

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
47 CFR FCC Part 15, Subpart E (Section 15.407)
47 CFR FCC Part 22
47 CFR FCC Part 24
47 CFR FCC Part 27
47 CFR FCC Part 96
47 CFR FCC Part 2

Report No.: RFBEIH-WTW-P25030743-8

FCC ID: P27-TMOG5SE

Product: T-Mobile 5G Gateway

Brand: T-Mobile

Model No.: TMO-G5SE

Received Date: 2025/4/1

Test Date: 2025/5/6 ~ 2025/5/22

Issued Date: 2025/6/11

Applicant: Sercomm Corp.

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

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FCC Registration / 281270 / TW0032

Designation Number:

Approved by: _____

Jeremy Lin

Date: _____

2025/6/11

Jeremy Lin / Project Engineer

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Prepared by : Annie Chang / Senior Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBEIH-WTW-P25030743-8	Original release.	2025/6/11

1 Certificate

Product: T-Mobile 5G Gateway

Brand: T-Mobile

Test Model: TMO-G5SE

Sample Status: Engineering sample

Applicant: Sercomm Corp.

Test Date: 2025/5/6 ~ 2025/5/22

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
47 CFR FCC Part 15, Subpart E (Section 15.407)
47 CFR FCC Part 22
47 CFR FCC Part 24
47 CFR FCC Part 27
47 CFR FCC Part 96
47 CFR FCC Part 2

Measurement procedure: ANSI C63.10-2013
ANSI C63.26-2015

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.

2 Summary of Test Results

Standard / Clause	Test Item	Result	Remark
15.205 /15.209 /15.247(d) 15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Meet the requirement of limit.
Part 2.1053	Radiated Spurious Emissions below 1GHz	Pass	Meet the requirement of limit.
15.205 /15.209 /15.247(d) 15.407(b) (1/2/3/4(i)/10) 15.407(b)(6)/15.407(b)(10)	Unwanted Emissions above 1 GHz	Pass	Meet the requirement of limit.
Part 2.1053	Radiated Spurious Emissions above 1GHz	Pass	Meet the requirement of limit.

Note: 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:

Parameter	Specification	Uncertainty (±)
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3 dB
Radiated Spurious Emissions below 1GHz	30 MHz ~ 1 GHz	2.93 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	1.76 dB
Radiated Spurious Emissions above 1GHz	18 GHz ~ 40 GHz	1.77 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	T-Mobile 5G Gateway		
Brand	T-Mobile		
Test Model	TMO-G5SE		
Modulation Technology	BT-LE	DTS, FHSS	
	WLAN	DSSS, OFDM, OFDMA	
	LTE	OFDM, OFDMA, SC-FDMA	
	5G NR	CP-OFDM, DFT-s-OFDM	
Operating Frequency	BT-LE	2.402 GHz ~ 2.48 GHz	
	WLAN	2.412 GHz ~ 2.462 GHz 5.18 GHz ~ 5.25 GHz, 5.25 GHz ~ 5.32 GHz, 5.5 GHz ~ 5.72 GHz, 5.745 GHz ~ 5.825 GHz 5.955 GHz ~ 6.415 GHz, 6.425 GHz ~ 6.525 GHz, 6.535 GHz ~ 6.865 GHz, 6.875 GHz ~ 7.115 GHz	
	LTE	LTE Band 2 : 1850 ~ 1910 MHz LTE Band 4 : 1710 ~ 1755 MHz LTE Band 5 : 824 ~ 849 MHz LTE Band 12 : 699 ~ 716 MHz LTE Band 25 : 1850 ~ 1915 MHz LTE Band 41 : 2496 ~ 2690 MHz LTE Band 48 : 3550 ~ 3700 MHz LTE Band 66 : 1710 ~ 1780 MHz LTE Band 71 : 663 ~ 698 MHz	
	5G NR	NR Band 25 : 1850 ~ 1915 MHz NR Band 41 : 2496 ~ 2690 MHz NR Band 48 : 3550 ~ 3700 MHz NR Band 66 : 1710 ~ 1780 MHz NR Band 71 : 663 ~ 698 MHz NR Band 77 : 3450 ~ 3550 MHz, 3700 ~ 3980 MHz	

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification
Adapter 1	MASS POWER	PD065E-D1C0AVU	AC Input : 100-240V, 50/60Hz, 1.5A DC Output : 5.0V, 3.0A or 9.0V, 3.0A or 12.0V, 3.0A or 15.0, 3.0A or 20.0V, 3.0A DC Cable : 1.8m non-shielded
Adapter 2	MOSO	P30-V3000R200-060Q0-US	AC Input : 100-240V, 50/60Hz, 1.7A DC Output : 5V, 3A or 9V, 3A or 12V, 3A or 15, 3A or 20V, 3A DC Cable : 1.8m non-shielded
Adapter 3	Sercomm	PU60W200ULW18-ECY-00	AC Input : 100-240V, 50/60Hz, 1.3A DC Output : 5.0V, 3.0A, 15W or 9.0V, 3.0A, 27W or 12.0V, 3.0A, 36W or 15.0, 3.0A, 45W or 20.0V, 3.0A, 60W DC Cable : 1.8m non-shielded

2. Two Bluetooth modules provided to the EUT, please refer to the following table:

No.	Model	Function
1	EFR32BG21A020F512IM32	BT-LE
2	EFR32MG21A020F512IM32	BT-LE, Zigbee, Thread, Matter

3. There are Bluetooth, Zigbee, Thread, Matter, WWAN (WCDMA/LTE/5G NR) and WLAN (2.4 GHz/ 5 GHz/ 6 GHz) technology used for the EUT.

4. Simultaneously transmission combination.

Combination	Technology					
	WLAN (2.4 GHz)	WLAN (5 GHz)	WLAN (6 GHz)	WWAN	BT-LE (EFR32BG21A020F512IM32)	Zigbee (EFR32MG21A020F512IM32)
1						

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. The EUT contains certified WWAN module with FCC ID: P27-TMOG5SEM.
6. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Antenna Description of EUT

The antenna information is listed as below.

WLAN, BT-LE, Zigbee, Thread, Matter			
Function	Antenna Gain (dBi)	Antenna Type	Connector Type
BT-LE, Zigbee, Thread, Matter (EFR32MG21A020F512IM32)	5.01	Dipole	U.FL
BT-LE (EFR32BG21A020F512IM32)	5.36	Dipole	U.FL
WLAN 2.4 GHz	3.88	Dipole	U.FL
WLAN 5 GHz	4.59	Dipole	U.FL
WLAN 6 GHz	5	Dipole	U.FL

WWAN			
Ant No.	Operating Band	Antenna Type	Connector Type
Ant2	617 ~ 894 MHz	PIFA	U.FL
Ant3	1710 ~ 2200 MHz	PIFA	U.FL
Ant6	2500 ~ 2700 MHz	PIFA	U.FL
Ant8	3300 ~ 4200MHz	PIFA	U.FL
Ant1	1710 ~ 2200 MHz 2500 ~ 2700 MHz 3300 ~ 4200MHz	Dipole	U.FL
Ant4		Dipole	U.FL
Ant5		Dipole	U.FL
Ant7		Dipole	U.FL

Band	Freq. Range (MHz)	Antenna Gain(dBi)							
		Ant1	Ant2	Ant3	Ant4	Ant5	Ant6	Ant7	Ant8
LTE Band 2	1850~1910	3.12	1.9 (RX)	3.43 (RX)	3.18 (RX)	1.96 (RX)	2.88 (RX)	1.58	3.05 (RX)
LTE Band 4	1710~1755	1.48	1.88 (RX)	2.2 (RX)	1.67 (RX)	1.98 (RX)	2.14 (RX)	1.49	2.11 (RX)
LTE Band 5	824~849	-	-0.13	-1.44 (RX)	-	-	-2.19 (RX)	-	-0.94
LTE Band 12	699~716	-	0.12	0.4 (RX)	-	-	0.44 (RX)	-	0.53
LTE Band 25	1850~1915	3.12	1.9 (RX)	3.43 (RX)	3.18 (RX)	1.96 (RX)	2.88 (RX)	1.58	3.05 (RX)
LTE Band 41	2496~2690	2.48	2.64 (RX)	2.23 (RX)	3.66 (RX)	2.87 (RX)	2.76 (RX)	2.48	2.53 (RX)
LTE Band 48	3550~3700	1.99	2.89 (RX)	2.37 (RX)	3.57 (RX)	2.88 (RX)	2.85 (RX)	1.73	2.19 (RX)
LTE Band 66	1710~1780	1.48	1.88 (RX)	2.2 (RX)	1.67 (RX)	1.98 (RX)	2.14 (RX)	1.49	2.11 (RX)
LTE Band 71	663~698	-	-0.09	-0.33 (RX)	-	-	0.44 (RX)	-	0
NR Band 25	1850~1915	3.12	1.9 (RX)	3.43 (RX)	3.18 (RX)	1.96 (RX)	2.88 (RX)	1.58	3.05 (RX)
NR Band 41	2496~2690	2.48	2.64 (RX)	2.23 (RX)	3.66 (RX)	2.87 (RX)	2.76 (RX)	2.48	2.53 (RX)
NR Band 48	3550~3700	1.99	2.89 (RX)	2.37 (RX)	3.57 (RX)	2.88 (RX)	2.85 (RX)	1.73	2.19 (RX)
NR Band 66	1710~1780	1.48	1.88 (RX)	2.2 (RX)	1.67 (RX)	1.98 (RX)	2.14 (RX)	1.49	2.11 (RX)
NR Band 71	663~698	-	-0.09	-0.33 (RX)	-	-	0.44 (RX)	-	0
NR Band 77	3300~4200	1.99	2.89 (RX)	2.37 (RX)	3.57 (RX)	2.88 (RX)	2.85 (RX)	1.73	2.19 (RX)

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.3 Test Mode Applicability and Tested Channel Detail

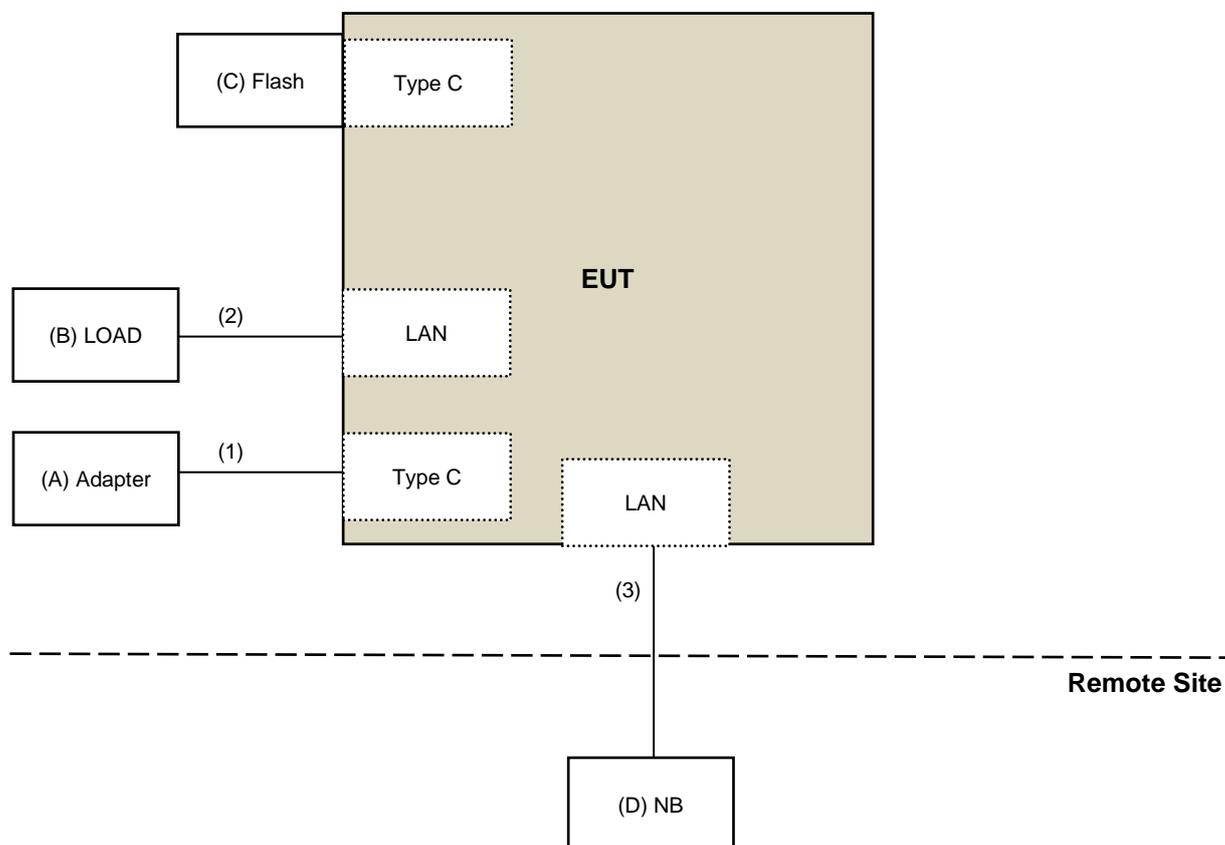
Following channel(s) was (were) selected for the final test as listed below:

Test Item	Combination	Mode	Tested Channel
Unwanted Emissions below 1 GHz	1	802.11be (EHT40)	6
		BT-LE 2M	19
		Zigbee	18
		802.11be (EHT20)	157
		802.11be (EHT320)	31
Radiated Spurious Emissions below 1GHz		5G NR Band41	518598
Unwanted Emissions above 1 GHz	1	802.11be (EHT40)	6
		BT-LE 2M	19
		Zigbee	18
		802.11be (EHT20)	157
		802.11be (EHT320)	31
Radiated Spurious Emissions above 1GHz		5G NR Band41	518598

3.4 Test Program Used and Operation Descriptions

Controlling software (Tera Term v4.8 & QSPR v6.00.00209.1) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.5 Connection Diagram of EUT and Peripheral Devices



3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	MASSPOWER	PD065E-D1C0AVU	N/A	N/A	Supplied by applicant
B	LOAD	BV	BV	N/A	N/A	Provided by Lab
C	Flash	SanDisk	32GB	N/A	N/A	Provided by Lab
D	NB	Lenovo	IdeaPad 5 15ITL05	N/A	N/A	Provided by Lab

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC cable	1	1.8	N	0	Supplied by applicant
2	LAN cable	1	1.8	N	0	Provided by Lab
3	LAN cable	1	10	N	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFA-515BSN	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-1214	2024/10/15	2025/10/14
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Agilent	N9038A	MY52260177	2024/9/19	2025/9/18
Preamplifier EMCI	EMC330N	980798	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMCCFD400-NM-NM- 500	201248	2025/1/14	2026/1/13
	EMCCFD400-NM-NM- 3000	201249	2025/1/14	2026/1/13
	EMCCFD400-NM-NM- 9000	201251(with PAD)	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208676	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 9.
2. Tested Date: 2025/5/6

4.2 Radiated Spurious Emissions below 1GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFA-515BSN	N/A	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-1214	2024/10/15	2025/10/14
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Loop Antenna TESEQ	HLA 6121	45745	2024/8/21	2025/8/20
MXE EMI Receiver Agilent	N9038A	MY52260177	2024/9/19	2025/9/18
Preamplifier EMCI	EMC330N	980798	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMCCFD400-NM-NM- 500	201248	2025/1/14	2026/1/13
	EMCCFD400-NM-NM- 3000	201249	2025/1/14	2026/1/13
	EMCCFD400-NM-NM- 9000	201251(with PAD)	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208676	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 9.
2. Tested Date: 2025/5/22

4.3 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower Max-Full	MFA-515BSN	N/A	N/A	N/A
EXA Signal Analyzer Agilent	N9010A	MY52220207	2024/12/30	2025/12/29
Horn Antenna RFSPIN	DRH18-E	210104A18E	2024/11/10	2025/11/9
Horn Antenna Schwarzbeck	BBHA 9170	9170-1049	2024/11/10	2025/11/9
MXE EMI Receiver Agilent	N9038A	MY52260177	2024/9/19	2025/9/18
Preamplifier Agilent	83017A	MY39501357	2024/6/12	2025/6/11
Preamplifier EMCI	EMC184045SE	980788	2025/1/14	2026/1/13
RF Coaxial Cable EMCI	EMC101G-KM-KM-2000	201254	2025/1/14	2026/1/13
	EMC101G-KM-KM-3000	201258	2025/1/14	2026/1/13
	EMC101G-KM-KM-5000	201261	2025/1/14	2026/1/13
	EMC104-SM-SM-1000	210103	2025/1/14	2026/1/13
	EMC104-SM-SM-3000	201241	2025/1/14	2026/1/13
	EMC104-SM-SM-9000	201244	2025/1/14	2026/1/13
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MF-7802BS	MF780208676	N/A	N/A

Notes:

1. The test was performed in WM - 966 chamber 9.
2. Tested Date: 2025/5/22

4.4 Radiated Spurious Emissions above 1GHz

Refer to section 4.3 to get the tested date and information of the instruments.

5 Limits of Test Items

5.1 Unwanted Emissions below 1 GHz

For FCC 15.247:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

For FCC 15.407:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.2 Radiated Spurious Emissions below 1GHz

For FCC Part 27:

According to FCC 47 CFR part 27.53(m)(4), on any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log (P)$ dB. The emission limit equal to – 25 dBm.

5.3 Unwanted Emissions above 1 GHz

For FCC 15.247:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

For FCC 15.407 transmitters operating in the 5.150-5.850 GHz band:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedure New Rules v02r01	Field Strength at 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
15.407(b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
15.407(b)(4)(i)	PK: -27 (dBm/MHz) ^{*1} PK: 10 (dBm/MHz) ^{*2} PK: 15.6 (dBm/MHz) ^{*3} PK: 27 (dBm/MHz) ^{*4}	PK: 68.2 (dBμV/m) ^{*1} PK: 105.2 (dBμV/m) ^{*2} PK: 110.8 (dBμV/m) ^{*3} PK: 122.2 (dBμV/m) ^{*4}

^{*1} beyond 75 MHz or more above of the band edge.

^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).$$

For FCC 15.407 transmitters operating in the 5.925-7.125 GHz band:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Frequencies (MHz)	EIRP Limit	Equivalent Field Strength at 3 m
5925 MHz > F > 7125 MHz	Peak: -7 (dBm/MHz)	88.2 (dBuV/m)
	Average: -27 (dBm/MHz)	68.2 (dBuV/m)

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

5.4 Radiated Spurious Emissions above 1GHz

For FCC Part 27:

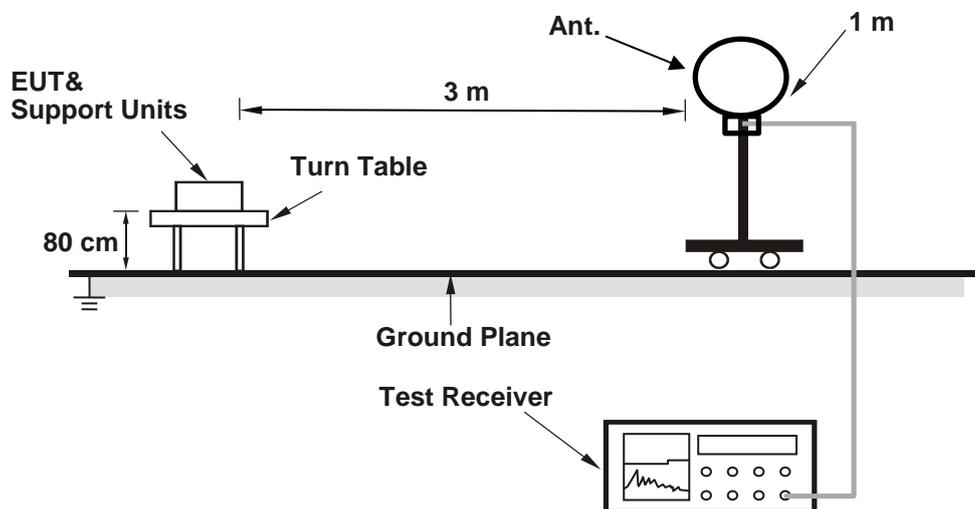
According to FCC 47 CFR part 27.53(m)(4), on any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least $55 + 10 \log (P)$ dB. The emission limit equal to – 25 dBm.

6 Test Arrangements

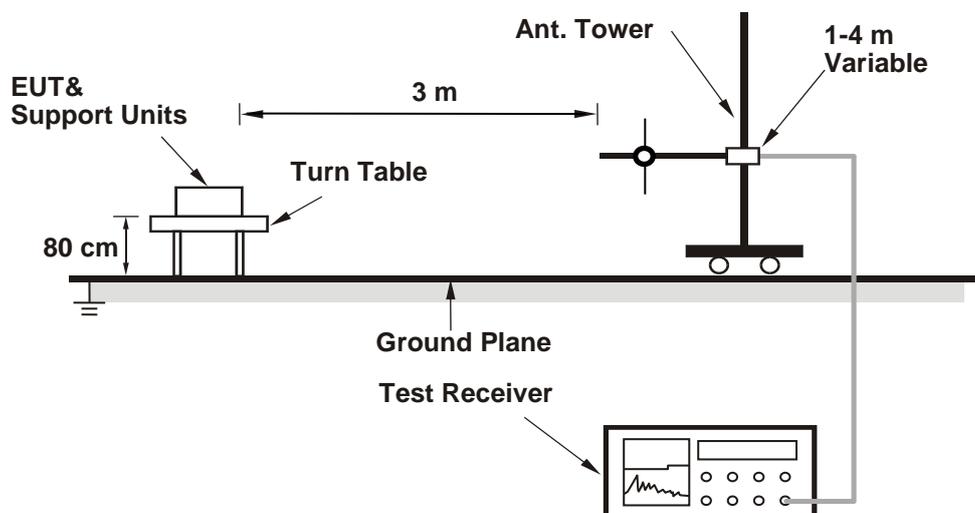
6.1 Unwanted Emissions below 1 GHz

6.1.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.1.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

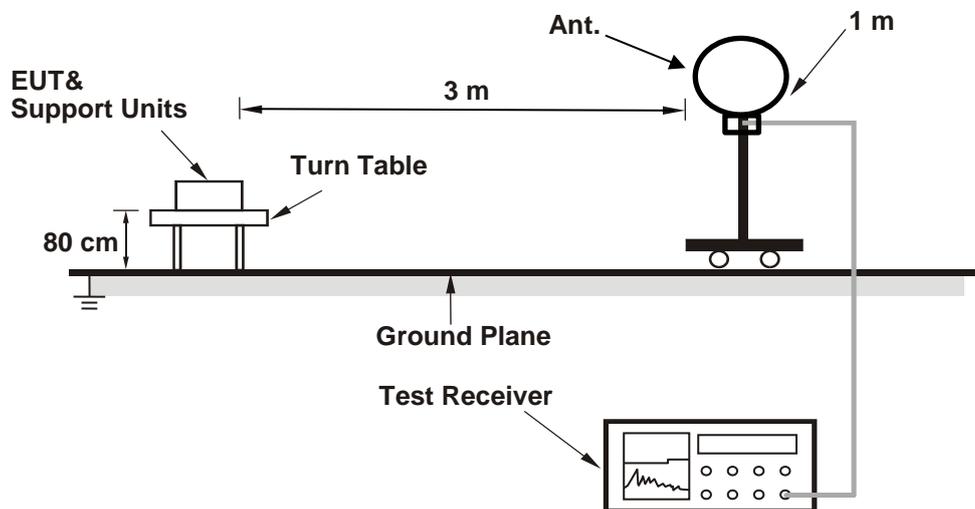
Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

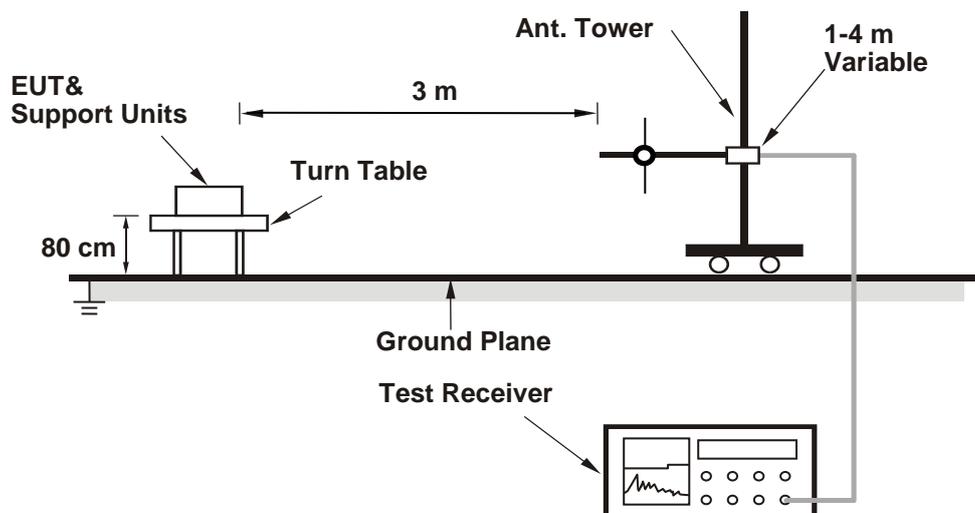
6.2 Radiated Spurious Emissions below 1GHz

6.2.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.2.2 Test Procedure

The EUT is configured to set data modulation and maximum power using WWAN technology.

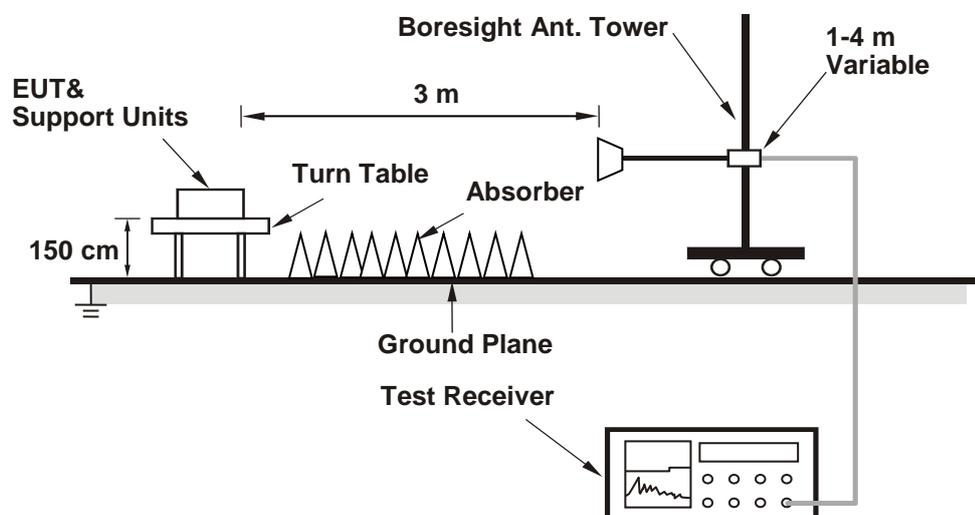
- a. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) height of turn table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following ANSI C63.26 section 5.5 and 5.2.7
- e. $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- f. $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.
2. The amplitude of spurious emissions in the range 9 kHz to 30 MHz which are attenuated more than 20 dB below the permissible value need not be reported.

6.3 Unwanted Emissions above 1 GHz

6.3.1 Test Setup



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

6.3.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

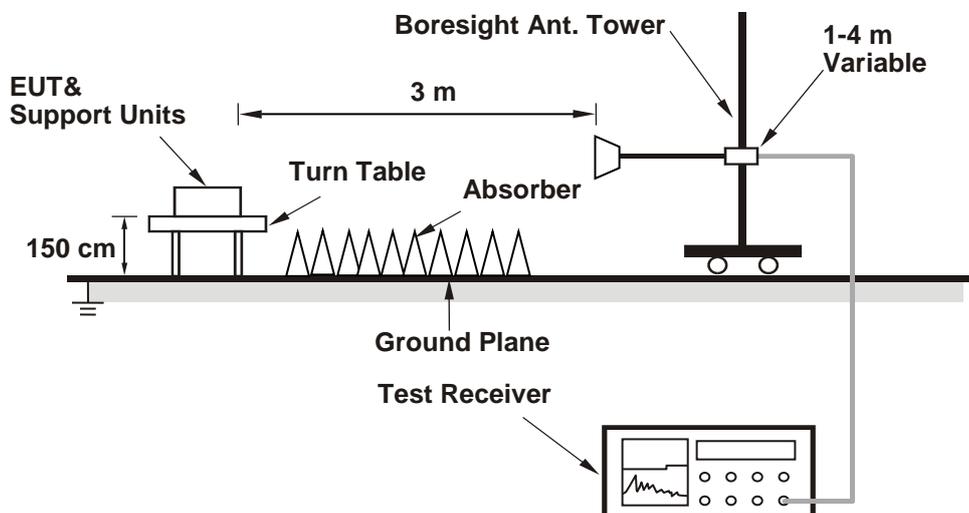
Notes:

- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

6.4 Radiated Spurious Emissions above 1GHz

6.4.1 Test Setup

For radiated emission above 1 GHz



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

6.4.2 Test Procedure

The EUT is configured to set data modulation and maximum power using WWAN technology.

- In the semi-anechoic chamber, EUT placed on the 1.5 m 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.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- Following ANSI C63.26 section 5.5 and 5.2.7
- $EIRP \text{ (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.
- $ERP \text{ (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8 - 2.15$; where D is the measurement distance (in the far field region) in m.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.

7 Test Results of Test Item

7.1 Unwanted Emissions below 1 GHz

FCC 15.247, FCC 15.407

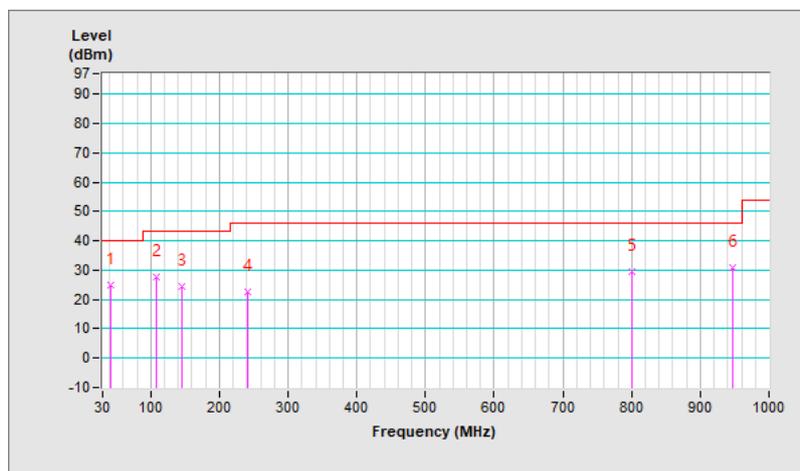
Combination	1		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	41.64	24.8 QP	40.0	-15.2	1.25 H	227	38.0	-13.2
2	107.60	27.7 QP	43.5	-15.8	1.00 H	247	43.9	-16.2
3	145.43	24.5 QP	43.5	-19.0	1.25 H	247	37.4	-12.9
4	240.49	22.4 QP	46.0	-23.6	1.50 H	265	36.7	-14.3
5	801.15	29.4 QP	46.0	-16.6	1.00 H	16	31.3	-1.9
6	947.62	30.8 QP	46.0	-15.2	1.00 H	71	30.6	0.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

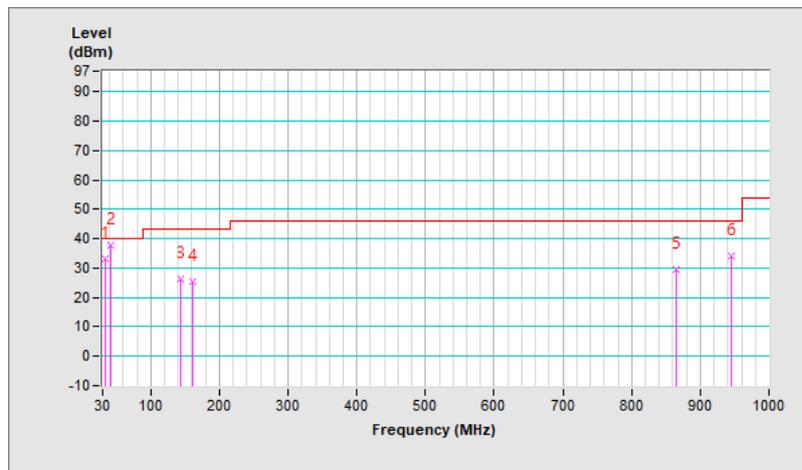


Combination	1		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	33.88	33.1 QP	40.0	-6.9	1.00 V	164	47.1	-14.0
2	41.64	37.8 QP	40.0	-2.2	1.25 V	5	51.0	-13.2
3	142.52	26.1 QP	43.5	-17.4	1.00 V	5	39.1	-13.0
4	161.92	25.4 QP	43.5	-18.1	1.50 V	164	38.2	-12.8
5	864.20	29.5 QP	46.0	-16.5	1.00 V	225	30.9	-1.4
6	944.71	33.9 QP	46.0	-12.1	1.25 V	345	33.7	0.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.2 Radiated Spurious Emissions below 1GHz

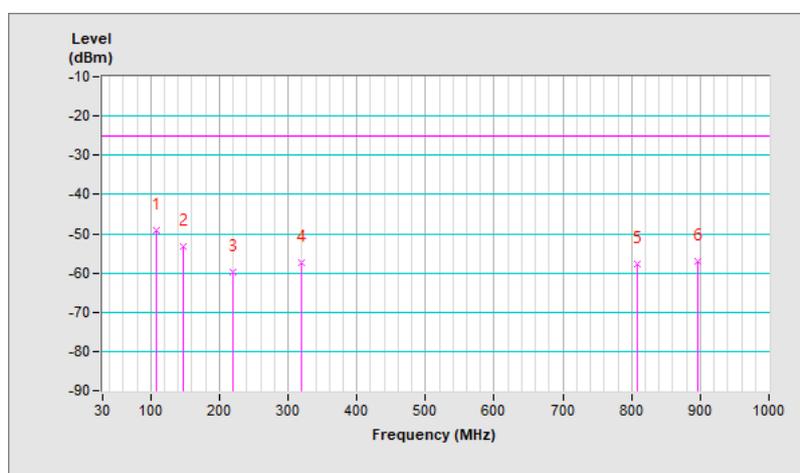
FCC Part 27

Combination	1		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	108.57	-49.27	-25.00	-24.27	1.25 H	257	62.18	-111.45
2	146.40	-53.17	-25.00	-28.17	1.00 H	269	54.98	-108.15
3	219.15	-59.76	-25.00	-34.76	1.50 H	304	51.82	-111.58
4	319.06	-57.42	-25.00	-32.42	1.00 H	301	49.45	-106.87
5	808.91	-57.63	-25.00	-32.63	1.00 H	5	39.62	-97.25
6	897.18	-56.91	-25.00	-31.91	1.25 H	192	39.12	-96.03

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

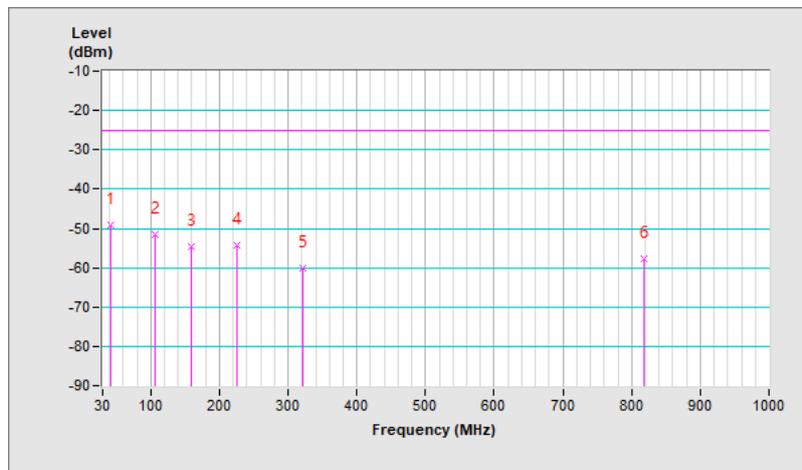


Combination	1		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	41.64	-49.07	-25.00	-24.07	1.25 V	279	59.55	-108.62
2	106.63	-51.47	-25.00	-26.47	1.00 V	168	60.28	-111.75
3	159.01	-54.51	-25.00	-29.51	1.50 V	18	53.60	-108.11
4	225.94	-54.43	-25.00	-29.43	1.25 V	186	56.82	-111.25
5	321.00	-60.17	-25.00	-35.17	1.00 V	169	46.62	-106.79
6	817.64	-57.71	-25.00	-32.71	1.00 V	67	39.48	-97.19

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.3 Unwanted Emissions above 1 GHz

FCC 15.247

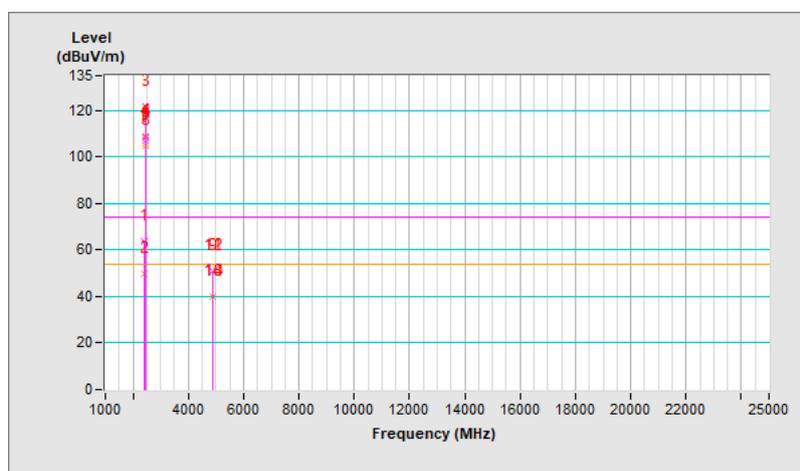
Combination	1		
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	63.6 PK	74.0	-10.4	2.37 H	9	31.0	32.6
2	2390.00	49.8 AV	54.0	-4.2	2.37 H	9	17.2	32.6
3	*2437.00	121.7 PK			2.37 H	9	89.1	32.6
4	*2437.00	108.9 AV			2.37 H	9	76.3	32.6
5	#2440.00	107.1 PK			1.31 H	259	74.5	32.6
6	#2440.00	108.3 PK			1.53 H	319	75.7	32.6
7	#2440.00	106.3 AV			1.31 H	259	73.7	32.6
8	#2440.00	104.7 AV			1.53 H	319	72.1	32.6
9	4874.00	51.0 PK	74.0	-23.0	1.88 H	23	46.5	4.5
10	4874.00	39.8 AV	54.0	-14.2	1.88 H	23	35.3	4.5
11	4880.00	50.8 PK	74.0	-23.2	1.93 H	279	46.3	4.5
12	4880.00	51.0 PK	74.0	-23.0	1.37 H	225	46.5	4.5
13	4880.00	39.7 AV	54.0	-14.3	1.93 H	279	35.2	4.5
14	4880.00	39.8 AV	54.0	-14.2	1.37 H	225	35.3	4.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band, the limit was restricted at the Conducted Out of Band Emissions.

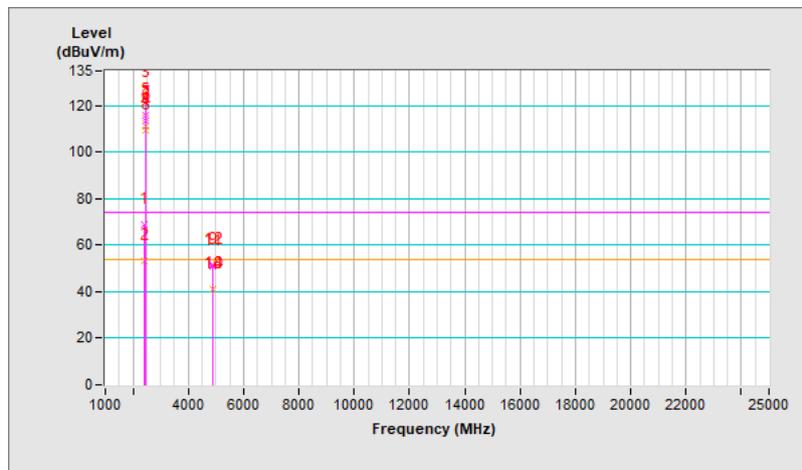


Combination	1		
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	68.9 PK	74.0	-5.1	1.29 V	338	36.3	32.6
2	2390.00	53.3 AV	54.0	-0.7	1.29 V	338	20.7	32.6
3	*2437.00	123.7 PK			1.29 V	338	91.1	32.6
4	*2437.00	111.0 AV			1.29 V	338	78.4	32.6
5	#2440.00	115.9 PK			1.02 V	349	83.3	32.6
6	#2440.00	113.3 PK			1.73 V	338	80.7	32.6
7	#2440.00	114.7 AV			1.02 V	349	82.1	32.6
8	#2440.00	109.4 AV			1.73 V	338	76.8	32.6
9	4874.00	51.3 PK	74.0	-22.7	1.18 V	332	46.8	4.5
10	4874.00	41.2 AV	54.0	-12.8	1.18 V	332	36.7	4.5
11	4880.00	51.2 PK	74.0	-22.8	2.87 V	269	46.7	4.5
12	4880.00	51.4 PK	74.0	-22.6	1.61 V	122	46.9	4.5
13	4880.00	41.0 AV	54.0	-13.0	2.87 V	269	36.5	4.5
14	4880.00	41.3 AV	54.0	-12.7	1.61 V	122	36.8	4.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band, the limit was restricted at the Conducted Out of Band Emissions.



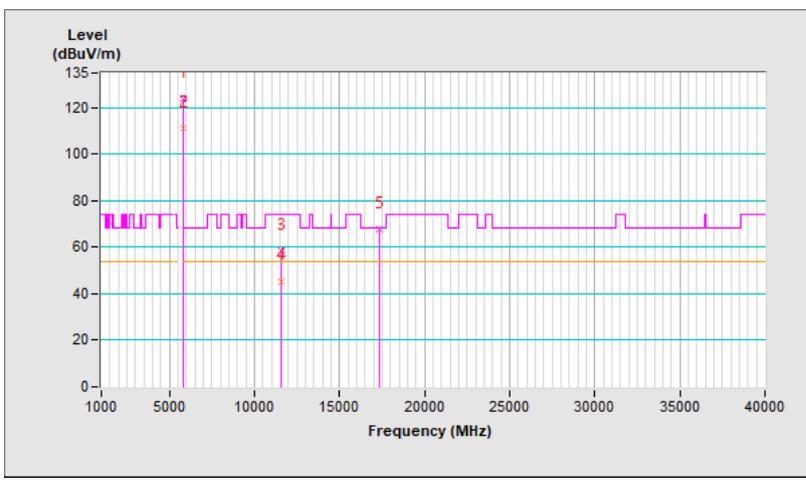
FCC 15.407

Combination	1		
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5785.00	123.9 PK			1.37 H	11	80.5	43.4
2	*5785.00	111.2 AV			1.37 H	11	67.8	43.4
3	11570.00	58.8 PK	74.0	-15.2	2.23 H	174	47.0	11.8
4	11570.00	45.5 AV	54.0	-8.5	2.23 H	174	33.7	11.8
5	#17355.00	67.7 PK	68.2	-0.5	2.81 H	302	54.8	12.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

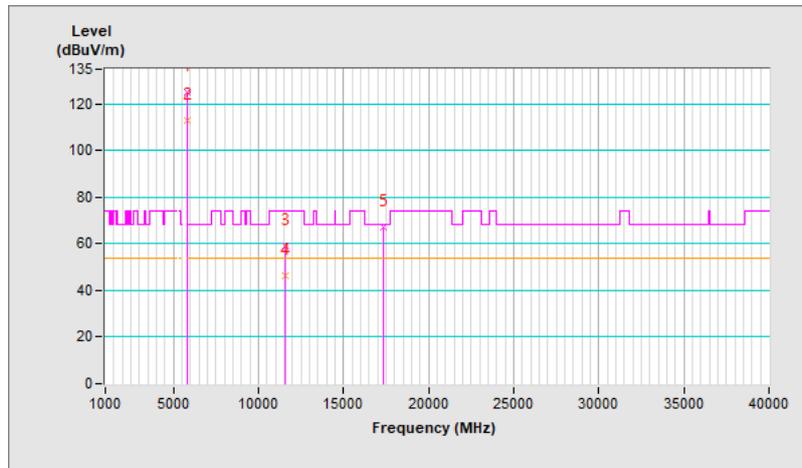


Combination	1		
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5785.00	125.3 PK			1.49 V	26	81.9	43.4
2	*5785.00	112.7 AV			1.49 V	26	69.3	43.4
3	11570.00	59.3 PK	74.0	-14.7	1.82 V	346	47.5	11.8
4	11570.00	46.1 AV	54.0	-7.9	1.82 V	346	34.3	11.8
5	#17355.00	67.3 PK	68.2	-0.9	1.65 V	343	54.4	12.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

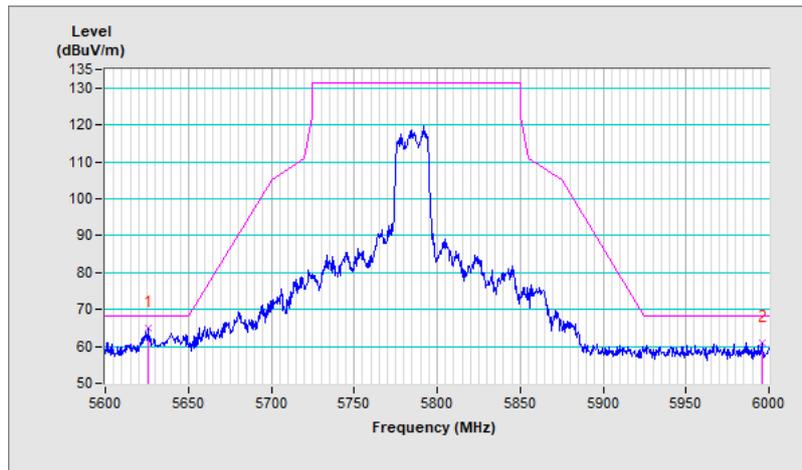


Combination	1		
Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5625.60	64.9 PK	68.2	-3.3	1.37 H	11	59.9	5.0
2	#5995.60	61.0 PK	68.2	-7.2	1.37 H	11	55.2	5.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " # " : The radiated frequency is out of the restricted band.

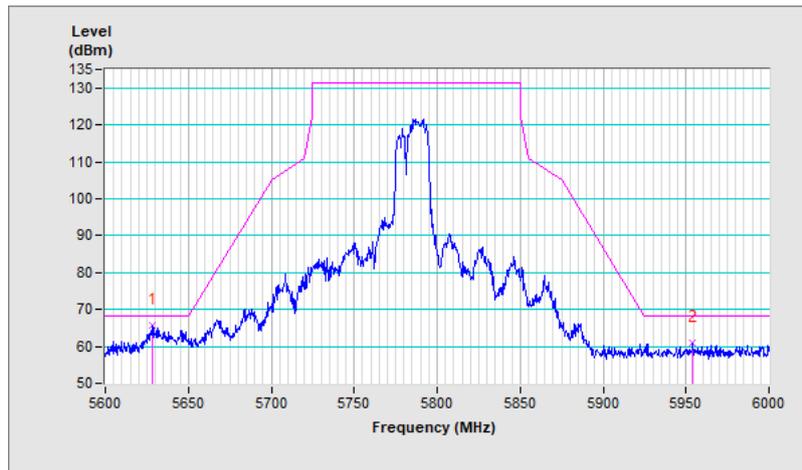


Combination	1		
Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5628.40	65.8 PK	68.2	-2.4	1.49 V	26	60.8	5.0
2	#5954.00	60.9 PK	68.2	-7.3	1.49 V	26	55.1	5.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " # ": The radiated frequency is out of the restricted band.

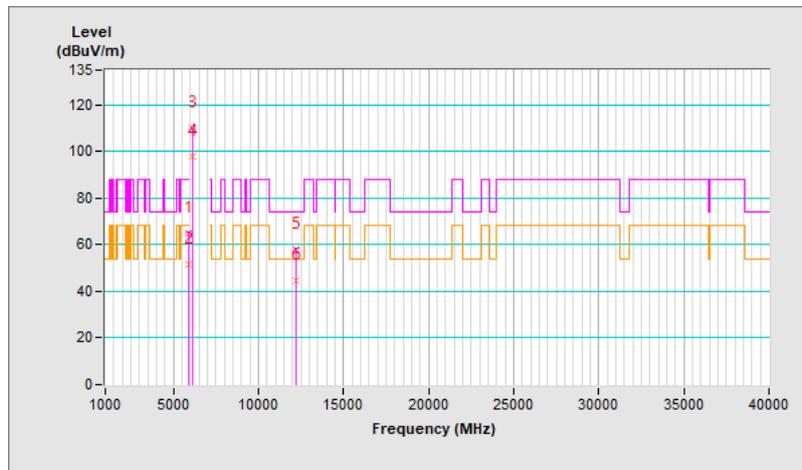


Combination	1		
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	64.7 PK	88.2	-23.5	2.09 H	211	58.8	5.9
2	#5925.00	51.7 AV	68.2	-16.5	2.09 H	211	45.8	5.9
3	*6105.00	110.2 PK			2.09 H	211	66.2	44.0
4	*6105.00	98.1 AV			2.09 H	211	54.1	44.0
5	12210.00	57.9 PK	74.0	-16.1	1.59 H	241	46.9	11.0
6	12210.00	44.7 AV	54.0	-9.3	1.59 H	241	33.7	11.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.

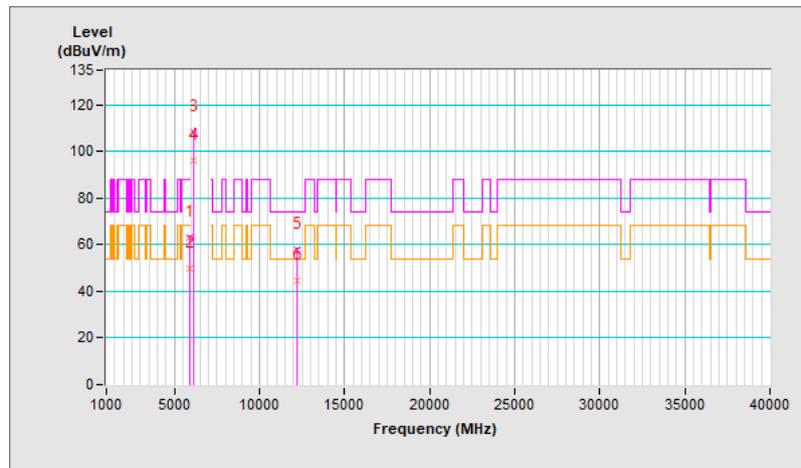


Combination	1		
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5925.00	63.0 PK	88.2	-25.2	2.48 V	221	57.1	5.9
2	#5925.00	49.9 AV	68.2	-18.3	2.48 V	221	44.0	5.9
3	*6105.00	108.2 PK			2.48 V	221	64.2	44.0
4	*6105.00	95.9 AV			2.48 V	221	51.9	44.0
5	12210.00	57.7 PK	74.0	-16.3	2.73 V	101	46.7	11.0
6	12210.00	44.4 AV	54.0	-9.6	2.73 V	101	33.4	11.0

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # " : The radiated frequency is out of the restricted band.



7.4 Radiated Spurious Emissions above 1GHz

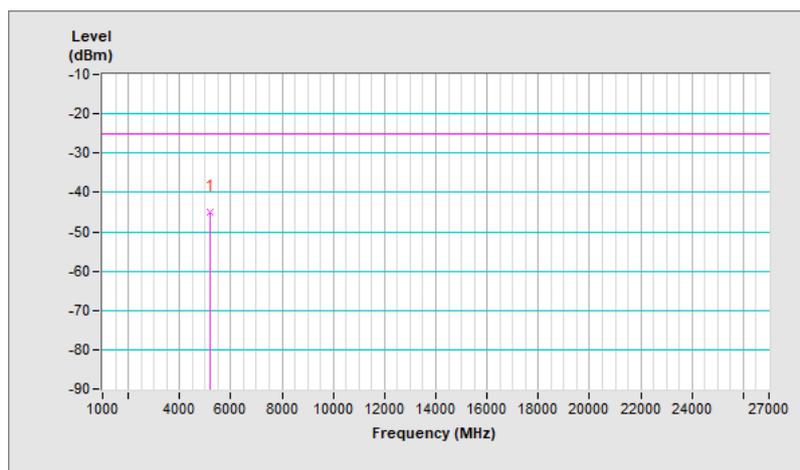
FCC Part 27

Combination	1		
Frequency Range	1 GHz ~ 27 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5185.98	-45.02	-25.00	-20.02	1.54 H	196	46.15	-91.17

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

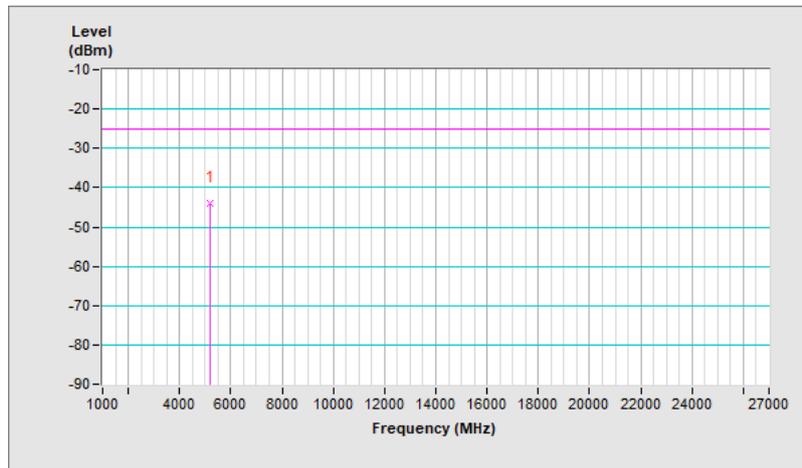


Combination	1		
Frequency Range	1 GHz ~ 27 GHz	Detector Function & Bandwidth	1 MHz/3 MHz (RMS)
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 68 % RH
Tested By	Greg Lin		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5185.98	-44.13	-25.00	-19.13	2.13 V	184	47.04	-91.17

Remarks:

1. $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2. $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.



8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 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.

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Web Site: <http://ee.bureauveritas.com.tw>

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

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