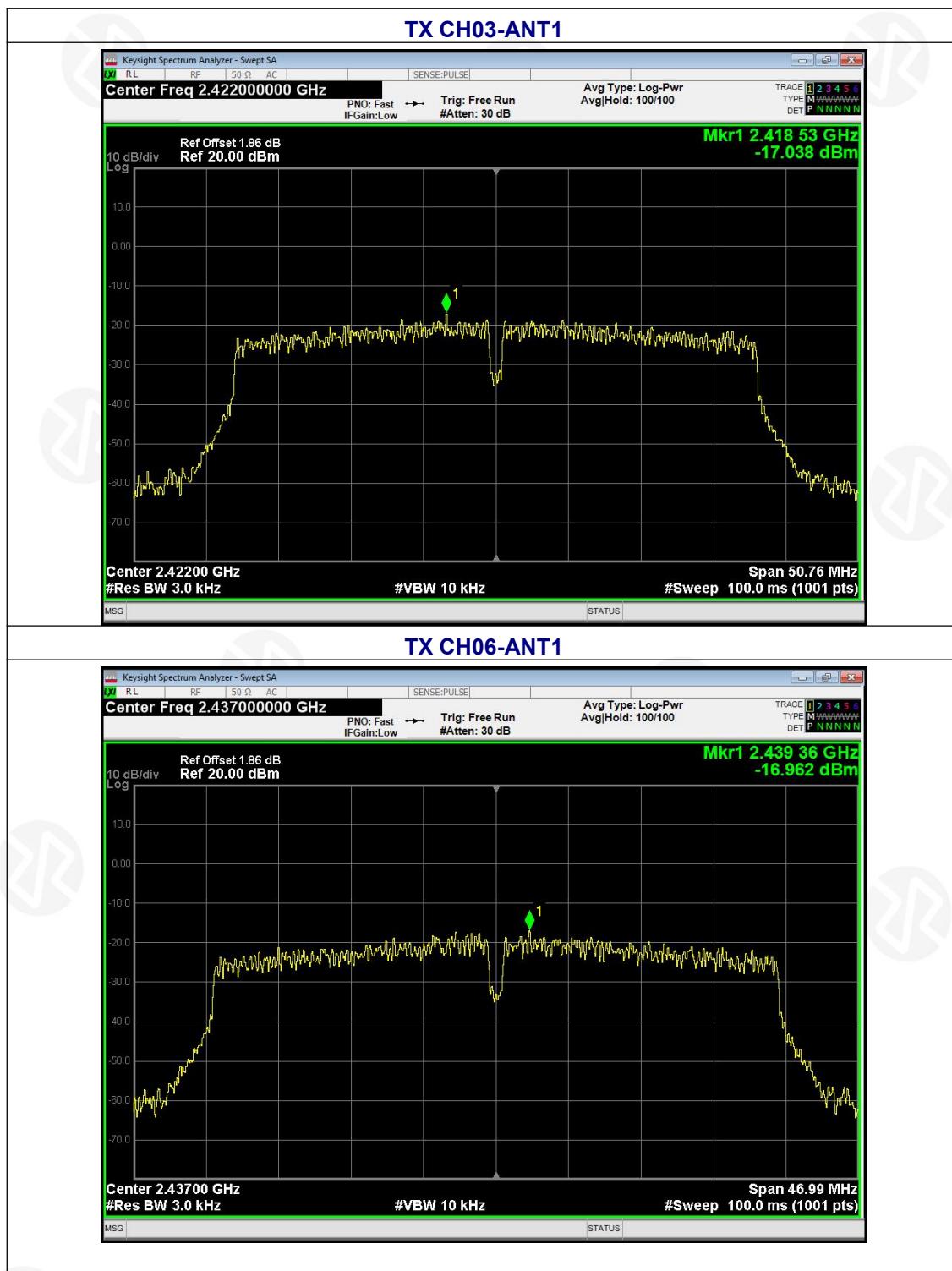




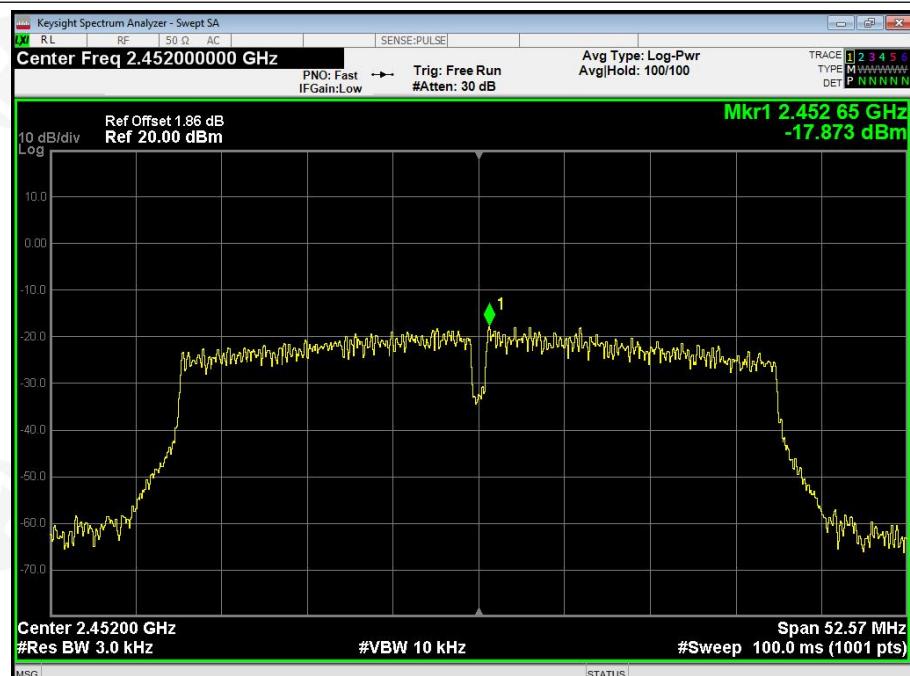
Temperature :	26°C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX n Mode(40M)		

Frequency (MHz)	Power Spectral Density (dBm/3kHz)		Power Spectral Density (mW)		Total Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
	ANT1	ANT2	ANT1	ANT2	/	/	/
2412 MHz	-17.038	-15.373	0.020	0.029	-13.098	8	PASS
2437 MHz	-16.962	-14.549	0.020	0.035	-12.596	8	PASS
2462 MHz	-17.873	-15.078	0.016	0.031	-13.279	8	PASS

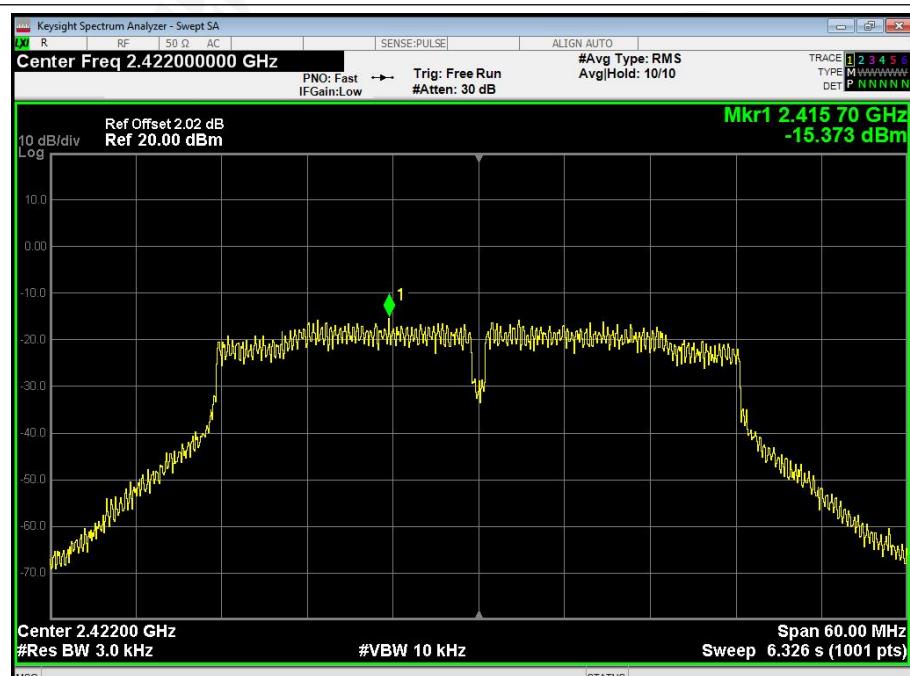




TX CH09-ANT1

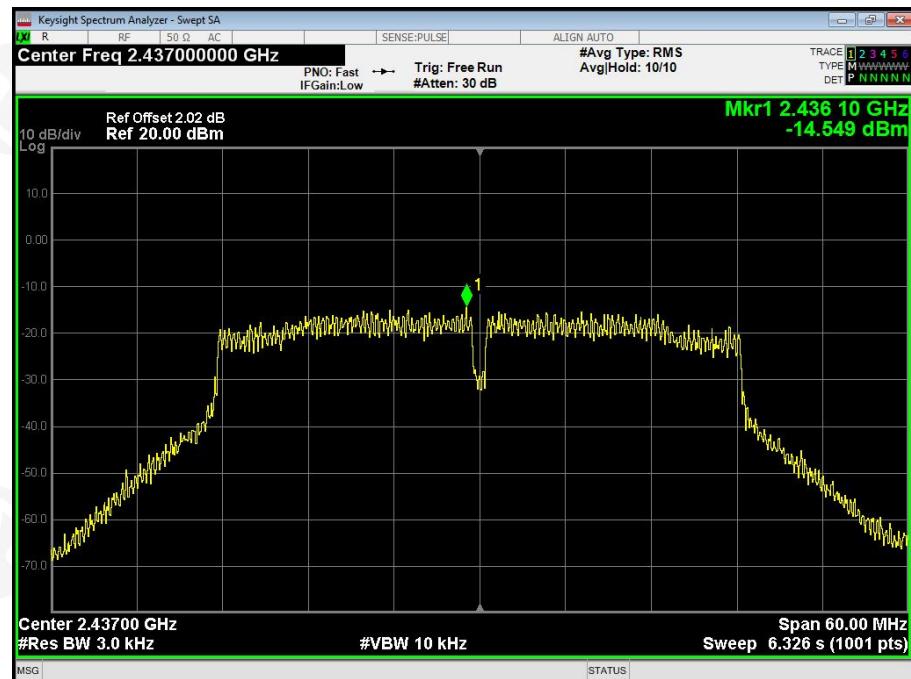


TX CH03-ANT2

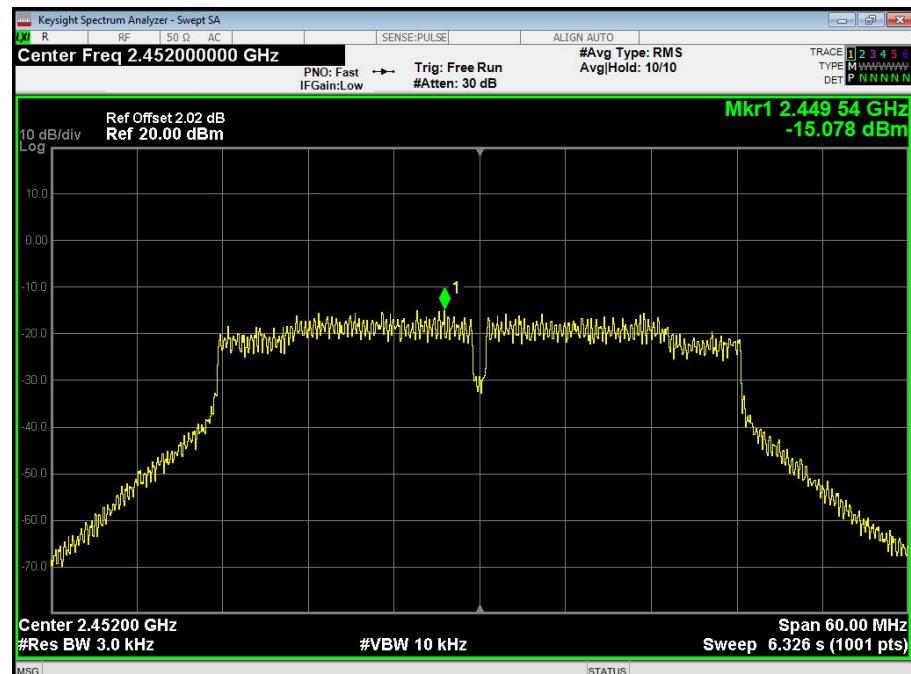




TX CH06-ANT2



TX CH09-ANT2





7. CHANNEL BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	KDB558074 D0115.247 Meas Guidance v05r02

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

7.2 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. 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 6 dB relative to the maximum level measured in the fundamental emission.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



7.6 TEST RESULT

Temperature :	26°C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX Mode-ANT1-Worst mode		

	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
802.11b	2412	10.00	>500	Pass
	2437	9.539	>500	Pass
	2462	9.995	>500	Pass
802.11g	2412	14.43	>500	Pass
	2437	12.95	>500	Pass
	2462	15.03	>500	Pass
802.11n20	2412	14.16	>500	Pass
	2437	13.89	>500	Pass
	2462	15.02	>500	Pass
802.11n40	2422	33.84	>500	Pass
	2437	31.33	>500	Pass
	2452	35.05	>500	Pass

Test plot as follows:

802.11b

802.11g

Lowest channel



Middle channel



Highest channel

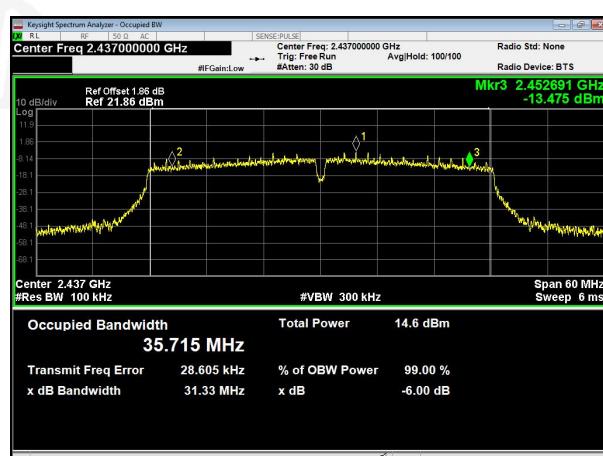


801.11n40

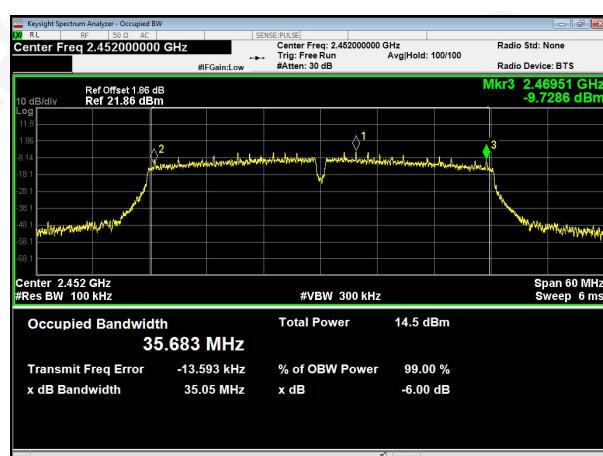
Lowest channel



Middle channel



Highest channel





8. PEAK OUTPUT POWER TEST

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	KDB558074 D0115.247 Meas Guidance v05r02

8.1 APPLIED PROCEDURES/LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

8.2 TEST PROCEDURE

- The EUT was directly connected to the Power meter

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



8.6 TEST RESULT

Temperature :	26°C	Relative Humidity :	54%
Pressure :	101kPa	Test Voltage :	AC 120V/60Hz

Test CH	Peak Output Power (dBm)				Limit(dBm)	Result		
	802.11b		802.11g					
	ANT1	ANT2	ANT1	ANT2				
Lowest	8.472	7.127	8.697	6.565	30.00	Pass		
Middle	8.663	7.106	8.553	6.508				
Highest	8.508	7.131	8.426	6.627				

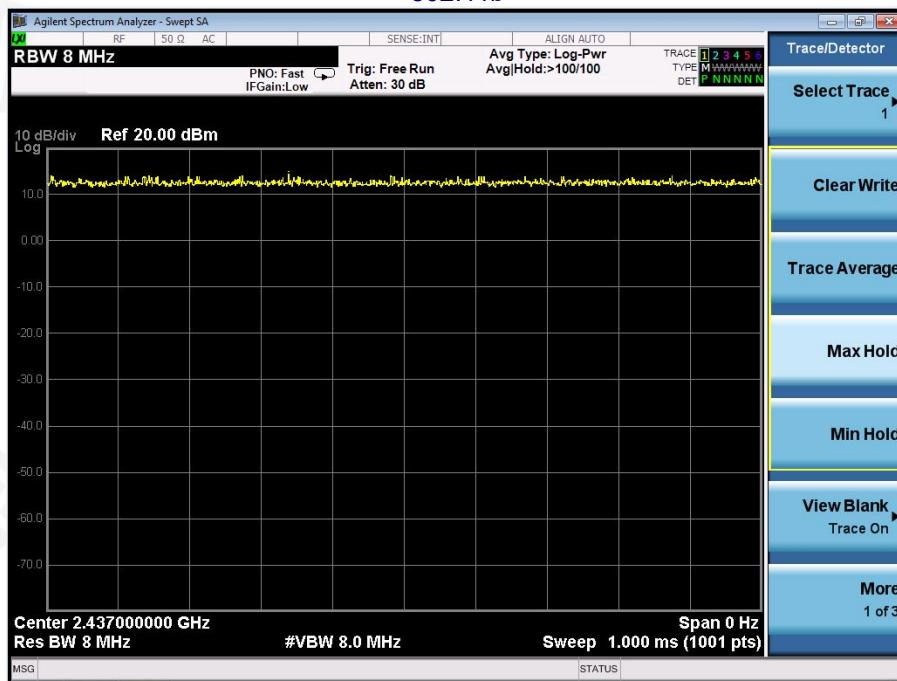
Test CH	Peak Output Power (dBm)						Total power(dBm)	
	802.11n(HT20) (dBm)	802.11n(HT40) (dBm)	802.11n(HT20) (mW)	802.11n(HT40) (mW)	802.11n (HT20) (dBm)	802.11n (HT40) (dBm)		
/	ANT1	ANT2	ANT1	ANT2	ANT1	ANT2	ANT1	ANT2
Lowest	6.240	5.324	6.305	5.204	4.207	3.407	4.271	3.314
Middle	6.313	5.228	6.157	5.223	4.279	3.333	4.128	3.329
Highest	6.265	5.356	6.168	5.187	4.232	3.432	4.138	3.301

	Frequency (MHz)	Output Power		Antenna gain	EIRP
		(dBm)	(dBm)	(dBi)	(dBm)
802.11b	Lowest	8.472		2.5	10.972
	Middle	8.663		2.5	11.163
	Highest	8.508		2.5	11.008
802.11g	Lowest	8.697		2.5	11.197
	Middle	8.553		2.5	11.053
	Highest	8.426		2.5	10.926
802.11n20	Lowest	8.816		5.5	14.316
	Middle	8.814		5.5	14.314
	Highest	8.844		5.5	14.344
802.11n40	Lowest	8.799		5.5	14.299
	Middle	8.725		5.5	14.225
	Highest	8.715		5.5	14.215



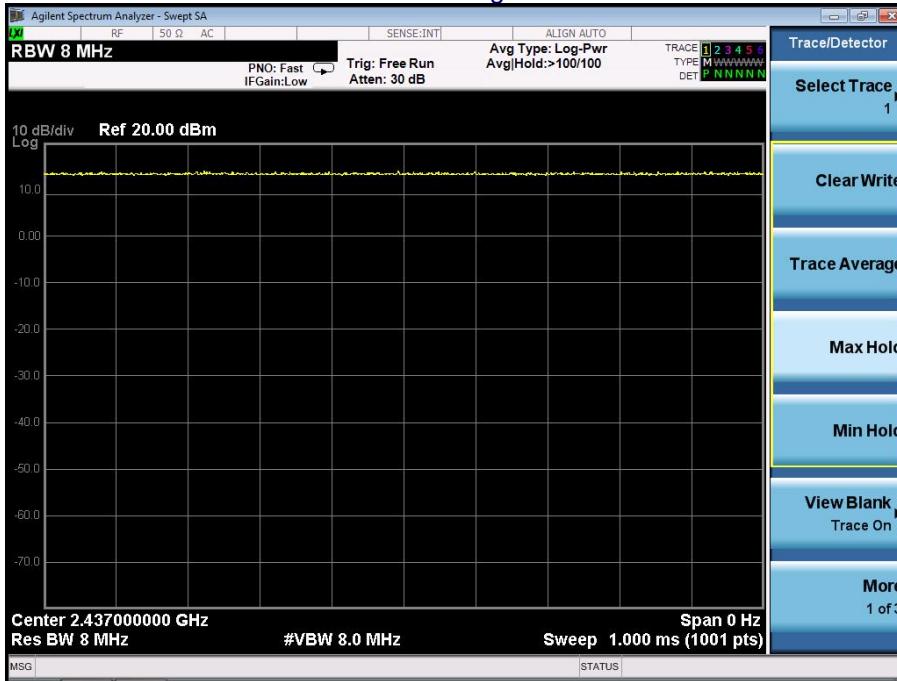
Duty Cycly:

802.11b



Ton	Tp	Duty cycly(%)	Duty factor(dB)
100.00	100.00	100.00%	0.00

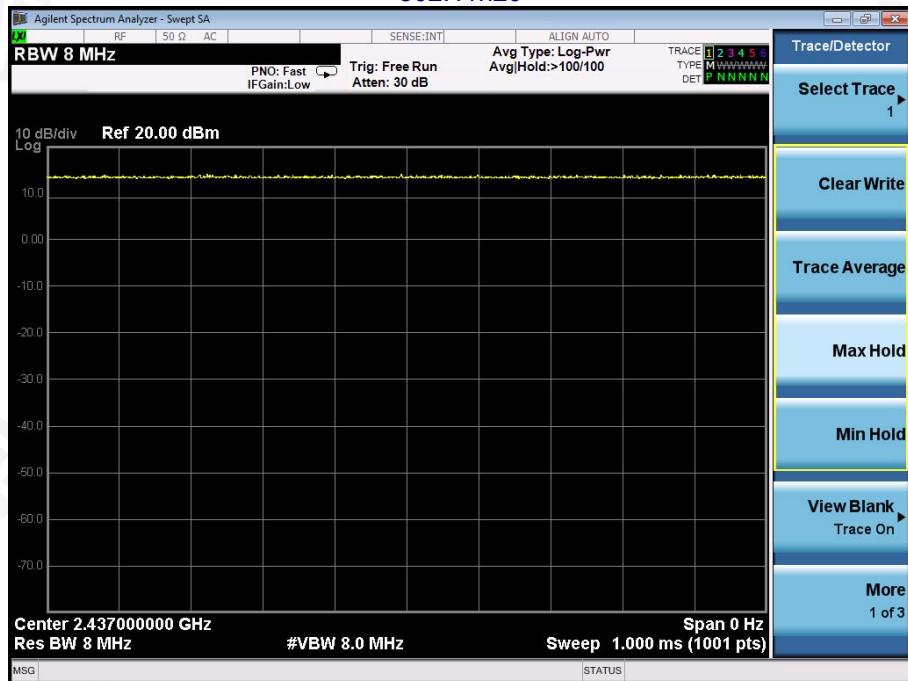
802.11g



Ton	Tp	Duty cycly(%)	Duty factor(dB)
100.00	100.00	100.00%	0.00

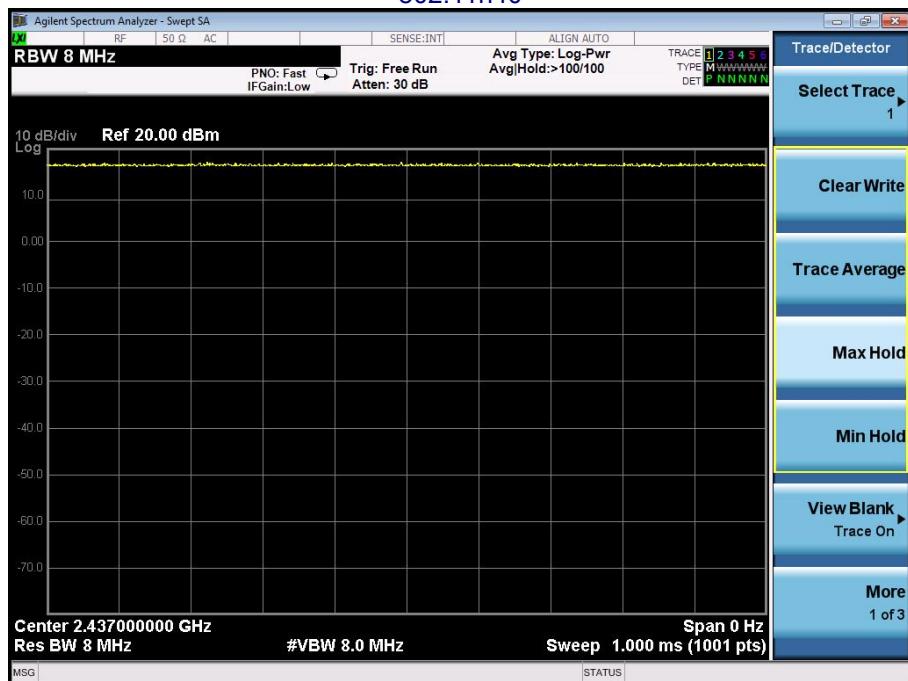


802.11n20



Ton	Tp	Duty cycl(%)	Duty factor(dB)
100.00	100.00	100.00%	0.00

802.11n40



Ton	Tp	Duty cycl(%)	Duty factor(dB)
100.00	100.00	100.00%	0.00



9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB558074 D0115.247 Meas Guidance v05r02

9.1 APPLICABLE STANDARD

in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in§15.205(a), must also comply with the radiated emission limits specified in15.209(a).

9.2 TEST PROCEDURE

Using the following spectrum analyzer setting:

- A) Set the RBW = 100KHz.
- B) Set the VBW = 300KHz.
- C) Sweep time = auto couple.
- D) Detector function = peak.
- E) Trace mode = max hold.
- F) Allow trace to fully stabilize.

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

9.6 TEST RESULTS

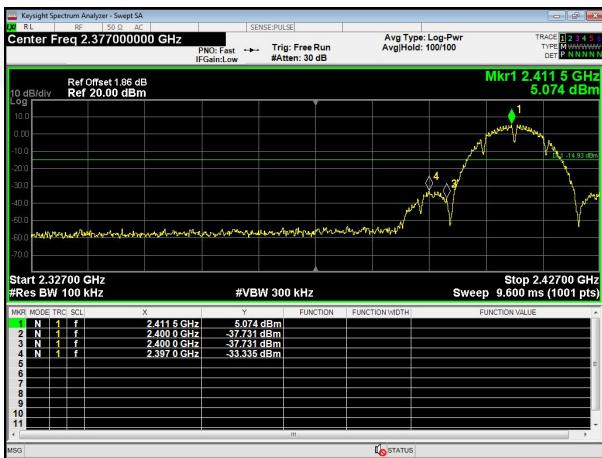


Pre-test the EUT in continuous transmitting mode with setup as stand-alone in only ANT1 transmits and only ANT2 transmits, found the worst case is ANT1 transmit and report the data.

Test plot as follows:

Test mode:

802.11b



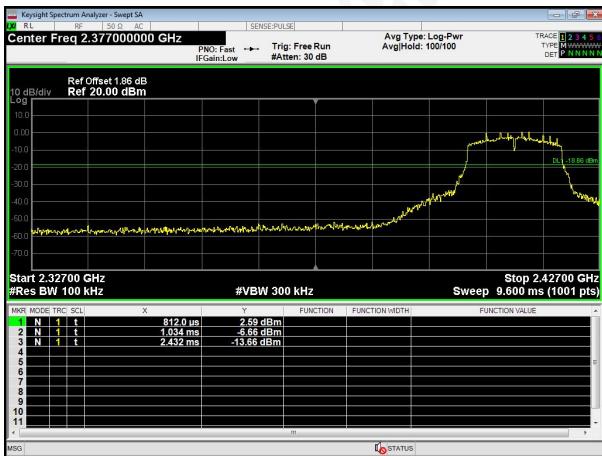
Lowest channel



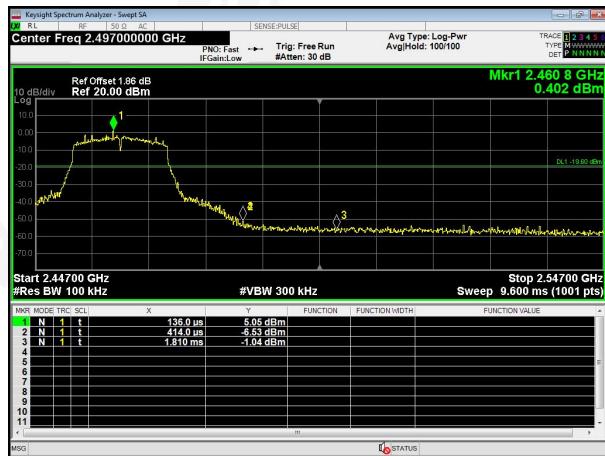
Highest channel

Test mode:

802.11g



Lowest channel

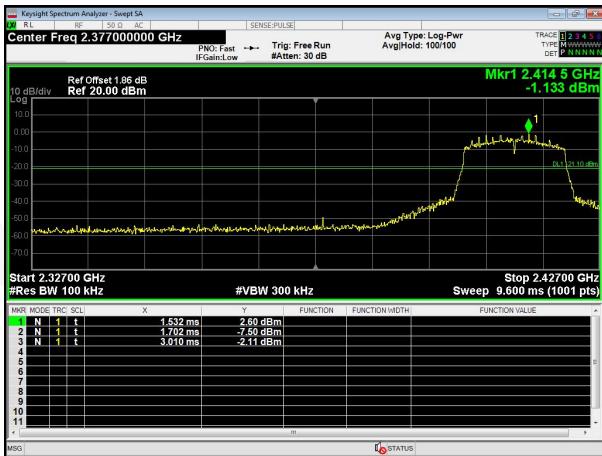


Highest channel



Test mode:

802.11n(HT20)



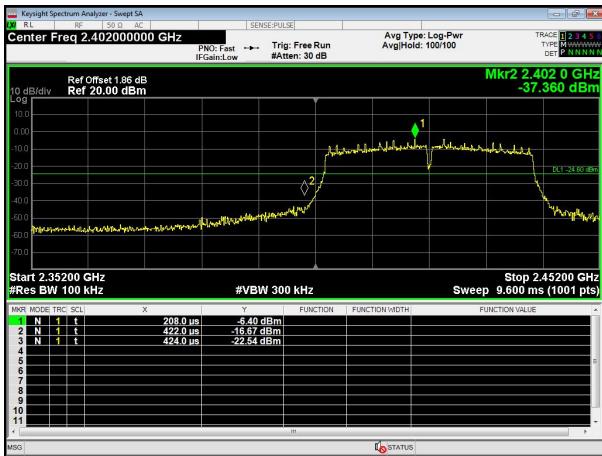
Lowest channel



Highest channel

Test mode:

802.11n(HT40)



Lowest channel



Highest channel

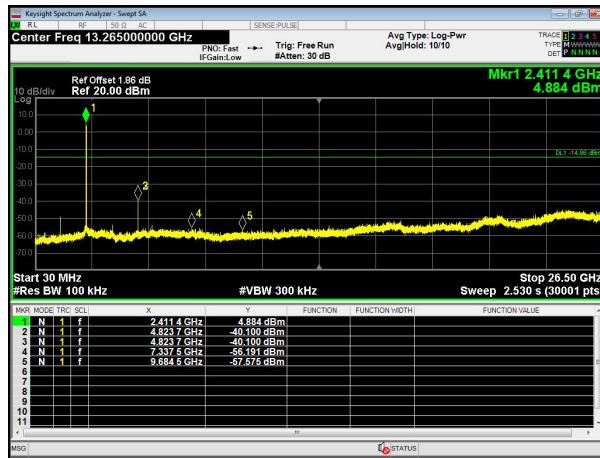


Pre-test the EUT in continuous transmitting mode with setup as stand-alone in only ANT1 transmits and only ANT2 transmits, found the worst case is ANT1 transmit and report the data.

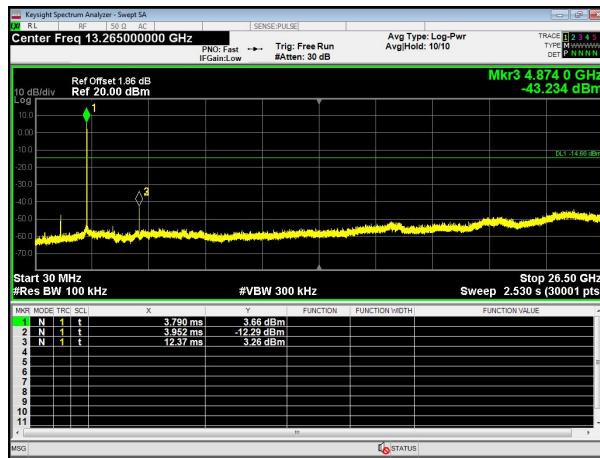
Test plot as follows:

802.11b

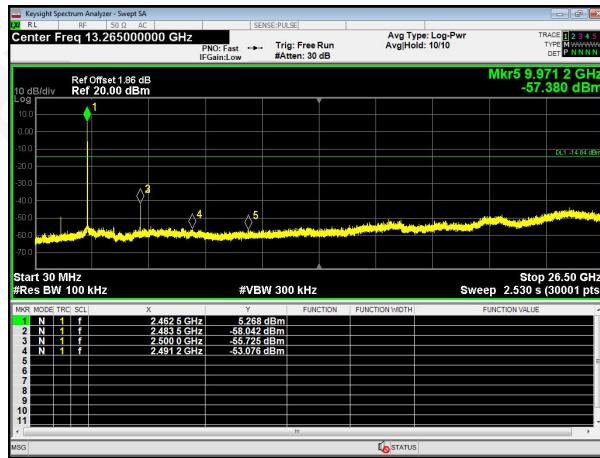
Lowest channel



Middle channel



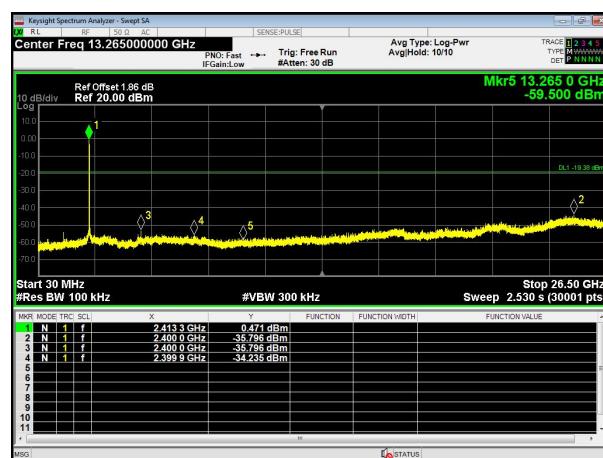
Highest channel



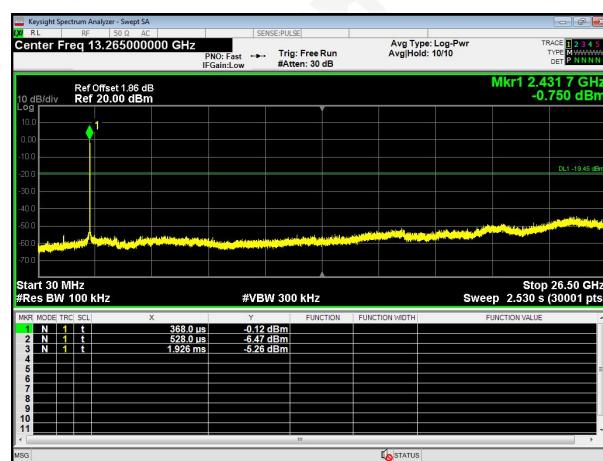


802.11g

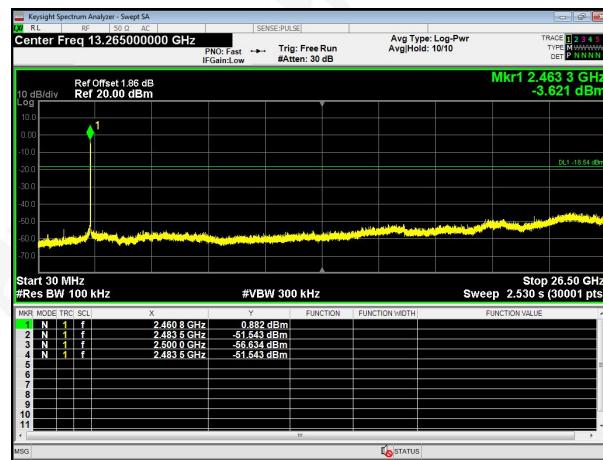
Lowest channel



Middle channel



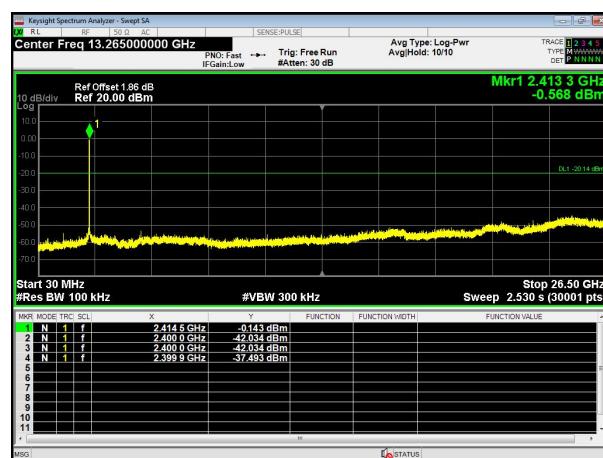
Highest channel



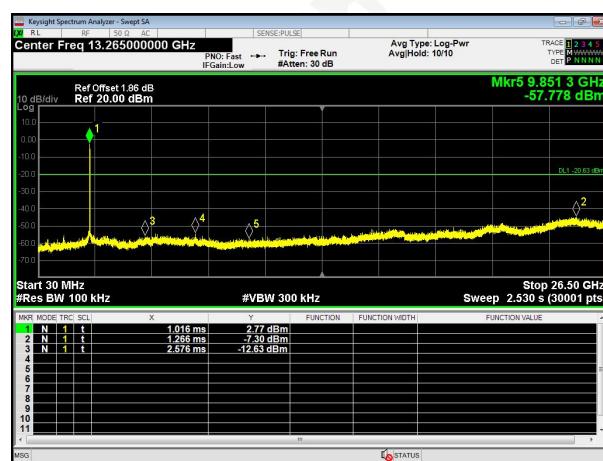


802.11n(HT20)

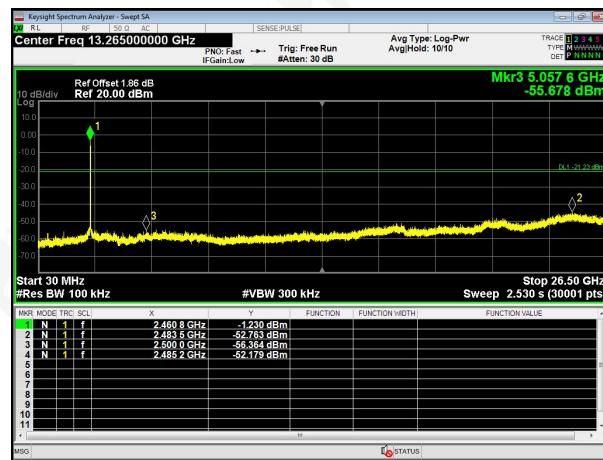
Lowest channel



Middle channel



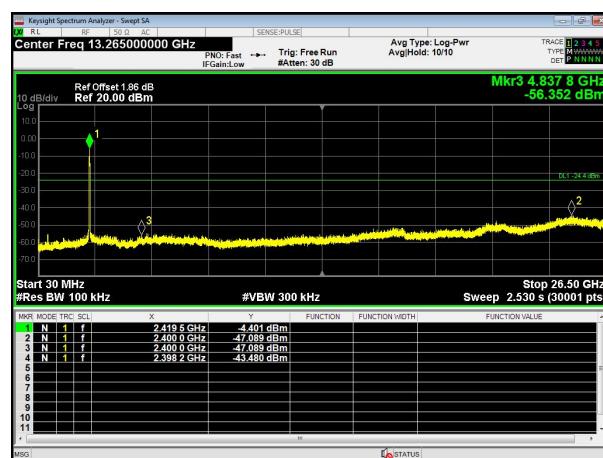
Highest channel



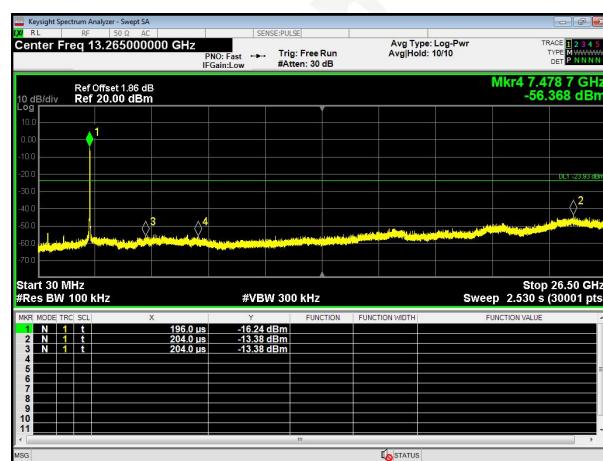


802.11n(HT40)

Lowest channel



Middle channel



Highest channel



10. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement:	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
15.247(c) (1)(i) requirement:	(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.
EUT Antenna:	The antennas are FPCB antenna, the best case gain of the antennas are 2.5dBi, reference to the appendix II for details



11. TEST SETUP PHOTO

Reference to the appendix I for details.

12. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

***** END OF REPORT *****