

GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD

Application For Certification

FCC ID: Z6QFX173RX17

DRONE MACH 10INCH WITH CAMERA

Model: MVid

2.4GHz Wi-Fi Transceiver

Report No.: GZHH00242298-002

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-15]

Prepared and Checked by:

Approved by:

Sign on file

Abel Zhou Senior Engineer Kidd Yang Senior Project Engineer Date: July 12, 2017

The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

For Terms And Conditions of the services, it can be provided upon request.

The evaluation data of the report will be kept for 3 years from the date of issuance.

TRF no.: FCC 15C_Tx_c

Intertek Testing Services Shenzhen Limited, Guangzhou E501, No.7-2, Caipin Road, Guangzhou Branch 深圳天祥质量技术服务有限公司广州分公司

Science City, GETDD Guangzhou. 广州经济技术开发区科学城彩频路7号之 _E501 (510663)

Tel +8620 8213 9688 Fax +8620 3205 3537 intertek.com.cn intertek.com



LIST OF EXHIBITS

INTRODUCTION

EXHIBIT 1:	Summary of Tests
EXHIBIT 2:	General Description
EXHIBIT 3:	System Test Configuration
EXHIBIT 4:	Measurement Results
EXHIBIT 5:	Equipment Photographs
EXHIBIT 6:	Product Labeling
EXHIBIT 7:	Technical Specifications
EXHIBIT 8:	Instruction Manual
EXHIBIT 9:	Confidentiality Request
EXHIBIT 10:	Miscellaneous Information
EXHIBIT 11:	Test Equipment List

MEASUREMENT/TECHNICAL REPORT

DRONE MACH 10INCH WITH CAMERA

Model: MVid

FCC ID: Z6QFX173RX17

This report concerns (check one) Original Grant <u>X</u> Class II Change	
Equipment Type: DTS - Part 15 Digital Transmission Systems (Wi-Fi transmitt portion)	<u>er</u>
Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes No>	<u><</u>
If yes, defer until :	
date	_
Company Name agrees to notify the Commission by:	
issued on that date. Transition Rules Request per 15.37? Yes NoX	
If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CF [10-01-15] Edition] provision.	
Report prepared by:	
Abel Zhou	
Intertek Testing Services Shenzhen Ltd. Guangzhou Branch	
Block E, No.7-2 Guang Dong Software So	;ienc
Park, Caipin Road, Guangzhou Science C	
GETDD Guangzhou, China Phone: 86-20-8213 9688	
Fille: 86-20-8213 9088 Fax: 86-20-3205 7538	

Table of Contents

1.0	Summary of Test results	2
2.0	General Description	4
2.1 2.2 2.3 2.4	Product Description Related Submittal(s) Grants Test Methodology Test Facility	
3.0	System Test Configuration	6
3.1 3.2 3.3 3.4 3.5 3.6	Justification EUT Exercising Software Special Accessories Measurement Uncertainty Equipment Modification Support Equipment List and Description	6 7 7 7
4.0	Measurement Results	9
4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10		
5.0	Equipment Photographs	57
6.0	Product Labelling	59
7.0	Technical Specifications	61
8.0	Instruction Manual	63
9.0	Confidentiality Request	65
10.0	Discussion of Pulse Desensitization	67
11.0	Test Equipment List	69

List of attached file

Exhibit type	File Description	Filename
Test Report	Test Report	report.pdf
Test Setup Photo	Radiated Emission	radiated photos.pdf
External Photo	External Photo	external photos.pdf
Internal Photo	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
Operation Description	Technical Description	descri.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf
Cover Letter	Confidentiality Letter	request.pdf
Cover Letter	Letter of Agency	agency.pdf

EXHIBIT 1

SUMMARY OF TEST RESULTS

1.0 <u>Summary of Test results</u>

DRONE MACH 10INCH WITH CAMERA

Model: MVid

FCC ID: Z6QFX173RX17

TEST ITEM	REFERENCE	RESULTS
Max. Output power	15.247(b)(3)	Pass
6 dB Bandwidth	15.247(a)(2)	Pass
Max. Power Density	15.247(e)	Pass
Out of Band Antenna Conducted Emission	15.247(d)	Pass
Radiated Emission in Restricted Bands	15.247(d)	Pass
Antenna Requirement	15.203	Pass (See Notes)

Notes: The EUT uses an Integral Antenna which in accordance to Section 15.203 is considered sufficient to comply with the provisions of this section.

EXHIBIT 2

GENERAL DESCRIPTION

2.0 <u>General Description</u>

2.1 Product Description

The Equipment Under Test (EUT) is a DRONE MACH 10INCH WITH CAMERA with Wi-Fi function operating at 2412-2462MHz for 802.11b/g/n-HT20, 11 channels with 5MHz channel spacing. The EUT is powered by rechargeable battery (DC 3.7V) which can be charged by adaptor. For more detailed features description, please refer to the user's manual.

The Model: MVid has various colours in appearance, the difference in appearance serves as marketing strategy.

Type of Modulation: CCK, BPSK, QPSK, 16QAM, 64QAM

Antenna Type: Integral Antenna

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

2.2 Related Submittal(s) Grants

This is an application for certification of:

DTS- Part 15 Digital Transmission Systems (2.4GHz Wi-Fi transmitter portion). The Corresponding transmitter is in the process of being filed under the FCC ID: Z6QFX173TX17.

2.3 Test Methodology

Radiated emission measurements was performed according to the procedures in ANSI C63.10: 2013 and KDB 558074 D01 v04. Radiated emission measurement was performed in semi-anechoic chamber. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

2.4 Test Facility

The Semi-anechoic chamber used to collect the radiated data is **Intertek Testing Services Shenzhen Ltd. Guangzhou Branch** and located at Block E, No.7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City, GETDD Guangzhou, China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: 549654).

EXHIBIT 3

SYSTEM TEST CONFIGURATION

3.0 System Test Configuration

3.1 Justification

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. The EUT was powered by one fully 3.7V rechargeable battery during the test.

On 802.11b/g/n-HT20 mode, only one antenna is used, and all data rate were tested and only the worst case data is shown in the report.

For maximizing emissions, the EUT was rotated through 360°, the EUT was placed on the styrene turntable with 0.8m up to 1GHz and 1.5 m above 1GHz. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000 MHz. The resolution is 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

The unit was operated standalone and placed at the centre of turntable.

Radiated emission measurement were performed the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

3.2 EUT Exercising Software

The EUT exercise program (provided by client) used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The worst case configuration is used in all specified testing.

The parameters of test software setting:

During the test, Channel and power controlling software provided by the applicant was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the application and is going to be fixed on the firmware of the end product.

3.3 Special Accessories

N/A.

3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Uncertainty and Compliance - Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

3.5 Equipment Modification

Any modifications installed previous to testing by GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch.

3.6 Support Equipment List and Description

This product was tested in the following configuration:

Refer List:

Description	Manufacturer	Model No.
iPod		
(Provided by Intertek)	Apple	A1421

EXHIBIT 4

MEASUREMENT RESULTS

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.0 <u>Measurement Results</u>

4.1 Maximum Conducted Output Power at Antenna Terminals, FCC Rules 15.247(b)(3):

The antenna power of the EUT was connected to the input of a broadband peak RF power meter. The power meter have a video bandwidth that is greater than DTS bandwidth and utilize a fast-responding diode detector. Power was read directly at the EUT antenna terminals with cable loss added.

For antennas with gains of 6 dBi or less, maximum allowed Transmitter output is 1 watt (+30 dBm).

IEEE 802.11b (Antenna Gain = 0dBi) (CCK, 1Mbps)			
Frequency (MHz) Output in dBm Output in mWatt			
Low Channel: 2412 20.2 104.7			
Middle Channel: 2437 20.1 102.3			
High Channel: 2462 19.6 91.2			

IEEE 802.11g (Antenna Gain = 0dBi) (16QAM, 6Mbps)			
Frequency (MHz) Output in dBm Output in mWatt			
Low Channel: 2412	22.5	177.8	
Middle Channel: 2437 22.3 169.8			
High Channel: 2462	22.1	162.2	

IEEE 802.11n-HT20 (Antenna Gain = 0dBi) (64QAM, 6Mbps)			
Frequency (MHz) Output in dBm Output in mWat			
Low Channel: 2412	21.7	147.9	
Middle Channel: 2437 21.5 141.3		141.3	
High Channel: 2462	21.0	125.9	

Cable loss: <u>1.5</u> dB External Attenuation: 0 dB

Cable loss, external attenuation has been included in OFFSET function

EUT max. output level = 22.5dBm

For RF Exposure, the information is saved with filename: RF exposure.pdf.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.2 Minimum 6 dB RF Bandwidth, FCC Rule 15.247(a) (2):

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 KHz according to FCC KDB 558074 D01 v04. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level. The 6dB bandwidth was determined from where the channel output spectrum intersected the display line.

Limit: The 6 dB Bandwidth is at least 500 kHz.

IEEE 802.11b (CCK, 1Mbps)		
Frequency (MHz)6 dB Bandwidth (MHz)		
2412	10.463	
2437	9.986	
2462	10.005	

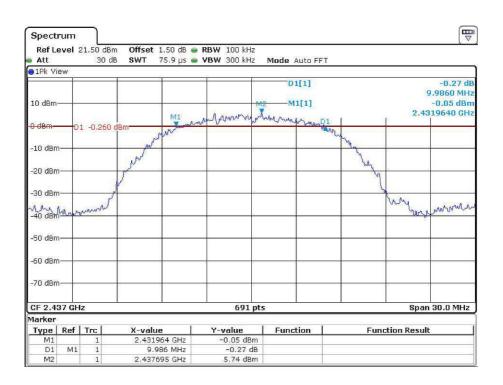
IEEE 802.11g (16QAM, 6Mbps)		
Frequency (MHz) 6 dB Bandwidth (MHz)		
2412	16.498	
2437	16.454	
2462	16.498	

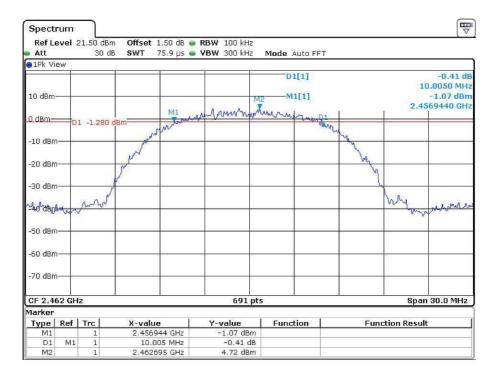
IEEE 802.11n-HT20 (64QAM, 6Mbps)		
Frequency (MHz)6 dB Bandwidth (MHz)		
2412	17.540	
2437 17.757		
2462	17.757	

The test plots are attached as below.

802.11b

Spect	um								
		21.50 30			RBW 100 kHz VBW 300 kHz	Mode Auto F	FT		[~v
1Pk Vi	ew			**	MG 022				
10 dBm·						D1[1]		- (-0.73 d 630 MH).13 dBr 9640 GH
0 dBm—	D	1 -0.5	90 dBm	M1 Vinter	ampana	12-MILIJ	UD1	2.400	5040 GH
-10 dBm	-		سمر				- Way		
-20 dBm			r Jr				(M)		
-30 dBm			1	>>				1	
-gerden	borno	_W arlys, In	٢		_			Juny mour	www
-50 dBm	-		_						
-60 dBm	-		_					-	
-70 dBm								- Te	
CF 2.4	L2 GH	z			691 p	ts		Span 3	0.0 MHz
Marker					5.9% (*** 1988) *** (*	5.123 1656 2100	10 92842	C1211	
Type	Ref		X-valu		Y-value	Function	Fun	ction Result	
M1 D1	M1	1		64 GHz 63 MHz	-0.13 dBm -0.73 dB				
	IVI L								
M2	.vita	1		21 GHz	5.41 dBm				

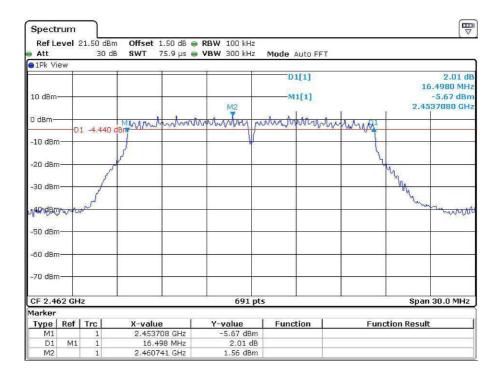




802.11g

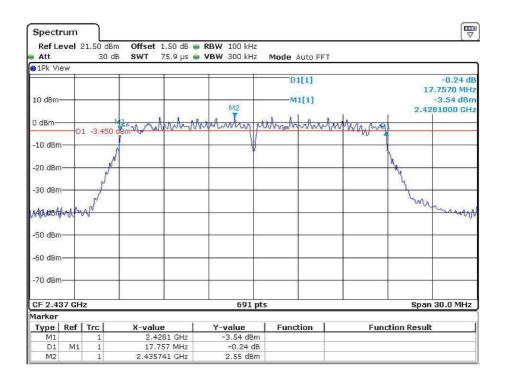
Spect	rum						
Ref Lo Att	evel :	21.50 d 30		 RBW 100 kHz VBW 300 kHz 	Mode Auto FFT		C //
) 1Pk Vi	ew			765 ST			
10 dBm					D1[1] M1[1] M2		-1.30 dl 16.4980 MH -2.77 dBn
0 dBm—	D	1 -3.26	50 dBm	an particular	Aven Japan and	www.wyg1	2.4037510 GH
-10 dBm				¥		Ţ	
-20 dBm	n	,	M				X
-30 dBr Aaga-8876		s f					mmun
-50 dBr							
-60 dBm	i						
-70 dBm)						
CF 2,4	12 GH	Iz		691 pts			Span 30.0 MHz
Marker	8						
Type	Ref	Trc	X-value	Y-value	Function	Functio	on Result
M1		1	2.403751 GHz	-2.77 dBm			
D1	M1	1	16.498 MHz	-1.30 dB			
M2		1	2.414475 GHz	2.74 dBm			

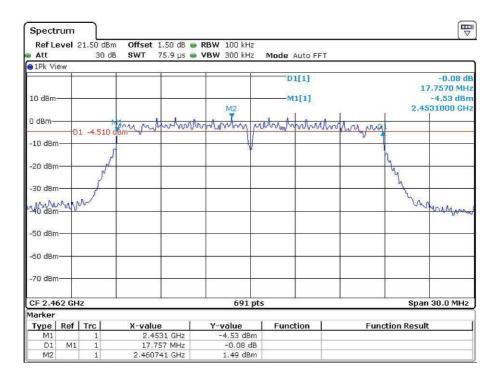
Att		21.50 dB 30 d		 RBW 100 kHz VBW 300 kHz 	Mode Auto FFT	г	
1Pk Vi	ew						
10 dBm·				M2	D1[1] M1[1]		-0.09 dl 16.4540 MH -2.54 dBn 2.4287510 GH
0 d8m-	D	1 -3.600	dBm Manutanter	T	handrang	mana	2.4207310 GH
-10 dBm				¥			
-20 dBm	<u></u> 2	1	r ^f			4	lıq.
-30 dBm		n S					human
46 881							0 V V 11,000
-50 dBm							
-60 dBm							
-70 dBm	12			2			8
CF 2.4	37 GH	z		691 pts			Span 30.0 MHz
1arker Type	Ref	Tral	X-value	Y-value	Function	Function	on Result
M1	Nei	1	2.428751 GHz	-2.54 dBm	runction	runcu	JII Kesult
D1	M1	1	16.454 MHz	-0.09 dB			
M2		1	2.435741 GHz	2.40 dBm			



802.11n-HT20

Spect	rum							
		21.50 c 30		10000200 0000 000	RBW 100 kHz VBW 300 kHz	Mode Auto FF	т	6.2
🔵 1 Pk Vi	ew			10 02	46 X4			
					-	D1[1]		-0.76 di
water and						No. of Concession, Name		17.5400 MH
10 dBm	-				M2	M1[1]		-3.70 dBn
			10.100 C				80 F.	2.4033170 GH
0 dBm–			10 dBm14	Indent	and marking the	Mynmylow	Muthyma	
		1 -3.50			W		00 - 1	
-10 dBn								
			1					1
-20 dBn	1		<i>[</i>	-				4
		1						by .
-30 dBn	1	1			-			7
		S						Musselly
Add black	1 mp	W0/		-				· way
-50 dBn) <u> </u>			-				20
-60 dBn	1							8
-70 dBn	i 		-	+				2 8
CF 2.4	12 GH	z	<u>k</u>		691 pt	5	*	Span 30.0 MHz
Marker	č.							
Type	Ref	Trc	X-valu	e	Y-value	Function	Func	tion Result
M1		1		17 GHz	-3.70 dBm			
D1	M1	1		54 MHz	-0.76 dB			
M2		1	2.4107	'41 GHz	2.50 dBm			





Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.3 Maximum Power Density Reading, FCC Rule 15.247(e):

The Measurement Procedure PKPSD was set according to the FCC KDB 558074 D01 v04.

Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

Limit: The Power Density does not exceed 8dBm/3 kHz.

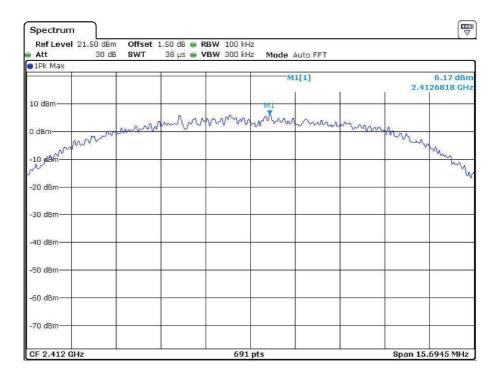
IEEE 802.11b (CCK, 1Mbps)								
Frequency (MHz)	Power Density with RBW 100KHz							
2412	6.17							
2437	5.78							
2462	4.50							

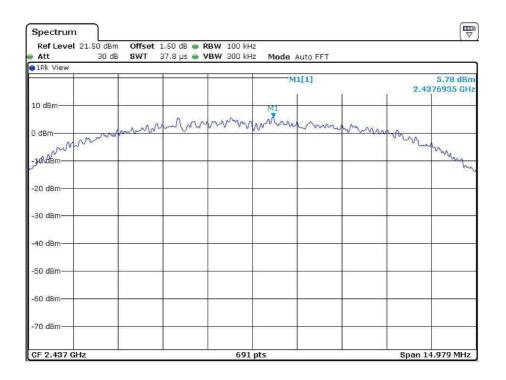
IEEE 802.11g (16QAM, 6Mbps)								
Frequency (MHz)	Power Density with RBW 100KHz							
2412	3.09							
2437	2.56							
2462	1.47							

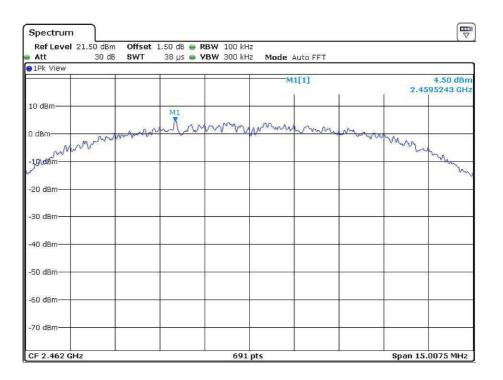
IEEE 802.11n-HT20 (64QAM, 6Mbps)							
Frequency (MHz)	Power Density with RBW 100KHz						
2412	2.81						
2437	2.46						
2462	1.48						

The test plots are attached as below.

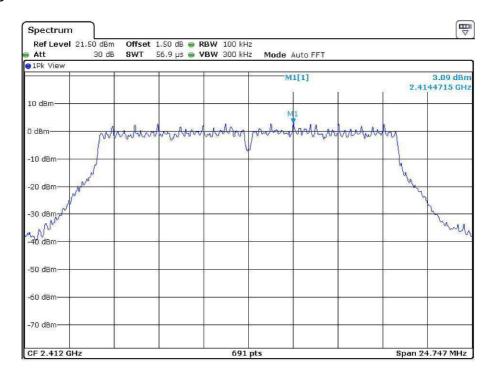
802.11b

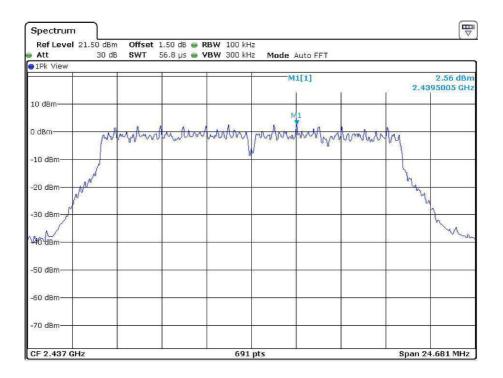


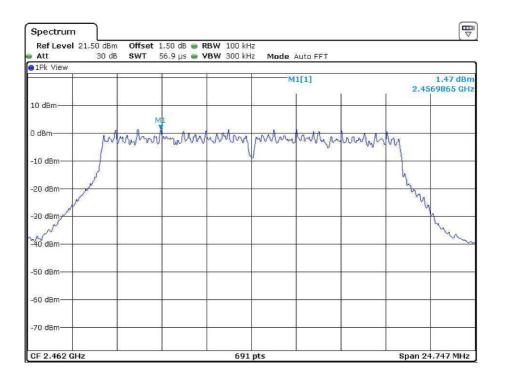




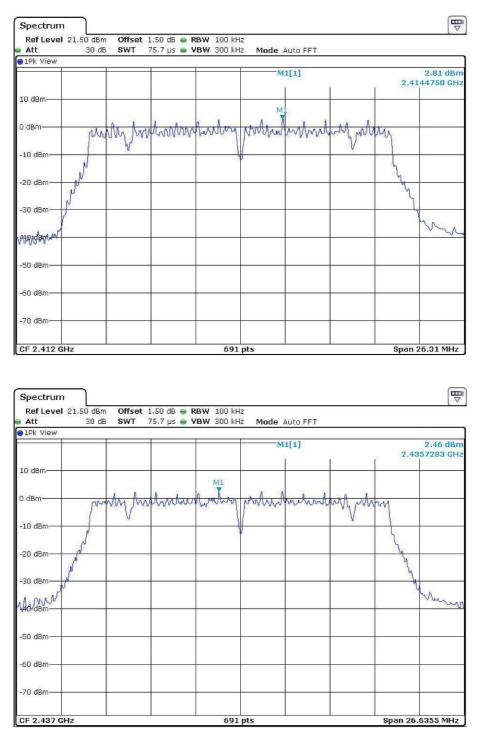
802.11g

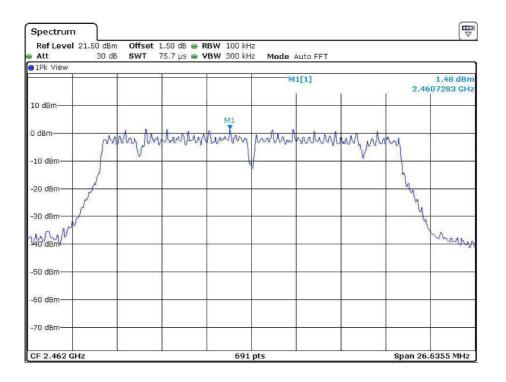






802.11n-HT20





Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.4 Out of Band Conducted Emissions, FCC Rule 15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. The Measurement Procedure was set according to the FCC KDB 558074 D01 v04.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the passband.

Refer to the attached test plots for out of band conducted emissions data with rate of 1Mbps for 802.11b and 6Mbps for 802.11g and 6Mbps for 802.11n-HT20.

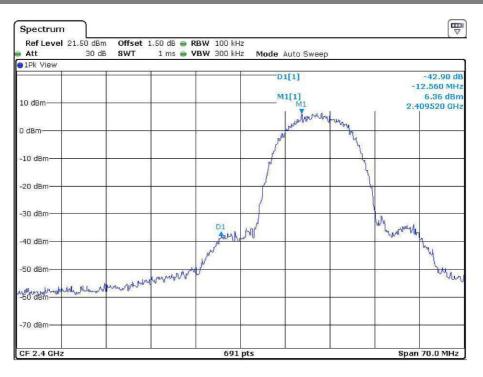
The test plots showed all spurious emission up to the tenth harmonic were measured and they were found to be at least 20 dB below the highest level of the desired power in the passband.

The test plots are attached as below.

802.11b Channel 01 (2412MHz) Reference Level: 6.17dBm

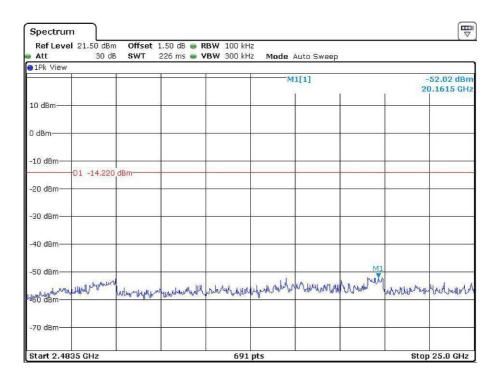
Att 30 1Pk View	dB SWT 24 ms	5 🧰 YBW 300 kHz 🛛 N	1ode Auto Sweep	
ALK LIGH				
16				-39.87 dBn 2.39830 GH:
0 dBm				
dBm				
10 dBm	30 dBm			
20 dBm				
30 dBm				
40 dBm				
50 dBm				
ilg-approximation	a super-range weglow how with	or the superior of the second	and a supported the second	under and the state of the stat
70 dBm				

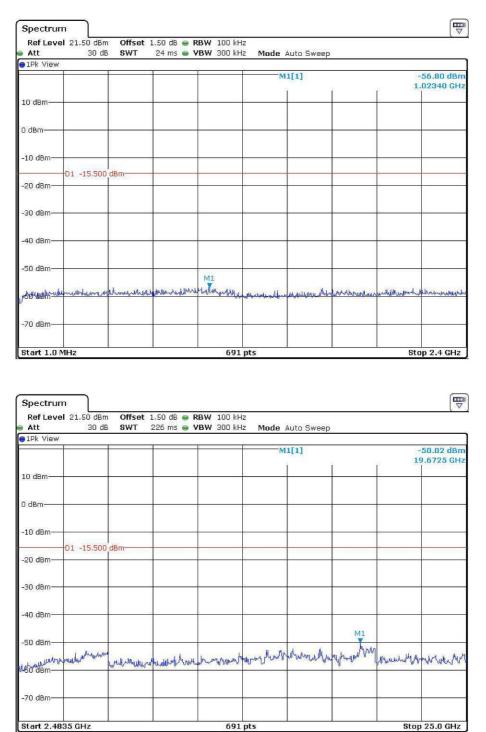
Spectrum									
RefLevel 2 Att	1.50 dBm 30 dB		1.50 dB 👄 R 226 ms 👄 V			Auto Sweep			
●1Pk View					<i></i>				
					M	1[1]	a		51.23 dBm 9.6395 GHz
10 dBm									
0 dBm				6			-		
-10 dBm	-13.830 c	10 m						·	
-20 dBm	10.000 0								
-30 dBm					-				
-40 dBm									
-50 dBm		_		29	10. Tes		M1		
-50 dBm	prominent	al uhan han han ha	an should wright	unohlanda	manuturity	Mundundel	When we way	uhudhundhildhar	Numundaria
-70 dBm									
Start 2.4835	GHz			691	pts			Stop	25.0 GHz



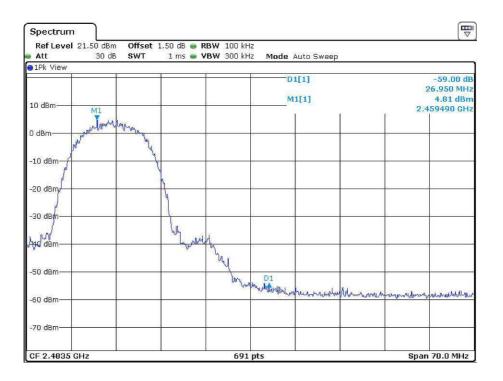
Channel 06 (2437MHz) Reference Level: 5.78dBm

₿ Spectrum Offset 1.50 dB ● RBW 100 kHz SWT 24 ms ● VBW 300 kHz Ref Level 21.50 dBm Att 30 dB Mode Auto Sweep ●1Pk Viev M1[1] -56.01 dBm 1.04080 GH: 10 dBm 0 dBm -10 dBm D1 -14.220 dBm -20 dBm -30 dBm -40 dBm -50 dBm M1 multi maderinghan rely and my hold in Mound was with Milliake AH. LANHARMENT VAL NMM -70 dBm Start 1.0 MHz 691 pts Stop 2.4 GHz





Channel 11 (2462MHz) Reference Level: 4.5dBm

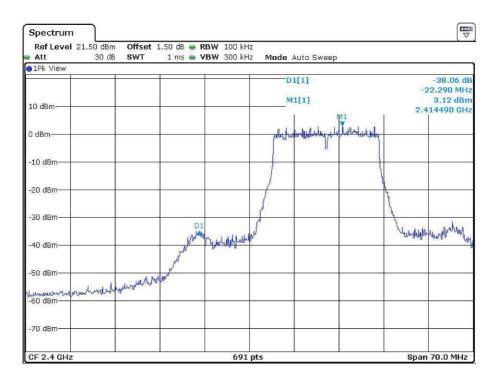


802.11g

Channel 01 (2412MHz) Reference Level: 3.09dBm

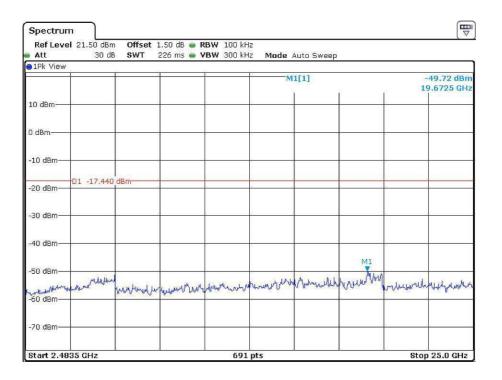
Spectrum Ref Level 21.50 dBm Offset 1.	50 dB 💩 RBW 100 kHz	
VINCEN CONTRACTOR AND	24 ms 🥃 VBW 300 kHz 🛛 Mode Auto S	Sweep
1Pk View	M1[1]	-36.59 dBm 2.39830 GHz
10 dBm-		
0 dBm-		
-10 dBm		
-20 dBm		
-30 dBm		
-40 dBm		
-50 dBm		
Baltshuhrumannaupuntranthu	www.werdburder.weedby render werder werder	whether and a second seco
-70 dBm		
Start 1.0 MHz	691 pts	Stop 2.4 GHz

Att	30 dE	SWT	226 ms 🥃 🛚	/BW 300 kH	z Mode	Auto Sweep			
1Pk View		r	1	1					
					M	1[1]			51.54 dBn 9.6395 GH
10 dBm		-							
0 dBm	S 8		-		\$1			5	
-10 dBm				-					
-20 dBm—	-D1 -16.910	dBm			64				
-30 dBm—					n				
-40 dBm—	35			>:	10 · · · ·			2	
-50 dBm—						August 1	M1		
do dBm-	alaharandulthid	whyman	Munution	mather	Kinghad	hurmand	author way	which Marina	nahrlann
-70 dBm					¢				



Channel 06 (2437MHz) Reference Level: 2.56dBm

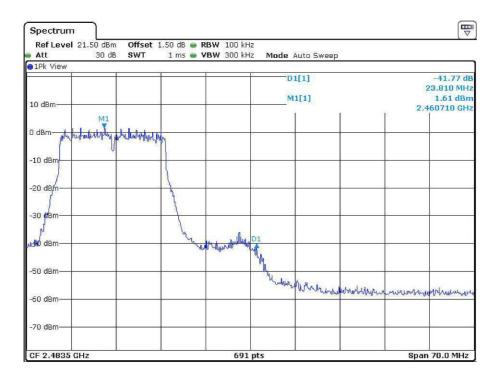
₿ Spectrum Ref Level 21.50 dBm 30 dB Mode Auto Sweep Att 1Pk View M1[1] -56.22 dBm 1.08250 GHz 10 dBm-0 dBm· -10 dBm D1 -17.440 dBm -20 dBm -30 dBm -40 dBm -50 dBm MI Manufamilymushikh 4 danta -70 dBm 691 pts Stop 2.4 GHz Start 1.0 MHz



Att 30 dB	SWT 24 ms 👄 VI	3W 300 kHz Mo	de Auto Sweep	
			-M1[1]	-56.62 dBr
			1	2.38780 GH
10 dBm				
0 dBm				
-10 dBm				
-20 dBm D1 -18.530 d	Bm	i.		
-30 dBm				
-40 dBm				
-50 dBm				
on apr with his production in	educia monthe Middowy and Minute	alphabellage and and and	the show a reducer bold on the de	watter the departure date with a limber with
		a dediatella anticas		AN ADD DO NOT AN ADD DO NOT ADD D
-70 dBm		<u></u>		
Start 1.0 MHz		691 pts		Stop 2.4 GHz
				-
Spectrum				
RefLevel 21.50 dBm Att 30 dB	Offset 1.50 dB 👄 RI SWT 226 ms 👄 VI		de Auto Sweep	
1Pk View	1 1	10	-M1[1]	~50.79 dBr

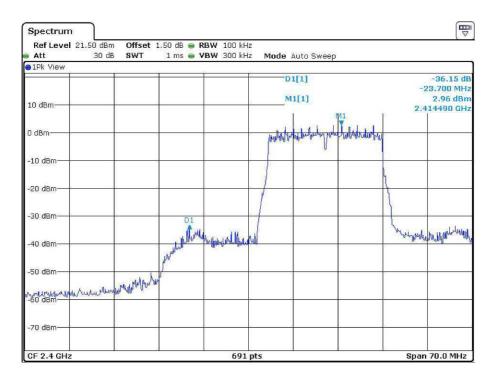
Channel 11 (2462MHz) Reference Level: 1.47dBm

Att	l 21.50 dBm 30 dB			BW 100 kH 'BW 300 kH		Auto Sweep			
1Pk View			a	6	1				
					M	1[1]			50.79 dBn).0955 GH
10 dBm				2					
0 dBm	5 V	1		-					
-10 dBm			,		<i>.</i>			7	
-20 dBm	D1 -18.530	dBm			4				
-30 dBm					÷			×	
-40 dBm	6	13		c	fa o				
-50 dBm				-			M1		
Hould Bm-	arun Mulash	Makethawa	all and they	andronum	m hph Mr. Mi	Mul dates	Anna and	www.	March
-70 dBm									



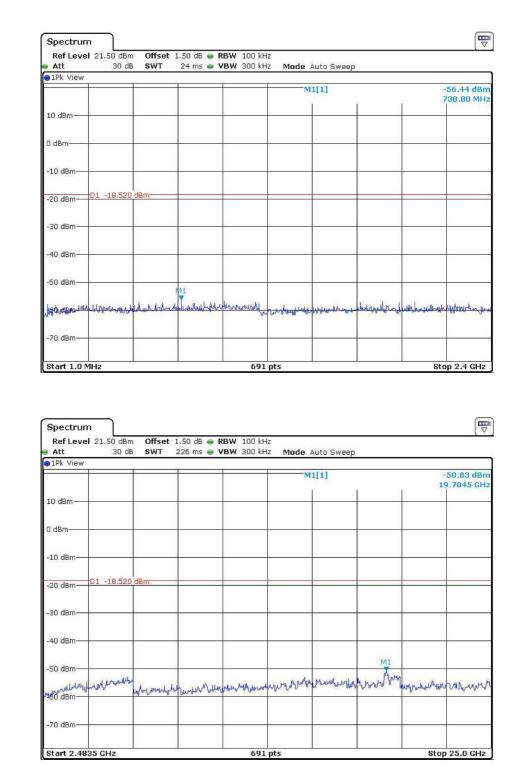
802.11n-HT20 Channel 01 (2412MHz) Reference Level: 2.81dBm

Att	21.50 dBm 30 dB	Offset SWT		RBW 100 kHz VBW 300 kHz		ween		
1Pk View			2,100		Mode Adda	moop		
18					M1[1]			-37.32 dBn
LO dBm								
or power weeks and the								
I dBm			-					-
-180 DRI								
10 dBm							8	<i>#</i>
20 dBm	1 -17.190 di	3m-						
30 dBm								
40 dBm								
50 dBm								
08.418H-MA	nerand re. Heres	anna startable	applications	englower with the	werthown when the wert	Alor mall har market	un hille area Mary	manularherm
1 and 100								
70 dBm								1
	_		1	691 p	its	L	St	op 2.4 GHz
		Offset	1.50 dB 🕳 1	691 p		1	St	_
Spectrum Ref Level Att						weep	St	_
Spectrum Ref Level Att	21.50 dBm			RBW 100 kHz	Mode Auto S	weep		
Spectrum Ref Level Att	21.50 dBm			RBW 100 kHz		weep		-50.05 dBr
Spectrum Ref Level Att 1Pk View	21.50 dBm			RBW 100 kHz	Mode Auto S	weep		-50.05 dBr
Spectrum Ref Level Att 1Pk View 0 dBm-	21.50 dBm			RBW 100 kHz	Mode Auto S	weep		-50.05 dBr
Spectrum Ref Level Att 1Pk View 0 dBm-	21.50 dBm			RBW 100 kHz	Mode Auto S	weep		-50.05 dBr
Spectrum Ref Level Att 1Pk View 0 dBm	21.50 dBm			RBW 100 kHz	Mode Auto S	weep		-50.05 dBn
Bpectrum Ref Level Att 1Pk View 0 dBm	21.50 dBm 30 dB	SWT		RBW 100 kHz	Mode Auto S	weep		-50.05 dBr
Spectrum Ref Level Att 1Pk View 0 dBm	21.50 dBm	SWT		RBW 100 kHz	Mode Auto S	weep		-50.05 dBn
Spectrum Ref Level Att 1Pk View 0 dBm dBm 10 dBm 20 dBm	21.50 dBm 30 dB	SWT		RBW 100 kHz	Mode Auto S	weep		-50.05 dBr
Spectrum Ref Level Att 1Pk View 0 dBm 1 dBm 10 dBm 20 dBm	21.50 dBm 30 dB	SWT		RBW 100 kHz	Mode Auto S	weep		-50.05 dBn
Spectrum Ref Level Att 1Pk View 0 dBm 10 dBm 20 dBm 20 dBm	21.50 dBm 30 dB	SWT		RBW 100 kHz	Mode Auto S	weep		-50.05 dBn
Spectrum Ref Level Att 1Pk View 0 dBm 10 dBm 20 dBm 20 dBm	21.50 dBm 30 dB	SWT		RBW 100 kHz	Mode Auto S		2	-50.05 dBn
Spectrum Ref Level Att 1Pk View 0 dBm 1 dBm 10 dBm 20 dBm 30 dBm 40 dBm	21.50 dBm 30 dB	SWT		RBW 100 kHz YBW 300 kHz	Mode Auto S		2	-50.05 dBn 0.3235 GH
Spectrum Ref Level Att 1Pk View 0 dBm dBm 10 dBm 20 dBm 30 dBm 40 dBm 50 dBm	21.50 dBm 30 dB	SWT	226 ms	RBW 100 kHz YBW 300 kHz	Mode Auto S		2	-50.05 dBr
Spectrum Ref Level Att 1Pk View 0 dBm dBm 10 dBm 20 dBm 30 dBm 40 dBm 50 dBm	21.50 dBm 30 dB	SWT	226 ms	RBW 100 kHz YBW 300 kHz	Mode Auto S		2	-50.05 dBn 0.3235 GH
Att) 1Pk View 10 dBm) dBm 20 dBm 20 dBm 40 dBm 50 dBm	21.50 dBm 30 dB	SWT	226 ms	RBW 100 kHz YBW 300 kHz	Mode Auto S		2	-50.05 dBn 0.3235 GH

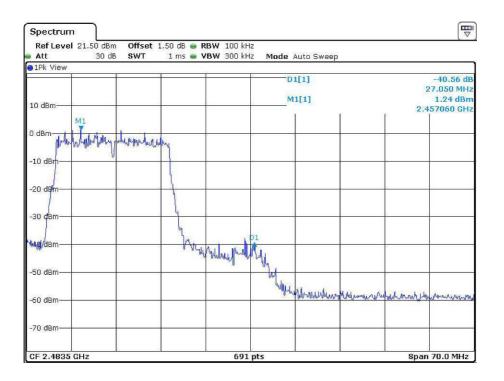


Channel 06 (2437MHz) Reference Level: 2.46dBm

Att	dBm Offset		BW 100 kHz BW 300 kHz		n Sween			
1Pk View				nous nat	5 0 11 00 p			
						55.76 dBm 09630 GHz		
10 dBm				1	1			09000 0112
								-
) dBm								
10 dBm			-				-	
01 17	.540 dBm							
-20 dBm	JTO UDIT	20	<				<u>.</u>	
-30 dBm								
-40 dBm								
i se Miletti								
-50 dBm								
	-		M1					
80 dBhi	nurdationinghrus	watreen well well	www.ihulika	mintrovilletera	reliquister	whetherodenicadur	ultraturement	Un Although
-70 dBm		1 1			-		<u>.</u>	
			691 f	ots			Sto	p 2.4 GHz
	dBm Offset	1.50 dB 👄 R					Sto	
Spectrum Ref Level 21.50 Att	dBm Offset 30 dB SWT				D Sweep		Sto	
			BW 100 kHz	Mode Auto				
Spectrum Ref Level 21.50 Att			BW 100 kHz					(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att 3 91Pk View			BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att			BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att 3 91Pk View 10 dBm-			BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att 3 91Pk View 10 dBm			BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att 3 91Pk View 10 dBm			BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att 3 91Pk View 10 dBm- 10 dBm- 10 dBm- 10 dBm-			BW 100 kHz	Mode Auto				p 2.4 GHz 50.29 dBr 2.7705 GH2
Spectrum Ref Level 21.50 Att 2 1Pk View 10 dBm- 10 dBm- 10 dBm-	BO dB SWT		BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBrr
Spectrum Ref Level 21.50 Att 31Pk View 10 dBm 1 dBm 20 dBm 20 dBm	BO dB SWT		BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att 31Pk View 10 dBm 10 dBm 20 dBm 20 dBm 30 dBm	BO dB SWT		BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBrr
Spectrum Ref Level 21.50 Att 3 91Pk View 10 dBm- 10 dBm- -10 dBm- -10 dBm-	BO dB SWT		BW 100 kHz	Mode Auto				(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att 3 1Pk View 10 dBm- 10 dBm- -10 dBm- -20 dBm- -20 dBm- -40 dBm-	BO dB SWT		BW 100 kHz BW 300 kHz	Mode Auto]	MI	10	(₩ ⊽ 50.29 dBn
Spectrum Ref Level 21.50 Att 3 11Pk View 3 10 dBm 3 10 dBm 10 dBm 20 dBm 01 -17 30 dBm 30 dBm 40 dBm 50 dBm	20 dB SWT	226 ms • V	BW 100 kHz BW 300 kHz	Mode Auto]	M1	10	₩ 50.29 dBn .7705 GH
Spectrum Ref Level 21.50 Att 3 11Pk View 3 10 dBm 3 10 dBm 10 dBm 20 dBm 01 -17 30 dBm 30 dBm 40 dBm 50 dBm	2.540 dBm	226 ms • V	BW 100 kHz BW 300 kHz	Mode Auto]	MI	10	50.29 dBn
Spectrum Ref Level 21.50 Att 2 1Pk View 10 dBm 10 dBm 20 dBm 20 dBm 40 dBm 50 dBm	20 dB SWT	226 ms • V	BW 100 kHz BW 300 kHz	Mode Auto]	MI	10	₩ 50.29 dBn .7705 GH



Channel 11 (2462MHz) Reference Level: 1.48dBm



Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.5 Out of Band Radiated Emissions (for emissions in 4.4 above that are less than 20dB below carrier), FCC Rule 15.247(d):

For out of band emissions that are close to or that exceed the 20dB attenuation requirement described in the specification, radiated measurements were performed at a 3m separation distance to determine whether these emissions complied with the general radiated emission requirement.

- [X] Not required, since all emissions are more than 20dB below fundamental
- [] See attached data sheet

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.6 Transmitter Radiated Emissions in Restricted Bands, FCC Rule 15.35(b) (c):

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included. All measurements were performed with peak detection unless otherwise specified.

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.7 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

FS = RA + AF + CF - AG + PD

Where $FS = Field Strength in dB\mu V/m$ $RA = Receiver Amplitude (including preamplifier) in dB\mu V$ CF = Cable Attenuation Factor in dB AF = Antenna Factor in dB AG = Amplifier Gain in dBPD = Pulse Desensitization in dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

FS = RA + AF + CF - AG + PD

Example

Assume a receiver reading of 62.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB. The net field strength for comparison to the appropriate emission limit is 42 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

RA = $62.0 \text{ dB}\mu\text{V}$ AF = 7.4 dB CF = 1.6 dB AG = 29.0 dB PD = 0 dB FS = $62 + 7.4 + 1.6 - 29 + 0 = 42 \text{ dB}\mu\text{V/m}$

Level in mV/m = Common Antilogarithm [(42 dB μ V/m)/20] = 125.9 μ V/m

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.8 Radiated Spurious Emission

Worst Case Radiated Spurious Emission (802.11b-Channel 01) at 7386.000MHz is passed by 10.5dB margin.

For the electronic filing, the worst case radiated emission configuration photographs are saved with filename: radiated photos.pdf.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11b-Channel 01)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	325.140	37.2	20.0	13.3	30.5	46.0	-15.5
Horizontal	486.260	38.1	20.0	15.7	33.8	46.0	-12.2
Horizontal	756.400	34.9	20.0	19.3	34.2	46.0	-11.8
Vertical	200.850	38.5	20.0	13.5	32.0	43.5	-11.5
Vertical	280.200	38.4	20.0	15.8	34.2	46.0	-11.8
Vertical	845.300	33.2	20.0	20.3	33.5	46.0	-12.5

Radiated Emissions

NOTES: 1. Quasi-Peak detector is used for frequency below 1GHz.

- 2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11b-Channel 01)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4824.000	63.9	41.3	33.5	56.1	74.0	-17.9
Horizontal	*2390.000	64.6	41.4	29.1	52.3	74.0	-21.7

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4824.000	46.3	41.3	33.5	38.5	54.0	-15.5
Horizontal	*2390.000	43.3	41.4	29.1	31.0	54.0	-23.0

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz/VBW=10Hz for average value.
 - 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
 - 3. Negative value in the margin column shows emission below limit.
 - 4. Horn antenna used for the emission over 1000MHz.
 - * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11b-Channel 06)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4874.000	65.6	41.2	33.4	57.8	74.0	-16.2
Horizontal	*7311.000	60.3	40.5	35.8	55.6	74.0	-18.4

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4874.000	46.9	41.2	33.4	39.1	54.0	-14.9
Horizontal	*7311.000	47.8	40.5	35.8	43.1	54.0	-10.9

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
 - 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
 - 3. Negative value in the margin column shows emission below limit.
 - 4. Horn antenna used for the emission over 1000MHz.
 - * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11b-Channel 11)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4924.000	62.3	41.2	33.3	54.4	74.0	-19.6
Horizontal	*7386.000	60.6	40.3	36.1	56.4	74.0	-17.6
Horizontal	*2483.500	64.2	41.4	29.3	52.1	74.0	-21.9

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4924.000	46.7	41.2	33.3	38.8	54.0	-15.2
Horizontal	*7386.000	47.7	40.3	36.1	43.5	54.0	-10.5
Horizontal	*2483.500	43.6	41.4	29.3	31.5	54.0	-22.5

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
 - 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
 - 3. Negative value in the margin column shows emission below limit.
 - 4. Horn antenna used for the emission over 1000MHz.
 - * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11g-Channel 01)

	Radiated Emissions											
Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin					
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)					
			Gain	(dB)	(dBµV/m)	(dBµV/m)						
			(dB)									
Horizontal	*4824.000	61.2	41.3	33.5	53.4	74.0	-20.6					
Horizontal	*2390.000	65.4	41.4	29.1	53.1	74.0	-20.9					

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	*4824.000	46.2	41.3	33.5	38.4	54.0	-15.6
Horizontal	*2390.000	43.5	41.4	29.1	31.2	54.0	-22.8

NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.

- 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
- 3. Negative value in the margin column shows emission below limit.
- 4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11g-Channel 06)

Radiated Emissions											
Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin				
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)				
			Gain	(dB)	(dBµV/m)	(dBµV/m)					
			(dB)								
Horizontal	*4874.000	62.9	41.2	33.4	55.1	74.0	-18.9				
Horizontal	*7311.000	62.2	40.5	35.8	57.5	74.0	-16.5				

			Gain (dB)	(dB)	(dBµV/m	n) (dBµV/m)		
Horizontal	*4874.000	62.9	41.2	33.4	55.1	74.0	-18.9)
Horizontal	*7311.000	62.2	40.5	35.8	57.5	74.0	-16.5	;
								_
Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin	
	(* * * *)							

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
		、 . ,	Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4874.000	46.6	41.2	33.4	38.8	54.0	-15.2
Horizontal	*7311.000	46.8	40.5	35.8	42.1	54.0	-11.9

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
 - 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
 - 3. Negative value in the margin column shows emission below limit.
 - 4. Horn antenna used for the emission over 1000MHz.
 - Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11g-Channel 11)

Radiated Emissions											
Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin				
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)				
			Gain	(dB)	(dBµV/m)	(dBµV/m)					
			(dB)								
Horizontal	*4924.000	59.7	41.2	33.3	51.8	74.0	-22.2				
Horizontal	*2483.500	63.2	41.4	29.3	51.1	74.0	-22.9				

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4924.000	45.1	41.2	33.3	37.2	54.0	-16.8
Horizontal	*2483.500	43.3	41.4	29.3	31.2	54.0	-22.8

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
 - 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
 - 3. Negative value in the margin column shows emission below limit.
 - 4. Horn antenna used for the emission over 1000MHz.
 - * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11n-HT20)-Channel 01

Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin				
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)				
			Gain	(dB)	(dBµV/m)	(dBµV/m)					
			(dB)								
Horizontal	*4824.000	62.2	41.3	33.5	54.4	74.0	-19.6				
Horizontal	*2390.000	64.7	41.4	29.1	52.4	74.0	-21.6				

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	*4824.000	44.3	41.3	33.5	36.5	54.0	-17.5
Horizontal	*2390.000	44.8	41.4	29.1	32.5	54.0	-21.5

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
 - 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
 - 3. Negative value in the margin column shows emission below limit.
 - 4. Horn antenna used for the emission over 1000MHz.
 - * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11n-HT20)-Channel 06

	Radiated Emissions											
Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin					
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)					
		,	Gain	(dB)	(dBµV/m)	(dBµV/m)						
			(dB)									
Horizontal	*4874.000	56.9	36.1	33.4	54.2	74.0	-19.8					
Horizontal	*7311.000	56.9	35.6	35.8	57.1	74.0	-16.9					

Polarization	Frequency (MHz)	Reading (dBµV)	Pre- Amp Gain	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
			(dB)	(02)			
Horizontal	*4874.000	45.0	41.2	33.4	37.2	54.0	-16.8
Horizontal	*7311.000	46.8	40.5	35.8	42.1	54.0	-11.9

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
 - 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
 - 3. Negative value in the margin column shows emission below limit.
 - 4. Horn antenna used for the emission over 1000MHz.
 - * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid Worst Case Operating Mode: Transmitting (802.11n-HT20)-Channel 11

Radiated Emissions											
Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin				
	(MHz)	(dBµV)	Amp Gain	Factor (dB)	at 3m (dBµV/m)	at 3m (dBµV/m)	(dB)				
			(dB)								
Horizontal	*4924.000	61.0	41.2	33.3	53.1	74.0	-20.9				
Horizontal	*2483.500	63.5	41.4	29.3	51.4	74.0	-22.6				

				```	· ·	/ / /	
			(dB)				
Horizontal	*4924.000	61.0	41.2	33.3	53.1	74.0	-20.9
Horizontal	*2483.500	63.5	41.4	29.3	51.4	74.0	-22.6
Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margir

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
		、 . ,	Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)		,		
Horizontal	*4924.000	45.4	41.2	33.3	37.5	54.0	-16.5
Horizontal	*2483.500	45.3	41.4	29.3	33.2	54.0	-20.8

- NOTES: 1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
  - 2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
  - 3. Negative value in the margin column shows emission below limit.
  - 4. Horn antenna used for the emission over 1000MHz.
  - Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

- 4.9 Radiated Emissions from Digital Section of Transceiver, FCC Ref: 15.109
- [ ] Not required No digital part
- [ ] Test results are attached
- [x] Included in the separated report.

Applicant: GUANGDONG FEILUN TECHNOLOGY INDUSTRIAL CO., LTD Date of Test: July 10, 2017 Model: MVid

4.10 Transmitter Duty Cycle Calculation and Measurements, FCC Rule 15.35(b), (c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SWEP function on the analyzer was set to ZERO SPAN. The Transmitter ON time was determined from the resultant time-amplitude display:

	See attached spectrum analyzer chart (s) for Transmitter timing
	See Transmitter timing diagram provided by manufacturer
х	Not applicable, duty cycle was not used.

# EXHIBIT 5

# **EQUIPMENT PHOTOGRAPHS**

#### 5.0 Equipment Photographs

For electronic filing, the photographs are saved with filename: external photos.pdf & internal photos.pdf.

# **EXHIBIT 6**

# PRODUCT LABELLING

#### 6.0 Product Labeling

For electronic filing, the FCC ID label artwork and location is saved with filename: label.pdf.

# EXHIBIT 7

# **TECHNICAL SPECIFICATIONS**

#### 7.0 <u>Technical Specifications</u>

For electronic filing, the block diagram and circuit diagram are saved with filename: block.pdf and circuit.pdf respectively.

# **EXHIBIT 8**

# **INSTRUCTION MANUAL**

#### 8.0 Instruction Manual

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

# EXHIBIT 9

# CONFIDENTIALITY REQUEST

#### 9.0 <u>Confidentiality Request</u>

For electronic filing, the confidentiality request of the tested EUT is saved with filename: request.pdf.

# **EXHIBIT 10**

# **MISCELLANEOUS INFORMATION**

#### 10.0 Discussion of Pulse Desensitization

The determination of pulse desensitivity was made in accordance with Hewlett Packard Application Note 150-2, *Spectrum Analysis ... Pulsed RF.* 

Pulse desensitivity is not applicable for this device since the transmitter transmits the RF signal continuously.

# **EXHIBIT 11**

# **TEST EQUIPMENT LIST**

### 11.0 Test Equipment List

Equipment No.		Model		Cal. Due date	Calibration
	Equipment		Manufacturer	(MM-DD- YYYY)	Interval
EM030-04	3m Semi-Anechoic Chamber	9×6×6 m ³	ETS·LINDGREN	9/9/2017	1 <b>Y</b>
EM031-02	EMI Test Receiver (9 kHz~7 GHz)	R&S ESR7	R&S	9/7/2017	1Y
EM031-03	Signal and Spectrum Analyzer (10 Hz~40 GHz)	R&S FSV40	R&S	9/3/2017	1Y
EM011-04	Loop antenna (9 kHz-30 MHz)	HFH2-Z2	R&S	9/6/2017	1Y
EM061-03	TRILOG Super Broadband test Antenna (30 MHz-1.5 GHz) (TX)	VULB 9161	SCHWARZBECK	9/6/2017	1Y
EM033-01	TRILOG Super Broadband test Antenna(30 MHz-3 GHz) (RX)	VULB 9163	SCHWARZBECK	9/8/2017	1Y
EM033-02	Bouble-Ridged Waveguide Horn Antenna (800 MHz-18 GHz)(RX)	R&S HF907	R&S	9/6/2017	1Y
EM033-03	High Frequency Antenna & preamplifier(18 GHz~26.5 GHz) (RX)	R&S SCU-26	R&S	4/1/2018	1Y
EM033-04	High Frequency Antenna & preamplifier (26 GHz-40 GHz)	R&S SCU-40	R&S	4/1/2018	1Y
EM031-02-01	Coaxial cable(9 kHz-1 GHz)	N/A	R&S	9/30/2017	1Y
EM033-02-02	Coaxial cable(1 GHz-18 GHz)	N/A	R&S	9/30/2017	1Y
EM033-04-02	Coaxial cable(18 GHz~40 GHz)	N/A	R&S	4/1/2018	1Y
EM022-03	2.45 GHz Filter	BRM50702	Micro-Tronics	9/9/2017	1Y