Partial FCC Test Report

(PART 27)

Report No.:	RFBHPY-WTW-P20110791-2
FCC ID:	A4C01007A
Test Model:	LE910C1-NS
Received Date:	Nov. 20, 2020
Test Date:	Nov. 25, 2020 ~ Nov. 26, 2020
Issued Date:	Dec. 07, 2020
Applicant:	RM Acquisition LLC
Address:	8770 W. Bryn Mawr Avenue Chicago, Illinois 60631
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
Test Location:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RFBHPY-WTW-P20110791-2	Original Release	Dec. 07, 2020

1 Certificate of Conformity

Product:	LTE Module
Brand:	Telit
Test Model:	LE910C1-NS
Sample Status:	Identical Prototype
Applicant:	RM Acquisition LLC
Test Date:	Nov. 25, 2020 ~ Nov. 26, 2020
Standards:	FCC Part 27, Subpart C, H, L

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 : Lena Wang , **Date:** Dec. 07, 2020

Lena Wang / Specialist

Approved by : , **Date:** Dec. 07, 2020

Dylan Chiou / Senior Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2 (LTE 4)			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 27.50(d)(4)	Effective radiated power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to note
2.1055 27.54	Frequency Stability	N/A	Refer to note
2.1049	Occupied Bandwidth	N/A	Refer to note
27.50(d)(5)	Peak to Average Ratio	N/A	Refer to note
27.53(h)	Band Edge Measurements	N/A	Refer to note
2.1051 27.53(h)	Conducted Spurious Emissions	N/A	Refer to note
2.1053 27.53(h)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.91 dB at 3440.00 MHz.

Applied Standard: FCC Part 27 & Part 2 (LTE 12)			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 27.50(c)(10)	Effective radiated power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to note
2.1055 27.54	Frequency Stability	N/A	Refer to note
2.1049	Occupied Bandwidth	N/A	Refer to note
---	Peak to Average Ratio	N/A	Refer to note
27.53(g)	Band Edge Measurements	N/A	Refer to note
2.1051 27.53(g)	Conducted Spurious Emissions	N/A	Refer to note
2.1053 27.53(g)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -28.55 dB at 43.58 MHz.

Note:

1. This report is a partial report. Only Effective radiated power, Conducted power and Radiated Spurious Emissions were verified and recorded in this report. Other testing data please refer to the original TELIT report no.: FG740703P27 and FG740703P27 -1(LTE Module, Brand: Telit, Model: LE910C1-NS, FCC ID: RI7LE910C1NS).
2. 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. 12, 2019	Dec. 11, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 16, 2020	Apr. 15, 2021
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 24, 2019	Nov. 23, 2020
			Nov. 22, 2020	Nov. 21, 2021
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Nov. 06, 2020	Nov. 05, 2021
Fixed Attenuator WORKEN	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
MXG Vector signal generator Agilent	N5182B	MY53050430	Dec. 02, 2019	Dec. 01, 2020
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 Worken	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. 25, 2019	Dec. 24, 2020

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

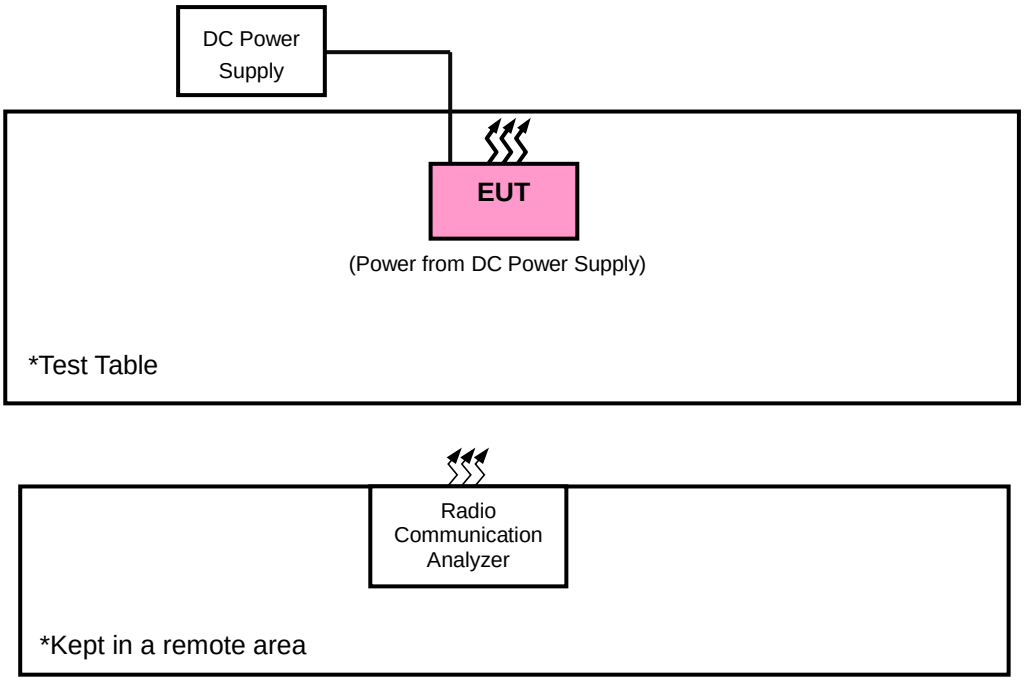
Product	LTE Module	
Brand	Telit	
Test Model	LE910C1-NS	
Status of EUT	Identical Prototype	
Power Supply Rating	12 or 24 Vdc (DC Power Supply)	
Modulation Type	LTE	QPSK, 16QAM
Frequency Range	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	1710.7 ~ 1754.3 MHz
	LTE Band 4 (Channel Bandwidth: 3 MHz)	1711.5 ~ 1753.5 MHz
	LTE Band 4 (Channel Bandwidth: 5 MHz)	1712.5 ~ 1752.5 MHz
	LTE Band 4 (Channel Bandwidth: 10 MHz)	1715.0 ~ 1750.0 MHz
	LTE Band 4 (Channel Bandwidth: 15 MHz)	1717.5 ~ 1747.5 MHz
	LTE Band 4 (Channel Bandwidth: 20 MHz)	1720.0 ~ 1745.0 MHz
	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
Max. ERP Power	LTE Band 12 (Channel Bandwidth: 1.4 MHz)	118.85 mW
	LTE Band 12 (Channel Bandwidth: 3 MHz)	121.06 mW
	LTE Band 12 (Channel Bandwidth: 5 MHz)	123.03 mW
	LTE Band 12 (Channel Bandwidth: 10 MHz)	124.45 mW
Max. EIRP Power	LTE Band 4 (Channel Bandwidth: 1.4 MHz)	178.65 mW
	LTE Band 4 (Channel Bandwidth: 3 MHz)	180.72 mW
	LTE Band 4 (Channel Bandwidth: 5 MHz)	182.81 mW
	LTE Band 4 (Channel Bandwidth: 10 MHz)	184.93 mW
	LTE Band 4 (Channel Bandwidth: 15 MHz)	186.21 mW
	LTE Band 4 (Channel Bandwidth: 20 MHz)	187.50 mW
Antenna Type	Dipole Antenna	
Antenna Gain	LTE Band 4	2.24 dBi
	LTE Band 12	-0.31 dBi
Accessory Device	N/A	
Data Cable Supplied	N/A	

Note:

1. This report is prepared for FCC class II permissive change. This report is a partial report. Only Effective radiated power, Conducted power and Radiated Spurious Emissions were verified and recorded in this report. Other testing data please refer to the original TELIT report no.: FG740703P27 and FG740703P27 -1(LTE Module, Brand: Telit, Model: LE910C1-NS, FCC ID: RI7LE910C1NS).
2. The EUT was installed in E-log and Fleet Management Device (Brand: Rand McNally, Model: DC210).
3. 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.
4. 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

<Radiated Emission Test> & <E.R.P. / E.I.R.P. 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.

No.	Product	Brand	Model No.	Serial No.	FCC ID
A	DC power supply	Keysight	U8002A	MY56330015	N/A
B	Radio Communication Analyzer	Anritsu	MT8820C	6201010284	N/A

No.	Signal Cable Description Of The Above Support Units
1.	DC Cable: 2.38m

Note:

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

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	ERP / EIRP	Radiated Emission
LTE Band 4	X-plane	X-plane
LTE Band 12	X-plane	Z-plane

LTE Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
-	Radiated Emission	19957 to 20393	19957, 20175, 20393	1.4 MHz	QPSK	1 RB / 0 RB Offset
		19975 to 20375	19975, 20175, 20375	5 MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20 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.

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
-	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.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP / EIRP	25 deg. C, 65 % RH	12 Vdc	Tim Chen
Radiated Emission	25 deg. C, 65 % RH	12 Vdc	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

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. (For band 4)

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

EIRP / ERP Measurement:

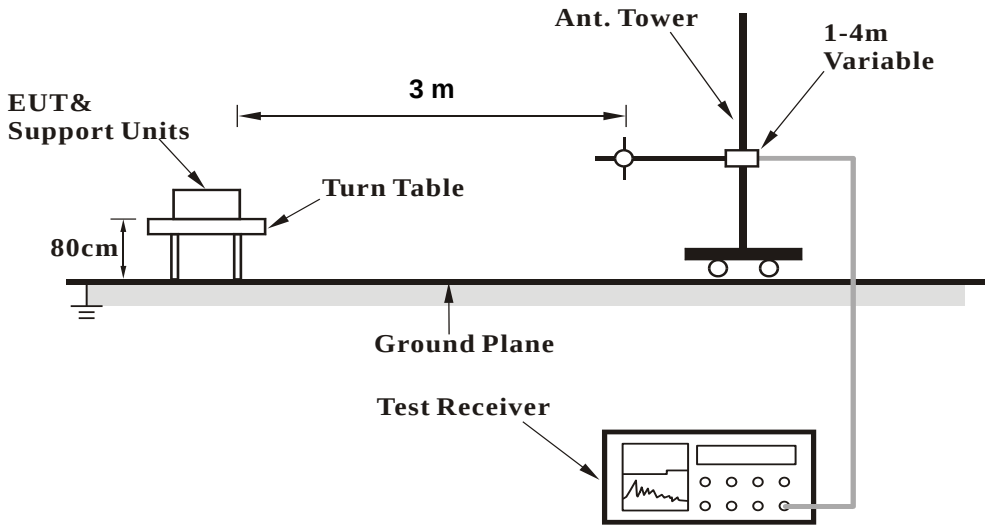
a. All measurements were done at low, middle and high operational frequency range. RBW is 1.4 MHz、5 MHz、10 MHz、15 MHz、 20 MHz for LTE mode, and VBW ≥ 3 x RBW.
b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 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.
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15 dB.

Conducted Power Measurement:

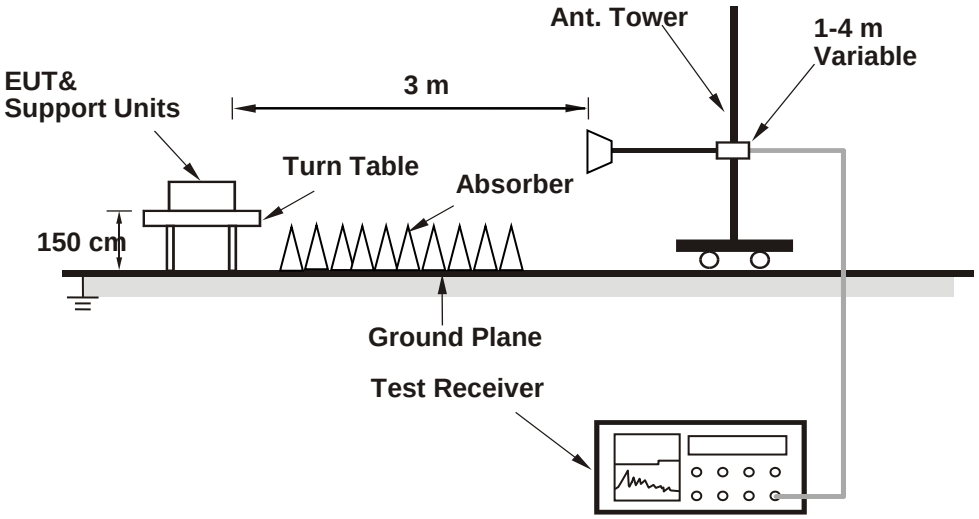
a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 Test Setup

EIRP / ERP Measurement:
<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).

Conducted Power Measurement:

4.1.4 Test Results

Conducted Output Power (dBm)

LTE Band 4																
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		20050	20175	20300				Channel		20025	20175	20325	
		Frequency (MHz)		1720.0	1732.5	1745.0				Frequency (MHz)		1717.5	1732.5	1747.5	
20M	QPSK	1	0	23.16	22.91	23.32	0	15M	QPSK	1	0	22.91	23.10	23.05	0
		1	50	23.35	23.36	23.49	0			1	37	23.05	23.92	23.24	0
		1	99	22.81	23.12	23.54	0			1	74	22.94	23.35	22.95	0
		50	0	22.66	22.89	23.41	1			36	0	22.09	22.35	21.99	1
		50	25	22.94	23.15	23.38	1			36	19	22.15	22.05	22.16	1
		50	50	22.85	23.06	23.23	1			36	39	22.26	22.24	22.21	1
		100	0	22.01	23.14	22.24	1			75	0	22.05	22.11	22.29	1
	16QAM	1	0	21.77	22.00	21.18	1		16QAM	1	0	22.42	22.16	22.08	1
		1	49	22.05	22.06	21.43	1			1	37	22.98	22.63	22.31	1
		1	99	21.39	21.27	21.43	1			1	74	22.26	21.97	21.84	1
		27	0	21.17	21.08	20.77	2			27	0	21.16	21.16	21.40	2
		27	12	21.26	20.97	21.14	2			27	12	21.25	21.32	21.36	2
		27	23	20.97	20.73	20.77	2			27	23	21.18	21.13	21.16	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		20000	20175	20350				Channel		19975	20175	20375	
		Frequency (MHz)		1715.0	1732.5	1750.0				Frequency (MHz)		1712.5	1732.5	1752.5	
10M	QPSK	1	0	22.96	23.22	23.39	0	5M	QPSK	1	0	23.21	23.10	23.35	0
		1	24	23.11	23.49	23.35	0			1	12	23.45	23.28	23.46	0
		1	49	23.06	23.25	23.04	0			1	24	23.26	23.14	23.19	0
		25	0	21.96	22.24	22.49	1			12	0	22.26	22.45	22.49	1
		25	12	21.91	22.05	22.34	1			12	6	22.32	22.41	22.48	1
		25	25	22.08	22.11	22.18	1			12	13	22.21	22.39	22.43	1
		50	0	21.84	21.96	22.23	1			25	0	22.18	22.35	22.41	1
	16QAM	1	0	21.47	22.25	22.37	1		16QAM	1	0	21.95	21.65	21.56	1
		1	24	21.80	22.91	22.51	1			1	12	22.21	22.14	22.08	1
		1	49	21.59	22.25	22.30	1			1	24	21.84	21.83	21.75	1
		27	0	21.06	21.23	21.48	2			12	0	21.19	21.36	21.08	2
		27	12	21.12	21.20	21.69	2			12	6	21.25	21.12	21.36	2
		27	23	20.95	20.99	21.42	2			12	11	21.24	21.10	21.05	2
										25	0	21.11	21.06	21.12	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		19965	20175	20385				Channel		19957	20175	20393	
		Frequency (MHz)		1711.5	1732.5	1753.5				Frequency (MHz)		1710.7	1732.5	1754.3	
3M	QPSK	1	0	23.13	22.98	23.11	0	1.4M	QPSK	1	0	23.16	22.91	23.32	0
		1	7	23.32	23.29	23.16	0			1	2	23.35	23.36	23.49	0
		1	14	22.92	22.82	22.94	0			1	5	22.81	23.12	23.54	0
		8	0	21.82	22.21	22.18	1			3	0	22.66	22.89	23.41	0
		8	4	21.71	22.14	21.91	1			3	1	22.94	23.15	23.38	0
		8	7	21.70	21.99	21.84	1			3	2	22.85	23.06	23.23	0
		15	0	21.88	22.25	21.79	1			6	0	22.01	23.14	22.24	1
	16QAM	1	0	22.45	22.36	22.14	1		16QAM	1	0	22.01	21.83	22.05	1
		1	7	22.59	22.29	22.49	1			1	2	22.55	21.75	22.13	1
		1	14	22.23	22.33	22.13	1			1	5	22.13	21.98	22.08	1
		8	0	21.19	21.06	20.99	2			3	0	22.24	21.65	22.12	1
		8	4	21.11	20.81	21.12	2			3	1	22.01	21.76	22.01	1
		8	7	20.79	20.95	20.95	2			3	2	22.26	21.83	22.05	1
		15	0	21.04	20.83	20.96	2			6	0	21.29	21.25	20.75	2

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	22.06	21.98	21.88	0	5M	QPSK	1	0	22.27	22.46	21.76	0
		1	24	22.56	22.36	22.42	0			1	12	22.24	22.31	22.22	0
		1	49	21.96	22.10	22.28	0			1	24	22.14	21.97	22.19	0
		25	0	20.99	21.26	21.00	1			12	0	20.92	21.28	21.19	1
		25	12	21.34	21.02	21.03	1			12	6	21.17	21.05	21.13	1
		25	24	21.23	21.12	21.26	1			12	11	20.96	21.21	21.38	1
		50	0	21.06	21.07	21.00	1			25	0	21.05	21.08	20.84	1
	16QAM	1	0	21.27	21.31	20.99	1		16QAM	1	0	21.39	20.99	20.74	1
		1	24	22.35	21.31	20.26	1			1	12	21.19	21.24	21.03	1
		1	49	21.01	21.16	20.88	1			1	24	21.29	20.92	20.92	1
		27	0	20.07	20.20	20.32	2			12	0	19.93	20.10	19.89	2
		27	12	20.24	20.09	20.19	2			12	6	20.22	20.19	20.24	2
		27	23	20.21	20.07	20.37	2			12	11	19.97	20.16	20.01	2
										25	0	20.13	20.52	19.95	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	22.28	22.18	21.88	0	1.4M	QPSK	1	0	22.12	21.98	22.08	0
		1	7	22.52	22.53	22.29	0			1	2	22.16	22.00	22.56	0
		1	14	22.16	22.26	22.25	0			1	5	22.07	22.15	22.06	0
		8	0	21.22	21.20	21.16	1			3	0	22.17	22.22	22.42	0
		8	4	20.94	20.99	21.27	1			3	1	22.04	22.07	22.25	0
		8	7	21.05	21.10	21.32	1			3	2	22.02	22.22	22.05	0
		15	0	21.16	21.31	21.12	1			6	0	21.08	21.07	21.28	1
	16QAM	1	0	21.54	21.87	20.67	1		16QAM	1	0	20.84	21.47	21.03	1
		1	7	21.39	21.33	21.24	1			1	2	21.49	21.59	20.89	1
		1	14	21.32	20.96	20.89	1			1	5	21.17	21.44	21.04	1
		8	0	19.70	20.34	19.86	2			3	0	20.92	21.17	20.79	1
		8	4	20.04	20.11	20.44	2			3	1	21.05	21.26	20.93	1
		8	7	20.01	20.13	20.00	2			3	2	21.27	21.35	21.12	1
		15	0	20.07	20.32	20.11	2			6	0	20.12	20.41	20.37	2

ERP Power (dBm)

LTE Band 12							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	23017	699.7	-9.91	30.36	20.45	110.92	H
	23095	707.5	-9.57	30.17	20.60	114.82	
	23173	715.3	-9.42	30.17	20.75	118.85	
	23017	699.7	-15.89	32.03	16.14	41.11	V
	23095	707.5	-15.66	31.98	16.32	42.85	
	23173	715.3	-15.62	32.06	16.44	44.06	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	23017	699.7	-10.98	30.36	19.38	86.70	H
	23095	707.5	-10.65	30.17	19.52	89.54	
	23173	715.3	-10.48	30.17	19.69	93.11	
	23017	699.7	-16.95	32.03	15.08	32.21	V
	23095	707.5	-16.71	31.98	15.27	33.65	
	23173	715.3	-16.70	32.06	15.36	34.36	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB)

LTE Band 12							
Channel Bandwidth: 3 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor (dB)**	**ERP (dBm)**	**ERP (mW)**	**Polarization (H/V)**
X	23025	700.5	-9.65	30.17	20.52	112.72	H
	23095	707.5	-9.49	30.17	20.68	116.95	
	23165	714.5	-9.35	30.18	20.83	121.06	
	23025	700.5	-15.74	31.96	16.22	41.88	V
	23095	707.5	-15.59	31.98	16.39	43.55	
	23165	714.5	-15.52	32.03	16.51	44.77	
Channel Bandwidth: 3 MHz / 16QAM							
X	23025	700.5	-10.67	30.17	19.50	89.13	H
	23095	707.5	-10.51	30.17	19.66	92.47	
	23165	714.5	-10.37	30.18	19.81	95.72	
	23025	700.5	-16.78	31.96	15.18	32.96	V
	23095	707.5	-16.60	31.98	15.38	34.51	
	23165	714.5	-16.59	32.03	15.44	34.99	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB)

LTE Band 12							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
X	23035	701.5	-9.60	30.17	20.57	114.02	H
	23095	707.5	-9.43	30.17	20.74	118.58	
	23155	713.5	-9.28	30.18	20.90	123.03	
	23035	701.5	-15.70	31.96	16.26	42.27	V
	23095	707.5	-15.55	31.98	16.43	43.95	
	23155	713.5	-15.45	32.03	16.58	45.50	
Channel Bandwidth: 5 MHz / 16QAM							
X	23035	701.5	-10.62	30.17	19.55	90.16	H
	23095	707.5	-10.47	30.17	19.70	93.33	
	23155	713.5	-10.35	30.18	19.83	96.16	
	23035	701.5	-16.78	31.96	15.18	32.96	V
	23095	707.5	-16.58	31.98	15.40	34.67	
	23155	713.5	-16.50	32.03	15.53	35.73	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB)

LTE Band 12							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
X	23060	704.0	-9.56	30.17	20.61	115.08	H
	23095	707.5	-9.38	30.17	20.79	119.95	
	23130	711.0	-9.23	30.18	20.95	124.45	
	23060	704.0	-15.63	31.96	16.33	42.95	V
	23095	707.5	-15.52	31.98	16.46	44.26	
	23130	711.0	-15.42	32.03	16.61	45.81	
Channel Bandwidth: 10 MHz / 16QAM							
X	23060	704.0	-10.63	30.17	19.54	89.95	H
	23095	707.5	-10.45	30.17	19.72	93.76	
	23130	711.0	-10.24	30.18	19.94	98.63	
	23060	704.0	-16.71	31.96	15.25	33.50	V
	23095	707.5	-16.53	31.98	15.45	35.08	
	23130	711.0	-16.50	32.03	15.53	35.73	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB)

EIRP Power (dBm)

LTE Band 4							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	19957	1710.7	-14.31	36.45	22.14	163.68	H
	20175	1732.5	-14.52	36.80	22.28	169.04	
	20393	1754.3	-14.42	36.94	22.52	178.65	
	19957	1710.7	-22.85	37.28	14.43	27.73	V
	20175	1732.5	-23.19	37.63	14.44	27.80	
	20393	1754.3	-23.06	37.64	14.58	28.71	
Channel Bandwidth: 1.4 MHz / 16QAM							
X	19957	1710.7	-15.36	36.45	21.09	128.53	H
	20175	1732.5	-15.58	36.80	21.22	132.43	
	20393	1754.3	-15.51	36.94	21.43	139.00	
	19957	1710.7	-23.88	37.28	13.40	21.88	V
	20175	1732.5	-24.22	37.63	13.41	21.93	
	20393	1754.3	-24.11	37.64	13.53	22.54	

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

LTE Band 4							
Channel Bandwidth: 3 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	19965	1711.5	-14.23	36.45	22.22	166.72	H
	20175	1732.5	-14.46	36.80	22.34	171.40	
	20385	1753.5	-14.37	36.94	22.57	180.72	
	19965	1711.5	-22.82	37.28	14.46	27.93	V
	20175	1732.5	-23.11	37.63	14.52	28.31	
	20385	1753.5	-22.99	37.64	14.65	29.17	
Channel Bandwidth: 3 MHz / 16QAM							
X	19965	1711.5	-15.31	36.45	21.14	130.02	H
	20175	1732.5	-15.55	36.80	21.25	133.35	
	20385	1753.5	-15.44	36.94	21.50	141.25	
	19965	1711.5	-23.88	37.28	13.40	21.88	V
	20175	1732.5	-24.17	37.63	13.46	22.18	
	20385	1753.5	-24.03	37.64	13.61	22.96	

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

LTE Band 4							
Channel Bandwidth: 5 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	19975	1712.5	-14.15	36.45	22.30	169.82	H
	20175	1732.5	-14.39	36.80	22.41	174.18	
	20375	1752.5	-14.32	36.94	22.62	182.81	
	19975	1712.5	-22.79	37.28	14.49	28.12	V
	20175	1732.5	-23.06	37.63	14.57	28.64	
	20375	1752.5	-22.96	37.64	14.68	29.38	
Channel Bandwidth: 5 MHz / 16QAM							
X	19975	1712.5	-15.21	36.45	21.24	133.05	H
	20175	1732.5	-15.47	36.80	21.33	135.83	
	20375	1752.5	-15.41	36.94	21.53	142.23	
	19975	1712.5	-23.83	37.28	13.45	22.13	V
	20175	1732.5	-24.13	37.63	13.50	22.39	
	20375	1752.5	-24.02	37.64	13.62	23.01	

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

LTE Band 4							
Channel Bandwidth: 10 MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**EIRP (mW)**	**Polarization (H/V)**
X	20000	1715.0	-14.30	36.64	22.34	171.40	H
	20175	1732.5	-14.35	36.80	22.45	175.79	
	20350	1750.0	-14.13	36.80	22.67	184.93	
	20000	1715.0	-22.89	37.44	14.55	28.51	V
	20175	1732.5	-22.98	37.63	14.65	29.17	
	20350	1750.0	-22.92	37.64	14.72	29.65	
Channel Bandwidth: 10 MHz / 16QAM							
X	20000	1715.0	-15.35	36.64	21.29	134.59	H
	20175	1732.5	-15.39	36.80	21.41	138.36	
	20350	1750.0	-15.22	36.80	21.58	143.88	
	20000	1715.0	-23.97	37.44	13.47	22.23	V
	20175	1732.5	-24.05	37.63	13.58	22.80	
	20350	1750.0	-23.97	37.64	13.67	23.28	

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

LTE Band 4							
Channel Bandwidth: 15 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	20025	1717.5	-14.08	36.45	22.37	172.58	H
	20175	1732.5	-14.31	36.80	22.49	177.42	
	20325	1747.5	-14.24	36.94	22.70	186.21	
	20025	1717.5	-22.69	37.28	14.59	28.77	V
	20175	1732.5	-22.93	37.63	14.70	29.51	
	20325	1747.5	-22.88	37.64	14.76	29.92	
Channel Bandwidth: 15 MHz / 16QAM							
X	20025	1717.5	-15.14	36.45	21.31	135.21	H
	20175	1732.5	-15.32	36.80	21.48	140.60	
	20325	1747.5	-15.33	36.94	21.61	144.88	
	20025	1717.5	-23.70	37.28	13.58	22.80	V
	20175	1732.5	-23.98	37.63	13.65	23.17	
	20325	1747.5	-23.94	37.64	13.70	23.44	

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

LTE Band 4							
Channel Bandwidth: 20 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
X	20050	1720.0	-14.05	36.45	22.40	173.78	H
	20175	1732.5	-14.26	36.80	22.54	179.47	
	20300	1745.0	-14.21	36.94	22.73	187.50	
	20050	1720.0	-22.63	37.28	14.65	29.17	V
	20175	1732.5	-22.90	37.63	14.73	29.72	
	20300	1745.0	-22.81	37.64	14.83	30.41	
Channel Bandwidth: 20 MHz / 16QAM							
X	20050	1720.0	-15.08	36.45	21.37	137.09	H
	20175	1732.5	-15.31	36.80	21.49	140.93	
	20300	1745.0	-15.26	36.94	21.68	147.23	
	20050	1720.0	-23.69	37.28	13.59	22.86	V
	20175	1732.5	-23.93	37.63	13.70	23.44	
	20300	1745.0	-23.83	37.64	13.81	24.04	

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

4.2 Radiated Emission Measurement

4.2.1 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.

4.2.2 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.
b. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
c. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15 dB.

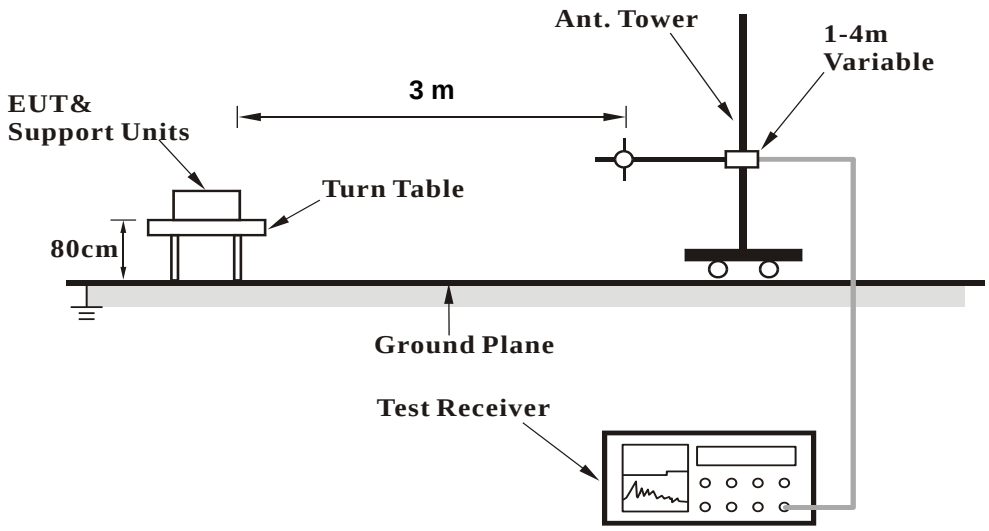
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.2.3 Deviation from Test Standard

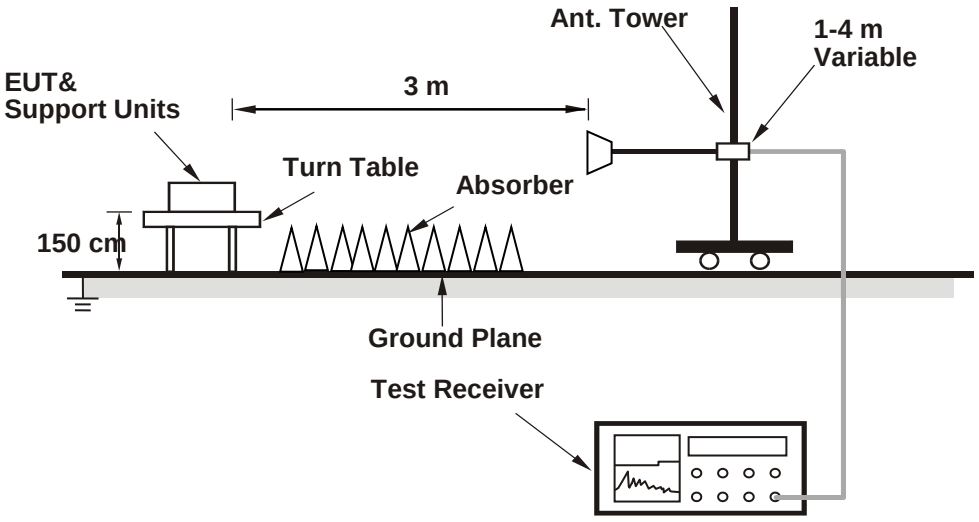
No deviation.

4.2.4 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).

4.2.5 Test Results

LTE Band 4

Channel Bandwidth: 1.4 MHz / QPSK

Low Channel

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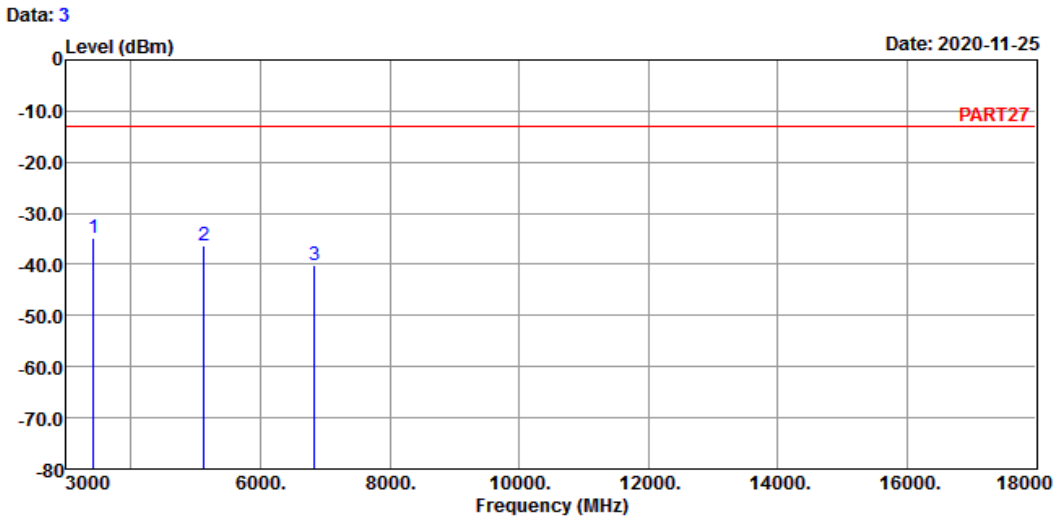
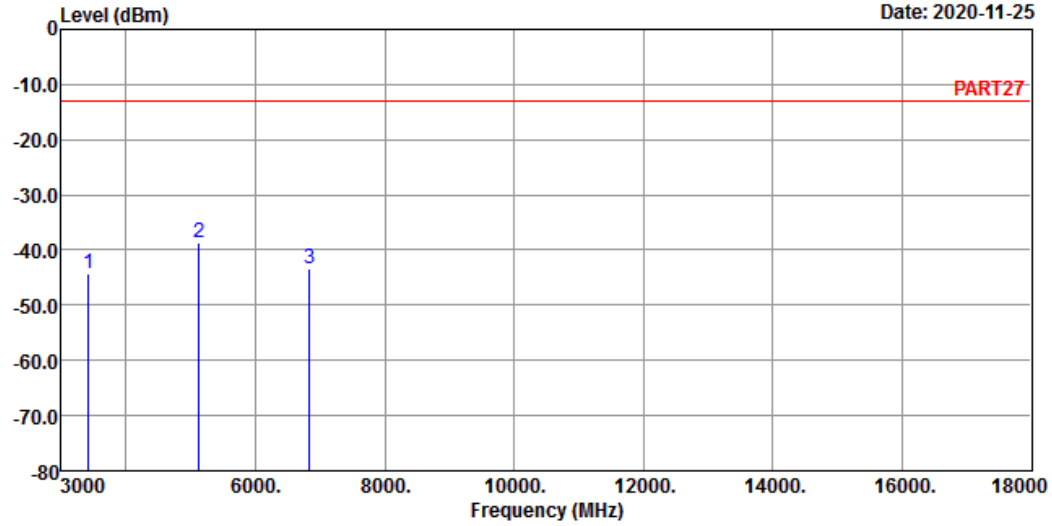


Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 QPSK_1.4M Link_L-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3421.40	-34.86	-26.52	-13.00	-8.34	-21.86	Peak
2	5132.10	-36.45	-34.71	-13.00	-1.74	-23.45	Peak
3	6842.80	-40.22	-42.53	-13.00	2.31	-27.22	Peak

Data: 4



Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 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	3421.40	-44.22	-35.88	-13.00	-8.34	-31.22	Peak
2 pp	5132.10	-38.68	-36.94	-13.00	-1.74	-25.68	Peak
3	6842.80	-43.37	-45.68	-13.00	2.31	-30.37	Peak

Middle Channel

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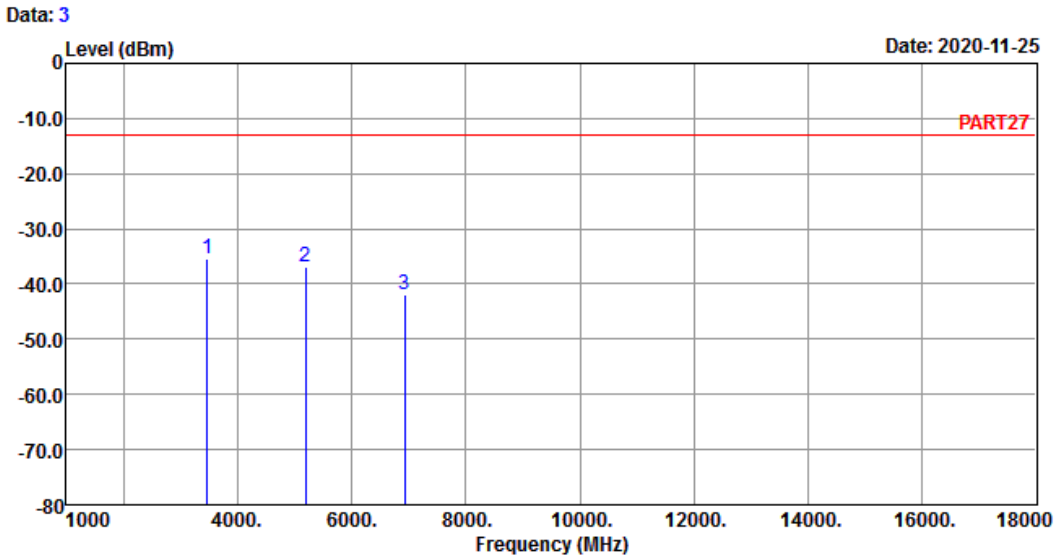
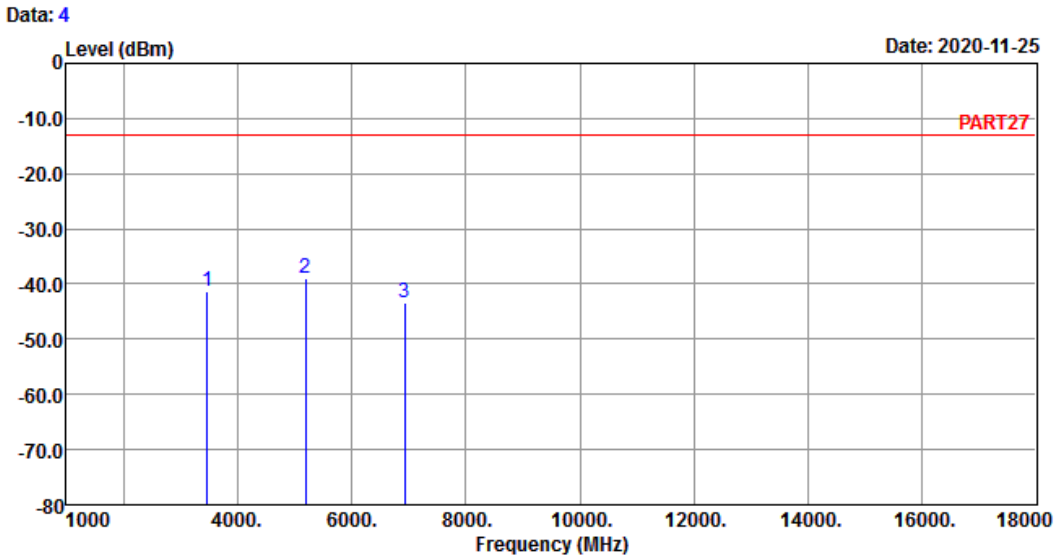


Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 QPSK_1.4M Link_M-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3465.00	-35.57	-27.69	-13.00	-7.88	-22.57	Peak
2	5197.50	-36.92	-34.85	-13.00	-2.07	-23.92	Peak
3	6930.00	-41.78	-44.47	-13.00	2.69	-28.78	Peak



Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 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	3465.00	-41.32	-33.44	-13.00	-7.88	-28.32	Peak
2 pp	5197.50	-38.91	-36.84	-13.00	-2.07	-25.91	Peak
3	6930.00	-43.33	-46.02	-13.00	2.69	-30.33	Peak

High Channel

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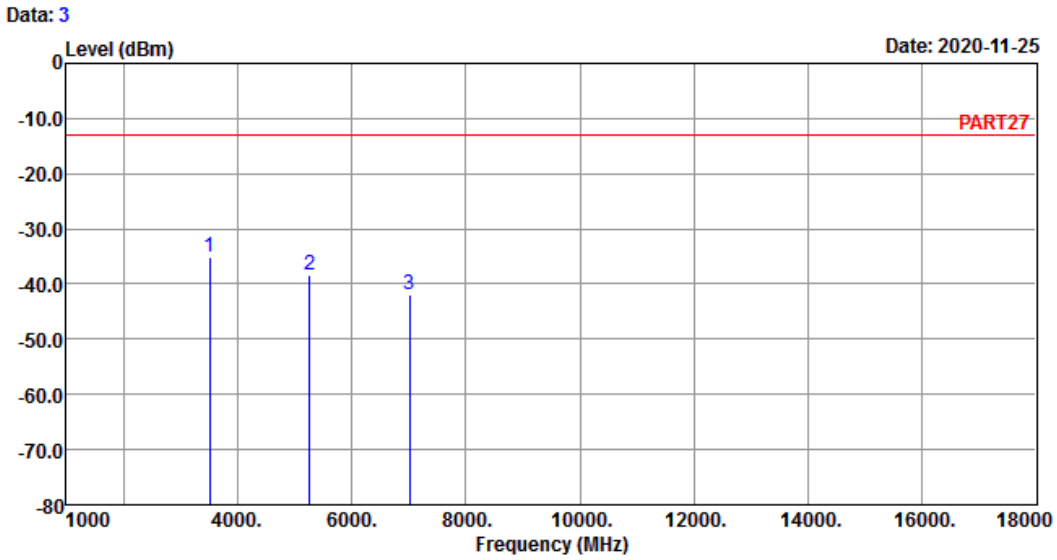
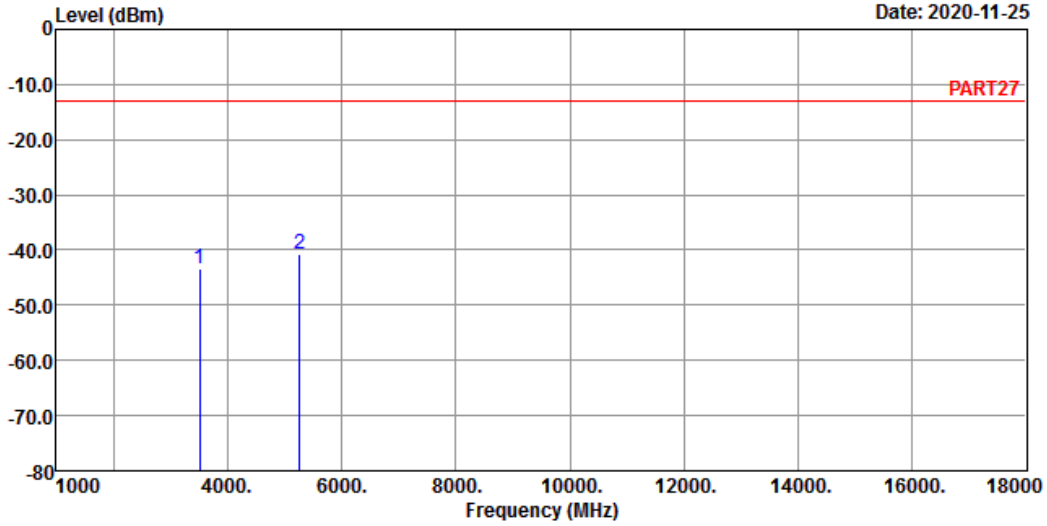


Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 QPSK_1.4M Link_H-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3508.60	-35.12	-27.67	-13.00	-7.45	-22.12	Peak
2	5262.90	-38.45	-35.93	-13.00	-2.52	-25.45	Peak
3	7017.20	-41.86	-45.05	-13.00	3.19	-28.86	Peak

Data: 4

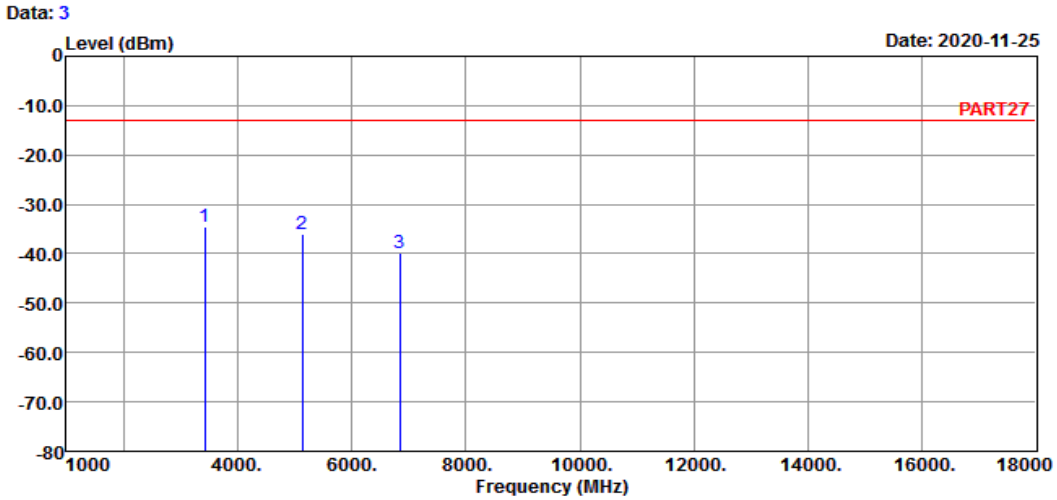


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 QPSK_1.4M Link_H-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3508.60	-43.35	-35.90	-13.00	-7.45	-30.35	Peak
2 pp	5262.90	-40.78	-38.26	-13.00	-2.52	-27.78	Peak

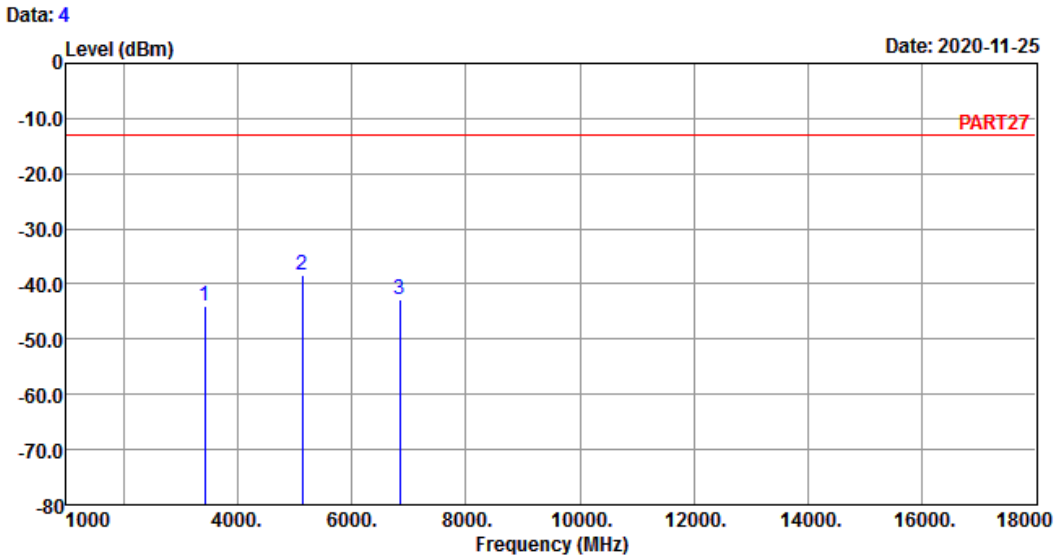
Channel Bandwidth: 5 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 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	3425.00	-34.45	-26.11	-13.00	-8.34	-21.45	Peak
2	5137.50	-36.04	-34.30	-13.00	-1.74	-23.04	Peak
3	6850.00	-39.83	-42.14	-13.00	2.31	-26.83	Peak

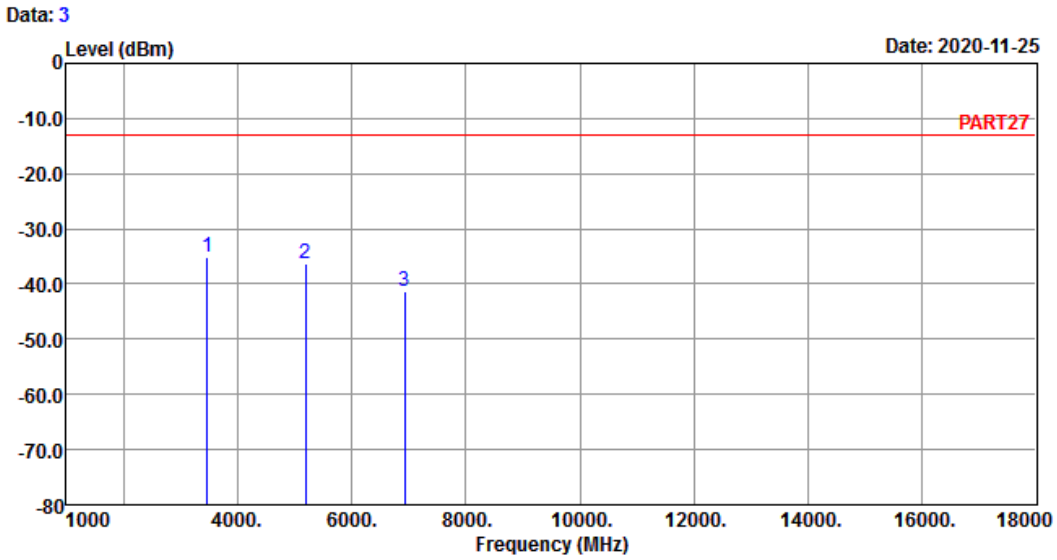


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 QPSK_5M Link_L-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3425.00	-43.97	-35.63	-13.00	-8.34	-30.97	Peak
2 pp	5137.50	-38.24	-36.50	-13.00	-1.74	-25.24	Peak
3	6850.00	-42.79	-45.10	-13.00	2.31	-29.79	Peak

Middle Channel

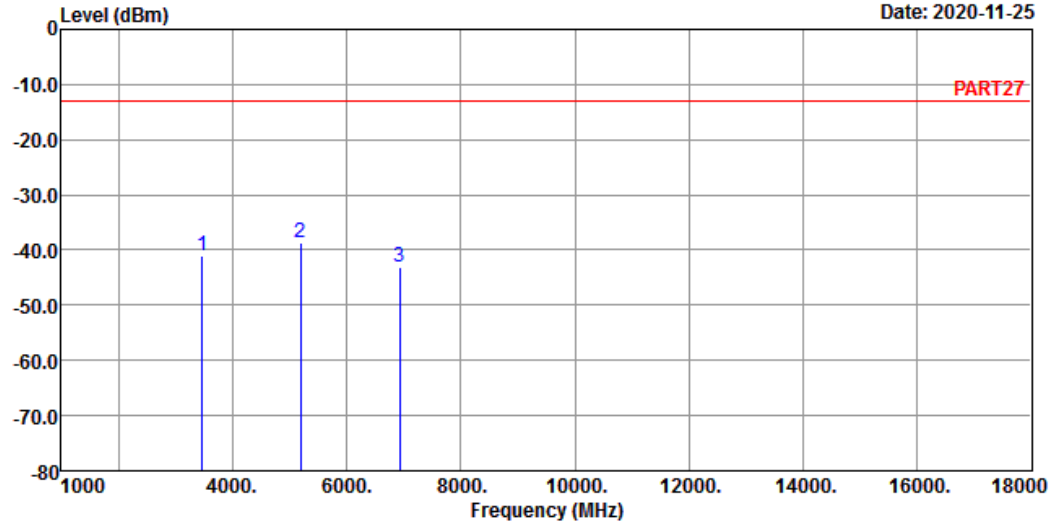
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 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	3465.00	-35.18	-27.30	-13.00	-7.88	-22.18	Peak
2	5197.50	-36.33	-34.26	-13.00	-2.07	-23.33	Peak
3	6930.00	-41.43	-44.12	-13.00	2.69	-28.43	Peak

Data: 4

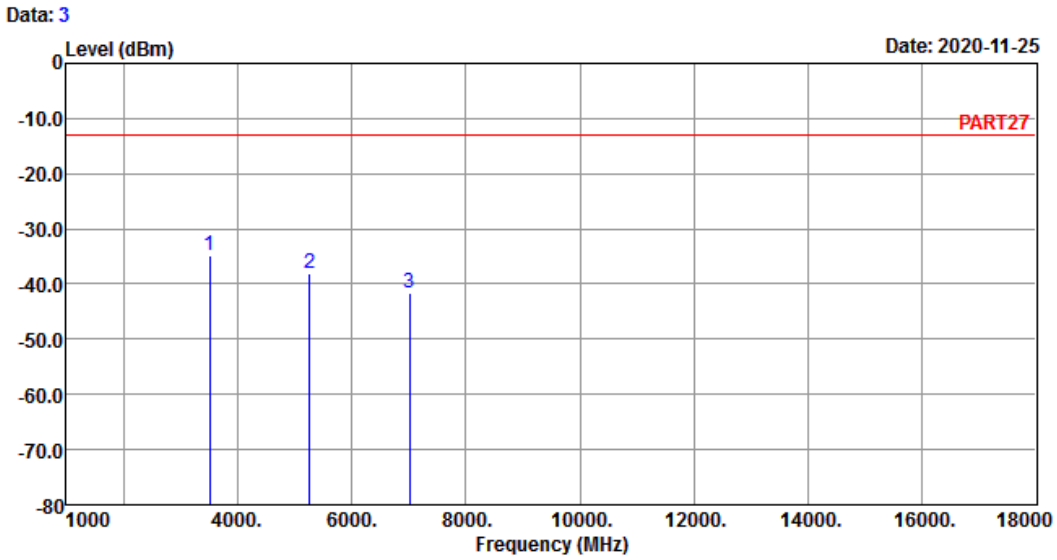


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 QPSK_5M Link_M-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3465.00	-40.95	-33.07	-13.00	-7.88	-27.95	Peak
2 pp	5197.50	-38.54	-36.47	-13.00	-2.07	-25.54	Peak
3	6930.00	-43.04	-45.73	-13.00	2.69	-30.04	Peak

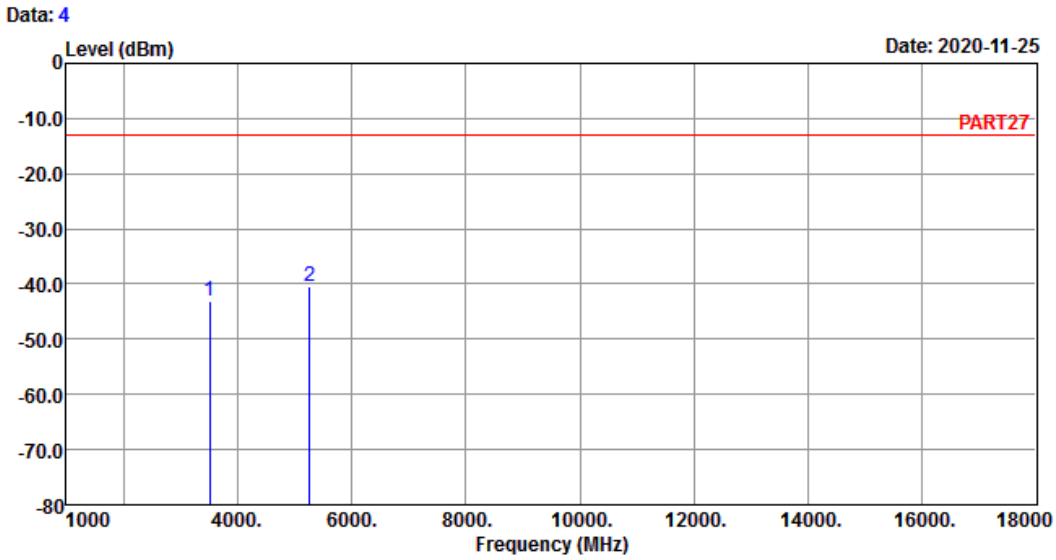
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 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	3505.00	-34.88	-27.43	-13.00	-7.45	-21.88	Peak
2	5257.50	-38.12	-35.60	-13.00	-2.52	-25.12	Peak
3	7010.00	-41.65	-44.84	-13.00	3.19	-28.65	Peak

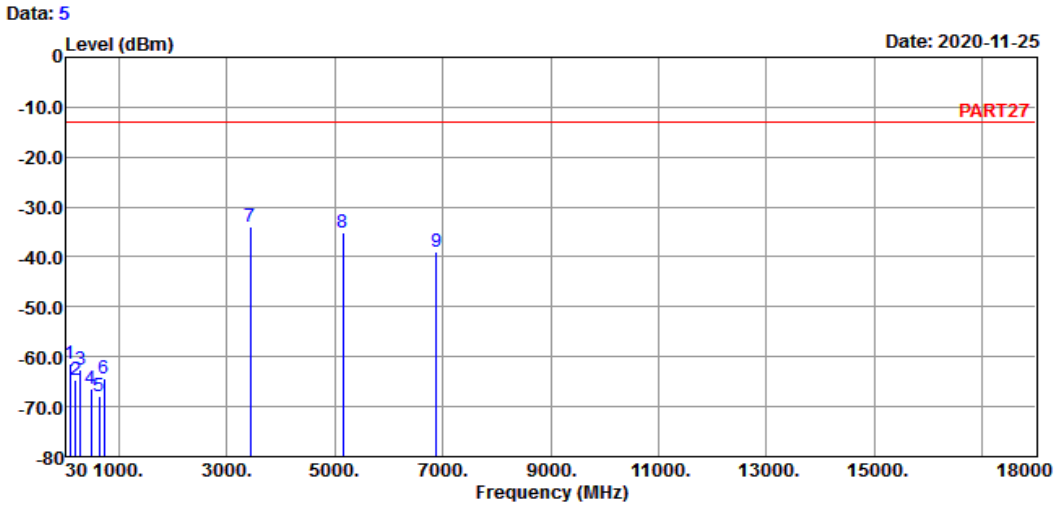


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 QPSK_5M Link_H-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3505.00	-43.13	-35.68	-13.00	-7.45	-30.13	Peak
2 pp	5257.50	-40.56	-38.04	-13.00	-2.52	-27.56	Peak

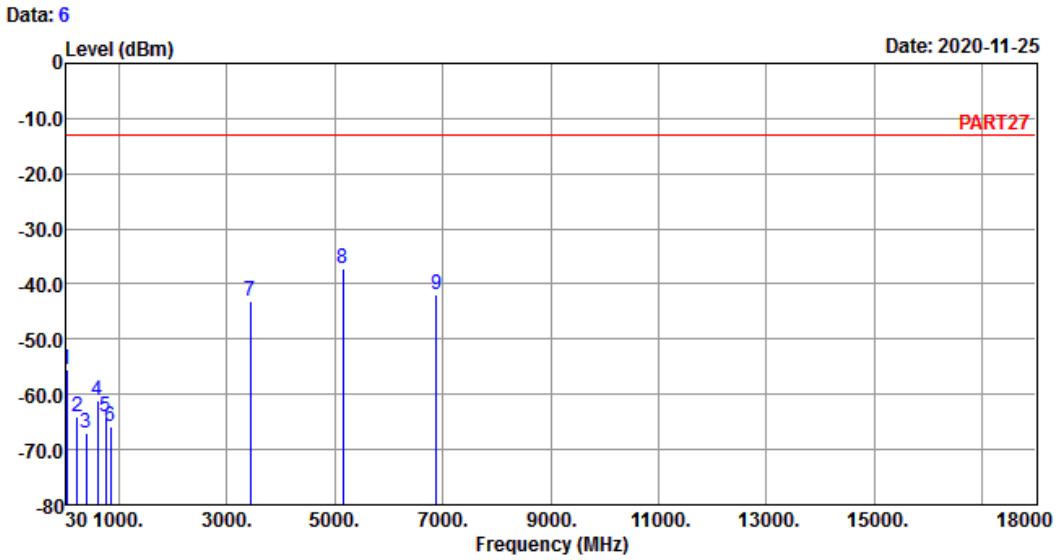
Channel Bandwidth: 20 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 QPSK_20M Link_L-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	88.20	-61.51	-50.45	-13.00	-11.06	-48.51	Peak
2	201.69	-64.65	-56.71	-13.00	-7.94	-51.65	Peak
3	293.84	-62.60	-55.71	-13.00	-6.89	-49.60	Peak
4	492.69	-66.39	-61.63	-13.00	-4.76	-53.39	Peak
5	639.16	-67.91	-67.05	-13.00	-0.86	-54.91	Peak
6	722.58	-64.35	-64.69	-13.00	0.34	-51.35	Peak
7 pp	3440.00	-33.91	-25.69	-13.00	-8.22	-20.91	Peak
8	5160.00	-35.27	-33.36	-13.00	-1.91	-22.27	Peak
9	6880.00	-39.04	-41.52	-13.00	2.48	-26.04	Peak

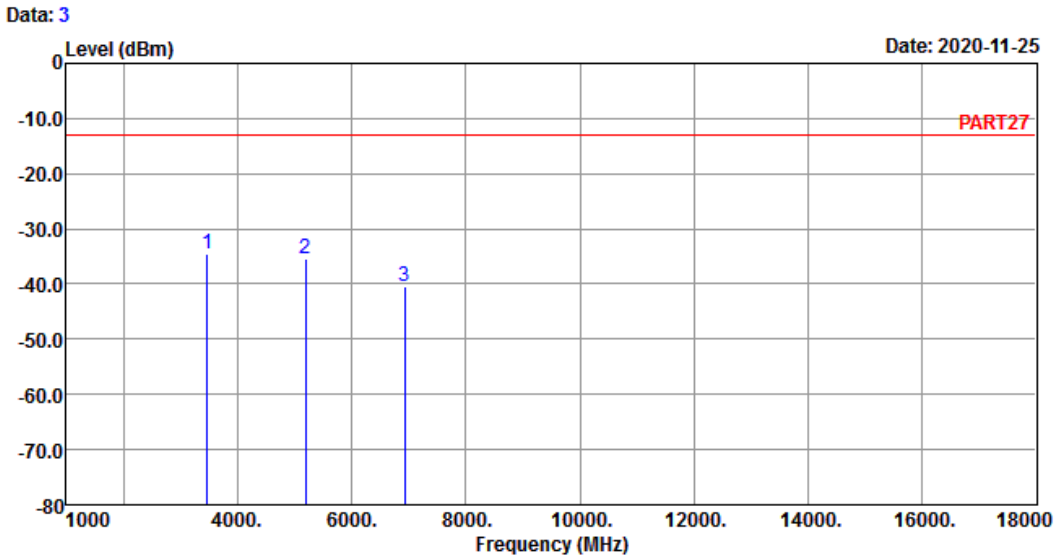


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 QPSK_20M Link_L-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	34.85	-55.40	-53.33	-13.00	-2.07	-42.40	Peak
2	226.91	-64.20	-57.27	-13.00	-6.93	-51.20	Peak
3	396.66	-67.10	-61.13	-13.00	-5.97	-54.10	Peak
4	609.09	-61.06	-60.28	-13.00	-0.78	-48.06	Peak
5	750.71	-64.19	-65.07	-13.00	0.88	-51.19	Peak
6	844.80	-65.84	-66.18	-13.00	0.34	-52.84	Peak
7	3440.00	-43.09	-34.87	-13.00	-8.22	-30.09	Peak
8 pp	5160.00	-37.34	-35.43	-13.00	-1.91	-24.34	Peak
9	6880.00	-42.06	-44.54	-13.00	2.48	-29.06	Peak

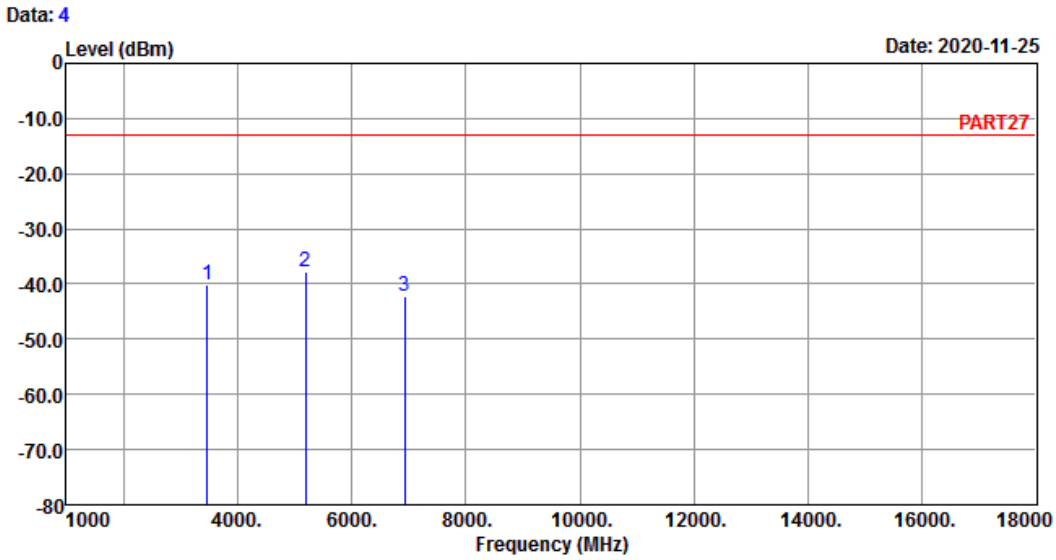
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 QPSK_20M 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	3465.00	-34.39	-26.51	-13.00	-7.88	-21.39	Peak
2	5197.50	-35.41	-33.34	-13.00	-2.07	-22.41	Peak
3	6930.00	-40.51	-43.20	-13.00	2.69	-27.51	Peak

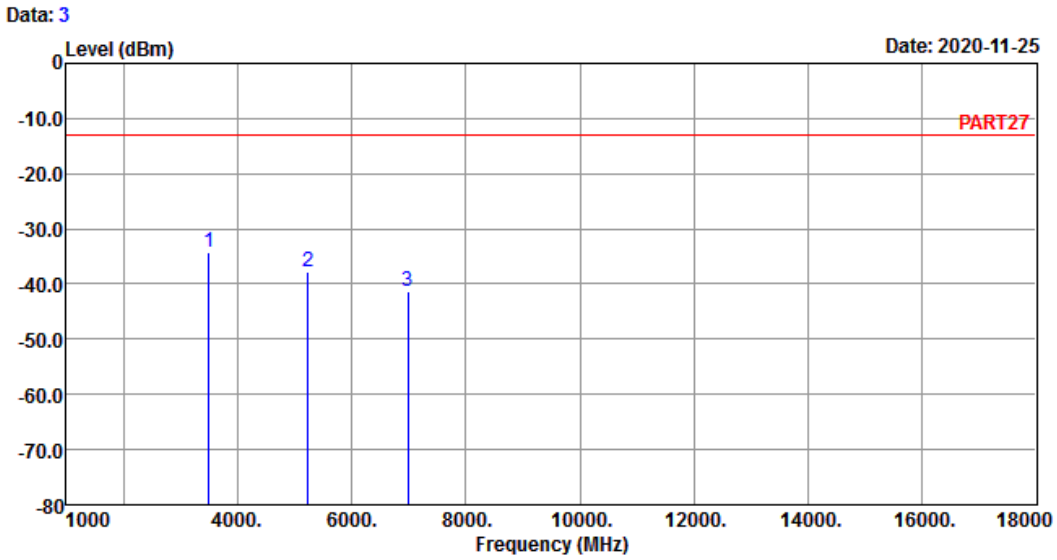


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 QPSK_20M Link_M-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3465.00	-40.11	-32.23	-13.00	-7.88	-27.11	Peak
2 pp	5197.50	-37.79	-35.72	-13.00	-2.07	-24.79	Peak
3	6930.00	-42.30	-44.99	-13.00	2.69	-29.30	Peak

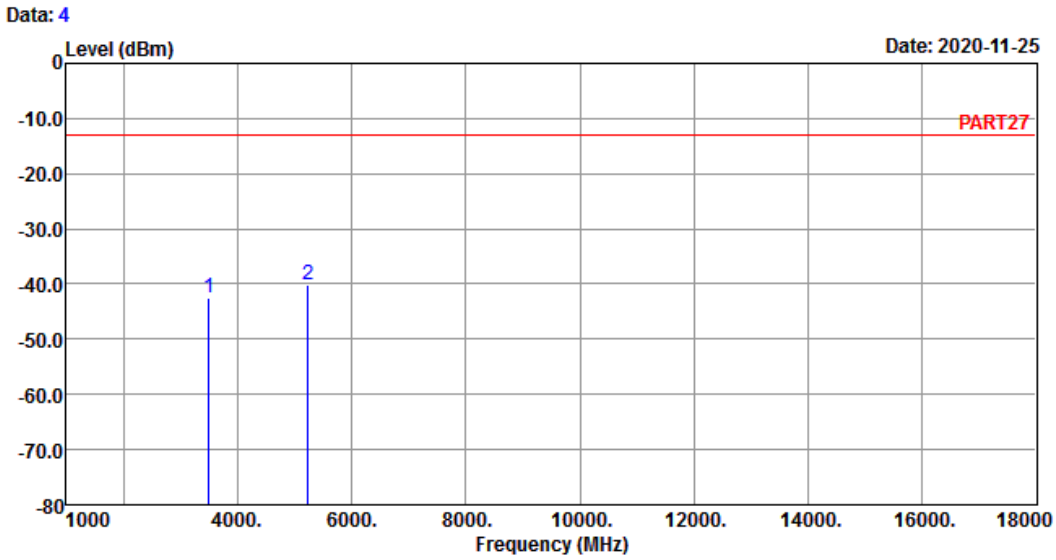
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 4 QPSK_20M 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	3490.00	-34.24	-26.59	-13.00	-7.65	-21.24	Peak
2	5235.00	-37.64	-35.23	-13.00	-2.41	-24.64	Peak
3	6980.00	-41.21	-44.27	-13.00	3.06	-28.21	Peak

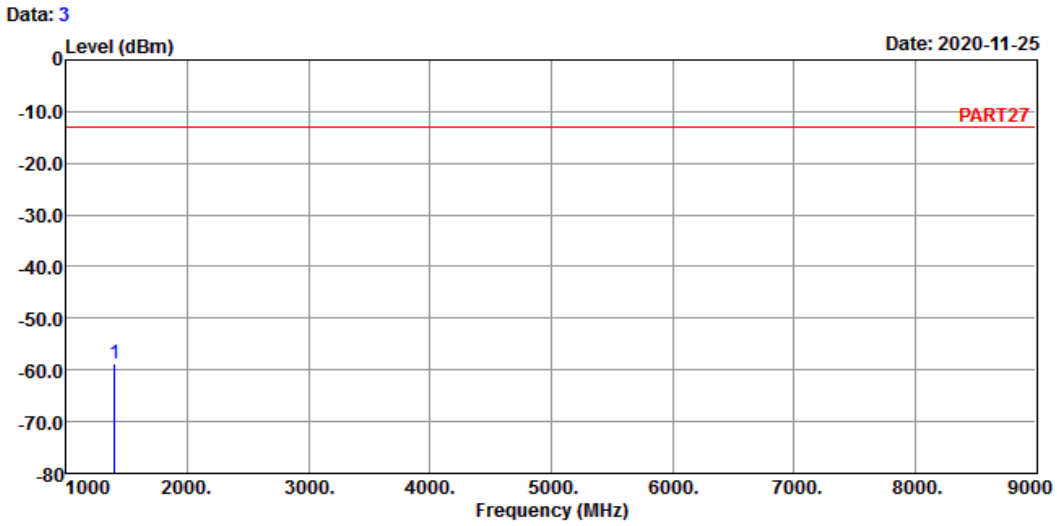


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 4 QPSK_20M Link_H-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3490.00	-42.52	-34.87	-13.00	-7.65	-29.52	Peak
2 pp	5235.00	-40.07	-37.66	-13.00	-2.41	-27.07	Peak

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

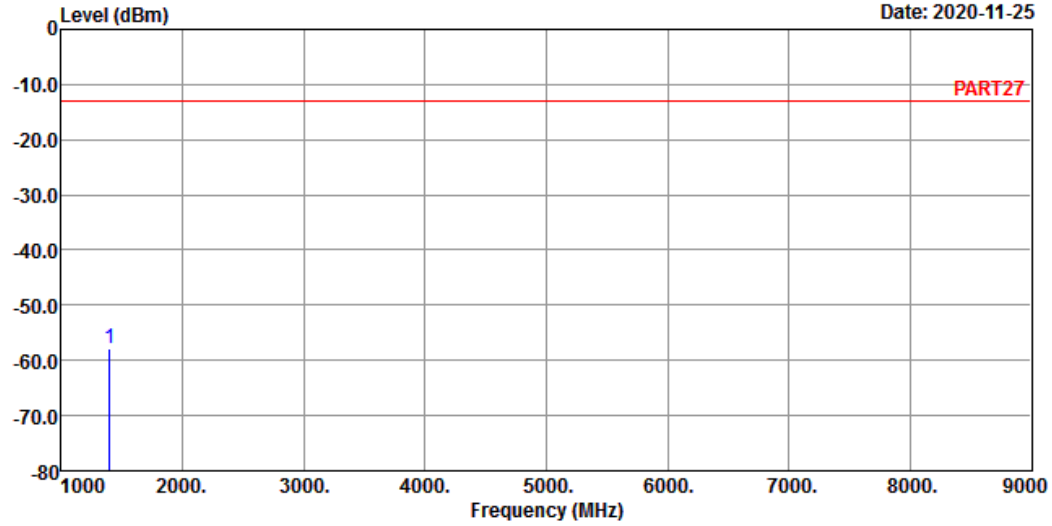
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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 Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1399.40	-58.65	-46.80	-13.00	-11.85	-45.65	Peak

Data: 4

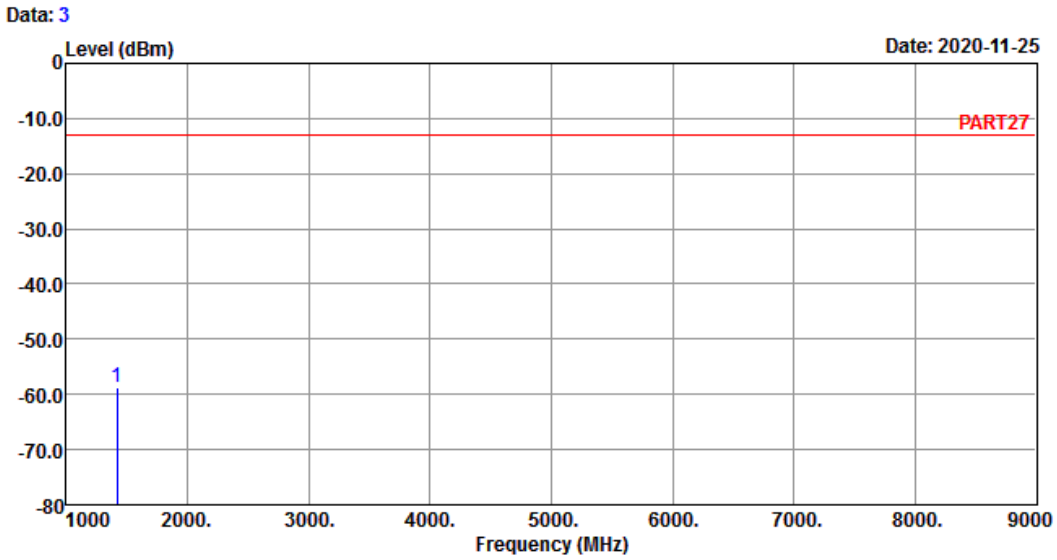


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 12 QPSK_1.4M Link_L-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1399.40	-57.73	-45.88	-13.00	-11.85	-44.73	Peak

Middle Channel

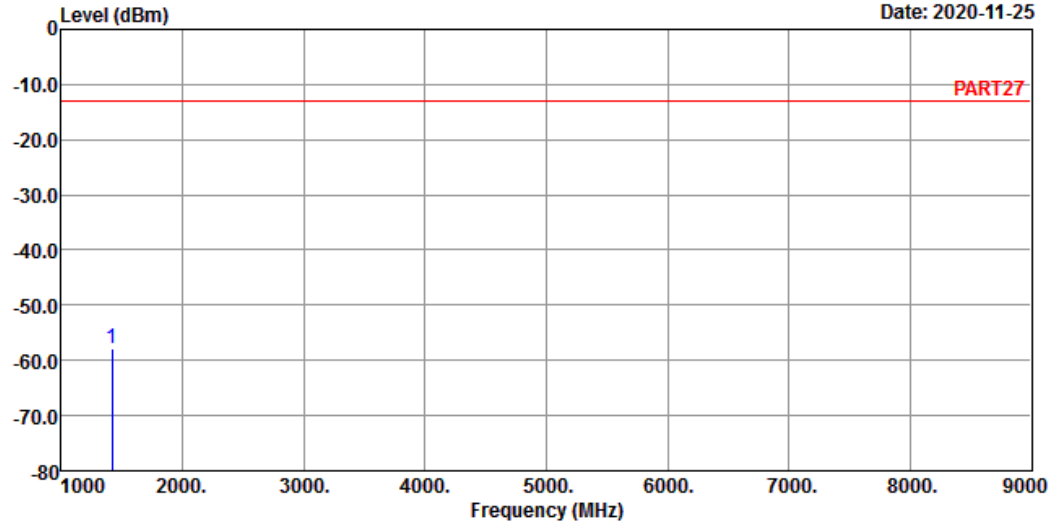
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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 pp	1415.00	-58.64	-46.56	-13.00	-12.08	-45.64	Peak

Data: 4

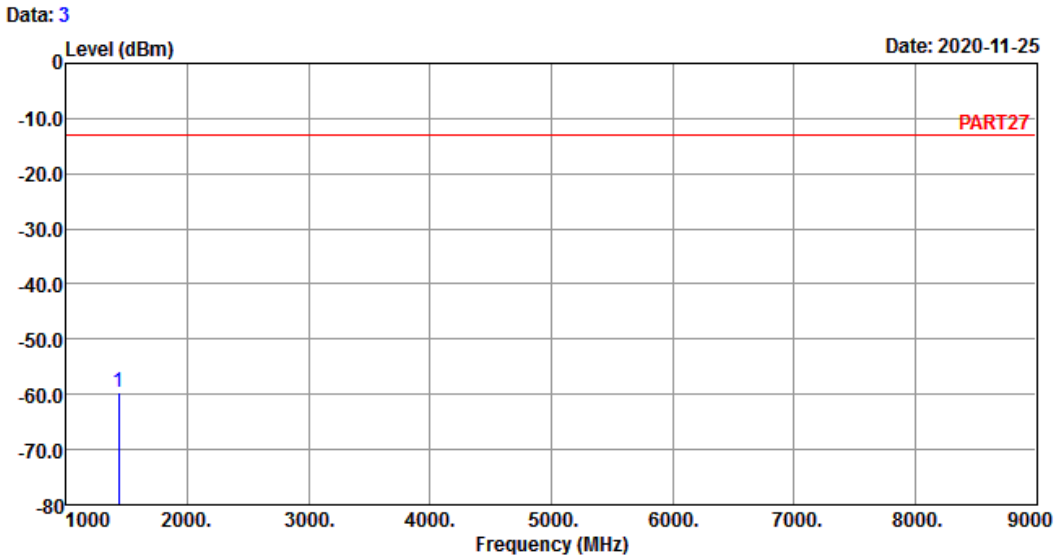


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 12 QPSK_1.4M Link_M-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1415.00	-57.95	-45.87	-13.00	-12.08	-44.95	Peak

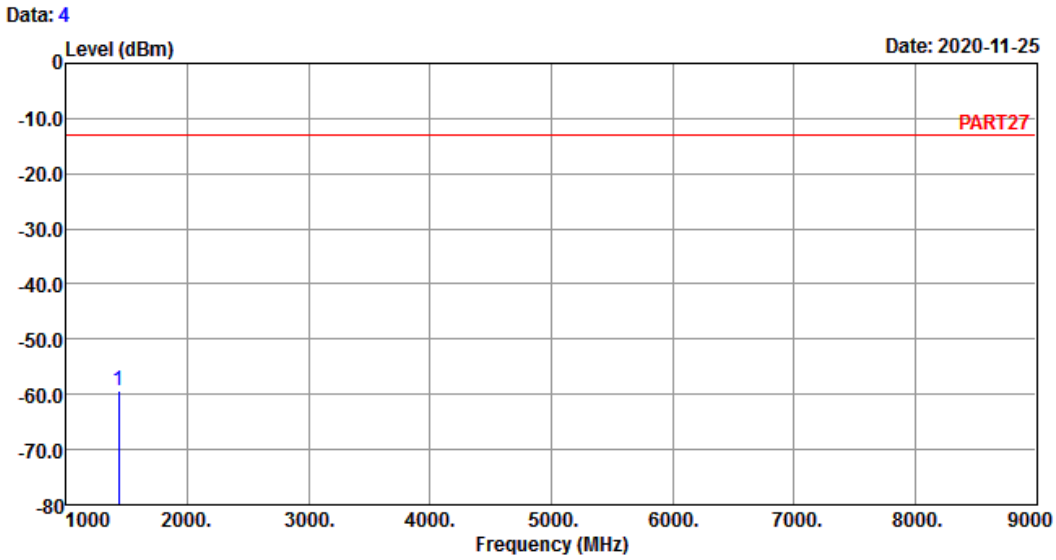
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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	-59.74	-47.43	-13.00	-12.31	-46.74	Peak

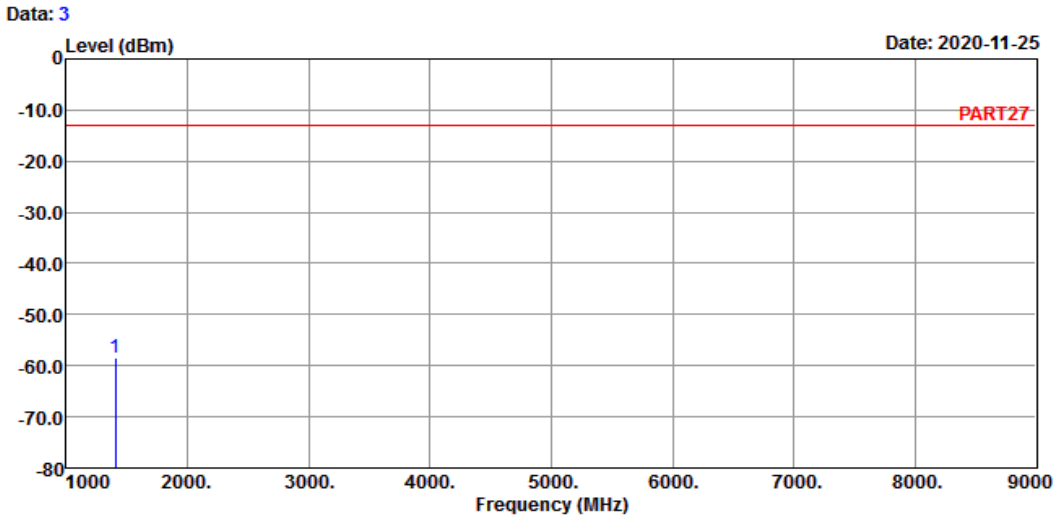


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 12 QPSK_1.4M Link_H-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1430.60	-59.34	-47.03	-13.00	-12.31	-46.34	Peak

Channel Bandwidth: 5 MHz / QPSK
Low Channel

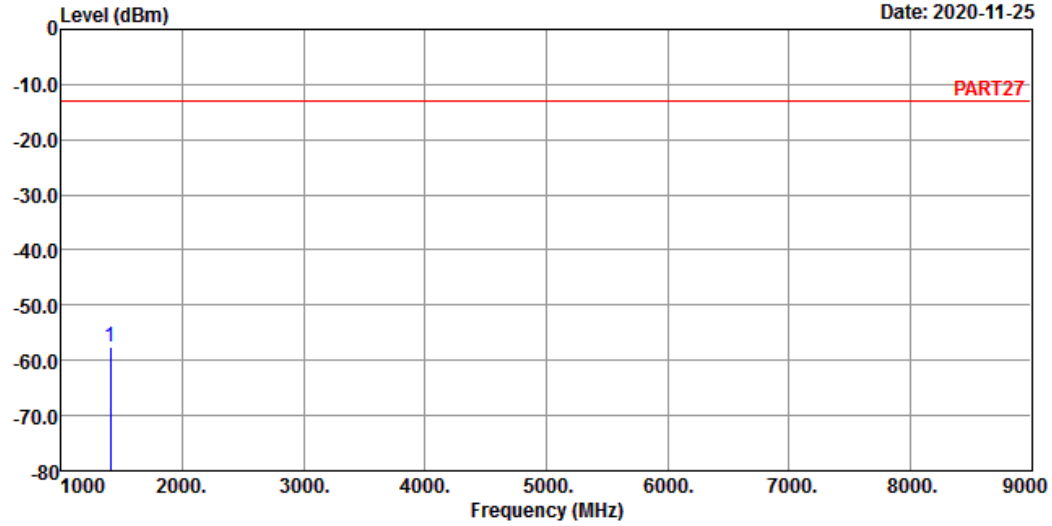
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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 Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1403.00	-58.34	-46.43	-13.00	-11.91	-45.34	Peak

Data: 4

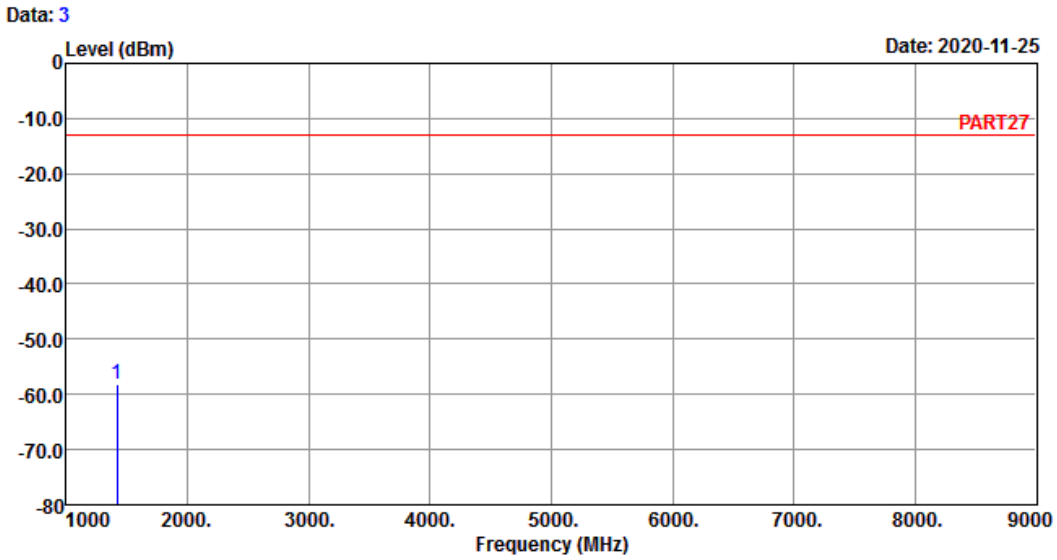


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 12 QPSK_5M Link_L-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1403.00	-57.55	-45.64	-13.00	-11.91	-44.55	Peak

Middle Channel

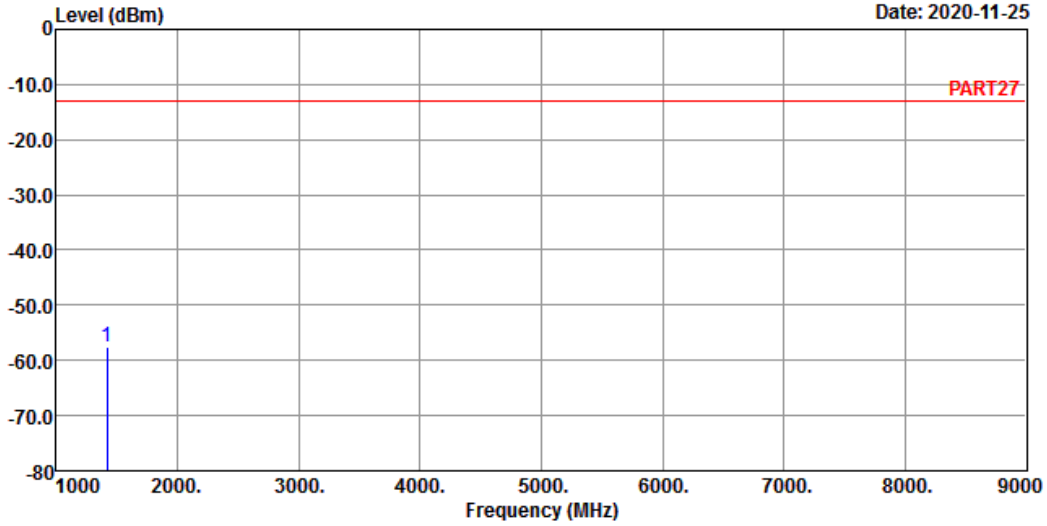
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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	-58.21	-46.13	-13.00	-12.08	-45.21	Peak

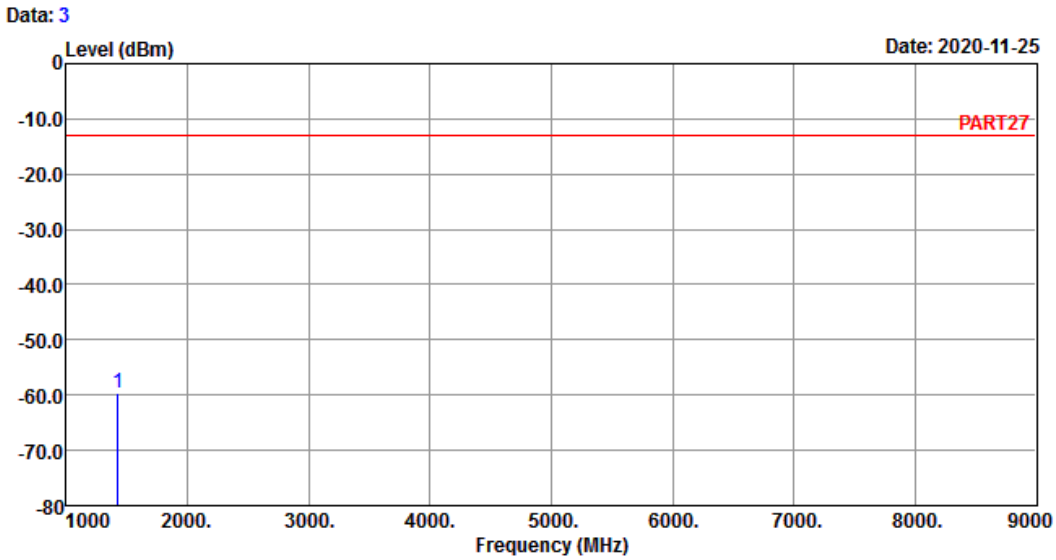
Data: 4



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	-57.63	-45.55	-13.00	-12.08	-44.63	Peak

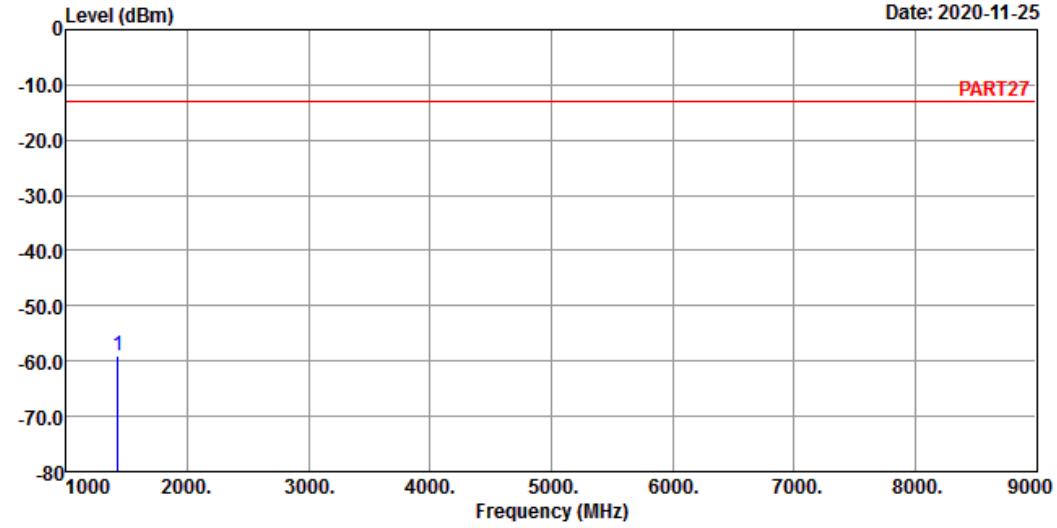
High Channel



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	-59.65	-47.40	-13.00	-12.25	-46.65	Peak

Data: 4

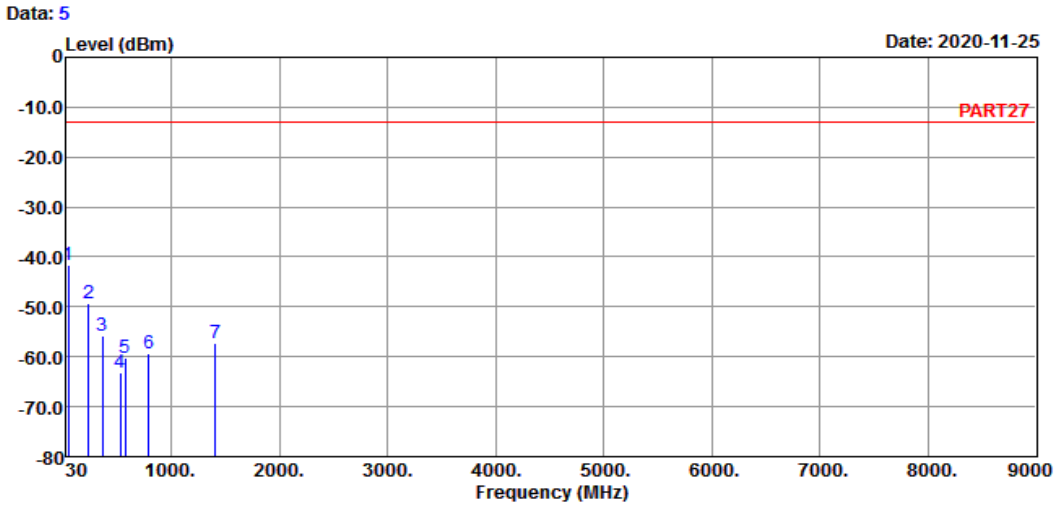


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 12 QPSK_5M Link_H-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1427.00	-59.01	-46.76	-13.00	-12.25	-46.01	Peak

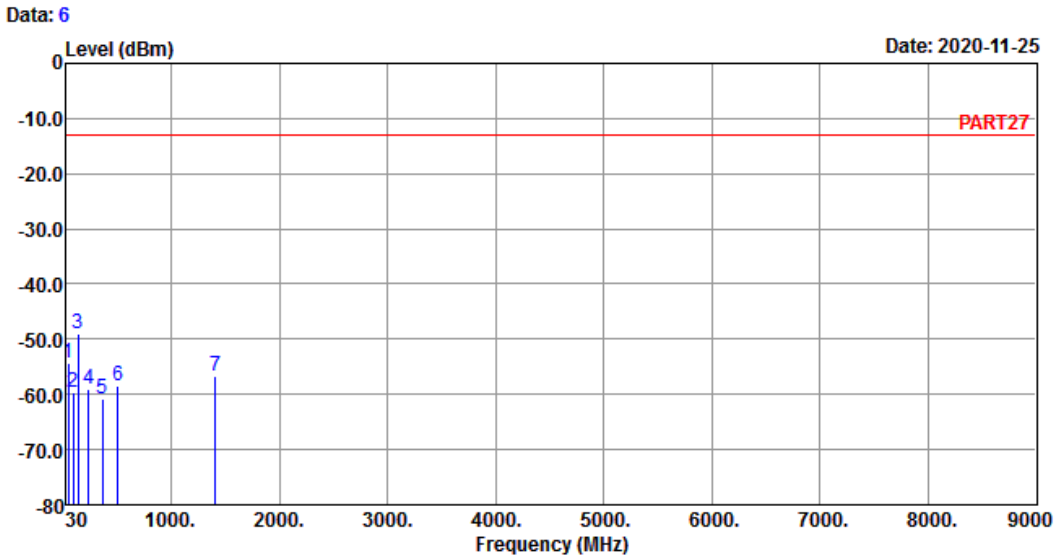
Channel Bandwidth: 10 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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	43.58	-41.55	-40.08	-13.00	-1.47	-28.55	Peak
2	238.55	-49.15	-42.69	-13.00	-6.46	-36.15	Peak
3	359.80	-55.88	-49.70	-13.00	-6.18	-42.88	Peak
4	525.67	-63.22	-59.51	-13.00	-3.71	-50.22	Peak
5	576.11	-60.19	-58.43	-13.00	-1.76	-47.19	Peak
6	792.42	-59.36	-60.12	-13.00	0.76	-46.36	Peak
7	1408.00	-57.41	-45.45	-13.00	-11.96	-44.41	Peak



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 Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	49.40	-54.21	-49.70	-13.00	-4.51	-41.21	Peak
2	92.08	-59.49	-48.49	-13.00	-11.00	-46.49	Peak
3 pp	138.64	-49.12	-40.46	-13.00	-8.66	-36.12	Peak
4	233.70	-58.96	-52.30	-13.00	-6.66	-45.96	Peak
5	359.80	-60.78	-54.60	-13.00	-6.18	-47.78	Peak
6	504.33	-58.54	-54.07	-13.00	-4.47	-45.54	Peak
7	1408.00	-56.56	-44.60	-13.00	-11.96	-43.56	Peak

Middle Channel

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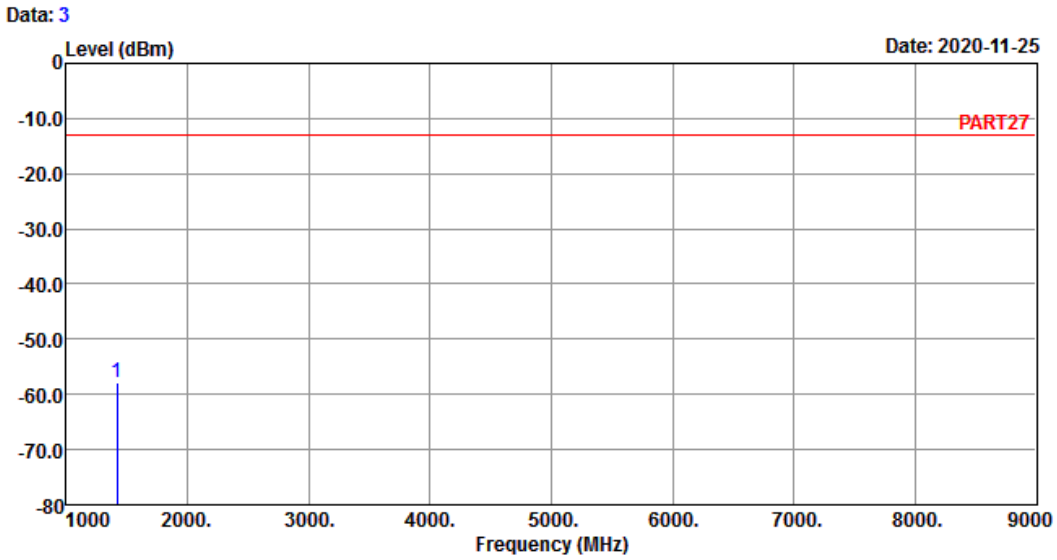
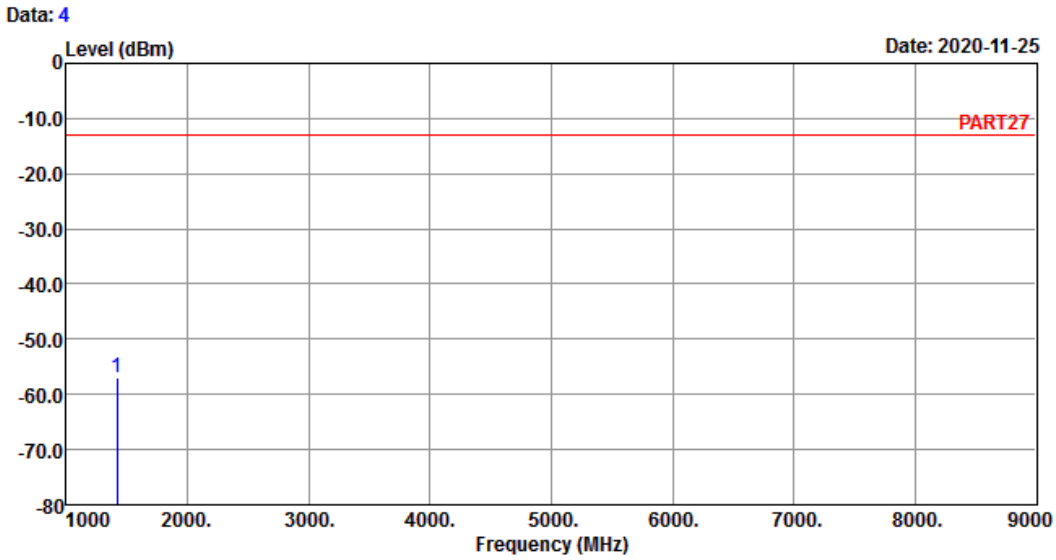


Site : 966 Chamber 5
Condition: PART27 HORIZONTAL
Remak : LTE Band 12 QPSK_10M Link_M-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1415.00	-57.73	-45.65	-13.00	-12.08	-44.73	Peak

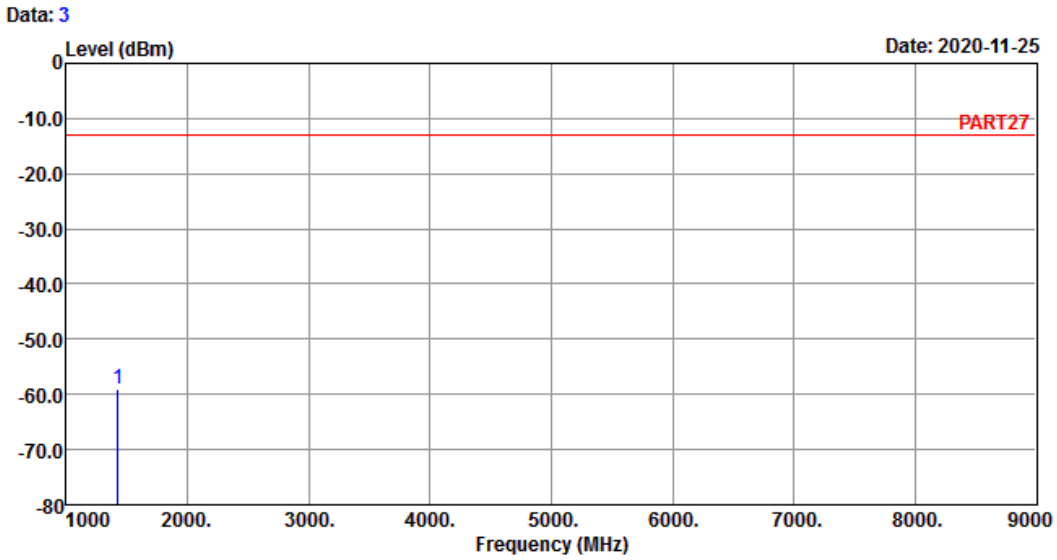


Site : 966 Chamber 5
Condition: PART27 VERTICAL
Remak : LTE Band 12 QPSK_10M Link_M-CH
Tested by: tim-chen

	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1415.00	-56.91	-44.83	-13.00	-12.08	-43.91	Peak

High Channel

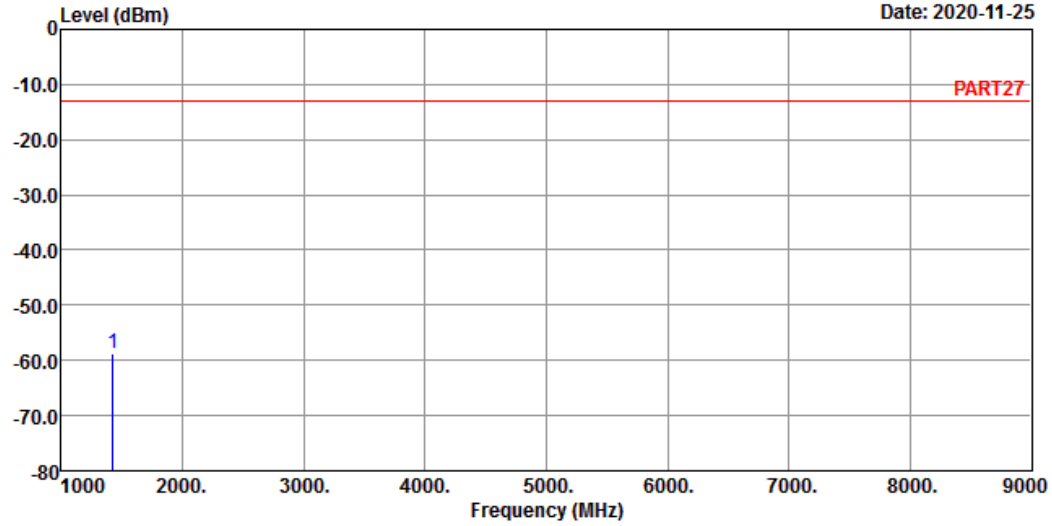
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



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	-59.06	-46.87	-13.00	-12.19	-46.06	Peak

Data: 4



Site : 966 Chamber 5
Condition: PART27 VERTICAL
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	-58.78	-46.59	-13.00	-12.19	-45.78	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

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

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

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

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

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