Conti- guous	42C	42	5	64QAM	1	0	43115	3552.5	42	20	64QAM	1	99	43232	3564.2	7.76	
					1	24						1	0			20.93	
		42	5	64QAM	1	0	43244	3565.4	42	20	64QAM	1	99	43361	3577.1	7.57	
					1	24						1	0			21.40	
		42	5	64QAM	1	0	43373	3578.3	42	20	64QAM	1	99	43490	3590	7.72	
					1	24						1	0			21.17	
Intra Band Conti- guous	42C	42	10	64QAM	1	0	43140	3555	42	20	64QAM	1	99	43284	3569.4	7.60	
					1	49						1	0			19.97	
		42	10	64QAM	1	0	43242	3565.2	42	20	64QAM	1	99	43386	3579.6	7.60	
					1	49						1	0			20.48	
		42	10	64QAM	1	0	43346	3575.6	42	20	64QAM	1	99	43490	3590	7.78	
					1	49						1	0			20.32	
Intra Band Conti- guous	42C	42	15	64QAM	1	0	43165	3557.5	42	20	64QAM	1	99	43336	3574.6	7.53	
					1	74						1	0			21.17	
		42	15	64QAM	1	0	43242	3565.2	42	20	64QAM	1	99	43413	3582.3	7.51	
					1	74						1	0			20.66	
		42	15	64QAM	1	0	43319	3572.9	42	20	64QAM	1	99	43490	3590	7.53	
					1	74						1	0			21.70	

LTE Band 42CA_Per 10M Power

Con- figure	Com- bination	PCC							SCC							Antenna gain (dBi)	
		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)	0.92	
																EIRP	
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	20	QPSK	1	99	43388	3579.8	5.48	
					1	99						1	0			22.68	
		42	20	QPSK	1	0	43241	3565.1	42	20	QPSK	1	99	43439	3584.9	5.36	
					1	99						1	0			22.55	
		42	20	QPSK	1	0	43292	3570.2	42	20	QPSK	1	99	43490	3590	5.29	
					1	99						1	0			22.50	
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	15	QPSK	1	74	43361	3577.1	5.67	
					1	99						1	0			22.48	
		42	20	QPSK	1	0	43265	3567.5	42	15	QPSK	1	74	43436	3584.6	5.55	
					1	99						1	0			22.46	
		42	20	QPSK	1	0	43341	3575.1	42	15	QPSK	1	74	43512	3592.2	5.51	
					1	99						1	0			22.40	
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	10	QPSK	1	49	43334	3574.4	5.36	
					1	99						1	0			22.32	
		42	20	QPSK	1	0	43335	3574.5	42	10	QPSK	1	49	43479	3588.9	5.41	
					1	99						1	0			22.28	
		42	20	QPSK	1	0	43391	3580.1	42	10	QPSK	1	49	43535	3594.5	5.53	
					1	99						1	0			22.13	
Intra Band Conti- guous	42C	42	20	QPSK	1	0	43190	3560	42	5	QPSK	1	24	43307	3571.7	5.54	
					1	99						1	0			22.29	
		42	20	QPSK	1	0	43315	3572.5	42	5	QPSK	1	24	43432	3584.2	5.29	
					1	99						1	0			22.25	
		42	20	QPSK	1	0	43440	3585	42	5	QPSK	1	24	43557	3596.7	5.56	
					1	99						1	0			21.99	
Intra Band Conti- guous	42C	42	5	QPSK	1	0	43115	3552.5	42	20	QPSK	1	99	43232	3564.2	5.37	
					1	24						1	0			22.23	
		42	5	QPSK	1	0	43244	3565.4	42	20	QPSK	1	99	43361	3577.1	5.41	
					1	24						1	0			22.00	
		42	5	QPSK	1	0	43373	3578.3	42	20	QPSK	1	99	43490	3590	5.40	
					1	24						1	0			21.95	
Intra Band Conti- guous	42C	42	10	QPSK	1	0	43140	3555	42	20	QPSK	1	99	43284	3569.4	5.38	
					1	49						1	0			21.13	
		42	10	QPSK	1	0	43242	3565.2	42	20	QPSK	1	99	43386	3579.6	5.33	
					1	49						1	0			20.50	
		42	10	QPSK	1	0	43346	3575.6	42	20	QPSK	1	99	43490	3590	5.30	
					1	49						1	0			21.13	
Intra Band Conti- guous	42C	42	15	QPSK	1	0	43165	3557.5	42	20	QPSK	1	99	43336	3574.6	5.39	
					1	74						1	0			22.25	
		42	15	QPSK	1	0	43242	3565.2	42	20	QPSK	1	99	43413	3582.3	5.57	
					1	74						1	0			21.49	
		42	15	QPSK	1	0	43319	3572.9	42	20	QPSK	1	99	43490	3590	5.47	
					1	74						1	0			22.13	

Con- figure	Com- bination	PCC							SCC							Antenna gain (dBi)	
		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)	0.92	
																EIRP	
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	20	16QAM	1	99	43388	3579.8	5.28	
					1	99						1	0			22.26	
		42	20	16QAM	1	0	43241	3565.1	42	20	16QAM	1	99	43439	3584.9	4.97	
					1	99						1	0			22.24	
		42	20	16QAM	1	0	43292	3570.2	42	20	16QAM	1	99	43490	3590	4.96	
					1	99						1	0			22.23	
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	15	16QAM	1	99	43361	3577.1	4.95	
					1	99						1	0			21.62	
		42	20	16QAM	1	0	43265	3567.5	42	15	16QAM	1	99	43436	3584.6	4.98	
					1	99						1	0			22.22	
		42	20	16QAM	1	0	43341	3575.1	42	15	16QAM	1	99	43512	3592.2	5.12	
					1	99						1	0			22.04	
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	10	16QAM	1	99	43334	3574.4	4.99	
					1	99						1	0			21.94	
		42	20	16QAM	1	0	43335	3574.5	42	10	16QAM	1	99	43479	3588.9	4.99	
					1	99						1	0			21.91	
		42	20	16QAM	1	0	43391	3580.1	42	10	16QAM	1	99	43535	3594.5	4.95	
					1	99						1	0			21.77	
Intra Band Conti- guous	42C	42	20	16QAM	1	0	43190	3560	42	5	16QAM	1	24	43307	3571.7	4.93	
					1	99						1	0			21.47	
		42	20	16QAM	1	0	43315	3572.5	42	5	16QAM	1	24	43432	3584.2	5.04	
					1	99						1	0			21.79	
		42	20	16QAM	1	0	43440	3585	42	5	16QAM	1	24	43557	3596.7	5.13	
					1	99						1	0			21.85	
Intra Band Conti- guous	42C	42	5	16QAM	1	0	43115	3552.5	42	20	16QAM	1	99	43232	3564.2	5.04	
					1	24						1	0			21.28	
		42	5	16QAM	1	0	43244	3565.4	42	20	16QAM	1	99	43361	3577.1	4.96	
					1	24						1	0			21.74	
		42	5	16QAM	1	0	43373	3578.3	42	20	16QAM	1	99	43490	3590	4.85	
					1	24						1	0			21.57	
Intra Band Conti- guous	42C	42	10	16QAM	1	0	43140	3555	42	20	16QAM	1	99	43284	3569.4	4.93	
					1	49						1	0			20.13	
		42	10	16QAM	1	0	43242	3565.2	42	20	16QAM	1	99	43386	3579.6	5.02	
					1	49						1	0			20.44	
		42	10	16QAM	1	0	43346	3575.6	42	20	16QAM	1	99	43490	3590	4.98	
					1	49						1	0			20.69	
Intra Band Conti- guous	42C	42	15	16QAM	1	0	43165	3557.5	42	20	16QAM	1	99	43336	3574.6	4.98	
					1	74						1	0			21.68	
		42	15	16QAM	1	0	43242	3565.2	42	20	16QAM	1	99	43413	3582.3	4.94	
					1	74						1	0			21.06	
		42	15	16QAM	1	0	43319	3572.9	42	20	16QAM	1	99	43490	3590	5.02	
					1	74						1	0			21.73	

Con- figure	Com- bination	PCC							SCC							Antenna gain (dBi)	
		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)	0.92	
																EIRP	
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	20	64QAM	1	99	43388	3579.8	4.76	
					1	99						1	0			21.84	
		42	20	64QAM	1	0	43241	3565.1	42	20	64QAM	1	99	43439	3584.9	4.69	
					1	99						1	0			21.81	
		42	20	64QAM	1	0	43292	3570.2	42	20	64QAM	1	99	43490	3590	4.63	
					1	99						1	0			21.79	
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	15	64QAM	1	99	43361	3577.1	4.46	
					1	99						1	0			21.20	
		42	20	64QAM	1	0	43265	3567.5	42	15	64QAM	1	99	43436	3584.6	4.56	
					1	99						1	0			21.27	
		42	20	64QAM	1	0	43341	3575.1	42	15	64QAM	1	99	43512	3592.2	4.59	
					1	99						1	0			21.77	
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	10	64QAM	1	99	43334	3574.4	4.53	
					1	99						1	0			21.52	
		42	20	64QAM	1	0	43335	3574.5	42	10	64QAM	1	99	43479	3588.9	4.53	
					1	99						1	0			21.67	
		42	20	64QAM	1	0	43391	3580.1	42	10	64QAM	1	99	43535	3594.5	4.45	
					1	99						1	0			21.41	
Intra Band Conti- guous	42C	42	20	64QAM	1	0	43190	3560	42	5	64QAM	1	24	43307	3571.7	4.65	
					1	99						1	0			21.47	
		42	20	64QAM	1	0	43315	3572.5	42	5	64QAM	1	24	43432	3584.2	4.48	
					1	99						1	0			21.79	
		42	20	64QAM	1	0	43440	3585	42	5	64QAM	1	24	43557	3596.7	4.58	
					1	99						1	0			21.69	
Intra Band Conti- guous	42C	42	5	64QAM	1	0	43115	3552.5	42	20	64QAM	1	99	43232	3564.2	4.57	
					1	24						1	0			20.86	
		42	5	64QAM	1	0	43244	3565.4	42	20	64QAM	1	99	43361	3577.1	4.51	
					1	24						1	0			21.25	
		42	5	64QAM	1	0	43373	3578.3	42	20	64QAM	1	99	43490	3590	4.55	
					1	24						1	0			21.19	
Intra Band Conti- guous	42C	42	10	64QAM	1	0	43140	3555	42	20	64QAM	1	99	43284	3569.4	4.63	
					1	49						1	0			19.61	
		42	10	64QAM	1	0	43242	3565.2	42	20	64QAM	1	99	43386	3579.6	4.63	
					1	49						1	0			19.98	
		42	10	64QAM	1	0	43346	3575.6	42	20	64QAM	1	99	43490	3590	4.66	
					1	49						1	0			20.25	
Intra Band Conti- guous	42C	42	15	64QAM	1	0	43165	3557.5	42	20	64QAM	1	99	43336	3574.6	4.57	
					1	74						1	0			21.26	
		42	15	64QAM	1	0	43242	3565.2	42	20	64QAM	1	99	43413	3582.3	4.48	
					1	74						1	0			20.57	
		42	15	64QAM	1	0	43319	3572.9	42	20	64QAM	1	99	43490	3590	4.45	
					1	74						1	0			21.35	

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stability Measurement

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

4.2.2 Test Procedure

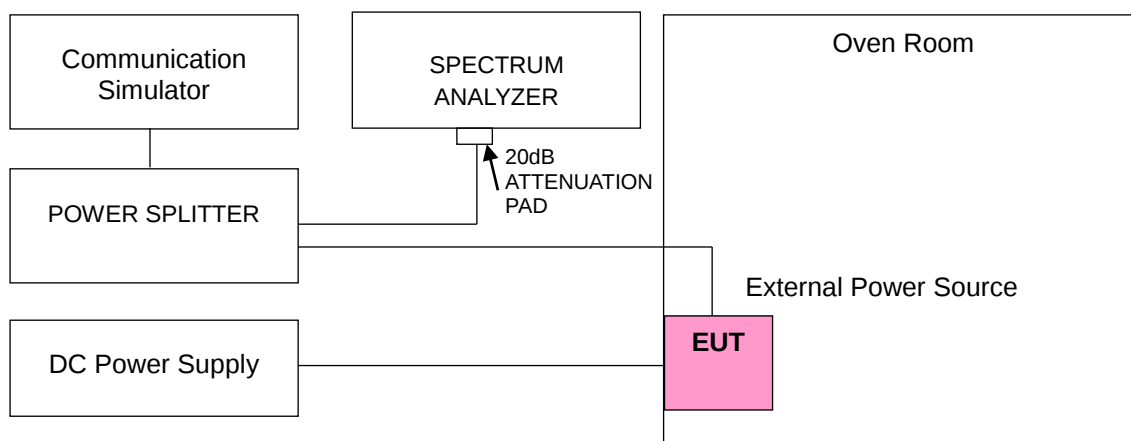
- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the AC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

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

4.2.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.2.4 Test Setup



4.2.5 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 42CA			
	Channel Bandwidth: 20MHz+20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	ppm	Frequency (MHz)	ppm
102	3565.100044	0.012	3584.900046	0.013
120	3565.100043	0.012	3584.900042	0.012
138	3565.100037	0.010	3584.900038	0.011

Frequency Error vs. Temperature

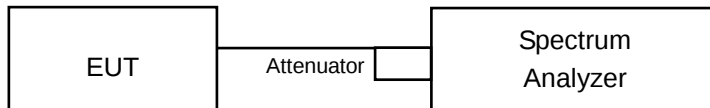
Temp. (°C)	LTE Band 42CA			
	Channel Bandwidth: 20MHz+20MHz			
	Low Channel		High Channel	
	Frequency (MHz)	ppm	Frequency (MHz)	ppm
75	3565.100036	0.010	3584.900037	0.010
70	3565.100045	0.013	3584.900046	0.013
60	3565.100048	0.013	3584.900047	0.013
50	3565.100041	0.012	3584.900042	0.012
40	3565.100043	0.012	3584.900043	0.012
30	3565.100041	0.012	3584.900041	0.011
20	3565.100039	0.011	3584.900048	0.013
10	3565.100037	0.010	3584.900038	0.011
0	3565.100036	0.010	3584.900036	0.010
-10	3565.100044	0.012	3584.900044	0.012
-20	3565.100043	0.012	3584.900043	0.012
-30	3565.100037	0.010	3584.900039	0.011

4.3 Emission Bandwidth Measurement

4.3.1 Limit of 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 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.

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 = 1-5% of the OBW. 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.

4.3.5 Deviation from Test Standard

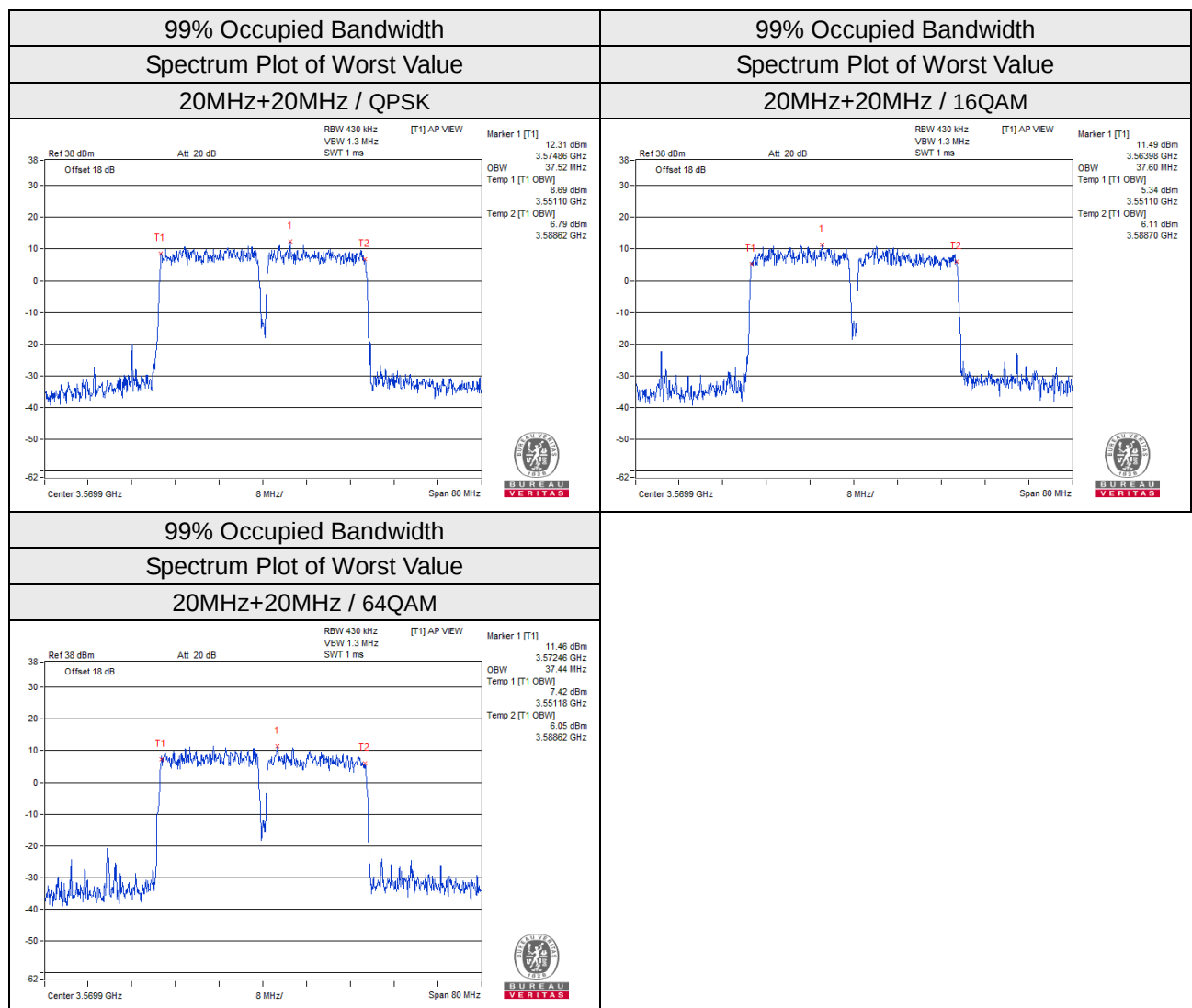
No deviation.

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.

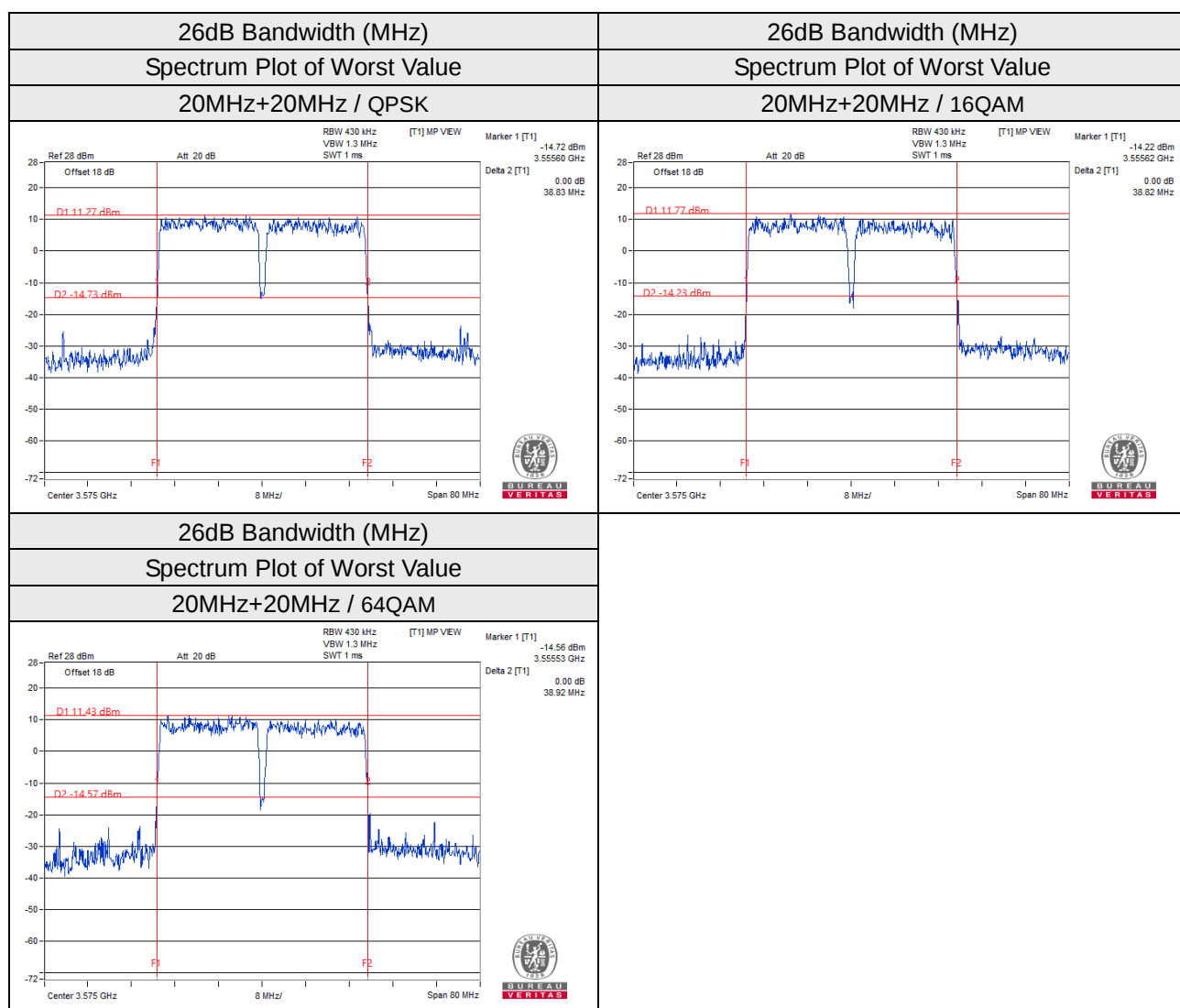
4.3.7 Test Result

LTE Band 42CA, Channel Bandwidth 20MHz+20MHz						
Channel Number	Freq. (MHz)	OCP 99 BAND WIDTH (MHz)			Limit(MHz)	PASS /FAIL
		Chain0				
		QPSK	16QAM	64QAM	Maximum	
43190+43388	3560+3579.8	37.52	37.60	37.44	40.00	PASS
43241+43439	3565.1+3584.9	37.36	37.36	37.44	40.00	PASS
43292+43490	3570.2+3590	37.36	37.52	37.36	40.00	PASS



LTE Band 42CA, Channel Bandwidth 20MHz+20MHz

Channel Number	Freq. (MHz)	26dB DOWN BANDWIDTH (MHz)			Limit(MHz)	PASS /FAIL
		Chain0				
		QPSK	16QAM	64QAM	Maximum	
43190+43388	3560+3579.8	38.68	38.71	38.71	40.00	PASS
43241+43439	3565.1+3584.9	38.83	38.82	38.92	40.00	PASS
43292+43490	3570.2+3590	38.76	38.72	38.89	40.00	PASS

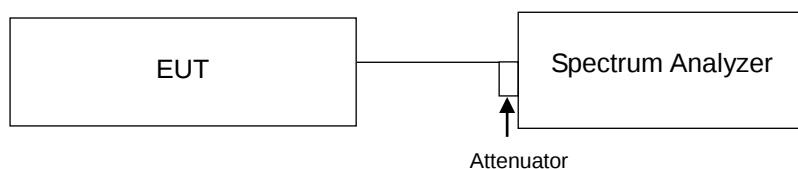


4.4 Peak to Average Ratio

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

For SC Configurations:

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

For CA Configurations:

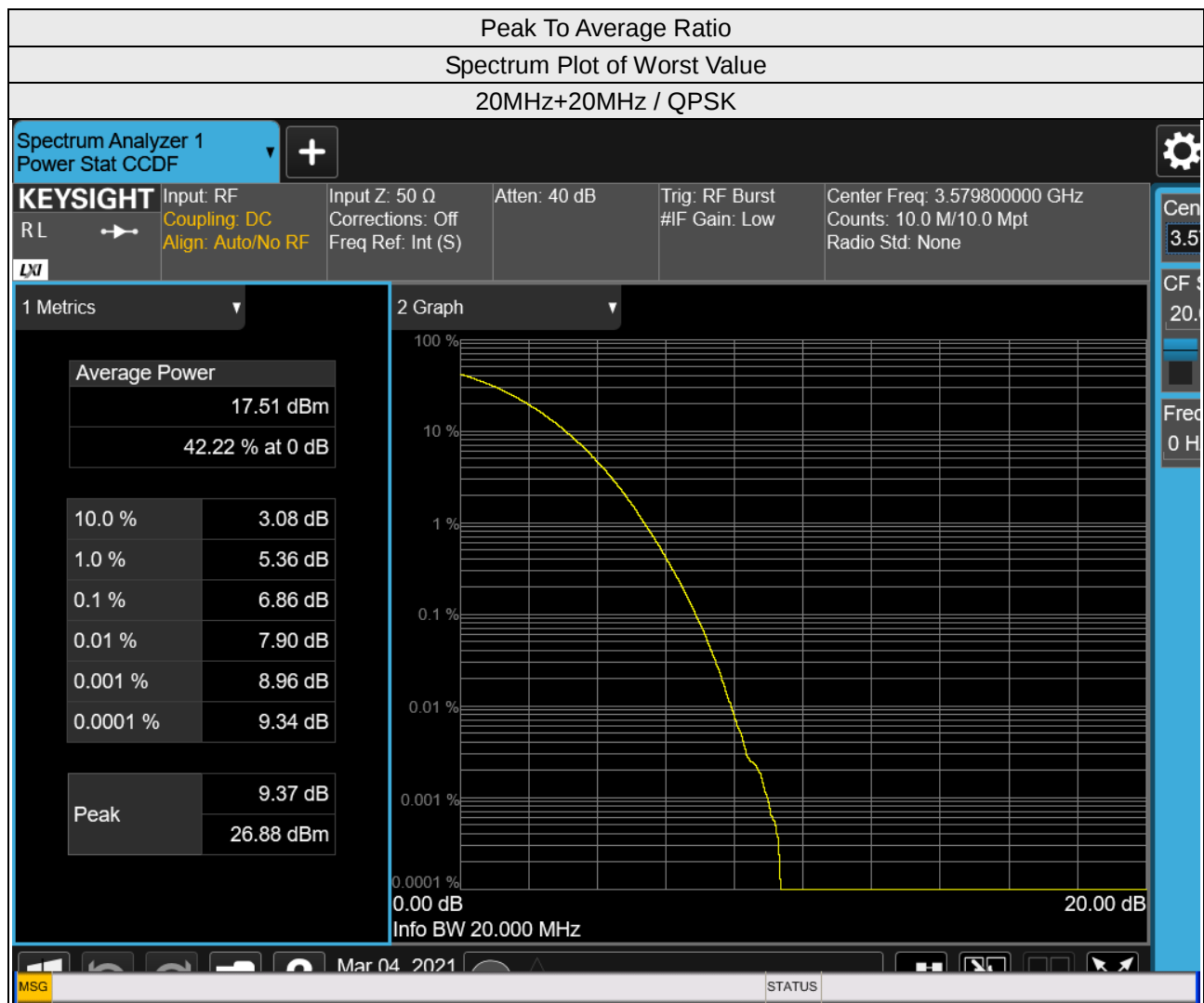
$$\text{PAPR (dB)} = P_{\text{Pk}} \text{ (dBm)} - P_{\text{Avg}} \text{ (dBm)}$$

Where :

- PAPR: peak-to-average power ratio, in dB.
- P_{Pk} : measured peak power or peak PSD level, in dBm.
- P_{Avg} : measured average power or average PSD level, in dBm.

4.4.4 Test Results

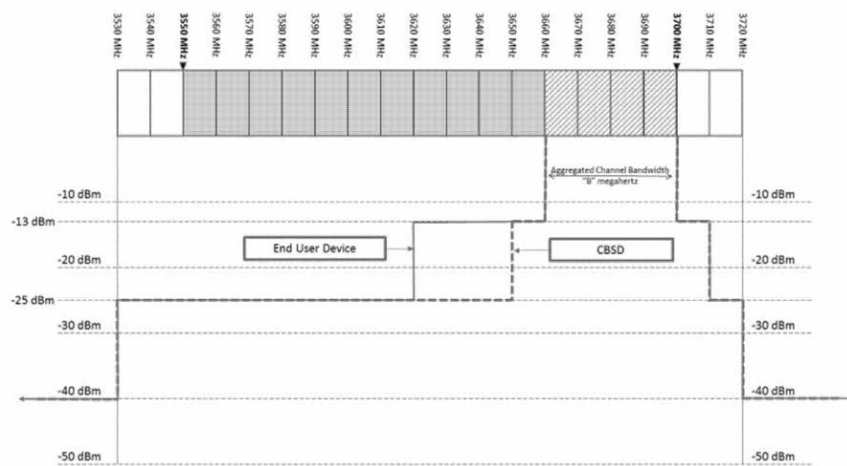
LTE Band 42CA, Channel Bandwidth 20MHz+20MHz									
Channel Number	Freq. (MHz)	Peak to Average Ratio (dB)						Limit(dB)	PASS /FAIL
		Chain0							
		QPSK		16QAM		64QAM		Maximum	
		CC0	CC1	CC0	CC1	CC0	CC1		
43190+43388	3560+3579.8	5.60	6.86	6.42	6.50	6.80	6.76	13	PASS
43241+43439	3565.1+3584.9	5.54	5.54	6.43	6.41	6.79	6.77	13	PASS
43292+43490	3570.2+3590	5.54	5.59	6.42	6.50	6.78	6.76	13	PASS



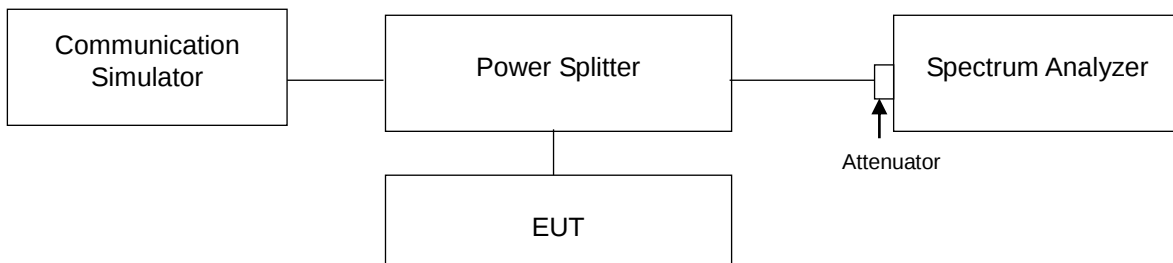
4.5 Conducted Spurious Emissions

4.5.1 Limits of Conducted Spurious Emissions Measurement

For CBSD 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 10MHz above the Assigned Channel	-25 dBm/MHz
Greater than 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



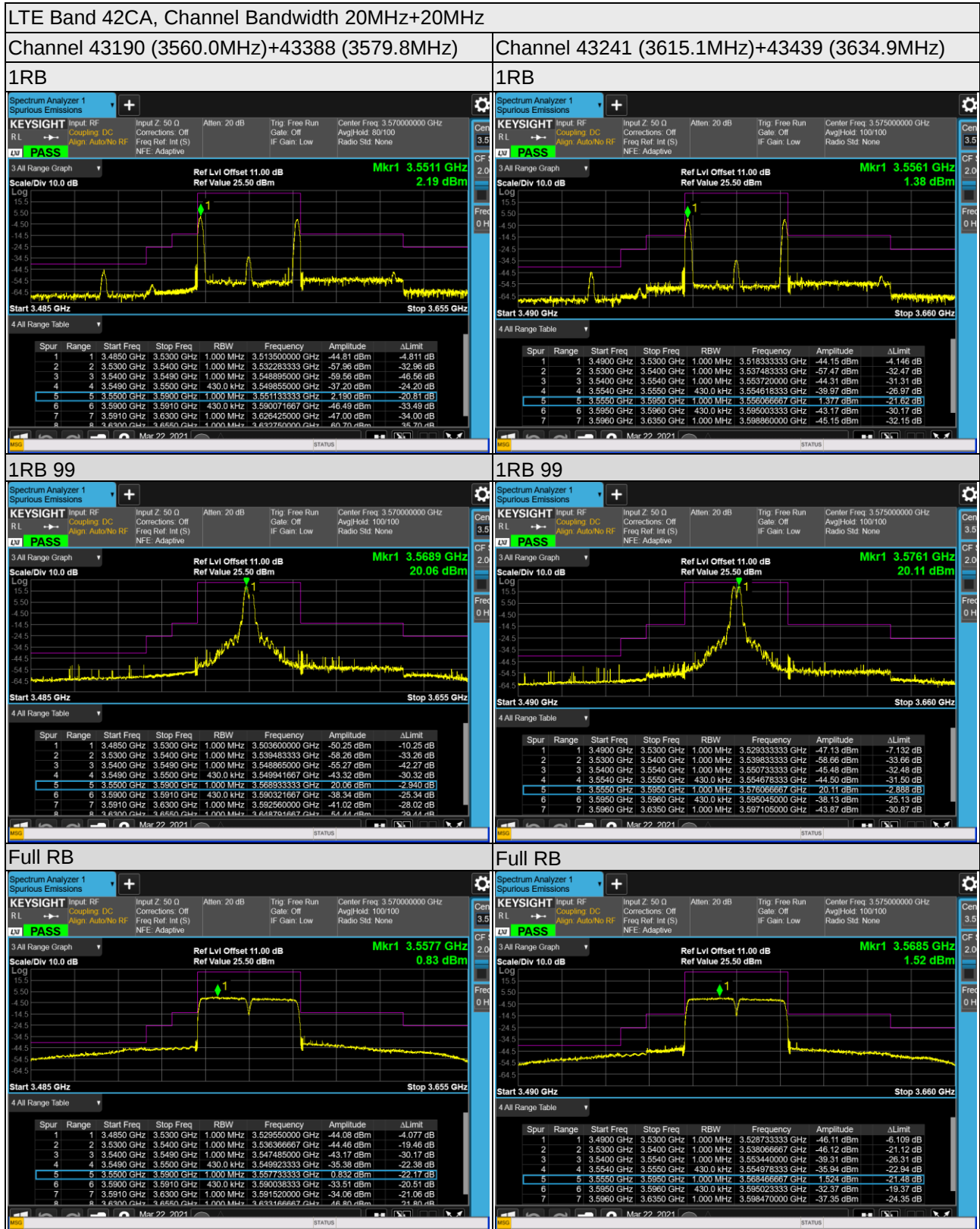
4.5.3 Test Instruments

Refer to section 4.1.3 to get information of above instrument.

4.5.4 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.
- c. Measuring frequency band edge, 20dB attenuation pad is connected with spectrum. 1% of the fundamental emission bandwidth is used for conducted emission measurement.
- d. For 5MHz channel BW mode, extend the 1% range from 1M to 2M above and below the channel edge and then reduce the limit further by $10 \log (1000/51)=13\text{dB}$ (i.e. total $-13 + -13=-26\text{dB}$) to compensate for the integration from 51k to 1M.

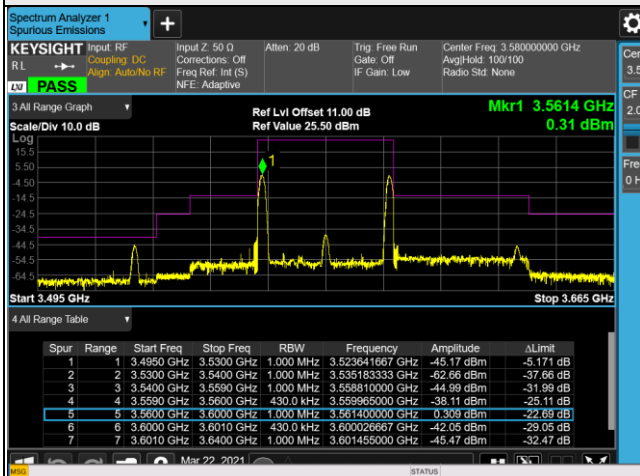
4.5.5 Test Results



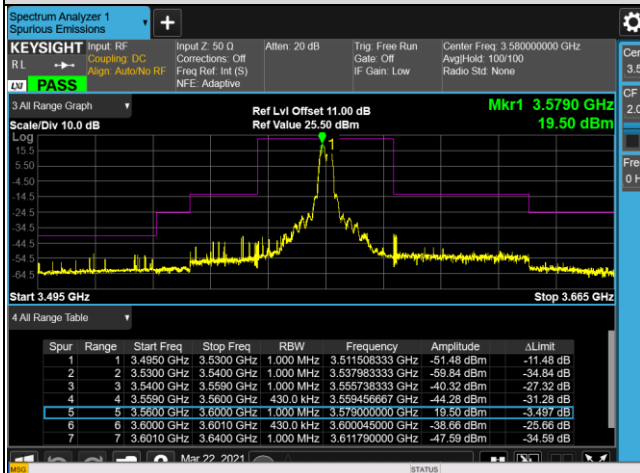
LTE Band 42CA Channel Bandwidth 20MHz+20MHz

Channel 43292 (3570.2MHz) +43490 (3590.0MHz)

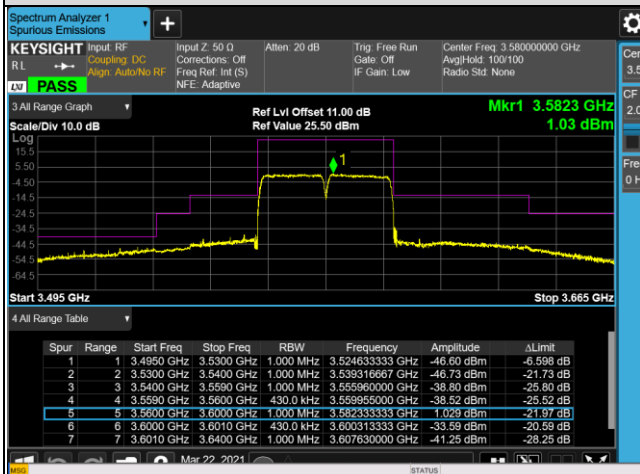
1RB



1RB 99



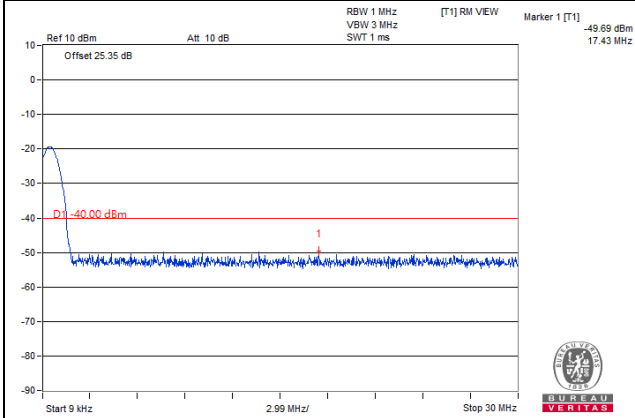
Full RB



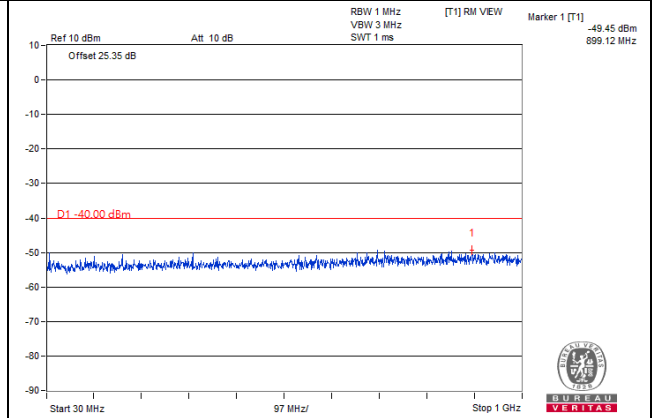
Channel Band width: 20MHz+20MHz

Channel 43190 (3560.0MHz)+43388 (3579.8MHz)

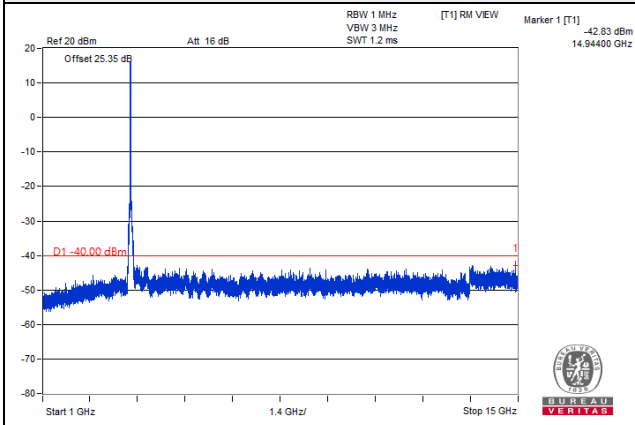
Frequency Range : 9kHz~30MHz



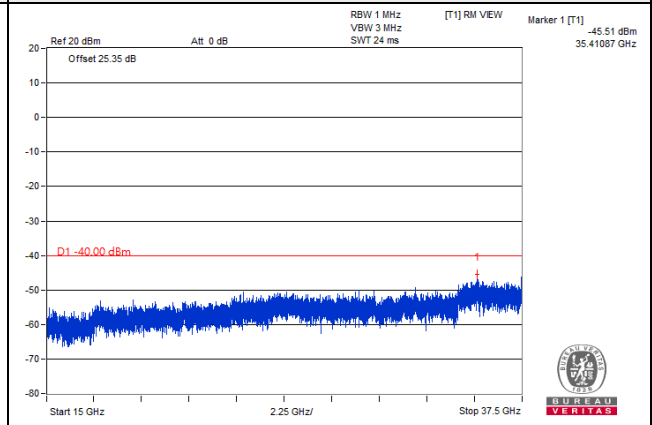
Frequency Range : 30MHz~1GHz



Frequency Range :1GHz~15GHz



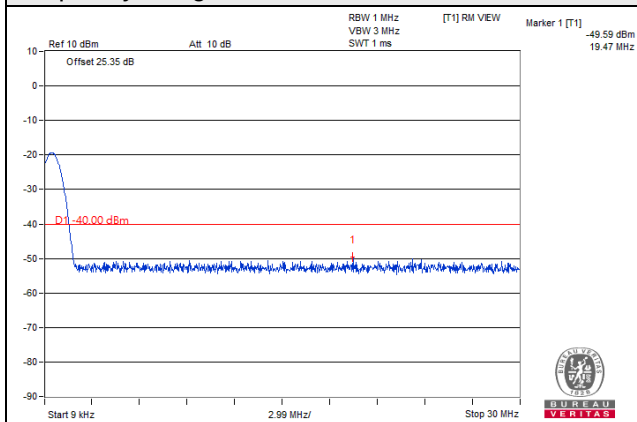
Frequency Range :15GHz~37.5GHz



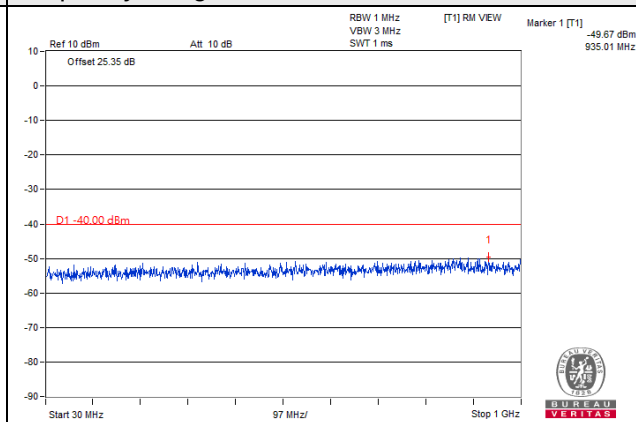
Channel Band width: 20MHz+20MHz

Channel 43241 (3565.1MHz)+43439 (3584.9MHz)

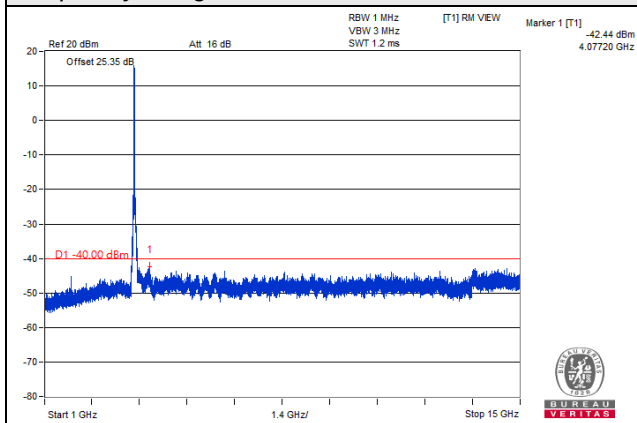
Frequency Range : 9kHz~30MHz



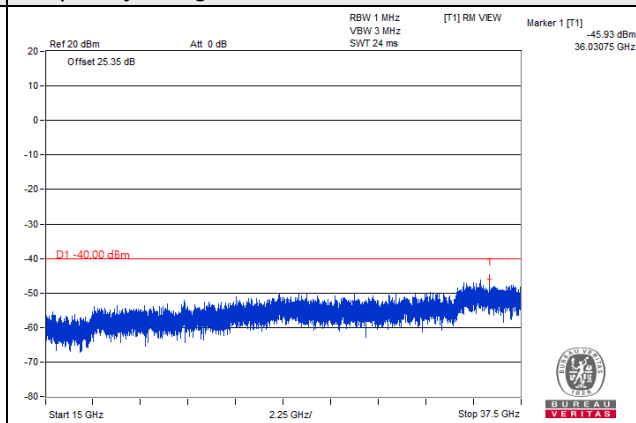
Frequency Range : 30MHz~1GHz



Frequency Range :1GHz~15GHz



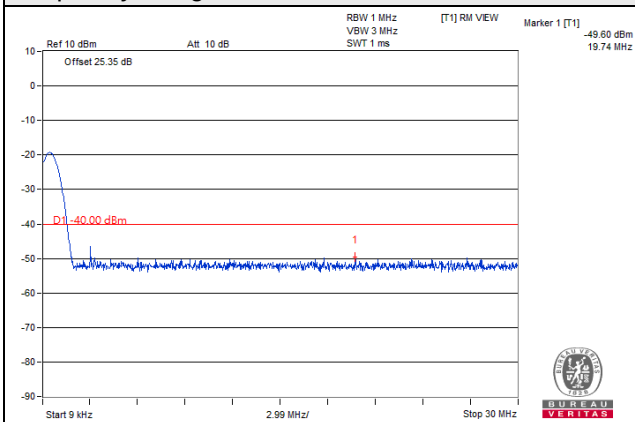
Frequency Range :15GHz~37.5GHz



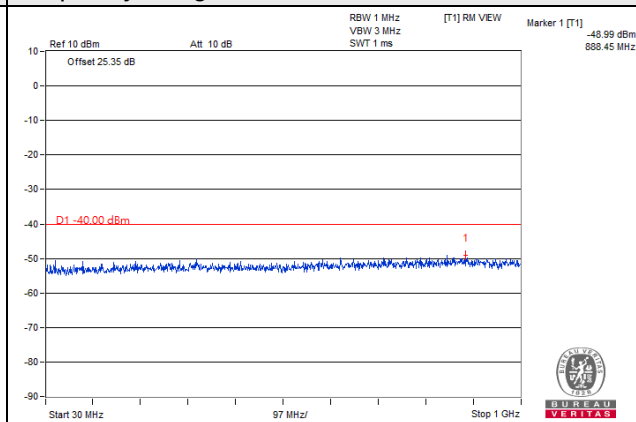
Channel Band width: 20MHz+20MHz

Channel 43292 (2570.2MHz)+43490 (3590.0MHz)

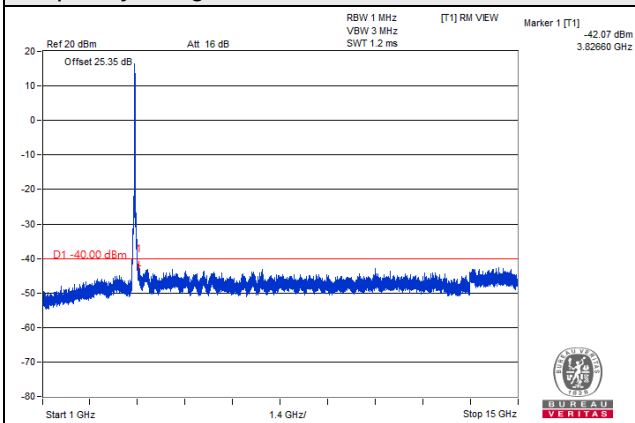
Frequency Range : 9kHz~30MHz



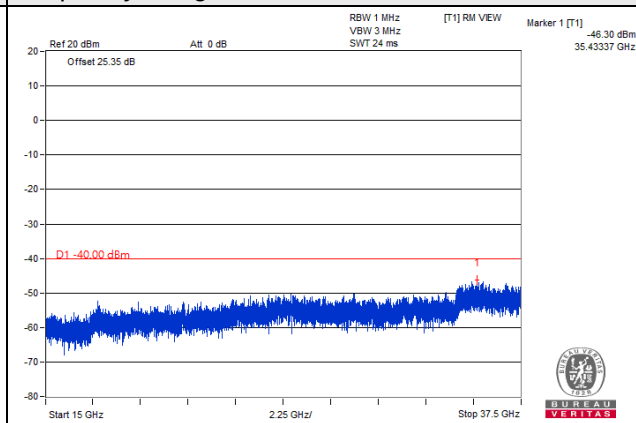
Frequency Range : 30MHz~1GHz



Frequency Range :1GHz~15GHz



Frequency Range :15GHz~37.5GHz



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. The field strength was measured with Spectrum Analyzer.
- b. Measurement in the semi-anechoic chamber, EUT placed on the 0.8m/1.5m 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 field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor.
- c. Perform a field strength measurement and then mathematically convert the measured field strength level to EIRP level.
- d. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = Read Value (dBμV/m) - Correction Factor @ 3m
- e. Correction Factor (dB) @ 3m = $20\log(D) - 104.8$; where D is the measurement distance @3m = -95.26dB

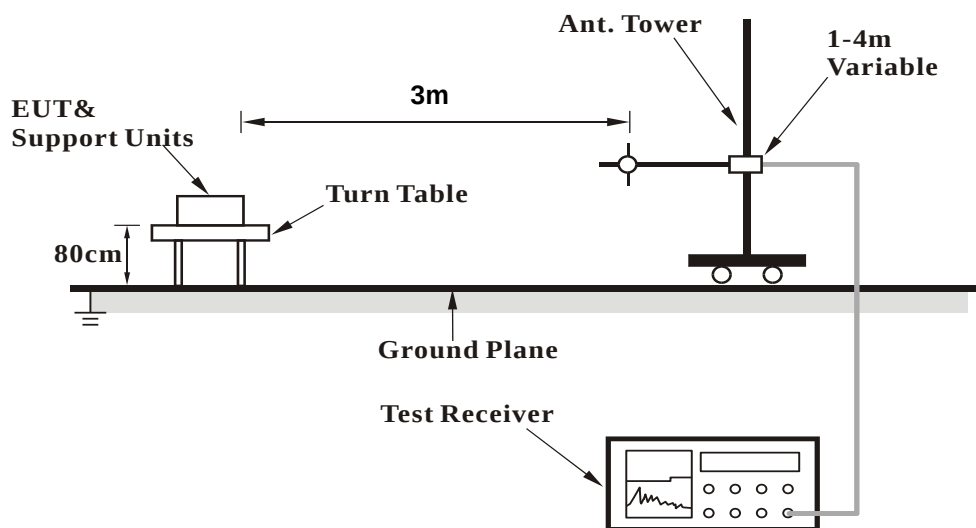
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.6.4 Deviation from Test Standard

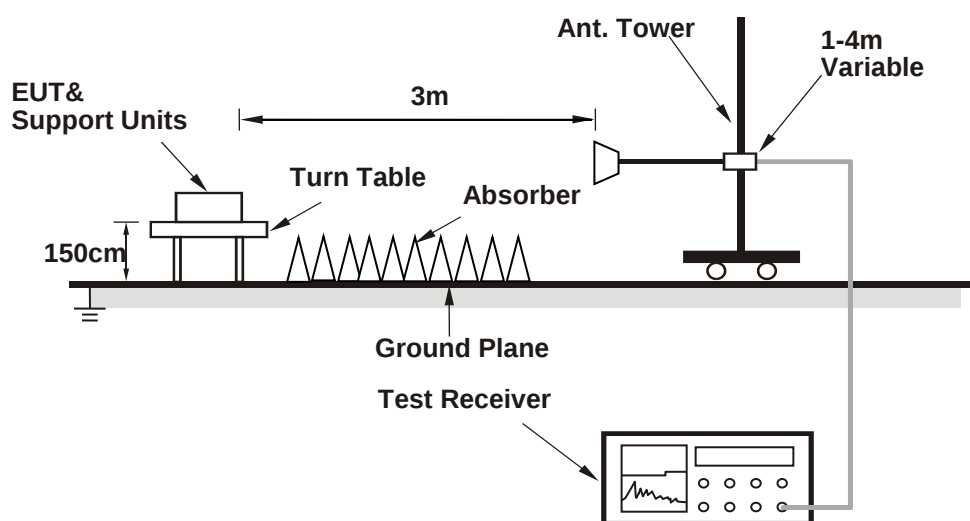
No deviation.

4.6.5 Test Setup

<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 :

Band 42CA

Mode	TX Channel 43190+43388	Frequency Range	Below 1000 MHz
------	------------------------	-----------------	----------------

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	30.96	27.94	-95.26	-67.32	-40	-27.32
2	109.54	22.9	-95.26	-72.36	-40	-32.36
3	148.97	23.43	-95.26	-71.83	-40	-31.83
4	196.22	26.8	-95.26	-68.46	-40	-28.46
5	310.56	22.86	-95.26	-72.40	-40	-32.40
6	486.16	28.39	-95.26	-66.87	-40	-26.87

Antenna Polarity & Test Distance: Vertical at 3 M						
NO.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	31.08	32.61	-95.26	-62.65	-40	-22.65
2	46.53	29.24	-95.26	-66.02	-40	-26.02
3	107.87	23.66	-95.26	-71.60	-40	-31.60
4	158.46	25.21	-95.26	-70.05	-40	-30.05
5	197.83	22.36	-95.26	-72.90	-40	-32.90
6	380.98	26.22	-95.26	-69.04	-40	-29.04

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), Emission Value (dBm) = E (dB μ V/m) + Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) – 104.8; where D is the measurement distance @3m

Mode	TX Channel 43241+43439	Frequency Range	Below 1000 MHz
------	------------------------	-----------------	----------------

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	30.94	28.21	-95.26	-67.05	-40	-27.05
2	109.53	23.18	-95.26	-72.08	-40	-32.08
3	149.55	23.74	-95.26	-71.52	-40	-31.52
4	196.7	26.74	-95.26	-68.52	-40	-28.52
5	310.8	22.4	-95.26	-72.86	-40	-32.86
6	485.4	27.92	-95.26	-67.34	-40	-27.34
Antenna Polarity & Test Distance: Vertical at 3 M						
NO.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	30.98	32.11	-95.26	-63.15	-40	-23.15
2	46.95	29.21	-95.26	-66.05	-40	-26.05
3	107.39	23.18	-95.26	-72.08	-40	-32.08
4	159.04	25.4	-95.26	-69.86	-40	-29.86
5	197.61	22.51	-95.26	-72.75	-40	-32.75
6	380.46	25.99	-95.26	-69.27	-40	-29.27

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), Emission Value (dBm) = E (dB μ V/m) + Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) – 104.8; where D is the measurement distance @3m

Mode	TX Channel 43292+43490	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	31.02	27.95	-95.26	-67.31	-40	-27.31
2	108.99	23.22	-95.26	-72.04	-40	-32.04
3	148.93	23.11	-95.26	-72.15	-40	-32.15
4	196.73	26.77	-95.26	-68.49	-40	-28.49
5	311.46	22.5	-95.26	-72.76	-40	-32.76
6	485.76	28.44	-95.26	-66.82	-40	-26.82

Antenna Polarity & Test Distance: Vertical at 3 M

NO.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	30.98	32.71	-95.26	-62.55	-40	-22.55
2	47.04	28.99	-95.26	-66.27	-40	-26.27
3	107.52	24.15	-95.26	-71.11	-40	-31.11
4	158.75	24.94	-95.26	-70.32	-40	-30.32
5	197.63	22.62	-95.26	-72.64	-40	-32.64
6	380.63	25.78	-95.26	-69.48	-40	-29.48

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), Emission Value (dBm) = E (dB μ V/m) + Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) – 104.8; where D is the measurement distance @3m

Above 1GHz Data :

Band 42CA

Mode	TX Channel 43190+43388	Frequency Range	Above 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	7120	31.55	-95.26	-63.71	-40	-23.71
2	8900	32.09	-95.26	-63.17	-40	-23.17
3	10680	31.39	-95.26	-63.87	-40	-23.87
4	12460	32.54	-95.26	-62.72	-40	-22.72
5	14240	32.29	-95.26	-62.97	-40	-22.97
6	16020	32.78	-95.26	-62.48	-40	-22.48
Antenna Polarity & Test Distance: Vertical at 3 M						
NO.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	7120	31.82	-95.26	-63.44	-40	-23.44
2	8900	32.61	-95.26	-62.65	-40	-22.65
3	10680	32.74	-95.26	-62.52	-40	-22.52
4	12460	32.42	-95.26	-62.84	-40	-22.84
5	14240	32.72	-95.26	-62.54	-40	-22.54
6	16020	33.09	-95.26	-62.17	-40	-22.17

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), Emission Value (dBm) = E (dB μ V/m) + Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) – 104.8; where D is the measurement distance @3m

Mode	TX Channel 43241+43439	Frequency Range	Above 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	7130.2	32.01	-95.26	-63.25	-40	-23.25
2	8912.75	32.72	-95.26	-62.54	-40	-22.54
3	10695.3	32.27	-95.26	-62.99	-40	-22.99
4	12477.85	32.43	-95.26	-62.83	-40	-22.83
5	14260.4	33.11	-95.26	-62.15	-40	-22.15
6	16042.95	33.59	-95.26	-61.67	-40	-21.67

Antenna Polarity & Test Distance: Vertical at 3 M

NO.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	7130.2	31.39	-95.26	-63.87	-40	-23.87
2	8912.75	31.94	-95.26	-63.32	-40	-23.32
3	10695.3	32.54	-95.26	-62.72	-40	-22.72
4	12477.85	32.55	-95.26	-62.71	-40	-22.71
5	14260.4	32.54	-95.26	-62.72	-40	-22.72
6	16042.95	33.72	-95.26	-61.54	-40	-21.54

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), Emission Value (dBm) = E (dB μ V/m) + Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) - 104.8; where D is the measurement distance @3m

Mode	TX Channel 43292+43490	Frequency Range	Above 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	7140.4	31.98	-95.26	-63.28	-40	-23.28
2	8925.5	32.29	-95.26	-62.97	-40	-22.97
3	10710.6	32.38	-95.26	-62.88	-40	-22.88
4	12495.7	32.25	-95.26	-63.01	-40	-23.01
5	14280.8	32.88	-95.26	-62.38	-40	-22.38
6	16065.9	33.04	-95.26	-62.22	-40	-22.22

Antenna Polarity & Test Distance: Vertical at 3 M

NO.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	Emission Value (dBm)	Limit (dBm)	Margin (dB)
1	7140.4	31.5	-95.26	-63.76	-40	-23.76
2	8925.5	32.37	-95.26	-62.89	-40	-22.89
3	10710.6	32.76	-95.26	-62.50	-40	-22.50
4	12495.7	32.31	-95.26	-62.95	-40	-22.95
5	14280.8	32.9	-95.26	-62.36	-40	-22.36
6	16065.9	33.57	-95.26	-61.69	-40	-21.69

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), Emission Value (dBm) = E (dB μ V/m) + Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) - 104.8; where D is the measurement distance @3m

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.

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

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