RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS-247
(Class II Permissive Change)

Test Standard	**FCC Part 15.247** **RSS-247 issue 2 and RSS-GEN Issue 5**
Product name	**RPMA module**
Brand Name	**Compal**
Model No.	**CPX90**
Test Result	**Pass**
Statements of Conformity	**Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.**

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.
The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory).

Approved by:

Kevin Tsai
Deputy Manager

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	October 7, 2020	Initial Issue	ALL	Allison Chen
01	October 13, 2020	See the following note Rev.(01)	P.5, P.11, P.15-18	Allison Chen

Rev.(01)
1. Revised EUT channel list in section 1.2.
2. Removed description remark 3 in section 3.2.
3. Added all 6 antennas EIRP power in section 5.1.4.

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1. GENERAL INFORMATION

1.1 EUT INFORMATION

FCC Applicant	Compal Electronics Inc No.581 & 581-1, Ruiguang Rd., Neihu District, Taipei city, 11492 Taiwan
IC Applicant	COMPAL ELECTRONICS INC. No. 581 & 581-1, Ruiguang Rd,, Neihu District Taipei R.O.C. 114 Taiwan
Manufacturer	Compal Electronics Inc No.581 & 581-1, Ruiguang Rd., Neihu District, Taipei city, 11492 Taiwan
Equipment	RPMA module
Model No.	CPX90
Model Discrepancy	N/A
Trade Name	Compal
Received Date	August 11, 2020
Date of Test	August 17~ September 2, 2020
Power Supply	EUT power from USB. (DC 5V)
HW Version	LA-E701P REV1
FW Version	CPX90
EUT Serial #	000C0045
Class II Permissive Change	1. Add the new 6 antennas: 4 difference type of antenna and 2 the same type of antenna (Brand: Molex, Model: 146153-0150, Type: Dipole) (Brand: Laird, Model: MAF94264, Type: Dipole) (Brand: Ethertronics, Model: 1001013, Type: PIFA / magnetic Dipole) (Brand: Taiyo Yuden, Model: AH104F2450S1, Type: Monopole / Inverted F) (Brand: Linx/Antenna Factor, Model: ANT-2.4-USP, Type: Monopole / Chip) (Brand: Jesoncom, Model: 10I010D, Type: Monopole) 2. All relevant parts identical to the product won't be affect the output power

Remark: for more details, please refer to the User's manual and Operating description of the EUT.

1.2 EUT CHANNEL INFORMATION

Frequency Range	RPMA: 2402~2475.63MHz
Modulation Type	RPMA: DSSS-DBPSK
Number of channel	RPMA: 38 Channels

Channels list

Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402.00	16	2431.85	31	2461.70
2	2403.99	17	2433.84	32	2463.69
3	2405.98	18	2435.83	33	2465.68
4	2407.97	19	2437.82	34	2467.67
5	2409.96	20	2439.81	35	2469.66
6	2411.95	21	2441.80	36	2471.65
7	2413.94	22	2443.79	37	2473.64
8	2415.93	23	2445.78	38	2475.63
9	2417.92	24	2447.77		
10	2419.91	25	2449.76		
11	2421.90	26	2451.75		
12	2423.89	27	2453.74		
13	2425.88	28	2455.73		
14	2427.87	29	2457.72		
15	2429.86	30	2459.71		

Remark:
Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 and RSS-GEN Table A1 for test channels

Number of frequencies to be tested

Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
☐ 1 MHz or less	1	Middle
☐ 1 MHz to 10 MHz	2	1 near top and 1 near bottom
☒ More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Type / Antenna Gain	**Ant. #**	**Supplier**	**Model**	**Type**	**Gain (dBi)**
	1	Cortec	AN2400-5008 BSM	Dipole	Chain 0: 5.07 Chain 1: 5.07
	2	Molex	146153-0150	Dipole	Chain 0: 2.8 Chain 1: 2.8
	3	Laird	MAF94264	Dipole	Chain 0: 2.5 Chain 1: 2.5
	4	Ethertronics	1001013	PIFA / magnetic Dipole	Chain 0: 2.6 Chain 1: 2.6
	5	Taiyo Yuden	AH104F2450S1	Monopole / Inverted F	Chain 0: 1.9 Chain 1: 1.9
	6	Linx/Antenna Factor	ANT-2.4-USP	Monopole / Chip	Chain 0: 3.8 Chain 1: 3.8
	7	Jesoncom	10I010D	Monopole	Chain 0: 4.8 Chain 1: 4.8

1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 0.0014
RF output power, conducted	+/- 1.14
Power density, conducted	+/- 1.40
3M Semi Anechoic Chamber / 30M~200M	+/- 4.12
3M Semi Anechoic Chamber / 200M~1000M	+/- 4.68
3M Semi Anechoic Chamber / 1G~8G	+/- 5.18
3M Semi Anechoic Chamber / 8G~18G	+/- 5.47
3M Semi Anechoic Chamber / 18G~26G	+/- 3.81
3M Semi Anechoic Chamber / 26G~40G	+/- 3.87

Remark:
1.This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)

Test site	Test Engineer	Remark
AC Conduction Room	Rick Lee	-
Radiation	Jerry Chang	-
RF Conducted	Jane Wang	-

Remark: *The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.*

1.6 INSTRUMENT CALIBRATION

RF Conducted Test Site					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Coaxial Cable	Woken	WC12	CC001	06/29/2020	06/28/2021
Signal Analyzer	R&S	FSV 40	101073	09/25/2019	09/24/2020
Power Meter	Anritsu	ML2487A	6K00003260	05/21/2020	05/20/2021
Power Seneor	Anritsu	MA2490A	032910	05/21/2020	05/20/2021
Software	N/A				

3M 966 Chamber Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Band Reject Filters	MICRO TRONICS	BRM 50702	120	02/25/2020	02/24/2021
Bilog Antenna	Sunol Sciences	JB3	A030105	07/24/2020	07/23/2021
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/25/2020	02/24/2021
Coaxial Cable	EMCI	EMC105	190914+25111	09/20/2019	09/19/2020
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/15/2020	01/14/2021
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	10/04/2019	10/03/2020
Loop Ant	COM-POWER	AL-130	121051	03/27/2020	03/26/2021
Pre-Amplifier	EMEC	EM330	060609	02/25/2020	02/24/2021
Pre-Amplifier	HP	8449B	3008A00965	02/25/2020	02/24/2021
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	07/24/2020	07/23/2021
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180413				

Remark: *Each piece of equipment is scheduled for calibration once a year.*

1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

EUT Accessories Equipment					
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**
	N/A				

Support Equipment					
No.	**Equipment**	**Brand**	**Model**	**Series No.**	**FCC ID**
1	NB(J)	TOSHIBA	PT345T-00L002	N/A	PD97260H

1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247, KDB 558074 D01, RSS-247 Issue 2 and RSS-GEN Issue 5.

2. TEST SUMMARY

FCC Standard Section	IC Standard Section	Report Section	Test Item	Result
15.203	-	1.3	Antenna Requirement	Pass
15.207(a)	RSS-GEN 8.8	-	AC Conducted Emission	N/A
15.247(a)(2)	RSS-247(5.2)(a)	-	6 dB Bandwidth	N/A
-	RSS-GEN 6.6	-	Occupied Bandwidth (99%)	N/A
15.247(b)(3)	RSS-247(5.4)(d)	5.1	Output Power Measurement	Pass
15.247(e)	RSS-247(5.2)(b)	-	Power Spectral Density	N/A
15.247(d)	RSS-247(5.5)	-	Conducted Band Edge	N/A
15.247(d)	RSS-247(5.5)	-	Conducted Emission	N/A
15.247(d)	RSS-GEN 8.9, 8.10	5.2	Radiation Band Edge	Pass
15.247(d)	RSS-GEN 8.9, 8.10	5.2	Radiation Spurious Emission	Pass

3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	RPMA
Test Channel Frequencies	**RPMA:** 1. Lowest Channel : 2402.00MHz 2. Middle Channel : 2439.81MHz 3. Highest Channel : 2475.63MHz

Remark:
1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.

3.2 THE WORST MODE OF MEASUREMENT

Radiated Emission Measurement Below 1G	
Test Condition	**Radiated Emission Below 1G**
Power supply Mode	**Mode 1~3: EUT power by USB. (DC 5V)**
Worst Mode	☒ **Mode 1: Antenna 5: Taiyo Yuden / AH104F2450S1** ☒ **Mode 2: Antenna 6: Linx/Antenna Factor / ANT-2.4-USP** ☒ **Mode 3: Antenna 7: Jesoncom / 10I010D** ☐ **Mode 4: Antenna 4: Ethertronics / 1001013**

Radiated Emission Measurement Above 1G	
Test Condition	**Radiated Emission Above 1G**
Power supply Mode	**Mode 1~3: EUT power by USB. (DC 5V)**
Worst Mode	☒ **Mode 1: Antenna 5: Taiyo Yuden / AH104F2450S1** ☒ **Mode 2: Antenna 6: Linx/Antenna Factor / ANT-2.4-USP** ☒ **Mode 3: Antenna 7: Jesoncom / 10I010D** ☐ **Mode 4: Antenna 4: Ethertronics / 1001013**
Worst Position	☐ **Placed in fixed position.** ☐ **Placed in fixed position at X-Plane (E2-Plane)** ☒ **Placed in fixed position at Y-Plane (E1-Plane)** ☐ **Placed in fixed position at Z-Plane (H-Plane)**

Remark:
1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(Y-Plane) were recorded in this report

Radiated Emission Measurement Below 1G	
Test Condition	**Radiated Emission Below 1G**
Power supply Mode	**Mode 4: EUT power by USB. (DC 5V)**
Worst Mode	☐ **Mode 1: Antenna 5: Taiyo Yuden / AH104F2450S1** ☐ **Mode 2: Antenna 6: Linx/Antenna Factor / ANT-2.4-USP** ☐ **Mode 3: Antenna 7: Jesoncom / 10I010D** ☒ **Mode 4: Antenna 4: Ethertronics / 1001013**

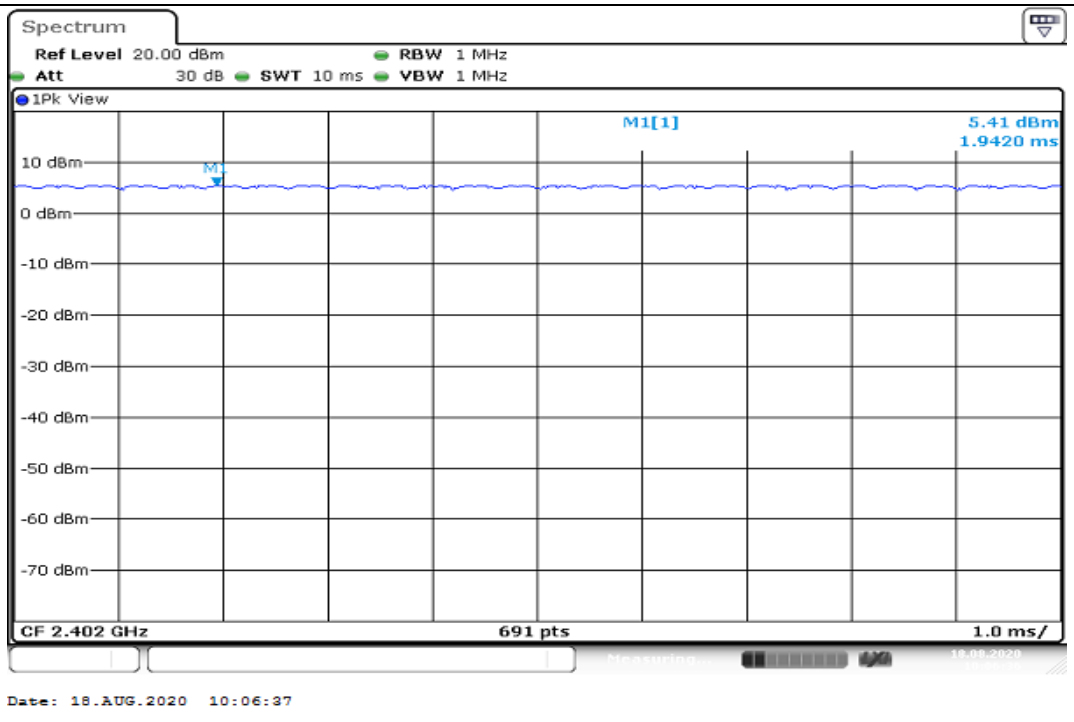
Radiated Emission Measurement Above 1G	
Test Condition	**Radiated Emission Above 1G**
Power supply Mode	**Mode 4: EUT power by USB. (DC 5V)**
Worst Mode	☐ **Mode 1: Antenna 5: Taiyo Yuden / AH104F2450S1** ☐ **Mode 2: Antenna 6: Linx/Antenna Factor / ANT-2.4-USP** ☐ **Mode 3: Antenna 7: Jesoncom / 10I010D** ☒ **Mode 4: Antenna 4: Ethertronics / 1001013**
Worst Position	☐ **Placed in fixed position.** ☒ **Placed in fixed position at X-Plane (E2-Plane)** ☐ **Placed in fixed position at Y-Plane (E1-Plane)** ☐ **Placed in fixed position at Z-Plane (H-Plane)**

Remark:
1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(Z-Plane) were recorded in this report

4. EUT DUTY CYCLE

Duty Cycle				
Configuration	Duty Cycle (%)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
RPMA	100.00%	0.00	N/A	0.01

RPMA



5. TEST RESULT

5.1 OUTPUT POWER MEASUREMENT

5.1.1 Test Limit

According to §15.247(b) (3) and RSS-247 section 5.4(d),

Peak output power：

For systems using digital modulation in the 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt(30 dBm) and the e.i.r.p. shall not exceed 4Watt(36 dBm), base on the use of antennas with directional gain not exceed 6 dBi If transmitting antennas of directional gain greater than 6dBi are used the peak output power the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Limit	☒ Antenna not exceed 6 dBi：30dBm ☐ Antenna with DG greater than 6 dBi： [Limit = 30 – (DG – 6)] ☐ Point-to-point operation：

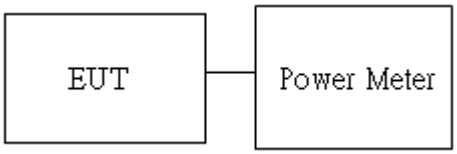
Average output power：For reporting purposes only.

5.1.2 Test Procedure

Test method Refer as KDB 558074 D01.

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

5.1.3 Test Setup



5.1.4 Test Result

Temperature:	24℃	**Humidity:**	50% RH
Tested by:	Jane Wang	**Test Date:**	August 18, 2020

Peak output power：

Antenna #1: Cortec / AN2400-5008 BSM
Chain 0

RPMA										
Config	**CH**	**Freq. (MHz)**	**Power Setting**	**PK Power (dBm)**	**PK Power (W)**	**EIRP PK Power (dBm)**	**EIRP PK Power (W)**	**Ant. Gain (dBi)**	**Limit (dBm)**	**EIRP Limit (dBm)**
RPMA	1	2402.00	49.0	22.89	0.1945	27.96	0.6252	5.07	30	36
	20	2439.81	49.0	**23.30**	0.2138	28.37	0.6871			
	38	2475.63	49.0	23.00	0.1995	28.07	0.6412			

Chain 1

RPMA										
Config	**CH**	**Freq. (MHz)**	**Power Setting**	**PK Power (dBm)**	**PK Power (W)**	**EIRP PK Power (dBm)**	**EIRP PK Power (W)**	**Ant. Gain (dBi)**	**Limit (dBm)**	**EIRP Limit (dBm)**
RPMA	1	2402.00	49.0	**23.20**	0.2089	28.27	0.6714	5.07	30	36
	20	2439.81	49.0	23.17	0.2075	28.24	0.6668			
	38	2475.63	49.0	23.01	0.2000	28.08	0.6427			

Antenna #2: Molex / 146153-0150
Chain 0

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	22.89	0.1945	25.69	0.3707	2.8	30	36
	20	2439.81	49.0	**23.30**	0.2138	26.10	0.4074			
	38	2475.63	49.0	23.00	0.1995	25.80	0.3802			

Chain 1

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	**23.20**	0.2089	26.00	0.3981	2.8	30	36
	20	2439.81	49.0	23.17	0.2075	25.97	0.3954			
	38	2475.63	49.0	23.01	0.2000	25.81	0.3811			

Antenna #3: Laird / MAF94264
Chain 0

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	22.89	0.1945	25.39	0.3459	2.5	30	36
	20	2439.81	49.0	**23.30**	0.2138	25.80	0.3802			
	38	2475.63	49.0	23.00	0.1995	25.50	0.3548			

Chain 1

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	**23.20**	0.2089	25.70	0.3715	2.5	30	36
	20	2439.81	49.0	23.17	0.2075	25.67	0.3690			
	38	2475.63	49.0	23.01	0.2000	25.51	0.3556			

Antenna #4: Ethertronics / 1001013
Chain 0

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	22.89	0.1945	25.49	0.3540	2.6	30	36
	20	2439.81	49.0	**23.30**	0.2138	25.90	0.3890			
	38	2475.63	49.0	23.00	0.1995	25.60	0.3631			

Chain 1

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	**23.20**	0.2089	25.80	0.3802	2.6	30	36
	20	2439.81	49.0	23.17	0.2075	25.77	0.3776			
	38	2475.63	49.0	23.01	0.2000	25.61	0.3639			

Antenna #5: Taiyo Yuden / AH104F2450S1
Chain 0

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	22.89	0.1945	24.79	0.3013	1.9	30	36
	20	2439.81	49.0	**23.30**	0.2138	25.20	0.3311			
	38	2475.63	49.0	23.00	0.1995	24.90	0.3090			

Chain 1

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	**23.20**	0.2089	25.10	0.3236	1.9	30	36
	20	2439.81	49.0	23.17	0.2075	25.07	0.3214			
	38	2475.63	49.0	23.01	0.2000	24.91	0.3097			

Antenna #6: Linx/Antenna Factor / ANT-2.4-USP
Chain 0

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	22.89	0.1945	26.69	0.4667	3.8	30	36
	20	2439.81	49.0	**23.30**	0.2138	27.10	0.5129			
	38	2475.63	49.0	23.00	0.1995	26.80	0.4786			

Chain 1

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	**23.20**	0.2089	27.00	0.5012	3.8	30	36
	20	2439.81	49.0	23.17	0.2075	26.97	0.4977			
	38	2475.63	49.0	23.01	0.2000	26.81	0.4797			

Antenna #7: Jesoncom / 10I010D
Chain 0

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	22.89	0.1945	27.69	0.5875	4.8	30	36
	20	2439.81	49.0	**23.30**	0.2138	28.10	0.6457			
	38	2475.63	49.0	23.00	0.1995	27.80	0.6026			

Chain 1

RPMA										
Config	CH	Freq. (MHz)	Power Setting	PK Power (dBm)	PK Power (W)	EIRP PK Power (dBm)	EIRP PK Power (W)	Ant. Gain (dBi)	Limit (dBm)	EIRP Limit (dBm)
RPMA	1	2402.00	49.0	**23.20**	0.2089	28.00	0.6310	4.8	30	36
	20	2439.81	49.0	23.17	0.2075	27.97	0.6266			
	38	2475.63	49.0	23.01	0.2000	27.81	0.6039			

Average output power：

Chain 0

RPMA			
Config	**CH**	**Freq. (MHz)**	**AV Power (dBm)**
RPMA	1	2402	21.09
	20	2439.81	21.33
	38	2475.63	20.93

Chain 1

RPMA			
Config	**CH**	**Freq. (MHz)**	**AV Power (dBm)**
RPMA	1	2402	21.31
	20	2439.81	21.16
	38	2475.63	20.98

5.2 RADIATION BANDEDGE AND SPURIOUS EMISSION

5.2.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

IC according to RSS-247 section 5.5, RSS-Gen, Section 8.9 and 8.10

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

Above 30 MHz

Frequency	Field Strength (microvolts/m)	Measurement Distance (metres)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark:
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

IC according to RSS-247 section 5.5, RSS-Gen, Section 8.9 and 8.10

RSS-Gen Table 3 and Table 5 – General Field Strength Limits for Transmitters and Receivers at Frequencies Above 30 MHz (Note)

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

Note: Measurements for compliance with the limits in table 3 may be performed at distances other than 3 metres, in accordance with Section 6.6.

RSS-Gen Table 6: General Field Strength Limits for Transmitters at Frequencies Below 30 MHz (Transmit)

Frequency	Magnetic field strength (H-Field) (μA/m)	Measurement Distance (m)
9-490 kHz Note	6.37/F (F in kHz)	300
490-1,705 kHz	63.7/F (F in kHz)	30
1.705-30 MHz	0.08	30

Note: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

5.2.2 Test Procedure

Test method Refer as KDB 558074 D01.

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 2013, and the EUT set in a continuous mode.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.

3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

Note: No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

4. The SA setting following：

(1) Below 1G：RBW = 100kHz, VBW ≥ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2) Above 1G：

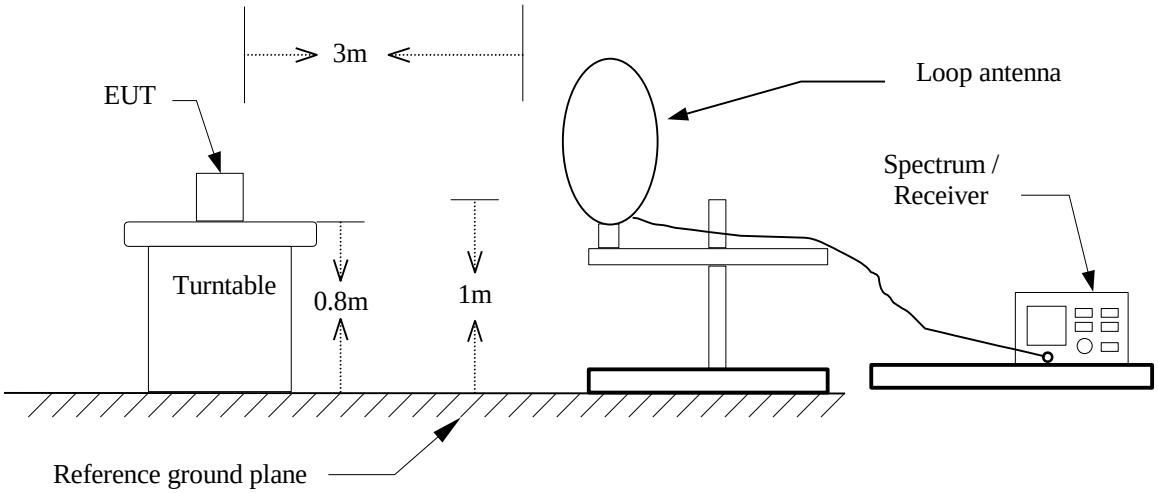
(2.1) For Peak measurement：RBW = 1MHz, VBW ≥ 3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2.2) For Average measurement：RBW = 1MHz, VBW

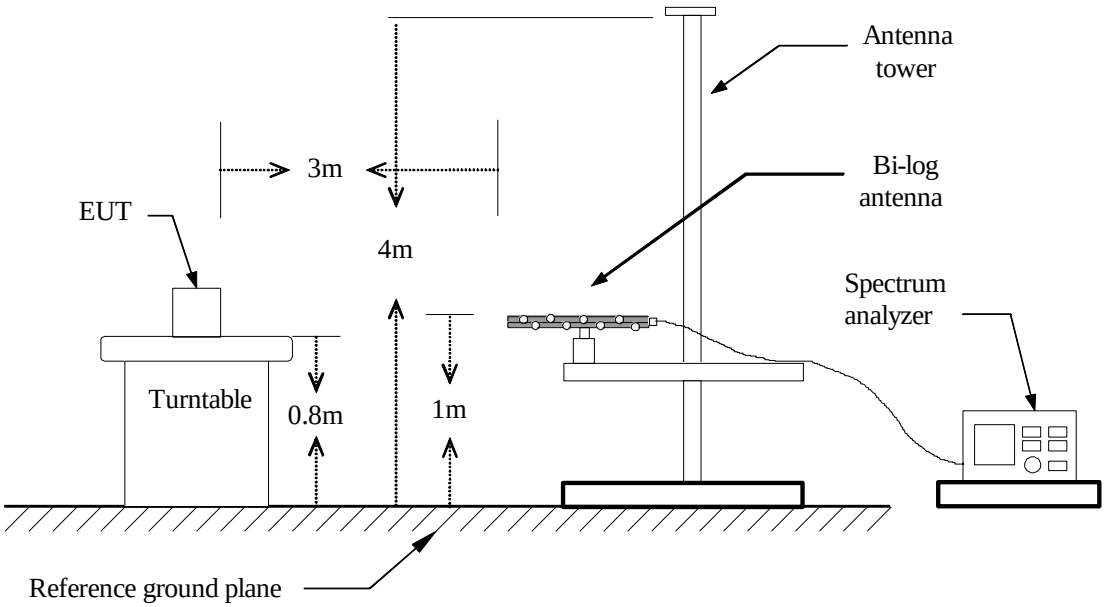
- If Duty Cycle ≥ 98%, VBW=10Hz.
- If Duty Cycle < 98%, VBW=1/T.

5.2.3 Test Setup

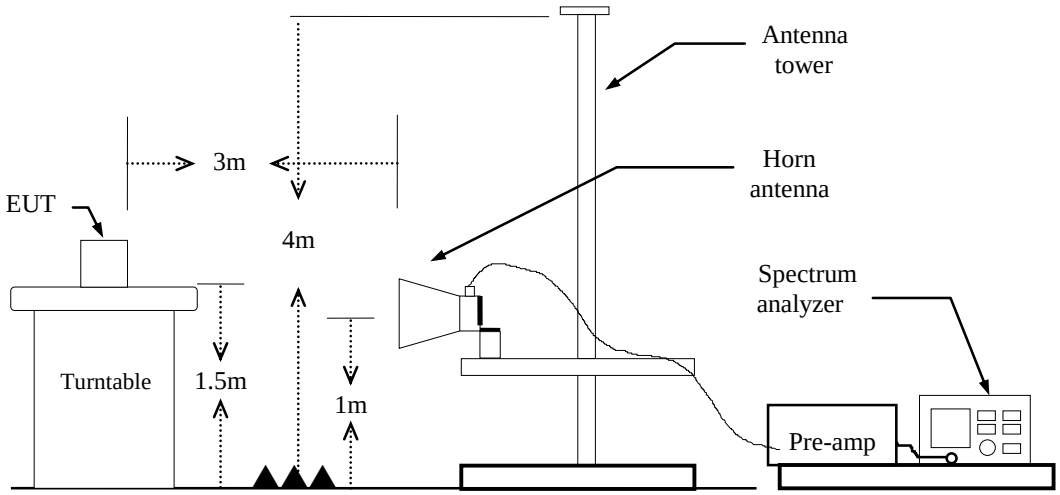
9kHz ~ 30MHz



30MHz ~ 1GHz



Above 1 GHz

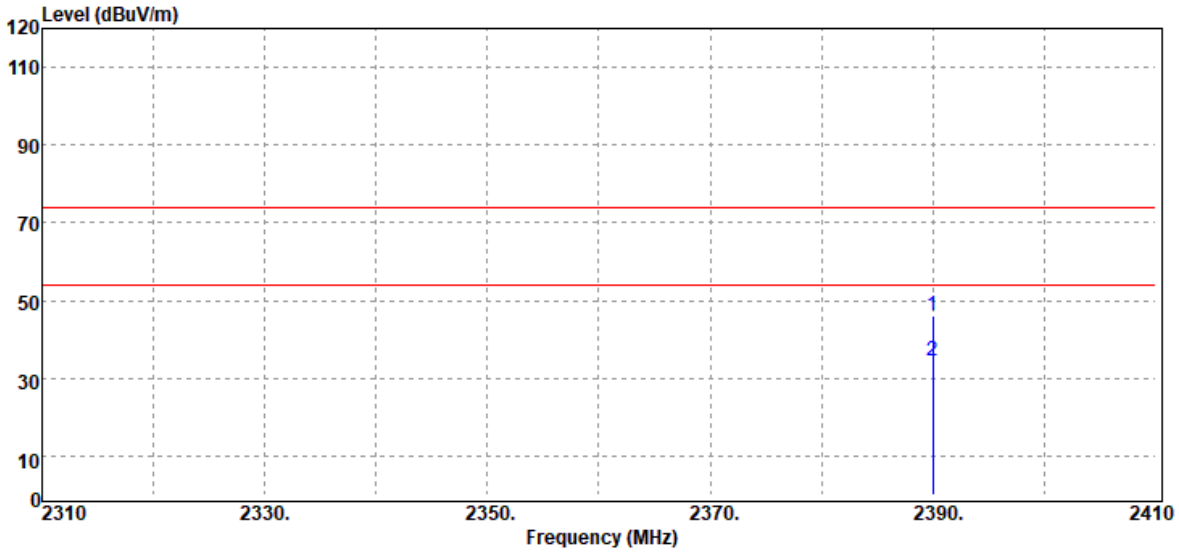


5.2.4 Test Result

Band Edge Test Data

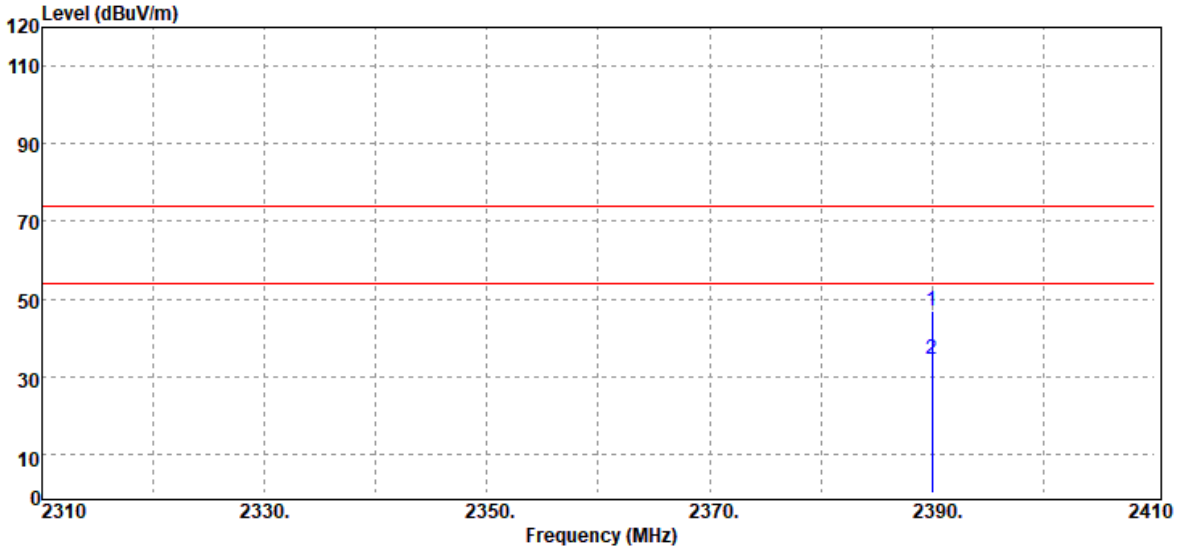
Antenna 5: Taiyo Yuden / AH104F2450S1

Test Mode	Mode 1: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



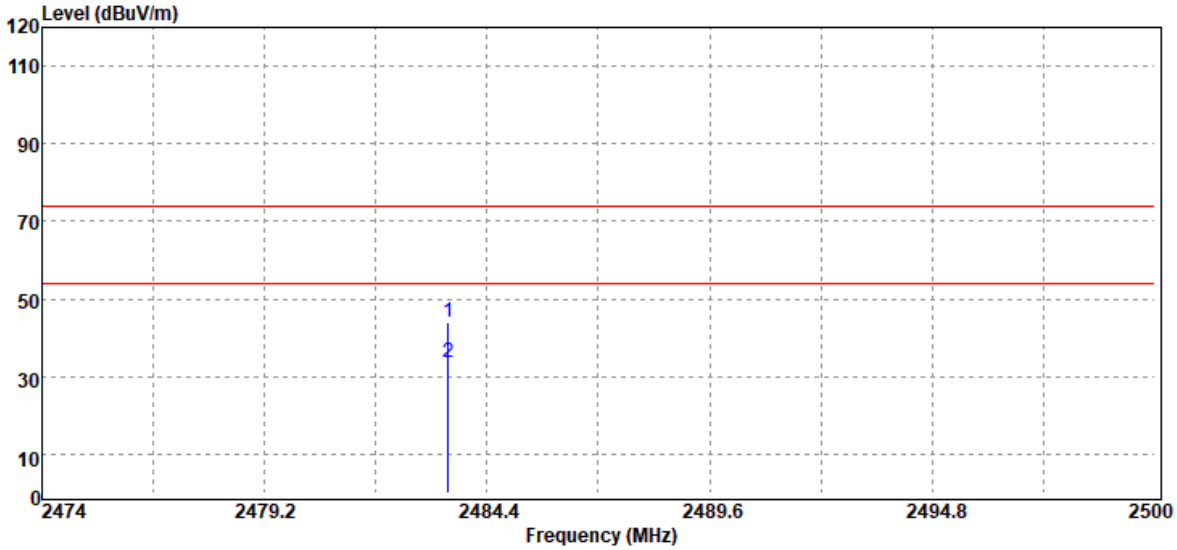
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2390.00	Peak	49.16	-3.17	45.99	74.00	-28.01
2390.00	Average	37.68	-3.17	34.51	54.00	-19.49

Test Mode	Mode 1: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



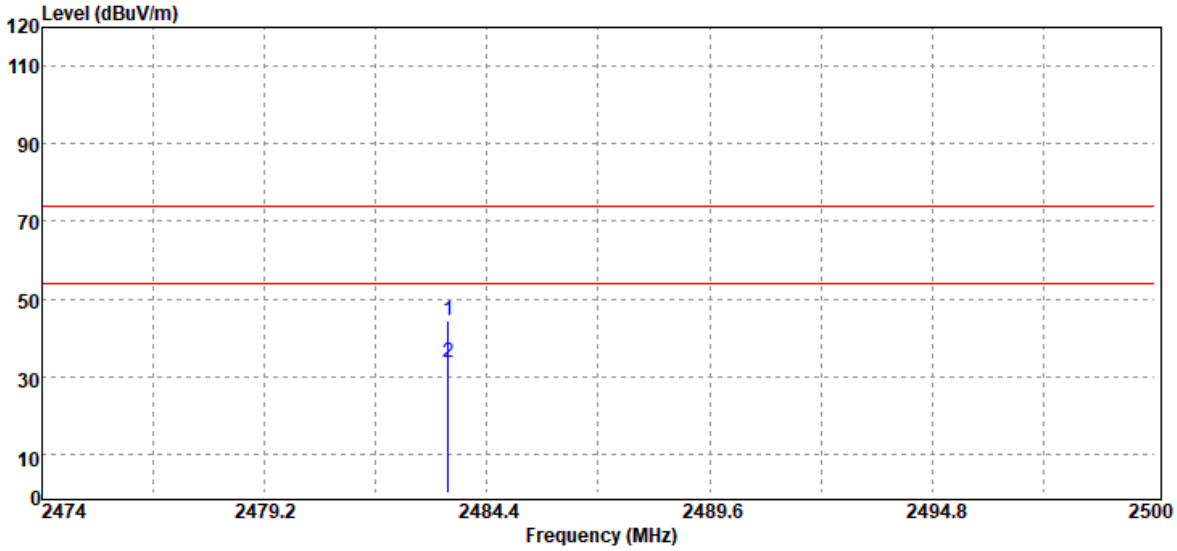
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2390.00	Peak	50.06	-3.17	46.89	74.00	-27.11
2390.00	Average	37.73	-3.17	34.56	54.00	-19.44

Test Mode	Mode 1: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2483.50	Peak	46.90	-2.71	44.19	74.00	-29.81
2483.50	Average	36.47	-2.71	33.76	54.00	-20.24

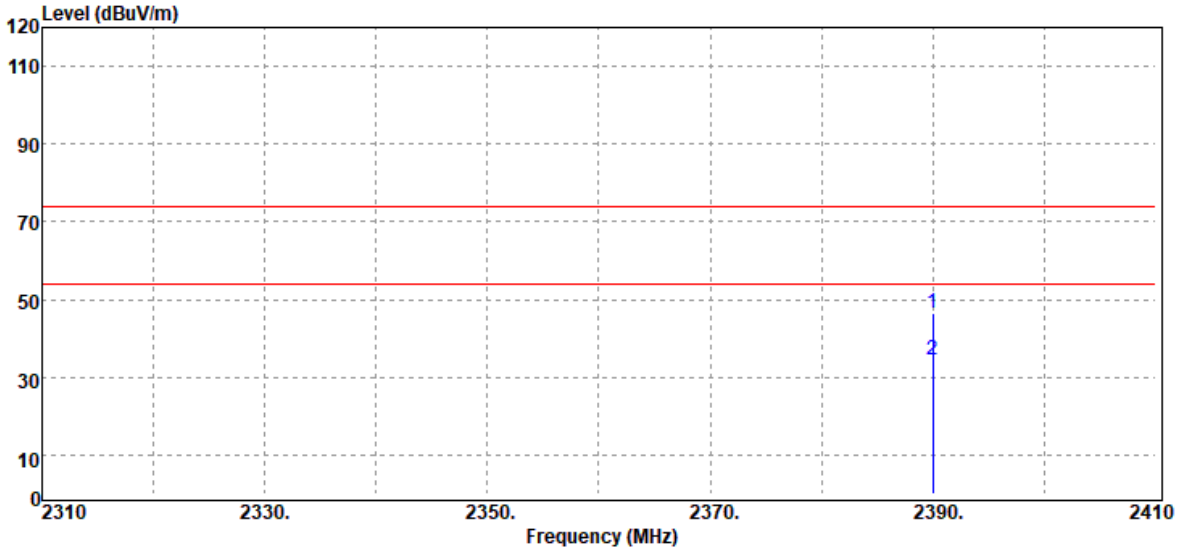
Test Mode	Mode 1: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2483.50	Peak	47.28	-2.71	44.57	74.00	-29.43
2483.50	Average	36.40	-2.71	33.69	54.00	-20.31

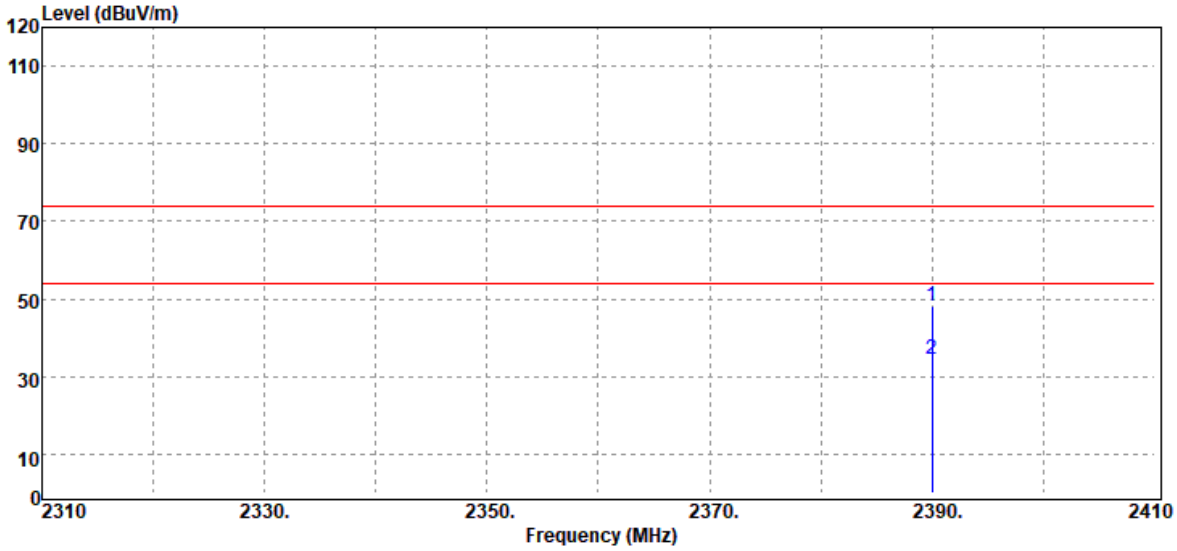
Antenna 6: Linx/Antenna Factor / ANT-2.4-USP

Test Mode	Mode 2: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



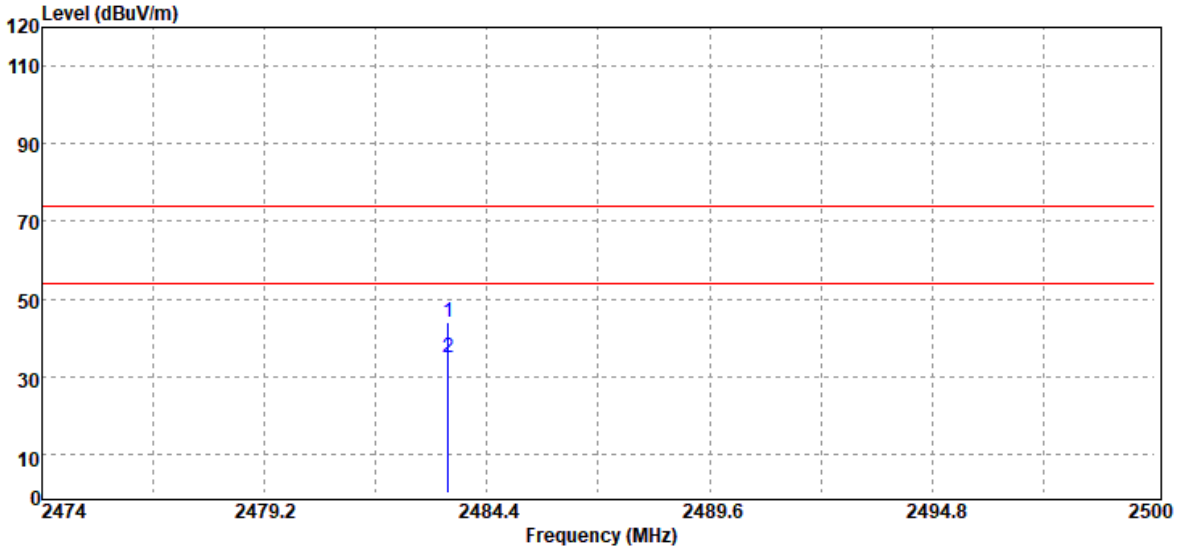
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2390.00	Peak	49.82	-3.17	46.65	74.00	-27.35
2390.00	Average	37.64	-3.17	34.47	54.00	-19.53

Test Mode	Mode 2: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



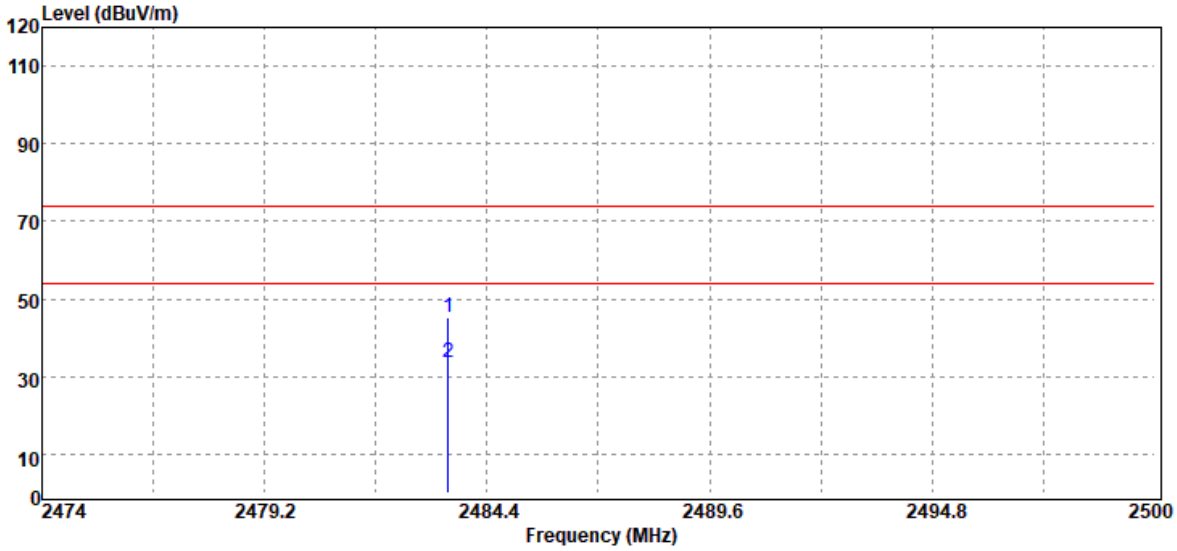
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2390.00	Peak	51.52	-3.17	48.35	74.00	-25.65
2390.00	Average	37.66	-3.17	34.49	54.00	-19.51

Test Mode	Mode 2: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2483.50	Peak	46.68	-2.71	43.97	74.00	-30.03
2483.50	Average	37.50	-2.71	34.79	54.00	-19.21

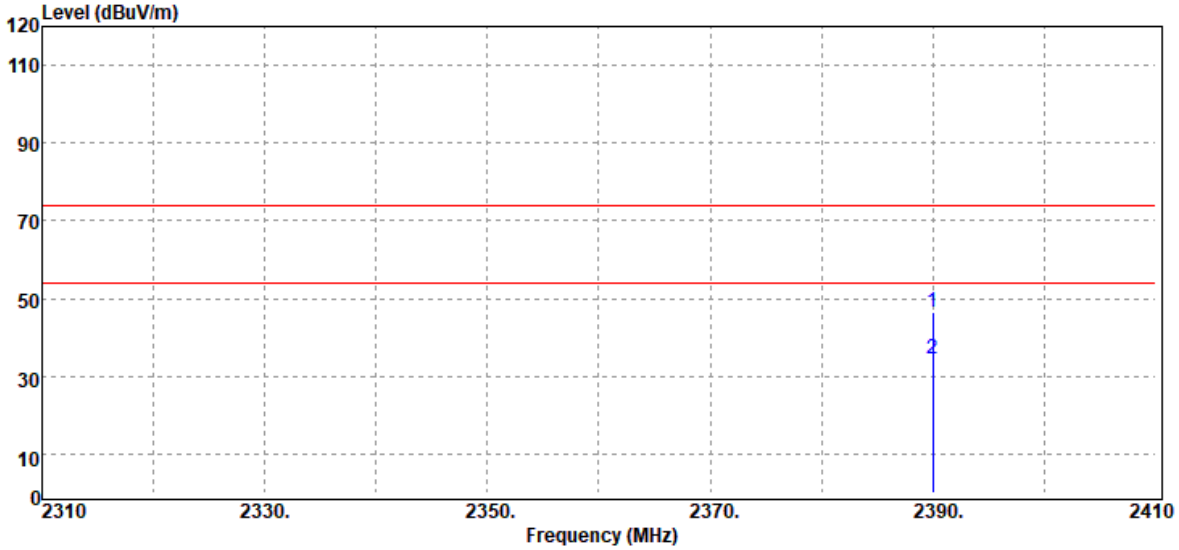
Test Mode	Mode 2: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2483.50	Peak	47.96	-2.71	45.25	74.00	-28.75
2483.50	Average	36.31	-2.71	33.60	54.00	-20.40

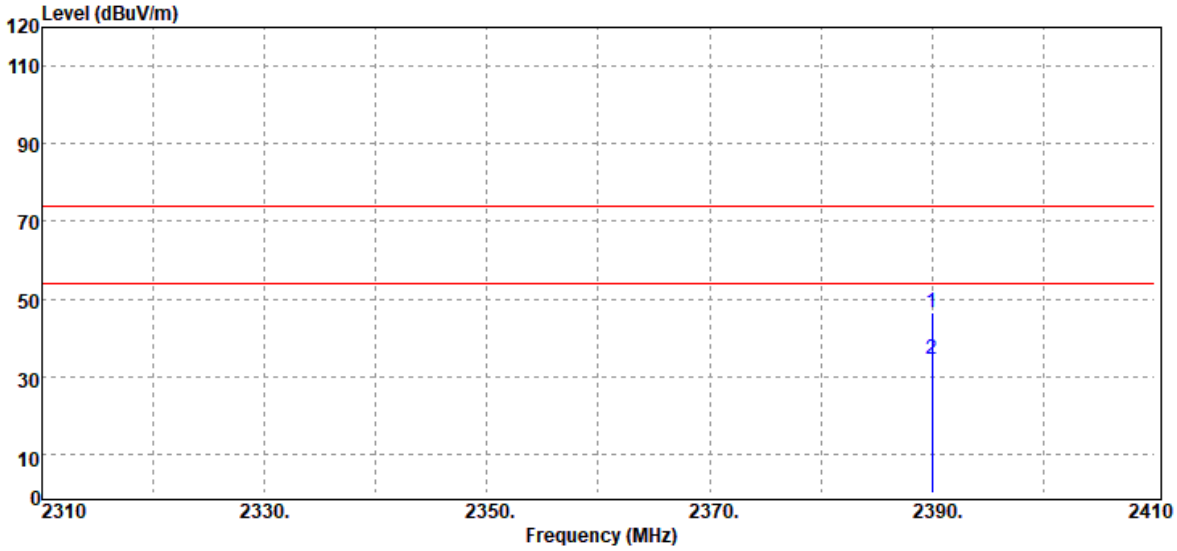
Antenna 7: Jesoncom / 10I010D

Test Mode	Mode 3: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



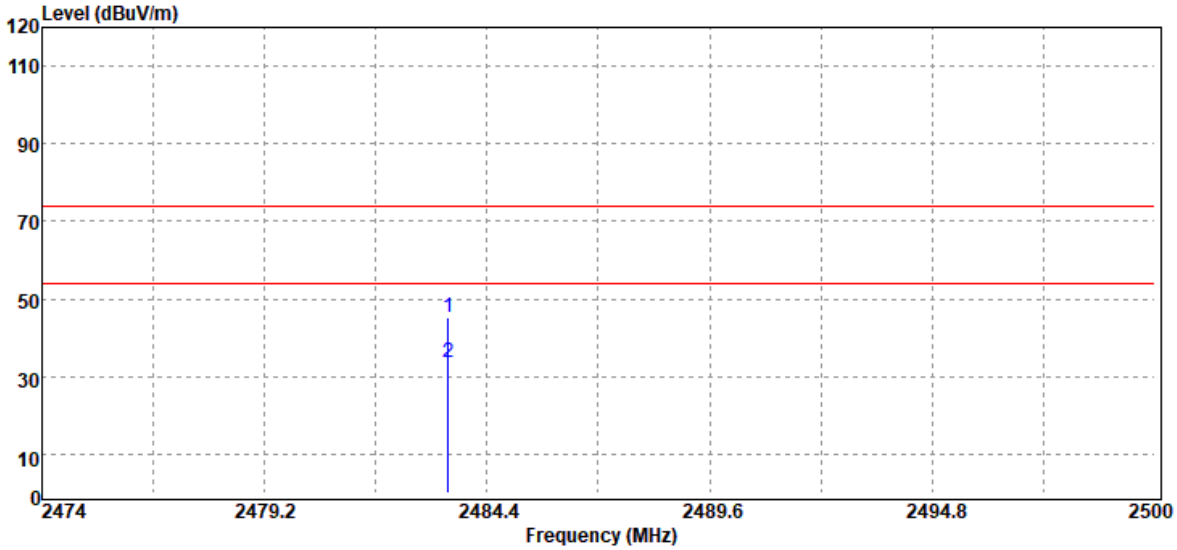
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2390.00	Peak	49.88	-3.17	46.71	74.00	-27.29
2390.00	Average	37.78	-3.17	34.61	54.00	-19.39

Test Mode	Mode 3: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



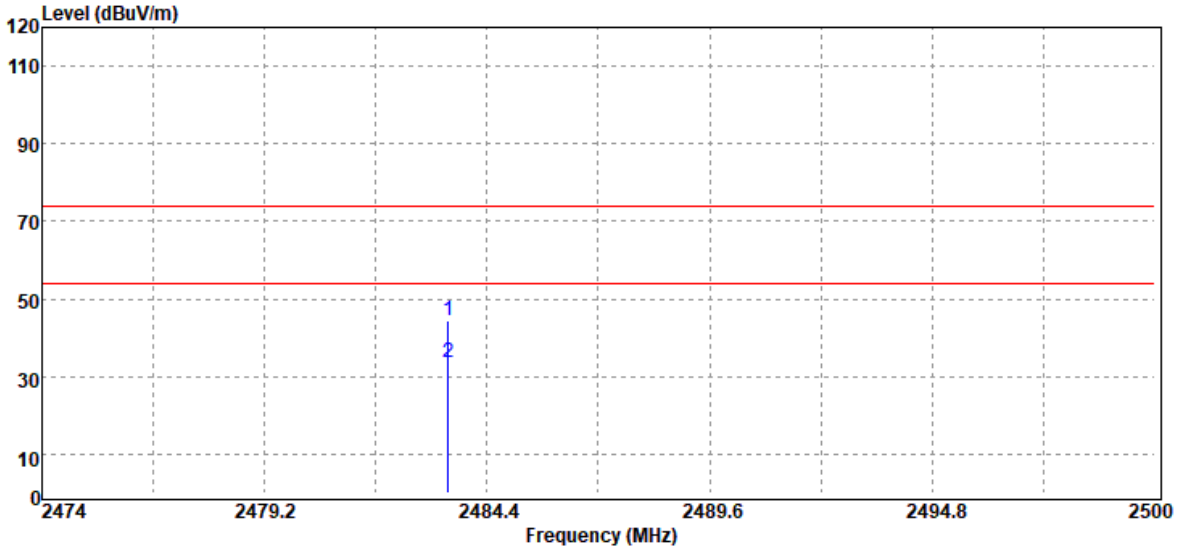
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2390.00	Peak	49.73	-3.17	46.56	74.00	-27.44
2390.00	Average	37.67	-3.17	34.50	54.00	-19.50

Test Mode	Mode 3: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2483.50	Peak	47.81	-2.71	45.10	74.00	-28.90
2483.50	Average	36.48	-2.71	33.77	54.00	-20.23

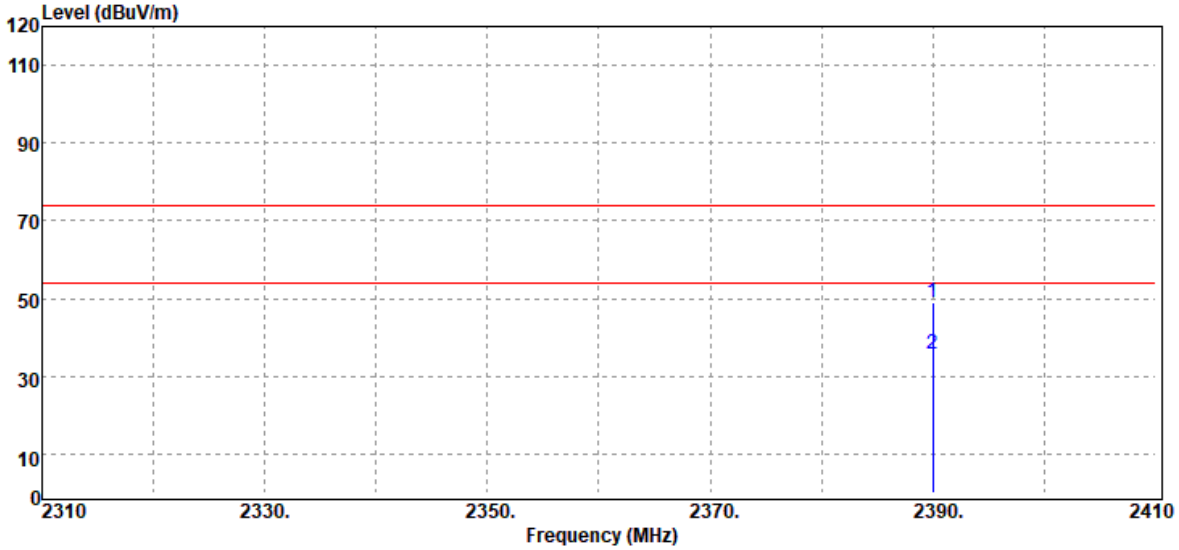
Test Mode	Mode 3: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2483.50	Peak	46.95	-2.71	44.24	74.00	-29.76
2483.50	Average	36.42	-2.71	33.71	54.00	-20.29

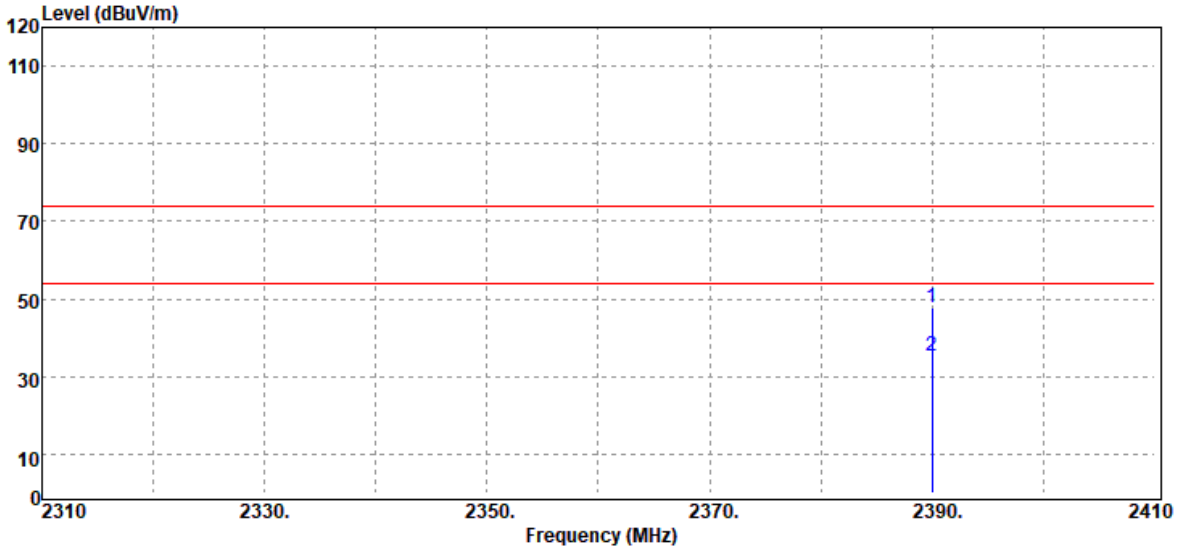
Antenna 4: Ethertronics / 1001013

Test Mode	Mode 4: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



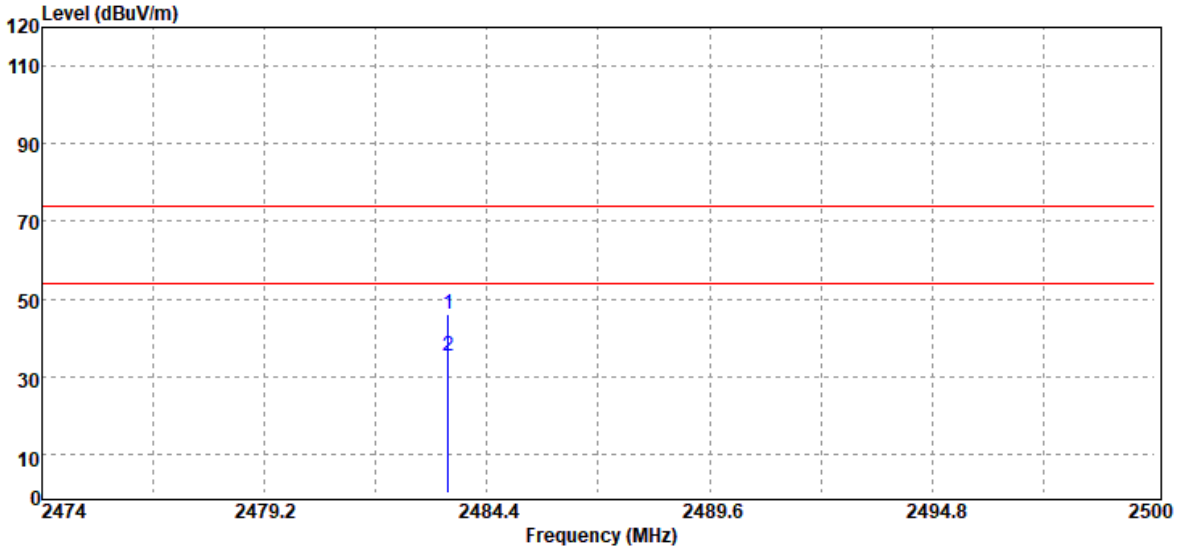
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2390.00	Peak	52.34	-3.17	49.17	74.00	-24.83
2390.00	Average	38.76	-3.17	35.59	54.00	-18.41

Test Mode	Mode 4: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



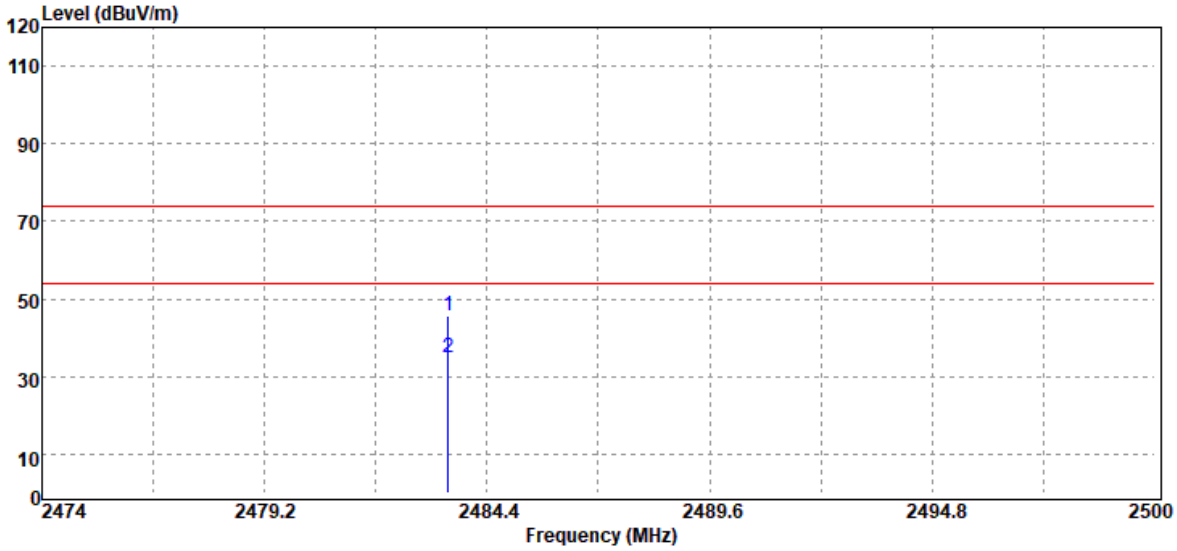
Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2390.00	Peak	50.91	-3.17	47.74	74.00	-26.26
2390.00	Average	38.43	-3.17	35.26	54.00	-18.74

Test Mode	Mode 4: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2483.50	Peak	48.69	-2.71	45.98	74.00	-28.02
2483.50	Average	37.93	-2.71	35.22	54.00	-18.78

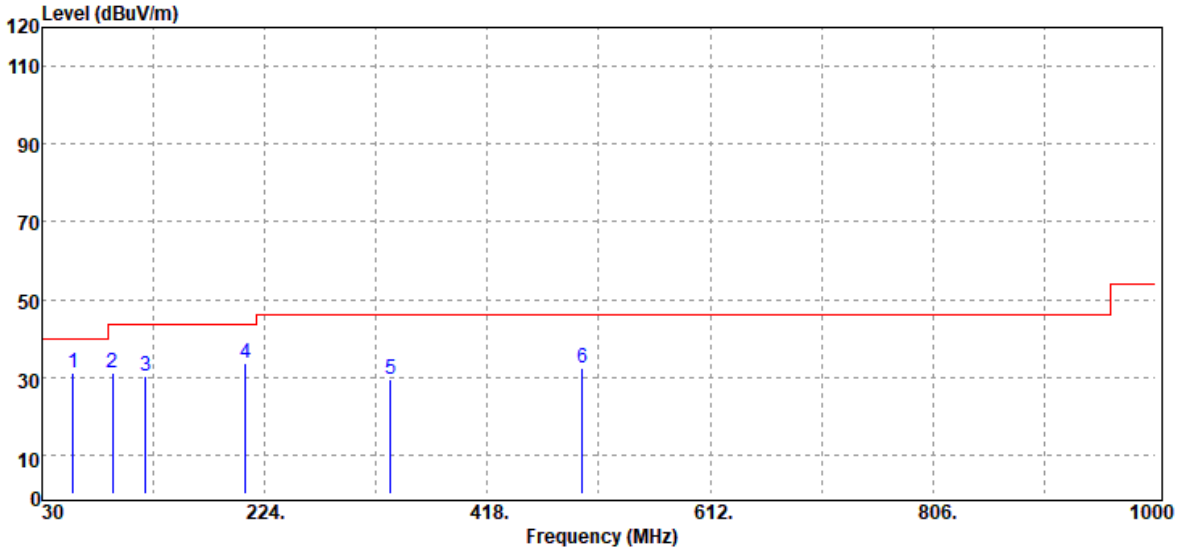
Test Mode	Mode 4: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Band Edge	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak / Average		



Frequency (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
2483.50	Peak	48.45	-2.71	45.74	74.00	-28.26
2483.50	Average	37.55	-2.71	34.84	54.00	-19.16

Below 1G Test Data

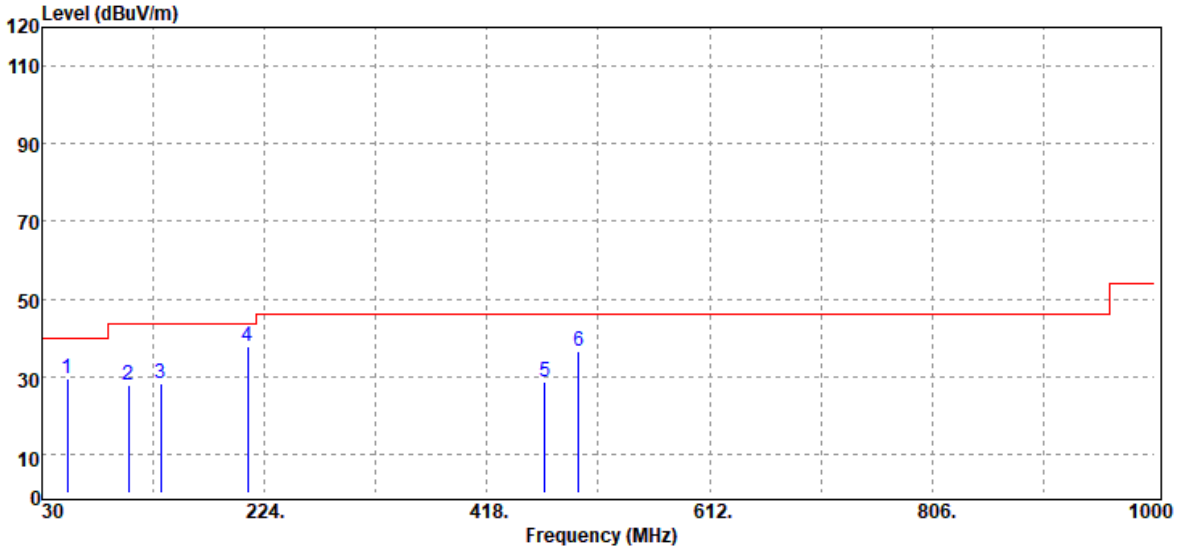
Test Mode	Mode 1	Temp/Hum	25.3(℃)/ 45%RH
Test Item	30MHz-1GHz	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
57.16	Peak	47.12	-16.16	30.96	40.00	-9.04
91.11	Peak	46.43	-15.43	31.00	43.50	-12.50
120.21	Peak	39.41	-9.11	30.30	43.50	-13.20
207.51	Peak	45.52	-11.80	33.72	43.50	-9.78
333.61	Peak	37.15	-7.80	29.35	46.00	-16.65
500.45	Peak	35.70	-3.30	32.40	46.00	-13.60

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

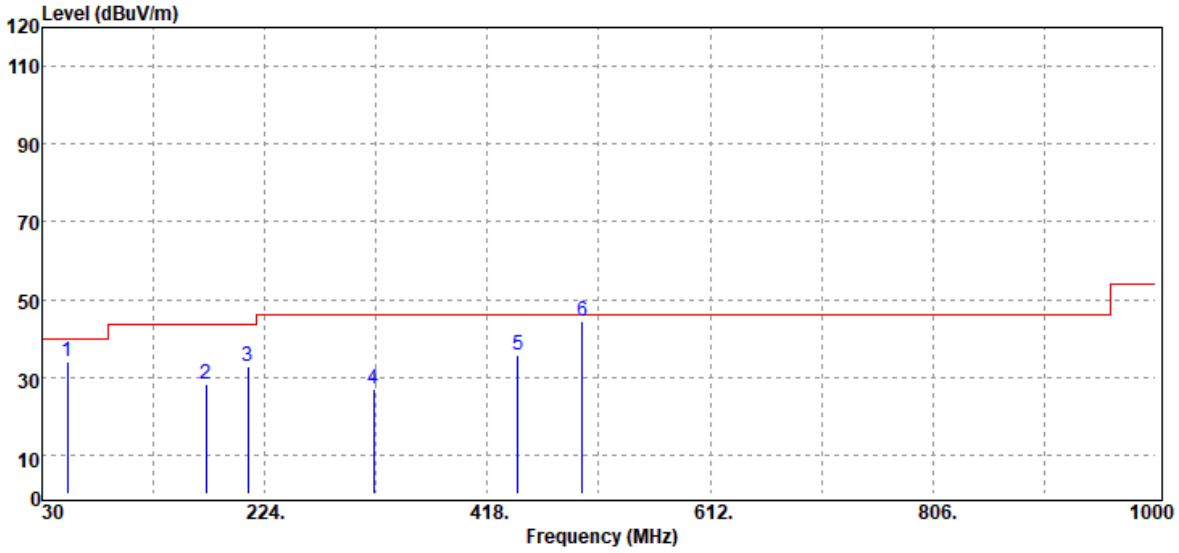
Test Mode	Mode 1	Temp/Hum	25.3(℃)/ 45%RH
Test Item	30MHz-1GHz	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
52.31	Peak	45.39	-15.89	29.50	40.00	-10.50
105.66	Peak	38.91	-11.23	27.68	43.50	-15.82
133.79	Peak	37.42	-9.36	28.06	43.50	-15.44
209.45	Peak	49.57	-11.90	37.67	43.50	-5.83
468.44	Peak	32.47	-3.78	28.69	46.00	-17.31
497.54	Peak	39.82	-3.30	36.52	46.00	-9.48

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

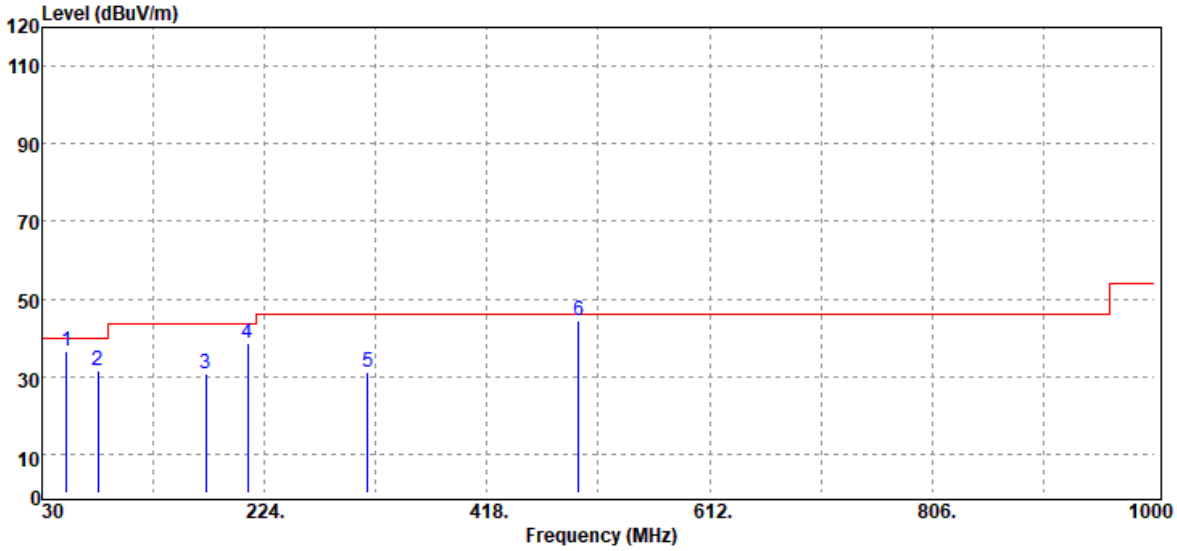
Test Mode	Mode 2	Temp/Hum	25.3(℃)/ 45%RH
Test Item	30MHz-1GHz	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
52.31	Peak	49.87	-15.89	33.98	40.00	-6.02
172.59	Peak	39.43	-11.00	28.43	43.50	-15.07
209.45	Peak	44.58	-11.90	32.68	43.50	-10.82
319.06	Peak	34.99	-7.89	27.10	46.00	-18.90
444.19	Peak	40.43	-4.52	35.91	46.00	-10.09
500.45	Peak	47.67	-3.30	44.37	46.00	-1.63

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

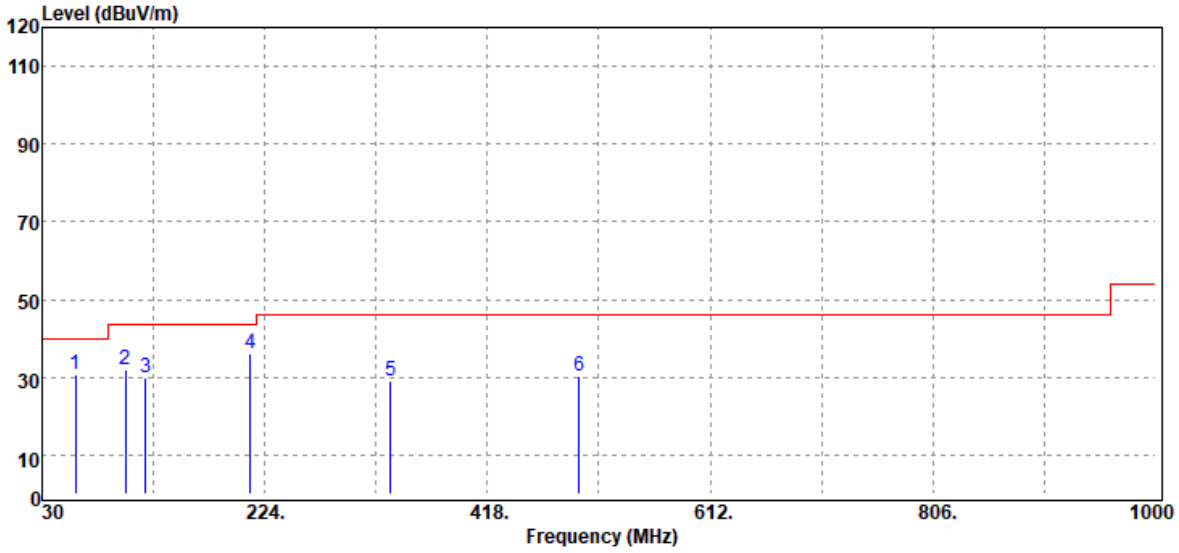
Test Mode	Mode 2	Temp/Hum	25.3(℃)/ 45%RH
Test Item	30MHz-1GHz	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
51.34	Peak	52.22	-15.68	36.54	40.00	-3.46
78.50	Peak	46.96	-15.33	31.63	40.00	-8.37
172.59	Peak	41.82	-11.00	30.82	43.50	-12.68
209.45	Peak	50.57	-11.90	38.67	43.50	-4.83
314.21	Peak	39.06	-7.99	31.07	46.00	-14.93
497.54	Peak	47.78	-3.30	44.48	46.00	-1.52

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

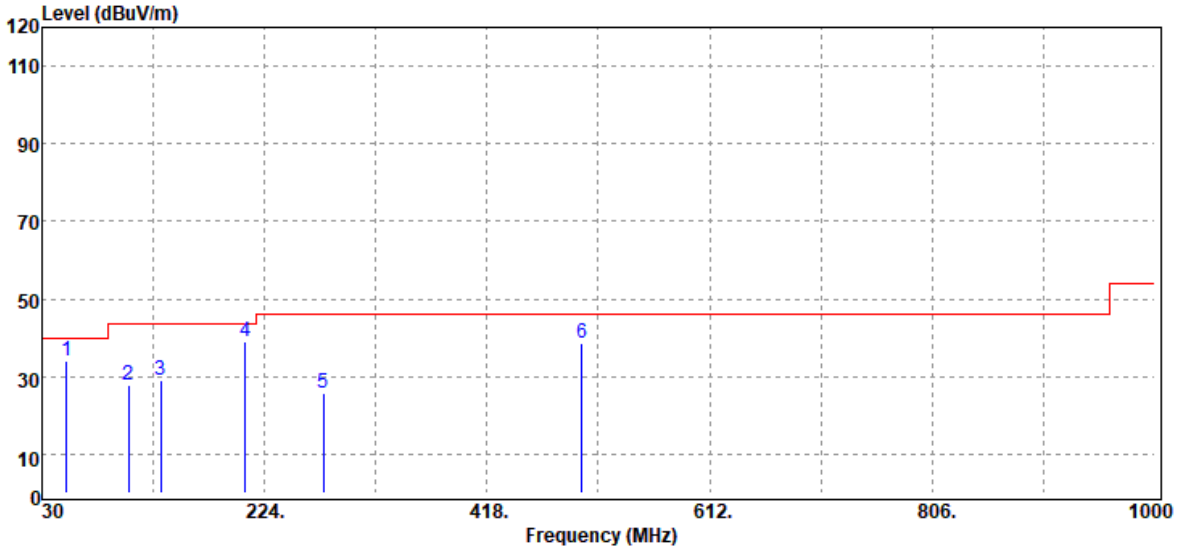
Test Mode	Mode 3	Temp/Hum	25.3(℃)/ 45%RH
Test Item	30MHz-1GHz	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
59.10	Peak	46.80	-16.25	30.55	40.00	-9.45
102.75	Peak	44.06	-12.09	31.97	43.50	-11.53
120.21	Peak	39.19	-9.11	30.08	43.50	-13.42
211.39	Peak	48.06	-11.92	36.14	43.50	-7.36
333.61	Peak	36.87	-7.80	29.07	46.00	-16.93
497.54	Peak	33.74	-3.30	30.44	46.00	-15.56

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

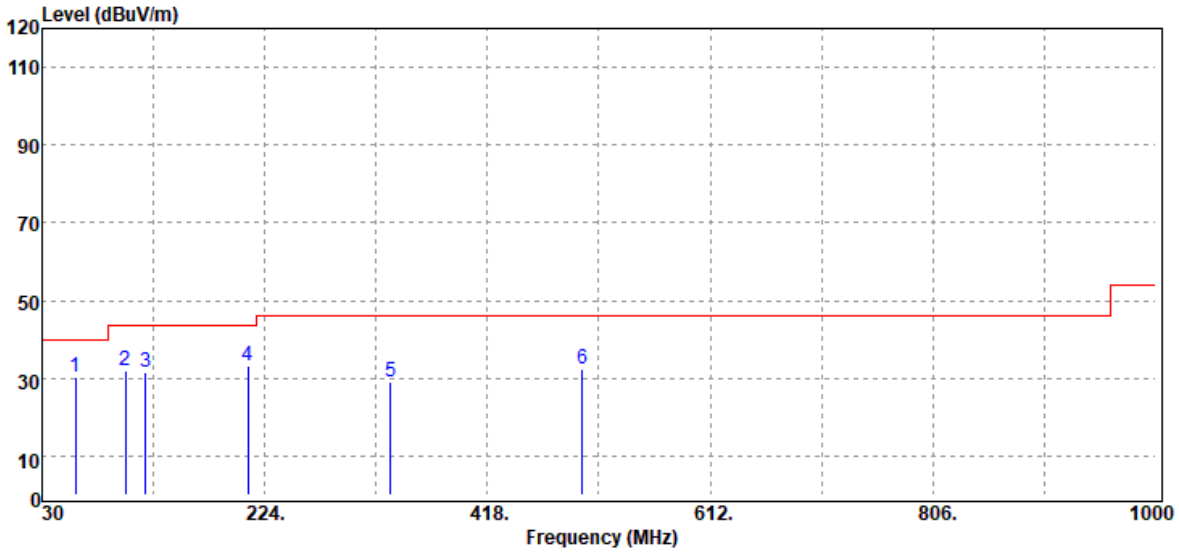
Test Mode	Mode 3	Temp/Hum	25.3(℃)/ 45%RH
Test Item	30MHz-1GHz	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
51.34	Peak	49.93	-15.68	34.25	40.00	-5.75
105.66	Peak	39.12	-11.23	27.89	43.50	-15.61
133.79	Peak	38.24	-9.36	28.88	43.50	-14.62
207.51	Peak	50.91	-11.80	39.11	43.50	-4.39
275.41	Peak	34.53	-8.78	25.75	46.00	-20.25
500.45	Peak	42.04	-3.30	38.74	46.00	-7.26

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

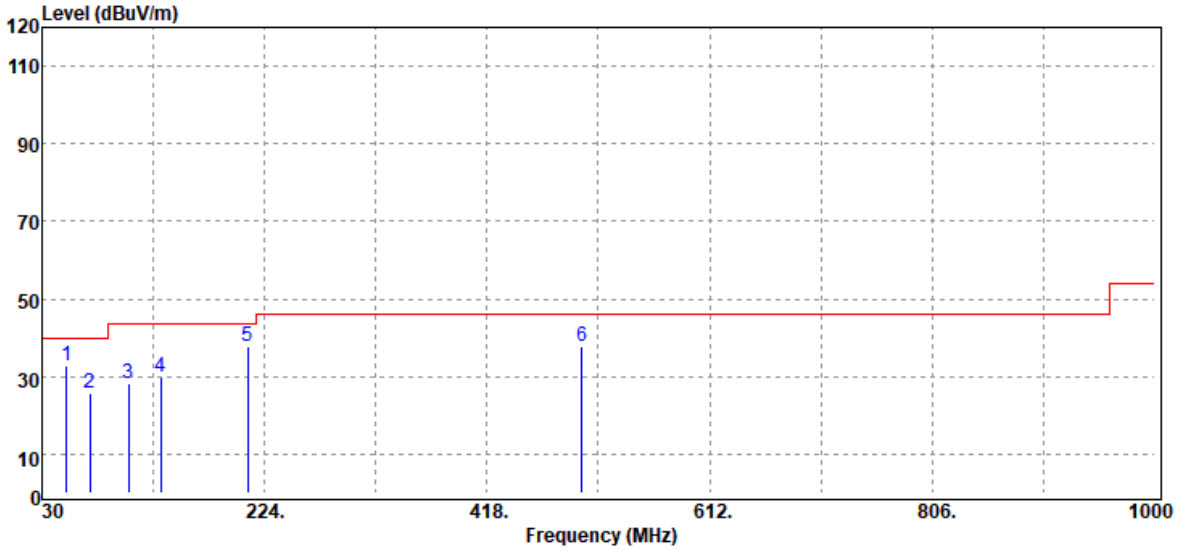
Test Mode	Mode 4	Temp/Hum	25.3(℃)/ 45%RH
Test Item	30MHz-1GHz	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
59.10	Peak	46.45	-16.25	30.20	40.00	-9.80
102.75	Peak	43.99	-12.09	31.90	43.50	-11.60
120.21	Peak	40.55	-9.11	31.44	43.50	-12.06
209.45	Peak	45.31	-11.90	33.41	43.50	-10.09
333.61	Peak	37.00	-7.80	29.20	46.00	-16.80
500.45	Peak	35.88	-3.30	32.58	46.00	-13.42

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Test Mode	Mode 4	Temp/Hum	25.3(℃)/ 45%RH
Test Item	30MHz-1GHz	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak	Test Voltage	

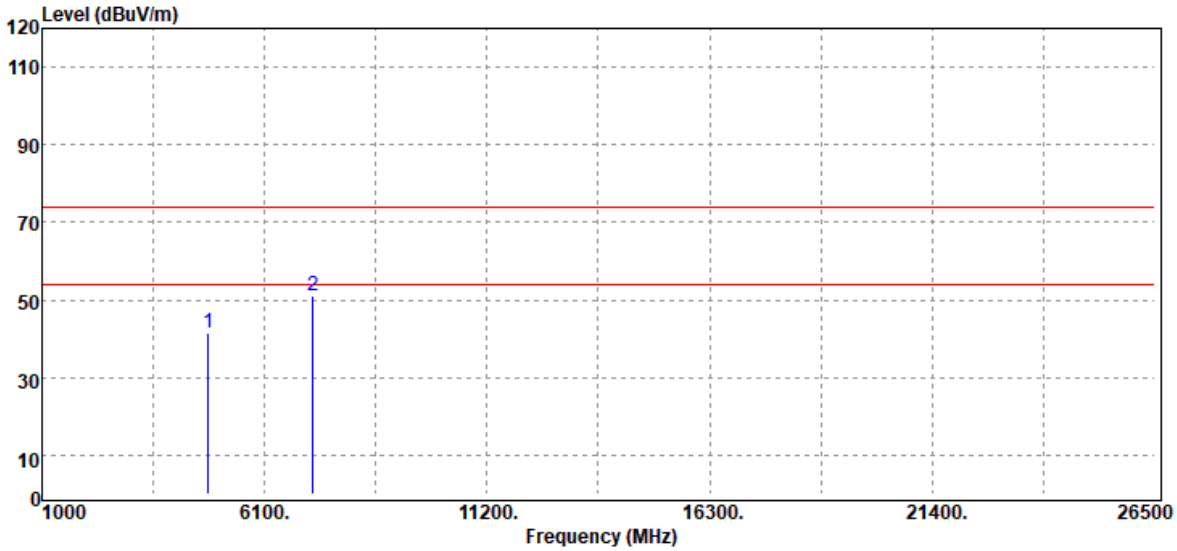


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
51.34	Peak	48.56	-15.68	32.88	40.00	-7.12
71.71	Peak	40.44	-14.88	25.56	40.00	-14.44
105.66	Peak	39.49	-11.23	28.26	43.50	-15.24
133.79	Peak	39.10	-9.36	29.74	43.50	-13.76
209.45	Peak	49.73	-11.90	37.83	43.50	-5.67
500.45	Peak	41.25	-3.30	37.95	46.00	-8.05

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Above 1G Test Data

Test Mode	Mode1: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

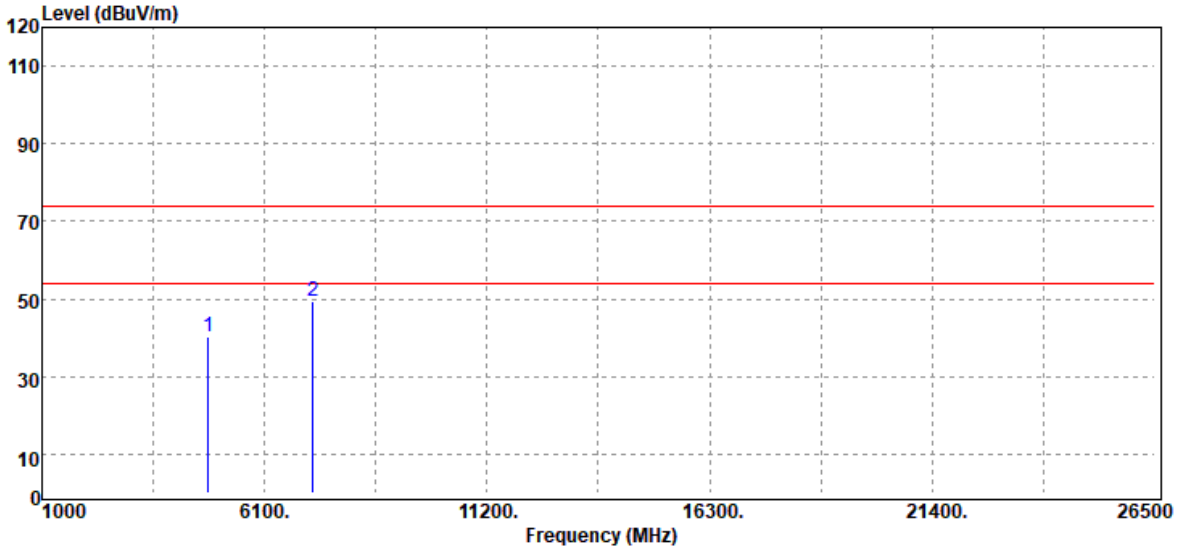


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4804.00	Peak	38.35	3.36	41.71	74.00	-32.29
7206.00	Peak	40.35	10.77	51.12	74.00	-22.88
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode1: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

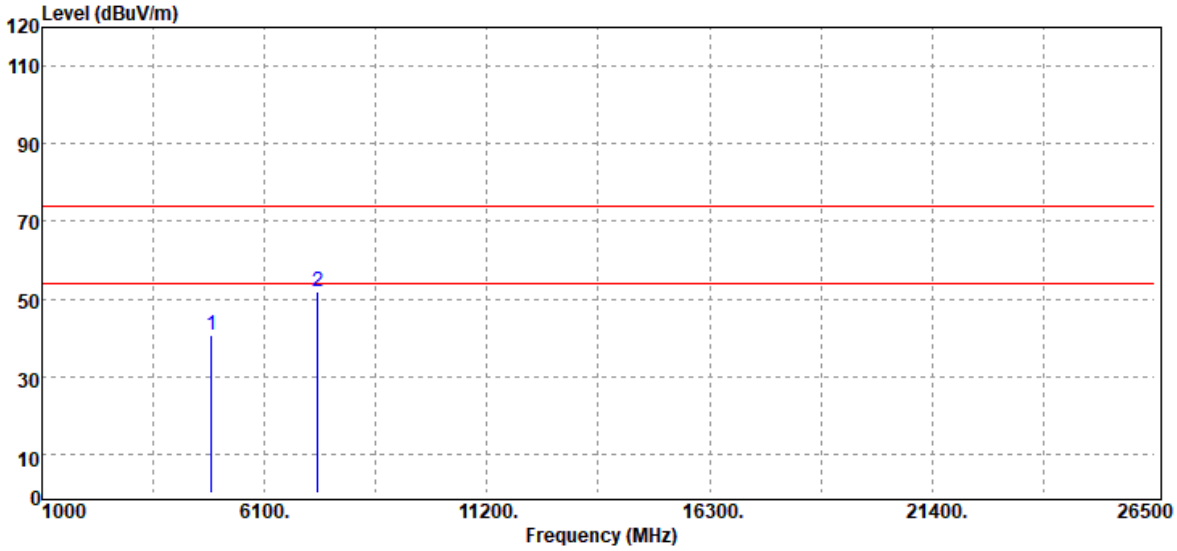


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4804.00	Peak	36.82	3.36	40.18	74.00	-33.82
7206.00	Peak	38.48	10.77	49.25	74.00	-24.75
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode1: RPMA Mid CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

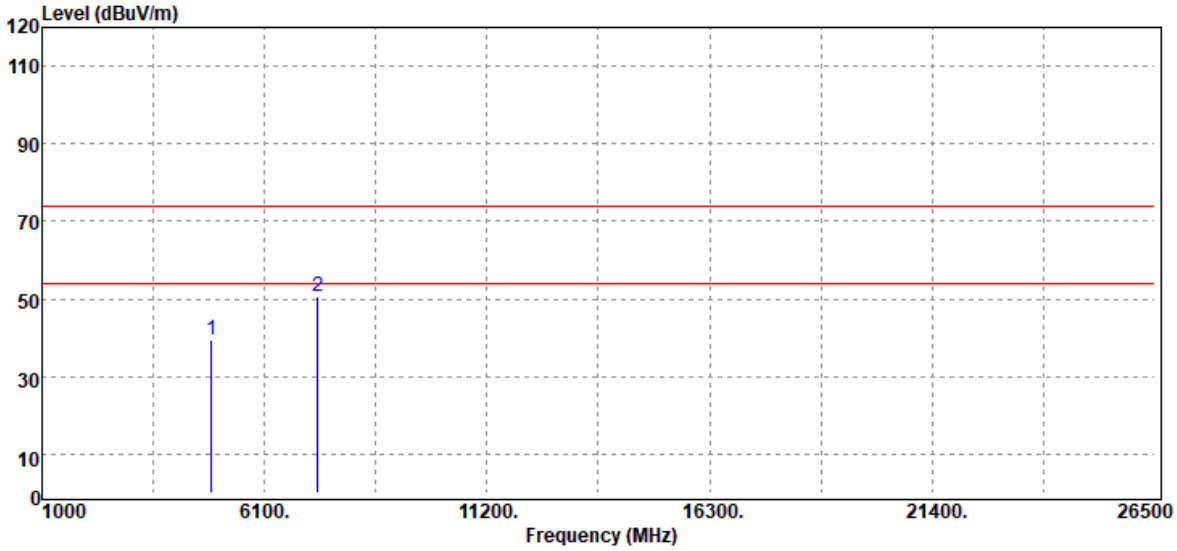


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4879.62	Peak	36.99	3.51	40.50	74.00	-33.50
7319.43	Peak	41.00	11.03	52.03	74.00	-21.97
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode1: RPMA Mid CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

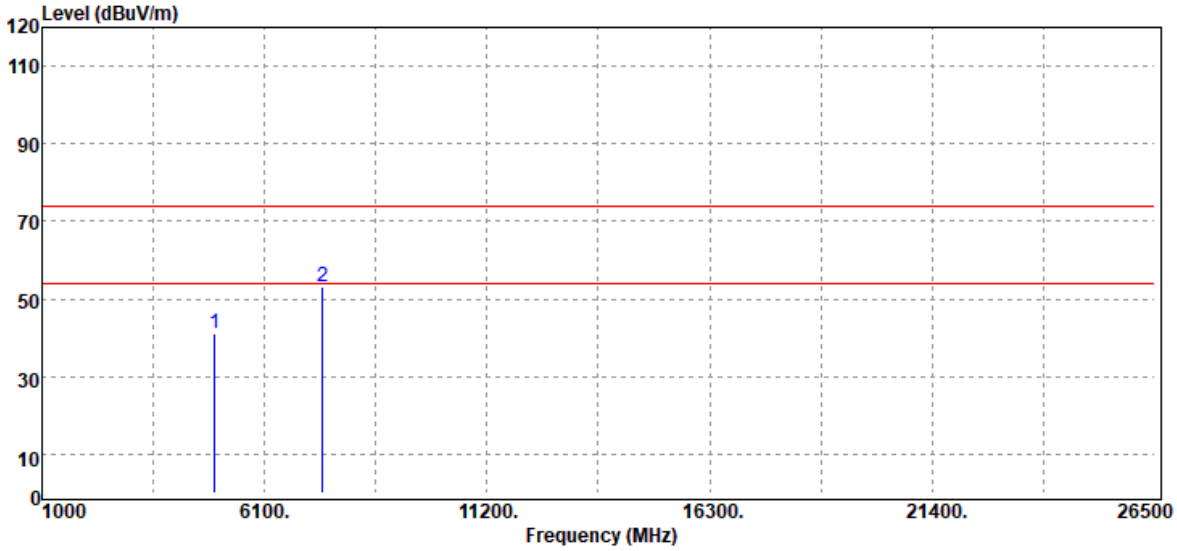


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4879.62	Peak	35.85	3.51	39.36	74.00	-34.64
7319.43	Peak	39.73	11.03	50.76	74.00	-23.24
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode1: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

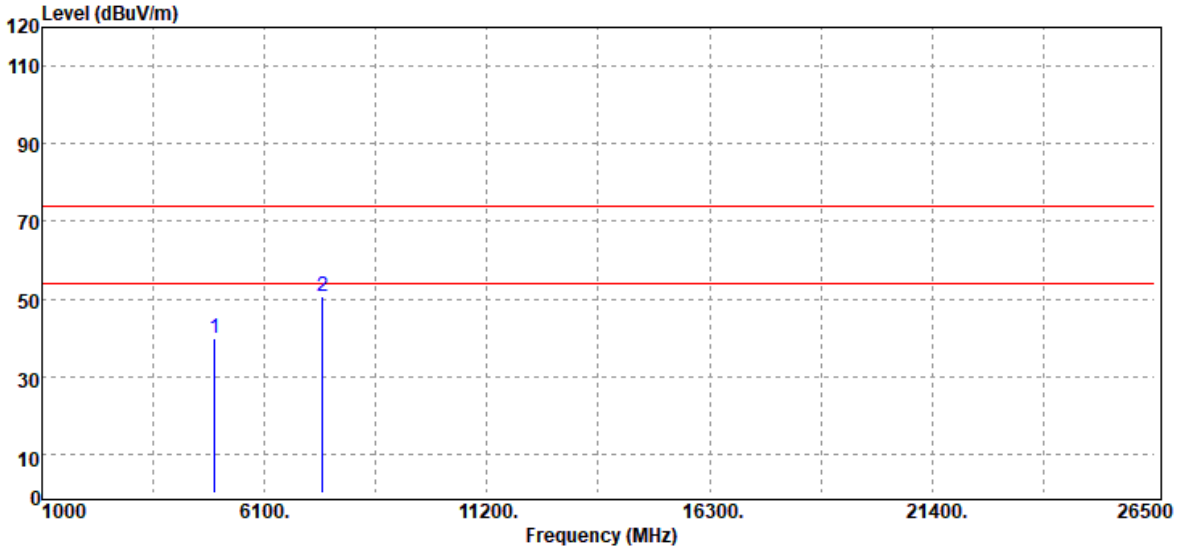


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4951.26	Peak	36.68	4.44	41.12	74.00	-32.88
7426.89	Peak	42.57	10.70	53.27	74.00	-20.73
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode1: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

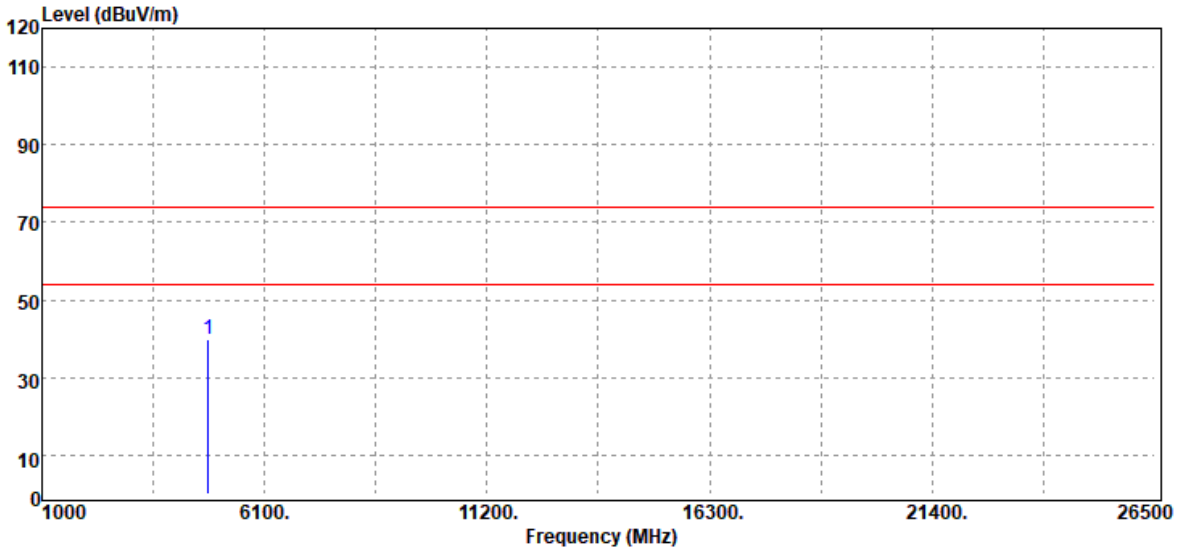


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4951.26	Peak	35.34	4.44	39.78	74.00	-34.22
7426.89	Peak	39.85	10.70	50.55	74.00	-23.45
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 2: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

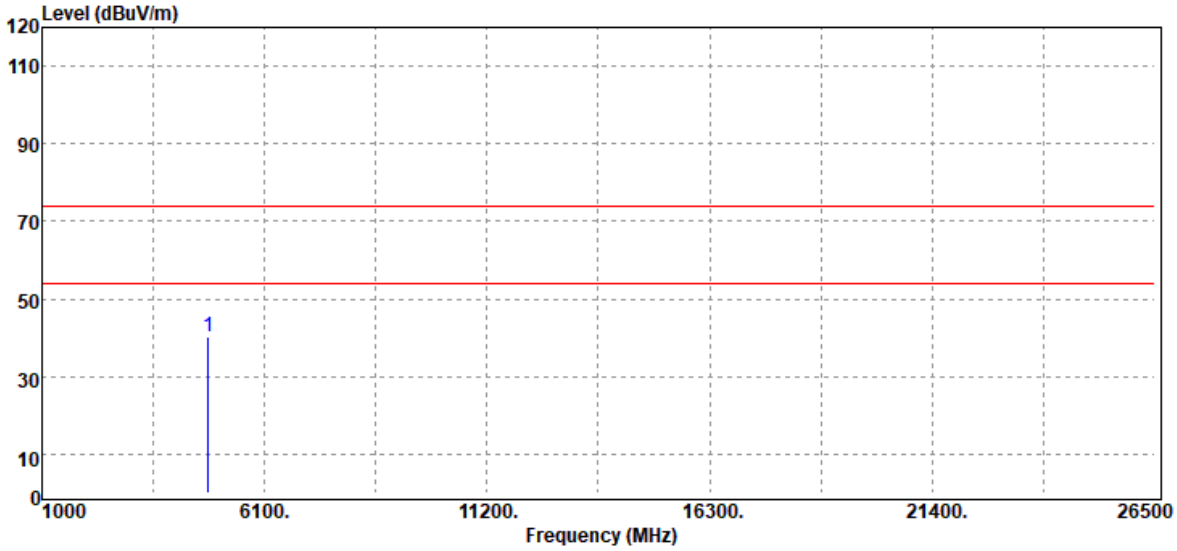


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4804.00	Peak	36.60	3.36	39.96	74.00	-34.04
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 2: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

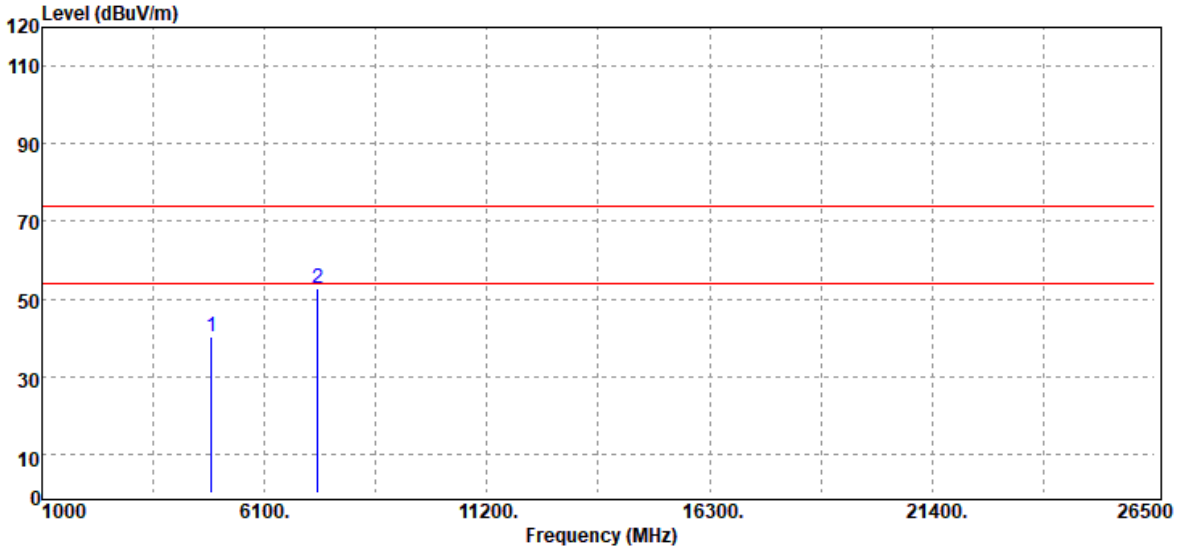


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4804.00	Peak	36.82	3.36	40.18	74.00	-33.82
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 2: RPMA Mid CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

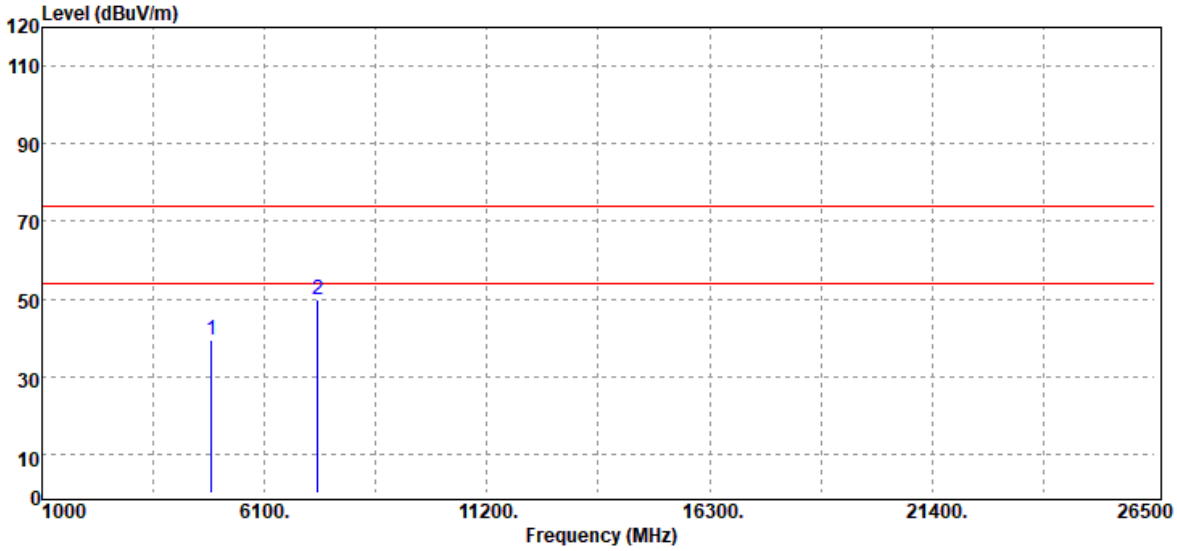


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4879.62	Peak	36.77	3.51	40.28	74.00	-33.72
7319.43	Peak	41.71	11.03	52.74	74.00	-21.26
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 2: RPMA Mid CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

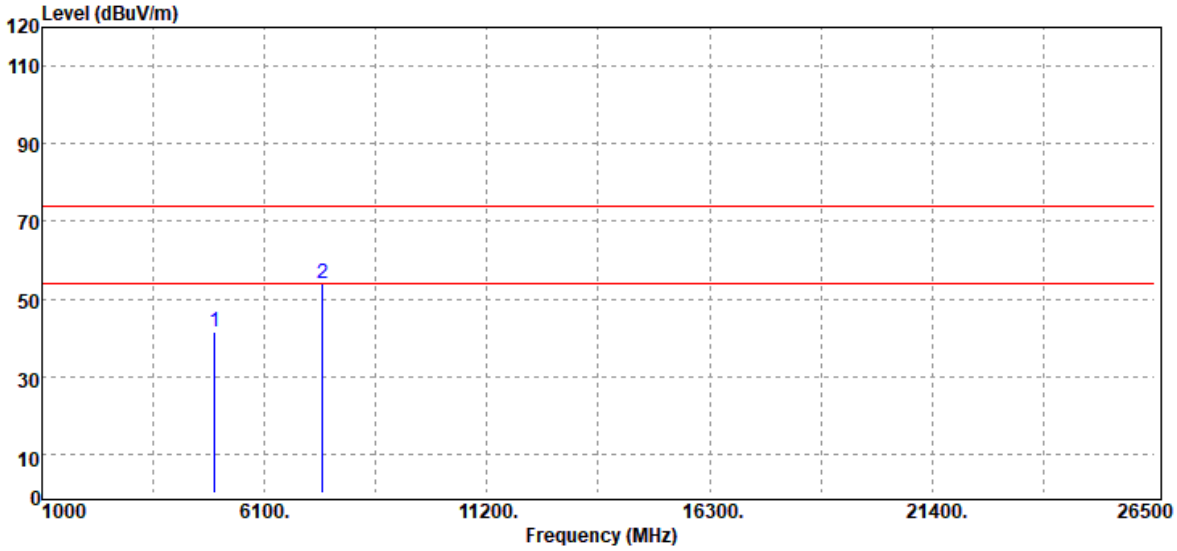


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4879.62	Peak	35.97	3.51	39.48	74.00	-34.52
7319.43	Peak	38.80	11.03	49.83	74.00	-24.17
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 2: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

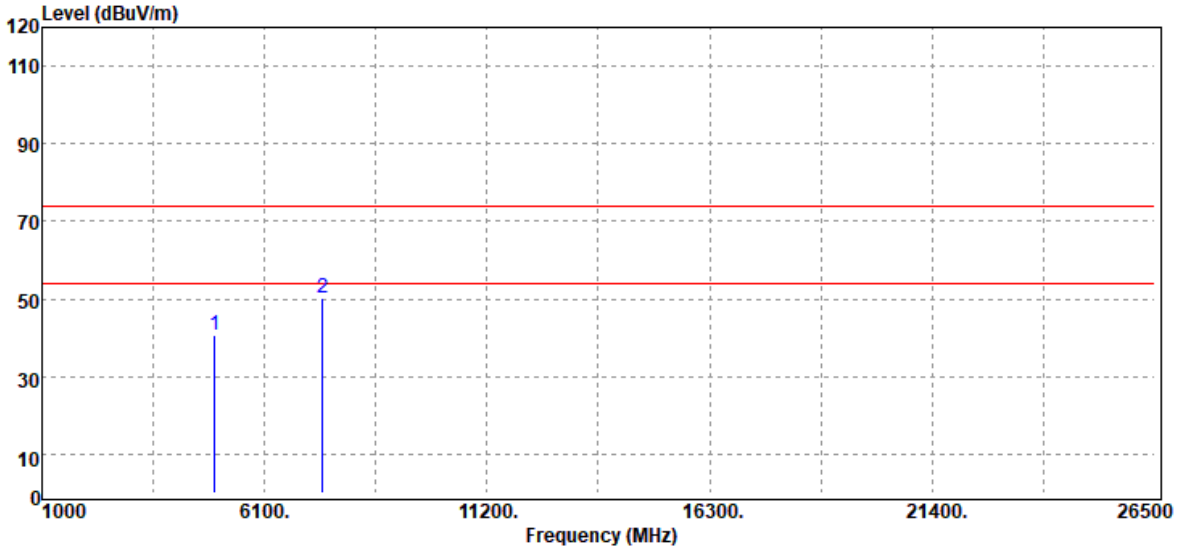


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4951.26	Peak	37.17	4.44	41.61	74.00	-32.39
7426.89	Peak	43.24	10.70	53.94	74.00	-20.06
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 2: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

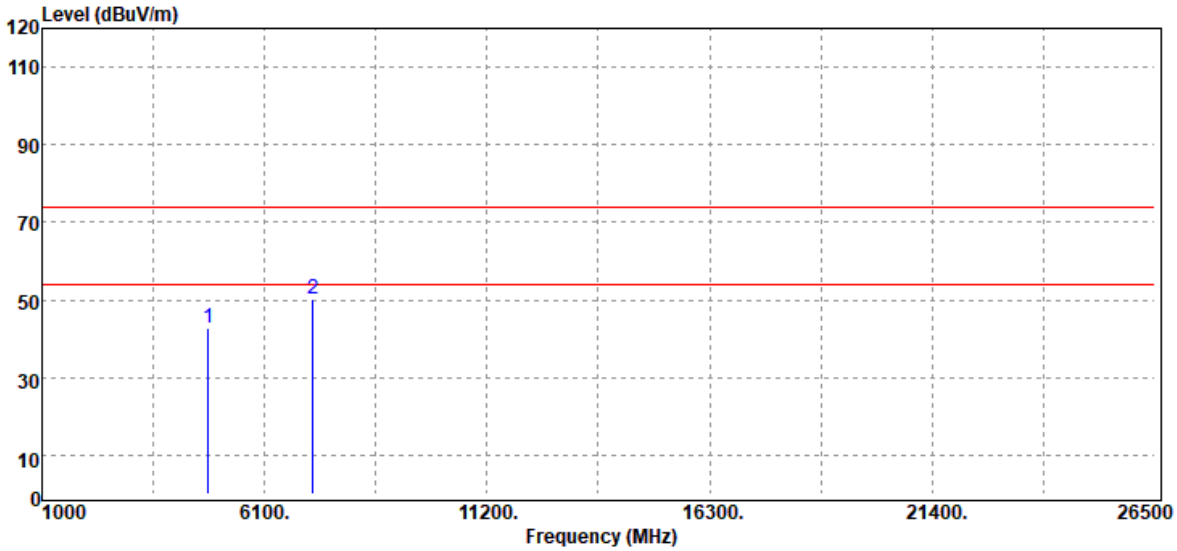


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4951.26	Peak	36.06	4.44	40.50	74.00	-33.50
7426.89	Peak	39.36	10.70	50.06	74.00	-23.94
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 3: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

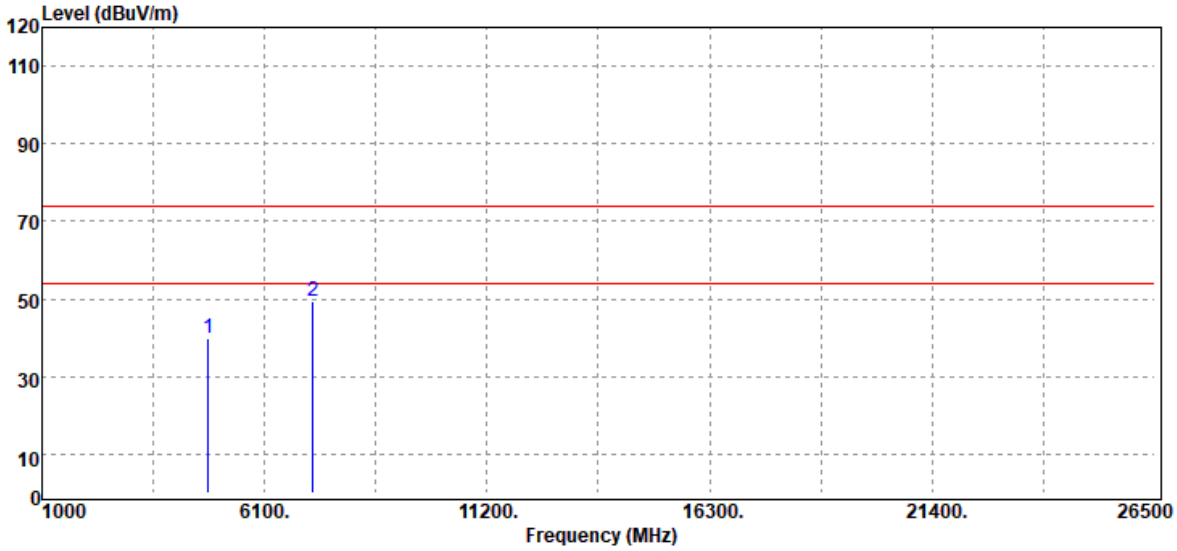


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4804.00	Peak	39.45	3.36	42.81	74.00	-31.19
7206.00	Peak	39.37	10.77	50.14	74.00	-23.86
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 3: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

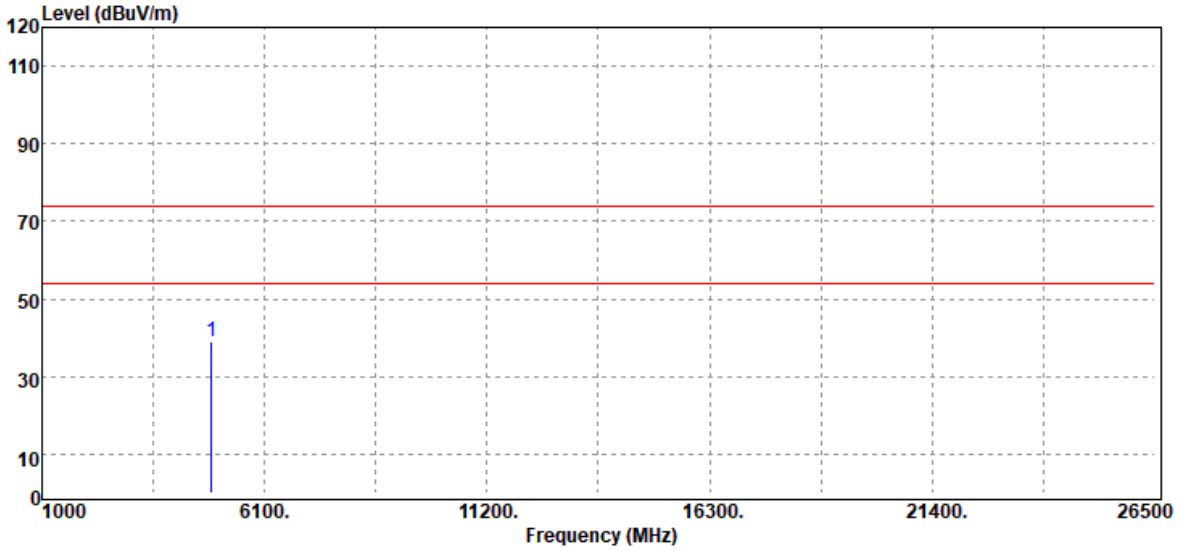


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4804.00	Peak	36.60	3.36	39.96	74.00	-34.04
7206.00	Peak	38.76	10.77	49.53	74.00	-24.47
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 3: RPMA Mid CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

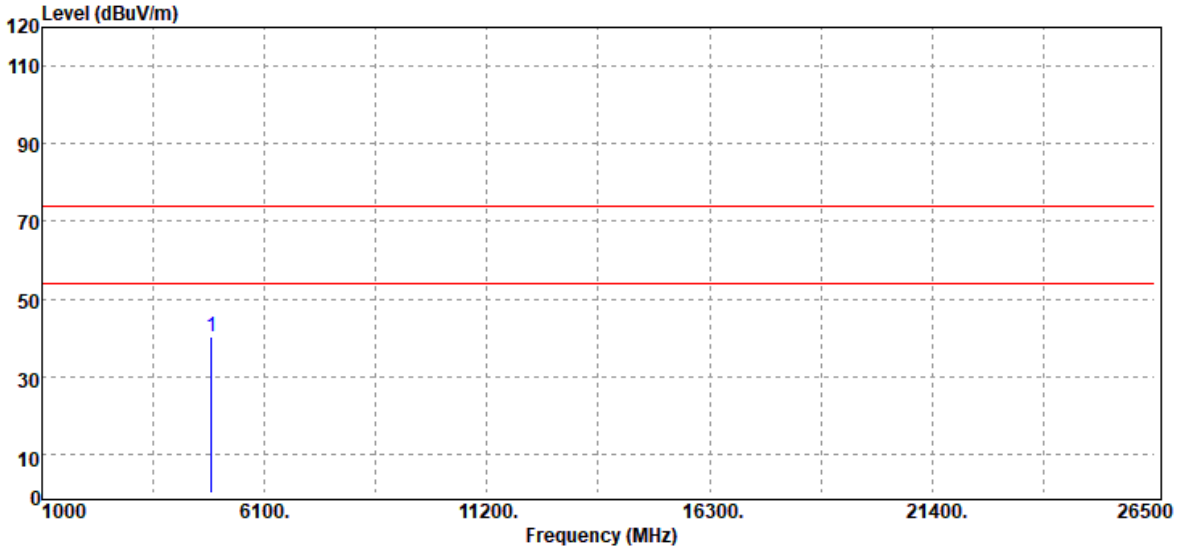


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4879.62	Peak	35.57	3.51	39.08	74.00	-34.92
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 3: RPMA Mid CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

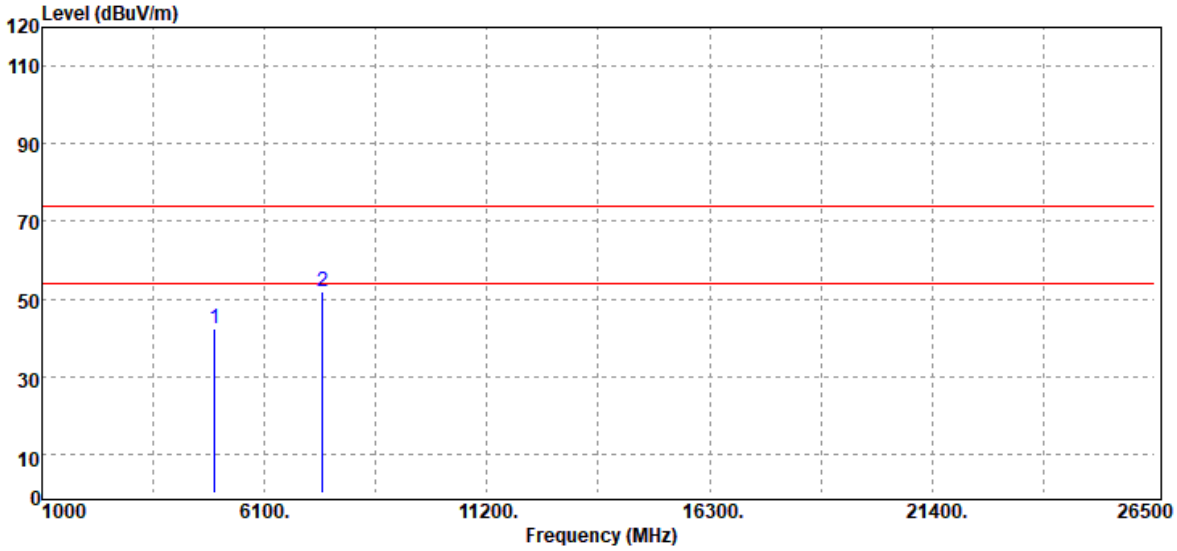


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4879.62	Peak	36.83	3.51	40.34	74.00	-33.66
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 3: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

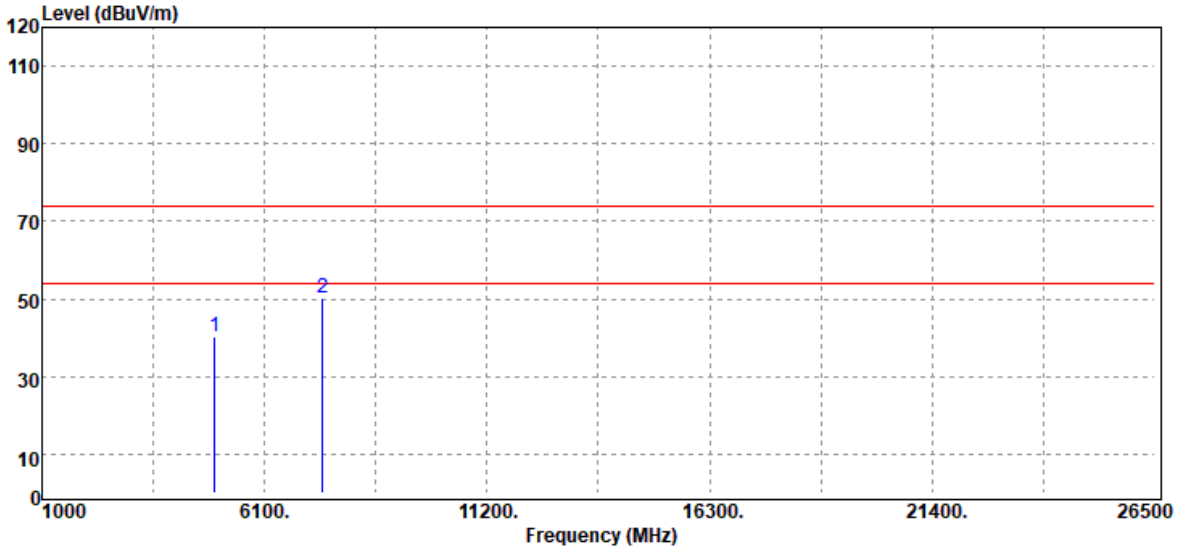


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4951.26	Peak	37.84	4.44	42.28	74.00	-31.72
7426.89	Peak	41.31	10.70	52.01	74.00	-21.99
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 3: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

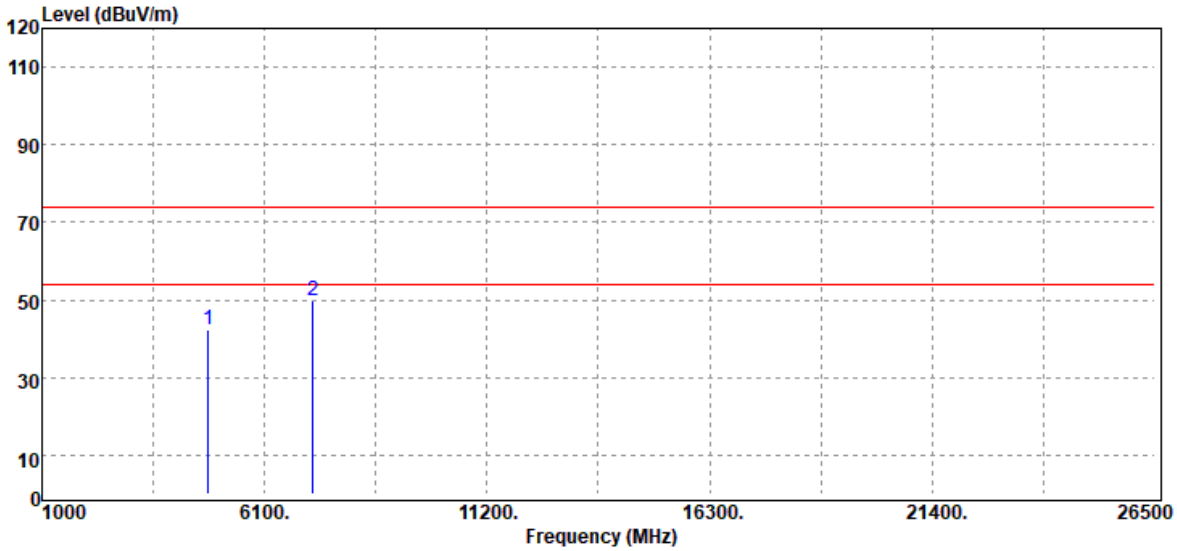


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4951.26	Peak	35.73	4.44	40.17	74.00	-33.83
7426.89	Peak	39.41	10.70	50.11	74.00	-23.89
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 4: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

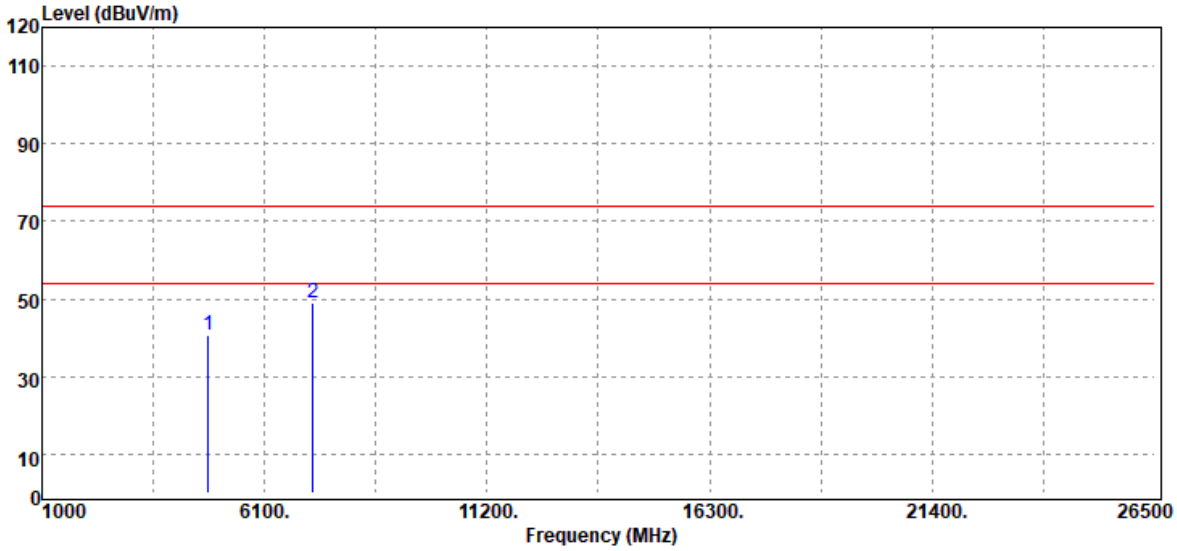


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4804.00	Peak	38.83	3.36	42.19	74.00	-31.81
7206.00	Peak	38.97	10.77	49.74	74.00	-24.26
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 4: RPMA Low CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

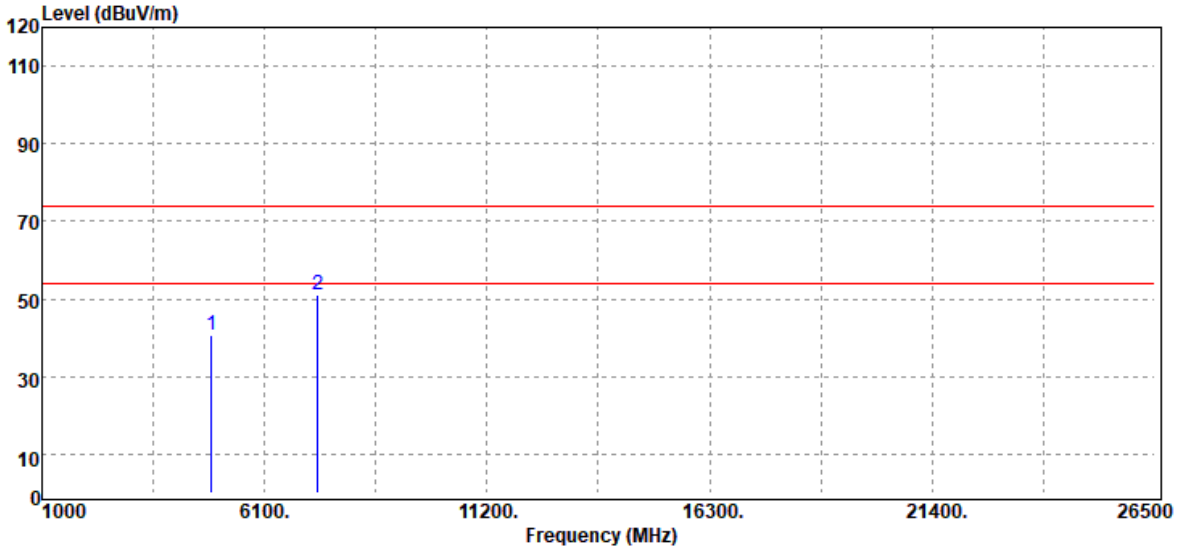


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4804.00	Peak	37.48	3.36	40.84	74.00	-33.16
7206.00	Peak	38.11	10.77	48.88	74.00	-25.12
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 4: RPMA Mid CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

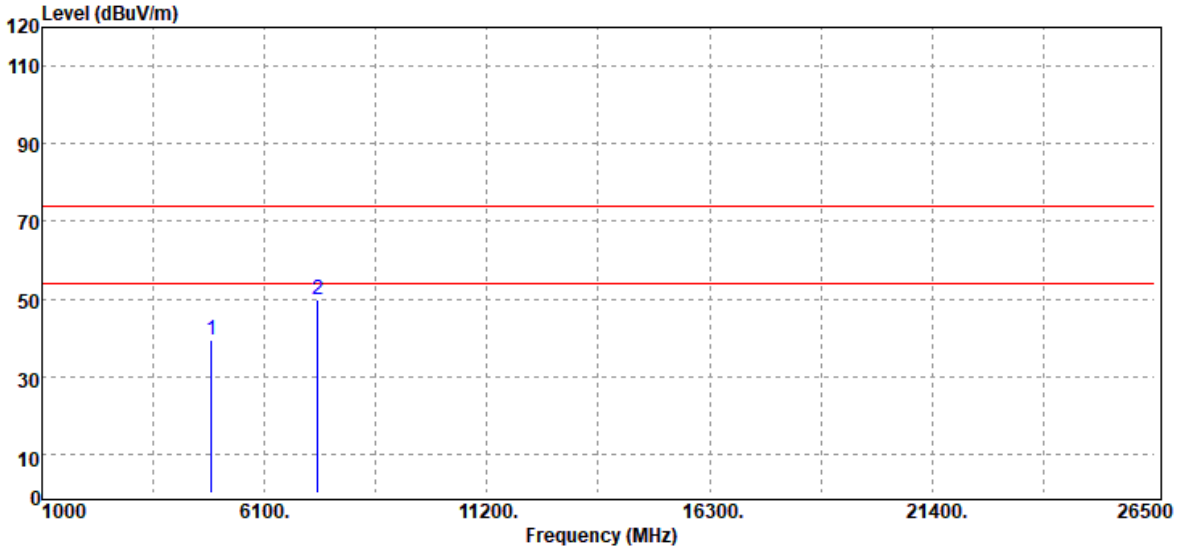


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4879.62	Peak	37.31	3.51	40.82	74.00	-33.18
7319.43	Peak	40.08	11.03	51.11	74.00	-22.89
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 4: RPMA Mid CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		

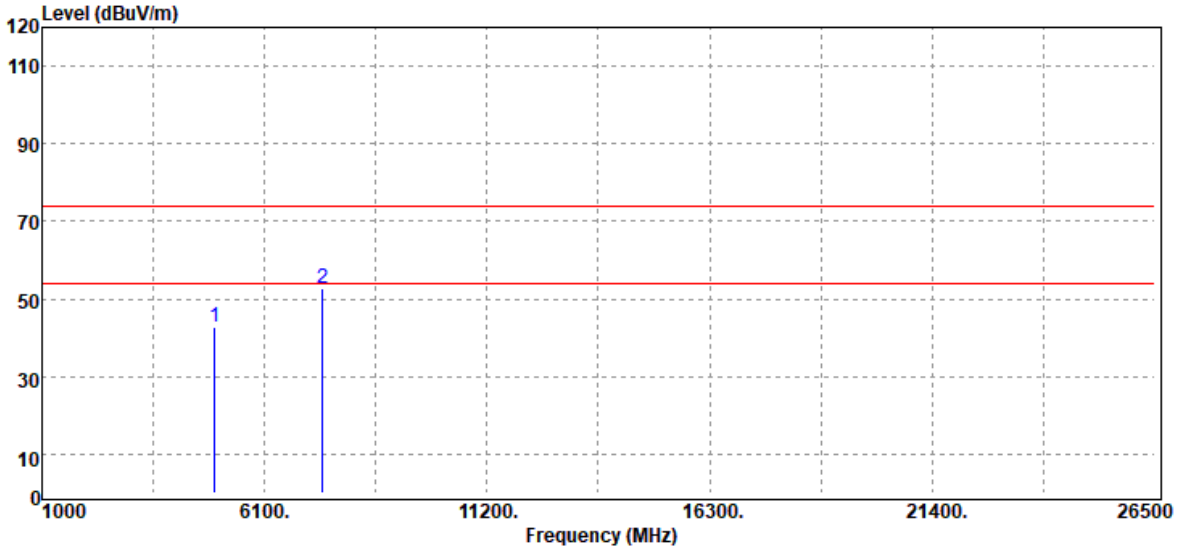


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4879.62	Peak	36.03	3.51	39.54	74.00	-34.46
7319.43	Peak	38.98	11.03	50.01	74.00	-23.99
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 4: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Vertical	Test Engineer	Jerry Chang
Detector	Peak		

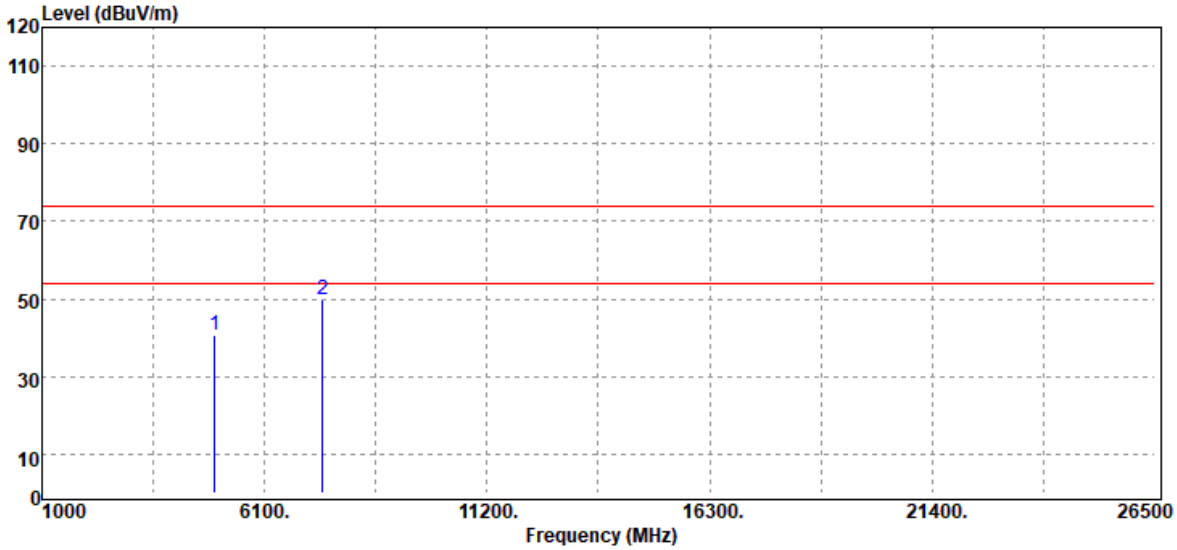


Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4951.26	Peak	38.46	4.44	42.90	74.00	-31.10
7426.89	Peak	42.00	10.70	52.70	74.00	-21.30
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Test Mode	Mode 4: RPMA High CH	Temp/Hum	25.3(℃)/ 45%RH
Test Item	Harmonic	Test Date	September 2, 2020
Polarize	Horizontal	Test Engineer	Jerry Chang
Detector	Peak		



Freq. (MHz)	Detector Mode (PK/QP/AV)	Spectrum Reading Level (dBµV)	Factor (dB)	Actual FS (dBµV/m)	Limit @3m (dBµV/m)	Margin (dB)
4951.26	Peak	36.05	4.44	40.49	74.00	-33.51
7426.89	Peak	39.21	10.70	49.91	74.00	-24.09
N/A						

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

- End of Test Report –