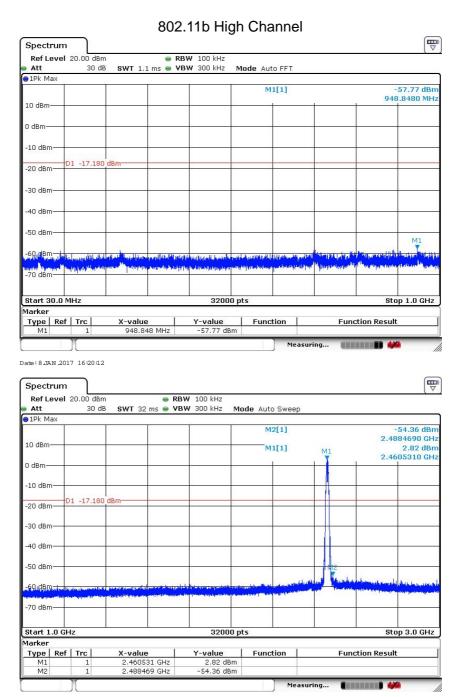


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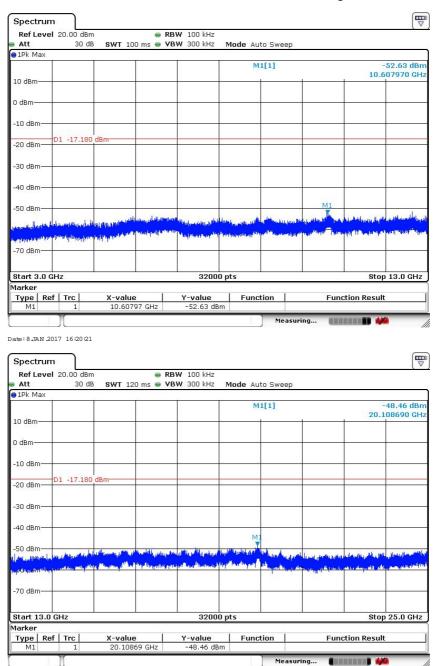


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Date: 8 JAN .2017 16:19:55



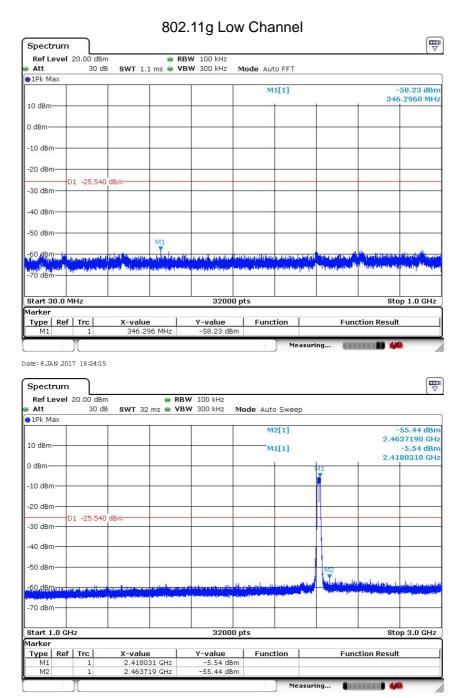
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Date: 8 JAN .2017 16:20:34



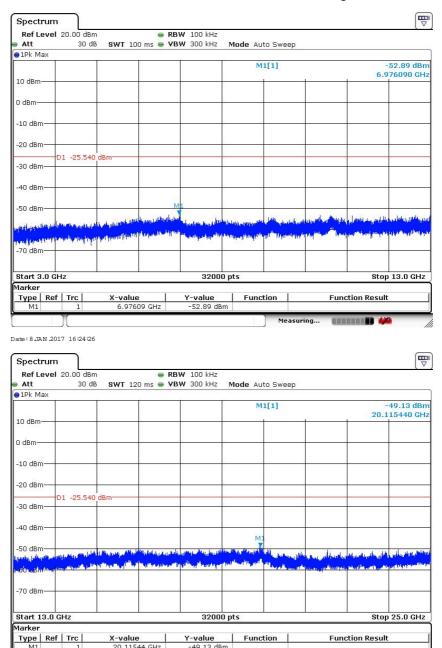
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Date: 8 JAN .2017 16:24:03



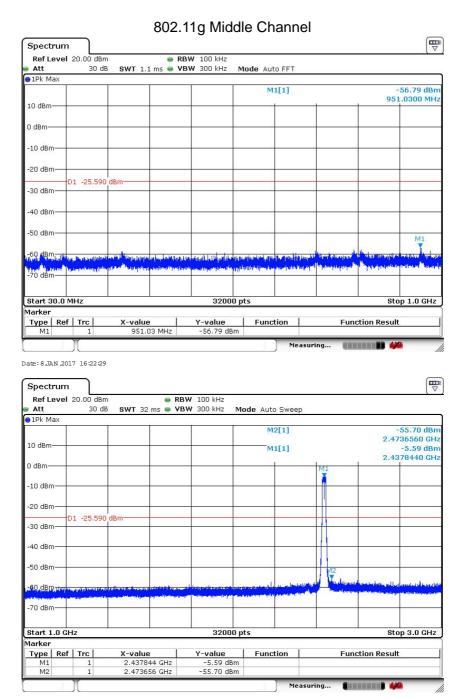
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Date: 8 JAN 2017 16:24:38



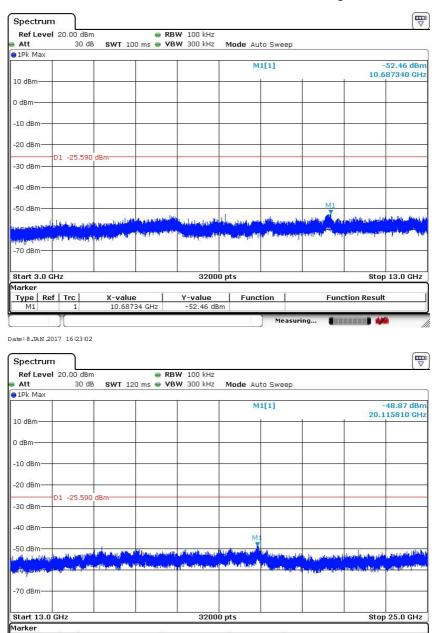
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Date: 8 JAN 2017 16:22:16



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Date: 8 JAN 2017 16:23:14

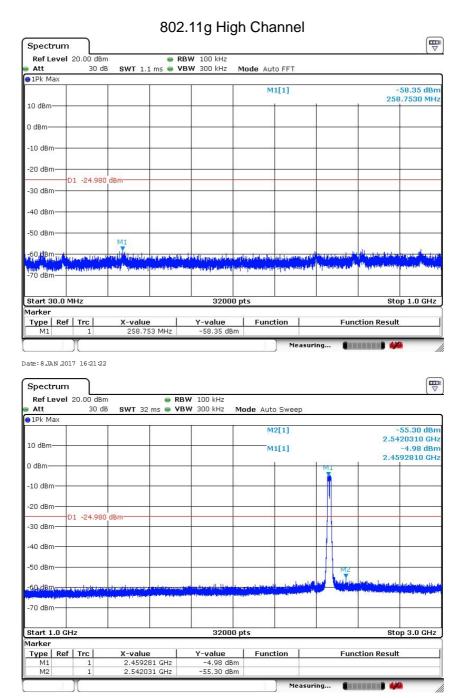
Type Ref Trc

Function

Function Result



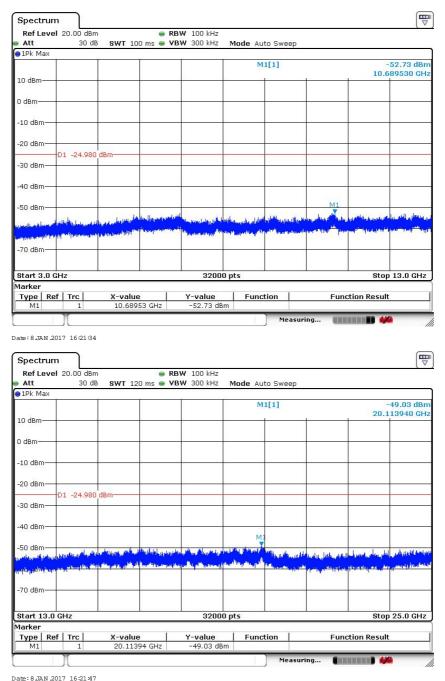
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Date: 8 JAN .2017 16:21:09

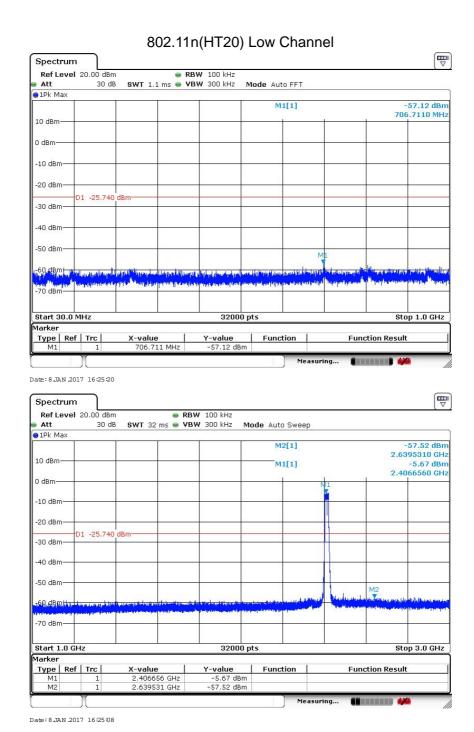


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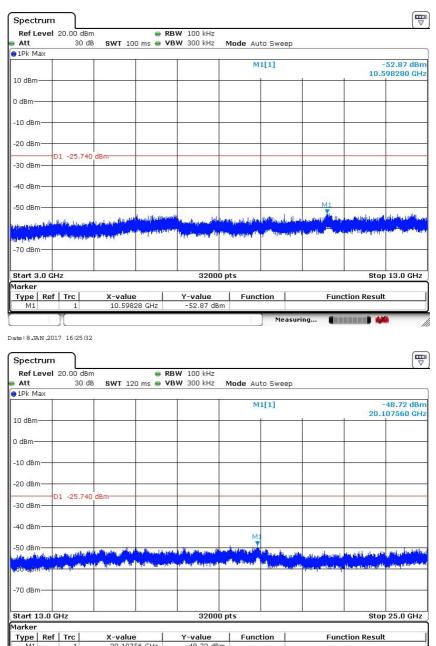
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Stop 3.0 GHz

Function Result

802.11n(HT20) Middle Channel Spectrum Ref Level 20.00 dBm RBW 100 kHz 30 dB SWT 1.1 ms - VBW 300 kHz Mode Auto FFT ● 1Pk Ma -57.97 dBm 811.5020 MHz M1[1] 0 dBm -10 dBm D1 -25.130 dB -30 dBm -40 dBm Start 30.0 MHz 32000 pts Stop 1.0 GHz Marker Type | Ref | Trc | X-value 811.502 MHz Y-value Function **Function Result** Date: 8 JAN 2017 16:26:31 RBW 100 kHz Ref Level 20.00 dBm SWT 32 ms VBW 300 kHz Mode Auto Sweep ● 1Pk Max M2[1] 54.51 dBm 10 dBm M1[1] -5.13 dBm 2.4454060 GHz 0 dBm -10 dBm D1 -25.130 dBr -30 dBm -50 dBm

Date: 8 JAN .2017 16:26:12

X-value

.445406 GHz .517031 GHz

Start 1.0 GHz

Marker Type | Ref | Trc | 32000 pts

Y-value

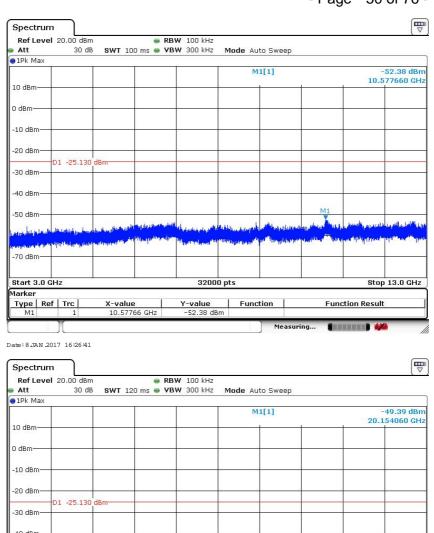
Function



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Stop 25.0 GHz

Function Result



Date: 8 JAN .2017 16:26:51

-50 dBm

-70 dBm

Marker Type | Ref | Trc

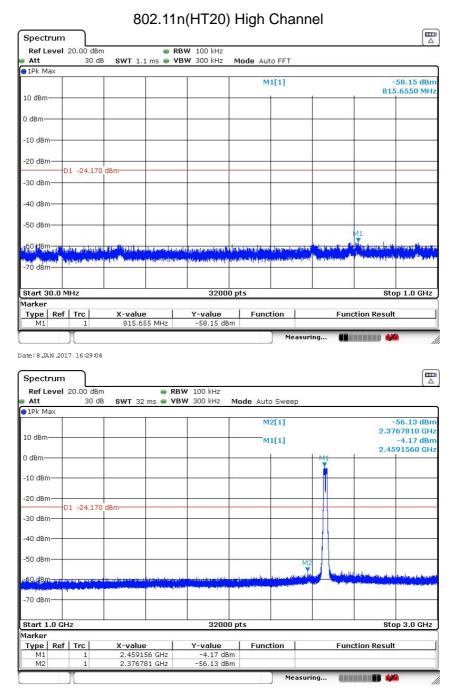
Start 13.0 GHz

32000 pts

Function



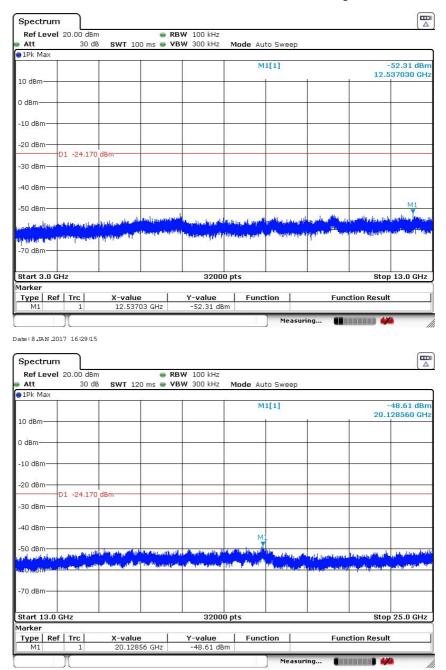
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Date: 8 JAN .2017 16:28:49



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Date: 8 JAN 2017 16:29:27



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4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C					
Section	Test Item	Limit	Frequency Range (MHz)	Result	
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS	

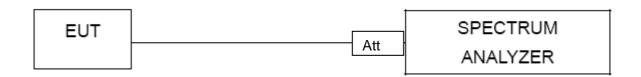
4.1.1 TEST PROCEDURE

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times DTS bandwith.
- 3. Set the RBW ≥ 3 kHz.
- 4. Set the VBW \geq 3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.



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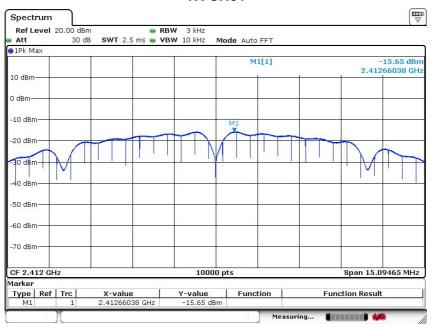
4.1.5 TEST RESULTS

EUT:	Inventor II (3D printer)	Model Name :	INVENTOR II
Temperature:	25 ℃	Relative Humidity:	56%
Pressure :	1015 hPa	Hest Voltage .	DC 24V from adapter AC 120V/60Hz
Test Mode :	TX b Mode /CH01, CH06, CH1	1	

Note: The relevant measured result has the offset with cable loss already.

Frequency	Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
2412 MHz	-15.65	8	PASS
2437 MHz	-16.02	8	PASS
2462 MHz	-15.77	8	PASS

TX CH01

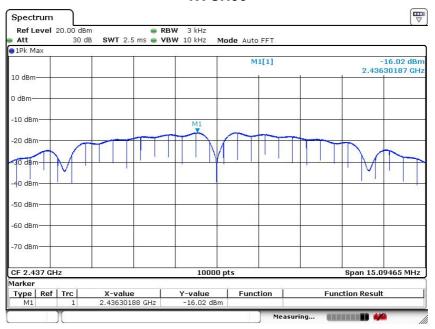


Date: 23 JAN .2017 15:56:56



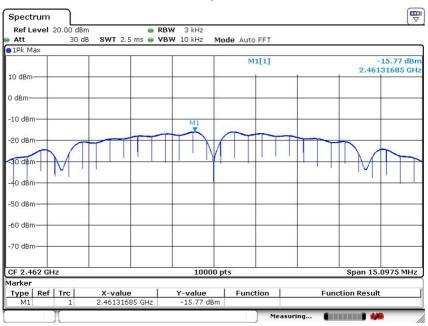
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TX CH06



Date: 23 JAN .2017 15:57:34

TX CH11



Date: 23 JAN 2017 15:58:29



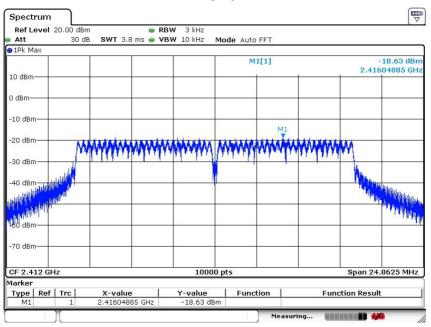
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EUT:	Inventor II (3D printer)	Model Name :	INVENTOR II
Temperature:	25 ℃	Relative Humidity:	56%
Pressure :	1015 hPa	riest vollage .	DC 24V from adapter AC 120V/60Hz
Test Mode :	TX g Mode /CH01, CH06, CH1	1	

Note: The relevant measured result has the offset with cable loss already.

Frequency	Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
2412 MHz	-18.63	8	PASS
2437 MHz	-17.92	8	PASS
2462 MHz	-17.83	8	PASS

TX CH01

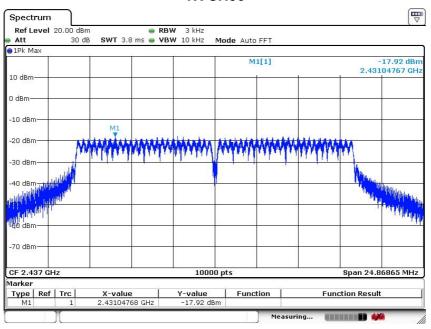


Date: 23 JAN .2017 16:00:18



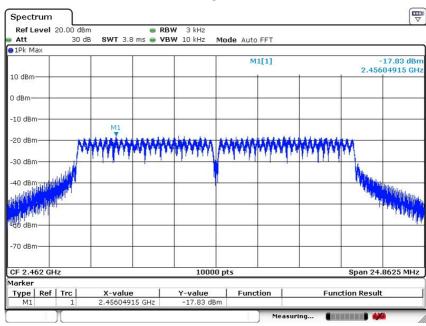
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TX CH06



Date: 23 JAN 2017 16:01:11

TX CH11



Date: 23 JAN 2017 16:01:32



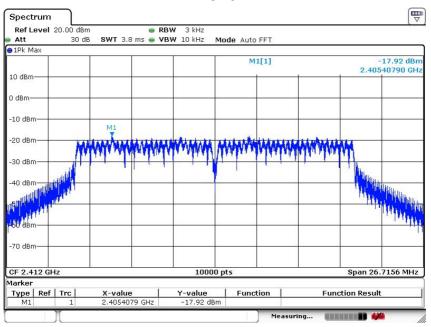
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EUT:	Inventor II (3D printer)	Model Name :	INVENTOR II
Temperature:	25 ℃	Relative Humidity:	56%
Pressure :	1015 hPa	Hest vollage .	DC 24V from adapter AC 120V/60Hz
Test Mode : TX n(HT20) Mode /CH01, CH06, CH11			

Note: The relevant measured result has the offset with cable loss already.

Frequency	Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
2412 MHz	-17.92	8	PASS
2437 MHz	-17.66	8	PASS
2462 MHz	-17.42	8	PASS

TX CH01

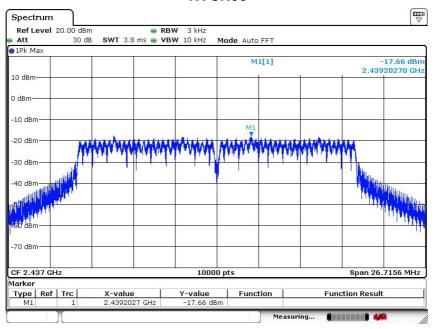


Date: 23 JAN .2017 16:02:47



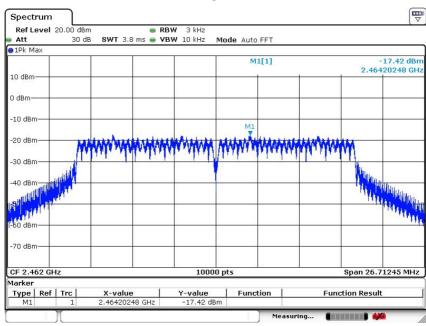
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TX CH06



Date: 23 JAN 2017 16:03:13

TX CH11



Date: 23 JAN 2017 16:04:22



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5. BANDWIDTH TEST

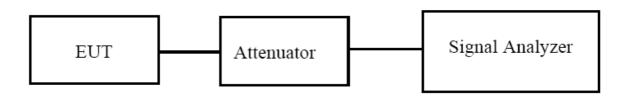
5.1 APPLIED PROCEDURES / LIMIT

/					
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	

5.1.1 TEST PROCEDURE

According to KDB 558074 D01 DTS Meas Guidance v03r03

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator
- 2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- 3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth.
- 4. Repeat above procedures until all frequencies measured were complete.



5.1.2 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.

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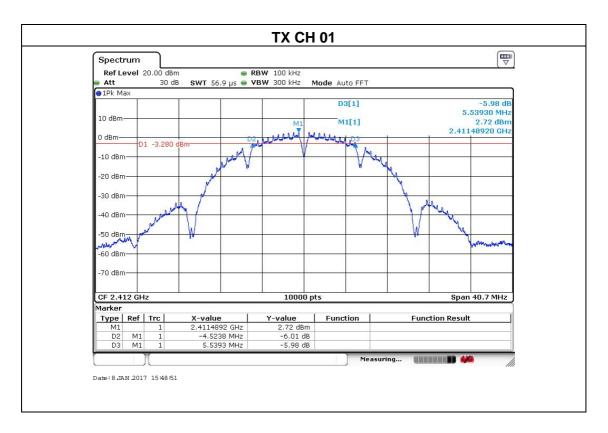


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5.1.3 TEST RESULTS

EUT:	Inventor II (3D printer)	Model Name :	INVENTOR II
Temperature:	25 ℃	Relative Humidity:	56%
Pressure :	1012 hPa	LIEST VOITAGE .	DC 24V from adapter AC 120V/60Hz
Test Mode :	TX b Mode /CH01, CH06, CH1	1	

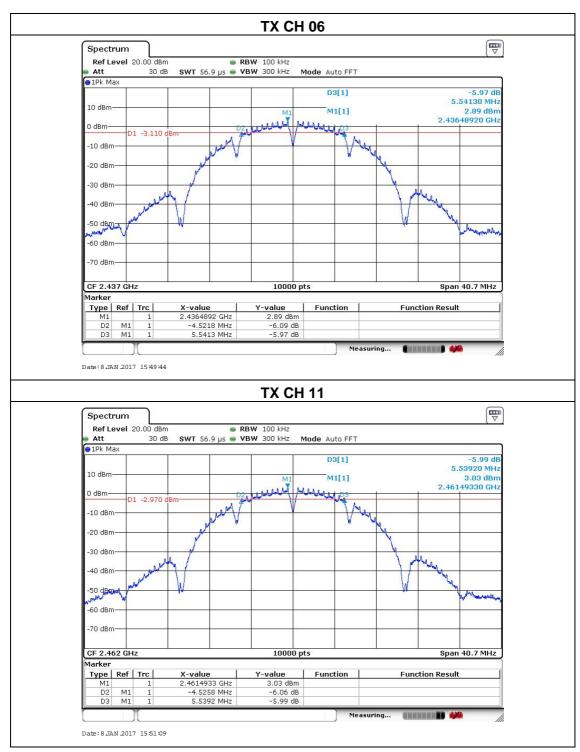
Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	10.063	500	Pass
Middle	2437	10.063	500	Pass
High	2462	10.065	500	Pass



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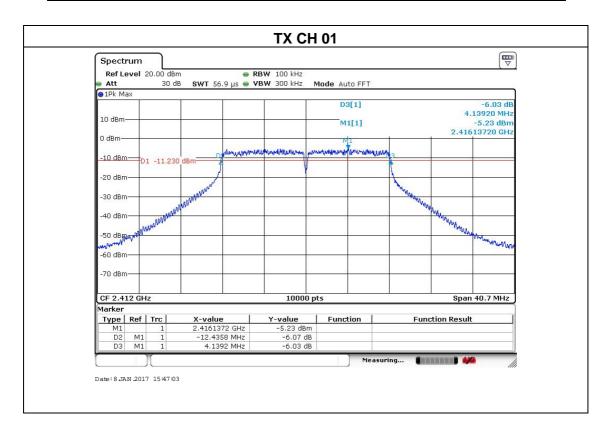




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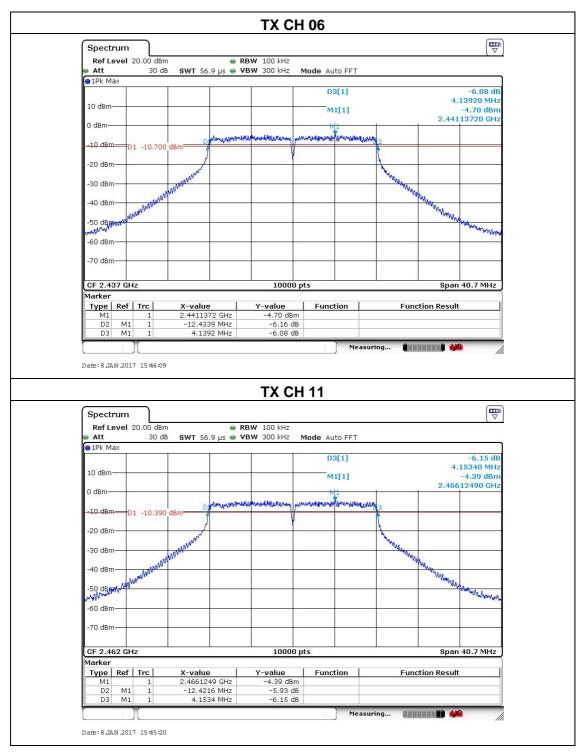
EUT:	Inventor II (3D printer)	Model Name :	INVENTOR II
Temperature :	25 ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Hest vollage .	DC 24V from adapter AC 120V/60Hz
Test Mode :	TX g Mode /CH01, CH06, CH1	1	

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	16.575	500	Pass
Middle	2437	16.573	500	Pass
High	2462	16.575	500	Pass





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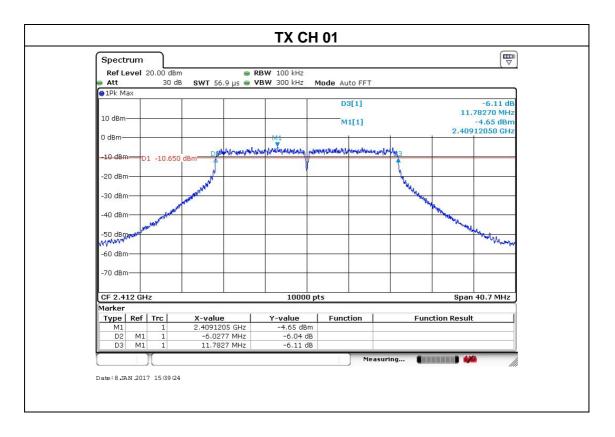




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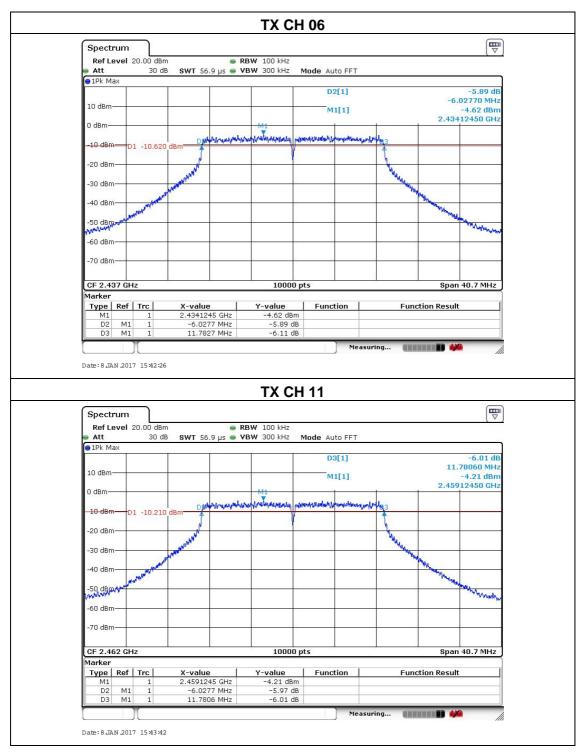
EUT:	Inventor II (3D printer)	Model Name :	INVENTOR II	
Temperature:	25 ℃	Relative Humidity:	60%	
Pressure :	1012 hPa	Test vollage .	DC 24V from adapter AC 120V/60Hz	
Test Mode :	TX n(HT20) Mode /CH01, CH06, CH11			

Channel	Frequency (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
Low	2412	17.810	500	Pass
Middle	2437	17.805	500	Pass
High	2462	17.808	500	Pass





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6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

1						
	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	

6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP

EUT		POWER	METER
-----	--	-------	-------

6.1.4 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.



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6.1.5 TEST RESULTS

EUT:	Inventor II (3D printer)	Model Name :	INVENTOR II
Temperature:	25 ℃	Relative Humidity:	60%
Pressure :	1012 hPa	HAST VAIIAAA .	DC 24V from adapter AC 120V/60Hz
Test Mode :	TX b/g/n Mode		

Test Channe	Frequency	Maximum Conducted Output Power(PK)	Max. Tune up Power	LIMIT		
	(MHz)	(dBm)	(dBm)	(dBm)		
		802	.11b			
CH01	2412	15.51	17.00	30		
CH06	2437	16.19	17.00	30		
CH11	2462	2462 16.68 17.00		30		
	802.11g					
CH01	2412	16.59	17.00	30		
CH06	2437	16.34	17.00	30		
CH11	2462 16.76 17.00 30		30			
	802.11n(HT20)					
CH01	2412	14.15	15.00	30		
CH06	2437	14.33	15.00	30		
CH11	2462	14.19	15.00	30		

Note: the highest powers for:

802.11b: 1Mbps 802.11g: 6Mbps

802.11n(HT20):11Mbps



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7. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE APPLICABLE STANDARD

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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 in §15.209(a) (see §15.205(c)).

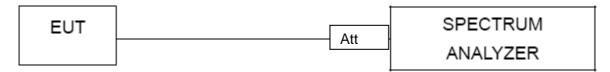
TEST PROCEDURE

- a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
- c) Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- e) Repeat above procedures until all measured frequencies were complete.

7.1 DEVIATION FROM STANDARD

No deviation.

7.2 TEST SETUP



7.3 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.

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7.4 TEST RESULTS

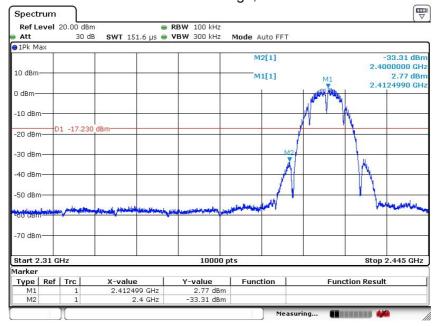
EUT:	Inventor II (3D printer)	Model Name :	INVENTOR II
Temperature:	25 ℃	Relative Humidity:	56%
Pressure :	1012 hPa	Test Voltage :	DC 24V from adapter AC 120V/60Hz

	Meter		Emission				
Frequency	Reading	Factor	Level	Limits	Margin	Detector	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Type	Comment
			802	.11b			
2390	41.26	9.86	51.12	74	-22.88	Pk	Vertical
2390	30.58	9.86	40.44	54	-13.56	Av	Vertical
2483.5	43.69	10.14	53.83	74	-20.17	Pk	Vertical
2483.5	31.12	10.14	41.26	54	-12.74	Av	Vertical
			802	.11g			
2390	41.19	9.86	51.05	74	-22.95	Pk	Vertical
2390	29.82	9.86	39.68	54	-14.32	Av	Vertical
2483.5	42.33	10.14	52.47	74	-21.53	Pk	Vertical
2483.5	30.14	10.14	40.28	54	-13.72	Av	Vertical
	802.11n(HT20)						
2390	40.42	9.86	50.28	74	-23.72	Pk	Vertical
2390	29.18	9.86	39.04	54	-14.96	Av	Vertical
2483.5	40.59	10.14	50.73	74	-23.27	Pk	Vertical
2483.5	28.66	10.14	38.8	54	-15.2	Av	Vertical



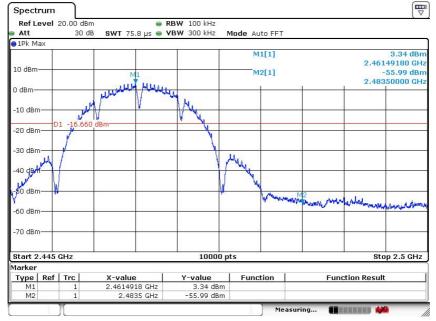
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Date: 8 JAN 2017 16:03:19

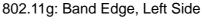
802.11b: Band Edge, Right Side

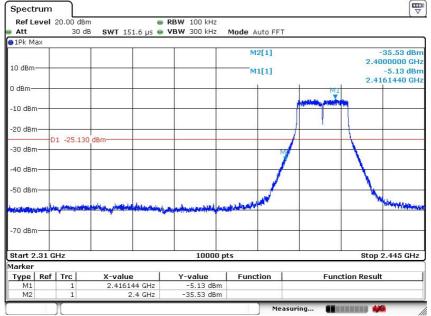


Date: 8 JAN .2017 16:04:15



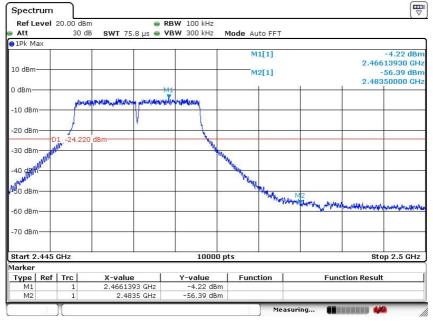
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Date: 8 JAN 2017 16:05:48

802.11g: Band Edge, Right Side

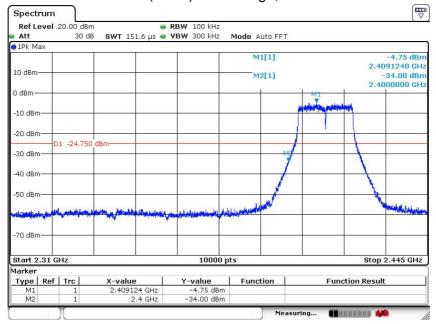


Date: 8 JAN .2017 16:05:05



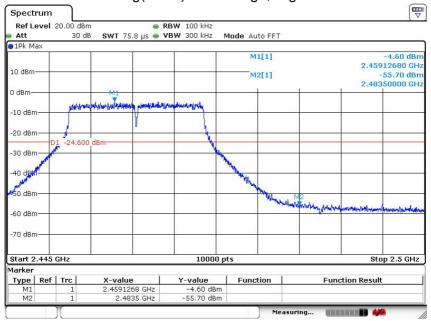
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802.11n(HT20): Band Edge, Left Side



Date: 8 JAN .2017 16:06:14

802.11g(HT20): Band Edge, Right Side



Date: 8 JAN .2017 16:06:56



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8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: 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.

8.2 EUT ANTENNA

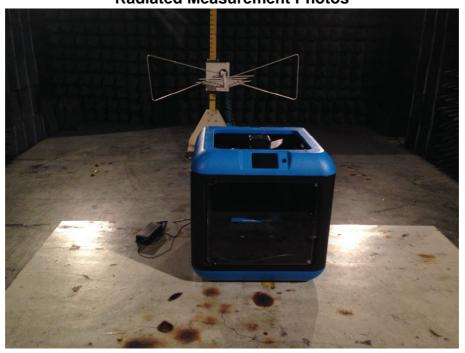
The EUT antenna is PCB antenna. It comply with the standard requirement.



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9. EUT TEST PHOTO







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Conducted Measurement Photos

