Partial FCC Test Report

(PART 90S)

Report No.:	RF191211C28A-2 R1
FCC ID:	2AEDS110LTEWIFI
Test Model:	SD-WAN 110-LTE-WiFi
Received Date:	Dec. 11, 2019
Test Date:	Feb. 05 ~ Feb. 07, 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

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF191211C28A-2	Original Release	Feb. 24, 2020
RF191211C28A-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. 05 ~ Feb. 07, 2020
Standards:	FCC Part 90, Subpart I, S FCC Part 2

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

Prepared by : Lena Wang , **Date:** 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 90 & Part 2 (LTE 26)			
FCC Clause	**Test Item**	**Result**	**Remarks**
2.1046 90.635 (b)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1047	Modulation Characteristics	N/A	Refer to Note
2.1055 90.213	Frequency Stability	N/A	Refer to Note
2.1049 90.209	Occupied Bandwidth	N/A	Refer to Note
2.1051 90.210	Emission Masks	N/A	Refer to Note
2.1051 90.691	Conducted Spurious Emissions	N/A	Refer to Note
2.1053 90.691	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -36.52 dB at 95.07 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	LTE	QPSK, 16QAM
Frequency Range	LTE Band 26 (Channel Bandwidth: 1.4 MHz)	814.7 ~ 823.3 MHz
	LTE Band 26 (Channel Bandwidth: 3 MHz)	815.5 ~ 822.5 MHz
	LTE Band 26 (Channel Bandwidth: 5 MHz)	816.5 ~ 821.5 MHz
	LTE Band 26 (Channel Bandwidth: 10 MHz)	819 MHz
Max. ERP Power	LTE Band 26 (Channel Bandwidth: 1.4 MHz)	234.96 mW
	LTE Band 26 (Channel Bandwidth: 3 MHz)	244.23 mW
	LTE Band 26 (Channel Bandwidth: 5 MHz)	250.61 mW
	LTE Band 26 (Channel Bandwidth: 10 MHz)	215.28 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 / LTE5	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.													

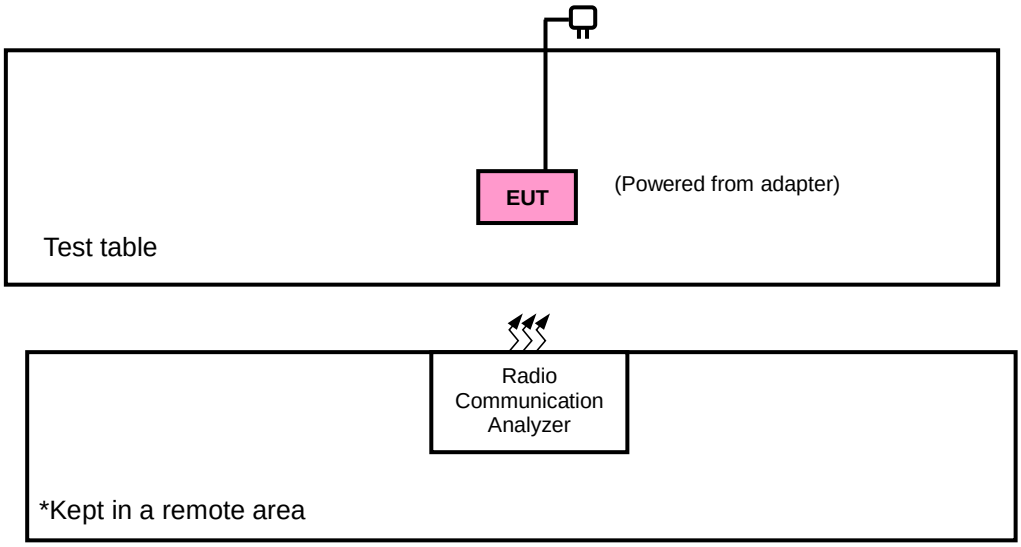
3. The EUT contains following accessory devices.

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
LTE Band 26	90°	90°

LTE Band 26

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	ERP	26697 to 26783	26697, 26740, 26783	1.4 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26705 to 26775	26705, 26740, 26775	3 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26715 to 26765	26715, 26740, 26765	5 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		26740	26740	10 MHz	QPSK, 16QAM	1 RB / 0 RB Offset
-	Radiated Emission	26697 to 26783	26697, 26740, 26783	1.4 MHz	QPSK	1 RB / 0 RB Offset
		26715 to 26765	26715, 26740, 26765	5 MHz	QPSK	1 RB / 0 RB Offset
		26740	26740	10 MHz	QPSK	1 RB / 0 RB Offset

Note:

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

Test Condition:

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

3.4 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 90
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
KDB 971168 D02 Misc Rev Approv License Devices v02r01
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

The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw) ERP.

4.1.2 Test Procedures

EIRP / ERP Measurement:

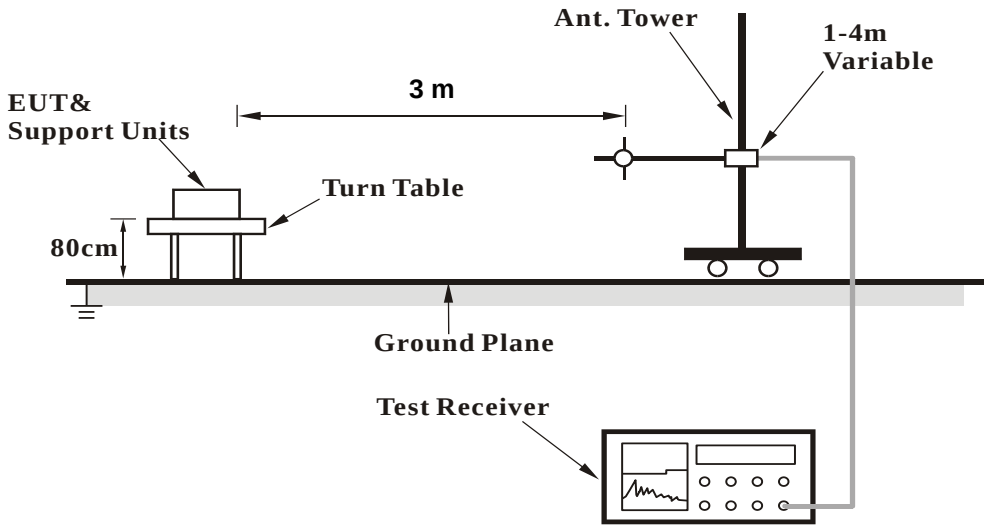
a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 10 MHz for LTE mode.
b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table,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

Conducted Power Measurement:

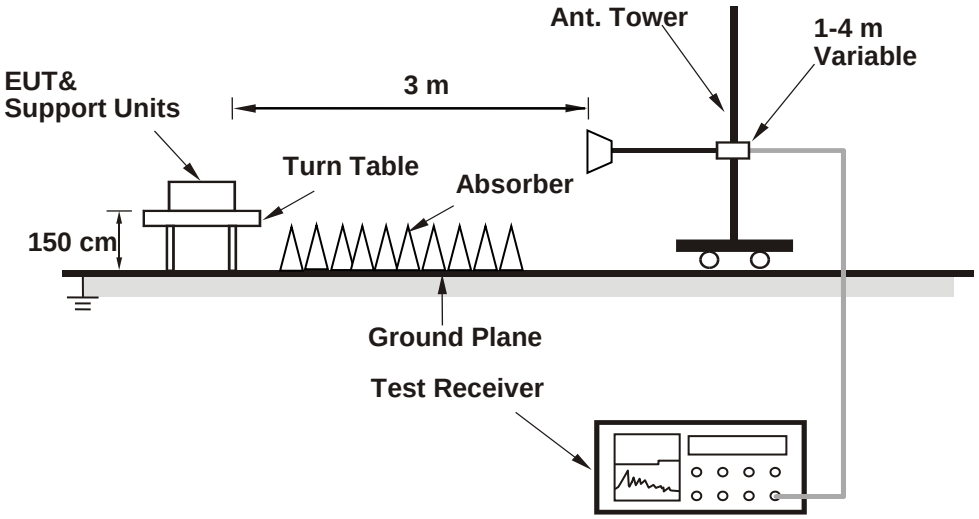
a. The EUT was set up for the maximum power with CDMA and LTE link data modulation and link up with simulator.
b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 Test Setup

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



<Radiated Emission above 1 GHz>



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

Conducted Power Measurement:

4.1.4 Test Results

Conducted Output Power (dBm)

LTE Band 26																
BW	MCS Index	RB Size	RB Offset		Mid		3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel			26740					Channel		26715	26740	26765	
		Frequency (MHz)			819.0					Frequency (MHz)		816.5	819.0	821.5	
10M	QPSK	1	0		23.42		0	5M	QPSK	1	0	23.43	23.42	23.30	0
		1	24		24.07		0			1	12	23.71	23.83	23.67	0
		1	49		23.27		0			1	24	23.53	23.29	23.18	0
		25	0		22.79		1			12	0	22.64	22.74	22.70	1
		25	12		22.85		1			12	6	22.58	22.83	22.62	1
		25	25		22.66		1			12	13	22.68	22.71	22.65	1
		50	0		22.64		1			25	0	22.60	22.65	22.75	1
	16QAM	1	0		22.34		1		16QAM	1	0	22.11	22.25	22.13	1
		1	24		22.40		1			1	12	22.50	22.50	22.67	1
		1	49		22.40		1			1	24	22.05	22.25	21.78	1
		25	0		21.57		2			12	0	21.56	21.72	21.51	2
		25	12		21.70		2			12	6	21.52	21.70	21.67	2
		25	25		21.66		2			12	13	21.42	21.41	21.61	2
		50	0		21.56		2			25	0	21.52	21.61	21.58	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		26705	26740	26775				Channel		26697	26740	26783	
		Frequency (MHz)		815.5	819.0	822.5				Frequency (MHz)		814.7	819.0	823.3	
3M	QPSK	1	0	23.54	23.58	23.62	0	1.4M	QPSK	1	0	23.40	23.57	23.44	0
		1	7	23.55	23.75	23.70	0			1	2	23.31	23.57	23.65	0
		1	14	23.53	23.64	23.22	0			1	5	23.17	23.59	23.44	0
		8	0	22.66	22.79	22.77	1			3	0	23.38	23.70	23.66	0
		8	3	22.53	22.73	22.76	1			3	1	23.57	23.73	23.82	0
		8	7	22.50	22.69	22.70	1			3	3	23.58	23.90	23.83	0
		15	0	22.58	22.69	22.72	1			6	0	22.51	22.72	22.63	1
	16QAM	1	0	22.18	22.36	22.10	1		16QAM	1	0	22.19	22.21	22.28	1
		1	7	22.16	22.29	22.27	1			1	2	22.28	22.23	22.36	1
		1	14	22.19	22.28	22.06	1			1	5	22.24	22.07	22.16	1
		8	0	21.45	21.89	21.58	2			3	0	22.65	22.91	22.87	1
		8	3	21.42	21.59	21.62	2			3	1	22.59	22.95	22.86	1
		8	7	21.39	21.58	21.68	2			3	3	22.61	22.79	22.78	1
		15	0	21.51	21.93	21.84	2			6	0	21.51	21.68	21.67	2

ERP Power (dBm)

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^{O}	26697	814.7	-5.41	31.208	23.65	231.63	H
	26740	819.0	-5.44	31.3	23.71	234.96	
	26783	823.3	-5.28	31.222	23.79	239.44	
	26697	814.7	-10.31	31.504	19.04	80.24	V
	26740	819.0	-9.87	31.117	19.10	81.23	
	26783	823.3	-10.62	31.922	19.15	82.26	
Channel Bandwidth: 1.4 MHz / 16QAM							
90^{O}	26697	814.7	-6.42	31.208	22.64	183.57	H
	26740	819.0	-6.44	31.3	22.71	186.64	
	26783	823.3	-6.28	31.222	22.79	190.20	
	26697	814.7	-11.32	31.504	18.03	63.59	V
	26740	819.0	-10.88	31.117	18.09	64.37	
	26783	823.3	-11.62	31.922	18.15	65.34	

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^{O}	26705	815.5	-5.18	31.208	23.88	244.23	H
	26740	819.0	-5.29	31.3	23.86	243.22	
	26775	822.5	-5.35	31.222	23.72	235.61	
	26705	815.5	-10.27	31.504	19.08	80.98	V
	26740	819.0	-9.84	31.117	19.13	81.79	
	26775	822.5	-10.58	31.922	19.19	83.02	
Channel Bandwidth: 3 MHz / 16QAM							
90^{O}	26705	815.5	-6.19	31.208	22.87	193.55	H
	26740	819.0	-6.20	31.3	22.95	197.24	
	26775	822.5	-6.04	31.222	23.03	201.00	
	26705	815.5	-11.27	31.504	18.08	64.33	V
	26740	819.0	-10.85	31.117	18.12	64.82	
	26775	822.5	-11.59	31.922	18.18	65.80	

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^{O}	26715	816.5	-5.14	31.208	23.92	246.49	H
	26740	819.0	-5.16	31.3	23.99	250.61	
	26765	821.5	-5.20	31.222	23.87	243.89	
	26715	816.5	-10.23	31.504	19.12	81.73	V
	26740	819.0	-9.80	31.117	19.17	82.55	
	26765	821.5	-10.54	31.922	19.23	83.79	
Channel Bandwidth: 5 MHz / 16QAM							
90^{O}	26715	816.5	-6.15	31.208	22.91	195.34	H
	26740	819.0	-6.17	31.3	22.98	198.61	
	26765	821.5	-6.01	31.222	23.06	202.40	
	26715	816.5	-11.24	31.504	18.11	64.77	V
	26740	819.0	-10.81	31.117	18.16	65.42	
	26765	821.5	-11.54	31.922	18.23	66.56	

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^{O}	26740	819.0	-5.82	31.3	23.33	215.28	H
	26740	819.0	-9.76	31.117	19.21	83.31	V
Channel Bandwidth: 10 MHz / 16QAM							
90^{O}	26740	819.0	-6.93	31.3	22.22	166.72	H
	26740	819.0	-10.76	31.117	18.21	66.18	V

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

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

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

4.2.2 Test Procedure

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

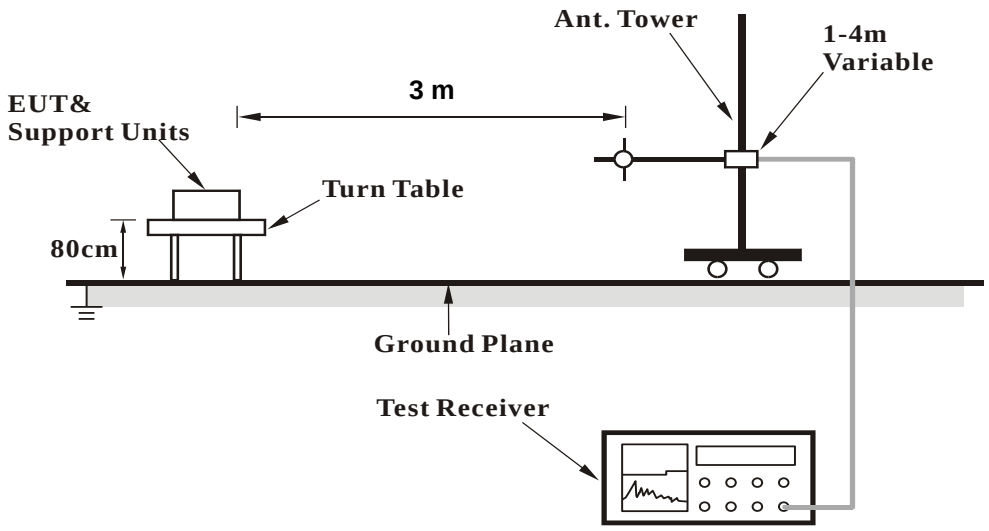
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.2.3 Deviation from Test Standard

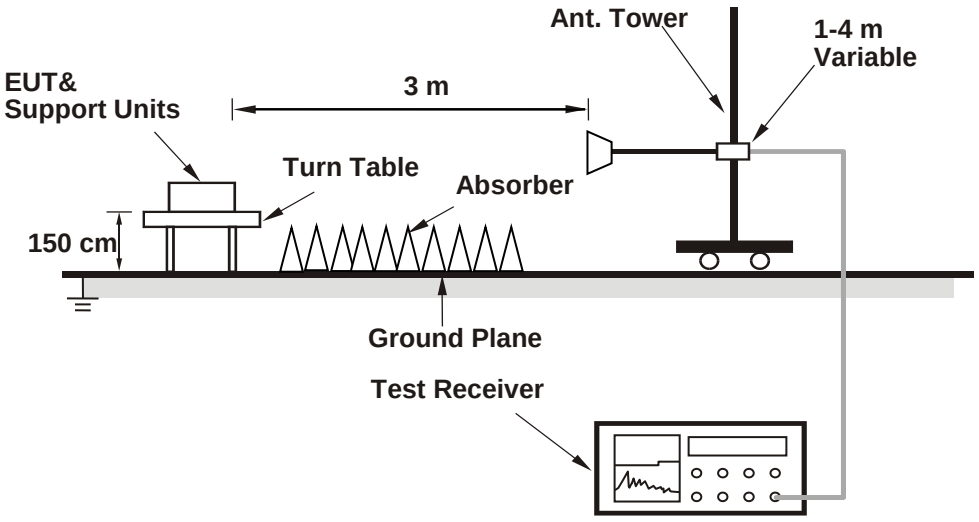
No deviation.

4.2.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



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

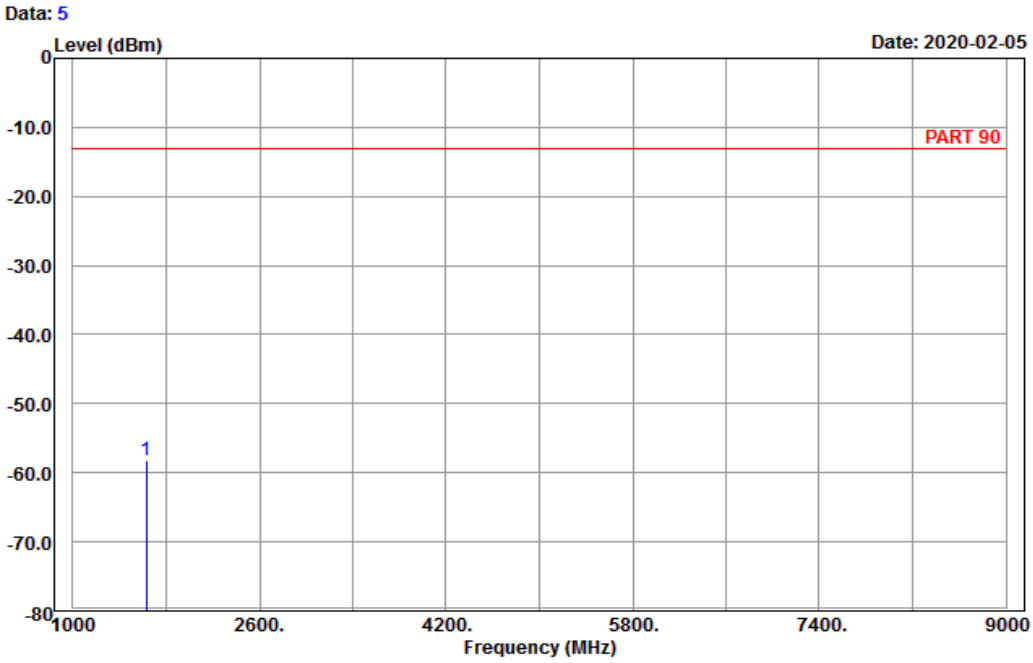
4.2.5 Test Results

LTE Band 26

Channel Bandwidth: 1.4 MHz / QPSK

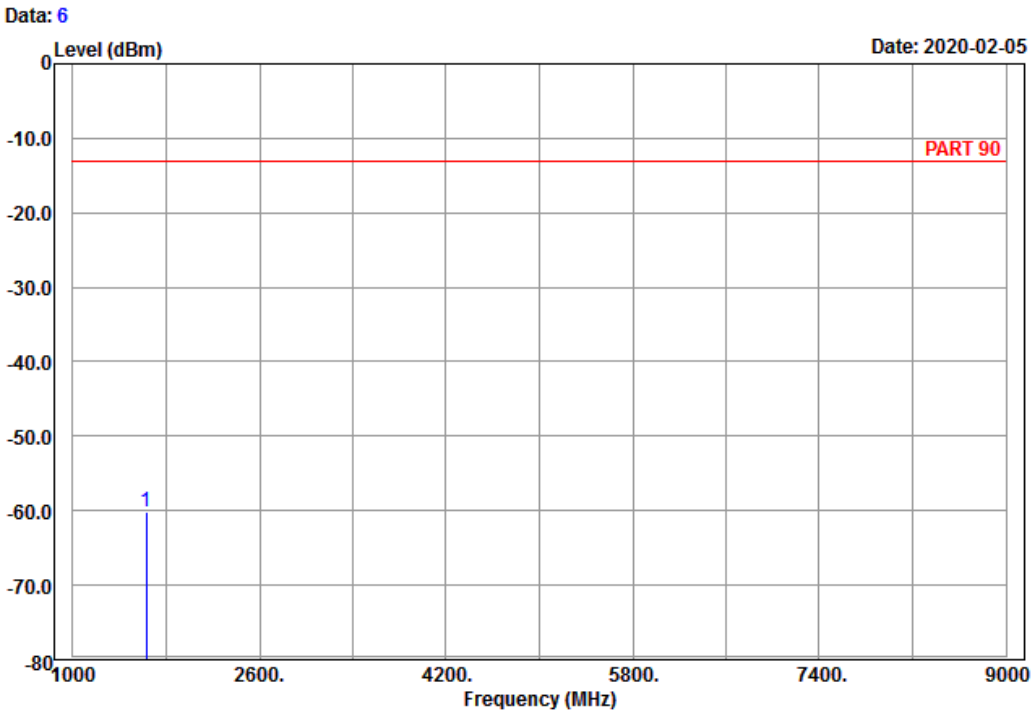
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch




```
Site      : 966 chamber 1
Condition: PART 90 Horizontal
Remark    : LTE_Band 26_Link_L-Ch
Tested by: Karl Lee
                          Read          Limit   Over
           Freq  Level   Level Factor   Line   Limit Remark
          ------ ------ ------ ------ ------ ------ ------
            MHz    dBm    dBm     dB    dBm     dB

  1 pp  1629.40 -58.22 -65.78   7.56 -13.00 -45.22 Peak
```

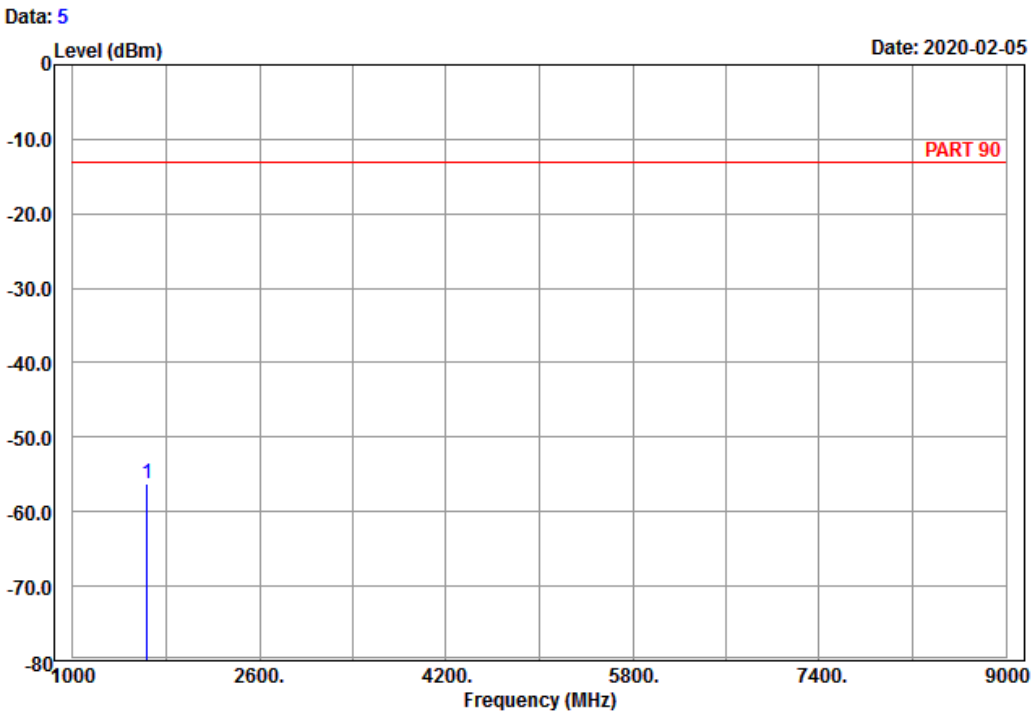


Site : 966 chamber 1
Condition: PART 90 Vertical
Remark : LTE_Band 26_Link_L-Ch
Tested by: Karl Lee

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1629.40	-60.09	-67.65	7.56	-13.00	-47.09	Peak

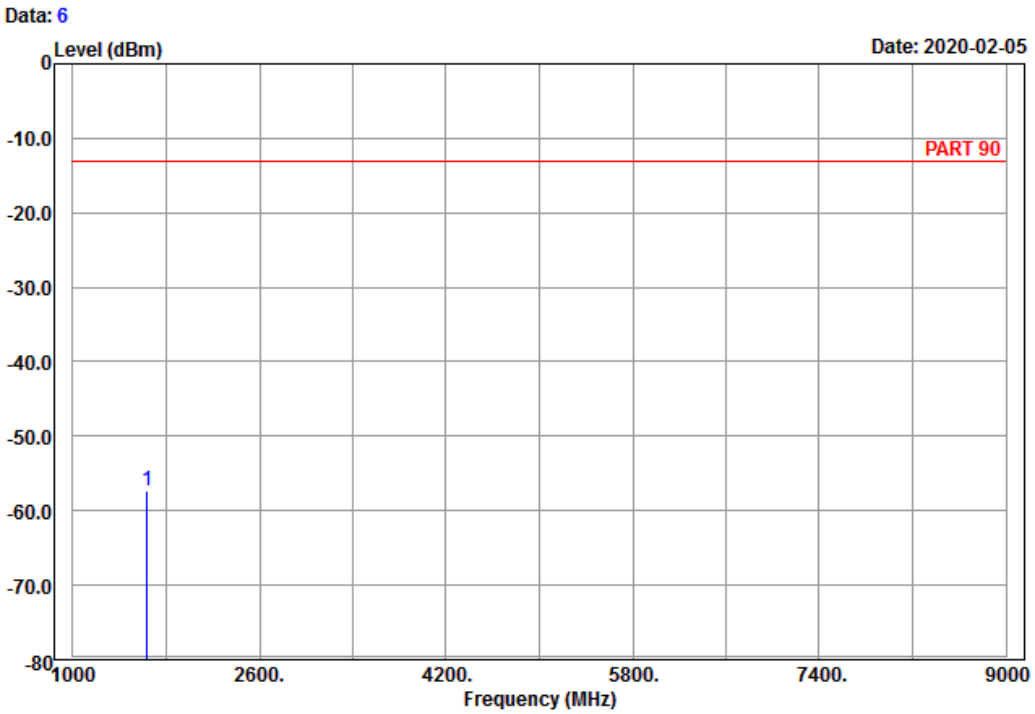
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 90 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	1638.00	-56.16	-63.72	7.56	-13.00	-43.16	Peak

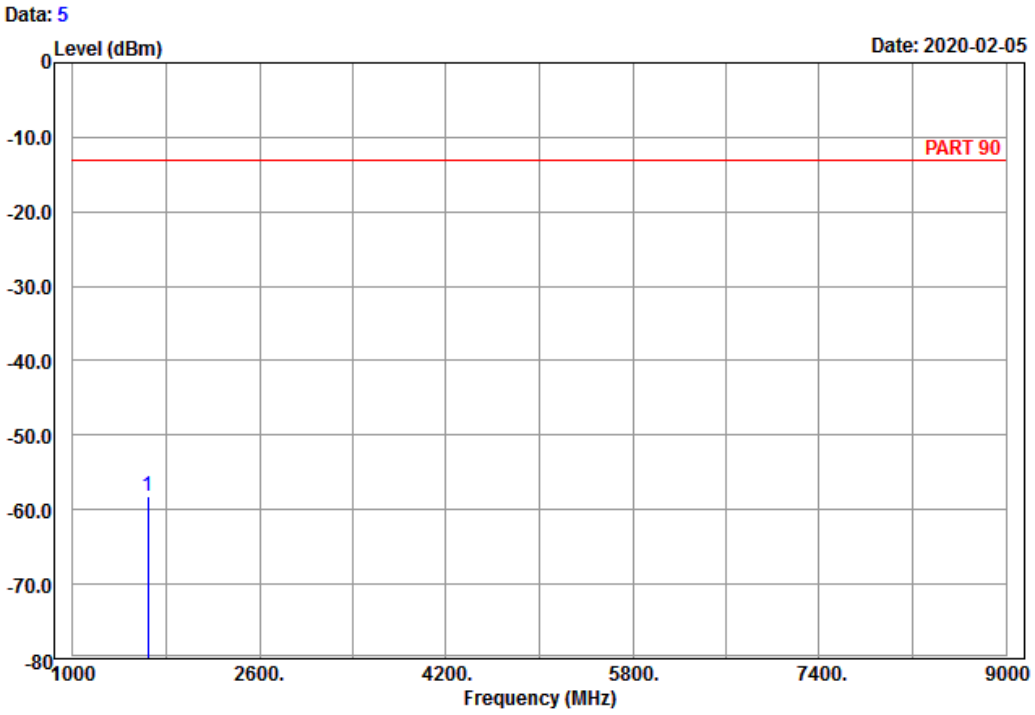


Site : 966 chamber 1
Condition: PART 90 Vertical
Remark : LTE_Band 26_Link_M-Ch
Tested by: Karl Lee

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1638.00	-57.36	-64.92	7.56	-13.00	-44.36	Peak

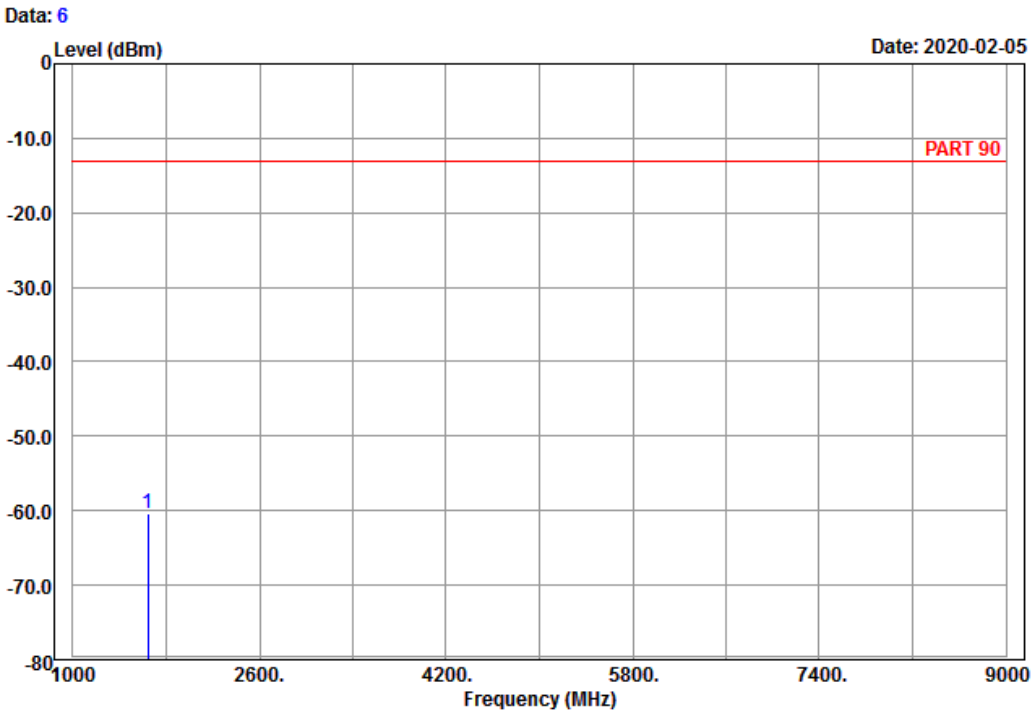
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 90 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	1646.60	-58.23	-65.96	7.73	-13.00	-45.23	Peak



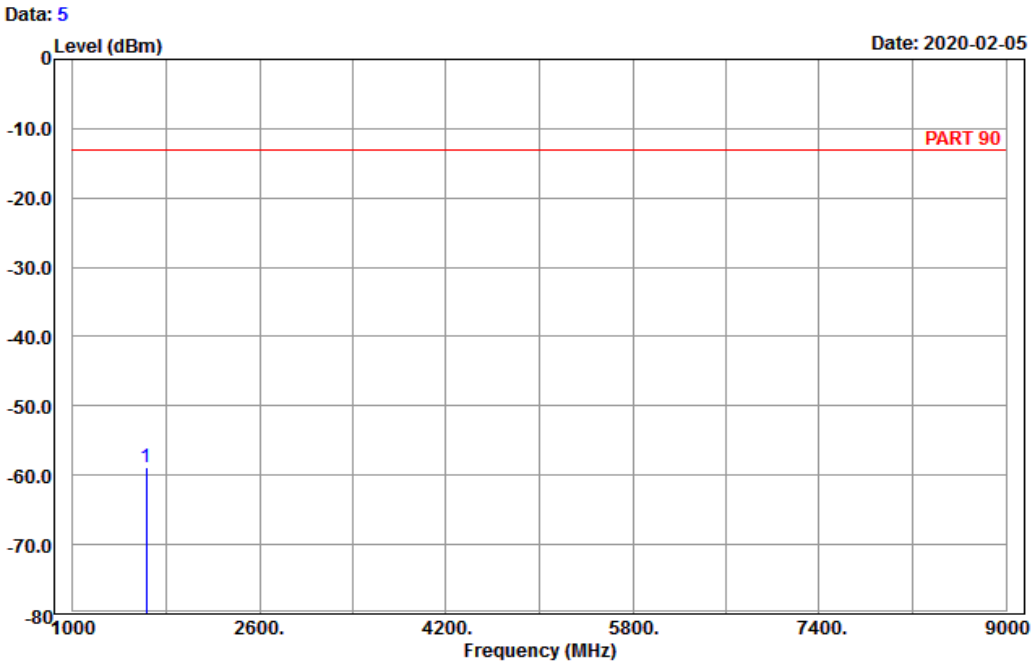
Site : 966 chamber 1
Condition: PART 90 Vertical
Remark : LTE_Band 26_Link_H-Ch
Tested by: Karl Lee

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1646.60	-60.36	-68.09	7.73	-13.00	-47.36	Peak

Channel Bandwidth: 5 MHz / QPSK

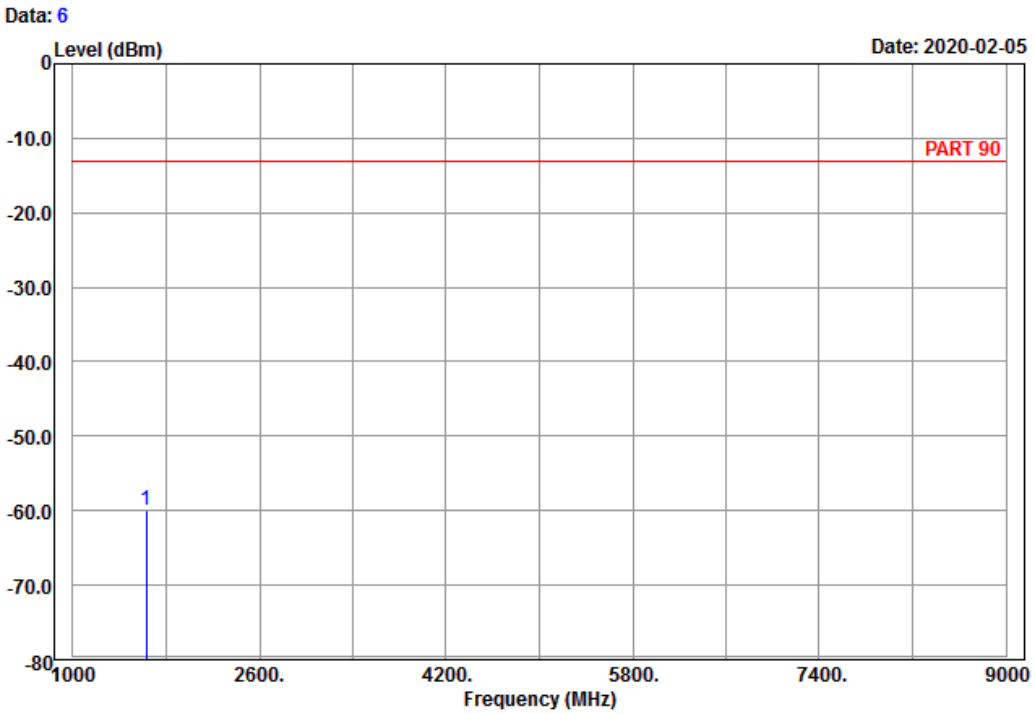
Low Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 90 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	1633.00	-58.89	-66.45	7.56	-13.00	-45.89	Peak

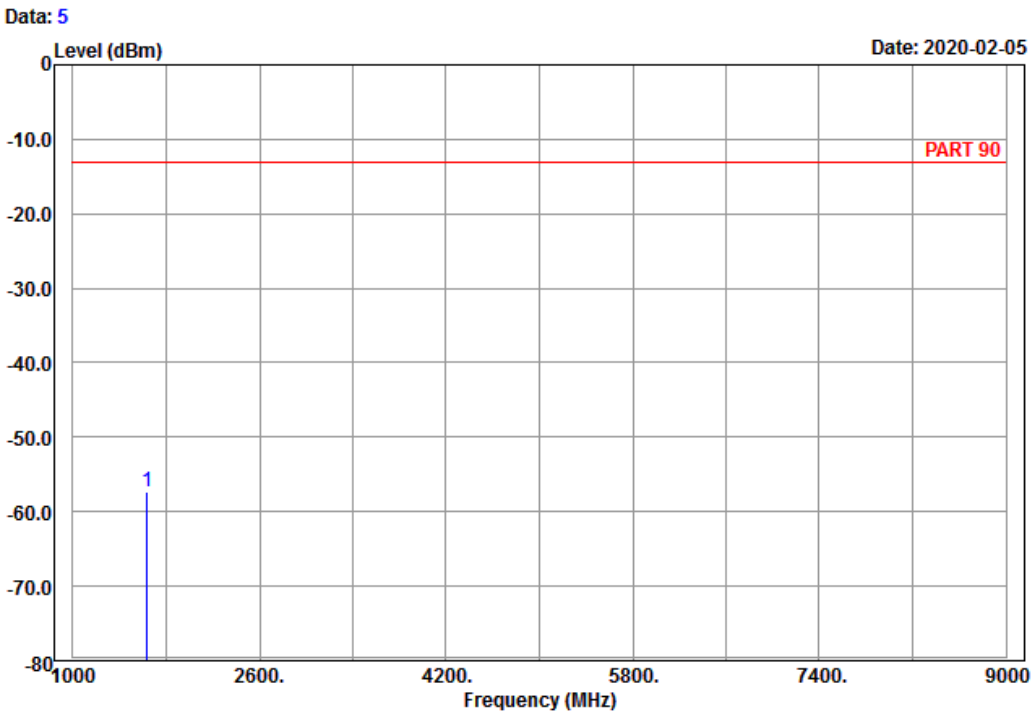


Site : 966 chamber 1
Condition: PART 90 Vertical
Remark : LTE_Band 26_Link_L-Ch
Tested by: Karl Lee

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1633.00	-59.85	-67.41	7.56	-13.00	-46.85	Peak

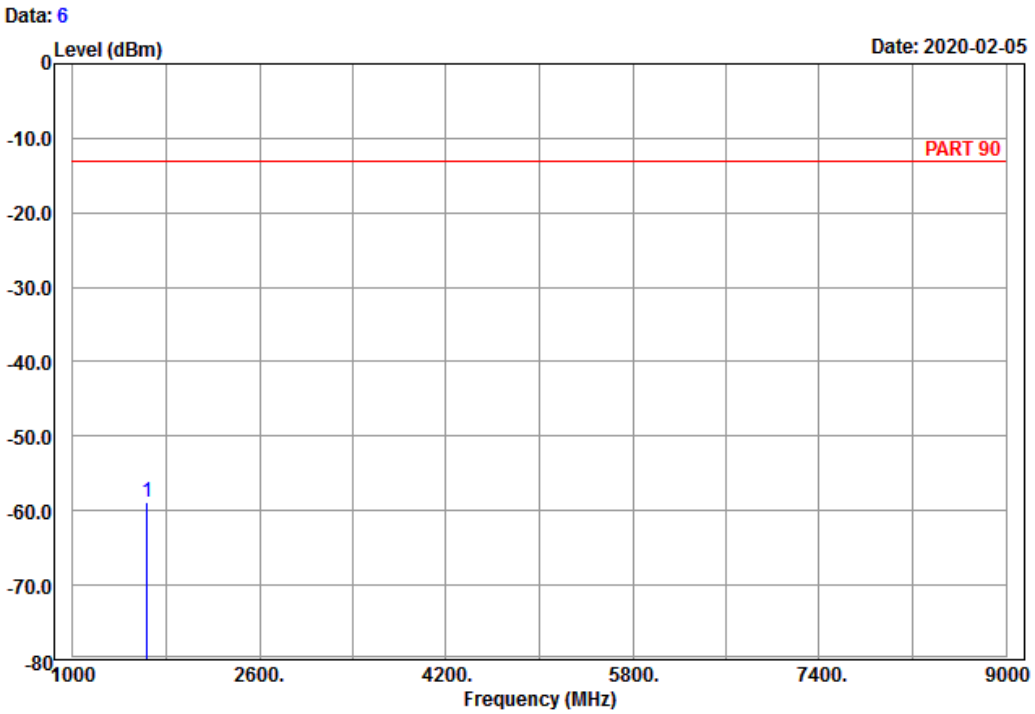
Middle Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 90 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	1638.00	-57.23	-64.79	7.56	-13.00	-44.23	Peak

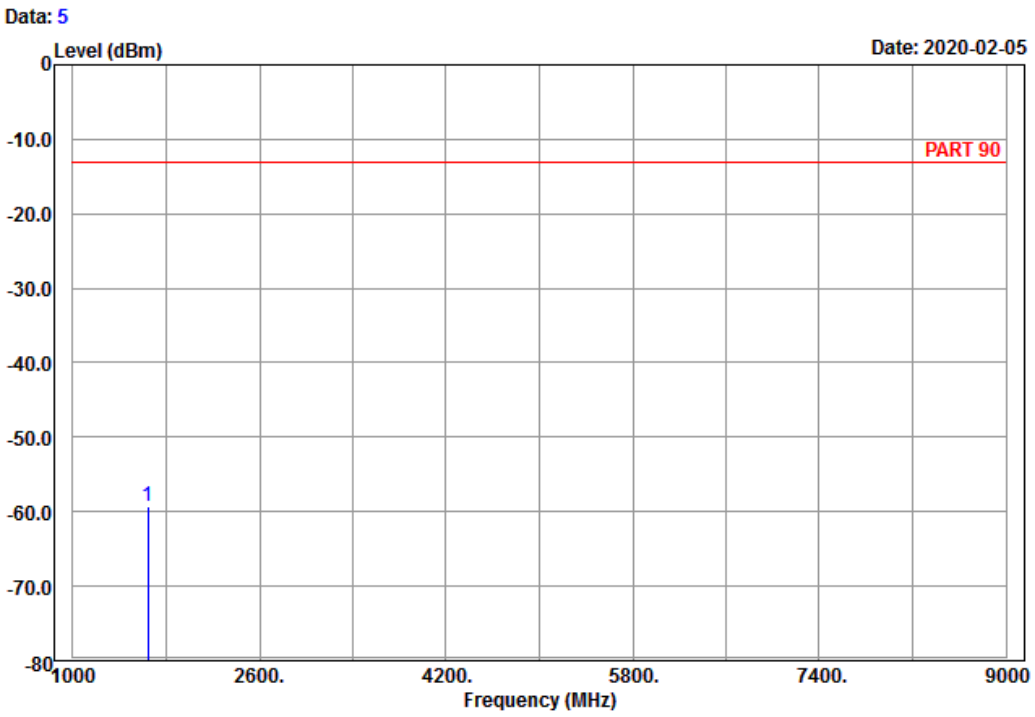


Site : 966 chamber 1
Condition: PART 90 Vertical
Remark : LTE_Band 26_Link_M-Ch
Tested by: Karl Lee

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1638.00	-58.89	-66.45	7.56	-13.00	-45.89	Peak

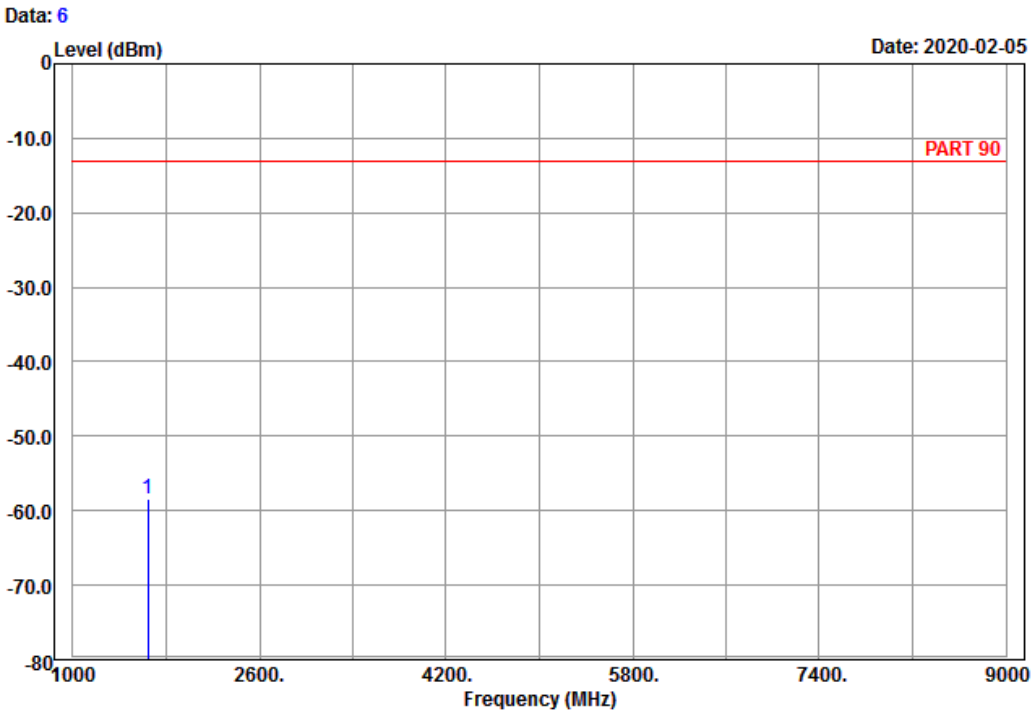
High Channel

Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 90 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	1643.00	-59.38	-67.11	7.73	-13.00	-46.38	Peak

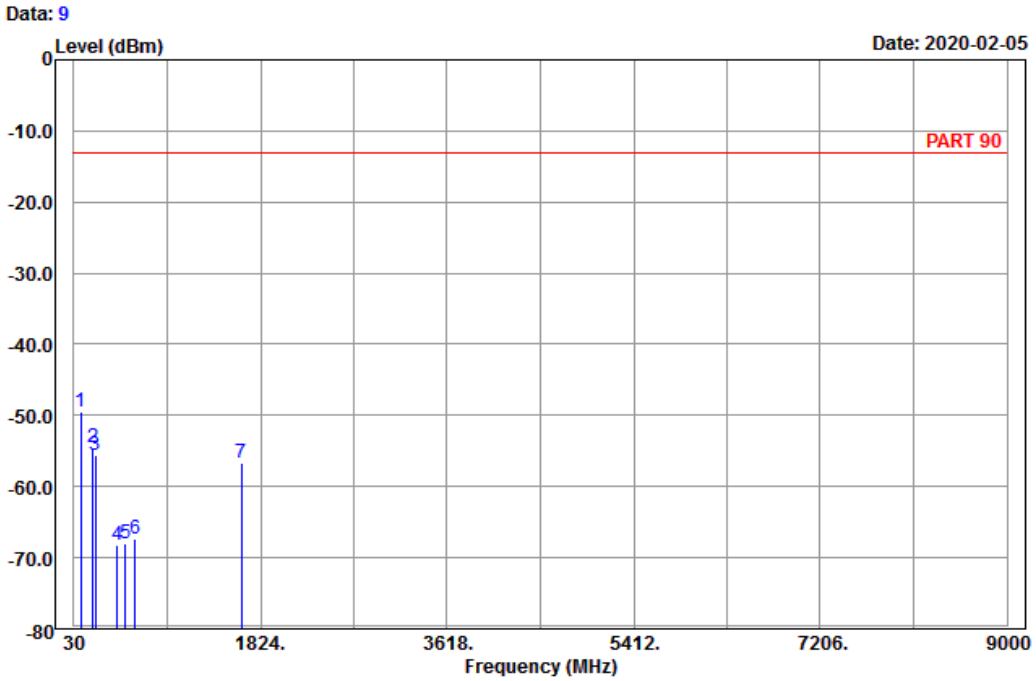


Site : 966 chamber 1
Condition: PART 90 Vertical
Remark : LTE_Band 26_Link_H-Ch
Tested by: Karl Lee

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1 pp	1643.00	-58.42	-66.15	7.73	-13.00	-45.42	Peak

Channel Bandwidth: 10 MHz / QPSK
Middle Channel

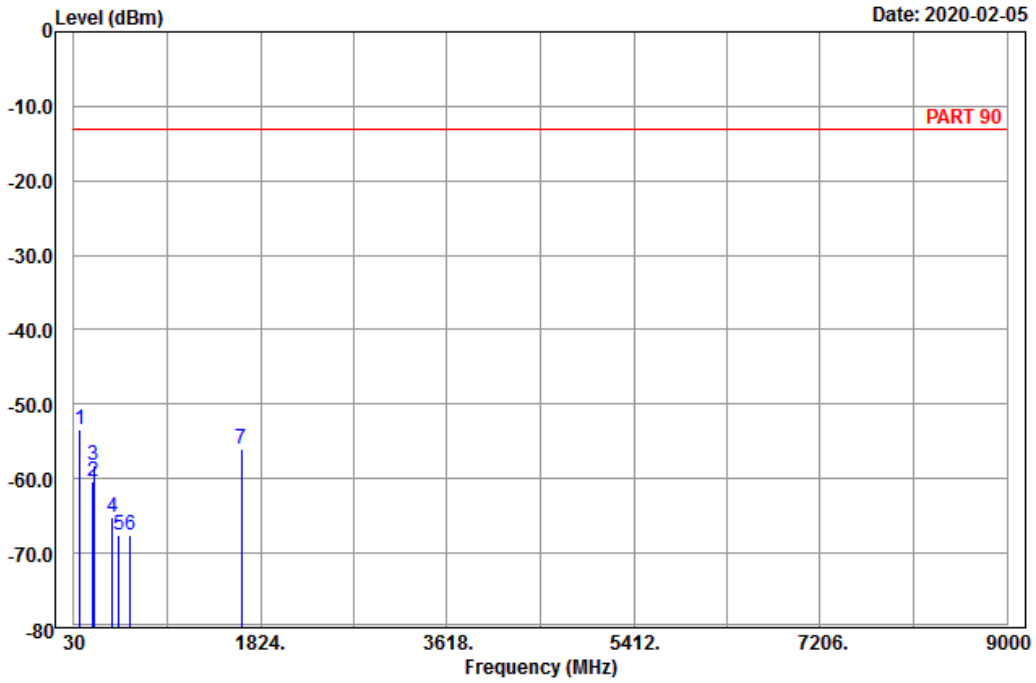
Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch



Site : 966 chamber 1
Condition: PART 90 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	95.07	-49.52	-39.12	-10.40	-13.00	-36.52	Peak
2	217.11	-54.55	-48.60	-5.95	-13.00	-41.55	Peak
3	234.93	-55.65	-49.93	-5.72	-13.00	-42.65	Peak
4	446.30	-68.14	-64.38	-3.76	-13.00	-55.14	Peak
5	525.40	-67.92	-64.48	-3.44	-13.00	-54.92	Peak
6	618.50	-67.30	-67.52	0.22	-13.00	-54.30	Peak
7	1638.00	-56.75	-64.31	7.56	-13.00	-43.75	Peak

Data: 10



Site : 966 chamber 1
Condition: PART 90 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	90.21	-53.47	-42.80	-10.67	-13.00	-40.47	Peak
2	210.90	-60.37	-54.33	-6.04	-13.00	-47.37	Peak
3	223.59	-58.19	-52.33	-5.86	-13.00	-45.19	Peak
4	400.80	-65.11	-62.35	-2.76	-13.00	-52.11	Peak
5	464.50	-67.64	-63.38	-4.26	-13.00	-54.64	Peak
6	573.70	-67.60	-66.94	-0.66	-13.00	-54.60	Peak
7	1638.00	-56.09	-63.65	7.56	-13.00	-43.09	Peak

5 Pictures of Test Arrangements

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

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

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

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

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

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

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