

Shenzhen Toby Technology Co., Ltd.

Report No.: TB-FCC149368

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FCC Radio Test Report FCC ID: 2AJGR-K60PW13

Original Grant

Report No. TB-FCC149368

Innertainment Delivery Systems LLC **Applicant**

Equipment Under Test (EUT)

EUT Name MID

Model No. K60PW13

Series No. N/A

Brand Name IDS

Receipt Date 2016-08-10

2016-08-11 to 2016-08-22 **Test Date**

Issue Date 2016-08-23

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

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1. General Information about EUT

1.1 Client Information

Applicant : Innertainment Delivery Systems LLC

Address : 162 Rosa L. Parks Blvd. Suite 1, Nashville TN 37203, USA

Manufacturer : IRL Tech Industrial Group Co.,Ltd

Address : 3/F, Building C, No. 52 Huangpu Road, Shangliao Community, Shajing

Street, Boan District, Shenzhen, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	n:	MID	MID				
Models No.		K60PW13					
Model Difference	3	N/A					
000		Operation Frequency 802.11b/g/n(HT20): 2					
		Number of Channel:	802.11b/g/n(HT20):11 channels see note(3)				
		RF Output Power:	802.11b: 9.27 dBm				
			802.11g: 9.14 dBm				
Product			802.11n (HT20): 9.12 dBm				
Description		Antenna Gain:	1.26 dBi FPC Antenna				
200011711011		Modulation Type:	802.11b: CCK, QPSK, BPSK				
			802.11g: OFDM				
			802.11n: OFDM				
		Bit Rate of	802.11b:11/5.5/2/1 Mbps				
		Transmitter:	802.11g:54/48/36/24/18/12/9/6 Mbps				
A AMOUNT			802.11n:up to 150Mbps				
Power Supply	-	DC Voltage supplied from Adapter.					
	1	DC power by Li-ion B	attery.				
Power Rating	3	AC/DC Adapter:					
		Input: 100~240V, 50/6	60Hz, 0.4A				
		Output: 5.0V, 2A					
		DC 3.7V by Li-ion Ba					
Connecting I/O Port(S)	3	Please refer to the Us	ser's Manual				

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 v03r05.
- (2) For a more detailed features description, please refer to the manufacturer's specifications or



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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	80	2447		
					•

- (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



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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 01/06/11			

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)

- (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.





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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.

Test Software Version		Ampak RF Test Tool VER:5	i.3
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

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})
	Level Accuracy:	
Conducted Emission	9kHz~150kHz	±3.42 dB
	150kHz to 30MHz	±3.42 dB
Padiated Emission	Level Accuracy:	±4.60 dB
Radiated Emission	9kHz to 30 MHz	±4.60 dB
Radiated Emission	Level Accuracy:	±4.40 dB
Radiated Emission	30MHz to 1000 MHz	±4.40 db
Radiated Emission	Level Accuracy:	±4.20 dB
Naulateu EIIIISSIUII	Above 1000MHz	±4.20 UD



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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.







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2. Test Summary

		15 Subpart C(15.247)/ RSS 247	13340 1		
Standa	rd Section	Test Item	Judgment	Remark	
FCC	IC	rest item	Judgillent	iveillai k	
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	

N/A is an abbreviation for Not Applicable.



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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	Jul. 22, 2016	Jul. 21, 2017
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 22, 2016	Jul. 21, 2017
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 22, 2016	Jul. 21, 2017
LISN	Rohde & Schwarz	ENV216	101131	Jul. 22, 2016	Jul. 21, 2017
Radiation	Emission Tes	t			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 22, 2016	Jul. 21, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 20, 2016	Mar. 19, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 20, 2016	Mar. 19, 2017
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 19, 2016	Mar. 18, 2017
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar. 19, 2016	Mar. 18, 2017
Pre-amplifier	Sonoma	310N	185903	Mar. 20, 2016	Mar. 19, 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
Antenna C	Conducted Em	ission			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
EMI Test Receiver	Rohde & Schwarz	ESCI	100010/007	Jul. 22, 2016	Jul. 21, 2017
Power Meter	Anritsu	ML2495A	25406005	Jul. 22, 2016	Jul. 21, 2017
Power Sensor	Anritsu	MI 2411B	25406005	Jul. 22, 2016	Jul. 21, 2017



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4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1Test Standard FCC Part 15.207

4.1.2 Test Limit

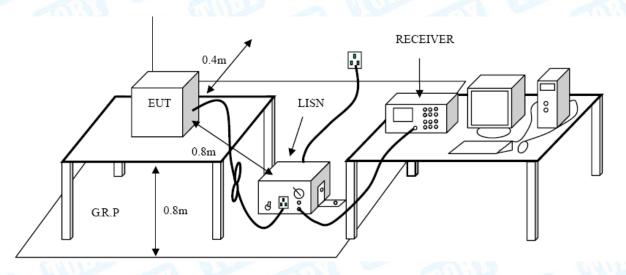
Conducted Emission Test Limit

Eroguenov	Maximum RF Line 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.



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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.





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EUT:	MID	100	Mo	odel Name :	K60PW13	3
emperature	25°	C	Re	lative Humidity:	55%	ABOVE
est Voltage	: AC	120V/60Hz	100	10	ATT IS S	
Terminal:	Line		AHAT.		Grand Co	MILITARY
Test Mode:	TX E	3 Mode		William .	A V	N. Jane
Remark:	Only	worse case	is reported		71:35	
80.0 dBuV						
					QP: AVG:	
					7,774.	
* *						
1111	**·					
	MAMM	him	, M	and the state of t		
30	' \	holler the sperior shall be seen that	William hallowy with which	water to a grant of the paper of a grant of	chromphologopolyhydy.	
30 0	MAMA	Mu 140		a Marian		peal
WVV	1 A A A A A A A A	Mr. Hurry Wynddyn	May and Market Control of the Contro	A THE STATE OF THE	while har bad a de	AVG
-20 0.150	0.5		(MHz)	5		30.000
0.130	0.3					30.000
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment Lir	nit Over	
INO. IVIK.	MHz	dBu∀	dB	mone	uV dB	Detector
1 *	0.1500	45.07	9.92		.99 -11.00	QP
2	0.1500	26.60	9.92		.99 -11.00	AVG
3	0.1900	39.66	10.00		.03 -14.37	
4	0.1900	21.06	10.00		.03 -14.37	QP AVG
5	0.1900	37.43	10.00		.03 -22.97	
						QP
6	0.2420	19.92	10.02		.02 -22.08	AVG
7	0.3020	29.15	10.02		.19 -21.02	QP
	0.3020	12.80	10.02		.19 -27.37	AVG
8		30.56	10.02	40.58 59	.35 -18.77	QP
9	0.3339					AVG
	0.3339	13.90	10.02	23.92 49	.35 -25.43	700
9					.35 -25.43 .89 -20.10	QP
9	0.3339	13.90	10.02	37.79 57		QP
9 10 11	0.3339	13.90 27.77	10.02 10.02	37.79 57	.89 -20.10	





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EUT:	MID		Mo	del Name :	k	(60PW13	
Temperature:	25 ℃	CIN!	Re	lative Humidi	ty: 5	55%	A BOOK
Test Voltage:	AC 12	20V/60Hz	150		Call	1130	
Terminal:	Neutr	al	AHO:		6		
Test Mode:	TX B	Mode		MIDE		a W	N. J. San
Remark:	Only	worse case i	s reported		THE STATE	13	
80.0 dBuV							
30		t-place production of the second	dlamphopally Malingrod	Alland Milled Holling Market College		QP: AVG:	MANAMAN pea
-20							
0.150 No. Mk.	0.5	Reading Level	(MHz) Correct Factor	Measure- ment	Limit	Over	30.000
0.150		_	Correct	Measure-	Limit dBuV	Over	
0.150 No. Mk.	Freq.	Level	Correct Factor	Measure- ment			
0.150 No. Mk.	Freq.	Level dBu∨	Correct Factor	Measure- ment dBuV 59.48	dBuV	dB	Detector
0.150 No. Mk. 1 * 0 2 0	Freq. MHz	dBuV 49.36	Correct Factor dB	Measure- ment dBuV 59.48 40.82	dBu∀ 65.99	dB -6.51	Detector
0.150 No. Mk. 1 * 0 2 0 3 0	Freq. MHz 0.1500	dBuV 49.36 30.70	Correct Factor dB 10.12 10.12	Measure- ment dBuV 59.48 40.82 54.51	dBuV 65.99 55.99 63.86	dB -6.51 -15.17	Detector QP AVG
0.150 No. Mk. 1 * 0 2 0 3 0 4 0	Freq. MHz 0.1500 0.1500 0.1940	dBuV 49.36 30.70 44.39	Correct Factor dB 10.12 10.12	Measure- ment dBuV 59.48 40.82 54.51 35.96	dBuV 65.99 55.99 63.86 53.86	dB -6.51 -15.17 -9.35	Detector QP AVG
0.150 No. Mk. 1 * 0 2 0 3 0 4 0 5 0	Freq. MHz 0.1500 0.1500 0.1940 0.1940	dBuV 49.36 30.70 44.39 25.84	Correct Factor dB 10.12 10.12 10.12	Measure- ment dBuV 59.48 40.82 54.51 35.96 51.17	dBuV 65.99 55.99 63.86 53.86 61.89	dB -6.51 -15.17 -9.35 -17.90	QP AVG QP AVG
0.150 No. Mk. 1 * 0 2 0 3 0 4 0 5 0 6 0	Freq. MHz 0.1500 0.1500 0.1940 0.1940 0.2460	dBuV 49.36 30.70 44.39 25.84 41.07	Correct Factor dB 10.12 10.12 10.12 10.12	Measure- ment dBuV 59.48 40.82 54.51 35.96 51.17 32.20	dBuV 65.99 55.99 63.86 53.86 61.89	dB -6.51 -15.17 -9.35 -17.90 -10.72	QP AVO
0.150 No. Mk. 1 * 0 2 0 3 0 4 0 5 0 6 0 7 0	Freq. MHz 0.1500 0.1500 0.1940 0.1940 0.2460	dBuV 49.36 30.70 44.39 25.84 41.07 22.10	Correct Factor dB 10.12 10.12 10.12 10.12 10.10	Measure- ment dBuV 59.48 40.82 54.51 35.96 51.17 32.20 46.40	dBuV 65.99 55.99 63.86 53.86 61.89 51.89	dB -6.51 -15.17 -9.35 -17.90 -10.72 -19.69	QP AVG QP AVG QP AVG
0.150 No. Mk. 1 * 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0	Freq. MHz 0.1500 0.1500 0.1940 0.1940 0.2460 0.2460 0.2900	dBuV 49.36 30.70 44.39 25.84 41.07 22.10 36.31	Correct Factor dB 10.12 10.12 10.12 10.12 10.10 10.10	Measure- ment dBuV 59.48 40.82 54.51 35.96 51.17 32.20 46.40 28.65	dBuV 65.99 55.99 63.86 53.86 61.89 51.89 60.52	dB -6.51 -15.17 -9.35 -17.90 -10.72 -19.69 -14.12	QP AVG QP AVG QP AVG
0.150 No. Mk. 1 * 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 0	Freq. MHz 0.1500 0.1500 0.1940 0.2460 0.2460 0.2900 0.3339	Level dBuV 49.36 30.70 44.39 25.84 41.07 22.10 36.31 18.56 33.80	Correct Factor dB 10.12 10.12 10.12 10.10 10.10 10.09 10.09 10.08	Measure- ment dBuV 59.48 40.82 54.51 35.96 51.17 32.20 46.40 28.65 43.88	dBuV 65.99 55.99 63.86 53.86 61.89 51.89 60.52 50.52 59.35	dB -6.51 -15.17 -9.35 -17.90 -10.72 -19.69 -14.12 -21.87 -15.47	QP AVG QP AVG QP AVG QP AVG
0.150 No. Mk. 1 * 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 0 10 0	Freq. MHz 0.1500 0.1500 0.1940 0.1940 0.2460 0.2460 0.2900	Level dBuV 49.36 30.70 44.39 25.84 41.07 22.10 36.31 18.56	Correct Factor dB 10.12 10.12 10.12 10.12 10.10 10.09 10.09	Measure- ment dBuV 59.48 40.82 54.51 35.96 51.17 32.20 46.40 28.65 43.88 24.65	dBuV 65.99 55.99 63.86 61.89 51.89 60.52 59.35 49.35	dB -6.51 -15.17 -9.35 -17.90 -10.72 -19.69 -14.12 -21.87	QP AVG QP AVG QP AVG





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EUT:	MID		Mo	del Name :	ŀ	K60PW13	
Temperature:	25 ℃		Re	lative Humidi	ty:	55%	A BANK
Test Voltage:	AC 240)V/60Hz	450		Cal	11:30	
Terminal:	Line		DAG:		63	100	
Test Mode:	TXBN	lode		MILES			
Remark:	Only w	orse case i	s reported			35	
80.0 dBuV							
						QP: AVG:	
						7114	
	-						
	X.,	,		K.III. WHILI WILL ANK ANK MINING A PARTY	X		
30	A Many	and The March Contractions	Annah kalan sunar dalah	Walkate in Acide Let	Additional strategy	maderile y nevertice	where.
2000000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	My AMMA M	JAN	الماسم بالمواليورانيورانيورانيورانيوران	mudous		peal
MANAM		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A. A. A.A.		1 4104	many many	AVG
-20							
0.150	0.5		(MHz)	5			30.000
		Reading	Correct	Measure-			
No. Mk.	Freq.	Level	Factor		Limit	Over	
	MHz	dBu∀	dB	dBu∀	dBuV	dB	Detector
1 0.	1500	35.47	10.12	45.59	65.99	-20.40	QP
	1500	19.75	10.12	29.87	55.99	-26.12	AVG
3 0.	1940	32.04	10.12	42.16	63.86	-21.70	QP
4 0.	1940	21.18	10.12	31.30	53.86	-22.56	AVG
5 0.	2380	28.35	10.11	38.46	62.16	-23.70	QP
6 0.	2380	15.02	10.11	25.13	52.16	-27.03	AVG
7 * 0.	4220	27.24	10.05	37.29	57.41	-20.12	QP
7 0.		40.00	10.05	26.11	47.41	-21.30	AVG
	4220	16.06	10.00				
8 0.	4220 4020	16.06 23.47	10.12			-22.41	QP
8 0. 9 1.				33.59	56.00	-22.41 -23.81	QP AVG
8 0. 9 1. 10 1.	4020	23.47	10.12	33.59 22.19	56.00 46.00		





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	MID		Model Name :		K60PW13	3
Temperature:	25 ℃	Carrier Contract	Relative Hum	idity:	55%	Alban
Test Voltage:	AC 240V	/60Hz	100	(A)	UPP	
Terminal:	Neutral			1 16		
Test Mode:	TX B Mod	de	(4111)		~ N	MARKET
Remark:	Only wors	se case is repo	orted		139	
80.0 dBuV						
					QP: AVG:	_
					AVG.	
× ×						
\		×	X	with All		
	MAMMAN	The work when the bold way	Khapan Karakan Karakan	, Alexander	your who was	L Comme
30	A A II ha har	abot relational.		Jan and a		pea
	MATOMINA	was hard of the state of war and who was and the state of	The state of the s	Age governor policy	manny My Marine	MANUTAN AVE
						AVC
-20 0.150	0.5	(MI				30.000
		l: 0				
No. Mk.		ading Corr		Limit	Over	
	Freq. Le			Limit dBu/	Over	Detector
	Freq. Le	evel Fac	tor ment		dB	Detector QP
1 * 0.	Freq. Let MHz d 1500 35	evel Fac	tor ment dBuV 2 46.02	dBu√ 65.99	dB	
1 * 0. 2 0.	Freq. Let MHz d 1500 35	evel Fac Bu∀ dB 5.90 10.1	tor ment dBuV 2 46.02 2 28.06	dBuV 65.99 55.99	dB -19.97	QP
1 * 0. 2 0. 3 0.	Freq. Le MHz d 1500 35 1500 17 1900 32	Evel Fac BuV dB 5.90 10.1 7.94 10.1	tor ment dBuV 2 46.02 2 28.06 2 42.91	dBuV 65.99 55.99 64.03	dB -19.97 -27.93	QP AVG
1 * 0. 2 0. 3 0. 4 0.	Freq. Le MHz d 1500 35 1500 17 1900 32	evel Fac Bu√ dB 5.90 10.1 7.94 10.1 2.79 10.1	tor ment dBuV 2 46.02 2 28.06 2 42.91 2 26.67	dBuV 65.99 55.99 64.03 54.03	dB -19.97 -27.93 -21.12	QP AVG QP
1 * 0. 2 0. 3 0. 4 0. 5 0.	Freq. Le MHz d 1500 35 1500 17 1900 32 1900 16 2380 28	BuV dB 5.90 10.1 7.94 10.1 2.79 10.1 6.55 10.1	tor ment dBuV 2 46.02 2 28.06 2 42.91 2 26.67 1 38.54	dBuV 65.99 55.99 64.03 54.03 62.16	dB -19.97 -27.93 -21.12 -27.36	QP AVG QP AVG
1 * 0. 2 0. 3 0. 4 0. 5 0. 6 0.	Freq. Le MHz d 1500 35 1500 17 1900 32 1900 16 2380 28	BuV dB 5.90 10.1 7.94 10.1 2.79 10.1 6.55 10.1 3.43 10.1	tor ment dBuV 2 46.02 2 28.06 2 42.91 2 26.67 1 38.54 1 22.85	dBuV 65.99 55.99 64.03 54.03 62.16	dB -19.97 -27.93 -21.12 -27.36 -23.62	QP AVG QP AVG QP
1 * 0. 2 0. 3 0. 4 0. 5 0. 6 0. 7 1.	Freq. Le MHz d d 1500 35 1500 17 1900 32 1900 16 2380 25 2380 12 0820 19	BuV dB 5.90 10.1 7.94 10.1 2.79 10.1 6.55 10.1 3.43 10.1 2.74 10.1	tor ment dBuV 2 46.02 2 28.06 2 42.91 2 26.67 1 38.54 1 22.85 5 29.21	dBuV 65.99 55.99 64.03 54.03 62.16 52.16 56.00	dB -19.97 -27.93 -21.12 -27.36 -23.62 -29.31	QP AVG QP AVG QP AVG
1 * 0. 2 0. 3 0. 4 0. 5 0. 6 0. 7 1. 8 1.	Freq. Le MHz d 1500 35 1500 17 1900 32 1900 16 2380 28 2380 12 0820 19	BuV dB 5.90 10.1 7.94 10.1 2.79 10.1 6.55 10.1 3.43 10.1 2.74 10.1	tor ment dBuV 2 46.02 2 28.06 2 42.91 2 26.67 1 38.54 1 22.85 5 29.21 5 18.92	dBuV 65.99 55.99 64.03 54.03 62.16 52.16 56.00 46.00	dB -19.97 -27.93 -21.12 -27.36 -23.62 -29.31 -26.79	QP AVG QP AVG QP AVG QP
1 * 0. 2 0. 3 0. 4 0. 5 0. 6 0. 7 1. 8 1. 9 3.	Freq. Le MHz d 1500 35 1500 17 1900 32 1900 16 2380 28 2380 12 0820 19 0820 8	BuV dB 5.90 10.1 7.94 10.1 6.55 10.1 3.43 10.1 2.74 10.1 9.06 10.1 3.77 10.1	tor ment dBuV 2 46.02 2 28.06 2 42.91 2 26.67 1 38.54 1 22.85 5 29.21 5 18.92 16 33.12	dBuV 65.99 55.99 64.03 54.03 62.16 52.16 56.00 46.00	dB -19.97 -27.93 -21.12 -27.36 -23.62 -29.31 -26.79 -27.08	QP AVG QP AVG QP AVG AVG
1 * 0. 2 0. 3 0. 4 0. 5 0. 6 0. 7 1. 8 1. 9 3.	Freq. Le MHz d 1500 35 1500 17 1900 32 1900 16 2380 28 2380 12 0820 8 4540 23 4540 10	Evel Fac BuV dB 5.90 10.1 7.94 10.1 2.79 10.1 3.43 10.1 2.74 10.1 9.06 10.1 3.77 10.1	tor ment dBuV 2 46.02 2 28.06 2 42.91 2 26.67 1 38.54 1 22.85 5 29.21 5 18.92 16 33.12	dBuV 65.99 55.99 64.03 54.03 62.16 52.16 56.00 46.00 46.00	dB -19.97 -27.93 -21.12 -27.36 -23.62 -29.31 -26.79 -27.08 -22.88	QP AVG QP AVG QP AVG QP AVG QP



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

Note:

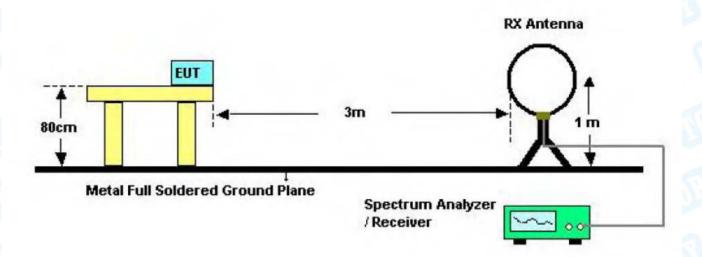
- (1) The tighter limit applies at the band edges.
- (2) Emission Level(dBuV/m)=20log Emission Level(uV/m)



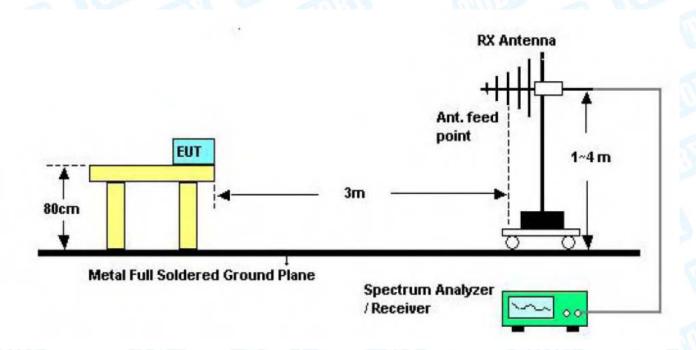


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5.2 Test Setup



Below 30MHz Test Setup

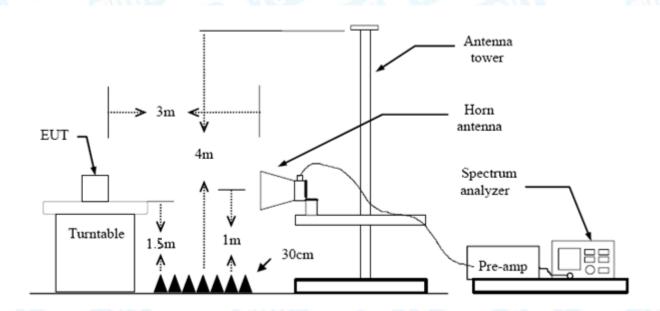


Below 1000MHz Test Setup





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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.



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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.





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re: ge:	TX E	3.7V zontal 3 Mode		MHz is reported	d 4	(RF)	5 X	3M Radiatio	
	Horiz TX E	zontal B Mode v worse		is reported	3 4 X		5 X	Margin -	6 dB
	TX E	B Mode worse		is reported	3 4 X		5 X	Margin -	6 dB
		worse		is reported	3 4 X		5 X	Margin -	6 dB
	Only		case		3 4 X		5 X	Margin -	6 dB
		1	and and	2 ************************************	×		5 X	Margin -	6 dB
	^^	1	or Volument	2 Mm	×		5 X	Margin -	6 dB
0 50	60 70	Read	_	(MHz)	Measur		500	600 700	1000.0
	req.	Lev		Factor	ment	Limi		Over	
M	lHz	dΒι	ı۷	dB/m	dBuV/m	n dBu\	//m	dB	Detect
87.7	7248	47.	38	-22.87	24.51	40.	00	-15.49	pea
133.	6188	50.	59	-21.99	28.60	43.	50	-14.90	pea
191.	7450	49.	66	-20.45	29.21	43.	50	-14.29	pea
239.	9874	49.	29	-18.18	31.11	46.	00	-14.89	pea
463.	9696	38.	76	-11.48	27.28	46.	00	-18.72	pea
									pea
	87.7 133. 191. 239. 463. 721.	MHz 87.7248 133.6188 191.7450 239.9874 463.9696 721.7259	MHz dBu 87.7248 47. 133.6188 50. 191.7450 49. 239.9874 49. 463.9696 38. 721.7259 48.	MHz dBuV 87.7248 47.38 133.6188 50.59 191.7450 49.66 239.9874 49.29 463.9696 38.76 721.7259 48.62	MHz dBuV dB/m 87.7248 47.38 -22.87 133.6188 50.59 -21.99 191.7450 49.66 -20.45 239.9874 49.29 -18.18 463.9696 38.76 -11.48 721.7259 48.62 -6.00	MHz dBuV dBuV dBuV/n 87.7248 47.38 -22.87 24.51 133.6188 50.59 -21.99 28.60 191.7450 49.66 -20.45 29.21 239.9874 49.29 -18.18 31.11 463.9696 38.76 -11.48 27.28	MHz dBuV dB/m dBuV/m dBuV/m dBuV 87.7248 47.38 -22.87 24.51 40.133.6188 50.59 -21.99 28.60 43.191.7450 49.66 -20.45 29.21 43.1239.9874 49.29 -18.18 31.11 46.1463.9696 38.76 -11.48 27.28 46.1721.7259 48.62 -6.00 42.62 46.1	MHz dBuV dB/m dBuV/m dBuV/m 87.7248 47.38 -22.87 24.51 40.00 133.6188 50.59 -21.99 28.60 43.50 191.7450 49.66 -20.45 29.21 43.50 239.9874 49.29 -18.18 31.11 46.00 463.9696 38.76 -11.48 27.28 46.00 721.7259 48.62 -6.00 42.62 46.00	MHz dBuV dB/m dBuV/m dBuV/m dBuV/m dB uV/m dB uV/m





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	MID		Mo	odel:	K	60PW13	
Temperature	e: 25 °C		Re	elative Humid	ity: 55	5%	
Test Voltage	: DC 3	.7V	1000		Turn	133	
Ant. Pol.	Vertic	cal	Alle		62		M.
Test Mode:	TX B	Mode 2412	MHz	MILES		a W	1 less
Remark:	Only	worse case	is reported				
80.0 dBuV/m							
30	1 2 X	3	Mary	5 X		C 3M Radiation Margin -6 X	
-20							
30.000 40	50 60 70	80	(MHz)	300	400 50	0 600 700	1000.00
	50 60 70 Freq.	Reading Level	(MHz) Correct Factor	Measure-	400 50 Limit	0 600 700 Over	1000.00
30.000 40		Reading	Correct	Measure-			1000.00
30.000 40	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
30.000 40 No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment dBuV/m	Limit dBuV/m	Over	Detecto
No. Mk.	Freq. MHz 46.6664	Reading Level dBuV 60.07	Correct Factor dB/m -23.10	Measure- ment dBuV/m 36.97	Limit dBuV/m 40.00	Over dB -3.03	Detector peak
No. Mk. 1 * 2 ! 3	Freq. MHz 46.6664 57.3922	Reading Level dBuV 60.07 59.49	Correct Factor dB/m -23.10 -24.58	Measure- ment dBuV/m 36.97 34.91	Limit dBuV/m 40.00 40.00	Over dB -3.03 -5.09	Detector peak
No. Mk. 1 * 2 ! 3 4	Freq. MHz 46.6664 57.3922 87.7248	Reading Level dBuV 60.07 59.49 50.38	Correct Factor dB/m -23.10 -24.58 -22.87	Measure- ment dBuV/m 36.97 34.91 27.51	Limit dBuV/m 40.00 40.00 40.00	Over dB -3.03 -5.09 -12.49	Detector peal peal peal





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25 ℃ DC 3.7V Horizontal	Relative Humidity:	55%					
		21110					
Horizontal							
I IUIIZUIIIai							
TX B Mode 2437MHz							
Only worse case is rep	orted	11:33					
	2 3 X	FCC 15C 3M Radiation Margin -6 dB					
60 70 80 (MHz) 300 400	500 600 700 1000.000					
•		mit Over					
lz dBuV dE	/m dBuV/m dBu	uV/m dB Detecto					
389 57.36 -23	.40 33.96 40	0.00 -6.04 peal					
365 54.95 -20	.26 34.69 43	3.50 -8.81 peal					
874 52.57 -18	.18 34.39 46	6.00 -11.61 peal					
		6.00 -6.76 peal					
		6.00 -10.83 peak					
		6.00 -3.99 peak					
	Reading Cor Level Fa Z dBuV dB 389 57.36 -23 365 54.95 -20 874 52.57 -18 074 56.26 -17 141 47.22 -12	Reading Correct Measure- Eq. Level Factor ment Lin Z dBuV dB/m dBuV/m dBr 389 57.36 -23.40 33.96 40 365 54.95 -20.26 34.69 43 874 52.57 -18.18 34.39 46 074 56.26 -17.02 39.24 46 141 47.22 -12.05 35.17 46					





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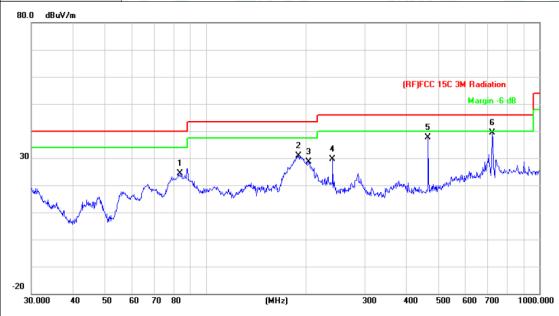
EUT	[:			MID					141	odel:			K	60PW	/13	
Гет	peratu	ıre:		25	$^{\circ}$	E		(A)	R	elative	Humi	idity:	55	5%		A STATE
Test	t Volta	ge:		DC	3.7	V			est.				111			
Ant.	. Pol.			Vert	ical			1 1	W				63			MA
Test	t Mode	:		TX	ВМ	lode	e 243	7MHz						ħ.		A least
Ren	nark:			Only	y wo	orse	cas	e is rep	orted			6	111			
80.0	dBuV/m	1														
30		W	•	<i></i>	, Z		Wrass.		3	- Land	Ž,	(RI	5 X	Ma	argin -6 8 X	
			\\				Jhr.	mysegraph (Ingl		NA						
-20			W					When out		ndv						
	.000 4	10	50	60 7	70 8		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		MHz)	N	300	40	0 50	0 600	700	1000.00
30	.000 4 No. M		50 Fre			0	ding	Cor		Meas	ure-	40		00 600 Ove		1000.00
30				q.		Rea Le	ding	Cor	rect		ure- nt		it		er	1000.00
30		k.	Fre	q. z		Rea Lev	iding vel	Cor Fac	rect ctor	mer	ure- nt	Lim	it V/m	Ove	er	
	No. M	k. 4	Fre	eq. z 016		Rea Lev	iding vel	Cor Fac	rect ctor m 87	mer dBu\	ure- nt //m	Lim dBu	it V/m 00	Ove	er 31	Detector
1 1	No. MI	k. 4 7	Fre MH 8.50	eq. z 016		Read Level dB 59	ding vel su/	Cor Fac dB/	rect ctor m 87	dBu\ 35.6	ure- nt //m 69	Lim dBu	it V/m 00	Ove	er 31 28	Detector peak
1 2	No. MI	k. 4 7	Fre MH 8.50 7.05	eq. z 116 502		Rea Lev dB 59 59	ding vel su/ .56	Cor Fac dB/ -23.	rect ctor 87 44	35.6	ure- nt //m 69 72	Lim dBu 40.	it 00 00 50	Ove dB -4.3	er 31 28	Detector peak peak
1 2 3	No. MI	k. 4 7 16	Fre MH 8.50 7.05	eq. z 016 502 988 237		Rea Le 59 55 51	ding vel .56 .16	Cor Fac dB/ -23.	rect ctor m 87 44 88 05	35.0 35.0	ure- nt //m 69 72 02	Lim 40. 40.	it //m 00 00 50 00	Ove dB -4.3 -4.2	er 31 28 48	Detector peak peak peak





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EUT:	MID	Model:	K60PW13
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.7V	(1) L	THE STATE OF
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	Only worse case is repor	ted	



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		83.8156	47.37	-23.11	24.26	40.00	-15.74	peak
2		189.7384	51.34	-20.54	30.80	43.50	-12.70	peak
3		203.5226	48.59	-19.84	28.75	43.50	-14.75	peak
4		239.9874	47.81	-18.18	29.63	46.00	-16.37	peak
5		463.9696	49.19	-11.48	37.71	46.00	-8.29	peak
6	*	721.7259	45.30	-6.00	39.30	46.00	-6.70	peak

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





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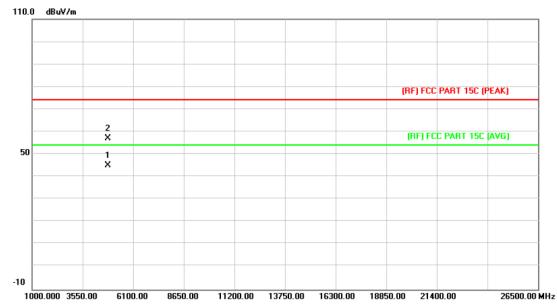
MID	Mode	el:	K60PW13	K60PW13		
25 ℃	Rela	tive Humidity:	55%	MA		
DC 3.7V	100		THE			
Vertical	MAG		1			
TX B Mode 2462	2MHz					
Only worse case	is reported		133	_ (
3			Margin -6 d	B		
60 70 80	(MHz)	300 400	500 600 700	1000.00		
Reading req. Level	Correct M Factor		nit Over			
MHz dBuV	dB/m	dBuV/m dBu	ıV/m dB	Detect		
9658 53.72	-21.97	31.75 40	.00 -8.25	pea		
0711 53.61	-24.54	29.07 40	.00 -10.93	pea		
9668 56.45	-23.97	32.48 40	.00 -7.52	pea		
9651 53.81	-23.38	30.43 40	.00 -9.57	peal		
	-11.48		.00 -11.26	peal		
.9696 46.22						
	25 °C DC 3.7V Vertical TX B Mode 2462 Only worse case A seading Level MHz dBuV 9658 53.72 0711 53.61 9668 56.45	25 °C Rela DC 3.7V Vertical TX B Mode 2462MHz Only worse case is reported Reading Correct Market Factor MHz dBuV dB/m 9658 53.72 -21.97 0711 53.61 -24.54 9668 56.45 -23.97	Reading Correct Measure- Teq. Level Factor ment Line WHz dBuV dB/m dBuV/m dBut 9658 53.72 -21.97 31.75 40 9668 56.45 -23.97 32.48 40	25 °C Relative Humidity: 55% DC 3.7V Vertical TX B Mode 2462MHz Only worse case is reported (RFJFCC 15C 3M Radiation Margin 6 section of the content of		





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EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V	DC 3.7V				
Ant. Pol.	Horizontal					
Test Mode:	TX B Mode 2412MHz		THE PARTY OF THE P			
Remark:	No report for the emission	No report for the emission which more than 10 dB below the				
	prescribed limit.	2 m 13				



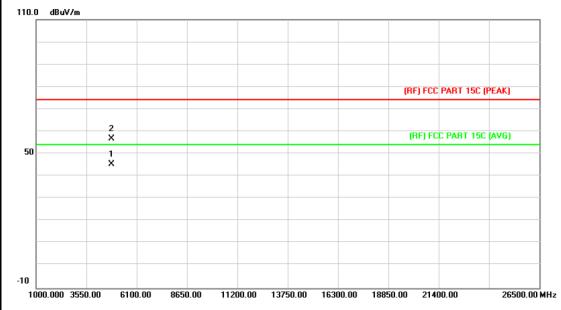
1	No.	Mk.	Freq.			Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4824.435	31.52	13.50	45.02	54.00	-8.98	AVG
2			4824.507	43.58	13.50	57.08	74.00	-16.92	peak





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MID	Model:	K60PW13		
25 ℃	Relative Humidity:	55%		
DC 3.7V	01 - 6	THE		
Vertical				
TX B Mode 2412MHz				
Test Mode: TX B Mode 2412MHz Remark: No report for the emission which more than 10 dB below the prescribed limit.				
	25 °C DC 3.7V Vertical TX B Mode 2412MHz No report for the emissio	25 °C Relative Humidity: DC 3.7V Vertical TX B Mode 2412MHz No report for the emission which more than 10 or		



No.	Mk.	Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.010	31.87	13.50	45.37	54.00	-8.63	AVG
2		4824.528	43.29	13.50	56.79	74.00	-17.21	peak





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EUT:	MID	Model:	K60PW13		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.7V	01 - 6	THE STATE OF		
Ant. Pol.	Horizontal				
Test Mode:	TX B Mode 2437MHz		THE PARTY OF THE P		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.				
prescribed limit.					



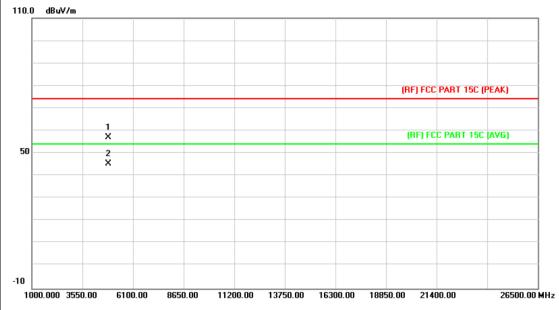
No	o. Mk	c. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4873.454	32.33	13.86	46.19	54.00	-7.81	AVG
2		4873.688	43.64	13.86	57.50	74.00	-16.50	peak





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EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V	DC 3.7V				
Ant. Pol.	Vertical					
Test Mode:	TX B Mode 2437MHz					
Remark:	Remark: No report for the emission which more than 10 dB below the prescribed limit.					



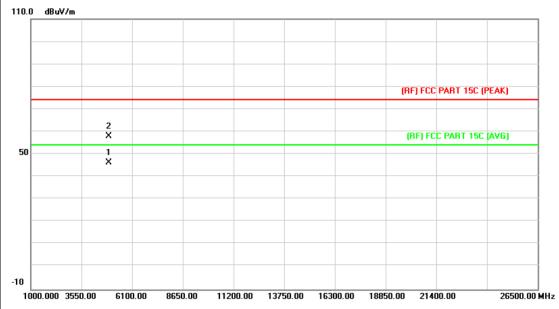
No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.072	43.08	13.86	56.94	74.00	-17.06	peak
2	*	4875.047	31.55	13.87	45.42	54.00	-8.58	AVG





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EUT:	MID	Model:	K60PW13				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.7V	01 - 6					
Ant. Pol.	Horizontal						
Test Mode:	TX B Mode 2462MHz		THE PARTY OF THE P				
Remark:	emark: No report for the emission which more than 10 dB below the prescribed limit.						



N	lo.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4923.526	32.00	14.15	46.15	54.00	-7.85	AVG
2			4924.732	43.86	14.15	58.01	74.00	-15.99	peak





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EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V	DC 3.7V				
Ant. Pol.	Vertical					
Test Mode:	TX B Mode 2462MHz					
Remark: No report for the emission which more than 10 dB below the prescribed limit.						



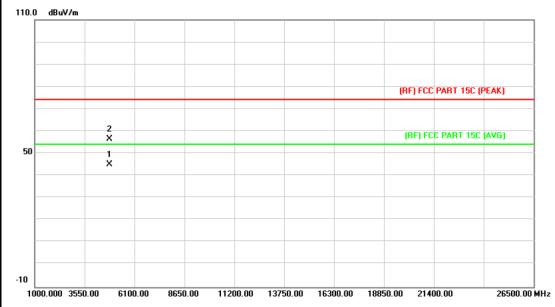
No	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4924.081	43.64	14.15	57.79	74.00	-16.21	peak
2	*	4924.240	32.04	14.15	46.19	54.00	-7.81	AVG





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EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V					
Ant. Pol.	Horizontal					
Test Mode:	TX G Mode 2412MHz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					



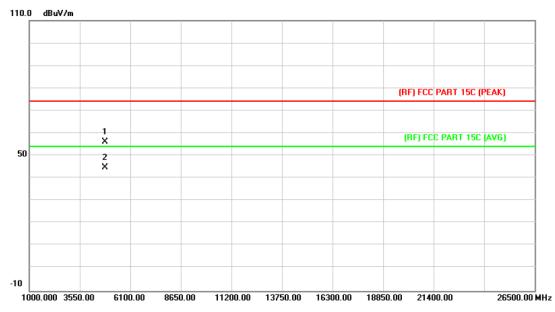
1	No.	Mk.	Freq.	_		Measure- ment	Limit	Over	
			MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4824.387	31.61	13.56	45.17	54.00	-8.83	AVG
2			4825.194	42.96	13.57	56.53	74.00	-17.47	peak





Page: 34 of 79

EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V					
Ant. Pol.	Vertical					
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		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4825.176	42.71	13.57	56.28	74.00	-17.72	peak
2	*	4825.353	31.27	13.57	44.84	54.00	-9.16	AVG





Page: 35 of 79

EUT:	MID	Model:	K60PW13				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.7V	DC 3.7V					
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.						



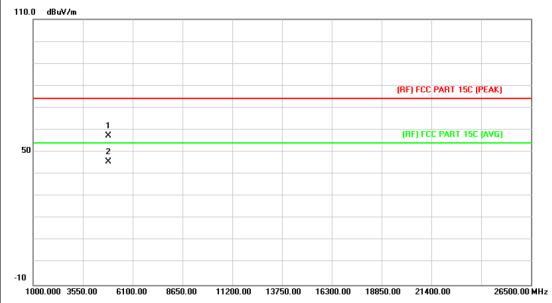
No	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.318	43.31	13.86	57.17	74.00	-16.83	peak
2	*	4875.029	32.20	13.87	46.07	54.00	-7.93	AVG





Page: 36 of 79

EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V					
Ant. Pol.	Vertical					
Test Mode:	TX G Mode 2437MHz	MILES	A VIII			
Remark:	No report for the emiss prescribed limit.	sion which more than 10	dB below the			



No	o. Mk	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4872.539	43.36	13.85	57.21	74.00	-16.79	peak
2	*	4874.942	31.88	13.86	45.74	54.00	-8.26	AVG





Page: 37 of 79

EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V	01 - 6	Miles of			
Ant. Pol.	Horizontal	Horizontal				
Test Mode:	TX G Mode 2462MHz					
Remark:	No report for the emissio prescribed limit.	n which more than 10 o	dB below the			
110.0 ID-VI						



No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.667	43.95	14.15	58.10	74.00	-15.90	peak
2	*	4925.494	32.06	14.16	46.22	54.00	-7.78	AVG





Page: 38 of 79

EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V		THE			
Ant. Pol.	Vertical	Vertical				
Test Mode:	TX G Mode 2462MHz		A VIII			
Remark:	No report for the emissio prescribed limit.	n which more than 10	dB below the			



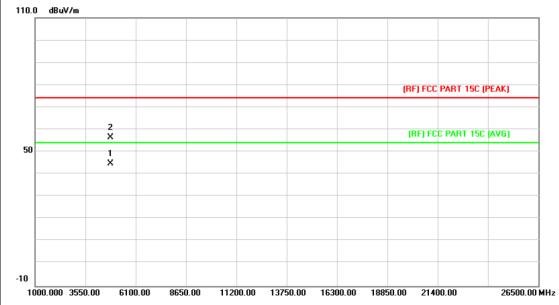
No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.274	43.92	14.15	58.07	74.00	-15.93	peak
2	*	4923.892	32.26	14.15	46.41	54.00	-7.59	AVG





Page: 39 of 79

EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V					
Ant. Pol.	Horizontal	Horizontal				
Test Mode:	TX N(HT20) Mode 2412	ИHz				
Remark:	No report for the emission which more than 10 dB below the					
	prescribed limit.					



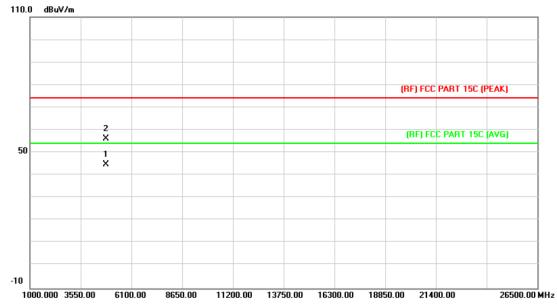
No	. Mk	. Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4824.342	31.33	13.56	44.89	54.00	-9.11	AVG
2		4824.588	42.77	13.56	56.33	74.00	-17.67	peak





Page: 40 of 79

EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V	DC 3.7V				
Ant. Pol.	Vertical	Vertical				
Test Mode:	TX N(HT20) Mode 2412	ИНz				
Remark:	No report for the emission which more than 10 dB below the					
	prescribed limit.					
110.0 10.01						



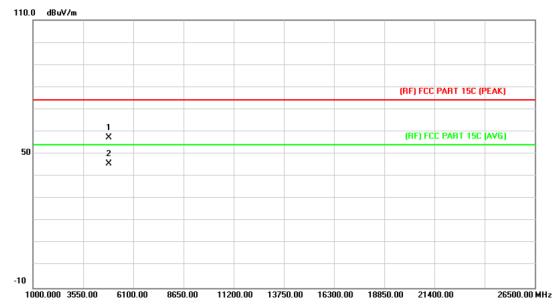
N	o. Mł	c. Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.016	31.31	13.56	44.87	54.00	-9.13	AVG
2		4824.027	42.55	13.56	56.11	74.00	-17.89	peak





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EUT:	MID	Model:	K60PW13		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.7V				
Ant. Pol.	Horizontal				
Test Mode:	TX N(HT20) Mode 2437	ИНz	THE PARTY OF THE P		
Remark:	No report for the emission which more than 10 dB below the				
	prescribed limit.	2 13			



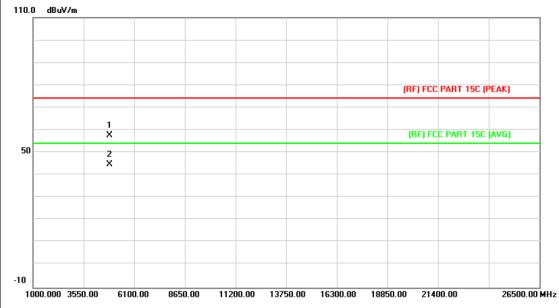
No	. Mk	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.726	43.63	13.86	57.49	74.00	-16.51	peak
2	*	4874.882	31.89	13.86	45.75	54.00	-8.25	AVG





Page: 42 of 79

EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V	DC 3.7V				
Ant. Pol.	Vertical	Vertical				
Test Mode:	TX N(HT20) Mode 2437M	1Hz				
Remark:	No report for the emission prescribed limit.	which more than 10 o	dB below the			



No	. Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4872.503	43.84	13.85	57.69	74.00	-16.31	peak
2	*	4872.503	30.85	13.85	44.70	54.00	-9.30	AVG





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EUT:	MID	Model:	K60PW13						
Temperature:	25 ℃	Relative Humidity:	55%						
Test Voltage:	DC 3.7V								
Ant. Pol.	Horizontal								
Test Mode:	TX N(HT20) Mode 2462N	ИНz	A VIII						
Remark:	No report for the emissio prescribed limit.	No report for the emission which more than 10 dB below the							



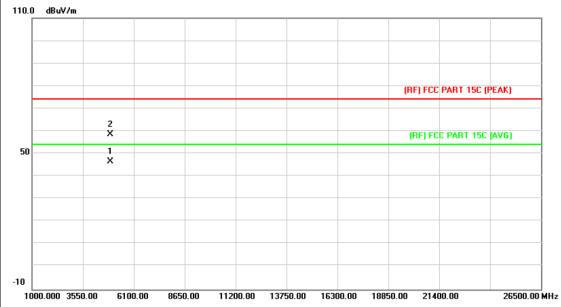
No	. Mk.	Freq.	_	leading Correct M Level Factor		Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4922.905	43.93	14.14	58.07	74.00	-15.93	peak
2	*	4924.201	31.91	14.15	46.06	54.00	-7.94	AVG





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EUT:	MID	Model:	K60PW13					
Temperature:	25 °C Relative Humidity: 55%							
Test Voltage:	DC 3.7V							
Ant. Pol.	Vertical							
Test Mode:	TX N(HT20) Mode 2462MHz							
Remark:	No report for the emission which more than 10 dB below the prescribed limit.							
	No report for the emissio		dB below the					



No	No. Mk. Freq.		Reading Correct Meas lo. Mk. Freq. Level Factor mer			Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4922.746	32.29	14.14	46.43	54.00	-7.57	AVG
2		4923.274	44.46	14.15	58.61	74.00	-15.39	peak





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6. Restricted Bands Requirement

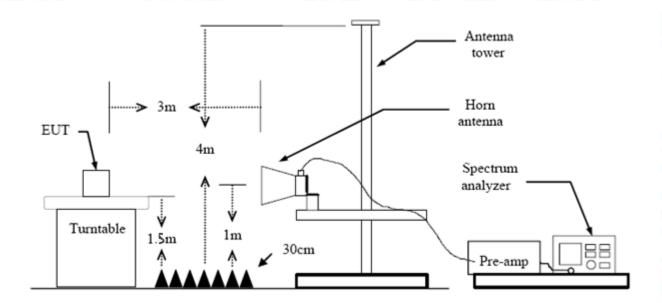
6.1 Test Standard and Limit

6.1.1 Test Standard FCC Part 15.209 FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency	ncy Class B (dBuV/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.



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(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.

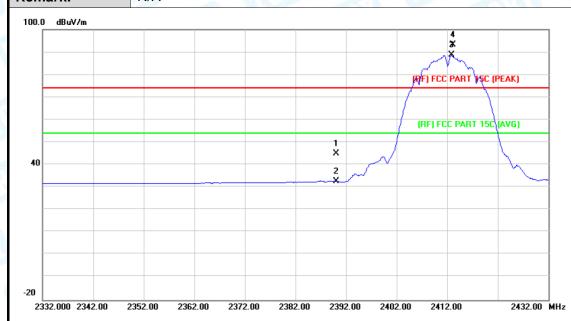




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(1) Radiation Test

EUT:	MID	Model:	K60PW13				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	DC 3.7V						
Ant. Pol.	Horizontal	MILDS	THE PERSON NAMED IN				
Test Mode:	TX B Mode 2412MHz						
Remark:	N/A	J 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	44.25	0.77	45.02	74.00	-28.98	peak
2		2390.000	31.88	0.77	32.65	54.00	-21.35	AVG
3	*	2412.900	87.79	0.86	88.65	Fundamental	Frequency	AVG
4	X	2413.100	92.37	0.86	93.23	Fundamental	Frequency	peak





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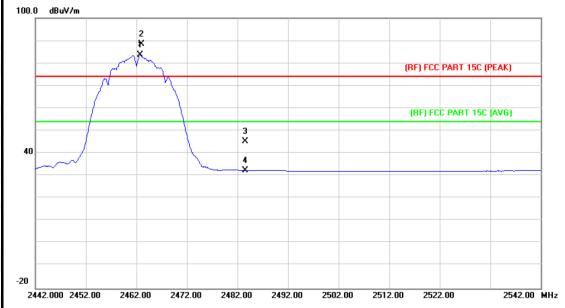
:UT	Γ:	MID Model: K60PW				0PW13						
em	peratu	re:	25 °C		UEM	Re	elativ	e Humi	dity:	559	%	
es	t Voltag	e:	DC 3	3.7V		1	196					
nt	. Pol.		Vertic	cal	0	MAG			1 1	7	A	AN!
es	t Mode:		ТХВ	Mode 2	412MHz		- 6	1110			1 1/1	Mes
Ren	nark:		N/A	ARA		1	/				9	
100.0) dBuV/m											
										3		
										XI.	AT 15C (PEA	
									(RE)/f	CC PA	AT 15C (PEA	K)
									1			
									(RF)	FCC P	ART 150 LAV	G)
							1 X		1			
40							2 X	~~~	/			~
20 23	332.000 23 4	2.00 :	2352.00	2362.00	2372.00	2382.00	2392	2.00 240	02.00 2	412.00)	2432.00 M
				Readi	na Co	rrect	Mea	asure-				
N	lo. Mk	. Fr	eq.	Leve		actor		ent	Limit		Over	
		М	Hz	dBuV	dl	B/m	dB	uV/m	dBuV	/m	dB	Detecto
1		2390	0.000	42.88		.77	43	3.65	74.0	0	-30.35	peal
2		2390	0.000	31.24	1 0	.77	32	2.01	54.0	00	-21.99	
3	Х	2411	.100	86.14	1 0	.86	87	7.00	Fundam	ental	Frequency	peal
4	*	2411	.400	81.5	7 0	.86	82	2.43			Frequency	AVC
4												





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EUT:	MID	Model:	K60PW13
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.7V		THE STATE OF
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	*	2462.700	82.49	1.08	83.57	Fundamental	Frequency	AVG
2	Χ	2463.000	87.25	1.08	88.33	Fundamenta	I Frequency	peak
3		2483.500	44.10	1.17	45.27	74.00	-28.73	peak
4		2483.500	31.04	1.17	32.21	54.00	-21.79	AVG





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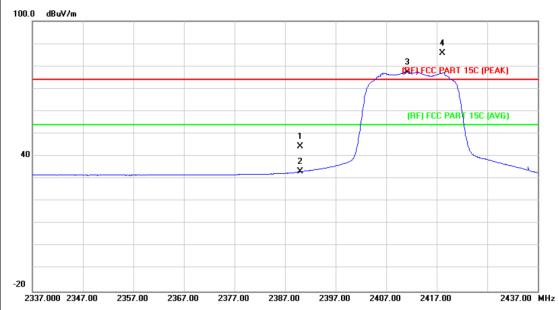
UT:	T: MID N				M	lodel: K60P			K60PW13		
emperatu	re:	25 ℃		W. P.	Re	elative I	Humi	dity:	y : 55%		
est Voltag	e:	DC 3	.7V					(A	41.30		
nt. Pol.		Vertic	cal		MAG			1 6	and and	100	
Test Mode:		ТХВ	Mode 2	462MH;	Z		103	9	~ W	Meson	
Remark:		N/A	ARA						A.D.		
100.0 dBuV/m	<u> </u>										
		1 X									
	مم	\sim	,								
	//		V					(RF) FC	C PART 15C (PEA	K)	
	1							(RF) F	CC PART 15C (AV	G)	
	/			3 X							
40			7	4							
-20 2442.000 24	52.00	2462.00	2472.00	2482.00	2492.00	2502.00	251	2.00 25	22.00	2542.00 MI	
			Poodi	na C	orrect	Maga	uro				
No. Mk	Fr	eq.	Readi Leve	_	actor	Meas mer		Limit	Over		
		Hz	dBuV			dBu\		dBuV/	m dB	Detect	
					dB/m			ubuv/	II UD		
1 *	2461	.300	88.3	1 1	1.07	89.3	38	Fundame	ntal Frequency	AVC	
2 X	2463	3.000	92.8	0 1	1.08	93.8	38	Fundame	ntal Frequency	pea	
3	2483	3.500	44.6	9 1	1.17	45.8	36	74.0	0 -28.14	pea	
4	2483	3.500	31.8	5 1	1.17	33.0	02	54.0	0 -20.98	AVC	
•				-							





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EUT:	MID	Model:	K60PW13
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.7V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	N/A		1:33



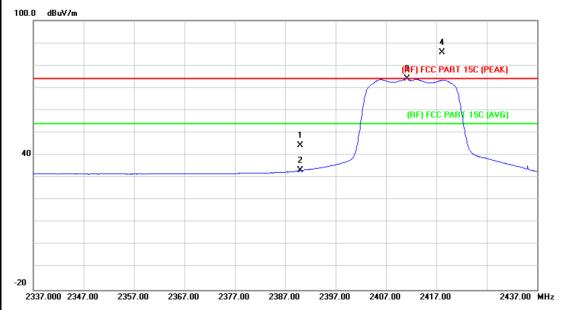
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	43.66	0.77	44.43	74.00	-29.57	peak
2		2390.000	32.36	0.77	33.13	54.00	-20.87	AVG
3	*	2411.200	76.61	0.86	77.47	Fundamental	Frequency	AVG
4	Χ	2418.100	84.95	0.89	85.84	Fundamental	Frequency	peak





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EUT:	MID	Model:	K60PW13
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.7V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	N/A		



No	o. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	43.66	0.77	44.43	74.00	-29.57	peak
2		2390.000	32.36	0.77	33.13	54.00	-20.87	AVG
3	*	2411.200	73.11	0.86	73.97	Fundamenta	Frequency	AVG
4	Χ	2418.100	84.95	0.89	85.84	Fundamenta	l Frequency	peak





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117
Jan Street
A.
1
_

	1 X	_					
		2 X			(RF) FCC	PART 15C (F	'EAK)
			3 X		(RF) FC	C PART 15C	(AVG)
40			4 ×				
						·	
0							

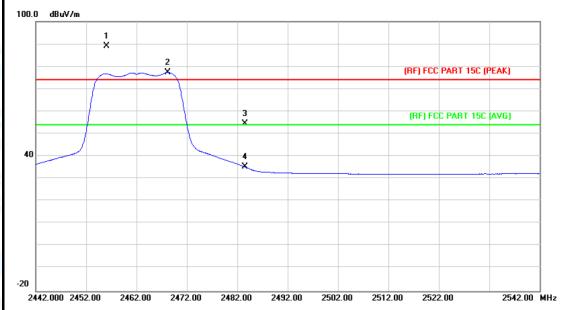
No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2455.900	85.70	1.05	86.75	Fundamenta	I Frequency	peak
2	*	2468.400	78.47	1.11	79.58	Fundamenta	al Frequency	AVG
3		2483.500	53.58	1.17	54.75	74.00	-19.25	peak
4		2483.500	38.73	1.17	39.90	54.00	-14.10	AVG





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EUT:	MID	Model:	K60PW13
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.7V	01 - 6	Miles of
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz	THE PARTY OF	THE PARTY OF THE P
Remark:	N/A		



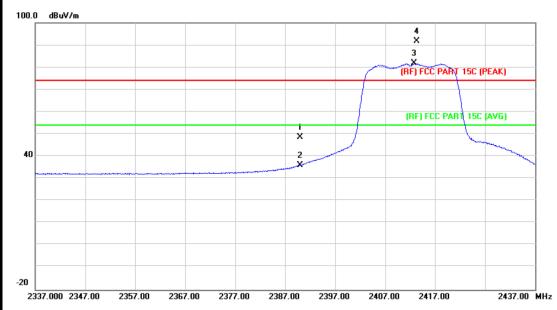
No	o. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2456.100	88.09	1.05	89.14	Fundamental	Frequency	peak
2	*	2468.200	76.23	1.11	77.34	Fundamental	Frequency	AVG
3		2483.500	53.41	1.17	54.58	74.00	-19.42	peak
4		2483.500	34.09	1.17	35.26	54.00	-18.74	AVG





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EUT:	MID	Model:	K60PW13					
Temperature:	25 ℃ Relative Humidity: 55%							
Test Voltage:	DC 3.7V							
Ant. Pol.	Horizontal	Horizontal						
Test Mode:	TX N(HT20) Mode 2412N	TX N(HT20) Mode 2412MHz						
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	47.71	0.77	48.48	74.00	-25.52	peak
2		2390.000	35.17	0.77	35.94	54.00	-18.06	AVG
3	*	2412.800	80.85	0.86	81.71	Fundamenta	I Frequency	AVG
4	X	2413.300	91.00	0.86	91.86	Fundamenta	I Frequency	peak





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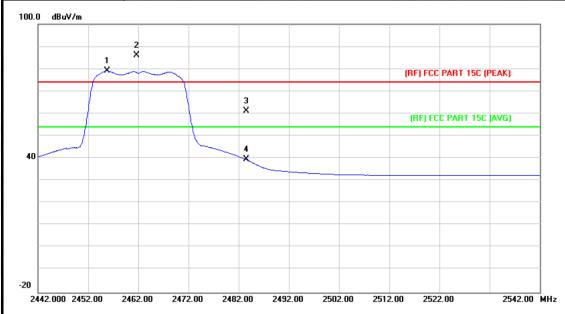
EUT: MID			Model:				K60PW13						
em	peratur	e:	25 °C		ATT.	9	Relat	tive Hur	nidity:	55%	%	AR	ŀ
es	t Voltag	e:	DC 3	.7V					16		33		
\nt.	. Pol.		Vertic	cal		1111						AT.	1
est	t Mode:		TX N	(HT20)	Mode	2412N	lHz	THE PERSON		A THE			
Ren	nark:		N/A	AR					CIL	U.37			
100.0) dBuV/m												_
									4 × 3 (RE)	FCC PAF	RT 15C (PEA	ıK)	
									(RF)	FCC PA	IRT 15C (AV	'G)	
40							1 X 2 X						
-20 23	337.000 23 4	7.00 2	357.00	2367.00	2377.00	0 2387	.00 2	397.00 2	407.00 2	2417.00		2437.00	_ MH
N	lo. Mk.	Fre	eq.	Readi Leve	_	Correc		easure- ment	Limi	t	Over		
		MI	Ηz	dBu\	/	dB/m		dBuV/m	dBu∖	//m	dB	Dete	ecto
								44 77	74.0	20	-29.23	ре	al
1		2390	.000	44.0	0	0.77		44.77	77.	50			
1		2390 2390		44.0 32.3		0.77		33.12	54.0		-20.88		
	*		.000		5				54.0	00			/ G





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EUT:	EUT: MID		K60PW13				
Temperature:	25 °C Relative Humidity: 55%						
Test Voltage:	DC 3.7V						
Ant. Pol.	Horizontal						
Test Mode:	TX N(HT20) Mode 2462MHz						
Remark:	N/A						



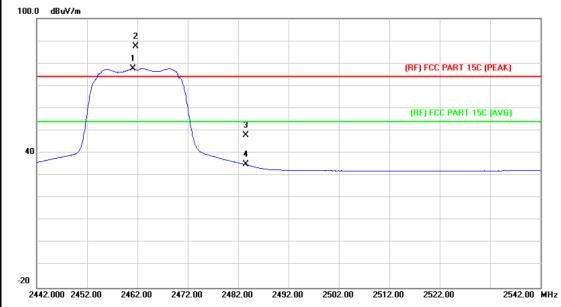
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2455.800	78.13	1.05	79.18	Fundamental	Frequency	AVG
2	Χ	2461.700	84.84	1.07	85.91	Fundamental	Frequency	peak
3		2483.500	60.06	1.17	61.23	74.00	-12.77	peak
4		2483.500	38.30	1.17	39.47	54.00	-14.53	AVG





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EUT:	MID	Model:	K60PW13		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.7V				
Ant. Pol.	Vertical				
Test Mode:	TX N(HT20) Mode 2462MHz				
Remark:	N/A		1:33		



No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2461.100	76.62	1.06	77.68	Fundamenta	l Frequency	peak
2	*	2461.700	86.59	1.07	87.66	Fundamenta	l Frequency	peak
3		2483.500	46.74	1.17	47.91	74.00	-26.09	peak
4		2483.500	33.74	1.17	34.91	54.00	-19.09	AVG

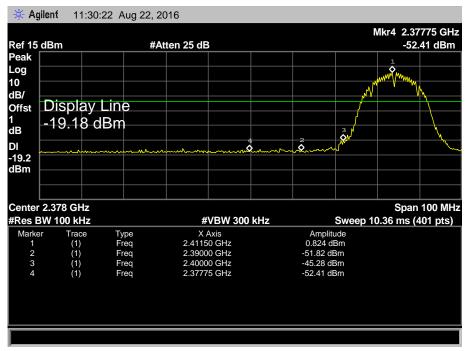


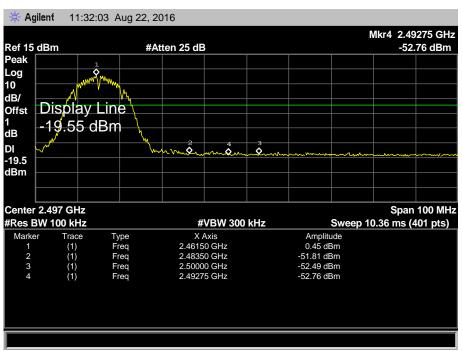


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(2) Conducted Test

EUT:	MID	Model:	K60PW13		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.7V				
Test Mode:	TX B Mode 2412MHz / TX B Mode 2462MHz				
Remark:	The EUT is programed in continuously transmitting mode				



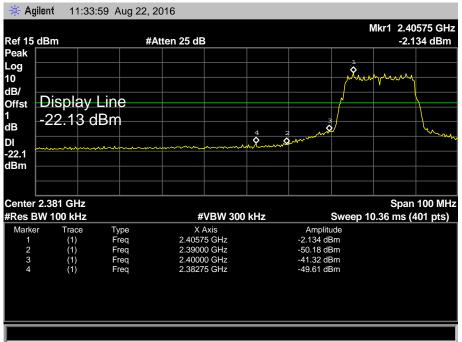


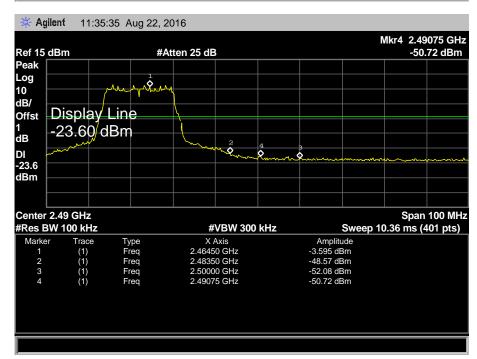




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EUT:	MID	Model:	K60PW13		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.7V				
Test Mode:	TX G Mode 2412MHz / TX G Mode 2462MHz				
Remark: The EUT is programed in continuously transmitting mode					
46.1					



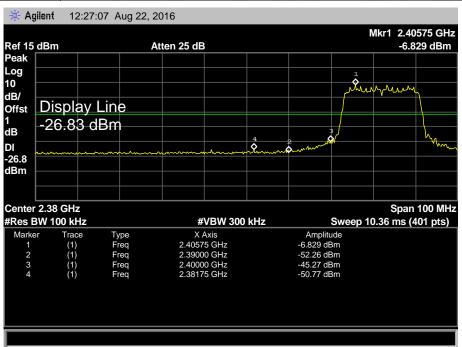


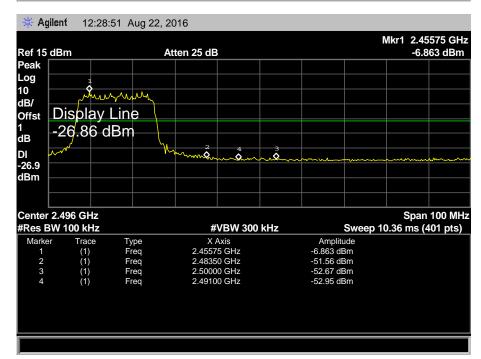




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EUT:	MID	Model:	K60PW13			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	DC 3.7V					
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz					
Remark:	The EUT is programed in o	continuously transmittir	ng mode			







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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	Test Item Limit 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.



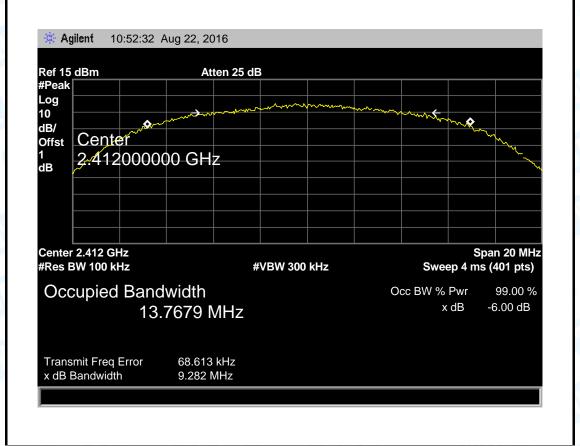


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7.5 Test Data

EUT:	MID	Model:	K60PW13
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.7V		
Test Mode:	TX 802.11B Mode	2 Diller	10
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit
(MHz)	(MHz)	(MHz)	(MHz)
2412	9.282	13.7679	
2437	9.379	13.7546	>=0.5
2462	8.763	13.7605	

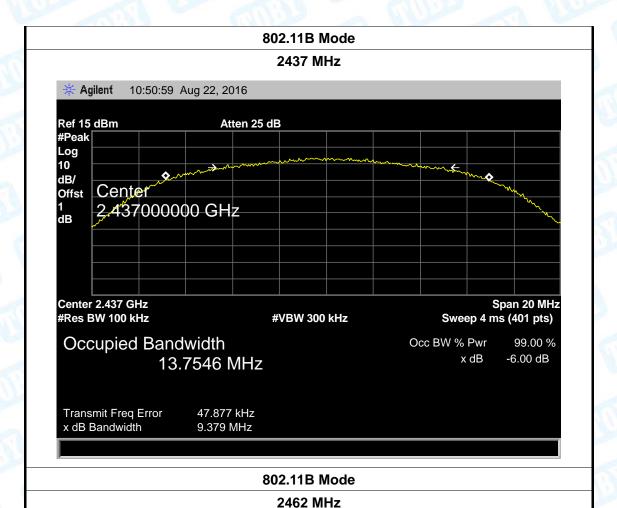
802.11B Mode







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* Agilent 10:51:54 Aug 22, 2016 Ref 15 dBm Atten 25 dB #Peak Log 10 dB/ Center Offst 1 dB 2,462000000 GHz Center 2.462 GHz Span 20 MHz #Res BW 100 kHz **#VBW 300 kHz** Sweep 4 ms (401 pts) Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 13.7605 MHz

Transmit Freq Error

x dB Bandwidth

54.428 kHz

8.763 MHz

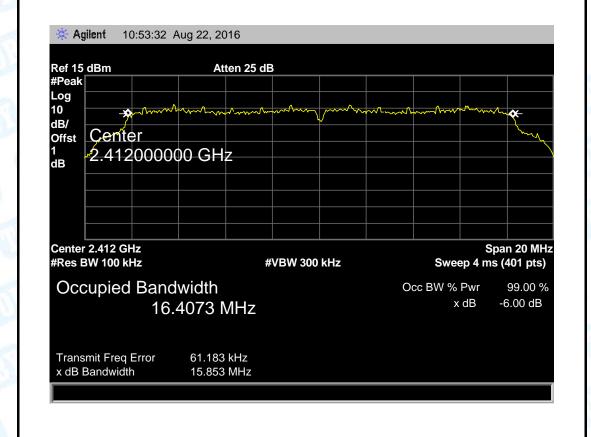




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EUT:	MID	Model:	K60PW13		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.7V				
Test Mode:	TX 802.11G Mode		ALL STREET		
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit		
(MHz)	(MHz)	(MHz)	(MHz)		
2412	15.853	16.4073			
2437	16.167	16.4111	>=0.5		
2462	16.144	16.4043			
802.11G Mode					

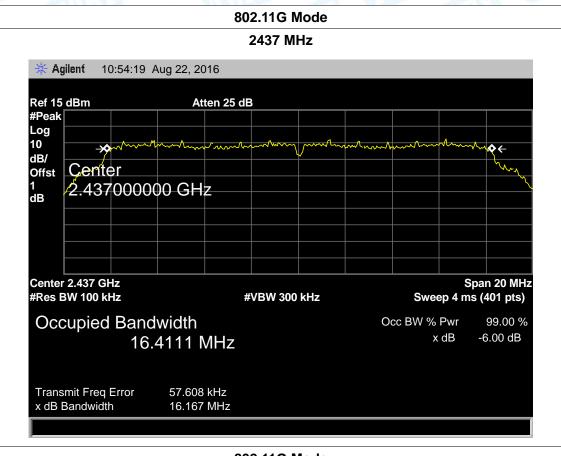
02.110 1110



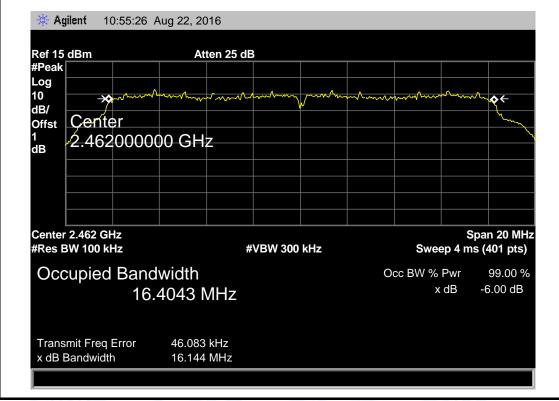




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802.11G Mode



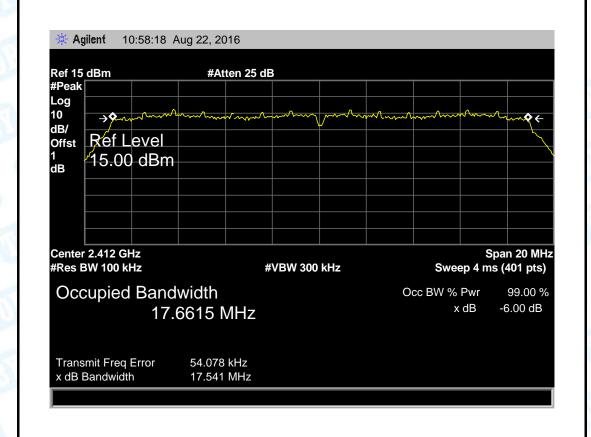




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EUT:	MID	Model:	K60PW13		
Temperature:	25 ℃	Relative Humidity:	55%		
Test Voltage:	DC 3.7V				
Test Mode:	TX 802.11N(HT20) Mode		ALL STREET		
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit		
(MHz)	(MHz)	(MHz)	(MHz)		
2412	17.541	17.6615			
2437	17.560	17.6697	>=0.5		
2462	17.317	17.6542			
802.11N(HT20) Mode					

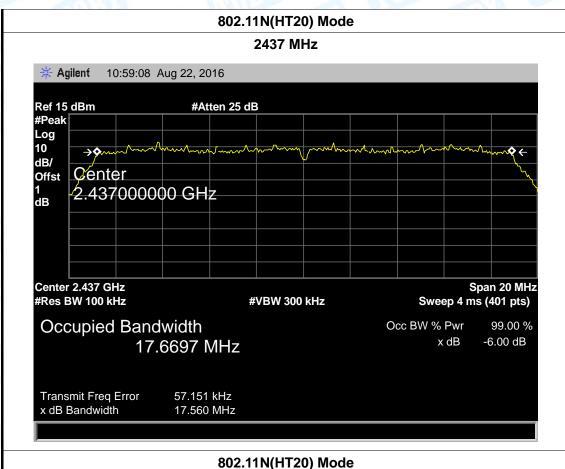
2.11N(11120) INC

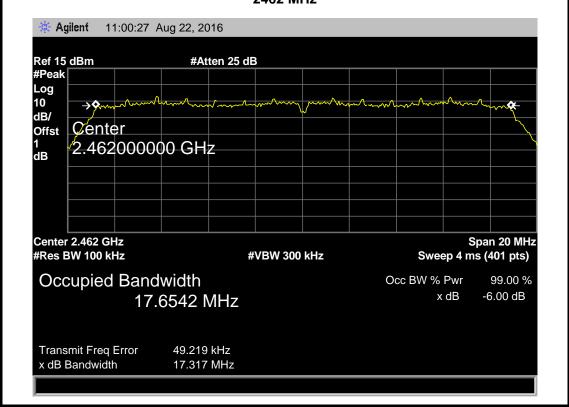






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8. Peak Output Power Test

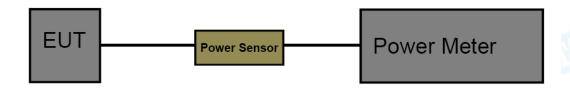
8.1 Test Standard and Limit

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 v03r05.

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.





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8.5 Test Data

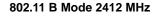
EUT:	MID	Model Name :	K60PW13
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	DC 3.7V		
Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
	2412	9.23	
802.11b	2437	9.27	
	2462	9.21	
	2412	9.09	
802.11g	2437	9.12	30
	2462	9.14	
000 44	2412	9.11	
802.11n (HT20)	2437	9.09	
(П120)	2462	9.12	
	Resi	ult: PASS	

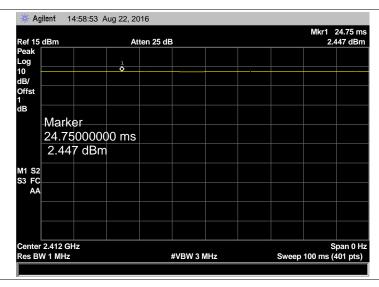
2412 2437 2462 2412	Test Result
2437 2462	
2462	
2412	
2412	
2437	>98%
2462	
2412	
2437	
2462	
	2462 2412 2437



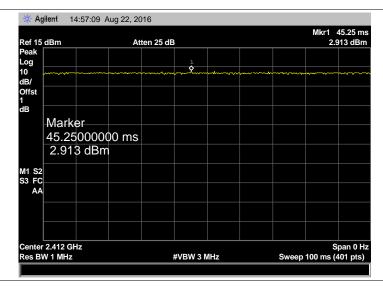
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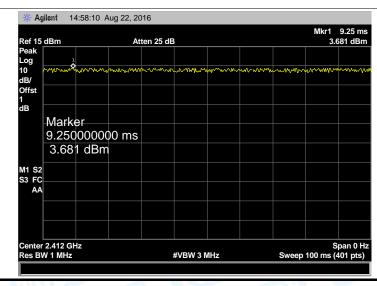




802.11 G Mode 2412 MHz



802.11 N(HT20) Mode 2412 MHz





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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 Range(MHz)			
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 v03r05.

- (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.

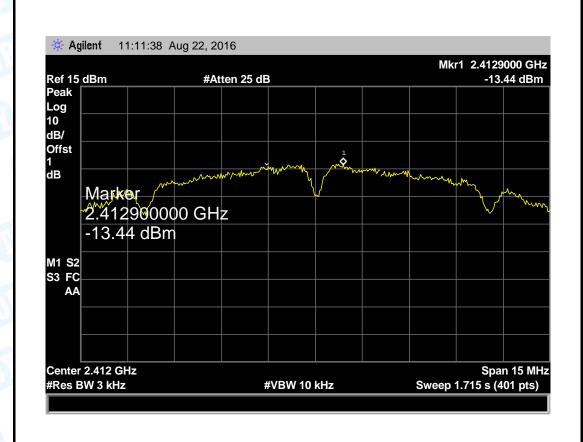




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9.5 Test Data

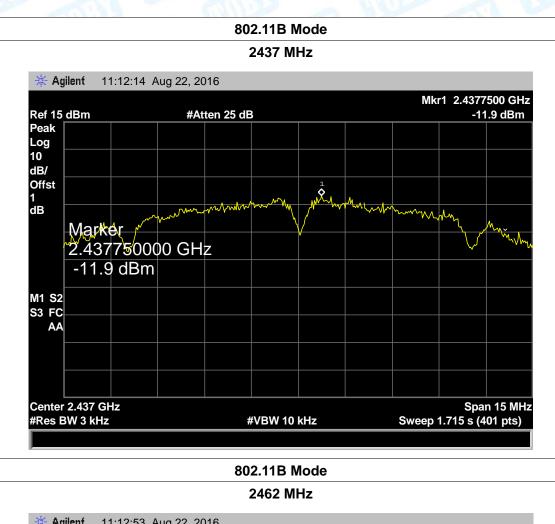
EUT:	MID N		Model:	K60PW13		
Temperature:	25 ℃ Re		Relative Humidity:	55%		
Test Voltage:	DC 3.7V					
Test Mode:	TX 802.1	TX 802.11B Mode				
Channel Freq	uency	Power	Density	Limit (dBm)		
(MHz)		(3 kHz/dBm)				
2412		-13	3.44			
2437		-11	.90	8		
2462		-13	3.19			
802.11B Mode						







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Center 2.412 GHz #Res BW 3 kHz Page: 75 of 79

EUT:	MID		Model:	K60PW13		
Temperature:	25 ℃	25 ℃		25 ℃		
Test Voltage:	DC 3.7V	The same of	2011			
Test Mode:	TX 802.110	G Mode	U			
Channel Fre (MHz	-		Density Iz/dBm)	Limit (dBm)		
2412		•	6.67			
2437		-1	6.17	8		
2462		-1	6.71			
		802.11	IG Mode			
		241	2 MHz			
Ref 15 dBm	1:18:19 Aug 22,	2016 Atten 25 dB		Mkr1 2.41800 GHz -16.67 dBm		
Peak Log						
4.0						
10 dB/						
				1		
dB/ Offst 1	er mm/m	MMM-47444	Mymmmmm	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
dB/ Offst 1 dB Mark 2.418	300 <mark>2</mark> 500 GI	Λ / ///////////////////////////////////	Mymmmmm	√√ √ √ √ √ √ √ √ √ √		
dB/ Offst 1 dB Mark 2.418	er ////// 8002500 GH 7/dBm	////////////////////////////////////	My Mmymm	√√√√√√√√√√√√√		
dB/ Offst 1 dB Mark 2.418	300 <mark>2</mark> 500 GI	////////////////////////////////////	Mymmmmm	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		

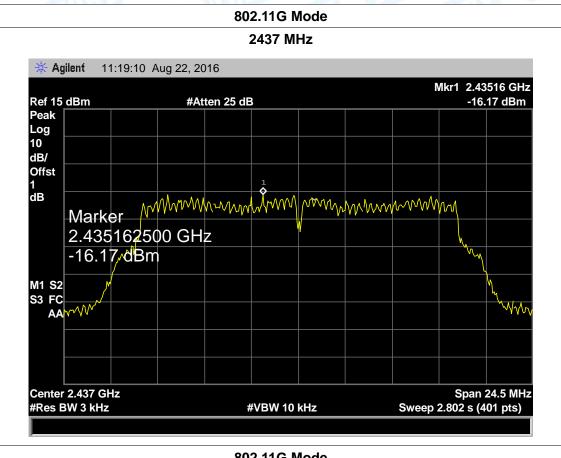
#VBW 10 kHz

Span 24.5 MHz Sweep 2.802 s (401 pts)





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802.11G Mode 2462 MHz * Agilent 11:19:40 Aug 22, 2016 Mkr1 2.46831 GHz -16.71 dBm #Atten 25 dB Ref 15 dBm Peak Log 10 dB/ Offst 1 dB MMMMMM LINN Marker mm/mm/mm/mm/mm/mm 2.468308750 GHz -16.71/dBm M1 S2 S3 FC AA Center 2.462 GHz Span 24.5 MHz #Res BW 3 kHz #VBW 10 kHz Sweep 2.802 s (401 pts)





Center 2.412 GHz #Res BW 3 kHz Page: 77 of 79

:	MID		Model:		ŀ	(60PW1	3	
perature:	25 ℃		Te	Temperature:		2	25 ℃	MA
: Voltage:	DC 3.7V		501					
t Mode:	TX 802.11N	(HT20) M	ode			6		1
Channel Fred	quency	Power Density			ı	_imit (d	Bm)	
(MHz)		(3 k	kHz/dE	3m)				
2412		,	-20.96	;				
2437		,	-20.82)			8	
2462			-21.40)				
	1	802.11N	N(HT20)) Mod	e			
		24	112 MI					
	:12:08 Aug 22, 2	2016	•				Mkr1 2.4	
Agilent 14 Ref 15 dBm Peak			•					1107 GH .96 dBm
Ref 15 dBm Peak Log		2016	•					
Ref 15 dBm Peak Log 10 dB/		2016	•					
Ref 15 dBm Peak Log 10 dB/ Offst	A	2016 atten 25 dB	412 MH	- Hz			-20	
Ref 15 dBm Peak Log 10 dB/ Offst	A	2016 atten 25 dB	412 MH	- Hz			-20	
Ref 15 dBm Peak Log 10 dB/ Offst 1 dB Marke 2.411	er	2016 atten 25 dB	412 MH	- Hz			-20	
Ref 15 dBm Peak Log 10 dB/ Offst	er	2016 atten 25 dB	412 MH	- Hz			-20	
Ref 15 dBm Peak Log 10 dB/ Offst 1 dB Marke 2.411	er	2016 atten 25 dB	412 MH	- Hz			-20	

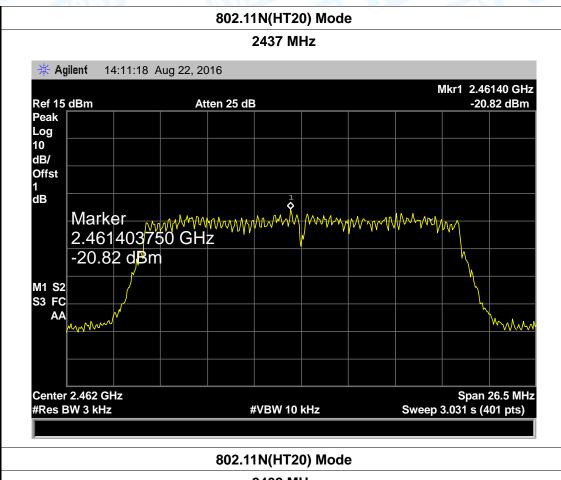
#VBW 10 kHz

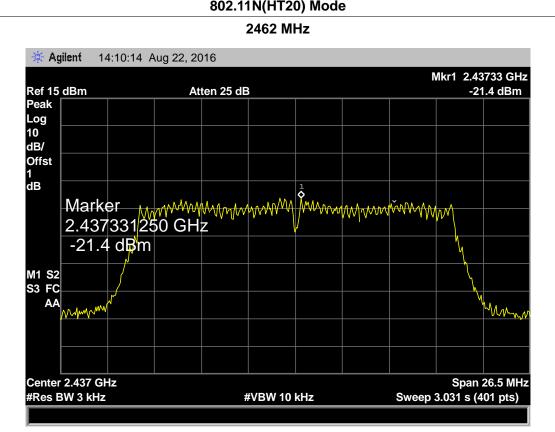
Span 26.5 MHz Sweep 3.031 s (401 pts)





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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 1.26 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 FPC Antenna. It complies with the standard requirement.

Antenna Type				
	▶ Permanent attached antenna			
Em.	□ Unique connector antenna			
	□ Professional installation antenna			