CERTIFICATION TEST REPORT

FCC CFR47 PART 15 SUBPART C

Test Report File No.	14-IST-0573	■ Basic	☐ Alternate
Date of Receipt	September 04, 2014	**Begin of test date**	September 22, 2014
Date of Issue	October 17, 2014	**End of test date**	September 30, 2014

Kind of Product	Action Camera
FCC Basic Model(s)	360FLYBLK
IC Basic Model(s)	360FLYBLK
FCC ID	2ADDK-360FLYBLK
IC ID	12404A-360FLYBLK

Applicant	360fly, Inc.
Address	1000 Town Center Way, Suite 200
	Canonsburg PA 15317, USA
Manufacturer	WOOJEON&HANDAN CO.,LTD.
Address	569-12 kasan-dong, kumchon-ku, 153-803
	Seoul, Korea

Test Result ■ **Positive** ☐ **Negative**

Tested By

B.O.KO

Reviewed By

S.J.CHO

Comment(s)

- Investigations requested : Measurement to the relevant clauses of FCC rules and regulations Part 15 Subpart C.
- The test report is consists of 70 pages.
- The test result only responds to the tested sample.
- It is not allowed to copy this report even partly without the allowance of IST Co., Ltd.
- This equipment as for has been shown to be capable of continued compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4 I assume full responsibility for accuracy and completeness of these data.

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INFORMATION OF TEST LABORATORY

EMC LABORATORY of IST Co., Ltd.
52-20, Sinjeong-ro 41beon-gil, Giheung-gu
Yongin-si, Gyeonggi-do, Korea.

TEL : +82 31 326 6700 FAX : +82 31 326 6797

KOLAS Testing No. : KT118
RRA Designation No. : KR0018
FCC Registration No. : 400603
VCCI Member No. : 1739

Measurement Uncertainty

Conducted Emissions(#1)	U = 2.59 [dB] (Confidence level approximately 95 %, k = 2)
Conducted Emissions(#2)	U = 2.59 [dB] (Confidence level approximately 95 %, k = 2)
Radiated Emissions 30 MHz – 1000 MHz (Antenna – Horizontal)	**U = 3.02 [dB]** (Confidence level approximately 95 %, k = 2)
Radiated Emissions 30 MHz – 1000 MHz (Antenna – Vertical)	**U = 3.68 [dB]** (Confidence level approximately 95 %, k = 2)
Radiated Emissions Above 1 GHz	U = 4.20 [dB] (Confidence level approximately 95 %, k = 2)

PRODUCT INFORMATION

Action Camera(360FLYBLK)

Recording	
Video Format	H.264
Video Mode(Resolution)	1504 x 1504 @ 30fps
Video Actual (Pixel)	Approximately 2.300K
Video Bit rate	Approximately 12 Mbps
Audio Format	AAC 2-Ch, Sample rate : 48 KHz, Sample rate : 64 kbps
Lens	
f-stop	f 2.50
Field of view	204°
Interface	
WIFI	IEEE 802.11 b/g/n(2.4 GHz band) for RTSP
Bluetooth	BT 4.0 LE
USB	USB OTG 2.0
Environmental	
Water-proof	5ATM (With Microphone Plug)
Water-resistant	IP6X (Without Microphone Plug)
Operating Temperature	-4° to 140° F / -20° to 60℃
Power	
Power Source	Built-In Li-Polymer battery (1600mA), DC 3.7 V
Charging Method	Through Power Cradle using bundled USB cable
Full Charging Time	Approx. 3hrs 30min @ 500mA, 2hr 10min @ 1A
Size & Weight	
Dimensions (Approx.)	Main Device (61mm (Diameter) x 59.5mm(H)) Power Cradle (45.6mm(Dia) x 12.3mm(H)) TiltMount (50mm(Dia) x 25.8mm(H))
Weight (Approx.)	Main Device (138g) Power Cradle – TBD TiltMount (30.6g)

Note: All the testing were performed according to the procedures in FCC 47CFR PART 15 SUBPART C

SUMMARY

FCC Standard Section	IC Standard Section	Description	result	remark
15.207	RSS-Gen 7.2.4	AC Conducted Emission	Pass	
15.247(b)	RSS-210 A8.4(4)	Peak Output Power	Pass	
15.205 & 15.209	RSS-210 A8.5	General Field Strength Limits	Pass	
15.247(d)	RSS-210 A8.5 & RSS-Gen 7.2.3	Conducted Band Edges	Pass	
		Conducted Spurious Emission	Pass	
		Radiated restricted bands Emission	Pass	
		Radiated Spurious Emission	Pass	
-	RSS-Gen Issue 3	99% Occupied Bandwidth	Pass	
15.247(a)(2)	RSS-210 A8.2(a)	6dB Bandwidth	Pass	
15.247(e)	RSS-210 A8.2(b)	Power Spectral Density	Pass	
15.203 & 15.247(b)	RSS-Gen 7.1.2	Antenna requirement	-	

Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the Following standards:

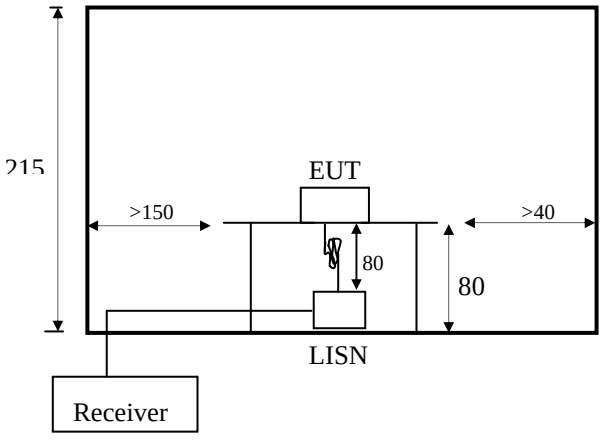
- ✧ FCC Part 15 Subpart C § 15.247
- ✧ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02
- ✧ FCC TCB Workshop 2013, April 9.
- ✧ ANSI C63.4-2003 and ANSI C63.10-2009
- ✧ IC RSS-210 Issue 8
- ✧ IC RSS-Gen Issue 3

Conducted Emissions:

The measurement were performed over the frequency range of 0.15 MHz to 30 MHz using a 50 Ω/50 uH LISN as the input transducer to a Spectrum Analyzer or a Field Intensity Meter. The measurements were made with the detector set for "quasi-peak" & “Average” within a bandwidth of 9 KHz.

- Procedure of Test

The line-conducted facility is located inside a shielded room No.1. A 1 m X 1.5 m wooden table 80 cm height is placed 40 cm away from the vertical wall and 1.5 m away from the other wall of the shielded room. The R/S ENV216 and R/S ESH3-Z5 LISN are bonded to bottom of the shielded room. The EUT is located on the wooden table with distance more than 80 cm from the LISN and powered from the R/S ENV216 LISN. The peripheral equipment is powered from the other LISN. If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply lines will be connected to the R/S ESH3-Z6 LISN. All interconnected cables more than 1 m were shortened by non-inductive bundling to a 1 m length. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating conditions. The RF output of the LISN was connected to the R/S receiver to determine the frequency producing the maximum emission from the EUT. The frequency producing the maximum level was reexamined using Quasi-Peak mode by manual measurement. The EUT, peripheral equipment, and interconnecting cables were arranged and manipulated to maximize each emission.



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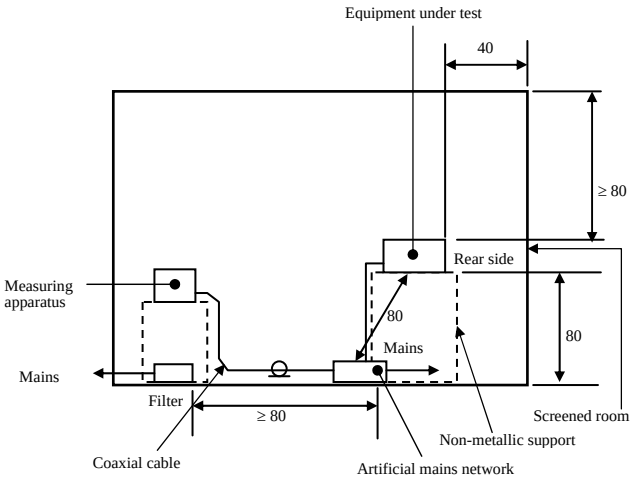


< Concept Drawing >

Limits

According to ∮15.207(a) except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network(LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Limits	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

* Decreases with the logarithm of the frequency.

Test specification.

According to FCC 47 CFR Part 15 Subpart C Section 15.207 & RSS-Gen 7.2.2

Conducted Emissions

[Applicable]

◆ Test Equipment Used

Model Name	Description	Manufacturer	Due for Cal	Serial No.
ESCI	Test Receiver	Rohde & Schwarz	May. 09, 2015	100374
ENV216	LISN	Rohde & Schwarz	Dec. 09, 2014	101718

Note : The equipment used is calibrated in regular for every year.

◆ Test Accessories Used

Equipment	Type	Brand	Serial No.
360FLYBLK	360FLYBLK	360fly Inc.	N/A
Laptop	LG15N53	LG ELECTRONICS	404QCPY560240
Adapter(Laptop)	ADP-65JH BB	DELTA ELECTRONICS, INC.	69IW43403WP
I phone	A1387	Apple Inc.	DQGJX0TLDTDF

Connecting Interface Cables :

AC Power Cable : 1.2 m (Unshielded)

USB Cable(Micro 5pin to USB) : 0.5 m (Unshielded)

◆ Test Conditions

Temperature (24.5 ± 0.2) ℃

Humidity (50.0 ± 0.2) % R.H.

Atmosphere (1010) mbar

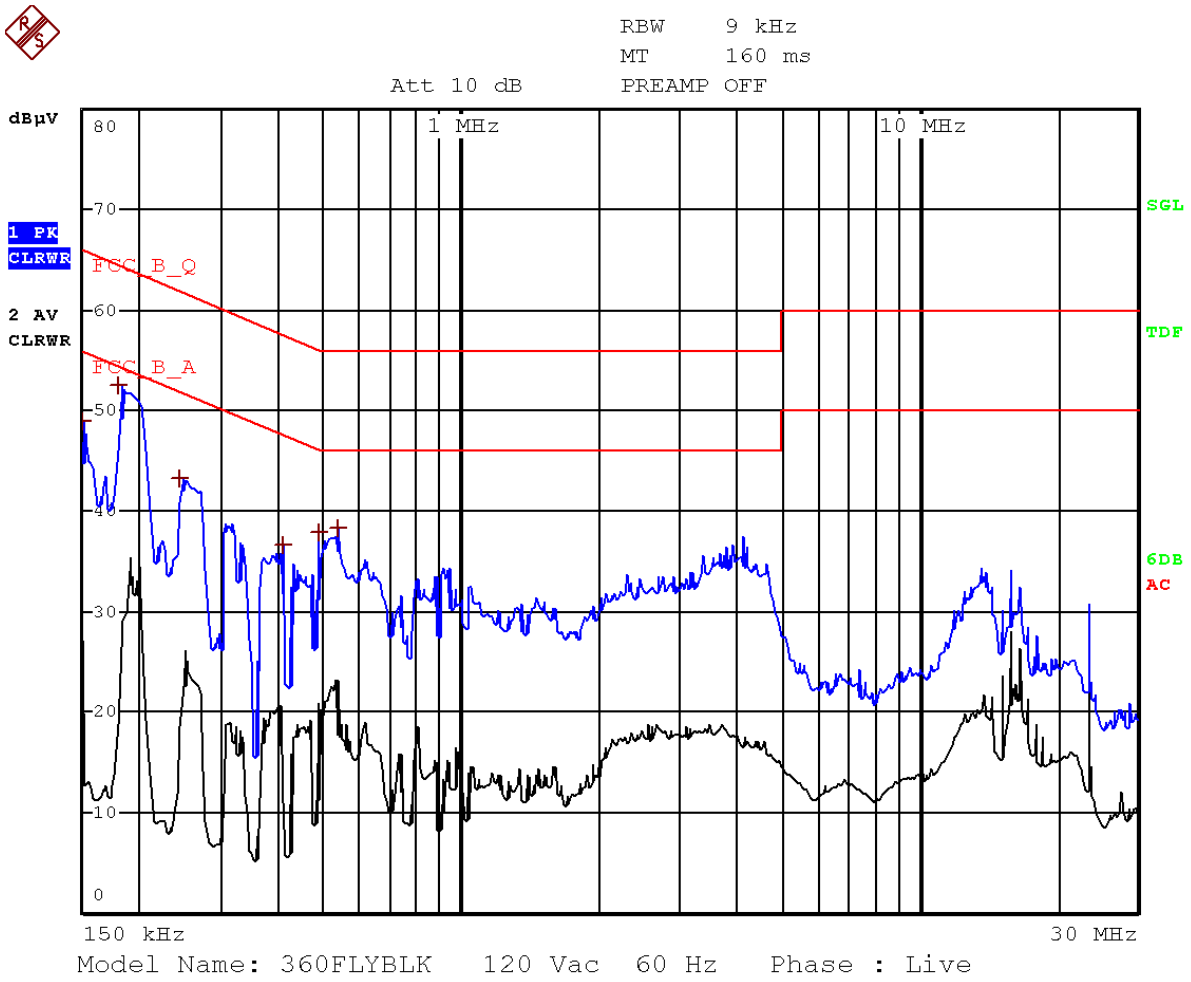
◆ Test Area Conducted Room #2

◆ Test Date September 23, 2015

Note :

Conducted Emissions result

Live

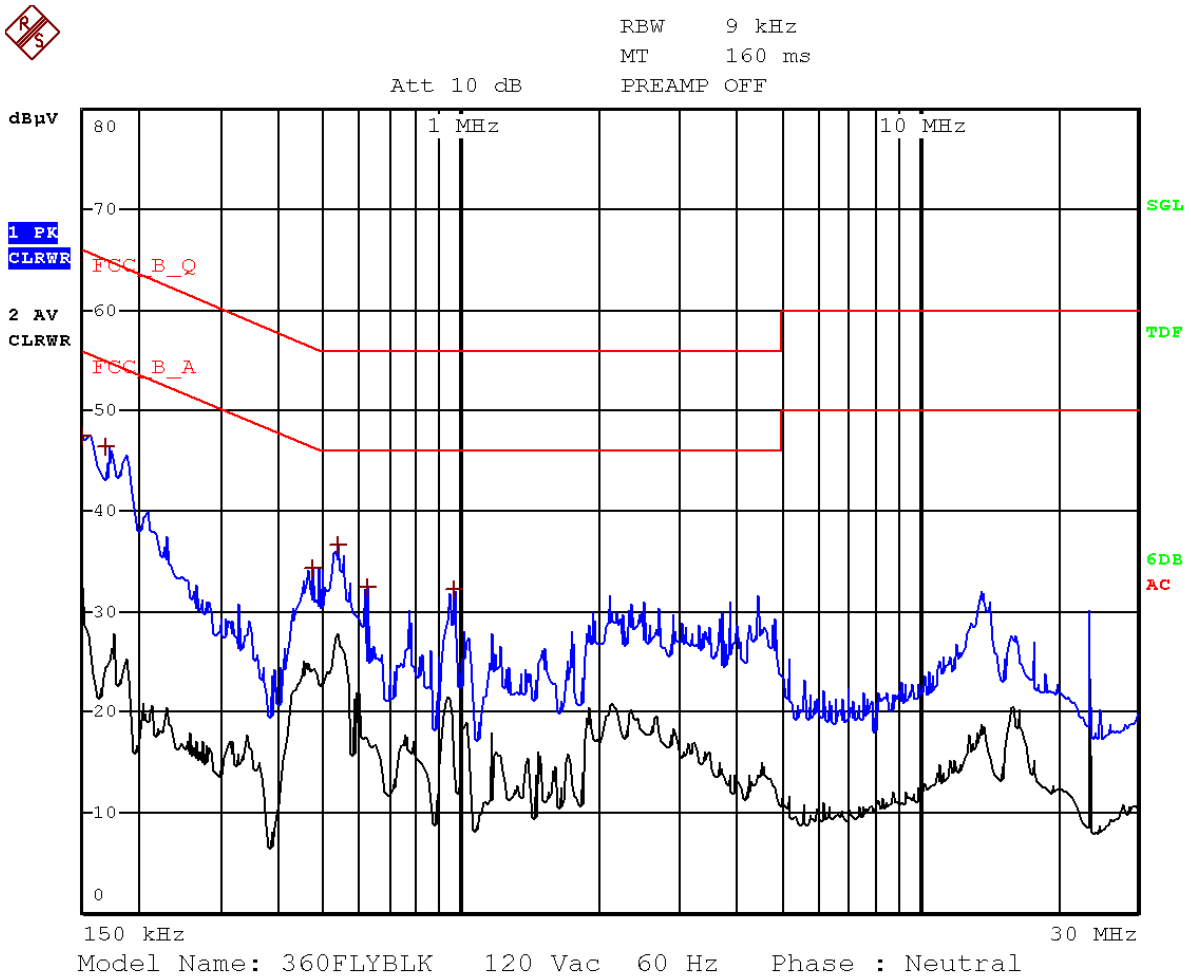


Model Name: 360FLYBLK 120 Vac 60 Hz Phase : Live

Freq. [MHz]	Measurement [dB µV]		Limit [dB µV]		Insertion Loss	Cable Loss	Result [dB µV]		Margin [dB]	
	Q-peak	Average	Q-peak	Average	[dB]	[dB]	Q-peak	Average	Q-peak	Average
0.150	39.75	26.57	66.00	56.00	9.54	0.10	49.39	36.21	16.61	19.79
0.190	36.44	21.10	64.04	54.04	9.54	0.07	46.05	30.71	17.99	23.33
0.216	28.94	13.49	62.97	52.97	9.54	0.07	38.55	23.10	24.43	29.88
0.467	23.93	18.05	56.57	46.57	9.55	0.11	33.59	27.71	22.97	18.85
0.490	23.07	17.02	56.17	46.17	9.55	0.10	32.72	26.67	23.44	19.49
0.548	24.41	18.06	56.00	46.00	9.55	0.09	34.05	27.70	21.95	18.30

Conducted Emissions result

Neutral



Freq. [MHz]	Measurement [dB㎶]		Limit [dB㎶]		Insertion Loss	Cable Loss	Result [dB㎶]		Margin [dB]	
	Q-peak	Average	Q-peak	Average	[dB]	[dB]	Q-peak	Average	Q-peak	Average
0.150	35.59	22.47	66.00	56.00	9.55	0.10	45.24	32.12	20.76	23.88
0.171	33.24	18.71	64.91	54.91	9.55	0.08	42.87	28.34	22.04	26.57
0.474	20.38	15.79	56.44	46.44	9.55	0.11	30.04	25.45	26.40	20.99
0.535	23.29	17.93	56.00	46.00	9.55	0.09	32.93	27.57	23.07	18.43
0.591	17.26	12.62	56.00	46.00	9.55	0.08	26.90	22.26	29.11	23.75
0.941	16.51	11.43	56.00	46.00	9.56	0.10	26.17	21.09	29.84	24.92

Peak Output Power

◆ Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model no/Serial No.	Due for Cal.
1	Power Meter	Agilent	N1911A/ MY53280018	Oct. 08, 2015
2	Wideband Power Sensor	Agilent	N1921A/ MY52300024	Oct. 08, 2015
3	RF ROOM			

Note : All equipment upon which need to calibrated are with calibration period of 1 year.

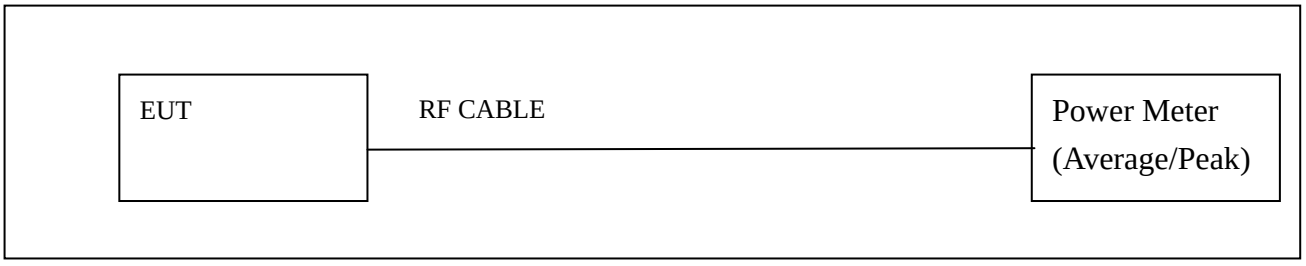
◆ Limits

The maximum peak output power of the intentional radiator shall not exceed the following :

1. According to ∮15.247(b)(3), for systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz : 1Watt.
2. According to ∮15.247(b)(4), the conducted output power limit specified in paragraph(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph(c) of this section, is transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs(b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi

IC RSS-210 A8.4

◆ Test Setup



◆ Test Procedure

1.The transmitter output is connected to the Power meter.
The Power meter is set to the peak power detection.

2. The testing follows the Measurement Procedure FCC KDB No. 558074 D01 DTS Meas. Guidance v03r02.
9.1.2 PKPM1 Peak power meter method.

Peak Output Power Test result

Product	360FLYBLK
Test Method	PKPM1 Peak Power Meter method
Test Mode	Transmit
Test Site	RF Room
Measurement Method	Conducted

802.11b Mode		Rate (Mbps)	Measure Power (dBm)	Limit (dBm)
Frequency (MHz)	Channel No.			
2412	1	1 Mbps	17.63	1Watt=30dBm
		2 Mbps	17.70	1Watt=30dBm
		5.5 Mbps	17.50	1Watt=30dBm
		11 Mbps	17.76	1Watt=30dBm
2437	6	1 Mbps	17.41	1Watt=30dBm
		2 Mbps	17.74	1Watt=30dBm
		5.5 Mbps	17.24	1Watt=30dBm
		11 Mbps	17.45	1Watt=30dBm
2462	11	1 Mbps	16.98	1Watt=30dBm
		2 Mbps	16.93	1Watt=30dBm
		5.5 Mbps	16.83	1Watt=30dBm
		11 Mbps	16.95	1Watt=30dBm

Note : Measurement Power = reading level + correct factor

802.G Mode		Rate (Mbps)	Measure Power (dBm)	Limit (dBm)
Frequency (MHz)	Channel No.			
2412	1	6 Mbps	20.35	1Watt=30dBm
		9 Mbps	19.44	1Watt=30dBm
		12 Mbps	19.95	1Watt=30dBm
		18 Mbps	19.69	1Watt=30dBm
		24 Mbps	20.19	1Watt=30dBm
		36 Mbps	20.03	1Watt=30dBm
		48 Mbps	19.98	1Watt=30dBm
		54 Mbps	20.16	1Watt=30dBm
2437	6	6 Mbps	19.99	1Watt=30dBm
		9 Mbps	19.51	1Watt=30dBm
		12 Mbps	19.93	1Watt=30dBm
		18 Mbps	19.38	1Watt=30dBm
		24 Mbps	20.07	1Watt=30dBm
		36 Mbps	19.86	1Watt=30dBm
		48 Mbps	19.85	1Watt=30dBm
		54 Mbps	19.86	1Watt=30dBm
2462	11	6 Mbps	19.55	1Watt=30dBm
		9 Mbps	19.02	1Watt=30dBm
		12 Mbps	19.43	1Watt=30dBm
		18 Mbps	18.93	1Watt=30dBm
		24 Mbps	19.57	1Watt=30dBm
		36 Mbps	19.43	1Watt=30dBm
		48 Mbps	19.19	1Watt=30dBm
		54 Mbps	19.36	1Watt=30dBm

Note : Measurement Power = reading level + correct factor

802.N Mode(HT20)		Rate (Mbps)	Measure Power (dBm)	Limit (dBm)
Frequency (MHz)	Channel No.			
2412	1	6.5 Mbps	18.83	1Watt=30dBm
		13 Mbps	18.86	1Watt=30dBm
		19.5 Mbps	18.85	1Watt=30dBm
		26 Mbps	18.85	1Watt=30dBm
		39 Mbps	18.87	1Watt=30dBm
		52 Mbps	18.90	1Watt=30dBm
		58.5 Mbps	19.23	1Watt=30dBm
		65 Mbps	18.91	1Watt=30dBm
2437	6	6.5 Mbps	18.75	1Watt=30dBm
		13 Mbps	18.61	1Watt=30dBm
		19.5 Mbps	18.57	1Watt=30dBm
		26 Mbps	18.60	1Watt=30dBm
		39 Mbps	18.85	1Watt=30dBm
		52 Mbps	18.65	1Watt=30dBm
		58.5 Mbps	18.59	1Watt=30dBm
		65 Mbps	18.96	1Watt=30dBm
2462	11	6.5 Mbps	18.96	1Watt=30dBm
		13 Mbps	19.01	1Watt=30dBm
		19.5 Mbps	18.94	1Watt=30dBm
		26 Mbps	19.06	1Watt=30dBm
		39 Mbps	18.94	1Watt=30dBm
		52 Mbps	18.95	1Watt=30dBm
		58.5 Mbps	18.90	1Watt=30dBm
		65 Mbps	18.89	1Watt=30dBm

Note : Measurement Power = reading level + correct factor

802.N Mode(HT40)		Rate (Mbps)	Measure Power (dBm)	Limit (dBm)
Frequency (MHz)	Channel No.			
2422	3	6.5 Mbps	18.88	1Watt=30dBm
		13 Mbps	18.87	1Watt=30dBm
		19.5 Mbps	19.34	1Watt=30dBm
		26 Mbps	19.62	1Watt=30dBm
		39 Mbps	19.54	1Watt=30dBm
		52 Mbps	19.57	1Watt=30dBm
		58.5 Mbps	19.26	1Watt=30dBm
		65 Mbps	19.15	1Watt=30dBm
2437	6	6.5 Mbps	18.77	1Watt=30dBm
		13 Mbps	18.62	1Watt=30dBm
		19.5 Mbps	18.99	1Watt=30dBm
		26 Mbps	19.25	1Watt=30dBm
		39 Mbps	19.06	1Watt=30dBm
		52 Mbps	19.55	1Watt=30dBm
		58.5 Mbps	19.21	1Watt=30dBm
		65 Mbps	18.82	1Watt=30dBm
2452	9	6.5 Mbps	18.65	1Watt=30dBm
		13 Mbps	18.50	1Watt=30dBm
		19.5 Mbps	18.99	1Watt=30dBm
		26 Mbps	19.21	1Watt=30dBm
		39 Mbps	19.12	1Watt=30dBm
		52 Mbps	19.27	1Watt=30dBm
		58.5 Mbps	18.97	1Watt=30dBm
		65 Mbps	18.64	1Watt=30dBm

Note : Measurement Power = reading level + correct factor

6dB BandWidth

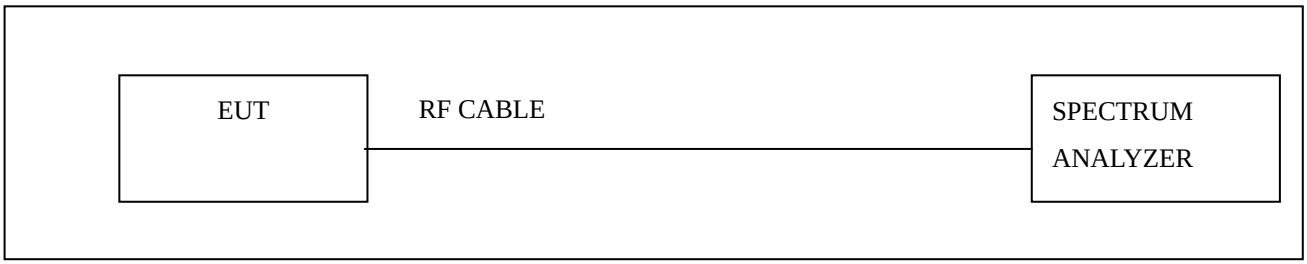
◆Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model no/Serial No.	Due for Cal.
1	Spectrum Analyzer	ADVANTEST	R3273 / 110600587	May.08, 2015
2	RF ROOM			

Note : All equipment upon which need to calibrated are with calibration period of 1 year.

◆Test Setup



◆Limits

(a) Operation under the provisions of this Section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions :

(2) systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

IC RSS-210 A8.2 a

◆Test Procedure

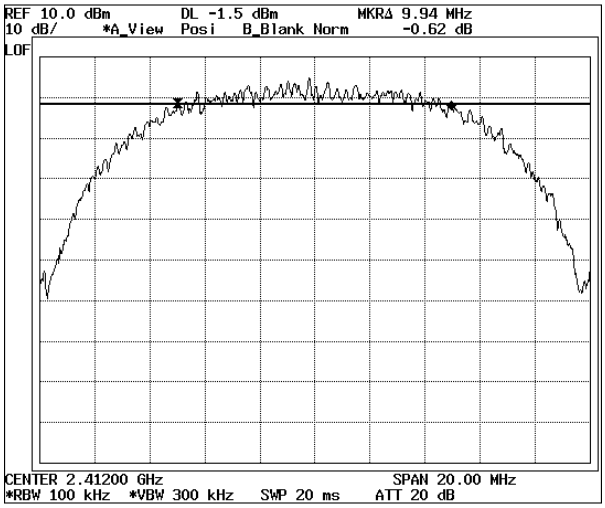
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v03r02. 8.0 DTS bandwidth 8.1 Option 1.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Set the spectrum analyzer`s resolution bandwidth (RBW) = 100KHz.
   Set the Video bandwidth (VBW) > 3 *RBW.
   Set Peak Detector, max hold trace mode and auto couple sweep.
4. Measure the Maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (Upper and lower frequencies) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

6dB BandWidth Test result

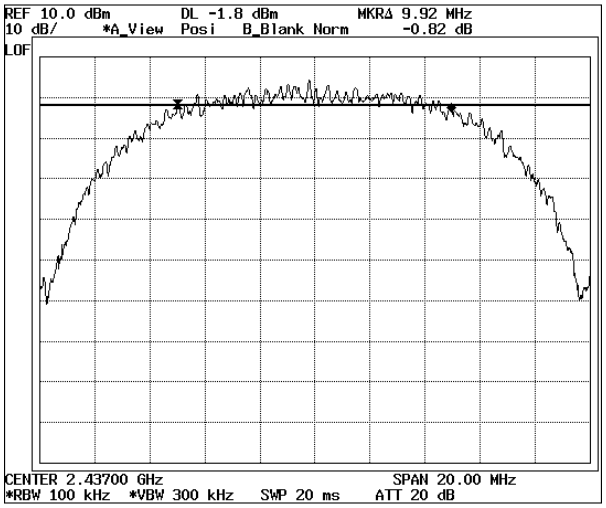
Product	360FLYBLK
Test Method	DTS bandwidth 8.1 Option 1
Test Mode	Transmit
Test Site	RF Room
Measurement Method	Conducted

802.11b				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (KHz)	Result
Low	2412	9.94	>500	Pass
Mid	2437	9.92	>500	Pass
High	2462	9.94	>500	Pass

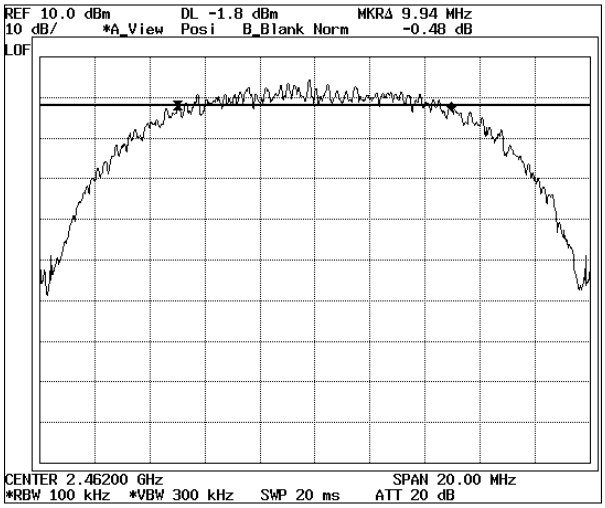
Low(2412 MHz)



Mid(2437 MHz)

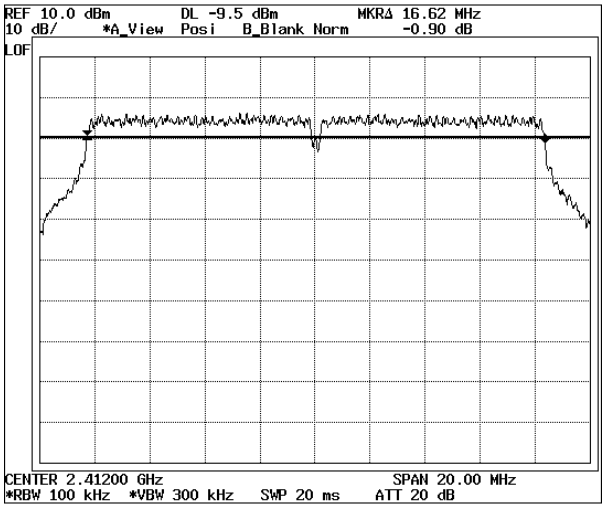


High(2462 MHz)

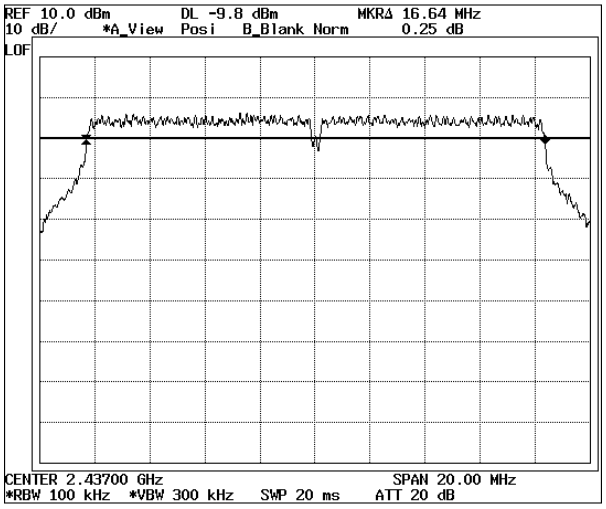


802.11g				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (KHz)	Result
Low	2412	16.62	>500	Pass
Mid	2437	16.64	>500	Pass
High	2462	16.62	>500	Pass

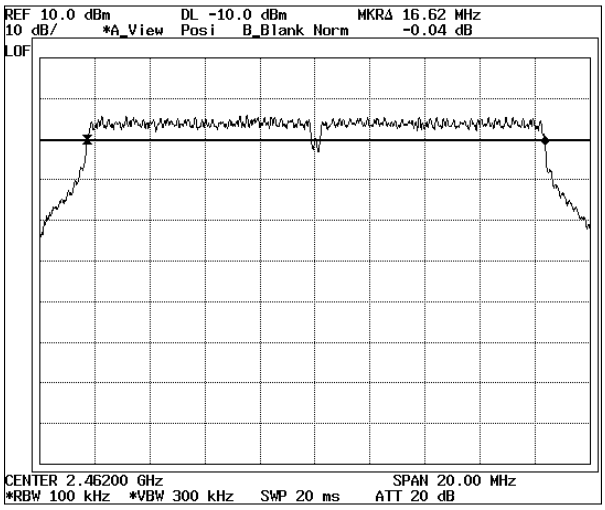
Low(2412 MHz)



Mid(2437 MHz)



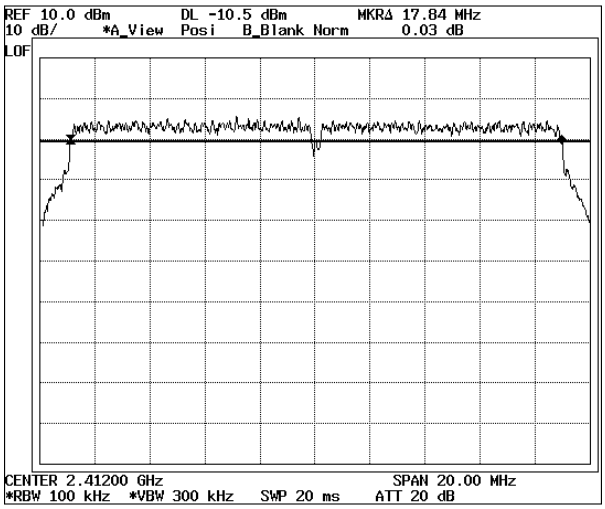
High(2462 MHz)



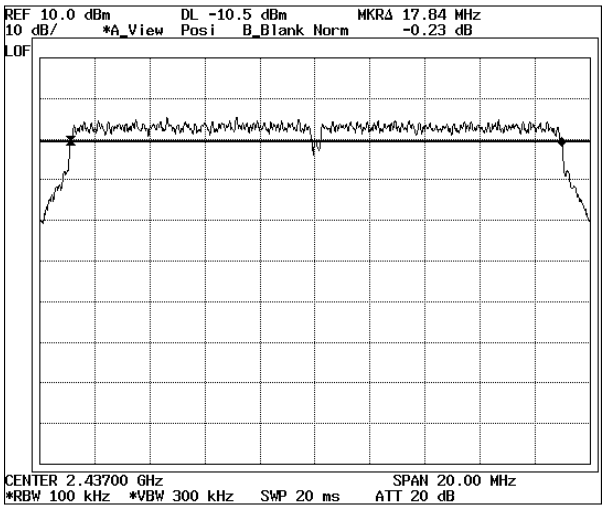
Note : Measurement level = reading level + correct factor

802.11n(ht20)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (KHz)	Result
Low	2412	17.84	>500	Pass
Mid	2437	17.84	>500	Pass
High	2462	17.84	>500	Pass

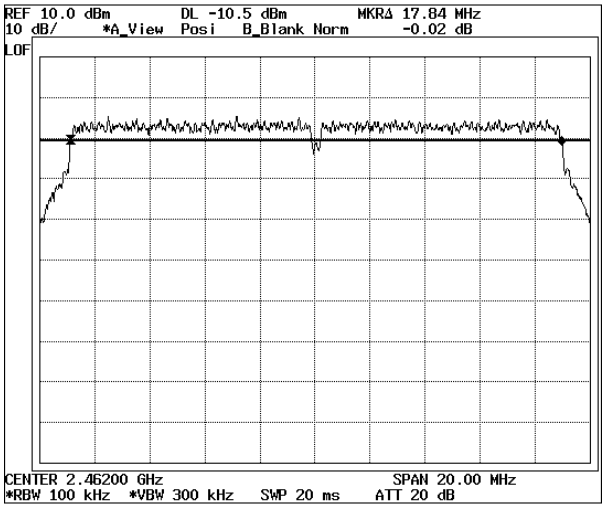
Low(2412 MHz)



Mid(2437 MHz)



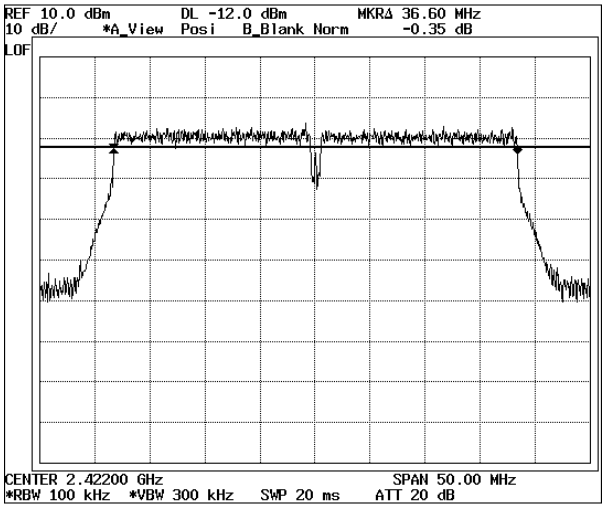
High(2462 MHz)



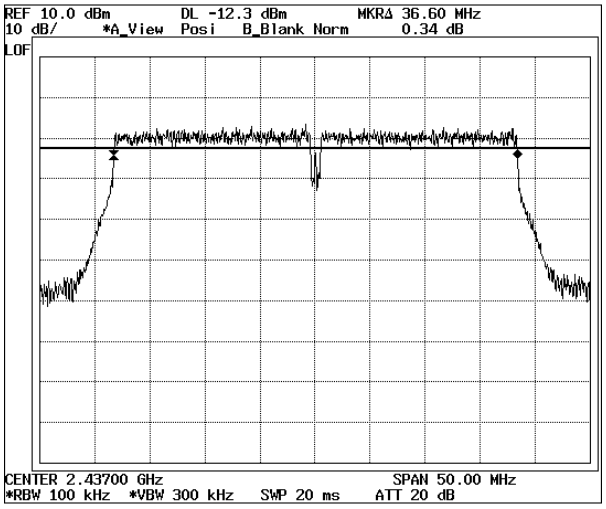
Note：Measurement level = reading level + correct factor

802.11n(ht40)				
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (KHz)	Result
Low	2422	36.60	>500	Pass
Mid	2437	36.60	>500	Pass
High	2452	36.60	>500	Pass

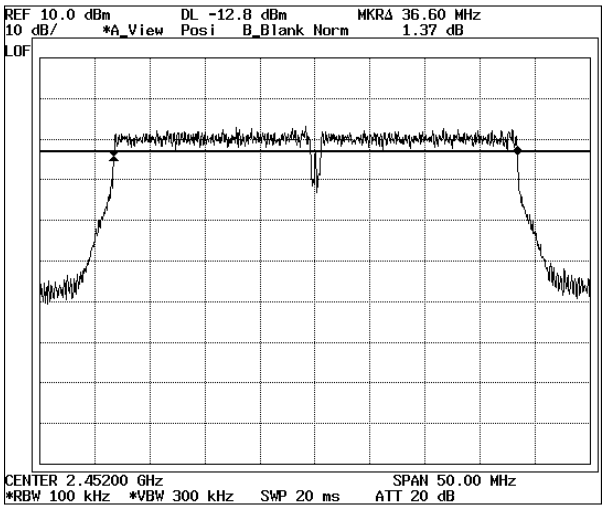
Low(2422 MHz)



Mid(2437 MHz)



High(2452 MHz)



Note : Measurement level = reading level + correct factor

Power Spectral Density

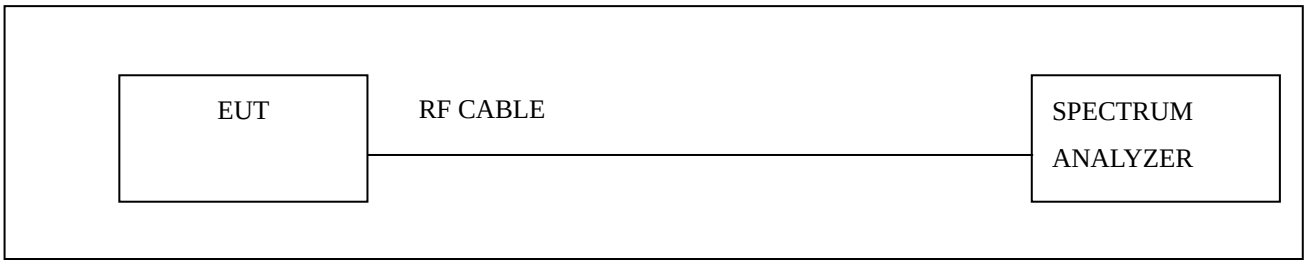
◆ Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model no/Serial No.	Due for Cal.
1	Spectrum Analyzer	ADVANTEST	R3273 / 110600587	May. 08, 2015
2	RF ROOM			

Note : All equipment upon which need to calibrated are with calibration period of 1 year.

◆ Test Setup



◆ Limits

Section 15.247 (e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (v) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

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◆ Test Procedure

The Measurement Procedure PKPSD was set according to the FCC KDB 558074 D01 DTS Meas. Guidance v03r02. 10.2 Method PDPSD (peak PSD).

Use the peak marker function to determine the maximum power level in any 3 kHz band segment within the fundamental RBW.

(VBW ≥3 xRBW, Sweep time = auto couple, Trace mode = Max hold)

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

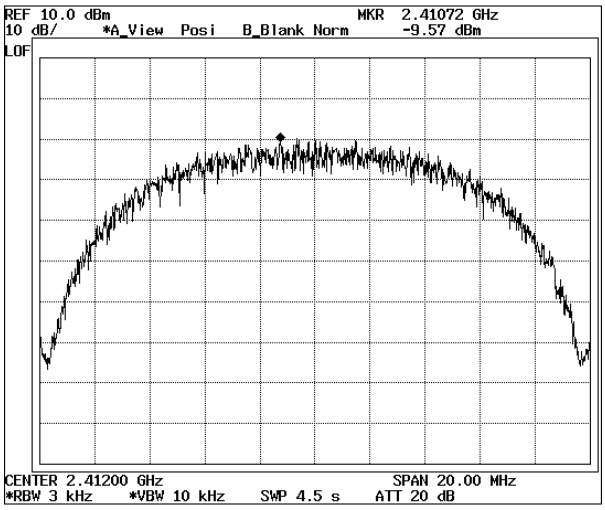
Limit: The Power Density does not exceed 8dBm/ 3 kHz.

PSD Test result

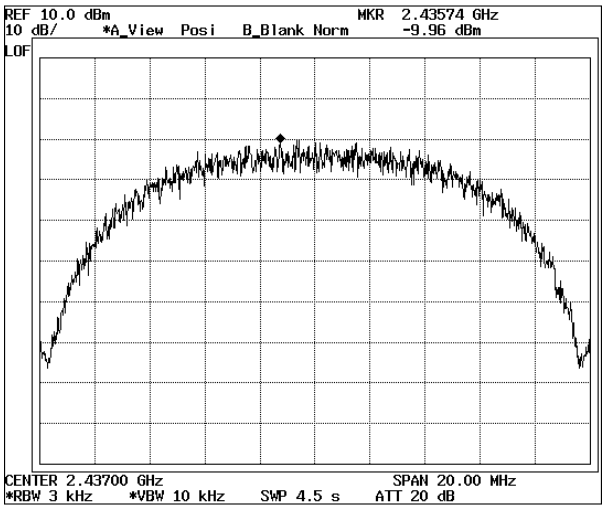
Product	360FLYBLK
Test Method	Method PKPSD (peak PSD)
Test Mode	Transmit
Test Site	RF Room
Measurement Method	Conducted

802.11b				
Channel	Frequency (MHz)	PSD/3KHz (dBm)	Limit (dBm)	Result
Low	2412	-9.57	< 8	Pass
Mid	2437	-9.96	< 8	Pass
High	2462	-10.10	< 8	Pass

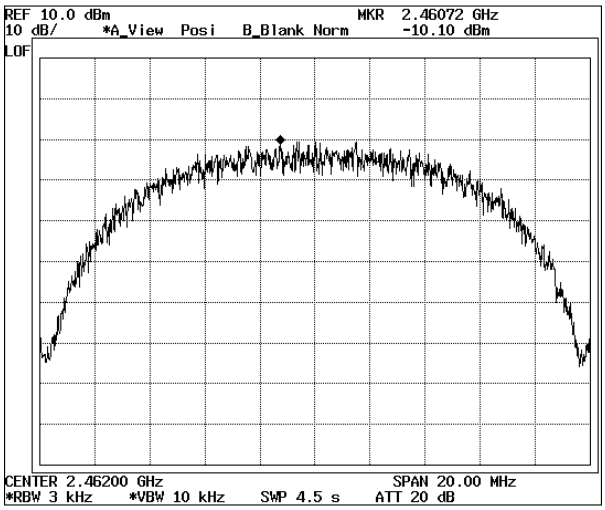
Low(2412 MHz)



Mid(2442 MHz)

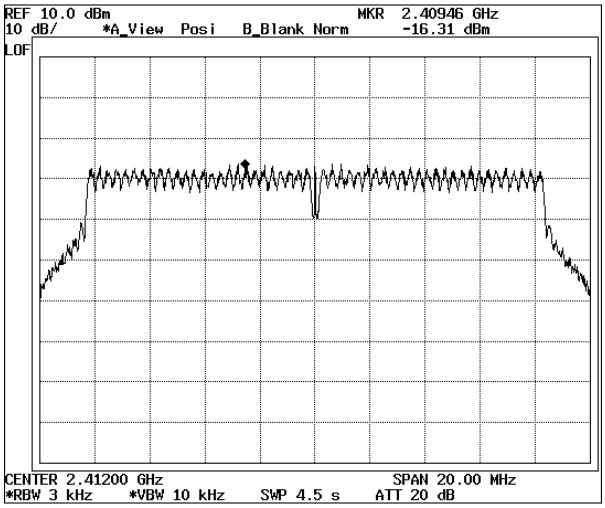


High(2462 MHz)

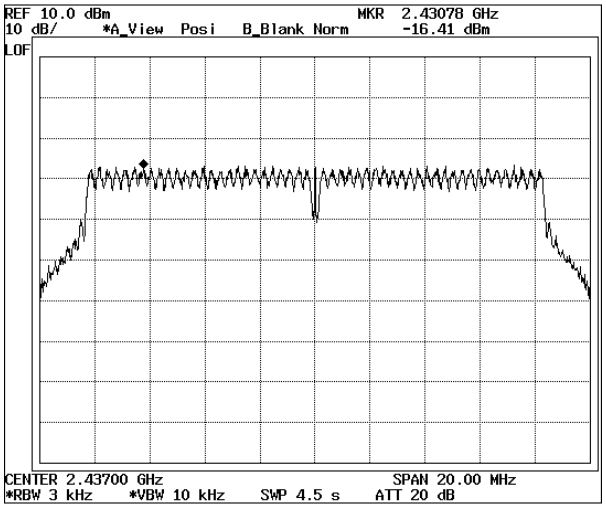


802.11g				
Channel	Frequency (MHz)	PSD/3KHz (dBm)	Limit (dBm)	Result
Low	2412	-16.31	< 8	Pass
Mid	2437	-16.41	< 8	Pass
High	2462	-16.72	< 8	Pass

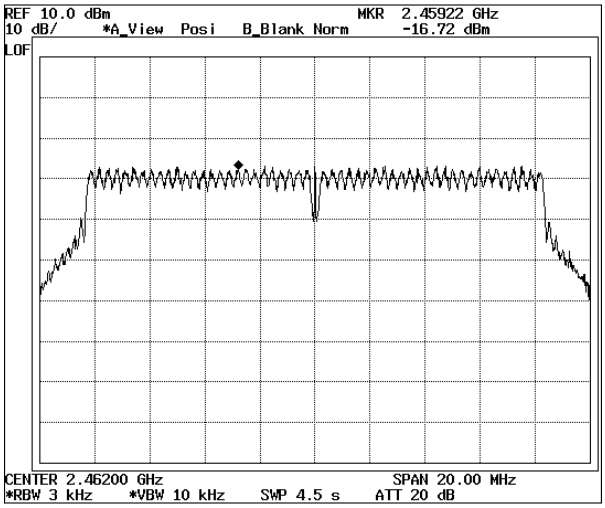
Low(2412 MHz)



Mid(2442 MHz)



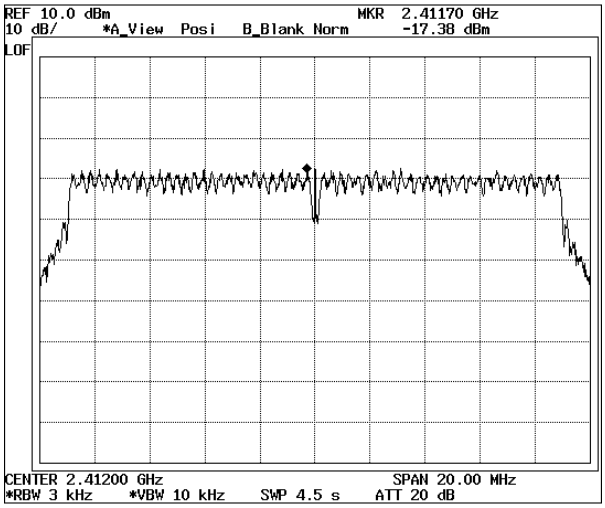
High(2462 MHz)



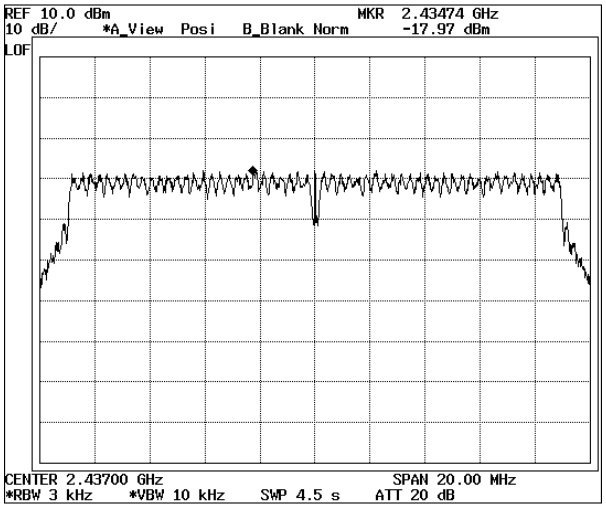
Note : Measurement level = reading level + correct factor

802.11n(ht20)				
Channel	Frequency (MHz)	PSD/3KHz (dBm)	Limit (dBm)	Result
Low	2412	-17.38	< 8	Pass
Mid	2437	-17.97	< 8	Pass
High	2462	-17.57	< 8	Pass

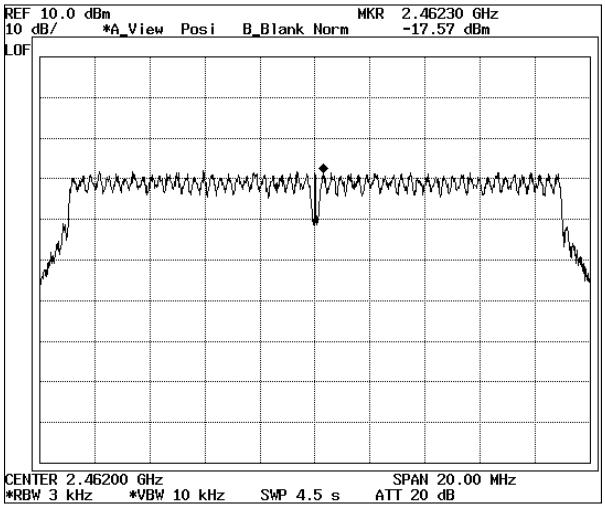
Low(2412 MHz)



Mid(2437 MHz)



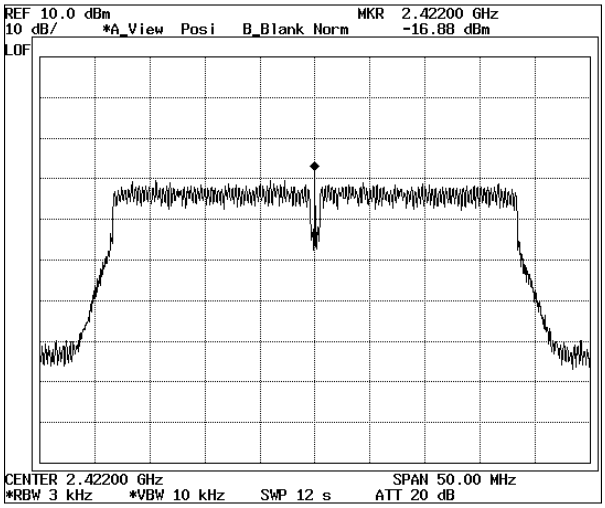
High(2462 MHz)



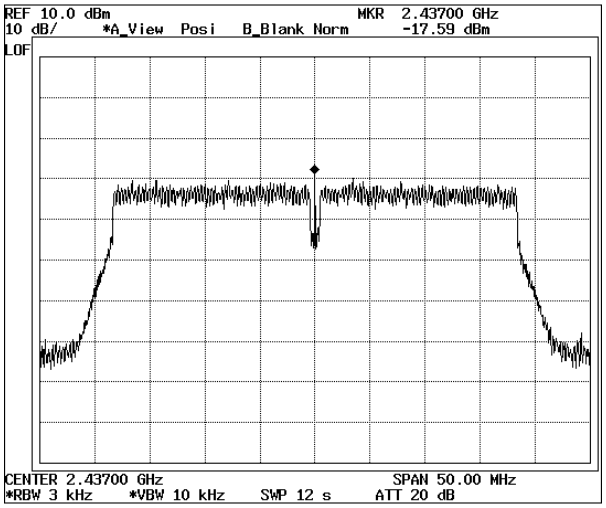
Note : Measurement level = reading level + correct factor

802.11n(ht40)				
Channel	Frequency (MHz)	PSD/3KHz (dBm)	Limit (dBm)	Result
Low	2422	-16.88	< 8	Pass
Mid	2437	-17.59	< 8	Pass
High	2452	-17.37	< 8	Pass

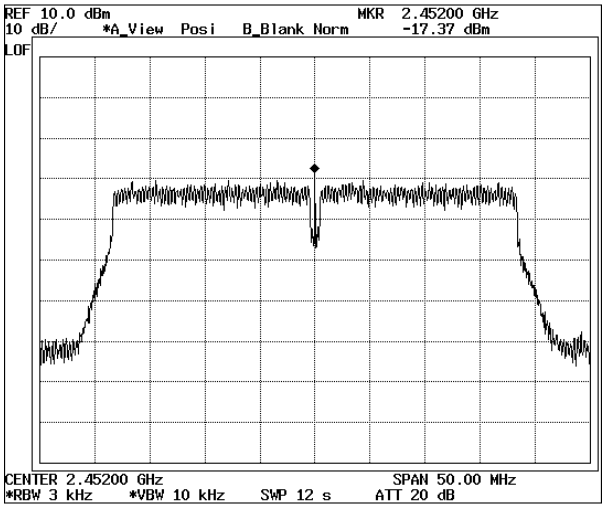
Low(2422 MHz)



Mid(2437 MHz)



High(2452 MHz)



Note : Measurement level = reading level + correct factor

99% Occupied Bandwidth

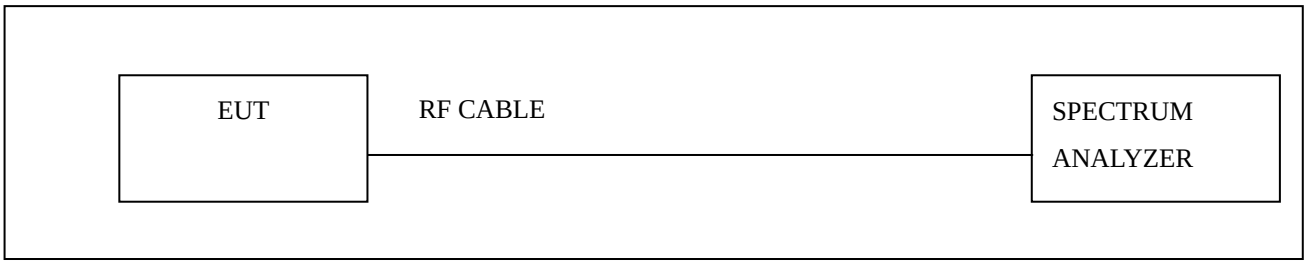
◆ Test Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model no/Serial No.	Due for Cal.
1	Spectrum Analyzer	ADVANTEST	R3273 / 110600587	May. 08, 2015
2	RF ROOM			

Note : All equipment upon which need to calibrated are with calibration period of 1 year.

◆ Test Setup



◆ Limits

None; for reporting purposes only

RSS-Gen 4.6.1

◆ Test Procedure

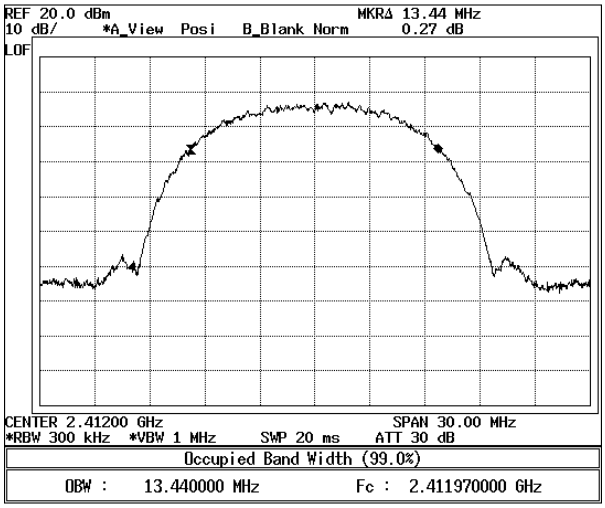
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the Span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

99% Occupied Bandwidth Test result

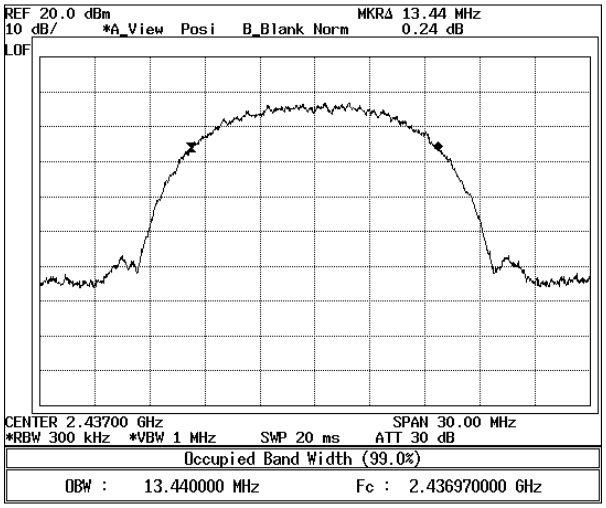
Product	360FLYBLK
Test Item	99% Occupied Bandwidth
Test Mode	Transmit
Test Site	RF Room
Measurement Method	Conducted

802.11b		
Channel	Frequency (MHz)	99% Occupied bandwidth (MHz)
Low	2412	13.44
Mid	2437	13.44
High	2462	13.44

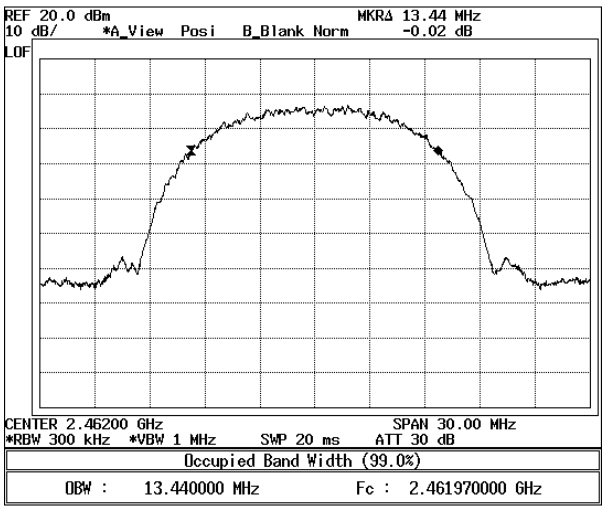
Low(2412 MHz)



Mid(2442 MHz)

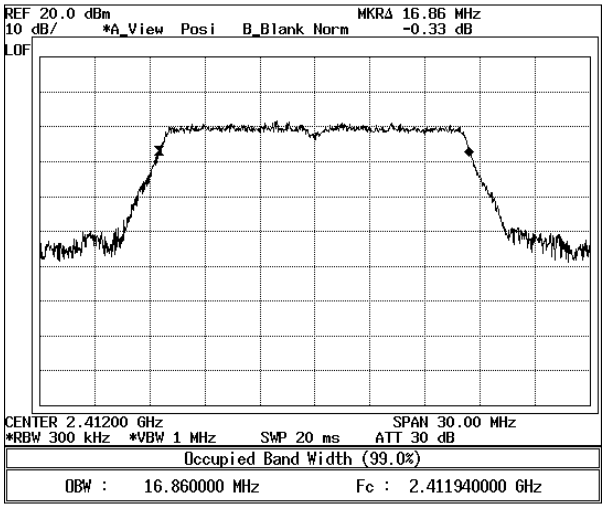


High(2462 MHz)

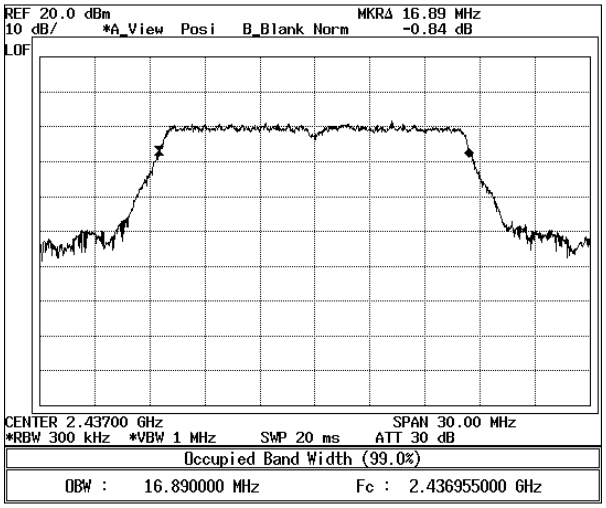


802.11g		
Channel	Frequency (MHz)	99% Occupied bandwidth (MHz)
Low	2412	16.86
Mid	2437	16.89
High	2462	16.89

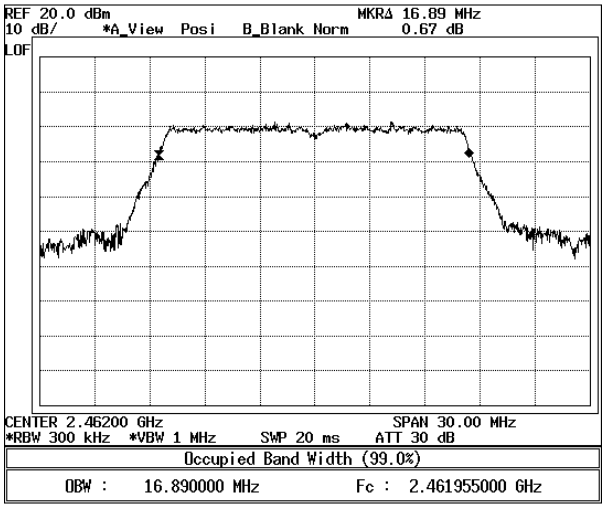
Low(2412 MHz)



Mid(2442 MHz)



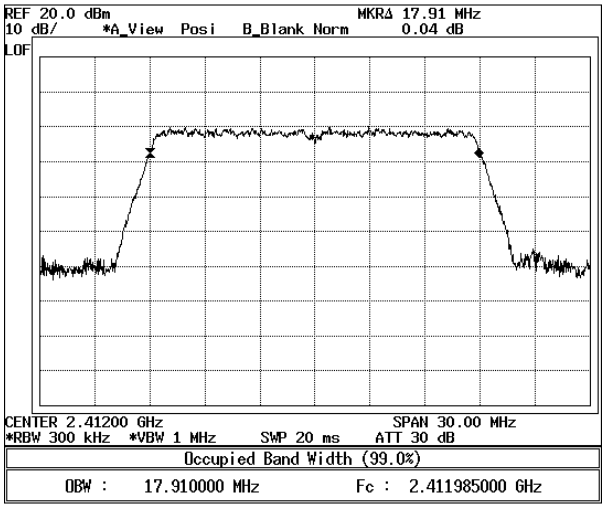
High(2462 MHz)



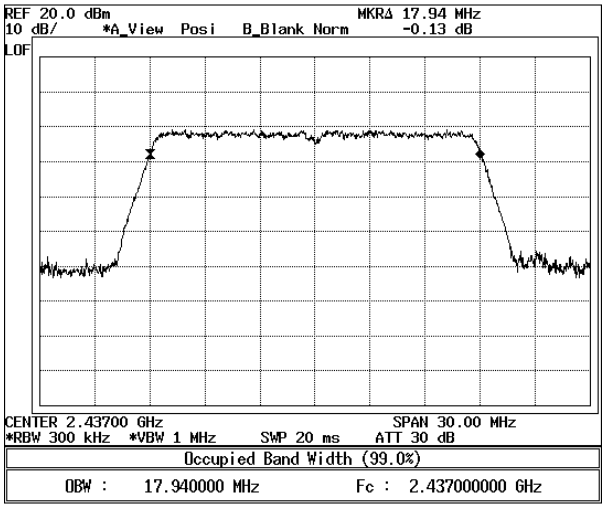
Note : Measurement level = reading level + correct factor

802.11n(ht20)		
Channel	Frequency (MHz)	99% Occupied bandwidth (MHz)
Low	2412	17.91
Mid	2437	17.94
High	2462	17.91

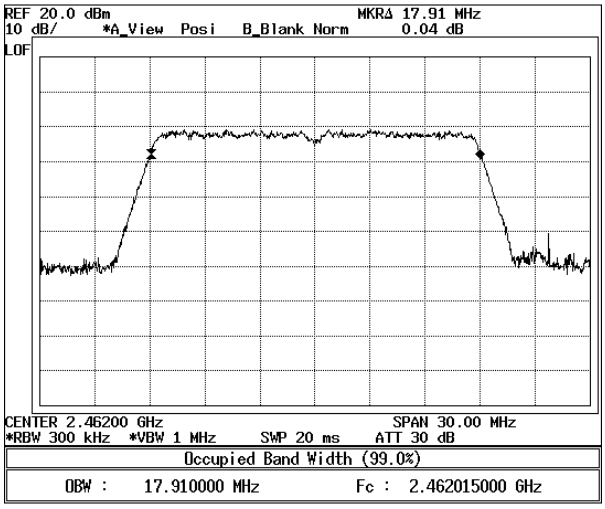
Low(2412 MHz)



Mid(2437 MHz)



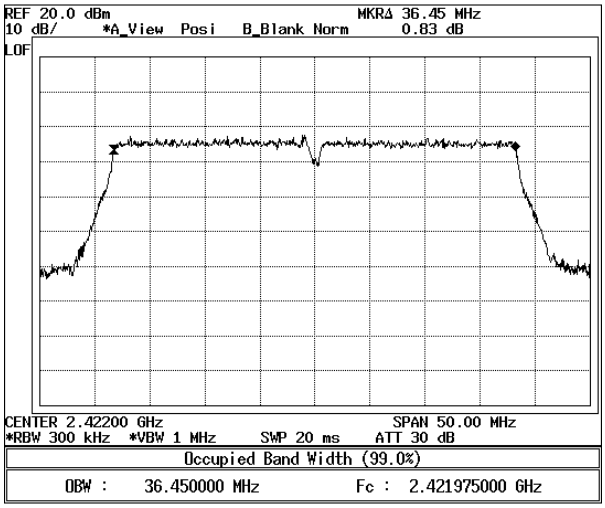
High(2462 MHz)



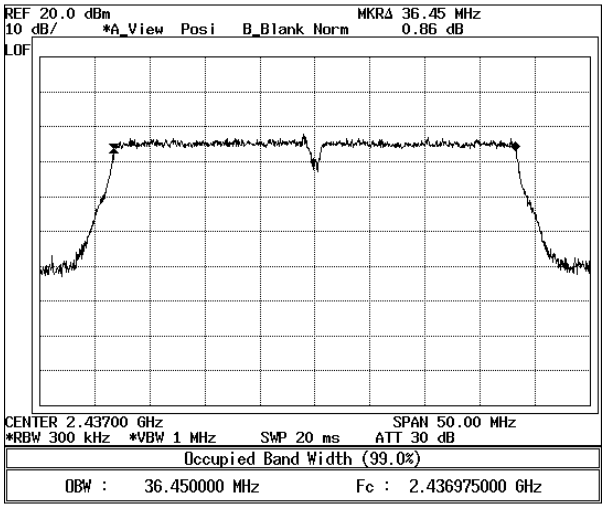
Note : Measurement level = reading level + correct factor

802.11n(ht40)		
Channel	Frequency (MHz)	99% Occupied bandwidth (MHz)
Low	2422	36.45
Mid	2437	36.45
High	2452	36.45

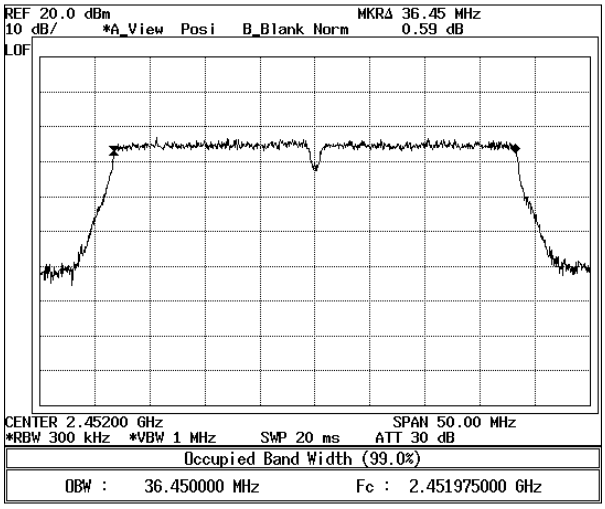
Low(2422 MHz)



Mid(2437 MHz)



High(2452 MHz)



Note : Measurement level = reading level + correct factor

Conducted Spurious Emissions & Band Edge

◆ TEST Equipment

The following test equipment are used during the test:

Item	Equipment	Manufacturer	Model no/Serial No.	Last Cal.
1	Spectrum Analyzer	ADVANTEST	R3273 / 110600587	May. 08, 2015
2	RF ROOM			

Note : 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to RRL, KRISS, KTL and HCT.

◆ Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio Frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within The band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

Attenuation below the general limits specified in section 15.209(a) is not required. In addition, radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a)(see Section 15.205(c)).

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◆ Test Setup

◆ Test Procedure

1.The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the peak power detection.

2. The testing follows the Measurement Procedure FCC KDB No. 558074 D01 DTS Meas. Guidance v03r02.

11.2 Reference level measurement.

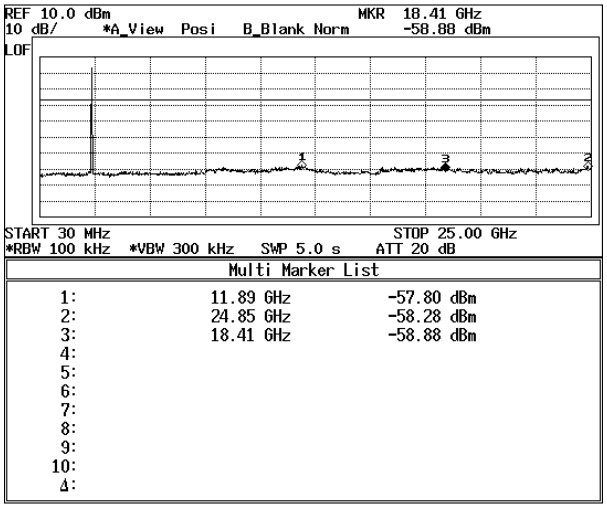
11.3 Emission level measurement.

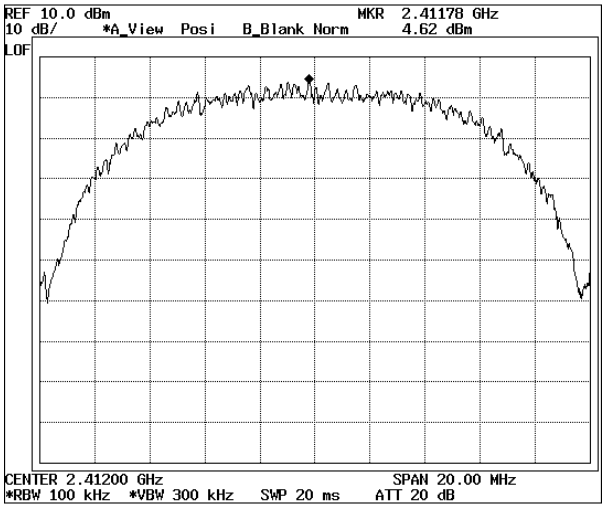
Spurious Emission Test result

Product	360FLYBLK
Test Method	11.2 Reference level measurement 11.3 Emission level measurement (30 MHz ~ 25 GHz)
Test Mode	Transmit
Test Site	RF Room
Measurement Method	Conducted

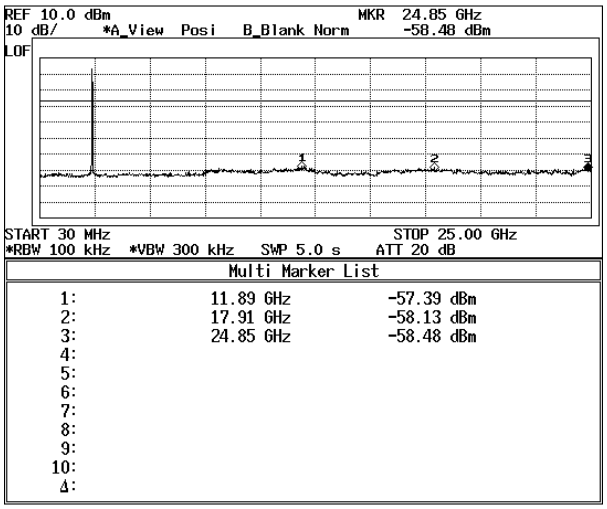
● **802.11b**

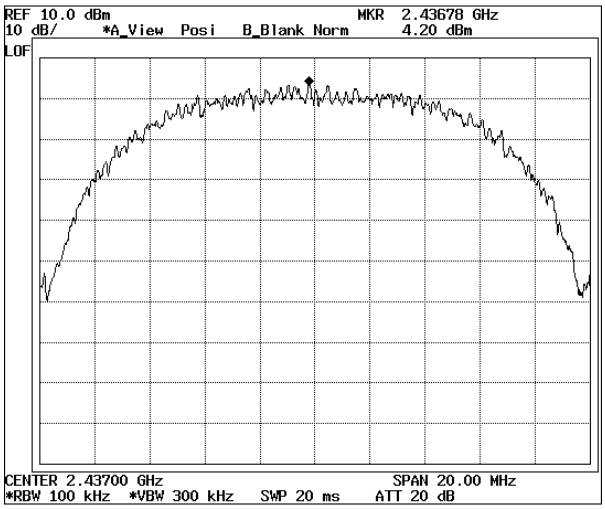
Low(2412 MHz)



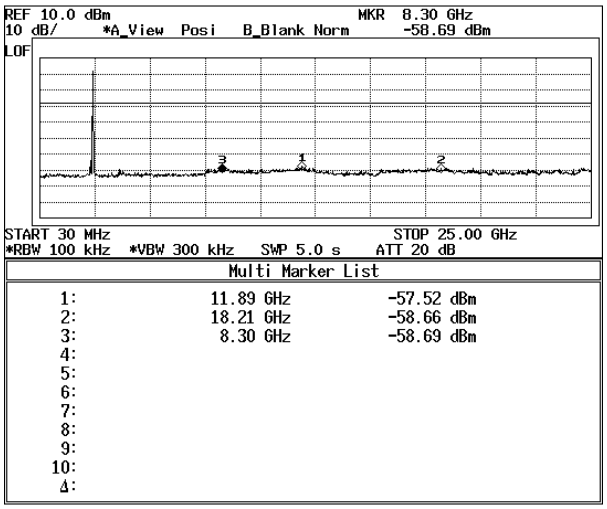


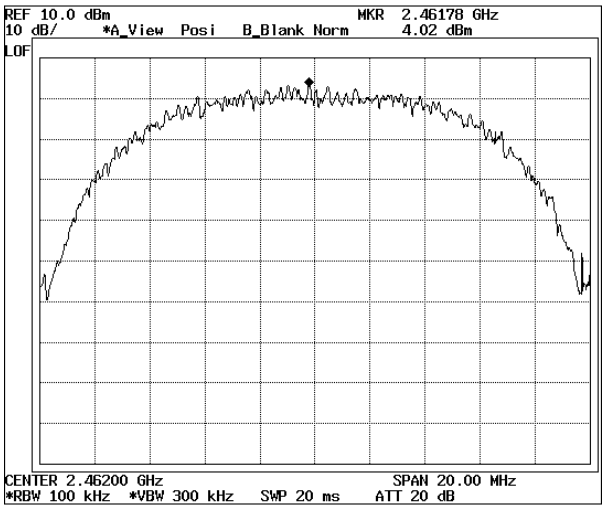
Mid(2437 MHz)





High(2462 MHz)

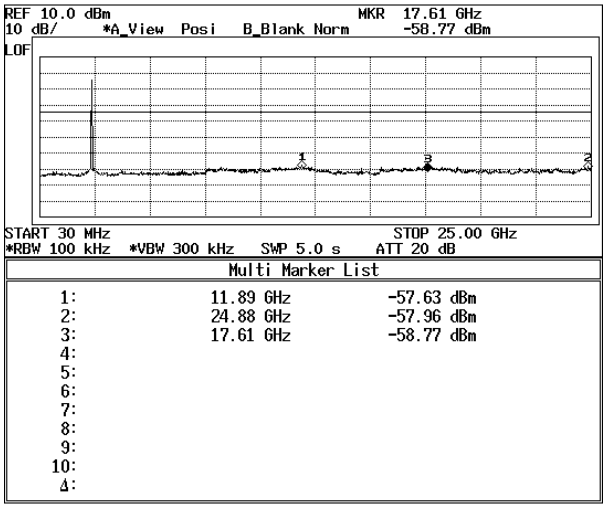


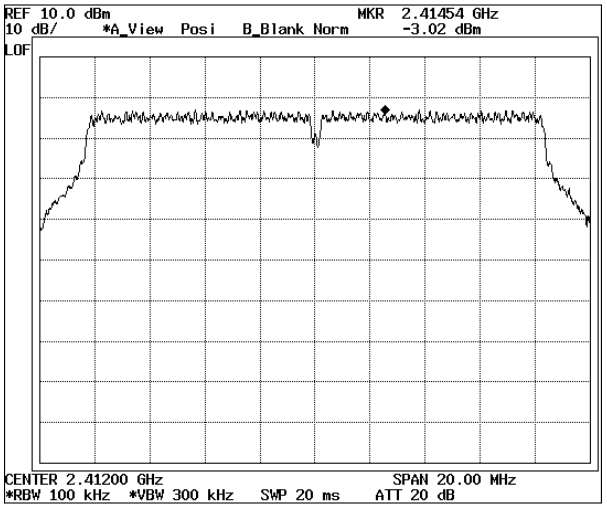


Note : Measurement level = reading level + correct factor

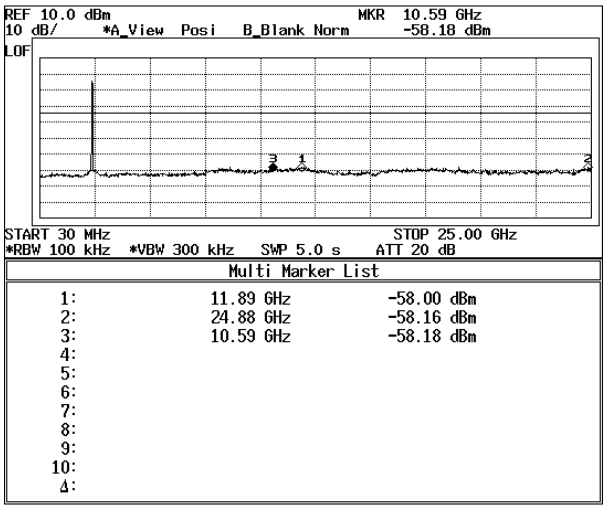
● 802.11g

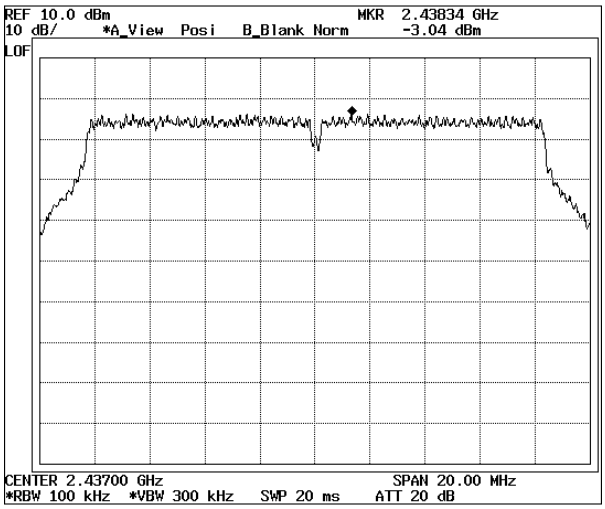
Low(2412 MHz)



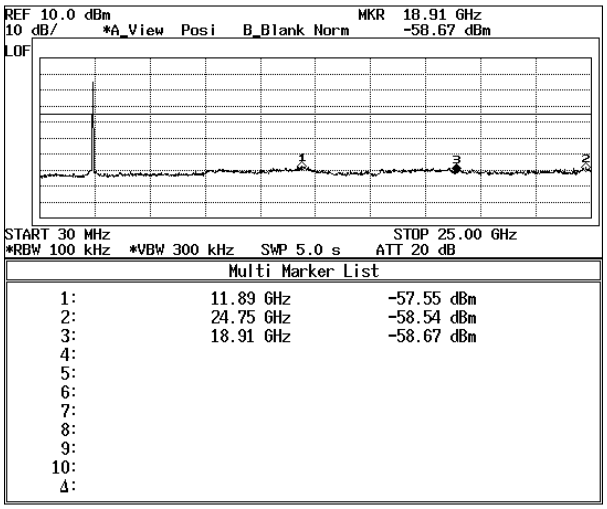


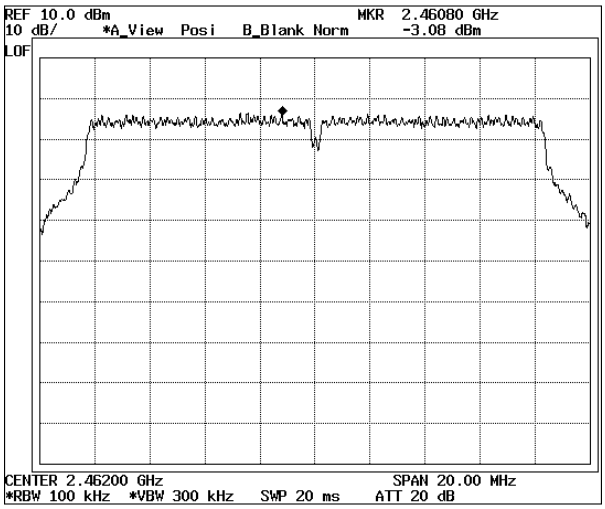
Mid(2437 MHz)





High(2462 MHz)

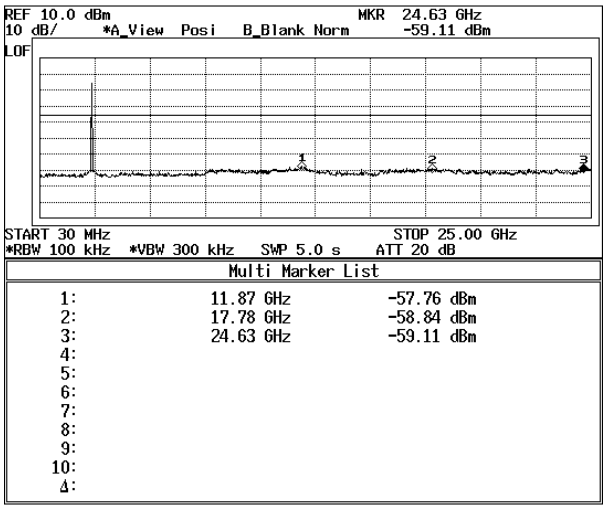


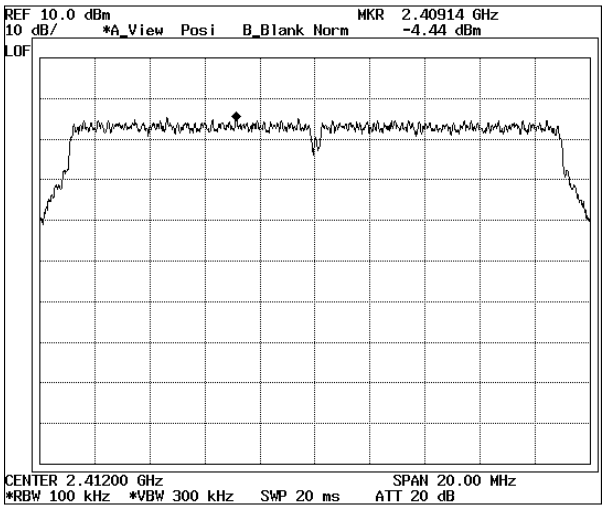


Note : Measurement level = reading level + correct factor

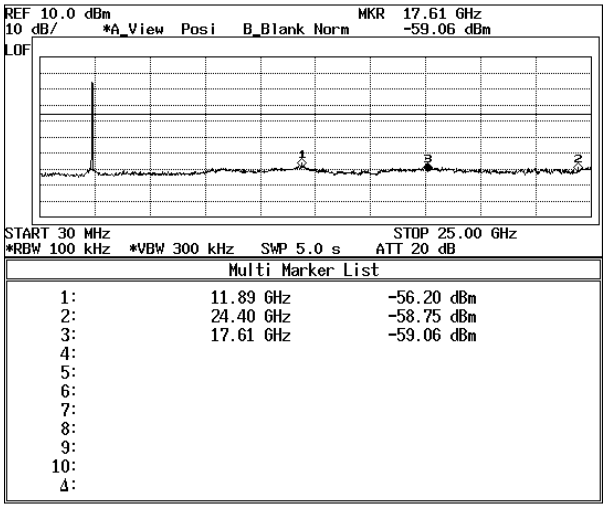
● 802.11n(ht20)

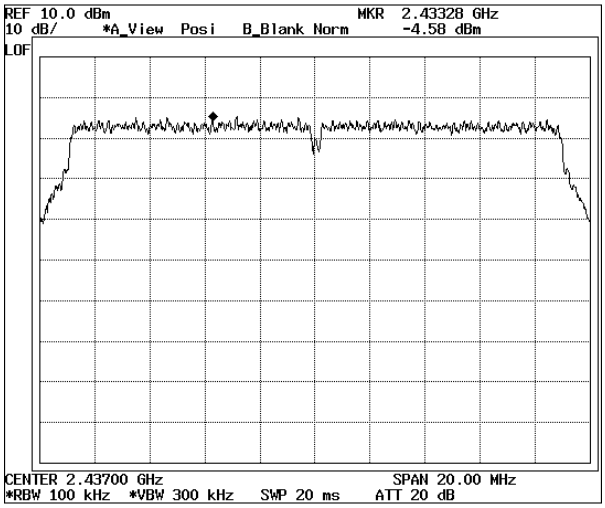
Low(2412 MHz)



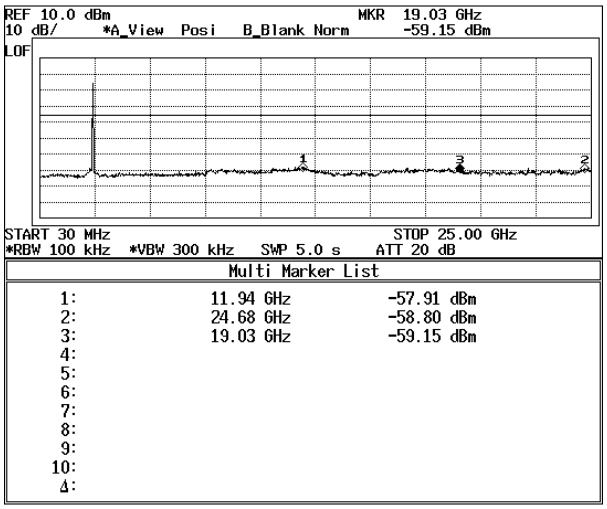


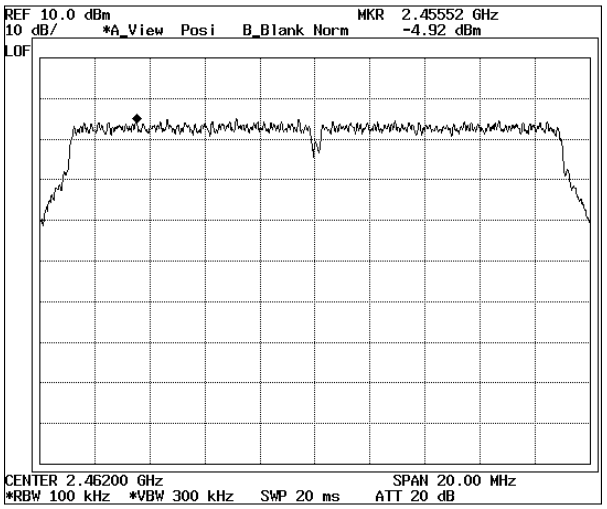
Mid(2437 MHz)





High(2462 MHz)

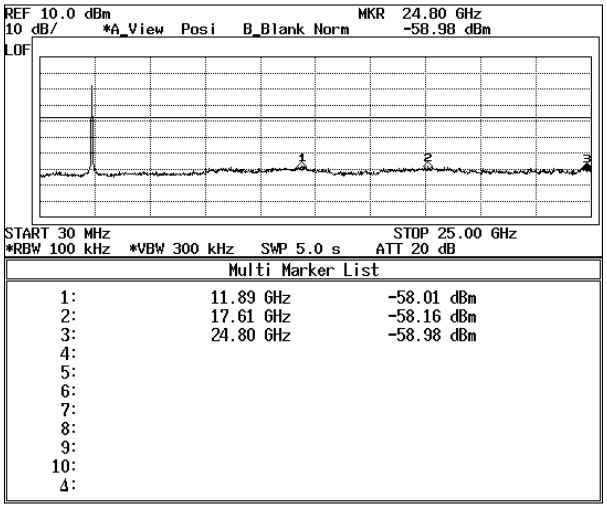


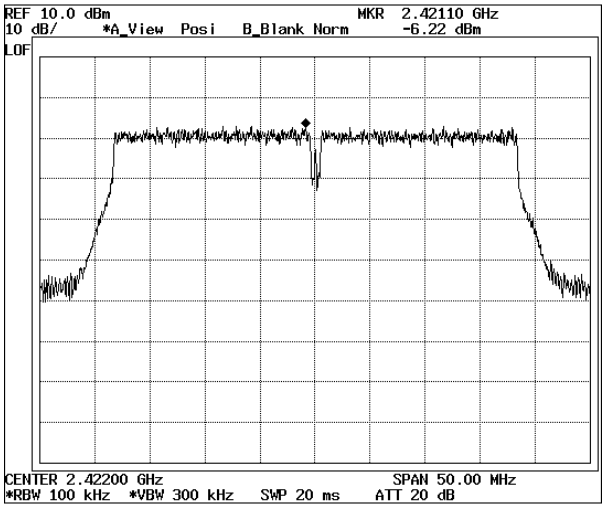


Note：Measurement level = reading level + correct factor

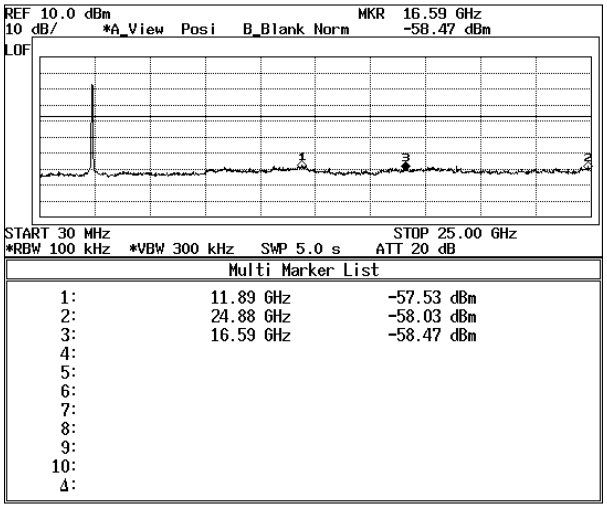
● 802.11n(ht40)

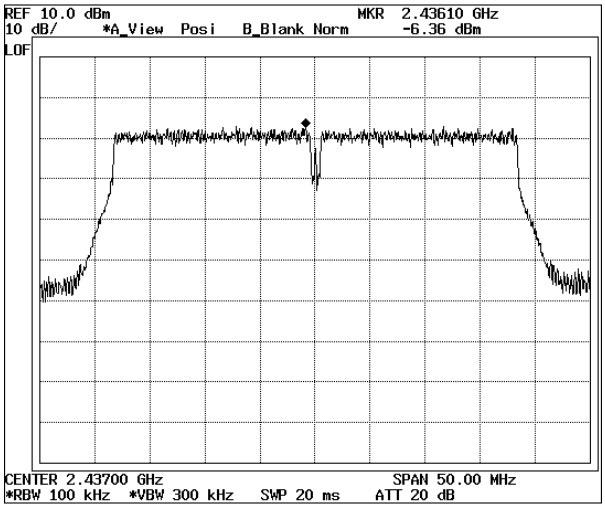
Low(2422 MHz)



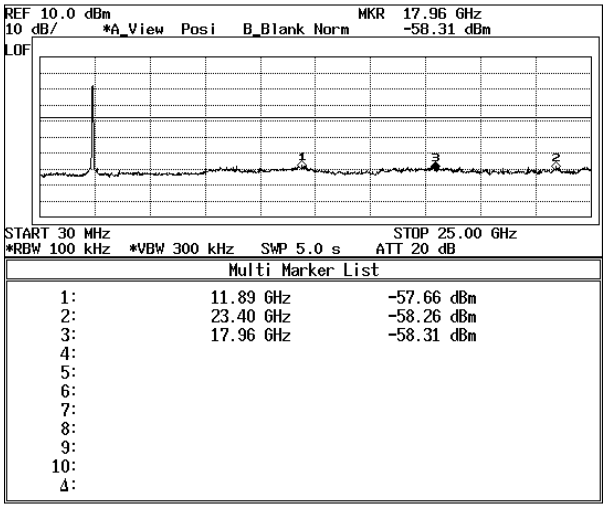


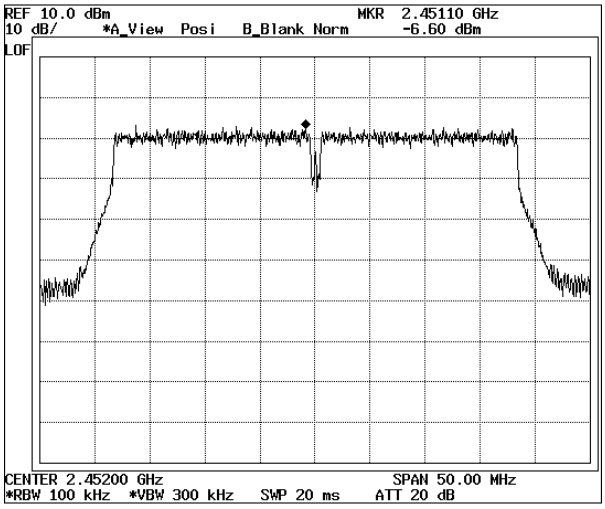
Mid(2437 MHz)





High(2452 MHz)





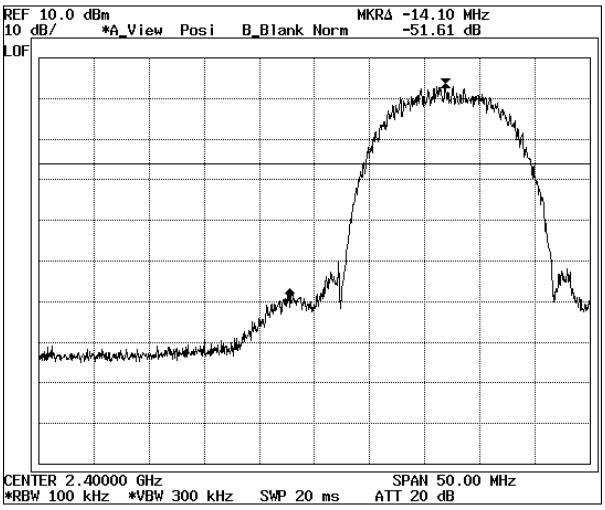
Note : Measurement level = reading level + correct factor

Band Edge Test result

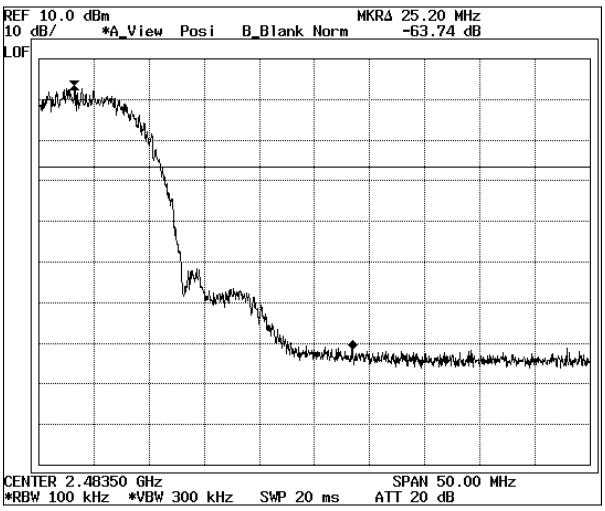
Product	360FLYBLK
Test Item	Band Edge
Test Mode	Transmit Low/High
Test Site	RF Room
Measurement Method	Conducted

● **802.11b**

Low (2412 MHz)



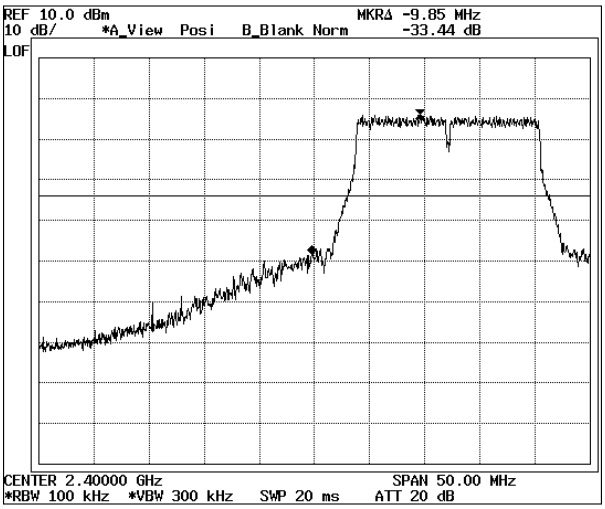
High (2462 MHz)



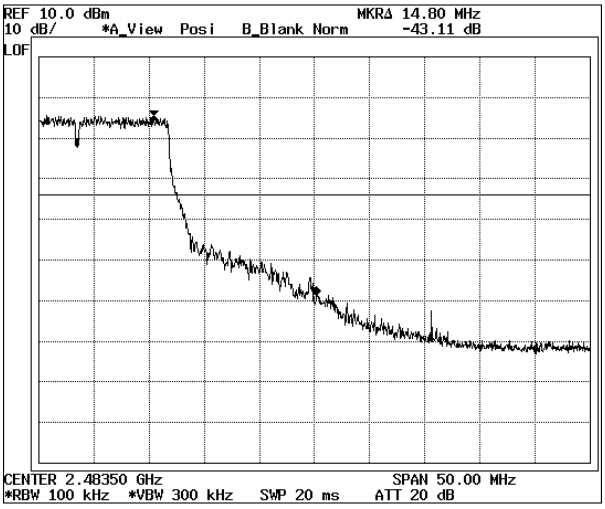
Note : Measurement level = reading level + correct factor

● **802.11g**

Low (2412 MHz)



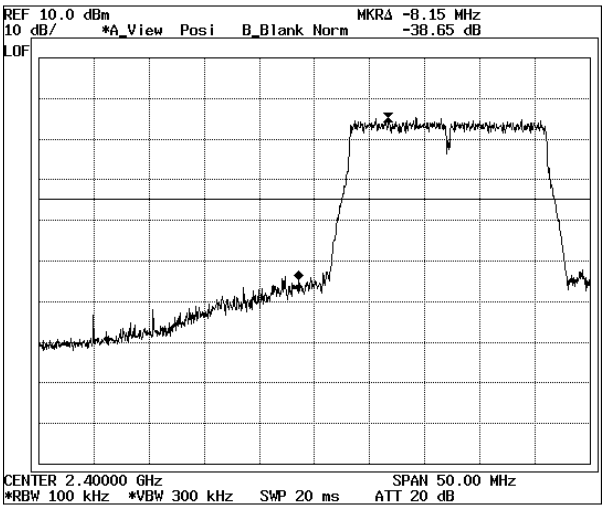
High (2462 MHz)



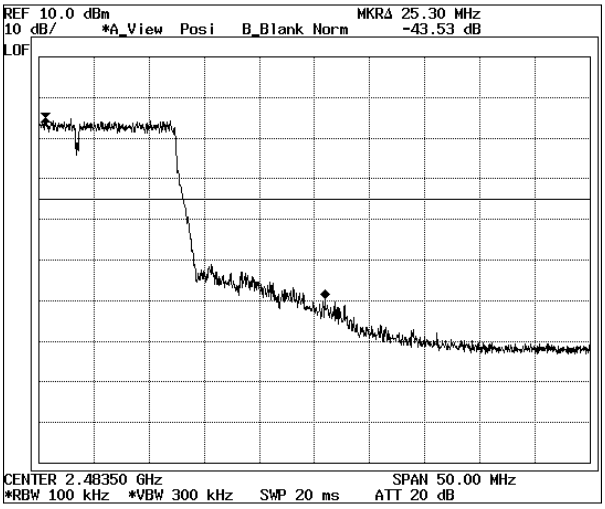
Note : Measurement level = reading level + correct factor

● **802.11n(ht20)**

Low (2412 MHz)



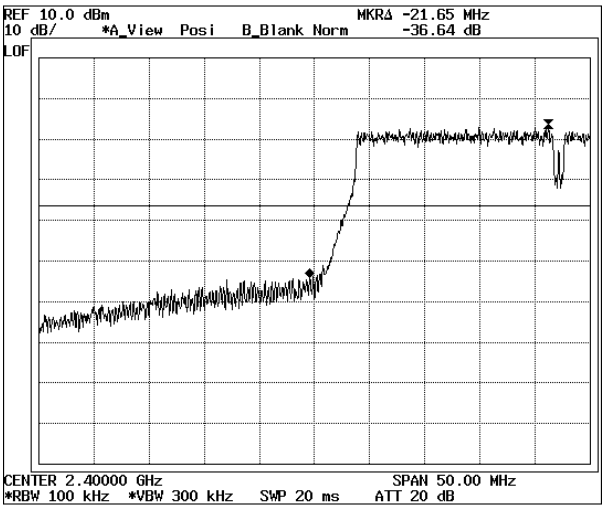
High (2462 MHz)



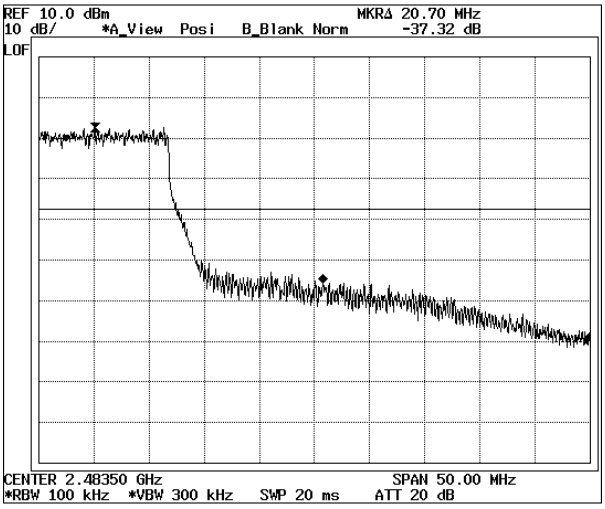
Note : Measurement level = reading level + correct factor

● **802.11n(ht40)**

Low (2422 MHz)



High (2452 MHz)



Note : Measurement level = reading level + correct factor

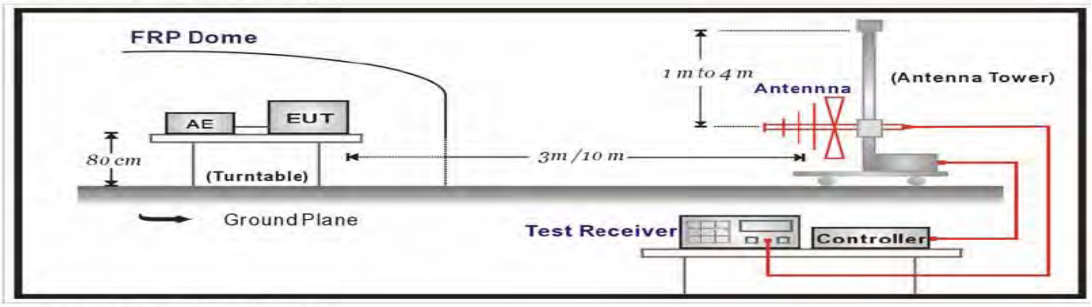
Radiated Emissions:

The measurement was performed over the frequency range of 30MHz to 1GHz using antenna as the input transducer to a Spectrum analyzer or a Field Intensity Meter. The measurement was made with the detector set for "quasi-peak" within a bandwidth of 120kHz.

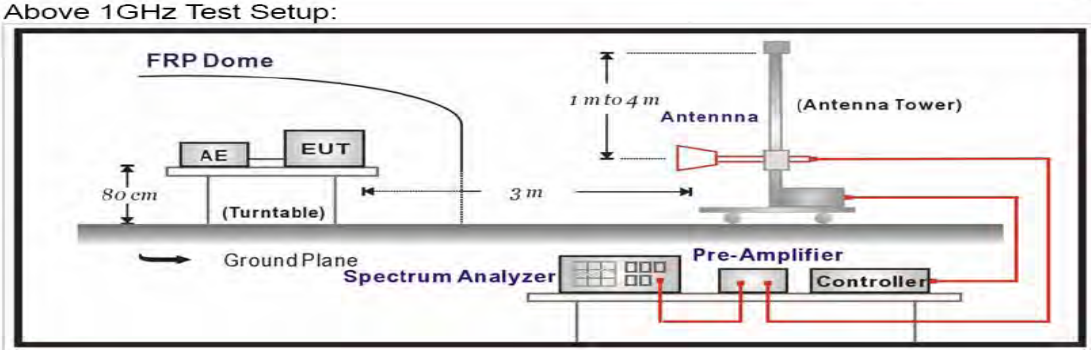
Procedure of Test

Preliminary measurements were made at 3 meter using bi-log antennas, and spectrum analyzer to determine the frequency producing the max. emission in anechoic chamber. Appropriate precaution was taken to ensure that all emission from the EUT were maximized and investigated. The system configuration, mode of operation, turn-table azimuth and height with respect to the antenna were noted for each frequency found. The spectrum was scanned from 30MHz to 1000MHz using bi-log antenna. Above 1GHz, linearly polarized double ridge horn antennas were used. Final measurements were made at open site with 3-meters test distance using bi-log antenna or horn antenna. The OATS have been verified in regular for its normalized site attenuation. The test equipment was placed on a wooden table. Sufficient time for the EUT, peripheral equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. Each frequency found during pre-scan measurements was re-examined by manual. The detector function was set to CISPR quasi-peak mode and the bandwidth of the receiver was set to 120kHz or 1MHz depending on the frequency of type of signal. The EUT, peripheral equipment and interconnecting cables were re-configured to the set-up producing the max. emission for the frequency and were placed on top of a 0.8-meter high nonmetallic 1 x 1.5 meter table. The EUT, peripheral equipment, and interconnecting cables were re-arranged and manipulated to maximize each emission. The turntable containing the system was rotated; the antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission. Each emission was maximized by: varying the mode of operation to the EUT and/or peripheral equipment and changing the polarity of the antenna, whichever determined the worst-case emission.(The bandwidth below 1GHz setting on the field strength meter is 120KHz and above 1GHz is 1MHz.)

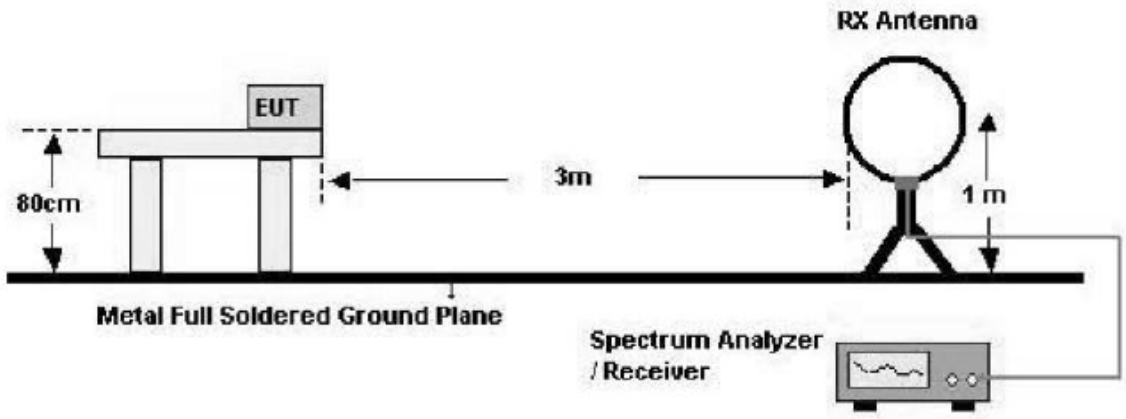
Under 1GHz Test Setup:



Above 1GHz Test Setup:



Below 30 MHz



Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, Shall be attenuated by at least 20dB below the level of the fundamental or to the General radiated emission limits in paragraph 15.209, whichever is the lesser attenuation:

FCC Part 15 Subpart C Section 15.209 Limits		
Frequency(MHz)	μV/meter	dBμV/meter(3m)
0.009-0.490	2400/F(KHz) at 300 m	20log 2400/F(KHz)+80
0.490-1.705	24000/F(KHz)at 30m	20log 24000/F(KHz)+40
1.705-30	30 at 30 m	49.5
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks :

1. RF Voltage(dBuv)=20log RF Voltage(uV)
2. dBuV/m = ERP(dBm)+106.92 dB + 20log(10m/3m) + 2.15dB(conversion Factor for E.I.R.P)
3. In the Above Table, the tighter limit applies at the band edges.
4. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Test specification.

According to FCC CFR Title 47 Part 15 Subpart C Section 15.209

IC RSS-210 Clause 2.6

IC RSS-Gen Clause 6

Radiated Spurious Emissions & Restricted bands Emissions

[Applicable]

◆ Test Equipment Used

Name	Type	Manufacturer	Due for Cal	Serial Number
EMI Receiver	ESCS30	Rohde & Schwarz	May. 08, 2015	100171
EMI Receiver	ESCI7	Rohde & Schwarz	Jul. 21, 2015	100872
SPECTRUM ANALYZER	R3273	ADVANTEST	May. 08, 2015	110600587
Loop Antenna	HFH2-Z2	Rohde & Schwarz	Oct. 26, 2014	8620771017
Log-bicon Antenna	VULB9160	Schwarz beck	Jun. 03, 2015	3071
HORN-Antenna	3115	EMCO	Dec. 04, 2015	9012-3602
BROADBAND HORN-Antenna	BBHA9170	Schwarzbeck	Sep. 06, 2015	BBHA9170318
PRE AMPLIFIER	8449B OPT H02	HP	Oct. 06, 2015	3008A0530

Note : 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to RRL, KRISS, KTL and HCT.
2. The calibration interval of horn ant. and loop ant. is 24 months

◆ Test Conditions

Temperature (23.0 ± 0.2) ℃
Humidity (46.2 ± 0.2) % R.H.
Atmosphere (1005) mbar

◆ Test Area Full-Anechoic Room (3m)

◆ Test Date September 25, 2015

Note :

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. For the limit is employed average value, therefore the peak value can be transferred to average value by subtracting the duty factor. The basic equation with a sample calculation is as follows:

Peak = Reading + Corrected Factor

Where Corr. Factor = Antenna Factor + Cable Factor - Amplifier Gain (if any)

Radiated Emissions Test, 9 kHz to 30 MHz
(Magnetic Field Test)

1. The preliminary radiated measurements were performed to determine the frequency producing the maximum emissions at a distance of 3 meters according to Section 15.31(f)(2).
2. The EUT was placed on the top of the 0.8-meter height, 1 x 1.5 meter non-metallic table.
3. Emissions from the EUT are maximized by adjusting the orientation of the Loop antenna and rotating the EUT on the turntable. Manipulating the system cables also maximizes EUT emissions if applicable.
4. To obtain the final measurement data, each frequency found during preliminary measurements was re-examined and investigated. The test-receiver system was set up to average, peak, and quasi-peak detector with specified bandwidth.
5. The result was 20dB lower than the limit line 15.31(o) was not reported.

Radiated Emissions Result

Frequency MHz	Reading dBuV	P (H, V)	Ant. Factor dB	Cable Loss dB	Limit dBuV	Total dBuV	Margin dB

Note : The measured value have enough margin over 20dB than the limit, therefore they are not reported.

Radiated Spurious Emissions Result

[Applicable]

Spurious Emissions Test (Below 1GHz) :

☒ Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, packet types and antenna ports(if EUT with antenna diversity architecture), and X,Y,Z Axis.

EUT	360FLYBLK	PROBE	Below 1 GHz
POWER	DC 3.7 V	NOTE	802.11g Low channel

Frequency MHz	Reading dBuV	P (H,V)	Ant. Factor dB	Cable Loss dB	Limit dBuV	Total dBuV	Margin dB
47.462	21.40	V	11.85	1.14	40.00	34.39	-5.61
144.464	18.20	V	12.45	1.98	43.50	32.63	-10.87
200.721	20.40	H	9.14	2.46	43.50	32.00	-11.50
228.853	20.90	H	10.30	2.59	46.00	33.79	-12.21
300.635	13.30	H	12.95	2.93	46.00	29.18	-16.82
375.328	22.70	H	14.82	3.24	46.00	40.76	-5.24
400.549	21.30	H	15.45	3.35	46.00	40.10	-5.90
*480.081	19.50	V	17.55	3.66	46.00	40.71	-5.29

EUT	360FLYBLK	PROBE	Below 1 GHz
POWER	DC 3.7 V	NOTE	802.11g Mid channel

Frequency MHz	Reading dBuV	P (H,V)	Ant. Factor dB	Cable Loss dB	Limit dBuV	Total dBuV	Margin dB
144.462	18.70	V	12.45	1.98	43.50	33.13	-10.37
288.995	22.30	H	12.55	2.87	46.00	37.72	-8.28
300.631	25.80	H	12.95	2.93	46.00	41.68	-4.32
384.057	22.50	H	15.04	3.28	46.00	40.82	-5.18
400.543	22.10	H	15.45	3.35	46.00	40.90	-5.10
425.764	21.40	H	16.12	3.45	46.00	40.97	-5.03
*480.088	20.60	V	17.55	3.66	46.00	41.81	-4.19

EUT	360FLYBLK	PROBE	Below 1 GHz
POWER	DC 3.7 V	NOTE	802.11g High channel

Frequency MHz	Reading dBuV	P (H,V)	Ant. Factor dB	Cable Loss dB	Limit dBuV	Total dBuV	Margin dB
200.725	21.6	H	9.14	2.46	43.50	33.20	-10.30
228.853	20.8	H	10.30	2.59	46.00	33.69	-12.31
288.994	22.8	H	12.55	2.87	46.00	38.22	-7.78
*300.632	24.4	H	12.95	2.93	46.00	40.28	-5.72
400.546	20.6	H	15.45	3.35	46.00	39.40	-6.60
480.081	18.2	V	17.55	3.66	46.00	39.41	-6.59

Note :

1. *Remark "*" means that the data is the worst emission level.*
2. *802.11g mode is the worst case based on peak output power.*
3. *All reading levels are Quasi-peak value.*
4. *Measurement level = reading level + correct factor*

Spurious Emissions Test (Above 1GHz) :

☒ Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, packet types and antenna ports(if EUT with antenna diversity architecture), and X,Y,Z Axis.

● **802.11b**

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	CHANNEL	1 Channel (2412 MHz)
MODE	802.11b		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.104	39.60	25.02	H	74.00	54.00	34.40	28.98
1.442	38.65	24.61	H	74.00	54.00	35.35	29.39
3.255	43.88	31.70	H	74.00	54.00	30.12	22.30
4.836	45.09	35.33	H	74.00	54.00	28.91	18.67
8.257	50.02	38.54	H	74.00	54.00	23.98	15.46
1.726	38.45	24.94	V	74.00	54.00	35.55	29.06
4.551	44.66	32.11	V	74.00	54.00	29.34	21.89
5.152	45.42	34.59	V	74.00	54.00	28.58	19.41
6.344	48.39	37.05	V	74.00	54.00	25.61	16.95

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	CHANNEL	6 Channel (2437 MHz)
MODE	802.11b		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.107	40.78	25.31	H	74.00	54.00	33.22	28.69
2.304	43.71	27.27	H	74.00	54.00	30.29	26.73
3.913	43.88	32.12	H	74.00	54.00	30.12	21.88
4.882	45.16	34.58	H	74.00	54.00	28.84	19.42
5.734	46.38	34.47	H	74.00	54.00	27.62	19.53
1.105	40.33	26.52	V	74.00	54.00	33.67	27.48
1.207	41.11	25.41	V	74.00	54.00	32.89	28.59
1.972	38.97	26.60	V	74.00	54.00	35.03	27.40
3.891	44.18	32.28	V	74.00	54.00	29.82	21.72
5.623	45.78	34.12	V	74.00	54.00	28.22	19.88

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	11 Channel (2462 MHz)
MODE	802.11b		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.104	40.23	26.01	H	74.00	54.00	33.77	27.99
1.193	38.49	21.39	H	74.00	54.00	35.51	32.61
4.931	45.40	34.86	H	74.00	54.00	28.60	19.14
5.683	46.04	34.36	H	74.00	54.00	27.96	19.64
1.207	42.75	26.67	V	74.00	54.00	31.25	27.33
1.301	44.81	26.71	V	74.00	54.00	29.19	27.29
5.556	45.83	34.21	V	74.00	54.00	28.17	19.79
8.328	49.82	39.01	V	74.00	54.00	24.18	14.99

Note : -Reading(dBuv) : Measurement Level + Ant Factor + Cable Loss - Amp Gain

- The measured value from 6GHz to 25GHz have enough margin over 20dB than the limit, therefore they are not reported.

● 802.11g

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	CHANNEL	1 Channel (2412 MHz)
MODE	802.11g		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.052	48.28	23.63	H	74.00	54.00	25.72	30.37
2.727	47.31	26.96	H	74.00	54.00	26.69	27.04
4.423	45.73	31.92	H	74.00	54.00	28.27	22.08
5.752	46.14	34.31	H	74.00	54.00	27.86	19.69
1.105	36.99	24.68	V	74.00	54.00	37.01	29.32
2.054	44.50	25.97	V	74.00	54.00	29.50	28.03
5.181	44.82	34.57	V	74.00	54.00	29.18	19.43
9.082	50.15	39.24	V	74.00	54.00	23.85	14.76

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	CHANNEL	6 Channel (2437 MHz)
MODE	802.11g		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.937	43.42	25.46	H	74.00	54.00	30.58	28.54
5.114	45.68	33.74	H	74.00	54.00	28.32	20.26
5.642	46.07	34.64	H	74.00	54.00	27.93	19.36
1.184	42.70	21.67	V	74.00	54.00	31.30	32.33
2.814	46.04	27.62	V	74.00	54.00	27.96	26.38
4.642	51.00	32.86	V	74.00	54.00	23.00	21.14
5.193	46.03	34.41	V	74.00	54.00	27.97	19.59

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	11 Channel (2462 MHz)
MODE	802.11g		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.106	40.05	26.34	H	74.00	54.00	33.95	27.66
2.247	48.28	27.19	H	74.00	54.00	25.72	26.81
4.513	45.78	30.63	H	74.00	54.00	28.22	23.37
10.062	51.36	40.04	H	74.00	54.00	22.64	13.96
1.154	43.94	22.09	V	74.00	54.00	30.06	31.91
1.794	48.34	24.35	V	74.00	54.00	25.66	29.65
4.341	44.03	32.35	V	74.00	54.00	29.97	21.65
5.204	45.22	34.51	V	74.00	54.00	28.78	19.49

Note : -Reading(dBuv) : Measurement Level + Ant Factor + Cable Loss - Amp Gain

- The measured value from 6GHz to 25GHz have enough margin over 20dB than the limit, therefore they are not reported.

● 802.11n(ht20)

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	CHANNEL	1 Channel (2412 MHz)
MODE	802.11n		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.105	40.86	26.95	H	74.00	54.00	33.14	27.05
3.926	43.05	32.70	H	74.00	54.00	30.95	21.30
4.732	43.88	32.55	H	74.00	54.00	30.12	21.45
5.802	46.09	34.65	H	74.00	54.00	27.91	19.35
1.102	37.65	24.82	V	74.00	54.00	36.35	29.18
1.847	40.72	34.50	V	74.00	54.00	33.28	19.50
2.903	50.36	28.54	V	74.00	54.00	23.64	25.46
6.851	46.21	35.38	V	74.00	54.00	27.79	18.62

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	CHANNEL	6 Channel (2437 MHz)
MODE	802.11n		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.104	41.72	26.68	H	74.00	54.00	32.28	27.32
1.445	37.49	24.01	H	74.00	54.00	36.51	29.99
3.397	42.99	31.71	H	74.00	54.00	31.01	22.29
4.924	44.92	32.70	H	74.00	54.00	29.08	21.30
5.692	46.27	34.74	H	74.00	54.00	27.73	19.26
1.025	39.06	21.72	V	74.00	54.00	34.94	32.28
1.761	41.93	24.67	V	74.00	54.00	32.07	29.33
5.356	53.00	34.13	V	74.00	54.00	21.00	19.87
5.742	45.45	34.50	V	74.00	54.00	28.55	19.50

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	11 Channel (2462 MHz)
MODE	802.11n		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.103	41.64	27.11	H	74.00	54.00	32.36	26.89
1.907	39.05	26.47	H	74.00	54.00	34.95	27.53
3.964	43.85	32.20	H	74.00	54.00	30.15	21.80
5.203	46.22	34.88	H	74.00	54.00	27.78	19.12
2.253	38.62	28.49	V	74.00	54.00	35.38	25.51
4.805	41.27	30.38	V	74.00	54.00	32.73	23.62
7.626	46.82	36.41	V	74.00	54.00	27.18	17.59

Note :- Reading(dBuv) : Measurement Level + Ant Factor + Cable Loss - Amp Gain

- The measured value from 6GHz to 25GHz have enough margin over 20dB than the limit, therefore they are not reported.

● 802.11n(ht40)

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	CHANNEL	3 Channel (2422 MHz)
MODE	802.11n		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.103	40.01	26.44	H	74.00	54.00	33.99	27.56
1.850	38.02	25.13	H	74.00	54.00	35.98	28.87
3.234	42.69	31.68	H	74.00	54.00	31.31	22.32
5.312	45.86	34.41	H	74.00	54.00	28.14	19.59
1.305	38.00	23.71	V	74.00	54.00	36.00	30.29
3.241	42.42	31.53	V	74.00	54.00	31.58	22.47
5.224	45.34	34.33	V	74.00	54.00	28.66	19.67
8.462	50.48	40.42	V	74.00	54.00	23.52	13.58

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	CHANNEL	6 Channel (2437 MHz)
MODE	802.11n		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.103	41.69	26.67	H	74.00	54.00	32.31	27.33
3.214	43.23	31.43	H	74.00	54.00	30.77	22.57
5.651	46.26	34.37	H	74.00	54.00	27.74	19.63
1.053	36.55	23.13	V	74.00	54.00	37.45	30.87
2.016	38.41	26.35	V	74.00	54.00	35.59	27.65
5.230	45.17	34.44	V	74.00	54.00	28.83	19.56
5.761	45.05	34.21	V	74.00	54.00	28.95	19.79

EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	9 Channel (2452 MHz)
MODE	802.11n		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
1.105	40.19	26.21	H	74.00	54.00	33.81	27.79
3.376	42.68	31.53	H	74.00	54.00	31.32	22.47
5.678	46.54	34.20	H	74.00	54.00	27.46	19.80
7.982	49.87	38.54	H	74.00	54.00	24.13	15.46
1.304	37.37	23.67	V	74.00	54.00	36.63	30.33
1.901	37.86	25.49	V	74.00	54.00	36.14	28.51
4.654	44.82	32.29	V	74.00	54.00	29.18	21.71
5.873	46.66	33.97	V	74.00	54.00	27.34	20.03

Note :- Reading(dBuv) : Measurement Level + Ant Factor + Cable Loss - Amp Gain

- The measured value from 6GHz to 25GHz have enough margin over 20dB than the limit, therefore they are not reported.

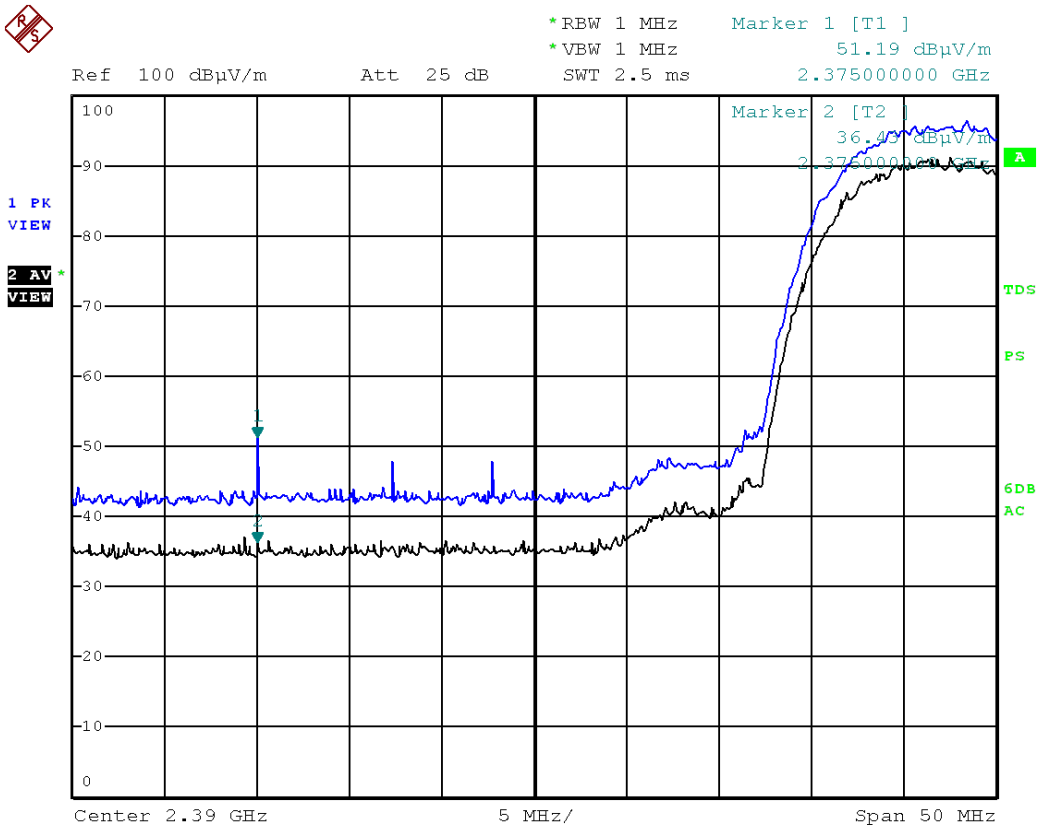
Radiated Restricted bands Emissions Result

● 802.11b

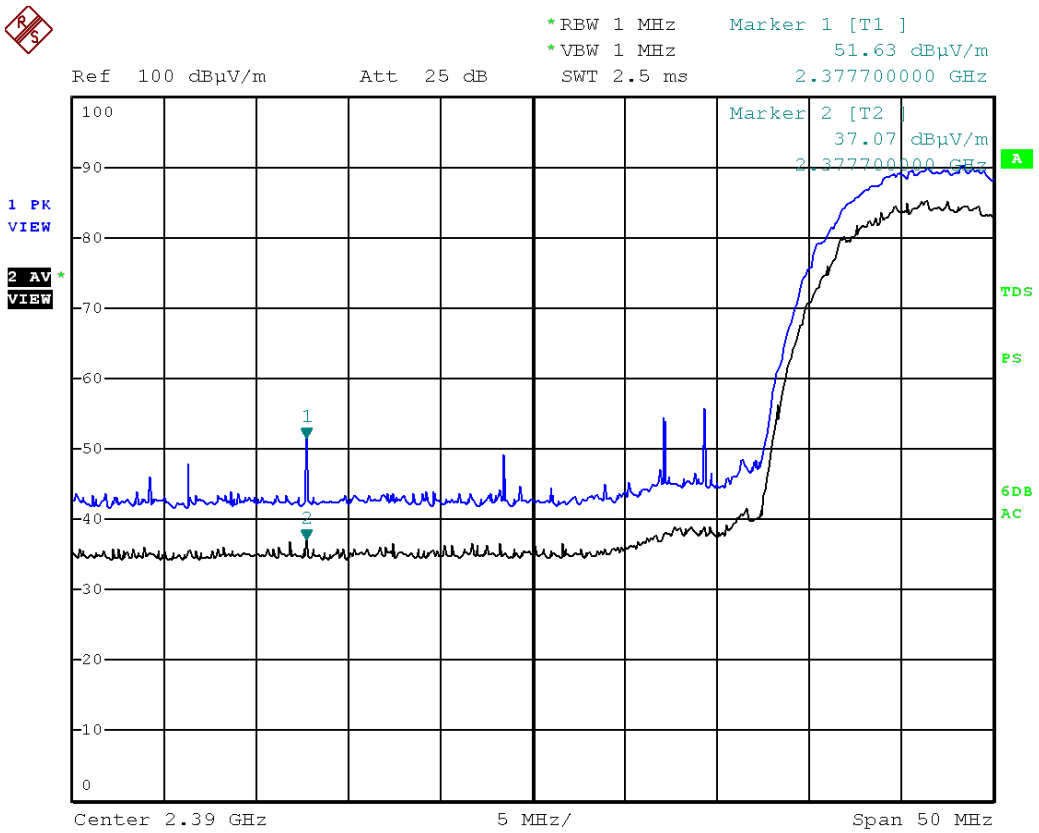
EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	1 Channel (2412 MHz)
MODE	802.11b		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
2.3750	51.19	36.40	H	74.00	54.00	22.81	17.60
2.3777	51.63	37.07	V	74.00	54.00	22.37	16.93



802.11b Low (Horizontal)

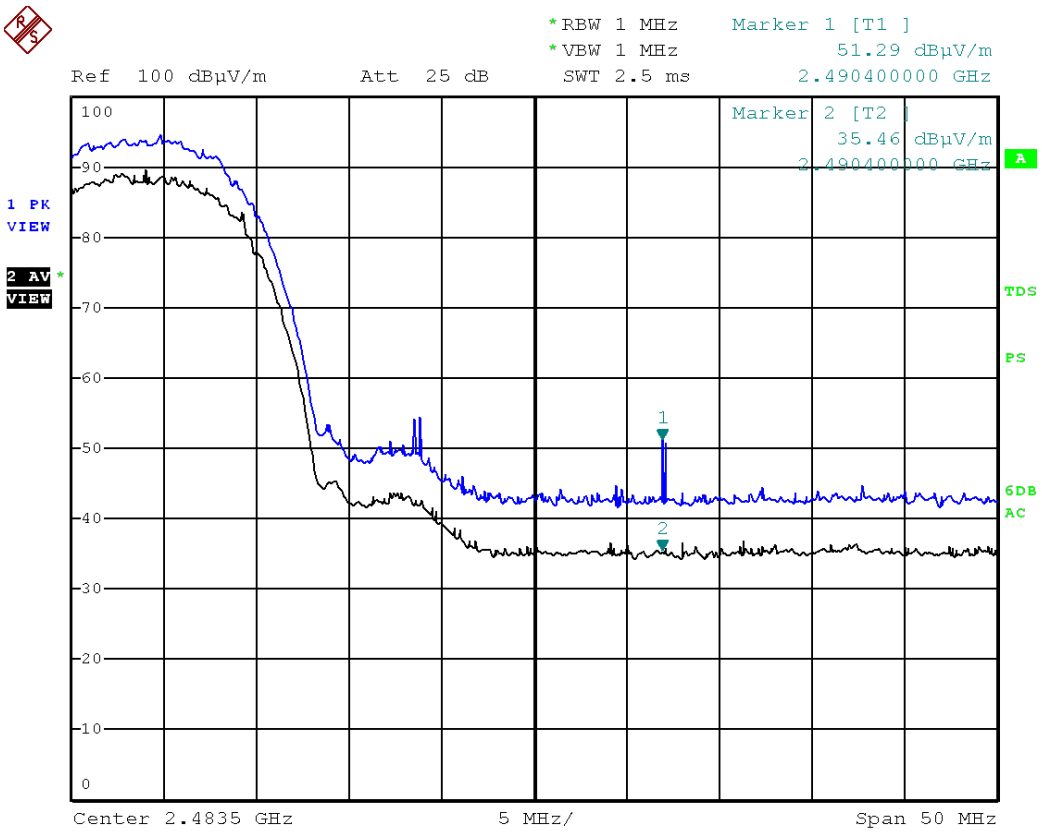


802.11b Low (Vertical)

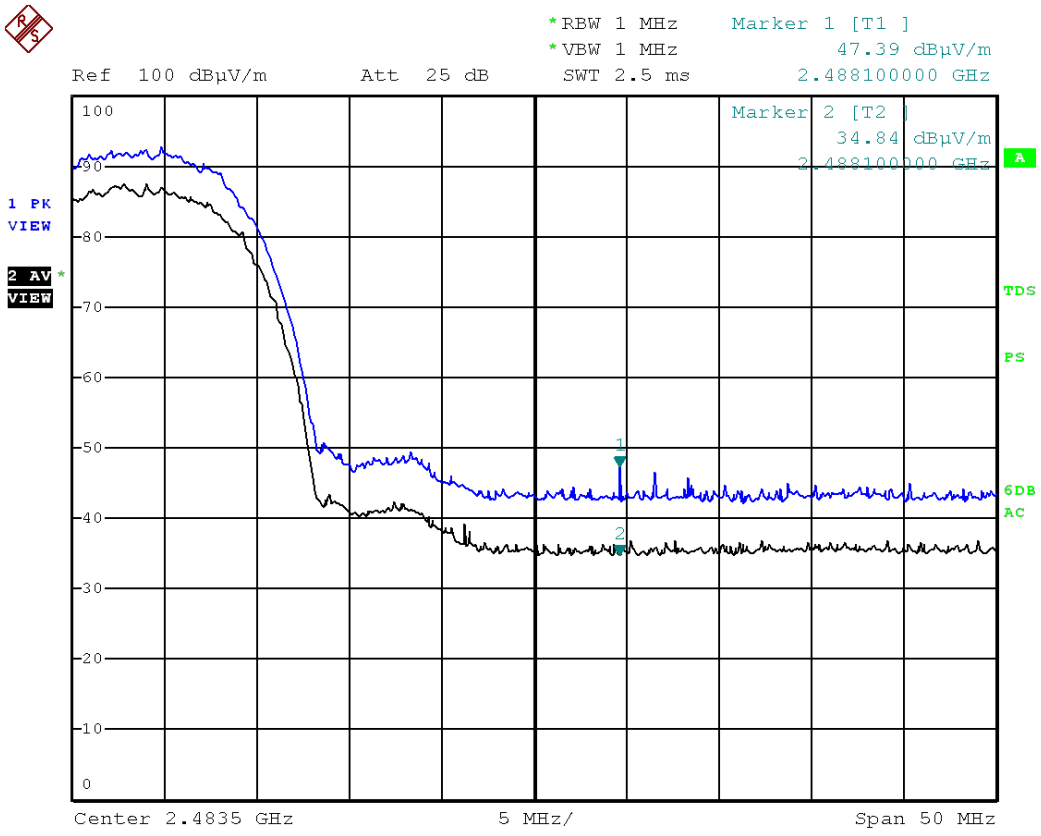
EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	11 Channel (2462 MHz)
MODE	802.11b		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
2.4904	51.29	35.46	H	74.00	54.00	22.71	18.54
2.4881	47.39	34.84	V	74.00	54.00	26.61	19.16



802.11b High (Horizontal)



802.11b High (Vertical)

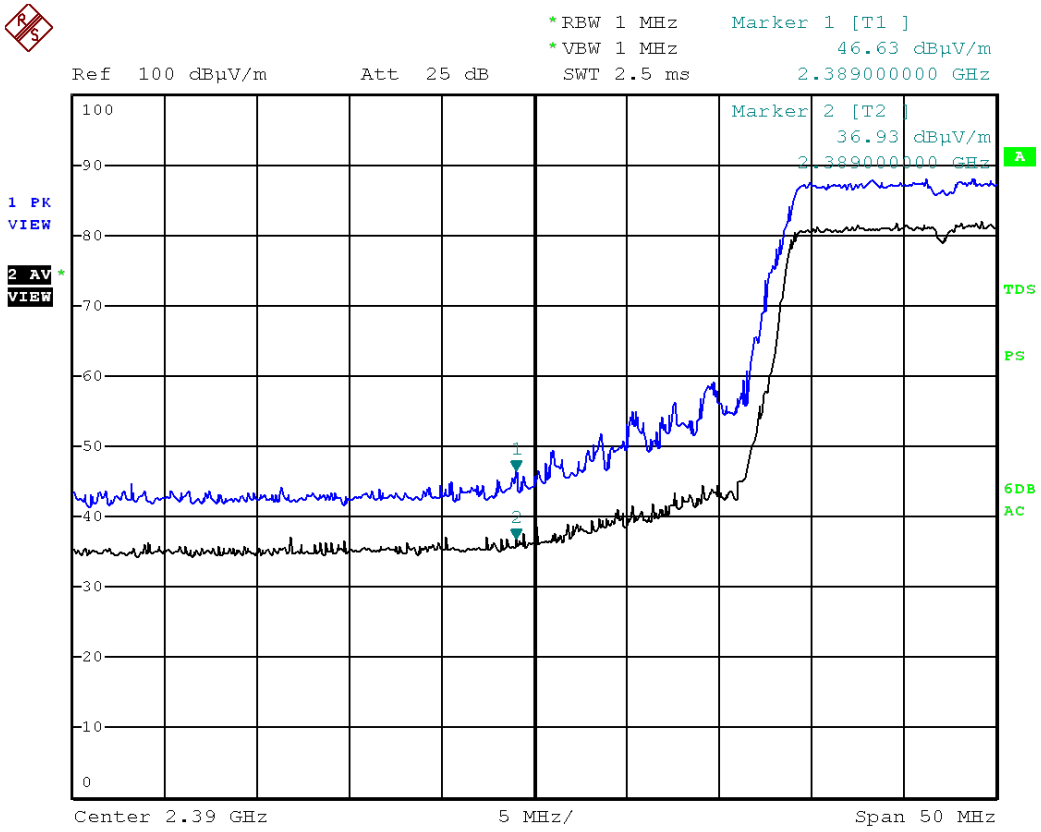
Note : Reading(dBuv) : Measurement Level + Ant Factor + Cable Loss - Amp Gain

● 802.11g

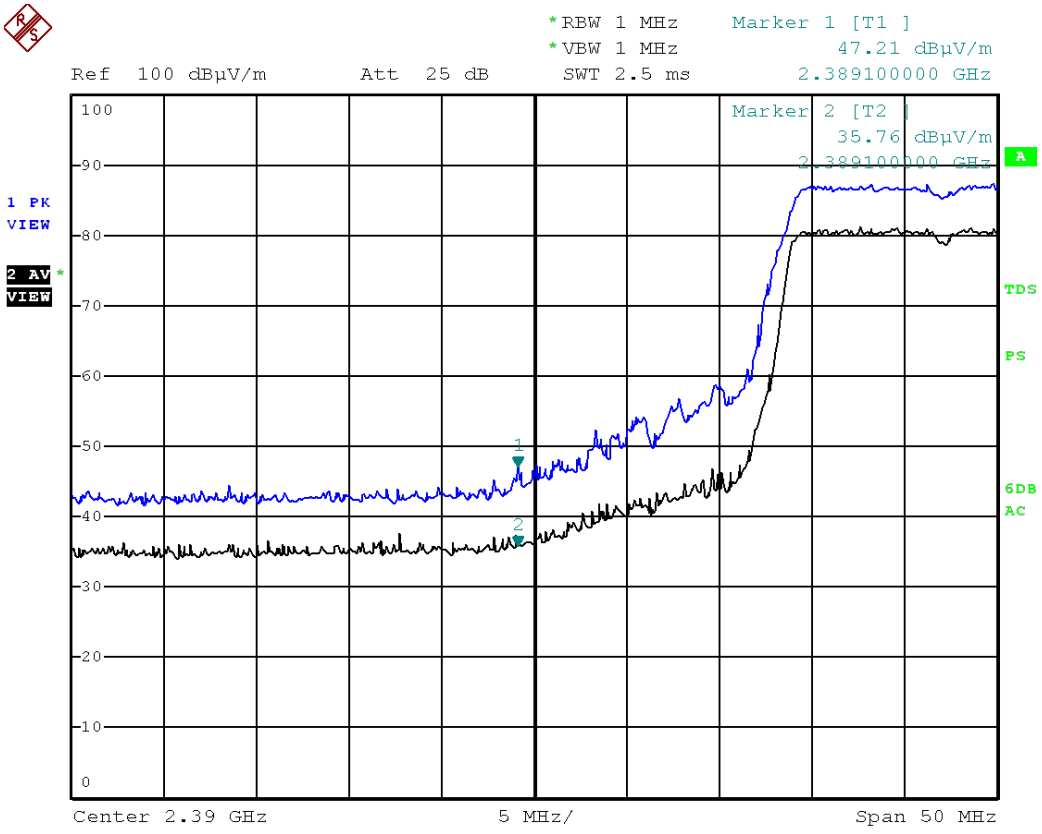
EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	1 Channel (2412 MHz)
MODE	802.11g		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
2.3890	46.63	36.93	H	74.00	54.00	27.37	17.07
2.3891	47.21	35.76	V	74.00	54.00	26.79	18.24



802.11g Low (Horizontal)

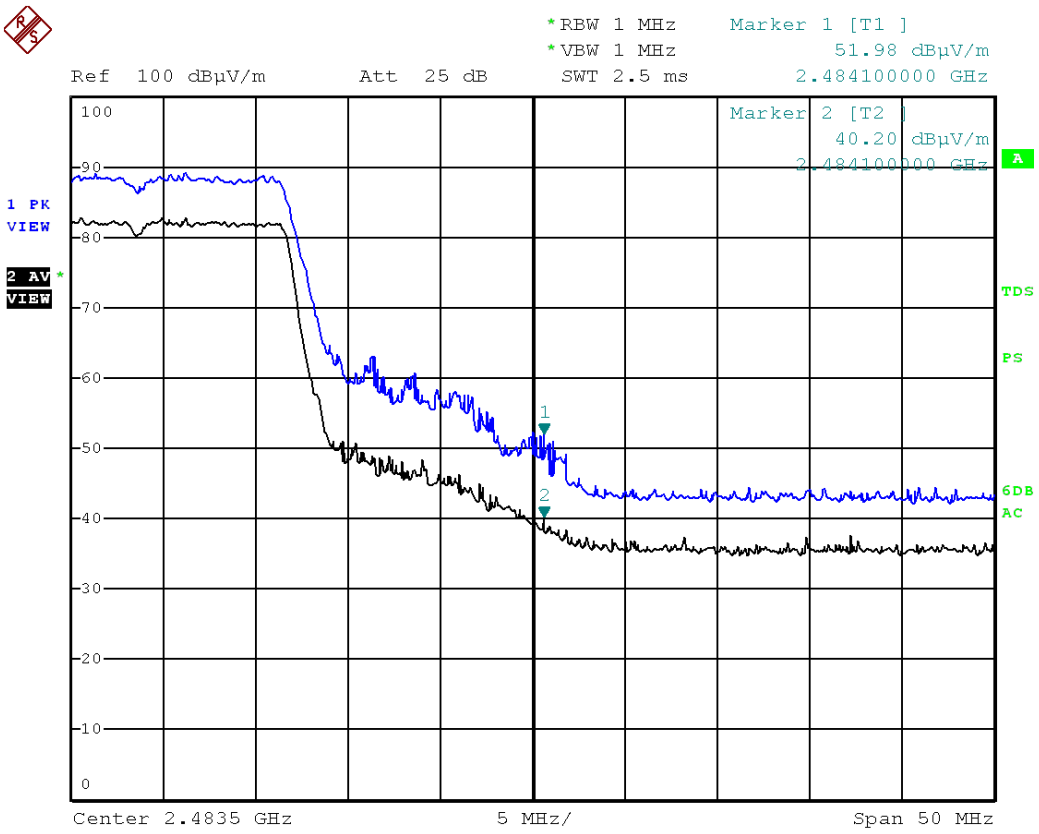


802.11g Low (Vertical)

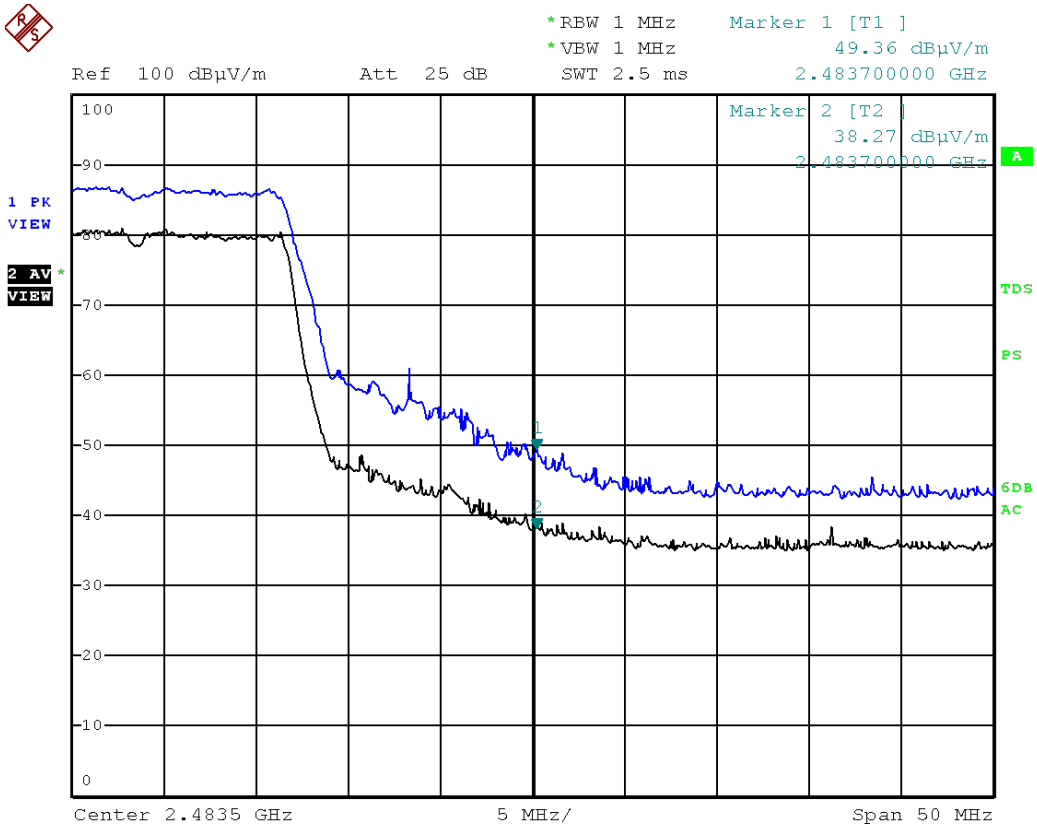
EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	11 Channel (2462 MHz)
MODE	802.11g		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
2.4841	51.98	40.20	H	74.00	54.00	22.02	13.80
2.4837	49.36	38.27	V	74.00	54.00	24.64	15.73



802.11g High (Horizontal)



802.11g High (Vertical)

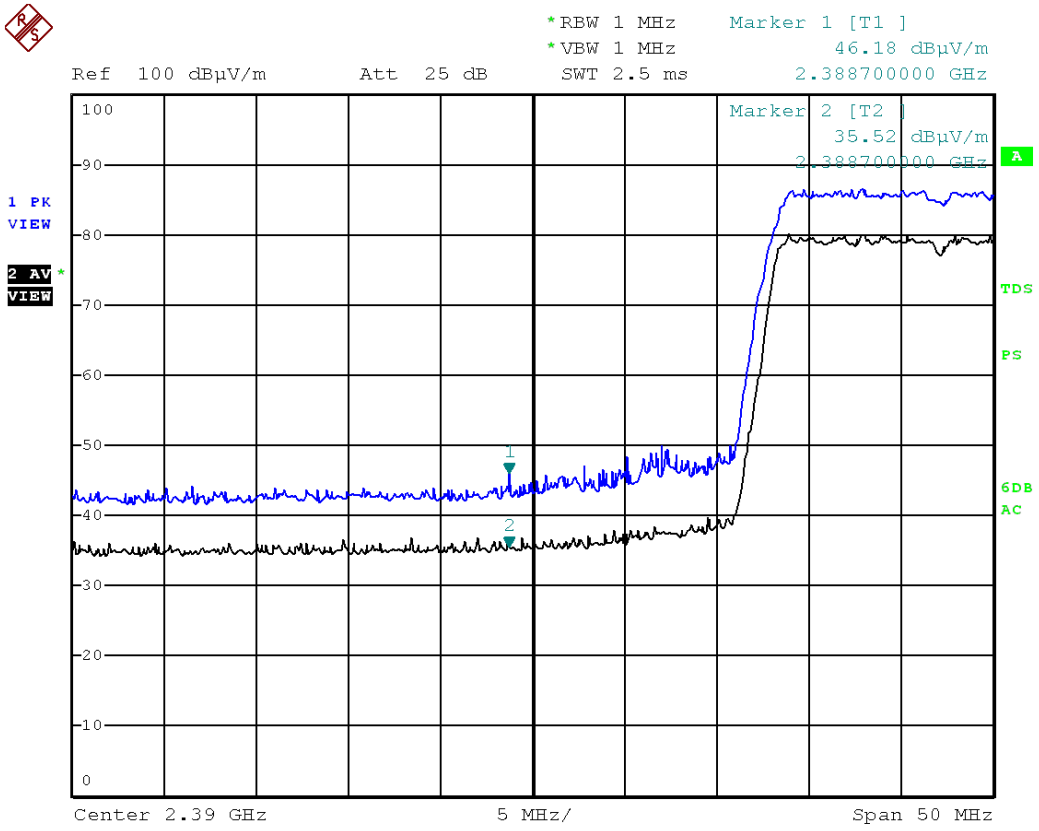
Note : Reading(dBuv) : Measurement Level + Ant Factor + Cable Loss - Amp Gain

● 802.11n(ht20)

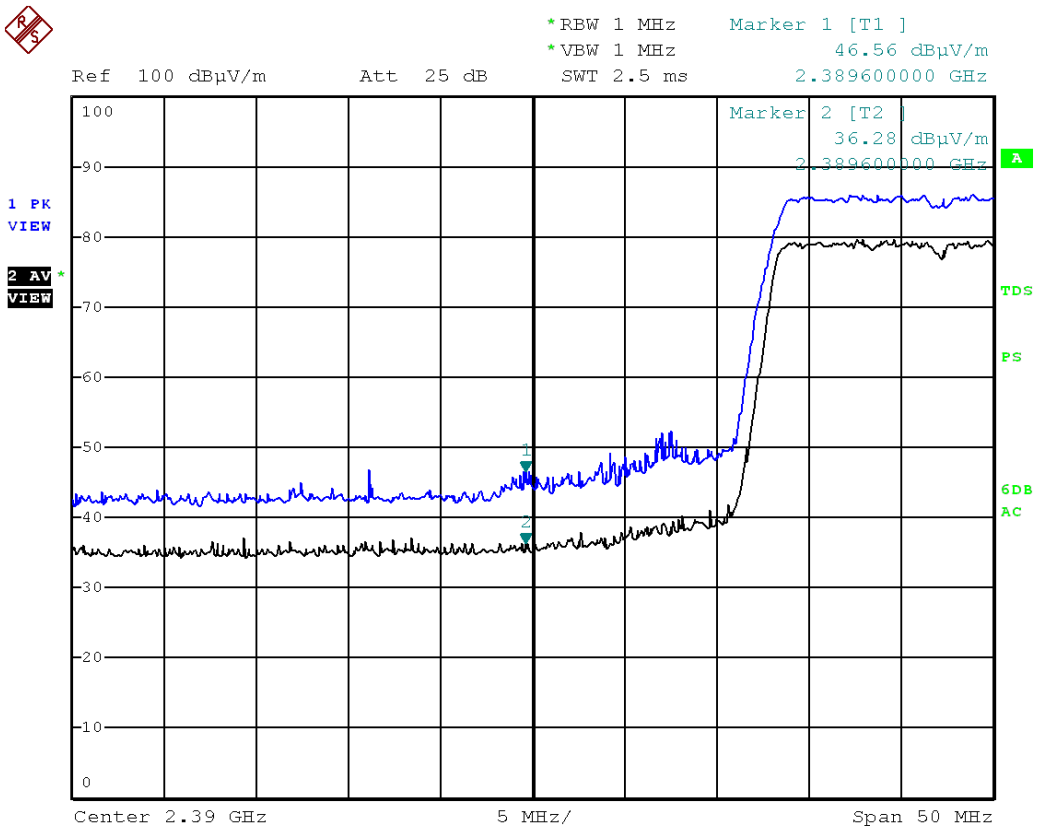
EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	1 Channel (2412 MHz)
MODE	802.11n(ht20)		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
2.3887	46.18	35.52	H	74.00	54.00	27.82	18.48
2.3896	46.56	36.28	V	74.00	54.00	27.44	17.72



802.11n(ht20) Low (Horizontal)

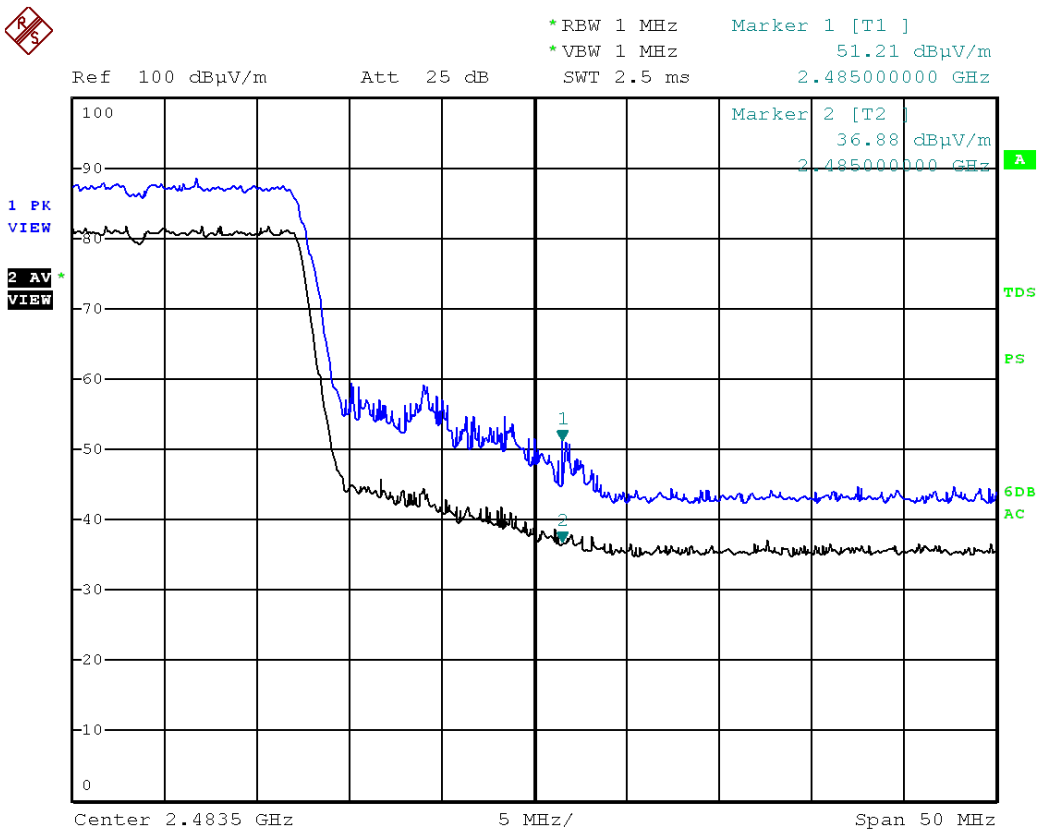


802.11n(ht20) Low (Vertical)

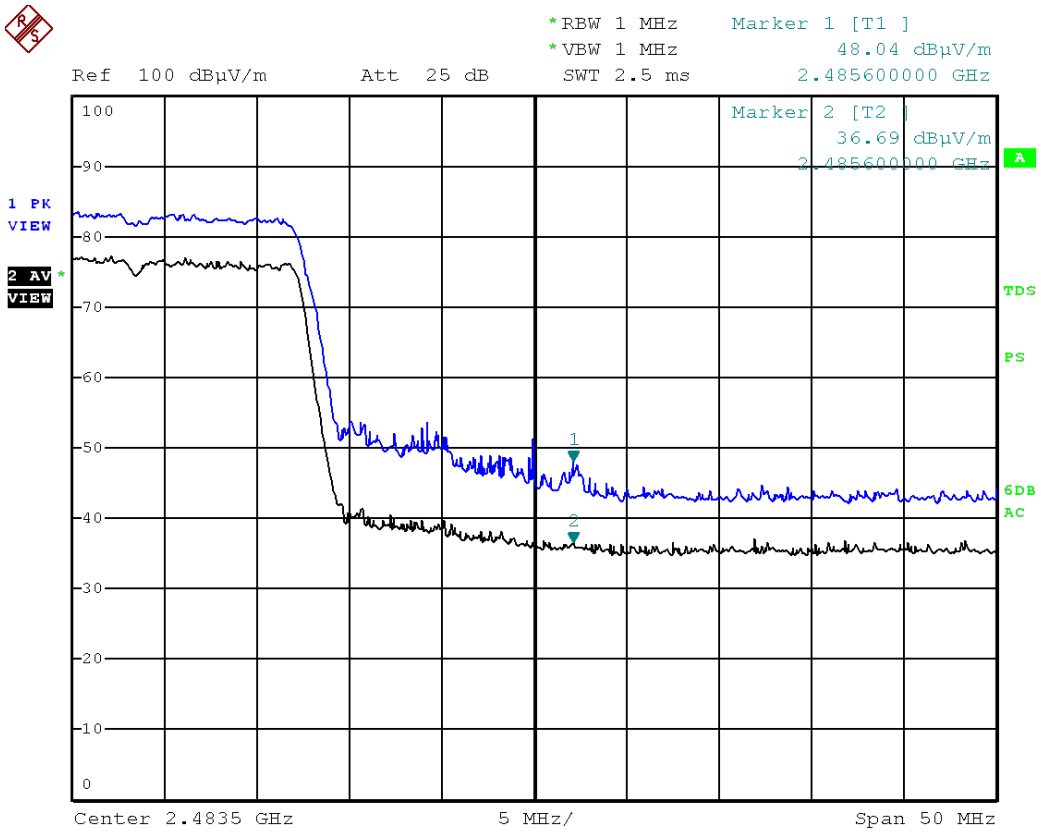
EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	11 Channel (2462 MHz)
MODE	802.11n(ht20)		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
2.4850	51.21	36.88	H	74.00	54.00	22.79	17.12
2.4856	48.04	36.69	V	74.00	54.00	25.96	17.31



802.11n(ht20) High (Horizontal)



802.11n(ht20) High (Vertical)

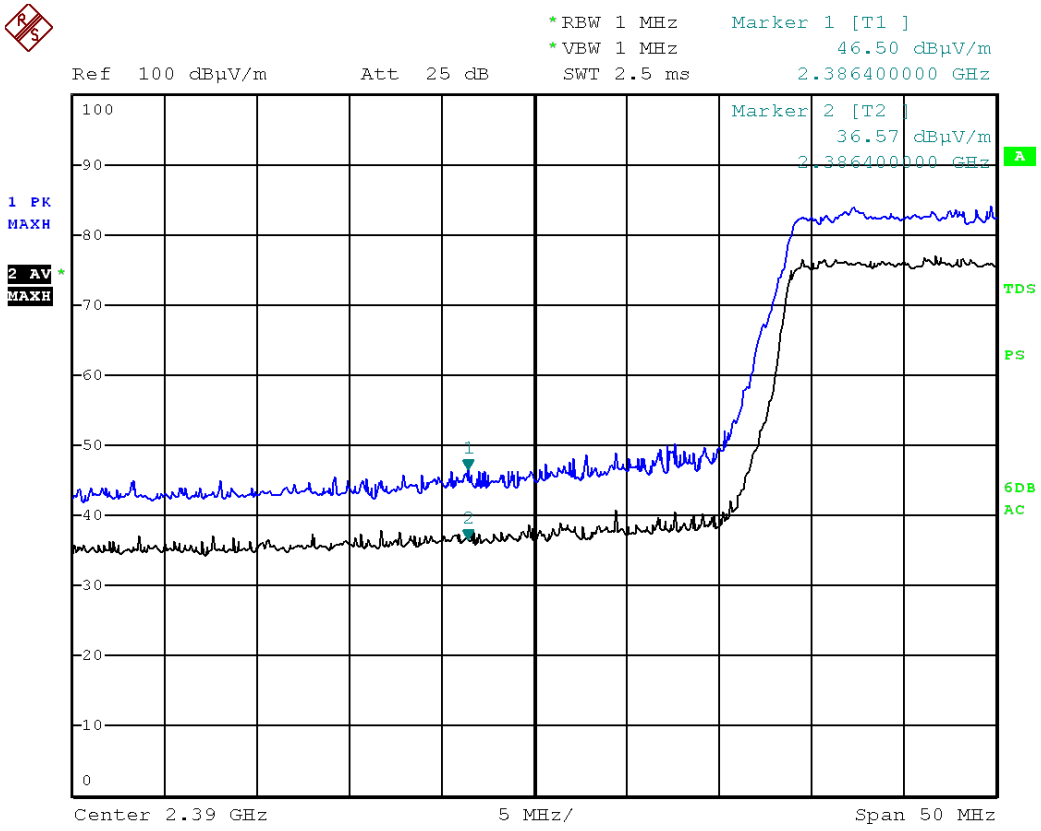
Note : Reading(dBuv) : Measurement Level + Ant Factor + Cable Loss - Amp Gain

● 802.11n(ht40)

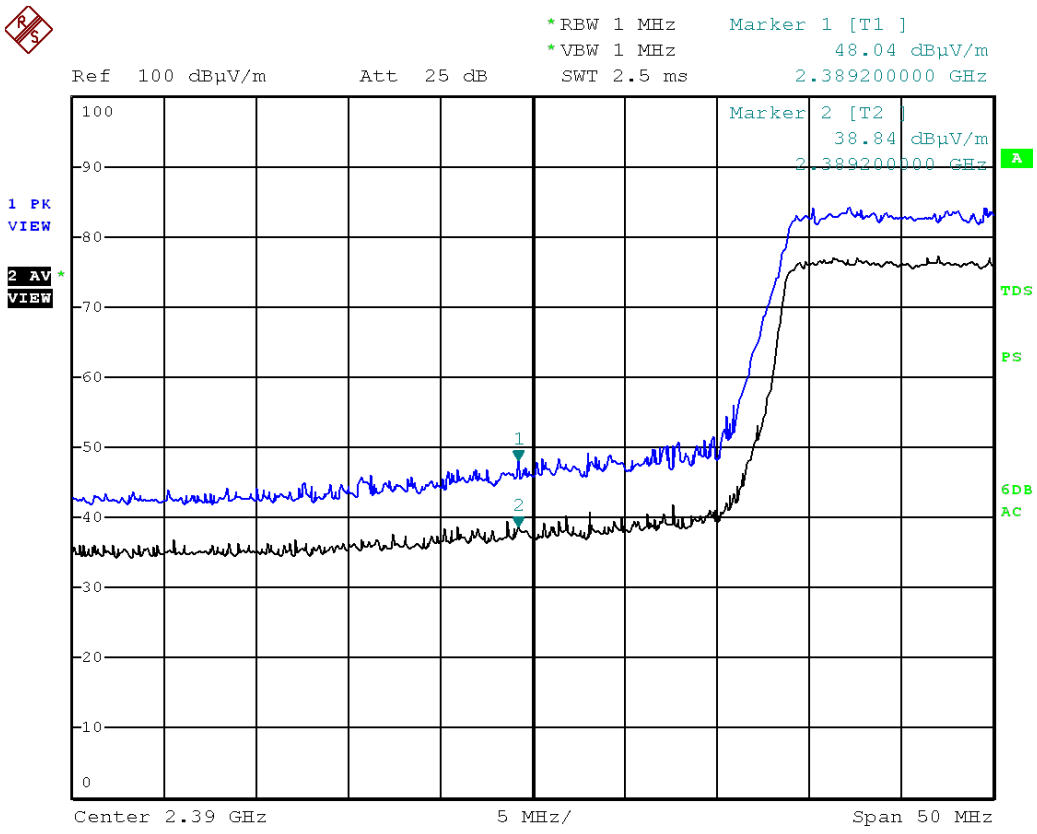
EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	3 Channel (2422 MHz)
MODE	802.11n(ht40)		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
2.3864	46.50	36.57	H	74.00	54.00	27.50	17.43
2.3892	48.04	38.84	V	74.00	54.00	25.96	15.16



802.11n(ht40) Low (Horizontal)

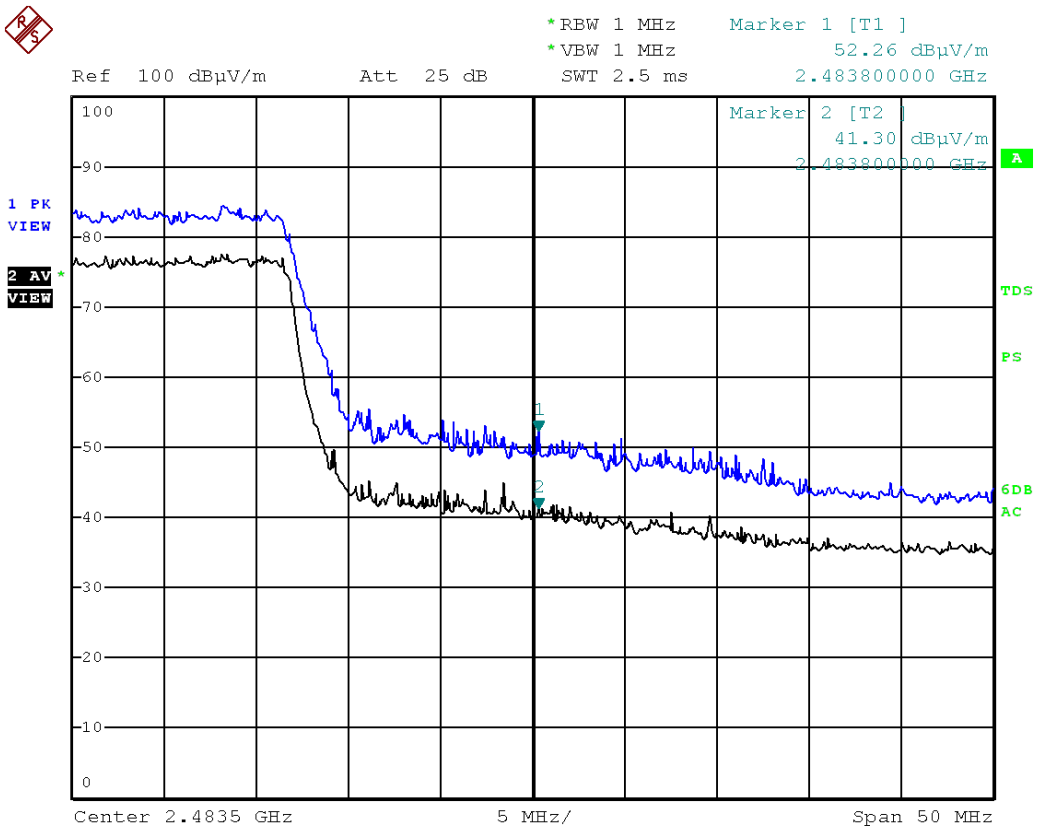


802.11n(ht40) Low (Vertical)

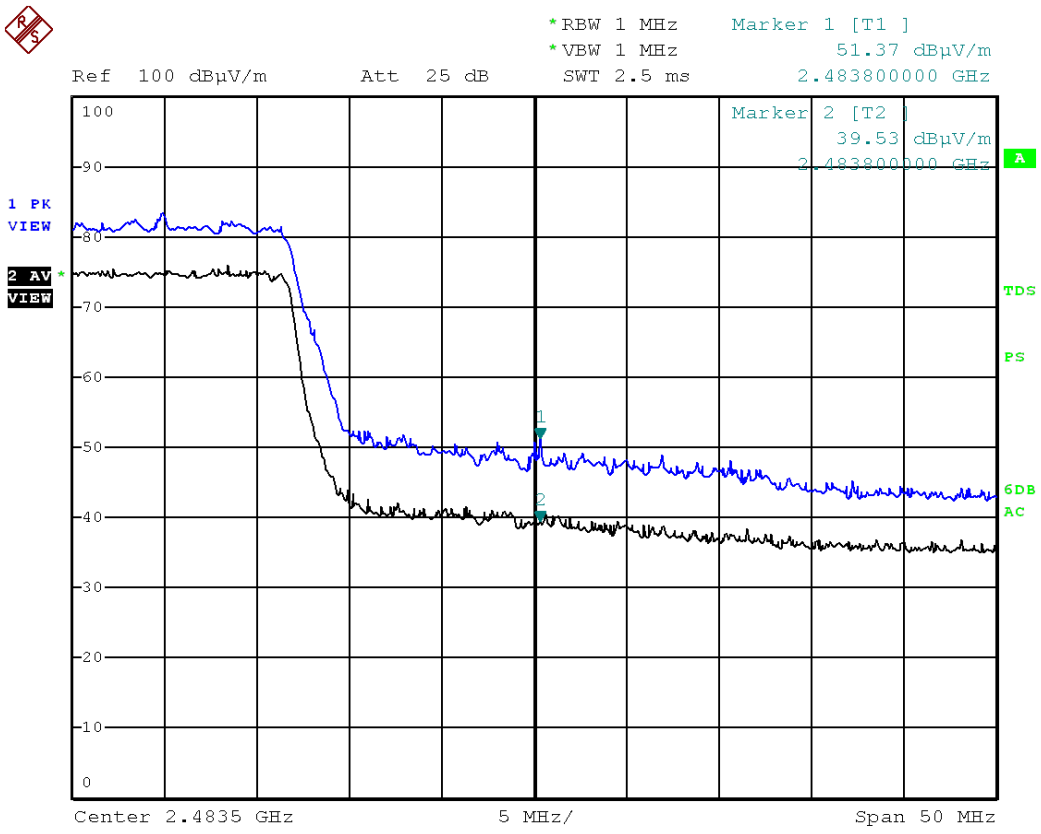
EUT	360FLYBLK	PROBE	Above 1 GHz
POWER	DC 3.7 V	NOTE	9 Channel (2452 MHz)
MODE	802.11n(ht40)		

Test Data

Frequency GHz	Reading dBuV		P	Limit dBuV		Margin dB	
	Peak	AV		Peak	AV	Peak	AV
2.4838	52.26	41.30	V	74.00	54.00	12.05	6.75
2.4838	51.37	39.53	H	74.00	54.00	10.80	5.18



802.11n(ht40) High (Horizontal)



802.11n(ht40) High (Vertical)

Note : Reading(dBuv) : Measurement Level + Ant Factor + Cable Loss - Amp Gain

Antenna requirements

According to FCC 47 CFR 15.203

"an intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached or an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section"

* the antenna of this EUT is a unique(CHIP Antenna).

* the EUT complies with the requirement of 15.203