Excellence in Compliance Testing

Certification Test Report

FCC ID: AZ489FT7061
IC: 109U-89FT7061

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

ACS Report Number: 15-2019.W04.1B

Applicant: Motorola Solutions

Model(s): H91TGD9PW7AN

Test Begin Date: **March 4, 2016**
Test End Date: **March 21, 2016**

Report Issue Date: March 29, 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.

This report contains 34 pages

TABLE OF CONTENTS

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 for a Class 2 Permissive Change (C2PC).

The purpose of the permissive change is to document compliance of the Bluetooth Low Energy (BLE) mode of operation. The BLE mode of operation is achieved via software upgrade. There are no power or hardware changes on the product.

1.2 Applicant Information

Motorola Solutions
8000 West Sunrise Blvd
Fort Lauderdale, FL 33322

1.3 Product Description

The EUT is a P25 Portable Public Safety Radio. The EUT includes a transceiver which supports Bluetooth 2.1+EDR, Bluetooth Low Energy (BLE) and IEEE 802.11b/g/n modes of operation. The test report addresses the BLE radio which was enabled via software upgrade.

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:	PIFA, 2.58 dBi
Input Power:	7.4 VDC Lithium Ion Battery, 12 VDC Power Supply

Model Number: H91TGD9PW7AN

Test Sample Serial Number(s): 579TRH0266 (RF Conducted Emissions), 579TRH0121 (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, power line and RF conducted emissions for the Bluetooth Low Energy (BLE) radio.

The RF conducted measurements were performed on a sample with the back cover removed for access to the RF port.

The radiated emission evaluation was performed for the EUT set in multiple configurations. The unit was investigated stand-alone in three orthogonal orientations, when installed in a single unit charger, when placed on a multi-unit charger and when connected to a computer. The final measurements were executed using the worst case configuration which consists of the EUT standalone laid on one side for the band-edge emissions and the unit flat on the table top for the radiated spurious emissions.

The unit was also investigated for inter-modulation products between the co-located BLE and the land mobile radio operating in the VHF, UHF and 700-800 MHz bands. The measurements were performed for two antenna configurations of the land mobile radio. The first antenna covers the VHF, UHF, 7/800 MHz and GPS bands while the second antenna covers the 7/800 MHz and GPS band. All inter-modulation products between the co-located radios were found to be compliant to the FCC limits of 15.209 and Industry Canada RSS-GEN.

The EUT was evaluated for power line conducted emissions when installed in the single unit charger model NNTN8845A, and the multi-unit charger model NNTN8844A. In addition to the EUT, the multi-unit charger was loaded with additional radios which were evaluated on idle mode and with the Wi-Fi transceiver in the TX mode. The multi-unit charger led to the worst case emissions and the results are reported in this document.

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:

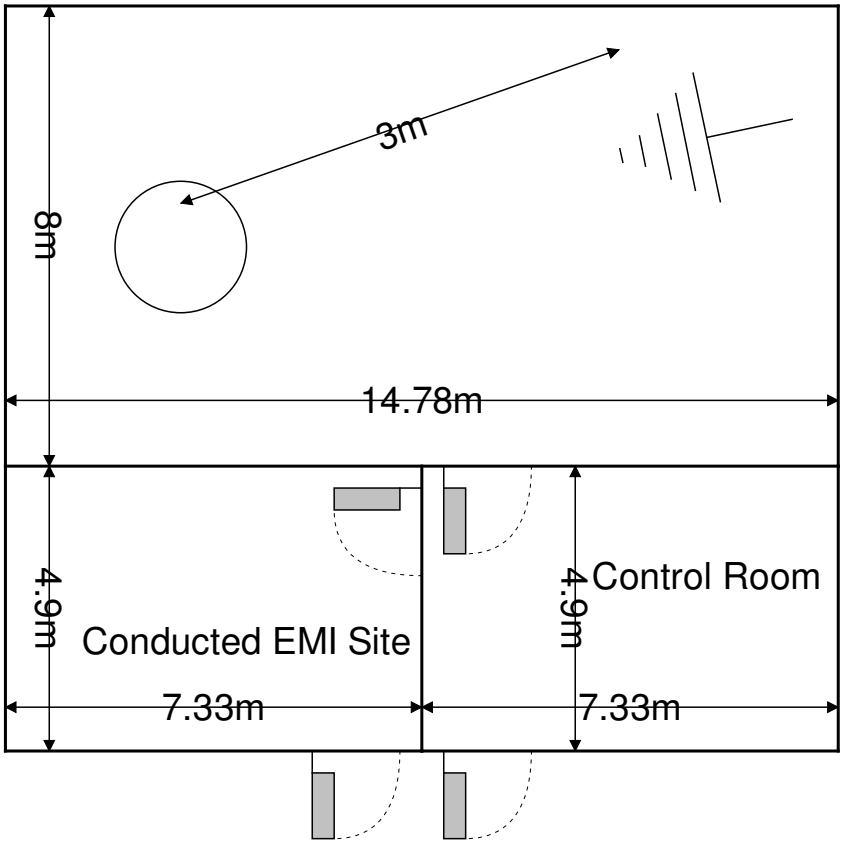


Figure 2.3.1-1: Semi-Anechoic Chamber Test Site

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:

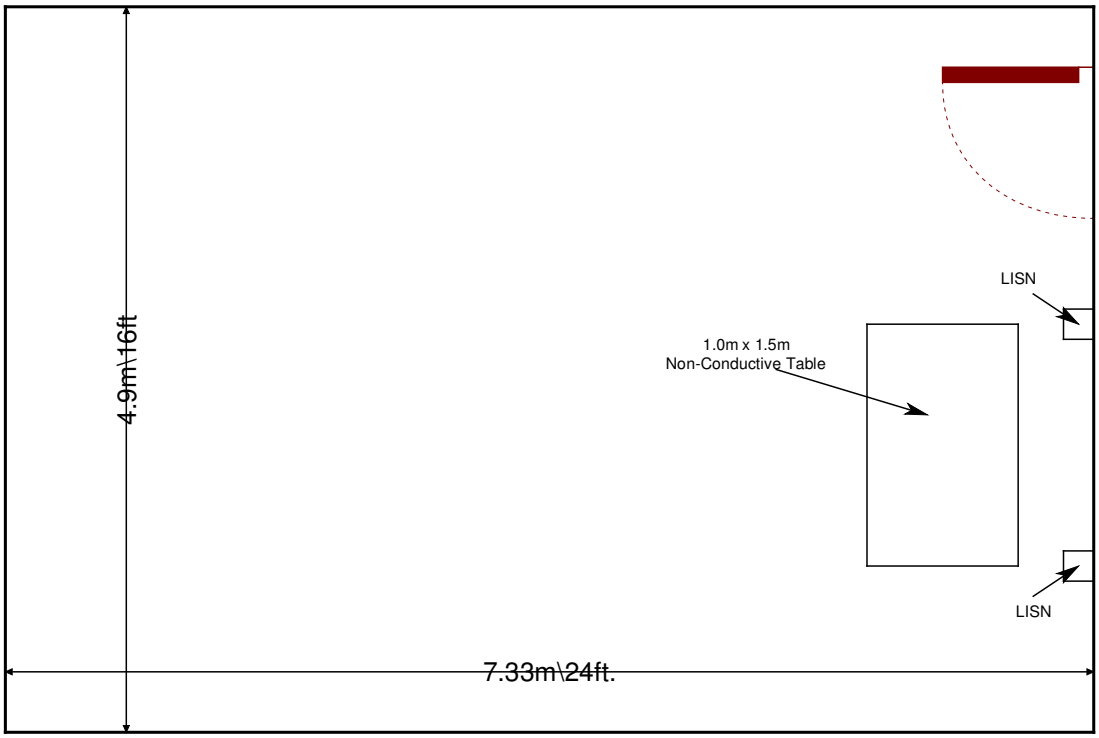


Figure 2.3.2-1: AC Mains Conducted EMI Site

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

Table 4-1: Test Equipment List

AssetID	Manufacturer	Model #	Equipment Type	Serial #	Last Calibration Date	Calibration Due Date
283	Rohde & Schwarz	FSP40	Spectrum Analyzers	1000033	7/1/2015	7/1/2016
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
2002	EMCO	3108	Antennas	2147	11/19/2015	11/19/2017
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
2089	Agilent Technologies, Inc.	83017A	Amplifiers	3123A00214	12/9/2015	12/9/2016
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

Note: NCR=No Calibration Required

5 SUPPORT EQUIPMENT

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

Item #	Type Device	Manufacturer	Model/Part #	Serial #
1	EUT	Motorola Solutions	H91TGD9PW7AN	579TRH0121

Note: The EUT was evaluated standalone without any support equipment

Table 5-2: EUT and Support Equipment (Power Line Conducted Emissions)

Item #	Type Device	Manufacturer	Model/Part #	Serial #
1	EUT	Motorola Solutions	H91TGD9PW7AN	579TRH0121
2	Multi-Unit Charger	Motorola Solutions	NNTN8844A	N/A
3	Two-Way Radio	Motorola Solutions	H91TGD9PW7AN	579TRT1004
4	Two-Way Radio	Motorola Solutions	H91TGD9PW7AN	579TRT0988
5	Two-Way Radio	Motorola Solutions	H91TGD9PW7AN	579TRT1000
6	Two-Way Radio	Motorola Solutions	H91TGD9PW7AN	579TRT0991
7	Two-Way Radio	Motorola Solutions	H91TGD9PW7AN	579TRT1018
8	6 x Resistive Loads	Motorola Solutions	N/A	N/A

Table 5-3: Cable Description (Power Line Conducted Emissions)

Cable #	Cable Type	Length	Shield	Termination
A	Power	2.2 m	No	Charger to AC Mains
B	6 x USB	0.2 m	Yes	Charger to Resistive Load

6 EQUIPMENT UNDER TEST SETUP BLOCK DIAGRAM

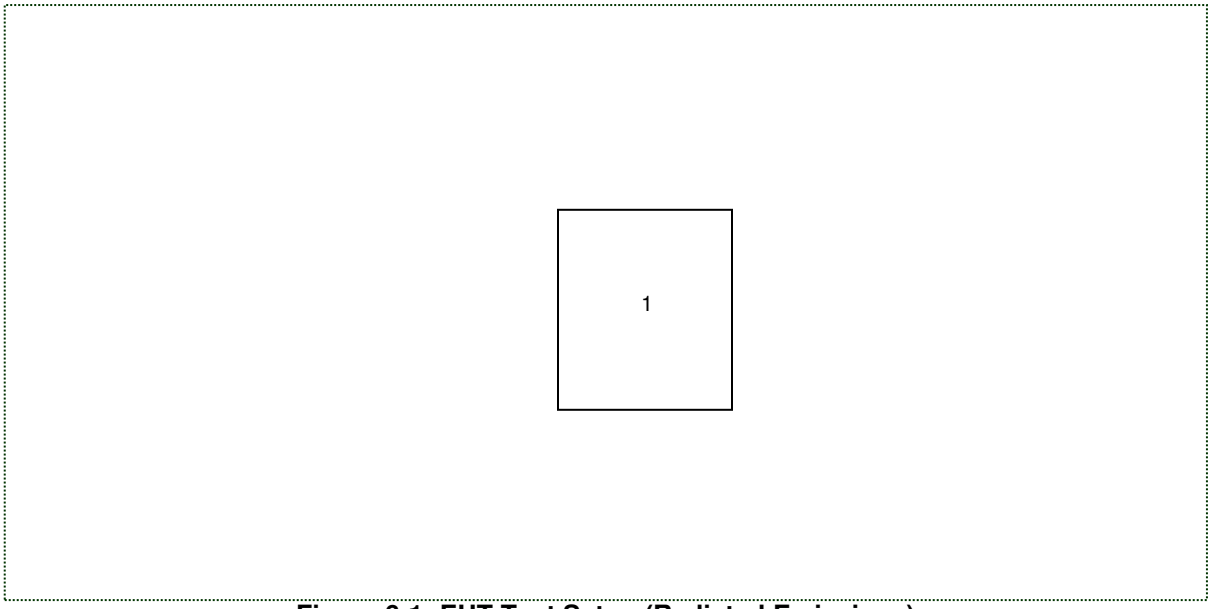


Figure 6-1: EUT Test Setup (Radiated Emissions)

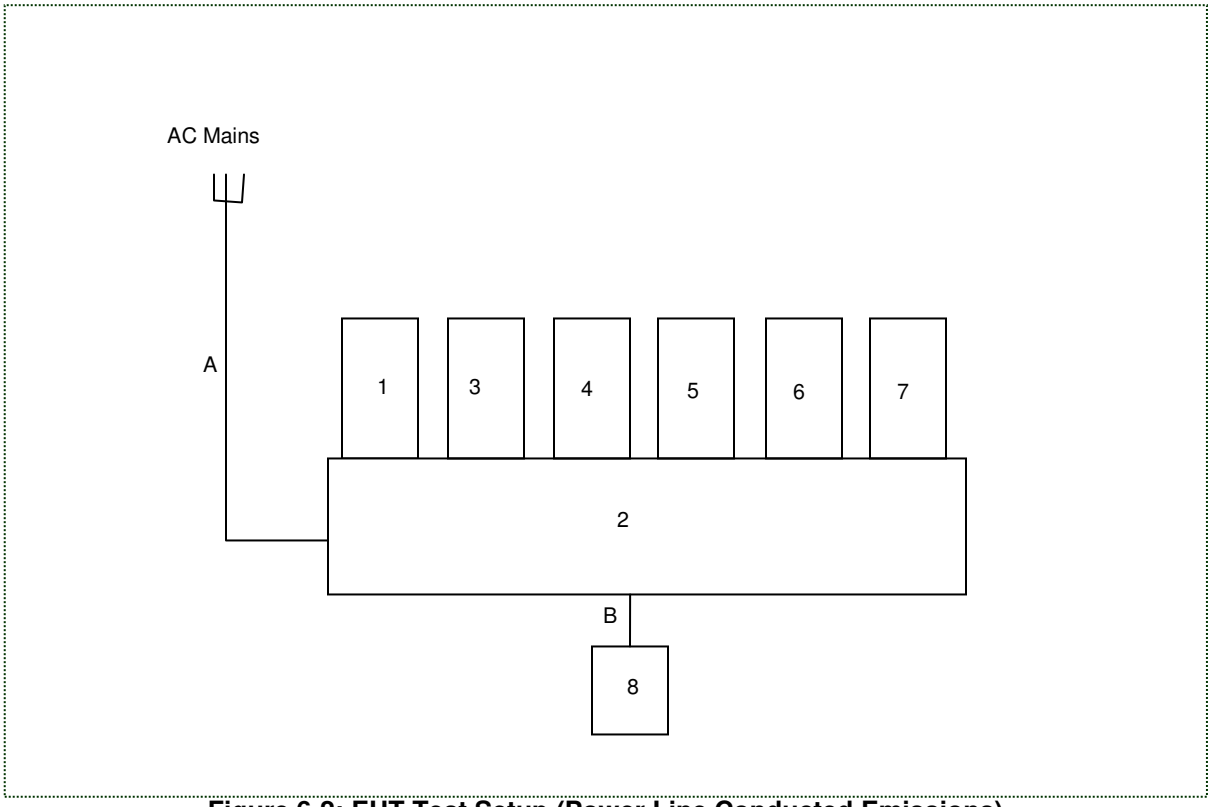


Figure 6-2: EUT Test Setup (Power Line Conducted Emissions)

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 EUT uses a 2.58 dBi internal PIFA which connects to the RF port via a spring contact. The EUT meets the requirements of FCC 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	756.00	1040.00
2442	756.00	1040.00
2480	756.00	1040.00

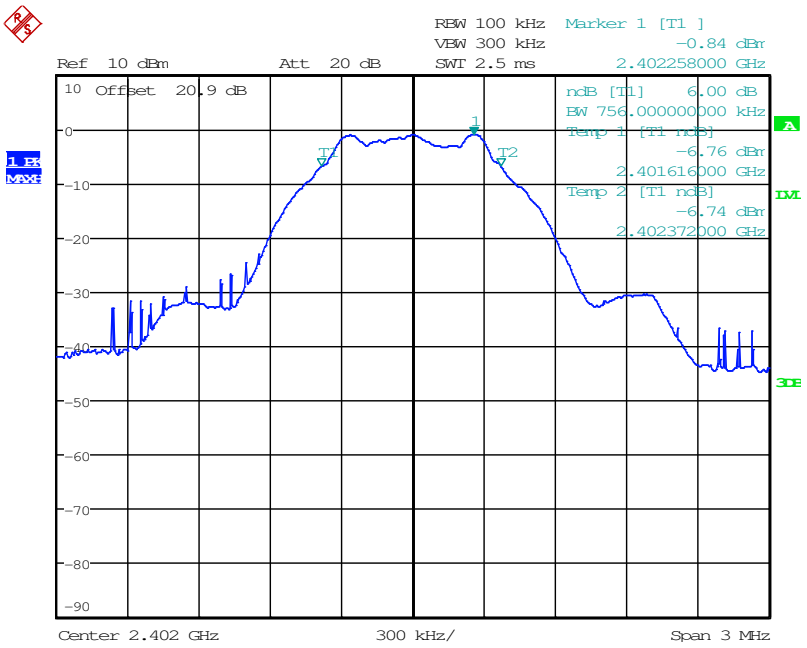


Figure 7.2.2-1: 6dB BW - Low Channel

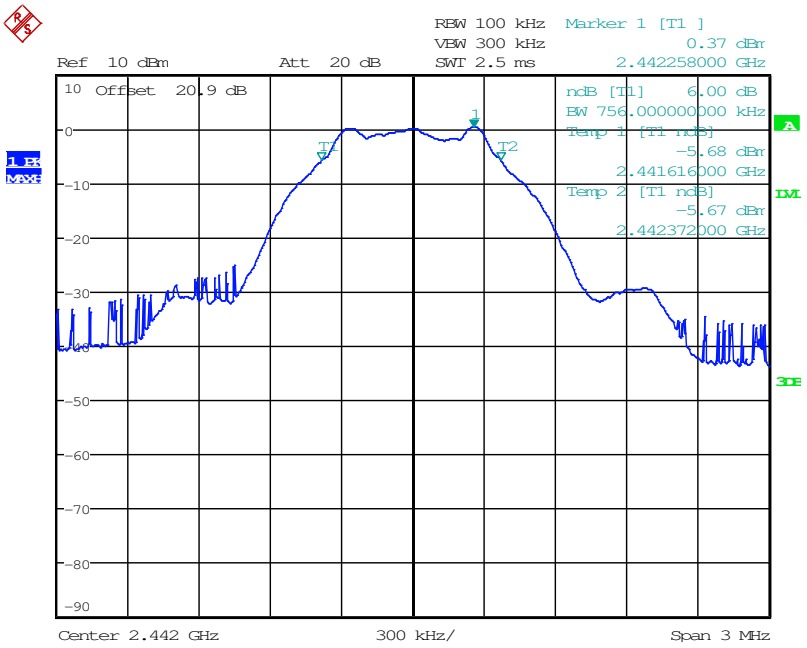
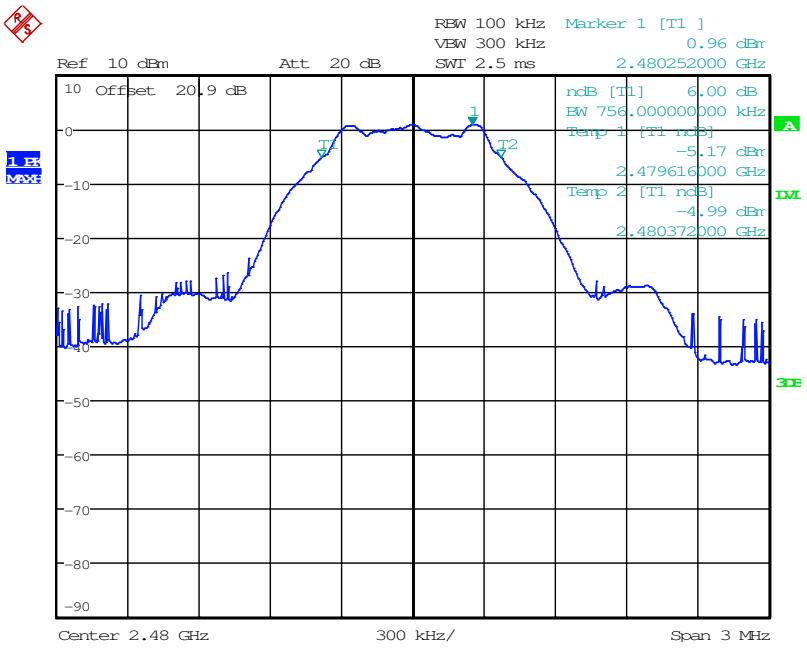
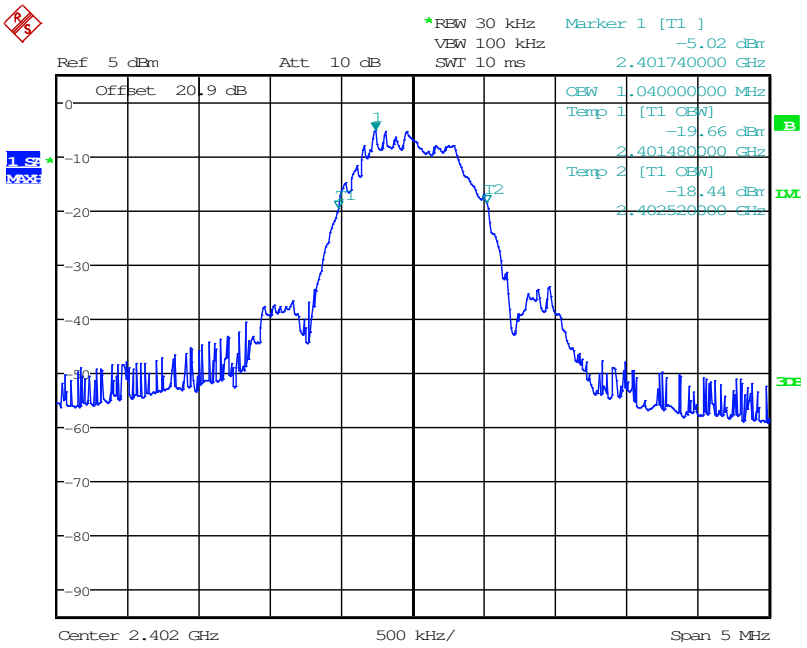


Figure 7.2.2-2: 6dB BW - Middle Channel



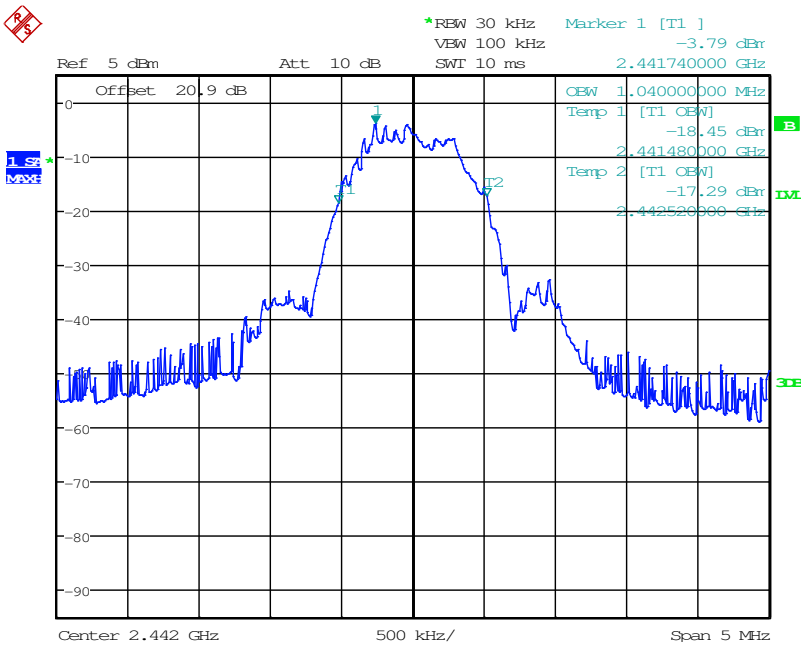
Date: 12.MAR.2016 16:53:23

Figure 7.2.2-3: 6dB BW - High Channel



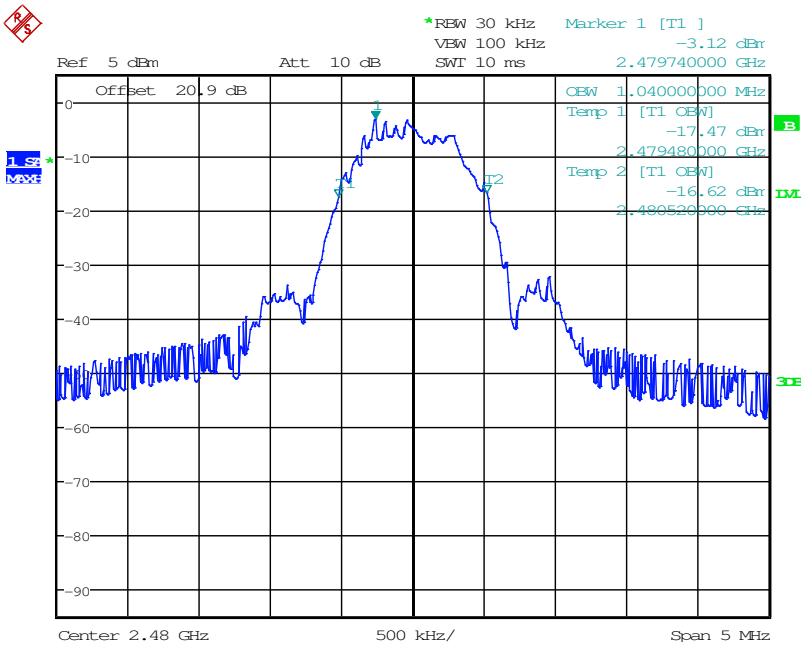
Date: 12.MAR.2016 16:44:14

Figure 7.2.2-4: 99% OBW - Low Channel



Date: 12.MAR.2016 16:49:35

Figure 7.2.2-5: 99% OBW - Middle Channel



Date: 12.MAR.2016 16:52:17

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	0.32
2442	1.42
2480	1.91

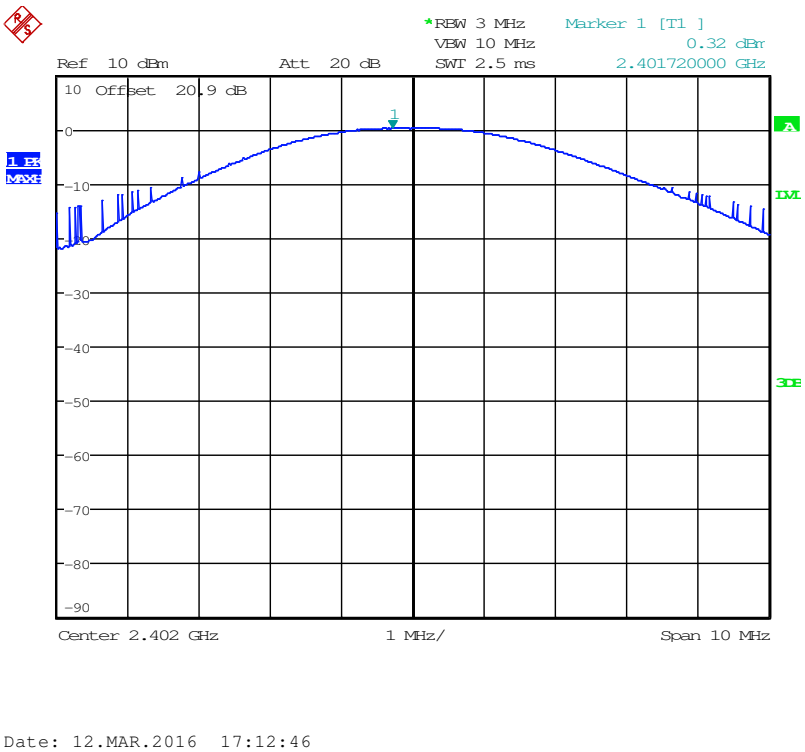


Figure 7.3.2-1: RF Output Power - Low Channel

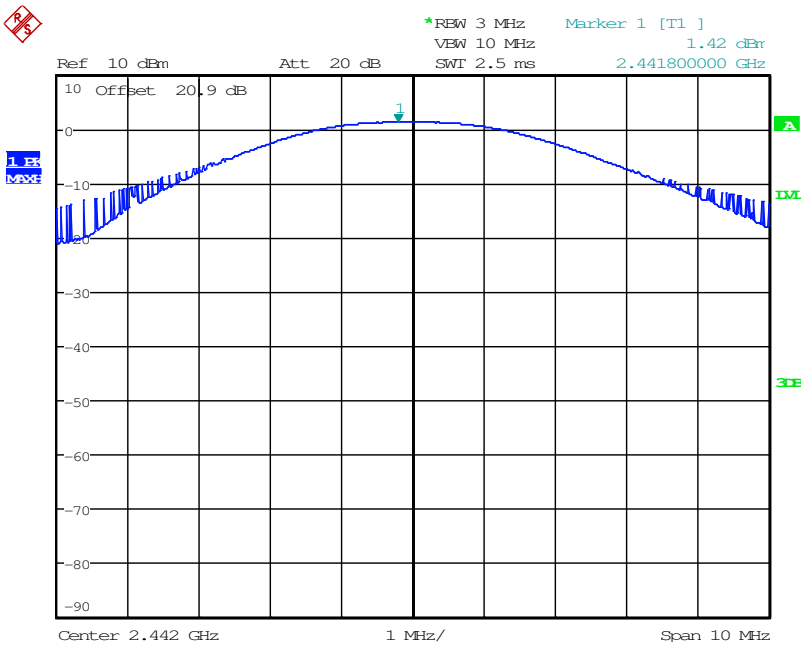


Figure 7.3.2-2: RF Output Power - Middle Channel

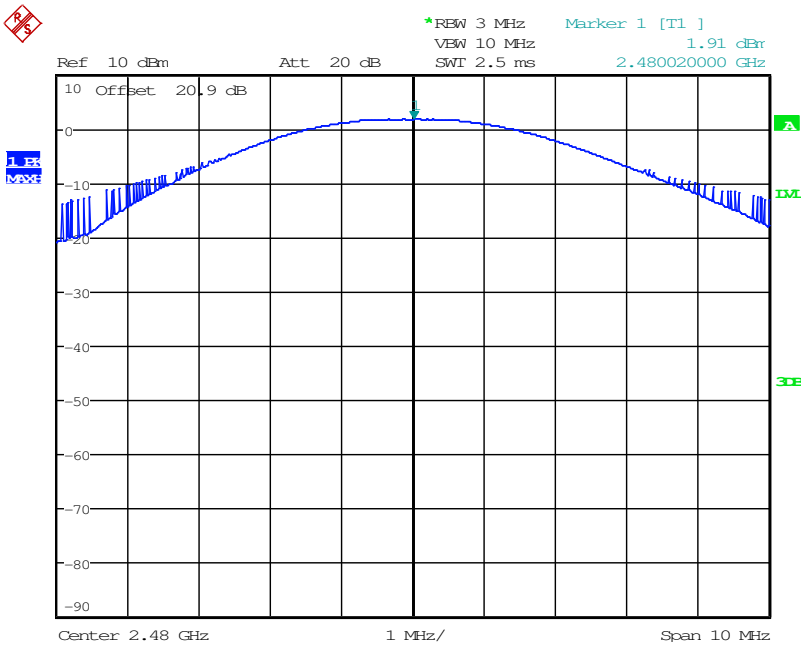


Figure 7.3.2-3: RF Output Power - High Channel

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.

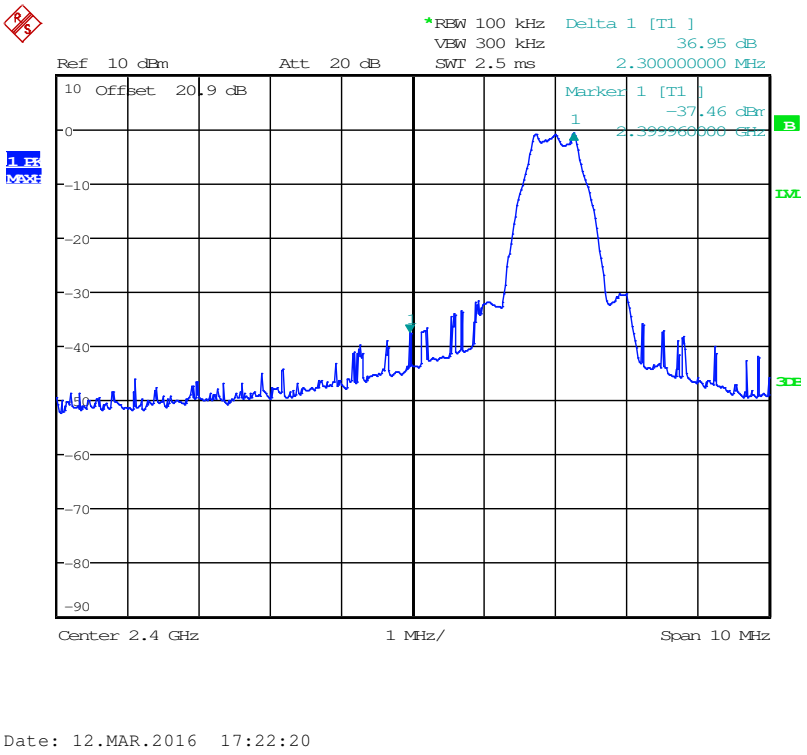


Figure 7.4.1.2-1: Lower Band-edge

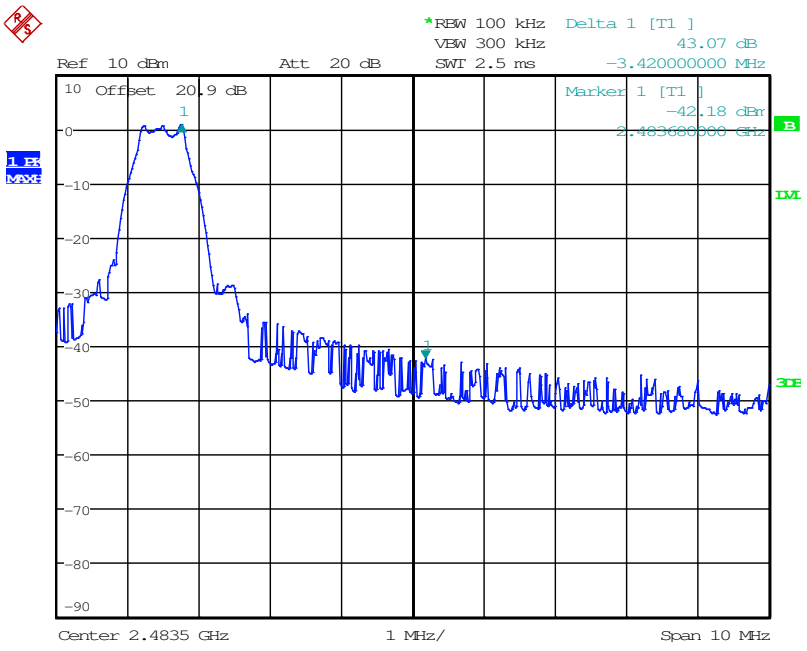


Figure 7.4.1.2-2: Upper Band-edge

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.

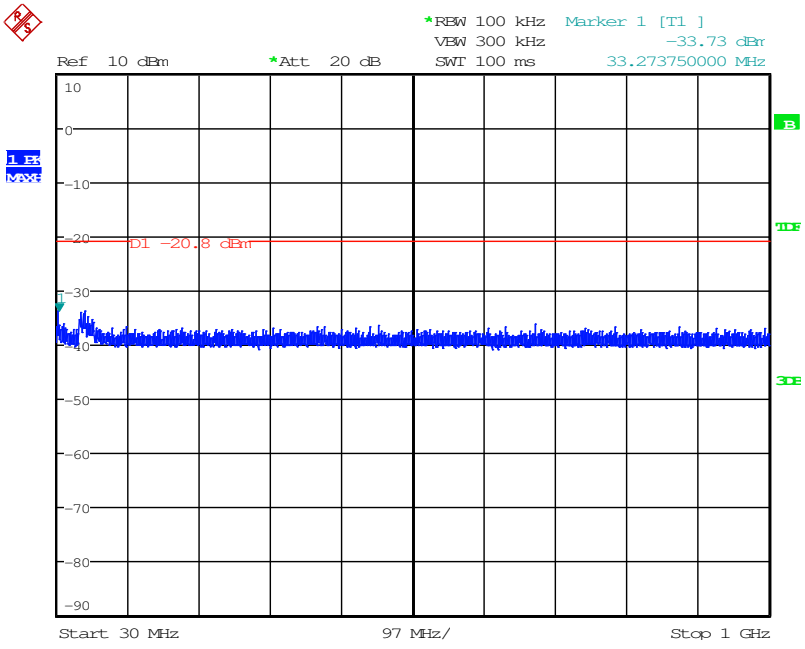
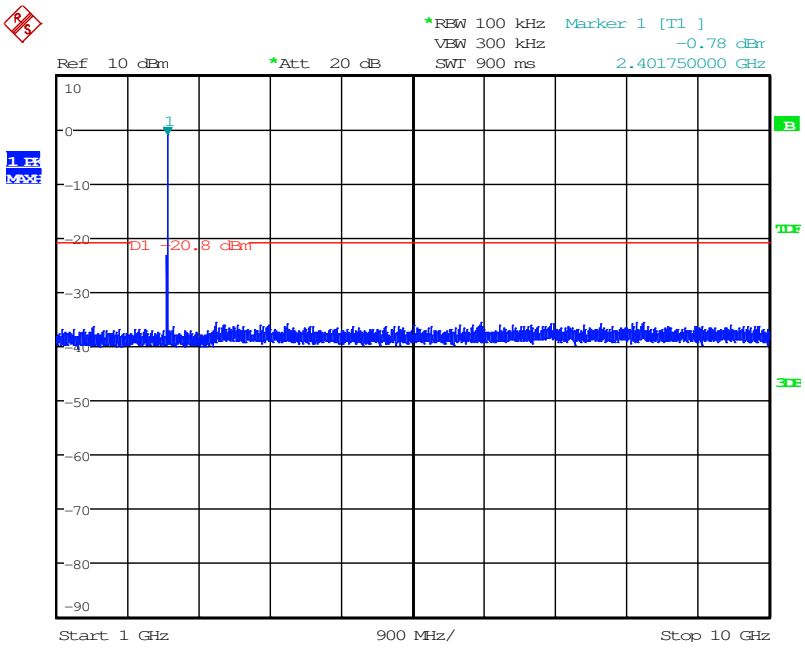
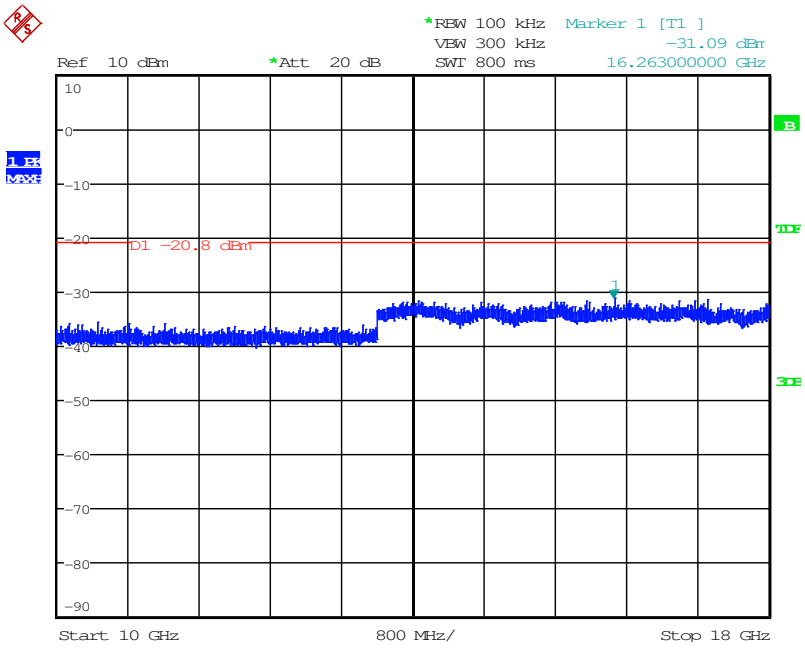


Figure 7.4.2.2-1: 30 MHz – 1 GHz – Low Channel



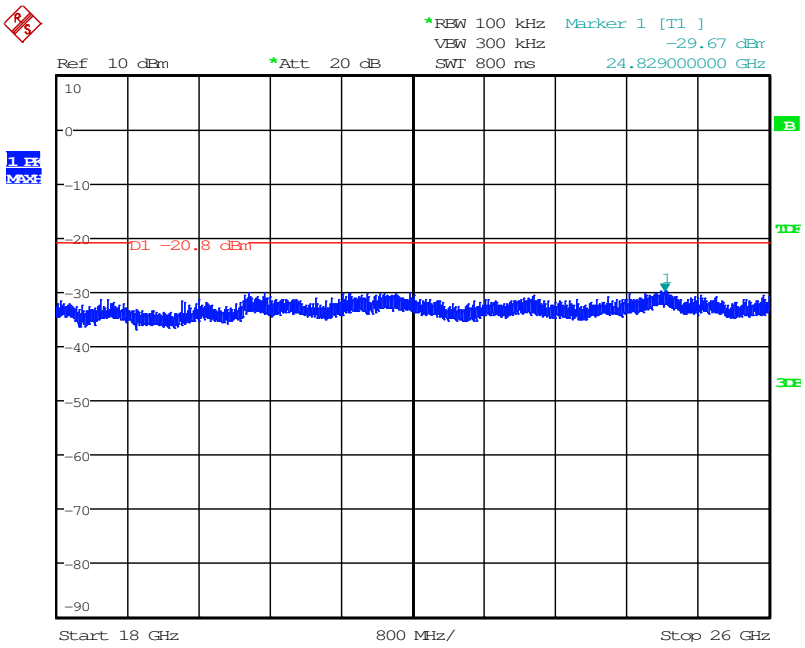
Date: 12.MAR.2016 18:09:31

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



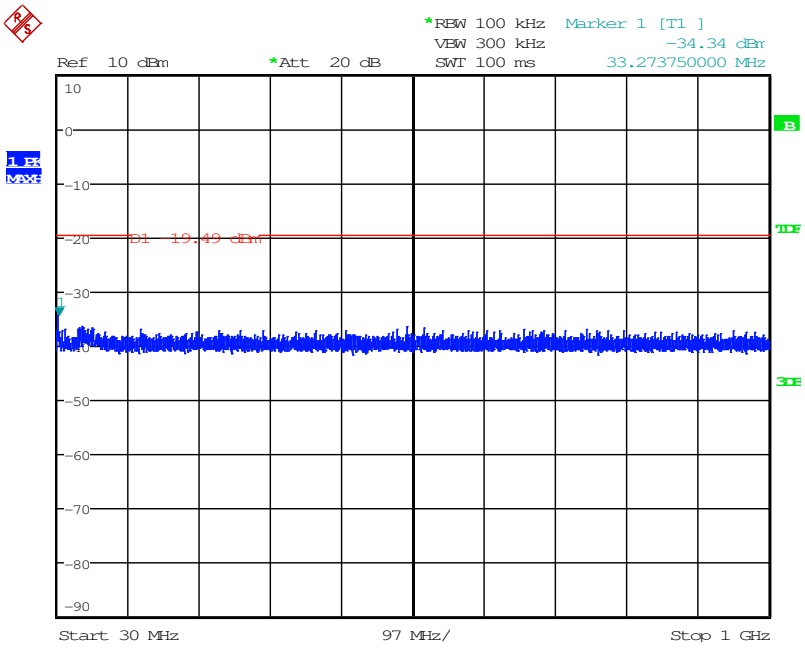
Date: 12.MAR.2016 18:19:32

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



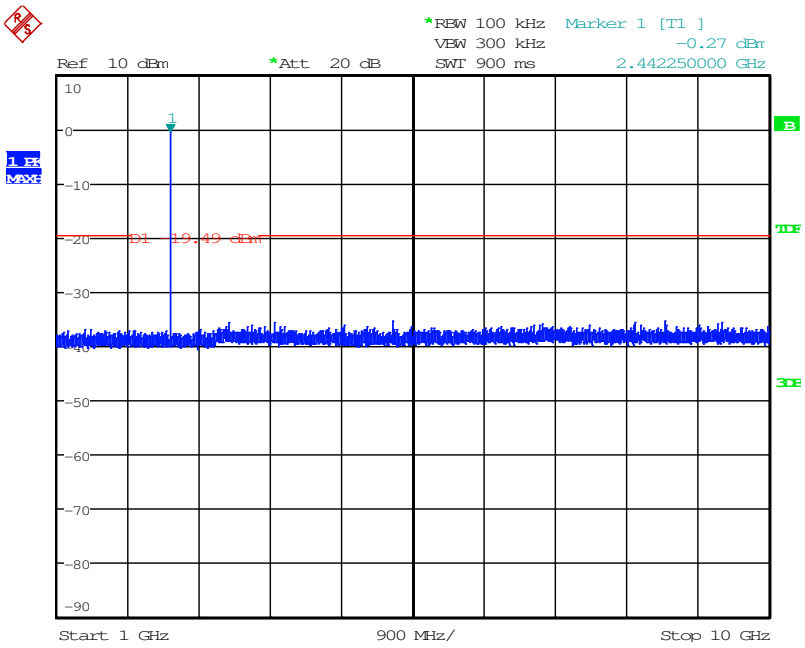
Date: 12.MAR.2016 18:22:11

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



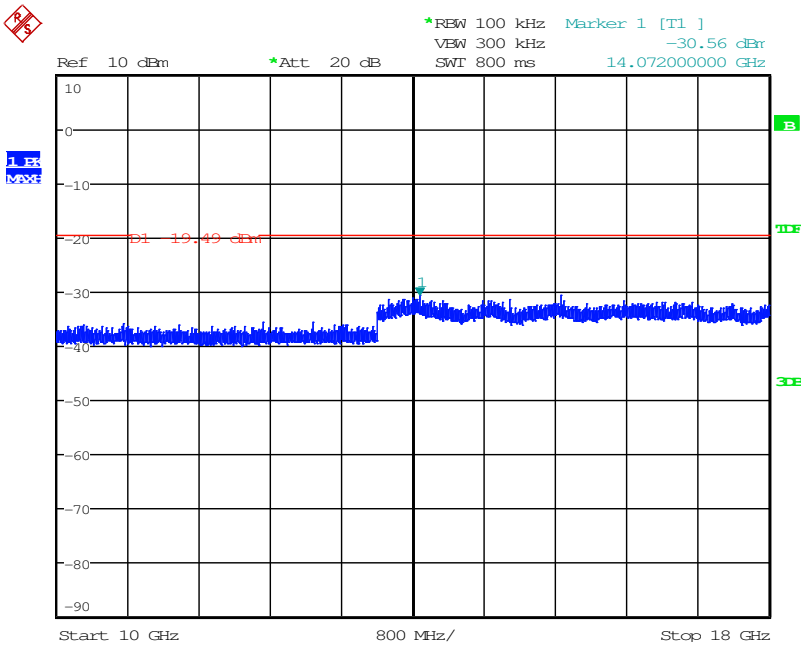
Date: 12.MAR.2016 17:44:24

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



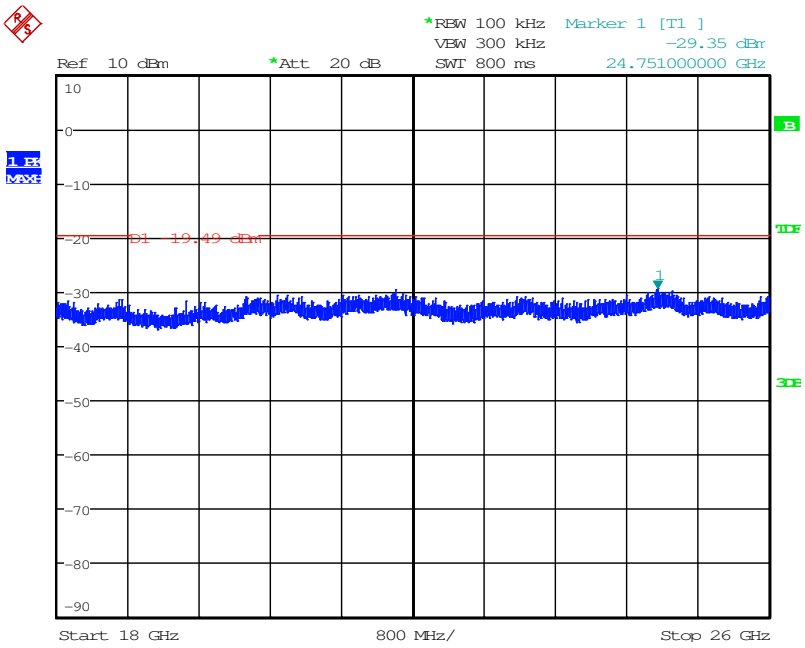
Date: 12.MAR.2016 17:52:19

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



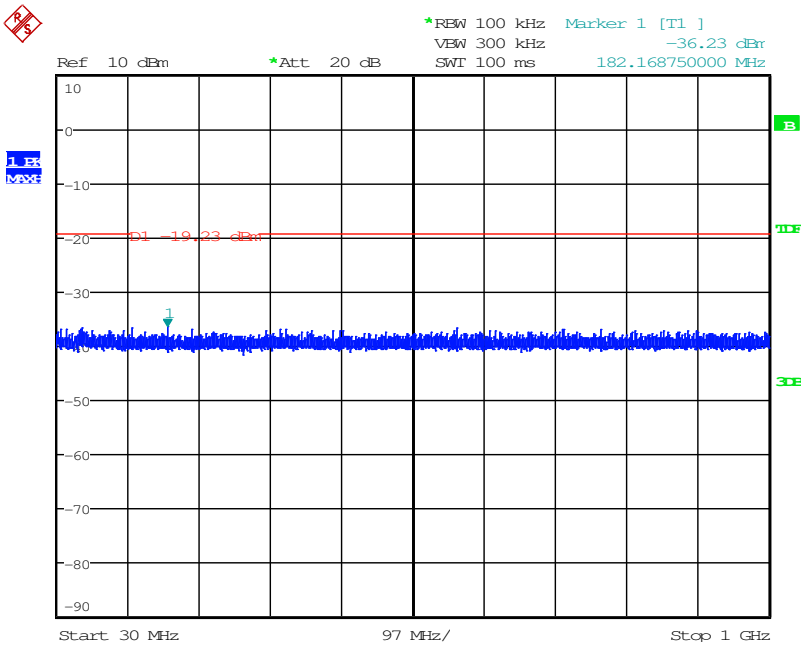
Date: 12.MAR.2016 17:57:26

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



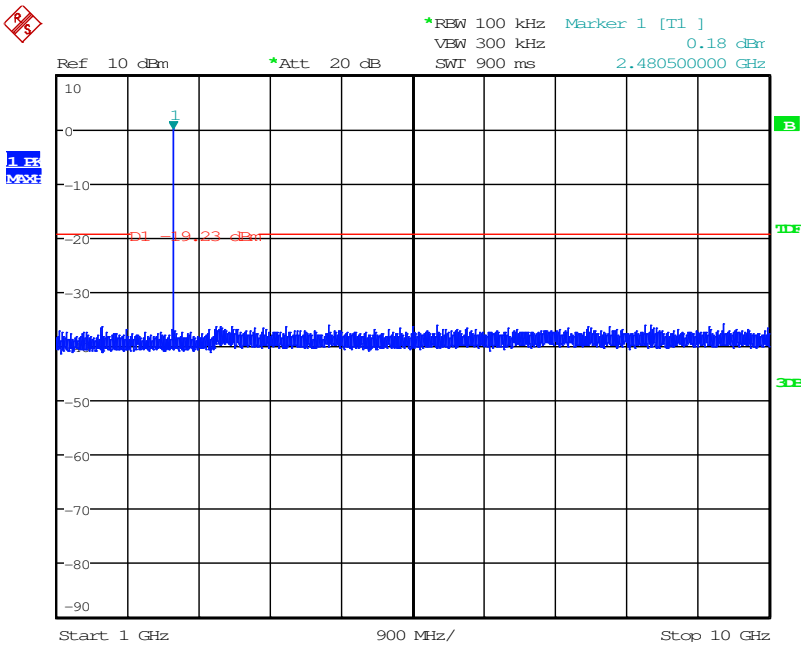
Date: 12.MAR.2016 17:59:40

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



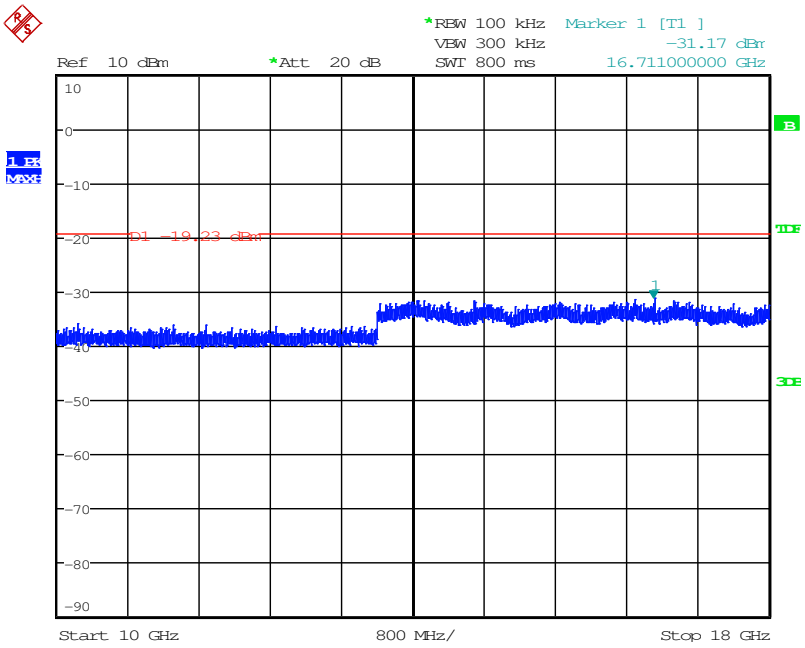
Date: 12.MAR.2016 17:41:19

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



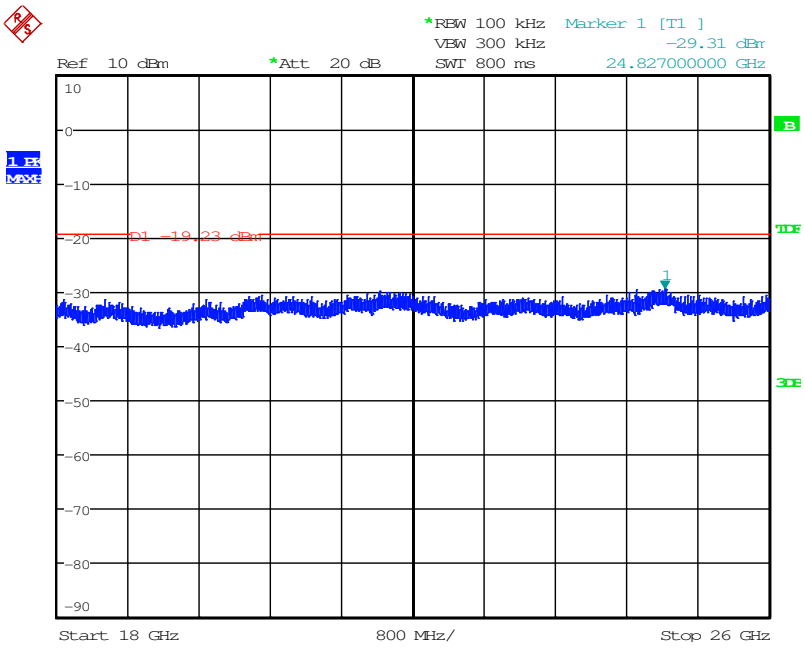
Date: 12.MAR.2016 17:37:37

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



Date: 12.MAR.2016 17:34:57

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



Date: 12.MAR.2016 17:32:16

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)										
2390	62.44	46.89	H	-5.60	56.84	41.29	74.0	54.0	17.2	12.7
Middle Channel (2442 MHz)										
7326	44.80	34.59	H	8.87	53.67	43.46	74.0	54.0	20.3	10.5
7326	47.00	37.93	V	8.87	55.87	46.80	74.0	54.0	18.1	7.2
High Channel (2480 MHz)										
2483.5	78.43	52.81	H	-5.15	73.28	47.66	74.0	54.0	0.7	6.3
2483.5	65.58	45.39	V	-5.15	60.43	40.24	74.0	54.0	13.6	13.8
7440	45.24	35.45	H	9.37	54.61	44.82	74.0	54.0	19.4	9.2
7440	47.30	39.16	V	9.37	56.67	48.53	74.0	54.0	17.3	5.5

Note: All emissions above 7.44 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: 62.44+ (-5.6) = 56.84 dBµV/m
Margin: 74 dBµV/m – 56.84 dBµV/m = 17.2 dB

Example Calculation: Average
Corrected Level: 46.89 + (-5.6) = 41.29 dBµV/m
Margin: 54 dBµV/m – 41.29 dBµV/m = 12.7 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	-15.15	8.0	23.15
2442	-13.73	8.0	21.73
2480	-13.46	8.0	21.46

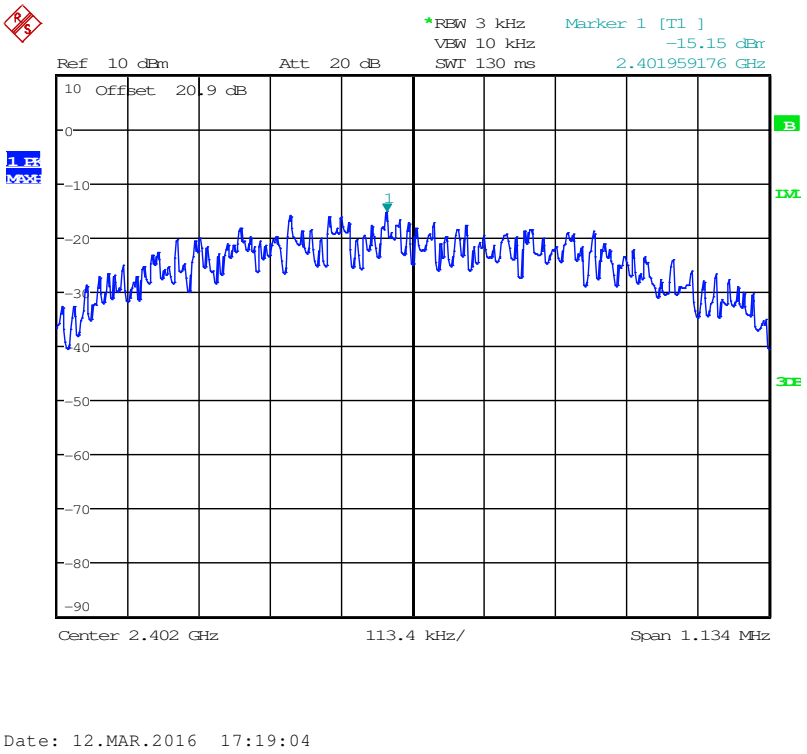


Figure 7.5.2-1: Power Spectral Density - Low Channel

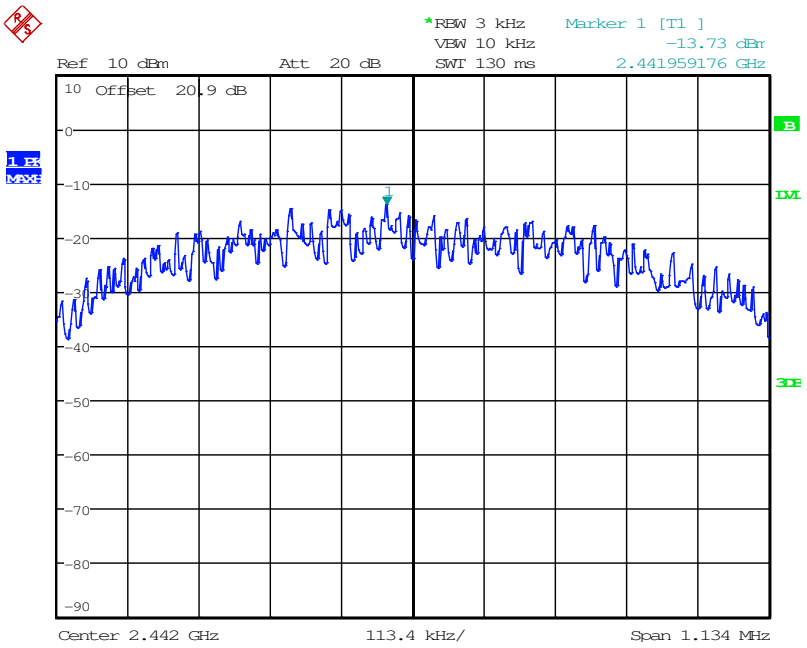


Figure 7.5.2-2: Power Spectral Density - Middle Channel

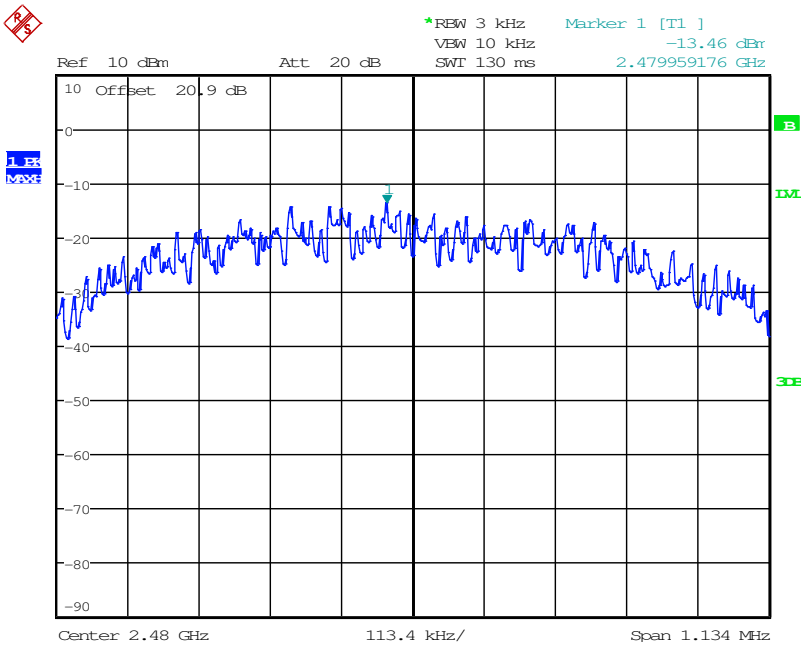


Figure 7.5.2-3: Power Spectral Density – High Channel

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.

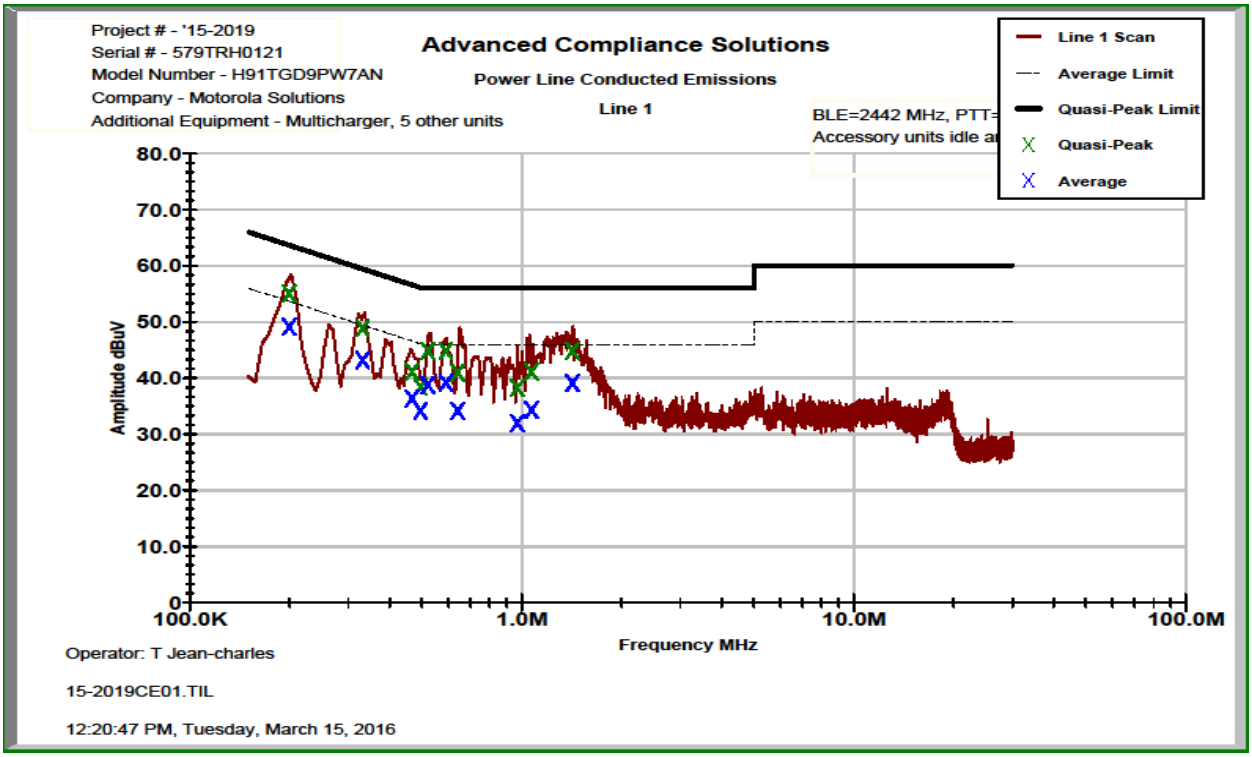


Figure 7.6.2-1: Conducted Emissions Results – Line 1

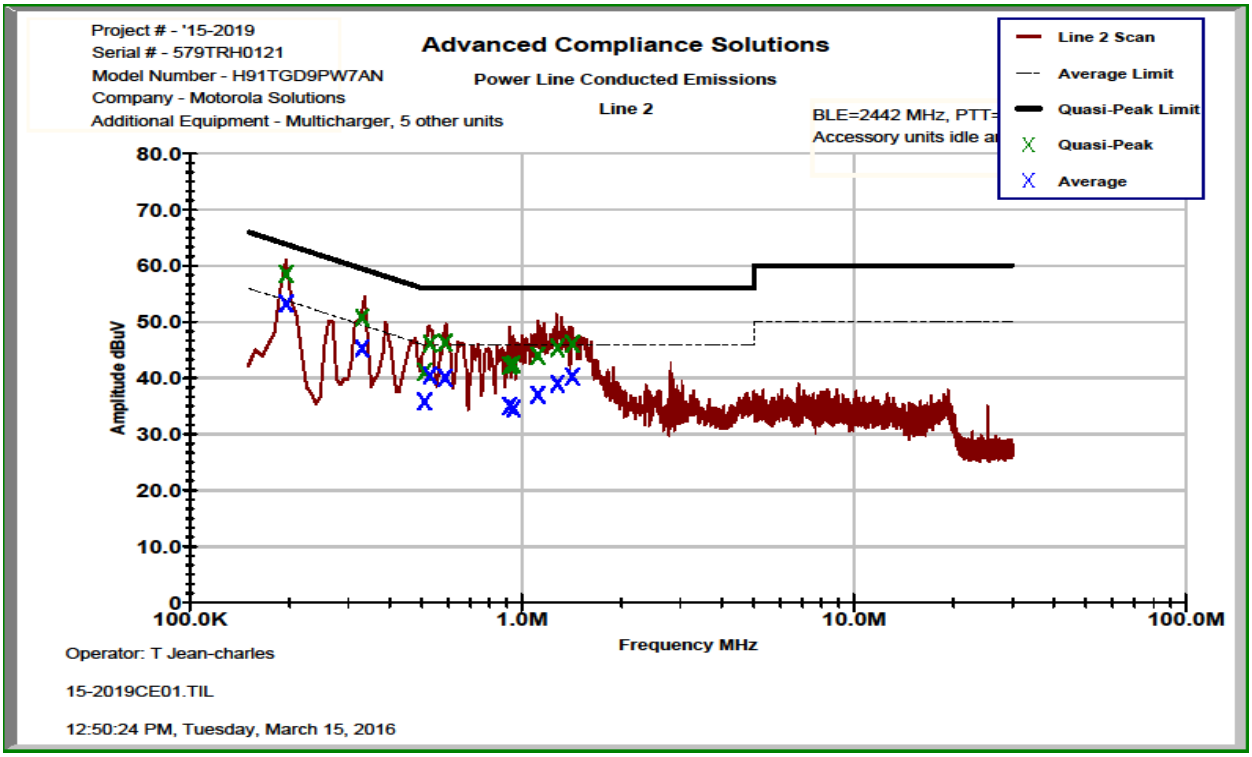


Figure 7.6.2-2: Conducted Emissions Results – Line 2

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: 15-2019CE01
Power Supply Description: 12 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									
0.199038	44.823	38.876	10.20	55.03	49.08	63.65	53.65	8.6	4.6
0.331512	38.647	32.957	10.20	48.85	43.16	59.41	49.41	10.6	6.3
0.466424	30.889	26.136	10.21	41.10	36.35	56.58	46.58	15.5	10.2
0.49485	28.172	23.931	10.21	38.38	34.14	56.09	46.09	17.7	11.9
0.520724	34.636	28.567	10.20	44.84	38.77	56.00	46.00	11.2	7.2
0.589888	34.589	28.944	10.20	44.79	39.15	56.00	46.00	11.2	6.9
0.640338	30.742	23.958	10.20	40.94	34.16	56.00	46.00	15.1	11.8
0.968574	28.037	21.76	10.19	38.23	31.95	56.00	46.00	17.8	14.1
1.06821	30.884	24.06	10.20	41.09	34.26	56.00	46.00	14.9	11.7
1.41914	34.593	28.844	10.20	44.80	39.05	56.00	46.00	11.2	7.0
Line 2									
0.194875	48.262	43.007	10.22	58.49	53.23	63.83	53.83	5.3	0.6
0.329563	40.563	35.061	10.21	50.78	45.27	59.46	49.46	8.7	4.2
0.508749	30.854	25.57	10.21	41.06	35.78	56.00	46.00	14.9	10.2
0.527975	35.959	30.243	10.21	46.17	40.45	56.00	46.00	9.8	5.5
0.586937	36.057	29.844	10.21	46.27	40.06	56.00	46.00	9.7	5.9
0.918237	32.028	24.805	10.20	42.23	35.01	56.00	46.00	13.8	11.0
0.944075	32.161	24.344	10.21	42.37	34.55	56.00	46.00	13.6	11.4
1.11613	33.725	26.776	10.25	43.98	37.03	56.00	46.00	12.0	9.0
1.27818	35.091	28.746	10.25	45.34	39.00	56.00	46.00	10.7	7.0
1.41866	35.761	29.995	10.25	46.01	40.25	56.00	46.00	10.0	5.8

8 CONCLUSION

In the opinion of ACS, Inc., the model H91TGD9PW7AN manufactured by Motorola Solutions 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