

Shenzhen Toby Technology Co., Ltd.

Report No.: TB-FCC147282

1 of 97 Page:

FCC Radio Test Report FCC ID: 2AEP6XM-JPG1-2

Original Grant

Report No. TB-FCC147282

HangZhou XiongMai Technology CO., LTD **Applicant**

Equipment Under Test (EUT)

EUT Name WarriorG1

Model No. XM-JPG1-2

Series No. XM-JPG1-2S, XM-JPG1-4, XM-JPG1-4S, G1-2, G1-4S

Brand Name XM

2016-03-18 **Receipt Date**

2016-03-18 to 2016-03-27 **Test Date**

Issue Date 2016-03-28

FCC Part 15, Subpart C (15.247:2015) **Standards**

Test Method ANSI C63.10: 2013

Conclusions **PASS**

In the configuration tested, the EUT complied with the standards specified above,

The EUT technically complies with the FCC and IC requirements

Test/Witness Engineer

Approved& **Authorized**

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

TB-RF-074-1.0



Page: 2 of 97

Contents

CON	ITENTS	2
1.	GENERAL INFORMATION ABOUT EUT	4
	1.1 Client Information	
	1.2 General Description of EUT (Equipment Under Test)	
	1.3 Block Diagram Showing the Configuration of System Tested	
	1.4 Description of Support Units	5
	1.5 Description of Test Mode	
	1.6 Description of Test Software Setting	6
	1.7 Measurement Uncertainty	7
	1.7 Test Facility	8
2.	TEST SUMMARY	9
3.	TEST EQUIPMENT	10
4.	CONDUCTED EMISSION TEST	11
	4.1 Test Standard and Limit	11
	4.2 Test Setup	
	4.3 Test Procedure	11
	4.4 EUT Operating Mode	12
	4.5 Test Data	12
5.	RADIATED EMISSION TEST	17
	5.1 Test Standard and Limit	17
	5.2 Test Setup	
	5.3 Test Procedure	19
	5.4 EUT Operating Condition	19
	5.5 Test Data	20
6.	RESTRICTED BANDS REQUIREMENT	51
	6.1 Test Standard and Limit	51
	6.2 Test Setup	51
	6.3 Test Procedure	51
	6.4 EUT Operating Condition	52
	6.5 Test Data	
7.	BANDWIDTH TEST	73
	7.1 Test Standard and Limit	
	7.2 Test Setup	
	7.3 Test Procedure	
	7.4 EUT Operating Condition	73
	7.5 Test Data	74
8.	PEAK OUTPUT POWER TEST	82
	8.1 Test Standard and Limit	82



Page: 3 of 97

	8.2 Test Setup	82
	8.3 Test Procedure	
	8.4 EUT Operating Condition	82
	8.5 Test Data	83
9.	POWER SPECTRAL DENSITY TEST	88
	9.1 Test Standard and Limit	
	9.2 Test Setup	
	9.3 Test Procedure	
	9.4 EUT Operating Condition	88
	9.5 Test Data	89
10.	ANTENNA REQUIREMENT	97
	10.1 Standard Requirement	97
	10.2 Antenna Connected Construction	



Page: 4 of 97

1. General Information about EUT

1.1 Client Information

Applicant: HangZhou XiongMai Technology CO., LTD

Address: 9th Floor, Building 9, Yinhu Innovation Center, No.9 FuXian Road,

YinHu Street, Hangzhou, China

Manufacturer : HangZhou XiongMai Technology CO., LTD

Address: 9th Floor, Building 9, Yinhu Innovation Center, No.9 FuXian Road,

YinHu Street, Hangzhou, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name		WarriorG1	WarriorG1			
Models No.	7	XM-JPG1-2, XM-JPG	XM-JPG1-2, XM-JPG1-2S, XM-JPG1-4, XM-JPG1-4S, G1-2, G1-4S			
Model Difference	1		identical in the same PCB, layout and electrical ence is model name for commercial.			
	I.	Operation Frequency 802.11b/g/n(HT20): 2 802.11n(HT40): 2422	412MHz~2462MHz			
		Number of Channel:	802.11b/g/n(HT20):11 channels see note(3) 802.11n(HT40): 7 channels see note(3)			
Product Description		RF Output Power:	802.11b: 9.13 dBm 802.11g: 9.08 dBm 802.11n (HT20): 9.00 dBm 802.11n (HT40): 9.02 dBm			
A VIII		Antenna Gain:	2 dBi Chip Antenna			
		Modulation Type:	802.11b: CCK, DQPSK, DBPSK 802.11g: 64-QAM,QPSK,BPSK 802.11n: 64-QAM,16-QAM,QPSK,BPSK			
		Bit Rate of	802.11b:11/5.5/2/1 Mbps			
	1	Transmitter:	802.11g:54/48/36/24/18/12/9/6 Mbps 802.11n:up to 150Mbps			
Power Supply		DC Voltage supplied from Host System by USB cable. DC power by Li-ion Battery.				
Power Rating	ċ					
Connecting I/O Port(S)	:	Please refer to the User's Manual				



Page: 5 of 97

Note:

(1) This Test Report is FCC Part 15.247 for 802.11b/g/n, the test procedure follows the FCC KDB 558074 D01 DTS Meas Guidance v03r04.

(2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

(3) Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		

Note:CH 01~CH 11 for 802.11b/g/n(HT20) CH 03~CH 09 for 802.11n(HT40)

- (4) The Antenna information about the equipment is provided by the applicant.
- 1.3 Block Diagram Showing the Configuration of System Tested

TX Mode

EUT

1.4 Description of Support Units

The EUT has been test as an independent unit



Page: 6 of 97

1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned follow was evaluated respectively.

For Conducted Test				
Final Test Mode	Description			
Mode 1	TX B Mode			

For Radiated Test				
Final Test Mode Description				
Mode 3 TX Mode B Mode Channel 01/06/11				
Mode 4 TX Mode G Mode Channel 01/06/11 Mode 5 TX Mode N(HT20) Mode Channel 01/06/				
		Mode 6	TX Mode N(HT40) Mode Channel 03/06/09	

Note:

(1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels, and the worst case data rate as follows:

802.11b Mode: CCK (1 Mbps) 802.11g Mode: OFDM (6 Mbps)

802.11n (HT20) Mode: MCS 0 (6.5 Mbps) 802.11n (HT40) Mode: MCS 0 (13 Mbps)

- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is considered a mobile unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

During testing channel& Power controlling software provided by the customer 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 customer and is going to be fixed on the firmware of the final end product power parameters of WLAN.



Page: 7 of 97

Test Software Version		N/A	The same of the
Channel	CH 01	CH 06	CH 11
IEEE 802.11b DSSS	DEF	DEF	DEF
IEEE 802.11g OFDM	DEF	DEF	DEF
IEEE 802.11n (HT20)	DEF	DEF	DEF
	CH 03	CH 06	CH 09
IEEE 802.11n (HT40)	DEF	DEF	DEF

1.7 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

Test Item	Parameters	Expanded Uncertainty (U _{Lab})
The same	Level Accuracy:	
Conducted Emission	9kHz~150kHz	±3.42 dB
	150kHz to 30MHz	±3.42 dB
De diete d'Engineien	Level Accuracy:	. 4 CO dD
Radiated Emission	9kHz to 30 MHz	±4.60 dB
Dadiated Emission	Level Accuracy:	.4.40 dD
Radiated Emission	30MHz to 1000 MHz	±4.40 dB
Dadiated Emission	Level Accuracy:	. 4 20 dD
Radiated Emission	Above 1000MHz	±4.20 dB



Page: 8 of 97

1.7 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

FCC List No.: (811562)

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

IC Registration No.: (11950A-1)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A-1.



Page: 9 of 97

2. Test Summary

		: 15 Subpart C(15.247)/ RSS 247		
Standa	rd Section	Test Item	Judgment	Remark
FCC	IC	Test item	odagment	
15.203	1	Antenna Requirement	PASS	N/A
15.207	RSS-GEN 7.2.4	Conducted Emission	PASS	N/A
15.205	RSS-GEN 7.2.2	Restricted Bands	PASS	N/A
15.247(a)(2)	RSS 247 5.2 (1)	6dB Bandwidth	PASS	N/A
15.247(b)	RSS 247 5.4 (4)	Peak Output Power	PASS	N/A
15.247(e)	RSS 247 5.2 (2)	Power Spectral Density	PASS	N/A
15.247(d)	RSS 247 5.5	Transmitter Radiated Spurious Emission	PASS	N/A

Note: "/" for no requirement for this test item.

N/A is an abbreviation for Not Applicable.



Page: 10 of 97

3. Test Equipment

Conducte	d Emission Te	est			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Aug. 07, 2015	Aug. 06, 2016
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Aug. 07, 2015	Aug. 06, 2016
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Aug. 07, 2015	Aug. 06, 2016
LISN	Rohde & Schwarz	ENV216	101131	Aug. 07, 2015	Aug. 06, 2016
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Date
					Cal. Due
Spectrum	Agilent	F4407B	MY45106456	Aug. 07, 2015	Aug. 06, 2016
Analyzer	Agilent	E4407B	W1145106456	Aug. 07, 2015	Aug. 06, 2016
EMI Test Receiver	Rohde & Schwarz	ESCI	100010/007	Aug. 07, 2015	Aug. 06, 2016
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 26, 2016	Mar. 25, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 26, 2016	Mar. 25, 2017
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 26, 2016	Mar. 25, 2017
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar. 26, 2016	Mar. 25, 2017
Pre-amplifier	Sonoma	310N	185903	Mar. 26, 2016	Mar. 25, 2017
Pre-amplifier	HP	8447B	3008A00849	Mar. 26, 2016	Mar. 25, 2017
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 26, 2016	Mar. 25, 2017
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A



Page: 11 of 97

4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1Test Standard FCC Part 15.207

4.1.2 Test Limit

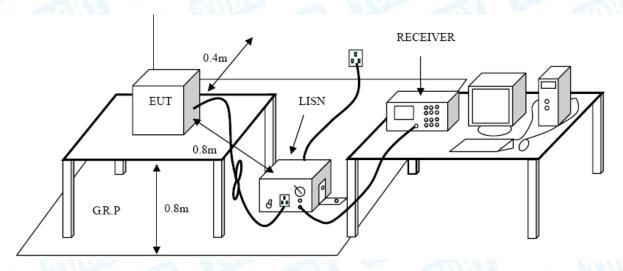
Conducted Emission Test Limit

	Maximum RF Lin	e Voltage (dBμV)
Frequency	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2 Test Setup



4.3 Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.



Page: 12 of 97

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

4.4 EUT Operating Mode

Please refer to the description of test mode.

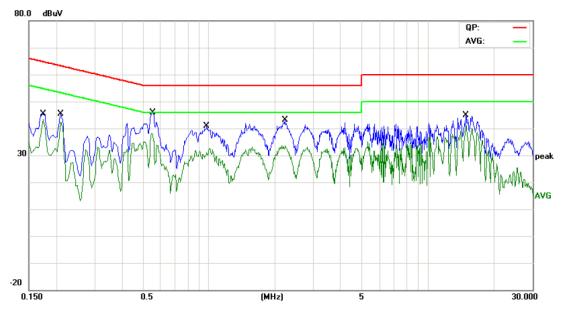
4.5 Test Data

Please see the next page.



Page: 13 of 97

EUT:	WarriorG1	Model Name :	XM-JPG1-2		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	Test Voltage: AC 120V/60Hz				
Terminal:	Line				
Test Mode:	TX B Mode				
Remark: Only worse case is reported			1:33		
80.0 dBuV					



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB	dBu∨	dBu∀	dB	Detector
1		0.1740	33.93	10.12	44.05	64.76	-20.71	QP
2		0.1740	33.25	10.12	43.37	54.76	-11.39	AVG
3		0.2100	33.90	10.12	44.02	63.20	-19.18	QP
4		0.2100	32.11	10.12	42.23	53.20	-10.97	AVG
5		0.5540	35.41	10.02	45.43	56.00	-10.57	QP
6	*	0.5540	27.69	10.02	37.71	46.00	-8.29	AVG
7		0.9780	28.56	10.15	38.71	56.00	-17.29	QP
8		0.9780	21.06	10.15	31.21	46.00	-14.79	AVG
9		2.2220	27.70	10.06	37.76	56.00	-18.24	QP
10		2.2220	22.93	10.06	32.99	46.00	-13.01	AVG
11		14.9060	31.68	10.06	41.74	60.00	-18.26	QP
12		14.9060	30.65	10.06	40.71	50.00	-9.29	AVG

^{*:}Maximum data x:Over limit !:over margin



Page: 14 of 97

EUT:	WarriorG1	Model Name :	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		anis -
Terminal:	Neutral	THURSDAY TO	
Test Mode:	TX B Mode		THU .
Remark:	Only worse case is	reported	1:43
80.0 dBuV			
30	Why was a second of the second		QP: — AVG: — pe
-20	0.5 Reading	(MHz) 5 Correct Measure-	30.000
	Freq. Level	Factor ment Limi	
	MHz dBu∨ 1740 37.38	dB dBu√ dBu¹ 9.97 47.35 64.7	
	1740 37.38 1740 36.89	9.97 46.86 54.7	
	2100 37.19	10.02 47.21 63.2	
	2100 33.84	10.02 43.86 53.2	
	5540 34.30		0 -11.65 QP
	5540 26.48	10.05 36.53 46.0	
7 2.2	2020 27.20		0 -18.75 QP
8 2.2	2020 21.70	10.05 31.75 46.0	0 -14.25 AVG
9 6.1	1420 14.58	10.02 24.60 60.0	0 -35.40 QP
10 6.1	1420 10.04	10.02 20.06 50.0	0 -29.94 AVG
11 14.9	9060 4.50	10.26 14.76 60.0	0 -45.24 QP
12 14.9	9060 -1.00	10.26 9.26 50.0	0 -40.74 AVG
	ver limit !:over margin = Read Level+ Corre	ct Factor	



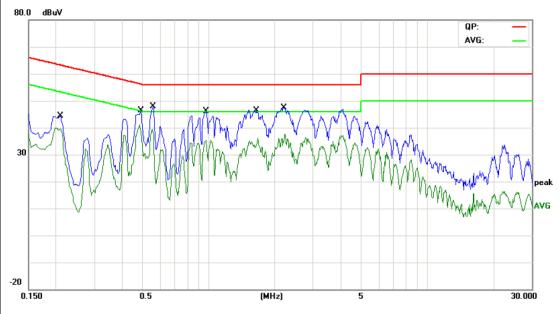
Page: 15 of 97

	Warrior	G1	Model Name :	XM-JPG1-2	2
Temperature:	25 ℃	6000	Relative Humidity:	55%	fill re
Test Voltage:	AC 240	V/60Hz	01		
Terminal:	Line	- UK		The same	
Test Mode:	TX B Mo	ode		- W	
Remark:	Only wo	rse case is repor	ted	1:13	_ (
80.0 dBuV			- 10		
				QP: AVG:	
	-				
XXX	X		. ×		
	MANA	MANN, MAY			
30	NV YWW	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	wa ^w zali. Yzyty zli VIVA az		A
30	JV * // (4)	# # # # # # # # # # # # # # # # # # #	A VA A A VAVA A	M	\sqrt{VV}
	V Y Y	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	. , , , , , ////	A Transportation of the party of	Pe
				V MANAGERAND AMAL OF	v~\ \ \
				100 904 90	
-20					
0.150	0.5	(MHz	5		30.000
No Ma		eading Corre			
No. Mk. F				it Over	
		Level Fact			Dotostor
	иHz	dBuV dB	dBu∨ dBu	V dB	Detector
1 0.2	инz 2100	dBuV dB 38.66 10.02	dBuV dBu 2 48.68 63.2	∨ dB 20 -14.52	QP
1 0.2	инz 2100 : 2100 :	dBuV dB 38.66 10.02 36.41 10.02	dBuV dBu 2 48.68 63.2 2 46.43 53.2	∨ dB 20 -14.52 20 -6.77	QP AVG
1 0.2 2 0.2 3 0.2	2100 : 2100 : 2100 :	dBu√ dB 38.66 10.02 36.41 10.02 40.49 10.02	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8	V dB 20 -14.52 20 -6.77 38 -10.37	QP AVG QP
1 0.2 2 0.2 3 0.2 4 * 0.2	2100 : 2100 : 2100 : 2779 :	dBuV dB 38.66 10.02 36.41 10.02 40.49 10.02 35.97 10.02	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8 2 45.99 50.8	V dB 20 -14.52 20 -6.77 88 -10.37 88 -4.89	QP AVG QP AVG
1 0.2 2 0.2 3 0.2 4 * 0.2 5 0.3	2100 :2100 :2779 :2779 :3500 :	dBuV dB 38.66 10.02 36.41 10.02 40.49 10.02 35.97 10.02	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8 2 45.99 50.8 2 46.31 58.9	V dB 20 -14.52 20 -6.77 38 -10.37 38 -4.89 96 -12.65	QP AVG QP AVG
1 0.2 2 0.2 3 0.2 4 * 0.2 5 0.3 6 0.3	2100 :2100 :2779 :2779 :3500 :3500 :3	dBuV dB 38.66 10.02 36.41 10.02 40.49 10.02 35.97 10.02 36.29 10.02 31.69 10.02	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8 2 45.99 50.8 2 46.31 58.9 2 41.71 48.9	V dB 20 -14.52 20 -6.77 38 -10.37 38 -4.89 96 -12.65 96 -7.25	QP AVG QP AVG QP
1 0.2 2 0.2 3 0.2 4 * 0.2 5 0.3 6 0.3 7 0.4	2100 :2100 :2779 :2779 :3500 :3500 :4900 :	dBuV dB 38.66 10.02 36.41 10.02 40.49 10.02 35.97 10.02 36.29 10.02 31.69 10.02 37.47 10.02	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8 2 45.99 50.8 2 46.31 58.9 2 41.71 48.9 2 47.49 56.1	V dB 20 -14.52 20 -6.77 38 -10.37 38 -4.89 96 -12.65 96 -7.25	QP AVG QP AVG QP QP
1 0.2 2 0.2 3 0.2 4 * 0.2 5 0.3 6 0.3 7 0.4 8 0.4	2100 :2100 :2779 :2779 :3500 :3500 :4900 :	dBuV dB 38.66 10.02 36.41 10.02 40.49 10.02 35.97 10.02 36.29 10.02 31.69 10.02 37.47 10.02	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8 2 45.99 50.8 2 46.31 58.9 2 41.71 48.9 2 47.49 56.1 2 40.71 46.1	V dB 20 -14.52 20 -6.77 38 -10.37 38 -4.89 96 -12.65 96 -7.25 17 -8.68	QP AVG QP AVG QP AVG
1 0.2 2 0.2 3 0.2 4 * 0.2 5 0.3 6 0.3 7 0.4 8 0.4 9 1.6	2100 2100 2779 2779 3500 3500 4900	dBuV dB 38.66 10.02 36.41 10.02 40.49 10.02 35.97 10.02 36.29 10.02 31.69 10.02 37.47 10.02 30.69 10.02 34.16 10.06	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8 2 45.99 50.8 2 46.31 58.9 2 41.71 48.9 2 47.49 56.1 2 40.71 46.1 6 44.22 56.0	dB 20 -14.52 20 -6.77 38 -10.37 38 -4.89 96 -12.65 96 -7.25 17 -8.68 17 -5.46 90 -11.78	QP AVG QP AVG QP AVG QP
1 0.2 2 0.2 3 0.2 4 * 0.2 5 0.3 6 0.3 7 0.4 8 0.4 9 1.6	MHz 2100 2100 2779 2779 3500 3500 4900 4900 5019	dBuV dB 38.66 10.02 36.41 10.02 40.49 10.02 35.97 10.02 36.29 10.02 31.69 10.02 37.47 10.02 30.69 10.02 34.16 10.06	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8 2 45.99 50.8 2 46.31 58.9 2 41.71 48.9 2 47.49 56.1 2 40.71 46.1 6 44.22 56.0 6 33.13 46.0	dB 20 -14.52 20 -6.77 38 -10.37 38 -4.89 96 -12.65 96 -7.25 17 -8.68 17 -5.46 90 -11.78	QP AVG QP AVG QP AVG AVG
1 0.2 2 0.2 3 0.2 4 * 0.2 5 0.3 6 0.3 7 0.4 8 0.4 9 1.6 10 1.6	2100 :2100 :2779 :2779 :3500 :3500 :4900 :5019 :5019 :0340 :	dBuV dB 38.66 10.02 36.41 10.02 40.49 10.02 35.97 10.02 36.29 10.02 31.69 10.02 37.47 10.02 30.69 10.02 34.16 10.06	dBuV dBu 2 48.68 63.2 2 46.43 53.2 2 50.51 60.8 2 45.99 50.8 2 46.31 58.9 2 41.71 48.9 2 47.49 56.1 2 40.71 46.1 6 44.22 56.0 6 33.13 46.0 6 42.67 56.0	dB 20 -14.52 20 -6.77 38 -10.37 38 -4.89 96 -12.65 96 -7.25 17 -8.68 17 -5.46 90 -11.78 90 -12.87	QP AVG QP AVG QP AVG QP



Page: 16 of 97

EUT:	WarriorG1	Model Name :	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 240V/60Hz		
Terminal:	Neutral		
Test Mode:	TX B Mode		
Remark:	Only worse case is report	ted	1:72
80.0 dBuV			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB	dBuV	dBu∨	dB	Detector
1		0.2100	31.15	10.12	41.27	63.20	-21.93	QP
2		0.2100	29.09	10.12	39.21	53.20	-13.99	AVG
3		0.4900	34.71	10.02	44.73	56.17	-11.44	QP
4	*	0.4900	28.29	10.02	38.31	46.17	-7.86	AVG
5		0.5580	37.54	10.02	47.56	56.00	-8.44	QP
6		0.5580	28.01	10.02	38.03	46.00	-7.97	AVG
7		0.9740	34.77	10.15	44.92	56.00	-11.08	QP
8		0.9740	25.03	10.15	35.18	46.00	-10.82	AVG
9		1.6460	34.85	10.10	44.95	56.00	-11.05	QP
10		1.6460	23.37	10.10	33.47	46.00	-12.53	AVG
11		2.2300	33.52	10.06	43.58	56.00	-12.42	QP
12		2.2300	27.24	10.06	37.30	46.00	-8.70	AVG

^{*:}Maximum data x:Over limit !:over margin



Page: 17 of 97

5. Radiated Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard FCC Part 15.209

5.1.2 Test Limit

Radiated Emission Limits (9kHz~1000MHz)

Frequency (MHz	Field Strength (microvolt/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
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Radiated Emission Limit (Above 1000MHz)

Frequency	Class A (dBuV	/m)(at 3 M)	Class B (dBuV	/m)(at 3 M)
(MHz)	Peak	Average	Peak	Average
Above 1000	80	60	74	54

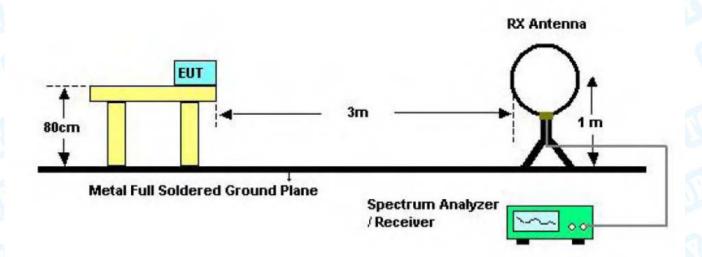
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level(dBuV/m)=20log Emission Level(uV/m)

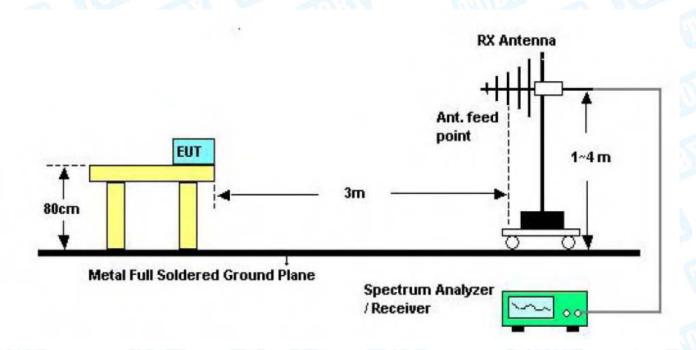


Page: 18 of 97

5.2 Test Setup



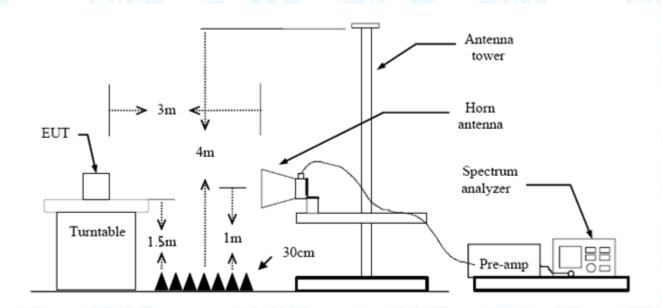
Below 30MHz Test Setup



Below 1000MHz Test Setup



Page: 19 of 97



Above 1GHz Test Setup

5.3 Test Procedure

- (1) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (3) 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.
- (4) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (5) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (6) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (7) For the actual test configuration, please see the test setup photo.

5.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.



Page: 20 of 97

5.5 Test Data

Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

Test data please refer the following pages.



Page: 21 of 97

EUT:	WarriorG1	Mod	el:	XM-JPG1-2
Temperature:	25 ℃	Rela	tive Humidity:	55%
Test Voltage:	DC 3.6V		1	
Ant. Pol.	Horizontal	ARGE		
Test Mode:	TX B Mode 2412	2MHz	WILD TO SERVICE OF THE PARTY OF	
Remark:	Only worse case	is reported		1:33
30 dBuV/m -20 30.000 40 50	60 70 80	(MHz)	3 × × × × × × × × × × × × × × × × × × ×	500 600 700 1000.000
No. Mk. Fr	Reading req. Level	Correct N Factor	leasure- ment Lim	it Over
	Hz dBu∨	dB/m	dBuV/m dBu\	
1 72.0)841 53.74	-24.22	29.52 40.	00 -10.48 peak
2 ! 167.8	8241 60.14	-22.18	37.96 43.	50 -5.54 peak
3 247.0	6819 58.03	-19.62	38.41 46.	00 -7.59 peak
4 * 346.8	8091 58.27	-16.51	41.76 46.	00 -4.24 peak
5 ! 470.	5230 55.31	-13.84	41.47 46.	00 -4.53 peak
6 ! 645.	1195 52.62	-11.15	41.47 46.	00 -4.53 peak
	Over limit !:over margin			



Page: 22 of 97

EUT:	WarriorG1	Model:	XI	M-JPG1-2	
Temperature:	25 ℃	Relative I	Humidity: 55	5%	N
Test Voltage:	DC 3.6V		Tim	133	
Ant. Pol.	Vertical	A PROPERTY.			NIF.
Test Mode:	TX B Mode 241	2MHz		a WWW	
Remark:	Only worse cas	e is reported		3	. (
80.0 dBuV/m					
-20 30.000 40 50	2 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	3 (MHz)	(RF)FCC 15(Badiation Margin -6 dB 6 X 0 600 700 1	000.000
No. Mk. F	Reading req. Level	Correct Measu Factor men	1 2 24	Over	
	∕/Hz dBu∀	dB/m dBuV	/m dBuV/m	dB D	etector
1 49.	5328 55.49	-24.67 30.8	32 40.00	-9.18	peak
2 71.	8319 56.82	-24.23 32.5	9 40.00	-7.41	peak
3 167.	.8240 59.62	-22.18 37.4	4 43.50	-6.06	peak
	.5803 54.47	-14.84 39.6		'	peak
				'	
5 470.	.5230 53.36	-13.84 39.5	2 46.00	-6.48	peak

*:Maximum data x:Over limit !:over margin

645.1195

Emission Level= Read Level+ Correct Factor

52.12

-11.15

40.97

46.00

-5.03

peak



Page: 23 of 97

EUT:	WarriorG1	Mod	lel:	XM	-JPG1-2	
Temperature:	25 ℃	Rela	tive Humidity	': 55%	%	
Test Voltage:	DC 3.6V			(III)	333	
Ant. Pol.	Horizontal	A MATERIAL PROPERTY.		600		
Test Mode:	TX B Mode 2437	MHz			187	A STATE OF
Remark:	Only worse case	is reported		A:D	3	
80.0 dBuV/m						
30	1 X	2	3	A X	3M Radiation Margin -6	
when have been a second			YUYVAALU	ALTONIA HILAMINI	A Thurstill	
-20	0 60 70 80	(MHz)	300 4	100 500	600 700	1000.00
-20 30.000 40 50	Reading Freq. Level		/leasure-	100 500 mit	600 700 Over	1000.00
-20 30.000 40 50 No. Mk.	Reading	Correct N	/leasure- ment Li			1000.00
-20 30.000 40 50 No. Mk.	Reading Freq. Level	Correct N Factor	/leasure- ment Li dBuV/m dE	mit	Over	
No. Mk. F	Reading Freq. Level	Correct N Factor	/leasure- ment Li dBuV/m dE 31.52 4	mit BuV/m	Over	Detecto
No. Mk. F	Reading Freq. Level MHz dBuV .0841 55.74	Correct N Factor dB/m -24.22	Measure- ment Li dBuV/m dE 31.52 4 35.96 4	mit BuV/m	Over dB -8.48	Detector peal
No. Mk. F	Reading Level MHz dBuV .0841 55.74 7.8240 58.14	Correct Name of the Factor of	Measurement Li dBuV/m dE 31.52 4 35.96 4 39.76 4	mit BuV/m 0.00 3.50	Over dB -8.48 -7.54 -6.24	Detector peal peal
No. Mk. F	Reading Level MHz dBuV .0841 55.74 7.8240 58.14 6.8091 56.27 0.5230 53.31	Correct Name Factor dB/m -24.22 -22.18 -16.51 -13.84	Measurement Li dBuV/m dE 31.52 4 35.96 4 39.76 4 39.47 4	mit 0.00 3.50 6.00	Over dB -8.48 -7.54 -6.24 -6.53	peal peal peal
No. Mk. F 1 72 2 167 3 346 4 470 5 * 645	Reading Level MHz dBuV .0841 55.74 7.8240 58.14 6.8091 56.27	Correct Name	Measurement Li dBuV/m dE 31.52 4 35.96 4 39.76 4 39.47 4 40.47 4	mit 3.00 3.50 6.00	Over dB -8.48 -7.54 -6.24	Detection peal peal



Page: 24 of 97

	WarriorG1	IVIC	odel:	X	M-JPG1-2	
Temperature:	25 ℃	Re	lative Humidit	y: 5	5%	
Test Voltage:	DC 3.6V		1	6.11	133	
Ant. Pol.	Vertical	A RATE		60		
Test Mode:	TX B Mode 2437	7MHz	(III)		a W	and the same of
Remark:	Only worse case	e is reported			13	_ (
80.0 dBuV/m						
30		3 X		(RF)FCC 1	15C 3M Radiation Margin -6	
V V V) MANA	n AM.	W	1 1 4 1	Yri yling.	
-20 30.000 40 50	60 70 80	(MHz)	300	400 5	500 600 700	1000.000
				400 5	500 600 700	1000.000
	Reading	(MHz) Correct Factor	Measure-	400 5	500 600 700 Over	1000.000
30.000 40 50	Reading eq. Level	Correct	Measure- ment L		Over	1000.00 Detecto
30.000 40 50 No. Mk. Fre	Reading eq. Level	Correct Factor	Measure- ment L	imit	Over	
30.000 40 50 No. Mk. Fre	Reading Level dBu V 328 53.99	Correct Factor	Measurement L	_imit dBu∨/m	Over	Detecto peak
No. Mk. Fre	Reading Level dz dBuV 328 53.99 319 54.32	Correct Factor dB/m -24.67	Measurement L dBuV/m c 29.32 4 30.09	.imit dBuV/m 40.00	Over dB -10.68	Detector peak
No. Mk. Fre	Reading Level dBuV 328 53.99 319 54.32 240 57.62	Correct Factor dB/m -24.67 -24.23 -22.18	Measurement L dBuV/m c 29.32 4 30.09 4 35.44	imit dBuV/m 40.00 40.00 43.50	Over dB -10.68 -9.91 -8.06	Detecto peak peak peak
No. Mk. Free MH 1 49.53 2 71.83 3 167.83 4 346.86	Reading Level dBuV 328 53.99 319 54.32 240 57.62 091 53.61	Correct Factor dB/m -24.67 -24.23 -22.18 -16.51	Measurement L dBuV/m 29.32 4 30.09 4 35.44 4 37.10	imit dBuV/m 40.00 40.00 43.50 46.00	Over dB -10.68 -9.91 -8.06 -8.90	Detecto peak peak
No. Mk. Free MH 1 49.53 2 71.83 3 167.83	Reading Level dBuV 328 53.99 319 54.32 240 57.62 091 53.61	Correct Factor dB/m -24.67 -24.23 -22.18	Measurement L dBuV/m 29.32 4 30.09 4 35.44 4 37.10	imit dBuV/m 40.00 40.00 43.50	Over dB -10.68 -9.91 -8.06	Detection pea



Page: 25 of 97

	WarriorG1	Model:	XM	I-JPG1-2	
Temperature:	25 ℃	Relative Hur	midity: 55%	%	
Test Voltage:	DC 3.6V		The state of	133	
Ant. Pol.	Horizontal	THU	3 2		
Test Mode:	TX B Mode 2462	2MHz		18	
Remark:	Only worse case	e is reported		3	- 1
80.0 dBuV/m		2 3 X	(RF)FCC 150	C 3M Radiation Margin -6	dB 6
-20	JAMAH MANA	/ht			
	60 70 80	(MHz) 30	00 400 500	0 600 700	1000.00
-20	Reading	(MHz) 30 Correct Measure Factor ment		0 600 700 Over	1000.00
20 30.000 40 50	Reading eq. Level	Correct Measure	_	Over	1000.00
20 30.000 40 50 No. Mk. Fre	Reading eq. Level	Correct Measure Factor ment	- Limit	Over	
No. Mk. Fre	Reading Level z dBuV	Correct Measure Factor ment	Limit	Over	Detecto
No. Mk. Fre	Reading Level z dBuV 319 53.73 240 58.64	Correct Measure ment dB/m dBuV/m -24.23 29.50	Limit dBuV/m 40.00	Over dB -10.50	Detecto peak peak
No. Mk. Free MH 1 71.83 2 * 167.8	Reading Level Z dBuV 319 53.73 240 58.64 819 55.53	Correct Measure ment dB/m dBuV/m -24.23 29.50 -22.18 36.46	Limit dBuV/m 40.00 43.50	Over dB -10.50 -7.04	Detecto peak peak peak
No. Mk. Free MH 1 71.83 2 * 167.8 3 247.6	Reading Level Z dBuV 319 53.73 240 58.64 819 55.53 091 54.77	Correct Factor Measure ment dB/m dBuV/m -24.23 29.50 -22.18 36.46 -19.62 35.91	Limit dBuV/m 40.00 43.50 46.00	Over dB -10.50 -7.04 -10.09	Detecto peak



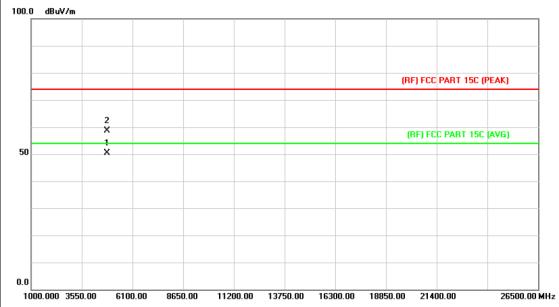
Page: 26 of 97

	WarriorG1		Model:	X	(M-JPG1-2	
Temperature:	25 ℃	anist.	Relative Hun	nidity: 5	55%	Filtre
Test Voltage:	DC 3.6V		al F	(m)	133	
Ant. Pol.	Vertical	NW N		A W		
Test Mode:	TX B Mode	e 2462MHz		ر و		A STATE OF THE PARTY OF THE PAR
Remark:	Only worse	e case is repor	ted		13	
80.0 dBuV/m						
30		2	3 X	(RF)FCC	15C 3M Radiatio	
		my My				
-20 30.000 40 50		(MHz	ct Measure	-	500 600 700	1000.00
30.000 40 50 No. Mk. Fre	Rea eq. Le	ading Corre	ct Measure or ment	- Limit	Over	
No. Mk. Fre	Rea eq. Le	ading Corre	ct Measure or ment dBuV/m	- Limit dBuV/m	Over	Detecto
No. Mk. Fre	Rea eq. Le	ading Corre	ct Measure or ment dBuV/m 3 31.59	Limit dBuV/m 40.00	O∨er dB -8.41	Detecto peak
No. Mk. Free MH 1 71.83 2 * 167.8	Readeq. Let de	ading Corre Evel Facto BuV dB/m 5.82 -24.23 5.62 -22.18	ct Measure- or ment dBuV/m 3 31.59 8 36.44	Limit dBu∀/m 40.00 43.50	Over dB -8.41 -7.06	Detecto
No. Mk. Fre	Readeq. Let de	ading Corre	ct Measure- or ment dBuV/m 3 31.59 8 36.44	Limit dBuV/m 40.00	Over dB -8.41 -7.06	Detecto peak
No. Mk. From MH 1 71.83 2 * 167.8	Readeq. Le de	ading Corre Evel Facto BuV dB/m 5.82 -24.23 5.62 -22.18	t Measurement dBuV/m 3 31.59 3 36.44 9 33.39	Limit dBu∀/m 40.00 43.50	Over dB -8.41 -7.06 -12.61	Detecto peak peak
No. Mk. From MH 1 71.83 2 * 167.83 3 297.2	Readeq. Le de	ading Corre Facto 6.82 -24.23 6.62 -22.18	t Measurement dBuV/m 3 31.59 3 36.44 9 33.39 4 38.13	Limit dBuV/m 40.00 43.50 46.00	Over dB -8.41 -7.06 -12.61 -7.87	Detecto peak peak peak



Page: 27 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V	101 T	THE STATE OF THE S			
Ant. Pol.	Horizontal		TO THE			
Test Mode:	TX B Mode 2412MHz		THE REAL PROPERTY OF THE PERTY			
Remark:	No report for the emission	No report for the emission which more than 10 dB below the				
	prescribed limit.					

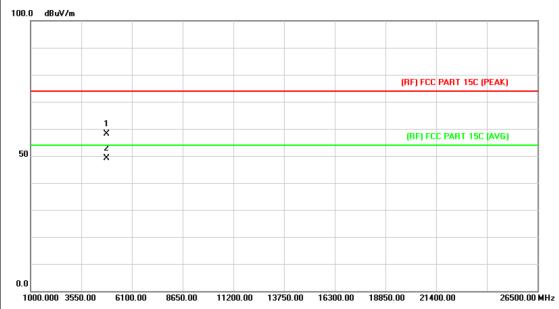


-	No.	Mk.	Freq.	_		Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4824.311		13.56	50.34	54.00	-3.66	AVG
2			4824.652	45.11	13.56	58.67	74.00	-15.33	peak



Page: 28 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.6V	01 - 0			
Ant. Pol.	Vertical				
Test Mode:	TX B Mode 2412MHz				
Remark:	No report for the emission which more than 10 dB below the				
	prescribed limit.				

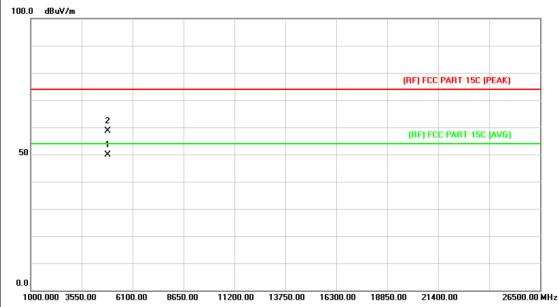


	No.	Mk.	Freq.			Measure- ment	Limit	Over	
			MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1			4823.674	44.59	13.56	58.15	74.00	-15.85	peak
2)	*	4824.034	35.65	13.56	49.21	54.00	-4.79	AVG



Page: 29 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.6V	01 - 0			
Ant. Pol.	Horizontal				
Test Mode:	TX B Mode 2437MHz				
Remark:	No report for the emission which more than 10 dB below the				
	prescribed limit.				



No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4873.025	36.01	13.86	49.87	54.00	-4.13	AVG
2		4874.210	44.78	13.86	58.64	74.00	-15.36	peak



Page: 30 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V					
Ant. Pol.	Vertical					
Test Mode:	TX B Mode 2437MHz					
Remark:	No report for the emission	No report for the emission which more than 10 dB below the				
	prescribed limit.	1 1 W				
İ						

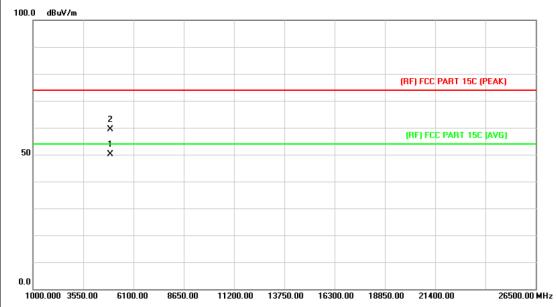


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.314	45.38	13.86	59.24	74.00	-14.76	peak
2	*	4874.351	36.48	13.86	50.34	54.00	-3.66	AVG



Page: 31 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.6V				
Ant. Pol.	Horizontal				
Test Mode:	TX B Mode 2462MHz				
Remark:	No report for the emission which more than 10 dB below the				
	prescribed limit.				

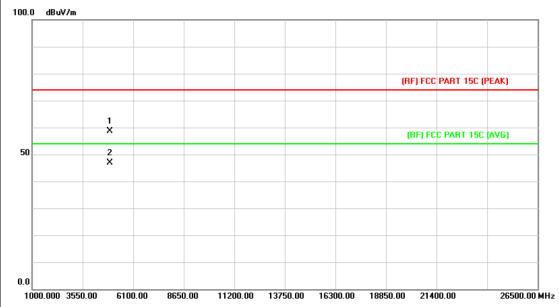


No.	Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.687	35.86	14.15	50.01	54.00	-3.99	AVG
2		4924.064	45.22	14.15	59.37	74.00	-14.63	peak



Page: 32 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V	011	
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	No report for the emission	n which more than 10	dB below the
	prescribed limit.		
l I			

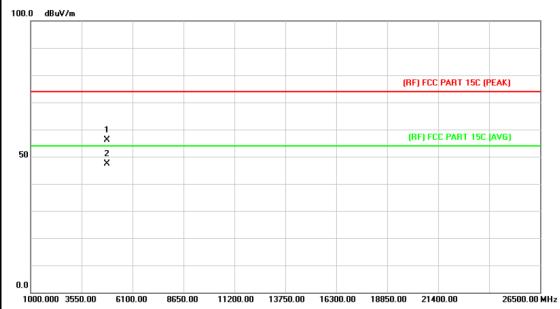


No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.974	44.54	14.15	58.69	74.00	-15.31	peak
2	*	4924.310	32.72	14.15	46.87	54.00	-7.13	AVG



Page: 33 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V					
Ant. Pol.	Horizontal					
Test Mode:	TX G Mode 2412MHz					
Remark: No report for the emission which more than 10 dB below the prescribed limit.						

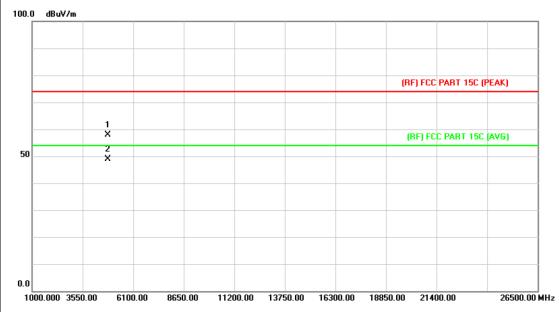


	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1			4823.974	42.61	13.56	56.17	74.00	-17.83	peak
2	2	*	4824.067	33.82	13.56	47.38	54.00	-6.62	AVG



Page: 34 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage: DC 3.6V							
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX G Mode 2412MHz						
Remark:	No report for the emission which more than 10 dB below the						
prescribed limit.							
4							

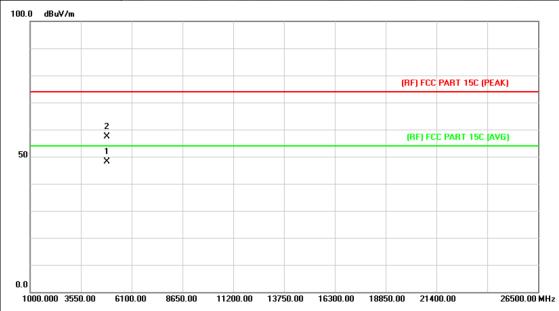


	No.	Mk.	Freq.	_		Measure- ment	Limit	Over	
			MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1			4824.287	44.33	13.56	57.89	74.00	-16.11	peak
2	2	*	4824.317	35.20	13.56	48.76	54.00	-5.24	AVG



Page: 35 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage: DC 3.6V							
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX G Mode 2437MHz						
Remark:	No report for the emission which more than 10 dB below the						
prescribed limit.							
i e e e e e e e e e e e e e e e e e e e			<u>'</u>				



No	o. Mk	. Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.349	34.32	13.86	48.18	54.00	-5.82	AVG
2		4874.366	43.49	13.86	57.35	74.00	-16.65	peak



Page: 36 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V	DC 3.6V					
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX G Mode 2437MHz						
Remark:	No report for the emission which more than 10 dB below the						
prescribed limit.							

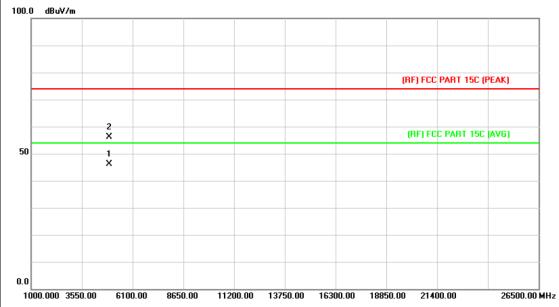


No.	Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.598	43.38	13.86	57.24	74.00	-16.76	peak
2	*	4874.641	34.81	13.86	48.67	54.00	-5.33	AVG



Page: 37 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 °C	Relative Humidity:	55%			
Test Voltage:	DC 3.6V					
Ant. Pol.	Horizontal	Horizontal				
Test Mode:	TX G Mode 2462MHz		A WILL			
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					

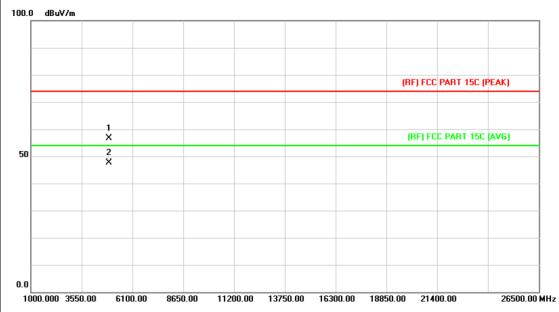


No	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.678	32.07	14.15	46.22	54.00	-7.78	AVG
2		4924.351	42.09	14.15	56.24	74.00	-17.76	peak



Page: 38 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V	TOTAL CONTRACTOR	an U.S.			
Ant. Pol.	Vertical	Vertical				
Test Mode:	TX G Mode 2462MHz		THE PARTY OF THE P			
Remark:	No report for the emissi prescribed limit.	on which more than 10	dB below the			

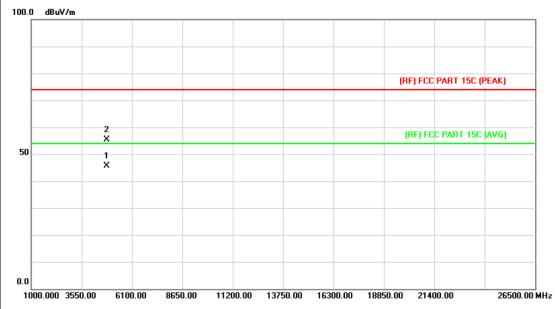


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.641	42.39	14.15	56.54	74.00	-17.46	peak
2	*	4924.312	33.53	14.15	47.68	54.00	-6.32	AVG



Page: 39 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V	DC 3.6V				
Ant. Pol.	Horizontal					
Test Mode:	TX N(HT20) Mode 2412N	1Hz				
Remark:	No report for the emission which more than 10 dB below the					
	prescribed limit.					
4						

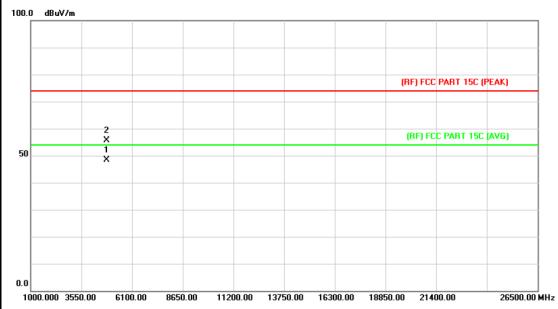


N	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.654	32.12	13.56	45.68	54.00	-8.32	AVG
2		4824.254	41.81	13.56	55.37	74.00	-18.63	peak



Page: 40 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.6V	01 - 0			
Ant. Pol.	Vertical				
Test Mode:	TX N(HT20) Mode 2412	ИНz			
Remark:	No report for the emission which more than 10 dB below the prescribed limit.				

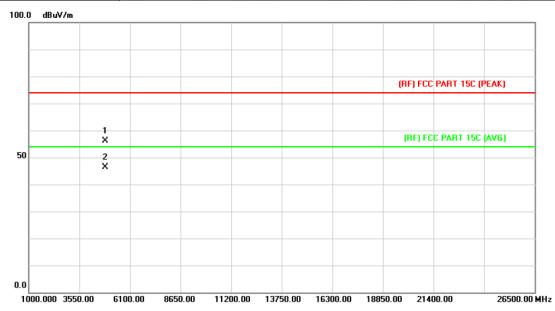


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4824.541	34.78	13.56	48.34	54.00	-5.66	AVG
2		4824.658	42.08	13.56	55.64	74.00	-18.36	peak



Page: 41 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V	W .	THE STATE OF THE S			
Ant. Pol.	Horizontal	Horizontal				
Test Mode:	TX N(HT20) Mode 2437	ИНz	THE REAL PROPERTY OF THE PERTY			
Remark:	No report for the emissio	No report for the emission which more than 10 dB below the				
	prescribed limit.	2 1 W				

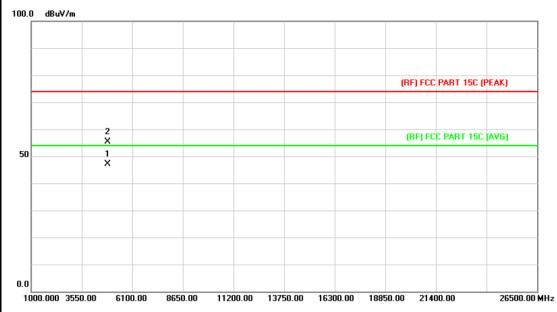


No	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.058	42.22	13.86	56.08	74.00	-17.92	peak
2	*	4874.298	32.52	13.86	46.38	54.00	-7.62	AVG



Page: 42 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V	DC 3.6V				
Ant. Pol.	Vertical	Vertical				
Test Mode:	TX N(HT20) Mode 2437	MHz	A VIVE			
Remark:	No report for the emission which more than 10 dB below the					
	prescribed limit.					

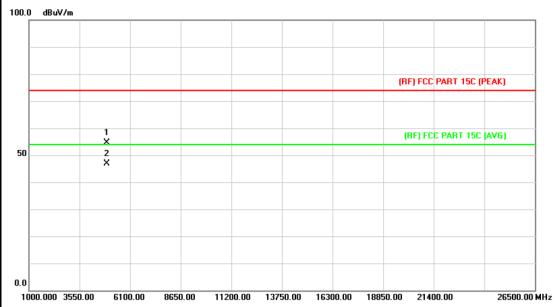


No	o. Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4873.854	33.35	13.86	47.21	54.00	-6.79	AVG
2		4874.651	41.52	13.86	55.38	74.00	-18.62	peak



Page: 43 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V	DC 3.6V					
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT20) Mode 2462N	ИНz					
Remark:	No report for the emissio	No report for the emission which more than 10 dB below the					
	prescribed limit.						

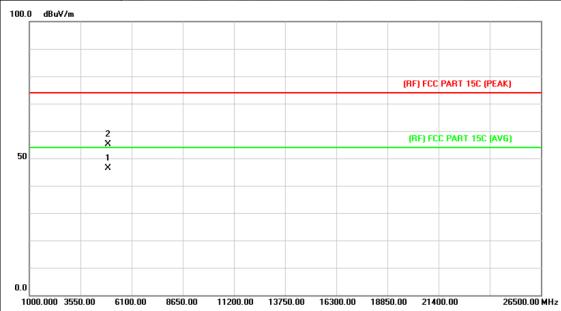


No	o. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.899	40.53	14.15	54.68	74.00	-19.32	peak
2	*	4924.158	32.72	14.15	46.87	54.00	-7.13	AVG



Page: 44 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V	DC 3.6V					
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX N(HT20) Mode 2462N	ИНz	A VIII				
Remark:	No report for the emissio	No report for the emission which more than 10 dB below the					
	prescribed limit.						

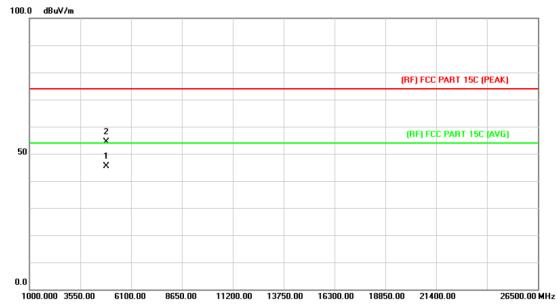


N	۷o.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4924.084	32.17	14.15	46.32	54.00	-7.68	AVG
2			4924.485	40.94	14.15	55.09	74.00	-18.91	peak



Page: 45 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V	DC 3.6V				
Ant. Pol.	Horizontal					
Test Mode:	TX N(HT40) Mode 2422N	ИНz	THE PARTY OF THE P			
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					

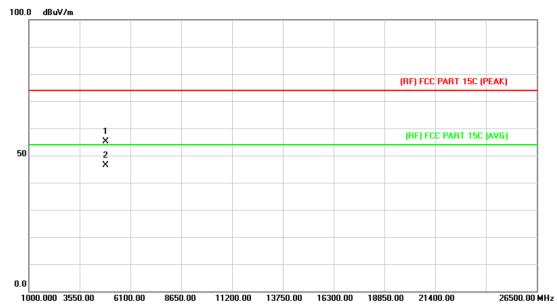


-	۷o.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4843.174	31.63	13.68	45.31	54.00	-8.69	AVG
2			4844.251	40.58	13.68	54.26	74.00	-19.74	peak



Page: 46 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V	DC 3.6V					
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX N(HT40) Mode 2422	ИНz	THE PARTY OF THE P				
Remark:	No report for the emissio	No report for the emission which more than 10 dB below the					
	prescribed limit.						
i							

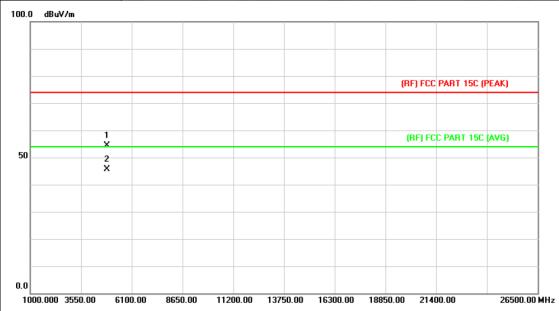


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4843.854	41.34	13.68	55.02	74.00	-18.98	peak
2	*	4844.621	32.64	13.68	46.32	54.00	-7.68	AVG



Page: 47 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V	DC 3.6V					
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT40) Mode 2437N	ИНz					
Remark:	No report for the emissio	No report for the emission which more than 10 dB below the					
	prescribed limit.						

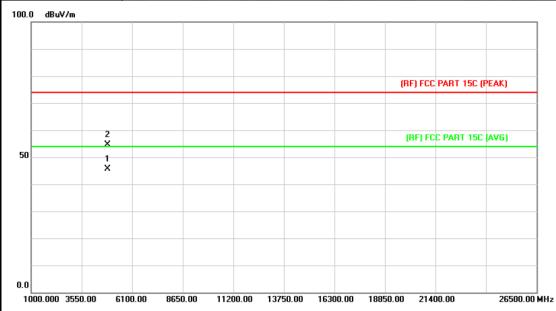


١	No. M	k. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.845	40.40	13.86	54.26	74.00	-19.74	peak
2	*	4874.365	31.81	13.86	45.67	54.00	-8.33	AVG



Page: 48 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V	DC 3.6V					
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX N(HT40) Mode 2437N	ИНz					
Remark:	No report for the emission	No report for the emission which more than 10 dB below the					
	prescribed limit.						

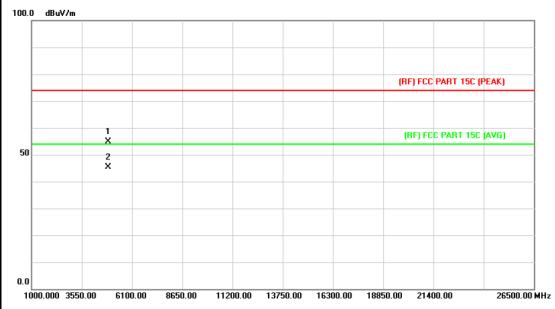


No	o. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	O∨er	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.254	31.82	13.86	45.68	54.00	-8.32	AVG
2		4874.325	40.83	13.86	54.69	74.00	-19.31	peak



Page: 49 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT40) Mode 2452M	lHz	THE PARTY OF THE P				
Remark:	No report for the emission	which more than 10 o	dB below the				
	prescribed limit.						
4							

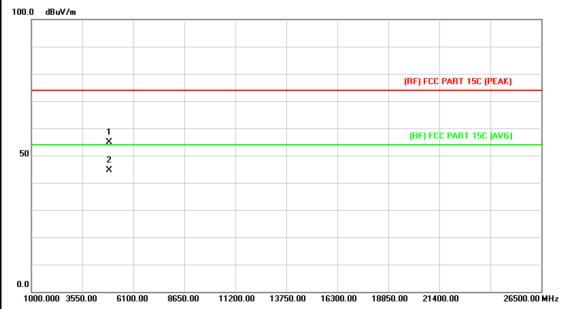


No	o. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4904.021	40.95	14.03	54.98	74.00	-19.02	peak
2	*	4904.670	31.33	14.03	45.36	54.00	-8.64	AVG



Page: 50 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V						
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX N(HT40) Mode 2452N	ИНz					
Remark:	No report for the emission	No report for the emission which more than 10 dB below the					
	prescribed limit.						



No	No. Mk. Freq.		_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4903.988	40.86	14.03	54.89	74.00	-19.11	peak
2	*	4904.351	30.66	14.03	44.69	54.00	-9.31	AVG



Page: 51 of 97

6. Restricted Bands Requirement

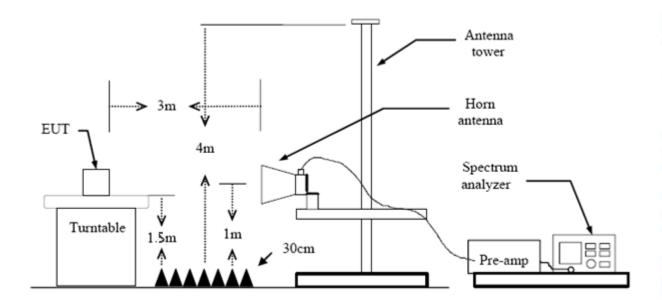
6.1 Test Standard and Limit

6.1.1 Test Standard FCC Part 15.209 FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency	Class B (dB	uV/m)(at 3 M)
Band (MHz)	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54

6.2 Test Setup



6.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.



Page: 52 of 97

(4) 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.

- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

6.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

6.5 Test Data

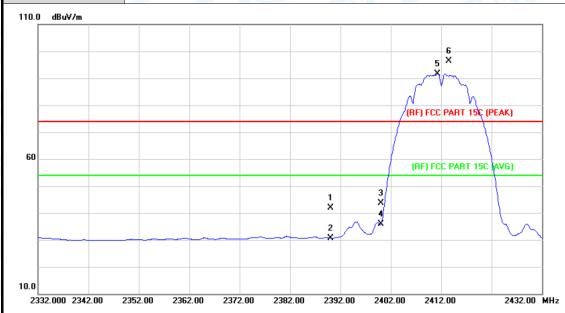
Please see the next page.



Page: 53 of 97

(1) Radiation Test

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V		
Ant. Pol.	Horizontal	WW CO	THU .
Test Mode:	TX B Mode 2412MHz		
Remark:	N/A	P 13	



No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	43.32	0.77	44.09	74.00	-29.91	peak
2		2390.000	30.79	0.77	31.56	54.00	-22.44	AVG
3	*	2411.300	90.70	0.86	91.56	Fundamental Frequency		AVG
4	Χ	2413.400	95.37	0.86	96.23	Fundamental	Frequency	peak



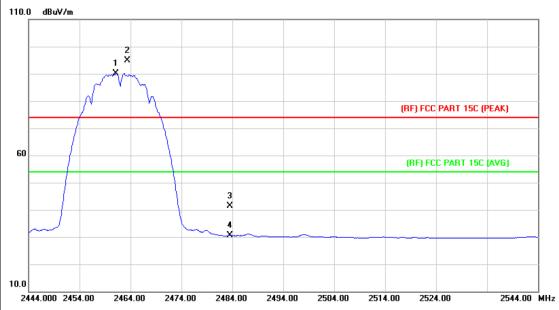
Page: 54 of 97

EUT	Γ:		Warı	riorG1		9 /	Мо	del:		XM-JPG1-2			Com-	
Tem	peratu	re:	25 °	С		10	Re	lativ	e Hum	idity:	55	5%	FILL	
Test	t Voltag	je:	DC 3	3.6V	120		10	A		6	M	133		
Ant.	. Pol.		Verti	cal		J. A. A.	اخلا		1					
Test	t Mode:		TX E	3 Mode	2412	MHz		6	M					
Ren	nark:		N/A	W		160		1		6.10		3		
110.0	0 dBuV/m													
60								1 X 2 X	<i></i>			ART 15C (PEA)		
10.0														
	332.000 23 lo. Mk		352.00 eq.	Rea Le	ding	Correct Factor	ct		asure- ent	402.00 Lim	2412.0	Over	2432.00 MHz	
		ME	łz	dB	u∨	dB/m		dB	uV/m	dBu\	V/m	dB	Detector	
1		2390.	000	42	.82	0.77		43	3.59	74.	00	-30.41	peak	
2		2390.	000	30.	.24	0.77		31	1.01	54.	00	-22.99	AVG	
3	*	2411.	300	88.	.86	0.86		89	9.72	Funda	menta	I Frequency	AVG	
4	X	2413.	500	95	.55	0.86		96	6.41			Frequency	peak	



Page: 55 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	N/A		

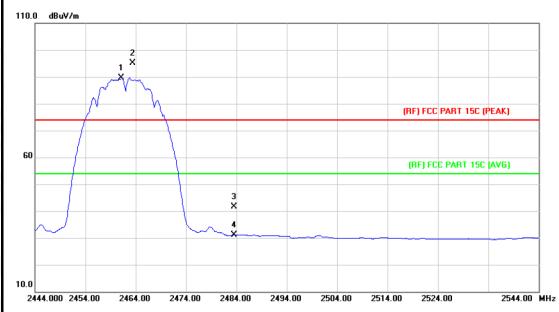


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2461.200	89.04	1.07	90.11	Fundamental	Frequency	AVG
2	Χ	2463.400	93.74	1.08	94.82	Fundamenta	l Frequency	peak
3		2483.500	40.16	1.17	41.33	74.00	-32.67	peak
4		2483.500	29.54	1.17	30.71	54.00	-23.29	AVG



Page: 56 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V	(3)	
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	N/A		1:33



N	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	2461.200	88.49	1.07	89.56	Fundamental Frequency		AVG
2		X	2463.400	94.16	1.08	95.24	Fundamenta	I Frequency	peak
3			2483.500	40.40	1.17	41.57	74.00	-32.43	peak
4			2483.500	29.87	1.17	31.04	54.00	-22.96	AVG



Page: 57 of 97

EUT	Γ:		Warr	iorG1		9	Model	:		XM-	JPG1-2	THE STATE OF	
Tem	peratu	re:	25 °	C	TIVE	33	Relativ	ve Hum	nidity:	55%		J. J. J.	
Test	t Voltag	e:	DC 3	3.6V			W.	1000	6	M	33		
Ant	. Pol.		Horiz	zontal		113	A CONTRACTOR OF THE PARTY OF TH	-					
Test	t Mode:		TX	Mod	le 2412	MHz	_ (ALI D		THE REAL PROPERTY.			
Ren	nark:		N/A	M		1			6311	1.15		_ (
110.0	0 dBuV/m												
											3		
											4		
									(BF) I	FCC PART	X I 15C (PEAK)		
60													
									(RF)	FCC PAR	RT 15C (AVG)	
								1 X					
								2 X					
				_									
10.0	329.000 233	99 00 2	349.00	2359.0	nn 220	9.00 2379	100 220	9.00 2	399.00 2	2409.00	24	129.00 MHz	
2.	323.000 23.	3.00 2	343.00	2333.0	00 230	3.00 2373	5.00 250	3.00 2.	333.00 2	.405.00	2.	123.00 MN2	
_				Rea	ading	Corre	ct Me	asure-					
1	No. Mk	. Fr	eq.	Le	evel	Facto	or n	nent	Limi	it	Over		
		M	Hz	d	Bu∨	dB/m	d	BuV/m	dBu\	//m	dB	Detector	
1		2390	.000	42	2.27	0.77	4	3.04	74.	00	-30.96	peak	
2		2390	.000	3′	1.52	0.77	3	32.29	54.	00	-21.71	AVG	
3	Х	2413	.400	92	2.23	0.86	S	3.09	Fundar	nental F	requency	peak	

Emission Level= Read Level+ Correct Factor

81.59

0.86

82.45

2413.800

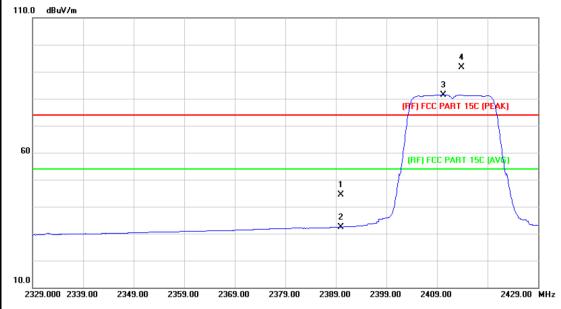
AVG

Fundamental Frequency



Page: 58 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V	(1) TO (1)	and the
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	N/A	51	1:13
110.0 dBuV/m			

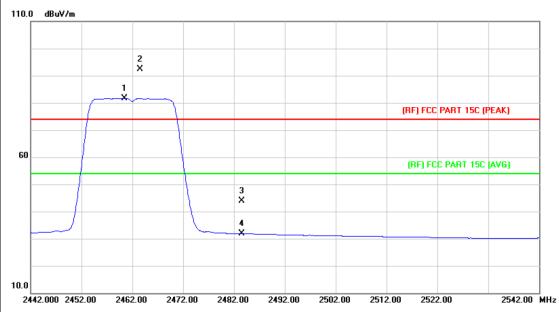


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	43.67	0.77	44.44	74.00	-29.56	peak
2		2390.000	31.68	0.77	32.45	54.00	-21.55	AVG
3	*	2410.300	80.64	0.85	81.49	Fundamental	Frequency	AVG
4	X	2413.800	90.83	0.86	91.69	Fundamental	Frequency	peak



Page: 59 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V	(3)	
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	N/A		1:73



1	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	2460.400	80.68	1.06	81.74	Fundamental	Frequency	AVG
2		X	2463.500	91.29	1.08	92.37	Fundamenta	l Frequency	peak
3			2483.500	42.62	1.17	43.79	74.00	-30.21	peak
4			2483.500	30.60	1.17	31.77	54.00	-22.23	AVG



Page: 60 of 97

EUT:			Warr	riorG1		Model:		X	XM-JPG1-2		
Геm	peratu	re:	25 °C		3.3	Relativ	e Hum	idity: 5	5%		
Test	t Voltag	e:	DC 3	3.6V			1000	6.11	133		
۱nt.	Pol.		Verti	cal	A BISI		1	A W			
Test	Mode:		TX G	Mode 246	2MHz	_ (1110		a W	A STATE OF THE PARTY OF THE PAR	
Ren	nark:		N/A	A STATE OF	-	1 1			13	_ (
110.0) dBuV/m										
			2 X								
		1									
		ذــــا	•	\neg				(RF) FCC	PART 15C (PEAK)	
60								(DE) EC	PART 15C (AVG		
								(nr) rci	FANT TOC (AVO	',	
					X 3						
					4 ×						
10.0 24	42.000 245	52.00	2462.00	2472.00 24	82.00 2492	.00 2502	2.00 25	512.00 2522	.00 2	542.00 MH:	
				Reading	Correc	rt Mea	asure-				
Ν	lo. Mk	. Fr	eq.	Level	Facto		ent	Limit	Over		
		M	Hz	dBuV	dB/m	dB	uV/m	dBuV/m	dB	Detecto	
1	*	2458	.800	79.27	1.06	80	0.33	Fundamenta	al Frequency	AVG	
2	X	2460	.500	89.83	1.06	90	0.89	Fundament	al Frequency	peak	
_					4 47	12	2.21	74.00	-31.79	peak	
3		2483	.500	41.04	1.17	72	2.21	7 1.00	010	poun	



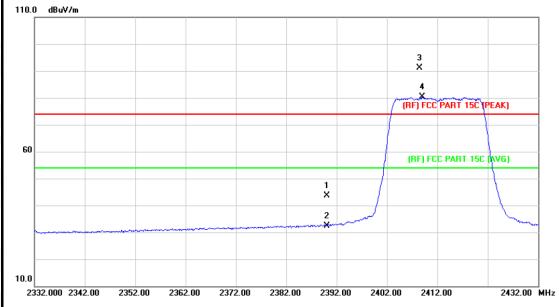
Page: 61 of 97

EUT: WarriorG1 Model:					ΧN	/I-JPG1-2	2						
Temp	eratu	re:	25 °	°C	TIVE	30	Re	elativ	e Hum	idity:	55	%	A The
Test V	/oltag	e:	DC:	3.6V			10	18		6	W	133	
Ant. F	ol.		Hori	zonta		I III			1				
Test N	/lode:		1XT	N(HT2	20) Mo	de 2412	MHz	2 6	4110			1 11	A STATE OF THE PARTY OF THE PAR
Rema	rk:		N/A			1		(I		6111		3	_ (
110.0	dBuV/m												
										4 ×			
										3	-		
										(BEL	FCC PA	RT 15C (PEAI	KI
										1,			,
60													
<u> </u>										(RF)	FCC P	ART 15C (AVI	G)
								1 X					
								2				1	
								X	Anna Anna Anna Anna Anna Anna Anna Anna				
10.0	000 234		352.00				32.00						2432.00 MHz
2332.	000 234	2.00 2		2362	ading	72.00 236 Corre		2392	asure-	02.00 2	2412.00	, ,	2432.00 MI12
No	. Mk	Fre	eq.		evel	Fact			ent	Limi	t	Over	
		M	Ηz	d	Bu∀	dB/m	1	dB	uV/m	dBu√	//m	dB	Detector
1		2390	.000	42	2.97	0.77	,	43	3.74	74.0	00	-30.26	peak
2		2390	.000	3	1.46	0.77	,	32	2.23	54.0	00	-21.77	AVG
3	*	2408	.900	8	1.86	0.85)	82	2.71	Fundar	nenta	l Frequency	AVG
4	Χ	2409	000	9	2.23	0.85	;	9:	3.08	Fundan	nental	Frequency	peak



Page: 62 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V		
Ant. Pol.	Vertical	THE PARTY OF	
Test Mode:	TX N(HT20) Mode 2	2412MHz	
Remark:	N/A		1:73
110.0 dBuV/m			
		3	

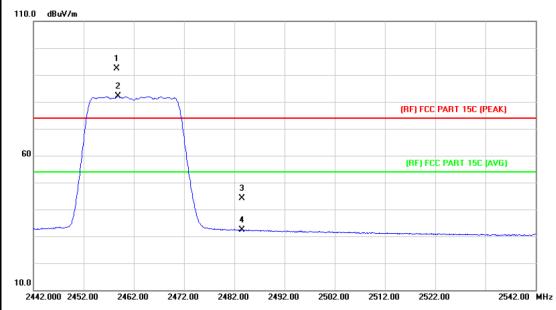


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	42.92	0.77	43.69	74.00	-30.31	peak
2		2390.000	31.67	0.77	32.44	54.00	-21.56	AVG
3	Χ	2408.400	90.20	0.85	91.05	Fundamental	Frequency	peak
4	*	2409.000	79.47	0.85	80.32	Fundamental	Frequency	AVG



Page: 63 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V	031	
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462	ИНz	
Remark:	N/A		1:33

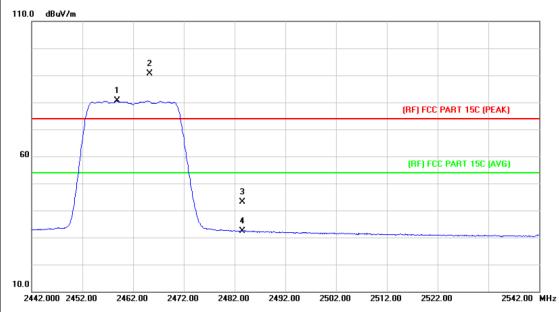


N	lo. Mł	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2458.600	91.30	1.06	92.36	Fundamental	Frequency	peak
2	*	2458.800	81.00	1.06	82.06	Fundamental	Frequency	AVG
3		2483.500	42.90	1.17	44.07	74.00	-29.93	peak
4		2483.500	31.16	1.17	32.33	54.00	-21.67	AVG



Page: 64 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2					
Temperature:	25 ℃	Relative Humidity:	55%					
Test Voltage:	DC 3.6V	(1) T						
Ant. Pol.	Vertical							
Test Mode:	TX N(HT20) Mode 2462	TX N(HT20) Mode 2462MHz						
Remark:	N/A		1:72					



1	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	2458.800	79.47	1.06	80.53	Fundamenta	l Frequency	AVG
2		X	2465.300	89.58	1.09	90.67	Fundamenta	l Frequency	peak
3			2483.500	41.95	1.17	43.12	74.00	-30.88	peak
4			2483.500	31.18	1.17	32.35	54.00	-21.65	AVG



10.0

2345.000 2355.00

2365.00

2375.00

2385.00

Report No.: TB-FCC147282

Page: 65 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	55%					
Test Voltage:	: DC 3.6V						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT40) Mode	2422MHz					
Remark:	N/A		7:13				
110.0 dBuV/m		4 X					
60) FCC PART 15C (PEAK)				
		(R	F) FCC PART 15C (AVG)				
		1 X					

No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	42.07	0.77	42.84	74.00	-31.16	peak
2		2390.000	32.07	0.77	32.84	54.00	-21.16	AVG
3	*	2418.300	78.98	0.89	79.87	Fundament	al Frequency	AVG
4	Χ	2419.500	89.29	0.89	90.18	Fundament	al Frequency	peak

2395.00

2405.00

2415.00

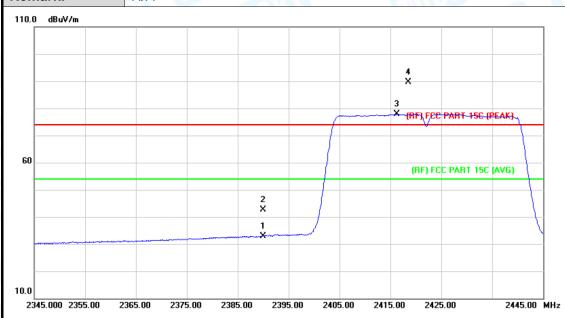
2425.00

2445.00 MHz



Page: 66 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V	DC 3.6V				
Ant. Pol.	Vertical					
Test Mode:	TX N(HT40) Mode 2422	TX N(HT40) Mode 2422MHz				
Remark:	N/A					

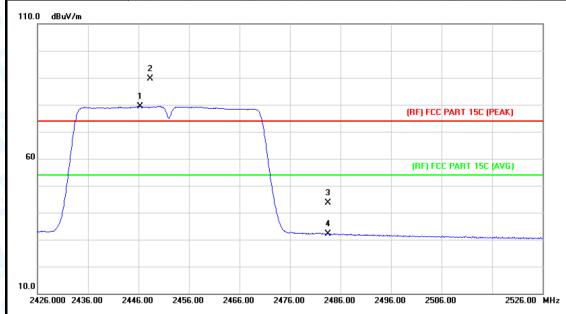


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	41.89	0.77	42.66	74.00	-31.34	peak
2		2390.000	32.23	0.77	33.00	54.00	-21.00	AVG
3	*	2416.300	76.96	0.88	77.84	Fundament	al Frequency	AVG
4	Χ	2418.600	88.68	0.89	89.57	Fundament	al Frequency	peak



Page: 67 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.6V				
Ant. Pol.	Horizontal				
Test Mode:	TX N(HT40) Mode 2452MHz				
Remark:	N/A				

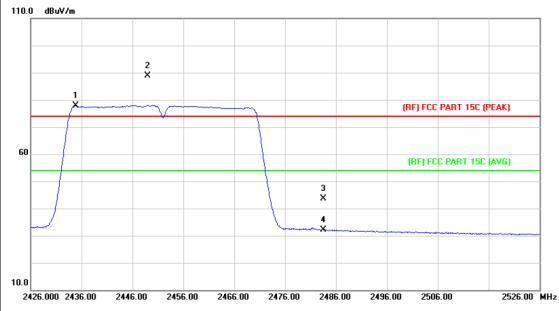


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2446.300	78.35	1.01	79.36	Fundamenta	l Frequency	AVG
2	Χ	2448.300	88.67	1.02	89.69	Fundamenta	l Frequency	peak
3		2483.500	42.43	1.17	43.60	74.00	-30.40	peak
4		2483.500	31.02	1.17	32.19	54.00	-21.81	AVG



Page: 68 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V	DC 3.6V					
Ant. Pol.	Vertical						
Test Mode:	TX N(HT40) Mode 2452MHz						
Remark:	N/A		1:73				



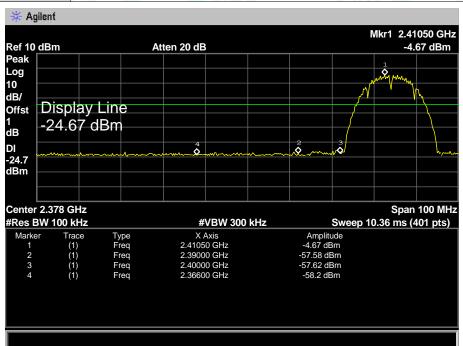
No	o. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2434.900	76.99	0.97	77.96	Fundamenta	I Frequency	AVG
2	Χ	2449.000	87.95	1.02	88.97	Fundamenta	Frequency	peak
3		2483.500	42.54	1.17	43.71	74.00	-30.29	peak
4		2483.500	30.94	1.17	32.11	54.00	-21.89	AVG

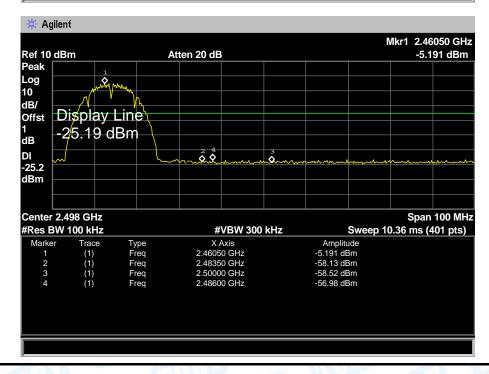


69 of 97 Page:

(2) Conducted Test

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V					
Test Mode:	TX B Mode 2412MHz / TX B Mode 2462MHz					
Remark:	The EUT is programed in continuously transmitting mode					

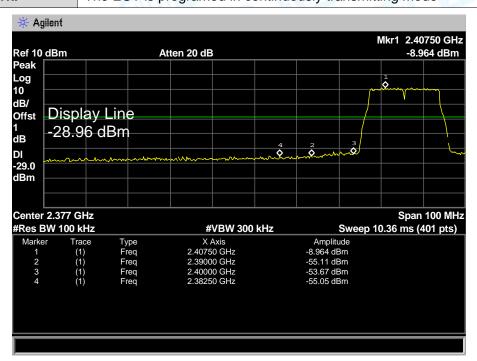


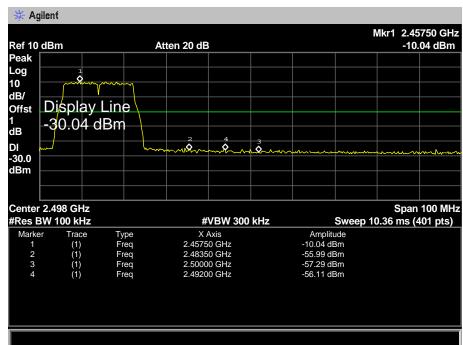




70 of 97 Page:

EUT:	WarriorG1	Model:	XM-JPG1-2				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.6V	01 - 0					
Test Mode:	TX G Mode 2412MHz / T	TX G Mode 2412MHz / TX G Mode 2462MHz					
Remark:	The EUT is programed in	The EUT is programed in continuously transmitting mode					

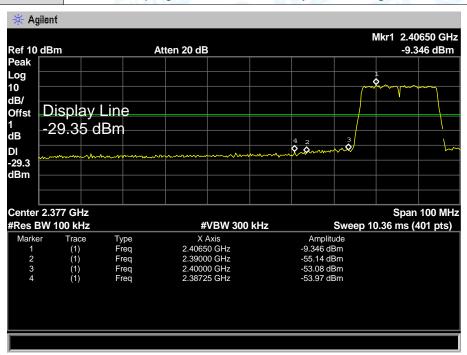


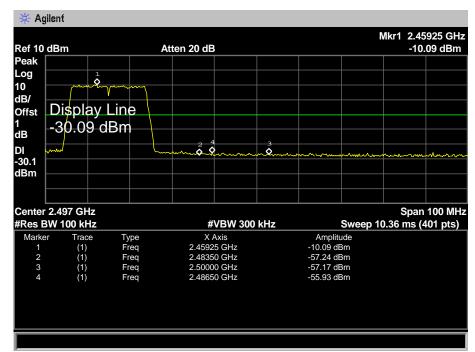




71 of 97 Page:

EUT:	WarriorG1	Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V	(1) T	in its			
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz					
Remark:	The EUT is programed in continuously transmitting mode					



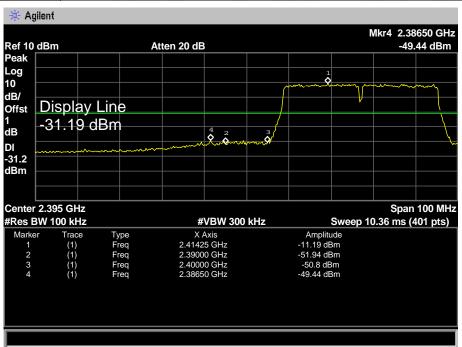


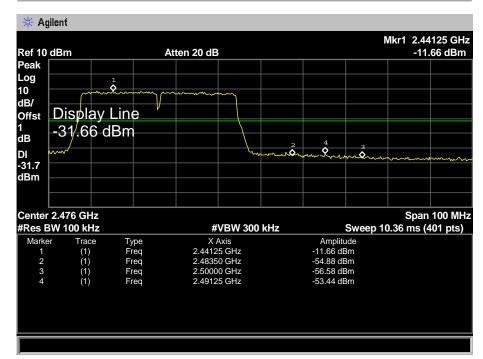


Page: 72 of 97



EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V		
Test Mode:	TX N(HT40) Mode 2422MHz / TX N(HT40) Mode 2452MHz		
Remark:	The EUT is programed in continuously transmitting mode		







Page: 73 of 97

7. Bandwidth Test

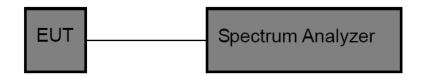
7.1 Test Standard and Limit

7.1.1 Test Standard FCC Part 15.247 (a)(2)

7.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210					
Test Item	Frequency Range(MHz)				
Bandwidth	>=500 KHz (6dB bandwidth)	2400~2483.5			

7.2 Test Setup



7.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst –case (i.e the widest) bandwidth.
- (3)Measure the channel separation the spectrum analyzer was set to Resolution Bandwidth:100 kHz, and Video Bandwidth:300 kHz, Detector: Peak, Sweep Time set auto.

7.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

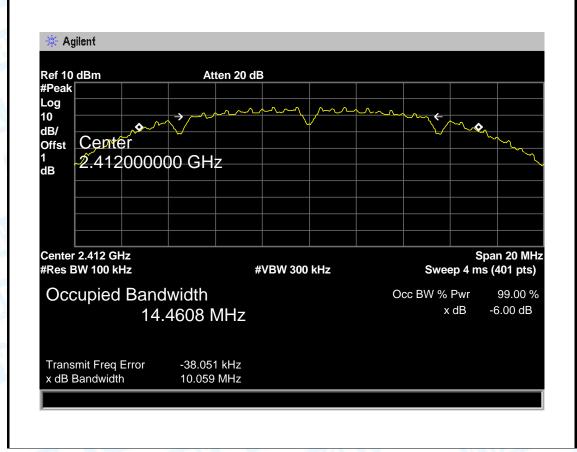


Page: 74 of 97

7.5 Test Data

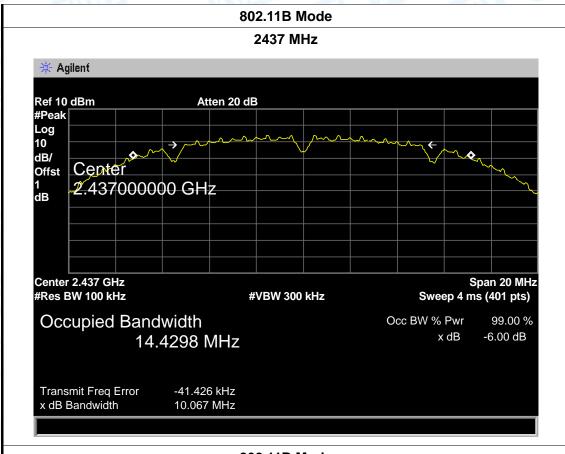
EUT: WarriorG1		Model:	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V		CINID.
Test Mode:	TX 802.11B Mode	2 BADE	
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit
(MHz)	(MHz)	(MHz)	(MHz)
2412	10.059	14.4608	
2437	10.067	14.4298	>=0.5
2462	10.060	14.4538	

802.11B Mode





Page: 75 of 97

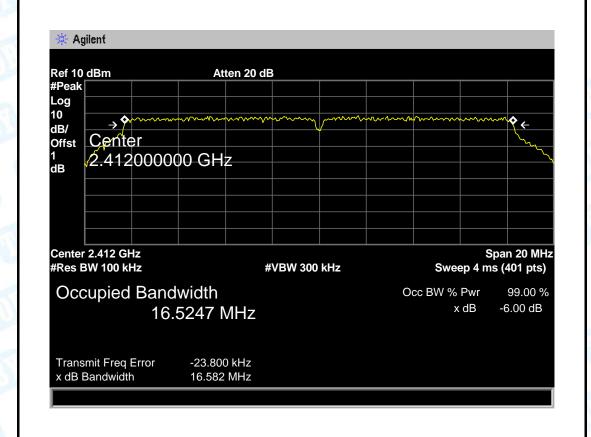


802.11B Mode 2462 MHz 🔆 Agilent Ref 10 dBm Atten 20 dB #Peak Log 10 dB/ Center Offst 1 dB 2.462000000 GHz Center 2.462 GHz Span 20 MHz #Res BW 100 kHz Sweep 4 ms (401 pts) **#VBW 300 kHz** Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 14.4538 MHz Transmit Freq Error -37.552 kHz x dB Bandwidth 10.060 MHz



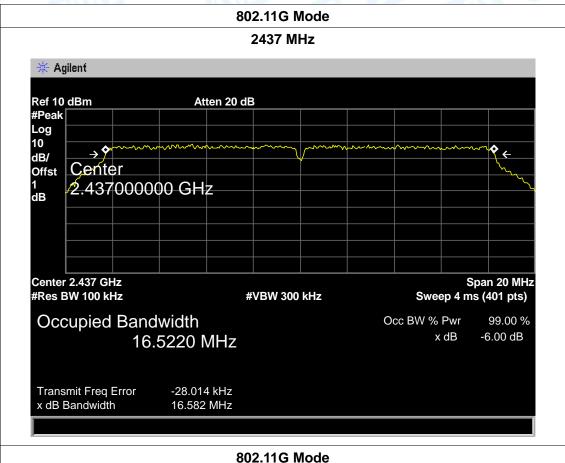
76 of 97 Page:

EUT: WarriorG1		Model:	XM-JPG1-2		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	st Voltage: DC 3.6V				
Test Mode:	TX 802.11G Mode	(MID)	THE STATE OF THE S		
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit		
(MHz)	(MHz)	(MHz)	(MHz)		
2412	16.582	16.5247			
2437	16.582	16.5220	>=0.5		
2462	16.616	16.5310			
802.11G Mode					





Page: 77 of 97



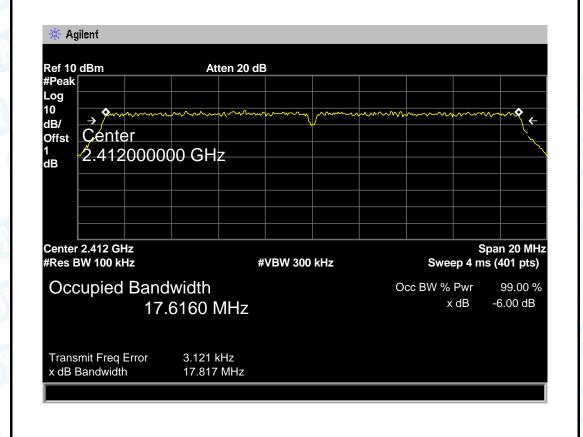
2462 MHz 🔆 Agilent Ref 10 dBm Atten 20 dB #Peak Log 10 → **?** Center dB/ Offst 1 dB 2.462000000 GHz Center 2.462 GHz Span 20 MHz #Res BW 100 kHz Sweep 4 ms (401 pts) **#VBW 300 kHz** Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 16.5310 MHz Transmit Freq Error -35.862 kHz x dB Bandwidth 16.616 MHz



Page: 78 of 97

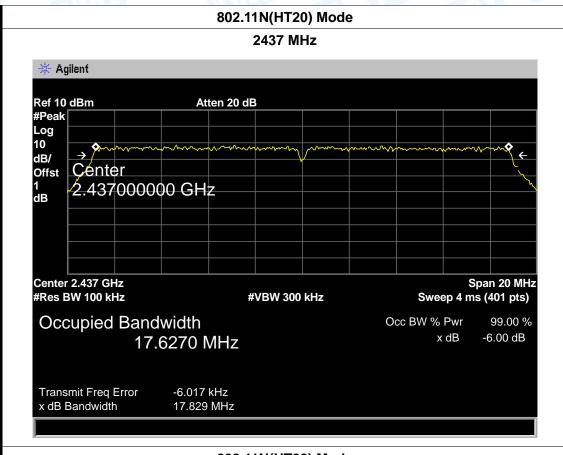
EUT: WarriorG1		Model:	XM-JPG1-2			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.6V					
Test Mode:	TX 802.11N(HT20) Mode	e ((()))	THE STATE OF THE S			
Channel frequen	cy 6dB Bandwidth	99% Bandwidth	Limit			
(MHz)	(MHz)	(MHz)	(MHz)			
2412	17.817	17.6160				
2437	17.829	17.6270	>=0.5			
2462	17.837	17.6347				
802.11N(HT20) Mode						

72.111N(11120) IVI

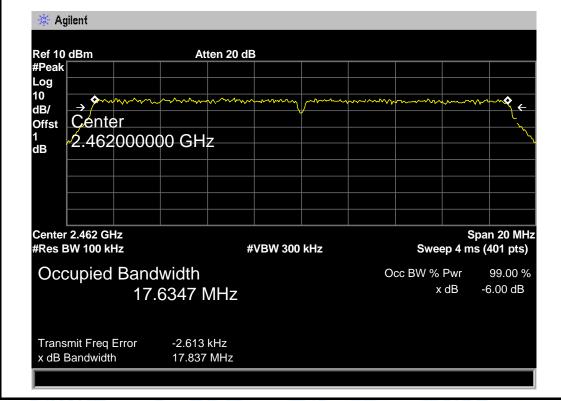




Page: 79 of 97



802.11N(HT20) Mode

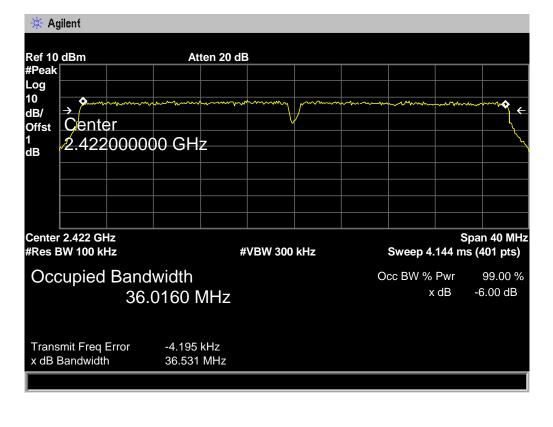




Page: 80 of 97

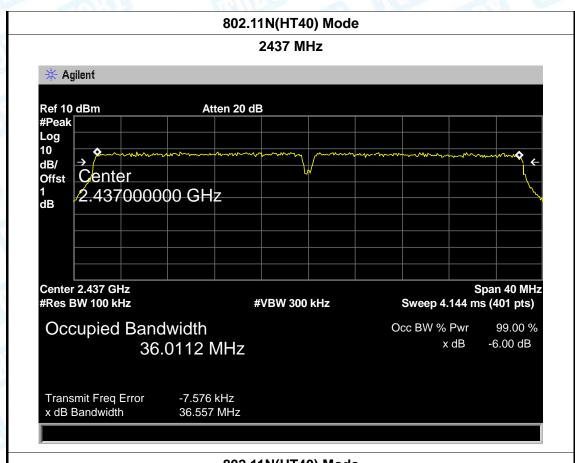
EUT: WarriorG1		Model:	XM-JPG1-2	
Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	DC 3.6V	101 - C		
Test Mode:	TX 802.11N(HT40) Mode			
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit	
(MHz)	(MHz)	(MHz)	(MHz)	
2412	36.531	36.0160		
2437	36.557	36.0112	>=0.5	
2462	36.526	36.0155		

802.11N(HT40) Mode





Page: 81 of 97



802.11N(HT40) Mode 2452 MHz 🔆 Agilent Ref 10 dBm Atten 20 dB #Peak Log 10 dB/ Center Offst 2.452000000 GHz 1 dB Center 2.452 GHz Span 40 MHz #Res BW 100 kHz Sweep 4.144 ms (401 pts) **#VBW 300 kHz** Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB 36.0155 MHz x dB Transmit Freq Error -12.498 kHz x dB Bandwidth 36.526 MHz



Page: 82 of 97

8. Peak Output Power Test

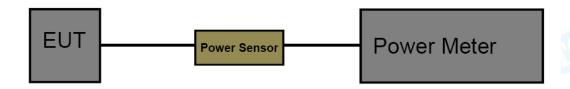
8.1 Test Standard and Limit

8.1.1 Test Standard FCC Part 15.247 (b)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210					
Test Item	Limit	Frequency Range(MHz)			
Peak Output Power	1 Watt or 30 dBm	2400~2483.5			

8.2 Test Setup



8.3 Test Procedure

The measurement is according to section 9.1.2 of KDB 558074 D01 DTS Meas Guidance v03r04.

The EUT was connected to RF power meter via a broadband power sensor as show the block above. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

8.4 EUT Operating Condition

The EUT was set to continuously transmitting in the max power during the test.



Page: 83 of 97

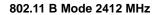
8.5 Test Data

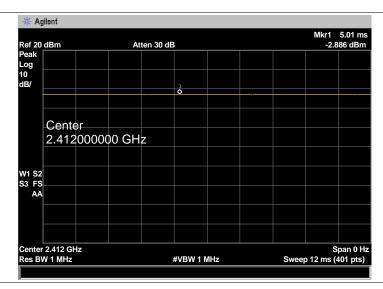
EUT:	WarriorG1	Model Name :	XM-JPG1-2
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.6V		CALLED .
Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
	2412	9.12	
802.11b	2437	9.09	
	2462	9.13	
	2412	9.01	
802.11g	2437	9.08	
	2462	9.05	30
802.11n	2412	8.97	30
(HT20)	2437	8.98	
(11120)	2462	9.00	
902 44 5	2422	9.02	
802.11n (HT40)	2437	8.99	
(11140)	2452	8.87	
	Resi	ult: PASS	

Duty Cycle						
Mode	Channel frequency (MHz)	Test Result				
	2412					
802.11b	2437					
	2462					
	2412					
802.11g	2437					
	2462	. 000/				
000 44	2412	>98%				
802.11n (HT20)	2437					
(11120)	2462					
000 44	2422					
802.11n (HT40)	2437					
(1140)	2452					
Please see belo	w plots					

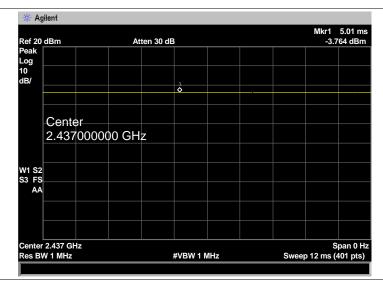


Page: 84 of 97

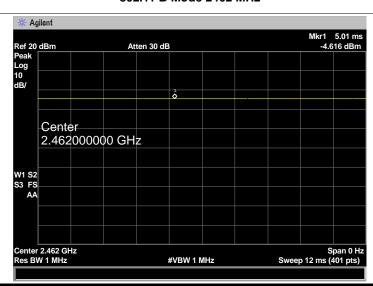




802.11 B Mode 2437 MHz

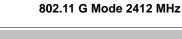


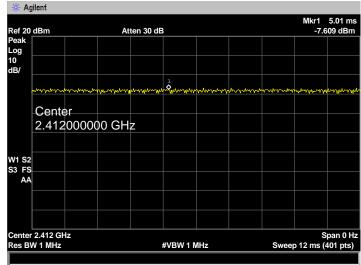
802.11 B Mode 2462 MHz



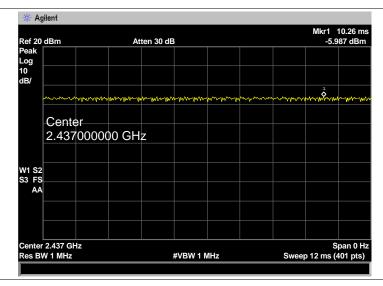


Page: 85 of 97

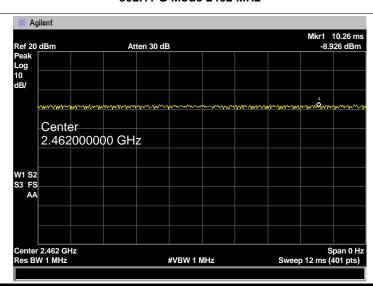




802.11 G Mode 2437 MHz

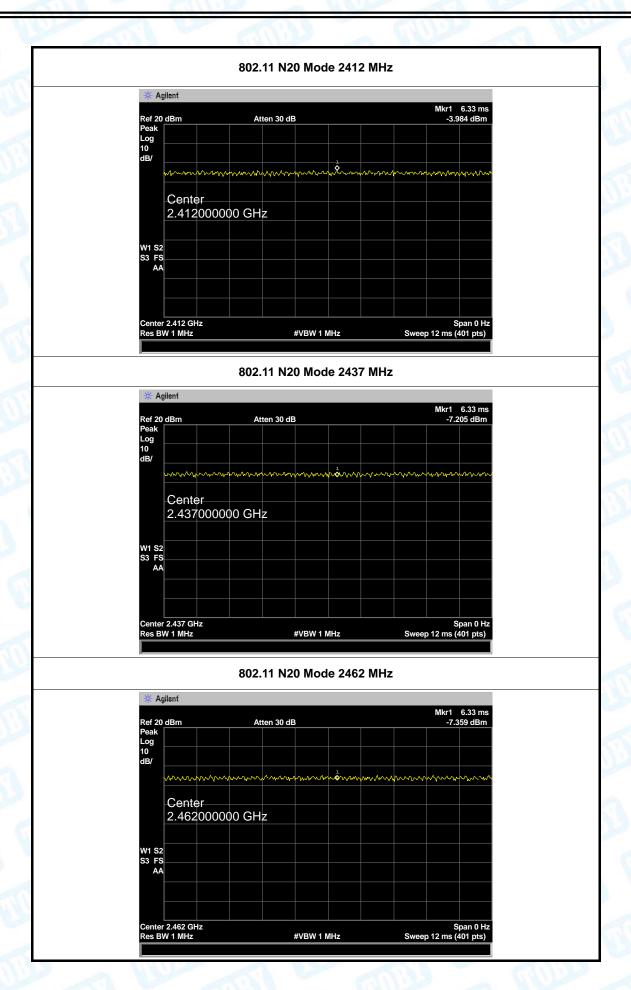


802.11 G Mode 2462 MHz



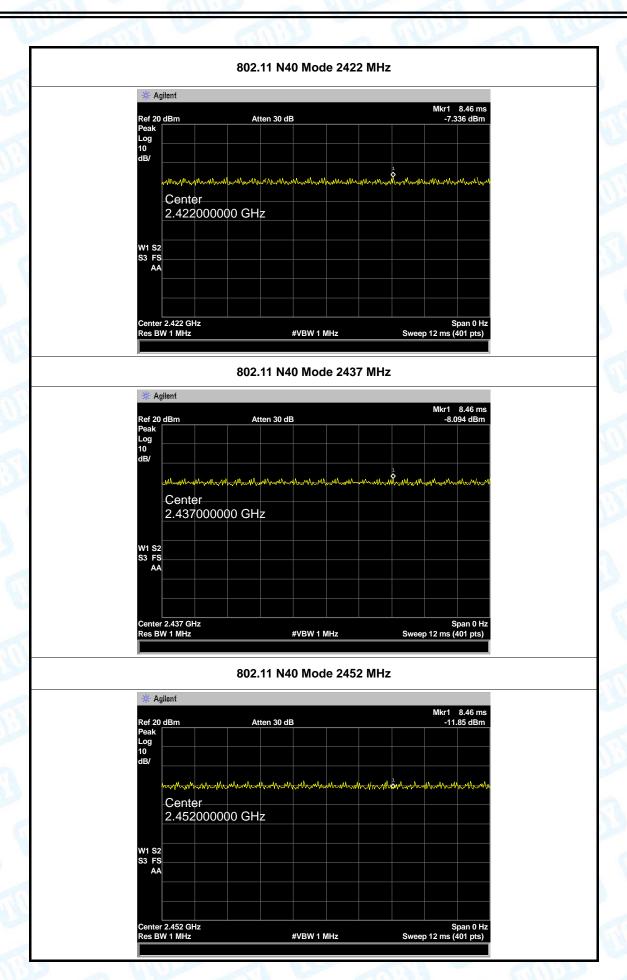


Page: 86 of 97





Page: 87 of 97





Page: 88 of 97

9. Power Spectral Density Test

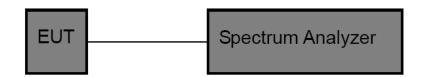
9.1 Test Standard and Limit

9.1.1 Test Standard FCC Part 15.247 (e)

9.1.2 Test Limit

FCC Part 15 Subpart C(15.247)					
Test Item Limit Frequency Rang					
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5			

9.2 Test Setup



9.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v03r04.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser center frequency to DTS channel center frequency.
- (3) Set the span to 1.5 times the DTS bandwidth.
- (4) Set the RBW to: 3 kHz(5) Set the VBW to: 10 kHz
- (6) Detector: peak(7) Sweep time: auto
- (8) Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

9.4 EUT Operating Condition

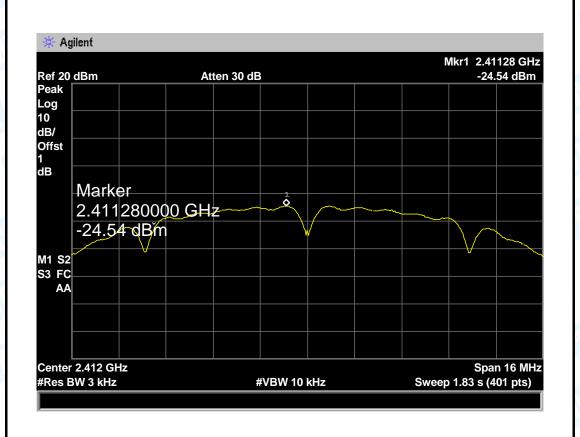
The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.



Page: 89 of 97

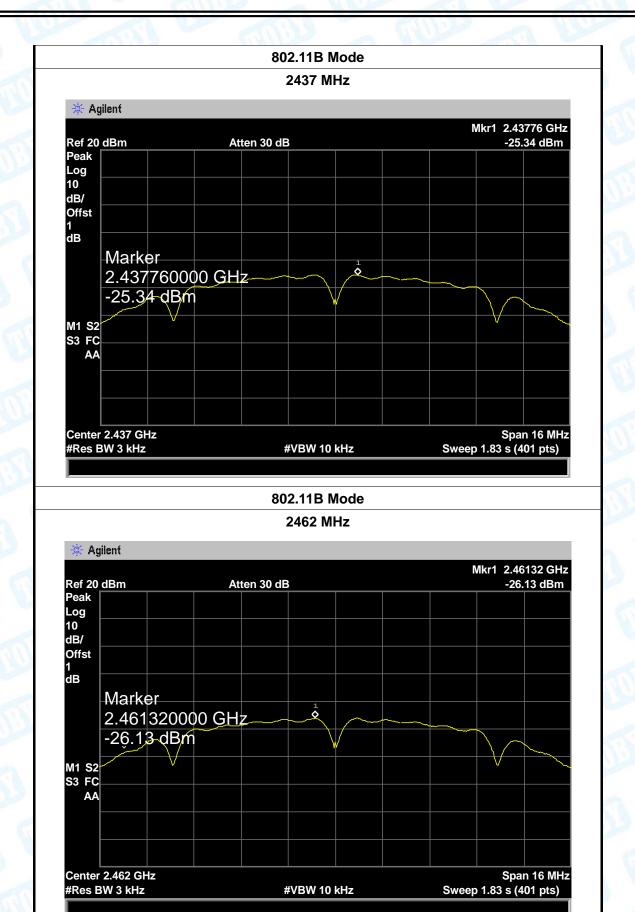
9.5 Test Data

	EUT:	WarriorG1		Model:	XM-JPG1-2	
	Temperature:	25 ℃	610	Relative Humidity	55%	
	Test Voltage:	DC 3.6V			COUNTY OF THE PARTY OF THE PART	
	Test Mode:	TX 802.11	1B Mode	2 Million		
	Channel Frequency		Power Density		Limit (dBm)	
	(MHz) 2412 2437		(3 kHz/dBm) -24.54 -25.34			
					8	
	2462		-26	5.13		
			802.111	B Mode		





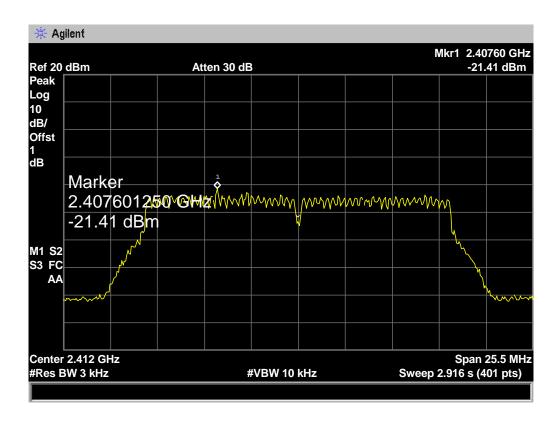
Page: 90 of 97





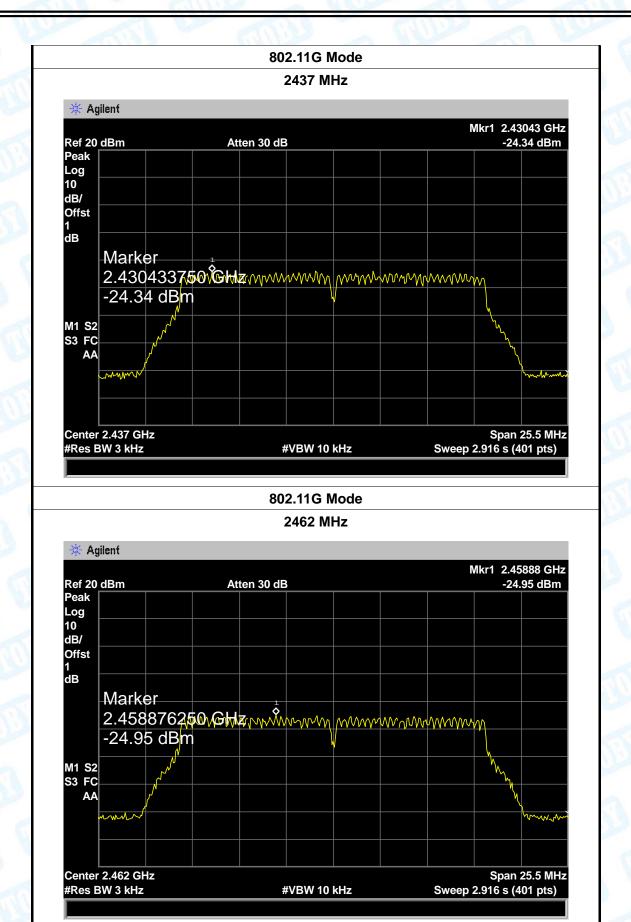
Page: 91 of 97

EUT:	WarriorG	1	Model:	XM-JPG1-2		
Temperature:	25 ℃	THE STATE OF THE S	Temperature:	25 ℃		
Test Voltage:	DC 3.6V					
Test Mode:	TX 802.1	1G Mode	MUL			
Channel Frequency		Power Density		Limit (dBm)		
(MHz)		(3 kHz/dBm)				
2412		-21.41				
2437		-24.34	8			
2462		-24.95				
		802	.11G Mode			
		2	412 MHz			





Page: 92 of 97



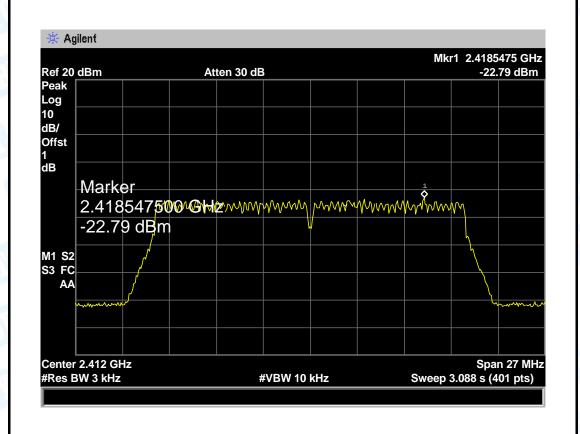


Page: 93 of 97

	EUT:	WarriorG'		Model:		XM-JPG1-2	
	Temperature:	25 ℃	100	Temperature:		25 ℃	
	Test Voltage:	DC 3.6V	DC 3.6V				
	Test Mode:	TX 802.11N(HT20) Mode					Cir
4	0		_	- "			

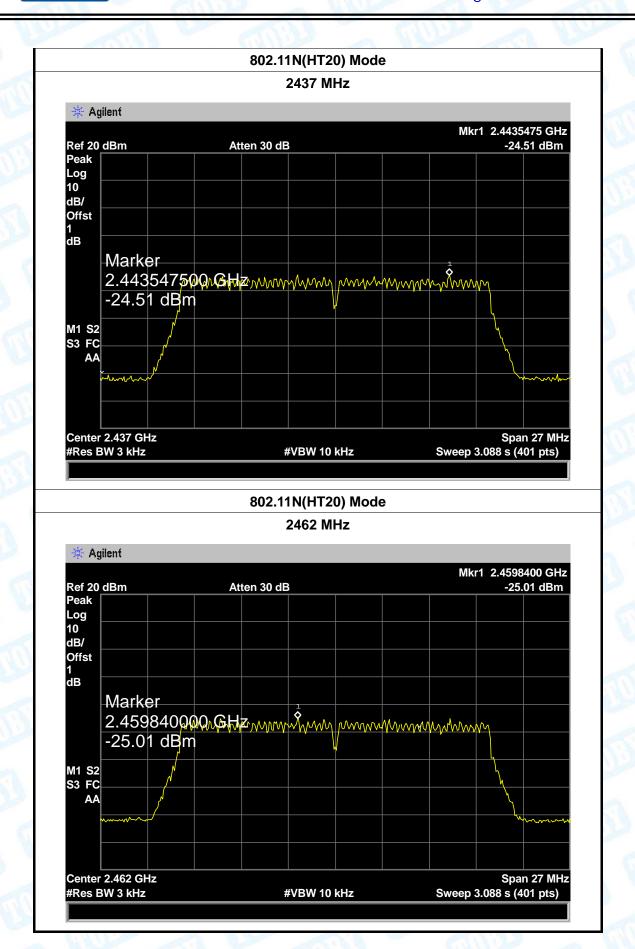
Channel Frequency	Power Density	Limit (dBm)
(MHz)	(3 kHz/dBm)	
2412	-22.79	
2437	-24.51	8
2462	-25.01	

802.11N(HT20) Mode





Page: 94 of 97





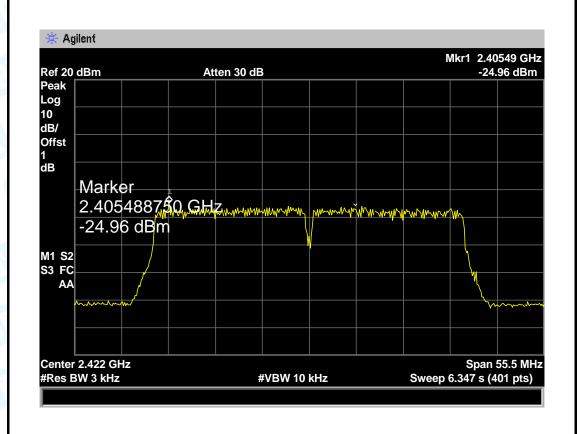
Page: 95 of 97

EUT:	WarriorG1	Model:	XM-JPG1-2
Temperature:	25 ℃	Temperature:	25 ℃
Test Voltage:	DC 3.6V	01 - 0	in its
T (34 . 1 .	TV 000 44N// IT40) NA I	The second of	

Test Mode: TX 802.11N(HT40) Mode

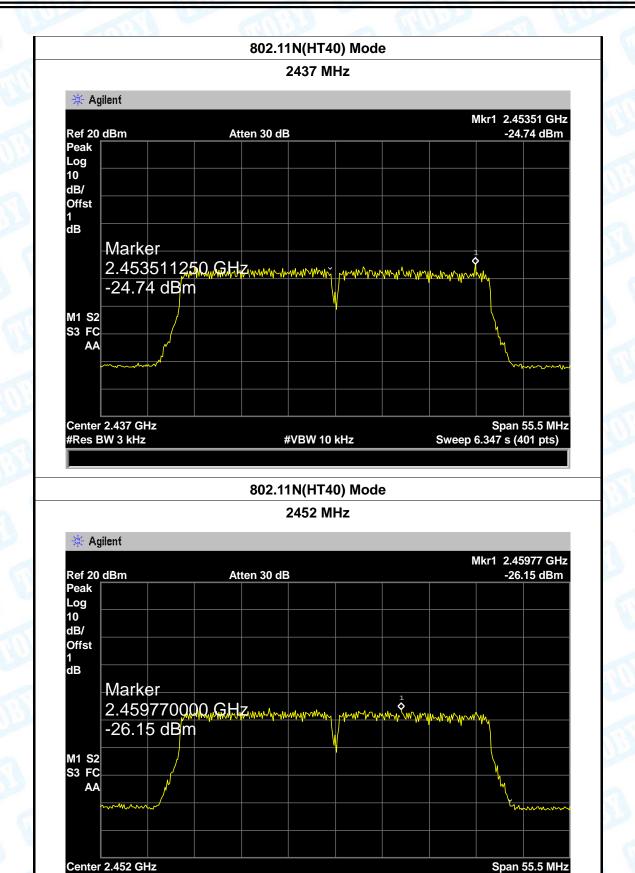
Channel Frequency	Power Density	Limit (dBm)
(MHz)	(3 kHz/dBm)	
2422	-24.96	
2437	-24.74	8
2452	-26.15	
·		·

802.11N(HT40) Mode





Page: 96 of 97



#VBW 10 kHz

#Res BW 3 kHz

Sweep 6.347 s (401 pts)



Page: 97 of 97

10. Antenna Requirement

10.1 Standard Requirement

10.1.1 Standard FCC Part 15.203

10.1.2 Requirement

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.

10.2 Antenna Connected Construction

The directional gains of the antenna used for transmitting is 2 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

Result

The EUT antenna is a PCB Antenna. It complies with the standard requirement.

	Antenna Type
33	☑ Permanent attached antenna
and a	□ Unique connector antenna
	□ Professional installation antenna