

FCC Test Report

(PART 27)

Report No.: RFBHDC-WTW-P20120816-8

FCC ID: 2AYY9FMP182

Test Model: F-41B

Received Date: Dec. 24, 2020

Test Date: Jan. 27 ~ Feb. 19, 2021

Issued Date: Mar. 03, 2021

Applicant: FCNT Limited

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**FCC Registration /
Designation Number:** 788550 / TW0003



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Release Control Record


Issue No.	Description	Date Issued
RFBHDC-WTW-P20120816-8	Original Release	Mar. 03, 2021

1 Certificate of Conformity

Product: Smart Phone
Brand: FUJITSU
Test Model: F-41B
Sample Status: Engineering Sample
Applicant: FCNT Limited
Test Date: Jan. 27 ~ Feb. 19, 2021
Standards: FCC Part 27, Subpart C, H

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 : , **Date:** Mar. 03, 2021
Gina Liu / Specialist

Approved by : , **Date:** Mar. 03, 2021
Dylan Chiou / Senior Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(c)(10)	Maximum Peak Output Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	Pass	Meet the requirement.
2.1055 27.54	Frequency Stability	Pass	Meet the requirement of limit.
2.1049	Occupied Bandwidth	Pass	Meet the requirement of limit.
---	Peak to Average Ratio	Pass	Meet the requirement of limit.
27.53(g)	Band Edge Measurements	Pass	Meet the requirement of limit.
2.1051 27.53(g)	Conducted Spurious Emissions	Pass	Meet the requirement of limit.
2.1053 27.53(g)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -26.74 dB at 707.50 MHz.

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

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent	N9038A	MY51210203	Mar. 18, 2020	Mar. 17, 2021
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 07, 2020	Dec. 06, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 16, 2020	Apr. 15, 2021
BILOG Antenna SCHWARZBECK	VULB 9168	9168-153	Nov. 03, 2020	Nov. 02, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	148	Nov. 22, 2020	Nov. 21, 2021
Horn Antenna EMCO	3115	00027023	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 22, 2020	Nov. 21, 2021
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Nov. 06, 2020	Nov. 05, 2021
Fixed Attenuator WOKEN	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 25, 2020	Nov. 24, 2021
Loop Antenna	EM-6879	269	Sep. 17, 2020	Sep. 16, 2021
Preamplifier EMCI	EMC001340	980201	Oct. 21, 2020	Oct. 20, 2021
Preamplifier EMCI	EMC 012645	980115	Oct. 07, 2020	Oct. 06, 2021
Preamplifier EMCI	EMC 330H	980112	Oct. 07, 2020	Oct. 06, 2021
Power Meter Anritsu	ML2495A	1012010	Sep. 01, 2020	Aug. 31, 2021
Power Sensor Anritsu	MA2411B	1315050	Sep. 01, 2020	Aug. 31, 2021
RF Coaxial Cable EMCI	EMC104-SM-SM-8000	171005	Oct. 07, 2020	Oct. 06, 2021
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1000(140807)	Oct. 07, 2020	Oct. 06, 2021
RF Coaxial Cable WOKEN	8D-FB	Cable-Ch10-01	Oct. 07, 2020	Oct. 06, 2021
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Radio Communication Analyzer Anritsu	MT8820C	6201010284	Dec. 28, 2020	Dec. 27, 2021
Radio Communication Analyzer Anritsu	MT8821C	6261806803	Jan. 22, 2021	Jan. 21, 2022
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 09, 2020	Sep. 08, 2021
DC Power Supply Keysight	U8002A	MY56330015	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 HwaYa Chamber 10.

3 General Information

3.1 General Description of EUT

Product	Smart Phone	
Brand	FUJITSU	
Test Model	F-41B	
Status of EUT	Engineering Sample	
Power Supply Rating	3.85 Vdc (Battery) 5 Vdc (Adapter)	
Modulation Type	LTE	QPSK, 16QAM
Frequency Range	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	699.7 ~ 715.3 MHz
	LTE Band 12 (Channel Bandwidth: 3 MHz)	700.5 ~ 714.5 MHz
	LTE Band 12 (Channel Bandwidth: 5 MHz)	701.5 ~ 713.5 MHz
	LTE Band 12 (Channel Bandwidth: 10 MHz)	704.0 ~ 711.0 MHz
Emission Designator	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	1M09G7D
	LTE Band 12 (Channel Bandwidth: 3 MHz)	2M70D7W
	LTE Band 12 (Channel Bandwidth: 5 MHz)	4M49D7W
	LTE Band 12 (Channel Bandwidth: 10 MHz)	8M96D7W
Max. ERP Power	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	3.954 mW (5.97dBm)
	LTE Band 12 (Channel Bandwidth: 3 MHz)	4.018 mW (6.04dBm)
	LTE Band 12 (Channel Bandwidth: 5 MHz)	3.990 mW (6.01dBm)
	LTE Band 12 (Channel Bandwidth: 10 MHz)	4.055 mW (6.08dBm)
Antenna Type	Monopole Antenna with -14.9 dBi gain	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

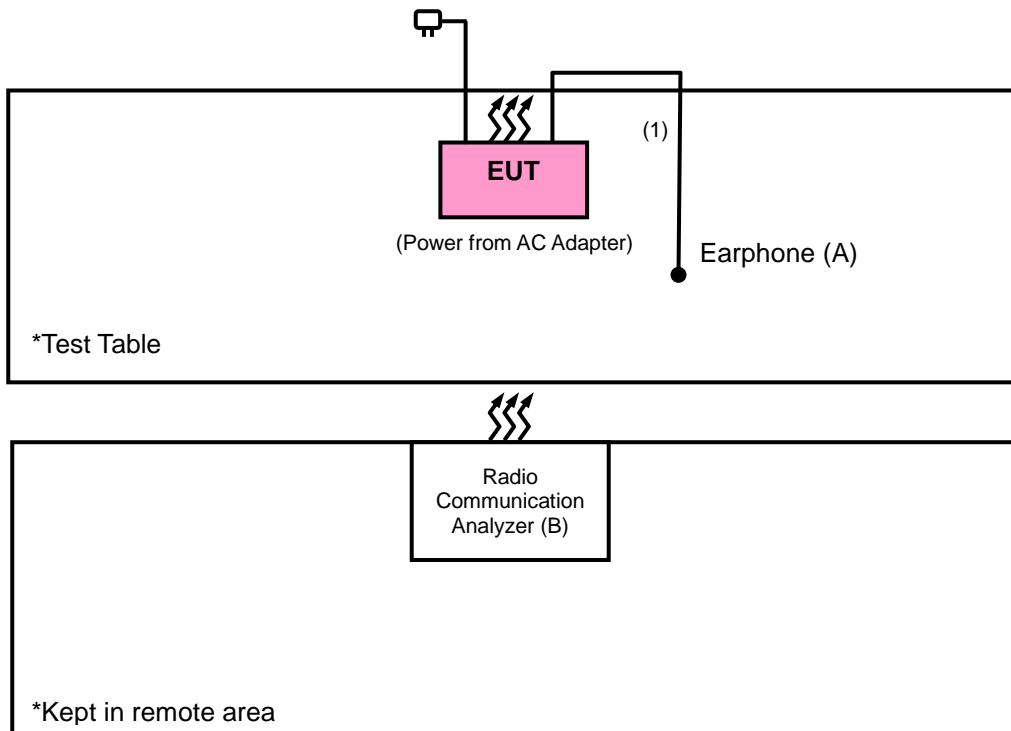
Note:

1. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	NTT docomo	AC adaptor 06	I/P: 100-240 Vac, 50/60 Hz, 0.8 A O/P: 5 Vdc, 3 A
Battery	N/A	CA54310-0081	3.85 Vdc, 3500 mAh, 13.47Wh

2. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
3. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test



3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Earphone	Apple	EW101BK	N/A	N/A	--
B.	Radio Communication Analyzer	Anritsu	MT8820C	6201010284	N/A	--

Note:

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

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Earphone Cable	1	1.0	N	0	--

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis, and antenna ports

The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

Band	Radiated Emission
LTE Band 12	Y-plane

LTE Band 12

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode		
-	ERP	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
-	Modulation Characteristics	23060 to 23130	23095	10 MHz	QPSK, 16QAM	50 RB / 0 RB Offset		
-	Frequency Stability	23017 to 23173	23017, 23173	1.4 MHz	QPSK	1 RB / 0 RB Offset		
		23025 to 23165	23025, 23165	3 MHz	QPSK	1 RB / 0 RB Offset		
		23035 to 23155	23035, 23155	5 MHz	QPSK	1 RB / 0 RB Offset		
		23060 to 23130	23060, 23130	10 MHz	QPSK	1 RB / 0 RB Offset		
-	Occupied Bandwidth	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK, 16QAM	6 RB / 0 RB Offset		
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK, 16QAM	15 RB / 0 RB Offset		
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK, 16QAM	25 RB / 0 RB Offset		
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK, 16QAM	50 RB / 0 RB Offset		
-	Peak to Average Ratio	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset		
-	Band Edge	23017 to 23173	23017	1.4 MHz	QPSK	1 RB / 0 RB Offset		
			23173	1.4 MHz	QPSK	6 RB / 0 RB Offset		
		23025 to 23165	23025	3 MHz	QPSK	1 RB / 5 RB Offset		
			23165	3 MHz	QPSK	6 RB / 0 RB Offset		
		23035 to 23155	23035	5 MHz	QPSK	1 RB / 0 RB Offset		
			23155	5 MHz	QPSK	15 RB / 0 RB Offset		
		23060 to 23130	23060	10 MHz	QPSK	1 RB / 14 RB Offset		
			23130	10 MHz	QPSK	15 RB / 0 RB Offset		
		-	Band Edge	23035 to 23155	23035	5 MHz	QPSK	1 RB / 0 RB Offset
					23155	5 MHz	QPSK	25 RB / 0 RB Offset
				23060 to 23130	23060	10 MHz	QPSK	1 RB / 24 RB Offset
					23130	10 MHz	QPSK	25 RB / 0 RB Offset
-	Band Edge	23060 to 23130	23060	10 MHz	QPSK	1 RB / 0 RB Offset		
			23130	10 MHz	QPSK	50 RB / 0 RB Offset		
		23060 to 23130	23060	10 MHz	QPSK	1 RB / 49 RB Offset		
			23130	10 MHz	QPSK	50 RB / 0 RB Offset		

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Conducted Emission	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK	1 RB / 0 RB Offset
		23025 to 23165	23025, 23095, 23165	3 MHz	QPSK	1 RB / 0 RB Offset
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK	1 RB / 0 RB Offset
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK	1 RB / 0 RB Offset
-	Radiated Emission	23017 to 23173	23017, 23095, 23173	1.4 MHz	QPSK	1 RB / 0 RB Offset
		23035 to 23155	23035, 23095, 23155	5 MHz	QPSK	1 RB / 0 RB Offset
		23060 to 23130	23060, 23095, 23130	10 MHz	QPSK	1 RB / 0 RB Offset

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. For radiated emission above 1 GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5 MHz & highest channel bandwidth for final test.
3. For radiated emissions below 1 GHz, select the worst radiated emission channel (above 1GHz) for final testing.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25 deg. C, 65 % RH	3.85 Vdc	Tim Chen
Modulation Characteristics	25 deg. C, 65 % RH	3.85 Vdc	Wayne Lin
Frequency Stability	25 deg. C, 65 % RH	3.85 Vdc	Wayne Lin
Occupied Bandwidth	25 deg. C, 65 % RH	3.85 Vdc	Wayne Lin
Band Edge	25 deg. C, 65 % RH	3.85 Vdc	Wayne Lin
Peak to Average Ratio	25 deg. C, 65 % RH	3.85 Vdc	Wayne Lin
Conducted Emission	25 deg. C, 65 % RH	3.85 Vdc	Wayne Lin
Radiated Emission	25 deg. C, 65 % RH	120 Vac, 60 Hz	Tim Chen

3.4 EUT Operating Conditions

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

3.5 General Description of Applied Standards and references

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

Test Standard:

FCC 47 CFR Part 2

FCC 47 CFR Part 27

ANSI 63.26-2015

Note: 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

ANSI/TIA/EIA-603-E 2016

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Portable stations (hand-held device) operating in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP. (For band 12)

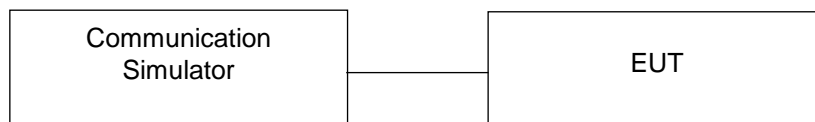
4.1.2 Test Procedures

Conducted Power Measurement:

- a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.
- c. $E.I.R.P = \text{Conducted power} + \text{Antenna Gain}$, $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15 \text{ dB}$.

4.1.3 Test Setup

Conducted Power Measurement:



4.1.4 Test Results

Conducted Output Power (dBm)

LTE Band 12															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				23060	23095	23130						23035	23095	23155	
				Channel	23060	23095						23130	Channel	23035	
		Frequency (MHz)		704.0	707.5	711.0			Frequency (MHz)		701.5	707.5	713.5		
10M	QPSK	1	0	23.13	23.08	23.02	0	5M	QPSK	1	0	23.06	23.05	22.94	0
		1	24	23.05	23.02	22.93	0			1	12	22.95	23.00	22.85	0
		1	49	22.96	22.92	22.92	0			1	24	22.87	22.82	22.86	0
		25	0	22.07	22.06	22.06	1			12	0	21.98	22.03	22.02	1
		25	12	22.01	21.97	21.91	1			12	6	21.96	21.92	21.89	1
		25	25	21.98	21.95	21.92	1			12	13	21.89	21.92	21.90	1
	16QAM	50	0	22.02	22.01	21.96	1		25	0	22.00	21.94	21.88	1	
		1	0	21.98	21.97	21.87	1		16QAM	1	0	21.89	21.97	21.86	1
		1	24	21.86	21.86	21.80	1			1	12	21.85	21.79	21.70	1
		1	49	21.75	21.67	21.63	1			1	24	21.73	21.65	21.54	1
		25	0	20.99	20.97	20.90	2			12	0	20.97	20.87	20.82	2
		25	12	20.95	20.86	20.84	2			12	6	20.88	20.84	20.74	2
		25	25	20.93	20.87	20.83	2			12	13	20.89	20.80	20.73	2
		50	0	20.96	20.95	20.85	2			25	0	20.86	20.90	20.83	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
				23025	23095	23165						23017	23095	23173	
				Channel	23025	23095						23165	Channel	23017	
		Frequency (MHz)		700.5	707.5	714.5			Frequency (MHz)		699.7	707.5	715.3		
3M	QPSK	1	0	23.09	23.01	22.91	0	1.4M	QPSK	1	0	22.95	23.02	22.92	0
		1	7	23.00	22.92	22.76	0			1	2	22.90	22.92	22.87	0
		1	14	22.88	22.84	22.76	0			1	5	22.88	22.88	22.77	0
		8	0	21.92	21.91	21.95	1			3	0	22.91	22.92	22.97	0
		8	3	21.83	21.77	21.84	1			3	1	22.84	22.86	22.85	0
		8	7	21.91	21.81	21.88	1			3	3	22.76	22.81	22.84	0
	16QAM	15	0	22.01	21.91	21.95	1		6	0	21.85	21.92	21.82	1	
		1	0	21.89	21.82	21.80	1		16QAM	1	0	21.86	21.86	21.80	1
		1	7	21.71	21.80	21.75	1			1	2	21.75	21.65	21.73	1
		1	14	21.61	21.48	21.43	1			1	5	21.61	21.45	21.52	1
		8	0	20.81	20.83	20.74	2			3	0	21.76	21.79	21.79	1
		8	3	20.75	20.79	20.62	2			3	1	21.83	21.78	21.68	1
		8	7	20.73	20.75	20.73	2			3	3	21.82	21.74	21.68	1
		15	0	20.82	20.88	20.65	2			6	0	20.85	20.91	20.69	2

ERP Power (dBm)

LTE Band 12																	
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)		
				Channel	23060	23095						23130	Channel	23035		23095	23155
				Frequency (MHz)	704.0	707.5						711.0	Frequency (MHz)	701.5		707.5	713.5
10M	QPSK	1	0	6.08	6.03	5.97	0	5M	QPSK	1	0	6.01	6.00	5.89	0		
		1	24	6.00	5.97	5.88	0			1	12	5.90	5.95	5.80	0		
		1	49	5.91	5.87	5.87	0			1	24	5.82	5.77	5.81	0		
		25	0	5.02	5.01	5.01	1			12	0	4.93	4.98	4.97	1		
		25	12	4.96	4.92	4.86	1			12	6	4.91	4.87	4.84	1		
		25	25	4.93	4.90	4.87	1			12	13	4.84	4.87	4.85	1		
		50	0	4.97	4.96	4.91	1			25	0	4.95	4.89	4.83	1		
	16QAM	1	0	4.93	4.92	4.82	1		16QAM	1	0	4.84	4.92	4.81	1		
		1	24	4.81	4.81	4.75	1			1	12	4.80	4.74	4.65	1		
		1	49	4.70	4.62	4.58	1			1	24	4.68	4.60	4.49	1		
		25	0	3.94	3.92	3.85	2			12	0	3.92	3.82	3.77	2		
		25	12	3.90	3.81	3.79	2			12	6	3.83	3.79	3.69	2		
		25	25	3.88	3.82	3.78	2			12	13	3.84	3.75	3.68	2		
		50	0	3.91	3.90	3.80	2			25	0	3.81	3.85	3.78	2		
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)		
				Channel	23025	23095						23165	Channel	23017		23095	23173
				Frequency (MHz)	700.5	707.5						714.5	Frequency (MHz)	699.7		707.5	715.3
3M	QPSK	1	0	6.04	5.96	5.86	0	1.4M	QPSK	1	0	5.90	5.97	5.87	0		
		1	7	5.95	5.87	5.71	0			1	2	5.85	5.87	5.82	0		
		1	14	5.83	5.79	5.71	0			1	5	5.83	5.83	5.72	0		
		8	0	4.87	4.86	4.90	1			3	0	5.86	5.87	5.92	0		
		8	3	4.78	4.72	4.79	1			3	1	5.79	5.81	5.80	0		
		8	7	4.86	4.76	4.83	1			3	3	5.71	5.76	5.79	0		
		15	0	4.96	4.86	4.90	1			6	0	4.80	4.87	4.77	1		
	16QAM	1	0	4.84	4.77	4.75	1		16QAM	1	0	4.81	4.81	4.75	1		
		1	7	4.66	4.75	4.70	1			1	2	4.70	4.60	4.68	1		
		1	14	4.56	4.43	4.38	1			1	5	4.56	4.40	4.47	1		
		8	0	3.76	3.78	3.69	2			3	0	4.71	4.74	4.74	1		
		8	3	3.70	3.74	3.57	2			3	1	4.78	4.73	4.63	1		
		8	7	3.68	3.70	3.68	2			3	3	4.77	4.69	4.63	1		
		15	0	3.77	3.83	3.60	2			6	0	3.80	3.86	3.64	2		

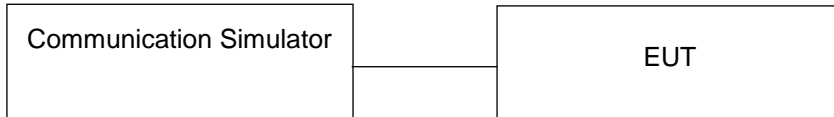
Note: ERP (dBm) = Conducted Power + Antenna gain – 2.15

4.2 Modulation Characteristics Measurement

4.2.1 Limits of Modulation Characteristics

N/A

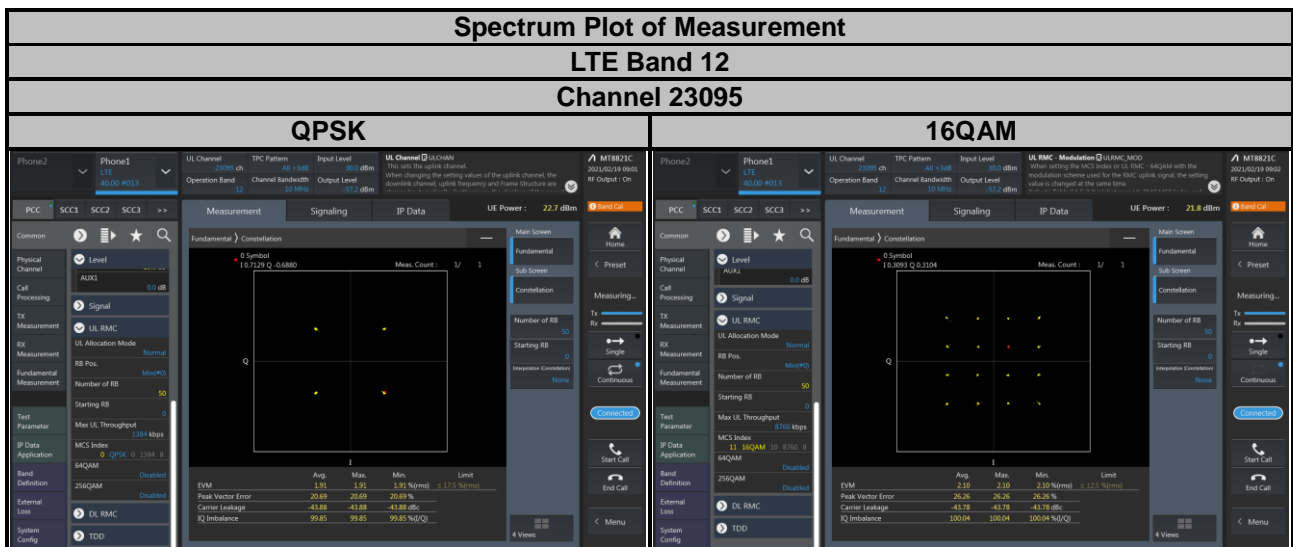
4.2.2 Test Setup



4.2.3 Test Procedure

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

4.2.4 Test Results



4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

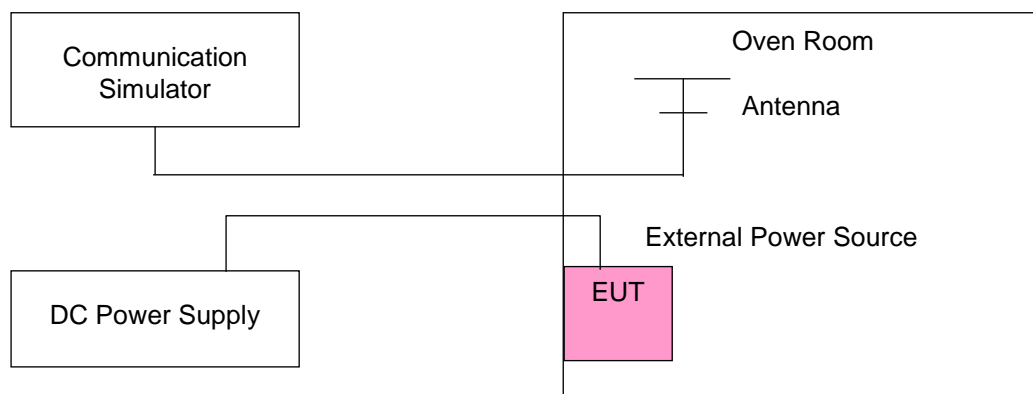
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

4.3.2 Test Procedure

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

4.3.3 Test Setup



4.3.4 Test Results

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	699.700006	0.008575	715.299991	-0.012582
3.27	699.699995	-0.007146	715.300008	0.011184
4.43	699.699992	-0.011433	715.300002	0.002796

Note: The applicant defined the normal working voltage of the battery is from 3.27 Vdc to 4.43 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 12			
	Channel Bandwidth: 1.4 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	699.699994	-0.008575	715.299992	-0.011184
-20	699.700002	0.002858	715.300001	0.001398
-10	699.700005	0.007146	715.299999	-0.001398
0	699.700009	0.012863	715.299995	-0.006990
10	699.699991	-0.012863	715.300010	0.013980
20	699.699991	-0.012863	715.299997	-0.004194
30	699.700009	0.012863	715.300007	0.009786
40	699.700010	0.014292	715.300010	0.013980
50	699.699999	-0.001429	715.299995	-0.006990
55	699.700005	0.007146	715.299991	-0.012582

Note: The applicant declared that the normal operating temperature of the EUT is from -10°C to 55°C.

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	700.500008	0.011420	714.499990	-0.013996
3.27	700.499996	-0.005710	714.500001	0.001400
4.43	700.499994	-0.008565	714.500003	0.004199

Note: The applicant defined the normal working voltage of the battery is from 3.27 Vdc to 4.43 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 12			
	Channel Bandwidth: 3 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	700.500004	0.005710	714.499996	-0.005598
-20	700.500004	0.005710	714.500009	0.012596
-10	700.500003	0.004283	714.499993	-0.009797
0	700.500001	0.001428	714.500007	0.009797
10	700.499992	-0.011420	714.500006	0.008397
20	700.500010	0.014276	714.500006	0.008397
30	700.500010	0.014276	714.500007	0.009797
40	700.500005	0.007138	714.500004	0.005598
50	700.499995	-0.007138	714.500006	0.008397
55	700.499994	-0.008565	714.499990	-0.013996

Note: The applicant declared that the normal operating temperature of the EUT is from -10°C to 55°C.

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	701.499999	-0.001426	713.499995	-0.007008
3.27	701.500010	0.014255	713.499994	-0.008409
4.43	701.499996	-0.005702	713.500009	0.012614

Note: The applicant defined the normal working voltage of the battery is from 3.27 Vdc to 4.43 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 12			
	Channel Bandwidth: 5 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	701.500009	0.012830	713.499997	-0.004205
-20	701.499999	-0.001426	713.499994	-0.008409
-10	701.499992	-0.011404	713.500001	0.001402
0	701.499992	-0.011404	713.499997	-0.004205
10	701.500009	0.012830	713.500002	0.002803
20	701.500008	0.011404	713.500006	0.008409
30	701.499998	-0.002851	713.499996	-0.005606
40	701.499998	-0.002851	713.500004	0.005606
50	701.499995	-0.007128	713.500008	0.011212
55	701.500005	0.007128	713.500010	0.014015

Note: The applicant declared that the normal operating temperature of the EUT is from -10°C to 55°C.

Frequency Error vs. Voltage

Voltage (Volts)	LTE Band 12			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.85	704.000003	0.004261	710.999990	-0.014065
3.27	704.000002	0.002841	711.000006	0.008439
4.43	704.000009	0.012784	710.999991	-0.012658

Note: The applicant defined the normal working voltage of the battery is from 3.27 Vdc to 4.43 Vdc.

Frequency Error vs. Temperature

Temp. (°C)	LTE Band 12			
	Channel Bandwidth: 10 MHz			
	Low Channel		High Channel	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
-30	703.999995	-0.007102	710.999999	-0.001406
-20	704.000009	0.012784	710.999995	-0.007032
-10	703.999997	-0.004261	711.000002	0.002813
0	704.000006	0.008523	710.999996	-0.005626
10	704.000006	0.008523	711.000004	0.005626
20	704.000005	0.007102	711.000006	0.008439
30	704.000001	0.001420	711.000007	0.009845
40	703.999999	-0.001420	711.000002	0.002813
50	704.000003	0.004261	710.999993	-0.009845
55	704.000001	0.001420	710.999997	-0.004219

Note: The applicant declared that the normal operating temperature of the EUT is from -10°C to 55°C.

4.4 Occupied Bandwidth Measurement

4.4.1 Limits of Occupied Bandwidth Measurement

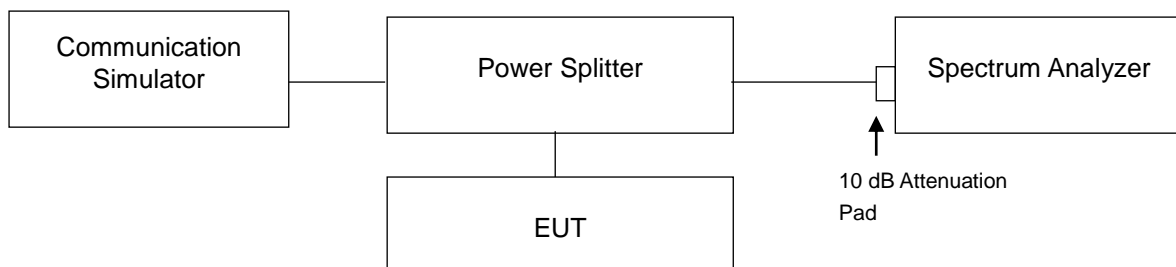
The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.4.2 Test Procedure

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.
- Measurement method, please refer to section 5.4.4 of ANSI C63.26.

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

4.4.3 Test Setup



4.4.4 Test Result

LTE Band 12					
Channel Bandwidth: 1.4 MHz					
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		26 dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
23017	699.7	1.09	1.09	1.27	1.24
23095	707.5	1.09	1.09	1.25	1.26
23173	715.3	1.09	1.09	1.25	1.24
Channel Bandwidth: 3 MHz					
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		26 dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
23025	700.5	2.69	2.69	2.91	2.92
23095	707.5	2.69	2.70	2.91	2.92
23165	714.5	2.70	2.70	2.90	2.92



LTE Band 12					
Channel Bandwidth: 5 MHz					
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		26 dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
23035	701.5	4.48	4.48	4.80	4.79
23095	707.5	4.48	4.49	4.81	4.80
23155	713.5	4.48	4.48	4.81	4.80

Channel Bandwidth: 10 MHz					
Channel	Frequency (MHz)	99 % Occupied Bandwidth (MHz)		26 dB Bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
23060	704.0	8.96	8.96	9.51	9.52
23095	707.5	8.96	8.96	9.49	9.52
23130	711.0	8.95	8.95	9.49	9.52



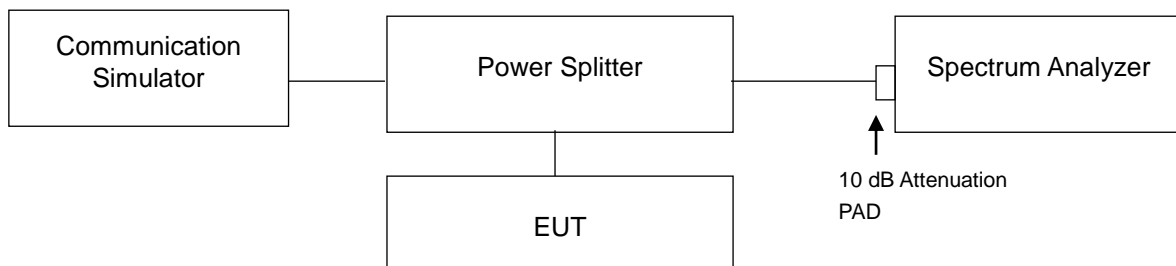
4.5 Band Edge Measurement

4.5.1 Limits of Band Edge Measurement

For operations in the 698-787 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

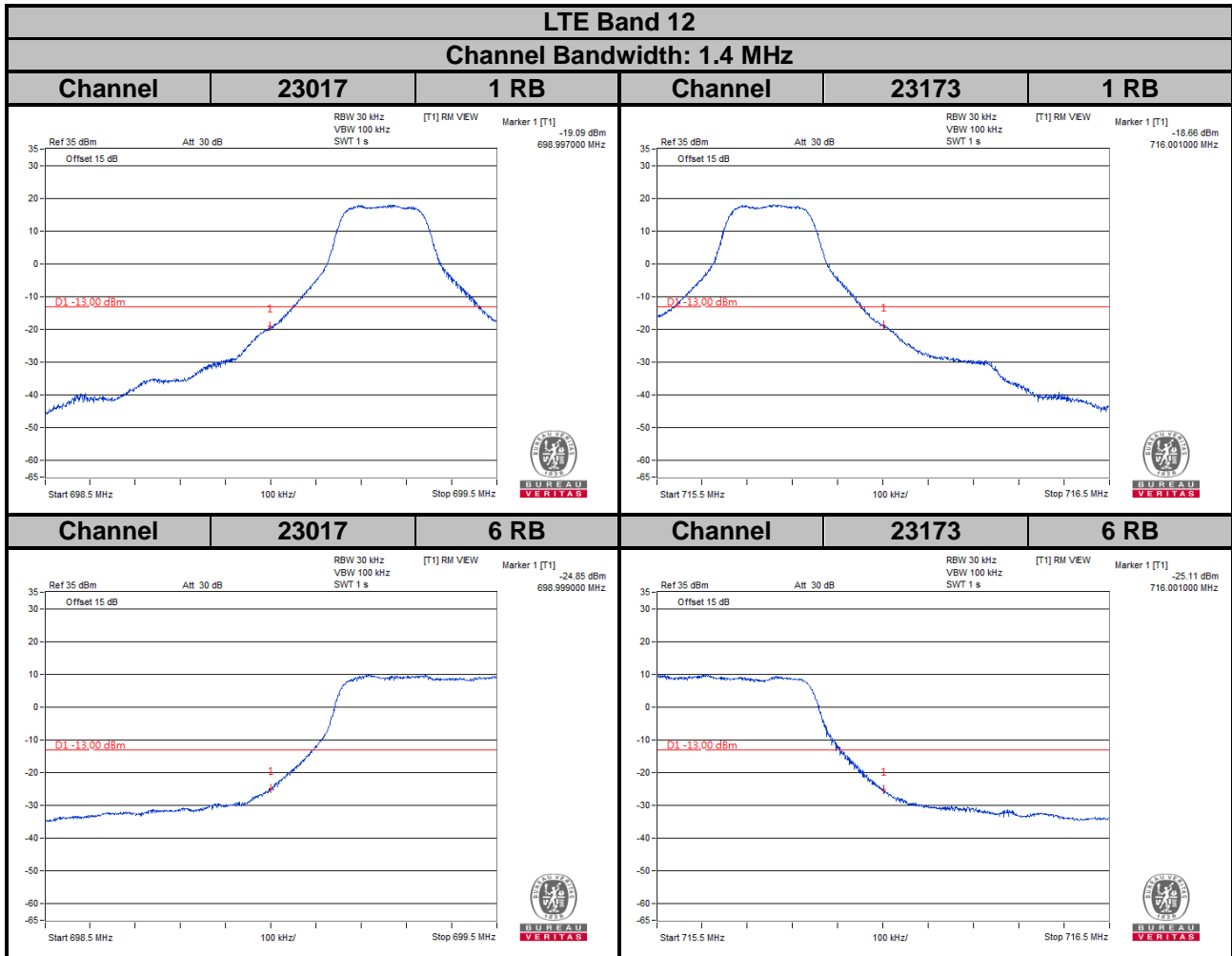
4.5.2 Test Setup



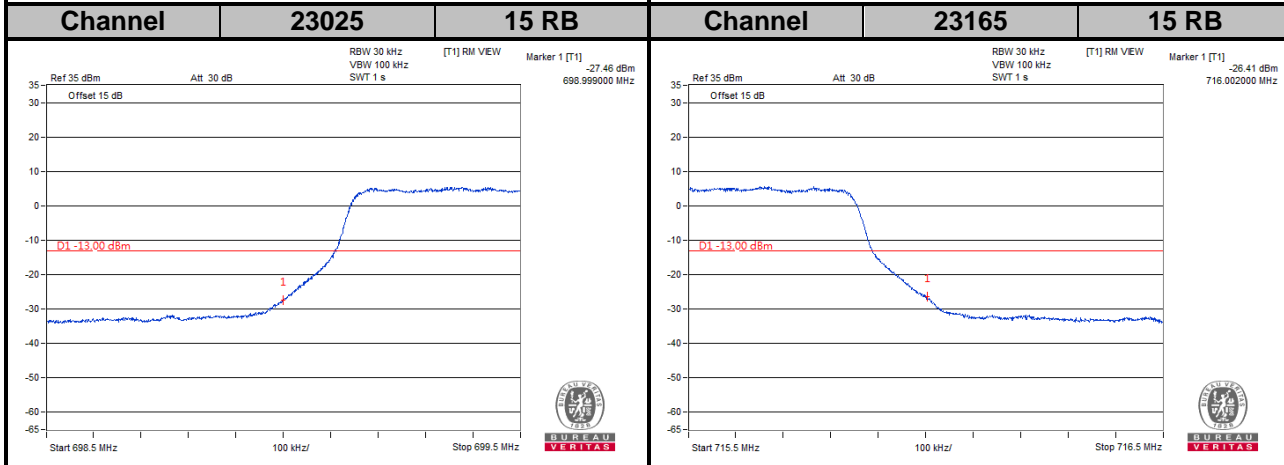
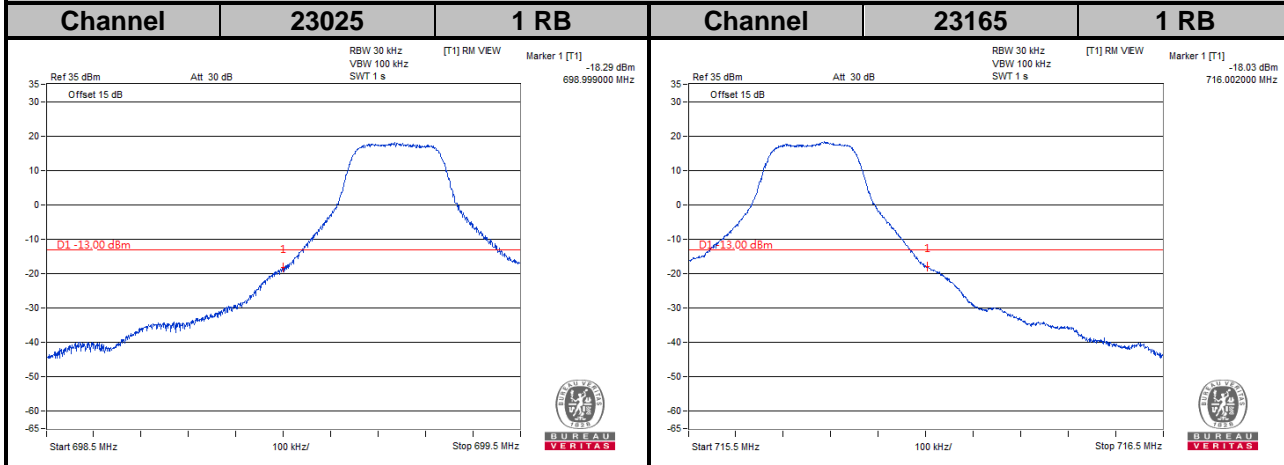
4.5.3 Test Procedures

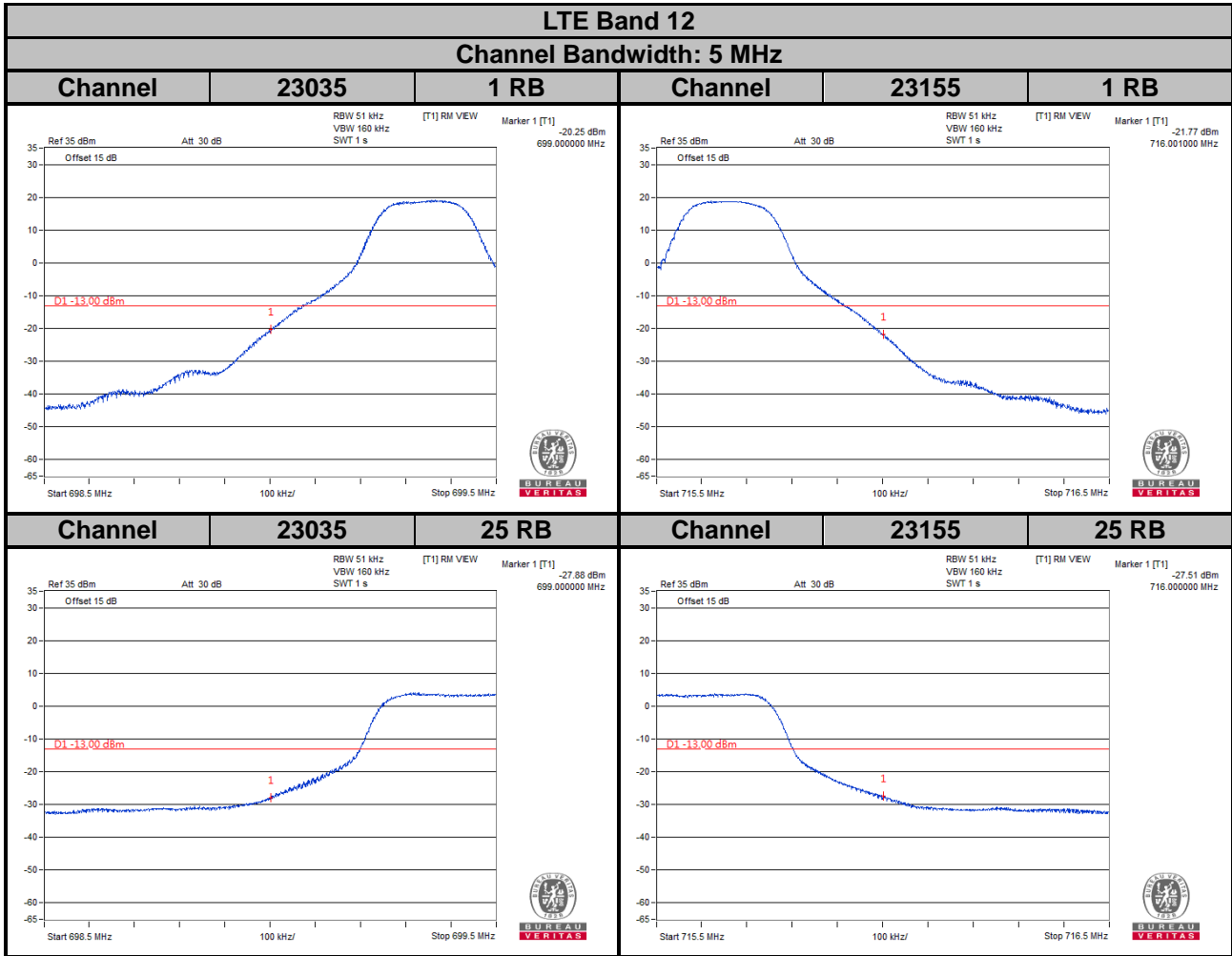
- All measurements were done at low and high operational frequency range.
- The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 30 kHz and VB of the spectrum is 100 kHz (LTE Bandwidth 1.4 MHz).
- The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 30 kHz and VB of the spectrum is 100 kHz (LTE Bandwidth 3 MHz).
- The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 51 kHz and VB of the spectrum is 160 kHz (LTE Bandwidth 5 MHz).
- The center frequency of spectrum is the band edge frequency and span is 1 MHz. RB of the spectrum is 100 kHz and VB of the spectrum is 300 kHz (LTE Bandwidth 10 MHz).
- Record the max. trace plot into the test report.

4.5.4 Test Results



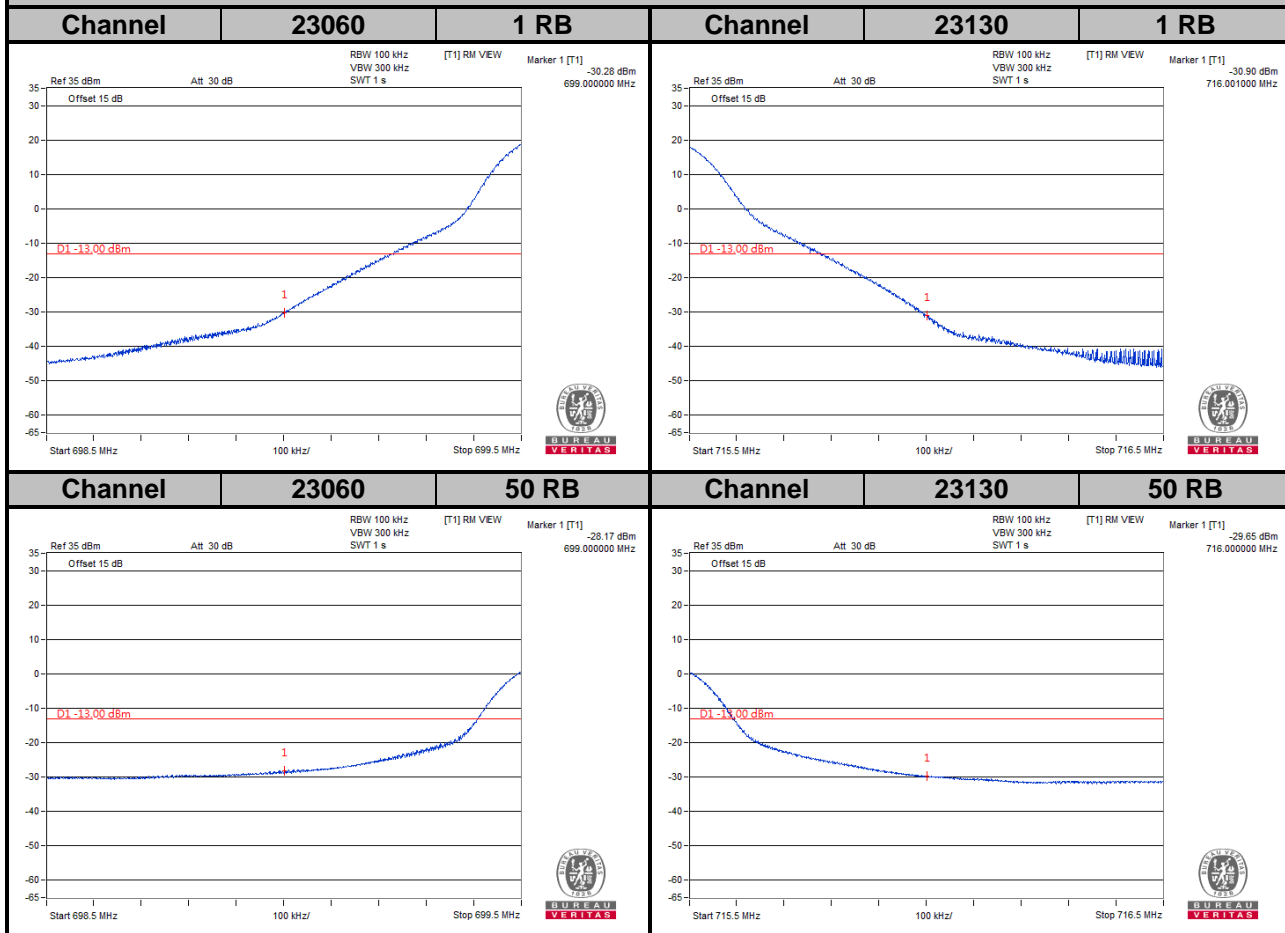
LTE Band 12
Channel Bandwidth: 3 MHz





LTE Band 12

Channel Bandwidth: 10 MHz

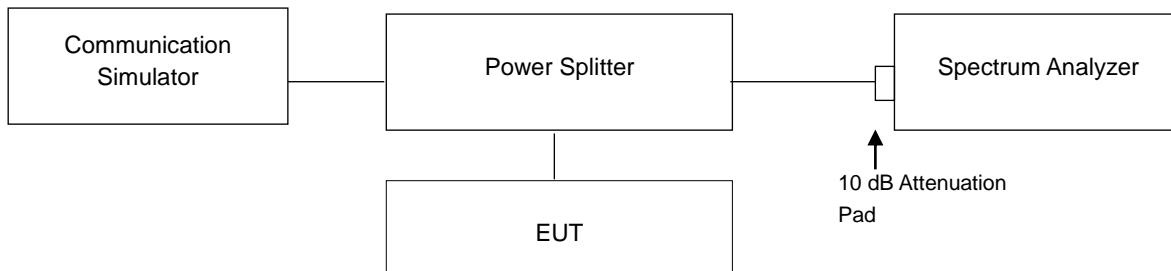


4.6 Peak to Average Ratio

4.6.1 Limits of Peak to Average Ratio Measurement

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

4.6.2 Test Setup

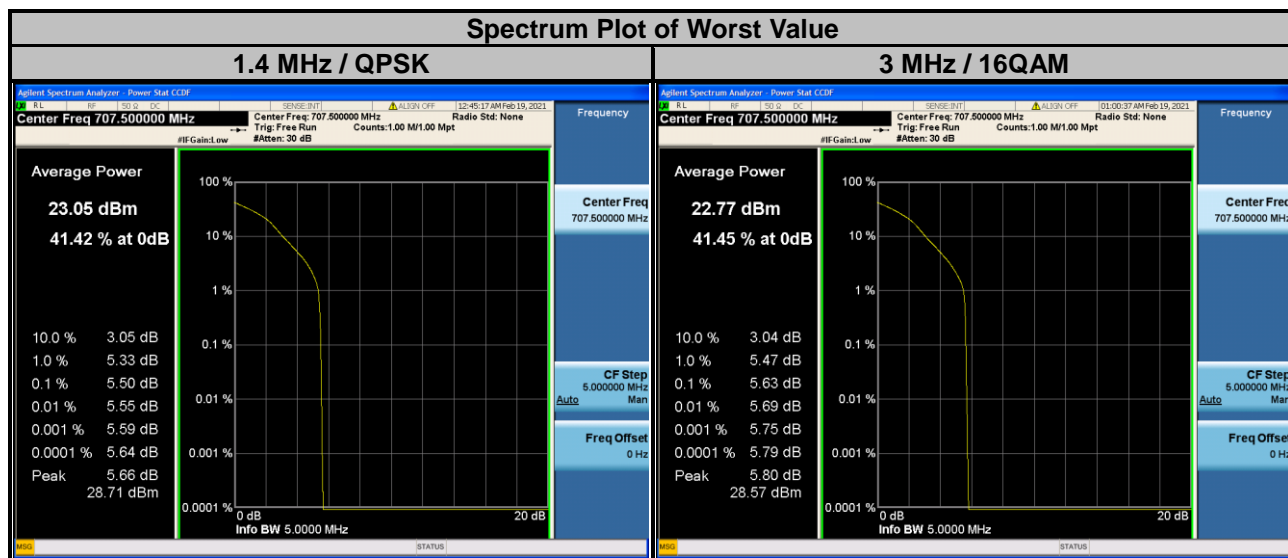


4.6.3 Test Procedures

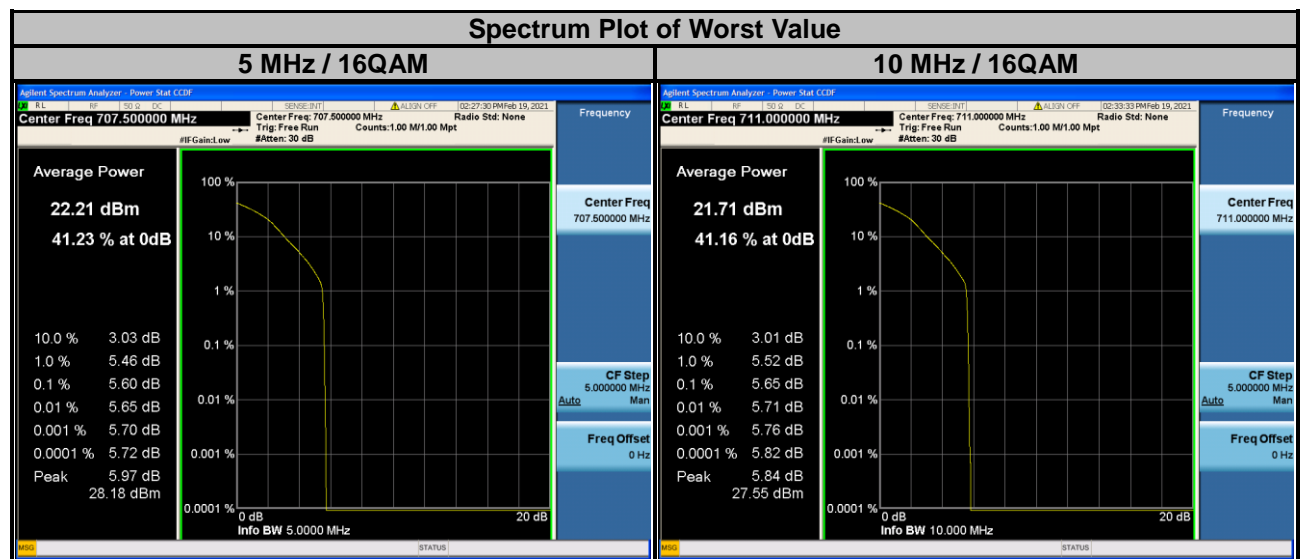
1. Set resolution/measurement bandwidth \geq signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1 %.

4.6.4 Test Results

LTE Band 12							
Channel Bandwidth: 1.4 MHz				Channel Bandwidth: 3 MHz			
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		QPSK	16QAM			QPSK	16QAM
23017	699.7	4.37	5.29	23025	700.5	4.37	5.44
23095	707.5	4.54	5.50	23095	707.5	4.60	5.63
23173	715.3	4.40	5.37	23165	714.5	4.65	5.54



LTE Band 12							
Channel Bandwidth: 5 MHz				Channel Bandwidth: 10 MHz			
Channel	Frequency (MHz)	Peak to Average Ratio (dB)		Channel	Frequency (MHz)	Peak to Average Ratio (dB)	
		QPSK	16QAM			QPSK	16QAM
23035	701.5	4.39	5.32	23060	704.0	4.33	5.31
23095	707.5	4.69	5.60	23095	707.5	4.67	5.59
23155	713.5	4.70	5.57	23130	711.0	4.64	5.65

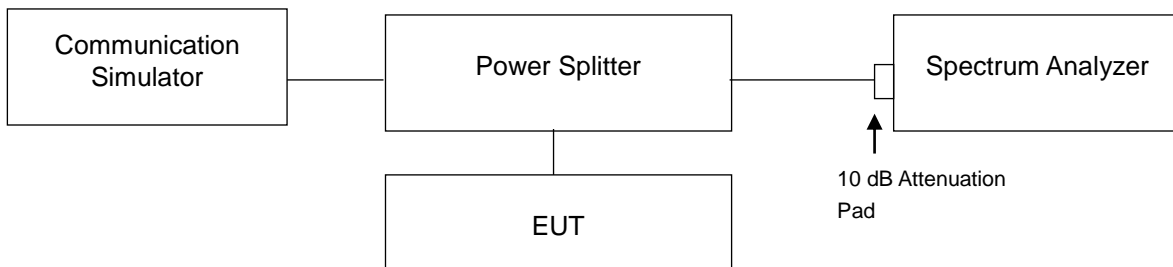


4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. The limit of emission is equal to -13 dBm.

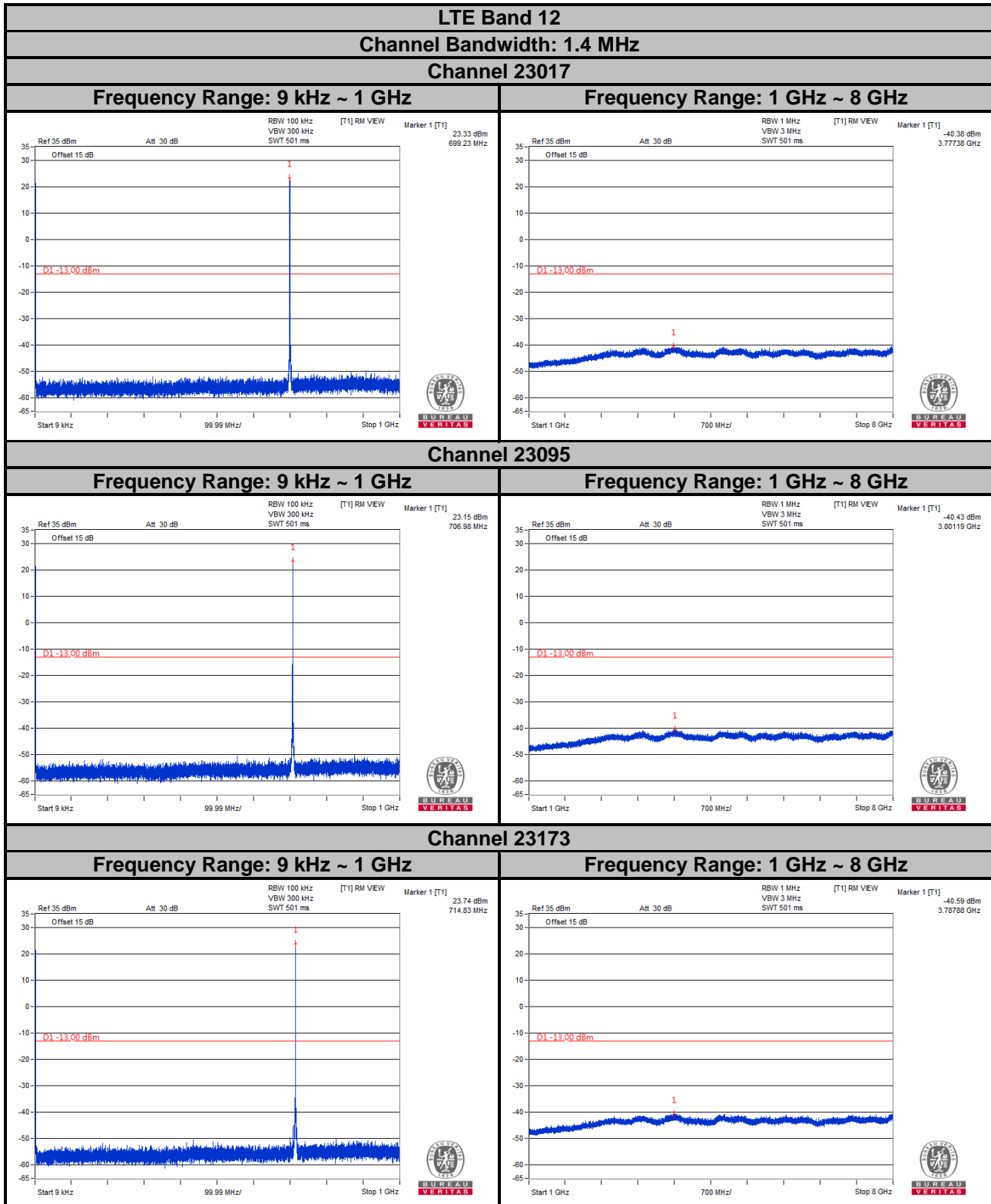
4.7.2 Test Setup



4.7.3 Test Procedure

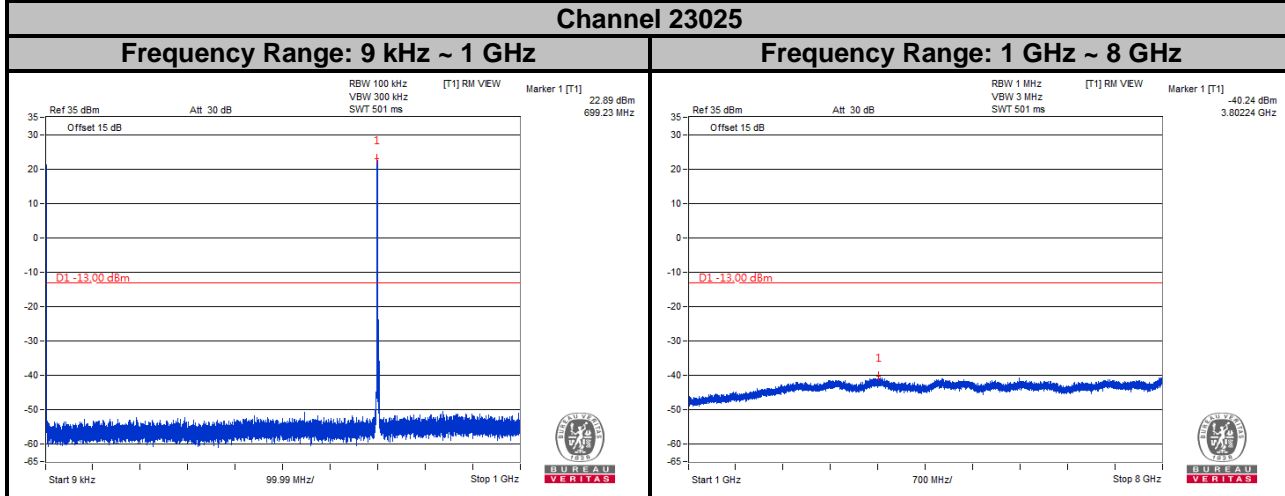
- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 1 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 100 kHz and VBW = 300 kHz is used for conducted emission measurement.
- Measuring frequency range is from 1 GHz to 8 GHz. 10 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz is used for conducted emission measurement.

4.7.4 Test Results

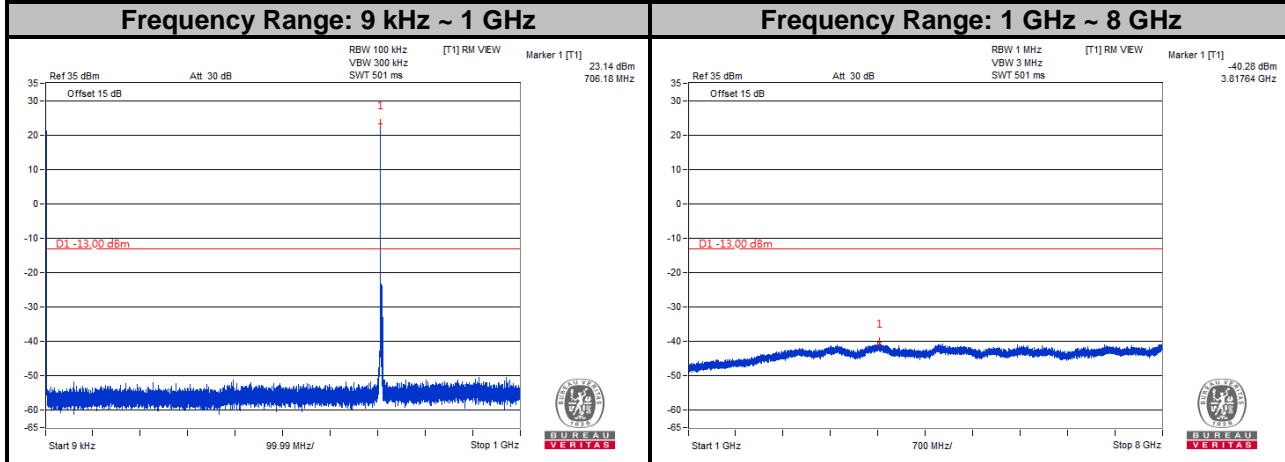


Note: The signal over the limit in 9 kHz is from spectrum analyzer.

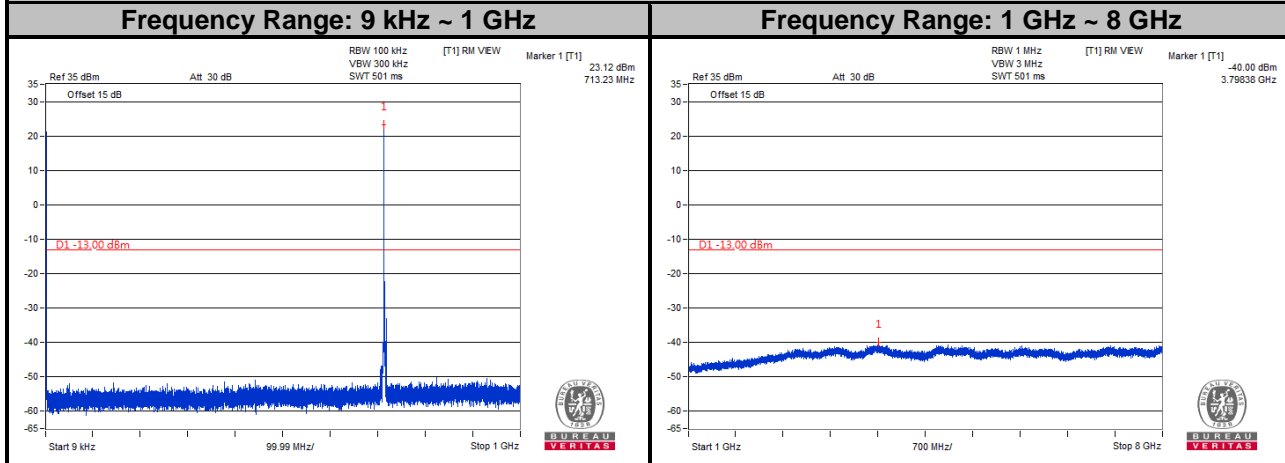
LTE Band 12
Channel Bandwidth: 3 MHz
Channel 23025



Channel 23095

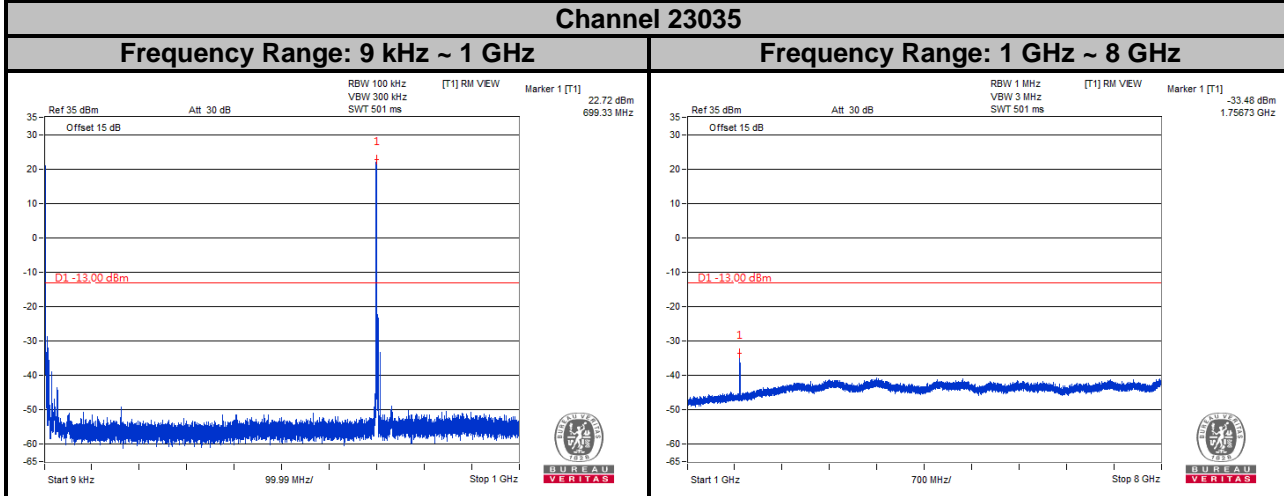


Channel 23165

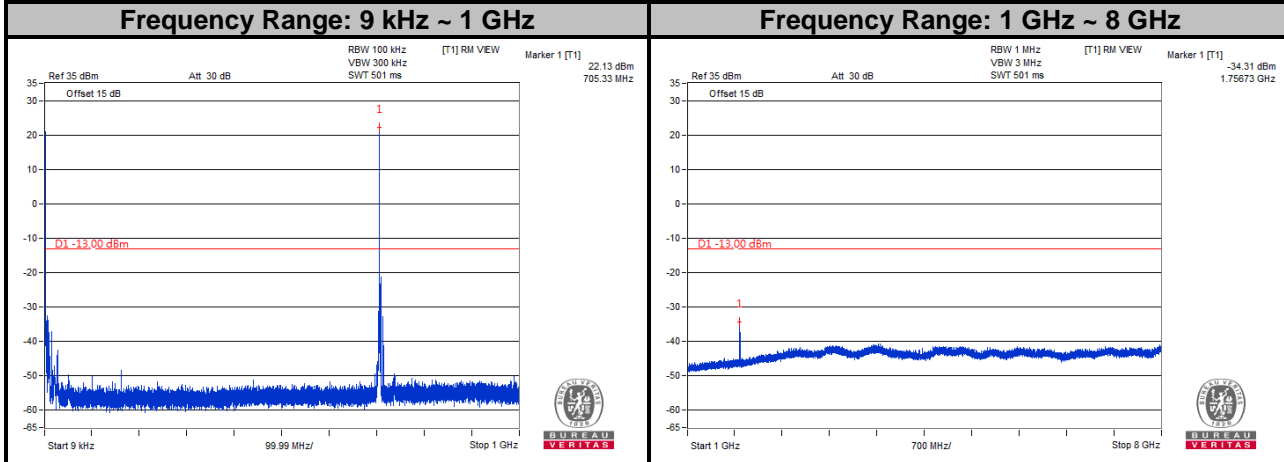


Note: The signal over the limit in 9 kHz is from spectrum analyzer.

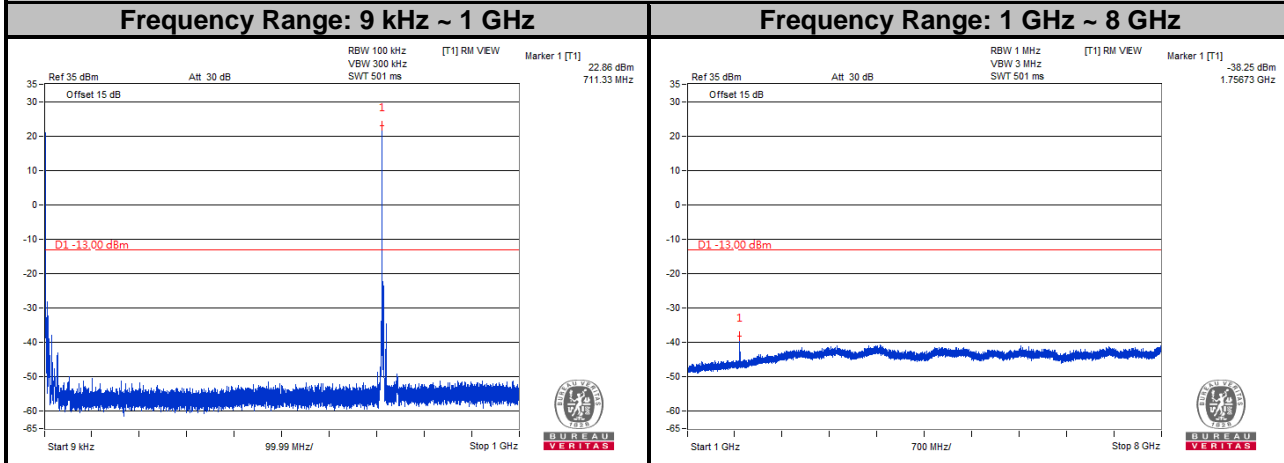
LTE Band 12
Channel Bandwidth: 5 MHz
Channel 23035



Channel 23095

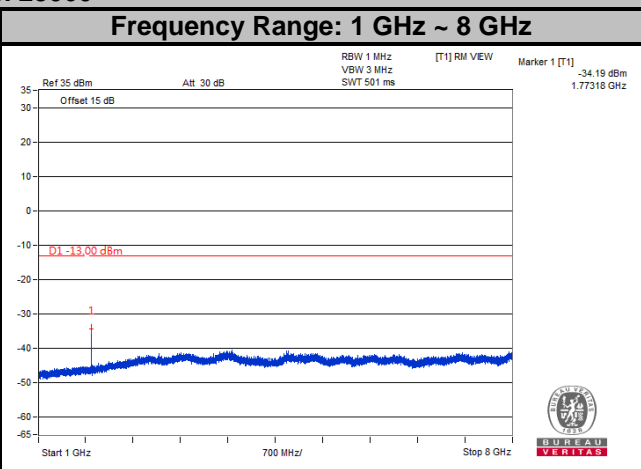
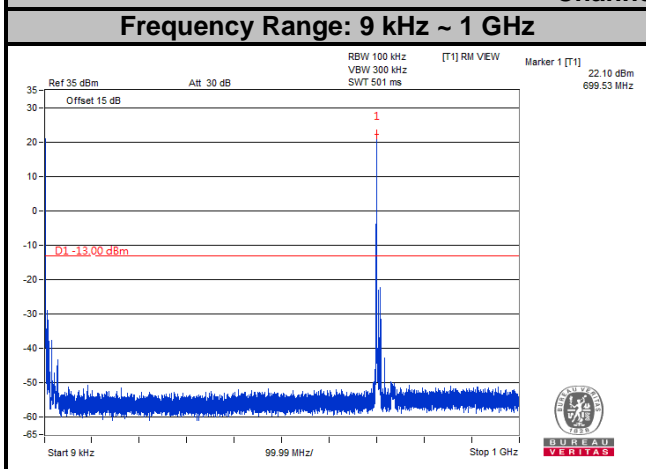


Channel 23155

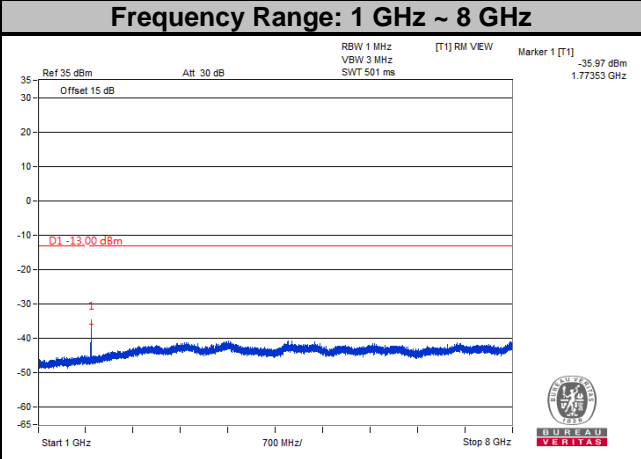
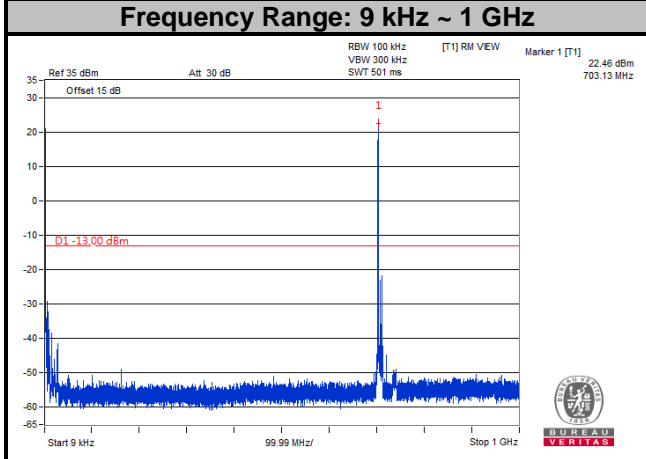


Note: The signal over the limit in 9 kHz is from spectrum analyzer.

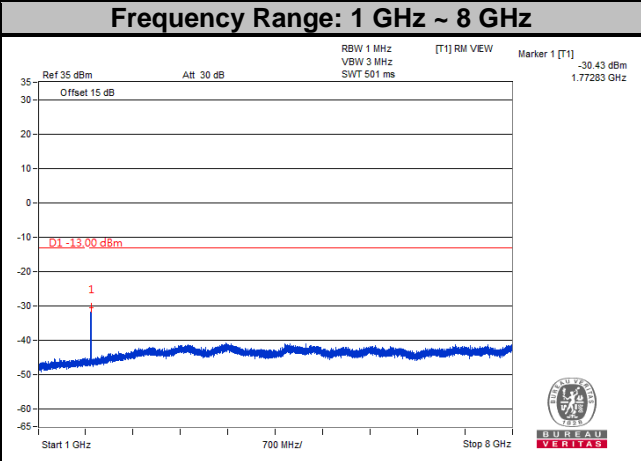
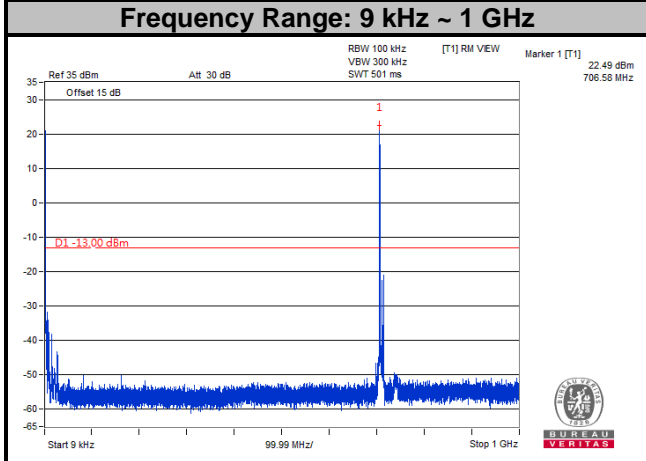
LTE Band 12
Channel Bandwidth: 10 MHz
Channel 23060



Channel 23095



Channel 23130



Note: The signal over the limit in 9 kHz is from spectrum analyzer.

4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

- a. The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. The limit of emission is equal to -13 dBm.

4.8.2 Test Procedure

- a. 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. Measurement method refers to ANSI C63.26 section 5.5 and 5.2.7.
- b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.

Note:

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

The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:

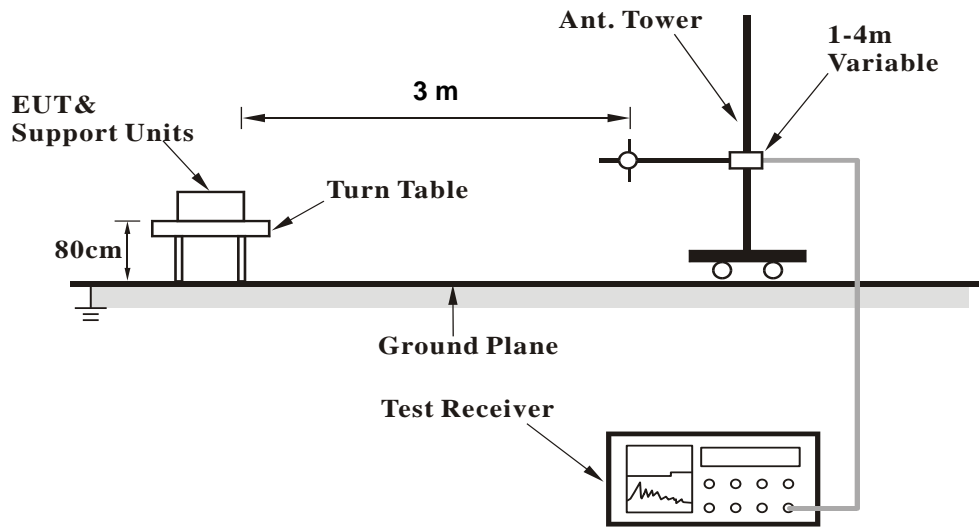
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.8.3 Deviation from Test Standard

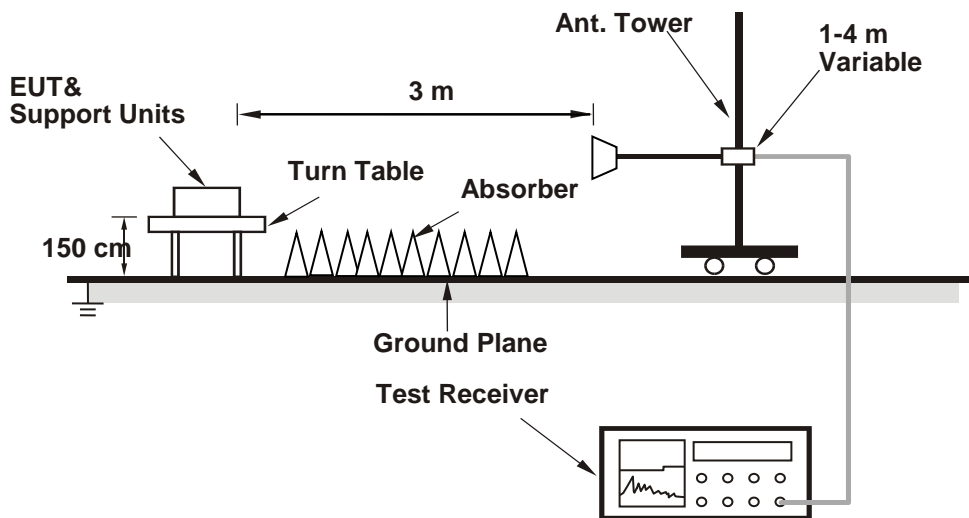
No deviation.

4.8.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



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

4.8.5 Test Results

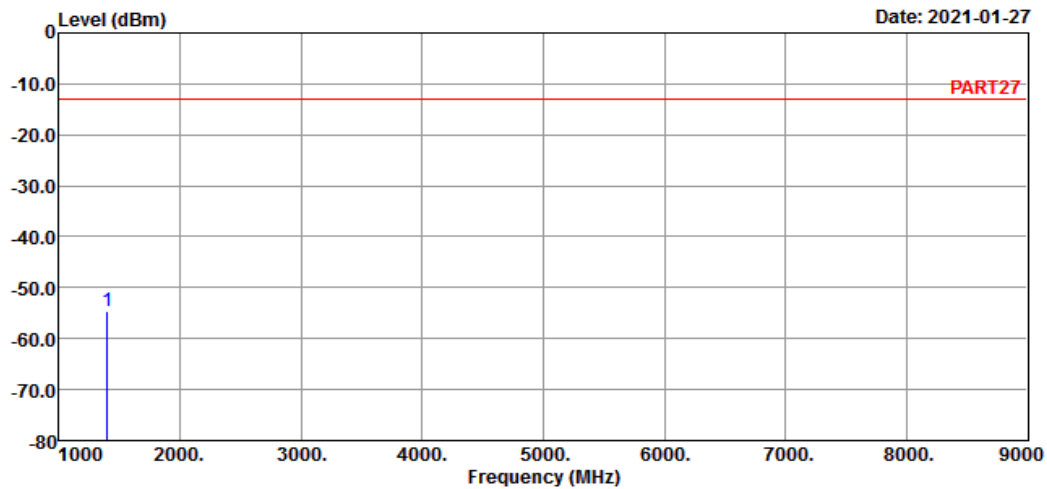
LTE Band 12
 Channel Bandwidth: 1.4 MHz / QPSK
 Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_1.4M Link_L-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Over	Remark
MHz	dBm	dBm	dBm	dB	dB
1399.40	-54.55	-42.70	-13.00	-11.85	-41.55 Peak

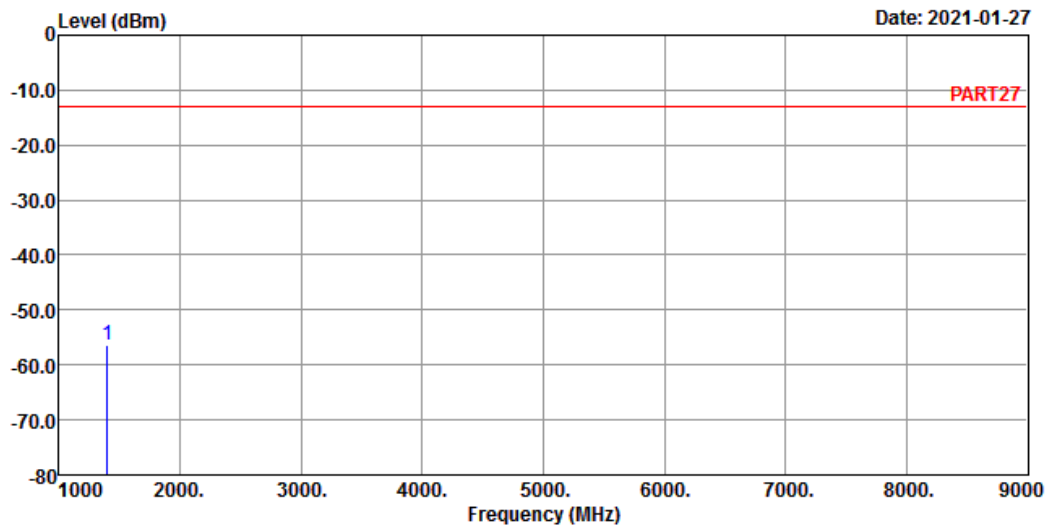


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 2021-01-27



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_1.4M Link_L-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 1399.40	-56.34	-44.49	-13.00	-11.85	-43.34	Peak

Middle Channel

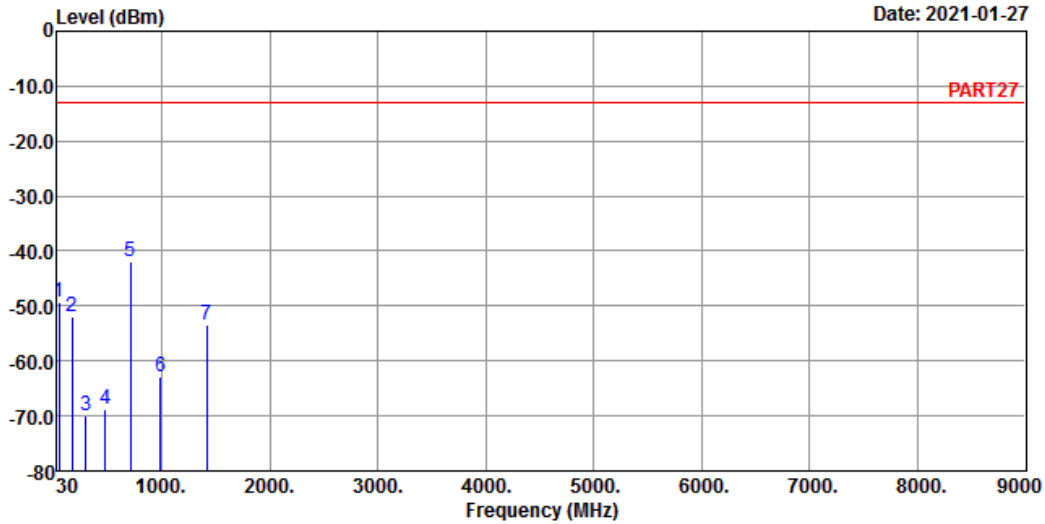


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2021-01-27



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_1.4M Link_M-CH
 Tested by: tim-chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	43.58	-49.23	-47.76	-13.00	-1.47	-36.23	Peak
2	166.77	-52.00	-46.68	-13.00	-5.32	-39.00	Peak
3	293.84	-69.87	-62.98	-13.00	-6.89	-56.87	Peak
4	474.26	-68.64	-63.54	-13.00	-5.10	-55.64	Peak
5 pp	707.50	-41.98	-42.02	-13.00	0.04	-28.98	Peak
6	983.51	-62.97	-65.97	-13.00	3.00	-49.97	Peak
7	1415.00	-53.57	-41.49	-13.00	-12.08	-40.57	Peak

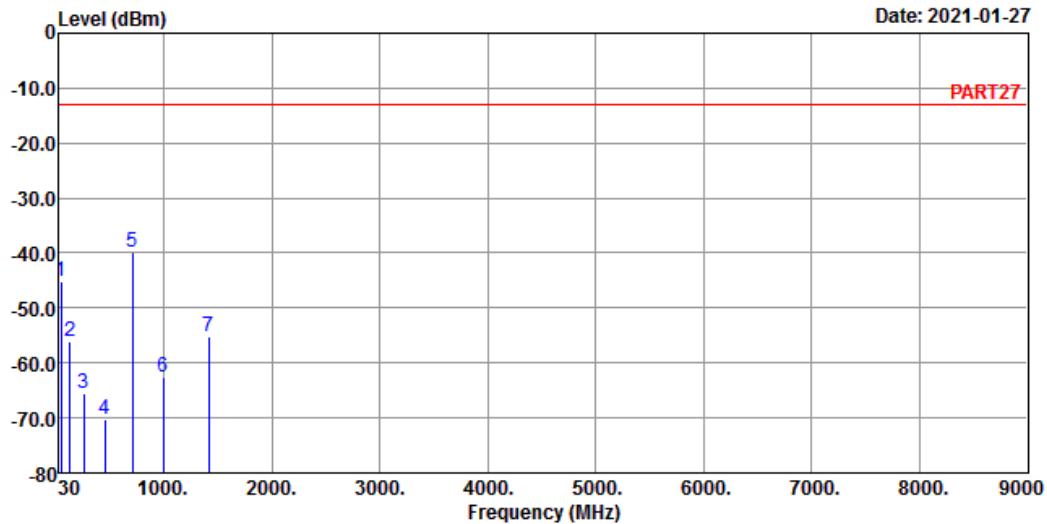


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2021-01-27



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_1.4M Link_M-CH
 Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Over Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	43.58	-45.07	-43.60	-13.00	-1.47	-32.07	Peak
2	131.85	-56.21	-47.53	-13.00	-8.68	-43.21	Peak
3	255.04	-65.42	-59.33	-13.00	-6.09	-52.42	Peak
4	455.83	-70.36	-64.92	-13.00	-5.44	-57.36	Peak
5 pp	707.50	-39.74	-39.78	-13.00	0.04	-26.74	Peak
6	994.18	-62.49	-65.86	-13.00	3.37	-49.49	Peak
7	1415.00	-55.22	-43.14	-13.00	-12.08	-42.22	Peak

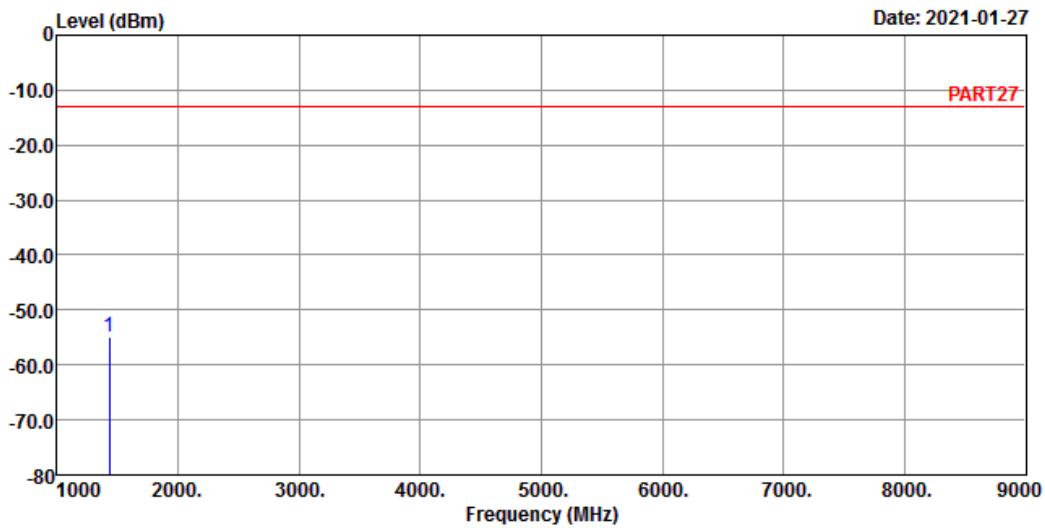
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_1.4M Link_H-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

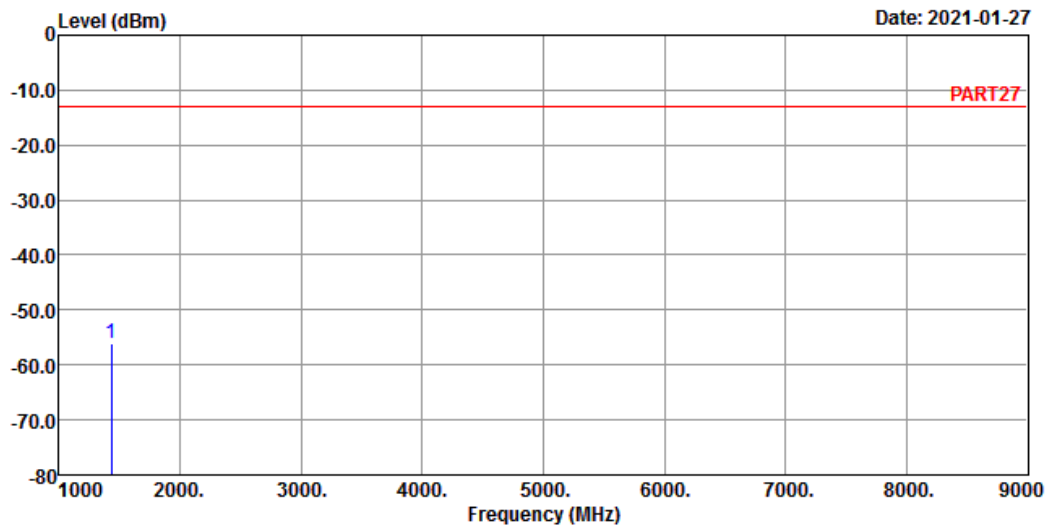
1 pp 1430.60 -54.78 -42.47 -13.00 -12.31 -41.78 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_1.4M Link_H-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 1430.60	-56.10	-43.79	-13.00	-12.31	-43.10	Peak

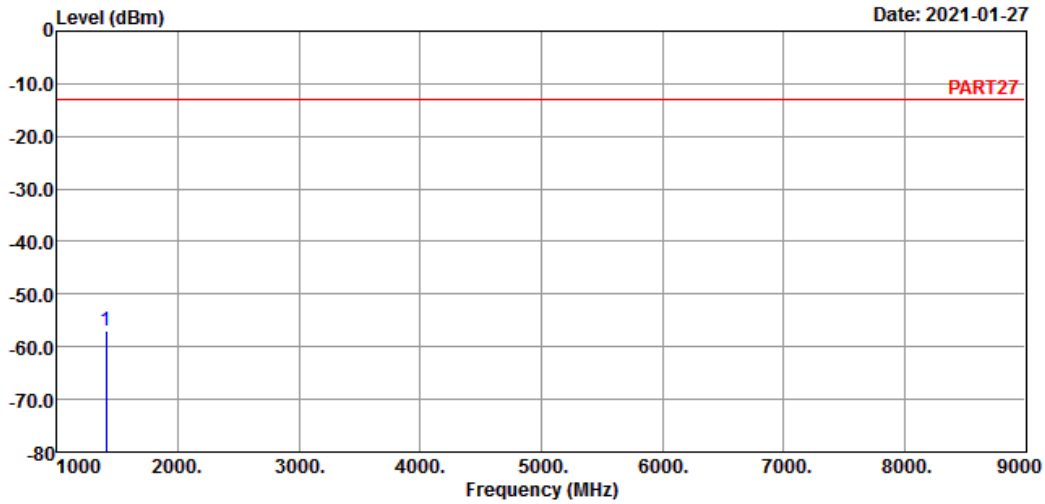
Channel Bandwidth: 5 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 12 QPSK_5M Link_L-CH
Tested by: tim-chen

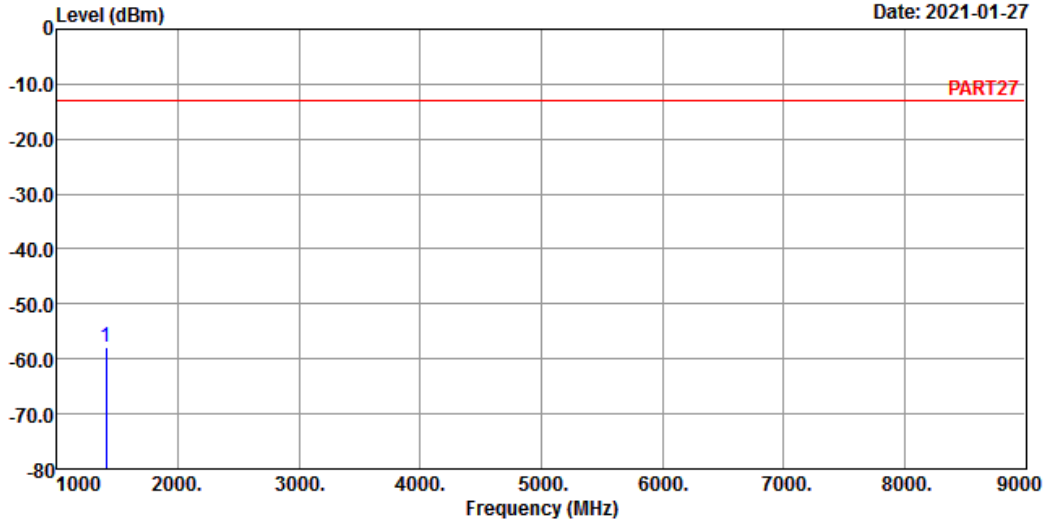
Freq	Level	Read Level	Limit	Over	Remark
MHz	dBm	dBm	dBm	dB	dB
1 pp 1403.00	-56.98	-45.07	-13.00	-11.91	-43.98 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_5M Link_L-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 1403.00	-57.94	-46.03	-13.00	-11.91	-44.94	Peak

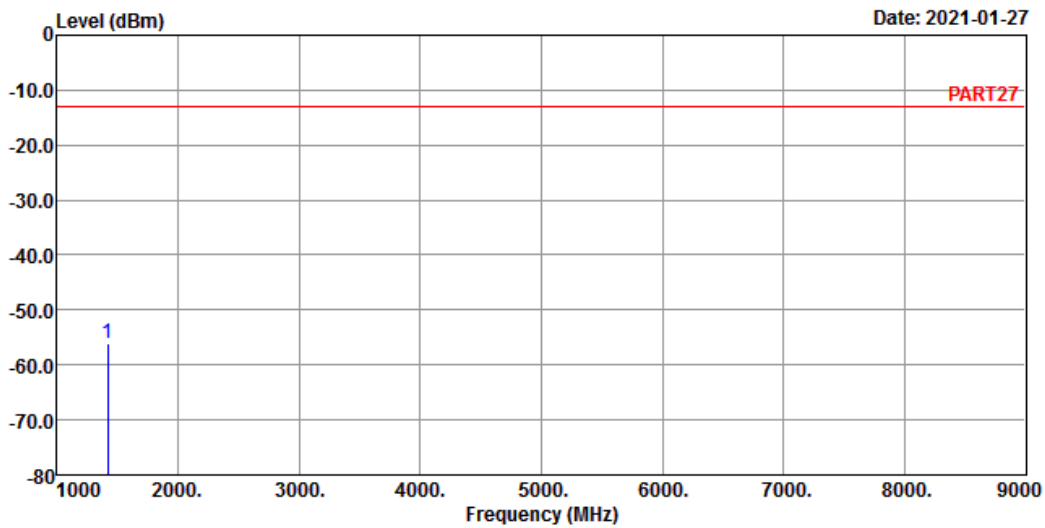
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_5M Link_M-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

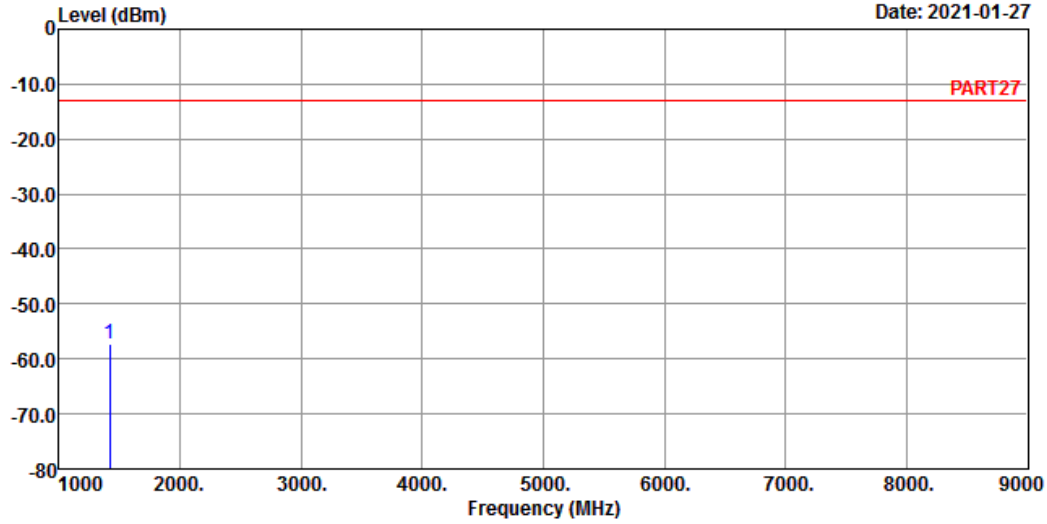
1 pp 1415.00 -56.08 -44.00 -13.00 -12.08 -43.08 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_5M Link_M-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 1415.00	-57.19	-45.11	-13.00	-12.08	-44.19	Peak

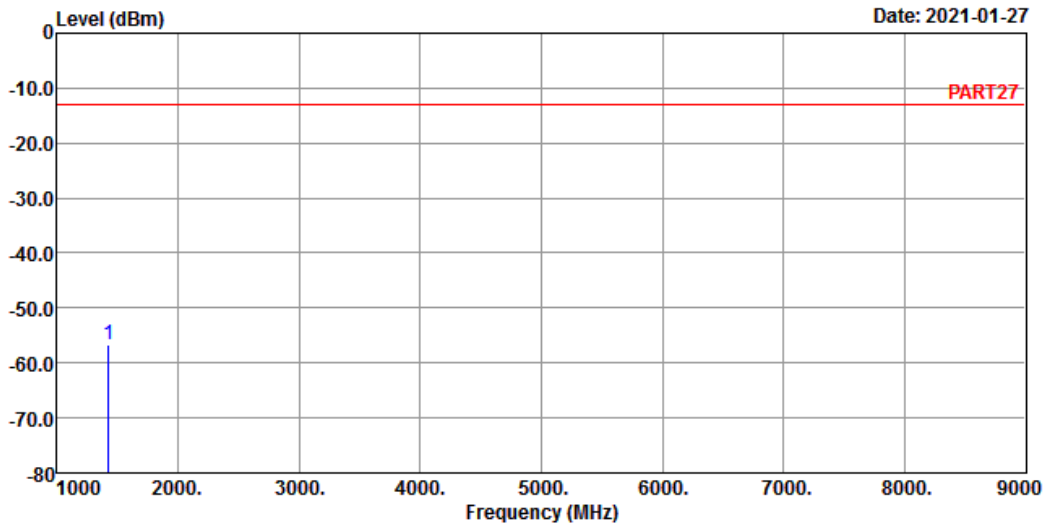
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_5M Link_H-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

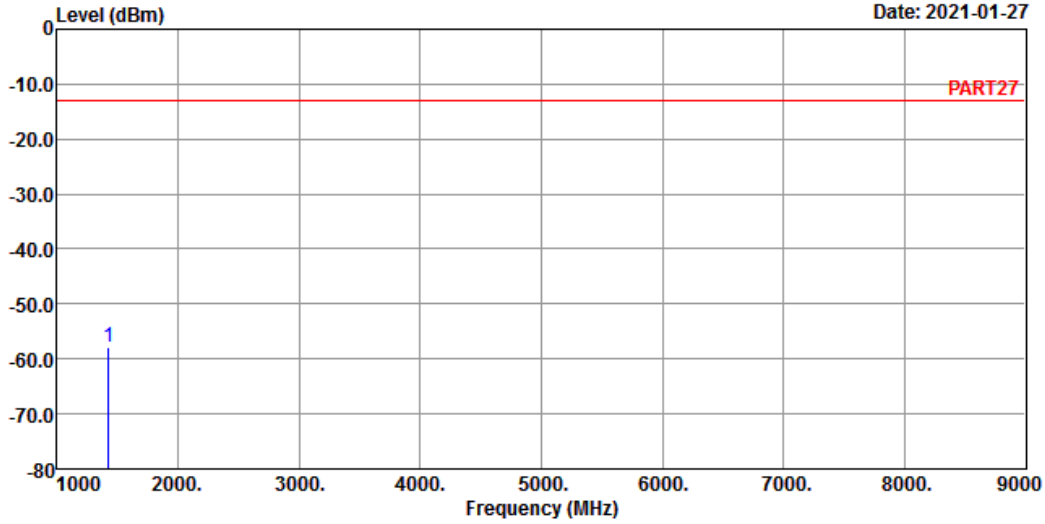
1 pp 1427.00 -56.65 -44.40 -13.00 -12.25 -43.65 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_5M Link_H-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 1427.00	-57.81	-45.56	-13.00	-12.25	-44.81	Peak

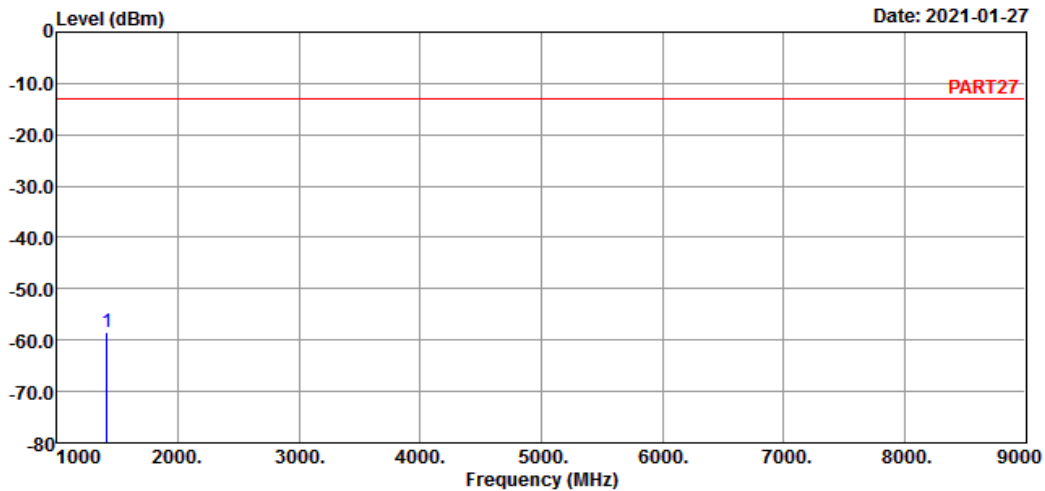
Channel Bandwidth: 10 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 12 QPSK_10M Link_L-CH
Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

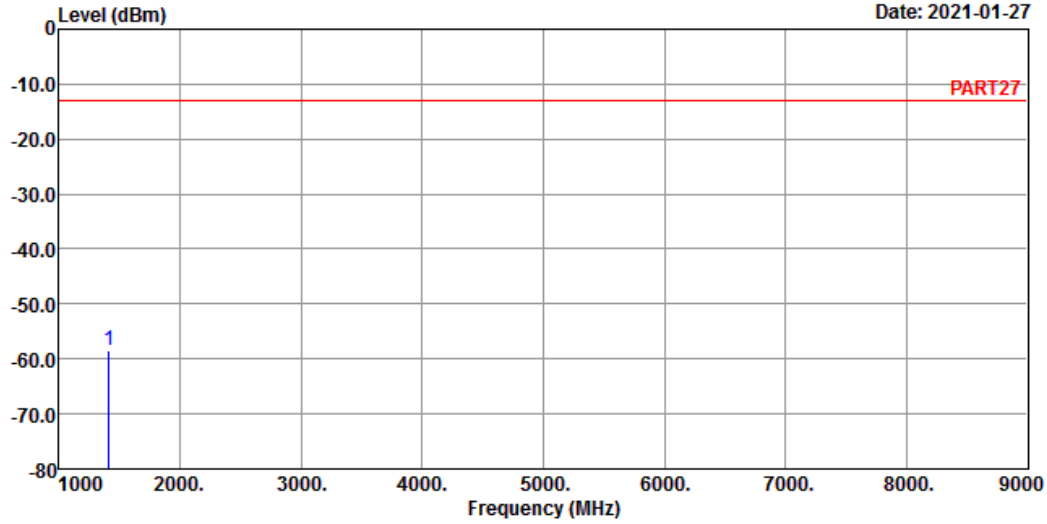
1 pp 1408.00 -58.42 -46.46 -13.00 -11.96 -45.42 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_10M Link_L-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Over	Remark
MHz	dBm	dBm	dBm	dB	
1408.00	-58.49	-46.53	-13.00	-11.96	-45.49 Peak

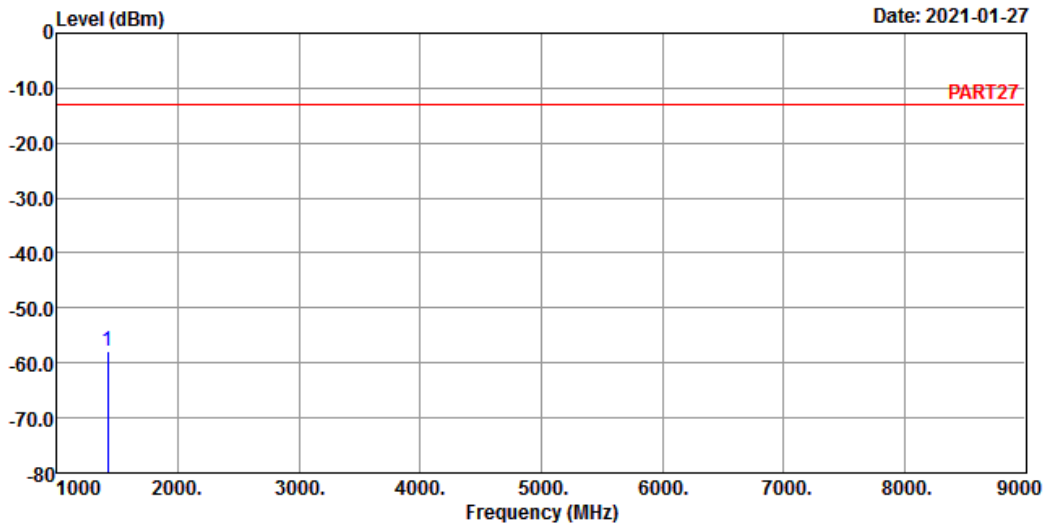
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_10M Link_M-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

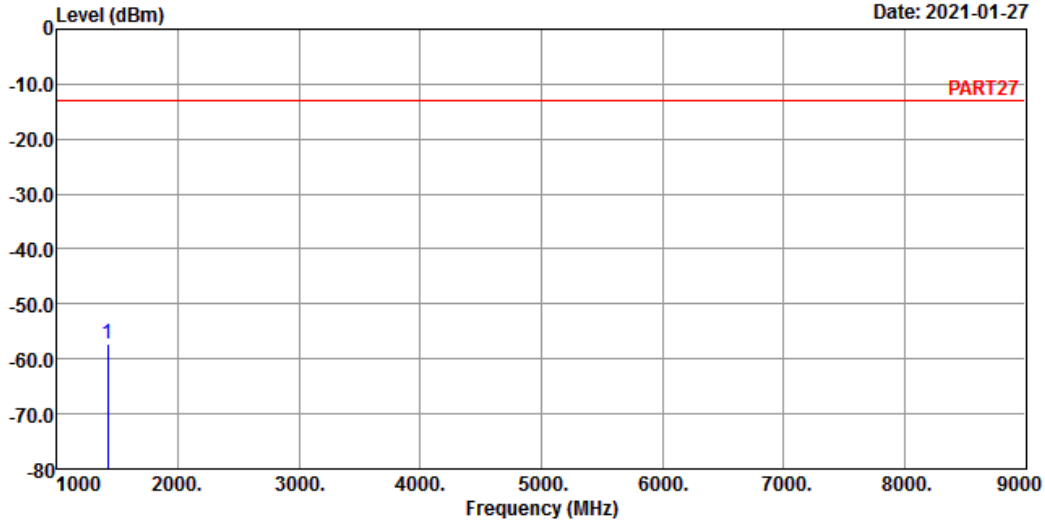
1 pp 1415.00 -57.92 -45.84 -13.00 -12.08 -44.92 Peak



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A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_10M Link_M-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1 pp 1415.00	-57.40	-45.32	-13.00	-12.08	-44.40	Peak

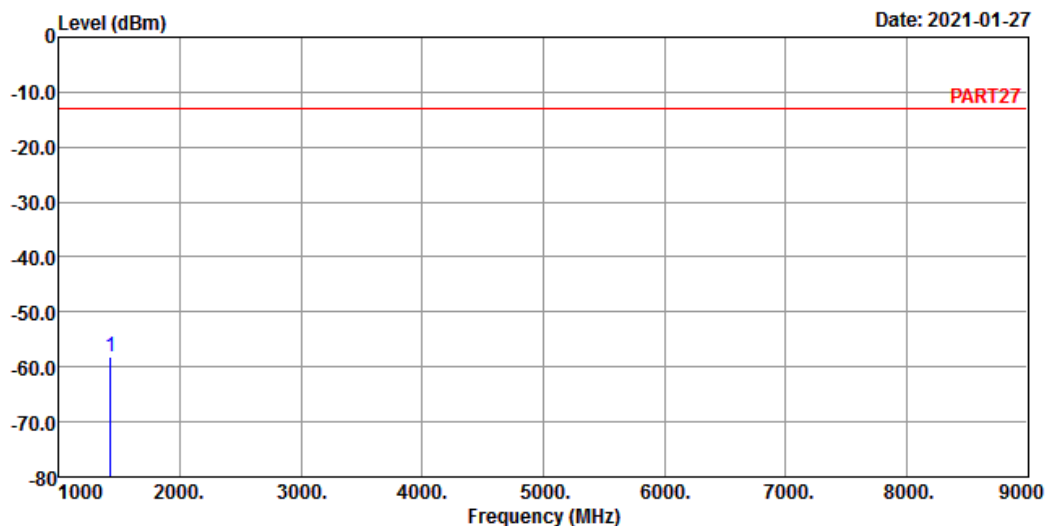
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART27 HORIZONTAL
 Remak : LTE Band 12 QPSK_10M Link_H-CH
 Tested by: tim-chen

Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	

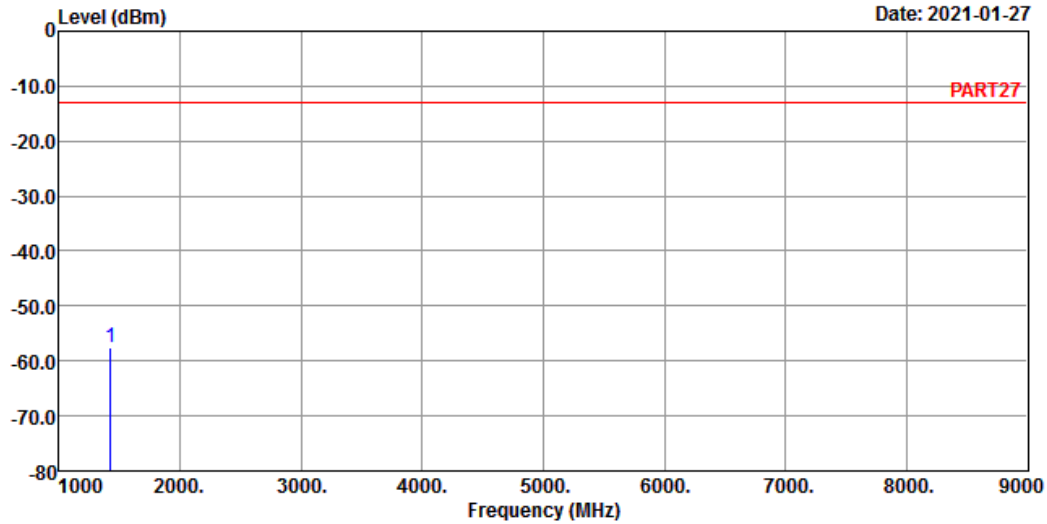
1 pp 1422.00 -58.23 -46.04 -13.00 -12.19 -45.23 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART27 VERTICAL
 Remak : LTE Band 12 QPSK_10M Link_H-CH
 Tested by: tim-chen

	Read	Limit	Over		
Freq	Level	Level	Line	Factor	Limit
MHz	dBm	dBm	dBm	dB	dB
1 pp 1422.00	-57.68	-45.49	-13.00	-12.19	-44.68
					Peak

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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

Lin Kou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

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Fax: 886-3-6668323

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Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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