



TEST REPORT

REPORT NUMBER: I20W00018-WWAN_Rev1

ON

Type of Equipment: IoT Module
Model Name: L720
Manufacturer: Shanghai MobileTek Communication Ltd.

ACCORDING TO

FCC CFR Part 2, FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS, e-CFR, 2019
PART 22, PUBLIC MOBILE SERVICES, e-CFR, 2019
PART 24, PERSONAL COMMUNICATIONS SERVICES, e-CFR, 2019
PART 27, MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES, e-CFR, 2019
ANSI C63.26-2015

Chongqing Academy of Information and Communications Technology

Month date, year

Oct, 30, 2020

Signature

Zhang Yan
Director

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of Chongqing Academy of Information and Communications Technology.



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Revision Version

Report Number	Revision	Date	Memo
I20W00018	V0.0	2020-10-22	--
I20W00018	V1.0	2020-10-30	--

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Report No.: I20W00018-WWAN_Rev1

FCC ID: 2AK9D-L720

Report Date: 2020-10-30

Test Firm Name: Chongqing Academy of Information and Communications Technology

FCC Registration Number: CN1239

Statement

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Parts 2, 22, 24, 27, The sample tested was found to comply with the requirements defined in the applied rules.

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1 General Information

1.1 Notes

All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Parts 2, 22, 24, 27.

The test results of this test report relate exclusively to the item(s) tested as specified in section 2.

The following deviation from, additions to, or exclusions from the test specifications have been made. See Annex B.

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1.2 Testers

Name: Zhang qinghao
Position: Engineer
Department: Department of RF test
Date: 2020-09-08 to 2020-09-18

Signature: 

Editor of this test report:

Name: Chen Wen
Position: Engineer
Department: Department of RF test
Date: 2020-10-30

Signature: 

Technical responsibility for area of testing:

Name: Zhang Yan
Position: Manager
Department: Director of the laboratory
Date: 2020-10-30

Signature: 



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1.3 Testing Laboratory information

1.3.1 Location

Name: Chongqing Academy of Information and Communications Technology
Address: No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China
4th Floor, Block B1-3, 19 East Road, XTB Valley, Yubeu District, Chongqing, P. R. China
Postal Code: 401336
Tel: +86-23-88069965
Fax: +86-23-88608777
Email: liqiao@caict.ac.cn

1.3.2 Test location, where different from section 1.3.1

Name: -----
Street: -----
City: -----
Country: -----
Telephone: -----
Fax: -----
Postcode: -----

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1.4 Details of applicant or manufacturer

1.4.1 Applicant

Name: Shanghai MobileTek Communication Ltd.
Address: Free Trade Zone No.33, No.17 building 6H Xiya
Road,shanghai
Country: China
Telephone: 18616835910
Fax: +86-21-54451877
Contact: bin yang
Email: b.yang@mobiletek.cn

1.4.2 Manufacturer (if different from applicant in section 1.4.1)

Name: --
Address: --
Country: --
Telephone: --
Fax: --
Contact: --
Email: --



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2 Test Item

2.1 General Information

Manufacturer:	Shanghai MobileTek Communication Ltd.	
Type of Equipment:	IoT Module	
Model Name:	L720	
Production Status:	Product	
Hardware Version:	V1	
Software Version:	L720v08.02b01	
Nominal Voltage:	3.3V	
Extreme High Voltage:	4.8V	
Extreme Low Voltage:	2.7V	
Antenna type:	Single stage sub-antenna	
Antenna gain:	Band2	2dBi-3dBi
	Band4/Band12	3dBi-4dBi
Modulation Type:	BPSK/QPSK/16QAM	
Receipt date of test item:	2020-09-08	

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2.2 Outline of Equipment under Test

The L720, referred to as “EUT” hereafter, is a multi-Band wireless module operating on the CAT-M1/NB-IoT networks. The table below shows the supported Bands for the EUT.

Technology	Band	UL Freq.(MHz)	DL Freq.(MHz)	Note
NB-IoT	Band2	1850 – 1910	1930 – 1990	--
	Band4	1710–1755	2110–2155	--
	Band12	699 – 716	729 – 746	--
CAT-M	Band2	1850 – 1910	1930 – 1990	--
	Band4	1710 – 1755	2110 – 2155	--
	Band12	699 – 716	729 – 746	--

2.3 Modifications Incorporated in EUT

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

2.4 Equipment Configuration

Equipment configuration list:

Item	Generic Description	Manufacturer	Type	Serial No.	Remarks
A	Modules	Micron Electronics LLC.	L720	866884045622016	None
B	Modules	Micron Electronics LLC.	L720	866884045622099	None

2.5 Other Information

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Report No.: I20W00018-WWAN_Rev1**3 Summary of Test Results**

A brief summary of the tests carried out is shown as following.

FCC Rules	Name of Test	Result
2.1046,22.913(a),24.232(c),27.50,90.635(b)	Conducted RF Power Output	Pass
24.232(b),27.50(d),27.50(h)(2),27.50(c),90.635(b)	ERP and EIRP	Pass
2.1049,22.917(b),24.238(b),90.209	Occupied Bandwidth	--
2.1051,2.1053,24.238,22.917,27.53,90.691	Conducted spurious emissions	Pass
2.1051,2.1053,24.238,22.917,27.53,90.691	Radiated Spurious Emission	Pass
2.1051,2.1053,24.238,22.917,27.53,90.691	Band Edge	Pass
2.1055,22.355,24.235,27.54,90.213	Frequency Stability over Temperature Variation	Pass
2.1055,22.355,24.235,27.54,90.213	Frequency Stability over Voltage Variation	Pass
24.232,27.50	Peak to Average Ratio	Pass
Note 1: No applicable performance criteria.		

4 Test Equipments and Ancillaries Used For Tests

The test equipments and ancillaries used are as follows.

No.	Equipment	Model	SN	Manufacture	Cal. Due Date
1	EMI Test Receiver	ESU26	100367	R&S	2021-05-25
2	Loop antenna	6502	00143163	ETS	2020-12-05
3	Trilog super broadBand test antenna	VULB 9163	9163-544	R&S	2020-11-23
4	Double-Ridged Horn Antenna	HF907	100357	R&S	2021-07-20
5	Fully-Anechoic Chamber	11.8m×6.5 m×6.3m	--	ETS	2020-10-22
6	Signal Generator	SMU200A	104517	R&S	2021-02-28
7	spectrum analyzer	FSQ 26	201137/026	R&S	2021-02-28
8	spectrum analyzer	N9020A	MY50200376	Agilent	2021-02-28
9	Universal Radio Communication Tester	CMU200	112012	R&S	2021-02-28
10	Climate chamber	SH-241	92010759	ESPEC	2021-02-28
11	DC Power Supply	N6705B	MY50000919	Agilent	2020-12-04
12	Universal Radio Communication Tester	CMW500	152395	R&S	2021-02-28
13	Universal Radio Communication Tester	SP8315	SP8315-1249	StarPoint	2021-02-28

5 Test Results

5.1 Conducted RF Power Output

Specifications:	FCC Part 2.1046, 22.913(a),24.232(c), 27.50,90.635(b)
DUT Serial Number:	866884045622016
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

According to Part 22.913(a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

According to Part 24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to Part 27.50(c), portable stations (hand-held devices) in the 600 MHz uplink Band and the 698-746 MHz Band, and fixed and mobile stations in the 600 MHz uplink Band are limited to 3 watts ERP;

According to Part 27.50(d), fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz Band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz Bands are limited to 1 watt EIRP.

According to Part 90.635 (b),The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

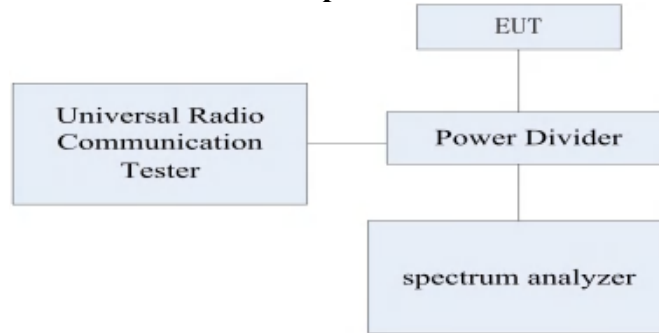
Measurement Uncertainty:

Item	Uncertainty
Expanded Uncertainty	0.52 dB (k=2)

Test Setup:

During the test, the EUT was controlled via the Wireless Telecommunications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.

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Test Method:

- 1) The EUT was coupled to the spectrum analyzer and the Wireless Telecommunications Test Set through a power divider. The loss of the RF cables of the test system is calibrated to correct the readings.
- 2) For RMS power test, the spectrum analyzer was set to RMS Detector function and Maximum hold mode.
- 3) For Peak power test, the spectrum analyzer was set to Maxpeak Detector function and Maximum hold mode.
- 4) The resolution Bandwidth of the spectrum analyzer was comparable to the emission Bandwidth.

Note: --.



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5.1.1 NB-IoT Band2 Conducted RF Power Output Results

NB-IoT Band 2

Maximum Average Conducted Power (dBm)					
Sub-carrier Spacing [kHz]	Modulation	N _{tones}	Channel		
			Low	Mid	High
3.75	BPSK	1@0	21.15	21.38	21.62
		1@47	21.08	21.64	21.43
	QPSK	1@0	21.12	21.72	21.52
		1@47	21.05	21.68	21.55
15	BPSK	1@0	21.61	20.77	21.09
		1@11	21.53	20.73	21.12
	QPSK	1@0	21.57	20.86	20.97
		1@11	21.48	20.76	21.03
		12@0	19.38	18.41	18.59

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5.1.2 NB-IoT Band4 Conducted RF Power Output Results

NB-IoT Band 4

Maximum Average Conducted Power (dBm)					
Sub-carrier Spacing [kHz]	Modulation	N _{tones}	Channel		
			Low	Mid	High
3.75	BPSK	1@0	21.67	21.55	21.58
		1@47	21.61	21.56	21.53
	QPSK	1@0	21.33	20.31	21.49
		1@47	21.50	21.28	21.55
15	BPSK	1@0	21.68	20.66	20.53
		1@11	21.60	20.58	20.55
	QPSK	1@0	21.71	20.30	20.62
		1@11	21.66	20.28	20.57
		12@0	19.21	18.12	18.09



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5.1.3 NB-IoT Band12 Conducted RF Power Output Results

NB-IoT Band12

Maximum Average Conducted Power (dBm)					
Sub-carrier Spacing [kHz]	Modulation	N _{tones}	Channel		
			Low	Mid	High
3.75	BPSK	1@0	21.82	21.42	-14.66
		1@47	21.75	21.27	-14.62
	QPSK	1@0	21.71	21.43	-14.60
		1@47	21.73	21.36	-14.64
15	BPSK	1@0	21.23	22.29	-14.68
		1@11	21.36	22.48	-14.83
	QPSK	1@0	21.43	22.62	-14.80
		1@11	21.38	22.46	-14.79
		12@0	20.54	22.35	-16.86

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5.1.4 CAT-M B2 Conducted RF Power Output Results

Mode	Bandwidth	Channel	RB	Index	Conducted Power	
					QPSK	16QAM
Band2	1.4MHz	18607	1#0	0	22.39	21.26
			6#0	0	21.06	20.2
		18900	1#0	0	22.25	21.08
			6#0	0	21.24	20.21
		19193	1#5	0	22.33	21.19
			6#0	0	21.27	21.34
	3MHz	18615	1#0	0	21.17	20.67
			6#0	0	22.41	21.12
		18900	1#0	0	22.31	21.73
			6#0	0	21.92	20.96
		19185	1#5	1	22.21	21.19
			6#0	1	21.21	21.26
	5MHz	18620	1#0	0	21.15	21.65
			6#0	0	21.05	20.11
		18900	1#0	0	21.25	21.94
			6#0	0	21.03	20.07
		19180	1#5	3	21.68	22.01
			6#0	3	21.25	20.46
	10MHz	18640	1#0	0	21.12	21.96

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			4#0	0	21.12	21.23	
		18900	1#0	0	21.10	21.85	
			4#0	0	21.06	21.57	
		19160	1#5	7	21.30	21.29	
			4#2	7	21.44	21.44	
		15MHz	18660	1#0	0	21.20	21.97
				6#0	0	21.15	21.53
			18900	1#0	0	21.15	21.95
	6#0			0	21.15	21.50	
	19140		1#5	0	21.24	21.99	
			6#0	0	21.22	21.65	
	20MHz	18680	1#0	0	21.13	21.95	
			6#0	0	21.09	21.51	
		18900	1#0	0	21.07	21.83	
			6#0	0	21.04	21.39	
		19120	1#5	0	21.25	21.97	
			6#0	0	21.20	21.52	

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5.1.5 CAT-M B4 Conducted RF Power Output Results

Mode	Bandwidth	Channel	RB	Index	Conducted Power	
					QPSK	16QAM
Band4	1.4MHz	19957	1#0	0	21.69	21.12
			6#0	0	19.78	20.65
		20175	1#0	0	21.37	20.72
			6#0	0	19.89	20.39
		20393	1#5	0	21.27	20.54
			6#0	0	19.85	20.50
	3MHz	19965	1#0	0	21.74	21.09
			6#0	0	19.79	20.55
		20175	1#0	0	21.39	20.82
			6#0	0	19.86	20.82
		20385	1#5	1	21.24	20.64
			6#0	1	19.79	20.52
	5MHz	19975	1#0	0	21.72	21.82
			6#0	0	20.69	20.60
		20175	1#0	0	21.48	22.17
			6#0	0	20.42	20.38
		20375	1#5	3	21.03	21.81
			6#0	3	20.19	20.54
	10MHz	20000	1#0	0	21.78	22.38

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			4#0	0	21.68	22.02	
		20175	1#0	0	21.44	22.15	
			4#0	0	21.48	21.78	
		20350	1#5	7	21.19	21.82	
			4#2	7	21.22	21.60	
		15MHz	20025	1#0	0	21.68	21.78
				6#0	0	21.67	21.70
			20175	1#0	0	21.48	22.16
	6#0			0	21.44	21.72	
	20325		1#5	0	21.22	21.96	
			6#0	0	21.41	21.71	
	20MHz	20050	1#0	0	21.66	22.30	
			6#0	0	21.62	21.94	
		20175	1#0	0	21.46	22.19	
			6#0	0	21.40	21.77	
		20300	1#5	0	21.01	21.80	
			6#0	0	21.19	21.55	

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5.1.6 CAT-M B12 Conducted RF Power Output Results

Mode	Bandwidth	Channel	RB	Index	Conducted Power	
					QPSK	16QAM
Band12	1.4MHz	20315	1#0	0	22.09	21.45
			6#0	0	20.65	20.67
		23095	1#0	0	21.93	21.25
			6#0	0	20.68	20.78
		23175	1#5	0	21.34	21.00
			6#0	0	20.47	20.69
	3MHz	20320	1#0	0	21.98	21.41
			6#0	0	20.63	20.77
		23095	1#0	0	21.82	21.25
			6#0	0	20.61	20.79
		23170	1#5	1	21.56	21.03
			6#0	1	20.54	20.68
	5MHz	20330	1#0	0	22.07	22.59
			6#0	0	20.69	21.02
		23095	1#0	0	21.82	22.51
			6#0	0	20.75	20.79
		23160	1#5	3	21.59	22.09
			6#0	3	20.50	20.79
	10MHz	20345	1#0	0	22.03	22.59
			4#0	0	21.97	22.15
		23095	1#0	0	21.84	22.66
			4#0	0	21.88	22.18
		23145	1#5	7	21.56	22.06
			4#2	7	21.72	21.80

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5.2 ERP and EIRP

Specifications:	FCC Part 24.232(b), 27.50(d), 27.50(h)(2), 27.50(c),90.635(b)
DUT Serial Number:	866884045622016
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

This is the test for the maximum radiated power from the EUT.

According to 22.913(a), The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.”

According to Part 24.232(c), "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power"and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."

According to Part 27.50(d), “Fixed, mobile, and portable (handheld) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP”.

According to Part 27.50(h)(2) “Mobile stations are limited to 2.0 watts EIRP.”.

According to Part 27.50(c), specifies “Portable stations (hand-held de-vices) are limited to 3 watts ERP.”.

Measurement Uncertainty:

Item	Uncertainty
Expanded Uncertainty	0.52 dB (k=2)

Test Procedure:

ANSI C63.26:2015

KDB 971168 Section 5.6

$EIRP(dBm)=ERP(dBm)+2.15(dB)$

$ERP/EIRP=P_{meas}+GT-LC$

where: ERP/ERP =effective or equivalent radiated power, respectively(expressed inthe same units as P_{meas}, typically dBw or dBm);

P_{meas}=measured transmitter output power or PSD, in dBm or dBw;

GT=gain of the transmitting antenna, in dBd(ERP)or dBi(EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna,in dB.2

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

EUT includes different power levels for head use configuration and body useconfiguration and the below tables contain the highest of all configurations averageconducted and ERP/ERP output powers as follows:

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5.2.1 NB-IoT Band2 Measurement result

NB-IoT Band 2

EIRP Average (dBm)						
Sub-carrier Spacing [kHz]	Modulation	N _{tones}	Antenna Gain (dBi)	Channel		
				Low	Mid	High
3.75	BPSK	1@0	3	24.15	24.38	24.62
		1@47	3	24.08	24.64	24.43
	QPSK	1@0	3	24.12	24.72	24.52
		1@47	3	24.05	24.68	24.55
15	BPSK	1@0	3	24.61	23.77	24.09
		1@11	3	24.53	23.73	24.12
	QPSK	1@0	3	24.57	23.86	23.97
		1@11	3	24.48	23.76	24.03
		12@0	3	22.38	21.41	21.59

Report No.: I20W00018-WWAN_Rev1

5.2.2 NB-IoT Band4 Measurement result

NB-IoT Band 4

EIRP Average (dBm)						
Sub-carrier Spacing [kHz]	Modulation	N _{tones}	Antenna Gain (dBi)	Channel		
				Low	Mid	High
3.75	BPSK	1@0	4	25.67	25.55	25.58
		1@47	4	25.61	25.56	25.53
	QPSK	1@0	4	25.33	24.31	25.49
		1@47	4	25.50	25.28	25.55
15	BPSK	1@0	4	25.68	24.66	24.53
		1@11	4	25.60	24.58	24.55
	QPSK	1@0	4	25.71	24.30	24.62
		1@11	4	25.66	24.28	24.57
		12@0	4	23.21	22.12	22.09

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5.2.3 NB-IoT Band12 Measurement result

NB-IoT Band 12

ERP Average (dBm)						
Sub-carrier Spacing [kHz]	Modulation	N _{tones}	Antenna Gain (dBi)	Channel		
				Low	Mid	High
3.75	BPSK	1@0	4	23.67	23.27	-12.81
		1@47	4	23.60	23.12	-12.77
	QPSK	1@0	4	23.56	23.28	-12.75
		1@47	4	23.58	23.21	-12.79
15	BPSK	1@0	4	23.08	24.14	-12.83
		1@11	4	23.21	24.33	-12.98
	QPSK	1@0	4	23.28	24.47	-12.95
		1@11	4	23.23	24.31	-12.94
		12@0	4	22.39	24.20	-15.01



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5.2.4 CAT-M B2 Conducted RF Power Output Results

Mode	Band width	Channel	RB	Index	Antenna Gain (dBi)	Conducted Average Power(dBm)		EIRP Average (dBm)	
						QPSK	16QAM	QPSK	16QAM
Band2	1.4MHz	18607	1#0	0	3	22.39	21.26	25.39	24.26
			6#0	0	3	21.06	20.2	24.06	23.20
		18900	1#0	0	3	22.25	21.08	25.25	24.08
			6#0	0	3	21.24	20.21	24.24	23.21
		19193	1#5	0	3	22.33	21.19	25.33	24.19
			6#0	0	3	21.27	21.34	24.27	24.34
	3MHz	18615	1#0	0	3	21.17	20.67	24.17	23.67
			6#0	0	3	22.41	21.12	25.41	24.12
		18900	1#0	0	3	22.31	21.73	25.31	24.73
			6#0	0	3	21.92	20.96	24.92	23.96
		19185	1#5	1	3	22.21	21.19	25.21	24.19
			6#0	1	3	21.21	21.26	24.21	24.26
	5MHz	18620	1#0	0	3	21.15	21.65	24.15	24.65
			6#0	0	3	21.05	20.11	24.05	23.11
		18900	1#0	0	3	21.25	21.94	24.25	24.94
			6#0	0	3	21.03	20.07	24.03	23.07
		19180	1#5	3	3	21.68	22.01	24.68	25.01
			6#0	3	3	21.25	20.46	24.25	23.46

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	10MHz	18640	1#0	0	3	21.12	21.96	24.12	24.96
			4#0	0	3	21.12	21.23	24.12	24.23
		18900	1#0	0	3	21.10	21.85	24.10	24.85
			4#0	0	3	21.06	21.57	24.06	24.57
		19160	1#5	7	3	21.30	21.29	24.30	24.29
			4#2	7	3	21.44	21.44	24.44	24.44
	15MHz	18660	1#0	0	3	21.20	21.97	24.20	24.97
			6#0	0	3	21.15	21.53	24.15	24.53
		18900	1#0	0	3	21.15	21.95	24.15	24.95
			6#0	0	3	21.15	21.50	24.15	24.50
		19140	1#5	0	3	21.24	21.99	24.24	24.99
			6#0	0	3	21.22	21.65	24.22	24.65
	20MHz	18680	1#0	0	3	21.13	21.95	24.13	24.95
			6#0	0	3	21.09	21.51	24.09	24.51
		18900	1#0	0	3	21.07	21.83	24.07	24.83
			6#0	0	3	21.04	21.39	24.04	24.39
		19120	1#5	0	3	21.25	21.97	24.25	24.97
			6#0	0	3	21.20	21.52	24.20	24.52

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5.2.5 CAT-M B4 Conducted RF Power Output Results

Mode	Band width	Channel	RB	Index	Antenna Gain (dBi)	Conducted Average Power(dBm)		EIRP Average (dBm)	
						QPSK	16QAM	QPSK	16QAM
Band4	1.4MHz	19957	1#0	0	4	21.69	21.12	25.69	25.12
			6#0	0	4	19.78	20.65	23.78	24.65
		20175	1#0	0	4	21.37	20.72	25.37	24.72
			6#0	0	4	19.89	20.39	23.89	24.39
		20393	1#5	0	4	21.27	20.54	25.27	24.54
			6#0	0	4	19.85	20.50	23.85	24.50
	3MHz	19965	1#0	0	4	21.74	21.09	25.74	25.09
			6#0	0	4	19.79	20.55	23.79	24.55
		20175	1#0	0	4	21.39	20.82	25.39	24.82
			6#0	0	4	19.86	20.82	23.86	24.82
		20385	1#5	1	4	21.24	20.64	25.24	24.64
			6#0	1	4	19.79	20.52	23.79	24.52
	5MHz	19975	1#0	0	4	21.72	21.82	25.72	25.82
			6#0	0	4	20.69	20.60	24.69	24.60
		20175	1#0	0	4	21.48	22.17	25.48	26.17
			6#0	0	4	20.42	20.38	24.42	24.38
		20375	1#5	3	4	21.03	21.81	25.03	25.81
			6#0	3	4	20.19	20.54	24.19	24.54

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	10MHz	20000	1#0	0	4	21.78	22.38	25.78	26.38
			4#0	0	4	21.68	22.02	25.68	26.02
		20175	1#0	0	4	21.44	22.15	25.44	26.15
			4#0	0	4	21.48	21.78	25.48	25.78
		20350	1#5	7	4	21.19	21.82	25.19	25.82
			4#2	7	4	21.22	21.60	25.22	25.60
	15MHz	20025	1#0	0	4	21.68	21.78	25.68	25.78
			6#0	0	4	21.67	21.70	25.67	25.70
		20175	1#0	0	4	21.48	22.16	25.48	26.16
			6#0	0	4	21.44	21.72	25.44	25.72
		20325	1#5	0	4	21.22	21.96	25.22	25.96
			6#0	0	4	21.41	21.71	25.41	25.71
	20MHz	20050	1#0	0	4	21.66	22.30	25.66	26.30
			6#0	0	4	21.62	21.94	25.62	25.94
		20175	1#0	0	4	21.46	22.19	25.46	26.19
			6#0	0	4	21.40	21.77	25.40	25.77
		20300	1#5	0	4	21.01	21.80	25.01	25.80
			6#0	0	4	21.19	21.55	25.19	25.55

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5.2.6 CAT-M B12 Conducted RF Power Output Results

Mode	Band width	Channel	RB	Index	Antenna Gain (dBi)	Conducted Average Power(dBm)		ERP Average (dBm)	
						QPSK	16QAM	QPSK	16QAM
Band12	1.4MHz	20315	1#0	0	4	22.09	21.45	23.94	23.30
			6#0	0	4	20.65	20.67	22.50	22.52
		23095	1#0	0	4	21.93	21.25	23.78	23.10
			6#0	0	4	20.68	20.78	22.53	22.63
		23175	1#5	0	4	21.34	21.00	23.19	22.85
			6#0	0	4	20.47	20.69	22.32	22.54
	3MHz	20320	1#0	0	4	21.98	21.41	23.83	23.26
			6#0	0	4	20.63	20.77	22.48	22.62
		23095	1#0	0	4	21.82	21.25	23.67	23.10
			6#0	0	4	20.61	20.79	22.46	22.64
		23170	1#5	1	4	21.56	21.03	23.41	22.88
			6#0	1	4	20.54	20.68	22.39	22.53
	5MHz	20330	1#0	0	4	22.07	22.59	23.92	24.44
			6#0	0	4	20.69	21.02	22.54	22.87
		23095	1#0	0	4	21.82	22.51	23.67	24.36
			6#0	0	4	20.75	20.79	22.60	22.64
		23160	1#5	3	4	21.59	22.09	23.44	23.94
			6#0	3	4	20.50	20.79	22.35	22.64

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	10MHz	20345	1#0	0	4	22.03	22.59	23.88	24.44
			4#0	0	4	21.97	22.15	23.82	24.00
		23095	1#0	0	4	21.84	22.66	23.69	24.51
			4#0	0	4	21.88	22.18	23.73	24.03
		23145	1#5	7	4	21.56	22.06	23.41	23.91
			4#2	7	4	21.72	21.80	23.57	23.65

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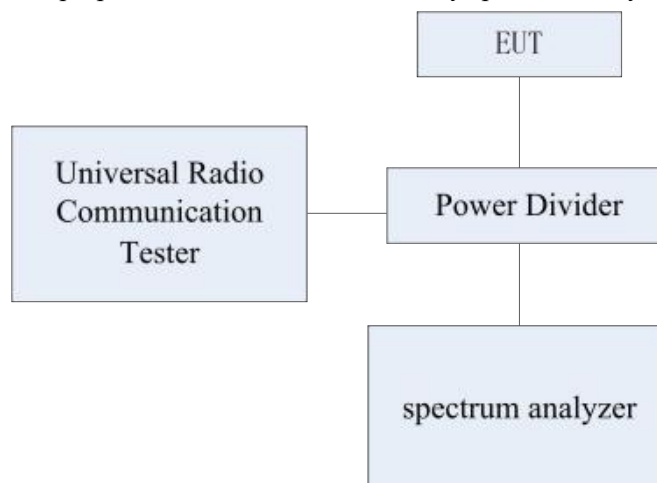
Report No.: I20W00018-WWAN_Rev1

5.3 Occupied Bandwidth

Specifications:	FCC Part 2.1049, 22.917(b), 24.238(b),90.209
DUT Serial Number:	866884045622016
Test conditions:	Ambient Temperature:15°C -35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	--

Test Setup

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.



Measurement Uncertainty:

Item	Uncertainty
Expanded Uncertainty	69 kHz (k=2)

Test Method

The occupied Bandwidth was calculated from the spectrum analyzer. Markers in the spectrum analyzer were then placed between the calculated frequencies to show the calculated 99% power Band. The 26dB Bandwidth was also measured and recorded.

Note: Only worst case result is given below.

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5.3.1 NB-IoT B2 Mode Occupied Bandwidth Results

Frequency ID	N _{UL}	Sub-carrier Spacing [kHz]	Occupied Bandwidth (99%) (kHz)		Occupied Bandwidth (26dB) (kHz)	
			QPSK	BPSK	QPSK	BPSK
Mid Range	18900	15	199.56	197.49	232.8	231.7

5.3.2 NB-IoT B4 Mode Occupied Bandwidth Results

Frequency ID	N _{UL}	Sub-carrier Spacing [kHz]	Occupied Bandwidth (99%) (kHz)		Occupied Bandwidth (26dB) (kHz)	
			QPSK	BPSK	QPSK	BPSK
Mid Range	20175	15	326.34	595.3	614.98	633.4

5.3.3 NB-IoT B12 Mode Occupied Bandwidth Results

Frequency ID	N _{UL}	Sub-carrier Spacing [kHz]	Occupied Bandwidth (99%) (kHz)		Occupied Bandwidth (26dB) (kHz)	
			QPSK	BPSK	QPSK	BPSK
Mid Range	23095	15	282.86	403.0	322.49	376.3

Report No.: I20W00018-WWAN_Rev1

5.3.4 CAT-M B2 Mode Occupied Bandwidth Results

Bandwidth	Modulation	Channel/Ferquency (MHz)	RB	Index	Occupied Bandwidth 99% (MHz)	Occupied Bandwidth 26dB (MHz)
1.4MHz	QPSK	18900/1880	6#0	0	0.90	1.25
	16QAM	18900/1880			1.08	1.06
3MHz	QPSK	18900/1880	6#0	0	1.09	1.27
	16QAM	18900/1880			1.47	1.12
5MHz	QPSK	18900/1880	6#0	0	1.12	1.32
	16QAM	18900/1880			0.94	1.12
10MHz	QPSK	18900/1880	6#0	0	1.77	1.40
	16QAM	18900/1880			1.01	1.31
15MHz	QPSK	18900/1880	6#0	0	1.42	1.00
	16QAM	18900/1880			1.27	1.65
20MHz	QPSK	18900/1880	6#0	0	1.43	1.01
	16QAM	18900/1880			1.28	1.75

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5.3.5 CAT-M B4 Mode Occupied Bandwidth Results

Bandwidth	Modulation	Channel/Ferquency (MHz)	RB	Index	Occupied Bandwidth 99% (MHz)	Occupied Bandwidth 26dB (MHz)
1.4MHz	QPSK	20175/1732.5	6#0	0	1.08	1.25
	16QAM	20175/1732.5			0.91	1.05
3MHz	QPSK	20175/1732.5	6#0	0	1.08	1.38
	16QAM	20175/1732.5			0.91	1.10
5MHz	QPSK	20175/1732.5	6#0	0	1.11	1.20
	16QAM	20175/1732.5			0.94	1.12
10MHz	QPSK	20175/1732.5	6#0	0	1.17	1.37
	16QAM	20175/1732.5			1.00	1.24
15MHz	QPSK	20175/1732.5	6#0	0	1.42	1.77
	16QAM	20175/1732.5			1.32	1.64
20MHz	QPSK	20175/1732.5	6#0	0	1.26	1.63
	16QAM	20175/1732.5			1.68	1.77

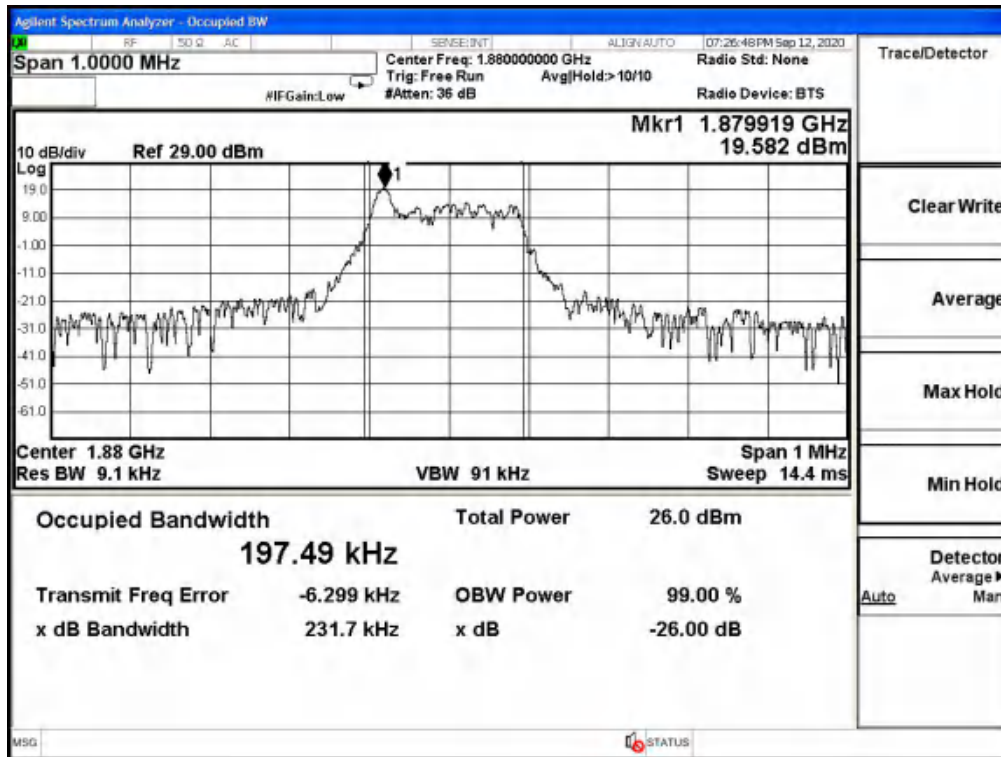
Report No.: I20W00018-WWAN_Rev1

5.3.6 CAT-M B12 Mode Occupied Bandwidth Results

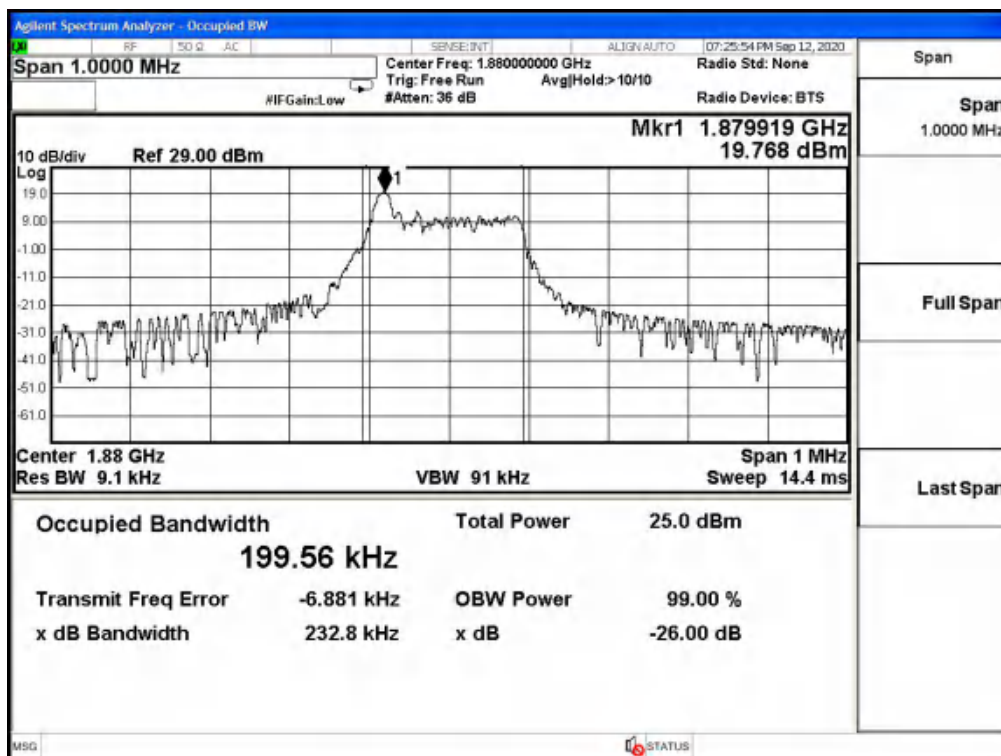
Bandwidth	Modulation	Channel/Ferquency (MHz)	RB	Index	Occupied Bandwidth 99% (MHz)	Occupied Bandwidth 26dB (MHz)
1.4MHz	QPSK	23095/707.5	6#0	0	1.08	1.26
	16QAM	23095/707.5			0.90	1.06
3MHz	QPSK	23095/707.5	6#0	0	1.09	1.20
	16QAM	23095/707.5			0.92	1.10
5MHz	QPSK	23095/707.5	6#0	0	0.93	1.38
	16QAM	23095/707.5			1.11	1.12
10MHz	QPSK	23095/707.5	6#0	0	1.00	1.37
	16QAM	23095/707.5			1.16	1.24

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Graphical results for NB-IoT:

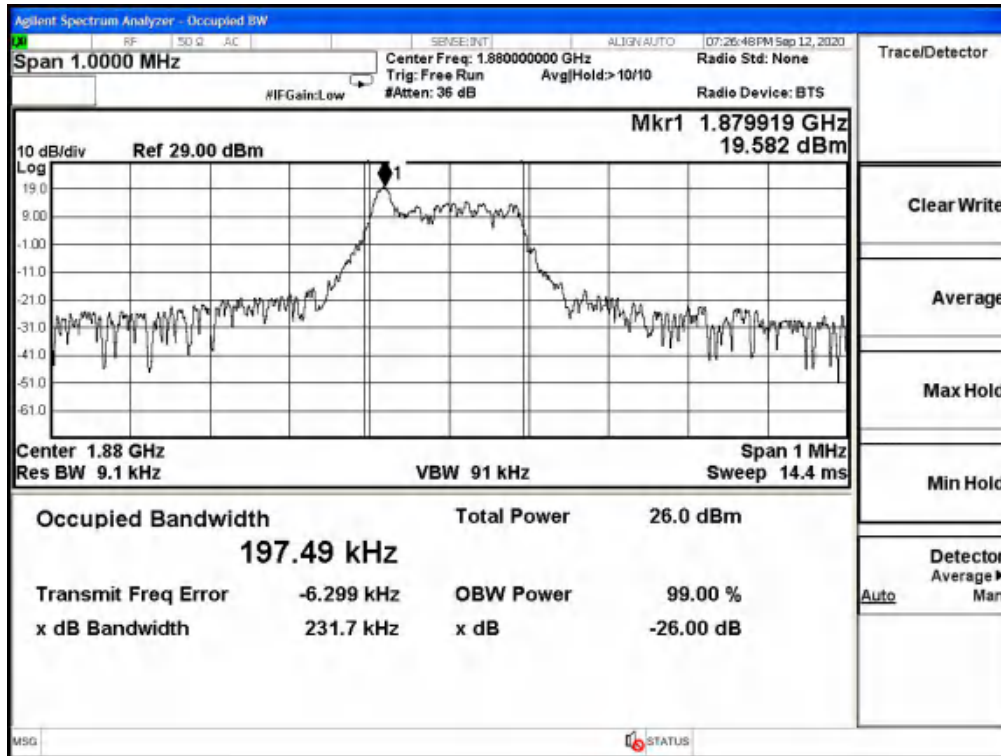


Band2-26dB OBW-18900 Channel-BPSK

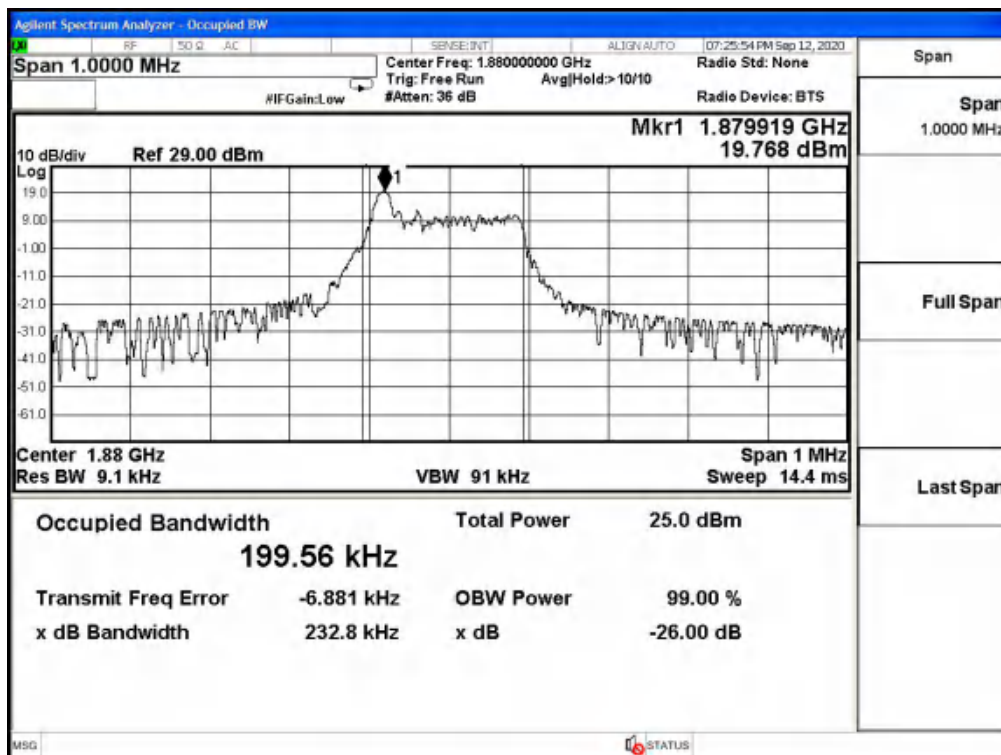


Band2-26dB OBW-18900 Channel-QPSK

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Band2-99% OBW-18900 Channel-BPSK



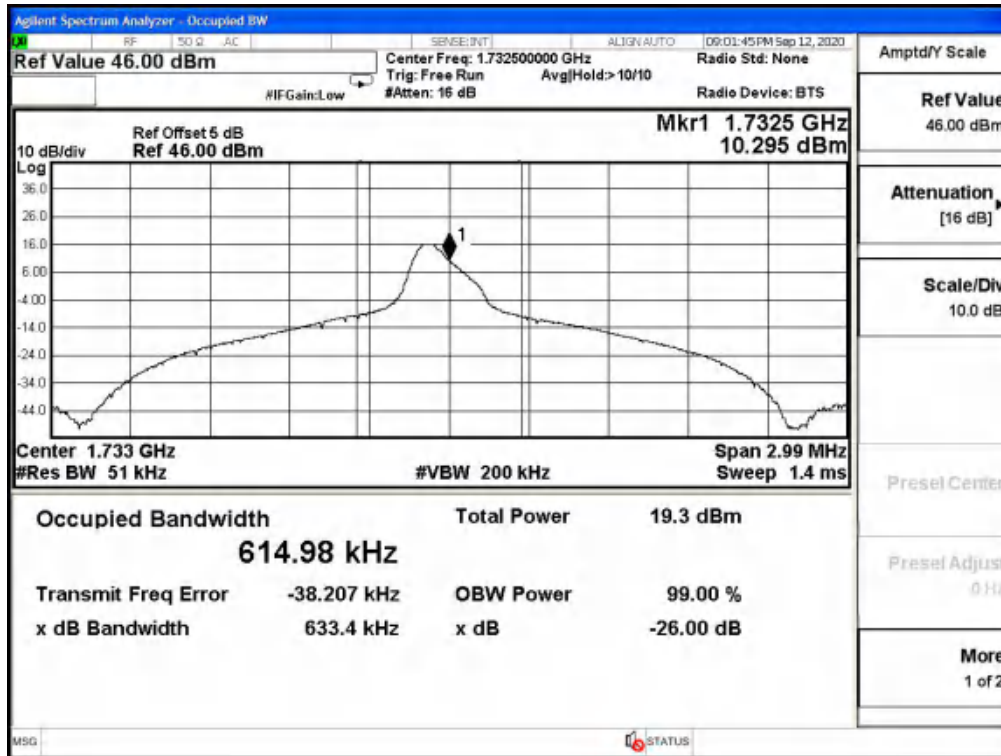
Band2-99% OBW-18900 Channel-QPSK

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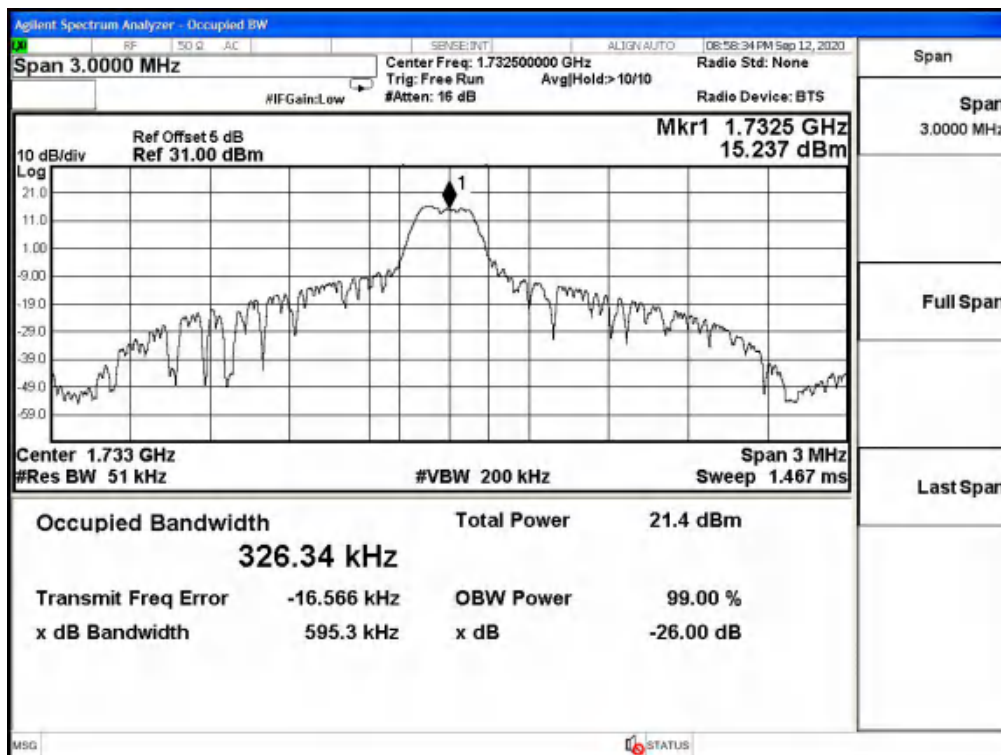
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Band4-26dB OBW-20175 Channel-BPSK

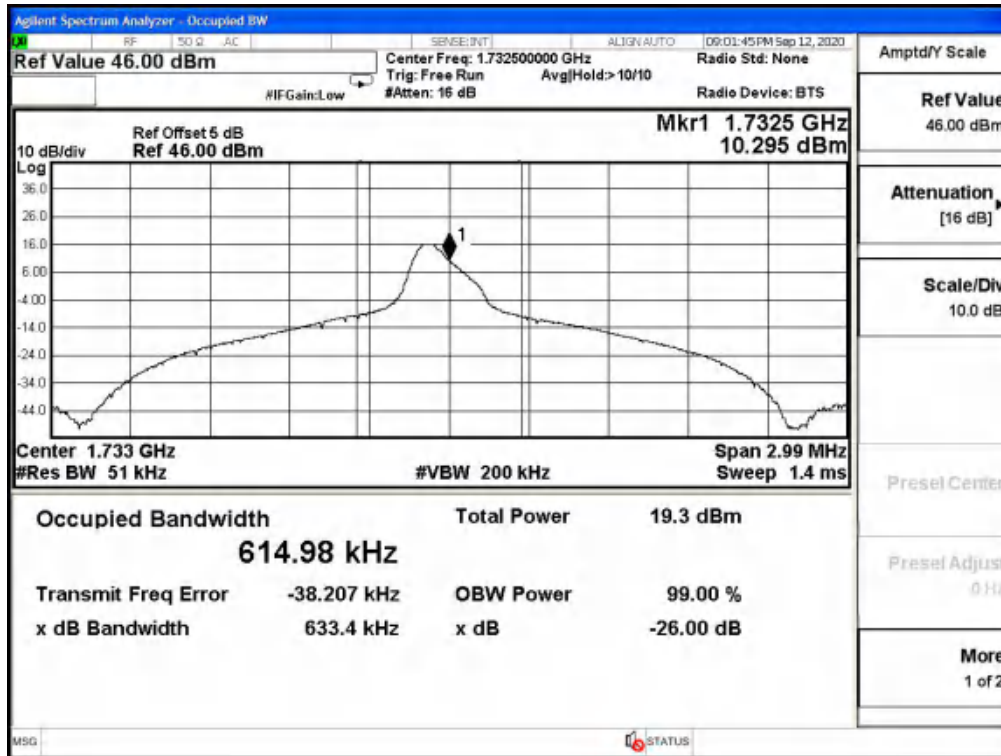


Band4-26dB OBW-20175 Channel-QPSK

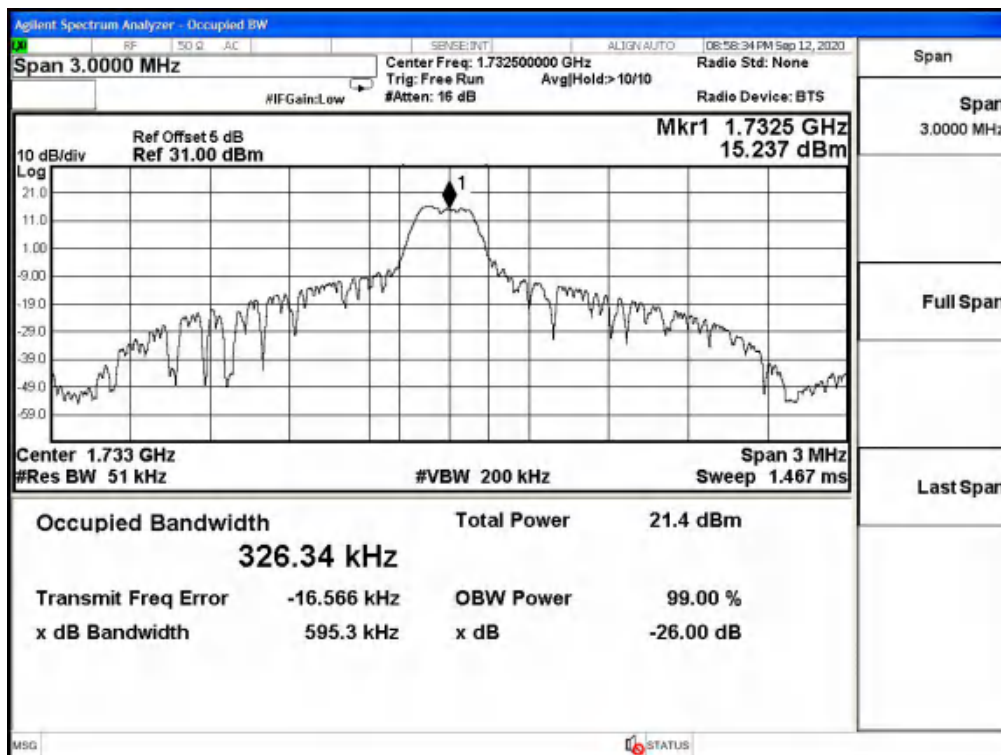
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Band4-99% OBW-20175 Channel-BPSK

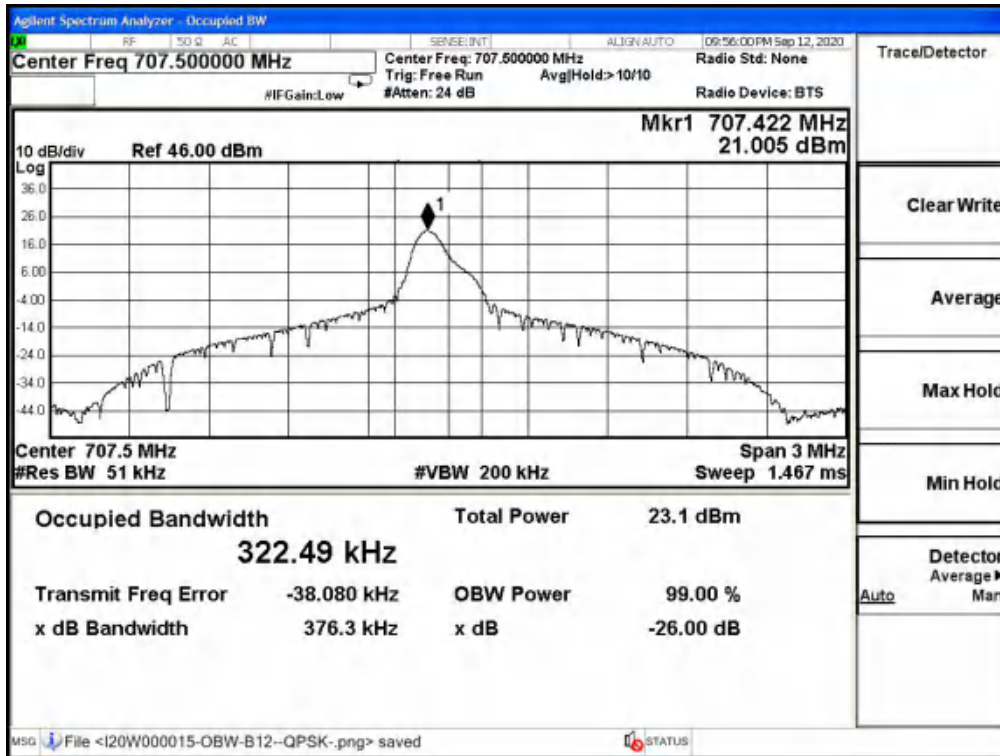


Band4-99% OBW-20175 Channel-QPSK

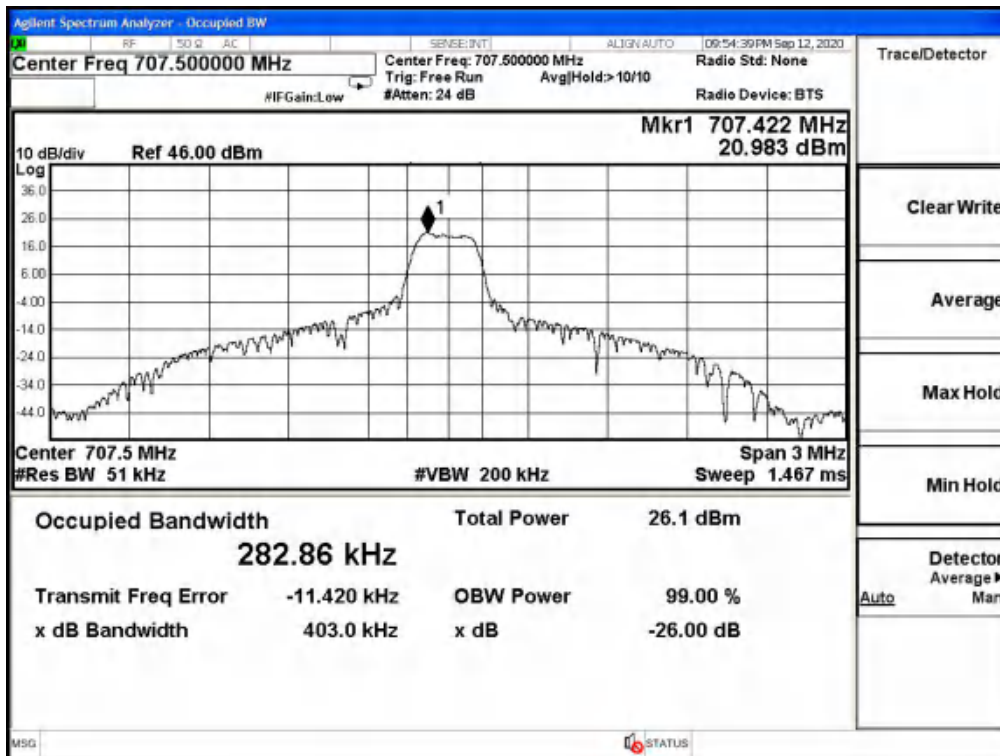
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Band12-26dB OBW-23095 Channel-BPSK

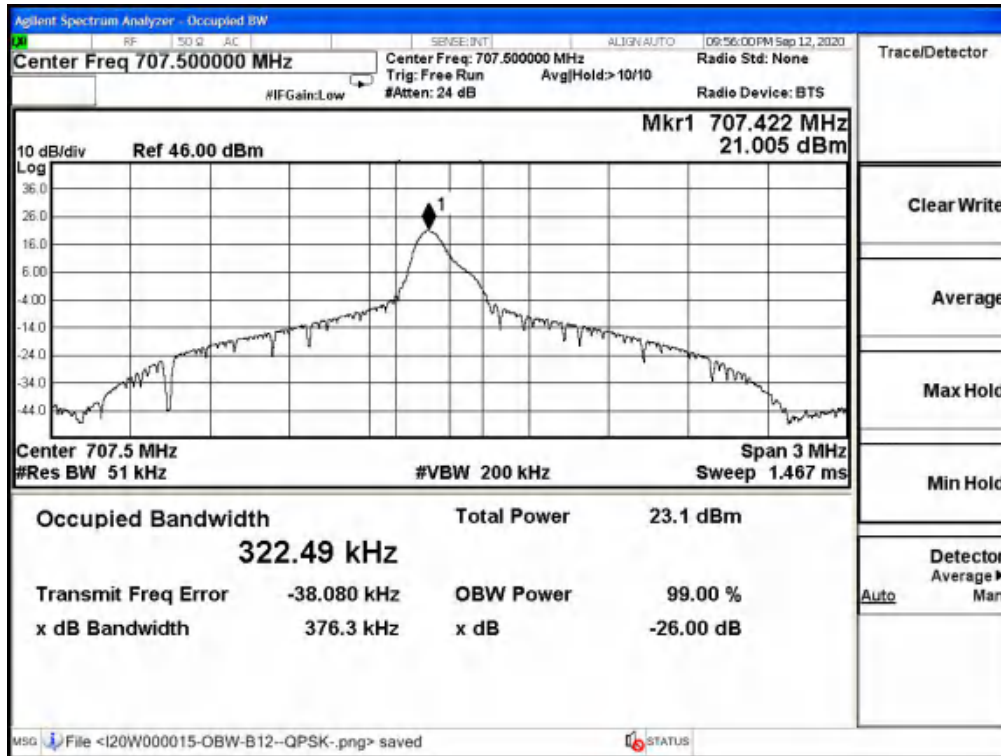


Band12-26dB OBW-23095 Channel-QPSK

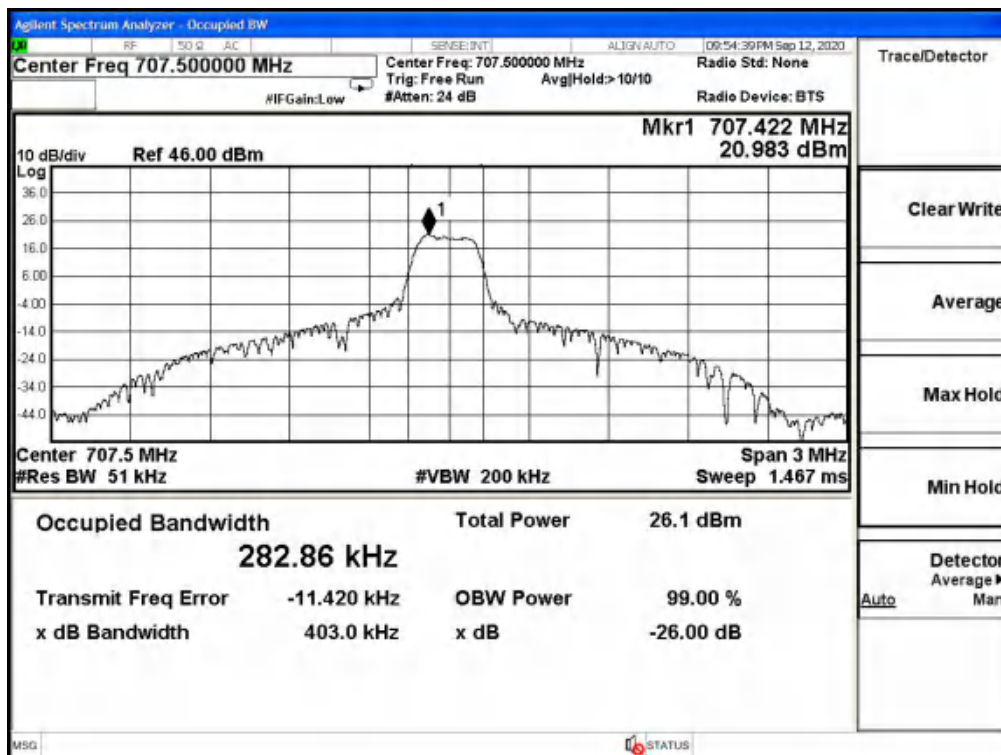
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Band12-99% OBW-23095 Channel-BPSK

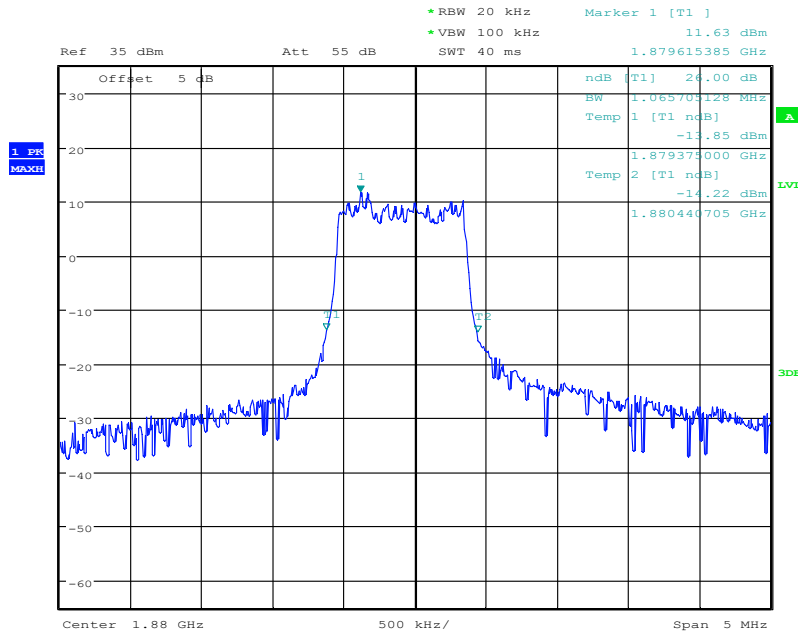


Band12-99% OBW-23095 Channel-QPSK



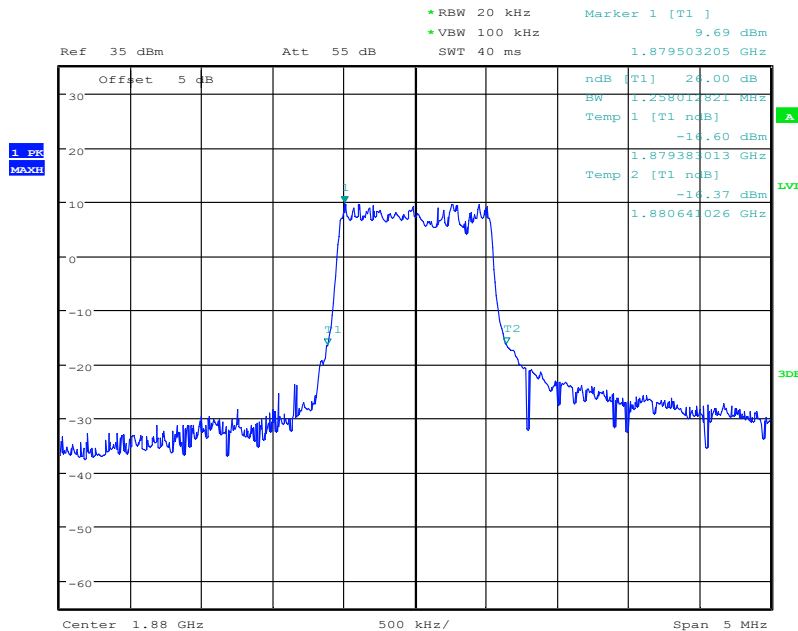
Report No.: I20W00018-WWAN_Rev1

Graphical results for CAT-M:



Date: 1.SEP.2020 22:02:54

Band2-26dB OBW-1.4MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:02:21

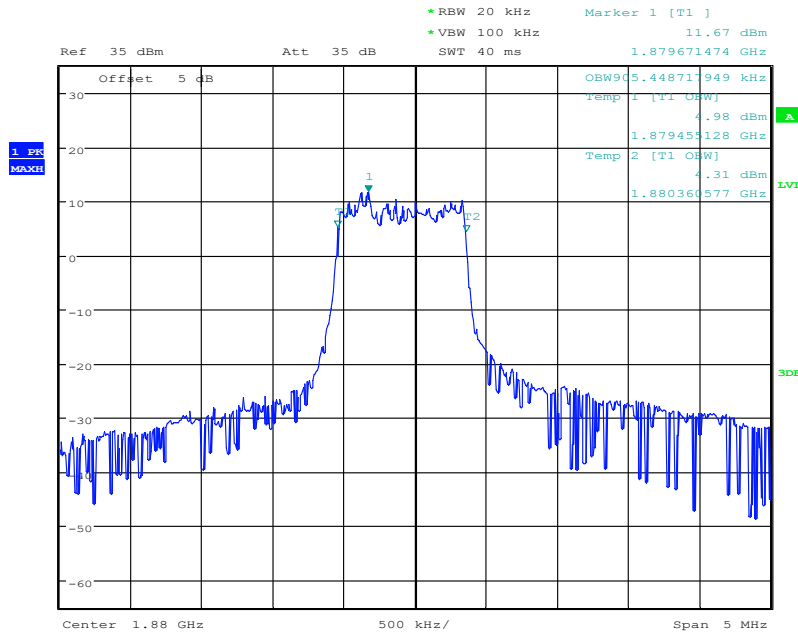
Band2-26dB OBW-1.4MHz Bandwidth-QPSK

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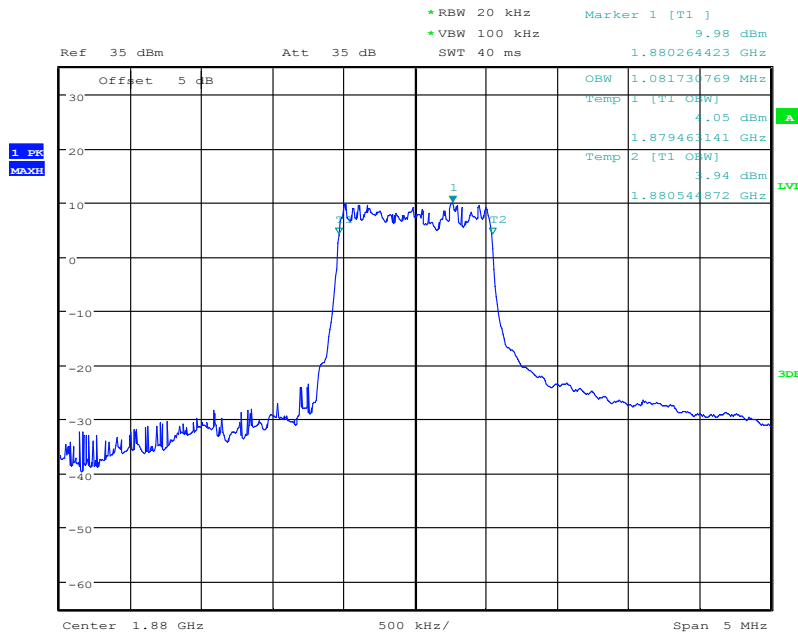


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:03:15

Band2-99% OBW-1.4MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:01:48

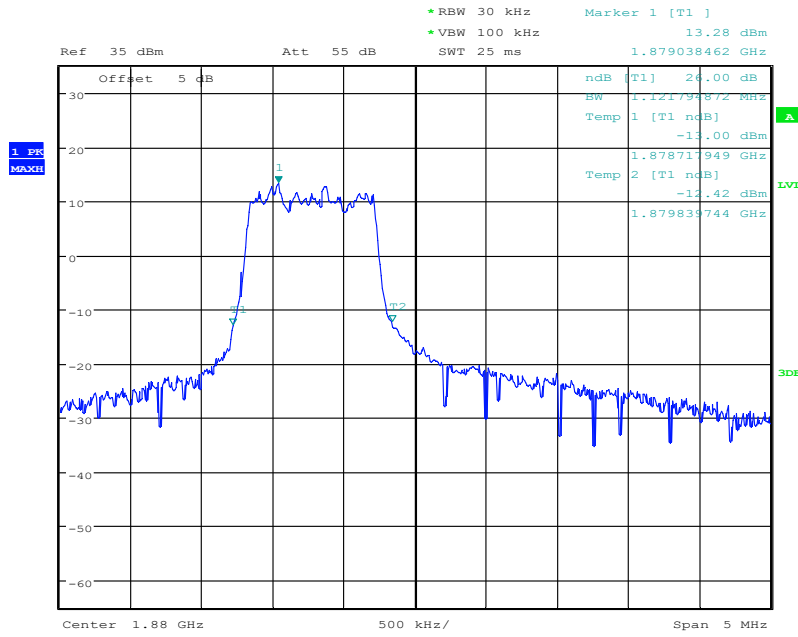
Band2-99% OBW-1.4MHz Bandwidth-QPSK

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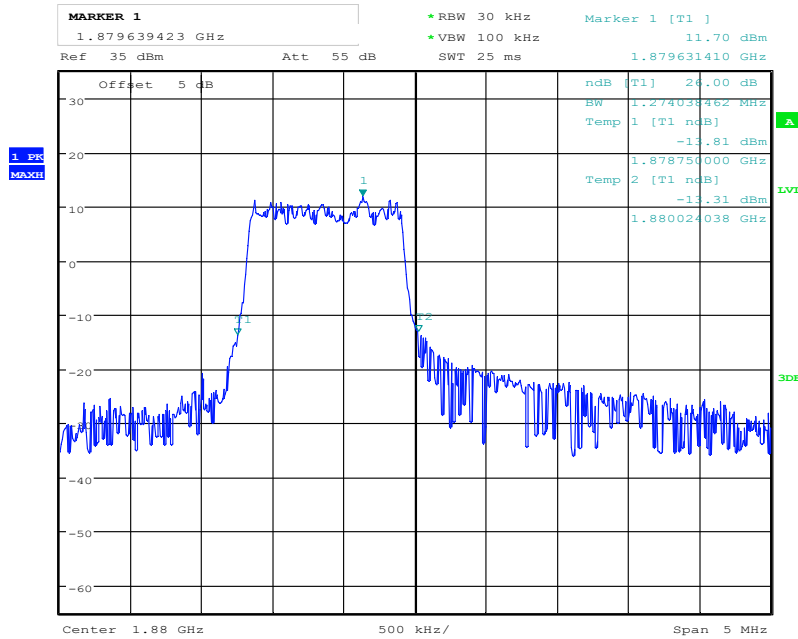


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:05:22

Band2-26dB OBW-3MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:04:45

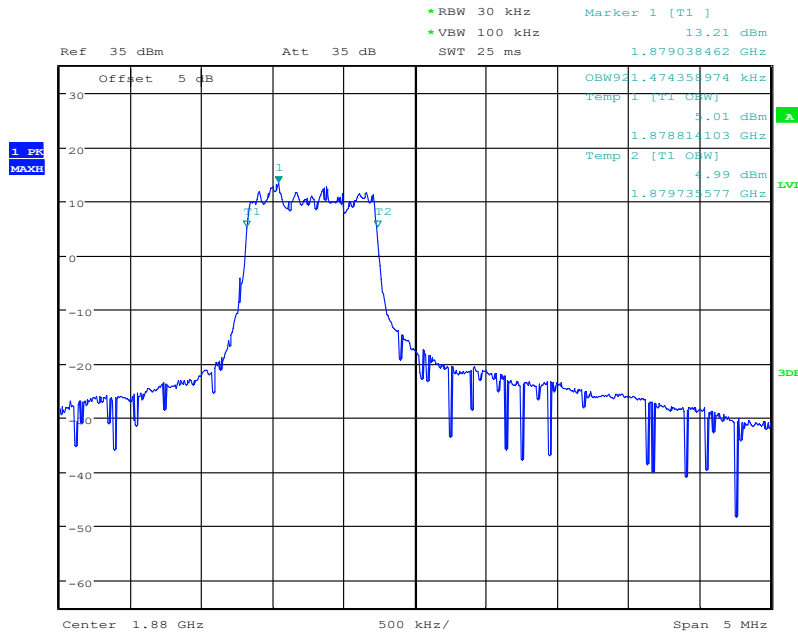
Band2-26dB OBW-3MHz Bandwidth-QPSK

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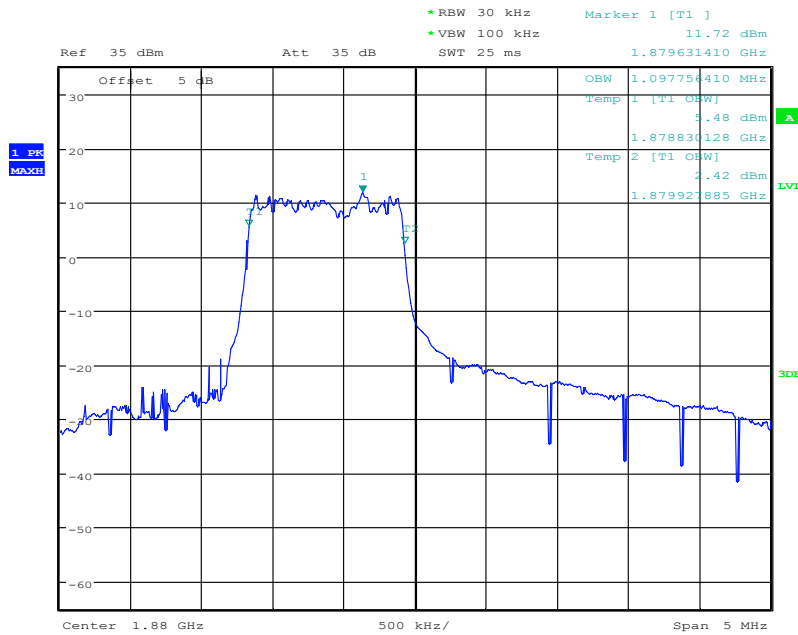


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:05:44

Band2-99% OBW-3MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:04:32

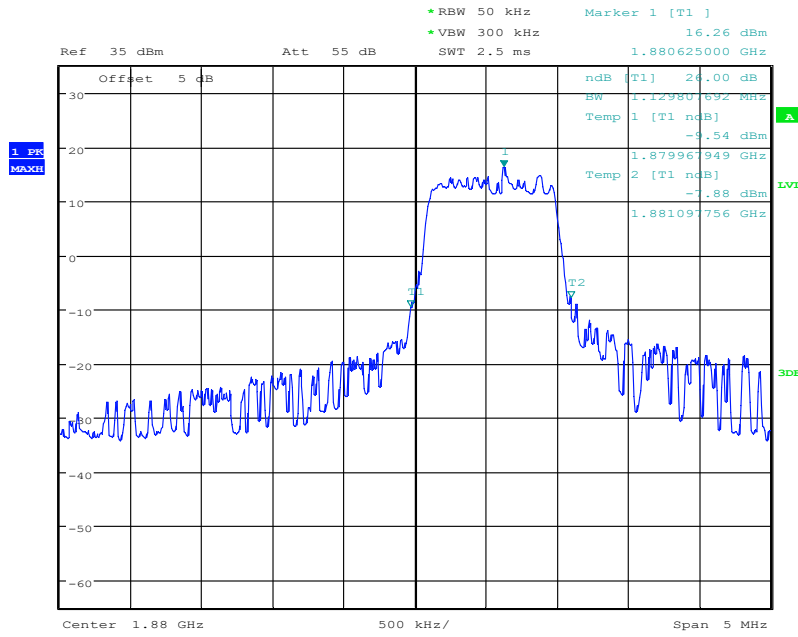
Band2-99% OBW-3MHz Bandwidth-QPSK

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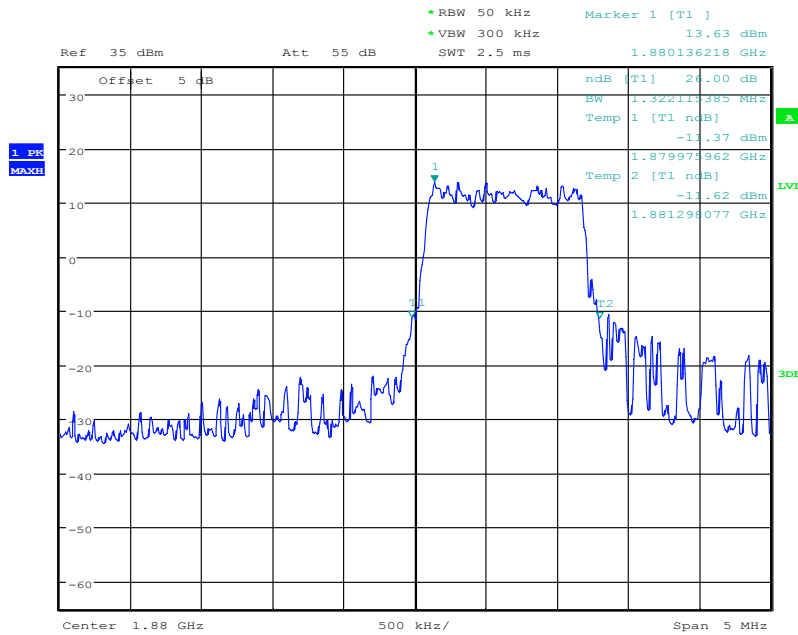


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:08:22

Band2-26dB OBW-5MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:07:58

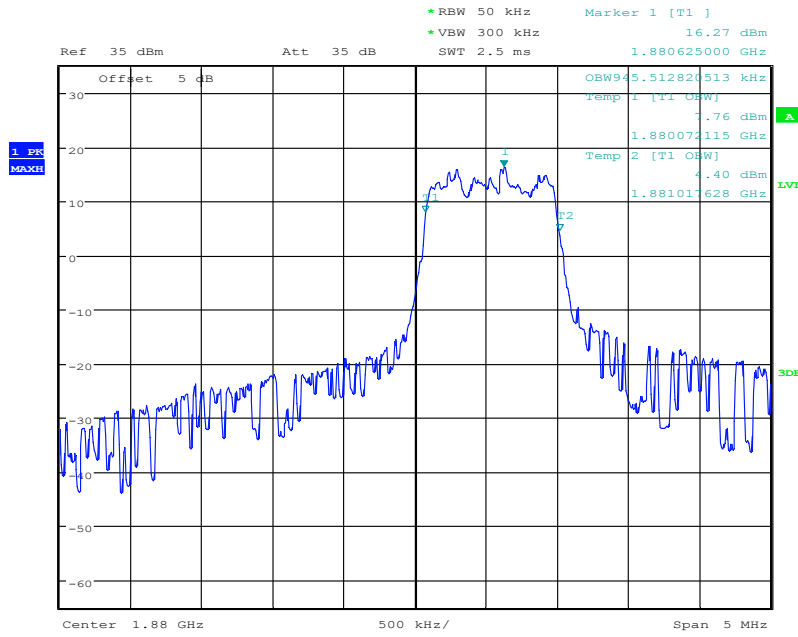
Band2-26dB OBW-5MHz Bandwidth-QPSK

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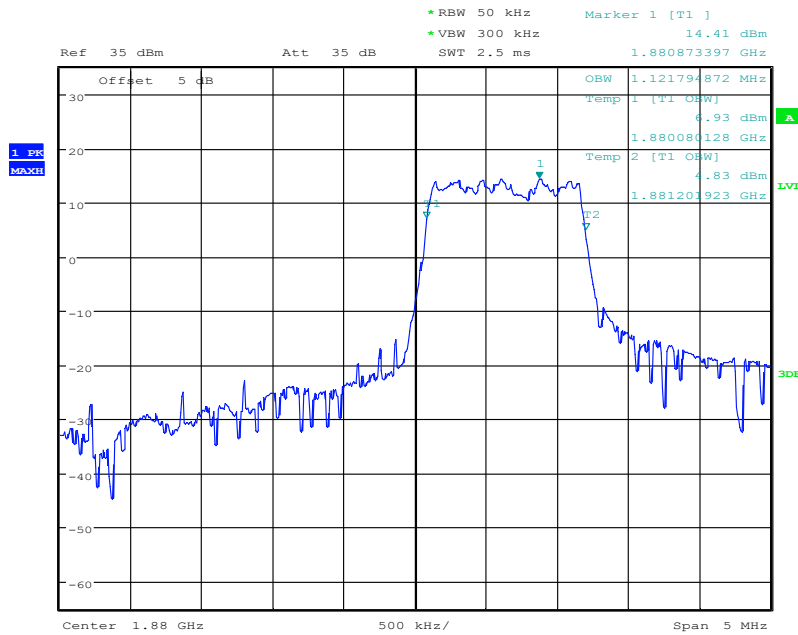


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:08:45

Band2-99% OBW-5MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:07:44

Band2-99% OBW-5MHz Bandwidth-QPSK

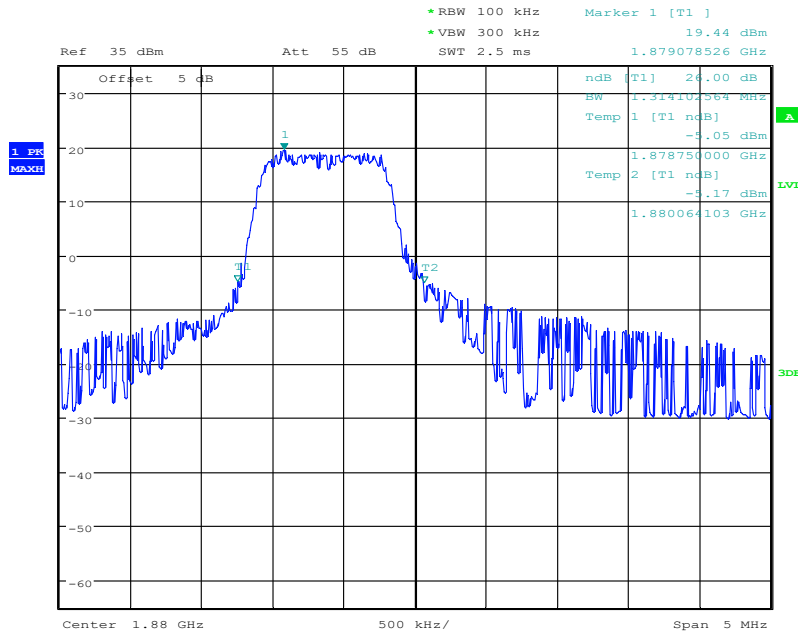
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Tel: 0086-23-88069965

FAX:0086-23-88608777

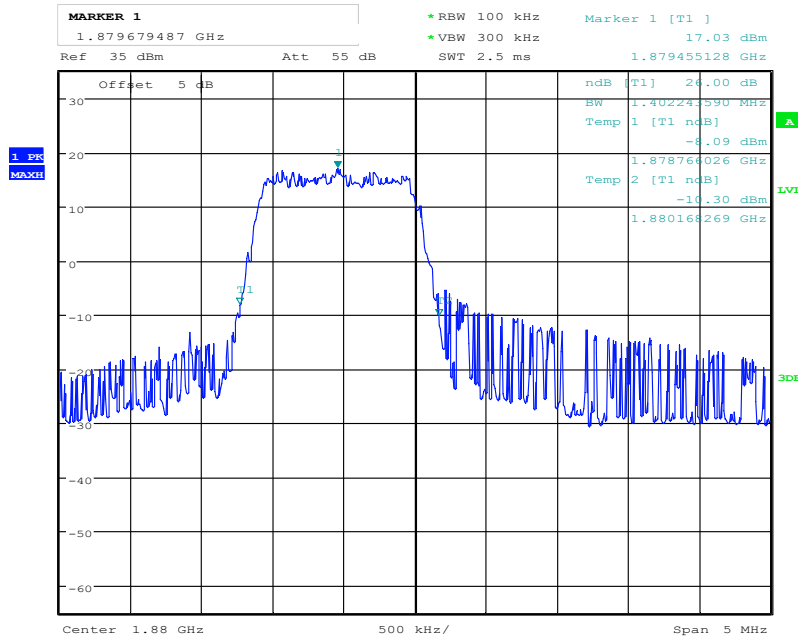


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:10:22

Band2-26dB OBW-10MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:09:56

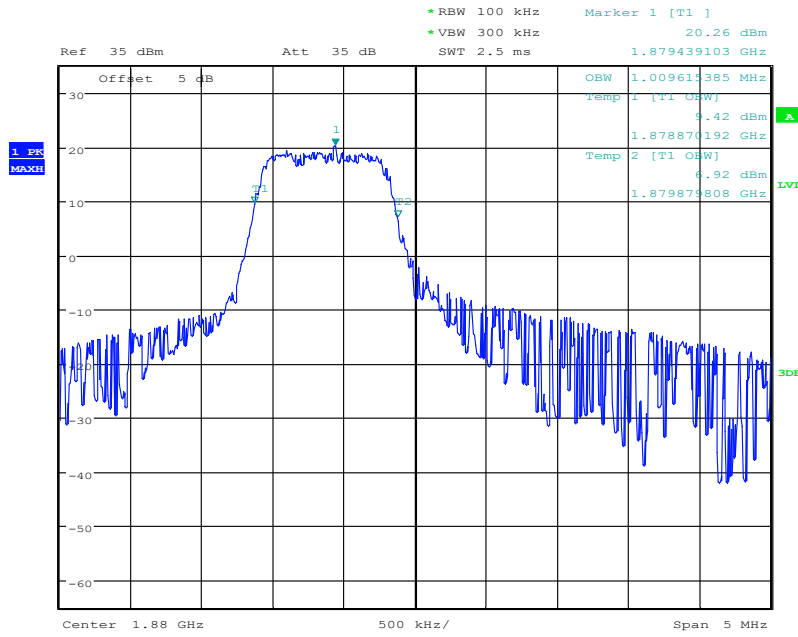
Band2-26dB OBW-10MHz Bandwidth-QPSK

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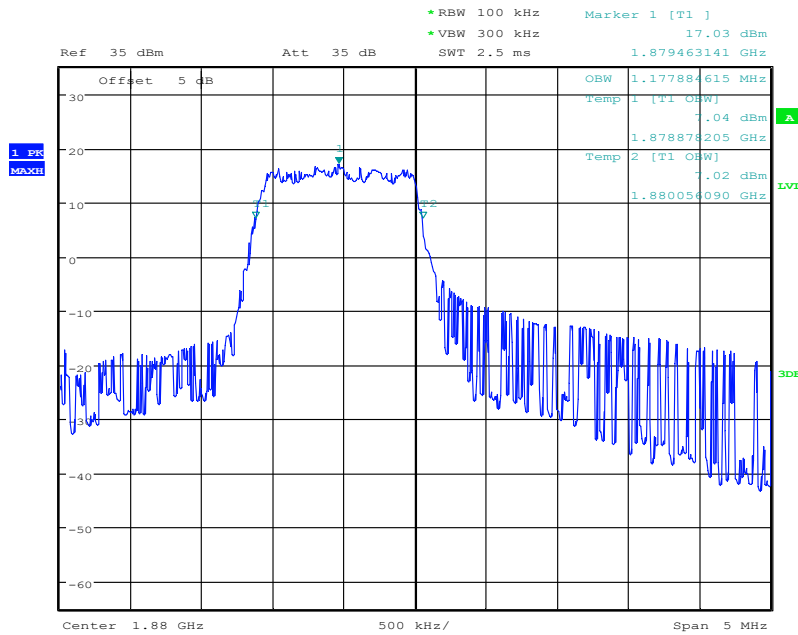


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:10:41

Band2-99% OBW-10MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:09:40

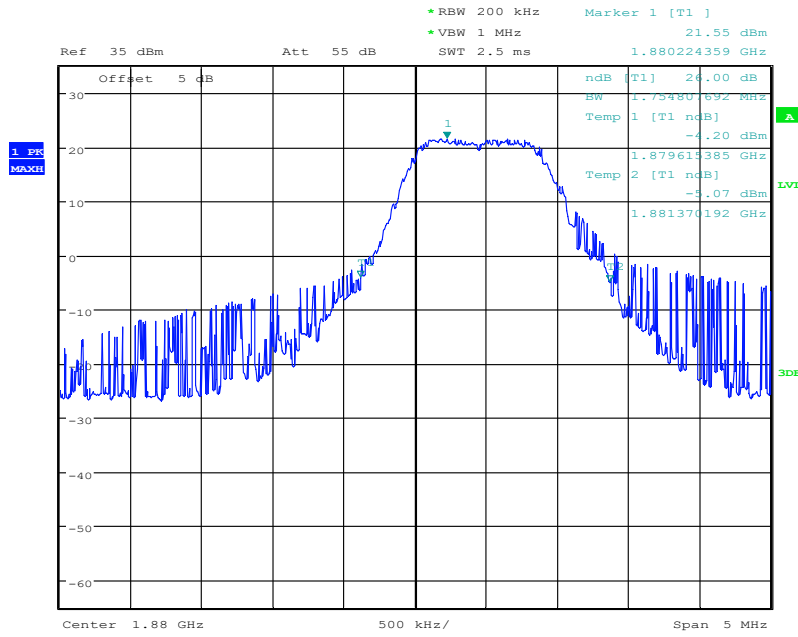
Band2-99% OBW-10MHz Bandwidth-QPSK

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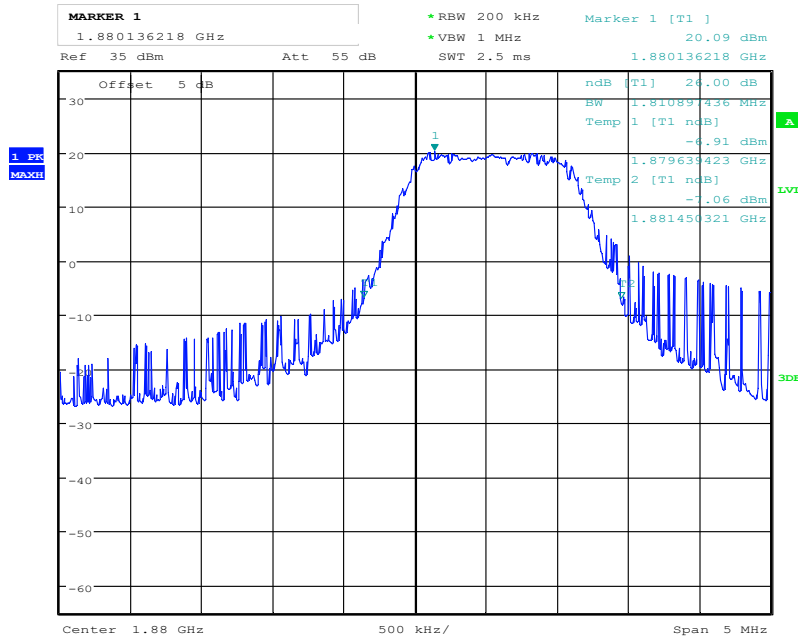


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:13:55

Band2-26dB OBW-20MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:13:33

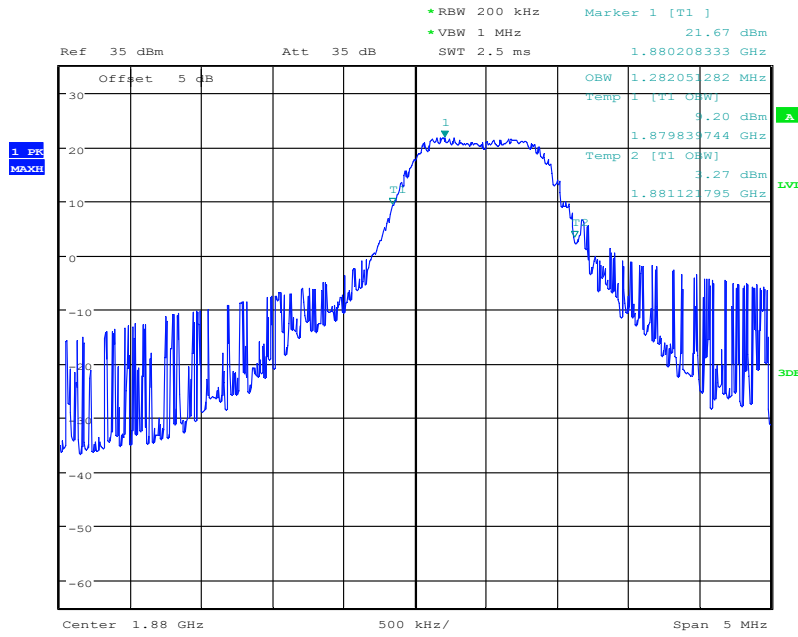
Band2-26dB OBW-20MHz Bandwidth-QPSK

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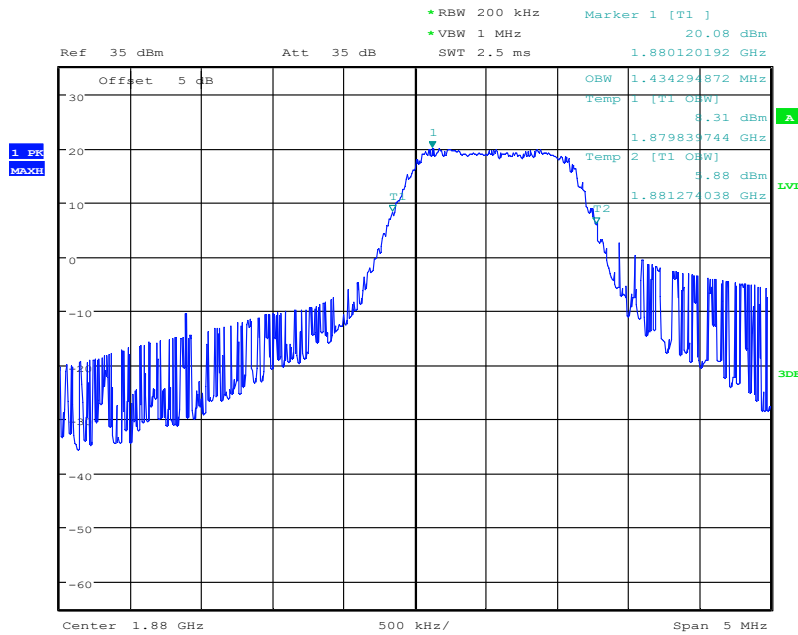


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:14:08

Band2-99% OBW-20MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:13:22

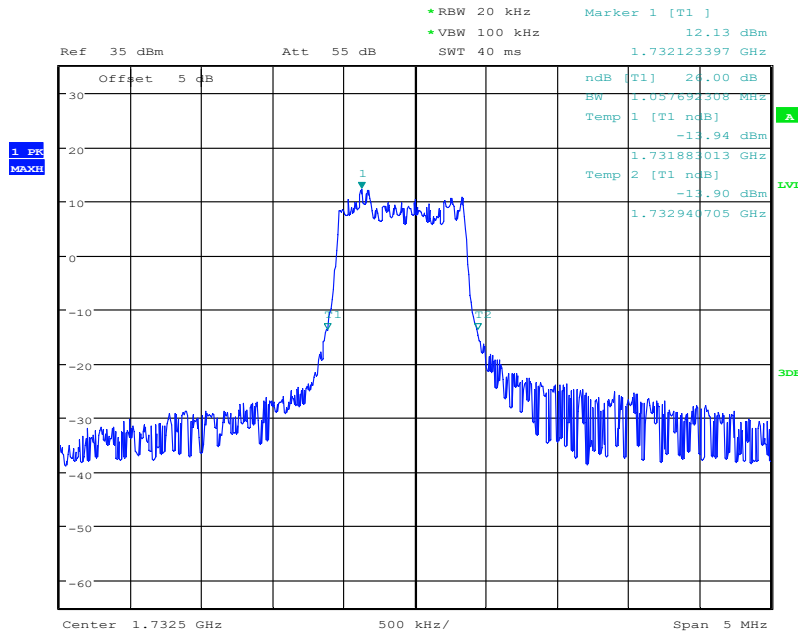
Band2-99% OBW-20MHz Bandwidth-QPSK

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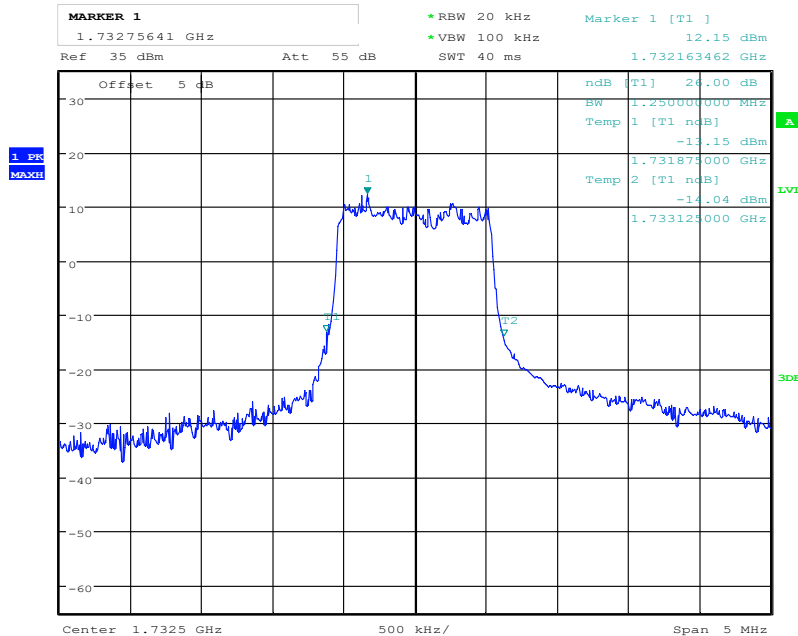


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:20:41

Band4-26dB OBW-1.4MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:20:26

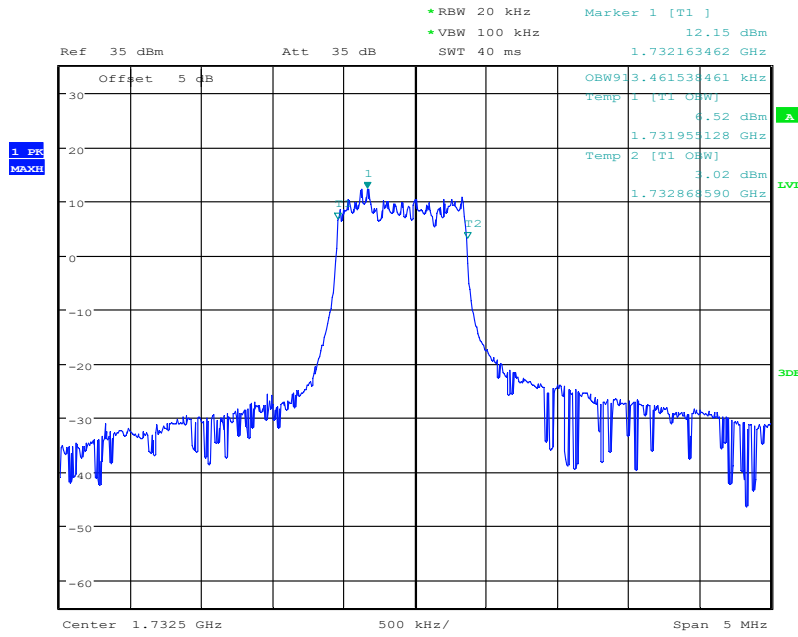
Band4-26dB OBW-1.4MHz Bandwidth-QPSK

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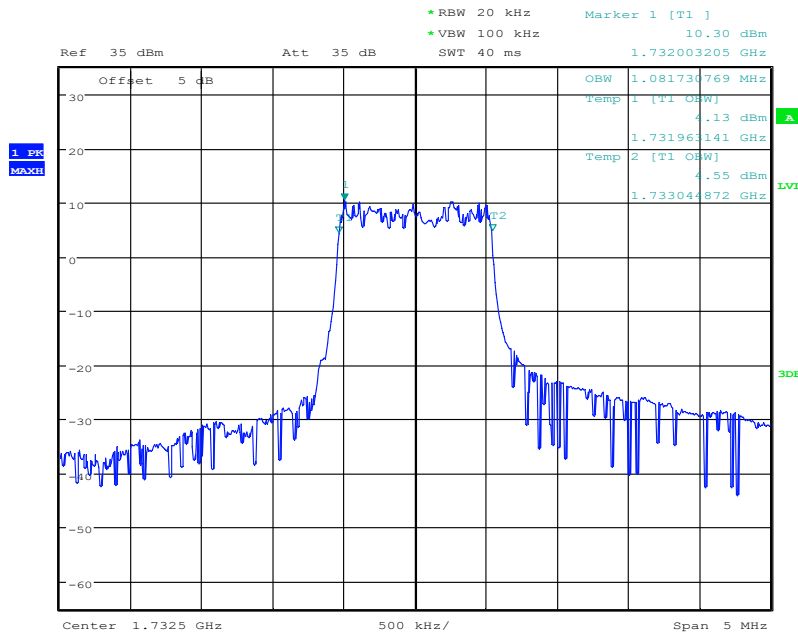


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:21:00

Band4-99% OBW-1.4MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:19:46

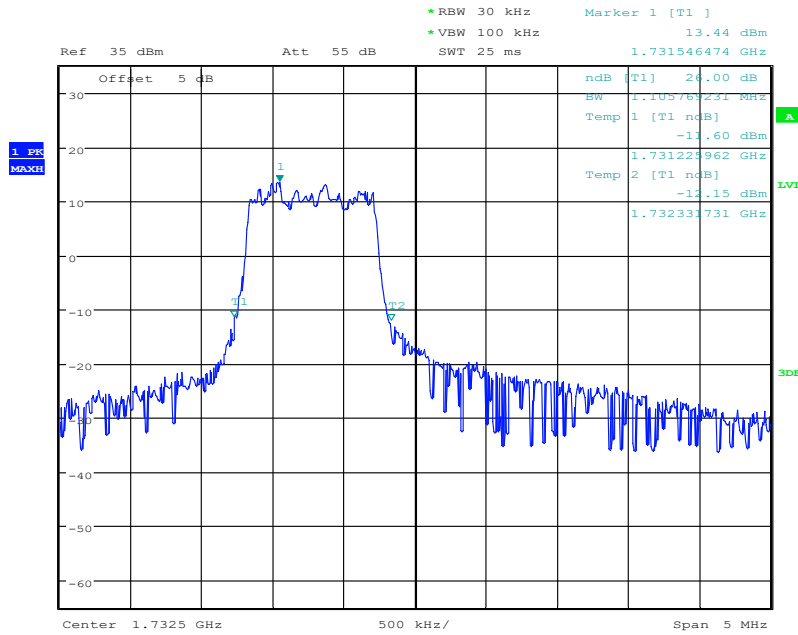
Band4-99% OBW-1.4MHz Bandwidth-QPSK

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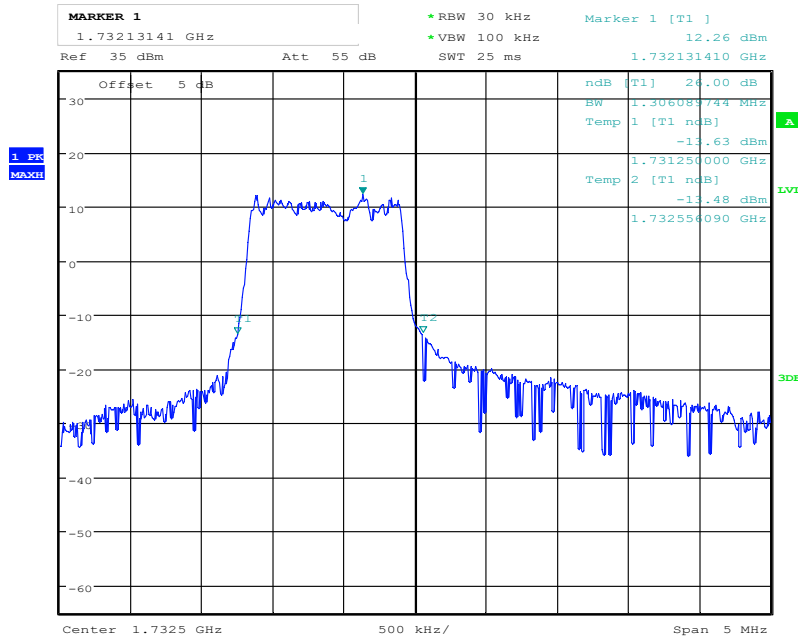


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:22:34

Band4-26dB OBW-3MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:22:08

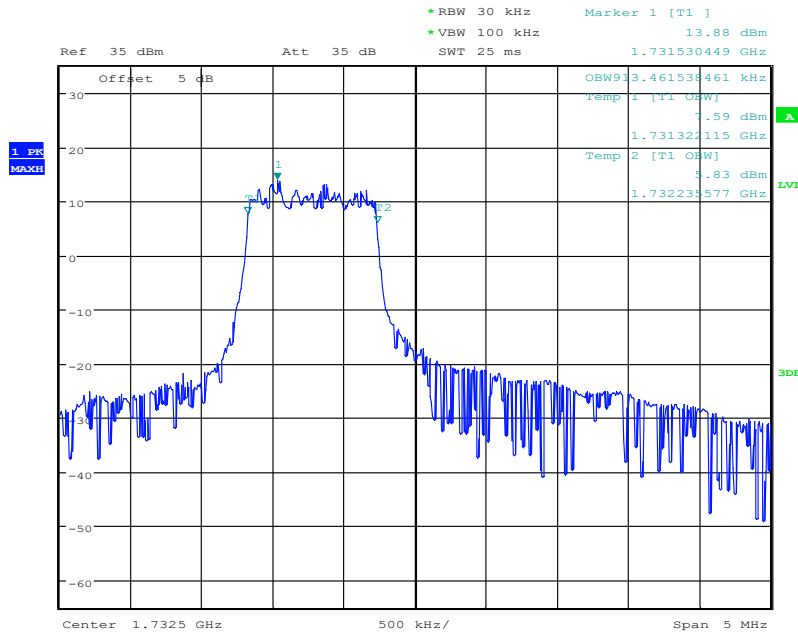
Band4-26dB OBW-3MHz Bandwidth-QPSK

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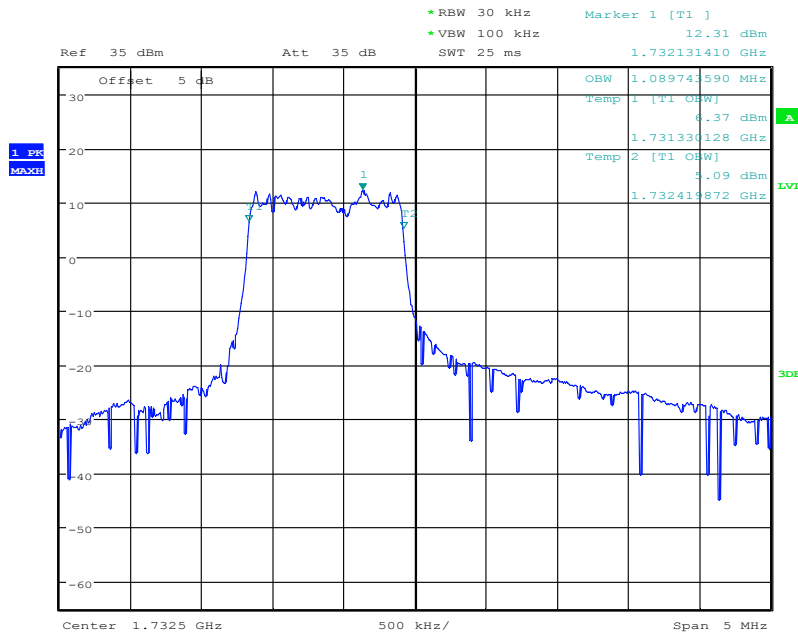


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:22:48

Band4-99% OBW-3MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:21:44

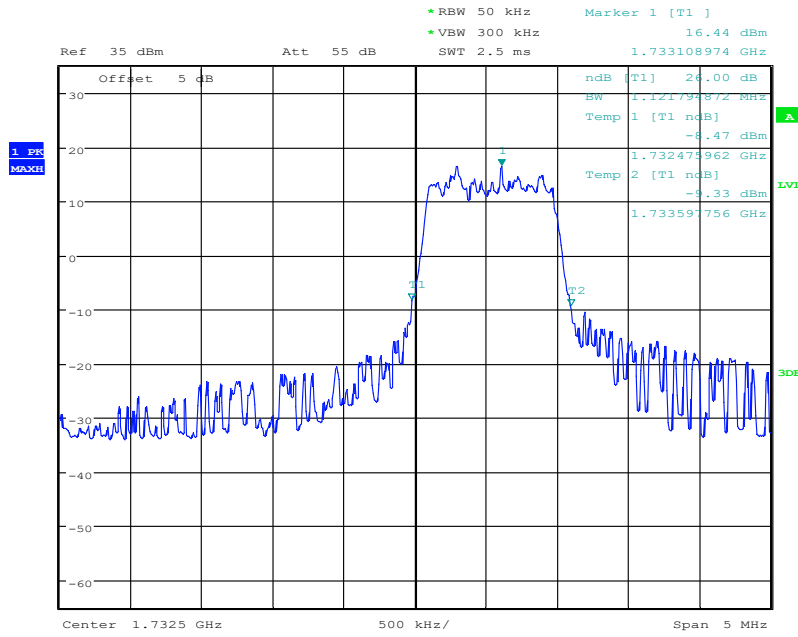
Band4-99% OBW-3MHz Bandwidth-QPSK

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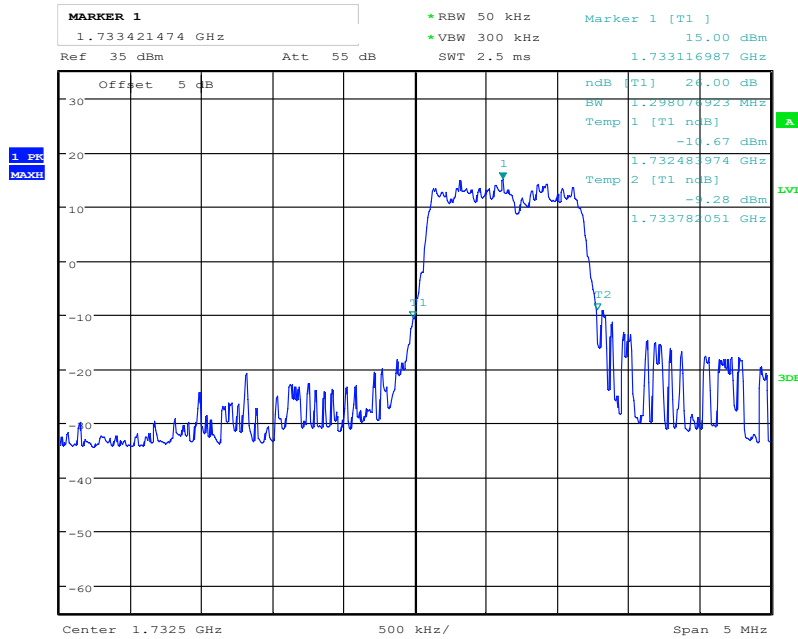


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:34:43

Band4-26dB OBW-5MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:34:21

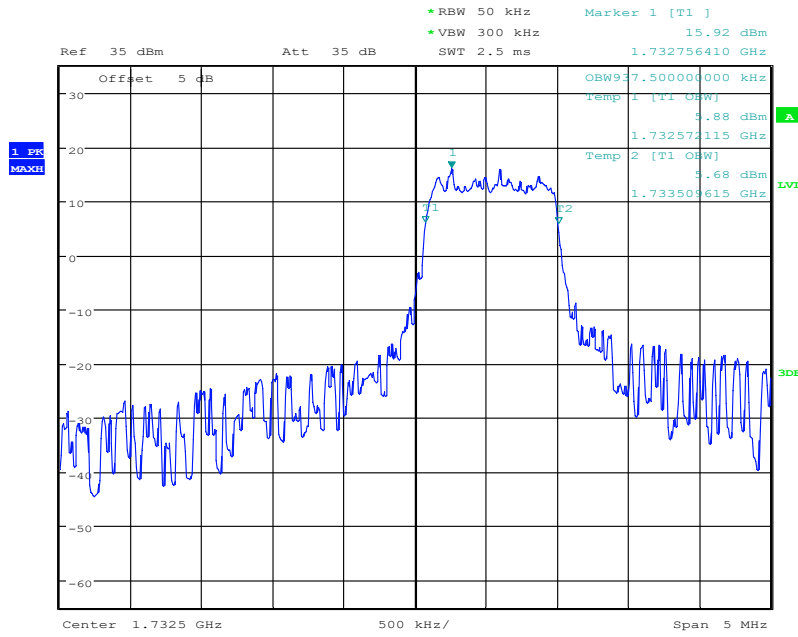
Band4-26dB OBW-5MHz Bandwidth-QPSK

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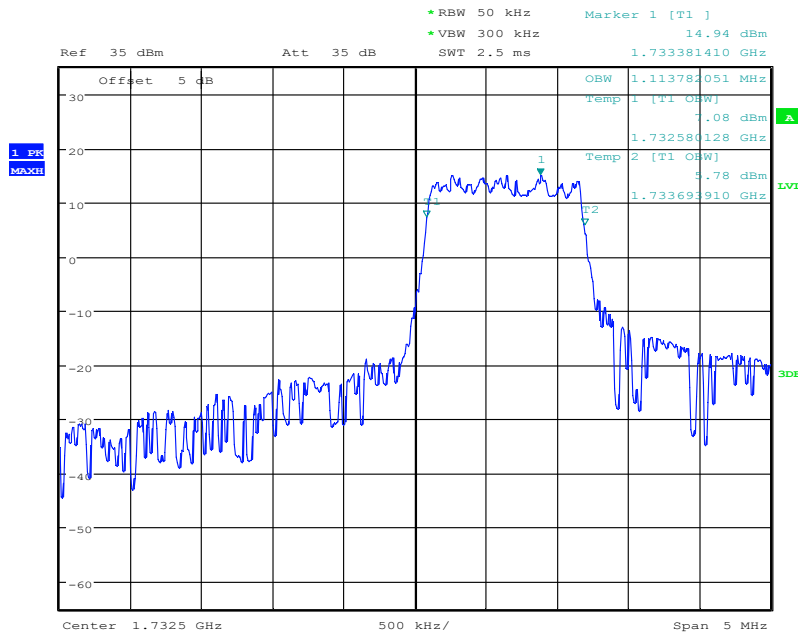


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:34:57

Band4-99% OBW-5MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:34:09

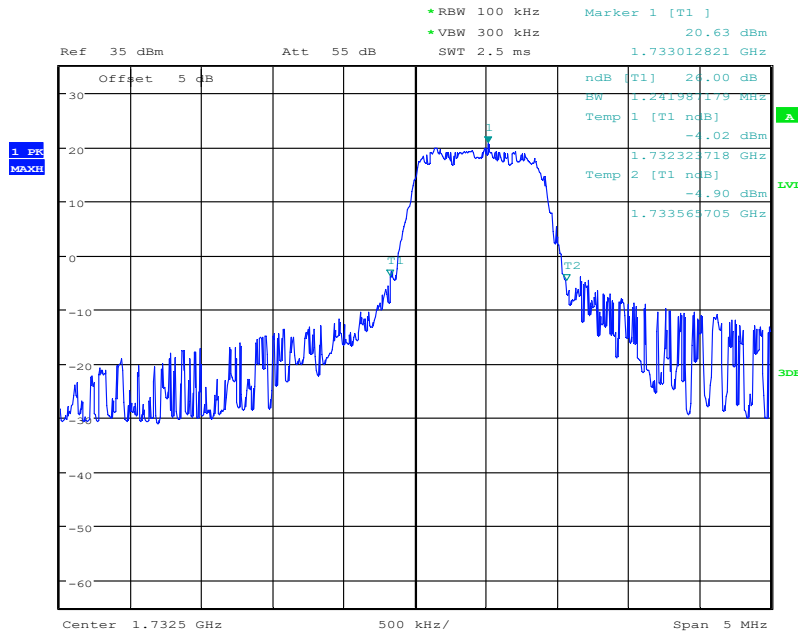
Band4-99% OBW-5MHz Bandwidth-QPSK

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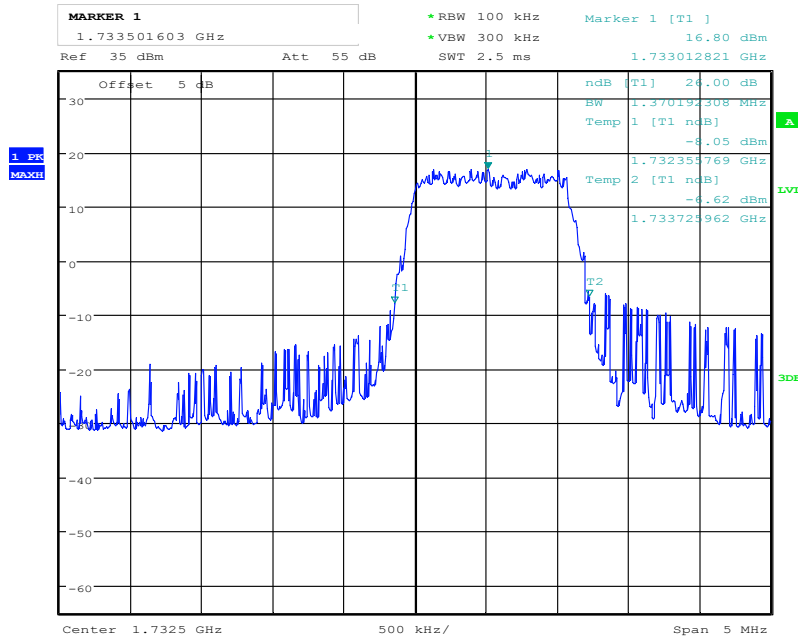


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:36:26

Band4-26dB OBW-10MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:36:06

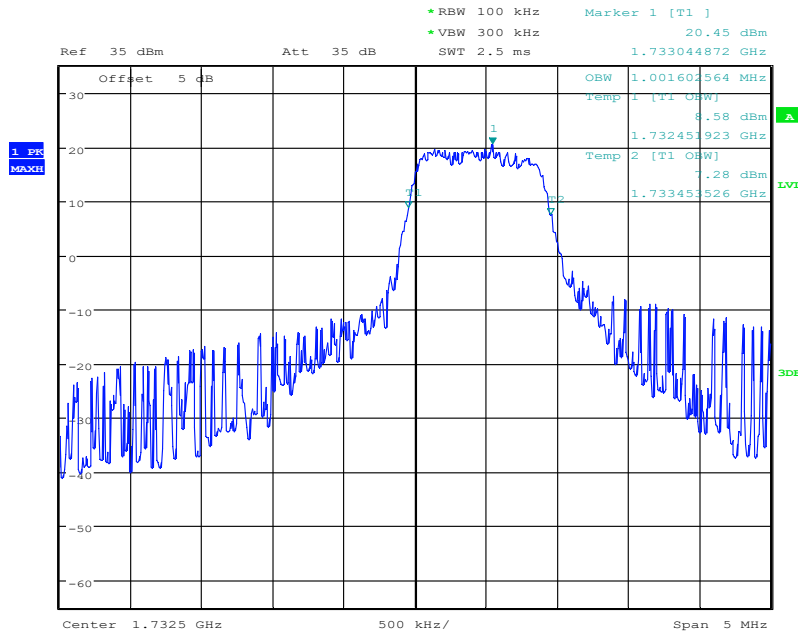
Band4-26dB OBW-10MHz Bandwidth-QPSK

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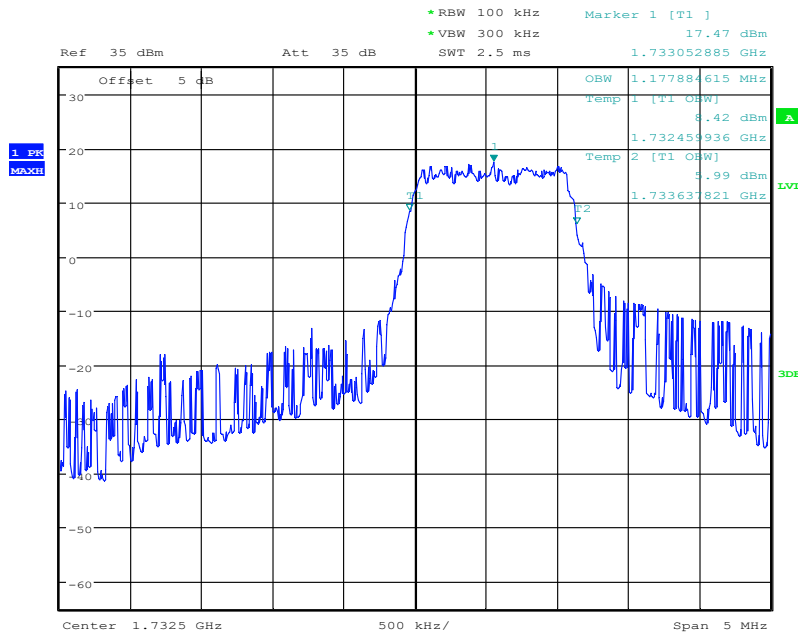


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:36:38

Band4-99% OBW-10MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:35:56

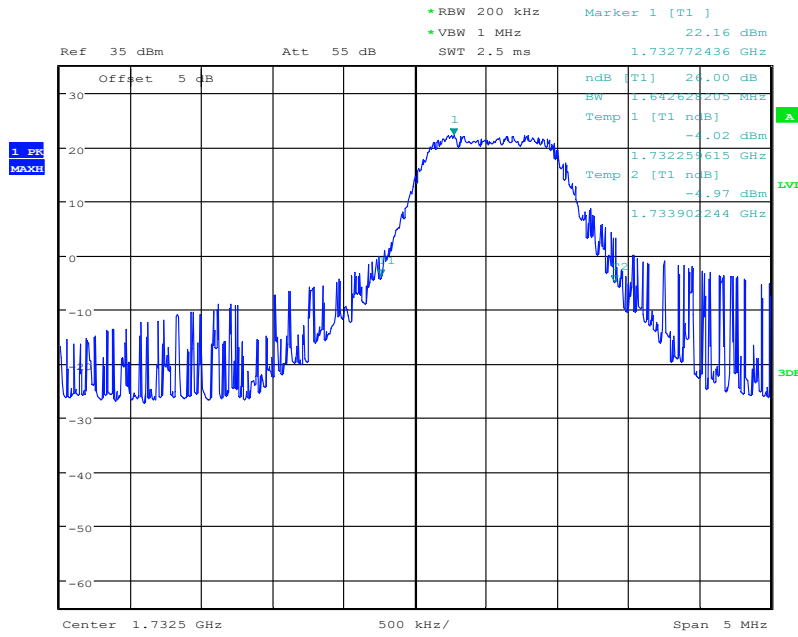
Band4-99% OBW-10MHz Bandwidth-QPSK

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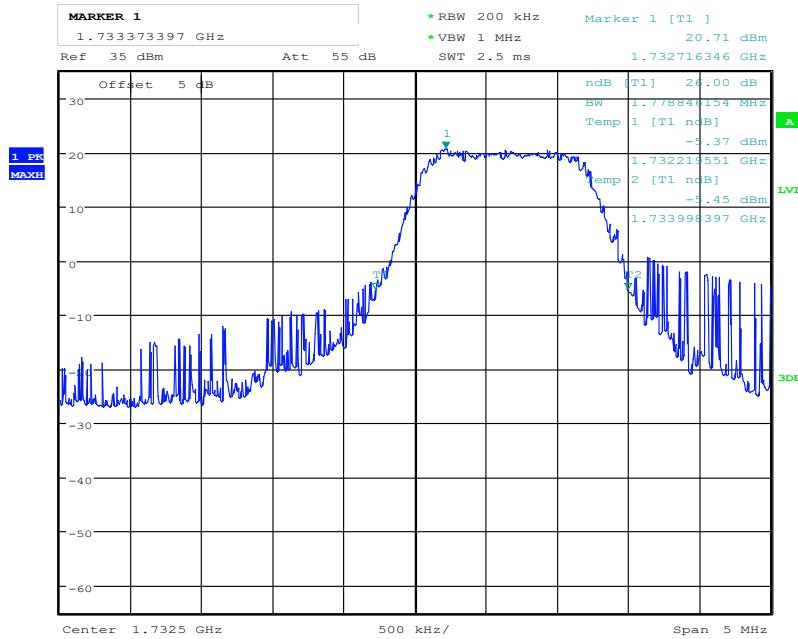


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:38:39

Band4-26dB OBW-15MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:38:18

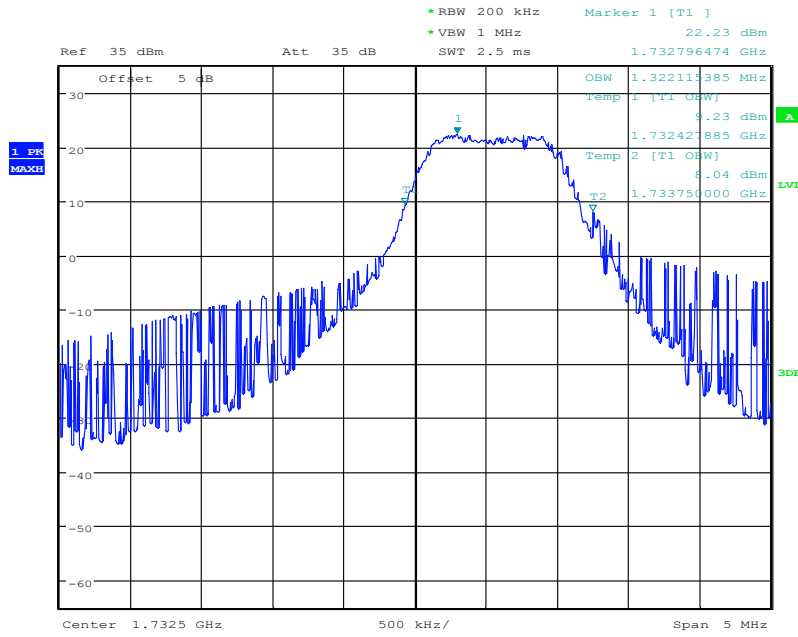
Band4-26dB OBW-15MHz Bandwidth-QPSK

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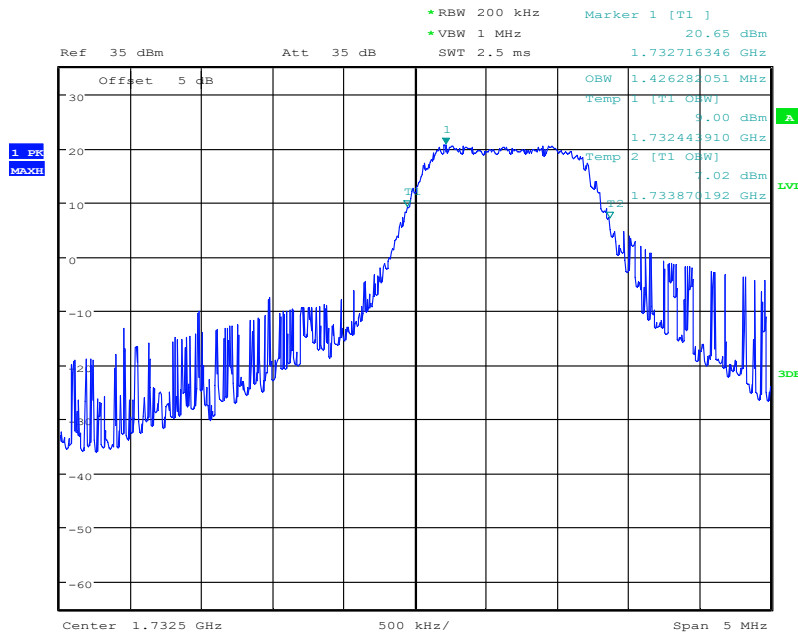


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:38:55

Band4-99% OBW-15MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:38:03

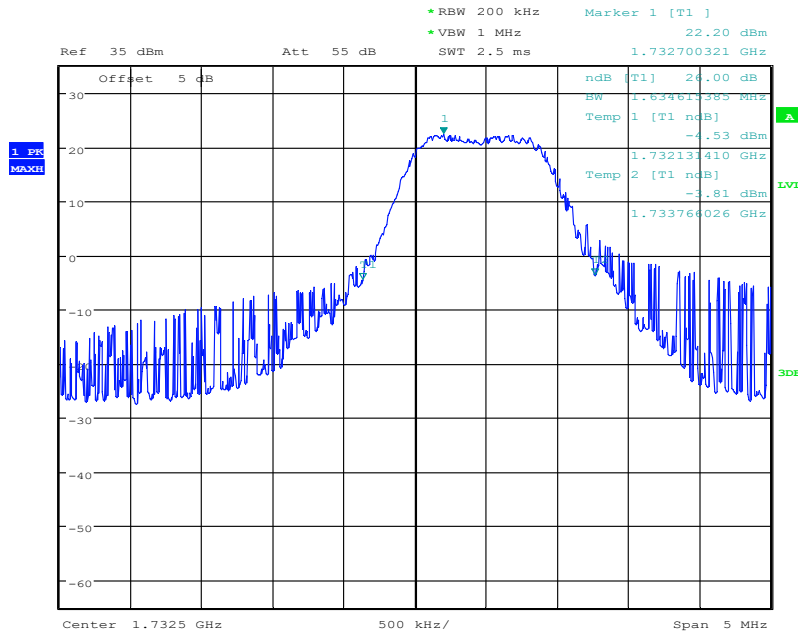
Band4-99% OBW-15MHz Bandwidth-QPSK

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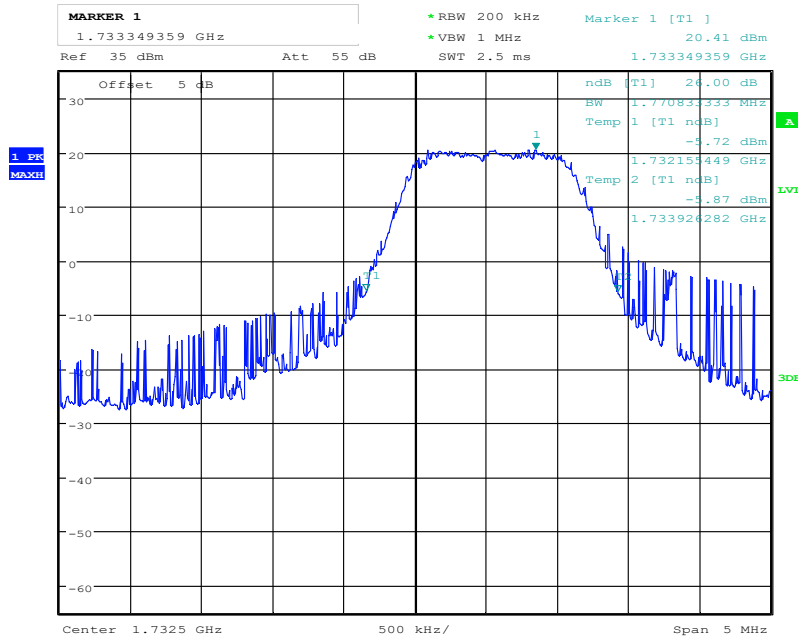


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:50:55

Band4-26dB OBW-20MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:50:35

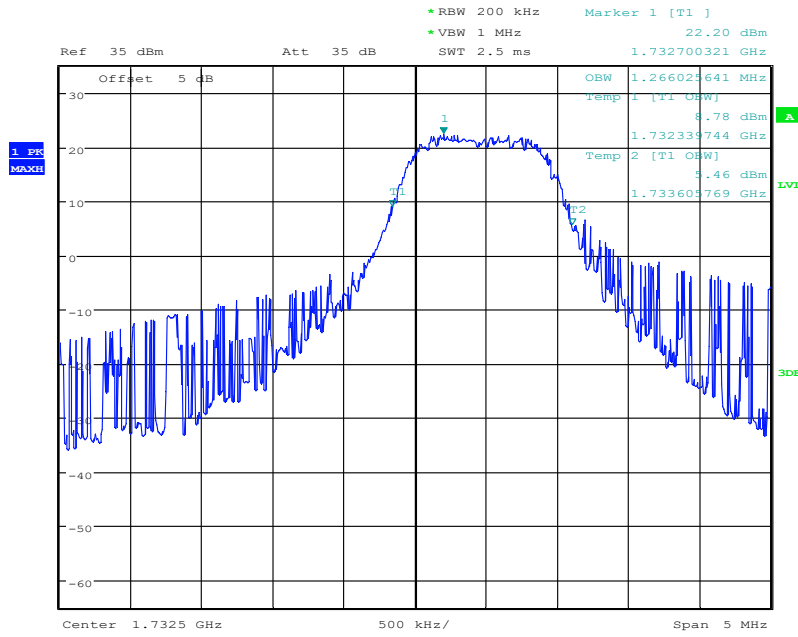
Band4-26dB OBW-20MHz Bandwidth-QPSK

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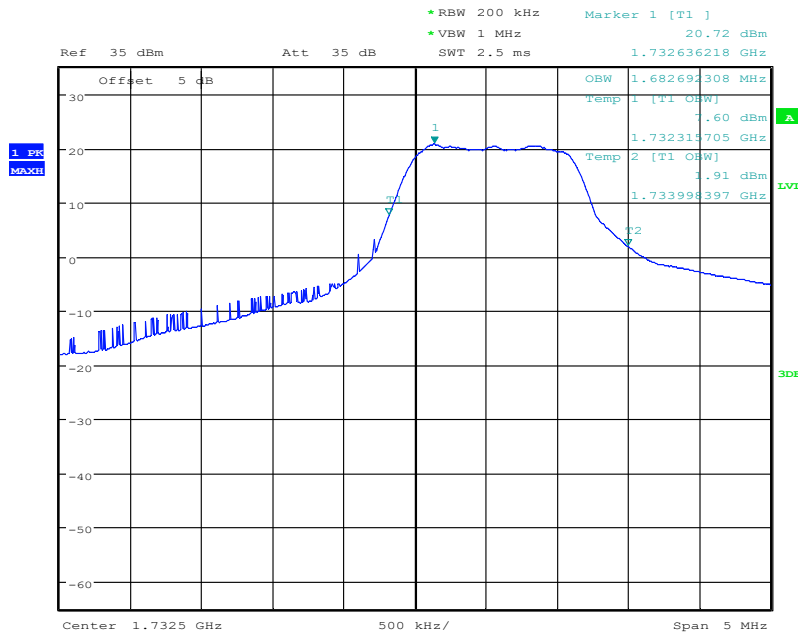


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 22:51:07

Band4-99% OBW-20MHz Bandwidth-16QAM



Date: 1.SEP.2020 22:50:22

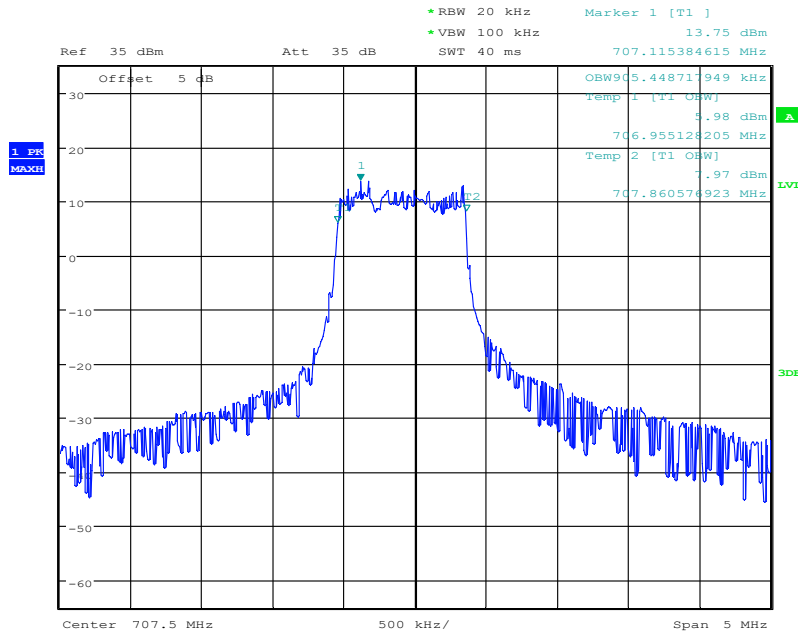
Band4-99% OBW-20MHz Bandwidth-QPSK

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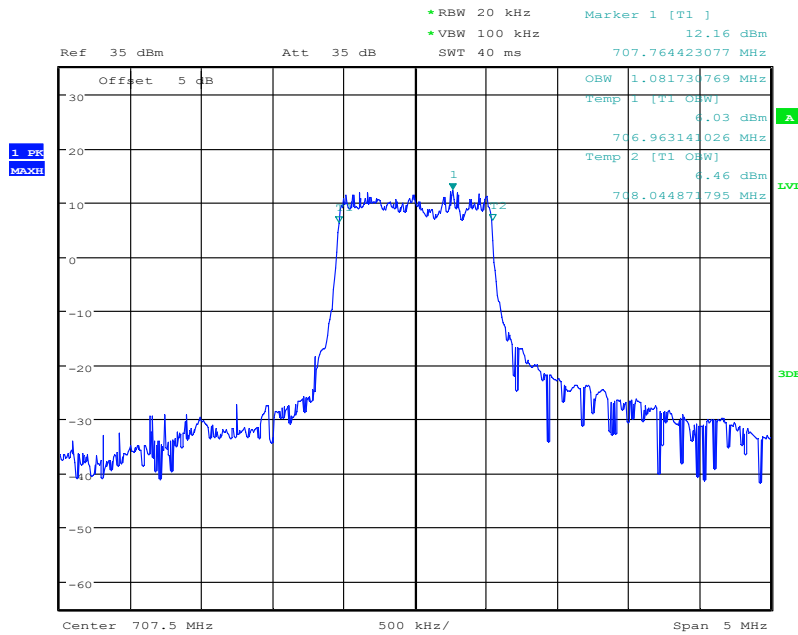


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 23:05:49

Band12-99% OBW-1.4MHz Bandwidth-16QAM



Date: 1.SEP.2020 23:04:56

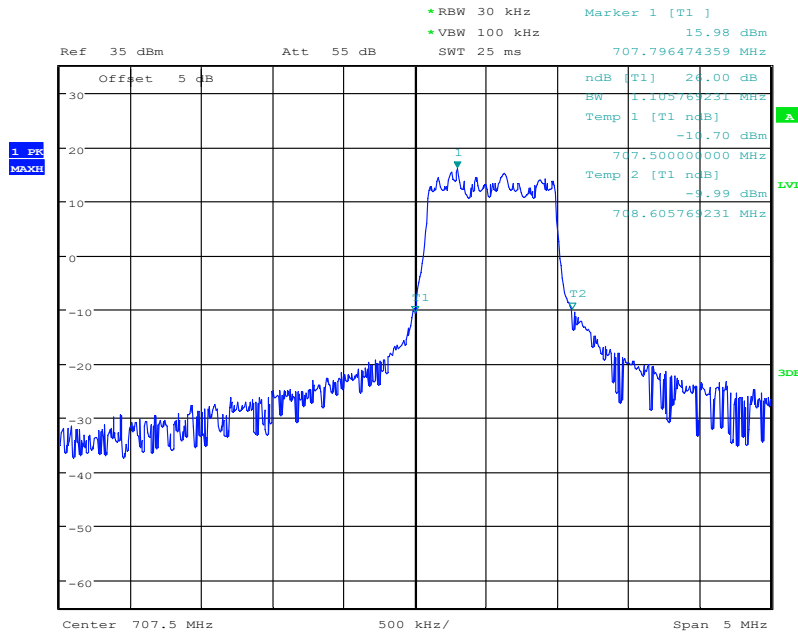
Band12-99% OBW-1.4MHz Bandwidth-QPSK

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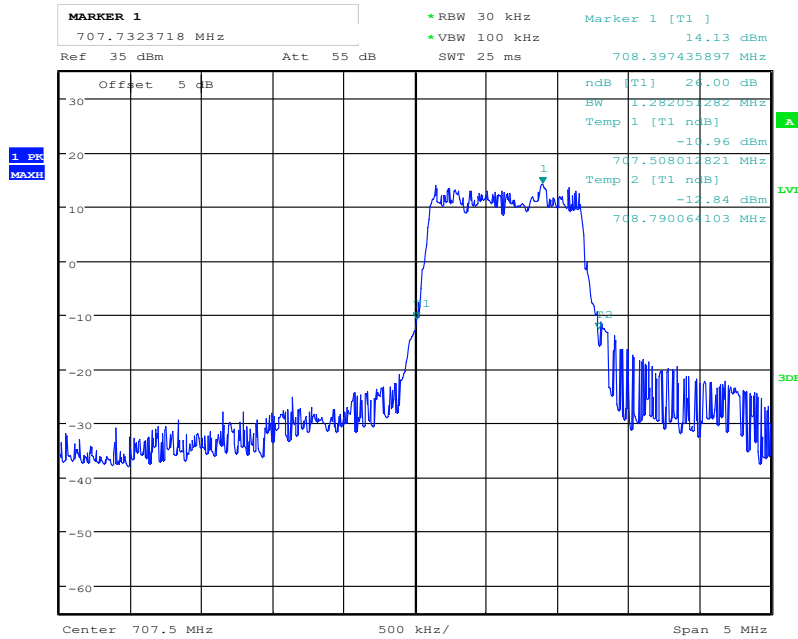


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 23:07:02

Band12-26dB OBW-3MHz Bandwidth-16QAM



Date: 1.SEP.2020 23:06:36

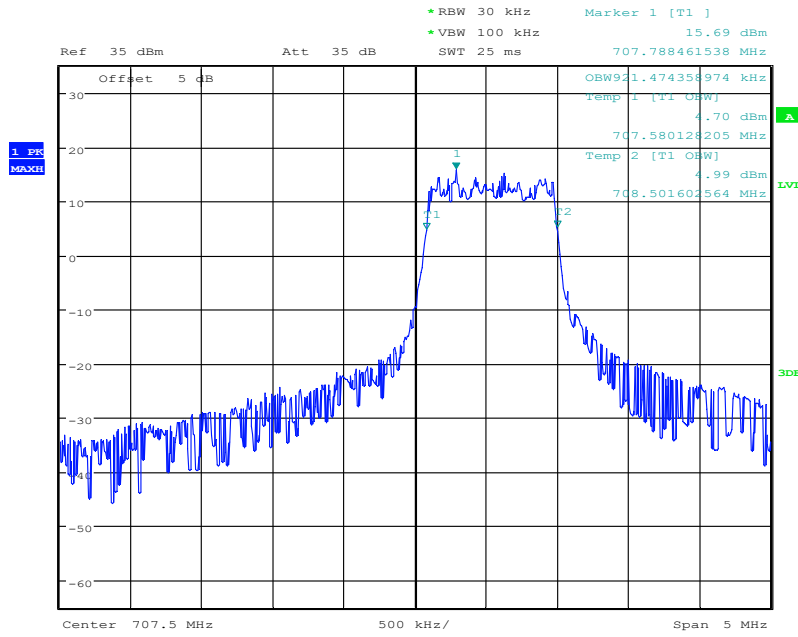
Band12-26dB OBW-3MHz Bandwidth-QPSK

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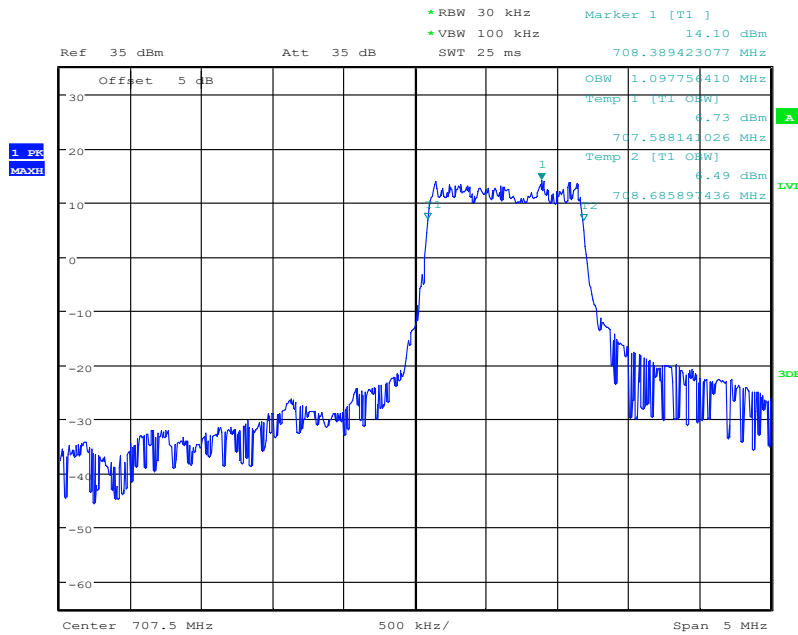


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 23:07:15

Band12-99% OBW-3MHz Bandwidth-16QAM



Date: 1.SEP.2020 23:06:25

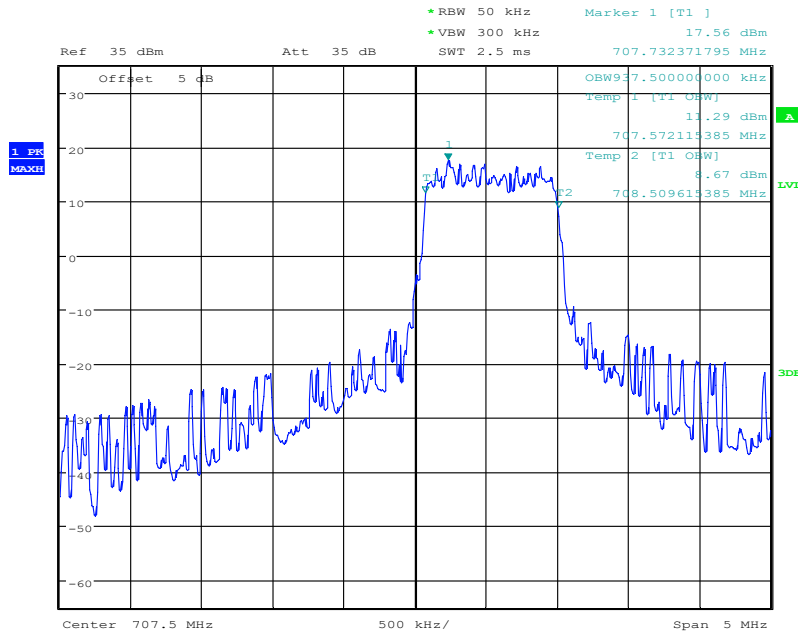
Band12-99% OBW-3MHz Bandwidth-QPSK

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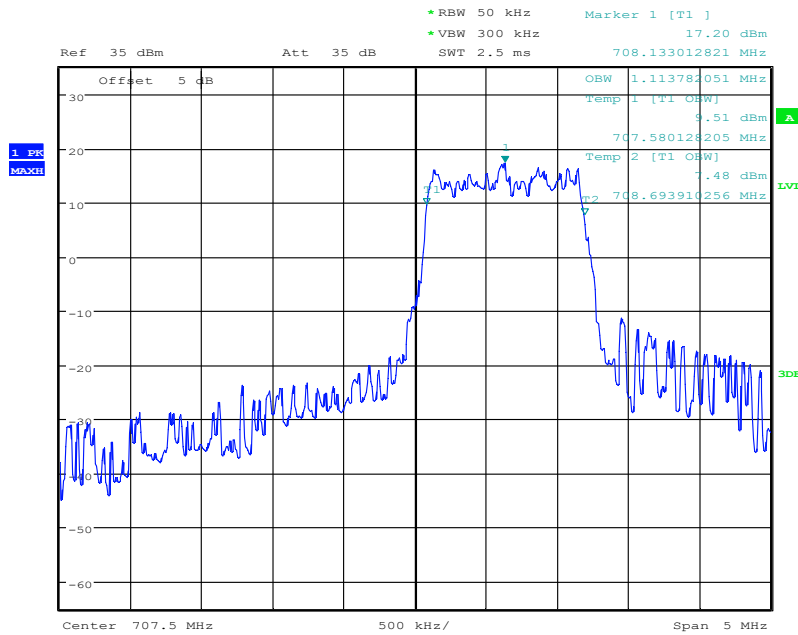


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 23:09:01

Band12-99% OBW-5MHz Bandwidth-16QAM



Date: 1.SEP.2020 23:07:48

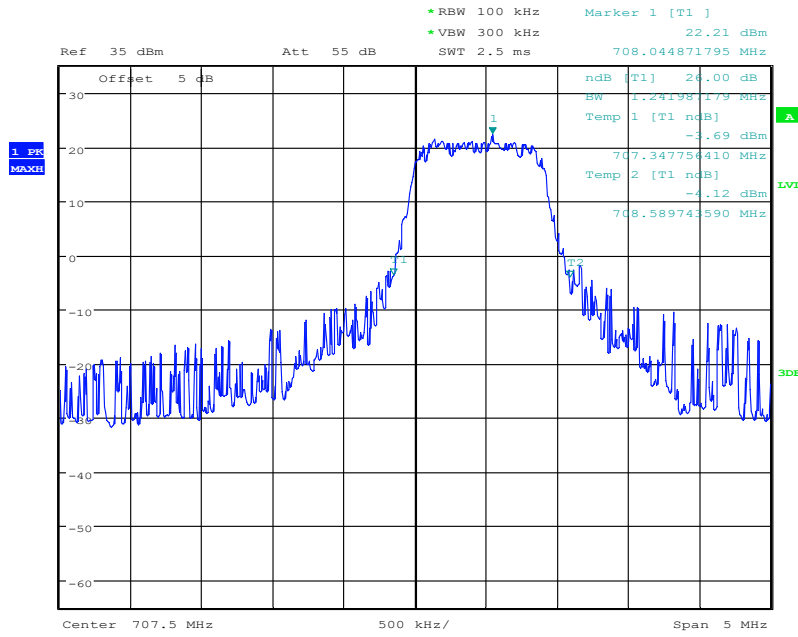
Band12-99% OBW-5MHz Bandwidth-QPSK

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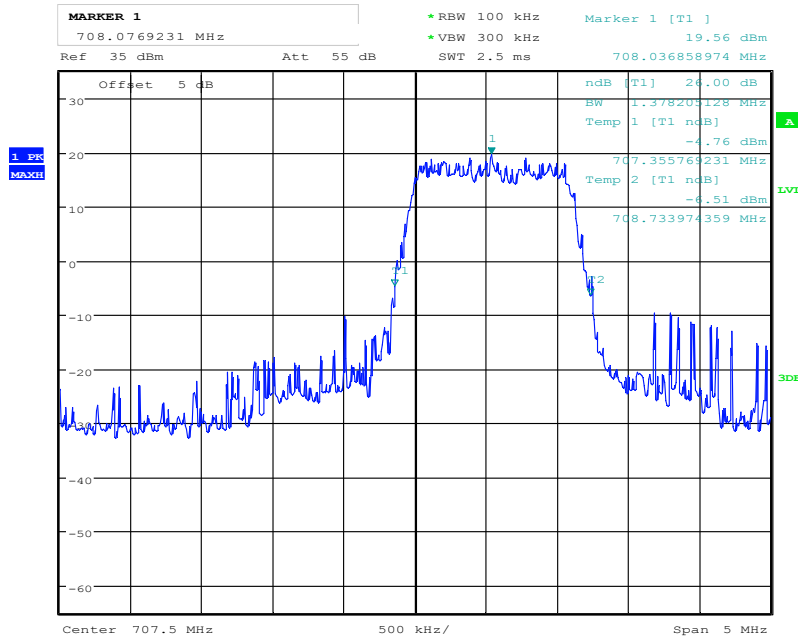


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 23:10:12

Band12-26dB OBW-10MHz Bandwidth-16QAM



Date: 1.SEP.2020 23:09:49

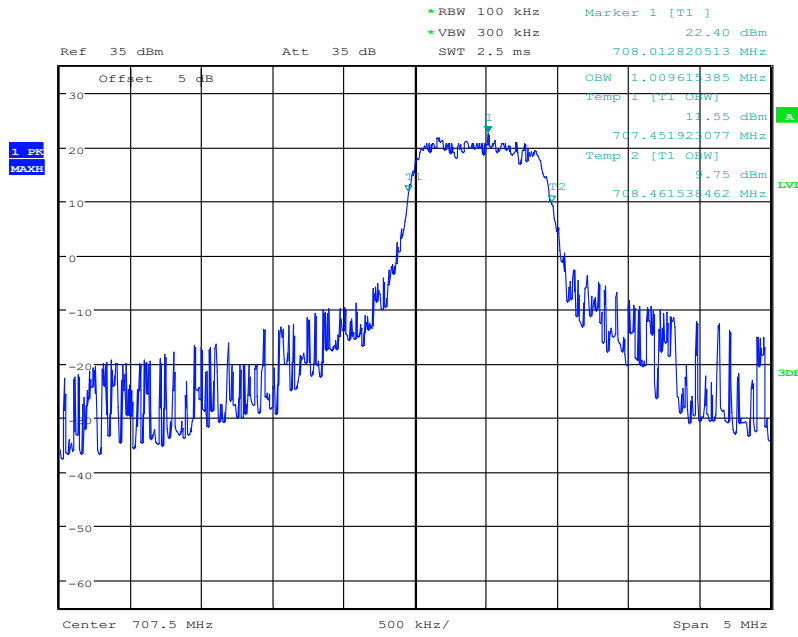
Band12-26dB OBW-10MHz Bandwidth-QPSK

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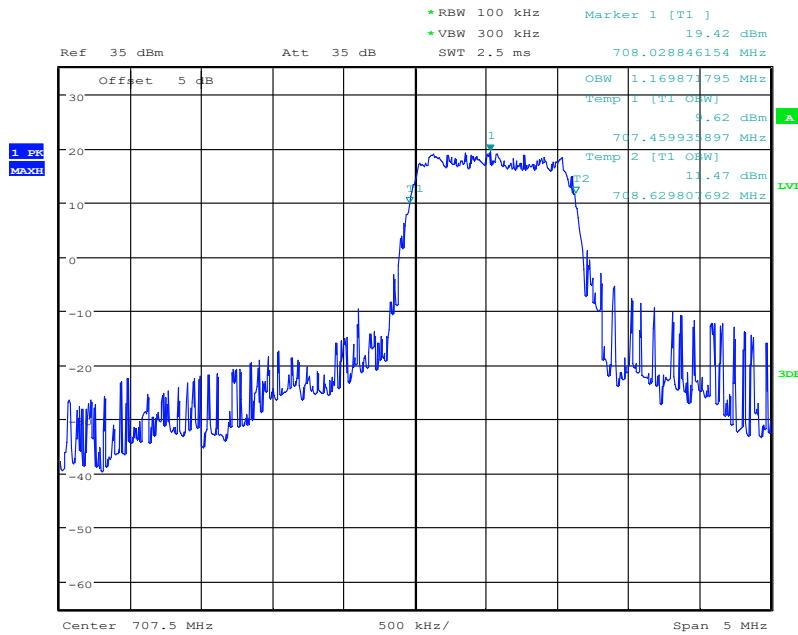


Report No.: I20W00018-WWAN_Rev1



Date: 1.SEP.2020 23:10:26

Band12-99% OBW-10MHz Bandwidth-16QAM



Date: 1.SEP.2020 23:09:36

Band12-99% OBW-10MHz Bandwidth-QPSK

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5.4 Conducted Spurious Emission

Specifications:	FCC Part 2.1051, 2.1053, 24.238, 22.917, 27.53,90.691
DUT Serial Number:	866884045622016
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit Level Construction:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB, so the limit level is:

$$P(\text{dBm}) - (43 + 10 \log(P)) \text{ dB} = -13\text{dBm}$$

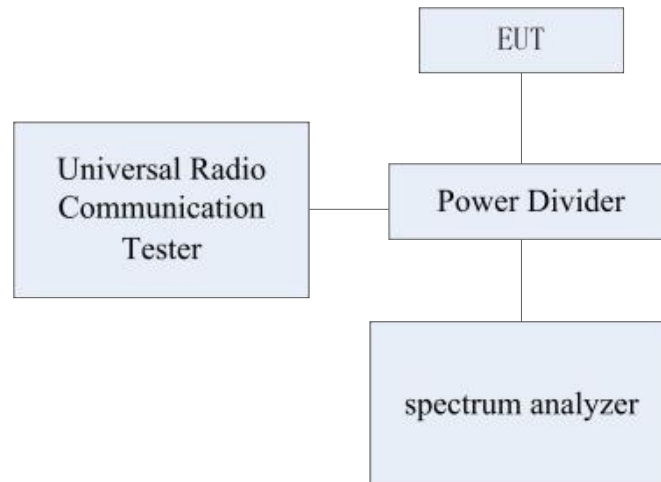
Measurement Uncertainty:

Item	Uncertainty	
Expanded Uncertainty	$9\text{kHz} < f \leq 4\text{GHz}$	0.71 dB (k=2)
	$4\text{GHz} \leq f < 12.75\text{GHz}$	0.74 dB (k=2)
	$12.75\text{GHz} \leq f < 26\text{GHz}$	2.70 dB (k=2)

Report No.: I20W00018-WWAN_Rev1

Test Setup:

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.



Test Method:

The measurement was performed accordance with section 2.2.13 of ANSI/TIA-603-E: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

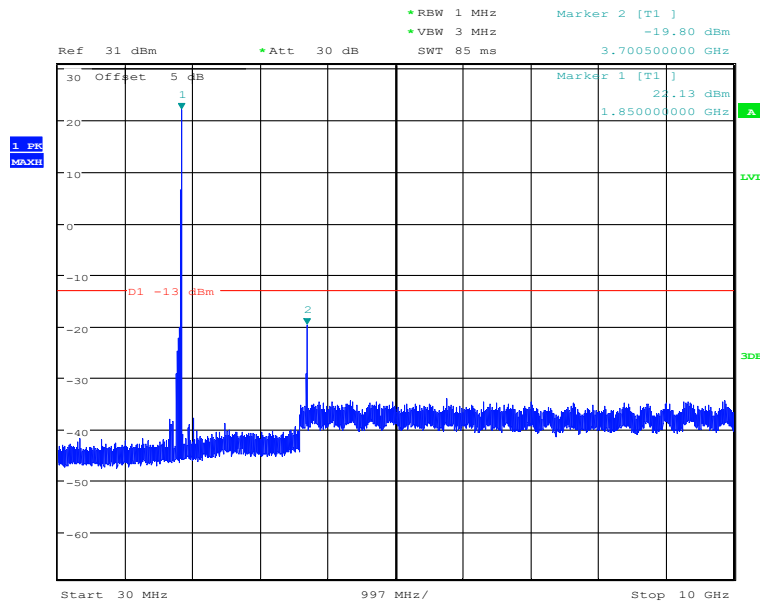
The measurement was performed accordance with section 2.2.13 of ANSI/TIA-603-E-2010: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-Band emissions, if any, up to 10th harmonic. The EUT was scanned for spurious emissions from 30MHz to 20GHz with sufficient Bandwidth and video resolution. The spectrum analyzer was set to Maximum hold mode to ensure that the worst-case emissions were captured.

Note: Only worst case result is given below.

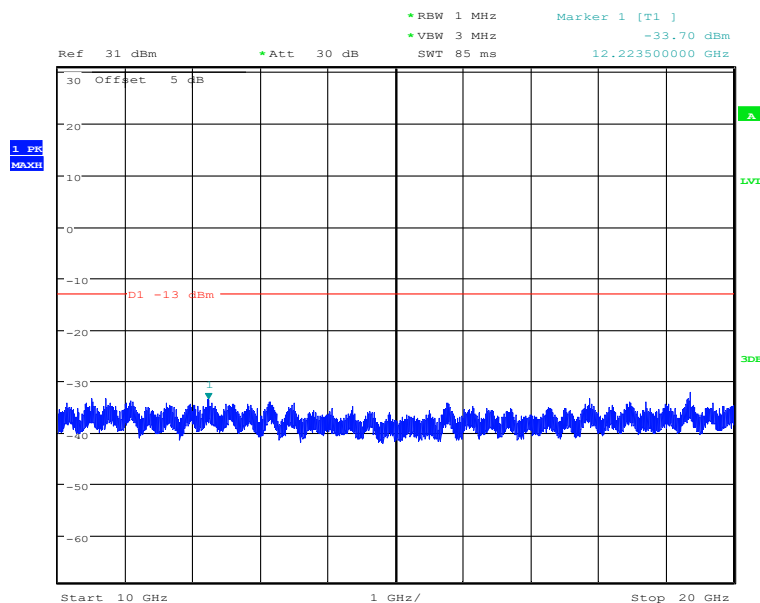
Report No.: I20W00018-WWAN_Rev1

5.4.1 NB-IoT B2 Conducted Spurious Emission Results



Date: 4.SEP.2020 18:11:55

30MHz to 10GHz, Low Channel, Subcarrier (3.75kHz), QPSK
Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:12:15

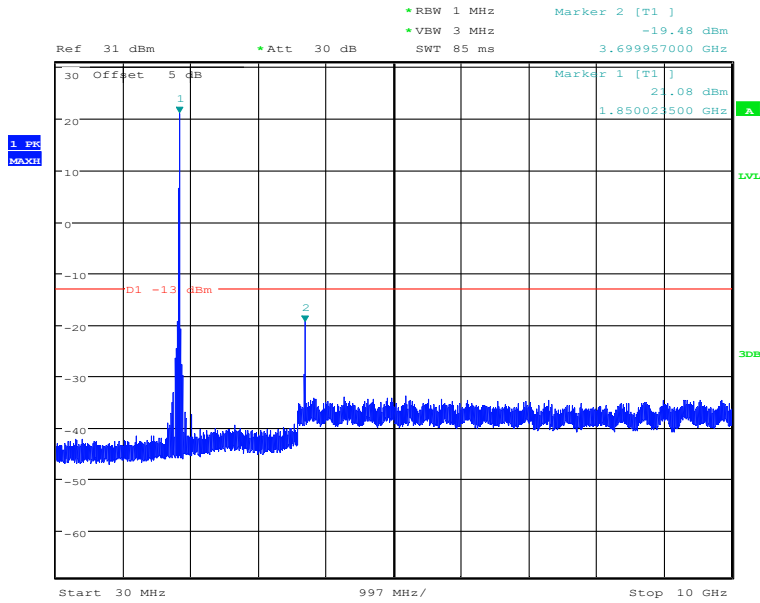
10GHz to 20GHz, Low Channel, Subcarrier (3.75kHz), QPSK

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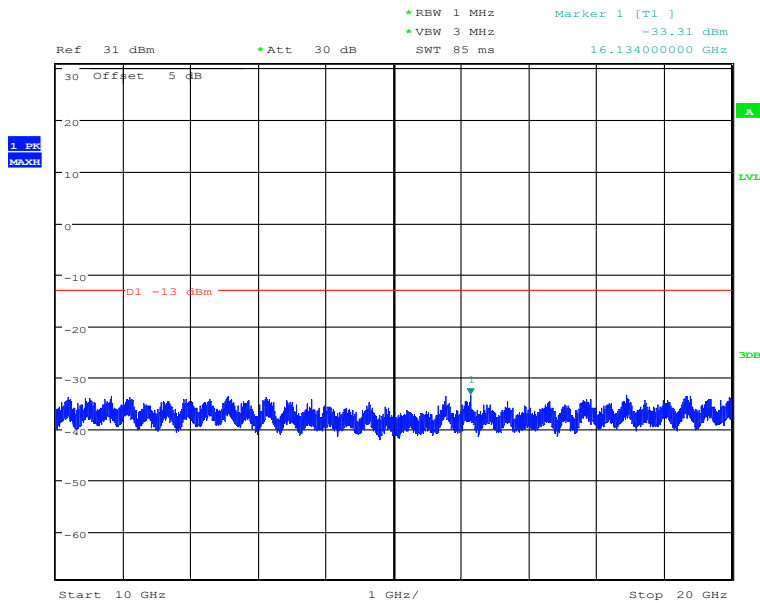


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:13:21

30MHz to 10GHz, Low Channel, Subcarrier (3.75kHz), BPSK
Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:12:54

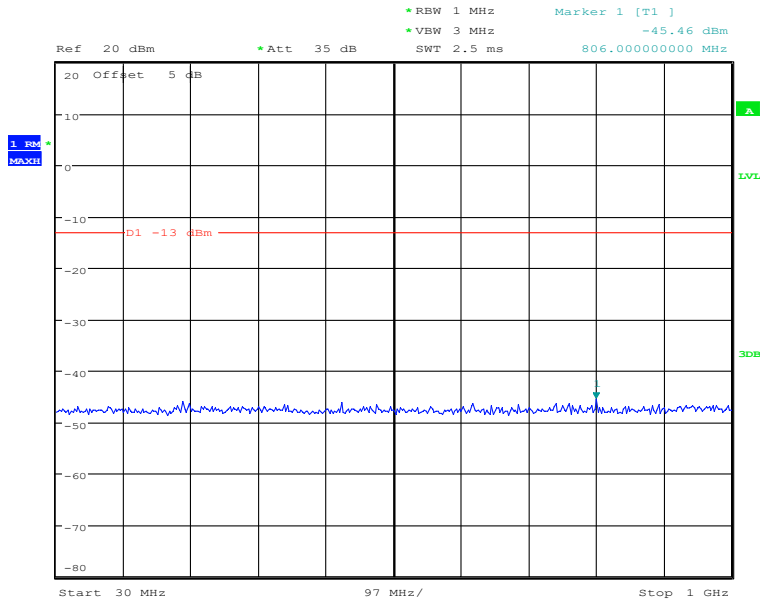
10GHz to 20GHz, Low Channel, Subcarrier (3.75kHz), BPSK,

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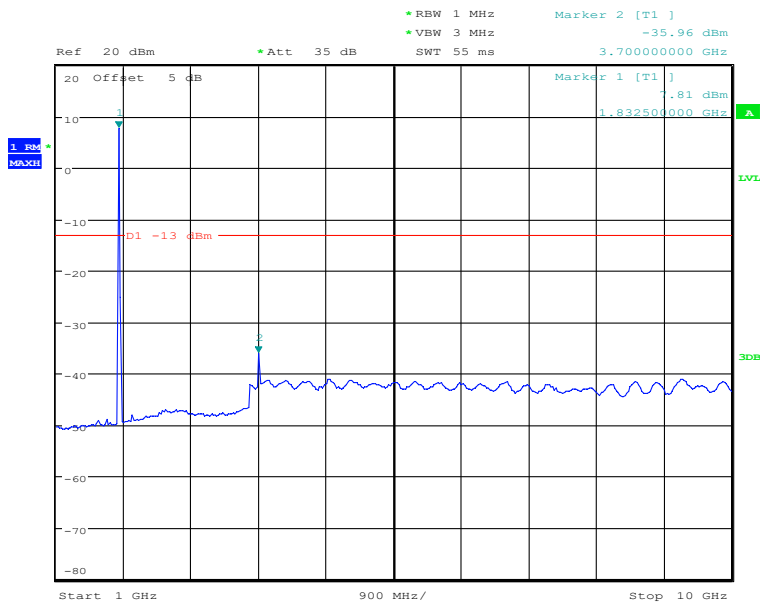


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 02:52:25

30MHz to 1GHz, Low Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 02:52:04

1GHz to 10GHz, Low Channel, Subcarrier (15kHz), QPSK

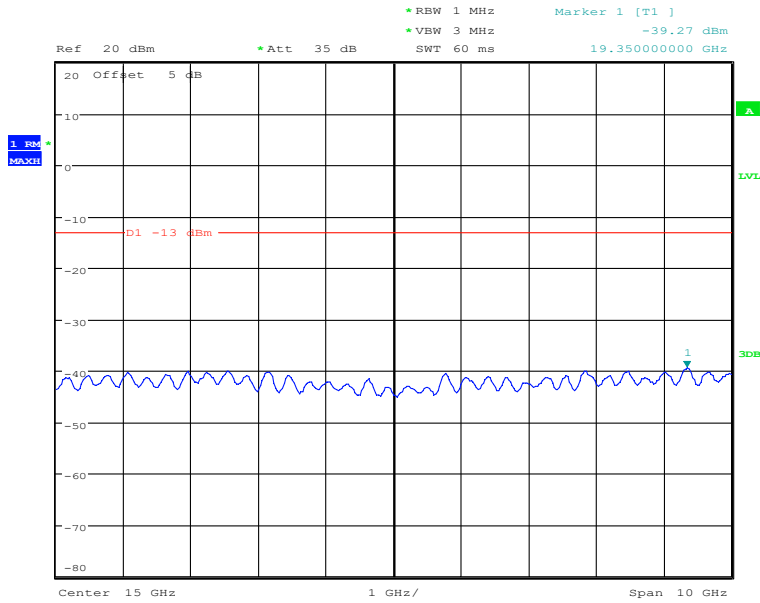
Note: The strong emission shown in each case is the carrier signal.

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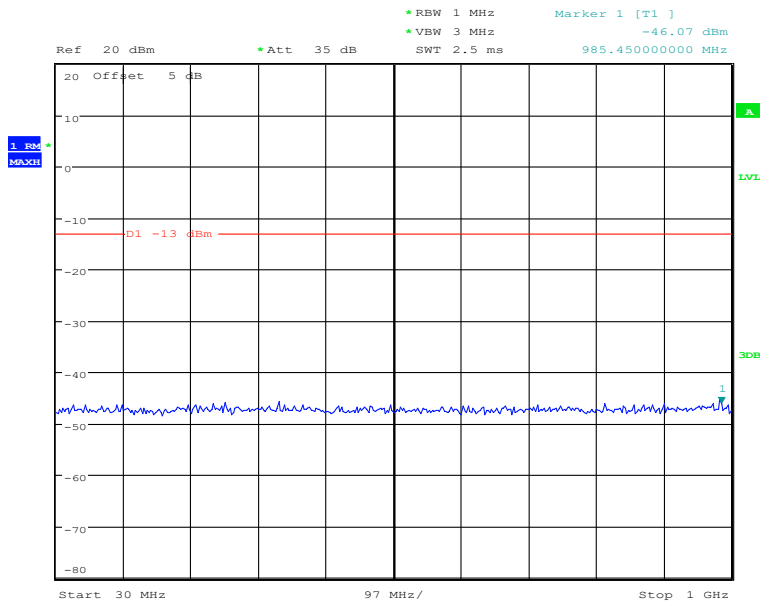


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 02:51:46

10GHz to 20GHz, Low Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 02:50:27

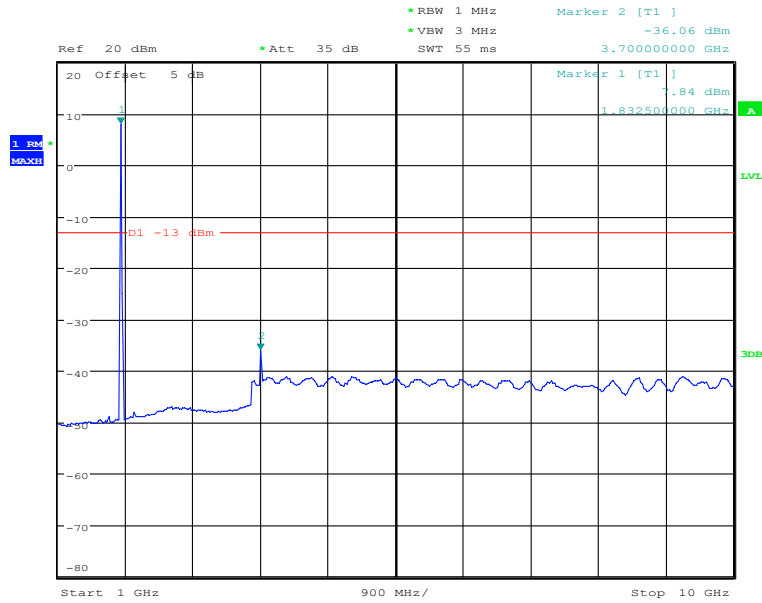
30MHz to 1GHz, Low Channel, Subcarrier (15kHz), BPSK

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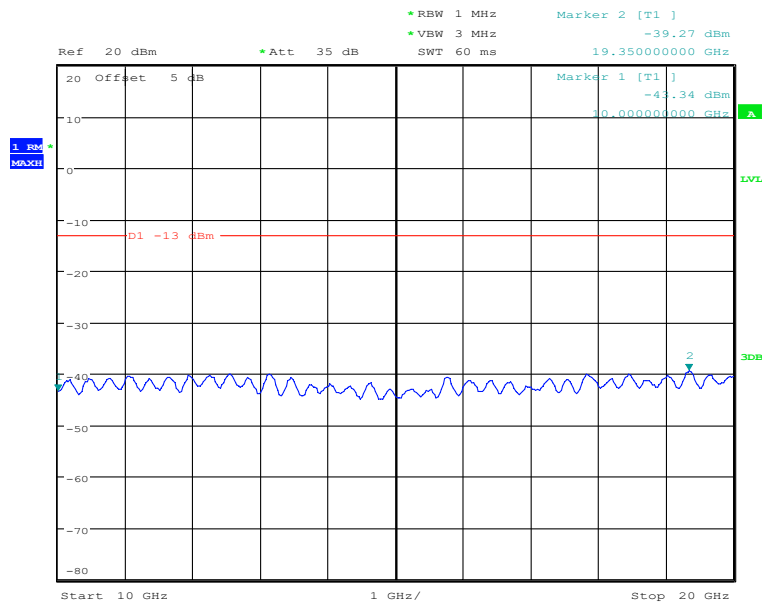
Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 02:50:56

1GHz to 10GHz, Low Channel, Subcarrier (15kHz), BPSK

Note: The strong emission shown in each case is the carrier signal.



Date: 5.SEP.2020 02:51:15

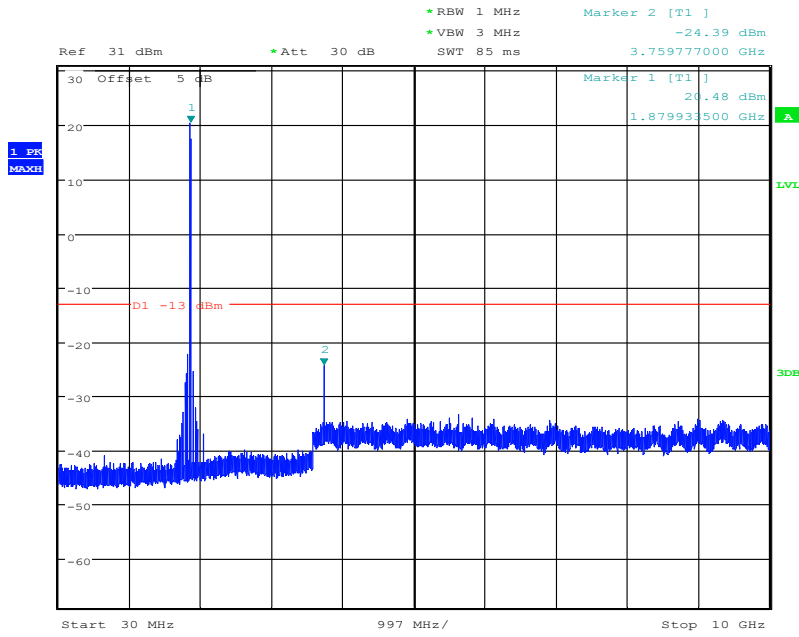
10GHz to 20GHz, Low Channel, Subcarrier (15kHz), BPSK

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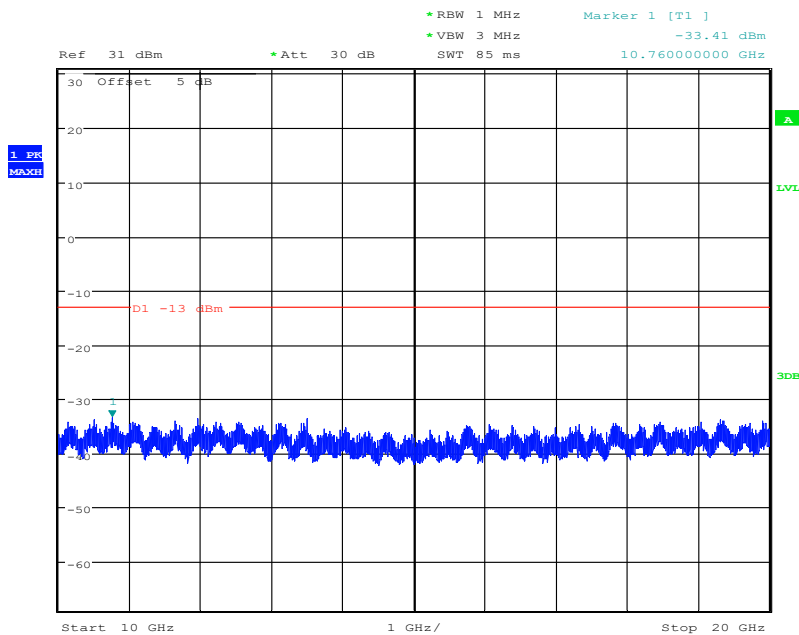


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:16:22

30MHz to 10GHz, Mid Channel, Subcarrier (3.75kHz), QPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:15:56

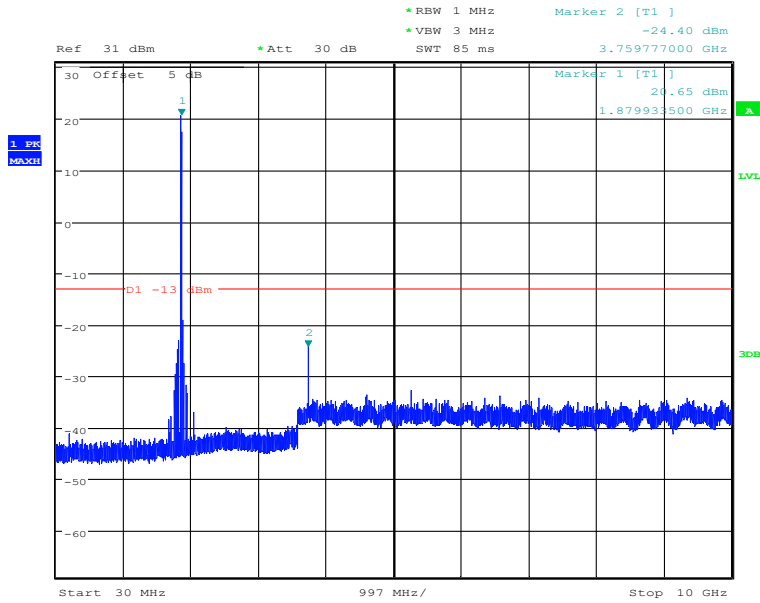
10GHz to 20GHz, Mid Channel, Subcarrier (3.75kHz), QPSK

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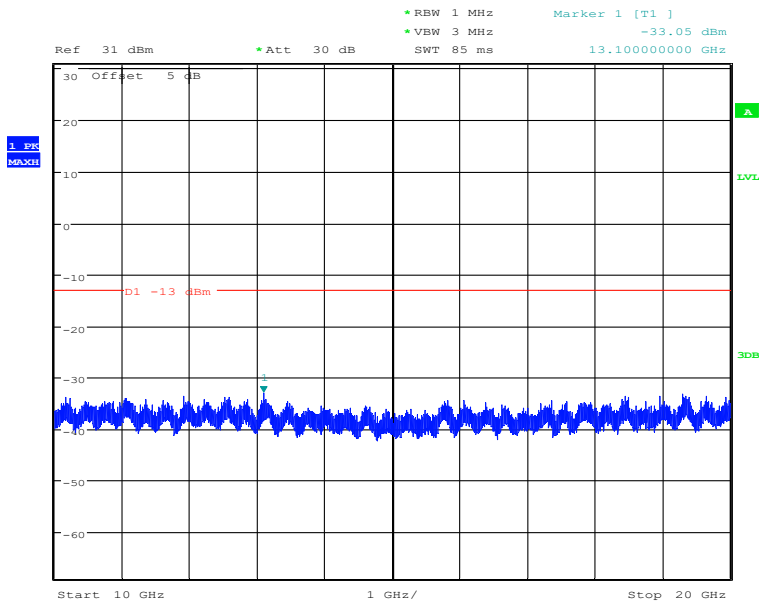


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:15:15

30MHz to 10GHz, Mid Channel, Subcarrier (3.75kHz), BPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:15:34

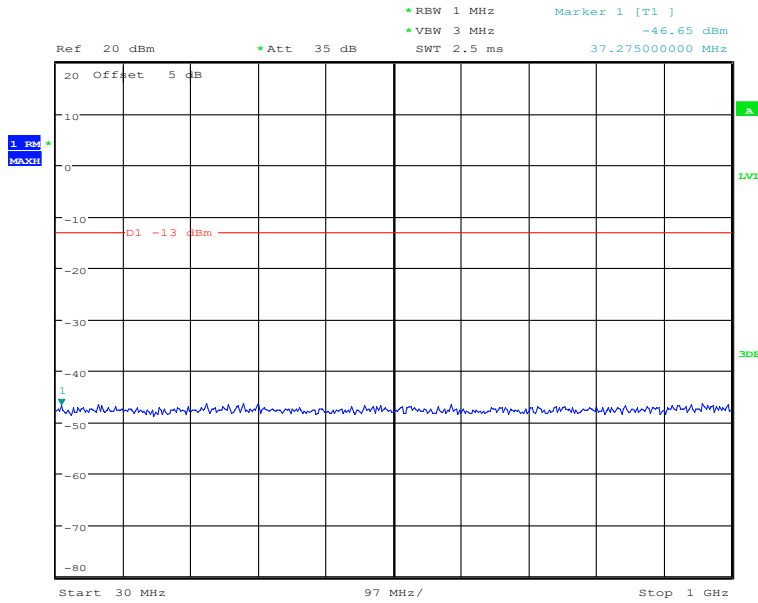
10GHz to 20GHz, Mid Channel, Subcarrier (3.75kHz), BPSK

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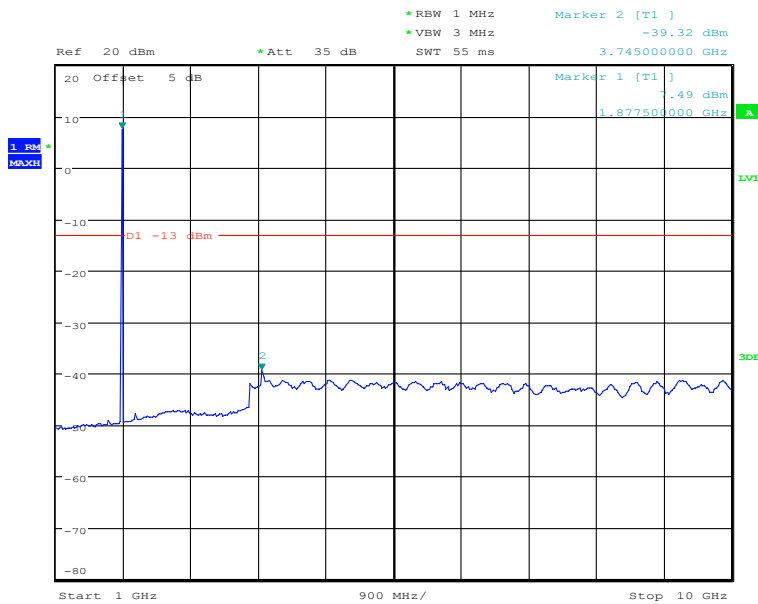


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 02:53:21

30MHz to 1GHz, Mid Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 02:53:37

1GHz to 10GHz, Mid Channel, Subcarrier (15kHz), QPSK

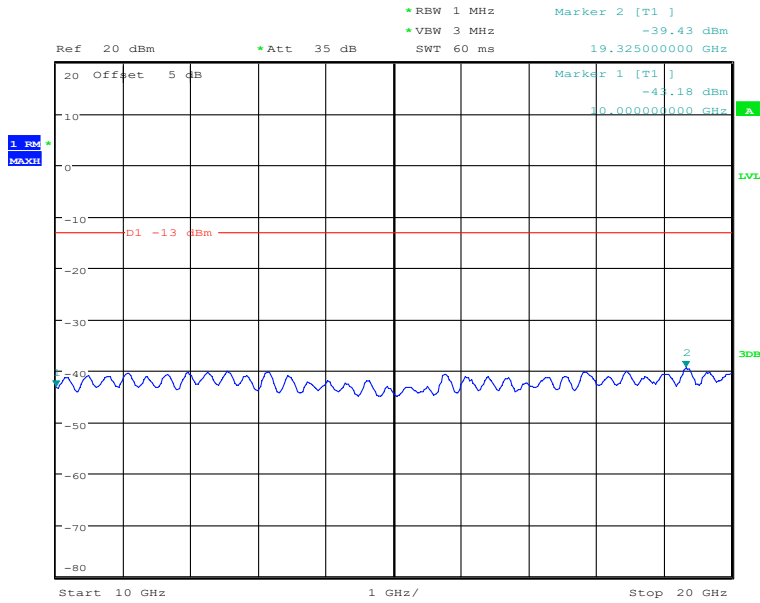
Note: The strong emission shown in each case is the carrier signal.

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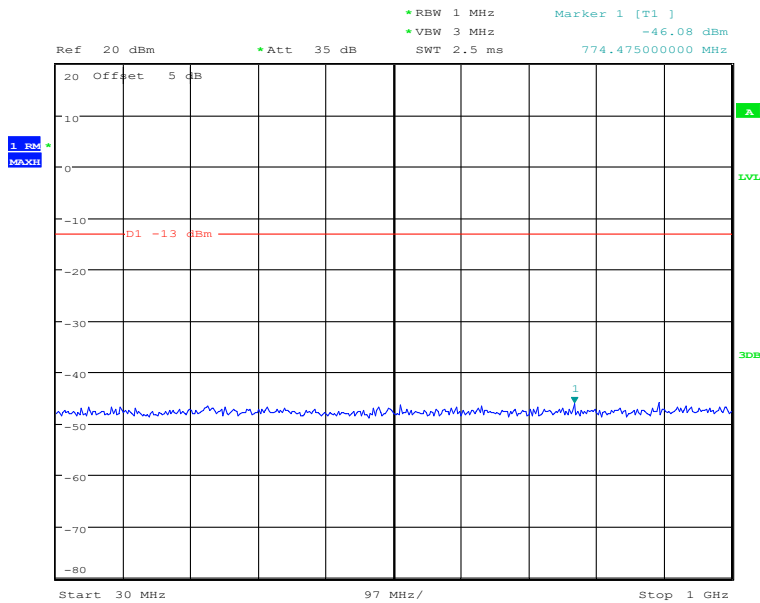


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 02:53:50

10GHz to 20GHz, Mid Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 02:54:41

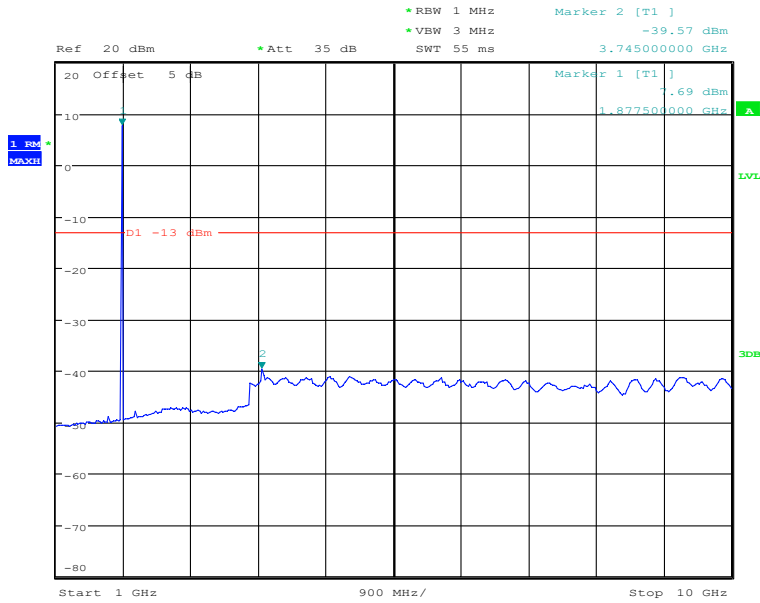
30MHz to 1GHz, Mid Channel, Subcarrier (15kHz), BPSK

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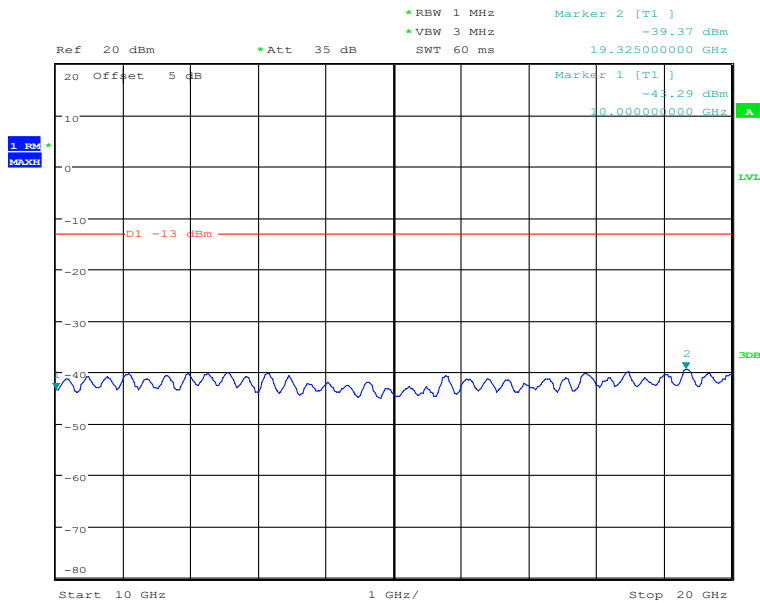
Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 02:54:25

1GHz to 10GHz, Mid Channel, Subcarrier (15kHz), BPSK

Note: The strong emission shown in each case is the carrier signal.



Date: 5.SEP.2020 02:54:05

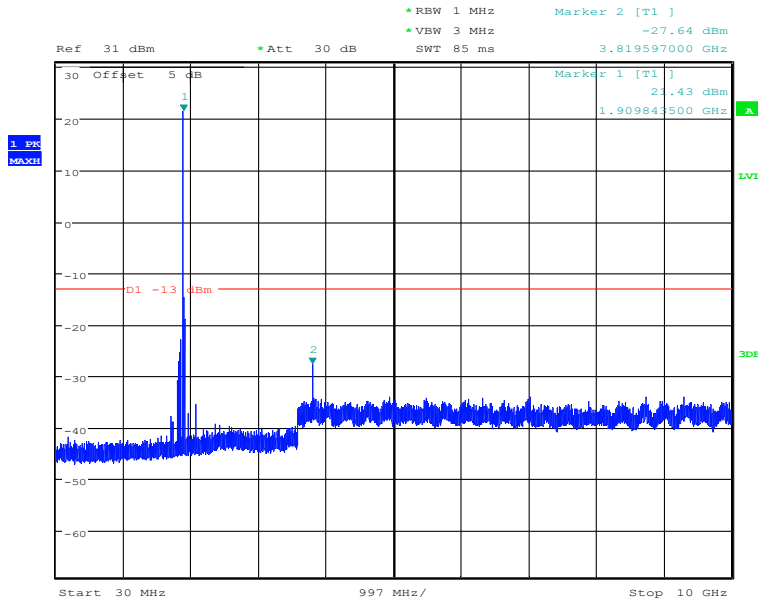
10GHz to 20GHz, Mid Channel, Subcarrier (15kHz), BPSK

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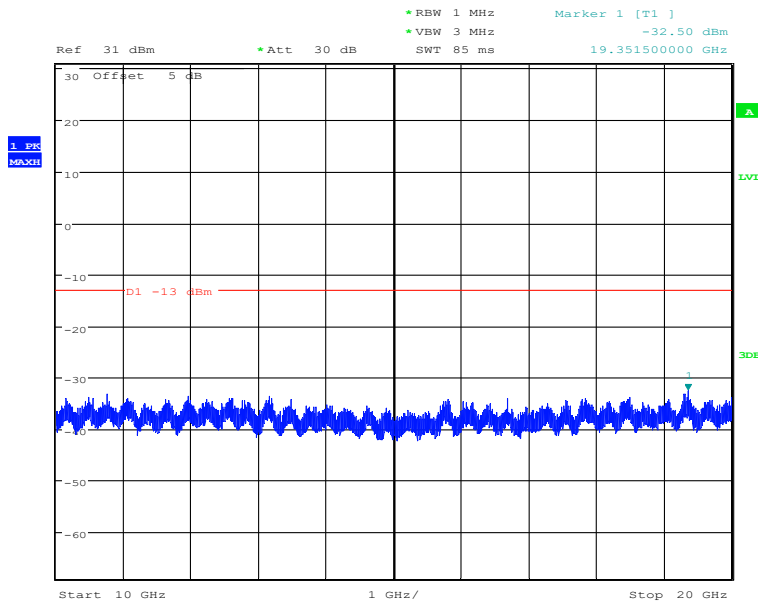


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:17:17

30MHz to 10GHz, High Channel, Subcarrier (3.75kHz), QPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:17:36

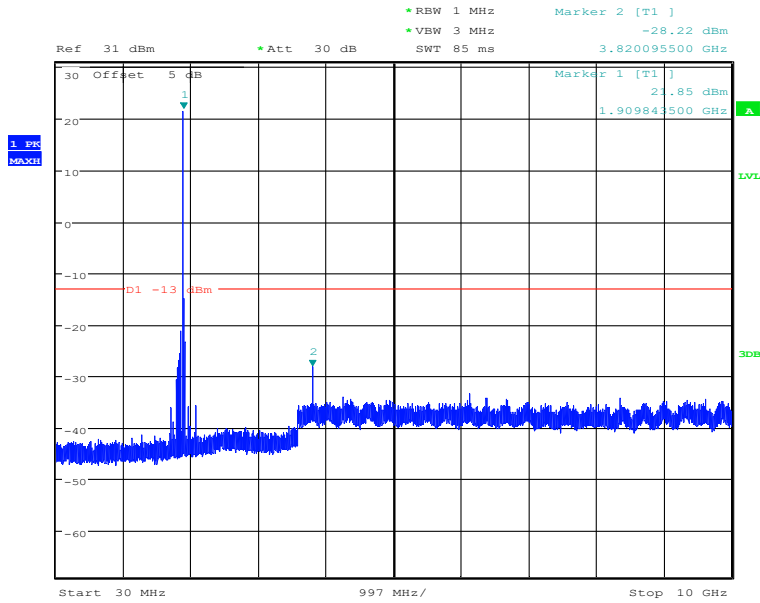
10GHz to 20GHz, High Channel, Subcarrier (3.75kHz), QPSK

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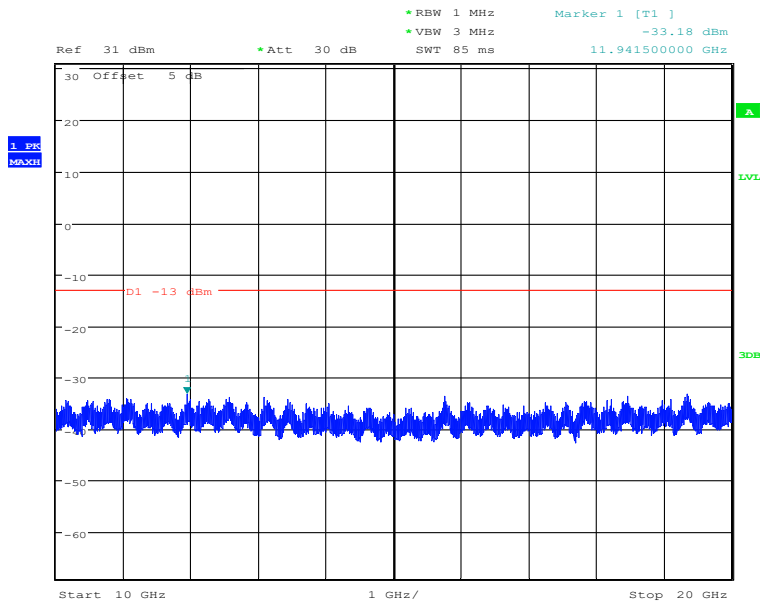


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:18:19

30MHz to 10GHz, High Channel, Subcarrier (3.75kHz), BPSK
Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:17:54

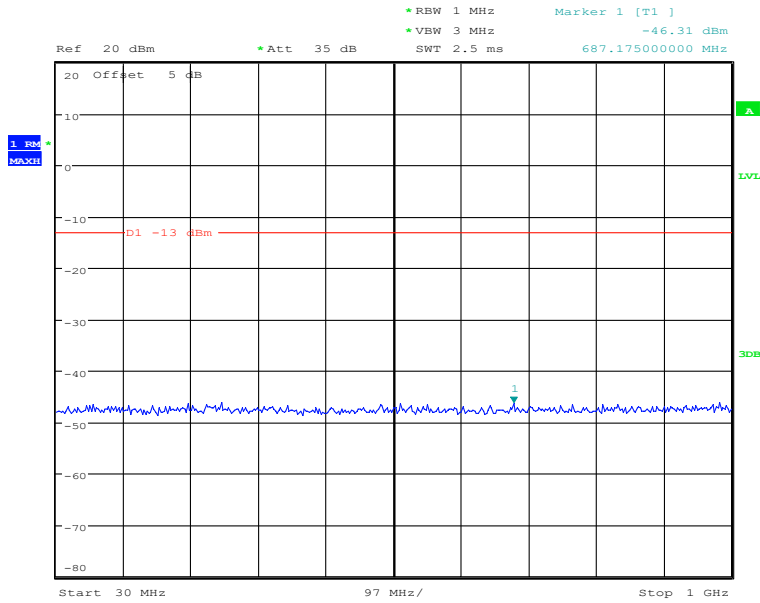
10GHz to 20GHz, High Channel, Subcarrier (3.75kHz), BPSK

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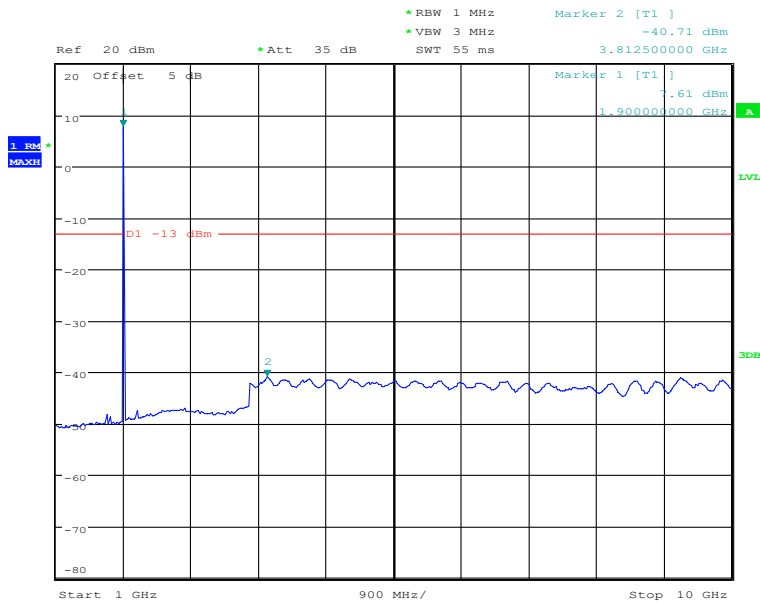


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 02:56:42

30MHz to 1GHz, High Channel, Subcarrier (15kHz), QPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 5.SEP.2020 02:56:20

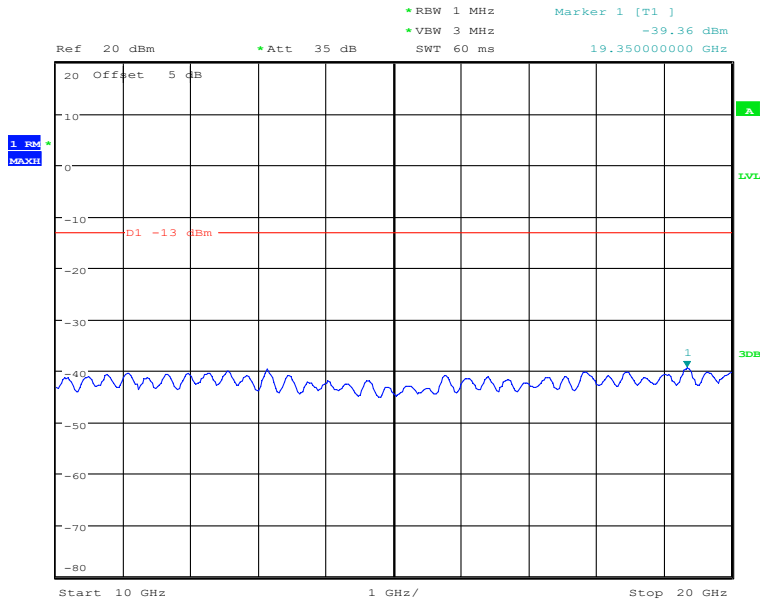
1GHz to 10GHz, High Channel, Subcarrier (15kHz), QPSK
 Note: The strong emission shown in each case is the carrier signal.

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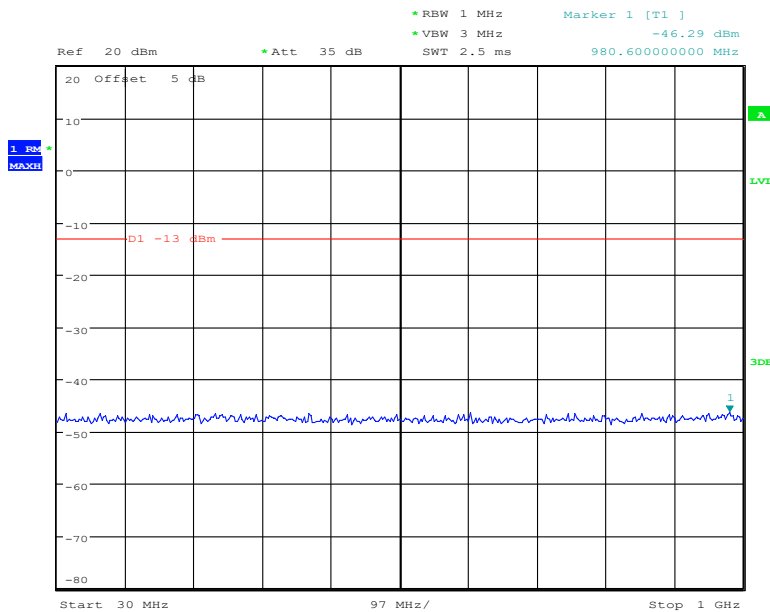


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 02:56:04

10GHz to 20GHz, High Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 02:55:18

30MHz to 1GHz, High Channel, Subcarrier (15kHz), BPSK

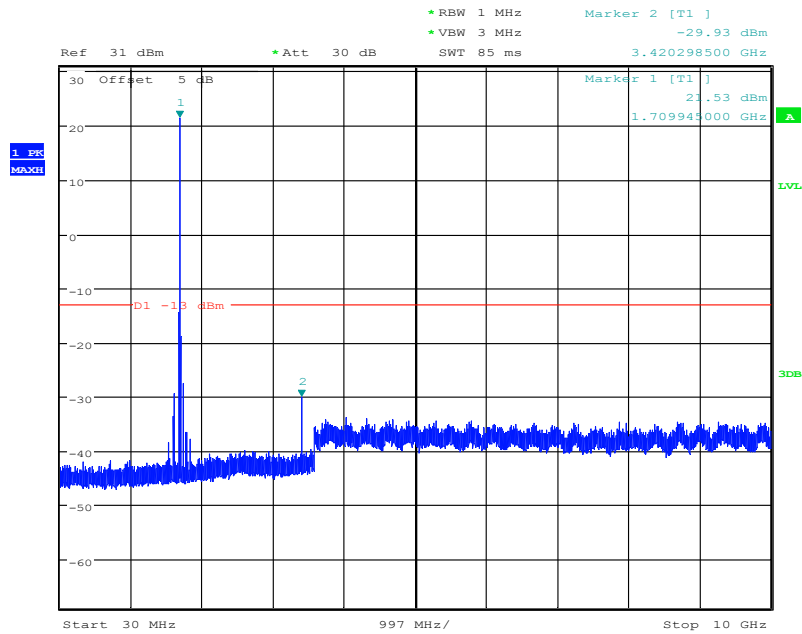
Note: The strong emission shown in each case is the carrier signal.

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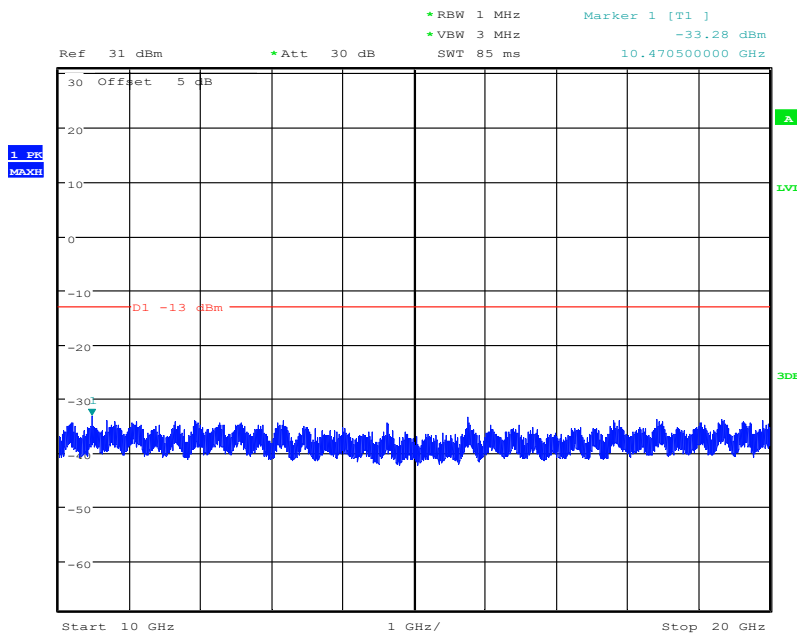
Report No.: I20W00018-WWAN_Rev1

5.4.2 NB-IoT B4 Conducted Spurious Emission Results



Date: 4.SEP.2020 18:21:42

30MHz to 10GHz, Low Channel, Subcarrier (3.75kHz), QPSK
Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:21:14

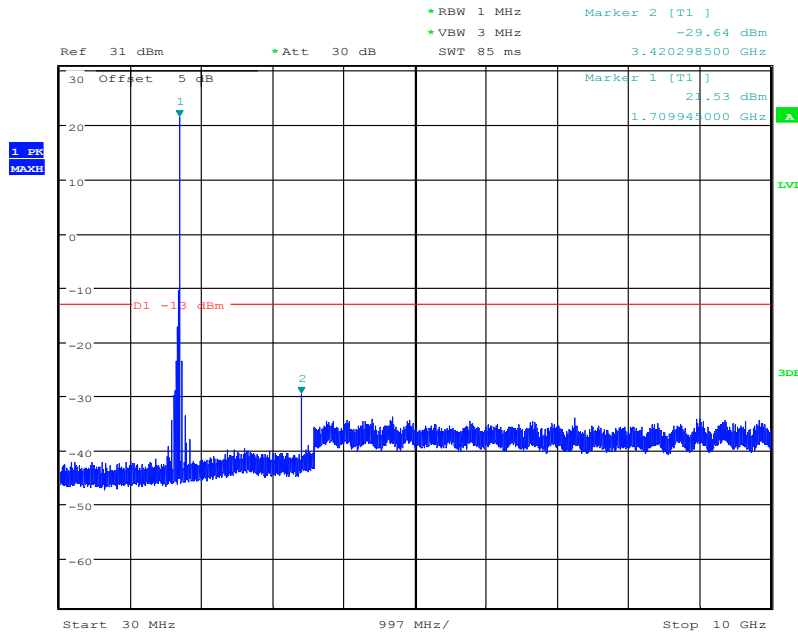
10GHz to 20GHz, Low Channel, Subcarrier (3.75kHz), QPSK

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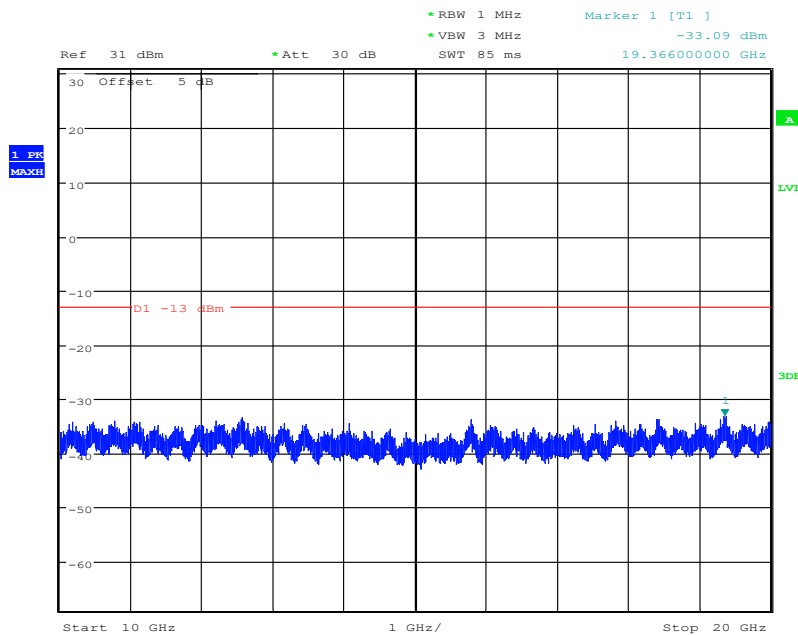


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:20:30

30MHz to 10GHz, Low Channel, Subcarrier (3.75kHz), BPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:20:45

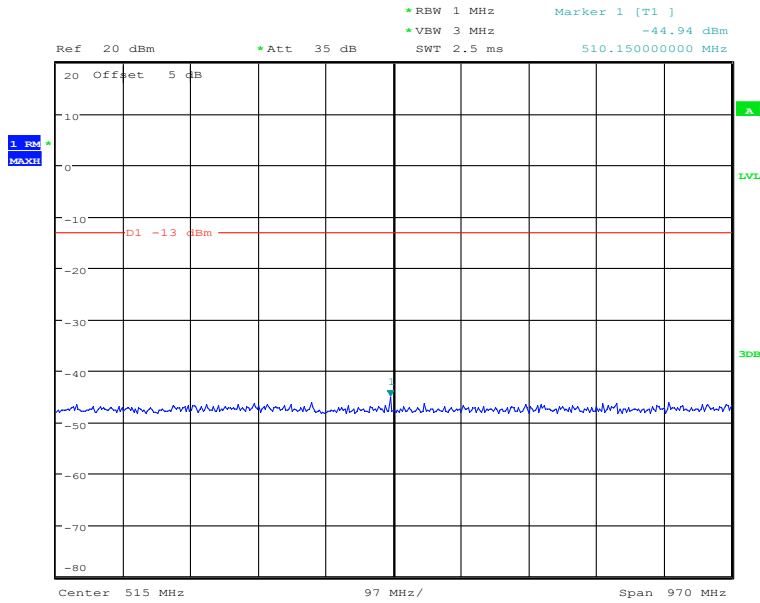
10GHz to 20GHz, Low Channel, Subcarrier (3.75kHz), BPSK

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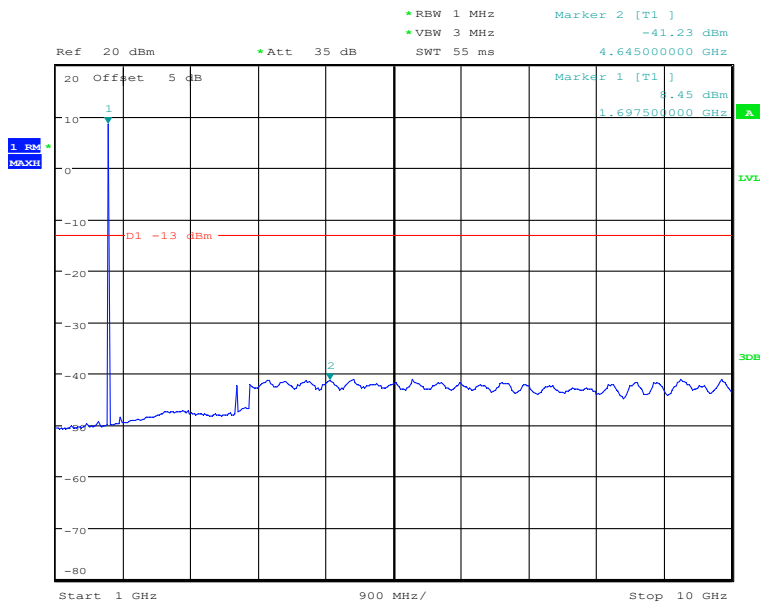


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:07:50

30MHz to 1GHz, Low Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 04:08:06

1GHz to 10GHz, Low Channel, Subcarrier (15kHz), QPSK

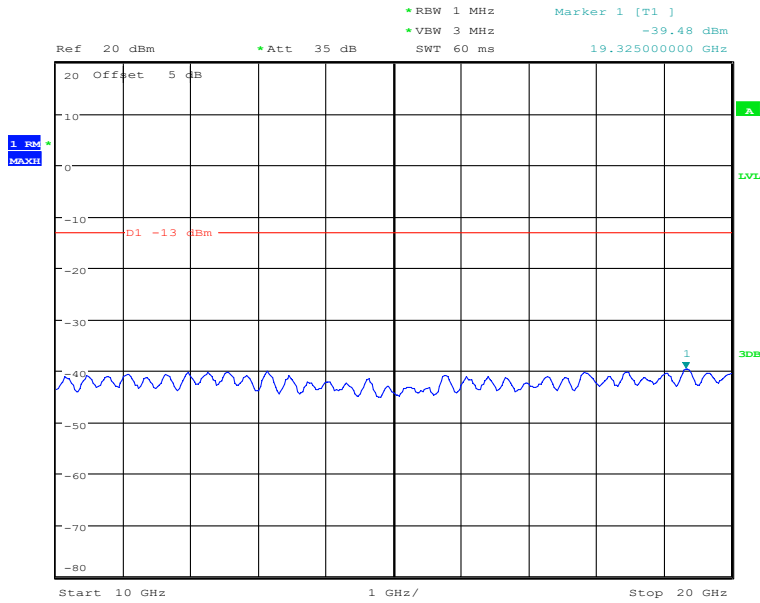
Note: The strong emission shown in each case is the carrier signal.

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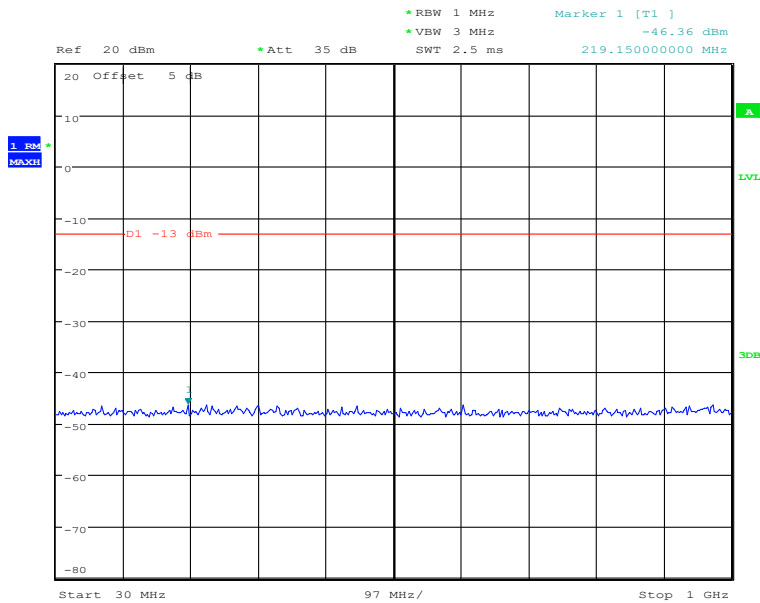


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:08:21

10GHz to 20GHz, Low Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 04:09:18

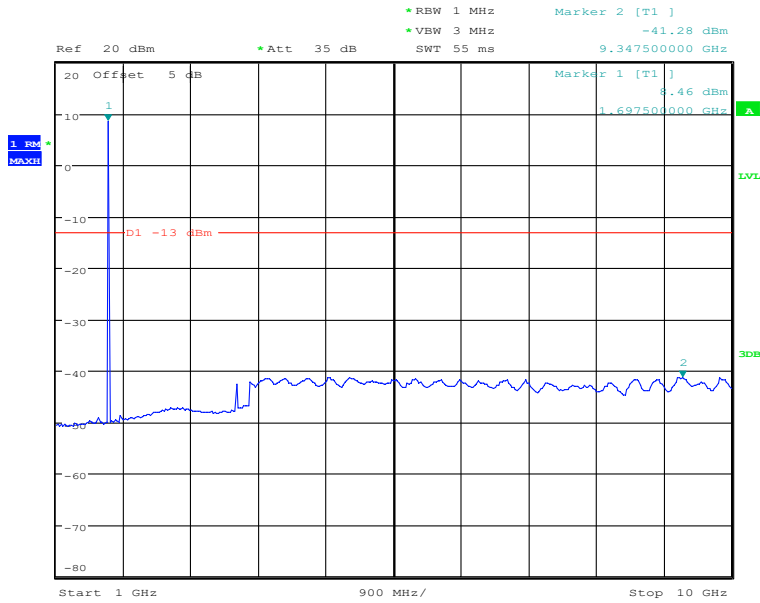
30MHz to 1GHz, Low Channel, Subcarrier (15kHz), BPSK

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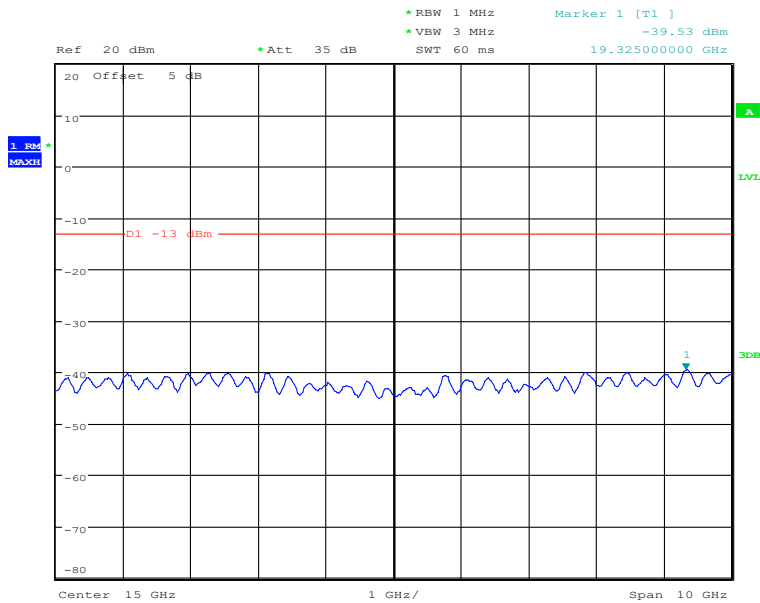
Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:09:00

1GHz to 10GHz, Low Channel, Subcarrier (15kHz), BPSK

Note: The strong emission shown in each case is the carrier signal.



Date: 5.SEP.2020 04:08:43

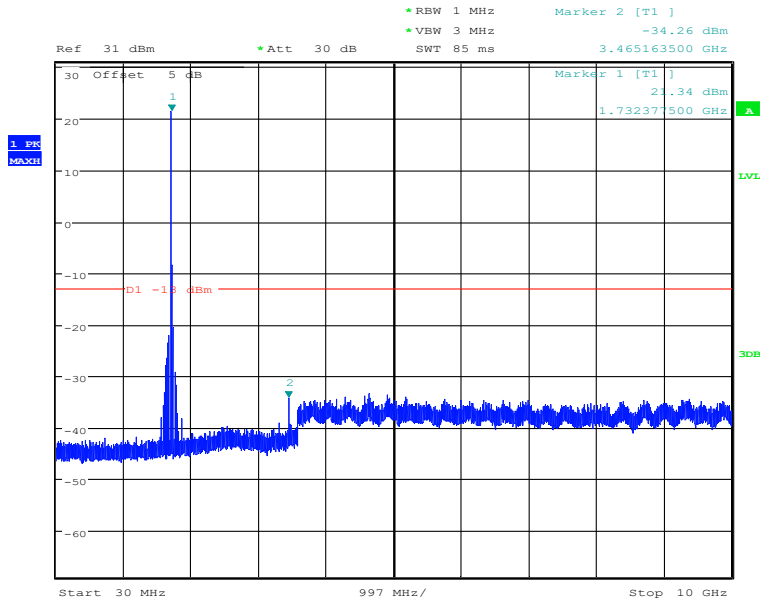
10GHz to 20GHz, Low Channel, Subcarrier (15kHz), BPSK

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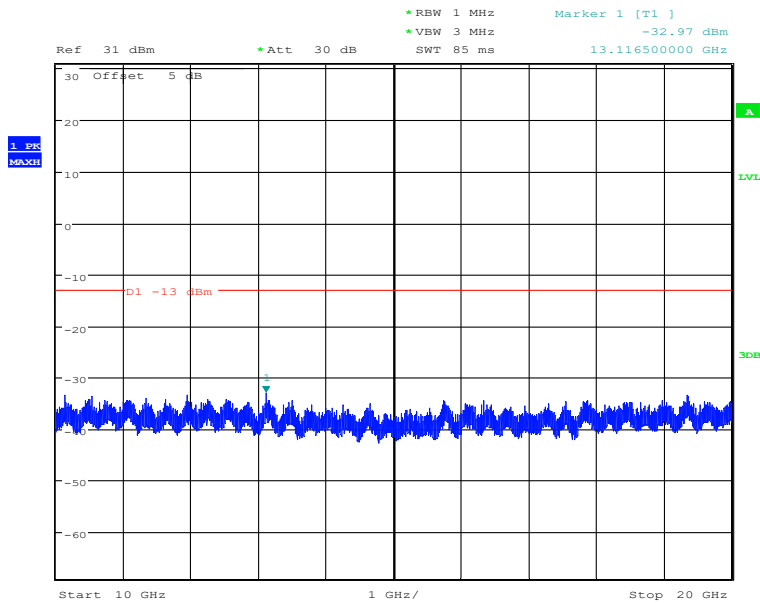


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:22:42

30MHz to 10GHz, Mid Channel, Subcarrier (3.75kHz), QPSK
Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:22:58

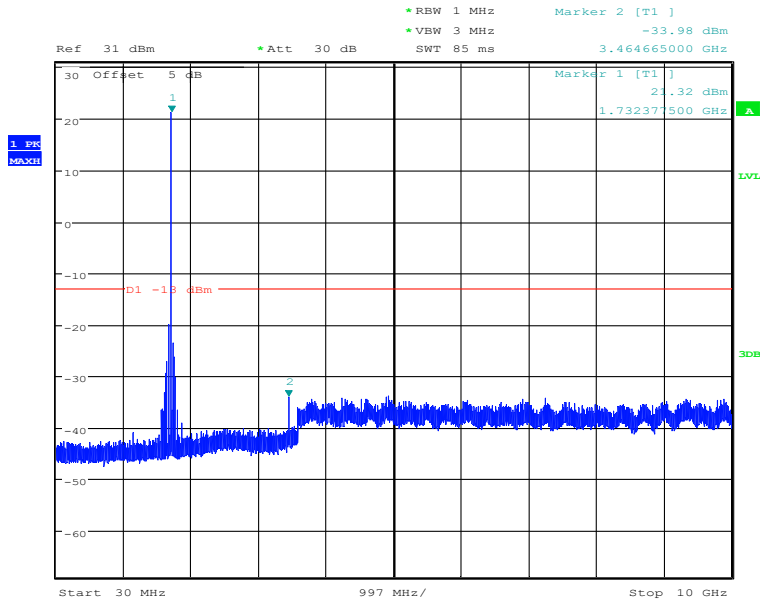
10GHz to 20GHz, Mid Channel, Subcarrier (3.75kHz), QPSK

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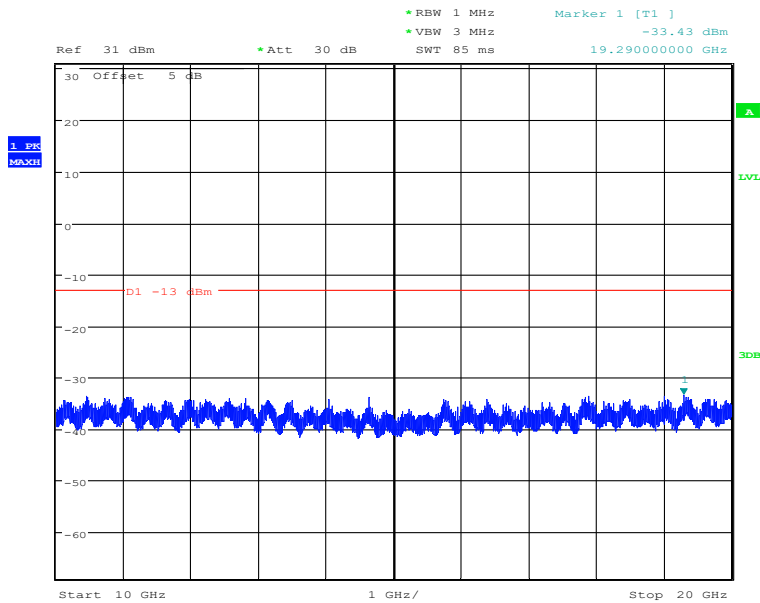


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:23:52

30MHz to 10GHz, Mid Channel, Subcarrier (3.75kHz), BPSK
Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:23:29

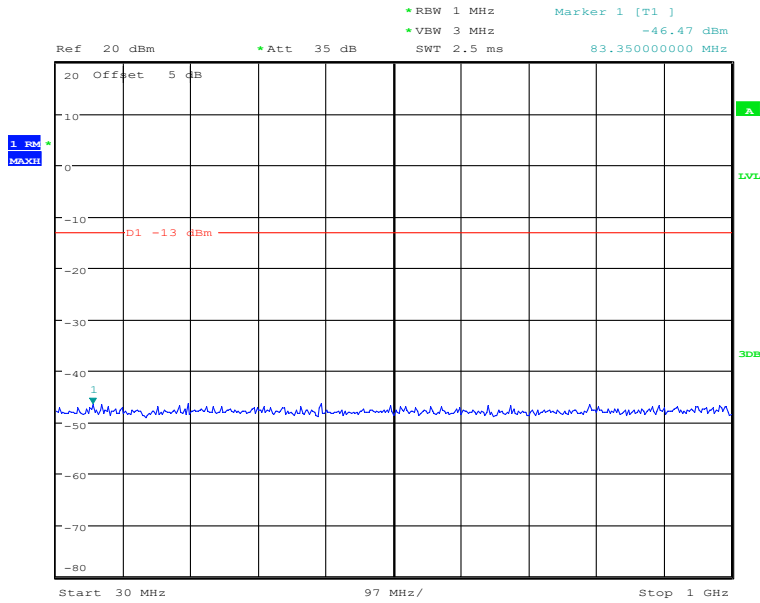
10GHz to 20GHz, Mid Channel, Subcarrier (3.75kHz), BPSK

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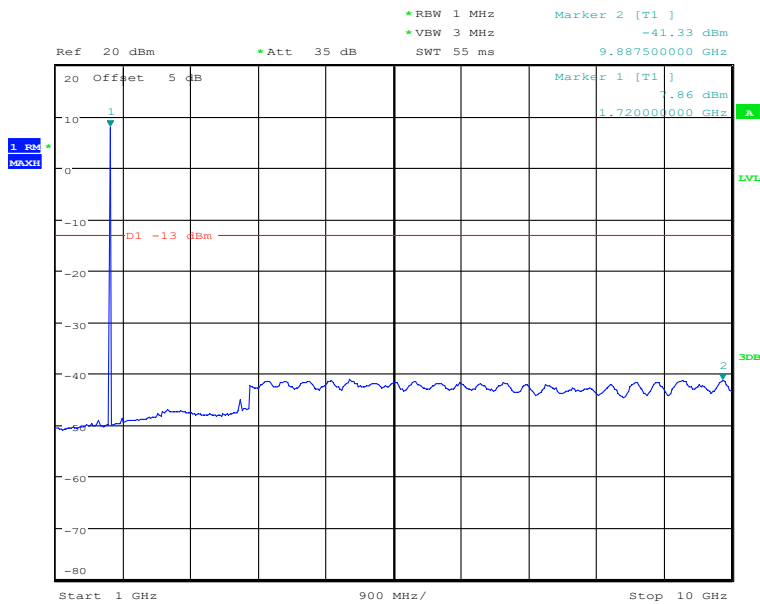


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:07:02

30MHz to 1GHz, Mid Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 04:06:46

1GHz to 10GHz, Mid Channel, Subcarrier (15kHz), QPSK

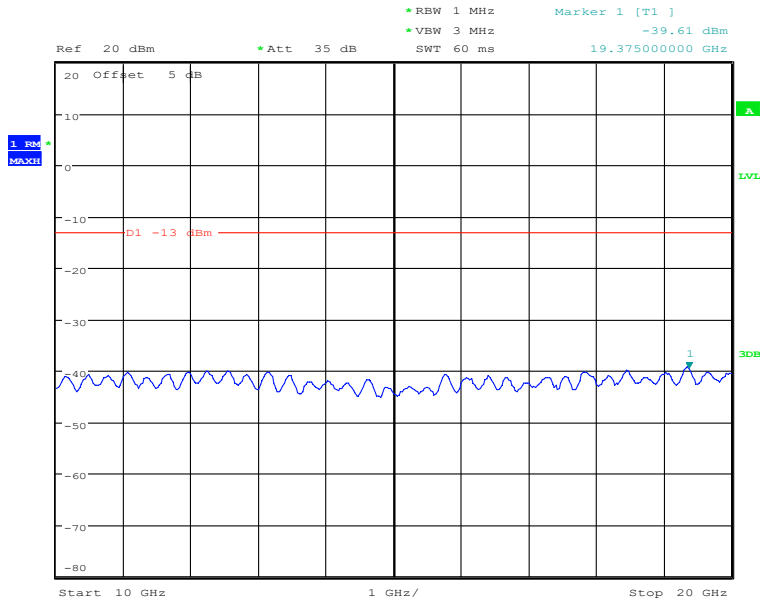
Note: The strong emission shown in each case is the carrier signal.

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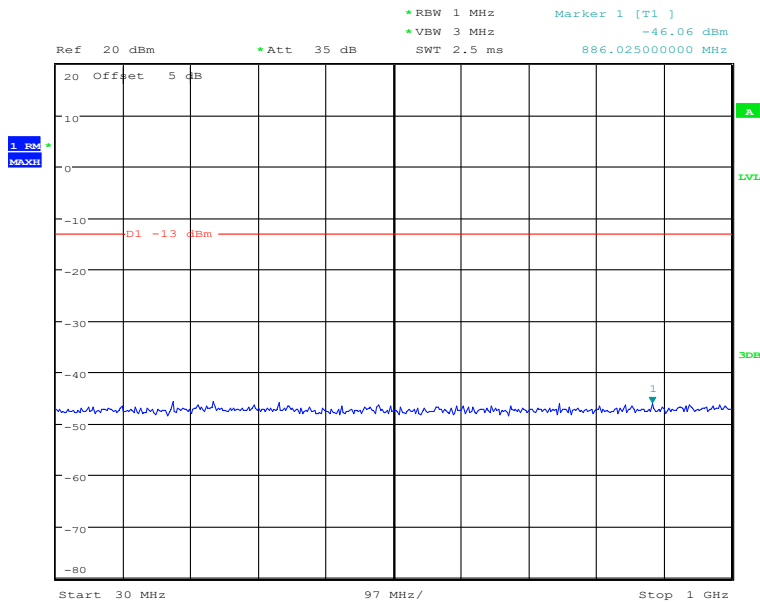


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:06:28

10GHz to 20GHz, Mid Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 04:04:49

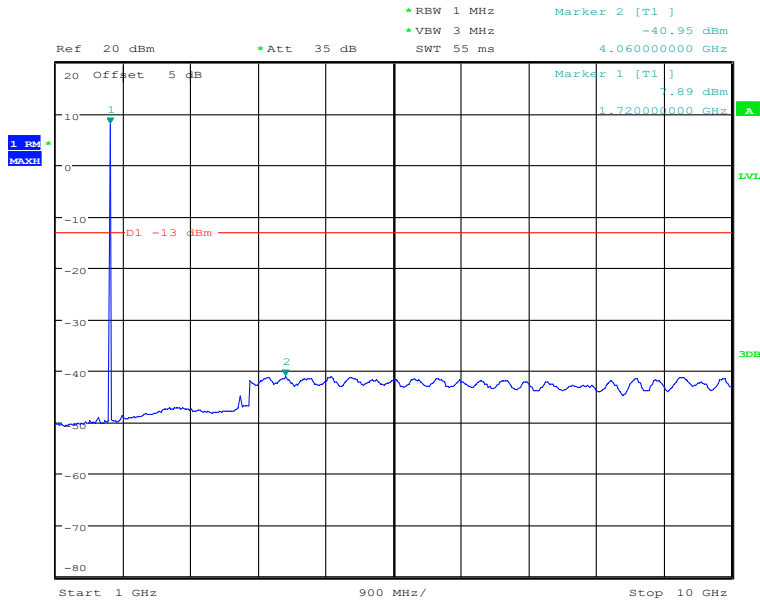
30MHz to 1GHz, Mid Channel, Subcarrier (15kHz), BPSK

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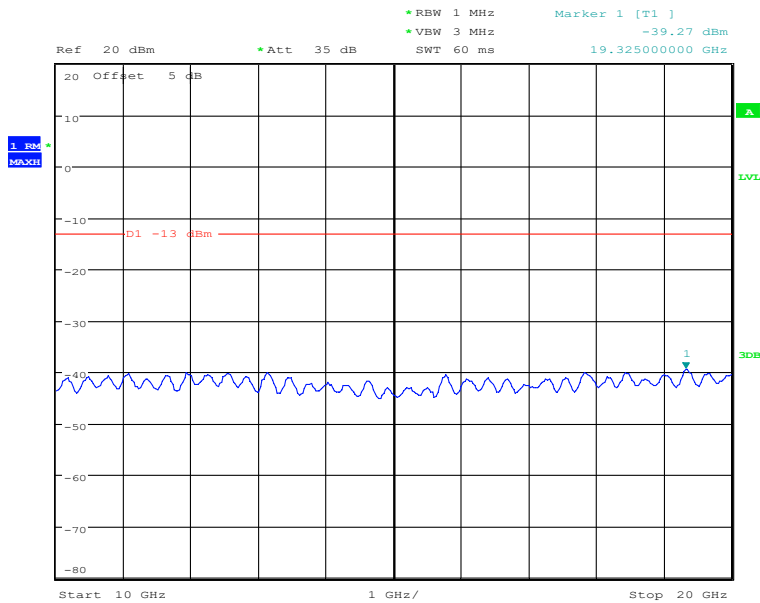
Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:05:23

1GHz to 10GHz, Mid Channel, Subcarrier (15kHz), BPSK

Note: The strong emission shown in each case is the carrier signal.



Date: 5.SEP.2020 04:05:42

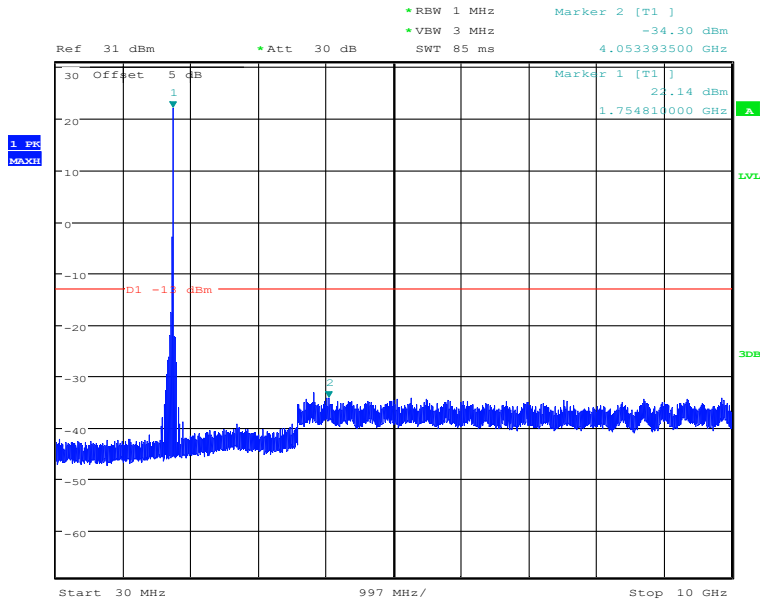
10GHz to 20GHz, Mid Channel, Subcarrier (15kHz), BPSK

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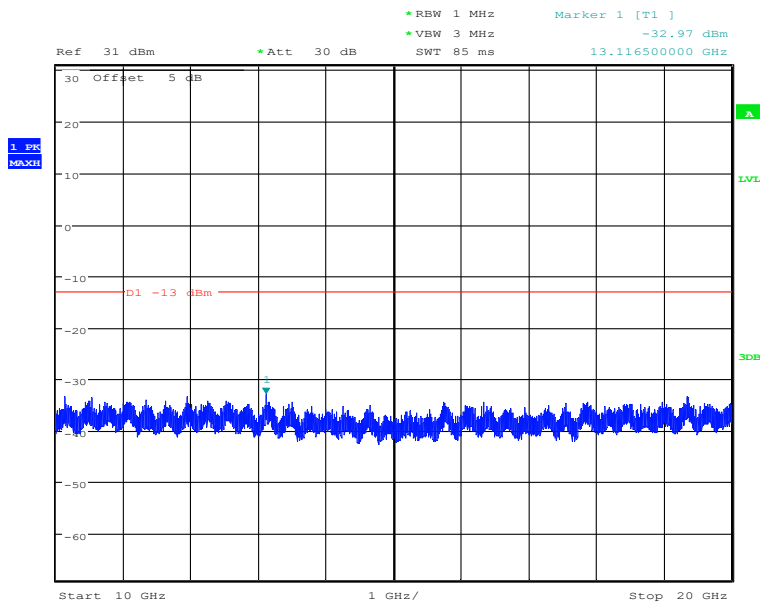


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:26:02

30MHz to 10GHz, High Channel, Subcarrier (3.75kHz), QPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:22:58

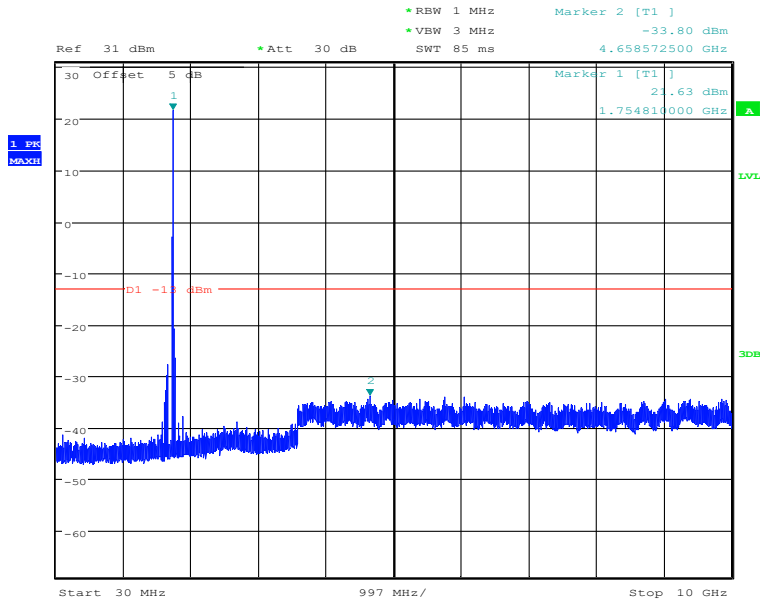
10GHz to 20GHz, High Channel, Subcarrier (3.75kHz), QPSK

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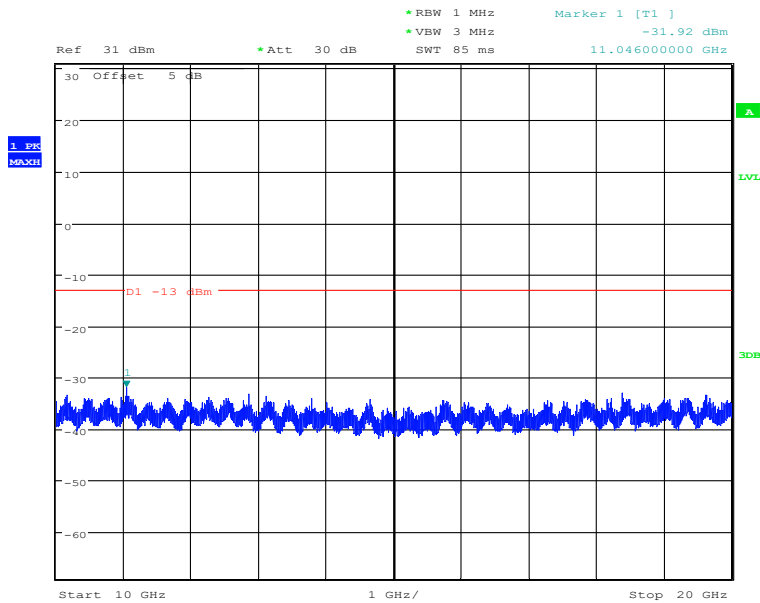


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:24:45

30MHz to 10GHz, High Channel, Subcarrier (3.75kHz), BPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:25:11

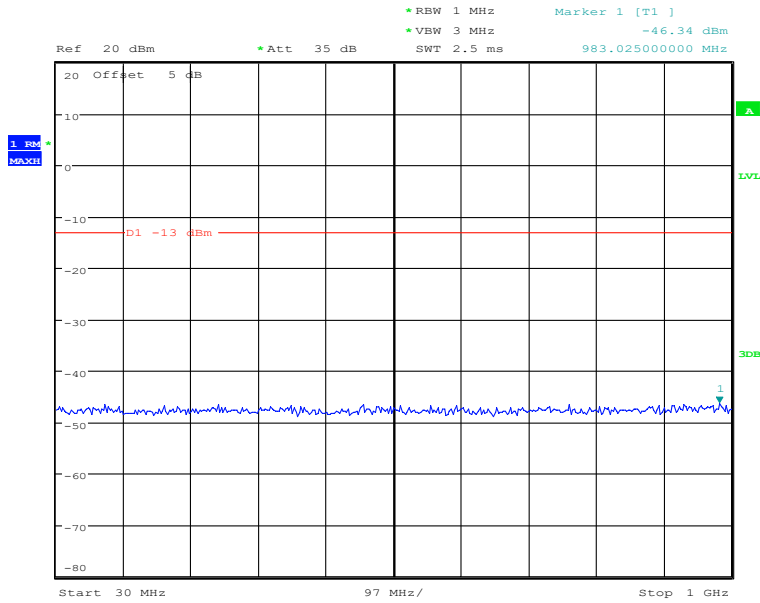
10GHz to 20GHz, High Channel, Subcarrier (3.75kHz), BPSK

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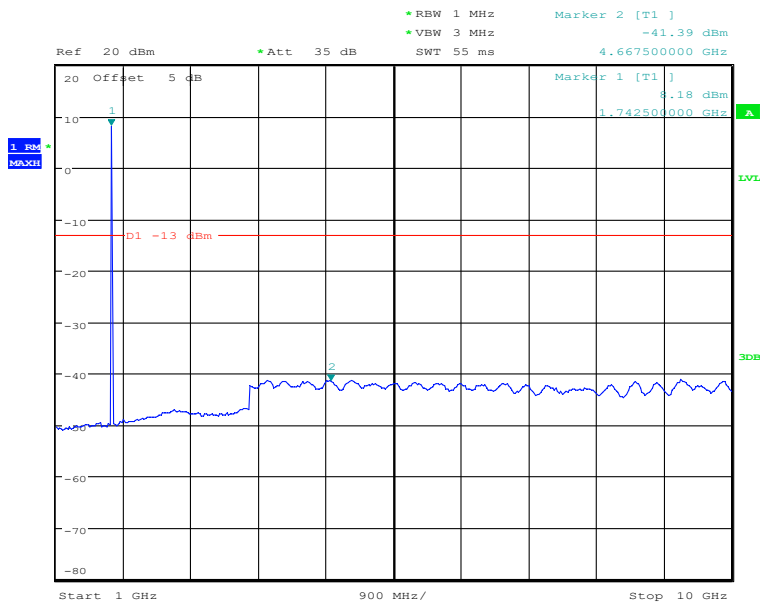


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:11:16

30MHz to 1GHz, High Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 04:10:55

1GHz to 10GHz, High Channel, Subcarrier (15kHz), QPSK

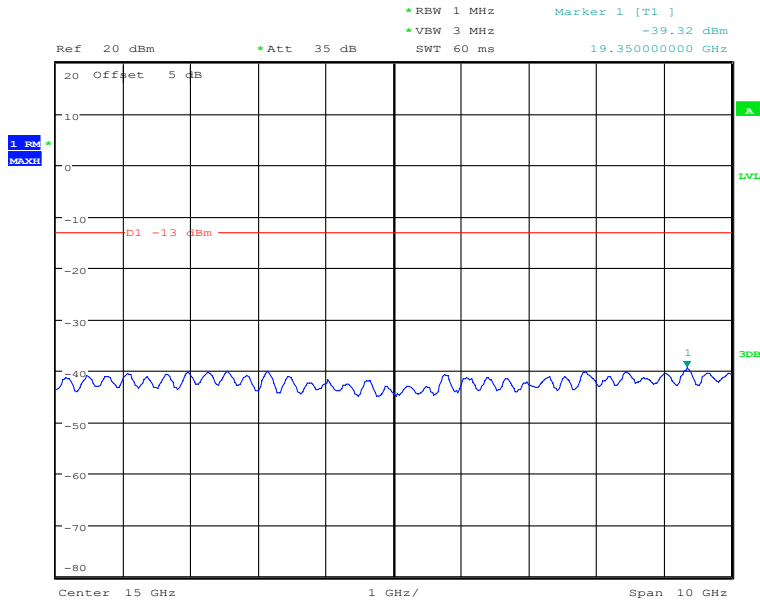
Note: The strong emission shown in each case is the carrier signal.

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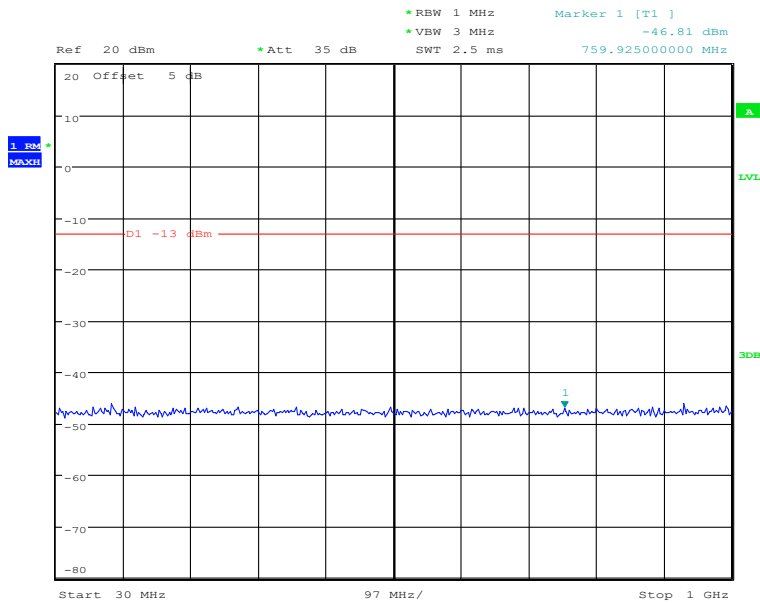


Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:10:42

10GHz to 20GHz, High Channel, Subcarrier (15kHz), QPSK



Date: 5.SEP.2020 04:09:53

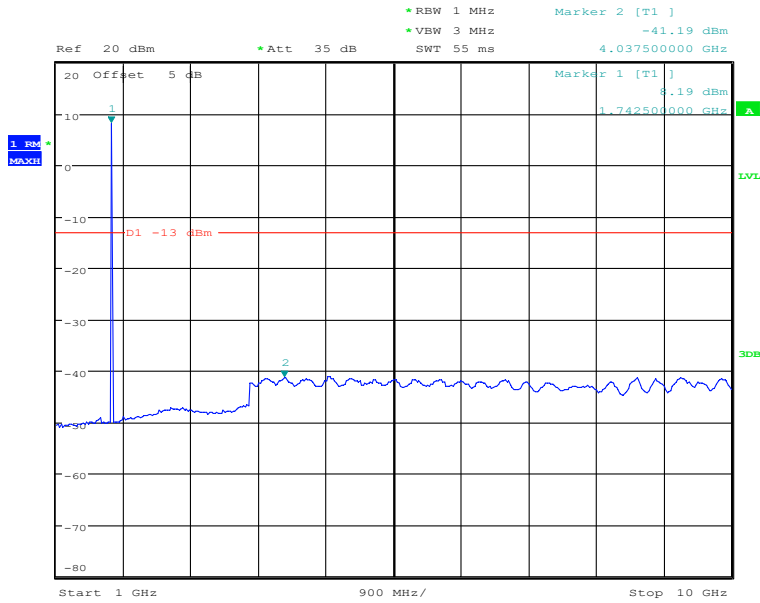
30MHz to 1GHz, High Channel, Subcarrier (15kHz), BPSK

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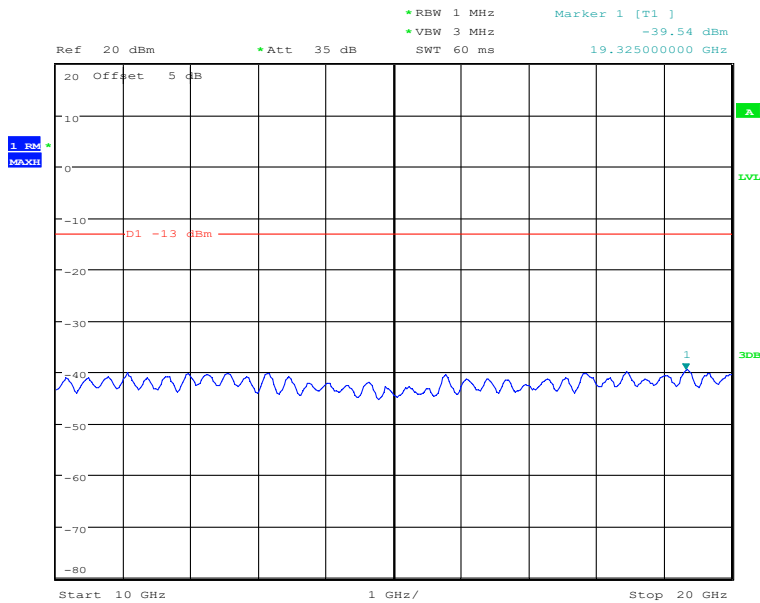
Report No.: I20W00018-WWAN_Rev1



Date: 5.SEP.2020 04:10:09

1GHz to 10GHz, High Channel, Subcarrier (15kHz), BPSK

Note: The strong emission shown in each case is the carrier signal.



Date: 5.SEP.2020 04:10:24

10GHz to 20GHz, High Channel, Subcarrier (15kHz), BPSK

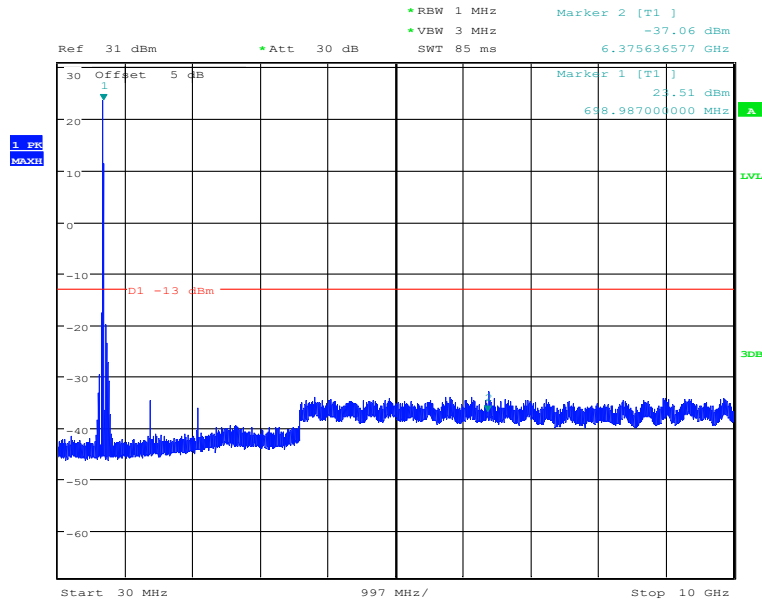
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Tel: 0086-23-88069965 FAX:0086-23-88608777



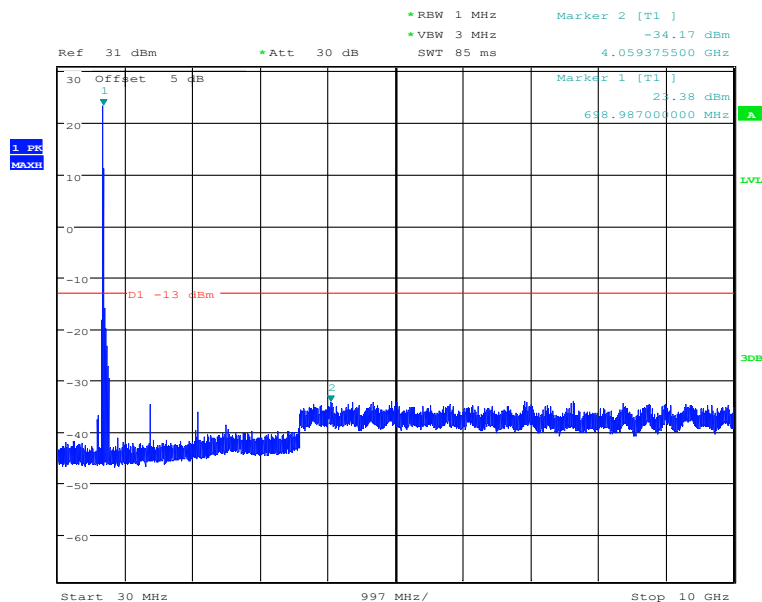
Report No.: I20W00018-WWAN_Rev1

5.4.3 NB-IoT B12 Conducted Spurious Emission Results



Date: 4.SEP.2020 18:50:10

30MHz to 10GHz, Low Channel, Subcarrier (3.75kHz), QPSK
Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:52:45

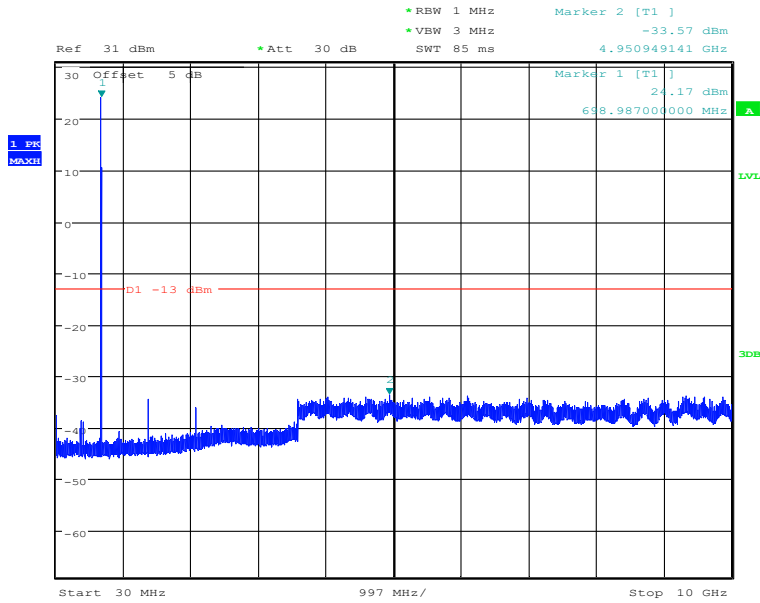
30MHz to 10GHz, Low Channel, Subcarrier (3.75kHz), BPSK
Note: The strong emission shown in each case is the carrier signal.

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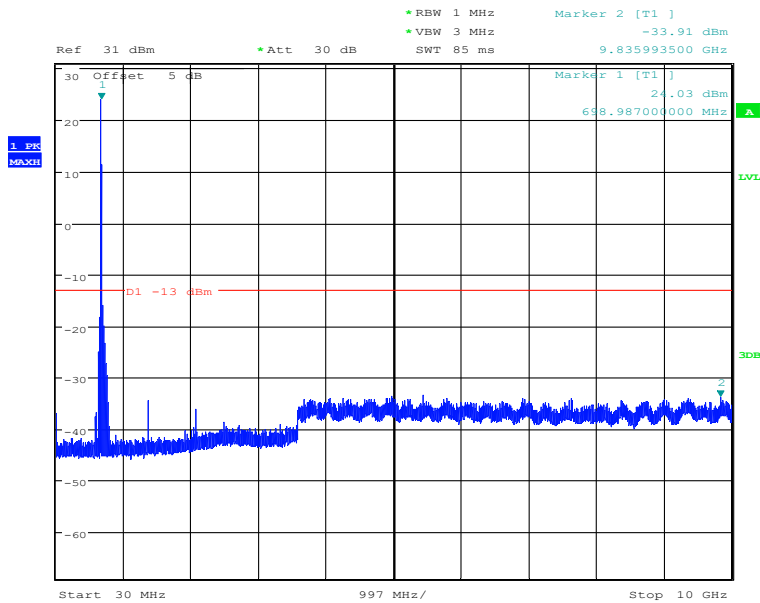


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 18:57:02

30MHz to 10GHz, Low Channel, Subcarrier (15kHz), QPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 18:53:53

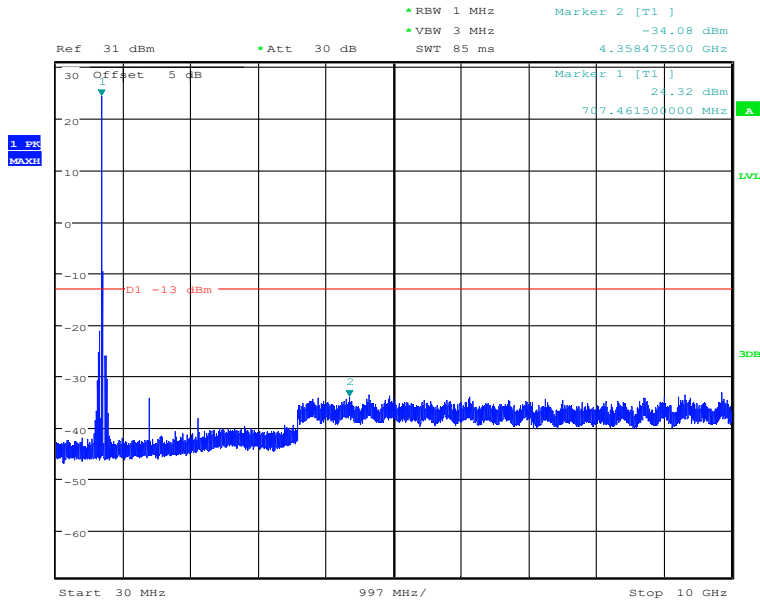
30MHz to 10GHz, Low Channel, Subcarrier (15kHz), BPSK
 Note: The strong emission shown in each case is the carrier signal.

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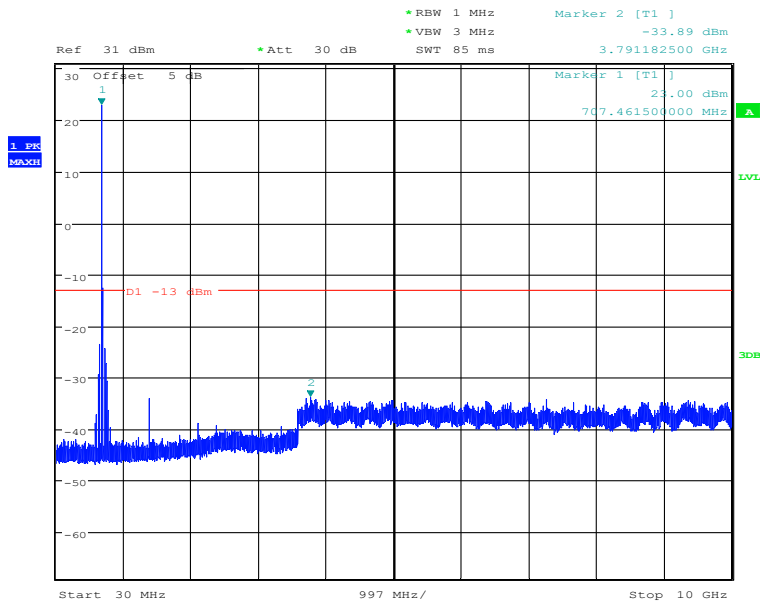


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 19:12:27

30MHz to 10GHz, Mid Channel, Subcarrier (3.75kHz), QPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 19:13:56

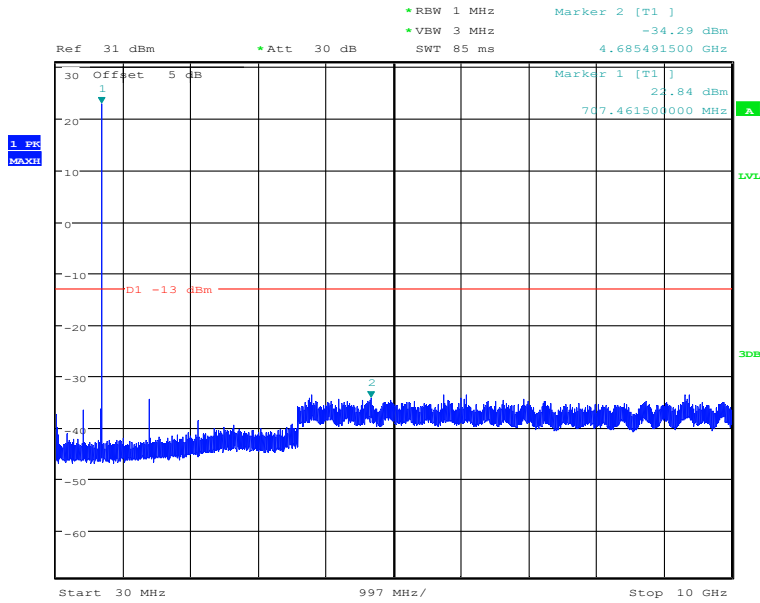
30MHz to 10GHz, Mid Channel, Subcarrier (3.75kHz), BPSK
 Note: The strong emission shown in each case is the carrier signal.

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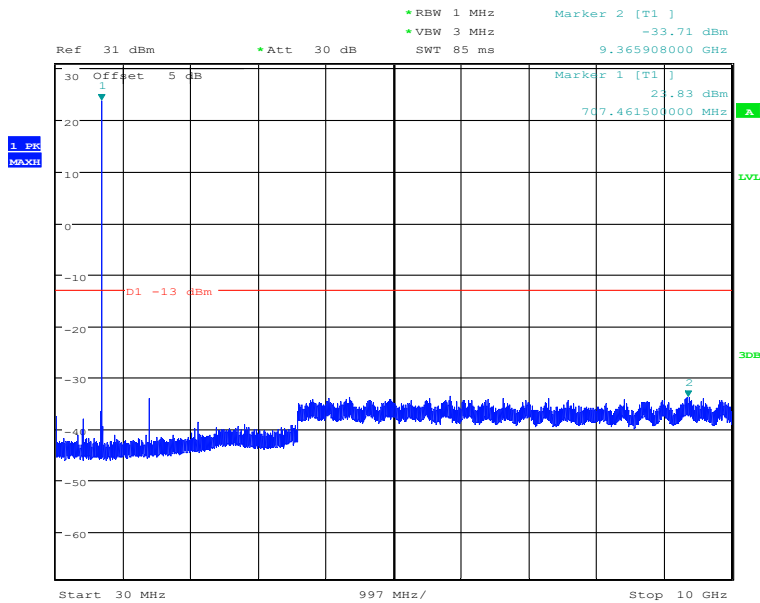


Report No.: I20W00018-WWAN_Rev1



Date: 4.SEP.2020 19:08:12

30MHz to 10GHz, Mid Channel, Subcarrier (15kHz), QPSK
 Note: The strong emission shown in each case is the carrier signal.



Date: 4.SEP.2020 19:11:05

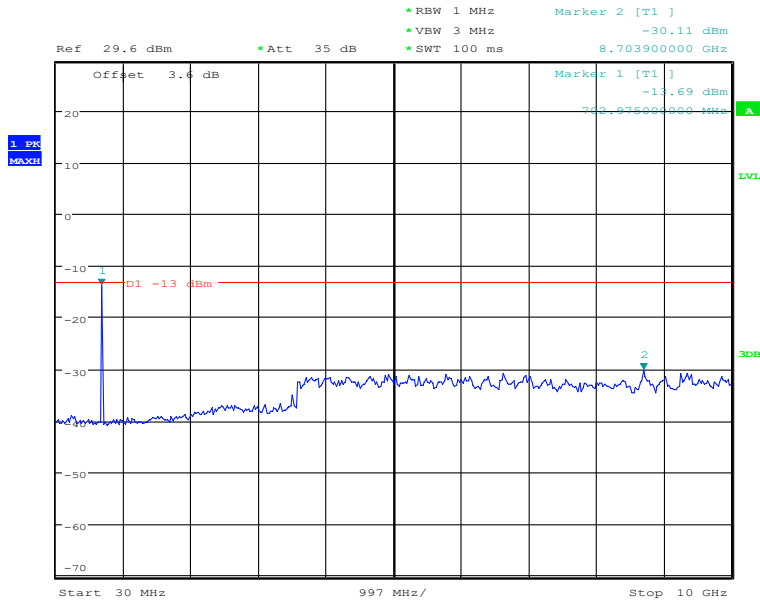
30MHz to 10GHz, Mid Channel, Subcarrier (15kHz), BPSK
 Note: The strong emission shown in each case is the carrier signal.

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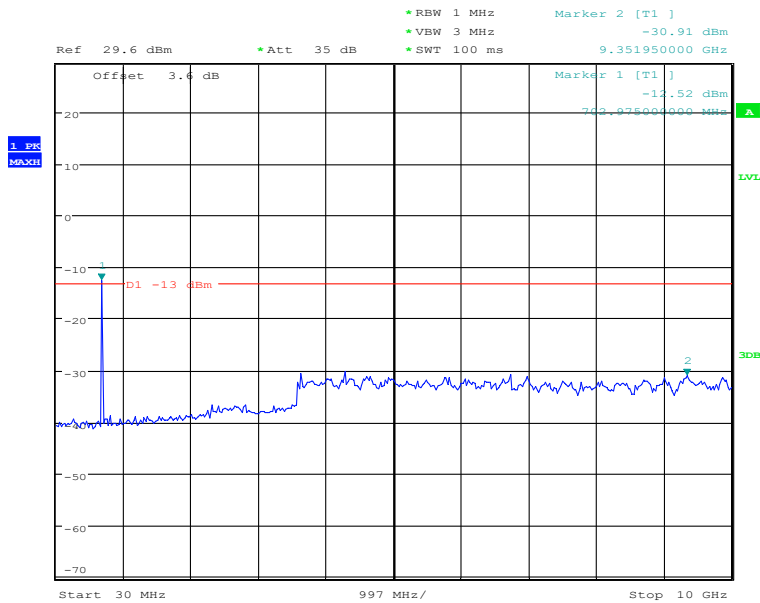


Report No.: I20W00018-WWAN_Rev1



Date: 7.SEP.2020 22:52:05

30MHz to 10GHz, High Channel, Subcarrier (3.75kHz), QPSK
Note: The strong emission shown in each case is the carrier signal.



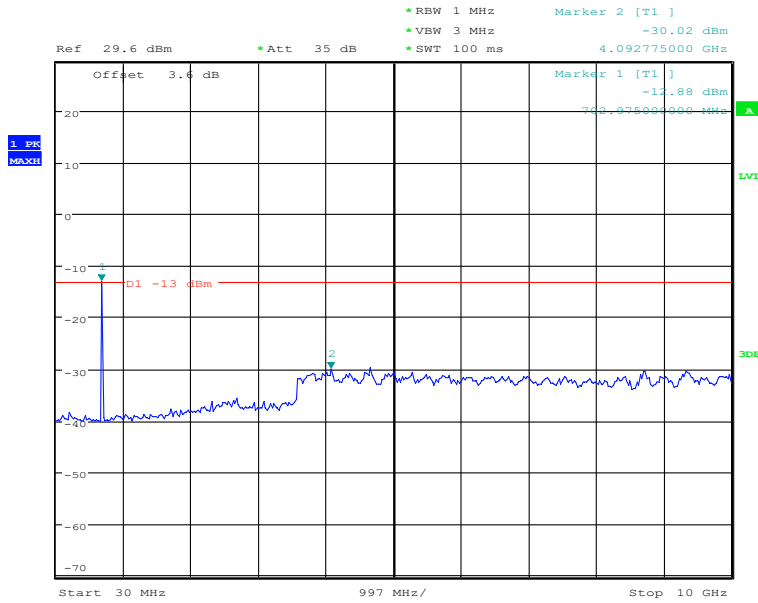
Date: 7.SEP.2020 22:51:37

30MHz to 10GHz, High Channel, Subcarrier (3.75kHz), BPSK
Note: The strong emission shown in each case is the carrier signal.

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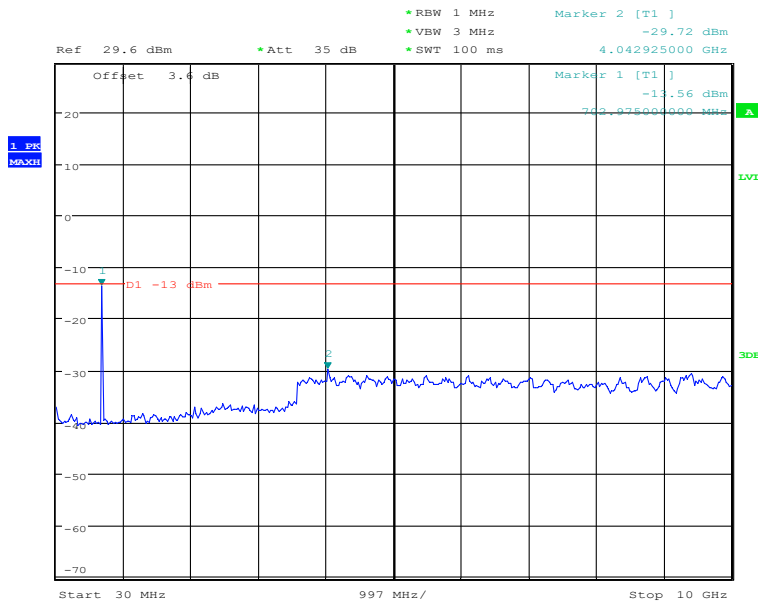
Address: No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336
Tel: 0086-23-88069965 FAX:0086-23-88608777

Report No.: I20W00018-WWAN_Rev1



Date: 7.SEP.2020 22:47:13

30MHz to 10GHz, High Channel, Subcarrier (15kHz), QPSK
Note: The strong emission shown in each case is the carrier signal.



Date: 7.SEP.2020 22:50:00

30MHz to 10GHz, High Channel, Subcarrier (15kHz), BPSK
Note: The strong emission shown in each case is the carrier signal.

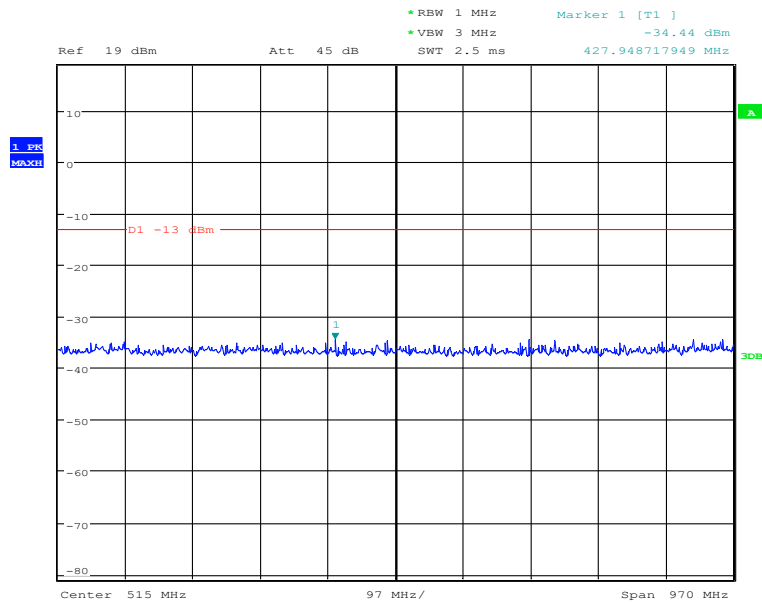
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Tel: 0086-23-88069965 FAX:0086-23-88608777



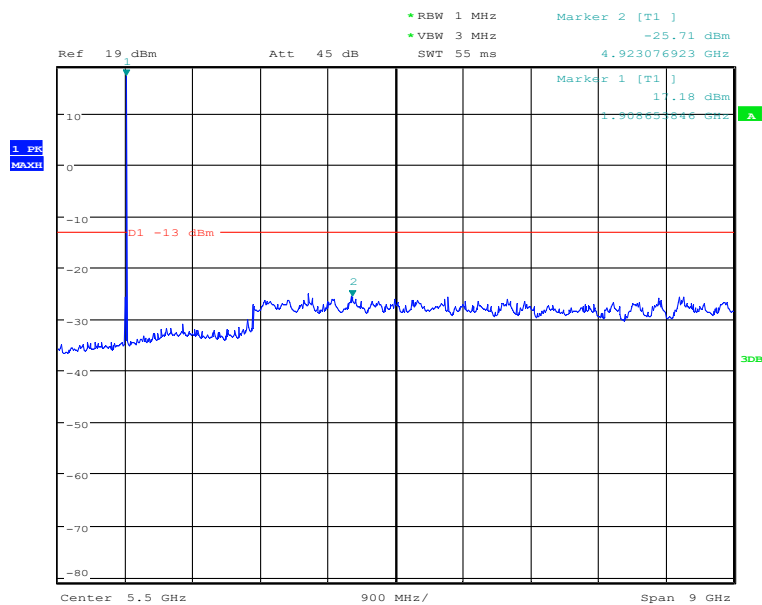
Report No.: I20W00018-WWAN_Rev1

5.4.4 CAT-M B2 Conducted Spurious Emission Results



Date: 2.SEP.2020 01:41:02

Band2-High Channel-1.4MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 01:41:28

Band2-High Channel-1.4MHz Bandwidth-1GHz to 10GHz

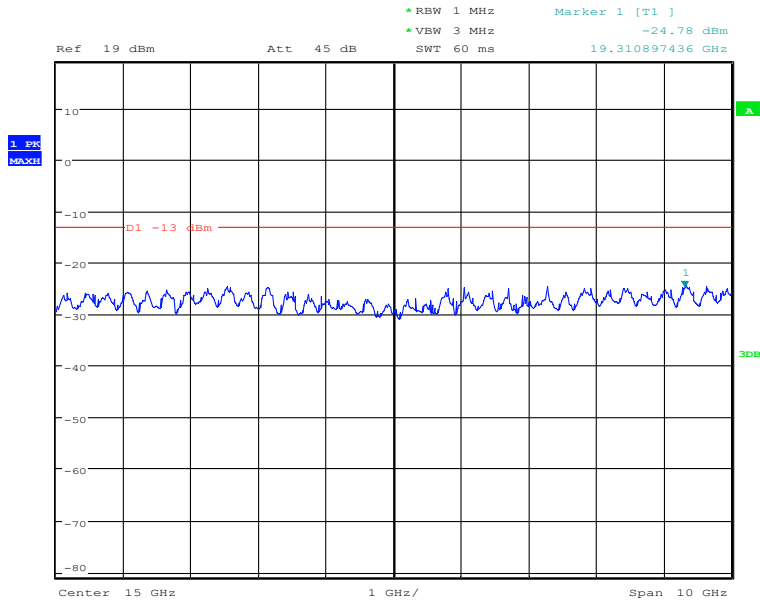
Note: The strong emission shown in each case is the carrier signal.

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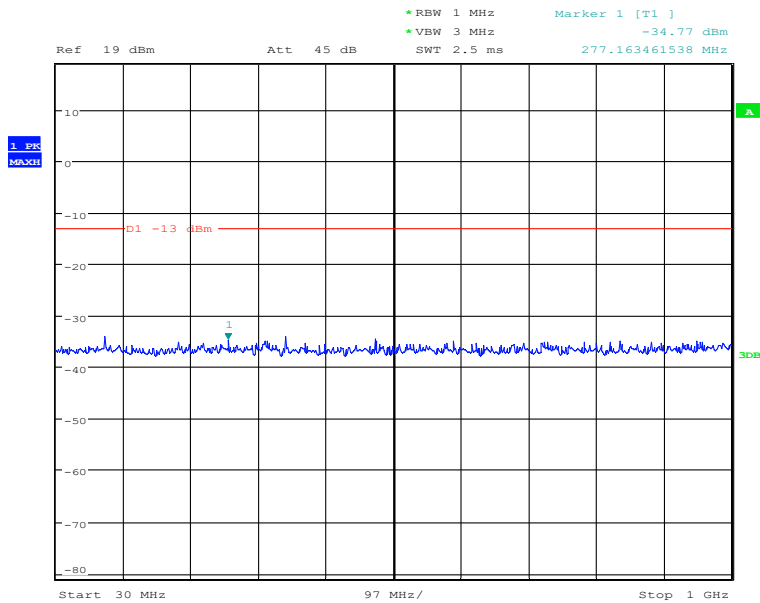


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:41:49

Band2-High Channel-1.4MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 01:47:28

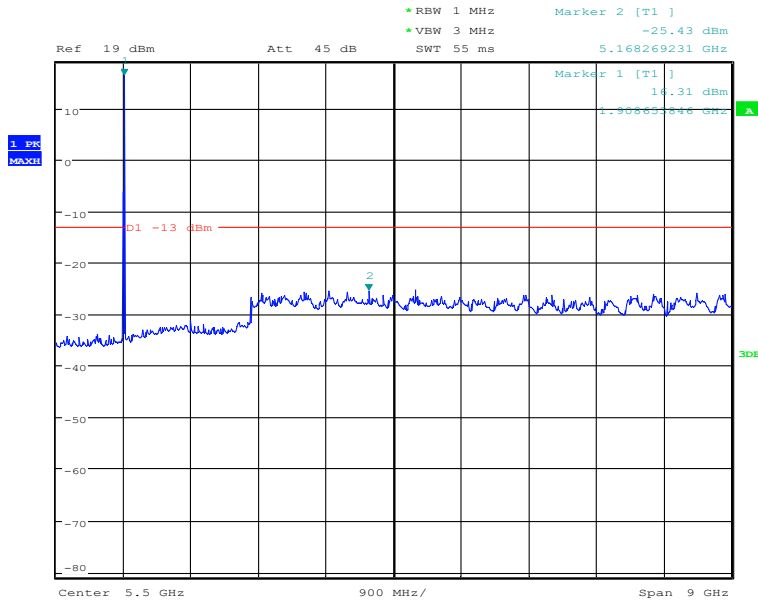
Band2-High Channel-3MHz Bandwidth-30MHz to 1GHz

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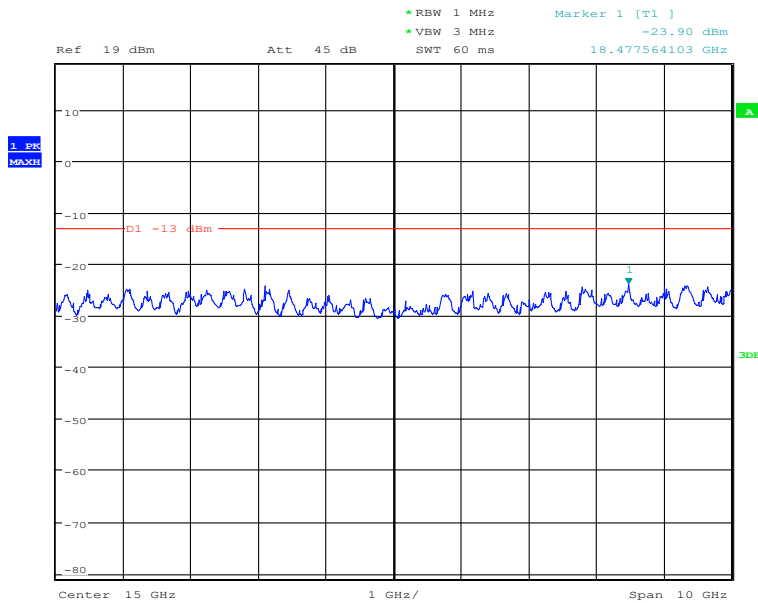
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:46:49

Band2-High Channel-3MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 01:46:15

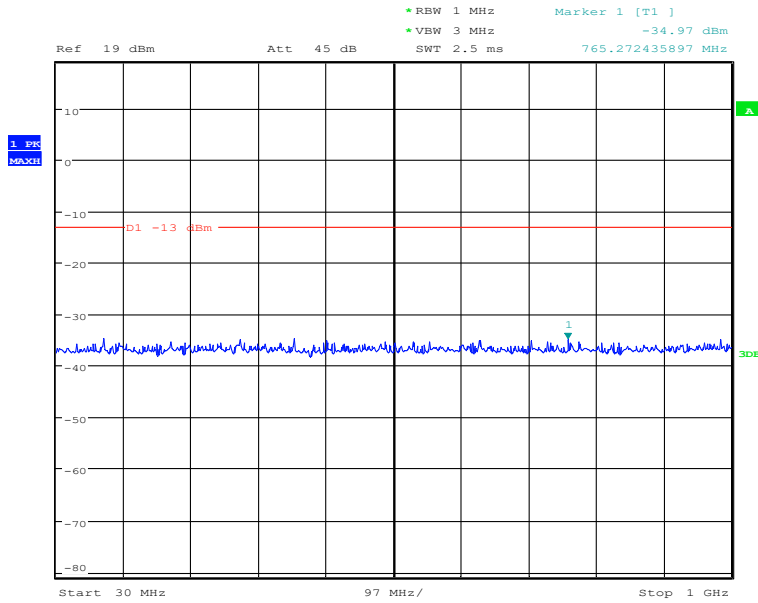
Band2-High Channel-3MHz Bandwidth-10GHz to 20GHz

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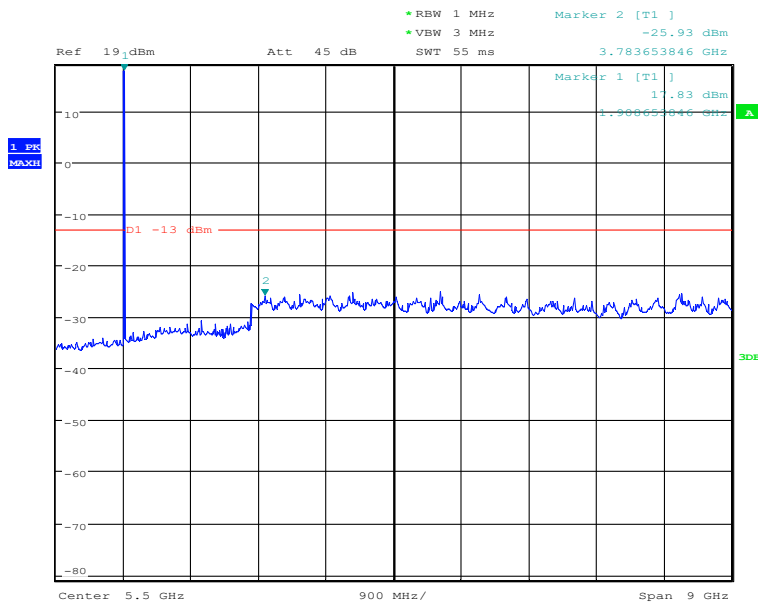


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:52:48

Band2-High Channel-5MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 01:53:16

Band2-High Channel-5MHz Bandwidth-1GHz to 10GHz

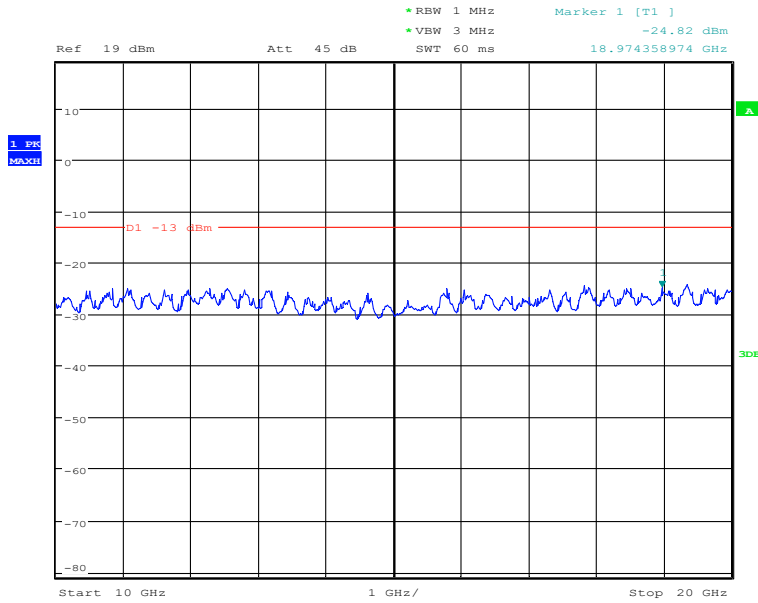
Note: The strong emission shown in each case is the carrier signal.

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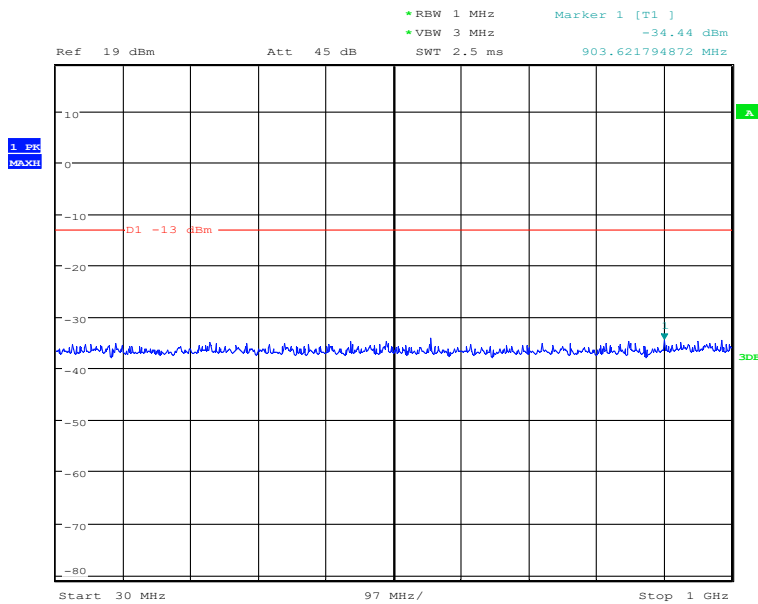


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:53:46

Band2-High Channel-5MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 02:30:00

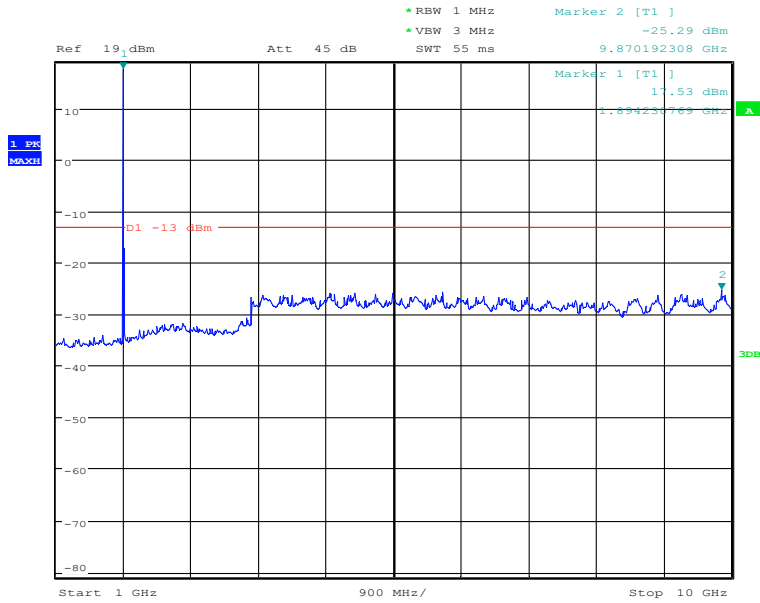
Band2-High Channel-10MHz Bandwidth-30MHz to 1GHz

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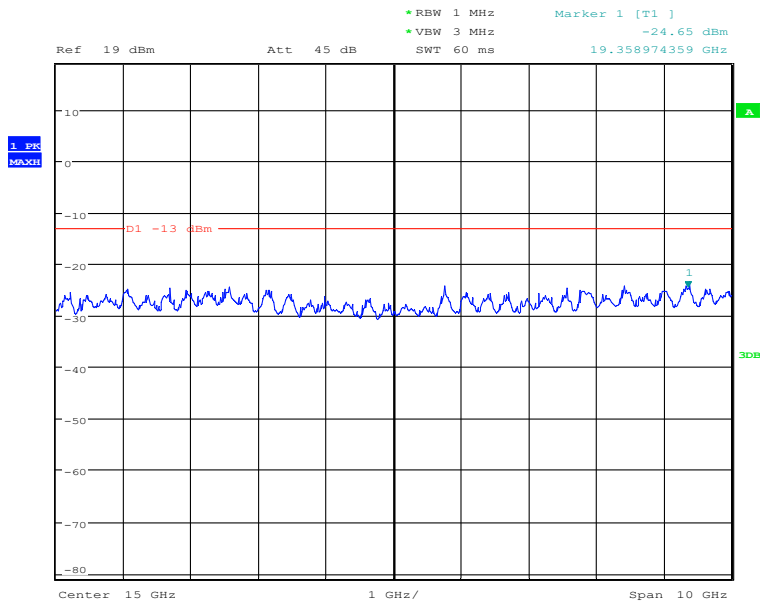
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 02:29:39

Band2-High Channel-10MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 02:29:16

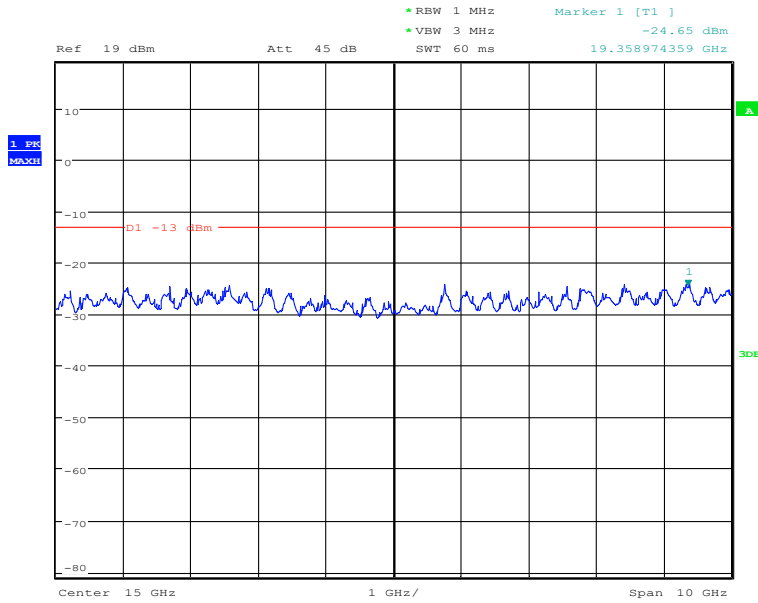
Band2-High Channel-10MHz Bandwidth-10GHz to 20GHz

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Tel: 0086-23-88069965 FAX:0086-23-88608777

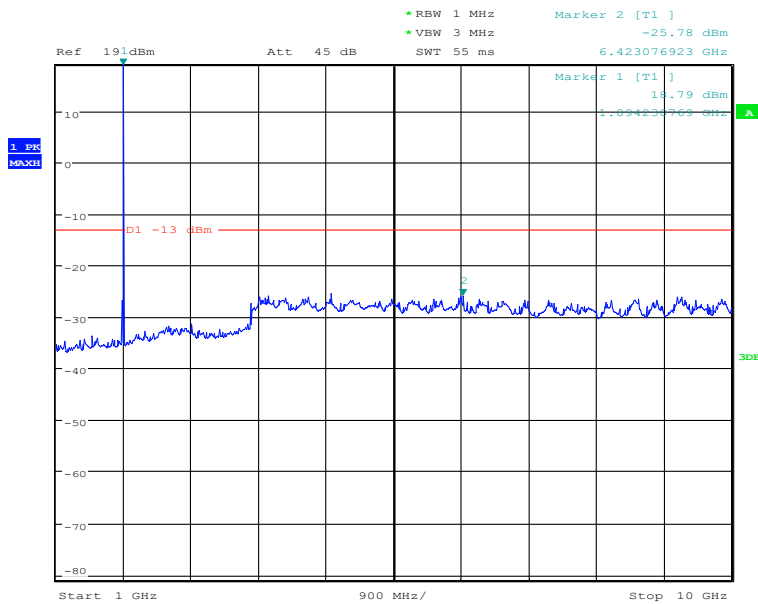


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 02:29:16

Band2-High Channel-15MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 03:00:14

Band2-High Channel-15MHz Bandwidth-1GHz to 10GHz

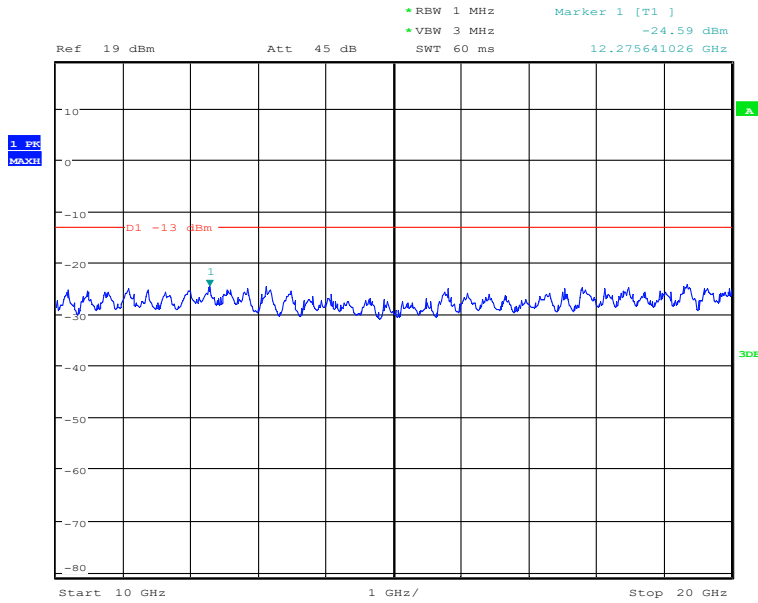
Note: The strong emission shown in each case is the carrier signal.

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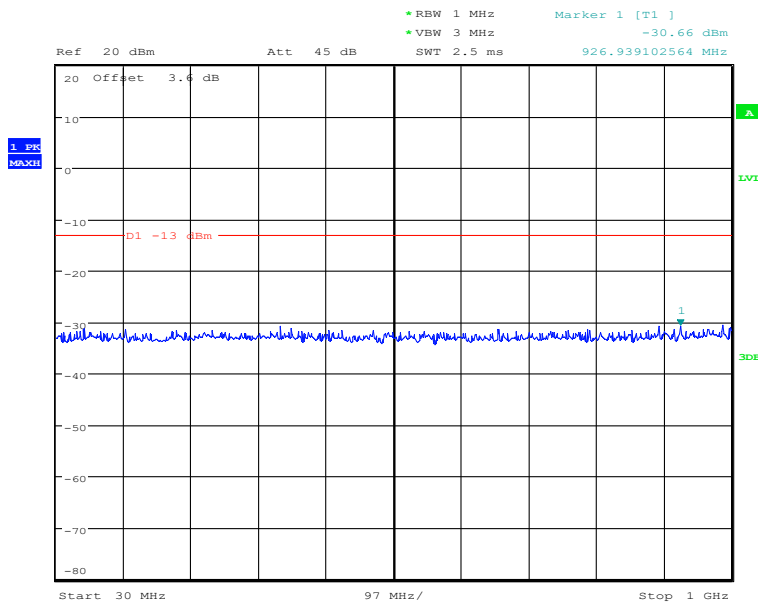


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:00:30

Band2-High Channel-15MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 03:05:56

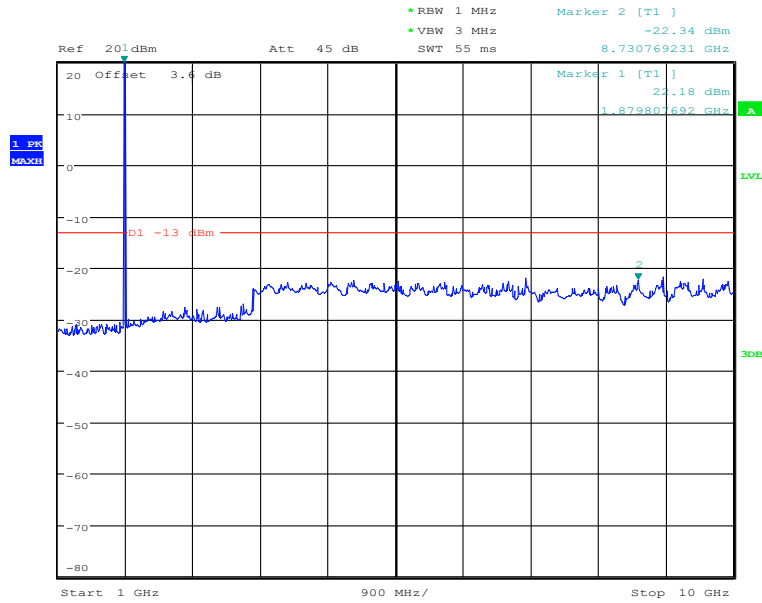
Band2-High Channel-20MHz Bandwidth-30MHz to 1GHz

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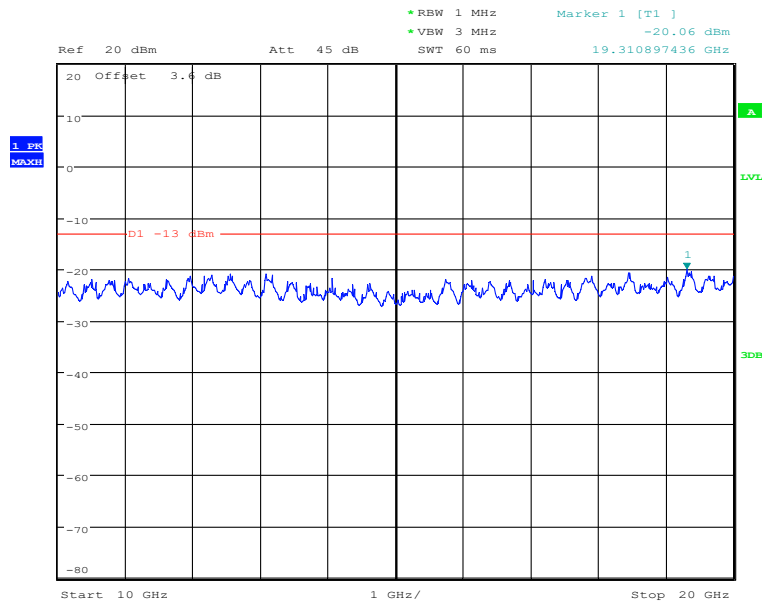
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:05:32

Band2-High Channel-20MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 03:05:12

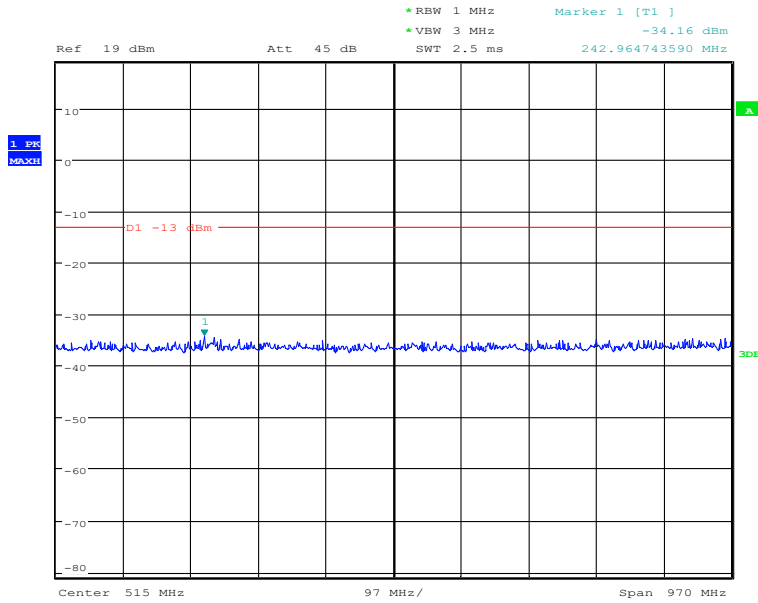
Band2-High Channel-20MHz Bandwidth-10GHz to 20GHz

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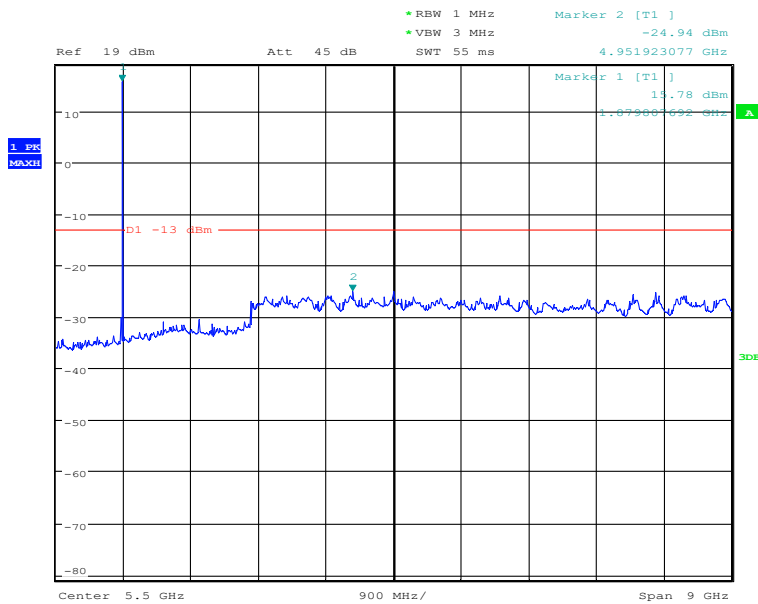


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:40:15

Band2-Middle Channel-1.4MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 01:39:47

Band2-Middle Channel-1.4MHz Bandwidth-1GHz to 10GHz

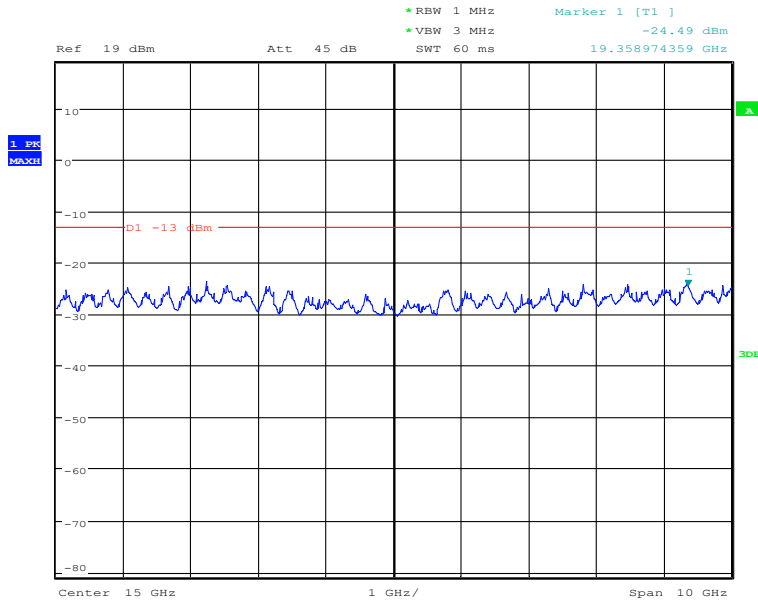
Note: The strong emission shown in each case is the carrier signal.

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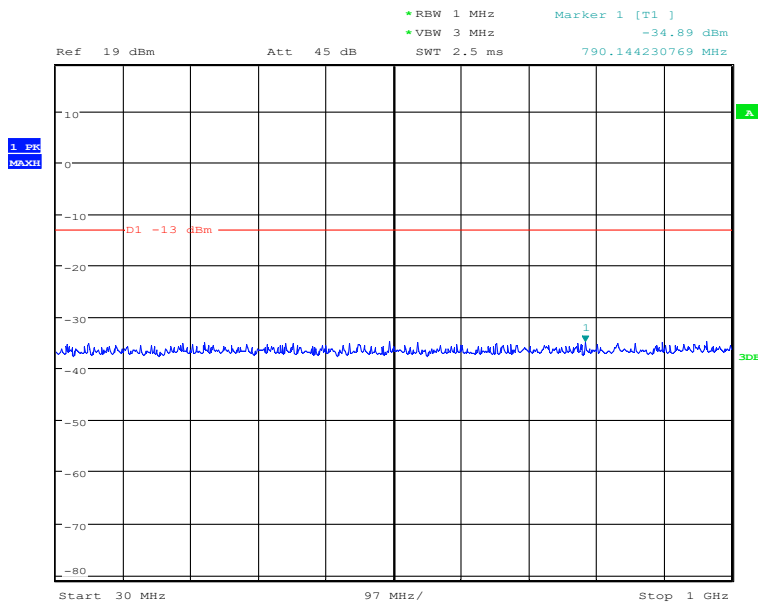


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:39:08

Band2-Middle Channel-1.4MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 01:44:47

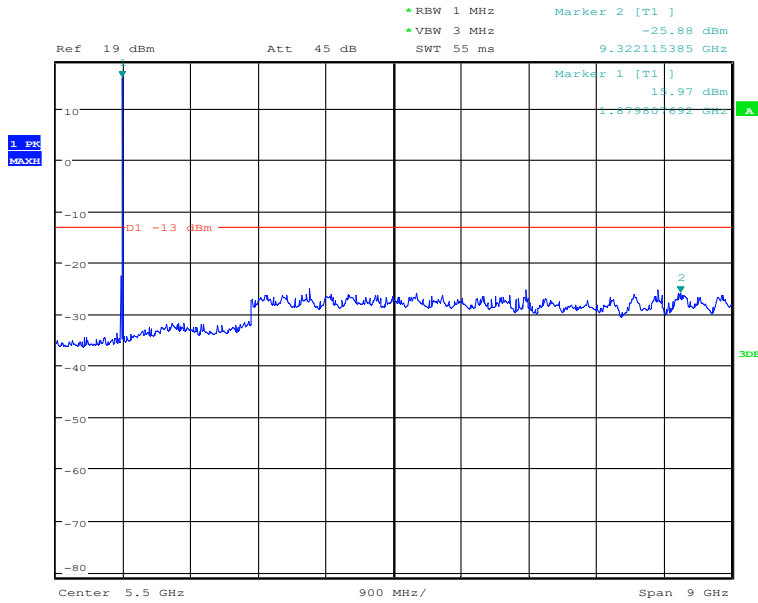
Band2-Middle Channel-3MHz Bandwidth-30MHz to 1GHz

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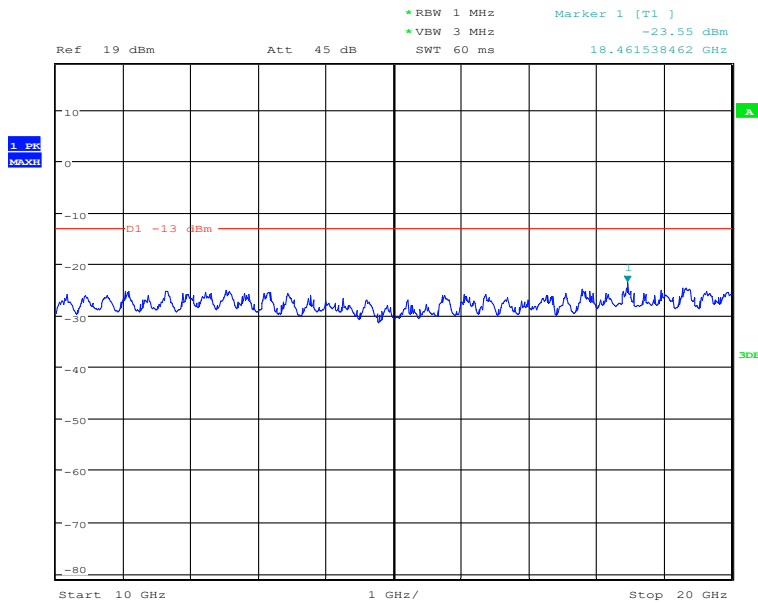
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:45:12

Band2-Middle Channel-3MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 01:45:30

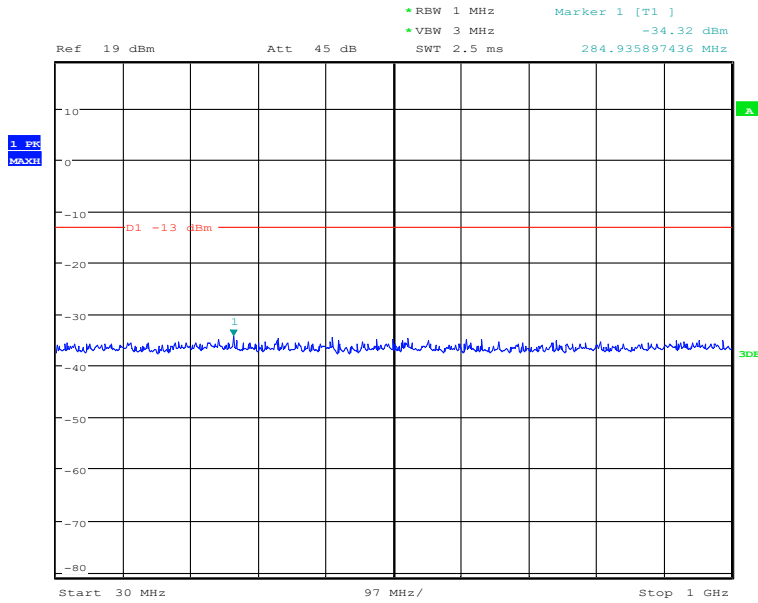
Band2-Middle Channel-3MHz Bandwidth-10GHz to 20GHz

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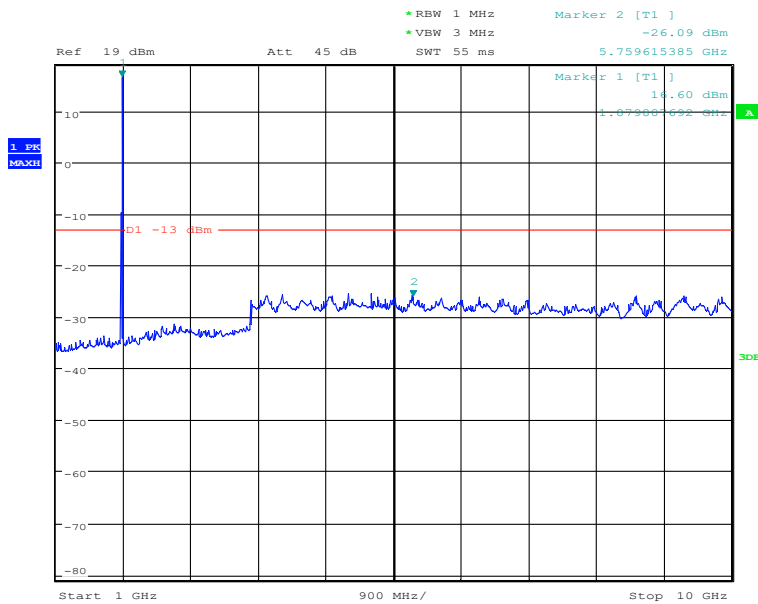


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:52:09

Band2-Middle Channel-5MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 01:51:48

Band2-Middle Channel-5MHz Bandwidth-1GHz to 10GHz

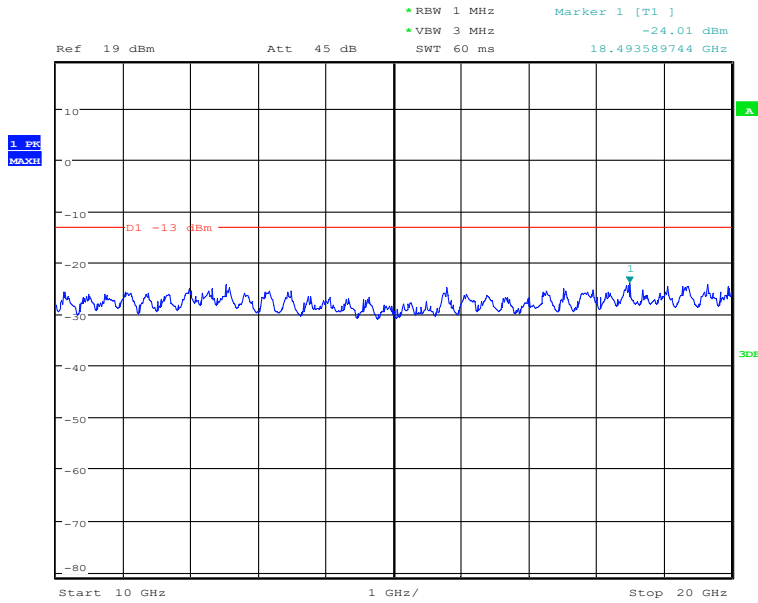
Note: The strong emission shown in each case is the carrier signal.

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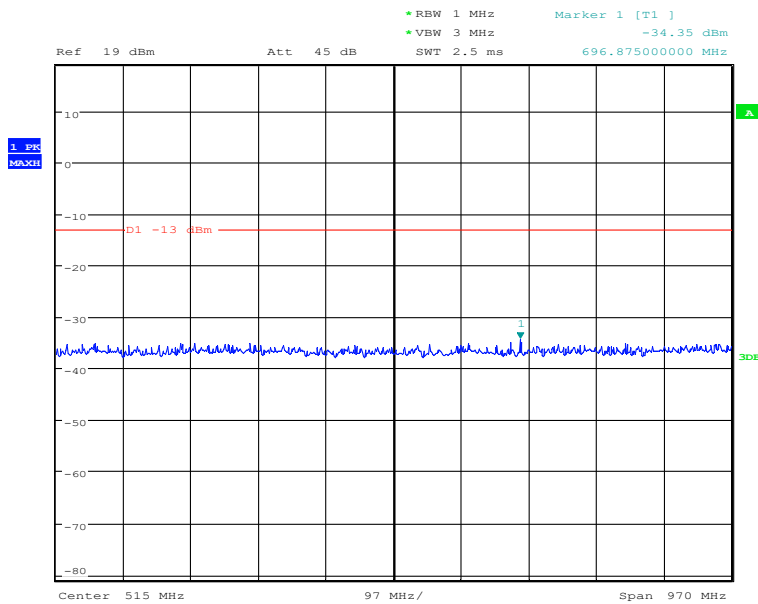


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:51:27

Band2-Middle Channel-5MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 02:00:04

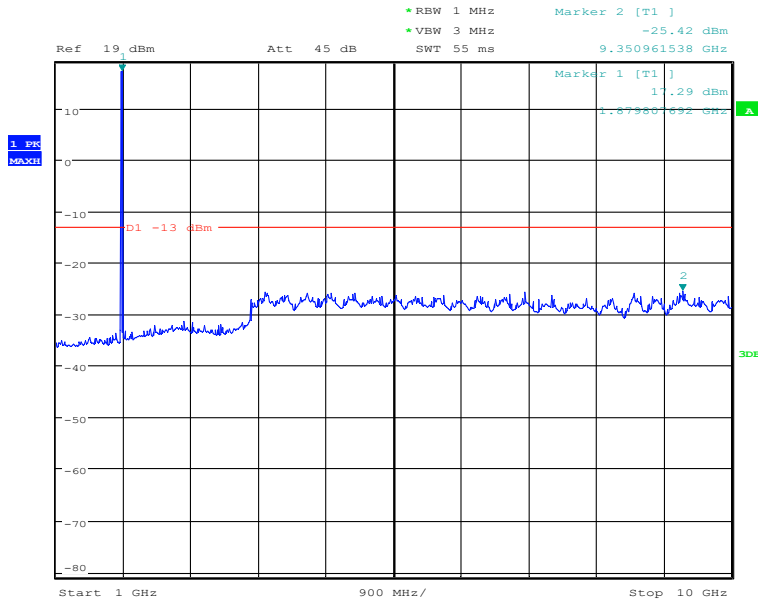
Band2-Middle Channel-10MHz Bandwidth-30MHz to 1GHz

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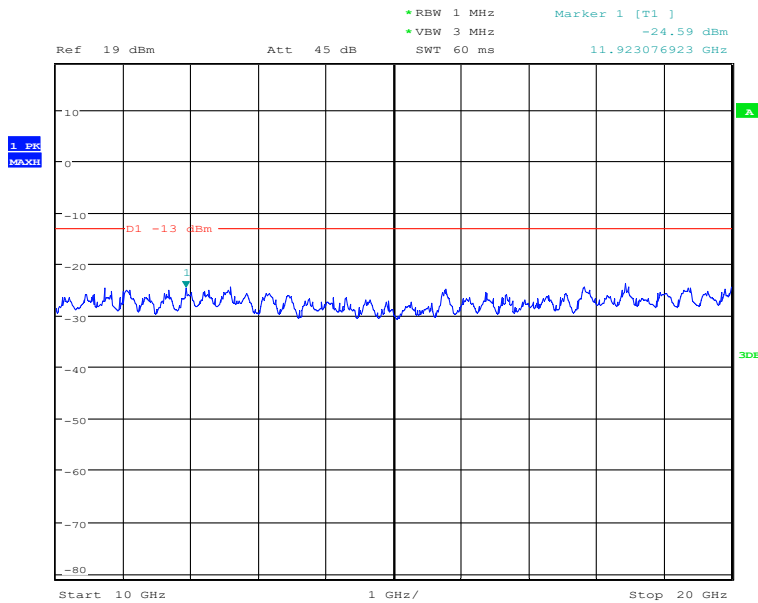
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 02:00:28

Band2-Middle Channel-10MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 02:00:49

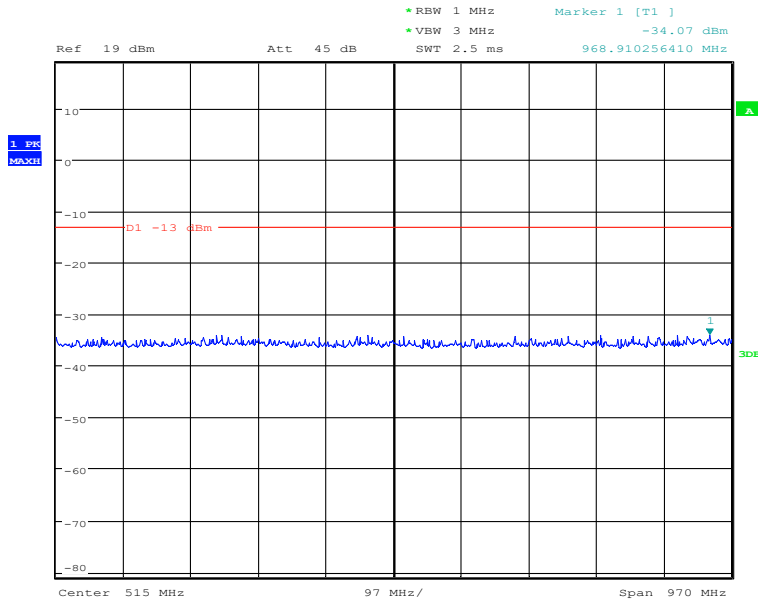
Band2-Middle Channel-10MHz Bandwidth-10GHz to 20GHz

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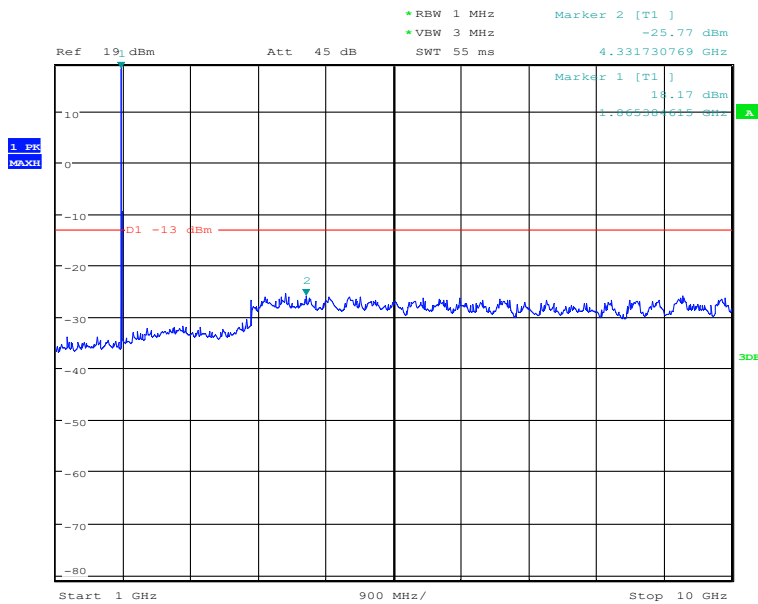


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 02:57:27

Band2-Middle Channel-15MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 02:32:40

Band2-Middle Channel-15MHz Bandwidth-1GHz to 10GHz

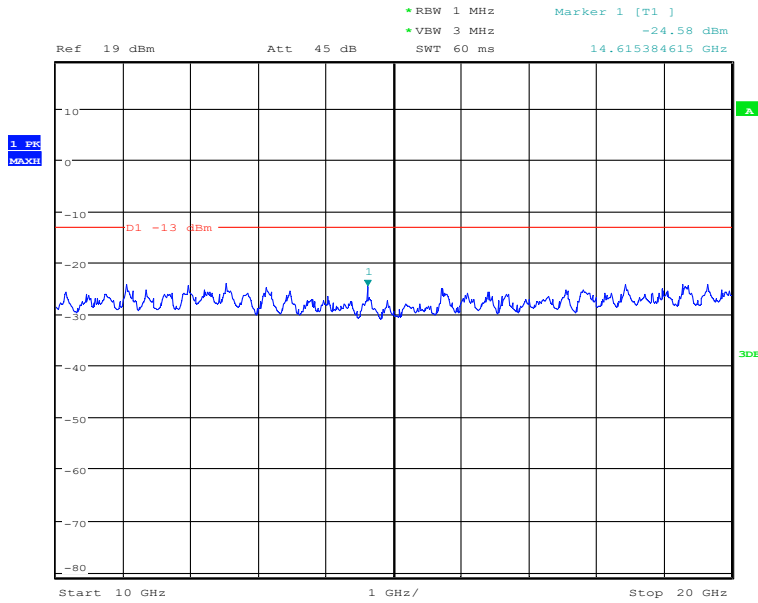
Note: The strong emission shown in each case is the carrier signal.

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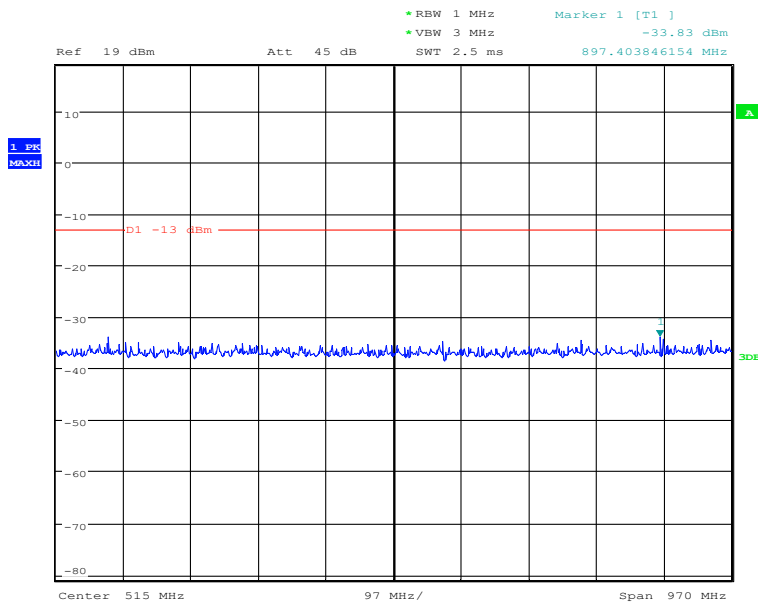


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 02:32:17

Band2-Middle Channel-15MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 03:02:29

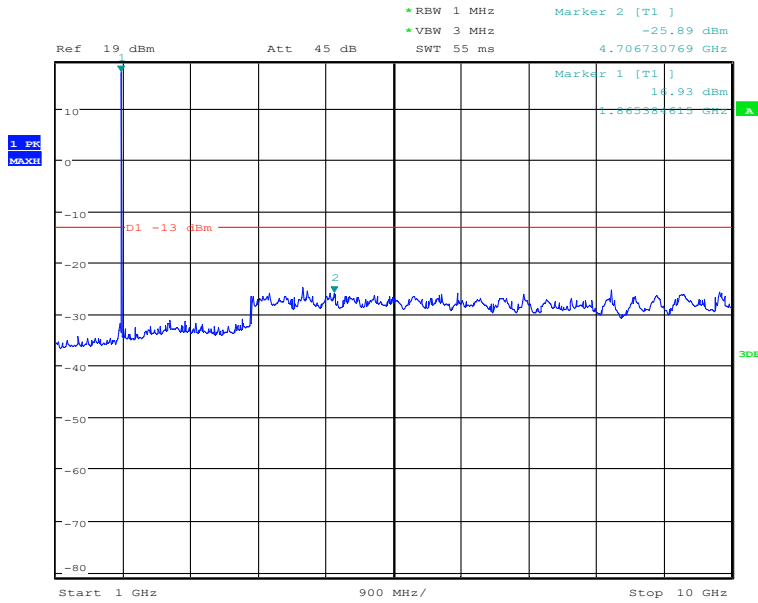
Band2-Middle Channel-20MHz Bandwidth-30MHz to 1GHz

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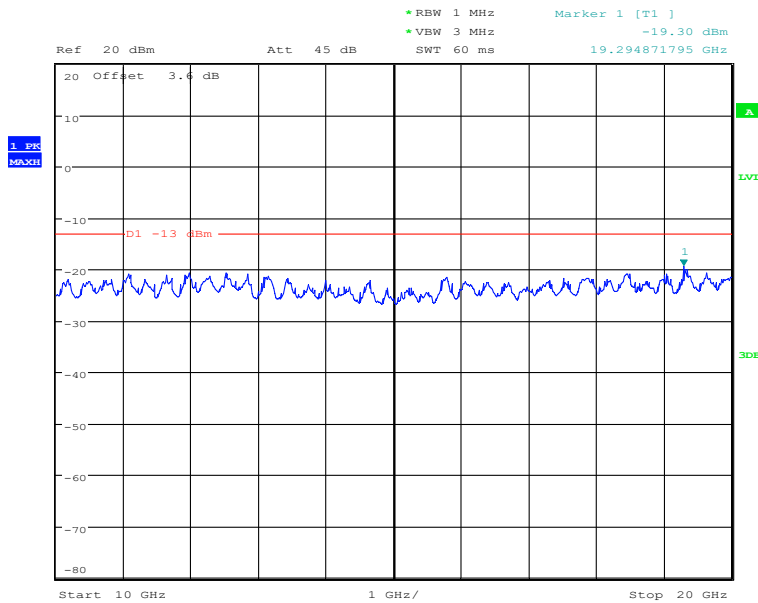
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:02:52

Band2-Middle Channel-20MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



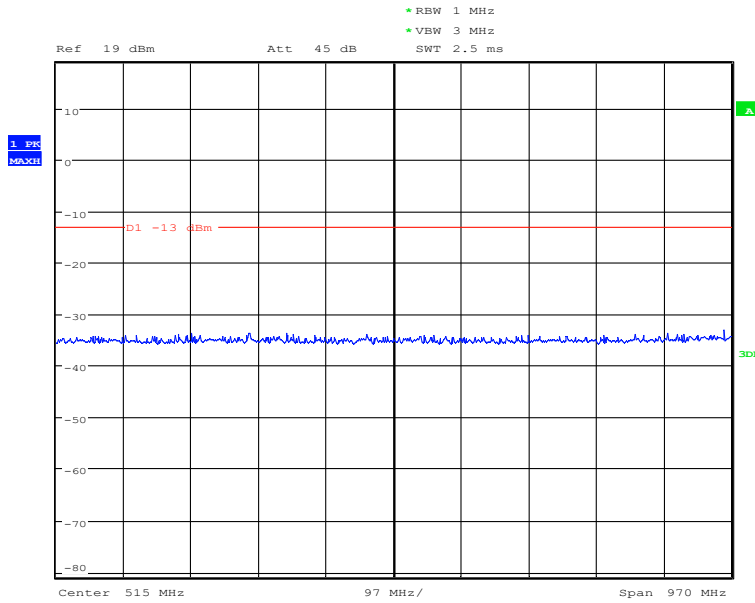
Date: 2.SEP.2020 03:04:34

Band2-Middle Channel-20MHz Bandwidth-10GHz to 20GHz

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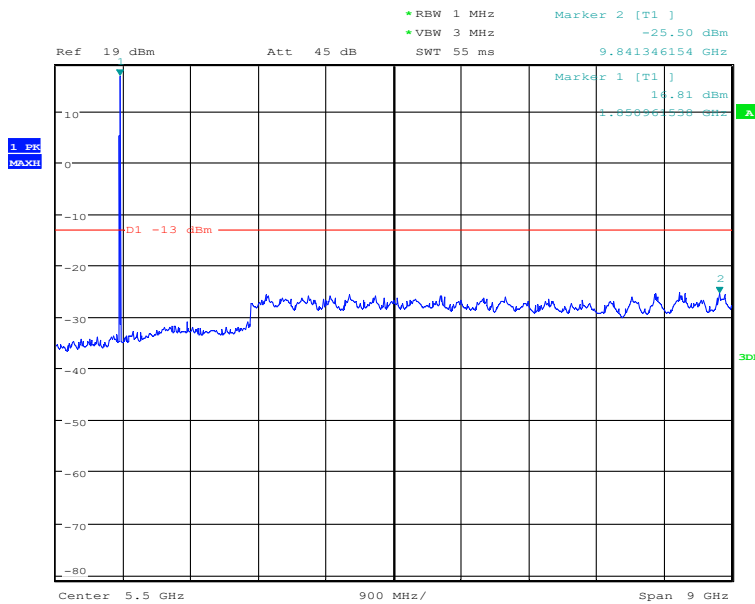
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Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:36:33

Band2-Low Channel-1.4MHz Bandwidth-30MHz to 1GHz



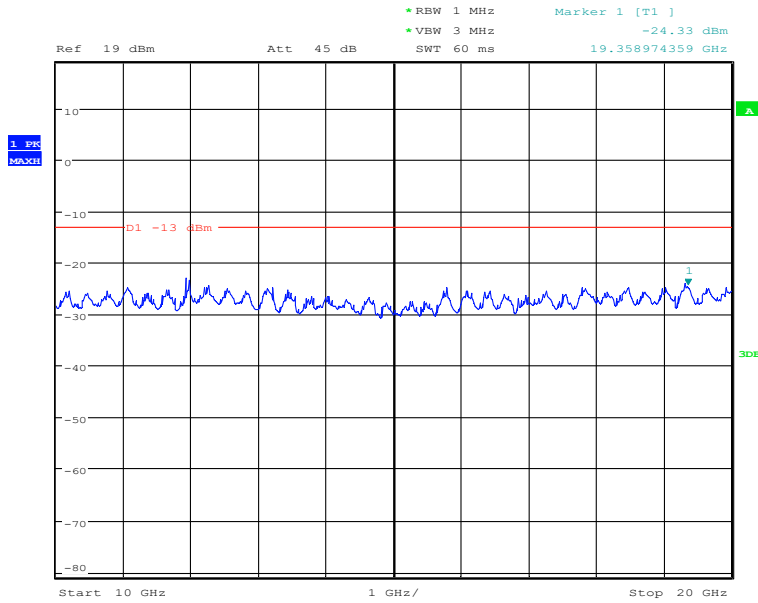
Date: 2.SEP.2020 01:37:14

Band2-Low Channel-1.4MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

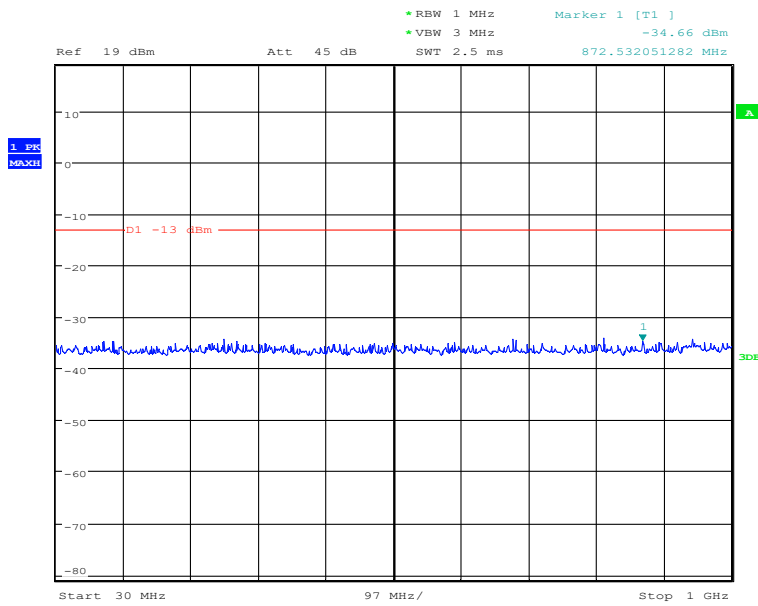


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:37:37

Band2-Low Channel-1.4MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 01:43:43

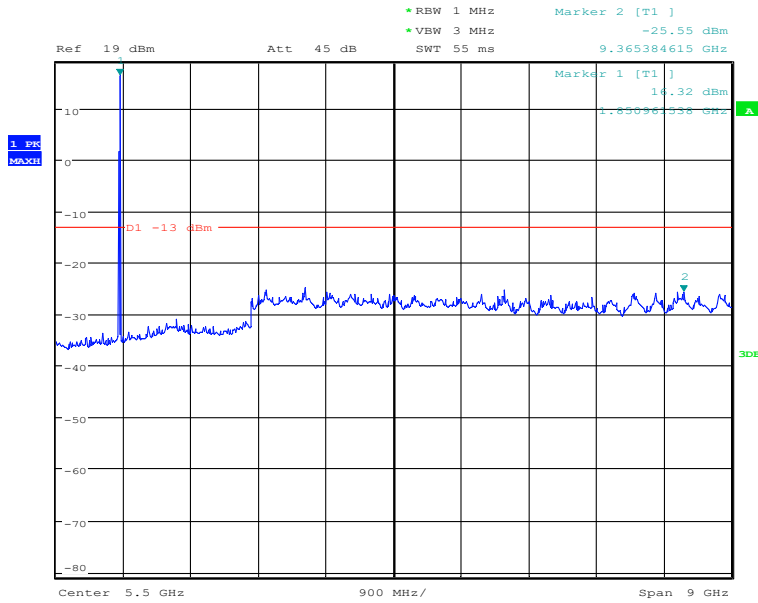
Band2-Low Channel-3MHz Bandwidth-30MHz to 1GHz

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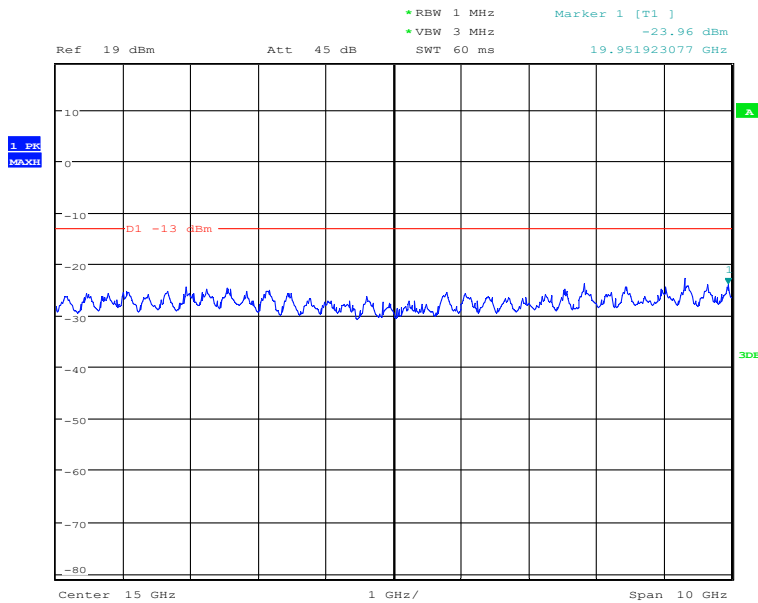
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:43:07

Band2-Low Channel-3MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 01:42:43

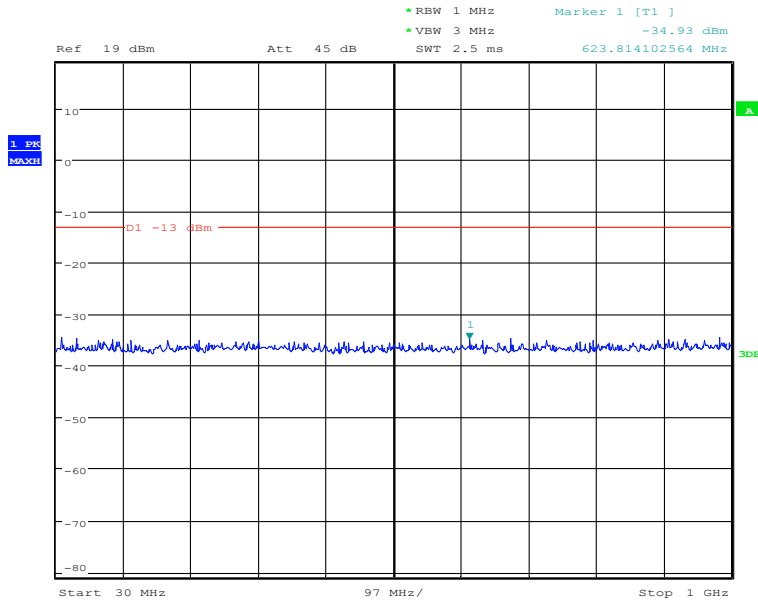
Band2-Low Channel-3MHz Bandwidth-10GHz to 20GHz

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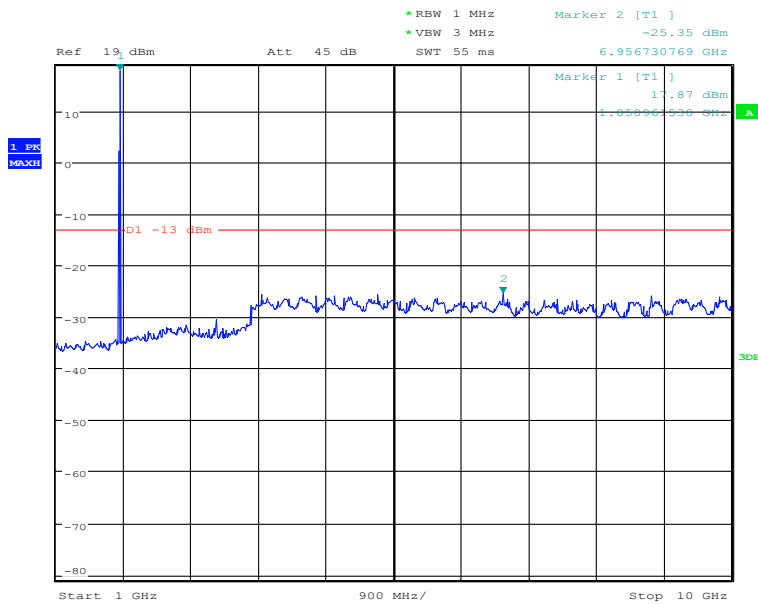


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:50:04

Band2-Low Channel-5MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 01:50:28

Band2-Low Channel-5MHz Bandwidth-1GHz to 10GHz

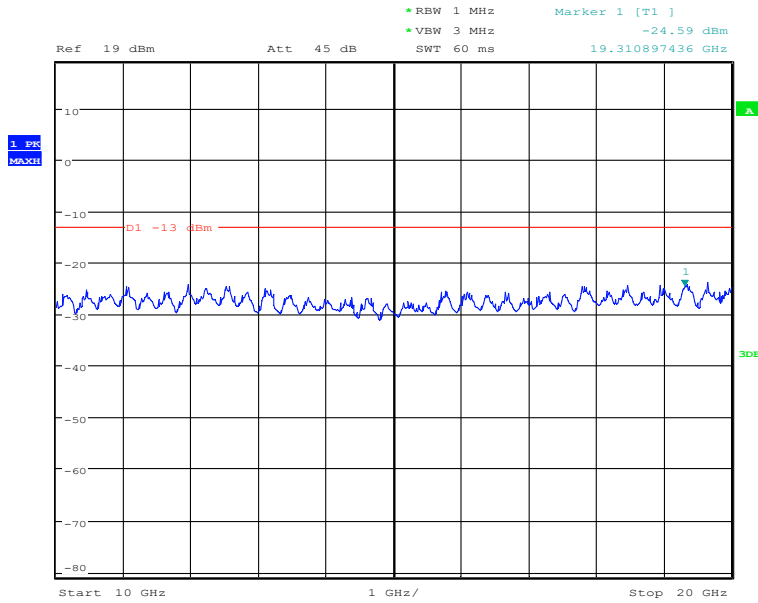
Note: The strong emission shown in each case is the carrier signal.

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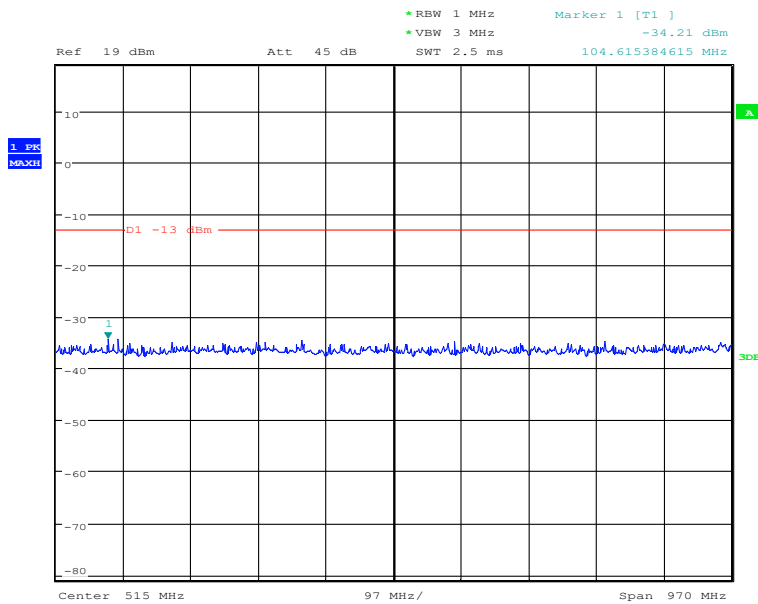


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:50:51

Band2-Low Channel-5MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 01:58:20

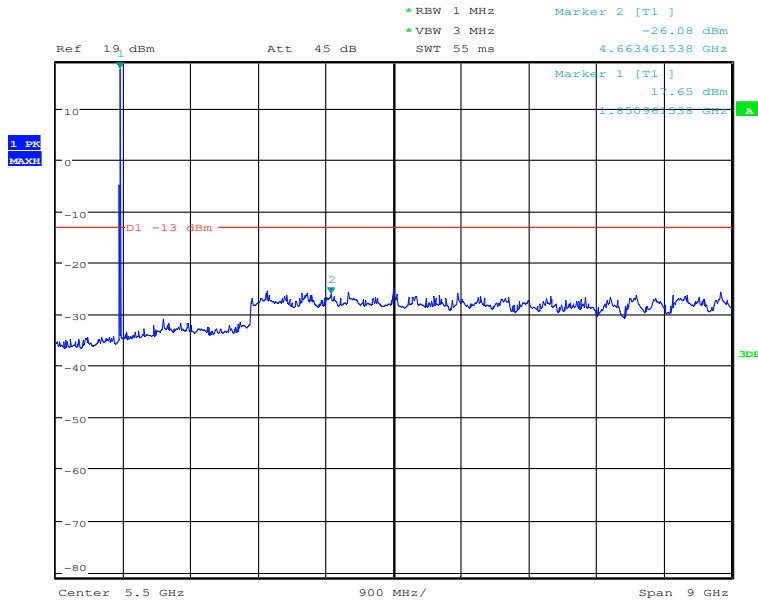
Band2-Low Channel-10MHz Bandwidth-30MHz to 1GHz

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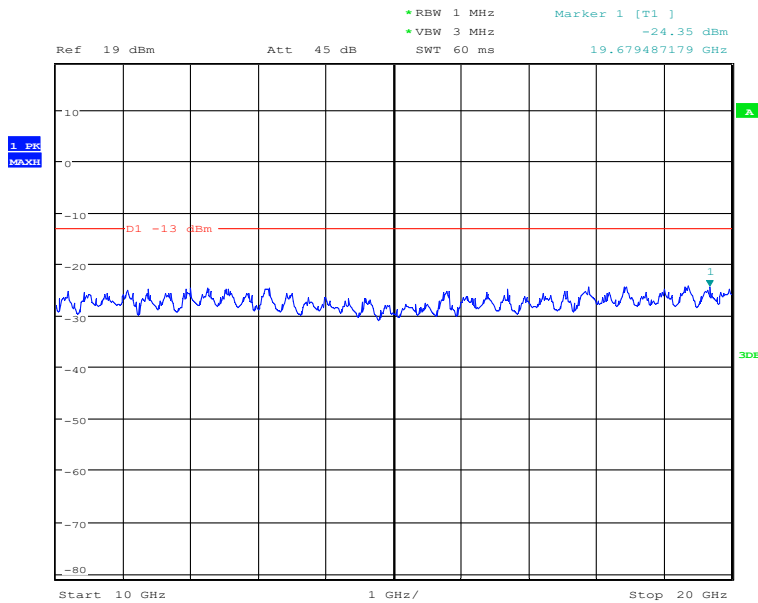
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 01:56:07

Band2-Low Channel-10MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 01:55:42

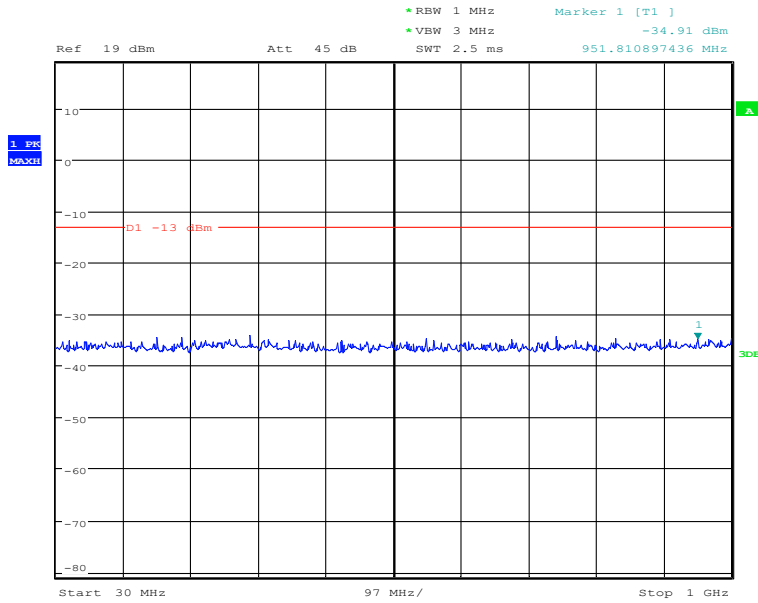
Band2-Low Channel-10MHz Bandwidth-10GHz to 20GHz

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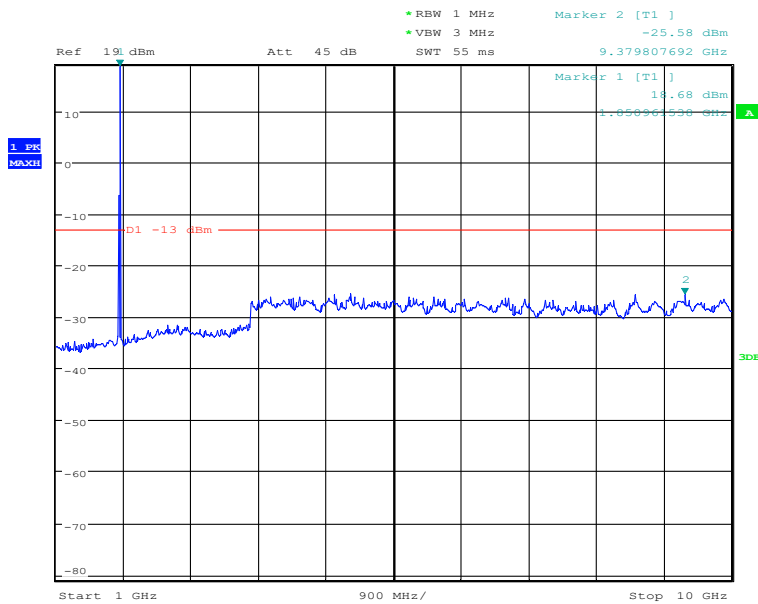


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 02:30:58

Band2-Low Channel-15MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 02:31:21

Band2-Low Channel-15MHz Bandwidth-1GHz to 10GHz

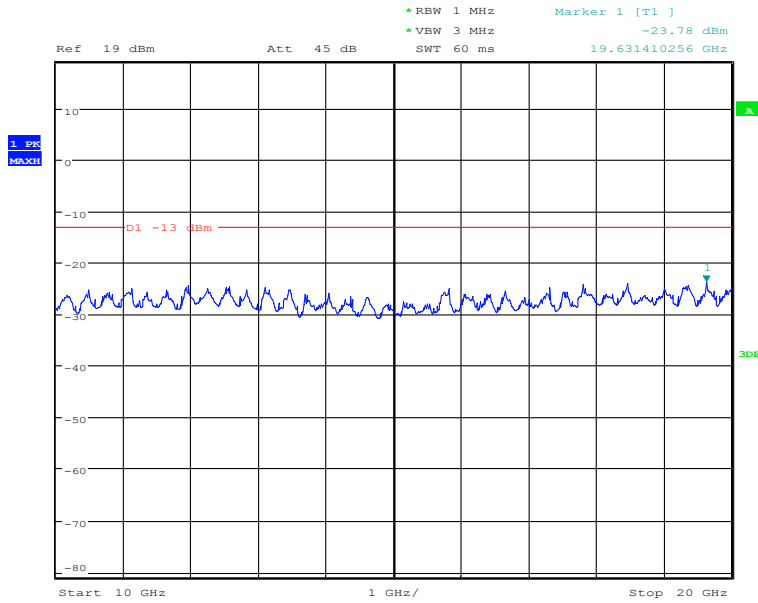
Note: The strong emission shown in each case is the carrier signal.

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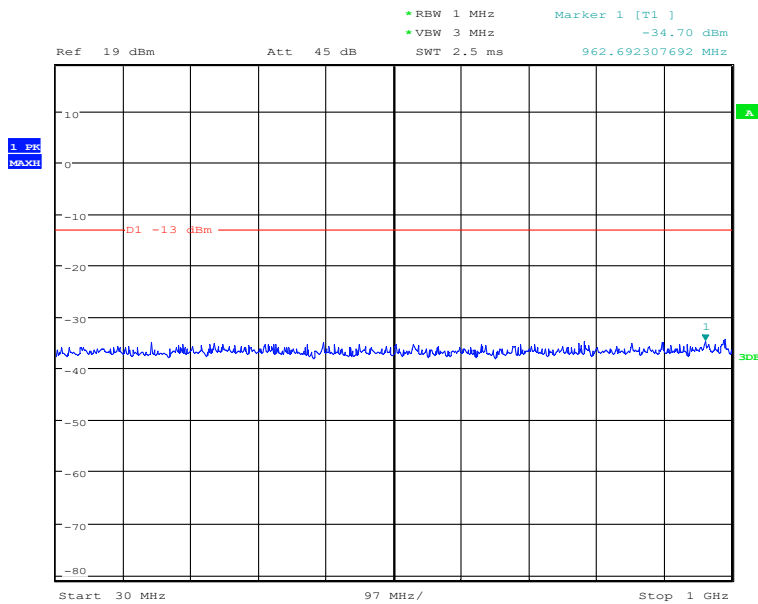


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 02:31:40

Band2-Low Channel-15MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 03:01:57

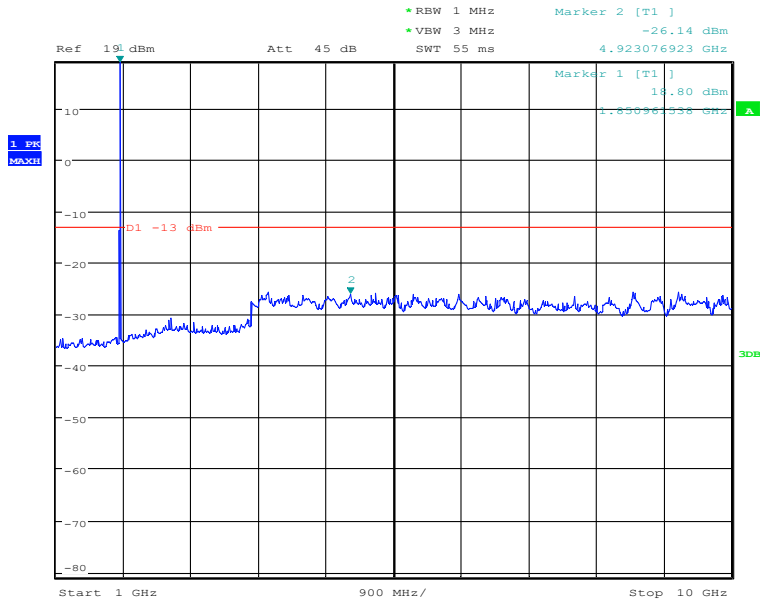
Band2-Low Channel-20MHz Bandwidth-30MHz to 10GHz

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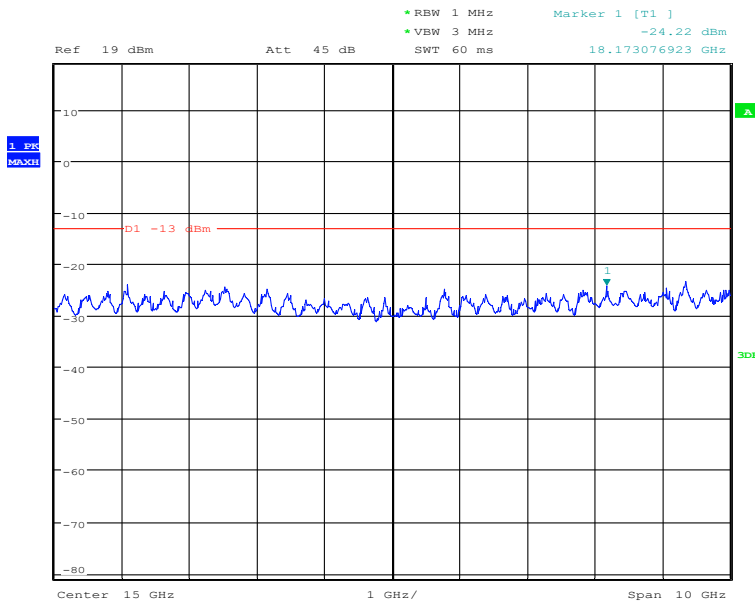
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:01:38

Band2-Low Channel-20MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 03:01:18

Band2-Low Channel-20MHz Bandwidth-10GHz to 20GHz

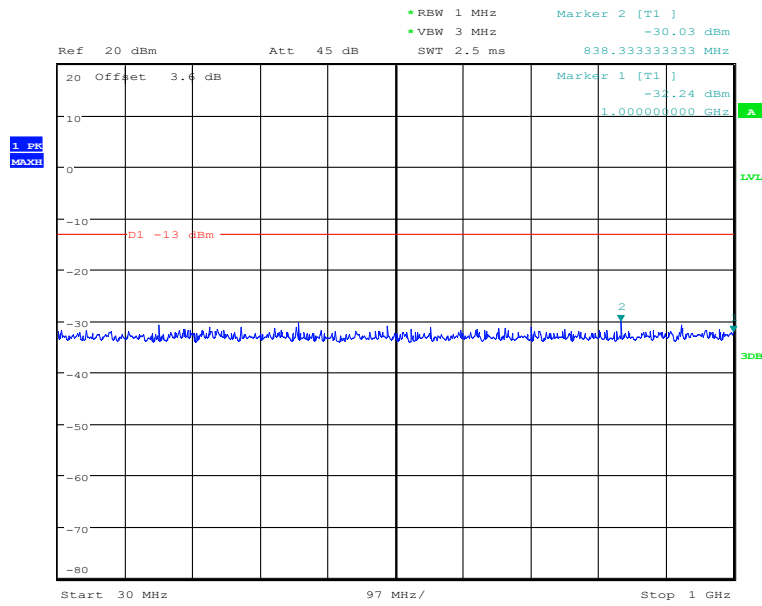
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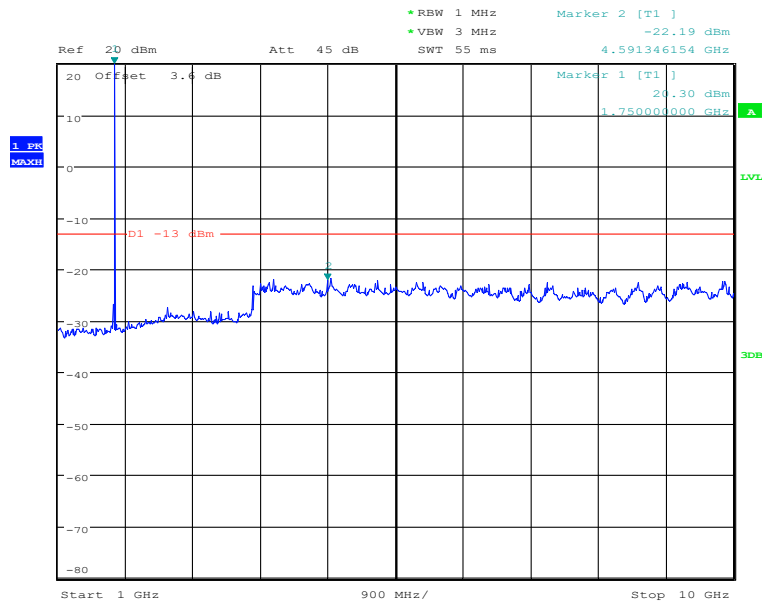
Report No.: I20W00018-WWAN_Rev1

5.4.5 CAT-M B4 Conducted Spurious Emission Results



Date: 2.SEP.2020 03:11:30

Band4-High Channel-1.4MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 03:11:51

Band4-High Channel-1.4MHz Bandwidth-1GHz to 10GHz

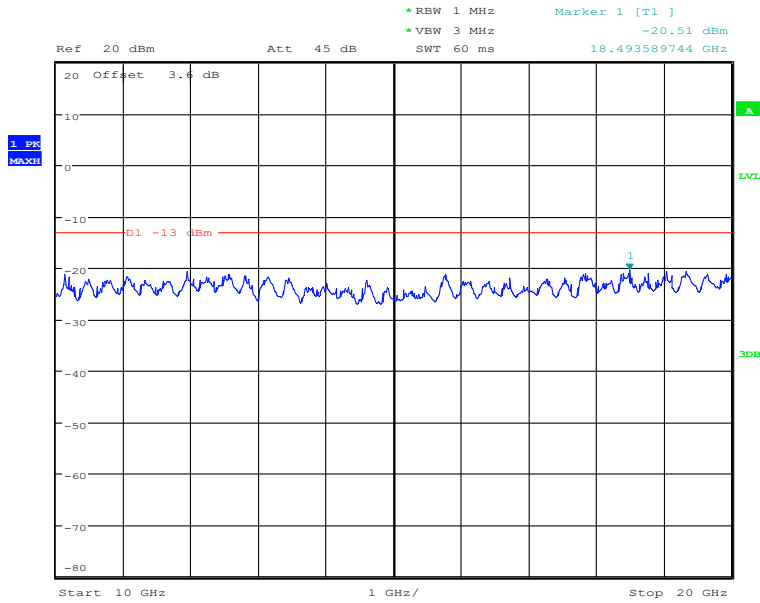
Note: The strong emission shown in each case is the carrier signal.

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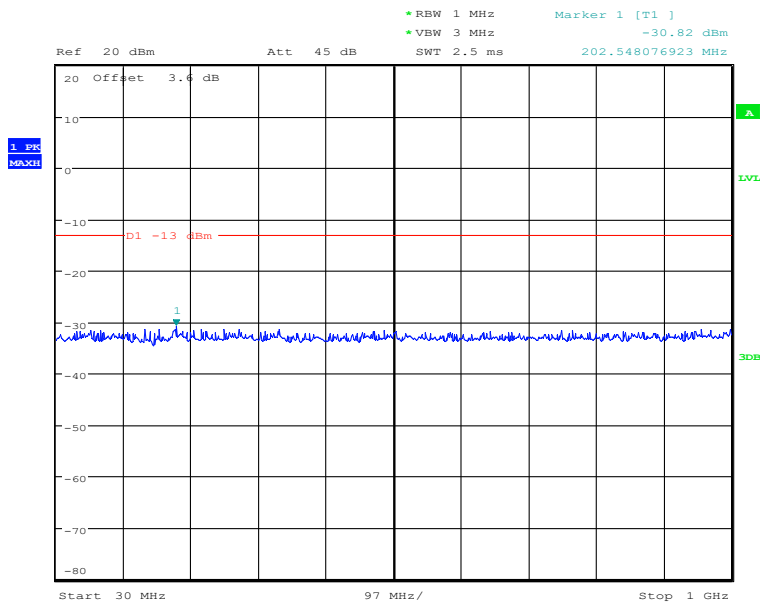


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:12:11

Band4-High Channel-1.4MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 03:16:33

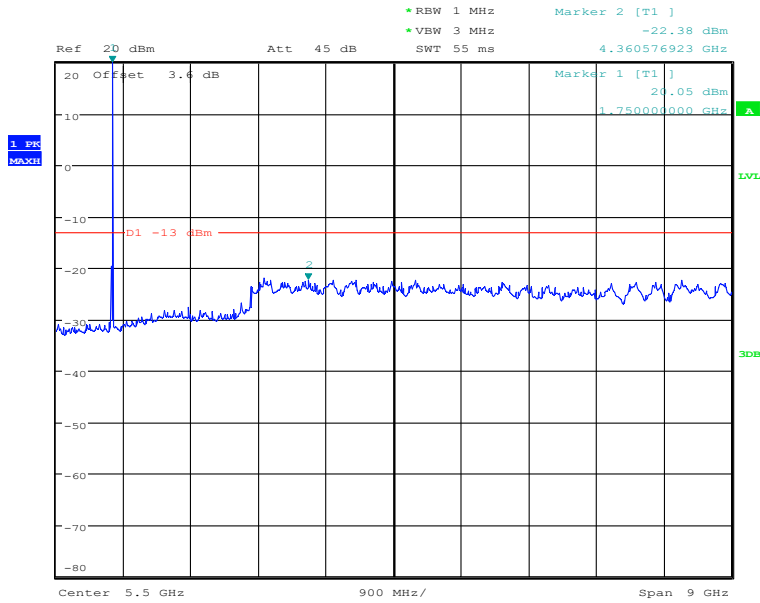
Band4-High Channel-3MHz Bandwidth-30MHz to 1GHz

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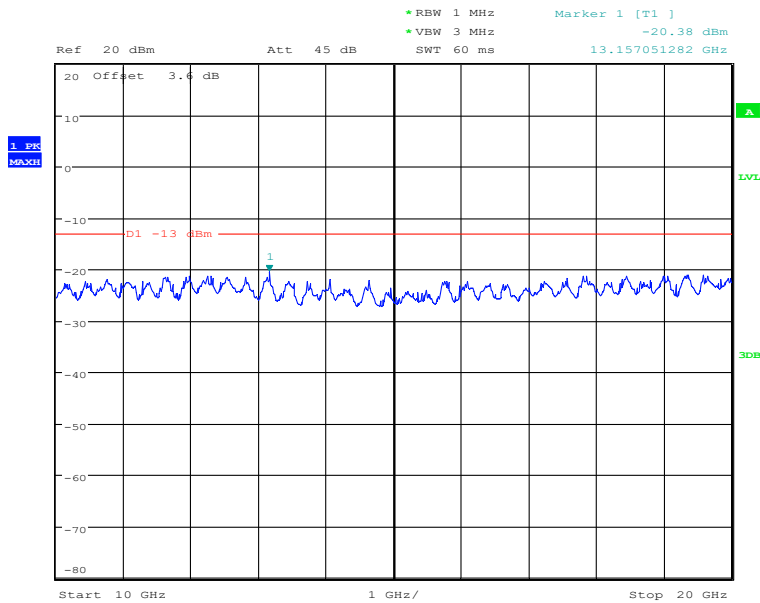
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:16:58

Band4-High Channel-3MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 03:17:16

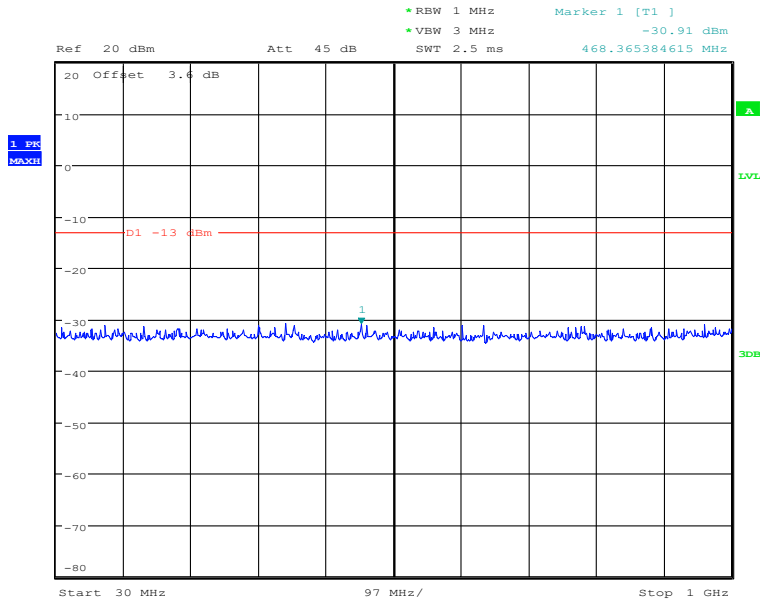
Band4-High Channel-3MHz Bandwidth-10GHz to 20GHz

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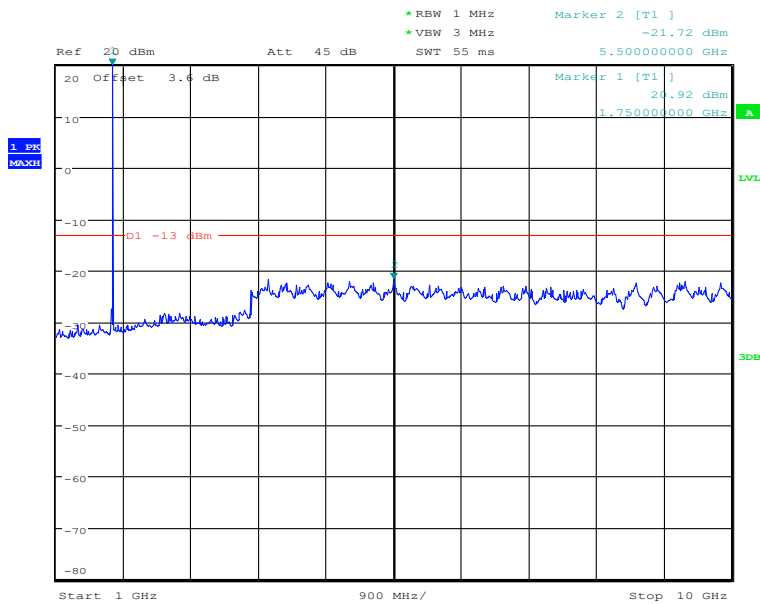


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:23:12

Band4-High Channel-5MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 03:22:57

Band4-High Channel-5MHz Bandwidth-1GHz to 10GHz

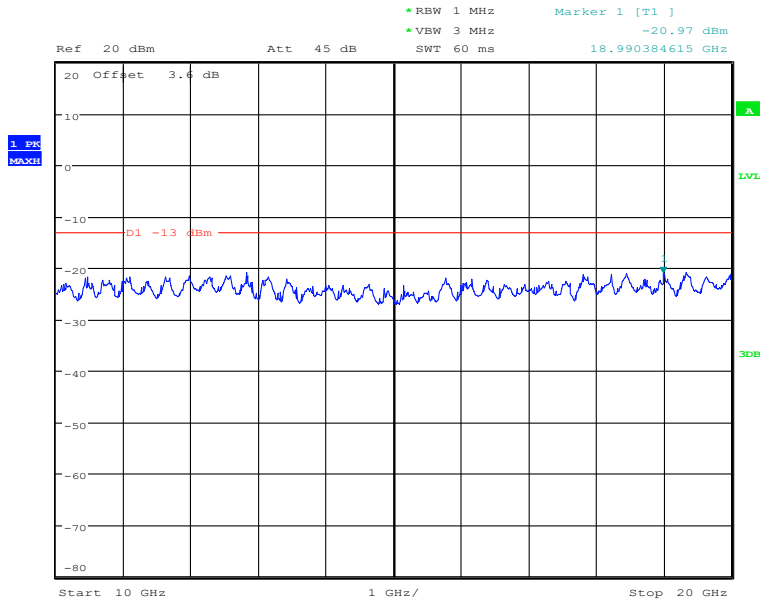
Note: The strong emission shown in each case is the carrier signal.

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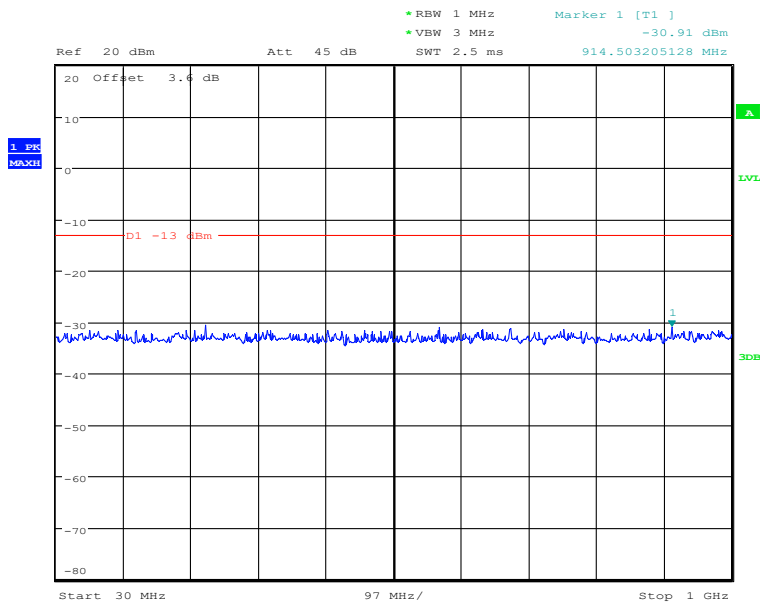


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:22:38

Band4-High Channel-5MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 03:28:28

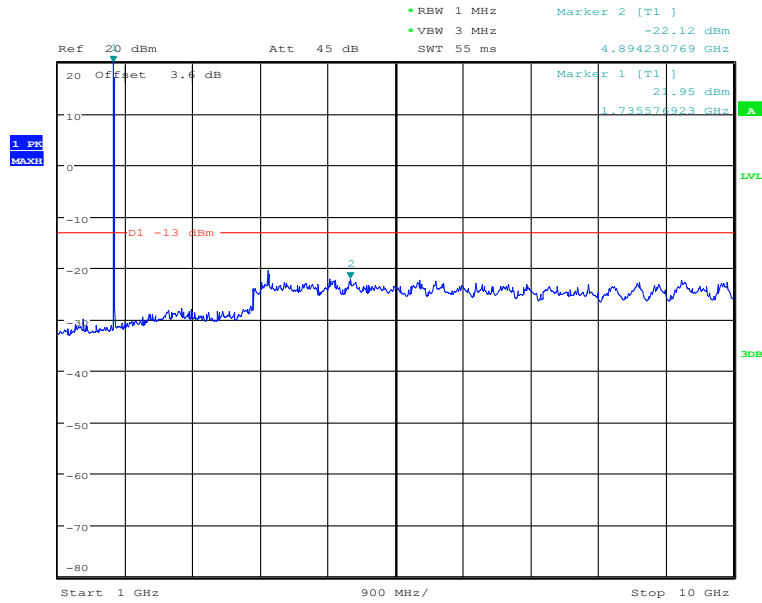
Band4-High Channel-10MHz Bandwidth-30MHz to 1GHz

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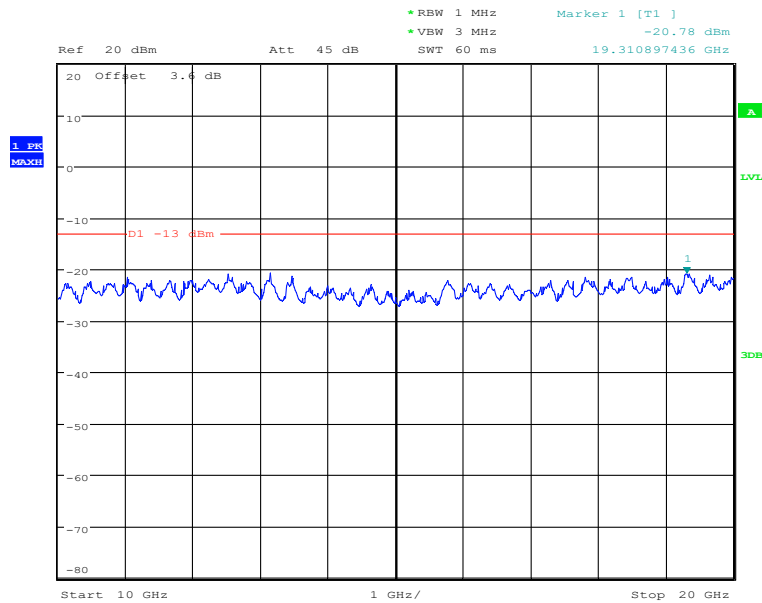
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:28:52

Band4-High Channel-10MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



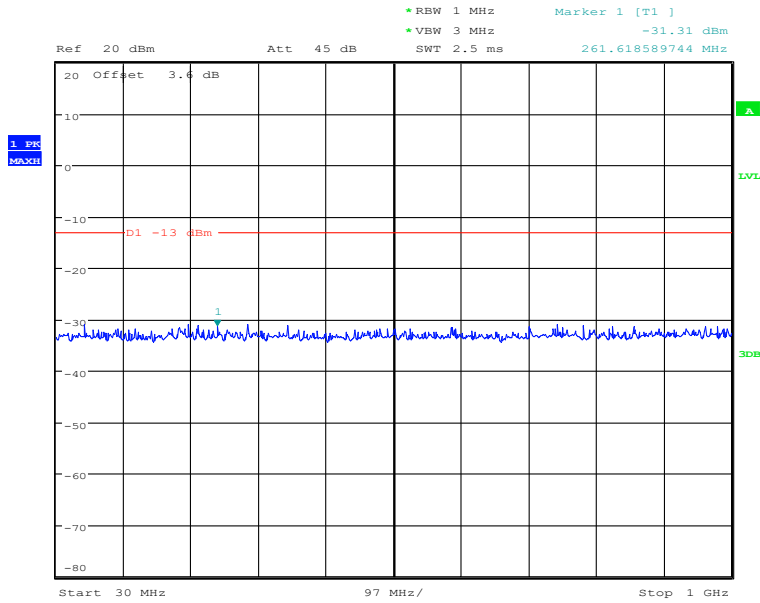
Date: 2.SEP.2020 03:29:08

Band4-High Channel-10MHz Bandwidth-10GHz to 20GHz

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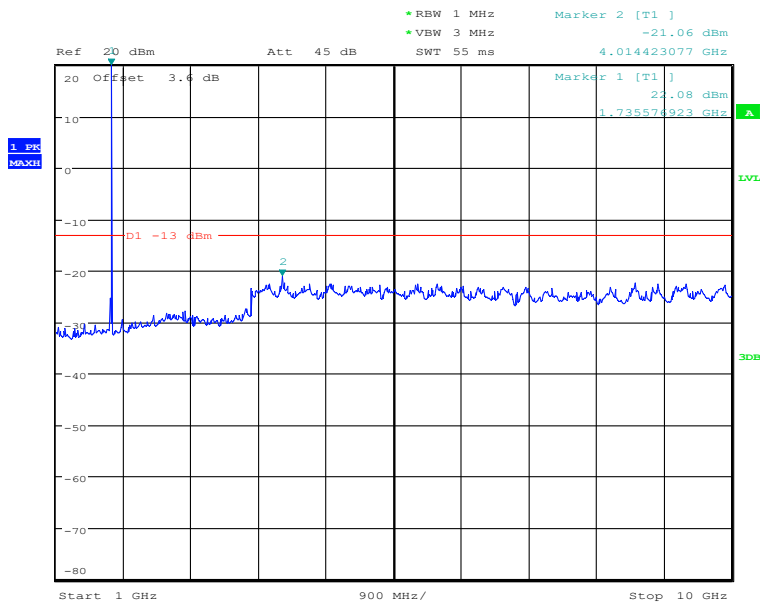
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Date: 2.SEP.2020 03:34:58

Band4-High Channel-15MHz Bandwidth-30MHz to 1GHz



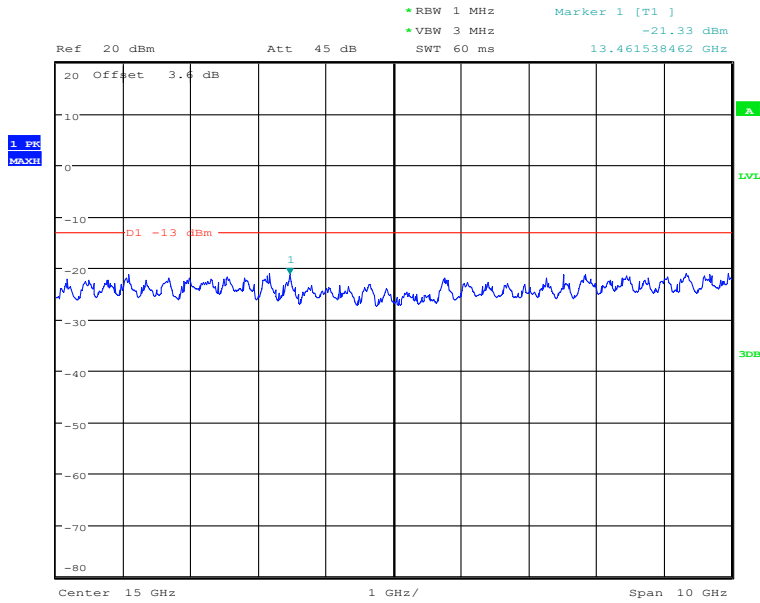
Date: 2.SEP.2020 03:34:41

Band4-High Channel-15MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.

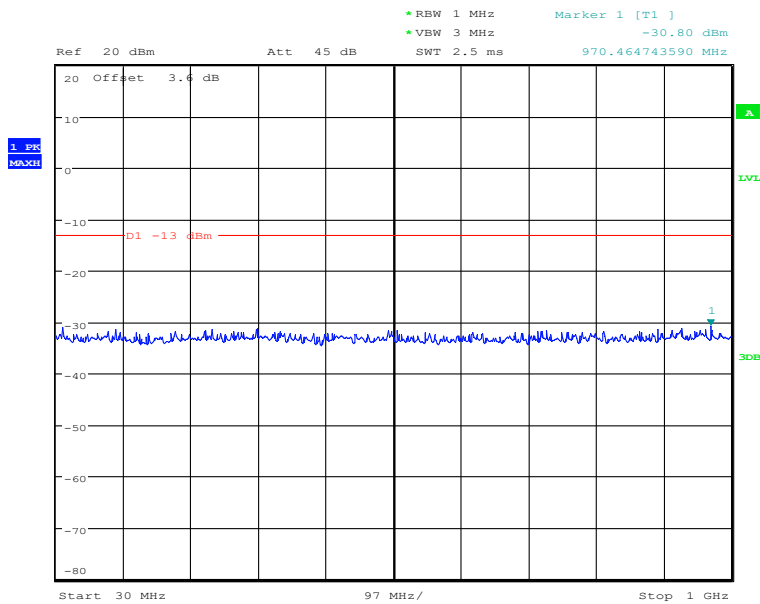


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Date: 2.SEP.2020 03:34:20

Band4-High Channel-15MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 03:45:57

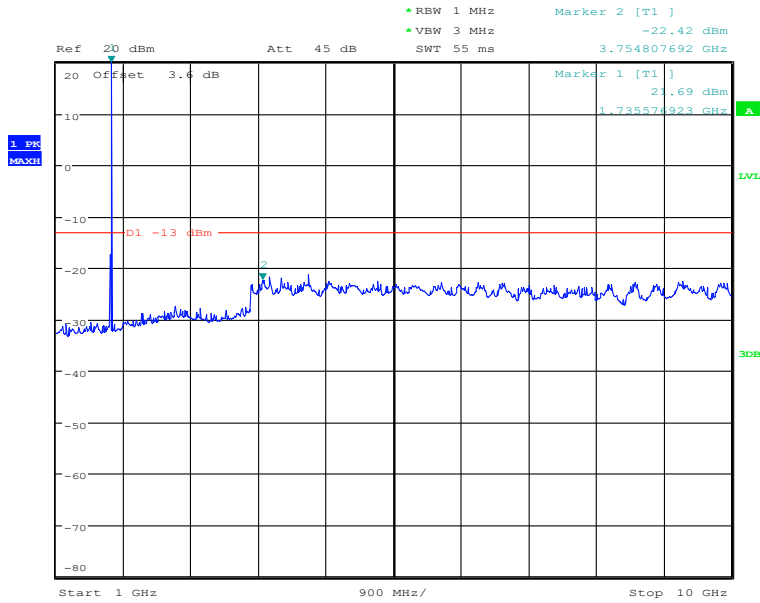
Band4-High Channel-20MHz Bandwidth-30MHz to 1GHz

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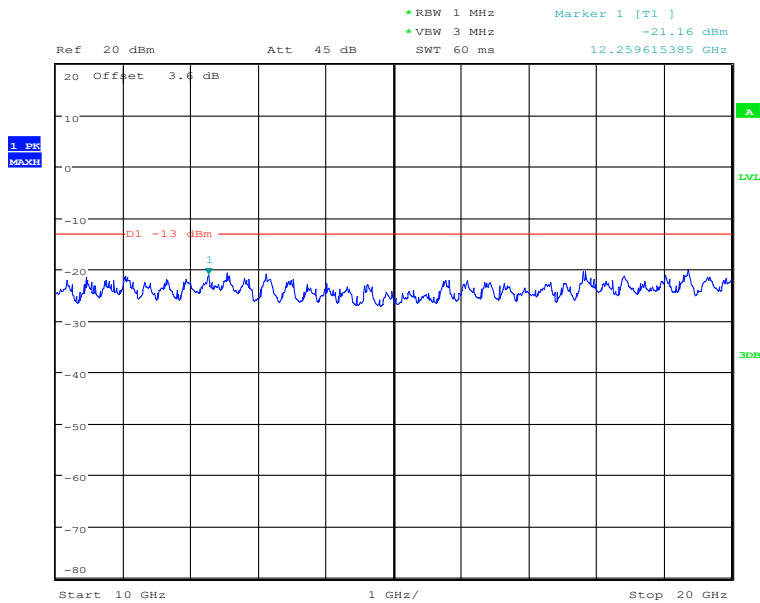
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:46:16

Band4-High Channel-20MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 03:46:35

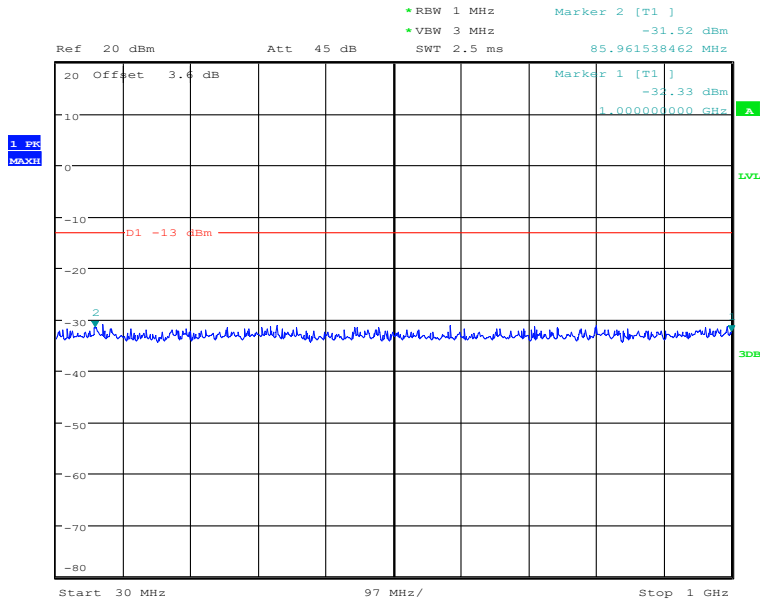
Band4-High Channel-20MHz Bandwidth-10GHz to 20GHz

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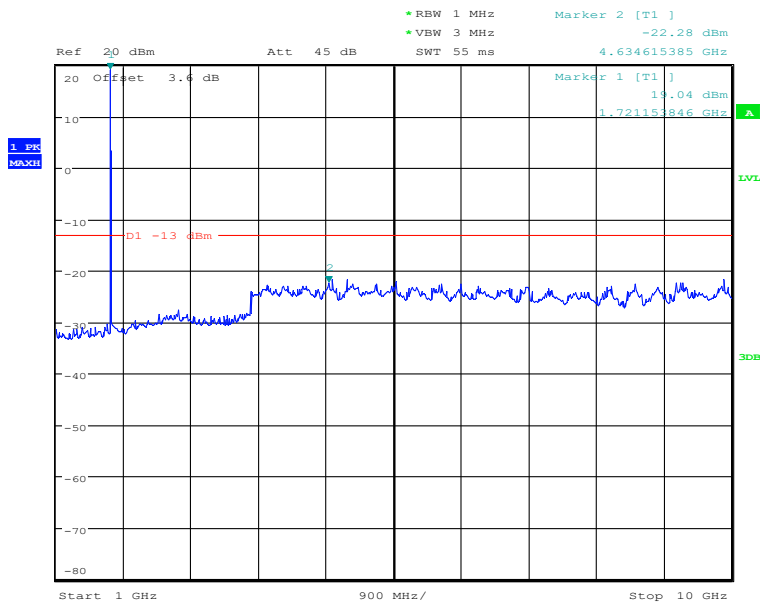


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Date: 2.SEP.2020 03:10:50

Band4-Middle Channel-1.4MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 03:10:28

Band4-Middle Channel-1.4MHz Bandwidth-1GHz to 10GHz

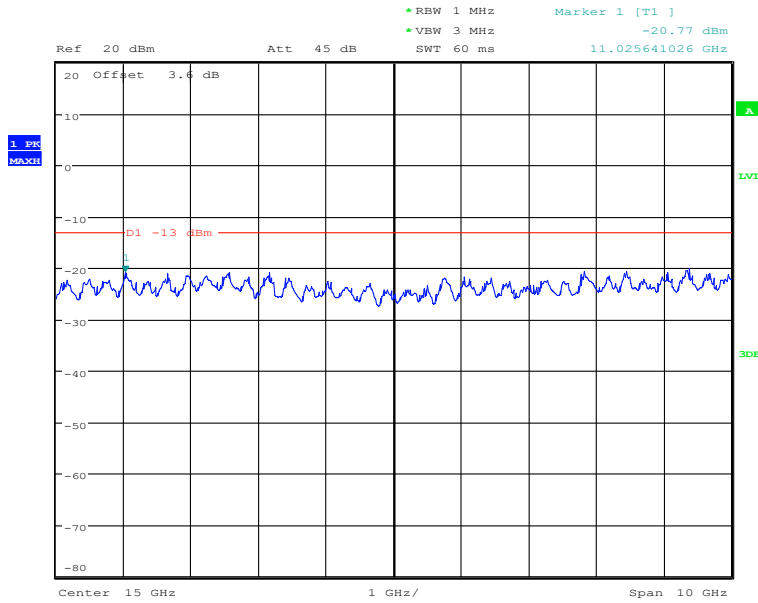
Note: The strong emission shown in each case is the carrier signal.

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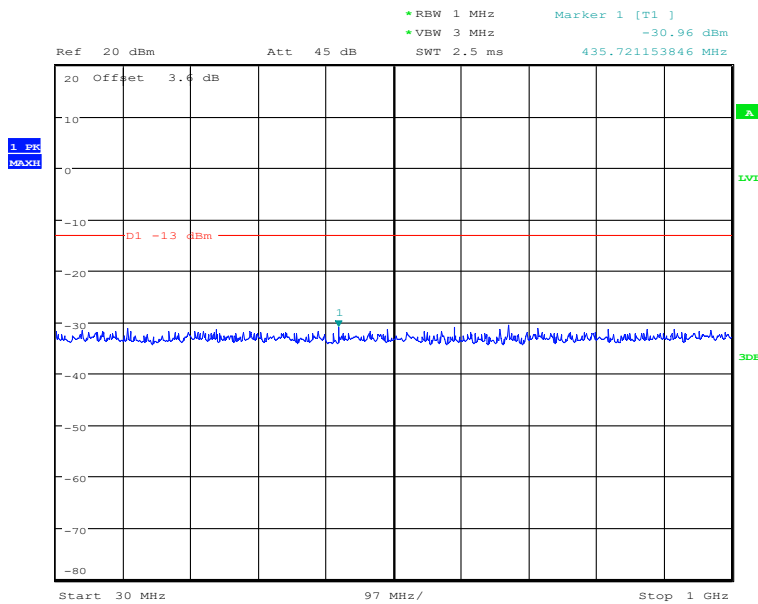


Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:10:10

Band4-Middle Channel-1.4MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 03:15:51

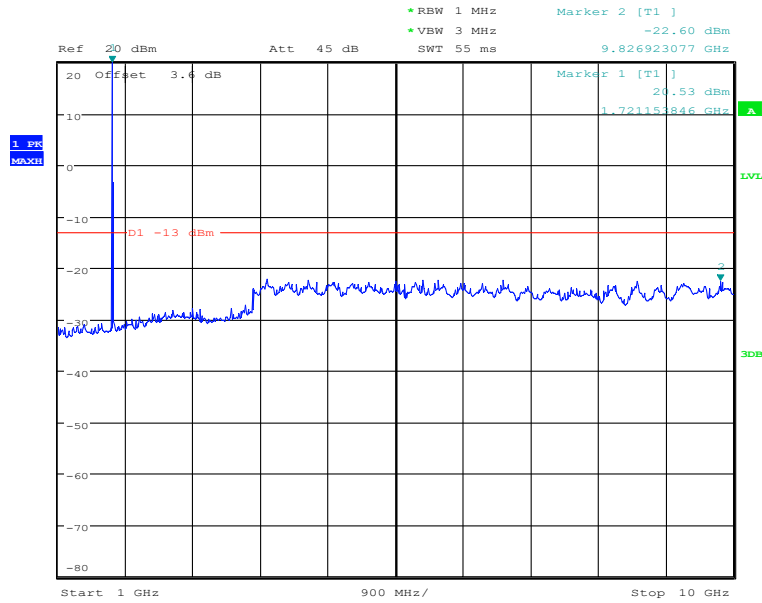
Band4-Middle Channel-3MHz Bandwidth-30MHz to 1GHz

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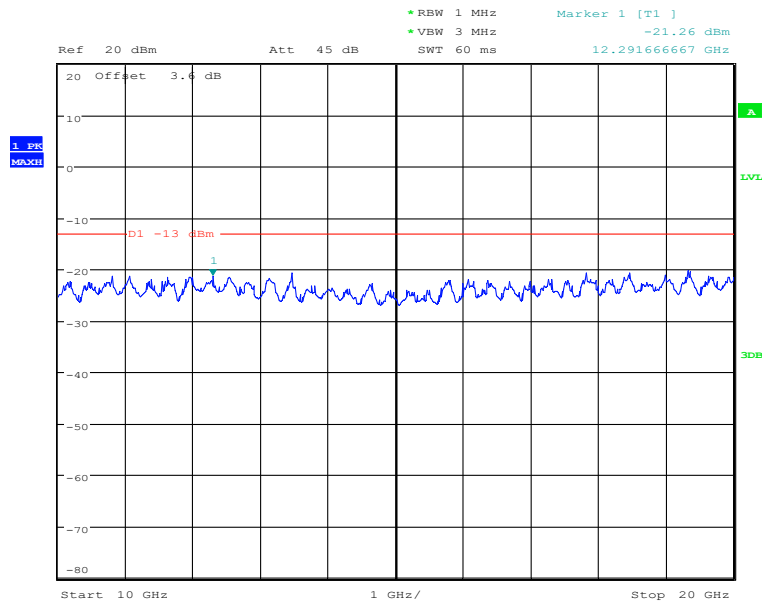
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:15:36

Band4-Middle Channel-3MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 03:15:17

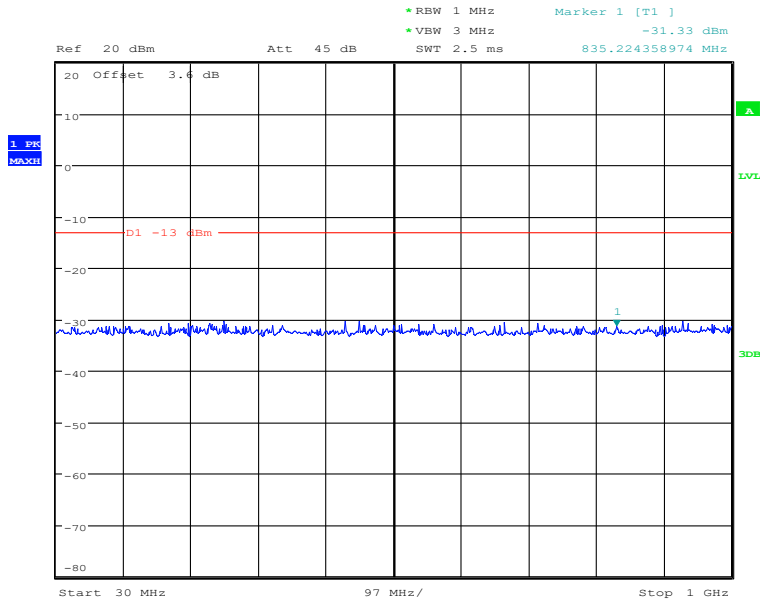
Band4-Middle Channel-3MHz Bandwidth-10GHz to 20GHz

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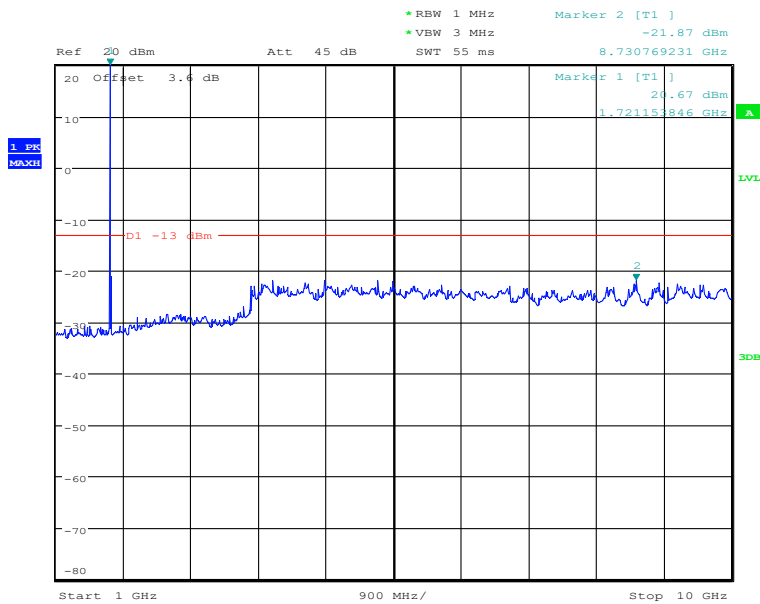


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Date: 2.SEP.2020 03:21:10

Band4-Middle Channel-5MHz Bandwidth-30MHz to 1GHz



Date: 2.SEP.2020 03:21:30

Band4-Middle Channel-5MHz Bandwidth-1GHz to 10GHz

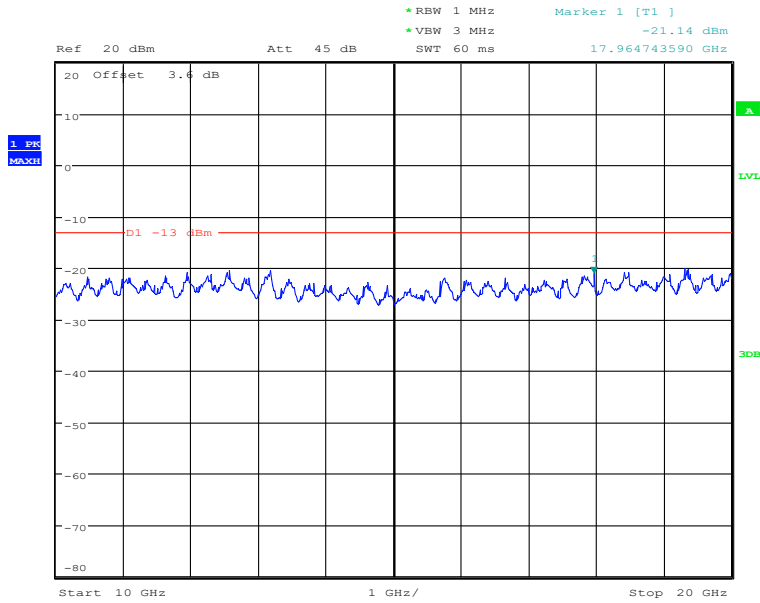
Note: The strong emission shown in each case is the carrier signal.

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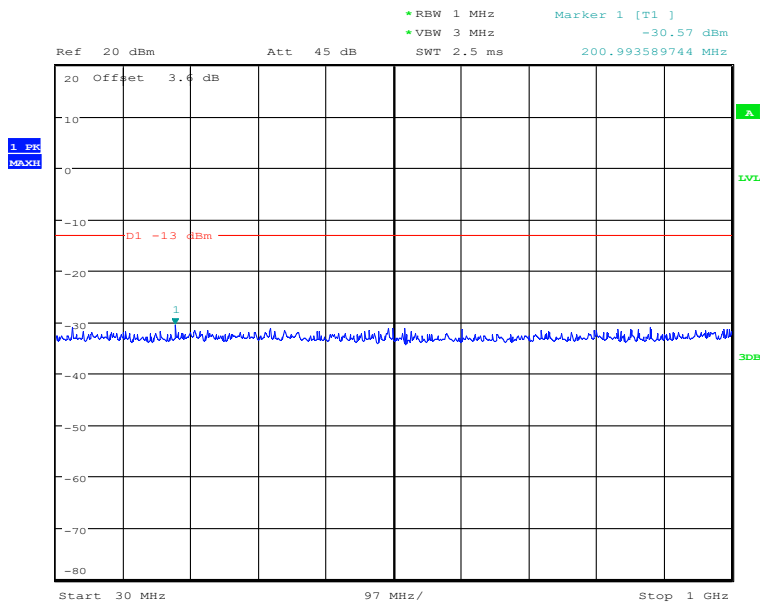


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Date: 2.SEP.2020 03:21:49

Band4-Middle Channel-5MHz Bandwidth-10GHz to 20GHz



Date: 2.SEP.2020 03:27:03

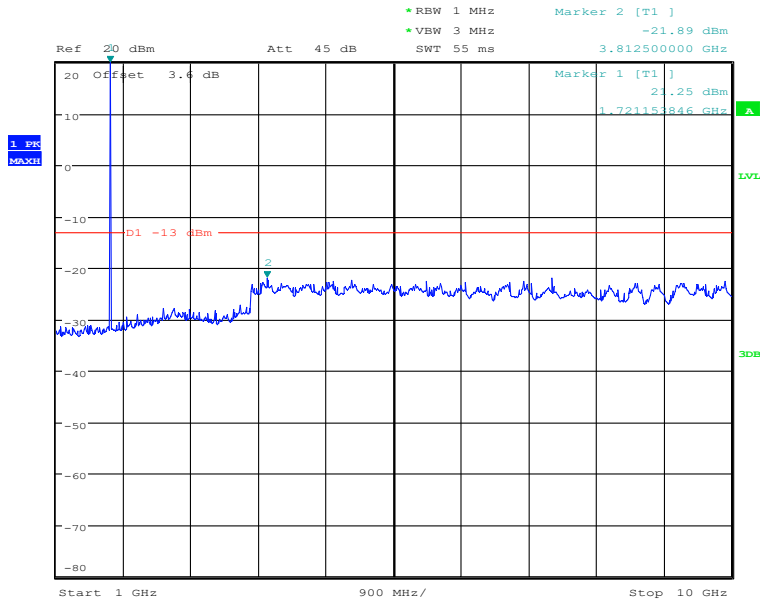
Band4-Middle Channel-10MHz Bandwidth-30MHz to 1GHz

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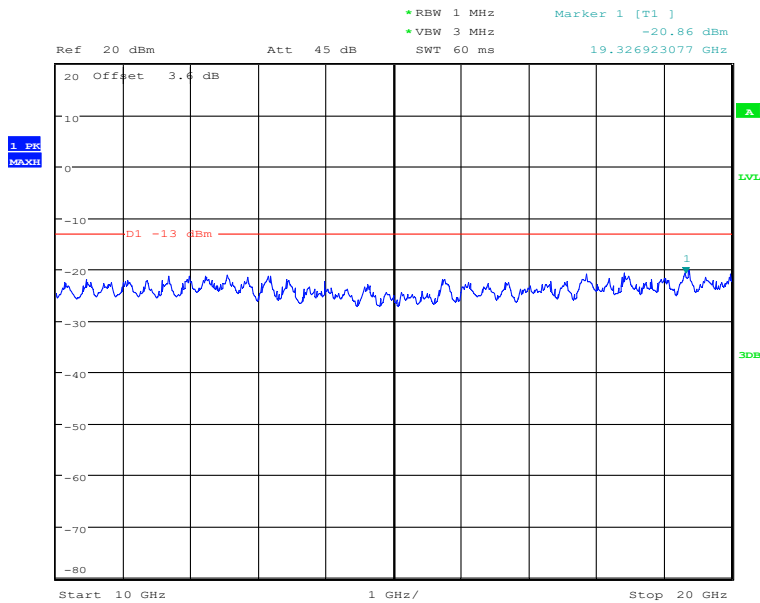
Report No.: I20W00018-WWAN_Rev1



Date: 2.SEP.2020 03:26:43

Band4-Middle Channel-10MHz Bandwidth-1GHz to 10GHz

Note: The strong emission shown in each case is the carrier signal.



Date: 2.SEP.2020 03:26:25

Band4-Middle Channel-10MHz Bandwidth-10GHz to 20GHz

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