Company: Alereon Inc.

Test of: Commander (AL5930)

(Contains Camouflage (AL5955) and Combat (AL5934))

To: FCC Part 15 Subpart F 15.519 - Hand Held UWB Devices

Report No.: ALER01-U2B Rev A

TEST REPORT

MiCOM Labs

opening wireless markets

TEST REPORT

FROM

Test of: Alereon Inc.– Commander (AL5930)

To: FCC CFR 47 Part 15 Subpart F 15.519 – Hand Held UWB Systems

Test Report Serial No.: ALER01-U2B Rev A

This report supersedes: NONE

Applicant:	Alereon Inc. 10800 Pecan Park Blvd, STE 100 Austin, TX 78750 USA
Product Function:	UWB Module with Parallel/Serial USB interface
Issue Date:	12th December 2018

This Test Report is Issued Under the Authority of:

MiCOM Labs, Inc.
575 Boulder Court
PleasantonCalifornia94566
USA
Phone: +1 (925) 462-0304
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ACCREDITED
TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

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1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. Test Accreditation

MiCOM Labs, Inc. an accredited laboratory complies with the international standard ISO/IEC 17025. The company is accreditedby the American Association for Laboratory Accreditation (A2LA)www.a2la.org test laboratory number 2381.01. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-01.pdf

Accredited Laboratory

A2LA has accredited

MiCOM LABS

Pleasanton, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 14th day of May 2018.

President and CEO
For the Accreditation Council
Certificate Number 2381.01
Valid to November 30, 2019

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

1.2. Recognition

MiCOM Labs, Inc has widely recognized Electrical testing capabilities. Our international recognition includes Conformity Assessment Body designation by APEC MRA** countries. Our test reports are widely accepted for global type approvals.

Country	Recognition Body	Status	Phase	Identification No.
model	Federal Communications Commission (FCC)	TCB	-	US0159 Listing #: 102167
Canada	Industry Canada (IC)	FCB	APEC MRA 2	US0159 Listing #: 4143A-2 4143A-3
Japan	MIC (Ministry of Internal Affairs and Communication)	CAB	APEC MRA 2	RCB 210
	VCCI	--	--	A-0012
Europe	European Commission	NB	EU MRA	NB 2280
Australia	Australian Communications and Media Authority (ACMA)	CAB	APEC MRA 1	US0159
Hong Kong	Office of the Telecommunication Authority (OFTA)	CAB	APEC MRA 1	
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)	CAB	APEC MRA 1	
Singapore	Infocomm Development Authority (IDA)	CAB	APEC MRA 1	
Taiwan	National Communications Commission (NCC) Bureau of Standards, Metrology and Inspection (BSMI)	CAB	APEC MRA 1	
Vietnam	Ministry of Communication (MIC)	CAB	APEC MRA 1	

**APEC MRA – Asia Pacific Economic Community Mutual Recognition Agreement.
Is a recognition agreement under which test lab is accredited to regulatory standards of the APEC member countries
Phase I -recognition for product testing
Phase II – recognition for both product testing and certification
N/A – Not Applicable

**EU MRA – European Union Mutual Recognition Agreement.
Is a recognition agreement under which test lab is accredited to regulatory standards of the EU member countries

**NB – Notified Body

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1.3. Product Certification

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard ISO/IEC 17065. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.02. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-02.pdf

Accredited Product Certification Body

A2LA has accredited

MiCOM LABS

Pleasanton, CA

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC 17065:2012 *Requirements for bodies certifying products, processes and services*. This product certification body also meets the *A2LA R322 – Specific Requirements – Notified Body Accreditation Requirements* and *A2LA R308 - Specific Requirements - ISO-IEC 17065 - Telecommunication Certification Body Accreditation Program*. This accreditation demonstrates technical competence for a defined scope and the operation of a management system.

Presented this 14th day of May 2018

President and CEO
For the Accreditation Council
Certificate Number 2381.02
Valid to November 30, 2019

For the product certification schemes to which this accreditation applies, please refer to the organization's Product Certification Scope of Accreditation.

United States of America – Telecommunication Certification Body (TCB)
TCB Identifier – US0159

Industry Canada – Certification Body
CAB Identifier – US0159

Europe – Notified Body
Notified Body Identifier - 2280

Japan – Recognized Certification Body (RCB)
RCB Identifier – 210

2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft	4th December 2018	Initial draft for client review.
Draft #2	11th December 2018	Report revised per client comments for second client review prior to formal release.
Rev A	12th December 2018	Initial Release.

In the above table the latest report revision will replace all earlier versions.

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3. TEST RESULT CERTIFICATE

Manufacturer:	Alereon Inc. 10800 Pecan Park Blvd, STE 100 Austin, TX 78750 USA	**Tested By:**	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566, USA
Model(s):	Camouflage (AL5955) and Commander (AL5930) Combat (AL5934)	**Telephone:**	+1 925 462 0304
		Fax:	+1 925 462 0306
Equipment Type:	UWB Module with Parallel/Serial interface and USB interface		
S/N's:	Camouflage (AL5955): 18300080 Commander (AL5930): 18340126 Combat (AL5934): 18300035		
Test Date(s):	6th – 21st November 2018	**Website:**	www.micomlabs.com

STANDARD(S)	TEST RESULTS
FCC CFR 47 Part 15 Subpart F 15.519	EQUIPMENT COMPLIES

MiCOM Labs, Inc. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

Notes:
1. This document reports conditions under which testing was conducted and the results of testing performed.

2. Details of test methods used have been recorded and kept on file by the laboratory.

3. Test results apply only to the item(s) tested.

ACCREDITED
TESTING CERT #2381.01

Approved & Released for MiCOM Labs, Inc. by:

Graeme Grieve
Quality Manager MiCOM Labs, Inc.

Gordon Hurst
President & CEO MiCOM Labs, Inc.

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4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
I	FCC 47 CFR Part F	2018	Radio Frequency Devices; Subpart F –Ultra Wide Band Devices
II	A2LA	August 2018	R105 - Requirement's When Making Reference to A2LA Accreditation Status
III	ANSI C63.10	2013	American National Standard for Testing Unlicensed Wireless Devices
IV	ANSI C63.4	2014	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
V	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
VI	M 3003	Edition 3 Nov.2012	Expression of Uncertainty and Confidence in Measurements
VII	FCC 47 CFR Part 2.1033	2016	FCC requirements and rules regarding photographs and test setup diagrams.
VIII	KDB 393764 D01 UWB FAQ v02	January 29, 2018	Ultra-Wideband (UWB) Devices frequently asked questions

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4.2. Test and Uncertainty Procedure

Conducted and radiated emission measurements were conducted in accordance with American National Standards Institute ANSI C63.4, listed in the Normative References section of this report.

Measurement uncertainty figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2.

Measurement uncertainties stated are based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 % in accordance with UKAS document M 3003 listed in the Normative References section of this report.

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5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the Alereon Commander (AL5930) to FCC CFR 47 Part 15 Subpart F 15.519
Applicant:	Alereon Inc. 10800 Pecan Park Blvd, STE 100 Austin, TX 78750 USA
Manufacturer:	As applicant
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Test report reference number:	ALER01-U2B
Date EUT received:	6th November 2018
Standard(s) applied:	FCC CFR 47 Part 15 Subpart F15.519
Dates of test (from - to):	6th – 21st November 2018
No of Units Tested:	3
Product Family Name:	Al5350/Al5100
Model(s):	Alereon Commander (AL5930), Camouflage (AL5955) and Combat (AL5934)
Location for use:	No fixed location Primarily hand held
Declared Frequency Range(s):	3100-10600 MHz
Type of Modulation:	BPM/BPSK
EUT Modes of Operation:	528 MHz Bandwidth
Declared Nominal Output Power (dBm):	-41.3 dBm
Transmit/Receive Operation:	Transceiver
Rated Input Voltage and Current:	Camouflage (AL5955): 3.3V DC, 10 mA Commander (AL5930): 3.3V DC, 240mA Combat (AL5934): 5V DC, 250 mA
Operating Temperature Range:	-40 ~ +85°C
ITU Emission Designator:	510MX0D
Equipment Dimensions:	Camouflage (AL5955): W: 0.86, L: 1.98 H: 0.151 Inches Commander (AL5930): W: 0.86, L: 1.117 H: 0.151 Inches Combat (AL5934): W: 0.86, L: 2.5 H: 0.151 Inches
Weight:	Camouflage (AL5955): 0.13 oz Commander (AL5930): 0.10 oz Combat (AL5934): 0.19 oz
Hardware Rev:	2.0.0
Software Rev:	28526

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5.2. Scope Of Test Program

The scope of the test program was to test the Alereon Commander (AL5930) configurations in the frequency ranges 3100 - 10600 MHz for compliance against the following specification:

FCC CFR 47 Part 15 Subpart F – 15.519
Compliance Measurement Procedures for Unlicensed National Information Infrastructure devices operating in the 3100 - 10600 MHz bands.

Model Differences
Camouflage (AL5955) – Serial Interface
Commander (AL5930) – Parallel Interface
Combat (AL5934) – USB Interface

The manufacturer declares that all 3 Models use exactly the same RF chipset (See Manufacturers declaration in Appendix B). Conducted testing was performed on the Combat (AL5934) model with USB Interface.

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5.3. Equipment Model(s) and Serial Number(s)

Type (EUT/ Support)	Equipment Description (Including Brand Name)	Mfr.	Model No.	Serial No.
EUT	UWB Module with Serial interface	Alereon Inc	Camouflage (AL5955)	18300080
EUT	UWB Module with Parallel interface	Alereon Inc	Commander (AL5930)	18340126
EUT	UWB Module with USB interface	Alereon Inc	Combat (AL5934)	18300035
Support	Host Board	Alereon Inc	AL5957	
Support	Laptop	Lenovo		

5.4. Antenna Details

Type	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
Chip	Taiyo Yuden	AH086M555003	Patch	1.0/0.2/0.2	--	--	No	3168-3696
Chip	Taiyo Yuden	AH086M555003	Patch	0.2/-0.2/0.1	--	--	No	6600-7656
Chip	Taiyo Yuden	AH086M555003	Patch	0.1/-1.8/-1.8	--	--	No	7656-8712

BF Gain - Beamforming Gain
Dir BW - Directional BeamWidth
X-Pol - Cross Polarization

5.5. Cabling and I/O Ports

Custom 60 pin interface to Host Board/ USB

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5.6. Test Configurations

Results for the following configurations are provided in this report:

Channel Bandwidth(s)	Transmission Rate	Channel Frequency (MHz)		
		Low	Mid	High
500 MHz	Max	3432	3960	4488
500 MHz	Max	6600	7128	7656
500 MHz	Max	7656	8184	8712

5.7. Equipment Modifications

The following modifications were required to bring the equipment into compliance:
1. NONE

5.8. Deviations from the Test Standard

The following deviations from the test standard were required in order to complete the test program:
1. NONE

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6. TEST SUMMARY

List of Measurements

Test Header	Result	Data Link
UWB Bandwidth	Complies	View Data
Peak Power	Complies	View Data
Peak Power Density	Complies	View Data
Spurious Radiated Emissions 1000 MHz - 18000 MHz	Complies	View Data
Spurious Radiated Emissions in GPS Bands	Complies	View Data
50 MHz Radiated Peak	Complies	View Data
Shutdown Timing Requirements	Complies	View Data
Comments: None		

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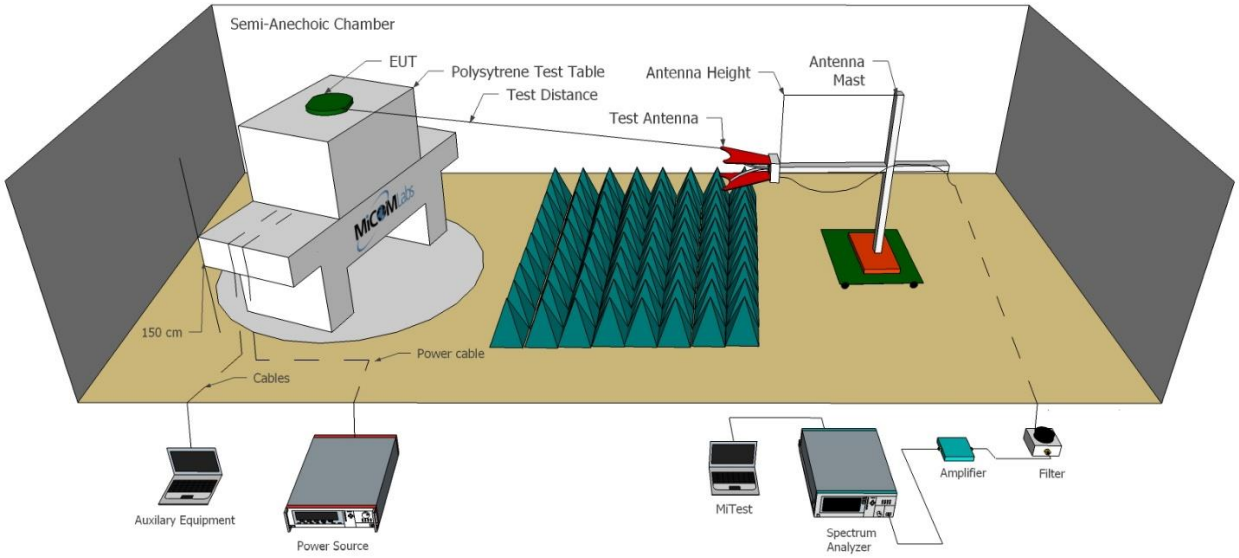
7. TEST EQUIPMENT CONFIGURATION(S)

7.1. Radiated Emissions - 3m Chamber

The following tests were performed using the radiated test set-up shown in the diagram below. Radiated emissions above 1GHz.

Radiated Emissions Above 1GHz Test Setup



A full system calibration was performed on the test station and any resulting system losses (or gains) were taken into account in the production of all final measurement data.

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CU101	04R08507	Not Required
298	3M Radiated Emissions Chamber Maintenance Check	MiCOM	3M Chamber	298	21 Jan 2019
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	4 Apr 2019
378	Rohde & Schwarz 40 GHz Receiver with Generator	Rhode & Schwarz	ESIB40	100107/040	12 Oct 2019
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	12 Dec 2018
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	12 Dec 2018
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	12 Dec 2018
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Sciences	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
415	Turntable Controller	Sunol Sciences	Turntable Controller	None	Not Required
447	MiTest Rad Emissions Test Software	MiCOM	Rad Emissions Test Software Version 1.0	447	Not Required
462	Schwarzbeck cable from Antenna to Amplifier.	Schwarzbeck	AK 9513	462	9 Oct 2019
463	Schwarzbeck cable from Amplifier to Bulkhead.	Schwarzbeck	AK 9513	463	9 Oct 2019
464	Schwarzbeck cable from Bulkhead to Receiver	Schwarzbeck	AK 9513	464	9 Oct 2019
465	Low Pass Filter DC-1000 MHz	Mini-Circuits	NLP-1200+	VUU01901402	9 Oct 2019
480	Cable - Bulkhead to Amp	SRC Haverhill	157-3050360	480	24 Aug 2019
481	Cable - Bulkhead to Receiver	SRC Haverhill	151-3050787	481	24 Aug 2019
510	Barometer/Thermometer	Control Company	68000-49	170871375	11 Dec 2018
518	Cable - Amp to Antenna	SRC Haverhill	157-3051574	518	24 Aug 2019
CC05	Confidence Check	MiCOM	CC05	None	21 Jan 2019

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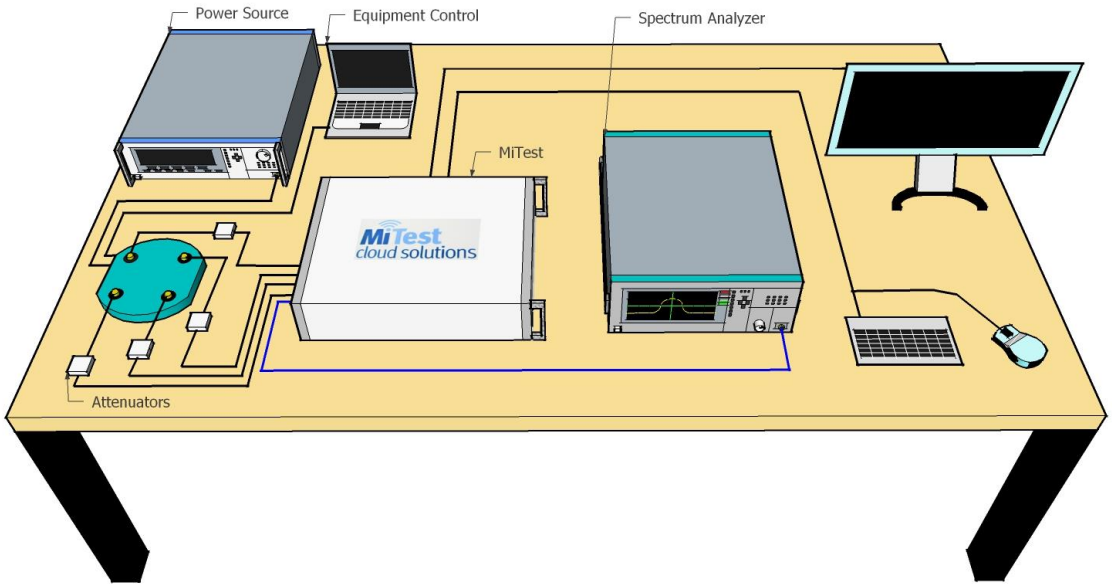
7.2. RF Conducted Emissions

The following tests were performed using the conducted test set-up shown in the diagram below. UWB Bandwidth, Peak Transmit Power, Peak Power Density, Shutoff Timing Requirements

MiTest Automated Test System



Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
#3 SA	MiTest Box to SA	Fairview Microwave	SCA1814-0101-72	#3 SA	20 Jan 2019
#3P1	EUT to MiTest box port 1	Fairview Microwave	SCA1814-0101-72	#3P1	20 Jan 2019
#3P2	EUT to MiTest box port 2	Fairview Microwave	SCA1814-0101-72	#3P2	20 Jan 2019
#3P3	EUT to MiTest box port 3	Fairview Microwave	SCA1814-0101-72	#3P3	20 Jan 2019
#3P4	EUT to MiTest box port 4	Fairview Microwave	SCA1812-0101-72	#3P4	20 Jan 2019
249	Resistance Thermometer	Thermotronics	GR2105-02	9340 #2	30 Oct 2019
361	Desktop for RF#1, Labview Software installed	Dell	Vostro 220	WS RF#1	Not Required
378	Rohde & Schwarz 40 GHz Receiver with Generator	Rhode & Schwarz	ESIB40	100107/040	12 Oct 2019
398	MiTest RF Conducted Test Software	MiCOM	MiTest ATS	Version 4.1	Not Required
405	DC Power Supply 0-60V	Agilent	6654A	MY4001826	Cal when used
408	USB to GPIB interface	National Instruments	GPIB-USB HS	14C0DE9	Not Required
436	USB Wideband Power Sensor	Boonton	55006	8731	14 Sep 2019
440	USB Wideband Power Sensor	Boonton	55006	9178	22 Sep 2019
441	USB Wideband Power Sensor	Boonton	55006	9179	20 Sep 2019
442	USB Wideband Power Sensor	Boonton	55006	9181	6 Oct 2019
445	PoE Injector	D-Link	DPE-101GL	QTAH1E2000625	Not Required
461	Spectrum Analyzer	Agilent	E4440A	MY46185537	20 Sep 2019
510	Barometer/Thermometer	Control Company	68000-49	170871375	11 Dec 2018
515	MiTest Cloud Solutions RF Test Box	MiCOM	2nd Gen with DFS	515	20 Jan 2019
75	Environmental Chamber	Thermatron	SE-300-2-2	27946	24 Dec 2018

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8. MEASUREMENT AND PRESENTATION OF TEST DATA

The measurement and graphical data presented in this test report was generated automatically using state-of-the-art technology creating an easy to read report structure. Numerical measurement data is separated from supporting graphical data (plots) through hyperlinks. Numerical measurement data can be reviewed without scrolling through numerous graphical pages to arrive at the next data matrix.

Plots have been relegated into the Appendix 'Graphical Data'.

Test and report automation was performed by MiTest. MiTest is an automated test system developed by MiCOM Labs. MiTest is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.

The MiCOM Labs "MiTest" Automated Test System" (Patent Pending)

9. TEST RESULTS

9.1. UWB Bandwidth

Conducted Test Conditions for 26 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.519	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	UWB Bandwidth	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	ANSI C63.10 Section 10.1	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for UWB Bandwidth Measurement
The UWB Bandwidth is measured radiated, at a 3-meter distance, while EUT is operating in transmission mode at the appropriate center frequency. The Resolution Bandwidth was set to 1MHz RBW IAW ANSI C63.10.
Testing was performed under ambient conditions at nominal voltage.

Test configuration and setup used for the measurement was per the Radiated Test Set-up section specified in this document.

Equipment Configuration for UWB Bandwidth			
Variant:	500 MHz Bandwidth	**Duty Cycle (%):**	100
Data Rate:	-	**Antenna Gain (dBi):**	1.5
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Equipment Configuration for UWB Bandwidth			
Variant:	Band Group 1	**Duty Cycle (%):**	100
Data Rate:	-	**Antenna Gain (dBi):**	Client Info Required
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Frequency	**Measured 10 dB Bandwidth (MHz)**	**10 dB Bandwidth (MHz)**			
MHz	**Port A**	**Highest**	**Lowest**		
3432.00	509.174	509.174	509.174		

Test Frequency	**Measured 10 dB Bandwidth (MHz)**	**10 dB Bandwidth (MHz)**			
MHz	**PortA**	**Highest**	**Lowest**		
3960.00	508.116	508.116	508.116		

Test Frequency	**Measured 10 dB Bandwidth (MHz)**	**10 dB Bandwidth (MHz)**			
MHz	**Port A**	**Highest**	**Lowest**		
4488.00	507.014	507.014	507.014		

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

The above values are representative of the worst case value between polarities and based on the power measurements.

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Equipment Configuration for UWB Bandwidth			
Variant:	Band Group 3	**Duty Cycle (%):**	100
Data Rate:	-	**Antenna Gain (dBi):**	0.5
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Frequency	Measured 10 dB Bandwidth (MHz)	10 dB Bandwidth (MHz)			
MHz	**Port A**	**Highest**	**Lowest**		
6600.00	510.321	510.321	510.321		

Test Frequency	Measured 10 dB Bandwidth (MHz)	10 dB Bandwidth (MHz)			
MHz	**PortA**	**Highest**	**Lowest**		
7128.00	509.920	509.920	509.920		

Test Frequency	Measured 10 dB Bandwidth (MHz)	10 dB Bandwidth (MHz)			
MHz	**Port A**	**Highest**	**Lowest**		
7656.00	508.818	508.818	508.818		

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

The above values are representative of the worst case value between polarities and based on the power measurements.

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Equipment Configuration for UWB Bandwidth			
Variant:	Band Group 6	**Duty Cycle (%):**	100
Data Rate:	-	**Antenna Gain (dBi):**	0.25
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Frequency	Measured 10 dB Bandwidth (MHz)	10 dB Bandwidth (MHz)			
MHz	**Port A**	**Highest**	**Lowest**		
7656.00	506.613	506.613	506.613		

Test Frequency	Measured 10 dB Bandwidth (MHz)	10 dB Bandwidth (MHz)			
MHz	**PortA**	**Highest**	**Lowest**		
8184.00	509.920	509.920	509.920		

Test Frequency	Measured 10 dB Bandwidth (MHz)	10 dB Bandwidth (MHz)			
MHz	**Port A**	**Highest**	**Lowest**		
8712.00	509.920	509.9200	509.920		

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

Note: click the links in the above matrix to view the graphical image (plot).

The above values are representative of the worst case value between polarities and based on the power measurements.

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9.2. Peak Transmit Power

Conducted Test Conditions for Maximum Radiated Output Power			
Standard:	FCC CFR 47:15.519 (c)	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Radiated Emissions UWB Transmission	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	ANSI C63.10 Section 10.3.5	**Pressure (mBars):**	999 - 1001
Reference Document(s):	None		

Test Procedure for UWB Transmission

Testing was performed under ambient conditions at nominal voltage.

Test configuration and setup used for the measurement was per the Radiated Test Set-up section specified in this document. Supporting KDB's referenced below.

Operating Frequency Band:
3100-10600 MHz

Limits Maximum EIRP (dBm)

Frequency (MHz)	EIRP Limit (dBm)	EIRP at 3 Meters (dBuv/m)
3100 - 10600	-41.3	53.9

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Equipment Configuration for RF Output Power			
Variant:	Band Group 1	**Duty Cycle (%):**	99
Data Rate:	-	**Antenna Gain (dBi):**	1.0/0.2/0.2
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency MHz	Measured Output Power(dBm)	Calculated Total Power	EIRP+ DCCF	Limit	Margin	EUT Power Setting
	Port A	dBm		dBm	Numeric	Numeric
3432.00	-42.92	-42.92	-41.92	-41.3	-0.62	4.0
3960.00	-41.72	-41.72	-41.52	-41.3	-0.22	4.0
4488.00	-41.92	-41.92	-41.72	-41.3	-0.42	4.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	±1.33 dB

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Equipment Configuration for RF Output Power			
Variant:	Band Group 3	**Duty Cycle (%):**	99
Data Rate:	-	**Antenna Gain (dBi):**	0.2/-0.2/0.1
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency MHz	Measured Output Power(dBm)	Calculated Total Power	EIRP+ DCCF	Limit	Margin	EUT Power Setting
	Port A	dBm		dBm	Numeric	Numeric
6600.00	-42.69	-42.69	-42.49	-41.3	-1.19	2.0
7128.00	-42.62	-42.62	-42.82	-41.3	-1.52	2.0
7656.00	-42.84	-42.84	-42.74	-41.3	-1.44	2.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	±1.33 dB

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Equipment Configuration for RF Output Power			
Variant:	Band Group 6	**Duty Cycle (%):**	99
Data Rate:	-	**Antenna Gain (dBi):**	0.1/-1.8/-1.8
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency MHz	Measured Output Power(dBm)	Calculated Total Power	EIRP+ DCCF	Limit	Margin	EUT Power Setting
	Port A	dBm		dBm	Numeric	Numeric
7656.00	-41.80	-41.80	-41.7	-41.3	-0.4	1.0
8184.00	-41.78	-41.78	-43.58	-41.3	-2.28	0.0
8712.00	-41.44	-41.44	-43.24	-41.3	-1.94	0.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	±1.33 dB

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9.3. Peak Power Density

Test Conditions for Maximum Peak Power Density			
Standard:	FCC CFR 47:15.519 (e)	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Radiated Emissions UWB Transmission	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	ANSI C63.10 Section 10.3.6	**Pressure (mBars):**	999 - 1001
Reference Document(s):	None		

Test Procedure for UWB Transmission

Testing was performed under ambient conditions at nominal voltage.

Test configuration and setup used for the measurement was per the Radiated Test Set-up section specified in this document. Supporting KDB's referenced below.

Measurements were gathered with a RBW of 1MHz and converted to 50MHz using the following formula:

$EIRP_{1\ MHz} = EIRP_{50\ MHz} + 20\log(1MHz/50MHz) = 0dBm + (-34dBm) = -34dBm$

Operating Frequency Band:
3100-10600 MHz

Limits Maximum EIRP (dBm)

Frequency (MHz)	EIRP Limit (dBm/50MHz)	EIRP Limit (dBm/1MHz)
3100 - 10600	0	-34

Equipment Configuration for Peak Power Density			
Variant:	Band Group 1	**Duty Cycle (%):**	99
Data Rate:	-	**Antenna Gain (dBi):**	1.0/0.2/0.2
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Frequency	Measured Output Power	Limit	Margin	EUT Power Setting
	dBm	dBm	Numeric	Numeric
3432.00	-36.101	-34.00	-2.10	4.0
3960.00	-35.379	-34.00	-1.38	4.0
4488.00	-35.635	-34.00	-1.64	4.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	±1.33 dB

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Peak Power Density			
Variant:	Band Group 3	**Duty Cycle (%):**	99
Data Rate:	-	**Antenna Gain (dBi):**	0.2/-0.2/0.1
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Frequency	Measured Output Power	Limit	Margin	EUT Power Setting
	dBm	dBm	Numeric	Numeric
6600.00	-35.220	-34.00	-1.22	2.0
7128.00	-36.648	-34.00	-2.65	2.0
7656.00	-36.188	-34.00	-2.19	2.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	±1.33 dB

Note: click the links in the above matrix to view the graphical image (plot).

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Equipment Configuration for Peak Power Density			
Variant:	Band Group 6	**Duty Cycle (%):**	99
Data Rate:	-	**Antenna Gain (dBi):**	0.1/-1.8/-1.8
Modulation:	BPM/BPSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Frequency	Measured Output Power	Limit	Margin	EUT Power Setting
	dBm	dBm	Numeric	Numeric
7656.00	-35.495	-34.00	-1.50	1.0
8184.00	-36.648	-34.00	-2.65	1.0
8712.00	-36.858	-34.00	-2.86	1.0

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Uncertainty:	±1.33 dB

Note: click the links in the above matrix to view the graphical image (plot).

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9.4. TX Spurious Band Emissions

Radiated Test Conditions for Radiated Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47 15.519	**Ambient Temp. (ºC):**	20.0 - 24.5
Test Heading:	Radiated Spurious and Band-Edge Emissions	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	ANSI C63.10 Section 10.2 + 10.3	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Radiated Spurious and Band-Edge Emissions
Radiated emissions for restricted bands above 1 GHz are measured in the anechoic chamber at a 3-meter distance on every azimuth in both horizontal and vertical polarities. The emissions are recorded and maximized as a function of azimuth by rotation through 360° with a spectrum analyzer in max hold mode. Depending on the frequency band spanned a notch filter was used to remove the fundamental frequency. The highest emissions relative to the limit are listed for each frequency spanned.
Measurements on any restricted band frequency or frequencies above 1 GHz are based on the use of measurement instrumentation employing peak and average detectors. All measurements were performed using a resolution bandwidth of 1 MHz.

Limits for Restricted Bands (15.205, 15.209)
Peak emission: 68.23 dBuV/m
Average emission: 54 dBuV/m

Field Strength Calculation
The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. All factors are included in the reported data.
FS = R + AF + CORR - FO

where:
FS = Field Strength
R = Measured Spectrum analyzer Input Amplitude
AF = Antenna Factor
CORR = Correction Factor = CL – AG + NFL
CL = Cable Loss
AG = Amplifier Gain
FO = Distance Falloff Factor
NFL = Notch Filter Loss

Measurements made at 1 meter to meet noise floor to limit requirements

Frequency Range		Average Limit	
MHz	**MHz**	**EIRP (dBm)**	**EIRP at 1 Meters (dBuV/m)**
960	1610	-75.3	29.4
1610	1990	-63.3	41.4
1990	3100	-61.3	43.4
3100	10600	-41.3	63.4
10600	18000	-61.3	43.4

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Radiated Spurious Emissions in the GPS Bands 15.519 (d)

Frequency Range		Average Limit	
MHz	**MHz**	**EIRP (dBm)**	**EIRP at 1 Meters (dBuV/m)**
1164	**1240**	**-85.3**	**19.47**
1559	**1610**	**-85.3**	**19.47**

50 MHz Peak Emissions 15.519 (e)
Within 50 MHz bandwidth centered on highest radiated emissions $f_{M,}$ Limit is 0 dBM EIRP. At 1 meter distance the equivalent level is 104.77 dBuVm

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9.4.1. TX Spurious Band Emissions

9.4.1.1. Commander AL5930

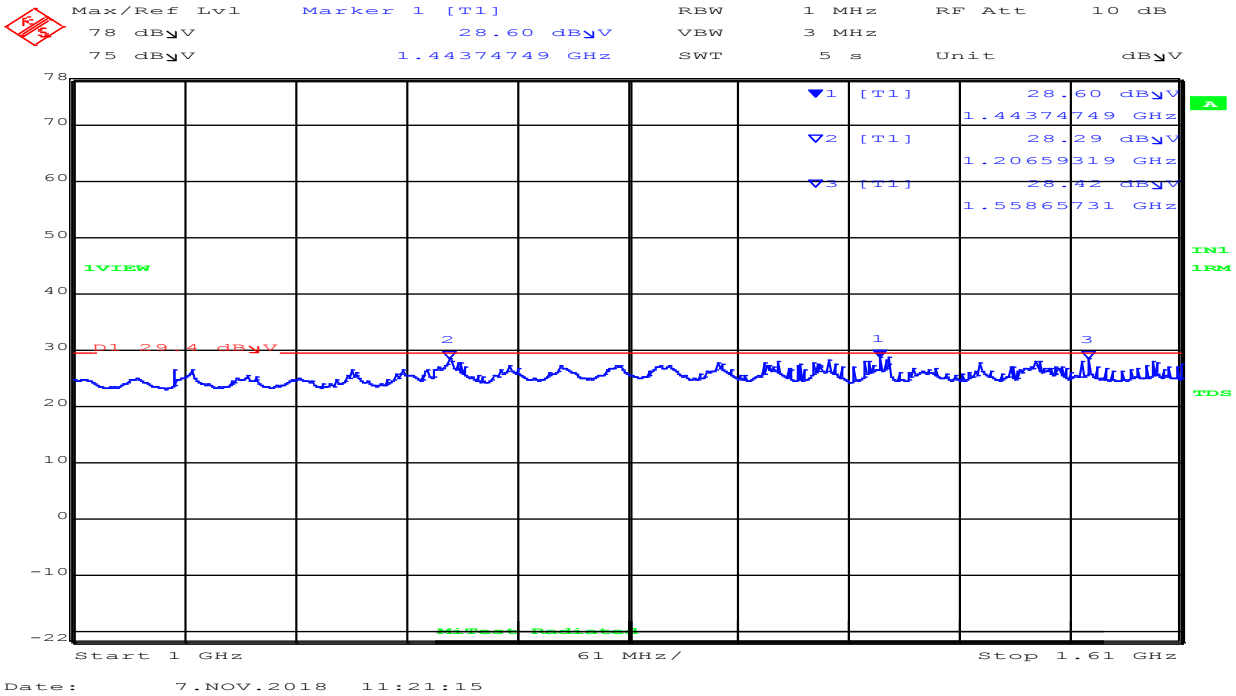
3432 MHz

Equipment Configuration for Spurious Emissions 1 - 1.61 GHz Horizontal			
Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1443.75*	28.2	Average	Horizontal	150	0	29.4	-1.2	Pass
2	1206.59*	26.4	Average	Horizontal	150	0	29.4	-3.0	Pass
3	1558.66*	25.2	Average	Horizontal	150	0	29.4	-4.2	Pass

Test Notes:
Source Laptop and UART to serial converter cable

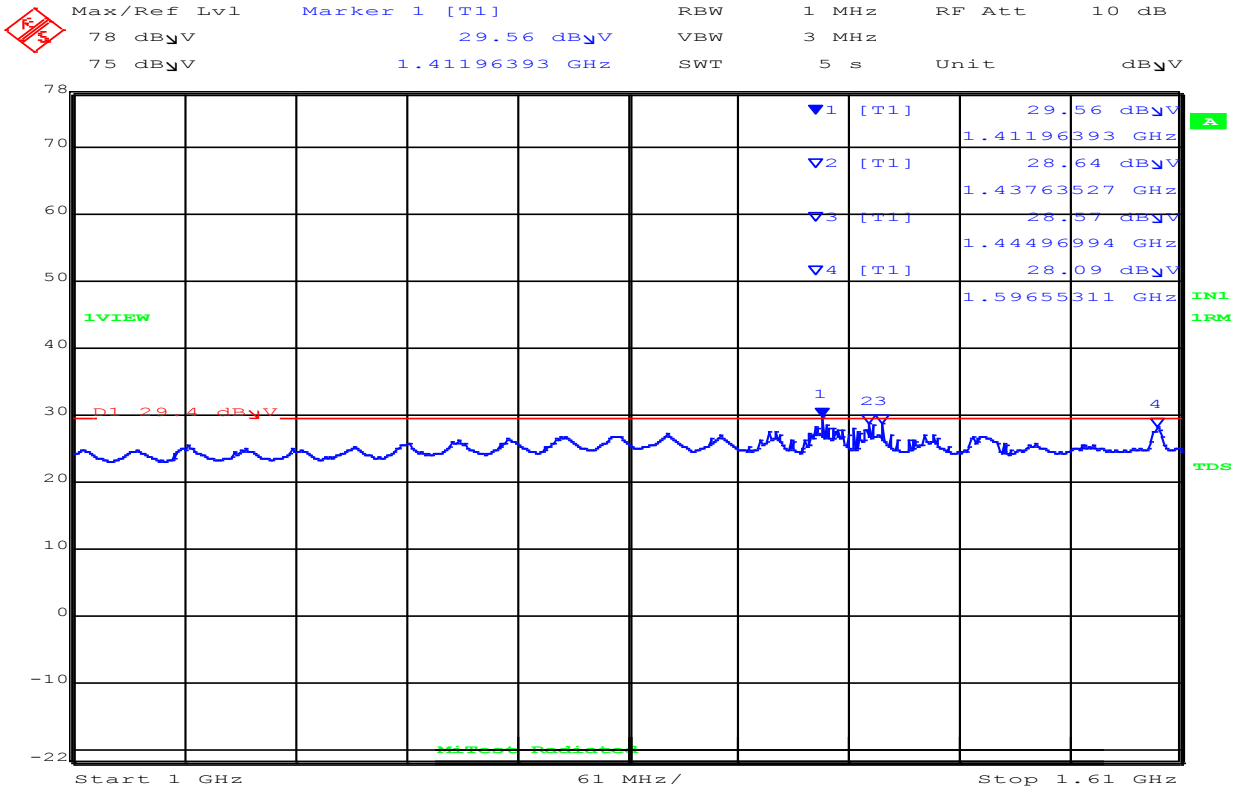
Equipment Configuration for Spurious Emissions 1 - 1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 11:31:31

1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1411.96*	28.1	Average	Vertical	150	0	29.4	-1.3	Pass
2	1437.63*	28.0	Average	Vertical	150	0	29.4	-1.4	Pass
3	1444.96*	27.5	Average	Vertical	150	0	29.4	-1.9	Pass
4	1596.55*	27.2	Average	Vertical	150	0	29.4	-2.2	Pass

Test Notes:
Source Laptop and UART to serial converter cable

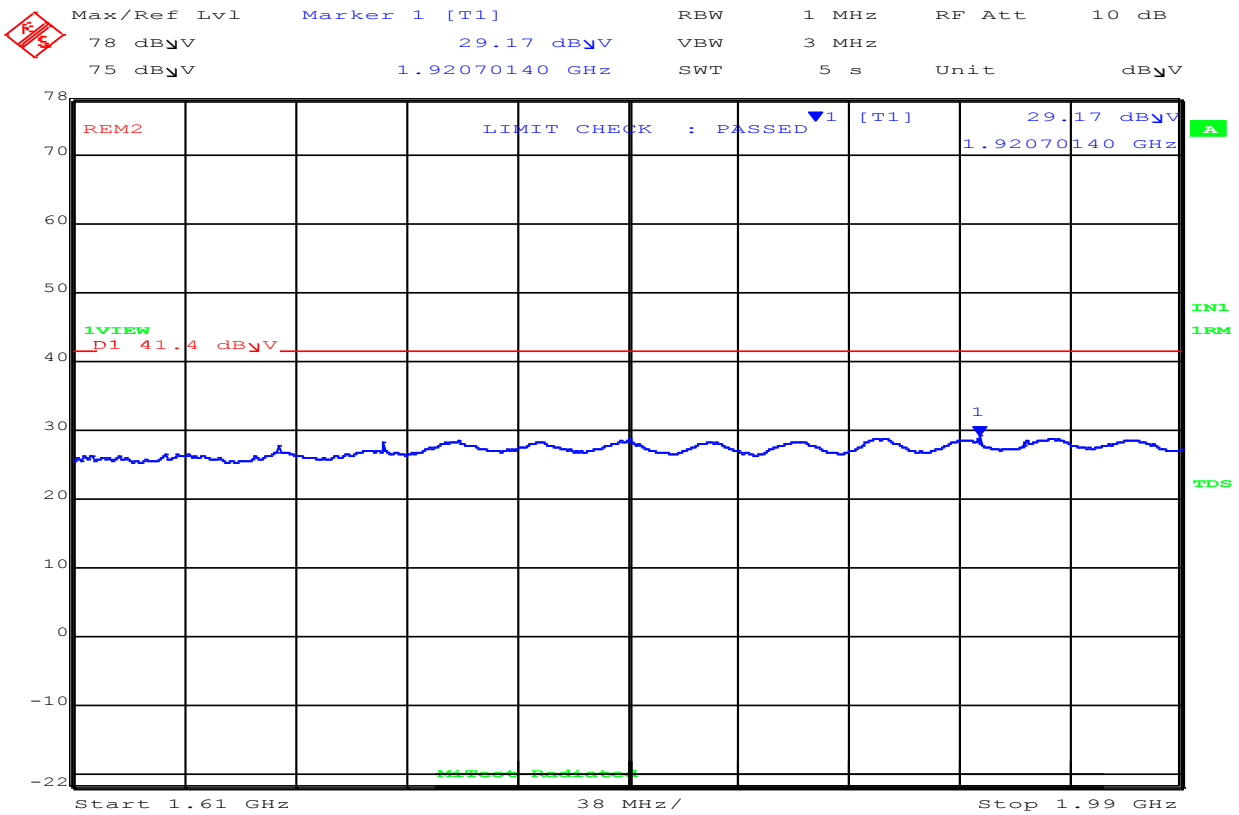
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 6.NOV.2018 15:11:09

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:
Laptop Removed

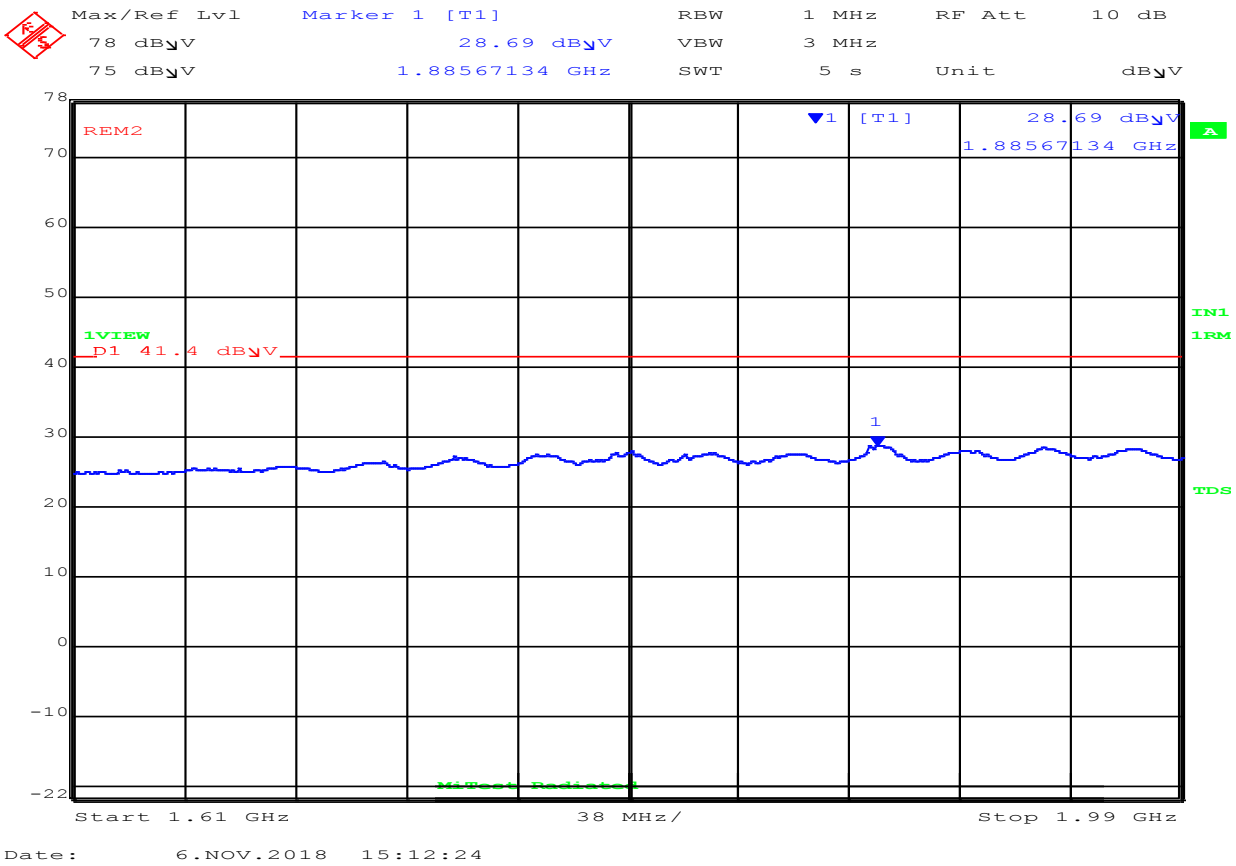
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:
Laptop Removed

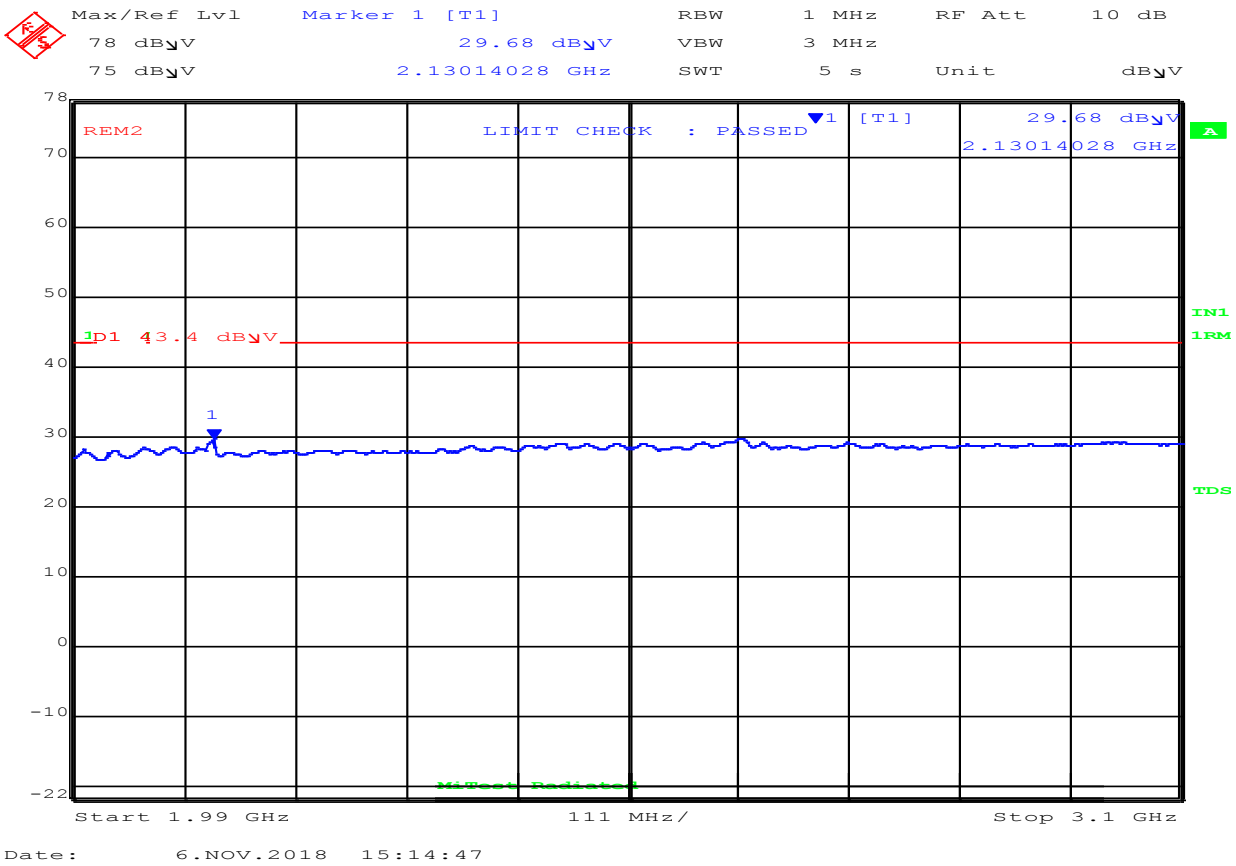
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:
Laptop Removed

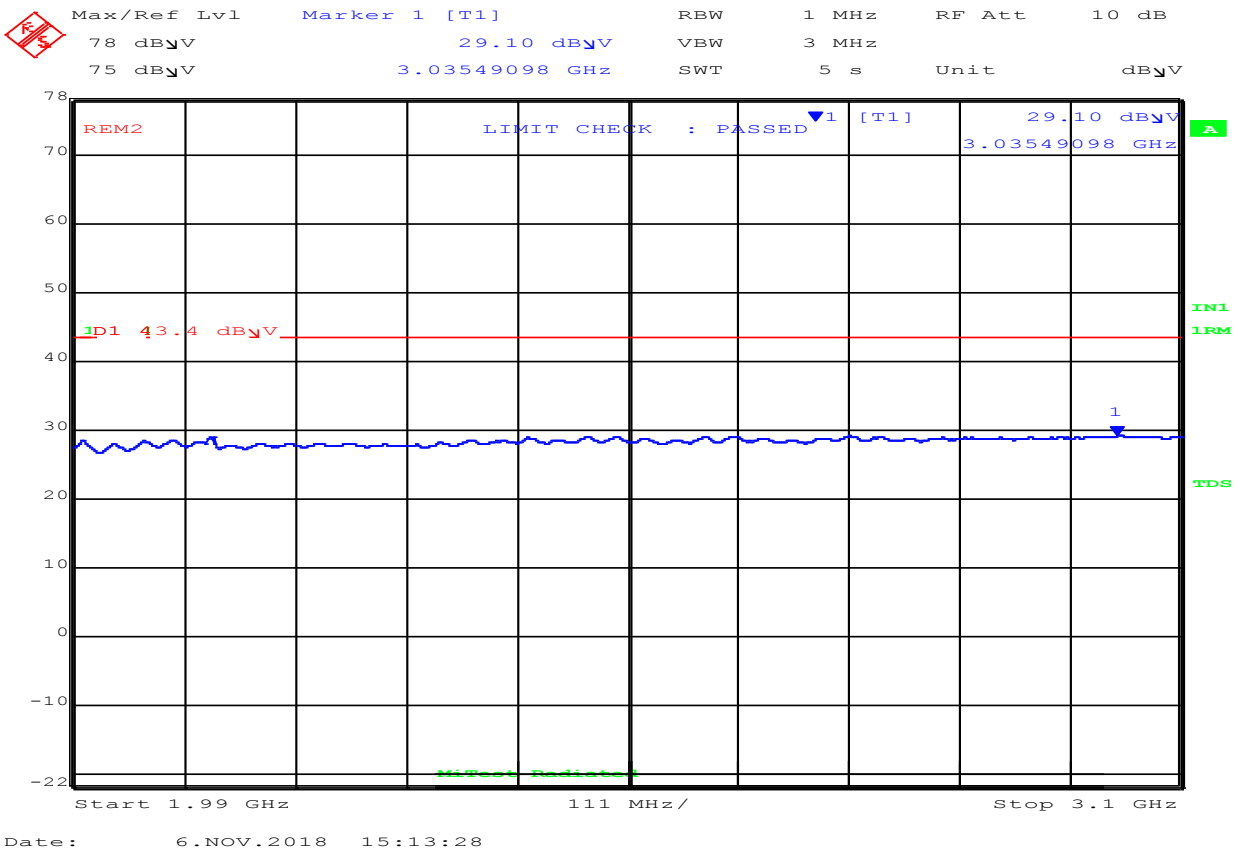
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1 GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:
Laptop Removed

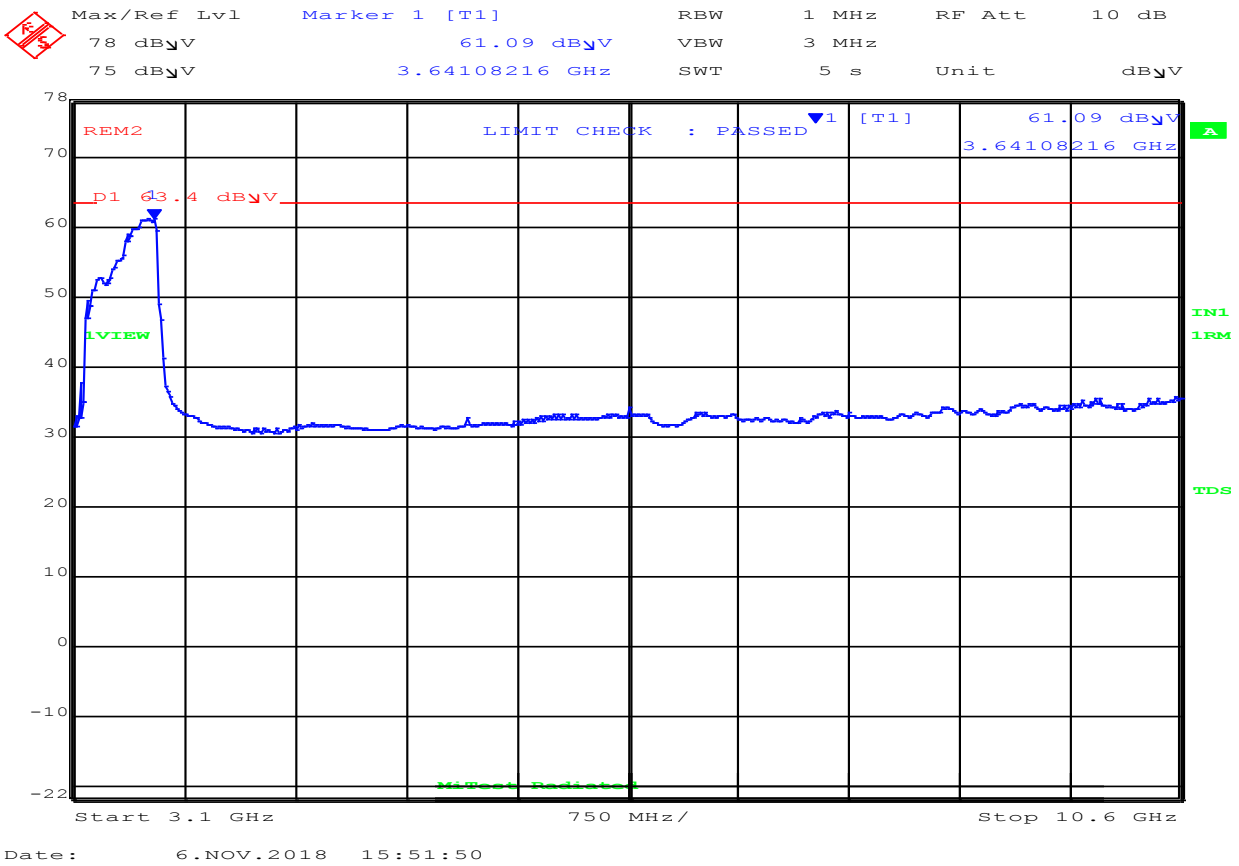
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6 GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	3641.08	59.60	Average	Horizontal	150	0	63.4	-3.8	Pass

Test Notes:

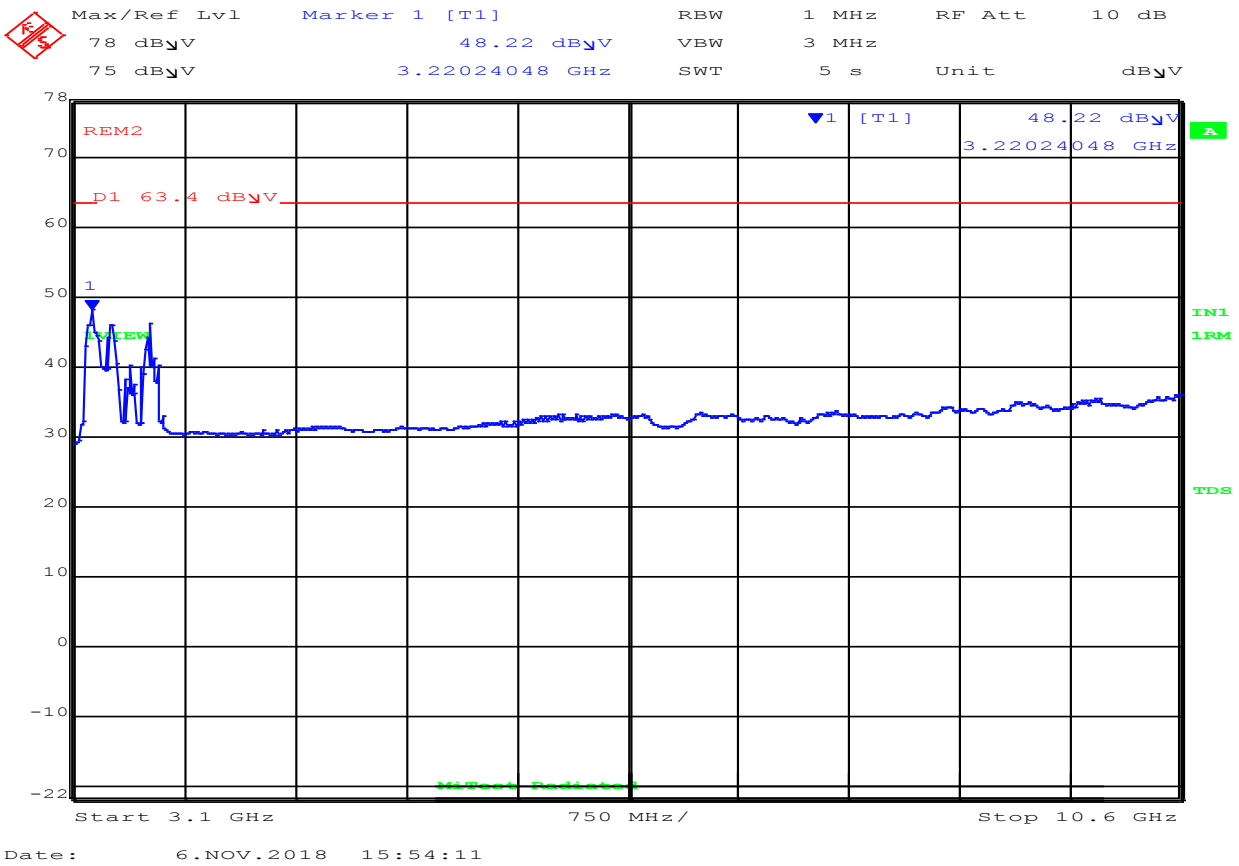
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6 GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 6.NOV.2018 15:54:11

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

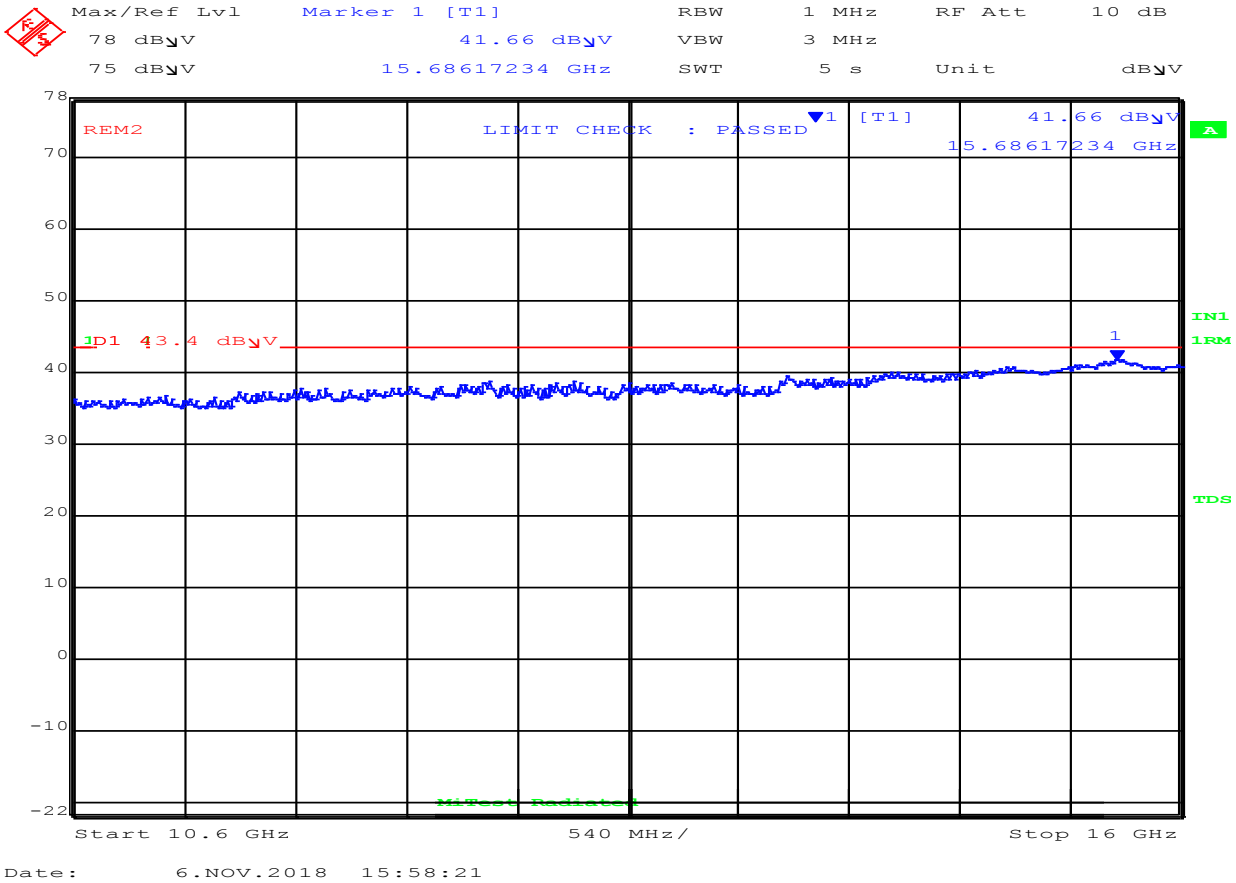
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16 GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.2	Average	Horizontal	150	0	43.4	-3.2	Pass

Test Notes:

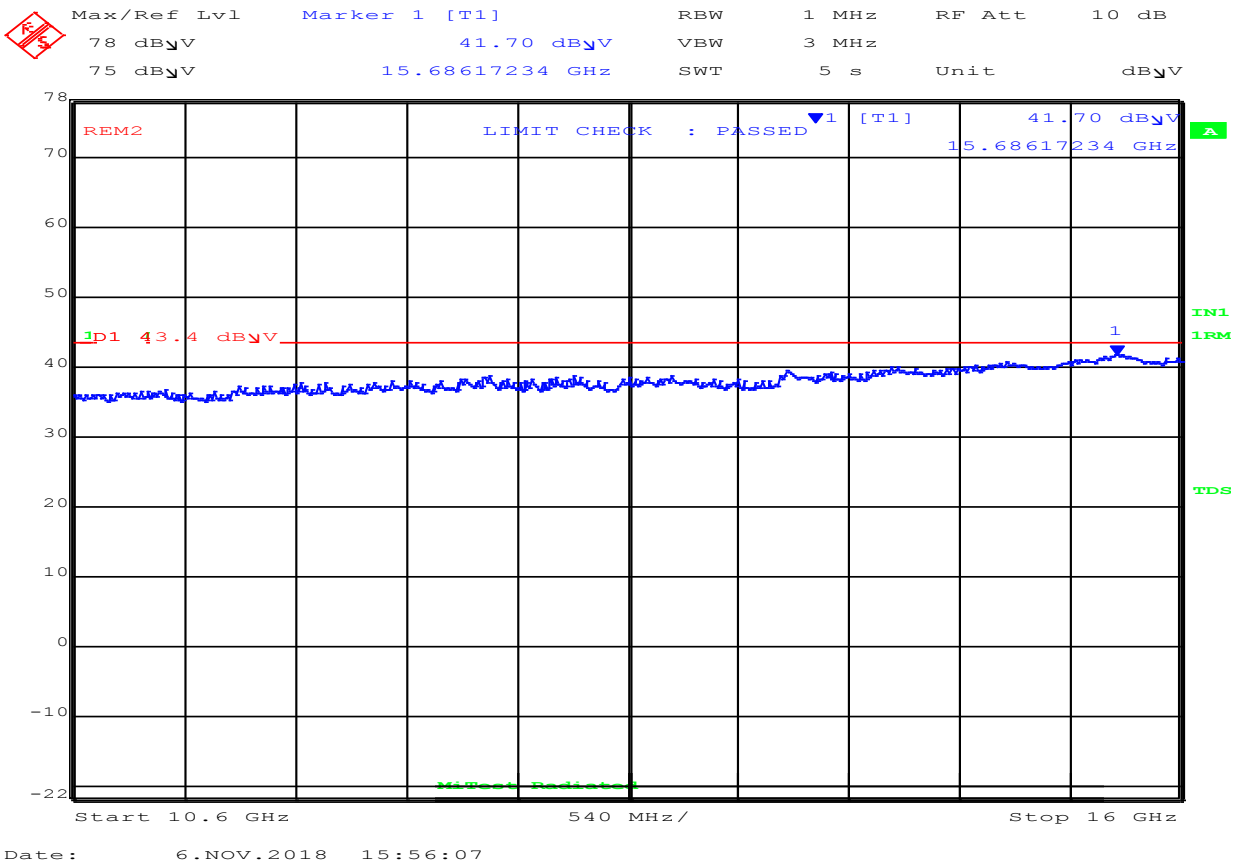
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	41.3	Average	Vertical	150	0	43.4	-2.1	Pass

Test Notes:

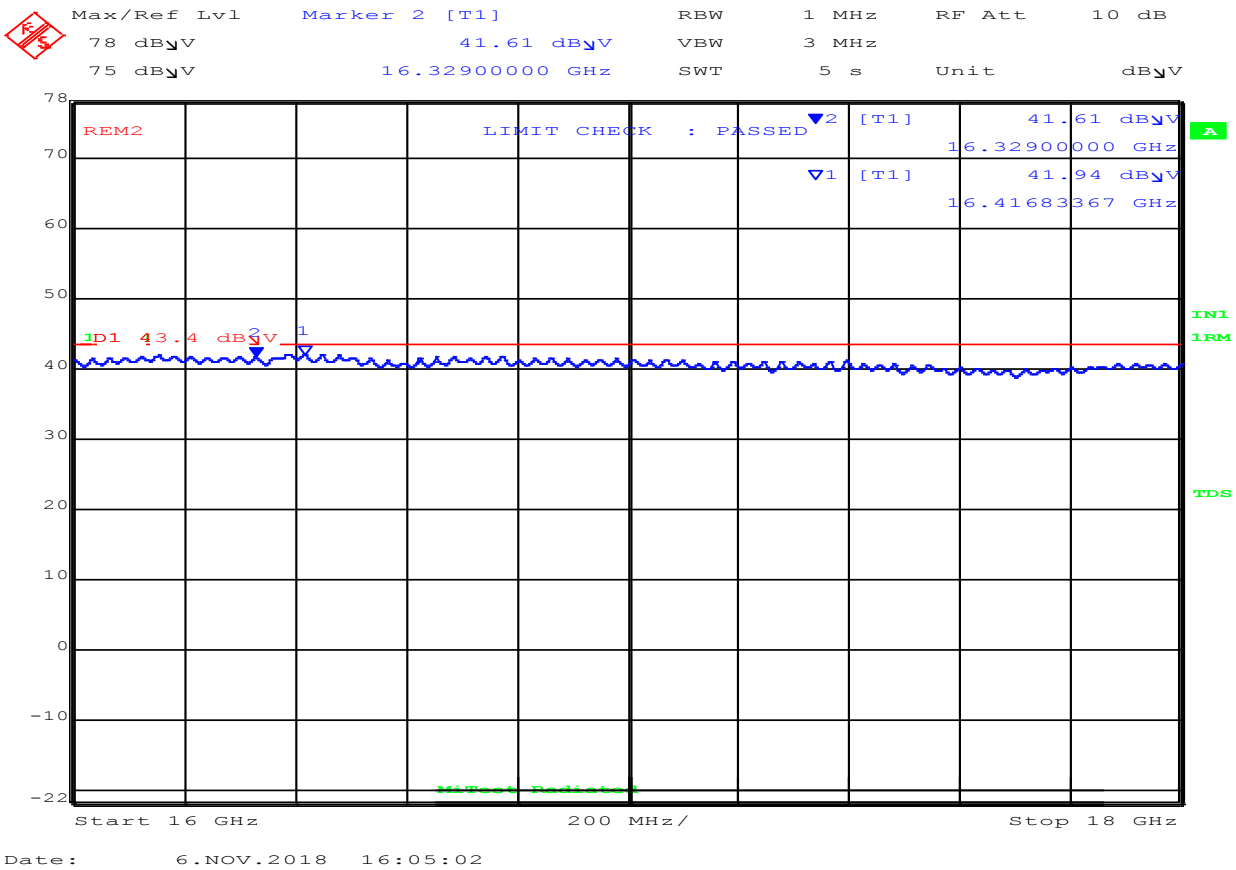
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16416.83	40.9	Average	Horizontal	150	0	43.4	-2.5	Pass
2	16329.00	40.6	Average	Horizontal	150	0	43.4	-2.8	Pass

Test Notes:

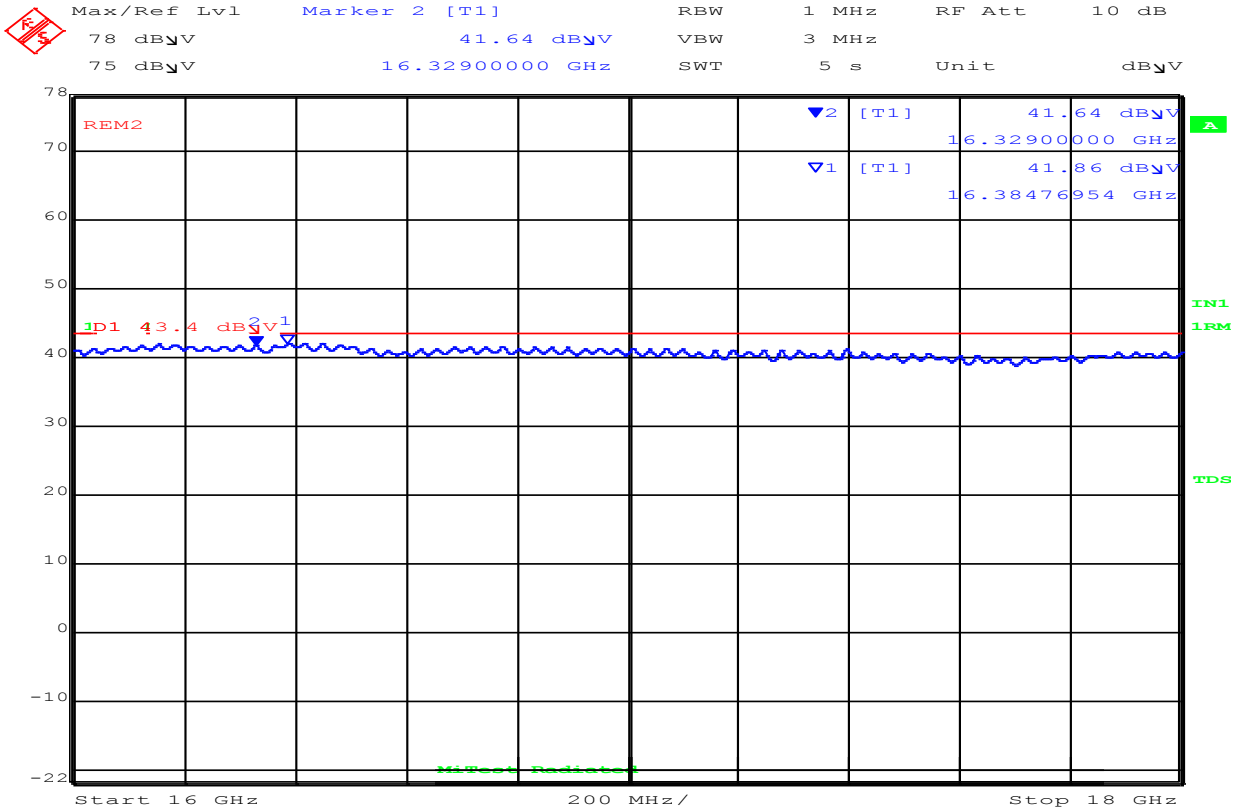
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16384.77	40.9	Average	Vertical	150	0	43.4	-2.5	Pass
2	16329.00	40.5	Average	Vertical	150	0	43.4	-2.9	Pass

Test Notes:

3960 MHz

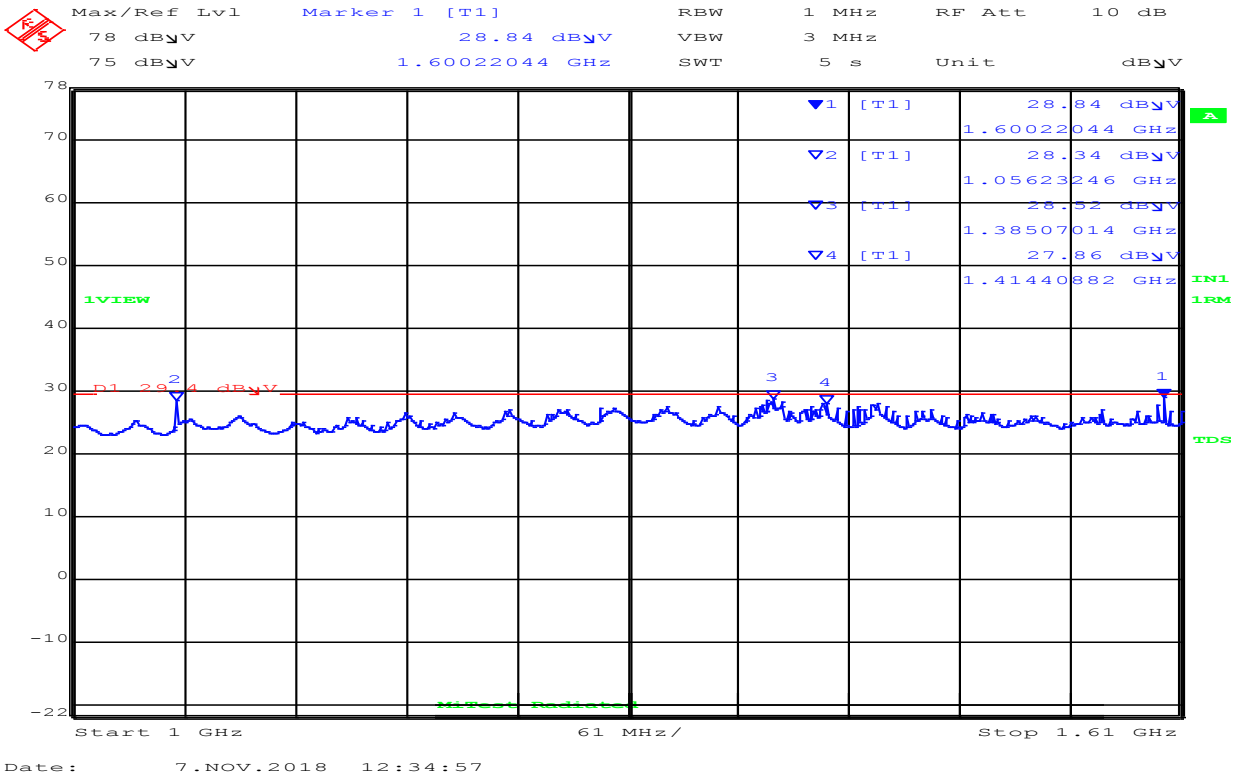
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 12:34:57

1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1600.22*	28.10	Average	Horizontal	150	0	29.4	-1.3	Pass
2	1056.23*	28.5	Average	Horizontal	150	0	29.4	-0.9	Pass
3	1385.51*	27.1	Average	Horizontal	150	0	29.4	-2.3	Pass
3	1414.41*	27.0	Average	Horizontal	150	0	29.4	-2.4	Pass

Test Notes:
Source Laptop and UART to serial converter cable

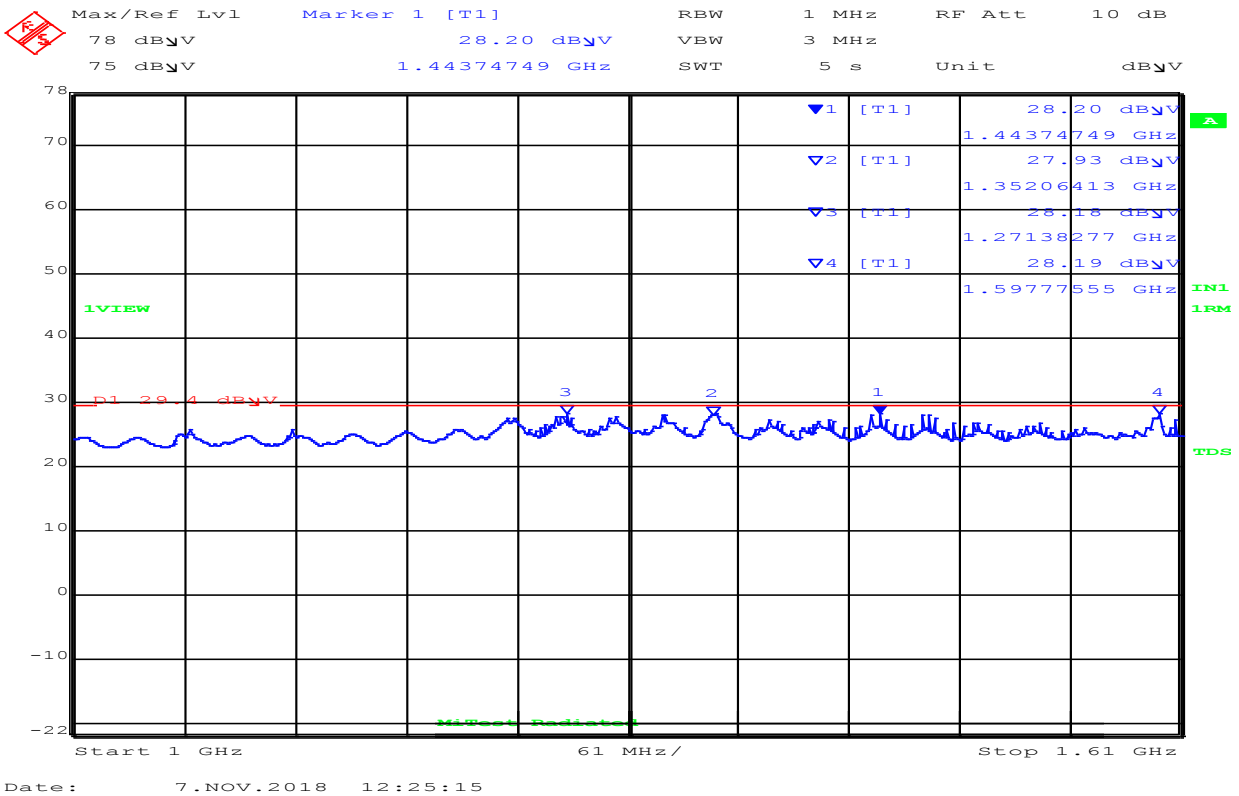
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1443.74*	27.5	Average	Vertical	150	0	29.4	-1.9	Pass
2	1352.06*	26.9	Average	Vertical	150	0	29.4	-2.5	Pass
3	1271.38*	26.2	Average	Vertical	150	0	29.4	-3.2	Pass
4	1597.77*	27.1	Average	Vertical	150	0	29.4	-2.3	Pass

Test Notes:
Source Laptop and UART to serial converter cable

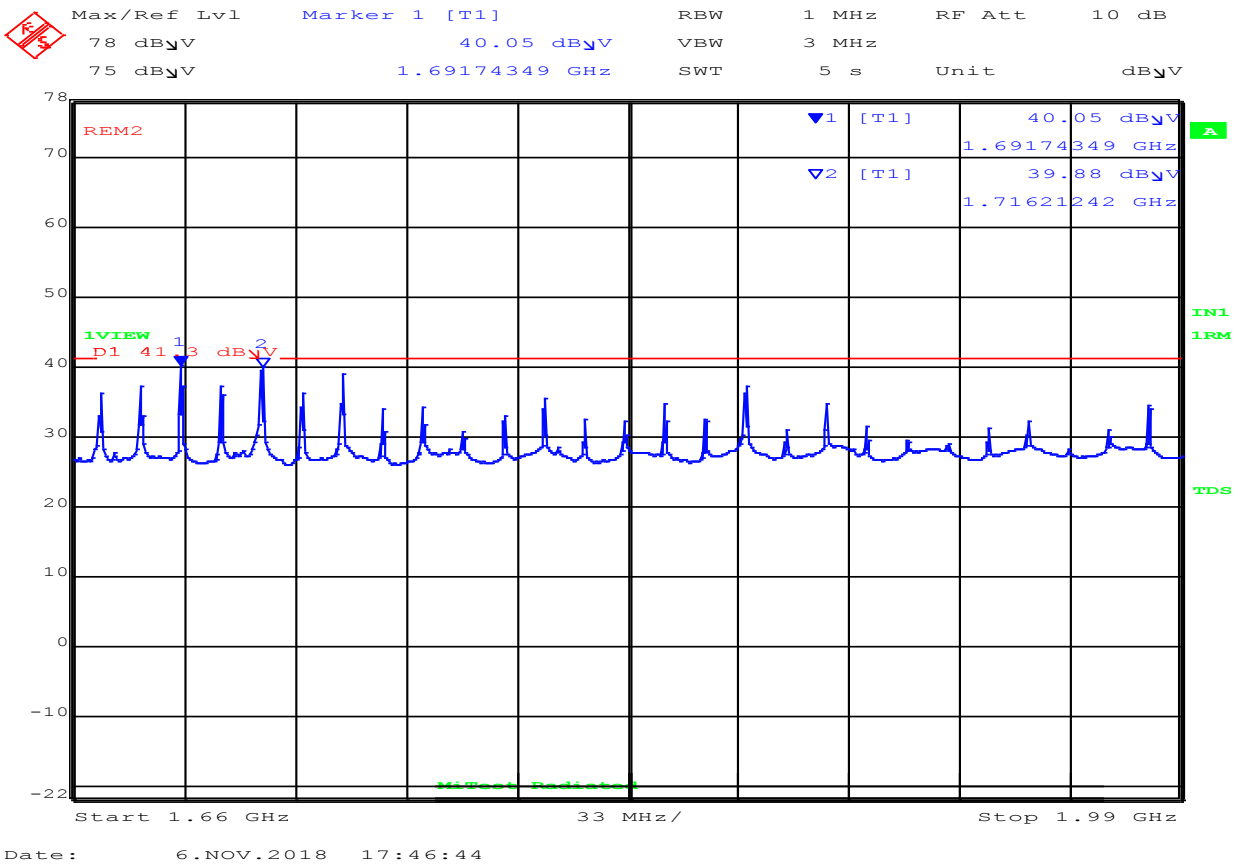
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 6.NOV.2018 17:46:44

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1691.74*	38.7	Average	Horizontal	150	0	41.4	-2.7	Pass
2	1716.21*	39.2	Average	Horizontal	150	0	41.4	-2.2	Pass

Test Notes:
Source Laptop and UART to serial converter cable

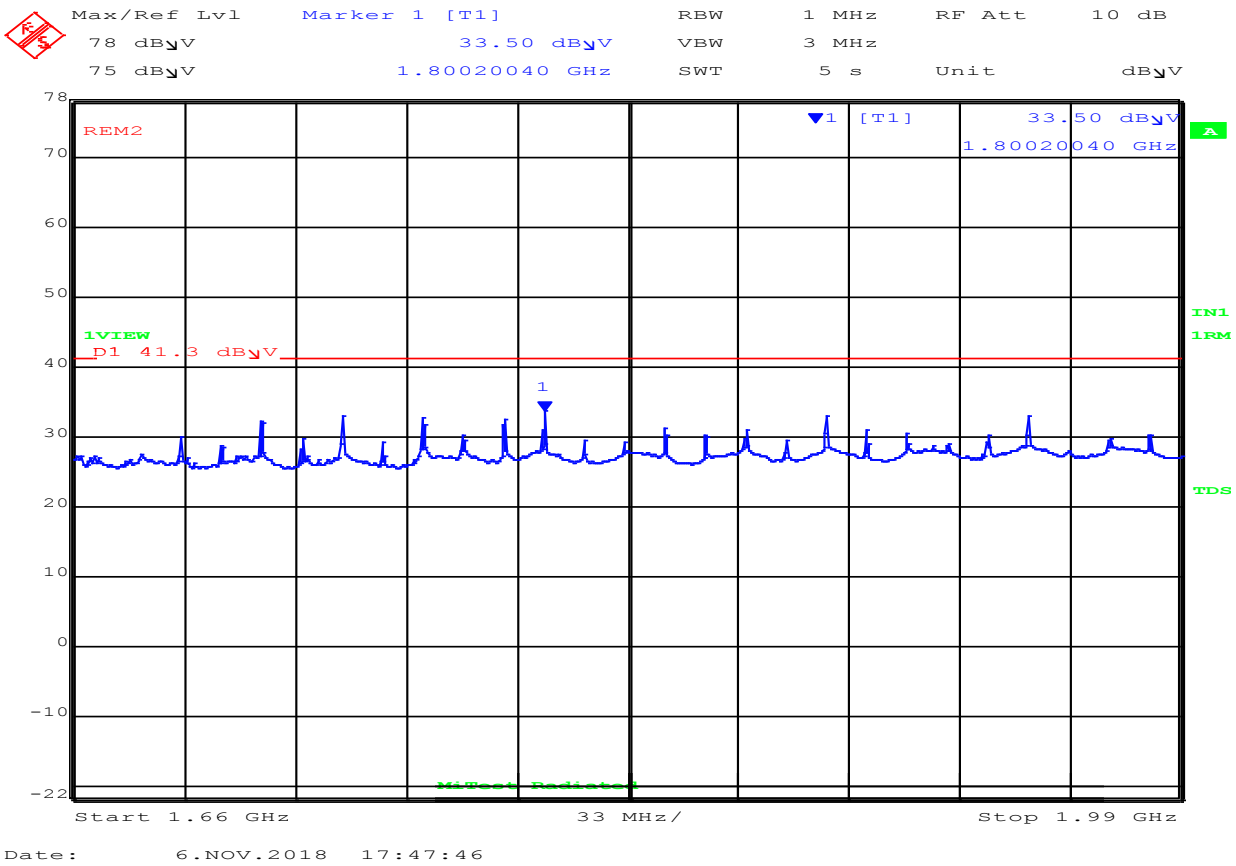
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 6.NOV.2018 17:47:46

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:
Source Laptop and UART to serial converter cable

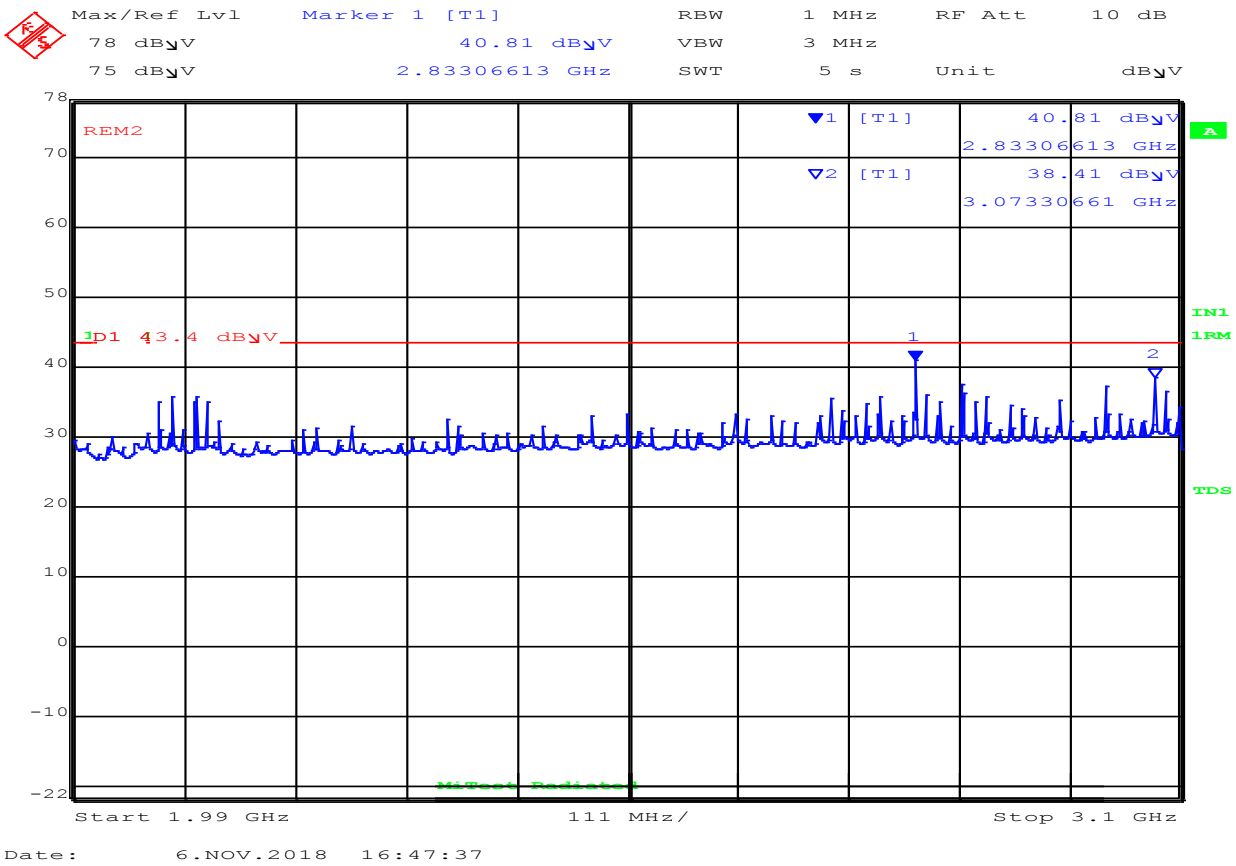
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2833.06*	40.8	Average	Horizontal	150	0	43.4	-2.6	Pass
2	3073.31*	38.2	Average	Horizontal	150	0	43.4	-5.2	Pass

Test Notes:
Source Laptop and UART to serial converter cable

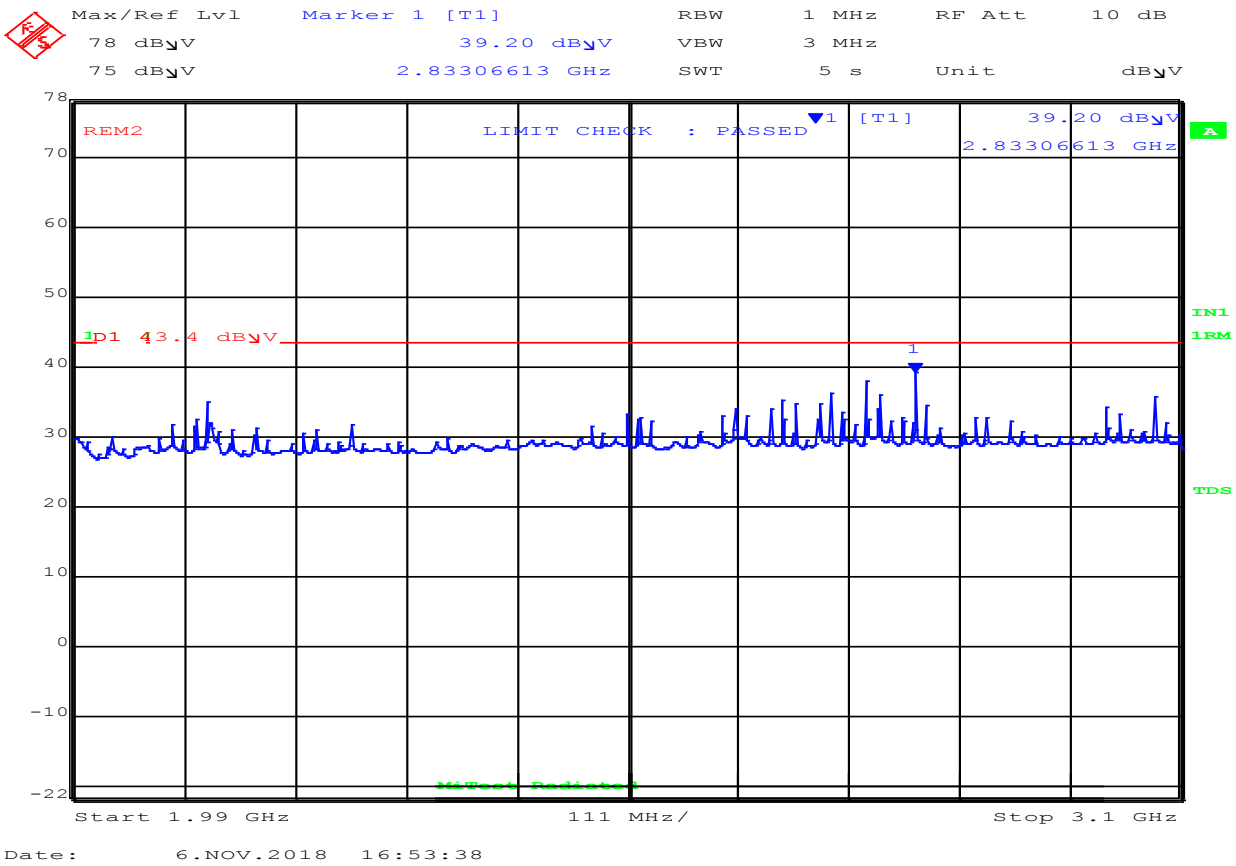
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2833.06*	39.2	Average	Vertical	150	0	43.4	-4.2	Pass

Test Notes:
Source Laptop and UART to serial converter cable

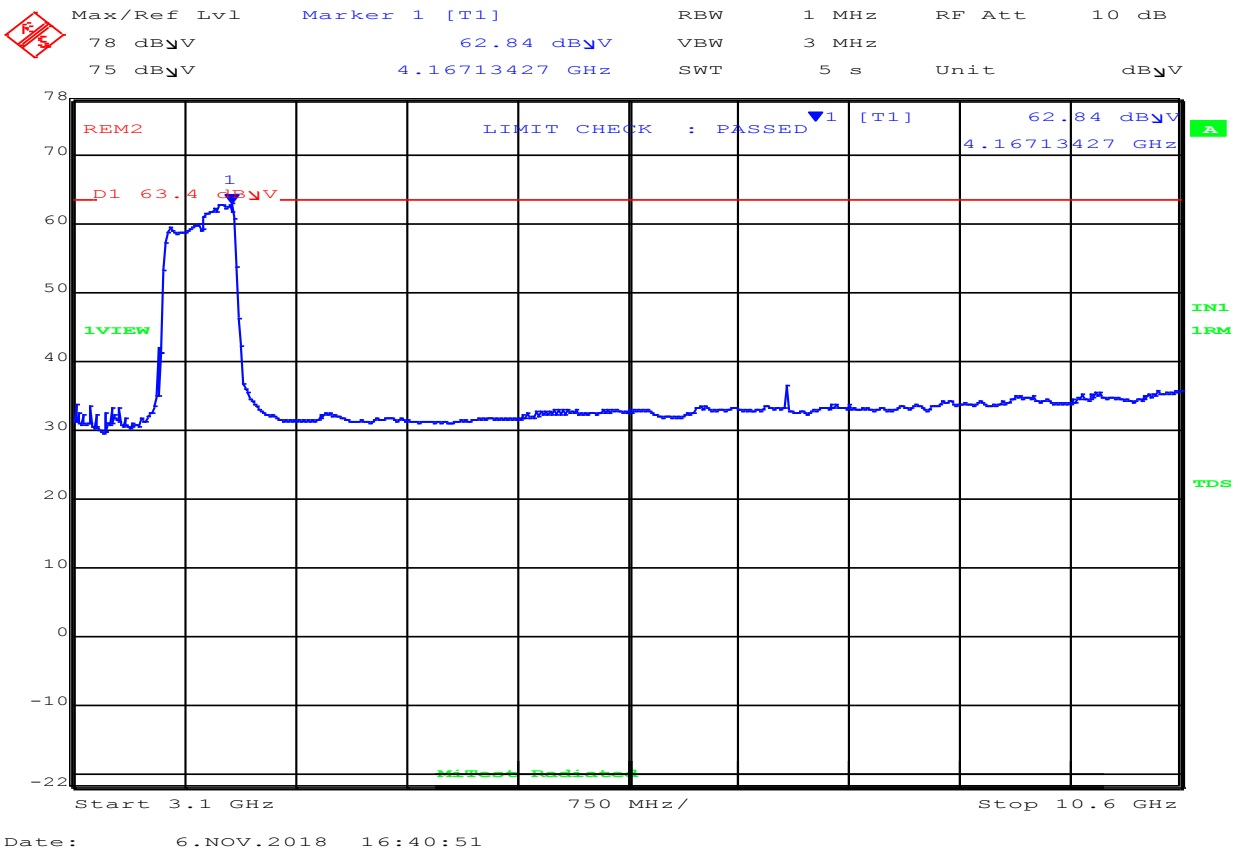
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



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3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	4167.13	62.0	Average	Horizontal	150	0	63.4	-1.4	Pass

Test Notes:

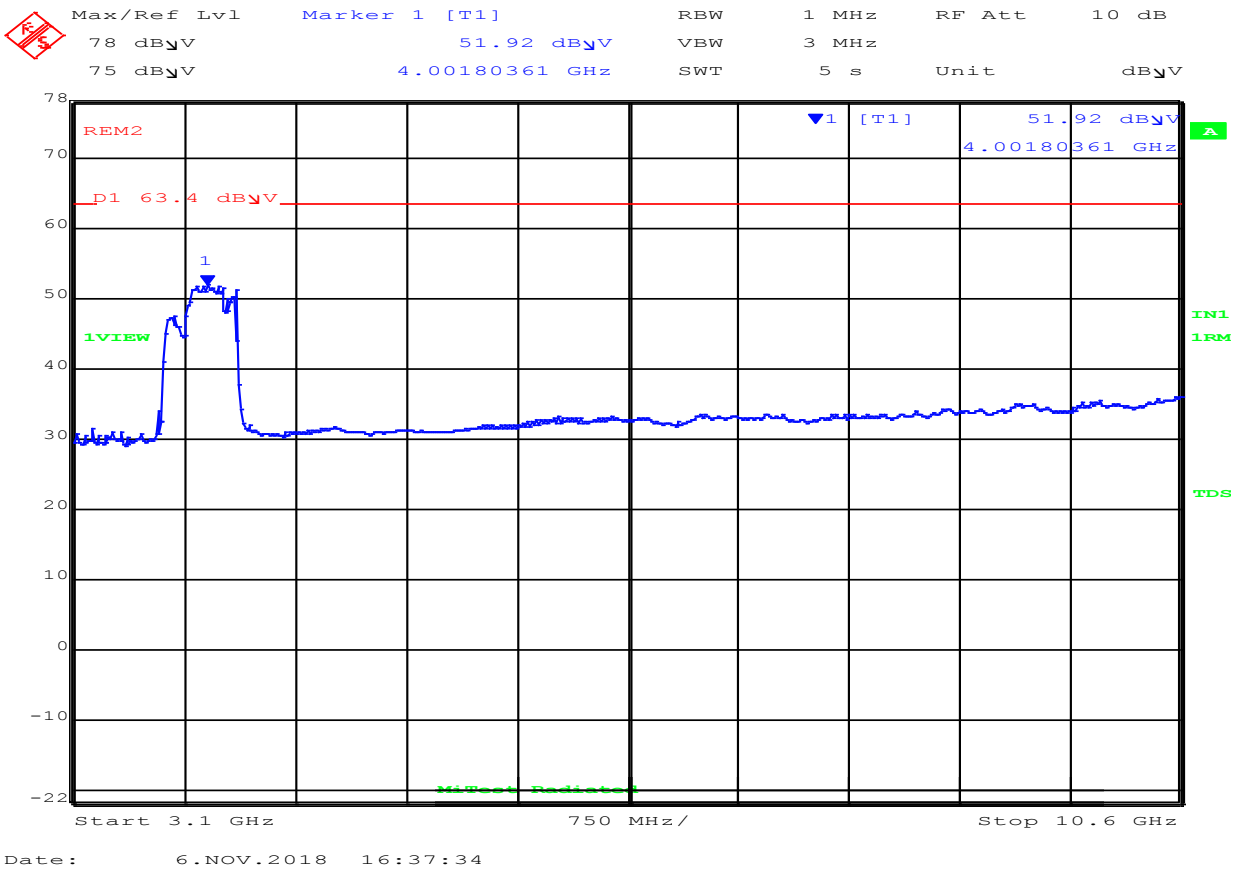
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

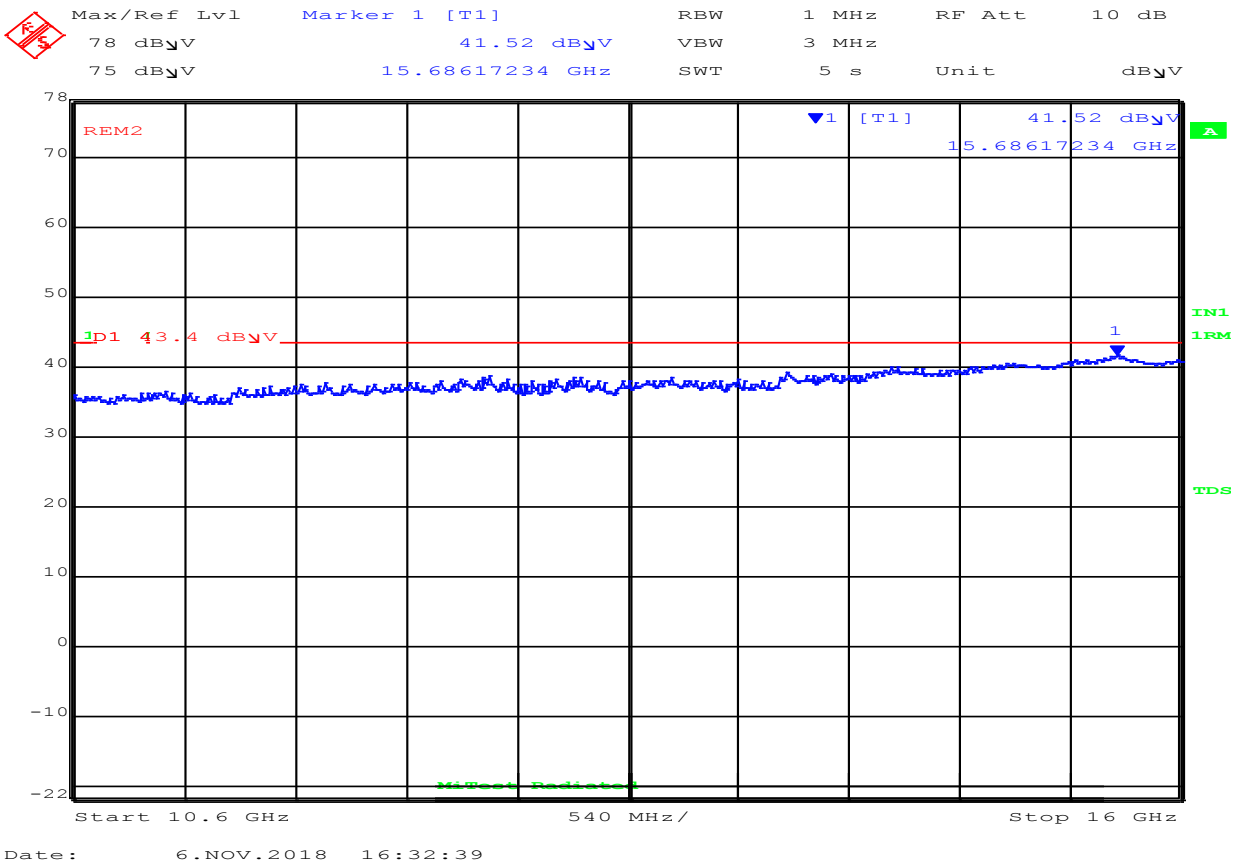
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	39.9	Average	Horizontal	150	0	29.4	-3.5	Pass

Test Notes:

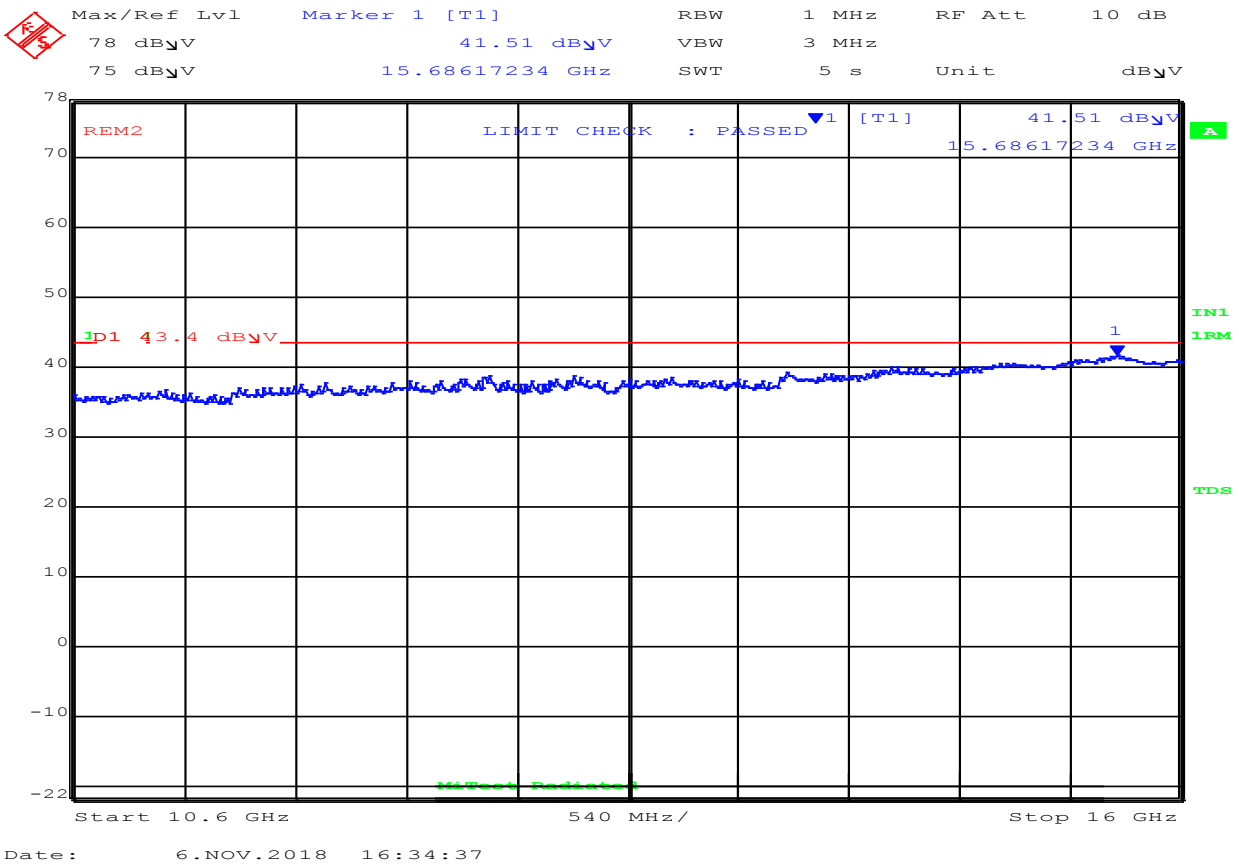
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



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10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	39.9	Average	Vertical	150	0	43.4	-3.5	Pass

Test Notes:

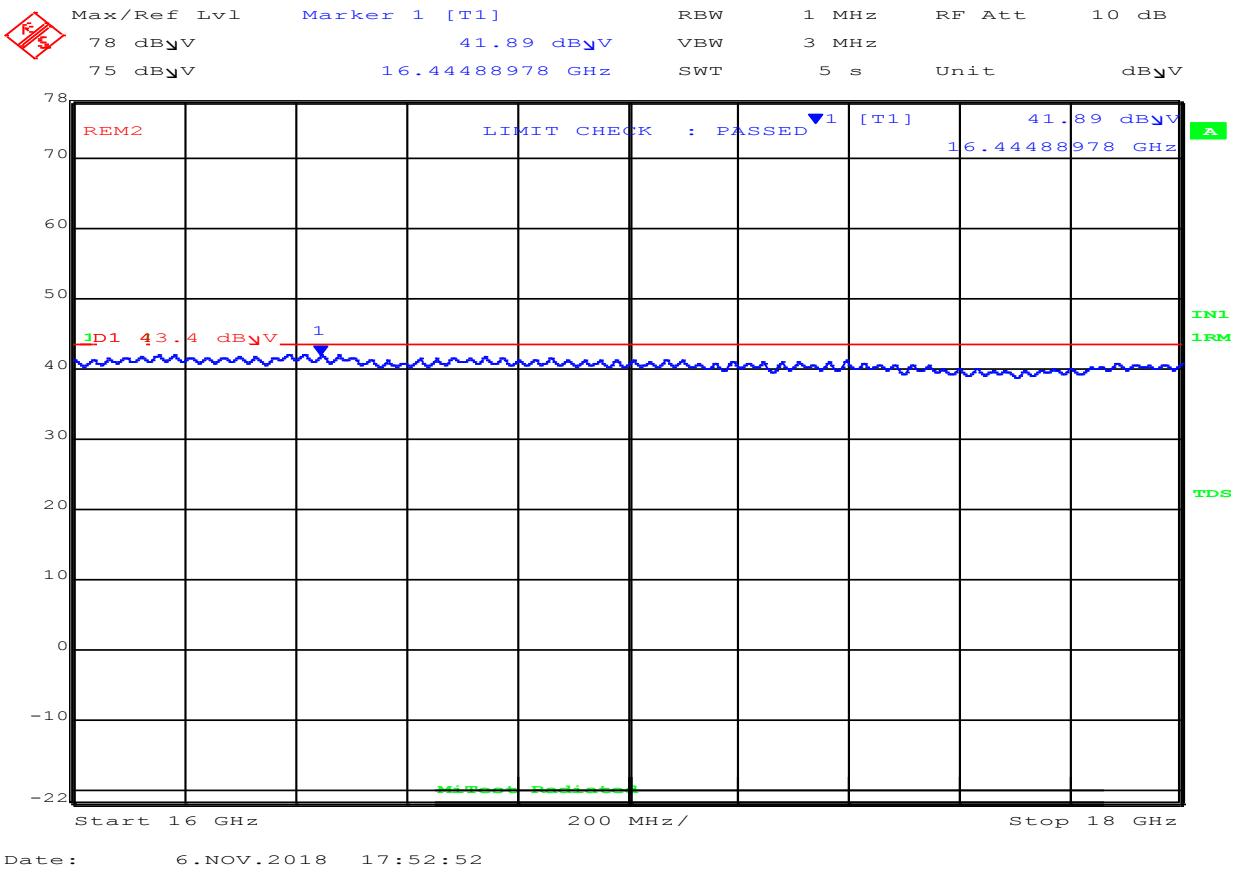
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.8	Average	Horizontal	150	0	43.4	-2.6	Pass
Test Notes:									

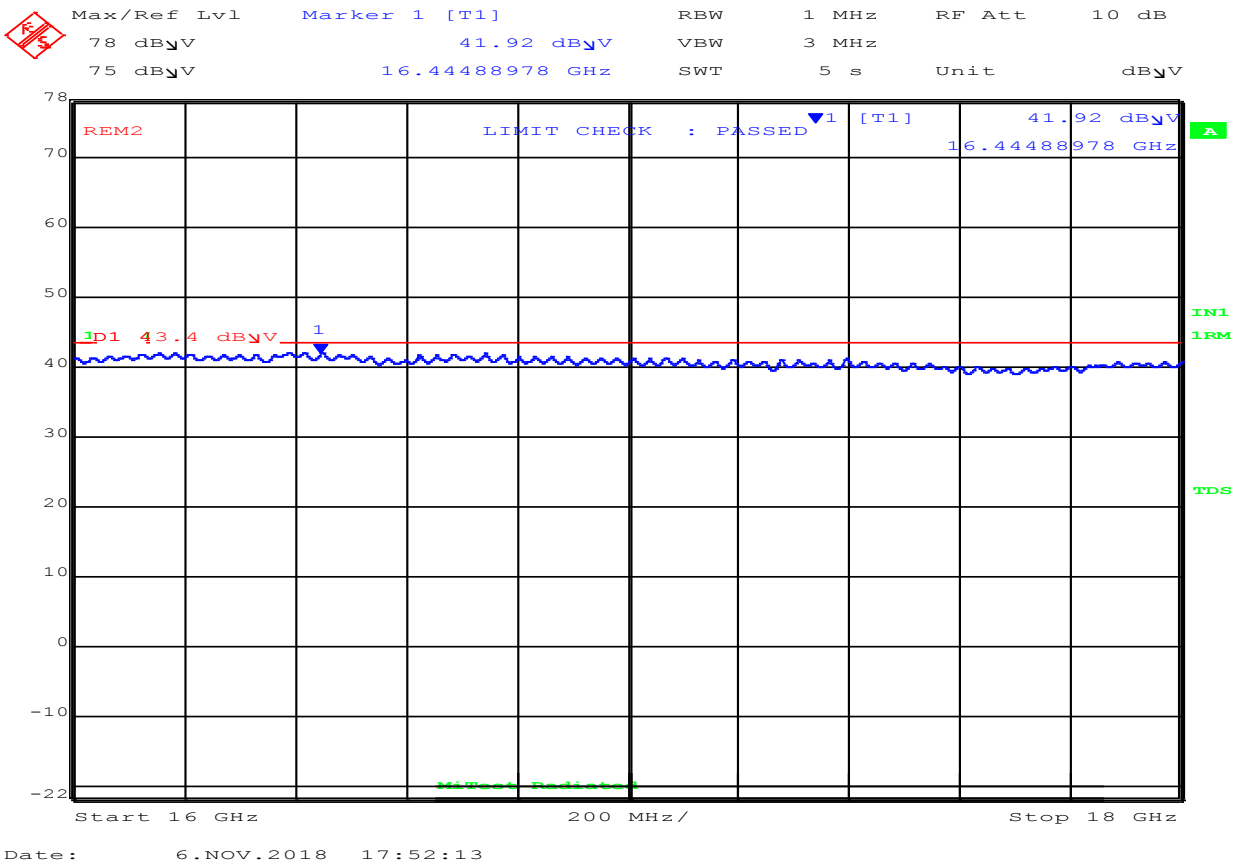
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.8	Average	Vertical	150	0	43.4	-2.6	Pass

Test Notes:

4488 MHz

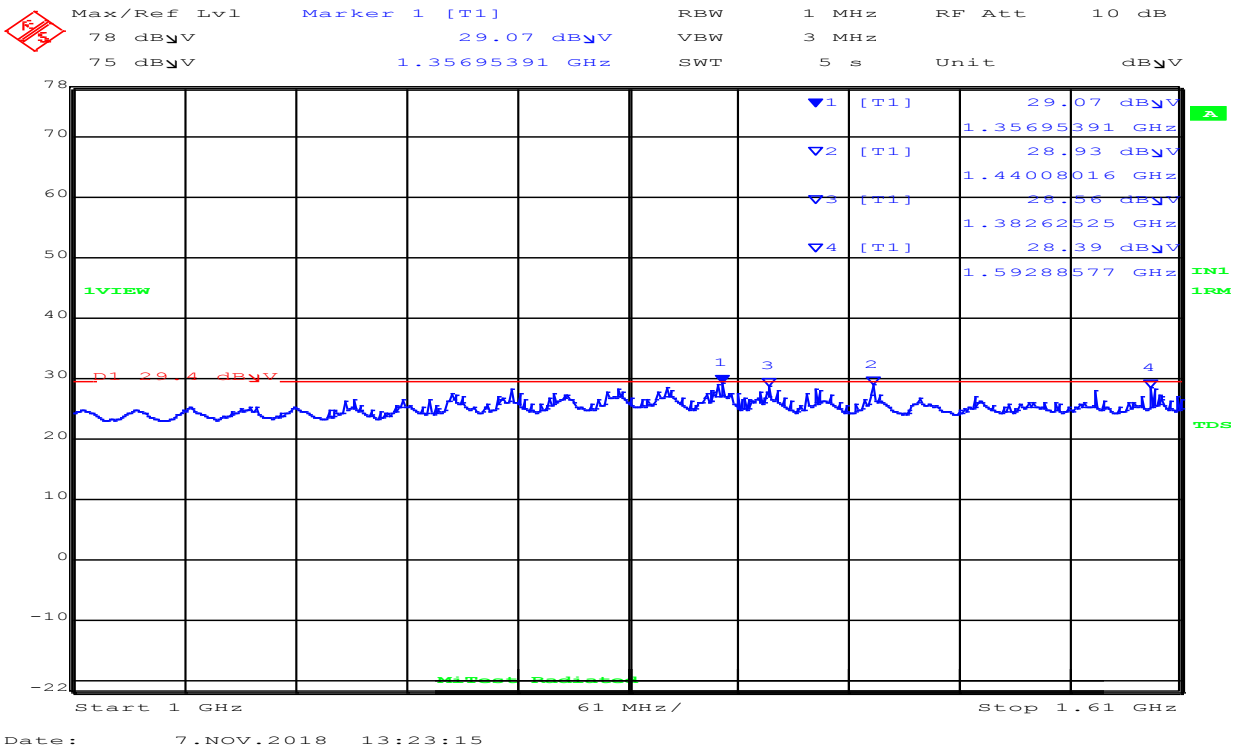
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1356.95*	27.7	Average	Horizontal	150	0	29.4	-1.7	Pass
2	1440.08	28.3	Average	Horizontal	150	0	29.4	-1.1	Pass
3	1382.62*	28.0	Average	Horizontal	150	0	29.4	-1.4	Pass
4	1592.89*	27.9	Average	Horizontal	150	0	29.4	-1.5	Pass

Test Notes:
Source Laptop and UART to serial converter cable

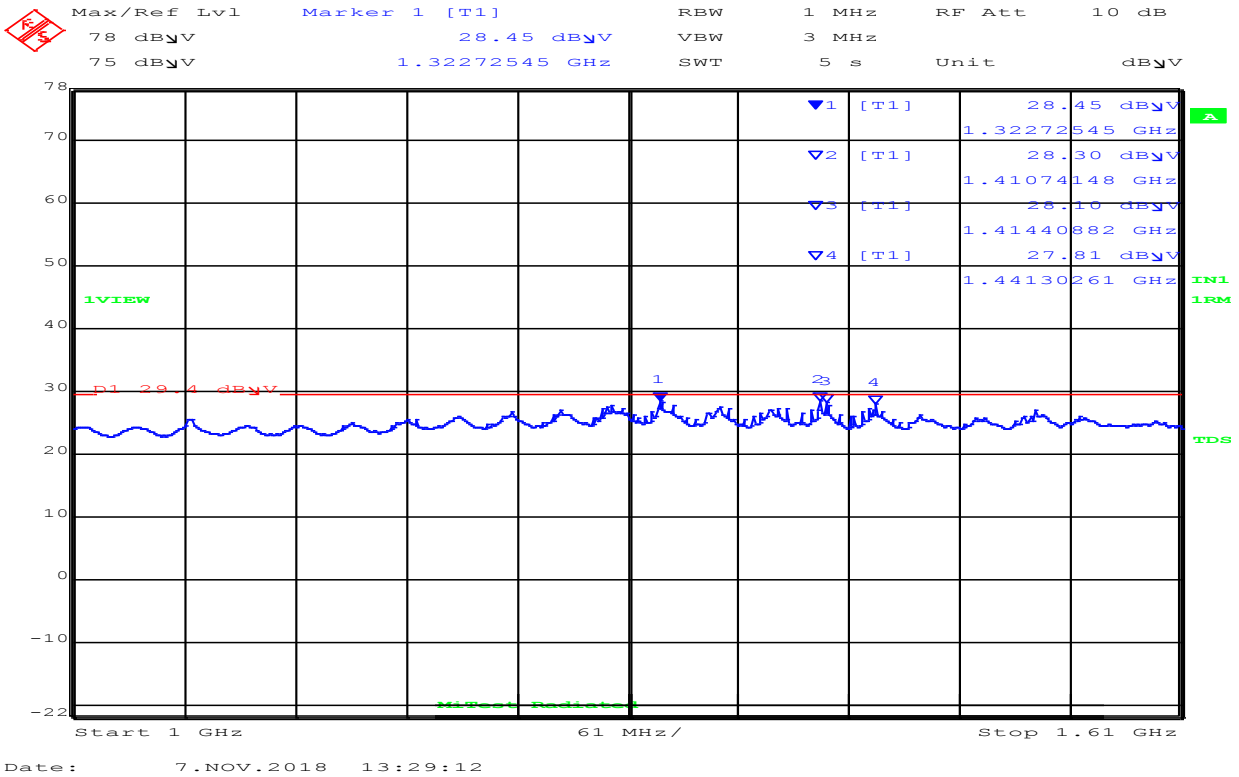
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1322.72*	27.1	Average	Vertical	150	0	29.4	-2.3	Pass
2	1410.74*	28.0	Average	Vertical	150	0	29.4	-1.4	Pass
3	1414.41*	27.9	Average	Vertical	150	0	29.4	-1.5	Pass
4	1441.30*	26.9	Average	Vertical	150	0	29.4	-2.5	Pass

Test Notes:
Source Laptop and UART to serial converter cable

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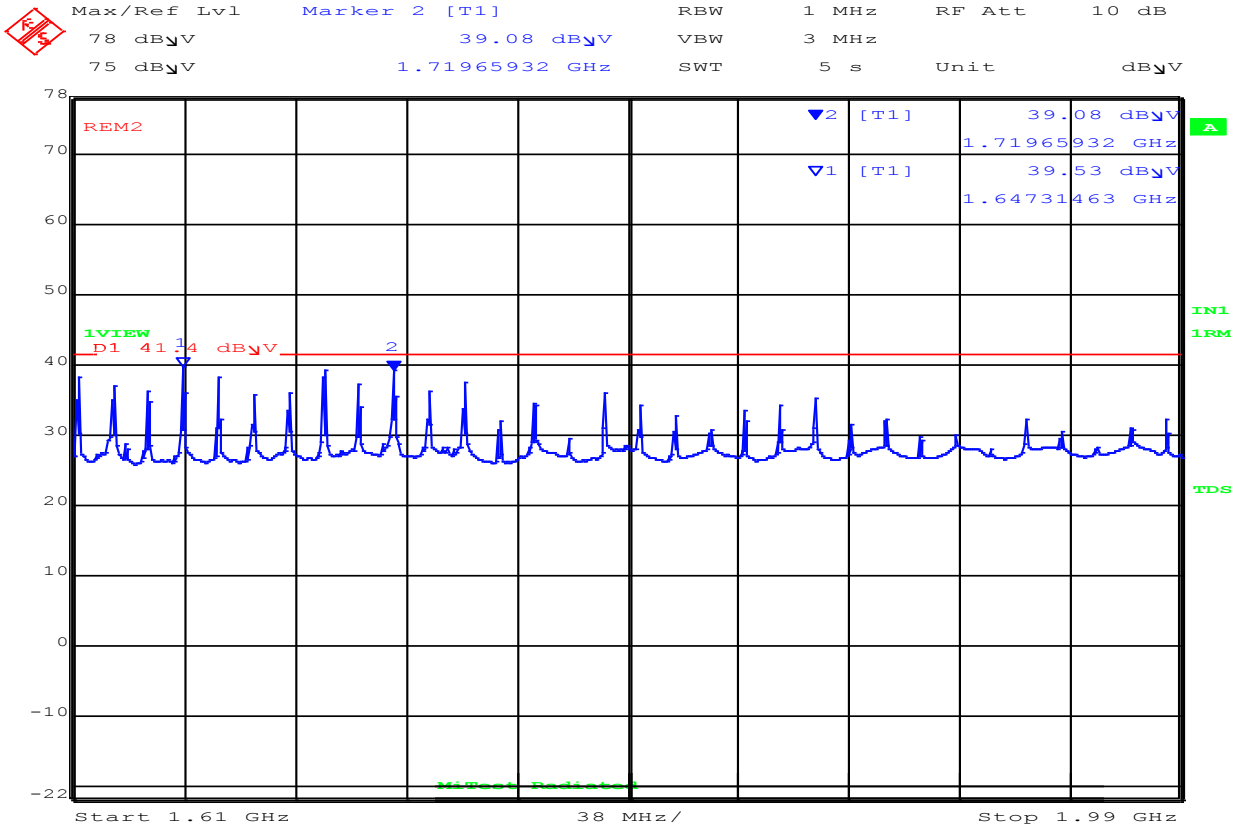
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



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1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1647.31*	37.2	Average	Horizontal	150	0	41.4	-4.2	Pass
2	1719.66*	38.6	Average	Horizontal	150	0	41.4	-2.8	Pass

Test Notes:
Source Laptop and UART to serial converter cable

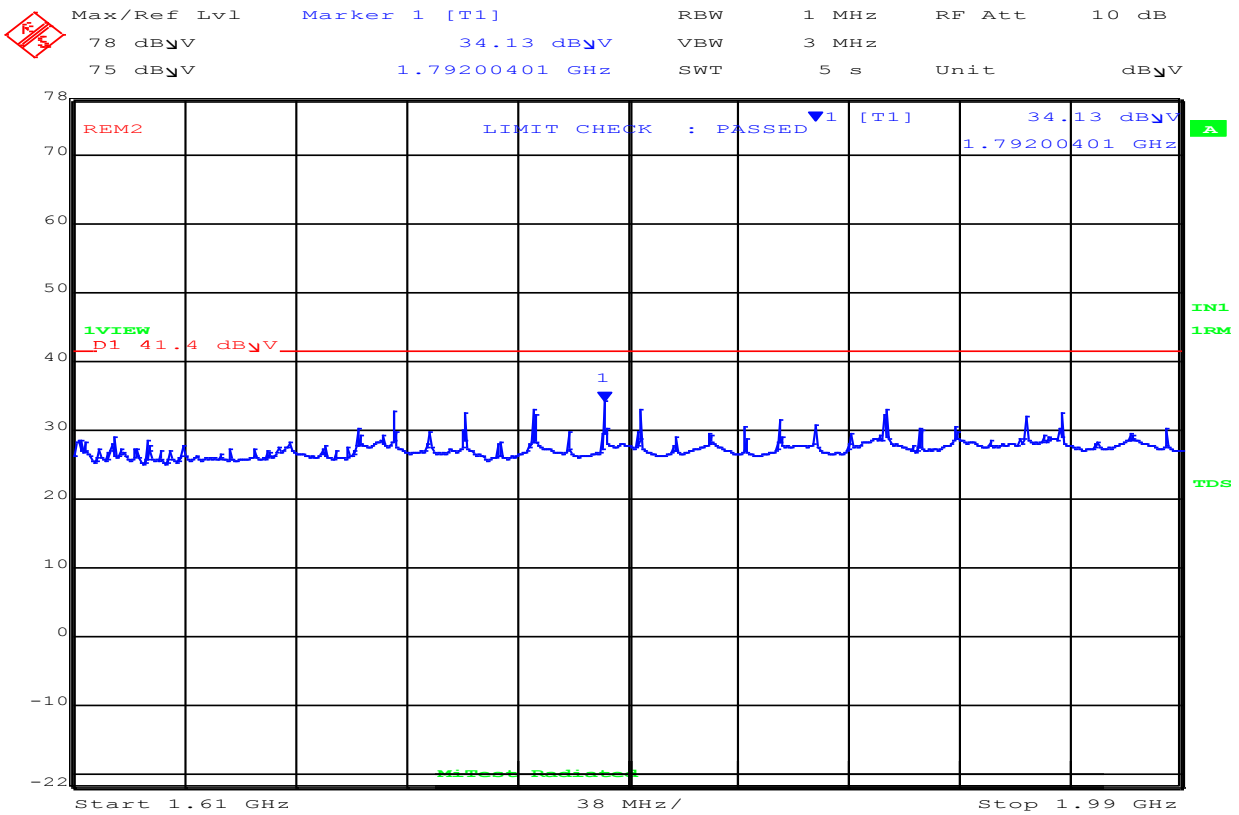
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 6.NOV.2018 17:18:46

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

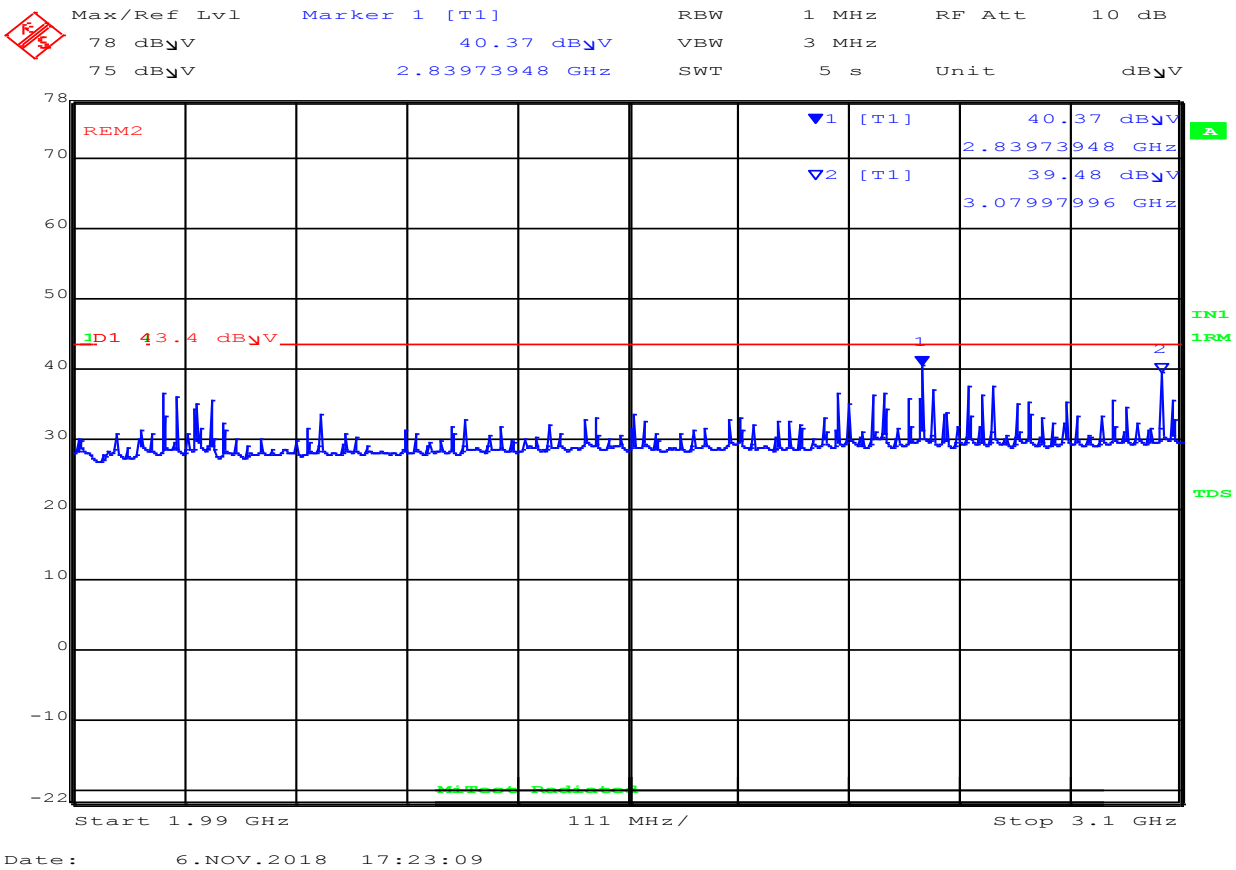
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2839.74*	41.7	Average	Horizontal	150	0	43.4	-1.7	Pass
2	3079.98*	40.3	Average	Horizontal	150	0	43.4	-3.1	Pass

Test Notes:
Source Laptop and UART to serial converter cable

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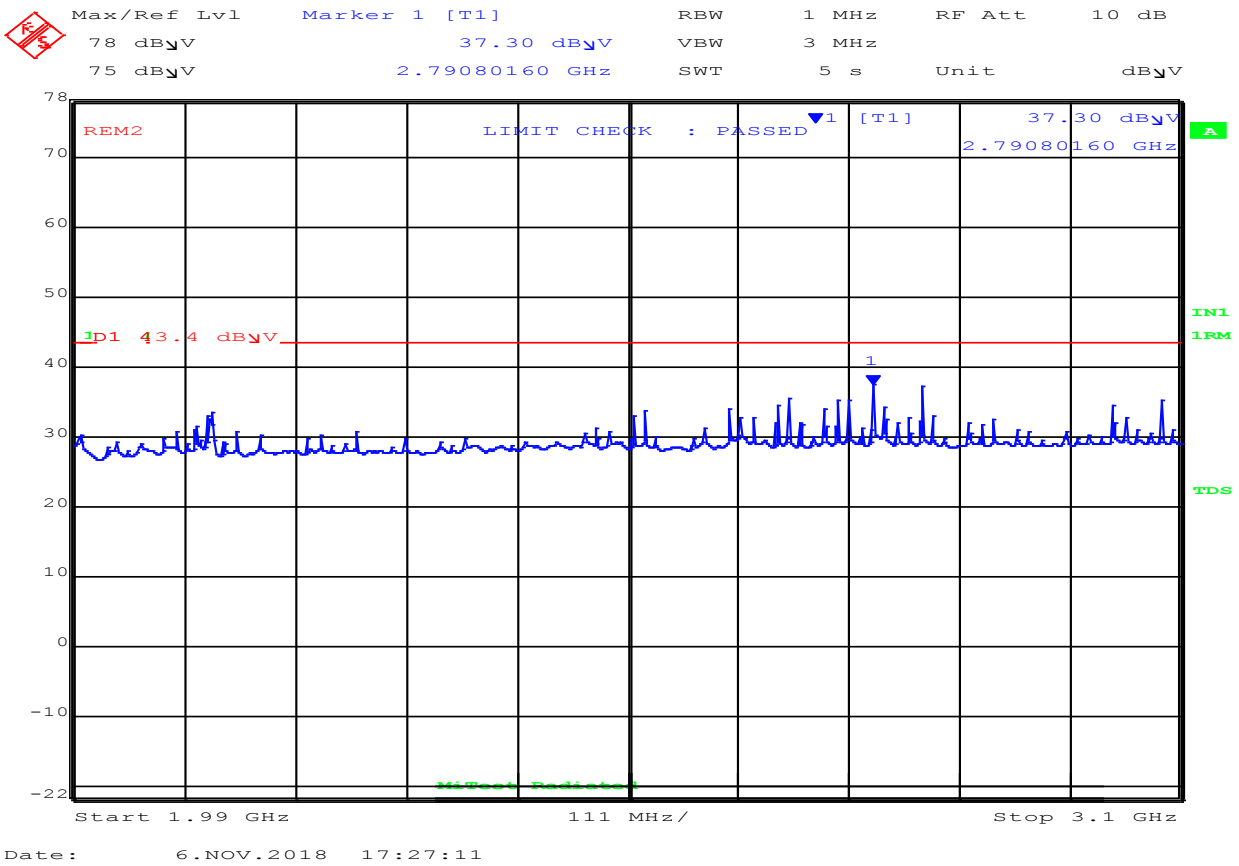
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2790.80*	37.3	Average	Vertical	150	0	29.4	-2.1	Pass

Test Notes:
Source Laptop and UART to serial converter cable

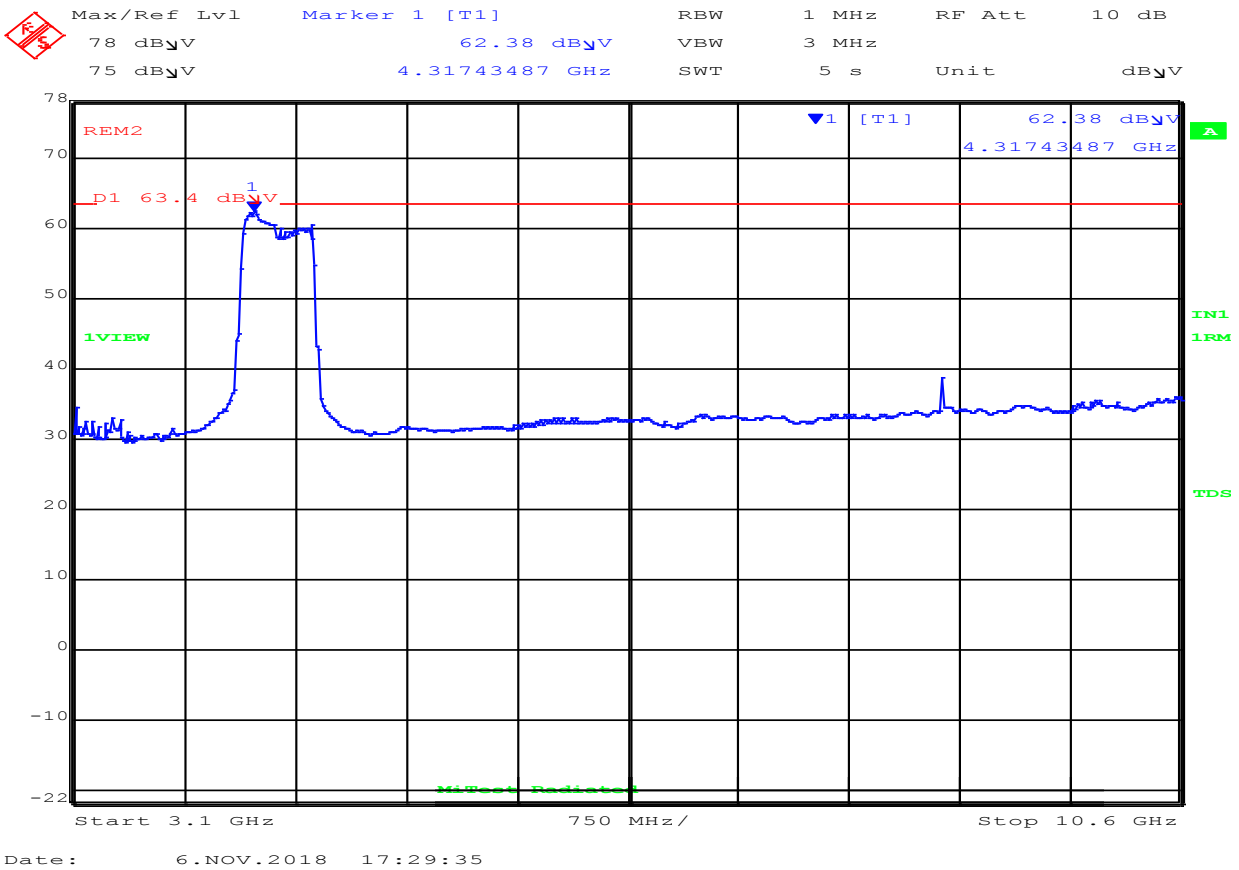
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	4317.43	61.2	Average	Horizontal	150	0	63.4	-2.2	Pass

Test Notes:

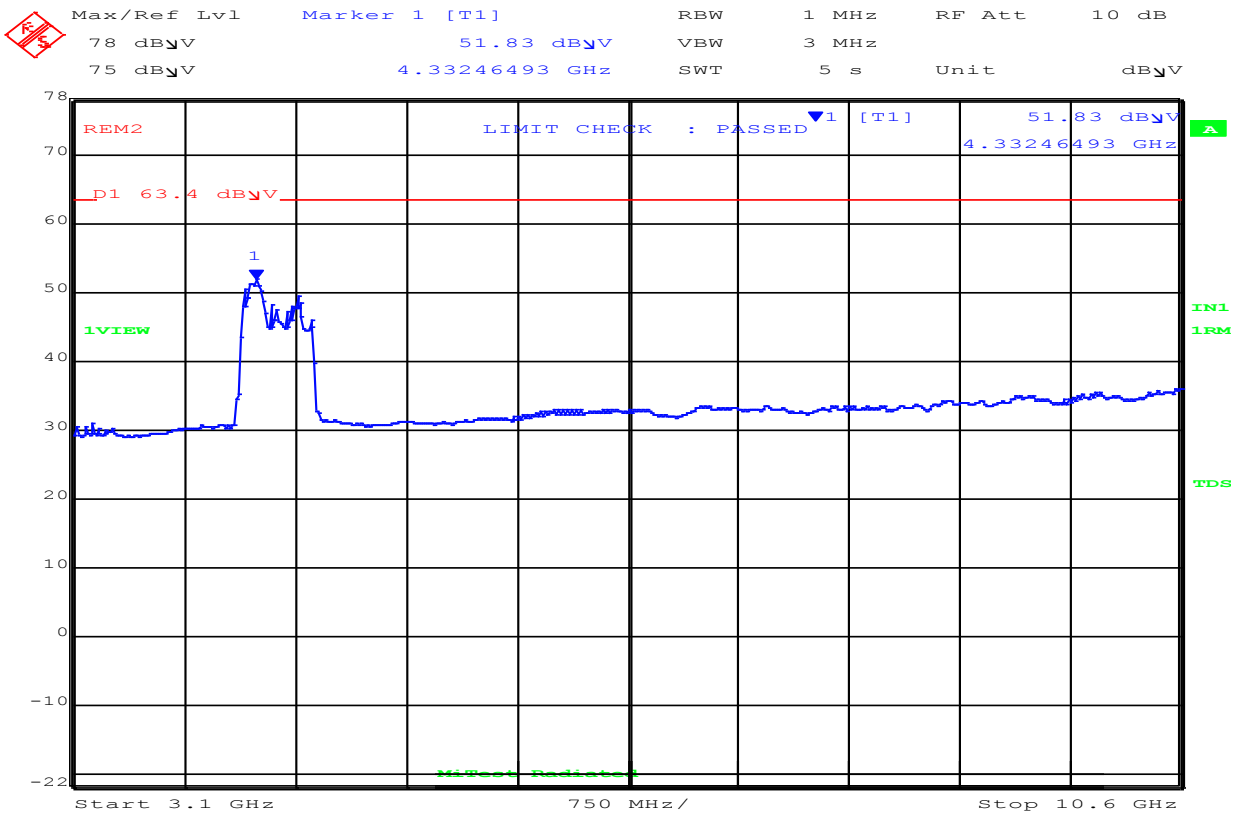
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 6.NOV.2018 17:28:29

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

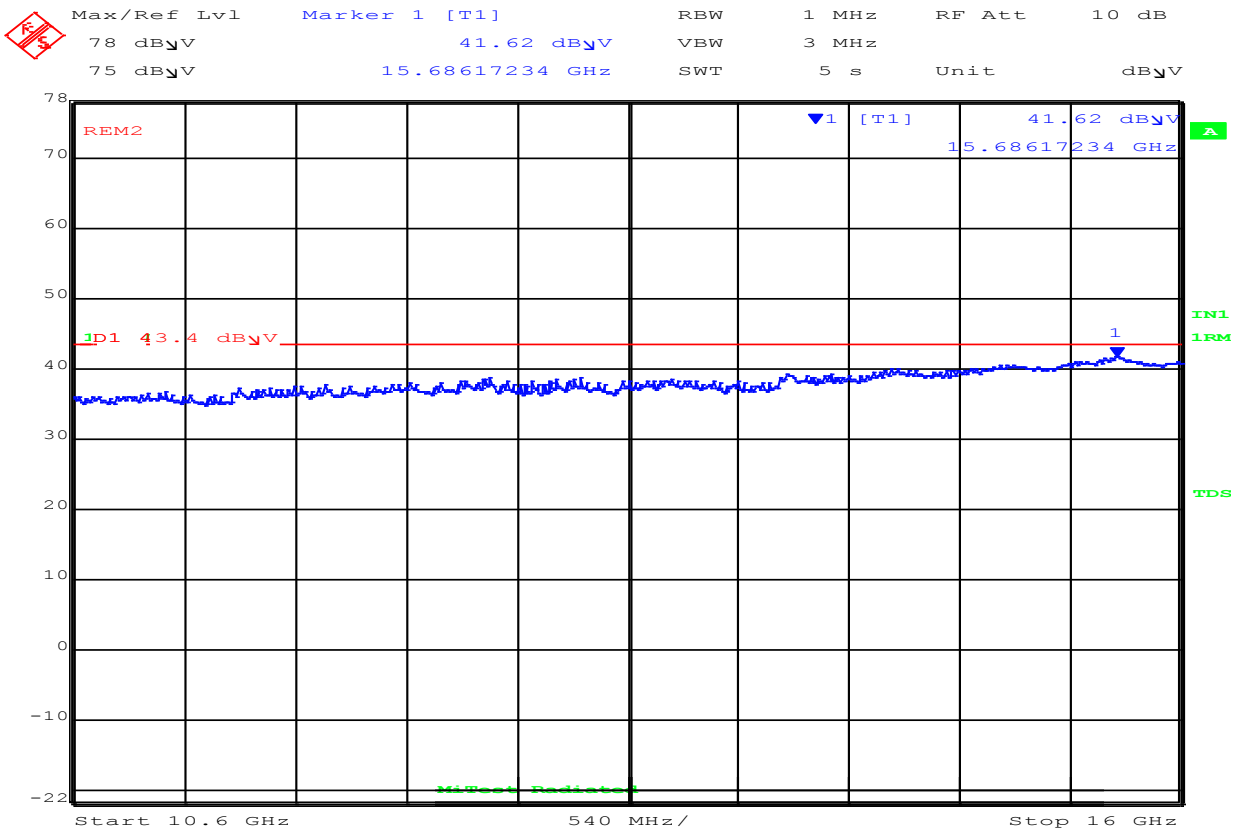
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 6.NOV.2018 17:32:41

10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.3	Average	Horizontal	150	0	43.4	-3.1	Pass

Test Notes:

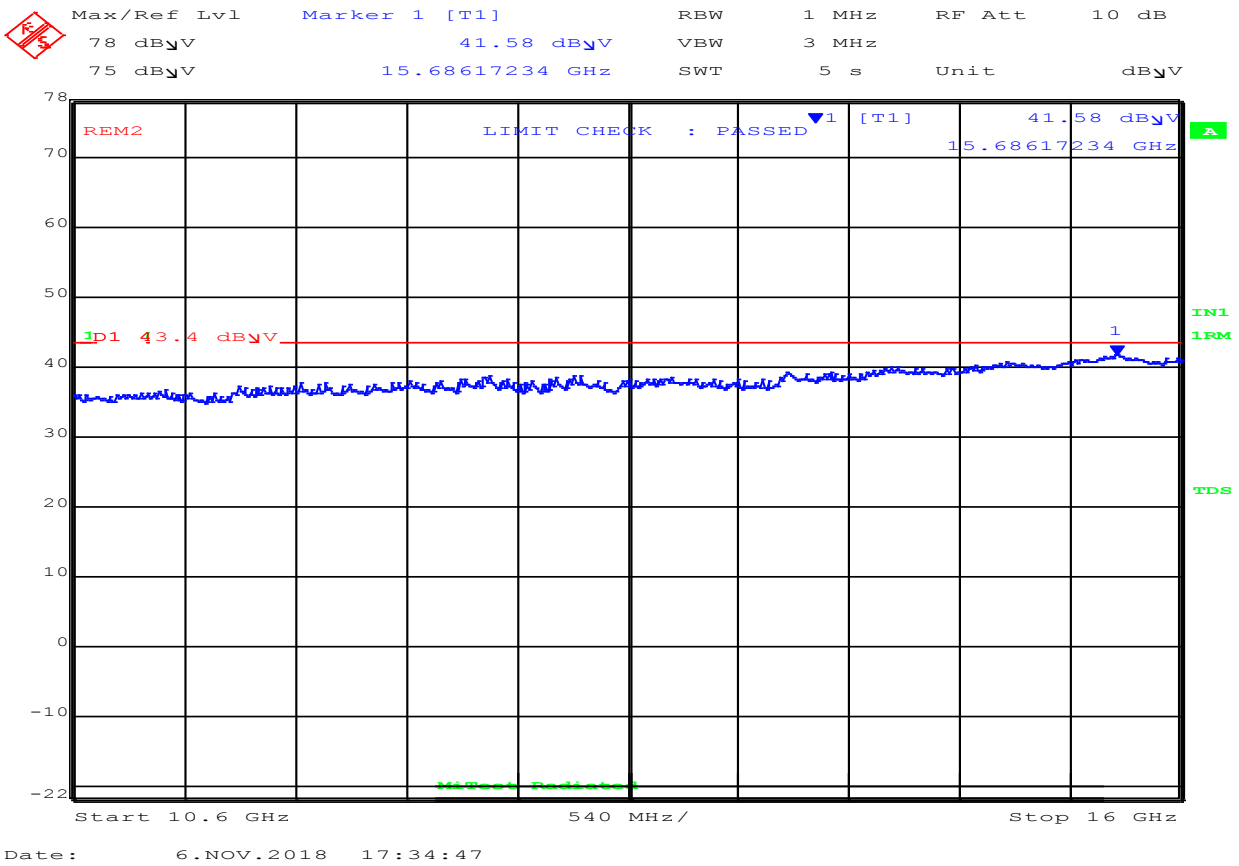
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.3	Average	Vertical	150	0	43.4	-3.1	Pass

Test Notes:

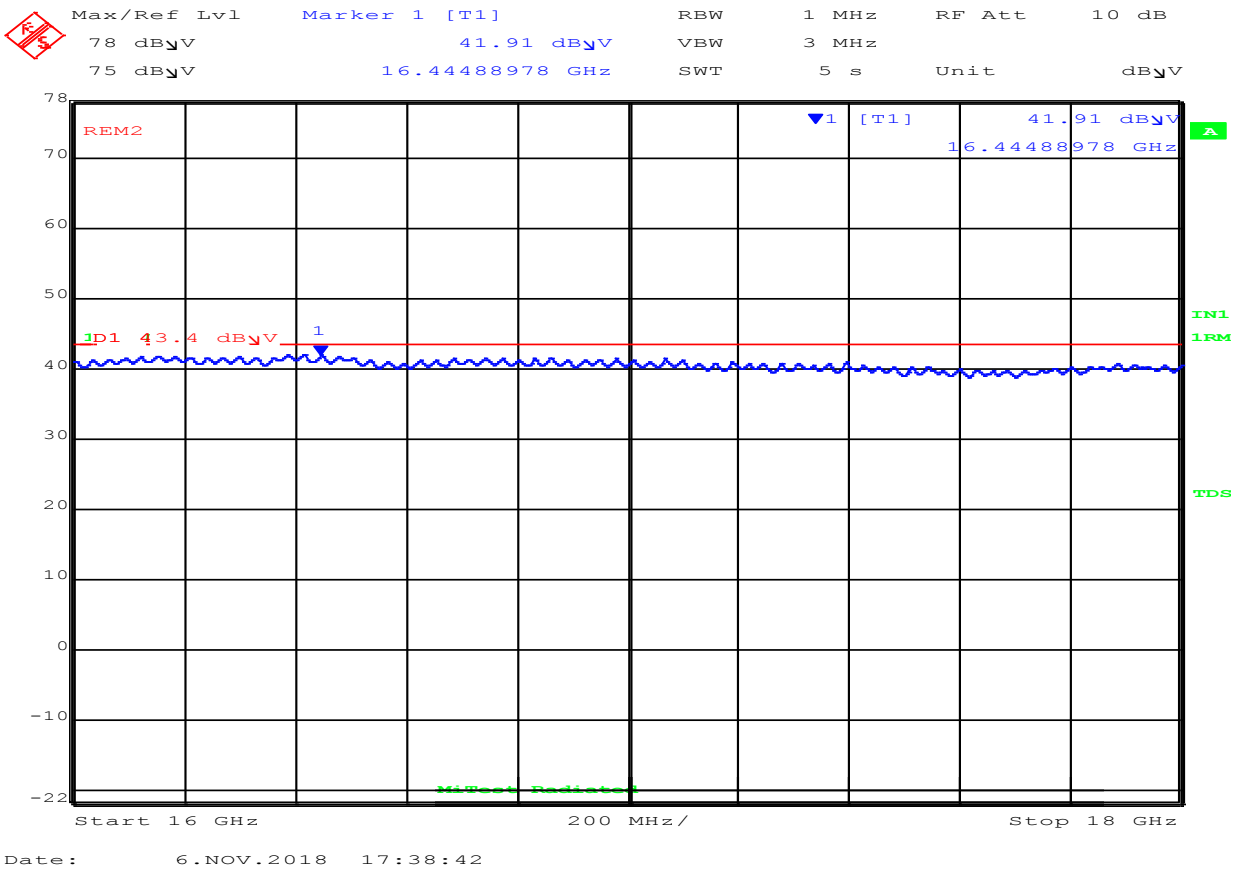
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.9	Average	Horizontal	150	0	43.4	-2.5	Pass
Test Notes:									

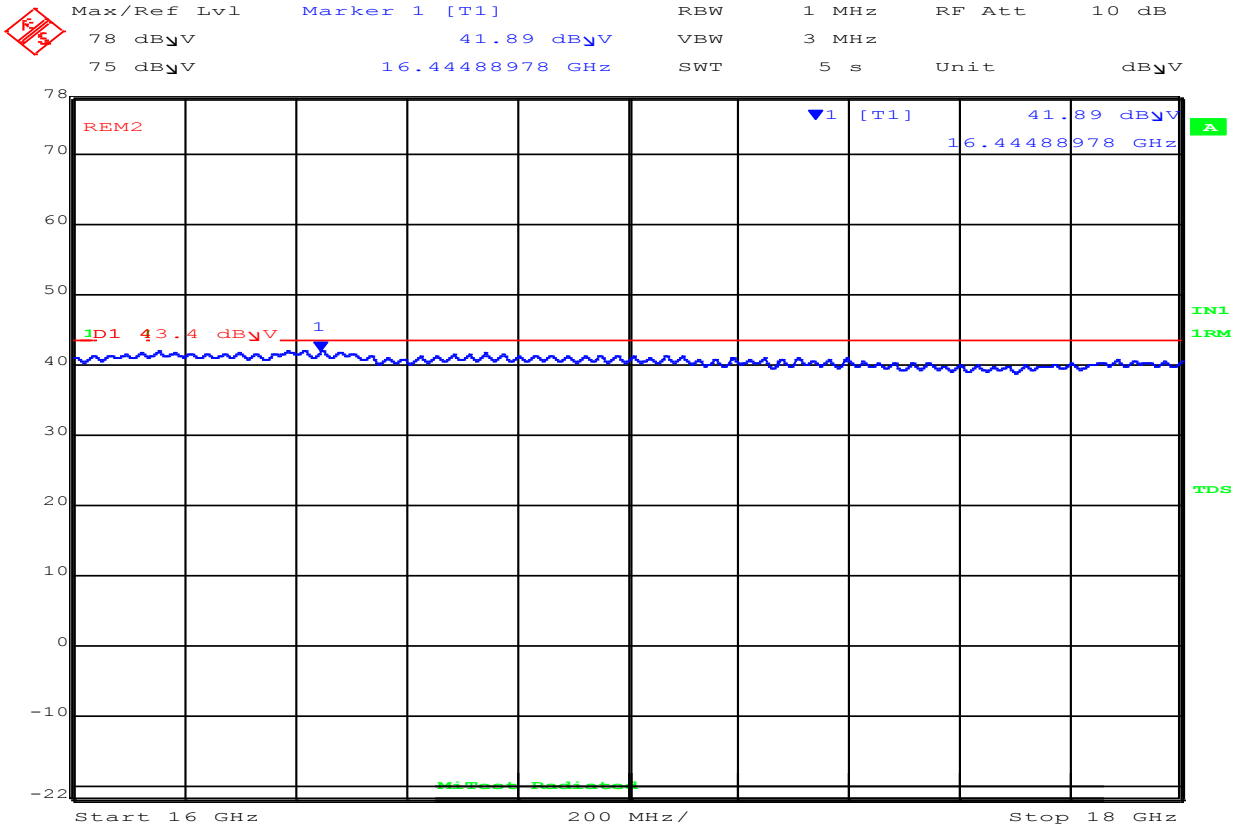
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 4448 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.9	Average	Vertical	150	0	43.4	-2.5	Pass
Test Notes:									

6600 MHz

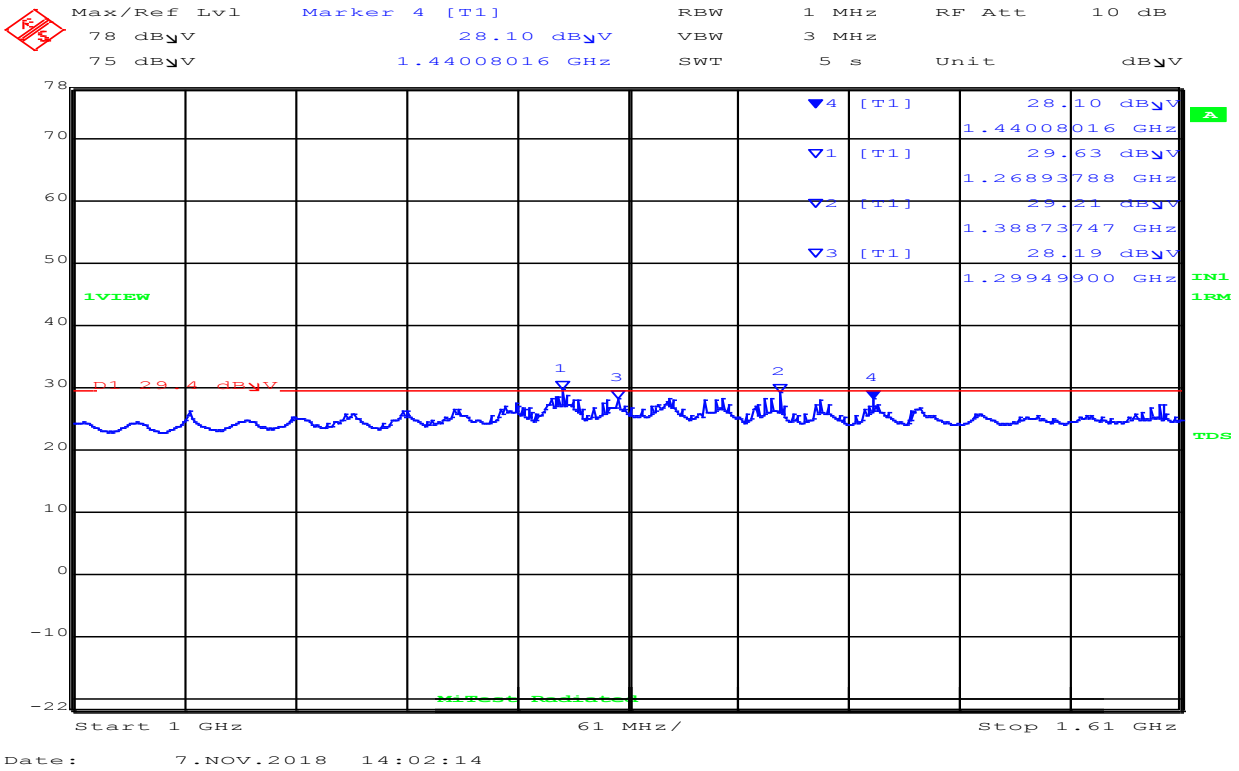
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61 GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1268.94*	28.5	Average	Horizontal	150	0	29.4	-0.9	Pass
2	1388.74*	27.5	Average	Horizontal	150	0	29.4	-1.9	Pass
3	1299.50*	27.9	Average	Horizontal	150	0	29.4	-1.5	Pass
4	1440.08	28.1	Average	Horizontal	150	0	29.4	-1.3	Pass

Test Notes:
Source Laptop and UART to serial converter cable

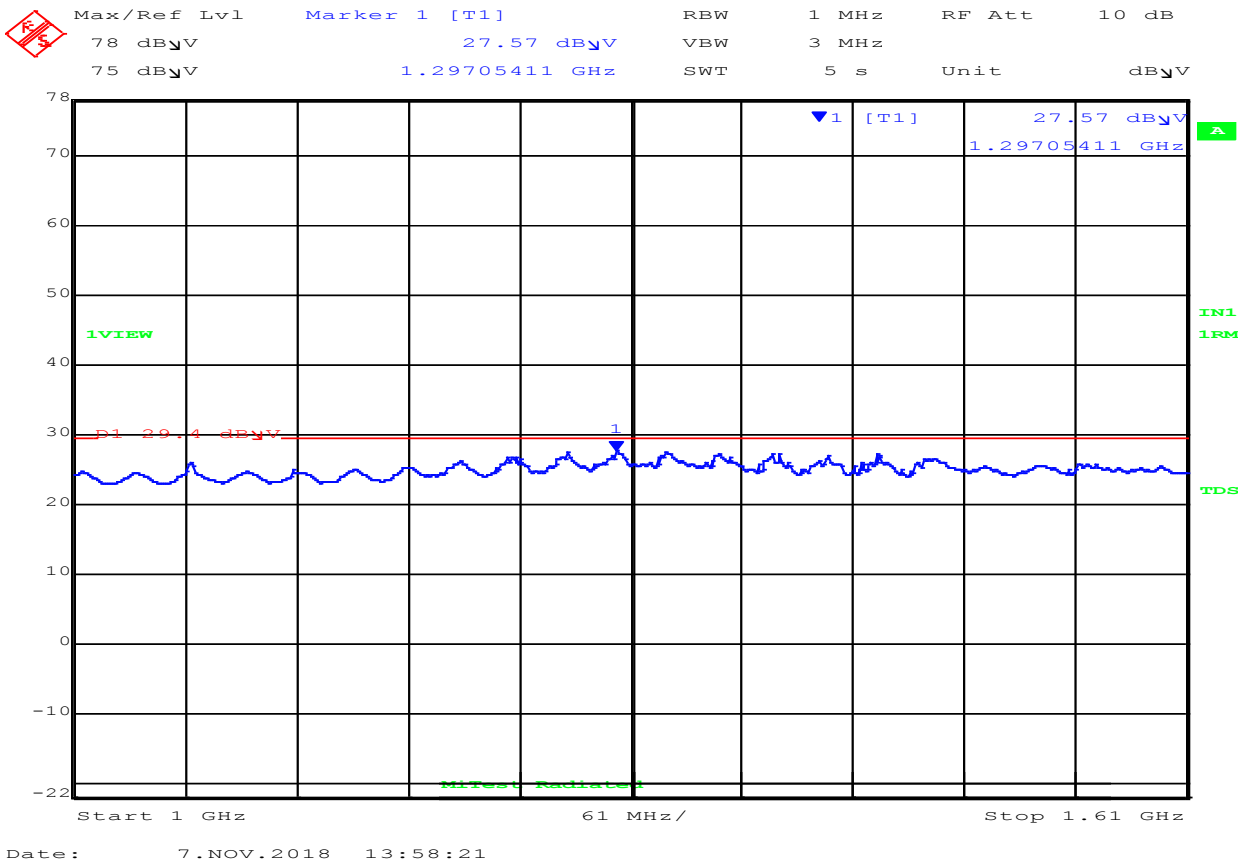
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1297.05	26.8	Average	Vertical	150	0	29.4	-2.6	Pass

Test Notes:

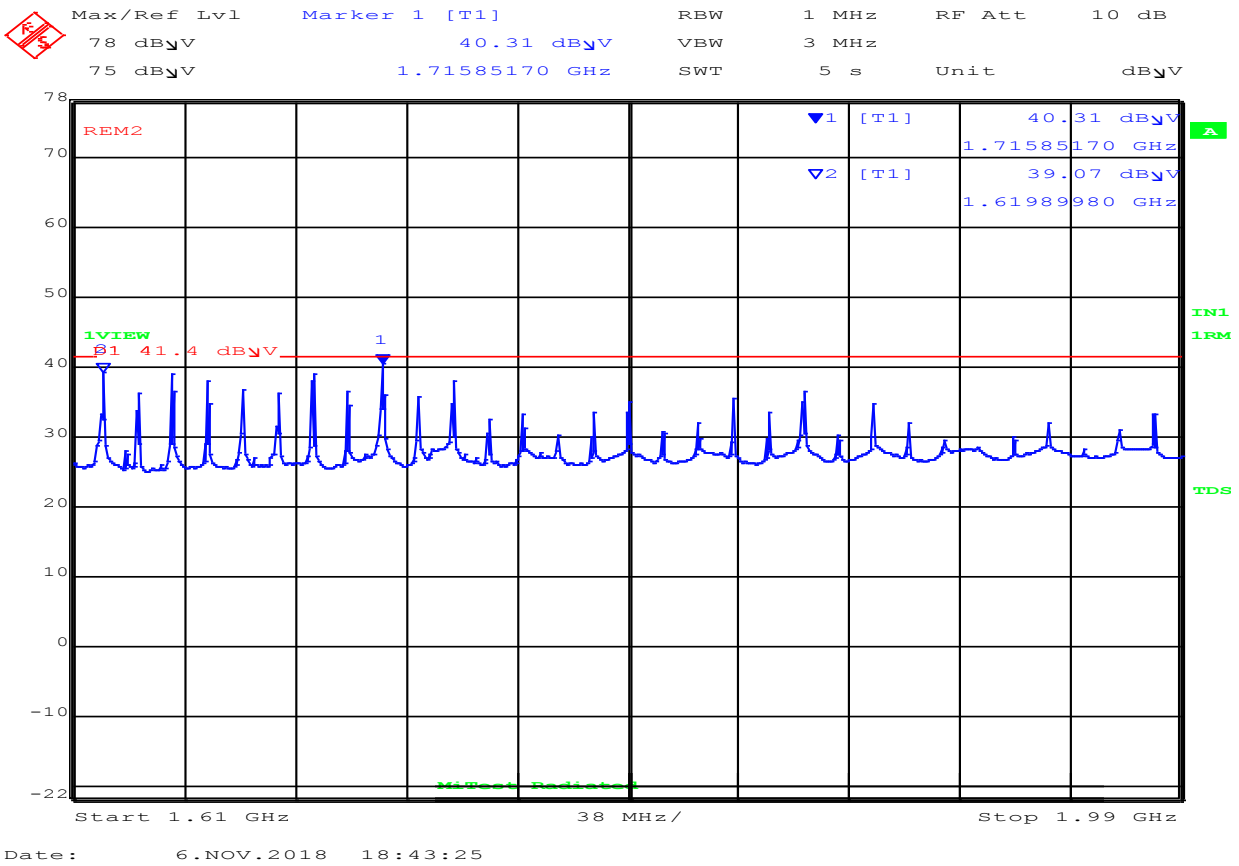
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 6.NOV.2018 18:43:25

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1715.85*	40.1	Average	Horizontal	150	0	41.4	-1.3	Pass
2	1619.90*	39.1	Average	Horizontal	150	0	41.4	-2.3	Pass

Test Notes:
Source Laptop and UART to serial converter cable

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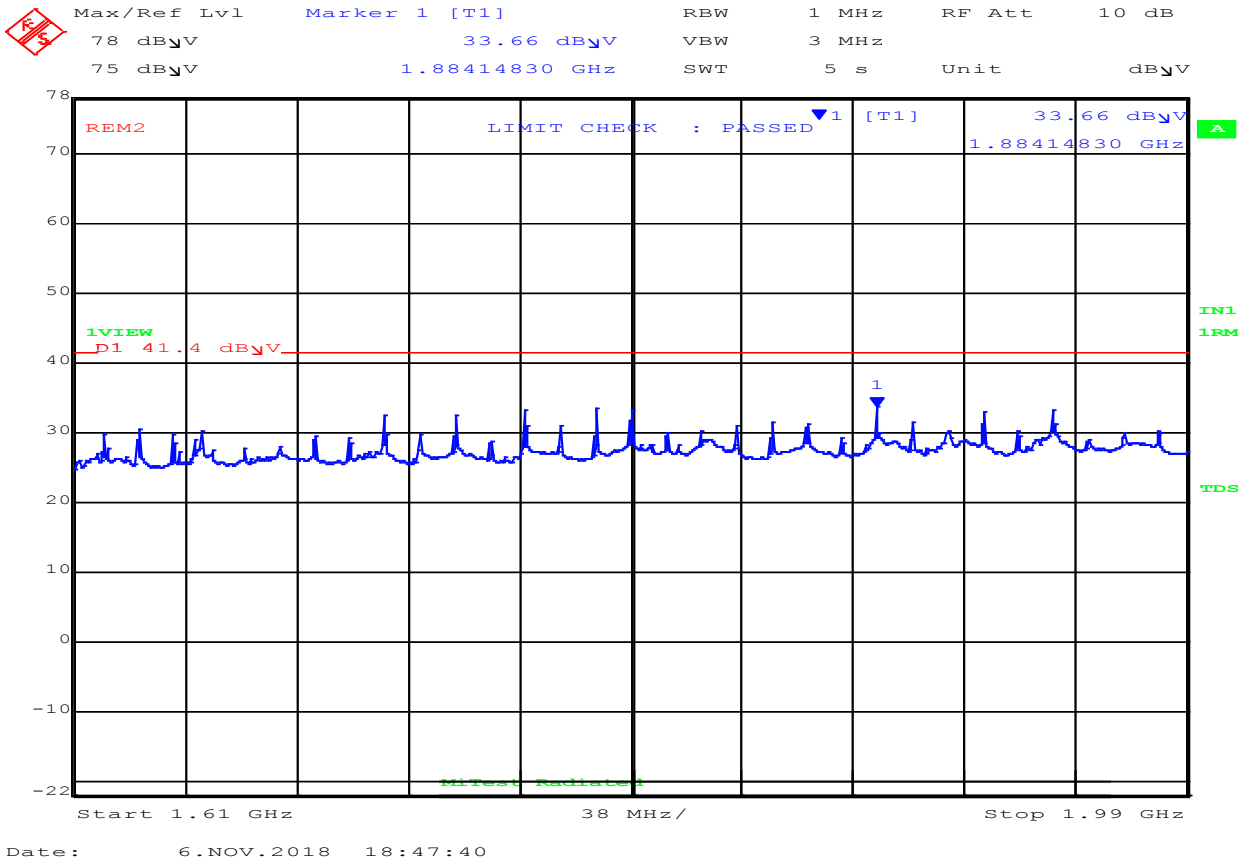
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 6.NOV.2018 18:47:40

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									
Test Notes:									

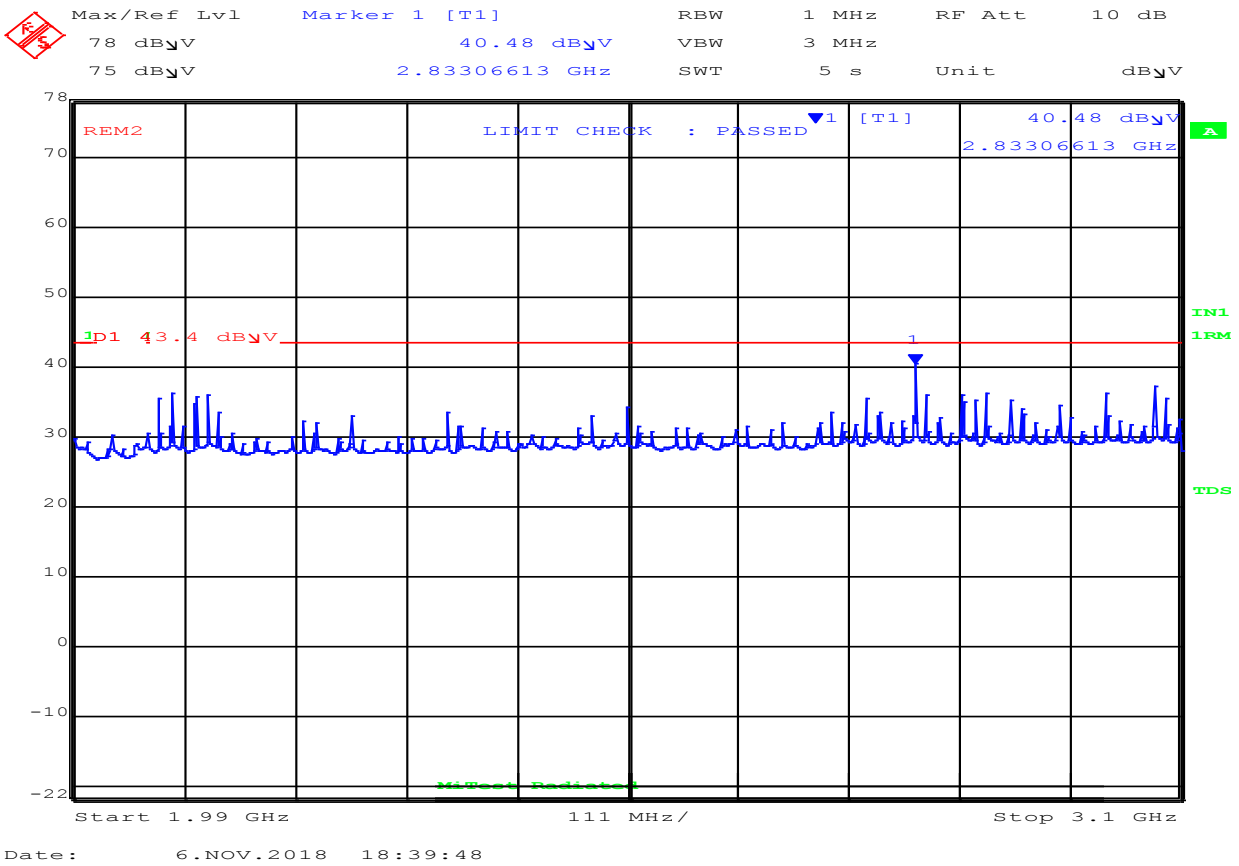
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2833.07*	40.1	Average	Horizontal	150	0	43.4	-3.3	Pass

Test Notes:
Source Laptop and UART to serial converter cable

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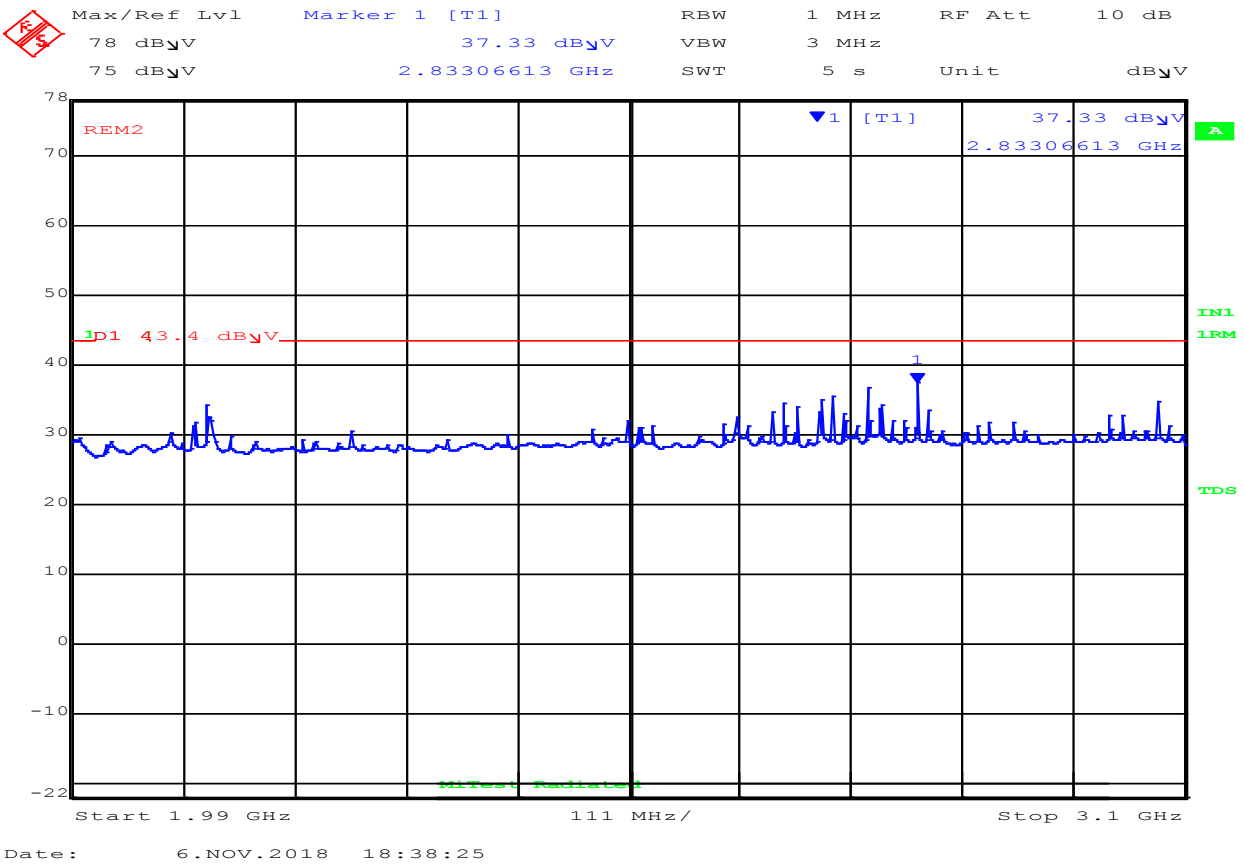
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 6.NOV.2018 18:38:25

1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2833.07*	37.1	Average	Vertical	150	0	43.4	-6.3	Pass

Test Notes:
Source Laptop and UART to serial converter cable

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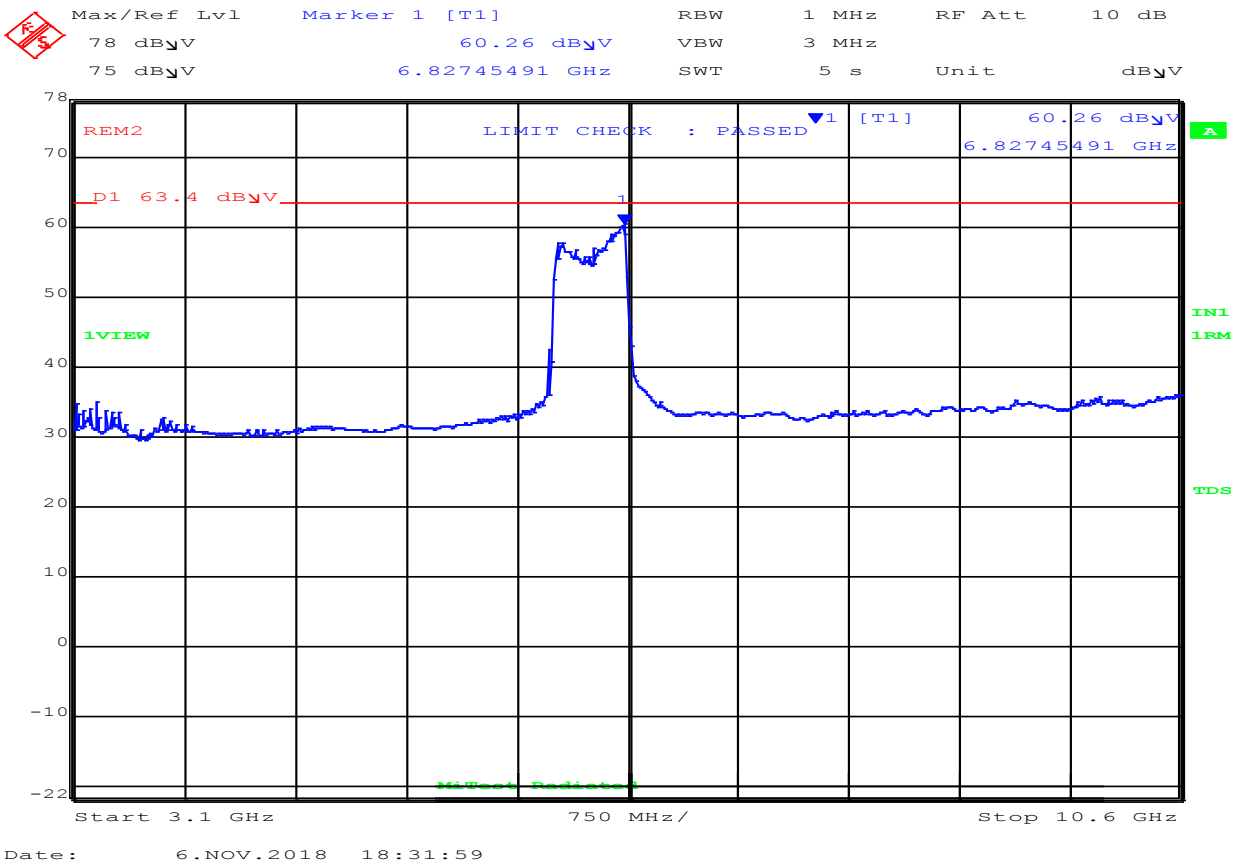
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS3.1-10.6GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	6827.45	59.1	Average	Horizontal	150	0	63.4	-4.3	Pass
2	1600.22	25.60	Average	Horizontal	150	0	29.4	-3.8	Pass

Test Notes:

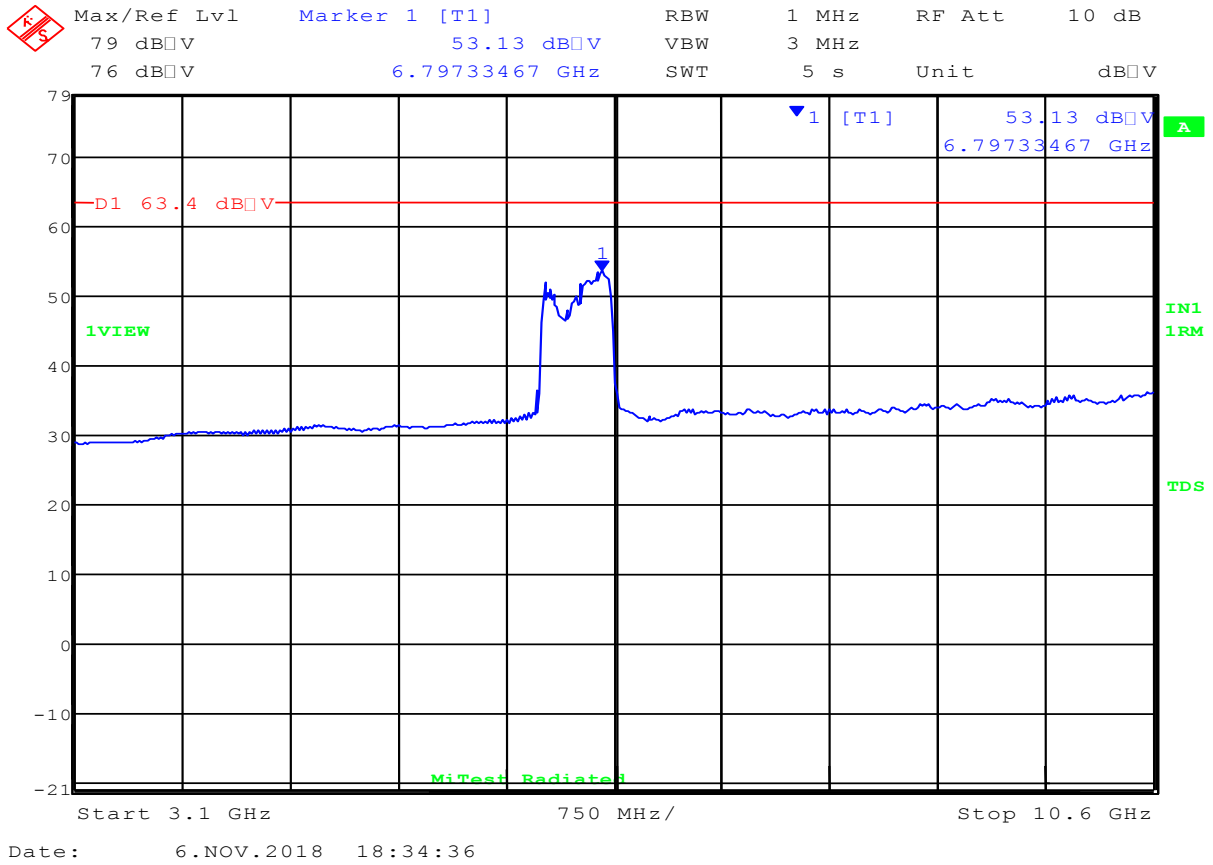
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6 GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

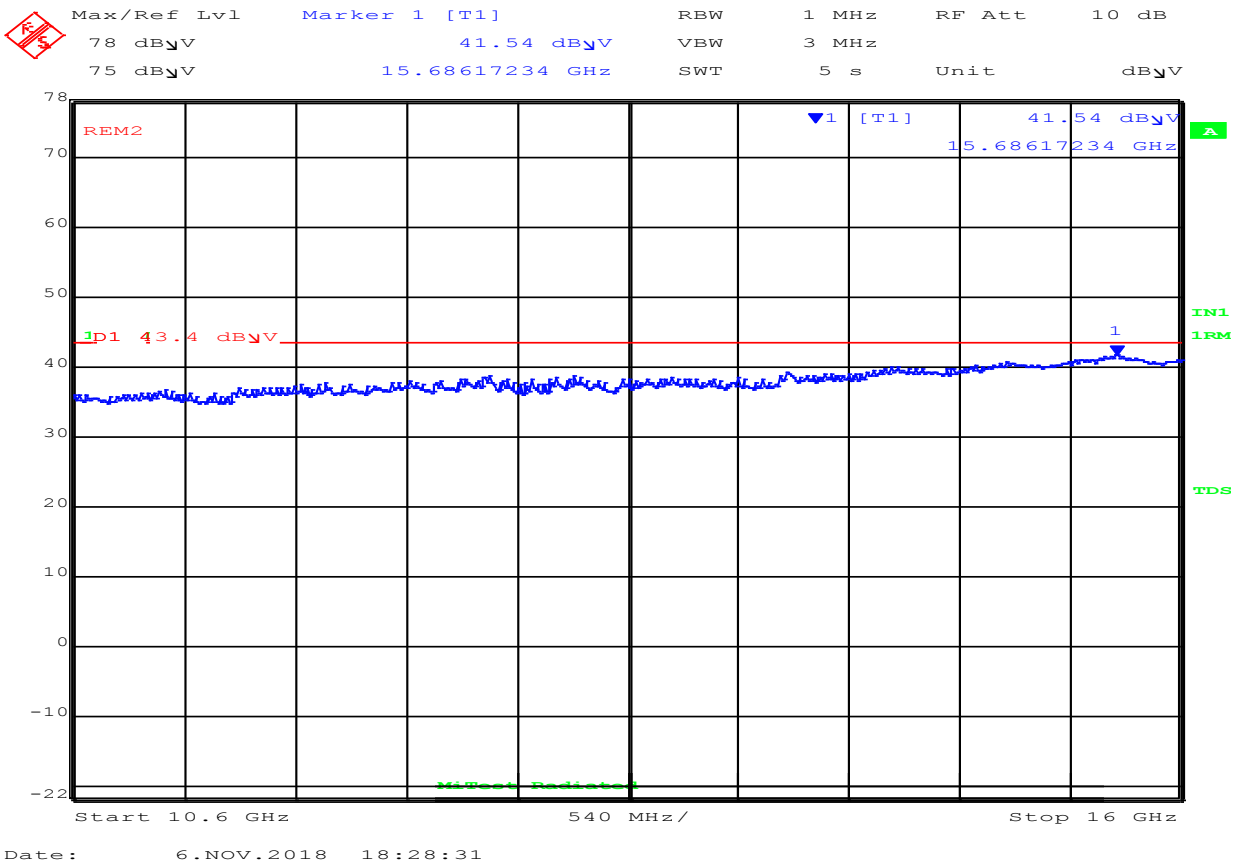
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.1	Average	Horizontal	150	0	43.4	-3.3	Pass

Test Notes:

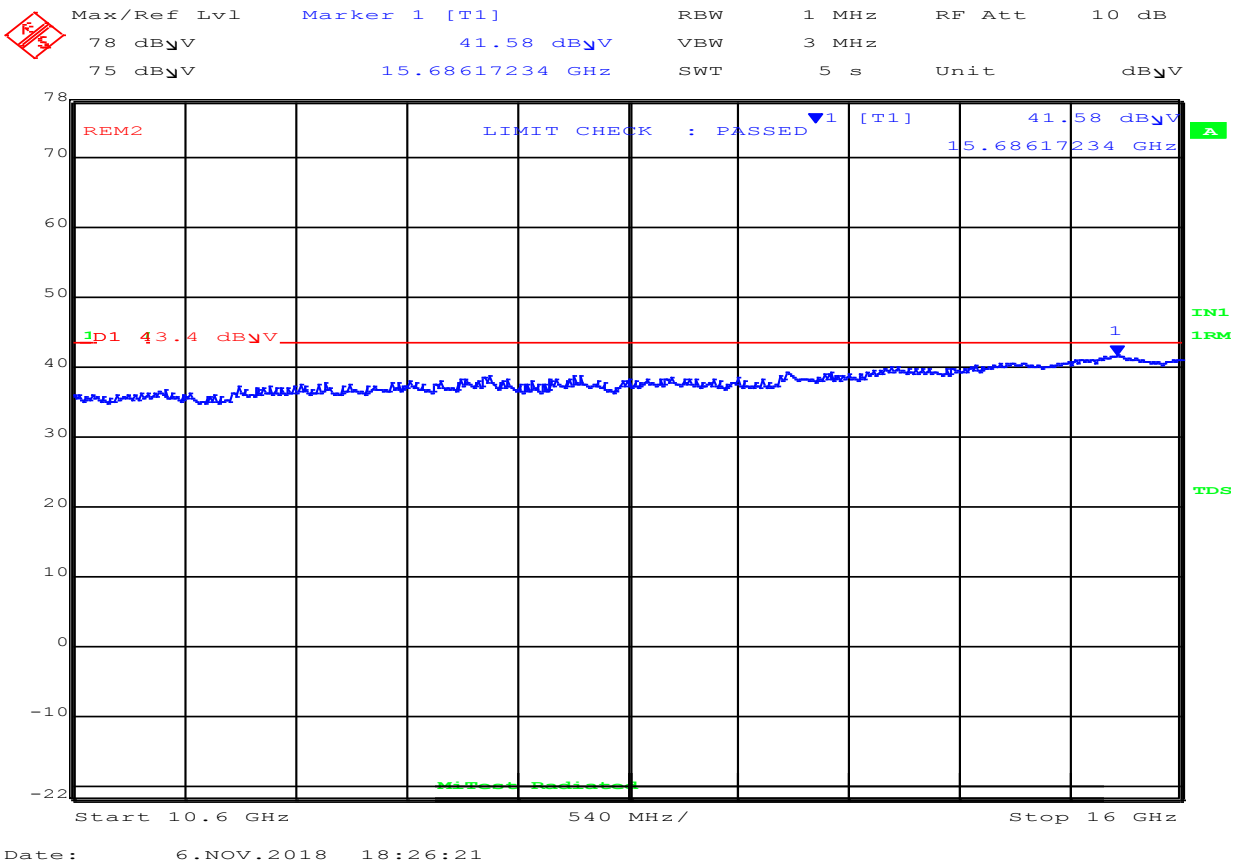
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 6.NOV.2018 18:26:21

10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.2	Average	Vertical	150	0	43.4	-3.2	Pass

Test Notes:

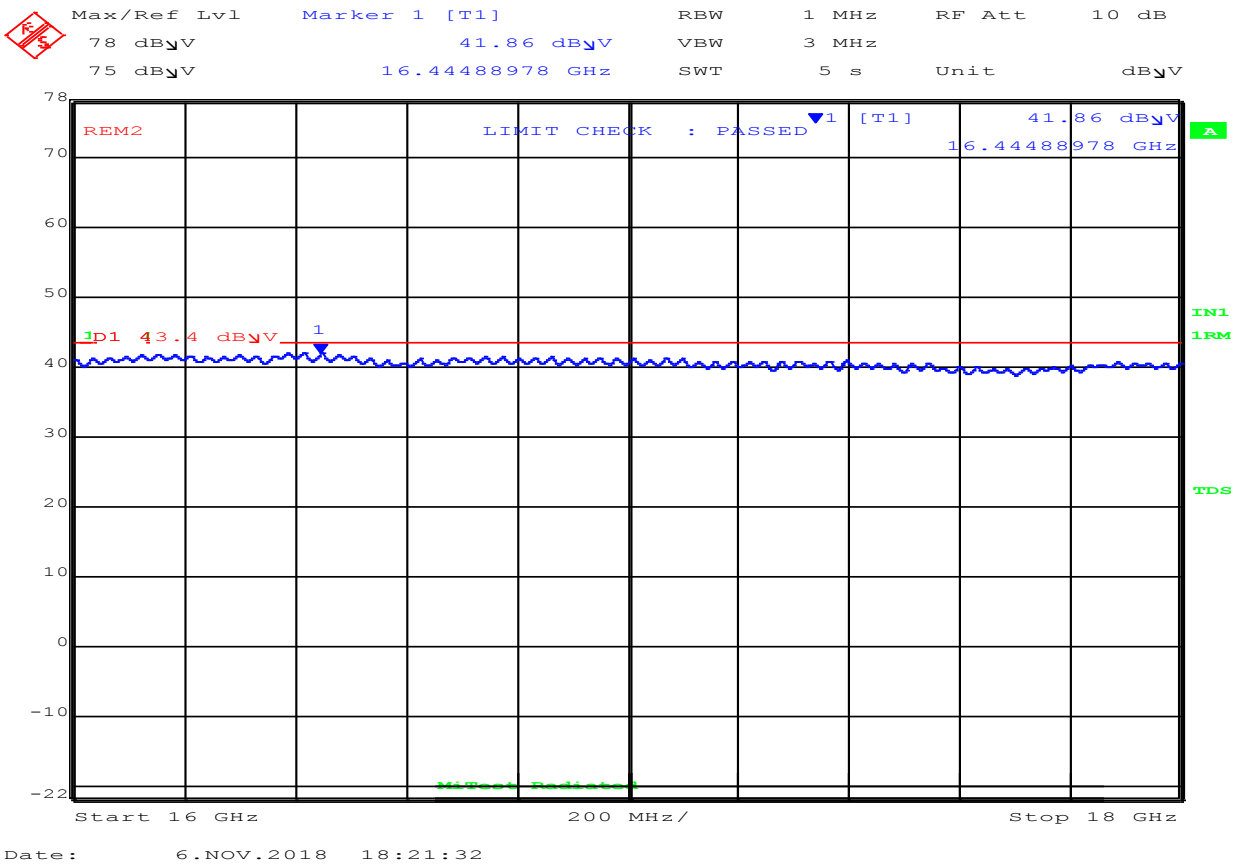
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.9	Average	Horizontal	150	0	43.4	-2.5	Pass

Test Notes:

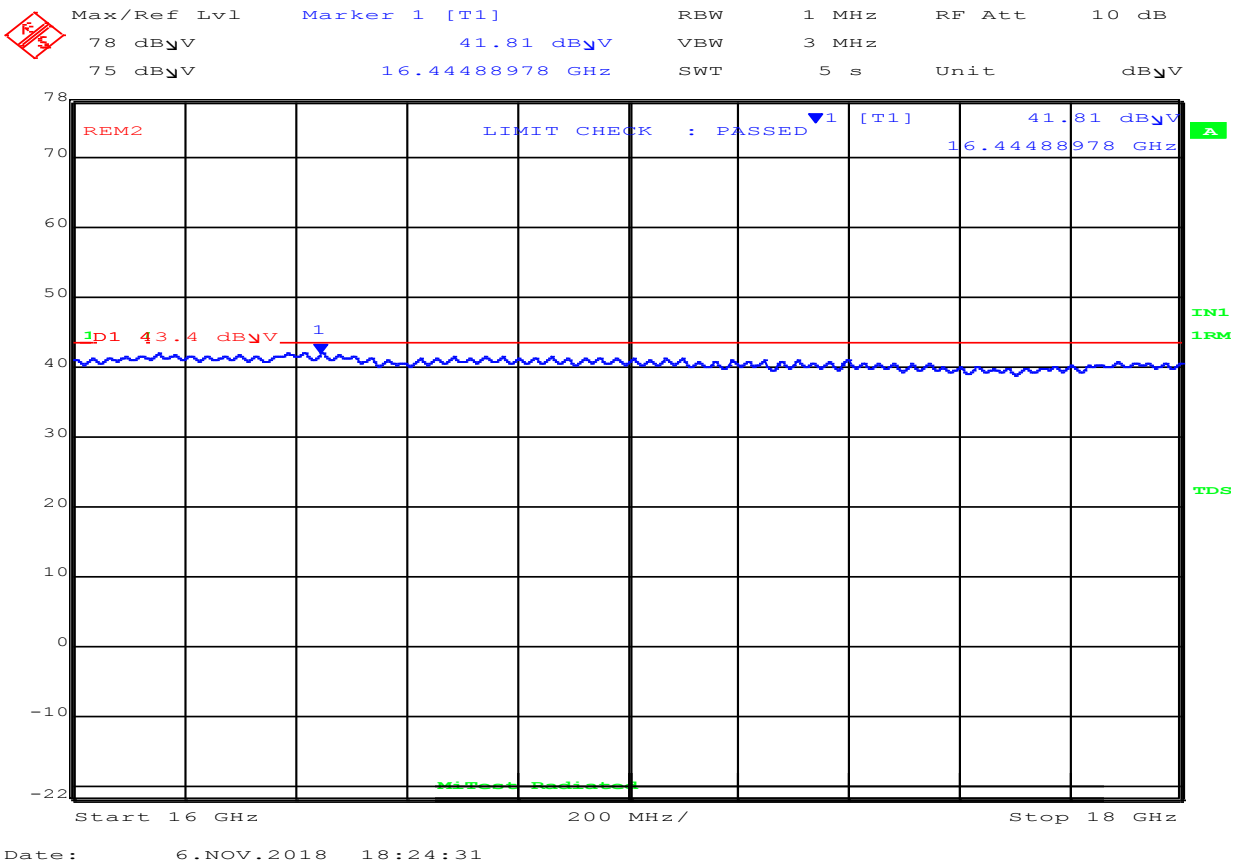
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.9	Average	Vertical	150	0	43.4	-2.5	Pass

Test Notes:

7128 MHz

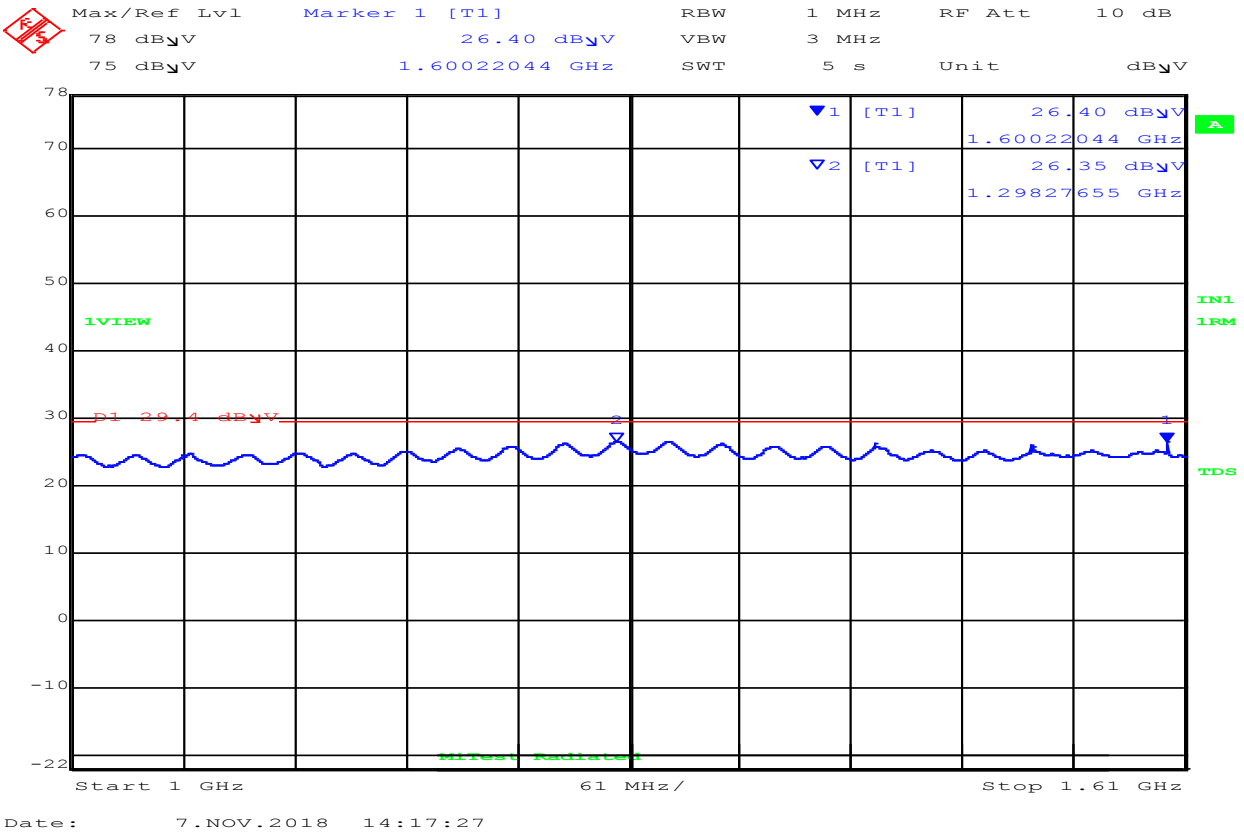
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1600.22	26.7	Average	Horizontal	150	0	29.4	-2.7	Pass
2	1298.28	24.8	Average	Horizontal	150	0	29.4	-4.6	Pass

Test Notes:
Removed Laptop

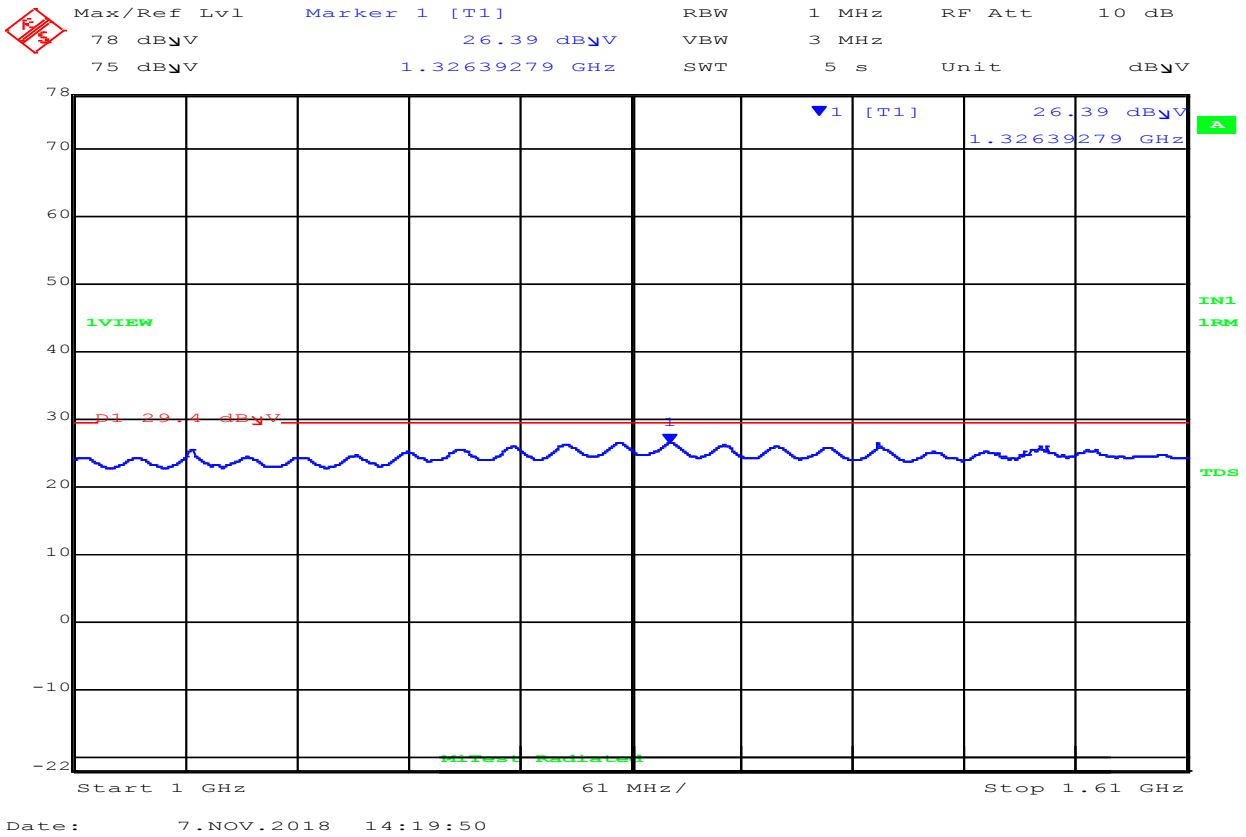
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.39	24.8	Average	Vertical	150	0	29.4	-4.6	Pass

Test Notes:
Removed Laptop

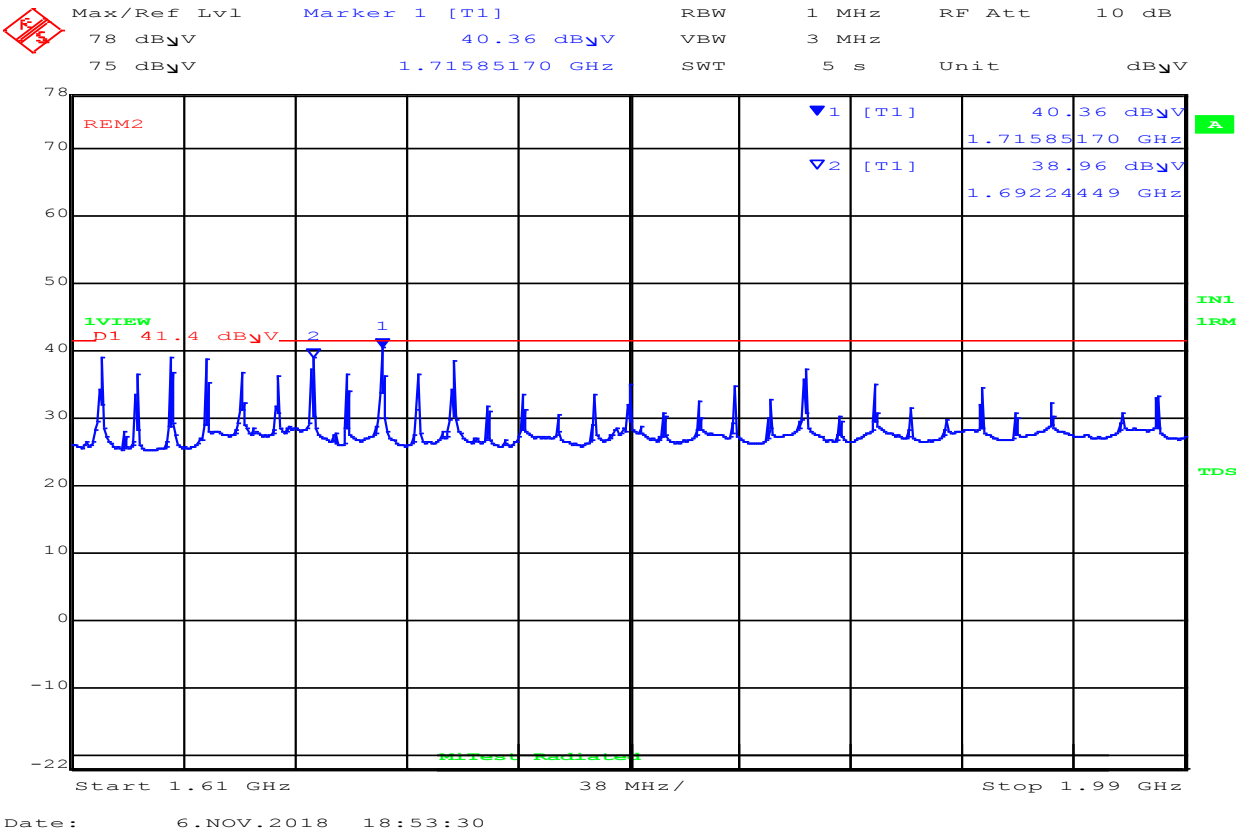
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1715.85*	40.6	Average	Horizontal	150	0	41.4	-2.8	Pass
2	1692.24*	40.3	Average	Horizontal	150	0	41.4	-3.1	Pass

Test Notes:
Source Laptop and UART to serial converter cable

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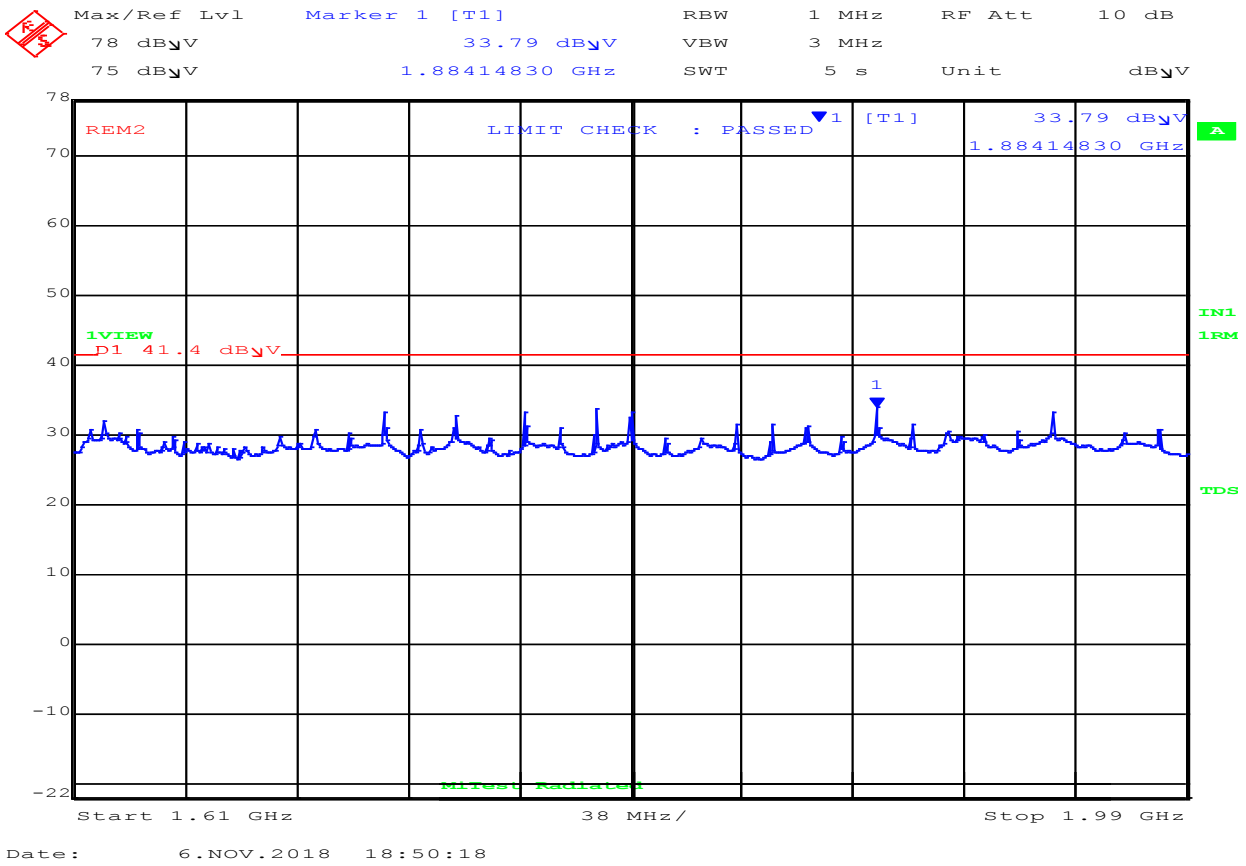
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



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1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

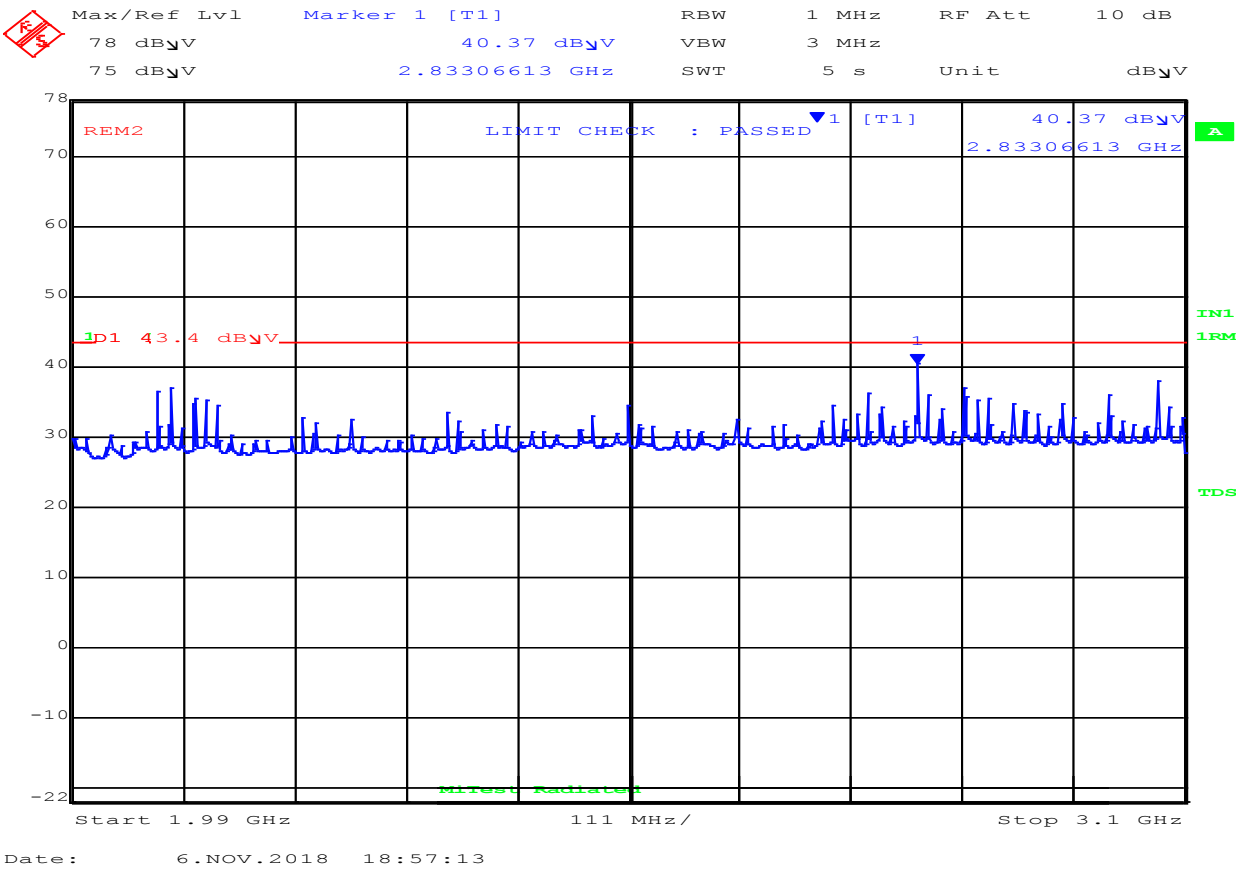
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2833.07*	40.5	Average	Horizontal	150	0	43.4	-2.9	Pass

Test Notes:
Source Laptop and UART to serial converter cable

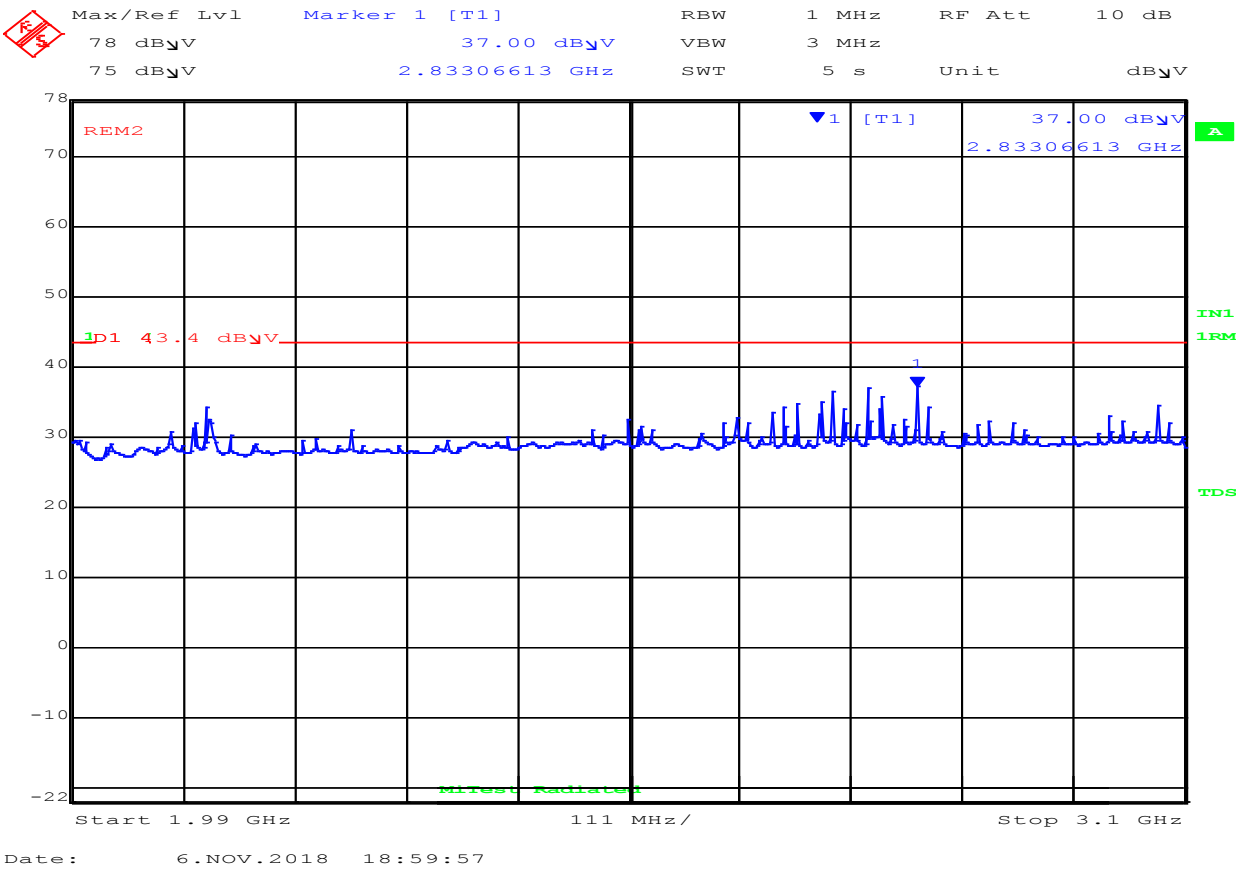
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2833.07*	37.1	Average	Vertical	150	0	43.4	-6.3	Pass

Test Notes:
Source Laptop and UART to serial converter cable

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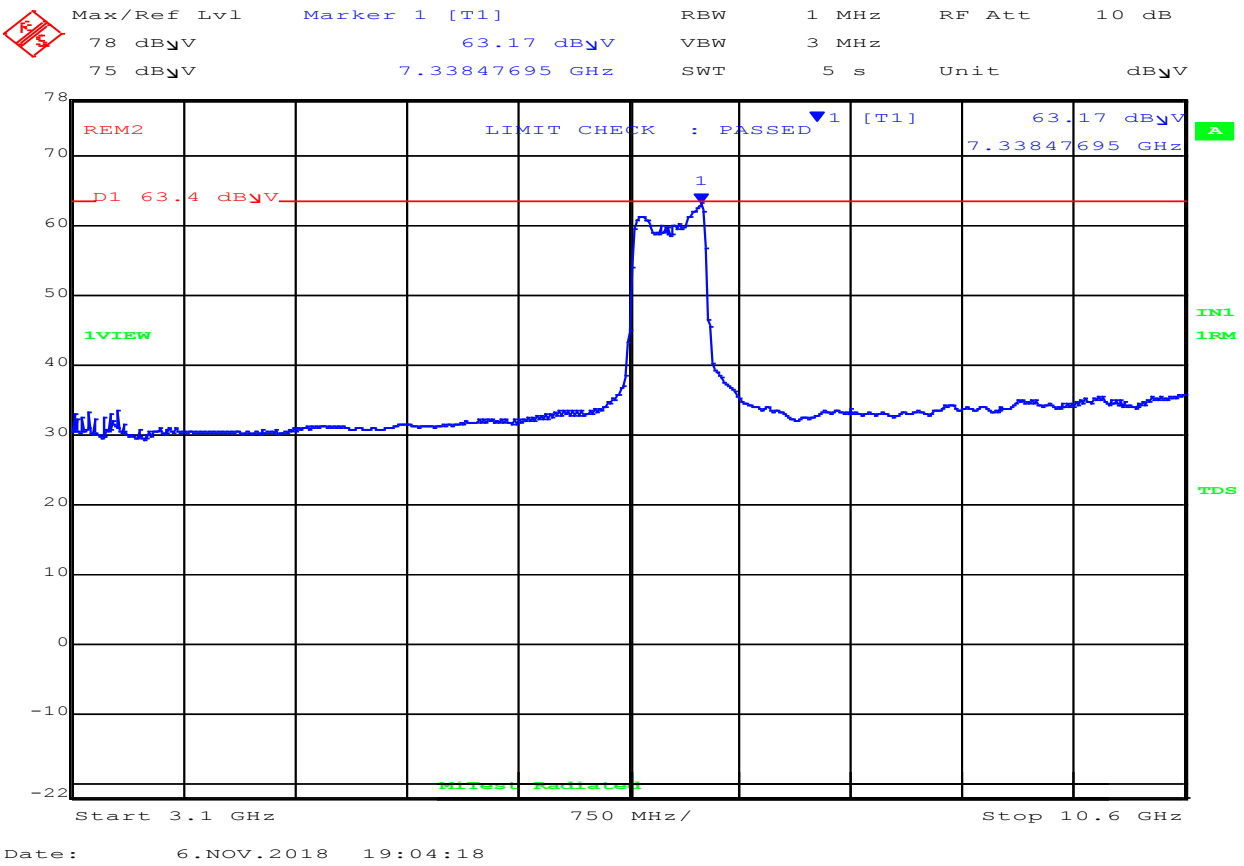
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	7338.48	62.2	Average	Horizontal	150	0	63.4	-1.2	Pass

Test Notes:

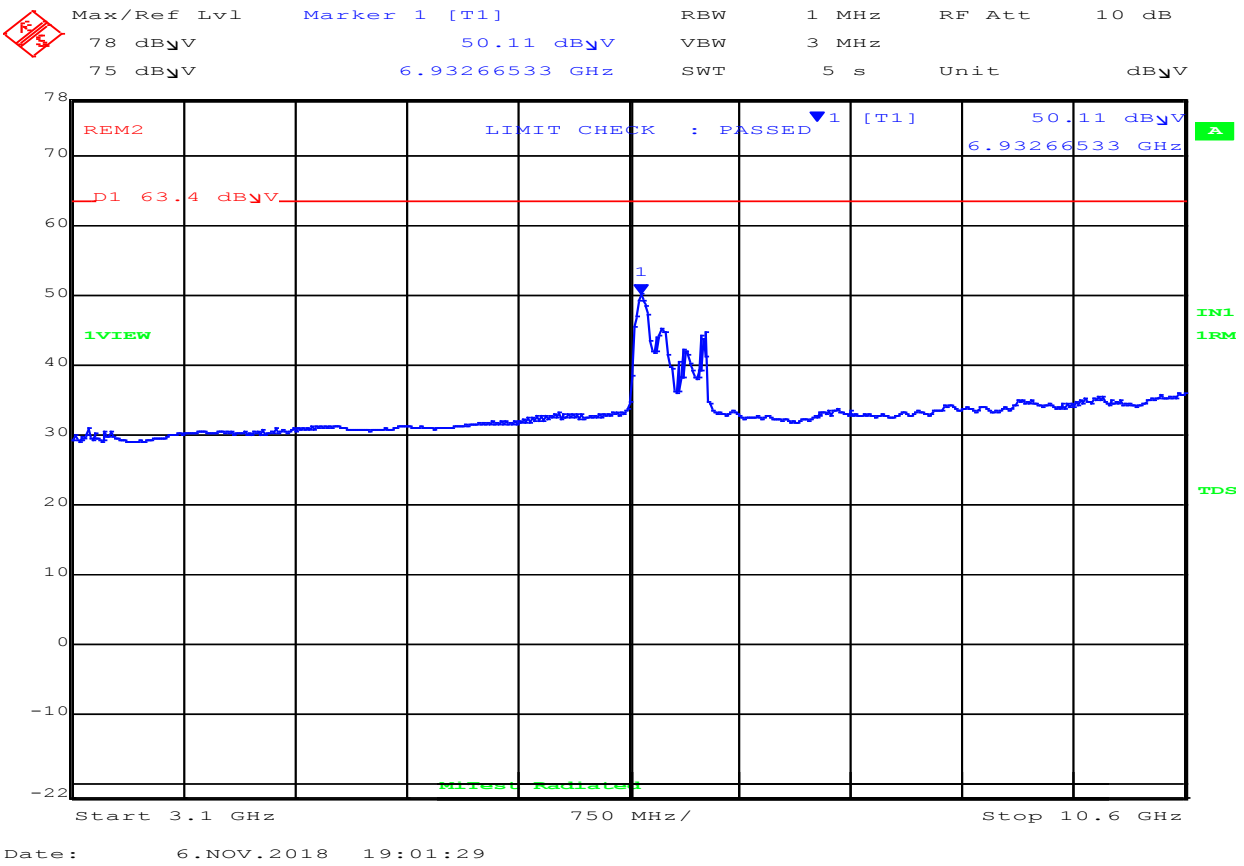
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

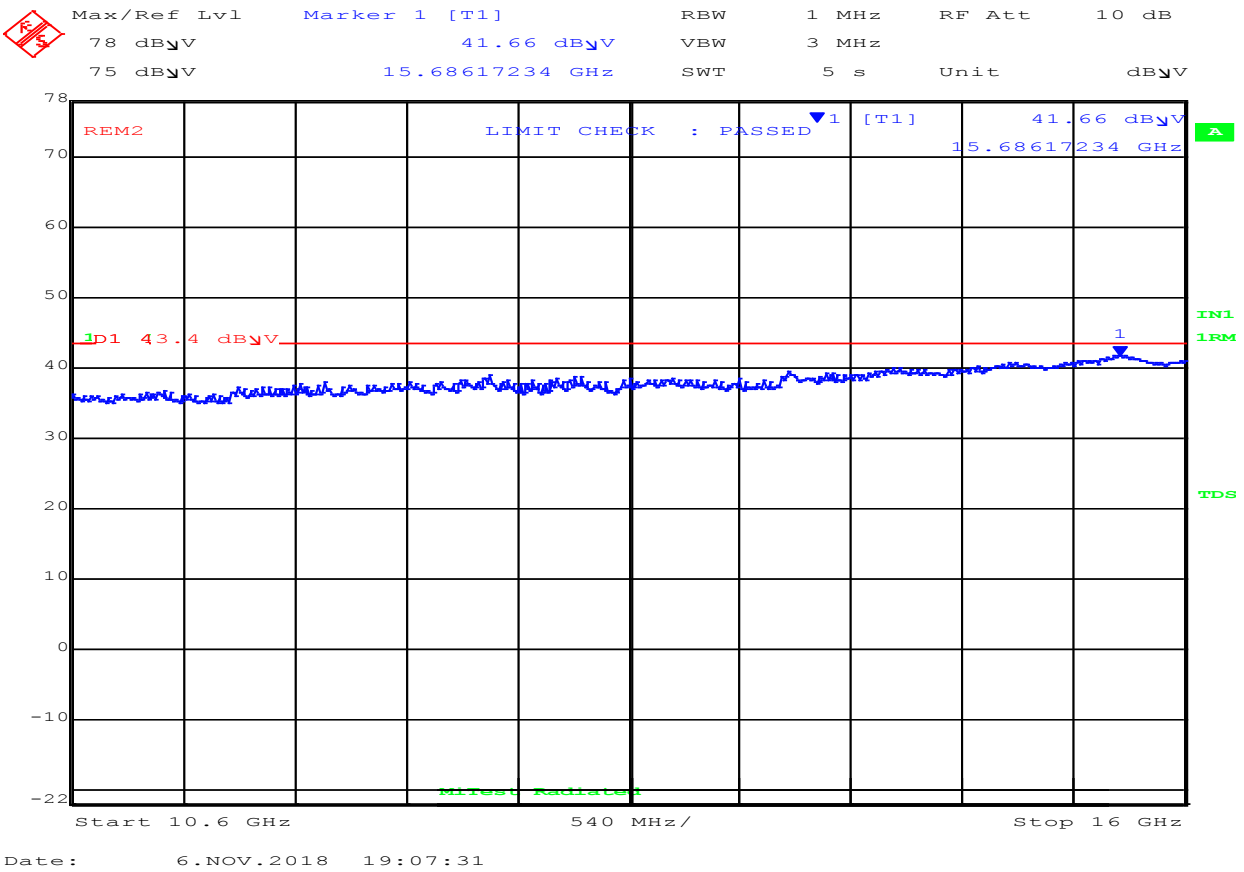
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.3	Average	Horizontal	150	0	43.4	-3.1	Pass

Test Notes:

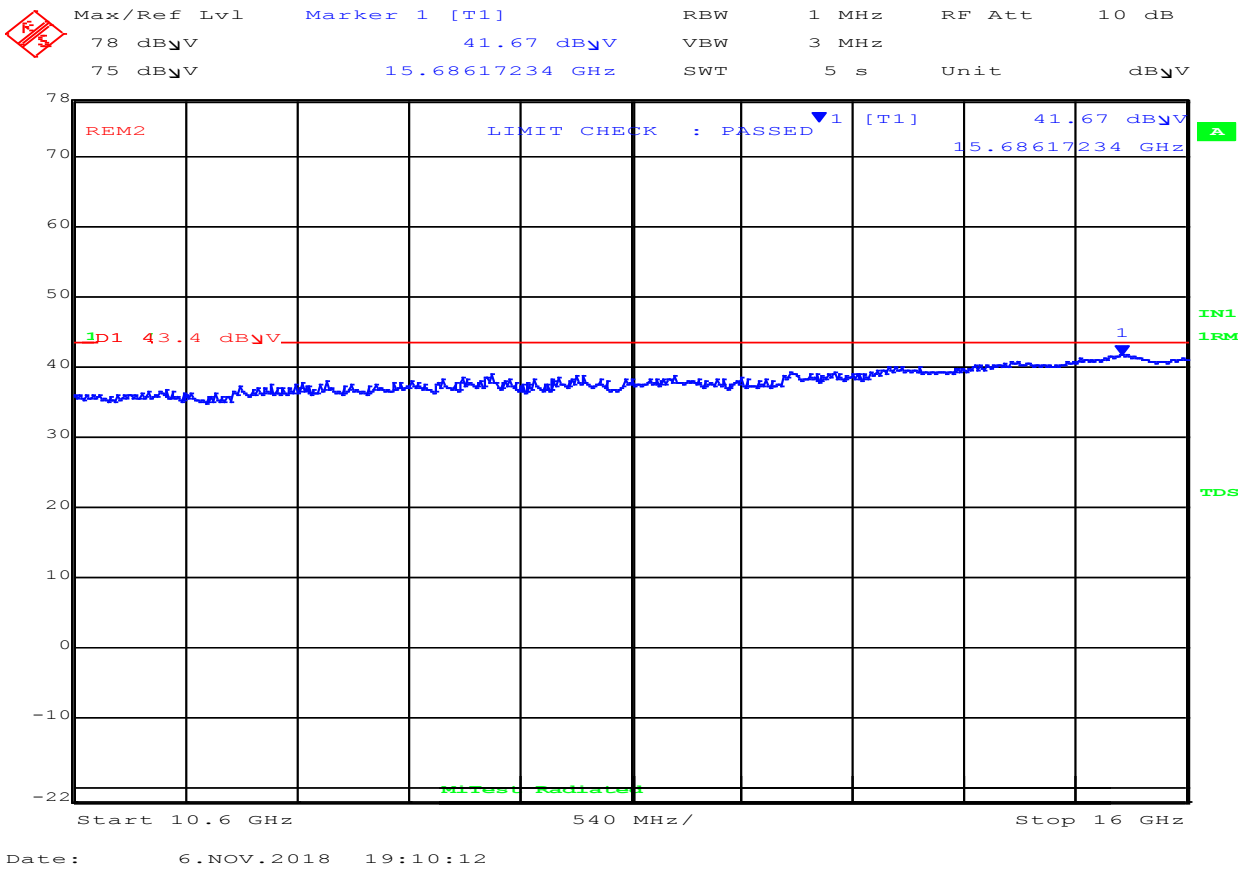
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.3	Average	Vertical	150	0	43.4	-3.1	Pass
Test Notes:									

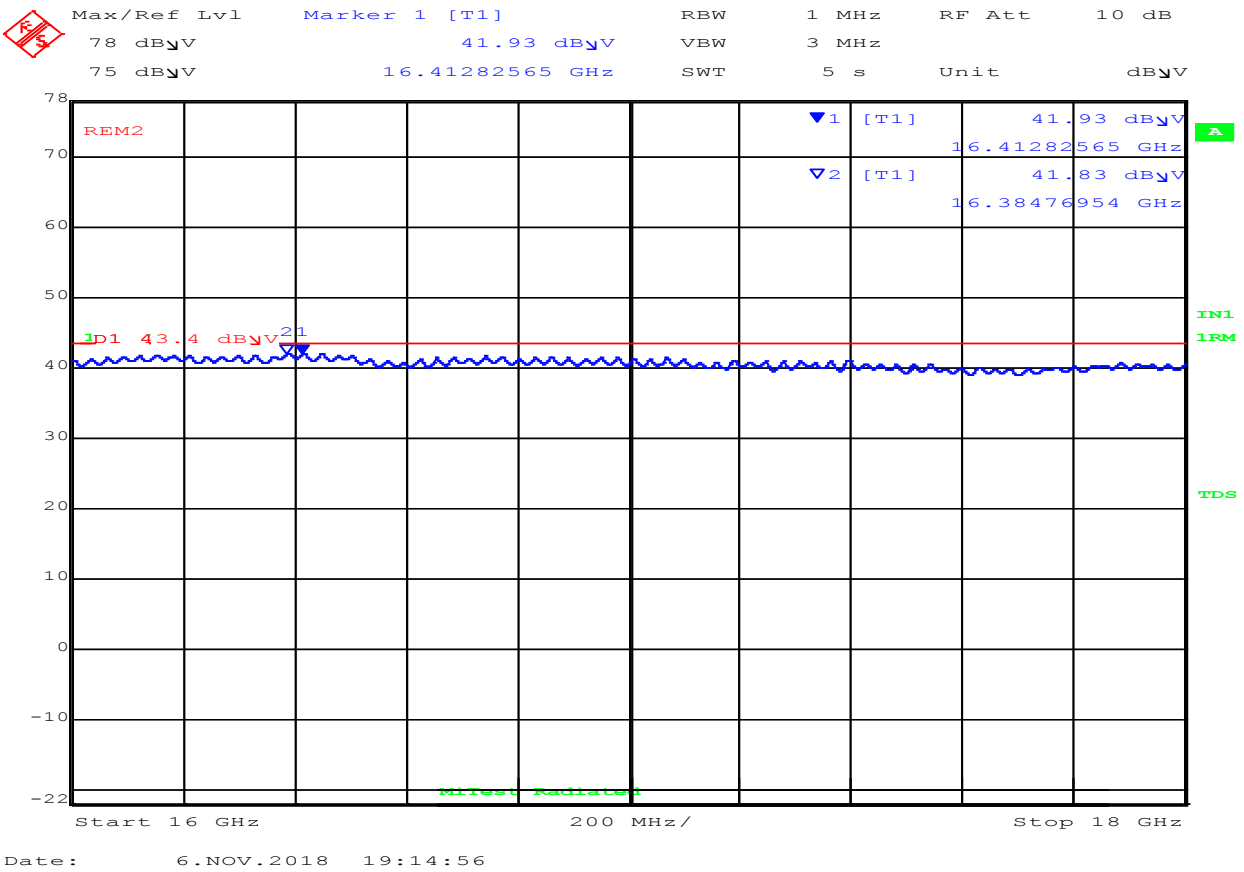
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16412.82	40.9	Average	Horizontal	150	0	43.4	-2.5	Pass
2	163884.77	40.8	Average	Horizontal	150	0	43.4	-2.6	Pass

Test Notes:

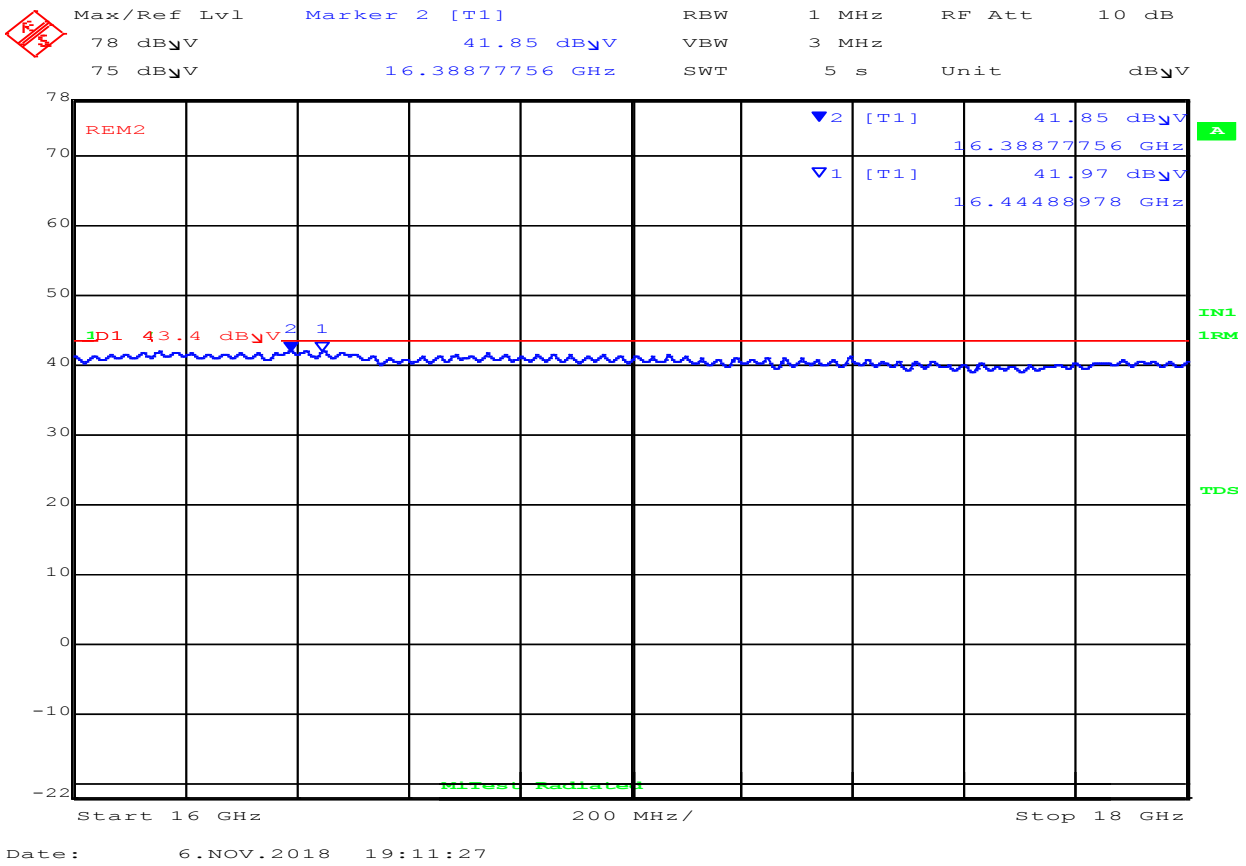
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



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16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.9	Average	Vertical	150	0	43.4	-2.5	Pass
2	16388.78	40.8	Average	Vertical	150	0	43.4	-2.6	Pass

Test Notes:

7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5

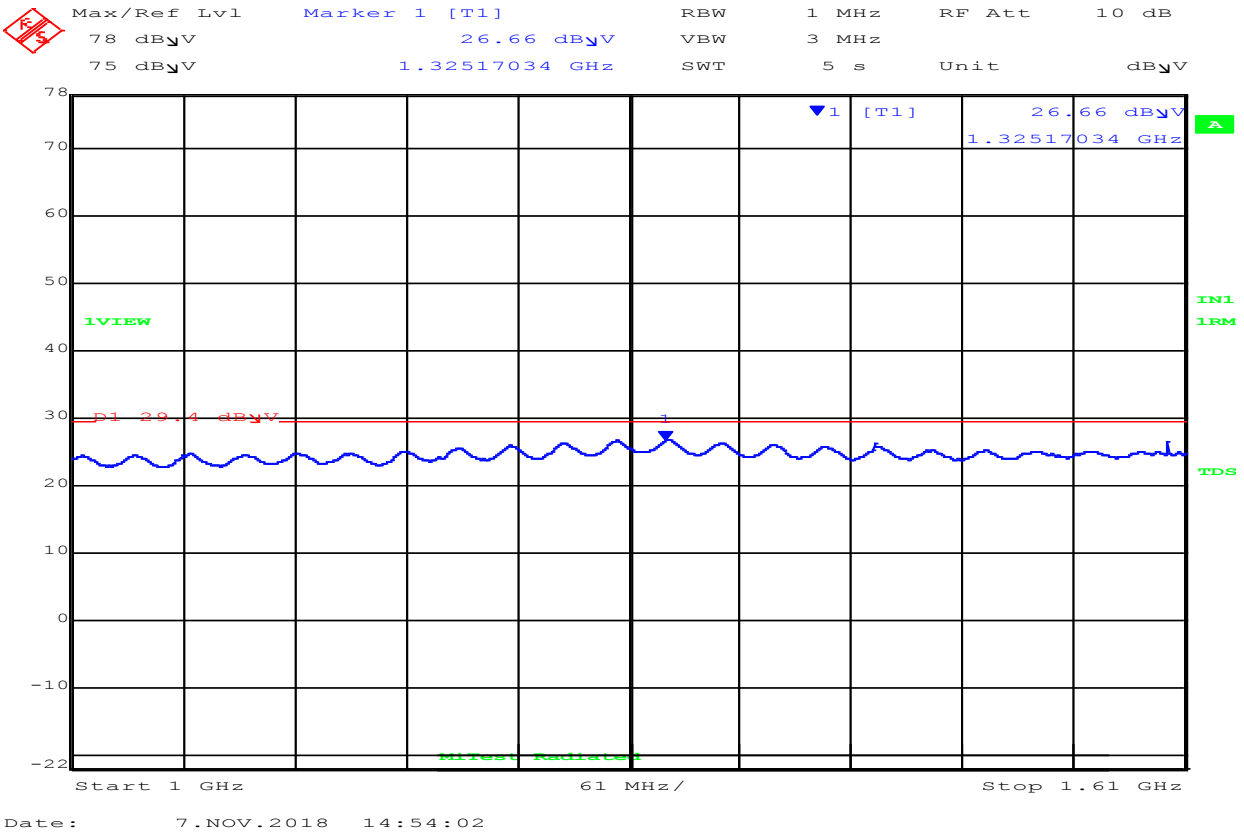
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1325.17	25.3	Average	Horizontal	150	0	29.4	-4.1	Pass

Test Notes:
Laptop Removed

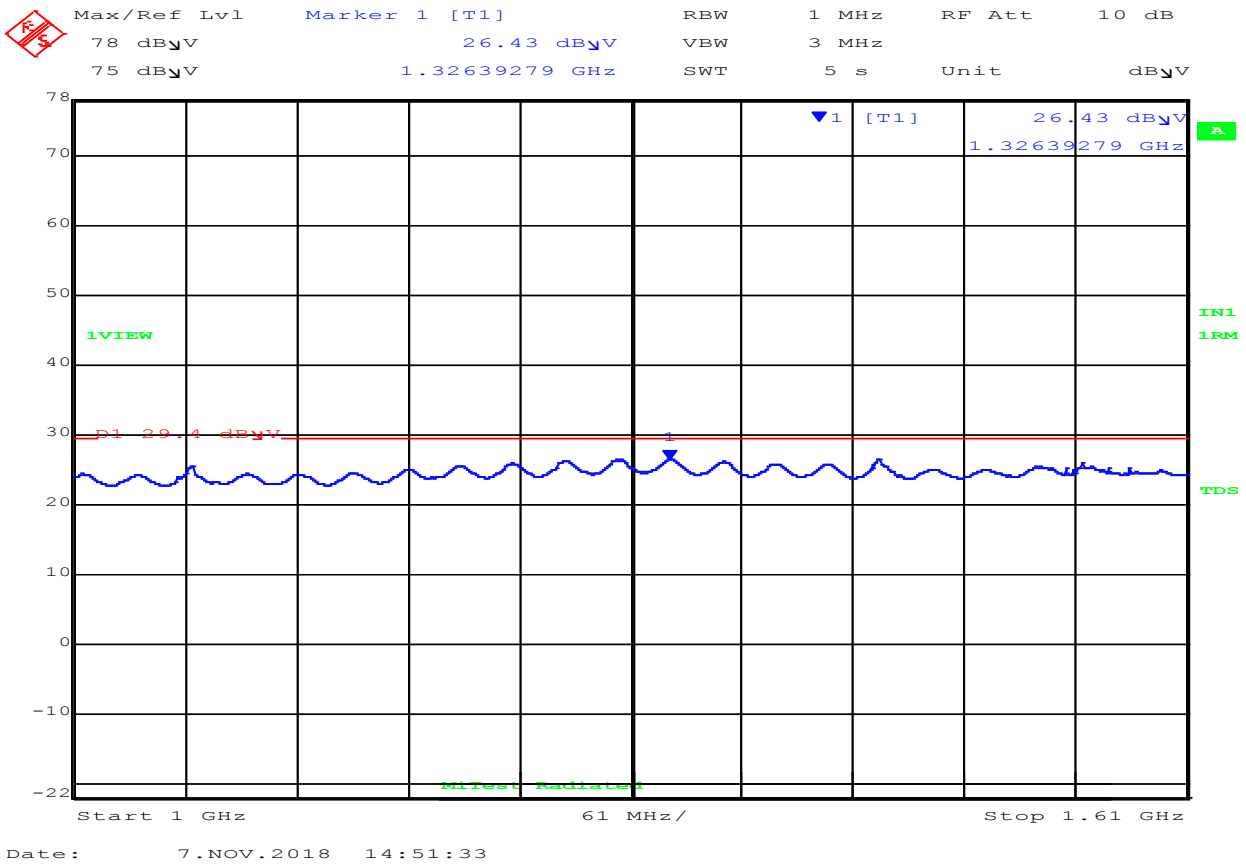
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.39	25.1	Average	Vertical	150	0	29.4	-4.1	Pass

Test Notes:
Laptop Removed

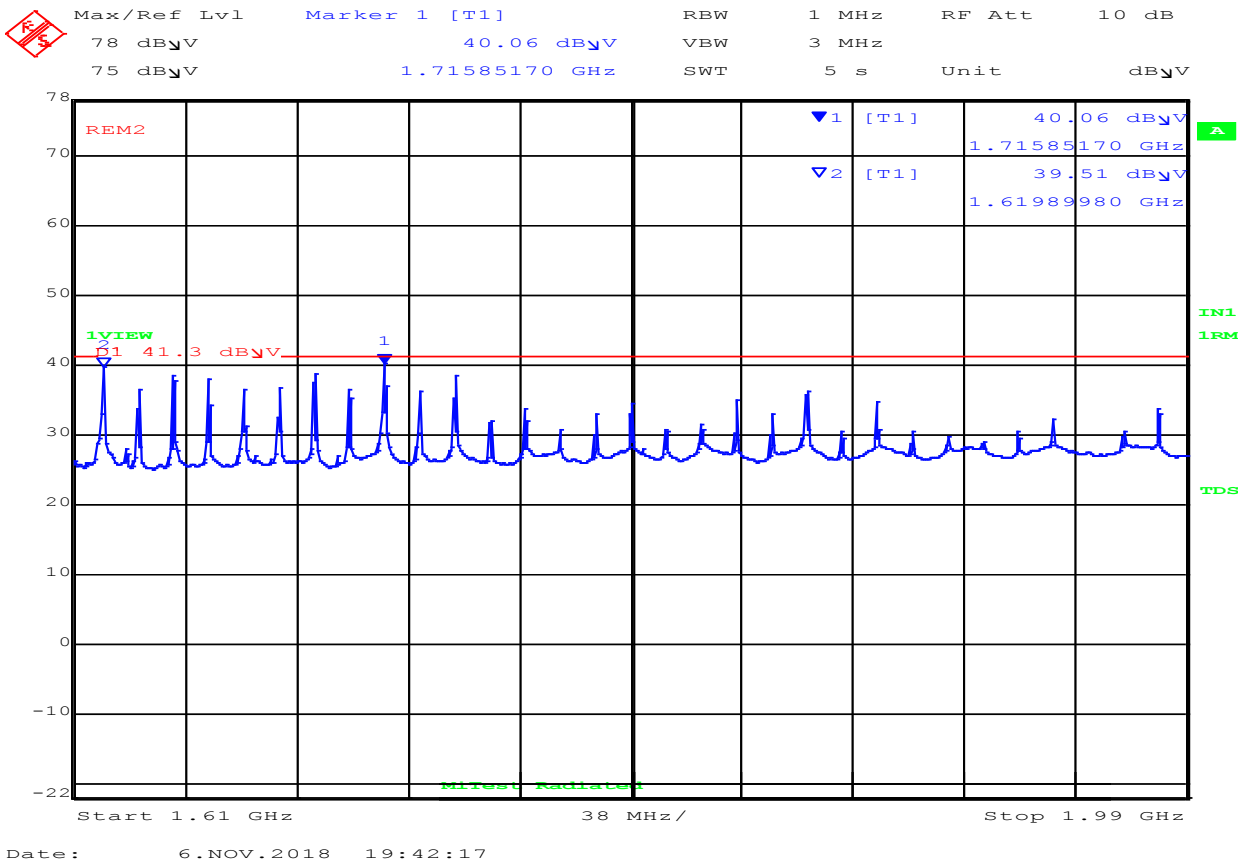
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1715.85*	40.1	Average	Horizontal	150	0	43.4	-3.3	Pass
2	1619.99*	39.6	Average	Horizontal	150	0	43.4	-3.8	Pass

Test Notes:
Source Laptop and UART to serial converter cable

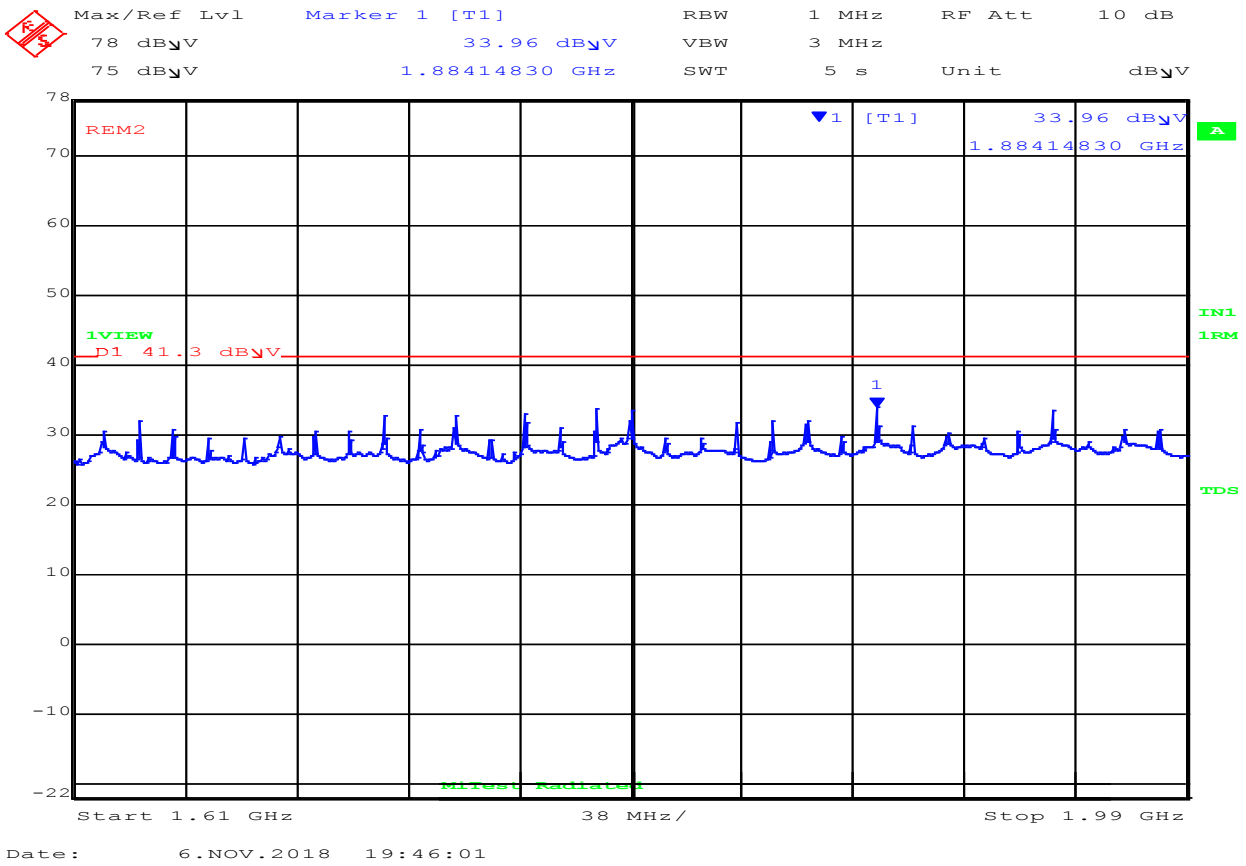
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 6.NOV.2018 19:46:01

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

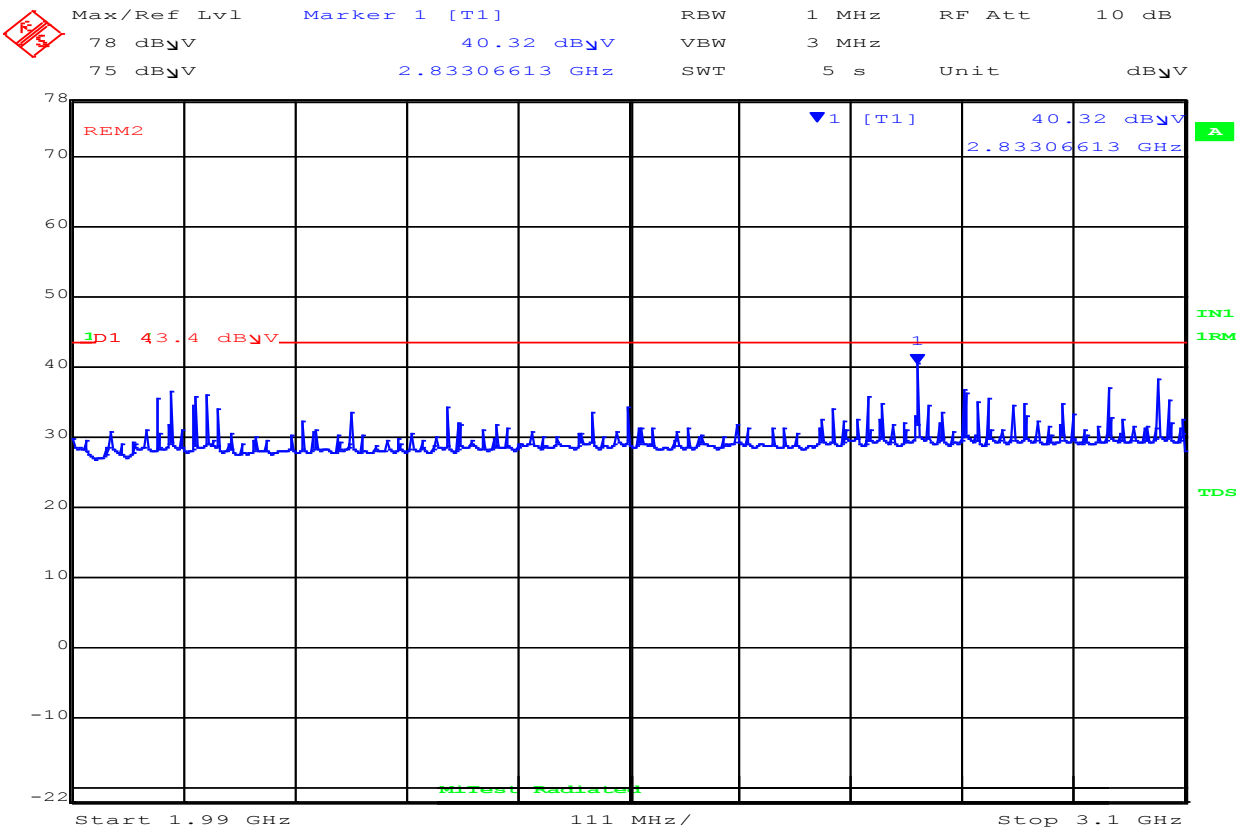
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 6.NOV.2018 19:39:52

1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2833.07*	42.3	Average	Horizontal	150	0	43.4	-1.1	Pass

Test Notes:
Source Laptop and UART to serial converter cable

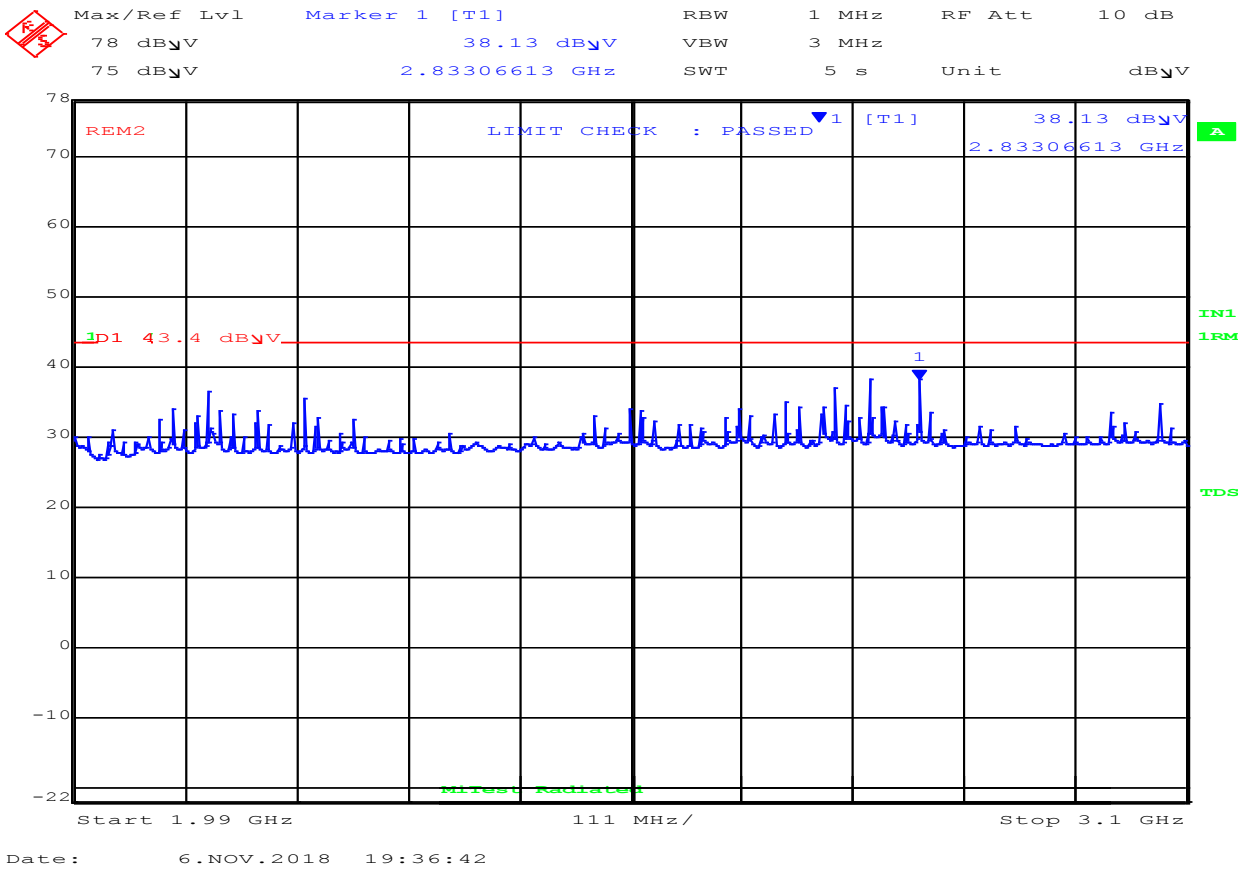
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	2833.07*	40.2	Average	Vertical	150	0	43.4	-3.2	Pass

Test Notes:
Source Laptop and UART to serial converter cable

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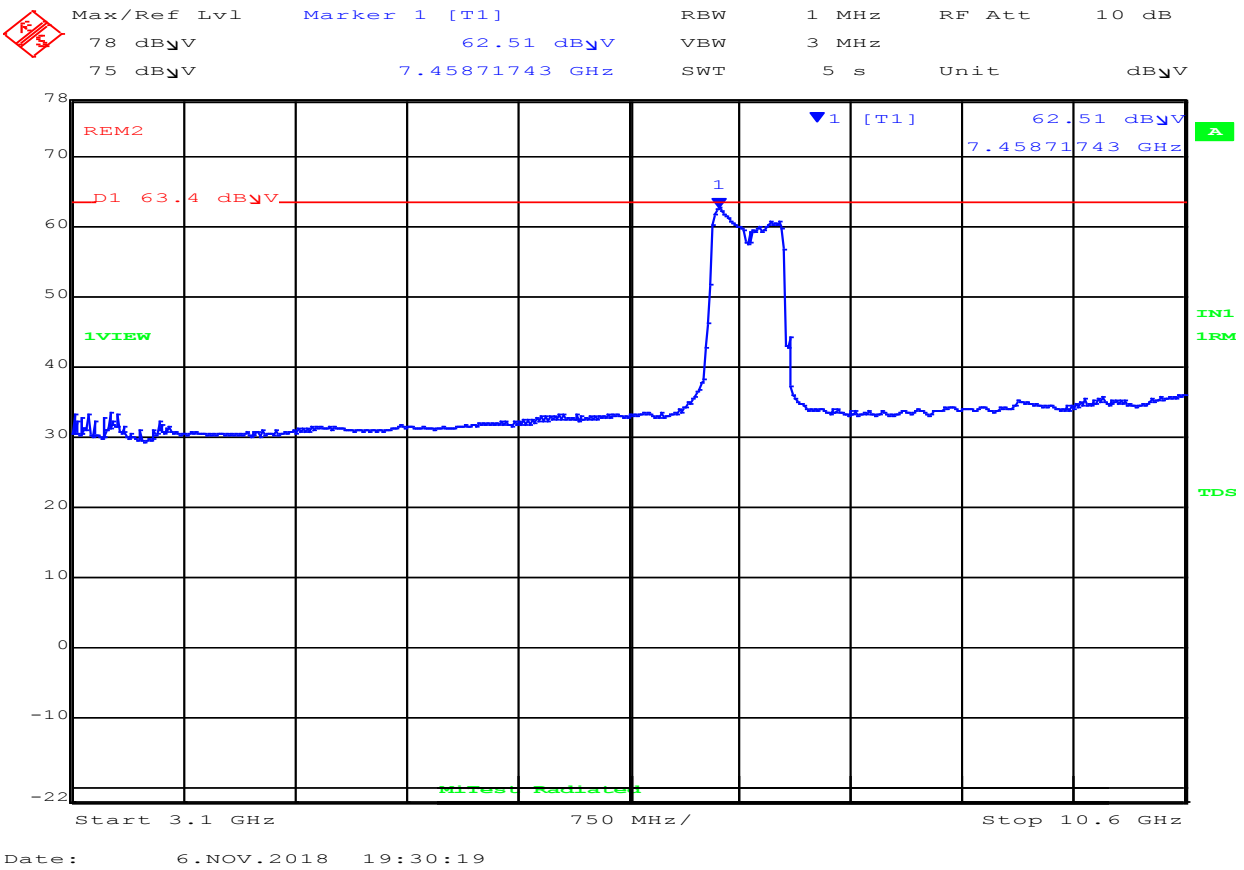
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	7458.72	61.6	Average	Horizontal	150	0	63.4	-1.8	Pass

Test Notes:

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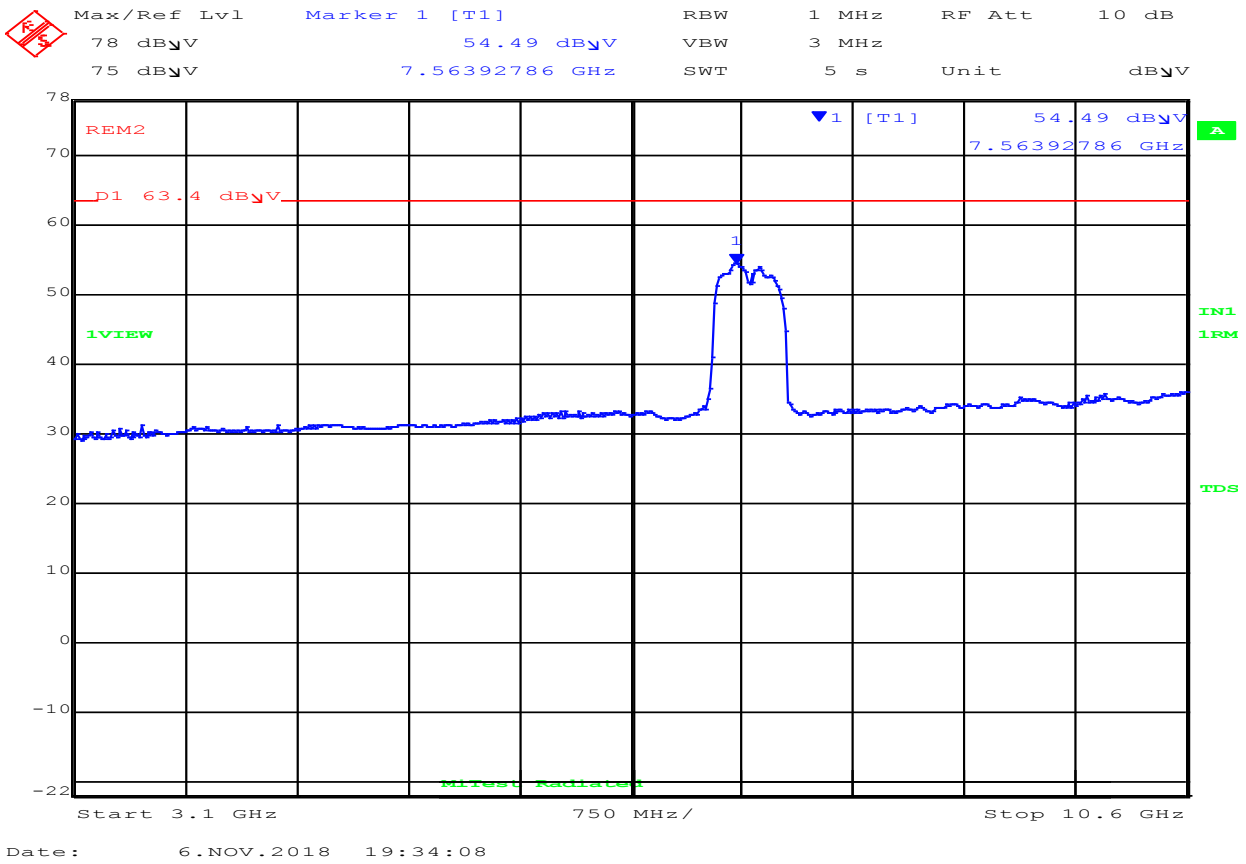
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

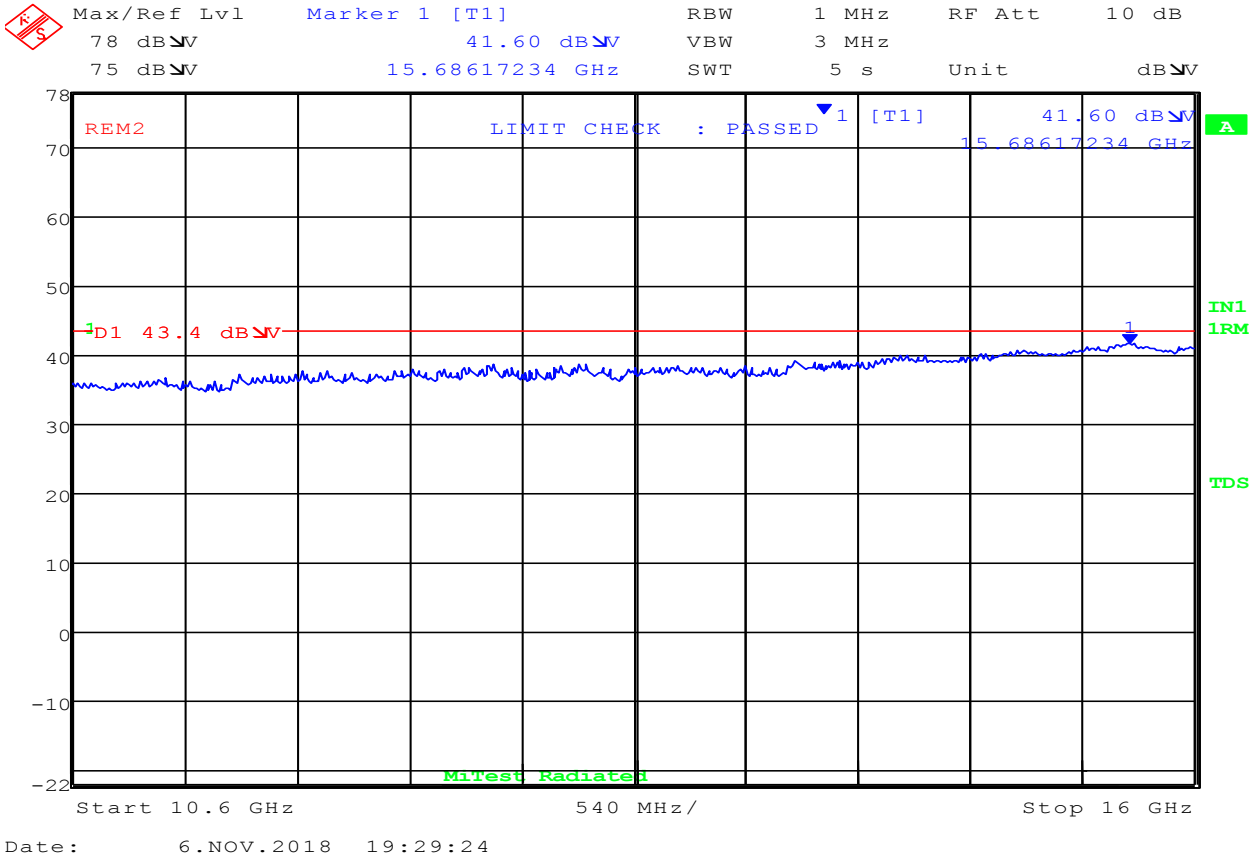
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 6.NOV.2018 19:29:24

10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.2	Average	Horizontal	150	0	43.4	-3.2	Pass

Test Notes:

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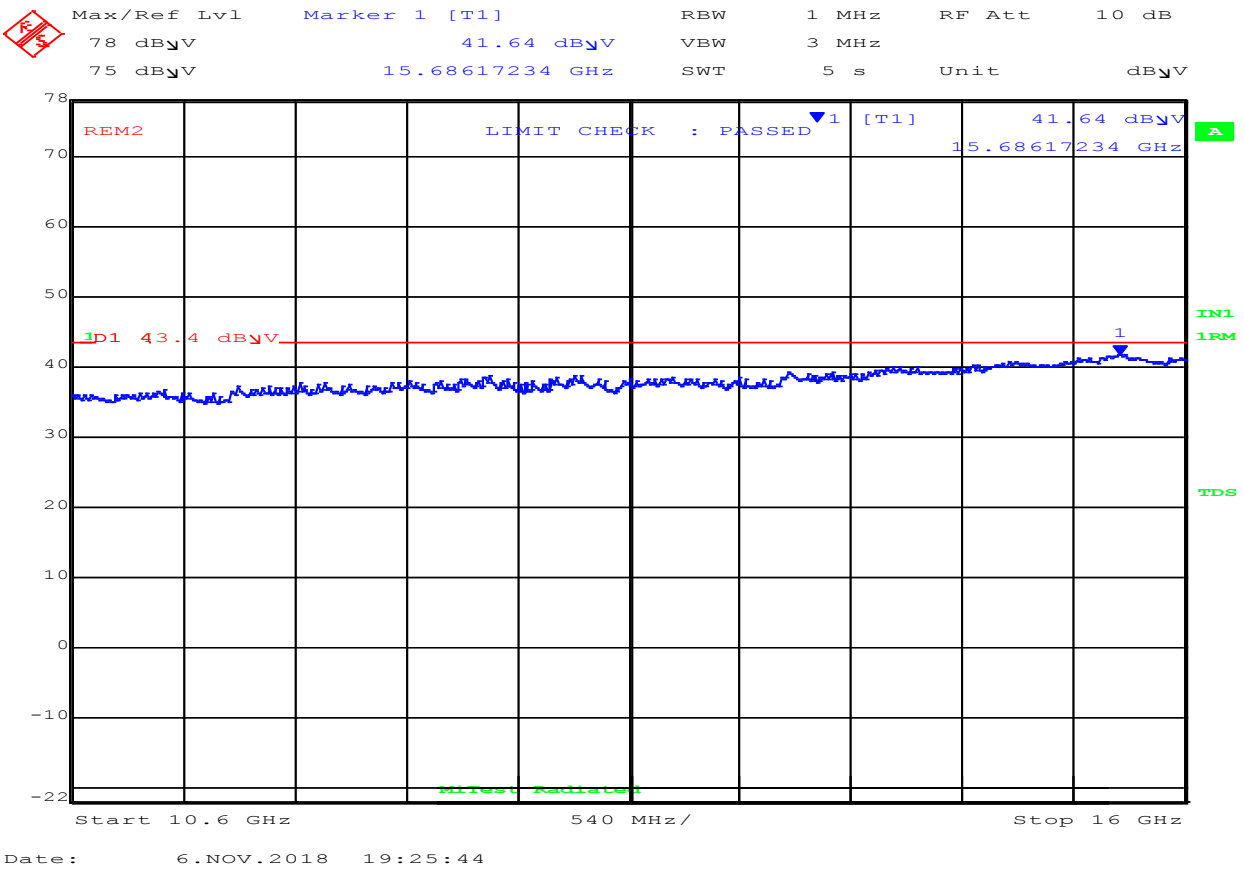
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.3	Average	Vertical	150	0	43.4	-3.1	Pass
Test Notes:									

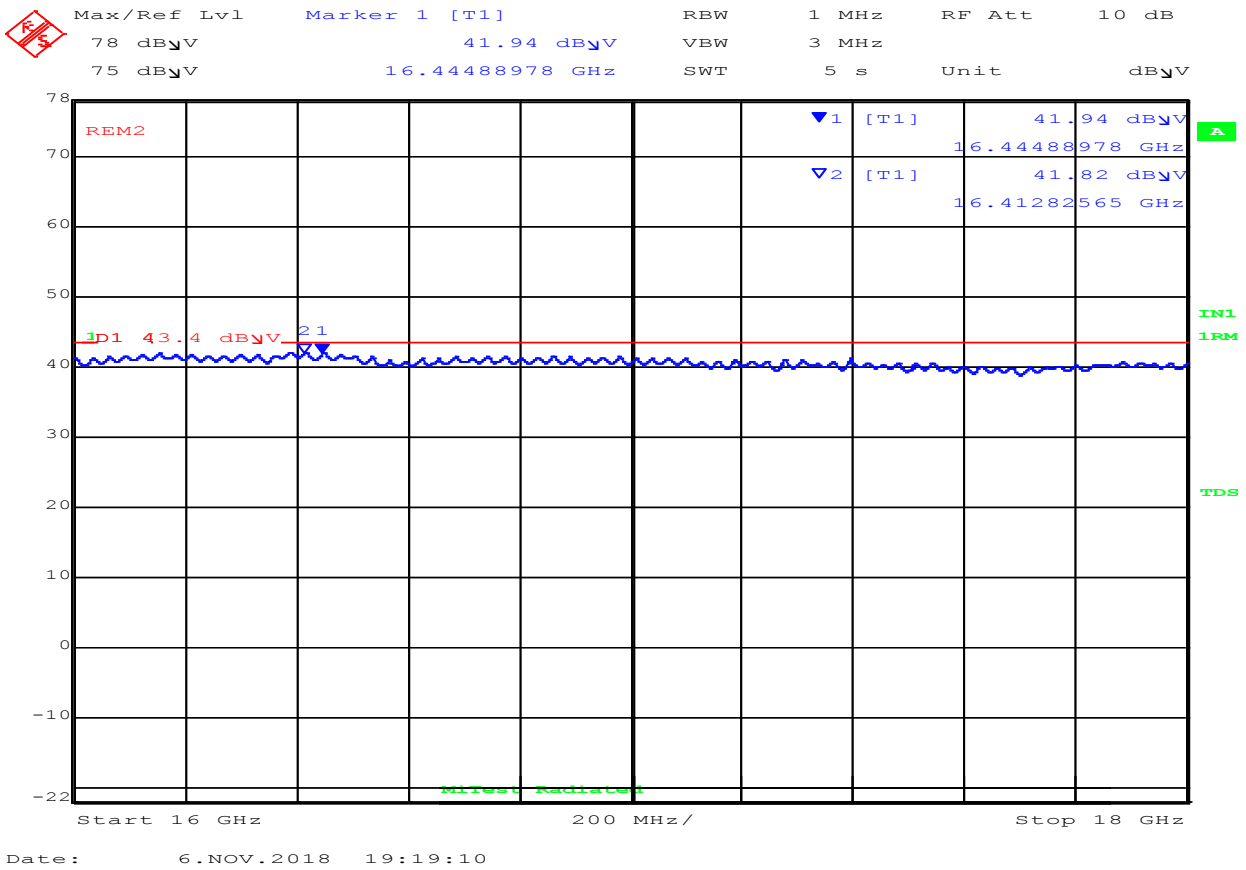
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.9	Average	Horizontal	150	0	43.4	-2.5	Pass
2	16412.83	40.8	Average	Horizontal	150	0	43.4	-2.6	Pass

Test Notes:

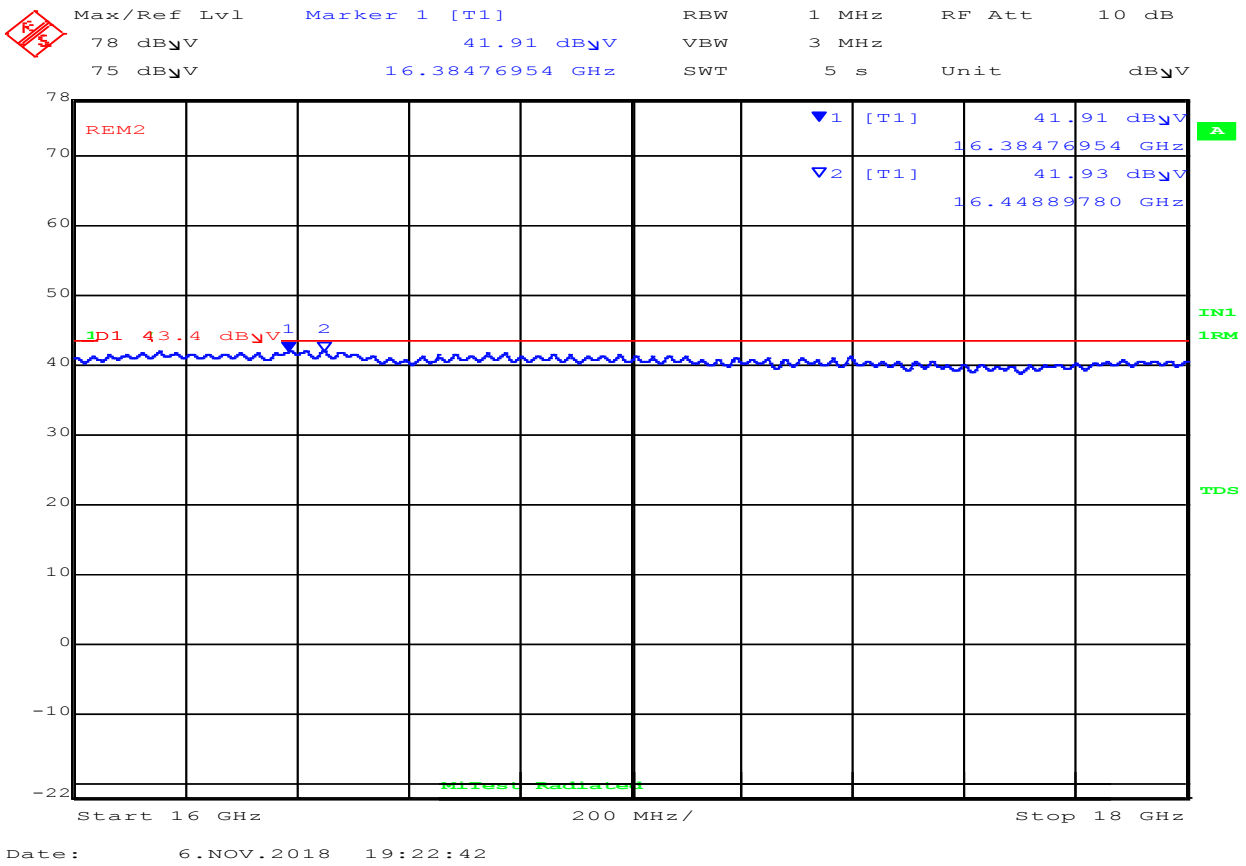
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16384.48	40.8	Average	Vertical	150	0	43.4	-2.6	Pass
2	16448.90	40.9	Average	Vertical	150	0	43.4	-2.5	Pass

Test Notes:

8184 MHz

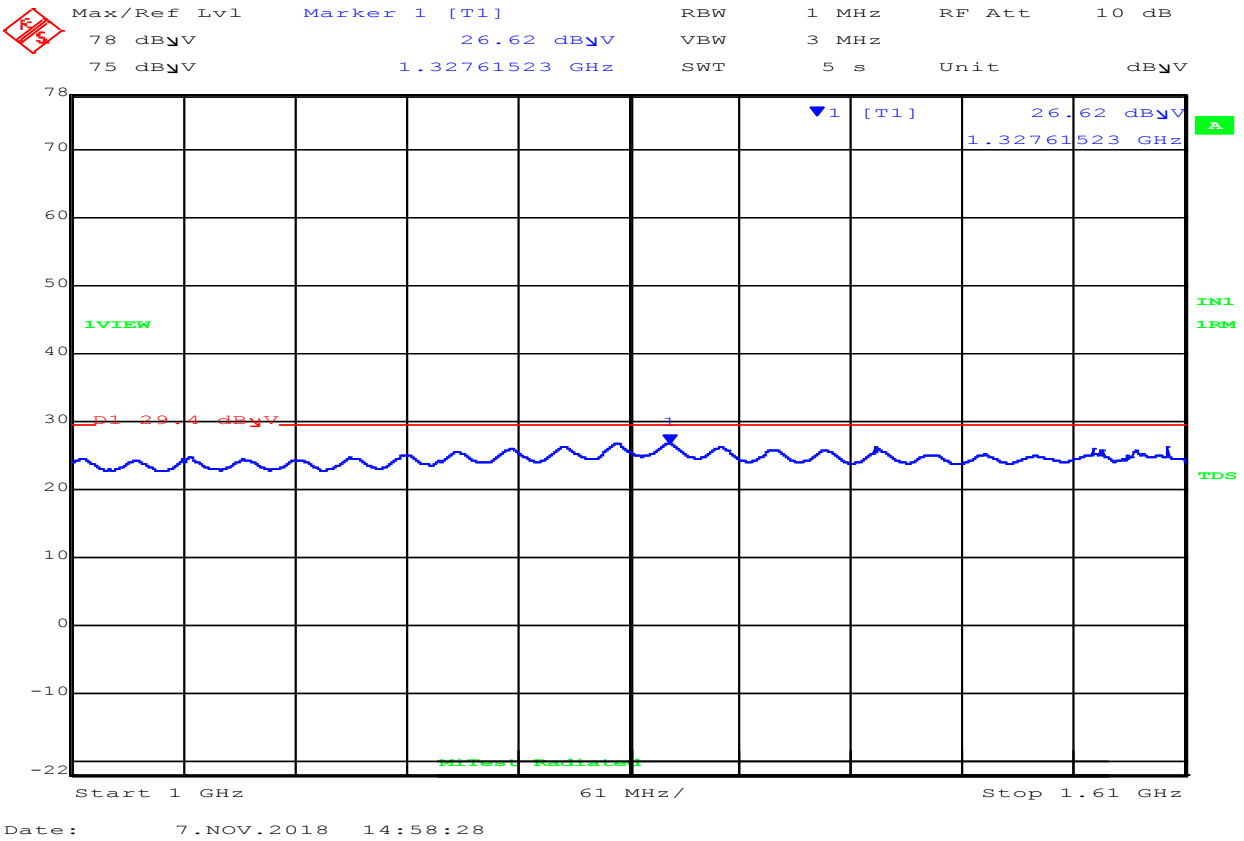
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1327.62	25.10	Average	Horizontal	150	0	29.4	-4.3	Pass
Test Notes:									

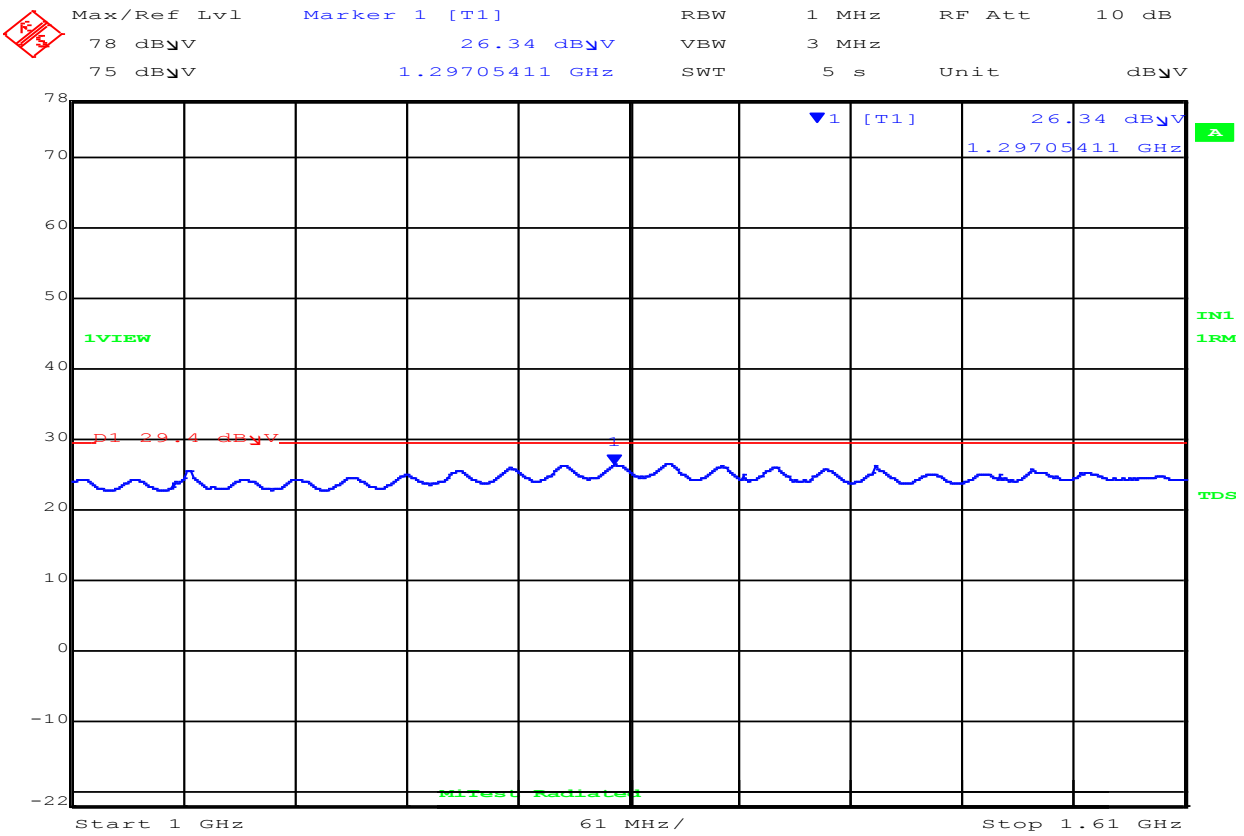
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 7.NOV.2018 15:00:25

1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
2	1297.05	25.1	Average	Vertical	150	0	29.4	-4.3	Pass

Test Notes:

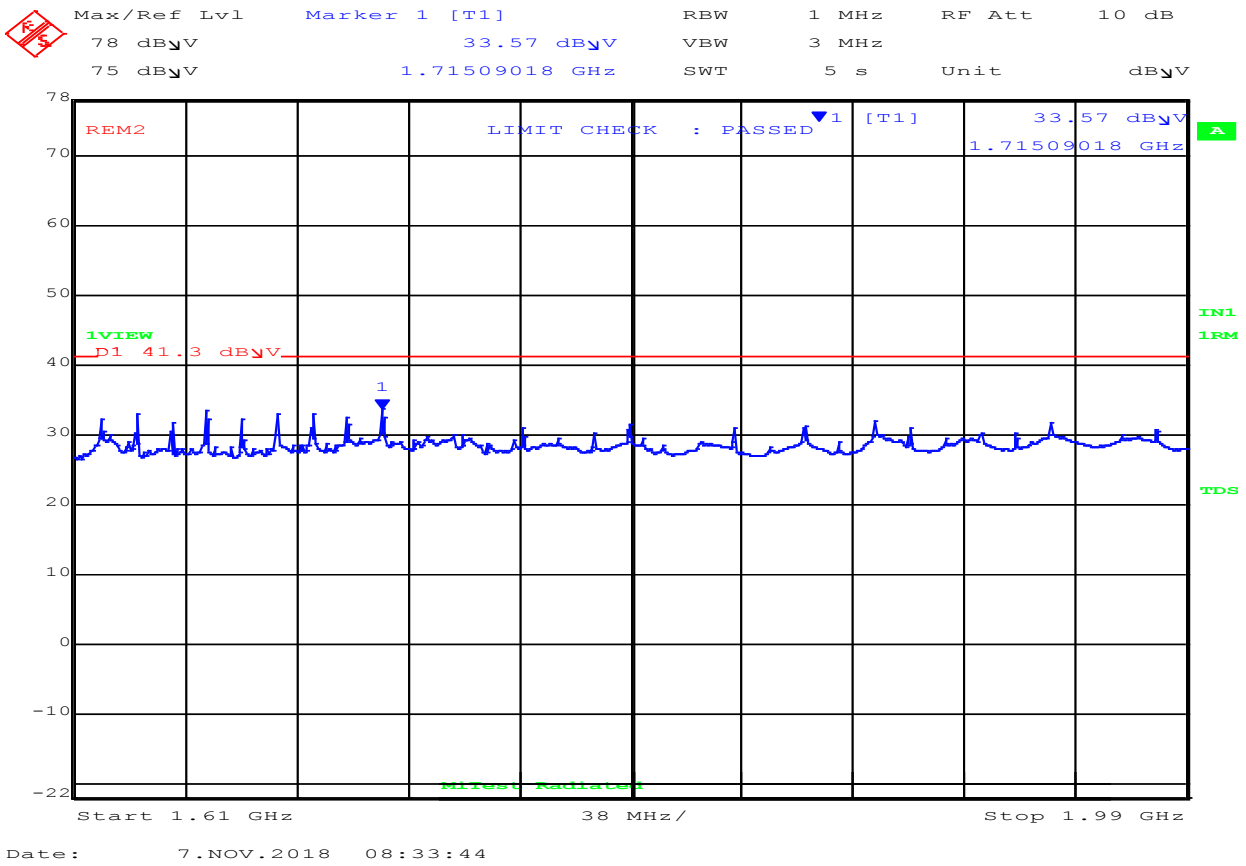
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

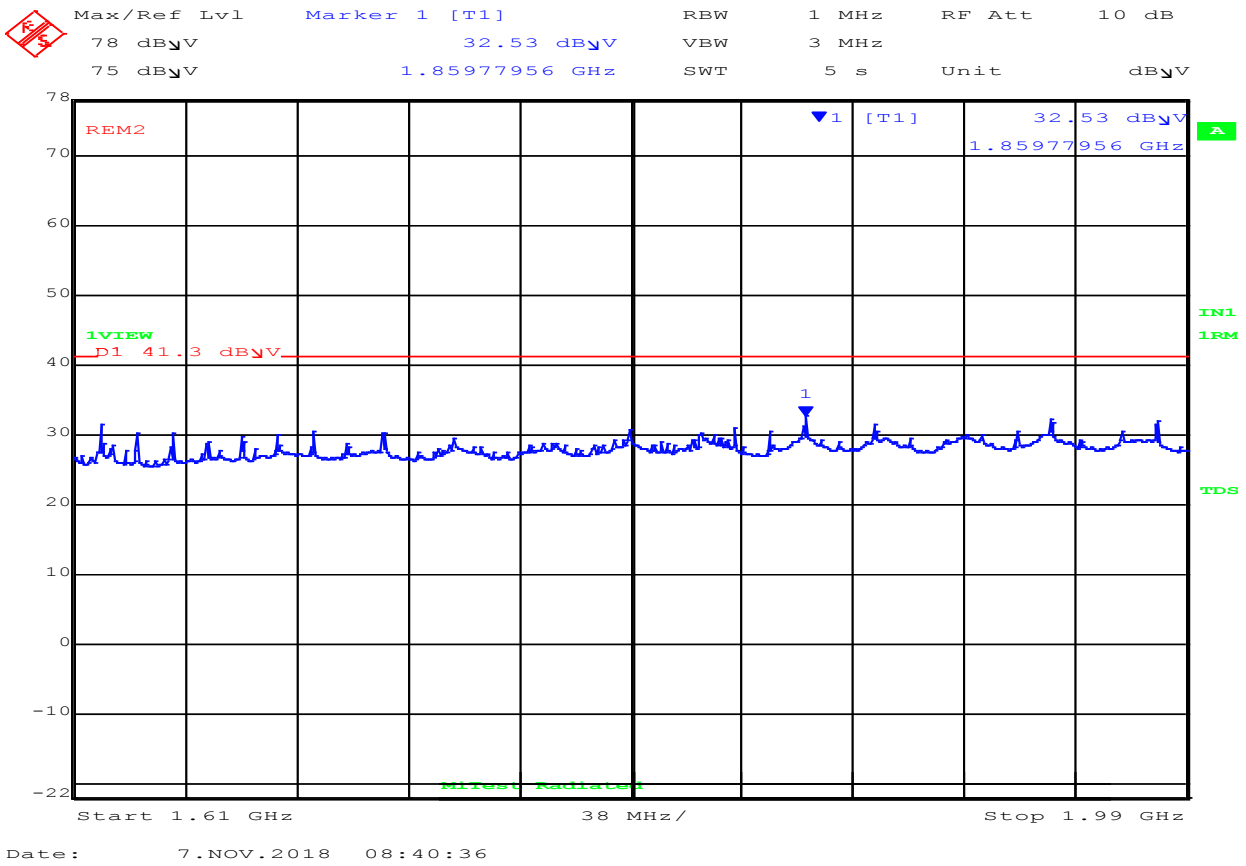
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 7.NOV.2018 08:40:36

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

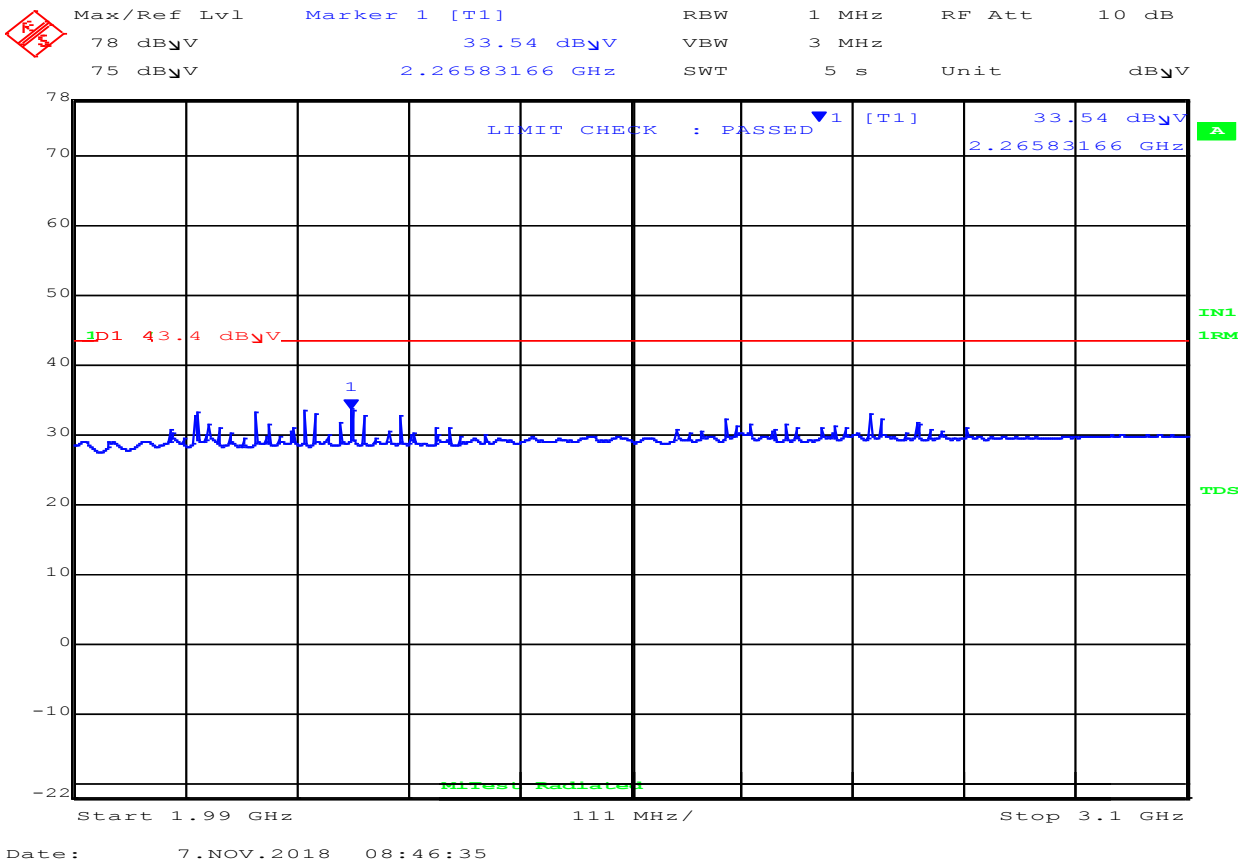
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

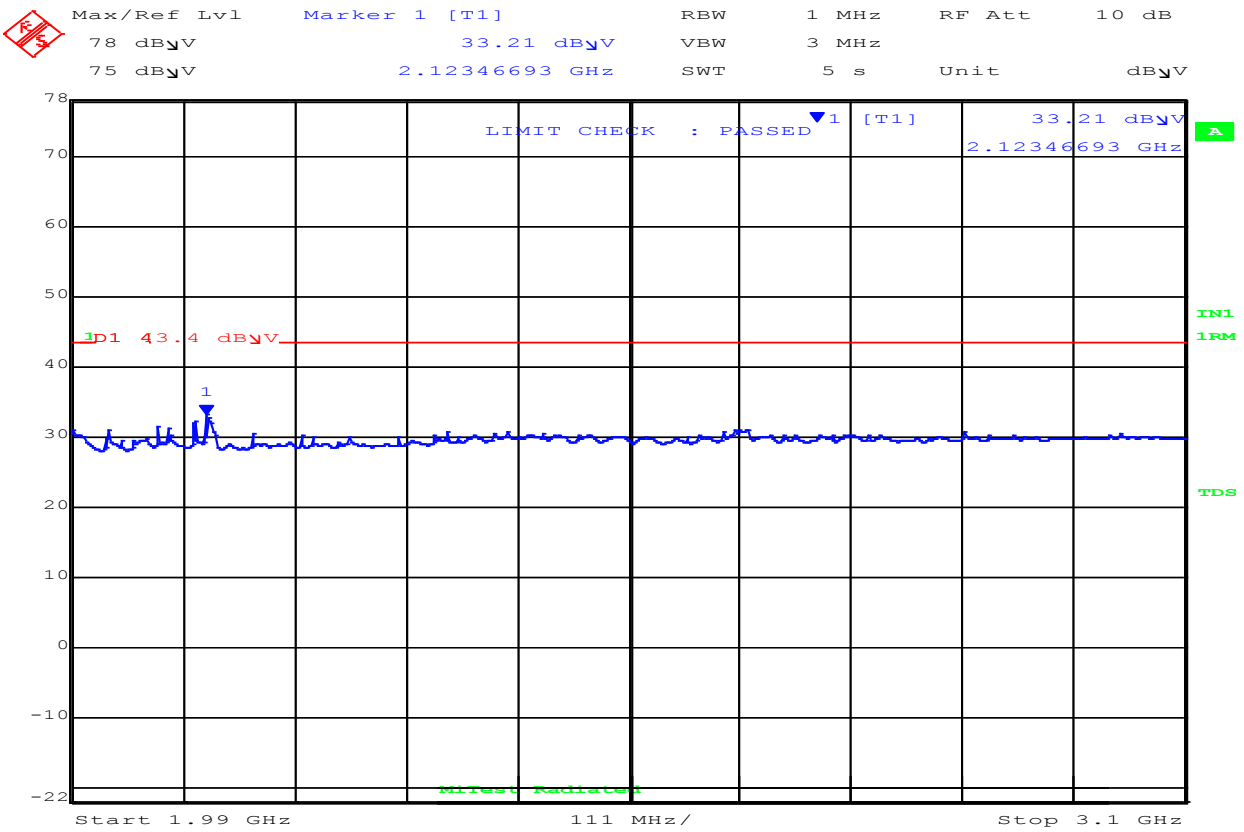
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 7.NOV.2018 08:44:59

1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									
Test Notes:									

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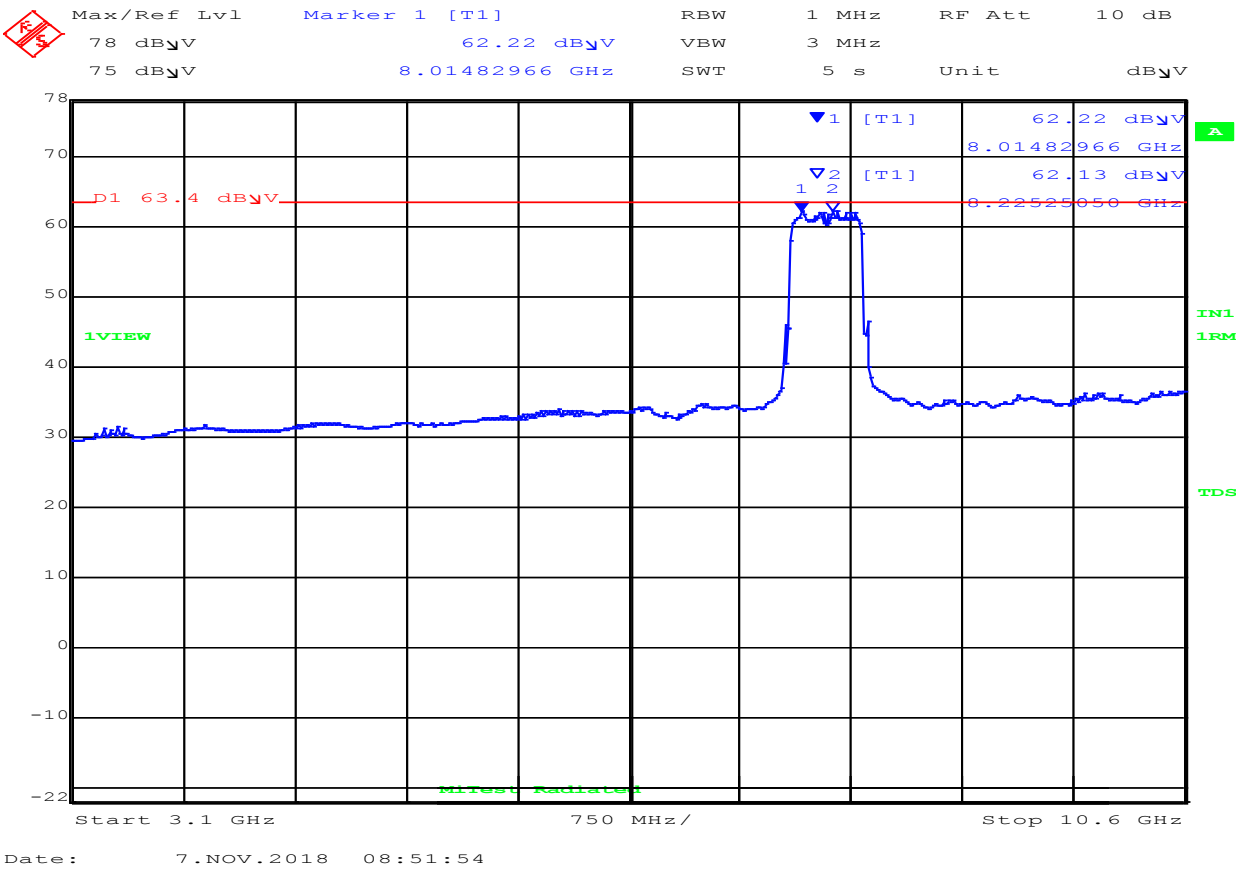
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	8014.83	60.9	Average	Horizontal	150	0	63.4	-2.5	Pass
2	8225.25	60.3	Average	Horizontal	150	0	63.4	-3.1	Pass

Test Notes:

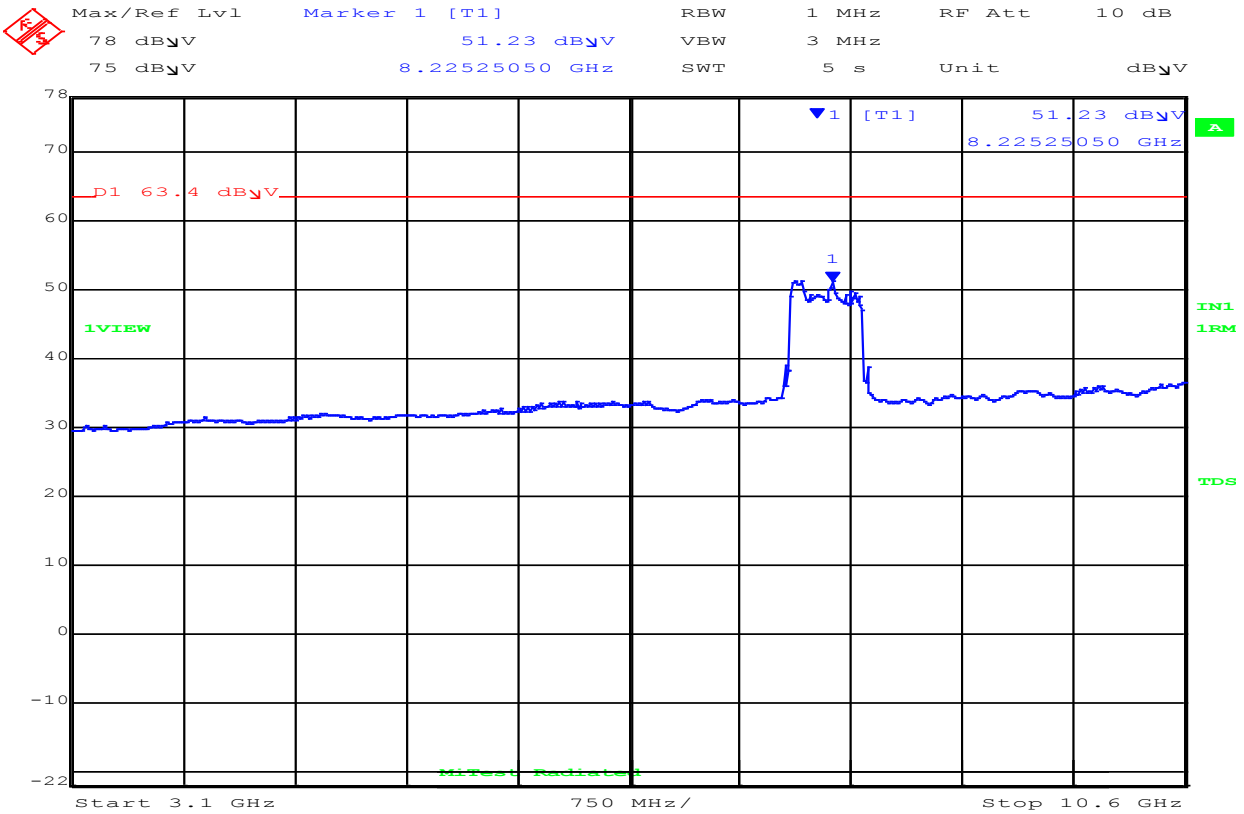
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 7.NOV.2018 08:57:17

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

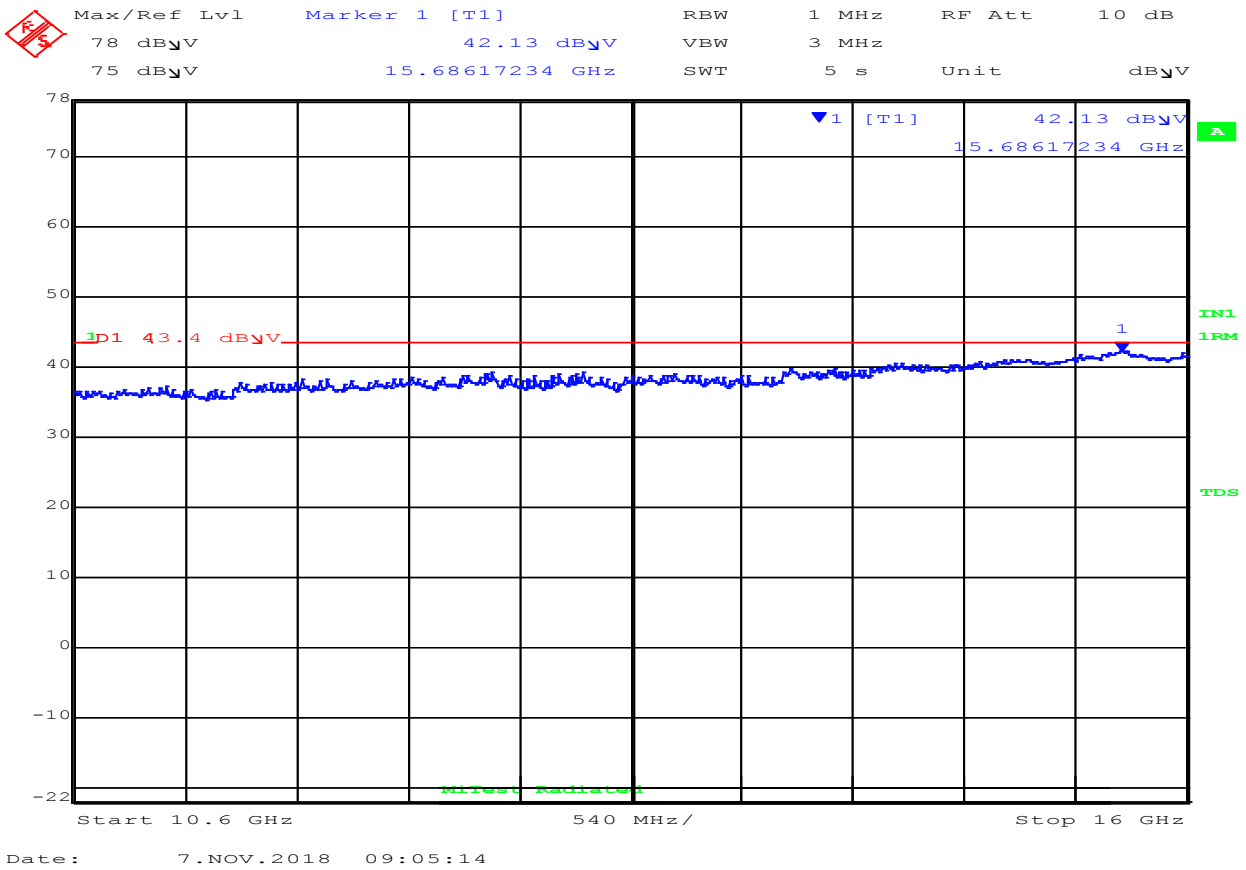
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.6	Average	Horizontal	150	0	43.4	-2.8	Pass

Test Notes:

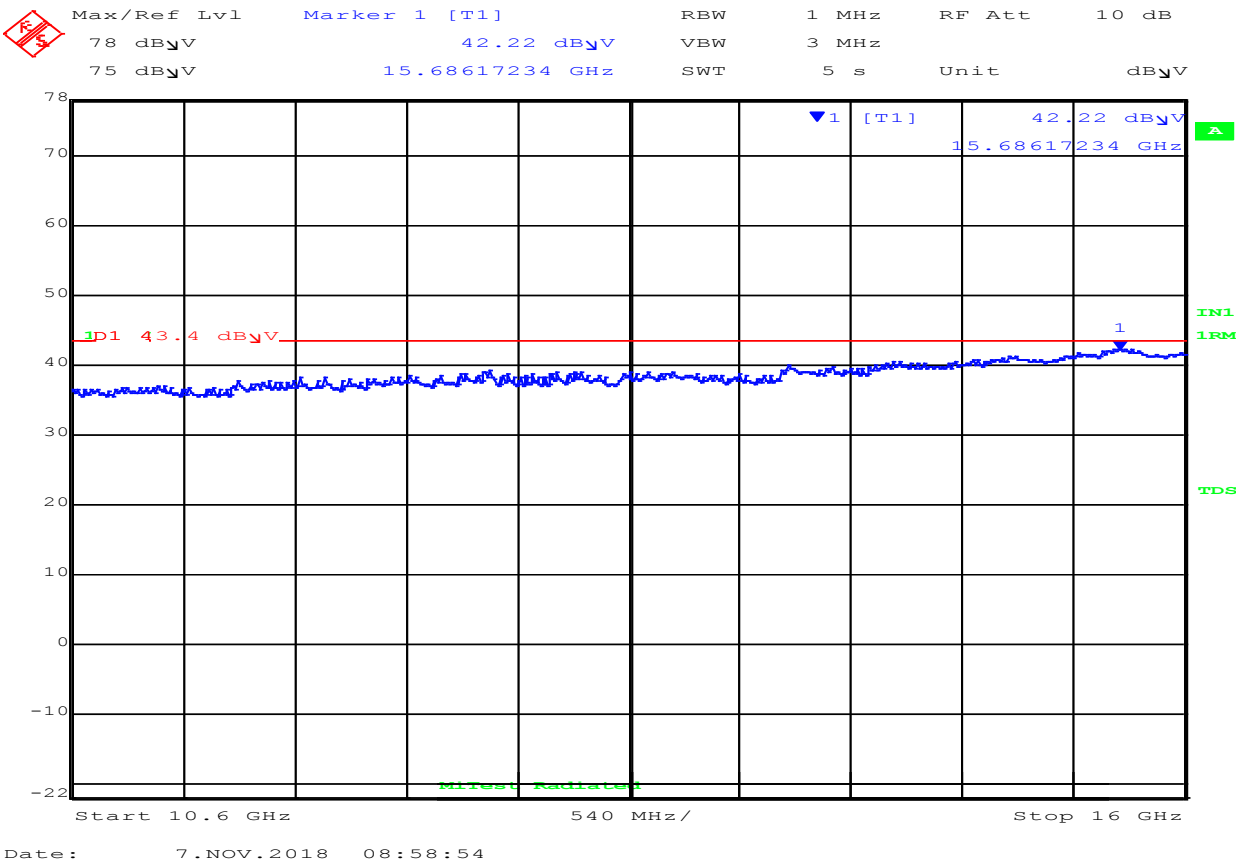
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.8	Average	Vertical	150	0	43.4	-2.6	Pass

Test Notes:

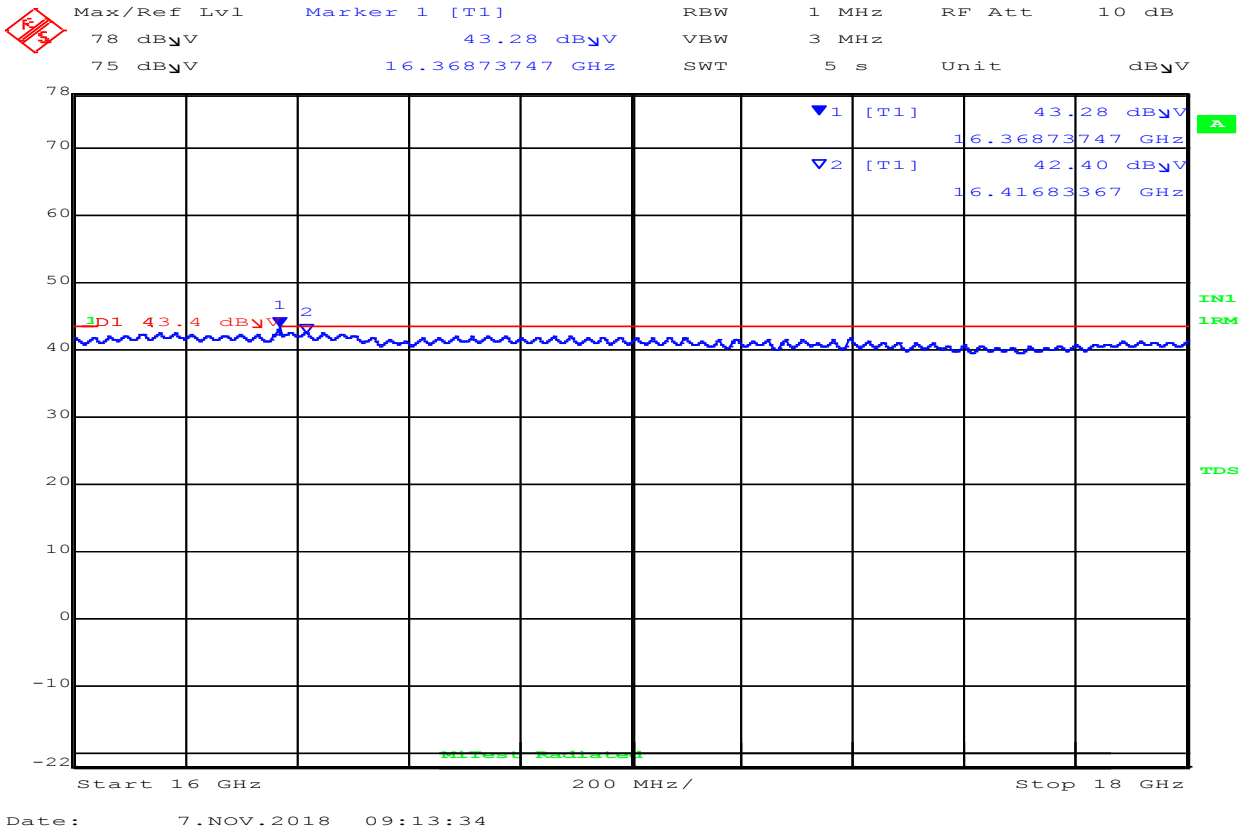
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16368.74	40.2	Average	Horizontal	150	0	43.4	-3.2	Pass
2	16416.83	40.7	Average	Horizontal	150	0	43.4	-2.7	Pass

Test Notes:

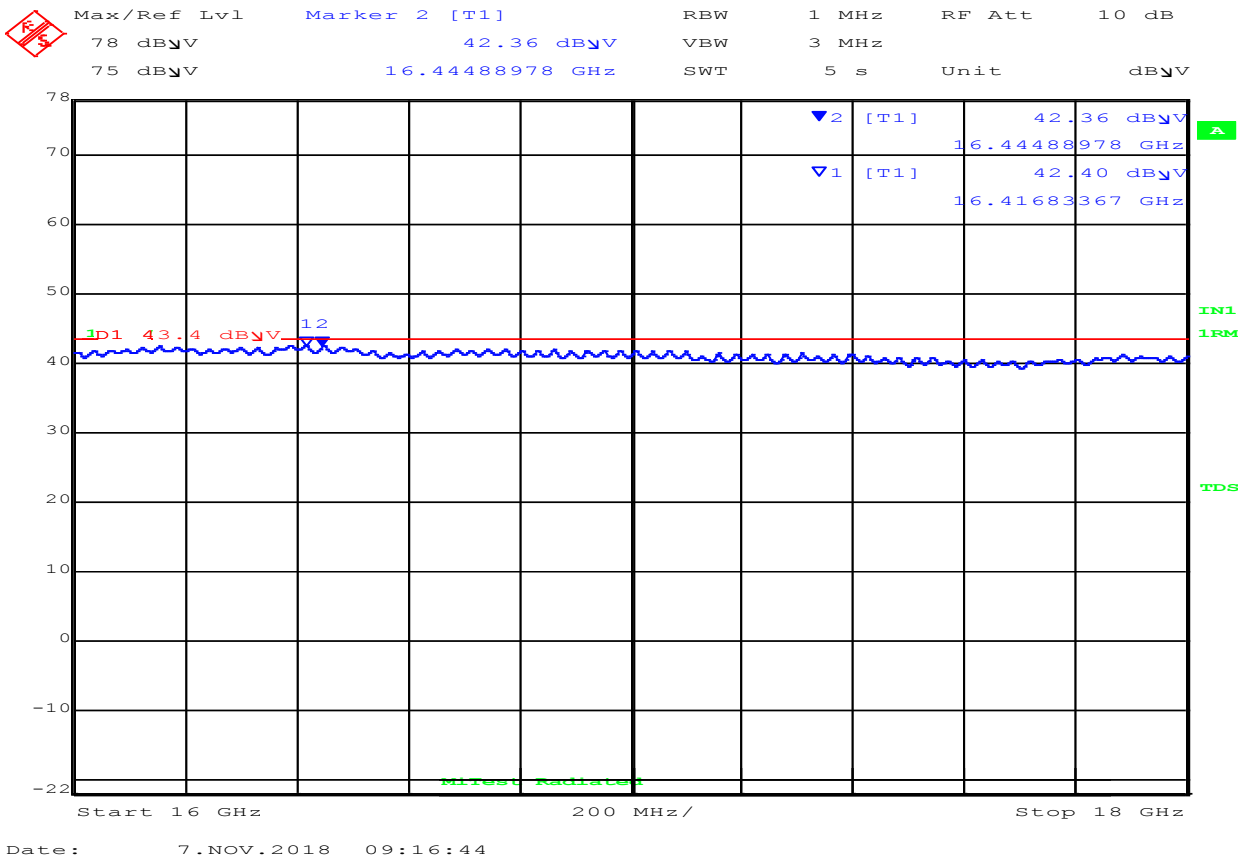
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.7	Average	Vertical	150	0	43.4	-2.7	Pass
2	16416.83	39.8	Average	Vertical	150	0	43.4	-3.6	Pass

Test Notes:

8712 MHz

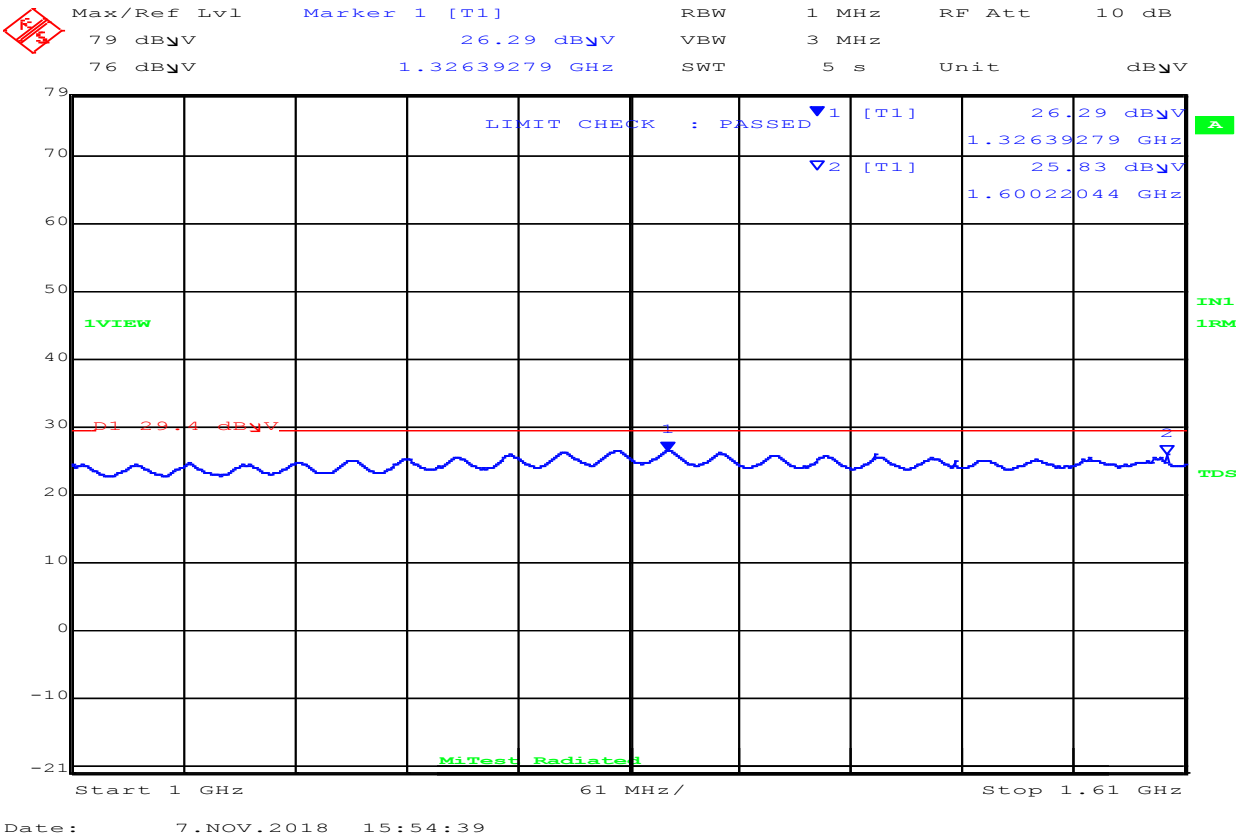
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.39	25.10	Average	Horizontal	150	0	29.4	-4.3	Pass
2	1600.22	25.70	Average	Horizontal	150	0	29.4	-3.7	Pass

Test Notes:

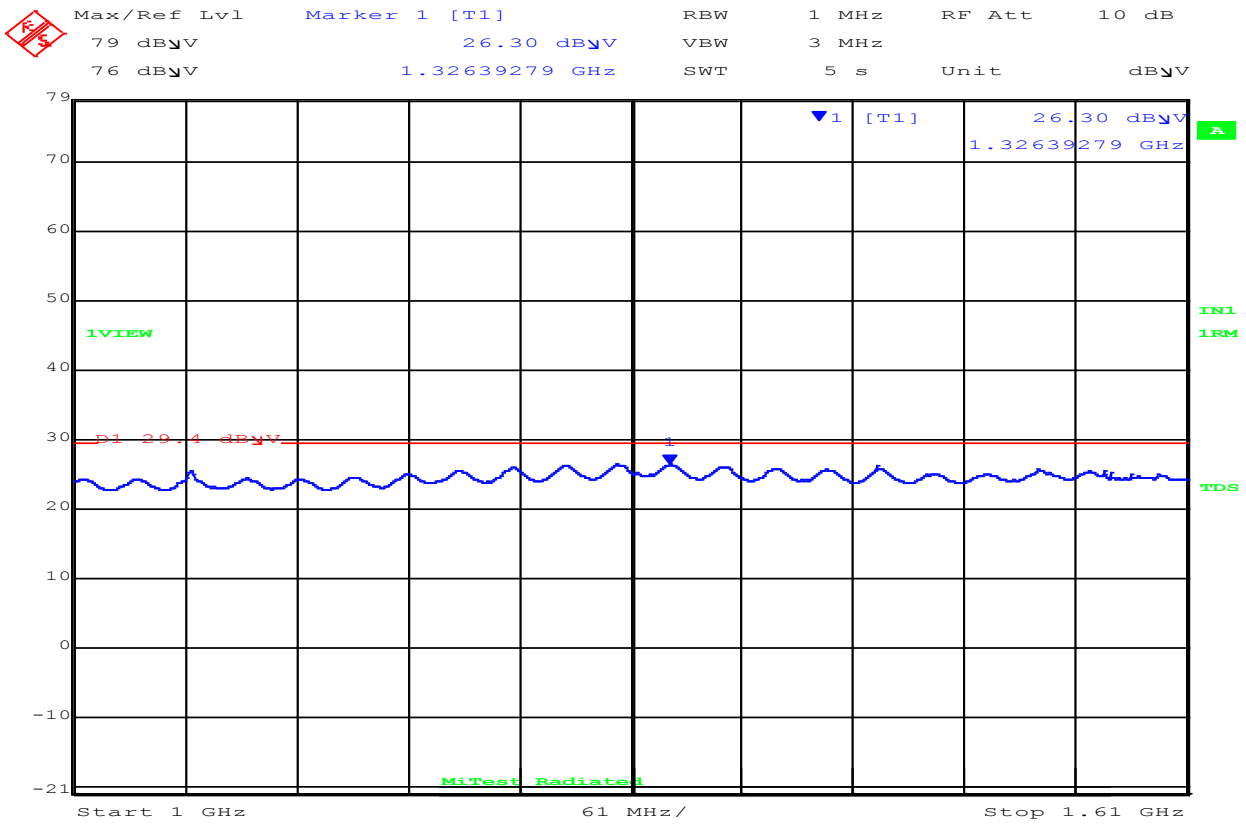
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.39	24.9	Average	Vertical	150	0	29.4	-4.5	Pass

Test Notes:

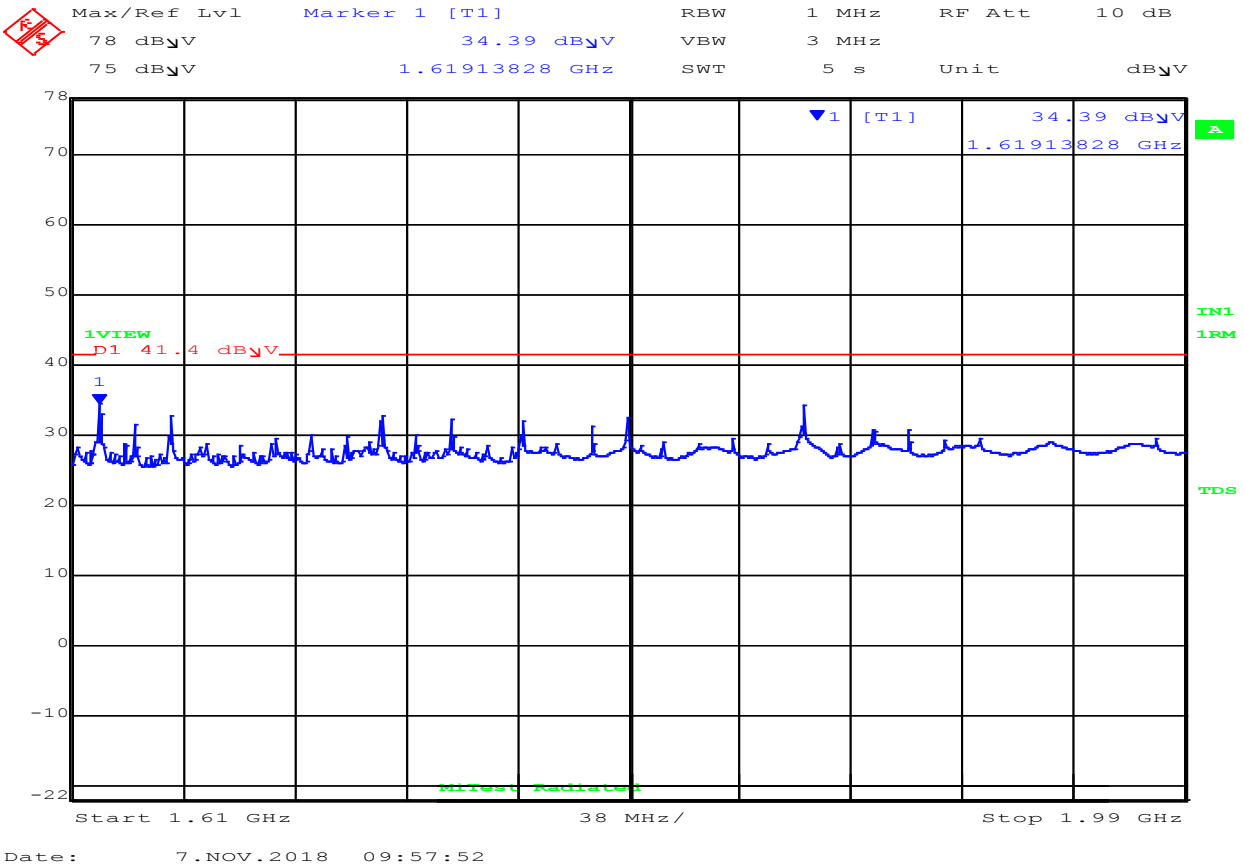
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

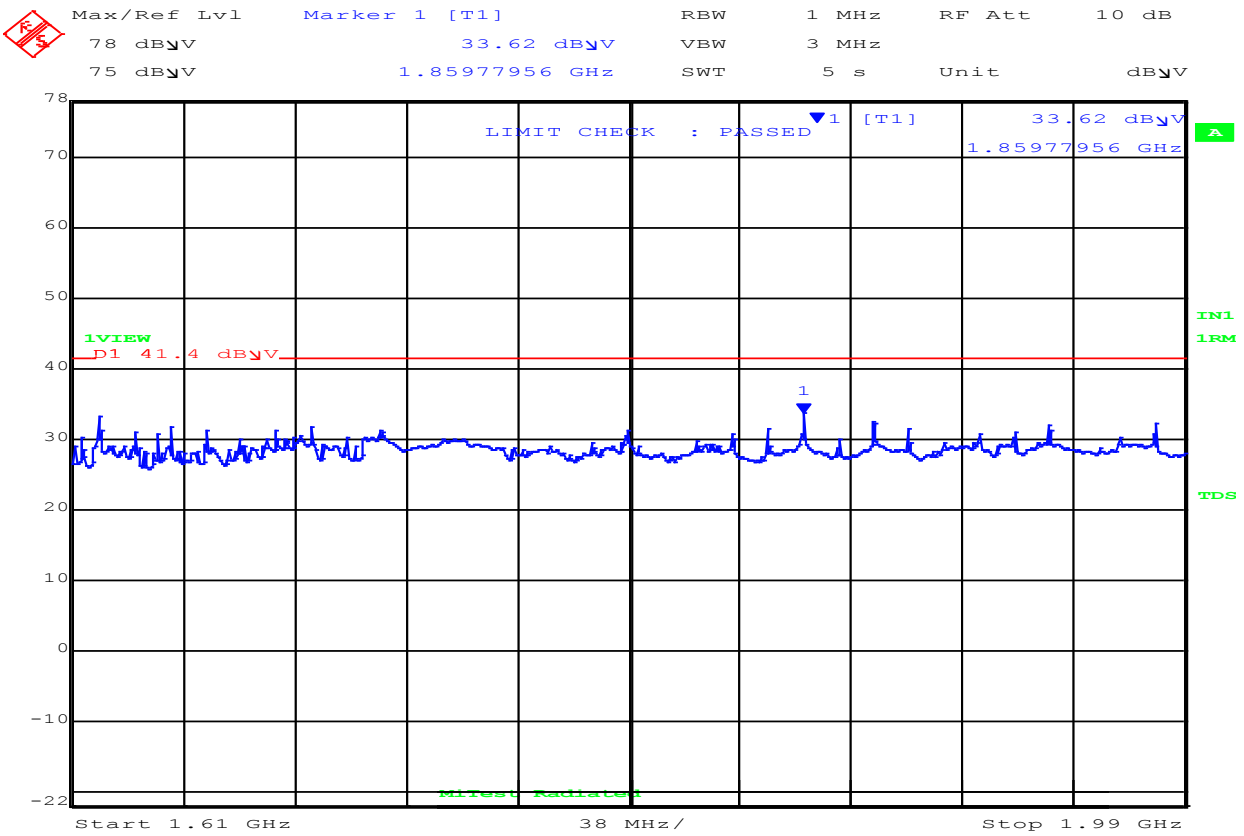
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



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1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									
Test Notes:									

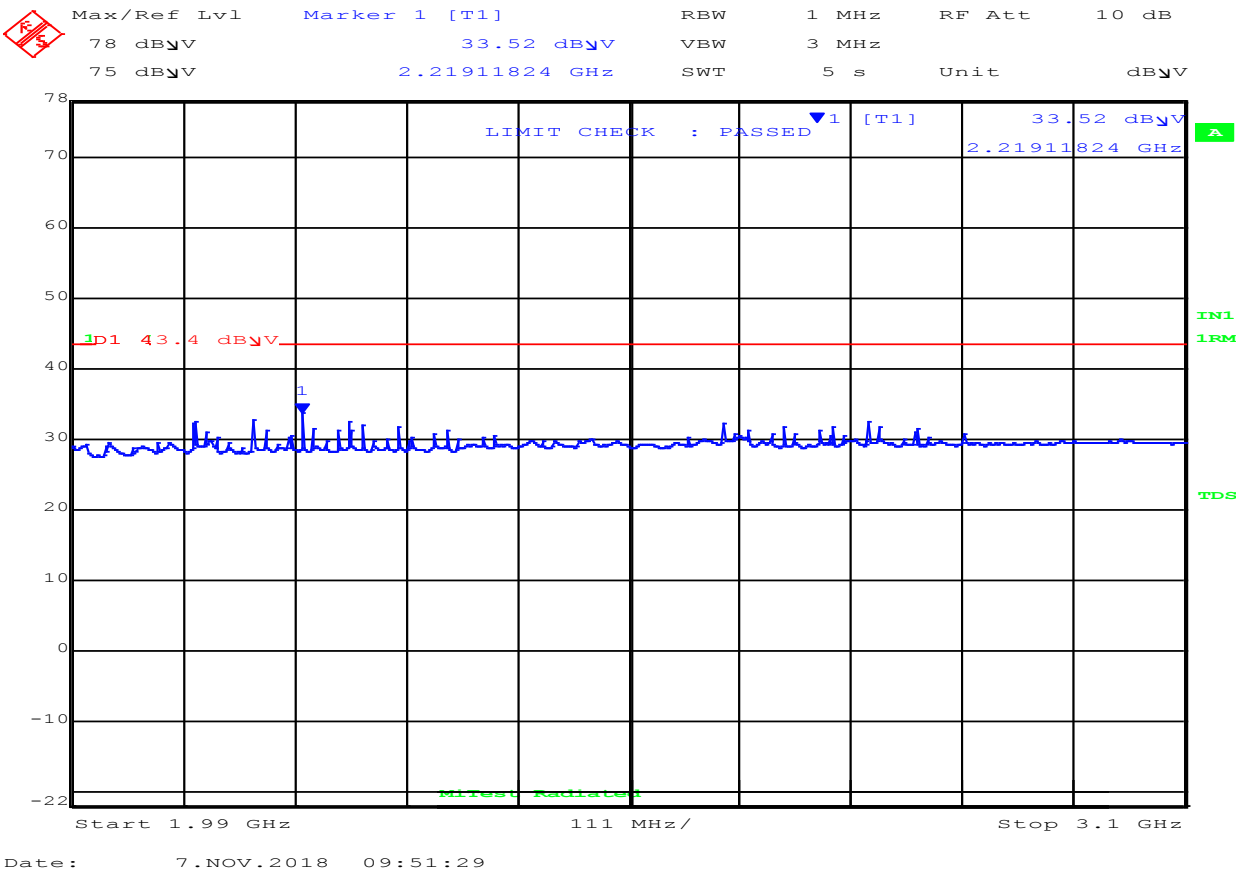
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

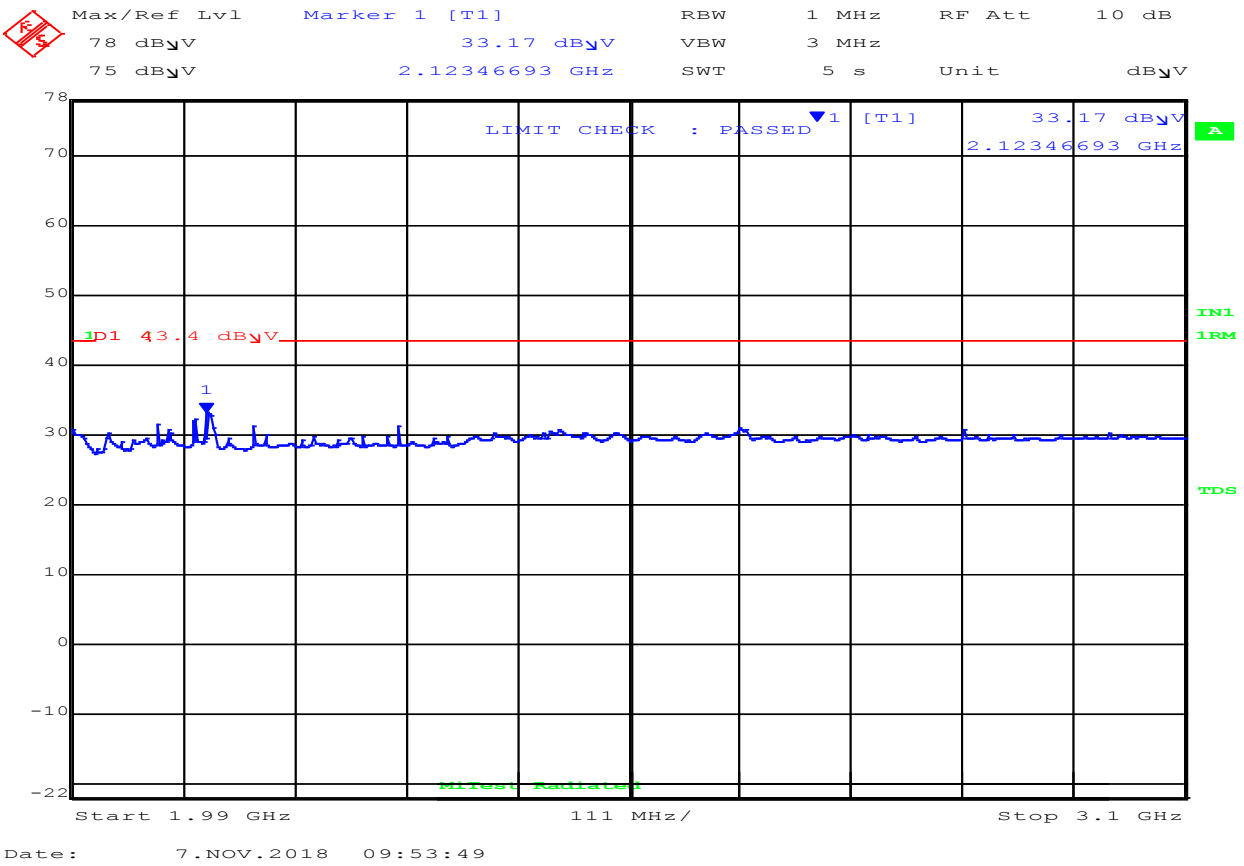
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

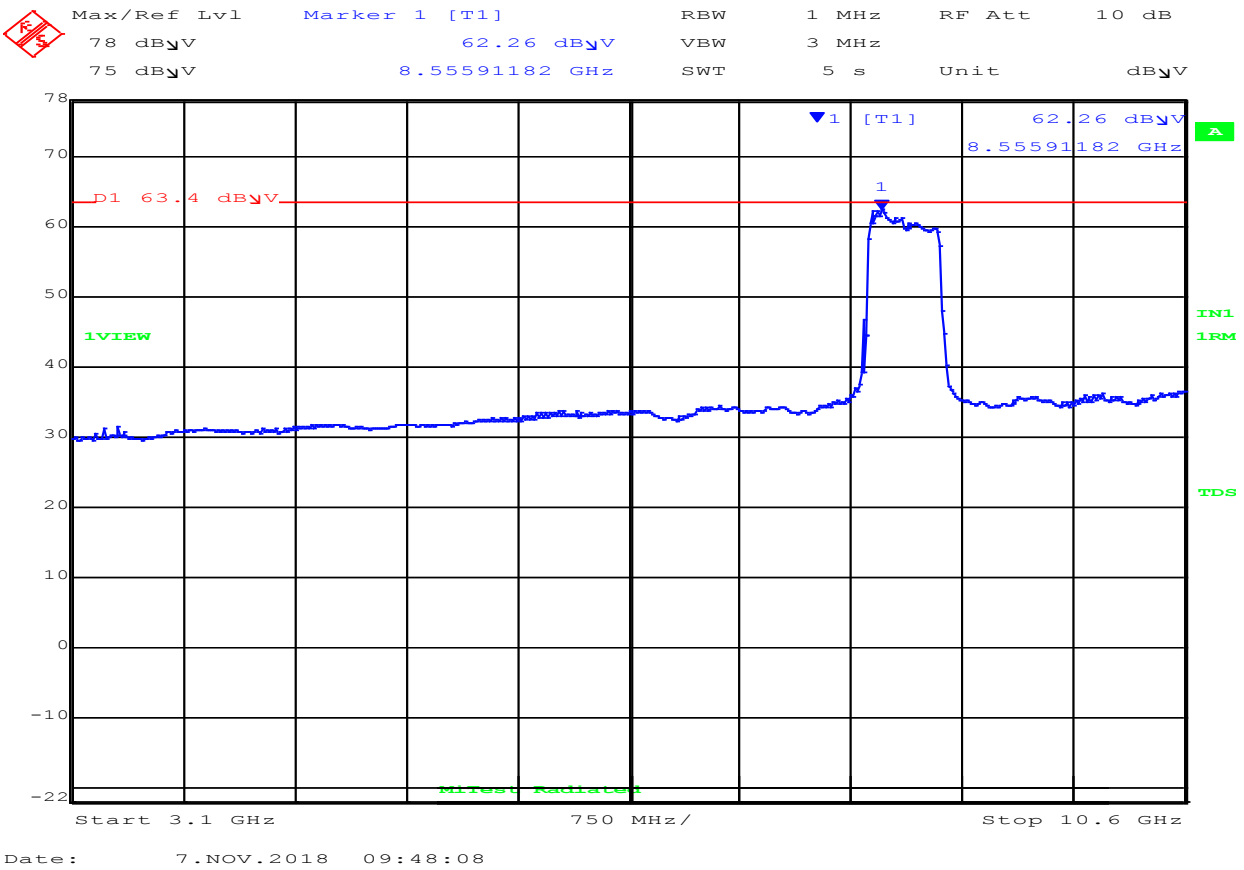
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	8555.91	61.7	Average	Horizontal	150	0	43.4	-1.7	Pass

Test Notes:

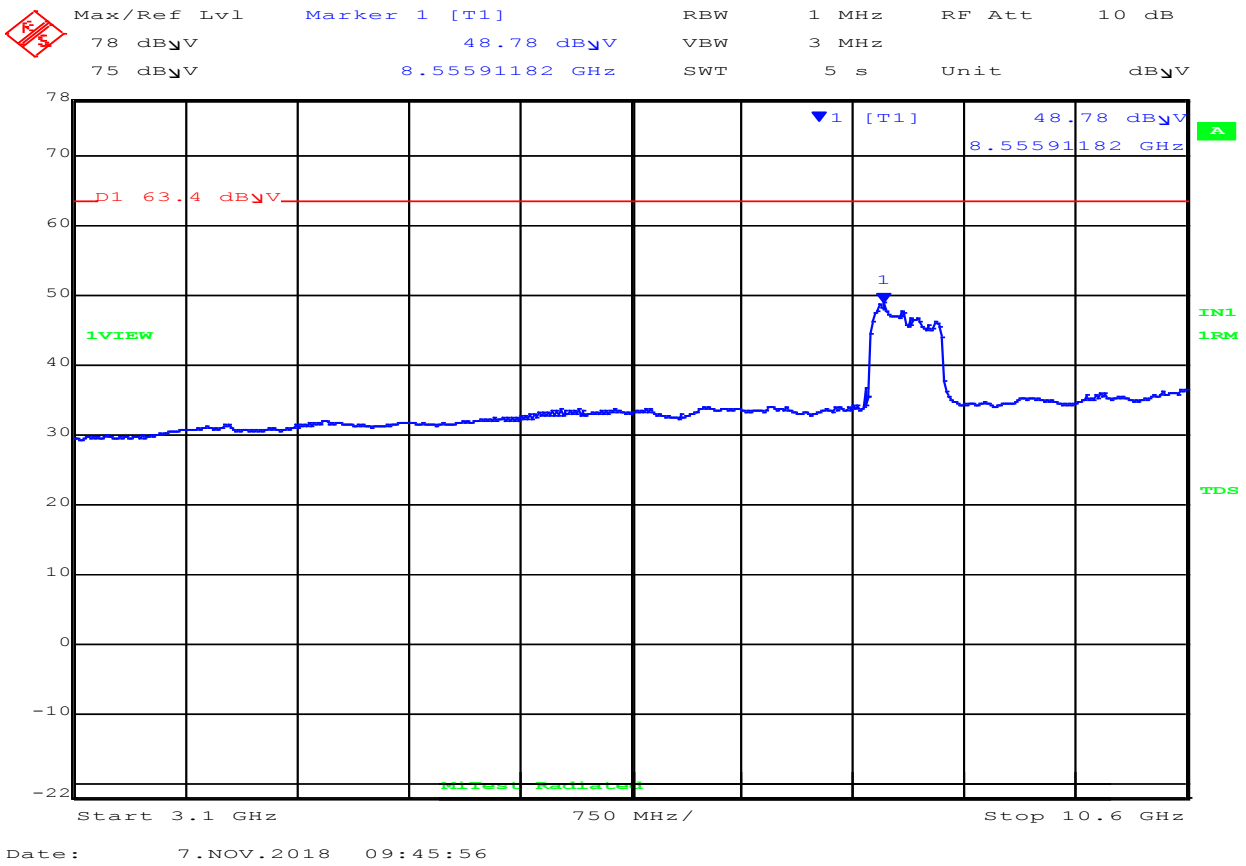
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 7.NOV.2018 09:45:56

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals Found within 6 dB of Limit									

Test Notes:

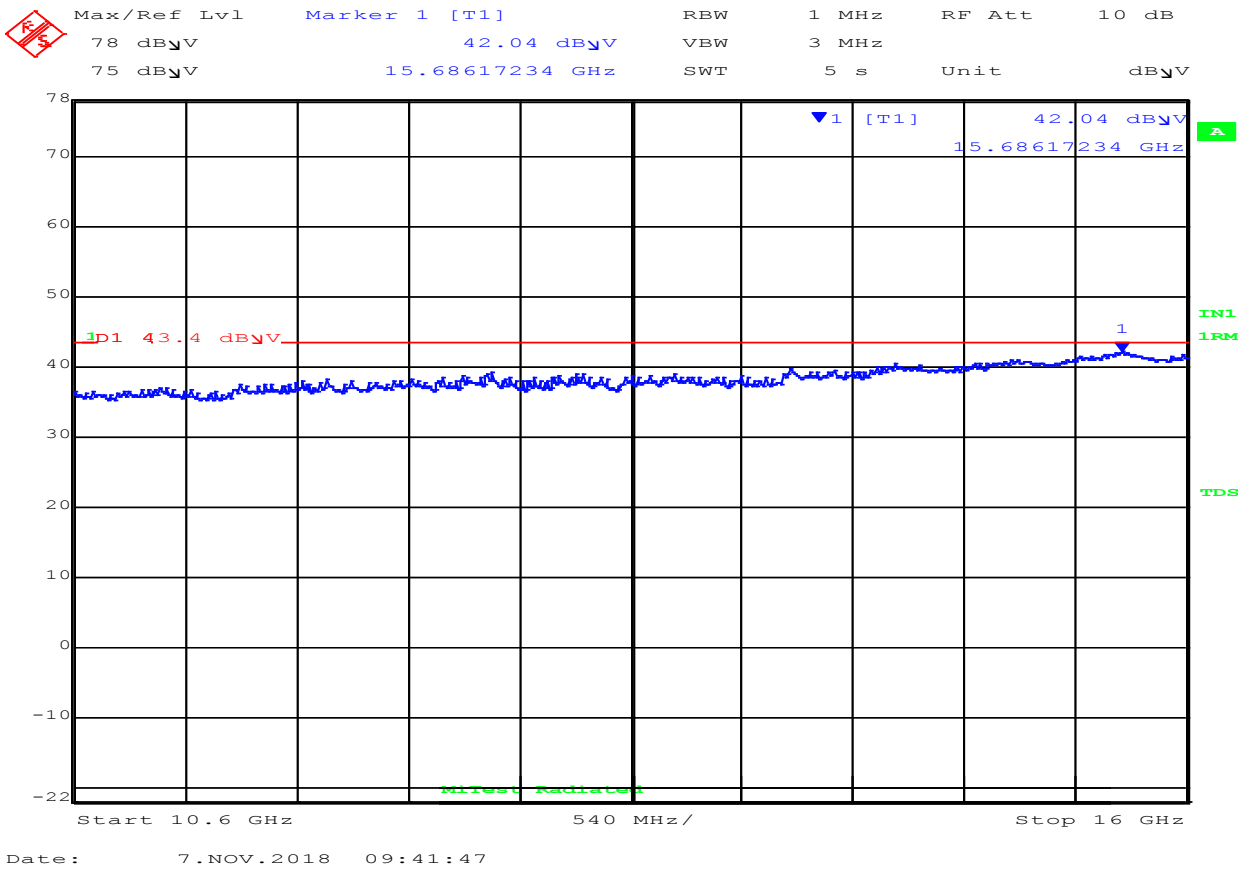
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.4	Average	Horizontal	150	0	43.4	-3.0	Pass

Test Notes:

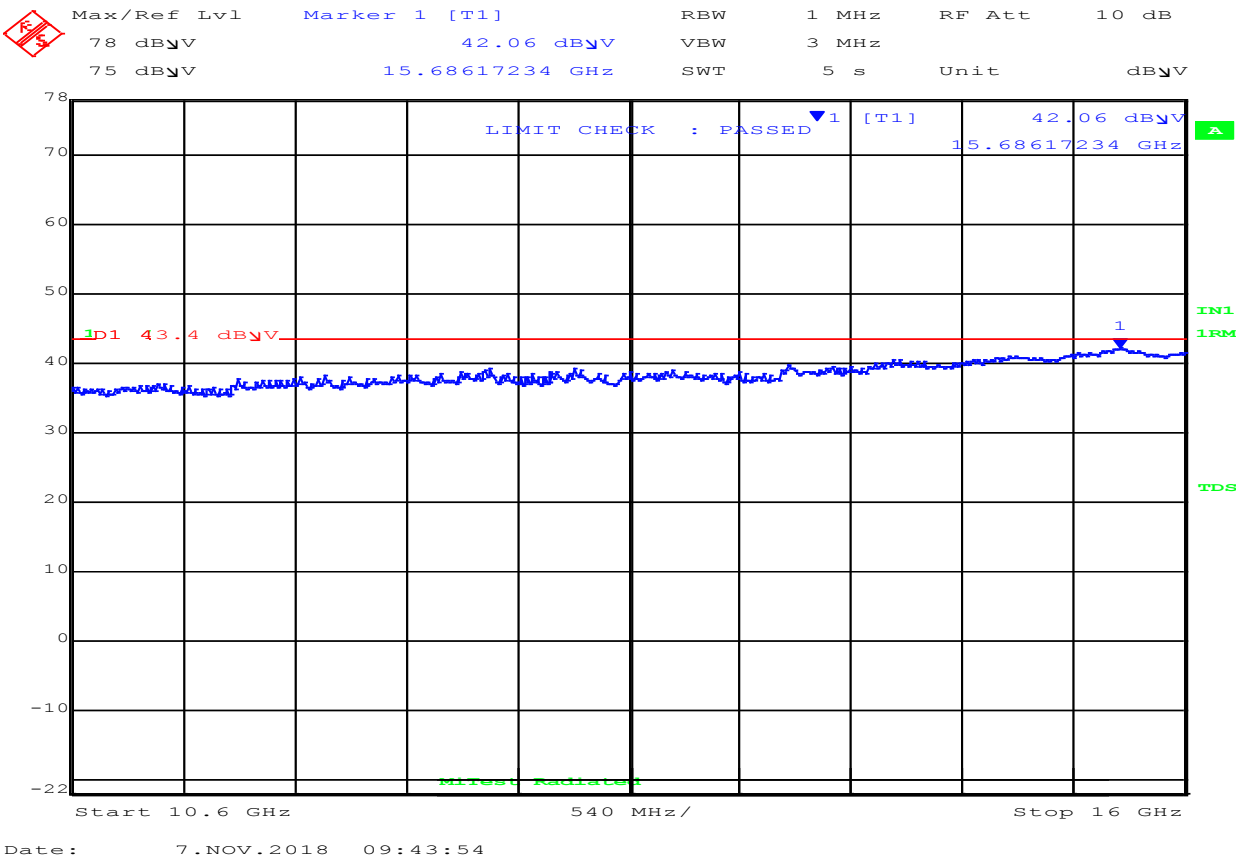
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.17	40.5	Average	Vertical	150	0	43.4	-2.9	Pass

Test Notes:

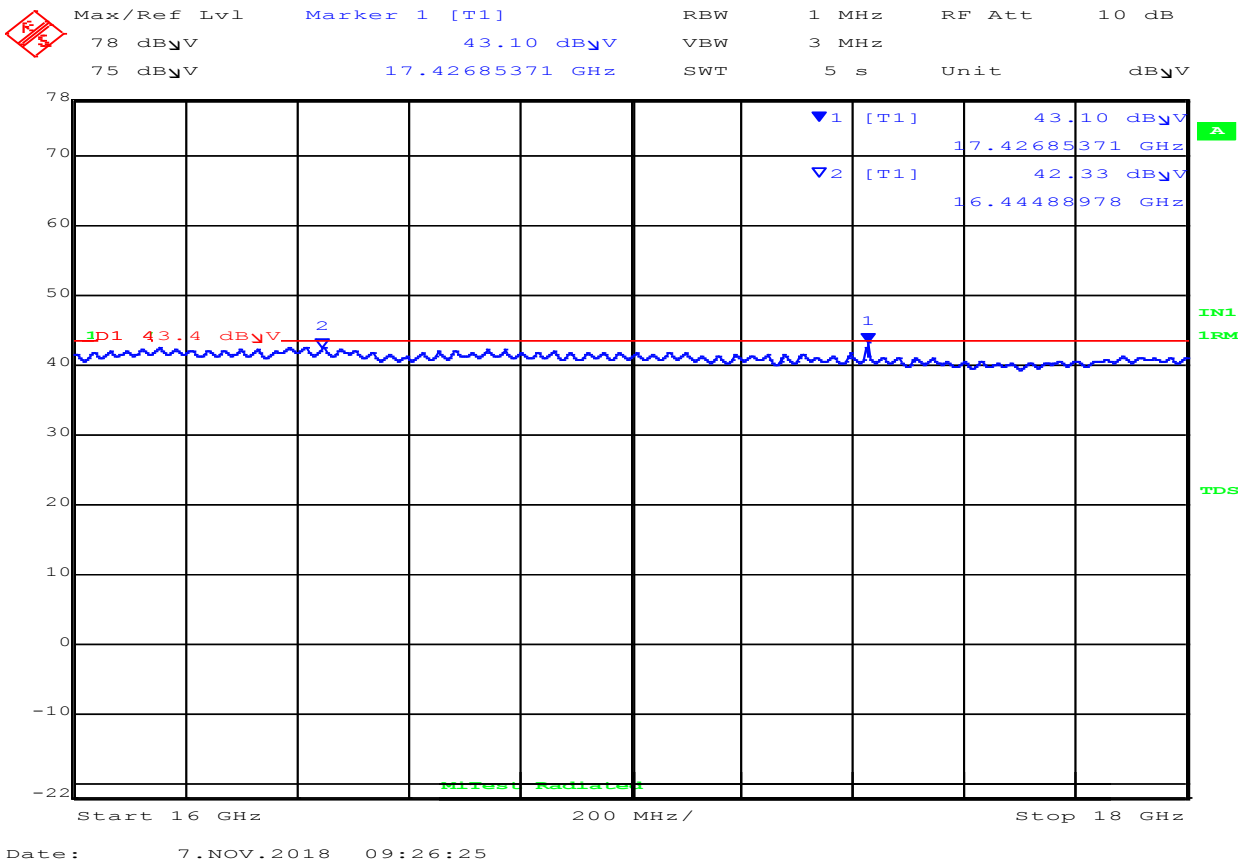
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	17426.85	41.3	Average	Horizontal	150	0	43.4	-2.1	Pass
2	16444.89	39.8	Average	Horizontal	150	0	43.4	-3.6	Pass

Test Notes:

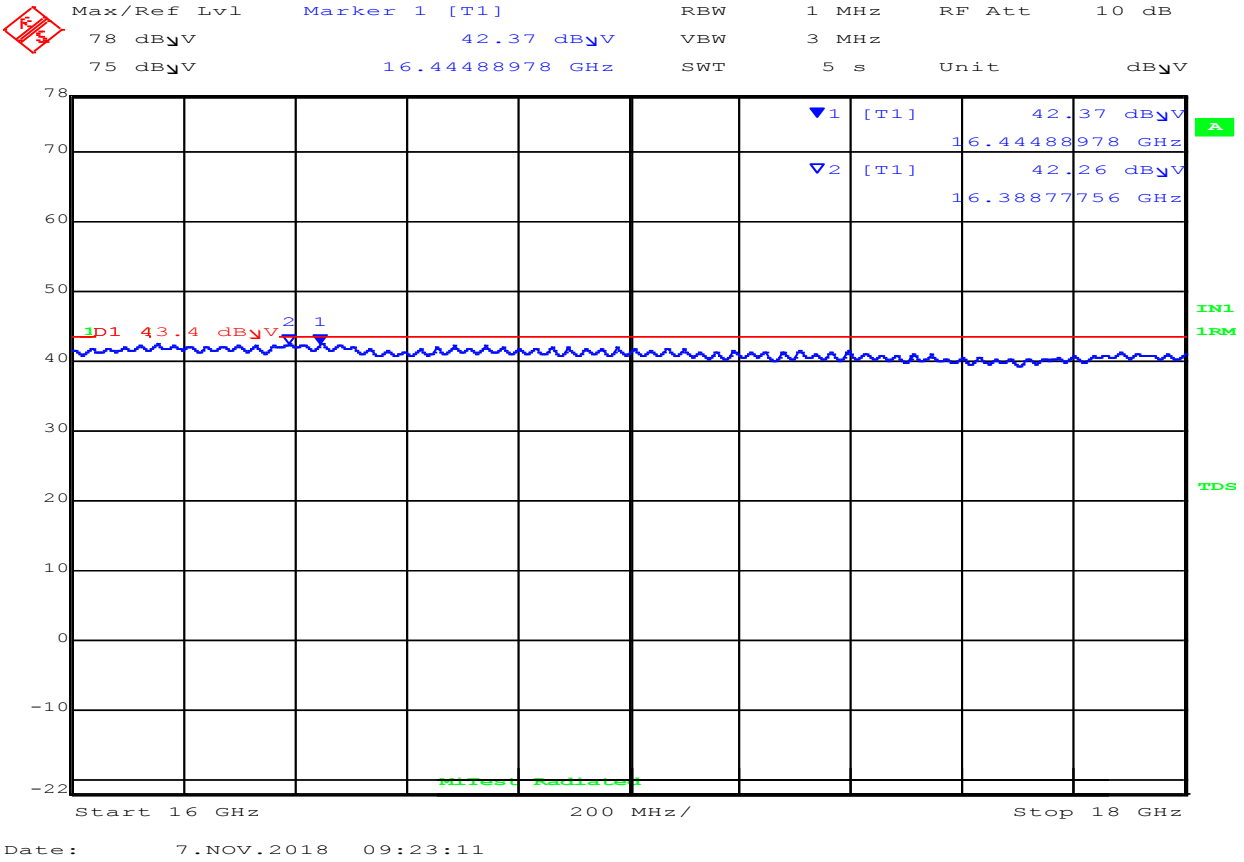
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.89	40.9	Average	Vertical	150	0	43.4	-2.5	Pass
2	16388.78	40.8	Average	Vertical	150	0	29.4	-2.6	Pass

Test Notes:

9.4.1.2. Camouflage AL5955

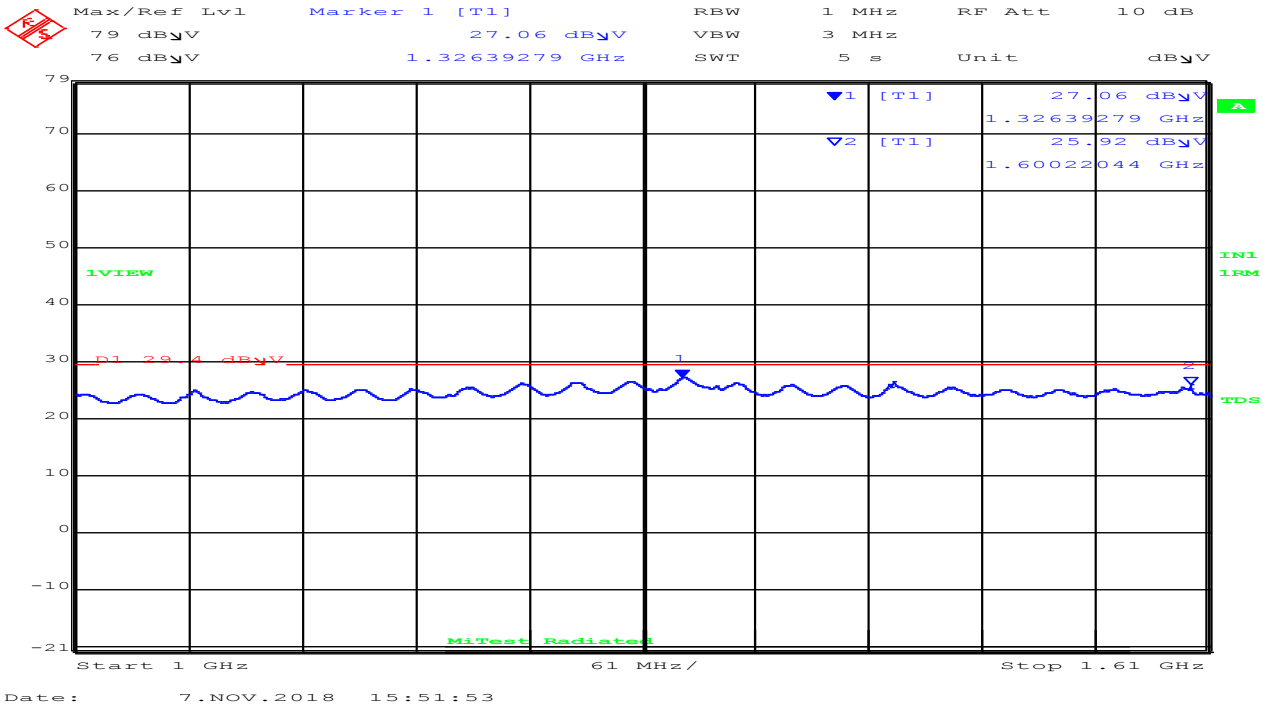
3432 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal			
Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.39	25.10	Average	Horizontal	150	0	29.4	-4.3	Pass
2	1600.22	25.60	Average	Horizontal	150	0	29.4	-3.8	Pass

Test Notes:
Laptop Removed

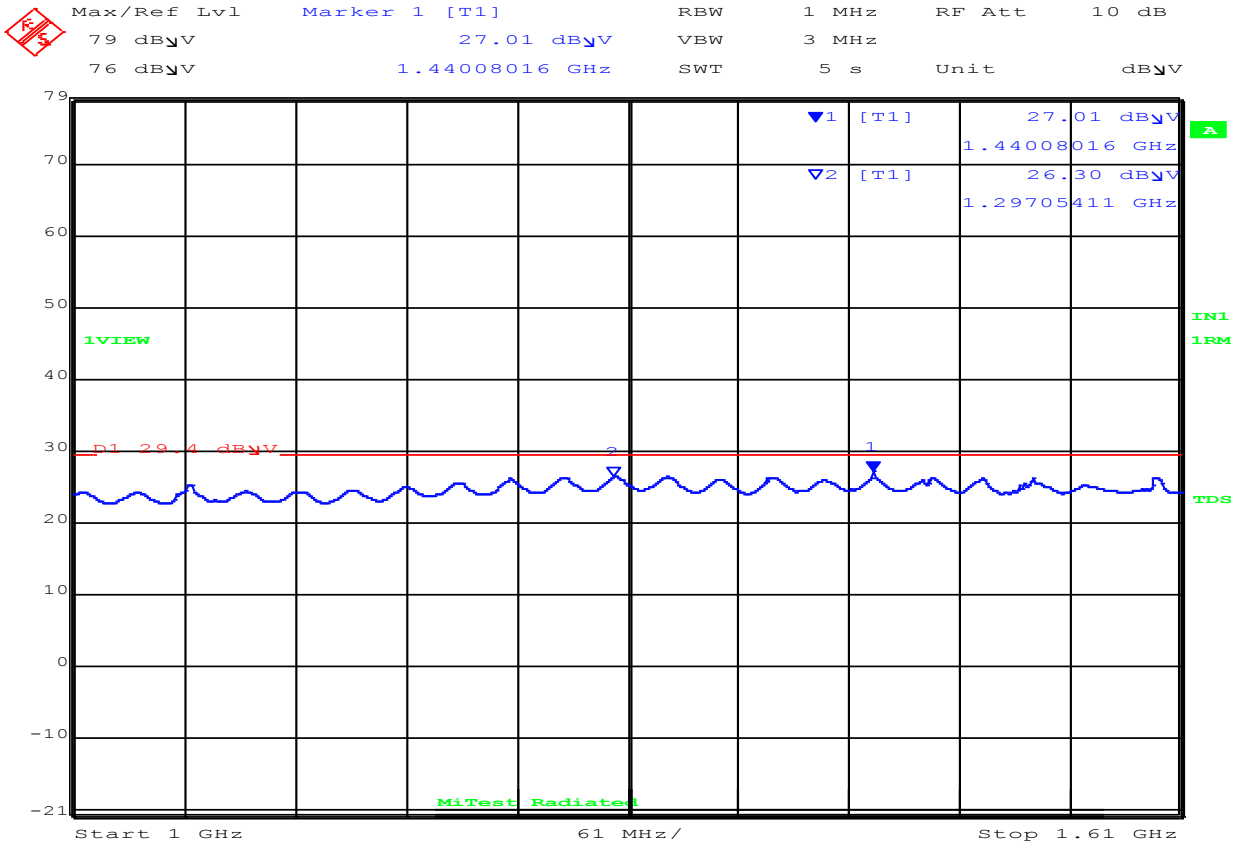
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1440.08	25.90	Average	Vertical	150	0	29.4	-3.5	Pass
2	1297.05	24.80	Average	Vertical	150	0	29.4	-4.6	Pass

Test Notes:
Laptop Removed

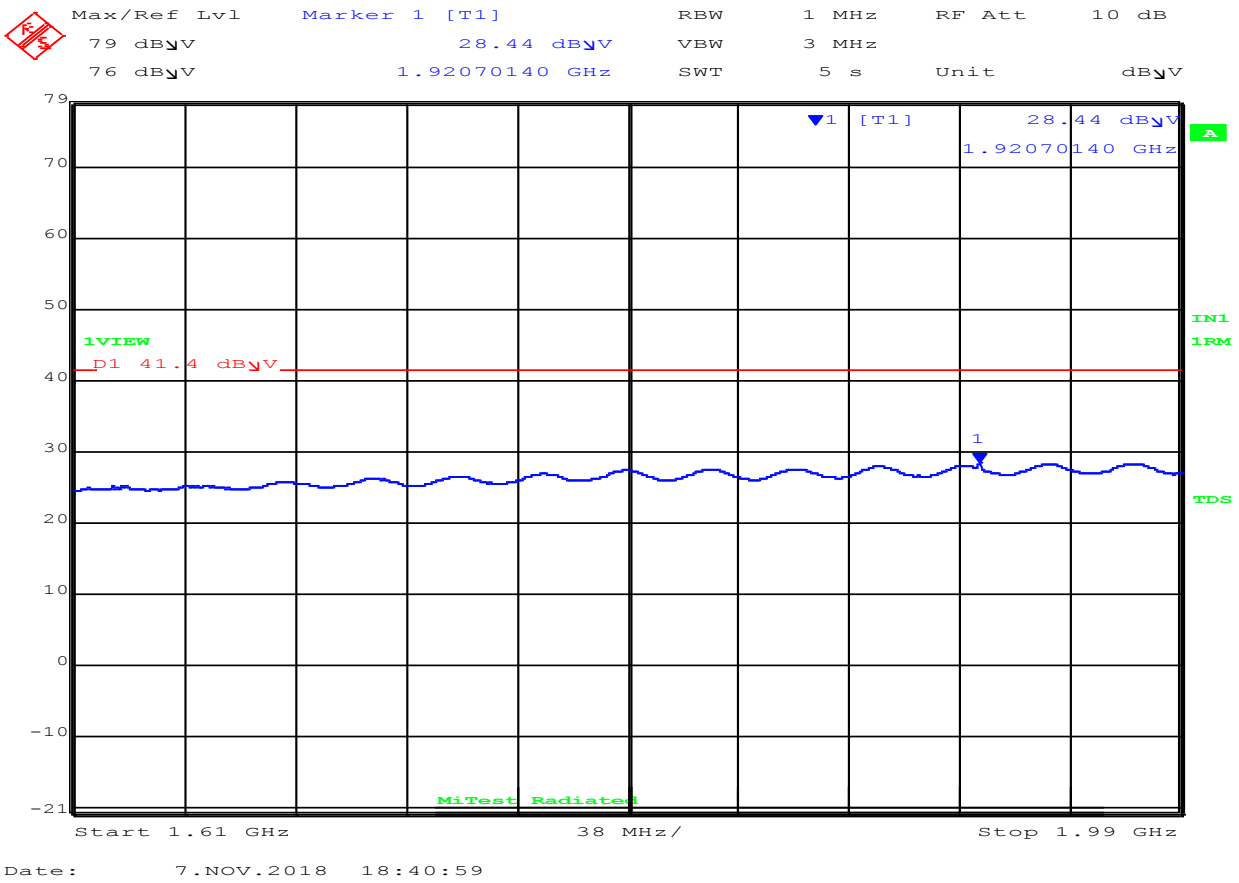
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99 GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1610.00–1990.00MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of limit									

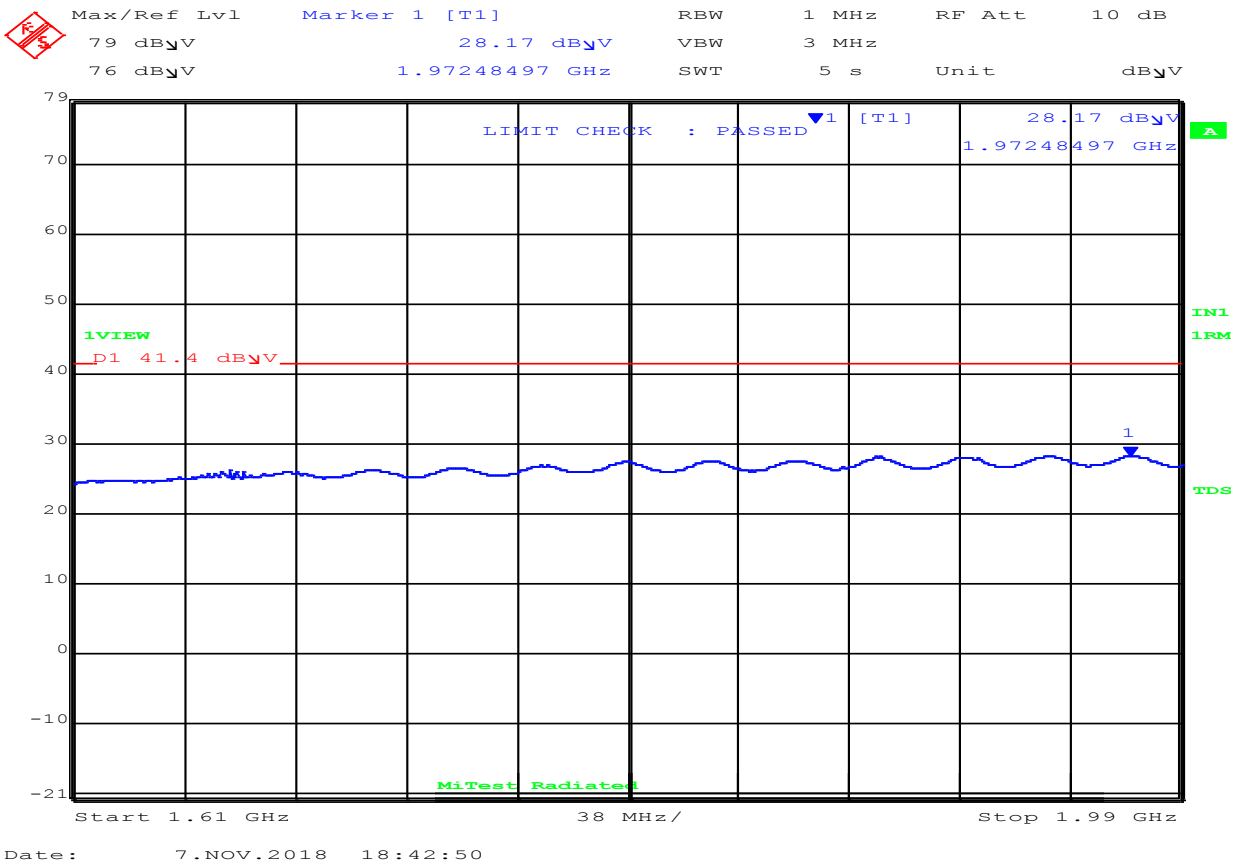
Test Notes:
Laptop Removed

Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

, Power Setting: 0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of limit									

Test Notes:
Laptop Removed

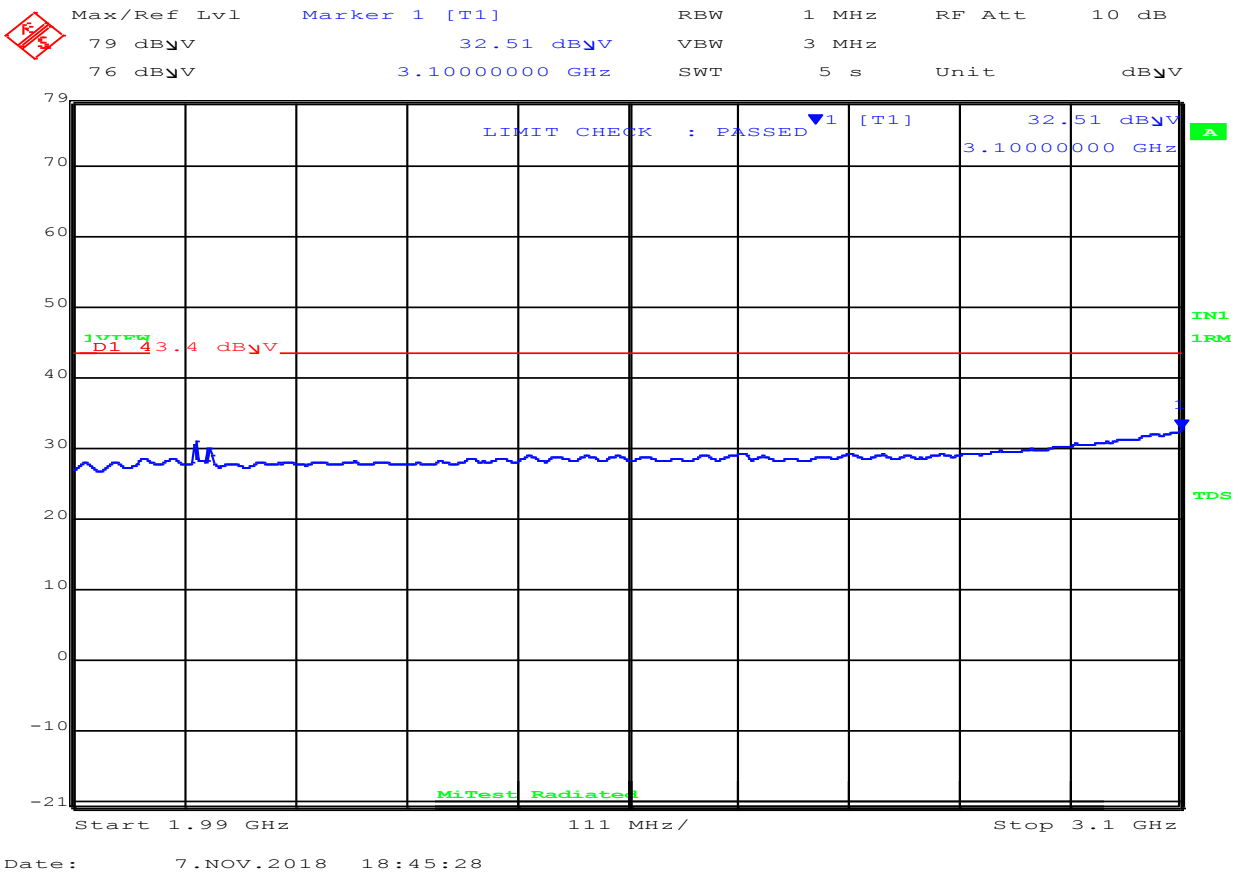
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00–3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of limit									

Test Notes:
Laptop Removed

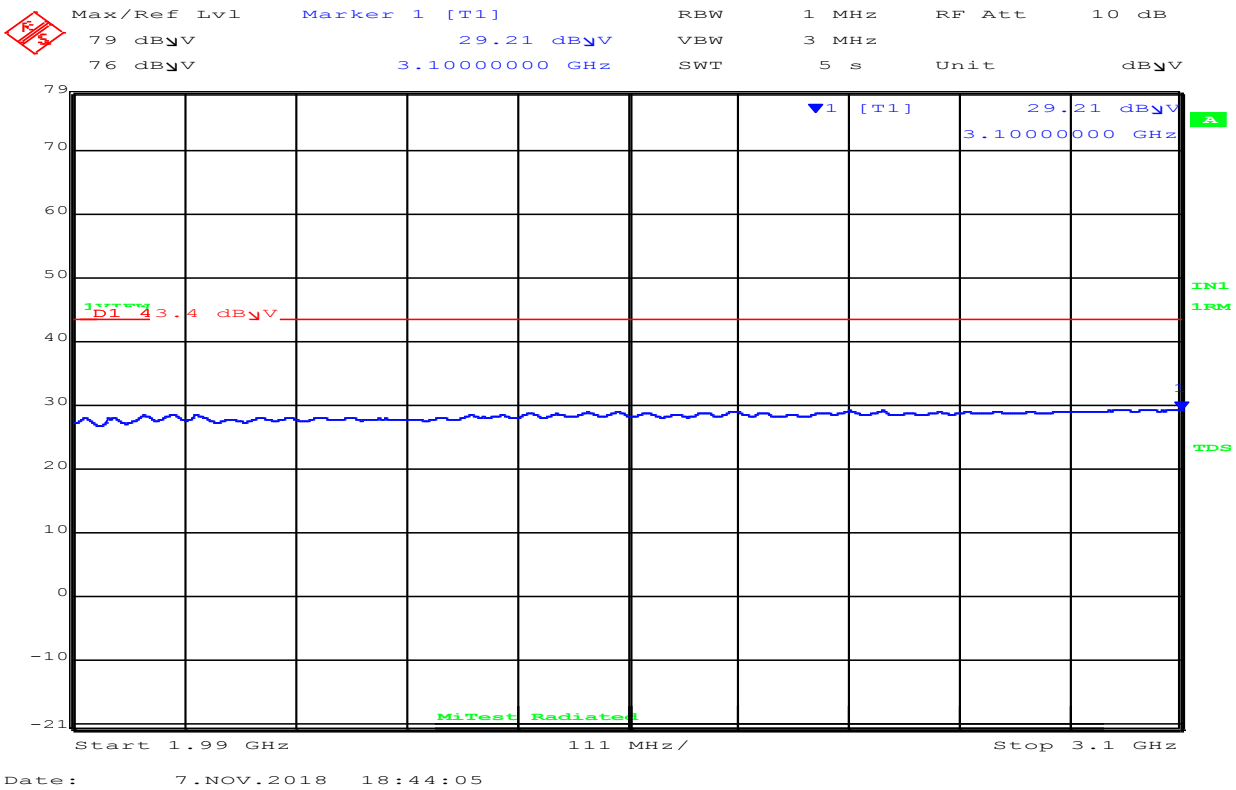
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of limit									

Test Notes:
Laptop Removed

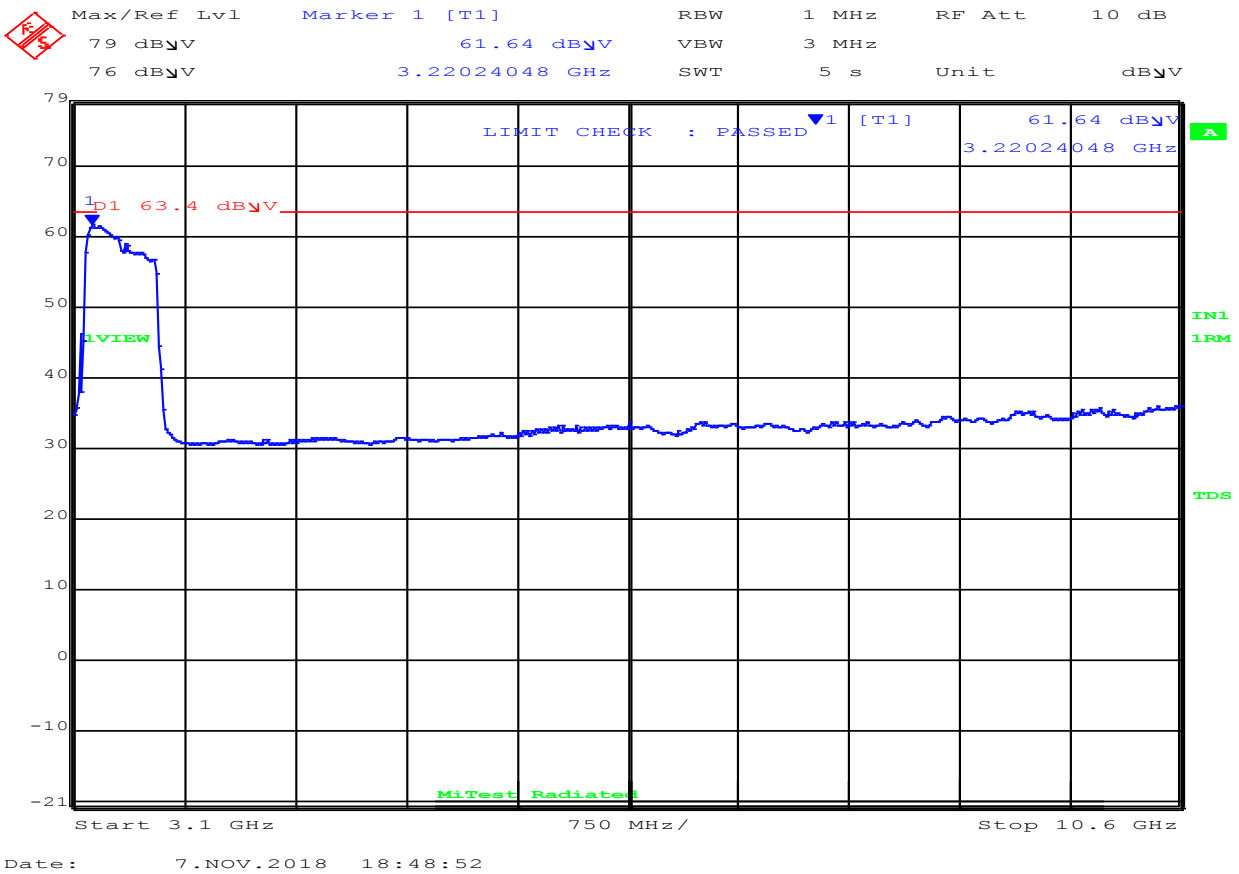
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	3220.24	60.4	Average	Horizontal	150	0	63.4	-3.0	Pass

Test Notes:

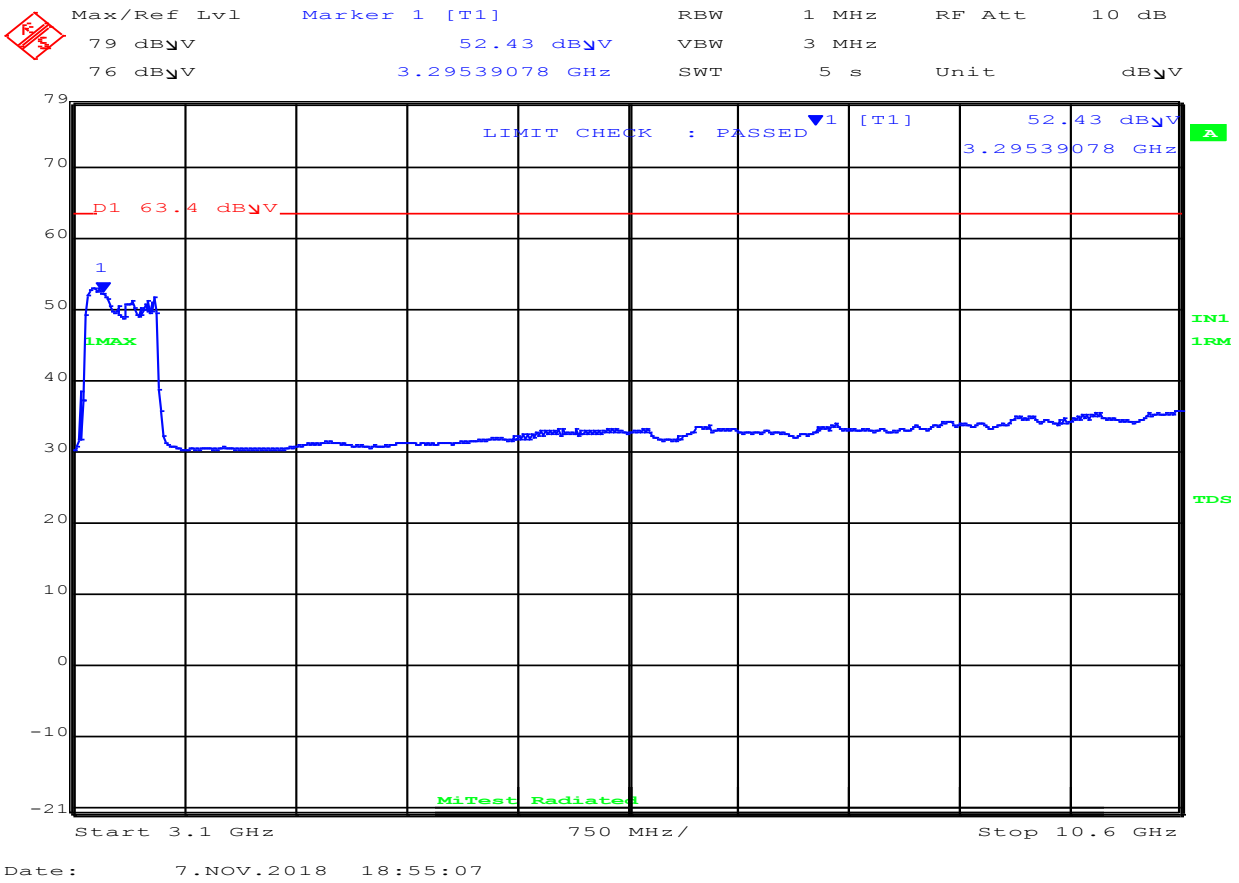
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of Limit									

Test Notes:

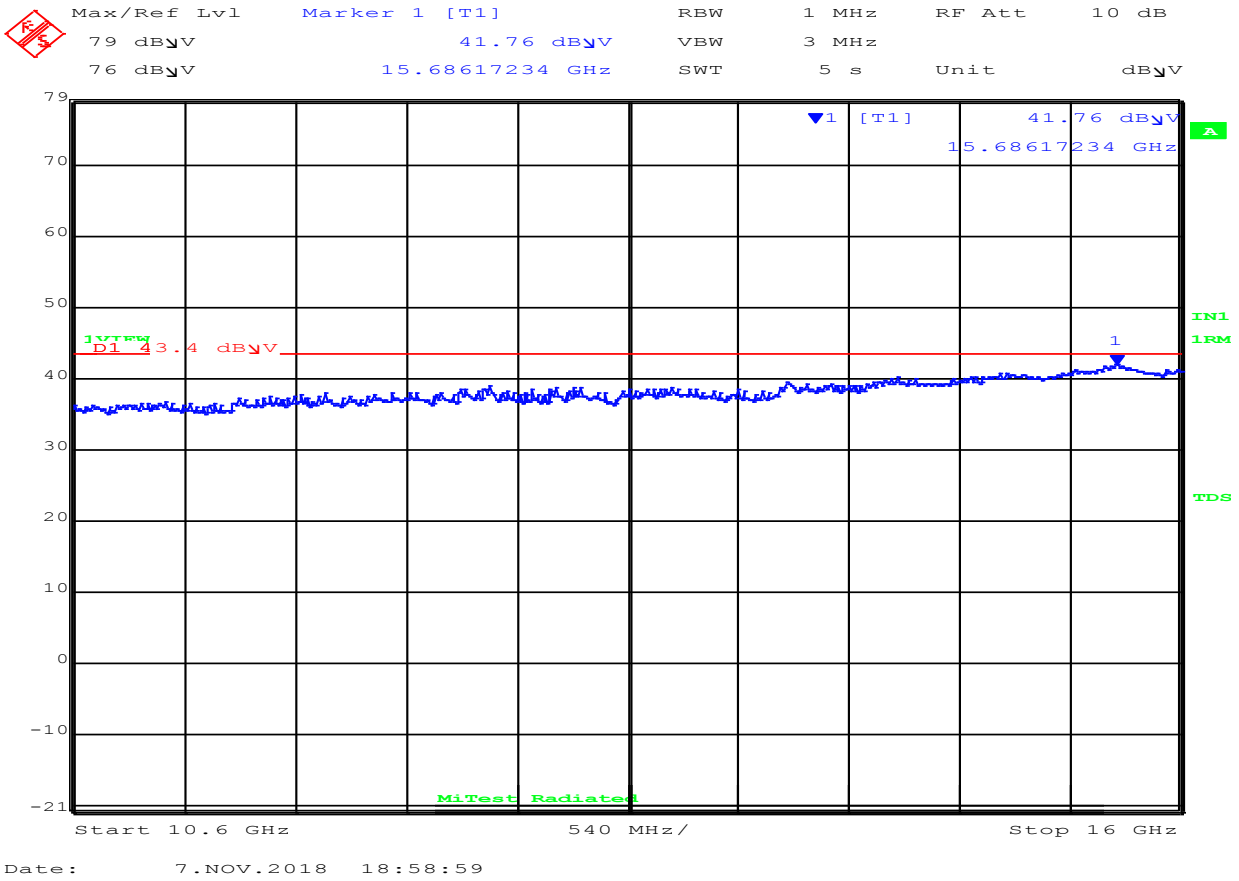
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	36.0	Average	Horizontal	150	0	43.4	-7.4	Pass

Test Notes:

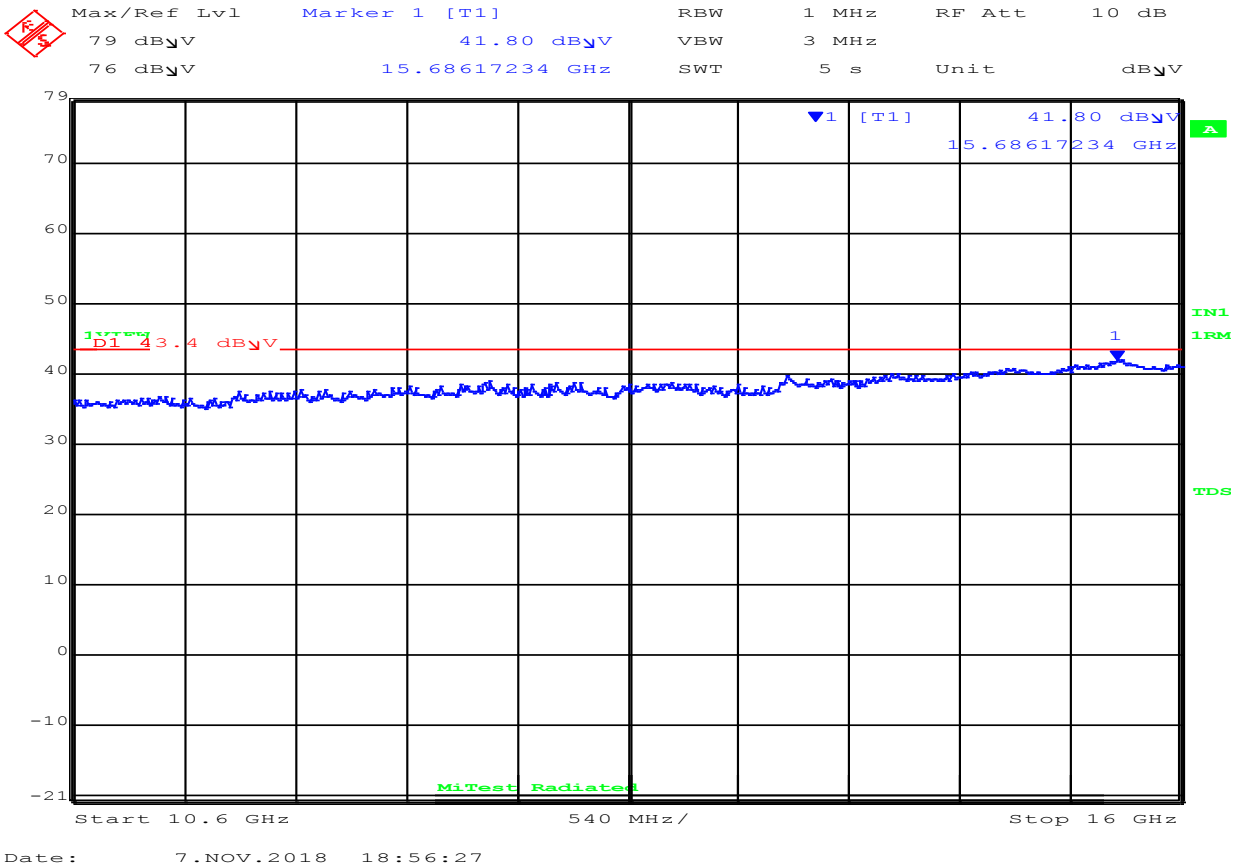
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	36.1	Average	Vertical	150	0	43.4	-7.3	Pass

Test Notes:

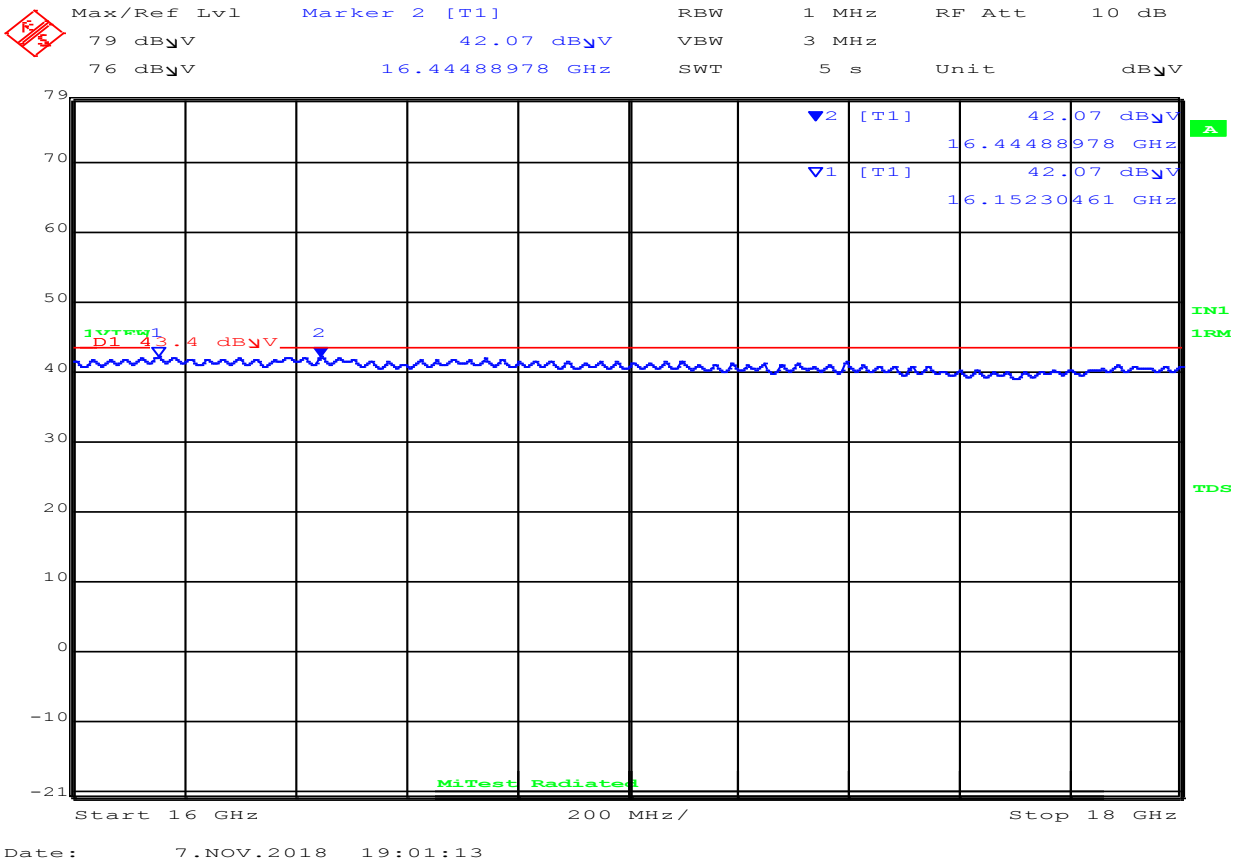
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16152.3	41.0	Average	Horizontal	150	0	43.4	-2.4	Pass
2	16448.9	40.9	Average	Horizontal	150	0	43.4	-2.5	Pass

Test Notes:

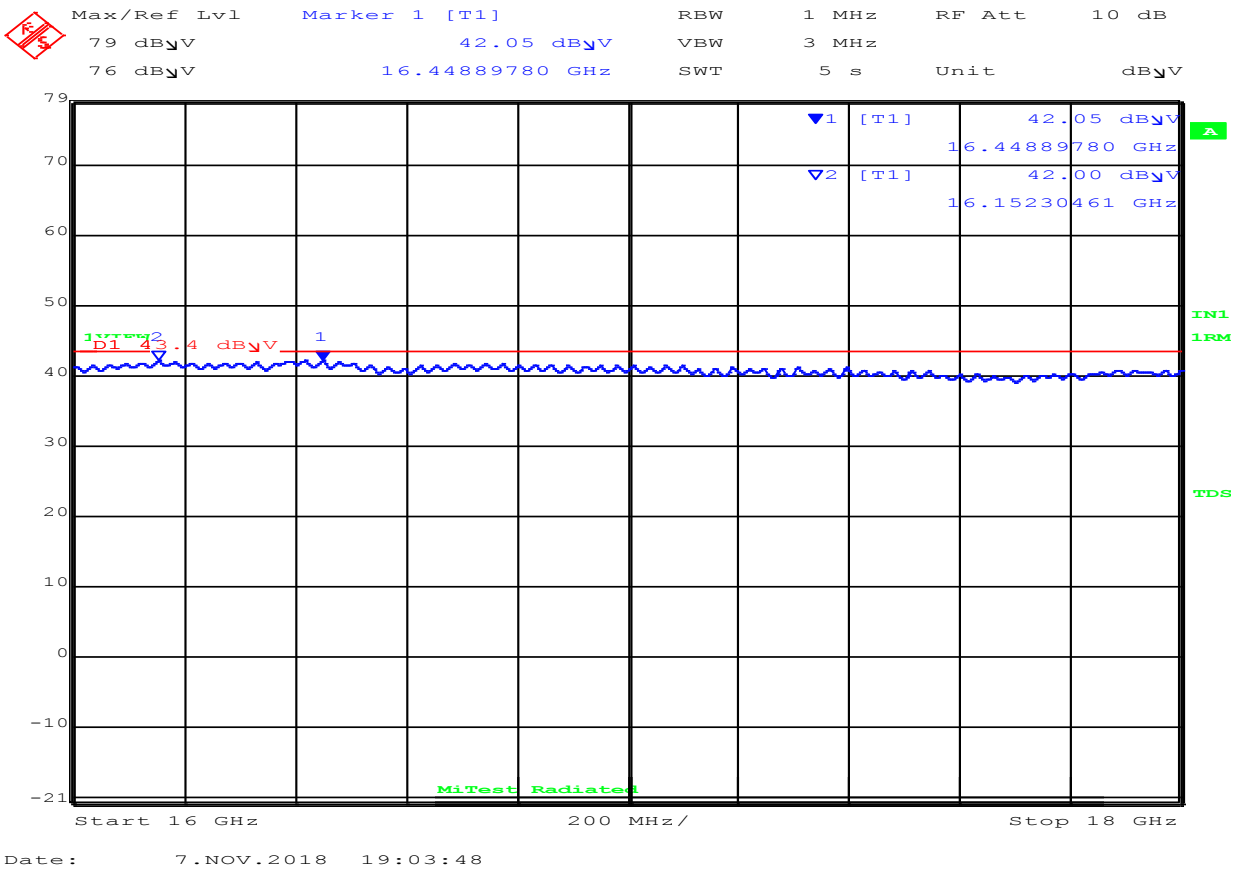
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16448.9	41.0	Average	Vertical	150	0	43.4	-2.4	Pass
2	16152.3	41.0	Average	Vertical	150	0	43.4	-2.4	Pass

Test Notes:

3960 MHz

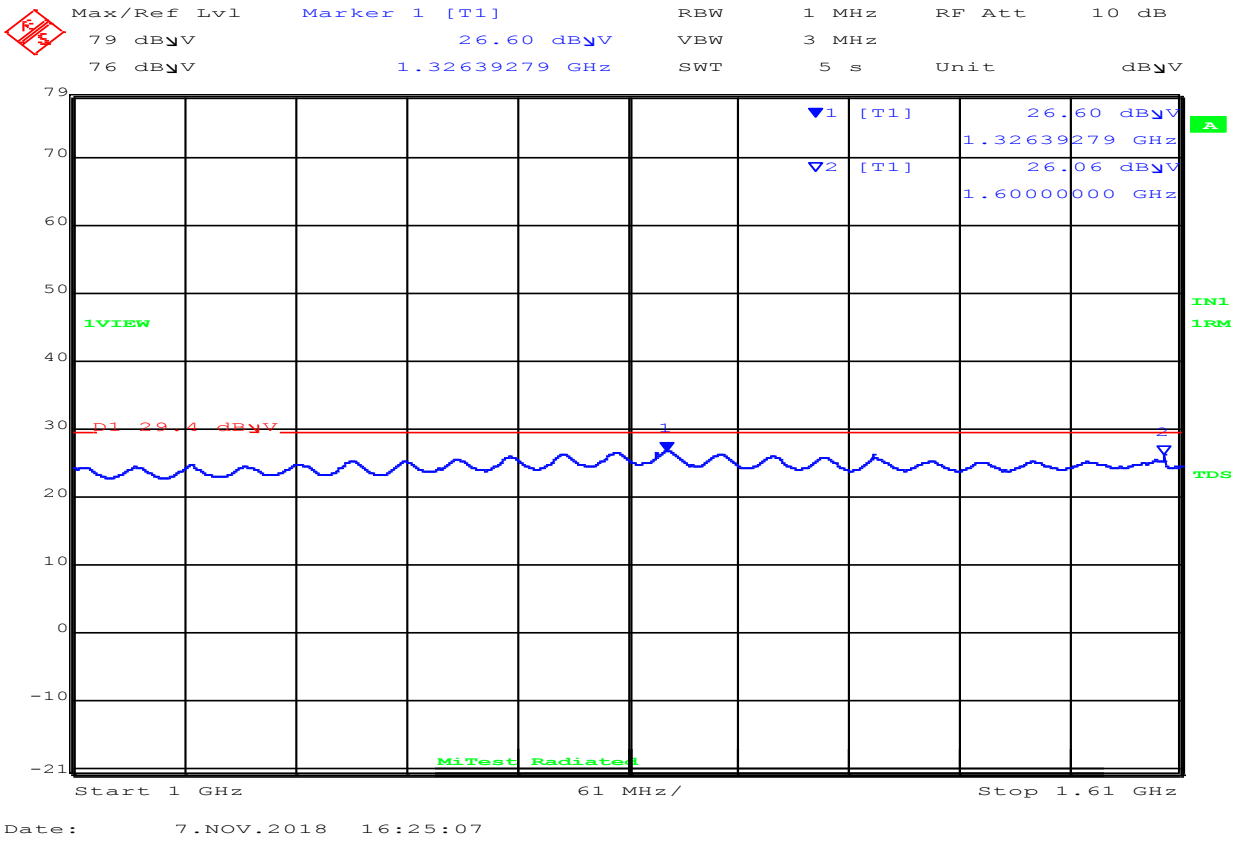
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.39	24.9	Average	Horizontal	150	0	29.4	-4.50	Pass
2	1600.22	27.1	Average	Horizontal	150	0	29.4	-2.30	Pass

Test Notes:
Laptop Removed

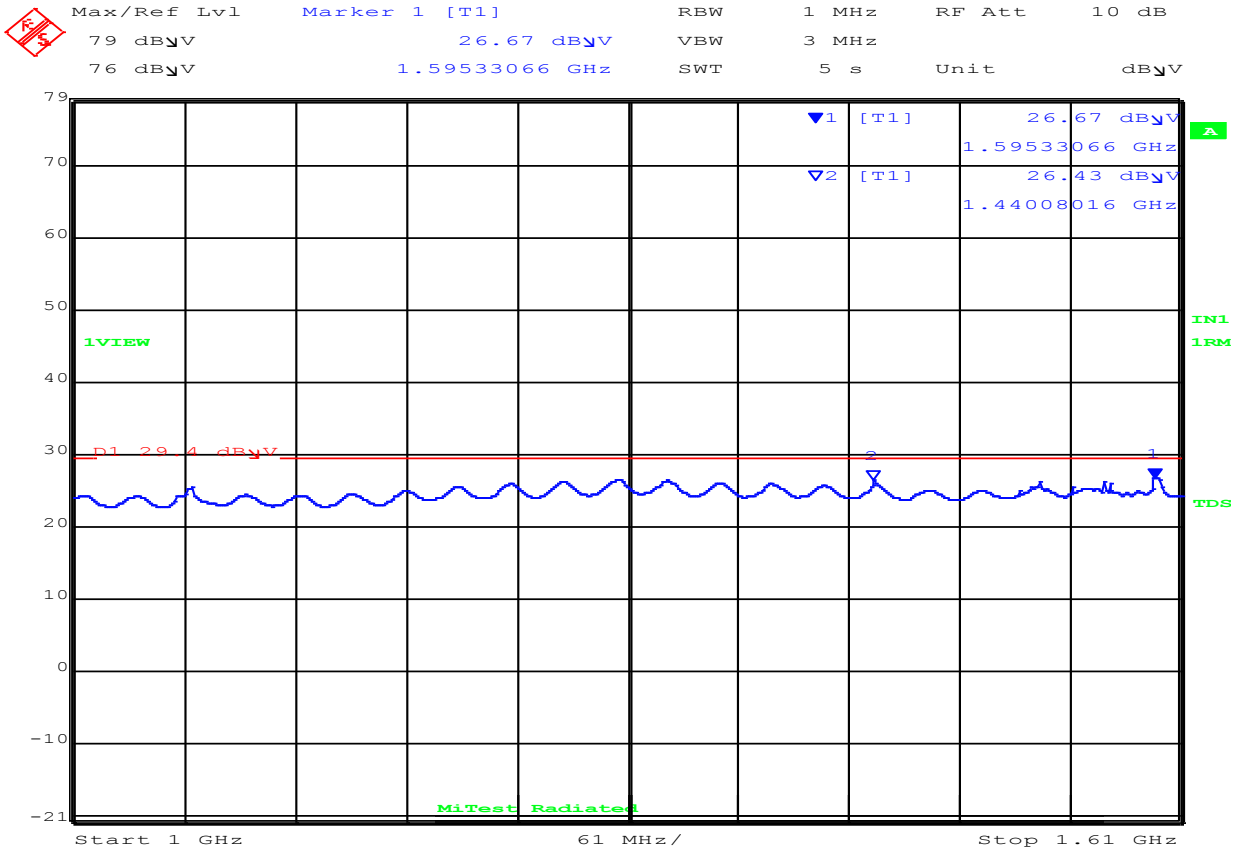
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 16:20:22

1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1595.3	24.8	Average	Vertical	150	0	29.4	-4.60	Pass
2	1440.1	25.8	Average	Vertical	150	0	29.4	-3.60	Pass

Test Notes:
Laptop Removed

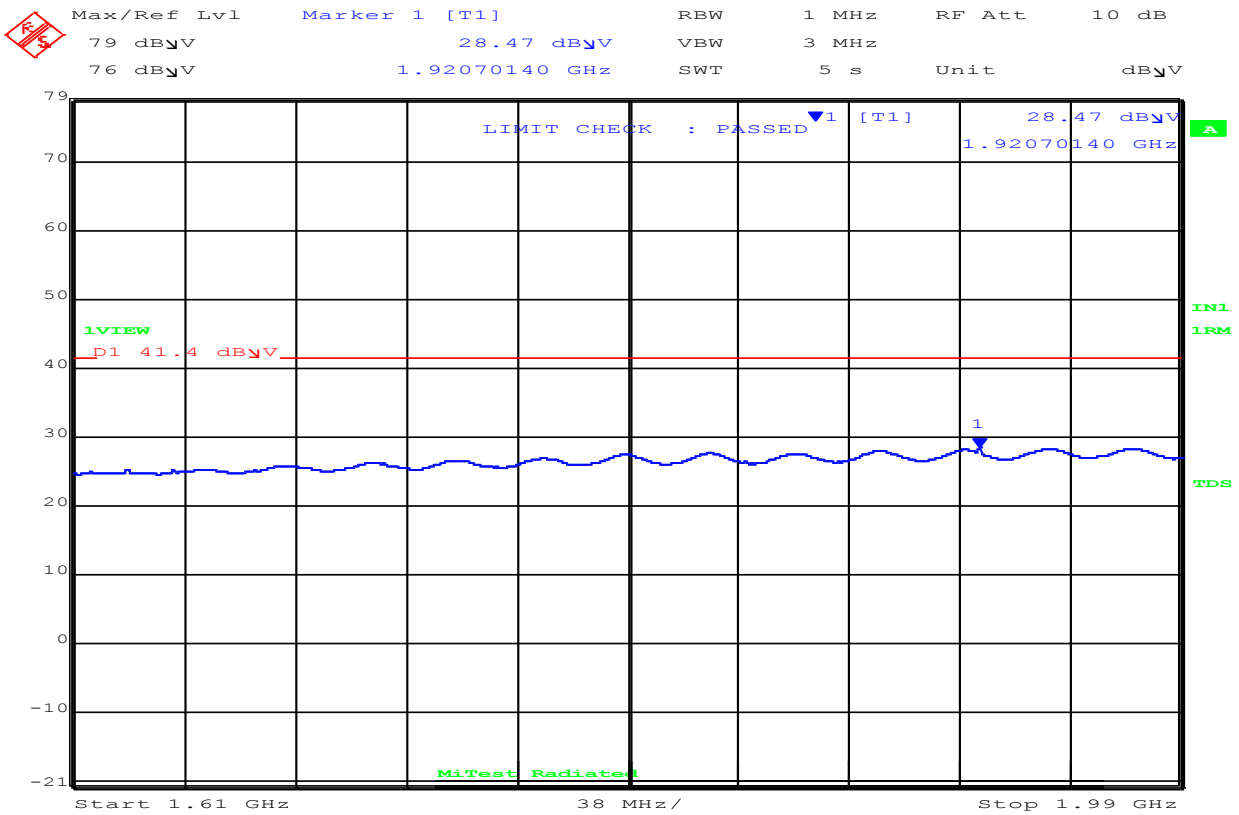
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 19:30:22

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

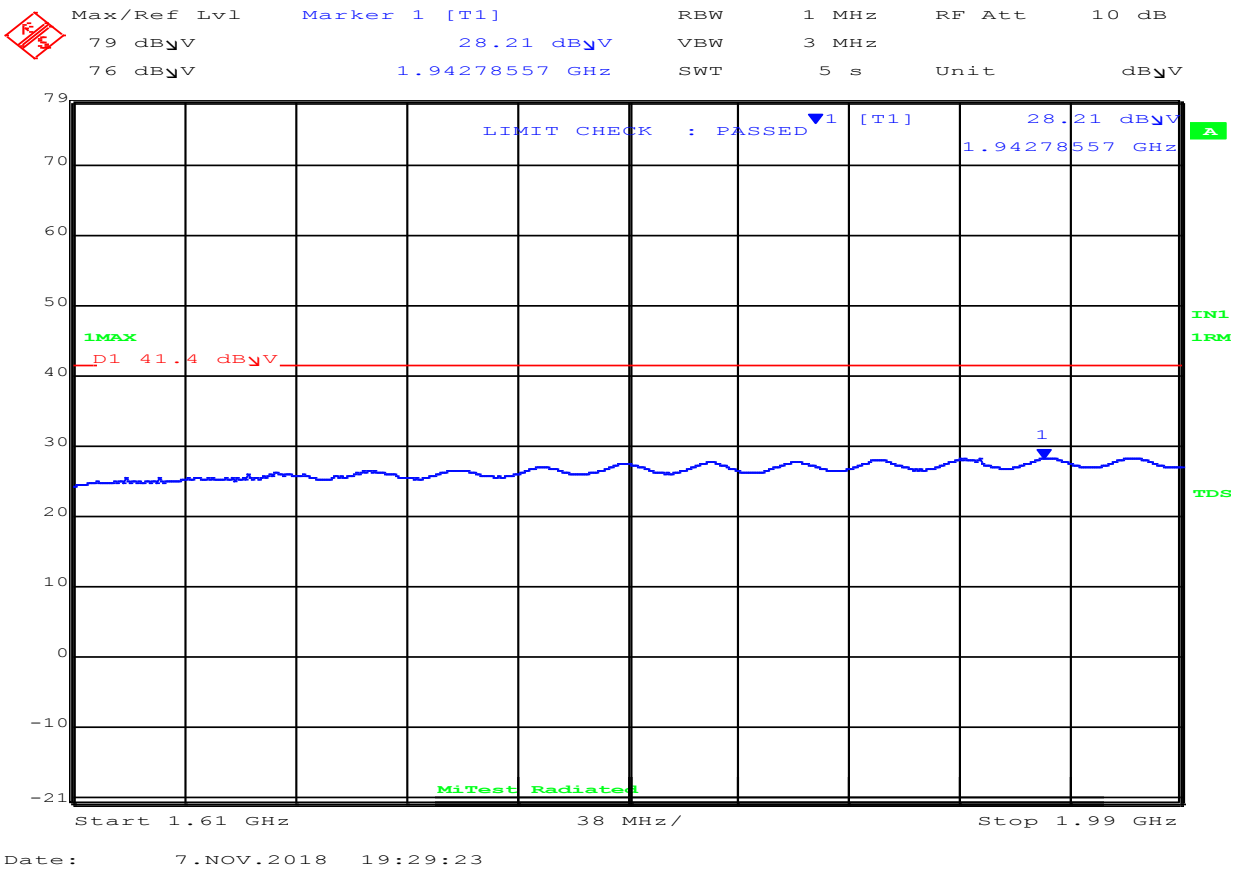
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

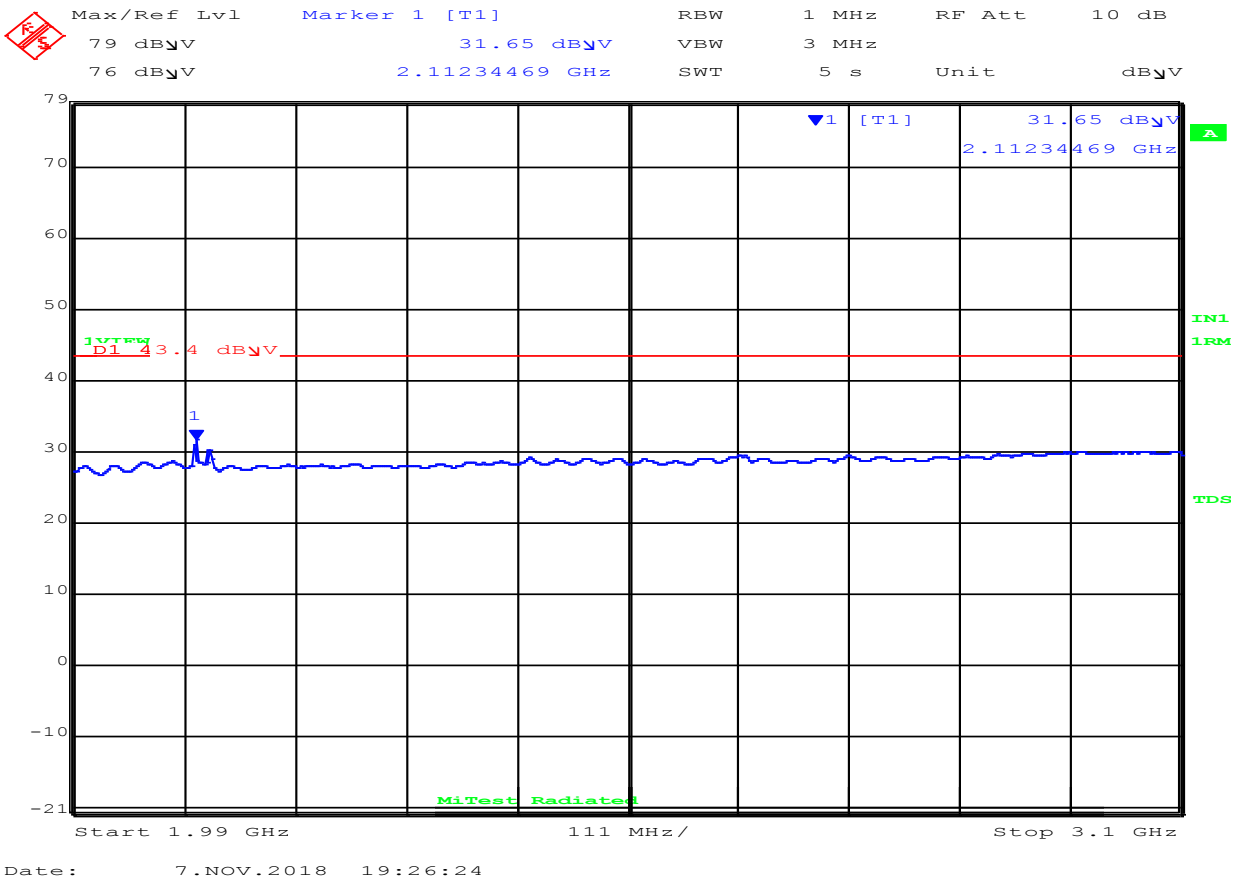
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

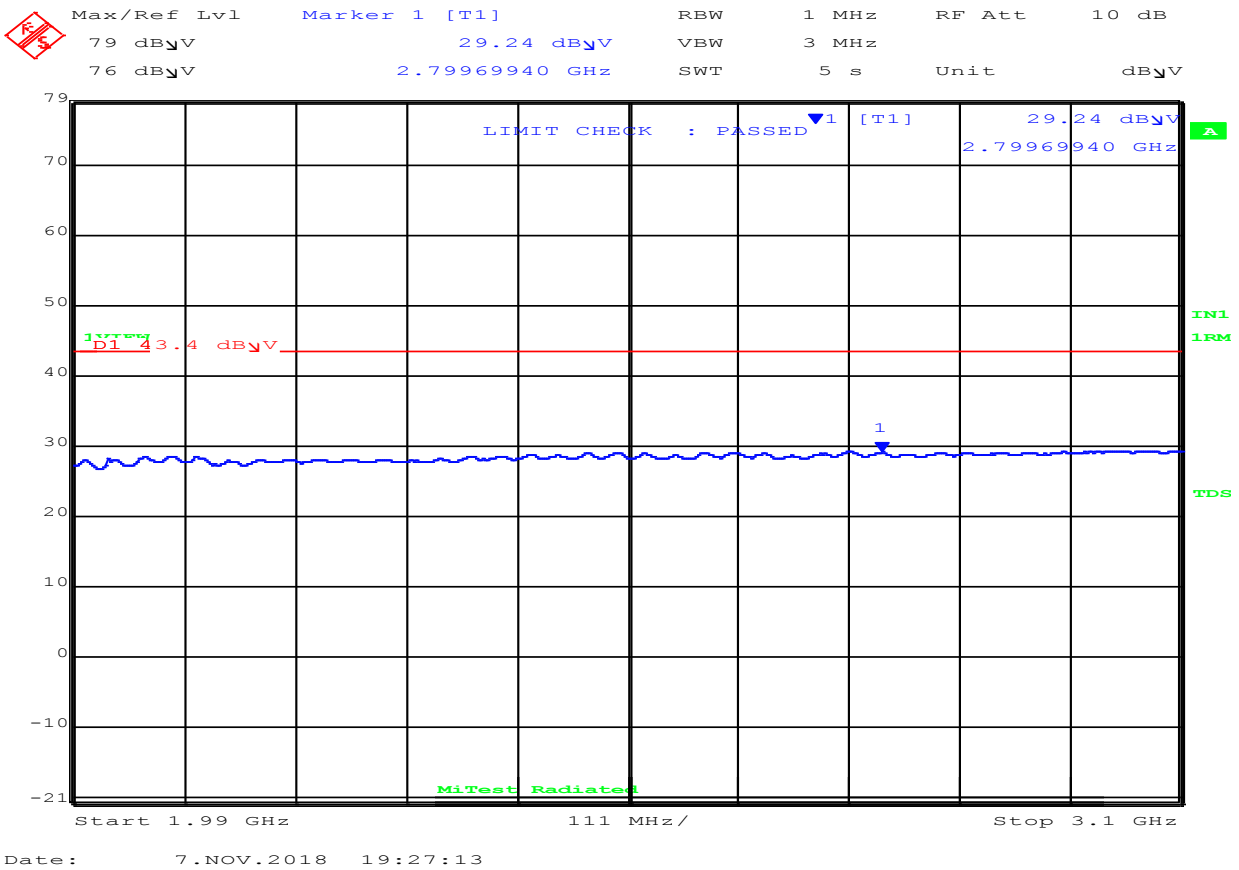
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

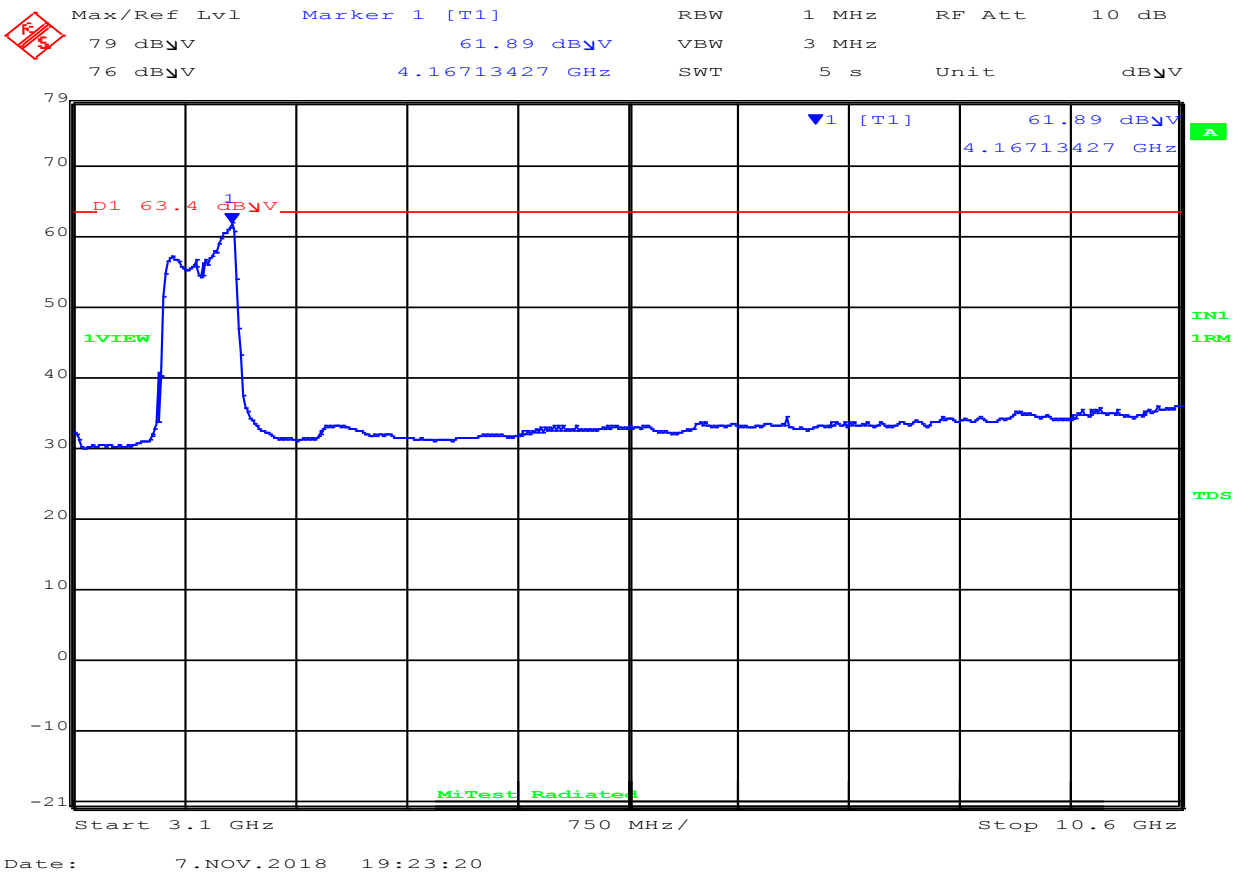
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6 GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	4167.1	59.6	Average	Horizontal	150	0	63.4	-3.80	Pass

Test Notes:

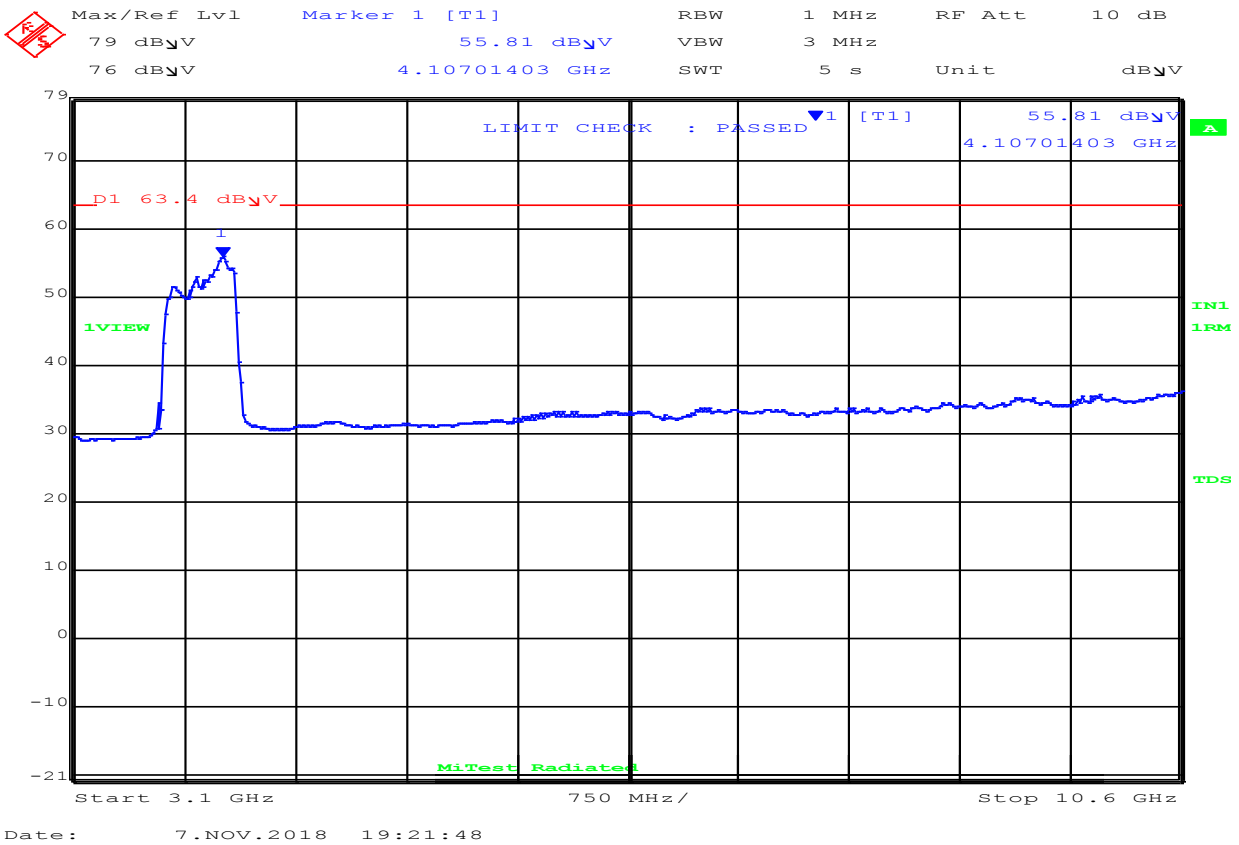
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6 GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:

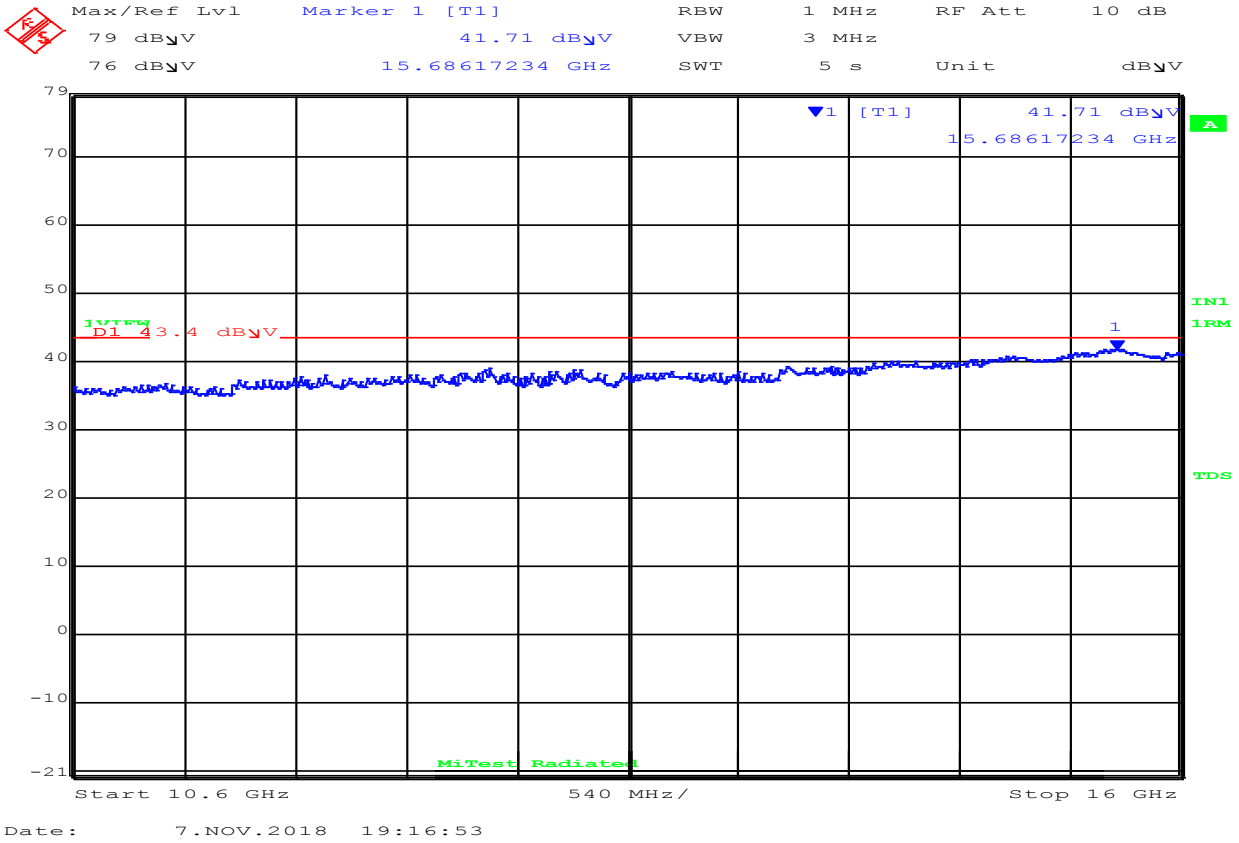
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16 GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.2	Average	Horizontal	150	0	43.4	-3.20	Pass

Test Notes:

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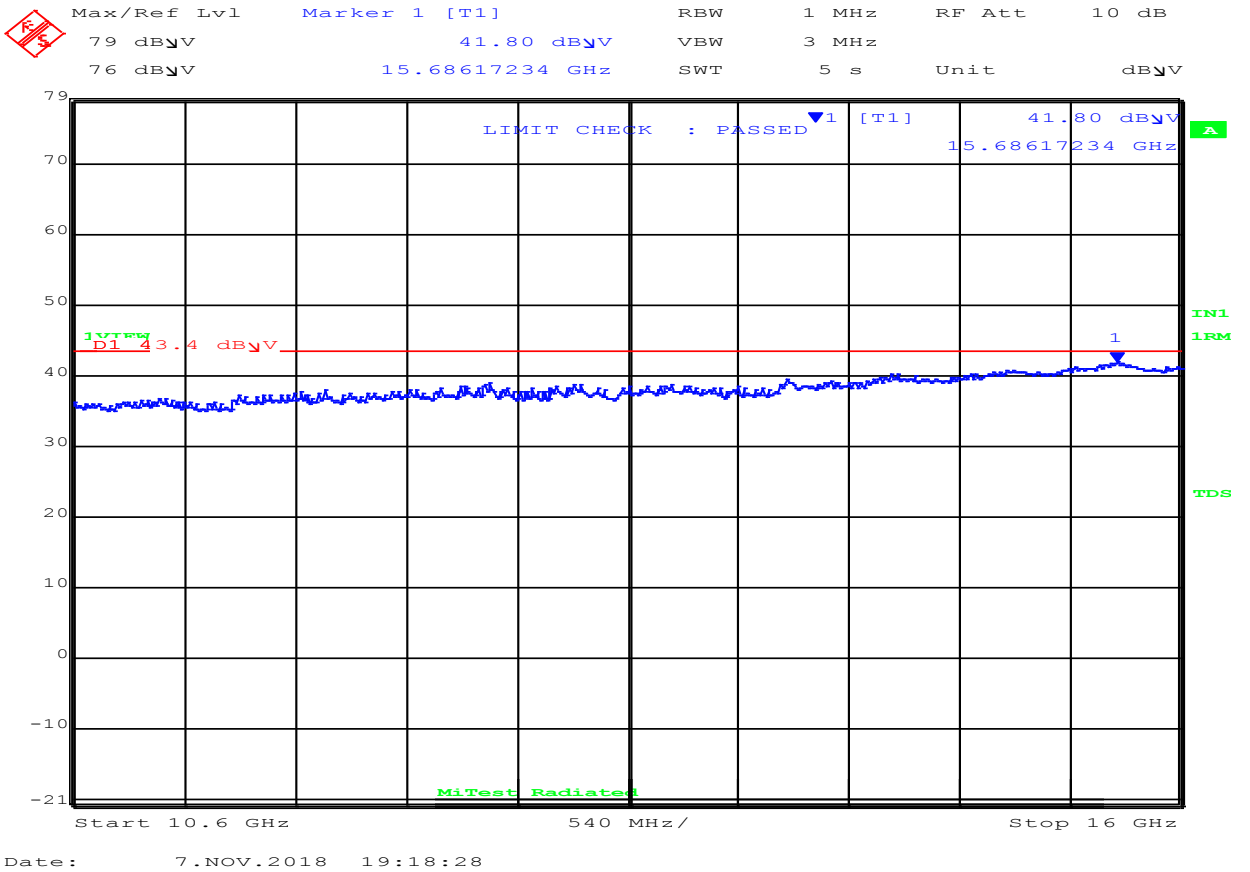
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.1	Average	Vertical	150	0	43.4	-3.30	Pass

Test Notes:

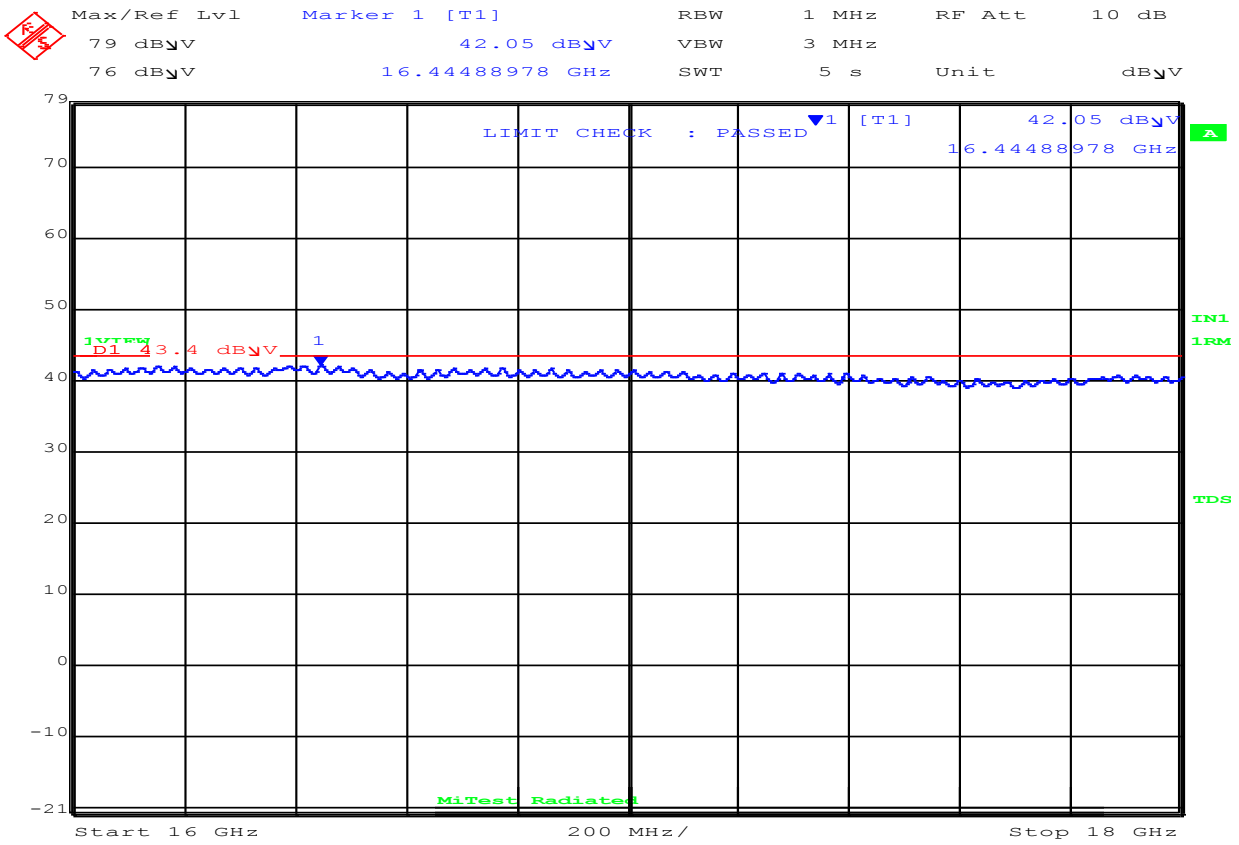
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



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16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.9	41.0	Average	Horizontal	150	0	43.4	-2.40	Pass

Test Notes:

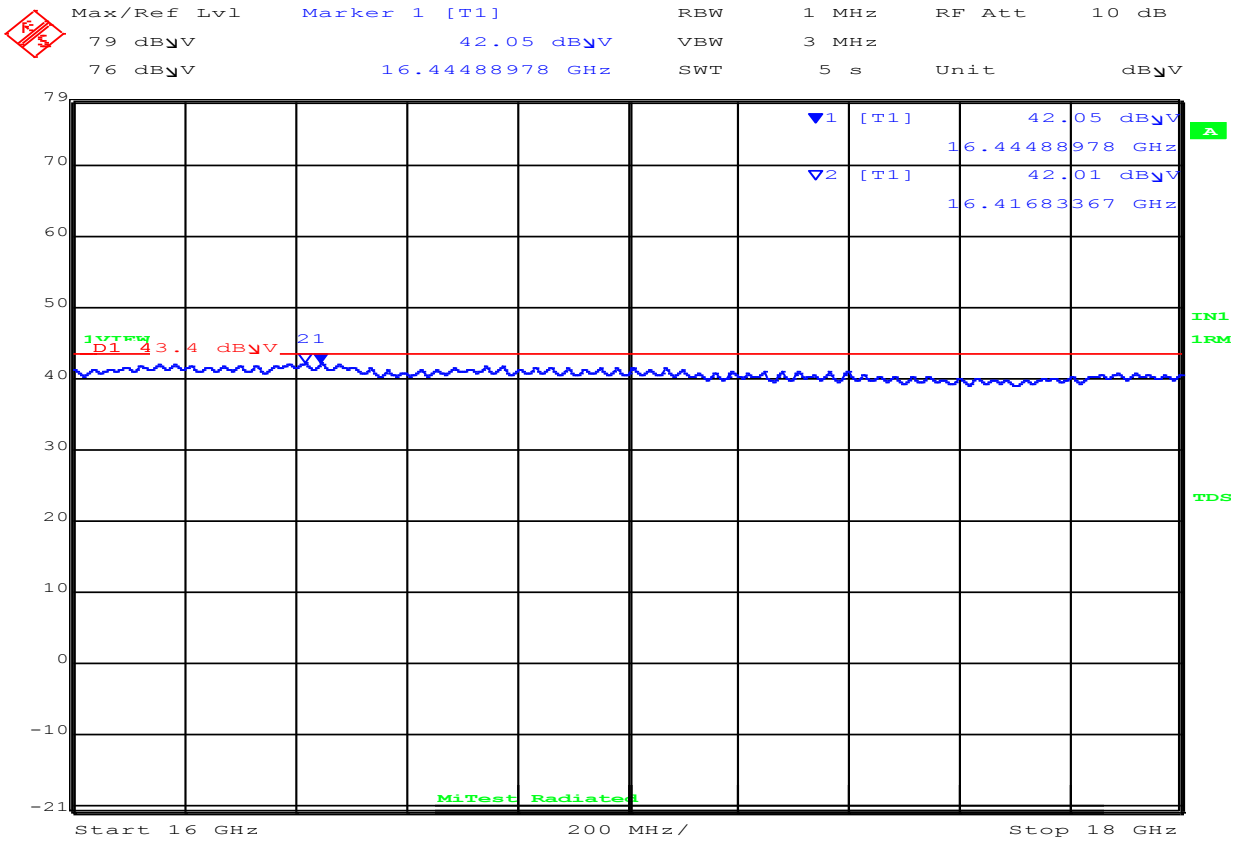
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3960.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 3960 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 19:09:08

16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.9	40.9	Average	Vertical	150	0	43.4	-2.50	Pass
2	16416.8	41.0	Average	Vertical	150	0	43.4	-2.40	Pass

Test Notes:

4488 MHz

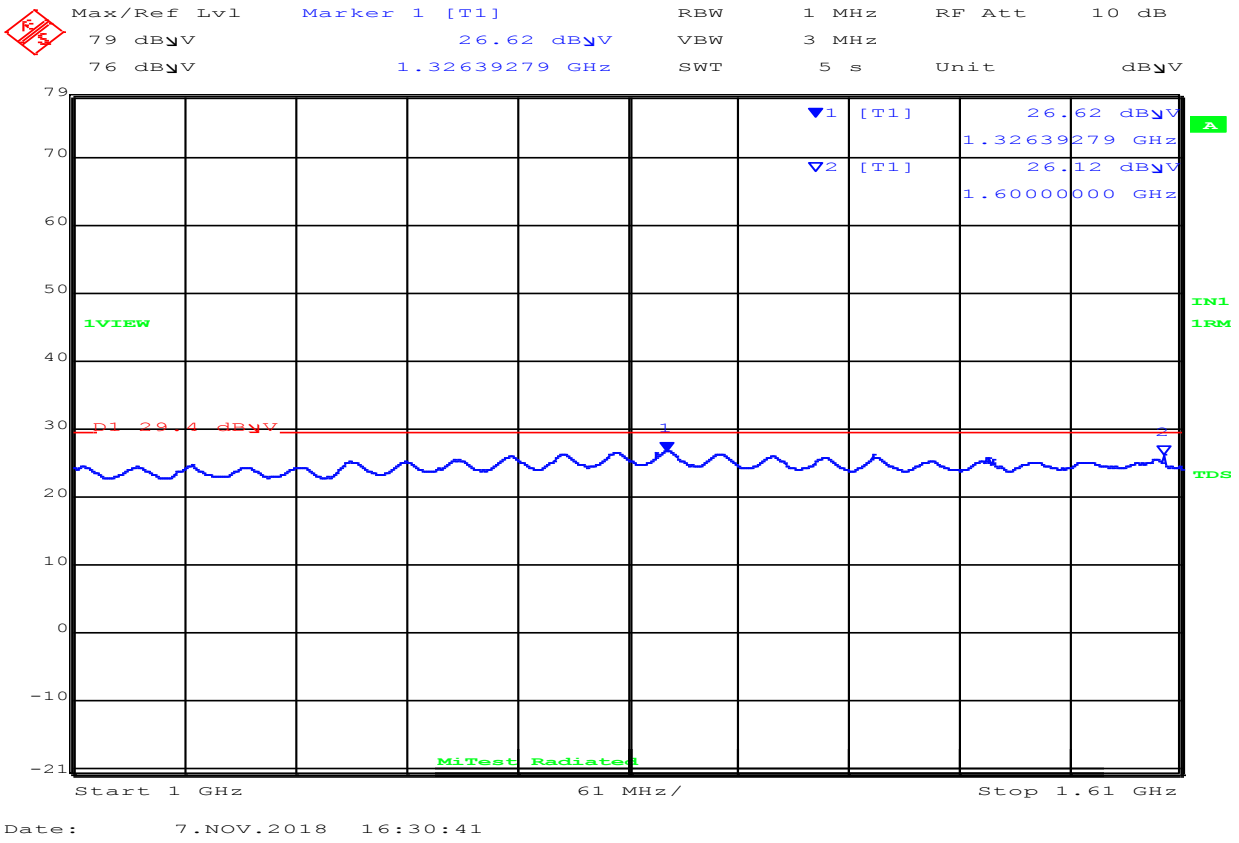
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.4	24.9	Average	Horizontal	150	0	29.4	-4.50	Pass
2	1600.0	27.2	Average	Horizontal	150	0	29.4	-2.20	Pass

Test Notes:
Laptop Removed

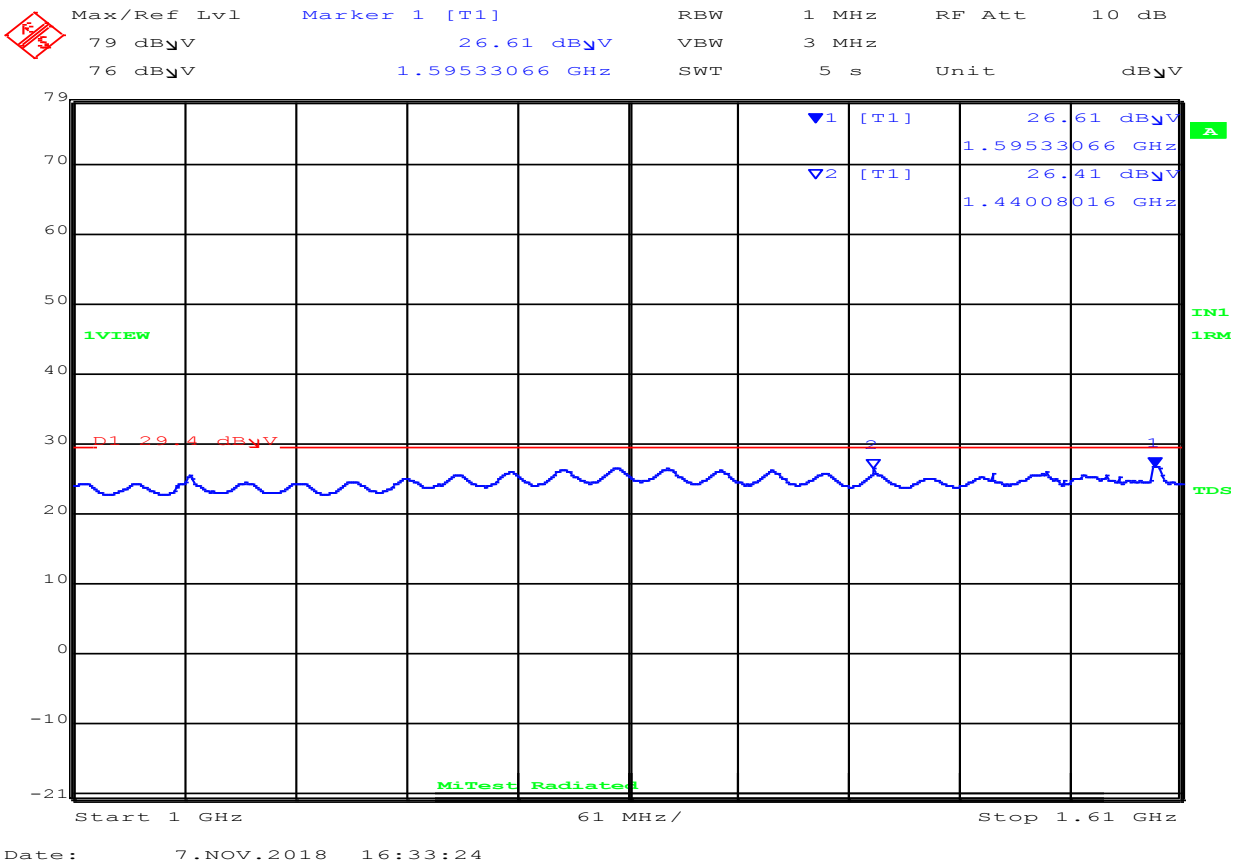
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1595.3	24.7	Average	Vertical	150	0	29.4	-4.70	Pass
2	1440.1	25.8	Average	Vertical	150	0	29.4	-3.60	Pass

Test Notes:
Laptop Removed

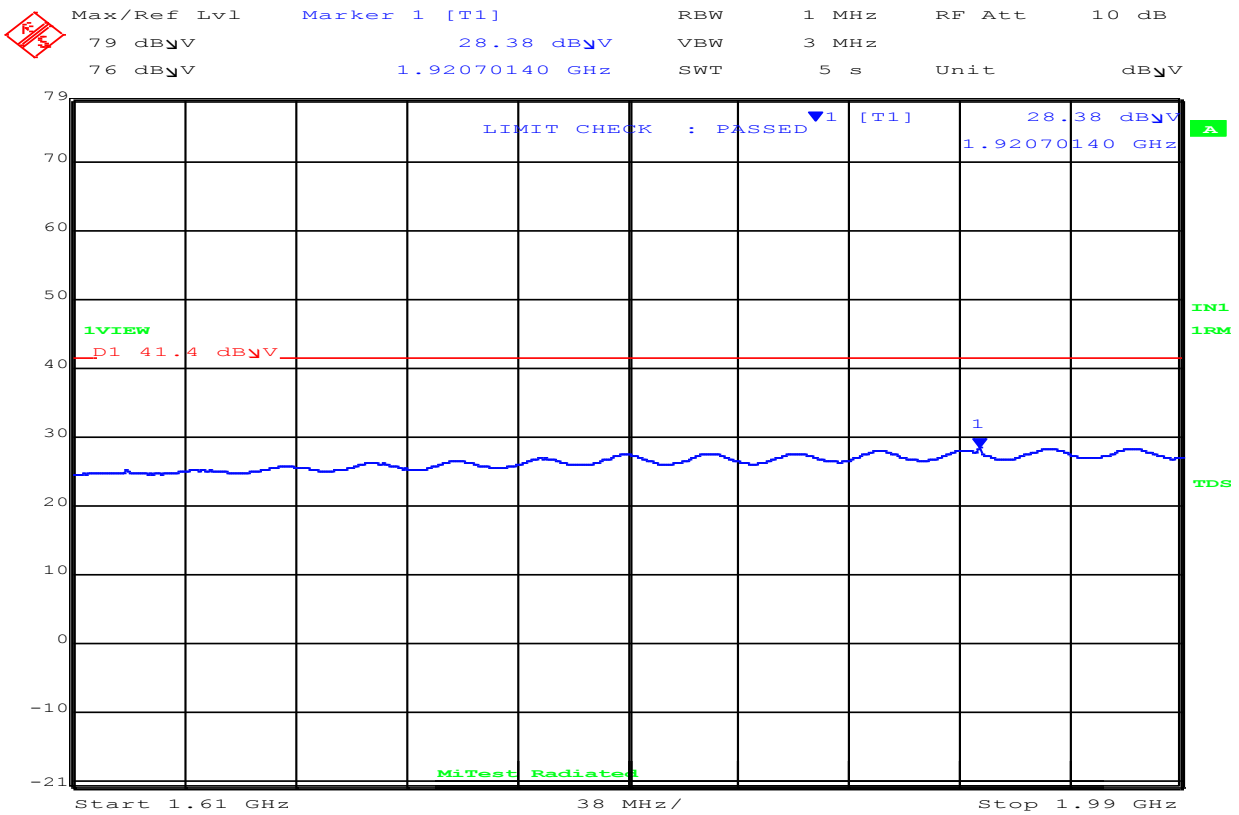
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 19:33:18

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

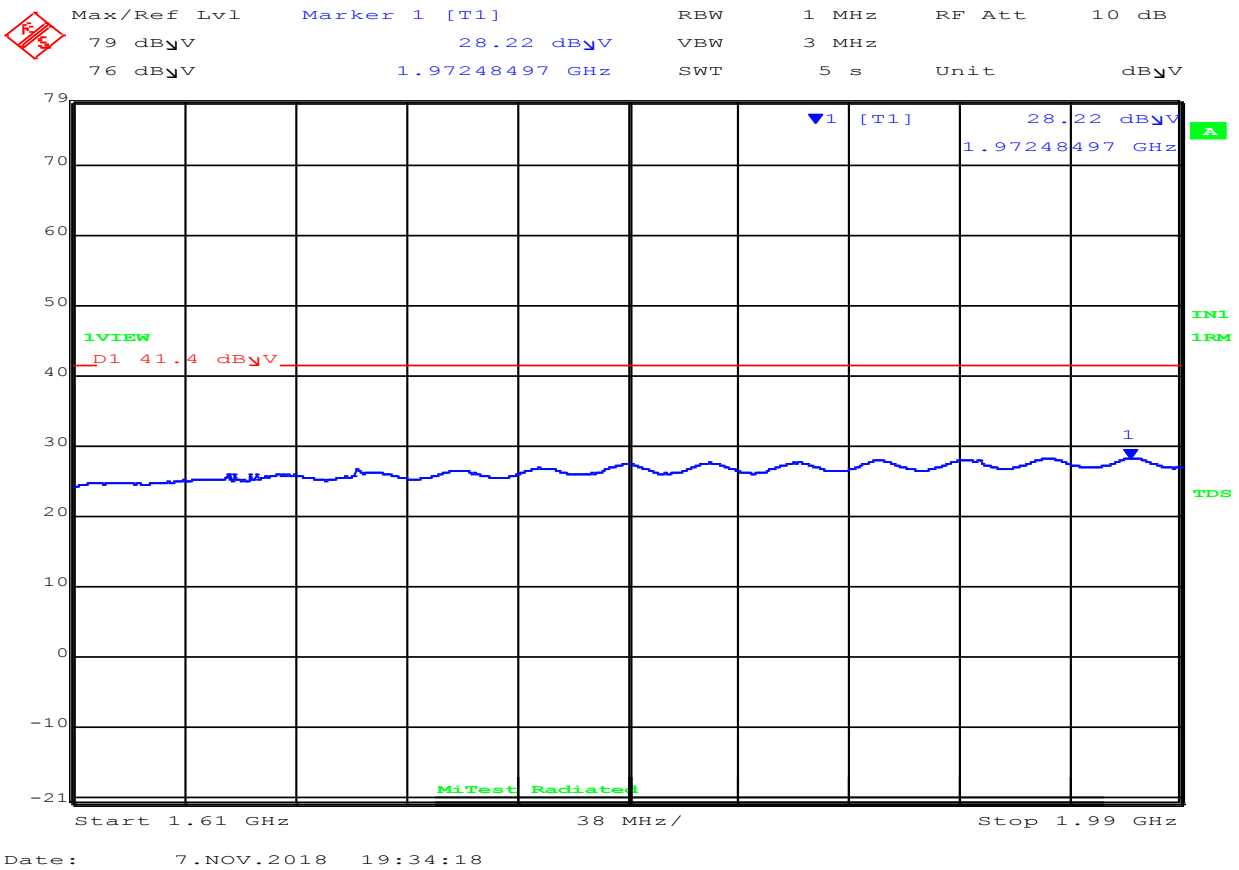
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

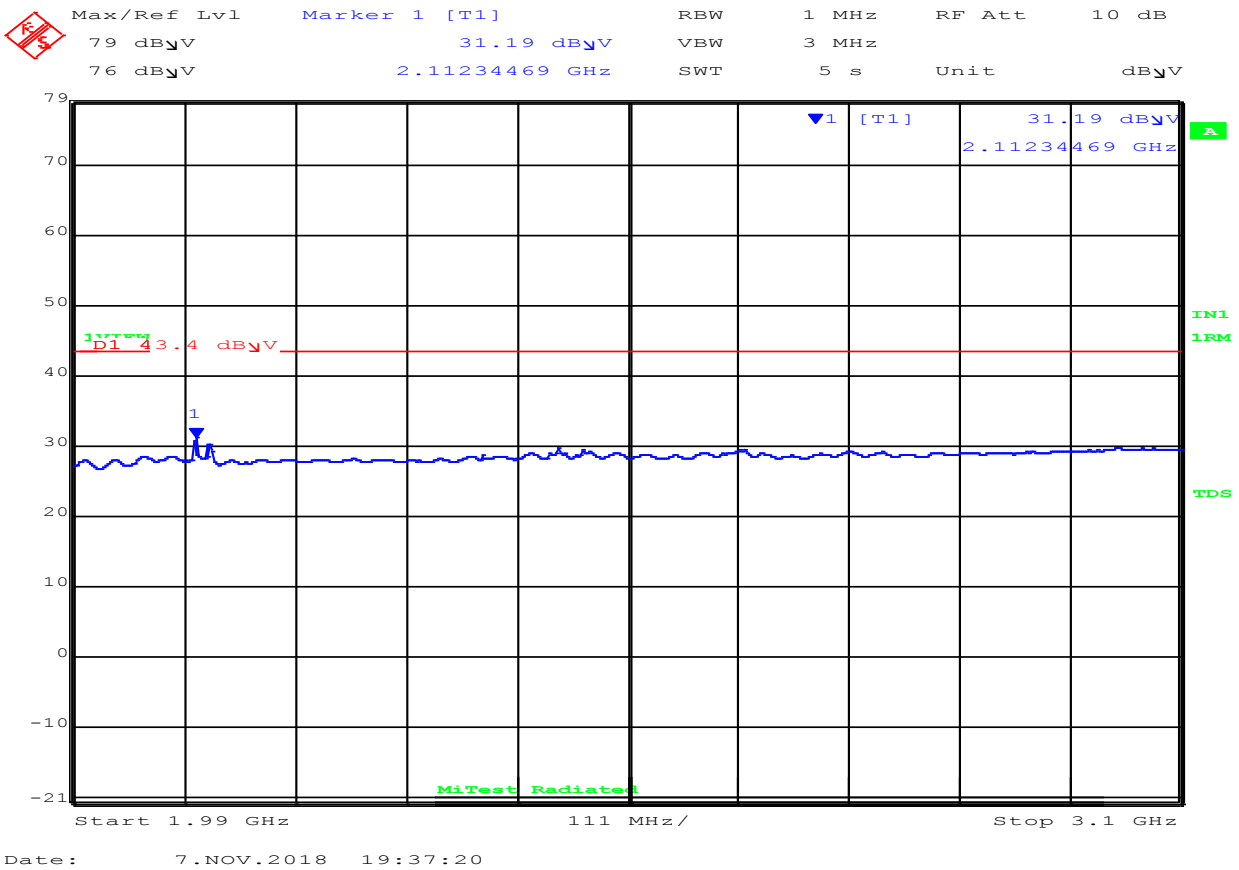
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

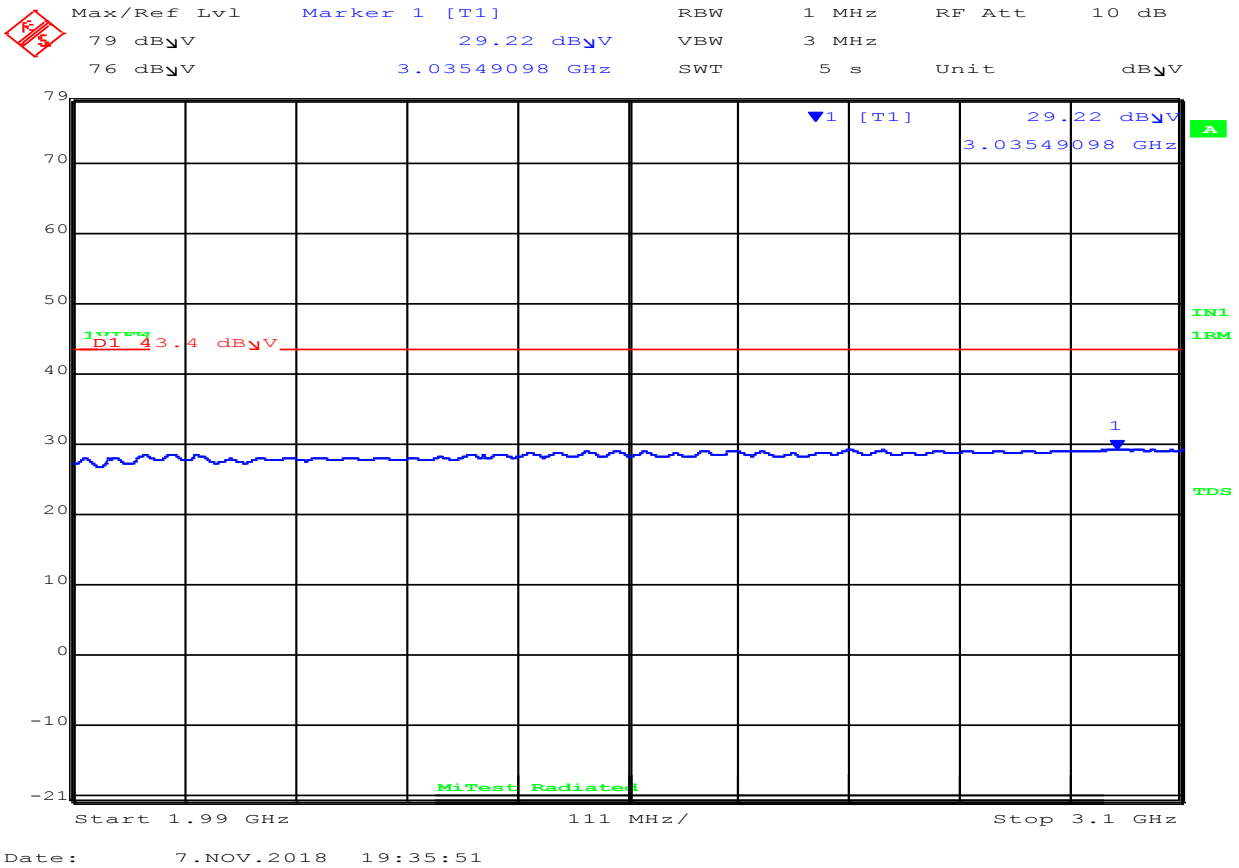
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

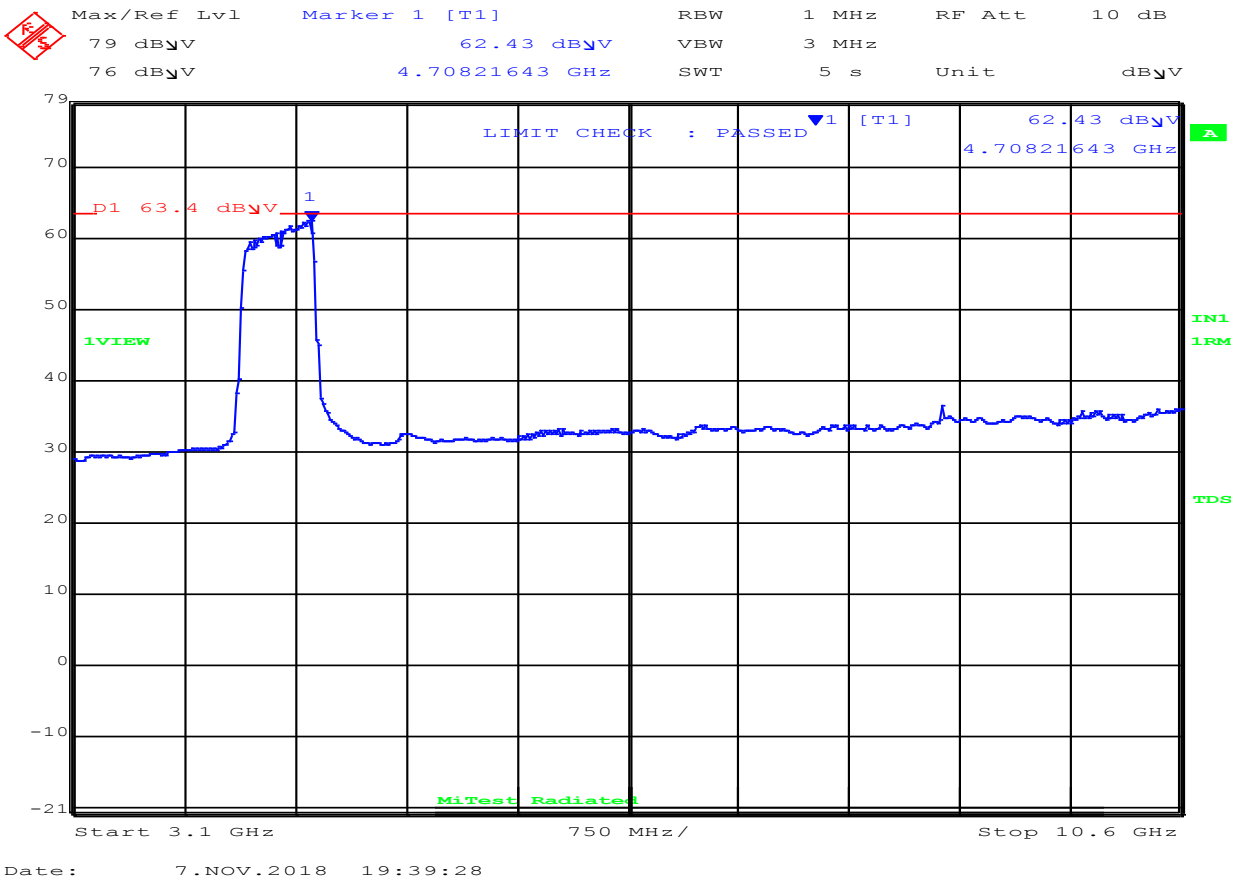
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	4708.2	61.6	Average	Horizontal	150	0	63.4	-1.80	Pass

Test Notes:

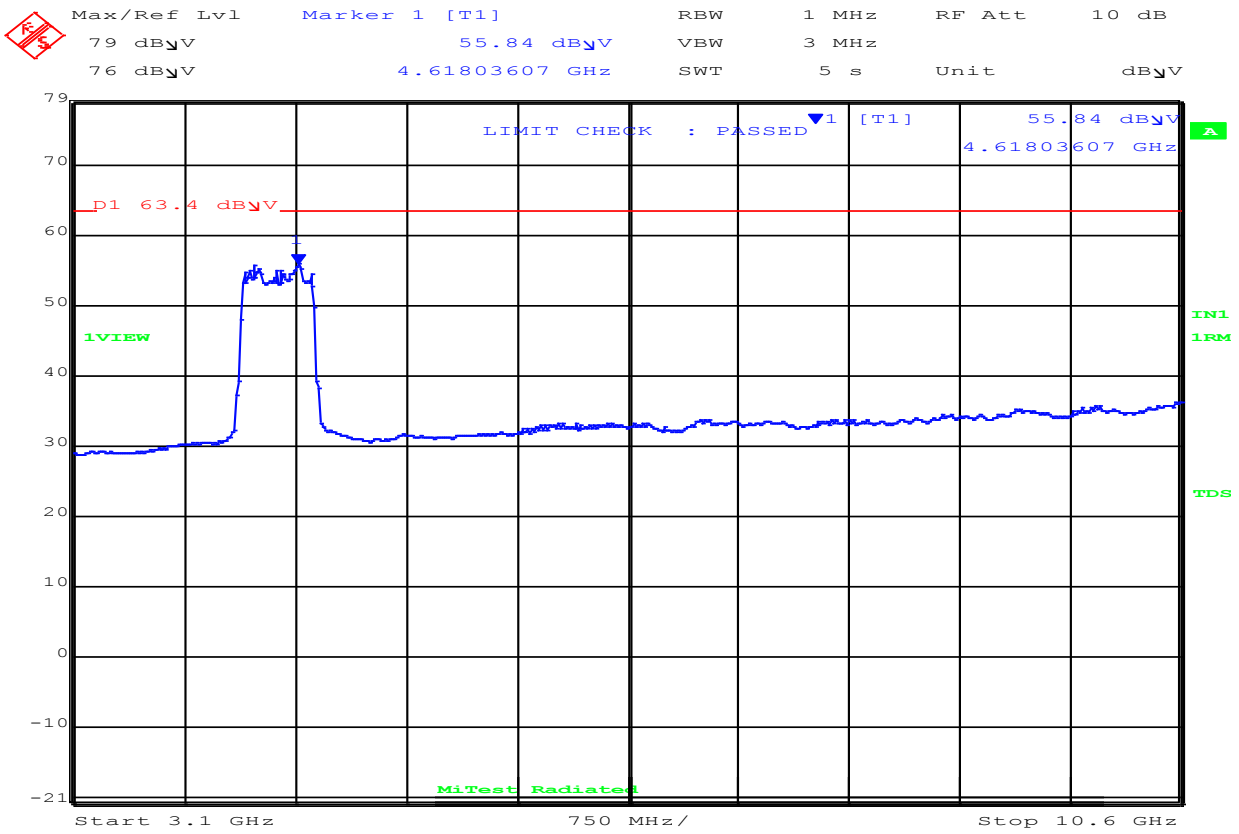
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



Date: 7.NOV.2018 19:41:19

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:

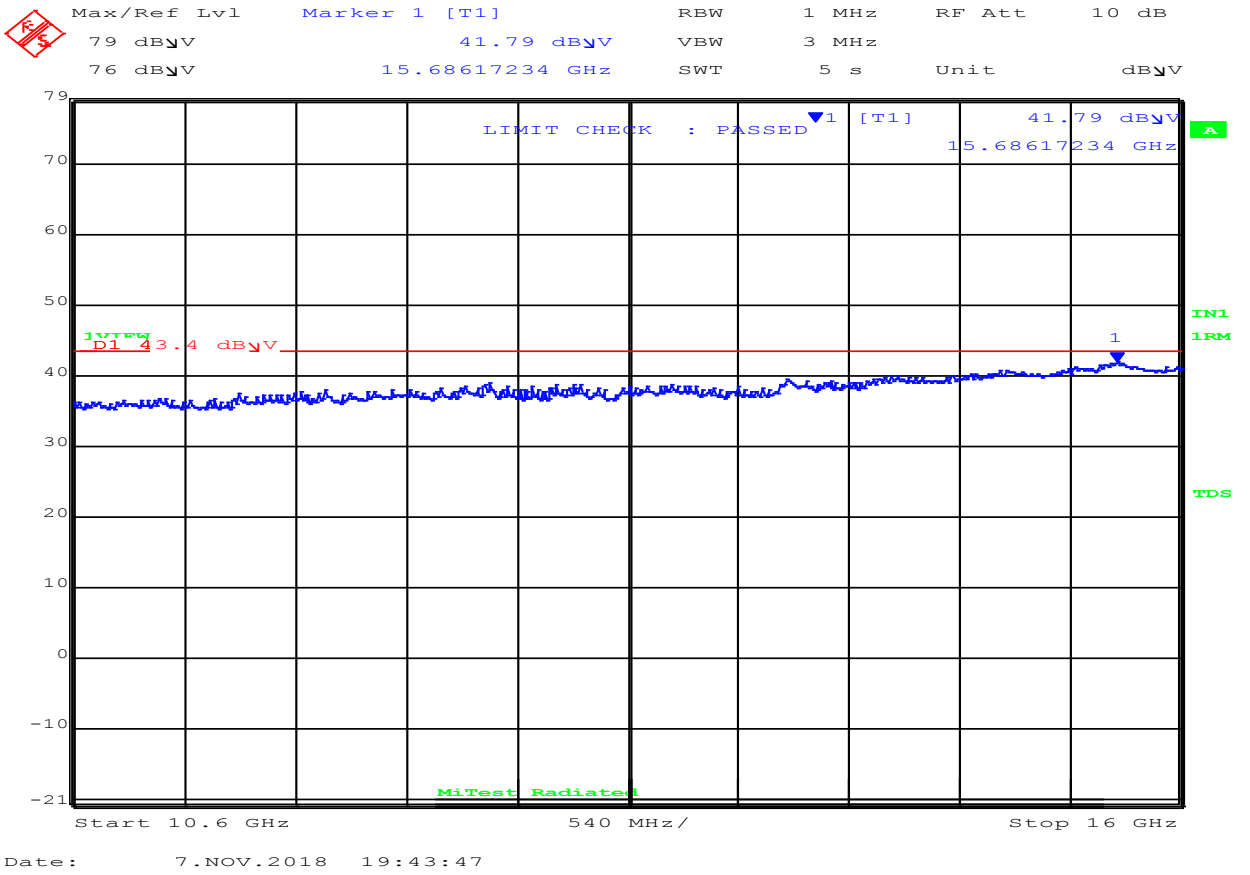
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.3	Average	Horizontal	150	0	43.4	-3.10	Pass

Test Notes:

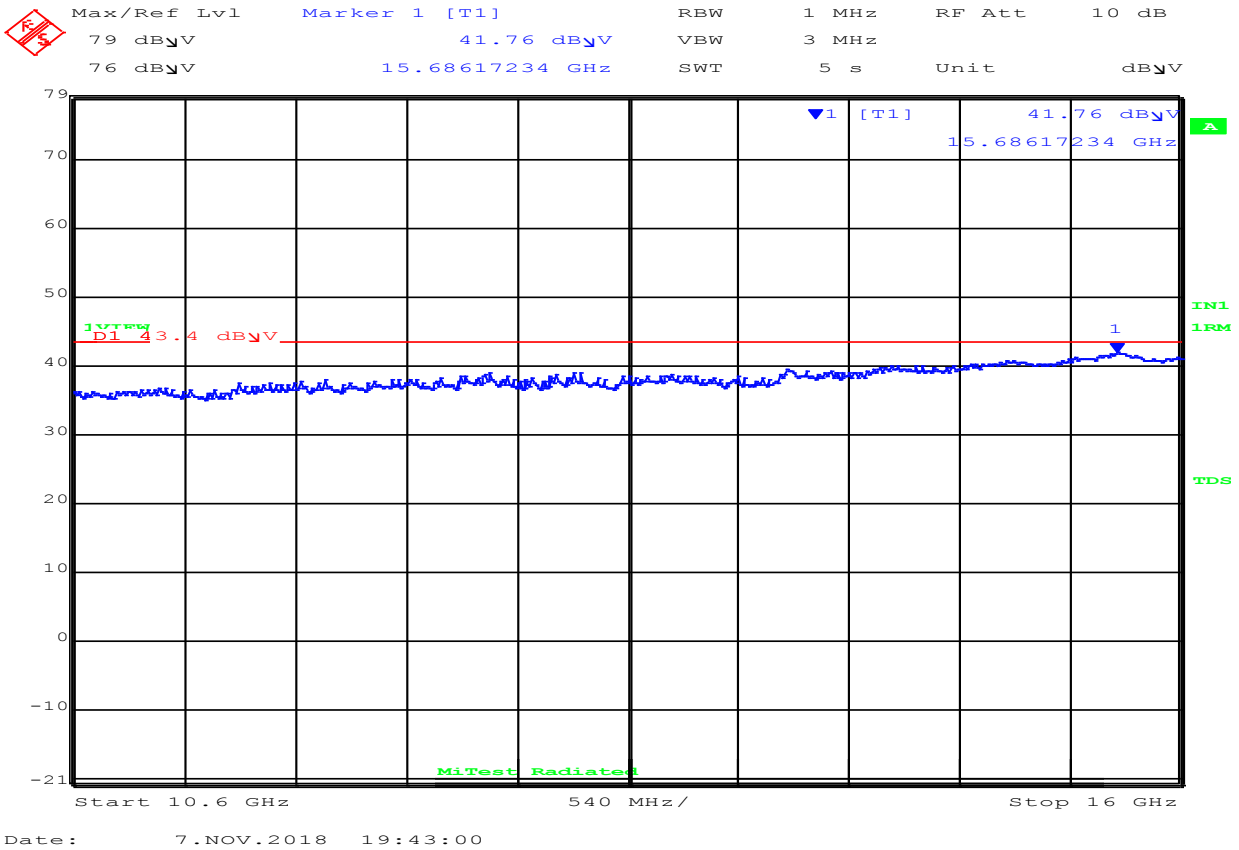
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.1	Average	Vertical	150	0	43.4	-3.30	Pass

Test Notes:

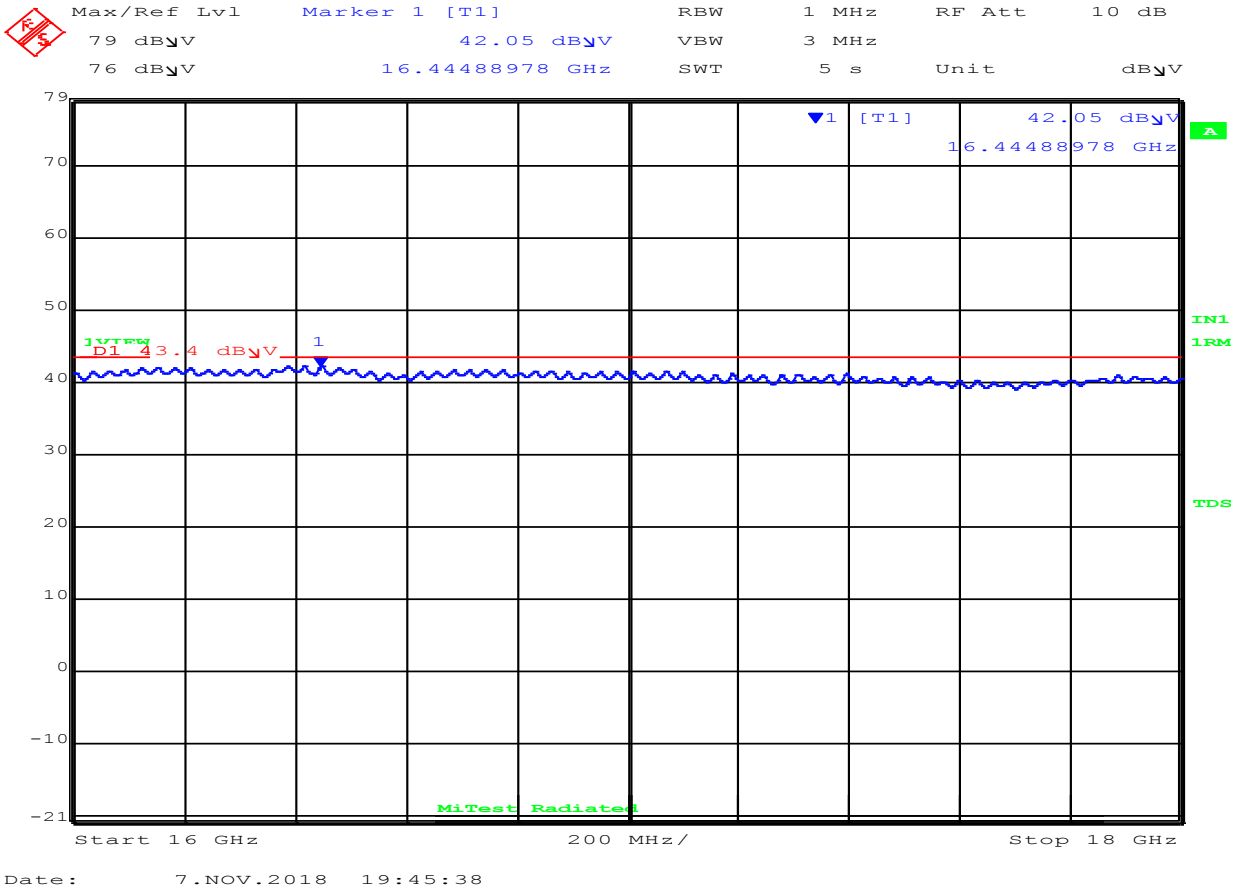
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.9	41.1	Average	Horizontal	150	0	43.4	-2.30	Pass

Test Notes:

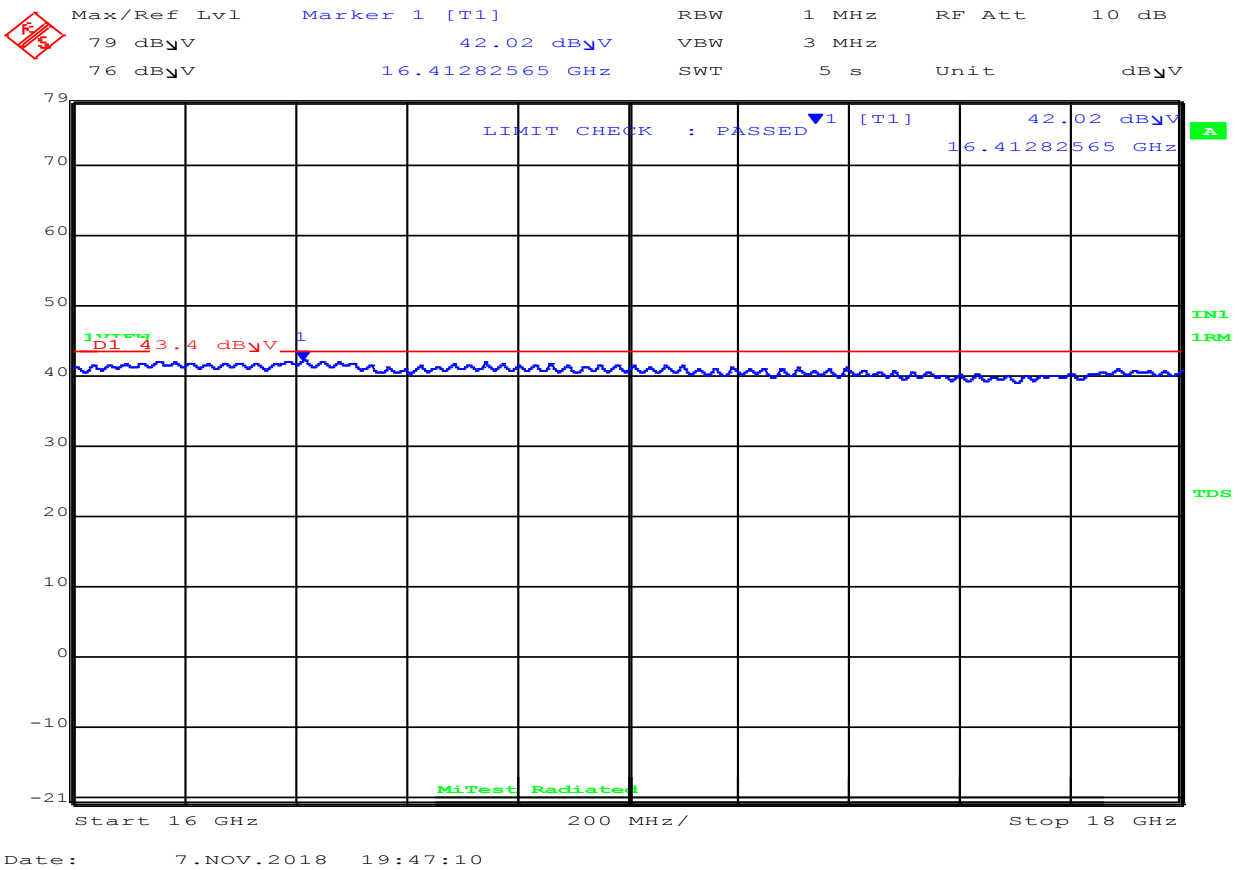
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	4488.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 4488 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16412.8	40.9	Average	Vertical	150	0	43.4	-2.50	Pass
Test Notes:									

6600 MHz

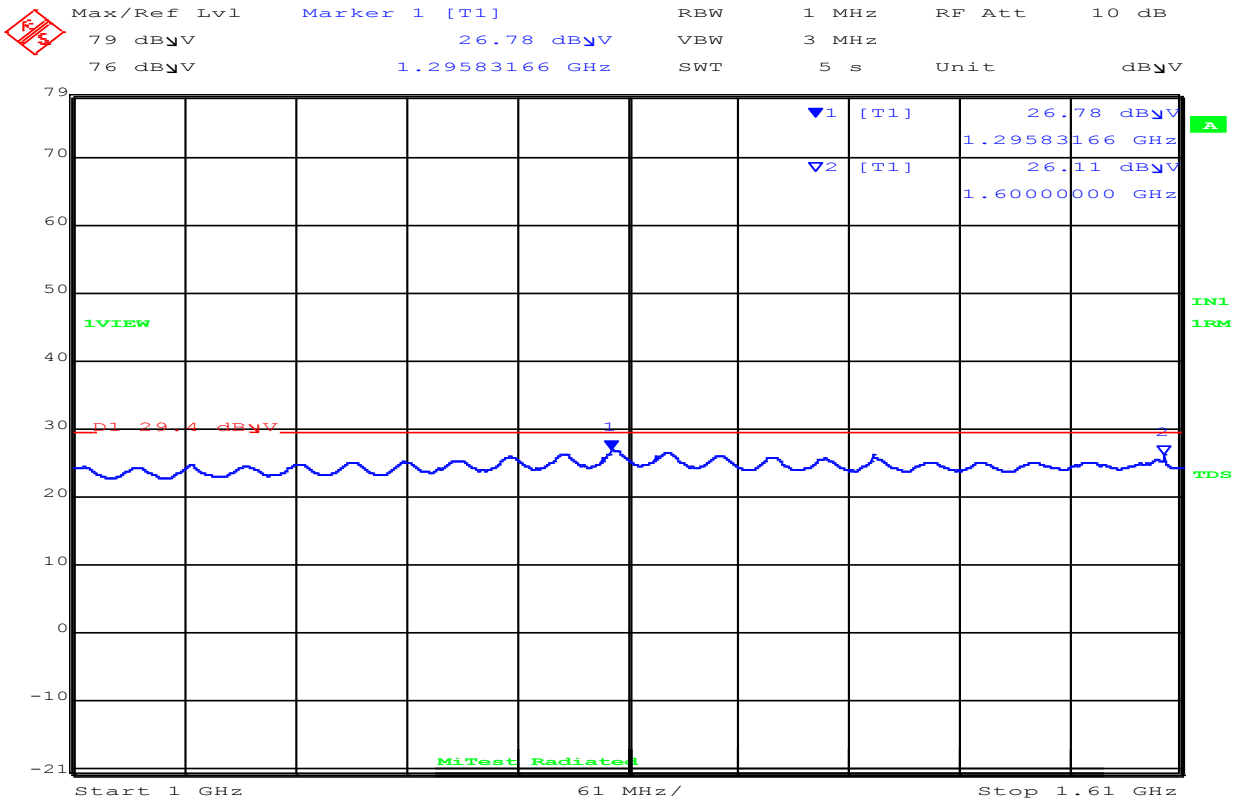
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1295.8	25.2	Average	Horizontal	150	0	29.4	-4.20	Pass
2	1600.0	26.2	Average	Horizontal	150	0	29.4	-3.20	Pass

Test Notes:
Laptop Removed

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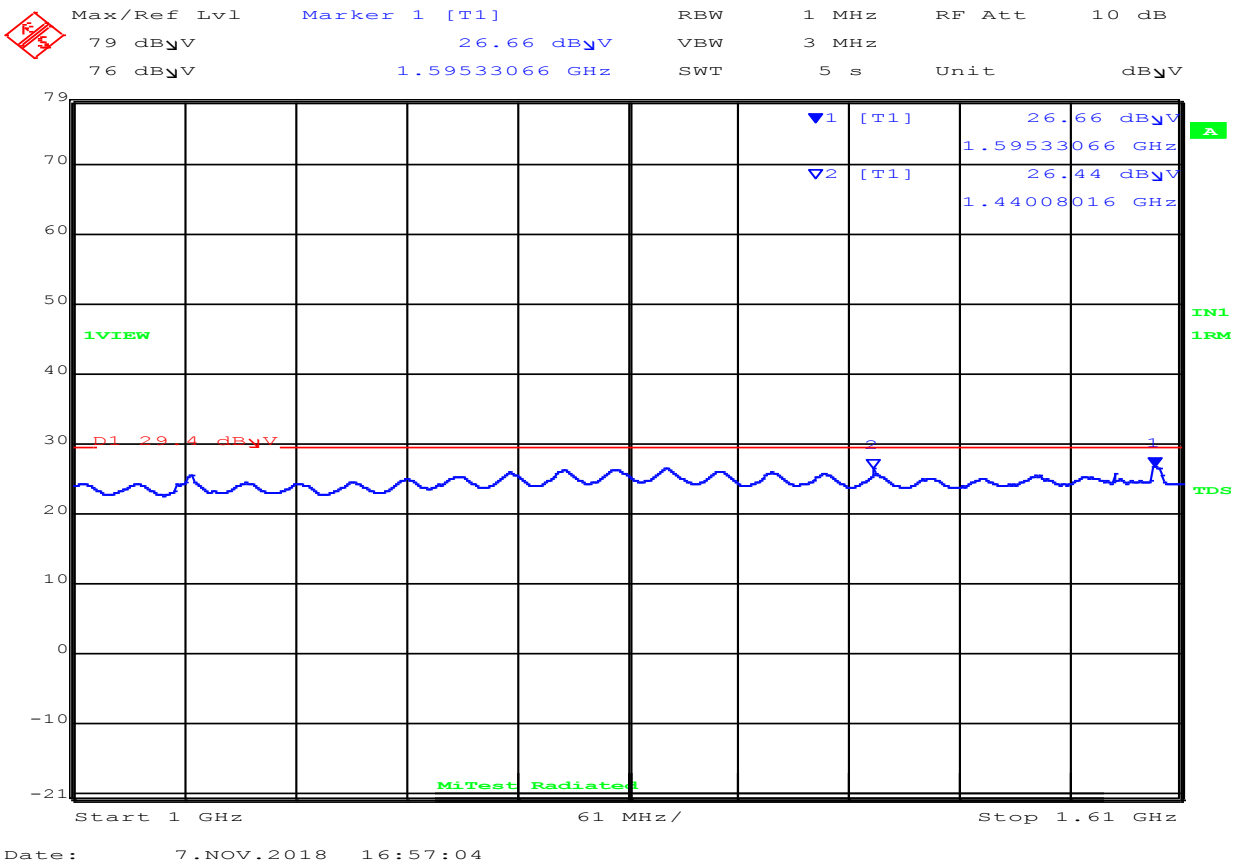
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1595.3	25.1	Average	Vertical	150	0	29.4	-4.30	Pass
2	1440.1	25.8	Average	Vertical	150	0	29.4	-3.60	Pass

Test Notes:
Laptop Removed

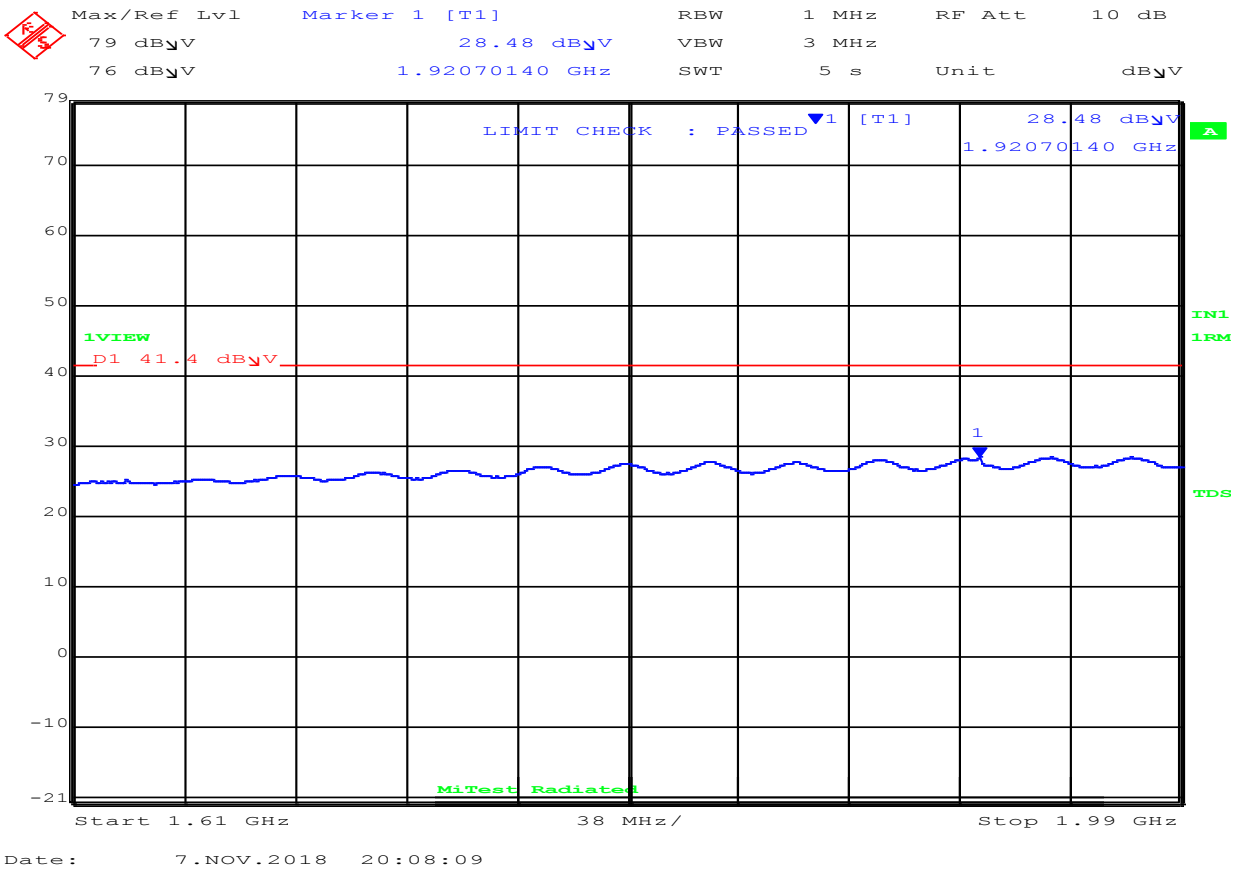
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 7.NOV.2018 20:08:09

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit.									

Test Notes:
Laptop Removed

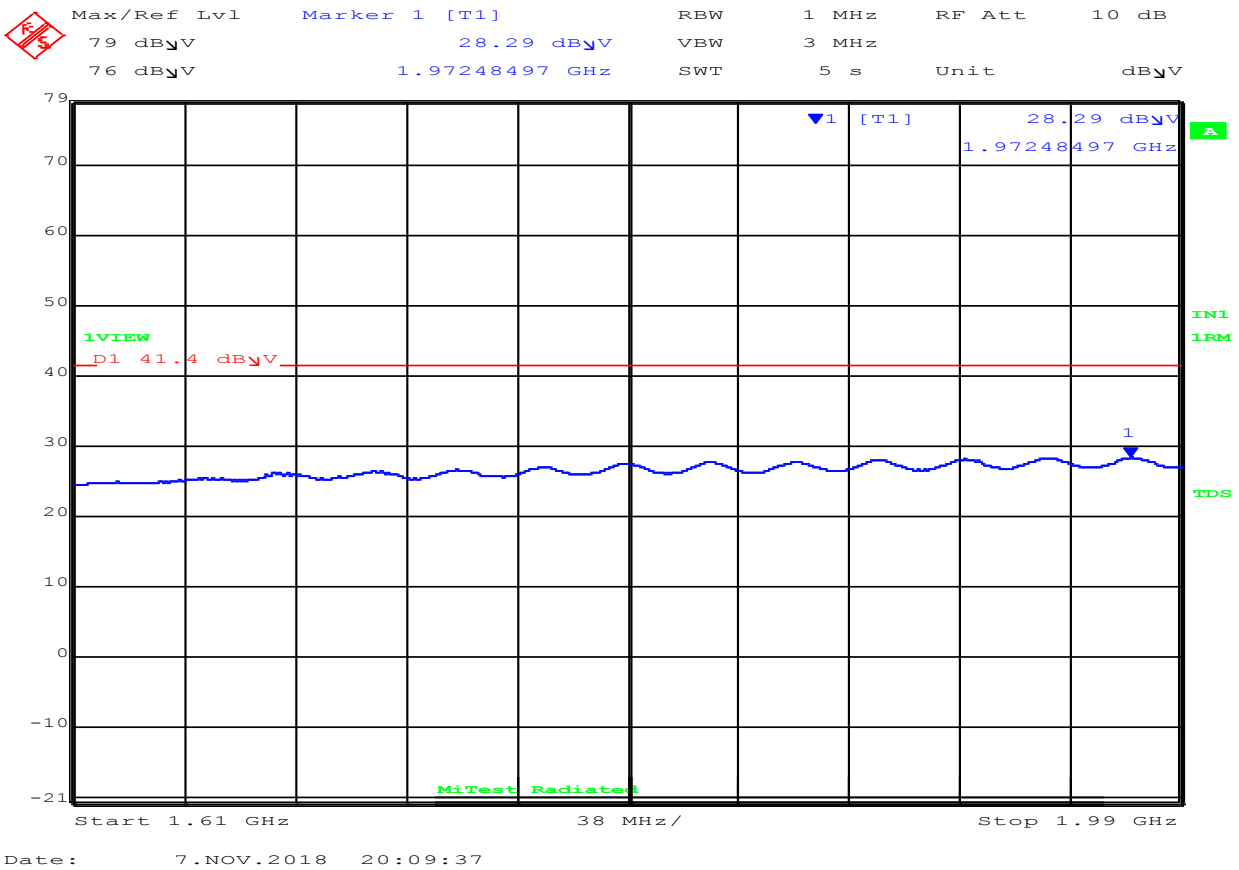
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit.									

Test Notes:
Laptop Removed

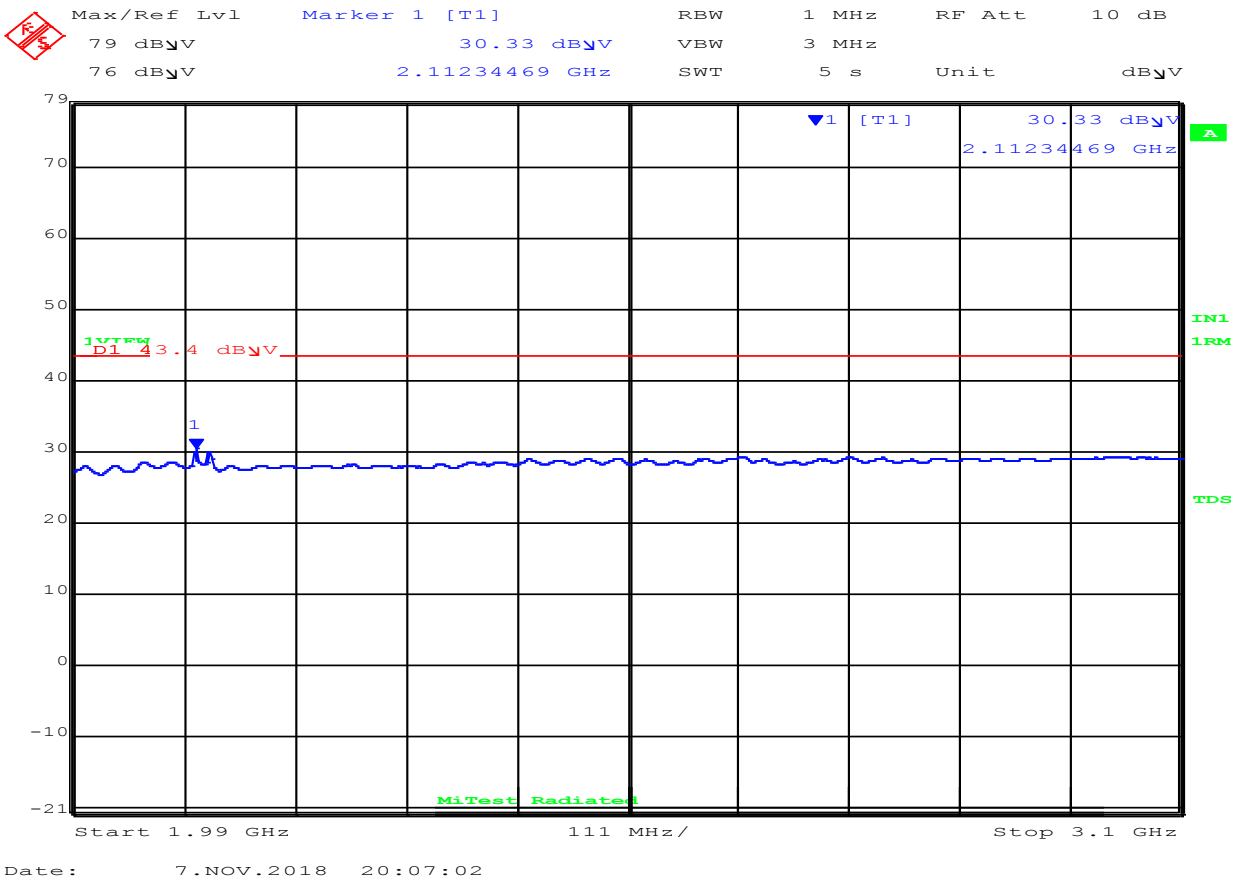
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 7.NOV.2018 20:07:02

1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit.									

Test Notes:
Laptop Removed

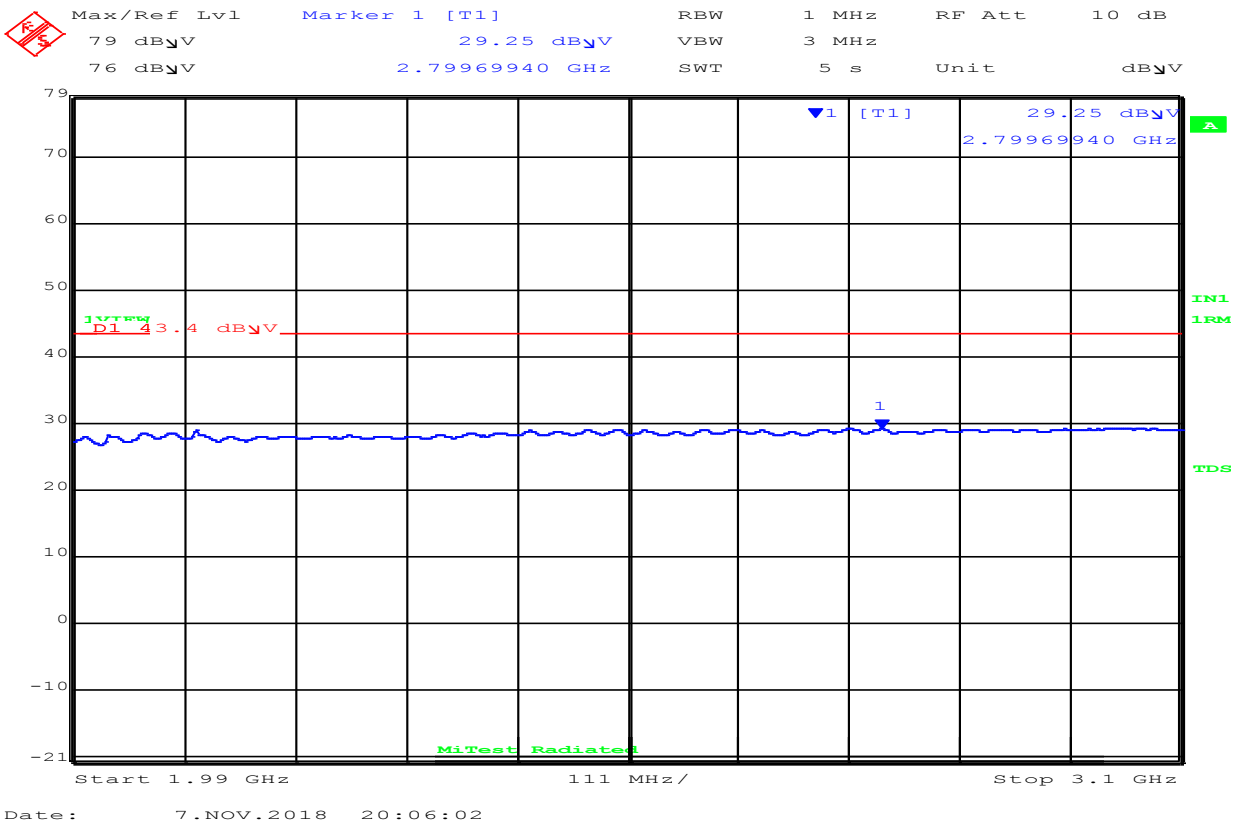
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit.									

Test Notes:
Laptop Removed

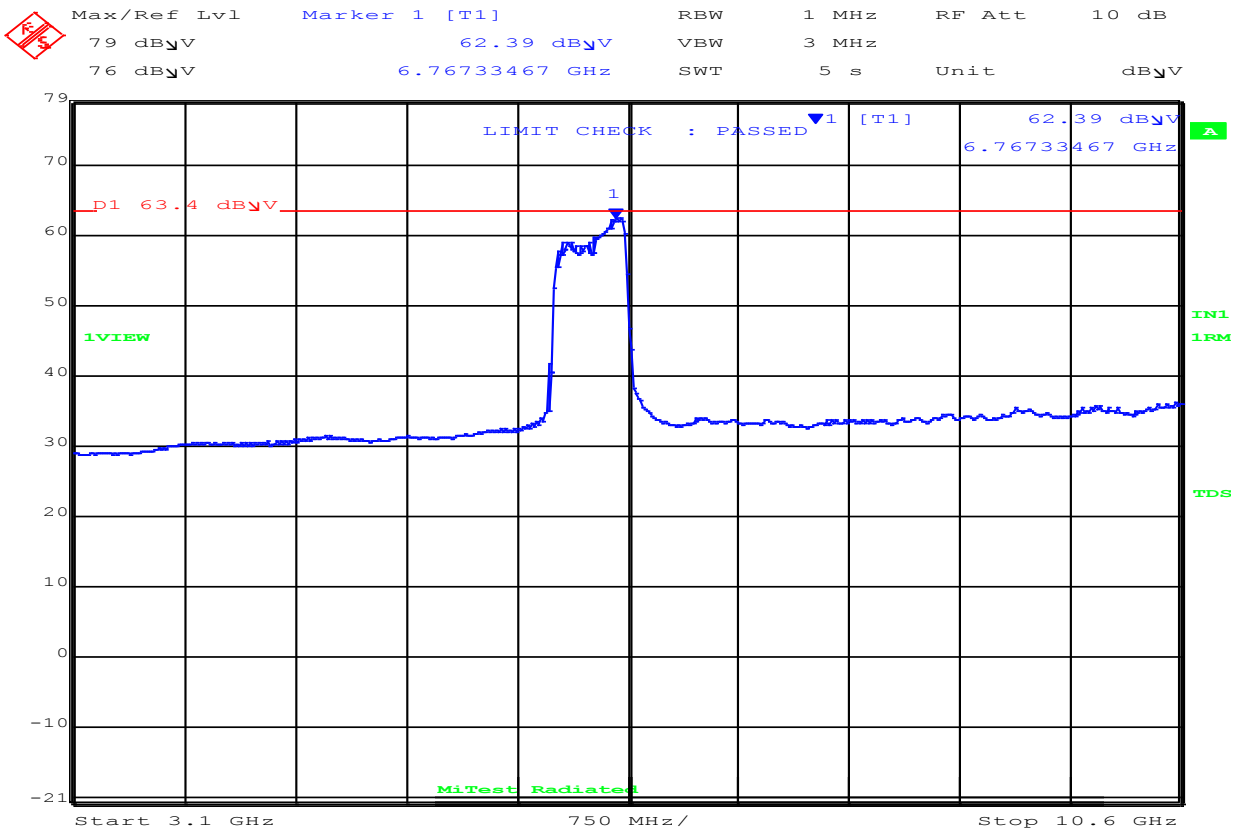
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 7.NOV.2018 20:01:36

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	6767.3	61.5	Average	Horizontal	150	0	63.4	-1.90	Pass
Test Notes:									

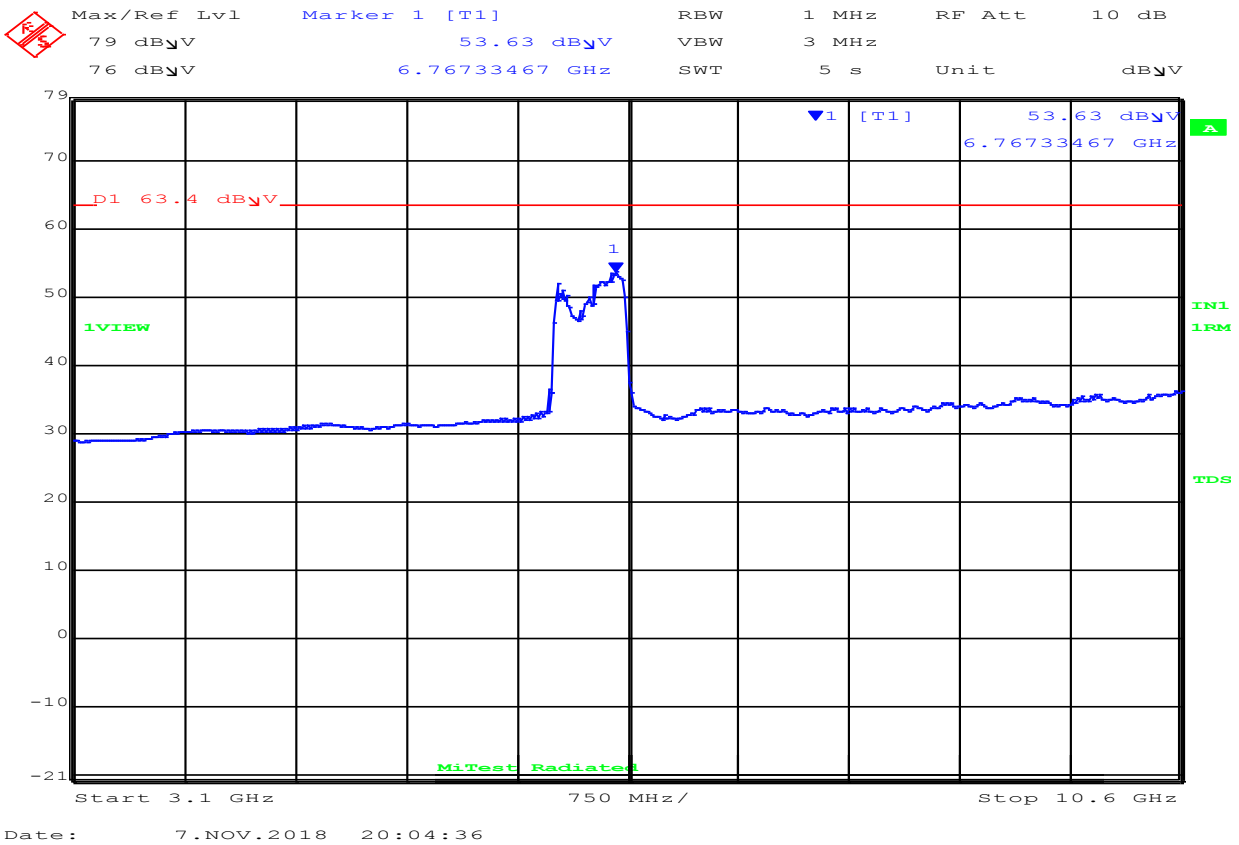
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit.									

Test Notes:

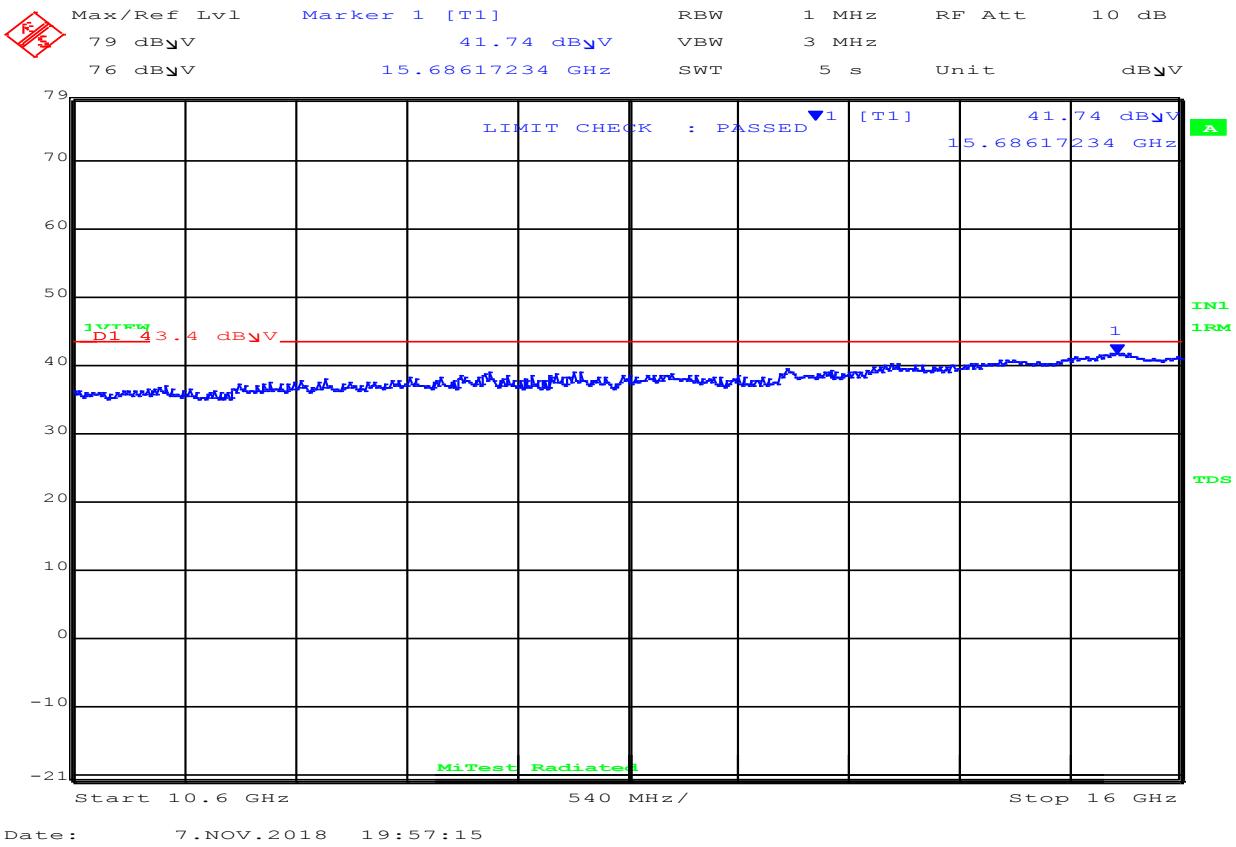
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 7.NOV.2018 19:57:15

10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.4	Average	Horizontal	150	0	43.4	-3.00	Pass

Test Notes:

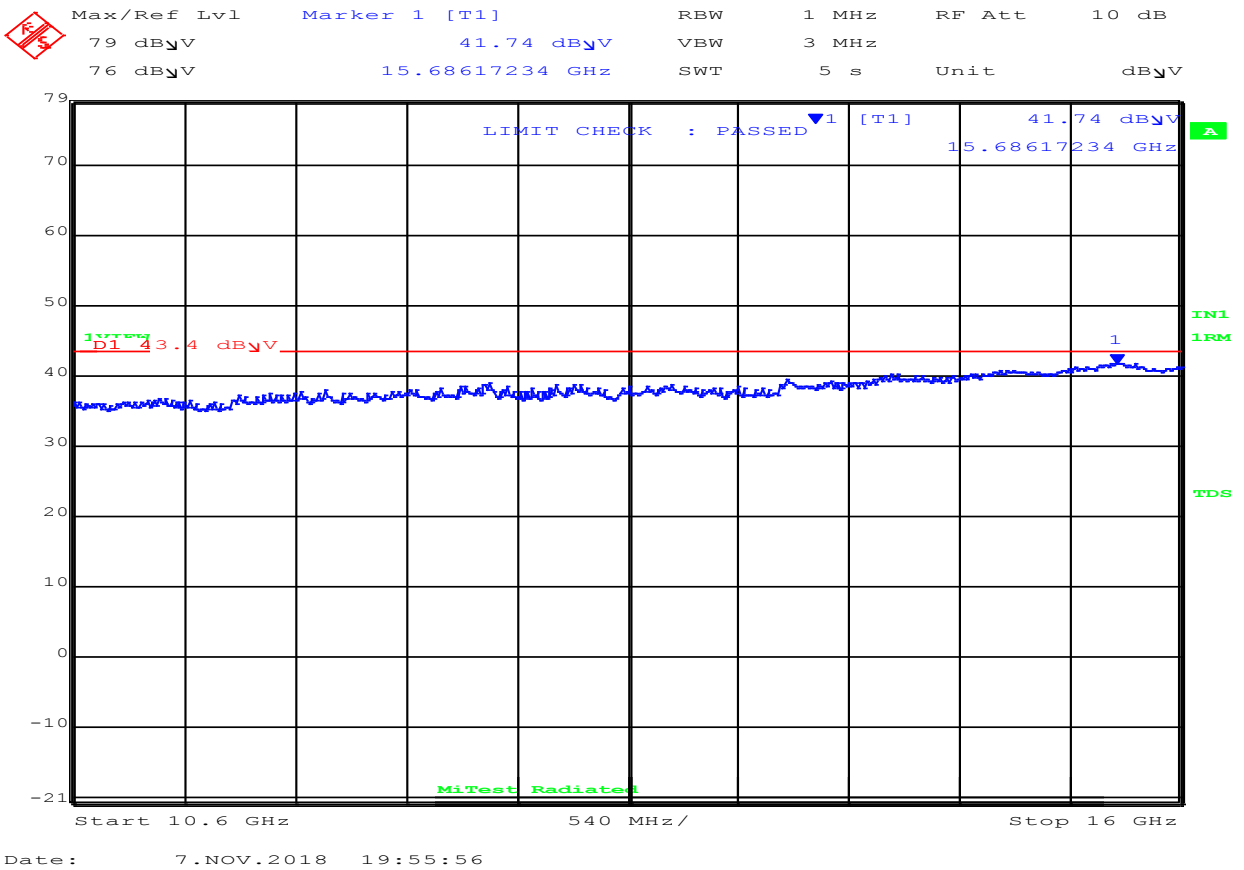
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.3	Average	Vertical	150	0	43.4	-3.10	Pass

Test Notes:

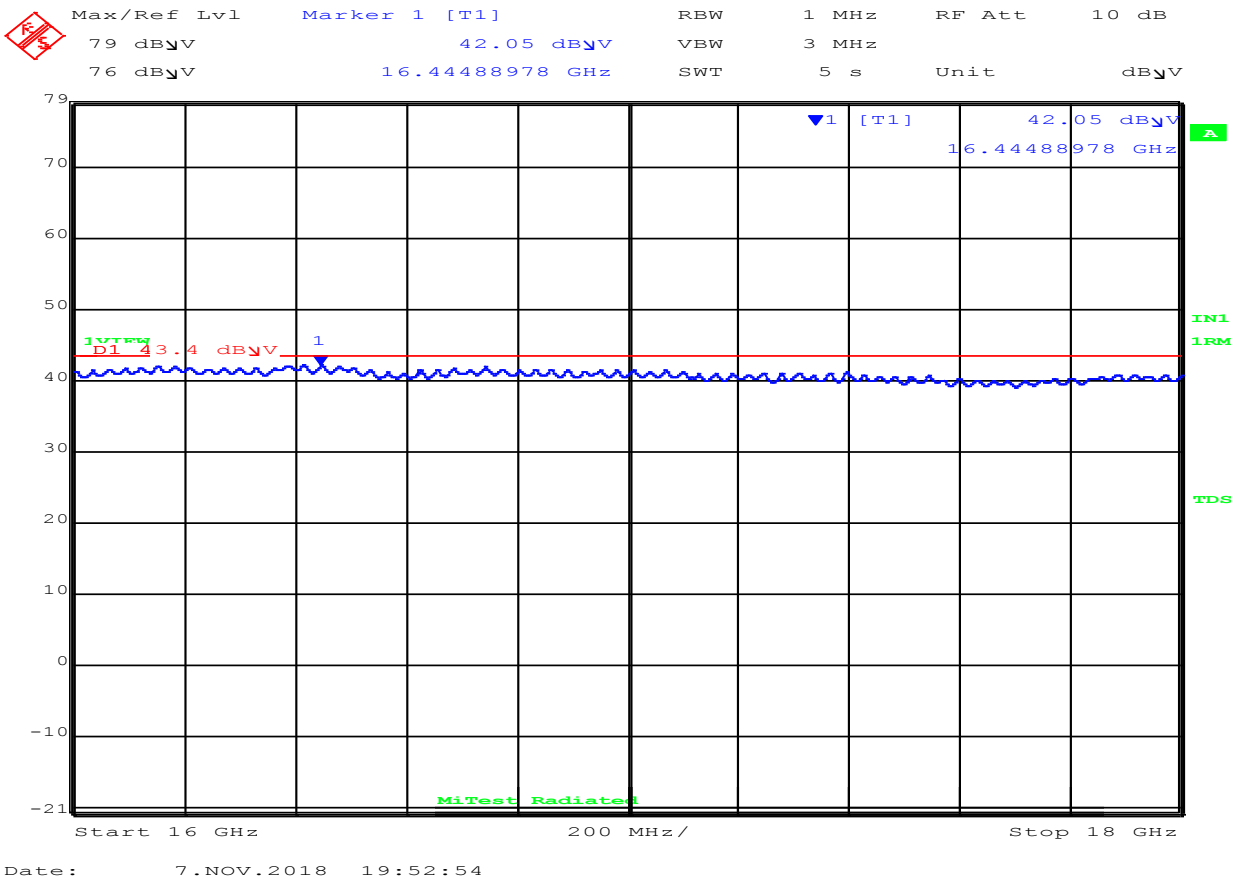
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.9	40.8	Average	Horizontal	150	0	43.4	-2.60	Pass

Test Notes:

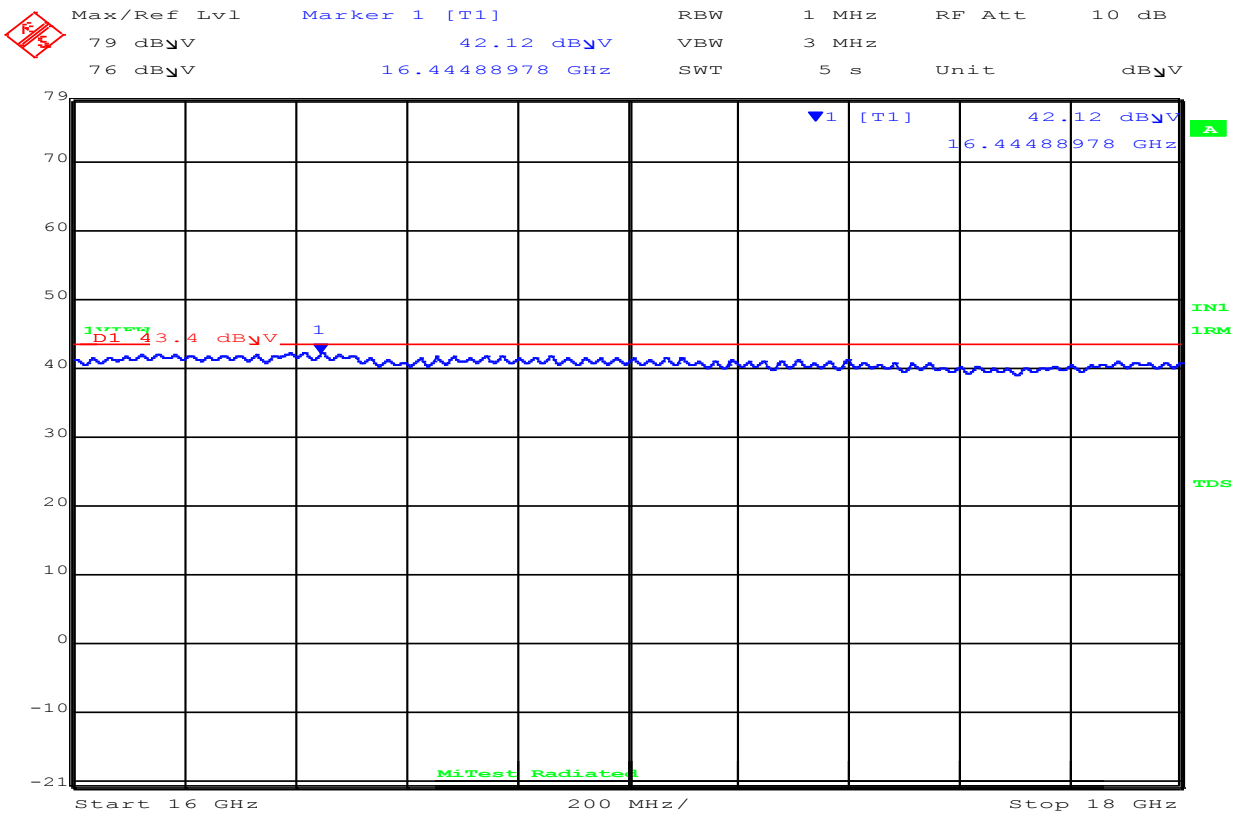
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	6600.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 6600 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 7.NOV.2018 19:50:56

16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.9	40.9	Average	Vertical	150	0	43.4	-2.50	Pass

Test Notes:

7128 MHz

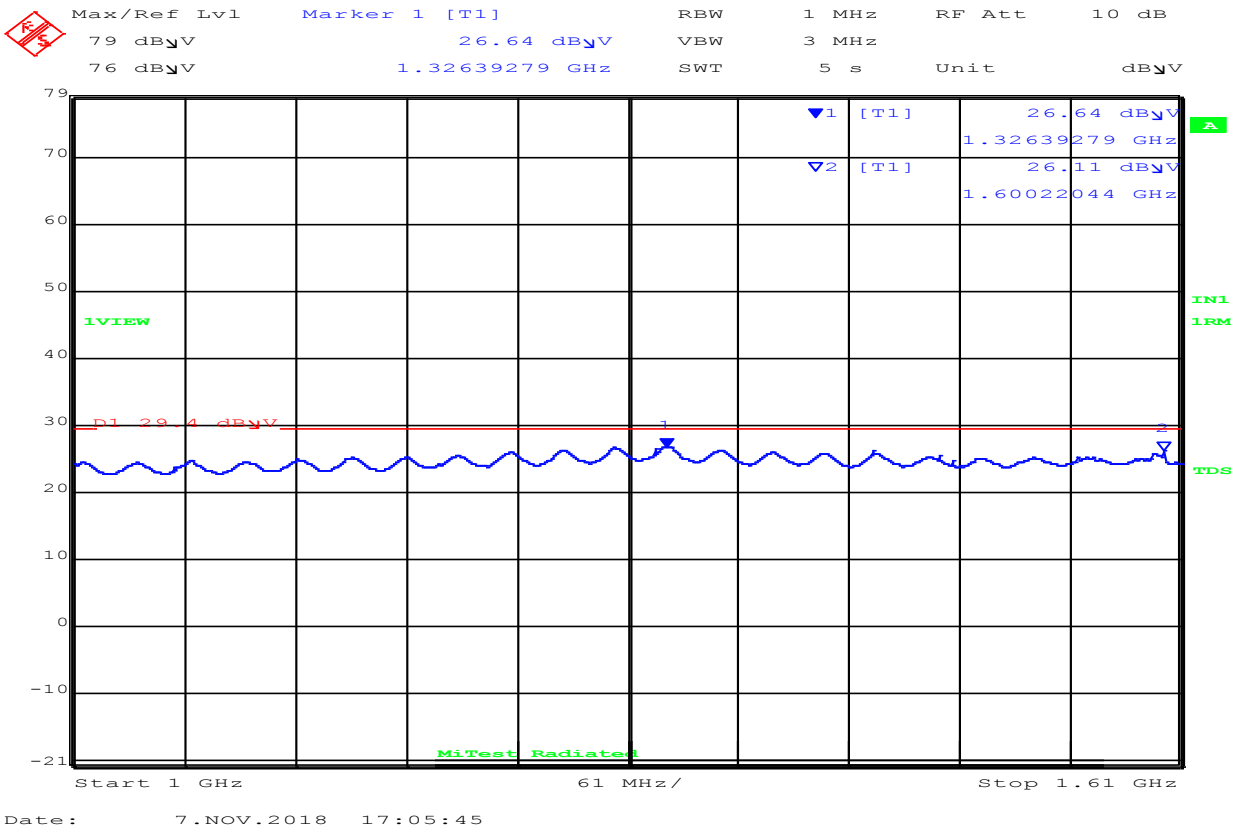
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.4	24.9	Average	Horizontal	150	0	29.4	-4.50	Pass
2	1600.2	26.1	Average	Horizontal	150	0	29.4	-3.30	Pass

Test Notes:
Laptop Removed

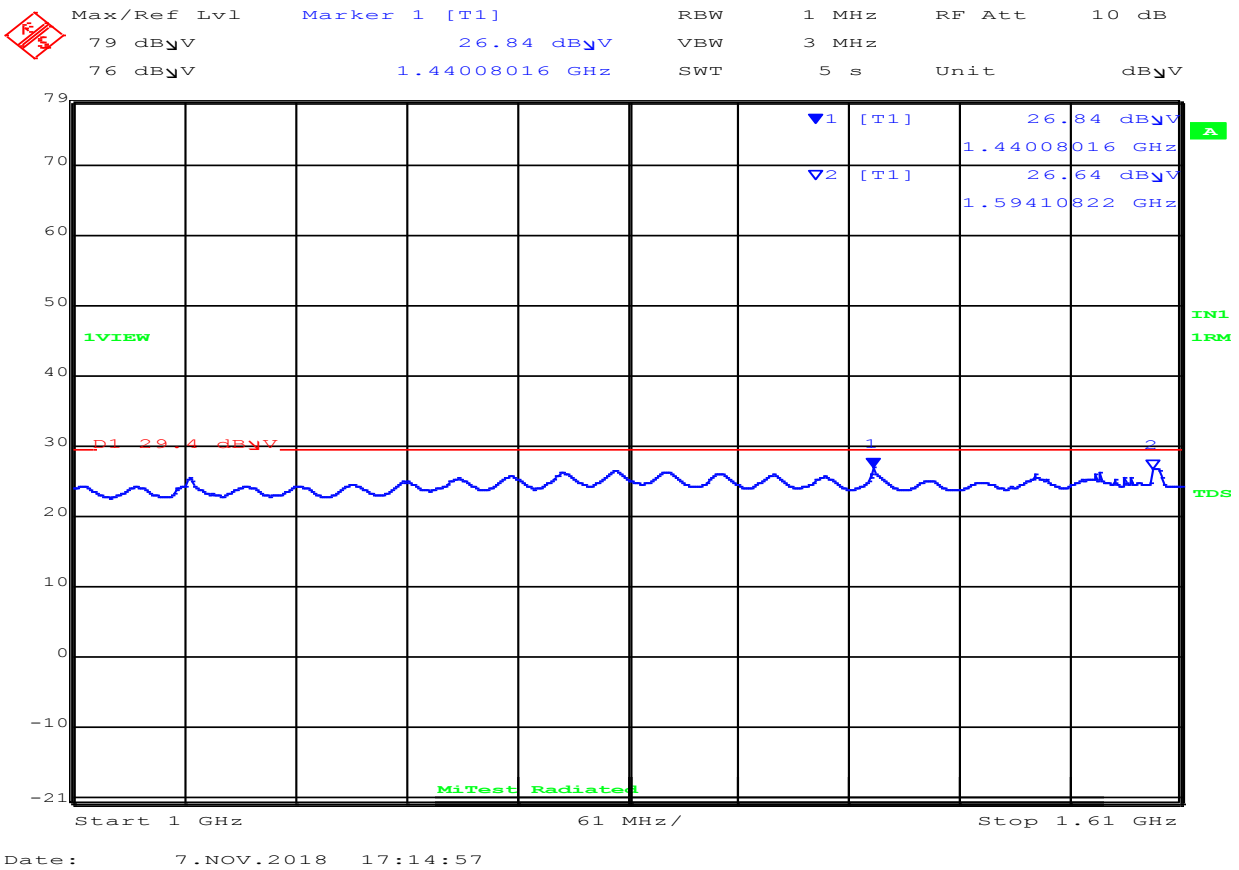
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1440.1	25.7	Average	Vertical	150	0	29.4	-3.70	Pass
2	1594.1	25.4	Average	Vertical	150	0	29.4	-4.00	Pass

Test Notes:
Laptop Removed

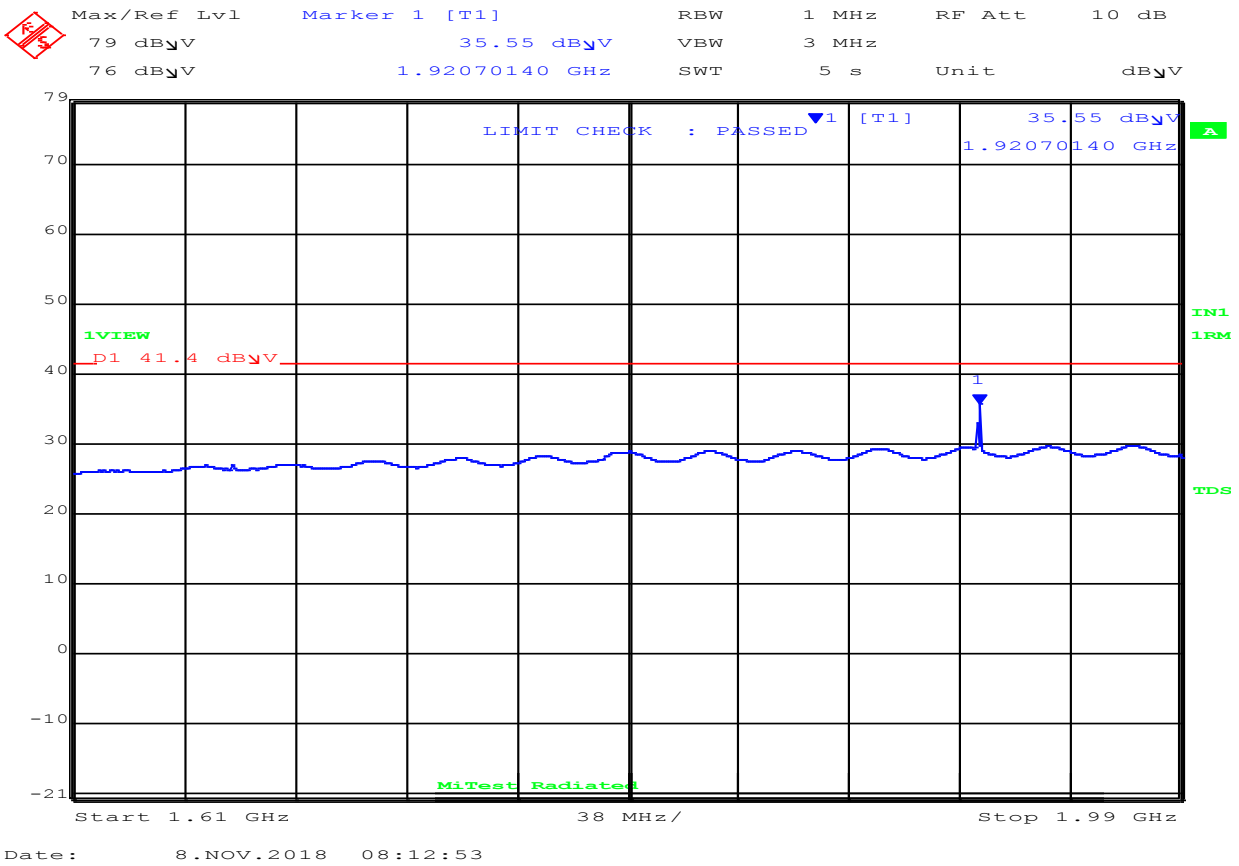
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:12:53

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1920.7	35.7	Average	Horizontal	150	0	41.4	-5.70	Pass

Test Notes:
Laptop Removed

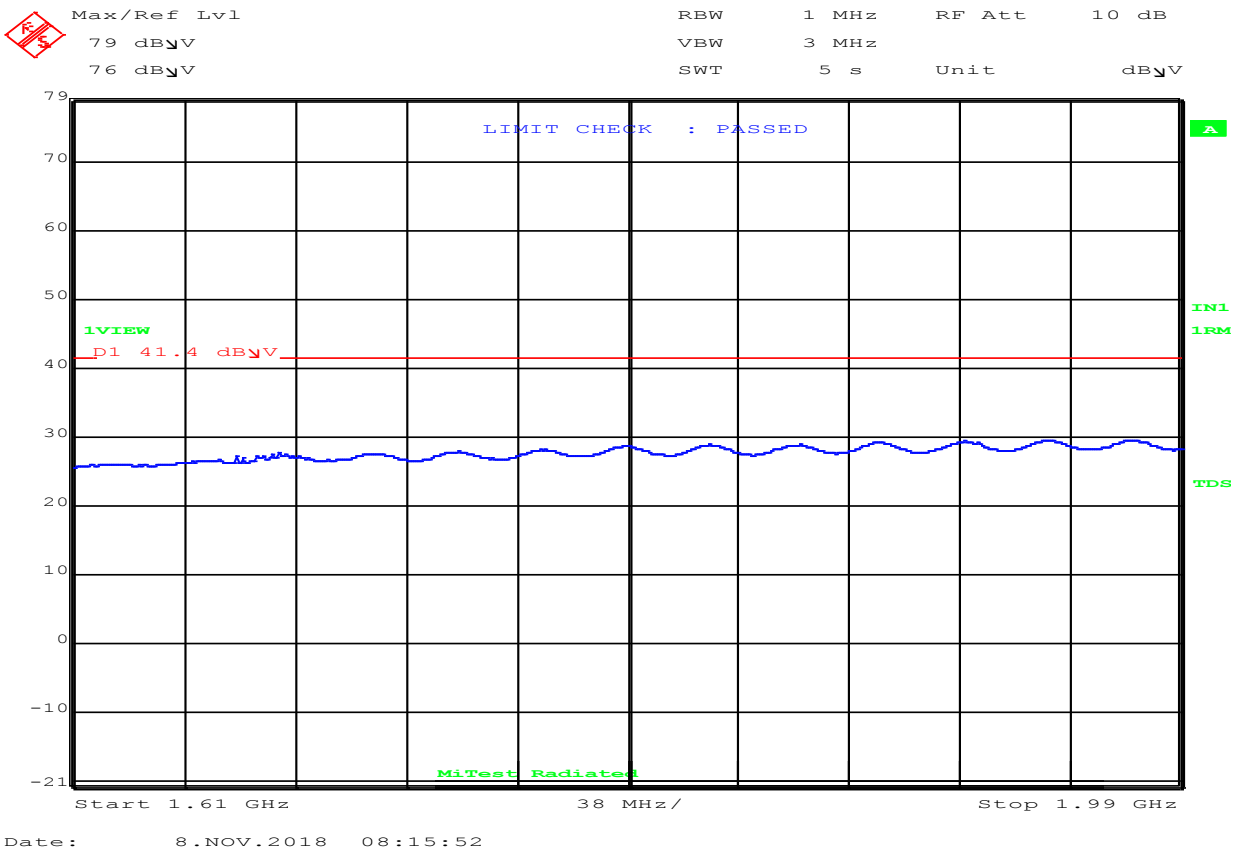
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:15:52

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

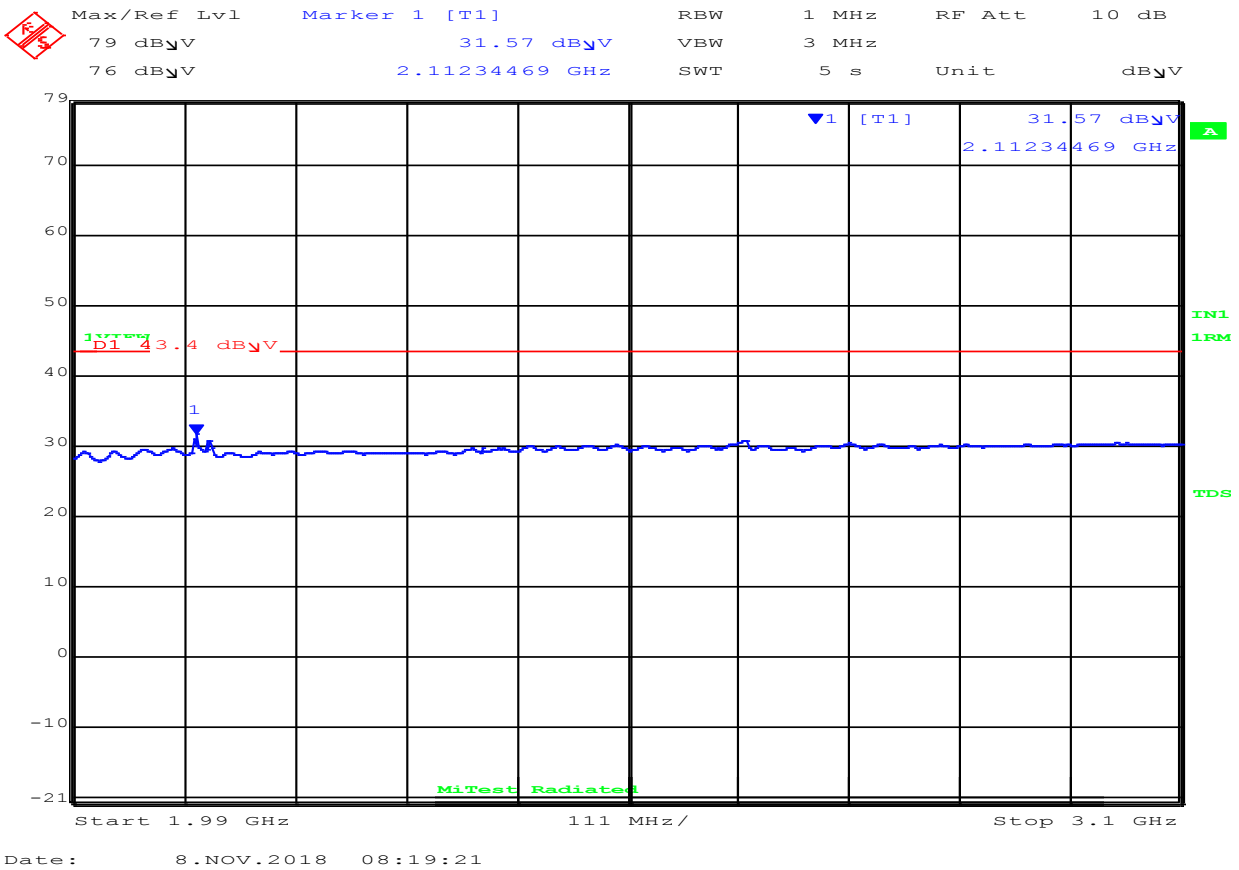
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-1.31GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

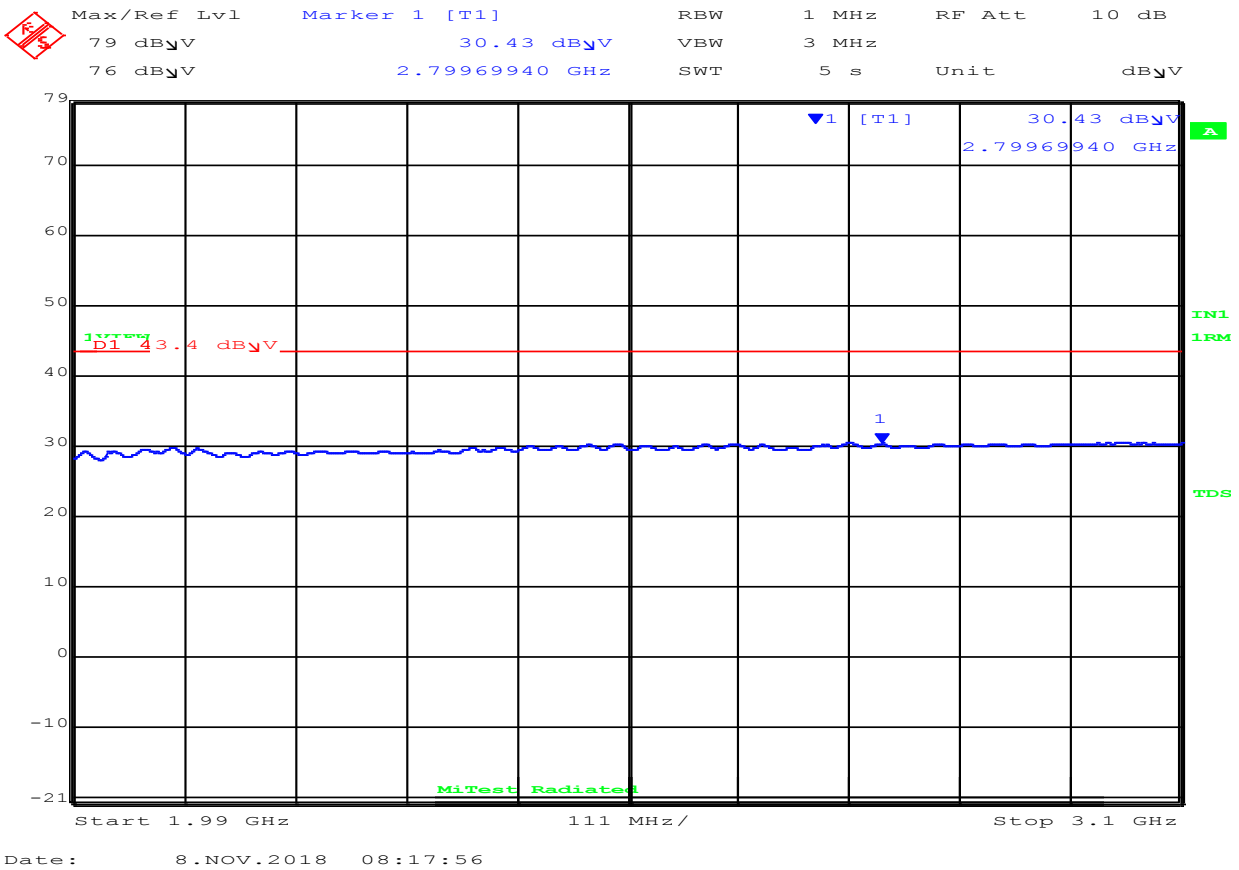
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

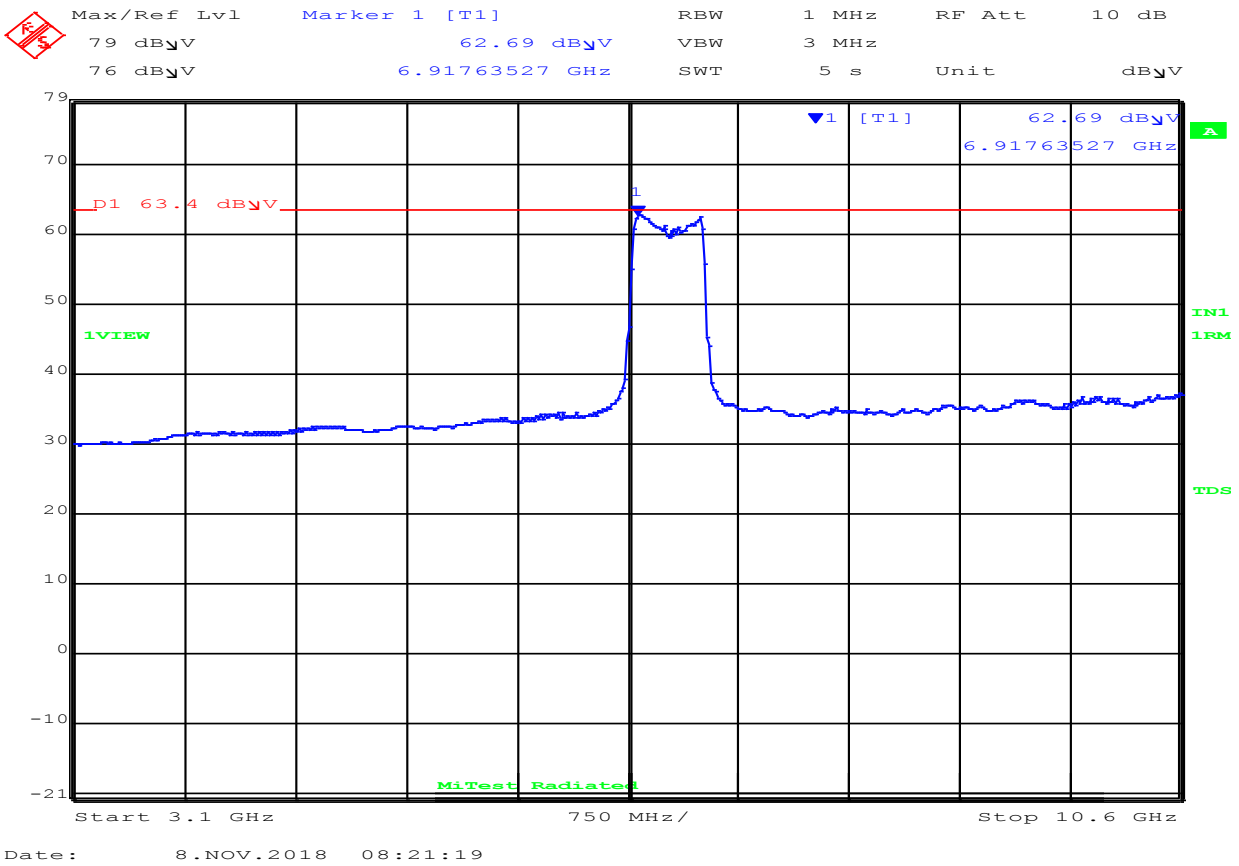
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:21:19

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	6917.6	61.8	Average	Horizontal	150	0	63.4	-1.60	Pass

Test Notes:

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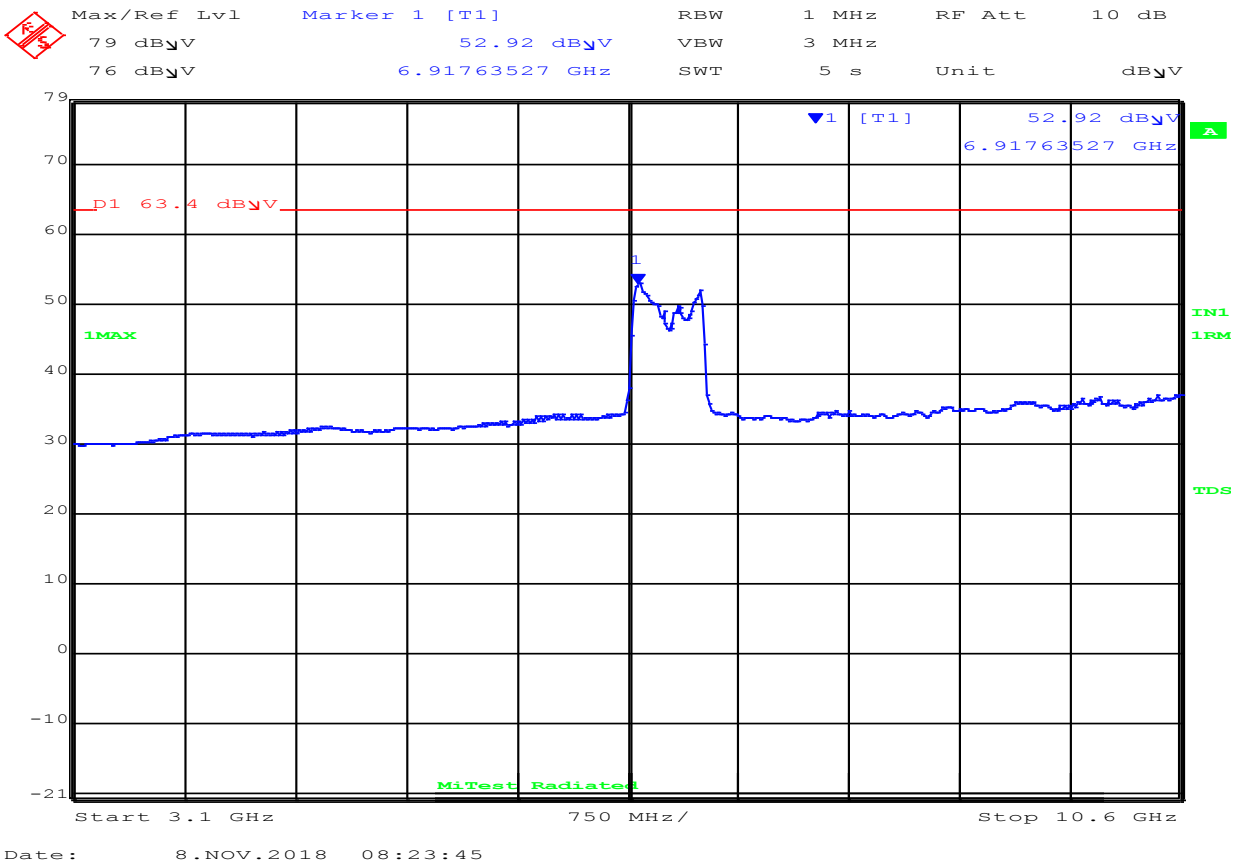
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:23:45

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:

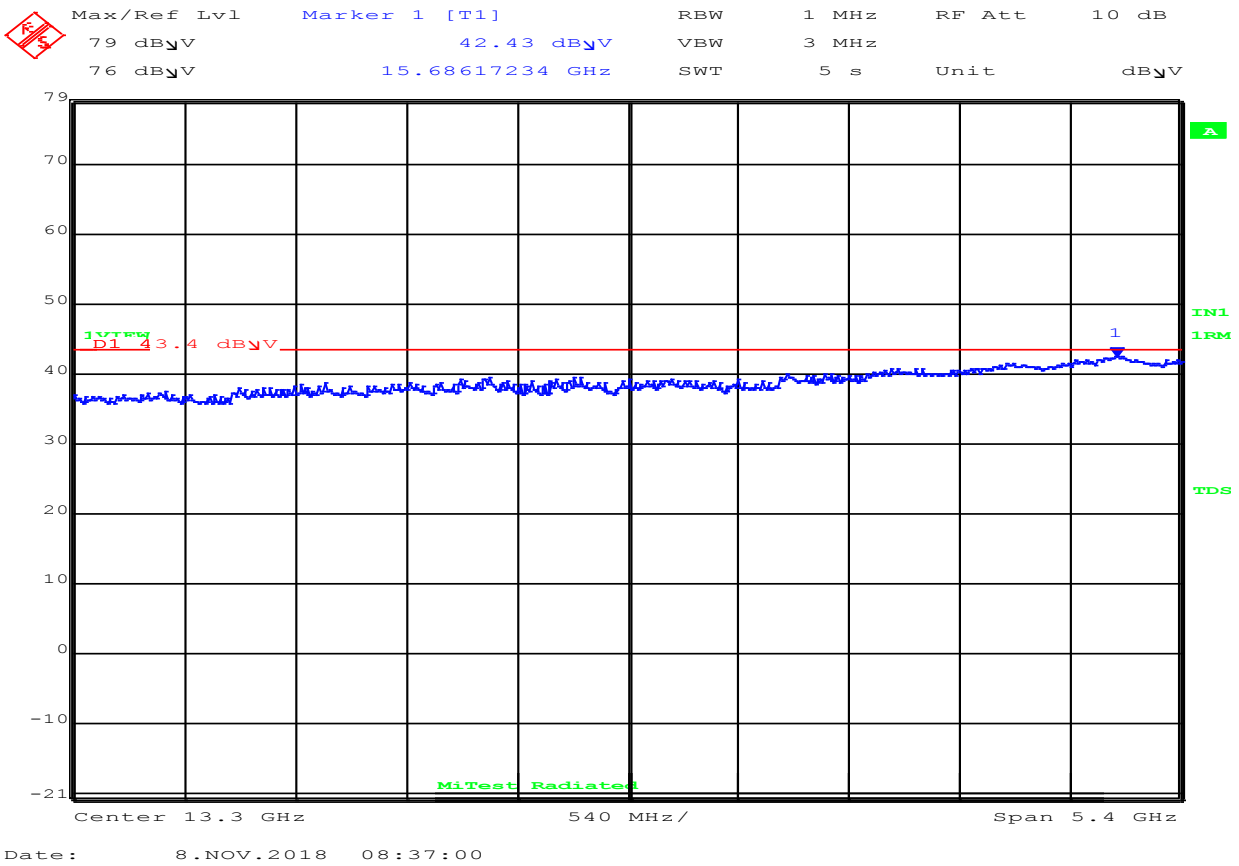
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	41.0	Average	Horizontal	150	0	43.4	-2.40	Pass

Test Notes:

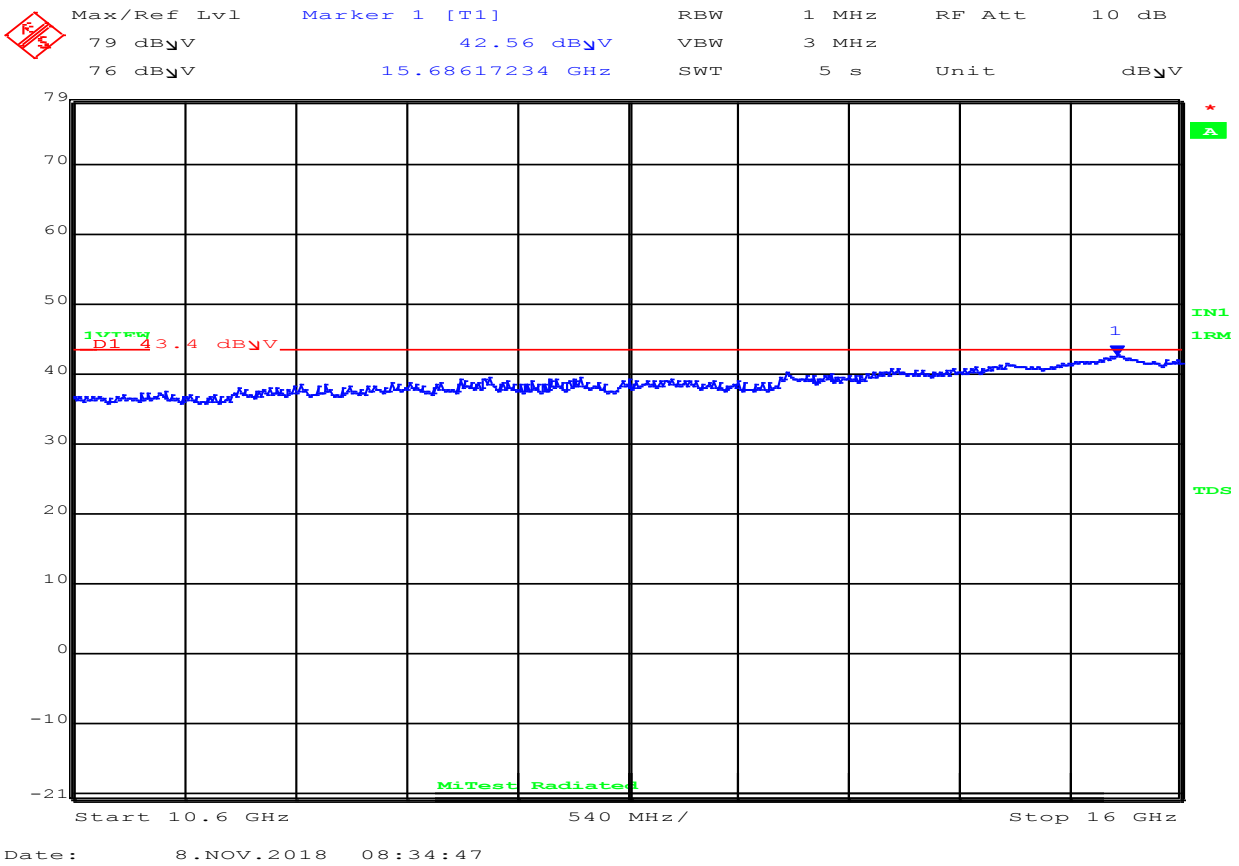
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	41.1	Average	Vertical	150	0	43.4	-2.30	Pass

Test Notes:

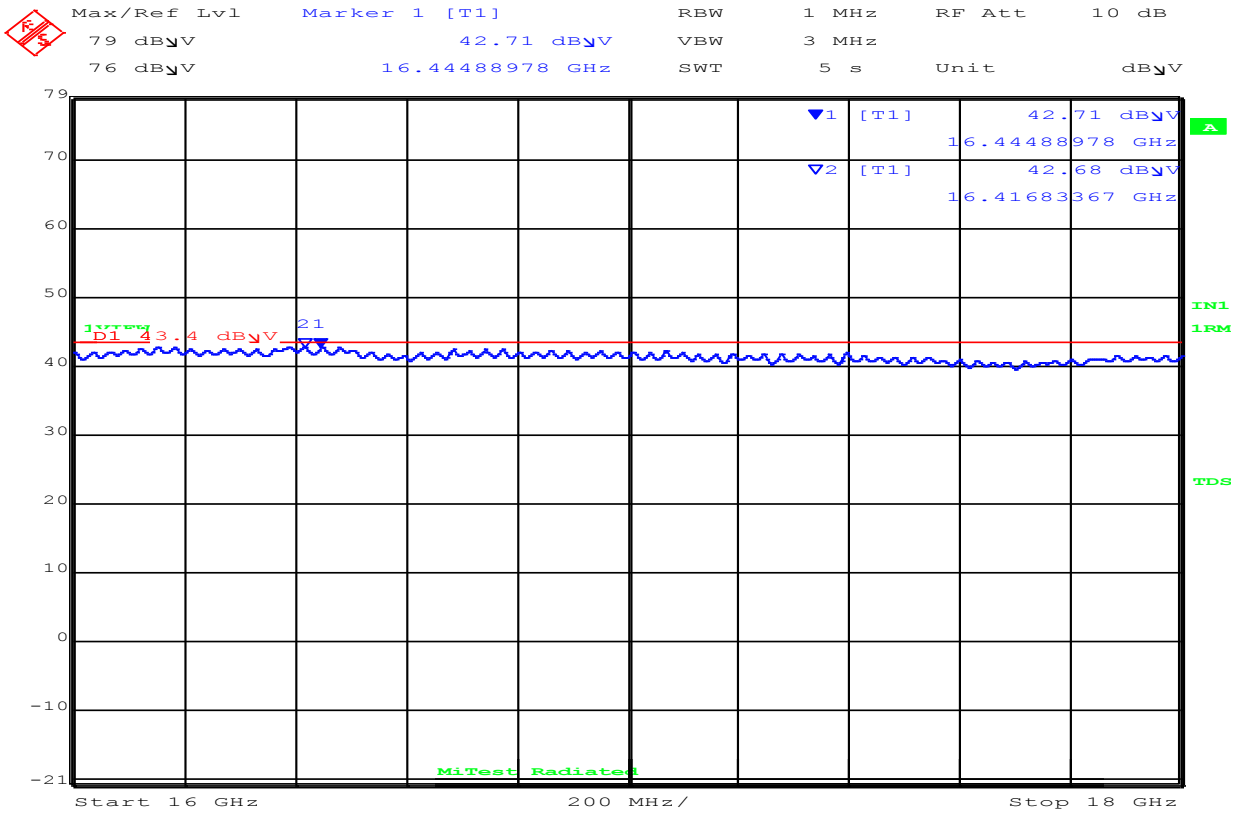
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:38:53

16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16448.9	41.5	Average	Horizontal	150	0	43.4	-1.90	Pass
2	16416.8	41.6	Average	Horizontal	150	0	43.4	-1.80	Pass

Test Notes:

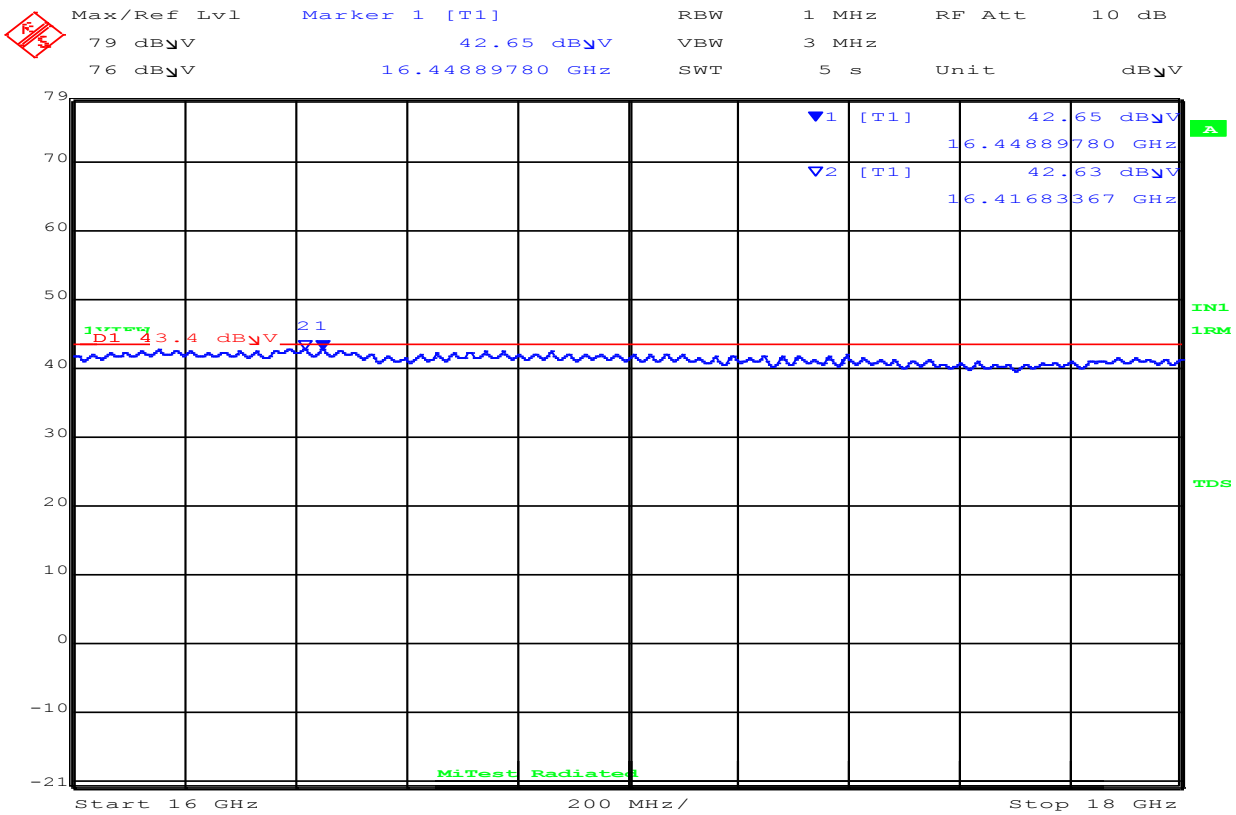
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-0.2	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7128.00	**Data Rate:**	
Power Setting:	2.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 7128 MHz, Antenna: integral, Power Setting: 2.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:41:03

16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16448.9	41.6	Average	Vertical	150	0	43.4	-1.80	Pass
2	16416.8	41.7	Average	Vertical	150	0	43.4	-1.70	Pass

Test Notes:

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7656 MHz (Covers Band Group 3 TFC 7 and Band Group 6 TFC 5

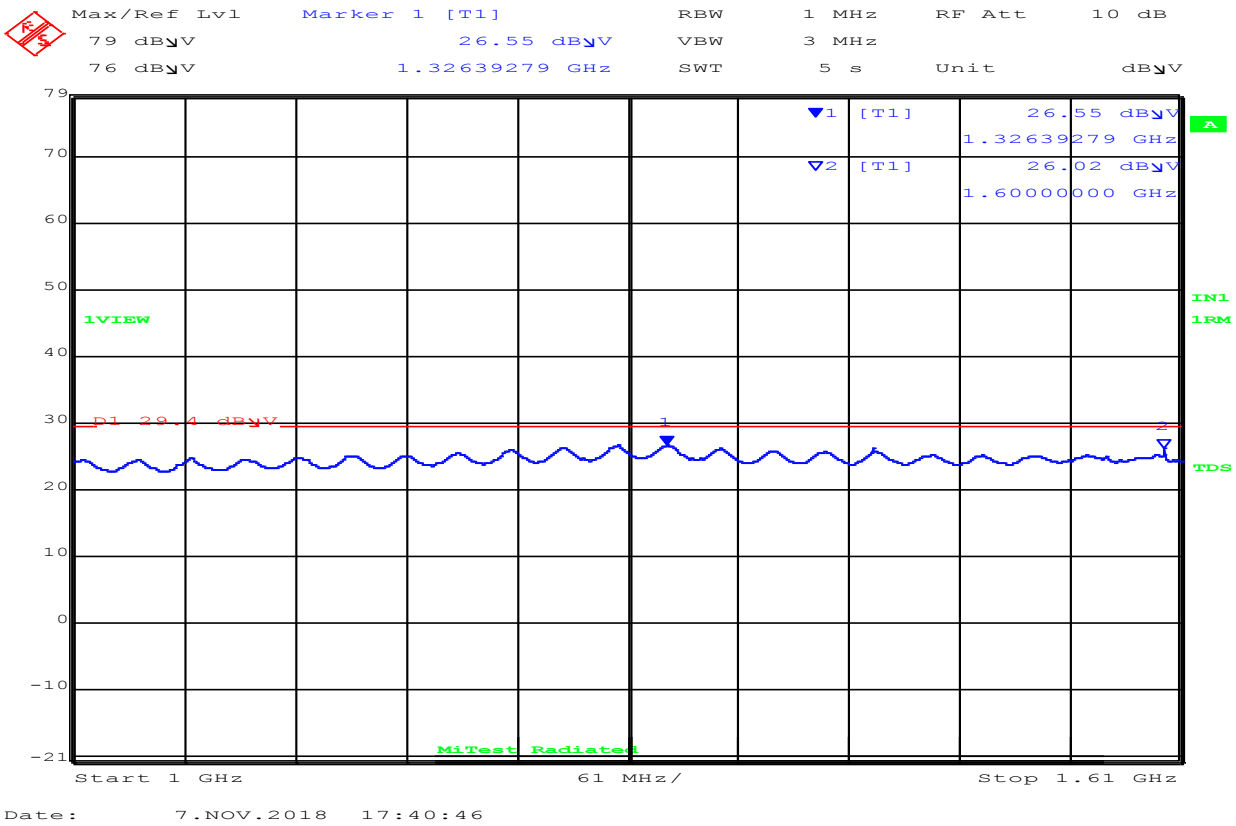
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.4	24.8	Average	Horizontal	150	0	29.4	-4.60	Pass
2	1600.0	26.9	Average	Horizontal	150	0	29.4	-2.50	Pass

Test Notes:
Laptop Removed

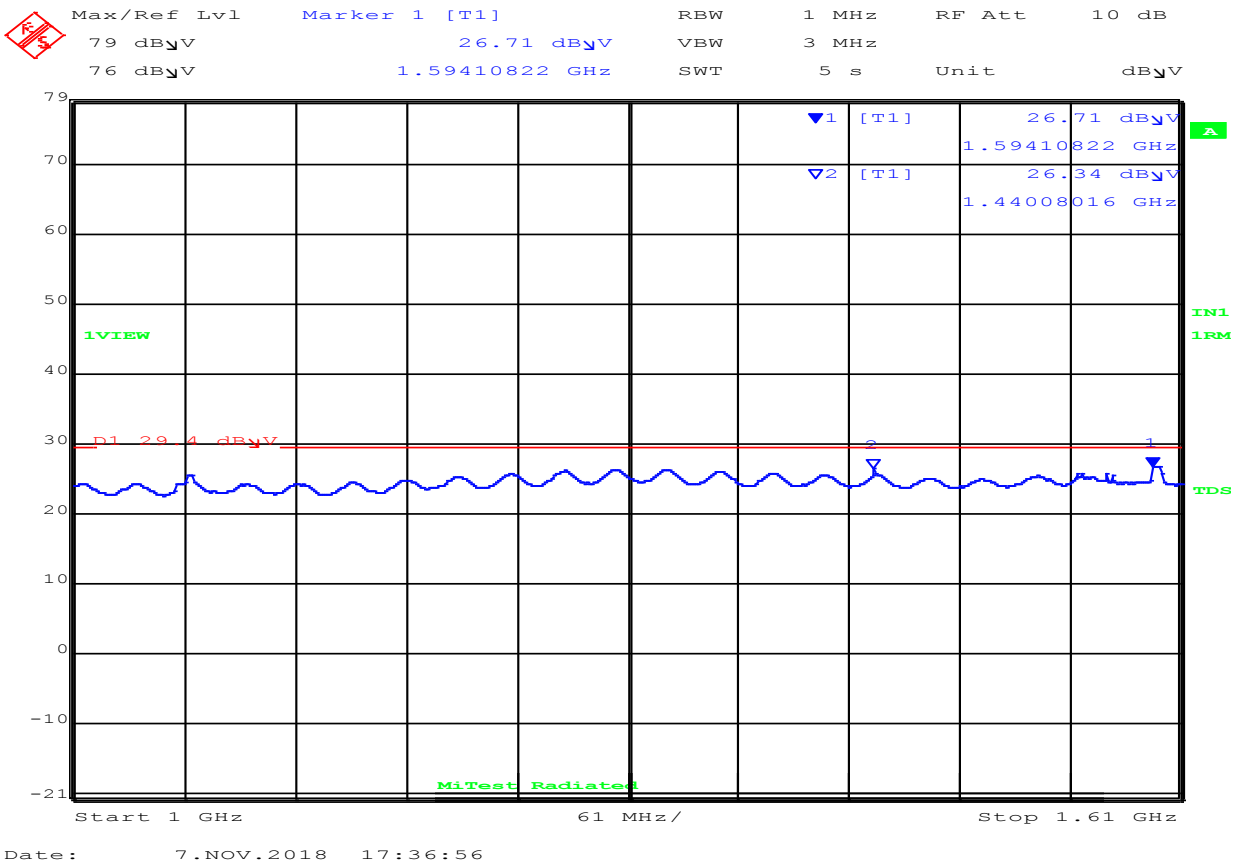
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1594.1	25.0	Average	Vertical	150	0	29.4	-4.40	Pass
2	1440.1	25.8	Average	Vertical	150	0	29.4	-3.60	Pass

Test Notes:
Laptop Removed

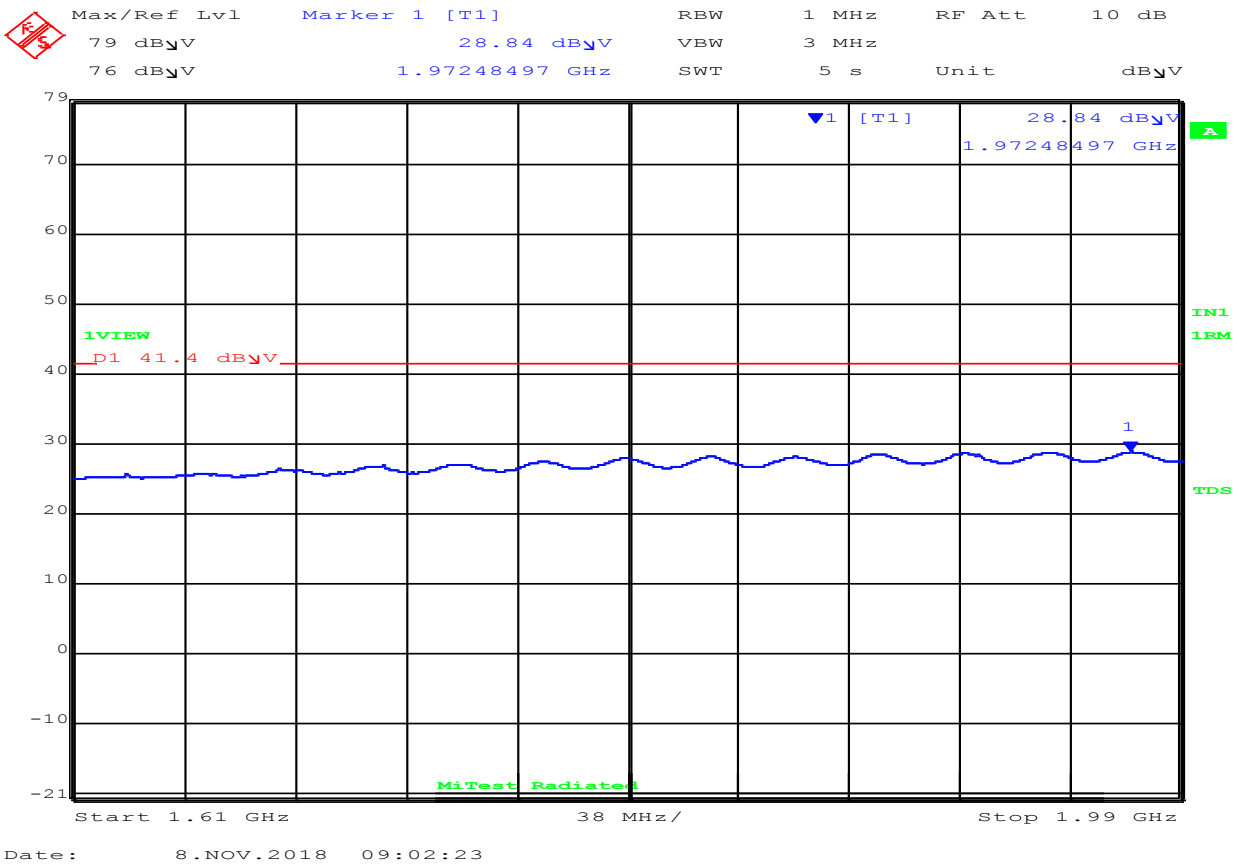
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:02:23

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

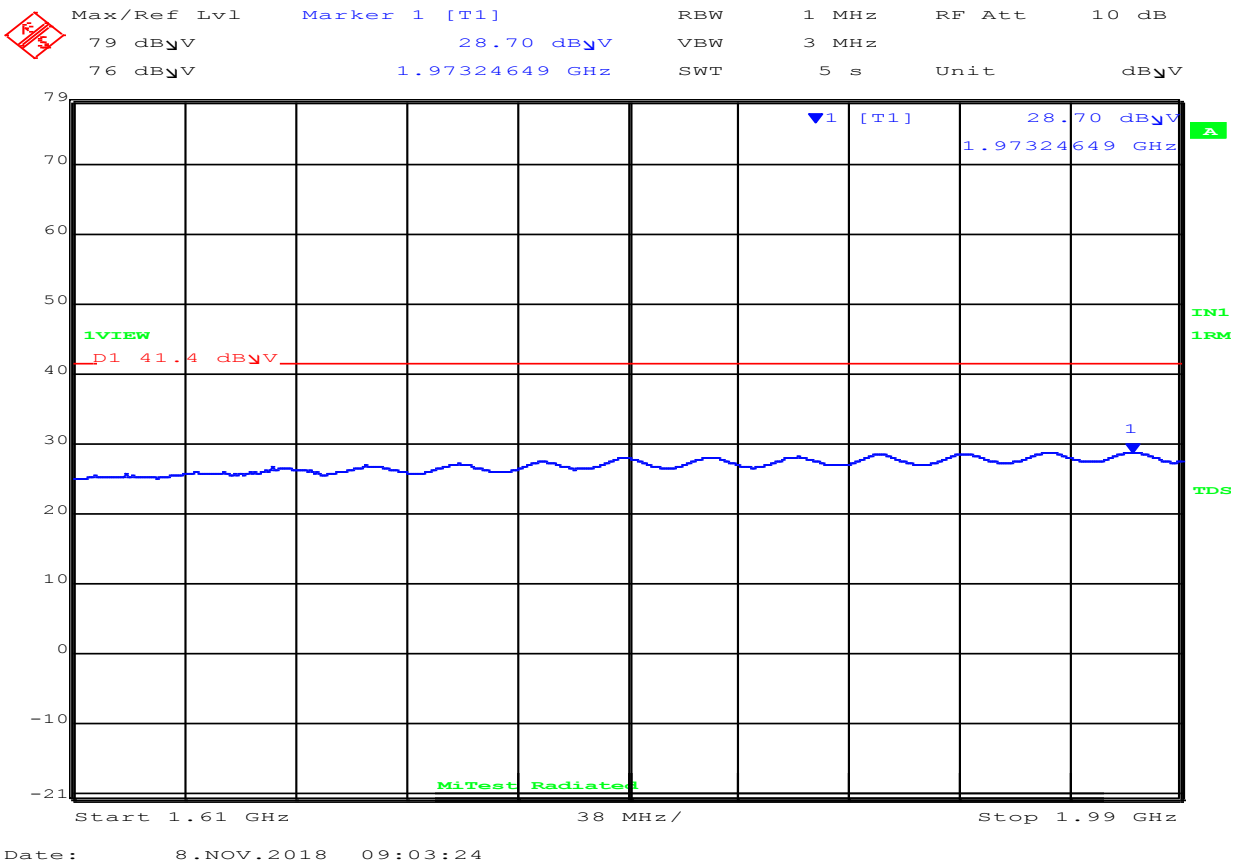
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:03:24

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

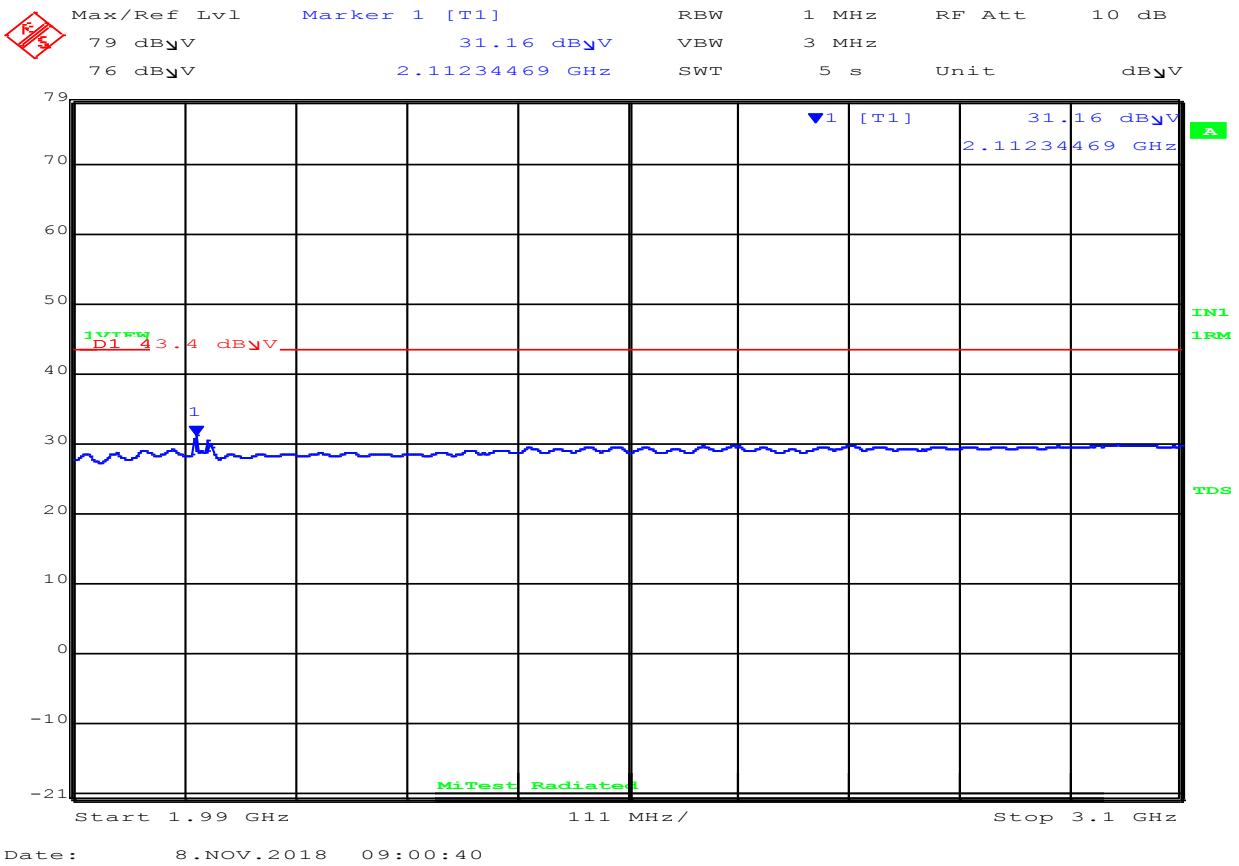
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:00:40

1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

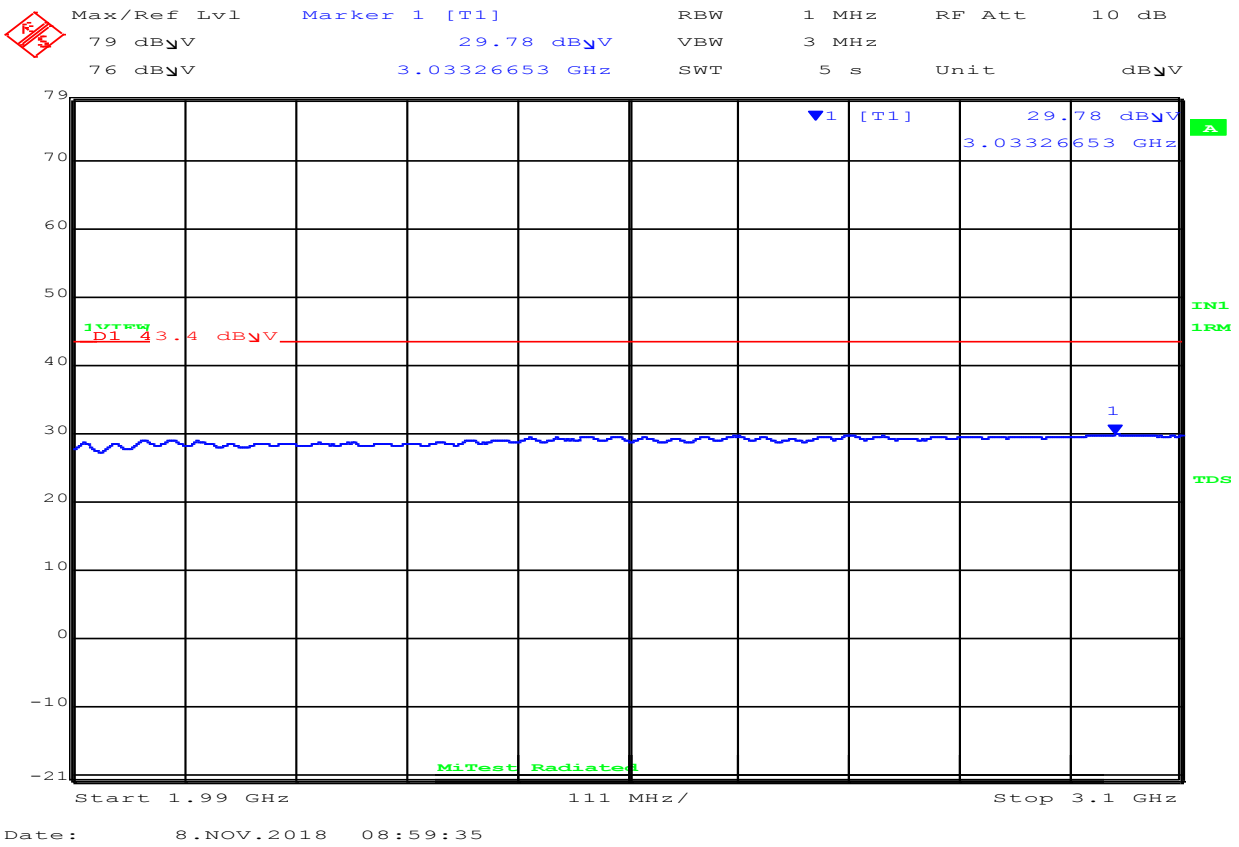
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:
Laptop Removed

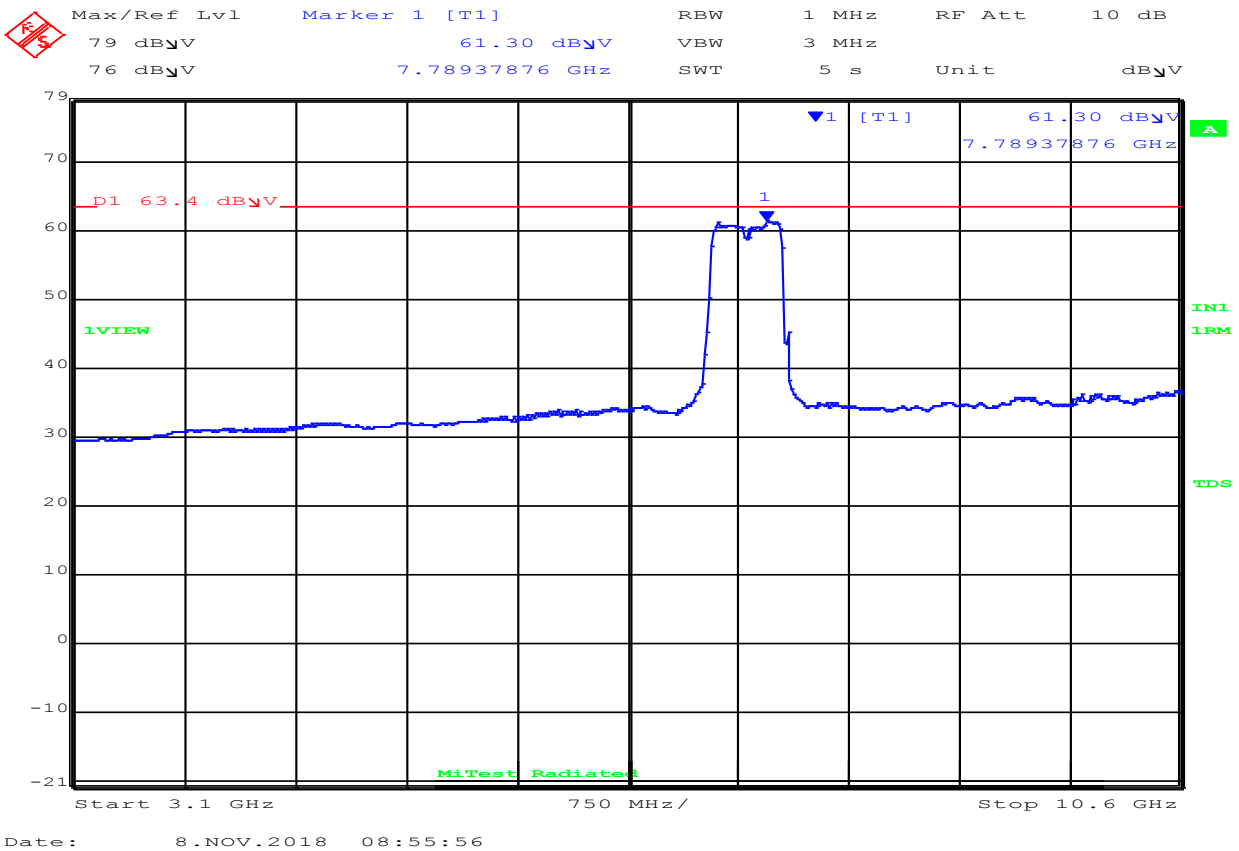
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	7789.4	58.6	Average	Horizontal	150	0	63.4	-4.80	Pass

Test Notes:

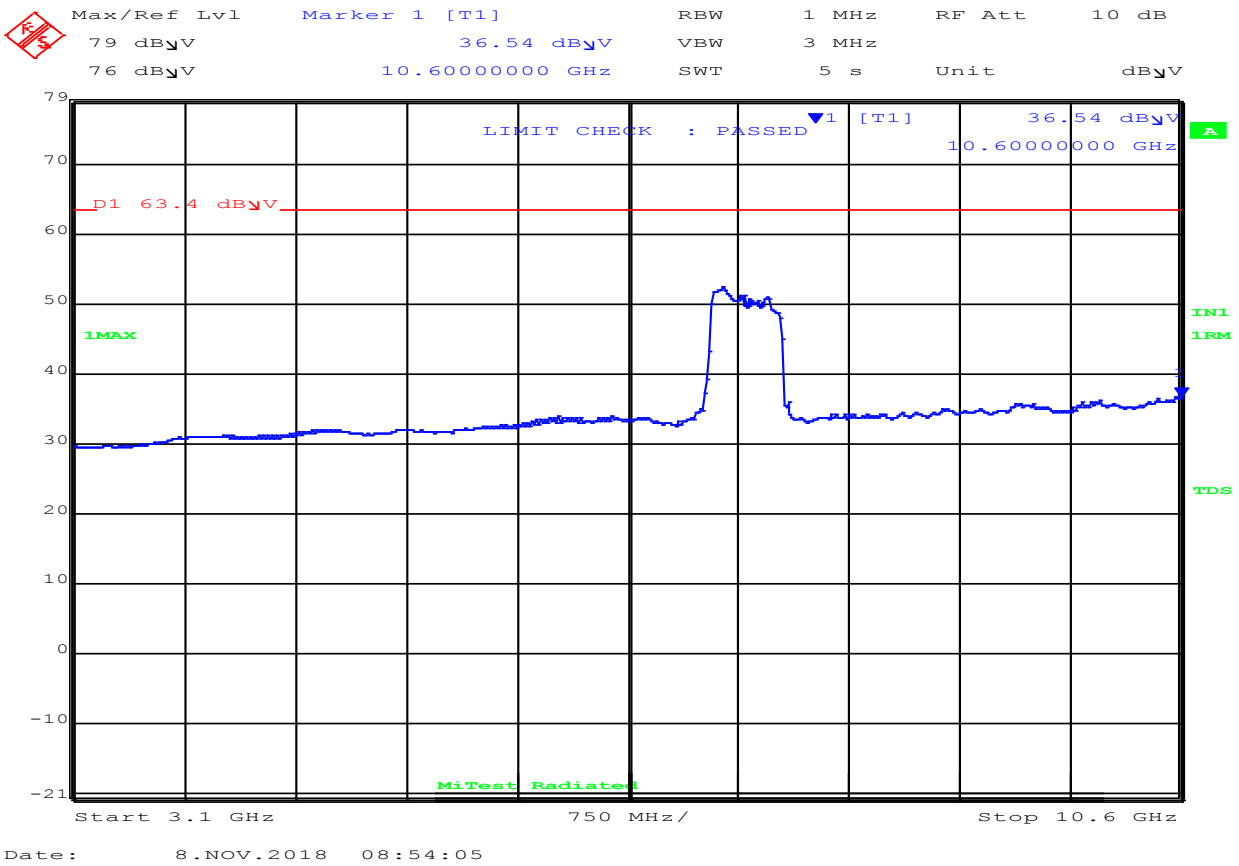
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:54:05

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of limit									

Test Notes:

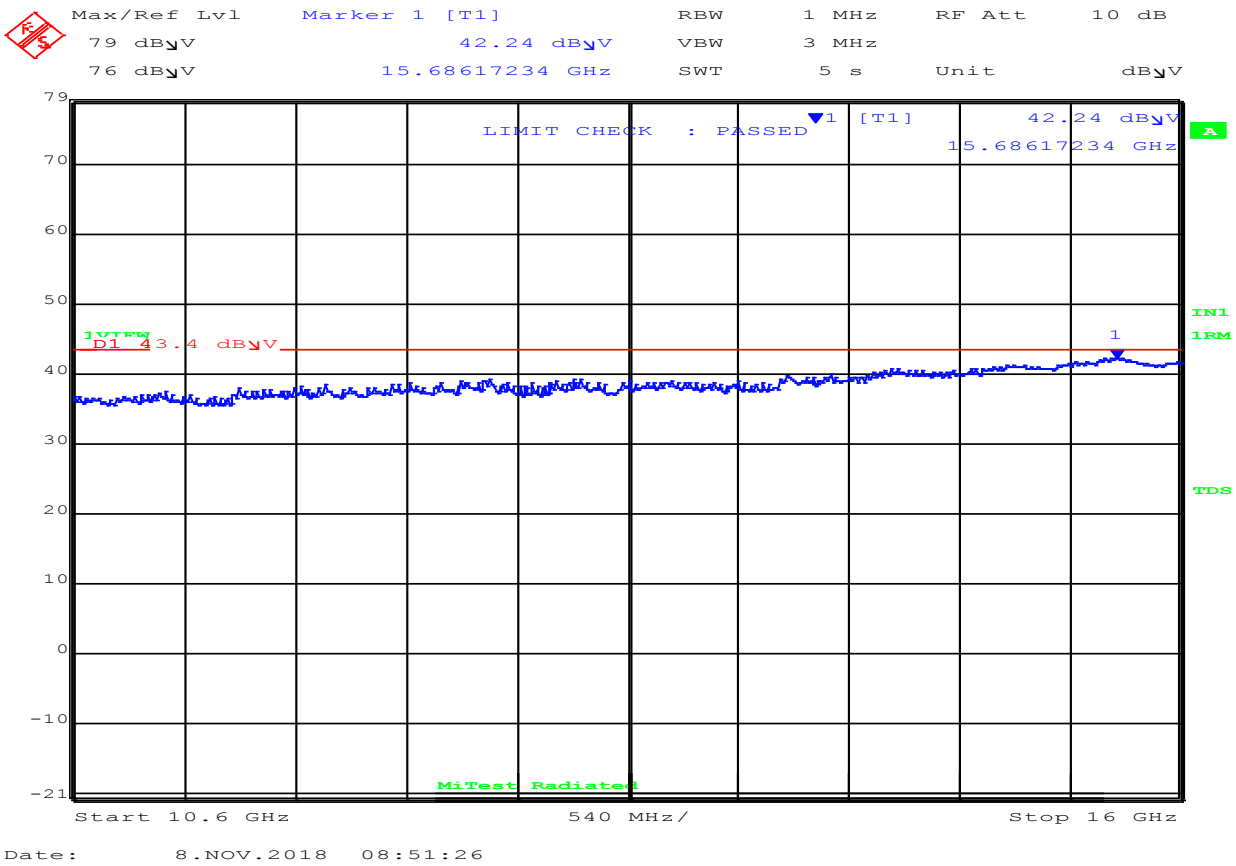
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:51:26

10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.7	Average	Horizontal	150	0	43.4	-2.70	Pass

Test Notes:

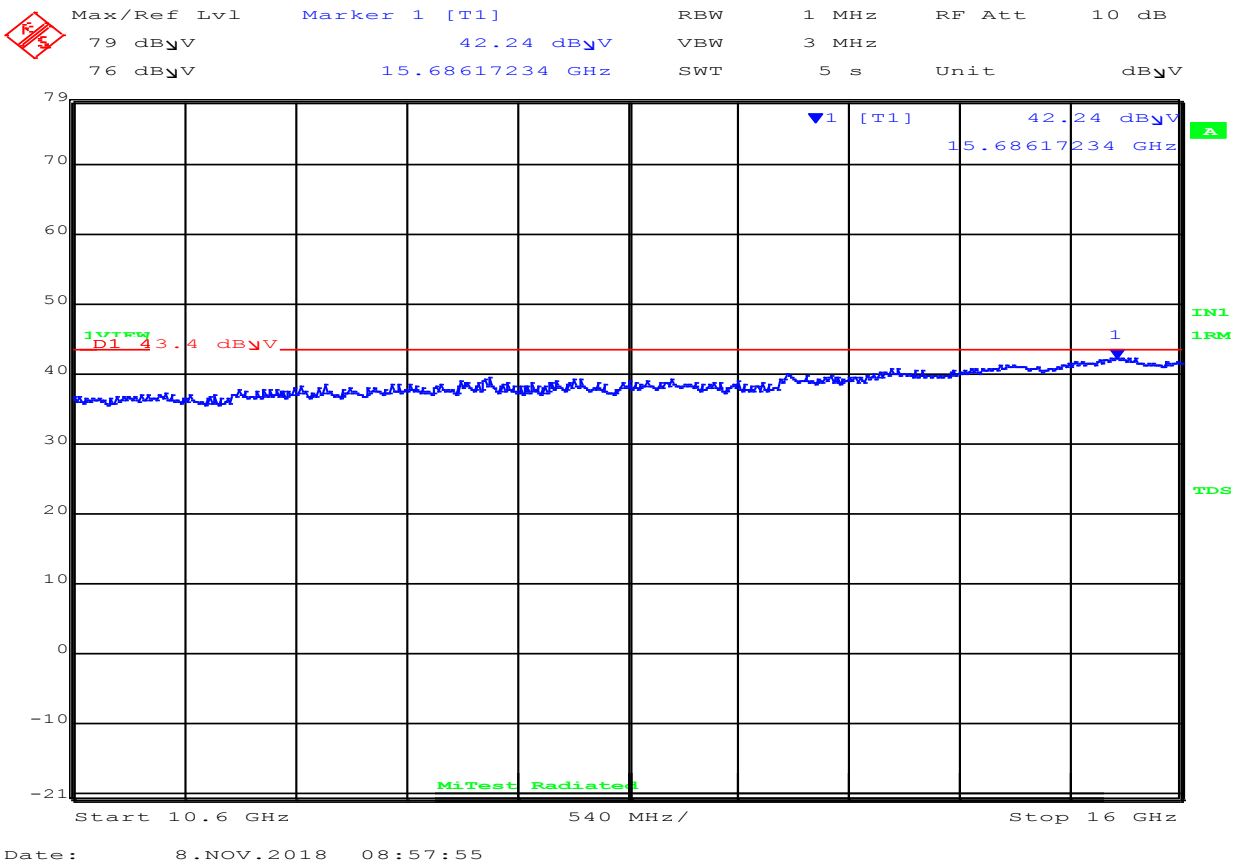
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:57:55

10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.8	Average	Vertical	150	0	43.4	-2.60	Pass

Test Notes:

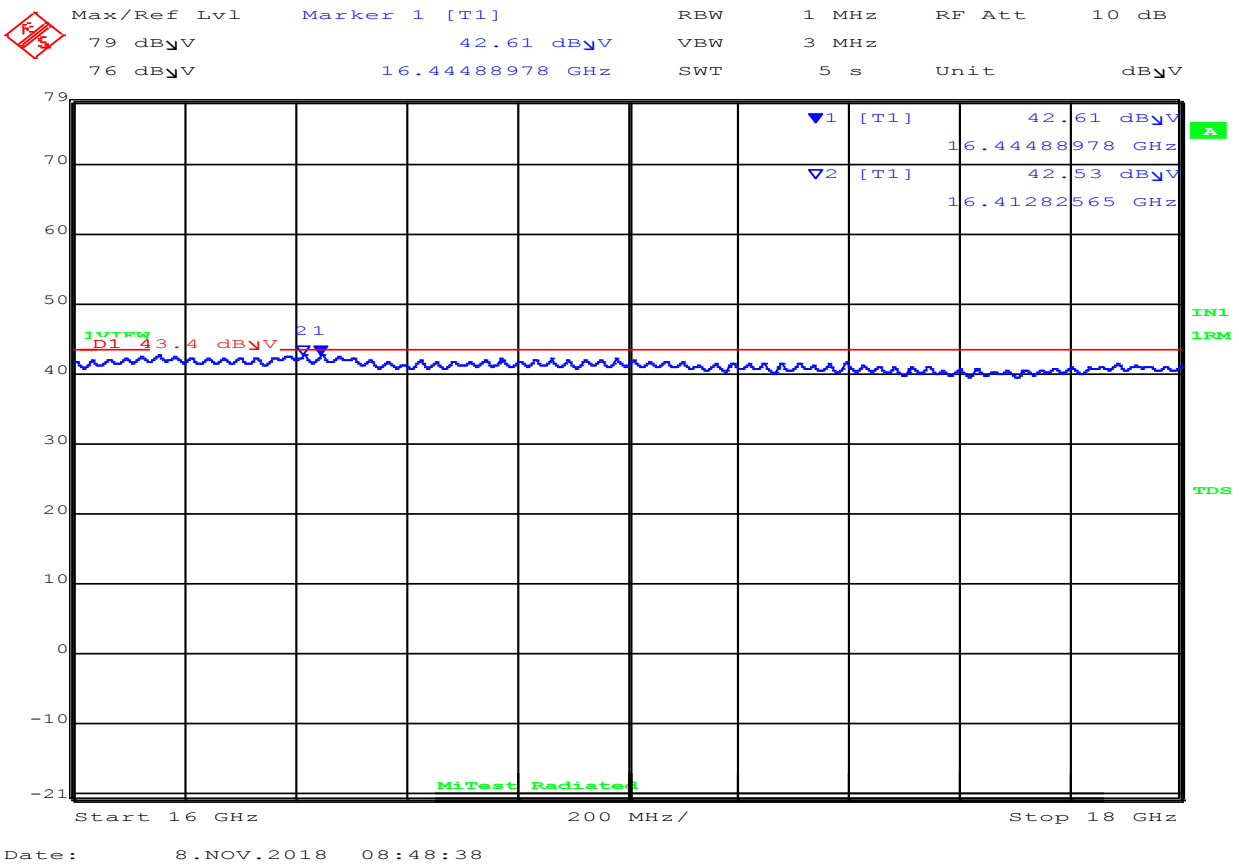
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.9	41.5	Average	Horizontal	150	0	43.4	-1.90	Pass
2	16412.8	41.4	Average	Horizontal	150	0	43.4	-2.00	Pass

Test Notes:

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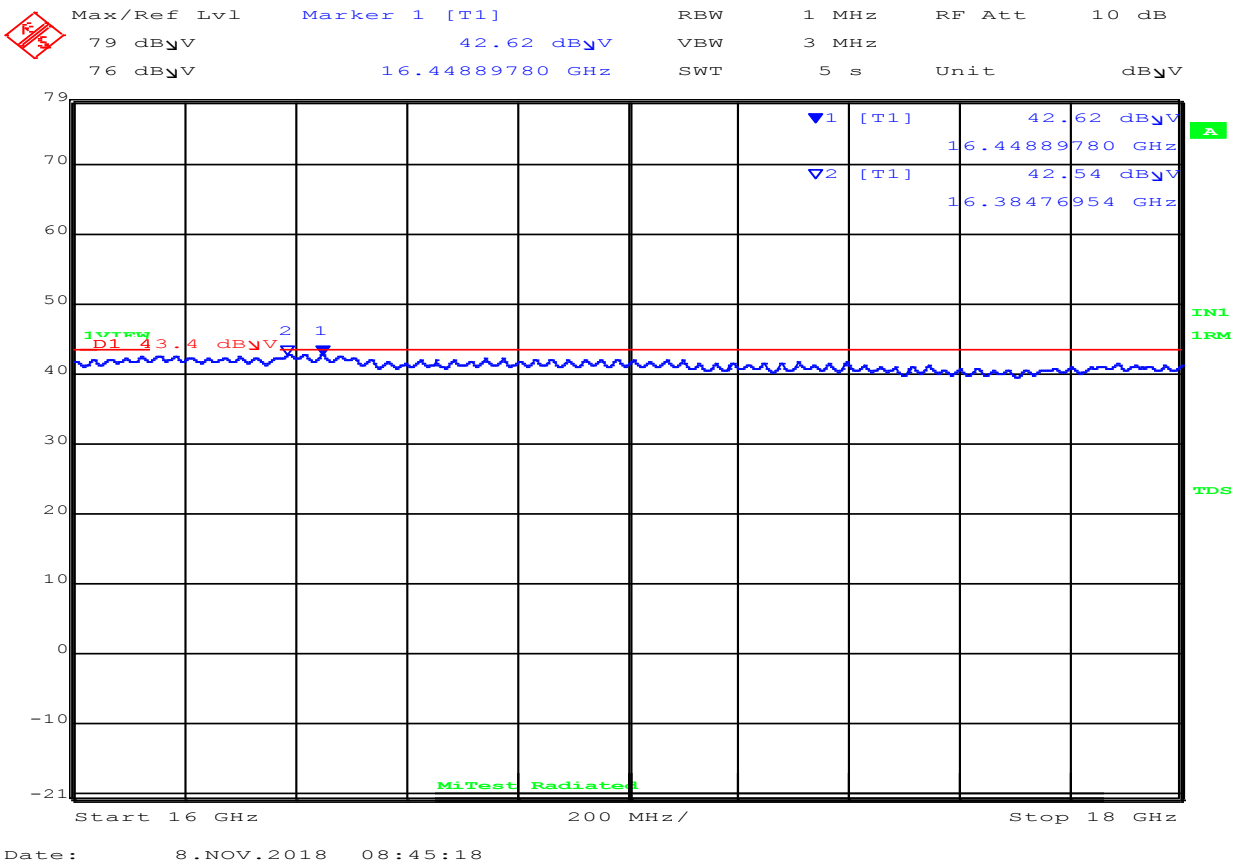
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	0.1	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	7656.00	**Data Rate:**	
Power Setting:	1.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 7656 MHz, Antenna: integral, Power Setting: 1.0, Duty Cycle (%): 99



Date: 8.NOV.2018 08:45:18

16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16448.9	42.6	Average	Vertical	150	0	43.4	-0.80	Pass
2	16384.7	41.5	Average	Vertical	150	0	43.4	-1.90	Pass

Test Notes:

8184 MHz

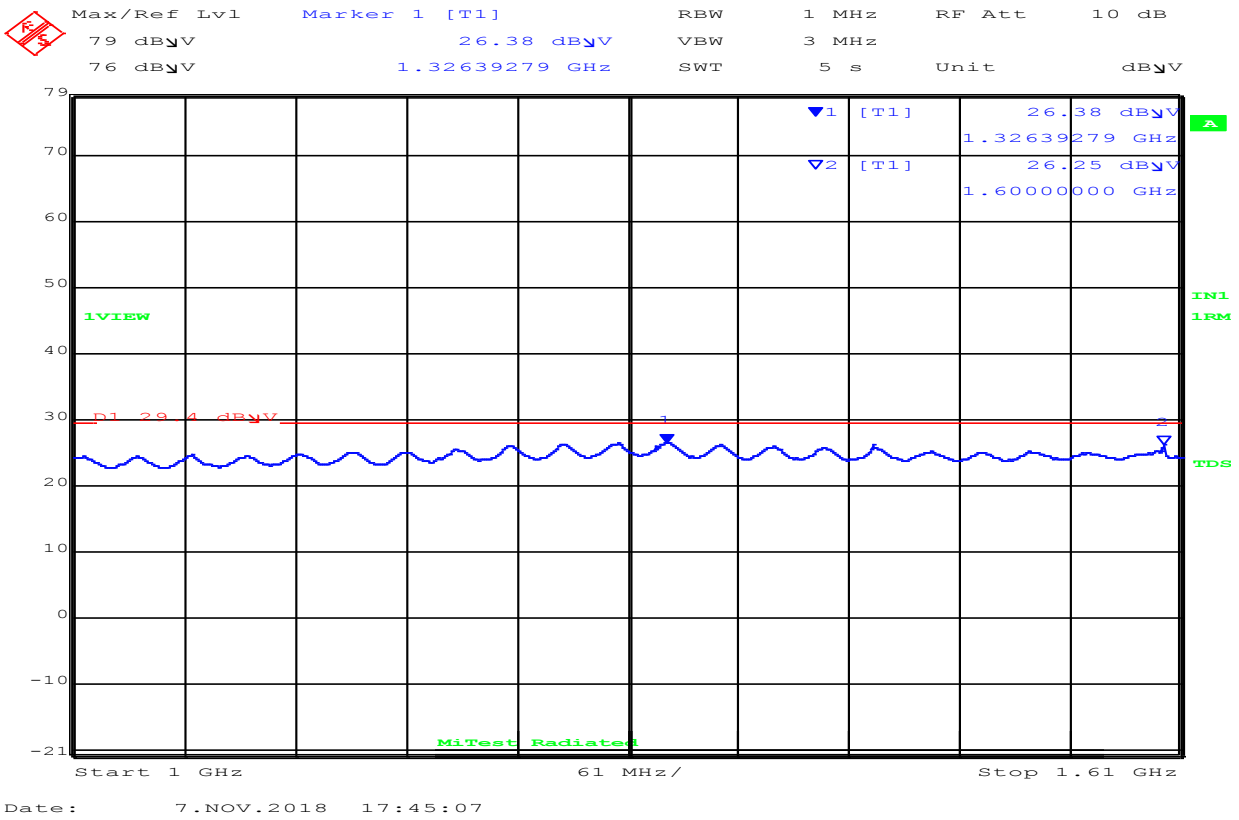
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1326.4	25.0	Average	Horizontal	150	0	29.4	-4.40	Pass
2	1600.0	27.1	Average	Horizontal	150	0	29.4	-2.30	Pass

Test Notes:
Laptop Removed

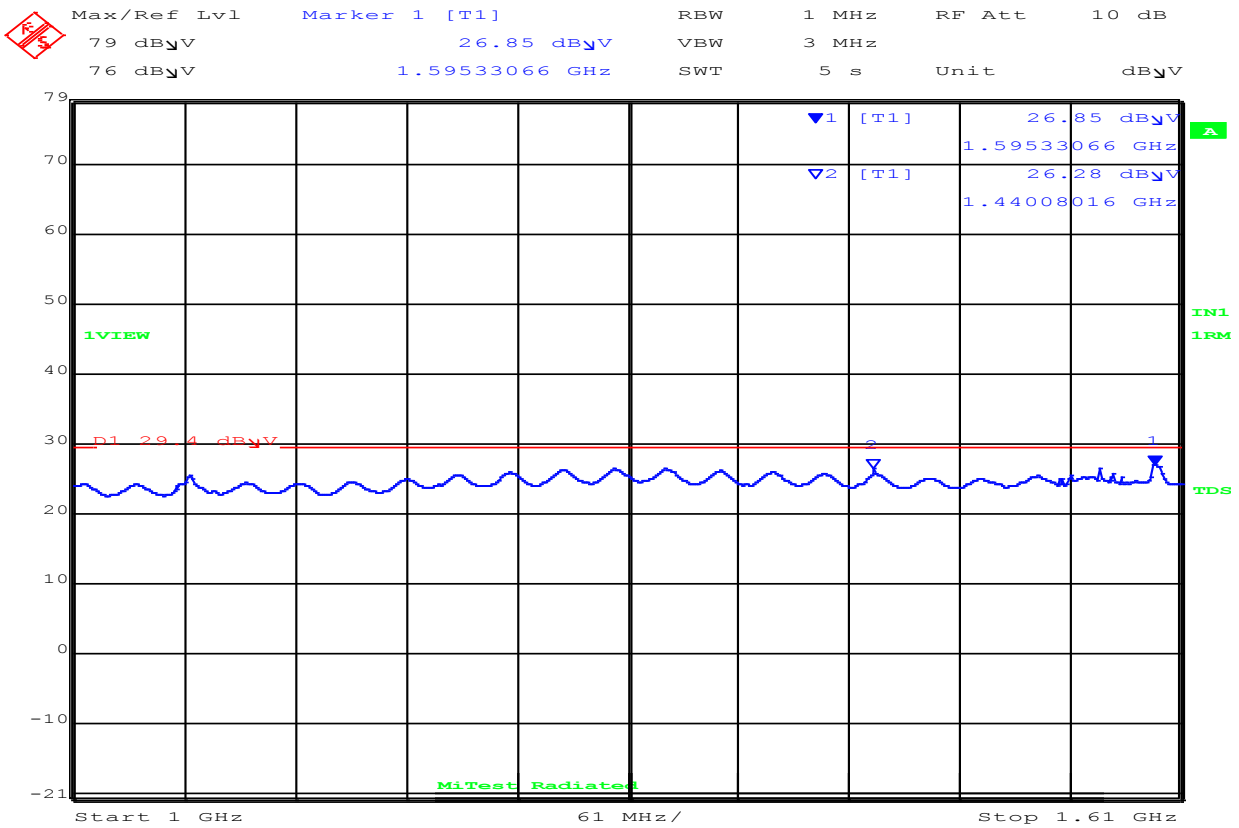
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1595.3	24.9	Average	Vertical	150	0	29.4	-4.50	Pass
2	1440.1	25.8	Average	Vertical	150	0	29.4	-3.60	Pass

Test Notes:
Laptop Removed

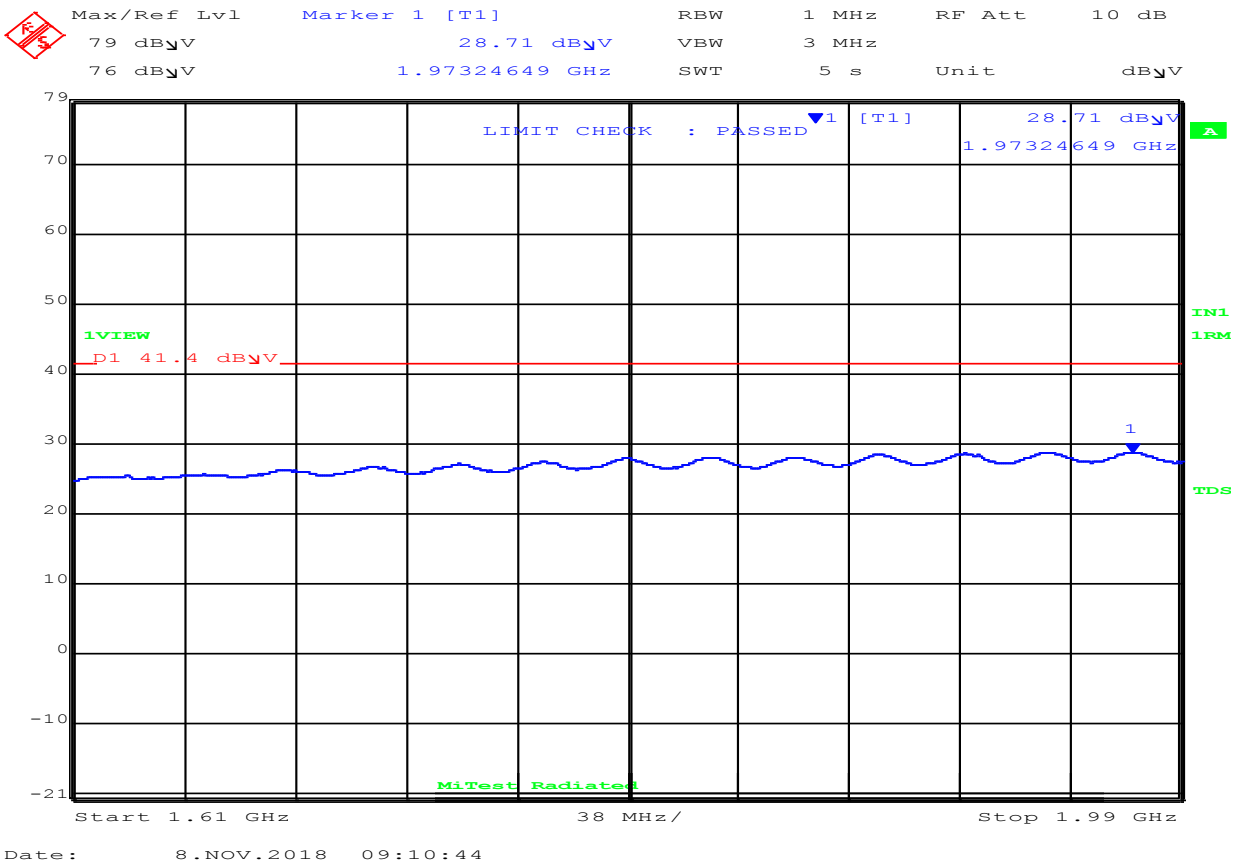
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:10:44

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

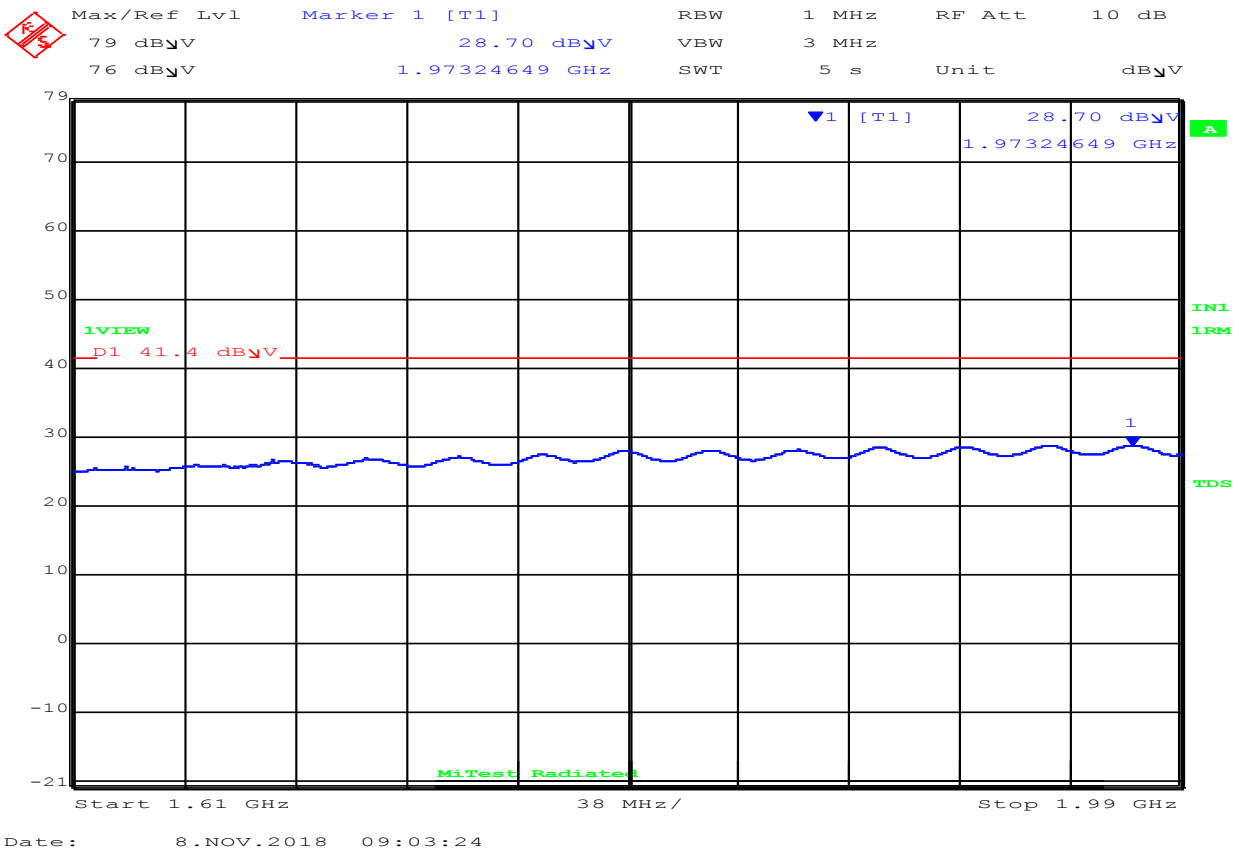
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

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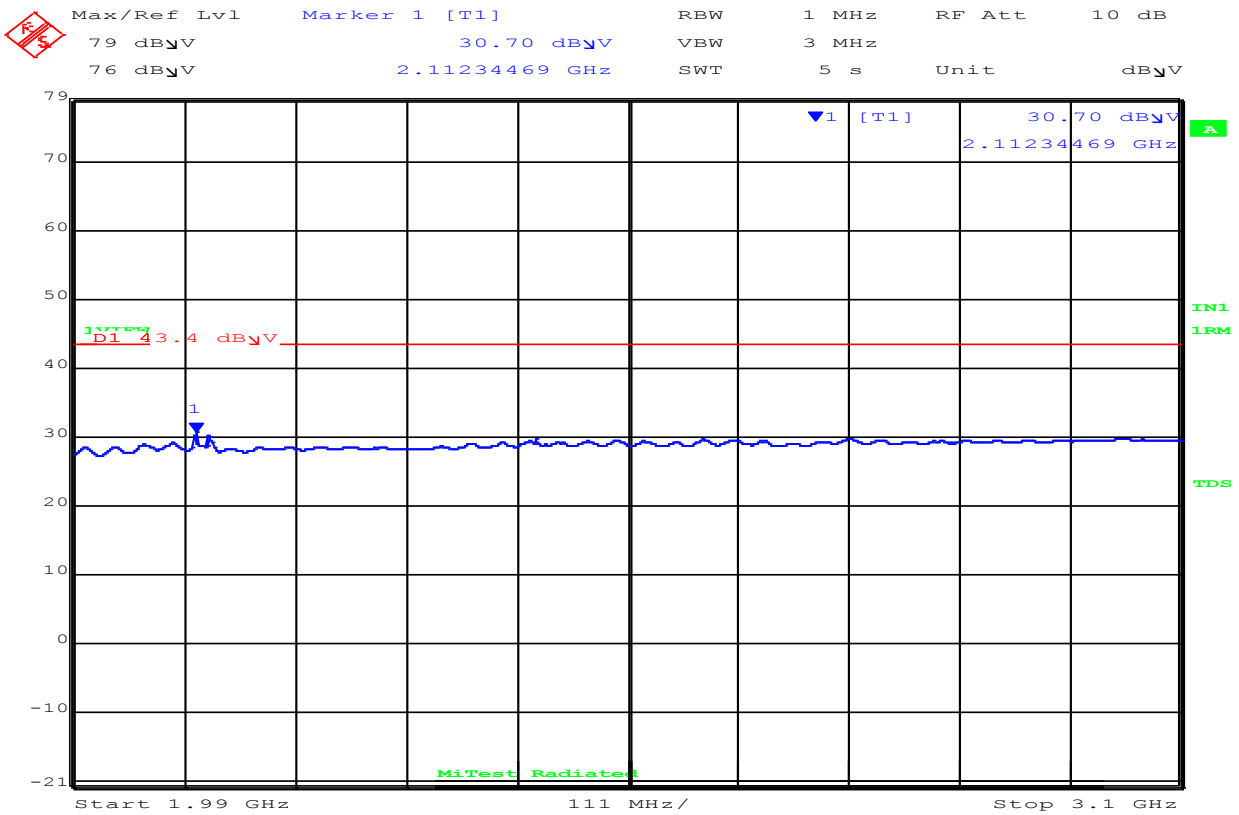
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:29:29

1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

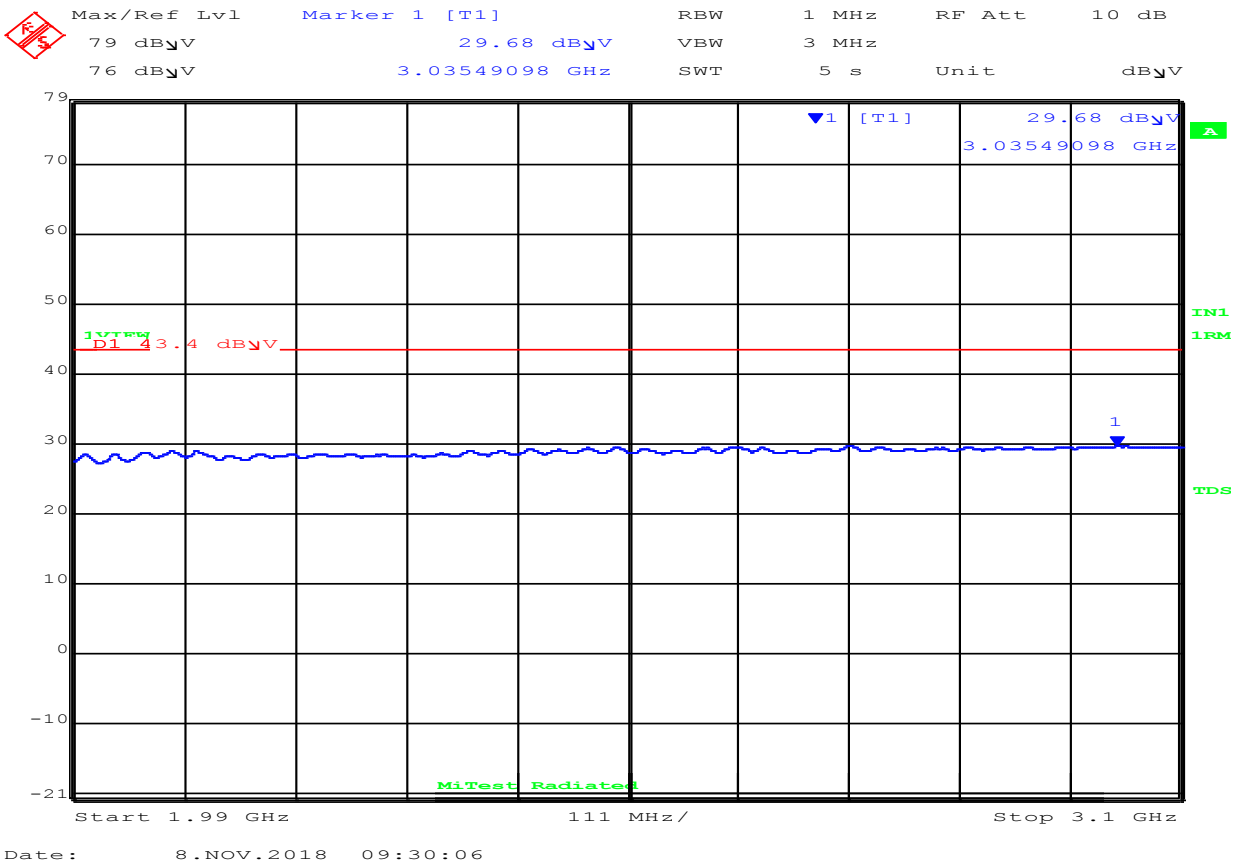
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

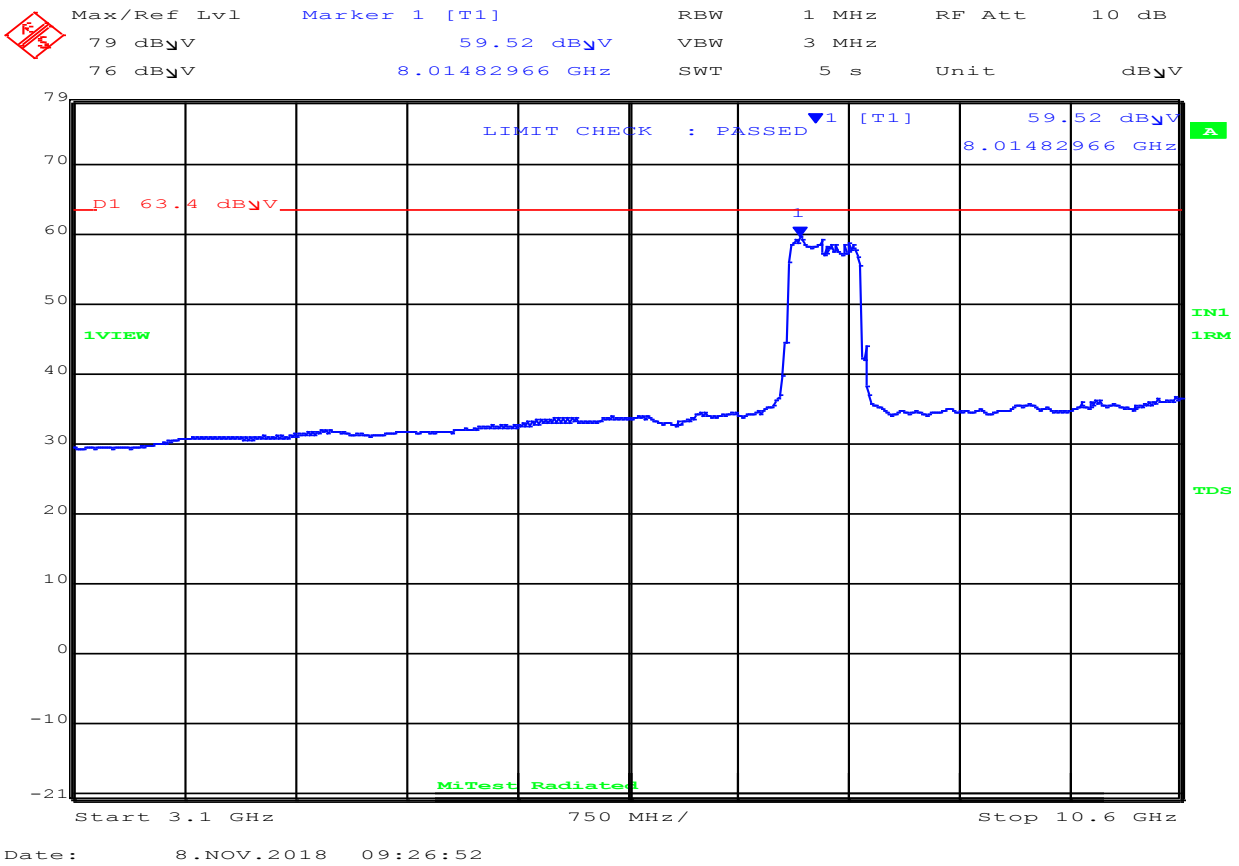
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:26:52

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	8014.8	59.2	Average	Horizontal	150	0	63.4	-4.20	Pass

Test Notes:

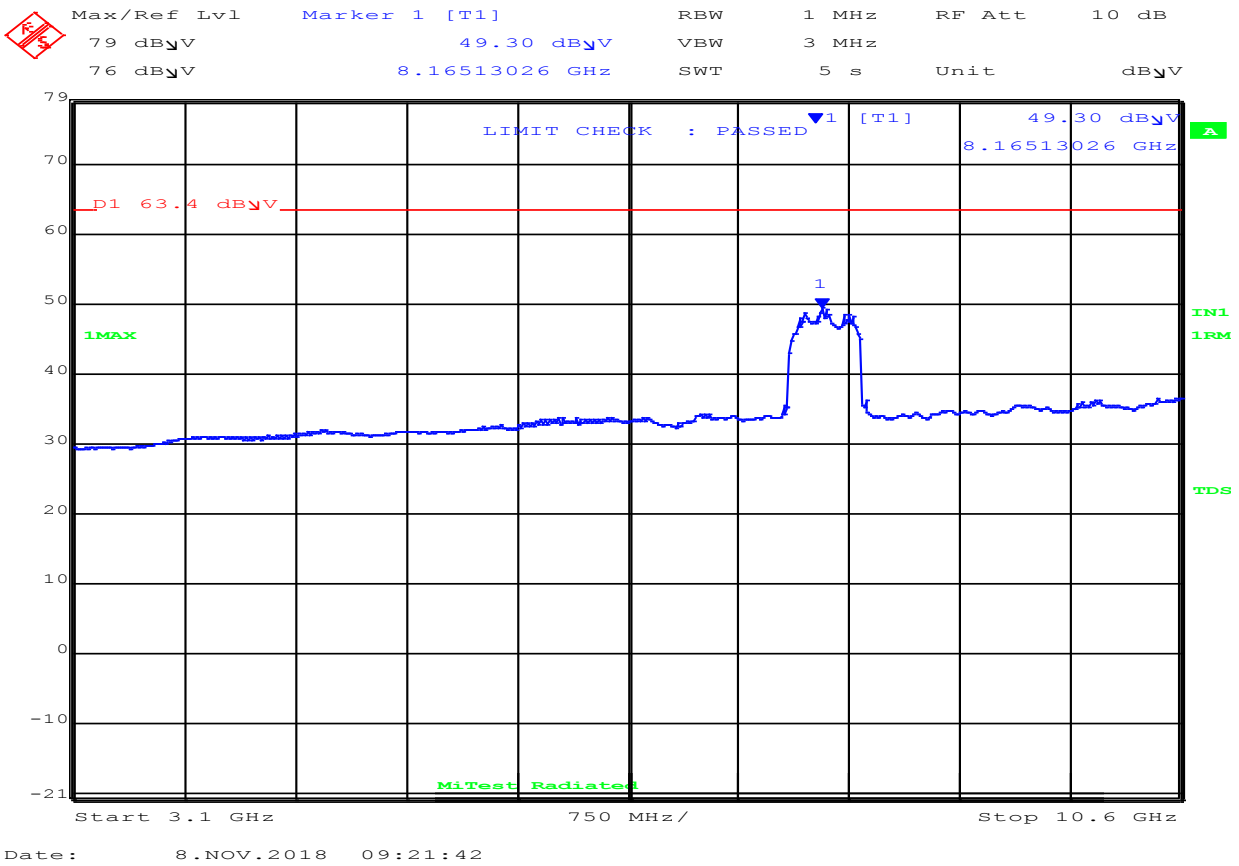
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:21:42

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:

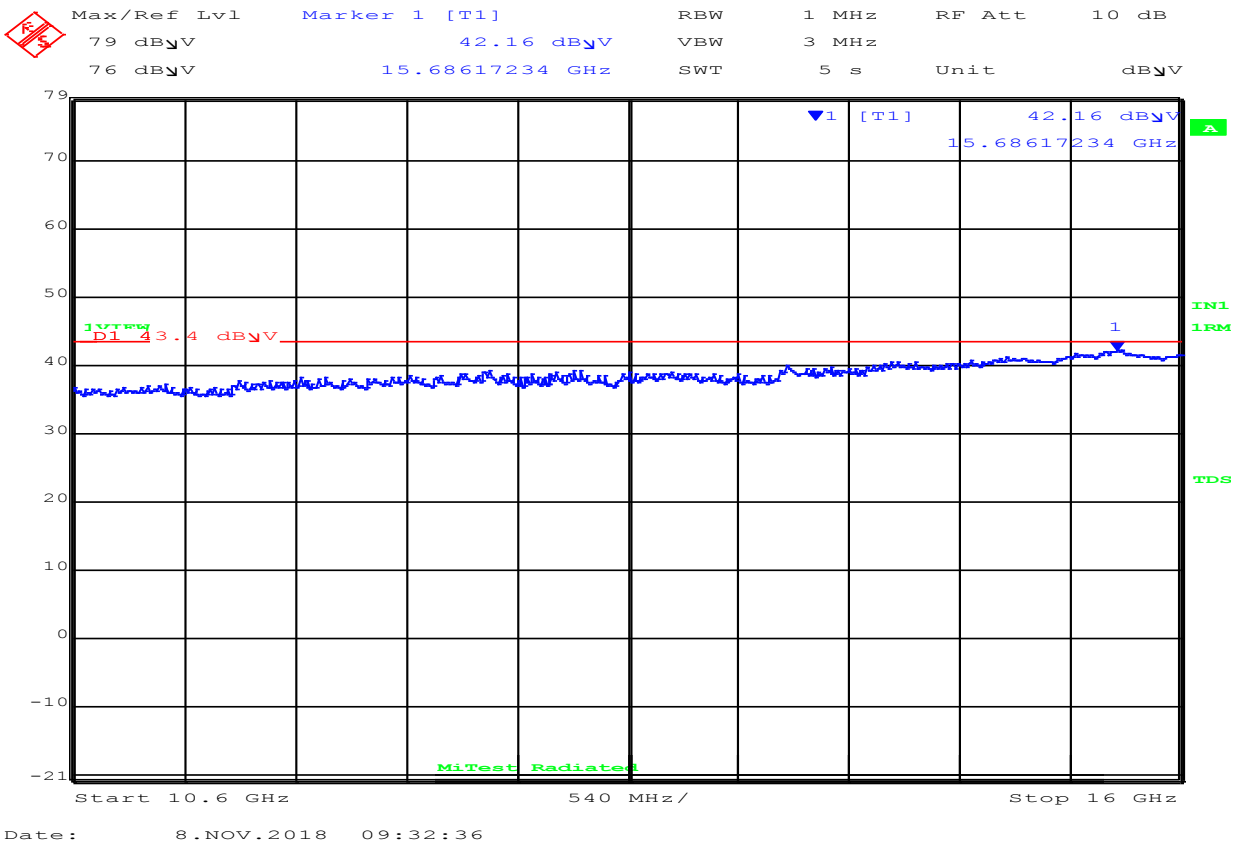
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.7	Average	Horizontal	150	0	43.4	-2.70	Pass

Test Notes:

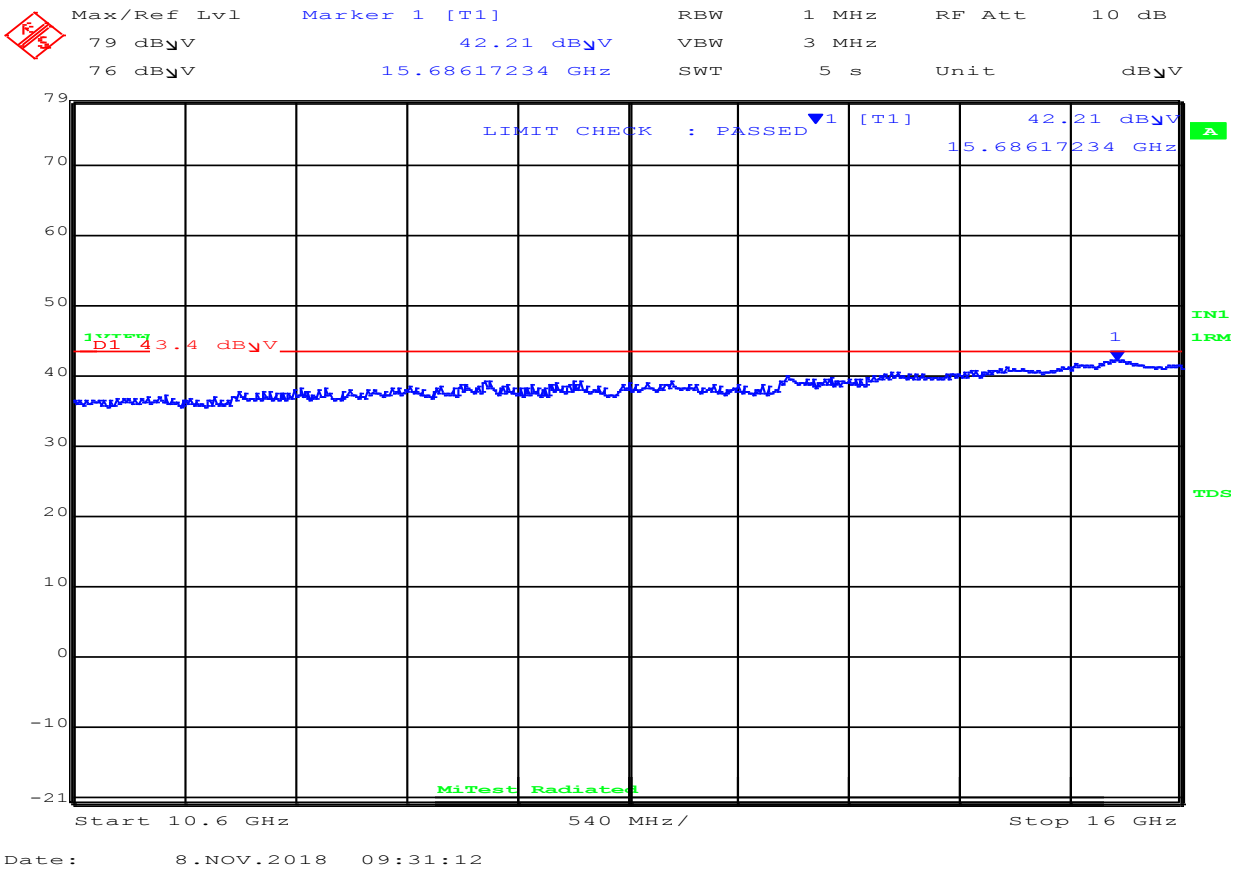
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.8	Average	Vertical	150	0	43.4	-2.60	Pass

Test Notes:

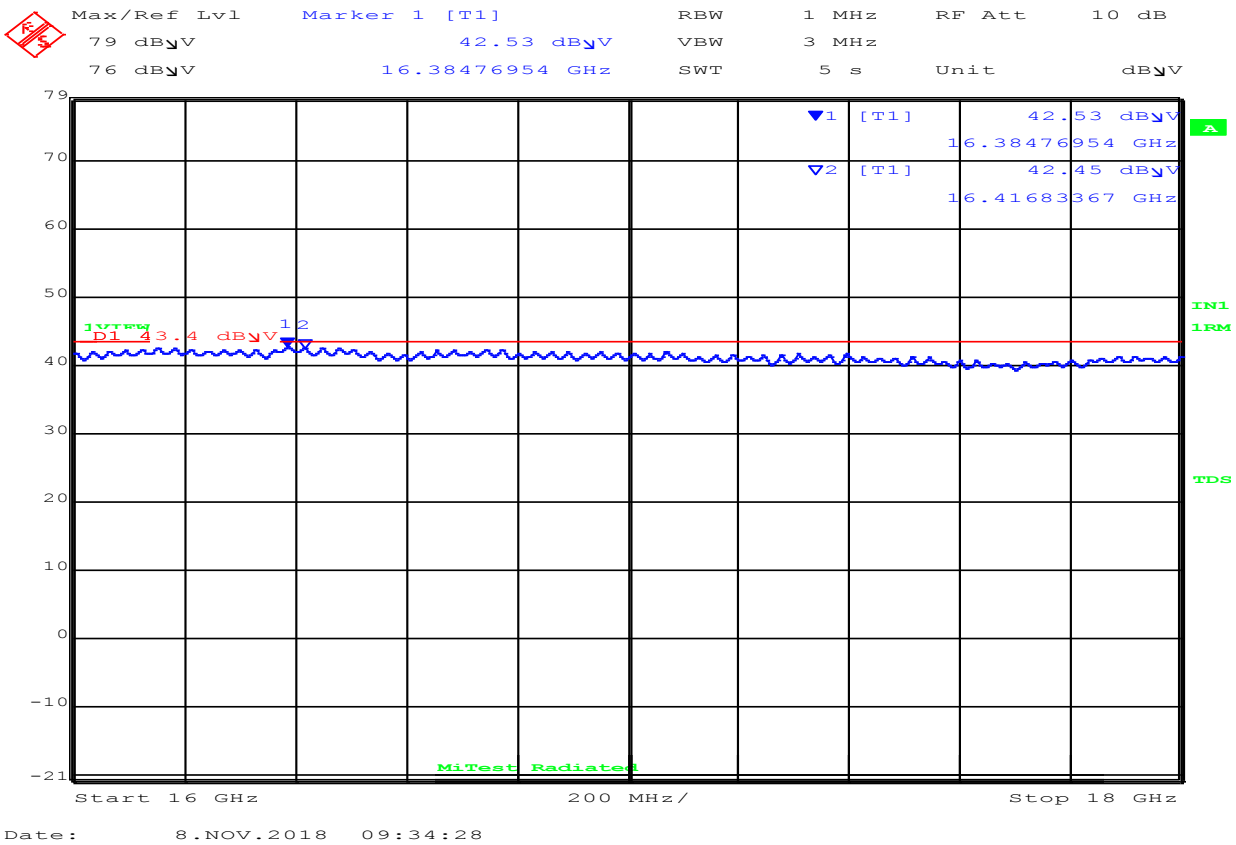
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16384.7	41.3	Average	Horizontal	150	0	43.4	-2.10	Pass
2	16416.8	41.5	Average	Horizontal	150	0	43.4	-1.90	Pass

Test Notes:

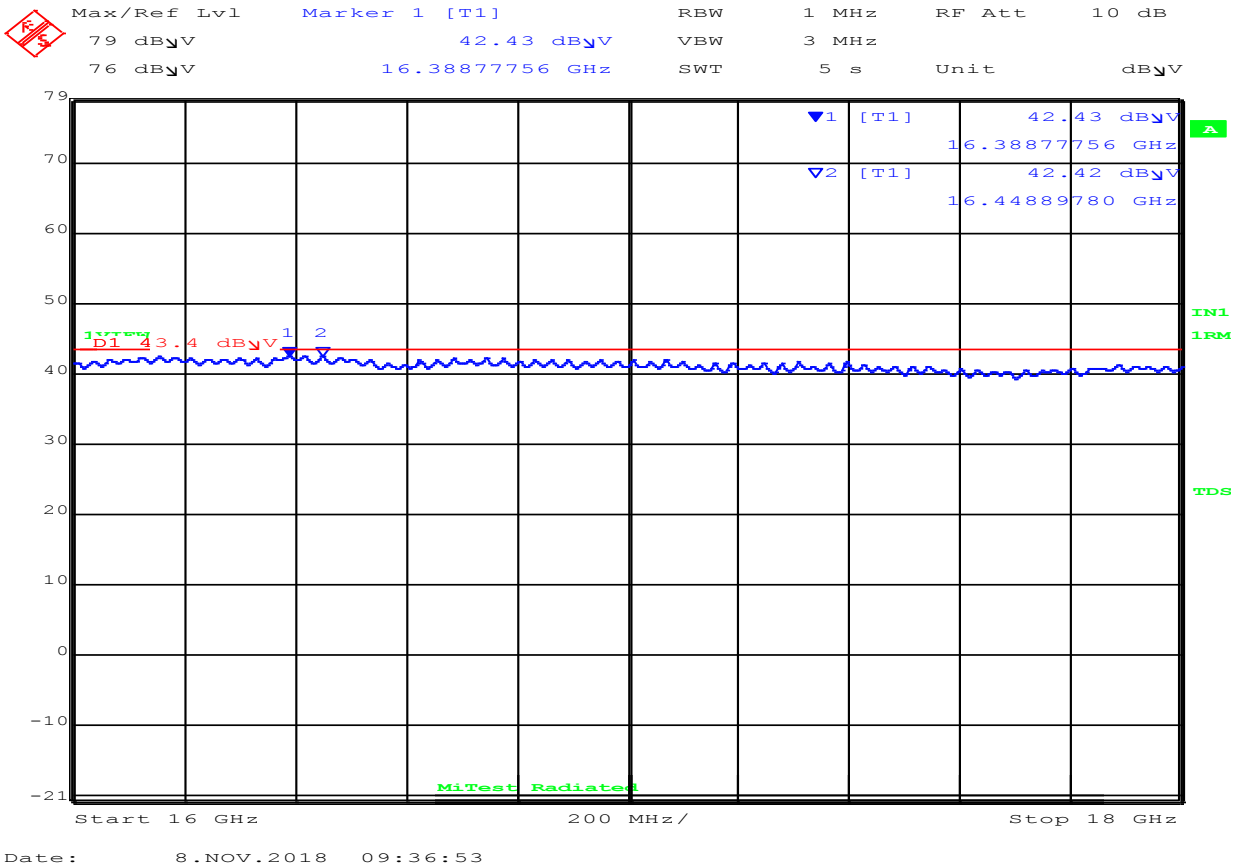
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8184.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 8184 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16388.8	41.3	Average	Vertical	150	0	43.4	-2.10	Pass
2	16488.9	41.6	Average	Vertical	150	0	43.4	-1.80	Pass

Test Notes:

8712 MHz

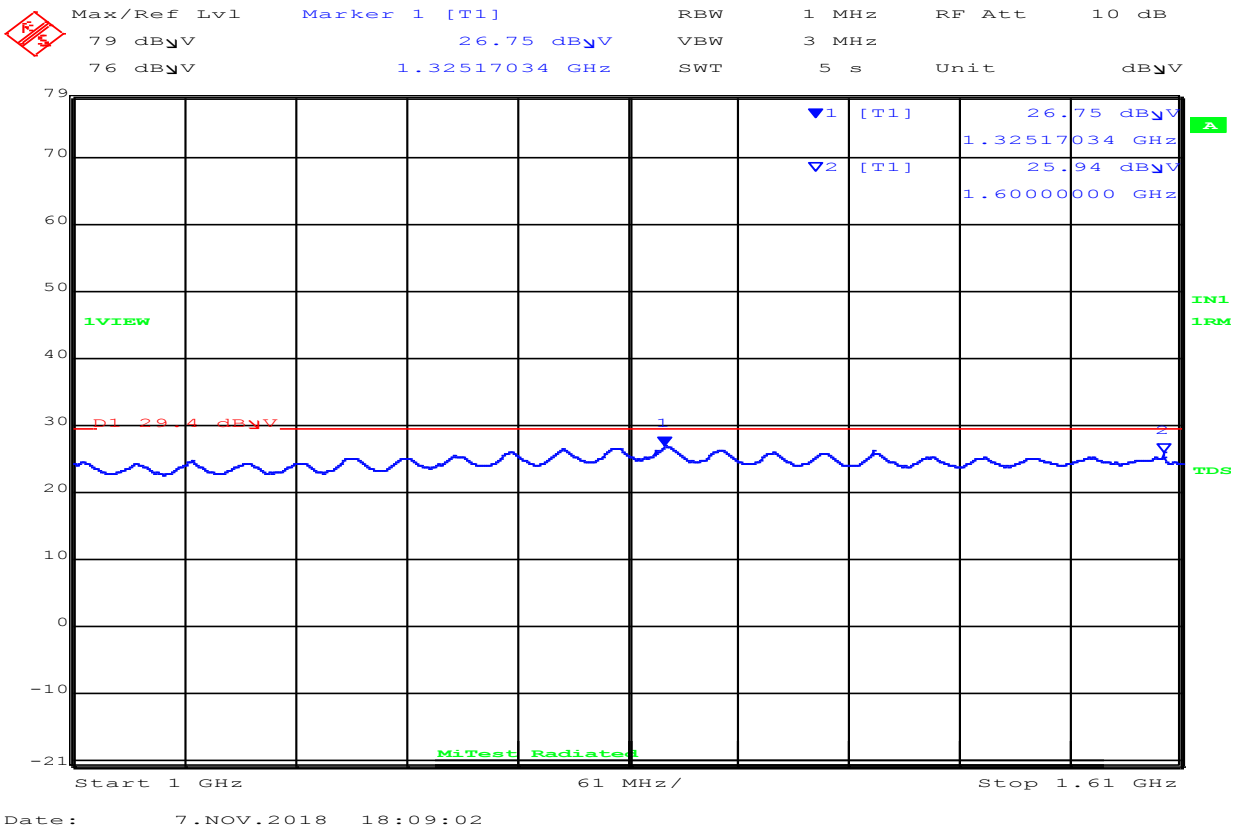
Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1325.2	25.0	Average	Horizontal	150	0	29.4	-4.40	Pass
2	1600.0	25.9	Average	Horizontal	150	0	29.4	-3.50	Pass

Test Notes:
Laptop Removed

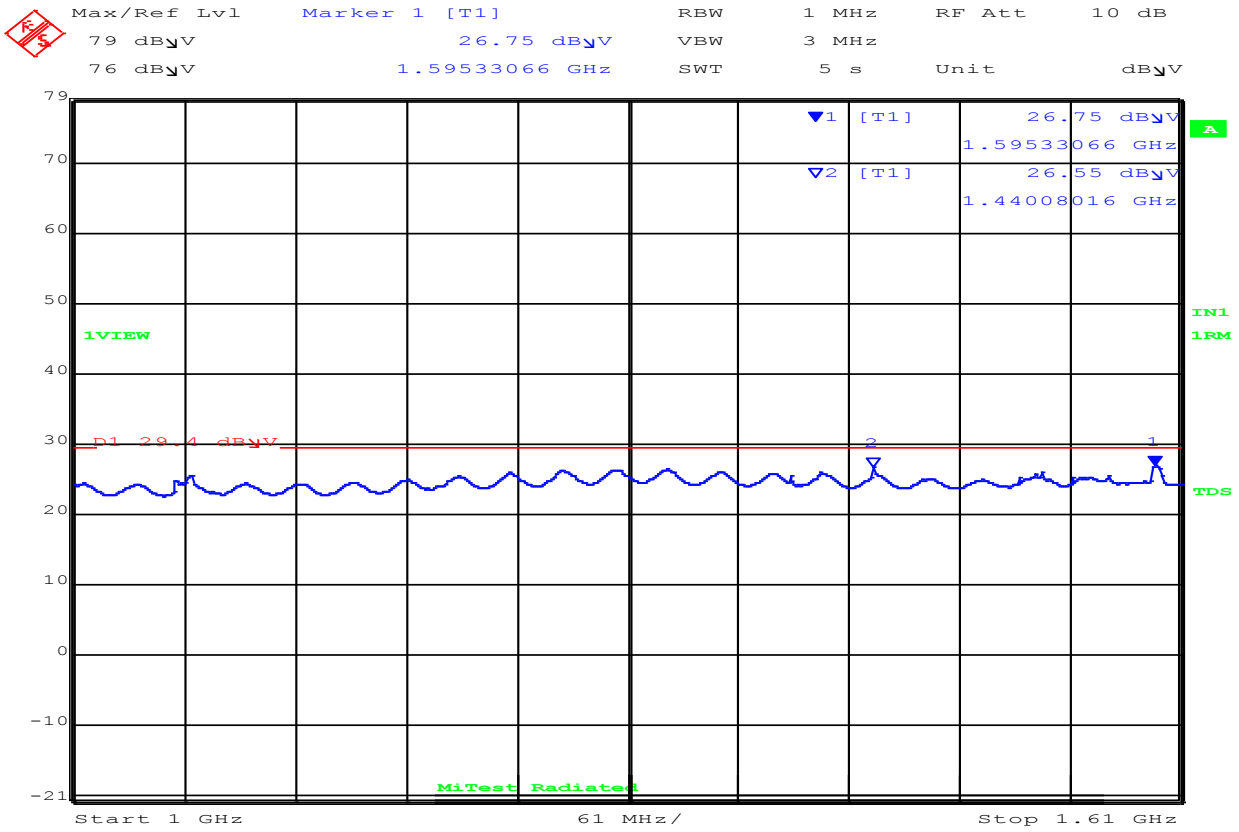
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1595.3	25.9	Average	Vertical	150	0	29.4	-3.50	Pass
2	1440.1	25.8	Average	Vertical	150	0	29.4	-3.60	Pass

Test Notes:
Laptop Removed

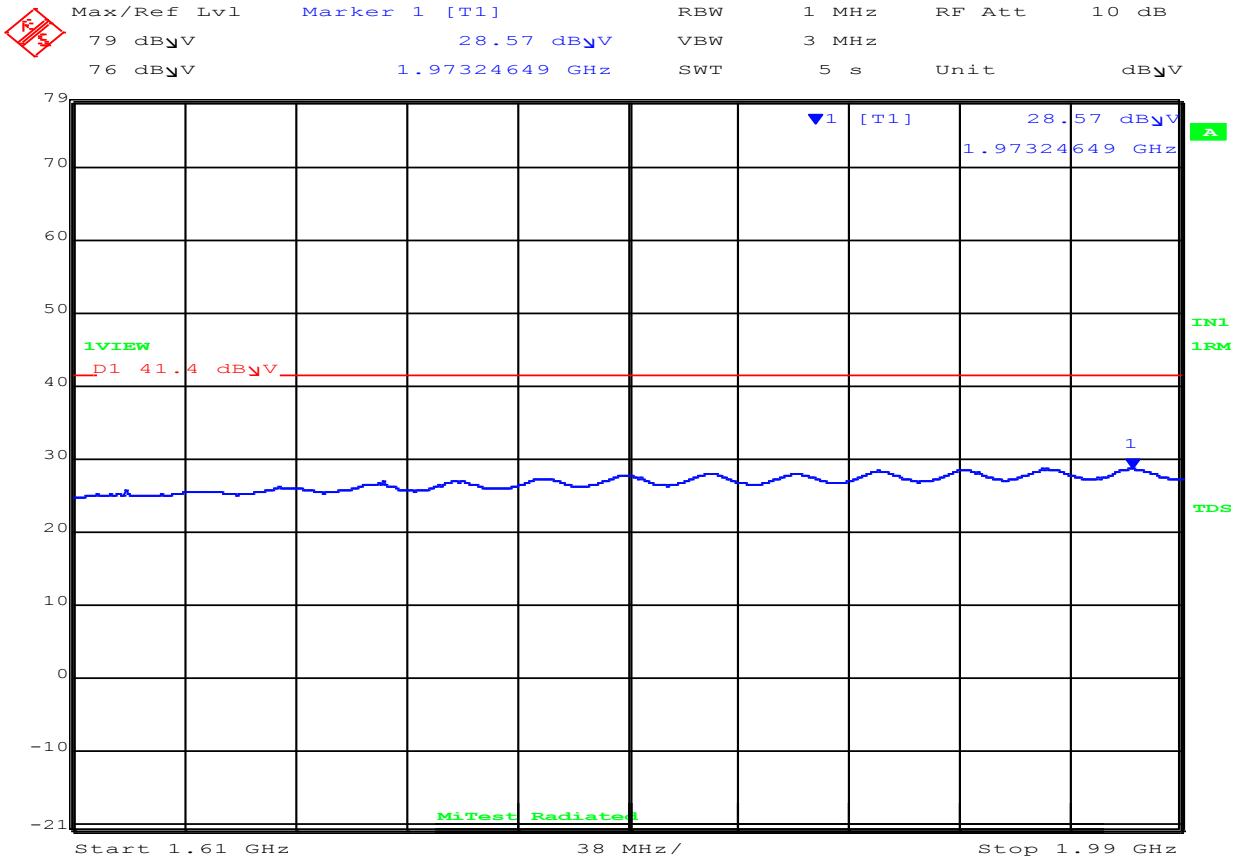
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 10:01:01

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

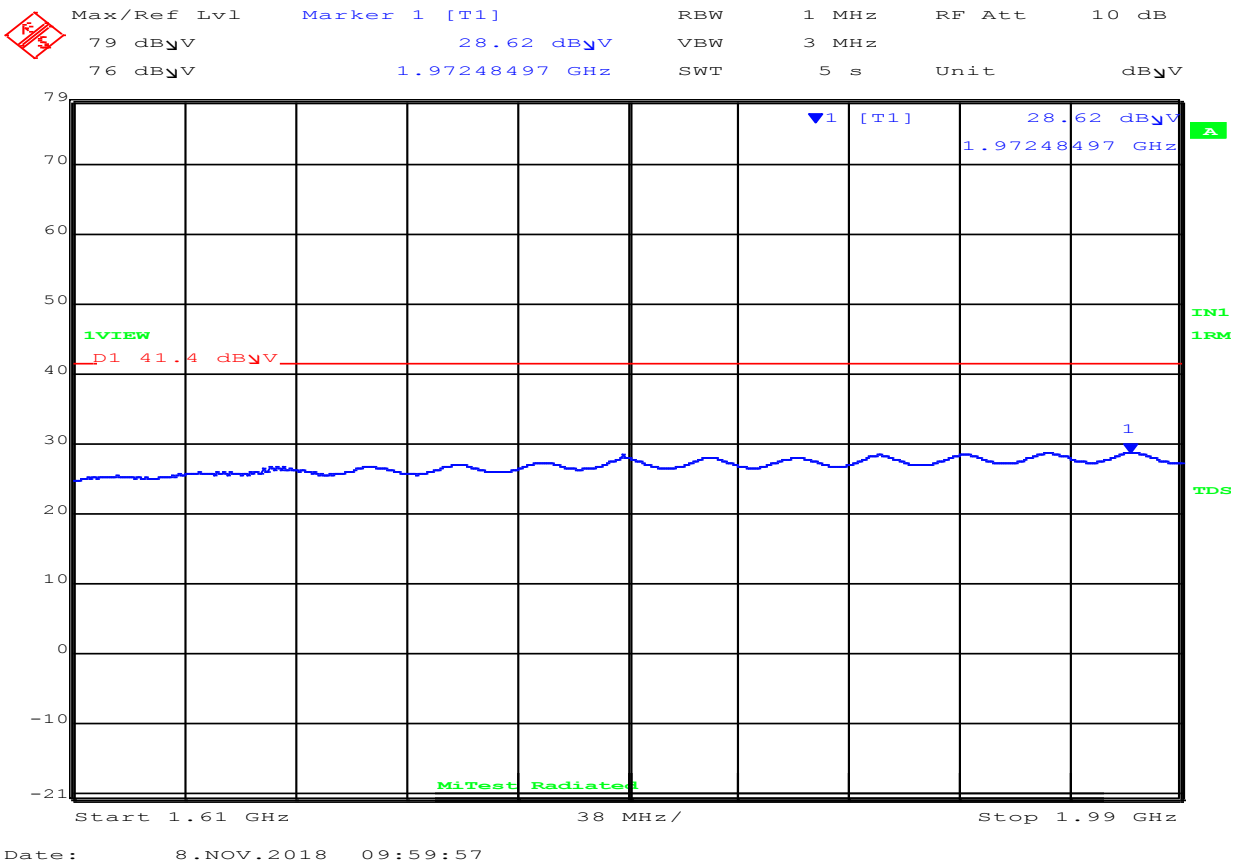
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:59:57

1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

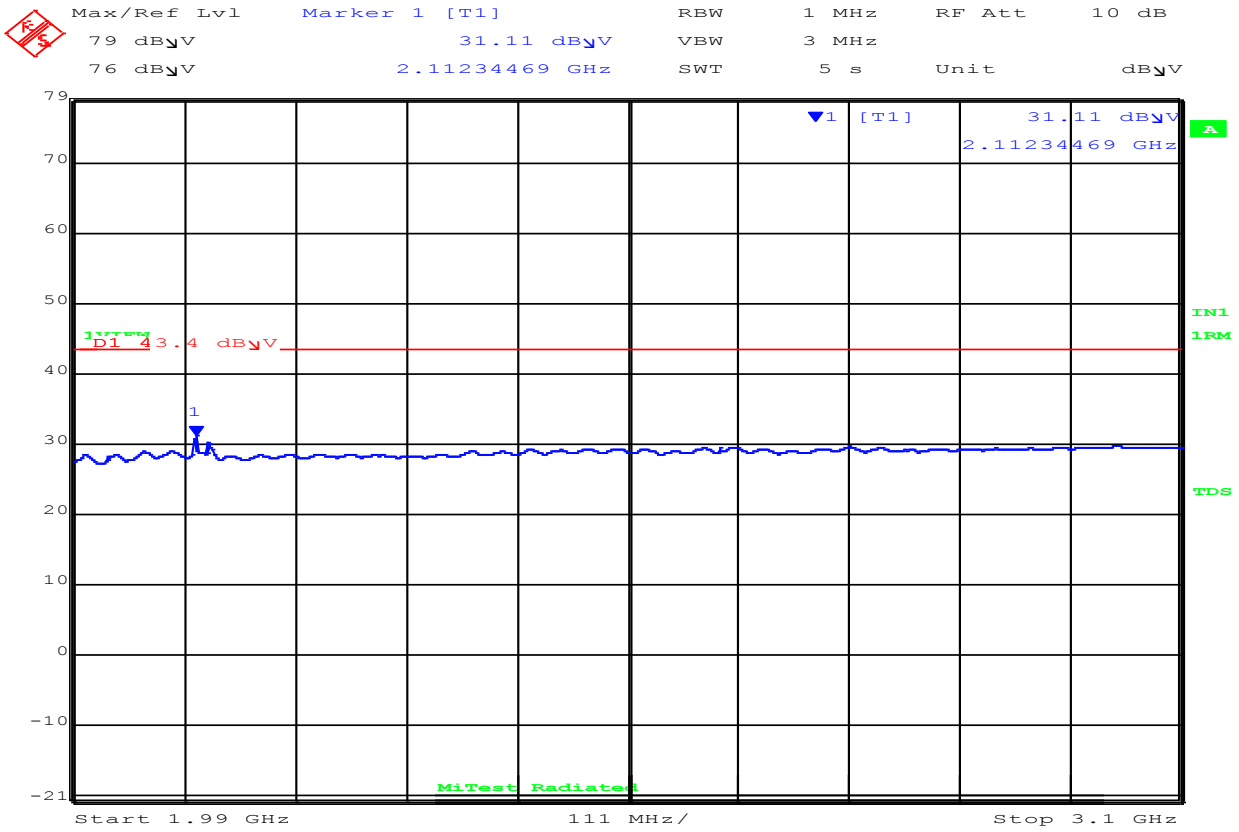
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:56:55

1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

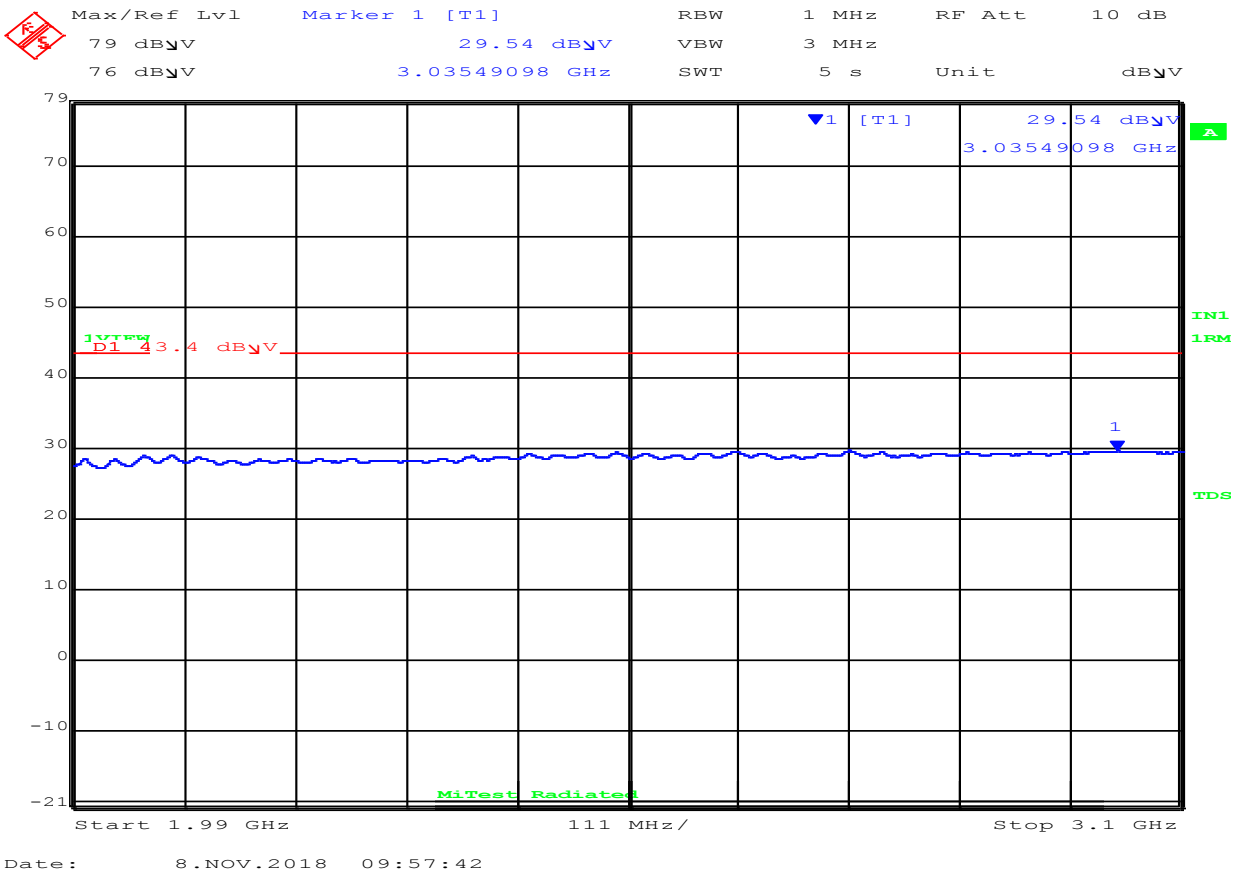
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:
Laptop Removed

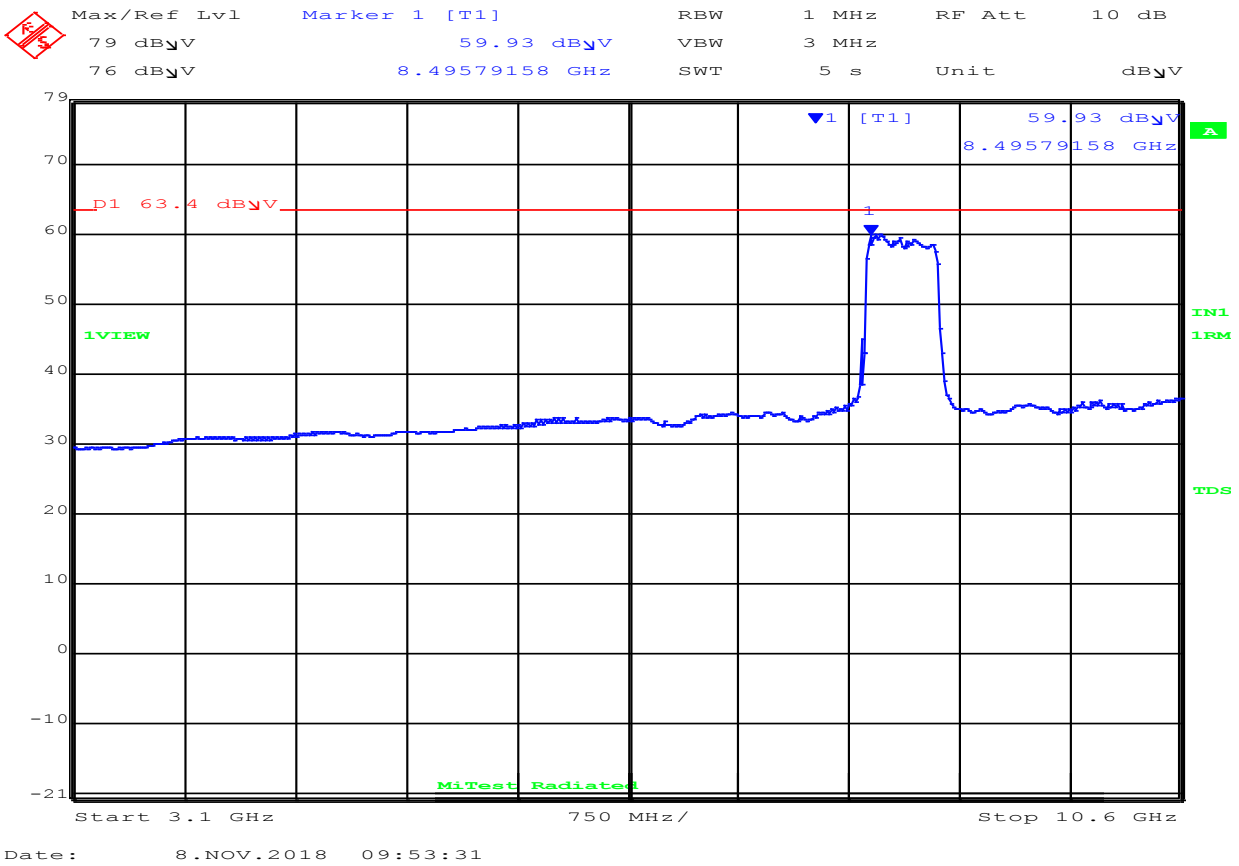
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:53:31

3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	8495.7	58.4	Average	Horizontal	150	0	63.4	-5.00	Pass

Test Notes:

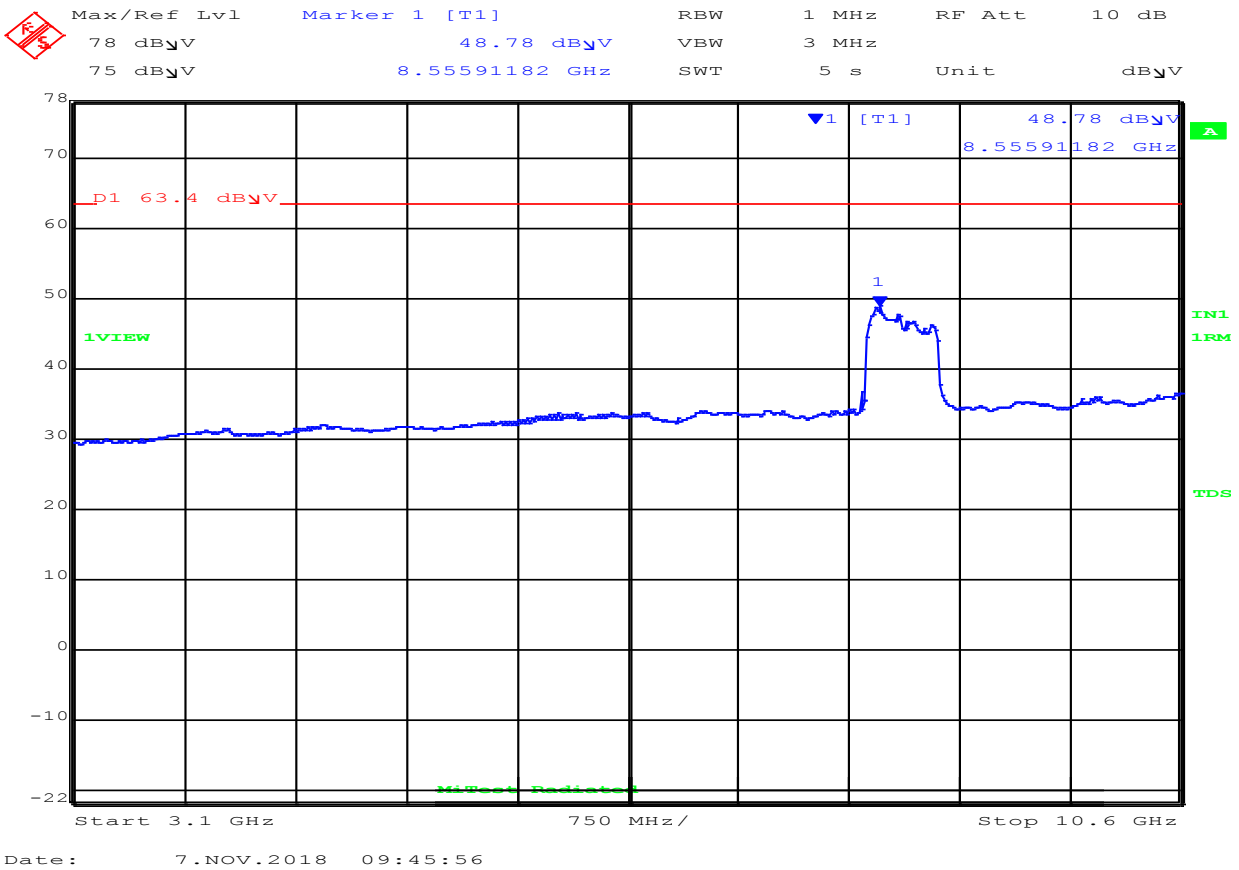
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals found within 6 dB of Limit									

Test Notes:

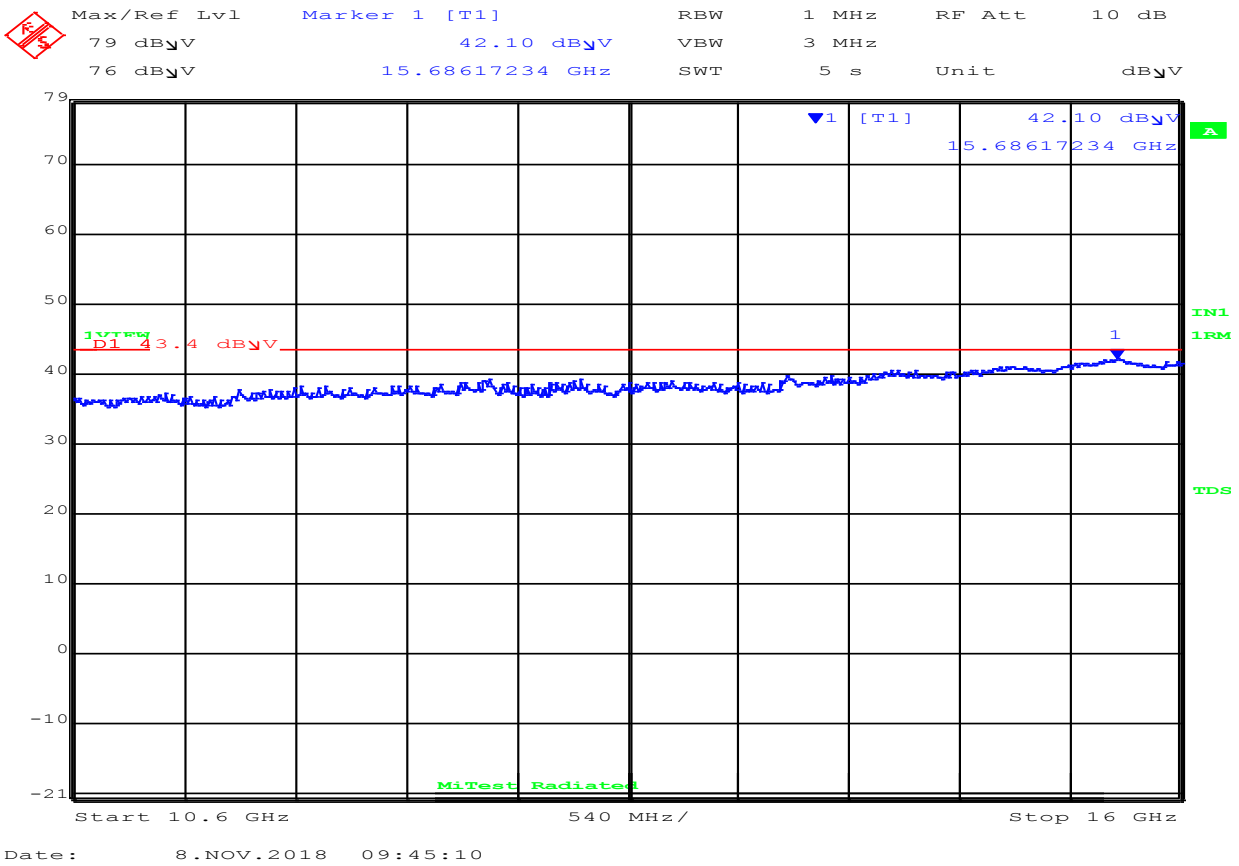
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:45:10

10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.6	Average	Horizontal	150	0	43.4	-2.80	Pass

Test Notes:

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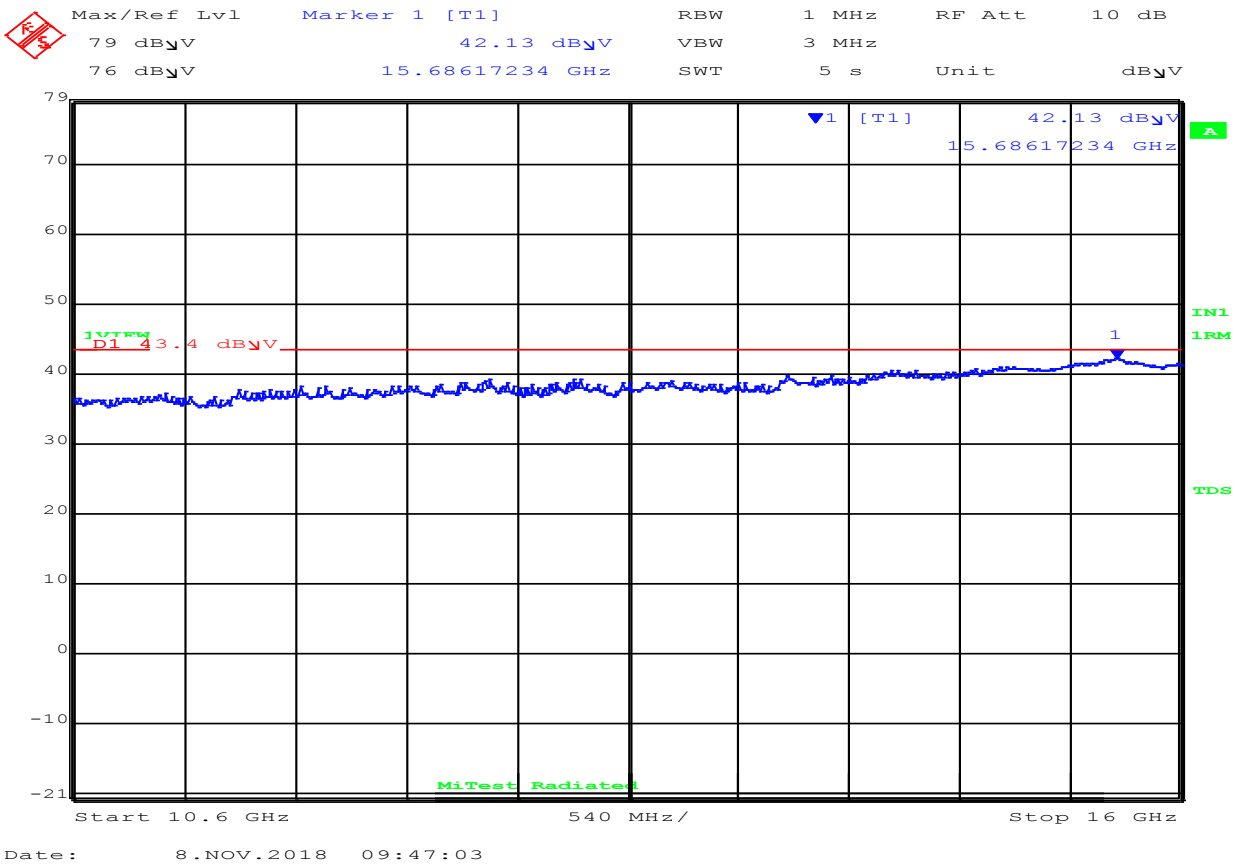
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:47:03

10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	40.7	Average	Vertical	150	0	43.4	-2.70	Pass

Test Notes:

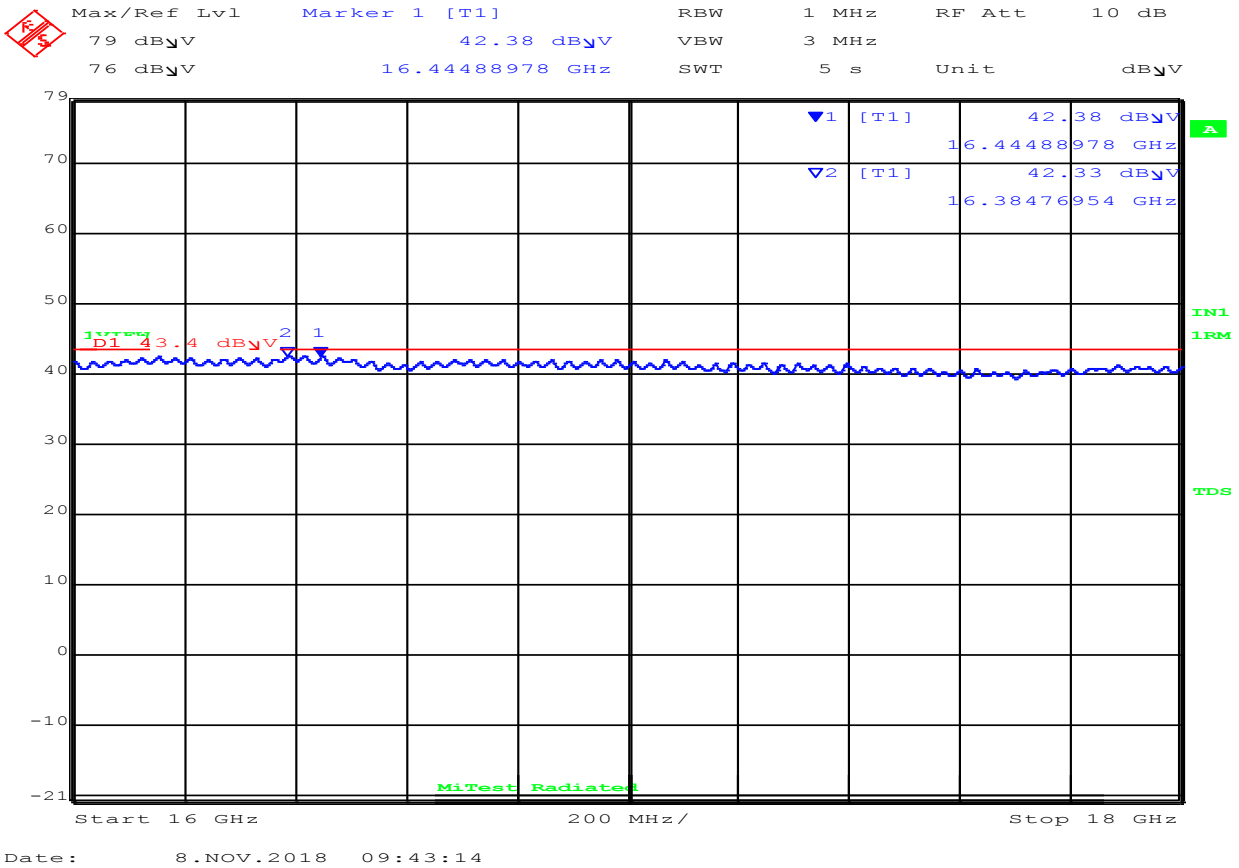
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.9	41.4	Average	Horizontal	150	0	43.4	-2.00	Pass
2	16384.8	41.3	Average	Horizontal	150	0	43.4	-2.10	Pass

Test Notes:

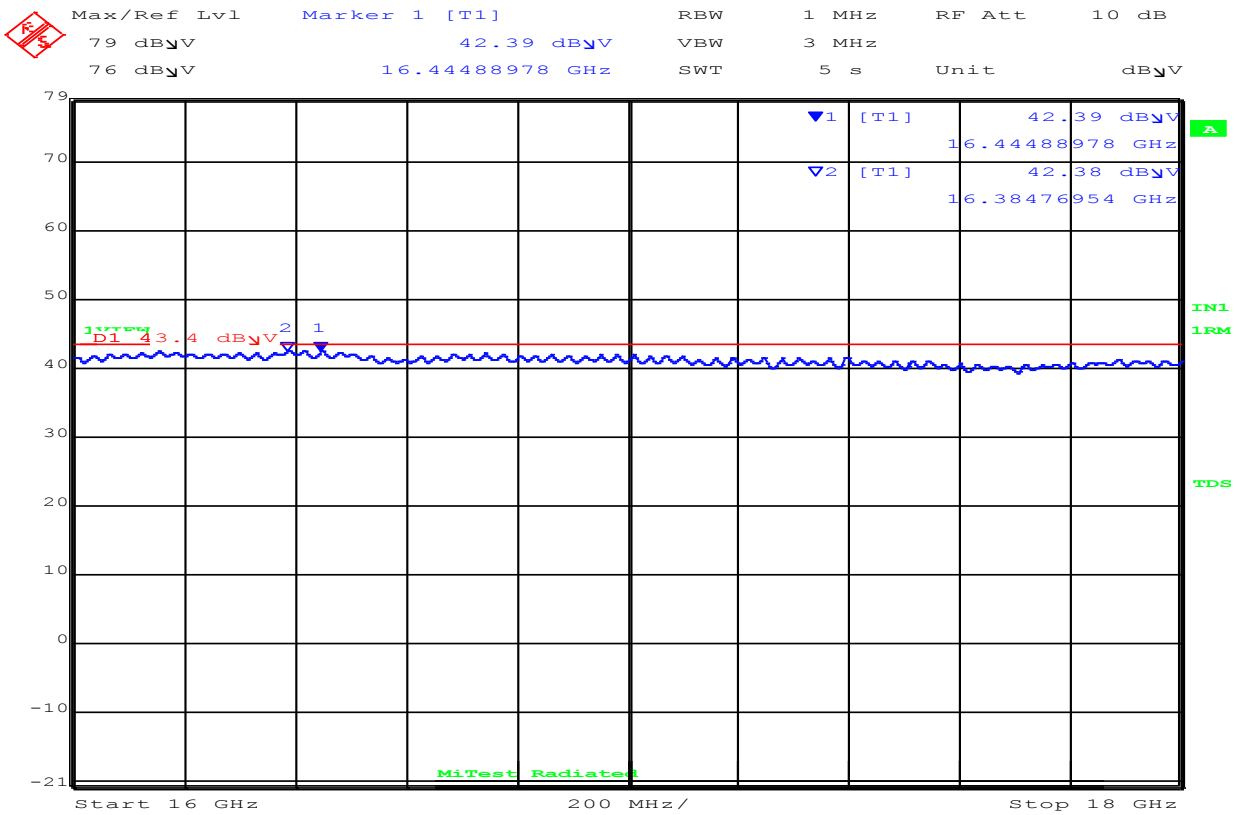
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	-1.8	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	8712.00	**Data Rate:**	
Power Setting:	0.0	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 8712 MHz, Antenna: integral, Power Setting: 0.0, Duty Cycle (%): 99



Date: 8.NOV.2018 09:40:35

16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16444.9	41.4	Average	Horizontal	150	0	43.4	-2.00	Pass
2	16384.8	41.3	Average	Horizontal	150	0	43.4	-2.10	Pass

Test Notes:

9.4.1.3. Combat AL5934

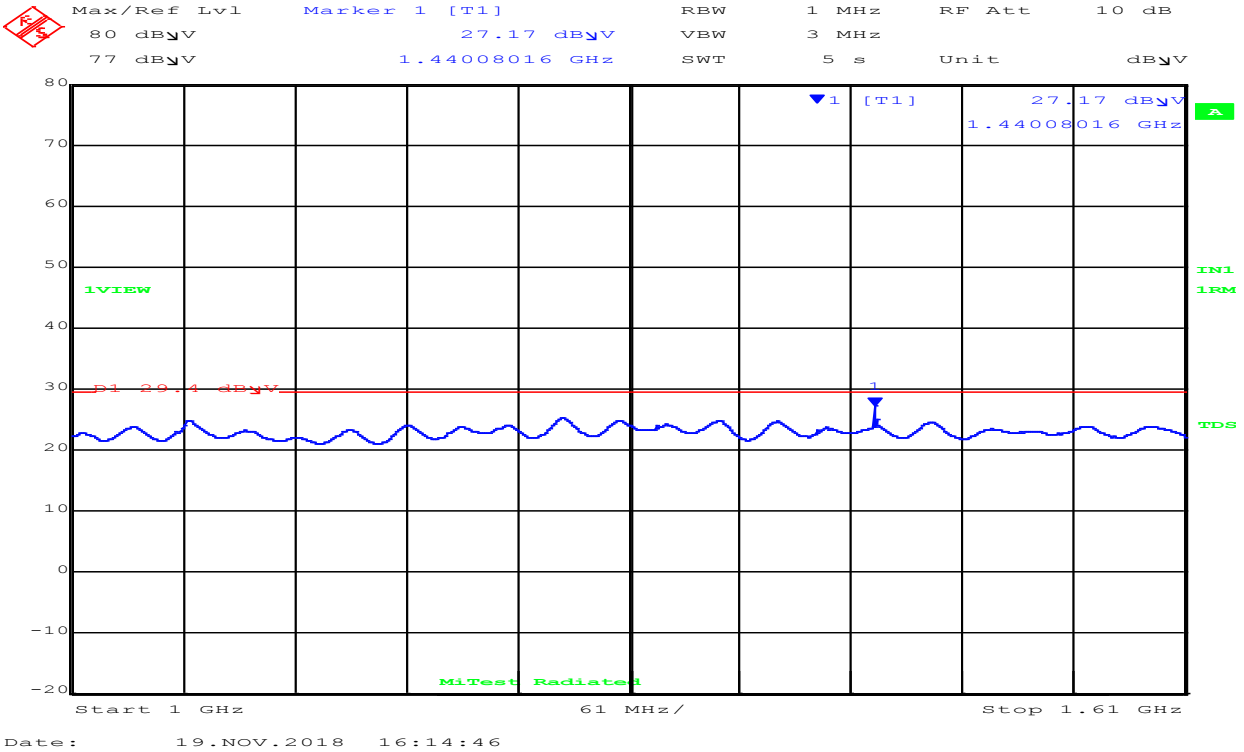
3432 MHz

Equipment Configuration for Spurious Emissions 1-1.61 GHz Horizontal			
Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1440.08	26.9	Average	Horizontal	150	0	29.4	-2.5	Pass

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

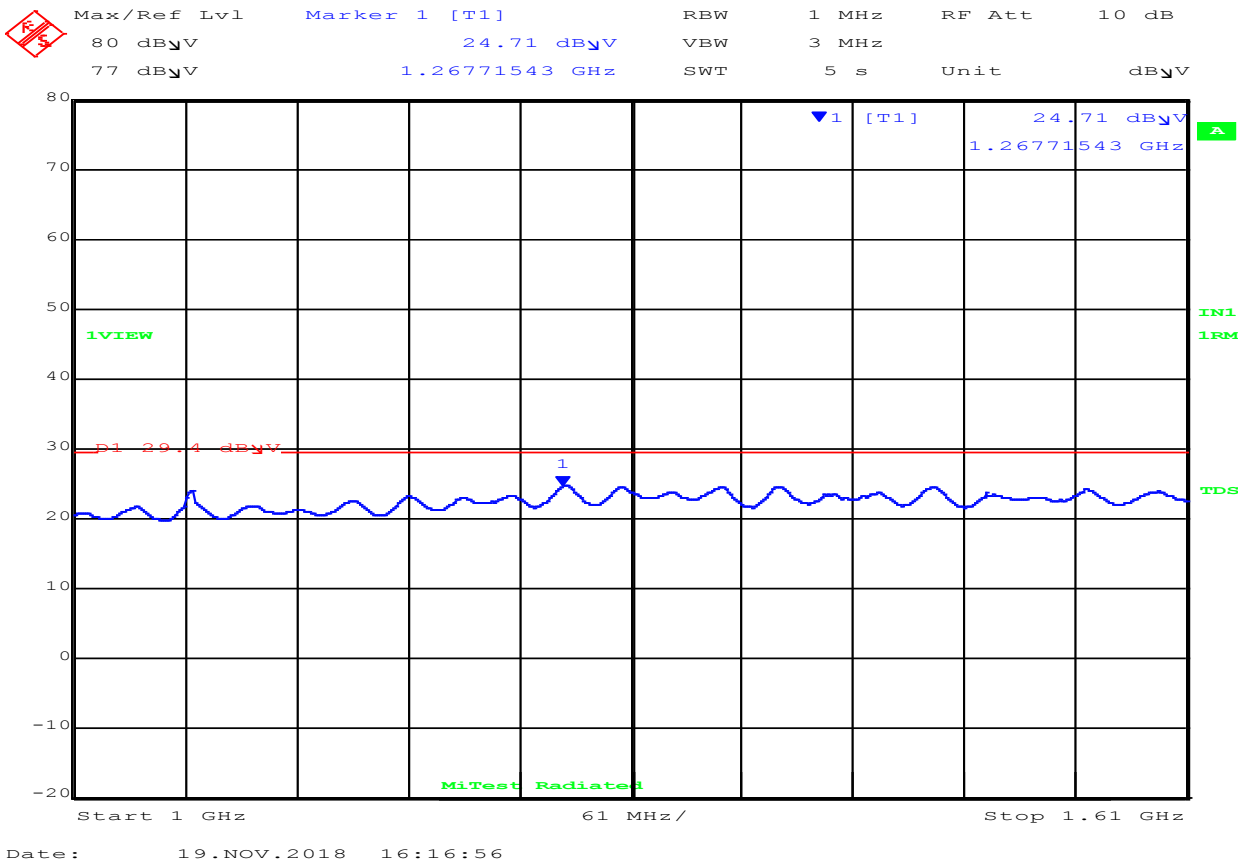
Equipment Configuration for Spurious Emissions 1-1.61 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.0-1.61GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1000.00– 1610.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	1267.72	23.90	Average	Vertical	150	0	29.4	-5.5	Pass

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

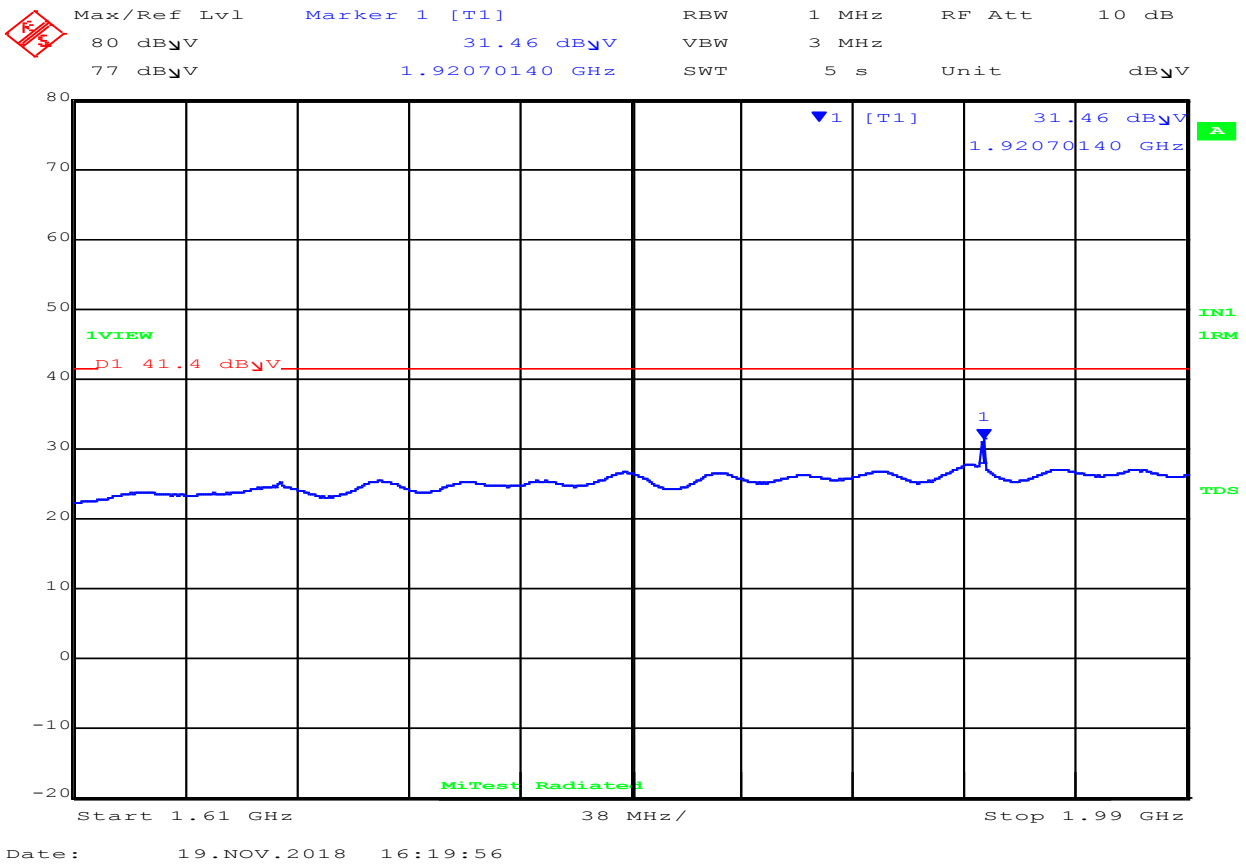
Equipment Configuration for Spurious Emissions 1.61 - 1.99 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1610.00–1990.00MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of limit									

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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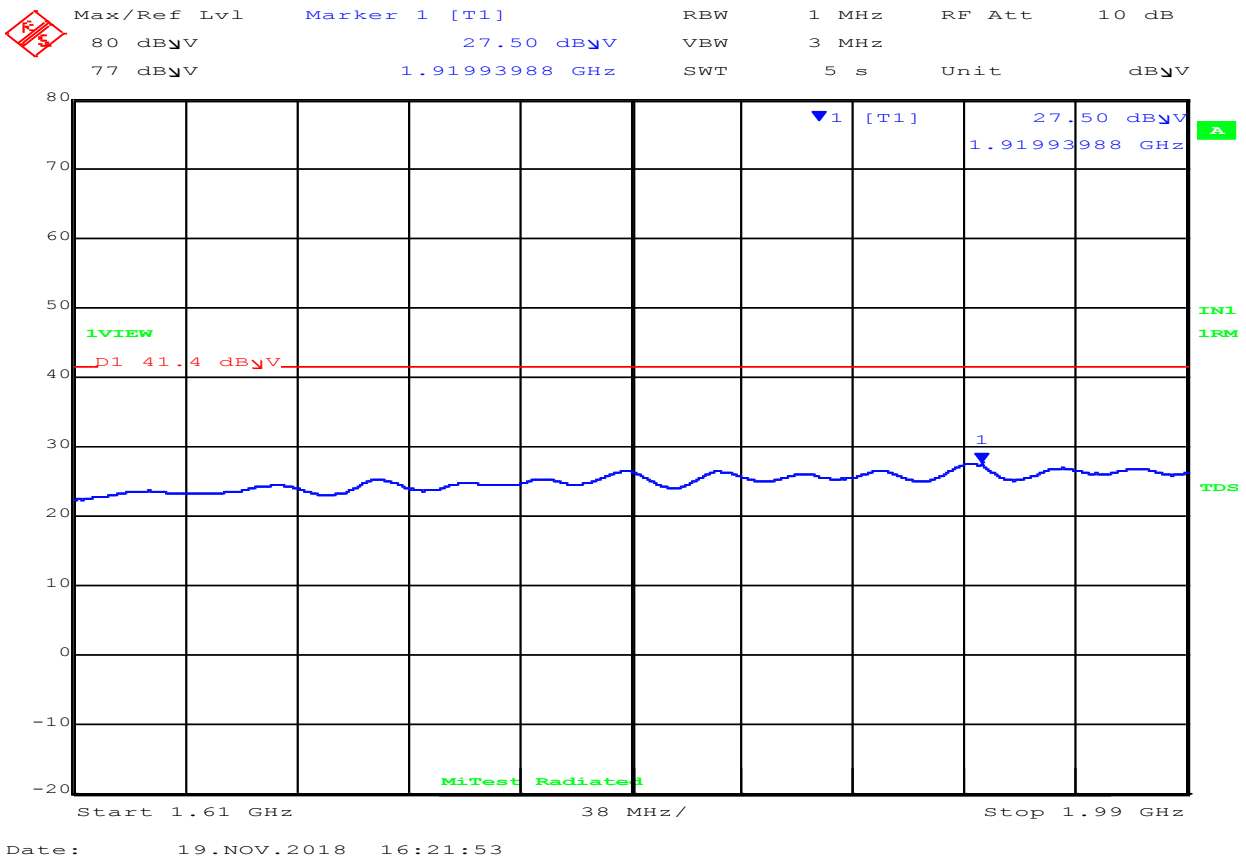
Equipment Configuration for Spurious Emissions 1.61 – 1.99 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.61-1.99GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1610.00 – 1990.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of limit									

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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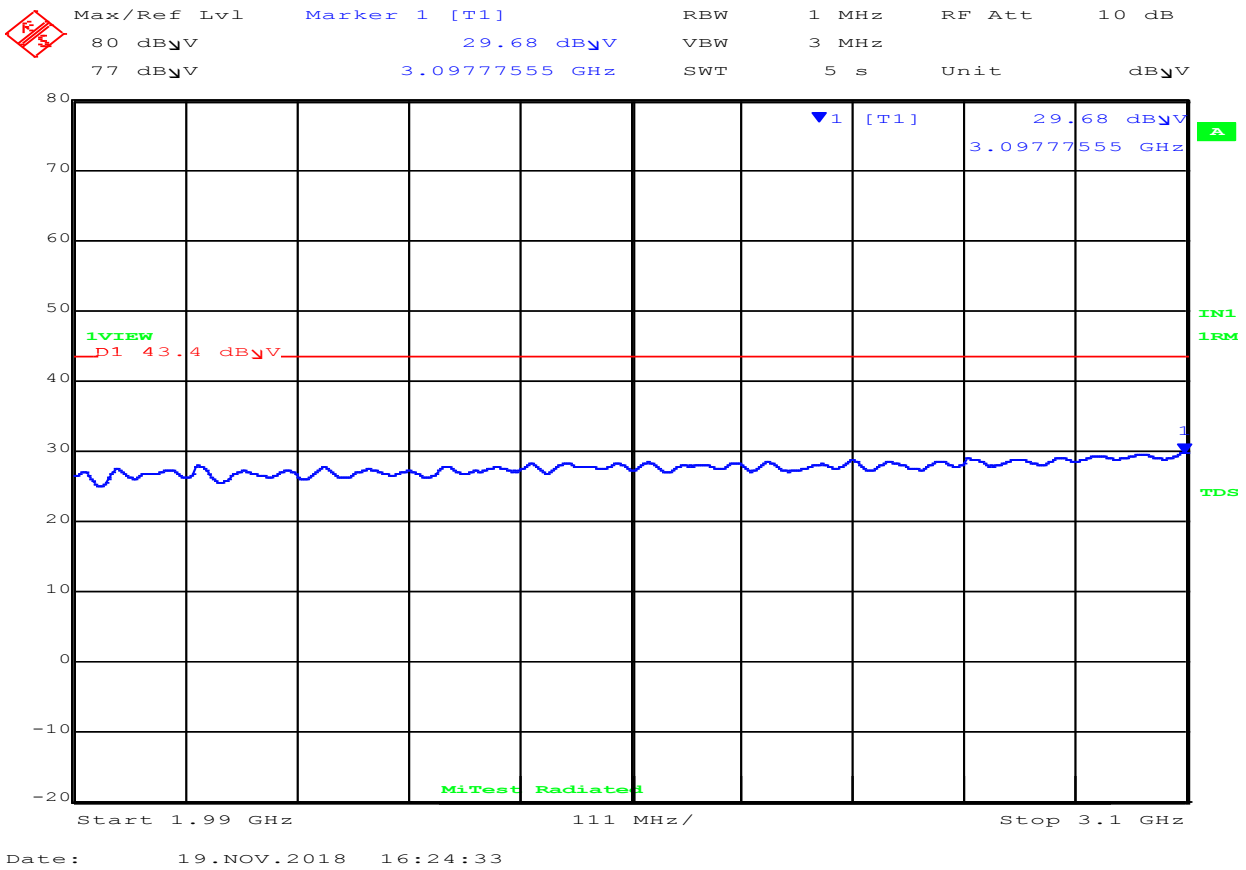
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00–3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of limit									

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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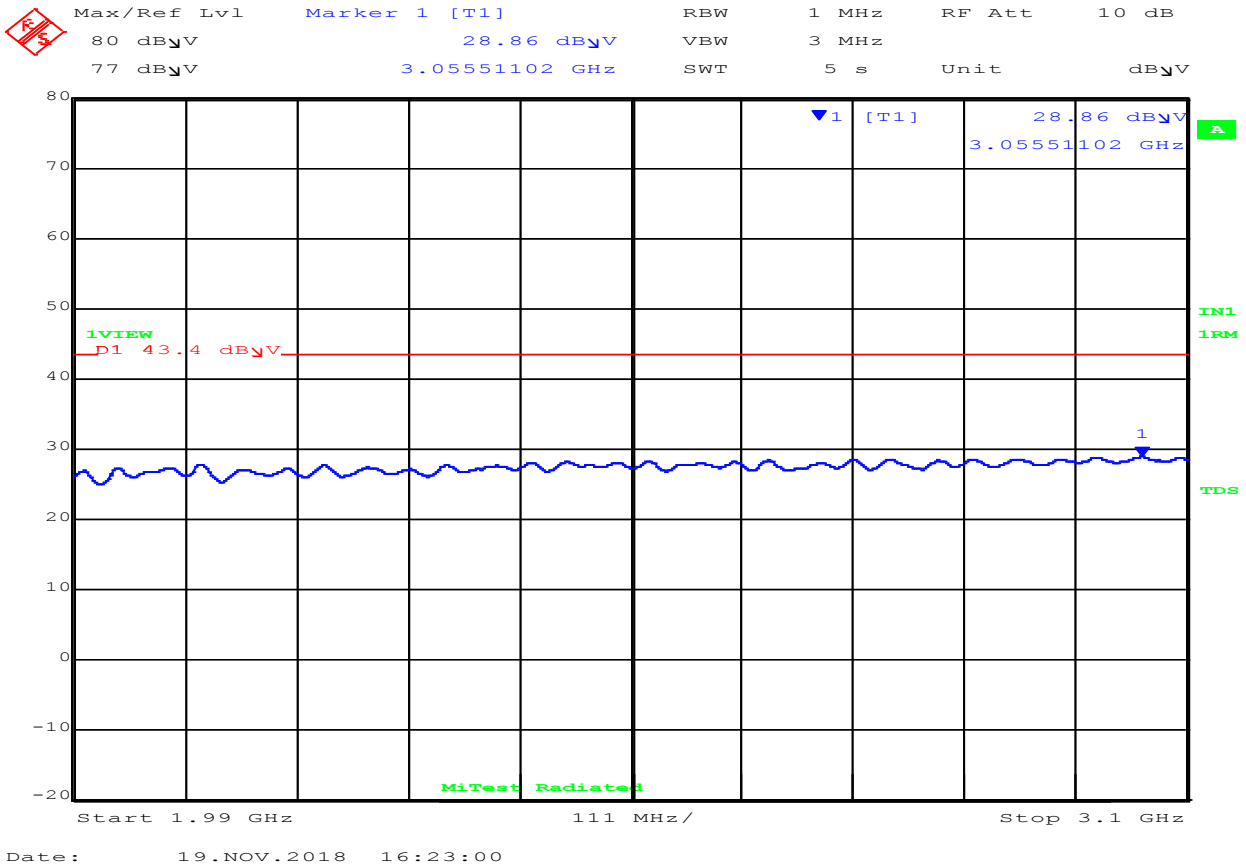
Equipment Configuration for Spurious Emissions 1.99 – 3.1 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 1.99-3.1GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



1990.00 – 3100.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of limit									

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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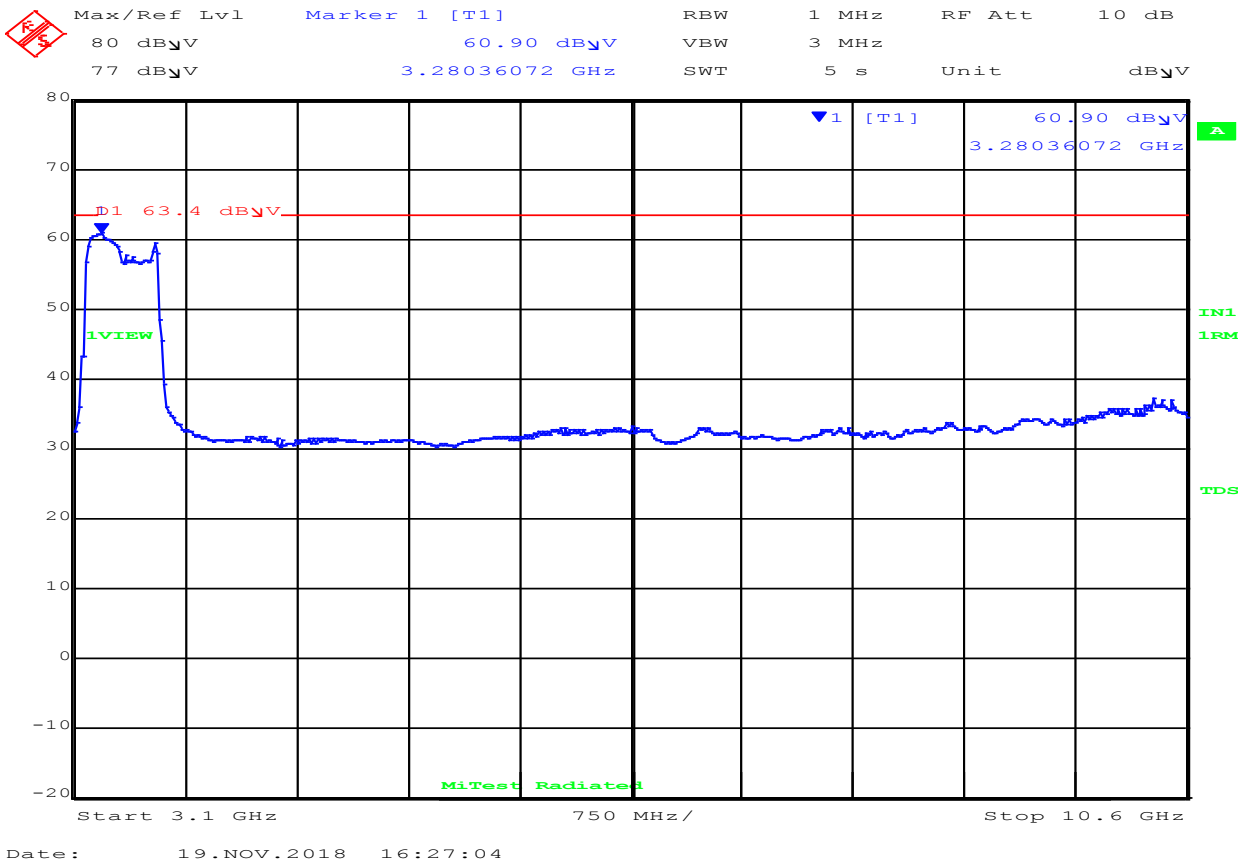
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	3280.36	58.9	Average	Horizontal	150	0	63.4	-4.5	Pass

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

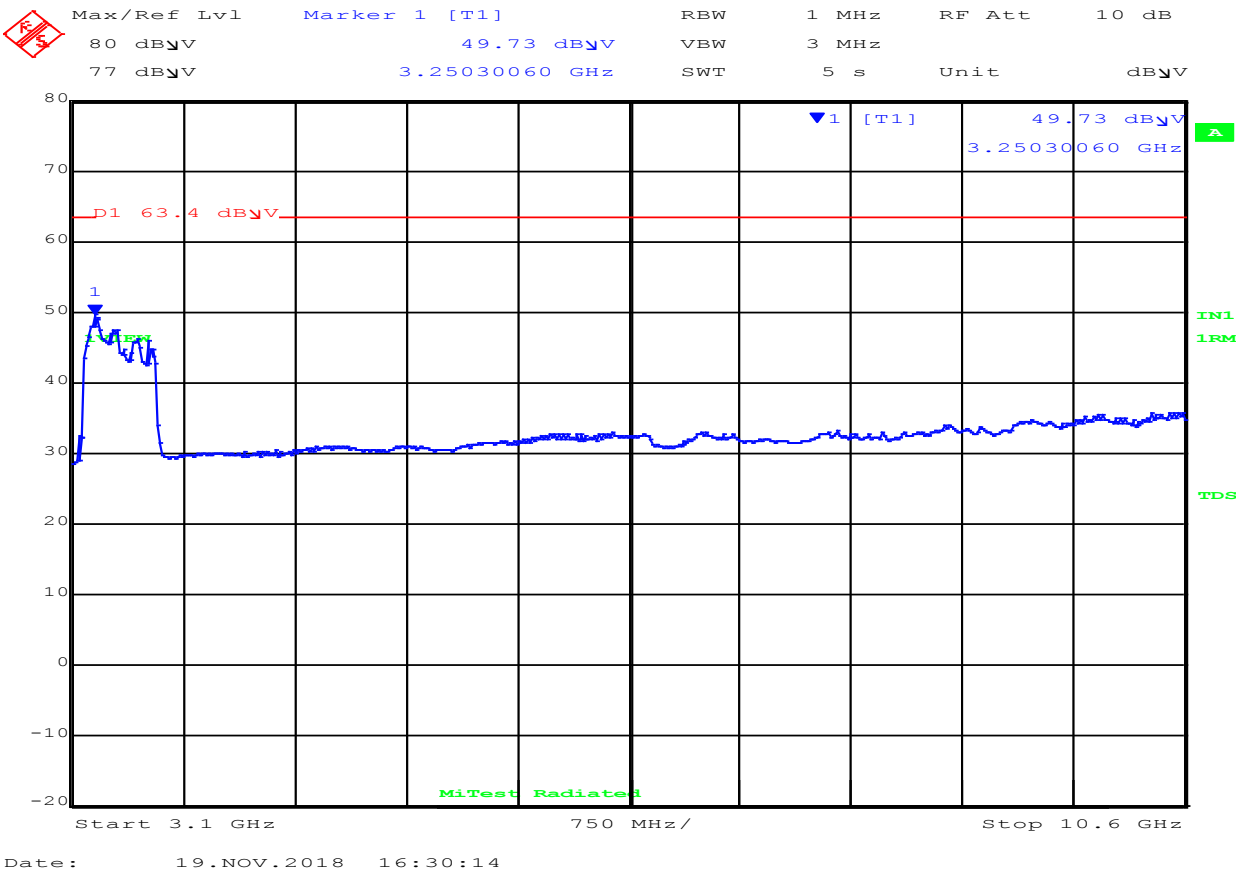
Equipment Configuration for Spurious Emissions 3.1 – 10.6 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 3.1-10.6GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



3100.00 - 10600.00 MHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
No Signals within 6 dB of Limit									

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

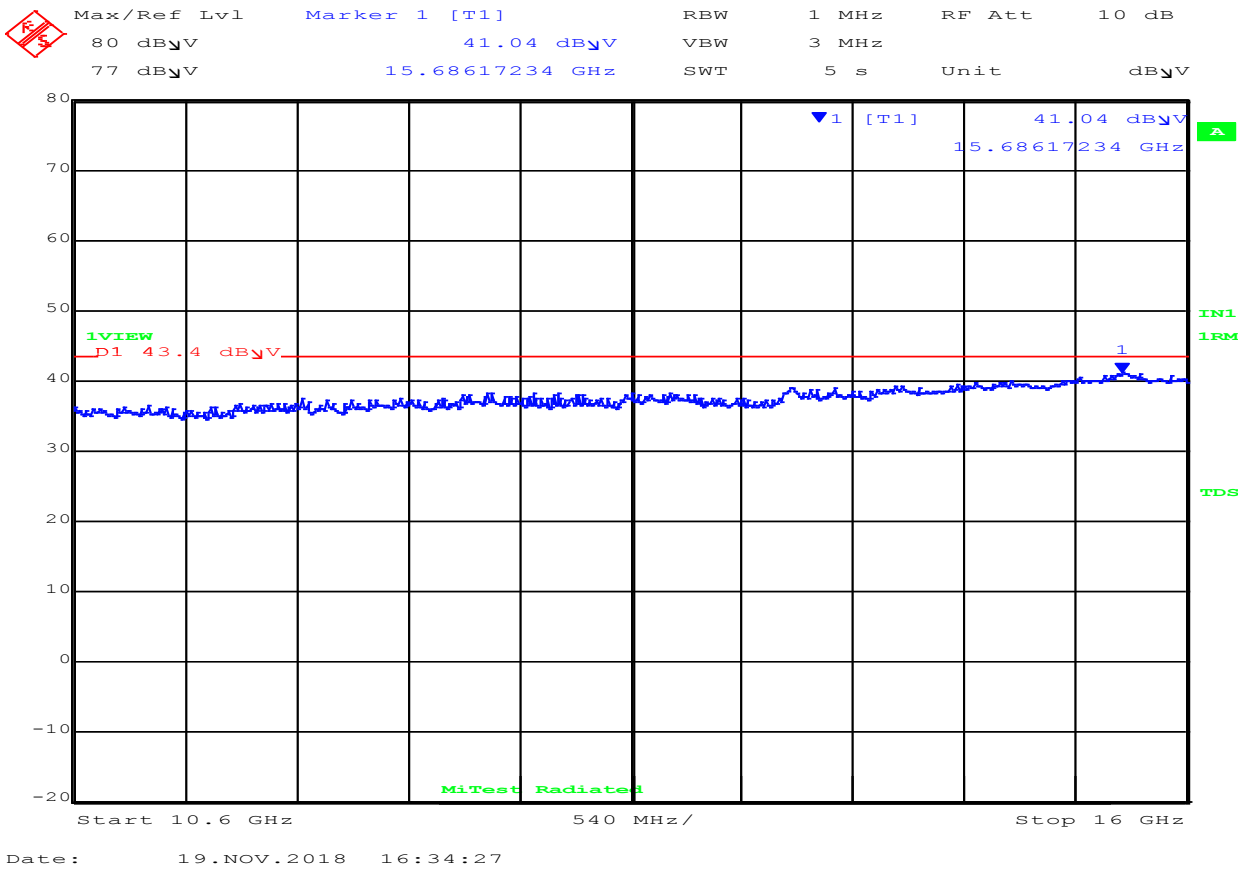
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	39.8	Average	Horizontal	150	0	43.4	-3.6	Pass

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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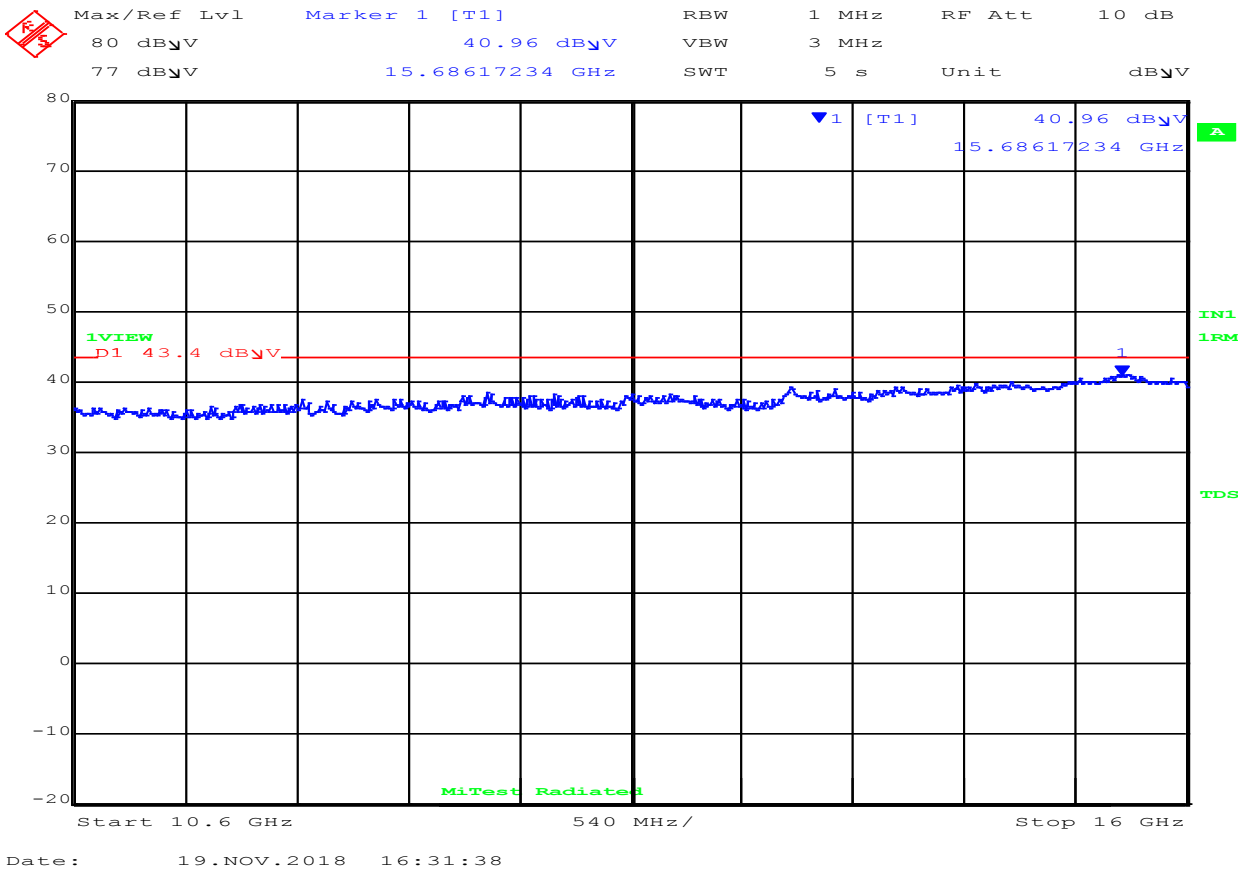
Equipment Configuration for Spurious Emissions 10.6 – 16.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 10.6-16GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



10600.00 – 16000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	15686.2	39.9	Average	Vertical	150	0	43.4	-3.5	Pass

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

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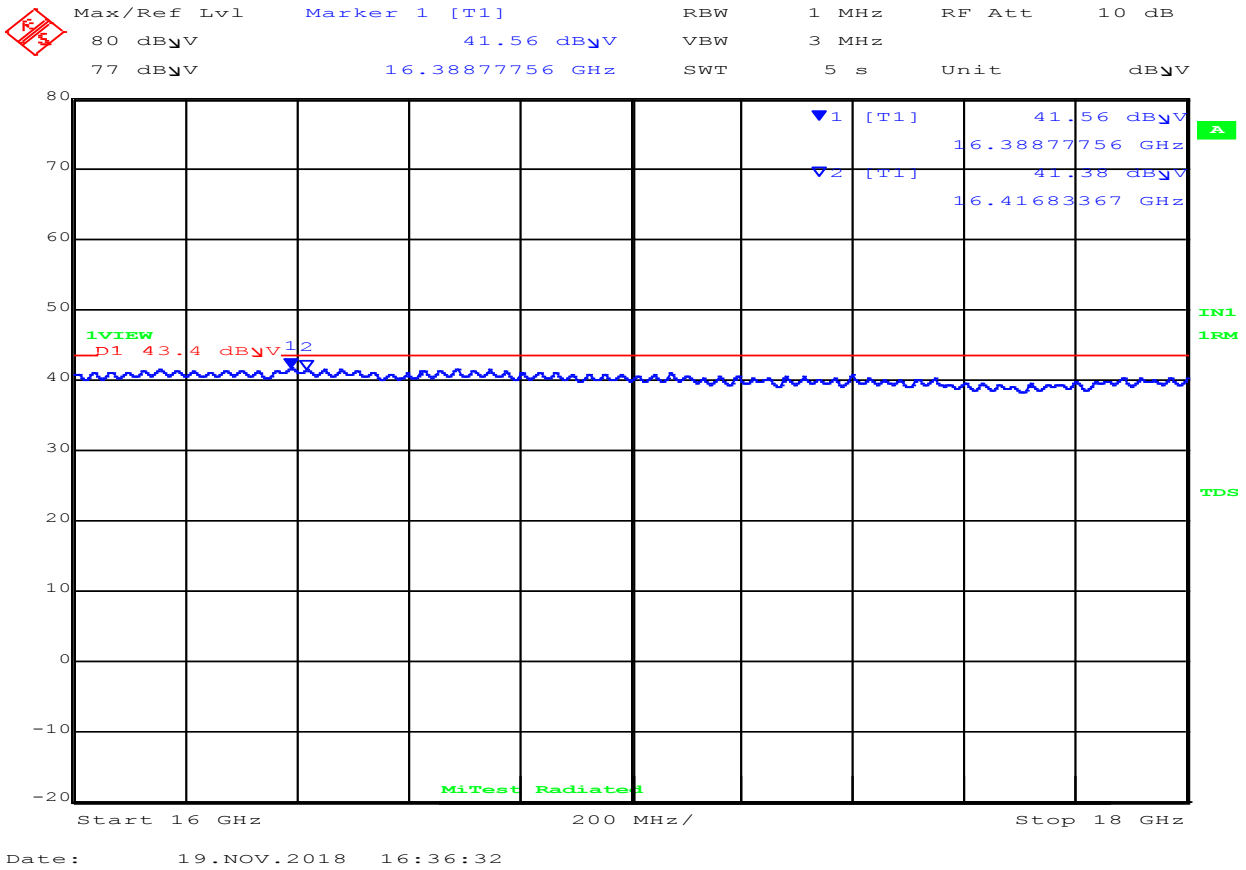
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Horizontal

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Horizontal

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16388.8	40.5	Average	Horizontal	150	0	43.4	-2.5	Pass
2	16416.8	40.3	Average	Horizontal	150	0	43.4	-3.1	Pass

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)

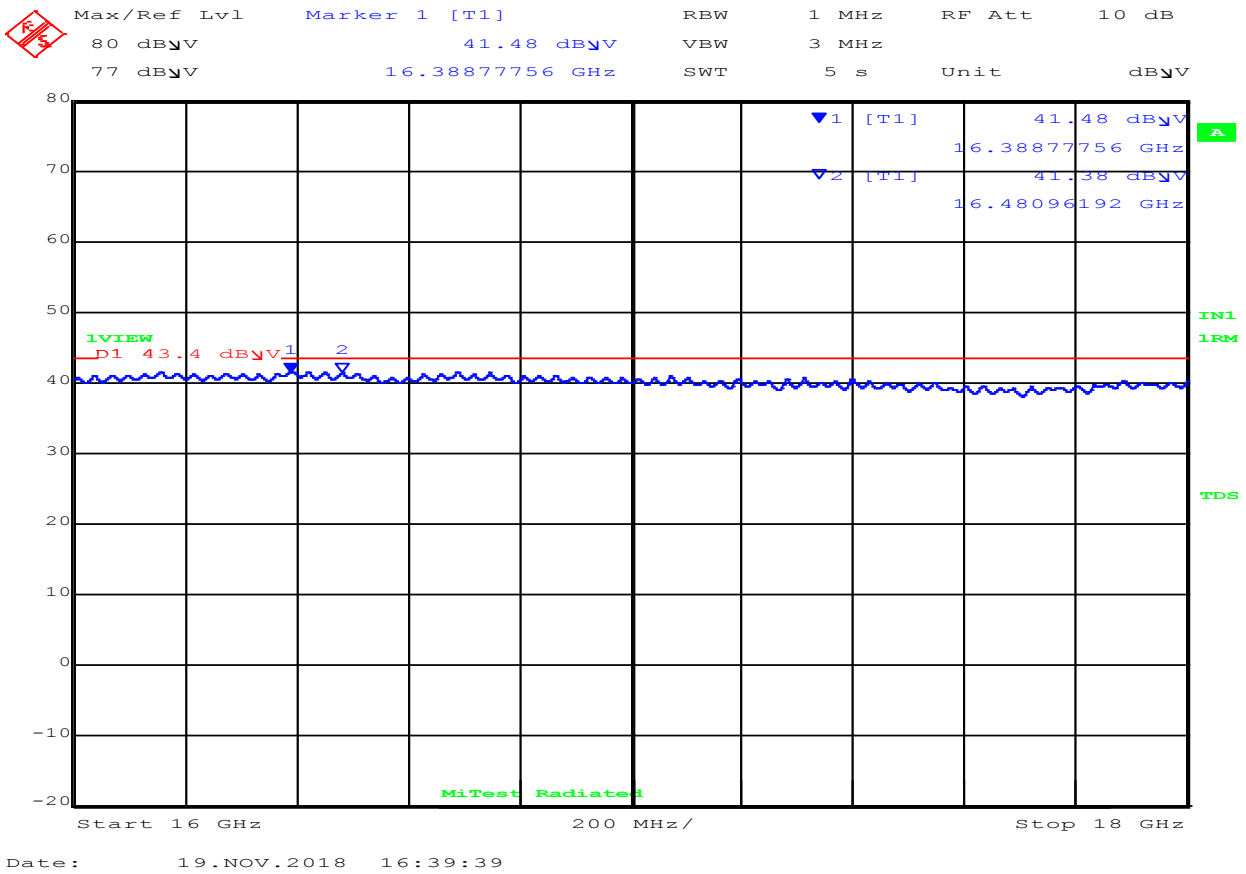
Equipment Configuration for Spurious Emissions 16.0 – 18.0 GHz Vertical

Antenna:	Chip	**Variant:**	500 MHz Bandwidth
Antenna Gain (dBi):	1.0	**Modulation:**	BPM/BPSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99%
Channel Frequency (MHz):	3432.00	**Data Rate:**	
Power Setting:	Max	**Tested By:**	JMH

Test Measurement Results

RADIATED SPURIOUS EMISSIONS 16-18GHz Vertical

Test Freq: 3432 MHz, Antenna: integral, Power Setting: 0, Duty Cycle (%): 99



16000.00 – 18000.00 GHz									
Num	**Frequency MHz**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
1	16388.8	40.5	Average	Vertical	150	0	43.4	-2.9	Pass
2	16481.0	40.3	Average	Vertical	150	0	43.4	-3.1	Pass

Test Notes:
Laptop connected via 10ft USB cable with Ferrites (TDK ZCAT-330-1236 and Fair-Rite Type 61 with one turn at each end)