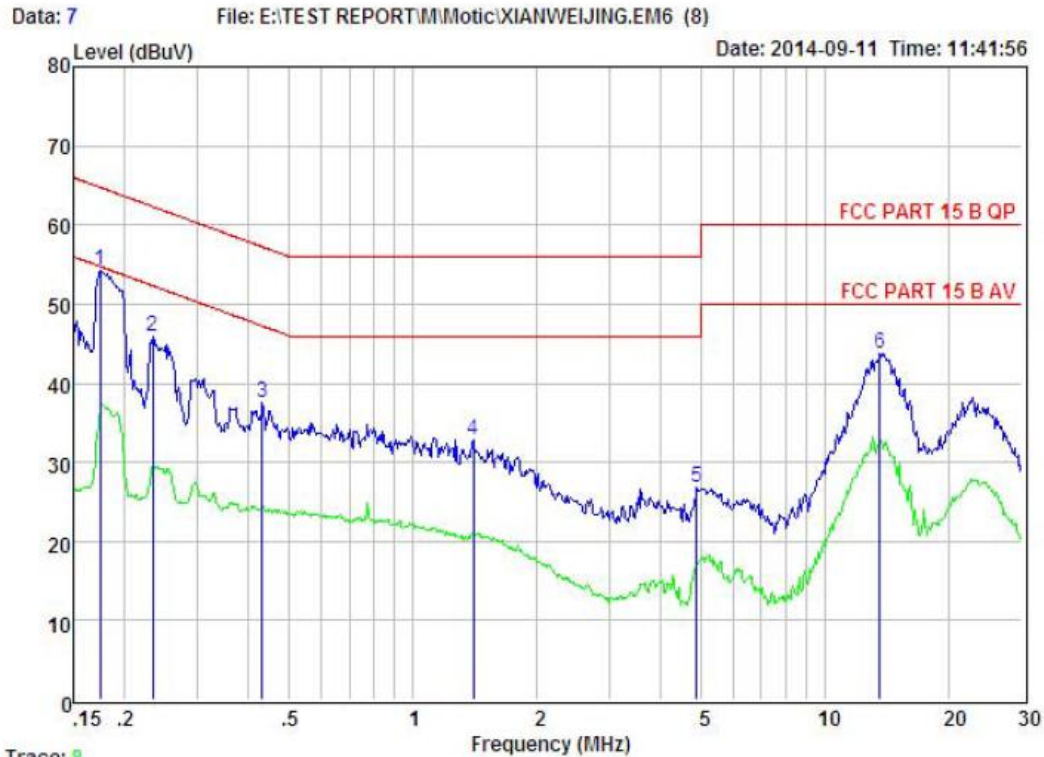




Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
Tel: 4006786199 Fax: +86-755-26736857
Website: <http://www.cessz.com> Email: Service@cessz.com



Condition : FCC PART 15 B QP POL: NEUTRAL Temp:24 °C Hum:56 %
EUT :
Model No : Stemi 305 Cam
Test Mode :
Power : AC 120V/60Hz
Test Engineer:
Remark :

Item	Freq MHz	Read dBuV	LISN Factor dB	Preamp Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	0.174	44.36	0.03	-9.72	0.10	54.21	64.77	-10.56	Peak
2	0.234	36.12	0.03	-9.72	0.10	45.97	62.30	-16.33	Peak
3	0.431	27.66	0.03	-9.72	0.10	37.51	57.24	-19.73	Peak
4	1.403	23.02	0.05	-9.71	0.10	32.88	56.00	-23.12	Peak
5	4.874	16.86	0.10	-9.68	0.12	26.76	56.00	-29.24	Peak
6	13.551	33.97	0.23	-9.42	0.23	43.85	60.00	-16.15	Peak

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

7 Conducted Maximum Output Power

7.1 Test limit

Please refer section 15.247.

Regulation 15.247(b) The limit of Maximum Peak Output Power Measurement is 1W(30dBm)

7.2 Test Procedure

Details see the KDB558074 Meas Guidance V03

7.2.1 Place the EUT on the table and set it in transmitting mode.

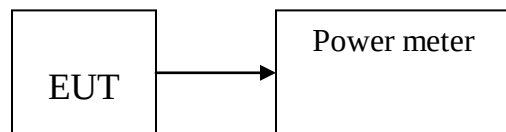
7.2.2 Connected the EUT's antenna port to peak power meter by 20dB attenuator.

7.2.3 Measure out each mode and each bands peak output power of EUT.

Note: The cable loss and attenuator loss were offset into measure device as amplitude offset.

Details see the KDB558074 DTS Meas Guidance V03

7.3 Test Setup



7.4 Test Results

PASS

Detailed information please see the following page.

EUT: Stereo Microscope with integrated WIFI Camera			M/N: Stemi 305 Cam	
Test date: 2014-07-30		Test site: RF site		Tested by: Simple Guan
Mode	Frequency (MHz)	PK Output power (dBm)	Limit (dBm)	Margin (dB)
IEEE 802.11 b	CH1: 2412	9.44	30	20.56
	CH6: 2437	9.42	30	20.58
	CH11: 2462	9.37	30	20.63
IEEE 802.11 g	CH1: 2412	9.18	30	20.82
	CH6: 2437	9.34	30	20.66
	CH11: 2462	9.32	30	20.68
IEEE 802.11 n/HT20 with 2.4G	CH1: 2412	9.23	30	20.77
	CH6: 2437	9.32	30	20.68
	CH11: 2462	9.36	30	20.64
IEEE 802.11 n/HT40 with 2.4G	CH1: 2422	9.29	30	20.71
	CH4: 2437	9.36	30	20.64
	CH7: 2452	9.18	30	20.82
Conclusion: PASS				

8 PEAK POWER SPECTRAL DENSITY

8.1 Test limit

8.1.1 Please refer section 15.247.

8.1.2 For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

8.1.3 The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

8.2 Method of measurement

Details see the KDB558074 DTS Meas Guidance V03

8.2.1 Place the EUT on the table and set it in transmitting mode.

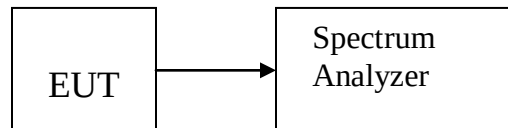
8.2.2 Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

8.2.3 Set the spectrum analyzer as RBW = 3kHz, VBW = 10kHz, span=5-30%EBW, detail see the test plot.

8.2.4 Record the max reading.

8.2.5 Repeat the above procedure until the measurements for all frequencies are completed.

8.3 Test Setup



8.4 Test Results

PASS.

Detailed information please see the following page.

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limit (dBm)	Result
IEEE 802.11b:				
Low	2412	-6.668	8	PASS
Mid	2437	-6.688	8	PASS
High	2462	-4.604	8	PASS
IEEE 802.11g:				
Low	2412	-11.820	8	PASS
Mid	2437	-10.277	8	PASS
High	2462	-11.838	8	PASS
IEEE 802.11n/HT20 with 2.4G:				
Low	2412	-10.635	8	PASS
Mid	2437	-9.094	8	PASS
High	2462	-12.602	8	PASS
IEEE 802.11n/HT40 with 2.4G:				
Low	2422	-17.954	8	PASS
Mid	2437	-16.105	8	PASS
High	2452	-16.624	8	PASS

IEEE 802.11b:
CH Low :



CH Mid :

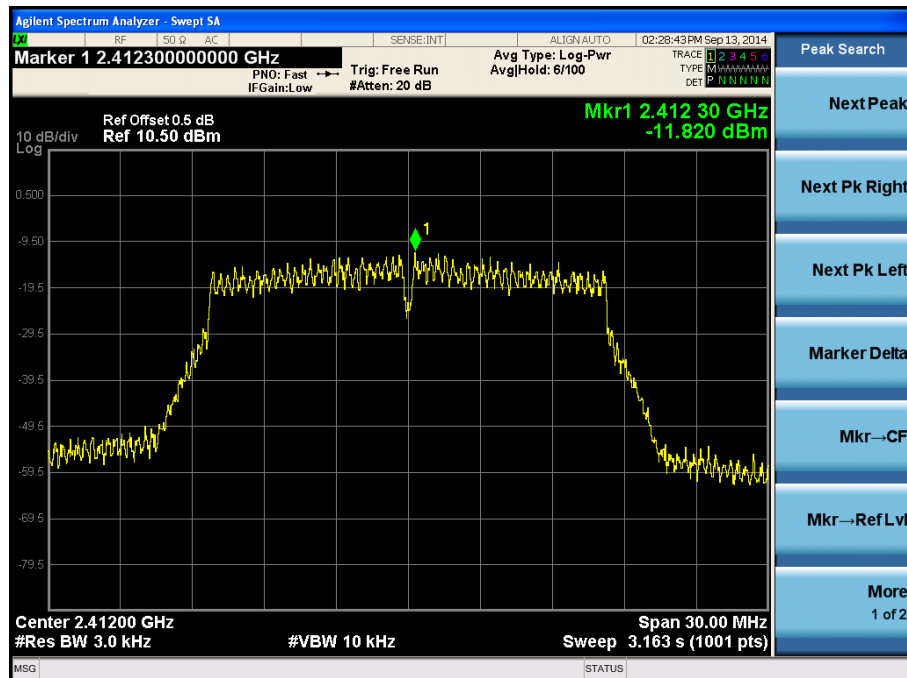


CH High :

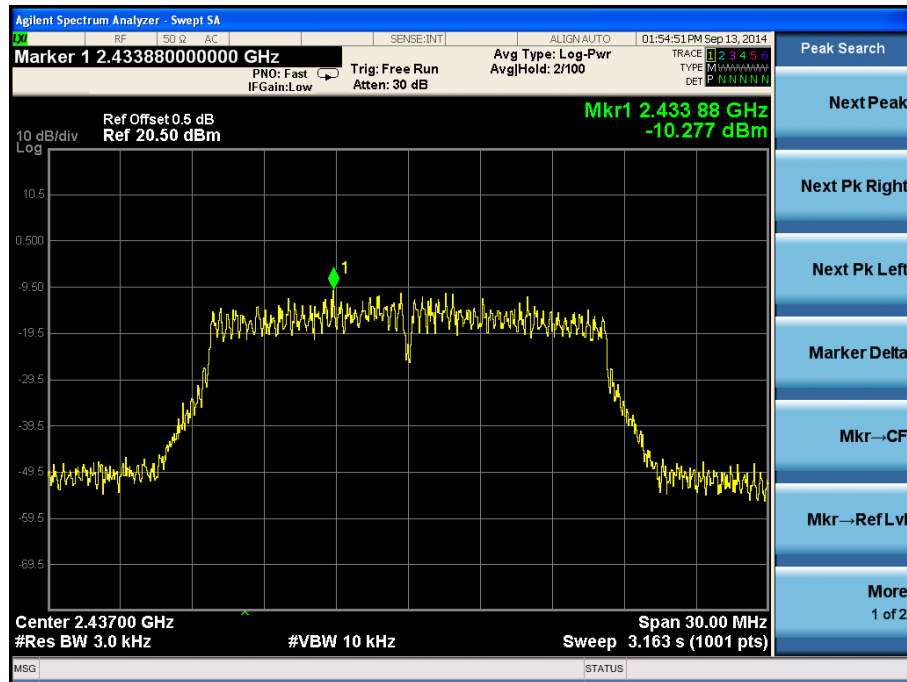


IEEE 802.11g:

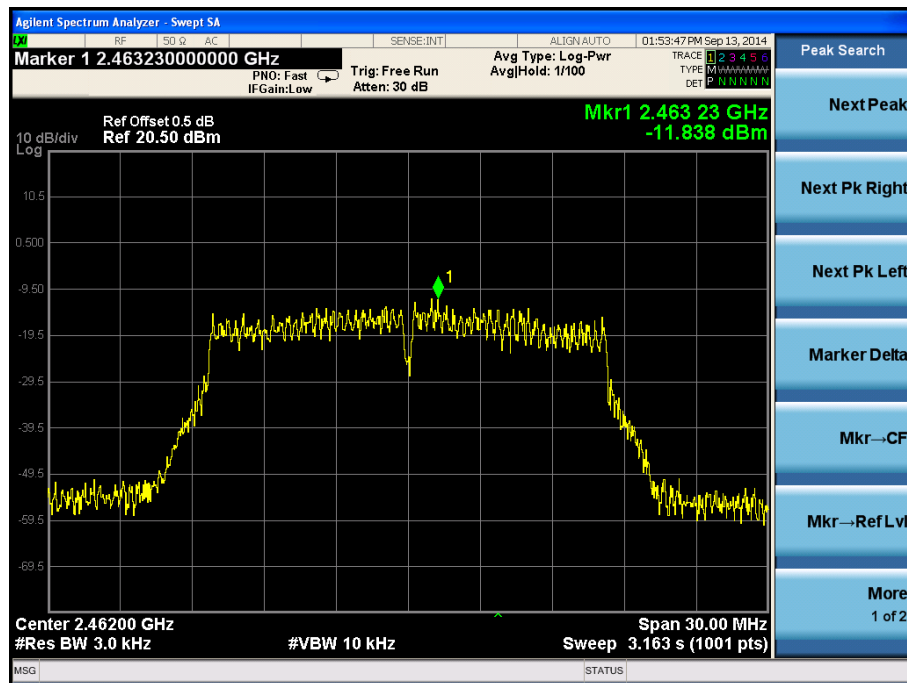
CH Low :



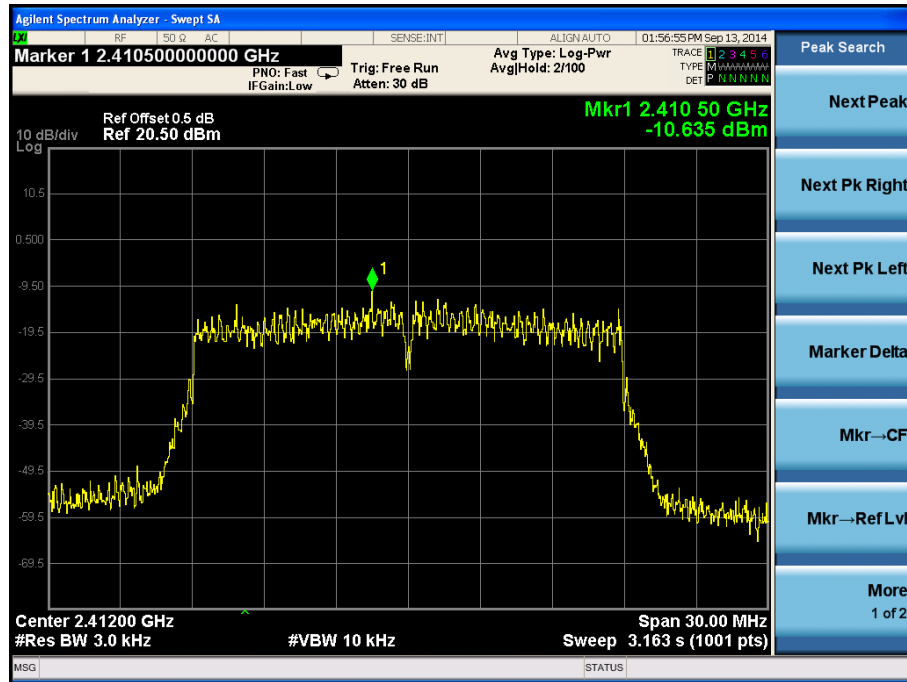
CH Mid :



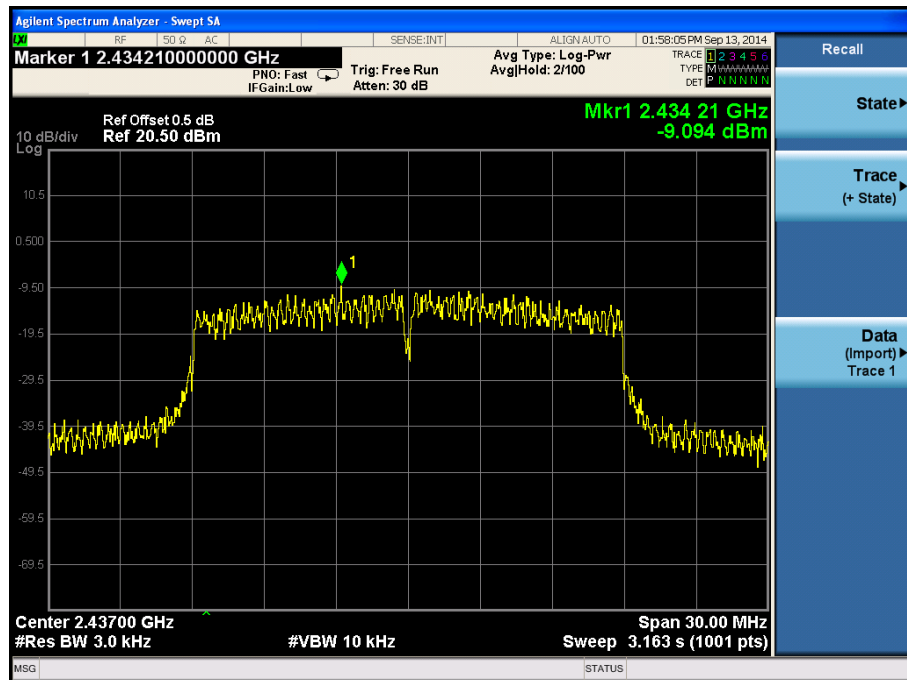
CH High :



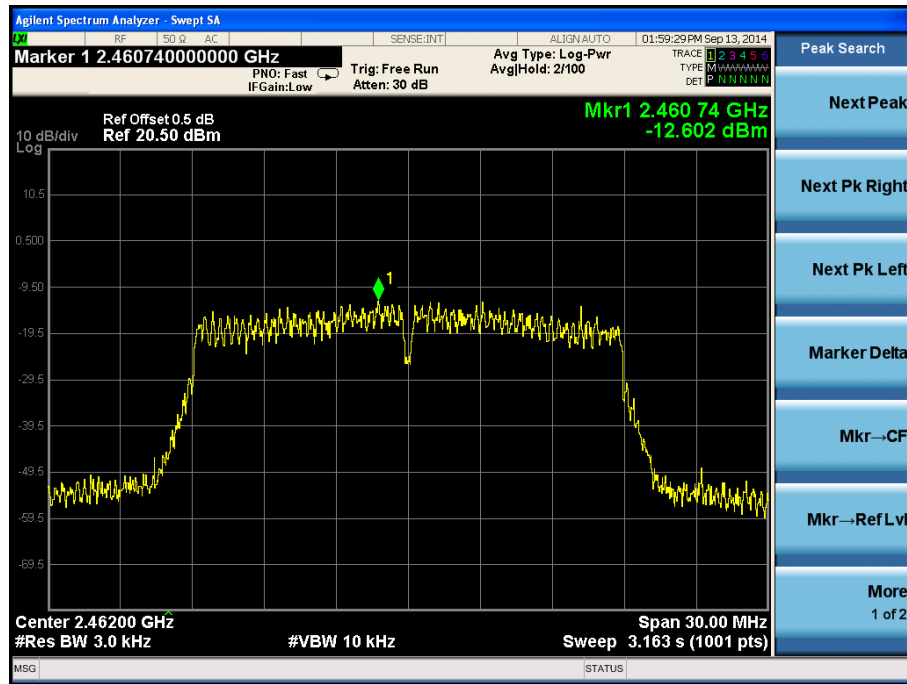
IEEE 802.11n/HT20 with 2.4G:
CH Low :



CH Mid :

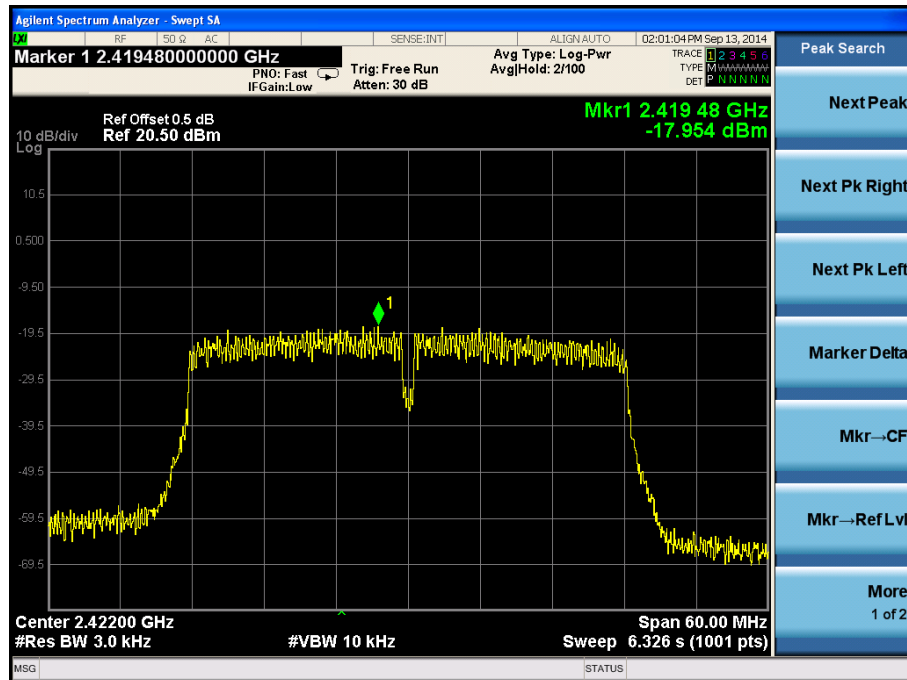


CH High :

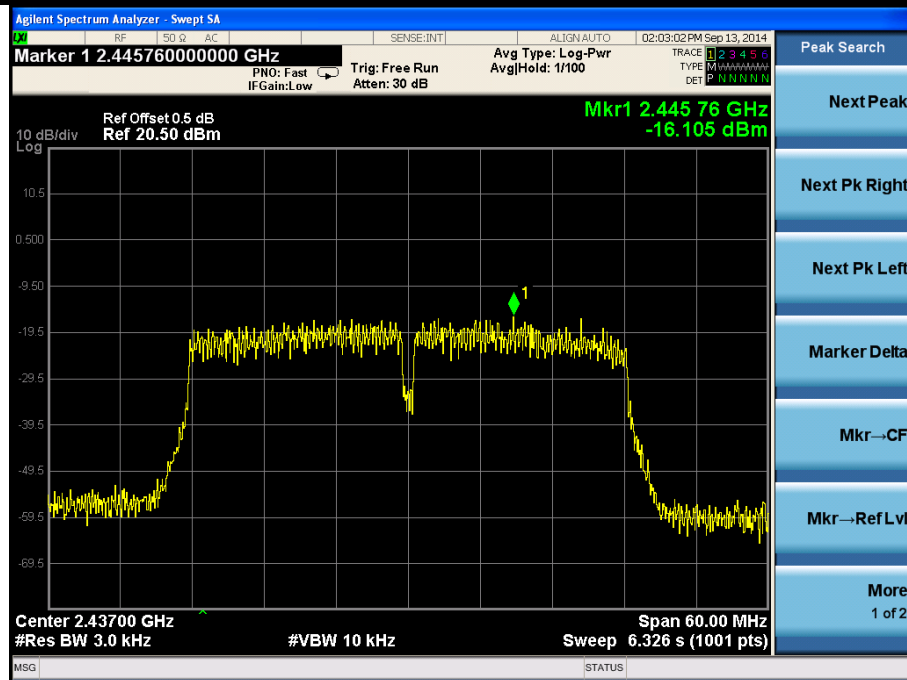


IEEE 802.11n/HT40 with 2.4G:

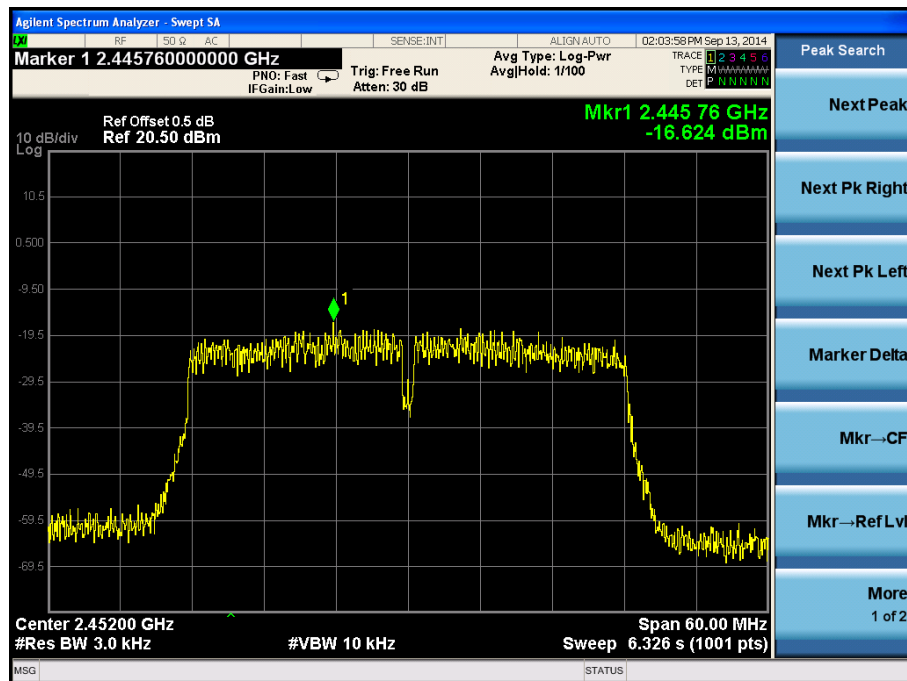
CH Low :



CH Mid :



CH High :



9 Bandwidth

9.1 Test limit

Please refer section 15.247

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

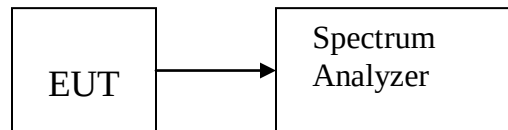
9.2 Method of measurement

Details see the KDB558074 D01 Meas Guidance

a) The bandwidth is measured at an amplitude level reduced 20dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

b) The test receiver set $RBW = 1-5\%$ EBW, $VBW \geq 3RBW$, Sweep time set auto, detail see the test plot.

9.3 Test Setup



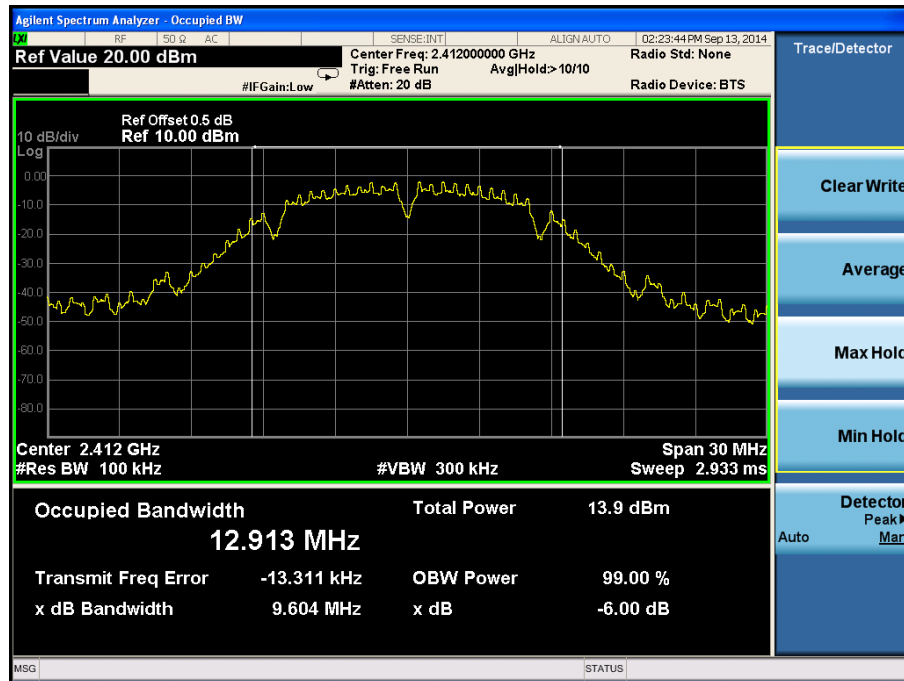
9.4 Test Results

PASS.

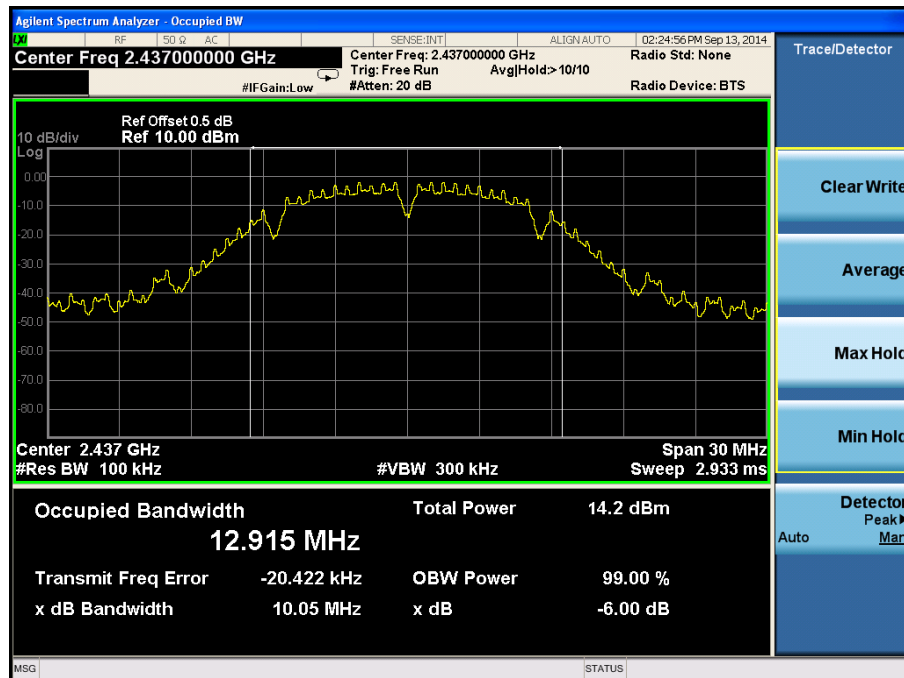
Detailed information please see the following page.

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
IEEE 802.11b:				
Low	2412	9.604	0.5	PASS
Mid	2437	10.050	0.5	PASS
High	2462	9.586	0.5	PASS
IEEE 802.11g:				
Low	2412	15.140	0.5	PASS
Mid	2437	15.710	0.5	PASS
High	2462	15.150	0.5	PASS
IEEE 802.11n/HT20 with 2.4G:				
Low	2412	15.160	0.5	PASS
Mid	2437	15.130	0.5	PASS
High	2462	15.330	0.5	PASS
IEEE 802.11n/HT40 with 2.4G:				
Low	2422	35.240	0.5	PASS
Mid	2437	35.250	0.5	PASS
High	2452	35.250	0.5	PASS

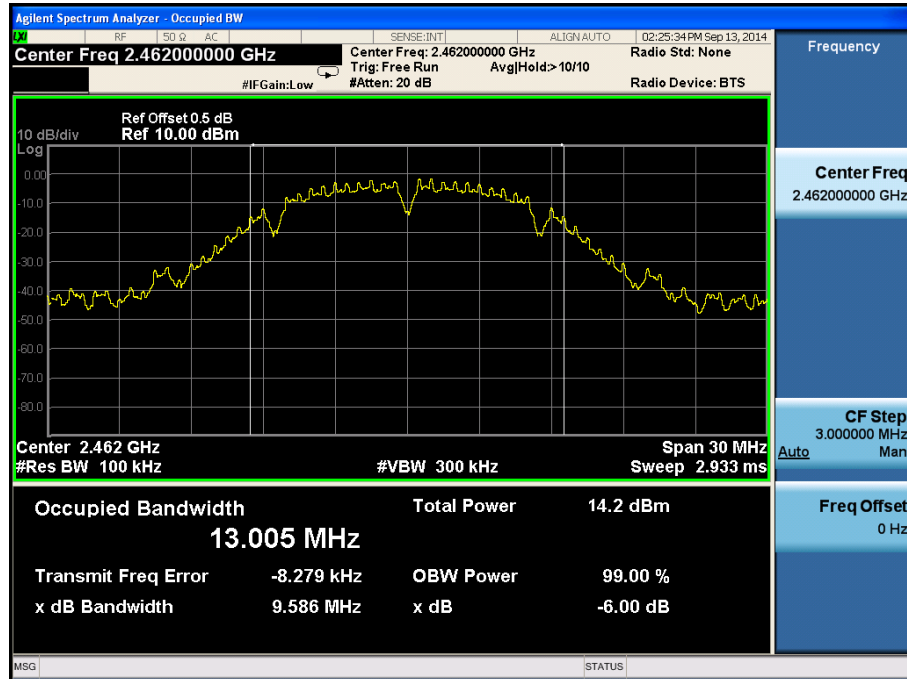
From 1G-25GHz with port 0 antenna
IEEE 802.11b:
CH Low :



CH Mid :

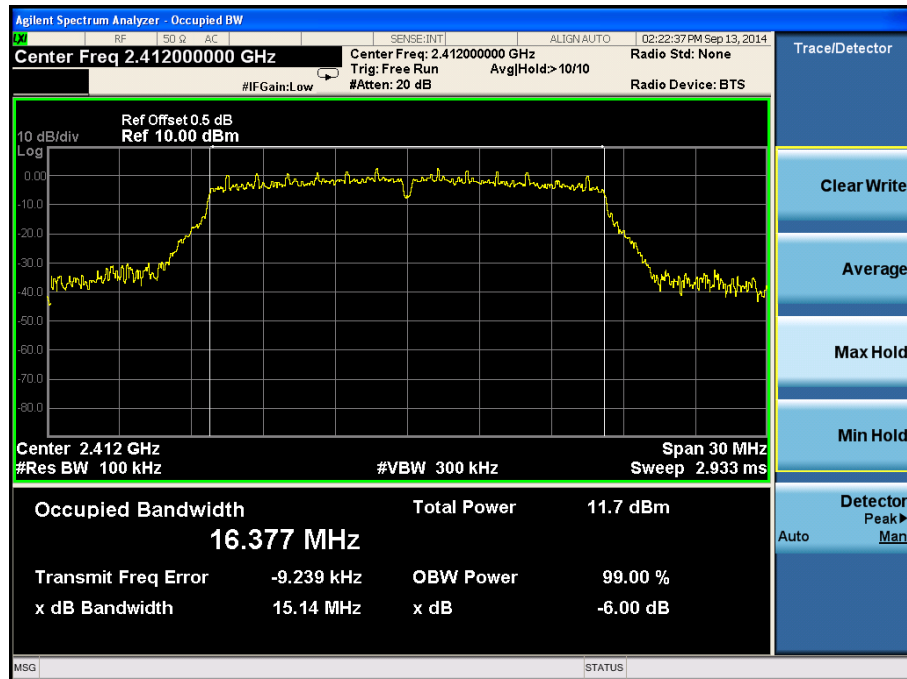


CH High :

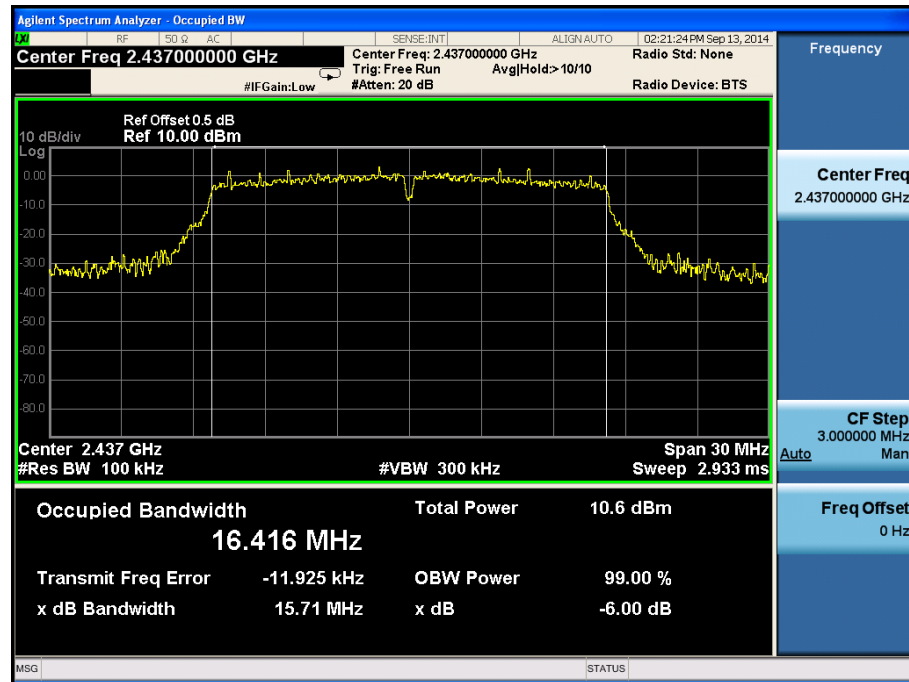


IEEE 802.11g:

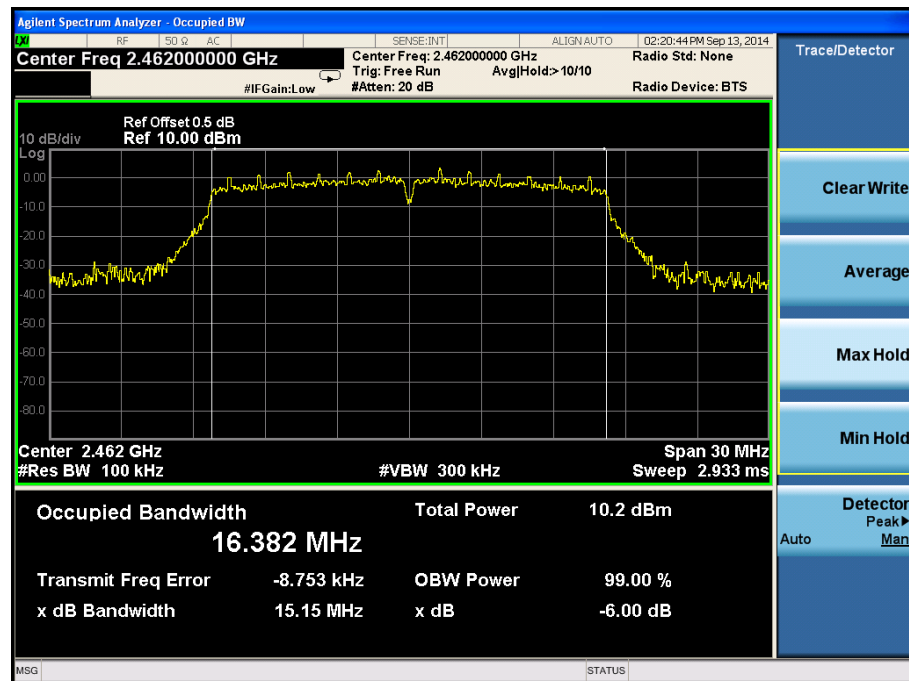
CH Low :



CH Mid :

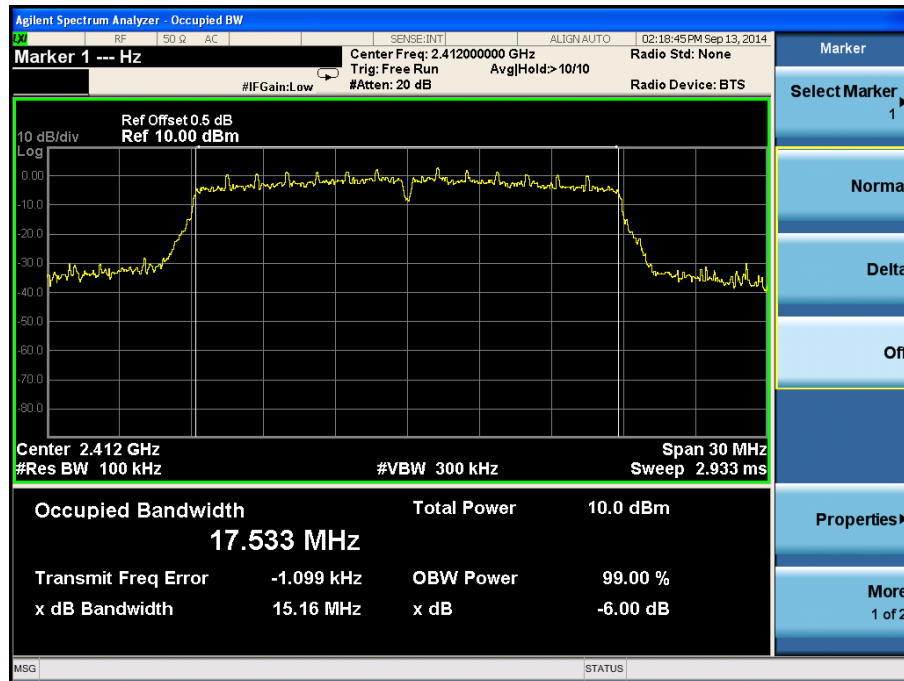


CH High :

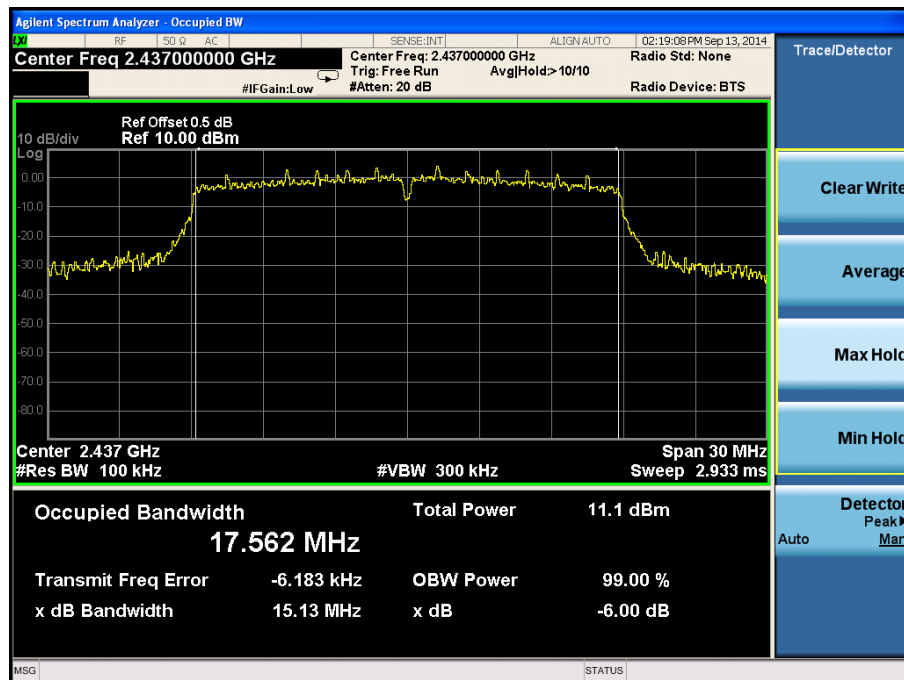


IEEE 802.11n/HT20 with 2.4G:

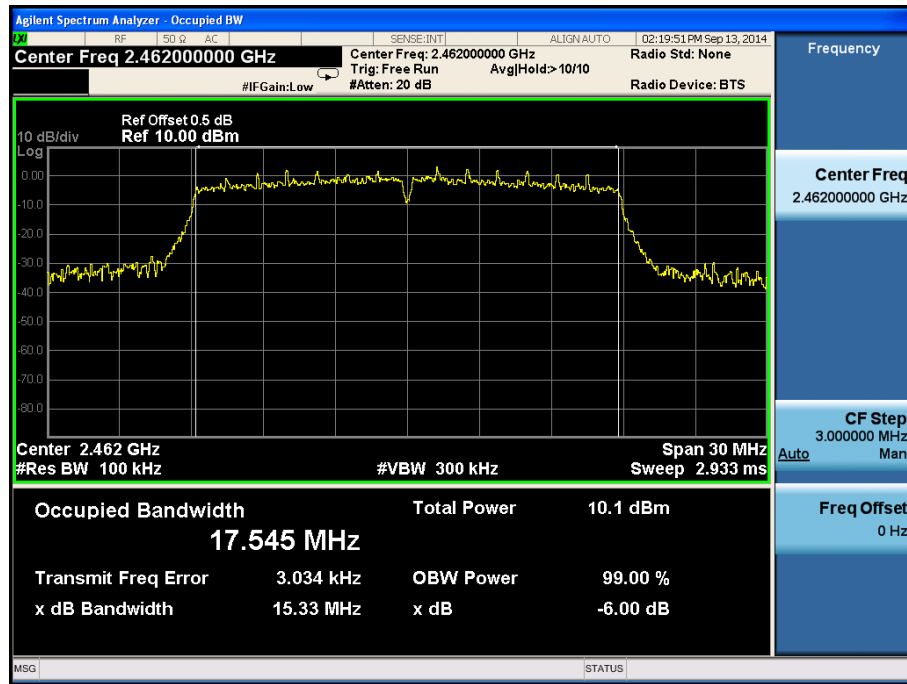
CH Low :



CH Mid :

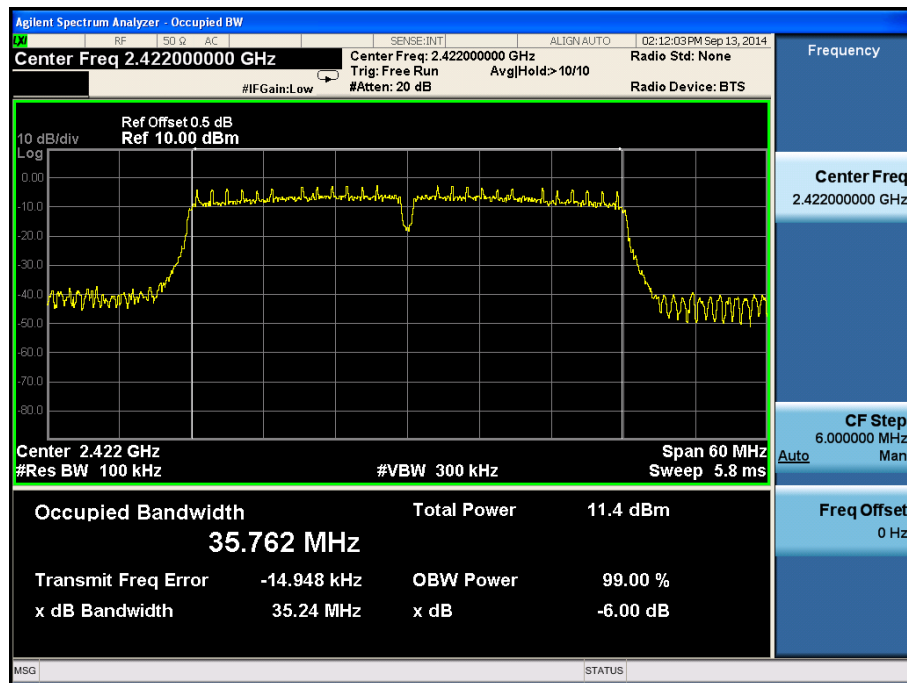


CH High :

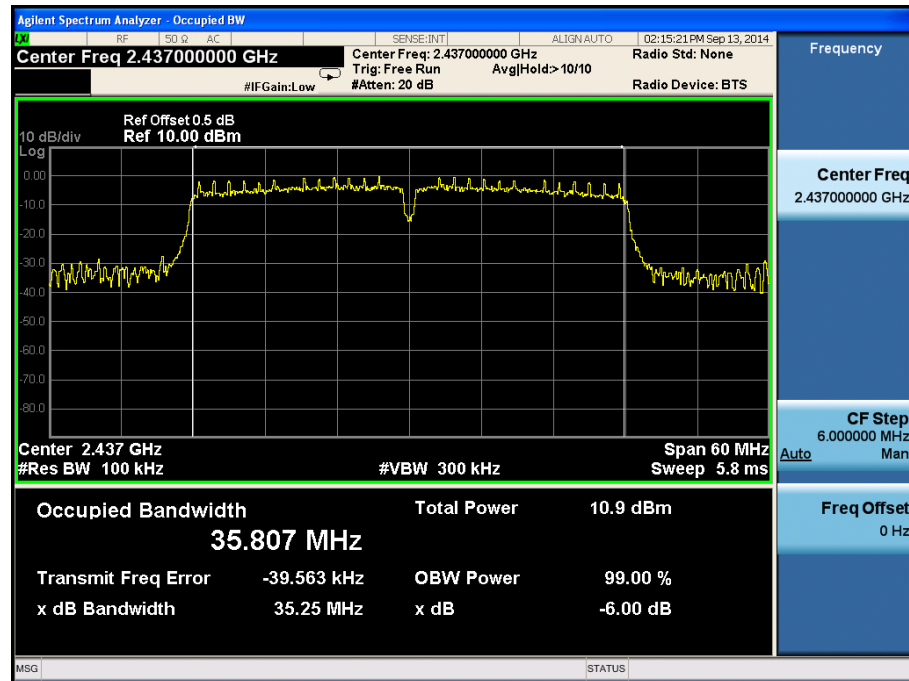


IEEE 802.11n/HT40 with 2.4G:

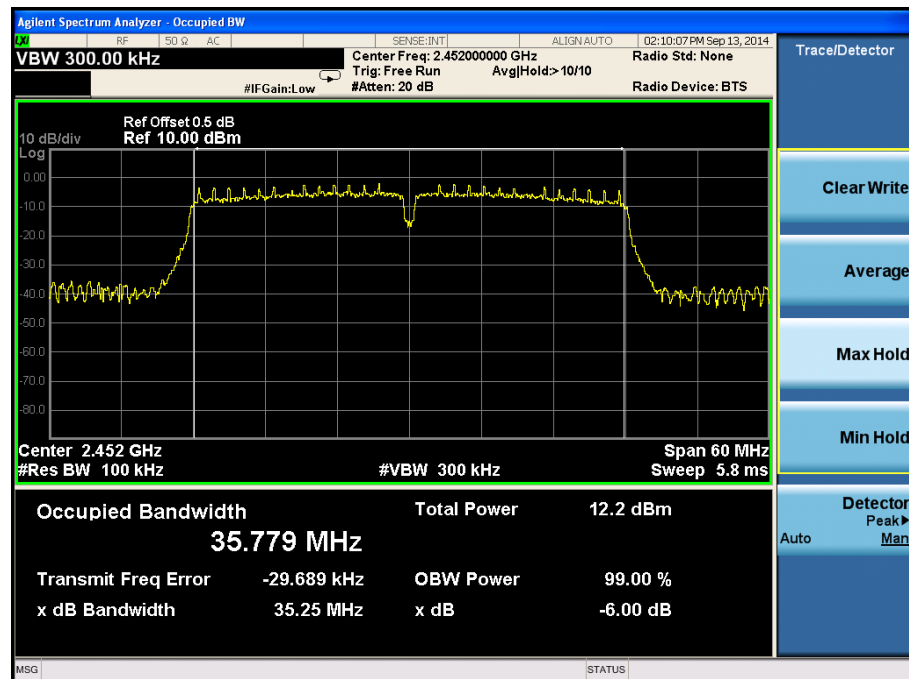
CH Low :



CH Mid :



CH High :



10 Band Edge Check

10.1 Test limit

Please refer section 15.247

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz and 5725MHz to 5850MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

10.2 Test Procedure

12.2.1 Put the EUT on a 0.8m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

12.2.2 Check the spurious emissions out of band.

12.2.3 RBW,VBW Setting:

For PEAK measurement, RBW=1MHz, VBW=3MHz, Detector=PK.

For AVG measurement, RBW=1MHz, VBW=3MHz, Detector=RMS

10.3 Test Setup

Keeping TX mode

10.4 Test Result

PASS.

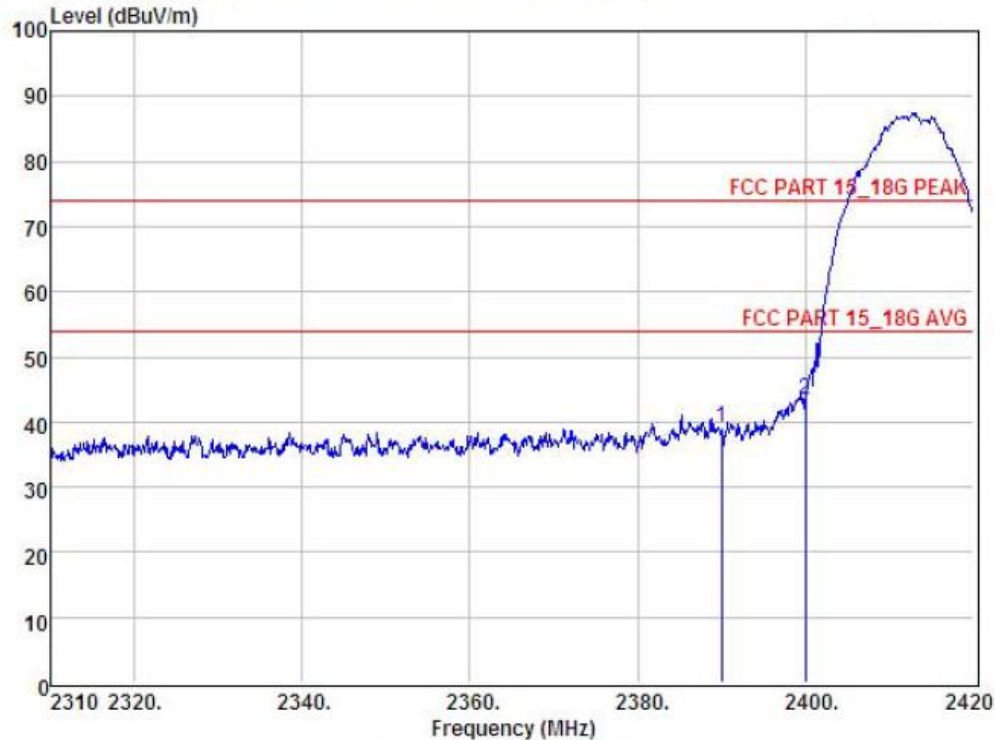
Detailed information please see the following page.



Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
Tel: 4006786199 FAX: +86-755-26736857
Website: <http://www.cessz.com> Email: Service@cessz.com

Data: 2

File: D:\REPORT DATA\MMOTIC\0912.EM6 (32)



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL
EUI :
Model No :
Test Mode : IEEE.802.b CH Low: 2412
Power :
Test Engineer :
Remark :
Temp : 24.2°C
Hum : 54%

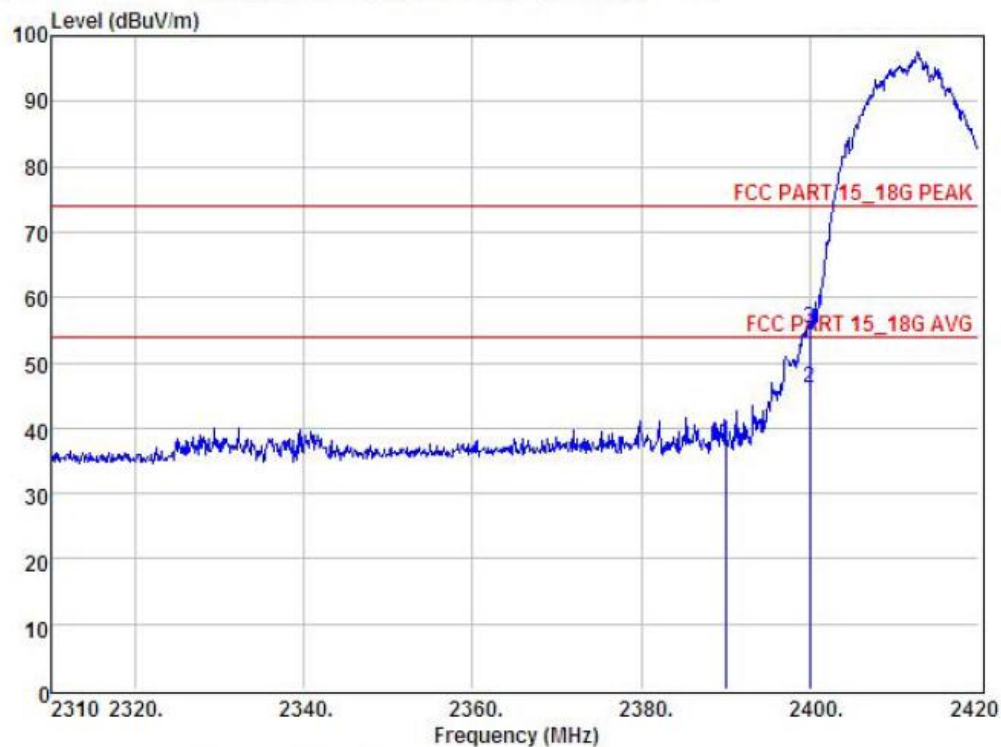
Item	Freq MHz	Read Level dBuV	Antenna Factor dB	Preamp Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	2390.00	42.50	27.62	34.97	3.92	39.07	74.00	-34.93	Peak
2	2400.00	46.92	27.62	34.97	3.94	43.51	74.00	-30.49	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss



Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
Tel: 4006786199 FAX: +86-755-26736857
Website: <http://www.cessz.com> Email: Service@cessz.com

Data: 1 File: D:\REPORT DATA\MMOTIC\0912.EM6 (32)



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL
EUT :
Model No :
Test Mode : IEEE.802.b CH Low: 2412
Power :
Test Engineer :
Remark :
Temp : 24.2°C
Hum : 54%

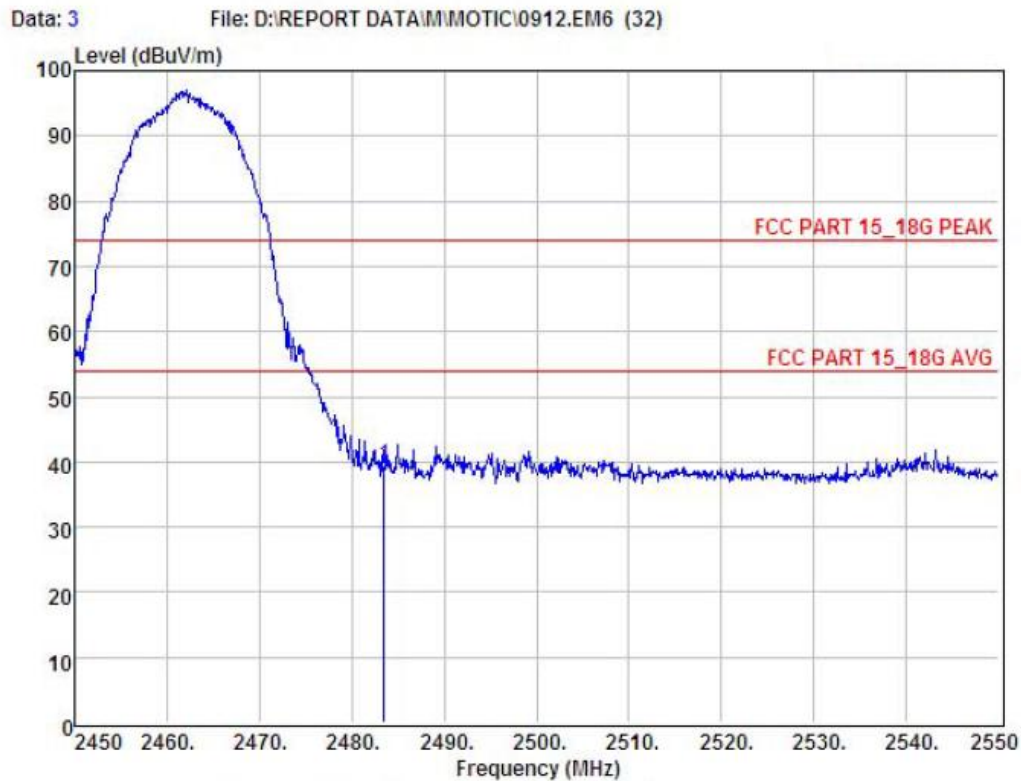
Item	Freq MHz	Read Level dBuV	Antenna Factor dB	Preamp Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	2390.00	41.16	27.62	34.97	3.92	37.73	74.00	-36.27	Peak
2	2400.00	49.60	27.62	34.97	3.94	46.19	54.00	-7.81	Average
3	2400.00	58.60	27.62	34.97	3.94	55.19	74.00	-18.81	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

CH High :



Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
Tel: 4006786199 FAX: +86-755-26736857
Website: <http://www.cessz.com> Email: Service@cessz.com



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL
EUT :
Model No :
Test Mode : IEEE.802.b CH High: 2462
Power :
Test Engineer :
Remark :
Temp : 24.2°C
Hum : 54%

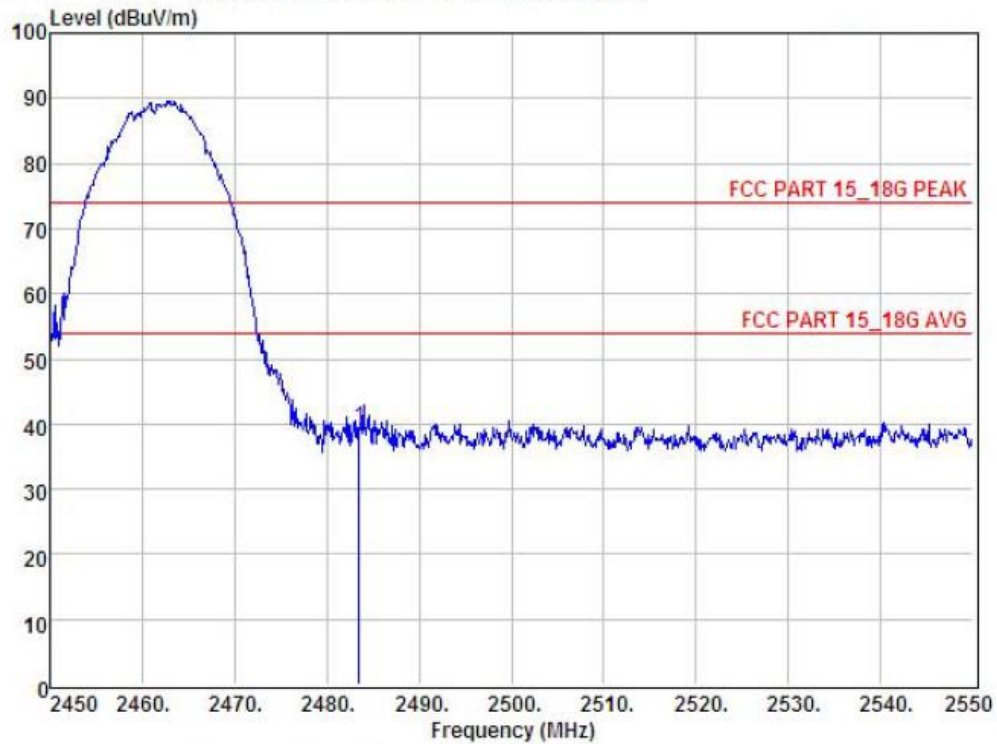
Item	Freq MHz	Read Level dBuV	Antenna Factor dB	Preamp Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	2483.50	42.86	27.59	34.97	4.00	39.48	74.00	-34.52	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss



Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
Tel: 4006786199 FAX: +86-755-26736857
Website: <http://www.cessz.com> Email: Service@cessz.com

Data: 4 File: D:\REPORT DATA\MMOTIC\0912.EM6 (32)



Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL
EUI :
Model No :
Test Mode : IEEE.802.b CH High: 2462
Power :
Test Engineer :
Remark :
Temp : 24.2℃
Hum : 54%

Item	Freq MHz	Read Level dBuV	Antenna Factor dB	Preamplifier Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	2483.50	42.85	27.59	34.97	4.00	39.47	74.00	-34.53	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

IEEE 802.11g:
CH LOW :



Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
Tel: 4006786199 FAX: +86-755-26736857
Website: <http://www.cessz.com> Email: Service@cessz.com

