FCC Test Report

(PART 95 Subpart I)

Report No.:	RFBHSI-WTW-P21080075
FCC ID:	2AYGR-3036
Test Model:	ECLS130 (eCLS v3)
Received Date:	Aug. 04, 2021
Test Date:	Aug. 23 ~Sep. 03, 2021
Issued Date:	Jan. 19, 2022
Applicant:	Saluda Medical Pty Ltd
Address:	Ground Floor, 407 Pacific Highway Artarmon, NSW, 2064, Australia
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:	No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RFBHSI-WTW-P21080075	Original Release	Jan. 19, 2022

1 Certificate of Conformity

Product:	Evoke™ External Closed Loop Stimulator
Brand:	Saluda Medical
Test Model:	ECLS130 (eCLS v3)
Sample Status:	Commercial Sapmle
Applicant:	Saluda Medical Pty Ltd
Test Date:	Aug. 23 ~Sep. 03, 2021
Standards:	FCC Part 95, Subpart I

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 Electromagnetic compatibility and Radio spectrum Matters (ERM) characteristics under the conditions specified in this report.

Prepared by : Polly Chien , **Date:** Jan. 19, 2022

Polly Chien / Specialist

Approved by : Jeremy Lin , **Date:** Jan. 19, 2022

Jeremy Lin / Project Engineer

2 Summary of Test Results

The EUT has been tested according to the following specifications:

FCC Part 95I & Part 2		
Clause	Test Descriptions	Result
FCC 95.2565 FCC 2.1055	Frequency Error	☒Pass ☐Fail ☐N/A ☐N/P (Limited Program)
FCC 95.2573(a) & 2563(a) FCC 2.1047	Emission Bandwidth	☒Pass ☐Fail ☐N/A ☐N/P (Limited Program)
FCC 95.2579(a)(c)	Emission Mask	☒Pass ☐Fail ☐N/A ☐N/P (Limited Program)
FCC 2.1049	Occupied Bandwidth	☒Pass ☐Fail ☐N/A ☐N/P (Limited Program)
FCC 95.2567(a)(1) FCC 2.1046	Transmitter Output Power	☒Pass ☐Fail ☐N/A ☐N/P (Limited Program)
FCC 95.2579(a)(1)&(c)&(g) FCC 2.1053	Transmitter Unwanted Emission	☒Pass ☐Fail ☐N/A ☐N/P (Limited Program)
FCC 95.2559	MedRadio channel access requirements	☐Pass ☐Fail ☒N/A ☐N/P (Limited Program)
FCC 95.2559(a)(3)&(4)	LBT Threshold Power Levels	☐Pass ☐Fail ☒N/A ☐N/P (Limited Program)
FCC 95.2559(a)(1)	Monitoring System Bandwidth	☐Pass ☐Fail ☒N/A ☐N/P (Limited Program)
FCC 95.2559(a)(2)	Monitoring System Scan Cycle Time	☐Pass ☐Fail ☒N/A ☐N/P (Limited Program)
FCC 95.2559(a)(6)	Minimum Channel Monitoring Period	☐Pass ☐Fail ☒N/A ☐N/P (Limited Program)
FCC 95.2559(a)(5)	Channel Access	☐Pass ☐Fail ☒N/A ☐N/P (Limited Program)
FCC 95.2559(a)(5) /95.2557(a)	Discontinuation of MICS Session	☐Pass ☐Fail ☒N/A ☐N/P (Limited Program)

N/A: Not Applicable

N/P: Not Performed

Note: In Evoke™ System the LBT is performed by Med Radio programmer/control transmitter, therefore all tests within section 95.2559 are N/A.

Note:

1. The EUT is battery powered therefore the AC conducted emissions tests are applicable.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 09, 2021	Apr. 08, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 10, 2021	Jun. 09, 2022
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 06, 2020	Nov. 05, 2021
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 22, 2020	Nov. 21, 2021
Loop Antenna TESEQ	HLA 6121	45745	Jul. 21, 2021	Jul. 20, 2022
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jun. 05, 2021	Jun. 04, 2022
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 17, 2021	Feb. 16, 2022
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Jan. 16, 2021	Jan. 15, 2022
RF signal cable Woken	8D-FB	Cable-CH9-01	Jun. 05, 2021	Jun. 04, 2022
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
STANDARD TEMPERATURE &HUMIDITY CHAMBER TERCHY	MHU-225AU	920842	Jun. 15, 2021	Jun. 14, 2022
DC power supply Keysight	U8002A	MY56330015	NA	NA
Digital Multimeter Fluke	87-III	70360742	Jun. 24, 2021	Jun. 23, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	100115	Feb. 03, 2021	Feb. 02, 2022

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.
3. Tested date: Aug. 23 ~Sep. 03, 2021

4. The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Frequency	Uncertainty
Radiated emissions	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Parameter	Uncertainty
Radio Frequency	±1.13 x10^{-8}
Adjacent channel power	±0.31 dB
RF power, conducted	±0.61 dB
Conducted emission of transmitter	±1.34 dB
Conducted emission of receivers	±1.25 dB
Radiated emission of transmitter, valid up to 4 GHz	±2.29 dB
Radiated emission of receiver, valid up to 4 GHz	±2.29 dB
Conducted monitoring test system	±1.34 dB
Radiated monitoring test system	±2.29 dB
Temperature	±0.6 °C
Humidity	±4 %

3 General Information

3.1 General Description of EUT

Product	Evoke™ External Closed Loop Stimulator
Brand	Saluda Medical
Test Model	ECLS130 (eCLS v3) (refer to Note for more details)
Sample Status	Commercial Sapmle
Nominal Voltage	3.6Vdc (battery)
Voltage Operation Range	for ECLS130: Vnom= 3.6V Vmin= 3.25V Vmax= 4.1V
Temperature Operating Range	Tmin: ☐ -20°C ☐ 0°C ☒ 5 °C Tnom: ☒ 25°C Tmax: ☐ +35°C ☐ 55°C ☒ 40°C
Type of Power Source	☒ Battery (Alkaline/Lithium-Ion/Lead acid/Other) ☐ Internal power supply ☐ External power supply (USB) ☐ Car Charger
Duty Cycle	☐ Continuous duty ☐ Intermittent duty ☒ Continuous operation
Modulation Type	FSK
Modulation Technology	2FSK
Transfer Rate	200kbps
Operating Frequency	402~405MHz
Number of Channels	8
Spectrum Access	LBT/AFA
EIRP Power (Measured Max. Average)	-20.65dBm
Antenna Type	Wired Loop antenna type ☒ Integral ☐ External
Antenna Connector	NA
Antenna Gain	-17dBi, ☐ Specified by manufacturer ☒ Measured
Test Sequence / Test Software Used	EMC Test Software PN 102448 Rev. 1.00; Firmware PN 102451 Rev. 1.00
Accessory Device	NA
Cable Supplied	NA

Note:

1. The EUT detailed information is provided in the following table.

Brand	Model	S/N	Rev	Ref
Saluda Medical	ECLS130 (eCLS v3)	1627, 1639	Rev. 2.01	P/N 101211

3.2 Description of Test Modes

8 channels are provided:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1(C-Low)	402.45	5 (C-Mid)	403.65
2	402.75	6	403.95
3	403.05	7	404.25
4	403.35	8(C-High)	404.55

The EUT is set in the following modes during tests:
- Permanent emission with modulation on a fixed channel at the highest power
- Permanent emission without modulation on a fixed channel at the highest power

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT configure mode	Applicable to									Description
	FE	EB	OB	EM	EIRP	ACE	TUE	SAP	RFE	
-	√	√	√	√	√	Note 3	√	Note 2	√	Note 1

Where FE: Frequency Error
EB: Emission Bandwidth
OB: Occupied Bandwidth
EM: Emission Mask
EIRP: Transmitter Output Power (EIRP)
ACE: AC Conducted Emissions
TUE: Transmitter Unwanted Emission
SAP: Spectrum Access Protocol (MedRadio channel access requirements)
RFE: RF Exposure evaluation

Note: 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.
2. Not Applicable: means no effect.
3. Without AC power port of the EUT

Frequency Error:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT configure mode	Test condition	Available Channel	Tested Channel
-	☒ internal permanent antenna ☐ temporary antenna connector ☐ human torso simulator	1 - 8	1, 8

Emission Bandwidth:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT configure mode	Test condition	Available Channel	Tested Channel
-	☒ internal permanent antenna ☐ temporary antenna connector ☐ human torso simulator	1 - 8	1, 5, 8

Occupied Bandwidth:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT configure mode	Test condition	Available Channel	Tested Channel
-	☒ internal permanent antenna ☐ temporary antenna connector ☐ human torso simulator	1 - 8	1, 5, 8

Emission Mask:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT configure mode	Test condition	Available Channel	Tested Channel
-	☒ internal permanent antenna ☐ temporary antenna connector ☐ human torso simulator	1 - 8	1, 5, 8

Transmitter Output Power (EIRP):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT configure mode	Test condition	Available Channel	Tested Channel
-	☒ internal permanent antenna ☐ temporary antenna connector ☐ human torso simulator	1 - 8	1, 5, 8

Transmitter Unwanted Emission:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT configure mode	Test condition	Available Channel	Tested Channel
-	☒ internal permanent antenna ☐ temporary antenna connector ☐ human torso simulator	1 - 8	1, 5, 8

Test Condition:

Applicable to	Environmental conditions	INPUT POWER	Tested by
FE	23 deg. C, 68% RH	3.6Vdc	Jisyong Wang
EB	23 deg. C, 68% RH	3.6Vdc	Jisyong Wang
OB	23 deg. C, 68% RH	3.6Vdc	Jisyong Wang
EM	23 deg. C, 68% RH	3.6Vdc	Jisyong Wang
EIRP	22 deg. C, 66% RH	3.6Vdc	Han Wu
TUE	22 deg. C, 66% RH	3.6Vdc	Han Wu
RFE	23 deg. C, 68% RH	3.6Vdc	Han Wu

3.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

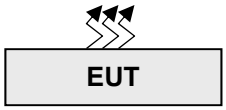
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Clinical System Transceiver	Saluda Medical	CST110, PN101448 Rev.1.00	431	NA	Provided by manufacturer
B.	Notebook	NA	Tablet Surface PC	015149160853	NA	Provided by manufacturer

Note:

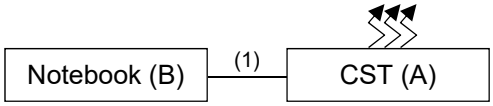
1. All power cords of the above support units are non-shielded (1.8m).
2. Items A-B acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB cable	1	1	Y	0	Attached to CST110

3.3.1 Configuration of System under Test



Remote site



3.4 General Description of Applied Standards

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

FCC 47 CFR Part 2
FCC 47 CFR Part 95 subpart I
Measurement Method:
ANSI C63.26:2015

All test items have been performed and recorded as per the above standard.

4 Test Procedure and Results

4.1 Frequency error

4.1.1 Limits

The frequency error for equipment operating in the 402 MHz to 405 MHz band shall not exceed ±100 ppm under normal, extreme or any intermediate set of conditions.
(a) 25 °C to 45 °C in the case of medical implant transmitters; and
(b) 0 °C to 55 °C in the case of MedRadio programmer/control transmitters and medical body-worn transmitters.

4.1.2 Test Instruments

Refer to section 2.1 to get information of above instrument.

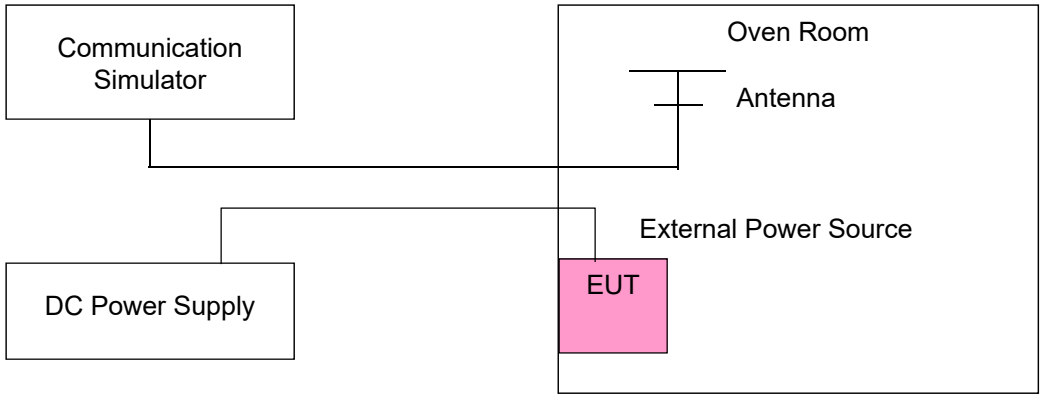
4.1.3 Test Procedures

a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.
d. Measurement method refer to EN 301 839 section 5.3.1.

4.1.4 Deviation from Test Standard

No deviation

4.1.5 Test Setup



4.1.6 Test Results

Frequency Error vs. Voltage

Voltage (Vdc)	(CH1) 402.45 MHz		(CH8) 404.55 MHz	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
3.60	402.450200	0.497	404.550400	0.989
3.25	402.451300	3.230	404.550800	1.978
4.10	402.450800	1.988	404.551100	2.719

Note: The applicant defined the normal working voltage is from 3.25Vdc to 4.10Vdc.

Frequency Error vs. Temperature

Temp. (℃)	(CH1) 402.45 MHz		(CH8) 404.55 MHz	
	Frequency (MHz)	Frequency Error (ppm)	Frequency (MHz)	Frequency Error (ppm)
0	402.447900	-5.218	404.547900	-5.191
10	402.448900	-2.733	404.548400	-3.955
20	402.450200	0.497	404.550400	0.989
30	402.450300	0.745	404.551000	2.472
40	402.451200	2.982	404.551300	3.213
50	402.451900	4.721	404.551900	4.697
55	402.452900	7.206	404.552200	5.438

4.2 Emission bandwidth & Emission Mask

4.2.1 Limits

95.2573 (a) for Emission bandwidth

(a) For MedRadio transmitters operating in the 402-405 MHz band, the maximum MedRadio emission bandwidth is 300 kHz. Such transmitters must not use more than 300 kHz of bandwidth (total) during a MedRadio communications session. This provision does not preclude full duplex or half duplex communications provided that the total bandwidth of all of the channels employed in a MedRadio communications session does not exceed 300 kHz.

95.2579(c) for Emission Mask

Attenuation requirements, 402-405 MHz. For MedRadio transmitter types designed to operate in the 402-405 MHz band, unwanted emissions must be attenuated below the maximum permitted transmitter output power by at least:

(1) 20 dB, on any frequency within the 402-405 MHz band that is more than 150 kHz away from the center frequency of the MedRadio channel the transmission is intended to occupy;

(2) 20 dB, on any frequency between 401.750 MHz and 402.000 MHz, and on any frequency between 405 MHz and 405.250 MHz.

4.2.2 Test Procedure

a. The emission bandwidth was radiated measurement.

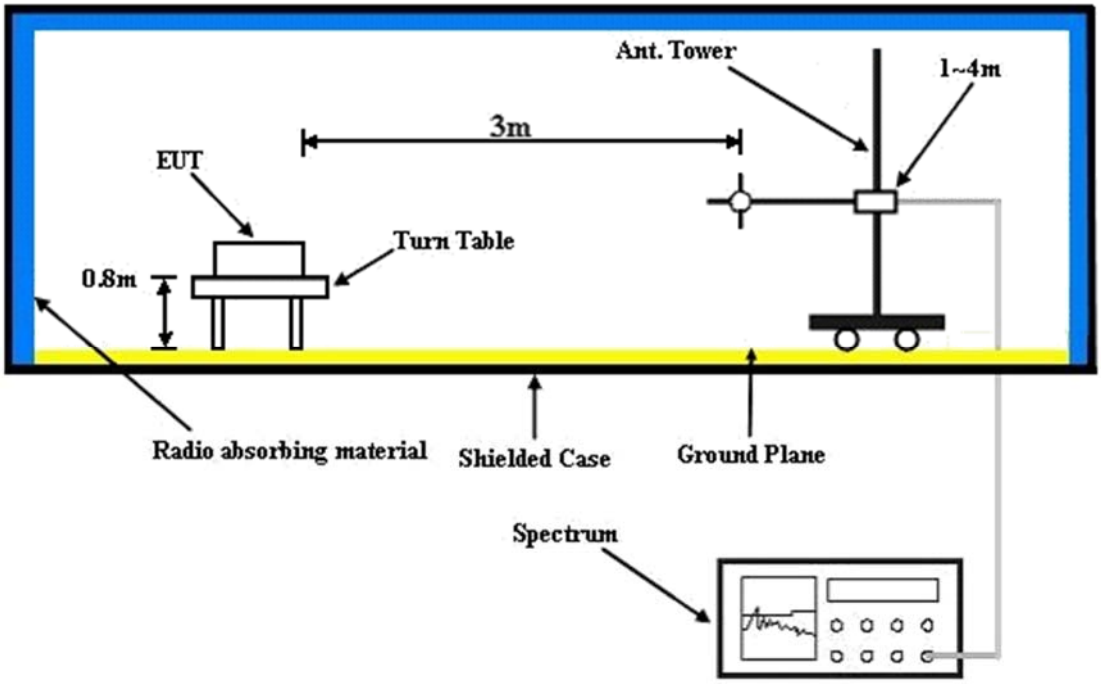
b. EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power.

c. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW = 3kHz and VBW = 10kHz. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB(spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth).

4.2.3 Deviation from Test Standard

No deviation.

4.2.4 Test Setup

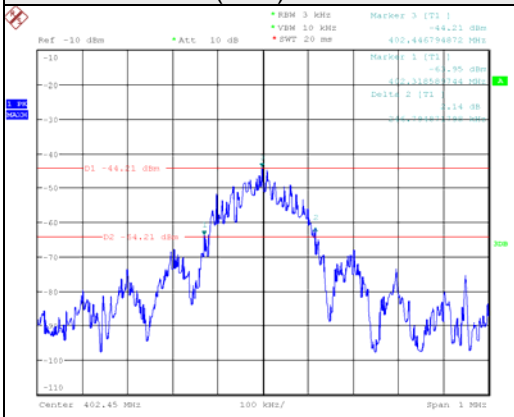


For the actual test configuration, please refer to the attached file (Test Setup Photo).

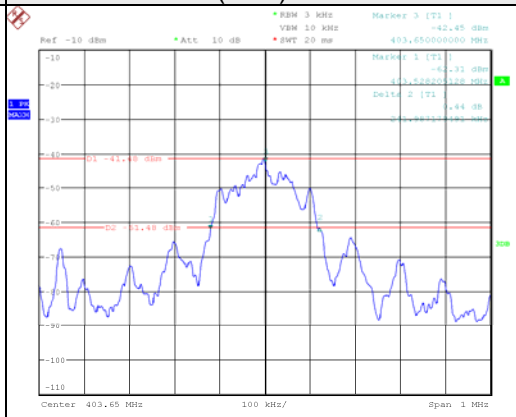
4.2.5 Test Results

Channel	Channel Frequency (MHz)	20dB down Bandwidth (MHz)	Measured Frequencies		Limit	Pass/Fail
			F_L (MHz)	F_H (MHz)		
1	402.45	0.246	402.318	402.564	FL > 402 MHz and FH < 405 MHz and 0.3 MHz	Pass
5	403.65	0.241	403.528	403.769		Pass
8	404.55	0.235	404.433	404.668		Pass

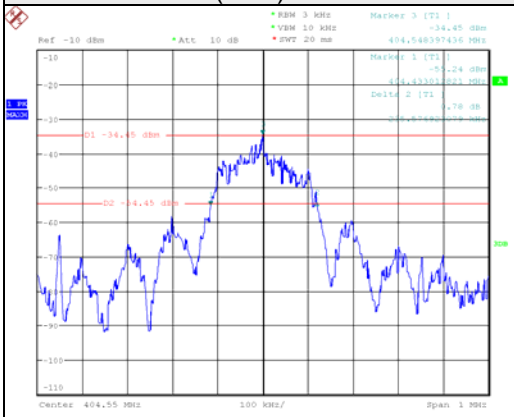
(CH1) 402.45 MHz



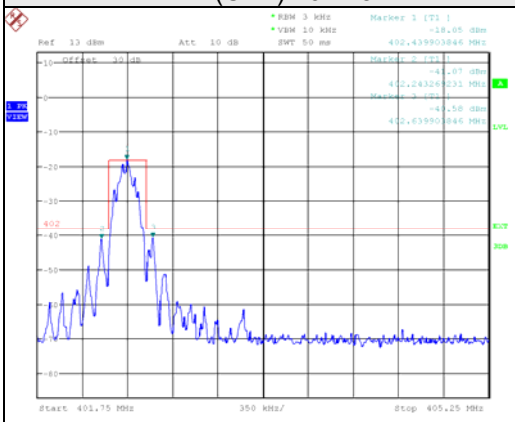
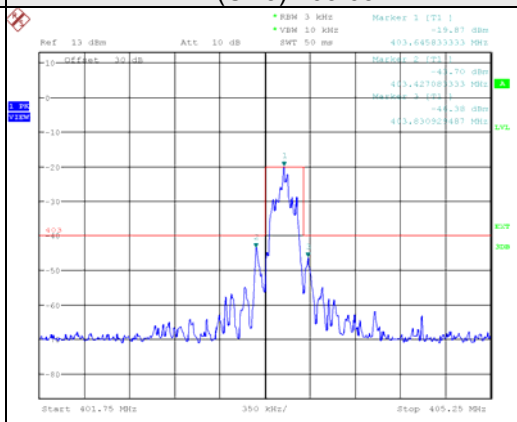
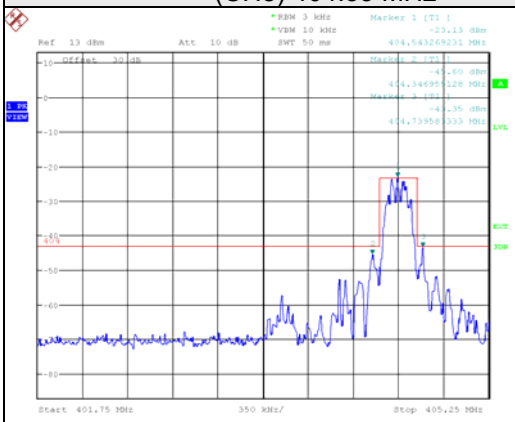
(CH5) 403.65 MHz



(CH8) 404.55 MHz



For emission Mask:

(CH1) 402.45 MHz	(CH5) 403.65 MHz
	
(CH8) 404.55 MHz	
	

4.3 Occupied Bandwidth Measurement

4.3.1 Limits

No limit.

4.3.2 Test Procedure

a. The emission bandwidth was radiated measurement.

b. EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power.

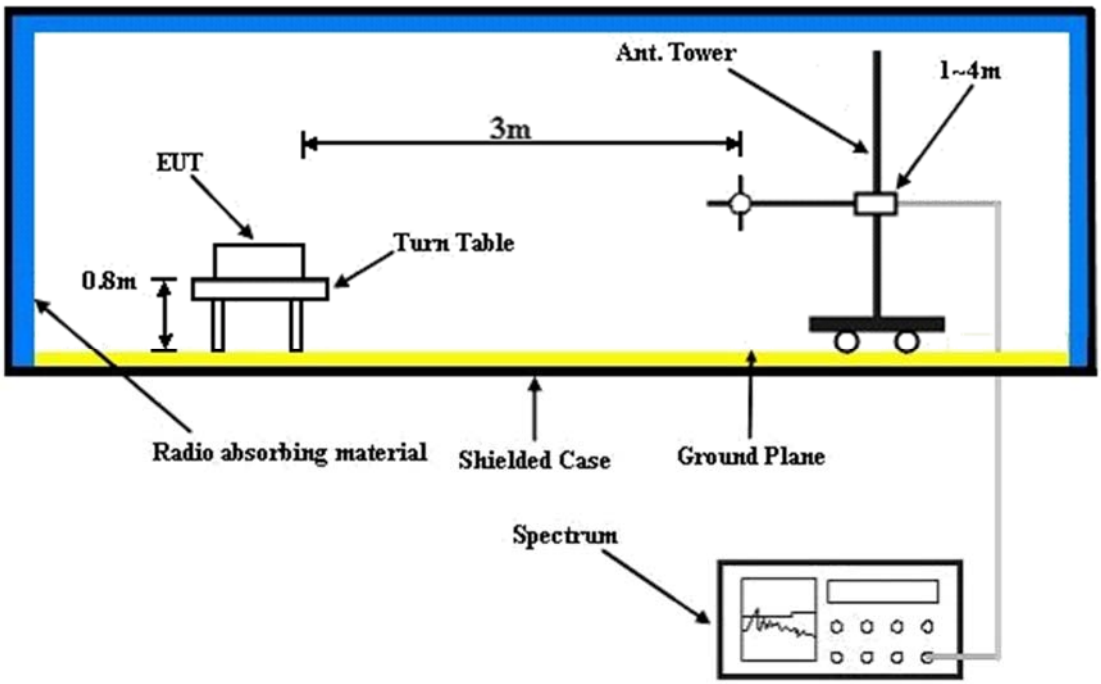
c. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to peak.

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to peak. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.3.3 Deviation from Test Standard

No deviation.

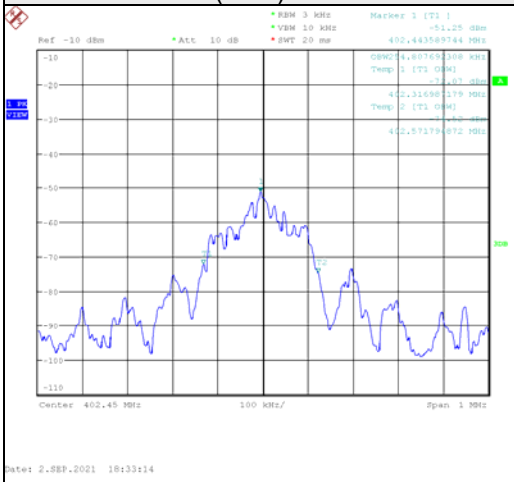
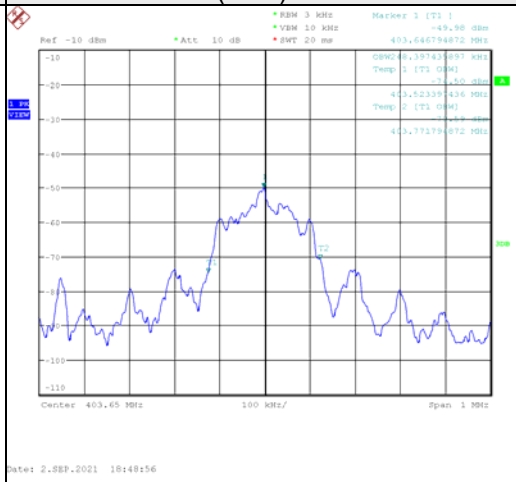
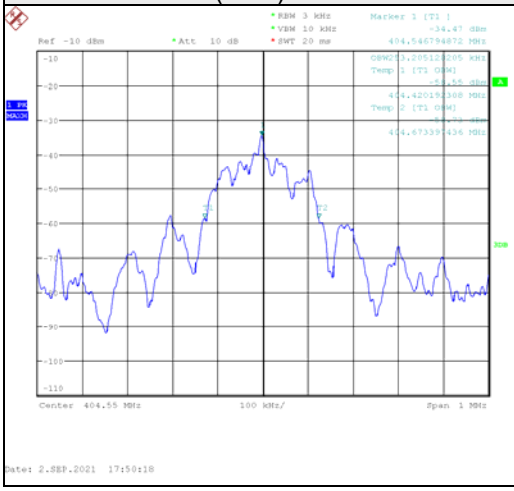
4.3.4 Test Setup



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

4.3.5 Test Results

Centre Frequencies f_c (kHz)			
Channel	1	5	8
Occupied Bandwidth (99% emission bandwidth) (kHz)	254.81	248.40	253.21

(CH1) 402.45 MHz	(CH5) 403.65 MHz
	
(CH8) 404.55 MHz	
	

4.4 Transmitter Output Power (EIRP)

4.4.1 Limits

The M-EIRP within any 300 kHz bandwidth within the 402-405 MHz band must not exceed 25 microwatts..

4.4.2 Test Instruments

Refer to section 2.1 to get information of above instrument.

4.4.3 Test Procedure

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

b. The 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 C63.26 section 5.5 and 5.2.7.
   - EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.
   - ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

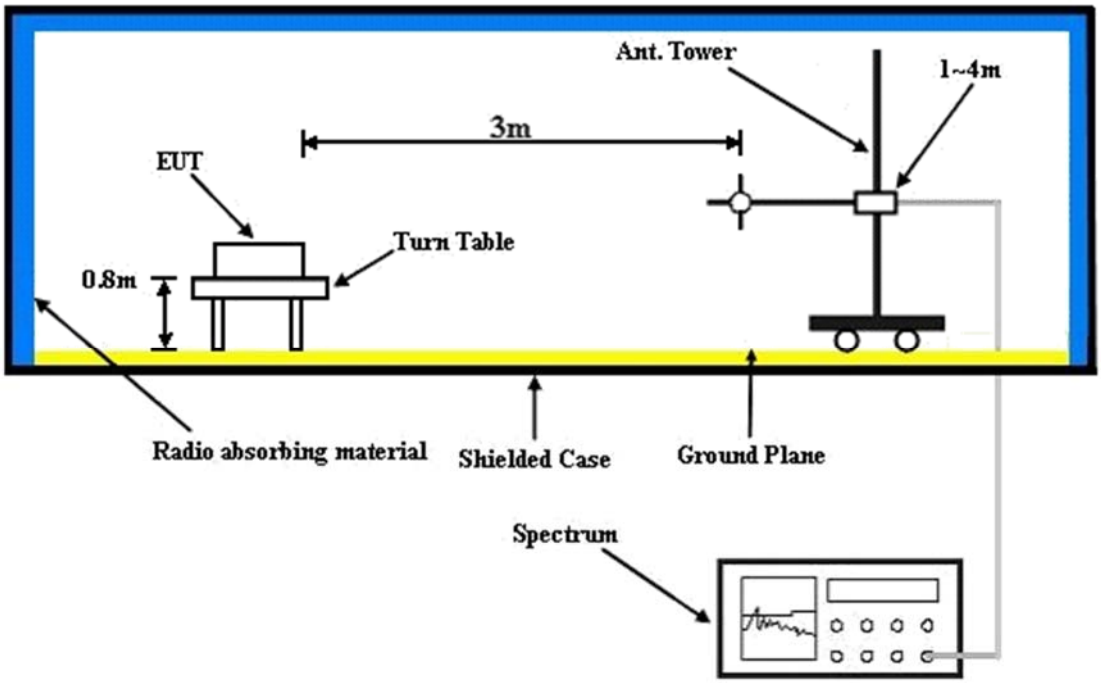
Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz, and the detector type is Peak.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
   The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

4.4.4 Deviation from Test Standard

No deviation.

4.4.5 Test Setup



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

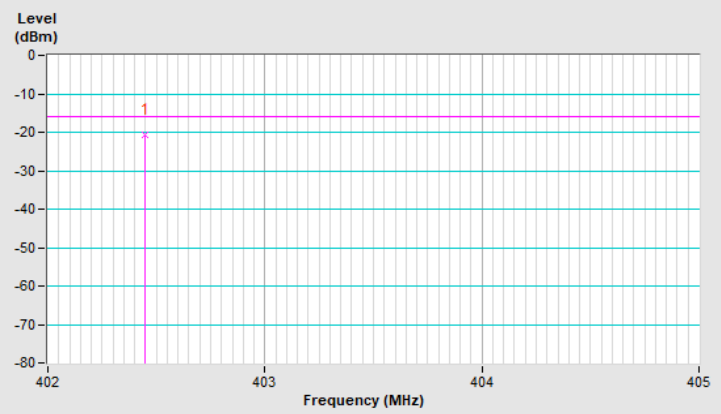
4.4.6 Test Results

Mode	TX channel 1 (402.45 MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Hans Wu		

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	402.45	-20.65	-16.02	-4.63	2.09 H	239	79.28	-99.93

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

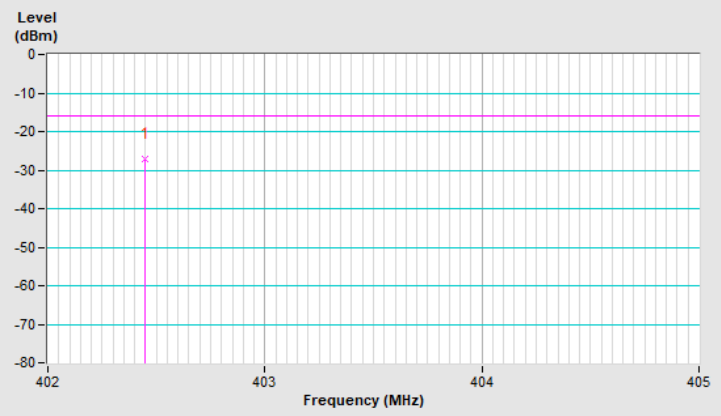


Mode	TX channel 1 (402.45 MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Hans Wu		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	402.45	-27.07	-16.02	-11.05	1.61 V	252	72.86	-99.93

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

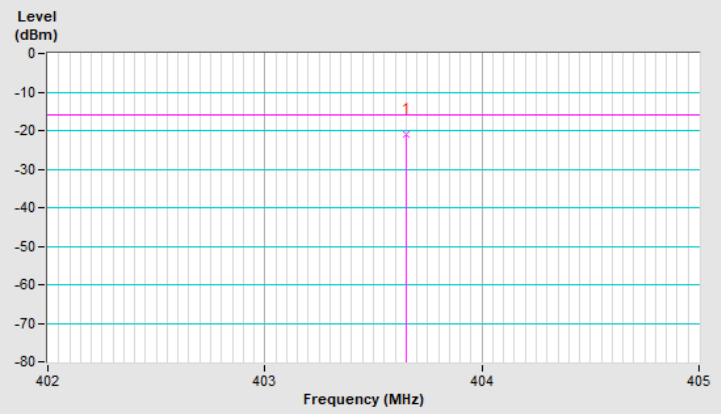


Mode	TX channel 5 (403.65 MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Hans Wu		

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	403.65	-21.17	-16.02	-5.15	2.15 H	234	78.74	-99.91

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

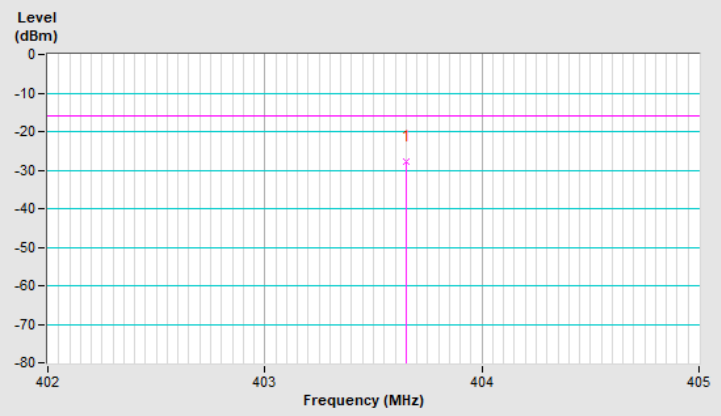


Mode	TX channel 5 (403.65 MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Hans Wu		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	403.65	-27.73	-16.02	-11.71	1.61 V	252	72.18	-99.91

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

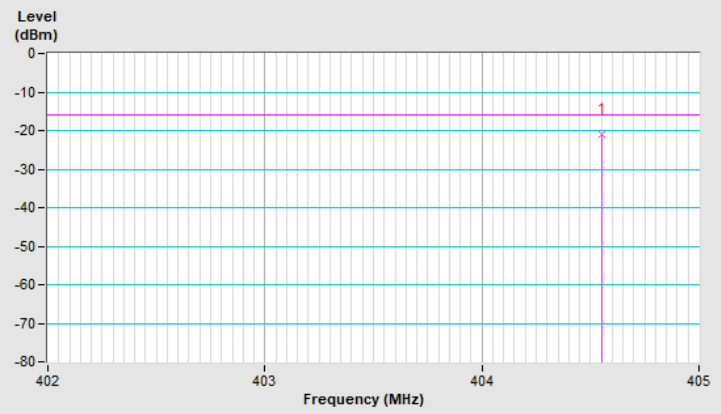


Mode	TX channel 8 (404.55 MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Hans Wu		

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	404.55	-21.13	-16.02	-5.11	2.14 H	232	78.76	-99.89

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

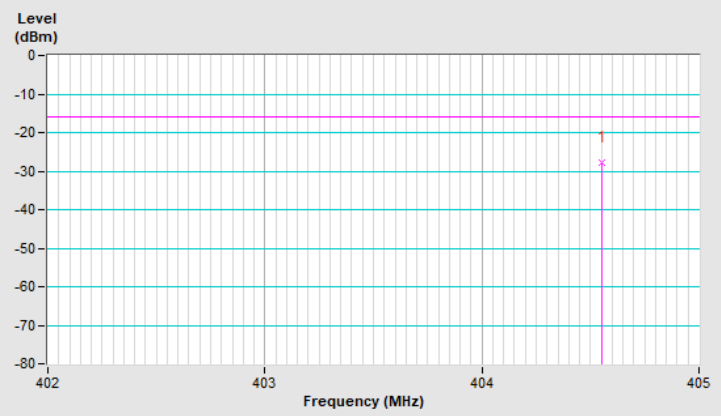


Mode	TX channel 8 (404.55 MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	22deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Hans Wu		

Antenna Polarity & Test Distance : Vertical at 3m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	404.55	-27.75	-16.02	-11.73	1.68 V	252	72.14	-99.89

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) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



4.5 Transmitter Unwanted Emission

4.5.1 Limits

(a) Emissions from MICS devices more than 250 kHz outside of the 402-405 MHz band shall not exceed the field strength limits specified below:

Frequencies (MHz)	Field Strength (microvolts/meter)	Field Strength (dBμV/m)	Measurement Distance (meters)
30 ~ 88	100	40	3
88 ~ 216	150	43.5	3
216 ~ 960	200	46	3
Above 960	500	53.9	3

Note:

1. At band edges, the tighter limit applies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, 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 20dB under any condition of modulation.
4. Radiated unwanted emissions from a MedRadio transmitter type must be measured to at least the tenth harmonic of the highest fundamental frequency emitted.

(b) Emissions within the 402-405 MHz MICS band which are more than 150 kHz away from the centre frequency of the spectrum, and the transmissions that occupy up to 250 kHz above and below the band shall be attenuated at least 20 dB below the maximum transmitter output power.

4.5.2 Test Instruments

Refer to section 4.4.2 to get information of above instrument.

4.5.3 Test Procedure

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) 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.

f. 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.

Note:

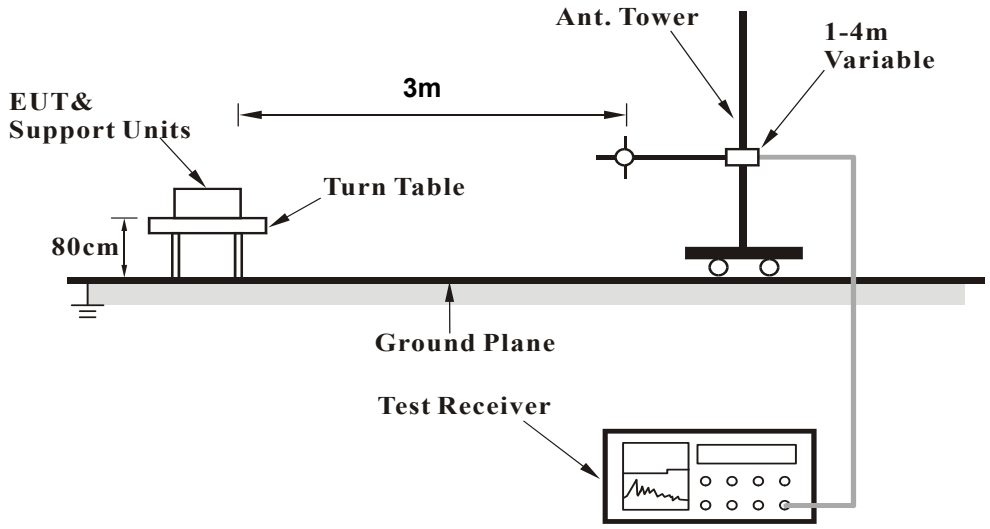
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.5.4 Deviation from Test Standard

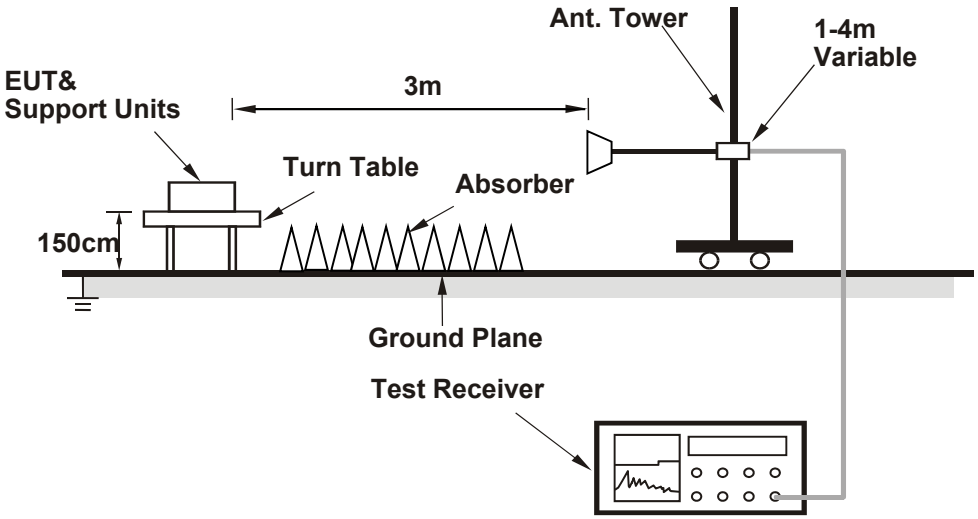
No deviation

4.5.5 Test Setup

For Radiated Emission below or equal 1GHz



For Radiated Emission above 1GHz



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

4.5.6 Test Results

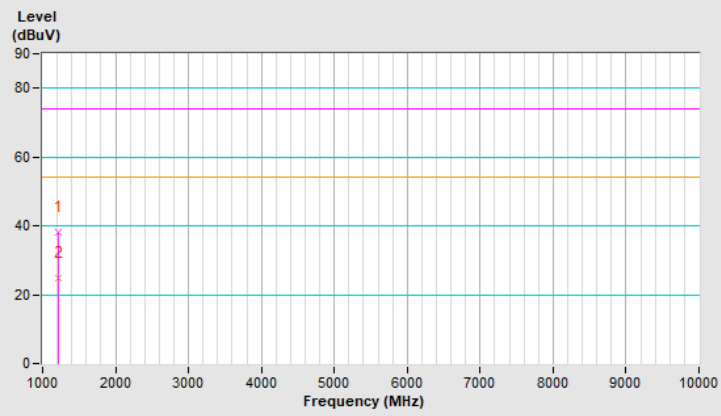
Above 1GHz Data:

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 10GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1207.35	38.3 PK	74.0	-35.7	3.56 H	176	43.6	-5.3
2	1207.35	24.6 AV	54.0	-29.4	3.56 H	176	29.9	-5.3

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

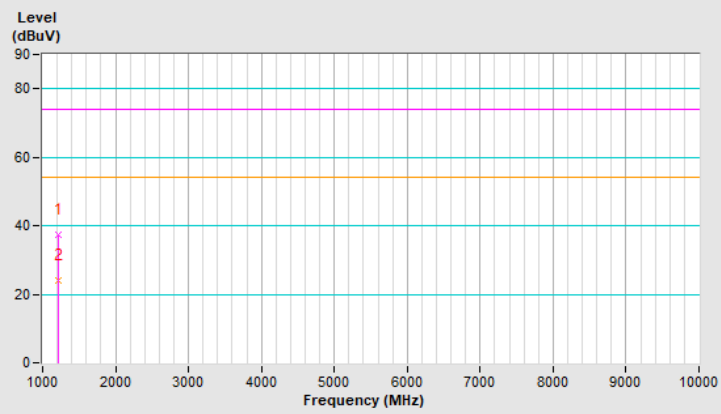


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 10GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1207.35	37.5 PK	74.0	-36.5	1.83 V	259	42.8	-5.3
2	1207.35	24.0 AV	54.0	-30.0	1.83 V	259	29.3	-5.3

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

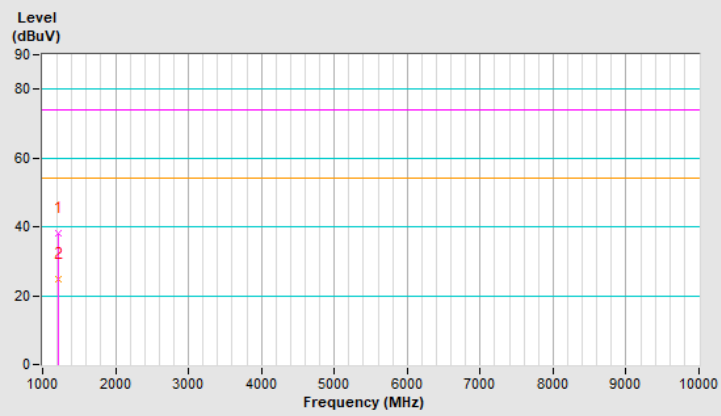


CHANNEL	TX Channel 5	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 10GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1210.95	38.2 PK	74.0	-35.8	3.47 H	164	43.4	-5.2
2	1210.95	24.6 AV	54.0	-29.4	3.47 H	164	29.8	-5.2

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

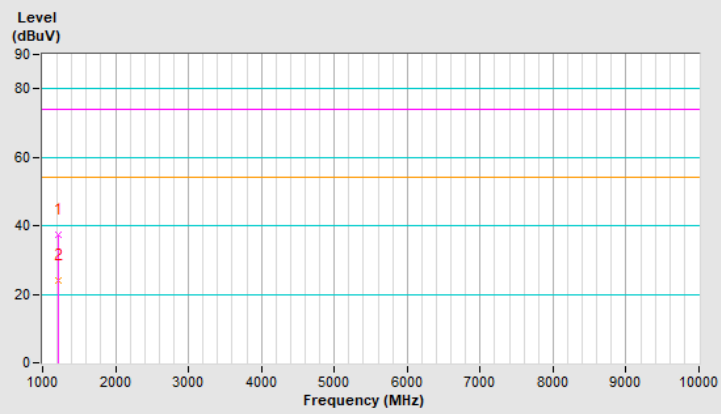


CHANNEL	TX Channel 5	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 10GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1210.95	37.5 PK	74.0	-36.5	1.92 V	261	42.7	-5.2
2	1210.95	24.2 AV	54.0	-29.8	1.92 V	261	29.4	-5.2

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

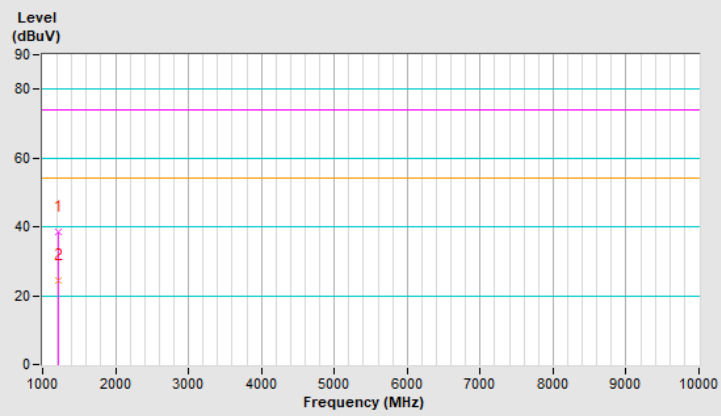


CHANNEL	TX Channel 8	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 10GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1213.65	38.4 PK	74.0	-35.6	3.51 H	174	43.5	-5.1
2	1213.65	24.5 AV	54.0	-29.5	3.51 H	174	29.6	-5.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

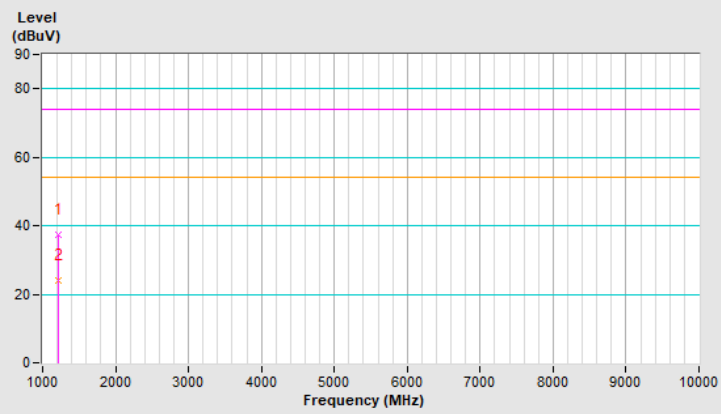


CHANNEL	TX Channel 8	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 10GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1213.65	37.5 PK	74.0	-36.5	1.92 V	254	42.6	-5.1
2	1213.65	24.1 AV	54.0	-29.9	1.92 V	254	29.2	-5.1

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



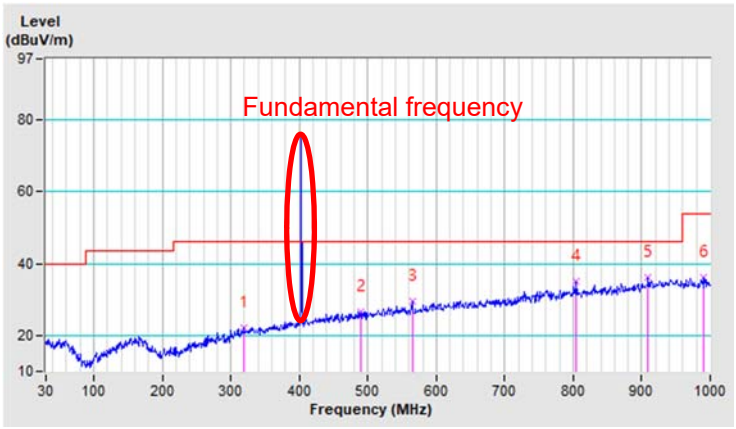
Below 1GHz data:

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	320.03	22.3 QP	46.0	-23.7	3.89 H	37	28.5	-6.2
2	488.81	26.7 QP	46.0	-19.3	1.23 H	352	29.2	-2.5
3	564.47	29.4 QP	46.0	-16.6	3.17 H	228	30.5	-1.1
4	804.90	35.2 QP	46.0	-10.8	2.92 H	140	31.7	3.5
5	909.79	36.1 QP	46.0	-9.9	2.28 H	123	30.2	5.9
6	989.33	36.1 QP	54.0	-17.9	1.52 H	269	29.6	6.5

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 of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

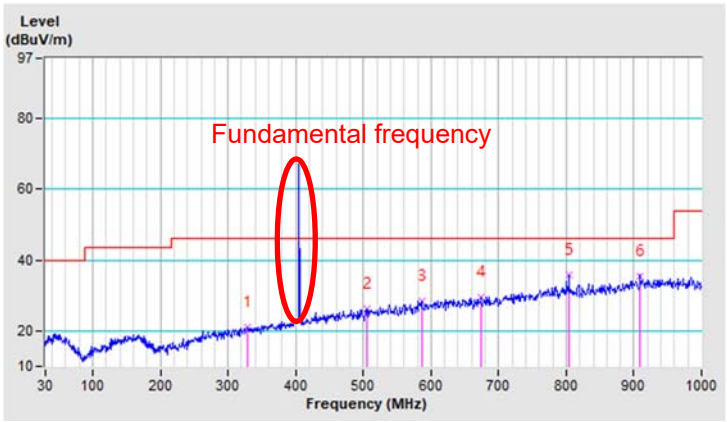


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	328.76	21.2 QP	46.0	-24.8	1.26 V	174	27.1	-5.9
2	505.30	26.4 QP	46.0	-19.6	1.31 V	51	28.6	-2.2
3	586.78	28.3 QP	46.0	-17.7	1.26 V	137	28.9	-0.6
4	674.08	29.7 QP	46.0	-16.3	1.74 V	186	28.8	0.9
5	804.90	35.8 QP	46.0	-10.2	1.73 V	340	32.3	3.5
6	909.79	35.6 QP	46.0	-10.4	1.62 V	28	29.7	5.9

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 of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

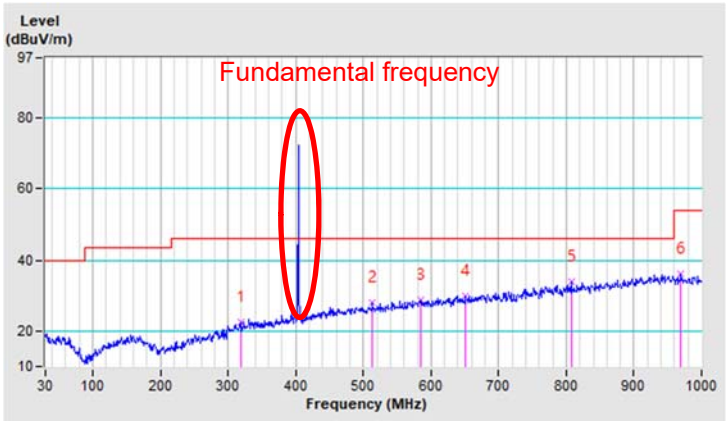


CHANNEL	TX Channel 5	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	320.03	22.5 QP	46.0	-23.5	2.03 H	64	28.7	-6.2
2	513.06	28.0 QP	46.0	-18.0	3.25 H	143	29.9	-1.9
3	583.87	28.9 QP	46.0	-17.1	1.51 H	126	29.6	-0.7
4	650.80	30.0 QP	46.0	-16.0	3.77 H	100	29.4	0.6
5	807.30	34.0 QP	46.0	-12.0	1.73 H	220	30.5	3.5
6	969.93	36.1 QP	54.0	-17.9	2.75 H	62	29.5	6.6

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 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

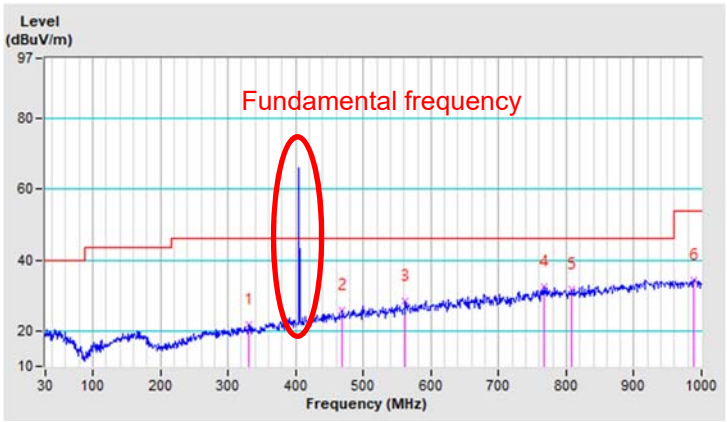


CHANNEL	TX Channel 5	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	329.73	21.7 QP	46.0	-24.3	1.13 V	195	27.6	-5.9
2	468.44	25.7 QP	46.0	-20.3	2.35 V	200	28.5	-2.8
3	561.56	28.5 QP	46.0	-17.5	3.11 V	33	29.6	-1.1
4	766.23	32.5 QP	46.0	-13.5	2.03 V	324	29.6	2.9
5	807.30	31.7 QP	46.0	-14.3	2.33 V	11	28.2	3.5
6	988.36	34.2 QP	54.0	-19.8	1.46 V	220	27.7	6.5

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 of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

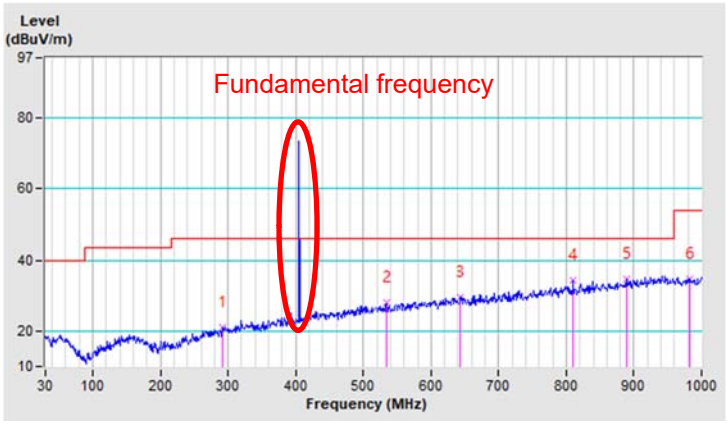


CHANNEL	TX Channel 8	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	291.90	21.1 QP	46.0	-24.9	2.47 H	77	28.0	-6.9
2	534.40	27.9 QP	46.0	-18.1	2.94 H	174	29.6	-1.7
3	644.01	29.7 QP	46.0	-16.3	3.37 H	279	29.0	0.7
4	809.10	34.5 QP	46.0	-11.5	1.33 H	121	31.0	3.5
5	888.45	34.6 QP	46.0	-11.4	2.48 H	251	29.5	5.1
6	983.51	34.7 QP	54.0	-19.3	2.27 H	271	28.1	6.6

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 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

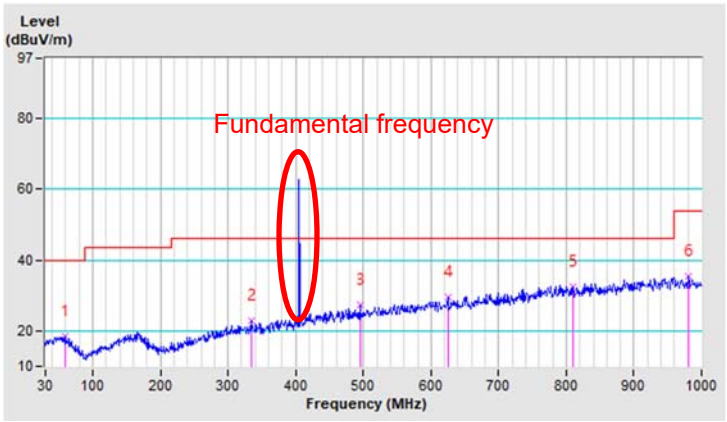


CHANNEL	TX Channel 8	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	58.13	18.5 QP	40.0	-21.5	3.38 V	130	27.8	-9.3
2	333.61	22.8 QP	46.0	-23.2	1.26 V	113	28.6	-5.8
3	495.60	27.2 QP	46.0	-18.8	3.90 V	334	29.5	-2.3
4	624.61	29.6 QP	46.0	-16.4	2.81 V	268	29.4	0.2
5	809.10	32.4 QP	46.0	-13.6	1.24 V	309	28.9	3.5
6	980.60	35.3 QP	54.0	-18.7	3.16 V	41	28.7	6.6

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 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



5 Photographs of the Test Configuration

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 and approved according to ISO/IEC 17025.

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

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

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

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