

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

TEST REPORT

For

TOY Transmitter

MODEL NUMBER: GGH7F

FCC ID: G6DGGH7F

IC: 9650A-GGH7F

REPORT NUMBER: 4789432922-1

ISSUE DATE: April 15, 2020

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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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	04/15/2020	Initial Issue	



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Summary of Test Results					
Clause	Test Items	IC Rules	Test Results		
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	Antenna Requirement	CFR 47 FCC §15.203 ISED RSS-Gen Clause 6.3	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 < CFR 47 FCC PART 15 SUBPART C, ISED RSS-210 Issue 9 and ISED RSS-GEN Issue 5 > when <Accuracy Method> decision rule is applied.



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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: GGH7F

Sample Received Date: March 23, 2020

Sample Status: Normal

Date of Tested: March 23, 2020~ April 15, 2020

APPLICABLE STANDARDS			
STANDARD TEST RESULT			
CFR 47 FCC PART 15 SUBPART C	PASS		
ISED RSS-210 Issue 9	PASS		
ISED RSS-GEN Issue 5	PASS		

Prepared By:	Checked By:
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Approved By:

Stephen Guo Laboratory Manager

Sephenbuo



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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 9 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
Company Number is 21320. VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)	
	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
	Tolliciality (Coll D, the Vool registration No. is 0-20012 and 1-20011

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
- 2. 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.



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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	3.62dB
Radiation Emission test (include Fundamental emission) (9KHz-30MHz)	2.2dB
Radiation Emission test (include Fundamental emission) (30MHz-1GHz)	4.00dB
Radiation Emission test	5.78dB (1GHz-18Gz)
(1GHz to 26GHz) (include Fundamental emission)	5.23dB (18GHz-26Gz)

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

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	TOY Transmitter		
EUT Description	The EUT is a wireless remote controller.		
Model	GGH7F		
Product Description	Operation Frequency	2410 MHz ~ 2473 MHz	
Product Description	Modulation Type	GFSK	
Battery	DC 3.0V		

5.2. MAXIMUM FIELD STRENGTH

Frequency (MHz)	Channel Number	Max Peak field strength (dBμV/m)
2473	32[32]	93.55

5.3. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2410	11	2429	21	2450	31	2469
2	2414	12	2430	22	2452	32	2473
3	2415	13	2431	23	2454	/	/
4	2416	14	2433	24	2456	/	/
5	2417	15	2434	25	2458	/	/
6	2418	16	2439	26	2462	/	/
7	2419	17	2441	27	2464	/	/
8	2421	18	2442	28	2465	/	/
9	2426	19	2444	29	2466	/	/
10	2428	20	2446	30	2467	/	/

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2410~ 2473	Wire Antenna	1

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



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5.5. **TEST CHANNEL CONFIGURATION**

Test Mode	Test Channel	Frequency
GFSK	CH 1(Low Channel), CH 18(MID Channel), CH 32(High Channel)	2410MHz, 2442MHz, 2473MHz

5.6. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2410 MHz ~ 2473 MHz Band				
Test Software Version /				
Modulation Tuna	Transmit Antenna	Test Channel		
Modulation Type	Number	CH 0	CH 18	CH 32
GFSK	1	Default	Default	Default

5.7. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests				
Relative Humidity	55 ~ 65%				
Atmospheric Pressure:	1025Pa				
Temperature	TN	22 ~ 28°C			
	VL	/			
Voltage:	VN	DC 3.0V			
	VH	/			

Note: VL= Lower Extreme Test Voltage

VN= Nominal Voltage

VH= Upper Extreme Test Voltage TN= Normal Temperature



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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.
/	/	/	/	/	/

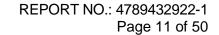
TEST SETUP

The EUT have the engineer mode inside.

SETUP DIAGRAM FOR TEST

EUT

Note: New battery was used during all tests.





5.9. MEASURING INSTRUMENT AND SOFTWARE USED

	Conducted Emissions									
Eq	uipment	Manufa	acturer		del No.		Serial		Last Cal.	Due Date
	MI Test eceiver	R8	ks .	S ESR3			1019	61	Dec. 5, 2019	Dec. 5, 2020
	o-Line V- etwork	R8	ks .	EN	NV216		1019	83	Dec. 5, 2019	Dec. 5, 2020
					Sc	oftware				
		Descri	ption			N	/lanufa	cturer	Name	Version
Т	est Softwar	e for Co	nducted	Emis	sions		Fara	ad	EZ-EMC	Ver. UL-3A1
				R	adiate					
Llood	Faulisa	201	Manufa	-t		trumen		al Nia	Last Cal	Novt Col
Used	Equipm MXE E		Manufad		Mode			al No.	Last Cal.	Next Cal.
$\overline{\mathbf{V}}$	Recei	ver	KESIG	HT	N90	38A	MY564	400036	Dec. 6, 2019	Dec. 6, 2020
V	Hybrid Periodic A		TDł	<	HLP-3	3003C	130	959	Sept.17, 2018	Sept.17,2021
V	Preamp		HP	ı	844	17D	2944A	09099	Dec. 5, 2019	Dec. 5, 2020
V	EMI Measurement Receiver		R&S	3	ESR26		101	377	Dec. 05, 2019	Dec.05, 2020
\checkmark	✓ Horn Antenna		TDł	K HRN-0118		130	939	Sept. 17, 2018	Sept.17,2021	
V	☑ Preamplifier TDK		<	PA-02	2-0118		-305- 067	Dec. 05, 2019	Dec.05, 2020	
\checkmark	Loop ant	enna	Schwarz	zbeck	151	19B	000	800	Jan.17, 2019	Jan.17, 2022
V	☑ Preamplifier TDK		PA-02			-302- 050	Dec. 05, 2019	Dec.05, 2020		
V	High Gain Horn Schwarzbeck BB		BBHA	-9170	69	91	Aug.11,2018	Aug.11,2021		
V	Preamp	lifier	TDI	<	PA-0	02-2		-307- 003	Dec. 05, 2019	Dec.05, 2020
						oftware				
Used		Descr			N	<i>M</i> anufa	cturer		Name	Version
V	Test Software for Radiated disturbance			Fara	ad		EZ-EMC	Ver. UL-3A1		
Other instruments										
Used	Equipm	nent	Manufad	cturer	Mode		Seria	al No.	Last Cal.	Next Cal.
V	High Pass	s Filter	Wi		2700-	WHKX10- 2700-3000- 18000-40SS		23	Dec. 05, 2019	Dec.05, 2020
V	Band Reje	ct Filter	Wainw	right	WRC 2350- 248 2533.5	JV8- 2400- 3.5-		4	Dec. 05, 2019	Dec.05, 2020

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6. ANTENNA PORT TEST RESULTS

6.1. ON TIME AND DUTY CYCLE

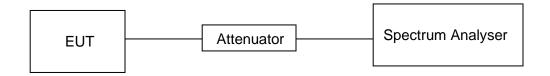
LIMITS

None; for reporting purposes only

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



TEST ENVIRONMENT

Temperature	22.7°C	Relative Humidity	55%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.0V

RESULTS

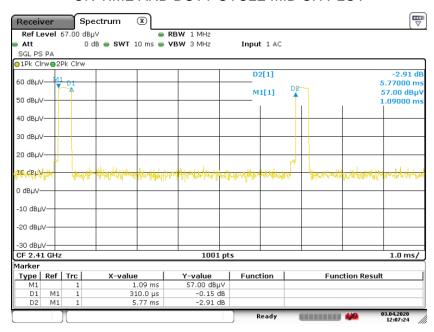
Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)
GFSK	5.58	100	0.0558	5.58	-25.07

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

Where: x is Duty Cycle

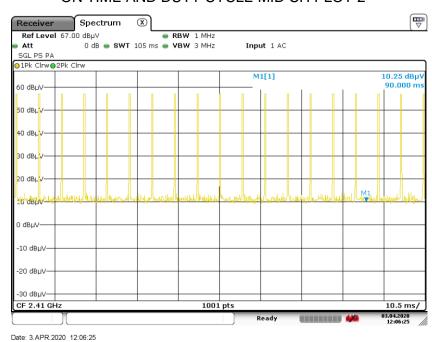


ON TIME AND DUTY CYCLE MID CH PLOT



Date: 3.APR.2020 12:07:24

ON TIME AND DUTY CYCLE MID CH PLOT-2



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

LIMITS

CFR 47 FCC Part15 (15.249) Subpart C RSS-Gen Issue 5					
Section Test Item Limit Frequency Ran (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		

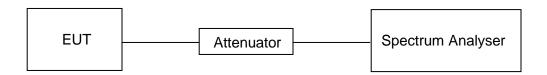
TEST PROCEDURE

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 3xRBW
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

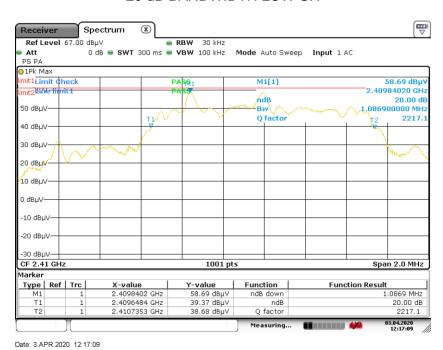
Temperature	22.9°C	Relative Humidity	62%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.0V



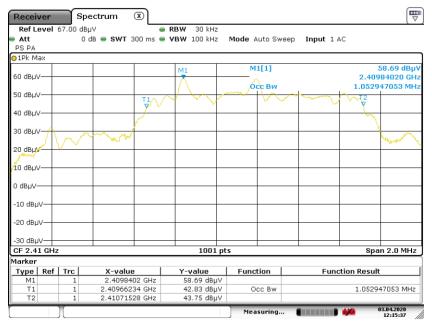
RESULTS

Frequency (MHz)	20dB bandwidth (MHz)	99% bandwidth (MHz)	Result
2410	1.087	1.053	PASS

20 dB BANDWIDTH LOW CH



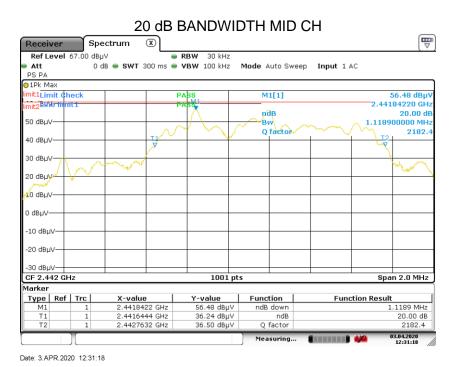
99% OCCUPIED BANDWIDTH LOW CH



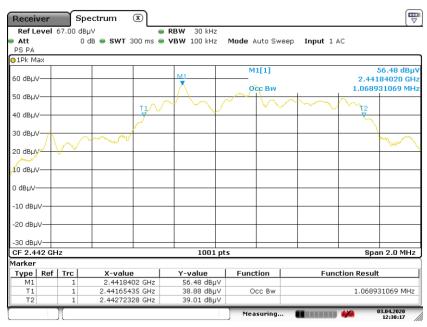
Date: 3.APR.2020 12:15:37



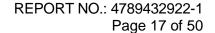
Frequency	20dB bandwidth	99% bandwidth	Result
(MHz)	(MHz)	(MHz)	
2442	1.119	1.069	PASS



99% OCCUPIED BANDWIDTH MID CH



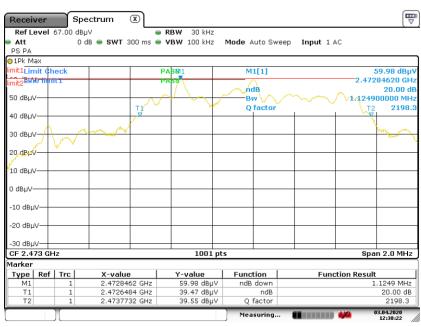
Date: 3.APR.2020 12:30:17



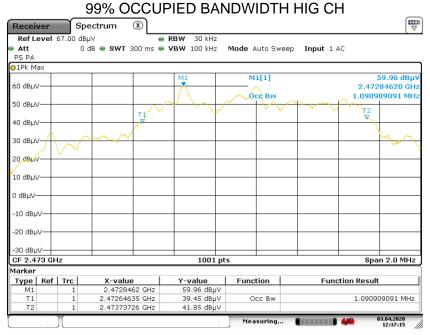


Frequency	20dB bandwidth	99% bandwidth	Result
(MHz)	(MHz)	(MHz)	
2473	1.125	1.091	PASS

20 dB BANDWIDTH HIG CH



Date: 3.APR.2020 12:38:21



Date: 3.APR.2020 12:37:15

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7. RADIATED TEST RESULTS

LIMITS

CFR 47 FCC §15.205 and §15.209

7.1. LIMITS AND PROCEDURE

CFR 47 FCC §15.249 (a)(d)(c)(e)

ISED RSS-210 Issue 9 Annex B B.10

RSS-GEN Clause 8.9

The field strength of emissions 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 radiated outside of the specified frequency bands above 30MHz			
Frequency Range	uency Range Field Strength Limit (dBuV/m) at 3 m Quasi-Pe		_
(MHz)			•
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
Above 1000	300	74	54

FCC Emissions radiated outside of the specified frequency 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	



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 ^{Note 1}	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

NHZ MHZ 190 - 0.110 149.9 - 150.05 195 - 0.505 156.52475 - 156.52525 735 - 2.1905 156.7 - 156.9 120 - 3.026 162.0125 - 167.17 25 - 4.128 167.72 - 173.2 7725 - 4.17775 240 - 285 20725 - 4.20775 322 - 335.4 377 - 5.683 399.9 - 410 215 - 6.218 608 - 614 26775 - 6.26825 960 - 1427 11175 - 6.31225 1435 - 1626.5 191 - 8.294 1645.5 - 1646.5	9.0 - 9.2 9.3 - 9.5 10.6 - 12.7 13.25 - 13.4 14.47 - 14.5 15.35 - 16.2 17.7 - 21.4 22.01 - 23.12 23.6 - 24.0 31.2 - 31.8 36.43 - 36.5
156.52475 - 156.52525 1735 - 2.1905 156.7 - 156.9 120 - 3.026 162.0125 - 167.17 125 - 4.128 167.72 - 173.2 17725 - 4.17775 240 - 285 177 - 5.683 399.9 - 410 115 - 6.218 108 - 614 107 - 6.2625 11175 - 6.31225 1435 - 1626.5	9.3 - 9.5 10.6 - 12.7 13.25 - 13.4 14.47 - 14.5 15.35 - 16.2 17.7 - 21.4 22.01 - 23.12 23.6 - 24.0 31.2 - 31.8
156.7 - 156.9 120 - 3.026 162.0125 - 167.17 25 - 4.128 167.72 - 173.2 17725 - 4.17775 240 - 285 20725 - 4.20775 322 - 335.4 377 - 5.683 399.9 - 410 215 - 6.218 608 - 614 26775 - 6.26825 960 - 1427 11175 - 6.31225 1435 - 1626.5	10.6 - 12.7 13.25 - 13.4 14.47 - 14.5 15.35 - 16.2 17.7 - 21.4 22.01 - 23.12 23.6 - 24.0 31.2 - 31.8
120 - 3.026 162.0125 - 167.17 25 - 4.128 167.72 - 173.2 7725 - 4.17775 240 - 285 10725 - 4.20775 322 - 335.4 177 - 5.683 399.9 - 410 115 - 6.218 608 - 614 126775 - 6.26825 960 - 1427 11175 - 6.31225 1435 - 1626.5	13.25 - 13.4 14.47 - 14.5 15.35 - 16.2 17.7 - 21.4 22.01 - 23.12 23.6 - 24.0 31.2 - 31.8
25 - 4.128	14.47 - 14.5 15.35 - 16.2 17.7 - 21.4 22.01 - 23.12 23.6 - 24.0 31.2 - 31.8
240 – 285 20725 - 4.20775 322 - 335.4 377 - 5.683 399.9 - 410 215 - 6.218 608 - 614 26775 - 6.26825 960 - 1427 11175 - 6.31225 1435 - 1626.5	15.35 · 16.2 17.7 · 21.4 22.01 · 23.12 23.6 · 24.0 31.2 · 31.8
20725 - 4.20775 322 - 335.4 177 - 5.683 398.9 - 410 115 - 6.218 608 - 614 126775 - 6.26825 960 - 1427 11175 - 6.31225 1435 - 1626.5	17.7 - 21.4 22.01 - 23.12 23.6 - 24.0 31.2 - 31.8
177 - 5.683 399.9 - 410 215 - 6.218 608 - 614 26775 - 6.26825 960 - 1427 11175 - 6.31225 1435 - 1626.5	22.01 - 23.12 23.6 - 24.0 31.2 - 31.8
115 - 6.218 608 - 614 18775 - 6.26825 960 - 1427 11175 - 6.31225 1435 - 1626.5	23.6 - 24.0 31.2 - 31.8
26775 - 6.26825 960 - 1427 11175 - 6.31225 1435 - 1626.5	31.2 - 31.8
11175 - 6.31225 1435 - 1626.5	
	36.43 - 36.5
91 - 8.294 1645.5 - 1646.5	
	Above 38.6
862 - 8.366 1660 - 1710	
7625 - 8.38675 1718.B - 1722.2	
1425 - 8.41475 2200 - 2300	
29 - 12 293 2310 - 2390	
51975 - 12.52025 2483.5 - 2500	
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	
8 - 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:

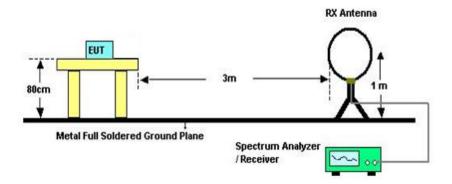
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	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	(²)
13.36-13.41			

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



TEST SETUP AND PROCEDURE

Below 30MHz



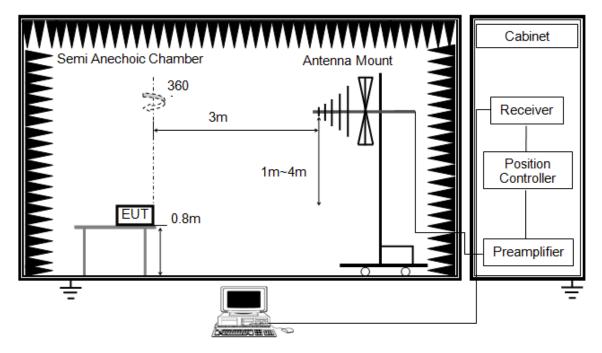
The setting of the spectrum analyser

RBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
VBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
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 80cm meter above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1m 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 1000MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.
- 6. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open field site. Therefore, the 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.



Below 1G



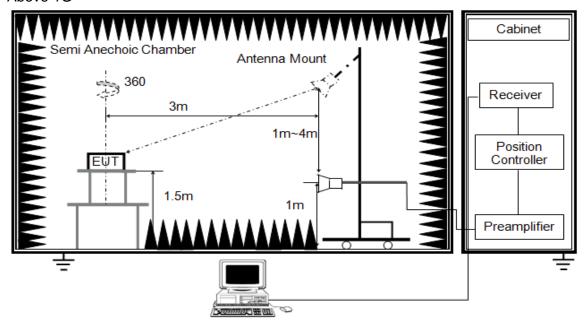
The setting of the spectrum analyser

RBW	120K
VBW	300K
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 1G



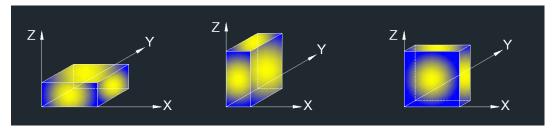
The setting of the spectrum analyser

RBW	1M
IVEVV	PEAK: 3M AVG: see note 6
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.
- 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.



X axis, Y axis, Z axis positions:



Note 1: 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

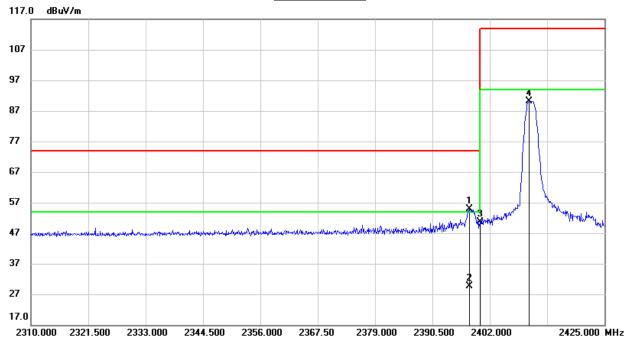
Temperature	23.9°C	Relative Humidity	54%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.0V



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7.2. RESTRICTED BANDEDGE AND FIELD STRENGTH OF INTENTIONAL EMISSIONS

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

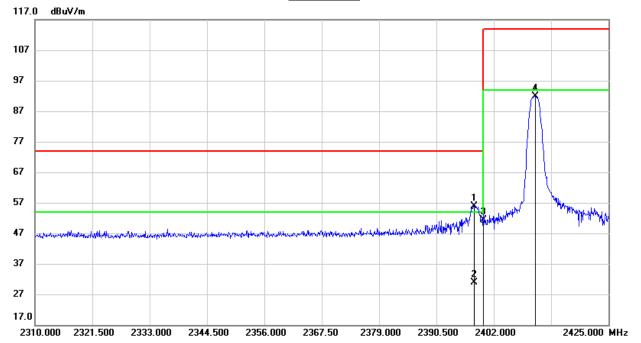


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2397.860	21.79	32.98	54.77	74.00	-19.23	peak
2	2397.860	-3.28	32.98	29.70	54.00	-24.30	AVG
3	2400.000	17.71	32.98	50.69	74.00	-23.31	peak
4	2409.935	57.00	33.05	90.05	114.00	-23.95	peak

- 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 Correction Factor.
- 5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



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

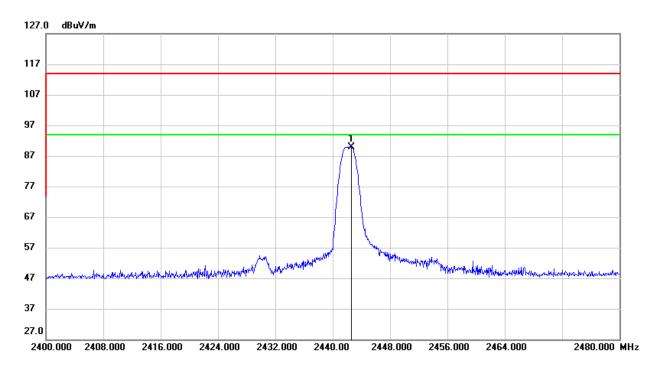


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2398.090	22.97	32.98	55.95	74.00	-18.05	peak
2	2398.090	-2.10	32.98	30.88	54.00	-23.12	AVG
3	2400.000	18.37	32.98	51.35	74.00	-22.65	peak
4	2410.280	58.75	33.06	91.81	114.00	-22.19	peak

- 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 Correction Factor.
- 5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



FIELD STRENGTH OF INTENTIONAL EMISSIONS (MIDDLE CHANNEL, HORIZONTAL)

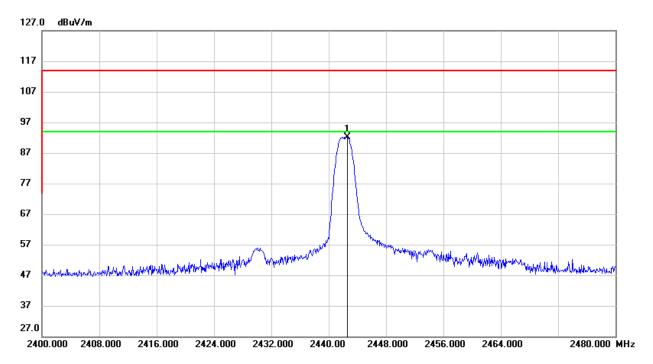


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2442.560	56.54	33.29	89.83	114.00	-24.17	peak

- 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 Correction Factor.
- 5. For the Duty Cycle and Correction Factor, please refer to clause 6.1.
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



FIELD STRENGTH OF INTENTIONAL EMISSIONS (MIDDLE CHANNEL, VERTICAL)



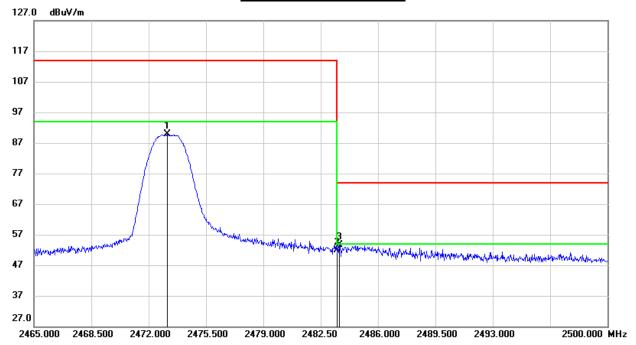
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2442.560	58.78	33.29	92.07	114.00	-21.93	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



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

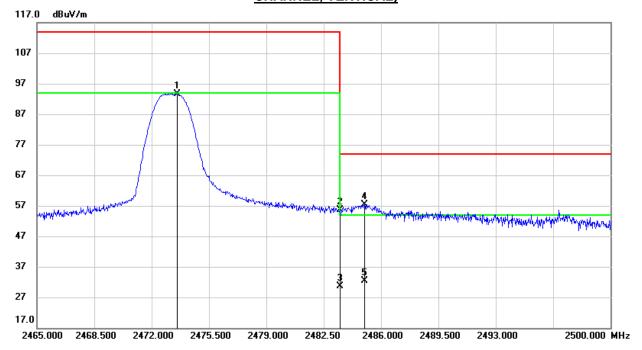


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2473.120	56.28	33.50	89.78	114.00	-24.22	peak
2	2483.500	18.24	33.58	51.82	74.00	-22.18	peak
3	2483.620	20.04	33.58	53.62	74.00	-20.38	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



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



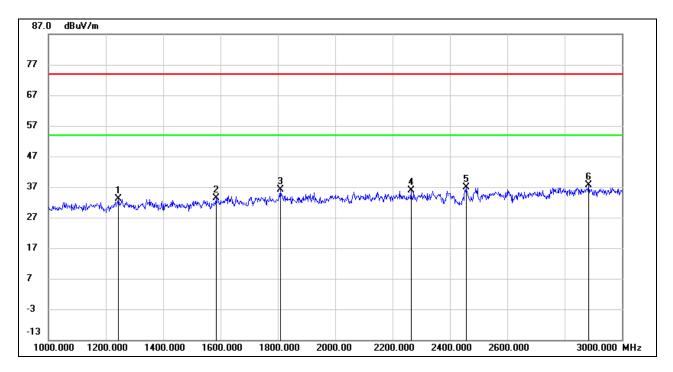
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2473.575	60.04	33.51	93.55	114.00	-20.45	peak
2	2483.500	22.07	33.58	55.65	74.00	-18.35	peak
3	2483.500	-3.00	33.58	30.58	54.00	-23.42	AVG
4	2484.985	23.90	33.59	57.49	74.00	-16.51	peak
5	2484.985	-1.17	33.59	32.42	54.00	-21.58	AVG

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Only the worst emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



7.3. SPURIOUS EMISSIONS (1~3GHz)

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

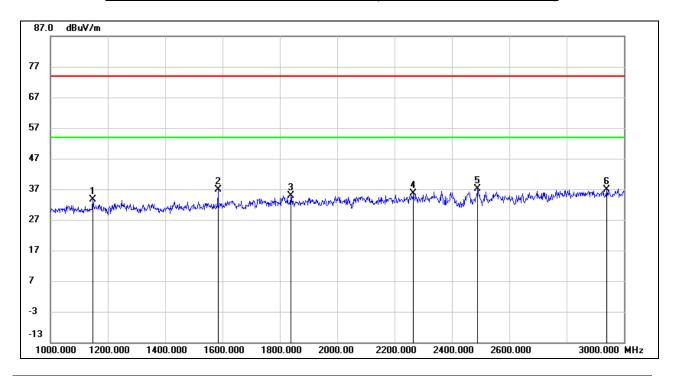


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1244.000	45.77	-12.53	33.24	74.00	-40.76	peak
2	1584.000	44.89	-11.53	33.36	74.00	-40.64	peak
3	1810.000	45.94	-9.92	36.02	74.00	-37.98	peak
4	2264.000	44.14	-8.36	35.78	74.00	-38.22	peak
5	2456.000	44.41	-7.47	36.94	74.00	-37.06	peak
6	2884.000	43.27	-5.61	37.66	74.00	-36.34	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 BRF losses.
 - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, VERTICAL)

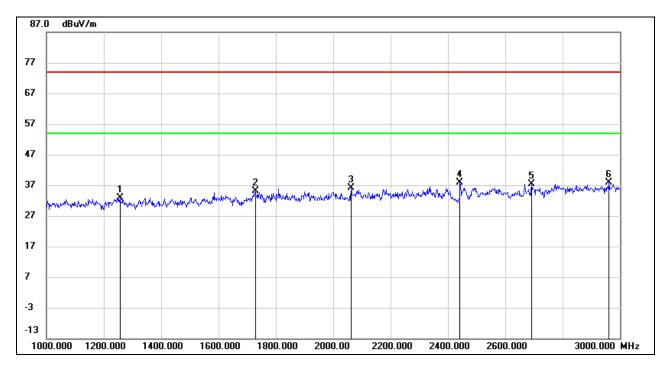


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1148.000	46.68	-13.11	33.57	74.00	-40.43	peak
2	1584.000	48.36	-11.53	36.83	74.00	-37.17	peak
3	1838.000	44.91	-9.93	34.98	74.00	-39.02	peak
4	2266.000	43.96	-8.35	35.61	74.00	-38.39	peak
5	2490.000	44.41	-7.24	37.17	74.00	-36.83	peak
6	2940.000	42.28	-5.44	36.84	74.00	-37.16	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 BRF losses.
 - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, HORIZONTAL)

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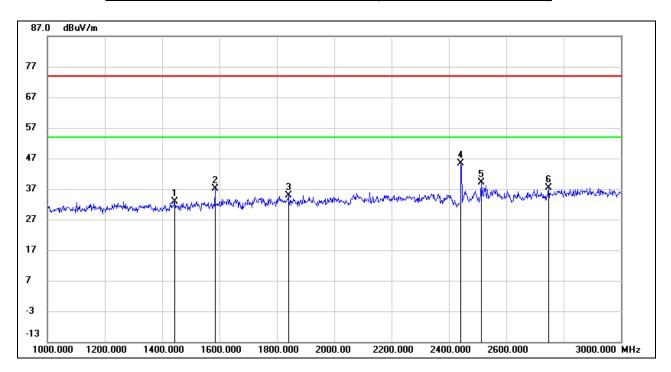


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1256.000	45.44	-12.49	32.95	74.00	-41.05	peak
2	1728.000	45.85	-10.62	35.23	74.00	-38.77	peak
3	2062.000	45.43	-9.41	36.02	74.00	-37.98	peak
4	2442.000	45.43	-7.57	37.86	/	/	fundamental
5	2692.000	44.58	-7.17	37.41	74.00	-36.59	peak
6	2962.000	43.27	-5.39	37.88	74.00	-36.12	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 BRF losses.
 - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

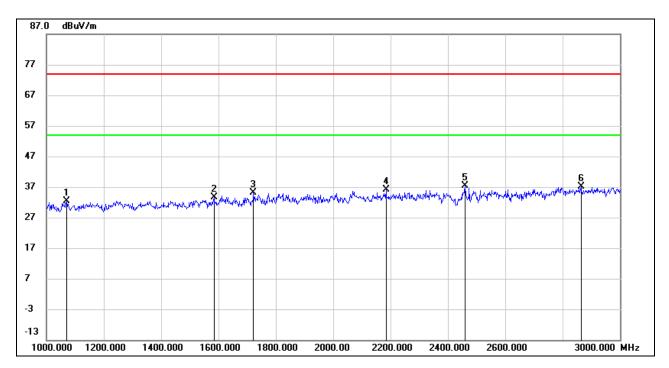


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1444.000	45.18	-12.31	32.87	74.00	-41.13	peak
2	1584.000	48.58	-11.53	37.05	74.00	-36.95	peak
3	1840.000	44.89	-9.93	34.96	74.00	-39.04	peak
4	2442.000	52.87	-7.57	45.30	/	/	fundamental
5	2512.000	46.27	-7.23	39.04	74.00	-34.96	peak
6	2748.000	44.11	-6.61	37.50	74.00	-36.50	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 BRF losses.
 - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, HORIZONTAL)

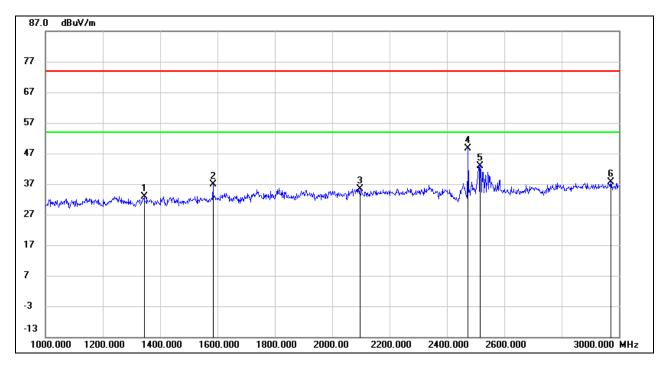


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1070.000	45.96	-13.53	32.43	74.00	-41.57	peak
2	1584.000	45.20	-11.53	33.67	74.00	-40.33	peak
3	1722.000	45.72	-10.69	35.03	74.00	-38.97	peak
4	2184.000	44.89	-8.74	36.15	74.00	-37.85	peak
5	2460.000	44.80	-7.44	37.36	74.00	-36.64	peak
6	2864.000	42.75	-5.71	37.04	74.00	-36.96	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 BRF losses.
 - 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

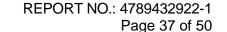


HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1344.000	45.22	-12.36	32.86	74.00	-41.14	peak
2	1584.000	48.41	-11.53	36.88	74.00	-37.12	peak
3	2096.000	44.51	-9.19	35.32	74.00	-38.68	peak
4	2473.000	55.89	-7.35	48.54	/	/	fundamental
5	2516.000	50.25	-7.25	43.00	74.00	-31.00	peak
6	2972.000	43.01	-5.36	37.65	74.00	-36.35	peak

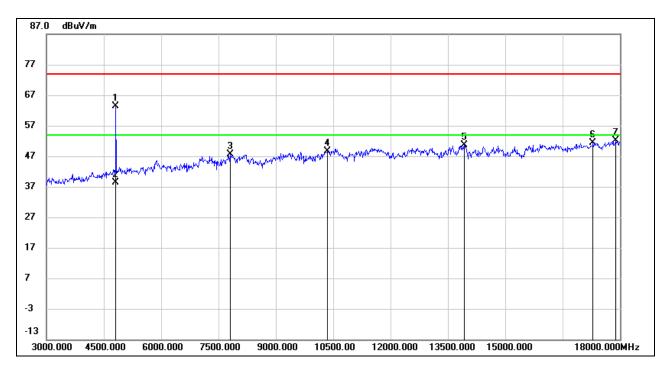
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in then spurious frequency bands and the authorized band was not corrected for BRF losses.
 - 5. Proper operation of the transmitter prior to adding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





7.4. SPURIOUS EMISSIONS (3~18GHz)

HARMONICS AND SPURIOUS EMISSIONS (LOW CHANNEL, HORIZONTAL)

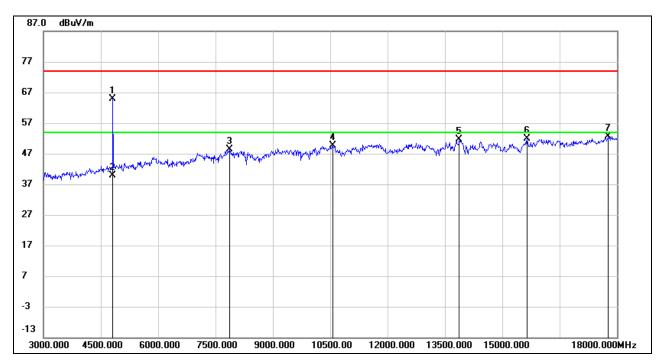


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4820.000	62.79	0.54	63.33	74.00	-10.67	peak
2	4820.000	37.72	0.54	38.26	54.00	-15.74	AVG
3	7800.000	39.68	7.93	47.61	74.00	-26.39	peak
4	10350.000	37.50	11.02	48.52	74.00	-25.48	peak
5	13920.000	34.38	16.17	50.55	74.00	-23.45	peak
6	17295.000	29.55	21.71	51.26	74.00	-22.74	peak
7	17895.000	28.79	23.34	52.13	74.00	-21.87	peak

- 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 (LOW CHANNEL, VERTICAL)

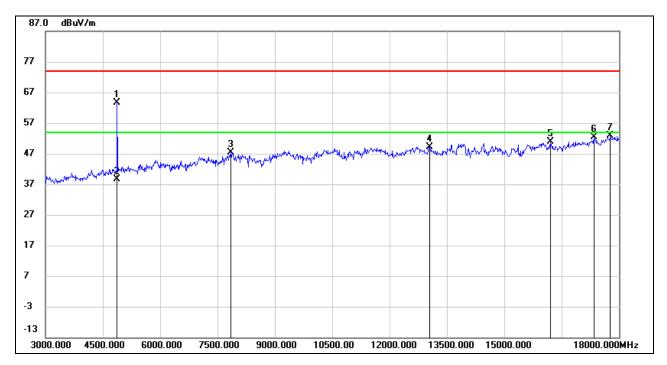


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4820.000	64.37	0.54	64.91	74.00	-9.09	peak
2	4820.000	39.30	0.54	39.84	54.00	-14.16	AVG
3	7875.000	40.91	7.40	48.31	74.00	-25.69	peak
4	10560.000	37.85	11.73	49.58	74.00	-24.42	peak
5	13875.000	35.11	16.44	51.55	74.00	-22.45	peak
6	15645.000	34.92	16.85	51.77	74.00	-22.23	peak
7	17775.000	29.54	23.09	52.63	74.00	-21.37	peak

- 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 (MID CHANNEL, HORIZONTAL)

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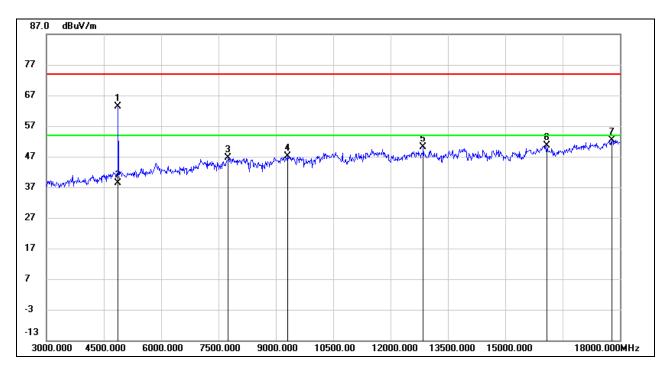


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4884.000	62.96	0.79	63.75	74.00	-10.25	peak
2	4884.000	37.89	0.79	38.68	54.00	-15.32	AVG
3	7845.000	39.78	7.62	47.40	74.00	-26.60	peak
4	13050.000	34.12	15.07	49.19	74.00	-24.81	peak
5	16200.000	32.28	18.50	50.78	74.00	-23.22	peak
6	17340.000	30.88	21.61	52.49	74.00	-21.51	peak
7	17775.000	29.82	23.09	52.91	74.00	-21.09	peak

- 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 (MID CHANNEL, VERTICAL)

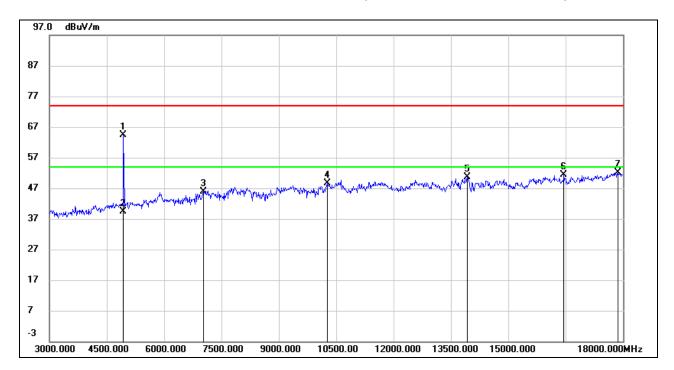


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4884.000	62.61	0.79	63.40	74.00	-10.60	peak
2	4884.000	37.54	0.79	38.33	54.00	-15.67	AVG
3	7755.000	39.40	7.29	46.69	74.00	-27.31	peak
4	9300.000	38.09	8.99	47.08	74.00	-26.92	peak
5	12855.000	34.89	15.23	50.12	74.00	-23.88	peak
6	16095.000	32.45	18.11	50.56	74.00	-23.44	peak
7	17790.000	29.23	23.22	52.45	74.00	-21.55	peak

- 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, HORIZONTAL)

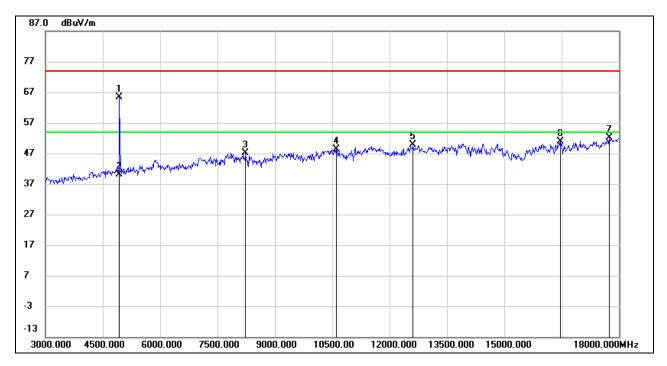


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4946.000	63.27	1.10	64.37	74.00	-9.63	peak
2	4946.000	38.20	1.10	39.30	54.00	-14.70	AVG
3	7035.000	40.18	5.81	45.99	74.00	-28.01	peak
4	10260.000	38.03	10.71	48.74	74.00	-25.26	peak
5	13920.000	34.56	16.17	50.73	74.00	-23.27	peak
6	16455.000	32.29	19.00	51.29	74.00	-22.71	peak
7	17865.000	28.75	23.33	52.08	74.00	-21.92	peak

- 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)



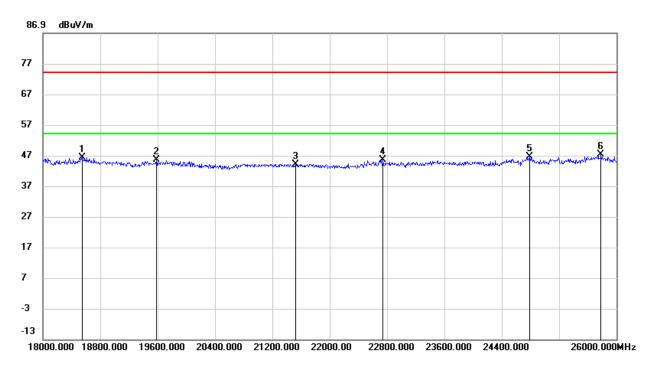
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4946.000	64.17	1.10	65.27	74.00	-8.73	peak
2	4946.000	39.10	1.10	40.20	54.00	-13.80	AVG
3	8235.000	39.03	8.06	47.09	74.00	-26.91	peak
4	10605.000	36.43	11.93	48.36	74.00	-25.64	peak
5	12615.000	35.91	14.03	49.94	74.00	-24.06	peak
6	16470.000	31.84	19.06	50.90	74.00	-23.10	peak
7	17745.000	29.24	22.82	52.06	74.00	-21.94	peak

- 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 (18~26GHz)

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

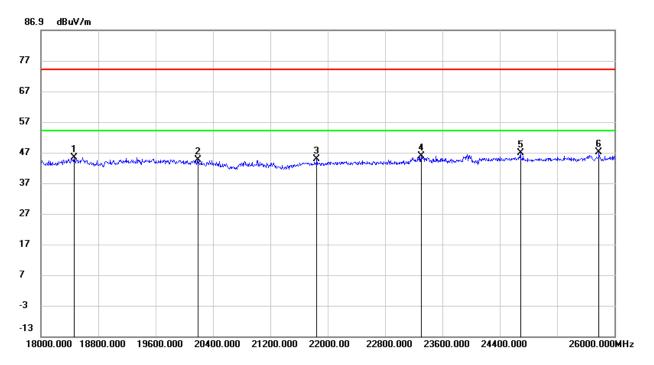


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	18544.000	50.76	-4.46	46.30	74.00	-27.70	peak
2	19584.000	50.17	-4.64	45.53	74.00	-28.47	peak
3	21528.000	49.92	-5.78	44.14	74.00	-29.86	peak
4	22744.000	51.18	-5.74	45.44	74.00	-28.56	peak
5	24784.000	48.31	-1.83	46.48	74.00	-27.52	peak
6	25784.000	48.73	-1.49	47.24	74.00	-26.76	peak

- 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 (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	18464.000	49.70	-4.39	45.31	74.00	-28.69	peak
2	20192.000	49.37	-4.76	44.61	74.00	-29.39	peak
3	21848.000	50.76	-5.95	44.81	74.00	-29.19	peak
4	23304.000	50.87	-5.16	45.71	74.00	-28.29	peak
5	24688.000	48.89	-2.11	46.78	74.00	-27.22	peak
6	25784.000	48.58	-1.49	47.09	74.00	-26.91	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.

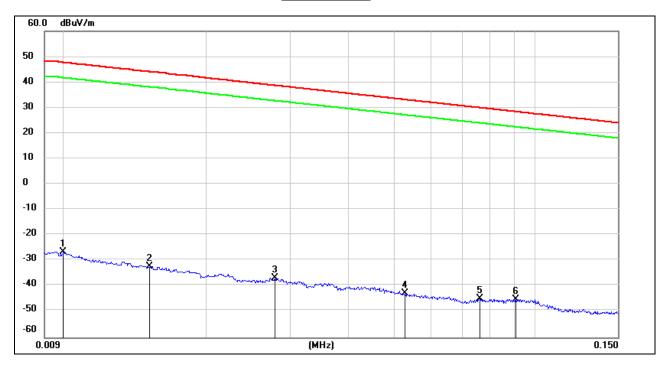
Note: All test modes had been tested, only the worst data record in the report.



7.6. SPURIOUS EMISSIONS BELOW 30MHz

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

9kHz~ 150kHz

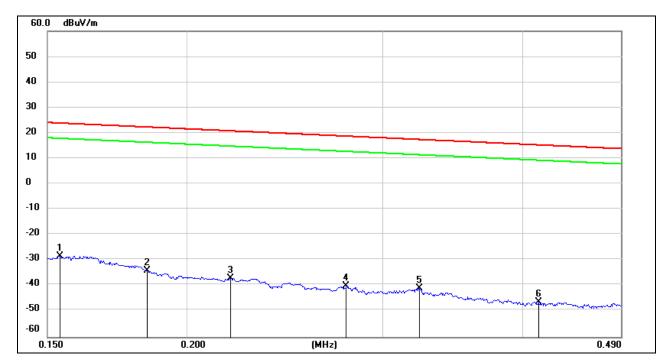


No.	Frequency	Reading	Correct	FCC	FCC	ISED	ISED	Margin	Remark
				Result	Limit	Result	Limit		
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0100	74.72	-101.40	-26.68	47.60	-78.18	-3.9	-74.28	peak
2	0.0151	69.21	-101.37	-32.16	44.02	-83.66	-7.48	-76.18	peak
3	0.0279	64.67	-101.38	-36.71	38.69	-88.21	-12.81	-75.40	peak
4	0.0529	58.80	-101.49	-42.69	33.13	-94.19	-18.37	-75.82	peak
5	0.0763	56.84	-101.60	-44.76	29.95	-96.26	-21.55	-74.71	peak
6	0.0911	56.61	-101.72	-45.11	28.41	-96.61	-23.09	-73.52	peak

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



150kHz ~ 490kHz

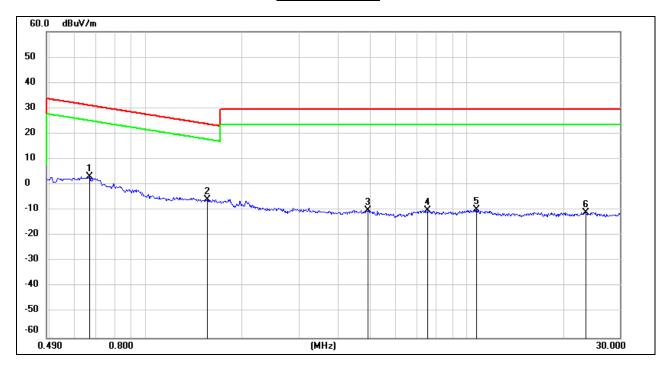


No.	Frequency	Reading	Correct	FCC	FCC	ISED	ISED	Margin	Remark
				Result	Limit	Result	Limit		
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1539	73.23	-101.64	-28.41	23.86	-79.91	-27.64	-52.27	peak
2	0.1842	67.62	-101.69	-34.07	22.30	-85.57	-29.2	-56.37	peak
3	0.2190	64.77	-101.75	-36.98	20.79	-88.48	-30.71	-57.77	peak
4	0.2782	61.79	-101.83	-40.04	18.71	-91.54	-32.79	-58.75	peak
5	0.3234	60.98	-101.88	-40.90	17.41	-92.4	-34.09	-58.31	peak
6	0.4132	55.55	-101.98	-46.43	15.28	-97.93	-36.22	-61.71	peak

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



490kHz ~ 30MHz



No.	Frequency	Reading	Correct	FCC Result	FCC Limit	ISED Result	ISED Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.6671	65.25	-62.10	3.15	31.12	-48.35	-20.38	-27.97	peak
2	1.5564	56.18	-62.02	-5.84	23.76	-57.34	-27.74	-29.60	peak
3	4.9165	51.38	-61.48	-10.10	29.54	-61.6	-21.96	-39.64	peak
4	7.5429	51.08	-61.14	-10.06	29.54	-61.56	-21.96	-39.60	peak
5	10.7299	50.98	-60.83	-9.85	29.54	-61.35	-21.96	-39.39	peak
6	23.4783	49.74	-60.56	-10.82	29.54	-62.32	-21.96	-40.36	peak

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

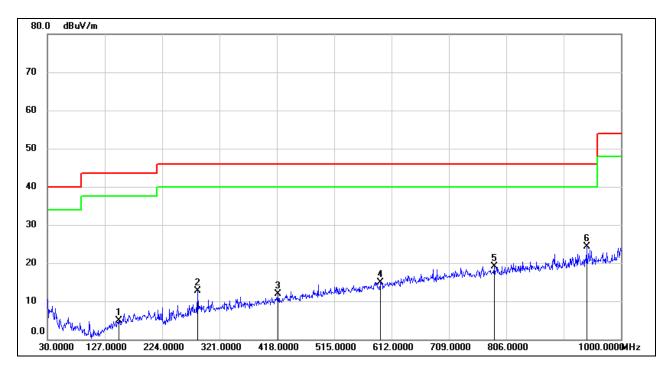
- 2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.
 - 4. $dBuA/m = dBuV/m 20log10(120\pi) = dBuV/m -51.5$.

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



7.7. SPURIOUS EMISSIONS BELOW 1GHz AND ABOVE 30MHz

SPURIOUS EMISSIONS (LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

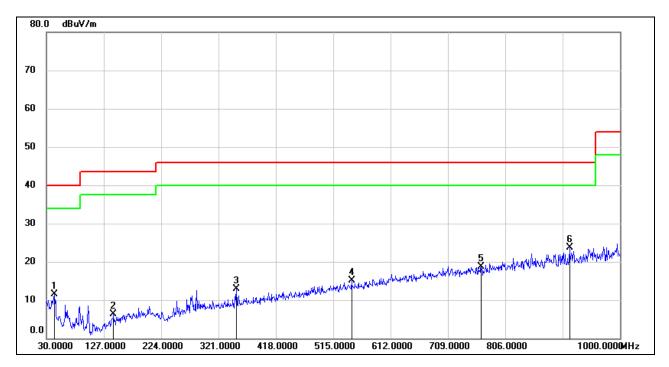


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	150.2800	23.11	-18.28	4.83	43.50	-38.67	QP
2	284.1400	27.68	-14.90	12.78	46.00	-33.22	QP
3	419.9400	24.22	-12.36	11.86	46.00	-34.14	QP
4	592.6000	24.07	-9.08	14.99	46.00	-31.01	QP
5	785.6300	24.99	-5.86	19.13	46.00	-26.87	QP
6	941.8000	27.92	-3.66	24.26	46.00	-21.74	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 (LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	43.5800	29.56	-17.97	11.59	40.00	-28.41	QP
2	143.4900	25.08	-18.86	6.22	43.50	-37.28	QP
3	351.0700	26.33	-13.50	12.83	46.00	-33.17	QP
4	546.0400	25.05	-9.96	15.09	46.00	-30.91	QP
5	765.2600	24.88	-6.09	18.79	46.00	-27.21	QP
6	914.6400	27.67	-4.03	23.64	46.00	-22.36	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 test modes had been tested, only the worst data record in the report.



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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.

<u>RESULTS</u>	
Complies	
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	FND OF REPORT