Excellence in Compliance Testing

Certification Test Report

FCC ID: AZ489FT7088
IC: 109U-89FT7088

FCC Rule Part: 15.247
IC Radio Standards Specification: RSS-247

ACS Report Number: 15-2124.W06.2A

Applicant: Motorola Solutions, Inc.

Model(s): HK2062A

Test Begin Date: **December 2, 2015**
Test End Date: **February 15, 2016**

Report Issue Date: February 17, 2016

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER AT-1533

This report must not be used by the client to claim product certification, approval, or endorsement by ANAB, ANSI, or any agency of the Federal Government.

Reviewed by:

Thierry Jean-Charles
EMC Engineer
Advanced Compliance Solutions, Inc.

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This report contains 34 pages

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1 GENERAL

1.1 Purpose

The purpose of this report is to demonstrate compliance with Part 15 Subpart C of the FCC's Code of Federal Regulations and Industry Canada's Radio Standards Specification RSS-247.

1.2 Applicant Information

Motorola Solutions, Inc.
8000 West Sunrise Blvd.
Fort Lauderdale, FL 33322

1.3 Product Description

The Motorola Solutions, Inc. Si500 model HK2062A is a video speaker microphone. The unit includes a dual band WLAN transceiver as well as a Bluetooth radio supporting both Bluetooth Classic (2.1+EDR) and Bluetooth Low Energy (BLE). This test report covers the Bluetooth Low Energy radio only.

Technical Details

Mode of Operation:	Bluetooth Low Energy (BLE)
Frequency Range:	2402 MHz - 2480 MHz
Number of Channels:	40
Channel Separation:	2 MHz
Modulations:	GFSK
Antenna Type/Gain:	Ceramic Chip Antenna, 3.2dBi
Input Power:	5 VDC USB, 3.7 VDC Lithium Ion Battery

Model Number: HK2062A

Test Sample Serial Number(s): ATP1B083 (RF Conducted Emissions), ATP1B104 (Radiated and Power Line Conducted Emissions).

Test Sample Condition: The equipment was provided in good condition without any physical damage.

1.4 Test Methodology and Considerations

The EUT was evaluated for radiated, RF conducted and power line conducted emissions for the Bluetooth Low Energy (BLE) radio. The EUT was evaluated using the QUALCOMM Remote Evaluation Tool (QRCT).

For the radiated emission investigation, preliminary evaluation was performed for the EUT standalone, set in three orthogonal orientations. Additional measurements were performed for the EUT powered via a wall adapter, for the EUT powered using a car battery and a vehicle power adapter (VPA), for the EUT connected to a computer and a multi-charger and for the EUT connected with a computer and an APX8000 radio. The EUT standalone, flat on the table top, was determined to be the configuration leading to the highest emissions as compared to the limits. That configuration was used for all the radiated emissions reported in this document.

The RF conducted emissions were investigated with the EUT configured with a temporary SMA connector at the antenna port.

The power line conducted emission test was performed for the EUT constantly transmitting while powered via a 5VDC AC power adapter.

The EUT was also evaluated for unintentional emissions. The results are documented separately in a Declaration of Conformity/Verification test report.

2 TEST FACILITIES

2.1 Location

The radiated and conducted emissions test sites are located at the following address:

Advanced Compliance Solutions, Inc.
3998 FAU Blvd, Suite 310
Boca Raton, Florida 33431
Phone: (561) 961-5585
Fax: (561) 961-5587
www.acstestlab.com

FCC Test Firm Registration #: 475089
Industry Canada Lab Code: 4175C

2.2 Laboratory Accreditations/Recognitions/Certifications

ACS is accredited to ISO/IEC 17025 by ANSI-ASQ National Accreditation Board under their ANAB program and has been issued certificate number AT-1533 in recognition of this accreditation. Unless otherwise specified, all test methods described within this report are covered under the ISO/IEC 17025 scope of accreditation.

2.3 Radiated & Conducted Emissions Test Site Description

2.3.1 Semi-Anechoic Chamber Test Site

The EMC radiated test facility consists of an RF-shielded enclosure. The interior dimensions of the indoor semi-anechoic chamber are approximately 48 feet (14.6 m) long by 36 feet (10.8 m) wide by 24 feet (7.3 m) high and consist of rigid, 1/8 inch (0.32 cm) steel-clad, wood core modular panels with steel framing. In the shielded enclosure, the faces of the panels are galvanized and the chamber is self-supporting. 8-foot RF absorbing cones are installed on 4 walls and the ceiling. The steel-clad ground plane is covered with vinyl flooring.

The turntable is driven by pneumatic motor, which is capable of supporting a 2000 lb. load. The turntable is flush with the chamber floor which it is connected to, around its circumference, with a continuous metallic loaded spring. An EMCO Model 1050 Multi-device controller controls the turntable position.

A pneumatic motor is used to control antenna polarizations and height relative to the ground. The height information is displayed on the control unit EMCO Model 1050.

The control room is an RF shielded enclosure attached to the semi-anechoic chamber with two bulkhead panels for connecting RF, and control cables. The dimension of the room is 7.3 m x 4.9 m x 3 m high and the entrance doors of both control and conducted rooms are 3 feet (0.91 m) by 7 feet (2.13 m).

A diagram of the Semi-Anechoic Chamber Test Site is shown in Figure 2.3.1-1 below:

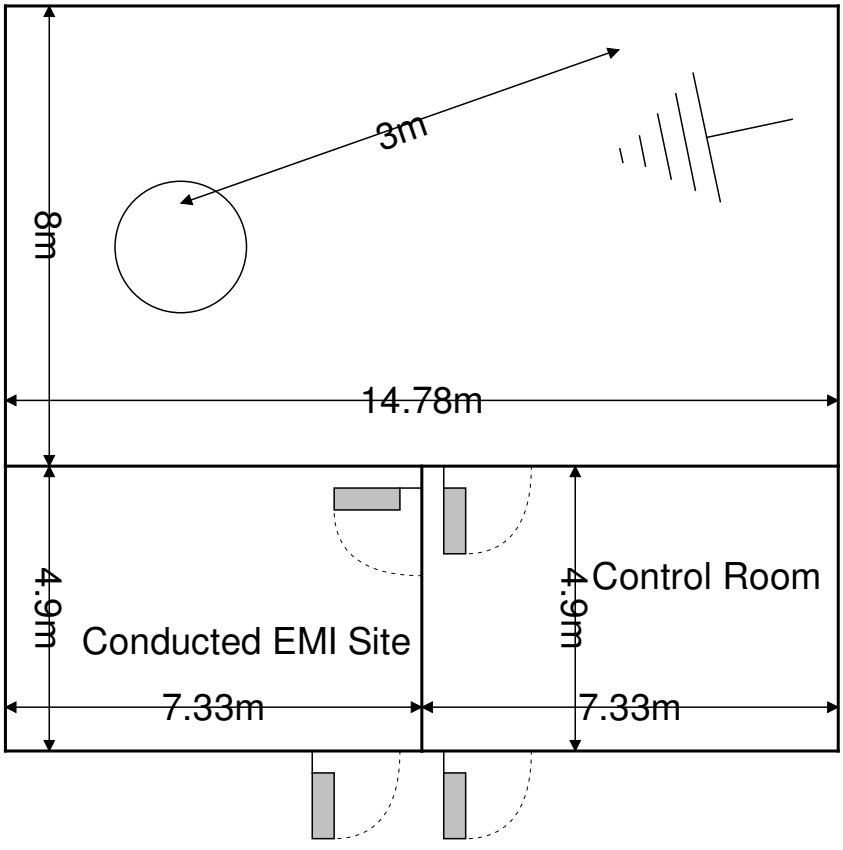


Figure 2.3.1-1: Semi-Anechoic Chamber Test Site

2.3.2 Conducted Emissions Test Site Description

The dimensions of the shielded conducted room are 7.3 x 4.9 x 3 m^3. The power line conducted emission site includes two LISNs: a Solar Model 8028-50 50 Ω/50 µH and an EMCO Model 3825/2R, which are installed as shown in the figure below. For evaluations requiring 230 V, 50 Hz AC input, a Polarad LISN (S/N 879341/048) is used in conjunction with a California Instruments signal generator Model 2001RP-OP1.

A diagram of the room is shown below in figure 2.3.2-1:

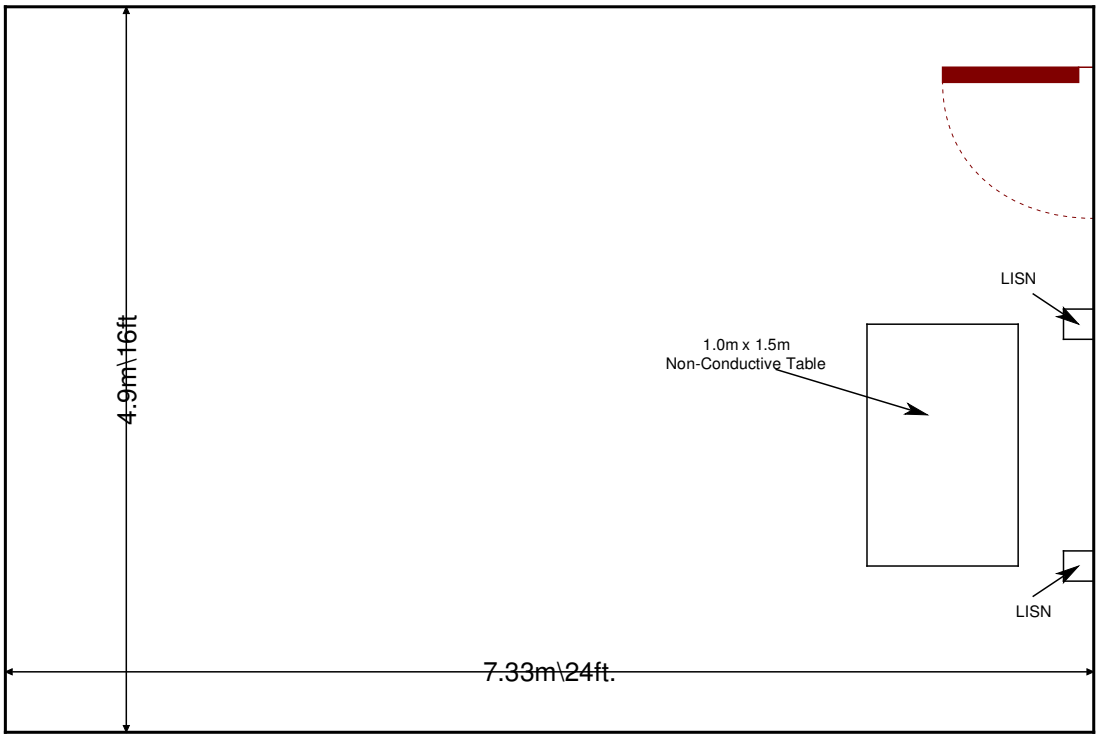


Figure 2.3.2-1: AC Mains Conducted EMI Site

3 APPLICABLE STANDARD REFERENCES

The following standards were used:

- ANSI C63.4-2014: Method of Measurements of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the 9 kHz to 40 GHz.
- ANSI C63.10-2013: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
- US Code of Federal Regulations (CFR): Title 47, Part 2, Subpart J: Equipment Authorization Procedures, 2016.
- US Code of Federal Regulations (CFR): Title 47, Part 15, Subpart C: Radio Frequency Devices, Intentional Radiators, 2016
- Industry Canada Radio Standards Specification: RSS-247 — Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices, Issue 1, May 2015.
- Industry Canada Radio Standards Specification: RSS-GEN – General Requirements for Compliance of Radio Apparatus, Issue 4, November 2014.

4 LIST OF TEST EQUIPMENT

The calibration interval of test equipment is annually or the manufacturer's recommendations. Where the calibration interval deviates from the annual cycle based on the instrument manufacturer's recommendations, it shall be stated below.

Table 4-1: Test Equipment

AssetID	Manufacturer	Model #	Equipment Type	Serial #	Last Calibration Date	Calibration Due Date
22	Agilent	8449B	Amplifiers	3008A00526	5/18/2015	5/18/2016
283	Rohde & Schwarz	FSP40	Spectrum Analyzers	1000033	7/1/2015	7/1/2016
479	Electro-Metrics	ALP-70	Antennas	158	12/2/2013	12/2/2015
479	Electro-Metrics	ALP-70	Antennas	158	12/3/2015	12/3/2017
523	Agilent	E7405	Spectrum Analyzers	MY45103293	12/26/2014	12/26/2016
653	Suhner	SF-102A	Cables	0944/2A	4/13/2015	4/13/2016
2003	EMCO	3108	Antennas	2148	2/18/2014	2/18/2016
2004	EMCO	3146	Antennas	1385	11/19/2015	11/19/2017
2006	EMCO	3115	Antennas	2573	4/14/2015	4/14/2017
2008	COM-Power	AH-826	Antennas	81009	NCR	NCR
2011	Hewlett-Packard	HP 8447D	Amplifiers	2443A03952	11/18/2015	11/18/2016
2022	EMCO	LISN3825/2R	LISN	1095	9/14/2015	9/14/2017
2045	ACS Boca	Conducted Cable Set	Cable Set	2045	11/11/2015	11/11/2016
2070	Mini Circuits	VHF-8400+	Filter	2070	11/17/2015	11/17/2016
2072	Mini Circuits	VHF-3100+	Filter	30737	11/17/2015	11/17/2016
2082	Teledyne Storm Products	90-010-048	Cables	2082	4/22/2015	4/22/2016
2086	Merrimac	FAN-6-10K	Attenuators	23148-83-1	11/16/2015	11/16/2016
2095	ETS Lindgren	TILE4! - Version 4.2.A	Software	85242	NCR	NCR
2111	Aeroflex Inmet	40AH2W-20	Attenuator	2111	7/22/2015	7/22/2016
2121	ACS Boca	Radiated Cable Set	Cable Set	2121	8/22/2015	8/22/2016
3004	Teseq	CFL 9206A	Attenuators	34720	10/7/2015	10/7/2016

Notes:
NCR=No Calibration Required
The calibration information cycle for asset 479 is provided to cover the entire test period. The asset was only used during the active period of the calibration cycle.

5 SUPPORT EQUIPMENT

Table 5-1: EUT and Support Equipment (Radiated Emissions)

Item #	Type Device	Manufacturer	Model/Part #	Serial #
1	EUT	Motorola Solutions, Inc.	HK2062A	ATP1B104
2	Earpiece	Motorola Solutions, Inc.	RLN4941A	N/A

Table 5-2: Cable Description (Radiated Emissions)

Cable #	Cable Type	Length	Shield	Termination
A	Audio	0.55 m	No	Earpiece to EUT

Table 5-3: EUT and Support Equipment (Power Line Conducted Emissions)

Item #	Type Device	Manufacturer	Model/Part #	Serial #
1	EUT	Motorola Solutions, Inc.	HK2062A	ATP1B104
2	Earpiece	Motorola Solutions, Inc.	RLN4941A	N/A
3	I.T.E Power Supply	Motorola Solutions, Inc.	MU08-L050150-A1	1538000119

Table 5-4: Cable Description (Power Line Conducted Emissions)

Cable #	Cable Type	Length	Shield	Termination
A	Audio	0.55 m	No	Earpiece to EUT
B	USB	1 m	No	Power Supply to EUT
C	Extension Cord	1.82 m	No	Power Supply to AC Mains

6 EQUIPMENT UNDER TEST SETUP BLOCK DIAGRAM

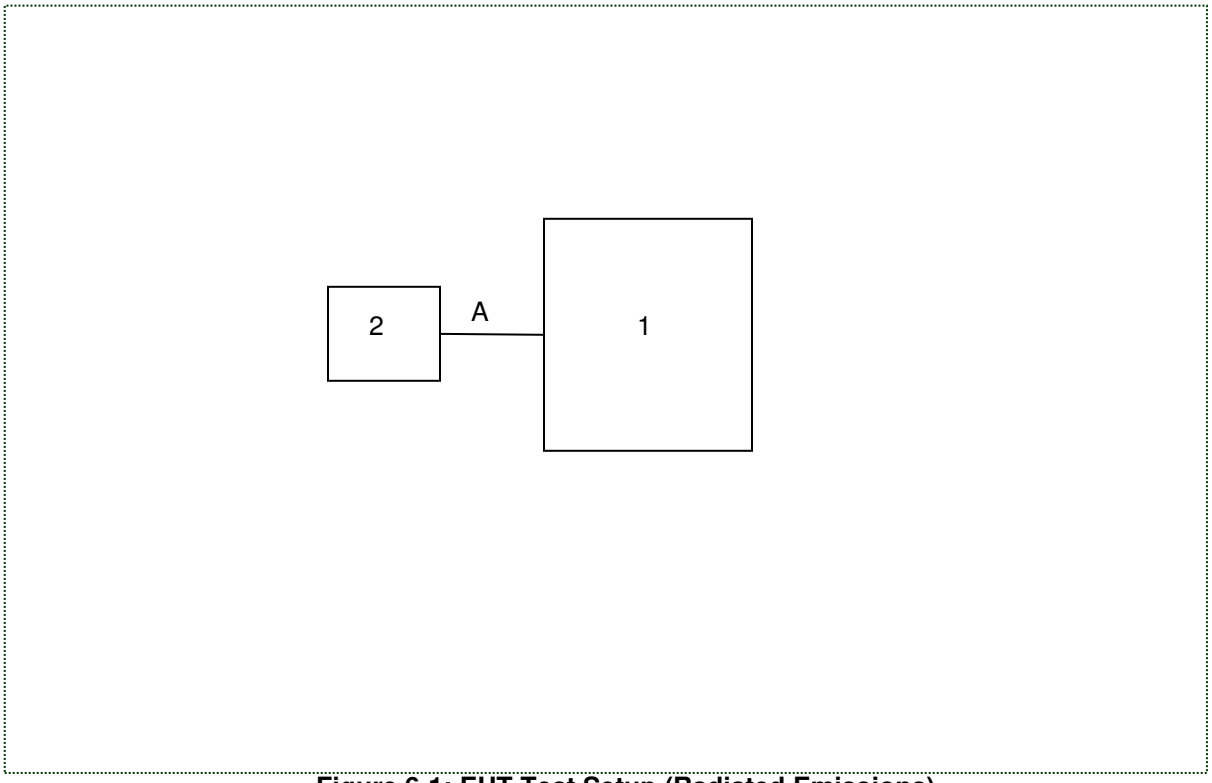


Figure 6-1: EUT Test Setup (Radiated Emissions)

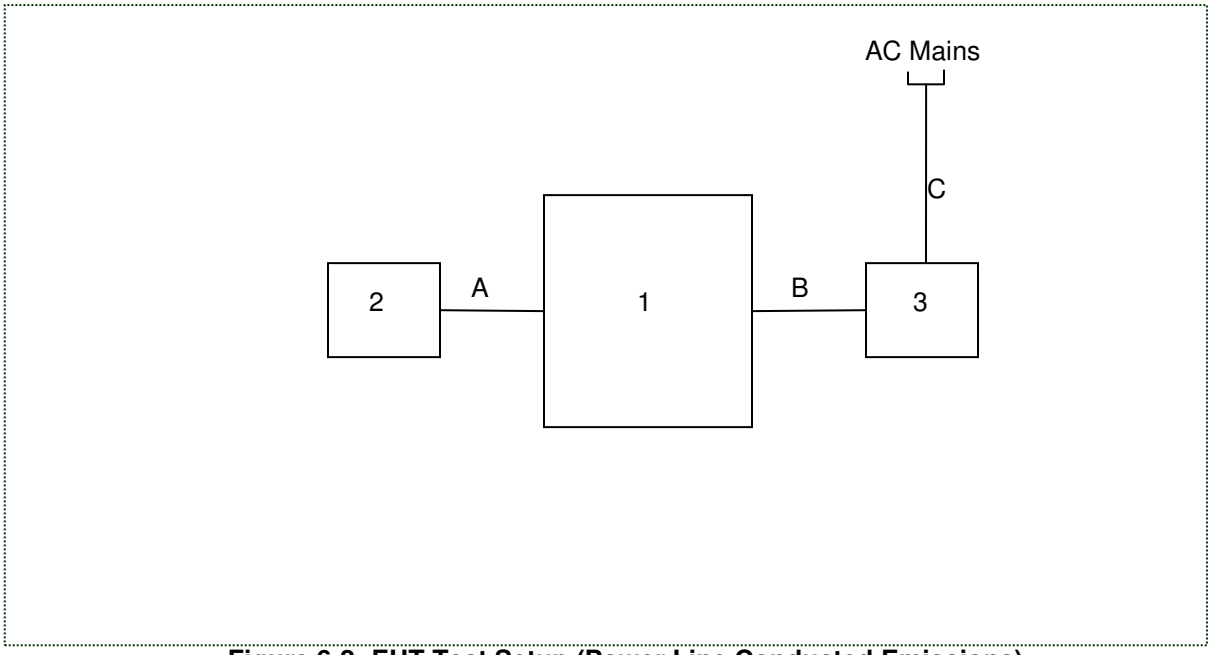


Figure 6-2: EUT Test Setup (Power Line Conducted Emissions)

7 SUMMARY OF TESTS

Along with the tabular data shown below, plots were taken of all signals deemed important enough to document.

7.1 Antenna Requirement – FCC: Section 15.203

The Si500 model HK2062A uses an internal surface mount BT/WLAN antenna which is soldered directly to the PCB. The antenna is not removable and the port is not accessible externally. The EUT meets the requirements of FCC Section 15.203.

7.2 6 dB Bandwidth - FCC: Section 15.247(a)(2) IC: RSS-247 5.5(1); 99% Bandwidth IC: RSS-GEN 6.6

7.2.1 Measurement Procedure

The 6dB bandwidth was measured in accordance with ANSI C63.10:2013 Section 11.8 DTS Bandwidth Option 2. The RBW of the spectrum analyzer was set to 100 kHz and VBW 300 kHz. Span was set large enough to capture the emissions and >> RBW.

The 99% occupied bandwidth was measured with the spectrum analyzer span set to fully display the emission. The RBW was set to 1% to 5% of the approximated bandwidth. The occupied 99% bandwidth was measured by using 99% bandwidth equipment function of the spectrum analyzer.

7.2.2 Measurement Results

Results are shown below.

Table 7.2.2-1: 6dB / 99% Bandwidth

Frequency [MHz]	6dB Bandwidth [kHz]	99% Bandwidth (kHz)
2402	684.00	1060.00
2440	678.00	1060.00
2480	678.00	1060.00

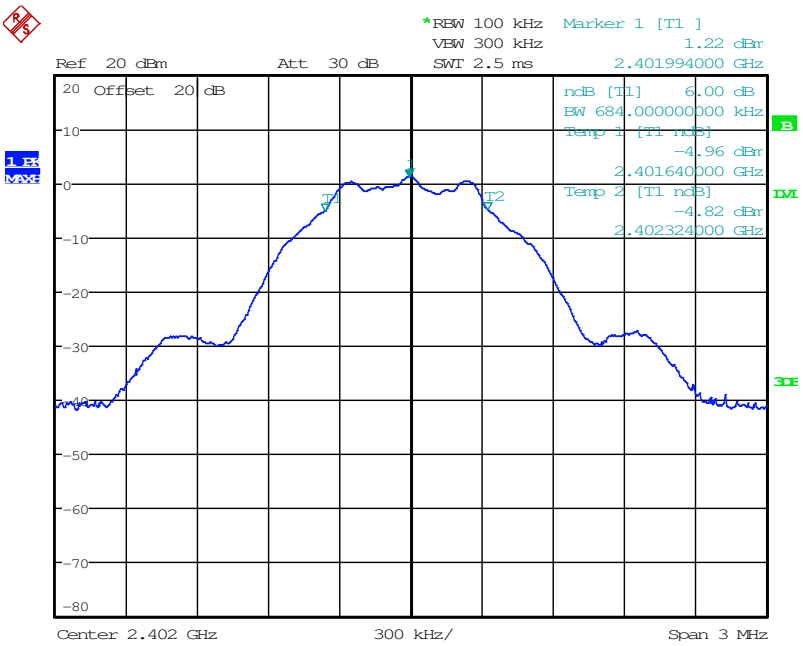


Figure 7.2.2-1: 6dB BW - Low Channel

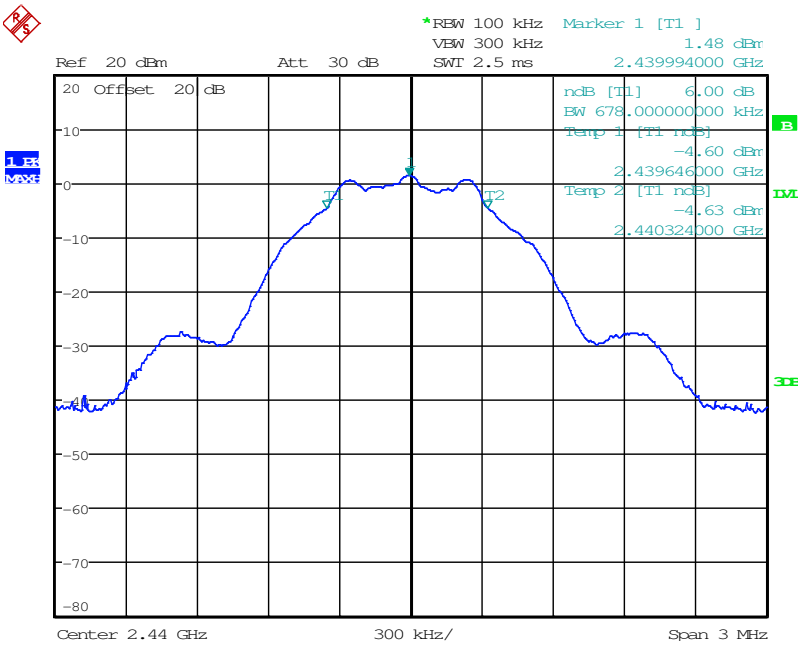
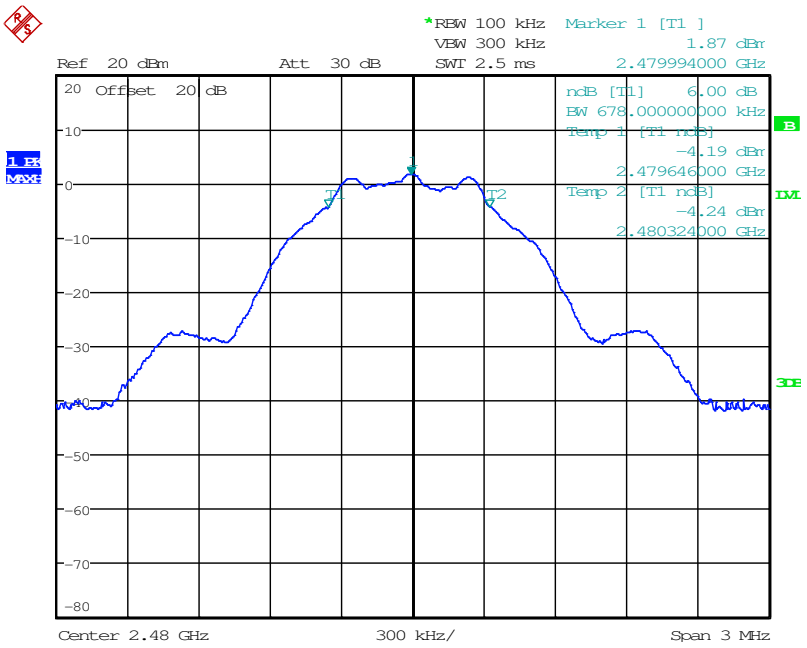
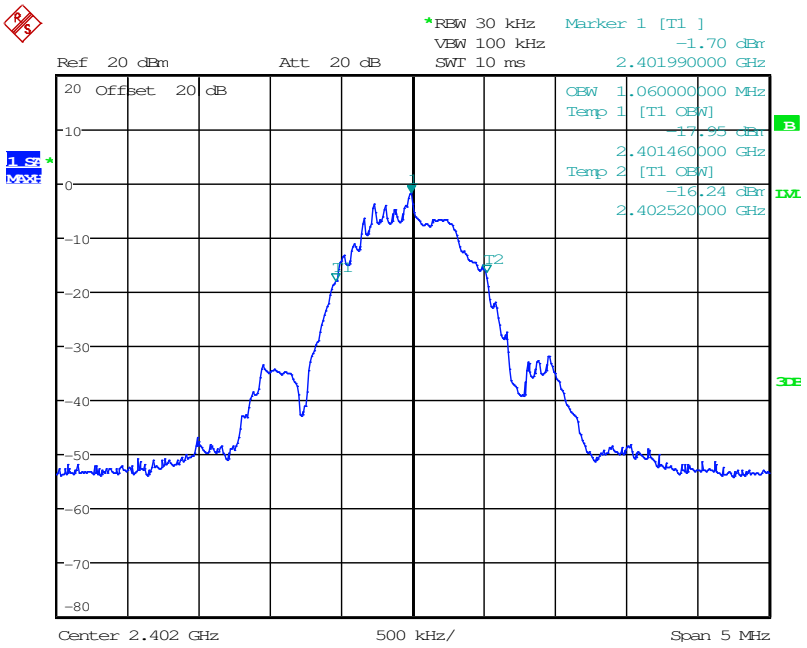


Figure 7.2.2-2: 6dB BW - Middle Channel



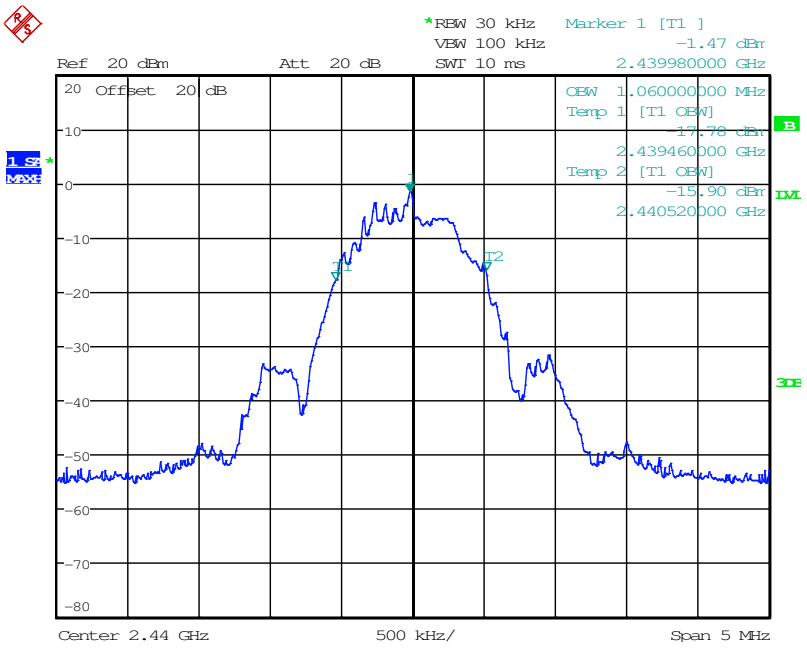
Date: 10.DEC.2015 21:45:12

Figure 7.2.2-3: 6dB BW - High Channel



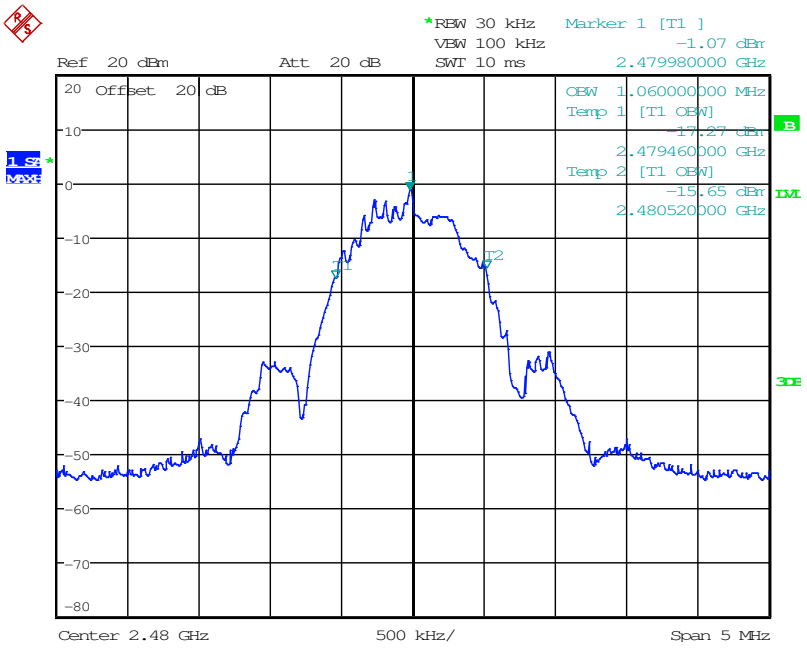
Date: 9.DEC.2015 18:26:51

Figure 7.2.2-4: 99% OBW - Low Channel



Date: 9.DEC.2015 18:37:30

Figure 7.2.2-5: 99% OBW - Middle Channel



Date: 9.DEC.2015 18:40:43

Figure 7.2.2-6: 99% OBW - High Channel

7.3 Peak Output Power - FCC Section 15.247(b)(3) IC: RSS-247 5.4(4)

7.3.1 Measurement Procedure (Conducted Method)

The fundamental emission output power was measured in accordance with ANSI C63.10:2013 Section 11.9.1.1 RBW ≥ DTS bandwidth. The RF output of the equipment under test was directly connected to the input of the spectrum analyzer through suitable attenuation.

7.3.2 Measurement Results

Results are shown below.

Table 7.3.2-1: RF Output Power

Frequency [MHz]	Level [dBm]
2402	1.69
2440	1.96
2480	2.33

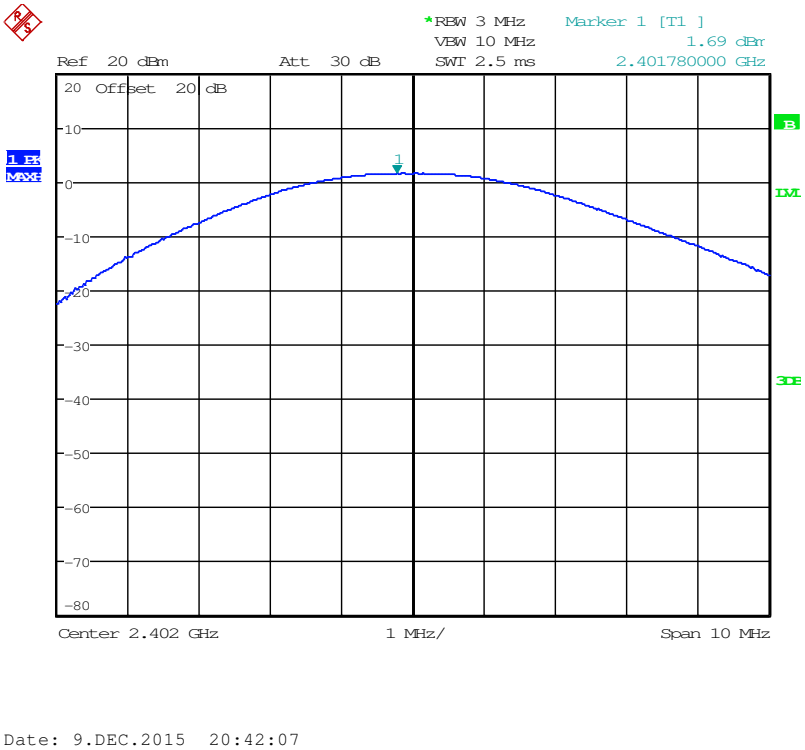


Figure 7.3.2-1: RF Output Power - Low Channel

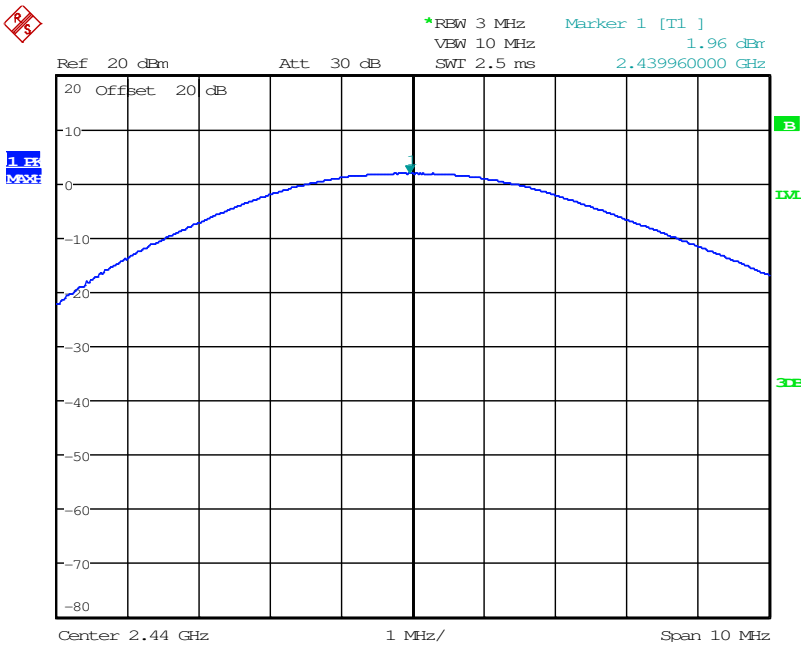


Figure 7.3.2-2: RF Output Power - Middle Channel

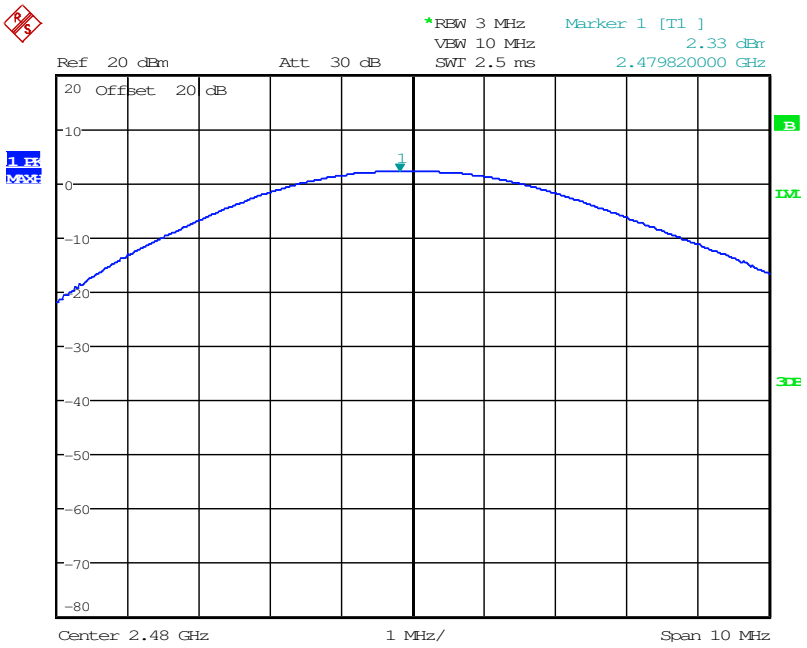


Figure 7.3.2-3: RF Output Power - High Channel

7.4 Band-Edge Compliance and Spurious Emissions-FCC 15.247(d) IC: RSS-247 5.5

7.4.1 Band-Edge Compliance of RF Conducted Emissions

7.4.1.1 Measurement Procedure

The RF output port of the EUT was directly connected to the input of the spectrum analyzer via suitable attenuation. The EUT was investigated at the lowest and highest channel available to determine band-edge compliance. For each measurement the spectrum analyzer's RBW was set to 100 kHz, and the VBW was set to 300 kHz.

7.4.1.2 Measurement Results

Results are shown below.

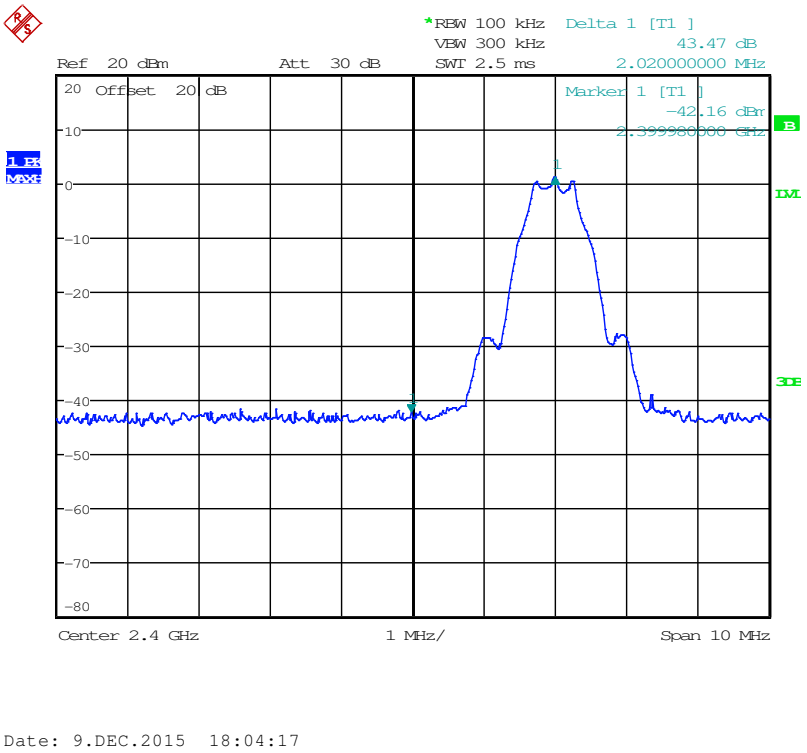


Figure 7.4.1.2-1: Lower Band-edge

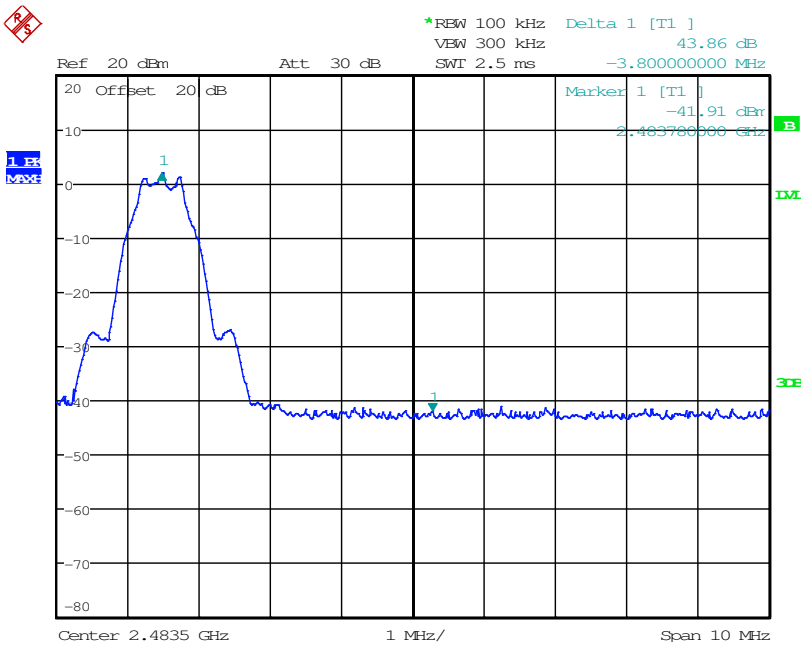


Figure 7.4.1.2-2: Upper Band-edge

7.4.2 RF Conducted Spurious Emissions

7.4.2.1 Measurement Procedure

The RF Conducted Spurious Emissions were measured in accordance with ANSI C63.10:2013 Section 11.11 Emissions in non-restricted frequency bands. The RF output port of the equipment under test was directly connected to the input of the spectrum analyzer. The EUT was investigated for conducted spurious emissions from 30MHz to 26 GHz, 10 times the highest fundamental frequency. Measurements were made at the low, center and high channels of the EUT. For each measurement, the spectrum analyzer's RBW was set to 100 kHz and the VBW was set to 300 kHz. The peak Max Hold function of the analyzer was utilized. The reference level was determined by measuring the Peak PSD level in any 100 kHz bandwidth within the DTS channel bandwidth.

7.4.2.2 Measurement Results

Results are shown below.

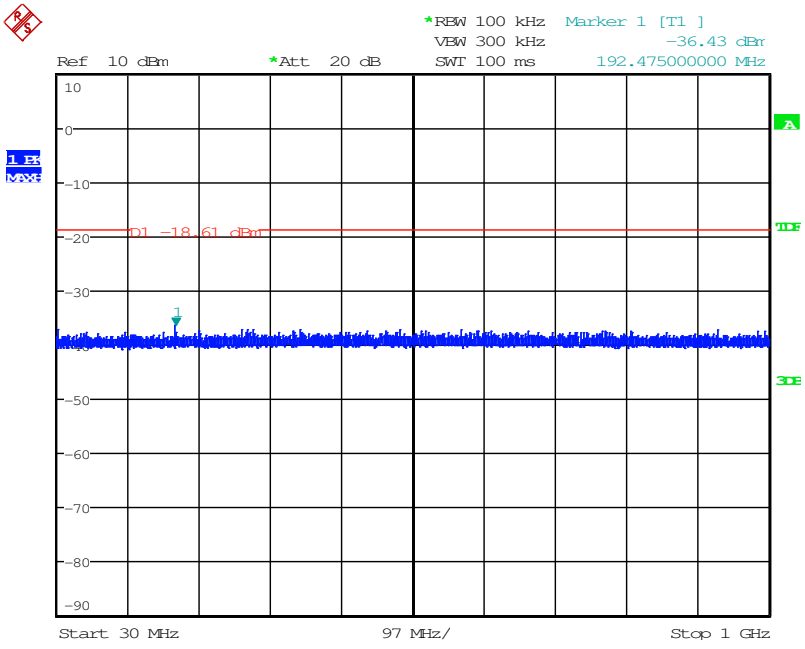


Figure 7.4.2.2-1: 30 MHz – 1 GHz – Low Channel

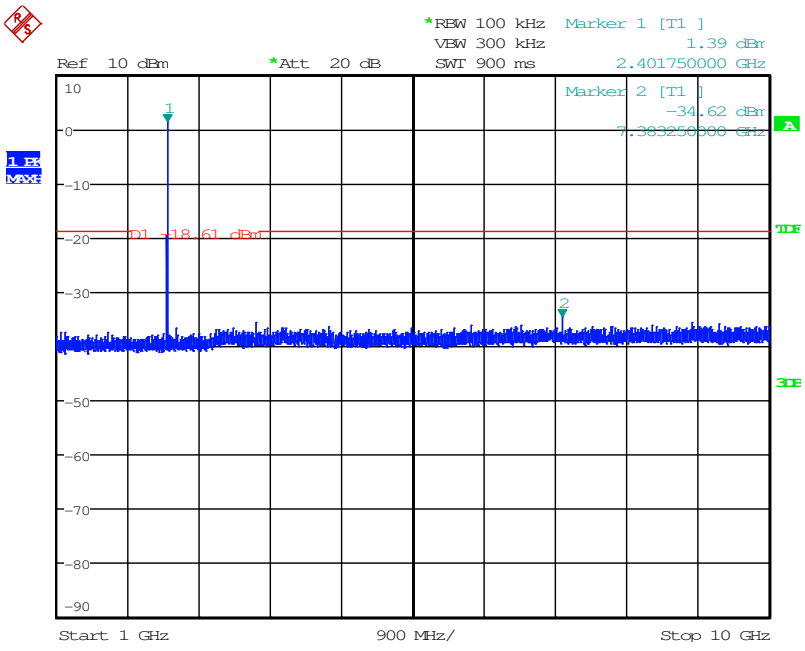


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Figure 7.4.2.2-2: 1 GHz –10 GHz – Low Channel

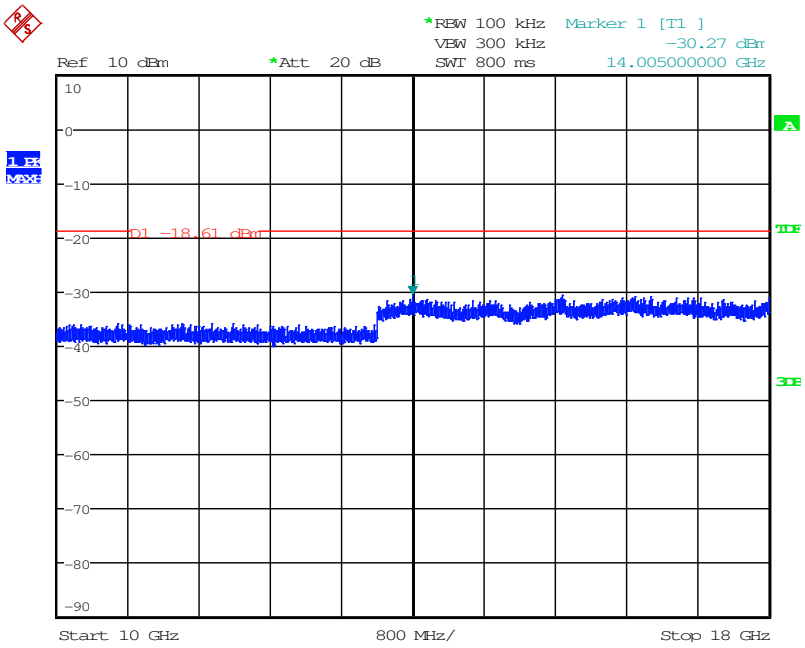

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Figure 7.4.2.2-3: 10 GHz –18 GHz – Low Channel

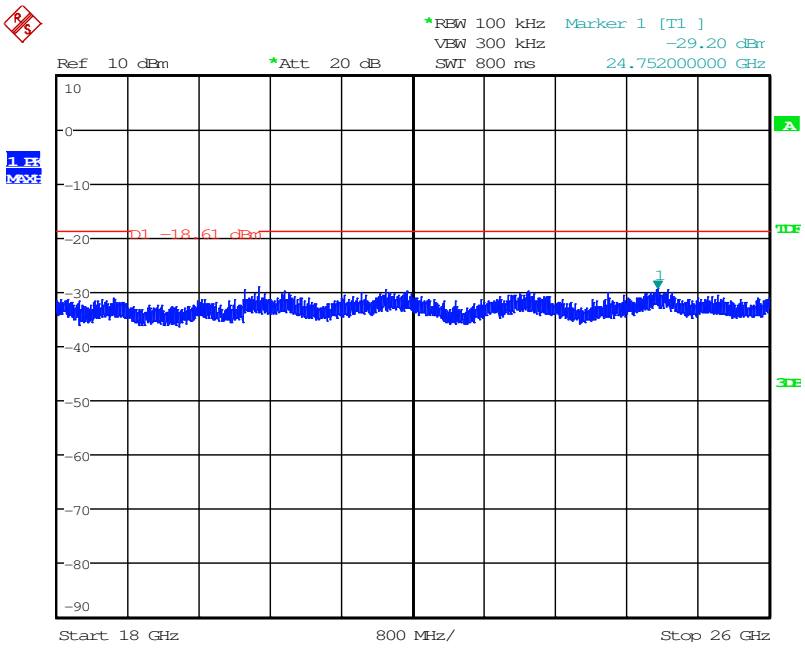

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Figure 7.4.2.2-4: 18 GHz – 26 GHz – Low Channel

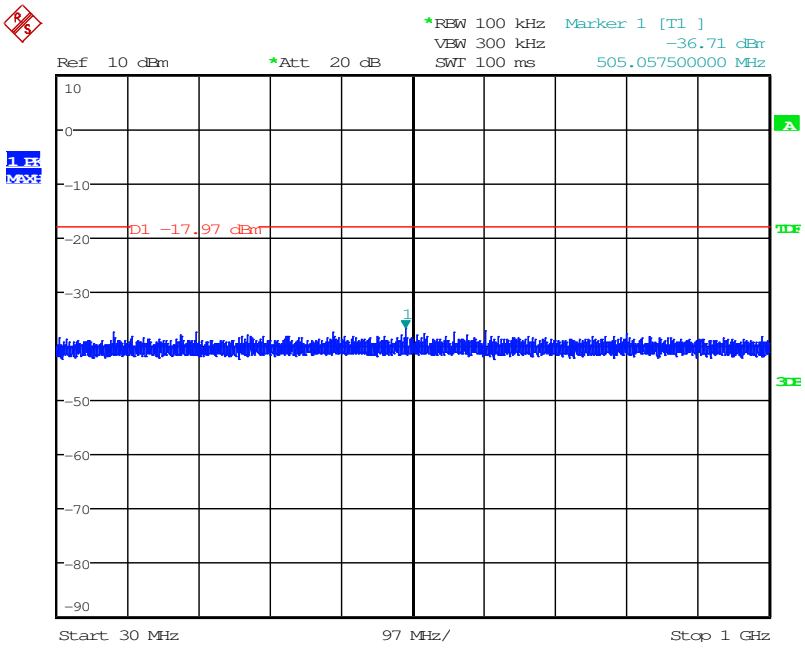

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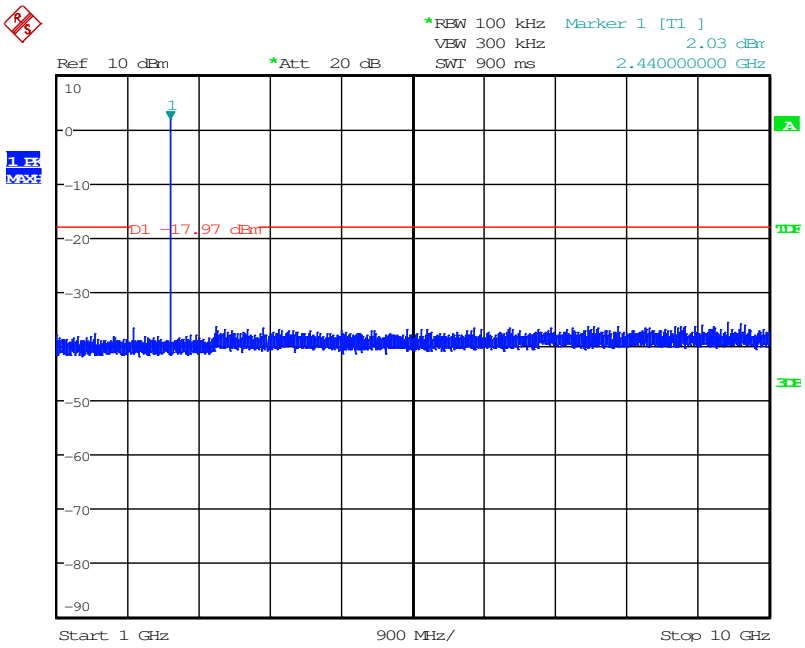
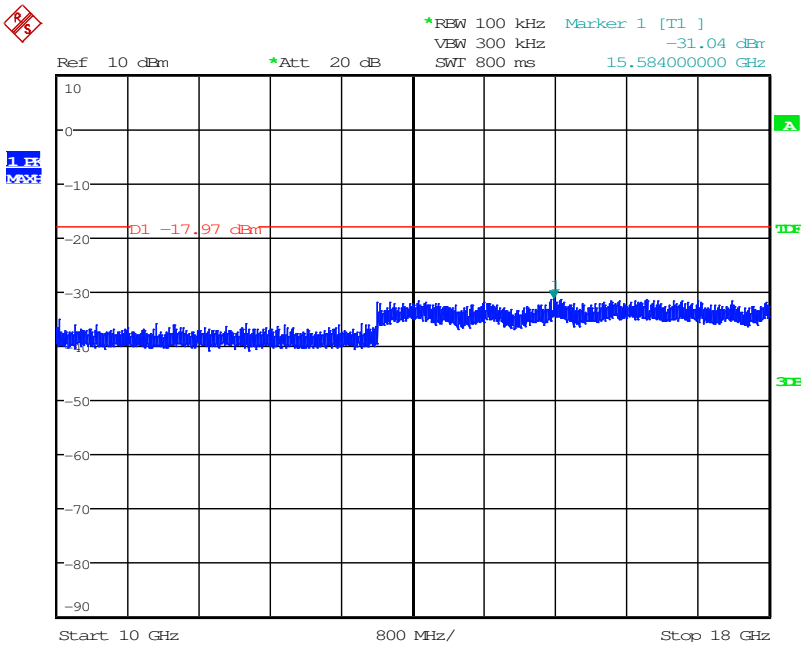
Figure 7.4.2.2-5: 30 MHz – 1 GHz –Middle Channel



Date: 17.DEC.2015 15:09:17

Figure 7.4.2.2-6: 1 GHz –10 GHz – Middle Channel



Date: 17.DEC.2015 15:10:38

Figure 7.4.2.2-7: 10 GHz –18 GHz – Middle Channel

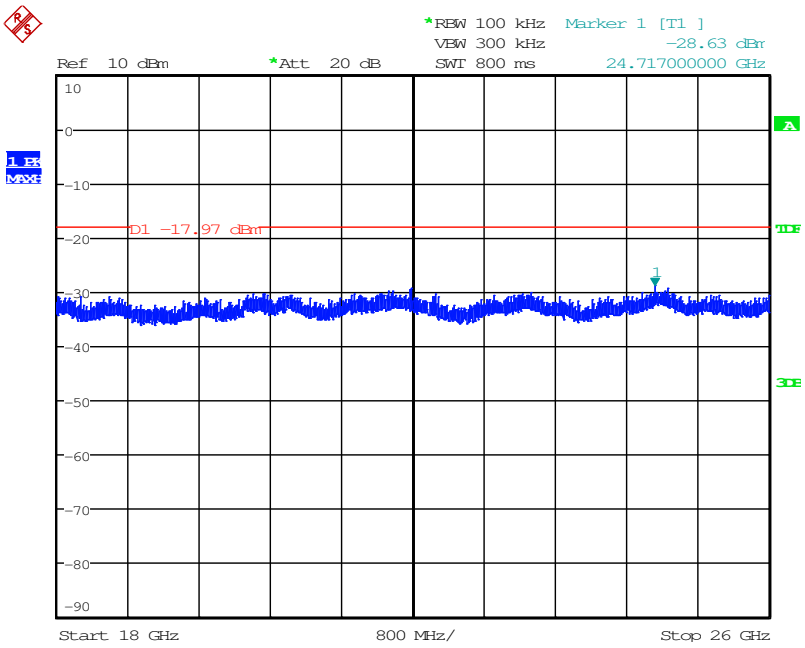


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Figure 7.4.2.2-8: 18 GHz – 26 GHz – Middle Channel

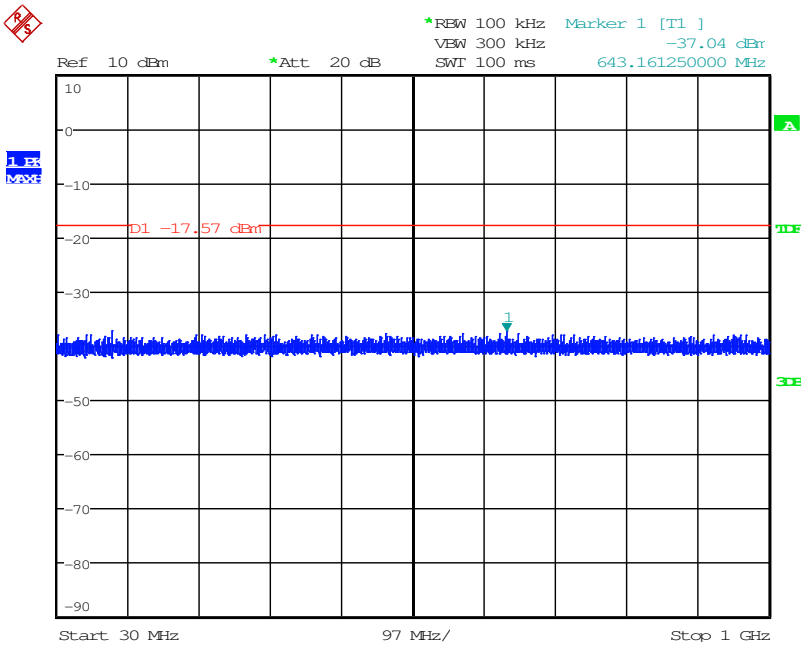

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Figure 7.4.2.2-9: 30 MHz – 1 GHz – High Channel

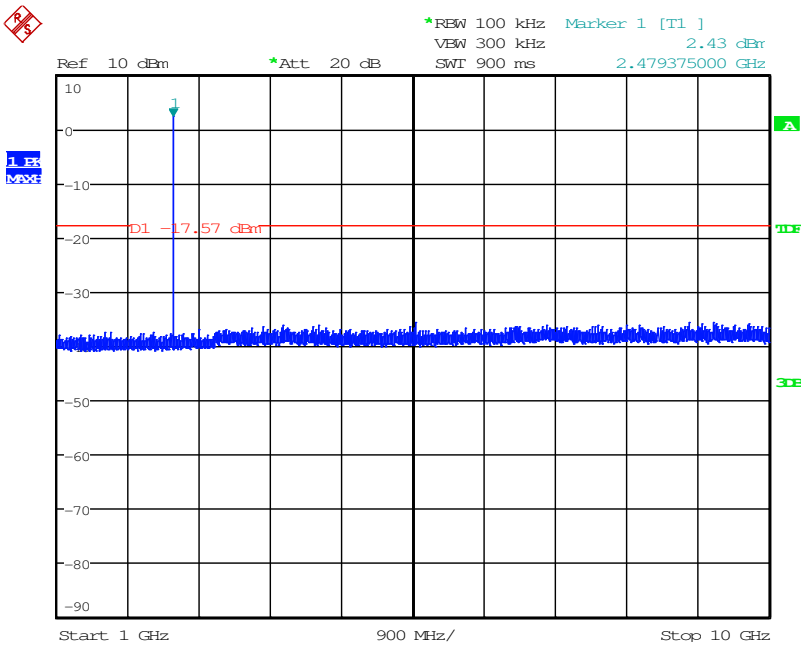

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Figure 7.4.2.2-10: 1 GHz –10 GHz –High Channel

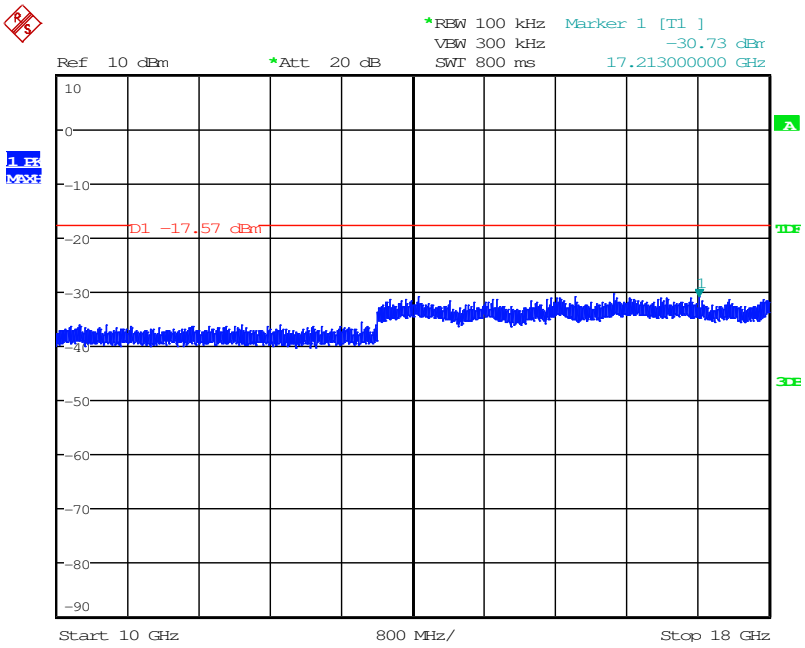

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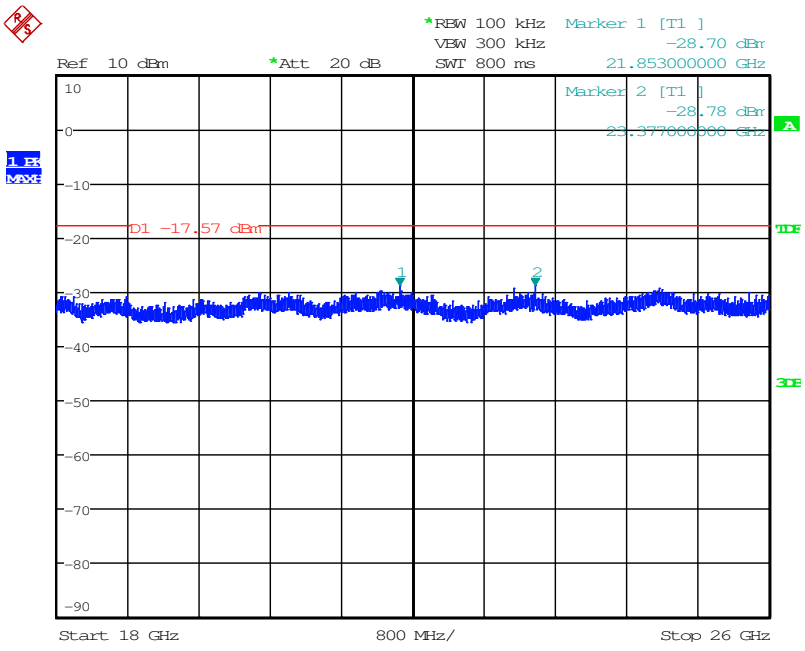
Figure 7.4.2.2-11: 10 GHz – 18 GHz –High Channel



Date: 17.DEC.2015 15:02:58

Figure 7.4.2.2-12: 18 GHz – 26 GHz –High Channel

7.4.3 Radiated Spurious Emissions into Restricted Frequency Bands - FCC 15.205, 15.209; IC: RSS-Gen 8.9, 8.10

7.4.3.1 Measurement Procedure

Radiated emissions tests were made over the frequency range of 9 kHz to 26 GHz, 10 times the highest fundamental frequency. Each emission found to be in a restricted band as defined by section 15.205, including any emission at the operational band-edge, was compared to the radiated emission limits as defined in section 15.209.

For measurements below 30 MHz, the receive antenna height was set to 1m and the EUT was rotated through 360 degrees. The resolution bandwidth was set to 200 Hz below 150 kHz and to 9 kHz above 150 kHz.

The EUT was rotated through 360° and the receive antenna height was varied from 1m to 4m so that the maximum radiated emissions level would be detected. For frequencies below 1000MHz, quasi-peak measurements were made using a resolution bandwidth RBW of 120 kHz and a video bandwidth VBW of 300 kHz. For frequencies above 1000 MHz, peak measurements are made with RBW of 1 MHz and VBW of 3 MHz. Average measurements are performed in the linear scale using VBW of 30 Hz over a 5 second sweep.

7.4.3.2 Measurement Results

Radiated band-edge and spurious emissions found in the restricted frequency bands of 9 kHz to 26 GHz are reported in the tables below.

Table 7.4.3.2-1: Radiated Spurious Emissions Tabulated Data

Frequency (MHz)	Level (dBuV)		Antenna Polarity	Correction Factors	Corrected Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)	
	pk	Qpk/Avg	(H/V)	(dB)	pk	Qpk/Avg	pk	Qpk/Avg	pk	Qpk/Avg
Low Channel = 2402 MHz										
4804	38.42	25.66	H	8.53	46.95	34.19	74.0	54.0	27.0	19.8
4804	38.49	25.69	V	8.53	47.02	34.22	74.0	54.0	27.0	19.8
Middle Channel = 2440 MHz										
4880	38.40	25.09	H	8.80	47.20	33.89	74.0	54.0	26.8	20.1
4880	38.13	25.07	V	8.80	46.93	33.87	74.0	54.0	27.1	20.1
High Channel = 2480 MHz										
2483.5	52.19	42.34	H	0.79	52.98	43.13	74.0	54.0	21.0	10.9
2483.5	50.88	39.41	V	0.79	51.67	40.20	74.0	54.0	22.3	13.8
4960	38.89	25.79	H	9.09	47.98	34.88	74.0	54.0	26.0	19.1
4960	38.13	25.38	V	9.09	47.22	34.47	74.0	54.0	26.8	19.5

Note: All emissions above 4.96 GHz were attenuated below the limits and the noise floor of the measurement equipment.

7.4.3.3 Sample Calculation:

$R_C = R_U + CF_T$

Where:

CF_T	=	Total Correction Factor (AF+CA+AG)-DC (Average Measurements Only)
R_U	=	Uncorrected Reading
R_C	=	Corrected Level
AF	=	Antenna Factor
CA	=	Cable Attenuation
AG	=	Amplifier Gain
DC	=	Duty Cycle Correction Factor

Example Calculation: Peak
Corrected Level: 38.42+ 8.53 = 46.95 dBµV/m
Margin: 74 dBµV/m – 46.95 dBµV/m = 27.0 dB

Example Calculation: Average
Corrected Level: 25.66 + 8.53 = 34.19 dBµV/m
Margin: 54 dBµV/m – 34.19 dBµV/m = 19.8 dB

7.5 Power Spectral Density - FCC Section 15.247(e) IC: RSS-247 5.2(2)

7.5.1 PSD Measurement Procedure (Conducted Method)

The power spectral density was measured in accordance with ANSI C63.10:2013 Section 10.2 Method PKPSD (peak PSD). The RF output port of the EUT was directly connected to the input of the spectrum analyzer. Offset values were input for cable and external attenuation. The spectrum analyzer RBW was set to 3 kHz and VBW 10 kHz. Span was adjusted to 1.5 times the 6 dB bandwidth and the sweep time was set to auto.

7.5.2 Measurement Results

Results are shown below.

Table 7.5.2-1: Power Spectral Density

Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
2402	-13.96	8	21.96
2440	-13.64	8	21.64
2480	-13.31	8	21.31

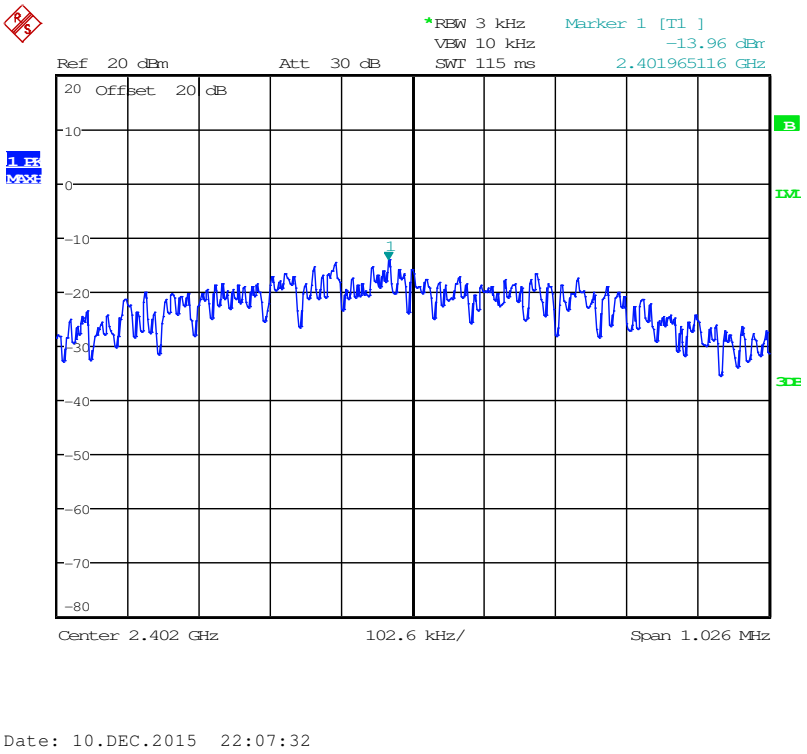


Figure 7.5.2-1: Power Spectral Density - Low Channel

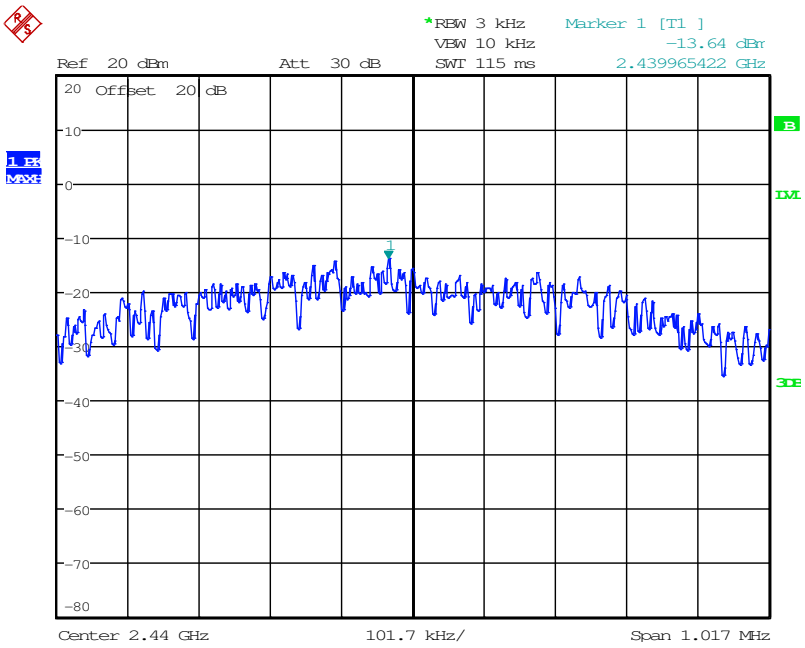


Figure 7.5.2-2: Power Spectral Density - Middle Channel

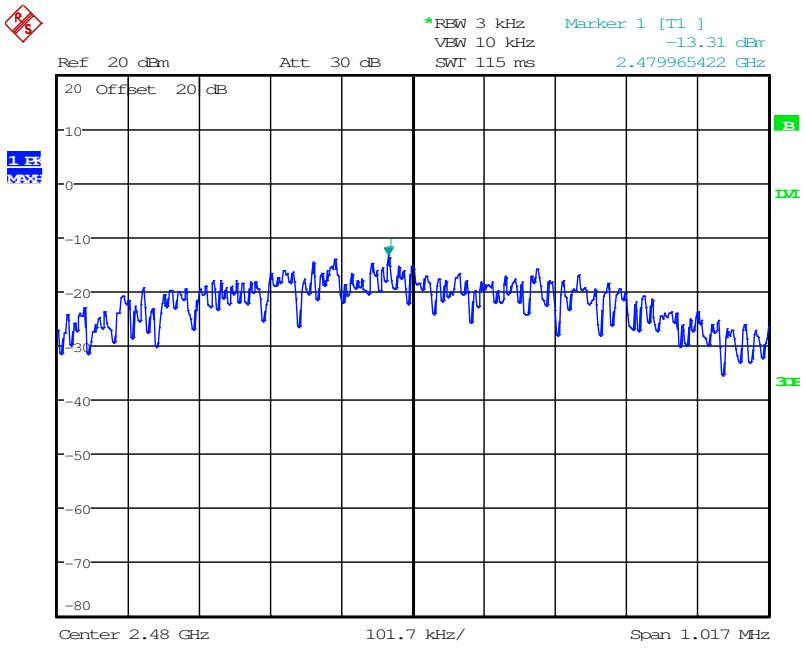


Figure 7.5.2-3: Power Spectral Density – High Channel

7.6 Power Line Conducted Emissions – FCC: Section 15.207 IC: RSS-Gen 8.8

7.6.1 Measurement Procedure

ANSI C63.4 sections 6 and 7 were the guiding documents for this evaluation. Conducted emissions were performed from 150 kHz to 30 MHz with the spectrum analyzer's resolution bandwidth set to 9 kHz and the video bandwidth set to 30 kHz. The calculation for the conducted emissions is as follows:

Corrected Reading = Analyzer Reading + LISN Loss + Cable Loss
Margin = Applicable Limit - Corrected Reading

7.6.2 Measurement Results

Results are shown below.

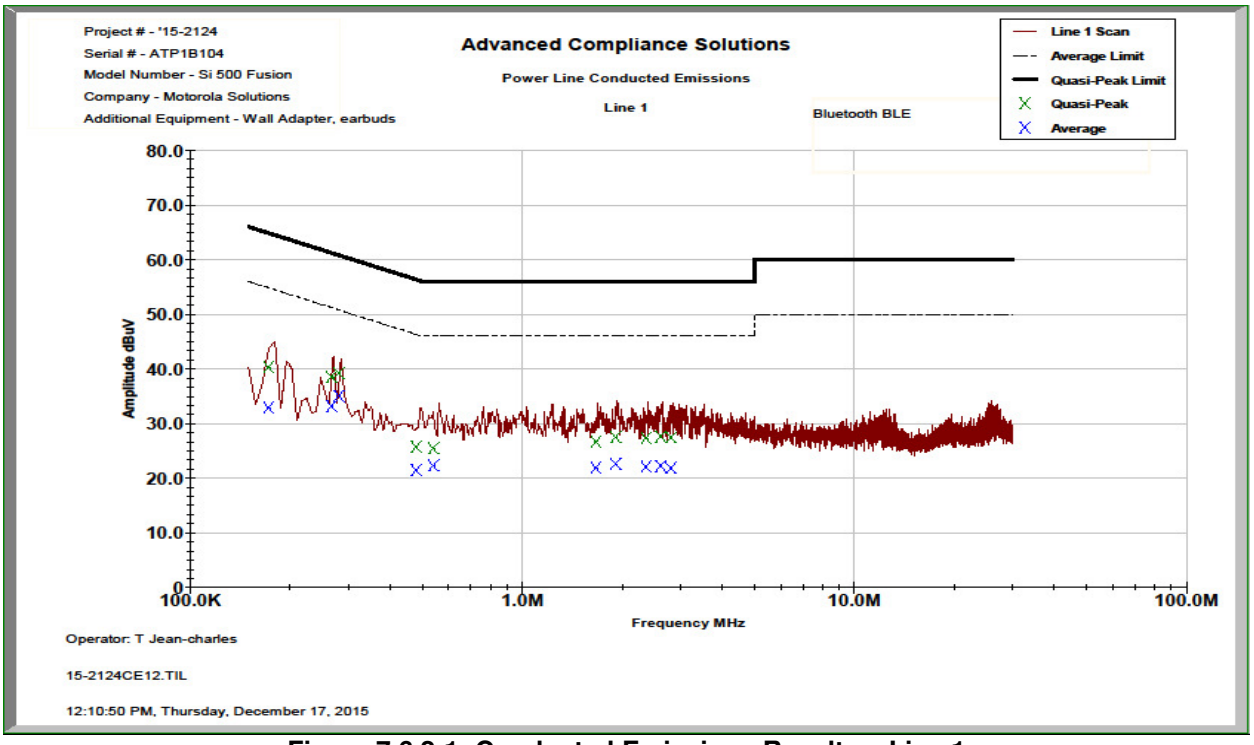


Figure 7.6.2-1: Conducted Emissions Results – Line 1

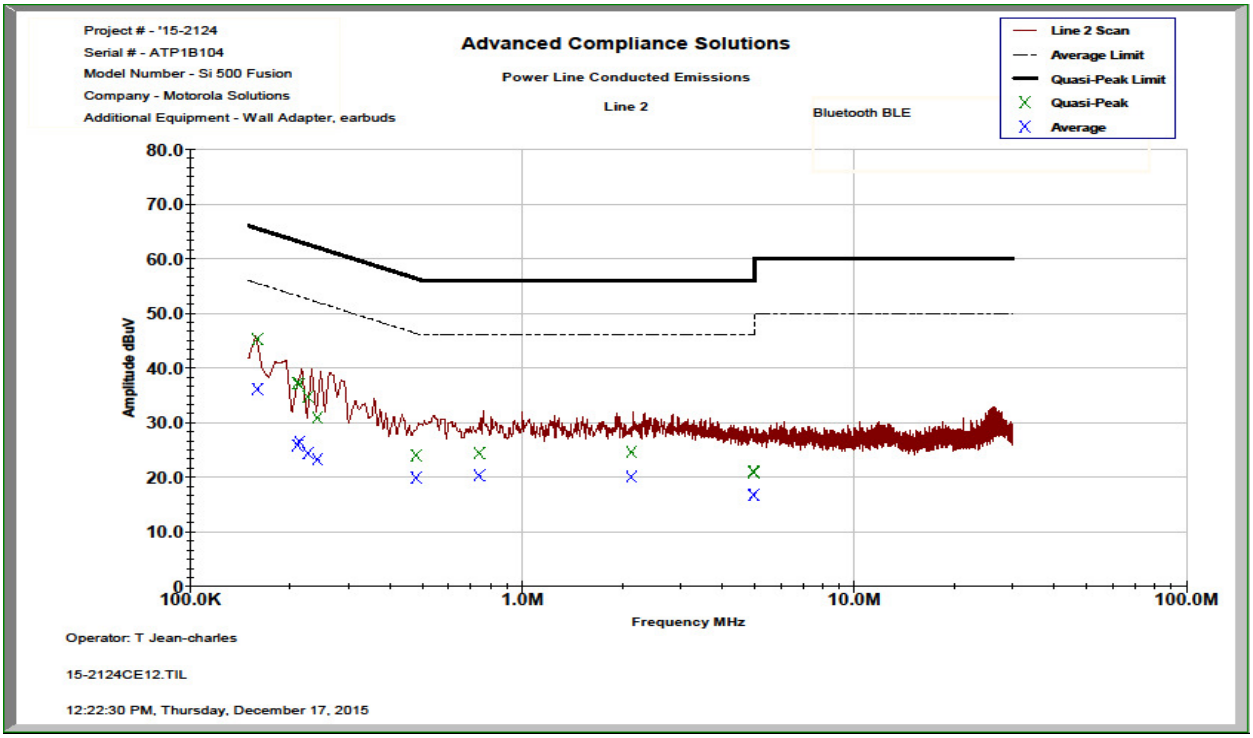


Figure 7.6.2-2: Conducted Emissions Results – Line 2

Table 7.6.2-1: Conducted EMI Results

☒ Line 1 ☒ Line 2 ☐ Line 3
☐ Line 4
☐ To Ground ☒ Floating
☐ Telecom Port _____
☒ dBµV ☐ dBµA

Plot Number: 15-2124CE12
Power Supply Description: 5 VDC

Frequency (MHz)	Uncorrected Reading		Total Correction Factor (dB)	Corrected Level		Limit		Margin (dB)	
	Quasi-Peak	Average		Quasi-Peak	Average	Quasi-Peak	Average	Quasi-Peak	Average
Line 1									
0.1724	30.128	22.703	10.20	40.33	32.91	64.84	54.84	24.5	21.9
0.2671	28.34	22.981	10.20	38.54	33.18	61.21	51.21	22.7	18.0
0.280374	29.022	24.913	10.20	39.22	35.11	60.80	50.80	21.6	15.7
0.48	15.51	11.258	10.21	25.72	21.47	56.34	46.34	30.6	24.9
0.540438	15.29	12.101	10.20	25.49	22.30	56.00	46.00	30.5	23.7
1.66727	16.446	11.675	10.20	26.65	21.88	56.00	46.00	29.4	24.1
1.91354	17.248	12.372	10.20	27.45	22.58	56.00	46.00	28.5	23.4
2.36129	17.042	11.844	10.28	27.32	22.12	56.00	46.00	28.7	23.9
2.61501	17.338	11.951	10.28	27.61	22.23	56.00	46.00	28.4	23.8
2.80904	17.113	11.536	10.28	27.39	21.81	56.00	46.00	28.6	24.2
Line 2									
0.159415	35.045	25.904	10.23	45.28	36.14	65.49	55.49	20.2	19.4
0.210563	26.983	15.653	10.22	37.20	25.87	63.18	53.18	26.0	27.3
0.213787	26.844	16.291	10.22	37.06	26.51	63.06	53.06	26.0	26.6
0.227013	24.555	14.181	10.22	34.77	24.40	62.56	52.56	27.8	28.2
0.241937	20.71	13.052	10.22	30.93	23.27	62.03	52.03	31.1	28.8
0.479999	13.814	9.674	10.21	24.02	19.88	56.34	46.34	32.3	26.5
0.741925	14.173	10.079	10.23	24.40	20.31	56.00	46.00	31.6	25.7
2.12995	14.281	9.755	10.32	24.60	20.07	56.00	46.00	31.4	25.9
4.98	10.603	6.298	10.44	21.05	16.74	56.00	46.00	35.0	29.3
4.9801	10.393	6.193	10.44	20.84	16.64	56.00	46.00	35.2	29.4

8 CONCLUSION

In the opinion of ACS, Inc., the model HK2062A manufactured by Motorola Solutions, Inc. meets the requirements of FCC Part 15 subpart C and Industry Canada's Radio Standards Specification RSS-247 for the test procedures documented in the test report.

END REPORT