



FCC LISTED, REGISTRATION
NUMBER: 2764.01

ISED LISTED REGISTRATION
NUMBER: 23595-1

Test Report No:
5121ERM.001A1

Test report

USA FCC Part 25 Satellite Communications (January 2025)
CANADA RSS-170 Issue 4 (September 2022)
CANADA RSS-Gen Issue 5 (February 2021)

(*) Identification of item tested	nRF91
(*) Trademark	nRF91
(*) Model and /or type reference	nRF9151
Other identification of the product	FCC ID: 2ANPO00nRF9151 IC: 24529-NRF9151 Hw version: nRF9151 LACA A1 Sw version: mfw_nrf91x1_0.4.0
(*) Features	LTE Cat-M1, LTE NB1&NB2, NTN NB1
Manufacturer	NORDIC SEMICONDUCTOR ASA Otto Nielsens Veg 12, 7052 Trondheim, Norway
Test method requested, standard	USA FCC Part 25 Satellite Communications (January 2025) CANADA RSS-170 Issue 4 (September 2022). CANADA RSS-Gen Issue 5 (February 2021). ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services.
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Domingo Galvez EMC&RF Lab Manager  Digitally signed by Domingo Galvez DN: cn=Domingo Galvez, o=DeKra Certification Inc., ou=Regulatory Lab Manager, email=domingo.galvez@dekra.co m, c=US
Date of issue	07-09-2025
Report template No	FDT08_24 (*) "Data provided by the client"

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Acronyms

Acronym ID	Acronym Description
	Emission Bandwidth
# of Tx Chains	Number of Transmission Chains
Avg Power	Maximum Average Conducted Output Power
DC	Duty Cycle
Freq	Frequency
Max EIRP	Maximum Burst EIRP
Mod	Modulation
Mode	Mode
Occ Ch BW	Occupied Channel Bandwidth
Operation Band	Operation Band
PSD	Power Spectrum Density
Port	Active Port
TPC	TPC

Competences and guarantees

DEKRA Certification Inc. is a testing laboratory accredited by A2LA (The American Association for Laboratory Accreditation), to perform the tests indicated in the Certificate 2764.01 and CAB ID US0215.

DEKRA Certification Inc. is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA Certification Inc. has a calibration and maintenance program for its measurement equipment.

DEKRA Certification Inc. guarantees the reliability of the data presented in this report, which is the result of the measurements, and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Certification at the time of performance of the test.

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The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Certification Inc.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Certification Inc. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor k=2) was calculated according to the DEKRA Certification internal document PODT000.

Test case	Frequency (MHz)	U (k=2)	Units
RF Power	2402-2483	0.78	dB
Occupied Bandwidth		5.0	kHz
Frequency tolerance		10.03	kHz
Conducted Spurious emission	30 - 1000	0.48	dB
Conducted Emission Mask	1000 - 40000	0.94	dB
Radiated Spurious Emission	30-180	4.27	dB
	180-1000	3.14	dB
	1000-18000	3.30	dB
	18000-40000	3.49	dB

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").
2. The sample consists of a Development Kit that has nRF9151 IOT Module and GPS. The nRF9151 is capable of LTE Cat-M1, Cat-NB1&NB2, NTN NB1 and GPS. The Development kit contains antennas for cellular and GPS.

DEKRA declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples undergoing test have been selected by: The client.

Sample S/01 is composed of the following elements, accessories and auxiliary equipment:

Id	Control Number	Description	Manufacturer / Model	Serial N°	Date of Reception	Application
S/01	5121/01	Development kit	NORDIC / nRF9151-DK	1051206053	05-12-2025	Element Under Test
S/01	5121/03	PCB to SMA pigtail	-	-	05-12-2025	Accessory

Sample S/01, was used for the following test(s): All Conducted tests except Frequency Tolerance test indicated in appendix A.

Sample S/02 is composed of the following elements, accessories and auxiliary equipment:

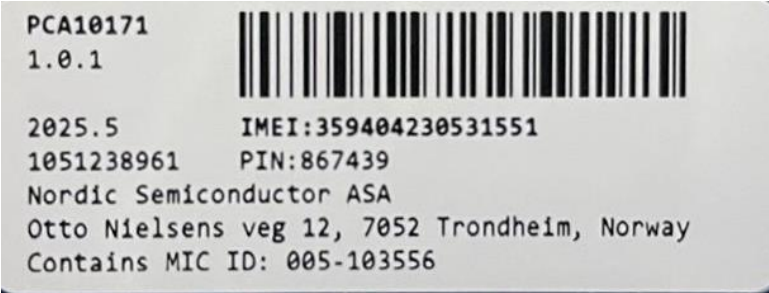
Id	Control Number	Description	Manufacturer / Model	Serial N°	Date of Reception	Application
S/02	5121/05	Cellular IoT development board	NORDIC / nRF9151-DK	1051206053	05-23-2025	Element Under Test
S/02	5121/03	PCB to SMA pigtail	-	-	05-12-2025	Accessory

Sample S/02, was used for the following test(s): Frequency Tolerance test indicated in appendix A.

Test sample description

Test Sample description (compulsory information for EMC and RF testing services)

Ports..... :	Port name and description		Cable				
			Specified max length [m]	Attached during test	Shielded	Coupled to patient ⁽³⁾	
	LTE RF		2	[x]	[x]	[]	
	GPS		2	[]	[]	[]	
	-		-	[]	[]	[]	
	-		-	[]	[]	[]	
	-		-	[]	[]	[]	
-		-	[]	[]	[]		
-		-	[]	[]	[]		
Supplementary information to the ports..... :		No Data Provided					
Rated power supply :	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[]	AC:	[]	[]	[]	[]	[]
	[]	AC:	[]	[]	[]	[]	[]
	[x]	DC: 3.0-5.5V, nominal 3.8V					
[]		DC:					
Rated Power :		1W					
Clock frequencies :		32kHz, 32MHz					
Other parameters..... :		Temperature range: -40C..+85C					
Software version :		mfw_nrf91x1_0.4.0					
Hardware version..... :		nRF9151 LACA A1					
Dimensions in cm (W x H x D) :		155x64x9 mm					
Mounting position..... :	[x]	Table top equipment					
	[]	Wall/Ceiling mounted equipment					
	[]	Floor standing equipment					
	[]	Hand-held equipment					
	[]	Other: Built into vehicle					
Modules/parts :	Module/parts of test item			Type	Manufacturer		
	No Data Provided						
Accessories (not part of the test item) :	Description			Type	Manufacturer		
	No Data Provided						

Documents as provided by the applicant	Description	File name	Issue date
	Instructions_From_DEKRA_SAU		5/12/2025
	Using nRF9151-DK_NTN_Mar25		04/10/2025
	Setup_CMW_NB_IoT(Release)_4.0.210.50_64 Bit_vs15		04/10/2025
	FDT30_18 Declaration Equipment Data_nRF9151_NTN_SIP		05/22/2025
Marking Label			
			

Identification of the client

NORDIC SEMICONDUCTOR ASA
Otto Nielsens Veg 12, 7052 Trondheim, Norway

Testing period and place

Test Location	DEKRA Certification Inc.
Date (start)	05-13-2025
Date (finish)	05-30-2025

Document history

Report number	Date	Description
5121ERM.001	06-06-2025	First release.
5121ERM.001A1	07-07-2025	Second release. RSS 170 limits clarification was added. This modified test report cancels and replaces the report 5121ERM.001.

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

In the semi anechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 60 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

Remarks and comments

The tests have been performed by the technical personnel: Juliana Cherry, Prudhvi Kothapalli and Koji Nishimoto.

List of equipment used during the test

Conducted Measurements

Control Number	Description	Serial No	Last Calibration	Next Calibration
101	ESPEC CHMBER UNIT	19248	2024-08-13	2026-08-13
897	AMETEK DC Power Supply	1707A01906	N/A	N/A
1014	FSV40 Signal Analyzer	101626	2024-10-04	2026-10-04
1107	Ethernet SNMP Thermometer- RF1 Room	60038026952	2022-10-18	2025-10-18
1149	Wideband Radio Communication Tester, CMW500	101976	2024-10-03	2027-10-03

Radiated Measurements

Control Number	Description	Serial No	Last Calibration	Next Calibration
878	Power supply (AMETEK / PROG-DC-PS)	1707A01783	N/A	N/A
1014	FSV40 Signal Analyzer	101626	2024-10-04	2026-10-04
1056	3115 Double-Ridged Waveguide Horn Antenna 1-18 GHz	213179	2024-07-01	2027-07-01
1057	3115 Double-Ridged Waveguide Horn Antenna 1-18 GHz	211373	2023-07-18	2026-07-18
1065	3142E Biconilog Antenna	208587	2025-02-03	2028-02-03
1108	Ethernet SNMP Thermometer- CR Room	60038026954	2022-10-18	2025-10-18
1111	Ethernet SNMP Thermometer- SAC	60038026577	2022-10-18	2025-10-18
1179	Semi anechoic Absorber Lined Chamber	F169021	N/A	N/A
1314	Wireless Measurement Software R&S EMC32	-	N/A	N/A
1461	Low Noise Preamplifier (1-18GHz)	2213857B	2024-06-06	2026-06-06

Testing verdicts

Fail	F
Not applicable	N/A
Not measured	N/M
Pass	P

Summary

FCC PART 15 PARAGRAPH / RSS-247			
Requirement	Test case	Verdict	Remark
FCC 25.204(a) / RSS-170 (5.5)	RF Output Power	P	N/A
RSS-Gen 6.7	Occupied Bandwidth	P	N/A
FCC 25.202 (d) / RSS-170 (5.3)	Frequency Tolerance	P	N/A
FCC 25.202 (f) / RSS-170 (5.4)	Conducted Emission Mask	P	N/A
FCC 25.202 (f) / RSS-170 (5.1)(5.8)	Emission Limitations	P	N/A
FCC 25.204 (f) / RSS-170 (5.8)	Field Strength of Spurious Radiation	P	N/A
FCC 25.216 (c)(e)(h)(i)	Additional Limits on Emission from Mobile Earth Station	P	N/A
<u>Supplementary information and remarks:</u>			
N/A			

Appendix A: Test results

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PRODUCT INFORMATION

(*): The following information is provided by the client

Information	Description
Equipment type	
Operating Frequency Range	B23: UL 2000 – 2020MHz DL 2180 – 2200MHz B255: UL 1626.5 – 1660.5MHz DL 1525 – 1559MHz
Nominal Channel Bandwidth	200 kHz
RF Output Power	23 dBm
Antenna type	SMD
Antenna gain	690-810MHz: 1.56 dBi 815-960MHz: 2.7 dBi 1626.5-1660.4: 2.2 Bi 1710-2200Mhz: 3.0 dBi
Modulation:	QPSK, BPSK
Supply Voltage	3.8 Vdc

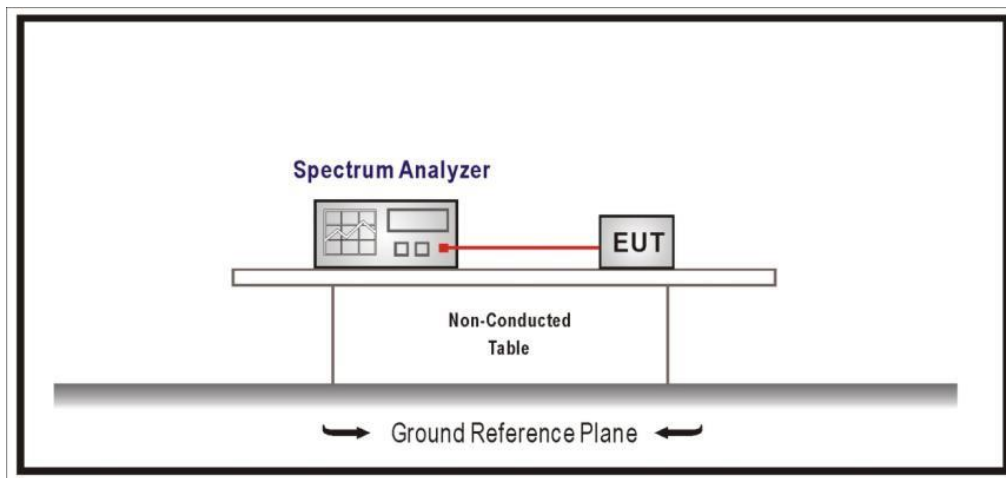
TEST CONDITIONS

(*): Data provided by the client.

TEST CONDITIONS	DESCRIPTION
TC#01 (*1)	Power supply (V): $V_{nominal} = 3.8\text{ Vdc}$ V min = 3.0V / Vmax = 5.5V Temperature range : -40 °C, +85 °C Channel Bandwidth: 200 kHz Test Frequencies for Conducted/Radiated tests: Band 23: Lowest channel: 2000.1 MHz Middle channel: 2010.0 MHz Highest channel: 2019.9 MHz Band 255: Lowest channel: 1626.5 MHz Middle channel: 1643.5 MHz Highest channel: 1660.4 MHz

Note: 1. The Radiated Emissions tables and plots show the results for the worst case

CONDUCTED MEASUREMENTS:



RADIATED MEASUREMENTS:

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency range 30-1000 MHz (Bilog antenna) and 1-18 GHz Double ridge horn antennas, and 1m for the frequency range 18 GHz- 40 GHz Double ridge horn antenna.

For radiated emissions in the range 18 - 40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

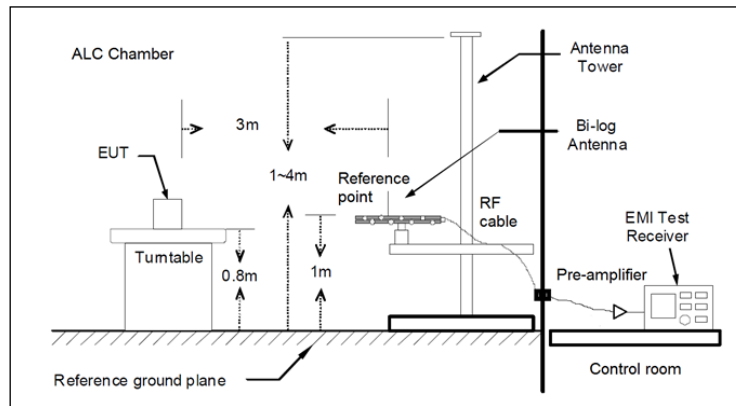


Fig A1: Radiated measurements Setup $f < 1$ GHz

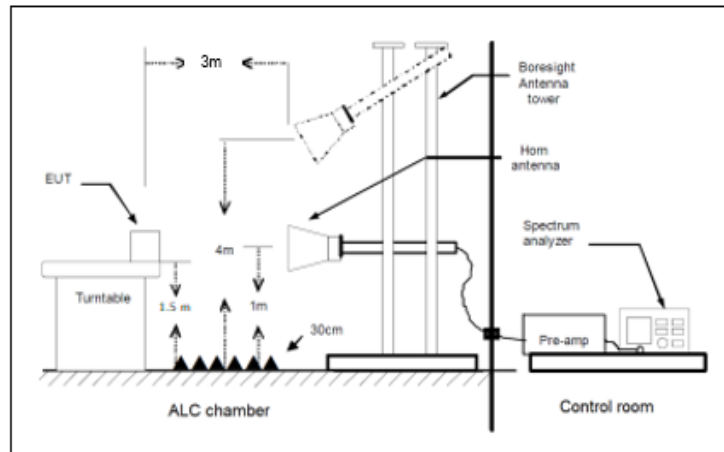


Fig A2: Radiated measurements setup $1 < f < 18$ GHz

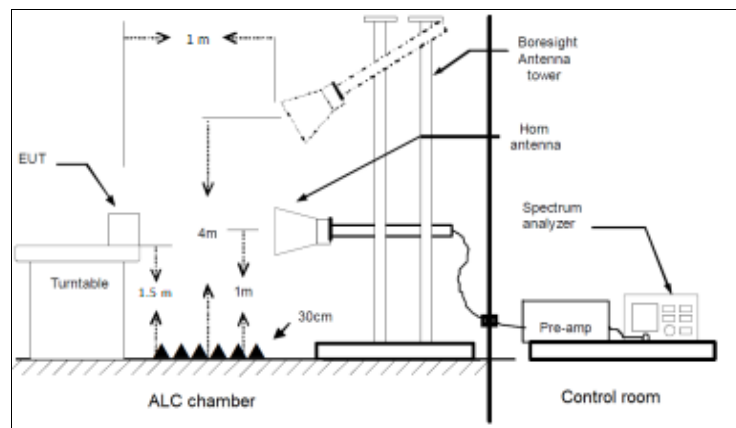


Fig A3: Radiated measurements setup $f > 18$ GHz

TEST CASES DETAILS

FCC 25.204 (a)/RSS-170 (5.5) Conducted Output Power

Limits

FCC 25.204

(a) In bands shared coequally with terrestrial radio communication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station, other than an ESV, operating in frequency bands between 1 and 15 GHz, shall not exceed the following limits except as provided for in paragraph (c) of this section:

- + 40 dBW in any 4 kHz band for $\theta \leq 0^\circ$
- + 40 + 3 θ dBW in any 4 kHz band for $0^\circ < \theta \leq 5^\circ$

where θ is the angle of elevation of the horizon viewed from the center of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.

RSS-170

5.5 The application for MES certification shall state the e.i.r.p. that the MES must have for satisfactory communication. The maximum permissible e.i.r.p. will be the stated e.i.r.p. plus a 2 dB margin. If a detachable antenna is used, the application for certification shall state the recommended antenna type and manufacturer, the antenna gain, and the maximum transmitter output power at the antenna terminal.

Band: 23 SCS 3.75 kHz

Modulations: BPSK, QPSK

Results

Antenna Gain: 3 dBi

B23 SCS 3.75 kHz						
Frequency (MHz)	SC Size	Cond power (dBm)		Antenna Gain (dBi)	EIRP Power (dBm)	
		BPSK	QPSK		BPSK	QPSK
2000.1	1SC0	23.1	23.1	3.0	26.1	26.1
	1SC47	23.0	22.9	3.0	26.0	25.9
2010.0	1SC0	23.0	22.9	3.0	26.0	25.9
	1SC47	22.9	22.9	3.0	25.9	25.9
2019.9	1SC0	22.9	23.0	3.0	25.9	26.0
	1SC47	23.0	23.0	3.0	26.0	26.0

Verdict

Pass

Band: 23 SCS 15 kHz

Modulations: BPSK, QPSK

Results

Antenna Gain: 3 dBi

B23 SCS 15 kHz						
Frequency (MHz)	SC Size	Cond power (dBm)		Antenna Gain (dBi)	EIRP Power (dBm)	
		BPSK	QPSK		BPSK	QPSK
2000.1	1SC0	23.1	23.2	3.0	26.1	26.2
	1SC11	23.1	23.1	3.0	26.1	26.1
	3SC0	N/A	22.4	3.0	N/A	25.4
	3SC9	N/A	22.3	3.0	N/A	25.3
	6SC0	N/A	21.9	3.0	N/A	24.9
	6SC6	N/A	21.9	3.0	N/A	24.9
	12SC0	N/A	17.4	3.0	N/A	20.4
2010	1SC0	22.8	22.8	3.0	25.8	25.8
	1SC11	22.8	22.7	3.0	25.8	25.7
	3SC0	N/A	22.5	3.0	N/A	25.5
	3SC9	N/A	22.5	3.0	N/A	25.5
	6SC0	N/A	21.9	3.0	N/A	24.9
	6SC6	N/A	22.1	3.0	N/A	25.1
	12SC0	N/A	18.6	3.0	N/A	21.6
2019.9	1SC0	23.1	22.6	3.0	26.1	25.6
	1SC11	23.1	23.1	3.0	26.1	26.1
	3SC0	N/A	22.9	3.0	N/A	25.9
	3SC9	N/A	21.9	3.0	N/A	24.9
	6SC0	N/A	21.2	3.0	N/A	24.2
	6SC6	N/A	21.2	3.0	N/A	24.2
	12SC0	N/A	18.0	3.0	N/A	21.0

Verdict

Pass

Band: 255 SCS 3.75 kHz

Modulations: BPSK, QPSK

Results

Antenna Gain: 2.2 dBi

B255 SCS 3.75 kHz						
Frequency (MHz)	SC Size	Cond power (dBm)		Antenna Gain (dBi)	EIRP Power (dBm)	
		BPSK	QPSK		BPSK	QPSK
1626.5	1SC0	21.8	21.8	2.2	24.0	24.0
	1SC47	21.8	21.8	2.2	24.0	24.0
1643.5	1SC0	21.7	21.8	2.2	23.9	24.0
	1SC47	21.8	21.7	2.2	24.0	23.9
1660.4	1SC0	21.7	21.7	2.2	23.9	23.9
	1SC47	21.6	21.6	2.2	23.8	23.8

Verdict

Pass

Band: 255 SCS 15 kHz

Modulations: BPSK, QPSK

Results

Antenna Gain: 2.2 dBi

B255 SCS 15 kHz						
Frequency (MHz)	SC Size	Cond power (dBm)		Antenna Gain (dBi)	EIRP Power (dBm)	
		BPSK	QPSK		BPSK	QPSK
1626.5	1SC0	22.3	22.3	2.2	24.5	24.5
	1SC11	21.9	21.9	2.2	24.1	24.1
	3SC0	N/A	21.7	2.2	N/A	23.9
	3SC9	N/A	21.9	2.2	N/A	24.1
	6SC0	N/A	19.9	2.2	N/A	22.1
	6SC6	N/A	20.4	2.2	N/A	22.6
	12SC0	N/A	17.2	2.2	N/A	19.4
1643.5	1SC0	21.8	21.9	2.2	24.0	24.1
	1SC11	21.9	21.9	2.2	24.1	24.1
	3SC0	N/A	21.6	2.2	N/A	23.8
	3SC9	N/A	21.6	2.2	N/A	23.8
	6SC0	N/A	20.4	2.2	N/A	22.6
	6SC6	N/A	20.4	2.2	N/A	22.6
	12SC0	N/A	17.3	2.2	N/A	19.5
1660.4	1SC0	21.7	21.7	2.2	23.9	23.9
	1SC11	21.7	21.7	2.2	23.9	23.9
	3SC0	N/A	21.5	2.2	N/A	23.7
	3SC9	N/A	21.5	2.2	N/A	23.7
	6SC0	N/A	20.3	2.2	N/A	22.5
	6SC6	N/A	20.0	2.2	N/A	22.2
	12SC0	N/A	17.2	2.2	N/A	19.4

Verdict

Pass

RSS-Gen 6.7 99% Occupied Bandwidth

Limits

No Limit has been set to this test case

Band: 23

Modulation: QPSK

Results

B23 SCS 15 kHz		
Frequency (MHz)	SC Size	99% OBW (kHz)
		QPSK
2000.1	12SC0	186.41
2010.0	12SC0	187.61
2019.9	12SC0	186.41

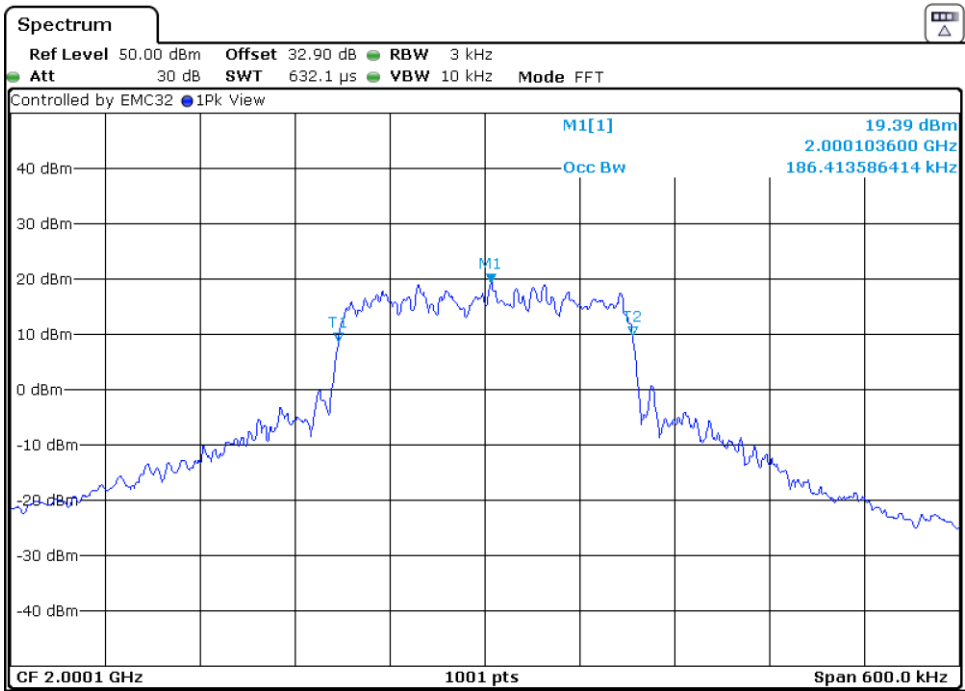
Verdict

Pass

Attachments

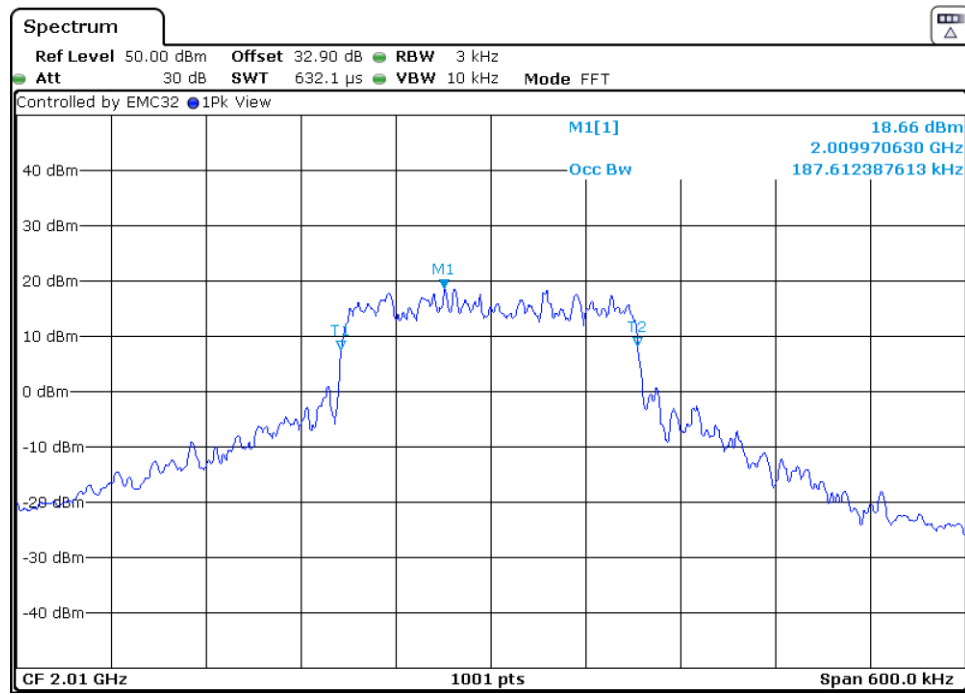
Frequency MHz = 2000.10000, Modulation = QPSK (12SC0), Number of Transmission Chains = 1

Images:



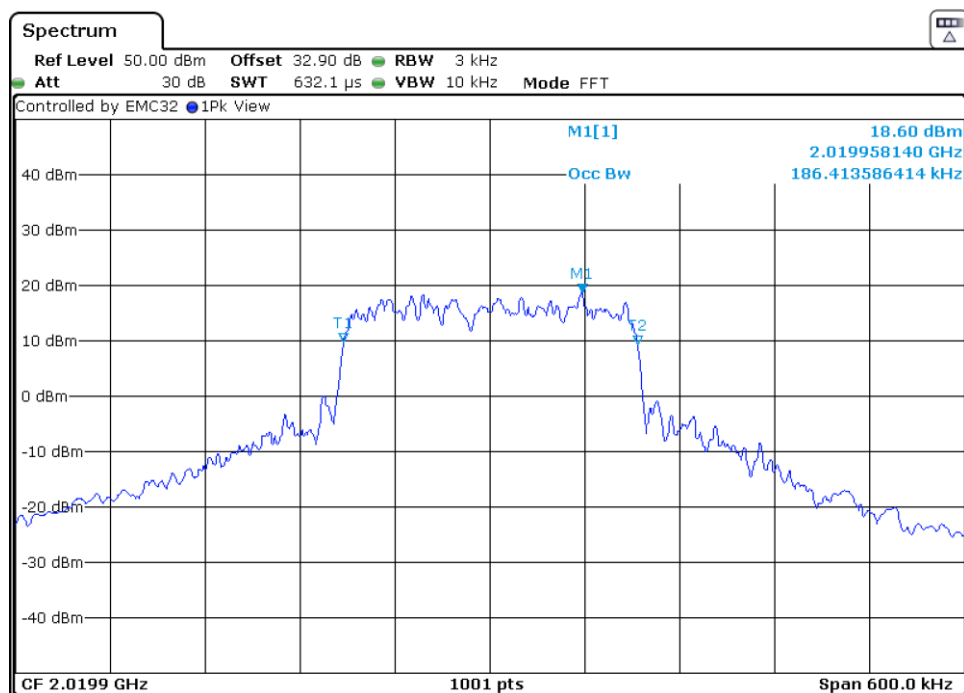
Frequency MHz = 2010.00000, Modulation = QPSK (12SC0), Number of Transmission Chains = 1

Images:



Frequency MHz = 2019.90000, Modulation = QPSK (12SC0), Number of Transmission Chains = 1

Images:



Band: 255

Modulation: QPSK

Results

B255 SCS 15 kHz		
Frequency (MHz)	SC Size	99% OBW (kHz)
		QPSK
1626.5	12SC0	190.61
1643.5	12SC0	196.00
1660.4	12SC0	192.41

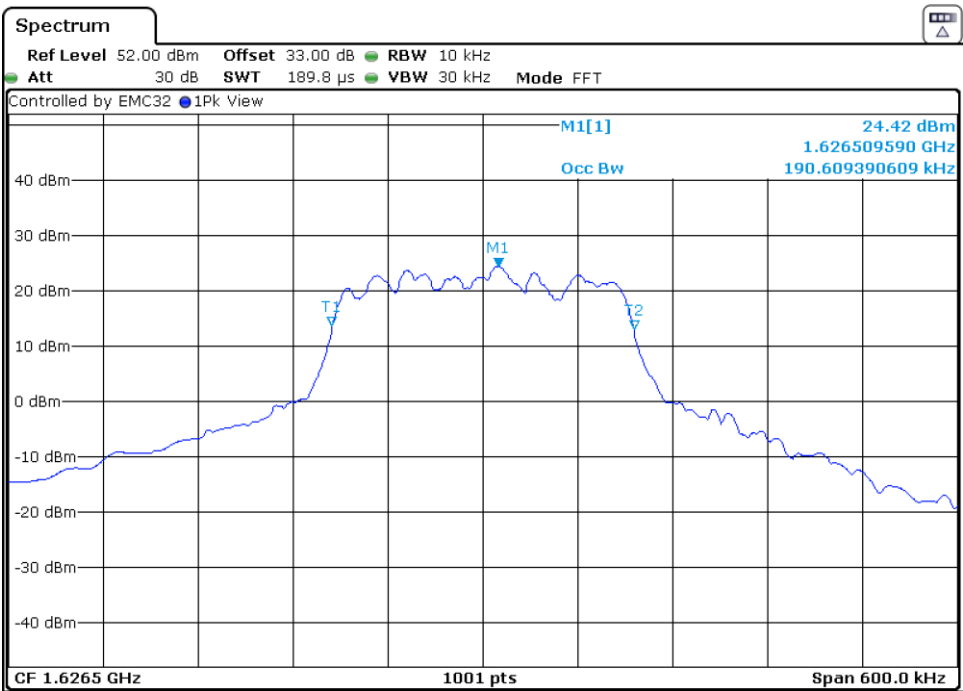
Verdict

Pass

Attachments

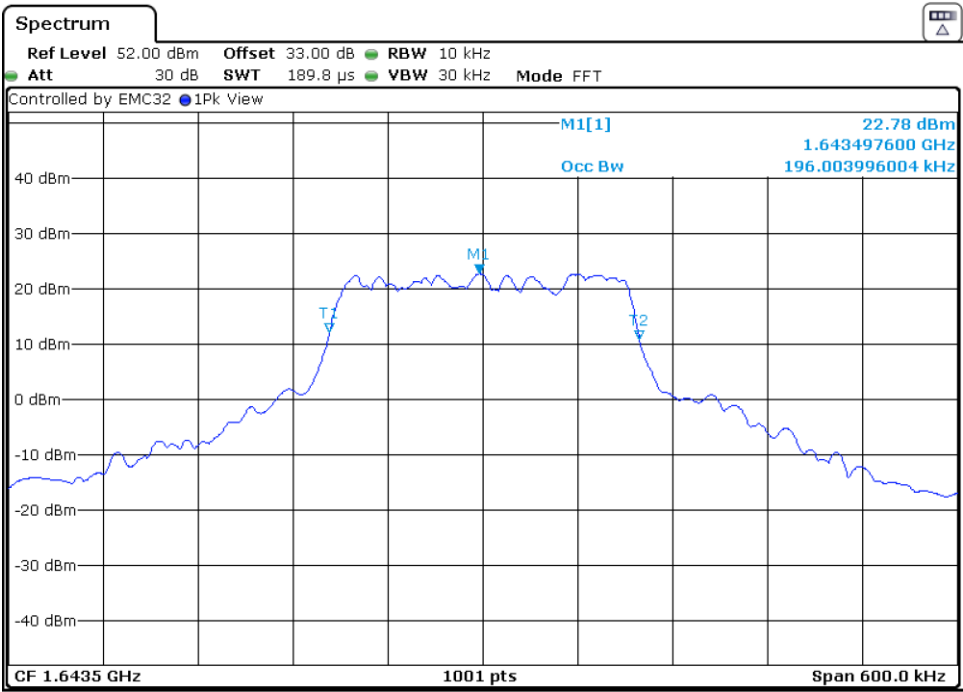
Frequency MHz = 1626.50000, Modulation = QPSK (12SC0), Number of Transmission Chains = 1

Images:



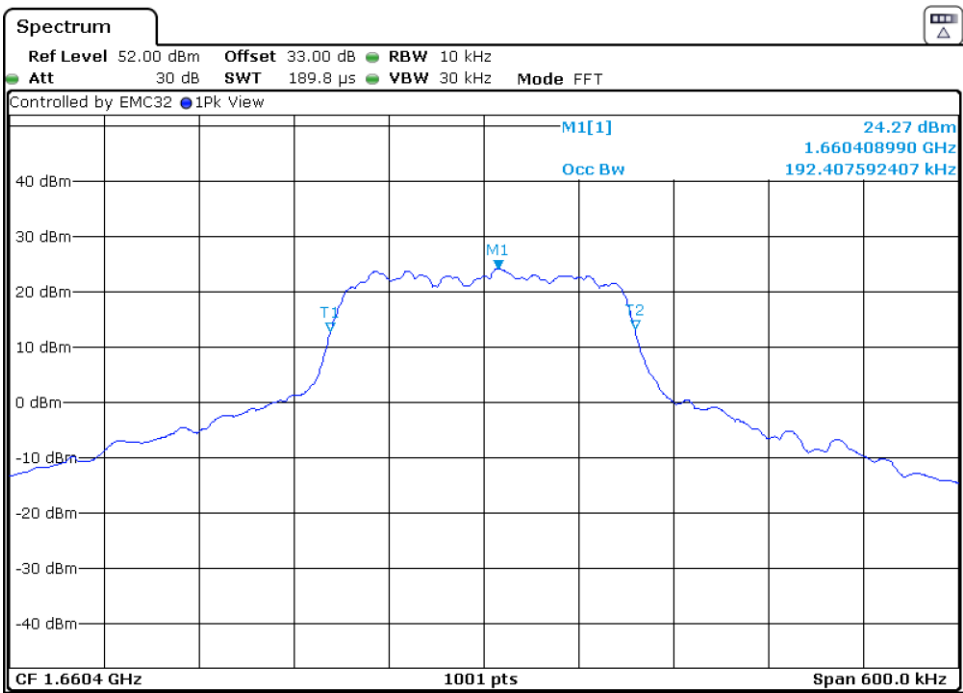
Frequency MHz = 1643.500000, Modulation = QPSK (12SC0), Number of Transmission Chains = 1

Images:



Frequency MHz = 1660.40000, Modulation = QPSK (12SC0), Number of Transmission Chains = 1

Images:



FCC 25.202 (d) / RSS-170 (5.3) Frequency Tolerance, Earth stations

Limits:

FCC 25.202

- (d) The carrier frequency of each earth station transmitter authorized in these services shall be maintained within 0.001 percent of the reference frequency.

RSS-170

- 5.3 For MES equipment, the carrier frequency shall not drift from the reference frequency by more than ± 10 ppm.

Test Results:

Nominal Voltage: 3.8V

Minimum Voltage: 3.0V

Maximum Voltage: 5.5V

The temperatures below -30 and above 50°C are out of the scope of the accreditation

Band 23 SCS 15kHz

The frequency fundamental emissions stay within the authorized frequency range:

Test Conditions		Band 23 (QPSK) / Middle channel	Limit
Temperature (C)	Voltage (V)	SCS 15 kHz Deviation (ppm)	
85	Nominal	0.2878	10 ppm
80	Nominal	0.2878	
70	Nominal	0.1366	
60	Nominal	0.1169	
50	Nominal	-0.1493	
40	Nominal	-0.2246	
30	Nominal	-0.2246	
20	Nominal	-0.3376	
10	Nominal	-0.4485	
0	Nominal	-0.4674	
-10	Nominal	-0.4485	
-20	Nominal	-0.4485	
-30	Nominal	-0.4612	
-40	Nominal	-0.4483	
20	Maximum	0.0107	
20	Lowest	-0.3363	

Verdict

Pass

Band 255 SCS 15kHz

The frequency fundamental emissions stay within the authorized frequency range:

Test Conditions		Band 255 (QPSK) / Middle channel	Limit
Temperature (C)	Voltage (V)	SCS 15 kHz Deviation (ppm)	
85	Nominal	-0.3121	10 ppm
80	Nominal	-0.3121	
70	Nominal	-0.3143	
60	Nominal	-0.3207	
50	Nominal	-0.3182	
40	Nominal	-0.3219	
30	Nominal	-0.3219	
20	Nominal	-0.3225	
10	Nominal	-0.9257	
0	Nominal	-1.1771	
-10	Nominal	-1.1880	
-20	Nominal	-1.1893	
-30	Nominal	-1.1904	
-40	Nominal	-1.1904	
20	Maximun	-0.3207	
20	Lowest	-0.0116	

Verdict

Pass

FCC 25.202 (f) / RSS-170 (5.1) (5.8) Conducted Emission Mask

Limits

FCC 25.202

- (f) Except for SDARS terrestrial repeaters and as provided for in paragraph (i), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule set forth in paragraphs (f)(1) through (f)(4) of this section. The out-of-band emissions of SDARS terrestrial repeaters shall be attenuated in accordance with the schedule set forth in paragraph (h) of this section.
- (1) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: 25 dB.
 - (2) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: 35 dB.
 - (3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts.

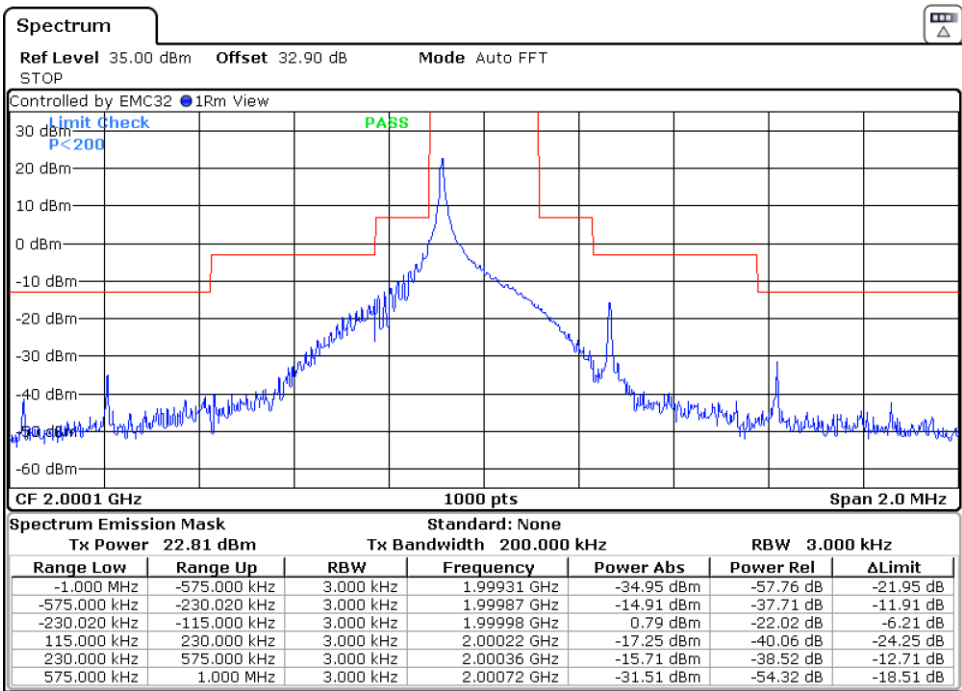
RSS-170

- 5.1 The equivalent isotropically radiated power (e.i.r.p.) density of unwanted and carrier-off state emissions outlined in sections 5.6 through 5.10 shall be averaged over any 2 ms active transmission period using a power average detector.
- 5.8 The average power of unwanted emissions shall be attenuated below the average output power, P (dBW), of the transmitter, as specified below:
- a. 25 dB in any 4 kHz, the frequency of which is offset from the channel centre frequency by more than 50%, up to and including 100% of the occupied bandwidth or necessary bandwidth, whichever is greater
 - b. 35 dB in any 4 kHz, the frequency of which is offset from the channel centre frequency by more than 100%, up to and including 250% of the occupied bandwidth or necessary bandwidth, whichever is greater
 - c. $43 + 10 \log p$ (watts) in any 4 kHz, the frequency of which is offset from the channel centre frequency by more than 250% of the occupied bandwidth or necessary bandwidth, whichever is greater

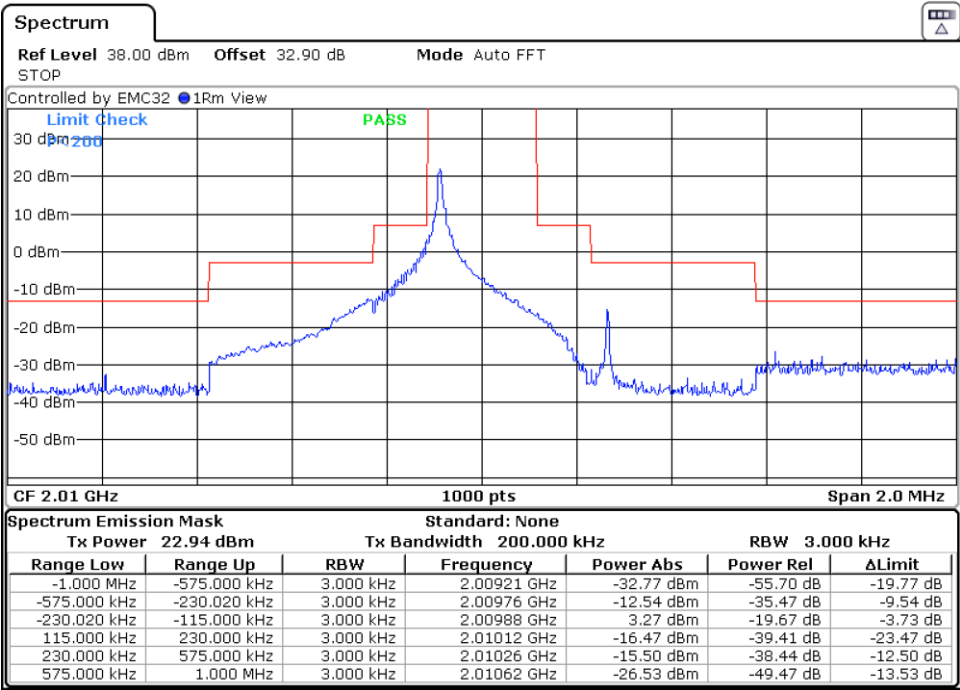
Test Results:

Band: 23 SCS 3.75 kHz
Modulation: BPSK (1SC0)

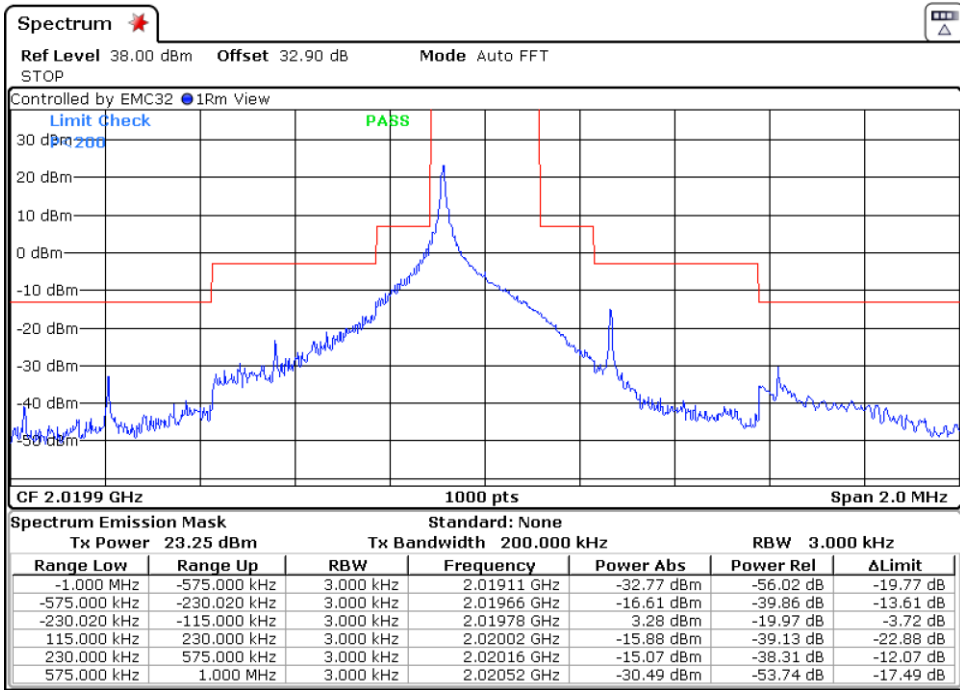
Low Channel



Middle Channel



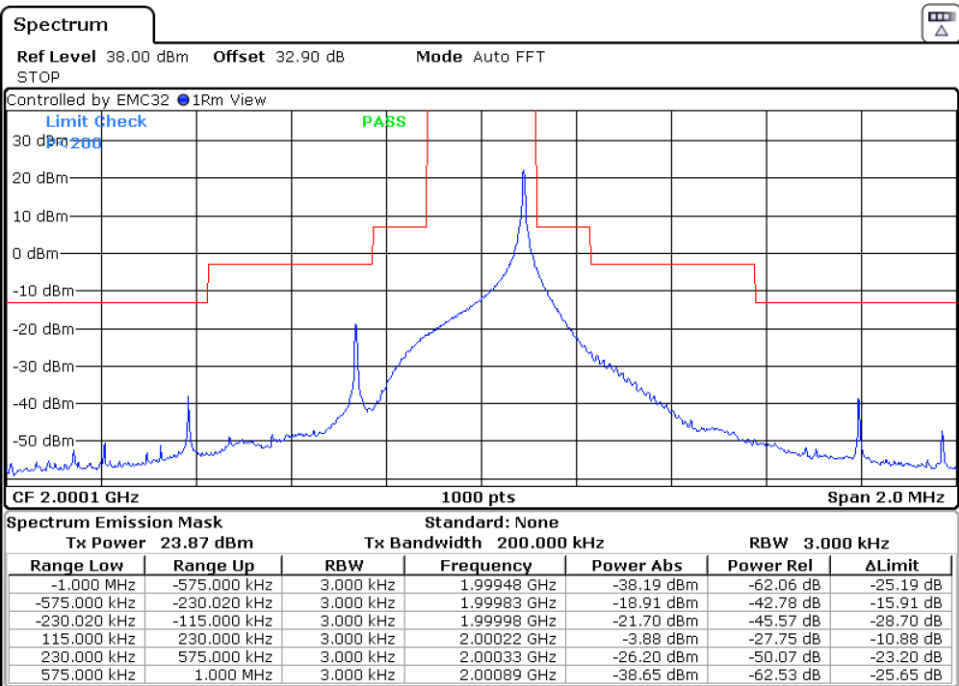
High Channel



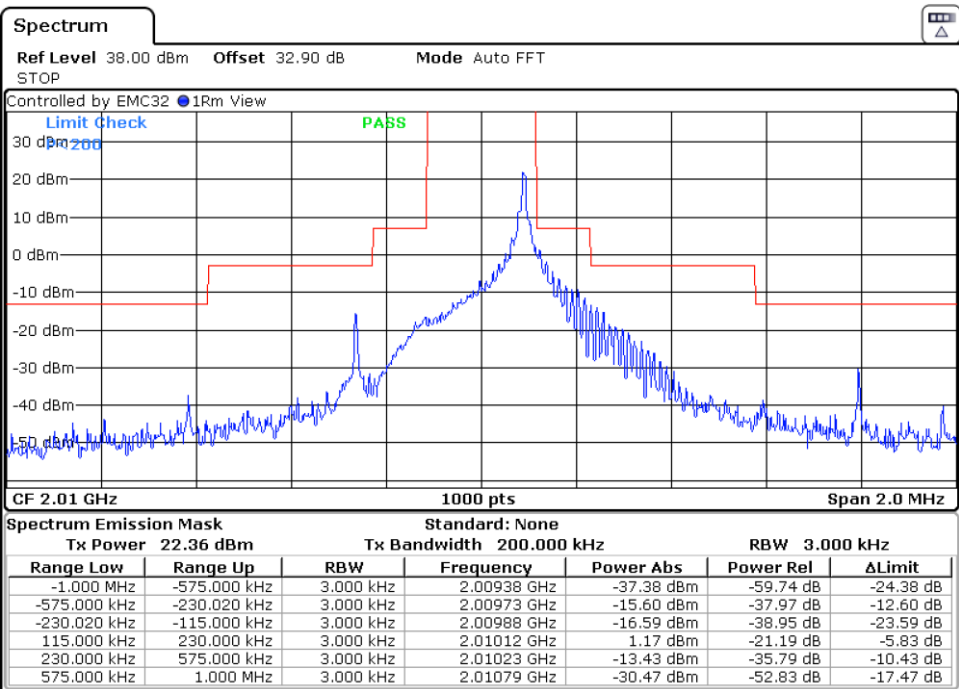
Modulation: BPSK (1SC47)

Results

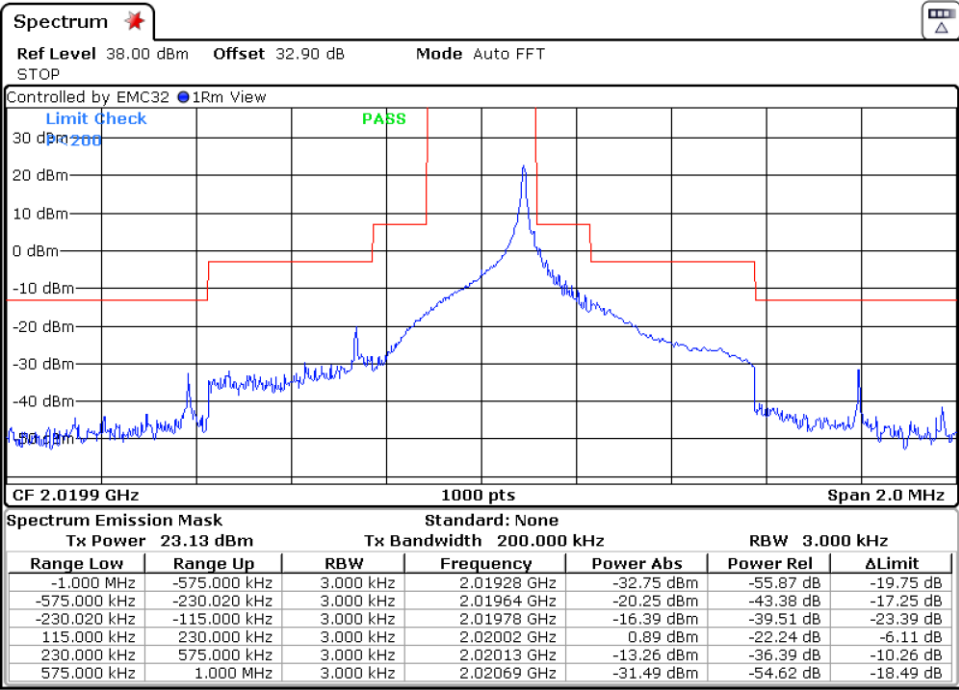
Low Channel



Middle Channel

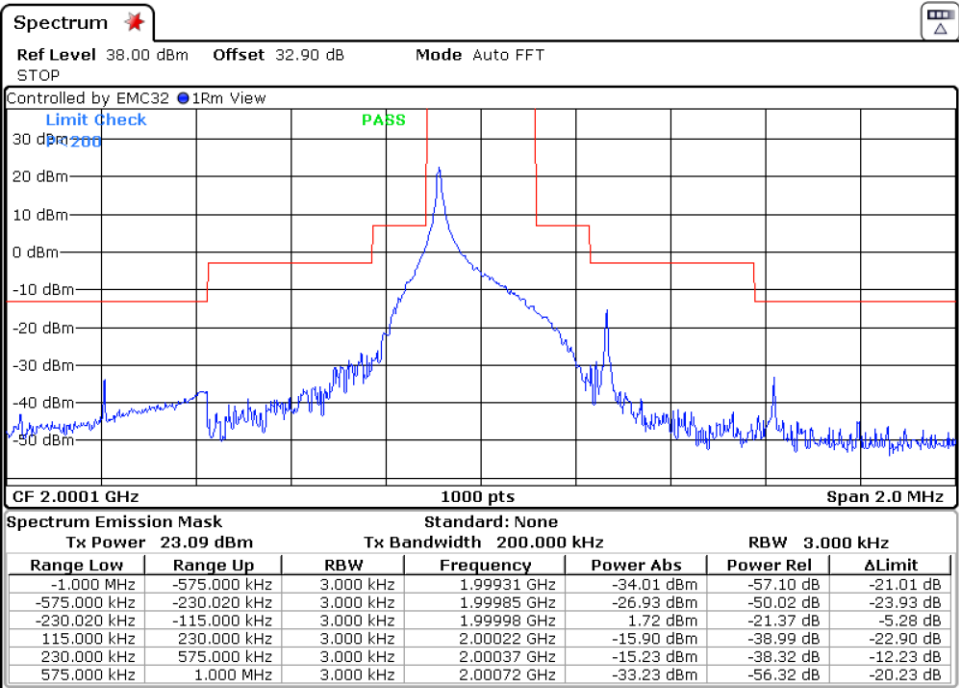


High Channel

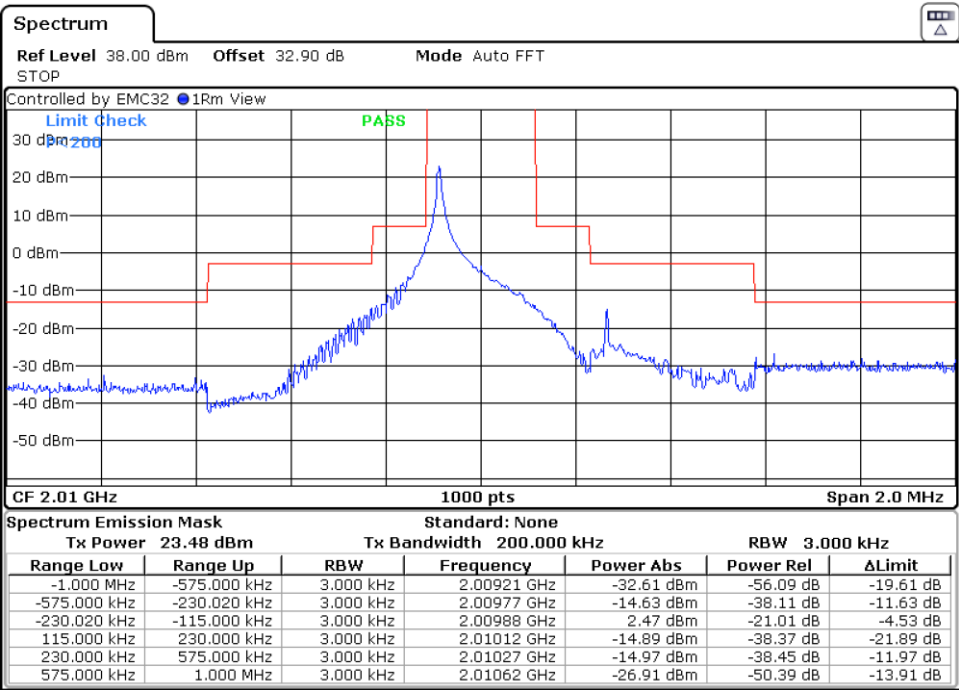


Modulation: QPSK (1SC0)
Results

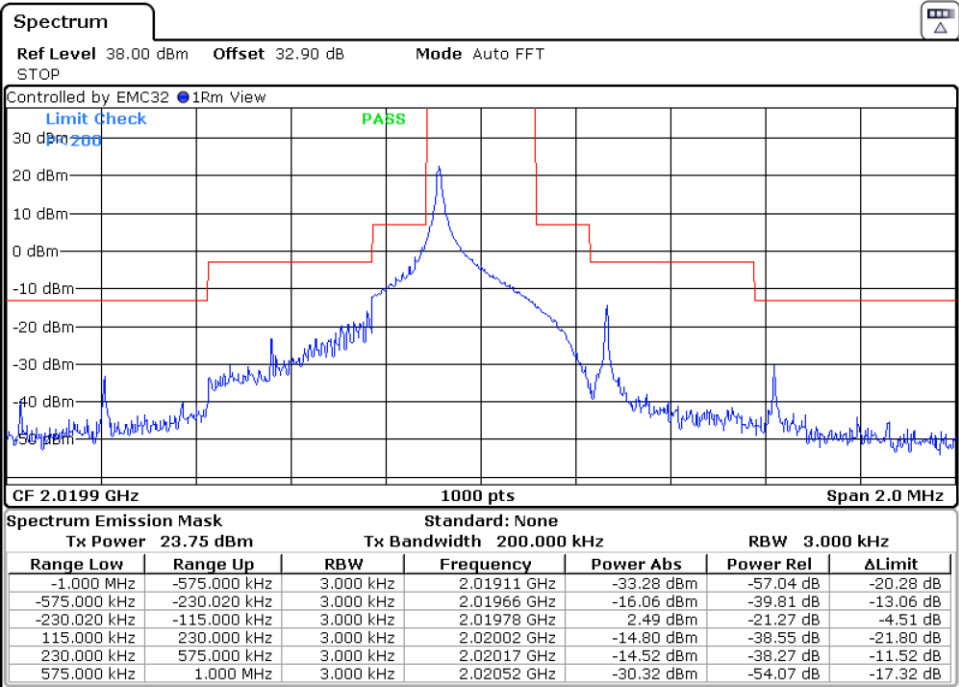
Low Channel



Middle Channel

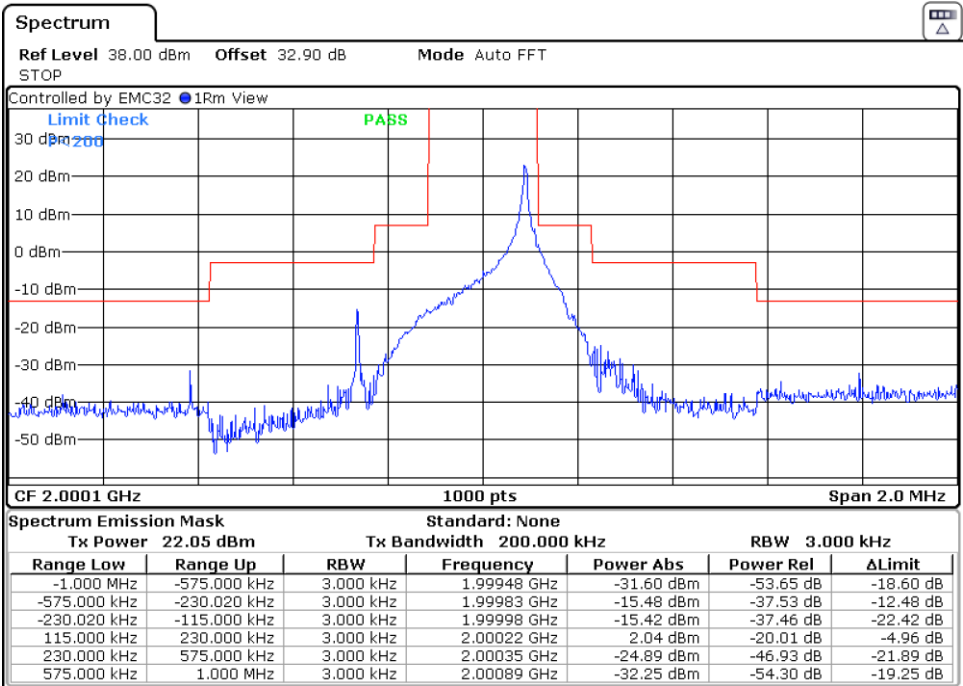


High Channel

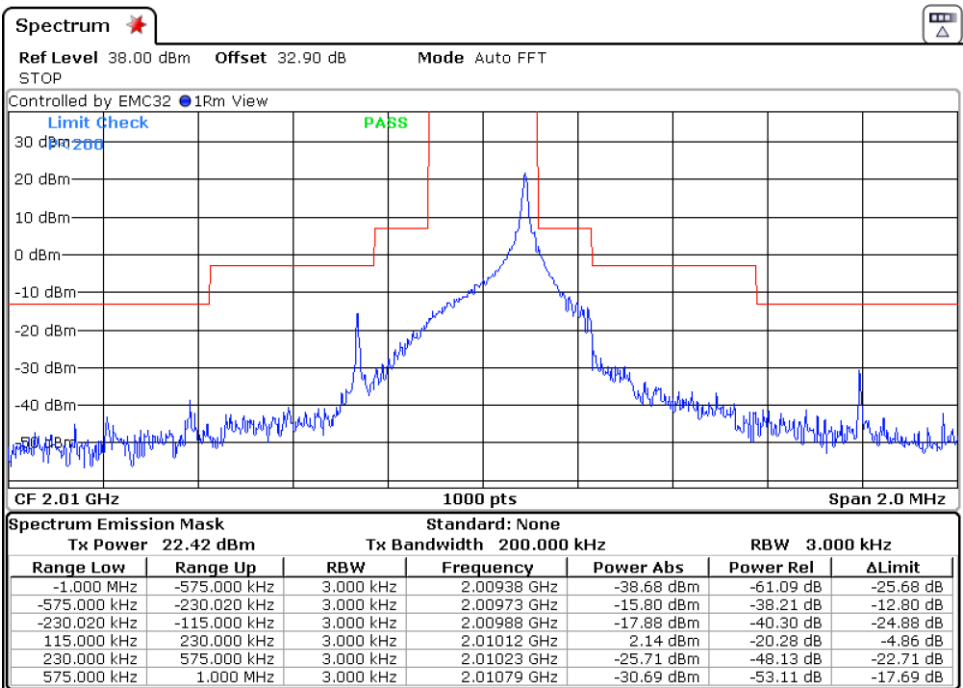


Modulation: QPSK (1SC47)
Results

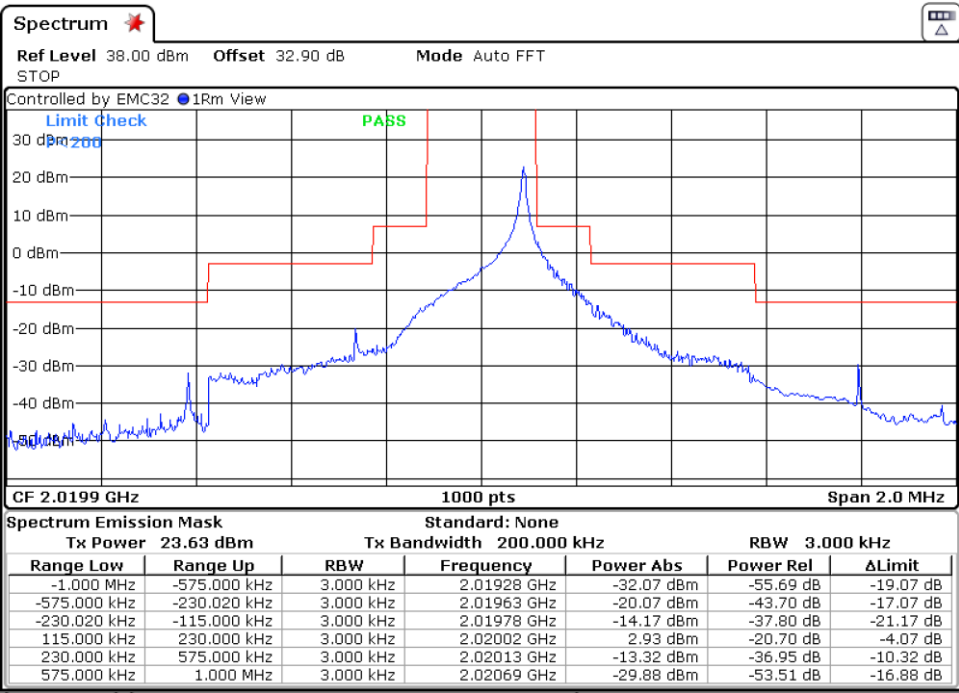
Low Channel



Middle Channel



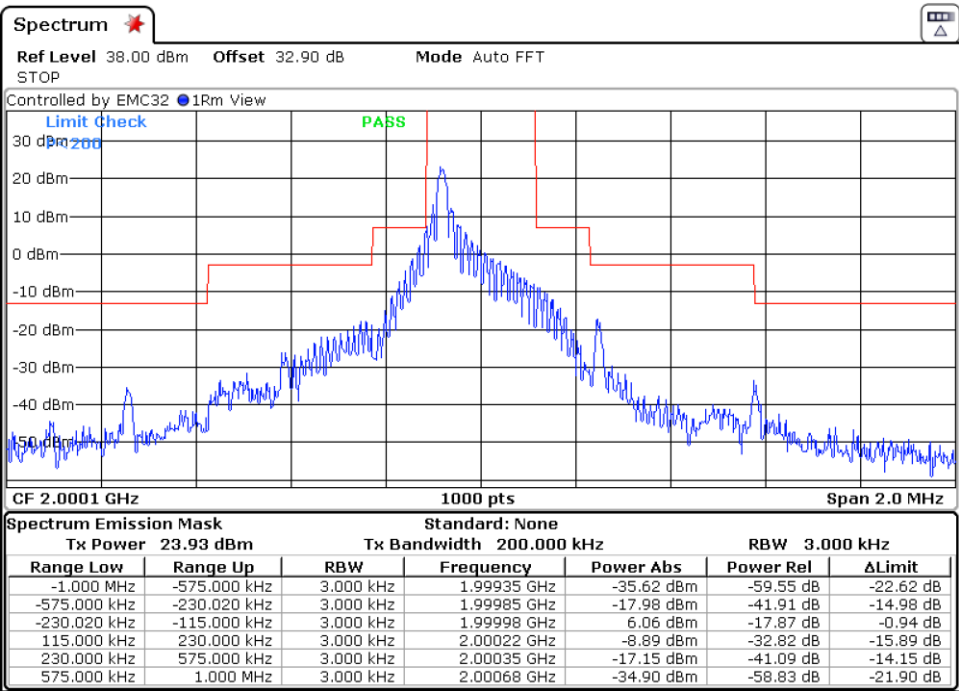
High Channel



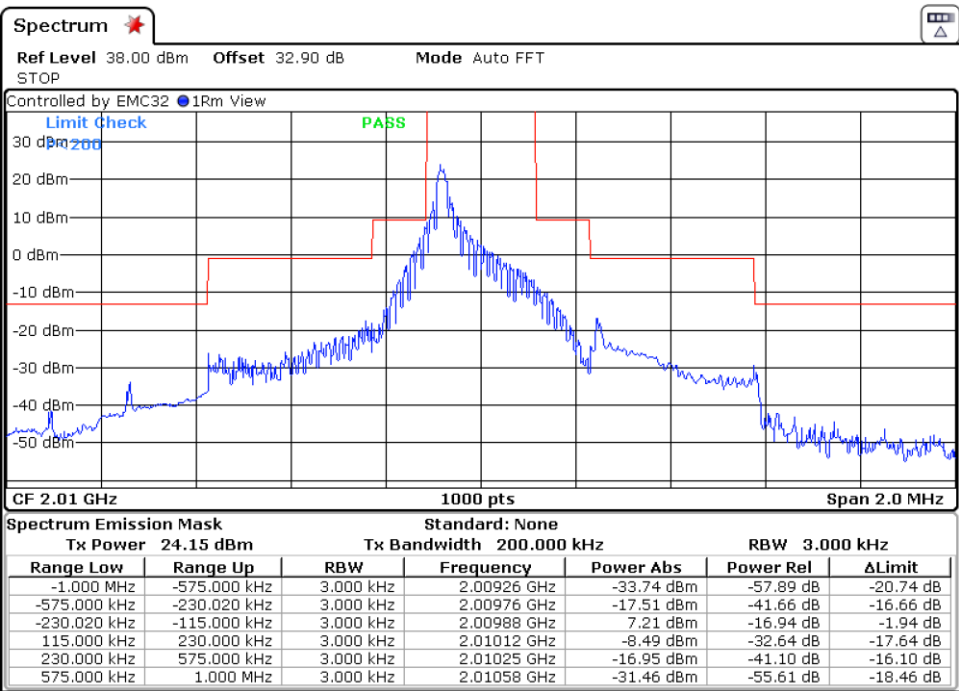
Band: 23 SCS 15 kHz

Modulation: BPSK (1SC0)
Results

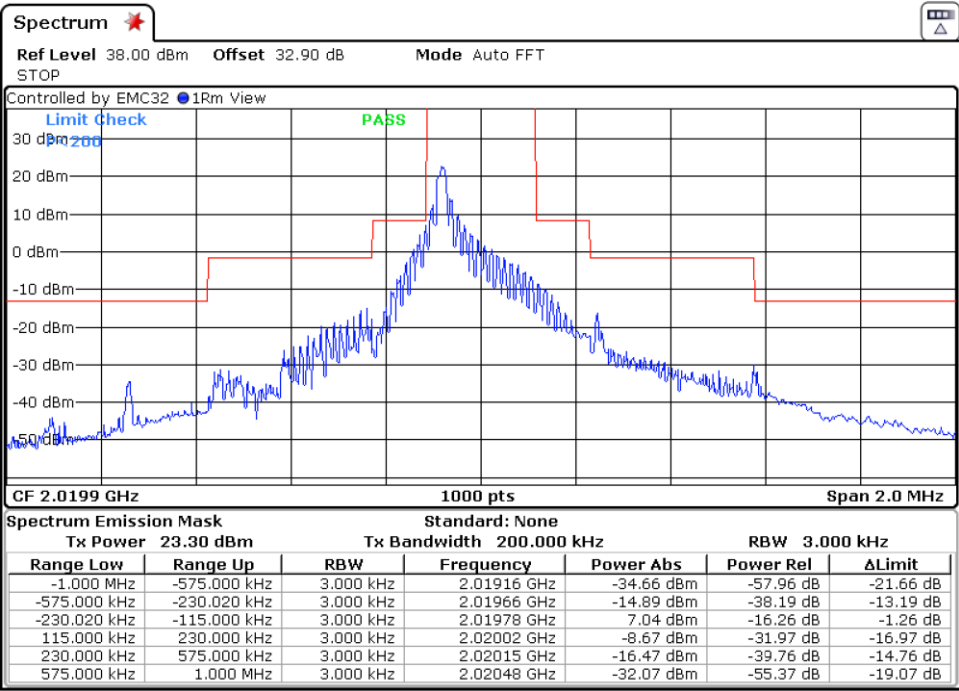
Low Channel



Middle Channel

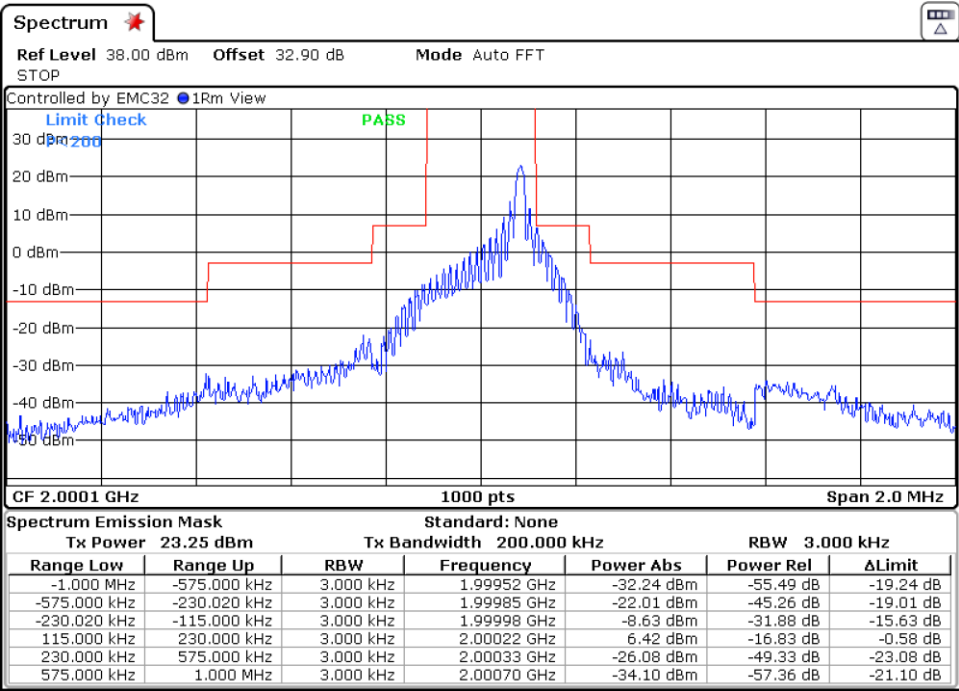


High Channel

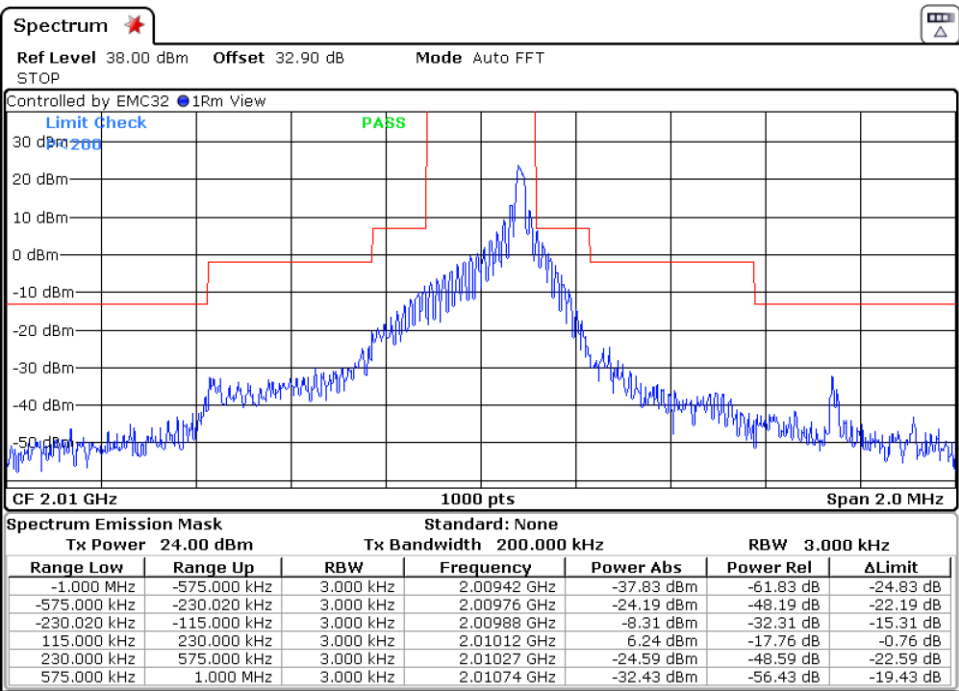


Modulation: BPSK (1SC11)
Results

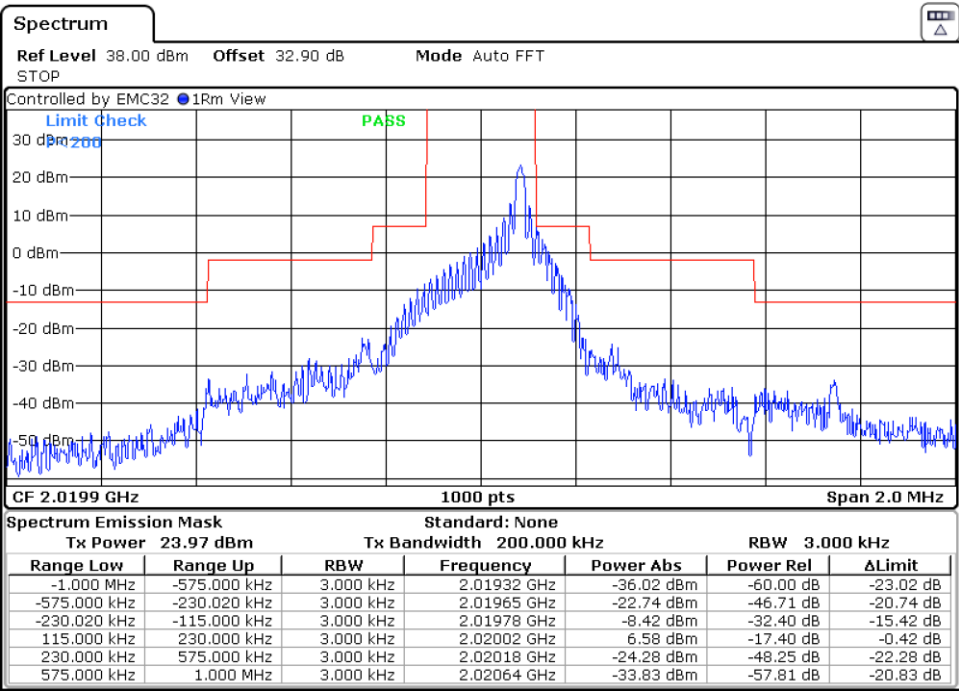
Low Channel



Middle Channel



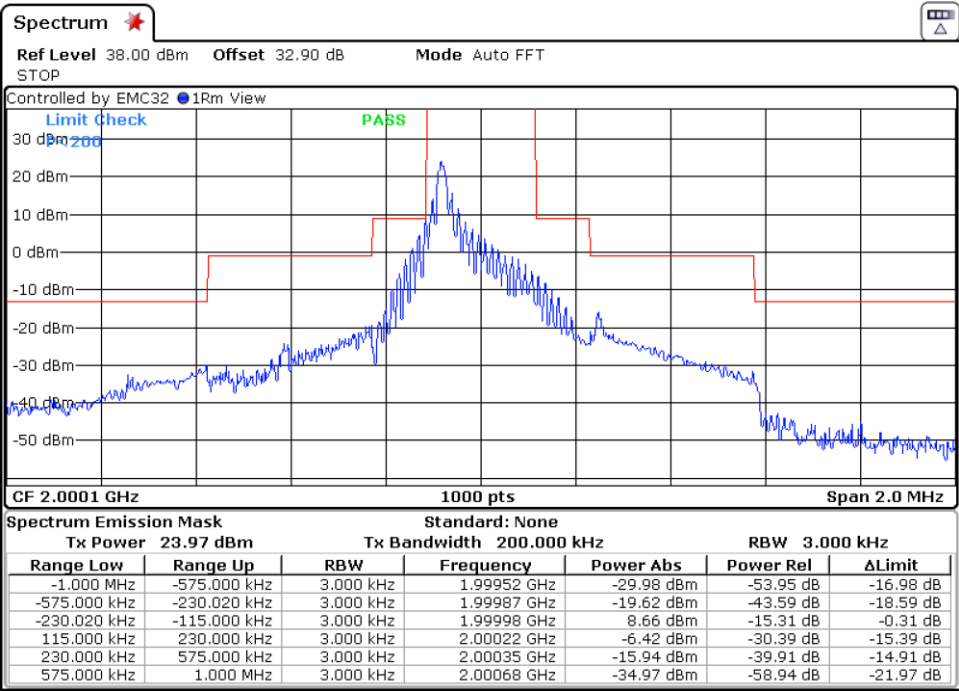
High Channel



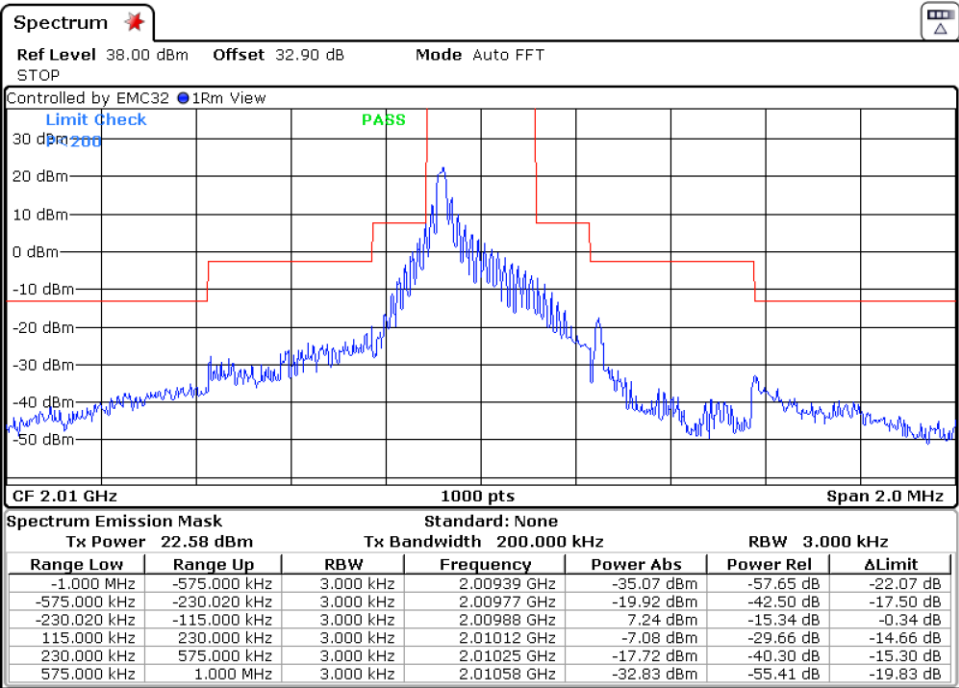
Modulation: QPSK (1SC0)

Results

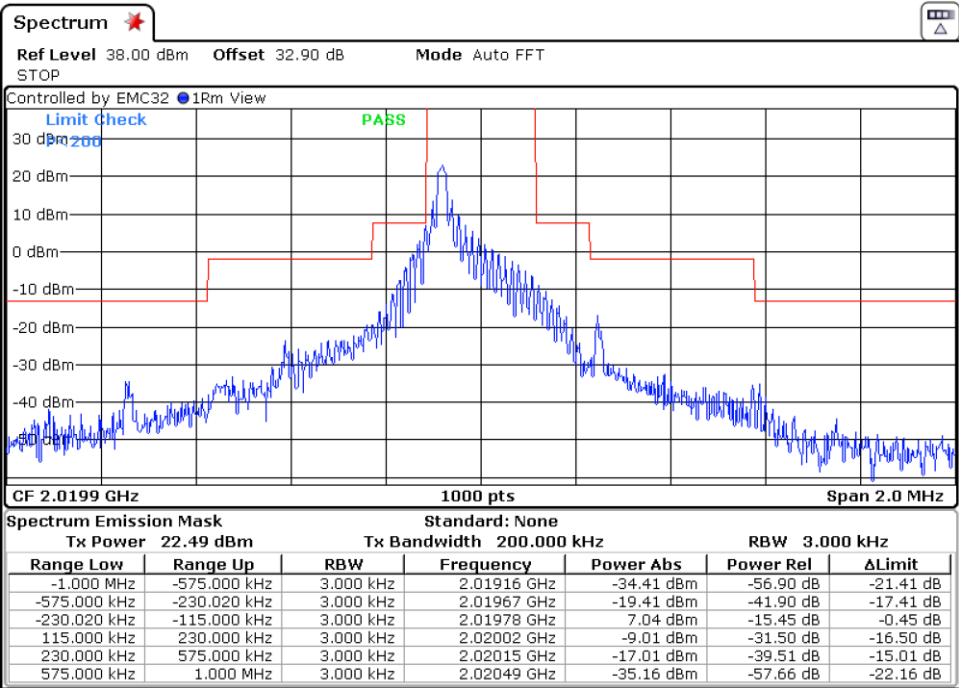
Low Channel



Middle Channel



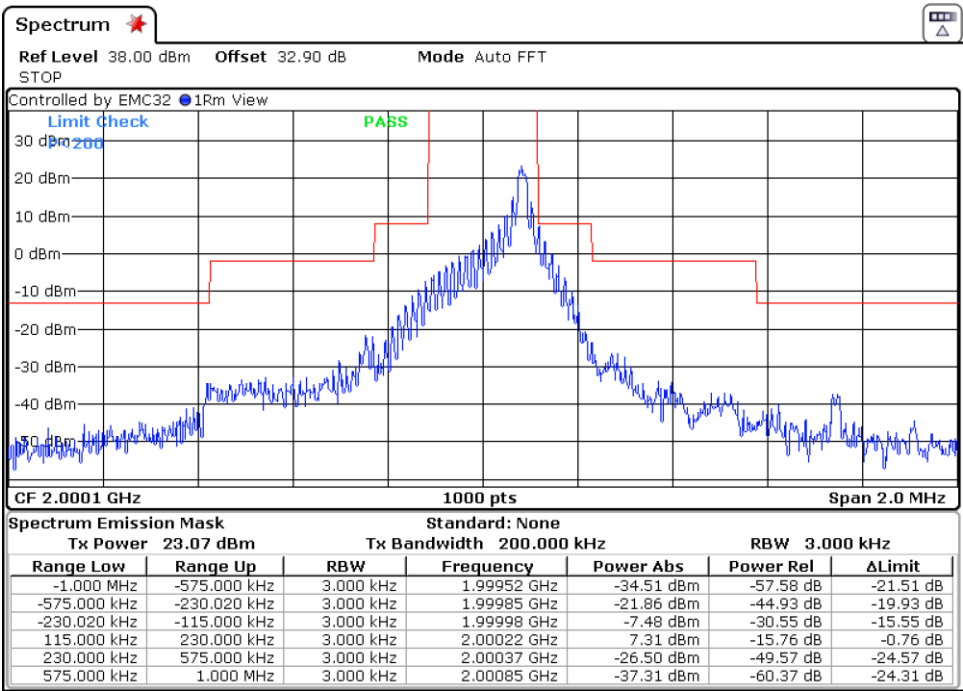
High Channel



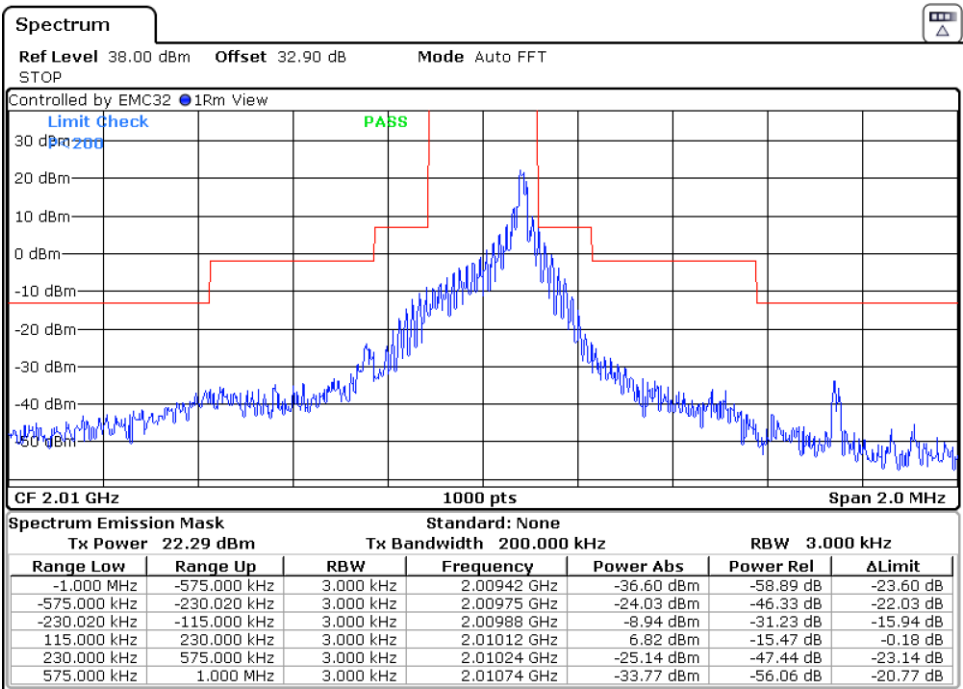
Modulation: QPSK (1SC11)

Results

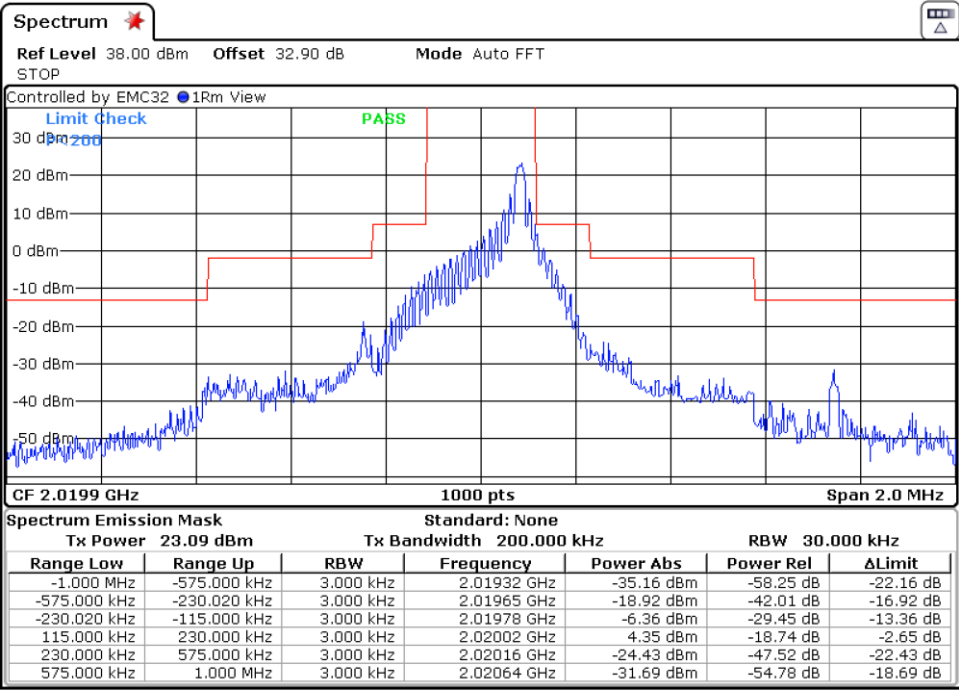
Low Channel



Middle Channel



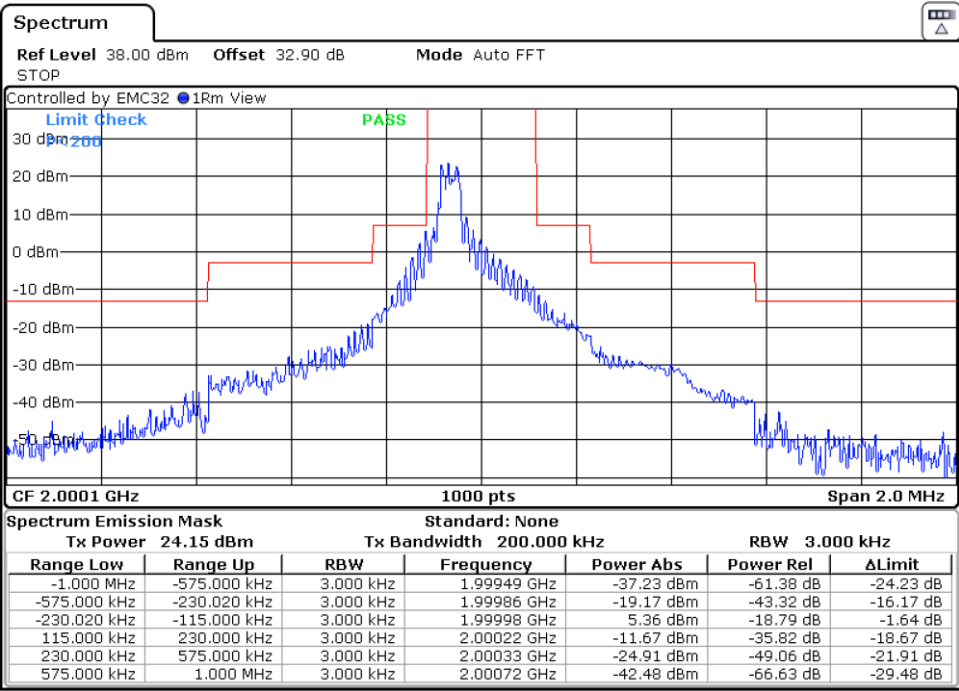
High Channel



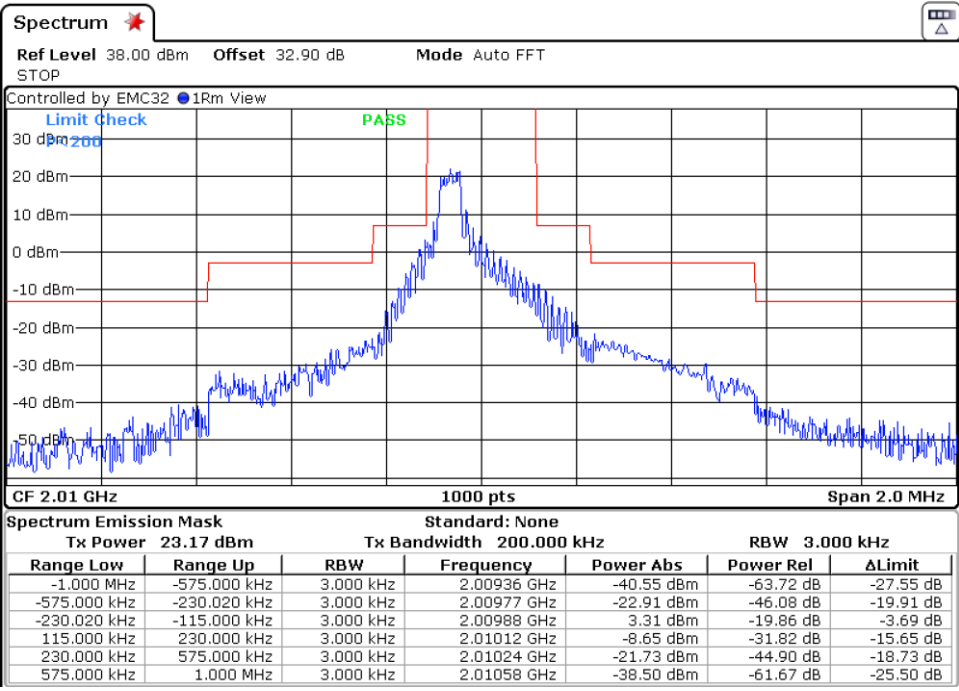
Modulation: QPSK (3SC0)

Results

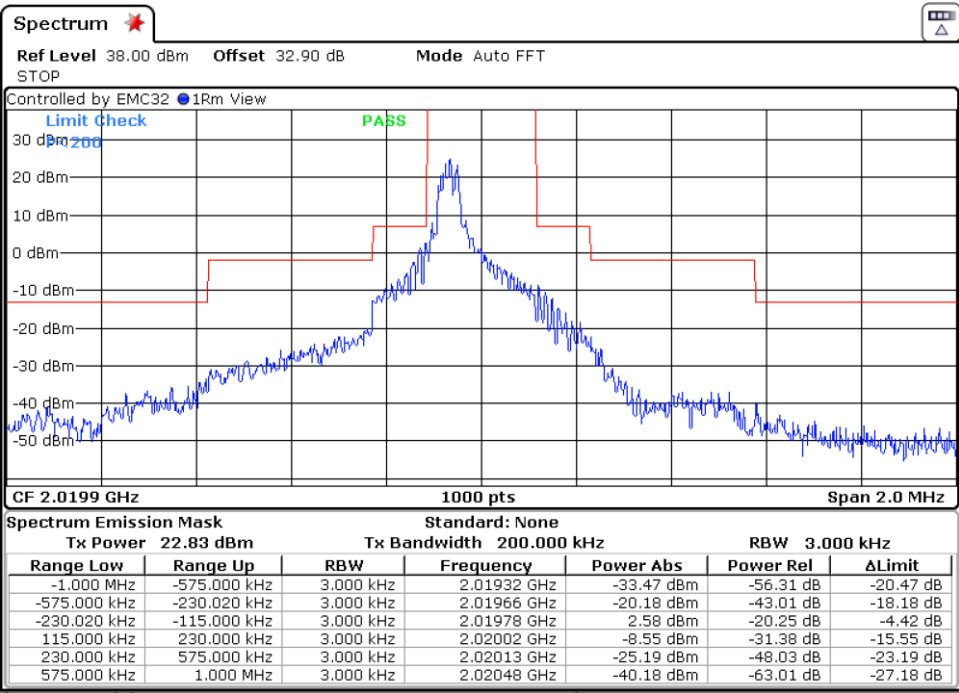
Low Channel



Middle Channel



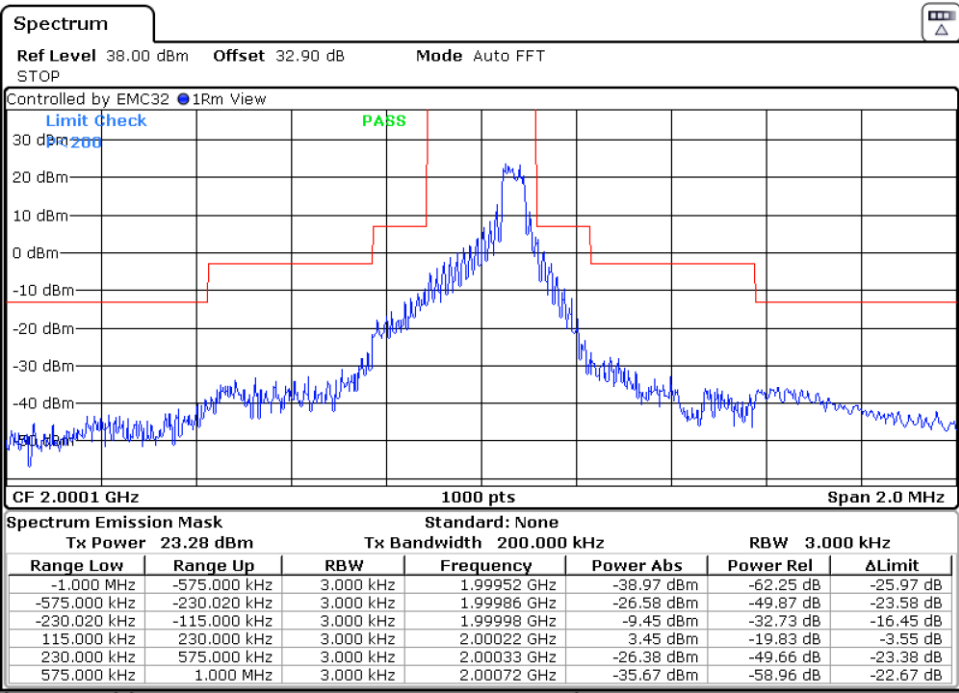
High Channel



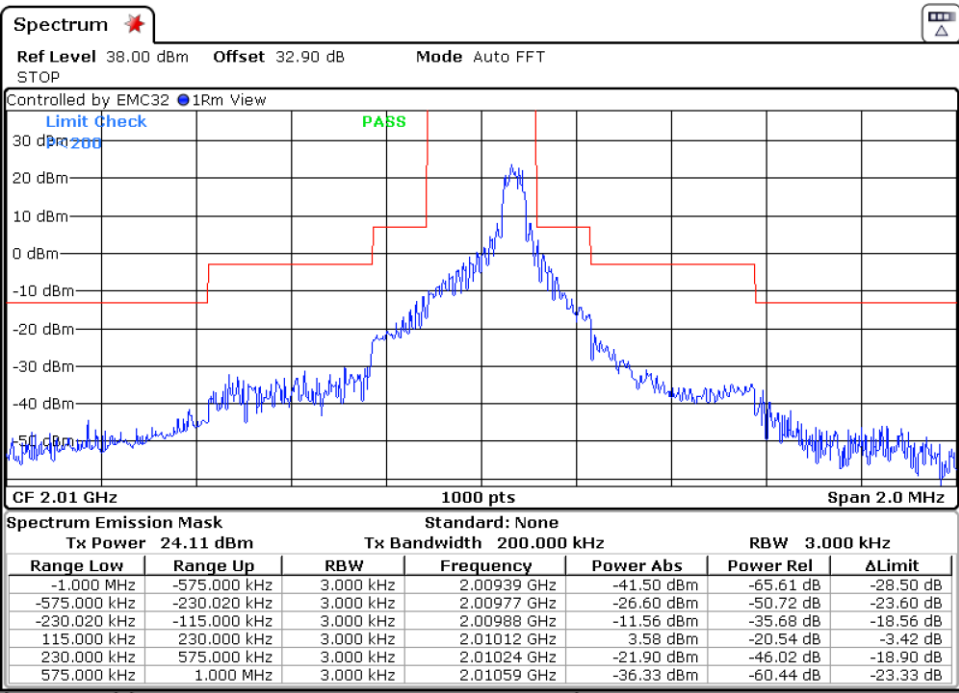
Modulation: QPSK (3SC9)

Results

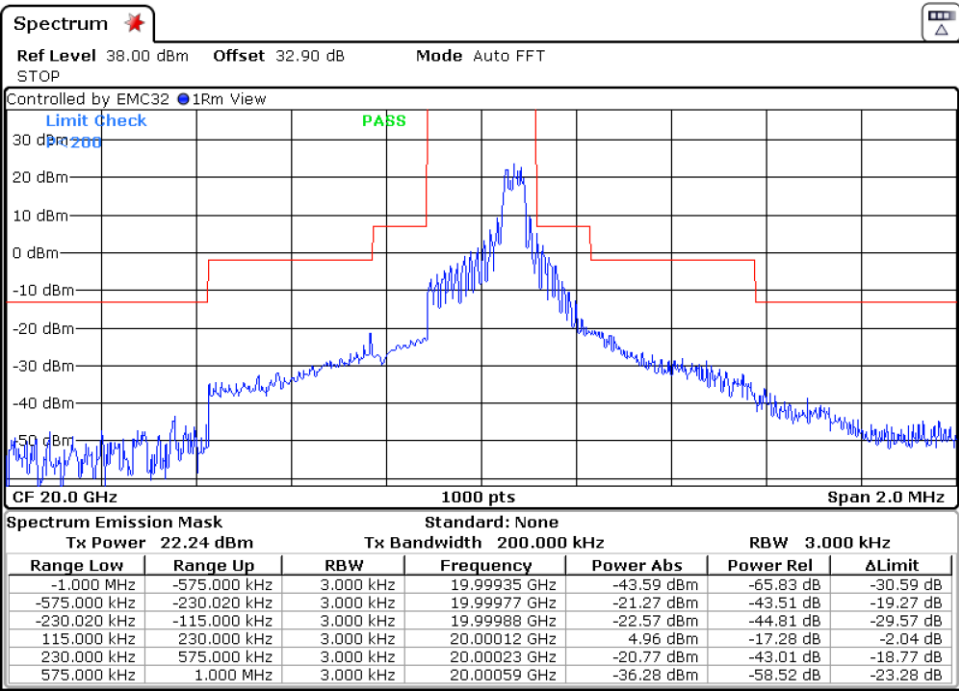
Low Channel



Middle Channel



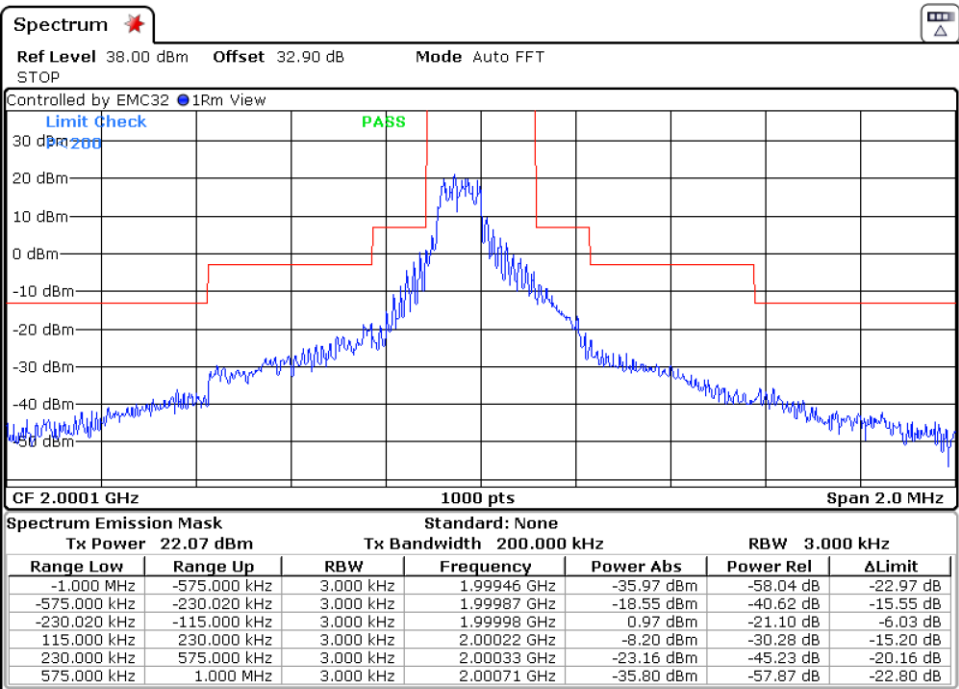
High Channel



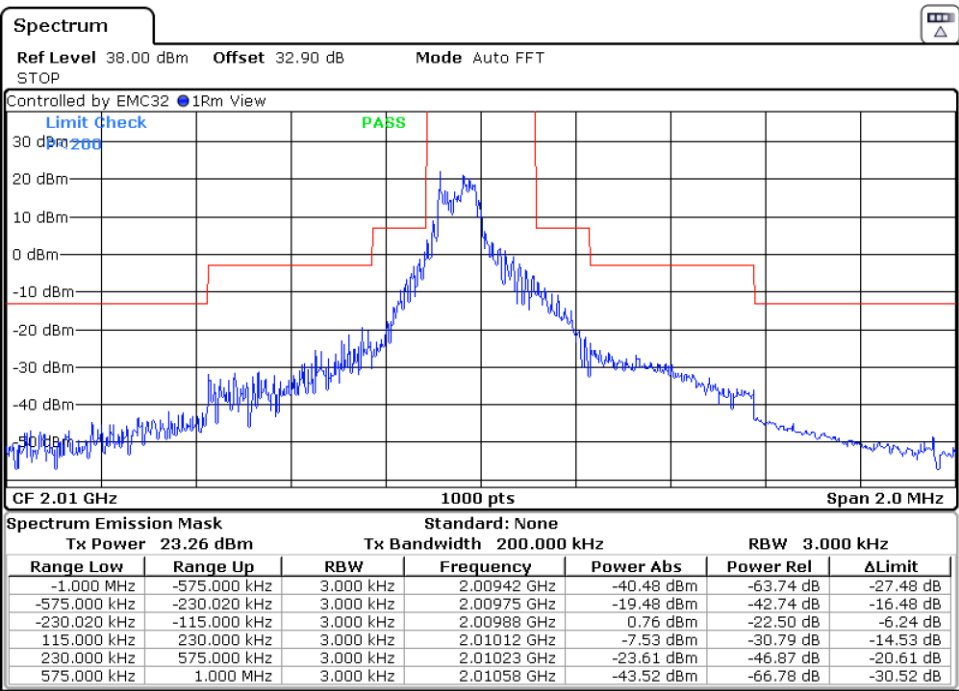
Modulation: QPSK (6SC0)

Results

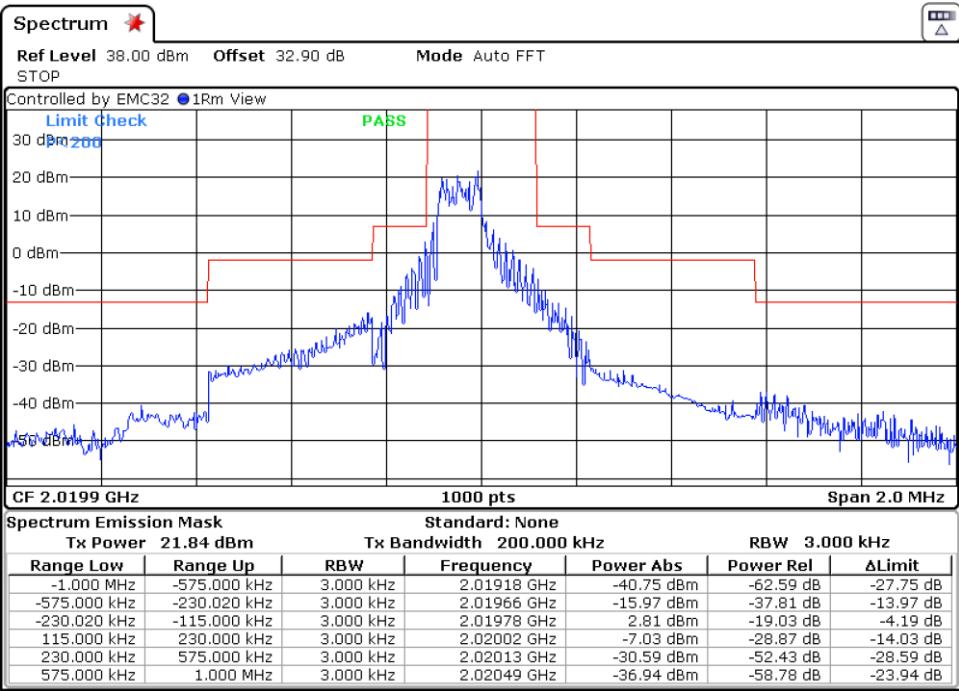
Low Channel



Middle Channel



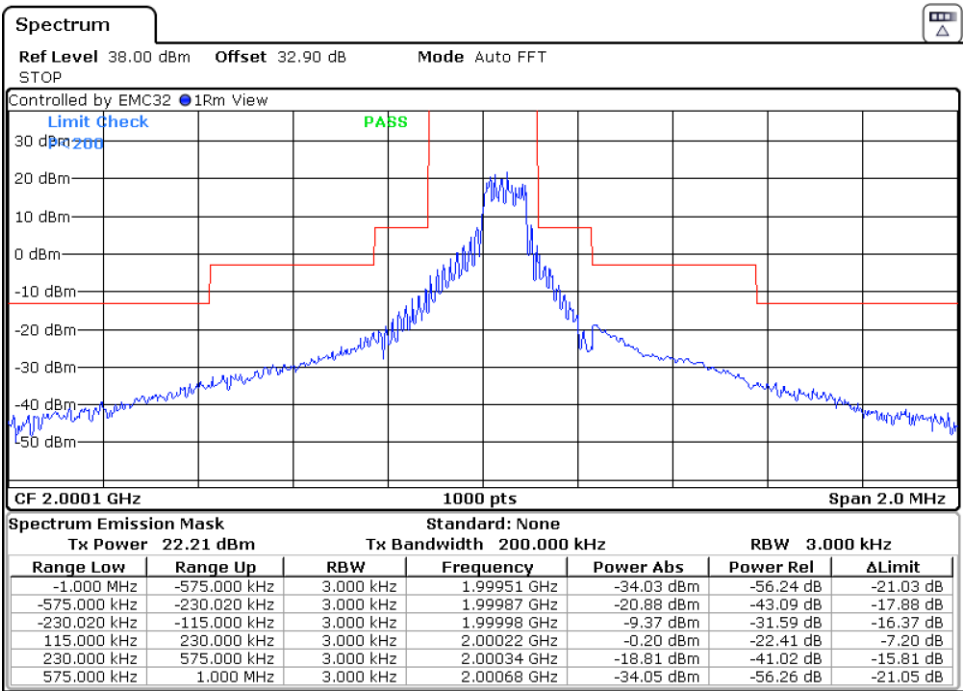
High Channel



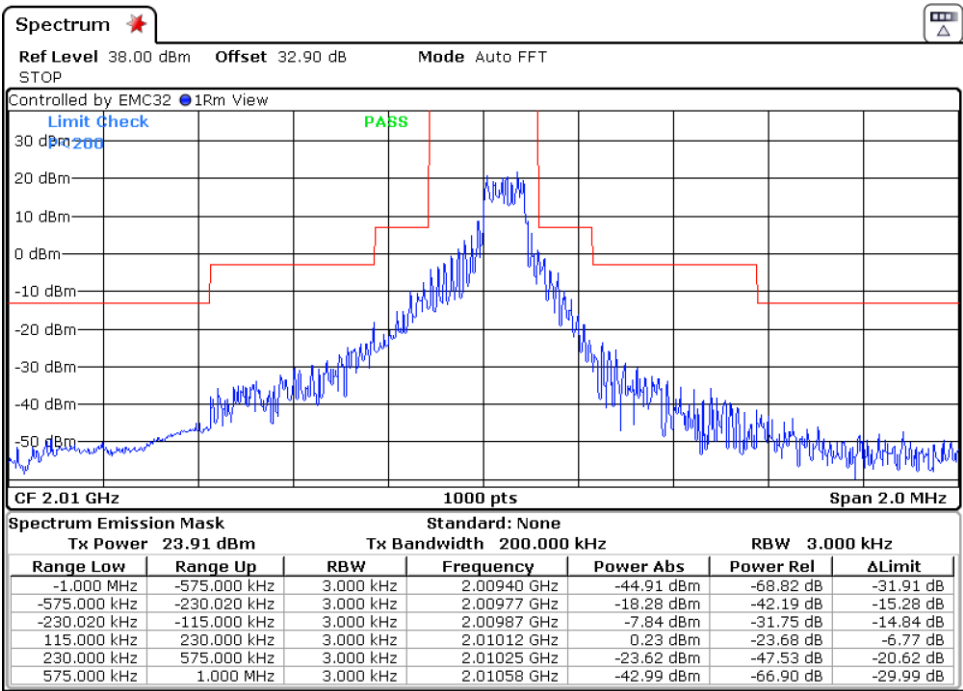
Modulation: QPSK (6SC6)

Results

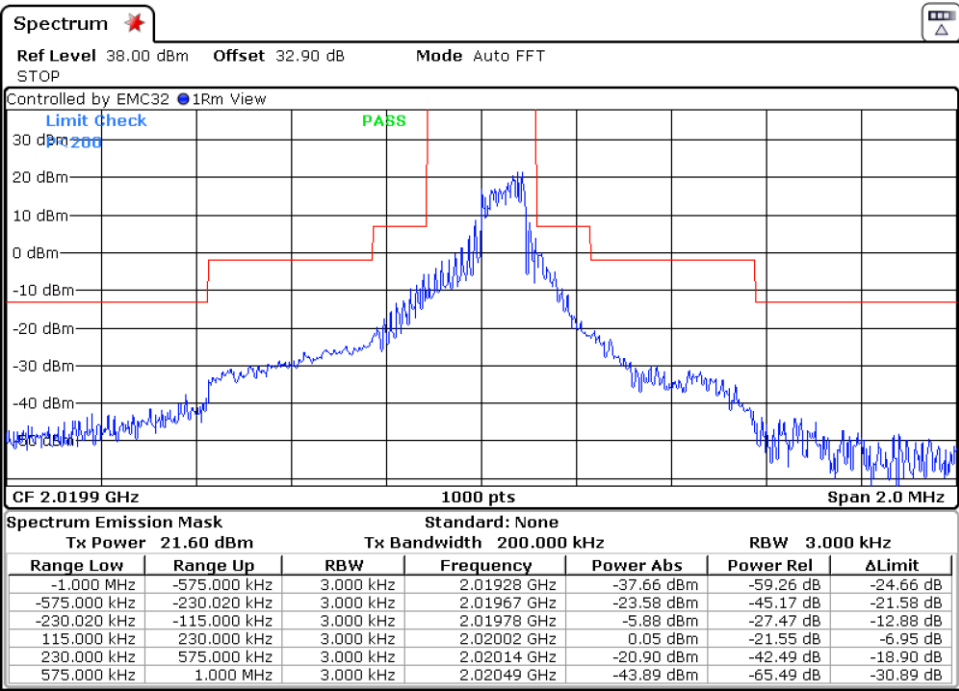
Low Channel



Middle Channel



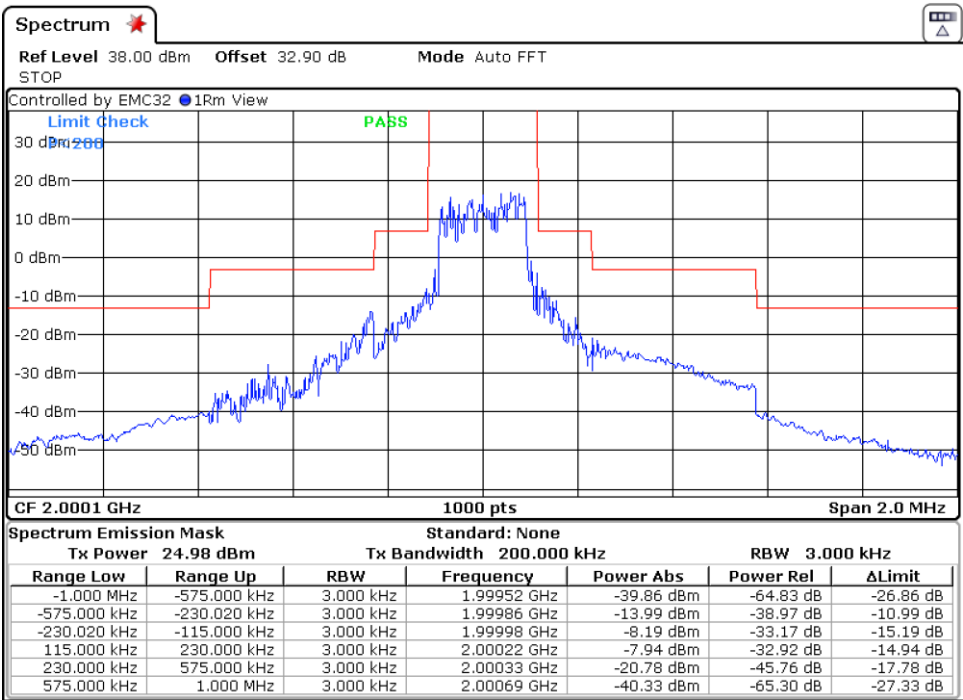
High Channel



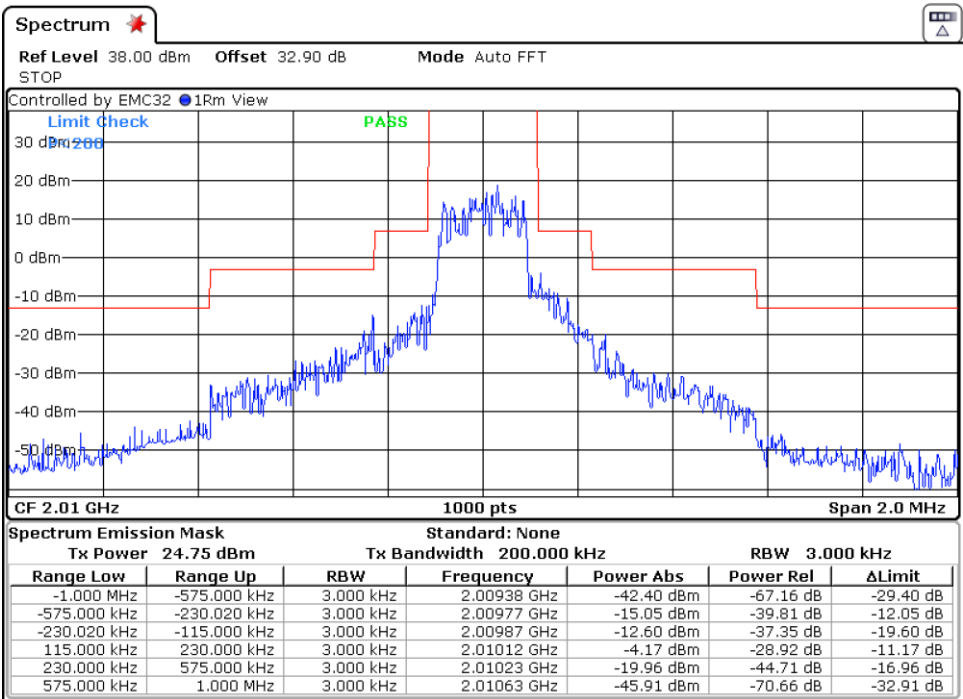
Modulation: QPSK (12SC0)

Results

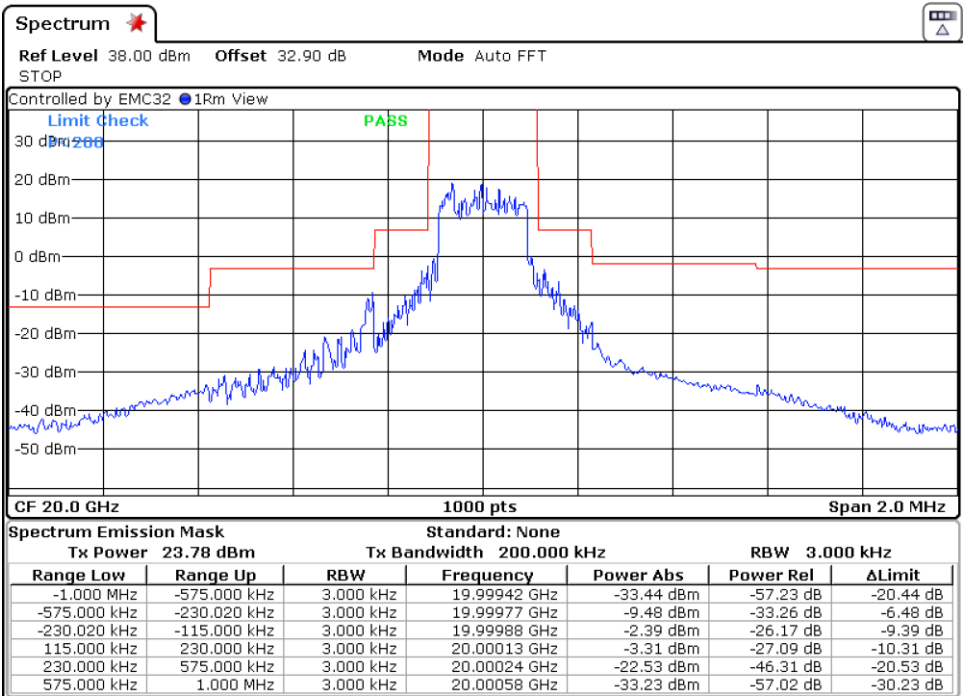
Low Channel



Middle Channel



High Channel



Verdict

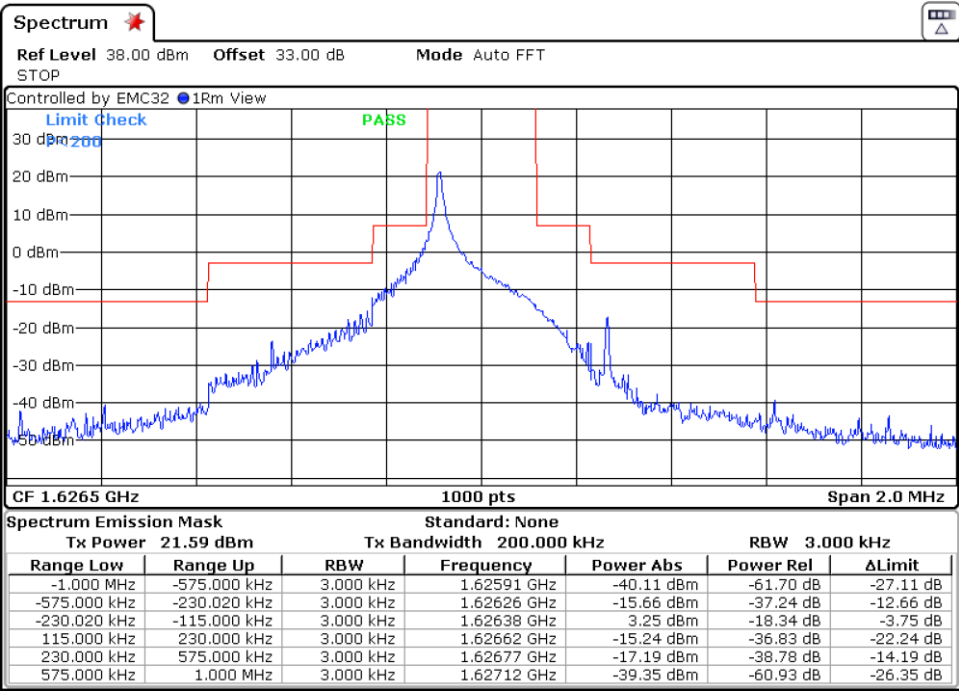
Pass

Band: 255 SCS 3.75 kHz

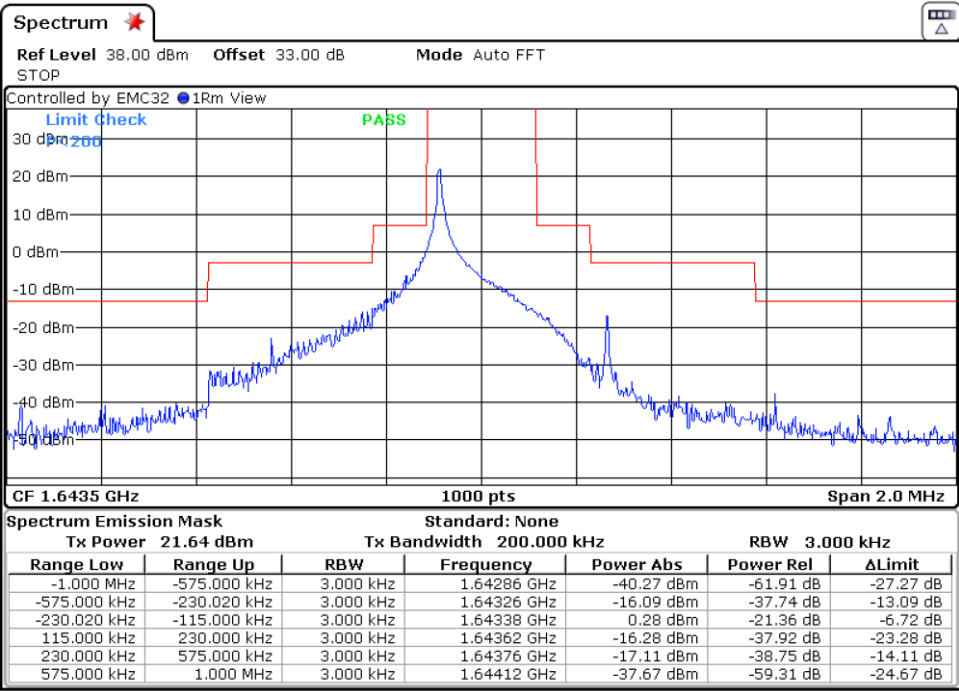
Modulation: BPSK (1SC0)

Results

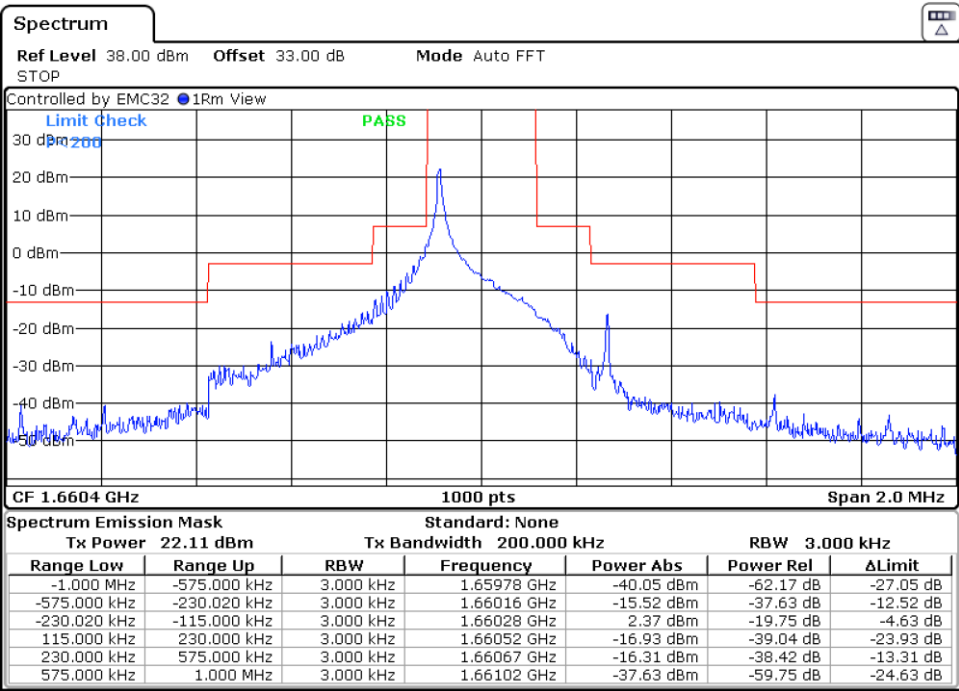
Low Channel



Middle Channel



High Channel



Modulation: BPSK (1SC47)
Results

Low Channel

