



### CFR 47 FCC PART 15 SUBPART C ISED RSS-210 ISSUE 10

## **TEST REPORT**

For

## **TOY Transmitter**

### MODEL NUMBER: 3705H6HW

FCC ID: G6D3705H6HW

### IC: 9650A-3705H6HW

### **REPORT NUMBER: 4790154433-1**

**ISSUE DATE: November 9, 2021** 

Prepared for

### NEW BRIGHT INDUSTRIAL CO., LTD 9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON,HONG KONG

Prepared by

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The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products.



### **Revision History**

Rev.	Issue Date	Revisions	Revised By
V0	11/08/2021	Initial Issue	



Summary of Test Results						
Clause	Clause Test Items FCC/ISED Rules Test R					
1	20dB Bandwidth and 99% Occupied Bandwidth	CFR 47 FCC §15.215 (c) ISED RSS-Gen Clause 6.7	Pass			
2	Radiated Emission	CFR 47 FCC §15.249 (a)(d)(e) ISED RSS-210 Annex B B.10 CFR 47 FCC §15.205 and §15.209 RSS-GEN Clause 8.9 RSS-GEN Clause 8.10	Pass			
3	Conducted Emission Test for AC Power Port	FCC Part 15.207 RSS-GEN Clause 8.8	Not Applicable (Note 3)			
4	4 Antenna Requirement CFR 47 FCC §15.203 RSS-GEN Clause 6.8 Pass					
Note 1: This test report is only published to and used by the applicant, and it is not for evidence purpose in China. Note 2: The measurement result for the sample received is <pass> according to &lt; CFR 47 FCC PART 15 SUBPART C, ISED RSS-210 Issue 10 and ISED RSS-GEN Issue 5 &gt; when <accuracy method=""> decision rule is applied.</accuracy></pass>						

Note 3: The EUT was power by battery but can't be charged.



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# **1. ATTESTATION OF TEST RESULTS**

#### Applicant Information

Company Name:	NEW BRIGHT INDUSTRIAL CO., LTD
Address:	9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD,
	KOWLOON BAY, KOWLOON,HONG KONG.

#### Manufacturer Information

Company Name:	NEW BRIGHT INDUSTRIAL CO., LTD
Address:	9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD,
	KOWLOON BAY, KOWLOON,HONG KONG.

#### **EUT Information**

EUT Name:	TOY Transmitter
Model:	3705H6HW
Sample ID:	4324498
Sample Received Date:	October 20, 2021
Sample Status:	Normal
Date of Tested:	October 21, 2021 ~ November 9, 2021

APPLICABLE STANDARDS				
STANDARD TEST RESULTS				
CFR 47 FCC PART 15 SUBPART C	PASS			
ISED RSS-210 Issue 10	PASS			
ISED RSS-GEN Issue 5	PASS			

Prepared By:

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Checked By:

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Stephen Guo Laboratory Manager



# 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 414788 D01 Radiated Test Site v01r01, FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, ISED RSS-210 Issue 10 and RSS-GEN Issue 5.

# 3. FACILITIES AND ACCREDITATION

	A2LA (Certificate No.: 4102.01)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with A2LA.
	FCC (FCC Designation No.: CN1187)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	Has been recognized to perform compliance testing on equipment subject to
	the Commission's Declaration of Conformity (DoC) and Certification rules.
	ISED (Company No.: 21320)
Accreditation	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
Certificate	has been registered and fully described in a report filed with ISED. The
Ocranoate	Company Number is 21320 and the test lab Conformity Assessment Body
	Identifier (CABID) is CN0046.
	VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with VCCI, the
	Membership No. is 3793.
	Facility Name:
	Chamber D, the VCCI registration No. is G-20019 and R-20004
	Shielding Room B, the VCCI registration No. is C-20012 and T-20011

Note:

- All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
- The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.
- 3. For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OFS.



# 4. CALIBRATION AND UNCERTAINTY

# 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

# 4.2. MEASUREMENT UNCERTAINTY

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

Test Item	Uncertainty		
Conduction emission	3.62 dB		
Radiation Emission test (include Fundamental emission) (9 kHz ~ 30 MHz)	2.2 dB		
Radiation Emission test (include Fundamental emission) (30 MHz ~ 1 GHz)	4.00 dB		
Radiation Emission test	5.78 dB (1 GHz ~ 18 GHz)		
(1 GHz ~ 26 GHz) (include Fundamental emission)	5.23 dB (18 GHz ~ 26 GHz)		
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.			



# 5. EQUIPMENT UNDER TEST

## 5.1. DESCRIPTION OF EUT

EUT Name	TOY Transmitter			
EUT Description	The EUT is a wireless controller.			
Model	3705H6HW			
Droduct Description	Operation Frequency 2420 MHz ~ 2462 MHz			
Product Description	Modulation Type GFSK			
Battery	DC 3 V			

# 5.2. MAXIMUM FIELD STRENGTH

Frequency	Channel Number	Max Peak field strength	Max AVG field strength	
(MHz)		(dBµV/m)	(dBµV/m)	
2462	21[21]	97.30	79.47	

# 5.3. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2420	7	2434	13	2446	19	2458
2	2422	8	2436	14	2450	20	2460
3	2424	9	2438	15	2452	21	2462
4	2426	10	2440	16	2454	/	/
5	2428	11	2442	17	2456	/	/
6	2430	12	2444	18	2457	/	/



## 5.4. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2420 ~ 2462	Line	1

Test Mode	Transmit and Receive Mode	Description
GFSK	⊠1TX	Antenna 1 can be used as transmitting antenna.

### 5.5. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency
GFSK	CH 1(Low Channel), CH 10(MID Channel), CH 21(High Channel)	2420 MHz, 2440 MHz, 2462 MHz

### 5.6. THE WORSE CASE POWER SETTING PARAMETER

The Wors	se Case Power Setting	g Parameter under 24	20 MHz ~ 2462 M	IHz Band
Test Soft	ware Version		/	
Modulation Type	Transmit Antenna		Test Channel	
	Number	CH 1	CH 10	CH 21
GFSK	1	Default	Default	Default

## 5.7. TEST ENVIRONMENT

Environment Parameter	Selected Va	lues During Tests
Relative Humidity	55	~ 65 %
Atmospheric Pressure:	10	025 Pa
Temperature	TN	22 ~ 28 °C
	VL	/
Voltage:	VN	DC 3 V
	VH	/

Note: VL= Lower Extreme Test Voltage VN= Nominal Voltage VH= Upper Extreme Test Voltage TN= Normal Temperature



# 5.8. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
/	/	/	/	/

### I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
/	/	/	/	/	/

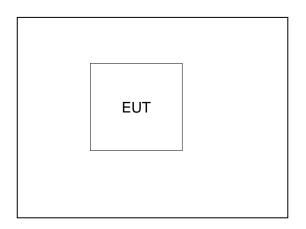
### ACCESSORY

Item	Equipment	Mfr/Brand	Model/Type No.	Specification	Series No.
/	/	/	/	/	/

#### TEST SETUP

The EUT have the engineer mode inside.

#### SETUP DIAGRAM FOR TEST



Note: New battery was used during all tests.

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# 5.9. MEASURING INSTRUMENT AND SOFTWARE USED

			Radiate	ed Emissi	ons			
			In	strument				
Used	Equipment	Manufacturer	Mod	el No.	Seria	l No.	Last Cal.	Next Cal.
	MXE EMI Receiver	KESIGHT	N90	)38A	MY564	00036	Nov. 12, 2020	Nov. 11, 2021
	Hybrid Log Periodic Antenna	TDK	HLP-:	3003C	130	960	Aug. 2, 2021	Aug. 2, 2023
V	Preamplifier	HP	844	47D	2944A	09099	Nov. 12, 2020	Nov. 11, 2021
V	EMI Measurement Receiver	R&S	ES	R26	101	377	Nov. 12, 2020	Nov. 11, 2021
	Horn Antenna	TDK	HRN	-0118	130	940	July 20, 2021	July 19, 2024
	Preamplifier	TDK	PA-02	2-0118	TRS- 000		Nov. 20, 2020	Nov. 19, 2021
V	Horn Antenna	Schwarzbeck	BBH/	A9170	#6	97	Jul. 20, 2021	Jul. 20, 2023
V	Preamplifier	TDK	PA-	02-2	TRS- 000		Nov. 12, 2020	Nov. 11, 2021
V	Preamplifier	TDK	PA-	02-3	TRS- 000		Nov. 12, 2020	Nov. 11, 2021
$\checkmark$	Loop antenna	Schwarzbeck	15	19B	000	800	Jan.17, 2019	Jan.17,2022
	Preamplifier	TDK	PA-02-0	001-3000	TRS- 000		Nov. 12, 2020	Nov. 11, 2021
V	Preamplifier	Mini-Circuits	ZX60-8	3LN-S+	SUP01	201941	Nov. 20, 2020	Nov. 19, 2021
V	High Pass Filter	Wi	3000-	10-2700- 18000- ISS	2	3	Nov. 12, 2020	Nov. 11, 2021
V	Band Reject Filter	Wainwright	2400-2	/8-2350- 2483.5- 5-40SS	2	1	Nov. 12, 2020	Nov. 11, 2021
			S	oftware				
Used	De	escription		Manufa	cturer	1	Name	Version
$\checkmark$		vare for Radiat sturbance	ed	Fara	ad	E	Z-EMC	Ver. UL-3A1

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# 6. ANTENNA PORT TEST RESULTS

# 6.1. ON TIME AND DUTY CYCLE

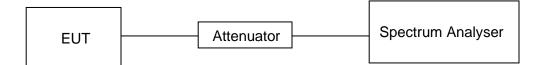
### **LIMITS**

None; for reporting purposes only

### PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method

### TEST SETUP



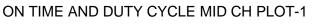
#### TEST ENVIRONMENT

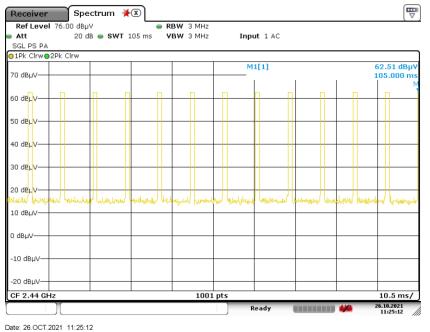
Temperature	25.5 °C	Relative Humidity	55 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 3 V

#### **RESULTS**

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)
GFSK	12.84	100	0.1284	12.84	-17.83

Note: Duty Cycle Correction Factor=20log(x). Where: x is Duty Cycle





### ON TIME AND DUTY CYCLE MID CH PLOT-2

Ref Level			•	RBW 3 MHz					
SGL PS PA	20 0	ib 😑 SWT	10 ms	VBW 3 MHz	Inpu	t 1 AC			
D1Pk Clrw	onk clew								
	LEK OILW				D	2[1]			-0.12 dE
70 dByy						~[+]			8.30000 ms
<b>v</b>	D1				M	1[1]			<sup>D</sup> 2.83 dBµ∖
60 dBµV									670.00 μs
50 dBuv									
40 dBuV						L			
adhing		مبلسين فبالالبينا	ويتلق والمراجع	white industry where we	and the second states of the	mahan		da da sur bar	da.
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			1						
20 dBµV	· · ·								
20 dBµV	· · · ·								
20 dBµV									
20 dBµV									
20 dBµV 10 dBµV 0 dBµV									
20 dBµV 10 dBµV 0 dBµV									
20 dBµV 10 dBµV 0 dBµV -10 dBµV									
20 dBµV 20 dBµV 10 dBµV -10 dBµV -20 dBµV <b>CF 2.44 GH</b>	z			1003					1.0 ms/
20 dBµV 10 dBµV 0 dBµV -10 dBµV -20 dBµV	2								1.0 ms/
20 dBµV 10 dBµV 0 dBµV -10 dBµV -20 dBµV <b>CF 2.44 GH</b>		X-value				tion	F	unction Re	
20 dBµV 10 dBµV 0 dBµV -10 dBµV -20 dBµV <b>CF 2.44 GH</b> <b>Marker</b> <b>Type Ref</b> M1	Trc 1	6	e 70.0 µs	<u>1001</u> <u>Y-value</u> 62.63 dBj	L pts	tion	Fi	unction Re	
20 dBµV 10 dBµV -10 dBµV -10 dBµV -20 dBµV CF 2.44 GH Marker Type Ref	Trc 1	6	e [	100 J Y-value	L pts Func	tion	F	unction Re	

Date: 26.OCT.2021 11:26:13

Note: All the modes had been tested, but only the worst duty cycle recorded in the report.

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## 6.2. 20 dB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

#### <u>LIMITS</u>

		t15 (15.249) Subpart C Gen Issue 5	
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.215 (c)	20dB Bandwidth	for reporting purposes only	2400-2483.5
ISED RSS-Gen Clause 6.7 Issue 5	99% Occupied Bandwidth	For reporting purposes only.	2400-2483.5

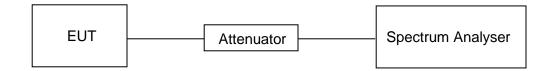
#### TEST PROCEDURE

Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	1% to 5% of the occupied bandwidth
VBW	approximately 3×RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB/99% relative to the maximum level measured in the fundamental emission.

#### TEST SETUP



#### TEST ENVIRONMENT

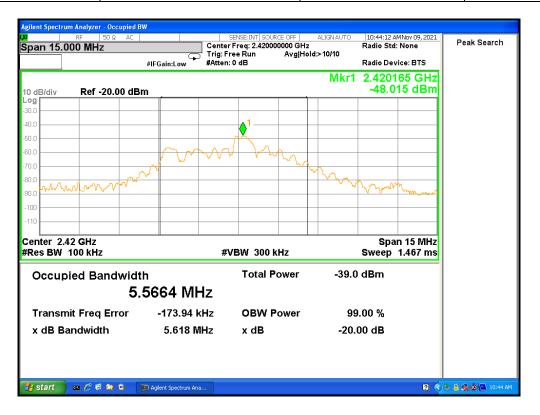
Temperature	25.5 °C	Relative Humidity	55 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 3 V

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RESULTS

Frequency (MHz)	20dB bandwidth (MHz)	99% bandwidth (MHz)	Result
2420	5.618	5.5664	PASS



Frequency	20dB bandwidth	99% bandwidth	Result
(MHz)	(MHz)	(MHz)	
2440	2.675	2.5979	PASS



Frequency	20dB bandwidth	99% bandwidth	Result
(MHz)	(MHz)	(MHz)	
2462	2.685	2.5925	PASS

gilent Spectrum Analyzer - Occupied BV Δ L RF 50Ω AC			NT SOURCE OFF	ALIGNAUTO	0 11:43:07 Radio Sto	AMNov 08, 2021	Peak Search
Center Freq 2.46200000	HIFGain:Low	Trig: Free Ru #Atten: 0 dB		ld>10/10		vice: BTS	
0 dB/div Ref -20.00 dBr	n			Mkr		156 GHz 928 dBm	
og 80.0							
40.0			.1				
50.0			<u>-</u>				
70.0		m	m	hype -			
80.0	mm mm			1 win	mon	m.	
90.0 mm hour 1					10	a manyon	
-100							
Center 2.462 GHz					S	oan 6 MHz	
Res BW 100 kHz		#VBW	300 kHz			eep 1ms	
Occupied Bandwidt	h	Т	otal Power	-46	.5 dBm		
2.	5925 MH	lz					
Transmit Freq Error	239.78 kl	Hz O	BW Power	9	99.00 %		
x dB Bandwidth	2.685 M	Hz x	dB	-2	0.00 dB		
SG				STA	rus		



# 7. RADIATED TEST RESULTS

## 7.1. LIMITS AND PROCEDURE

### <u>LIMITS</u>

CFR 47 FCC §15.205 and §15.209

CFR 47 FCC §15.249 (a)(d)(c)(e)

ISED RSS-210 Issue 10 Annex B B.10

**RSS-GEN Clause 8.9** 

The field strength of em	nissions from intentional	radiators operated within	these frequency bands
Frequency (MHz)	Field strength of Fundamental	Field strength of Harmonics	Distance (m)
902 - 928	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
2400 – 2483.5	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
5725 – 5875	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3

Emissions radi	ated outside of the specified frequer	ncy bands above 3	0MHz
Frequency Range	Field Strength Limit Field Strength L		ngth Limit
(MHz)	(uV/m) at 3 m	(dBuV/m	n) at 3 m
(11112)		Quasi	-Peak
30 - 88	100	4	0
88 - 216	150	43	5.5
216 - 960	200	4	6
Above 960	500	5	4
Above 1000	500	Peak	Average
	500	74	54

FCC Emissi	ons radiated outside of the specified free	equency bands below 30MHz
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

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#### ISED General field strength limits at frequencies below 30 MHz

Table 6 – General field strength limits at frequencies below 30 MHz			
Frequency	Magnetic field strength (H-Field) (μA/m)	Measurement distance (m)	
9 - 490 kHz <sup>Note 1</sup>	6.37/F (F in kHz)	300	
490 - 1705 kHz	63.7/F (F in kHz)	30	
1.705 - 30 MHz	0.08	30	

**Note 1:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

#### IC Restricted bands please refer to ISED RSS-GEN Clause 8.10

Hz	MHz	GHz
290 - 0.110	149.9 - 150.05	9.0 - 9.2
495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
735 - 2.1905	156.7 - 156.9	10.6 - 12.7
20 - 3.026	162.0125 - 167.17	13.25 - 13.4
25 - 4.128	167.72 - 173.2	14.47 - 14.5
7725 - 4.17775	240 - 285	15.35 - 16.2
20725 - 4.20775	322 - 335.4	17.7 - 21.4
77 - 5.683	399.9 - 410	22.01 - 23.12
215 - 6.218	608 - 614	23.6 - 24.0
26775 - 6.26825	960 - 1427	31.2 - 31.8
31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
91 - 8.294	1645.5 - 1646.5	Above 38.6
162 - 8.366	1660 - 1710	
7625 - 8.38675	1718.8 - 1722.2	
1425 - 8.41475	2200 - 2300	
29 - 12.293	2310 - 2390	
.51975 - 12.52025	2483.5 - 2500	
2.57675 - 12.57725	2655 - 2900	
.36 - 13.41	3260 - 3267	
42 - 16.423	3332 - 3339	
69475 - 16.69525	3345.8 - 3358	
80425 - 16.80475	3500 - 4400	
5 - 25.67	4500 - 5150	
5 - 38.25	5350 - 5460	
- 74.6	7250 - 7750	
- 75.2	8025 - 8500	

Note 1: Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.



FCC Restricted bands of operation:

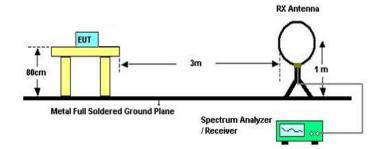
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

Note: <sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. <sup>2</sup>Above 38.6c



#### TEST SETUP AND PROCEDURE

Below 30MHz



The setting of the spectrum analyser

RBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
VBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
Sweep	Auto
Detector	Peak/QP/ Average
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80 cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.

5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

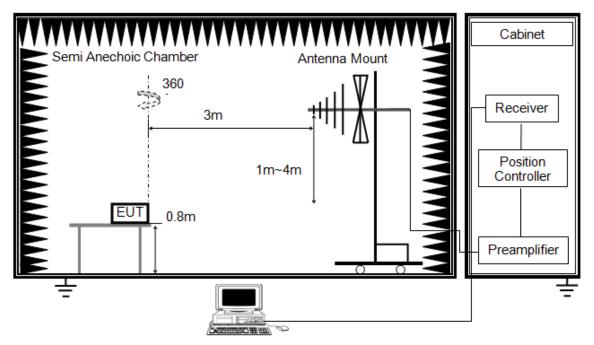
6. For measurement below 1 GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak and average detector mode remeasured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.

7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field 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 site based on KDB 414788.

8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377  $\Omega$ . For example, the measurement frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.



### Below 1 GHz and Above 30 MHz



The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

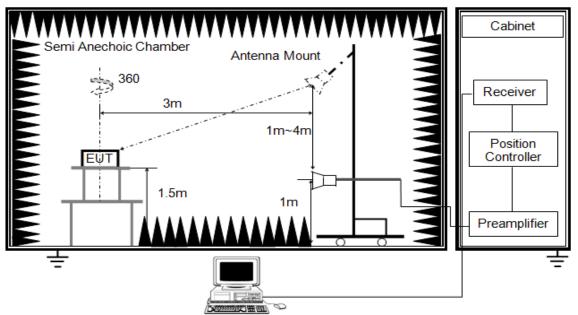
3. The EUT was placed on a turntable with 80cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured



Above 1 GHz



The setting of the spectrum analyser. (For Bandedge and Field strength)

RBW	≥ OBW (2 MHz)
VBW	PEAK: ≥ 3×RBW AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

The setting of the spectrum analyser. (For Spurious emissions)

RBW	1 MHz
IV BW	PEAK: 3 MHz AVG: see note 5
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (1.5 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter or band reject filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 150cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

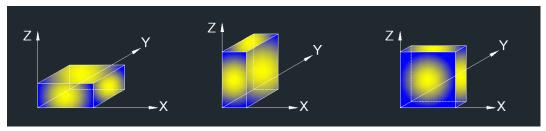
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5. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements. Where necessary, average emission are determined by applying the Duty Cycle Correction Factor to the peak measurements. For the Duty Cycle and Correction Factor please refer to clause 6.1. ON TIME AND DUTY CYCLE.

6. For measurements Bandedge above 1 GHz, the resolution bandwidth is set to 2 MHz, then the video bandwidth is set to  $\ge 3 \times RBW$  for peak measurements. This test results are worse than using 1 MHz resolution bandwidth, so if the result is pass, the test is considered to meet the standard requirements.

X axis, Y axis, Z axis positions:



Note: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

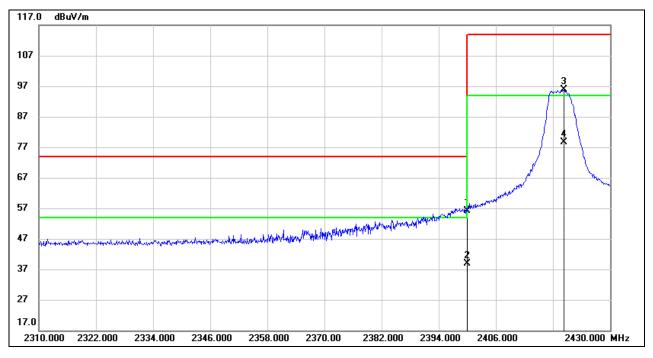
#### TEST ENVIRONMENT

Temperature	25.5 °C	Relative Humidity	55 %
Atmosphere Pressure	101 kPa	Test Voltage	DC 3 V



# 7.2. RESTRICTED BANDEDGE AND FIELD STRENGTH OF INTENTIONAL EMISSIONS





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2400.000	23.37	32.75	56.12	74.00	-17.88	peak
2	2400.000	/	/	38.29	54.00	-15.71	AVG
3	2420.280	62.95	32.83	95.78	114.00	-18.22	peak
4	2420.280	/	/	77.95	94.00	-16.05	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

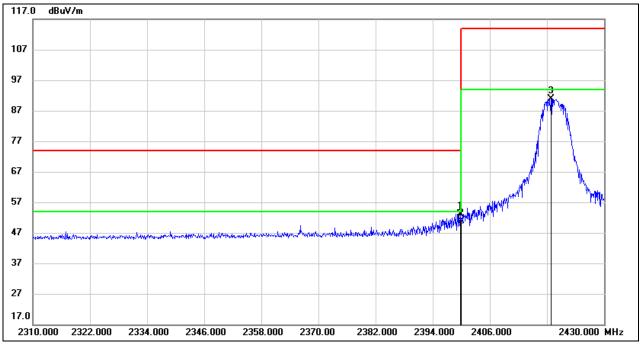
3. Peak: Peak detector.

4. AVG Result=Peak Result + Duty Cycle Correction Factor.

5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.



#### RESTRICTED BANDEDGE AND FIELD STRENGTH OF INTENTIONAL EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2399.880	20.41	32.75	53.16	74.00	-20.84	peak
2	2400.000	18.01	32.75	50.76	74.00	-23.24	peak
3	2418.840	57.98	32.83	90.81	114.00	-23.19	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

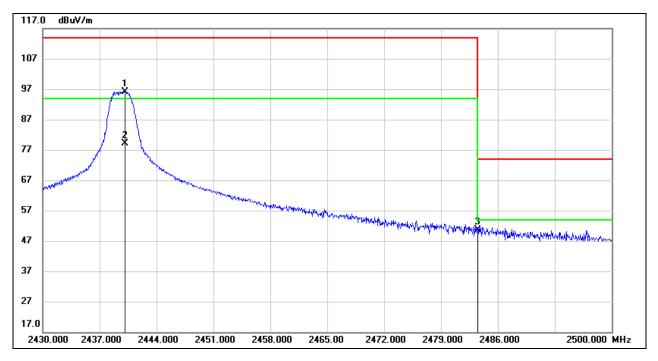
3. Peak: Peak detector.

4. AVG Result=Peak Result + Duty Cycle Correction Factor.

5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.



#### FIELD STRENGTH OF INTENTIONAL EMISSIONS (MIDDLE CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2440.150	63.27	32.91	96.18	114.00	-17.82	peak
2	2440.150	/	/	78.35	94.00	-15.65	AVG
3	2483.500	17.63	33.10	50.73	74.00	-23.27	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

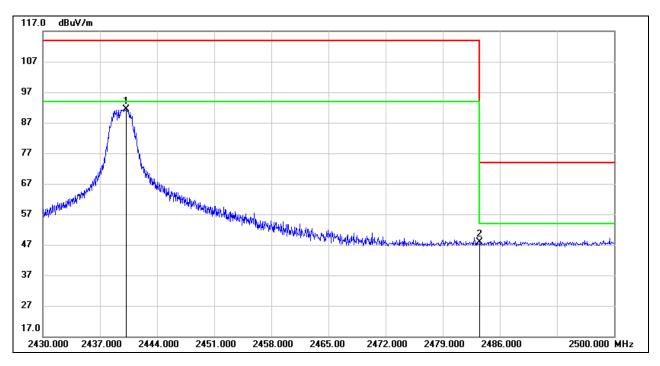
3. Peak: Peak detector.

4. AVG Result=Peak Result + Duty Cycle Correction Factor.

5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.



#### FIELD STRENGTH OF INTENTIONAL EMISSIONS (MIDDLE CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2440.220	58.36	32.91	91.27	114.00	-22.73	peak
2	2483.500	14.72	33.10	47.82	74.00	-26.18	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

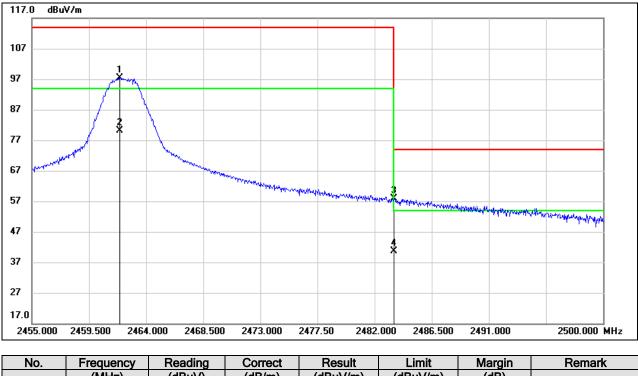
3. Peak: Peak detector.

4. AVG Result=Peak Result + Duty Cycle Correction Factor.

5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.



#### RESTRICTED BANDEDGE AND FIELD STRENGTH OF INTENTIONAL EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2461.930	64.30	33.00	97.30	114.00	-16.70	peak
2	2461.930	/	/	79.47	94.00	-14.53	AVG
3	2483.500	24.67	33.10	57.77	74.00	-16.23	peak
4	2483.500	/	/	39.94	54.00	-14.06	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

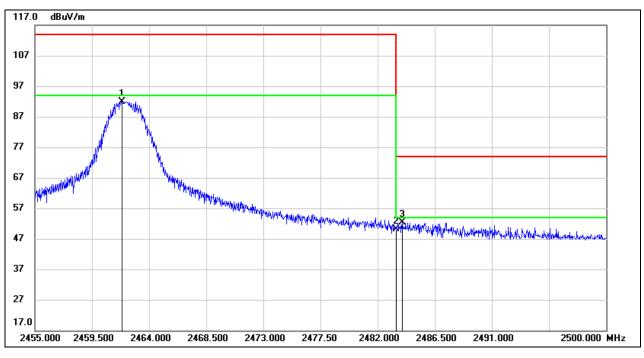
If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
Peak: Peak detector.

4. AVG Result=Peak Result + Duty Cycle Correction Factor.

5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.



#### RESTRICTED BANDEDGE AND FIELD STRENGTH OF INTENTIONAL EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2461.840	58.94	33.00	91.94	114.00	-22.06	peak
2	2483.500	17.04	33.10	50.14	74.00	-23.86	peak
3	2483.935	19.27	33.10	52.37	74.00	-21.63	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. AVG Result=Peak Result + Duty Cycle Correction Factor.

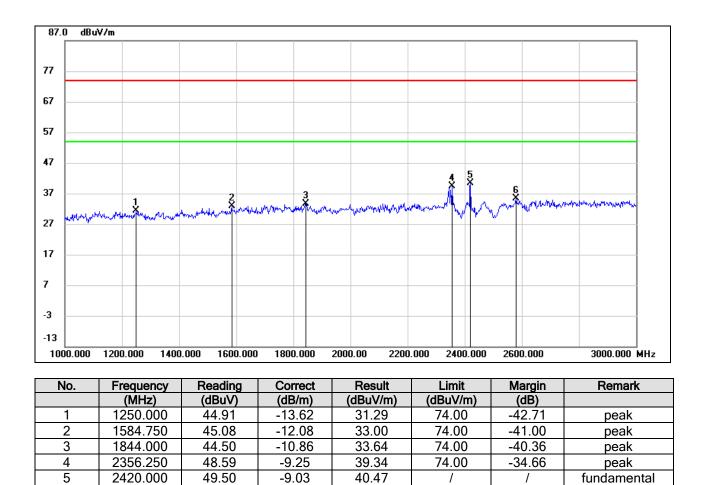
5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.



6

# 7.3. SPURIOUS EMISSIONS (1 ~ 3 GHz)

#### HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



Note: 1. Peak Result = Reading Level + Correct Factor.

-8.68

44.06

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

35.38

74.00

-38.62

peak

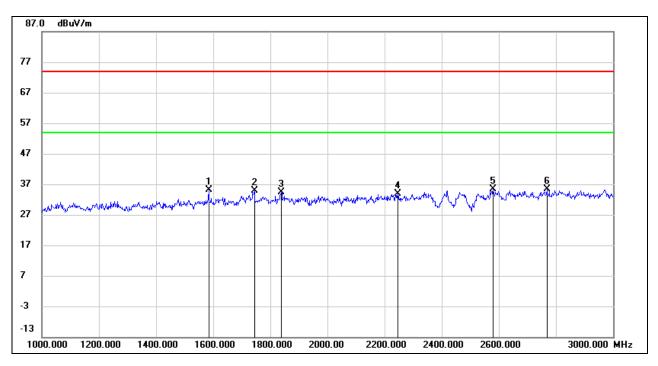
3. Peak: Peak detector.

2580.250

- 4. Filter losses were only considered in then spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.





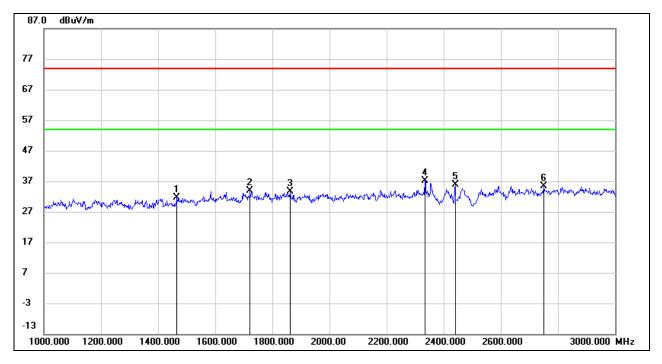


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1584.750	47.21	-12.08	35.13	74.00	-38.87	peak
2	1744.500	45.91	-11.11	34.80	74.00	-39.20	peak
3	1839.750	45.31	-10.85	34.46	74.00	-39.54	peak
4	2246.000	43.48	-9.70	33.78	74.00	-40.22	peak
5	2581.250	43.93	-8.67	35.26	74.00	-38.74	peak
6	2769.500	43.25	-7.83	35.42	74.00	-38.58	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in then spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



#### HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

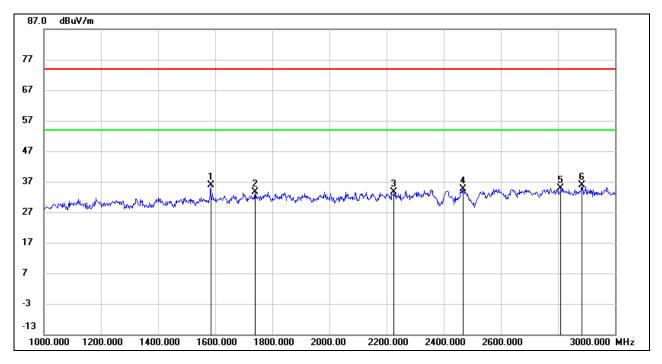


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1467.000	44.40	-12.74	31.66	74.00	-42.34	peak
2	1723.750	45.05	-11.23	33.82	74.00	-40.18	peak
3	1862.500	44.47	-10.90	33.57	74.00	-40.43	peak
4	2335.750	46.38	-9.34	37.04	74.00	-36.96	peak
5	2440.000	44.90	-8.98	35.92	/	/	fundamental
6	2750.750	43.23	-7.93	35.30	74.00	-38.70	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in then spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



### HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

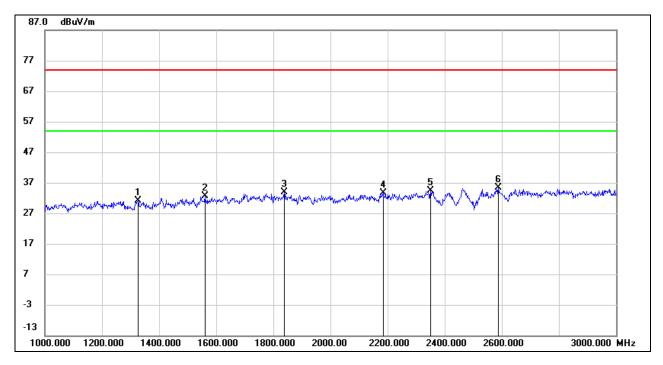


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1584.750	47.90	-12.08	35.82	74.00	-38.18	peak
2	1741.000	44.83	-11.13	33.70	74.00	-40.30	peak
3	2226.500	43.44	-9.78	33.66	74.00	-40.34	peak
4	2468.000	43.42	-8.90	34.52	74.00	-39.48	peak
5	2811.750	42.59	-7.66	34.93	74.00	-39.07	peak
6	2885.250	43.20	-7.44	35.76	74.00	-38.24	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in then spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



#### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

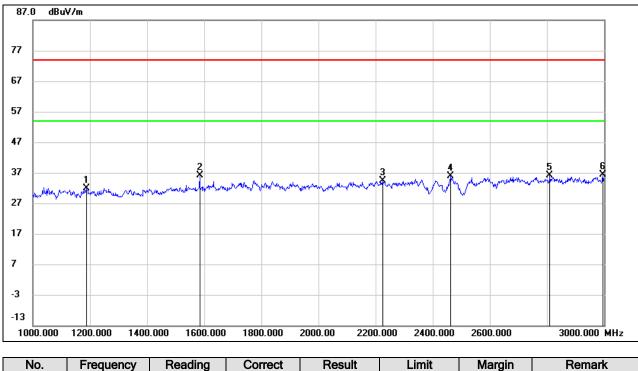


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1326.000	44.43	-13.39	31.04	74.00	-42.96	peak
2	1560.000	44.94	-12.22	32.72	74.00	-41.28	peak
3	1839.250	44.75	-10.86	33.89	74.00	-40.11	peak
4	2184.250	43.63	-9.99	33.64	74.00	-40.36	peak
5	2350.500	43.53	-9.27	34.26	74.00	-39.74	peak
6	2589.500	43.96	-8.66	35.30	74.00	-38.70	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in then spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



#### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1188.000	45.78	-13.85	31.93	74.00	-42.07	peak
2	1584.000	48.29	-12.08	36.21	74.00	-37.79	peak
3	2224.000	44.14	-9.79	34.35	74.00	-39.65	peak
4	2462.000	44.80	-8.92	35.88	/	/	fundamental
5	2810.000	43.71	-7.66	36.05	74.00	-37.95	peak
6	2996.000	43.46	-7.10	36.36	74.00	-37.64	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

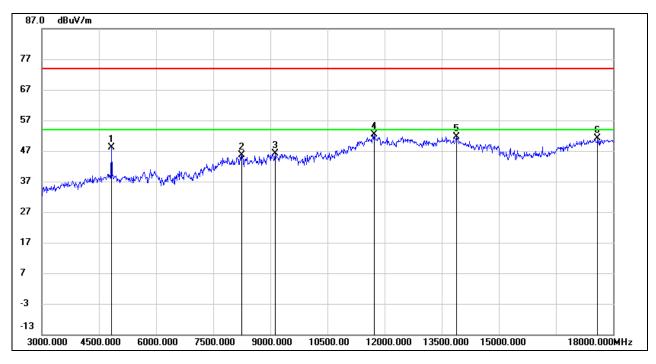
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in then spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

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# 7.4. SPURIOUS EMISSIONS (3 ~ 18 GHz)

# HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4839.375	48.75	-0.62	48.13	74.00	-25.87	peak
2	8259.375	37.17	8.48	45.65	74.00	-28.35	peak
3	9131.250	36.72	9.35	46.07	74.00	-27.93	peak
4	11731.875	35.28	17.00	52.28	74.00	-21.72	peak
5	13903.125	33.05	18.66	51.71	74.00	-22.29	peak
6	17598.750	30.38	20.74	51.12	74.00	-22.88	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

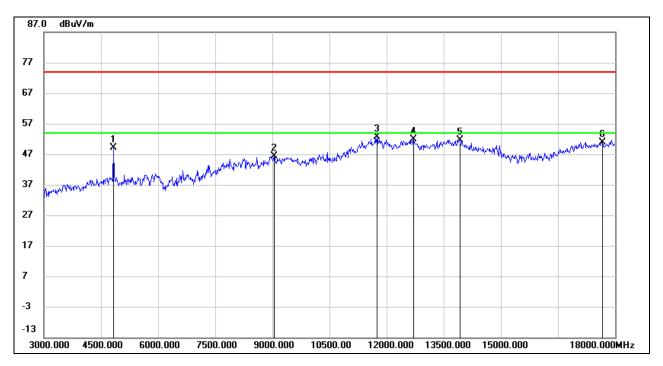
3. Peak: Peak detector.

4. AVG Result=Peak Result + Duty Cycle Correction Factor.

- 5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.
- 6. The High Pass filter loss factor already add into the correct factor.
- 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.



## HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4837.500	49.73	-0.63	49.10	74.00	-24.90	peak
2	9056.250	36.60	9.80	46.40	74.00	-27.60	peak
3	11748.750	35.48	17.08	52.56	74.00	-21.44	peak
4	12705.000	34.98	16.87	51.85	74.00	-22.15	peak
5	13923.750	32.97	18.64	51.61	74.00	-22.39	peak
6	17683.125	29.31	21.62	50.93	74.00	-23.07	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

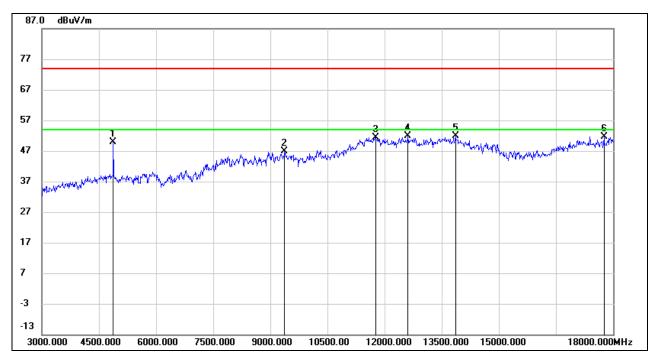
3. Peak: Peak detector.

4. The High Pass filter loss factor already add into the correct factor.

5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



# HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4878.750	50.58	-0.59	49.99	74.00	-24.01	peak
2	9386.250	36.90	10.05	46.95	74.00	-27.05	peak
3	11763.750	34.25	17.16	51.41	74.00	-22.59	peak
4	12620.625	35.16	16.67	51.83	74.00	-22.17	peak
5	13871.250	33.12	18.70	51.82	74.00	-22.18	peak
6	17763.750	29.25	22.48	51.73	74.00	-22.27	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

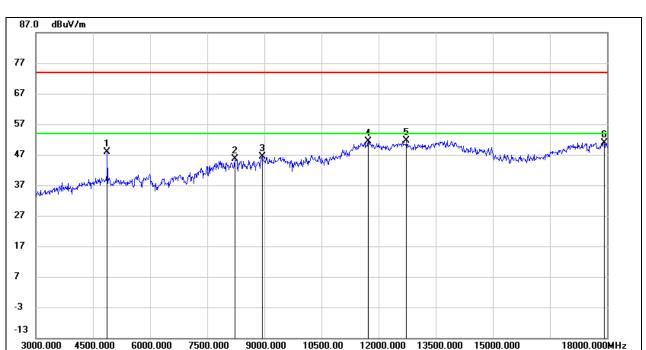
4. AVG Result=Peak Result + Duty Cycle Correction Factor.

5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.

6. The High Pass filter loss factor already add into the correct factor.

7. Proper operation of the transmitter prior to adding the filter to the measurement chain.





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4878.750	48.40	-0.59	47.81	74.00	-26.19	peak
2	8227.500	37.04	8.61	45.65	74.00	-28.35	peak
3	8945.625	36.74	9.53	46.27	74.00	-27.73	peak
4	11741.250	34.45	17.03	51.48	74.00	-22.52	peak
5	12735.000	34.74	16.92	51.66	74.00	-22.34	peak
6	17928.750	27.80	23.19	50.99	74.00	-23.01	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

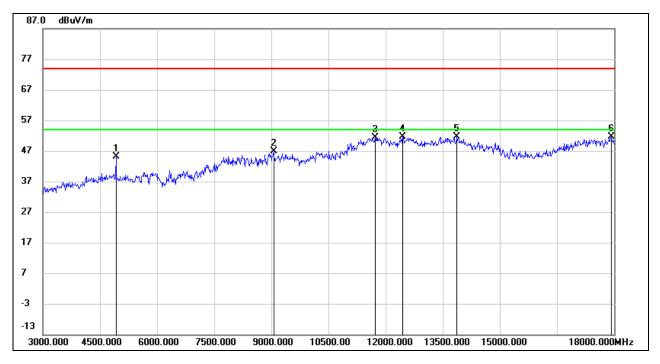
3. Peak: Peak detector.

4. The High Pass filter loss factor already add into the correct factor.

5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



## HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4923.750	45.74	-0.56	45.18	74.00	-28.82	peak
2	9061.875	37.11	9.77	46.88	74.00	-27.12	peak
3	11730.000	34.44	16.98	51.42	74.00	-22.58	peak
4	12461.250	34.80	16.75	51.55	74.00	-22.45	peak
5	13880.625	32.97	18.69	51.66	74.00	-22.34	peak
6	17926.875	28.35	23.18	51.53	74.00	-22.47	peak

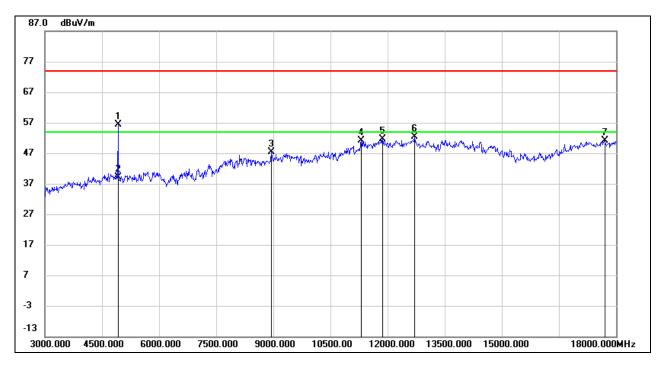
Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 3. Peak: Peak detector.
- 4. AVG Result=Peak Result + Duty Cycle Correction Factor.
- 5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.
- 6. The High Pass filter loss factor already add into the correct factor.
- 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.



# HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	56.94	-0.56	56.38	74.00	-17.62	peak
2	4920.000	/	/	38.55	54.00	-15.45	AVG
3	8940.000	37.83	9.47	47.30	74.00	-26.70	peak
4	11310.000	35.66	15.42	51.08	74.00	-22.92	peak
5	11865.000	34.30	17.24	51.54	74.00	-22.46	peak
6	12705.000	35.39	16.87	52.26	74.00	-21.74	peak
7	17700.000	29.40	21.80	51.20	74.00	-22.80	peak

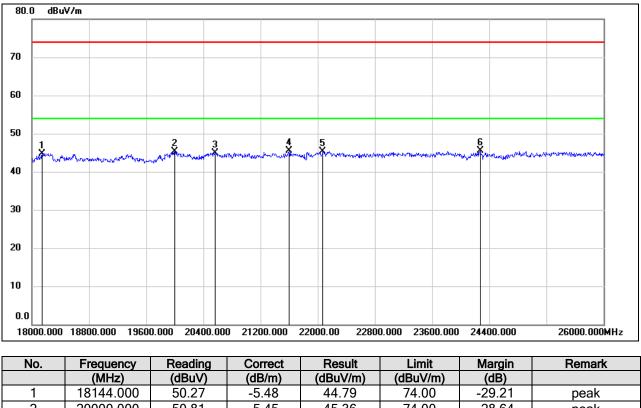
Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG Result=Peak Result + Duty Cycle Correction Factor.
- 5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.
- 6. The High Pass filter loss factor already add into the correct factor.
- 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.



# 7.5. SPURIOUS EMISSIONS (18 ~ 26 GHz)

#### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



2	20000.000	50.81	-5.45	45.36	74.00	-28.64	peak
3	20560.000	50.23	-5.30	44.93	74.00	-29.07	peak
4	21600.000	50.02	-4.54	45.48	74.00	-28.52	peak
5	22072.000	49.77	-4.41	45.36	74.00	-28.64	peak
6	24272.000	48.25	-2.79	45.46	74.00	-28.54	peak

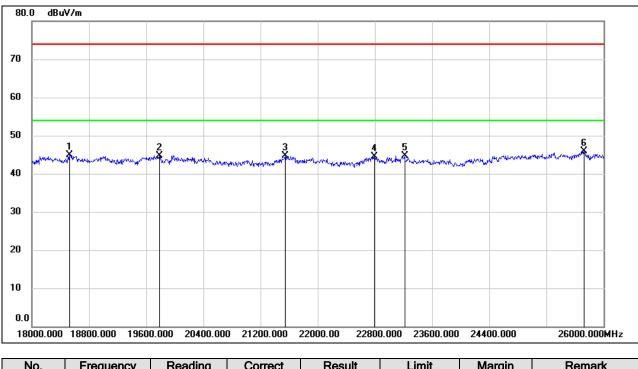
Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



#### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	18528.000	50.11	-5.26	44.85	74.00	-29.15	peak
2	19784.000	50.07	-5.28	44.79	74.00	-29.21	peak
3	21544.000	49.26	-4.63	44.63	74.00	-29.37	peak
4	22792.000	48.11	-3.65	44.46	74.00	-29.54	peak
5	23216.000	48.01	-3.38	44.63	74.00	-29.37	peak
6	25728.000	46.61	-0.72	45.89	74.00	-28.11	peak

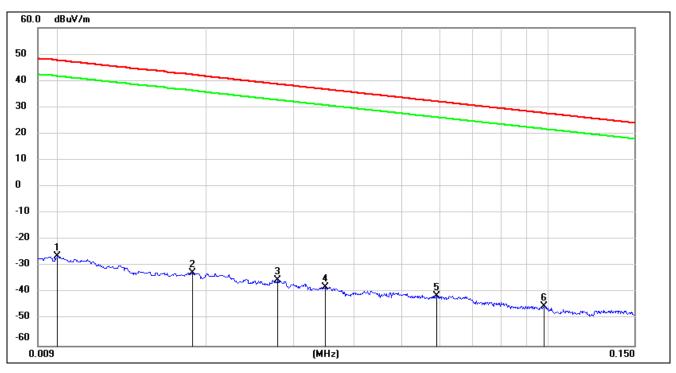
Note: 1. Measurement = Reading Level + Correct Factor.

If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
Peak: Peak detector.

Note: All test modes had been tested, only the worst data record in the report.

# 7.6. SPURIOUS EMISSIONS BELOW 30 MHz

#### SPURIOUS EMISSIONS (HIGH CHANNEL, LOOP ANTENNA FACE ON TO THE EUT, WORST-CASE CONFIGURATION)



## <u>9 kHz ~ 150 kHz</u>

No.	Frequency	Reading	Correct	FCC	FCC	ISED	ISED	Margin	Remark
				Result	Limit	Result	Limit		
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0100	75.22	-101.40	-26.18	47.6	-77.68	-3.90	-73.78	peak
2	0.0187	68.70	-101.35	-32.65	42.16	-84.15	-9.34	-74.81	peak
3	0.0279	66.17	-101.38	-35.21	38.69	-86.71	-12.81	-73.90	peak
4	0.0349	63.53	-101.41	-37.88	36.75	-89.38	-14.75	-74.63	peak
5	0.0589	60.31	-101.52	-41.21	32.2	-92.71	-19.30	-73.41	peak
6	0.0981	56.77	-101.78	-45.01	27.77	-96.51	-23.73	-72.78	peak

Note: 1. Measurement = Reading Level + Correct Factor.

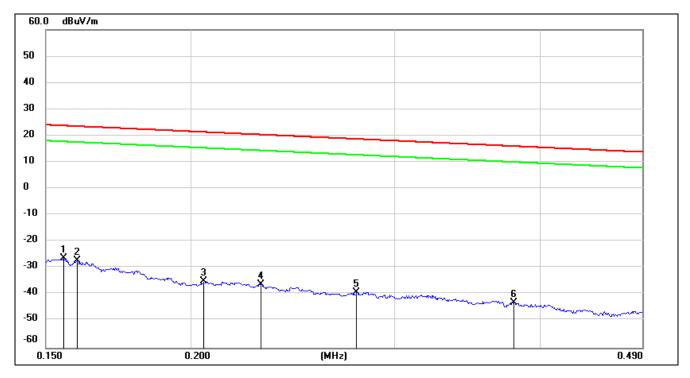
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

4.  $dBuA/m = dBuV/m - 20log10(120\pi) = dBuV/m - 51.5$ .



#### <u>150 kHz ~ 490 kHz</u>



No.	Frequency	Reading	Correct	FCC	FCC	ISED	ISED	Margin	Remark
				Result	Limit	Result	Limit		
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1554	75.27	-101.65	-26.38	23.77	-77.88	-27.73	-50.15	peak
2	0.1595	74.36	-101.65	-27.29	23.55	-78.79	-27.95	-50.84	peak
3	0.2053	66.79	-101.73	-34.94	21.35	-86.44	-30.15	-56.29	peak
4	0.2298	65.55	-101.77	-36.22	20.37	-87.72	-31.13	-56.59	peak
5	0.2782	62.79	-101.83	-39.04	18.71	-90.54	-32.79	-57.75	peak
6	0.3800	59.02	-101.94	-42.92	16.01	-94.42	-35.49	-58.93	peak

Note: 1. Measurement = Reading Level + Correct Factor.

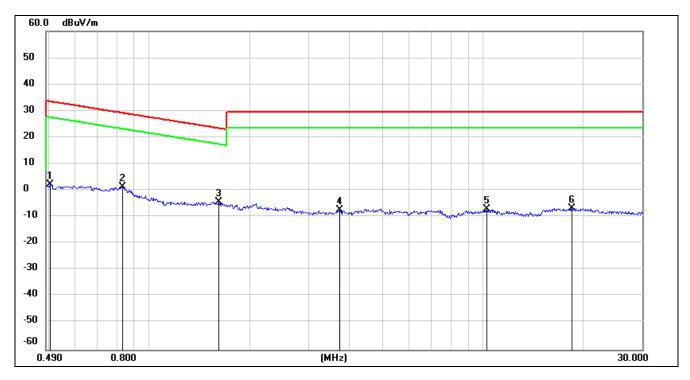
2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

4.  $dBuA/m = dBuV/m - 20log10(120\pi) = dBuV/m - 51.5$ .



#### <u>490 kHz ~ 30 MHz</u>



No.	Frequency	Reading	Correct	FCC	FCC	ISED	ISED	Margin	Remark
				Result	Limit	Result	Limit		
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.5039	64.44	-62.07	2.37	33.56	-49.13	-17.94	-31.19	peak
2	0.8296	63.44	-62.17	1.27	29.23	-50.23	-22.27	-27.96	peak
3	1.6149	57.62	-62.00	-4.38	23.44	-55.88	-28.06	-27.82	peak
4	3.7100	54.20	-61.41	-7.21	29.54	-58.71	-21.96	-36.75	peak
5	10.2576	53.63	-60.81	-7.18	29.54	-58.68	-21.96	-36.72	peak
6	18.4908	54.06	-60.89	-6.83	29.54	-58.33	-21.96	-36.37	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

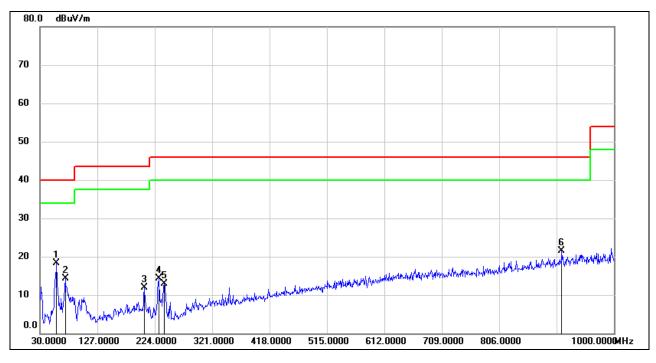
4.  $dBuA/m = dBuV/m - 20log10(120\pi) = dBuV/m - 51.5$ .

Note: All test modes had been tested, only the worst data record in the report.



# 7.7. SPURIOUS EMISSIONS BELOW 1 GHz AND ABOVE 30 MHz

## SPURIOUS EMISSIONS (HIGH CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	58.1300	38.80	-20.55	18.25	40.00	-21.75	QP
2	72.6800	35.02	-20.76	14.26	40.00	-25.74	QP
3	206.5399	28.81	-16.97	11.84	43.50	-31.66	QP
4	230.7900	32.99	-18.71	14.28	46.00	-31.72	QP
5	240.4900	32.16	-19.17	12.99	46.00	-33.01	QP
6	911.7300	26.52	-4.93	21.59	46.00	-24.41	QP

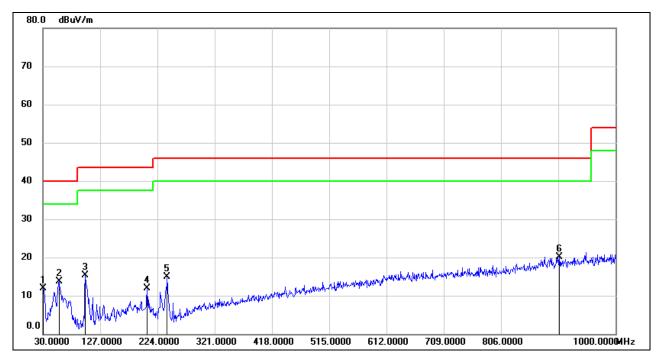
Note: 1. Result Level = Read Level + Correct Factor.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.



#### SPURIOUS EMISSIONS (HIGH CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	30.9700	30.88	-19.04	11.84	40.00	-28.16	QP
2	57.1600	34.26	-20.58	13.68	40.00	-26.32	QP
3	101.7800	36.22	-21.00	15.22	43.50	-28.28	QP
4	206.5399	28.93	-16.97	11.96	43.50	-31.54	QP
5	240.4900	34.07	-19.17	14.90	46.00	-31.10	QP
6	904.9400	25.26	-5.11	20.15	46.00	-25.85	QP

Note: 1. Result Level = Read Level + Correct Factor.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

Note: All the channels have been tested, only the worst data was recorded in the report.



# 8. ANTENNA REQUIREMENTS

# APPLICABLE REQUIREMENTS

#### Please refer to FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

## Please refer to FCC §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RESULTS Complies

# **END OF REPORT**