

Partial FCC Test Report

(PART 24)

Report No.: RFBHPY-WTW-P20110791-1

FCC ID: A4C01007A

Test Model: LE910C1-NS

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



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Release Control Record

Issue No.	Description	Date Issued
RFBHPY-WTW-P20110791-1	Original Release	Dec. 07, 2020

2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Effective Isotropic Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to note
24.232(d)	Peak to Average Ratio	N/A	Refer to note
2.1055 24.235	Frequency Stability	N/A	Refer to note
2.1049	Occupied Bandwidth	N/A	Refer to note
24.238	Band Edge Measurements	N/A	Refer to note
2.1051 24.238	Conducted Spurious Emissions	N/A	Refer to note
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -20.4 dB at 5647.50 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.: FG740703P24 and FG740703P24 -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) (\pm)
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 2 (Channel Bandwidth: 1.4 MHz)	1850.7 ~ 1909.3 MHz
	LTE Band 2 (Channel Bandwidth: 3 MHz)	1851.5 ~ 1908.5 MHz
	LTE Band 2 (Channel Bandwidth: 5 MHz)	1852.5 ~ 1907.5 MHz
	LTE Band 2 (Channel Bandwidth: 10 MHz)	1855.0 ~ 1905.0 MHz
	LTE Band 2 (Channel Bandwidth: 15 MHz)	1857.5 ~ 1902.5 MHz
	LTE Band 2 (Channel Bandwidth: 20 MHz)	1860.0 ~ 1900.0 MHz
	LTE Band 25 (Channel Bandwidth: 1.4 MHz)	1850.7 ~ 1914.3 MHz
	LTE Band 25 (Channel Bandwidth: 3 MHz)	1851.5 ~ 1913.5 MHz
	LTE Band 25 (Channel Bandwidth: 5 MHz)	1852.5 ~ 1912.5 MHz
	LTE Band 25 (Channel Bandwidth: 10 MHz)	1855.0 ~ 1910.0 MHz
	LTE Band 25 (Channel Bandwidth: 15 MHz)	1857.5 ~ 1907.5 MHz
	LTE Band 25 (Channel Bandwidth: 20 MHz)	1860.0 ~ 1905.0 MHz
Max. EIRP Power	LTE Band 2 (Channel Bandwidth: 1.4 MHz)	161.44 mW
	LTE Band 2 (Channel Bandwidth: 3 MHz)	163.68 mW
	LTE Band 2 (Channel Bandwidth: 5 MHz)	165.20 mW
	LTE Band 2 (Channel Bandwidth: 10 MHz)	167.49 mW
	LTE Band 2 (Channel Bandwidth: 15 MHz)	170.61 mW
	LTE Band 2 (Channel Bandwidth: 20 MHz)	173.38 mW
	LTE Band 25 (Channel Bandwidth: 1.4 MHz)	135.52 mW
	LTE Band 25 (Channel Bandwidth: 3 MHz)	138.04 mW
	LTE Band 25 (Channel Bandwidth: 5 MHz)	139.00 mW
	LTE Band 25 (Channel Bandwidth: 10 MHz)	139.96 mW
	LTE Band 25 (Channel Bandwidth: 15 MHz)	141.25 mW
	LTE Band 25 (Channel Bandwidth: 20 MHz)	142.89 mW
Antenna Type	Dipole Antenna with 4.21 dBi gain	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

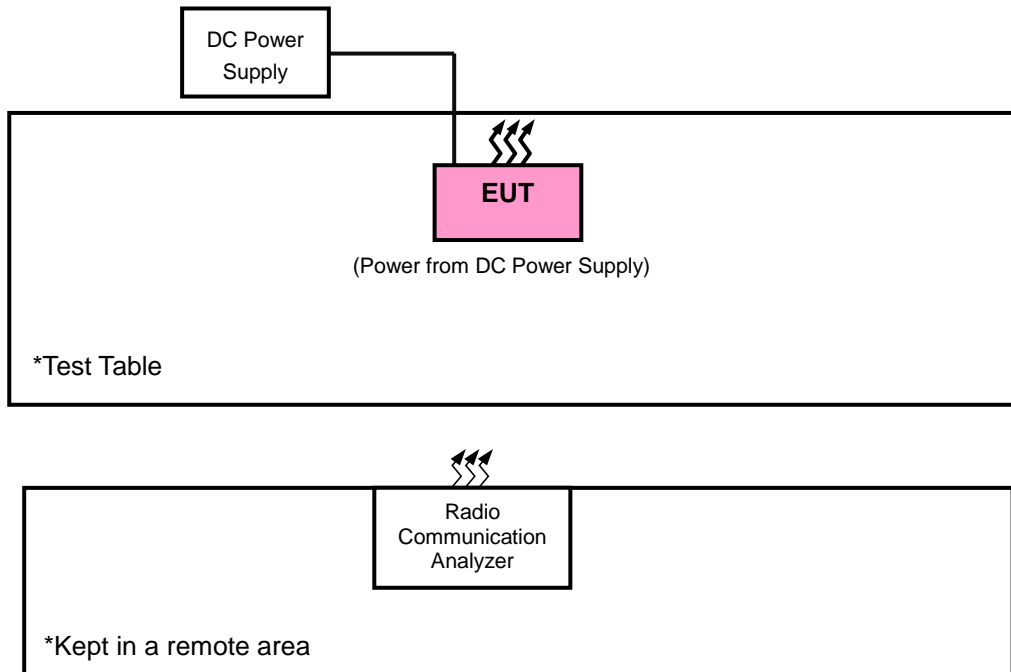
Note:

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.: FG740703P24 and FG740703P24 -1(LTE Module, Brand: Telit, Model: LE910C1-NS, FCC ID: R17LE910C1NS).
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.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	EIRP	Radiated Emission
LTE Band 2	Z-plane	Z-plane
LTE Band 25	Z-plane	Z-plane

LTE Band 2

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		18615 to 19185	18615, 18900, 19185	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		18650 to 19150	18650, 18900, 19150	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		18675 to 19125	18675, 18900, 19125	15 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	20 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
-	Radiated Emission	18607 to 19193	18607, 18900, 19193	1.4 MHz	QPSK	1 RB / 0 RB Offset
		18625 to 19175	18625, 18900, 19175	5 MHz	QPSK	1 RB / 0 RB Offset
		18700 to 19100	18700, 18900, 19100	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. Therefore, only EIRP had been tested under QPSK, 16QAM mode, the other items were performed under QPSK mode only.
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 25

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	EIRP	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26055 to 26675	26055, 26365, 26675	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26090 to 26640	26090, 26365, 26640	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26115 to 26615	26115, 26365, 26615	15 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	20 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
-	Radiated Emission	26047 to 26683	26047, 26365, 26683	1.4 MHz	QPSK	1 RB / 0 RB Offset
		26065 to 26665	26065, 26365, 26665	5 MHz	QPSK	1 RB / 0 RB Offset
		26140 to 26590	26140, 26365, 26590	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. Therefore, only EIRP had been tested under QPSK, 16QAM mode, the other items were performed under QPSK mode only.
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
EIRP	26 deg. C, 58 % RH	12 Vdc	Cyril Chen
Radiated Emission	25 deg. C, 65 % RH	12 Vdc	Cyril 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 24

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

Mobile / Portable station are limited to 2 watts e.i.r.p.

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 $\geq 3 \times$ 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.

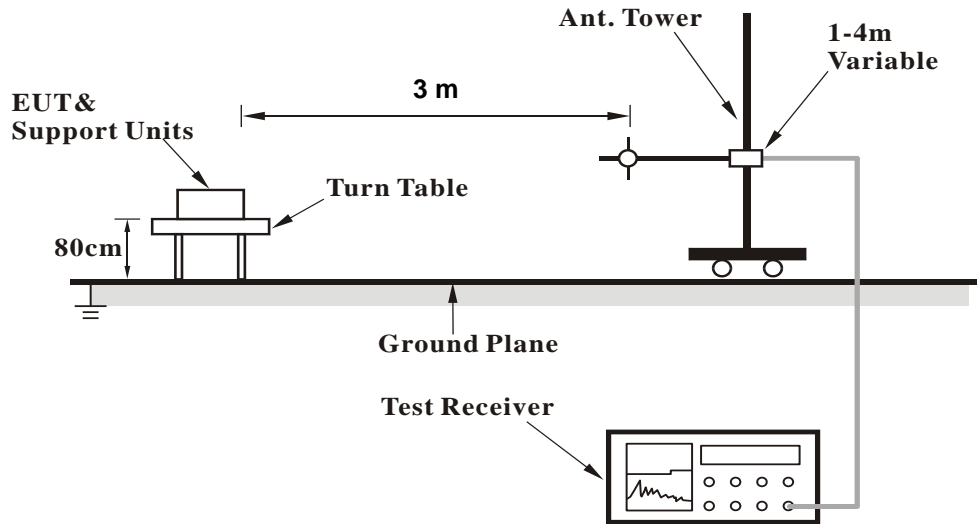
Conducted Power Measurement:

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

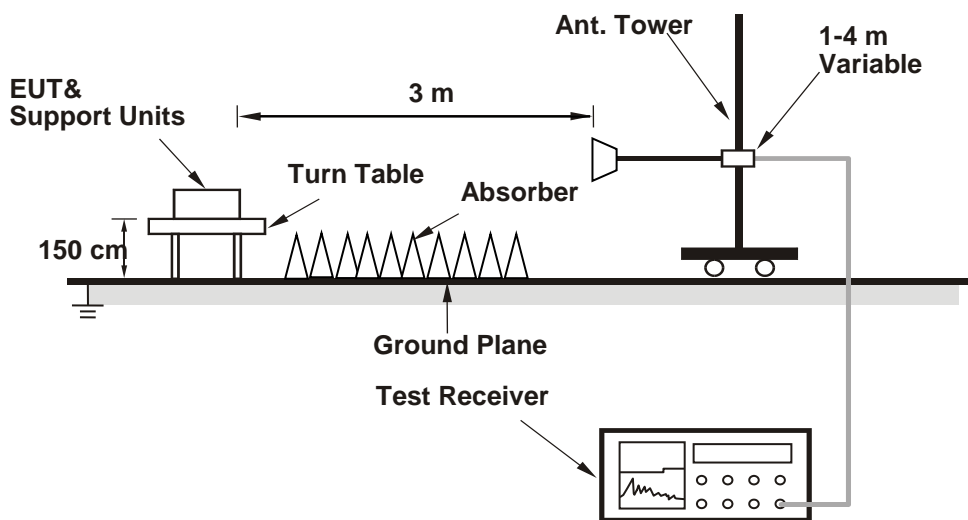
4.1.3 Test Setup

EIRP / ERP Measurement:

<Radiated Emission below or equal 1 GHz>

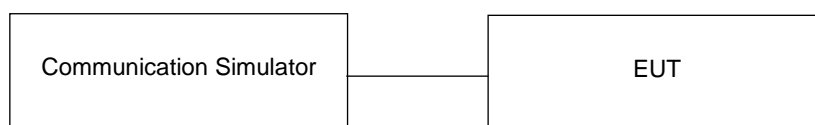


<Radiated Emission above 1 GHz>



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 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)
				18700	18900	19100						18675	18900	19125	
				Channel	1860.0	1880.0						1900.0	Channel	1857.5	
		Frequency (MHz)									Frequency (MHz)				
20M	QPSK	1	0	23.61	23.13	22.76	0	15M	QPSK	1	0	23.18	23.18	23.12	0
		1	49	23.76	23.25	22.18	0			1	37	23.21	23.21	23.24	0
		1	99	23.14	22.76	22.56	0			1	74	22.74	22.74	22.65	0
		50	0	22.36	21.89	21.60	1			36	0	22.02	22.02	21.62	1
		50	24	22.40	21.83	21.62	1			36	18	21.93	21.93	21.52	1
		50	49	22.35	21.89	21.65	1			36	37	21.94	21.94	21.64	1
		100	0	22.32	21.74	21.56	1			75	0	22.00	22.00	21.59	1
	16QAM	1	0	22.43	22.08	21.21	1		16QAM	1	0	23.02	22.03	22.02	1
		1	49	22.34	22.24	21.57	1			1	37	23.15	22.34	22.57	1
		1	99	21.58	21.76	20.84	1			1	74	22.54	21.71	21.82	1
		27	0	21.45	20.62	20.92	2			27	0	21.67	20.99	20.77	2
		27	12	21.50	20.58	20.56	2			27	12	21.56	21.02	20.78	2
		27	23	21.18	20.65	20.22	2			27	23	21.32	20.94	20.68	2
		27	23	21.18	20.65	20.22	2			27	23	21.32	20.94	20.68	2
10M	QPSK	1	0	24.01	23.15	22.81	0	5M	QPSK	1	0	23.65	22.74	22.78	0
		1	24	24.12	23.17	23.08	0			1	12	23.78	22.81	22.64	0
		1	49	23.56	23.18	22.79	0			1	24	23.64	22.84	22.75	0
		25	0	22.52	22.09	21.52	1			12	0	22.85	22.01	21.62	1
		25	12	22.52	22.04	21.45	1			12	6	22.76	22.04	21.62	1
		25	24	22.59	22.08	21.48	1			12	11	22.90	22.04	21.43	1
		50	0	22.58	22.04	21.45	1			25	0	22.82	22.08	21.56	1
	16QAM	1	0	22.94	22.14	21.65	1		16QAM	1	0	22.41	21.76	21.24	1
		1	24	23.56	22.57	22.41	1			1	12	22.55	21.77	21.27	1
		1	49	22.78	21.86	21.62	1			1	24	22.40	21.82	21.27	1
		27	0	21.76	21.06	20.55	2			12	0	21.79	21.05	20.59	2
		27	12	21.44	21.01	20.54	2			12	6	21.77	21.10	20.59	2
		27	12	21.44	21.01	20.54	2			12	11	21.74	21.08	20.61	2
		27	23	21.40	21.02	20.58	2			25	0	21.77	21.12	20.57	2
3M	QPSK	1	0	24.09	22.98	22.71	0	1.4M	QPSK	1	0	23.90	22.93	22.57	0
		1	7	24.22	23.07	22.79	0			1	2	23.87	22.95	22.58	0
		1	14	24.02	23.06	22.74	0			1	5	23.87	22.98	22.75	0
		8	0	22.85	22.09	21.72	1			3	0	23.78	23.02	22.59	0
		8	4	22.81	21.97	21.68	1			3	1	23.89	23.13	22.55	0
		8	7	22.87	22.09	21.59	1			3	2	23.83	23.02	22.71	0
		15	0	22.83	22.14	21.63	1			6	0	22.75	22.24	21.84	1
	16QAM	1	0	22.86	21.62	21.68	1		16QAM	1	0	22.81	22.07	21.59	1
		1	7	23.12	21.68	21.61	1			1	2	22.79	22.09	21.60	1
		1	14	23.18	21.66	21.77	1			1	5	22.89	22.08	21.67	1
		8	0	21.34	21.08	20.60	2			3	0	22.86	22.02	21.60	1
		8	4	21.83	21.05	20.52	2			3	1	22.82	21.96	21.59	1
		8	7	21.79	21.08	20.47	2			3	2	22.78	21.94	21.54	1
		15	0	21.71	21.03	20.59	2			6	0	21.72	21.25	20.57	2

LTE Band 25																	
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)		
				26140	26365	26590						26115	26365	26615			
				Channel	26140	26365						26590	Channel	26115		26365	26615
				1860.0	1882.5	1905.0					1857.5	1882.5	1907.5				
20M	QPSK	1	0	23.46	22.87	22.66	0	15M	QPSK	1	0	23.49	23.12	22.08	0		
		1	49	23.58	23.25	22.52	0			1	37	23.47	23.52	22.31	0		
		1	99	22.85	22.54	22.24	0			1	74	23.34	22.66	21.80	0		
		50	0	22.54	22.18	21.39	1			36	0	22.25	21.85	21.07	1		
		50	24	22.30	21.95	20.99	1			36	18	22.44	22.13	21.16	1		
		50	49	22.29	21.70	21.05	1			36	37	22.32	21.83	20.91	1		
		100	0	22.30	21.87	20.92	1			75	0	22.08	22.04	21.11	1		
	16QAM	1	0	21.80	21.24	20.84	1		16QAM	1	0	22.72	23.28	21.30	1		
		1	49	21.69	21.33	21.07	1			1	37	23.36	22.69	21.32	1		
		1	99	21.30	21.05	20.45	1			1	74	22.35	21.68	20.14	1		
		27	0	21.34	20.89	20.21	2			27	0	21.46	21.27	20.01	2		
		27	12	21.03	20.88	20.14	2			27	12	21.12	21.18	20.26	2		
		27	23	21.02	20.72	19.73	2			27	23	20.86	20.54	19.82	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)		
				26090	26365	26640						26065	26365	26665			
				Channel	26090	26365						26640	Channel	26065		26365	26665
				1855.0	1882.5	1910.0					1852.5	1882.5	1912.5				
10M	QPSK	1	0	23.74	23.35	22.14	0	5M	QPSK	1	0	23.43	22.95	22.16	0		
		1	24	23.86	23.28	22.39	0			1	12	23.68	23.06	22.14	0		
		1	49	23.21	23.15	22.18	0			1	24	23.41	22.83	22.11	0		
		25	0	22.36	22.15	21.17	1			12	0	22.28	22.01	21.06	1		
		25	12	22.40	21.84	21.03	1			12	6	22.31	21.83	20.89	1		
		25	24	22.23	21.86	20.99	1			12	11	22.44	21.78	21.18	1		
		50	0	22.39	21.98	20.94	1			25	0	22.21	22.19	21.03	1		
	16QAM	1	0	22.89	22.47	20.83	1		16QAM	1	0	22.47	21.64	21.14	1		
		1	24	23.19	22.66	20.68	1			1	12	22.74	22.17	21.23	1		
		1	49	22.67	22.16	20.46	1			1	24	22.28	21.77	20.96	1		
		27	0	21.31	20.74	20.06	2			12	0	21.34	20.71	19.83	2		
		27	12	21.18	20.88	20.06	2			12	6	21.25	21.17	19.99	2		
		27	23	21.29	20.72	19.96	2			12	11	21.01	20.97	20.11	2		
		27	23	21.29	20.72	19.96	2			25	0	20.91	20.79	20.15	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)		
				26055	26365	26675						26047	26365	26683			
				Channel	26055	26365						26675	Channel	26047		26365	26683
				1851.5	1882.5	1913.5					1850.7	1882.5	1914.3				
3M	QPSK	1	0	23.25	22.95	22.22	0	1.4M	QPSK	1	0	23.47	23.11	22.05	0		
		1	7	23.48	23.10	22.15	0			1	2	23.44	23.07	22.03	0		
		1	14	23.38	22.93	22.10	0			1	5	23.37	22.91	21.94	0		
		8	0	22.22	22.06	20.97	1			3	0	23.18	23.05	22.18	0		
		8	4	22.31	22.00	20.84	1			3	1	23.39	22.90	22.07	0		
		8	7	22.22	22.03	20.72	1			3	2	23.69	23.16	22.02	0		
		15	0	22.29	21.83	20.93	1			6	0	22.13	21.84	20.95	1		
	16QAM	1	0	22.53	21.83	20.44	1		16QAM	1	0	22.58	22.22	21.07	1		
		1	7	22.90	22.30	20.62	1			1	2	22.56	22.24	21.23	1		
		1	14	22.94	22.10	20.83	1			1	5	22.32	22.32	20.87	1		
		8	0	21.25	21.06	20.10	2			3	0	22.47	22.04	20.92	1		
		8	4	21.23	21.21	19.88	2			3	1	22.67	22.16	20.98	1		
		8	7	20.92	21.25	20.04	2			3	2	22.45	22.09	20.97	1		
		15	0	21.23	21.20	20.00	2			6	0	21.49	20.92	19.85	2		

EIRP Power (dBm)

LTE Band 2							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	18607	1850.7	-19.72	36.57	16.85	48.42	H
	18900	1880.0	-20.22	37.22	17.00	50.12	
	19193	1909.3	-20.03	37.18	17.15	51.88	
	18607	1850.7	-15.77	37.65	21.88	154.17	V
	18900	1880.0	-15.53	37.58	22.05	160.32	
	19193	1909.3	-15.40	37.48	22.08	161.44	
Channel Bandwidth: 1.4 MHz / 16QAM							
Z	18607	1850.7	-20.76	36.57	15.81	38.11	H
	18900	1880.0	-21.25	37.22	15.97	39.54	
	19193	1909.3	-21.05	37.18	16.13	41.02	
	18607	1850.7	-16.80	37.65	20.85	121.62	V
	18900	1880.0	-16.55	37.58	21.03	126.77	
	19193	1909.3	-16.44	37.48	21.04	127.06	

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

LTE Band 2							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	18615	1851.5	-19.64	36.57	16.93	49.32	H
	18900	1880.0	-20.17	37.22	17.05	50.70	
	19185	1908.5	-20.00	37.18	17.18	52.24	
	18615	1851.5	-15.73	37.65	21.92	155.60	V
	18900	1880.0	-15.50	37.58	22.08	161.44	
	19185	1908.5	-15.34	37.48	22.14	163.68	
Channel Bandwidth: 3 MHz / 16QAM							
Z	18615	1851.5	-20.72	36.57	15.85	38.46	H
	18900	1880.0	-21.21	37.22	16.01	39.90	
	19185	1908.5	-21.09	37.18	16.09	40.64	
	18615	1851.5	-16.81	37.65	20.84	121.34	V
	18900	1880.0	-16.51	37.58	21.07	127.94	
	19185	1908.5	-16.43	37.48	21.05	127.35	

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

LTE Band 2							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	18625	1852.5	-19.60	36.57	16.97	49.77	H
	18900	1880.0	-20.10	37.22	17.12	51.52	
	19175	1907.5	-19.92	37.18	17.26	53.21	
	18625	1852.5	-15.65	37.65	22.00	158.49	V
	18900	1880.0	-15.43	37.58	22.15	164.06	
	19175	1907.5	-15.30	37.48	22.18	165.20	
Channel Bandwidth: 5 MHz / 16QAM							
Z	18625	1852.5	-20.68	36.57	15.89	38.82	H
	18900	1880.0	-21.14	37.22	16.08	40.55	
	19175	1907.5	-20.93	37.18	16.25	42.17	
	18625	1852.5	-16.66	37.65	20.99	125.60	V
	18900	1880.0	-16.49	37.58	21.09	128.53	
	19175	1907.5	-16.35	37.48	21.13	129.72	

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

LTE Band 2							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	18650	1855.0	-19.54	36.57	17.03	50.47	H
	18900	1880.0	-20.03	37.22	17.19	52.36	
	19150	1905.0	-19.88	37.18	17.30	53.70	
	18650	1855.0	-15.62	37.65	22.03	159.59	V
	18900	1880.0	-15.37	37.58	22.21	166.34	
	19150	1905.0	-15.24	37.48	22.24	167.49	
Channel Bandwidth: 10 MHz / 16QAM							
Z	18650	1855.0	-20.62	36.57	15.95	39.36	H
	18900	1880.0	-21.12	37.22	16.10	40.74	
	19150	1905.0	-20.90	37.18	16.28	42.46	
	18650	1855.0	-16.67	37.65	20.98	125.31	V
	18900	1880.0	-16.46	37.58	21.12	129.42	
	19150	1905.0	-16.26	37.48	21.22	132.43	

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

LTE Band 2							
Channel Bandwidth: 15 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	18675	1857.5	-19.48	36.57	17.09	51.17	H
	18900	1880.0	-19.99	37.22	17.23	52.84	
	19125	1902.5	-19.85	37.18	17.33	54.08	
	18675	1857.5	-15.55	37.65	22.10	162.18	V
	18900	1880.0	-15.34	37.58	22.24	167.49	
	19125	1902.5	-15.16	37.48	22.32	170.61	
Channel Bandwidth: 15 MHz / 16QAM							
Z	18675	1857.5	-20.57	36.57	16.00	39.81	H
	18900	1880.0	-21.05	37.22	16.17	41.40	
	19125	1902.5	-20.94	37.18	16.24	42.07	
	18675	1857.5	-16.57	37.65	21.08	128.23	V
	18900	1880.0	-16.40	37.58	21.18	131.22	
	19125	1902.5	-16.20	37.48	21.28	134.28	

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

LTE Band 2							
Channel Bandwidth: 20 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	18700	1860.0	-19.43	36.57	17.14	51.76	H
	18900	1880.0	-19.94	37.22	17.28	53.46	
	19100	1900.0	-19.77	37.18	17.41	55.08	
	18700	1860.0	-15.48	37.65	22.17	164.82	V
	18900	1880.0	-15.28	37.58	22.30	169.82	
	19100	1900.0	-15.09	37.48	22.39	173.38	
Channel Bandwidth: 20 MHz / 16QAM							
Z	18700	1860.0	-20.45	36.57	16.12	40.93	H
	18900	1880.0	-21.02	37.22	16.20	41.69	
	19100	1900.0	-20.86	37.18	16.32	42.85	
	18700	1860.0	-16.52	37.65	21.13	129.72	V
	18900	1880.0	-16.32	37.58	21.26	133.66	
	19100	1900.0	-16.12	37.48	21.36	136.77	

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

LTE Band 25							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	26047	1850.7	-20.43	36.57	16.14	41.11	H
	26365	1882.5	-21.06	37.22	16.16	41.30	
	26683	1914.3	-22.73	39.09	16.36	43.25	
	26047	1850.7	-16.56	37.65	21.09	128.53	V
	26365	1882.5	-16.48	37.58	21.10	128.82	
	26683	1914.3	-16.60	37.92	21.32	135.52	
Channel Bandwidth: 1.4 MHz / 16QAM							
Z	26047	1850.7	-21.50	36.57	15.07	32.14	H
	26365	1882.5	-22.15	37.22	15.07	32.14	
	26683	1914.3	-23.80	39.09	15.29	33.81	
	26047	1850.7	-17.65	37.65	20.00	100.00	V
	26365	1882.5	-17.53	37.58	20.05	101.16	
	26683	1914.3	-17.63	37.92	20.29	106.91	

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

LTE Band 25							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	26055	1851.5	-20.39	36.57	16.18	41.50	H
	26365	1882.5	-20.98	37.22	16.24	42.07	
	26675	1913.5	-22.70	39.11	16.41	43.75	
	26055	1851.5	-16.52	37.65	21.13	129.72	V
	26365	1882.5	-16.44	37.58	21.14	130.02	
	26675	1913.5	-16.53	37.93	21.40	138.04	
Channel Bandwidth: 3 MHz / 16QAM							
Z	26055	1851.5	-21.46	36.57	15.11	32.43	H
	26365	1882.5	-22.04	37.22	15.18	32.96	
	26675	1913.5	-23.79	39.11	15.32	34.04	
	26055	1851.5	-17.55	37.65	20.10	102.33	V
	26365	1882.5	-17.49	37.58	20.09	102.09	
	26675	1913.5	-17.62	37.93	20.31	107.40	

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

LTE Band 25							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	26065	1852.5	-20.32	36.57	16.25	42.17	H
	26365	1882.5	-20.90	37.22	16.32	42.85	
	26665	1912.5	-21.67	38.11	16.44	44.06	
	26065	1852.5	-16.45	37.65	21.20	131.83	V
	26365	1882.5	-16.37	37.58	21.21	132.13	
	26665	1912.5	-16.53	37.96	21.43	139.00	
Channel Bandwidth: 5 MHz / 16QAM							
Z	26065	1852.5	-21.38	36.57	15.19	33.04	H
	26365	1882.5	-21.91	37.22	15.31	33.96	
	26665	1912.5	-22.71	38.11	15.40	34.67	
	26065	1852.5	-17.49	37.65	20.16	103.75	V
	26365	1882.5	-17.42	37.58	20.16	103.75	
	26665	1912.5	-17.61	37.96	20.35	108.39	

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

LTE Band 25							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	26090	1855.0	-20.26	36.57	16.31	42.76	H
	26365	1882.5	-20.84	37.22	16.38	43.45	
	26640	1910.0	-21.69	38.19	16.50	44.67	
	26090	1855.0	-16.44	37.65	21.21	132.13	V
	26365	1882.5	-16.33	37.58	21.25	133.35	
	26640	1910.0	-16.69	38.15	21.46	139.96	
Channel Bandwidth: 10 MHz / 16QAM							
Z	26090	1855.0	-21.34	36.57	15.23	33.34	H
	26365	1882.5	-21.93	37.22	15.29	33.81	
	26640	1910.0	-22.74	38.19	15.45	35.08	
	26090	1855.0	-17.49	37.65	20.16	103.75	V
	26365	1882.5	-17.41	37.58	20.17	103.99	
	26640	1910.0	-17.75	38.15	20.40	109.65	

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

LTE Band 25							
Channel Bandwidth: 15 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	26115	1857.5	-20.20	36.57	16.37	43.35	H
	26365	1882.5	-20.80	37.22	16.42	43.85	
	26615	1907.5	-21.66	38.23	16.57	45.39	
	26115	1857.5	-16.38	37.65	21.27	133.97	V
	26365	1882.5	-16.25	37.58	21.33	135.83	
	26615	1907.5	-16.72	38.22	21.50	141.25	
Channel Bandwidth: 15 MHz / 16QAM							
Z	26115	1857.5	-21.26	36.57	15.31	33.96	H
	26365	1882.5	-21.83	37.22	15.39	34.59	
	26615	1907.5	-22.75	38.23	15.48	35.32	
	26115	1857.5	-17.46	37.65	20.19	104.47	V
	26365	1882.5	-17.33	37.58	20.25	105.93	
	26615	1907.5	-17.73	38.22	20.49	111.94	

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

LTE Band 25							
Channel Bandwidth: 20 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Polarization (H/V)
Z	26140	1860.0	-20.16	36.57	16.41	43.75	H
	26365	1882.5	-20.74	37.22	16.48	44.46	
	26590	1905.0	-22.12	38.72	16.60	45.71	
	26140	1860.0	-16.33	37.65	21.32	135.52	V
	26365	1882.5	-16.17	37.58	21.41	138.36	
	26590	1905.0	-16.01	37.56	21.55	142.89	
Channel Bandwidth: 20 MHz / 16QAM							
Z	26140	1860.0	-21.20	36.57	15.37	34.43	H
	26365	1882.5	-21.75	37.22	15.47	35.24	
	26590	1905.0	-23.20	38.72	15.52	35.65	
	26140	1860.0	-17.34	37.65	20.31	107.40	V
	26365	1882.5	-17.24	37.58	20.34	108.14	
	26590	1905.0	-17.08	37.56	20.48	111.69	

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

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit 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:

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

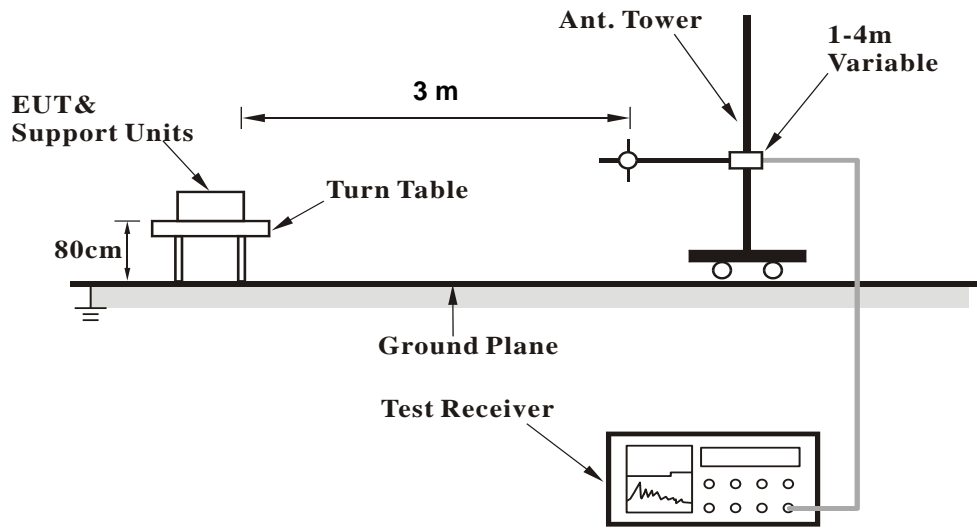
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.2.3 Deviation from Test Standard

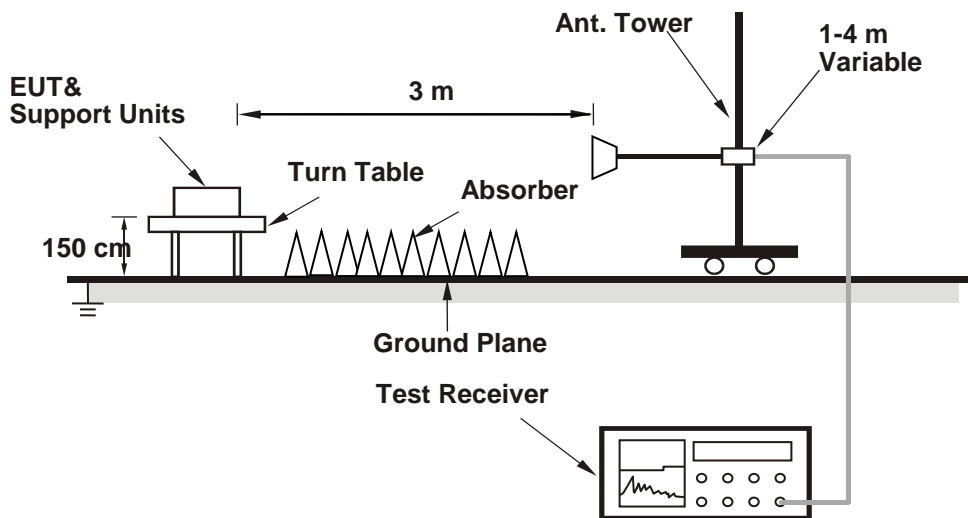
No deviation.

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 2

Channel Bandwidth: 1.4 MHz / QPSK

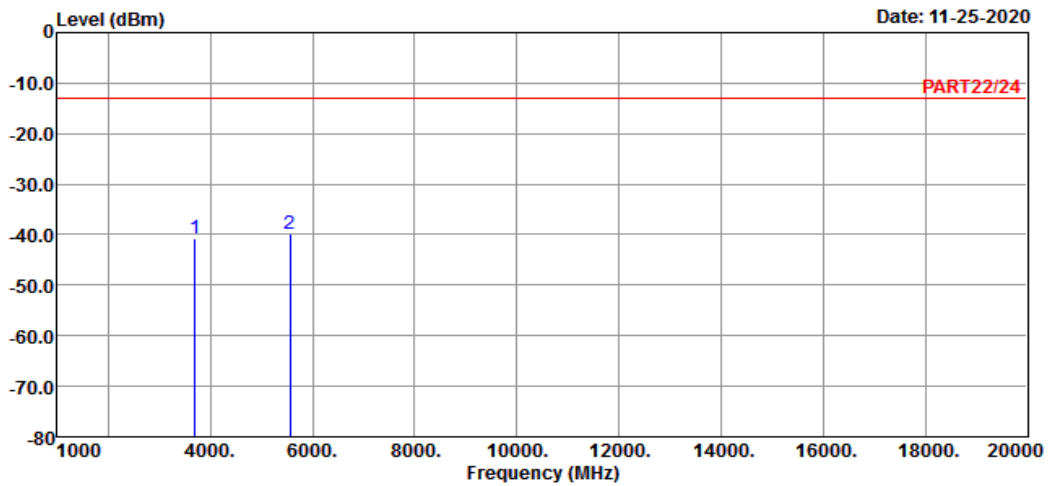
Low Channel



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A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_1.4M Link_L-CH
 Tested by: Cyril Chen

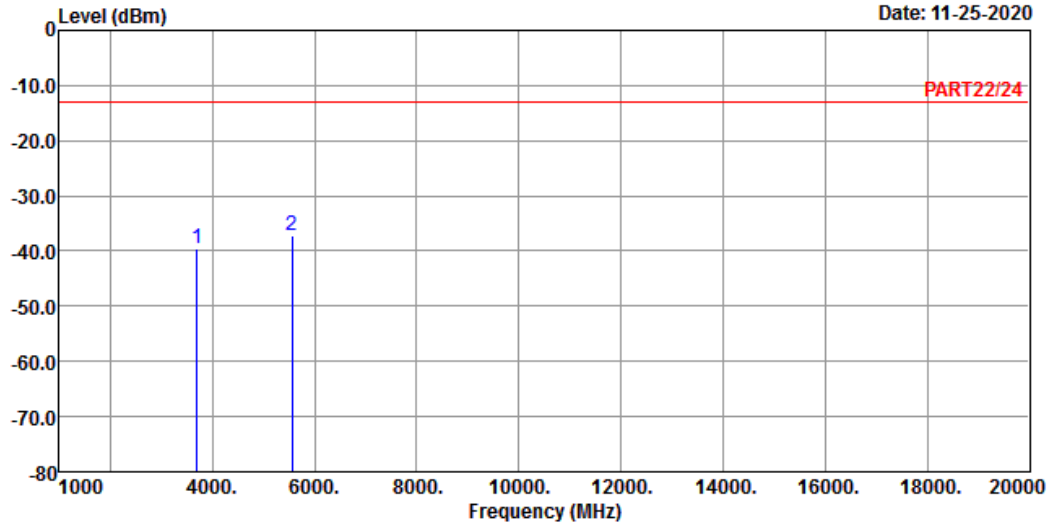
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3701.40	-40.66	-33.73	-13.00	-6.93	-27.66	Peak
2	5552.10	-39.76	-37.86	-13.00	-1.90	-26.76	Peak



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A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 2 QPSK_1.4M Link_L-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3701.40	-39.51	-32.58	-13.00	-6.93	-26.51	Peak
2 pp	5552.10	-37.22	-35.32	-13.00	-1.90	-24.22	Peak

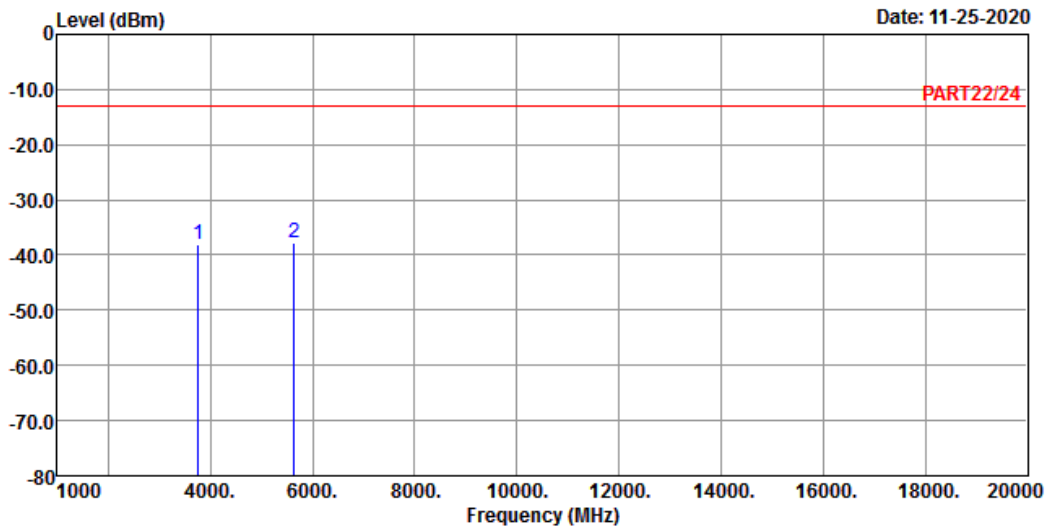
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_1.4M Link_M-CH
 Tested by: Cyril Chen

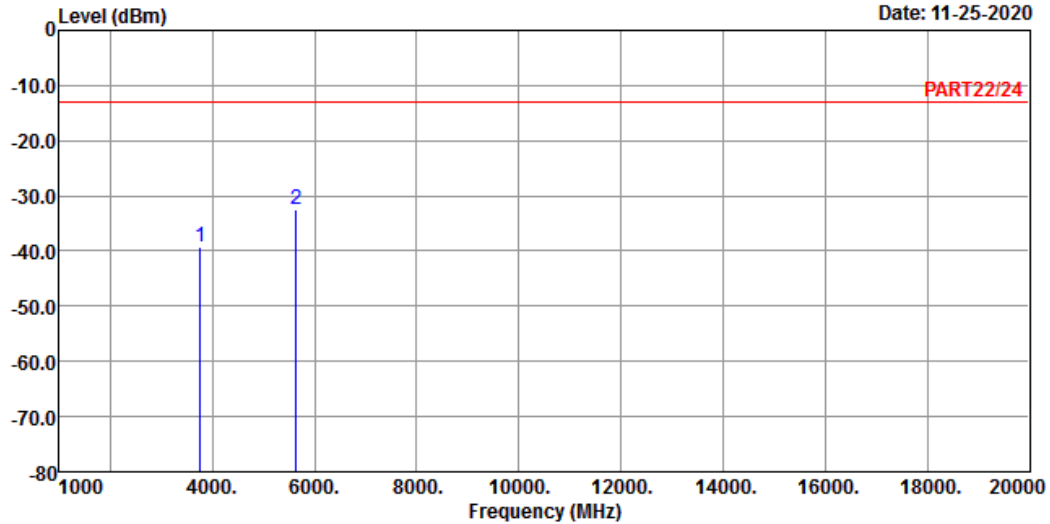
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3760.00	-37.94	-31.29	-13.00	-6.65	-24.94	Peak
2 pp	5640.00	-37.87	-36.01	-13.00	-1.86	-24.87	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 2 QPSK_1.4M Link_M-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3760.00	-39.25	-32.60	-13.00	-6.65	-26.25	Peak
2 pp	5640.00	-32.38	-30.52	-13.00	-1.86	-19.38	Peak

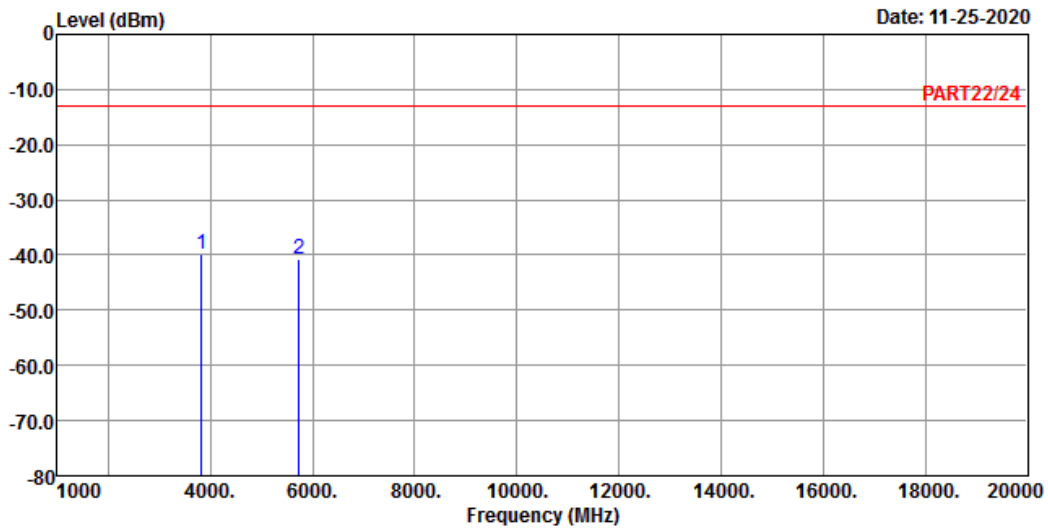
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_1.4M Link_H-CH
 Tested by: Cyril Chen

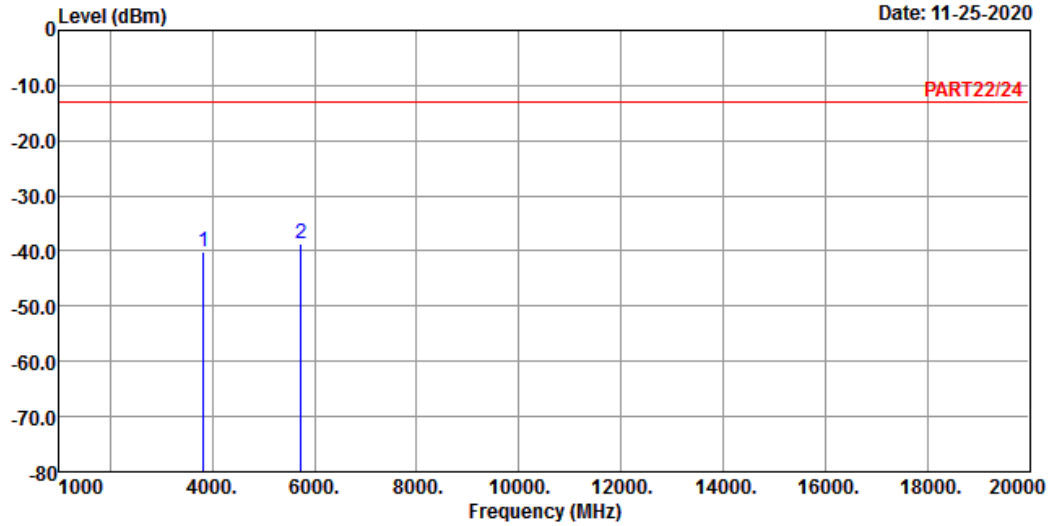
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	pp 3818.60	-39.74	-33.34	-13.00	-6.40	-26.74	Peak
2	5727.90	-40.63	-38.98	-13.00	-1.65	-27.63	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 2 QPSK_1.4M Link_H-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3818.60	-40.06	-33.66	-13.00	-6.40	-27.06	Peak
2 pp	5727.90	-38.59	-36.94	-13.00	-1.65	-25.59	Peak

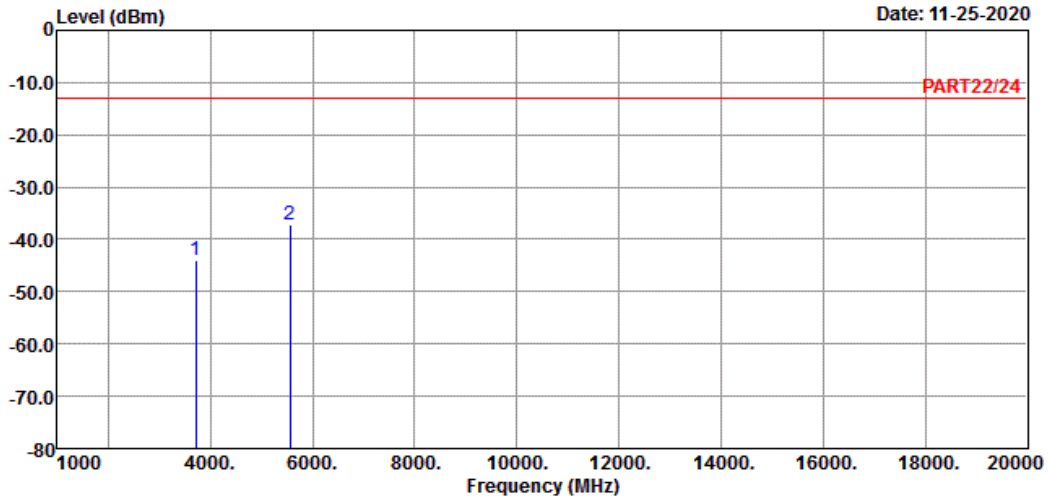
Channel Bandwidth: 5 MHz / QPSK
 Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_5M Link_L-CH
 Tested by: Cyril Chen

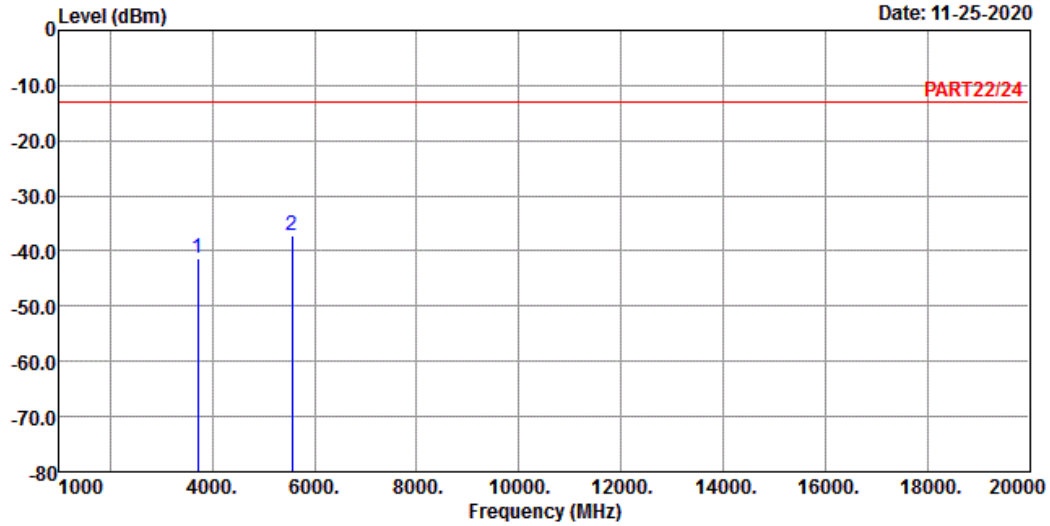
	Freq	Level	Read Level	Limit Line	Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3705.00	-44.11	-37.18	-13.00	-6.93	-31.11	Peak
2 pp	5557.50	-37.09	-35.18	-13.00	-1.91	-24.09	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remak : LTE Band 2 QPSK_5M Link_L-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3705.00	-41.27	-34.34	-13.00	-6.93	-28.27	Peak
2 pp	5557.50	-37.05	-35.14	-13.00	-1.91	-24.05	Peak

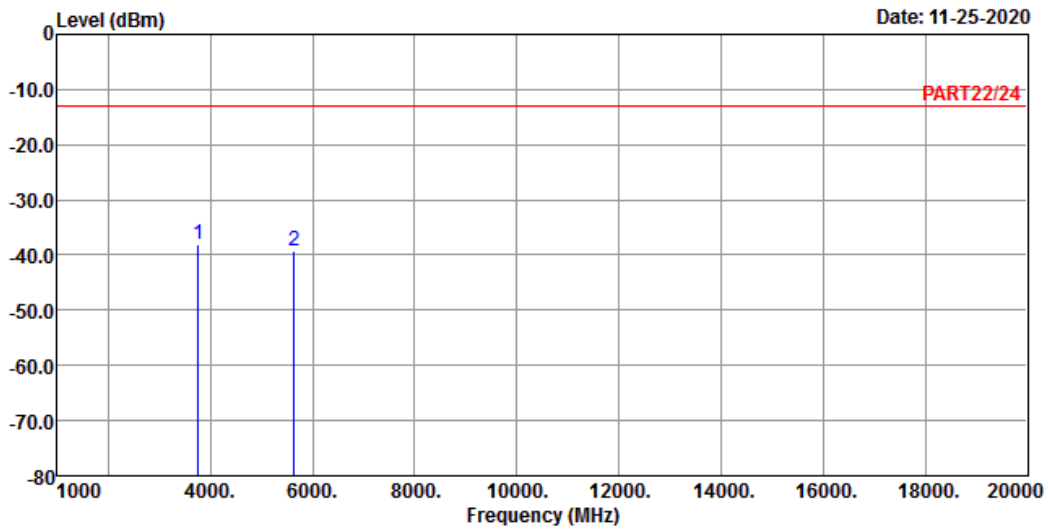
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_5M Link_M-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	pp 3760.00	-38.17	-31.52	-13.00	-6.65	-25.17	Peak
2	5640.00	-39.24	-37.38	-13.00	-1.86	-26.24	Peak

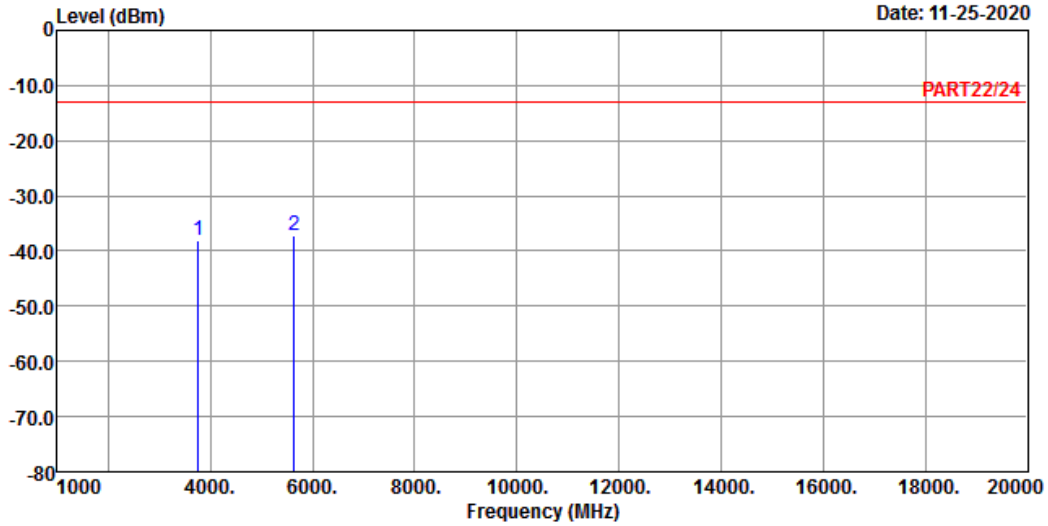


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 11-25-2020



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 2 QPSK_5M Link_M-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3760.00	-38.02	-31.37	-13.00	-6.65	-25.02	Peak
2 pp	5640.00	-37.18	-35.32	-13.00	-1.86	-24.18	Peak

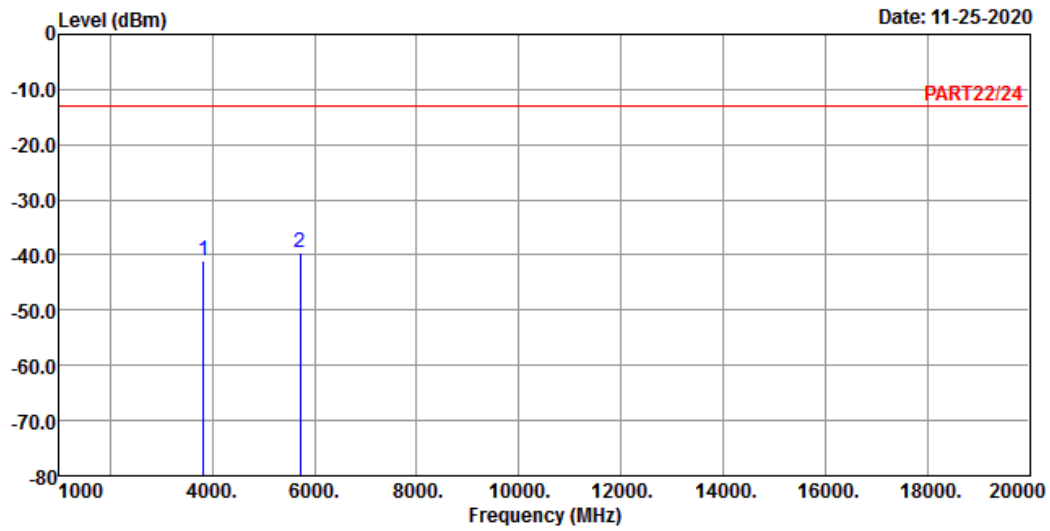
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_5M Link_H-CH
 Tested by: Cyril Chen

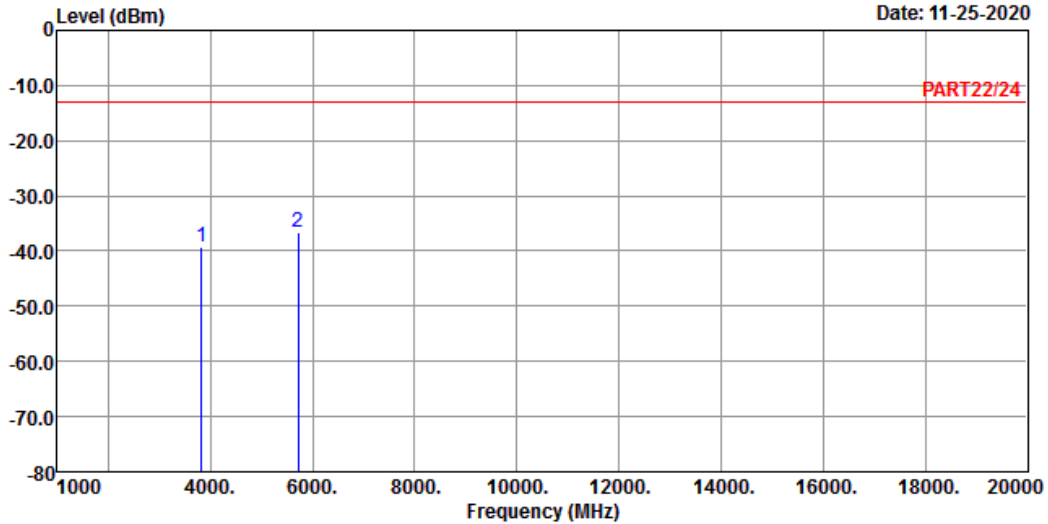
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3815.00	-41.11	-34.71	-13.00	-6.40	-28.11	Peak
2 pp	5722.50	-39.57	-37.88	-13.00	-1.69	-26.57	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 2 QPSK_5M Link_H-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3815.00	-39.18	-32.78	-13.00	-6.40	-26.18	Peak
2 pp	5722.50	-36.48	-34.79	-13.00	-1.69	-23.48	Peak

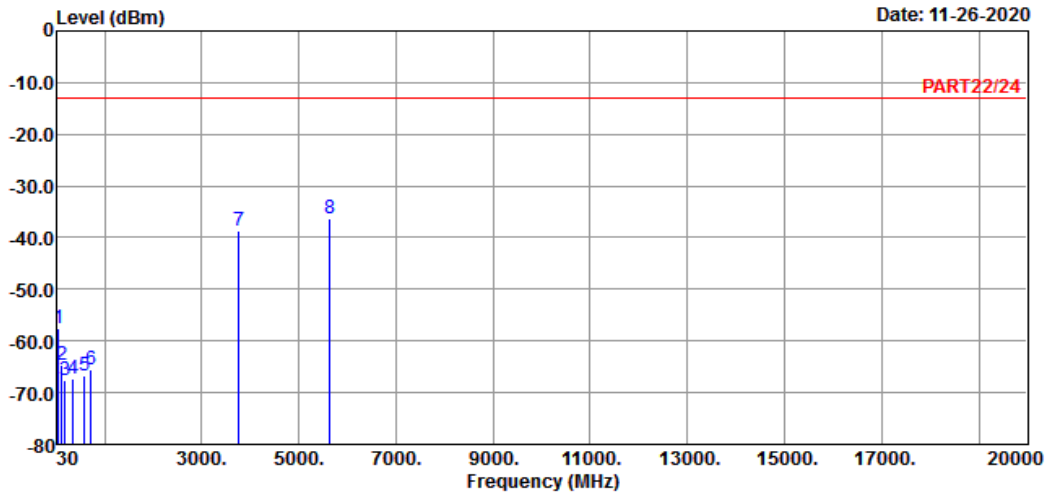
Channel Bandwidth: 20 MHz / QPSK
 Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_20M Link_L-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Over	Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	49.40	-57.67	-53.16	-13.00	-4.51	-44.67	Peak
2	110.51	-64.70	-54.42	-13.00	-10.28	-51.70	Peak
3	192.96	-67.49	-60.12	-13.00	-7.37	-54.49	Peak
4	355.92	-67.32	-61.12	-13.00	-6.20	-54.32	Peak
5	584.84	-66.67	-65.27	-13.00	-1.40	-53.67	Peak
6	715.79	-65.62	-65.83	-13.00	0.21	-52.62	Peak
7	3760.00	-38.65	-32.00	-13.00	-6.65	-25.65	Peak
8 pp	5640.00	-36.42	-34.56	-13.00	-1.86	-23.42	Peak

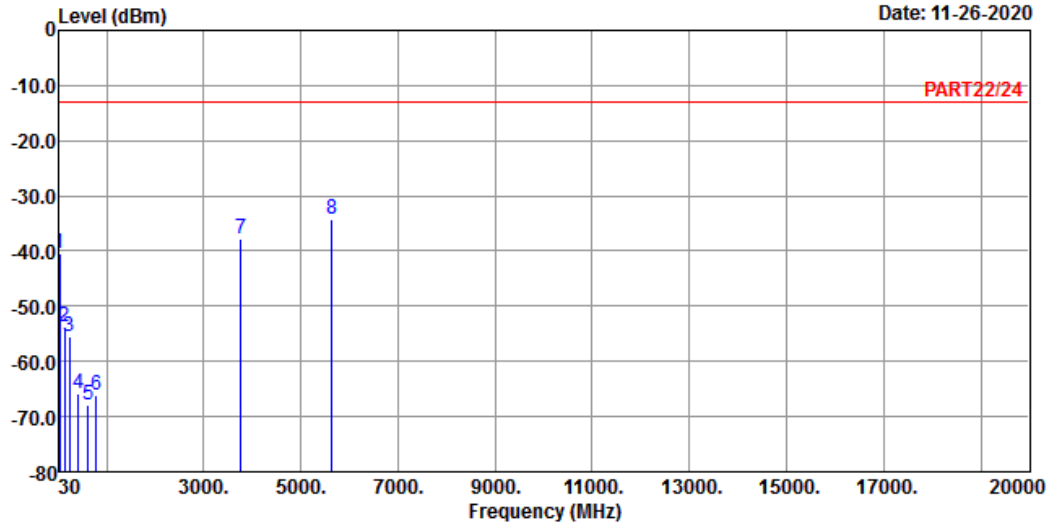


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 11-26-2020



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 2 QPSK_20M Link_L-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line	Factor	Over	Limit	Remark
	MHz	dBm	dBm	dBm		dB	dB		
1	40.67	-40.50	-40.62	-13.00		0.12	-27.50		Peak
2	140.58	-53.74	-45.18	-13.00		-8.56	-40.74		Peak
3	240.49	-55.59	-49.21	-13.00		-6.38	-42.59		Peak
4	426.73	-65.92	-60.19	-13.00		-5.73	-52.92		Peak
5	617.82	-67.82	-67.02	-13.00		-0.80	-54.82		Peak
6	781.75	-66.22	-67.01	-13.00		0.79	-53.22		Peak
7	3760.00	-37.72	-31.07	-13.00		-6.65	-24.72		Peak
8 pp	5640.00	-34.36	-32.50	-13.00		-1.86	-21.36		Peak

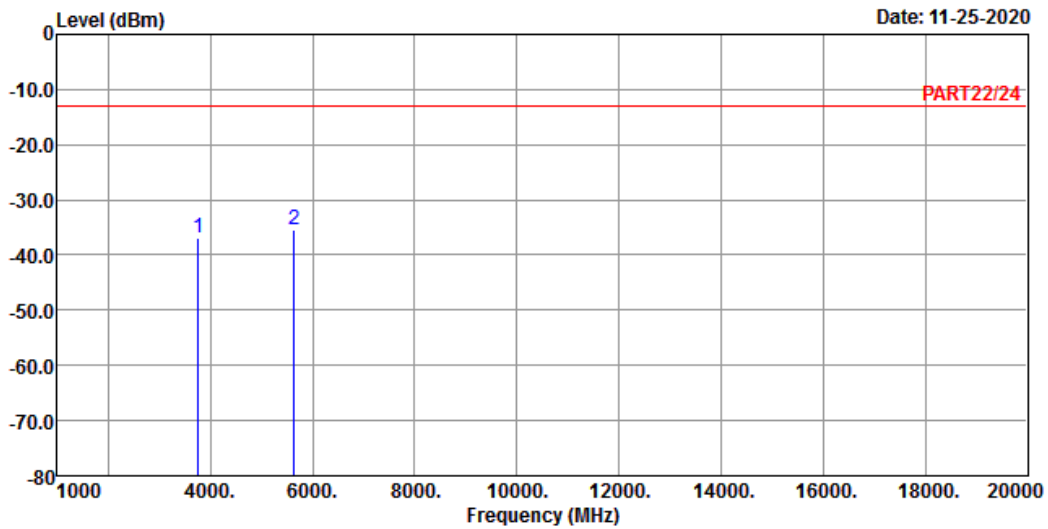
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_20M Link_M-CH
 Tested by: Cyril Chen

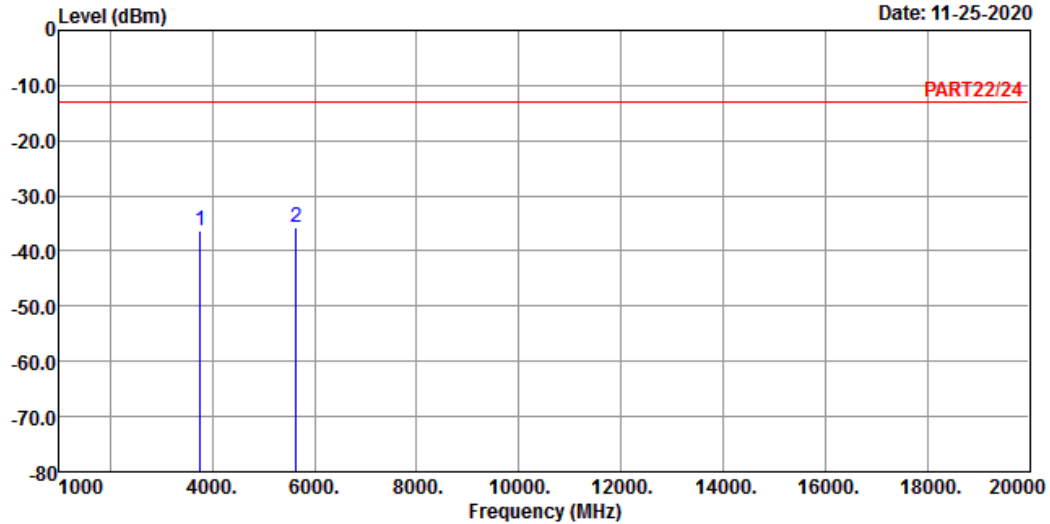
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3760.00	-36.86	-30.21	-13.00	-6.65	-23.86	Peak
2 pp	5640.00	-35.54	-33.68	-13.00	-1.86	-22.54	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 2 QPSK_20M Link_M-CH
 Tested by: Cyril Chen

	Read	Limit	Over			
Freq	Level	Level	Line	Factor	Limit	Remark
MHz	dBm	dBm	dBm	dB	dB	
1	3760.00	-36.21	-29.56	-13.00	-6.65	-23.21 Peak
2 pp	5640.00	-35.66	-33.80	-13.00	-1.86	-22.66 Peak

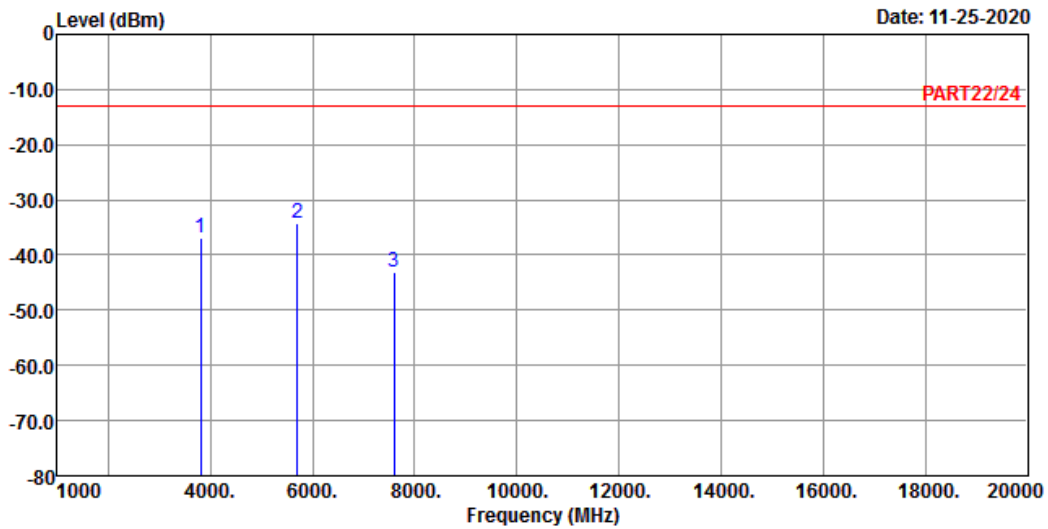
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 2 QPSK_20M Link_H-CH
 Tested by: Cyril Chen

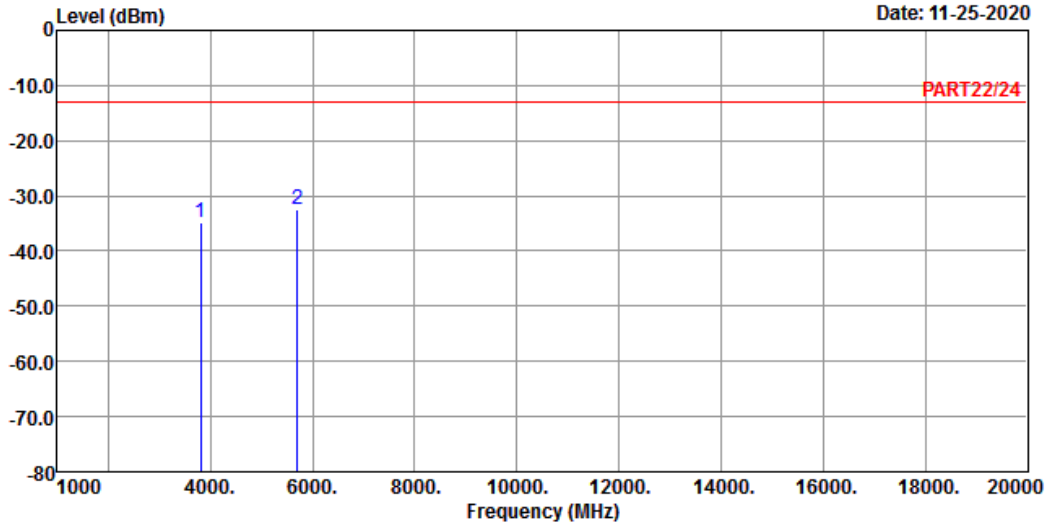
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3800.00	-36.94	-30.51	-13.00	-6.43	-23.94	Peak
2 pp	5700.00	-34.21	-32.48	-13.00	-1.73	-21.21	Peak
3	7600.00	-42.96	-47.43	-13.00	4.47	-29.96	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 2 QPSK_20M Link_H-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3800.00	-34.90	-28.47	-13.00	-6.43	-21.90	Peak
2 pp	5700.00	-32.39	-30.66	-13.00	-1.73	-19.39	Peak

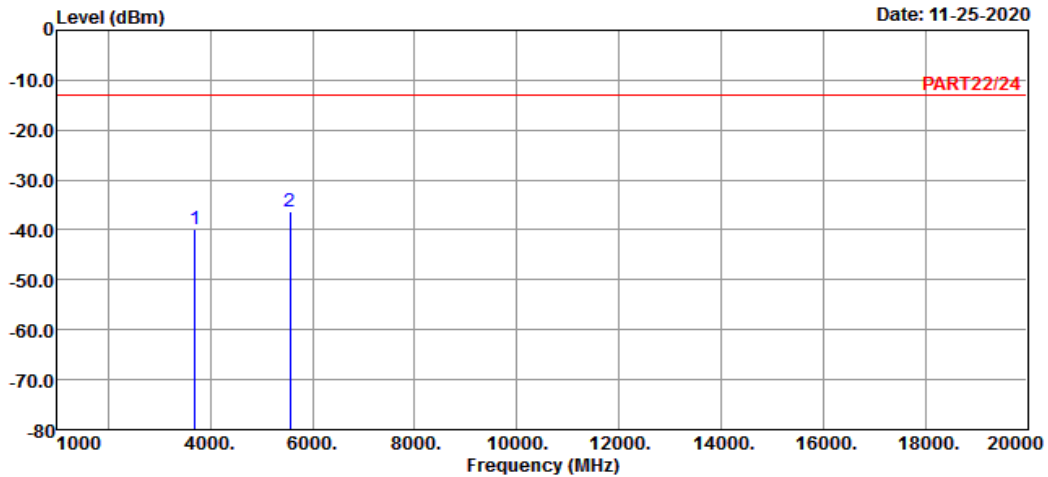
LTE Band 25
Channel Bandwidth: 1.4 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_1.4M Link_L-CH
Tested by: Cyril Chen

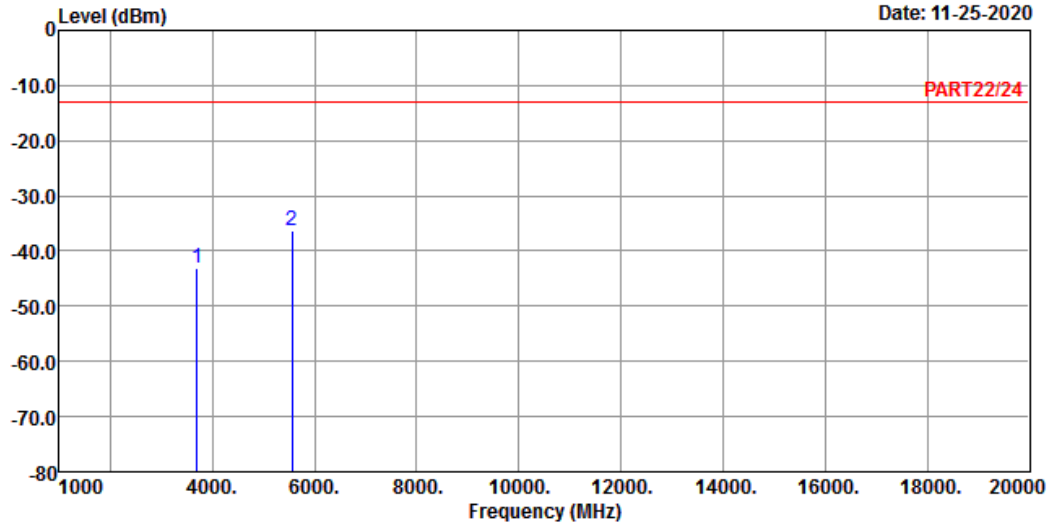
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3701.40	-39.94	-33.01	-13.00	-6.93	-26.94	Peak
2	5552.10	-36.25	-34.35	-13.00	-1.90	-23.25	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 25 QPSK_1.4M Link_L-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3701.40	-43.24	-36.31	-13.00	-6.93	-30.24	Peak
2	5552.10	-36.30	-34.40	-13.00	-1.90	-23.30	Peak

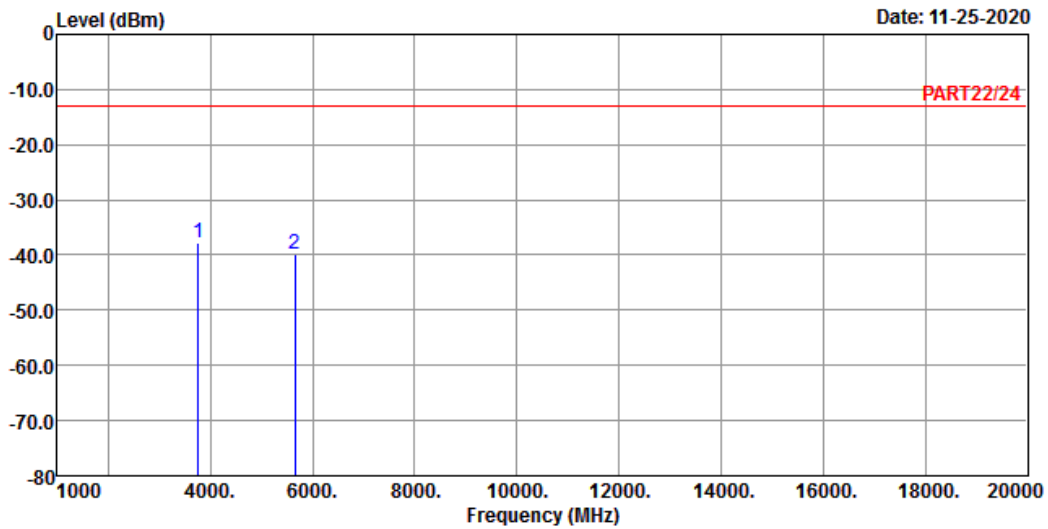
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 25 QPSK_1.4M Link_M-CH
 Tested by: Cyril Chen

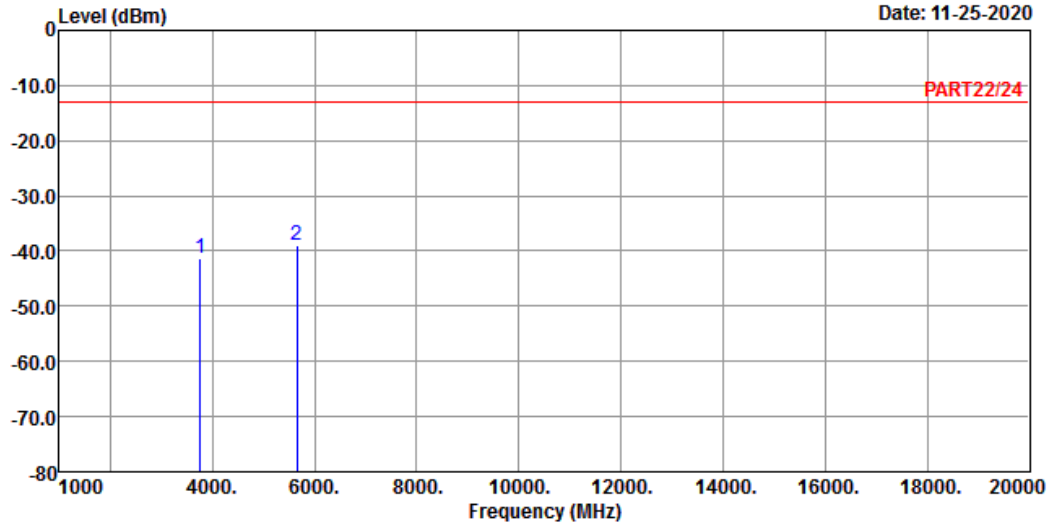
	Read	Limit	Over		
Freq	Level	Level	Line	Factor	Limit Remark
MHz	dBm	dBm	dBm	dB	dB
1 pp 3765.00	-37.64	-31.04	-13.00	-6.60	-24.64 Peak
2 5647.50	-39.88	-38.05	-13.00	-1.83	-26.88 Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remak : LTE Band 25 QPSK_1.4M Link_M-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3765.00	-41.32	-34.72	-13.00	-6.60	-28.32	Peak
2 pp	5647.50	-38.85	-37.02	-13.00	-1.83	-25.85	Peak

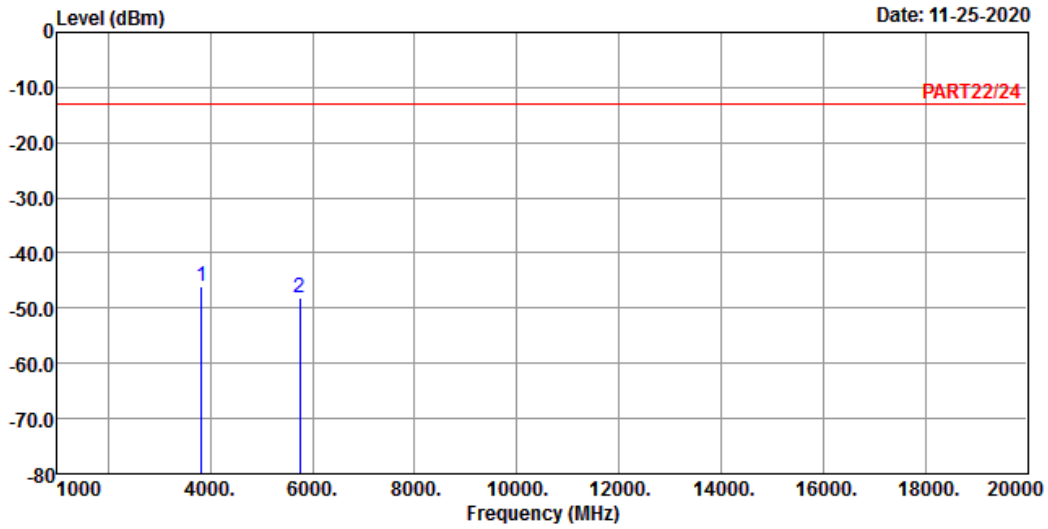
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 25 QPSK_1.4M Link_H-CH
 Tested by: Cyril Chen

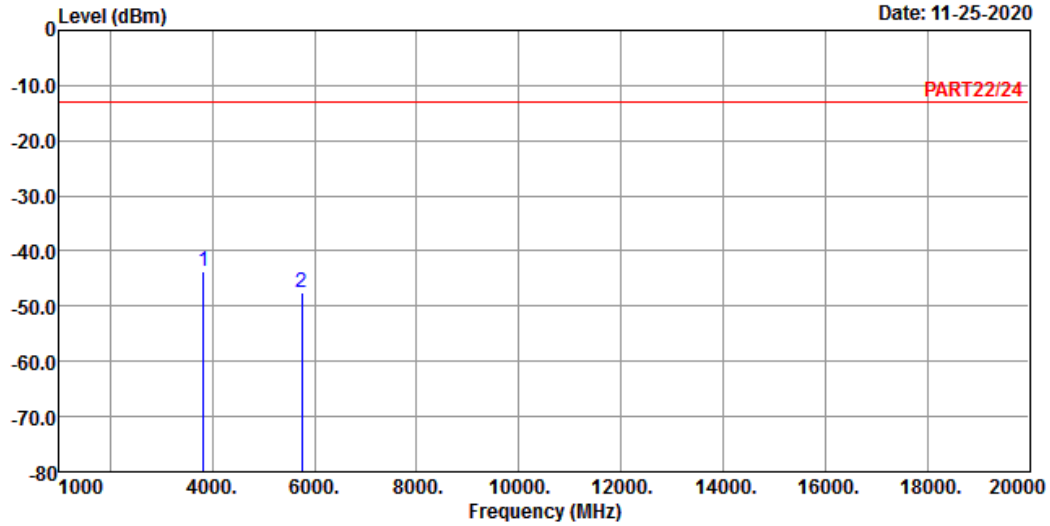
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	pp 3828.60	-45.92	-39.55	-13.00	-6.37	-32.92	Peak
2	5742.90	-47.99	-46.34	-13.00	-1.65	-34.99	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remak : LTE Band 25 QPSK_1.4M Link_H-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3828.60	-43.77	-37.40	-13.00	-6.37	-30.77	Peak
2	5742.90	-47.39	-45.74	-13.00	-1.65	-34.39	Peak

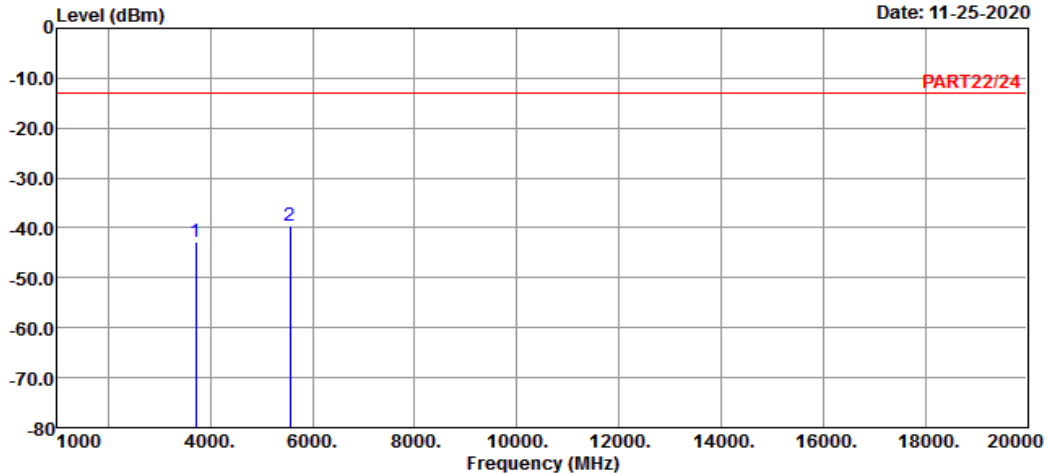
Channel Bandwidth: 5 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
Condition: PART22/24 HORIZONTAL
Remak : LTE Band 25 QPSK_5M Link_L-CH
Tested by: Cyril Chen

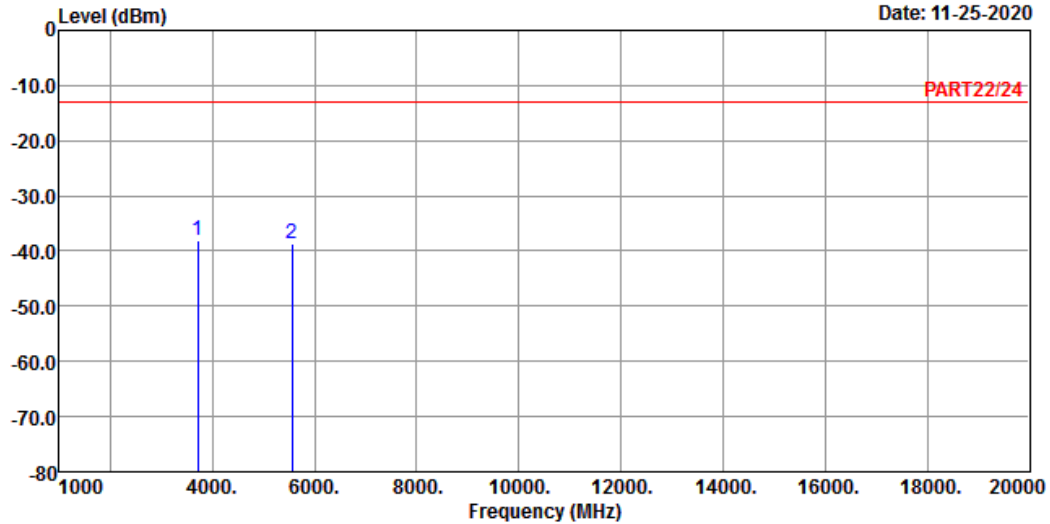
	Freq	Level	Read Level	Limit	Over	Over	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3705.00	-42.77	-35.84	-13.00	-6.93	-29.77	Peak
2 pp	5557.50	-39.48	-37.57	-13.00	-1.91	-26.48	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5

Condition: PART22/24 VERTICAL

Remak : LTE Band 25 QPSK_5M Link_L-CH

Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3705.00	-38.21	-31.28	-13.00	-6.93	-25.21	Peak
2	5557.50	-38.57	-36.66	-13.00	-1.91	-25.57	Peak

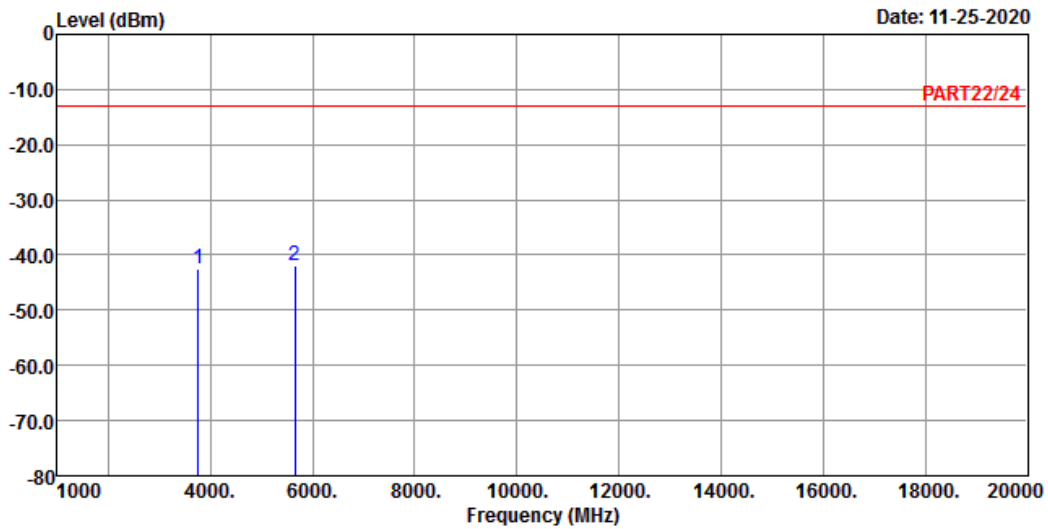
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 25 QPSK_5M Link_M-CH
 Tested by: Cyril Chen

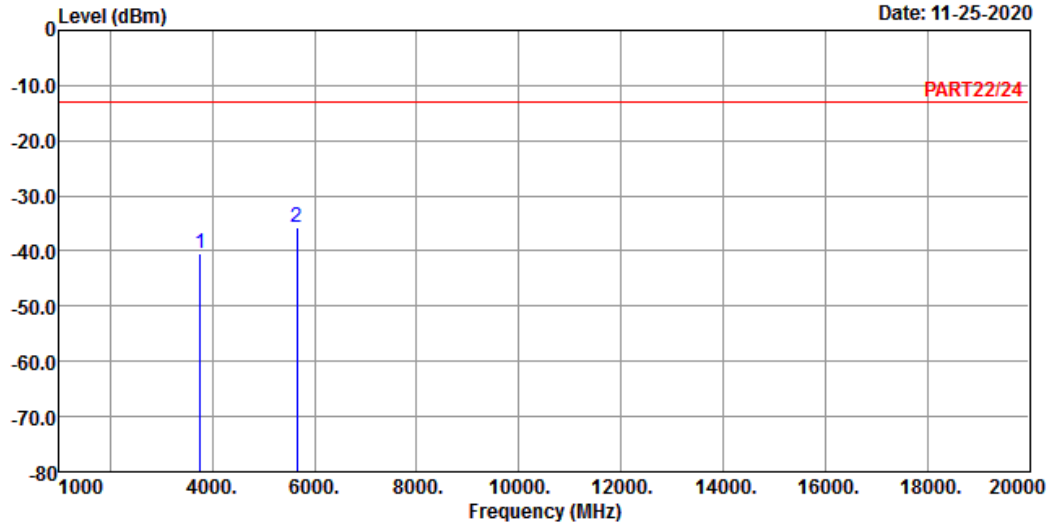
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3765.00	-42.48	-35.88	-13.00	-6.60	-29.48	Peak
2 pp	5647.50	-42.04	-40.21	-13.00	-1.83	-29.04	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 25 QPSK_5M Link_M-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3765.00	-40.32	-33.72	-13.00	-6.60	-27.32	Peak
2 pp	5647.50	-35.71	-33.88	-13.00	-1.83	-22.71	Peak

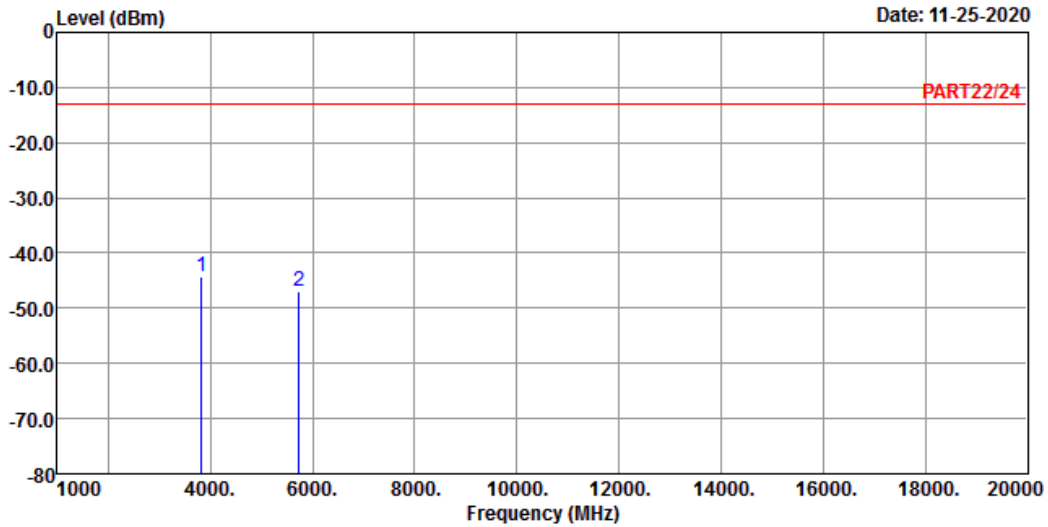
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 25 QPSK_5M Link_H-CH
 Tested by: Cyril Chen

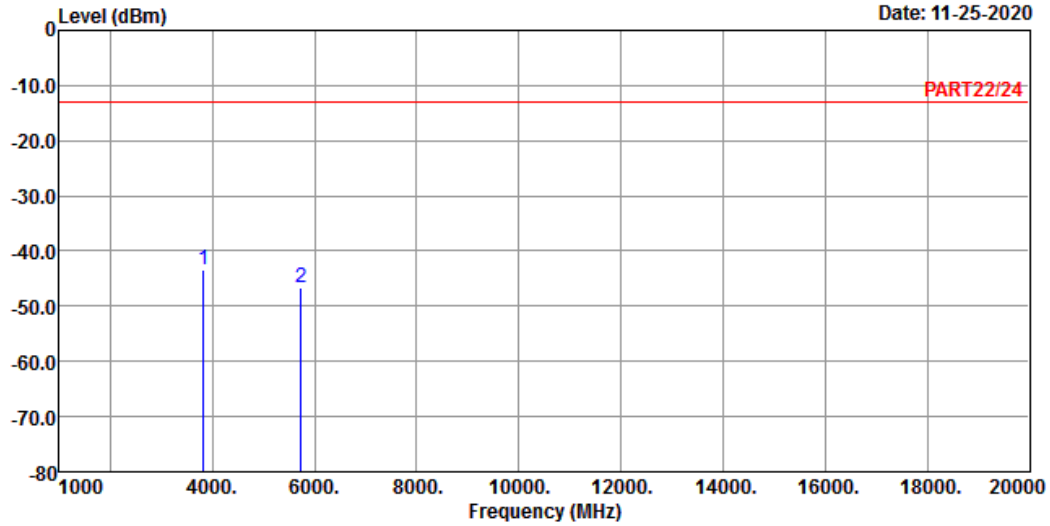
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	pp 3825.00	-44.26	-37.89	-13.00	-6.37	-31.26	Peak
2	5737.50	-46.89	-45.24	-13.00	-1.65	-33.89	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remak : LTE Band 25 QPSK_5M Link_H-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3825.00	-43.26	-36.89	-13.00	-6.37	-30.26	Peak
2	5737.50	-46.52	-44.87	-13.00	-1.65	-33.52	Peak

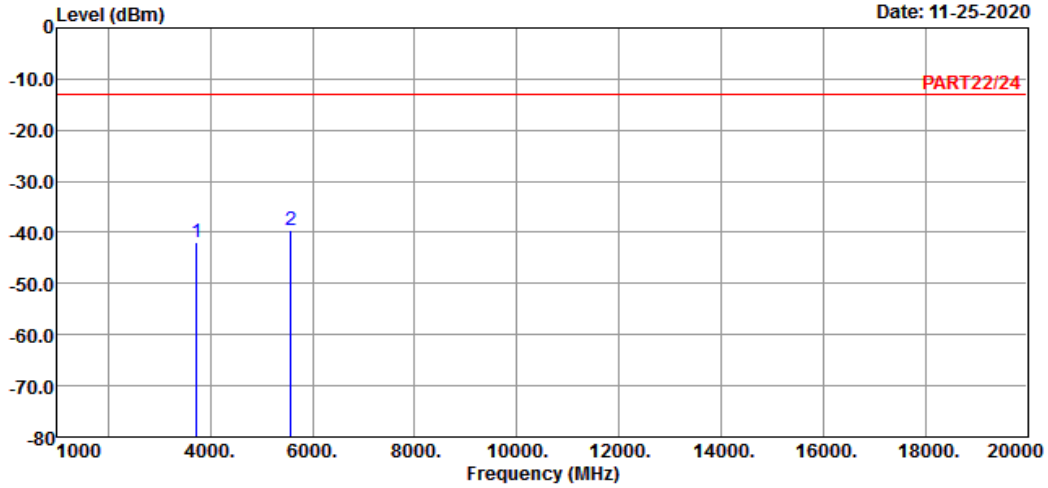
Channel Bandwidth: 20 MHz / QPSK
 Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 25 QPSK_20M Link_L-CH
 Tested by: Cyril Chen

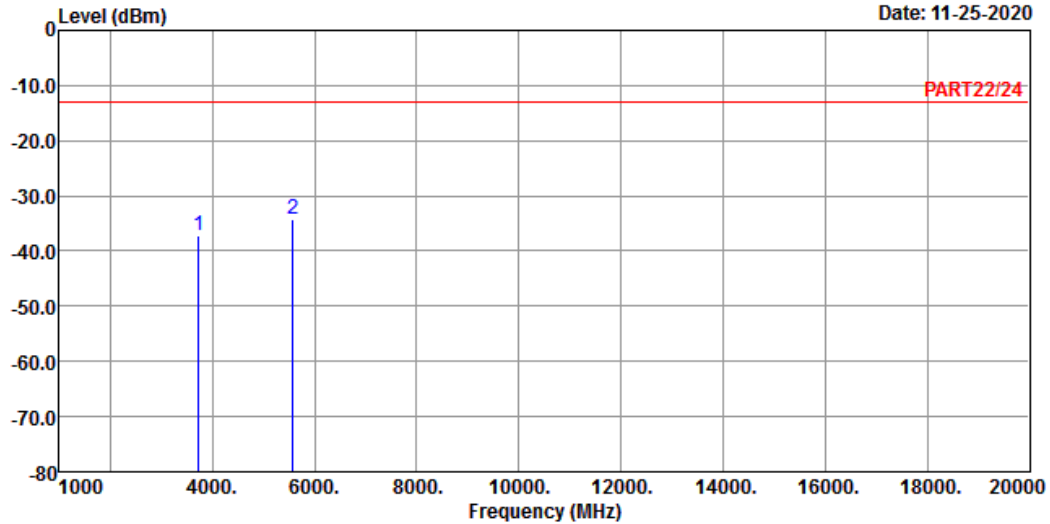
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3720.00	-41.90	-35.08	-13.00	-6.82	-28.90	Peak
2	5580.00	-39.46	-37.54	-13.00	-1.92	-26.46	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remak : LTE Band 25 QPSK_20M Link_L-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3720.00	-37.29	-30.47	-13.00	-6.82	-24.29	Peak
2 pp	5580.00	-34.12	-32.20	-13.00	-1.92	-21.12	Peak

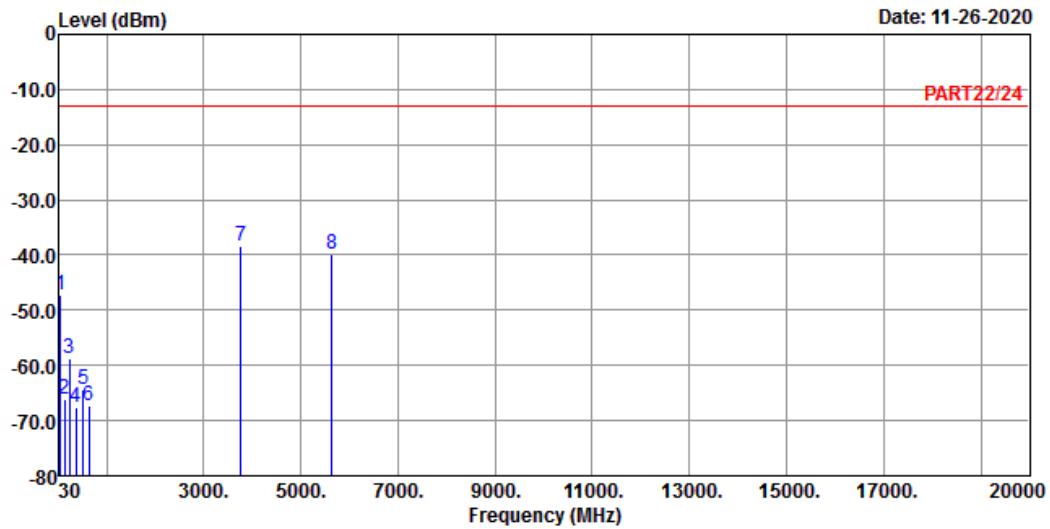
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 25 QPSK_20M Link_M-CH
 Tested by: Cyril Chen

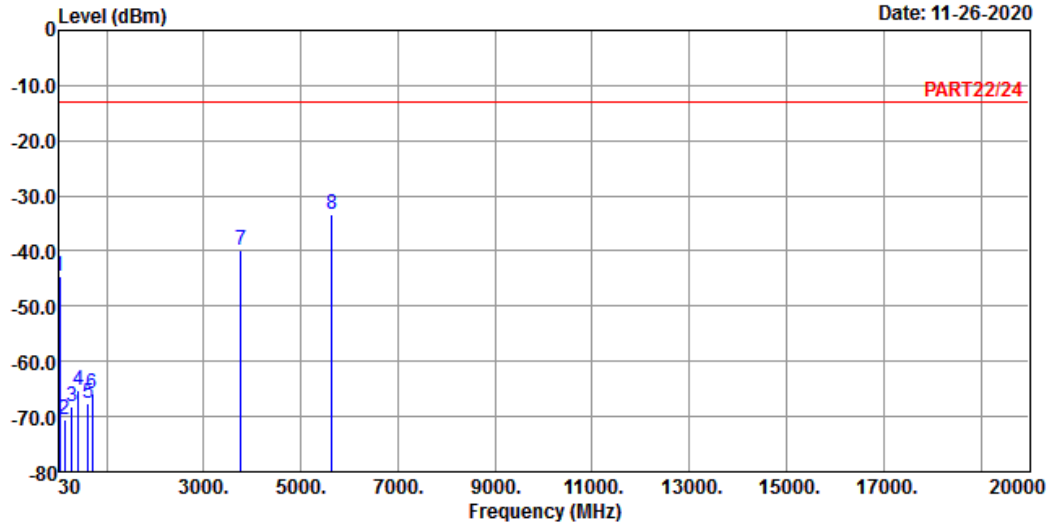
	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	46.49	-47.19	-44.19	-13.00	-3.00	-34.19	Peak
2	137.67	-66.23	-57.57	-13.00	-8.66	-53.23	Peak
3	228.85	-58.67	-51.82	-13.00	-6.85	-45.67	Peak
4	367.56	-67.67	-61.53	-13.00	-6.14	-54.67	Peak
5	515.00	-64.24	-60.15	-13.00	-4.09	-51.24	Peak
6	632.37	-67.33	-66.49	-13.00	-0.84	-54.33	Peak
7 pp	3765.00	-38.40	-31.80	-13.00	-6.60	-25.40	Peak
8	5647.50	-39.86	-38.03	-13.00	-1.83	-26.86	Peak



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remak : LTE Band 25 QPSK_20M Link_M-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit Line	Over Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	39.70	-44.69	-45.33	-13.00	0.64	-31.69	Peak
2	134.76	-70.68	-62.01	-13.00	-8.67	-57.68	Peak
3	286.08	-68.14	-61.41	-13.00	-6.73	-55.14	Peak
4	426.73	-65.18	-59.45	-13.00	-5.73	-52.18	Peak
5	626.55	-67.71	-66.89	-13.00	-0.82	-54.71	Peak
6	706.09	-65.72	-65.74	-13.00	0.02	-52.72	Peak
7	3765.00	-39.87	-33.27	-13.00	-6.60	-26.87	Peak
8 pp	5647.50	-33.40	-31.57	-13.00	-1.83	-20.40	Peak

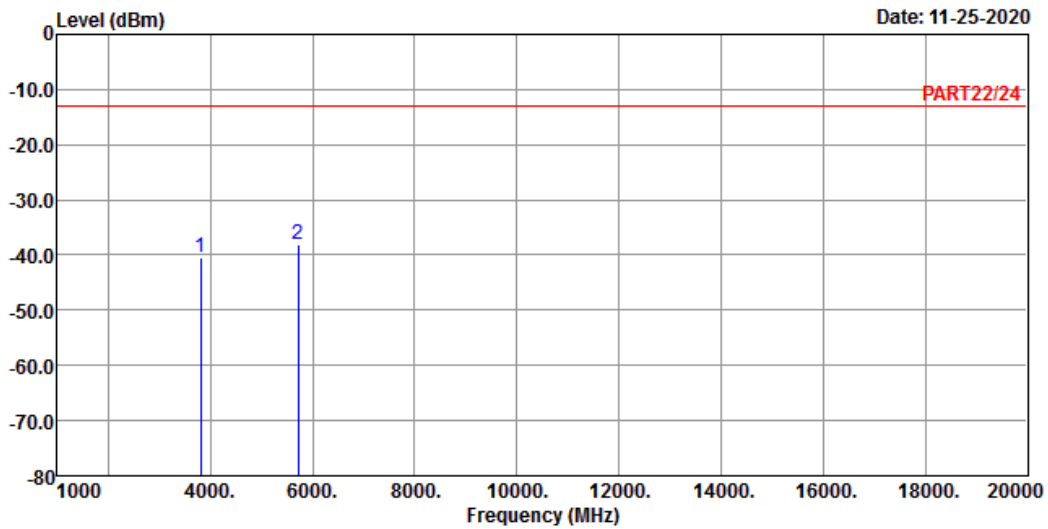
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 Chamber 5
 Condition: PART22/24 HORIZONTAL
 Remak : LTE Band 25 QPSK_20M Link_H-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	3810.00	-40.30	-33.90	-13.00	-6.40	-27.30	Peak
2 pp	5715.00	-38.14	-36.45	-13.00	-1.69	-25.14	Peak

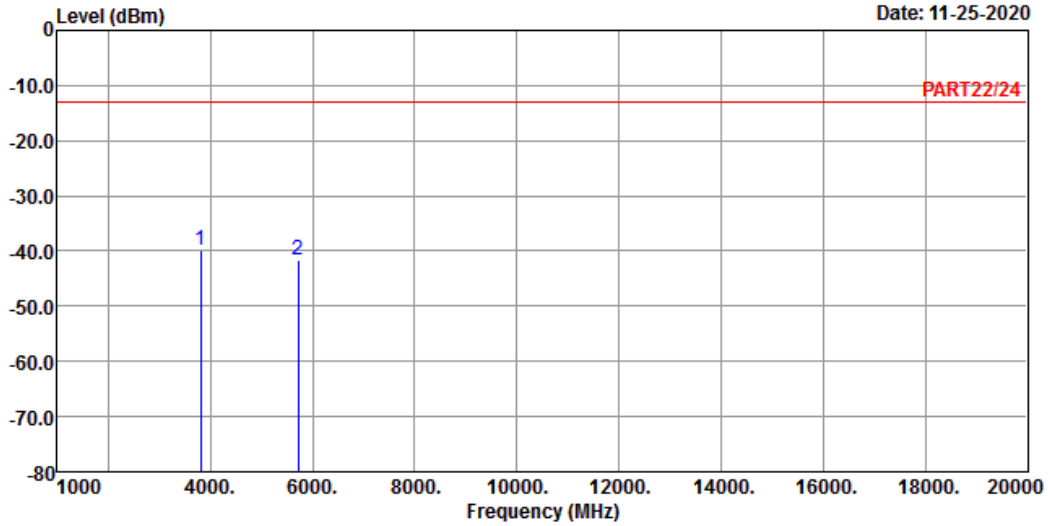


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 11-25-2020



Site : 966 Chamber 5
 Condition: PART22/24 VERTICAL
 Remark : LTE Band 25 QPSK_20M Link_H-CH
 Tested by: Cyril Chen

	Freq	Level	Read Level	Limit	Line Factor	Over Limit	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	3810.00	-39.87	-33.47	-13.00	-6.40	-26.87	Peak
2	5715.00	-41.50	-39.81	-13.00	-1.69	-28.50	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:

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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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