

Partial FCC Test Report

(PART 22)

Report No.: RF191211C28-2 R1

FCC ID: 2AEDS110LTEWIFI

Test Model: SD-WAN 110-LTE-WiFi

Received Date: Dec. 11, 2019

Test Date: Feb. 04 ~ Feb. 08, 2020

Issued Date: Apr. 07, 2020

Applicant: CITRIX SYSTEMS,INC

Address: 4988 Great America Parkway Santa Clara,CA 95054 USA

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231,
Taiwan

FCC Registration /
Designation Number: 427177 / TW0011



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Release Control Record

Issue No.	Description	Date Issued
RF191211C28-2	Original Release	Feb. 24, 2020
RF191211C28-2 R1	Revise Applicant information, FCC ID, Product name, Test Model and Brand	Apr. 07, 2020

1 Certificate of Conformity

Product: Networking device

Brand: **CITRIX®**

Test Model: SD-WAN 110-LTE-WiFi

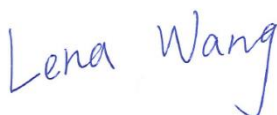
Sample Status: Engineering Sample

Applicant: CITRIX SYSTEMS, INC

Test Date: Feb. 04 ~ Feb. 08, 2020

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 : _____, **Date:** Apr. 07, 2020
Lena Wang / Specialist


Approved by : _____, **Date:** Apr. 07, 2020
Dylan Chiou / Senior 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
2.1046 22.913 (d)	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 -33.54 dB at 86.97 MHz.

Note:

1. This report is a partial report, only test item of Effective Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch report no.: HR/2019/1001601 for module (Brand: Quectel, Model: EG25-G, EG25-G MINIPCIE).
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.0400 dB
	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~ 1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	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. 26, 2019	Aug. 25, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 15, 2019	Apr. 14, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-616	Nov. 12, 2019	Nov. 11, 2020
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 24, 2019	Nov. 23, 2020
BILOG Antenna SCHWARZBECK	VULB 9168	9168-631	Nov. 12, 2019	Nov. 11, 2020
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 25, 2019	Nov. 24, 2020
Preamplifier Agilent	310N	187226	Jun. 18, 2019	Jun. 17, 2020
Preamplifier Agilent	83017A	MY39501357	Jun. 18, 2019	Jun. 17, 2020
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 18, 2019	Jun. 17, 2020
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 18, 2019	Jun. 17, 2020
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
Radio Communication Analyzer Anritsu	MT8820C	6201300640	Aug. 09, 2019	Aug. 08, 2021

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 General Information

3.1 General Description of EUT

Product	Networking device	
Brand	CITRIX™	
Test Model	SD-WAN 110-LTE-WiFi	
Status of EUT	Engineering Sample	
Power Supply Rating	12 Vdc (adapter)	
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	245.36 mW
	LTE 5 (Channel Bandwidth: 1.4 MHz)	220.70 mW
	LTE 5 (Channel Bandwidth: 3 MHz)	222.74 mW
	LTE 5 (Channel Bandwidth: 5 MHz)	200.35 mW
	LTE 5 (Channel Bandwidth: 10 MHz)	254.57 mW
	LTE 26 (Channel Bandwidth: 1.4 MHz)	250.73 mW
	LTE 26 (Channel Bandwidth: 3 MHz)	214.88 mW
	LTE 26 (Channel Bandwidth: 5 MHz)	218.68 mW
	LTE 26 (Channel Bandwidth: 10 MHz)	264.12 mW
	LTE 26 (Channel Bandwidth: 15 MHz)	234.96 mW
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 WWAN module (Brand: Quectel, Model: EG25-G, EG25-G MINIPCIE) was installed in EUT.
2. The antenna information is listed as below.

Antenna Type	Manufacturer	Parts Number	Antenna Connector	Antenna Gain									
				WCDMA II / LTE 2	WCDMA IV / LTE 4	WCDMA V / LTE 5	LTE 7	LTE 12	LTE 13	LTE 25	LTE 26	LTE 38	LTE 41
Dipole	Ethertronics	1004112-C003	SMA(M)	4.5	4.5	1.18	4	1.18	1.18	4.5	1.18	4	4
	Taoglas	TG.30.8113	SMA(M)	3.1	2.7	1.5	2.7	2.6	2.6	3.1	1.5	2.7	2.7

* After pre-test only the worst configuration was chosen for the final test and recorded in this report.

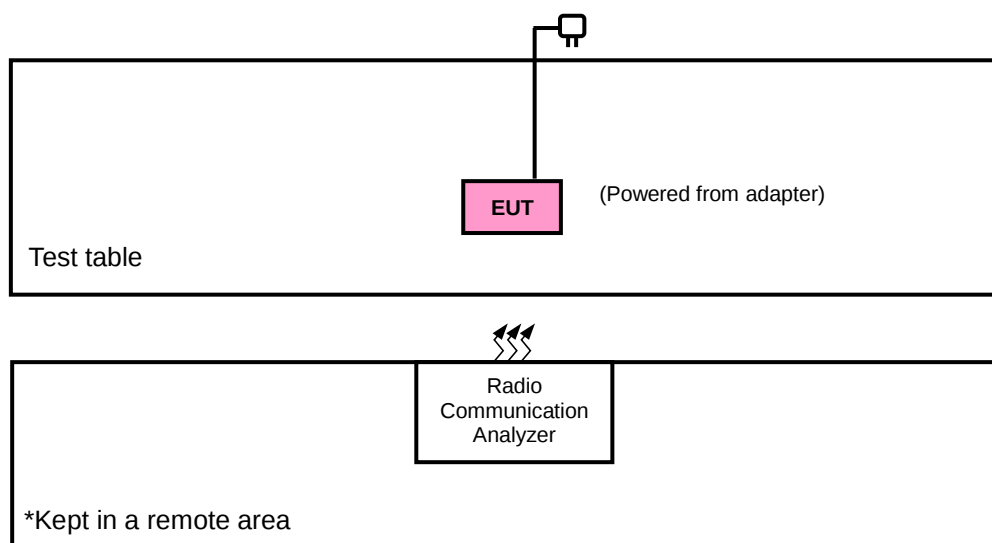
3. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	AOEM	ADS0248T-U120200	I/P: 100-240 Vac, 50-60 Hz, 0.6 A O/P: 12.0 Vdc, 2.0 A Cable: 1.46m cable w/o core

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

3.2 Configuration of System under Test

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



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, antenna degree 90°, 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	90°	90°
LTE Band 5	90°	90°
LTE Band 26	90°	90°

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	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20415 to 20635	20415, 20525, 20635	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
-	Radiated Emission	20407 to 20643	20407, 20525, 20643	1.4 MHz	QPSK	1 RB / 0 RB Offset
		20425 to 20625	20425, 20525, 20625	5 MHz	QPSK	1 RB / 0 RB Offset
		20450 to 20600	20450, 20525, 20600	10 MHz	QPSK	1 RB / 0 RB Offset

Note:

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

LTE Band 26

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

Note:

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

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25 deg. C, 65 % RH	3.8Vdc	Charles Hsiao, Karl Lee
Radiated Emission	25 deg. C, 65 % RH	3.8Vdc	Charles Hsiao

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 22

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 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 5 MHz for WCDMA, and 15 MHz for LTE mode.
- 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. 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. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15 \text{ dB}$.

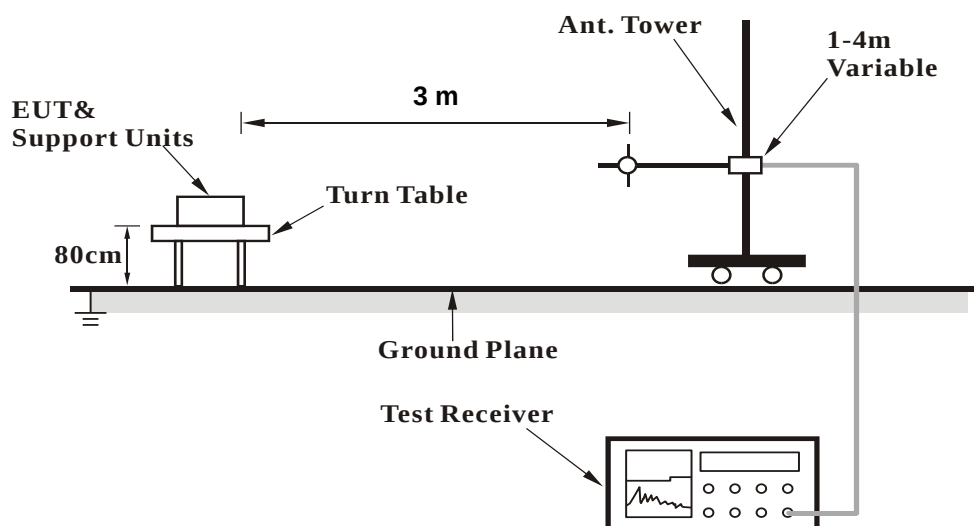
Conducted Power Measurement:

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.

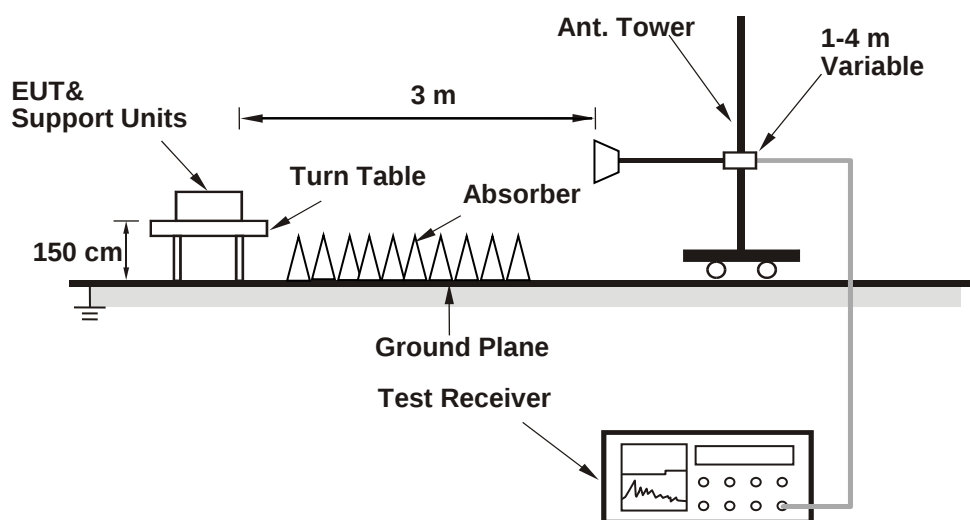
4.1.3 Test Setup

EIRP / ERP Measurement:

<Radiated Emission below or equal 1 GHz>

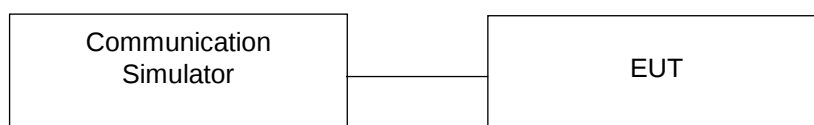


<Radiated Emission above 1 GHz>



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)

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	23.86	23.81	23.76

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	23.51	23.22	23.30	0	5M	QPSK	1	0	23.41	23.11	23.13	0
		1	24	23.53	24.00	23.54	0			1	12	23.43	23.29	23.40	0
		1	49	23.04	23.03	23.00	0			1	24	23.24	23.15	23.33	0
		25	0	22.61	22.57	22.51	1			12	0	22.68	22.48	22.45	1
		25	12	22.66	22.53	22.45	1			12	6	22.56	22.46	22.58	1
		25	25	22.28	22.33	22.35	1			12	13	22.49	22.46	22.37	1
		50	0	22.38	22.43	22.43	1			25	0	22.55	22.41	22.39	1
	16QAM	1	0	22.12	22.06	22.17	1		16QAM	1	0	21.87	21.85	21.95	1
		1	24	22.04	21.98	22.01	1			1	12	22.31	22.36	22.52	1
		1	49	22.06	21.94	21.99	1			1	24	21.55	21.96	21.96	1
		25	0	21.59	21.52	21.50	2			12	0	21.45	21.36	21.43	2
		25	12	21.53	21.65	21.32	2			12	6	21.44	21.21	21.30	2
		25	25	21.33	21.41	21.31	2			12	13	21.23	21.20	21.26	2
		50	0	21.30	21.48	21.44	2			25	0	21.48	21.43	21.25	2
3M	QPSK	1	0	23.47	23.40	23.47	0	1.4M	QPSK	1	0	23.01	23.25	23.29	0
		1	7	23.49	23.32	23.57	0			1	2	23.23	23.30	23.36	0
		1	14	23.30	23.04	23.27	0			1	5	23.38	23.18	23.31	0
		8	0	22.60	22.43	22.56	1			3	0	23.47	23.33	23.41	0
		8	3	22.51	22.51	22.48	1			3	1	23.50	23.36	23.44	0
		8	7	22.58	22.31	22.45	1			3	3	23.46	23.37	23.33	0
		15	0	22.55	22.32	22.51	1			6	0	22.50	22.28	22.48	1
	16QAM	1	0	22.09	22.17	22.14	1		16QAM	1	0	21.99	22.11	22.02	1
		1	7	22.01	22.06	22.09	1			1	2	22.21	22.10	21.94	1
		1	14	21.73	22.06	22.07	1			1	5	22.07	21.88	21.79	1
		8	0	21.39	21.32	21.28	2			3	0	22.63	22.49	22.62	1
		8	3	21.47	21.23	21.31	2			3	1	22.52	22.29	22.46	1
		8	7	21.46	21.28	21.44	2			3	3	22.73	22.41	22.60	1
		15	0	21.55	21.56	21.49	2			6	0	21.28	21.31	21.29	2

LTE Band 26																															
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		26865	26915	26965				Channel		26840	26915	26990																	
		Frequency (MHz)		831.5	836.5	841.5				Frequency (MHz)		829.0	836.5	844.0																	
15M	QPSK	1	0	23.39	23.20	23.26	0	10M	QPSK	1	0	23.26	23.17	23.29	0																
		1	37	23.74	23.68	23.70	0			1	24	23.78	23.84	23.94	0																
		1	74	22.77	22.89	22.71	0			1	49	23.00	22.84	22.77	0																
		36	0	22.62	22.60	22.70	1			25	0	22.69	22.58	22.67	1																
		36	19	22.67	22.63	22.54	1			25	12	22.72	22.71	22.57	1																
		36	39	22.44	22.31	22.42	1			25	25	22.46	22.26	22.25	1																
		75	0	22.47	22.46	22.59	1			50	0	22.44	22.55	22.43	1																
	16QAM	1	0	21.95	22.17	22.07	1		16QAM	1	0	22.04	22.32	22.15	1																
		1	37	22.06	22.24	22.12	1			1	24	22.15	22.24	21.84	1																
		1	74	22.06	22.14	22.10	1			1	49	22.12	22.14	21.96	1																
		36	0	21.45	21.56	21.53	2			25	0	21.46	21.33	21.35	2																
		36	19	21.47	21.42	21.49	2			25	12	21.60	21.55	21.51	2																
		36	39	21.47	21.46	21.44	2			25	25	21.50	21.43	21.49	2																
		75	0	21.48	21.39	21.42	2			50	0	21.56	21.47	21.55	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		26815	26915	27015				Channel		26805	26915	27025																	
		Frequency (MHz)		826.5	836.5	846.5				Frequency (MHz)		825.5	836.5	847.5																	
5M	QPSK	1	0	23.14	23.25	23.27	0	3M	QPSK	1	0	23.32	23.35	23.42	1																
		1	12	23.45	23.64	23.42	0			1	7	23.38	23.37	23.27	1																
		1	24	23.12	23.31	22.86	0			1	14	23.51	23.37	23.13	1																
		12	0	22.56	22.41	22.55	1			8	0	22.50	22.44	22.59	3																
		12	6	22.47	22.48	22.33	1			8	3	22.50	22.40	22.51	3																
		12	13	22.37	22.34	22.29	1			8	7	22.46	22.45	22.38	3																
		25	0	22.44	22.42	22.48	1			15	0	22.53	22.46	22.46	6																
	16QAM	1	0	22.03	21.86	22.02	1		16QAM	1	0	22.04	22.04	22.03	1																
		1	12	22.41	22.42	22.51	1			1	7	22.03	22.15	21.95	1																
		1	24	21.93	21.76	22.04	1			1	14	22.08	21.98	22.03	1																
		12	0	21.42	21.29	21.42	2			8	0	21.13	21.16	21.21	2																
		12	6	21.35	21.23	21.40	2			8	3	21.35	21.26	21.20	2																
		12	13	21.35	21.36	21.24	2			8	7	21.45	21.21	21.26	2																
		25	0	21.34	21.44	21.36	2			15	0	21.44	21.57	21.41	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	23.11	23.43	23.18	0																								
		1	2	23.25	23.49	23.42	0																								
		1	5	23.34	23.37	23.00	0																								
		3	0	23.47	23.64	23.40	0																								
		3	1	23.49	23.65	23.43	0																								
		3	3	23.47	23.57	23.42	0																								
		6	0	22.39	22.48	22.47	1																								
	16QAM	1	0	22.08	22.22	22.08	1																								
		1	2	22.14	22.27	22.18	1																								
		1	5	22.12	22.15	22.00	1																								
		3	0	22.56	22.63	22.76	1																								
		3	1	22.63	22.64	22.59	1																								
		3	3	22.49	22.62	22.53	1																								
		6	0	21.41	21.28	21.35	2																								

ERP Power (dBm)

WCDMA							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	4132	826.4	-5.16	31.208	23.90	245.36	H
	4182	836.4	-5.29	31.3	23.86	243.22	
	4233	846.6	-5.20	31.222	23.87	243.89	
	4132	826.4	-11.65	31.504	17.70	58.94	V
	4182	836.4	-11.36	31.117	17.61	57.64	
	4233	846.6	-12.14	31.922	17.63	57.97	

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

LTE Band 5							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	20407	824.7	-5.62	31.208	23.44	220.70	H
	20525	836.5	-5.81	31.3	23.34	215.77	
	20643	848.3	-5.80	31.222	23.27	212.42	
	20407	824.7	-11.92	31.504	17.43	55.39	V
	20525	836.5	-11.62	31.117	17.35	54.29	
	20643	848.3	-12.51	31.922	17.26	53.24	
Channel Bandwidth: 1.4 MHz / 16QAM							
90°	20407	824.7	-6.42	31.208	22.64	183.57	H
	20525	836.5	-6.62	31.3	22.53	179.06	
	20643	848.3	-6.61	31.222	22.46	176.28	
	20407	824.7	-12.73	31.504	16.62	45.96	V
	20525	836.5	-12.42	31.117	16.55	45.15	
	20643	848.3	-13.32	31.922	16.45	44.18	

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

LTE Band 5							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	20415	825.5	-5.58	31.208	23.48	222.74	H
	20525	836.5	-5.77	31.3	23.38	217.77	
	20635	847.5	-5.77	31.222	23.30	213.89	
	20415	825.5	-11.88	31.504	17.47	55.90	V
	20525	836.5	-11.58	31.117	17.39	54.79	
	20635	847.5	-12.47	31.922	17.30	53.73	
Channel Bandwidth: 3 MHz / 16QAM							
90°	20415	825.5	-6.89	31.208	22.17	164.74	H
	20525	836.5	-7.07	31.3	22.08	161.44	
	20635	847.5	-7.07	31.222	22.00	158.56	
	20415	825.5	-12.39	31.504	16.96	49.70	V
	20525	836.5	-12.08	31.117	16.89	48.83	
	20635	847.5	-12.98	31.922	16.79	47.77	

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

LTE Band 5							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	20425	826.5	-6.04	31.208	23.02	200.35	H
	20525	836.5	-6.23	31.3	22.92	195.88	
	20625	846.5	-6.24	31.222	22.83	191.96	
	20425	826.5	-11.84	31.504	17.51	56.42	V
	20525	836.5	-11.54	31.117	17.43	55.30	
	20625	846.5	-12.43	31.922	17.34	54.23	
Channel Bandwidth: 5 MHz / 16QAM							
90°	20425	826.5	-6.64	31.208	22.42	174.50	H
	20525	836.5	-6.83	31.3	22.32	170.61	
	20625	846.5	-6.84	31.222	22.23	167.19	
	20425	826.5	-12.35	31.504	17.00	50.16	
	20525	836.5	-12.05	31.117	16.92	49.17	
	20625	846.5	-12.93	31.922	16.84	48.33	

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

LTE Band 5							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
990°	20450	829.0	-5.00	31.208	24.06	254.57	H
	20525	836.5	-5.19	31.3	23.96	248.89	
	20600	844.0	-5.20	31.222	23.87	243.89	
	20450	829.0	-11.30	31.504	18.05	63.89	V
	20525	836.5	-11.00	31.117	17.97	62.62	
	20600	844.0	-11.89	31.922	17.88	61.40	
Channel Bandwidth: 10 MHz / 16QAM							
90°	20450	829.0	-6.80	31.208	22.26	168.19	H
	20525	836.5	-7.00	31.3	22.15	164.06	
	20600	844.0	-7.01	31.222	22.06	160.77	
	20450	829.0	-12.31	31.504	17.04	50.63	V
	20525	836.5	-12.01	31.117	16.96	49.62	
	20600	844.0	-12.89	31.922	16.88	48.78	

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

LTE Band 26							
Channel Bandwidth: 1.4 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	26797	824.7	-5.65	31.208	23.41	219.18	H
	26915	836.5	-5.45	31.3	23.70	234.42	
	27033	848.3	-5.08	31.222	23.99	250.73	
	26797	824.7	-10.16	31.504	19.19	83.06	V
	26915	836.5	-9.84	31.117	19.13	81.79	
	27033	848.3	-10.72	31.922	19.05	80.39	
Channel Bandwidth: 1.4 MHz / 16QAM							
90°	26797	824.7	-5.96	31.208	23.10	204.08	H
	26915	836.5	-6.10	31.3	23.05	201.84	
	27033	848.3	-6.09	31.222	22.98	198.70	
	26797	824.7	-11.16	31.504	18.19	65.98	V
	26915	836.5	-10.85	31.117	18.12	64.82	
	27033	848.3	-11.72	31.922	18.05	63.86	

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

LTE Band 26							
Channel Bandwidth: 3 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	26805	825.5	-5.95	31.208	23.11	204.55	H
	26915	836.5	-5.84	31.3	23.31	214.29	
	27025	847.5	-5.75	31.222	23.32	214.88	
	26805	825.5	-10.12	31.504	19.23	83.83	V
	26915	836.5	-9.80	31.117	19.17	82.55	
	27025	847.5	-10.68	31.922	19.09	81.13	
Channel Bandwidth: 3 MHz / 16QAM							
90°	26805	825.5	-6.95	31.208	22.11	162.48	H
	26915	836.5	-6.75	31.3	22.40	173.78	
	27025	847.5	-6.81	31.222	22.26	168.19	
	26805	825.5	-11.12	31.504	18.23	66.59	V
	26915	836.5	-10.81	31.117	18.16	65.42	
	27025	847.5	-11.68	31.922	18.09	64.45	

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

LTE Band 26							
Channel Bandwidth: 5 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	26815	826.5	-5.66	31.208	23.40	218.68	H
	26915	836.5	-5.95	31.3	23.20	208.93	
	27015	846.5	-5.84	31.222	23.23	210.47	
	26815	826.5	-10.08	31.504	19.27	84.61	V
	26919	836.5	-9.76	31.117	19.21	83.31	
	27015	846.5	-10.64	31.922	19.13	81.88	
Channel Bandwidth: 5 MHz / 16QAM							
90°	26815	826.5	-6.91	31.208	22.15	163.98	H
	26915	836.5	-6.75	31.3	22.40	173.78	
	27015	846.5	-6.37	31.222	22.70	186.38	
	26815	826.5	-11.09	31.504	18.26	67.05	V
	26919	836.5	-10.77	31.117	18.20	66.02	
	27015	846.5	-11.65	31.922	18.12	64.89	

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

LTE Band 26							
Channel Bandwidth: 10 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	26840	829.0	-4.84	31.208	24.22	264.12	H
	26915	836.5	-4.98	31.3	24.17	261.22	
	26990	844.0	-4.97	31.222	24.10	257.16	
	26840	829.0	-10.04	31.504	19.31	85.39	V
	26919	836.5	-9.72	31.117	19.25	84.08	
	26990	844.0	-10.60	31.922	19.17	82.64	
Channel Bandwidth: 10 MHz / 16QAM							
90°	26840	829.0	-6.58	31.208	22.48	176.93	H
	26915	836.5	-6.84	31.3	22.31	170.22	
	26990	844.0	-6.94	31.222	22.13	163.38	
	26840	829.0	-11.04	31.504	18.31	67.83	V
	26919	836.5	-10.73	31.117	18.24	66.63	
	26990	844.0	-11.61	31.922	18.16	65.49	

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

LTE Band 26							
Channel Bandwidth: 15 MHz / QPSK							
Plane	Channel	Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (mW)	Polarization (H/V)
90°	26865	831.5	-5.62	31.208	23.44	220.70	H
	26915	836.5	-5.44	31.3	23.71	234.96	
	26965	841.5	-5.61	31.222	23.46	221.92	
	26865	831.5	-10.00	31.504	19.35	86.18	V
	26915	836.5	-9.68	31.117	19.29	84.86	
	26965	841.5	-10.56	31.922	19.21	83.41	
Channel Bandwidth: 15 MHz / 16QAM							
90°	26865	831.5	-6.95	31.208	22.11	162.48	H
	26915	836.5	-6.75	31.3	22.40	173.62	
	26965	841.5	-6.84	31.222	22.23	167.19	
	26865	831.5	-11.01	31.504	18.34	68.30	V
	26915	836.5	-10.68	31.117	18.29	67.41	
	26965	841.5	-11.56	31.922	18.21	66.25	

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 -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. 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 - 2.15 dB.

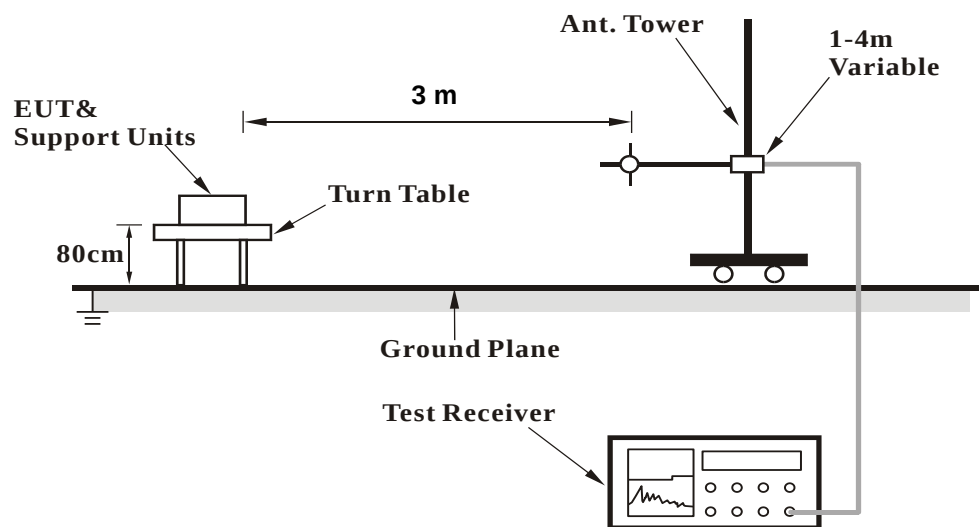
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.

4.2.3 Deviation from Test Standard

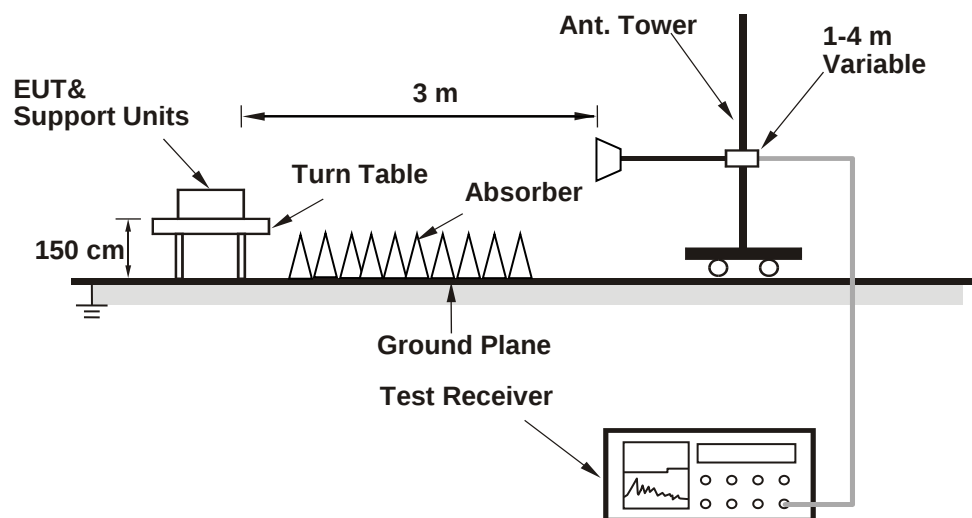
No deviation.

4.2.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



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

4.2.5 Test Results

WCDMA:

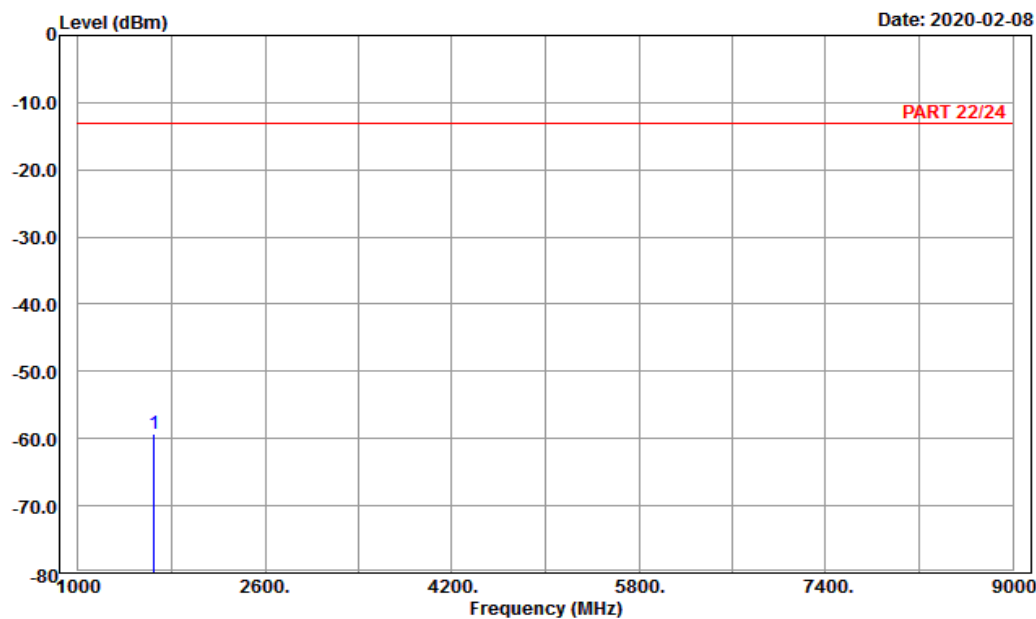
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : Band V_Link_L-Ch
 Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1652.80	-59.23	-66.96	7.73	-13.00	-46.23	Peak

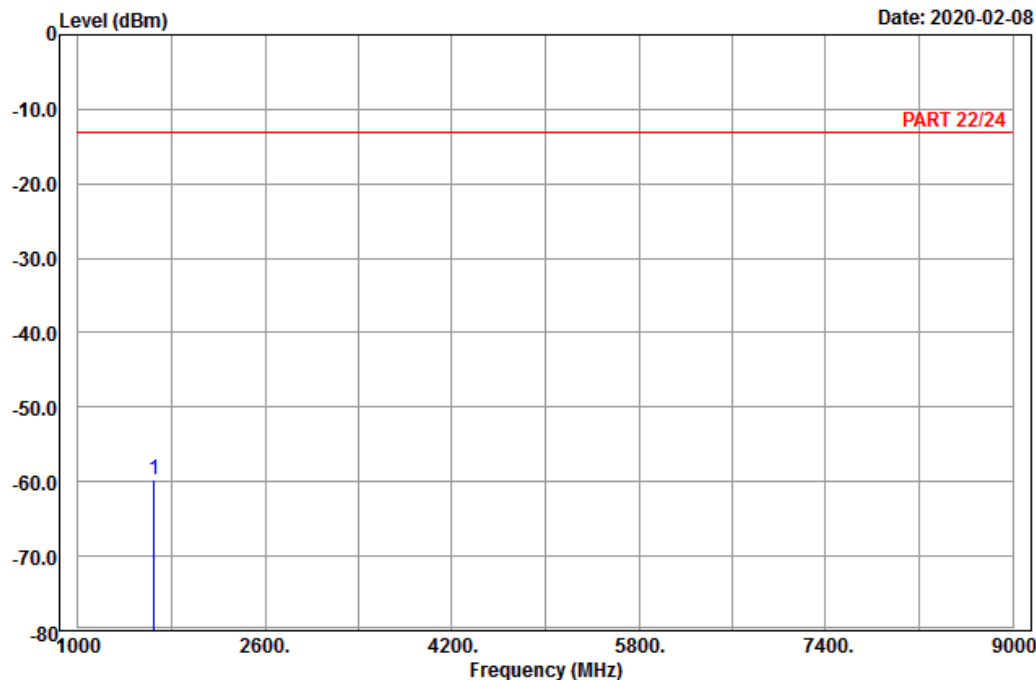


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Data: 4

Date: 2020-02-08



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_L-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1652.80	-59.78	-67.51	7.73	-13.00	-46.78	Peak

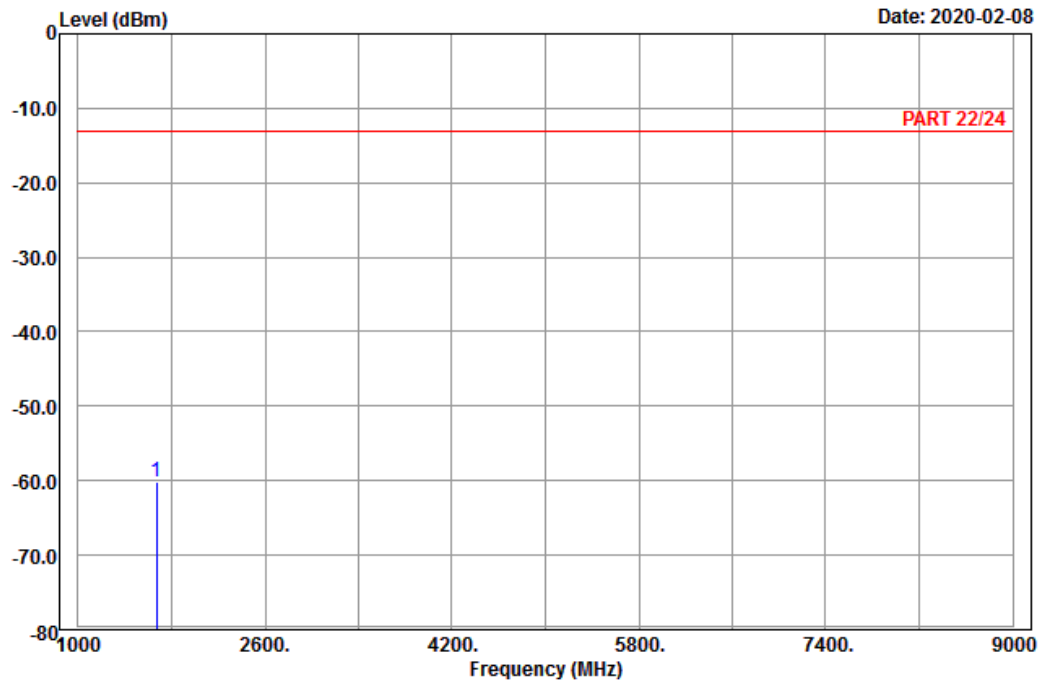
Middle Channel



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A D T

Data: 3



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : Band V_Link_M-Ch
Tested by: Charles Hsiao

		Read		Limit	Over	
Freq	Level	Level	Factor	Line	Limit	Remark
MHz	dBm	dBm	dB	dBm	dB	
1 pp 1672.80	-60.26	-68.17	7.91	-13.00	-47.26	Peak

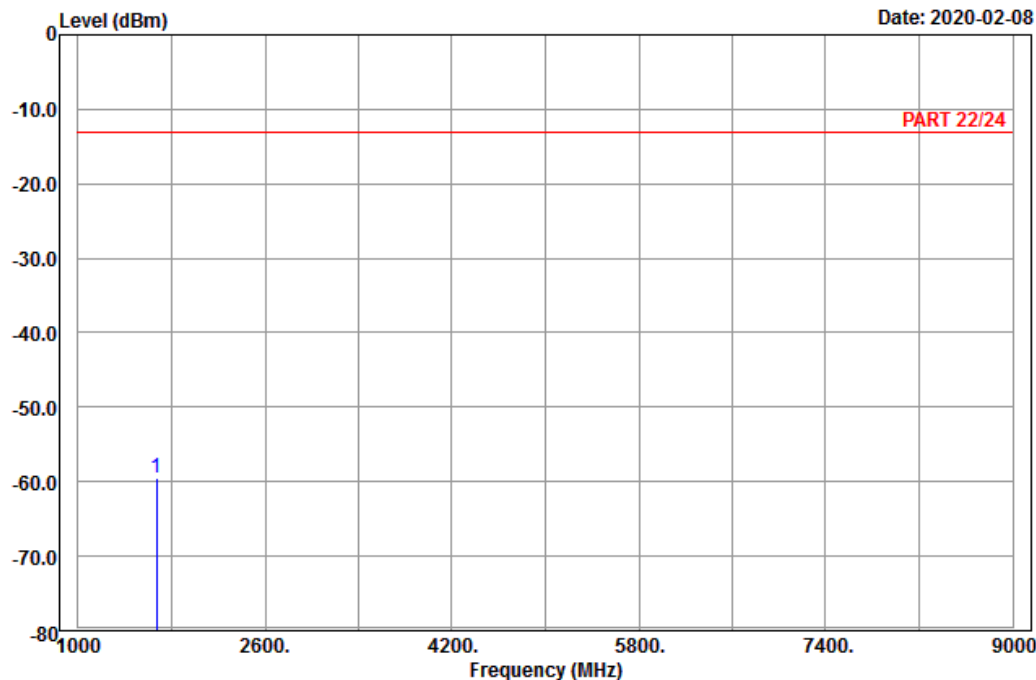


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A D T

Data: 4

Date: 2020-02-08



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_M-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1672.80	-59.50	-67.41	7.91	-13.00	-46.50	Peak

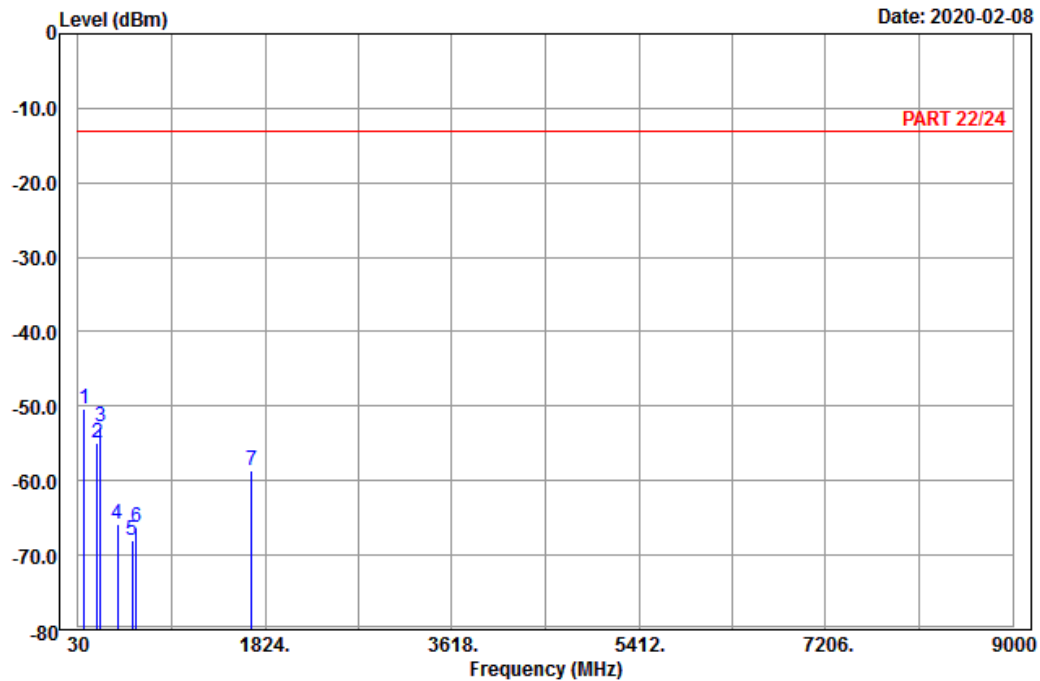
High Channel



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A D T

Data: 7



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : Band V_Link_H-Ch
 Tested by: Charles Hsiao

		Read	Limit	Over	
Freq	Level	Level	Factor	Line	Limit Remark
MHz	dBm	dBm	dB	dBm	dB
1 pp	86.43	-50.33	-39.22	-11.11	-13.00 -37.33 Peak
2	215.76	-54.88	-48.92	-5.96	-13.00 -41.88 Peak
3	243.57	-52.76	-47.16	-5.60	-13.00 -39.76 Peak
4	408.50	-65.90	-62.97	-2.93	-13.00 -52.90 Peak
5	545.70	-67.95	-66.00	-1.95	-13.00 -54.95 Peak
6	584.20	-66.20	-65.94	-0.26	-13.00 -53.20 Peak
7	1693.20	-58.56	-66.70	8.14	-13.00 -45.56 Peak

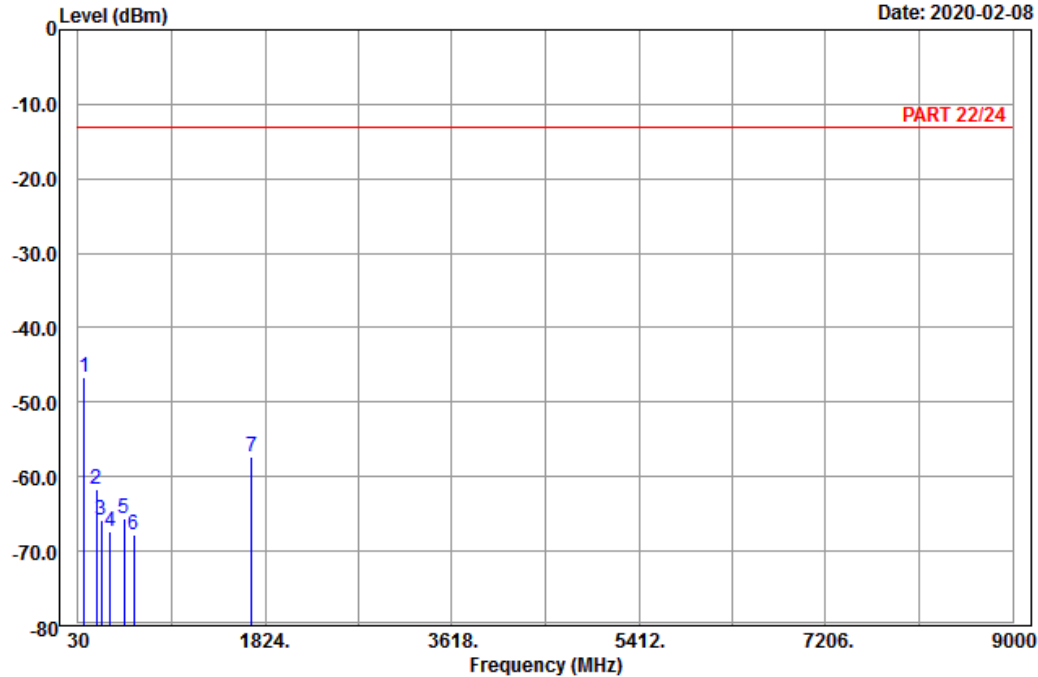


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A D T

Data: 8

Date: 2020-02-08



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : Band V_Link_H-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	86.97	-46.54	-35.54	-11.00	-13.00	-33.54	Peak
2	208.20	-61.69	-55.62	-6.07	-13.00	-48.69	Peak
3	252.48	-65.89	-60.37	-5.52	-13.00	-52.89	Peak
4	339.20	-67.30	-61.80	-5.50	-13.00	-54.30	Peak
5	472.20	-65.64	-61.16	-4.48	-13.00	-52.64	Peak
6	561.10	-67.79	-66.61	-1.18	-13.00	-54.79	Peak
7	1693.20	-57.32	-65.46	8.14	-13.00	-44.32	Peak

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

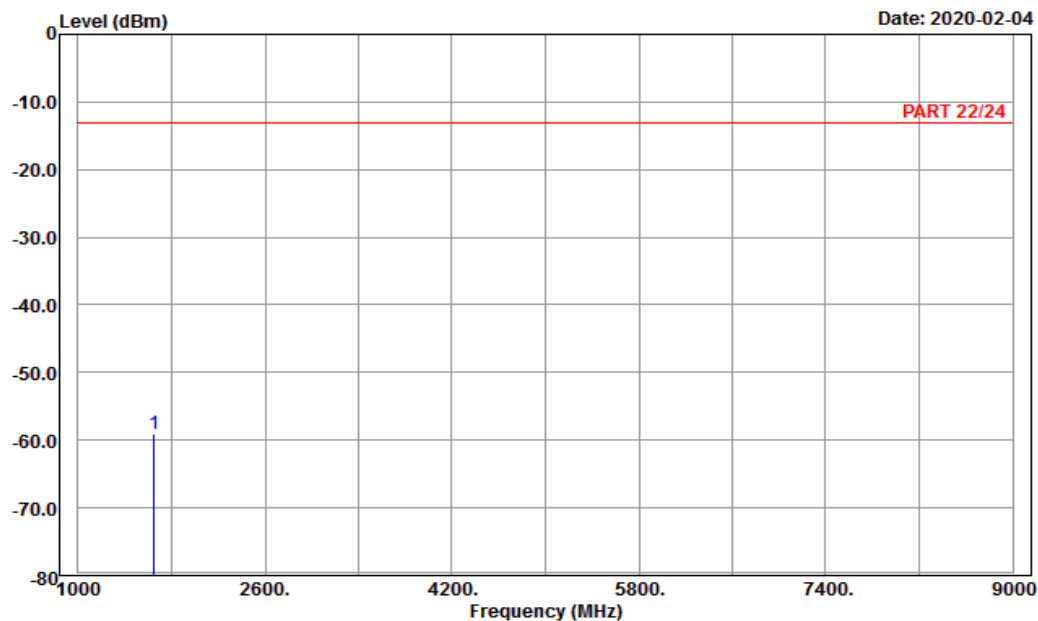


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_L-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1649.40	-59.09	-66.82	7.73	-13.00	-46.09	Peak

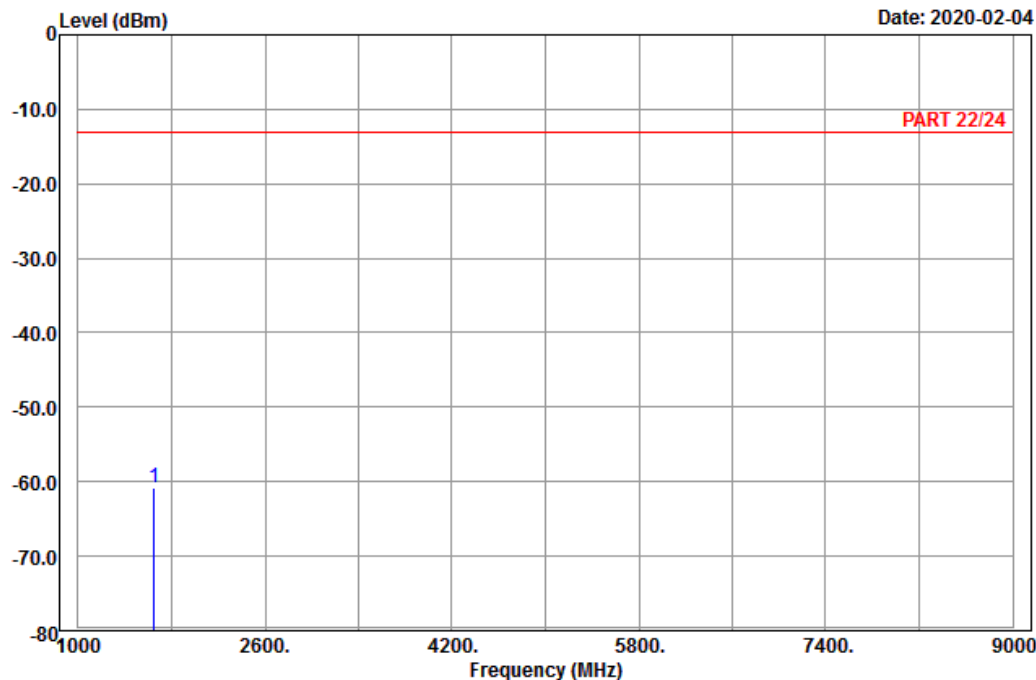


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5 _Link_L-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1649.40	-60.77	-68.50	7.73	-13.00	-47.77	Peak

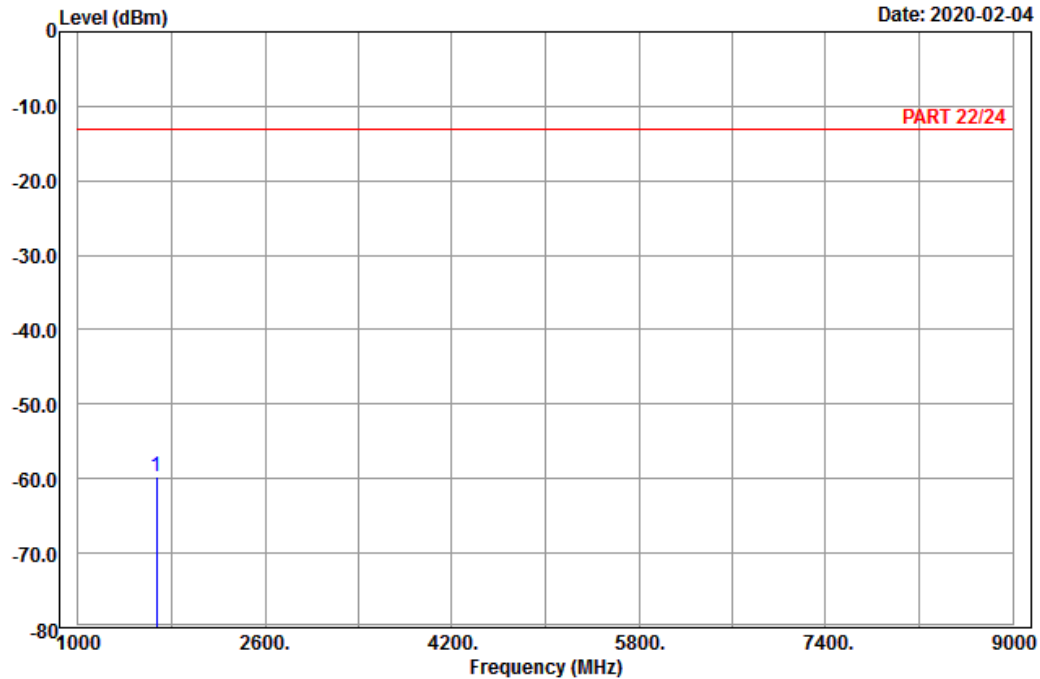
Middle Channel



Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_M-Ch
Tested by: Charles Hsiao

		Read		Limit	Over	
Freq	Level	Level	Factor	Line	Limit	Remark
MHz	dBm	dBm	dB	dBm	dB	
1 pp 1673.00	-59.76	-67.67	7.91	-13.00	-46.76	Peak

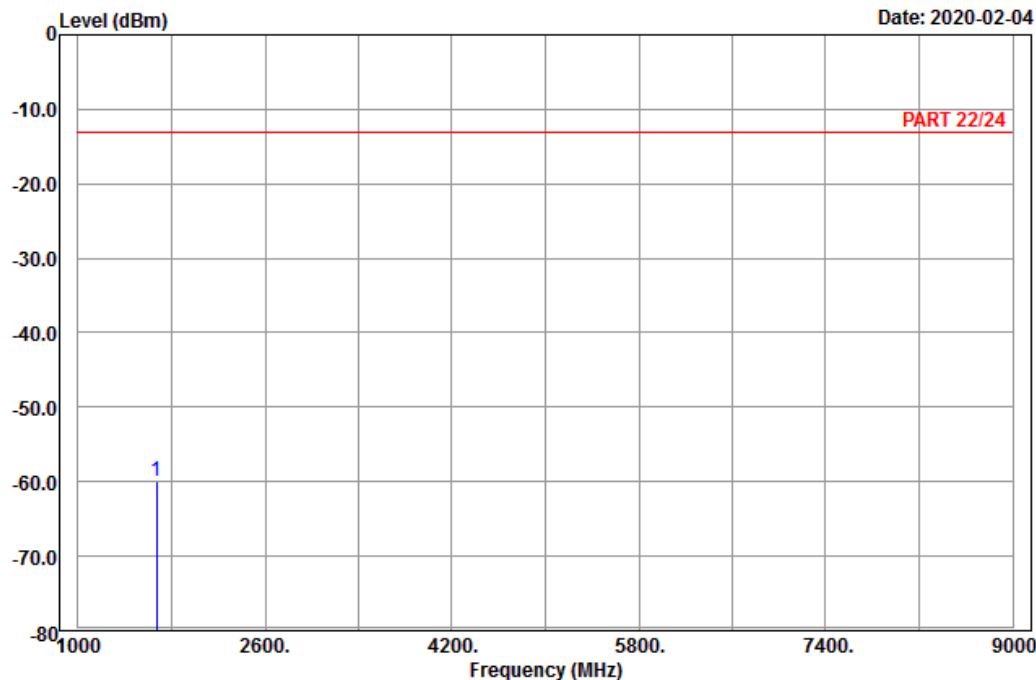


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



Site : 966 chamber 1
 Condition: PART 22/24 Vertical
 Remark : LTE_Band 5 _Link_M-Ch
 Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1673.00	-59.93	-67.84	7.91	-13.00	-46.93	Peak

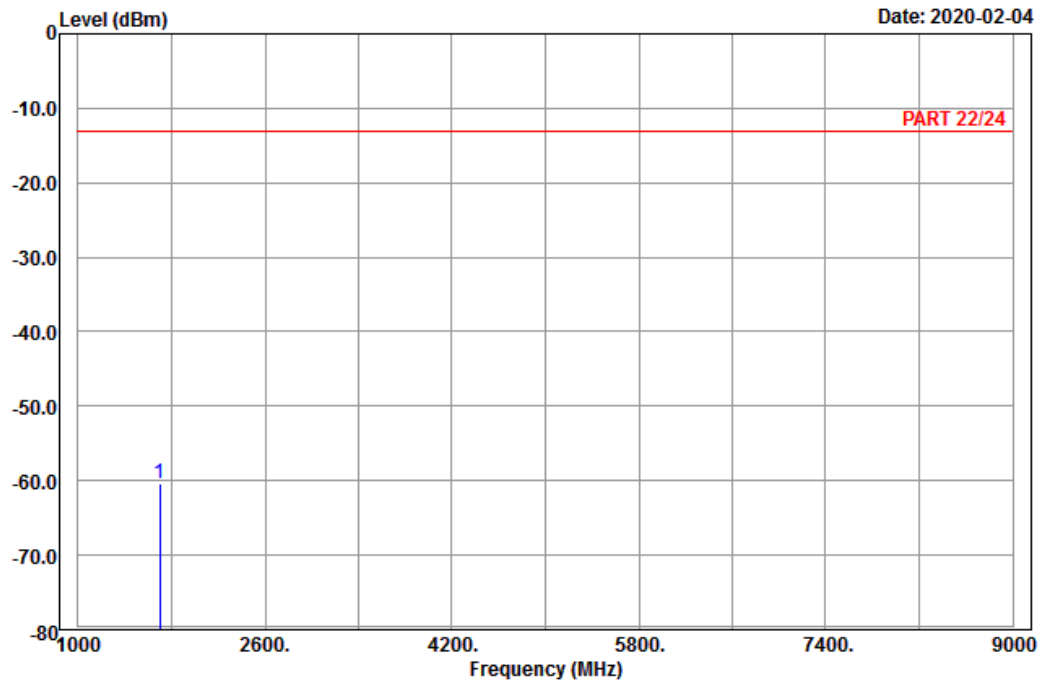
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : LTE_Band 5_Link_H-Ch
 Tested by: Charles Hsiao

		Read		Limit	Over	
Freq	Level	Level	Factor	Line	Limit	Remark
MHz	dBm	dBm	dB	dBm	dB	
1 pp 1696.60	-60.30	-68.44	8.14	-13.00	-47.30	Peak

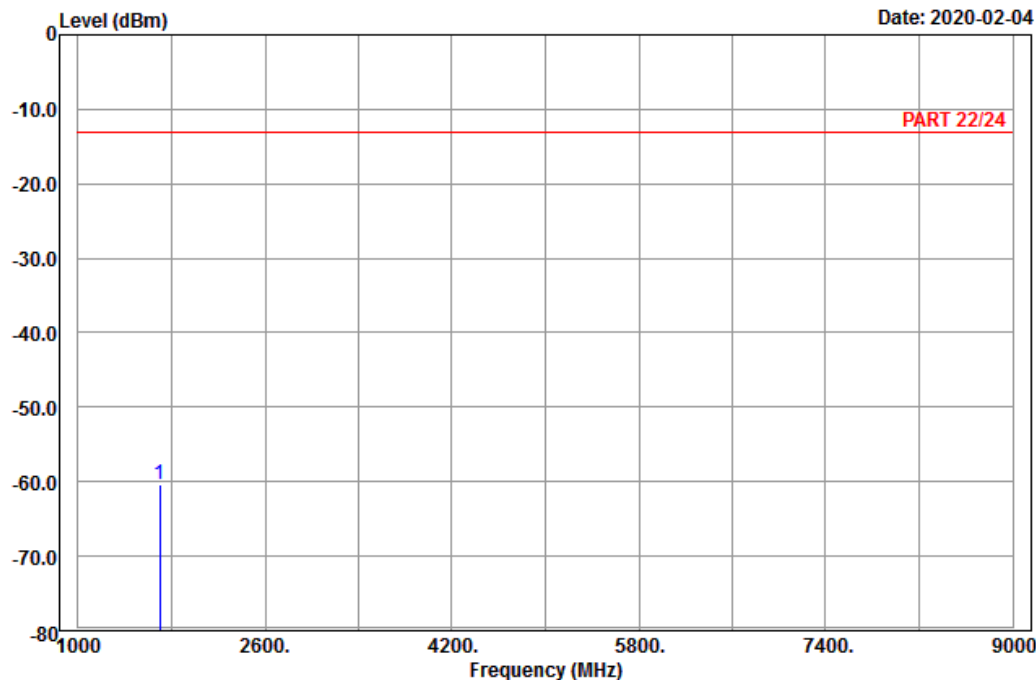


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5 _Link_H-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1696.60	-60.28	-68.42	8.14	-13.00	-47.28	Peak

Channel Bandwidth: 5 MHz / QPSK
Low Channel

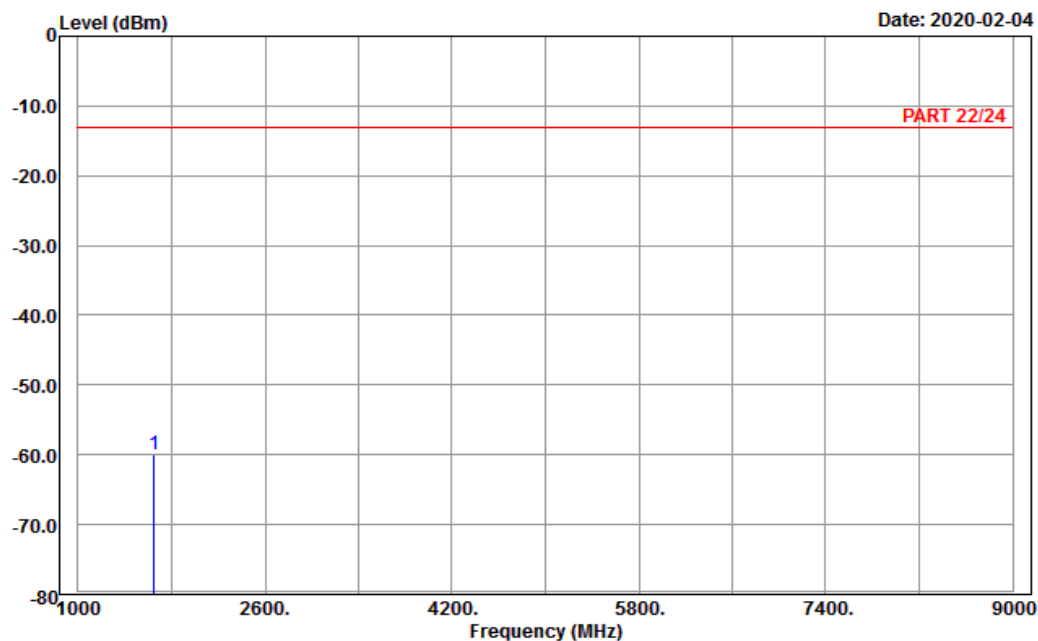


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5 _Link_L-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1653.00	-59.99	-67.72	7.73	-13.00	-46.99	Peak

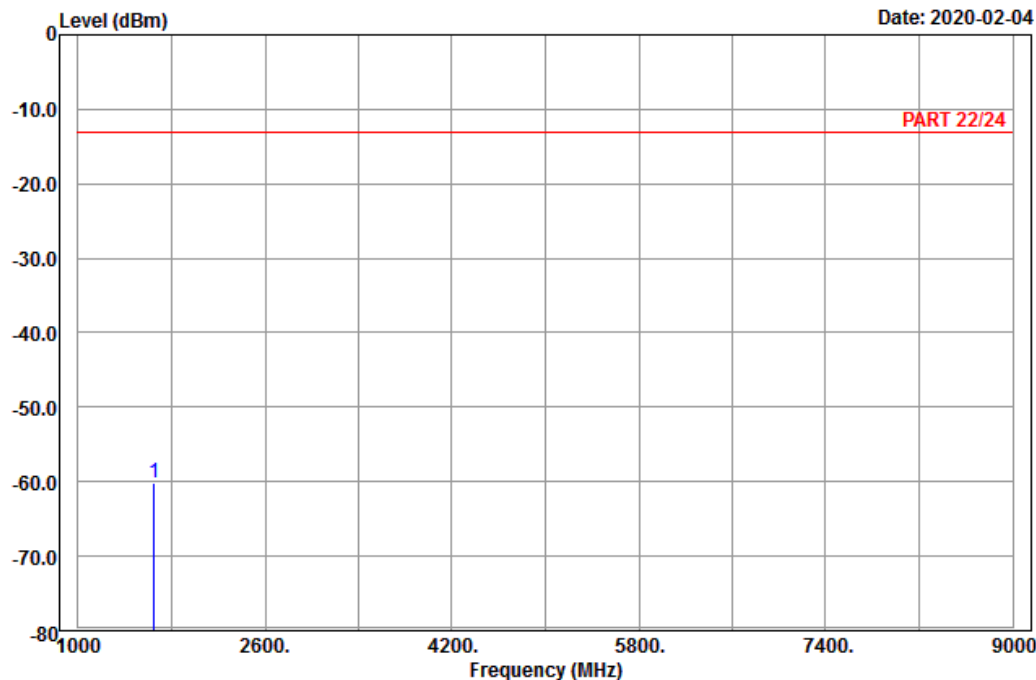


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_L-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1653.00	-60.08	-67.81	7.73	-13.00	-47.08	Peak

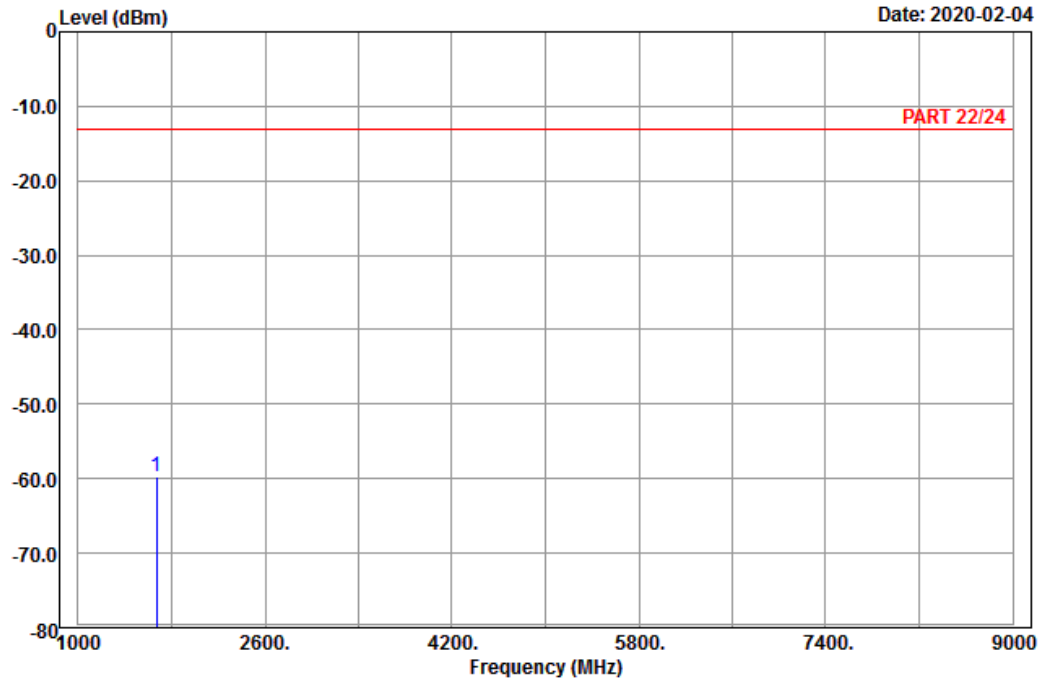
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : LTE_Band 5_Link_M-Ch
 Tested by: Charles Hsiao

		Read		Limit	Over	
Freq	Level	Level	Factor	Line	Limit	Remark
MHz	dBm	dBm	dB	dBm	dB	
1 pp 1673.00	-59.62	-67.53	7.91	-13.00	-46.62	Peak

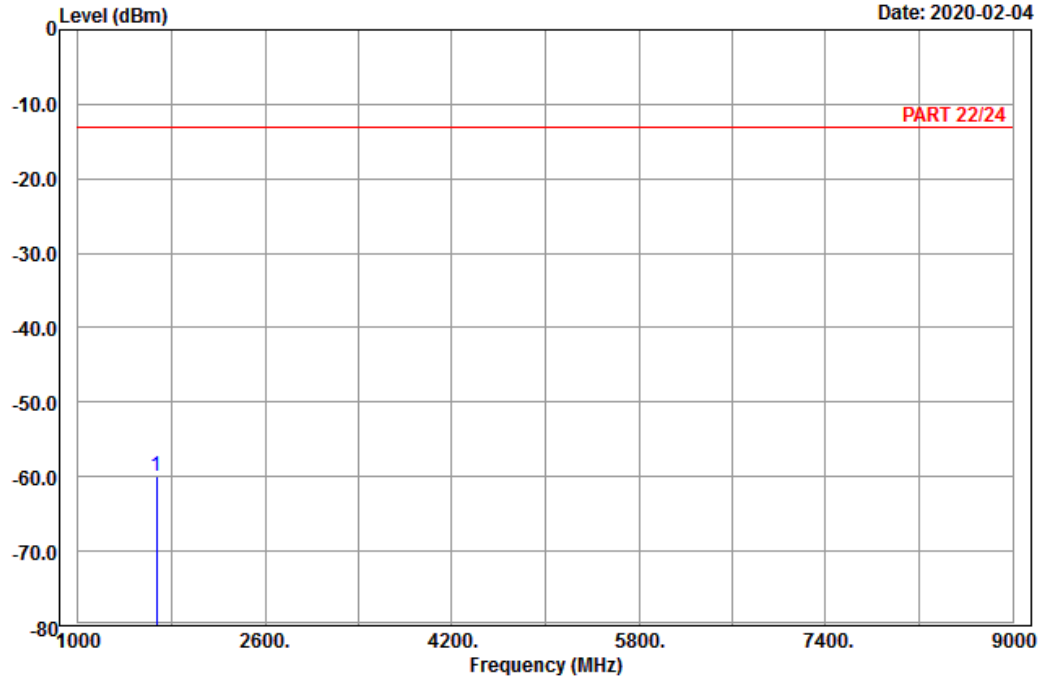


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5 _Link_M-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1673.00	-59.88	-67.79	7.91	-13.00	-46.88	Peak

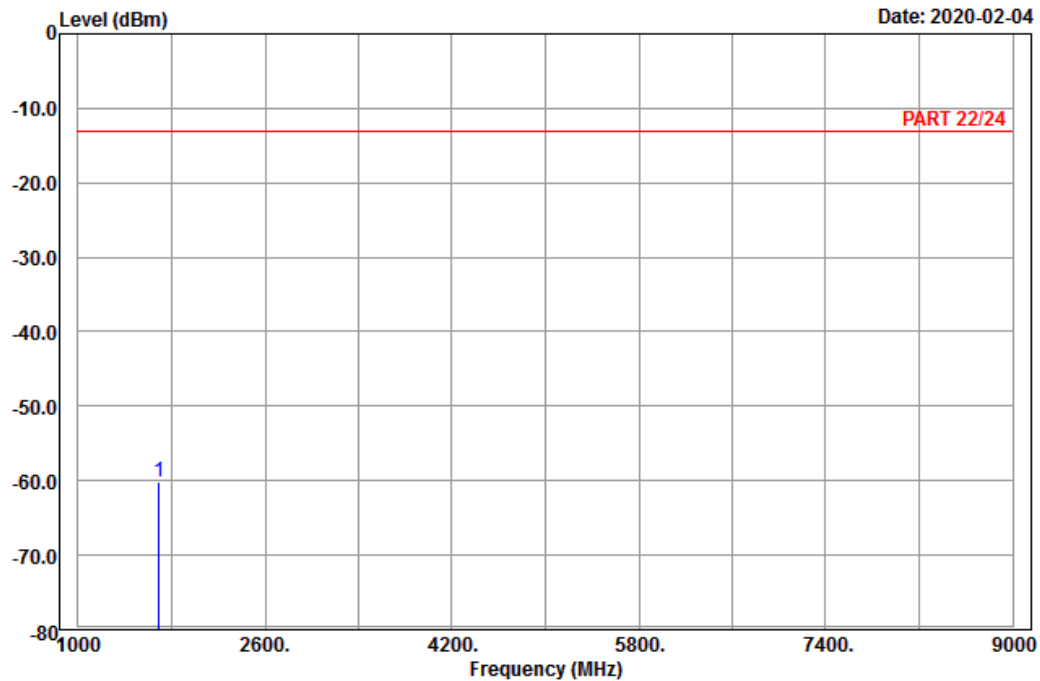
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : LTE_Band 5_Link_H-Ch
 Tested by: Charles Hsiao

		Read		Limit	Over	
Freq	Level	Level	Factor	Line	Limit	Remark
MHz	dBm	dBm	dB	dBm	dB	
1 pp 1693.00	-60.19	-68.21	8.02	-13.00	-47.19	Peak

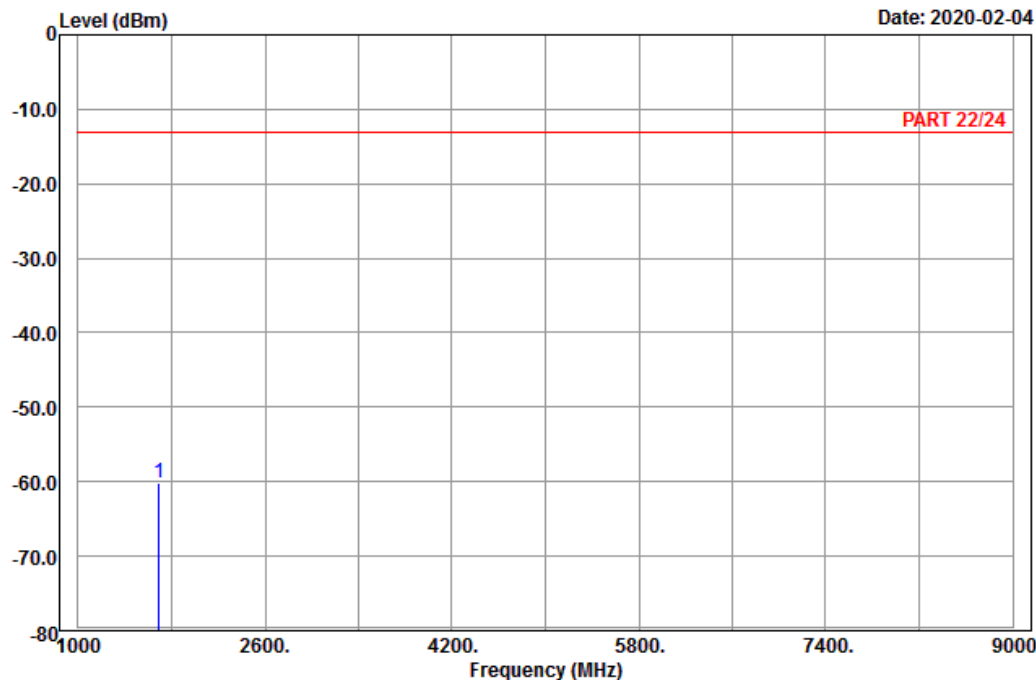


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5 _Link_H-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1693.00	-60.21	-68.23	8.02	-13.00	-47.21	Peak

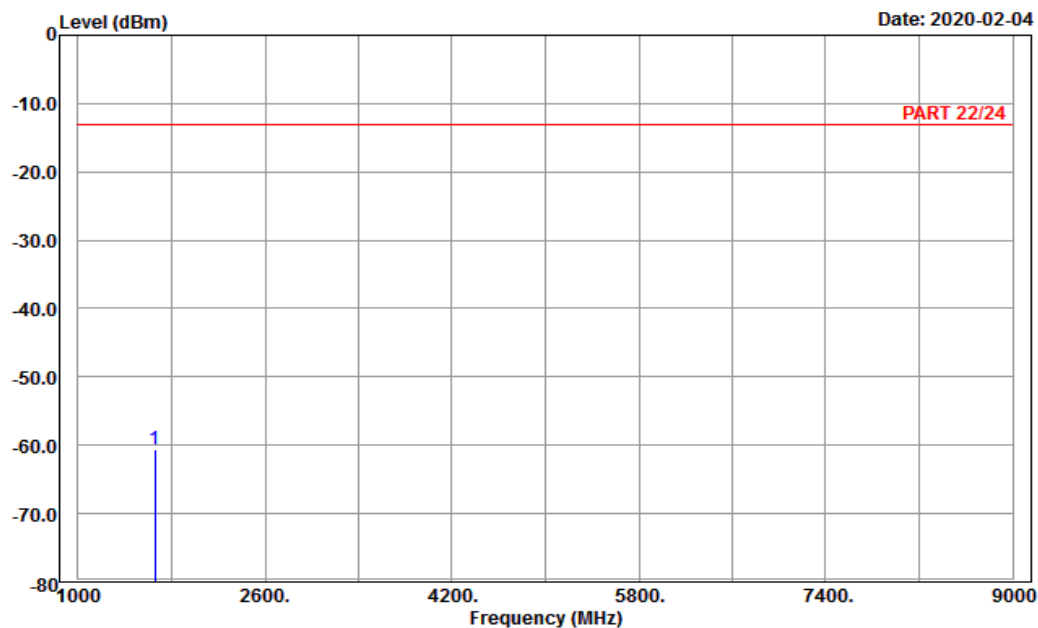
Channel Bandwidth: 10 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1
Condition: PART 22/24 Horizontal
Remark : LTE_Band 5_Link_L-Ch
Tested by: Charles Hsiao

		Read		Limit	Over	
Freq	Level	Level	Factor	Line	Limit	Remark
MHz	dBm	dBm	dB	dBm	dB	
1 pp 1658.00	-60.54	-68.45	7.91	-13.00	-47.54	Peak

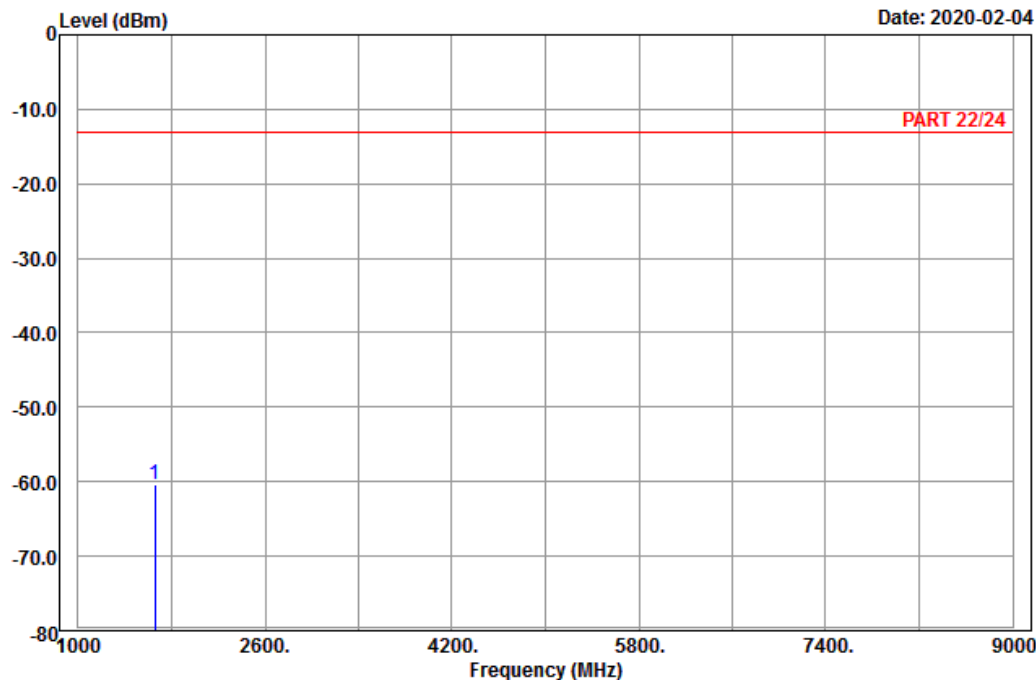


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_L-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1658.00	-60.32	-68.23	7.91	-13.00	-47.32	Peak

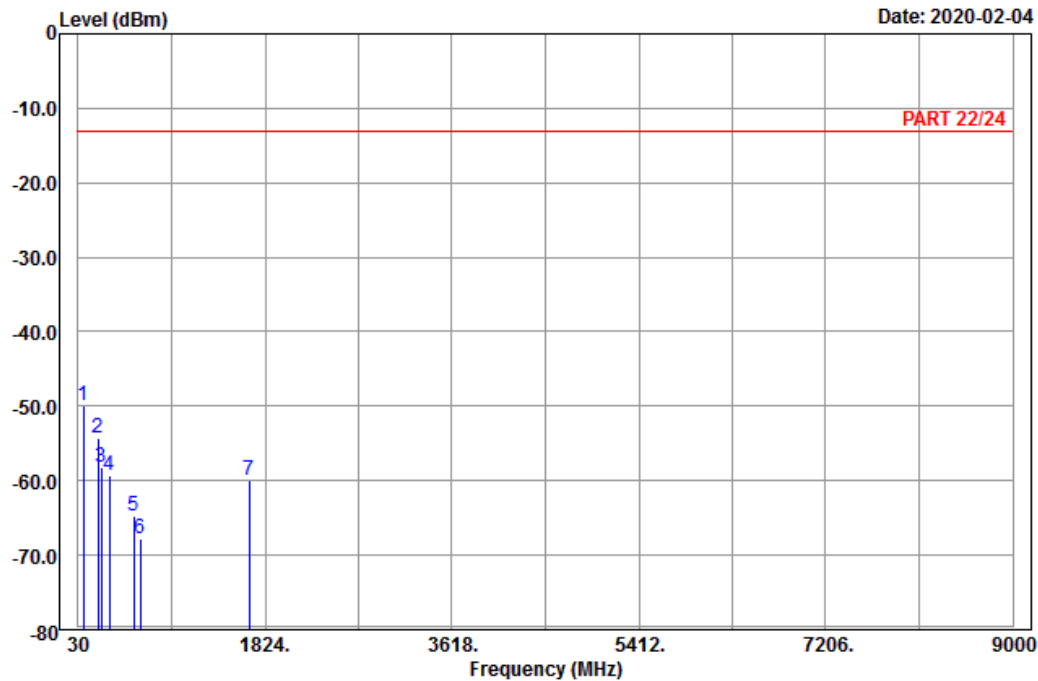
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : LTE_Band 5_Link_M-Ch
 Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	pp	84.54	-49.85	-38.52	-11.33	-13.00	-36.85 Peak
2		217.65	-54.29	-48.34	-5.95	-13.00	-41.29 Peak
3		248.70	-58.25	-52.72	-5.53	-13.00	-45.25 Peak
4		332.20	-59.37	-53.79	-5.58	-13.00	-46.37 Peak
5		562.50	-64.81	-63.67	-1.14	-13.00	-51.81 Peak
6		626.20	-67.73	-67.86	0.13	-13.00	-54.73 Peak
7		1673.00	-60.02	-67.93	7.91	-13.00	-47.02 Peak

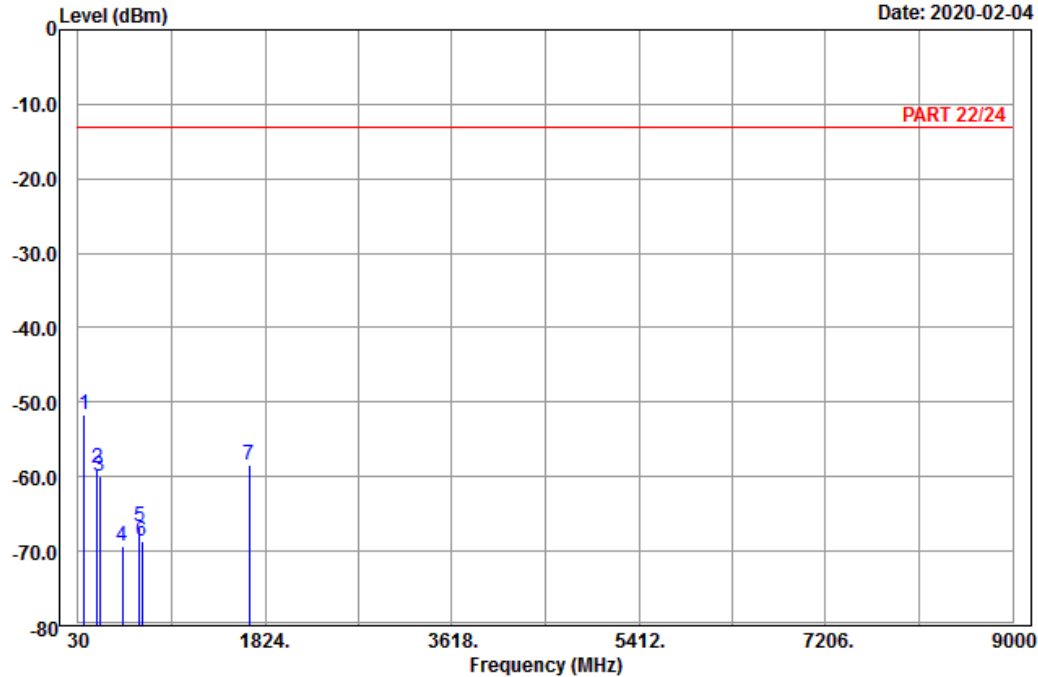


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5_Link_M-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	91.83	-51.58	-41.02	-10.56	-13.00	-38.58	Peak
2	216.57	-58.91	-52.95	-5.96	-13.00	-45.91	Peak
3	236.55	-59.84	-54.15	-5.69	-13.00	-46.84	Peak
4	453.30	-69.37	-65.44	-3.93	-13.00	-56.37	Peak
5	617.80	-66.79	-67.02	0.23	-13.00	-53.79	Peak
6	645.10	-68.77	-68.69	-0.08	-13.00	-55.77	Peak
7	1673.00	-58.50	-66.41	7.91	-13.00	-45.50	Peak

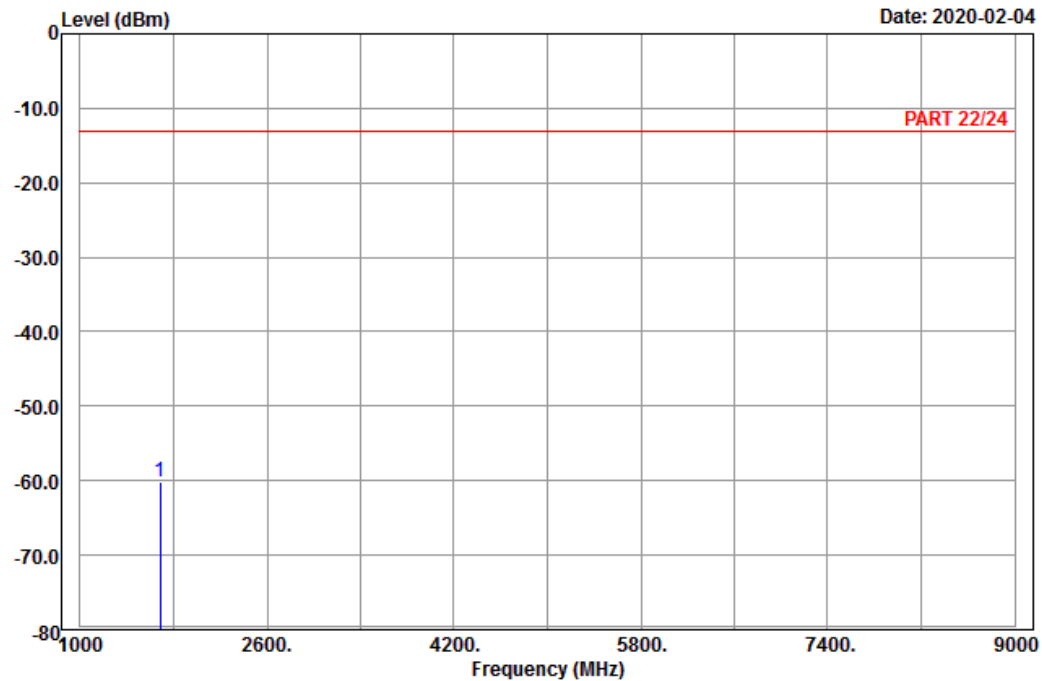
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1
 Condition: PART 22/24 Horizontal
 Remark : LTE_Band 5_Link_H-Ch
 Tested by: Charles Hsiao

		Read		Limit	Over	
Freq	Level	Level	Factor	Line	Limit	Remark
MHz	dBm	dBm	dB	dBm	dB	
1 pp 1688.00	-60.27	-68.29	8.02	-13.00	-47.27	Peak

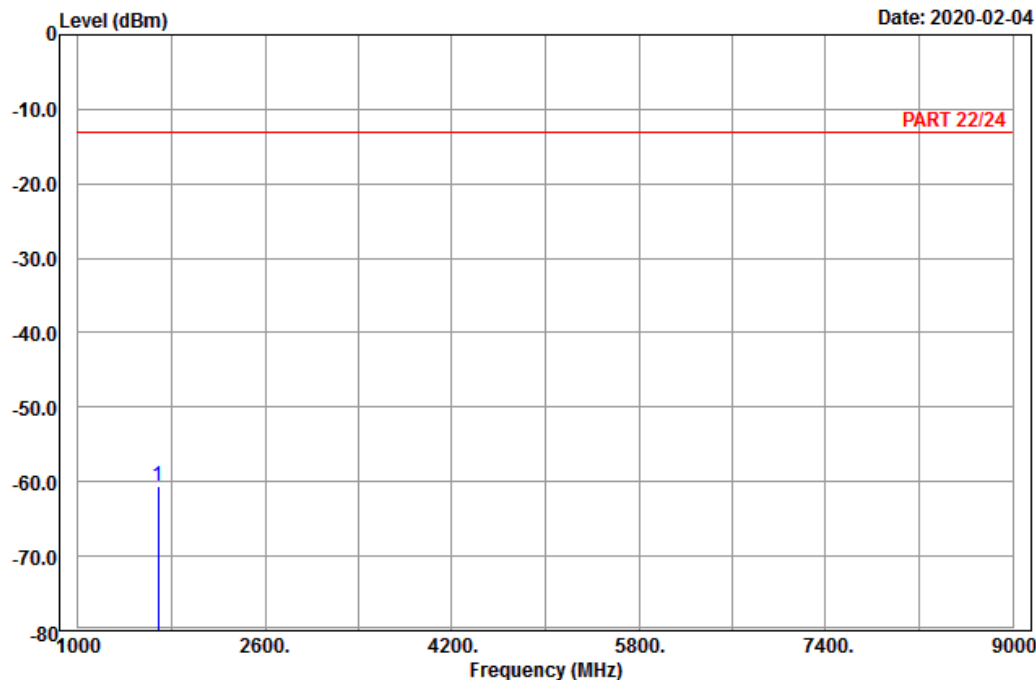


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



Site : 966 chamber 1
Condition: PART 22/24 Vertical
Remark : LTE_Band 5 _Link_H-Ch
Tested by: Charles Hsiao

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1688.00	-60.66	-68.68	8.02	-13.00	-47.66	Peak

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

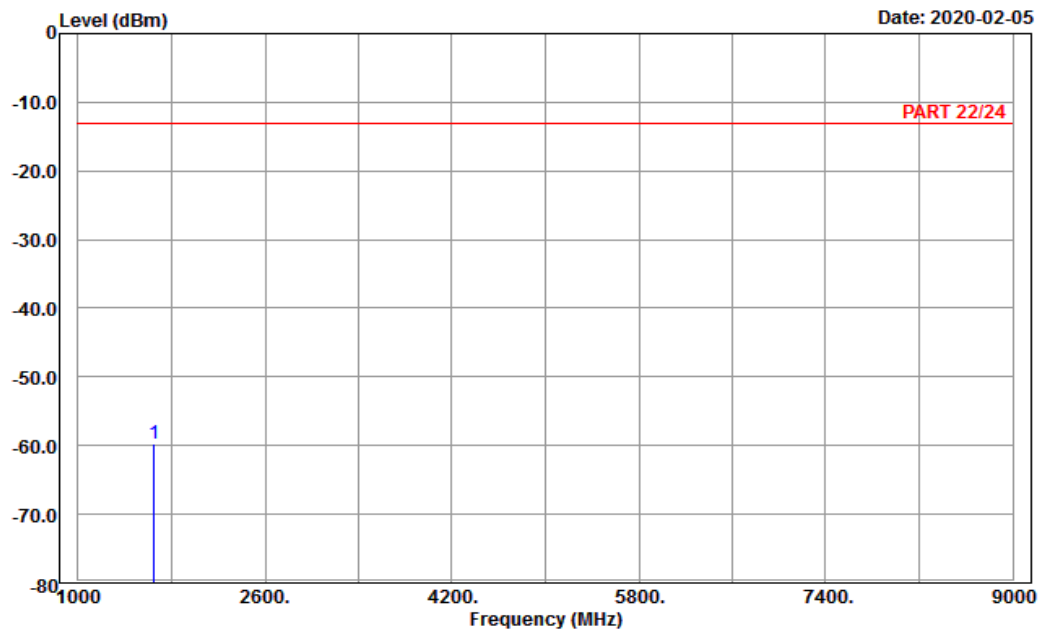


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2020-02-05



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1649.40	-59.77	-67.50	7.73	-13.00	-46.77	Peak

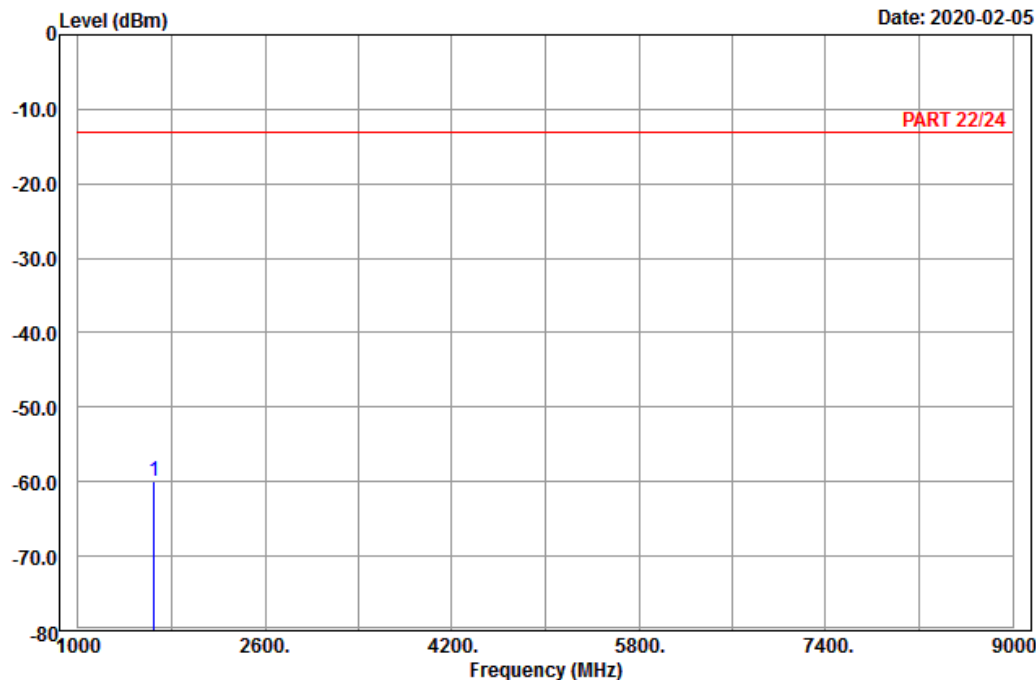


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-05



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1649.40	-59.90	-67.63	7.73	-13.00	-46.90	Peak

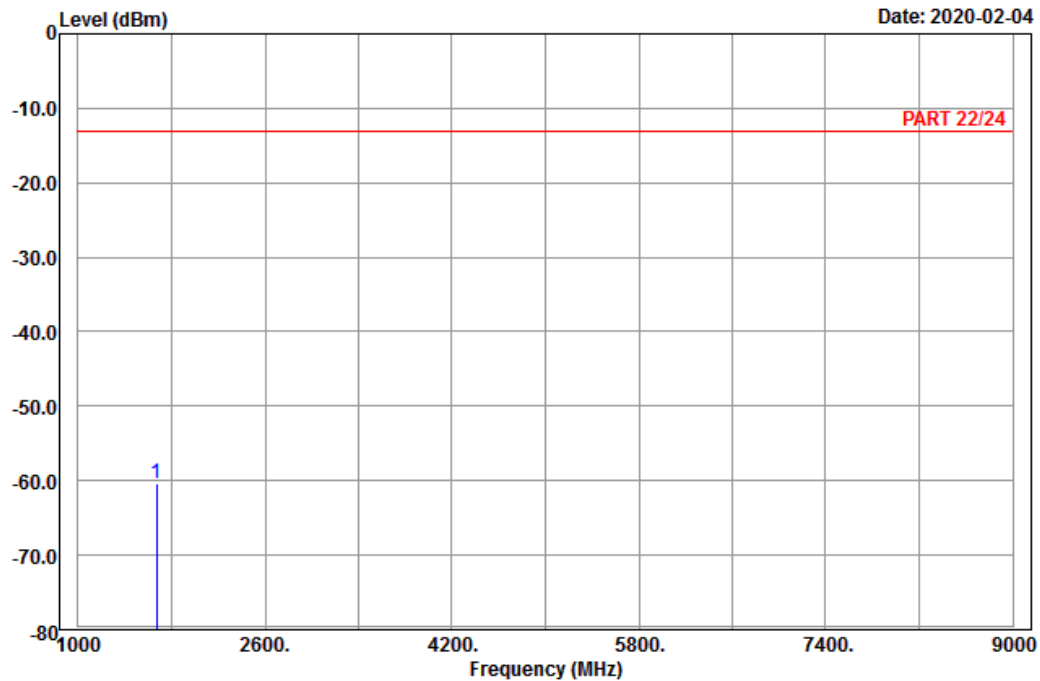
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1673.00	-60.36	-68.27	7.91	-13.00	-47.36	Peak

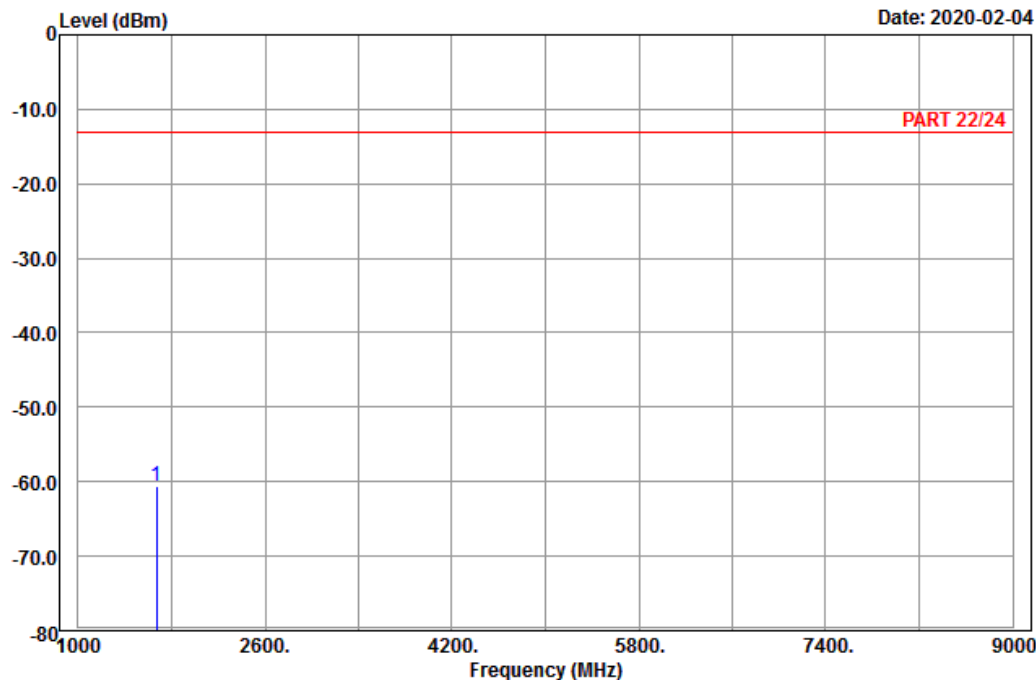


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1673.00	-60.52	-68.43	7.91	-13.00	-47.52	Peak

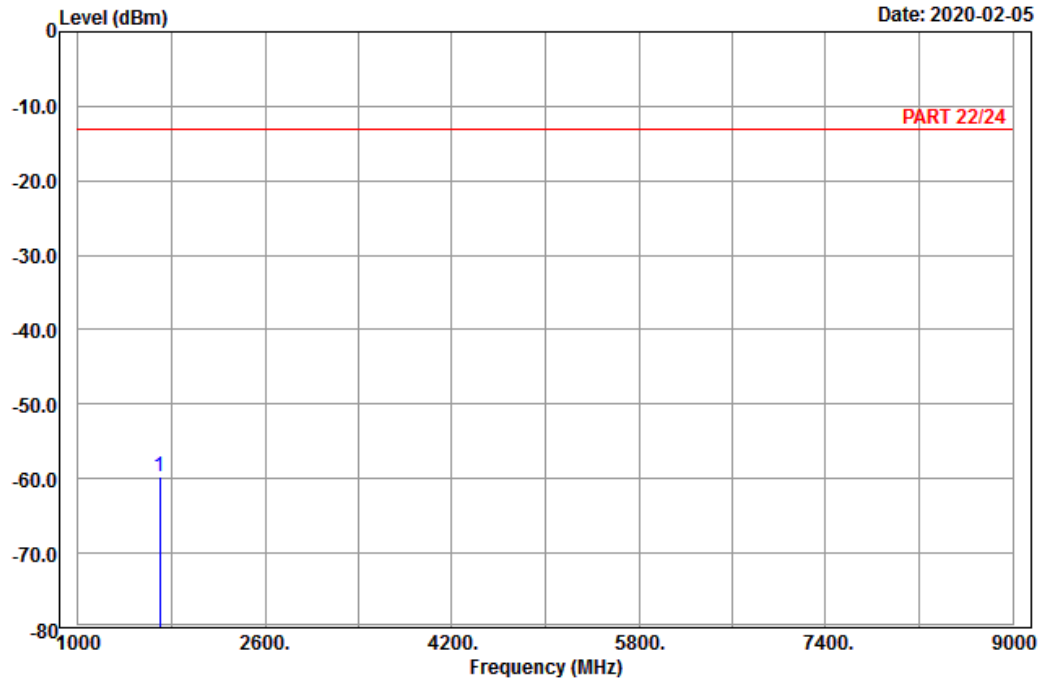
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1696.60	-59.67	-67.81	8.14	-13.00	-46.67	Peak

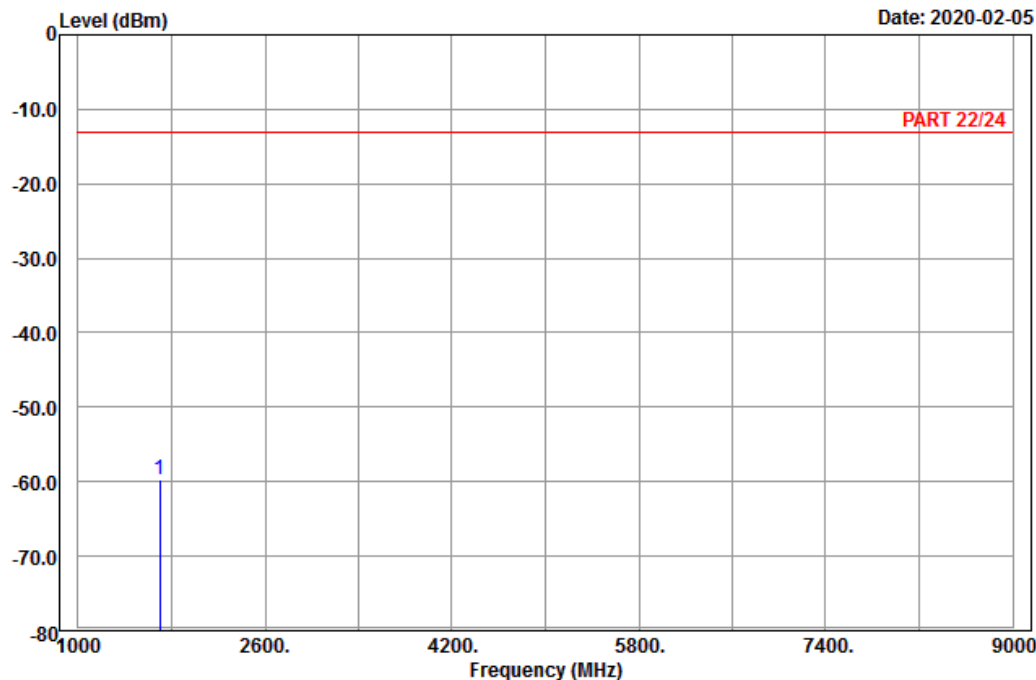


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-05



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1696.60	-59.74	-67.88	8.14	-13.00	-46.74	Peak

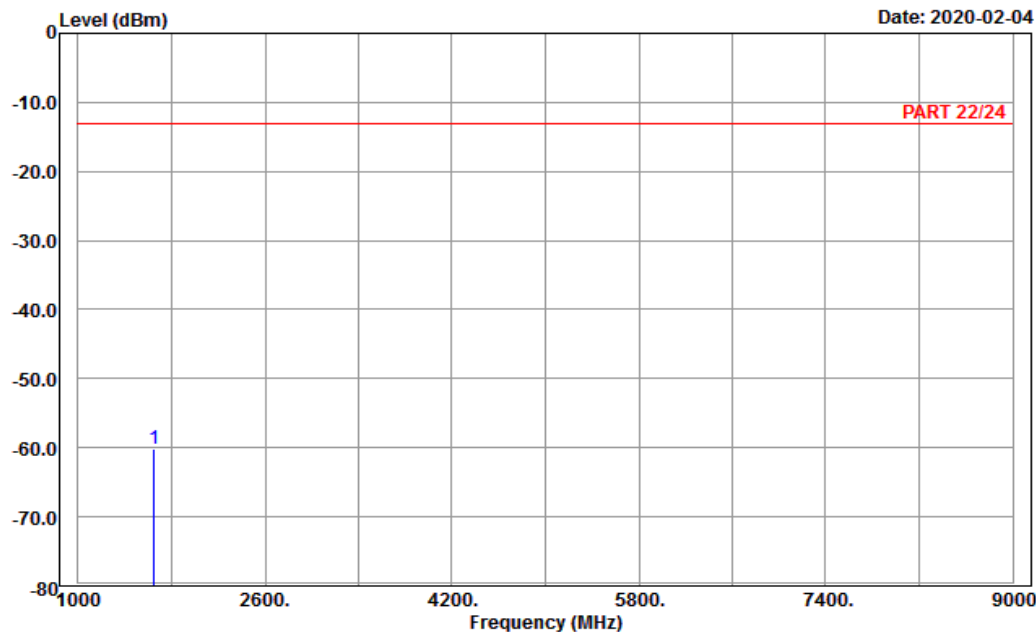
Channel Bandwidth: 5 MHz / QPSK
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1653.00	-60.07	-67.80	7.73	-13.00	-47.07	Peak

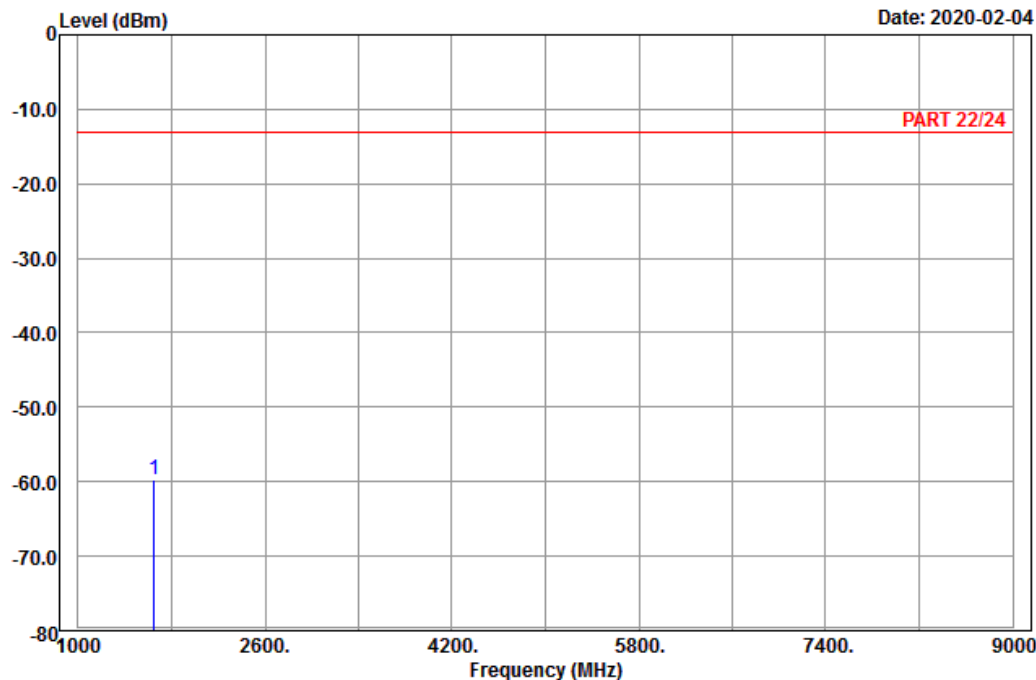


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1653.00	-59.77	-67.50	7.73	-13.00	-46.77	Peak

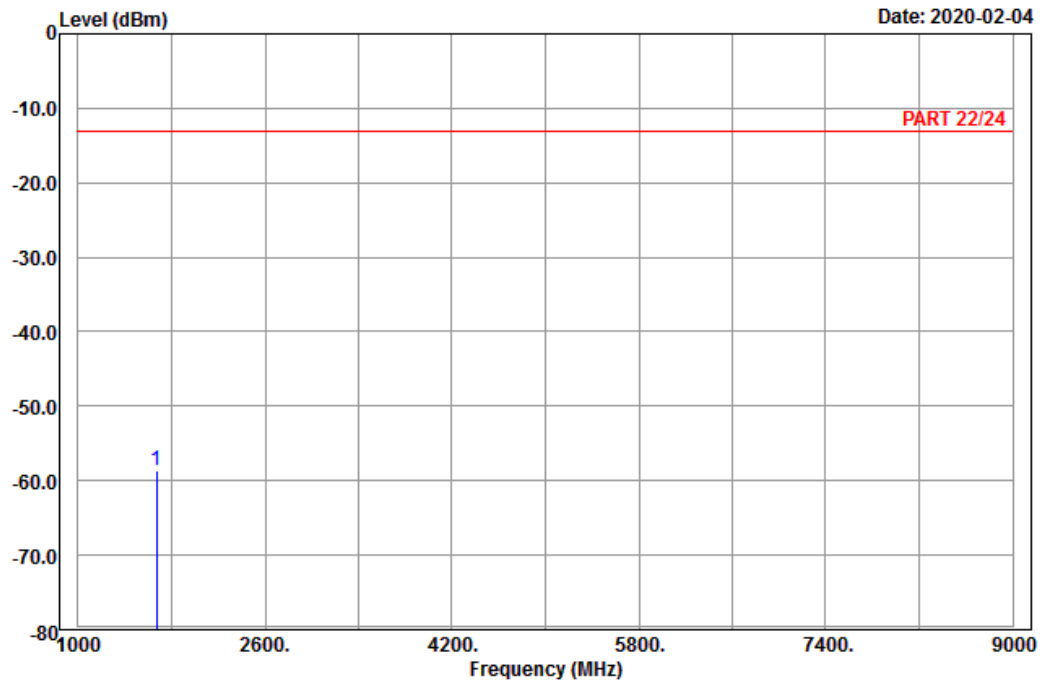
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1673.00	-58.64	-66.55	7.91	-13.00	-45.64	Peak

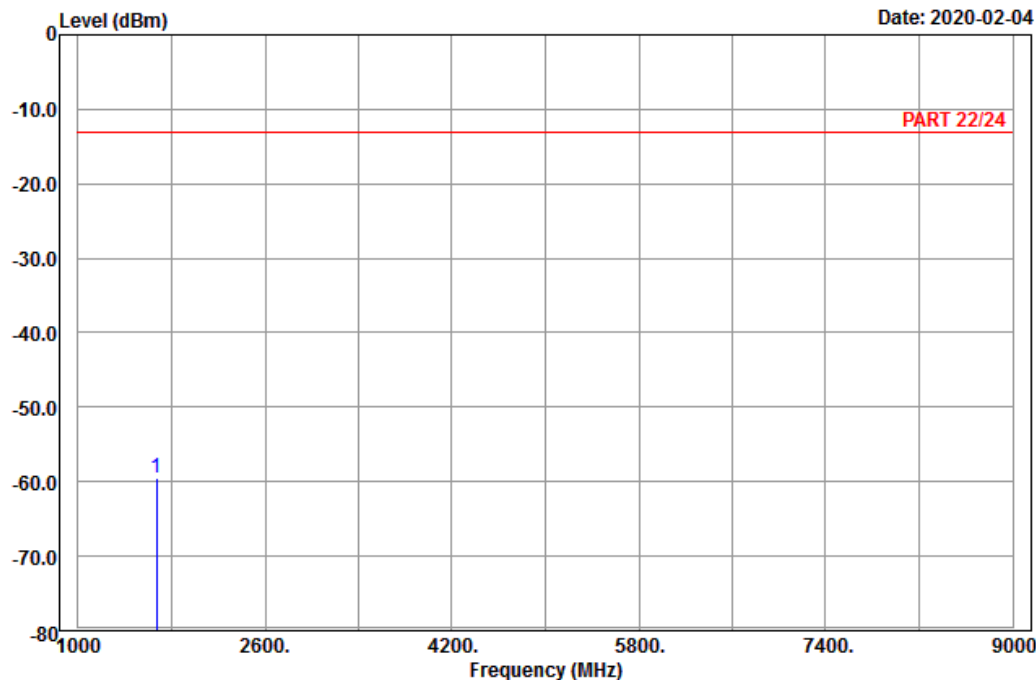


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2020-02-04



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1673.00	-59.47	-67.38	7.91	-13.00	-46.47	Peak

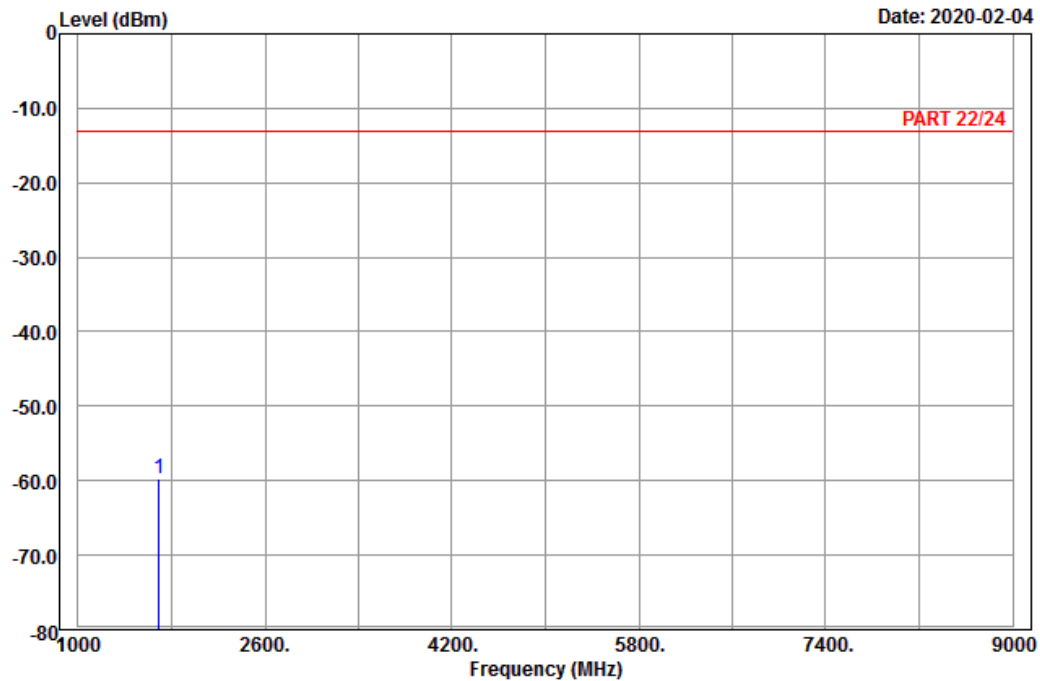
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1693.00	-59.66	-67.68	8.02	-13.00	-46.66	Peak

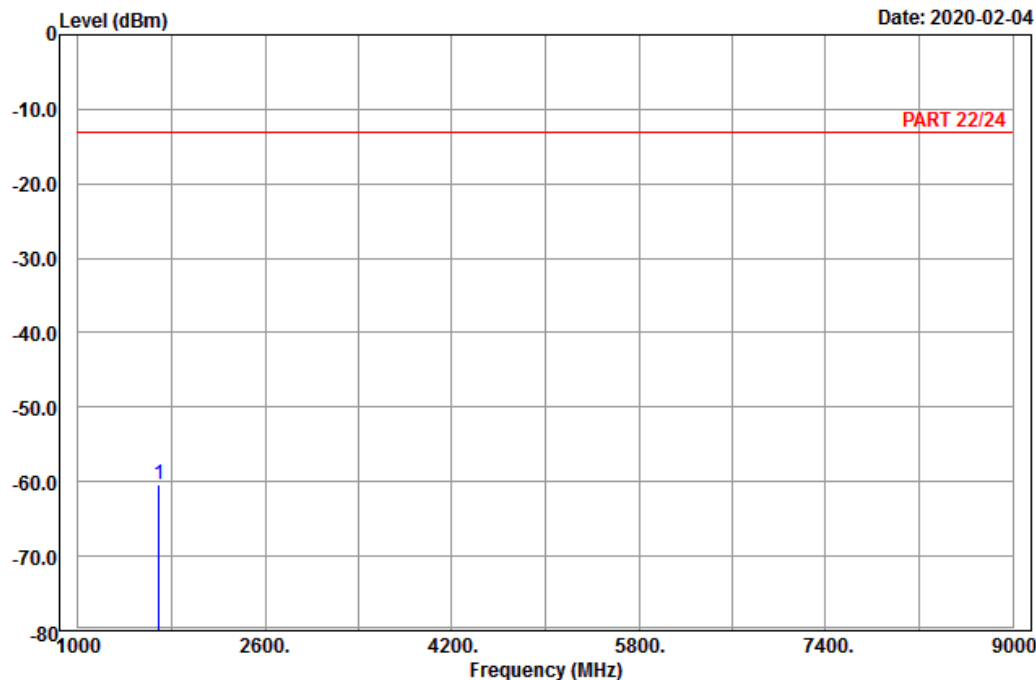


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1693.00	-60.32	-68.34	8.02	-13.00	-47.32	Peak

Channel Bandwidth: 15 MHz / QPSK
Low Channel

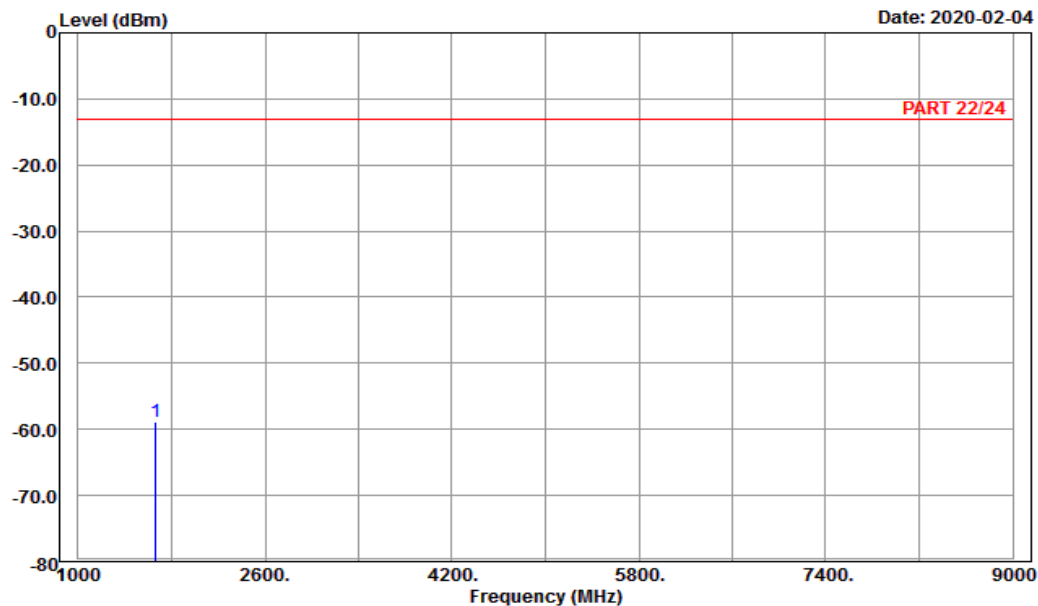


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2020-02-04



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1663.00	-58.80	-66.71	7.91	-13.00	-45.80	Peak

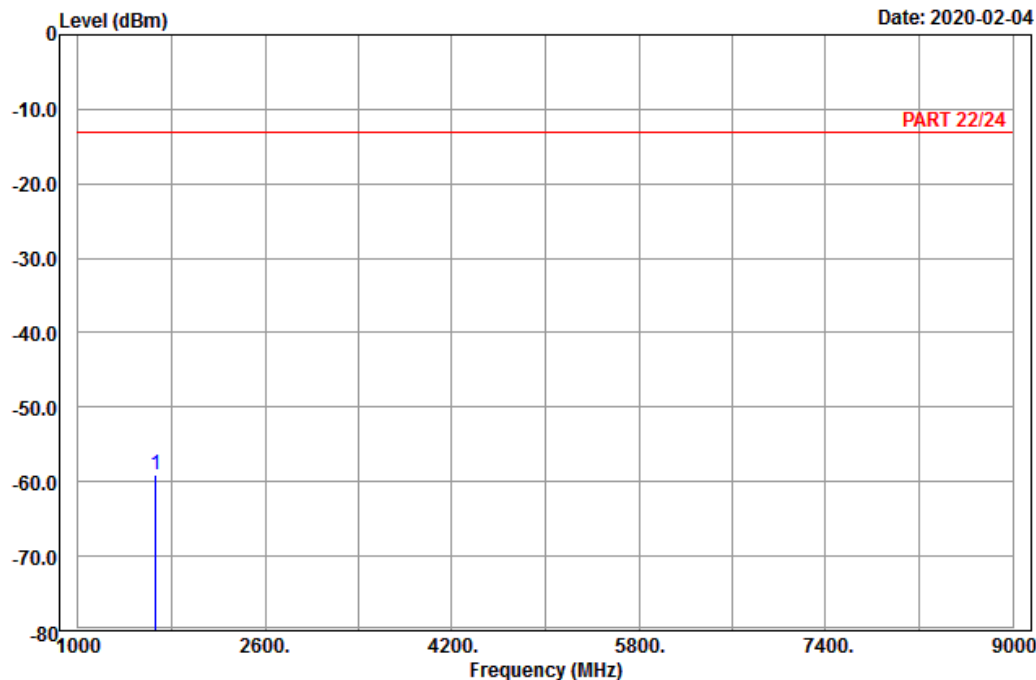


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1663.00	-59.17	-67.08	7.91	-13.00	-46.17	Peak

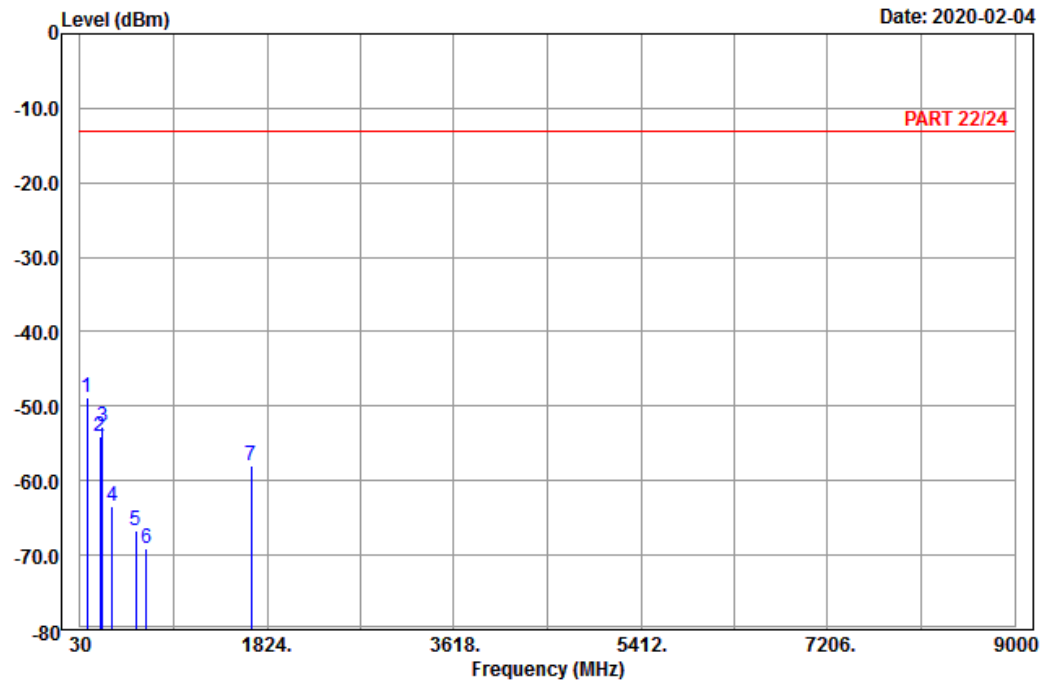
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	pp	92.91	-48.78	-38.27	-10.51	-13.00	-35.78 Peak
2		221.97	-54.10	-48.22	-5.88	-13.00	-41.10 Peak
3		243.57	-52.76	-47.16	-5.60	-13.00	-39.76 Peak
4		339.20	-63.36	-57.86	-5.50	-13.00	-50.36 Peak
5		566.00	-66.74	-65.76	-0.98	-13.00	-53.74 Peak
6		665.40	-69.02	-68.81	-0.21	-13.00	-56.02 Peak
7		1673.00	-57.96	-65.87	7.91	-13.00	-44.96 Peak

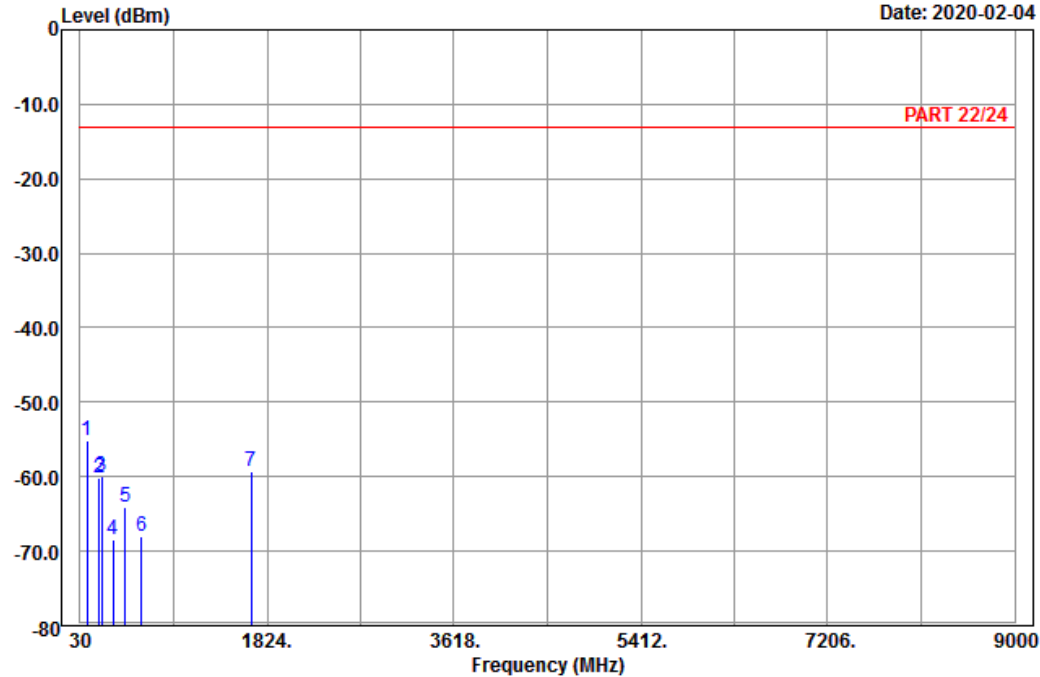


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-02-04



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	93.45	-55.17	-44.66	-10.51	-13.00	-42.17	Peak
2	211.44	-60.20	-54.17	-6.03	-13.00	-47.20	Peak
3	237.09	-59.88	-54.19	-5.69	-13.00	-46.88	Peak
4	348.30	-68.43	-63.03	-5.40	-13.00	-55.43	Peak
5	465.90	-64.17	-59.88	-4.29	-13.00	-51.17	Peak
6	617.80	-67.95	-68.18	0.23	-13.00	-54.95	Peak
7	1673.00	-59.38	-67.29	7.91	-13.00	-46.38	Peak

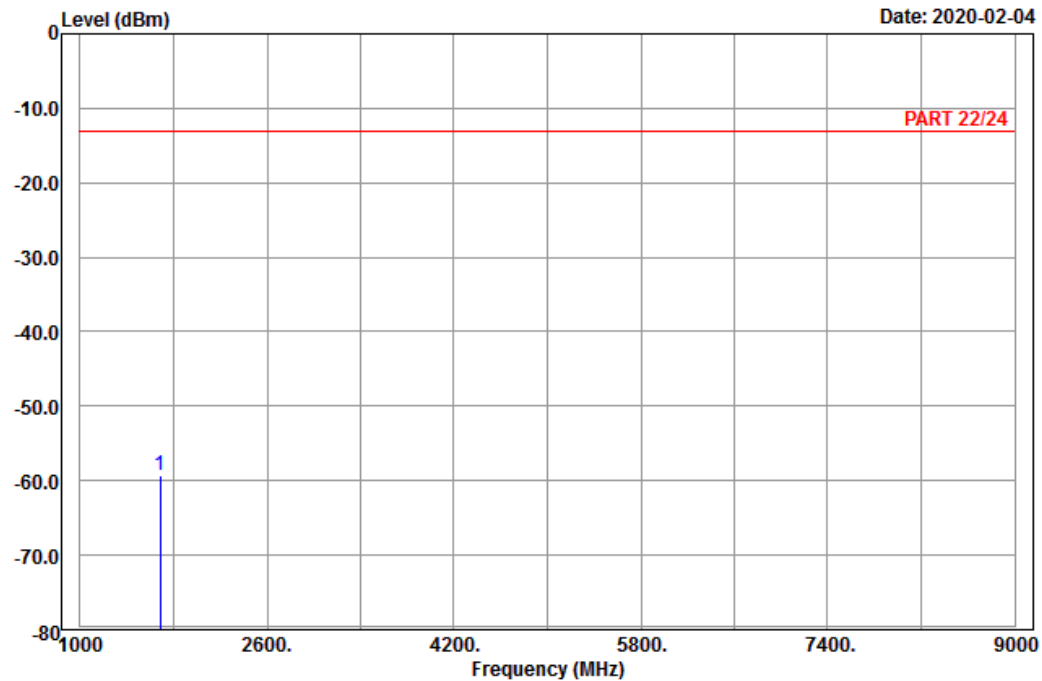
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



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

Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
MHz	dBm	dBm	dB	dBm	dB	
1 pp 1683.00	-59.40	-67.42	8.02	-13.00	-46.40	Peak

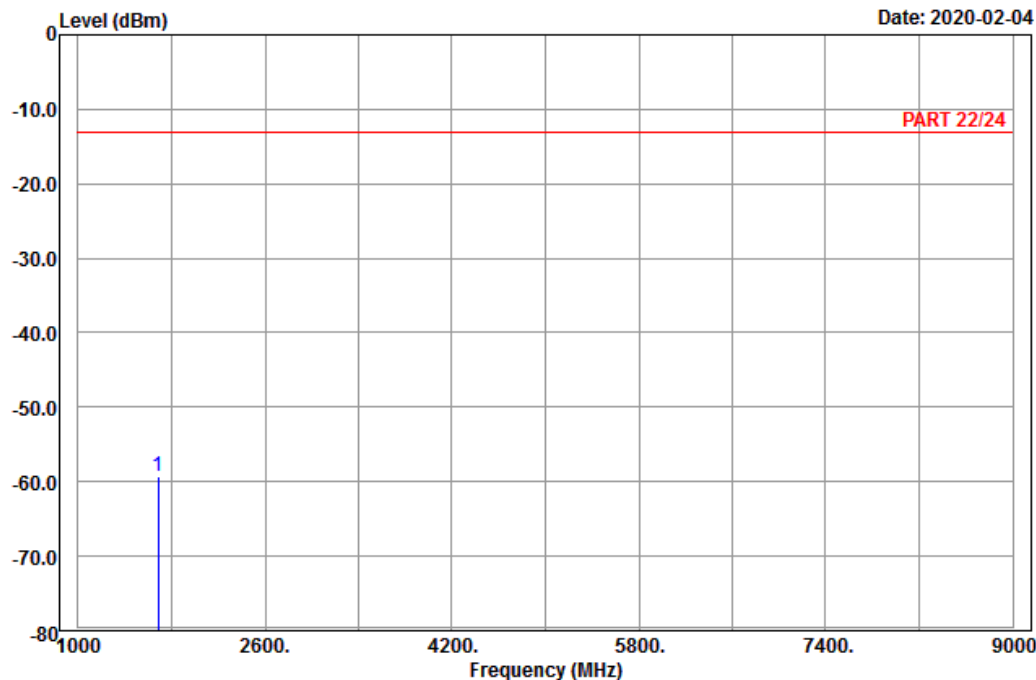


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2020-02-04



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

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1683.00	-59.34	-67.36	8.02	-13.00	-46.34	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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The address and road map of all our labs can be found in our web site also.

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