

Produkte
 Products

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<i>Test Report No.:</i>				
Auftraggeber: <i>Client:</i>	The Kroger Co. 11450 Grooms Rd. Blue Ash, OH 45242 United States.			
Gegenstand der Prüfung: <i>Test item:</i>	CC2640R2 BLE 5.0 Module			
Bezeichnung: <i>Identification:</i>	SRBTNM5	Serien-Nr.: <i>Serial No.</i> Engineering sample		
Wareneingangs-Nr.: <i>Receipt No.:</i>	1803307436	Eingangsdatum: <i>Date of receipt:</i> 15.03.2018		
Prüfart: <i>Testing location:</i>	Refer Page 5 of 35 for Test site details			
Prüfgrundlage: <i>Test specification:</i>	FCC Part 15 Subpart C 15.247 ANSI C63.10-2013			
Prüfergebnis: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test items passed the test specification(s).</i>			
Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland (India) Pvt. Ltd. 27/B, 2nd Cross Road, Electronics City Phase 1, Bengaluru-560 100, India. FCC Test Site Registration no.: 496599			
geprüft / tested by: 13.03.2018 Datum Date Santhosh S K Name/Stellung Name/Position <i>Santhosh S.K.</i> Unterschrift Signature kontrolliert / reviewed by: 15.04.2018 Datum Date Saibaba Siddapur Name/Stellung Name/Position <i>Saibaba</i> Unterschrift Signature				
Sonstiges / Other Aspects: FCC ID :PBR-SZMDLBTNR1 On receipt the EUT was in good condition				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> Abkürzungen: P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet </td> <td style="width: 50%; vertical-align: top;"> Abbreviations: P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested </td> </tr> </table>			Abkürzungen: P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet	Abbreviations: P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested
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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. <i>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.</i>				

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Test Summary

Section	Test item	Result	Remarks
15.247 (b) (3)	Maximum Peak Conducted Output Power	Pass	-
15.247 (a) (2)	6 dB / DTS Bandwidth	Pass	
15.247 (e)	Maximum Power Spectral Density	Pass	
15.247 (d)	Emissions in non – restricted band	Pass	
15.247 (a)(1)	Conducted Spurious Emissions	Pass	
15.247 (d) / (15.209 & 15.205)	Restricted bands of Emissions and Restricted Bands of Operation.	Pass	
15.207	Conducted emission on A.C power lines	Pass	

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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: MAXIMUM PERMISSIBLE EXPOSURE INFORMATION

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
Signal Analyser	Rohde & Schwarz	FSV7	101644	15.12.2018	Yearly	Antenna - Port Measurements
Spectrum Analyser	Agilent	E4407B	US41192772	29-03-2019	Yearly	
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

The SRBTNM5 Module (CC2538-92 BLE 5.0 Module) is designed to be used for BLE Wireless network applications. The Module is 2.4 GHz BLE 5.0 Wireless devices to be used with Host device to create low power wireless network. The module will be soldered on Host Board and will be powered through Host Board power system. The module will transmit/receive data over the air. The module will communicate with Host CPU through SPI/UART/I2C interface and I/O pins.

Ratings and System Details

Table 2: Ratings and System Details

Operating Frequency Range	2400 MHz – 2483.5 MHz
No. of Channel	40
Measured Transmitted Power	-0.43 dBm
Modulation	GFSK
Data Rate	1 Mbps
Antenna type	PCB Inverted Antenna
Number of antennas	1
Antenna Gain	2 dBi
Supply Voltage	2.7V -3.6VDC
Channel Spacing	2 MHz
Dimensions (LxWxH)	21.72mm x 20.96mm x 2.22 mm
Environmental	Temperature: -30 °c to +75 °c Humidity : 20-80% RH

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 °C
Supply Voltages	±3 %
Time	±5 %

4. TEST SET-UP AND OPERATION MODE

Principle of Configuration Selection

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

Test Operation and Test Software

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

Test Software Details: Smart RF Flash Programmer 2

Firmware Version: 1.7.5

Hardware Version: REV B

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 1Mbps data rates and results are reported in this report.

Note: Test Performed with Power setting = 3 dBm

Note: Testing was performed on the sample with the TUV Identification Number : 1803307436-1-1-3

List of frequencies

Table 4: List of Center Frequencies

Frequency Band (MHz)	Channel No.	Channel Frequency (MHz)
2400 – 2483.5	0	2402
	1	2404
	2	2406
	3	2408
	:	:
	:	:
	18	2438
	19	2440
	20	2437
	:	:
	:	:
	36	2474
	37	2476
	38	2478
	39	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 measurement 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.

1.1.1 Test Setup Configuration

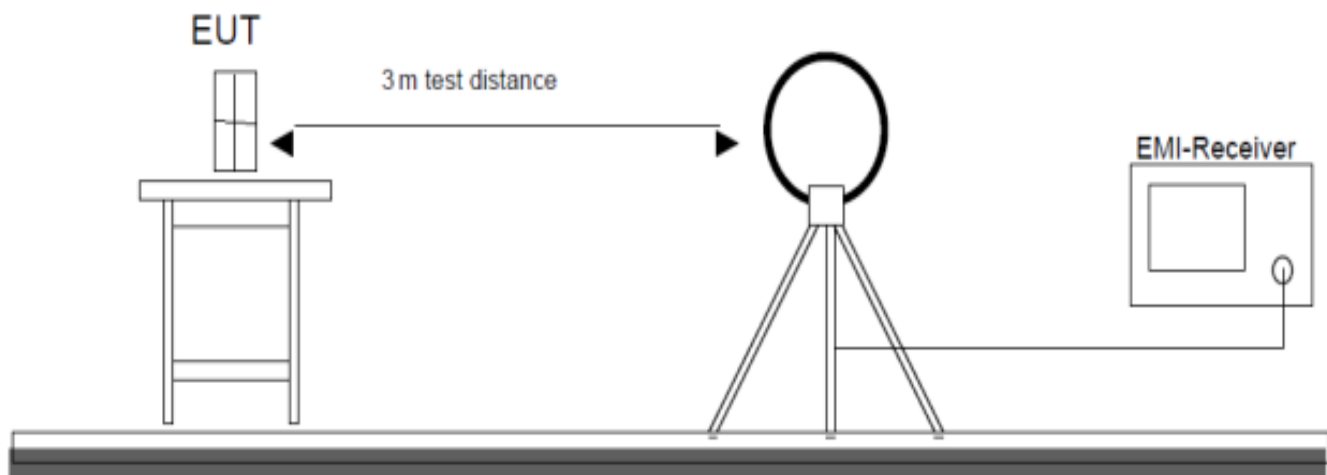


Figure 1: Frequency Range 9 kHz- 30 MHz

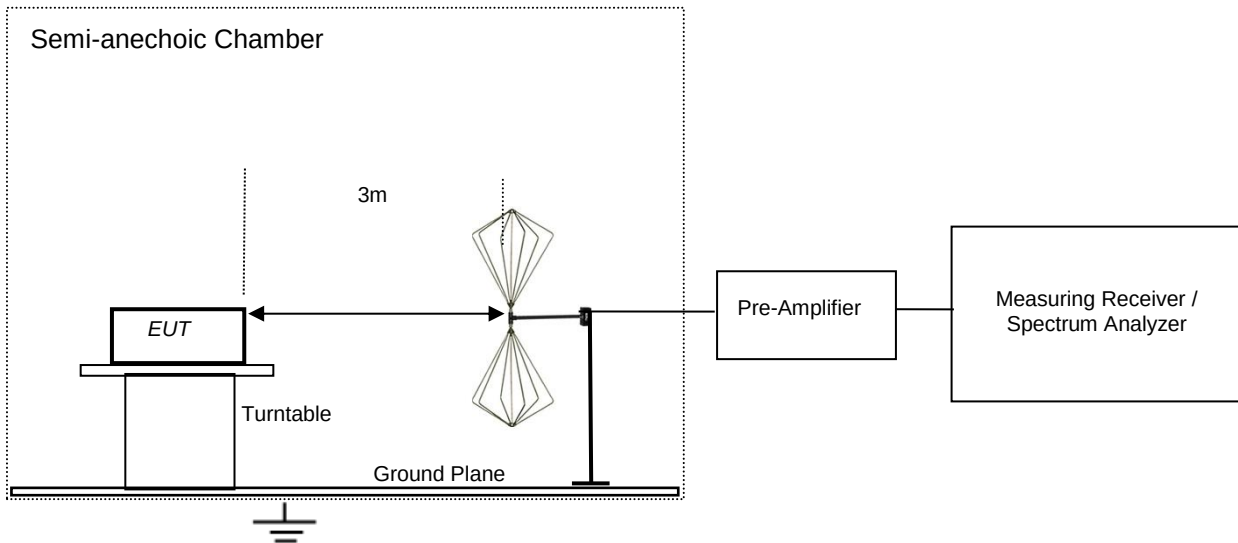


Figure 2: Frequency Range 30 MHz – 200 MHz

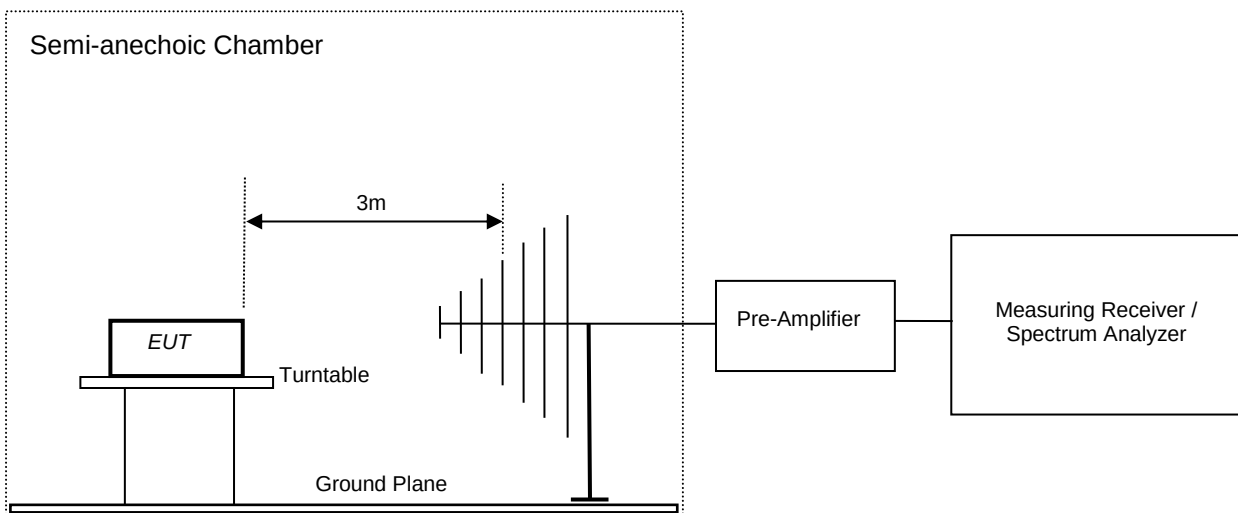


Figure 3: Frequency Range 200 MHz - 1GHz

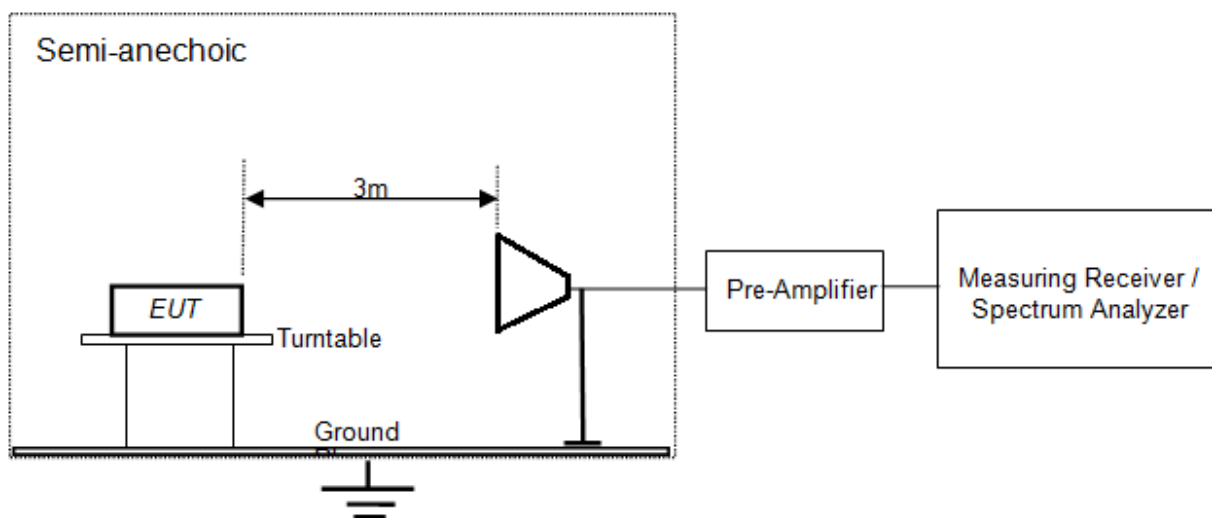


Figure 4: Frequency Range above 1 GHz

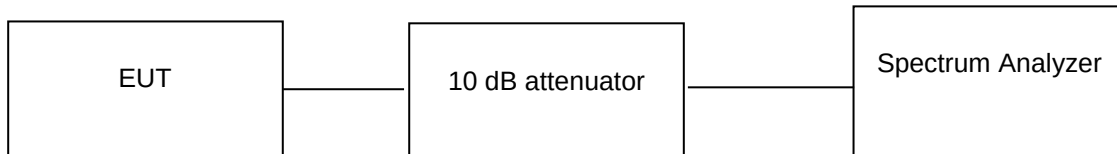
6. TEST RESULTS

Maximum Peak Conducted Output Power

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (b)(3)
Measurement Bandwidth	1 MHz
Detector	Peak
Requirement	$\leq 1 \text{ W (30 dBm)}$



Test results:

Note: Measurements were made as per section 9.1.1 in KDB 558074 D01 DTS Meas Guidance v04.

10 dB attenuator + 0.8 Cable loss = 10.8 dB offset is considered in below result

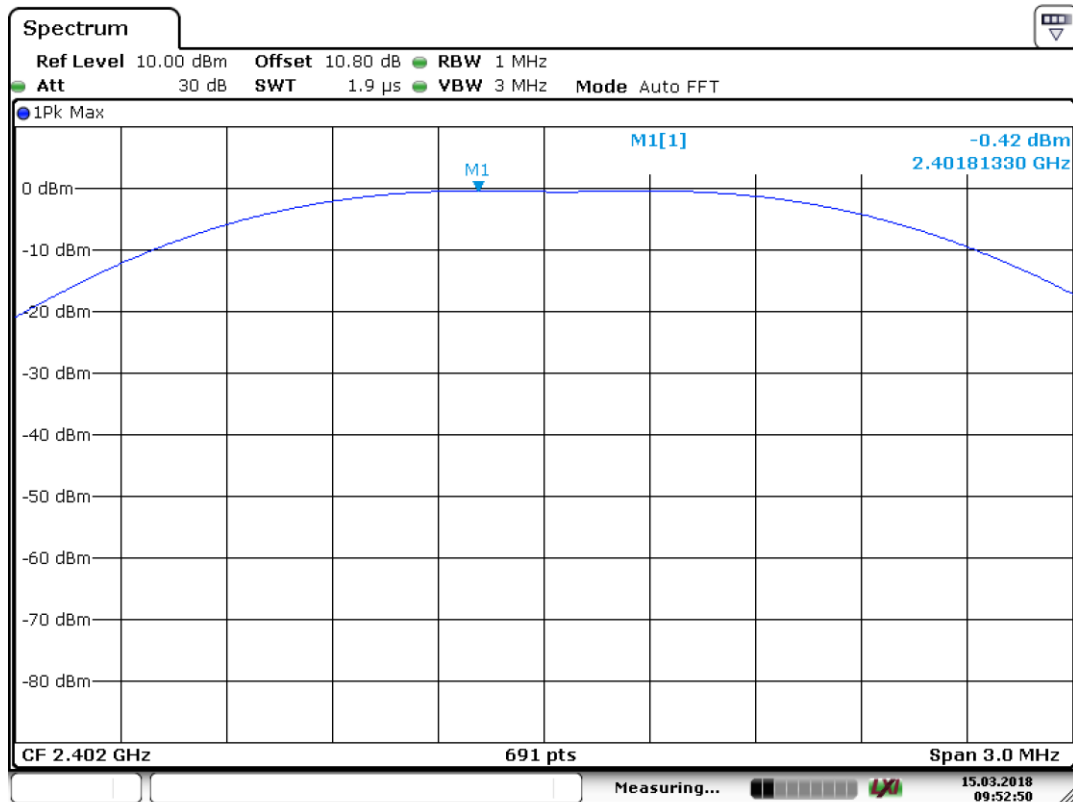
Table 5: Maximum peak conducted output power verified Test Results

Channel Frequency (MHz)	Output power (dBm)	Limit (dBm)	Margin dB
2402	-0.42	30	-30.42
2440	-0.79	30	-30.79
2480	-1.19	30	-31.19

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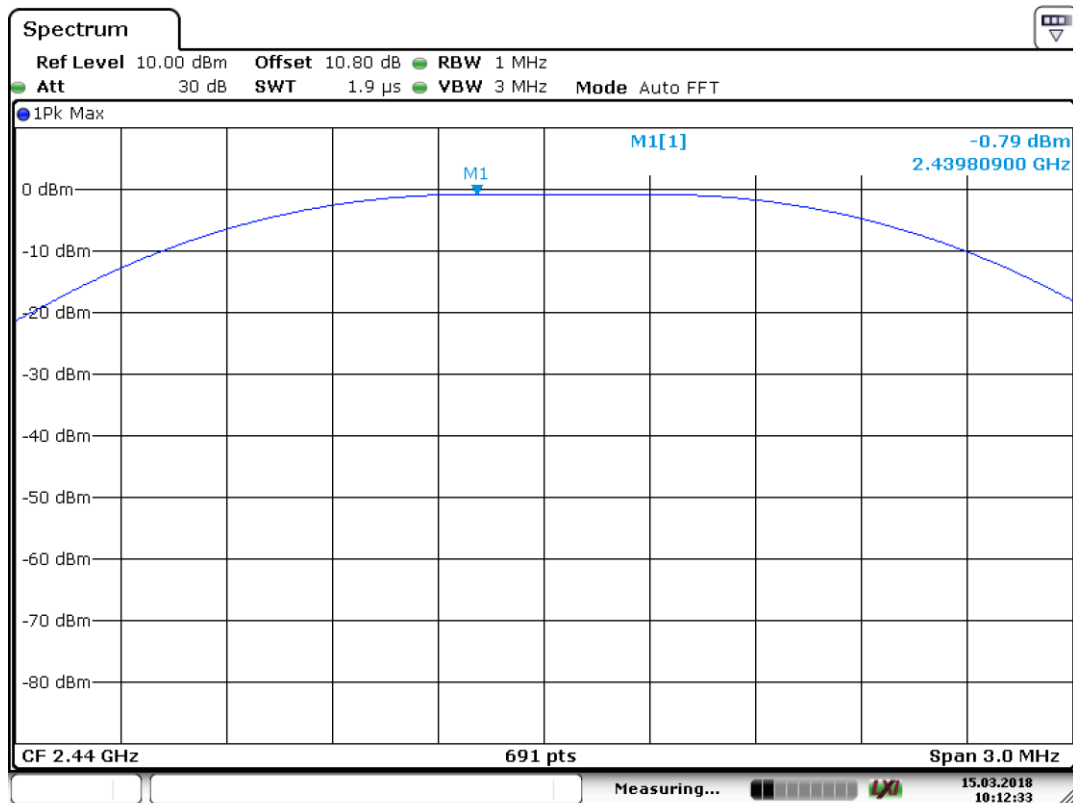
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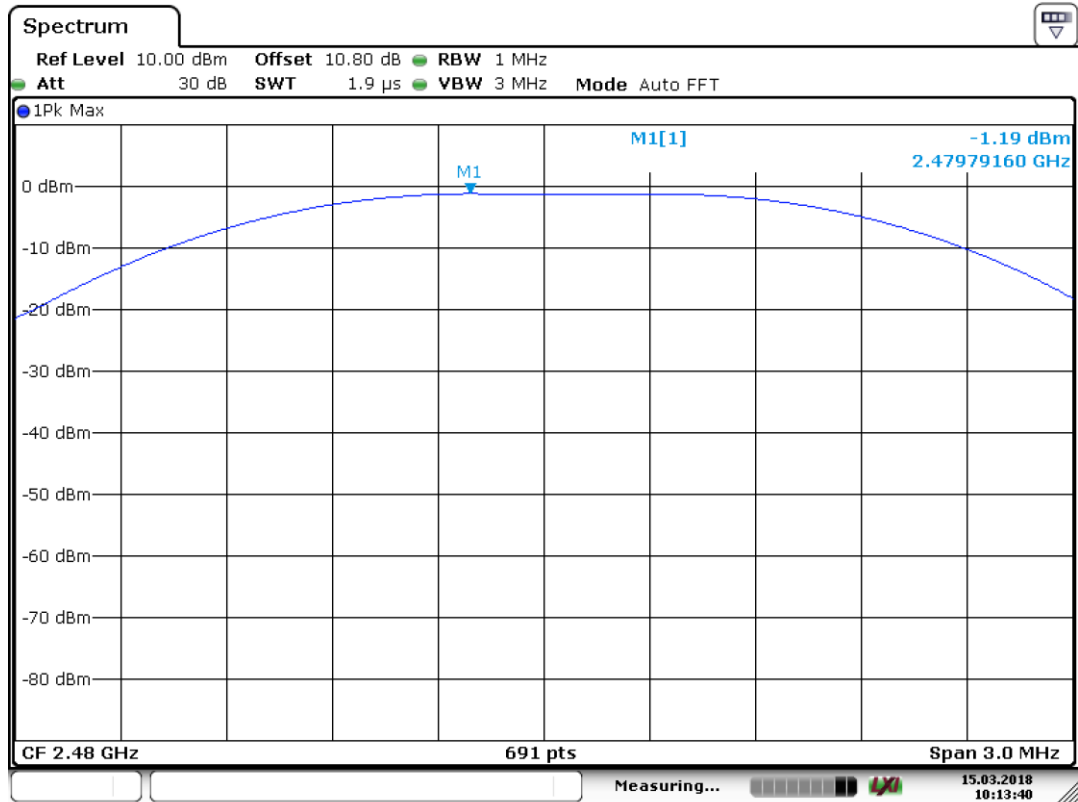
Date: 15.MAR.2018 09:52:50

Channel low – 2402 MHz



Date: 15.MAR.2018 10:12:33

Channel mid – 2440 MHz



Date: 15.MAR.2018 10:13:41

Channel high – 2480 MHz

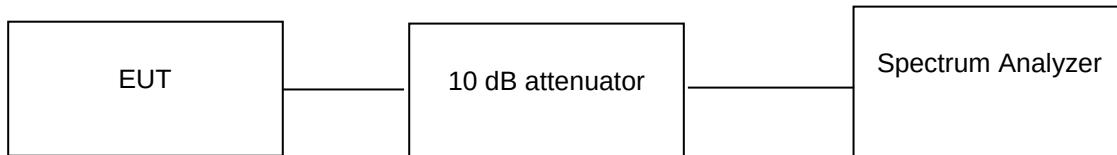
Maximum Power Spectral Density

Result

Pass

Test Specification FCC Part 15 Subpart C Section 15.247 (e)
 Detector Function Peak
 Port of testing Antenna port
 Requirement For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm.

Test Method:



Test results:

Note: Measurements were made as per section 10.2 in KDB 558074 D01 DTS Meas Guidance v04.

10 dB attenuator + 0.8 Cable loss = 10.8 dB offset is considered in below result

Table 6 : Maximum power spectral density verified Test Results

Channel Frequency (MHz)	Total PSD @ 100 kHz Bandwidth (dBm)	Total PSD @ 3 kHz Bandwidth (dBm)	Limit (dBm)	Margin (dB)
2402	-0.64	-15.86	8	-8.64
2440	-0.89	-16.11	8	-8.89
2480	-1.32	-16.54	8	-9.32

For 2402 MHz:

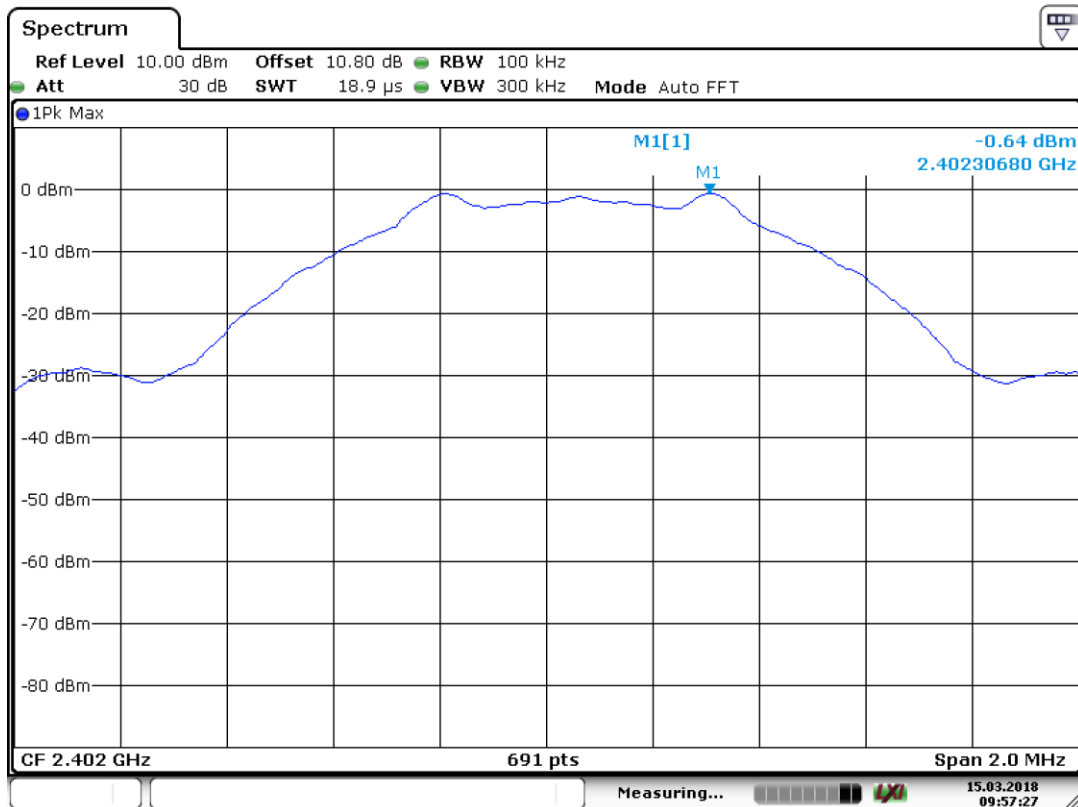
Total PSD (100 kHz Bandwidth) = -0.64 = -0.64 + 10 log(3 kHz/100 kHz) = -15.86 dBm (3 kHz Bandwidth)

For 2440 MHz:

Total PSD (100 kHz Bandwidth) = -0.89 = -0.89 + 10 log(3 kHz/100 kHz) = -16.11 dBm (3 kHz Bandwidth)

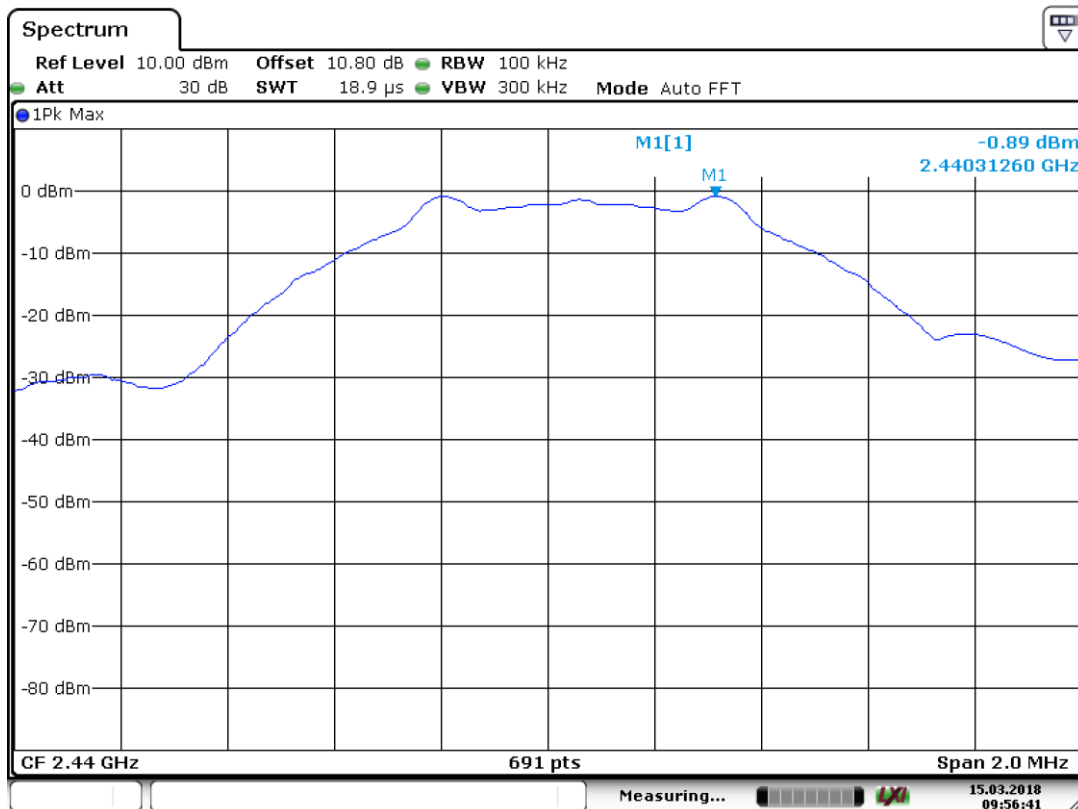
For 2480 MHz:

Total PSD (100 kHz Bandwidth) = -1.32 = -1.32 + 10 log(3 kHz/100 kHz) = -16.54 dBm (3 kHz Bandwidth)



Date: 15.MAR.2018 09:57:27

Channel low – 2402 MHz



Date: 15.MAR.2018 09:56:42

Channel mid – 2440 MHz

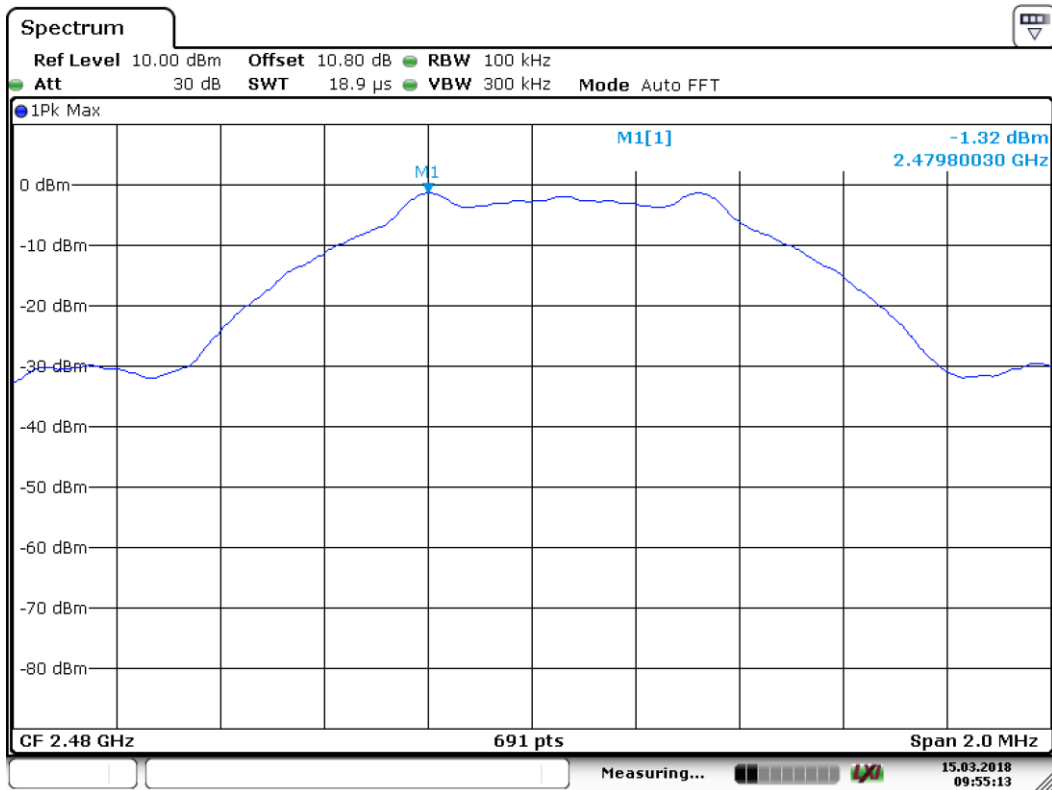
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Date: 15.MAR.2018 09:55:13

Channel high – 2480 MHz

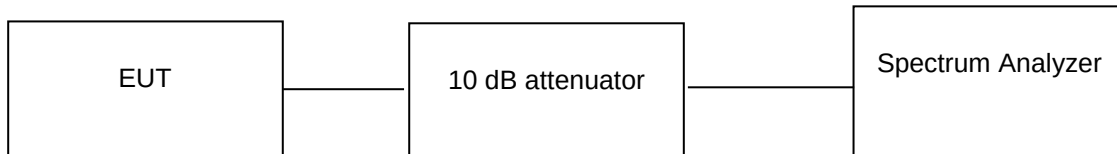
DTS Bandwidth

Result

Pass

Test Specification FCC part 15 Subpart C Section 15.247 (a)(2)
 Detector Peak
 Port of testing Antenna Port
 Requirement The minimum 6 dB bandwidth shall be at least 500 kHz.

Test Method:



Test results:

Note: Measurements were made as per section 8.1, 8.2 in KDB 558074 D01 DTS Meas Guidance v04.

10 dB attenuator + 0.8 Cable loss = 10.8 dB offset is considered in below result

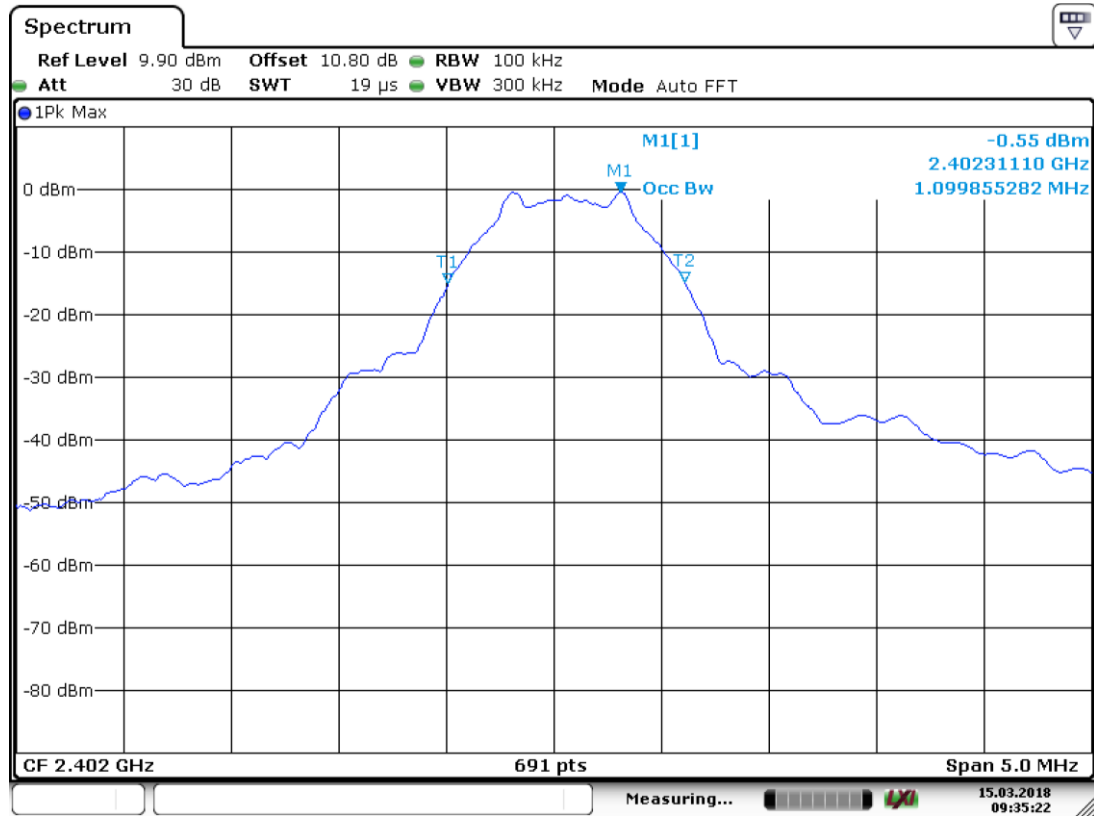
Table 7 : DTS Bandwidth verified Test Results

Channel Frequency (MHz)	6 dB Bandwidth (kHz)	99% OBW (MHz)
2402.00	729.40	1.09
2440.00	720.70	1.17
2480.00	725.00	1.08

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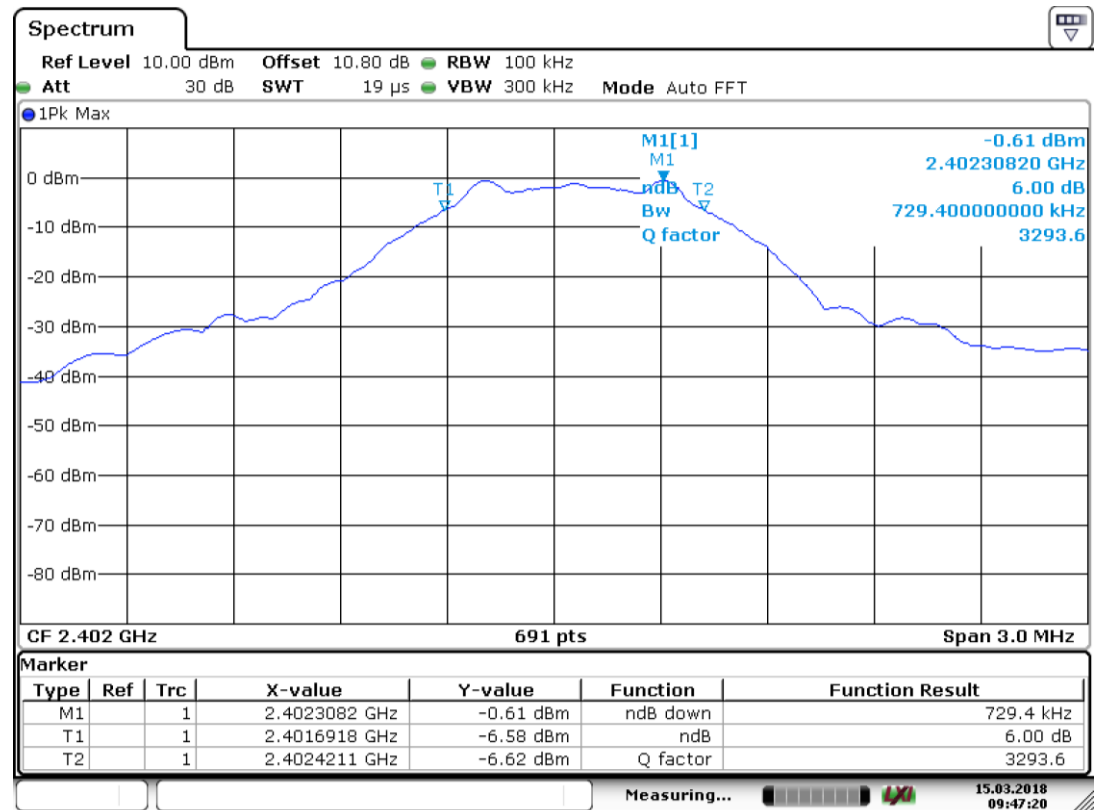
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Date: 15.MAR.2018 09:35:22

Channel low – 2402 MHz

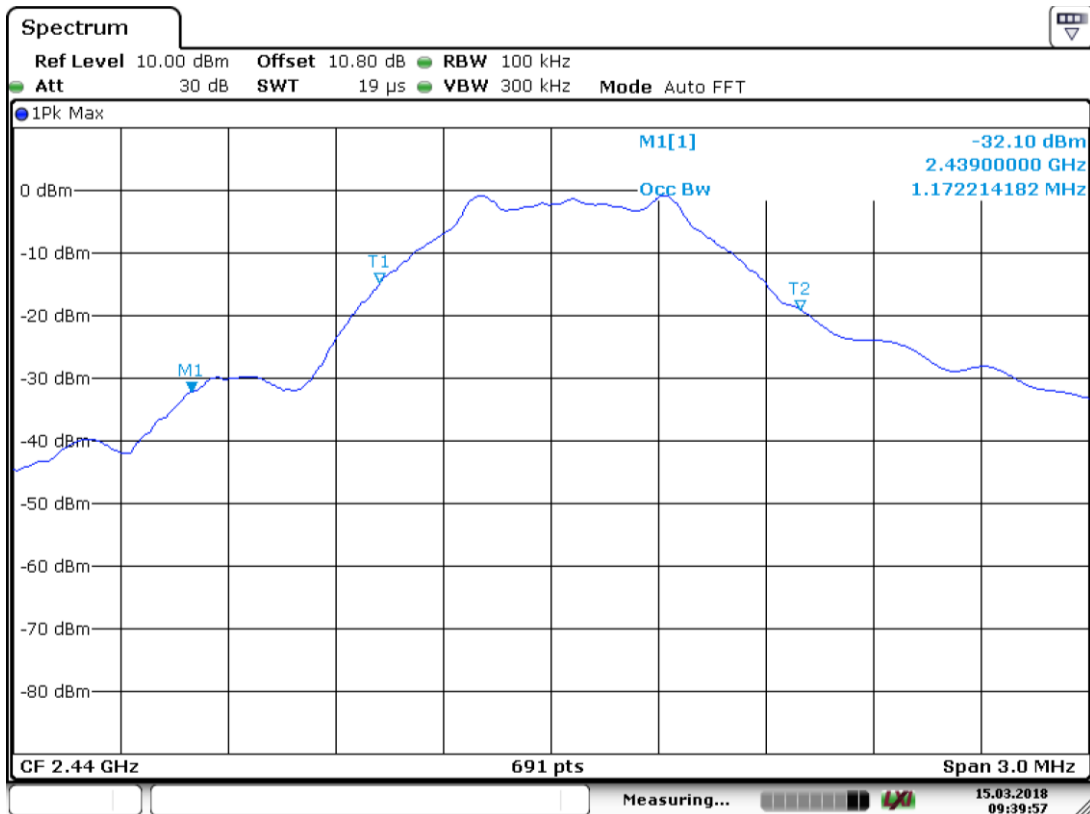
OBW



Date: 15.MAR.2018 09:47:20

Channel low – 2402 MHz

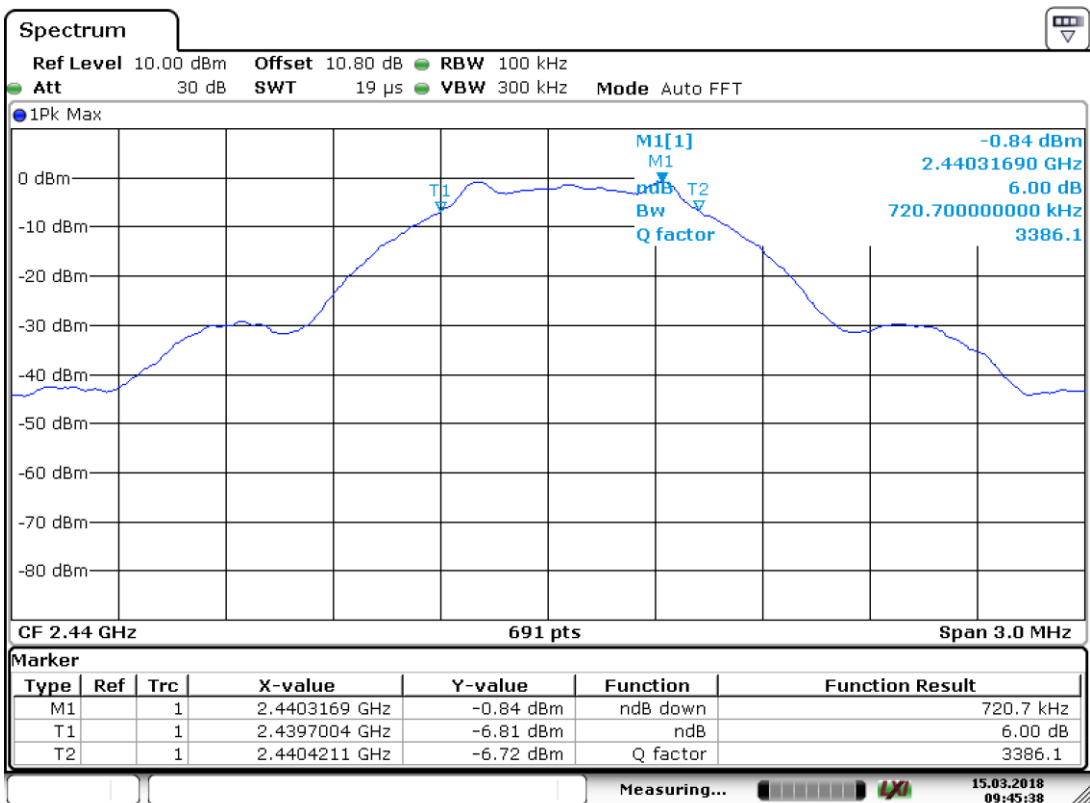
6 dB Bandwidth



Date: 15.MAR.2018 09:39:57

Channel mid – 2440 MHz

OBW



Date: 15.MAR.2018 09:45:39

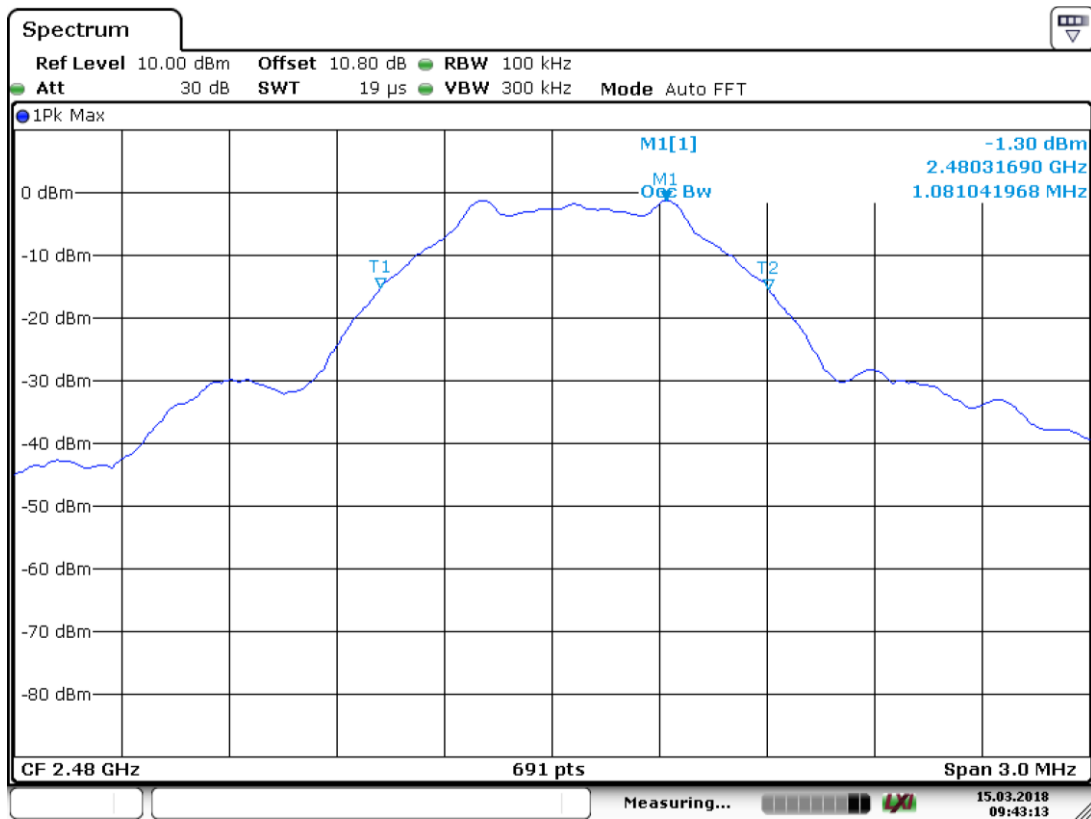
Channel mid – 2440 MHz

6 dB Bandwidth

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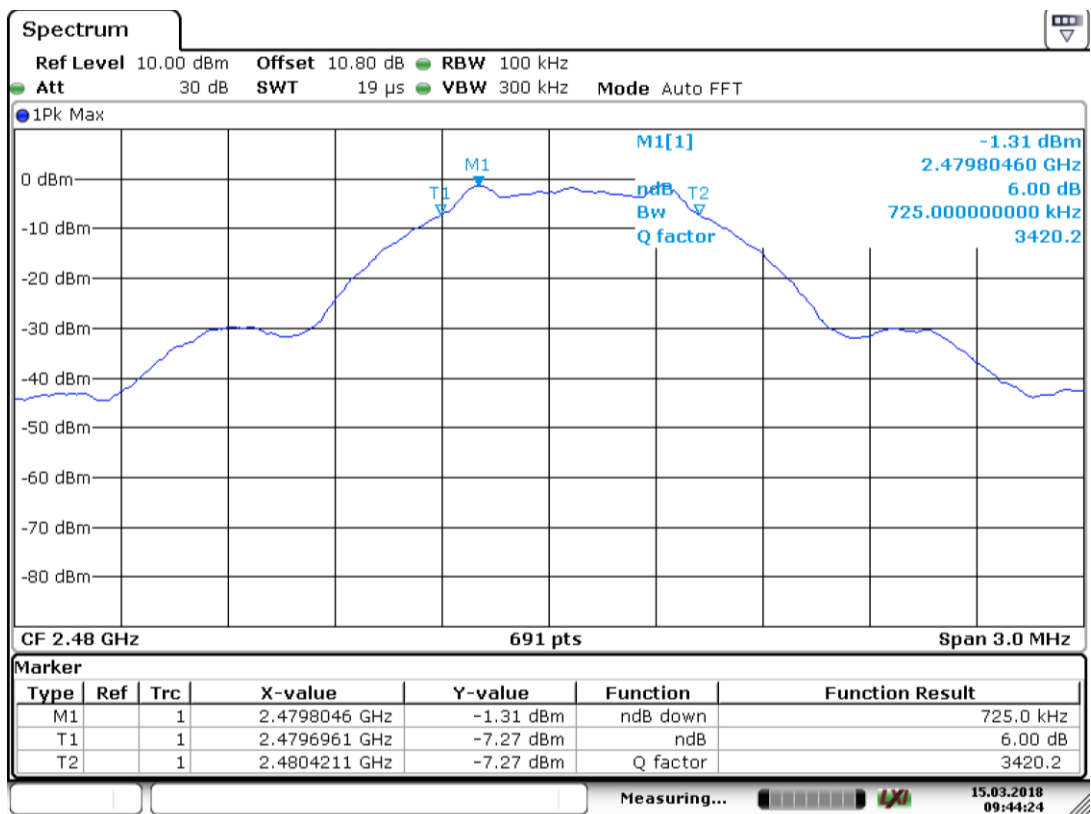
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Date: 15.MAR.2018 09:43:13

Channel High – 2480 MHz

OBW



Date: 15.MAR.2018 09:44:24

Channel High – 2480 MHz

6 dB Bandwidth

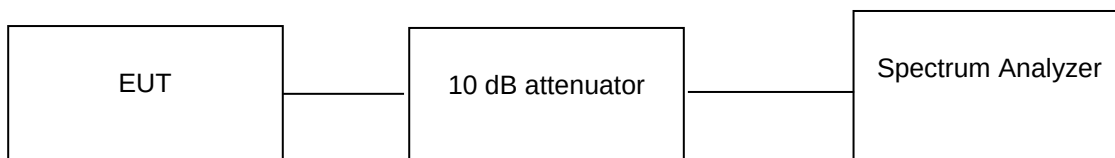
Emissions in non-restricted frequency bands

Result

Pass

Test Specification	FCC Part 15 Subpart C Section 15.247 (d)
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:



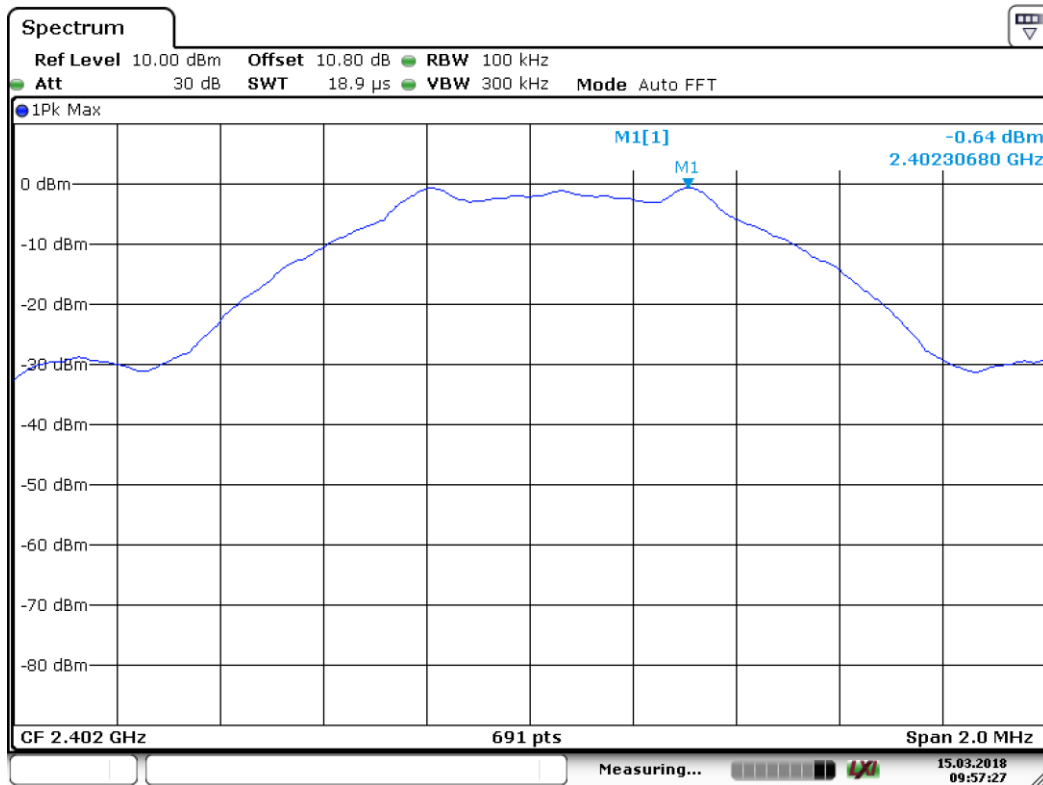
Test results:

Note: Measurements were made as per section 11.2, 11.3 in KDB 558074 D01 DTS Meas Guidance v04.

10 dB attenuator + 0.8 Cable loss = 10.8 dB offset is considered in below result

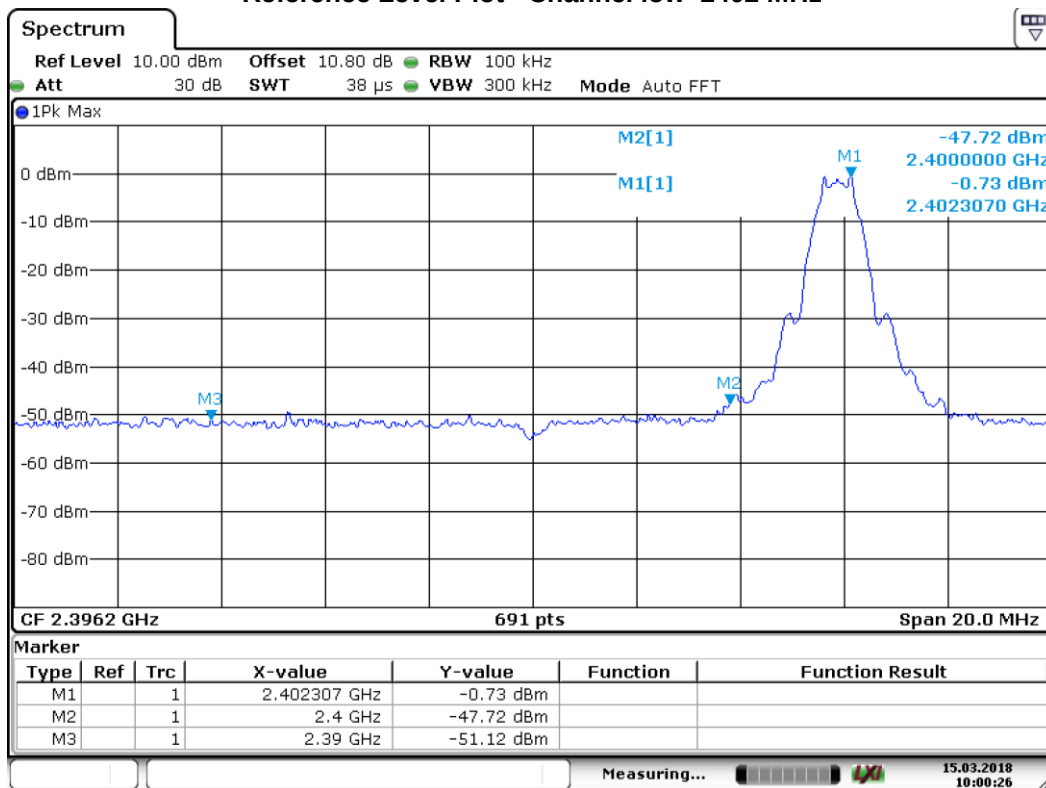
Table 8 : Verified Test Results of Emissions in non-restricted frequency bands

Channel Frequency (MHz)	Value at Band Edge		Reference PSD Value B (dBm)	Band Edge Value A~B (dBc)	Limit (dBc)
	Frequency (MHz)	Value A (dBm)			
2402	2400	-47.72	-0.64	47.08	20.00
2480	2483.50	-51.67	-1.32	50.35	20.00



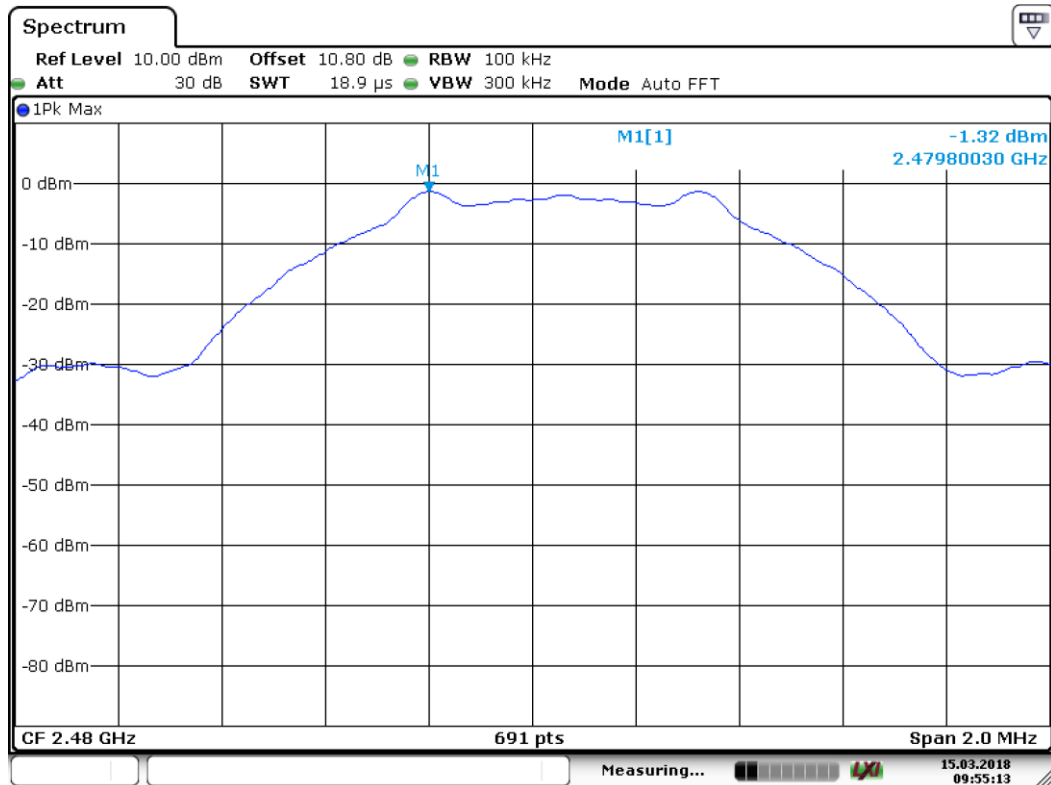
Date: 15.MAR.2018 09:57:27

Reference Level Plot - Channel low 2402 MHz



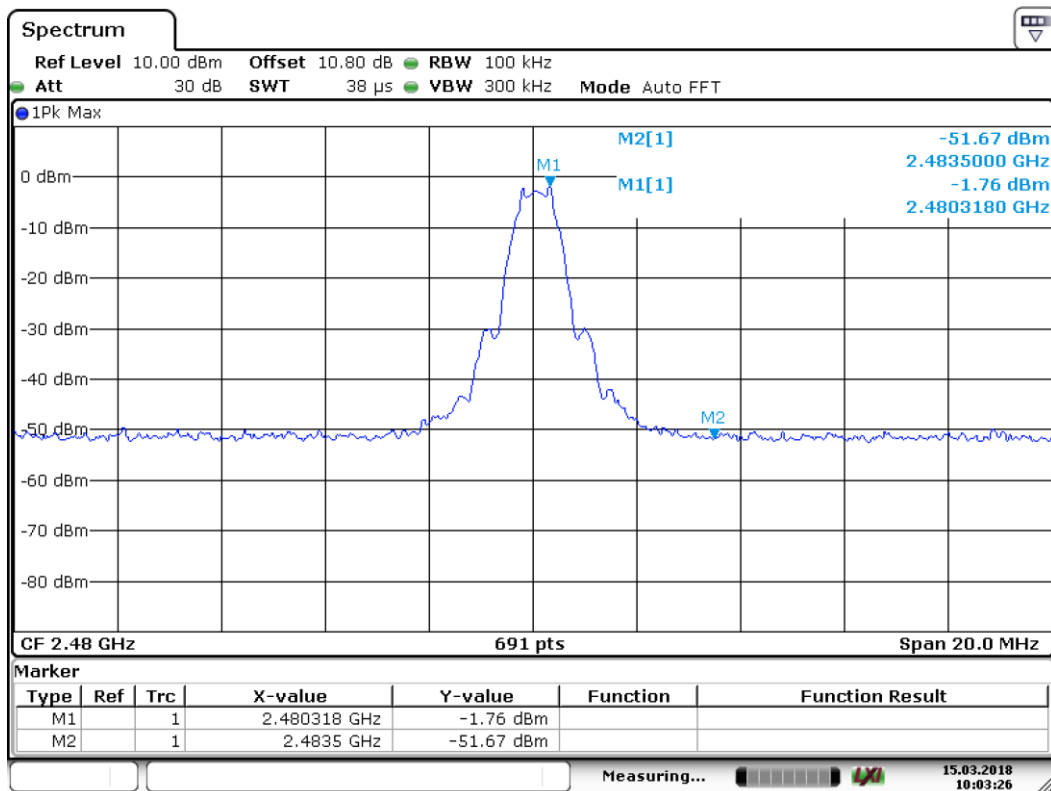
Date: 15.MAR.2018 10:00:27

Channel low – 2402 MHz



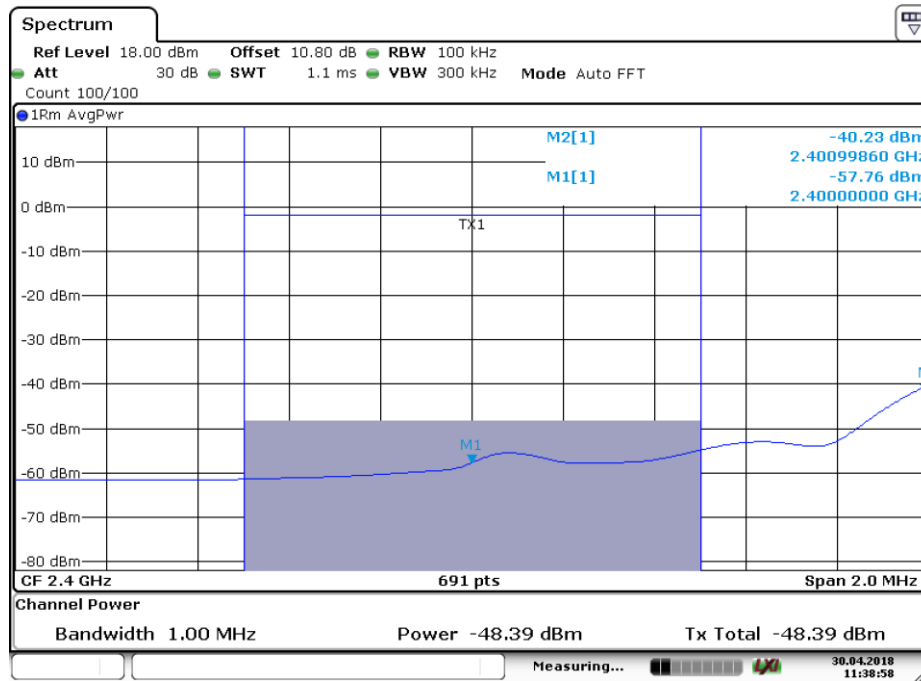
Date: 15.MAR.2018 09:55:13

Reference Level Plot - Channel high – 2480 MHz



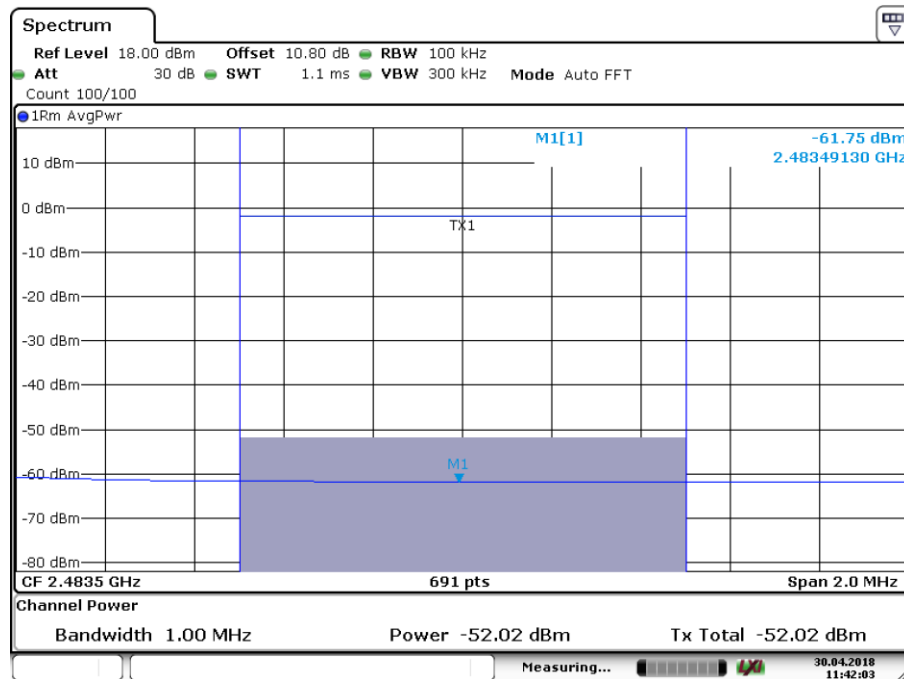
Date: 15.MAR.2018 10:03:26

Channel high - 2480 MHz



Date: 30.APR.2018 11:38:58

2405 MHz Band edge level with 2MHz span



Date: 30.APR.2018 11:42:02

2480 MHz Band edge level with 2MHz span

Emissions in non- restricted frequency bands / Emission level measurement with 2 MHz span

Channel Frequency (MHz)	Value at Band Edge		Limit (dB)
	Frequency (MHz)	Value (dBm)	
2400	2400	-48.39	-20
2483.5	2483.5	-52.02	-20

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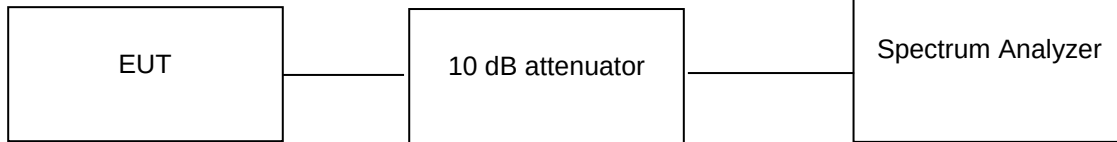
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Conducted Spurious Emission

Result

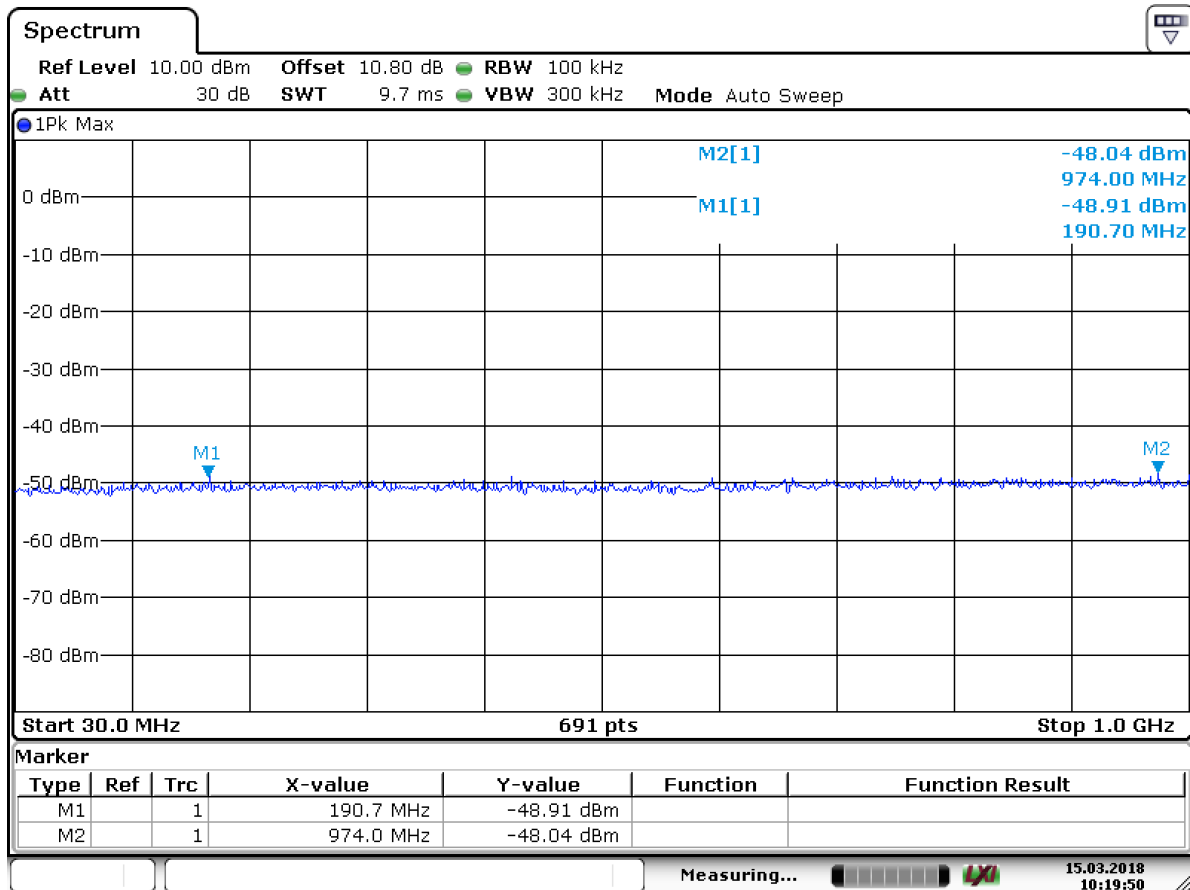
Pass

Test Method:



10 dB attenuator + 0.8 Cable loss = 10.8 dB offset is considered in below result

Test results:



Date: 15.MAR.2018 10:19:50

30MHz to 1GHz Spurious Emissions

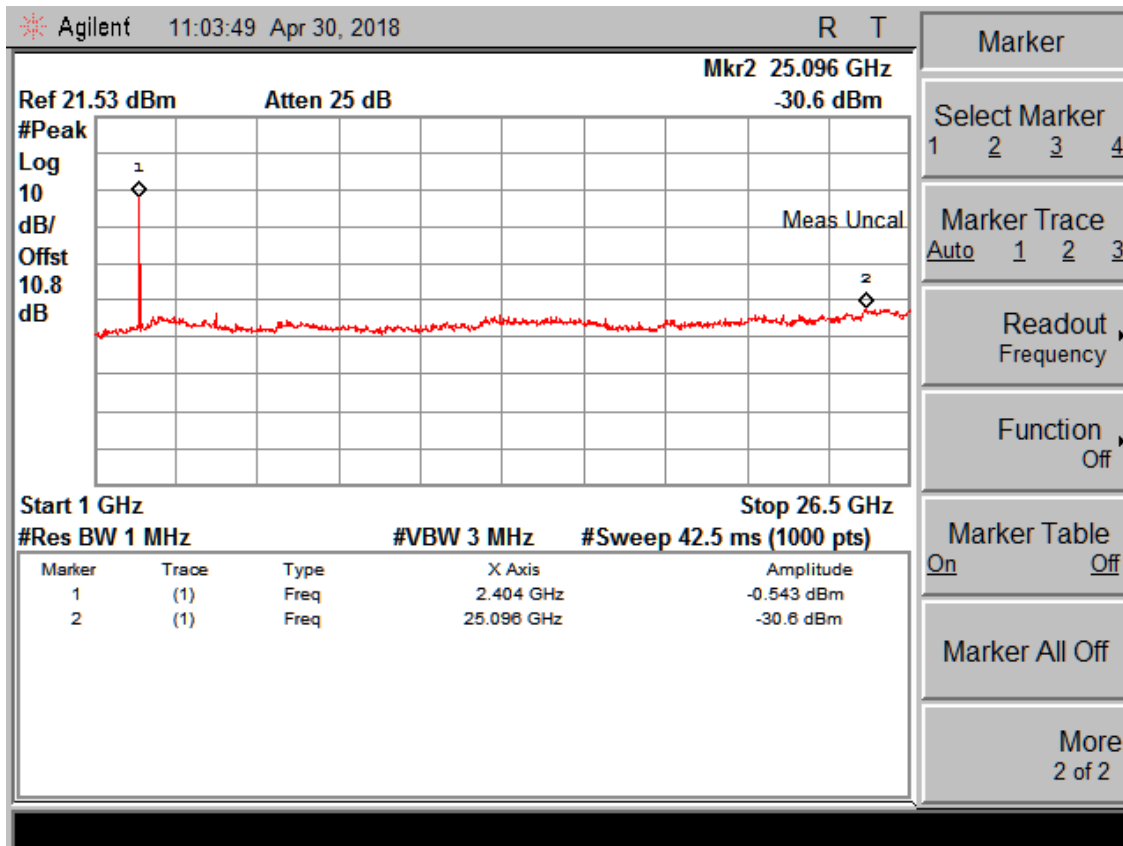
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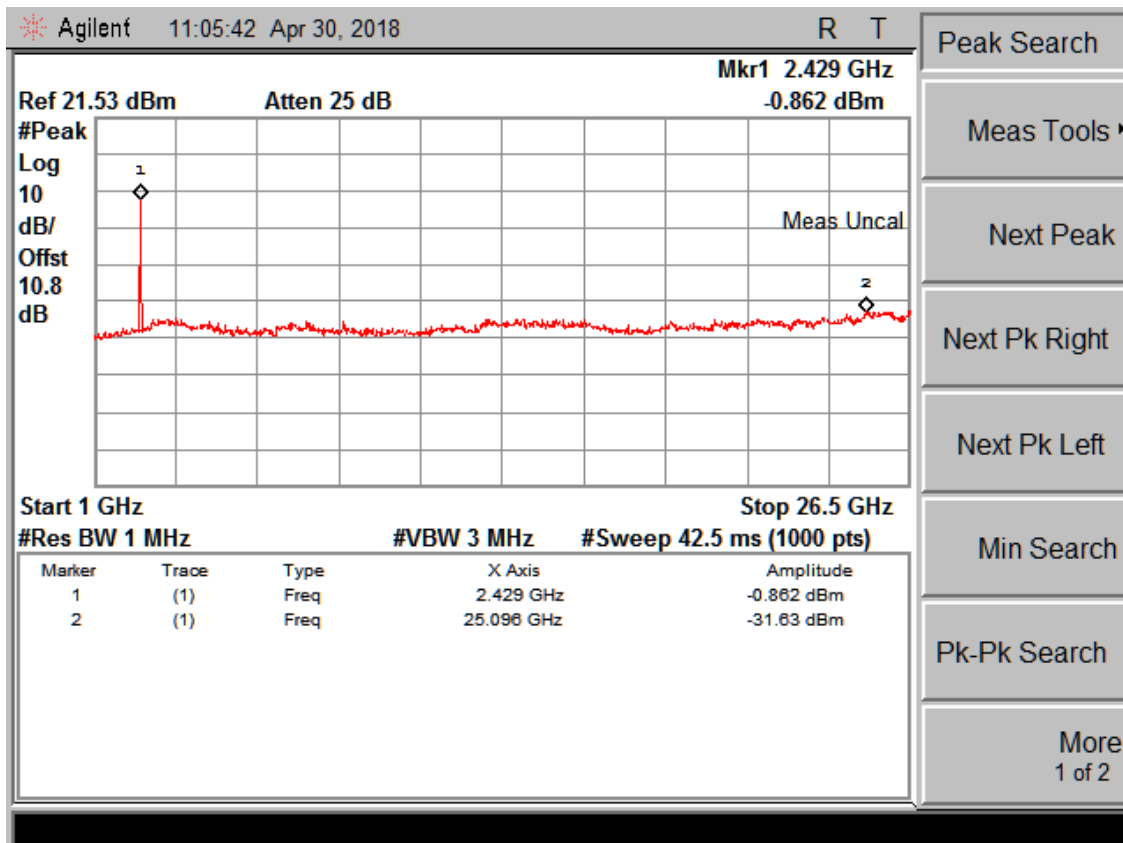
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Channel Frequency 2402 MHz



Channel Frequency 2440 MHz

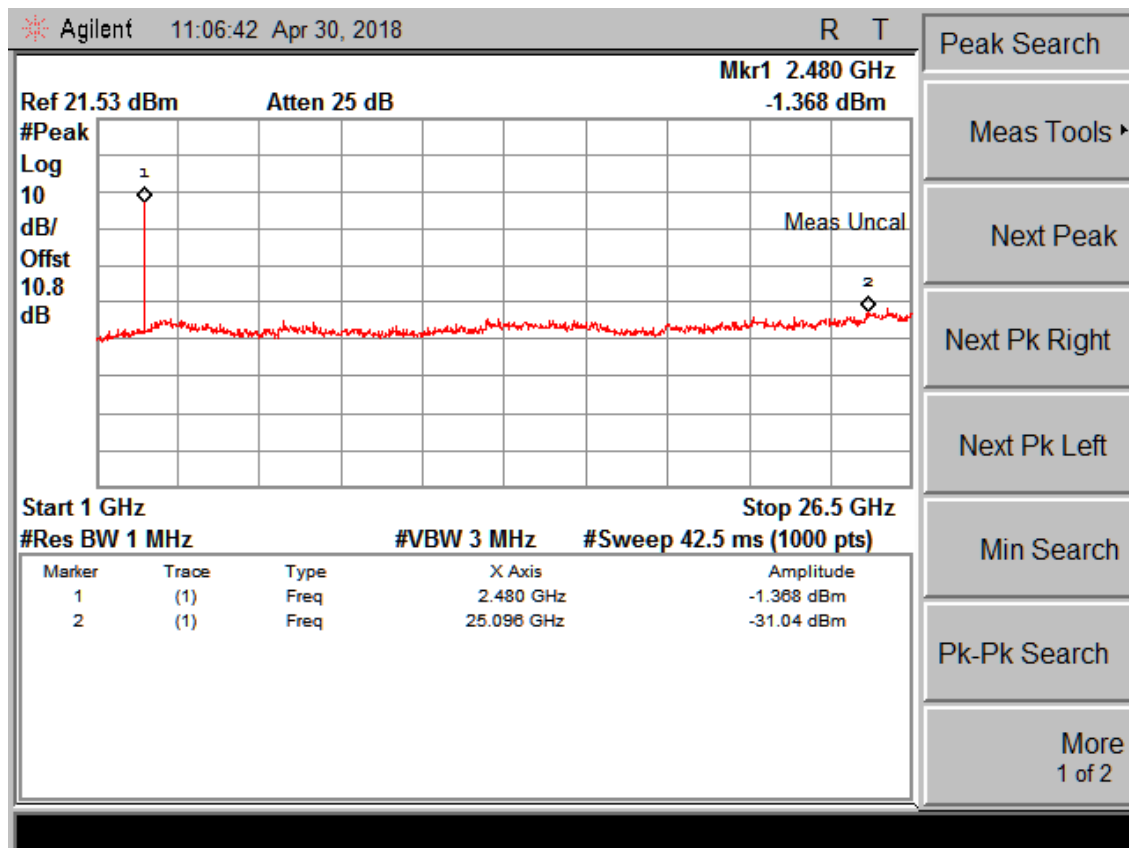
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Channel Frequency 2480 MHz

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 9: 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:

2.7V -3.6V from Power adaptor

Environmental conditions:

Temperature: +23.2 °C RH: 60.9 %

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Test results:

No emissions found in frequency 9 kHz to 30 MHz

Test results for frequencies in the range 30MHz – 1 GHz

Polarization	Frequency (MHz)	Measured value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	37.174	32.91	40.00	-7.09
	39.962	32.39	40.00	-7.61
	65.547	37.47	40.00	-2.53
Horizontal	124.673	30.70	43.50	-12.80
	131.082	33.19	43.50	-10.31
	136.828	32.83	43.50	-10.67

Test results for frequencies in the range 1 GHz - 26.5 GHz

Table 10 : Restricted bands of emission verified Test Results

Channel	Polarization	Frequency (MHz)	Measure Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Low	Vertical	2390(Pk)	46.30	74.00	-27.70
		2390(Av)	31.60	54.00	-22.40
		2402(Pk)	93.65	-	*
		2402(Av)	92.71	-	*
		4804(Pk)	54.68	74.00	-19.32
		4804(Av)	44.64	54.00	-9.36
		7206(Pk)	59.50	74.00	-14.50
		7206(Av)	48.04	54.00	-5.96
	Horizontal	2390(Pk)	44.57	74.00	-29.43
		2390(Av)	30.13	54.00	-23.87
		2402(Pk)	98.00	-	*
		2402(Av)	97.00	-	*
		4804(Pk)	58.02	74.00	-15.98
		4804(Av)	51.82	54.00	-2.18
		7206(Pk)	62.26	74.00	-11.74
		7206(Av)	51.97	54.00	-2.03
Mid	Vertical	4880(Pk)	52.62	74.00	-21.38
		4880(Av)	42.99	54.00	-11.01
		7320(Pk)	59.95	74.00	-14.05
		7320(Av)	48.00	54.00	-6.00
	Horizontal	4880(Pk)	56.04	74.00	-17.96
		4880(Av)	48.07	54.00	-5.93
		7320(Pk)	61.21	74.00	-12.79
		7320(Av)	50.40	54.00	-3.60
High	Vertical	2480(Pk)	90.29	-	*
		2480(Av)	89.25	-	*
		2483.5(Pk)	41.10	74.00	-32.90
		2483.5(Av)	30.13	54.00	-23.87
		4960(Pk)	52.32	74.00	-21.68
		4960(Av)	41.49	54.00	-12.51
		7440(Pk)	60.96	74.00	-13.04
		7440(Av)	48.44	54.00	-5.56
	Horizontal	2480(Pk)	96.08	-	*
		2480(Av)	94.95	-	*
		2483.5(Pk)	44.45	74.00	-29.55
		2483.5(Av)	31.72	54.00	-22.28
		4960(Pk)	54.35	74.00	-19.65
		4960(Av)	45.01	54.00	-8.99
		7440(Pk)	61.41	74.00	-12.59
		7440(Av)	49.51	54.00	-4.49

- Fundamental frequency

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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 : 110VAC,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

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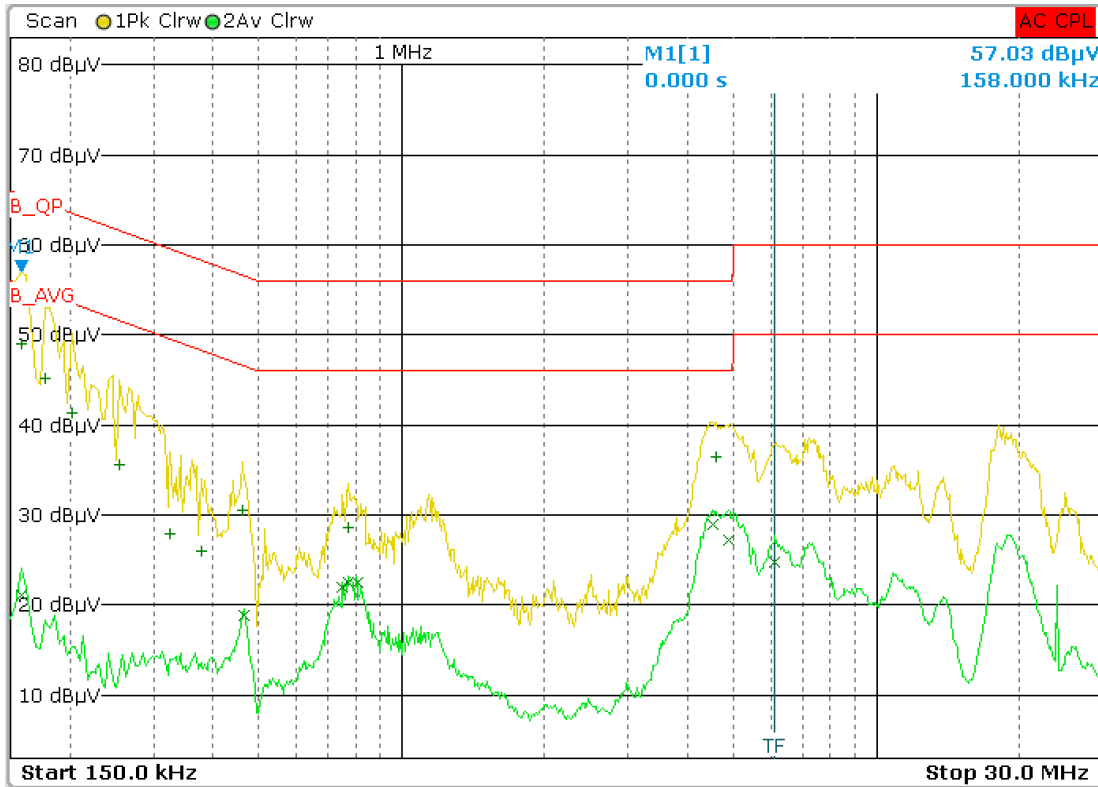
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Test Result: LINE Graphs and Tables

110v AC , 60Hz



Line Graph

Detector	Frequency	Level (dBμV)	Limit (dBμV)	Margin (dB)
Quasi Peak	158.00 kHz	48.99	65.55	-16.56
Quasi Peak	178.00 kHz	45.24	64.54	-19.30
Quasi Peak	202.00 kHz	41.27	63.46	-22.19
Quasi Peak	254.00 kHz	35.66	61.51	-25.85
Quasi Peak	326.00 kHz	27.93	59.39	-31.46
Quasi Peak	378.00 kHz	25.97	58.13	-32.16
Quasi Peak	462.00 kHz	30.47	56.42	-25.95
Quasi Peak	770.00 kHz	28.7	56.00	-27.30
Quasi Peak	4.594MHz	36.42	56.00	-19.58
Average	158.00 kHz	21.18	55.55	-34.37
Average	466.00 kHz	18.85	46.35	-27.50
Average	466.00 kHz	18.84	46.35	-27.51
Average	750.00 kHz	21.97	46.00	-24.03
Average	774.00 kHz	22.54	46.00	-23.46
Average	806.00 kHz	22.48	46.00	-23.52
Average	4.51MHz	29.04	46.00	-16.96
Average	4.874MHz	27.17	46.00	-18.83
Average	6.082MHz	24.86	50.00	-25.14

Line Table

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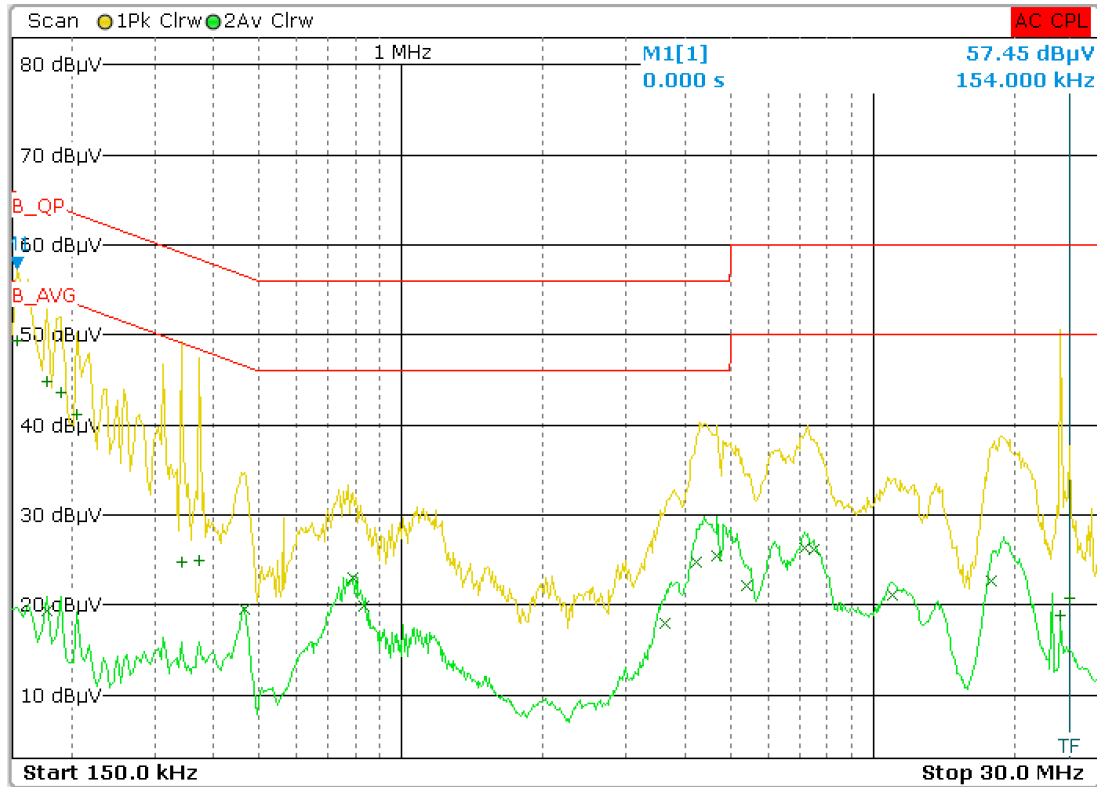
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Test Result: Neutral Graphs and Tables

110v AC , 60Hz



Neutral Graph

Detector	Frequency	Level (dBμV)	Limit (dBμV)	Margin (dB)
Quasi Peak	154.00 kHz	49.42	65.77	-16.35
Quasi Peak	178.00 kHz	44.81	64.54	-19.73
Quasi Peak	190.00 kHz	43.65	63.98	-20.33
Quasi Peak	206.00 kHz	41.10	63.30	-22.20
Quasi Peak	342.00 kHz	24.77	58.98	-34.21
Quasi Peak	374.00 kHz	24.95	58.22	-33.27
Quasi Peak	24.982 MHz	18.89	60.00	-41.11
Quasi Peak	26.058 MHz	20.76	60.00	-39.24
Average	178.00 kHz	19.47	54.54	-35.07
Average	466.00 kHz	19.54	46.35	-26.81
Average	790.00 kHz	22.96	46.00	-23.04
Average	834.00 kHz	19.98	46.00	-26.02
Average	3.634 MHz	17.97	46.00	-28.03
Average	4.210 MHz	24.78	46.00	-21.22
Average	4.662 MHz	25.53	46.00	-20.47
Average	5.410 MHz	22.09	50.00	-27.91
Average	7.194 MHz	26.34	50.00	-23.66
Average	7.490 MHz	26.21	50.00	-23.79
Average	10.990 MHz	21.18	50.00	-28.82
Average	17.818 MHz	22.61	50.00	-27.39

Neutral Table

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