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Prüfbericht - Nr.: *Test Report No.:*	**19660367 001**		**Seite 1 von 56** *Page 1 of 56*
Auftraggeber: *Client:*	**American Megatrends India Private Limited** **Kumaran Nagar, Semmanchery,** **Off. Old Mahabalipuram Road** **Chennai-600119, India**		
Gegenstand der Prüfung: *Test item:*	**B.O.L.T Chest ECG**		
Bezeichnung: *Identification:*	**VA07**	**Serien-Nr.:** *Serial No.*	**Engineering Sample**
Wareneingangs-Nr.: *Receipt No.:*	**1803293443**	**Eingangsdatum:** *Date of receipt:*	**01.02.2018**
Prüfort: *Testing location:*	**Refer** Page 5 of 56 **for Test site details**		
Prüfgrundlage: *Test specification:*	**FCC Part 15 Subpart C 15.247** **ANSI C63.10-2013**		
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test items passed the test specification(s).*		
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (India) Pvt. Ltd.** 27/B, 2nd Cross, Electronic City Phase 1 Bangalore – 560 100. India FCC Test Site Registration no.: **496599**		

geprüft / *tested by:*			**kontrolliert** / *reviewed by:*		
14.03.2018	Girish Kumar G Engineer		23.05.2018	Saibaba Siddapur Assistant Manager	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges /*Other Aspects:* **FCC ID:2AFV6-AMI-ECG-02**
On receipt the equipment was in good condition

Abkürzungen:			***Abbreviations:***		
P(ass)	=	***entspricht Prüfgrundlage***	***P(ass)***	=	***passed***
F(ail)	=	***entspricht nicht Prüfgrundlage***	***F(ail)***	=	***failed***
N/A	=	***nicht anwendbar***	***N/A***	=	***not applicable***
N/T	=	***nicht getestet***	***N/T***	=	***not tested***

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

CIN: U72501KA1996PTC020653

Test Summary

Section	Test item	Result	Remarks
15.247 (b)	Maximum Peak Conducted Output Power	Pass	-
15.247 (a) (1)	20dB Bandwidth	Pass	
15.247 (a) (1)(III)	Number of Hopping Channels	Pass	
15.247 (a)(1)	Carrier Frequency Separation	Pass	
15.247 (a)(1)(III)	Time of Occupancy (Dwell Time)	Pass	
15.247 (d)	Band Edge Compliance of RF Conducted Emissions	Pass	
15.247 (d) / (15.209 & 15.205)	Restricted bands of Emissions & Restricted Bands of Operation	Pass	
15.207	Conducted Emission Test on A.C Power Lines	Pass	

Table of Contents

1 GENERAL REMARKS

Complimentary Materials

All attachments are integral part of this test report. This applies especially to the following appendix:

APPENDIX 1: TEST SETUP PHOTOS

APPENDIX 2: EUT EXTERNAL PHOTOS

APPENDIX 3: EUT INTERNAL PHOTOS

APPENDIX 4: FCC LABEL AND LABEL LOCATION

APPENDIX 5: BLOCK DIAGRAM

APPENDIX 6: SPECIFICATION OF EUT

APPENDIX 7: SCHEMATIC DIAGRAM

APPENDIX 8: BILL OF MATERIAL

APPENDIX 9: USER MANUAL

APPENDIX 10: SAR EXCLUSION CALCULATION

2 TEST SITES

Testing Facilities

TUV Rheinland (India) Private Limited
108 , Beside ISBR Business School,
Electronic city Phase I
Bangalore - 560 100

List of Test and Measurement Instruments

Table 1: List of test and measurement instruments

Equipment	Manufacturer	Model Name	Serial Number	Calibration Due Date	Periodicity	Used for Test Items
Spectrum Analyser	Agilent Technologies	E4407B	US41192772	29.03.2019	Yearly	Antenna - Port Measurements
EMI Test Receiver	Rohde & Schwarz	ESU 40	100288	24-10-2018	Yearly	Radiated Spurious Emission
Active loop antenna	Frankonia	LAX-10	LAX-10-800	13-04-2018	Yearly	
Biconical Antenna	Schwarzbeck mess-elektronik	VHBB-9124 / BBA-9106	9124-656	09-01-2019	Yearly	
Log-Periodic Antenna	Schwarzbeck mess-elektronik	VUSLP-9111B	9111B-111	16-01-2019	Yearly	
Broadband Horn Antenna	Frankonia	HAX-18	HAX18-802	16-09-2018	Yearly	
Emission Horn Antenna	ETS Lindgren	116706	00107323	22-06-2018	Yearly	
Semi Anechoic Chamber	Frankonia	-	-	-	-	
EMI Test Receiver	Rohde & Schwarz	ESR7	101133	13.02.2019	Yearly	Conducted Emission on AC Power Lines
Two Line V-Network (LISN)	Rohde & Schwarz	ENV216	100022	05.09.2018	Yearly	

3 GENERAL PRODUCT INFORMATION

Product Function and Intended Use

B.O.L.T Chest ECG device is a portable diagnostic system which can measure/monitor the electrical activity of the heart over a period of time using the ECG electrodes placed on the user`s body. The device monitors the ECG waveform from the chest Left, Right alone with a reference Electrode. The acquired and processed ECG data obtained from the device is transmitted to a mobile device wirelessly for further processing and analysis. The ECG data acquired by the device can be used to obtain clinical consultation from cardiologists or healthcare practitioners.

Ratings and System Details

Table 2: Ratings and System Details

Operating Frequency Range	2400 MHz – 2483.5 MHz;
Radio Protocol	Bluetooth (BDR+EDR)
Verified RF Power	-05.45 dBm
Channel Spacing	1 MHz
Modulation	BDR (GFSK), EDR (Pi/4-DQPSK, 8DPSK)
Number of antennas	1
Antenna Type & gain	Chip Antenna & 0.5 dBi
Supply Voltage to Product	5 VDC from Power Adaptor
Environmental conditions	Storage Condition: 10°C to 55°C Operational conditions : 16°C to 35°C

Measurement Uncertainty:

Table 3: Measurement Uncertainty

Parameter	Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.5 dB
Power Spectral Density, conducted	±3 dB
Unwanted Emissions, conducted	±3 dB
All emissions, radiated	±6 dB
Temperature	±3 ℃
Supply Voltages	±3 %
Time	±5 %

4 TEST SET-UP AND OPERATION MODE

Principle of Configuration Selection

Transmission was enabled with hopping mode / highest possible duty cycle transmission on low, mid and high channel.

Test Operation and Test Software

Testing software was used to enable the continuous transmission on low/mid/high channels on the EUT for the tests in this report.

- Test software used: CSR Bluetest3
- Software Version: BlueSuite 2.6.0
- Hardware Version: ECG_2V2

Special Accessories and Auxiliary Equipment

- None

Countermeasures to achieve EMC Compliance

- None

Test modes – data rates and modulations

For Radiated spurious emissions, the tests were performed for all data rates and only worst case results are reported in this report.

Note: The testing was performed with the power settings of -4 dBm in the Bluetest software.

List of frequencies

Table 4: List of Center Frequiences

Frequency Band (MHz)	Channel No.	Channel Frequency (MHz)
2400 – 2483.5 BT(BDR+EDR)	0	2402
	1	2403
	2	2404
	3	2405
	:	:
	:	:
	:	:
	37	2439
	38	2440
	39	2441
	40	2442
	:	:
	:	:
	:	:
	74	2476
	75	2477
	76	2478
	77	2479
	78	2480

5 TEST METHODOLOGY

Radiated Emission Test

The radiated emission measurement was performed according to the procedures in ANSI C63.10-2013. The equipment under test (EUT) was placed at the middle of the 80 cm high turntable for below 1 GHz & 1.5 m height for above 1 GHz measurement, and the EUT is 3 meters far from the measuring antenna. The turntable was rotated 360° for obtaining the maximum emission. The height of the measuring antennas was scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations. Repeat the measurement steps until the maximum emissions were obtained. The measurement above 1000 MHz was performed by horn antenna, The measurement below 30 MHz was performed by loop antenna, Measurement from 30 MHz to 200 MHz was performed by Baloon and Biconical Antenna, and mesurement from 200 MHz to 1 GHz was performed by Log-Periodic Antenna.

The EUT was rotated around the X-, Y-, and Z-Axis and the results from worst case axis are recorded.

5.1.1 Test Setup Configuration

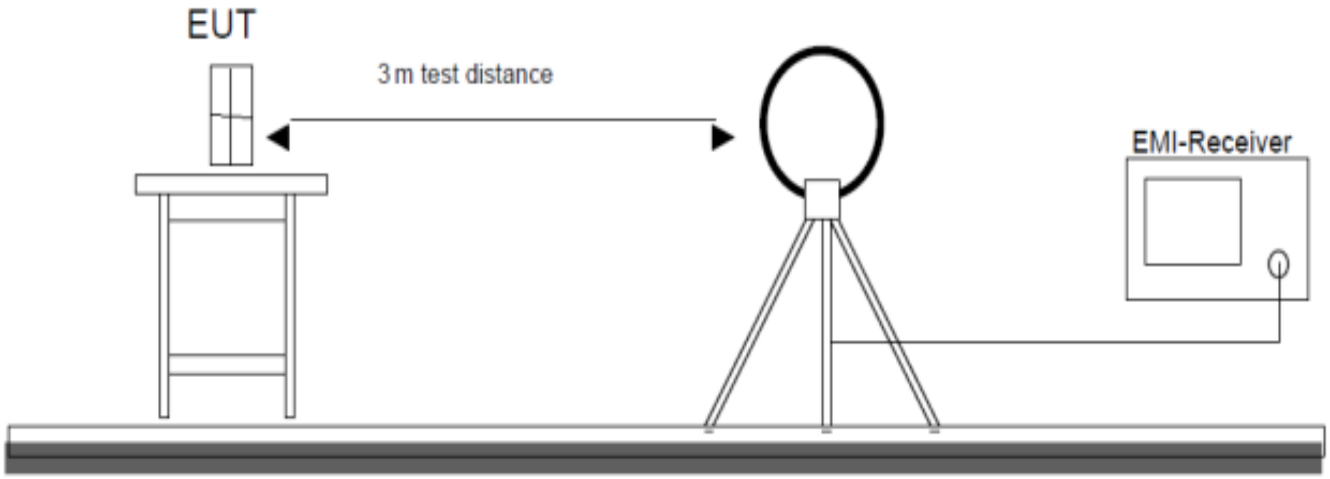


Figure 1: Frequency Range 9 kHz- 30 MHz

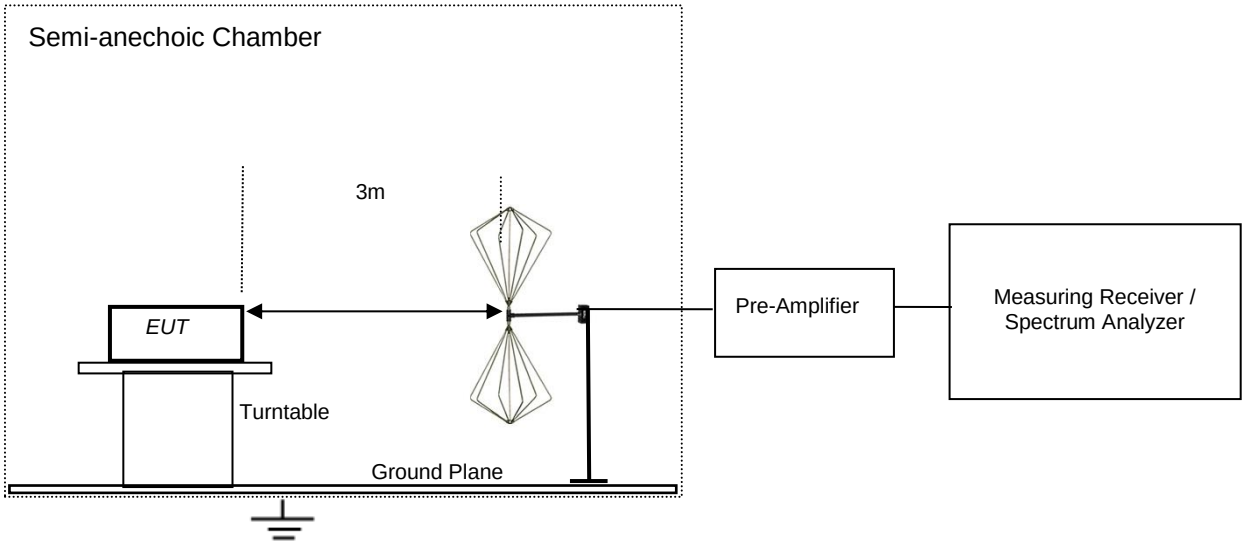


Figure 2: Frequency Range 30 MHz – 200 MHz

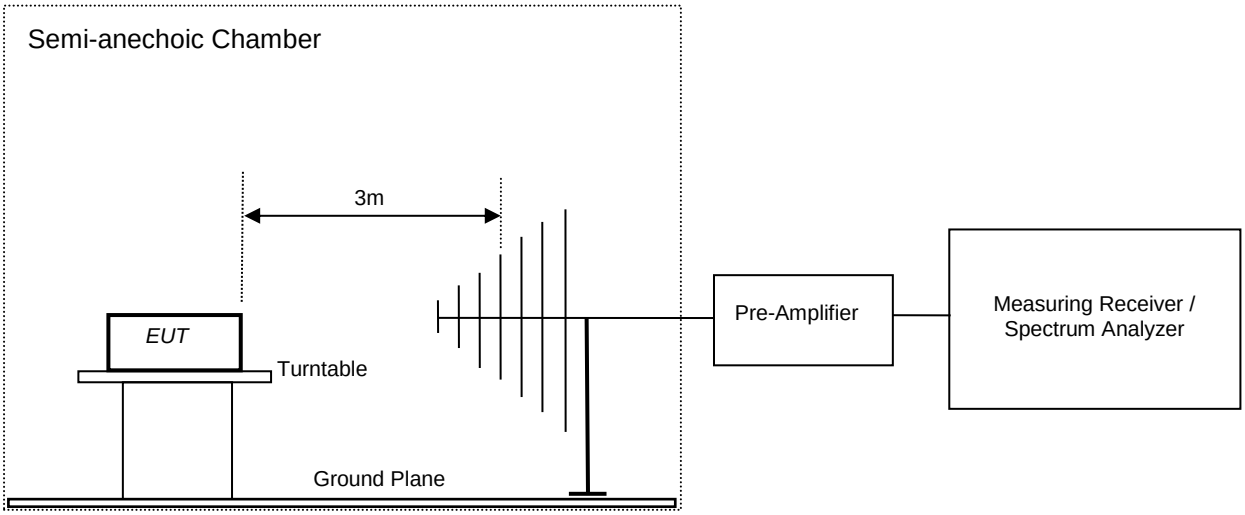


Figure 3: Frequency Range 200 MHz - 1GHz

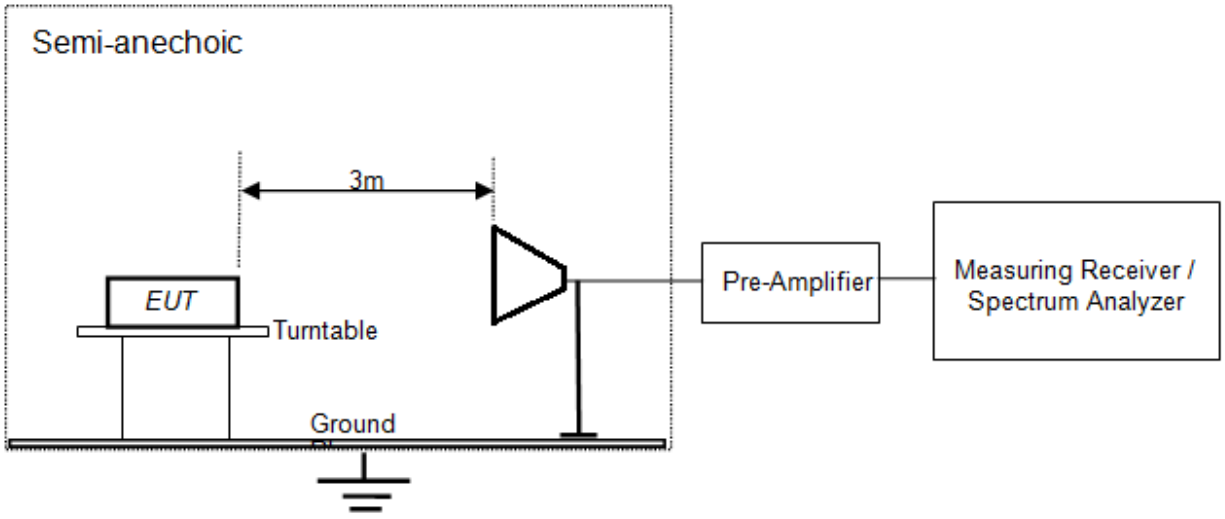


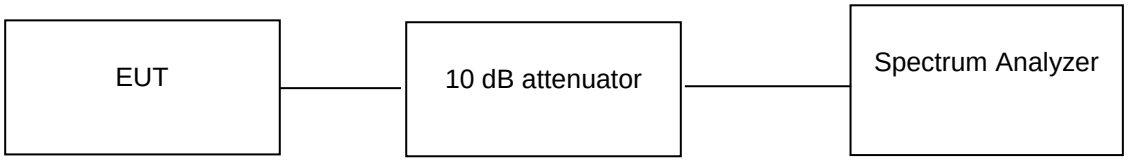
Figure 4: Frequency Range above 1 GHz

6 TEST RESULTS

Maximum Peak Conducted Output Power

Result ***Pass***

Test Specification	FCC part 15 Subpart C 15.247 (b)(1)
Measurement Bandwidth	3 MHz
Detector	Peak



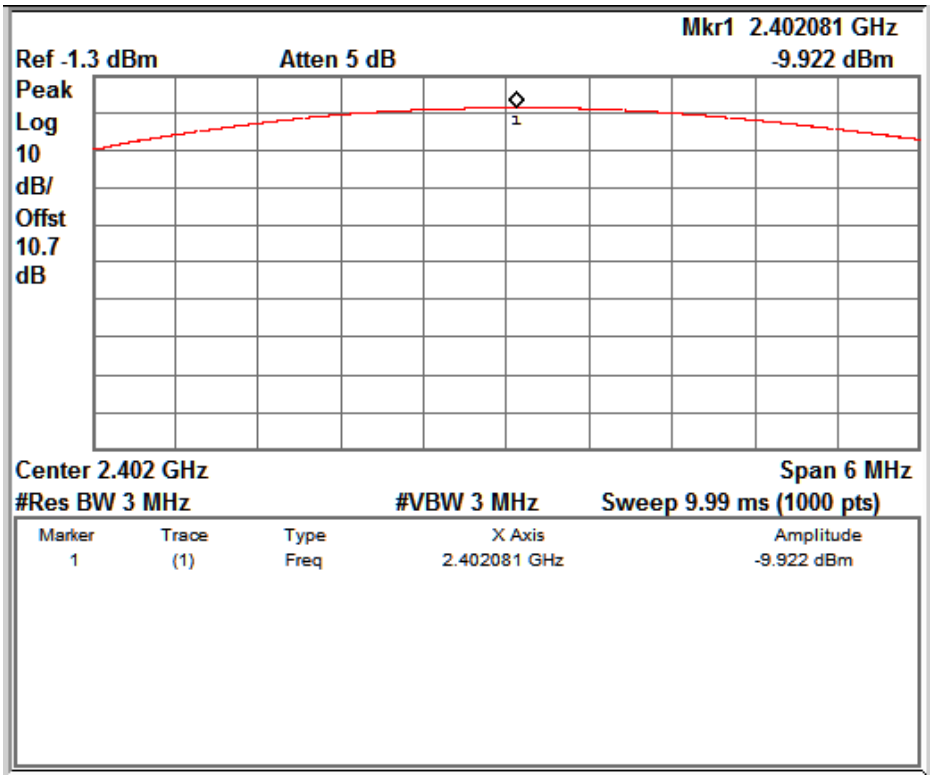
Note: Measurements were made as per DA-00-705, filing and measurements guidelines for 15.247, FHSS systems Mar.30,2000 mentioned in ANSI C63.10-2013.

Test results:

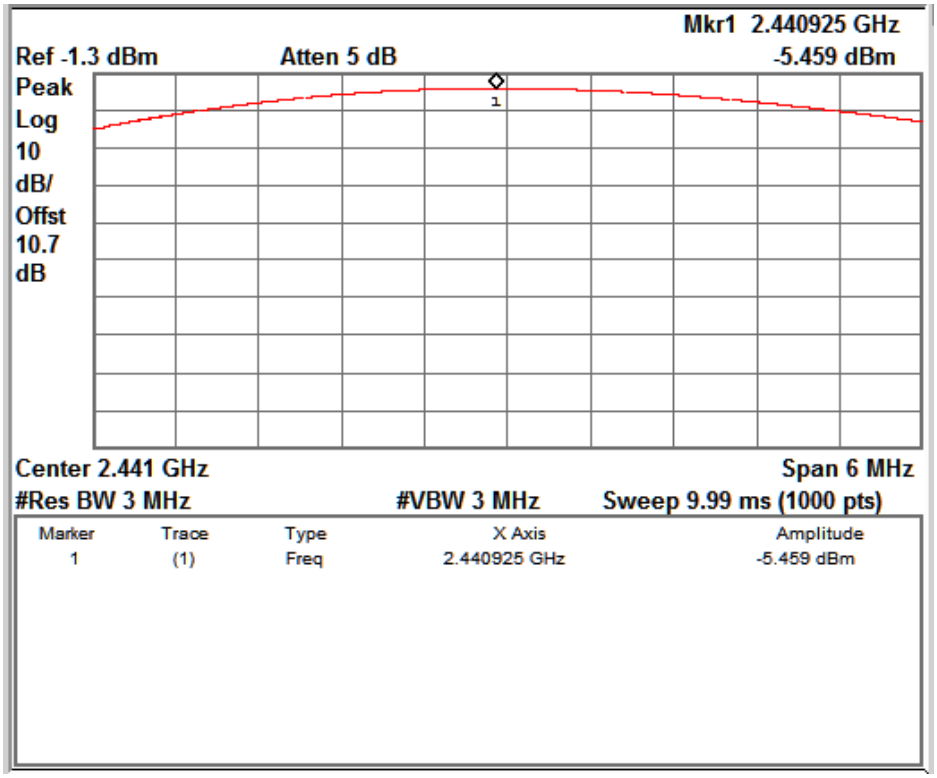
10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

Table 5: Maximum peak conducted output power verified Test Results

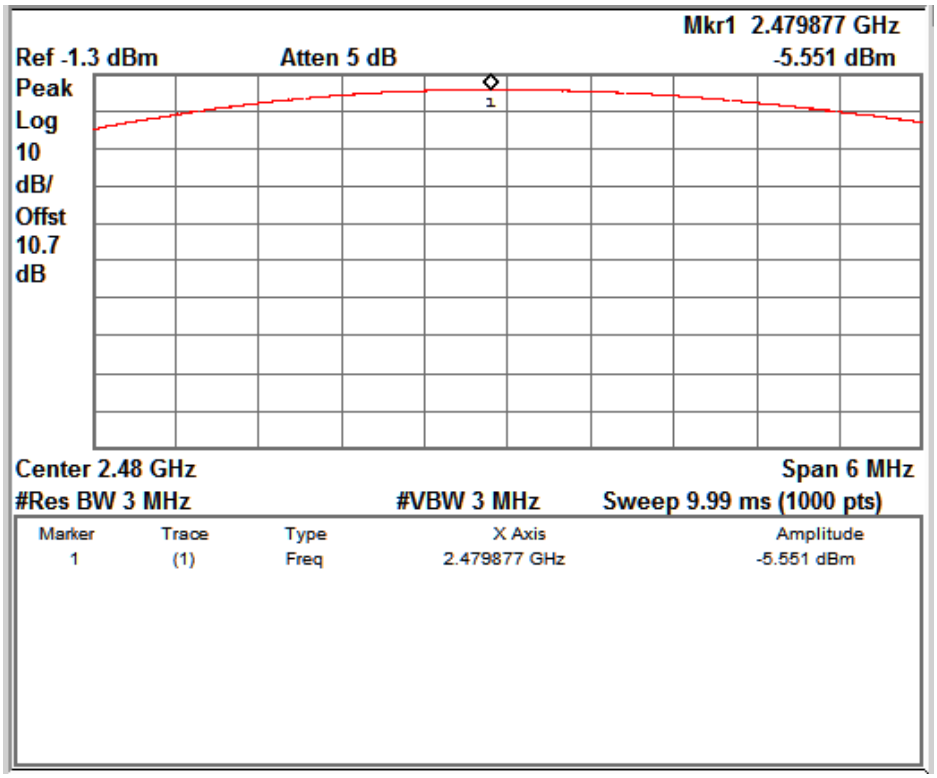
Modulation Type	Channel Frequency (MHz)	Output power (dBm)	Limit (dBm)
1 Mbps	2402	-9.92	30
	2441	-5.45	30
	2480	-5.55	30
2 Mbps	2402	-10.85	30
	2441	-6.54	30
	2480	-6.71	30
3 Mbps	2402	-10.49	30
	2441	-6.15	30
	2480	-6.33	30



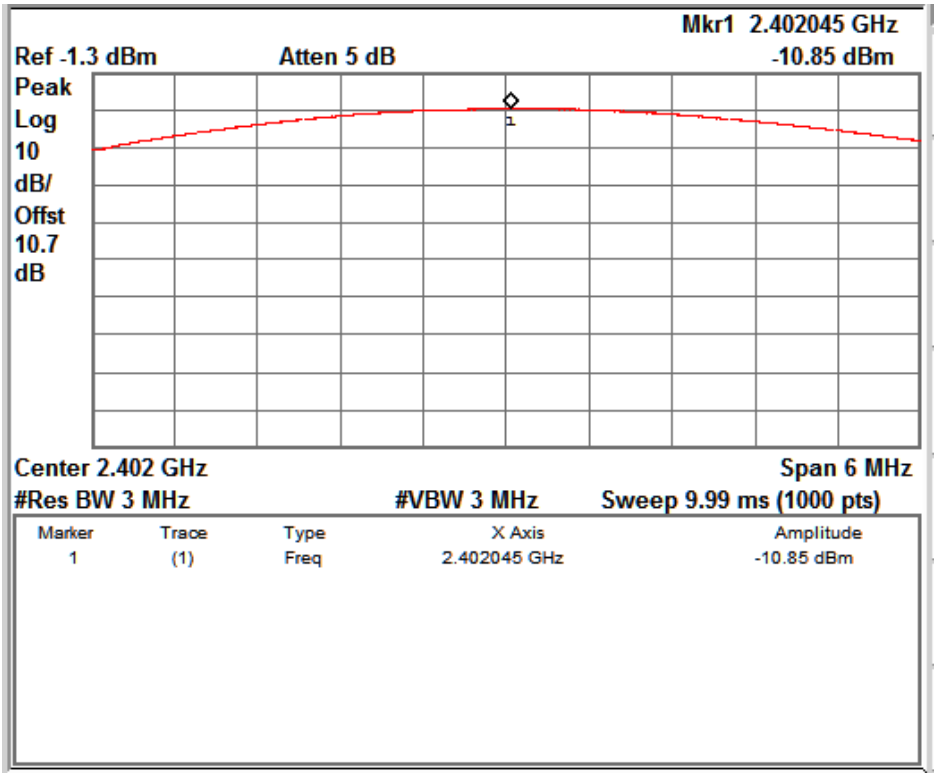
1 Mbps Channel low – 2402 MHz



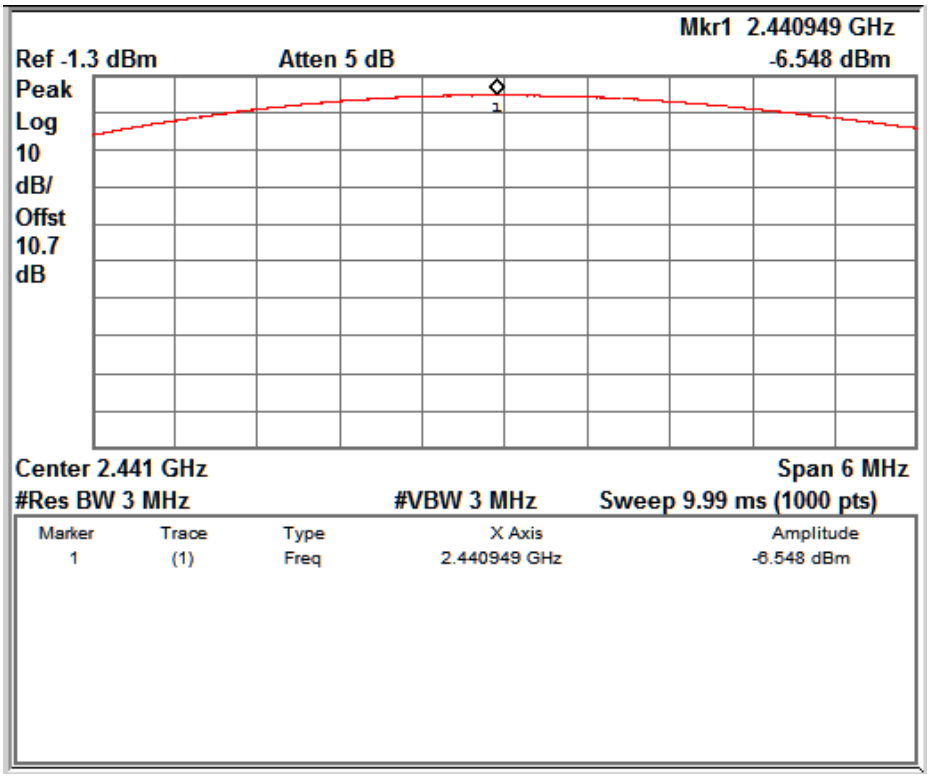
1 Mbps Channel mid – 2441 MHz



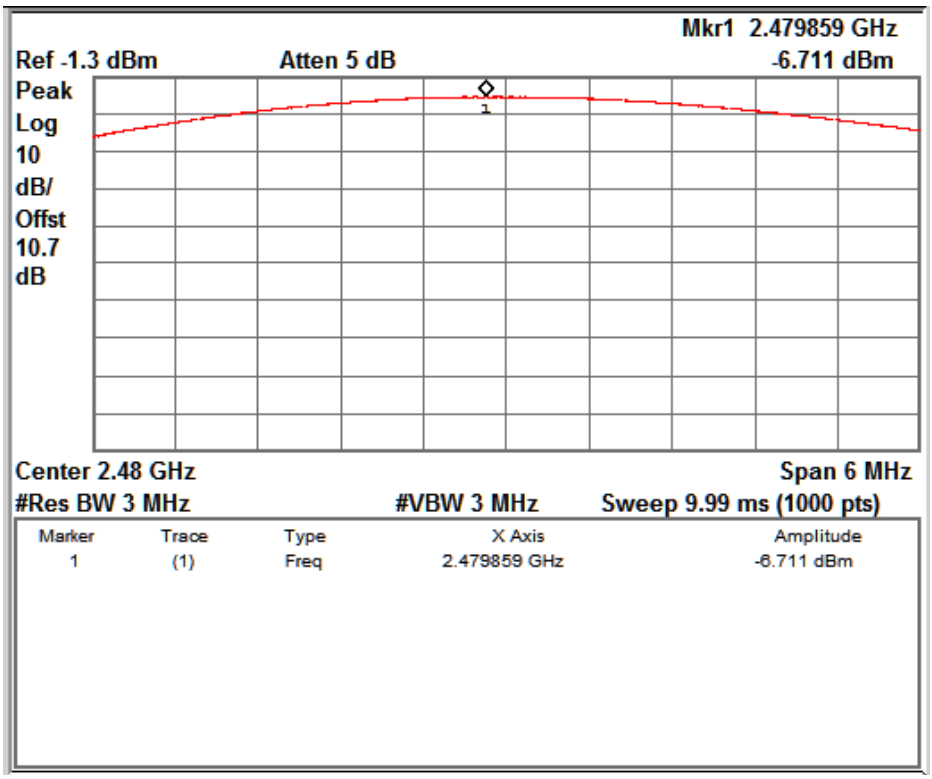
1 Mbps Channel high – 2480 MHz



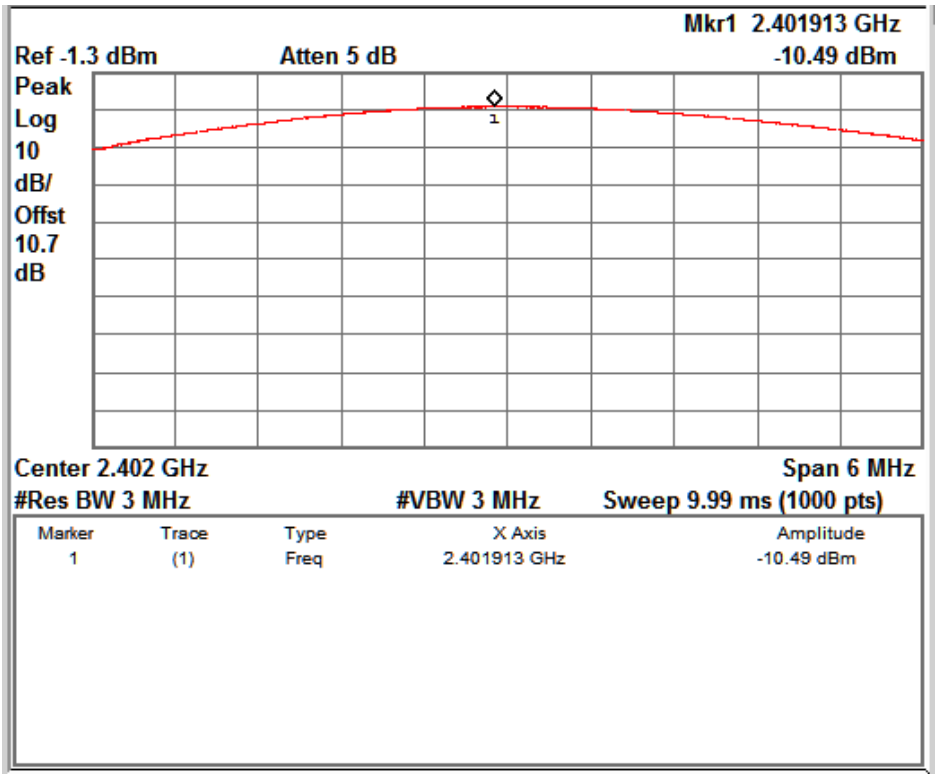
2 Mbps Channel low – 2402 MHz



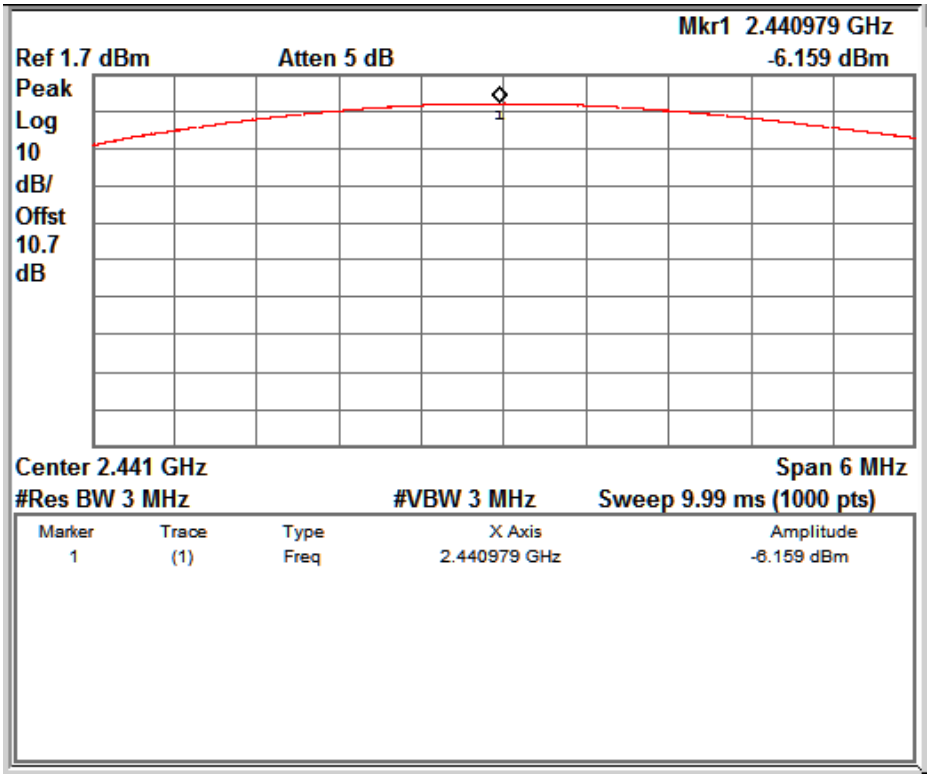
2 Mbps Channel mid – 2441 MHz



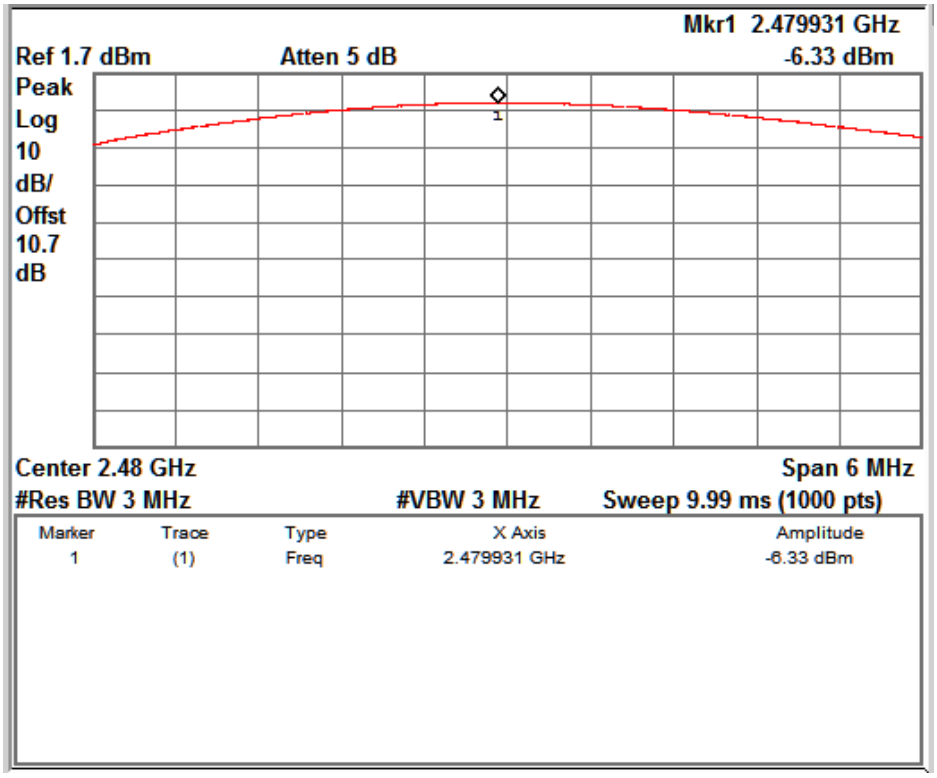
2 Mbps Channel high – 2480 MHz



3 Mbps Channel low – 2402 MHz



3 Mbps Channel mid – 2441 MHz

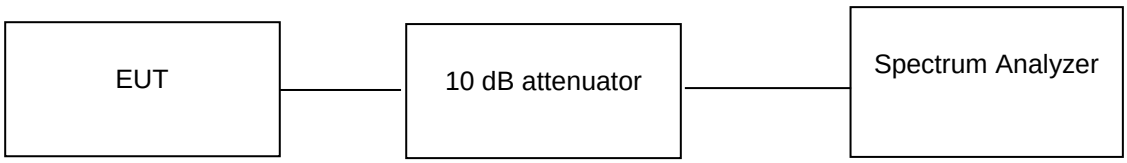


3 Mbps Channel high – 2480 MHz

20 dB Bandwidth

Result ***Pass***

Test Specification	FCC part 15 Subpart C Section 15.247 (a)(1)
Detector	Peak
Port of testing	Antenna Port
Requirement	The bandwidth of frequency hopping channel is the 20 dB emission bandwidth , measured with the hopping stopped. The system RF bandwidth is equal to the channel bandwidth multiplied by the number of channels in the hopset. The hopset shall be such that the near-term distribution of frequencies appears random , with sequential hops randomly distributed in both direction and magnitude of change in the hopset while the long-term distribution appears evenly distributed.



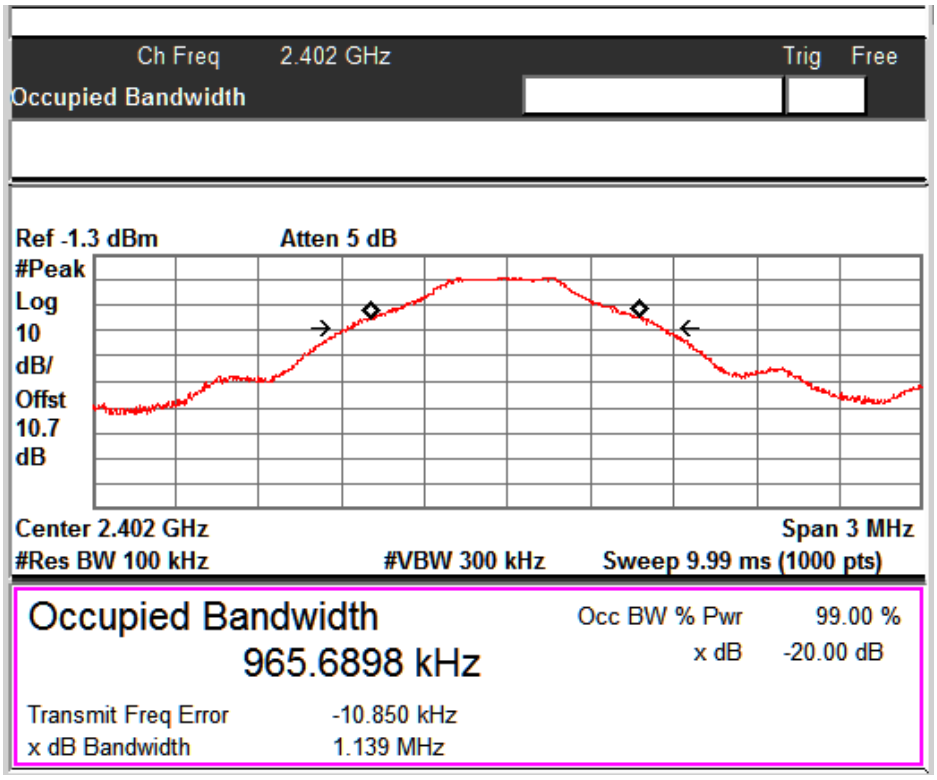
Note: Measurements were made as per DA-00-705, filing and measurements guidelines for 15.247, FHSS systems Mar.30,2000 mentioned in ANSI C63.10-2013.

Test results:

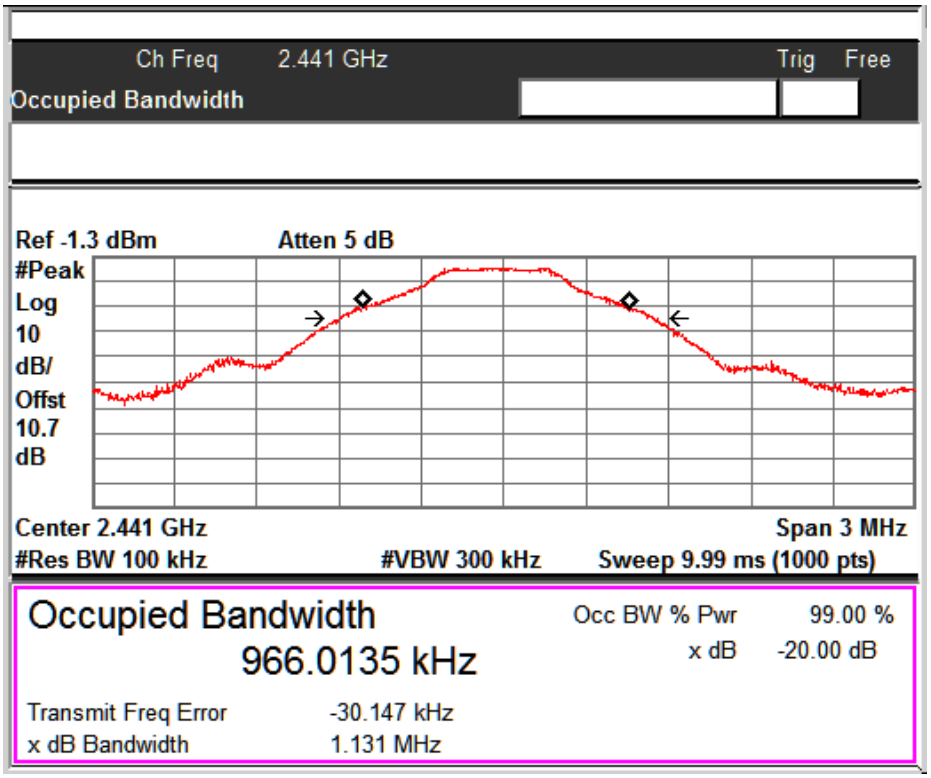
10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

Table 6: 20dB Bandwidth and Occupied Bandwidth Test Results

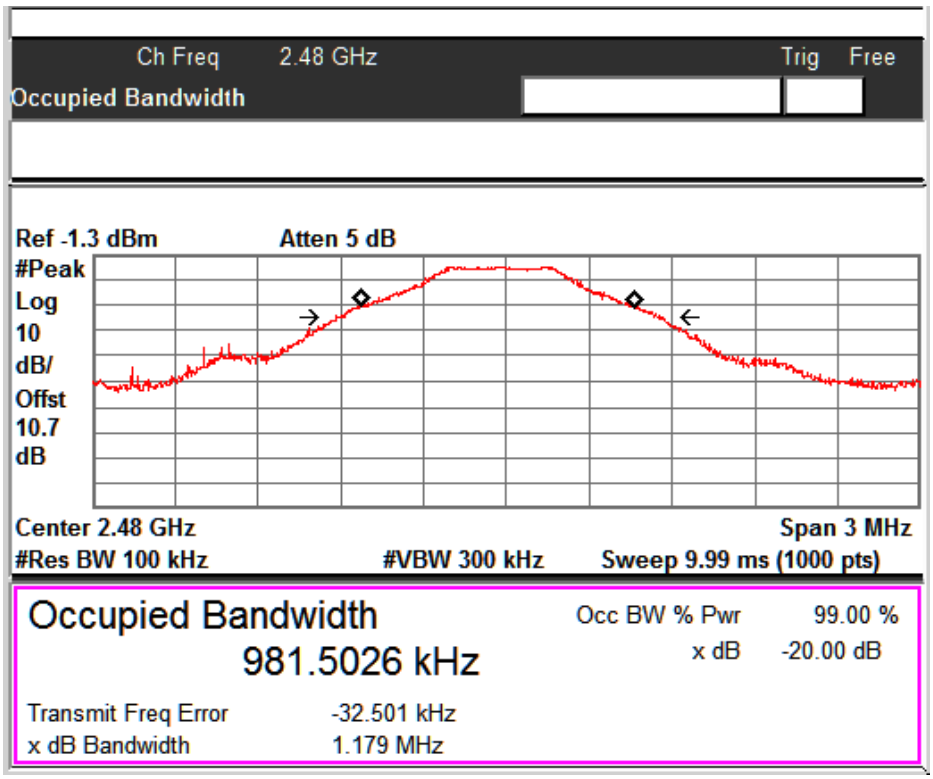
Modulation type	Channel Frequency (MHz)	20dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
1 Mbps	2402	1.139	0.965
	2441	1.131	0.966
	2480	1.179	0.981
2 Mbps	2402	1.391	1.222
	2441	1.392	1.222
	2480	1.391	1.227
3 Mbps	2402	1.391	1.231
	2441	1.391	1.231
	2480	1.391	1.234



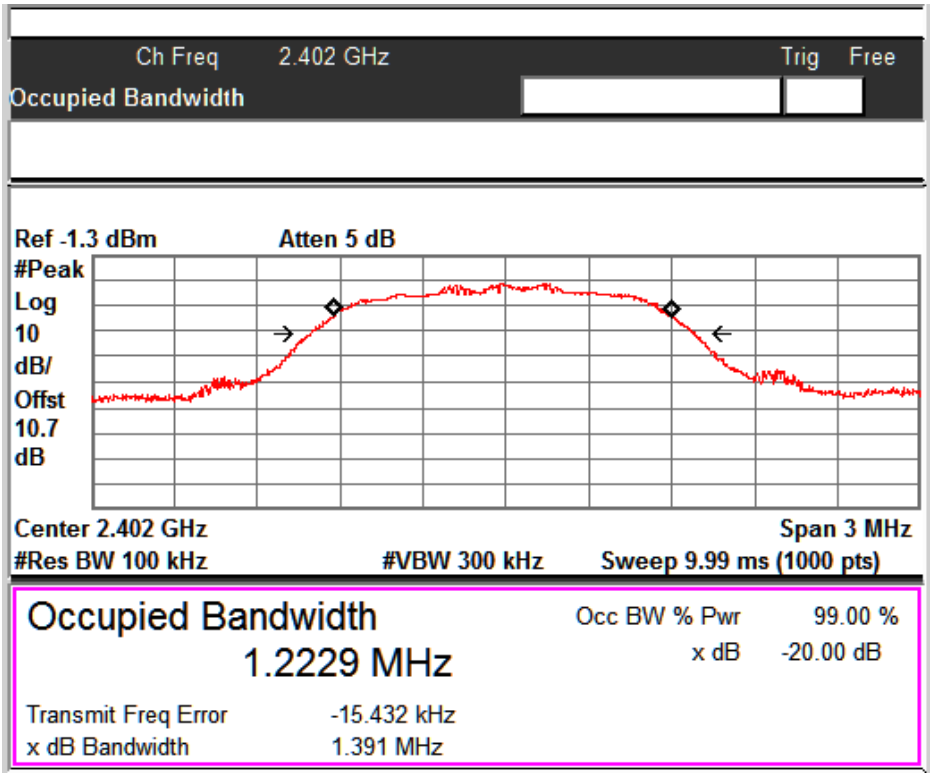
1 Mbps Channel low



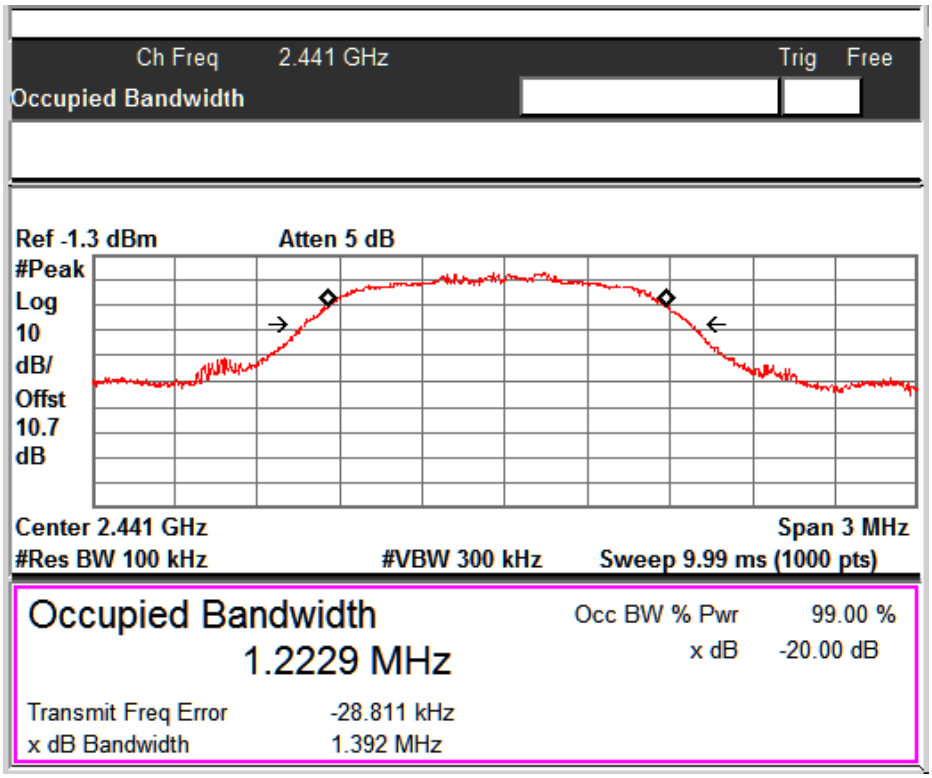
1 Mbps Channel mid



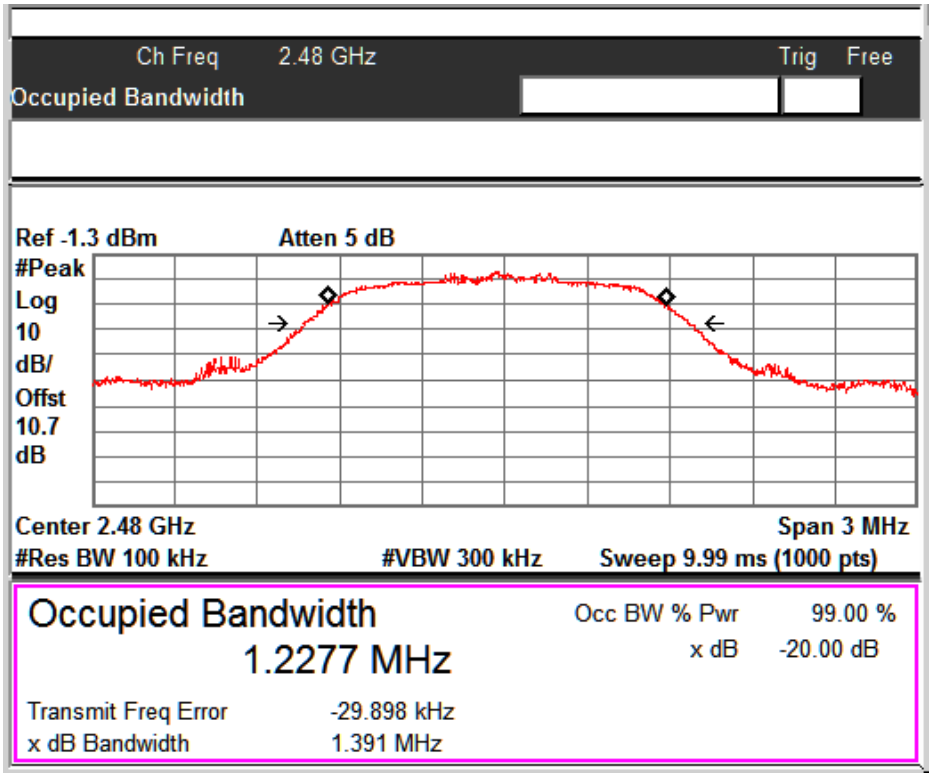
1 Mbps Channel high



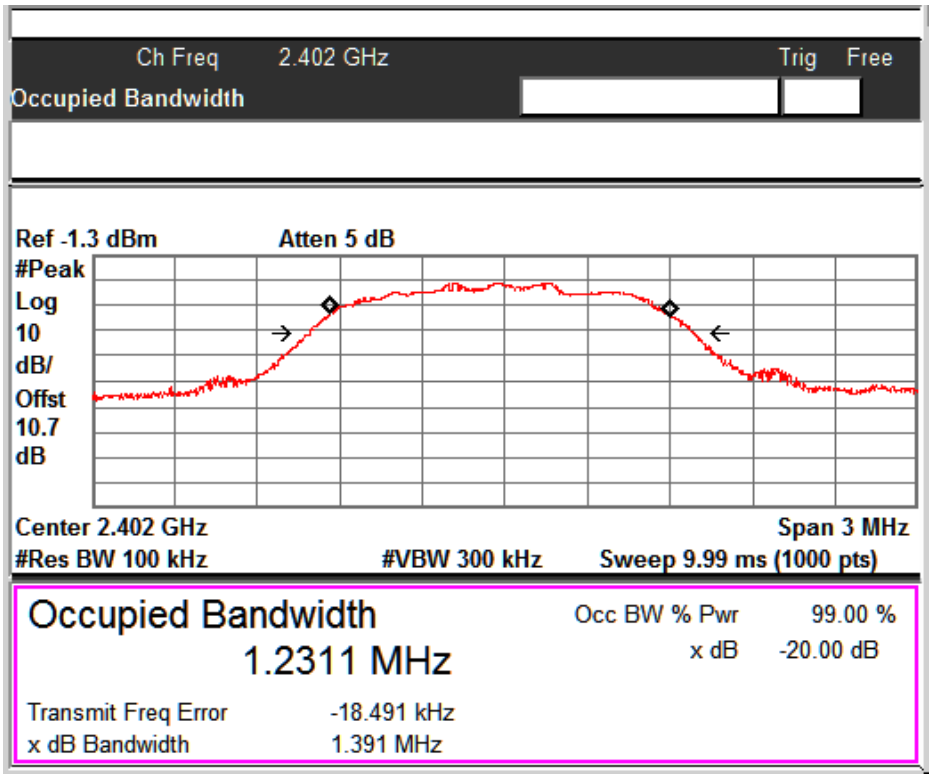
2 Mbps Channel low



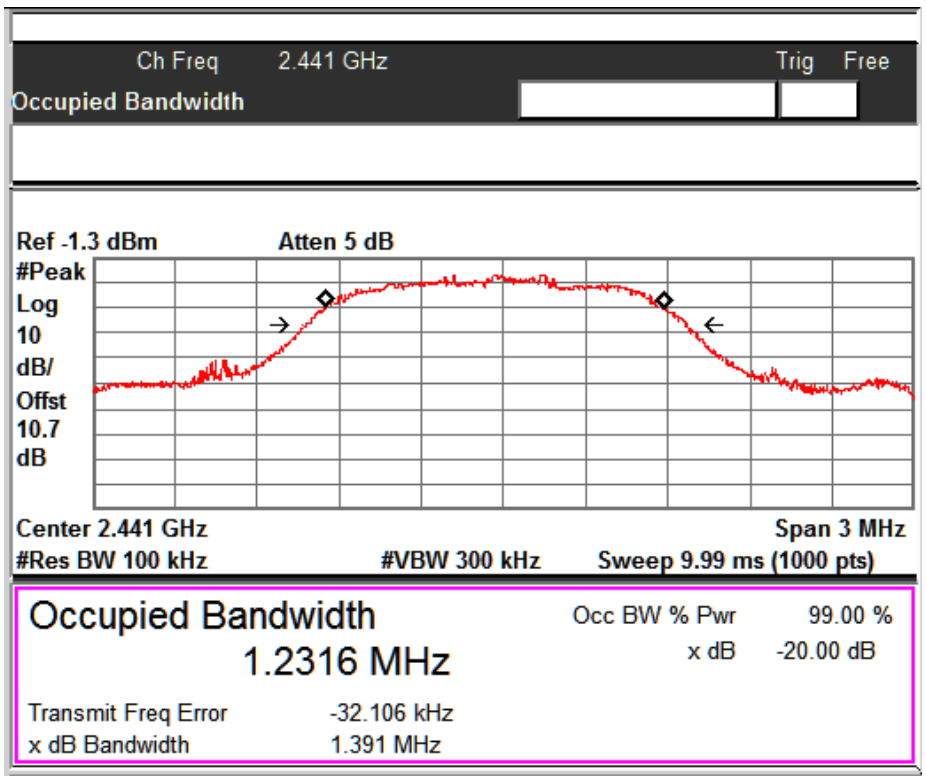
2 Mbps Channel mid



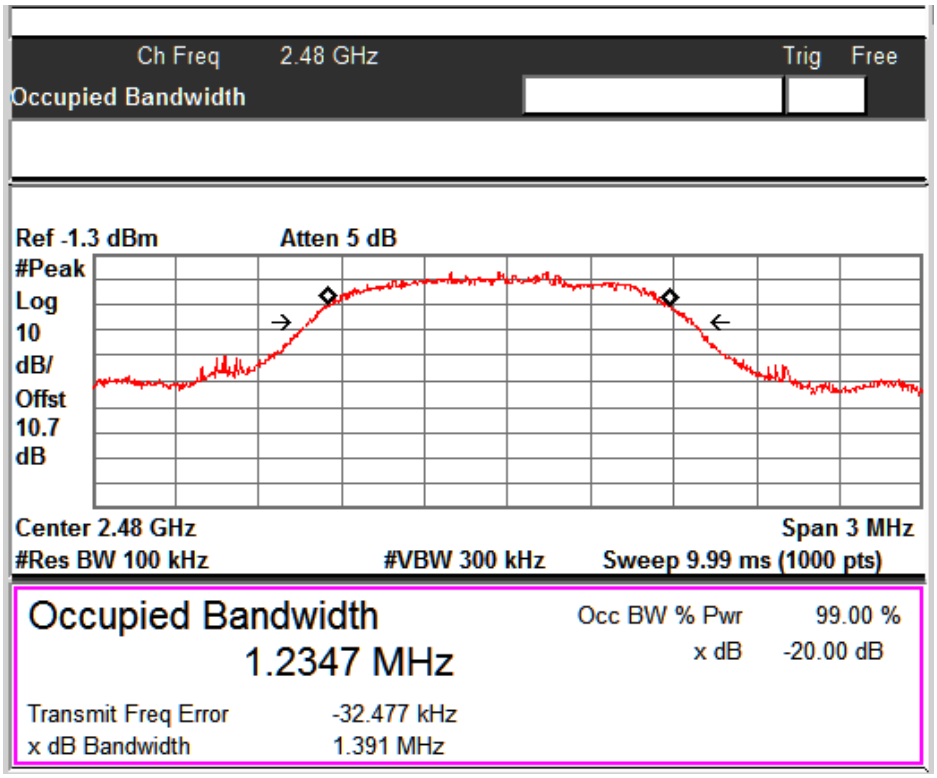
2 Mbps Channel high



3 Mbps Channel low



3 Mbps Channel mid



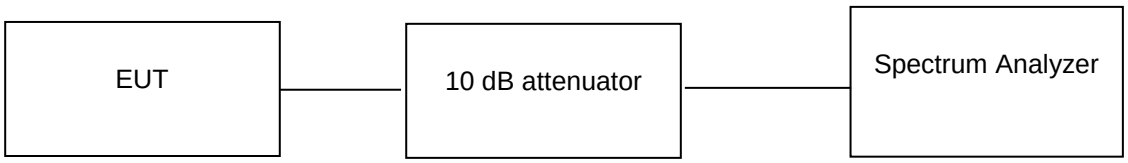
3 Mbps Channel high

Number of Hopping Channels

Result ***Pass***

Test Specification	FCC Part 15 Subpart C Section 15.247 (a) (1)
Detector Function	Peak
Port of testing	Antenna port
Requirement	Frequency hopping systems operating in the band 2400-2483.5 MHz shall use at least 15 hopping channels

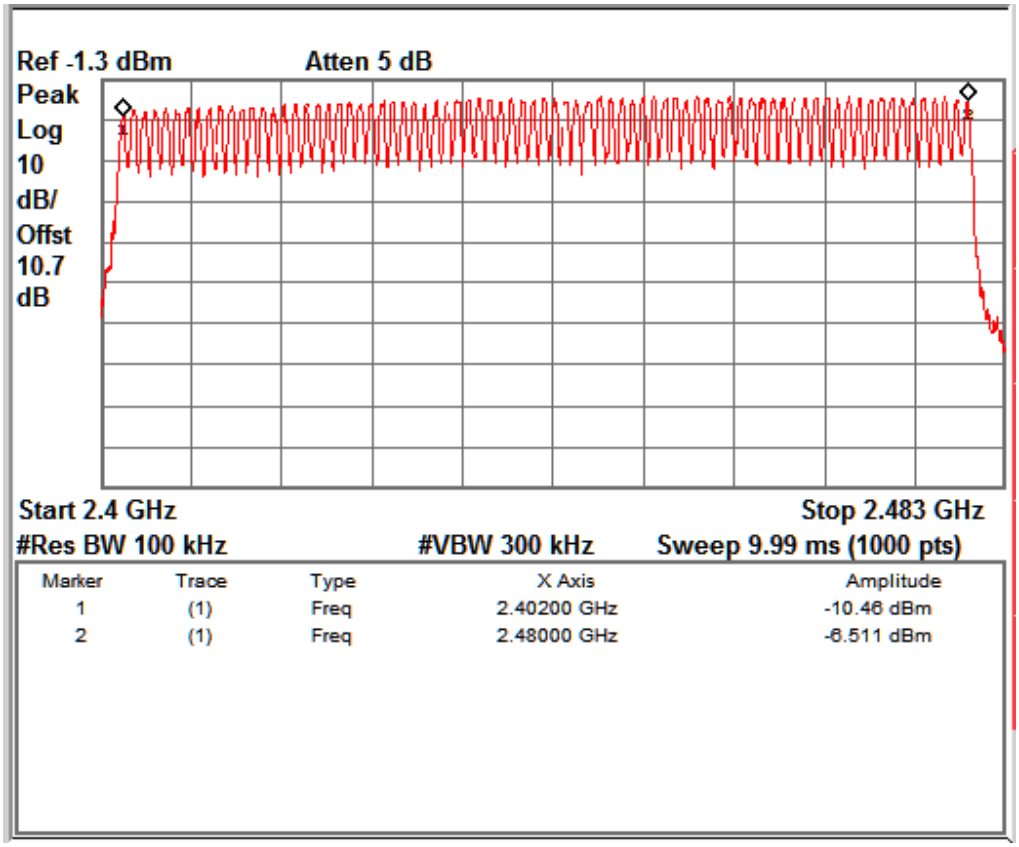
Test Method:



Note: Measurements were made as per DA-00-705, filing and measurements guidelines for 15.247, FHSS systems Mar.30,2000 mentioned in ANSI C63.10-2013.

Test results:

10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result



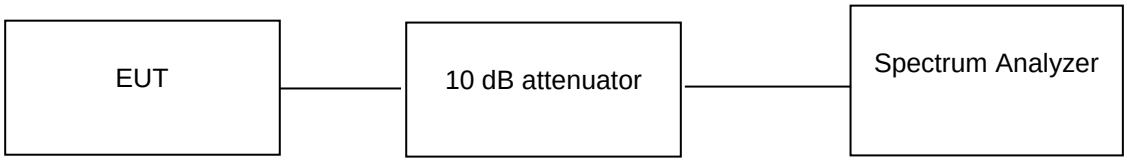
Total Number of hopping channels = 79

Carrier Frequency Separation

Result ***Pass***

Test Specification	FCC Part 15 Subpart C Section 15.247 (a) (1)
Detector Function	Peak
Port of testing	Antenna port
Requirement	Frequency hopping systems shall have hopping channel carrier frequency separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater

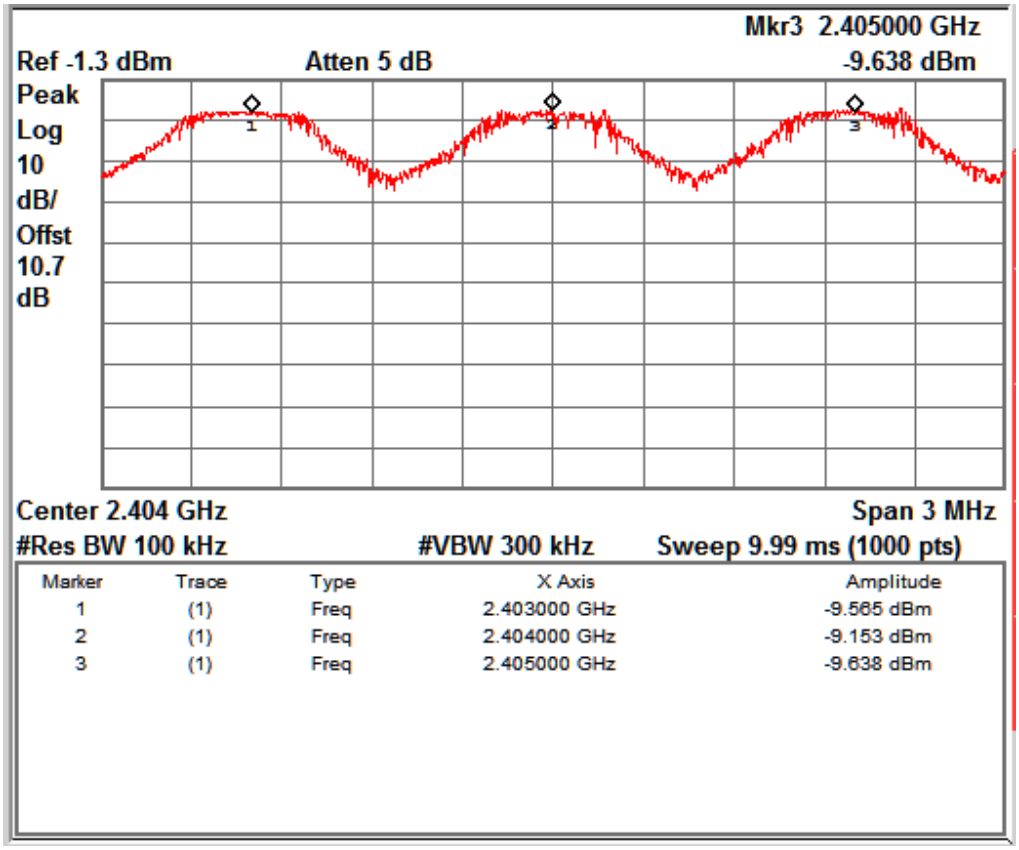
Test Method:



Note: Measurements were made as per DA-00-705, filing and measurements guidelines for 15.247, FHSS systems Mar.30,2000 mentioned in ANSI C63.10-2013.

10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

Test results:



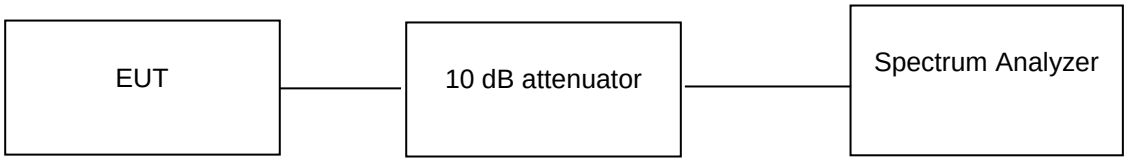
Channel Separation

Time of Occupancy (Dwell Time)

Result ***Pass***

Test Specification	FCC Part 15 Subpart C Section 15.247 (a) (1)
Detector Function	Peak
Port of testing	Antenna port
Requirement	The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Transmissions on particular hopping frequencies may be avoided or suppressed provided that a minimum of 15 hopping channels are used.

Test Method:



Note: Measurements were made as per DA-00-705, filing and measurements guidelines for 15.247, FHSS systems Mar.30,2000 mentioned in ANSI C63.10-2013.

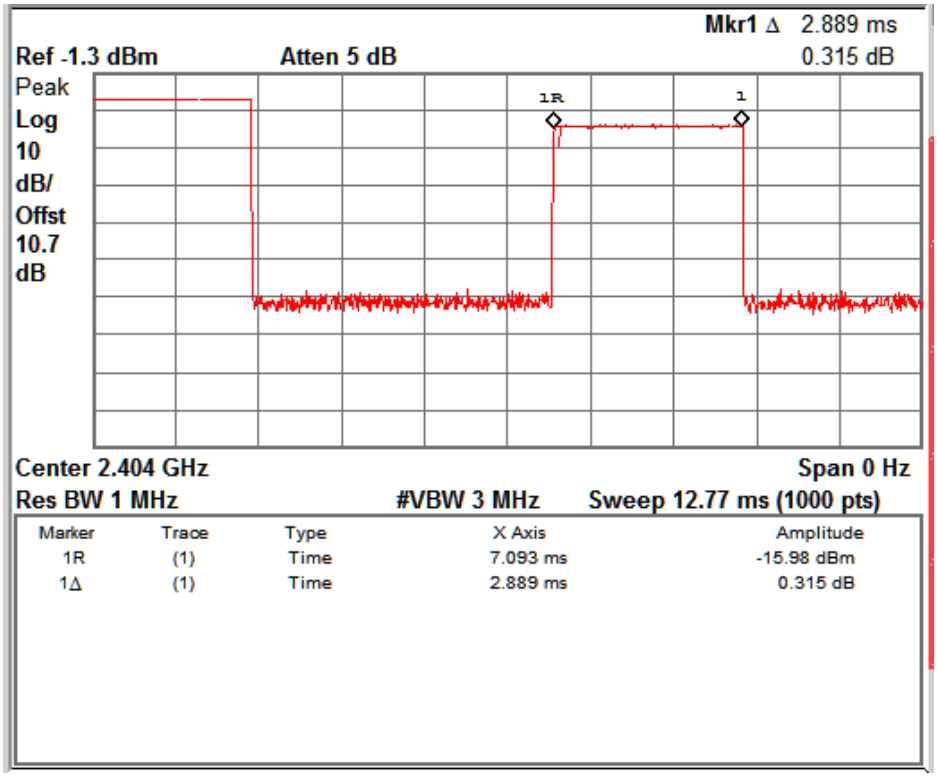
Test Results:

Time slot		Time Slot (s)	Limit (s)
DH	**Measurement Value (sec)**		
DH5	0.00288	0.307	31.6
2DH5	0.00290	0.309	31.6
3DH5	0.00290	0.309	31.6

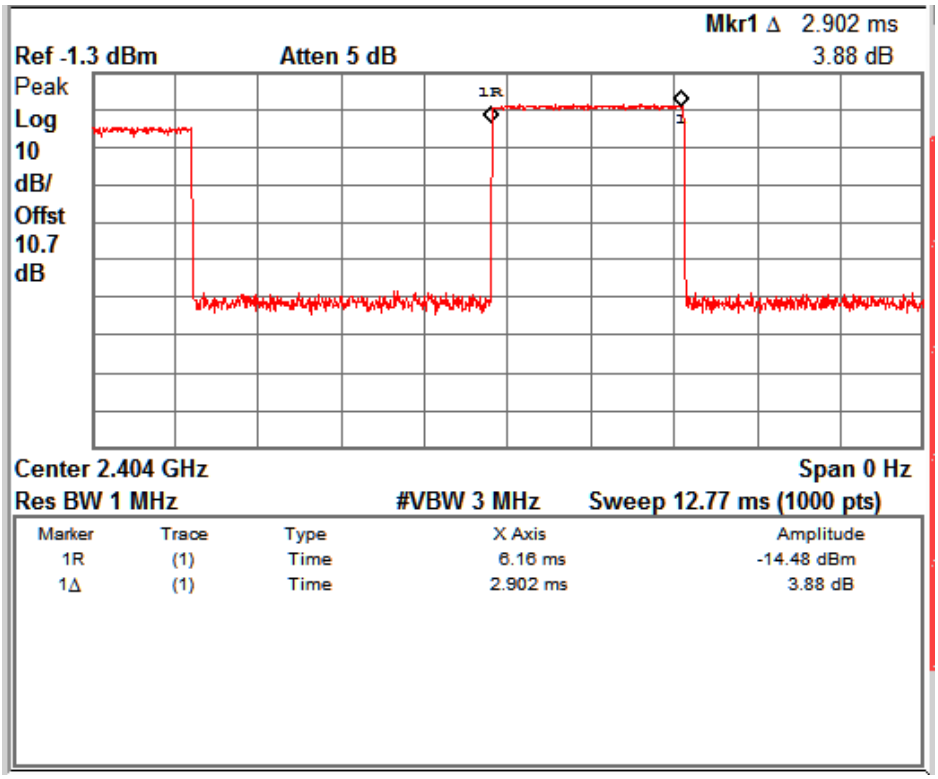
Measurement Method

Period Time = 0.4(sec)*79 (hopping channel) = 31.6 s

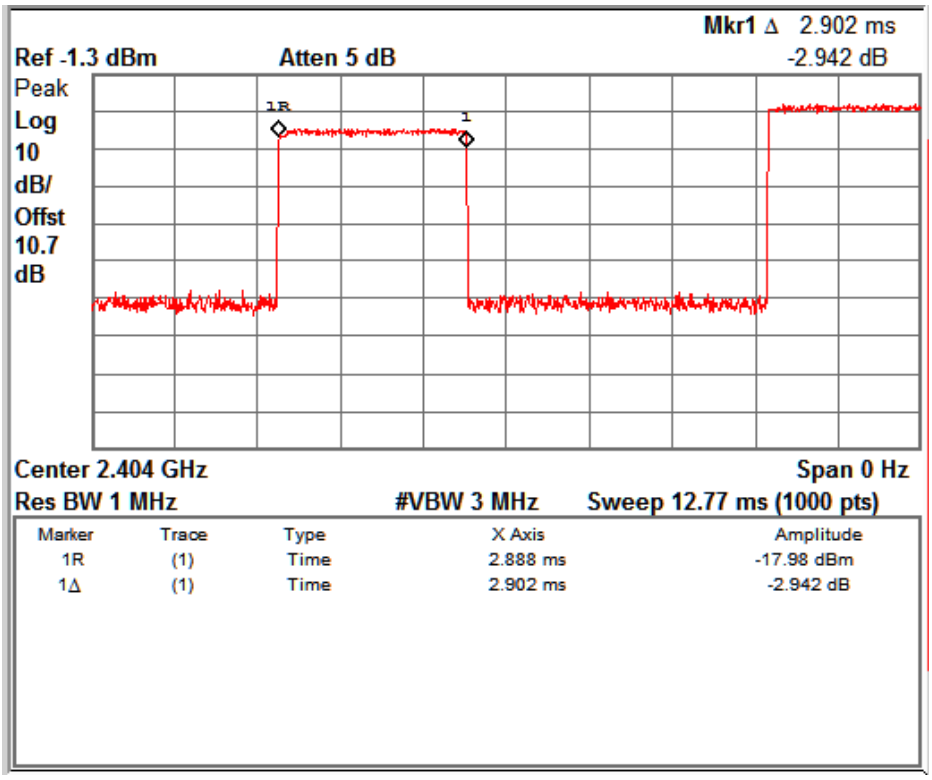
DH Time slot = Measurement value (Sec)*(1600/ (6*79))*Period time


Mkr1 Δ 2.889 ms
Ref -1.3 dBm
Atten 5 dB
0.315 dB
Peak
Log
10
dB/
Offst
10.7
dB
1R
1
Center 2.404 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 3 MHz
Sweep 12.77 ms (1000 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 7.093 ms -15.98 dBm
1Δ (1) Time 2.889 ms 0.315 dB

DH5


Mkr1 Δ 2.902 ms
Ref -1.3 dBm
Atten 5 dB
3.88 dB
Peak
Log
10
dB/
Offst
10.7
dB
1R
1
Center 2.404 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 3 MHz
Sweep 12.77 ms (1000 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 6.16 ms -14.48 dBm
1Δ (1) Time 2.902 ms 3.88 dB

2DH5


Mkr1 Δ 2.902 ms
Ref -1.3 dBm
Atten 5 dB
-2.942 dB
Peak
Log
10
dB/
Offst
10.7
dB
1R
1
Center 2.404 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 3 MHz
Sweep 12.77 ms (1000 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 2.888 ms -17.98 dBm
1Δ (1) Time 2.902 ms -2.942 dB

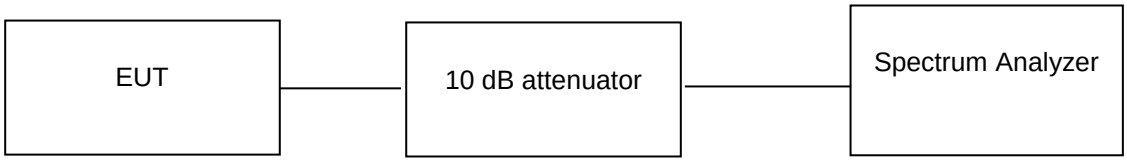
3DH5

Band- edge Compliance of RF Conducted Emissions

Result ***Pass***

Test Specification	FCC Part 15 Subpart C Section 15.247 (a) (1)
Detector Function	Peak
Port of testing	Antenna port
Requirement	In any 100kHz 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 20dB below that in the 100kHz 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.

Test Method:

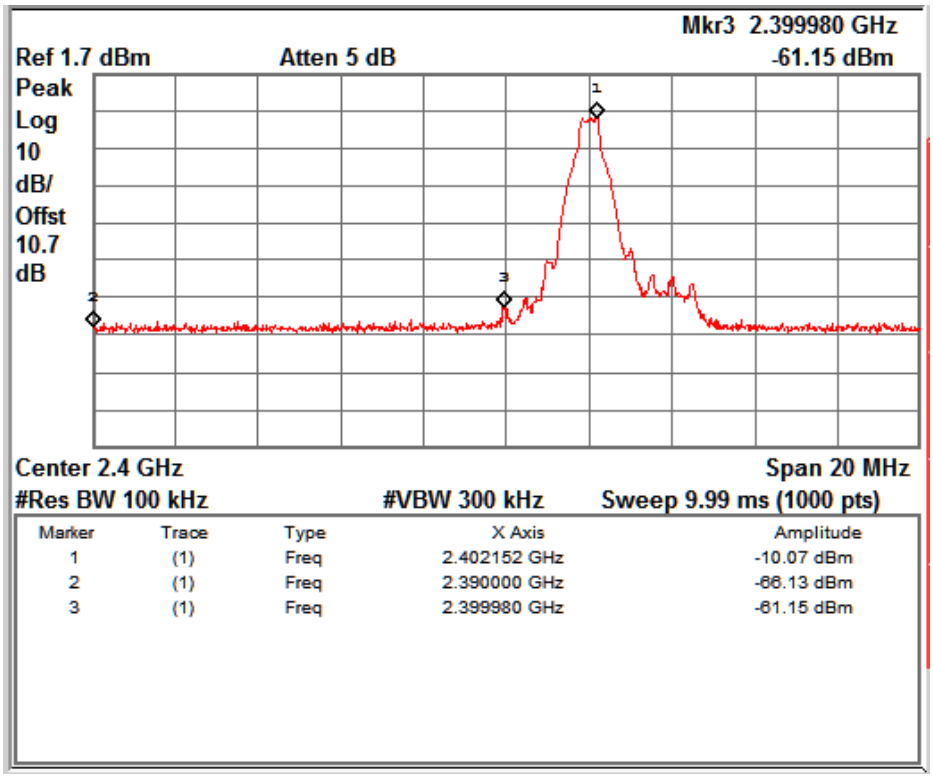


Note: Measurements were made as per DA-00-705, filing and measurements guidelines for 15.247, FHSS systems Mar.30,2000 mentioned in ANSI C63.10-2013.

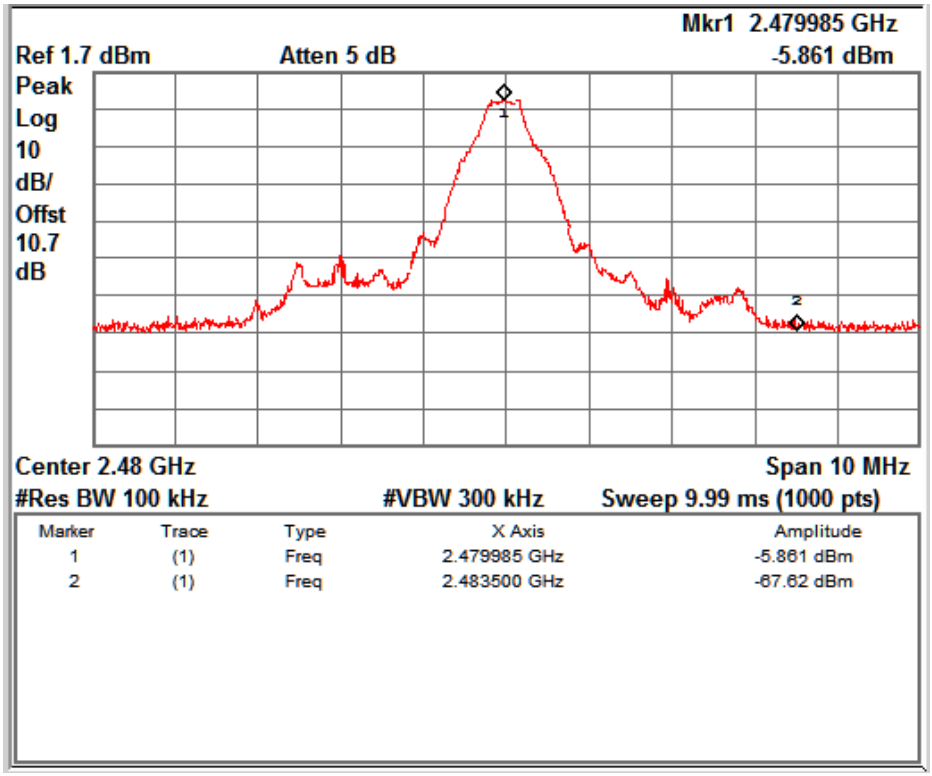
Test Result:

10 dB attenuator + 0.7 Cable loss = 10.7 dB offset is considered in below result

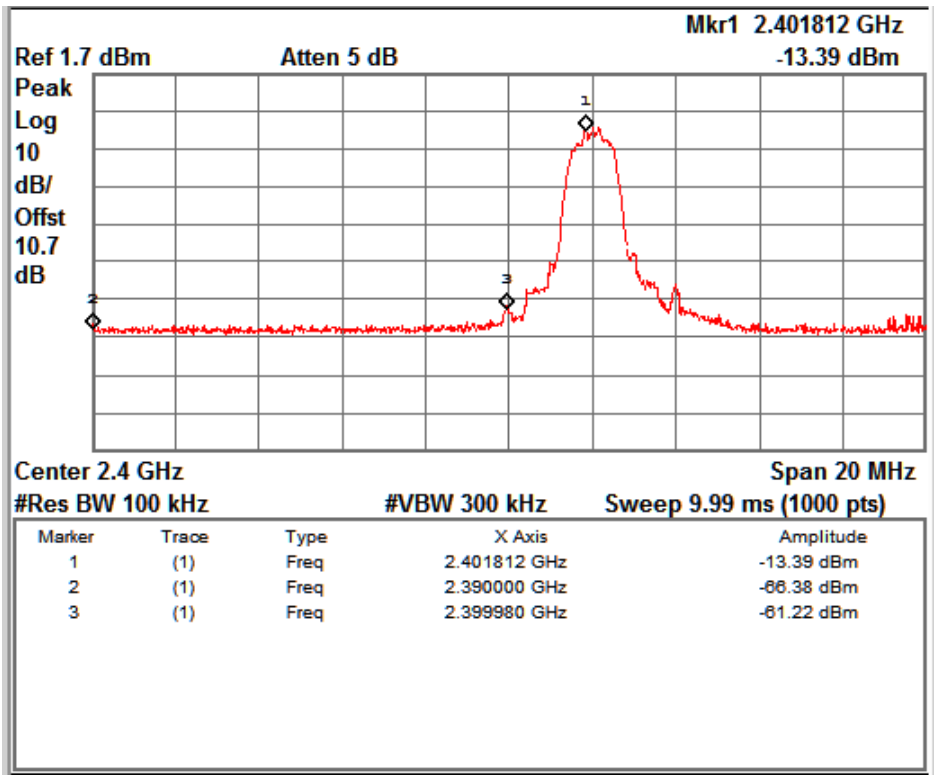
Modulation type	Channel	Fundamental Frequency (MHz)	Value at Band Edge		Limit (dB)
			Frequency (MHz)	Value (dB)	
1 Mbps	Low	2402	2399.9	-51.08	-20
	High	2480	2483.5	-61.75	-20
2 Mbps	Low	2402	2399.9	-47.83	-20
	High	2480	2483.5	-56.17	-20
3 Mbps	Low	2402	2399.9	-47.23	-20
	High	2480	2483.5	-57.45	-20



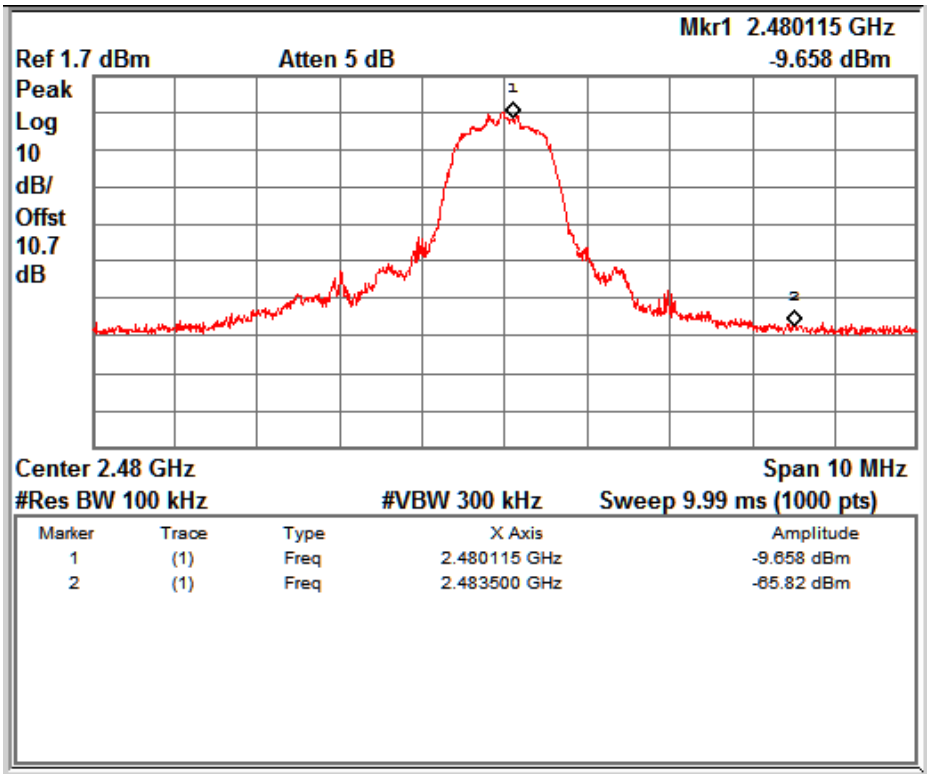
1 Mbps Channel low



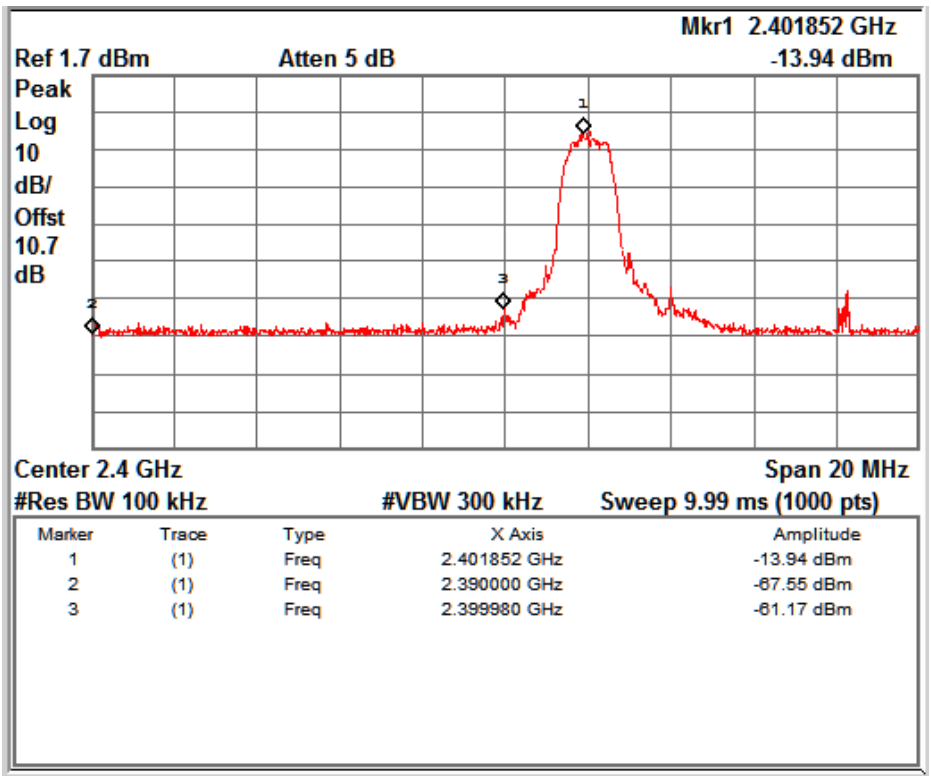
1 Mbps Channel high



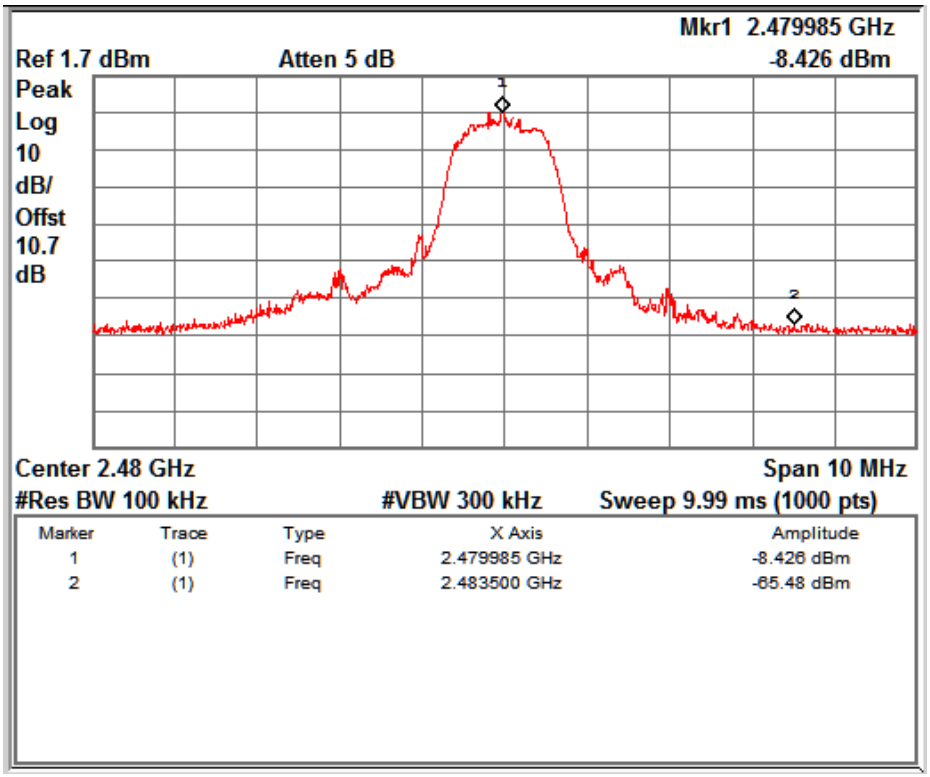
2 Mbps Channel low



2 Mbps Channel high



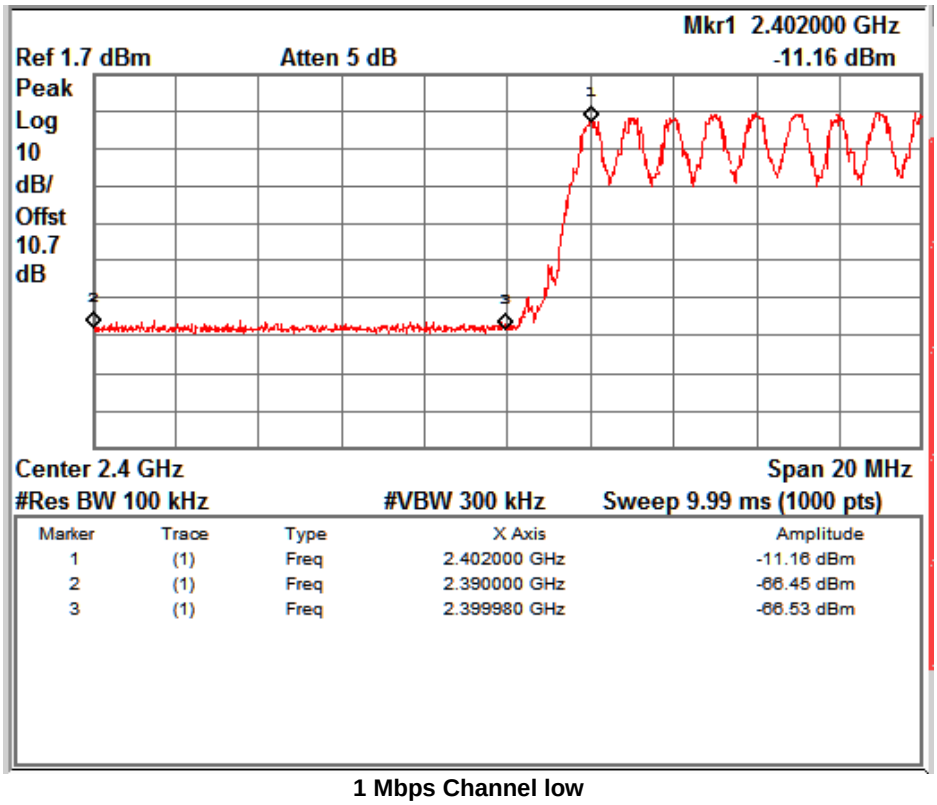
3 Mbps Channel low



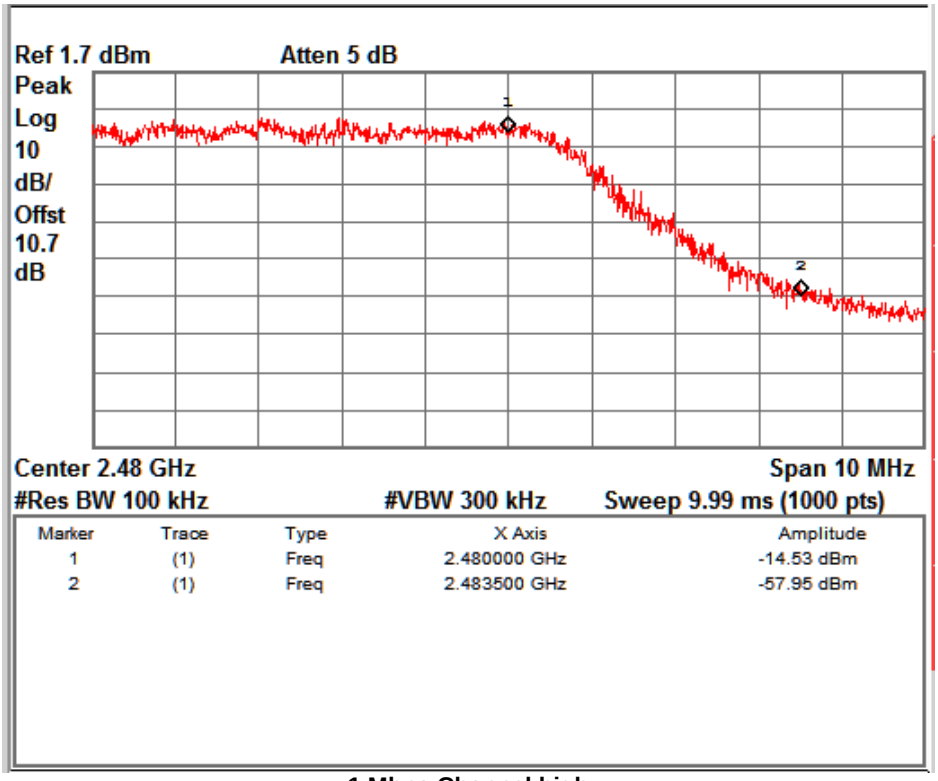
3 Mbps Channel high

Hopping mode Test Results :

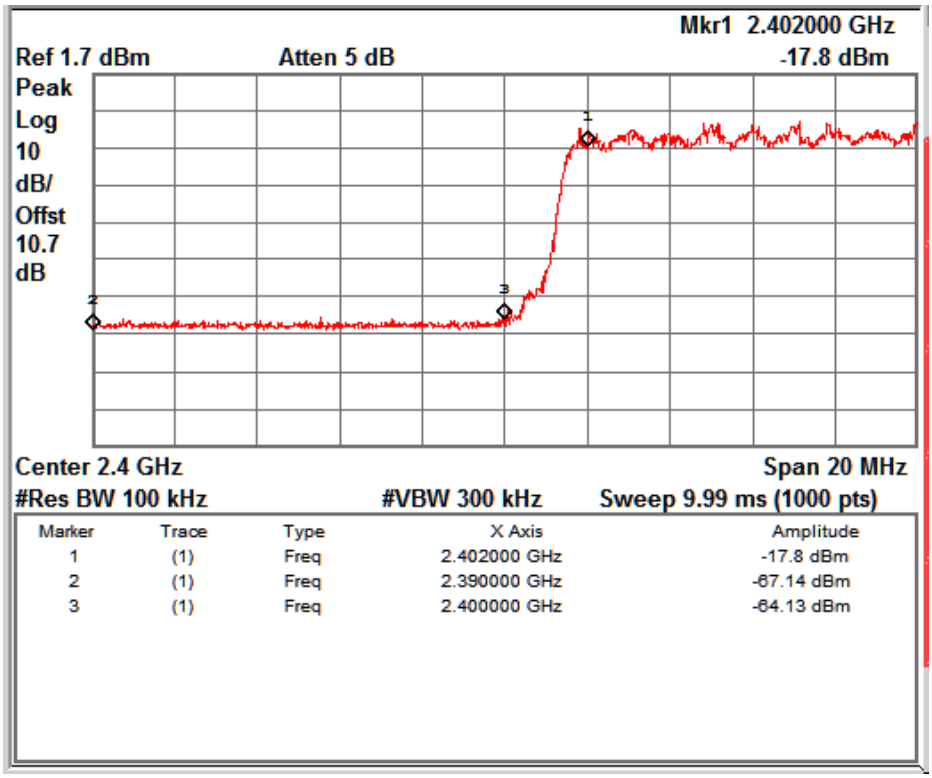
Modulation type	Channel	Fundamental Frequency (MHz)	Value at Band Edge		Limit (dB)
			Frequency (MHz)	Value (dB)	
1 Mbps	Low	2402	2399.9	-55.37	-20
	High	2480	2483.5	-43.42	-20
2 Mbps	Low	2402	2399.9	-46.33	-20
	High	2480	2483.5	-43.42	-20
3 Mbps	Low	2402	2399.9	-49.41	-20
	High	2480	2483.5	-52.31	-20



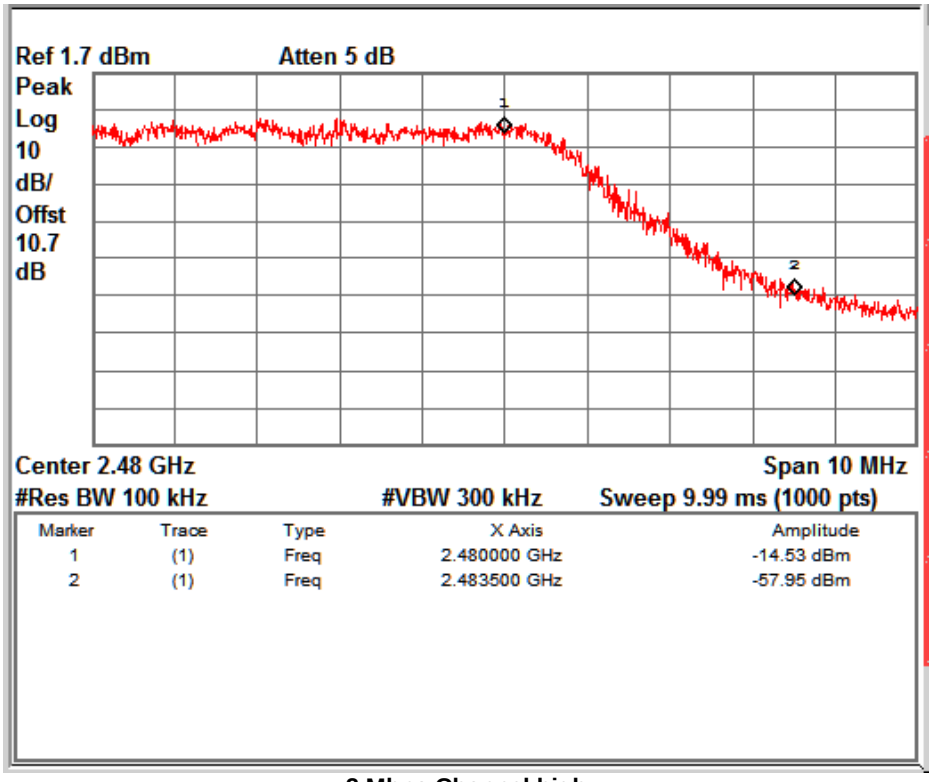
1 Mbps Channel low



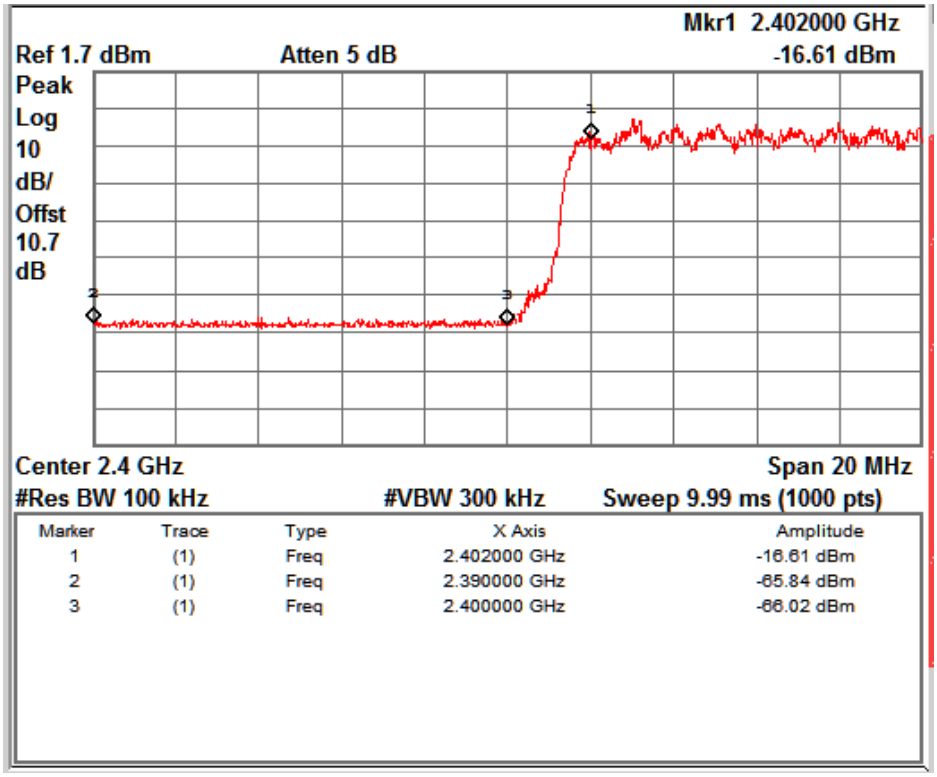
1 Mbps Channel high



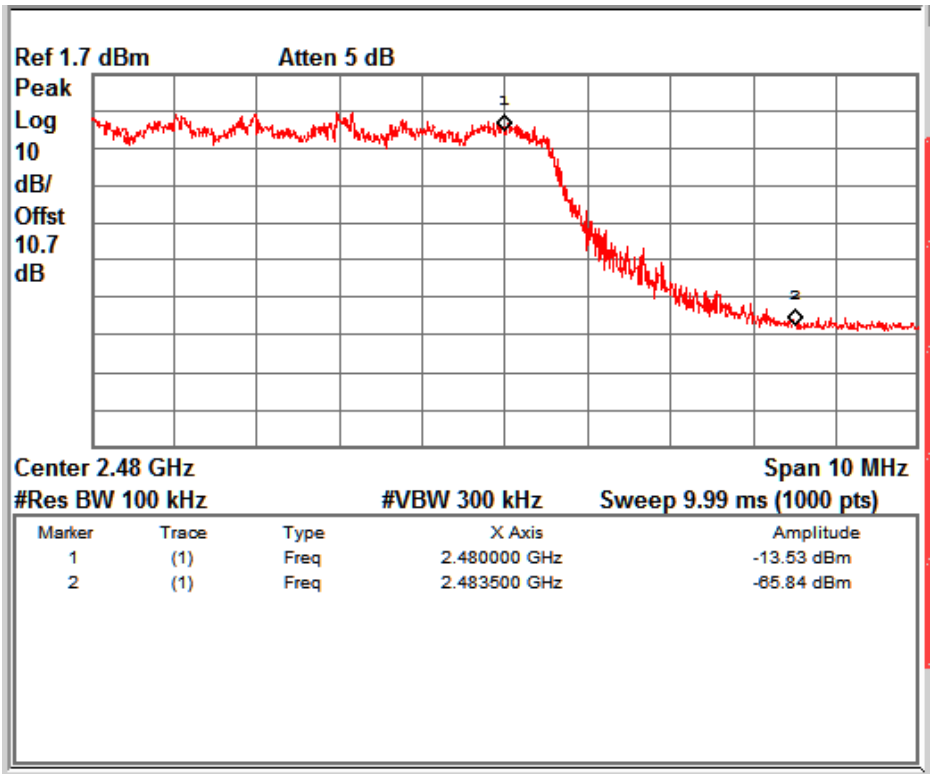
2 Mbps Channel low



2 Mbps Channel high



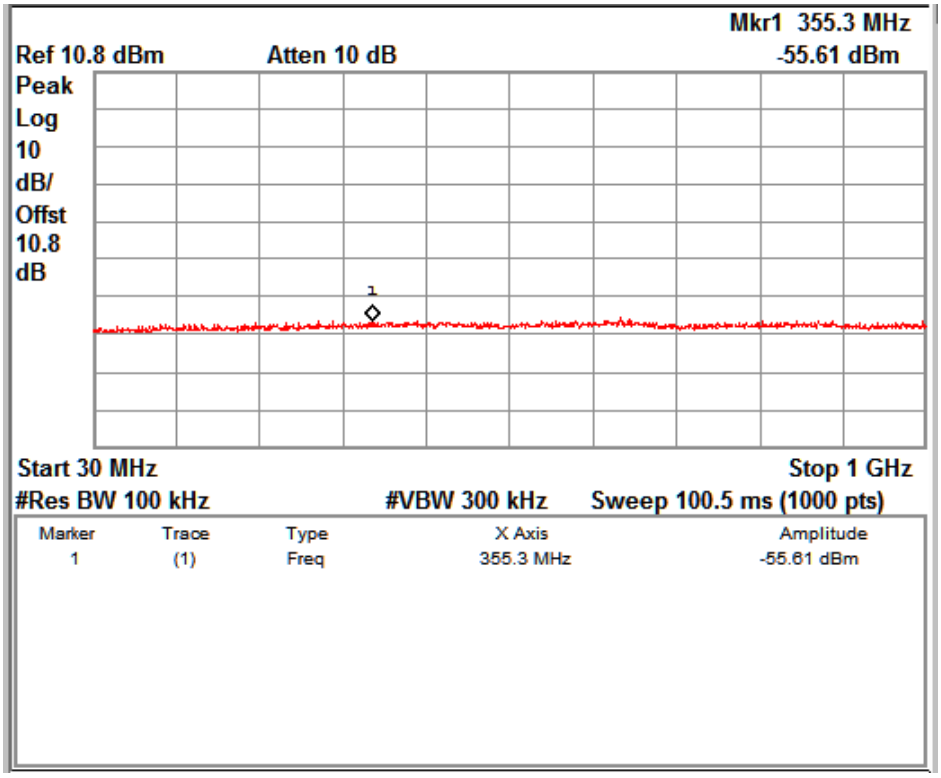
3 Mbps Channel low



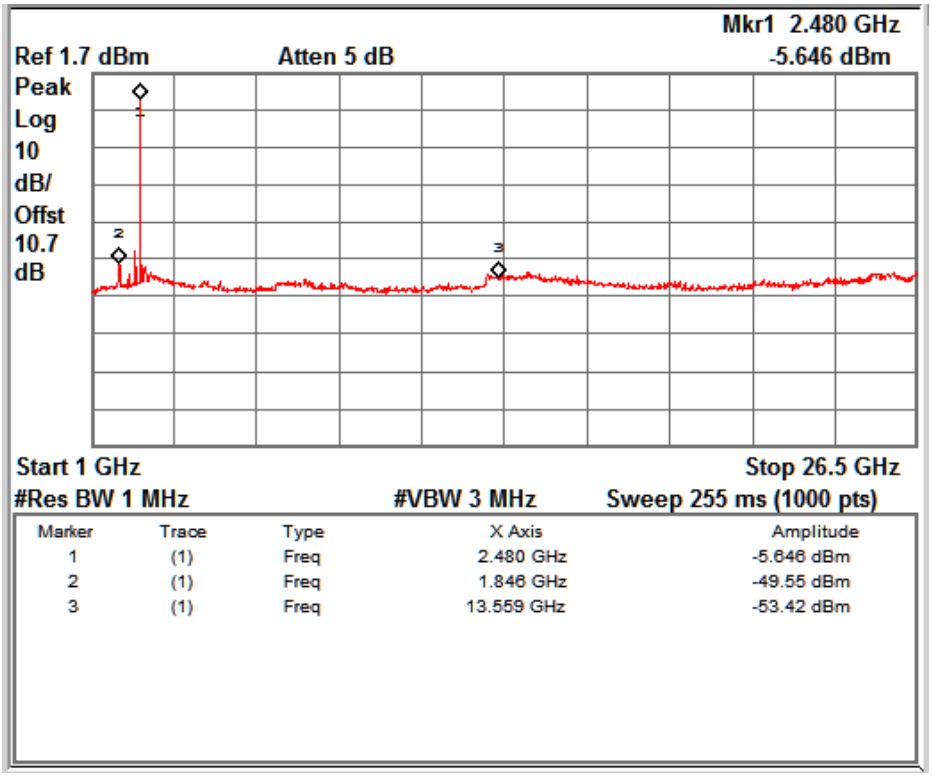
3 Mbps Channel high

Conducted Spurious Emissions

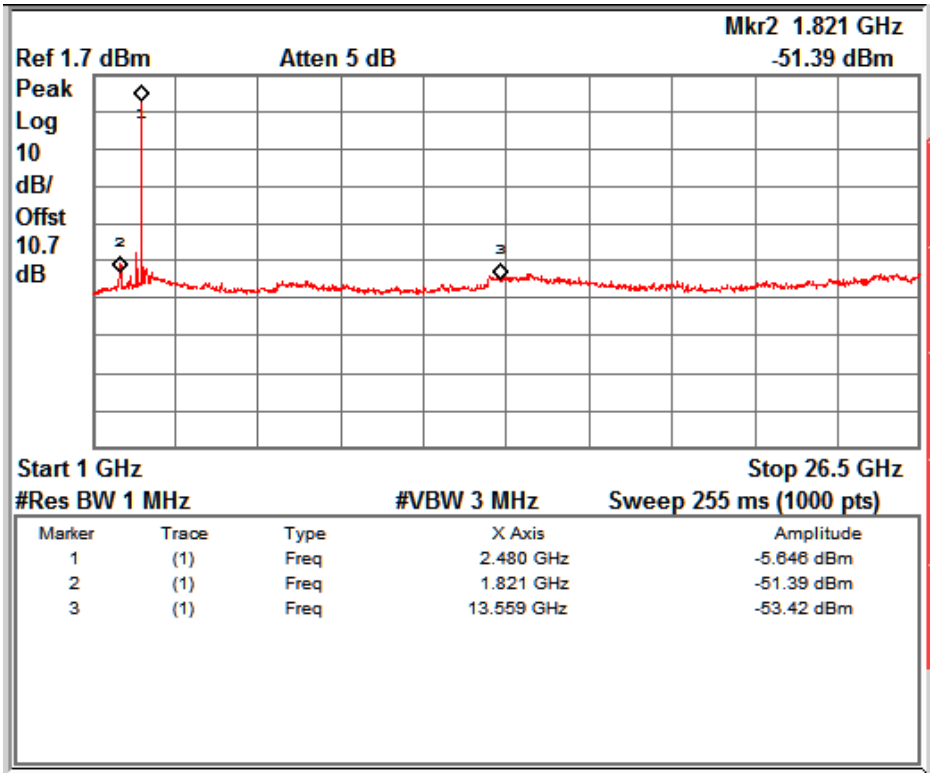
Frequency range = 30 MHz to 1 GHz



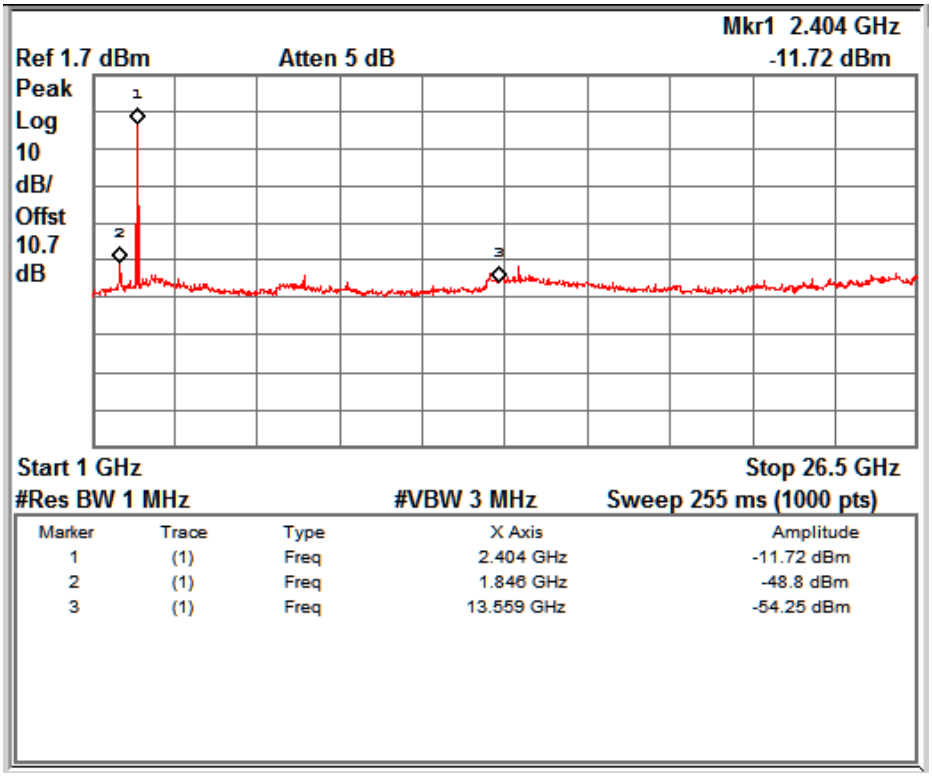
Frequency range = 1 GHz to 26.5 GHz Spurious Emissions



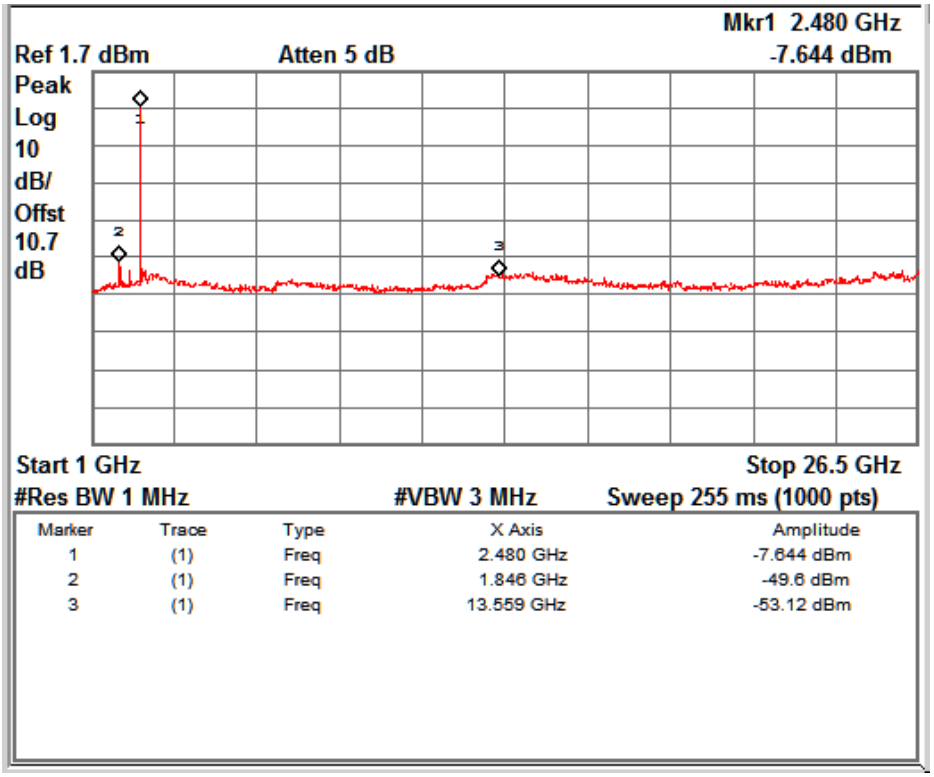
1 Mbps Channel low



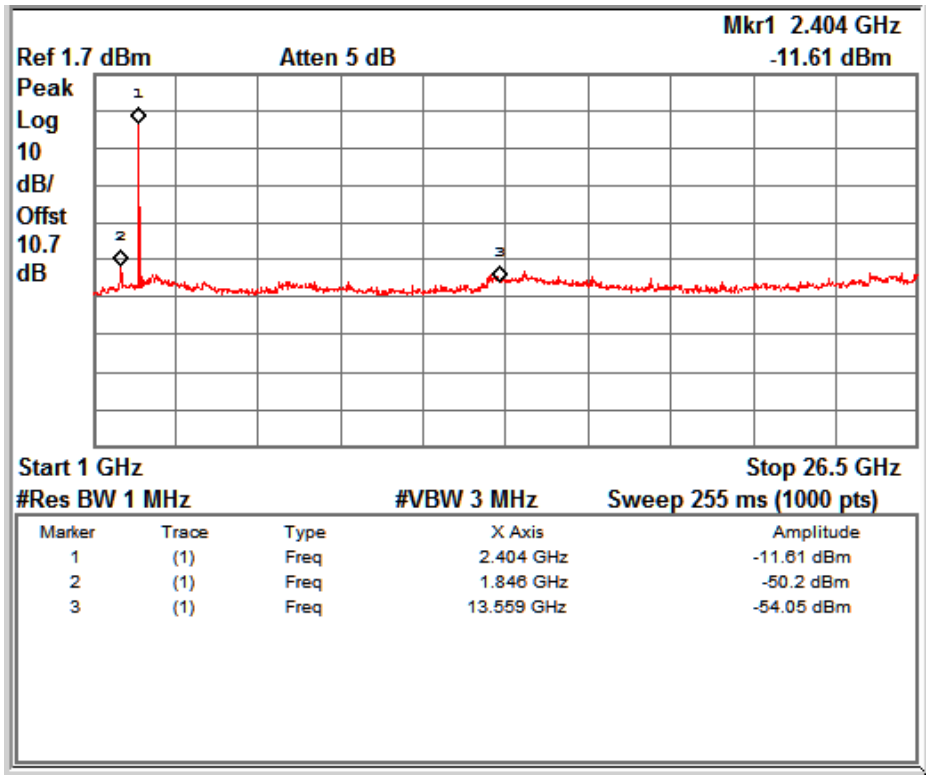
1 Mbps Channel High



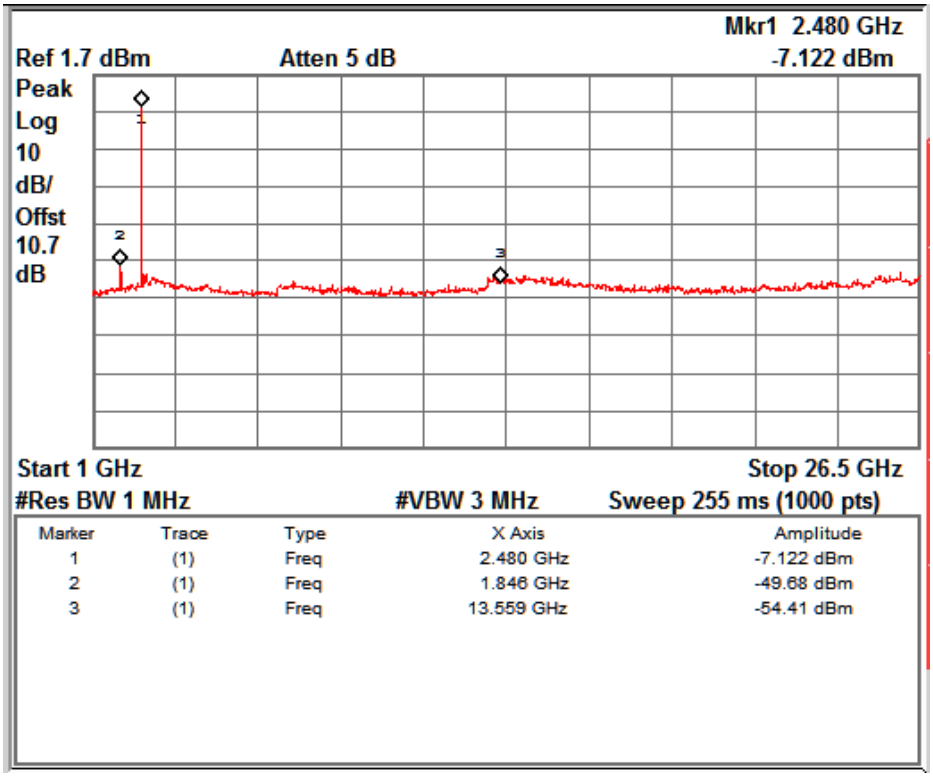
2 Mbps Channel low



2 Mbps Channel high



3 Mbps Channel low



3 Mbps Channel high

Restricted bands of Emissions & Restricted Bands of Operation

Result ***Pass***

Test Specification	FCC part 15 Subpart C Section 15.247 (d) / (15.209 & 15.205)
Test Method	ANSI C 63.10 – 2013
Measurement Location	Semi Anechoic Chamber
Measuring Distance	3 m
Detector	QP for frequency below 1 GHz, average for frequency above 1 GHz
Requirement	As per the limits mentioned in the below table

Table 7: Transmitter limits for Radiated emission of Section 15.209

Frequency (MHz)	Field strength (µV/m)	Field strength (dBµV/m)	Distance of Measurement (m)
0.009 – 0.490	2400/F(kHz)	48.50 – 13.80	300*
0.490 – 1.705	24000/F(kHz)	33.80 – 23.00	30*
1.705 -30	30	29.54	30*
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Remark: * The limit shows in the table above of frequency range 0.009 – 0.490, 0.490 – 1.705 MHz and 1.705-30MHz is at 300 meter, 30 meter and 30 meter range respectively, which corresponds to 128.51 – 93.80, 73.80 – 62.96 and 69.54 dBµV/m at 3m range by extrapolation calculation and the measurement of loop antenna.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.

Test Conditions:

Supply Voltage: 5 VDC from Power adapter

Environmental conditions:

Temperature: +23.5 °C RH: 61.7 %

Test results:

No emissions found in frequency 9 kHz to 30 MHz

Test results for frequencies in the range 30 MHz - 200 MHz

Adapter 1 with Battery 1 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	46.97	27.03	40	-12.97
	148.04	26.43	43.5	-17.07
Horizontal	87.23	18.03	40	-21.97
	180.73	21.25	43.5	-22.25

Adapter 1 with Battery 2 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	45.61	21.52	40	-18.48
	149.31	23.65	43.5	-19.85
Horizontal	87.52	18.11	40	-21.89
	149.11	18.12	43.5	-25.38

Adapter 2 with Battery 1 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	47.16	29.61	40	-10.39
	148.14	28.30	43.5	-15.20
Horizontal	94.89	20.92	40	-19.08
	175.59	29.37	43.5	-14.13

Adapter 2 with Battery 2 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	46.74	26.00	40	-14.00
	174.22	21.59	43.5	-21.91
Horizontal	92.25	20.45	40	-19.55
	199.04	23.62	43.5	-19.88

Test results for frequencies in the range 200 MHz to 1 GHz

Adapter 1 with Battery 1 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	479.98	24.41	46	-21.59
	591.24	27.85	46	-18.15
Horizontal	480.08	24.72	46	-21.28
	590.46	27.31	46	-18.69

Adapter 1 with Battery 2 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	379.58	23.23	46	-22.77
	536.92	27.70	46	-18.30
Horizontal	590.85	26.57	46	-19.43
	898.63	31.34	46	-14.66

Adapter 2 with Battery 1 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	232.34	23.34	46	-22.66
	590.95	26.47	46	-19.53
Horizontal	236.22	25.94	46	-20.06
	591.33	26.95	46	-19.05

Adapter 2 with Battery 2 combination

Polarization	Frequency (MHz)	Measured value (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Vertical	480.00	23.71	46	-22.29
	948.88	24.04	46	-21.96
Horizontal	479.92	24.52	46	-21.48
	898.00	26.10	46	-19.90

Test results for the frequencies in the range 1 GHz to 26.5 GHz.

Data Rate: 1 Mbps

Channel Frequency(MHz)	Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2402	Vertical	2390(Pk)	39.01	74	-34.99
		2390(Av)	27.24	54	-26.76
		2402(Pk)	76.99	-	*
		2402(Av)	76.90	-	*
		4804(Pk)	54.66	74	-19.34
		4804(Av)	50.34	54	-3.66
	Horizontal	2390(Pk)	39.00	74	-35.00
		2390(Av)	27.13	54	-26.87
		2402(Pk)	81.39	-	*
		2402(Av)	81.34	-	*
		4804(Pk)	54.21	74	-19.79
		4804(Av)	49.26	54	-4.74
2441	Vertical	4882(Pk)	56.51	74	-17.49
		4882(Av)	52.56	54	-1.44
	Horizontal	4882(Pk)	54.45	74	-19.55
		4882(Av)	49.65	54	-4.35
2480	Vertical	2480(Pk)	78.75	-	*
		2480(Av)	78.95	-	*
		2483.5(Pk)	38.90	74	-35.10
		2483.5(Av)	26.93	54	-27.07
		4960(Pk)	54.00	74	-20.00
		4960(Av)	48.83	54	-5.17
	Horizontal	2480(Pk)	84.89	-	*
		2480(Av)	84.80	-	*
		2483.5(Pk)	38.49	74	-35.51
		2483.5(Av)	27.04	54	-26.96
		4960(Pk)	52.70	74	-21.30
		4960(Av)	46.29	54	-7.71

Data Rate: 2 Mbps

Channel Frequency(MHz)	Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2402	Vertical	2390(Pk)	38.96	74	-35.04
		2390(Av)	27.16	54	-26.84
		2402(Pk)	75.29	-	*
		2402(Av)	75.19	-	*
		4804(Pk)	53.70	74	-20.30
		4804(Av)	49.15	54	-4.85
		2390(Pk)	38.97	74	-35.03
		2390(Av)	27.13	54	-26.87
		2402(Pk)	83.44	-	*
		2402(Av)	83.39	-	*
		4804(Pk)	53.11	74	-20.89
		4804(Av)	47.00	54	
2441	Vertical	4882(Pk)	53.44	74	-7.00
		4882(Av)	47.74	54	-6.26
	Horizontal	4882(Pk)	53.39	74	-20.61
		4882(Av)	47.65	54	-6.35
2480	Vertical	2480(Pk)	80.85	-	*
		2480(Av)	80.78	-	*
		4960(Pk)	53.53	74	-20.47
		4960(Av)	47.32	54	-6.68
		2483.5(Pk)	38.90	74	-35.10
		2483.5(Av)	26.93	54	-27.07
	Horizontal	2480(Pk)	87.29	-	*
		2480(Av)	87.27	-	*
		4960(Pk)	53.56	74	-20.44
		4960(Av)	47.96	54	-6.04
		2483.5(Pk)	38.53	74	-35.47
		2483.5(Av)	27.06	54	-26.94

Data Rate: 3 Mbps

Channel Frequency(MHz)	Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2402	Vertical	2390(Pk)	38.50	74	-35.50
		2390(Av)	27.00	54	-27.00
		2402(Pk)	75.15	-	*
		2402(Av)	75.03	-	*
		4804(Pk)	54.62	74	-19.38
		4804(Av)	49.53	54	-4.47
	Horizontal	2390(Pk)	38.75	74	-35.25
		2390(Av)	27.12	54	-26.88
		2402(Pk)	82.75	-	*
		2402(Av)	82.77	-	*
		4804(Pk)	53.08	74	-20.92
		4804(Av)	47.59	54	-6.41
2441	Vertical	4882(Pk)	53.71	74	-20.29
		4882(Av)	49.26	54	-4.74
	Horizontal	4882(Pk)	53.37	74	-20.63
		4882(Av)	47.94	54	-6.06
2480	Vertical	2480(Pk)	79.69	-	*
		2480(Av)	79.64	-	*
		4960(Pk)	54.46	74	-19.54
		4960(Av)	49.70	54	-4.30
		2483.5(Pk)	38.59	74	-35.41
		2483.5(Av)	26.89	54	-27.11
	Horizontal	2480(Pk)	85.36	-	*
		2480(Av)	85.33	-	*
		4960(Pk)	53.57	74	-20.43
		4960(Av)	48.28	54	-5.72
		2483.5(Pk)	38.63	74	-35.37
		2483.5(Av)	27.07	54	-26.93

Conducted Emission Test on A.C. Power Line

Result **Pass**

Test Specification	:	FCC Part 15 Section 15.207
Test Method	:	ANSI C63.10-2013
Testing Location	:	Screened room
Measurement Bandwidth	:	9kHz
Frequency Range	:	150kHz – 30MHz
Supply Voltage	:	120VAC,60Hz

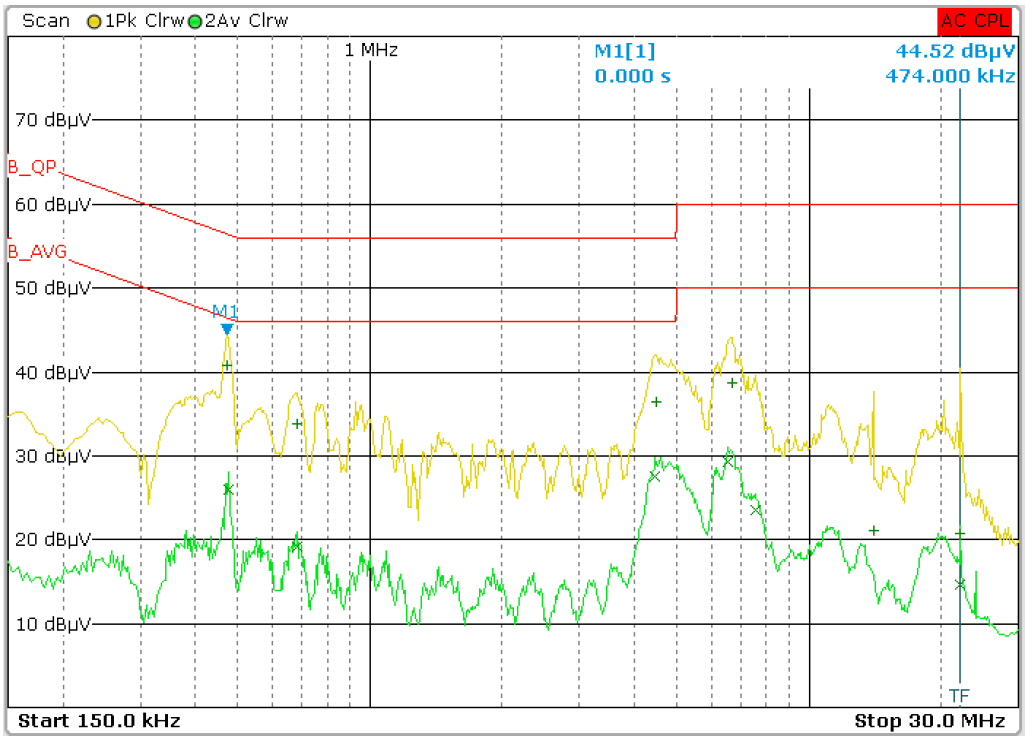
Limit of section 15.207

Frequency of emission	QP Limit	AV Limit
(MHz)	(dBµV)	(dBµV/m)
0.15 – 0.5	66 – 56*	56 – 46*
0.5 – 5	56	46
5 – 30	60	50

* Decreases with the logarithm of the frequency

Test Result: LINE Graphs and Tables

110v AC , 60Hz - Adapter 1 with Battery 1 combination

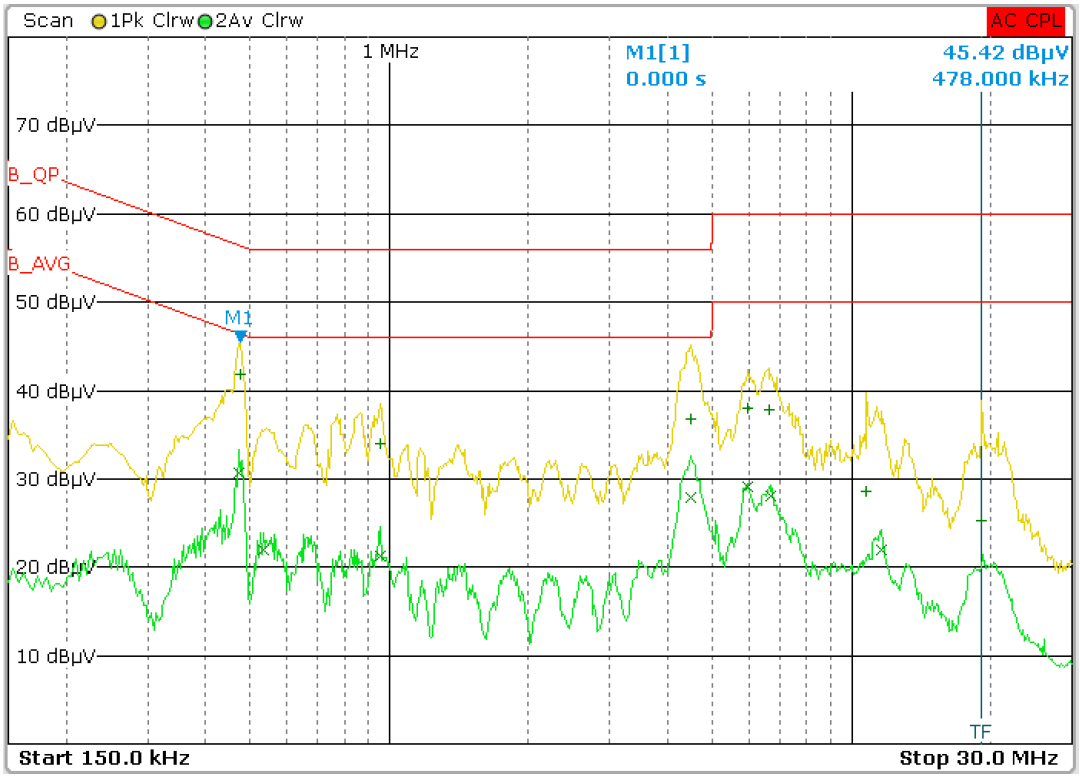


Line Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	474.00 kHz	40.82	56.20	-15.38
Quasi Peak	682.00 kHz	33.75	56	-22.25
Quasi Peak	4.49 MHz	36.45	56	-19.55
Quasi Peak	6.67 MHz	38.69	60	-21.31
Quasi Peak	14.07 MHz	21.03	60	-38.97
Quasi Peak	22.16 MHz	20.74	60	-39.26
Average	478.00 kHz	25.89	46.13	-20.24
Average	682 kHz	33.75	46	-12.25
Average	4.46 MHz	27.61	46	-18.39
Average	6.55 MHz	29.35	50	-20.65
Average	7.57 MHz	23.45	50	-26.55
Average	22.16 MHz	14.63	50	-35.37

Line Table

110v AC , 60Hz - Adapter 1 with Battery 2 combination

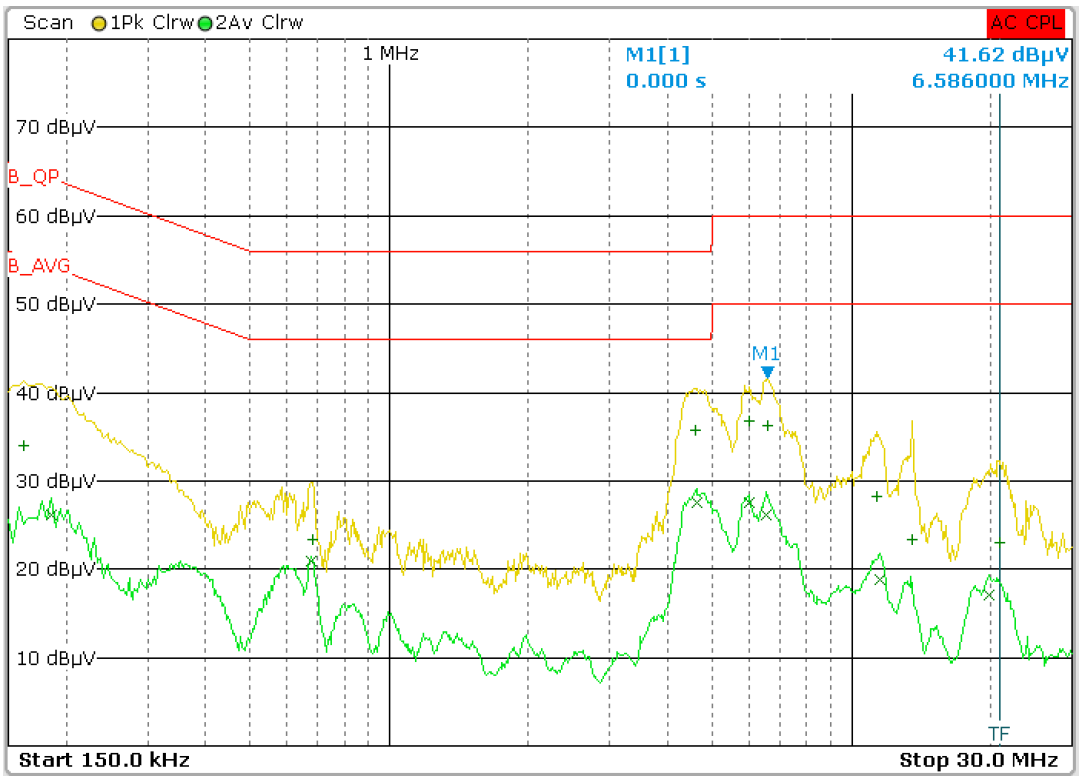


Line Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	478.00 kHz	41.82	56.13	-14.31
Quasi Peak	958.00 kHz	33.96	56	-22.04
Quasi Peak	4.50 MHz	36.76	56	-19.24
Quasi Peak	5.97 MHZ	38.08	60	-21.92
Quasi Peak	6.61 MHz	37.8	60	-22.20
Quasi Peak	10.77 MHz	28.57	60	-31.43
Quasi Peak	19.14 MHz	25.26	60	-34.74
Average	474.00 kHz	30.75	46.20	-15.45
Average	534.00 kHz	22.01	46	-23.99
Average	958.00 kHz	21.26	46	-24.74
Average	4.48 MHz	27.97	46	-18.03
Average	5.94 MHz	29.12	50	-20.88
Average	6.67 MHz	27.98	50	-22.02
Average	11.64 MHz	21.99	50	-28.01

Line Table

110v AC , 60Hz - Adapter 2 with Battery 1 combination

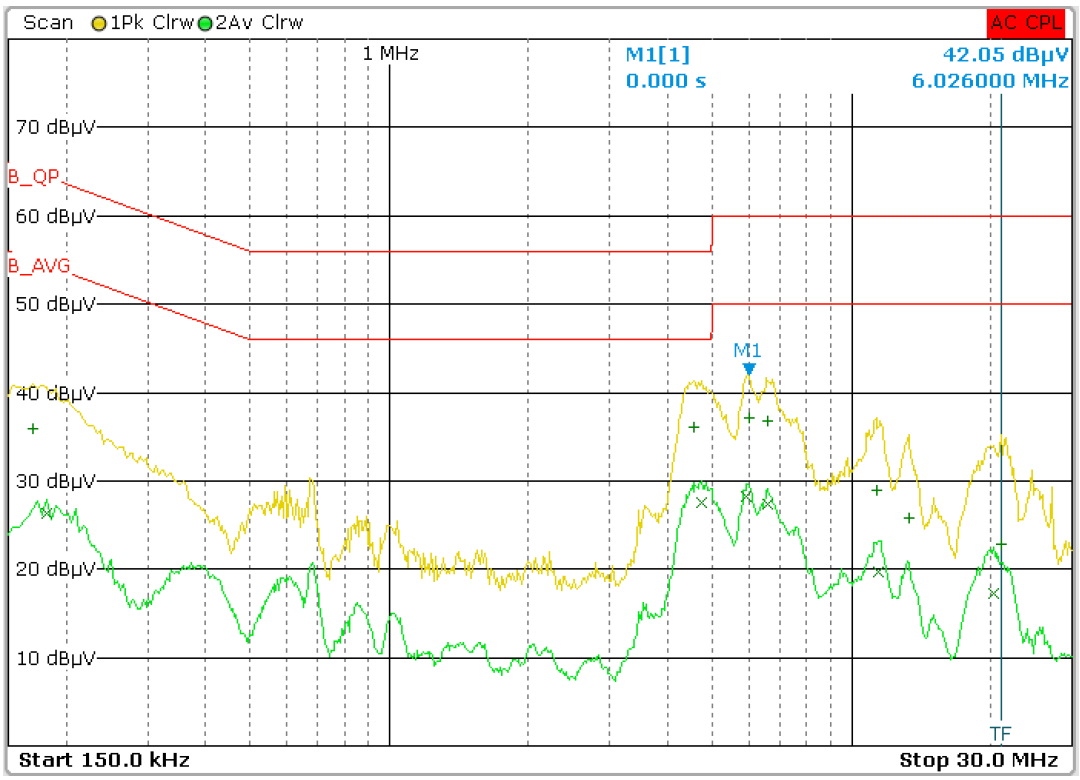


Line Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	162.00 kHz	33.99	65.34	-31.35
Quasi Peak	682.00 kHz	23.43	56	-32.57
Quasi Peak	4.58 MHz	35.8	56	-20.20
Quasi Peak	6.00 MHz	36.7	60	-23.30
Quasi Peak	6.58 MHz	36.17	60	-23.83
Quasi Peak	11.30 MHz	28.16	60	-31.84
Quasi Peak	13.55 MHz	23.4	60	-36.6
Quasi Peak	20.90 MHz	22.94	60	-37.06
Average	186.00 kHz	26.22	54.16	-27.94
Average	678.00 kHz	20.83	46	-25.17
Average	4.61 MHz	27.55	46	-18.45
Average	5.99 MHz	27.53	50	-22.47
Average	6.54 MHz	26.22	50	-23.78
Average	11.53 MHz	18.83	50	-31.17
Average	19.87 MHz	17.13	50	-32.87

Line Table

110v AC , 60Hz - Adapter 2 with Battery 2 combination



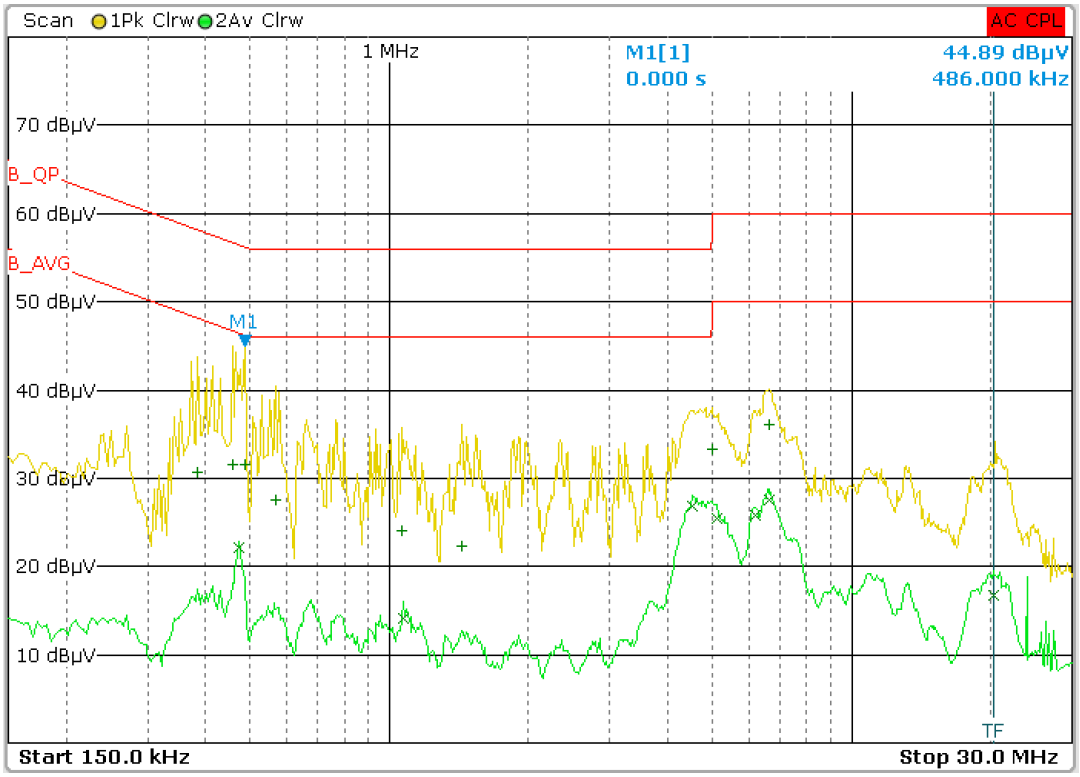
Line Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	170.00 kHz	35.85	64.93	-29.08
Quasi Peak	4.55 MHz	36.08	56	-19.92
Quasi Peak	6.02 MHz	37.18	60	-22.82
Quasi Peak	6.61 MHz	36.86	60	-23.14
Quasi Peak	11.31 MHz	28.88	60	-31.12
Quasi Peak	13.34 MHz	25.88	60	-34.12
Quasi Peak	21.12 MHz	22.79	60	-37.21
Average	182.00 kHz	26.38	54.35	-27.97
Average	4.73 MHz	27.49	46	-18.51
Average	5.93 MHz	28.32	50	-21.68
Average	6.58 MHz	27.39	50	-22.61
Average	11.47 MHz	19.77	50	-30.23
Average	20.25 MHz	17.17	50	-32.83

Line Table

NEUTRAL Graphs and Tables

110v AC , 60Hz - Adapter 1 with Battery 1 combination

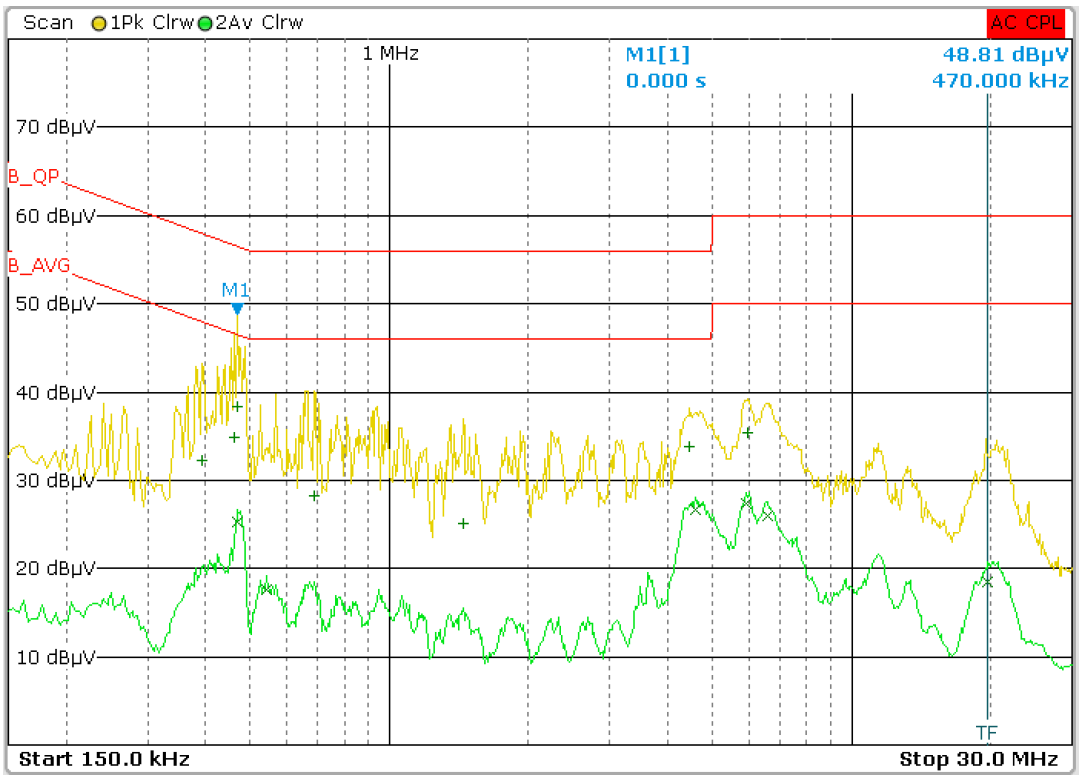


Neutral Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	386.00 kHz	30.63	57.95	-27.32
Quasi Peak	458.00 kHz	31.55	56.49	-24.94
Quasi Peak	486.00 kHz	31.53	55.99	-24.46
Quasi Peak	570.00 kHz	27.6	56	-28.40
Quasi Peak	1.06 MHz	24.04	56	-31.96
Quasi Peak	1.43 MHz	22.28	56	-33.72
Quasi Peak	4.98 MHz	33.21	56	-22.79
Quasi Peak	6.63 MHz	27.59	60	-32.41
Average	474.00 kHz	22.12	46.20	-24.08
Average	1.07 MHz	14.04	46	-31.96
Average	4.52 MHz	26.85	46	-19.15
Average	5.12 MHz	25.4	50	-24.60
Average	6.18 MHz	25.87	50	-24.13
Average	6.63 MHz	36.11	50	-13.89
Average	20.24 MHz	16.7	50	-33.30

Neutral Table

110v AC , 60Hz - Adapter 1 with Battery 2 combination

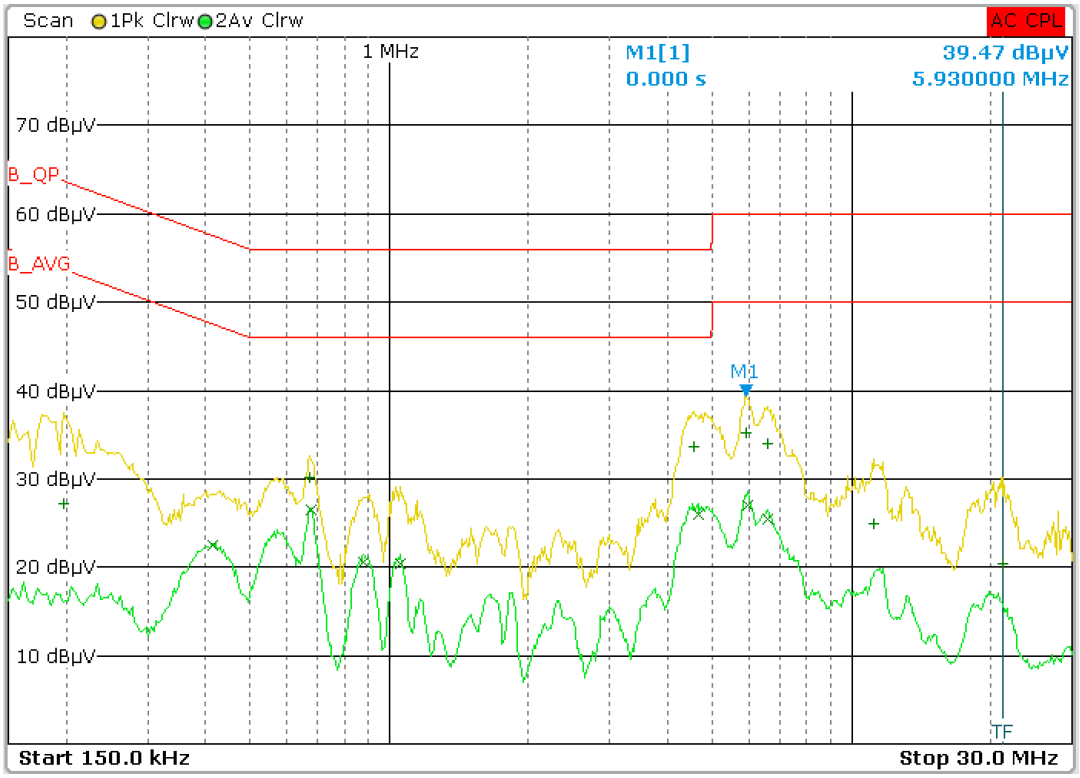


Neutral Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	394.00 kHz	32.19	57.77	-25.58
Quasi Peak	462.00 kHz	34.93	56.42	-21.49
Quasi Peak	470.00 kHz	38.27	56.27	-18.00
Quasi Peak	686.00 kHz	28.31	56	-27.69
Quasi Peak	1.44 MHz	25.16	56	-30.84
Quasi Peak	4.45 MHz	33.81	56	-22.19
Quasi Peak	5.94 MHz	35.31	60	-24.69
Average	470.00 kHz	25.32	46.27	-20.95
Average	542.00 kHz	17.55	46	-28.45
Average	4.60 MHz	26.75	46	-19.25
Average	5.92 MHz	27.44	50	-22.56
Average	6.56 MHz	25.96	50	-24.04
Average	19.74 MHz	18.52	50	-31.48

Neutral Table

110v AC , 60Hz - Adapter 2 with Battery 1 combination



Neutral Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	198.00 kHz	27.13	63.63	-36.5
Quasi Peak	674.00 kHz	30.16	56	-25.84
Quasi Peak	4.55 MHz	33.61	56	-22.39
Quasi Peak	5.93 MHz	35.15	60	-24.85
Quasi Peak	6.59 MHz	34.01	60	-25.99
Quasi Peak	11.14 MHz	24.89	60	-35.11
Quasi Peak	21.32 MHz	20.43	60	-39.57
Average	414.00 kHz	22.52	47.35	-24.83
Average	678.00 kHz	26.53	46	-19.47
Average	882.00 kHz	20.55	46	-25.45
Average	1.05 MHz	20.42	46	-25.58
Average	4.65 MHz	25.95	46	-20.05
Average	5.94 MHz	26.95	50	-23.05
Average	6.57 MHz	25.48	50	-24.52

Neutral Table

110v AC , 60Hz - Adapter 2 with Battery 2 combination

Neutral Graph

Detector	Frequency	Level (dBµV)	Limit (dBµV)	Margin (dB)
Quasi Peak	154.00 kHz	34.11	65.77	-31.66
Quasi Peak	678.00 kHz	29.99	56	-26.01
Quasi Peak	930.00 kHz	17.2	56	-38.80
Quasi Peak	4.55 MHz	34.73	56	-21.27
Quasi Peak	6.00 MHz	35.27	60	-24.73
Quasi Peak	11.35 MHz	29.08	60	-30.92
Quasi Peak	21.45 MHz	26.5	60	-33.50
Average	154.00 kHz	18.2	55.77	-37.57
Average	386.00 kHz	21.77	47.95	-26.18
Average	678.00 kHz	26.38	46	-19.62
Average	850.00 kHz	20.79	46	-25.21
Average	1.01 MHz	20.94	46	-25.06
Average	4.53 MHz	27.25	46	-18.75
Average	5.89 MHz	27.45	50	-22.55
Average	6.63 MHz	26.05	50	-23.95
Average	20.17 MHz	21.28	50	-28.72

Neutral Table

7 LIST OF TABLES

8 LIST OF FIGURES

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