SENSUS METERING SYSTEMS INC.

TEST REPORT

SCOPE OF WORK
RADIO TESTING –C2PC SDBSNUSCM1 / 2220A-SNUSCM1 – PART 27/RSS-130/RSS-139

REPORT NUMBER
106310015ATL-007C

ISSUE DATE
20 February 2026

REVISED DATE
05 March 2026

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37

DOCUMENT CONTROL NUMBER
Non-Specific Radio Report Shell Rev. January 2025

RADIO TEST REPORT

Report Number:	**106310015ATL-007C**
Project Number:	**G106310015**
Report Revision Date:	**05 March 2026**
PMN:	**SNUSCM1**
Model/HVIN:	**GM02S**
FCC ID:	**SDBSNUSCM1**
IC:	**2220A-SNUSCM1**
Standards:	**47 CFR Part 27, Subpart C** **RSS-130, Issue 2** **RSS-139, Issue 4** **ANSI C63.26-2015** **RSS-GEN, Issue 5**

Test Location

Intertek
1950 Evergreen Blvd., Suite 100
Duluth, GA 30096 USA
FCC Designation: US1046
ISED CAB Designator: US0128
ISO 17025 A2LA Accreditation: 1455.01

Client

Sensus Metering Systems Inc.
639 Davis Drive
Morrisville, NC 27560 USA

Report prepared by

Jeremy Pickens / Senior Staff Engineer

Report reviewed by

Michael Carlson / Staff Engineer

Table of Contents

1 Introduction and Conclusion

The tests indicated in Section 2 were performed on the product constructed as described in Section 4. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested **complies** with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested. Intertek does not make any claims of compliance for samples or variants which were not tested.

2 Test Summary

Section	Test Description	Test Specification		Result
		FCC Rule Part	ISED RSS	
6	RF Output Power	2.1046 27.50	RSS-GEN S6.12 RSS-130 S4.6 RSS-139 S5.5	Compliant
7	Spurious Emissions at Antenna Terminals	2.1051 27.53	RSS-Gen S6.13 RSS-130 S4.7 RSS-139 S5.6	Compliant
8	Field Strength of Spurious Emissions	2.1053 27.53	RSS-Gen S6.13 RSS-130 S4.7 RSS-139 S5.6	Compliant

3 Client Information

This evaluation was performed at the request of:

Client: Sensus Metering Systems Inc.
639 Davis Drive
Morrisville, NC 27560 USA

Contact: James Francisco

Email: James.Francisco@xylem.com

4 Description of Equipment Under Test and Variant Models

Manufacturer: Sensus Metering Systems Inc.
639 Davis Drive
Morrisville, NC 27560 USA

Equipment Under Test			
Description	**Manufacturer**	**Model Number (HVIN)**	**Serial Number**
Transceiver Module	Sensus Metering Systems Inc.	525M	125852894[1] 125852916[2]
Cellular Modem	Sequans	GM02S	IMEI: 359197352743240[1] IMEI: 359197352743042[2]

1) Conducted Measurements
2) Radiated Measurements

Receive Date:	03 September 2025
Received Condition:	Good
Type:	Production

Description of Equipment Under Test
The equipment under test was the 525M SmartPoint that incorporates a Sensus FLEXNET 900MHz transceiver, a sub-GHz 902-928MHz DTS transceiver, and a Cat M / NBIoT cellular modem. The device does not support simultaneous transmission among the radios. The SmartPoint® 525M pit set module is a radio transceiver designed for use in submersible, pit set environments. With true two-way communication ability, it serves as a walk-by end point, drive-by end point, fixed-base end point or any combination of those. This versatility gives you highly flexible data collection options and simplifies both current operations and network evolution.

Certification Purpose
This test report is to support a Class II Permissive Change of the cellular modem (FCC ID: SDBSNUSCM1 / IC: 2220A-SNUSCM1) to address a trace layout change to an onboard antenna. Testing related to the sub-GHz radios are documented in separate test reports.

Equipment Under Test Power Configuration			
Rated Voltage	**Rated Current**	**Rated Frequency**	**Number of Phases**
3.65Vdc	1.1A	NA	NA

Operating modes of the EUT

No.	Descriptions of EUT Exercising
1	The on-board eSIM was programmed as a test SIM. Using FieldLogic NAMU software, commands were sent over USB and then over the air via an NFC Smart Card Reader. The EUT was configured in a regulatory mode to allow constant connection to a CMW-500 communications test set. The CMW was used to control the band, mode, and channel, and force the radio to transmit at max power.

Test Channels						
FCC Rule Part	ISED RSS	LTE Band	Frequency Band (MHz)	Channel Location	Test Frequency (MHz)	
					CatM	NBIoT
27	RSS-139	4	1710-1755	Low	1712.5	1710.2
				Middle	1732.5	1732.5
				High	1752.5	1754.8
27	RSS-130	12	699-716	Low	701.5	699.2
				Middle	707.5	707.5
				High	713.5	715.8
27	RSS-130	13	777-787	Low	779.5	777.2
				Middle	782	782
				High	784.5	786.8
27	RSS-130	17	704-716	Low	706.5	704.2
				Middle	710	710
				High	713.5	715.8
27	RSS-139	66	1710-1780	Low	1712.5	1712.5
				Middle	1745	1745
				High	1777.5	1777.5

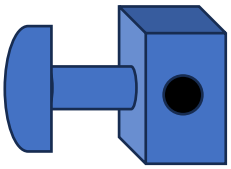
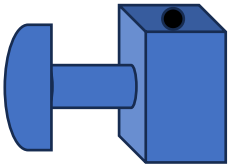
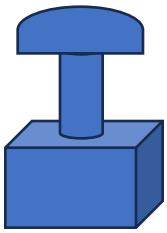
1) Note: For spurious emissions, bands 12 and 66 were used as supersets of bands 17 and 4.

Software used by the EUT

No.	Description of Control Software
1	FieldLogic NAMU 2.4.34.14

Radio/Receiver Characteristics (Bands 4/12/13/17/66)	
Frequency Ranges	699-716MHz, 777-787MHz, 1710-1780MHz
Modulation Type(s)	CatM: QPSK / 16QAM NBIoT: π/2 BPSK / π/4 QPSK
Maximum Output Power (Conducted):	25dBm (0.316W) – Including tune up tolerance
Power Setting	Max
MIMO Information (# of Transmit and Receive antenna ports)	1 (SISO)
Equipment Type	Full Module
Antenna Type and Gain	PCB Patch Antenna – Peak Gain by Band: LTE Band 4 (+2.6dBi) LTE Band 12 (+0.0dBi) LTE Band 13 (+1.0dBi) LTE Band 17 (+0.0dBi) LTE Band 66 (+3.2dBi)

Note: The worst-case CatM configuration from the original certification was with a 5MHz cell bandwidth, QPSK modulation, and 1RB Pos 0. For NBIoT, the worst-case setting was 12kHz bandwidth, π/4 QPSK, and 3 tones. The worst-case orientation for radiated field strength measurements was the Z-Axis.

X-Axis	Y-Axis	Z-Axis
		

5 System Setup and Method

Cables					
ID	**Description**	**Length (m)**	**Shielding**	**Ferrites**	**Termination**
1	DC Power	10.0	None	None	DC Power Supply

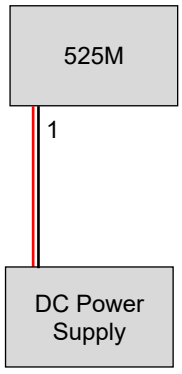
System Configuration			
Description	**Manufacturer**	**Model Number**	**Serial Number**
Transceiver Module	Sensus Metering Systems Inc.	525M	125852894[1] 125852916[2]
Cellular Modem	Sequans	GM02S	IMEI: 359197352743240[1] IMEI: 359197352743042[2]
DC Power Supply	Kikusui	PAS 60-18	ML000349

1) Conducted Measurements
2) Radiated Measurements

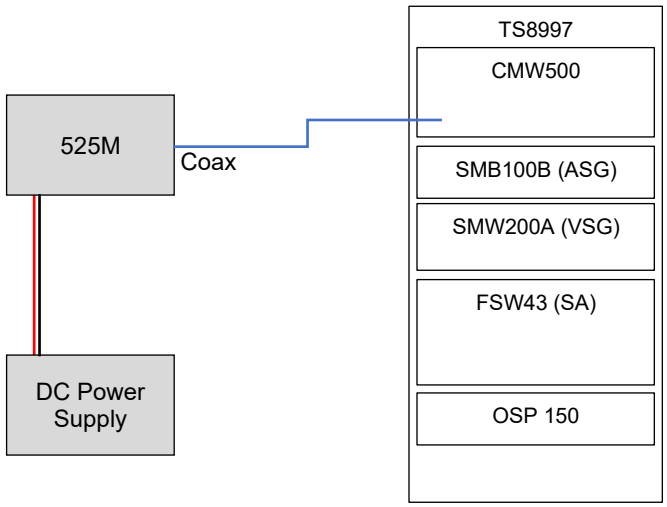
5.1 Method

Configuration as required by ANSI C63.26.

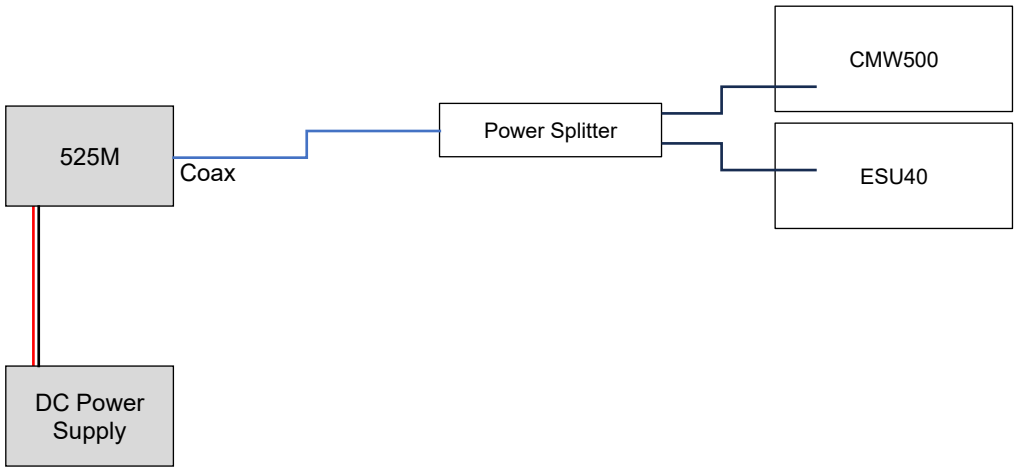
5.2 EUT Block Diagram – Radiated Measurements



5.3 EUT Block Diagram – Conducted Measurements (Power)



5.4 EUT Block Diagram – Conducted Measurements (Spurious Emissions)



6 RF Output Power

6.1 Method

The methods defined in ANSI C63.26, Sections 5.2.4.2 were applied for measuring the average (RMS Burst) output power. The antenna port was connected directly to a CMW500 through a coaxial cable. THE CMW was configured with both the signaling and measurement capabilities. The attenuation was accounted for by applying an offset on the CMW.

TEST SITE: RF Bench

The RF bench consists of a Rohde & Schwarz TS8997 automated test system coupled with a temperature/humidity environmental chamber. Where applicable, 2.4 and 5GHz radio measurements are automated using the Rohde & Schwarz EMC32 test software. The TS8997 system houses a switch matrix (OSP), along with a spectrum analyzer, vector network analyzer, and analog signal generator.

6.2 Test Equipment

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
212165	Temperature/Humidity/Pressure Sensor	Extech	SD700	110344	04/29/2025	04/29/2026
213500	Analog Signal Generator (8kHz-40GHz)	Rohde & Schwarz	SMB100B	106096	08/20/2024	08/20/2026
213499	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	172359	08/08/2025	08/08/2027
213503-01	Megaphase	OSP DUT Cable 1	KC12-K1K1-80	20815001 001	VBU	VBU

Software Utilized

Name	Manufacturer	Version
CMW-KS300 NB-IOT SIG	Rohde & Schwarz	4.0.230.8
CMW-KS590 LTE MTC SIG	Rohde & Schwarz	4.0.230.5
CMW-KS500 LTE FDD R8 SIG BASIC	Rohde & Schwarz	4.0.230.5
CMW-KM300 NB-IOT R13/14 TX MEAS	Rohde & Schwarz	4.0.230.8
CMW-KM500 LTE FDD R8 TX MEAS	Rohde & Schwarz	4.0.230.5
CMW-KM550 LTE TDD R8 TX MEAS	Rohde & Schwarz	4.0.230.5

6.3 Results

The sample tested was found to Comply.

6.4 Test Data

FCC Rule Part / RSS	Frequency (MHz)	Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	FCC ERP/EIRP Limit (dBm)	ISED ERP/EIRP Limit (dBm)
CatM							
27 / RSS-139	1712.5	23.59	2.6	26.19	24.04	30.0	30.0
27 / RSS-139	1732.5	23.57	2.6	26.17	24.02	30.0	30.0
27 / RSS-139	1752.5	23.49	2.6	26.09	23.94	30.0	30.0
27 / RSS-130	701.5	23.38	0.0	23.38	21.23	44.8	44.8
27 / RSS-130	707.5	23.58	0.0	23.58	21.43	44.8	44.8
27 / RSS-130	713.5	23.59	0.0	23.59	21.44	44.8	44.8
27 / RSS-130	779.5	23.64	1.0	24.64	22.49	44.8	44.8
27 / RSS-130	782	23.70	1.0	24.70	22.55	44.8	44.8
27 / RSS-130	784.5	23.80	1.0	24.80	22.65	44.8	44.8
27 / RSS-130	706.5	23.57	0.0	23.57	21.42	44.8	44.8
27 / RSS-130	710	23.63	0.0	23.63	21.48	44.8	44.8
27 / RSS-130	713.5	23.65	0.0	23.65	21.50	44.8	44.8
27 / RSS-139	1712.5	23.65	2.6	26.25	24.10	30.0	30.0
27 / RSS-139	1745	23.65	2.6	26.25	24.10	30.0	30.0
27 / RSS-139	1777.5	23.60	3.2	26.80	24.65	30.0	30.0
NBIoT							
27 / RSS-139	1710.2	23.49	2.6	26.09	23.94	30.0	30.0
27 / RSS-139	1732.5	23.52	2.6	26.12	23.97	30.0	30.0
27 / RSS-139	1754.8	23.48	2.6	26.08	23.93	30.0	30.0
27 / RSS-130	699.2	23.42	0.0	23.42	21.27	44.8	44.8
27 / RSS-130	707.5	23.28	0.0	23.28	21.13	44.8	44.8
27 / RSS-130	715.8	23.61	0.0	23.61	21.46	44.8	44.8
27 / RSS-130	777.2	23.30	1.0	24.30	22.15	44.8	44.8
27 / RSS-130	782	23.36	1.0	24.36	22.21	44.8	44.8
27 / RSS-130	786.8	23.34	1.0	24.34	22.19	44.8	44.8
27 / RSS-130	704.2	23.28	0.0	23.28	21.13	44.8	44.8
27 / RSS-130	710	23.43	0.0	23.43	21.28	44.8	44.8
27 / RSS-130	715.8	23.25	0.0	23.25	21.10	44.8	44.8
27 / RSS-139	1712.5	23.28	2.6	25.88	23.73	30.0	30.0
27 / RSS-139	1745	23.37	2.6	25.97	23.82	30.0	30.0
27 / RSS-139	1777.5	23.34	3.2	26.54	24.39	30.0	30.0

Calculation: P_{EIRP} = Power + Antenna Gain (dBi) (LTE Bands 4/66)
P_{ERP} = Power + Antenna Gain (dBi) - 2.15 (LTE Bands 12/13/17)
2.15 is the conversion from EIRP to ERP

Test Personnel:	Jeremy Pickens	Test Date:	30 January 2026
		Ambient Temperature:	17.5ºC
Reference Standard:	ANSI C63.26	Relative Humidity:	18.2%
		Atmospheric Pressure:	97.9kPa

7 Spurious Emissions at Antenna Terminals

7.1 Method

The methods defined in ANSI C63.26, Section 5.7.3 were applied for measuring the out of band emissions. The antenna port was connected directly to a spectrum analyzer and CMW500 through cables and attenuator(s). Tile software was used to collect the data from the spectrum analyzer in ranges with the preselector active to prevent overloading. The RF path attenuation was accounted for by applying a correction factor to the data collected from the spectrum analyzer. The spectrum analyzer was configured with the following Resolution Bandwidth (RBW) settings:

Frequency Range (MHz)	RBW
30 – 1000	100 kHz
1000 – 10000	1 MHz

TEST SITE: 10-Meter Chamber Control Room

7.2 Test Equipment

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
200162	EMI Receiver (20Hz-40GHz)	Rohde & Schwarz	ESU 40	100314	10/07/2025	10/07/2026
212166	Temperature/Humidity/Pressure Sensor	Extech	SD700	110392	04/02/2025	04/02/2026
213499	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	172359	08/08/2025	08/08/2027
213500	Analog Signal Generator (8kHz-40GHz)	Rohde & Schwarz	SMB100B	106096	08/20/2024	08/20/2026
213502	Spectrum Analyzer (2Hz-43.5GHz)	Rohde & Schwarz	FSW43	102972	08/01/2024	08/01/2026
213503-01	Megaphase	OSP DUT Cable 1	KC12-K1K1-80	20815001 001	VBU	VBU
213503-02	Megaphase	OSP DUT Cable 2	KC12-K1K1-80	20815001 002	VBU	VBU
213503-03	Megaphase	OSP DUT Cable 3	KC12-K1K1-80	20815001 003	VBU	VBU
213507-06	Tojoin	6dB SMA Attenuator	6dB	240425	VBU	VBU
213530	Mini-Circuits	Power Divider	ZC2PD-5R263-S+	5383081	VBU	VBU

1) Note: The signal generator and spectrum analyzer were used to characterize the path losses.

Software Utilized

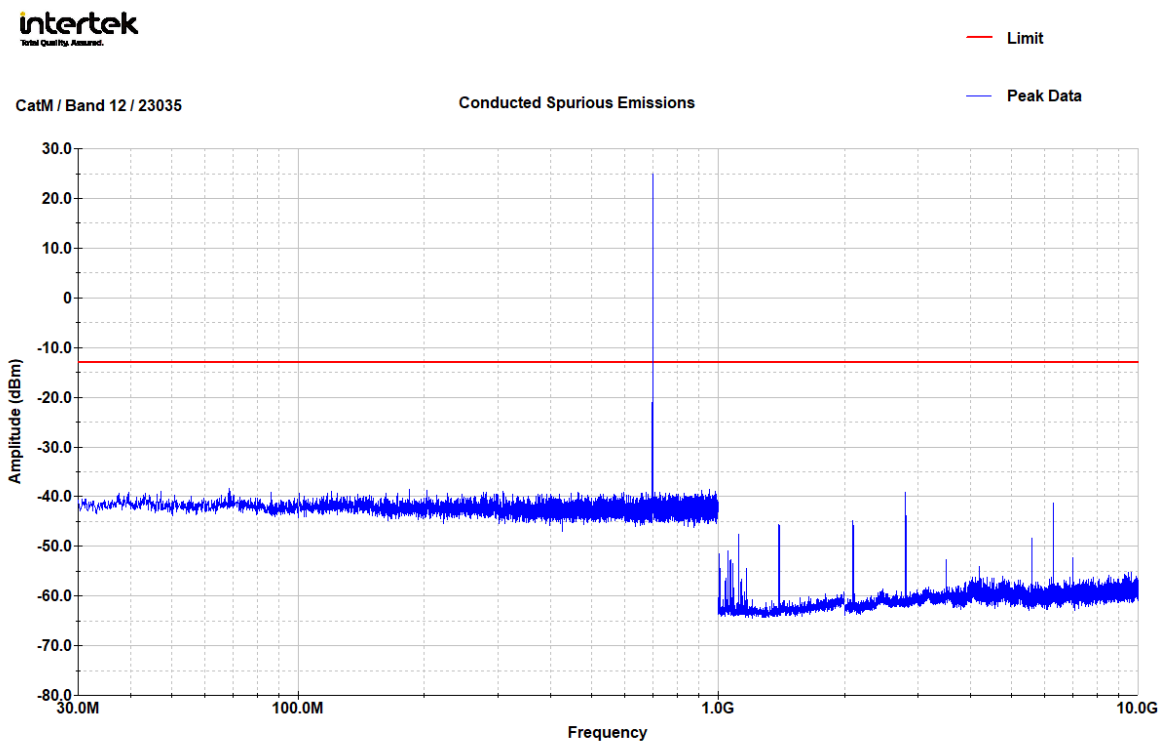
Name	Manufacturer	Version
Tile7	ETS-Lindgren	7.9.3.6

7.3 Results

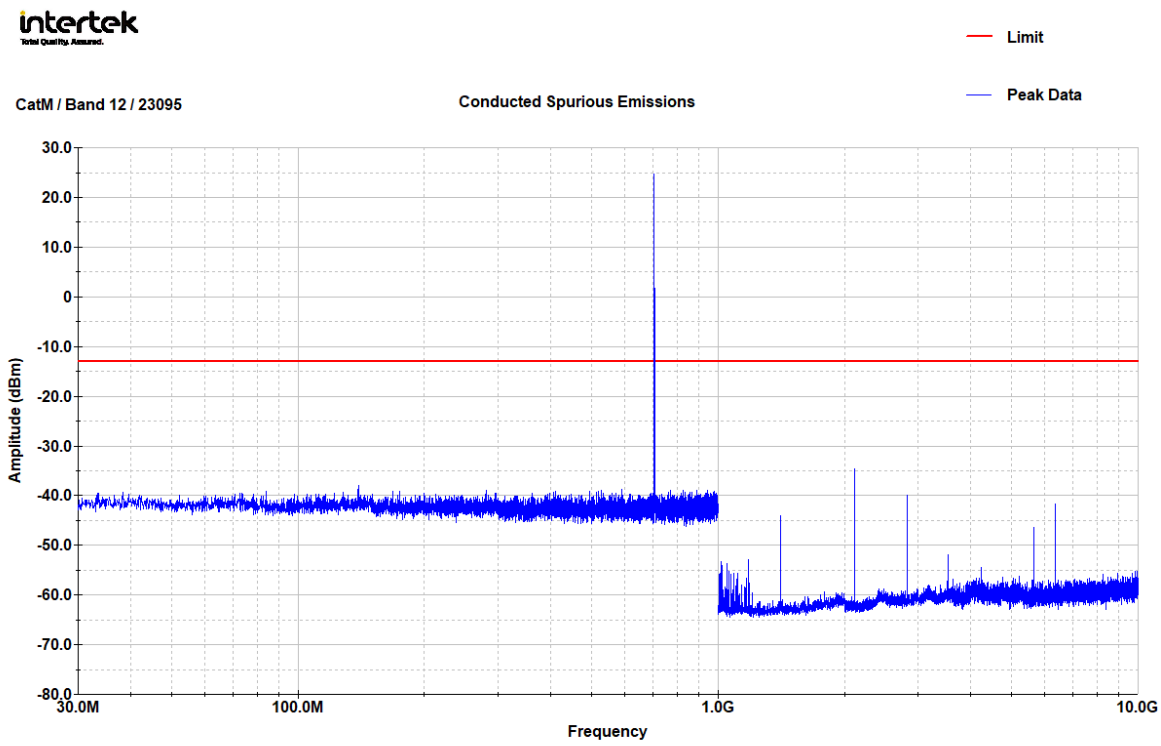
The sample tested was found to Comply.

7.4 Test Data

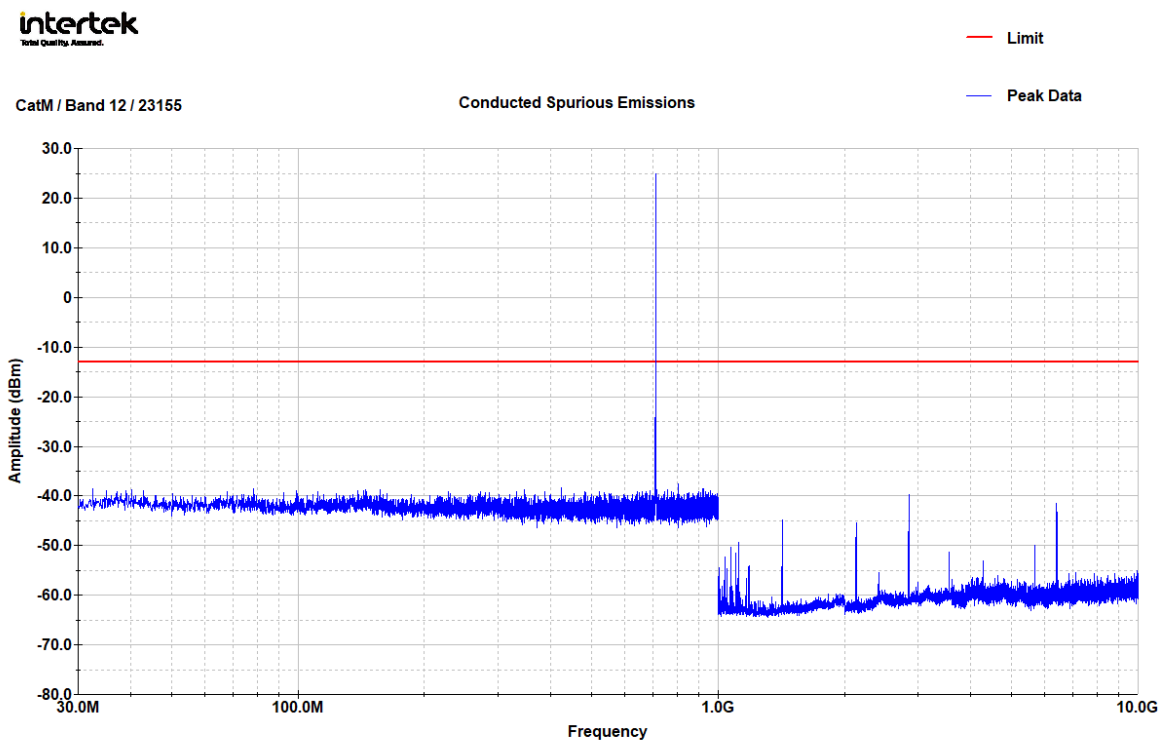
701.5MHz – CatM



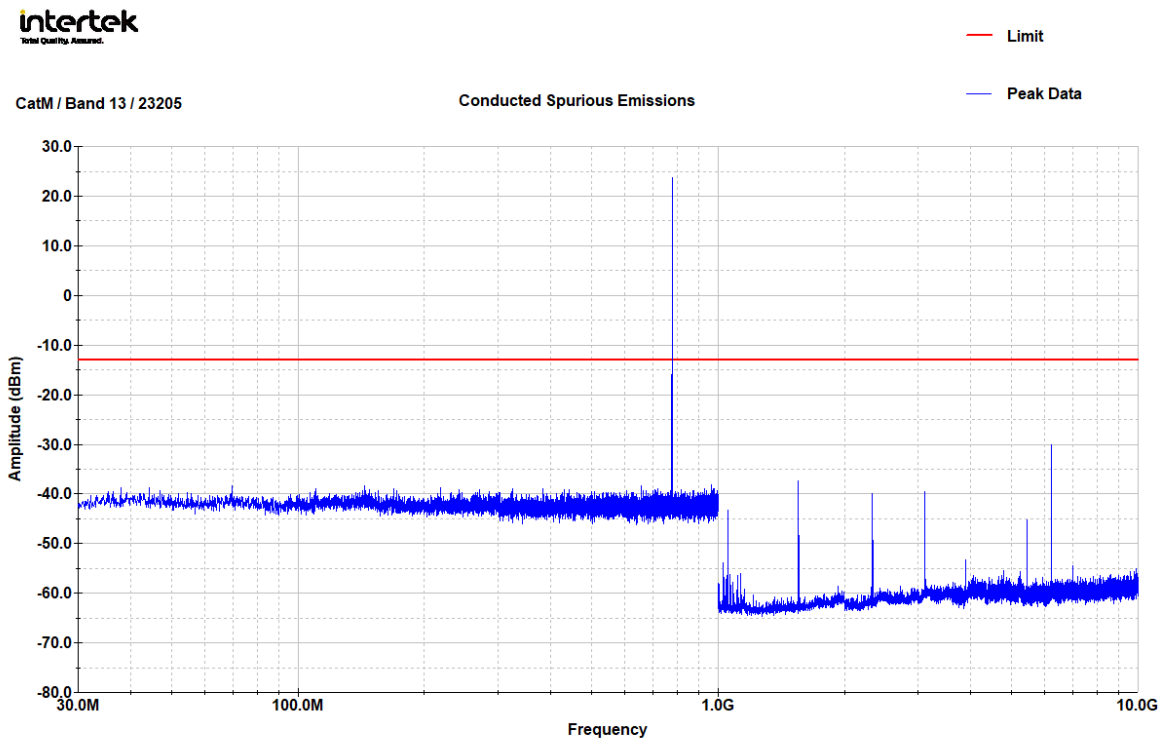
707.5 MHz – CatM



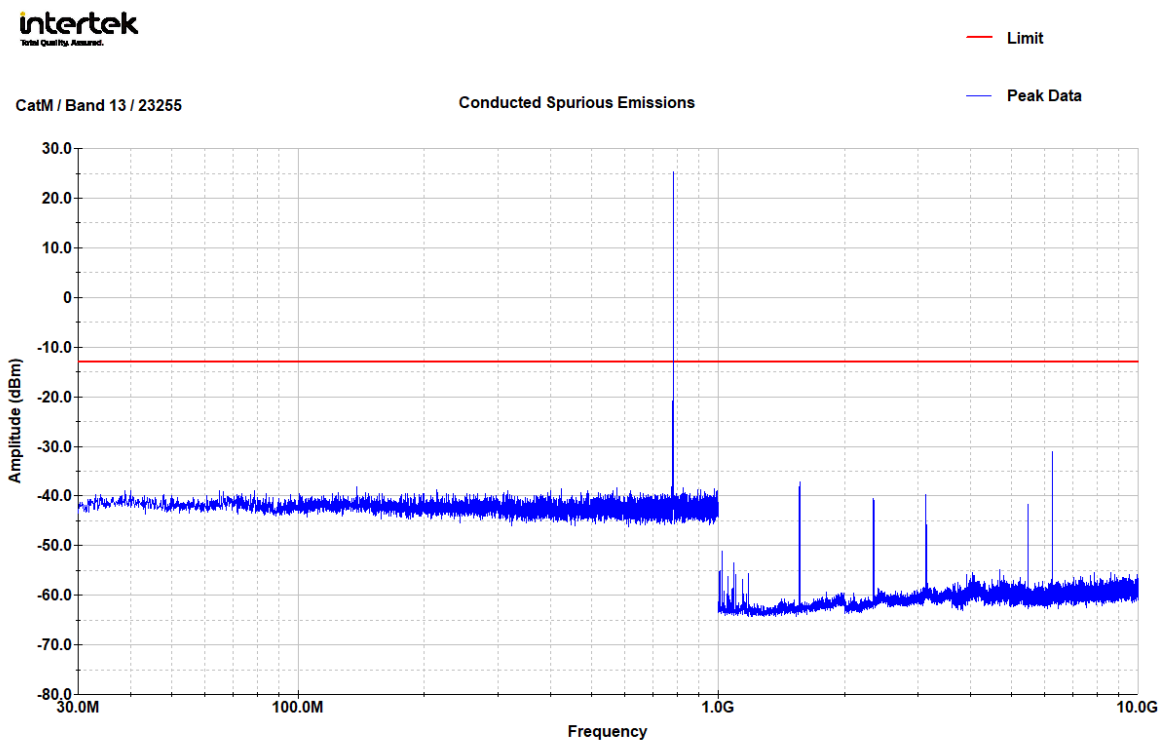
713.5 MHz – CatM



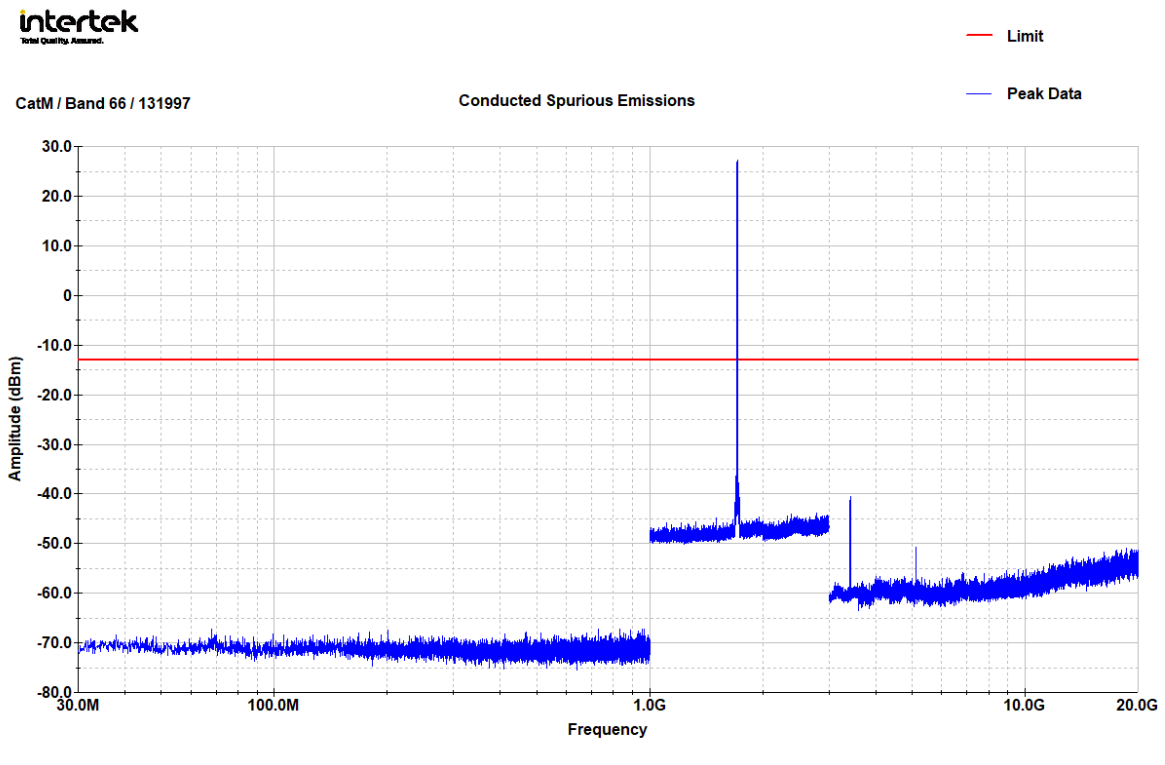
779.5 MHz – CatM



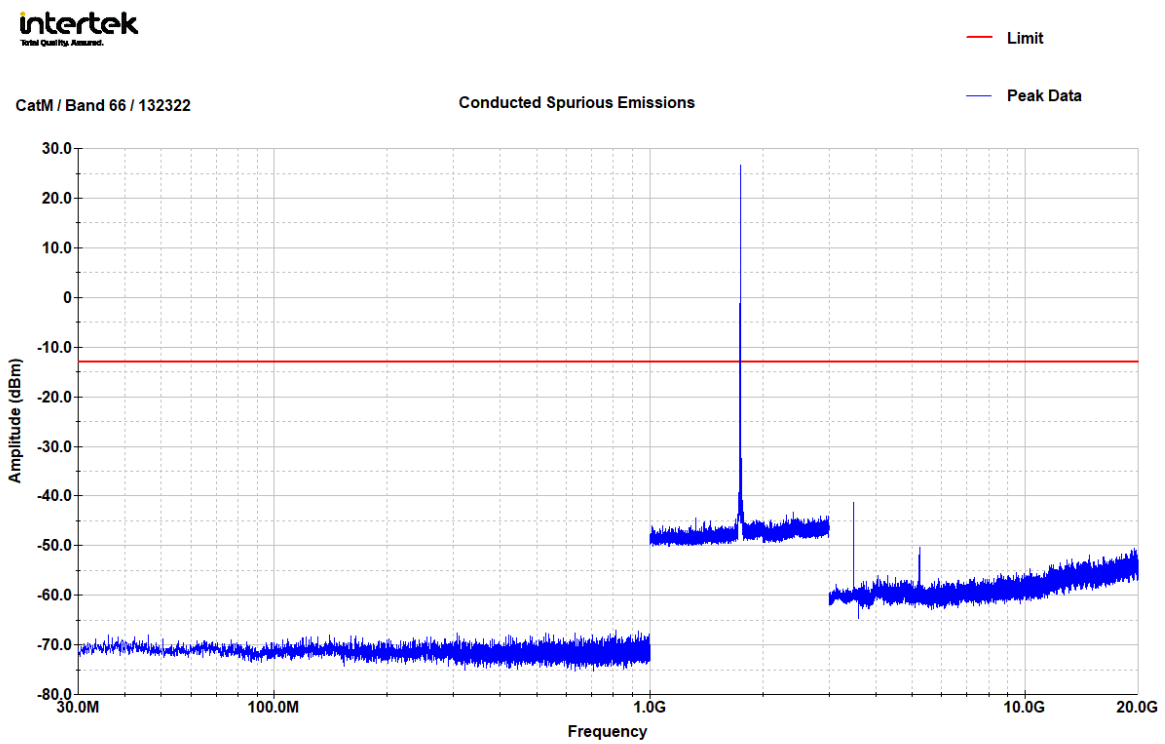
784.5 MHz – CatM



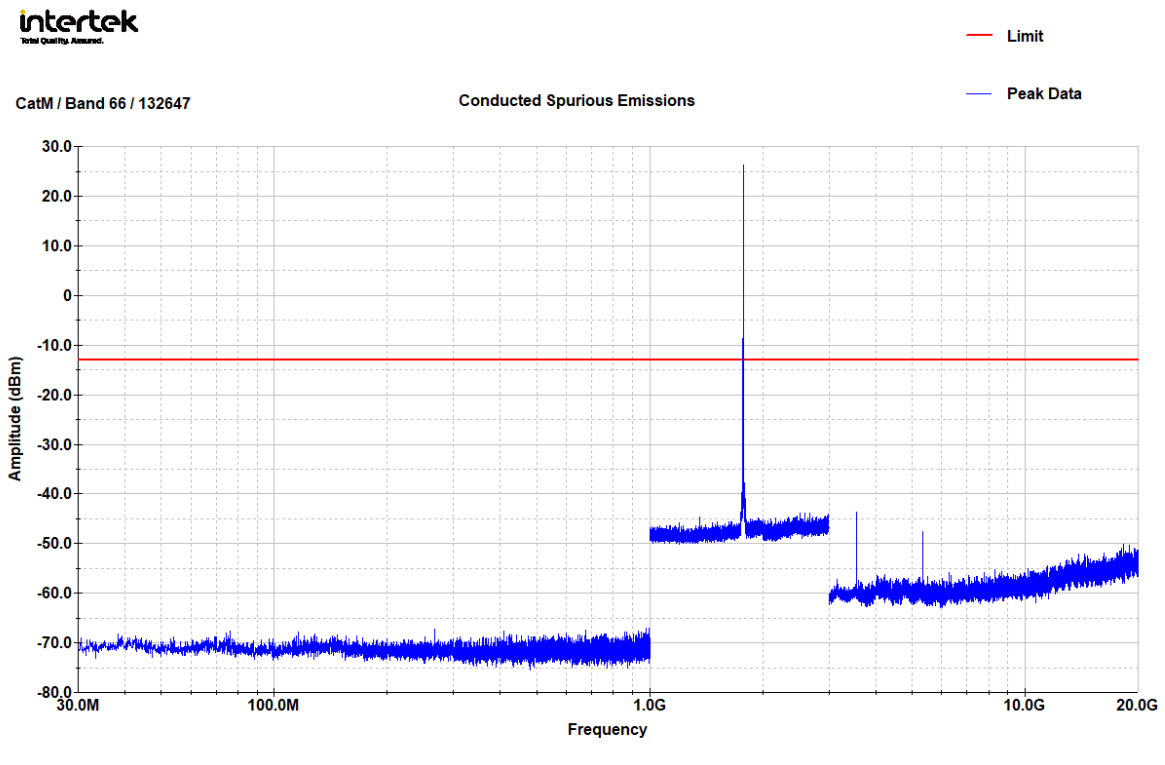
1712.5 MHz – CatM



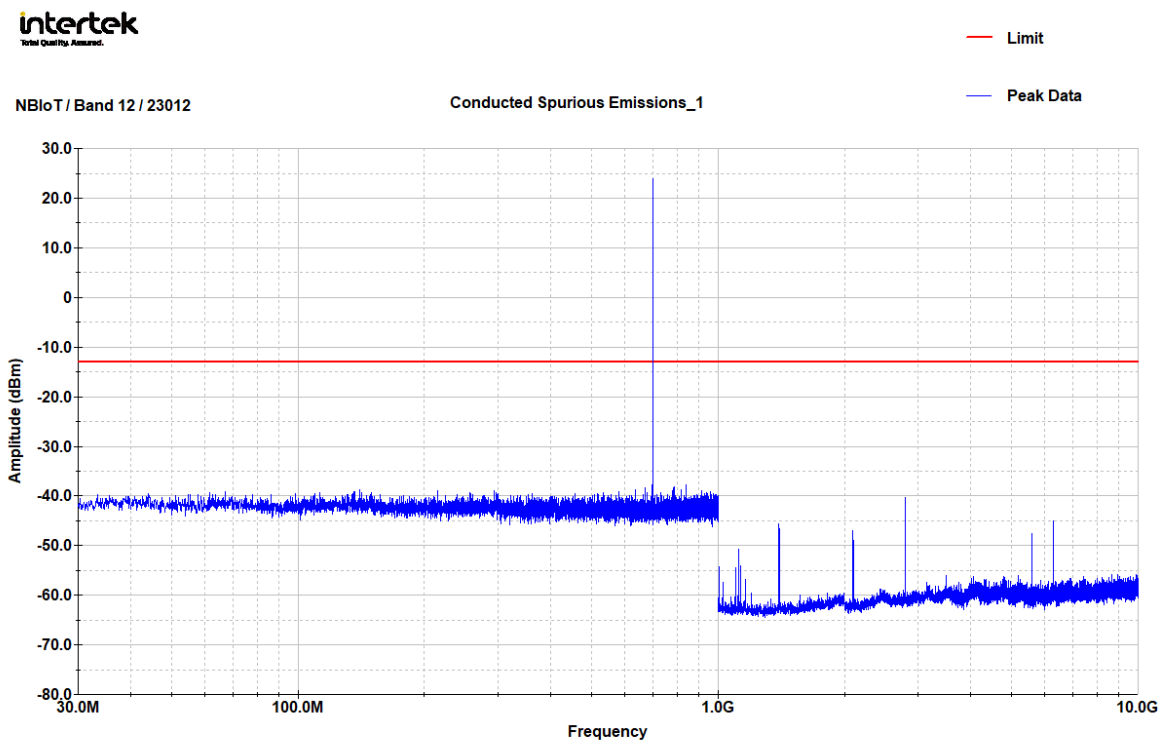
1745 MHz – CatM



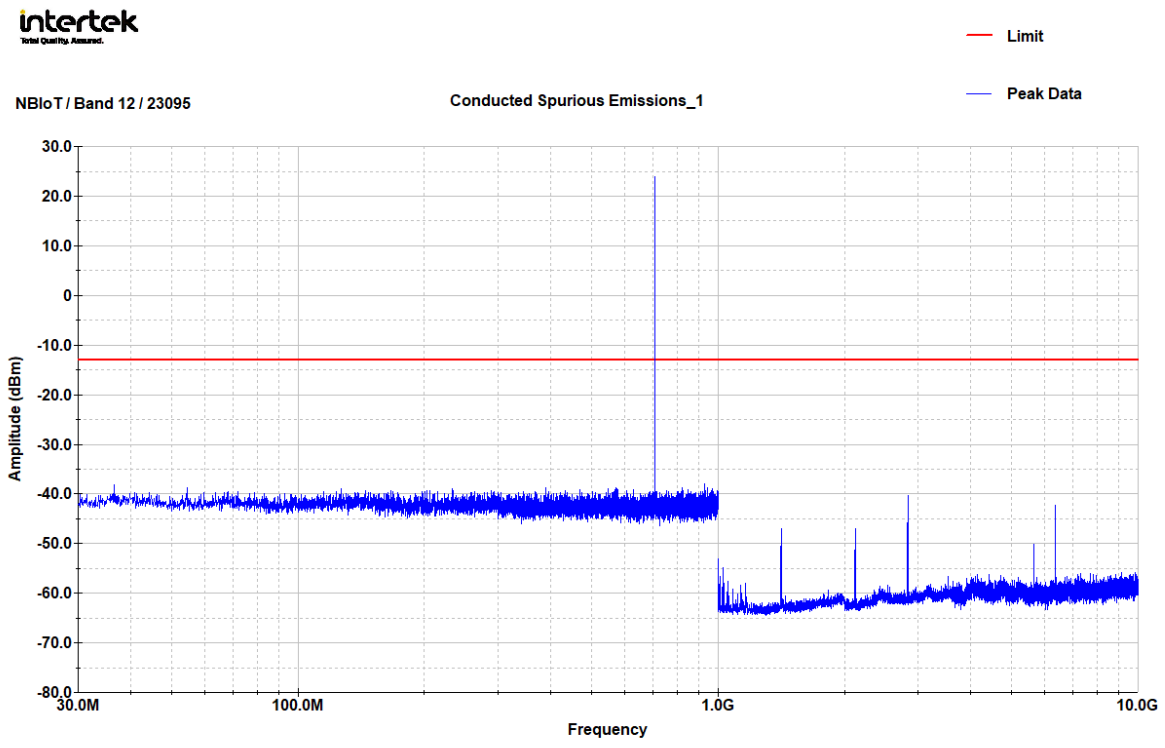
1777.5 MHz – CatM



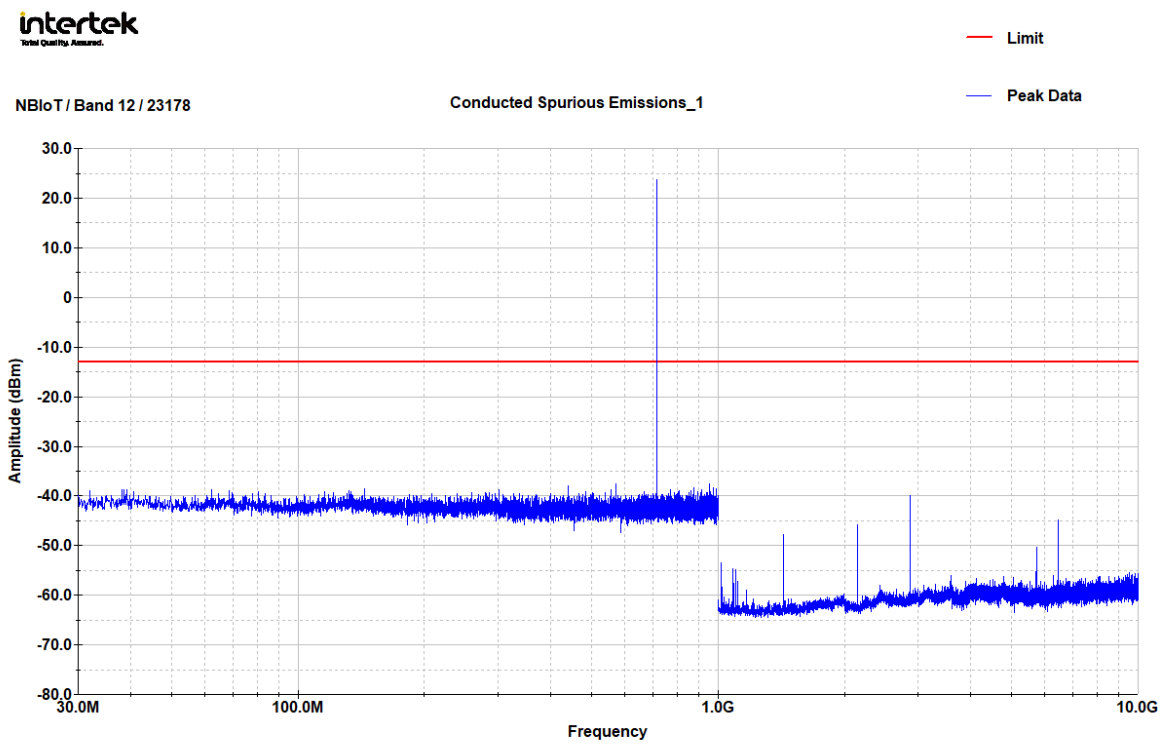
699.2 MHz – NBIoT



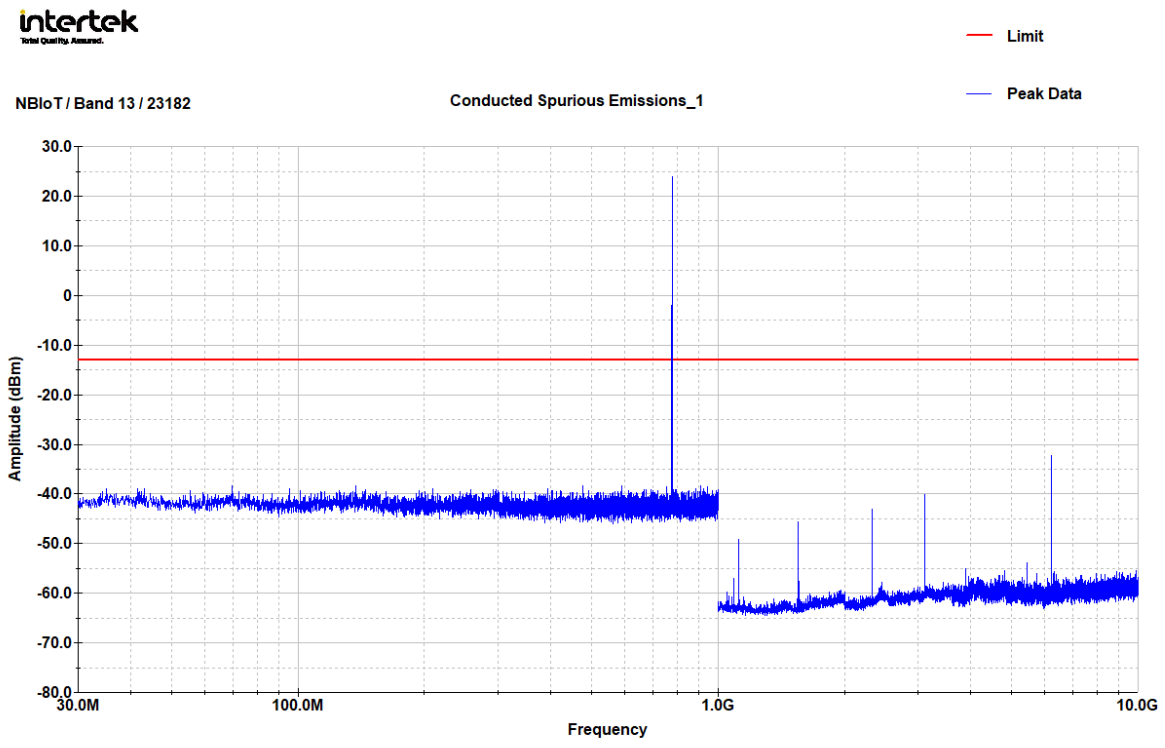
707.5 MHz – NBIoT



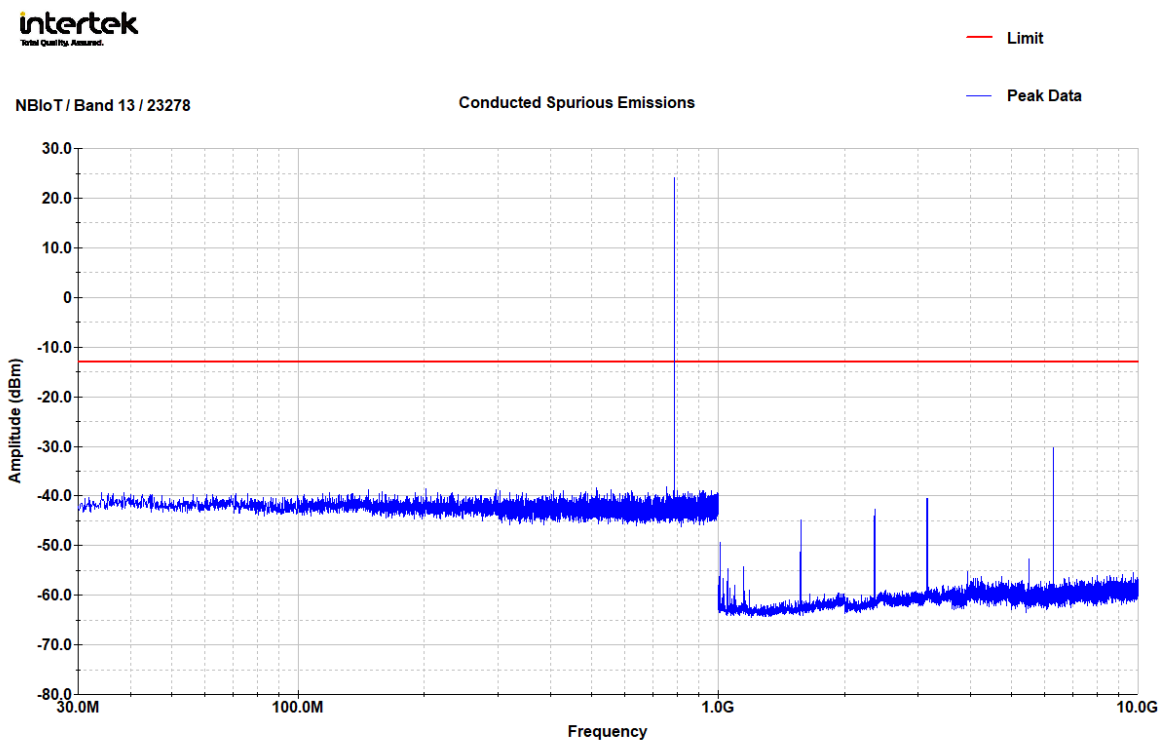
715.8 MHz – NBIoT



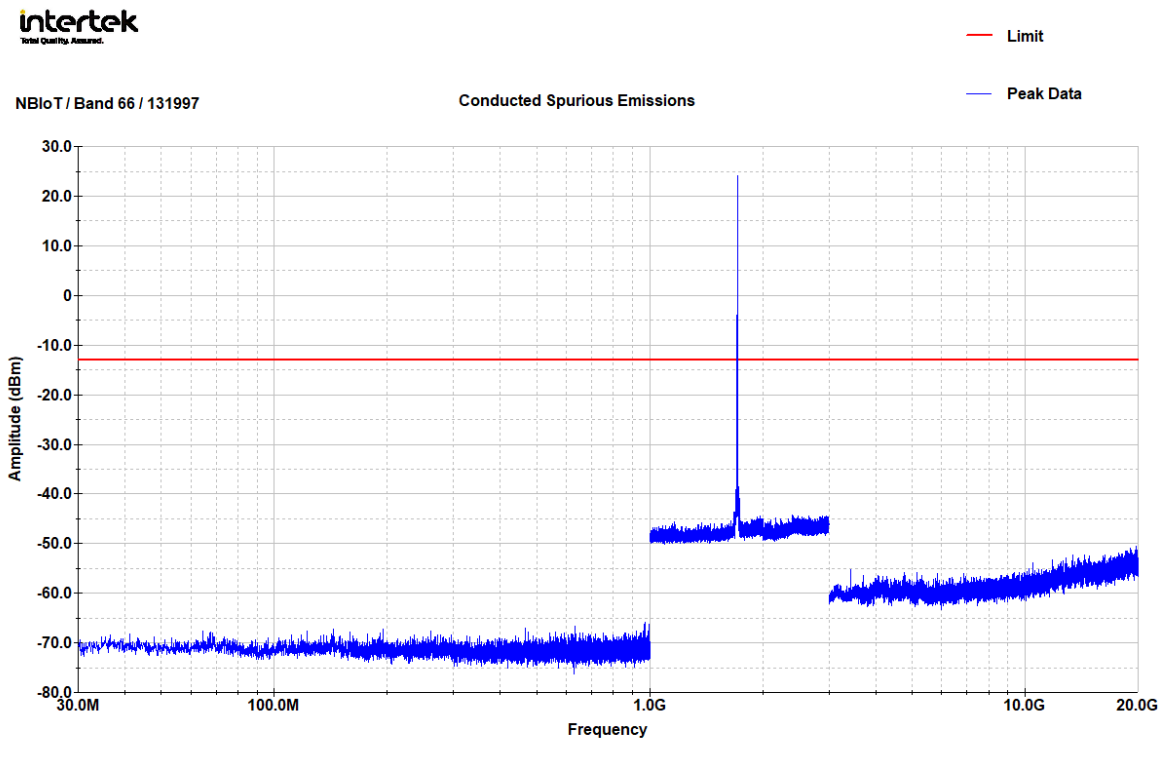
777.2 MHz – NBIoT



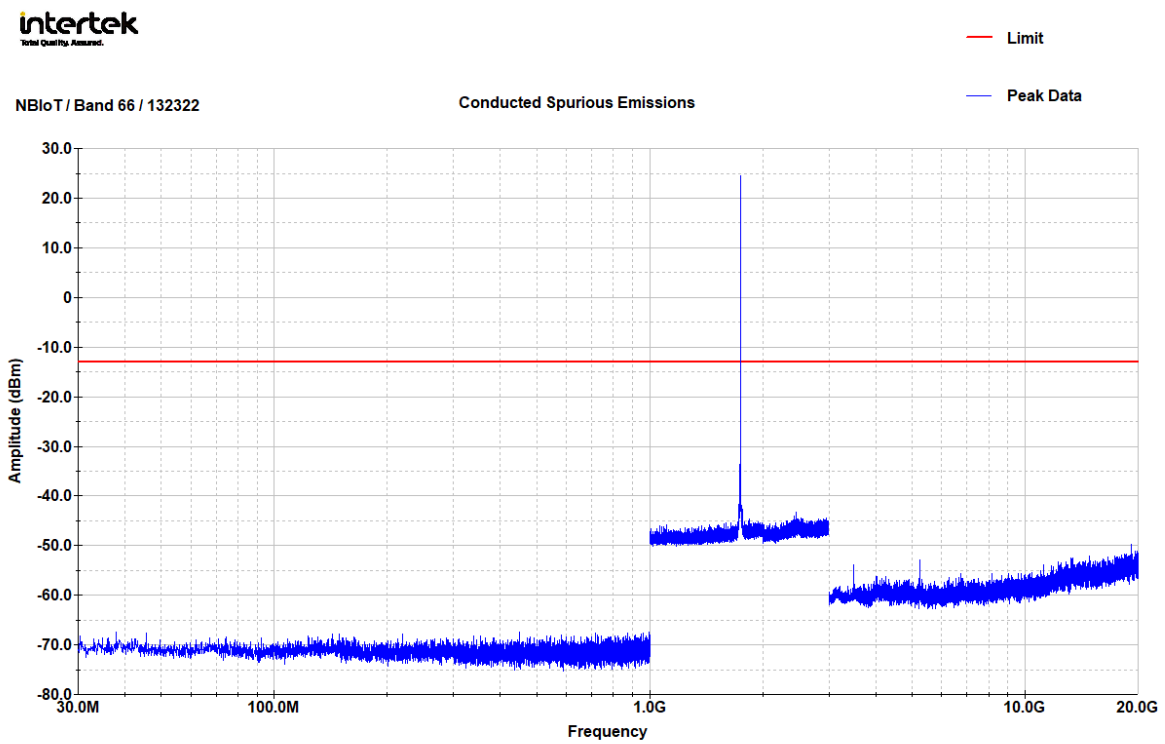
786.8 MHz – NBIoT



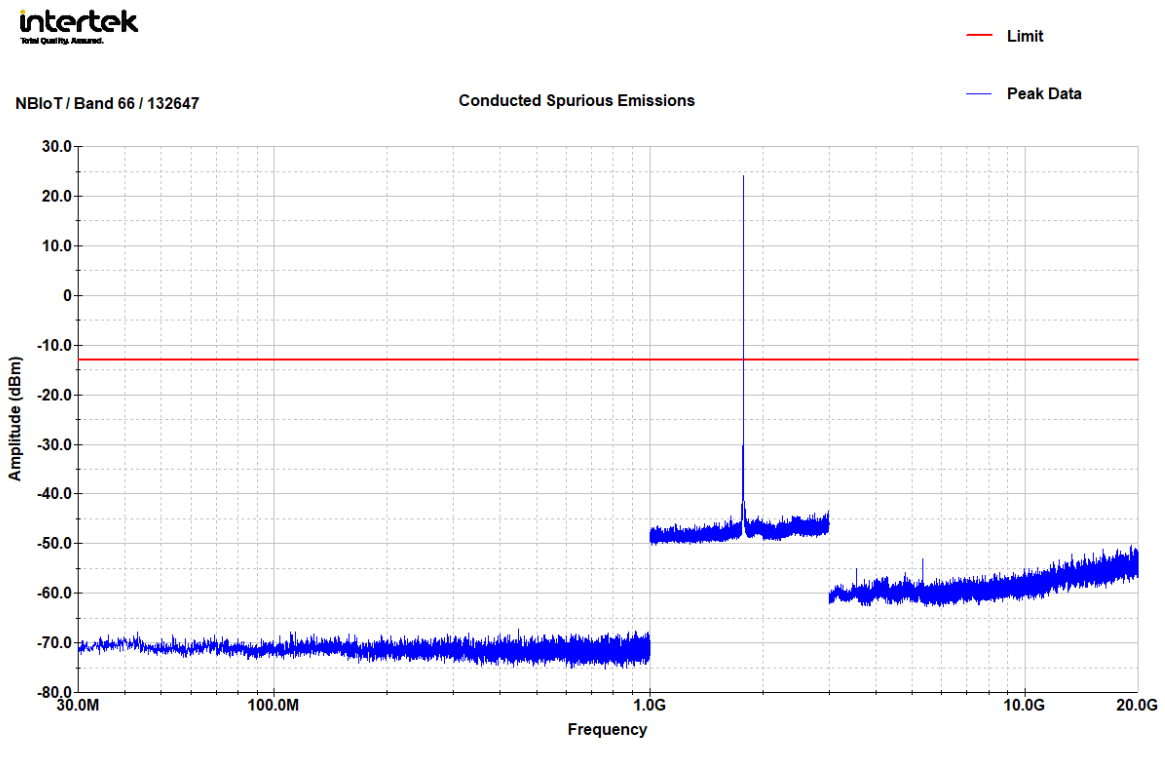
1712.5 MHz – NBIoT



1745 MHz – NBIoT



1777.5 MHz – NBIoT



Test Personnel:	Jeremy Pickens	Test Date:	03 February 2026
		Ambient Temperature:	19.1ºC
Reference Standard:	ANSI C63.26	Relative Humidity:	19.7%
		Atmospheric Pressure:	98. 3kPa

8 Field Strength of Spurious Emissions

8.1 Method

The field strength methods defined in ANSI C63.26, Section 5.5.4 were applied for measuring the radiated spurious emissions. The EUT was tested at a height of 0.8m for measurements below 1GHz and at 1.5 meters for measurements above 1GHz. Radiated field strength pre-scans were performed at a distance of 3 meters using a bandwidth of 200Hz (9kHz to 150kHz), 10kHz (15kHz-30MHz), 100kHz (30MHz-1GHz), and 1MHz above 1GHz. The video bandwidth (VBW) was set to at least 3 times the RBW. . The results were compared to the EIRP limits by applying a 95.2dB conversion to the applicable limit (e.g. -13dBm + 95.2 = 82.2dBµV/m at 3 meters). For tabular data, the resulting field strength measurements were converted to EIRP using the same 95.2dB correction and compared to the applicable EIRP limit.

TEST SITE: 10 Meter Chamber

10 Meter Semi-Anechoic Chamber The test site for radiated emissions is located at 1950 Evergreen Blvd, Suite 100, Duluth, Georgia 30096. It is a 10-meter semi-anechoic chamber manufactured by Panashield. Embedded in the floor is a 3-meter diameter turntable.

Sample Calculation

The field strength was calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

Correction = AF + CF - AG
FS = RA + Correction

Where FS = Field Strength in dBµV/m
RA = Receiver Amplitude (including preamplifier) in dBµV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

An example for the calculations in the following table is as follows.

Assume a receiver reading of 70.92 dBµV is obtained. The correction factor is calculated by adding the antenna factor of 26.26 dB and cable factor of 1.89 dB. The amplifier gain of 40.11 dB is subtracted, giving a correction factor of -11.96 dB/m. The correction factor is then added to the receiver amplitude resulting a field strength of 58.96dBµV/m.

RA = 70.92 dBµV
Correction = -11.96 dB/m
FS = 58.96 dBµV/m

To convert from field strength to EIRP, the following equations were used

$EIRP = (E \times d)^2 / 30$

Where: E = field strength in V/m
d = measurement distance in m
EIRP = equivalent isotropically radiated power in W

Working in dB units:

$EIRP_{dBm} = E_{dB\mu V/m} + 20\log(d_m) - 104.77$

For d = 3:

$EIRP_{dBm} = E_{dB\mu V/m} - 95.2$

Example

FS = 58.96 dBµV/m
$EIRP_{dBm}$ = 58.96 – 95.2 = --36.24 dBm

8.2 Test Equipment

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
200074	Preamplifier, 10 MHz to 2000 MHz	Mini-Circuits	ZKL-2	D052005	08/04/2025	08/04/2026
200162	EMI Receiver (20Hz-40GHz)	Rohde & Schwarz	ESU 40	100314	10/07/2025	10/07/2026
211262	Controller - Turntable and Mast	Sunol	SC99V	SC99V-1	VBU	VBU
211264	Mast - Antenna	Sunol	TWR95	NNN2	VBU	VBU
212166	Temperature/Humidity/Pressure Sensor	Extech	SD700	110392	04/02/2025	04/02/2026
213073	Antenna positioning tower	Sunol	TLT2	040314-5	VBU	VBU
213103	1GHz High Pass Filter	Micro-Tronics	HPM50108	140	06/18/2025	06/18/2026
213154A	3 GHz High Pass Filter	Filtek	HP12/3000-5AB	15B57-01	05/21/2025	05/21/2026
213451	Omni -directional Comb Generator	Com-Power	CGO-520	281266	VBU	VBU
213453	Preamplifier 500MHz-18GHz	Com-Power	PAM-118A	18040030	10/20/2025	10/20/2026
213058A	Antenna, Horn, <18 GHz	A.H. Systems	SAS-200/571	246	04/03/2025	04/03/2026
MM5	RF Coax Cable 9kHz-18GHz	Maury Microwave	UC-N-MM78	1514381	04/01/2025	04/01/2026
MM12	RF Coax Cable 9kHz-18GHz	Fairview Microwave	SCE18110505-600CM	MM12	09/11/2025	09/11/2026
MM36	RF Coax Cable 9kHz-18GHz	Maury Microwave	UC-N-MM36	16 32 10	06/18/2025	06/18/2026
MP10	RF Coax Cable 9kHz-18GHz	Fairview Microwave	FMCA1282-394	MP10	6/18/2025	06/18/2026
MP14	RF Coax Cable 9kHz-18GHz	Megaphase	EC29-N1N1-276-H	20938802	9/19/2025	09/19/2026

Software Utilized

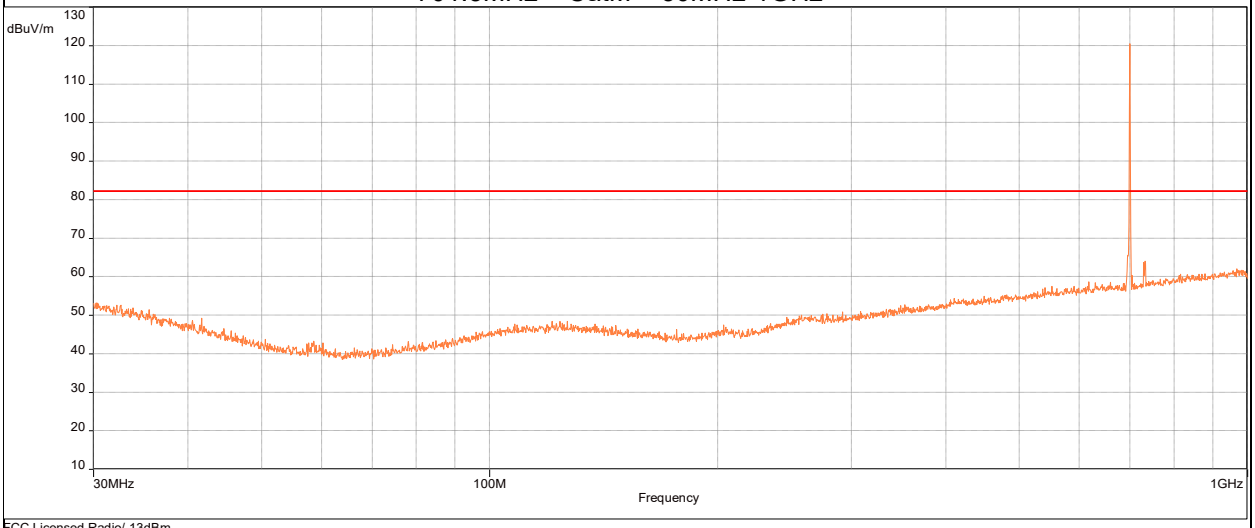
Name	Manufacturer	Version
BAT EMC	NEXIO	3.19.1.18

8.3 Results

The sample tested was found to Comply.

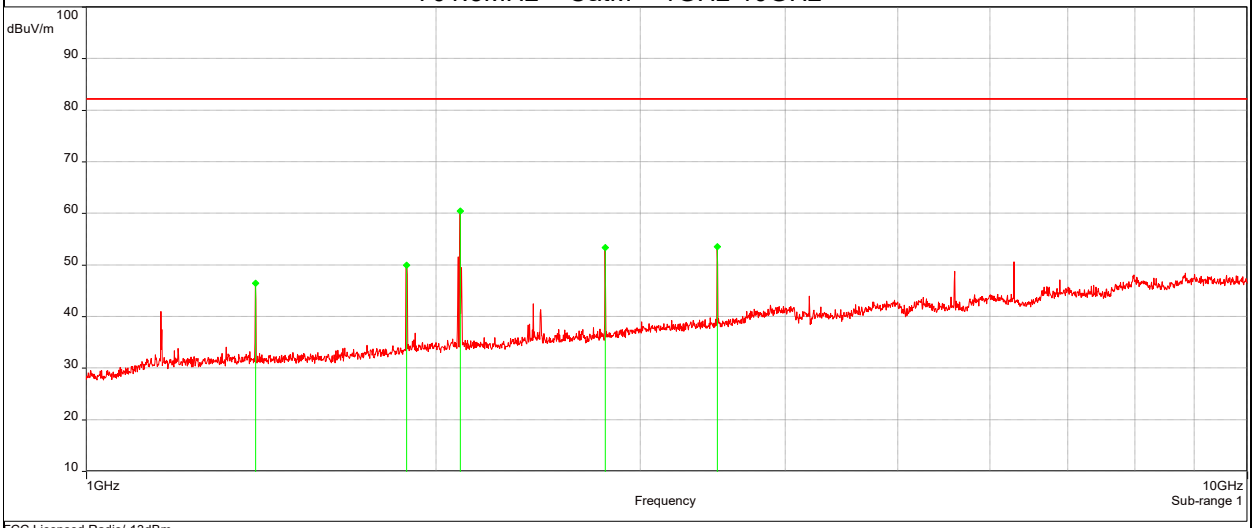
8.4 Plots/Data

701.5MHz – CatM – 30MHz-1GHz



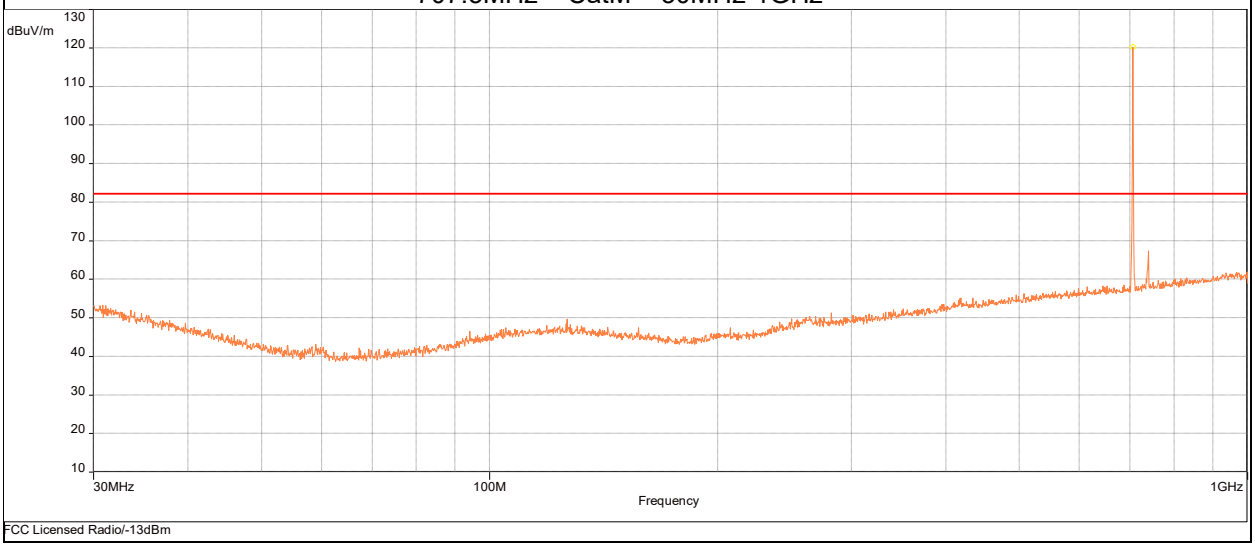
FCC Licensed Radio/-13dBm

701.5MHz – CatM – 1GHz-10GHz



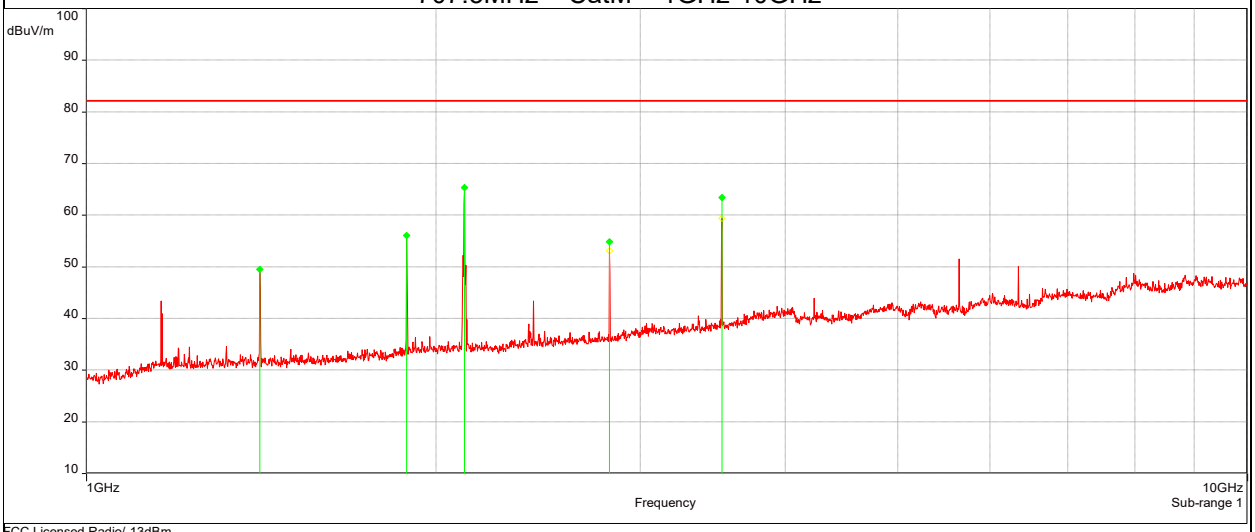
FCC Licensed Radio/-13dBm

707.5MHz – CatM – 30MHz-1GHz



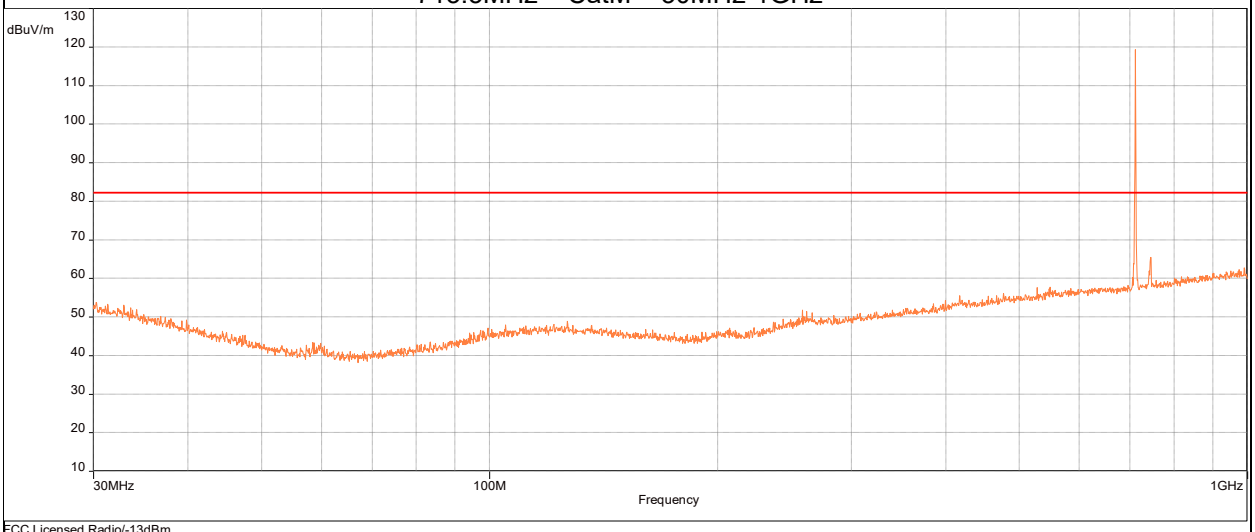
FCC Licensed Radio/-13dBm

707.5MHz – CatM – 1GHz-10GHz



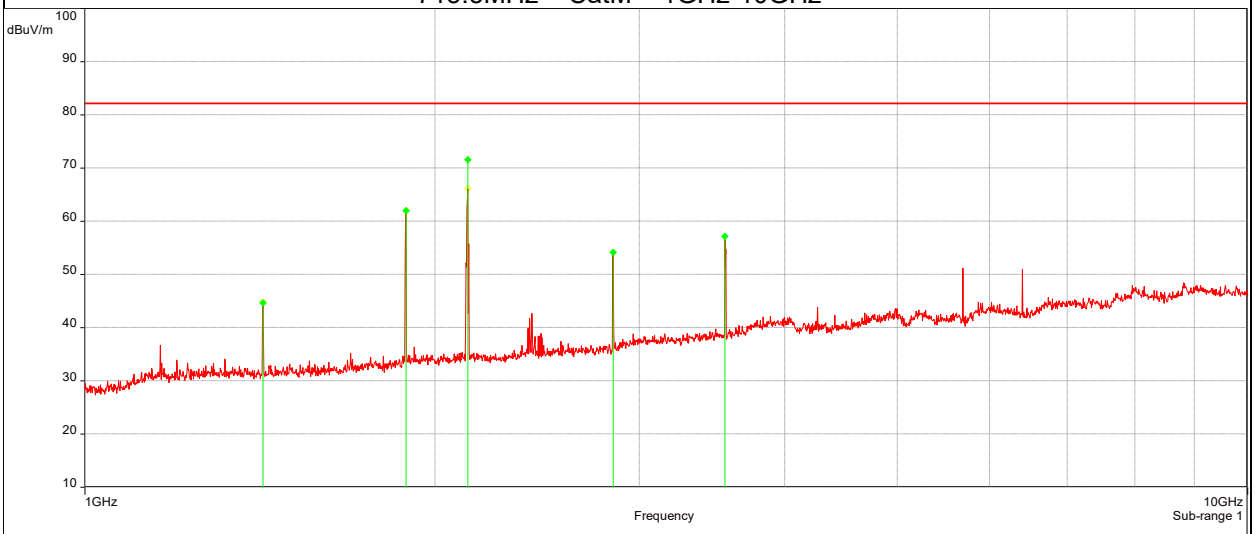
FCC Licensed Radio/-13dBm

713.5MHz – CatM – 30MHz-1GHz



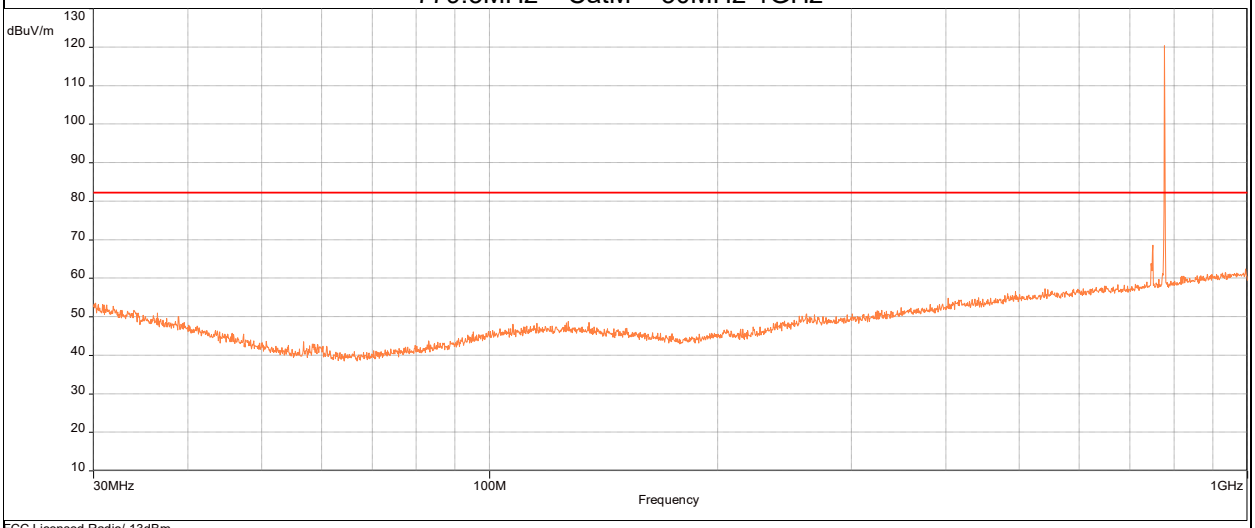
FCC Licensed Radio/-13dBm

713.5MHz – CatM – 1GHz-10GHz



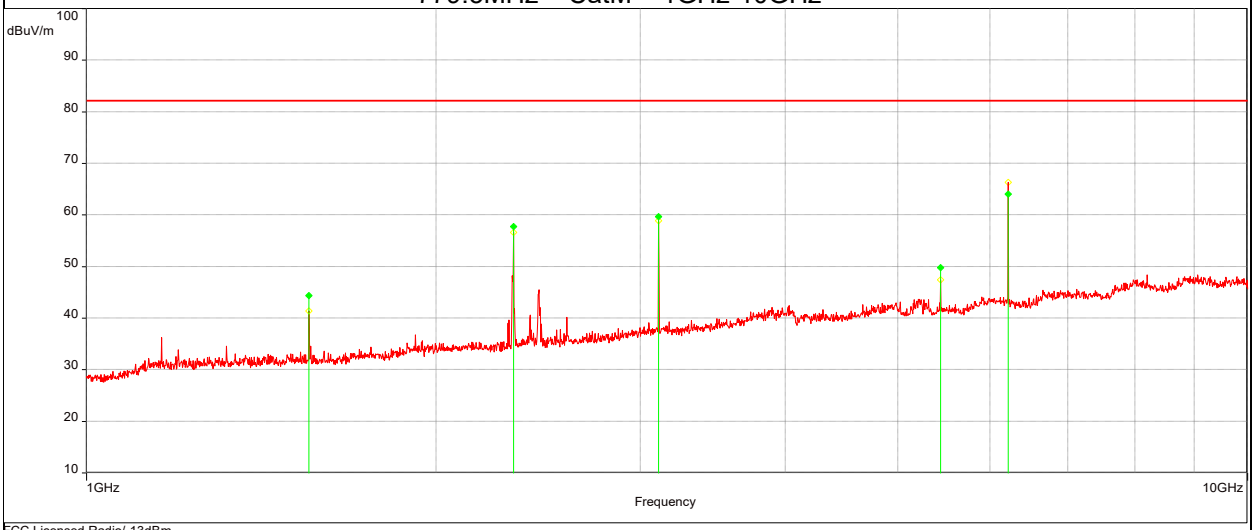
FCC Licensed Radio/-13dBm

779.5MHz – CatM – 30MHz-1GHz



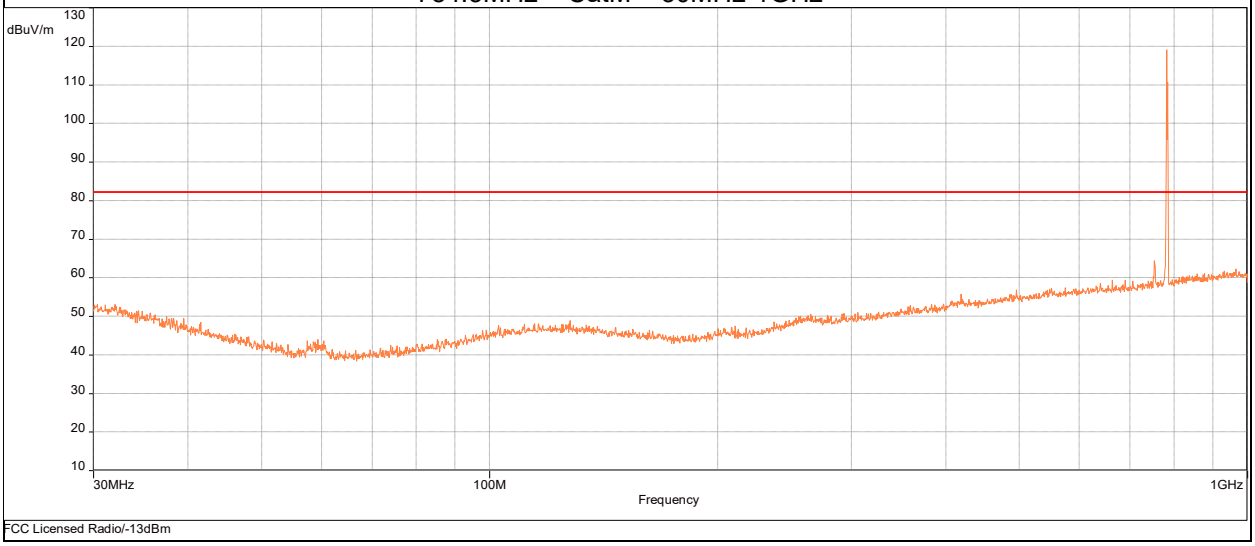
FCC Licensed Radio/-13dBm

779.5MHz – CatM – 1GHz-10GHz



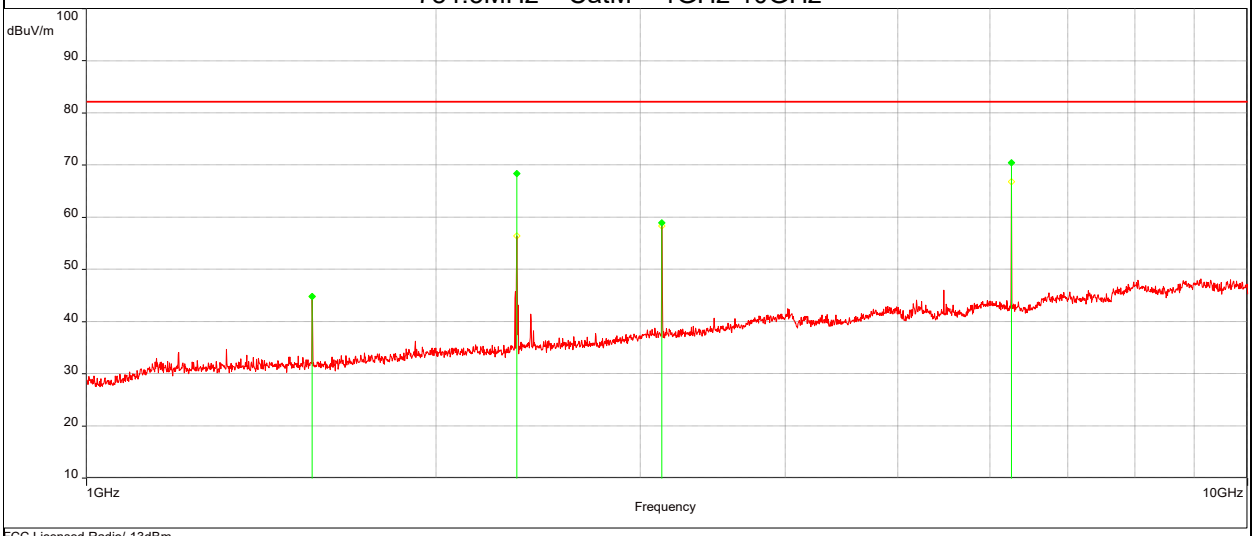
FCC Licensed Radio/-13dBm

784.5MHz – CatM – 30MHz-1GHz



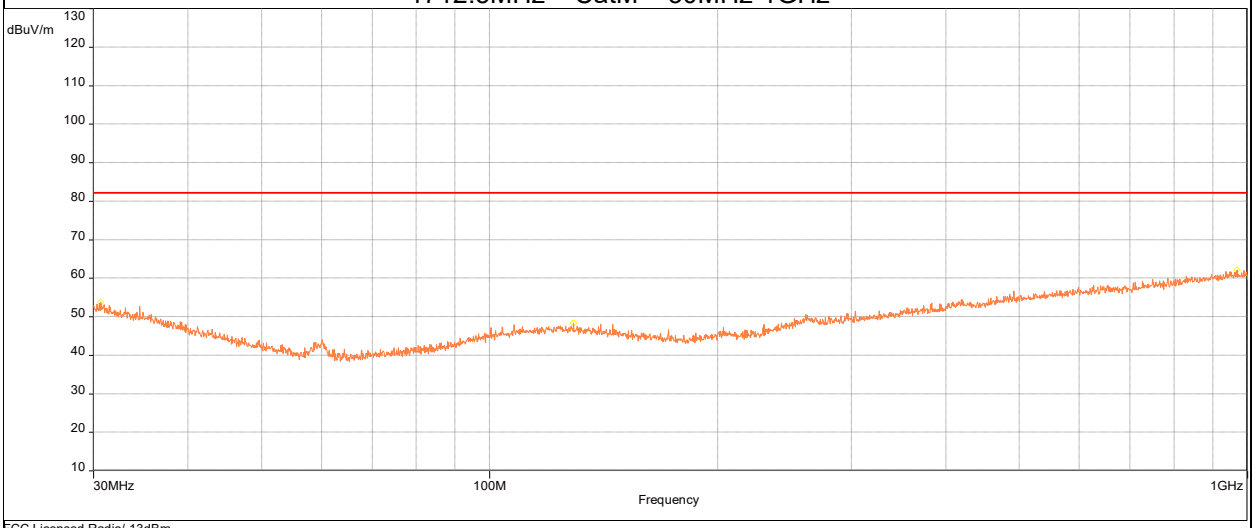
FCC Licensed Radio/-13dBm

784.5MHz – CatM – 1GHz-10GHz



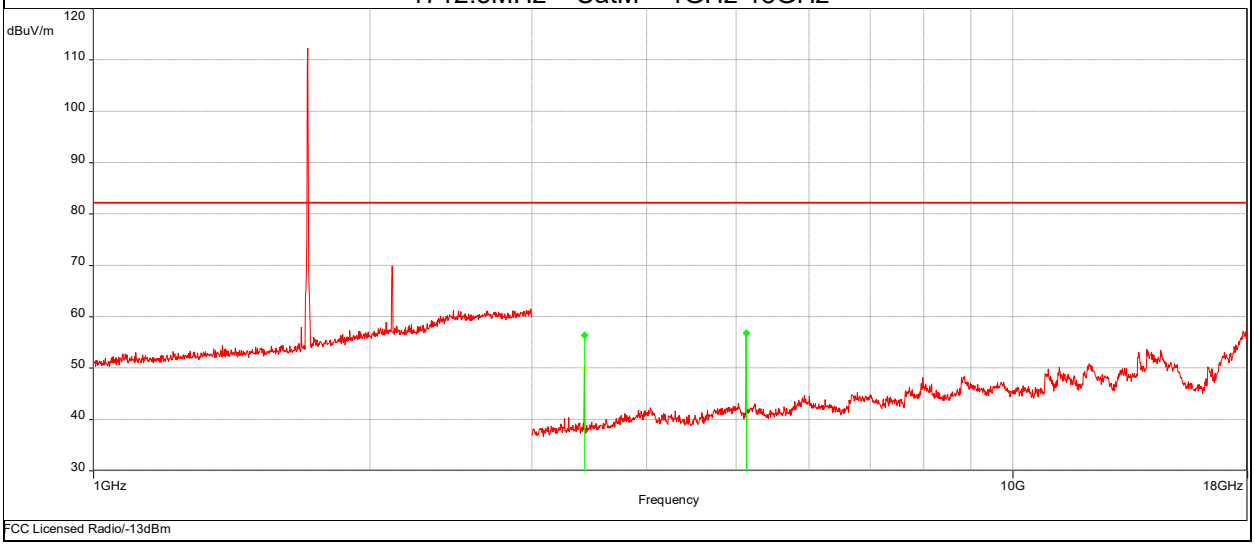
FCC Licensed Radio/-13dBm

1712.5MHz – CatM – 30MHz-1GHz



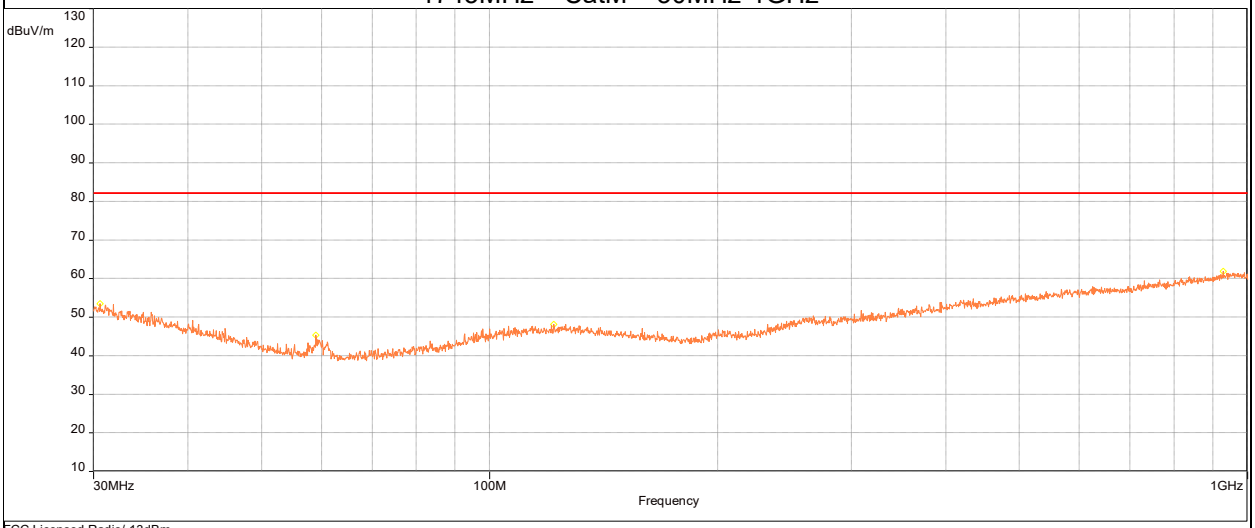
FCC Licensed Radio/-13dBm

1712.5MHz – CatM – 1GHz-18GHz



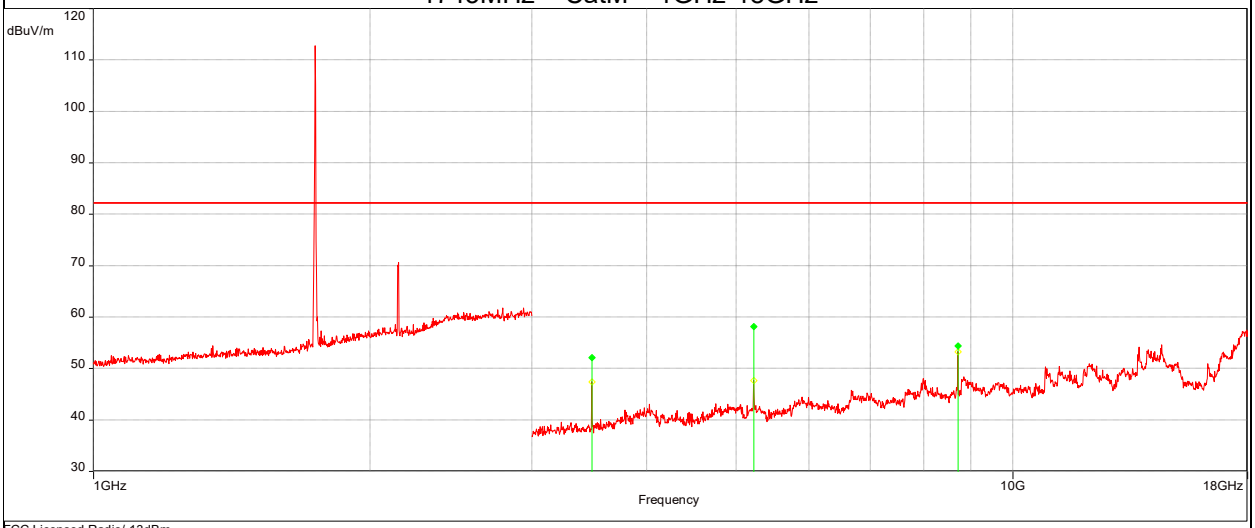
FCC Licensed Radio/-13dBm

1745MHz – CatM – 30MHz-1GHz



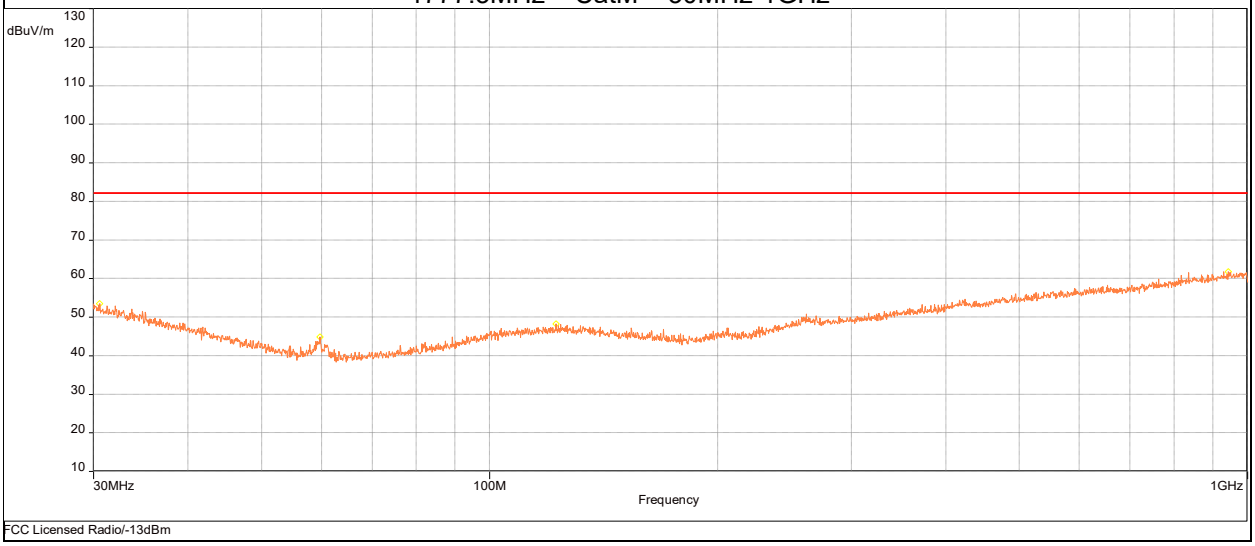
FCC Licensed Radio/-13dBm

1745MHz – CatM – 1GHz-18GHz



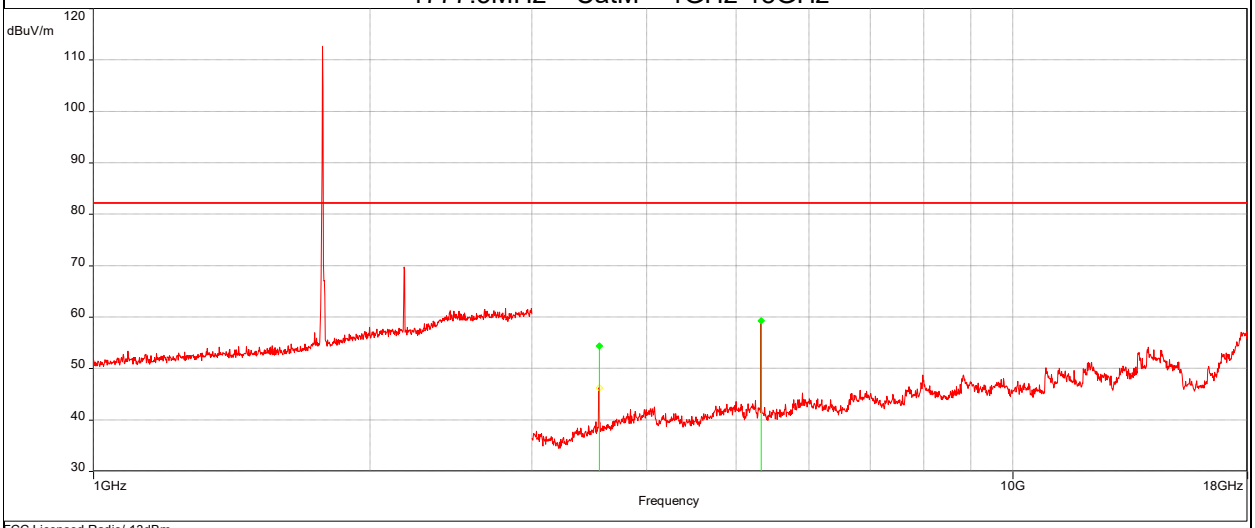
FCC Licensed Radio/-13dBm

1777.5MHz – CatM – 30MHz-1GHz



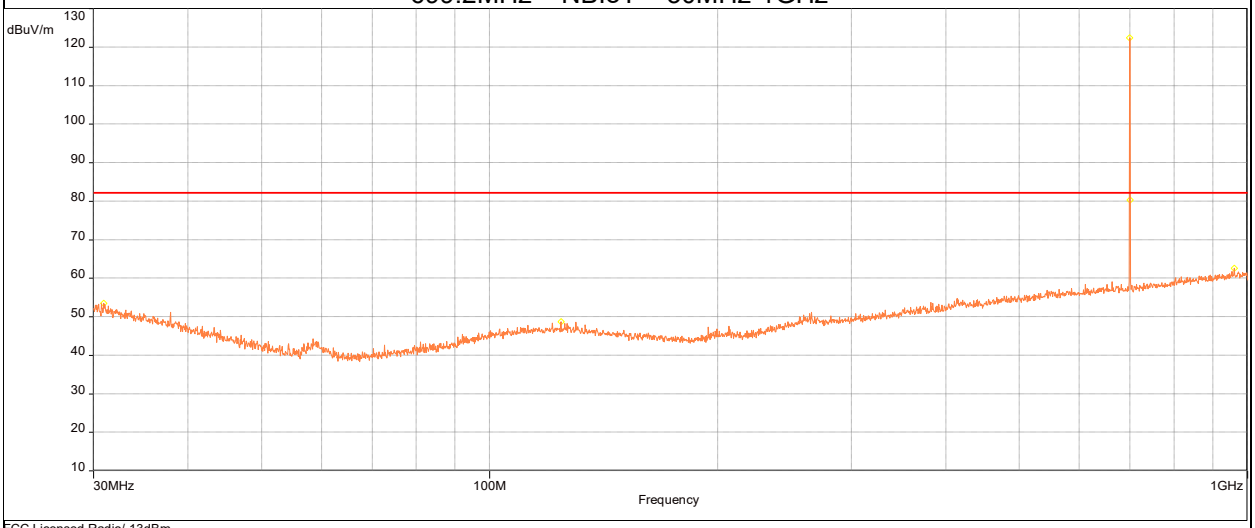
FCC Licensed Radio/-13dBm

1777.5MHz – CatM – 1GHz-18GHz



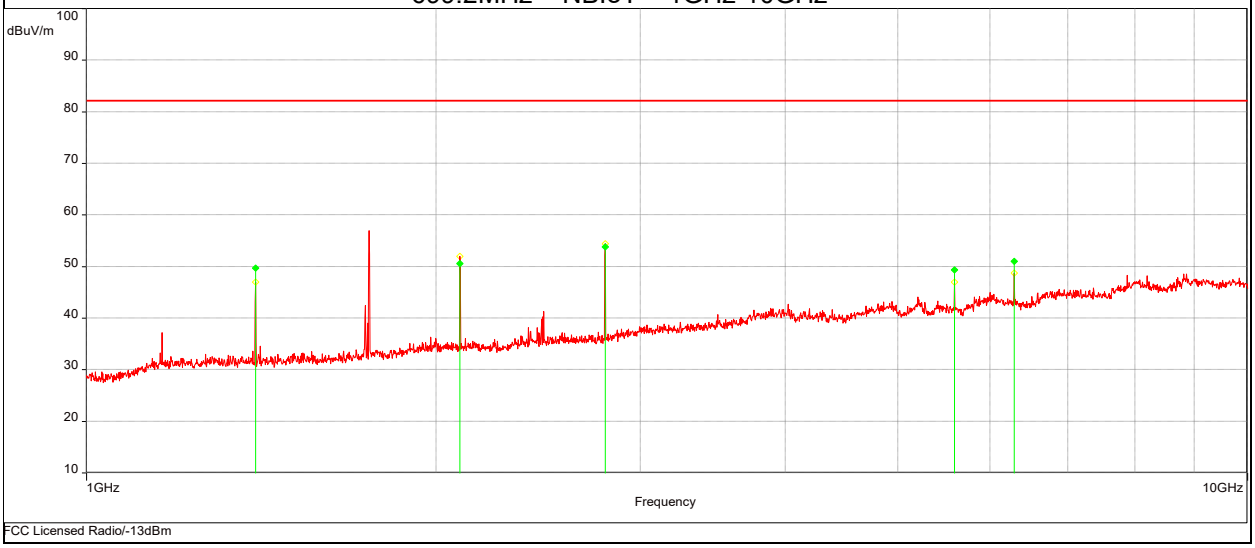
FCC Licensed Radio/-13dBm

699.2MHz – NBIoT – 30MHz-1GHz



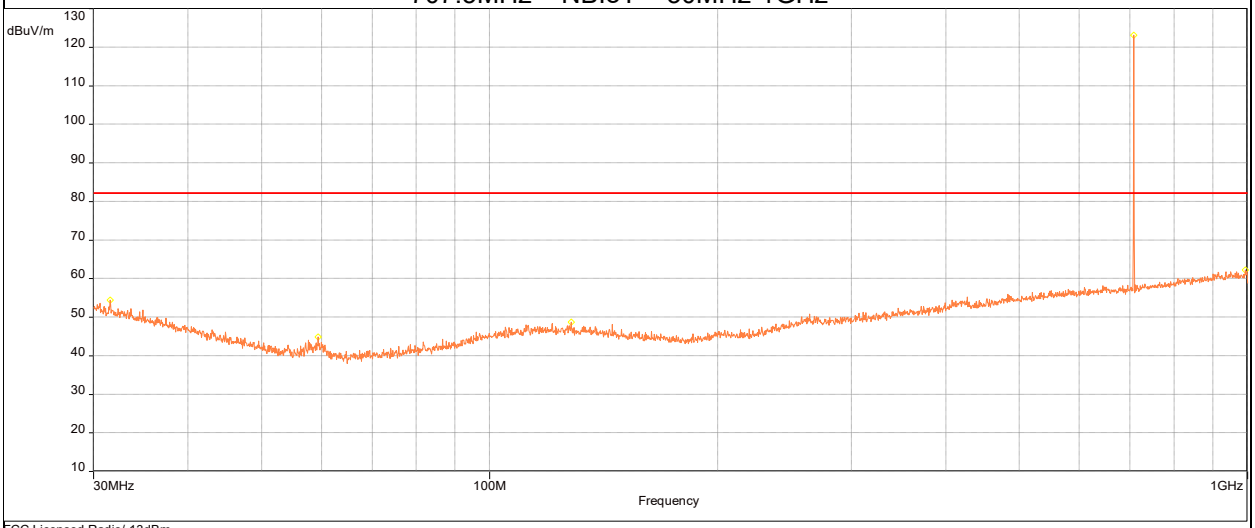
FCC Licensed Radio/-13dBm

699.2MHz – NBIoT – 1GHz-10GHz



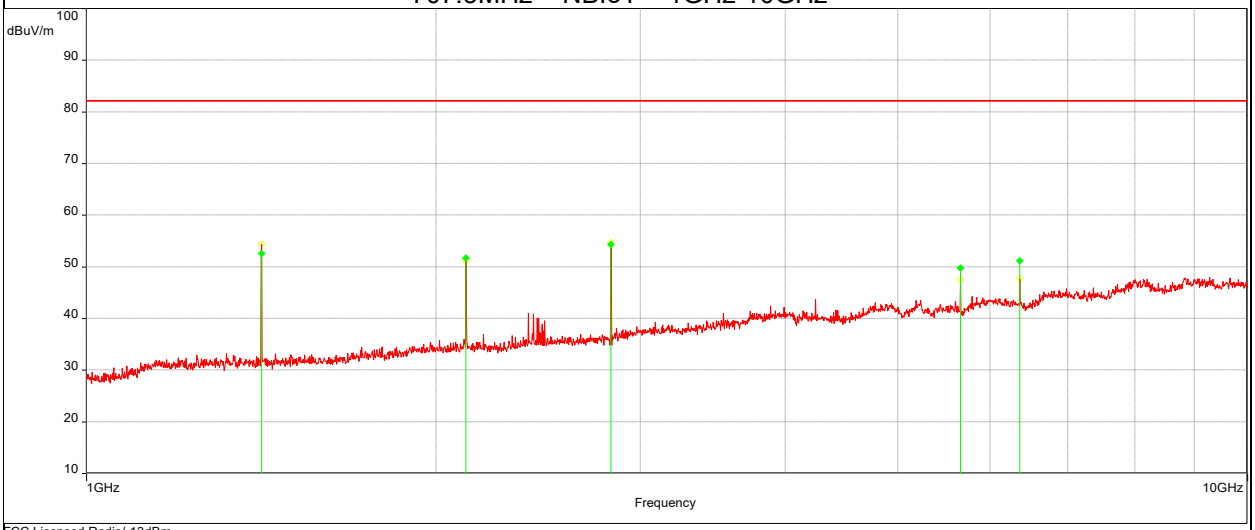
FCC Licensed Radio/-13dBm

707.5MHz – NBIoT – 30MHz-1GHz



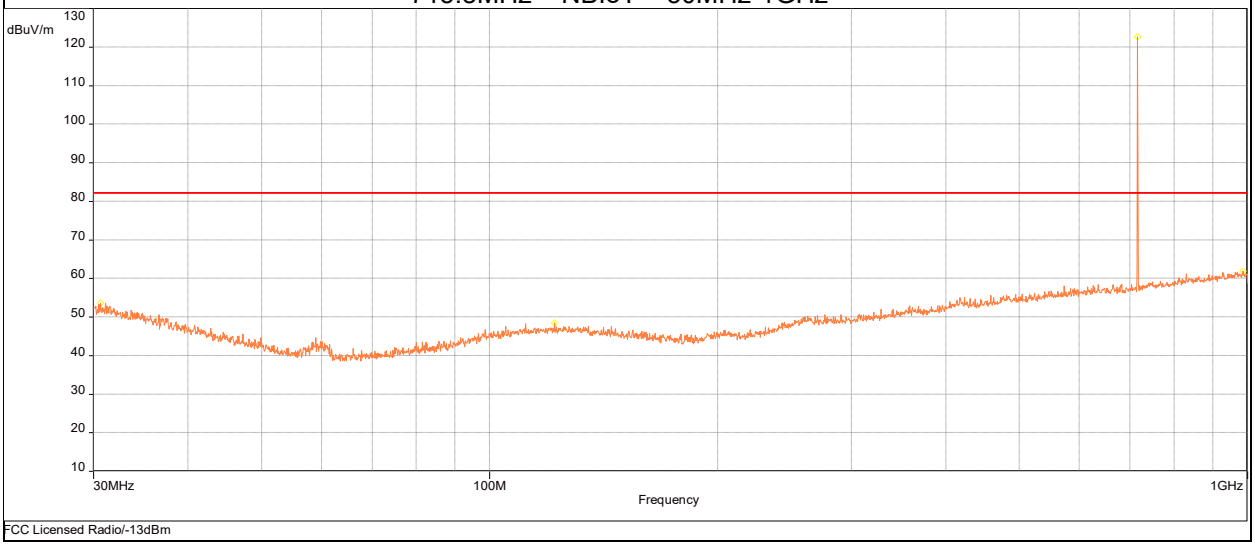
FCC Licensed Radio/-13dBm

707.5MHz – NBIoT – 1GHz-10GHz



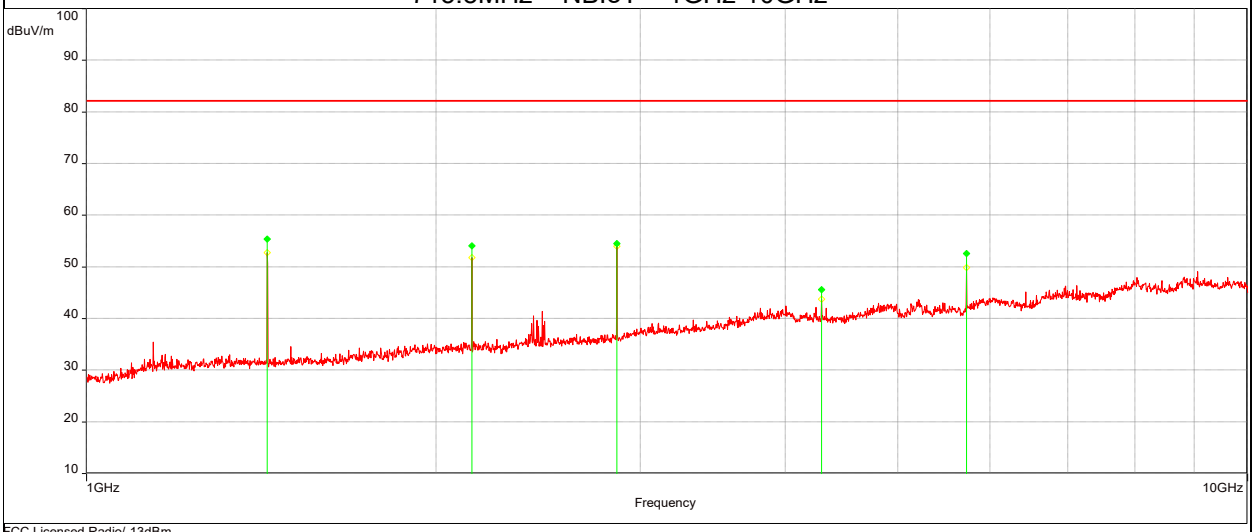
FCC Licensed Radio/-13dBm

715.8MHz – NBIoT – 30MHz-1GHz



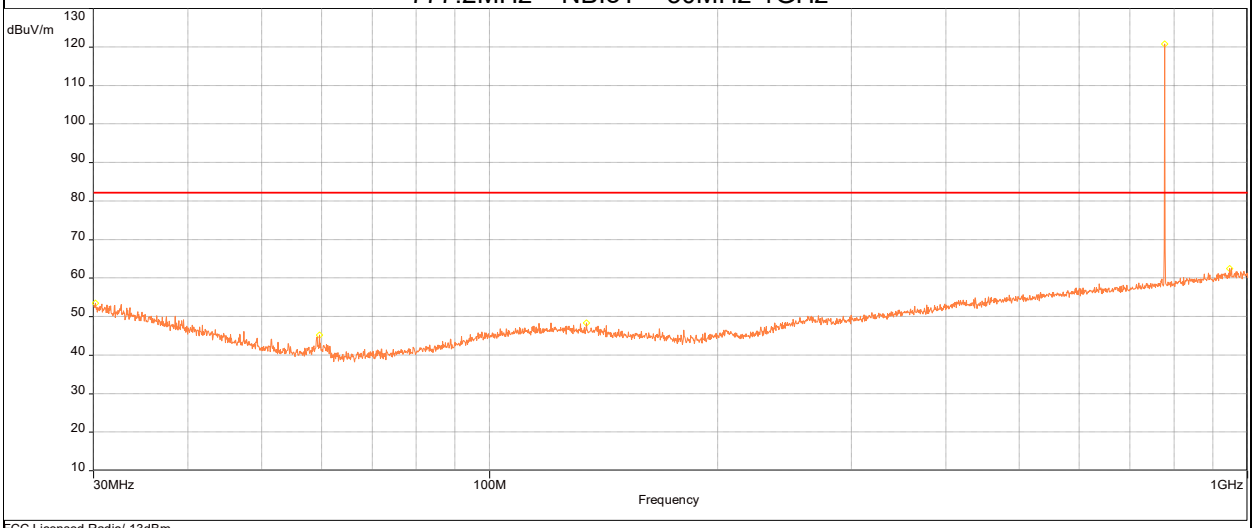
FCC Licensed Radio/-13dBm

715.8MHz – NBIoT – 1GHz-10GHz



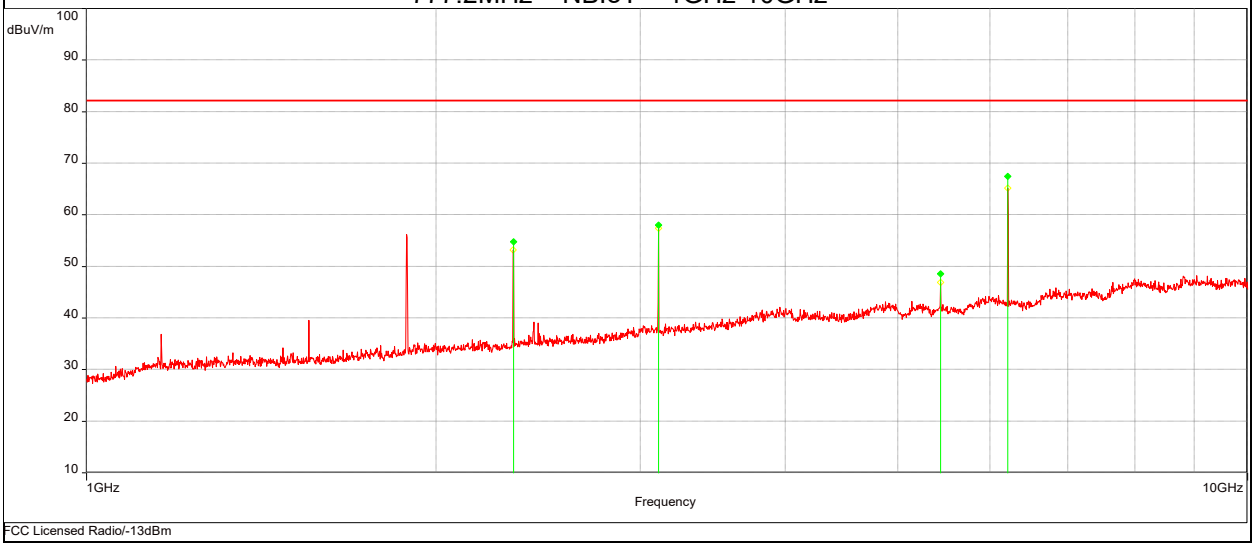
FCC Licensed Radio/-13dBm

777.2MHz – NBIoT – 30MHz-1GHz



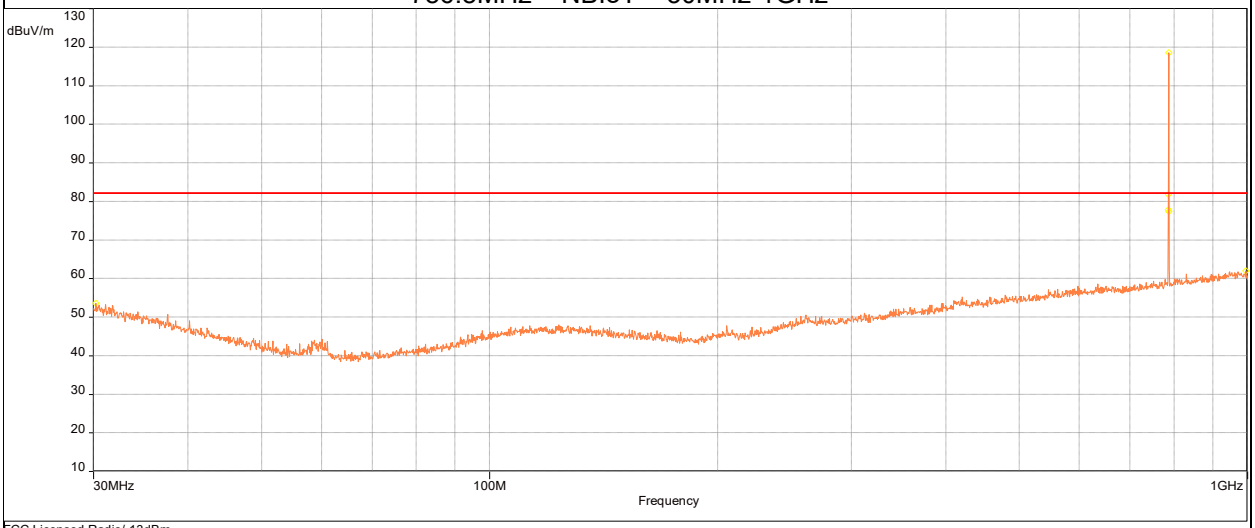
FCC Licensed Radio/-13dBm

777.2MHz – NBIoT – 1GHz-10GHz



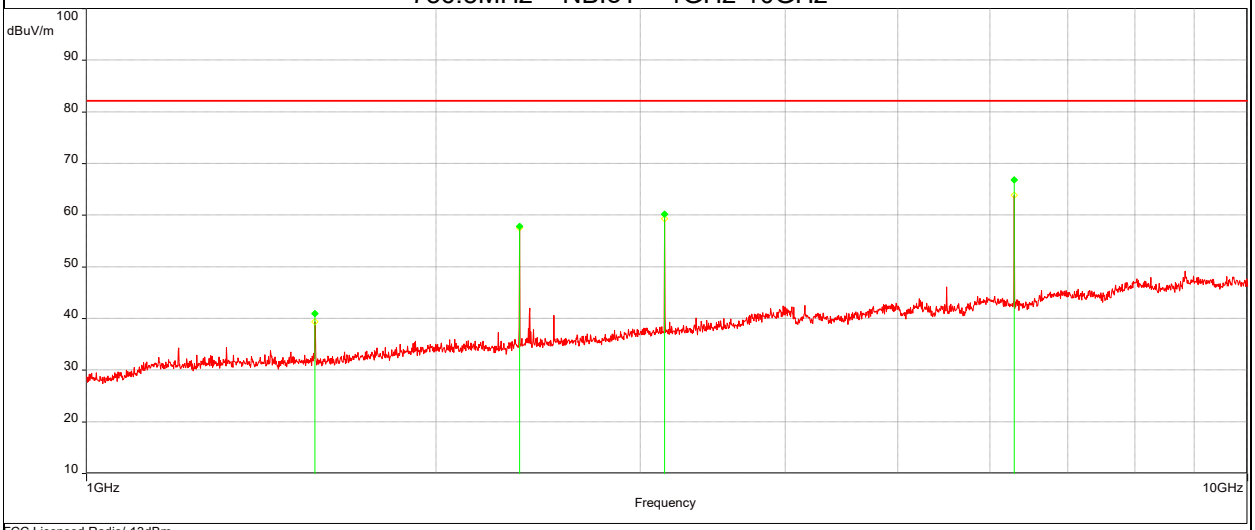
FCC Licensed Radio/-13dBm

786.8MHz – NBIoT – 30MHz-1GHz



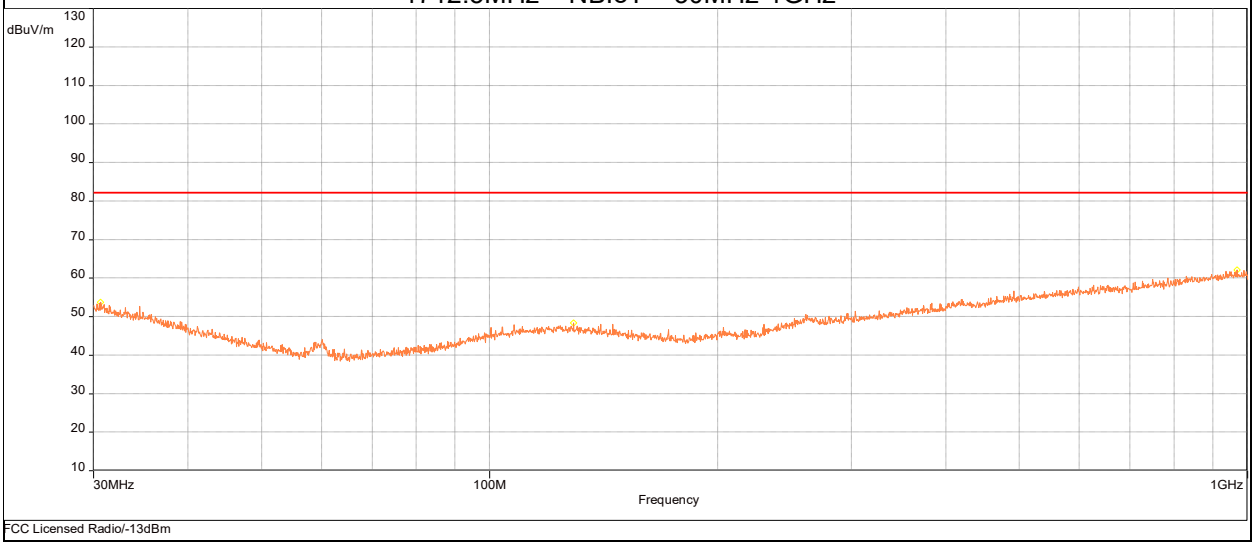
FCC Licensed Radio/-13dBm

786.8MHz – NBIoT – 1GHz-10GHz



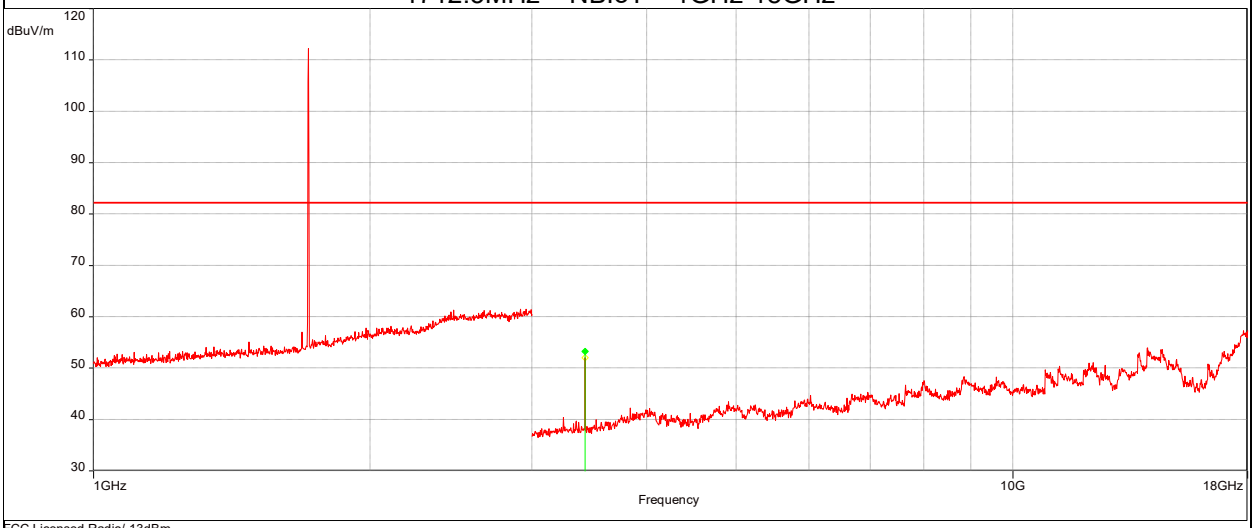
FCC Licensed Radio/-13dBm

1712.5MHz – NBIoT – 30MHz-1GHz



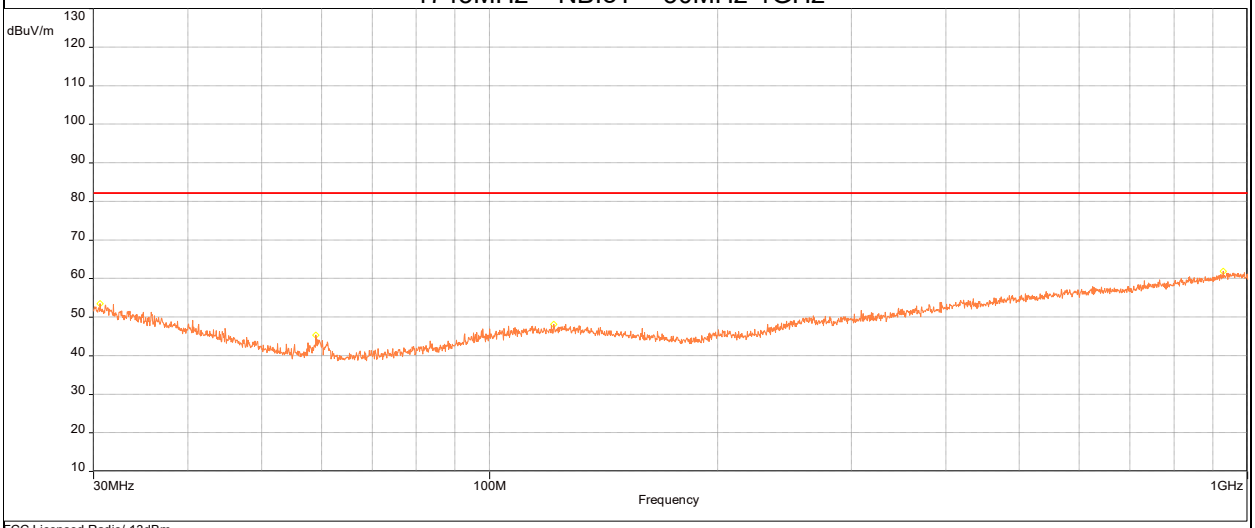
FCC Licensed Radio/-13dBm

1712.5MHz – NBIoT – 1GHz-18GHz



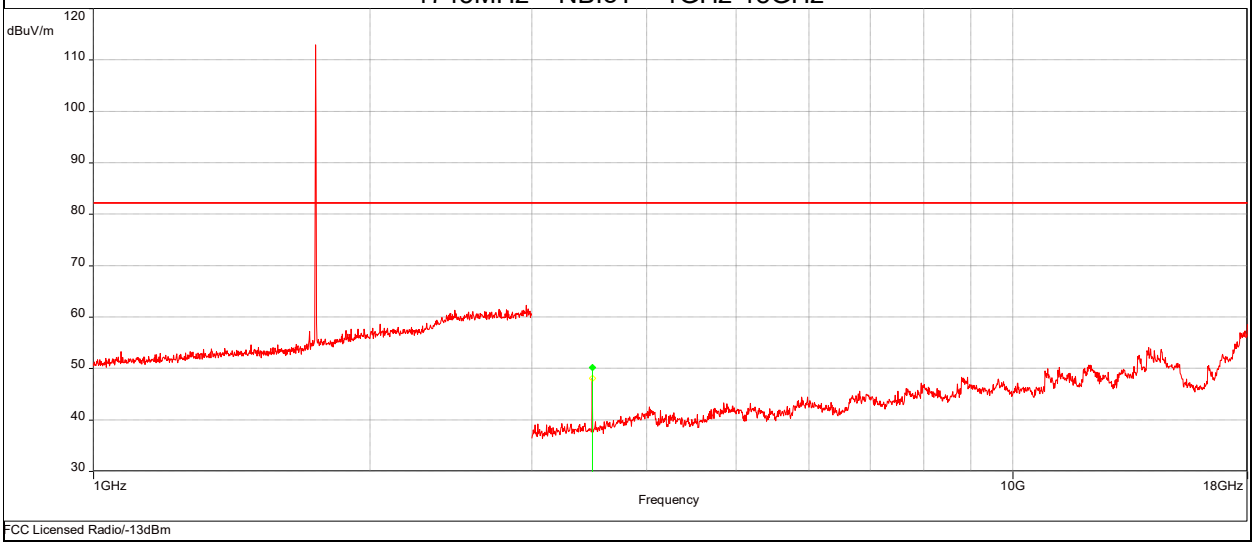
FCC Licensed Radio/-13dBm

1745MHz – NBIoT – 30MHz-1GHz

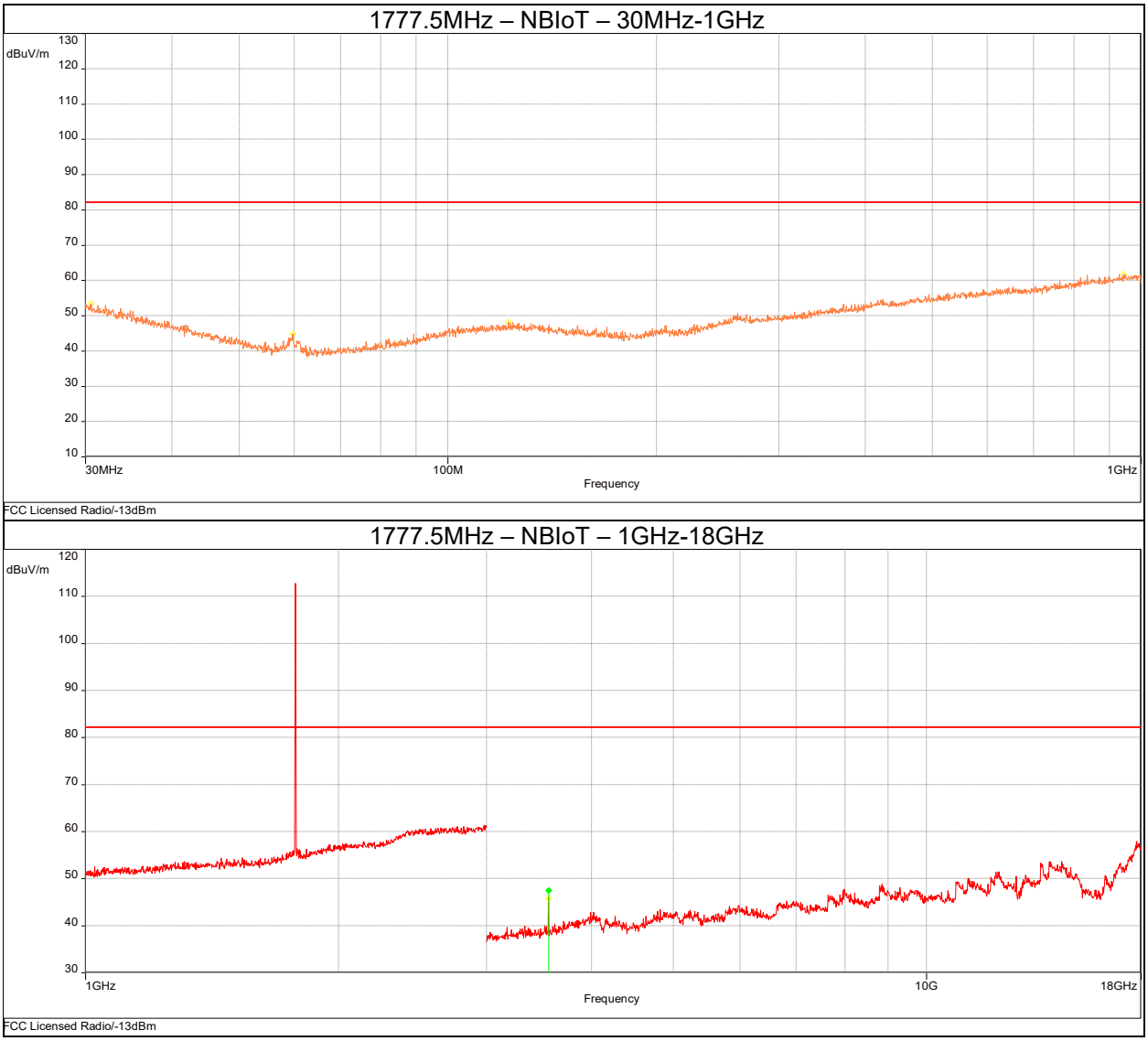


FCC Licensed Radio/-13dBm

1745MHz – NBIoT – 1GHz-18GHz



FCC Licensed Radio/-13dBm


1777.5MHz – NBIoT – 30MHz-1GHz
dBuV/m
130
120
110
100
90
80
70
60
50
40
30
20
10
30MHz
100M
1GHz
Frequency
FCC Licensed Radio/-13dBm
1777.5MHz – NBIoT – 1GHz-18GHz
dBuV/m
120
110
100
90
80
70
60
50
40
30
1GHz
10G
18GHz
Frequency
FCC Licensed Radio/-13dBm

Tabular Data – LTE Band 12/17

Mode	TX Frequency (MHz)	Frequency (MHz)	Reading (dBµV)	Correction (dB/m)	Field Strength (dBµV/m)	Free Space Conversion	EIRP (dBm)	Limit (dBm)	Margin (dB)
CatM Band 12	701.5	1398.400	59.46	-12.94	46.52	95.2	-48.68	-13	-35.68
CatM Band 12	701.5	1885.900	61.18	-11.18	50.00	95.2	-45.2	-13	-32.20
CatM Band 12	701.5	2099.200	71.39	-10.90	60.49	95.2	-34.71	-13	-21.71
CatM Band 12	701.5	2797.300	63.07	-9.68	53.39	95.2	-41.81	-13	-28.81
CatM Band 12	701.5	3495.400	61.38	-7.82	53.56	95.2	-41.64	-13	-28.64
CatM Band 12	707.5	1410.400	62.46	-12.96	49.50	95.2	-45.7	-13	-32.70
CatM Band 12	707.5	1886.800	67.30	-11.17	56.13	95.2	-39.07	-13	-26.07
CatM Band 12	707.5	2115.700	76.24	-10.86	65.38	95.2	-29.82	-13	-16.82
CatM Band 12	707.5	2821.300	64.43	-9.57	54.86	95.2	-40.34	-13	-27.34
CatM Band 12	707.5	3525.400	71.21	-7.80	63.41	95.2	-31.79	-13	-18.79
CatM Band 12	713.5	1422.700	57.65	-12.99	44.66	95.2	-50.54	-13	-37.54
CatM Band 12	713.5	1888.000	73.17	-11.16	62.01	95.2	-33.19	-13	-20.19
CatM Band 12	713.5	2134.000	82.41	-10.80	71.61	95.2	-23.59	-13	-10.59
CatM Band 12	713.5	2845.300	63.67	-9.54	54.13	95.2	-41.07	-13	-28.07
CatM Band 12	713.5	3551.800	64.96	-7.79	57.17	95.2	-38.03	-13	-25.03
NBIoT Band 12	701.5	1398.239	62.69	-12.94	49.75	95.2	-45.45	-13	-32.45
NBIoT Band 12	701.5	2097.426	61.51	-10.91	50.60	95.2	-44.6	-13	-31.60
NBIoT Band 12	701.5	2796.519	63.49	-9.68	53.81	95.2	-41.39	-13	-28.39
NBIoT Band 12	701.5	5593.027	53.02	-3.62	49.40	95.2	-45.8	-13	-32.80
NBIoT Band 12	701.5	6292.175	53.61	-2.60	51.01	95.2	-44.19	-13	-31.19
NBIoT Band 12	707.5	1414.861	65.60	-12.97	52.63	95.2	-42.57	-13	-29.57
NBIoT Band 12	707.5	2122.326	62.54	-10.84	51.70	95.2	-43.5	-13	-30.50
NBIoT Band 12	707.5	2829.668	63.89	-9.56	54.33	95.2	-40.87	-13	-27.87
NBIoT Band 12	707.5	5659.444	53.31	-3.54	49.77	95.2	-45.43	-13	-32.43
NBIoT Band 12	707.5	6366.874	53.83	-2.62	51.21	95.2	-43.99	-13	-30.99
NBIoT Band 12	715.8	1431.482	68.46	-13.02	55.44	95.2	-39.76	-13	-26.76
NBIoT Band 12	715.8	2147.226	64.81	-10.75	54.06	95.2	-41.14	-13	-28.14
NBIoT Band 12	715.8	2862.920	64.04	-9.48	54.56	95.2	-40.64	-13	-27.64
NBIoT Band 12	715.8	4294.376	52.35	-6.76	45.59	95.2	-49.61	-13	-36.61
NBIoT Band 12	715.8	5725.847	56.16	-3.53	52.63	95.2	-42.57	-13	-29.57

Tabular Data – LTE Band 13

Mode	TX Frequency (MHz)	Frequency (MHz)	Reading (dBµV)	Correction (dB/m)	Field Strength (dBµV/m)	Free Space Conversion	EIRP (dBm)	Limit (dBm)	Margin (dB)
CatM Band 13	779.5	1554.695	57.34	-12.95	44.39	95.2	-50.81	-13	-37.81
CatM Band 13	779.5	2332.051	68.29	-10.54	57.75	95.2	-37.45	-13	-24.45
CatM Band 13	779.5	3109.397	68.14	-8.42	59.72	95.2	-35.48	-13	-22.48
CatM Band 13	779.5	5441.484	53.53	-3.73	49.80	95.2	-45.4	-13	-32.40
CatM Band 13	779.5	6218.776	66.66	-2.63	64.03	95.2	-31.17	-13	-18.17
CatM Band 13	784.5	1564.689	57.77	-12.96	44.81	95.2	-50.39	-13	-37.39
CatM Band 13	784.5	2346.936	78.82	-10.40	68.42	95.2	-26.78	-13	-13.78
CatM Band 13	784.5	3129.389	67.35	-8.38	58.97	95.2	-36.23	-13	-23.23
CatM Band 13	784.5	6258.780	73.13	-2.63	70.50	95.2	-24.7	-13	-11.70
CatM Band 13	777.2	2331.404	65.30	-10.55	54.75	95.2	-40.45	-13	-27.45
NBIoT Band 13	777.2	3108.565	66.49	-8.42	58.07	95.2	-37.13	-13	-24.13
NBIoT Band 13	777.2	5439.899	52.33	-3.73	48.60	95.2	-46.6	-13	-33.60
NBIoT Band 13	777.2	6217.127	70.07	-2.63	67.44	95.2	-27.76	-13	-14.76
NBIoT Band 13	786.8	1573.439	53.90	-12.97	40.93	95.2	-54.27	-13	-41.27
NBIoT Band 13	786.8	2360.226	68.22	-10.33	57.89	95.2	-37.31	-13	-24.31
NBIoT Band 13	786.8	3146.903	68.57	-8.35	60.22	95.2	-34.98	-13	-21.98
NBIoT Band 13	786.8	6293.827	69.46	-2.60	66.86	95.2	-28.34	-13	-15.34

Tabular Data – LTE Band 4/66

Mode	TX Frequency (MHz)	Frequency (MHz)	Reading (dBµV)	Correction (dB/m)	Field Strength (dBµV/m)	Free Space Conversion	EIRP (dBm)	Limit (dBm)	Margin (dB)
CatM Band 66	1712.5	3420.500	64.39	-7.96	56.43	95.2	-38.77	-13	-25.77
CatM Band 66	1712.5	5129.000	61.37	-4.52	56.85	95.2	-38.35	-13	-25.35
CatM Band 66	1745	3485.694	60.01	-7.84	52.17	95.2	-43.03	-13	-30.03
CatM Band 66	1745	5228.500	62.50	-4.31	58.19	95.2	-37.01	-13	-24.01
CatM Band 66	1745	8714.090	52.42	1.99	54.41	95.2	-40.79	-13	-27.79
CatM Band 66	1777.5	3550.500	62.18	-7.79	54.39	95.2	-40.81	-13	-27.81
CatM Band 66	1777.5	5325.500	63.45	-4.11	59.34	95.2	-35.86	-13	-22.86
NBIoT Band 66	1712.5	3424.881	61.26	-7.96	53.30	95.2	-41.9	-13	-28.90
NBIoT Band 66	1745	3489.840	58.08	-7.84	50.24	95.2	-44.96	-13	-31.96
NBIoT Band 66	1777.5	3554.840	55.28	-7.78	47.50	95.2	-47.7	-13	-34.70

Test Personnel: Jeremy Pickens
Jean Rene

Test Date: 23 – 26 January 2026

Ambient Temperature: 17.8 – 21.3ºC

Reference Standard: ANSI C63.26

Relative Humidity: 18.5 – 20.9%

Atmospheric Pressure: 97.7 – 98.1kPa

9 Measurement Uncertainty

Parameter	Expanded Uncertainty for Normal k factor equal to 2
Radio Frequency	0.07 PPM
Total RF Power (Conducted)	0.65 dB
Power Density (Conducted)	0.65 dB
RF Spurious (Conducted)	1.8 dB
Radiated Emissions (9kHz-30MHz)	4.7 dB
Radiated Emissions (30MHz-1GHz)	4.1 dB
Radiated Emissions (1GHz-18GHz)	4.5dB
Radiated Emissions (18GHz-40GHz)	4.7 dB
AC Line Conducted Emissions	2.8 dB
Temperature	0.7°
Humidity	3.9%

10 Revision History

Revision Level	Date	Prepared By	Reviewed By	Notes
0	20 February 2026	JOP	MC	Original Issue
1	05 March 2026	JOP	MC	• Corrected PMN on Page 2

END OF REPORT