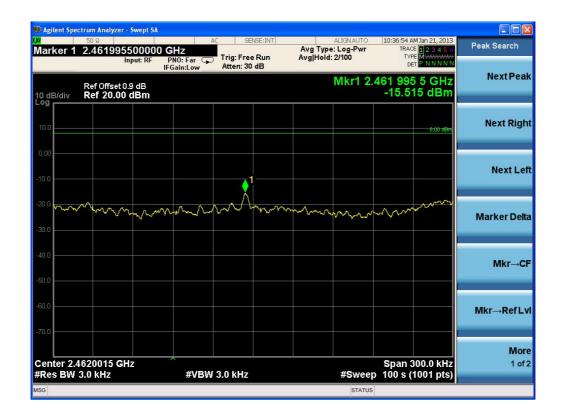


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# 2.1.4 Band - edge

#### **Procedure:**

The bandwidth at 20dB down from the highest inband spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to measure 20 dB down both sides of the intentional emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz VBW = 100 kHz

Span = 50 MHz Detector function = peak

Trace =  $\max$  hold Sweep = auto

#### **Measurement Data: Complies**

- All conducted emission in any 100 kHz bandwidth outside of the spread spectrum band was at least 20dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.

Minimum Standard:	> 20 dBc

See next pages for actual measured spectrum plots.

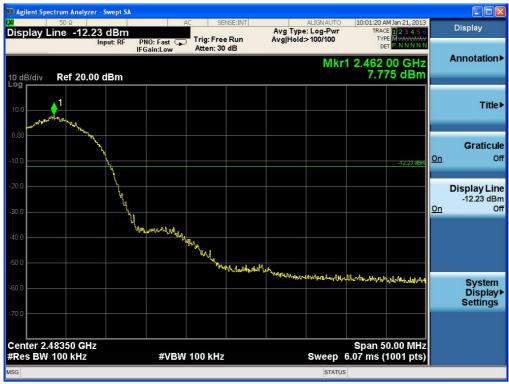
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# 802.11b Band-edge Measurements





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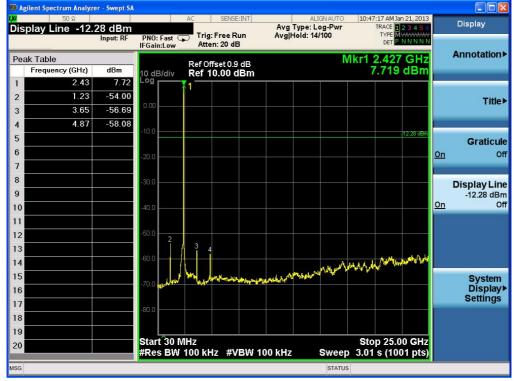


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Band - edge (at 20 dB blow) - Low channel(802.11b) Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic



Band - edge (at 20 dB blow) - Mid channel(802.11b) Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic



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Band – edge (at 20 dB blow) – High channel(802.11b) Frequency Range = 30 MHz  $\sim 10^{th}$  harmonic



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# 802.11q Band-edge Measurements





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Band - edge (at 20 dB blow) - Low channel(802.11g) Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic



Band - edge (at 20 dB blow) - Mid channel(802.11g) Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic



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Band – edge (at 20 dB blow) – High channel(802.11g) Frequency Range = 30 MHz  $\sim 10^{th}$  harmonic



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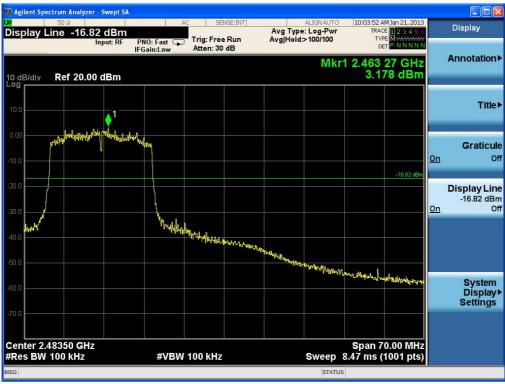
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# 802.11n Band-edge Measurements





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Band - edge (at 20 dB blow) - Low channel(802.11n) Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic



Band - edge (at 20 dB blow) - Mid channel(802.11n) Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic



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Band – edge (at 20 dB blow) – High channel(802.11n) Frequency Range = 30 MHz  $\sim$  10<sup>th</sup> harmonic



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# 2.1.5 Field Strength of Emissions(TX Mode)

#### **Test Location**

oxtimes 10 m SAC (test distance : oxtimes 10 m, oxtimes 3 m)

□ 3 m SAC (test distance : 3 m)

#### **Test Procedures**

- 1) In the frequency range of 9 kHz to 30 MHz, magnetic field is measured with Loop Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- 2) In the frequency rage above 30 MHz, Bi-Log Test Antenna(30 MHz to 1 GHz) and Horn Test Antenna(above 1 GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is carried from 1m to 4m above the ground to determine the maximum value of the field strength. The emissions levels at both horizontal and vertical polarizations should be tested.

# The spectrum analyzer is set to:

Frequency Range = 9 kHz  $\sim$  25 GHz (2.4 GHz 10<sup>th</sup> harmonic) RBW = 1 MHz for f  $\geq$  1 GHz, 100 kHz for f < 1 GHz, 9 kHz for f < 30 MHz VBW  $\geq$  RBW Sweep = auto

#### Limit

#### - 15.209(a)

Frequency(MHz)	Field Strength	Field Strength	Deasurement
r requericy(Mriz)	uV/m@3m	dBuV/m@3m	Distance (meters)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705-30	30	-	30
30-88	100**	40	3
88-216	150**	43.5	3
216-960	200**	46	3
Above 960	500	54	3

<sup>\*\*</sup> Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231 and 15.241.

#### Note:

- 1) For above 1 GHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
- 2) For above 1 GHz, limit field strength of harmonics : 54 dBuV/m@3m (AV) and 74 dBuV/m@3m (PK)

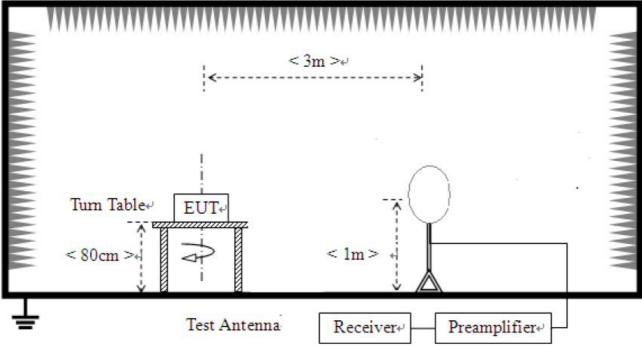
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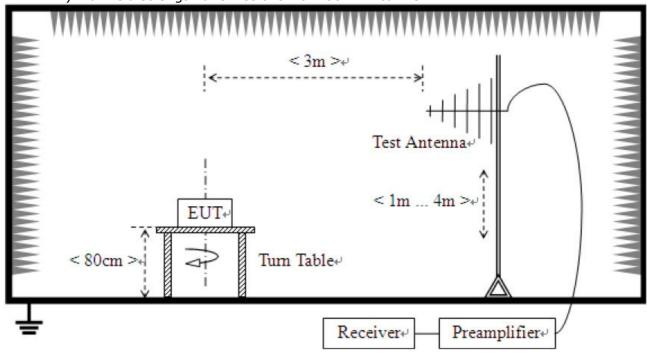
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# **Test Setup:**

1) For field strength of emissions from 9 kHz to 30 MHz



2) For field strength of emissions from 30 MHz to 1 GHz



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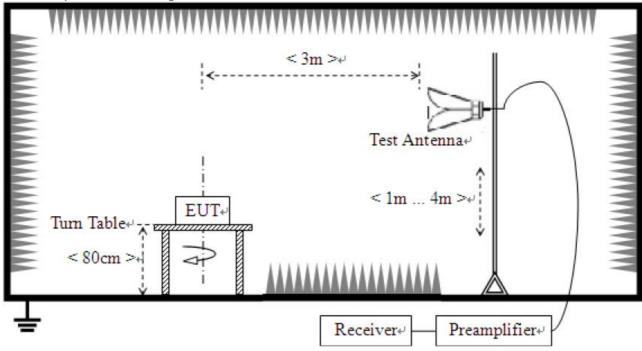
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3) For field strength of emissions above 1 GHz



# Test Results 1) 9 kHz to 30 MHz

EUT	Wi-Fi module	Measurement Detail		
Model	EBX1523P001	Frequency Range	9 kHz – 30 MHz	
Test mode	802.11b(Worst Case)	Detector function	Quasi-Peak	

# The requirements are:

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
-	_	-	See note

#### Note:

The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB)

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#### 2) 30 MHz to 1 GHz

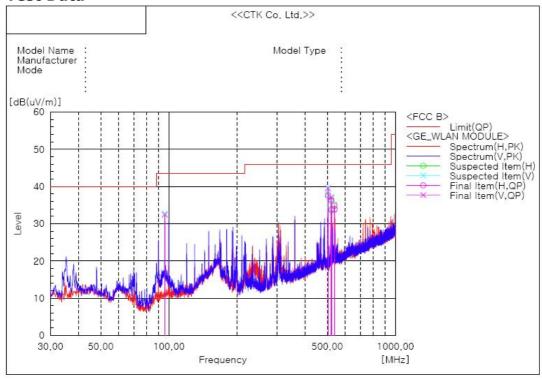
**Test mode: 802.11b** 

EUT	Wi-Fi module	Measurement Detail	
Model	EBX1523P001	Frequency Range	Below 1000MHz
Mode	802.11b(Worst Case)	Detector function	Quasi-Peak

# The requirements are:

- Complies			
Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
32.183	39.4	6.6	Quasi-peak

#### **Test Data**



Final	Resul	t

No.	Frequency	(P)	Reading QP	c,f	Result QP	Limit QP	Margin QP	Height	Angle
	[MHz]		[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]
1	95,960	V	46.4	-14.0	32.4	43.5	11.1	100.0	28.0
2	503,845	V	44.1	-4.7	39.4	46.0	6.6	100.0	0.0
3	503,966	Н	42.2	-4.7	37.5	46.0	8.5	208.0	179.0
4	520,941	V	41.2	-4.2	37.0	46.0	9.0	100.0	28.0
5	521,305	Н	40.4	-4.2	36,2	46.0	9.8	208.0	216.0
6	522,517	Н	37.8	-4.2	33,6	46.0	12.4	208.0	179.0
7	537,916	Н	38.6	-3.8	34.8	46.0	11.2	208.0	216.0
8	539 129	Н	37.5	-3 7	33 8	46 0	12 2	208 0	179 0

#### Remark:

1. The field strength of spurious emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(X axis) and the worst case was recorded.

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#### **Test Results**

EUT	Wi-Fi module	Measurement Detail		
Model	EBX1523P001	Frequency Range	1-25GHz	
Channel	Low Channel	Detector function	Peak	

#### Remarks

We have tested three mode (X, Y, Z). The worst mode (X axis) for final test.

The requirements are:

M Complies

<b>2</b> ••••••			
Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
2386	50.9	3.1	Average

# Test Data - 802.11b

Frequency	Reading [dBuV/m] Pol.		Height	Correction Factor		Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]	
[MHz]	AV / Pe	eak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak
4824.00	31.8 44	.2	V	1.0	32.8	18.4	54.0 74.0	46.2 58.6	7.8 15.4

Test Data - 802.11g

Frequency	Reading [dBuV/m]	Pol.	Height		Correction Factor	Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak
4824.00	29.6 42.2	V	1.0	32.8	18.4	54.0 74.0	44.0 56.6	10.0 17.4

# Test Data - 802.11n

Frequency	Reading [dBuV/m]	Pol.	Height	eight Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV ,	/ Peak	AV ,	/ Peak	AV /	Peak
4824.00	29.8 44.0	V	1.0	32.8	18.4	54.0	74.0	44.2	58.4	9.8	15.6

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# Restricted band edge test data

Measured frequency range: 2310-2390 MHz, 2483.5-2500 MHz

Test data - 802.11b

Frequency	Reading [dBuV/m]	Pol.	Height		Correction Factor	Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak
2320.00	28.8 48.2	Н	1.0	28.6	22.4	54.0 74.0	35.0 54.4	19.0 19.6
2386.00	41.2 54.0	Н	1.0	28.7	22.4	54.0 74.0	47.5 60.3	6.5 13.7

Test Data - 802.11g

Frequency	y Reading [dBuV/m] Pol.		Height	Height Correction Factor		Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]	
[MHz]	AV /	/ Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak
2320.00	27.4	47.7	Н	1.0	28.6	22.4	54.0 74.0	33.6 53.9	20.4 20.1
2386.00	35.3	49.2	Н	1.0	28.7	22.4	54.0 74.0	41.6 55.5	12.4 18.5

Test Data - 802.11n

Frequency	Reading [dBuV/m]	Pol.	Height		Correction Factor	Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV ,	/ Peak	AV ,	/ Peak	AV /	Peak
2320.00	27.8 46.5	Н	1.0	28.6	22.4	54.0	74.0	34.0	52.7	20.0	21.3
2386.00	44.6 60.9	Н	1.0	28.7	22.4	54.0	74.0	50.9	67.2	3.1	6.8

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#### **Test Results**

EUT	Wi-Fi module	Measurement Detail	
Model	EBX1523P001	Frequency Range	1-25GHz
Channel	Mid Channel	Detector function	Peak

#### Remarks

We have tested three mode (X, Y, Z). The worst mode (X axis) for final test.

The requirements are:

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
4874	45.7	8.3	Average

# Test Data - 802.11b

Frequency	Y Reading [dBuV/m]		auency		Pol.	Height	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
[MHz]	AV	/ Peak		[m]	Antenna	Amp. Gain + Cabel	AV /	Peak	AV /	/ Peak	AV /	Peak		
4874.00	31.7	44.5	V	1.0	33.0	19.0	54.0	74.0	45.7	58.5	8.3	15.5		

Test Data - 802.11g

Frequency	Reading [dBuV/m]	Pol.	Height		Correction Factor	Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]	
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak	
4874.00	29.7 42.0	V	1.0	33.0	19.0	54.0 74.0	43.7 56.0	10.3 18.0	

# Test Data - 802.11n

Frequency	Reading [dBuV/m]	Pol.	Height		Correction Factor		Result [dBuV/m]	Margin [dB]	
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak	
4874.00	29.8 42.4	V	1.0	33.0	19.0	54.0 74.0	43.8 56.4	10.2 17.6	

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#### **Test Results**

EUT	Wi-Fi module	Measurement Detail	
Model	EBX1523P001	Frequency Range	1-25GHz
Channel	High Channel	Detector function	Peak

# **Remarks**

We have tested three mode (X, Y, Z). The worst mode (X axis) for final test.

The requirements are:

□ Complies

	Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
ŀ	2488	51.6	2.4	Average

#### Test Data - 802.11b

Frequency	Reading [dBuV/m]		auency		Pol.	Height		Correction Factor	Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
[MHz]	AV ,	/ Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak		
4924.00	30.5	43.3	V	1.0	33.0	19.0	54.0 74.0	44.5 57.3	9.5 16.7		

Test Data - 802.11g

Frequency	Reading [dBuV/m]	Pol.	Height	Correction Factor		Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak
4924.00	29.5 42.0	V	1.0	33.0	19.0	54.0 74.0	43.5 56.0	10.5 18.0

# Test Data - 802.11n

Frequency	Reading [dBuV/m]	Pol.	Height		Correction Factor	Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak
4924.00	29.5 42.3	V	1.0	33.0	19.0	54.0 74.0	43.5 56.3	10.5 17.7

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# Restricted band edge test data

Measured frequency range: 2310-2390 MHz, 2483.5-2500 MHz

Test data - 802.11b

Frequency	Reading [dBuV/m]	Pol.	Height	Correction Factor		Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak
2488.00	38.7 51.1	Н	1.0	28.8	22.1	54.0 74.0	45.4 57.8	8.6 16.2

Test Data - 802.11g

Frequency	Read [dBu	•	Pol.	Height		Correction Factor	Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]
[MHz]	AV ,	/ Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak
2488.00	44.9	60.9	Н	1.0	28.8	22.1	54.0 74.0	51.6 67.6	2.4 6.4

Test Data - 802.11n

Frequency	Reading [dBuV/m]	Pol.	Height		Correction Factor	Limits [dBuV/m]	Result [dBuV/m]	Margin [dB]	
[MHz]	AV / Peak		[m]	Antenna	Amp. Gain + Cabel	AV / Peak	AV / Peak	AV / Peak	
2488.00	44.5 60.2	Н	1.0	28.8	22.1	54.0 74.0	51.2 66.9	2.8 7.1	

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# 2.1.6 Field Strength of Emissions(RX Mode)

#### **Test Location**

☐ Testing was performed at a test distance of 3 meter SAC

#### **Test Procedures**

The height of the measuring antenna was varied between 1 to 4 m and the table was rotated a full revolution in order to obtain maximum values of the electric field intensity. The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

#### The spectrum analyzer is set to:

Center frequency = the worst channel

Frequency Range = 30 MHz ~ 10<sup>th</sup> harmonic

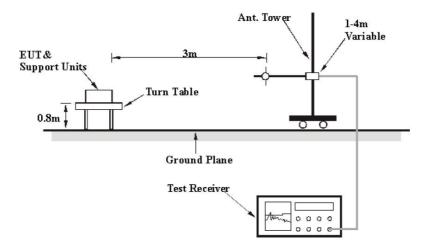
 $RBW = 120 \text{ kHz} (30 \text{ MHz} \sim 1 \text{ GHz})$ VBW ≥ RBW

= 1 MHz (1 GHz  $\sim 10^{th}$  harmonic)

Span = 100 MHz

Detector function = Quasi-peak

Trace = max hold



#### Limit

#### - 15.209(a)

Frequency(MHz)	Field Strength uV/m@3m	Field Strength dBuV/m@3m
30-88	100**	40
88-216	150**	43.5
216-960	200**	46
Above 960	500	54

<sup>\*\*</sup> Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231 and 15.241.

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#### **Test Results**

Test mode: 802.11b

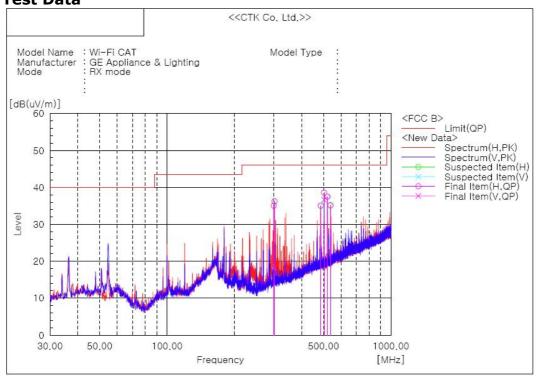
EUT	Wi-Fi module	Measurement Detail	
Model	EBX1523P001	Frequency Range	Below 1000MHz
Mode	802.11b(Worst Case)	Detector function	Quasi-Peak

#### The requirements are:

Frequency	Measured Data	Margin	Remark
(MHz)	(dBuV/m)	(dB)	
502.996	38.6	7.4	Quasi-peak

# **Test Data**

Final Result



No.	Frequency	(P)	Reading QP	c.f	Result QP	Limit QP	Margin QP	Height	Angle
	[MHz]		[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]
1	300.024	Н	45.3	-10.2	35.1	46.0	10.9	100.0	191.0
2	302.328	Н	46.4	-10.1	36.3	46.0	9.7	100.0	191.0
3	486.142	Н	40.0	-4.9	35.1	46.0	10.9	208.0	0.0
4	502.996	Н	43.3	-4.7	38.6	46.0	7.4	100.0	191.0
5	503.239	V	41.4	-4.7	36.7	46.0	9.3	100.0	144.0
6	519.971	Н	41.7	-4.2	37.5	46.0	8.5	309.0	290.0
7	521.305	Н	41.7	-4.2	37.5	46.0	8.5	309.0	290.0
8	537.068	Н	39.0	-3.8	35.2	46.0	10.8	309.0	290.0

#### Remark:

1. The field strength of spurious emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(X axis) and the worst case was recorded.

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# **Test Results**

EUT	Wi-Fi module	Measurement Detail	
Model	EBX1523P001	Frequency Range	1-25GHz
Test mode	Receive mode	Detector function	Peak

# The requirements are:

□ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
No emissions	were detected at a	level greater than	20dB below limit.

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# 2.1.7 AC Conducted Emissions

#### **Test Location**

Shielded Room

# **Frequency Range of Measurement**

150 kHz to 30 MHz

#### **Instrument Settings**

IF Band Width: 9 kHz

#### **Test Procedures**

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

#### Limit

#### - 15.207(a)

Frequency	Conducted Limit (dBuV)				
(MHz)	Quasi-peak	Average			
0.15 ~ 0.5	66 to 56*	56 to 46*			
0.5 ~ 5	56	46			
5 ~ 30	60	50			

<sup>\*</sup> Decreases with the logarithm of the frequency.

#### **Test Results**

The requirements are:

#### **Test mode: TX operating (802.11b, Middle Channel)**

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
0.5325	37.9	8.1	Average

#### Test mode: RX operating (802.11b, Middle Channel)

Frequency	Measured Data	Margin	Remark
(MHz)	(dBuV/m)	(dB)	
0.5280	36.6	9.4	Average

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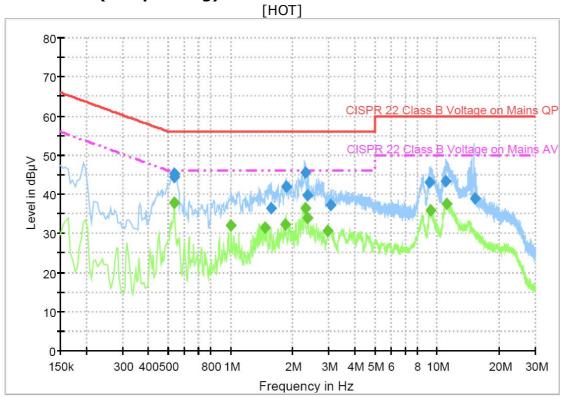
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# **Test Data (TX operating)**



#### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.532500	44.5	1000.0	9.000	On	L1	10.2	11.5	56.0
0.532500	45.4	1000.0	9.000	On	L1	10.2	10.6	56.0
1.567500	36.5	1000.0	9.000	On	L1	9.9	19.5	56.0
1.855500	41.8	1000.0	9.000	On	L1	9.9	14.2	56.0
2.296500	45.5	1000.0	9.000	On	L1	9.9	10.5	56.0
2.359500	39.6	1000.0	9.000	On	L1	9.9	16.4	56.0
3.066000	37.1	1000.0	9.000	On	L1	9.8	18.9	56.0
9.258000	43.0	1000.0	9.000	On	L1	9.8	17.0	60.0
11.031000	43.3	1000.0	9.000	On	L1	9.9	16.7	60.0
15.220500	38.9	1000.0	9.000	On	L1	9.9	21.1	60.0

# **Final Result 2**

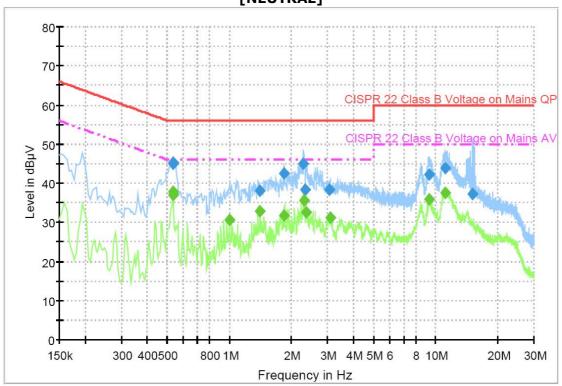
i mai recare 2											
Frequency	Average	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit			
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)			
		(ms)				(a					
0.532500	37.9	1000.0	9.000	On	L1	10.2	8.1	46.0			
0.532500	37.9	1000.0	9.000	On	L1	10.2	8.1	46.0			
1.005000	31.9	1000.0	9.000	On	L1	9.9	14.1	46.0			
1.473000	31.5	1000.0	9.000	On	L1	9.9	14.5	46.0			
1.851000	32.1	1000.0	9.000	On	L1	9.9	13.9	46.0			
2.296500	36.5	1000.0	9.000	On	L1	9.9	9.5	46.0			
2.359500	33.9	1000.0	9.000	On	L1	9.9	12.1	46.0			
2.971500	30.7	1000.0	9.000	On	L1	9.8	15.3	46.0			
9.262500	36.0	1000.0	9.000	On	L1	9.8	14.0	50.0			
11.161500	37.6	1000.0	9.000	On	L1	9.9	12.5	50.0			

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# **Final Result 1**

I IIIai IX	i iidi Kesait i											
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit				
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)				
		(ms)	22 32									
0.532500	45.0	1000.0	9.000	On	N	10.2	11.0	56.0				
0.532500	45.2	1000.0	9.000	On	N	10.2	10.8	56.0				
1.405500	38.0	1000.0	9.000	On	N	9.9	18.0	56.0				
1.851000	42.4	1000.0	9.000	On	N	9.9	13.6	56.0				
2.292000	44.9	1000.0	9.000	On	N	9.9	11.1	56.0				
2.346000	38.3	1000.0	9.000	On	N	9.9	17.7	56.0				
3.070500	38.2	1000.0	9.000	On	N	9.9	17.8	56.0				
9.352500	42.2	1000.0	9.000	On	N	9.8	17.8	60.0				
11.193000	43.9	1000.0	9.000	On	N	9.9	16.1	60.0				
15.189000	37.3	1000.0	9.000	On	N	9.9	22.7	60.0				

# **Final Result 2**

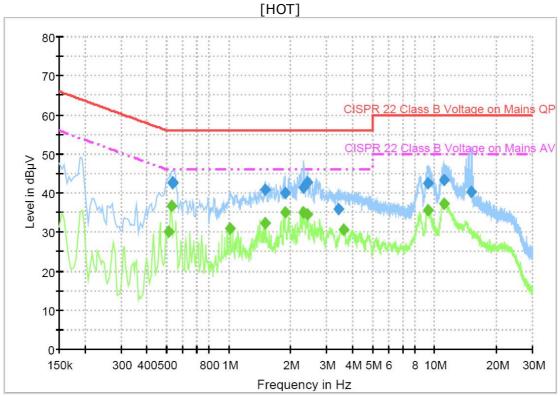
Frequency (MHz)	Average (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.532500	37.0	(ms) 1000.0	9,000	On	N	10.2	9.0	46.0
0.532500	37.9	1000.0	9.000	On	N	10.2	8.1	46.0
						0.0000000000000000000000000000000000000		
1.005000	30.7	1000.0	9.000	On	N	10.0	15.3	46.0
1.410000	32.8	1000.0	9.000	On	N	9.9	13.2	46.0
1.851000	31.7	1000.0	9.000	On	N	9.9	14.3	46.0
2.296500	35.5	1000.0	9.000	On	N	9.9	10.5	46.0
2.359500	32.7	1000.0	9.000	On	N	9.9	13.3	46.0
3.075000	31.1	1000.0	9.000	On	N	9.9	14.9	46.0
9.280500	35.8	1000.0	9.000	On	N	9.8	14.2	50.0
11.130000	37.5	1000.0	9.000	On	N	9.9	12.5	50.0

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# **Test Data (RX operating)**



#### **Final Result 1**

Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)		35-0-0-0-0-0	(dB)	(dB)	(dBµV)
		(ms)						
0.532500	42.7	1000.0	9.000	On	L1	10.2	13.3	56.0
0.537000	42.4	1000.0	9.000	On	L1	10.1	13.6	56.0
1.509000	40.8	1000.0	9.000	On	L1	9.9	15.2	56.0
1.878000	39.9	1000.0	9.000	On	L1	9.9	16.1	56.0
2.301000	41.5	1000.0	9.000	On	L1	9.9	14.5	56.0
2.409000	42.6	1000.0	9.000	On	L1	9.9	13.4	56.0
3.403500	36.0	1000.0	9.000	On	L1	9.8	20.0	56.0
9.303000	42.6	1000.0	9.000	On	L1	9.8	17.4	60.0
11.166000	43.3	1000.0	9.000	On	L1	9.9	16.7	60.
15.094500	40.3	1000.0	9.000	On	L1	9.9	19.7	60.

# Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
(,	(4241)	(ms)	(2)			(4.2)	(42)	(4.5/4.7)
0.510000	30.0	1000.0	9.000	On	L1	10.2	16.0	46.0
0.528000	36.6	1000.0	9.000	On	L1	10.2	9.4	46.0
1.014000	30.8	1000.0	9.000	On	L1	9.9	15.2	46.0
1.509000	32.4	1000.0	9.000	On	L1	9.9	13.6	46.0
1.882500	35.0	1000.0	9.000	On	L1	9.9	11.0	46.0
2.314500	35.0	1000.0	9.000	On	L1	9.9	11.0	46.0
2.404500	34.5	1000.0	9.000	On	L1	9.9	11.5	46.0
3.606000	30.5	1000.0	9.000	On	L1	9.8	15.5	46.0
9.348000	35.6	1000.0	9.000	On	L1	9.8	14.4	50.0
11.161500	37.2	1000.0	9.000	On	L1	9.9	12.8	50.0

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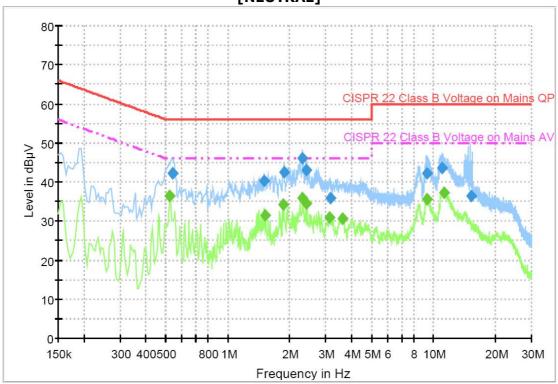
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# **Final Result 1**

marresult i											
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)			
(1411 12)	(αΒμν)	(ms)	(KI IZ)			(ub)	(ub)	(αΒμν)			
0.541500	42.1	1000.0	9.000	On	N	10.2	13.9	56.0			
0.541500	42.2	1000.0	9.000	On	N	10.2	13.8	56.0			
1.513500	40.3	1000.0	9.000	On	N	9.9	15.7	56.0			
1.882500	42.6	1000.0	9.000	On	N	9.9	13.4	56.0			
2.314500	46.0	1000.0	9.000	On	N	9.9	10.0	56.0			
2.404500	43.1	1000.0	9.000	On	N	9.9	12.9	56.0			
3.147000	35.9	1000.0	9.000	On	N	9.9	20.1	56.0			
9.339000	42.3	1000.0	9.000	On	N	9.8	17.7	60.0			
11.035500	43.5	1000.0	9.000	On	N	9.9	16.5	60.0			
15.198000	36.5	1000.0	9.000	On	N	9.9	23.5	60.0			

# **Final Result 2**

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.523500	36.5	1000.0	9.000	On	N	10.2	9,5	46.0
0.523500	36.3	1000.0	9.000	On	N	10.2	9.7	46.0
1.518000	31.6	1000.0	9.000	On	N	9.9	14.4	46.0
1.855500	34.1	1000.0	9.000	On	N	9.9	11.9	46.0
2.314500	35.8	1000.0	9.000	On	N	9.9	10.2	46.0
2.404500	34.6	1000.0	9.000	On	N	9.9	11.4	46.0
3.120000	31.0	1000.0	9.000	On	N	9.9	15.0	46.0
3.610500	30.6	1000.0	9.000	On	N	9.8	15.4	46.0
9.262500	35.7	1000.0	9.000	On	N	9.8	14.3	50.0
11.238000	37.1	1000.0	9.000	On	N	9.9	12.9	50.0

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# **APPENDIX A – Test Equipment Used For Tests**

	Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
1	Signal Analyzer	Agilent	N9020A	MY48011598	2013-11-08
2	Spectrum Analyzer	Rohde & Schwarz	FSP-30	100994	2013-11-18
3	EMI Test Receiver	Rohde & Schwarz	ESCI7	100814	2013-12-15
4	EMI Test Receiver	Rohde & Schwarz	ESCI3	100032	2014-02-04
5	EMI Test Receiver	Rohde & Schwarz	ESU40	100336	2013-06-29
6	Trilog Broadband Antenna	SCHWARZBECK	VULB 9161 SE	100203	2014-06-11
7	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-125	2014-06-06
8	Horn Antenna	ETS-Lindgren	3115	00078894	2013-03-22
9	Horn Antenna	ETS-Lindgren	3115	00078895	2013-03-22
10	EPM Series Power Meter	HP	E4418A	GB38272734	2013-11-08
11	Power Sensor	HP	8487A	3318A03524	2013-07-10
12	SYNTHESIZED SWEEPER	HP	8341B	2819A01563	2013-11-08
13	ESG-D Series Signal Generator	Agilent	E4432B	US40054094	2013-11-08
14	6dB Attenuator	Rohde & Schwarz	DNF	272.4110.50	2013-11-09
15	Attenuator	HP	8494A	3308A33351	2013-11-09
16	Attenuator	BIRD	1000-WA-MFN- 30	236	2013-11-09
17	OPT H64 AMPLIFIER	HP	8447F	3113A06814	2013-03-27
18	PREAMPLIFIER	Agilent	8449B	3008A02307	2013-11-09
19	AMPLIFIER	Sonoma Instrument Co.	310	291721	2013-03-27
20	LISN	Rohde & Schwarz	ENV216	101235	2013-08-18
21	LISN	Rohde & Schwarz	ENV216	101236	2013-08-06
22	Temp&Humi Chamber	Kunpoong	JT-TH-556-1	9QE5-002	2014-01-16
23	DC POWER SUPPLY	Agilent	E3632A	MY40011638	2013-11-09
24	Band Reject Filter	Wainwright Instruments GmbH	WRCGV 2400/2483- 2375/2505- 50/10EE	2	2013-09-11

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