Partial FCC Test Report

(PART 22)

Report No.:	RF140313C20E-4
FCC ID:	QYLEM7455T
Test Model:	EM7455
Received Date:	Oct. 03, 2018
Test Date:	Nov. 08, 2018 ~ Nov. 10, 2018
Issued Date:	Nov. 22, 2018
Applicant:	Getac Technology Corporation.
Address:	5F., Building A, No. 209, Sec.1, Nangang Rd.,Nangang Dist., Taipei City 11568, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
Test Location :	B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan, R.O.C
FCC Registration / Designation Number:	427177 / TW0011

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Release Control Record

Issue No.	Description	Date Issued
RF140313C20E-4	Original Release	Nov. 22, 2018

1 Certificate of Conformity

Product:	Wireless Module
Brand:	Sierra wireless Inc.
Test Model:	EM7455
Sample Status:	Identical Prototype
Applicant:	Getac Technology Corporation.
Test Date:	Nov. 08, 2018 ~ Nov. 10, 2018
Standards:	FCC Part 22, Subpart H

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

Prepared by : Flora Huang , **Date:** Nov. 22, 2018

Flora Huang / Specialist

Approved by : , **Date:** Nov. 22, 2018

Dylan Chiou / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 22 & Part 2			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 22.913 (a)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
---	Peak to Average Ratio	N/A	Refer to Note
2.1055 22.355	Frequency Stability	N/A	Refer to Note
2.1049	Occupied Bandwidth	N/A	Refer to Note
22.917	Band Edge Measurements	N/A	Refer to Note
2.1051 22.917	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 22.917	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -41.88dB at 1658.00MHz.

Note:

This report is a partial report. Therefore, only test item of Effective Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to TTS report no.:B15W50341-FCC-RF_Rev1 for module (Brand: Sierra Wireless Inc. , Model:EM7455)

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	Expended Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	2.0153 dB
	200MHz ~1000MHz	2.0224 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	1.0121 dB
	18GHz ~ 40GHz	1.1508 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Aug. 20, 2018	Aug. 19, 2019
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Jan. 11, 2018	Jan. 10, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-616	Dec. 14, 2017	Dec. 13, 2018
HORN Antenna ETS-Lindgren	3117	00143293	Dec. 13, 2017	Dec. 12, 2018
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 16, 2018	Apr. 15, 2019
Preamplifier Agilent	310N	187226	Jun. 19, 2018	Jun. 18, 2019
Preamplifier Agilent	83017A	MY39501357	Jun. 19, 2018	Jun. 18, 2019
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 19, 2018	Jun. 18, 2019
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 19, 2018	Jun. 18, 2019
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower&Turn Table Controller MF	MF-7802	NA	NA	NA
Communications Tester-Wireless Agilent	8960 Series 10	MY53201073	Jun. 28, 2017	Jun. 27, 2019
Radio Communication Analyzer Anritsu	MT8821C	6261786083	Dec. 21, 2017	Dec. 20, 2018
Temperature & Humidity Chamber	GTH-120-40-CP-AR	MAA1306-019	Sep. 05, 2018	Sep. 04, 2019

Note: 1. The calibration interval of the above test instruments is 12 / 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HsinTien Chamber 1.
3. The horn antenna and preamplifier (model: 83017A) are used only for the measurement of emission frequency above 1GHz if tested.
4. The IC Site Registration No. is 7450I-1.

3 General Information

3.1 General Description of EUT

Product	Wireless Module	
Brand	Sierra wireless Inc.	
Test Model	EM7455	
Status of EUT	Identical Prototype	
Power Supply Rating	3.3Vdc(Host equipment)	
Modulation Type	WCDMA	QPSK
	LTE	QPSK, 16QAM
Frequency Range	WCDMA	826.4 ~ 846.6 MHz
	LTE 5 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz
	LTE 5 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz
	LTE 5 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz
	LTE 5 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz
	LTE 26 (Channel Bandwidth: 1.4 MHz)	824.7 ~ 848.3 MHz
	LTE 26 (Channel Bandwidth: 3 MHz)	825.5 ~ 847.5 MHz
	LTE 26 (Channel Bandwidth: 5 MHz)	826.5 ~ 846.5 MHz
	LTE 26 (Channel Bandwidth: 10 MHz)	829 ~ 844 MHz
	LTE 26 (Channel Bandwidth: 15 MHz)	831.5 ~ 841.5 MHz
Max. ERP Power	WCDMA	180.22mW
	LTE 5 (Channel Bandwidth: 1.4 MHz)	78.74mW
	LTE 5 (Channel Bandwidth: 3 MHz)	80.50mW
	LTE 5 (Channel Bandwidth: 5 MHz)	81.25mW
	LTE 5 (Channel Bandwidth: 10 MHz)	82.00mW
	LTE 26 (Channel Bandwidth: 1.4 MHz)	91.37mW
	LTE 26 (Channel Bandwidth: 3 MHz)	92.21mW
	LTE 26 (Channel Bandwidth: 5 MHz)	93.07mW
	LTE 26 (Channel Bandwidth: 10 MHz)	93.93mW
	LTE 26 (Channel Bandwidth: 15 MHz)	94.80mW
Antenna Type	Refer to Note as below	
Accessory Device	Refer to Note as below	
Data Cable Supplied	Refer to Note as below	

Note:

1. The EUT is authorized for used in specific End-product. Please refer to below for more details.

Product	Brand	Model
Tablet PC	Getac	T800

2. The antenna information is listed as below.

Antenna Type	Model	Antenna Gain		
		WCDMA V	LTE Band 5	LTE Band 26
PIFA	Main: 422122800006 Aux.: 422122800007	Main: -0.96 Aux.: -3.35	Main: -0.96 Aux.: -3.35	Main: -0.96 Aux.: -3.35

3. The End-product contains following accessory devices.

Product	Brand	Model	Description
Adapter 1	CHICONY	A12-065N2A	I/P: 100-240Vac, 50-60Hz, 1.7A O/P: 19.0Vdc, 3.42A
Adapter 2	FSP GROUP INC.	FSP065-REB	I/P: 100-240Vac, 50-60Hz, 1.5A O/P: 19.0Vdc, 3.42A
Battery	Getac	BP2S2P2100S	7.4Vdc, 4200mAh, 32WAh
CPU	INTEL	Z8700	Speed:1.6GHz
LCD Panel	INNOLUX	HE080IA-06B	--
SSD	Hynix	H26M78103CCR	64GB
	Sandisk	SDIN8CE4-128G	128GB
OCD	FOXLINK	FO20FF-505H	Camera
		FO80AF-506H	Webcam
Digitizer	N/A	N/A	--
WWAN Module	Sierra	EM7455	--
GPS	GlobalSat	MT-5110C	--
WiFi& BT Module	Intel	7265NGW	--

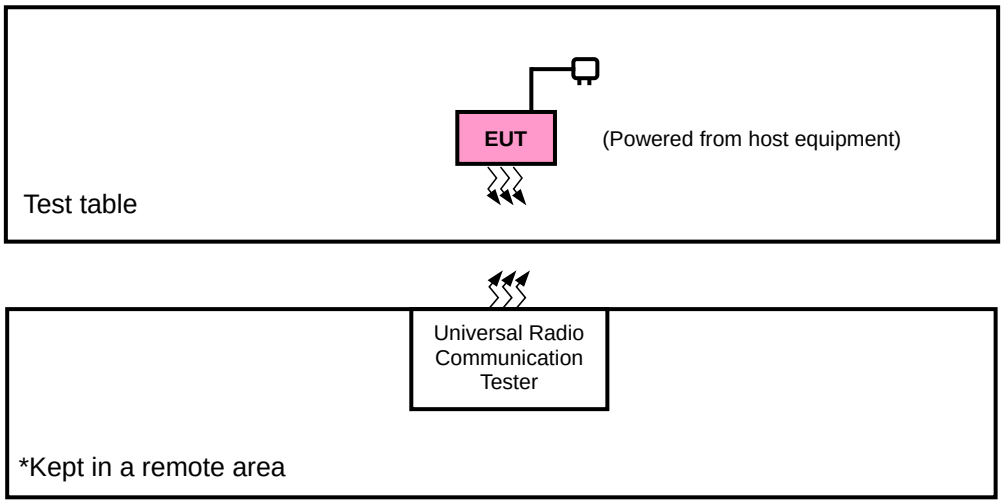
4. The End-product contains 4 SKU. The configurations of all SKU are listed as below. Only SKU D was tested and presented in the report.

Part	Brand	Model	Specification	Configuration			
				SKU A	SKU B	SKU C	SKU D
GPS	GlobalSat	MT-5110C	GPS	V	V	V	V
CPU	N/A	Z8700	Speed:1.6GHz	V	V	V	V
SSD	Hynix	H26M78103CCR	64GB	V			V
	Sandisk	SDIN8CE4-128G	128GB		V	V	
OCD	FOXLINK	FO20FF-505H	Camera	V	V	V	V
		FO80AF-506H	Webcam	V	V	V	V
Option Bay	N/A	N/A	LAN	V			V
	N/A	N/A	Barcode Reader		V	V	
WWAN Module	Sierra	EM7355	--	V	V	V	
	Sierra	EM7455	--				V
WiFi& BT Module	Intel	7265NGW	--	V	V	V	V
Digitizer	Hanvon	TP-018S-H1S1-GT	--			V	

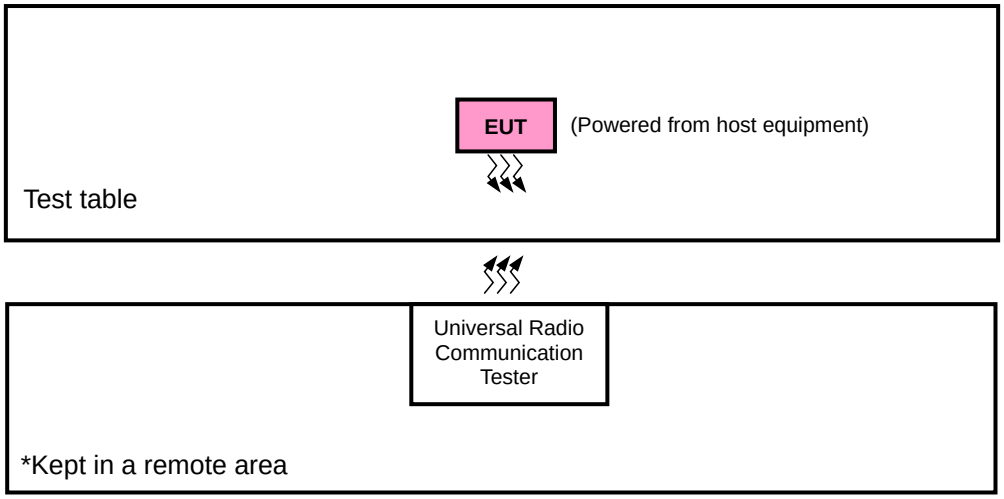
5. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test

<Radiated Emission Test>



<E.R.P. 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.

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	Radiated Emission
WCDMA	X-plane	X-axis
LTE Band 5	X-plane	X-axis
LTE Band 26	X-plane	X-axis

WCDMA

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	ERP	4132 to 4233	4132, 4182, 4233	WCDMA
-	Radiated Emission	4132 to 4233	4132, 4182, 4233	WCDMA

LTE Band 5

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK, 16QAM	3 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM	1 RB / 24 RB Offset
		20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM	1 RB / 24 RB Offset
-	Radiated Emission	20407 to 20643	20407, 20525, 20643	1.4MHz	QPSK	3 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5MHz	QPSK	1 RB / 24 RB Offset
		20450 to 20600	20450, 20525, 20600	10MHz	QPSK	1 RB / 24 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

LTE Band 26

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26805 to 27025	26805, 26915, 27025	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26840 to 26990	26840, 26915, 26990	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
-	Radiated Emission	26797 to 27033	26797, 26915, 27033	1.4MHz	QPSK	1 RB / 0 RB Offset
		26815 to 27015	26815, 26915, 27015	5MHz	QPSK	1 RB / 0 RB Offset
		26865 to 26965	26865, 26915, 26965	15MHz	QPSK	1 RB / 0 RB Offset

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25deg. C, 60%RH	120Vac, 60Hz	Karl Lee
Radiated Emission	25 deg. C, 60%RH	120Vac, 60Hz	Karl Lee

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

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

FCC 47 CFR Part 2
FCC 47 CFR Part 22
KDB 971168 D01 Power Meas License Digital Systems v03r01
ANSI/TIA/EIA-603-E 2016
ANSI 63.26-2015

Note: All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 7 watts e.r.p.

4.1.2 Test Procedures

EIRP / ERP Measurement:

a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5MHz for WCDMA, and 10MHz for LTE mode.

b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m (below or equal 1GHz) and/or 1.5 m (above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step b. Record the power level of S.G.

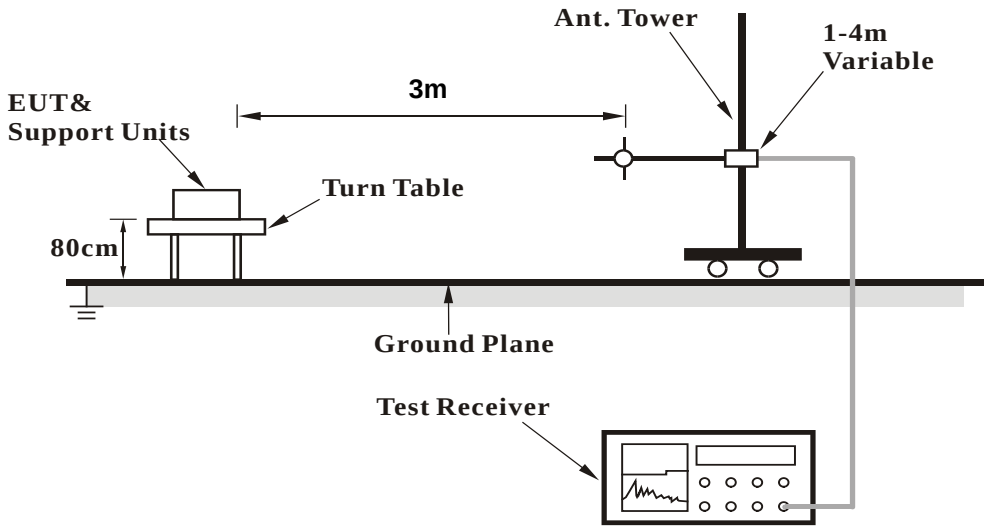
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn .E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15dB.

Conducted Power Measurement:

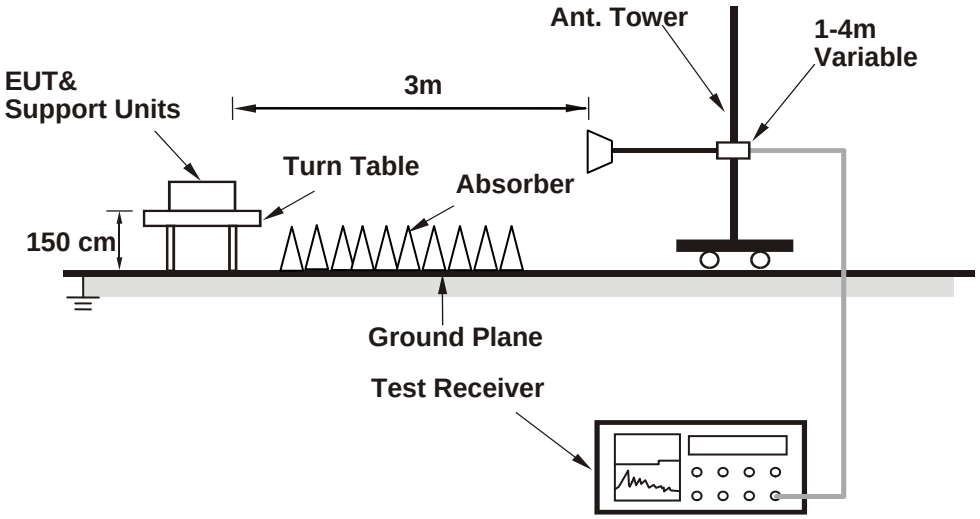
The EUT was set up for the maximum power with WCDMA and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 Test Setup

EIRP / ERP Measurement:
<Radiated Emission below or equal 1GHz>



<Radiated Emission above 1GHz>



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)

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	22.59	22.51	22.41
HSDPA Subtest-1	21.74	21.70	21.58
HSDPA Subtest-2	21.77	21.73	21.61
HSDPA Subtest-3	20.91	20.87	20.75
HSDPA Subtest-4	20.88	20.84	20.72
DC-HSDPA Subtest-1	21.69	21.65	21.53
DC-HSDPA Subtest-2	21.72	21.68	21.56
DC-HSDPA Subtest-3	20.86	20.82	20.70
DC-HSDPA Subtest-4	20.83	20.79	20.67
HSUPA Subtest-1	21.21	21.17	21.05
HSUPA Subtest-2	19.32	19.28	19.16
HSUPA Subtest-3	20.23	20.19	20.07
HSUPA Subtest-4	19.52	19.48	19.36
HSUPA Subtest-5	21.34	21.30	21.18

LTE Band 5

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		20450	20525	20600				Channel		20425	20525	20625	
		Frequency (MHz)		829.0	836.5	844.0				Frequency (MHz)		826.5	836.5	846.5	
10M	QPSK	1	0	22.15	22.08	22.13	0	5M	QPSK	1	0	22.12	22.07	22.01	0
		1	24	22.41	22.34	22.39	0			1	12	22.18	22.10	22.12	0
		1	49	22.08	22.01	22.06	0			1	24	22.19	22.11	22.05	0
		25	0	21.07	21.04	21.05	1			12	0	21.15	21.07	21.01	1
		25	12	21.16	21.09	21.14	1			12	6	21.05	21.03	21.02	1
		25	25	21.11	21.04	21.09	1			12	13	21.06	21.02	21.04	1
		50	0	21.14	21.07	21.12	1			25	0	21.02	21.03	21.05	1
	16QAM	1	0	21.08	21.05	21.06	1		16QAM	1	0	21.08	21.04	21.07	1
		1	24	21.30	21.16	21.21	1			1	12	21.15	21.04	21.08	1
		1	49	21.05	21.03	21.06	1			1	24	21.19	21.20	21.12	1
		25	0	20.03	20.05	20.04	2			12	0	20.15	20.13	20.16	2
		25	12	20.08	20.02	20.07	2			12	6	20.08	20.07	20.02	2
		25	25	20.04	20.06	20.08	2			12	13	20.16	20.07	20.10	2
		50	0	20.11	20.07	20.12	2			25	0	20.12	20.17	20.16	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		20415	20525	20635				Channel		20407	20525	20643	
		Frequency (MHz)		825.5	836.5	847.5				Frequency (MHz)		824.7	836.5	848.3	
3M	QPSK	1	0	22.29	22.09	22.15	0	1.4M	QPSK	1	0	22.08	22.06	22.10	0
		1	7	22.21	22.11	22.18	0			1	2	22.18	22.15	22.16	0
		1	14	22.01	22.03	22.02	0			1	5	22.13	22.05	22.10	0
		8	0	21.15	21.05	21.14	1			3	0	22.11	22.01	22.04	0
		8	3	21.05	21.02	21.01	1			3	1	22.23	22.03	22.07	0
		8	7	21.07	21.03	21.09	1			3	3	22.17	22.03	22.08	0
		15	0	21.10	21.05	21.09	1			6	0	21.06	21.08	21.10	1
	16QAM	1	0	21.15	21.11	21.08	1		16QAM	1	0	21.15	21.05	21.01	1
		1	7	21.07	21.15	21.09	1			1	2	21.24	21.13	21.09	1
		1	14	21.12	21.09	21.17	1			1	5	21.10	21.01	21.12	1
		8	0	20.07	20.13	20.06	2			3	0	21.11	21.03	21.14	1
		8	3	20.08	20.11	20.01	2			3	1	21.14	21.19	21.25	1
		8	7	20.15	20.09	20.16	2			3	3	21.15	21.06	21.20	1
		15	0	20.07	20.13	20.05	2			6	0	20.02	20.04	20.06	2

LTE Band 26

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26865	26915	26965	
		Frequency (MHz)		831.5	836.5	841.5	
15M	QPSK	1	0	22.89	22.62	22.52	0
		1	37	22.37	22.20	22.11	0
		1	74	22.30	22.13	22.13	0
		36	0	21.58	21.41	21.31	1
		36	19	21.55	21.38	21.28	1
		36	39	21.37	21.20	21.11	1
		75	0	21.47	21.30	21.20	1
	16QAM	1	0	21.56	21.32	21.27	1
		1	37	21.35	21.18	21.15	1
		1	74	21.20	21.05	21.13	1
		36	0	20.54	20.35	20.27	2
		36	19	20.55	20.34	20.18	2
		36	39	20.30	20.20	20.15	2
		75	0	20.41	20.22	20.14	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26840	26915	26990	
		Frequency (MHz)		829.0	836.5	844.0	
10M	QPSK	1	0	22.49	22.32	22.22	0
		1	24	22.26	22.09	22.14	0
		1	49	22.16	22.11	22.17	0
		25	0	21.51	21.39	21.11	1
		25	12	21.48	21.27	21.14	1
		25	25	21.33	21.09	21.13	1
		50	0	21.32	21.14	21.17	1
	16QAM	1	0	21.32	21.39	21.18	1
		1	24	21.11	21.13	21.11	1
		1	49	21.14	21.18	21.19	1
		25	0	20.43	20.32	20.24	2
		25	12	20.41	20.15	20.15	2
		25	25	20.29	20.12	20.17	2
		50	0	20.31	20.13	20.14	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26815	26915	27015	
		Frequency (MHz)		826.5	836.5	846.5	
5M	QPSK	1	0	22.57	22.33	22.18	0
		1	12	22.29	22.17	22.16	0
		1	24	22.13	22.05	22.11	0
		12	0	21.53	21.34	21.23	1
		12	6	21.43	21.23	21.14	1
		12	13	21.32	21.05	21.11	1
		25	0	21.29	21.14	21.08	1
	16QAM	1	0	21.29	21.20	21.25	1
		1	12	21.17	21.09	21.15	1
		1	24	21.15	21.08	21.13	1
		12	0	20.54	20.22	20.17	2
		12	6	20.40	20.25	20.12	2
		12	13	20.06	20.05	20.11	2
		25	0	20.26	20.10	20.19	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26805	26915	27025	
		Frequency (MHz)		825.5	836.5	847.5	
3M	QPSK	1	0	22.54	22.23	22.20	1
		1	7	22.24	22.13	22.12	1
		1	14	22.18	22.07	22.11	1
		8	0	21.42	21.28	21.22	3
		8	3	21.46	21.24	21.16	3
		8	7	21.21	21.06	21.12	3
		15	0	21.40	21.14	21.11	6
	16QAM	1	0	21.34	21.25	21.24	1
		1	7	21.19	21.04	21.22	1
		1	14	21.21	21.12	21.16	1
		8	0	20.34	20.15	20.15	2
		8	3	20.49	20.23	20.19	2
		8	7	20.21	20.02	20.11	2
		15	0	20.18	20.16	20.12	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26797	26915	27033	
		Frequency (MHz)		824.7	836.5	848.3	
1.4M	QPSK	1	0	22.44	22.35	22.17	0
		1	2	22.17	22.08	22.12	0
		1	5	22.19	22.08	22.11	0
		3	0	22.34	22.31	22.27	0
		3	1	22.38	22.23	22.18	0
		3	3	22.18	22.06	22.13	0
		6	0	21.31	21.22	21.14	1
	16QAM	1	0	21.40	21.27	21.14	1
		1	2	21.24	21.15	21.18	1
		1	5	21.21	21.11	21.13	1
		3	0	21.29	21.25	21.21	1
		3	1	21.42	21.17	21.12	1
		3	3	21.18	21.06	21.13	1
		6	0	20.27	20.19	21.17	2

ERP Power (dBm)

WCDMA							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor(dB)**	**ERP(dBm)**	**ERP(mW)**	**Polarization (H/V)**
X	4132	826.4	-6.50	31.208	22.56	180.22	H
	4182	836.4	-6.64	31.3	22.51	178.24	
	4233	846.6	-6.60	31.222	22.47	176.69	
	4132	826.4	-10.76	31.504	18.59	72.34	V
	4182	836.4	-10.43	31.117	18.54	71.40	
	4233	846.6	-11.29	31.922	18.48	70.50	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 5							
Channel Bandwidth: 1.4MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor(dB)**	**ERP(dBm)**	**ERP(mW)**	**Polarization (H/V)**
X	20407	824.7	-10.14	31.208	18.92	77.95	H
	20525	836.5	-10.21	31.3	18.94	78.34	
	20643	848.3	-10.11	31.222	18.96	78.74	
	20407	824.7	-14.31	31.504	15.04	31.94	V
	20525	836.5	-14.04	31.117	14.93	31.10	
	20643	848.3	-14.77	31.922	15.00	31.64	
Channel Bandwidth: 1.4MHz / 16QAM							
X	20407	824.7	-11.15	31.208	17.91	61.77	H
	20525	836.5	-11.21	31.3	17.94	62.23	
	20643	848.3	-11.12	31.222	17.95	62.40	
	20407	824.7	-15.32	31.504	14.03	25.32	V
	20525	836.5	-15.05	31.117	13.92	24.64	
	20643	848.3	-15.78	31.922	13.99	25.07	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 5							
Channel Bandwidth: 3MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor(dB)	ERP(dBm)	ERP(mW)	Polarization (H/V)
X	20415	825.5	-10.00	31.208	19.06	80.50	H
	20525	836.5	-10.18	31.3	18.97	78.89	
	20635	847.5	-10.07	31.222	19.00	79.47	
	20415	825.5	-14.27	31.504	15.08	32.24	V
	20525	836.5	-14.00	31.117	14.97	31.38	
	20635	847.5	-14.74	31.922	15.03	31.86	
Channel Bandwidth: 3MHz / 16QAM							
X	20415	825.5	-11.00	31.208	18.06	63.94	H
	20525	836.5	-11.19	31.3	17.96	62.52	
	20635	847.5	-11.08	31.222	17.99	62.98	
	20415	825.5	-15.28	31.504	14.07	25.55	V
	20525	836.5	-15.01	31.117	13.96	24.87	
	20635	847.5	-15.75	31.922	14.02	25.25	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 5							
Channel Bandwidth: 5MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor(dB)	ERP(dBm)	ERP(mW)	Polarization (H/V)
X	20425	826.5	-9.96	31.208	19.10	81.25	H
	20525	836.5	-10.14	31.3	19.01	79.62	
	20625	846.5	-10.03	31.222	19.04	80.20	
	20425	826.5	-14.23	31.504	15.12	32.54	V
	20525	836.5	-13.97	31.117	15.00	31.60	
	20625	846.5	-14.71	31.922	15.06	32.08	
Channel Bandwidth: 5MHz / 16QAM							
X	20425	826.5	-10.97	31.208	18.09	64.39	H
	20525	836.5	-11.15	31.3	18.00	63.10	
	20625	846.5	-11.04	31.222	18.03	63.56	
	20425	826.5	-15.24	31.504	14.11	25.79	V
	20525	836.5	-14.97	31.117	14.00	25.10	
	20625	846.5	-15.72	31.922	14.05	25.42	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 5							
Channel Bandwidth: 10MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor(dB)**	**ERP(dBm)**	**ERP(mW)**	**Polarization (H/V)**
X	20450	829.0	-9.92	31.208	19.14	82.00	H
	20525	836.5	-10.10	31.3	19.05	80.35	
	20600	844.0	-9.99	31.222	19.08	80.95	
	20450	829.0	-14.20	31.504	15.15	32.76	V
	20525	836.5	-13.93	31.117	15.04	31.89	
	20600	844.0	-14.67	31.922	15.10	32.37	
Channel Bandwidth: 10 MHz / 16QAM							
X	20425	826.5	-10.93	31.208	18.13	64.98	H
	20525	836.5	-11.11	31.3	18.04	63.68	
	20625	846.5	-10.99	31.222	18.08	64.30	
	20425	826.5	-15.21	31.504	14.14	25.97	V
	20525	836.5	-14.94	31.117	14.03	25.28	
	20625	846.5	-15.68	31.922	14.09	25.66	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 26							
Channel Bandwidth: 1.4MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor(dB)	ERP(dBm)	ERP(mW)	Polarization (H/V)
X	26797	824.7	-9.45	31.208	19.61	91.37	H
	26915	836.5	-9.60	31.3	19.55	90.16	
	27033	848.3	-9.57	31.222	19.50	89.17	
	26797	824.7	-14.76	31.504	14.59	28.80	V
	26915	836.5	-14.45	31.117	14.52	28.29	
	27033	848.3	-15.32	31.922	14.45	27.87	
Channel Bandwidth: 1.4MHz / 16QAM							
X	26797	824.7	-10.46	31.208	18.60	72.41	H
	26915	836.5	-10.61	31.3	18.54	71.45	
	27033	848.3	-10.58	31.222	18.49	70.66	
	26797	824.7	-15.77	31.504	13.58	22.82	V
	26915	836.5	-15.46	31.117	13.51	22.42	
	27033	848.3	-16.32	31.922	13.45	22.14	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 26							
Channel Bandwidth: 3MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor(dB)	ERP(dBm)	ERP(mW)	Polarization (H/V)
X	26805	825.5	-9.41	31.208	19.65	92.21	H
	26915	836.5	-9.56	31.3	19.59	90.99	
	27025	847.5	-9.54	31.222	19.53	89.78	
	26805	825.5	-14.72	31.504	14.63	29.07	V
	26915	836.5	-14.41	31.117	14.56	28.56	
	27025	847.5	-15.28	31.922	14.49	28.13	
Channel Bandwidth: 3MHz / 16QAM							
X	26805	825.5	-10.42	31.208	18.64	73.08	H
	26915	836.5	-10.56	31.3	18.59	72.28	
	27025	847.5	-10.54	31.222	18.53	71.32	
	26805	825.5	-15.72	31.504	13.63	23.09	V
	26915	836.5	-15.42	31.117	13.55	22.63	
	27025	847.5	-16.29	31.922	13.48	22.29	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 26							
Channel Bandwidth: 5MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor(dB)	ERP(dBm)	ERP(mW)	Polarization (H/V)
X	26815	826.5	-9.37	31.208	19.69	93.07	H
	26915	836.5	-9.52	31.3	19.63	91.83	
	27015	846.5	-9.51	31.222	19.56	90.41	
	26815	826.5	-14.69	31.504	14.66	29.27	V
	26919	836.5	-14.37	31.117	14.60	28.82	
	27015	846.5	-15.24	31.922	14.53	28.39	
Channel Bandwidth: 5MHz / 16QAM							
X	26815	826.5	-10.38	31.208	18.68	73.76	H
	26915	836.5	-10.53	31.3	18.62	72.78	
	27015	846.5	-10.52	31.222	18.55	71.65	
	26815	826.5	-15.70	31.504	13.65	23.20	V
	26919	836.5	-15.38	31.117	13.59	22.84	
	27015	846.5	-16.25	31.922	13.52	22.50	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 26							
Channel Bandwidth: 10MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor(dB)	ERP(dBm)	ERP(mW)	Polarization (H/V)
X	26840	829.0	-9.33	31.208	19.73	93.93	H
	26915	836.5	-9.49	31.3	19.66	92.47	
	26990	844.0	-9.47	31.222	19.60	91.24	
	26840	829.0	-14.66	31.504	14.69	29.47	V
	26919	836.5	-14.33	31.117	14.64	29.09	
	26990	844.0	-15.20	31.922	14.57	28.65	
Channel Bandwidth: 10MHz / 16QAM							
X	26840	829.0	-10.34	31.208	18.72	74.44	H
	26915	836.5	-10.50	31.3	18.65	73.28	
	26990	844.0	-10.47	31.222	18.60	72.48	
	26840	829.0	-15.67	31.504	13.68	23.36	V
	26919	836.5	-15.34	31.117	13.63	23.05	
	26990	844.0	-16.21	31.922	13.56	22.71	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

LTE Band 26							
Channel Bandwidth: 15MHz / QPSK							
Plane	**Channel**	**Frequency (MHz)**	**Reading (dBm)**	**Correction Factor(dB)**	**ERP(dBm)**	**ERP(mW)**	**Polarization (H/V)**
X	26865	831.5	-9.29	31.208	19.77	94.80	H
	26915	836.5	-9.46	31.3	19.69	93.11	
	26965	841.5	-9.43	31.222	19.64	92.09	
	26865	831.5	-14.62	31.504	14.73	29.74	V
	26915	836.5	-14.29	31.117	14.68	29.36	
	26965	841.5	-15.16	31.922	14.61	28.92	
Channel Bandwidth: 15MHz / 16QAM							
X	26865	831.5	-10.30	31.208	18.76	75.13	H
	26915	836.5	-10.46	31.3	18.69	73.96	
	26965	841.5	-10.44	31.222	18.63	72.98	
	26865	831.5	-15.63	31.504	13.72	23.57	V
	26915	836.5	-15.30	31.117	13.67	23.26	
	26965	841.5	-16.16	31.922	13.61	22.97	

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

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 -13dBm.

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 0.8m (below or equal 1GHz) and/or 1.5 m (above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step a. Record the power level of S.G
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.
d. 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 - 2.15dB.

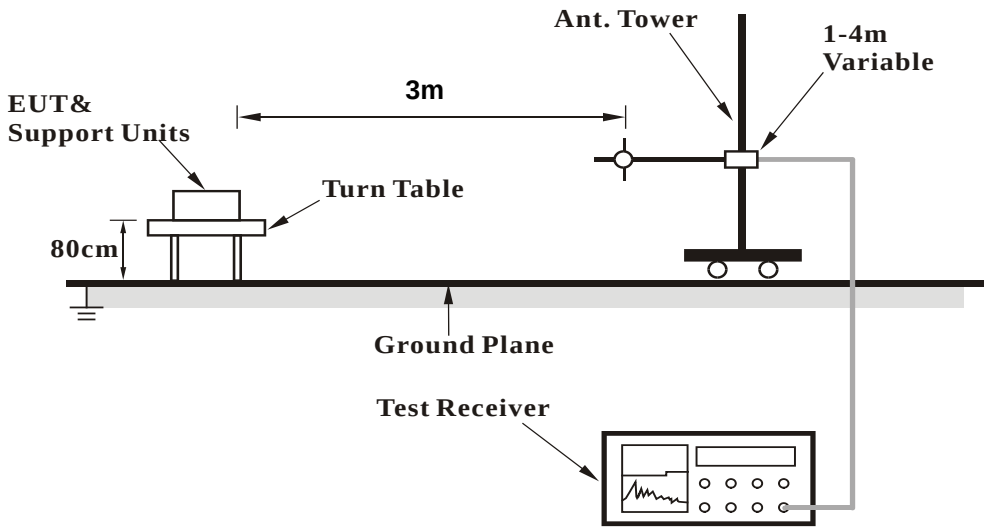
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.2.3 Deviation from Test Standard

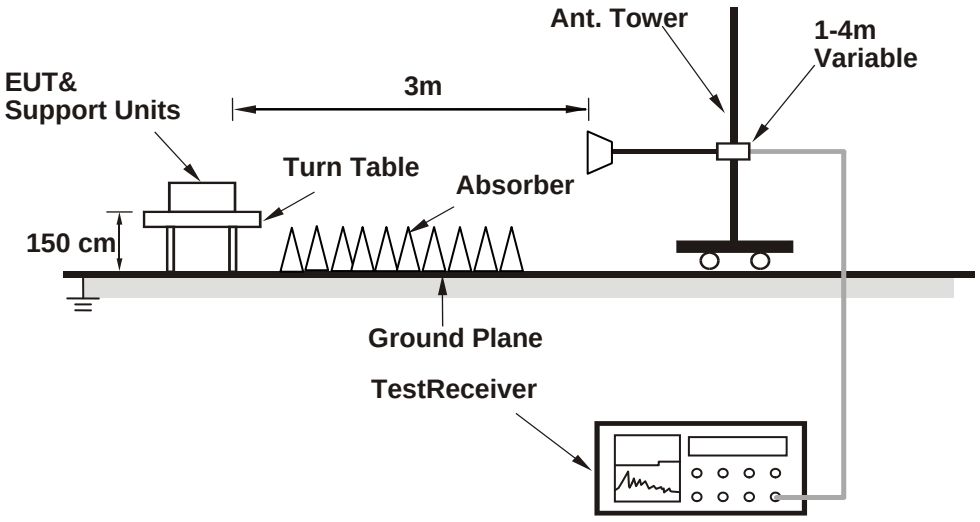
No deviation.

4.2.4 Test Setup

<Radiated Emission below or equal 1GHz>



<Radiated Emission above 1GHz>



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

4.2.5 Test Results

WCDMA:

Low Channel

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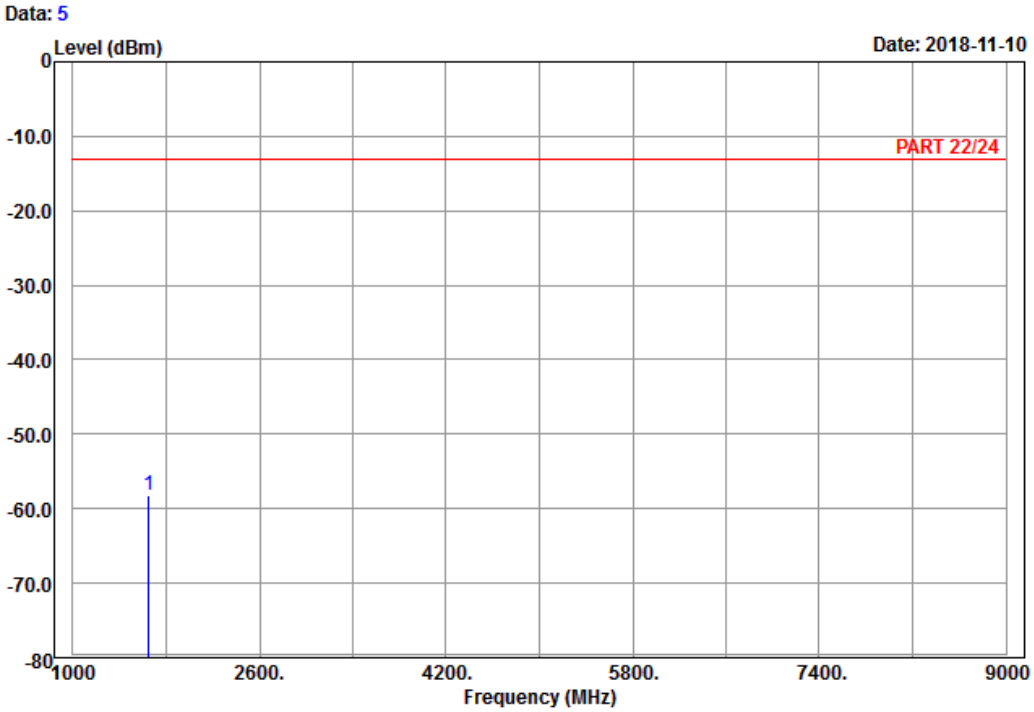
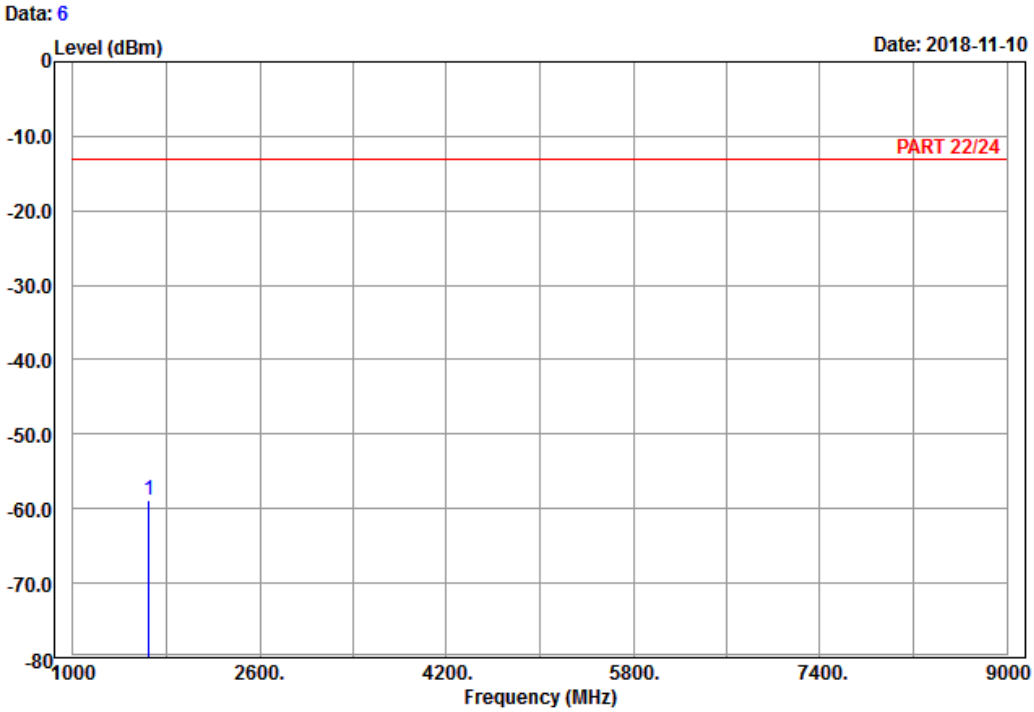


Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : Band V_Link_CH4132
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1652.80	-58.14	-65.87	-13.00	-45.14	7.73	Peak



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_CH4132
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1652.80	-58.84	-66.57	-13.00	-45.84	7.73	Peak

Middle Channel

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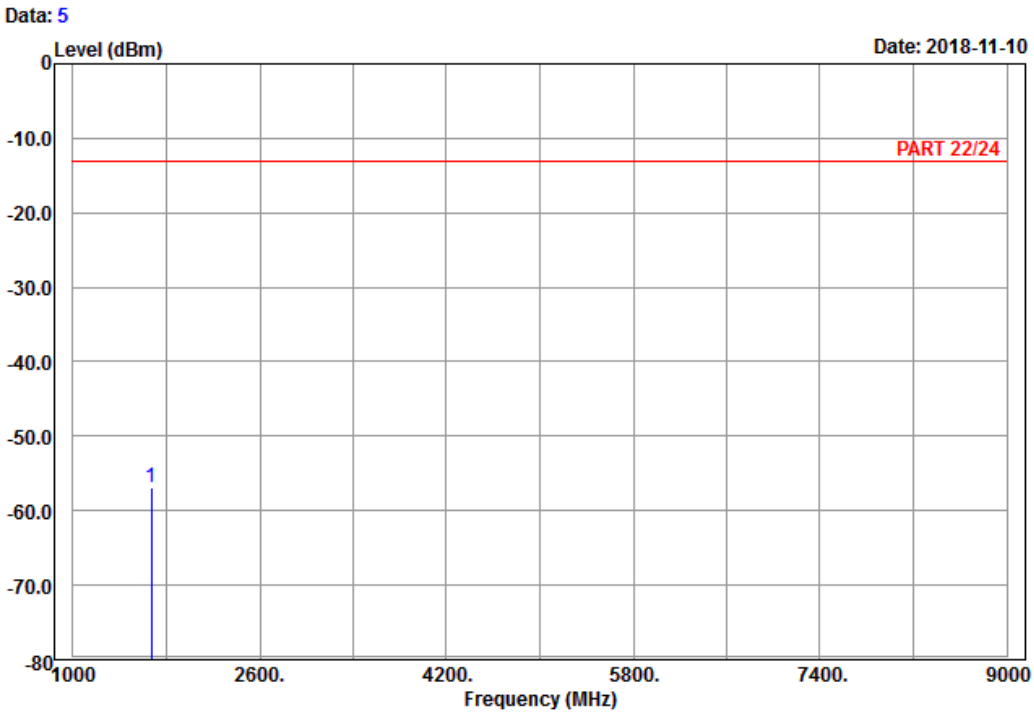
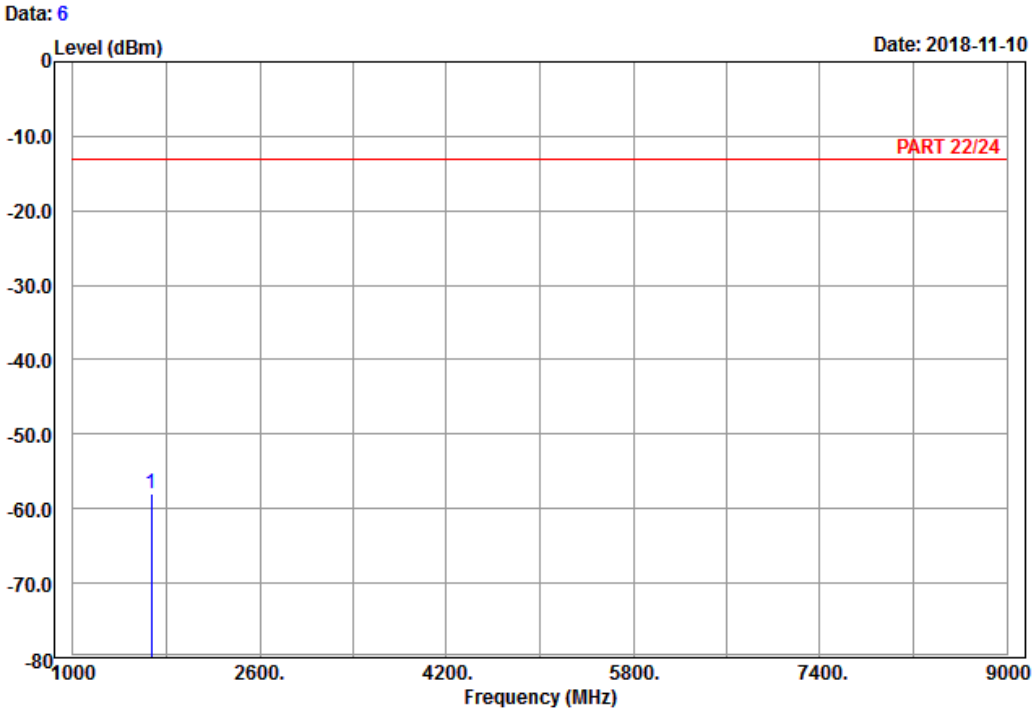


Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : Band V_Link_CH4182
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1672.80	-56.95	-64.86	-13.00	-43.95	7.91	Peak



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_CH4182
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1672.80	-58.03	-65.94	-13.00	-45.03	7.91	Peak

High Channel

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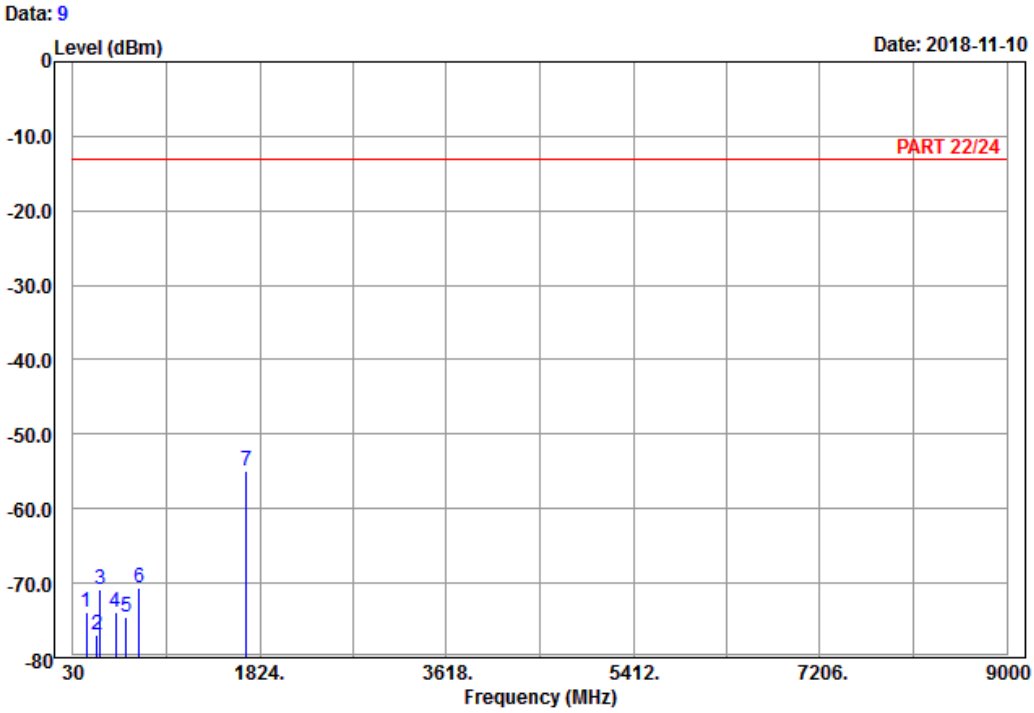
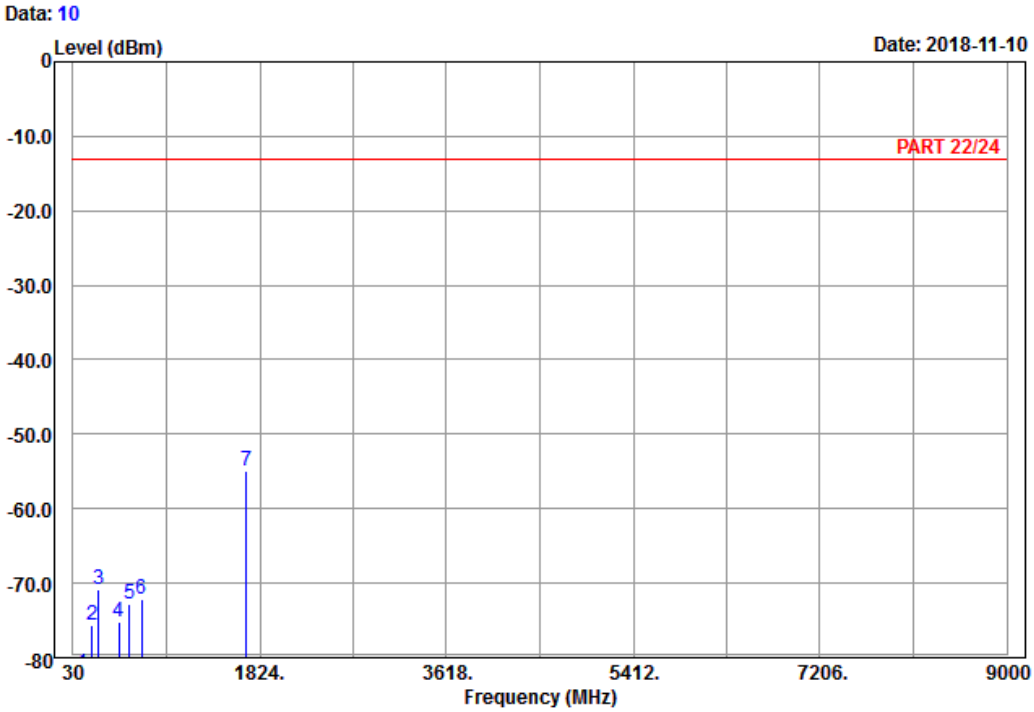


Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : Band V_Link_CH4233
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	161.22	-73.89	-66.32	-13.00	-60.89	-7.57	Peak
2	260.04	-76.95	-71.35	-13.00	-63.95	-5.60	Peak
3	287.85	-70.77	-64.92	-13.00	-57.77	-5.85	Peak
4	436.50	-73.85	-70.30	-13.00	-60.85	-3.55	Peak
5	542.90	-74.59	-72.43	-13.00	-61.59	-2.16	Peak
6	664.00	-70.61	-70.41	-13.00	-57.61	-0.20	Peak
7 pp	1693.20	-55.01	-63.15	-13.00	-42.01	8.14	Peak

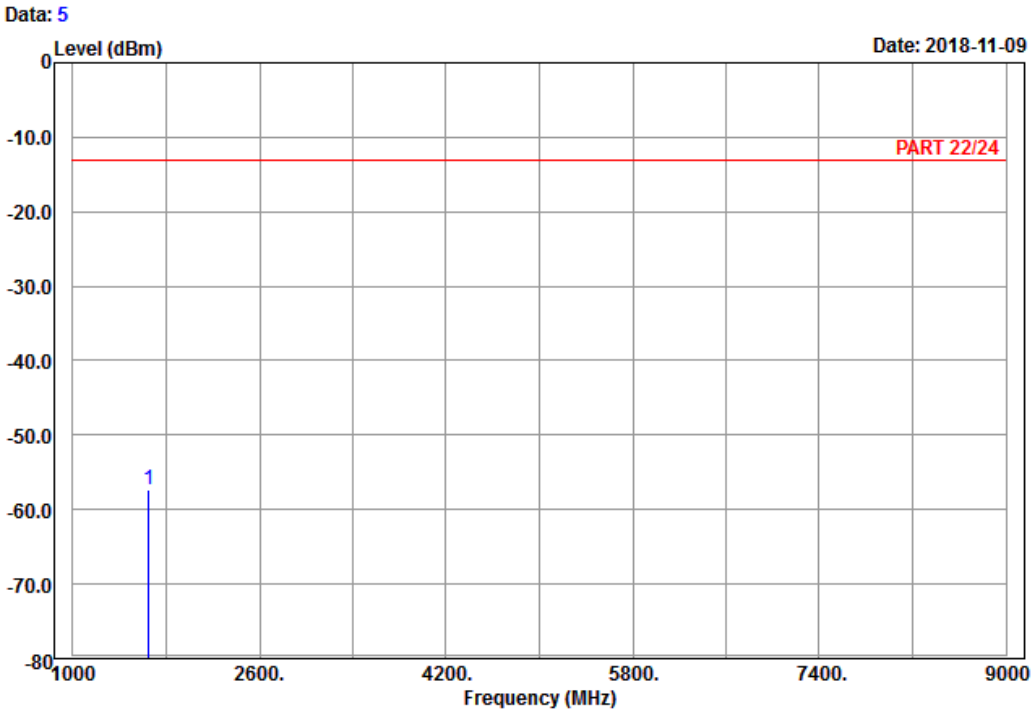


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_CH4233
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	118.56	-82.07	-73.69	-13.00	-69.07	-8.38	Peak
2	213.33	-75.68	-69.68	-13.00	-62.68	-6.00	Peak
3	273.00	-70.81	-65.09	-13.00	-57.81	-5.72	Peak
4	473.60	-75.16	-70.65	-13.00	-62.16	-4.51	Peak
5	570.90	-72.70	-71.92	-13.00	-59.70	-0.78	Peak
6	690.60	-72.07	-71.74	-13.00	-59.07	-0.33	Peak
7 pp	1693.20	-54.92	-63.06	-13.00	-41.92	8.14	Peak

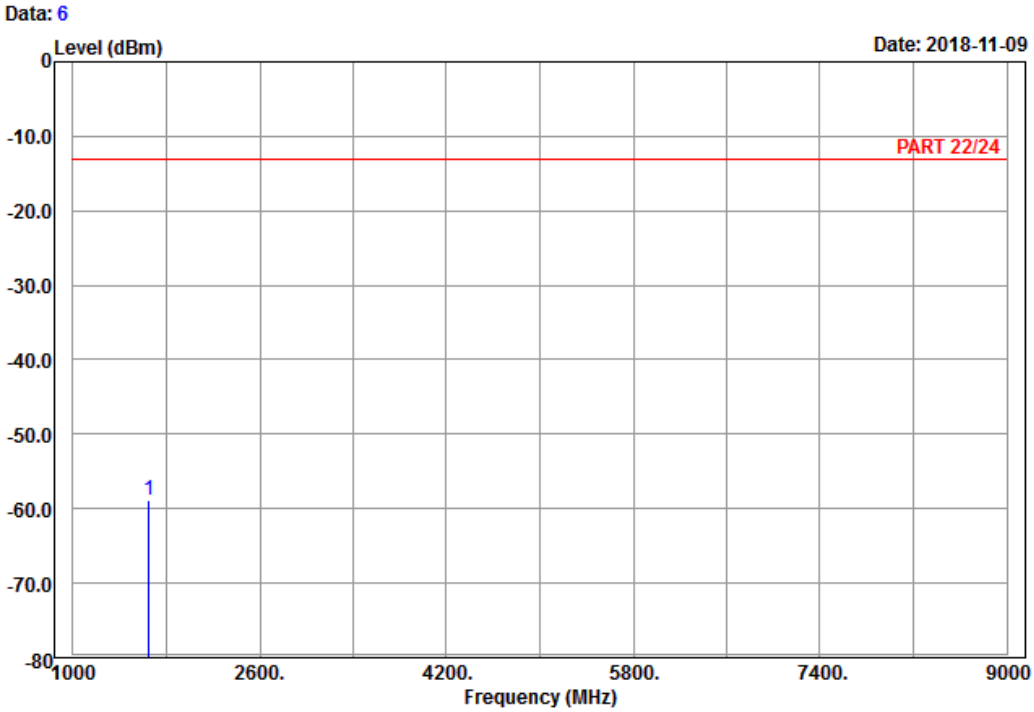
LTE Band 5
Channel Bandwidth:1.4MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20407
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1649.40	-57.40	-65.13	-13.00	-44.40	7.73	Peak

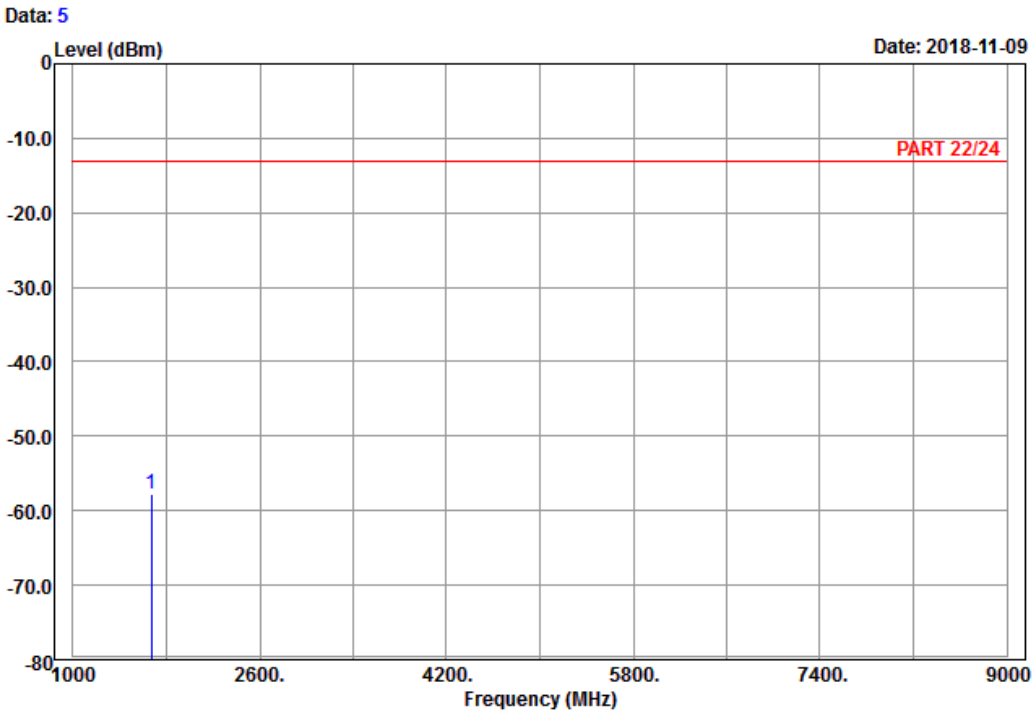


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20407
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1649.40	-58.76	-66.49	-13.00	-45.76	7.73	Peak

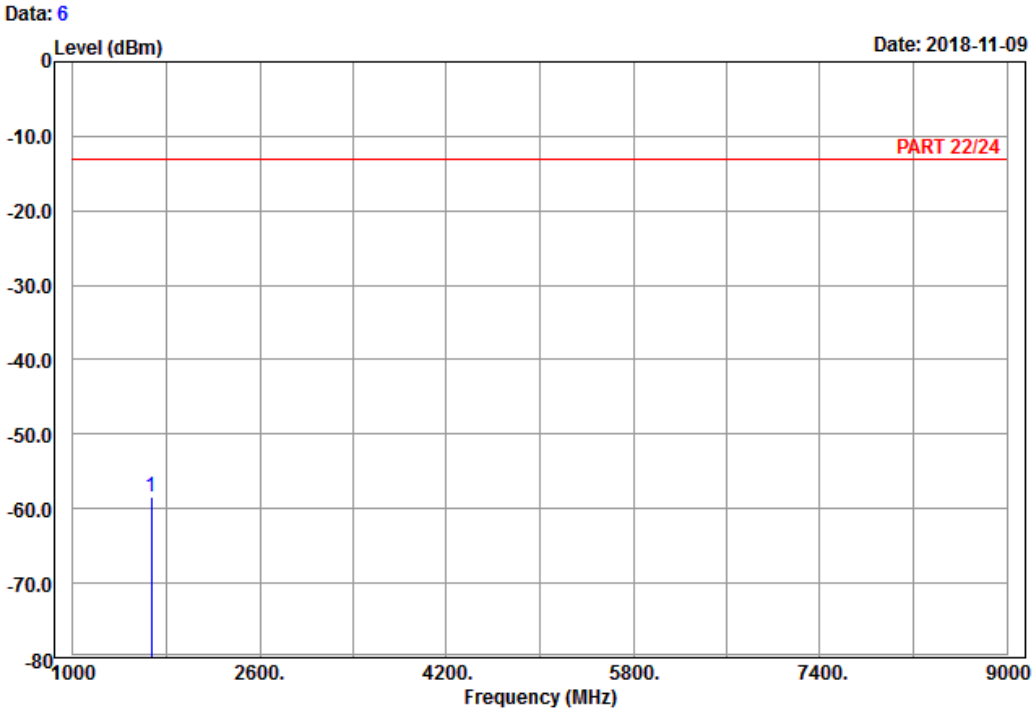
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20525
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-57.82	-65.73	-13.00	-44.82	7.91	Peak

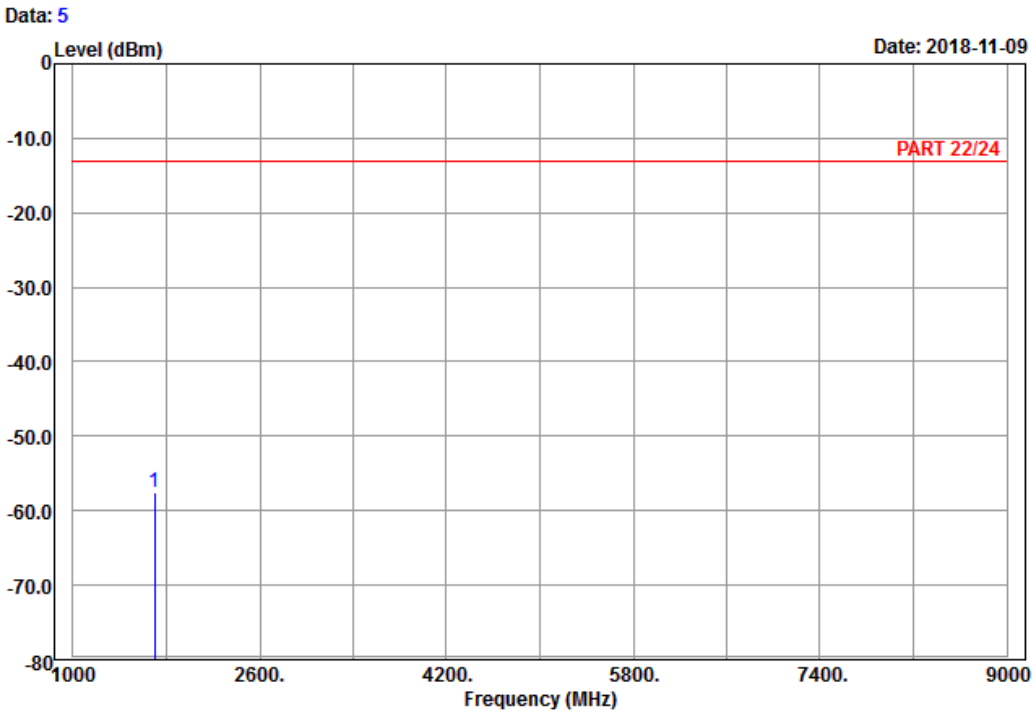


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20525
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-58.41	-66.32	-13.00	-45.41	7.91	Peak

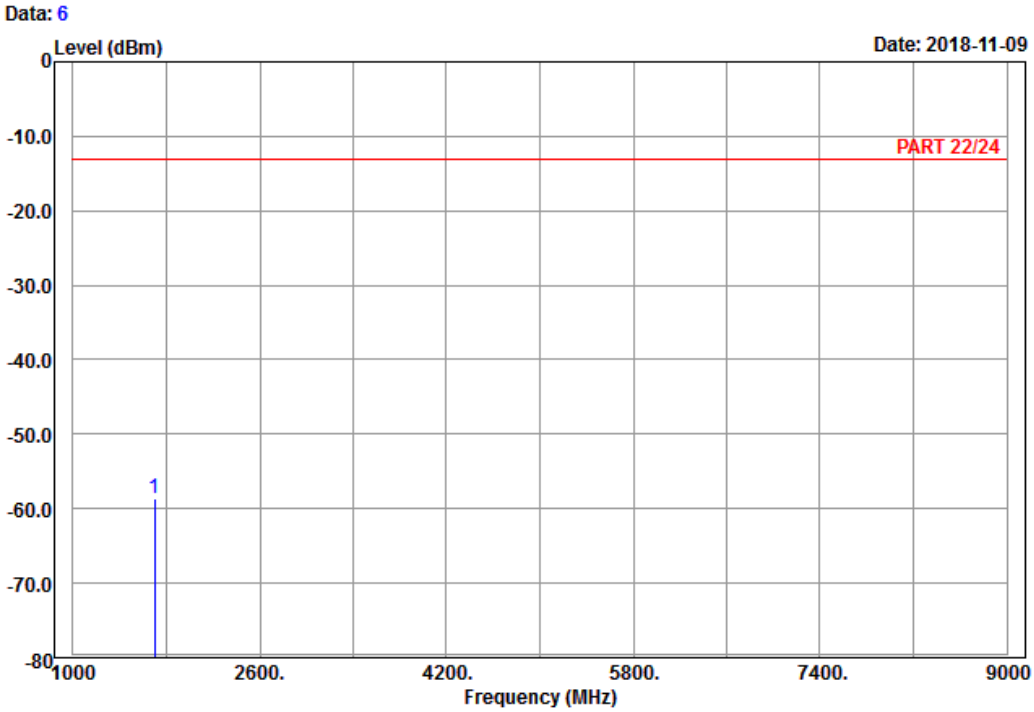
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20643
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1696.60	-57.64	-65.78	-13.00	-44.64	8.14	Peak

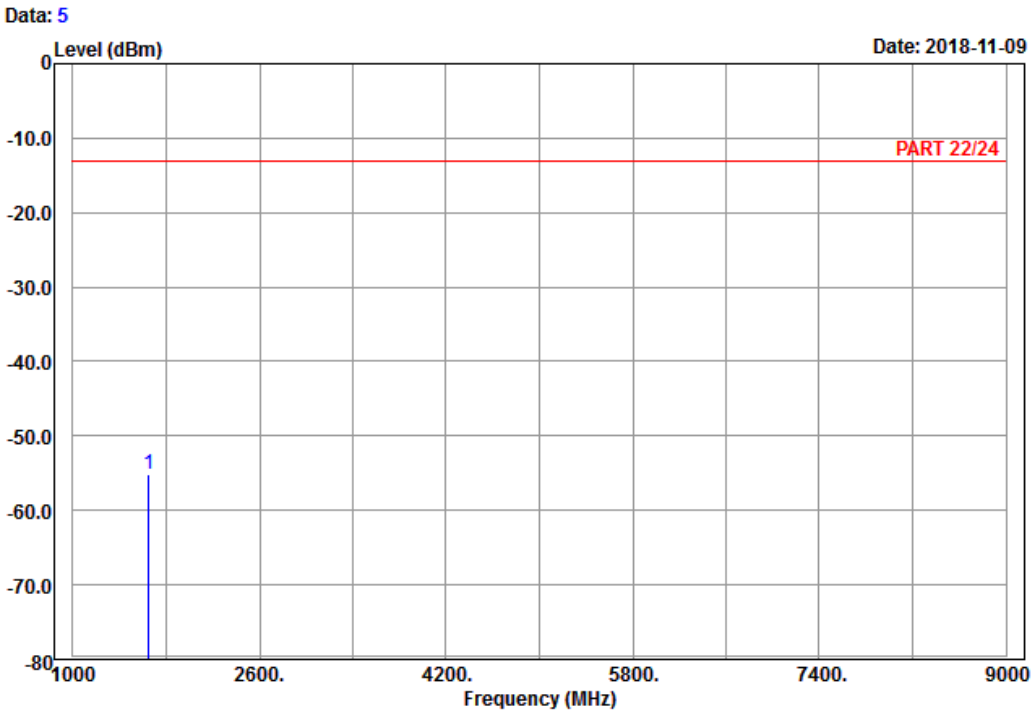


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20643
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1696.60	-58.55	-66.69	-13.00	-45.55	8.14	Peak

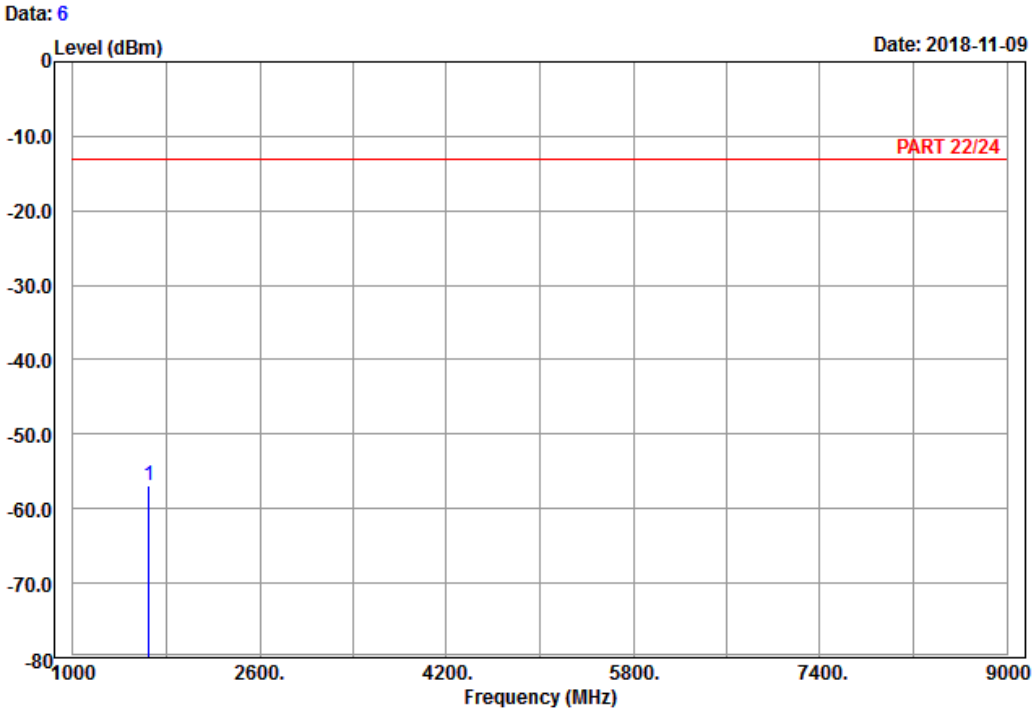
Channel Bandwidth:5 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20425
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1653.00	-55.24	-62.97	-13.00	-42.24	7.73	Peak

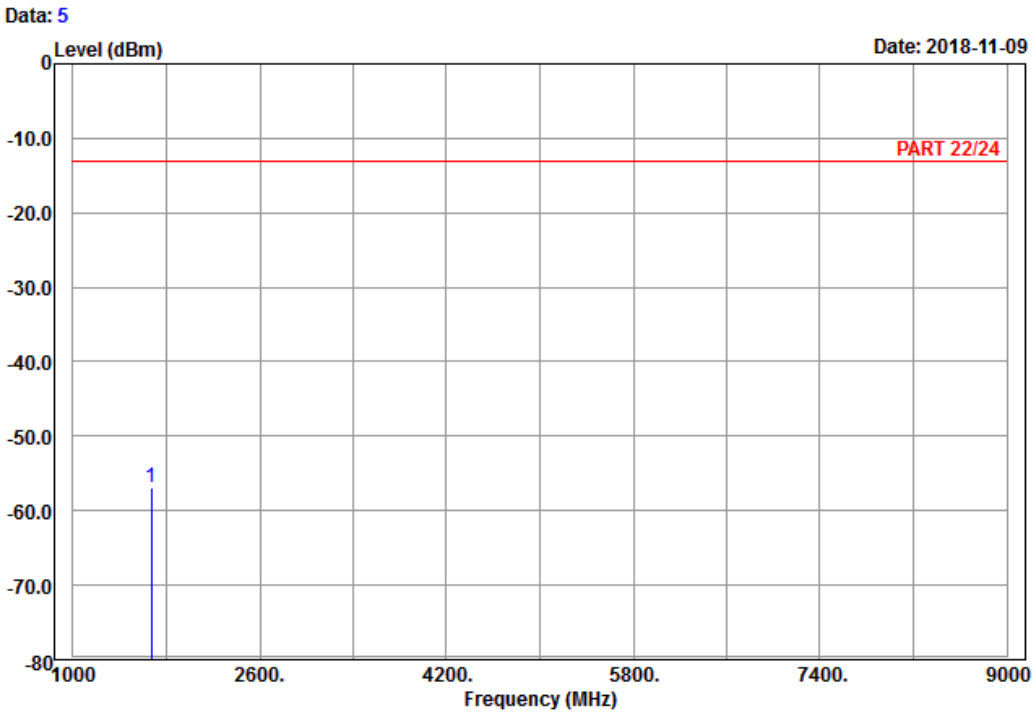


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20425
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1653.00	-56.85	-64.58	-13.00	-43.85	7.73	Peak

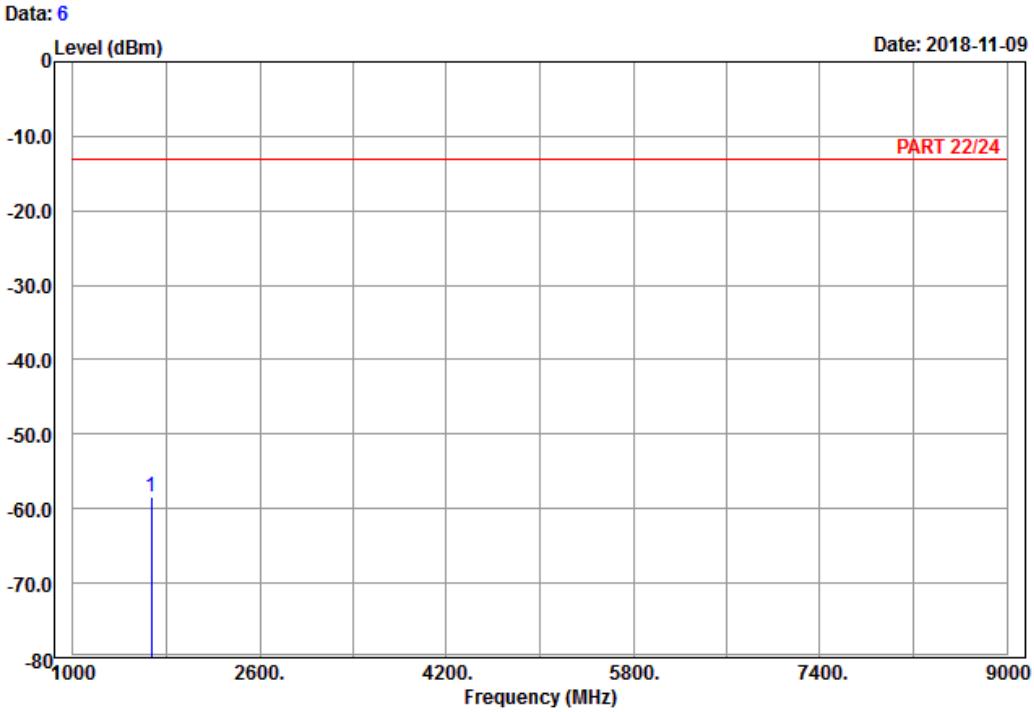
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20525
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-56.92	-64.83	-13.00	-43.92	7.91	Peak

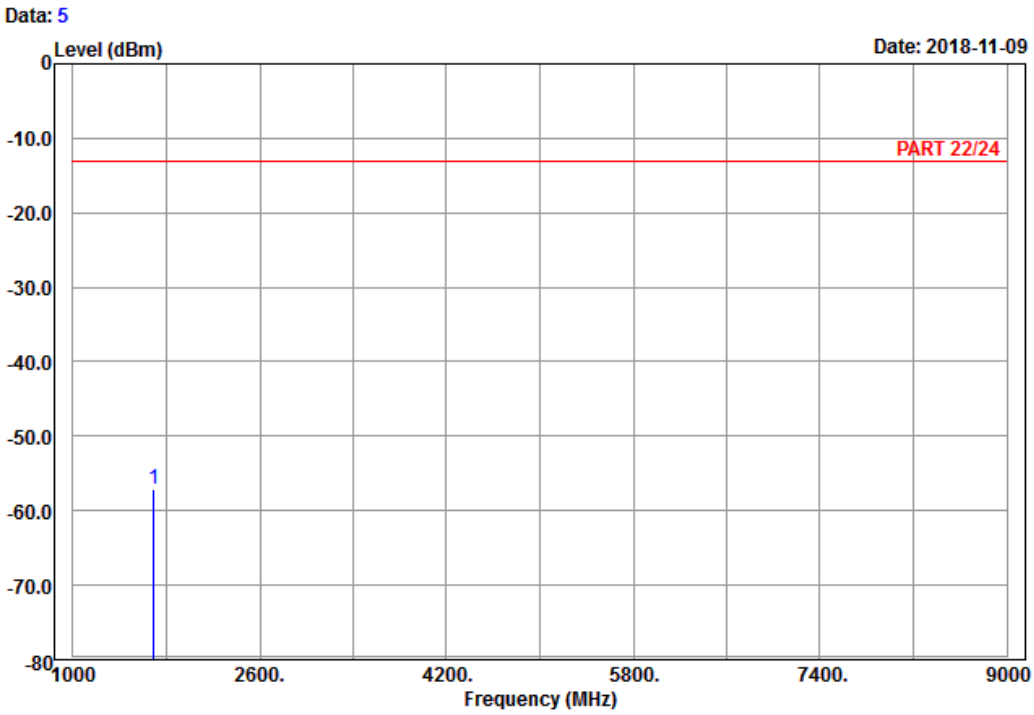


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20525
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-58.44	-66.35	-13.00	-45.44	7.91	Peak

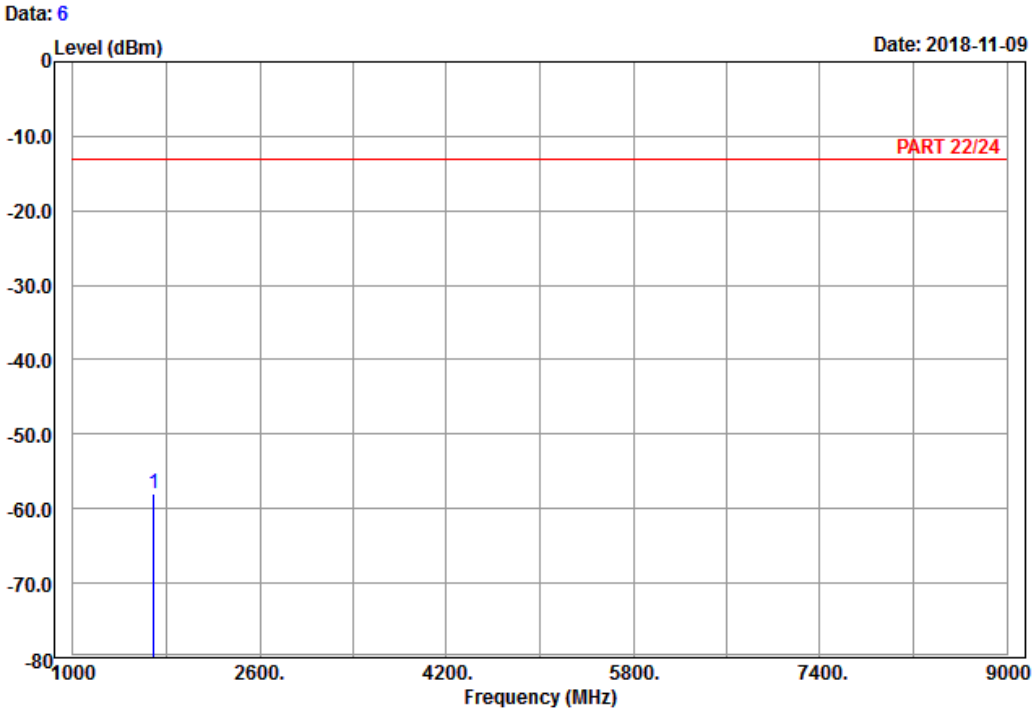
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20625
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1693.00	-57.15	-65.17	-13.00	-44.15	8.02	Peak

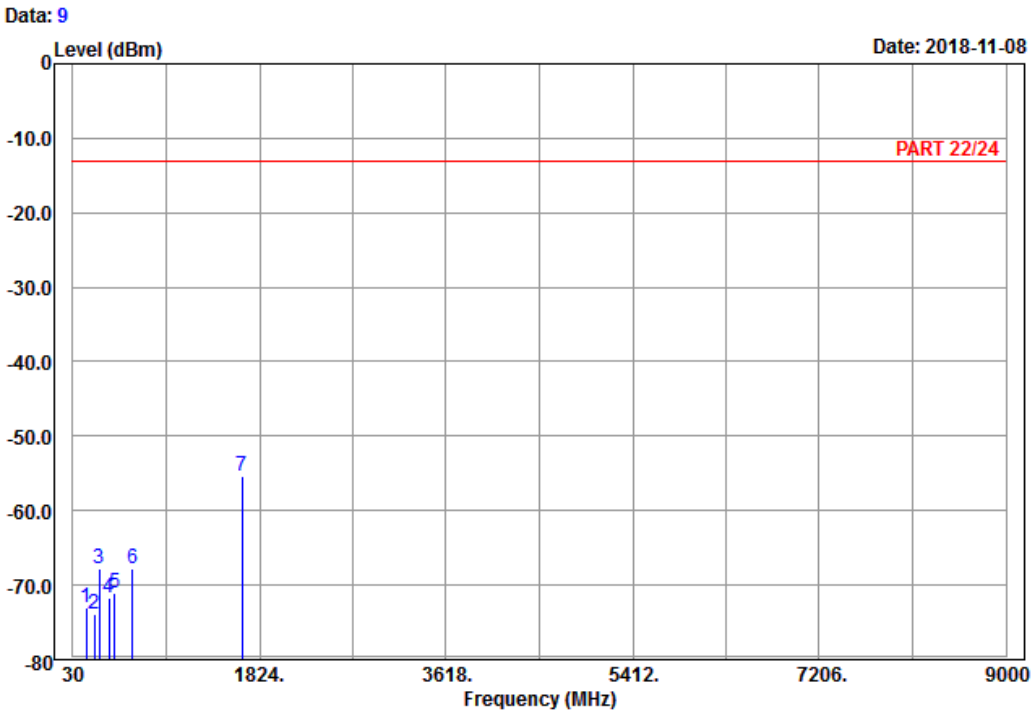


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20625
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1693.00	-57.92	-65.94	-13.00	-44.92	8.02	Peak

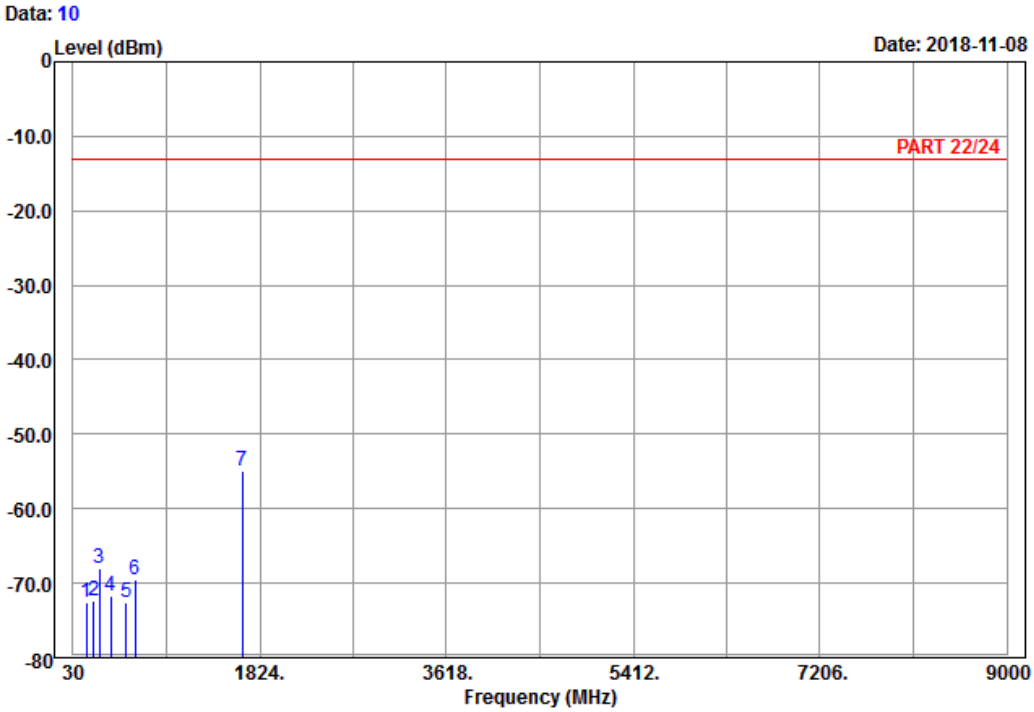
Channel Bandwidth: 10 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20450
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	162.30	-73.10	-65.63	-13.00	-60.10	-7.47	Peak
2	237.36	-73.88	-68.20	-13.00	-60.88	-5.68	Peak
3	283.26	-67.69	-61.88	-13.00	-54.69	-5.81	Peak
4	380.50	-71.70	-67.93	-13.00	-58.70	-3.77	Peak
5	428.10	-71.02	-67.66	-13.00	-58.02	-3.36	Peak
6	599.60	-67.72	-68.11	-13.00	-54.72	0.39	Peak
7 pp	1658.00	-55.42	-63.33	-13.00	-42.42	7.91	Peak

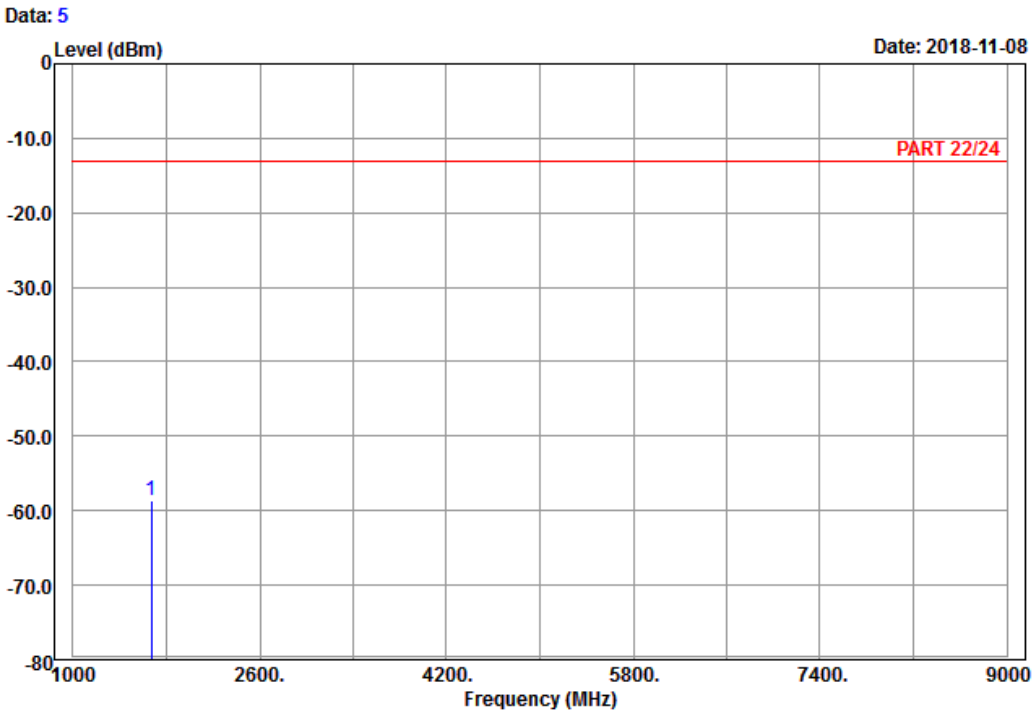


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20450
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	161.76	-72.58	-65.11	-13.00	-59.58	-7.47	Peak
2	230.88	-72.27	-66.50	-13.00	-59.27	-5.77	Peak
3	284.07	-67.98	-62.16	-13.00	-54.98	-5.82	Peak
4	396.60	-71.61	-68.71	-13.00	-58.61	-2.90	Peak
5	537.30	-72.49	-69.91	-13.00	-59.49	-2.58	Peak
6	626.20	-69.47	-69.60	-13.00	-56.47	0.13	Peak
7 pp	1658.00	-54.88	-62.79	-13.00	-41.88	7.91	Peak

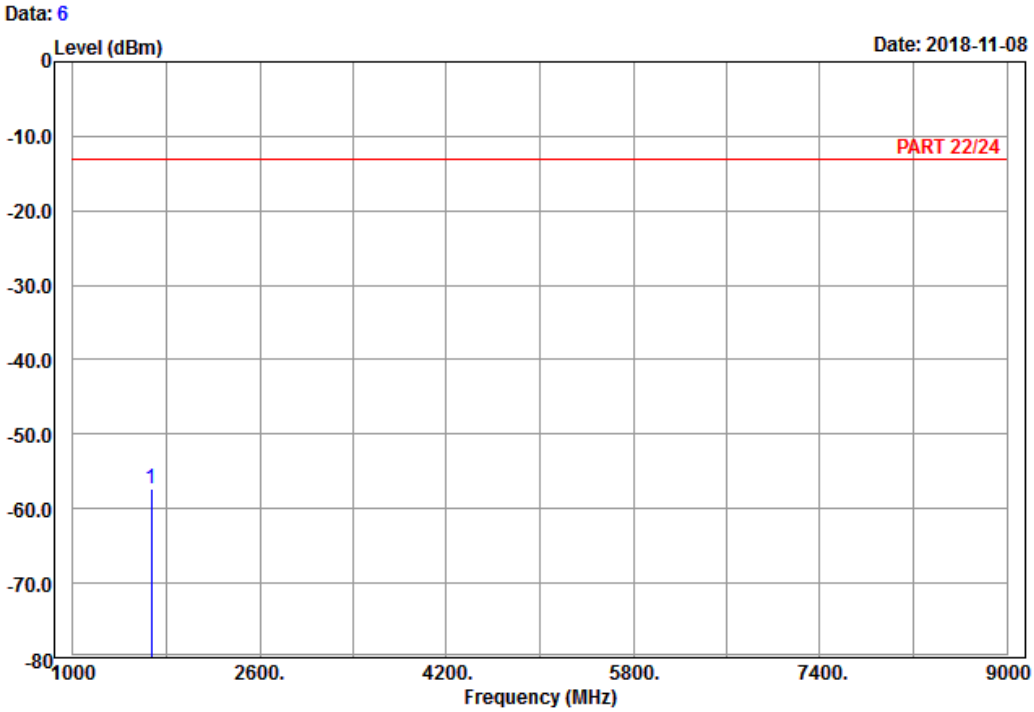
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20525
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-58.72	-66.63	-13.00	-45.72	7.91	Peak

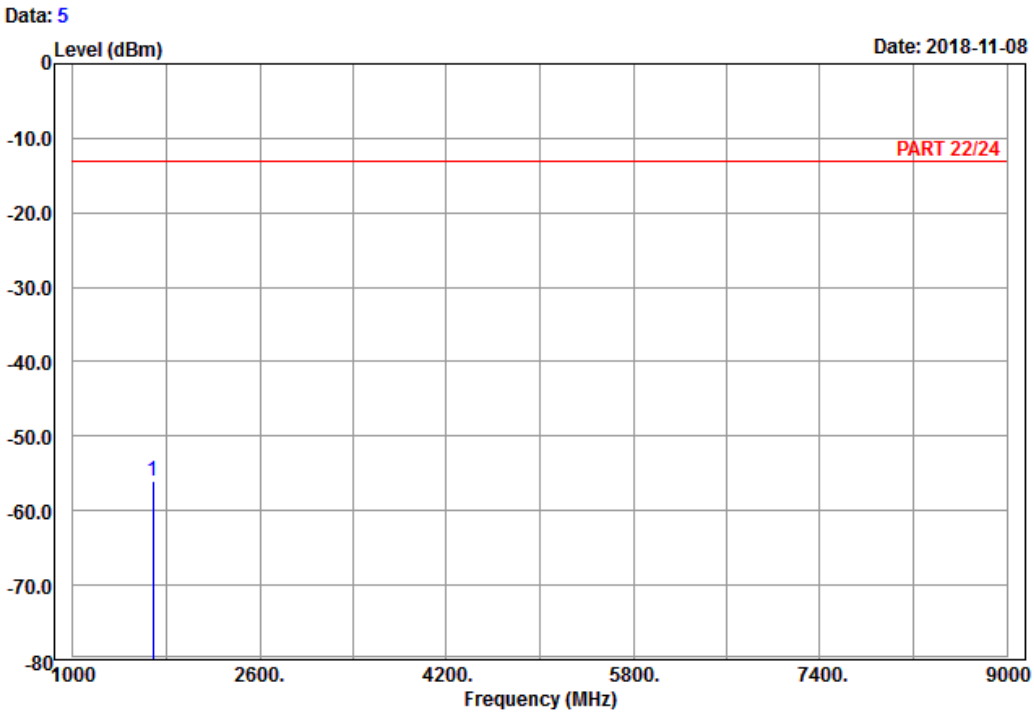


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20525
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-57.30	-65.21	-13.00	-44.30	7.91	Peak

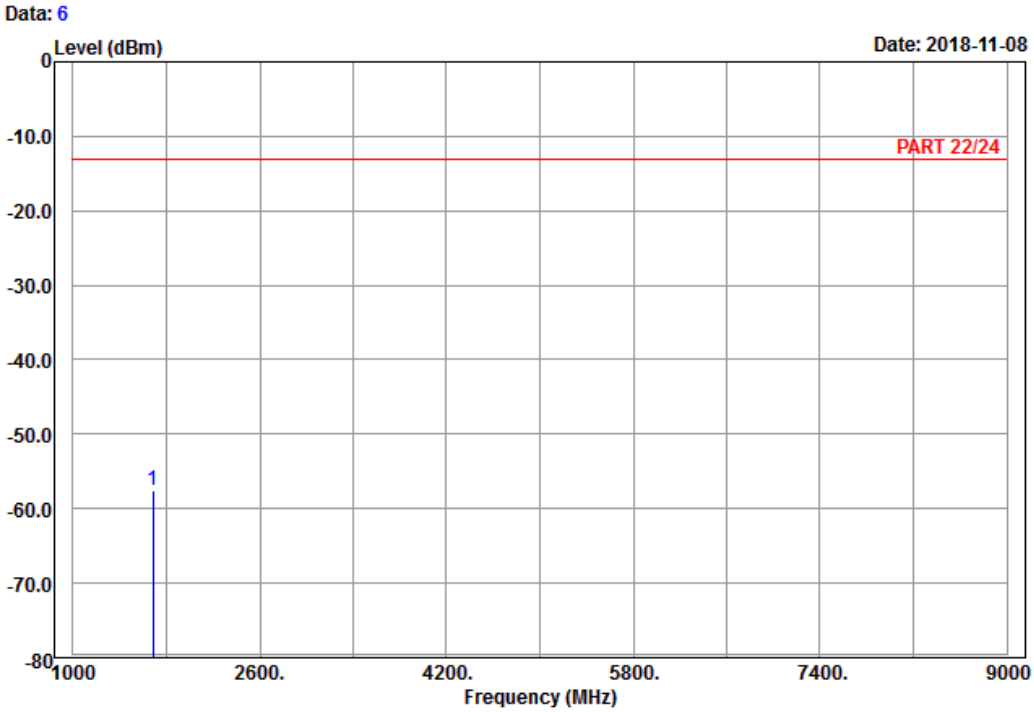
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_CH20600
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1688.00	-56.05	-64.07	-13.00	-43.05	8.02	Peak

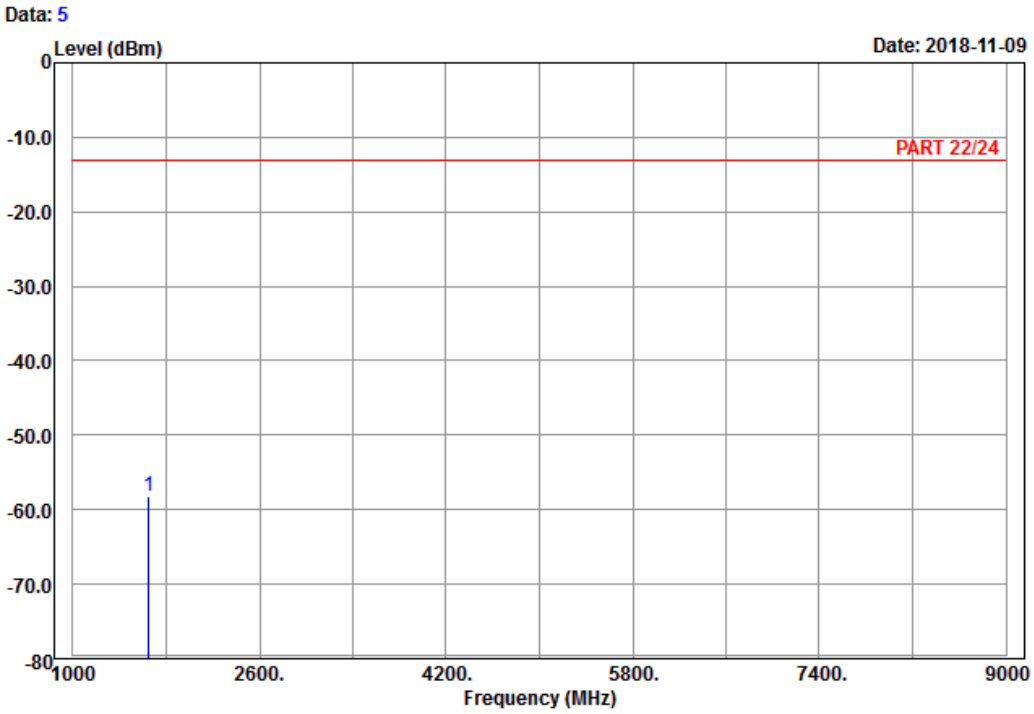


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_CH20600
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1688.00	-57.51	-65.53	-13.00	-44.51	8.02	Peak

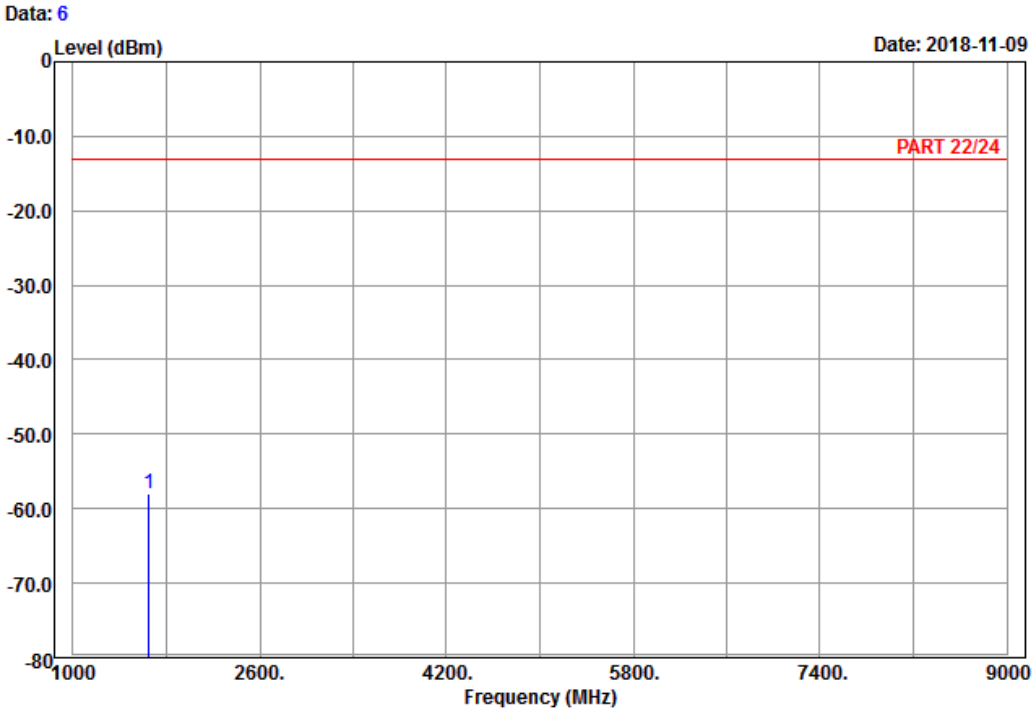
LTE Band 26
Channel Bandwidth:1.4MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26797
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1649.40	-58.27	-66.00	-13.00	-45.27	7.73	Peak

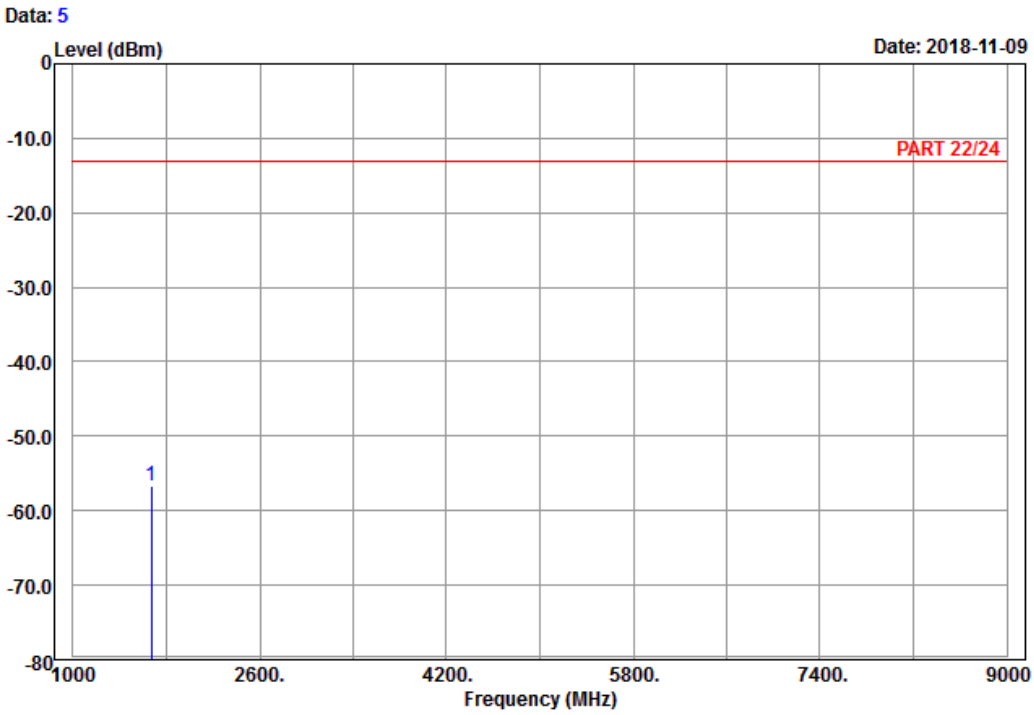


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26797
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1649.40	-57.99	-65.72	-13.00	-44.99	7.73	Peak

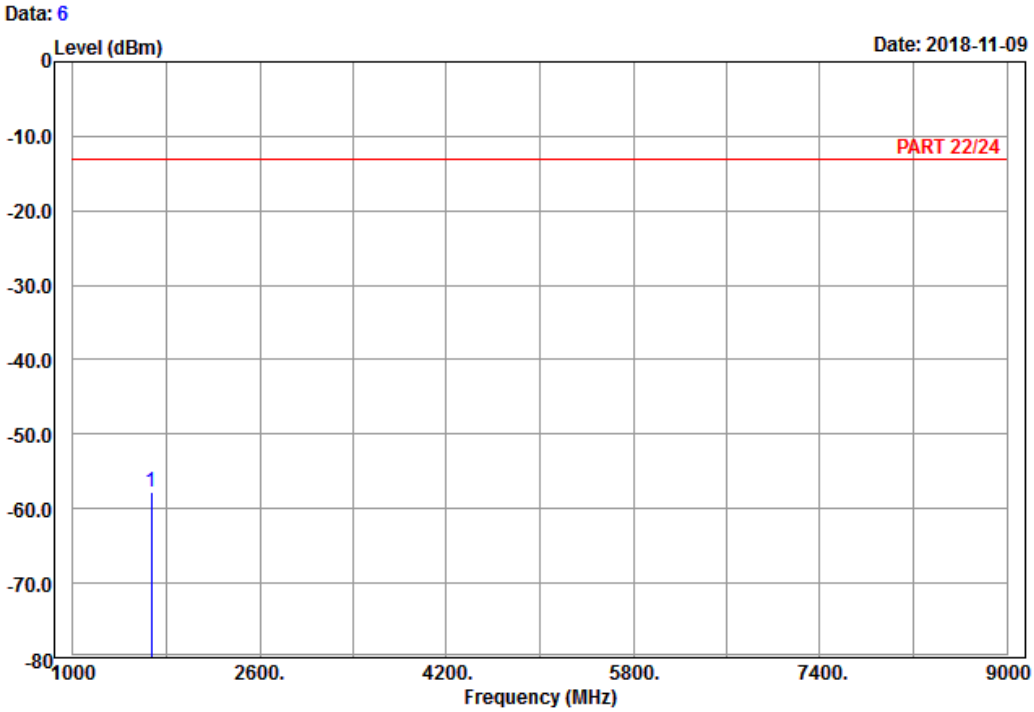
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-56.72	-64.63	-13.00	-43.72	7.91	Peak

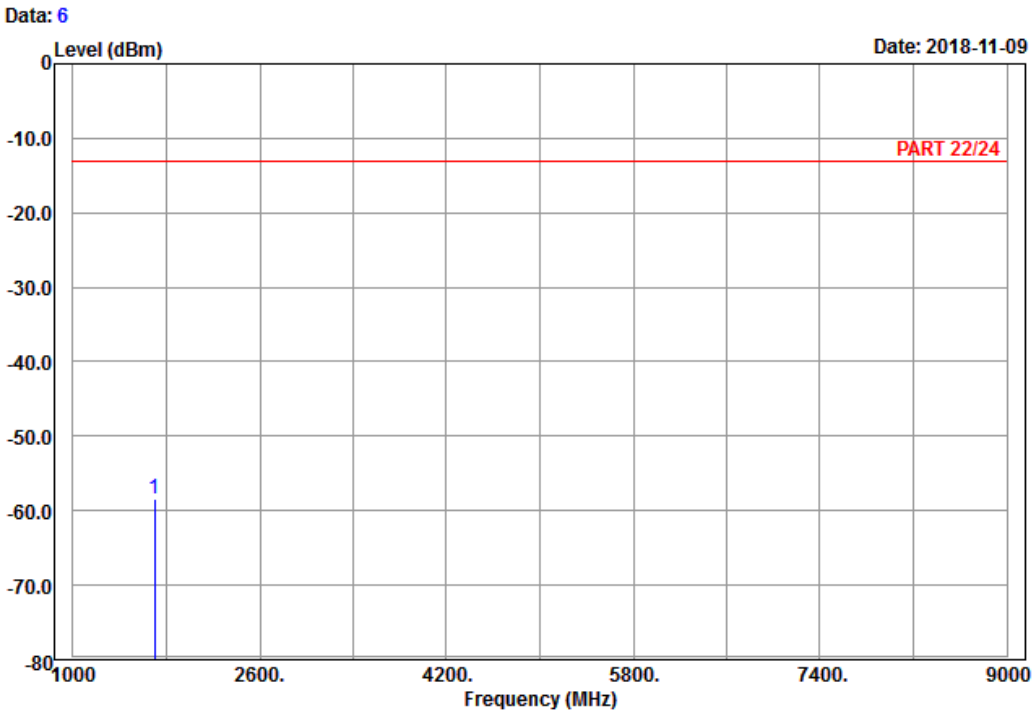


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-57.85	-65.76	-13.00	-44.85	7.91	Peak

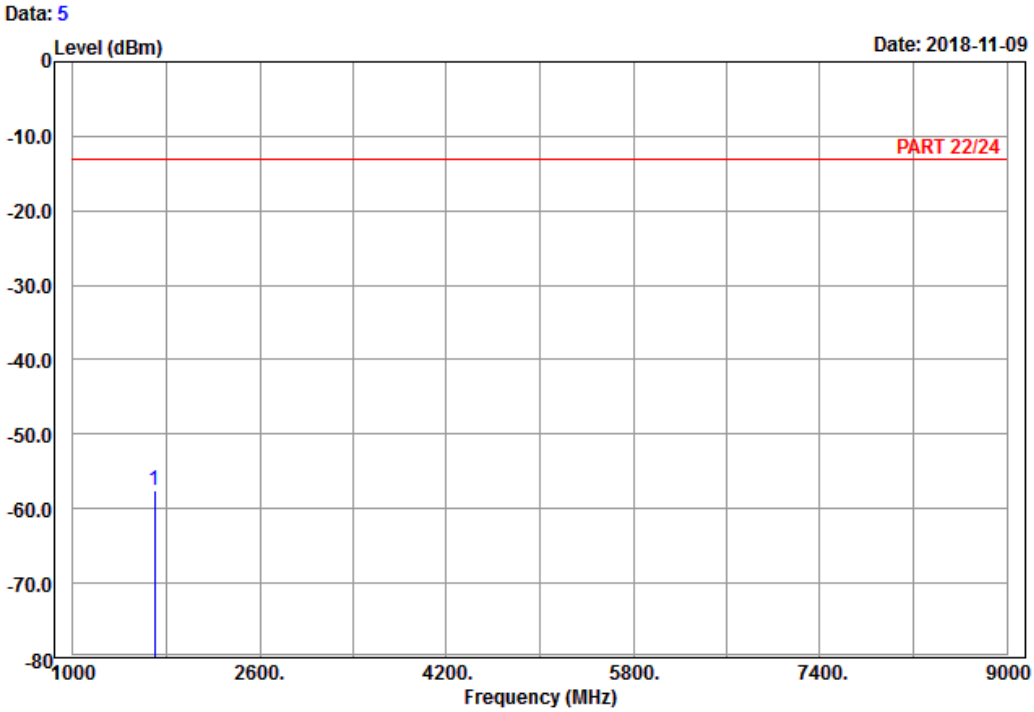
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH27033
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1696.60	-58.47	-66.61	-13.00	-45.47	8.14	Peak

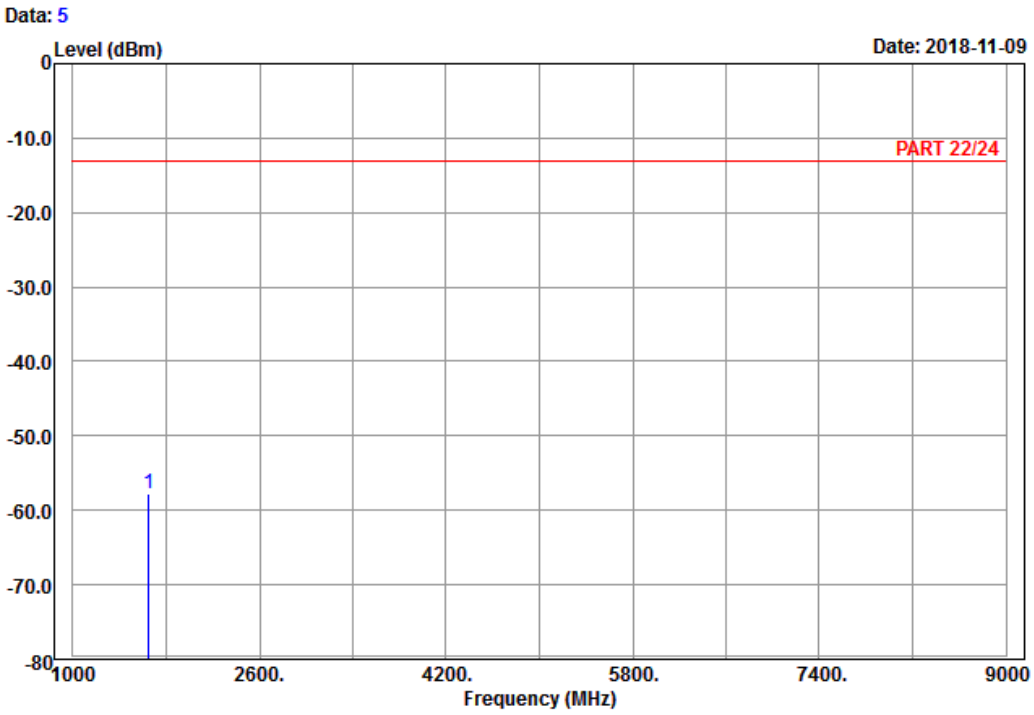


Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH27033
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1696.60	-57.51	-65.65	-13.00	-44.51	8.14	Peak

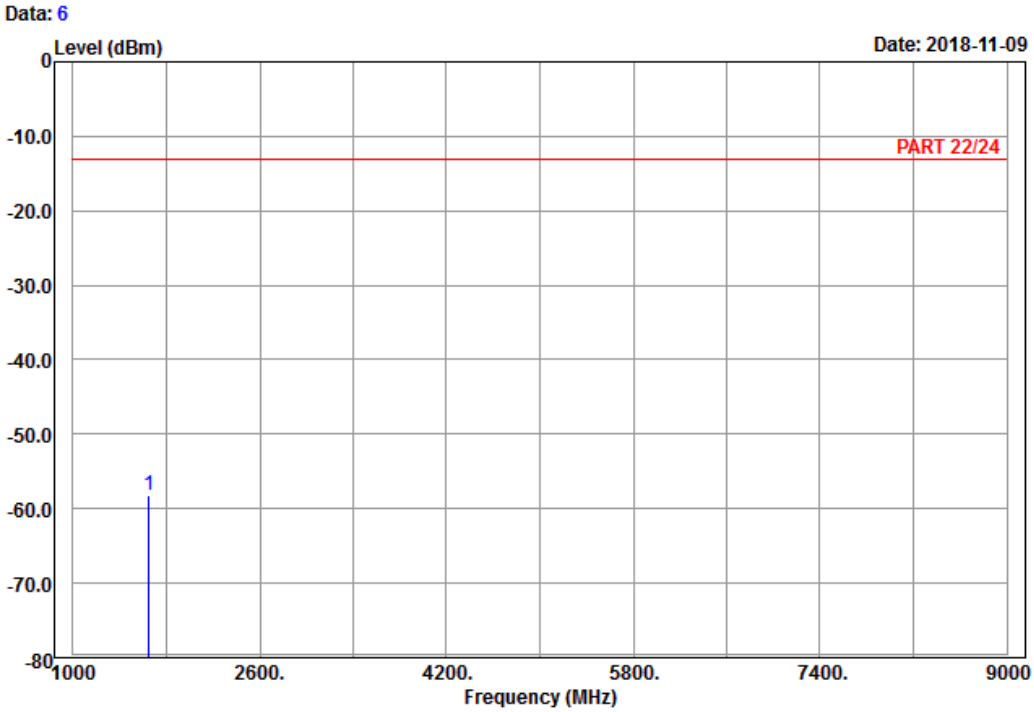
Channel Bandwidth:5 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26815
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1653.00	-57.66	-65.39	-13.00	-44.66	7.73	Peak

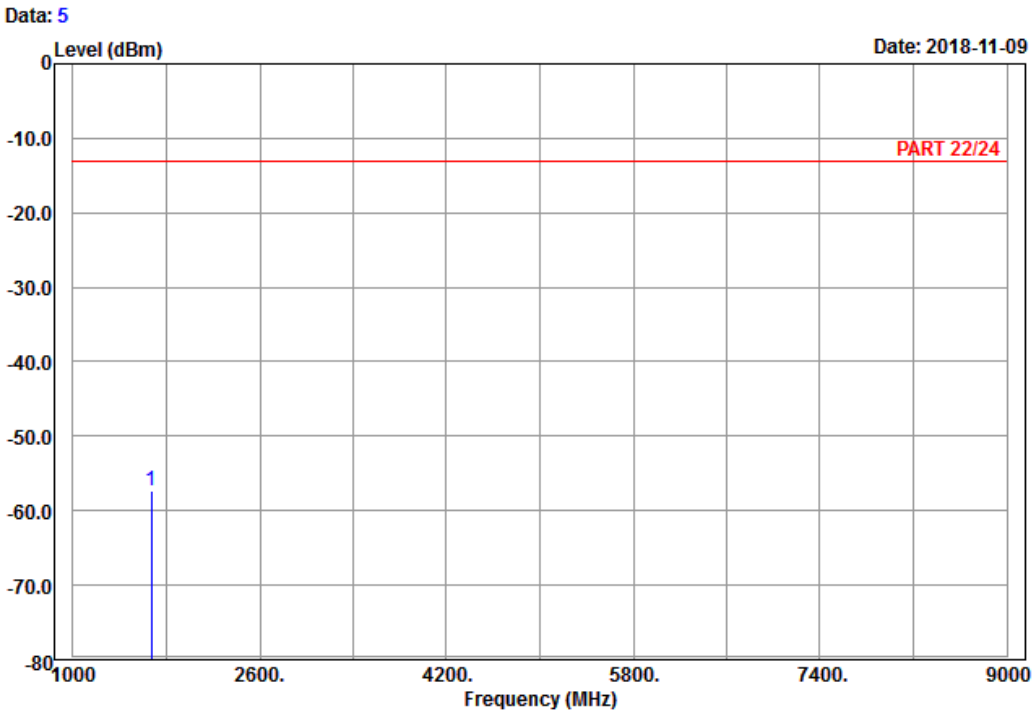


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26815
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1653.00	-58.22	-65.95	-13.00	-45.22	7.73	Peak

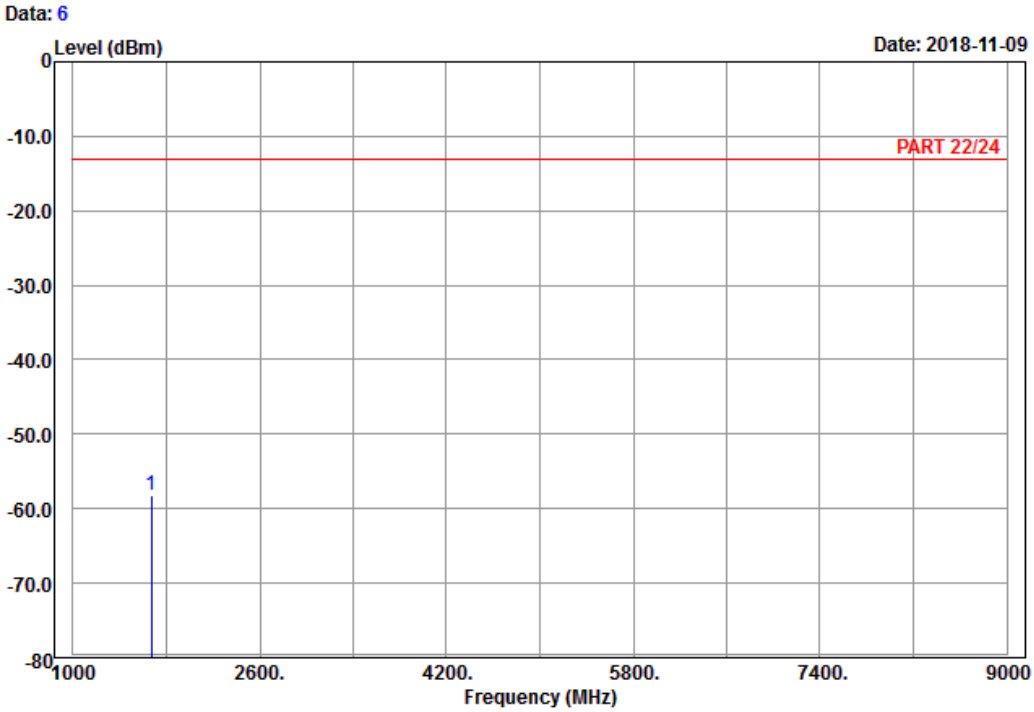
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-57.32	-65.23	-13.00	-44.32	7.91	Peak

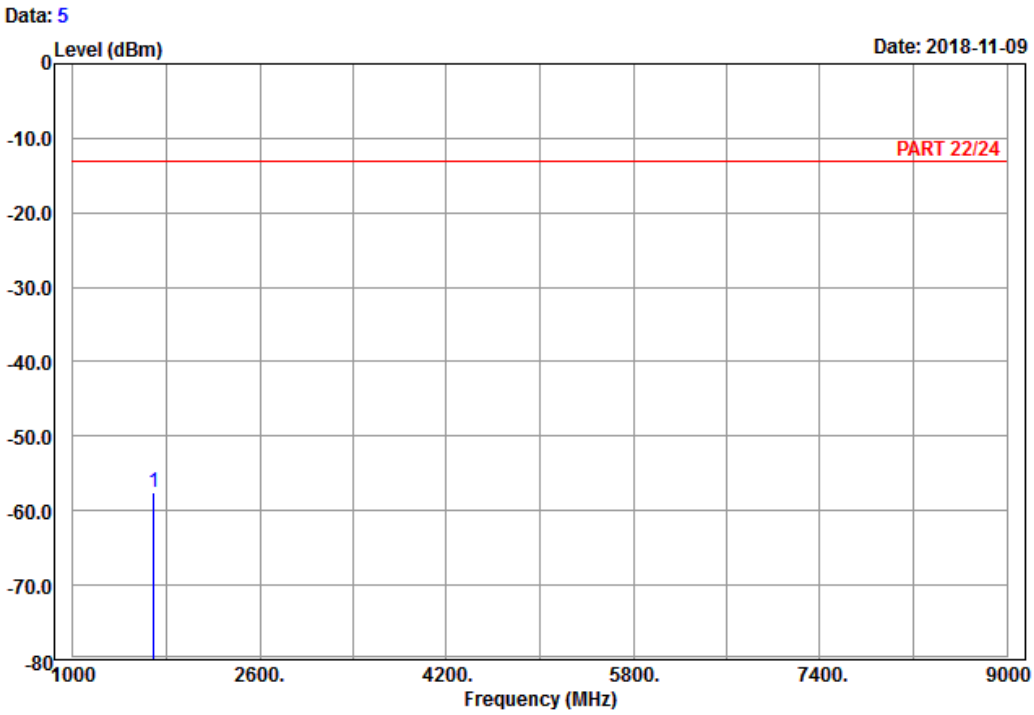


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-58.27	-66.18	-13.00	-45.27	7.91	Peak

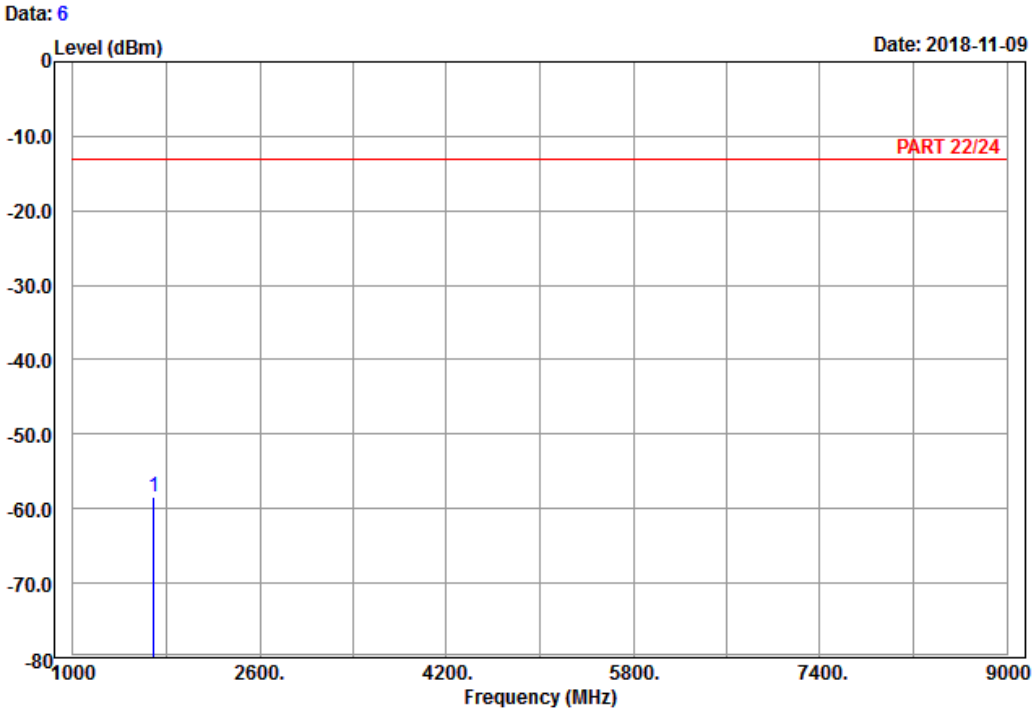
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH27015
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1693.00	-57.62	-65.64	-13.00	-44.62	8.02	Peak

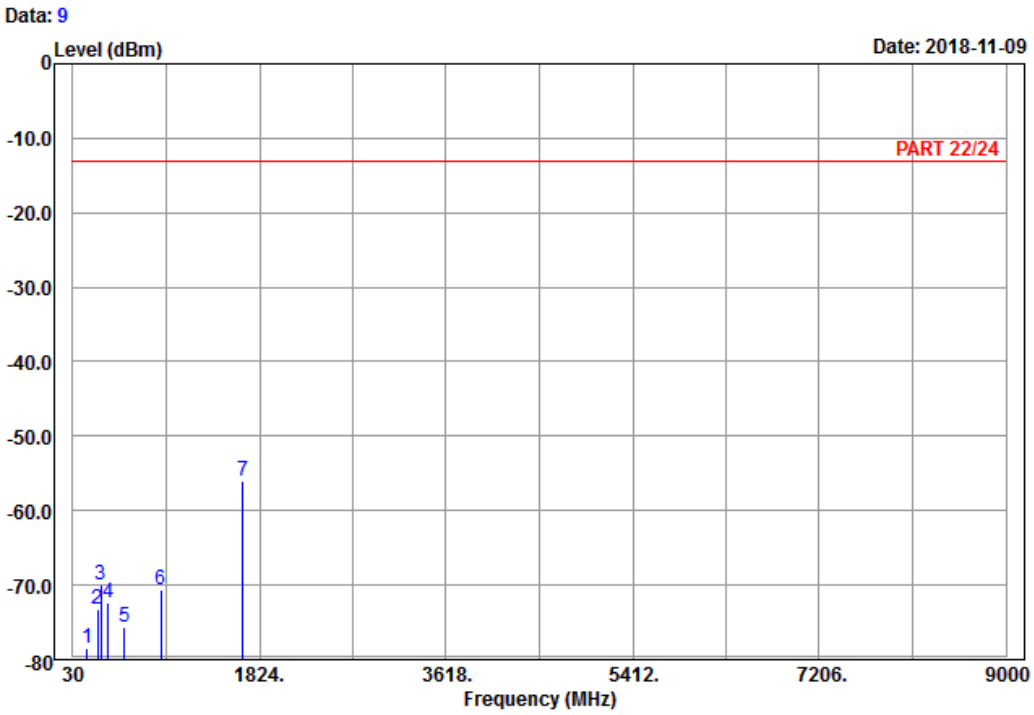


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH27015
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1693.00	-58.51	-66.53	-13.00	-45.51	8.02	Peak

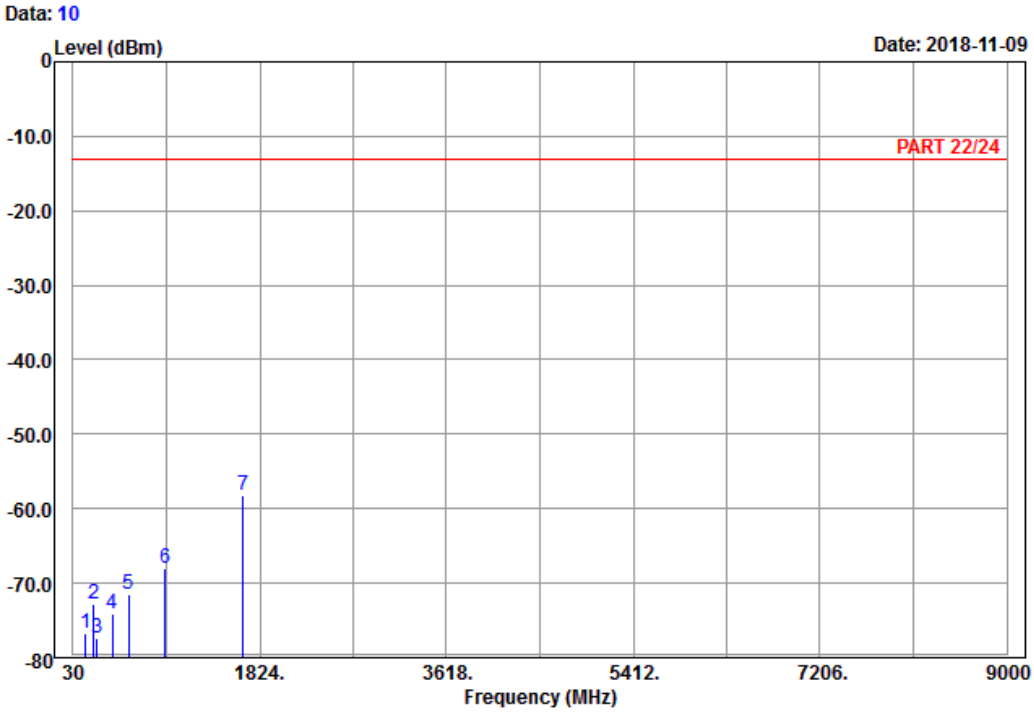
Channel Bandwidth: 15 MHz / QPSK
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26865
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	167.97	-78.57	-71.67	-13.00	-65.57	-6.90	Peak
2	267.33	-73.21	-67.54	-13.00	-60.21	-5.67	Peak
3	300.00	-69.93	-63.97	-13.00	-56.93	-5.96	Peak
4	372.10	-72.44	-68.25	-13.00	-59.44	-4.19	Peak
5	526.10	-75.69	-72.25	-13.00	-62.69	-3.44	Peak
6	876.80	-70.62	-72.84	-13.00	-57.62	2.22	Peak
7 pp	1663.00	-55.99	-63.90	-13.00	-42.99	7.91	Peak

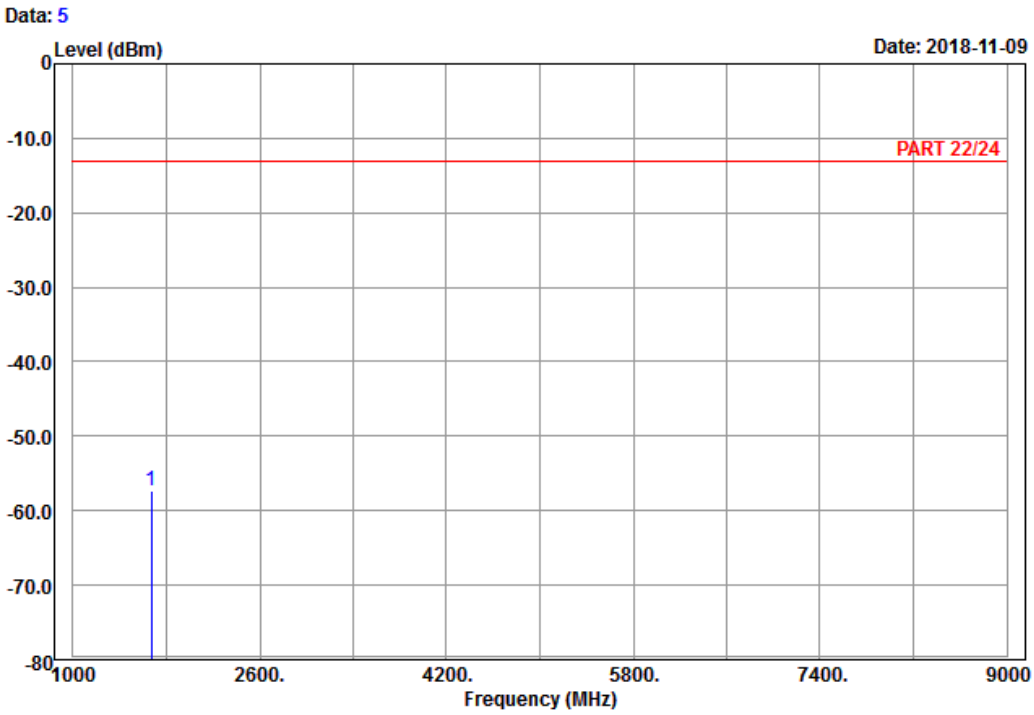


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26865
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1	153.93	-76.76	-68.92	-13.00	-63.76	-7.84	Peak
2	227.37	-72.86	-67.04	-13.00	-59.86	-5.82	Peak
3	261.93	-77.34	-71.73	-13.00	-64.34	-5.61	Peak
4	412.00	-74.02	-71.00	-13.00	-61.02	-3.02	Peak
5	567.40	-71.57	-70.63	-13.00	-58.57	-0.94	Peak
6	912.50	-67.92	-71.37	-13.00	-54.92	3.45	Peak
7 pp	1663.00	-58.21	-66.12	-13.00	-45.21	7.91	Peak

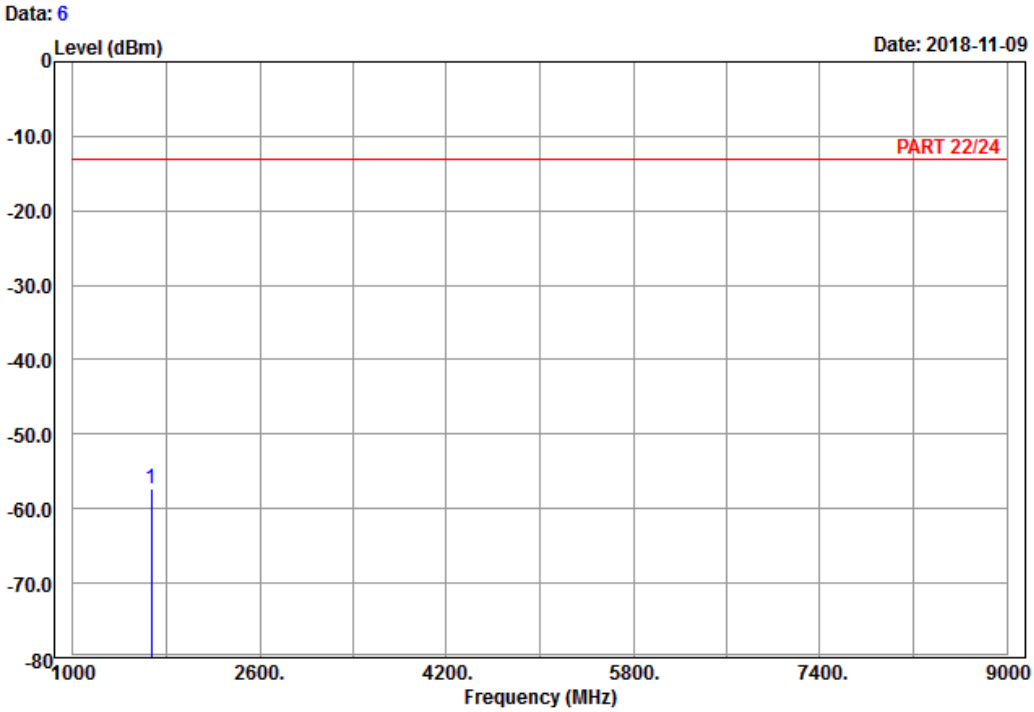
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-57.33	-65.24	-13.00	-44.33	7.91	Peak

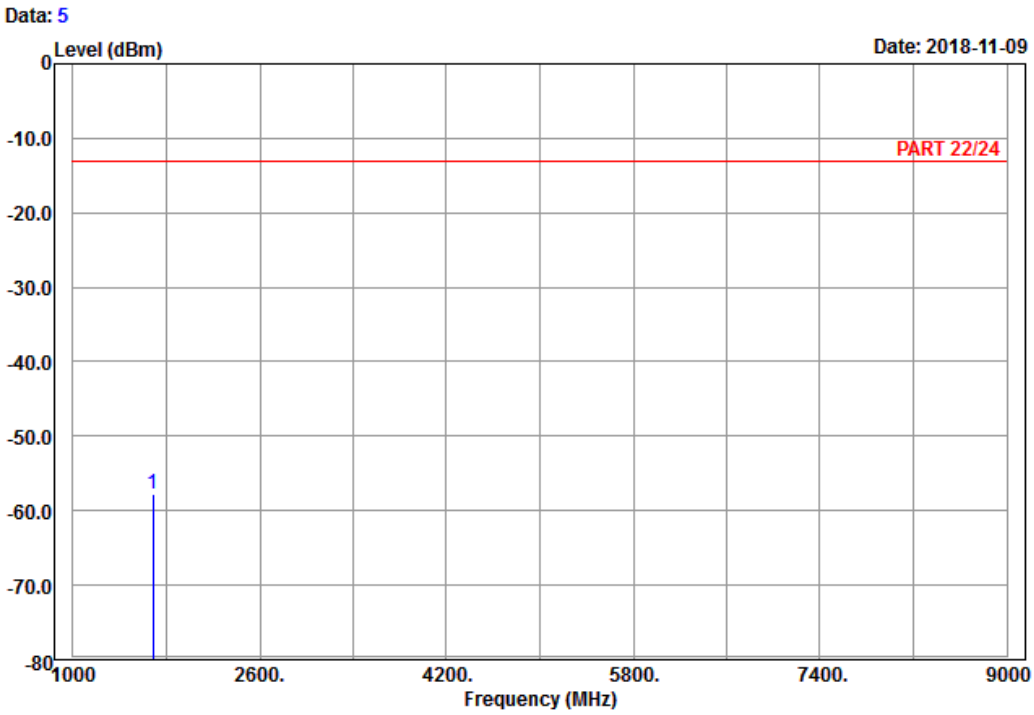


Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26915
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1673.00	-57.40	-65.31	-13.00	-44.40	7.91	Peak

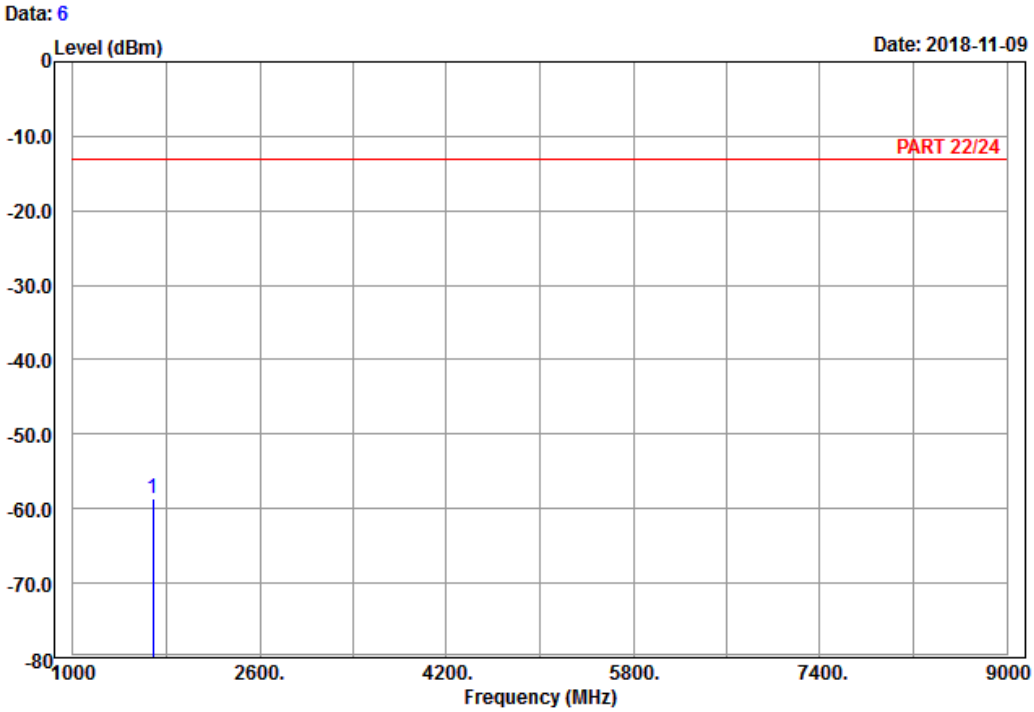
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 26_Link_CH26965
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1683.00	-57.73	-65.75	-13.00	-44.73	8.02	Peak



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 26_Link_CH26965
Tested by: Karl Lee

	Freq	Level	Read Level	Limit Line	Over Limit	Factor	Remark
	MHz	dBm	dBm	dBm	dB	dB	
1 pp	1683.00	-58.74	-66.76	-13.00	-45.74	8.02	Peak

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on 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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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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