



FCC TEST REPORT

Report No:STS2108135W01

Issued for

Dongguan Weiermac Electronic Technology Co., Ltd.

Room 203, No.153, Dongcheng Section, Guanlong Road,
Dongcheng Street, Dongguan City, Guangdong Province China

Product Name:	Wireless Microphone
Brand Name:	ZHIZNG
Model Name:	X6TX
Series Model:	X200TX,X200S,X6Q,X6,X6S
FCC ID:	2A3JP-X6TX
Test Standard:	FCC Part 74 Rules

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TEST RESULT CERTIFICATION

Applicant's Name: Dongguan Weiermac Electronic Technology Co., Ltd.
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Dongcheng Street, Dongguan City, Guangdong Province China
Manufacturer's Name.....: Dongguan Weiermac Electronic Technology Co., Ltd.
Address.....: Room 203, No.153, Dongcheng Section, Guanlong Road,
Dongcheng Street, Dongguan City, Guangdong Province China

Product Description

Product Name: Wireless Microphone
Brand Name: ZHIZNG
Model Name.....: X6TX
Series Model.....: X200TX,X200S,X6Q,X6,X6S

Test Standards: FCC Part 74 Rules

Test Procedure.....: ANSI C63.10-2013; C63.26-2015

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test :
Date of receipt of test item : 04 Aug. 2021
Date of performance of tests..... : 04 Aug. 2021 ~ 15 Oct. 2021
Date of Issue : 18 Oct. 2021
Test Result..... : Pass

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

Authorized Signatory :

(Vita Li)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	18 Oct. 2021	STS2108135W01	ALL	Initial Issue





1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

The EUT has been tested according to FCC CFR 47:

Part 2: Frequency Allocations and Radio Treaty Matters: General Rules and Regulations (10-1-05 Edition)

Part 74: Experimental Radio, Auxiliary, Special Broadcast and other program distributional services

Emission			
Standard	Item	Limit	Result
FCC 2.1053; 74.861(e)(6)	Radiated Spurious Emission	Refer to 74.861e(6)	PASS
FCC 2.1046 (a), 74.861(e)(1)	RF Output Power	250 mW	PASS
FCC 2.1047 (b), 74.861(e)(3)	Modulation Deviation	Refer to 74.861e(2)	PASS
FCC 2.1047 (a)	Audio Frequency Response	Refer to 2.1047(a)	PASS
FCC 74.861 (e)(5)	Occupied Bandwidth	< 200 KHz	PASS
FCC 74.861 (e)(6)(i) (ii); FCC 2.1049	Emission Mask	Refer to 74.861e(6)	PASS
2.1055(b); 74.861 e(4)	Frequency Stability vs. Temperature	Refer to 74.861e(4)	PASS
2.1055(a)(1); 74.861 e(4)	Frequency Stability vs. Voltage	Refer to 74.861e(4)	PASS
FCC 15.207	Line Conducted Emissions	Refer to 15.207	PASS

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report.



1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	All emissions, radiated 30-1GHz	$\pm 4.39\text{dB}$
4	All emissions, radiated 1G-6GHz	$\pm 5.10\text{dB}$
5	All emissions, radiated >6G	$\pm 5.48\text{dB}$
6	Conducted Emission (9KHz-150KHz)	$\pm 2.79\text{dB}$
7	Conducted Emission (150KHz-30MHz)	$\pm 2.80\text{dB}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	Wireless Microphone
Brand Name:	ZHIZNG
Model Name:	X6TX
Series Model :	X200TX,X200S,X6Q,X6,X6S
Model Difference description:	Only difference in model name.
Emission Bandwidth:	92.835KHz
Battery:	Rated Voltage: 3.7V Charge Limit Voltage: 4.2V Capacity: 700mAh
Operation Frequency Range	Band A: 550.125 MHz- 564.825 MHz Band B: 572.125 MHz- 586.825 MHz Band C: 518.175 MHz- 532.875 MHz Band B: 533.375 MHz- 548.075 MHz
Maximum Transmitter Power:	7.096 mW(8.51dBm)
Modulation mode / type:	FM
Frequency Tolerance	0.000814%
Temperature Range:	-30℃-50℃
Test frequency list:	See Note 4.
Software version number:	N/A
Hardware version number:	N/A

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.



2.

Channel List For Band A							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	550.725	14	554.625	27	558.525	40	562.425
2	551.025	15	554.925	28	558.825	41	562.725
3	551.325	16	555.225	29	559.125	42	563.025
4	551.625	17	555.525	30	559.425	43	563.325
5	551.925	18	555.825	31	559.725	44	563.625
6	552.225	19	556.125	32	560.025	45	563.925
7	552.525	20	556.425	33	560.325	46	564.225
8	552.825	21	556.725	34	560.625	47	564.525
9	553.125	22	557.025	35	560.925	48	564.825
10	553.425	23	557.325	36	561.225	49	565.125
11	553.725	24	557.625	37	561.525	50	565.425
12	554.025	25	557.925	38	561.825	/	/
13	554.325	26	558.225	39	562.125	/	/

Channel List For Band B							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	572.125	14	576.025	27	579.925	40	583.825
2	572.425	15	576.325	28	580.225	41	584.125
3	572.725	16	576.625	29	580.525	42	584.425
4	573.025	17	576.925	30	580.825	43	584.725
5	573.325	18	577.225	31	581.125	44	585.025
6	573.625	19	577.525	32	581.425	45	585.325
7	573.925	20	577.825	33	581.725	46	585.625
8	574.225	21	578.125	34	582.025	47	585.925
9	574.525	22	578.425	35	582.325	48	586.225
10	574.825	23	578.725	36	582.625	49	586.525
11	575.125	24	579.025	37	582.925	50	586.825
12	575.425	25	579.325	38	583.225	/	/
13	575.725	26	579.625	39	583.525	/	/



Channel List For Band C							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	518.175	14	522.075	27	525.975	40	529.875
2	518.475	15	522.375	28	526.275	41	530.175
3	518.775	16	522.675	29	526.575	42	530.475
4	519.075	17	522.975	30	526.875	43	530.775
5	519.375	18	523.275	31	527.175	44	531.075
6	519.675	19	523.575	32	527.475	45	531.375
7	519.975	20	523.875	33	527.775	46	531.675
8	520.275	21	524.175	34	528.075	47	531.975
9	520.575	22	524.475	35	528.375	48	532.275
10	520.875	23	524.775	36	528.675	49	532.575
11	521.175	24	525.075	37	528.975	50	532.875
12	521.475	25	525.375	38	529.275	/	/
13	521.775	26	525.675	39	529.575	/	/

Channel List For Band D							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	533.375	14	537.275	27	541.175	40	545.075
2	533.675	15	537.575	28	541.475	41	545.375
3	533.975	16	537.875	29	541.775	42	545.675
4	534.275	17	538.175	30	542.075	43	545.975
5	534.575	18	538.475	31	542.375	44	546.275
6	534.875	19	538.775	32	542.675	45	546.575
7	535.175	20	539.075	33	542.975	46	546.875
8	535.475	21	539.375	34	543.275	47	547.175
9	535.775	22	539.675	35	543.575	48	547.475
10	536.075	23	539.975	36	543.875	49	547.775
11	536.375	24	540.275	37	544.175	50	548.075
12	536.675	25	540.575	38	544.475	/	/
13	536.975	26	540.875	39	544.775	/	/

3. Table for Filed Antenna

Ant	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	ZHIZNG	X6TX	PIFA	NA	1	Antenna

Note: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.



4. Test frequency list

Test Channel List For Band A		
Test Channel	EUT Channel	Test Frequency (MHz)
lowest	CH01	550.725
middle	CH25	557.925
highest	CH50	565.425

Test Channel List For Band B		
Test Channel	EUT Channel	Test Frequency (MHz)
lowest	CH01	572.125
middle	CH25	579.325
highest	CH50	586.825

Test Channel List For Band C		
Test Channel	EUT Channel	Test Frequency (MHz)
lowest	CH01	518.175
middle	CH25	525.375
highest	CH50	532.875

Test Channel List For Band D		
Test Channel	EUT Channel	Test Frequency (MHz)
lowest	CH01	533.375
middle	CH25	540.575
highest	CH50	578.075

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, please see the above listed frequency for testing.



2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Low Channel
Mode 2	Middle Channel
Mode 3	High Channel
Mode 4	Link Mode

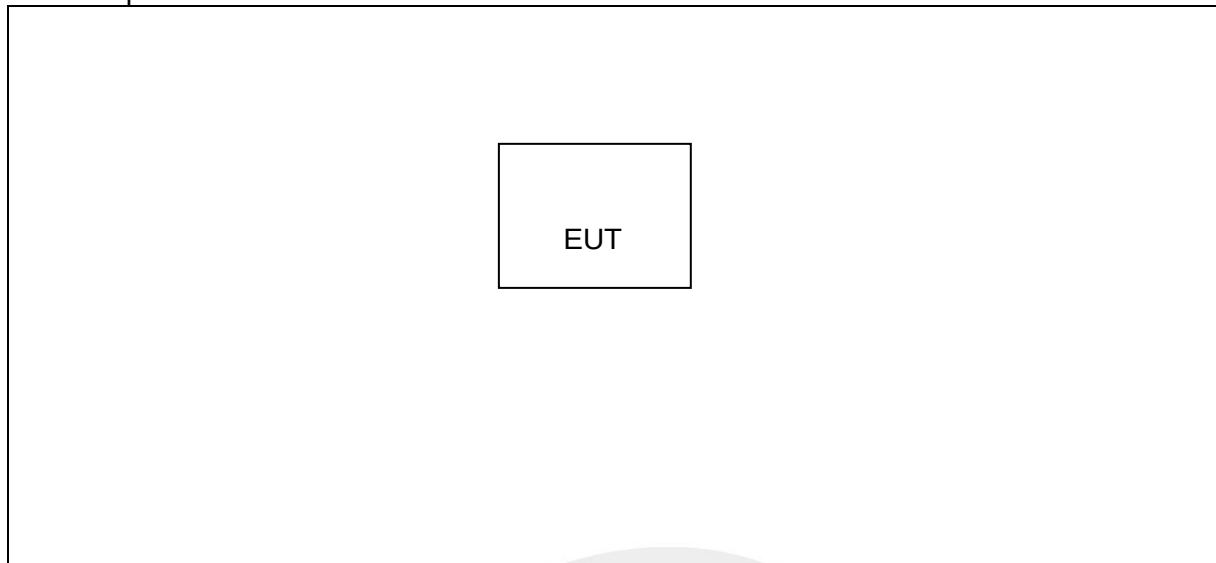
For Radiated Emission/Conducted Emission	
Final Test Mode	Description
Mode 1	Low Channel
Mode 2	Middle Channel
Mode 3	High Channel

Note:

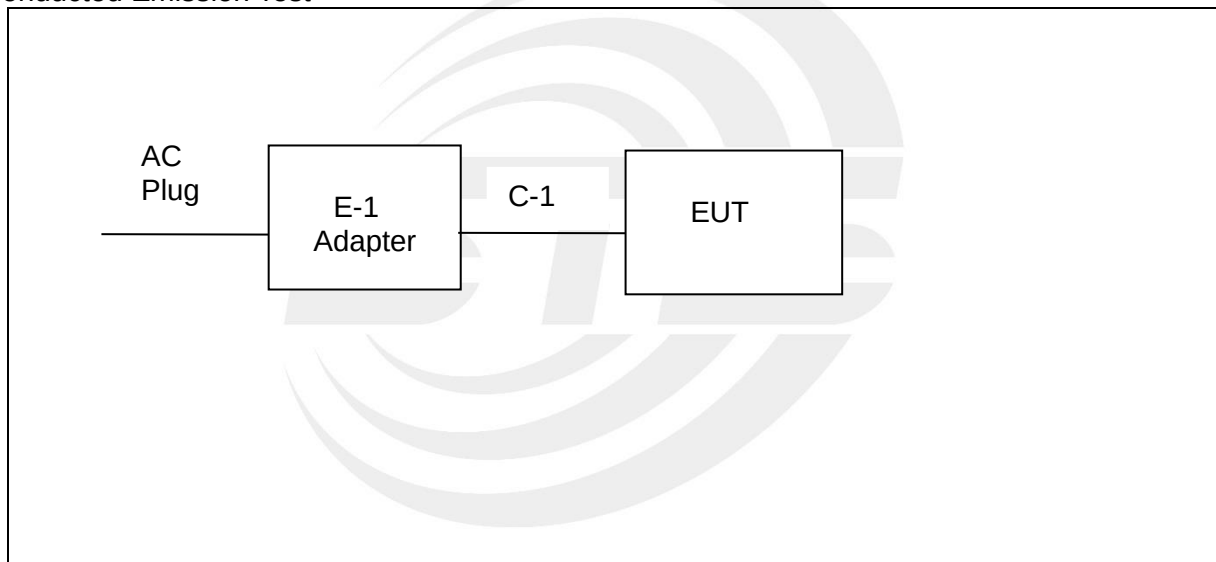
(1) Due to the different configuration and test, in this list only some worse mode. The worst test data of the worse mode is reported by this report.

2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test





2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
C-1	USB Cable	N/A	N/A	60cm	NO

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
E-1	Adapter	HUAWEI	HW-0580450C00	N/A	N/A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (2) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.



2.5 TEST EQUIPMENT

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Bilog Antenna	TESEQ	CBL6111D	34678	2020.10.12	2022.10.11
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2021.10.11	2023.10.10
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2021.10.08	2022.10.07
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2021.09.30	2022.09.29
Signal Analyzer	R&S	FSV 40-N	101823	2021.09.30	2022.09.29
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
Turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
AC Power Source	APC	KDF-11010G	F214050035	N.C.R	N.C.R
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			

RF Connected Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Generator	Agilent	N5182A	MY46240556	2021.09.30	2022.09.29
Signal Analyzer	Agilent	N9020A	MY51110105	2021.03.04	2022.03.03
Universal Radio communication tester	R&S	CMU200	111058	2021.09.29	2022.09.28
Audio analyzer	R&S	UPL	N/A	2021.03.04	2022.03.03
Temperature & Humidity	HH660	Mieo	N/A	2021.10.09	2022.10.08
Temperature& Humidity test chamber	Safety test	AG80L	171200018	2021.03.04	2022.03.03
Programmable power supply	Agilent	E3642A	MY40002025	2021.10.08	2022.10.07
Attenuator	HP	8494B	DC-18G	2021.04.28	2022.04.27
AC Power Source	APC	KDF-11010G	F214050035	N.C.R	N.C.R
Test SW	FARAD	LZ-RF /LzRf-3A3			



3. TEST METHODOLOGY

3.1 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirement in Section 13.1.4.1 of ANSI C63.4:2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Not Applicable (Since the EUT is powered by battery)

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4:2003.

3.2 DESCRIPTION OF TEST MODES

The EUT has been tested under engineering test mode condition and the EUT staying in continuous transmitting mode.

3.3 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.



4. FCC PART 74 REQUIREMENTS

4.1 RADIATED SPURIOUS EMISSION

TEST LIMITS

According to CFR 47 section 74.861 e (6)(iii), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(\text{dBW}) - [43 + 10\log(P)] (\text{dB})$$

$$= [30 + 10\log(P)] (\text{dBm}) - [43 + 10\log(P)] (\text{dB})$$

$$= -13\text{dBm}.$$

According to CFR 47 section 74.861 e (7), Beyond one megahertz below and above the carrier frequency, emissions shall comply with the limits specified in section 8.4 of ETSI EN 300 422-1 v1.4.2 (2011-08).

4.2 EMISSION MASK I

TEST LIMITS

- According to CFR 47 section 74.861 e (6), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

- (1) On any frequency removed from the operating frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: at least 25 dB;
- a. (2) On any frequency removed from the operating frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: at least 35 dB;
- (3) On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least $43 + 10\log 10 \cdot (\text{mean output power in watts})$ dB;

4.3 EMISSION MASK II

TEST LIMITS

- According to ETSI EN 300 422-1 V1.5.1 Clause 8.3.1.2,

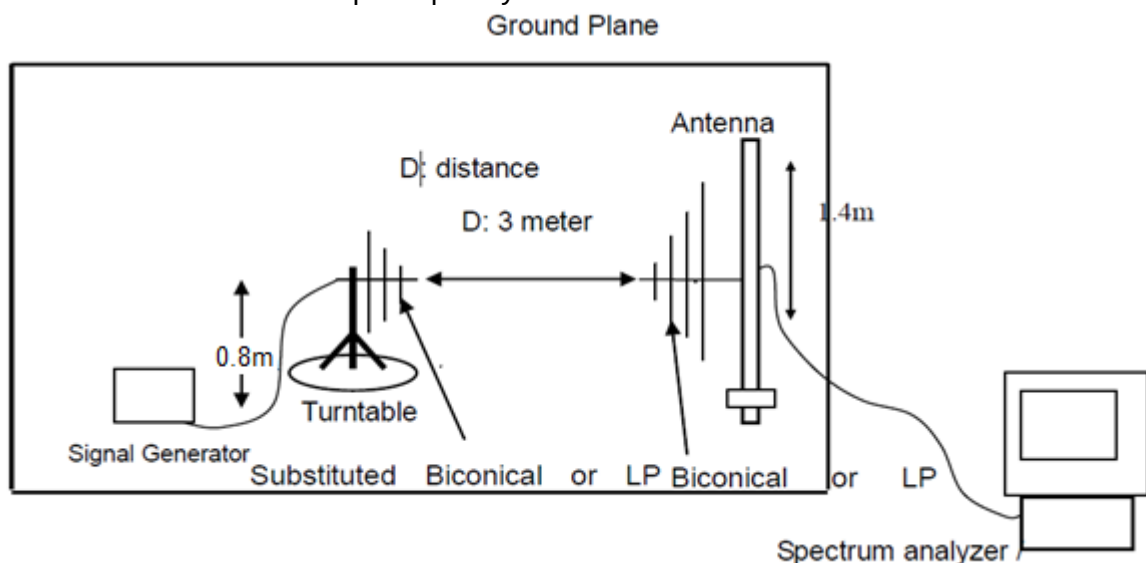
- a. The transmitter output spectrum shall be within the mask defined in figure 3 where B is the declared channel bandwidth

TEST PROCEDURE

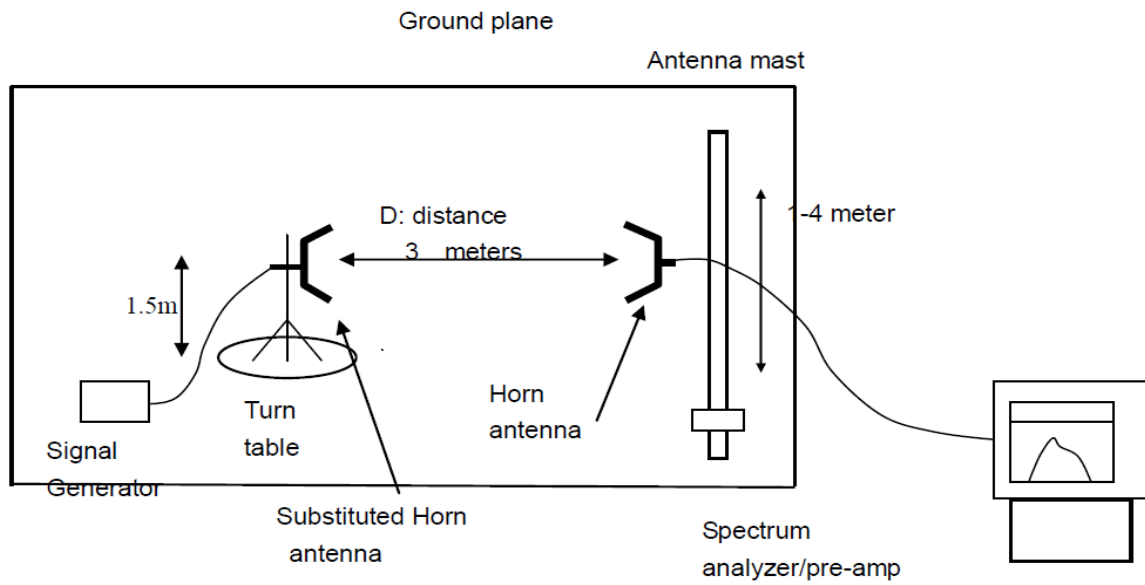
- a. On a test site, the EUT shall be placed on a turntable and in the position closest to the normal use as declared by the user.
- b. The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
- c. The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
- d. The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
- e. The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
- f. The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- g. The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
- h. The maximum signal level detected by the measuring receiver shall be noted.
- i. The measurement shall be repeated with the test antenna set to horizontal polarization.
- j. Replace the antenna with a proper Antenna (substitution antenna).
- k. The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
- l. The substitution antenna shall be connected to a calibrated signal generator.
- m. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- n. The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
- o. The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
- p. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
- q. The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

TEST CONFIGURATION

(A) Radiated Emission Test-Up Frequency Above 30MHz



(B) Radiated Emission Test-Up Frequency Above 1GHz





TEST RESULTS

Band A

(30-6000)MHz							
The Worst Test Results Low Channel 550.725 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1101.10	-39.65	6.88	4.72	-37.49	-13.00	-24.49	H
1651.91	-38.69	9.63	7.08	-36.14	-13.00	-23.14	H
2202.67	-30.78	10.50	10.92	-31.20	-13.00	-18.20	H
1100.83	-43.14	6.88	4.72	-40.98	-13.00	-27.98	V
1651.99	-43.49	9.63	7.08	-40.94	-13.00	-27.94	V
2202.51	-42.33	10.50	10.92	-42.75	-13.00	-29.75	V
The Worst Test Results Mid Channel 557.925 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1115.15	-36.09	6.88	4.72	-33.93	-13.00	-20.93	H
1673.36	-42.61	9.63	7.08	-40.06	-13.00	-27.06	H
2231.04	-37.75	10.50	10.92	-38.17	-13.00	-25.17	H
1115.26	-37.06	6.88	4.72	-34.90	-13.00	-21.90	V
1673.36	-31.79	9.63	7.08	-29.24	-13.00	-16.24	V
2231.07	-36.31	10.50	10.92	-36.73	-13.00	-23.73	V
The Worst Test Results High Channel 565.425 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1130.59	-36.09	6.88	4.72	-33.93	-13.00	-20.93	H
1696.31	-42.61	9.63	7.08	-40.06	-13.00	-27.06	H
2261.52	-37.75	10.50	10.92	-38.17	-13.00	-25.17	H
1130.50	-37.06	6.88	4.72	-34.90	-13.00	-21.90	V
1696.32	-31.79	9.63	7.08	-29.24	-13.00	-16.24	V
2261.41	-36.31	10.50	10.92	-36.73	-13.00	-23.73	V

**Band B****(30-6000)MHz****The Worst Test Results Low Channel 572.125 MHz**

Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1142.84	-39.65	6.88	4.72	-37.49	-13.00	-24.49	H
1716.46	-38.87	9.63	7.08	-36.32	-13.00	-23.32	H
2288.05	-30.60	10.50	10.92	-31.02	-13.00	-18.02	H
1143.11	-43.10	6.88	4.72	-40.94	-13.00	-27.94	V
1716.33	-43.90	9.63	7.08	-41.35	-13.00	-28.35	V
2288.11	-42.44	10.50	10.92	-42.86	-13.00	-29.86	V

The Worst Test Results Mid Channel 579.325 MHz

Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1157.87	-36.33	6.88	4.72	-34.17	-13.00	-21.17	H
1737.76	-43.00	9.63	7.08	-40.45	-13.00	-27.45	H
2317.05	-37.95	10.50	10.92	-38.37	-13.00	-25.37	H
1158.01	-37.11	6.88	4.72	-34.95	-13.00	-21.95	V
1737.78	-31.47	9.63	7.08	-28.92	-13.00	-15.92	V
2317.28	-36.57	10.50	10.92	-36.99	-13.00	-23.99	V

The Worst Test Results High Channel 586.825 MHz

Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1173.53	-35.81	6.88	4.72	-33.65	-13.00	-20.65	H
1760.53	-42.99	9.63	7.08	-40.44	-13.00	-27.44	H
2347.57	-37.82	10.50	10.92	-38.24	-13.00	-25.24	H
1173.45	-37.46	6.88	4.72	-35.30	-13.00	-22.30	V
1760.51	-31.30	9.63	7.08	-28.75	-13.00	-15.75	V
2347.63	-36.45	10.50	10.92	-36.87	-13.00	-23.87	V

**Band C****(30-6000)MHz****The Worst Test Results Low Channel 518.175 MHz**

Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1035.96	-36.27	6.88	4.72	-34.11	-13.00	-21.11	H
1554.39	-42.97	9.63	7.08	-40.42	-13.00	-27.42	H
2072.14	-37.95	10.50	10.92	-38.37	-13.00	-25.37	H
1035.95	-37.27	6.88	4.72	-35.11	-13.00	-22.11	V
1554.58	-31.65	9.63	7.08	-29.10	-13.00	-16.10	V
2072.00	-36.50	10.50	10.92	-36.92	-13.00	-23.92	V

The Worst Test Results Mid Channel 525.375 MHz

Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1050.17	-36.27	6.88	4.72	-34.11	-13.00	-21.11	H
1576.69	-42.97	9.63	7.08	-40.42	-13.00	-27.42	H
2101.22	-37.95	10.50	10.92	-38.37	-13.00	-25.37	H
1050.16	-37.27	6.88	4.72	-35.11	-13.00	-22.11	V
1576.64	-31.65	9.63	7.08	-29.10	-13.00	-16.10	V
2101.41	-36.50	10.50	10.92	-36.92	-13.00	-23.92	V

The Worst Test Results High Channel 532.875 MHz

Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1065.53	-35.89	6.88	4.72	-33.73	-13.00	-20.73	H
1598.47	-42.86	9.63	7.08	-40.31	-13.00	-27.31	H
2131.28	-38.05	10.50	10.92	-38.47	-13.00	-25.47	H
1065.62	-37.53	6.88	4.72	-35.37	-13.00	-22.37	V
1598.74	-31.28	9.63	7.08	-28.73	-13.00	-15.73	V
2131.18	-36.04	10.50	10.92	-36.46	-13.00	-23.46	V

**Band D****(30-6000)MHz****The Worst Test Results Low Channel 533.375 MHz**

Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1065.75	-39.86	6.88	4.72	-37.70	-13.00	-24.70	H
1600.45	-39.08	9.63	7.08	-36.53	-13.00	-23.53	H
2133.22	-30.51	10.50	10.92	-30.93	-13.00	-17.93	H
1065.95	-43.02	6.88	4.72	-40.86	-13.00	-27.86	V
1600.81	-43.65	9.63	7.08	-41.10	-13.00	-28.10	V
2133.09	-42.37	10.50	10.92	-42.79	-13.00	-29.79	V

The Worst Test Results Mid Channel 540.575 MHz

Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1081.16	-36.39	6.88	4.72	-34.23	-13.00	-21.23	H
1621.76	-42.97	9.63	7.08	-40.42	-13.00	-27.42	H
2162.40	-37.64	10.50	10.92	-38.06	-13.00	-25.06	H
1081.15	-37.00	6.88	4.72	-34.84	-13.00	-21.84	V
1621.35	-31.76	9.63	7.08	-29.21	-13.00	-16.21	V
2162.26	-36.47	10.50	10.92	-36.89	-13.00	-23.89	V

The Worst Test Results High Channel 548.075 MHz

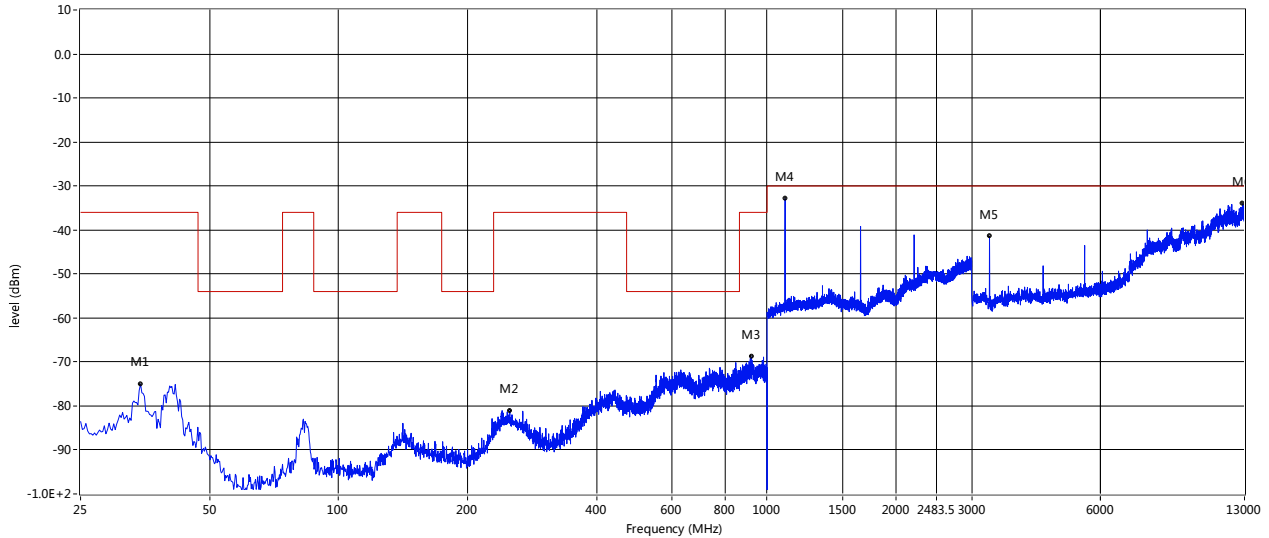
Frequency(MHz)	S	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
	G.Lev (dBm)			(dBm)	(dBm)	(dBm)	
1096.58	-35.89	6.88	4.72	-33.73	-13.00	-20.73	H
1644.72	-42.92	9.63	7.08	-40.37	-13.00	-27.37	H
2192.46	-37.70	10.50	10.92	-38.12	-13.00	-25.12	H
1096.59	-37.21	6.88	4.72	-35.05	-13.00	-22.05	V
1644.32	-31.73	9.63	7.08	-29.18	-13.00	-16.18	V
2192.23	-36.14	10.50	10.92	-36.56	-13.00	-23.56	V



ETSI EN 300 422-1 Clause 8.4 Spurious emissions:

Band A
Low channel
Horizontal

RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_H

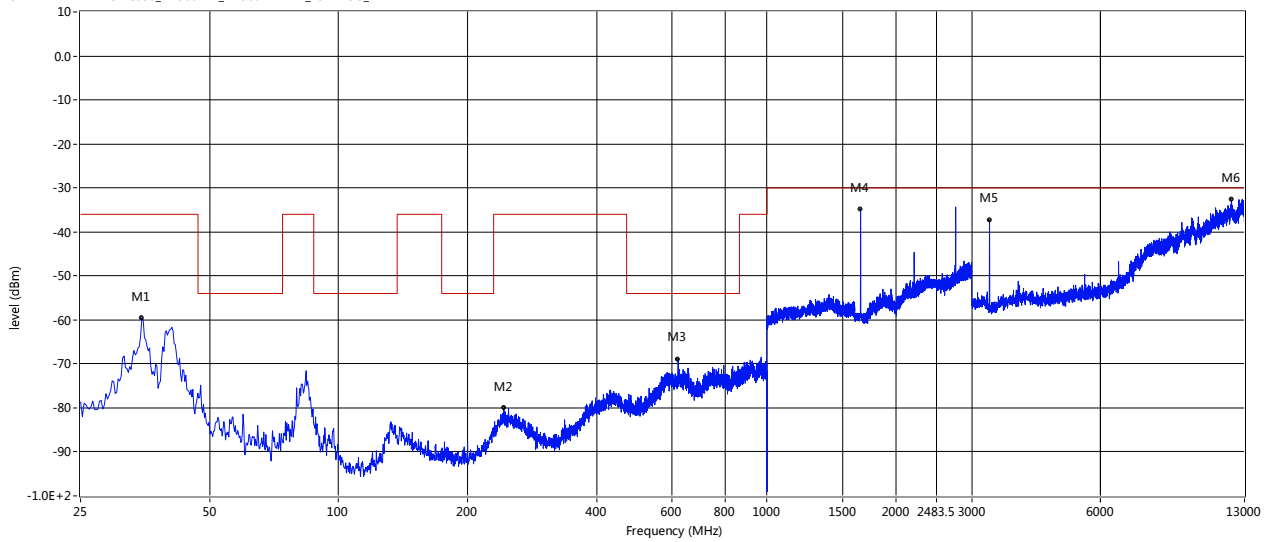


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
34.506	-75.02	-4.32	-36.0	-39.02	0.00	Horizontal	Vertical	Pass
250.956	-81.09	-2.33	-36.0	-45.09	8.00	Horizontal	Vertical	Pass
919.319	-68.87	9.57	-36.0	-32.87	5.00	Horizontal	Vertical	Pass
1101.000	-32.87	12.19	-30.0	-2.87	1.00	Horizontal	Vertical	Pass
3302.500	-41.41	2.02	-30.0	-11.41	8.00	Horizontal	Vertical	Pass
12872.500	-34.05	23.81	-30.0	-4.05	0.00	Horizontal	Vertical	Pass



Vertical

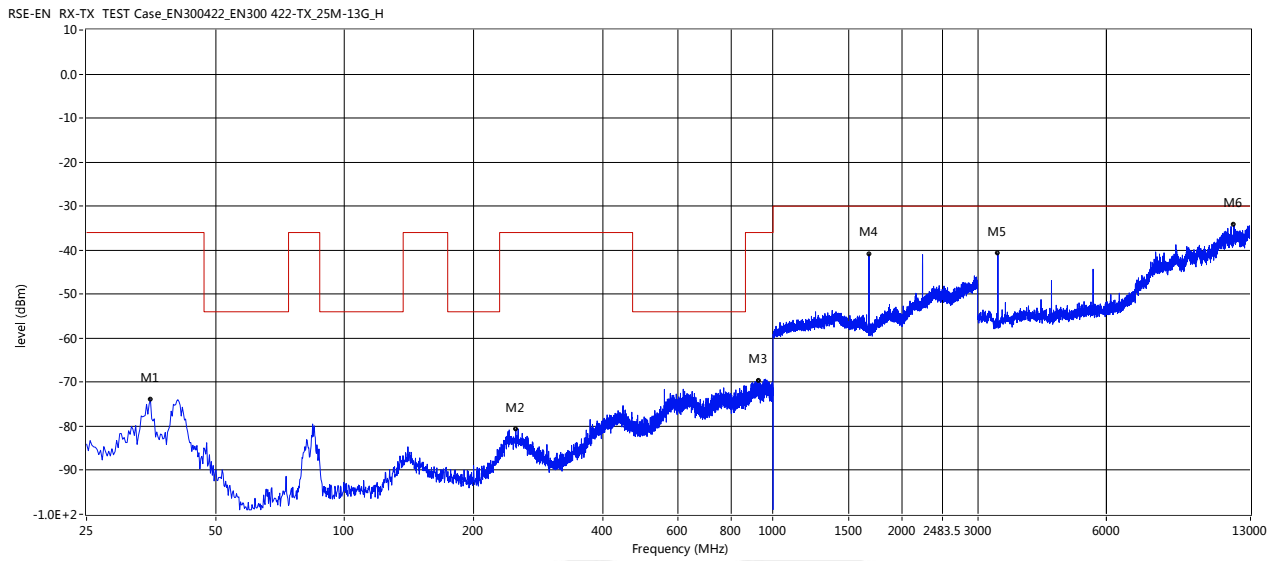
RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
34.750	-59.62	-4.32	-36.0	-23.62	8.00	Vertical	Vertical	Pass
242.913	-80.11	-2.05	-36.0	-44.11	1.00	Vertical	Vertical	Pass
619.994	-68.96	7.28	-54.0	-14.96	10.00	Vertical	Vertical	Pass
1652.500	-30.85	12.07	-30.0	-0.85	1.00	Vertical	Vertical	Pass
3302.500	-37.38	2.15	-30.0	-7.38	1.00	Vertical	Vertical	Pass
12112.500	-32.76	23.63	-30.0	-2.76	7.00	Vertical	Vertical	Pass



Mid channel
Horizontal

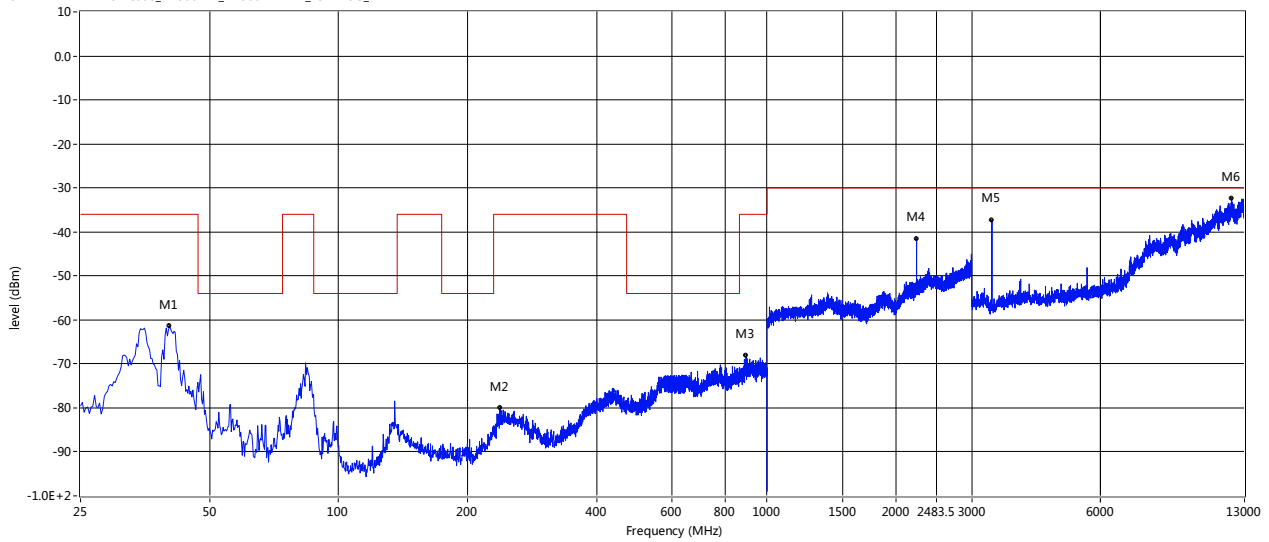


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
35.237	-73.99	-4.31	-36.0	-37.99	7.00	Horizontal	Vertical	Pass
250.956	-80.80	-2.33	-36.0	-44.80	8.00	Horizontal	Vertical	Pass
928.338	-69.58	9.01	-36.0	-33.58	2.00	Horizontal	Vertical	Pass
1673.500	-40.89	11.69	-30.0	-10.89	4.00	Horizontal	Vertical	Pass
3345.000	-40.78	2.15	-30.0	-10.78	8.00	Horizontal	Vertical	Pass
11887.500	-34.30	22.71	-30.0	-4.30	0.00	Horizontal	Vertical	Pass



Vertical

RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V

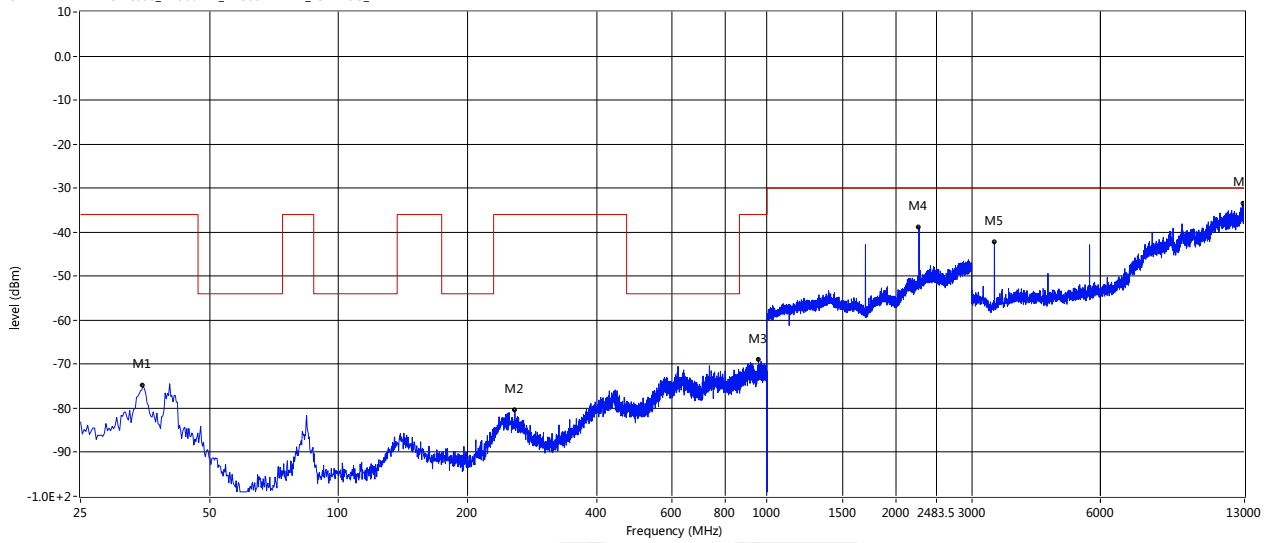


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.356	-61.34	-4.51	-36.0	-25.34	6.00	Vertical	Vertical	Pass
238.038	-80.07	-2.62	-36.0	-44.07	7.00	Vertical	Vertical	Pass
892.750	-68.22	8.56	-36.0	-32.22	6.00	Vertical	Vertical	Pass
2232.000	-41.54	16.93	-30.0	-11.54	10.00	Vertical	Vertical	Pass
3347.500	-37.53	2.23	-30.0	-7.53	1.00	Vertical	Vertical	Pass
12132.500	-32.39	23.63	-30.0	-2.39	8.00	Vertical	Vertical	Pass



High channel Horizontal

RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_H

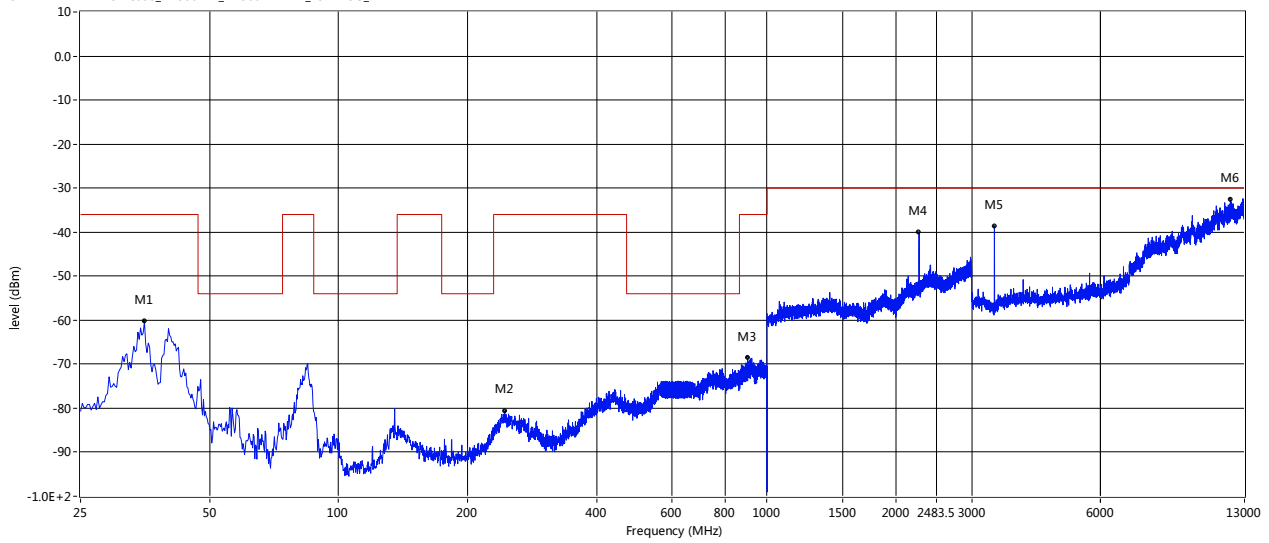


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
34.994	-74.90	-4.32	-36.0	-38.90	8.00	Horizontal	Vertical	Pass
257.781	-80.55	-2.56	-36.0	-44.55	1.00	Horizontal	Vertical	Pass
954.906	-68.99	9.27	-36.0	-32.99	4.00	Horizontal	Vertical	Pass
2261.500	-39.03	17.42	-30.0	-9.03	2.00	Horizontal	Vertical	Pass
3392.500	-42.27	2.31	-30.0	-12.27	1.00	Horizontal	Vertical	Pass
12920.001	-33.61	23.95	-30.0	-3.61	0.00	Horizontal	Vertical	Pass



Vertical

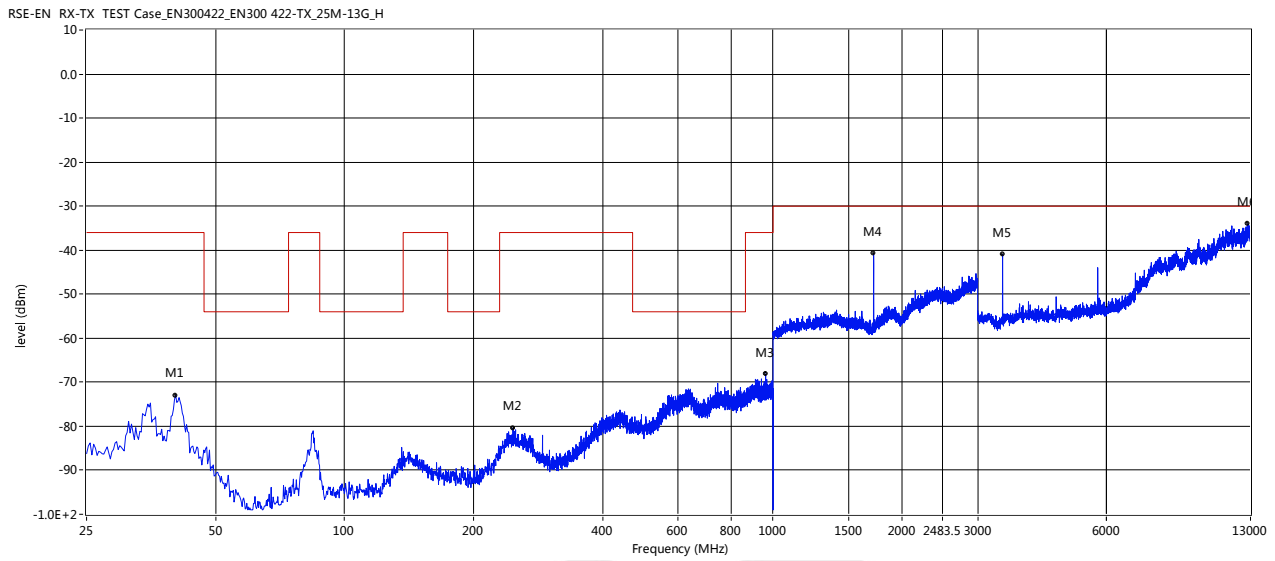
RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
35.237	-60.37	-4.31	-36.0	-24.37	6.00	Vertical	Vertical	Pass
244.131	-80.63	-2.09	-36.0	-44.63	10.00	Vertical	Vertical	Pass
900.306	-68.55	8.83	-36.0	-32.55	8.00	Vertical	Vertical	Pass
2262.000	-40.12	17.42	-30.0	-10.12	4.00	Vertical	Vertical	Pass
3392.500	-38.76	2.31	-30.0	-8.76	3.00	Vertical	Vertical	Pass
12052.500	-32.68	23.21	-30.0	-2.68	8.00	Vertical	Vertical	Pass



Band B
Low channel
Horizontal

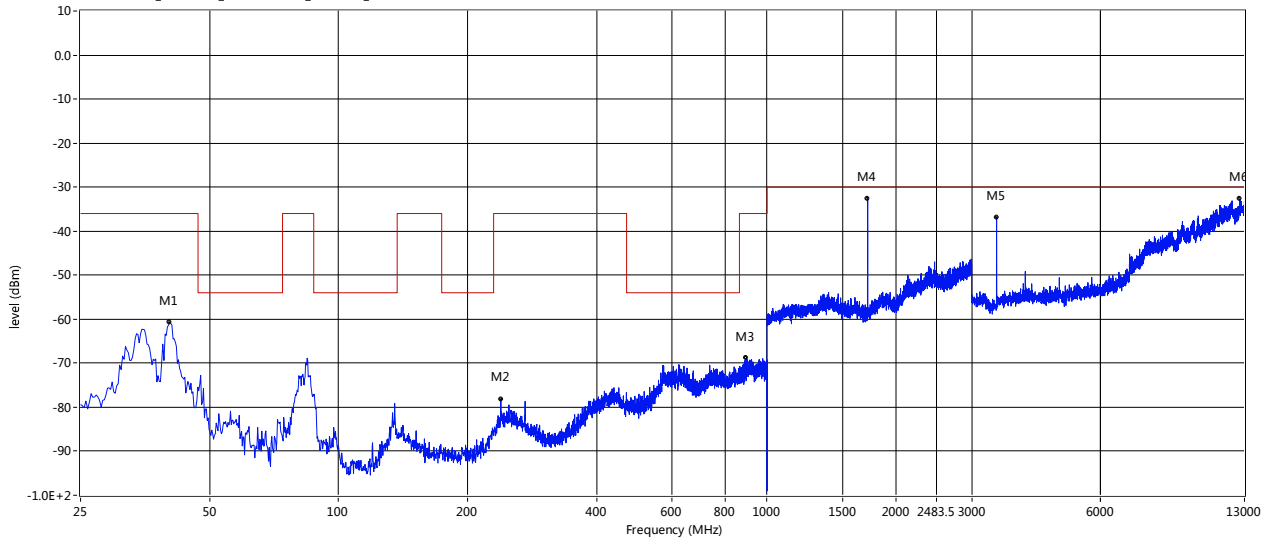


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.356	-72.96	-4.51	-36.0	-36.96	1.00	Horizontal	Vertical	Pass
247.300	-80.37	-2.20	-36.0	-44.37	2.00	Horizontal	Vertical	Pass
960.756	-68.10	9.62	-36.0	-32.10	1.00	Horizontal	Vertical	Pass
1716.500	-40.78	11.71	-30.0	-10.78	10.00	Horizontal	Vertical	Pass
3432.500	-40.99	2.80	-30.0	-10.99	5.00	Horizontal	Vertical	Pass
12822.500	-33.99	23.60	-30.0	-3.99	0.00	Horizontal	Vertical	Pass



Vertical

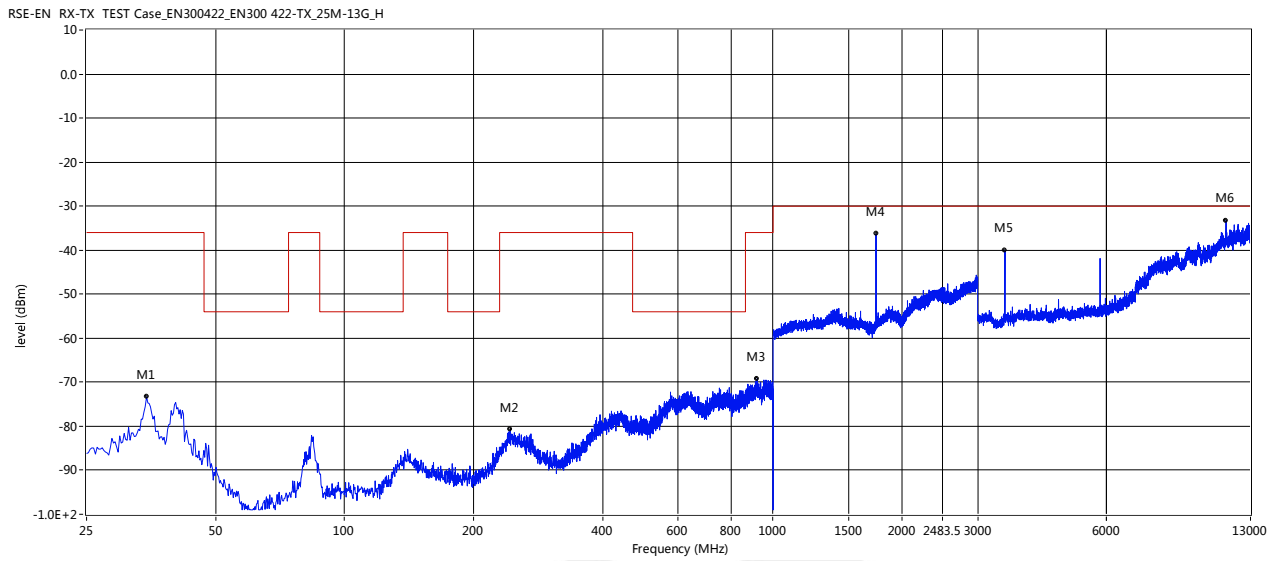
RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.356	-60.80	-4.51	-36.0	-24.80	6.00	Vertical	Vertical	Pass
239.256	-78.17	-2.20	-36.0	-42.17	0.00	Vertical	Vertical	Pass
893.969	-68.87	8.60	-36.0	-32.87	1.00	Vertical	Vertical	Pass
1716.500	-32.63	11.71	-30.0	-2.63	10.00	Vertical	Vertical	Pass
3432.500	-36.92	2.77	-30.0	-6.92	5.00	Vertical	Vertical	Pass
12672.500	-32.76	23.79	-30.0	-2.76	2.00	Vertical	Vertical	Pass



Mid channel
Horizontal

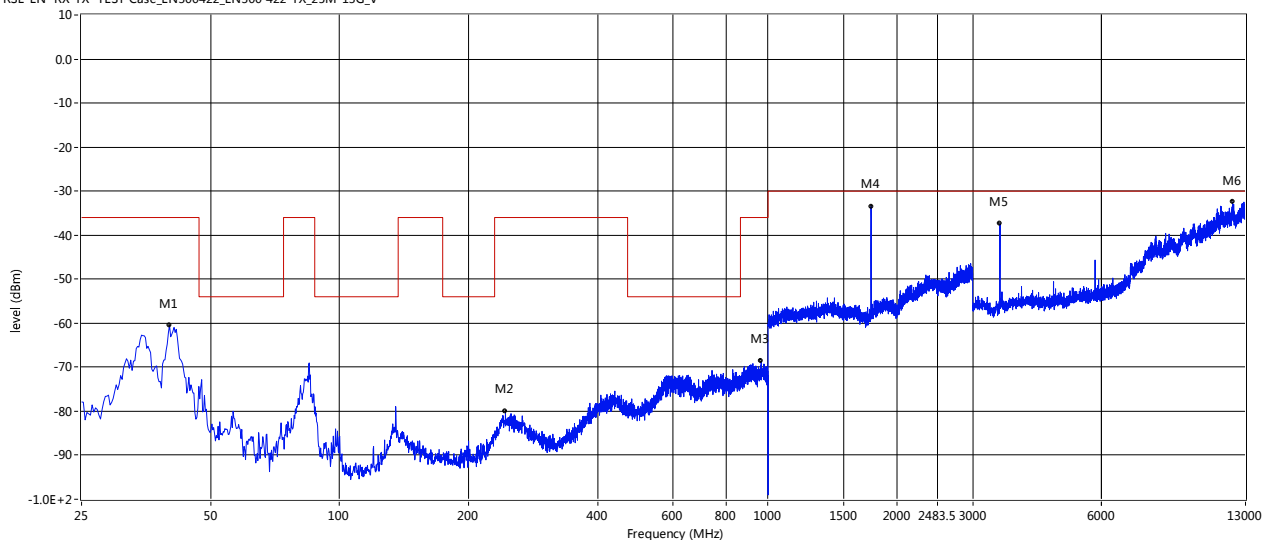


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
34.506	-73.30	-4.32	-36.0	-37.30	10.00	Horizontal	Vertical	Pass
243.644	-80.76	-2.08	-36.0	-44.76	2.00	Horizontal	Vertical	Pass
918.100	-69.17	9.53	-36.0	-33.17	7.00	Horizontal	Vertical	Pass
1738.000	-36.31	12.36	-30.0	-6.31	9.00	Horizontal	Vertical	Pass
3475.000	-39.95	3.42	-30.0	-9.95	1.00	Horizontal	Vertical	Pass
11395.000	-33.23	22.21	-30.0	-3.23	9.00	Horizontal	Vertical	Pass



Vertical

RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V

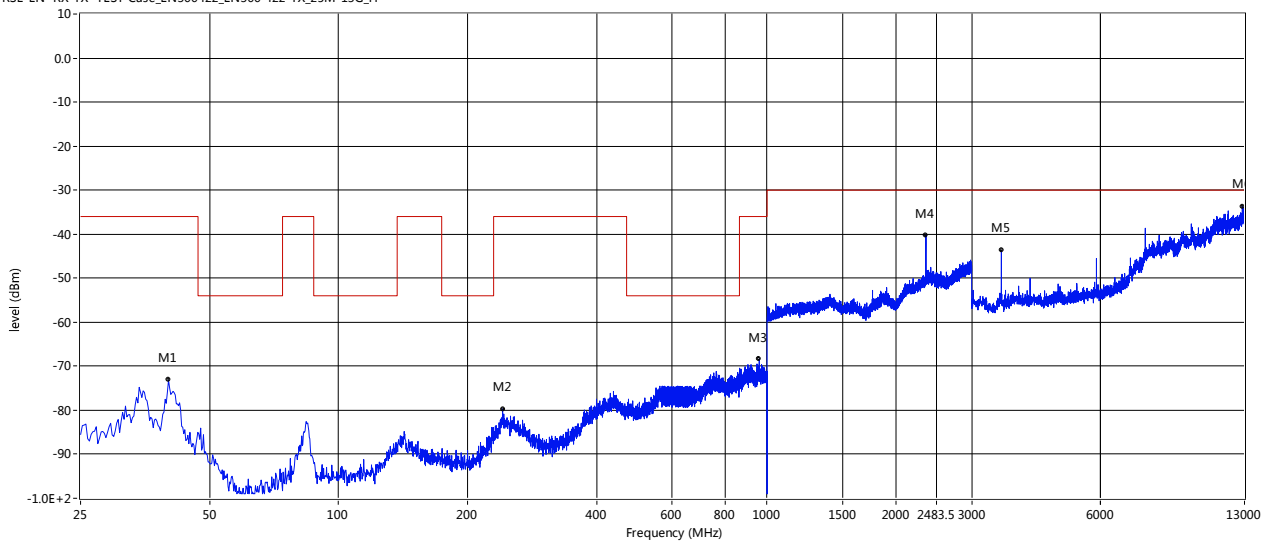


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.112	-60.47	-4.32	-36.0	-24.47	4.00	Vertical	Vertical	Pass
243.888	-79.97	-2.08	-36.0	-43.97	5.00	Vertical	Vertical	Pass
963.194	-68.57	9.54	-36.0	-32.57	4.00	Vertical	Vertical	Pass
1738.500	-33.49	12.38	-30.0	-3.49	8.00	Vertical	Vertical	Pass
3475.000	-37.41	3.37	-30.0	-7.41	4.00	Vertical	Vertical	Pass
12122.500	-32.48	23.63	-30.0	-2.48	8.00	Vertical	Vertical	Pass



High channel Horizontal

RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_H

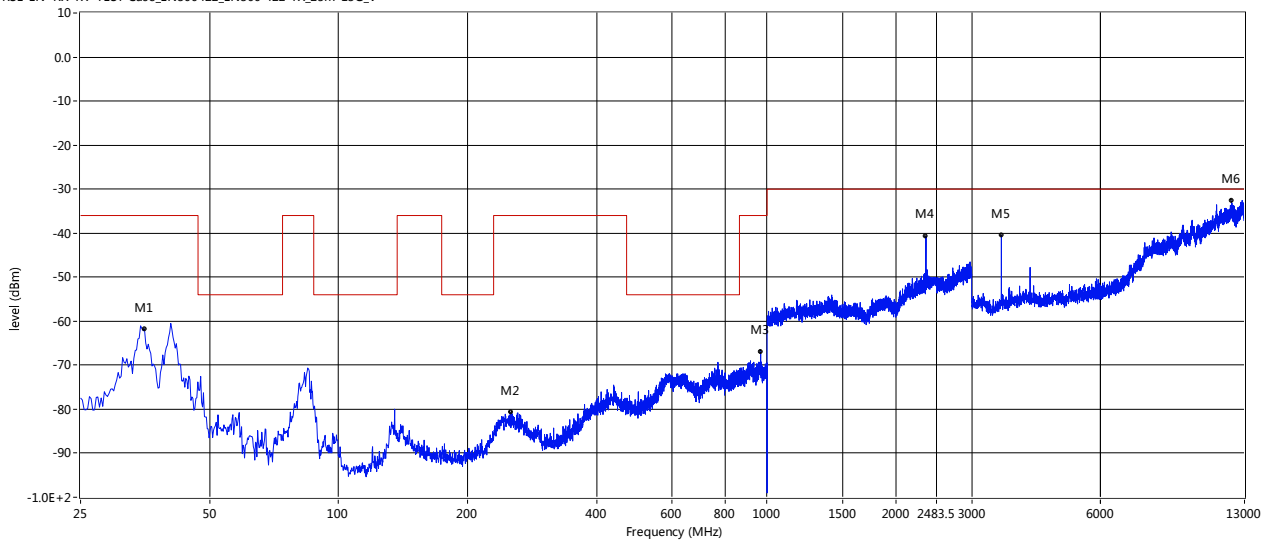


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.112	-73.12	-4.32	-36.0	-37.12	7.00	Horizontal	Vertical	Pass
241.450	-79.69	-2.00	-36.0	-43.69	3.00	Horizontal	Vertical	Pass
958.562	-68.32	9.54	-36.0	-32.32	0.00	Horizontal	Vertical	Pass
2347.500	-40.27	18.83	-30.0	-10.27	7.00	Horizontal	Vertical	Pass
3520.000	-43.77	3.63	-30.0	-13.77	2.00	Horizontal	Vertical	Pass
12850.000	-33.70	23.71	-30.0	-3.70	0.00	Horizontal	Vertical	Pass



Vertical

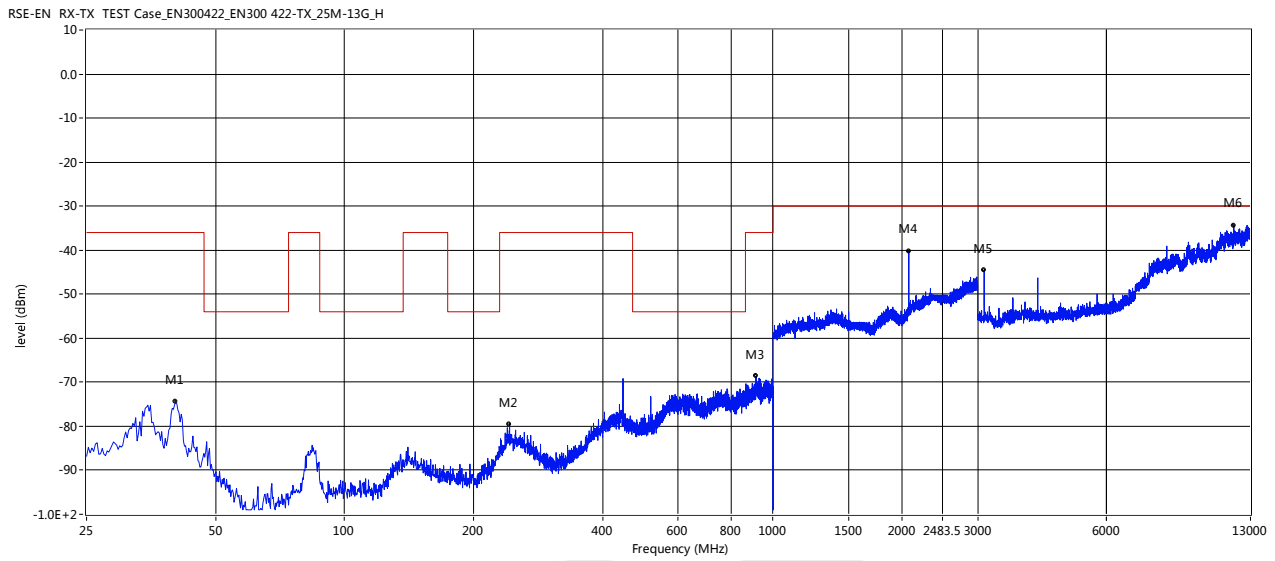
RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
35.237	-60.37	-4.31	-36.0	-24.37	6.00	Vertical	Vertical	Pass
252.175	-80.79	-2.37	-36.0	-44.79	6.00	Vertical	Vertical	Pass
965.875	-66.95	9.46	-36.0	-30.95	8.00	Vertical	Vertical	Pass
2347.500	-40.66	18.83	-30.0	-10.66	1.00	Vertical	Vertical	Pass
3520.000	-40.58	3.65	-30.0	-10.58	2.00	Vertical	Vertical	Pass
12125.000	-32.67	23.63	-30.0	-2.67	4.00	Vertical	Vertical	Pass



Band C
Low channel
Horizontal

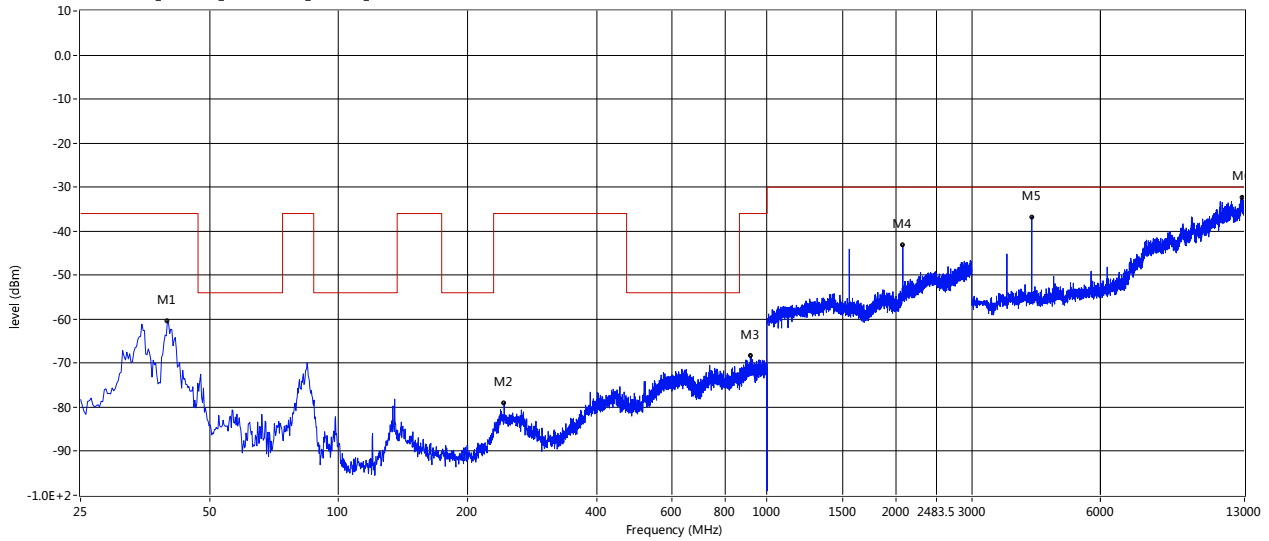


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.356	-74.47	-4.51	-36.0	-38.47	10.00	Horizontal	Vertical	Pass
242.669	-79.65	-2.04	-36.0	-43.65	5.00	Horizontal	Vertical	Pass
912.006	-68.65	9.29	-36.0	-32.65	9.00	Horizontal	Vertical	Pass
2072.500	-40.22	15.01	-30.0	-10.22	1.00	Horizontal	Vertical	Pass
3107.500	-44.98	2.90	-30.0	-14.98	7.00	Horizontal	Vertical	Pass
11882.500	-34.35	22.65	-30.0	-4.35	10.00	Horizontal	Vertical	Pass



Vertical

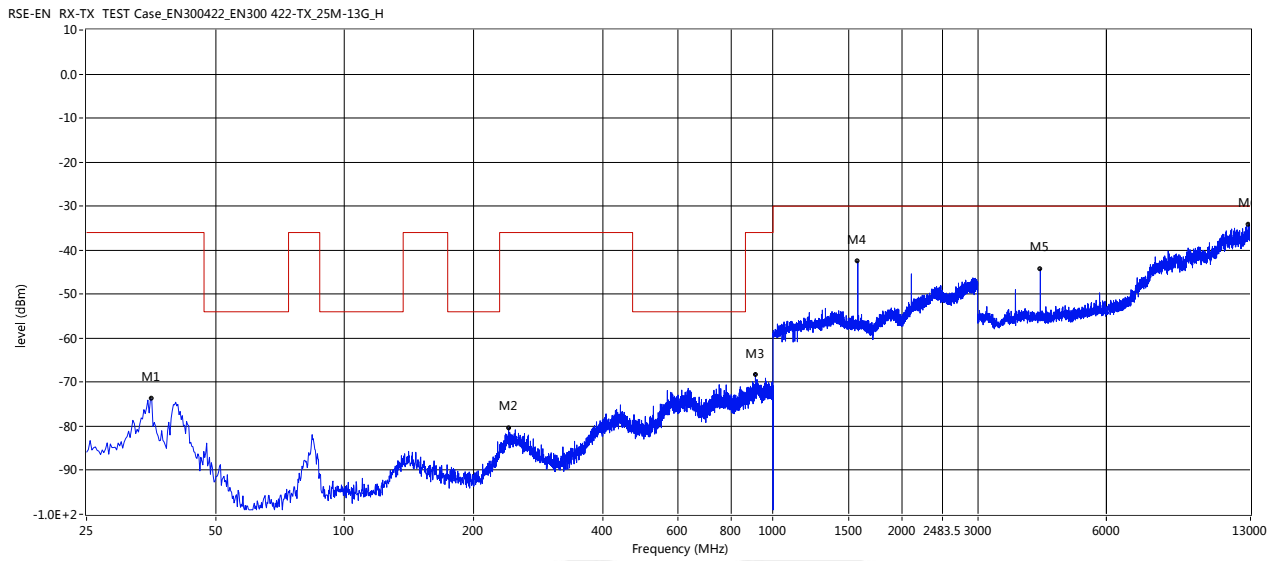
RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
39.869	-60.59	-4.24	-36.0	-24.59	7.00	Vertical	Vertical	Pass
243.400	-79.08	-2.07	-36.0	-43.08	4.00	Vertical	Vertical	Pass
917.369	-68.34	9.50	-36.0	-32.34	10.00	Vertical	Vertical	Pass
2073.000	-38.16	15.02	-30.0	-8.16	10.00	Vertical	Vertical	Pass
4145.000	-36.90	4.59	-30.0	-6.90	9.00	Vertical	Vertical	Pass
12830.000	-32.33	25.18	-30.0	-2.33	2.00	Vertical	Vertical	Pass



Mid channel
Horizontal

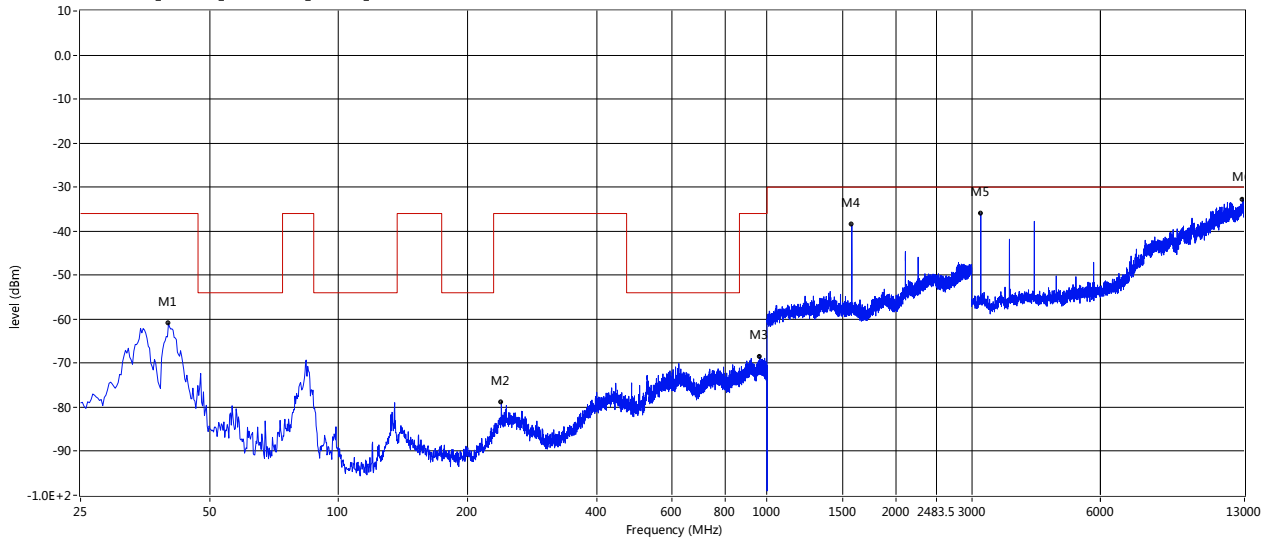


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
35.481	-73.80	-4.31	-36.0	-37.80	5.00	Horizontal	Vertical	Pass
241.450	-80.36	-2.00	-36.0	-44.36	7.00	Horizontal	Vertical	Pass
909.325	-68.30	9.18	-36.0	-32.30	8.00	Horizontal	Vertical	Pass
1576.000	-42.57	12.88	-30.0	-12.57	8.00	Horizontal	Vertical	Pass
4202.500	-44.24	4.37	-30.0	-14.24	0.00	Horizontal	Vertical	Pass
12872.500	-34.19	23.81	-30.0	-4.19	2.00	Horizontal	Vertical	Pass



Vertical

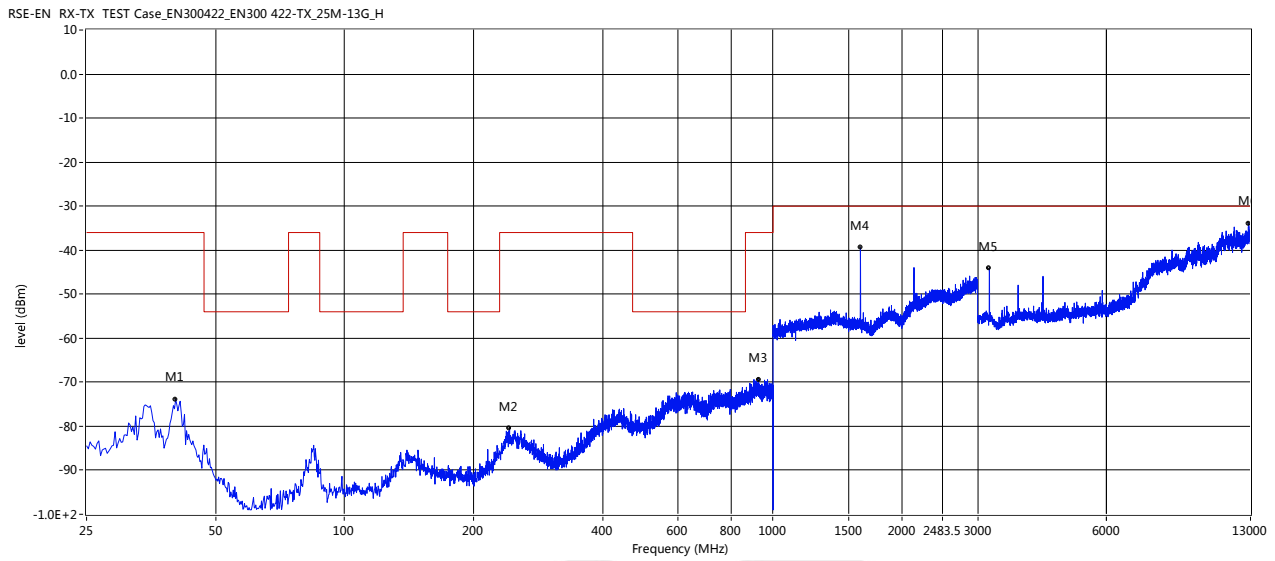
RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.112	-60.98	-4.32	-36.0	-24.98	7.00	Vertical	Vertical	Pass
239.744	-78.89	-2.04	-36.0	-42.89	5.00	Vertical	Vertical	Pass
962.219	-68.46	9.57	-36.0	-32.46	6.00	Vertical	Vertical	Pass
1576.500	-38.59	12.88	-30.0	-8.59	2.00	Vertical	Vertical	Pass
3150.000	-36.04	3.20	-30.0	-6.04	1.00	Vertical	Vertical	Pass
12865.000	-32.81	25.11	-30.0	-2.81	6.00	Vertical	Vertical	Pass



High channel Horizontal

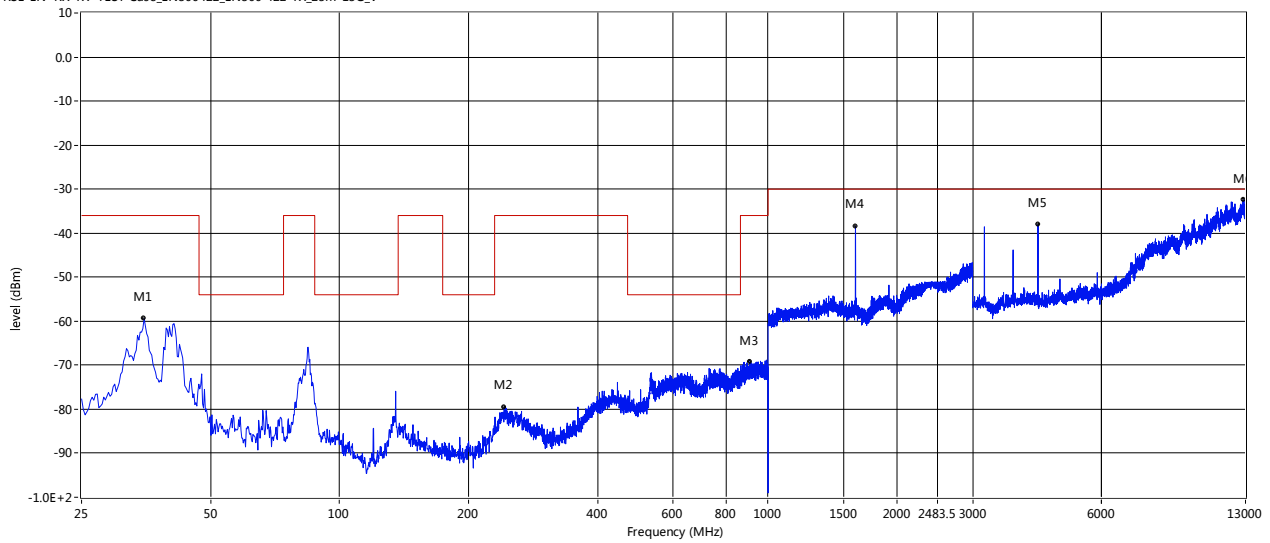


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.356	-73.88	-4.51	-36.0	-37.88	2.00	Horizontal	Vertical	Pass
242.669	-80.56	-2.04	-36.0	-44.56	2.00	Horizontal	Vertical	Pass
924.681	-69.42	9.27	-36.0	-33.42	7.00	Horizontal	Vertical	Pass
1598.500	-39.48	12.99	-30.0	-9.48	1.00	Horizontal	Vertical	Pass
3195.000	-44.18	3.48	-30.0	-14.18	0.00	Horizontal	Vertical	Pass
12877.500	-33.91	23.83	-30.0	-3.91	3.00	Horizontal	Vertical	Pass



Vertical

RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_V

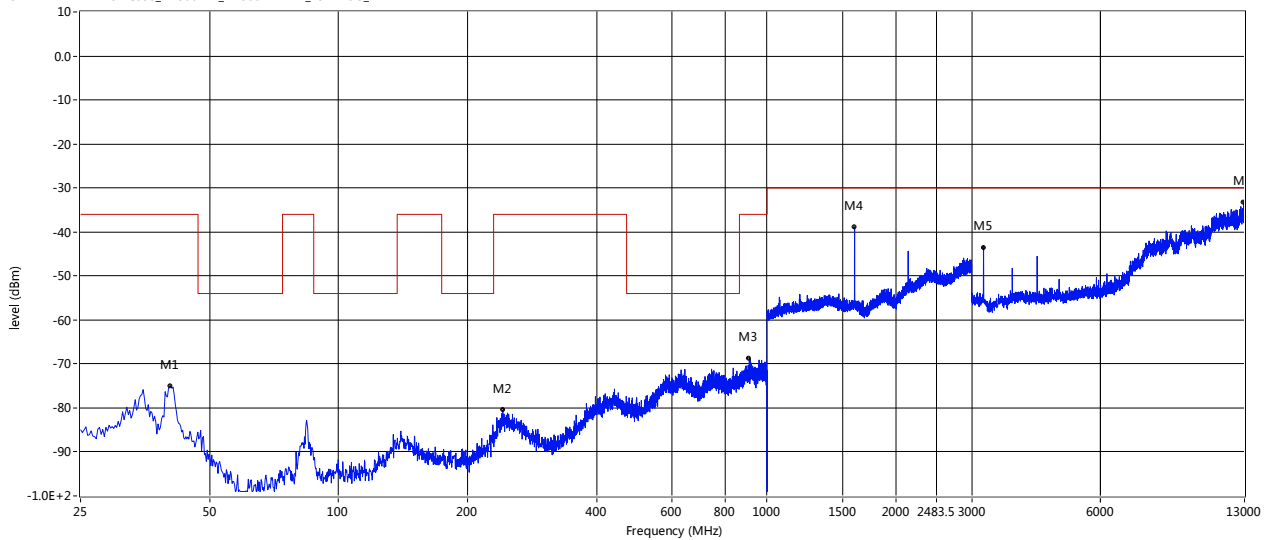


Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
34.994	-59.38	-4.32	-36.0	-23.38	5.00	Vertical	Vertical	Pass
242.181	-79.49	-2.03	-36.0	-43.49	7.00	Vertical	Vertical	Pass
904.937	-64.22	9.01	-36.0	-28.22	1.00	Vertical	Vertical	Pass
1599.000	-38.42	12.99	-30.0	-8.42	1.00	Vertical	Vertical	Pass
4262.500	-38.05	4.43	-30.0	-8.05	3.00	Vertical	Vertical	Pass
12890.000	-32.43	25.07	-30.0	-2.43	10.00	Vertical	Vertical	Pass



Band D
Low channel
Horizontal

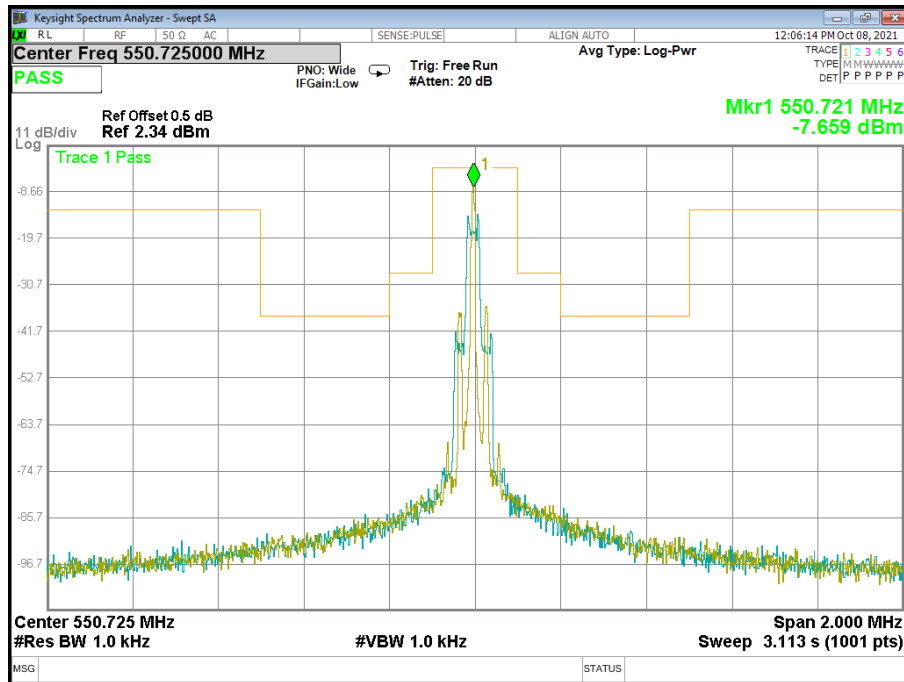
RSE-EN RX-TX TEST Case_EN300422_EN300 422-TX_25M-13G_H



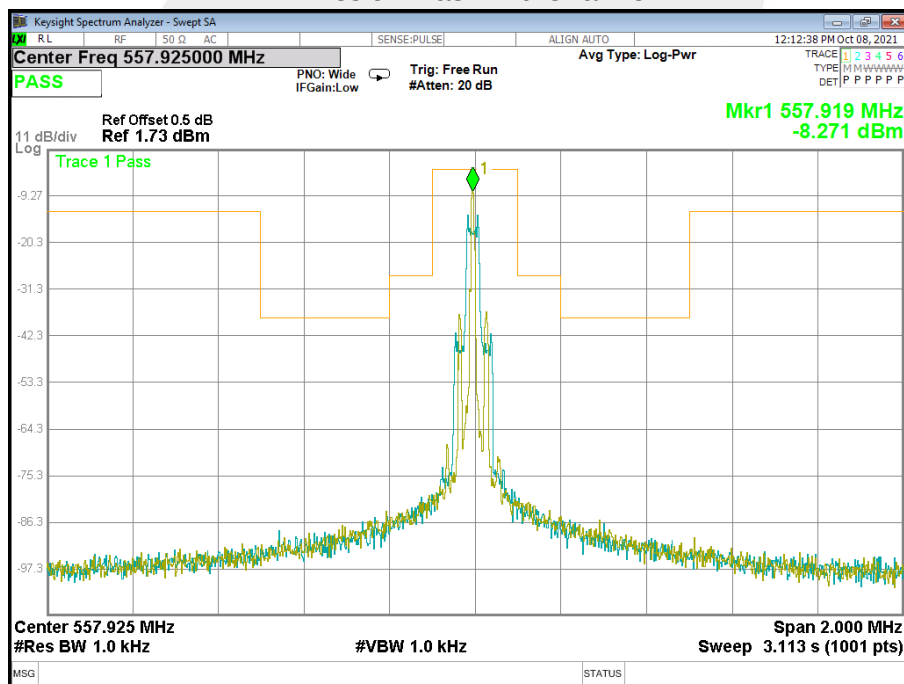
Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Over Limit (dB)	Table (o)	ANT	EUT	Verdict
40.600	-75.04	-4.69	-36.0	-39.04	8.00	Horizontal	Vertical	Pass
241.694	-80.44	-2.01	-36.0	-44.44	2.00	Horizontal	Vertical	Pass
908.594	-68.77	9.16	-36.0	-32.77	10.00	Horizontal	Vertical	Pass
1600.000	-38.96	13.00	-30.0	-8.96	4.00	Horizontal	Vertical	Pass
3200.000	-43.56	3.51	-30.0	-13.56	8.00	Horizontal	Vertical	Pass
12952.500	-33.37	23.99	-30.0	-3.37	9.00	Horizontal	Vertical	Pass



Emission Mask I

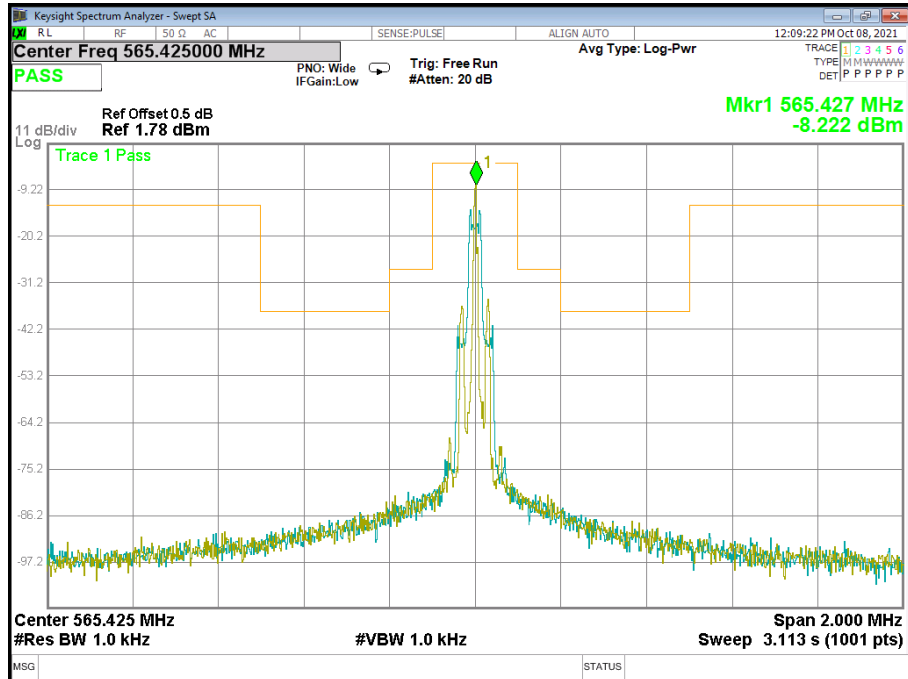
Band A
Emission Mask Low Channel

Emission Mask Mid Channel





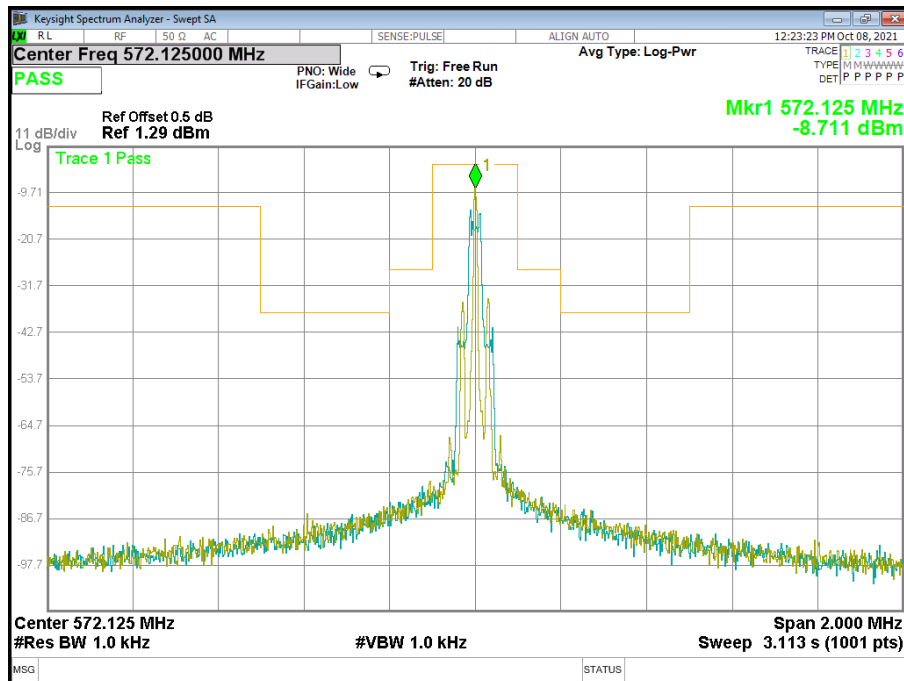
Emission Mask High Channel



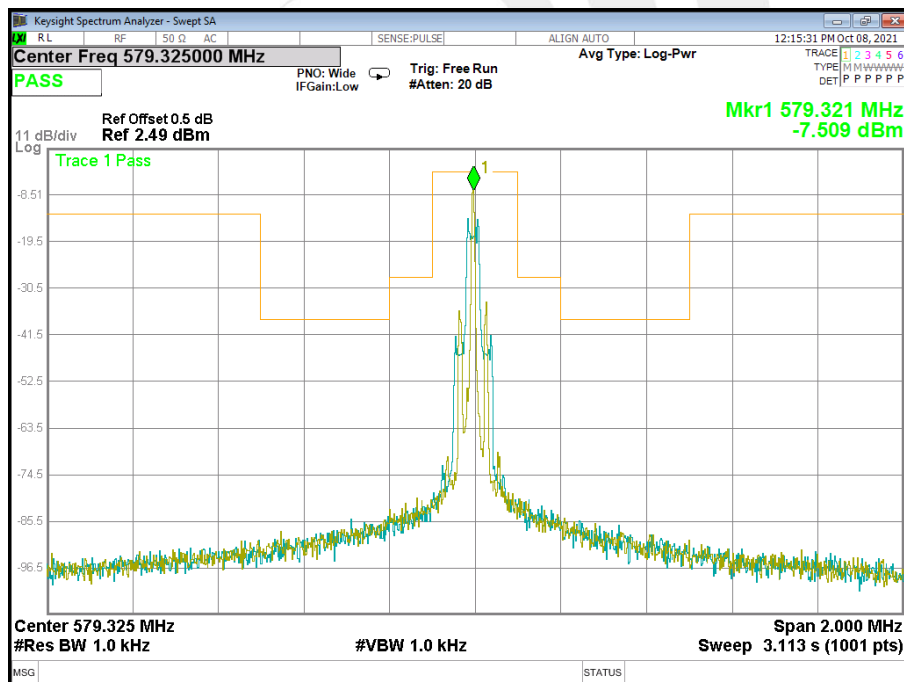


Band B

Emission Mask Low Channel

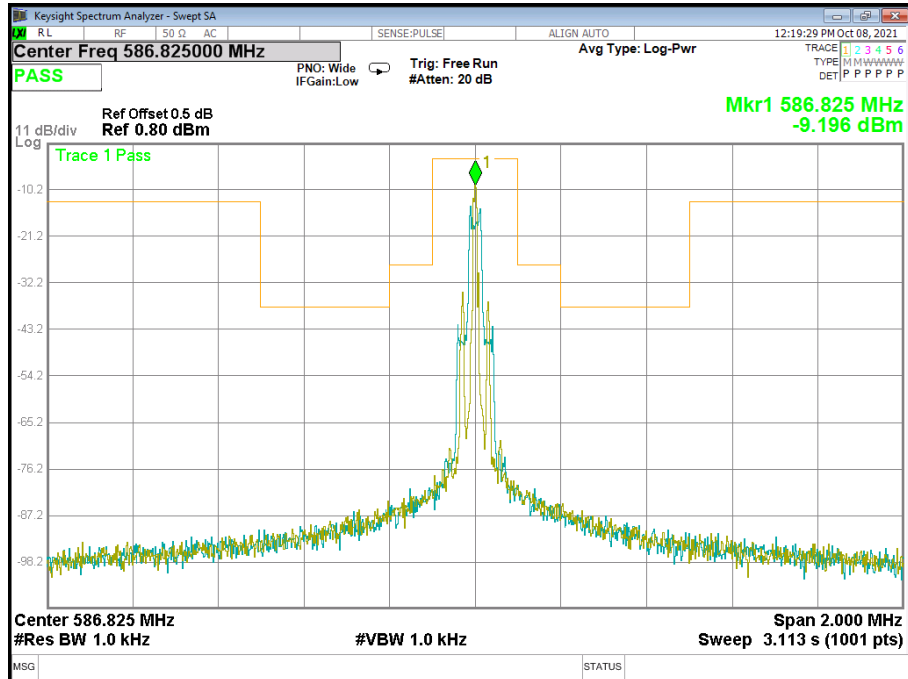


Emission Mask Mid Channel





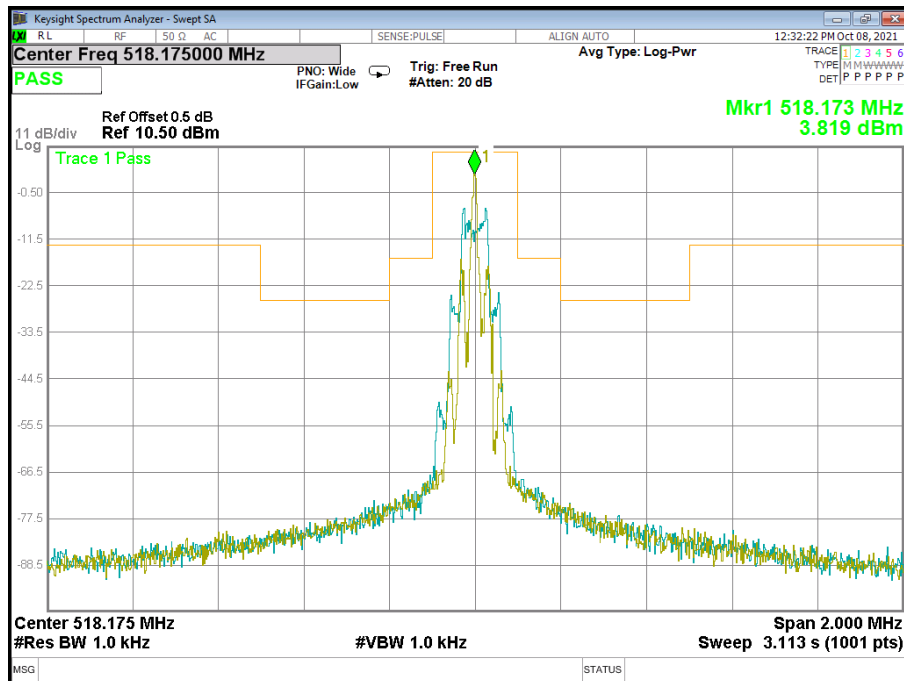
Emission Mask High Channel



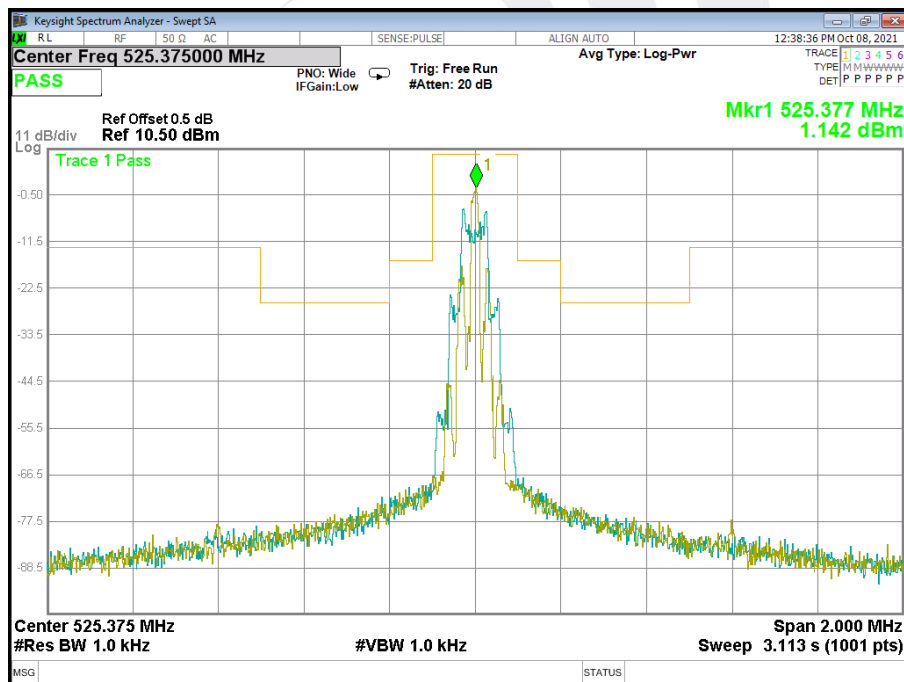


Band C

Emission Mask Low Channel

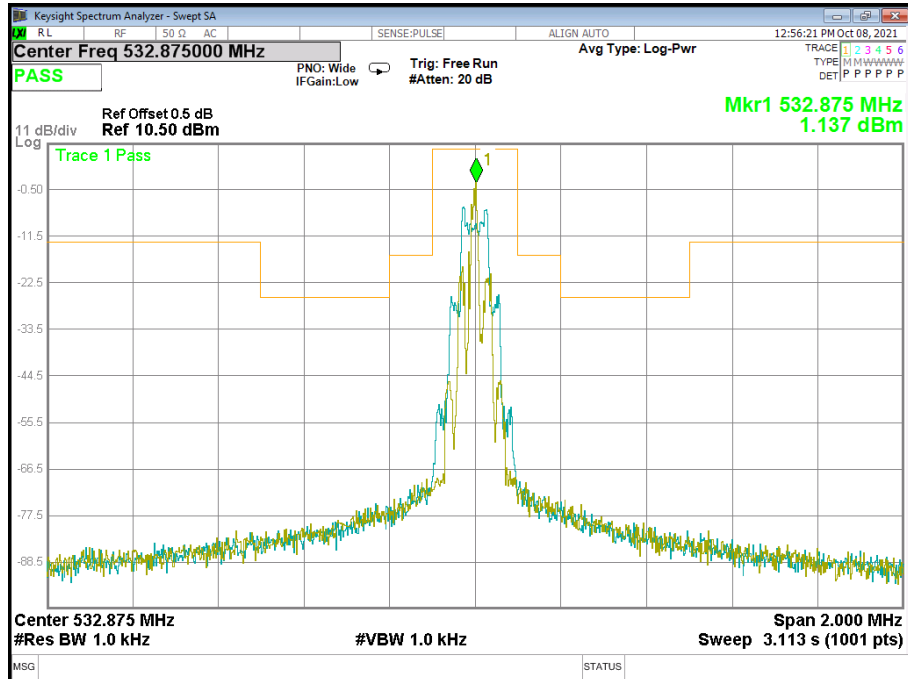


Emission Mask Mid Channel





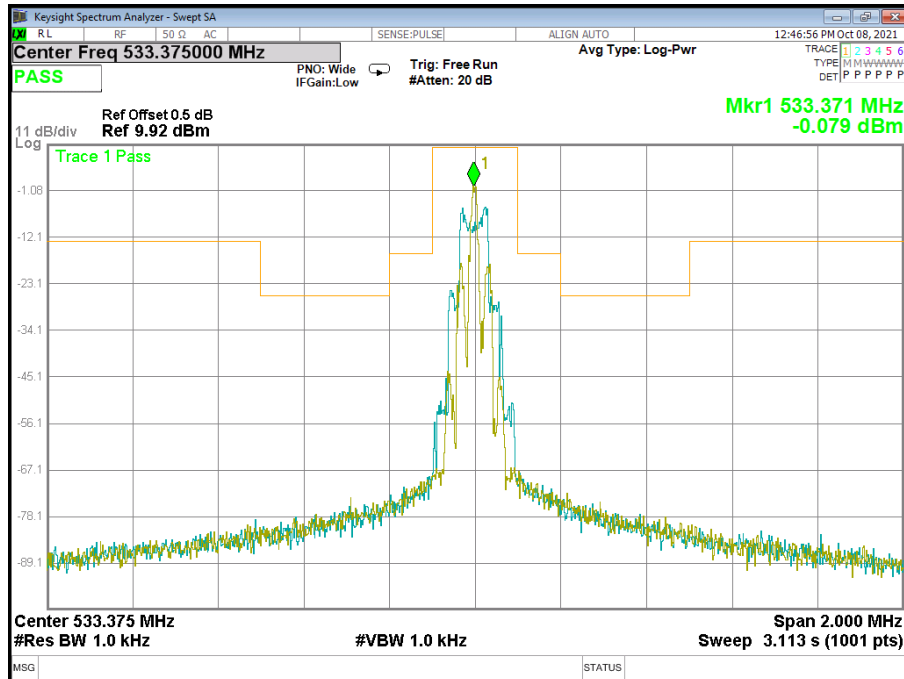
Emission Mask High Channel



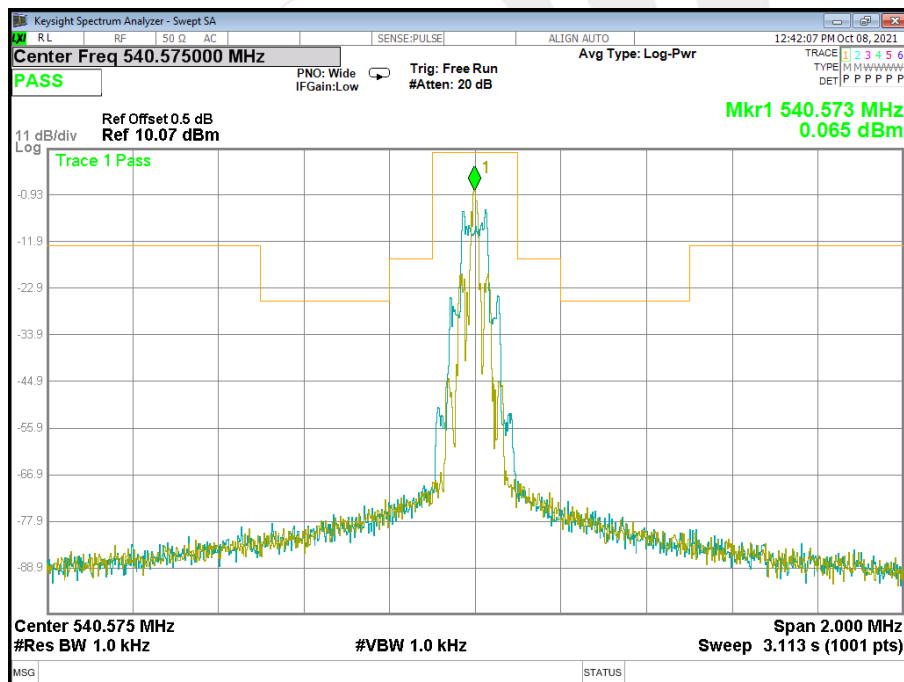


Band D

Emission Mask Low Channel

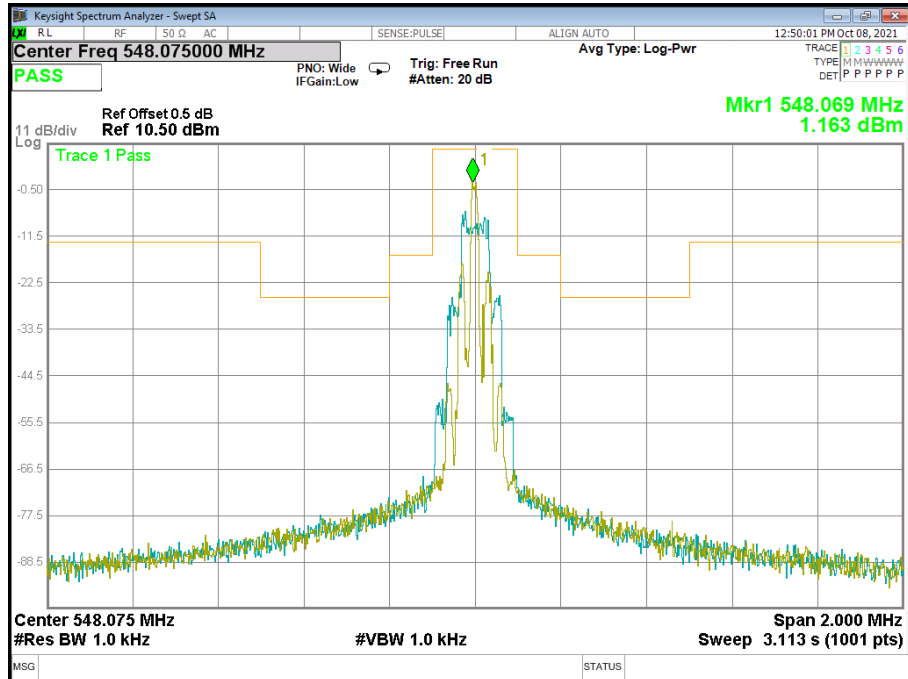


Emission Mask Mid Channel





Emission Mask High Channel



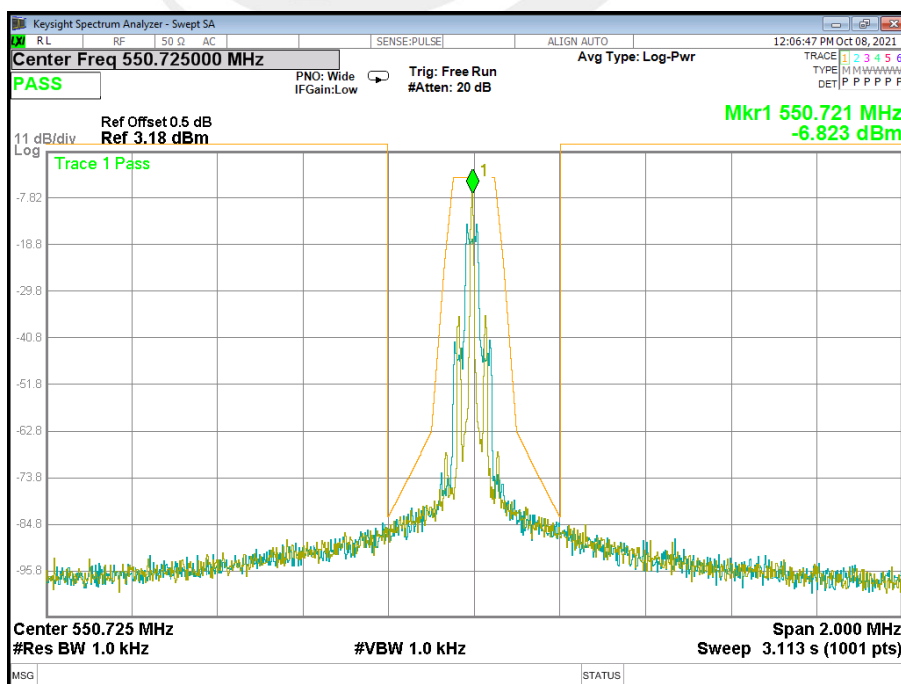
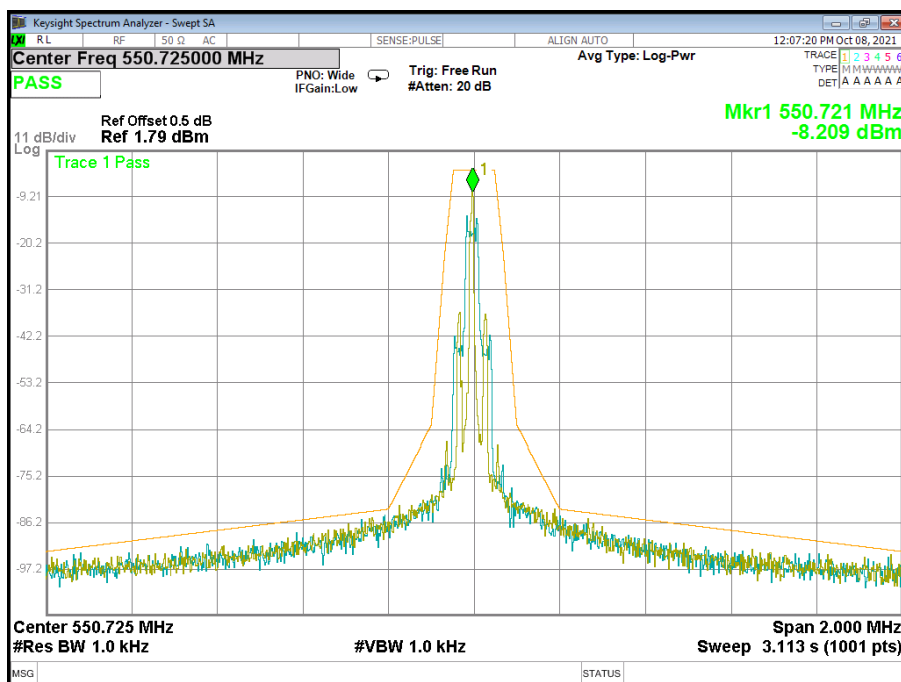
**Emission Mask II**

ETSI EN 300 422-1 V1.5.1 Clause 8.3.1.2 The Maximum Measurement of Necessary Bandwidth

Test Plot:

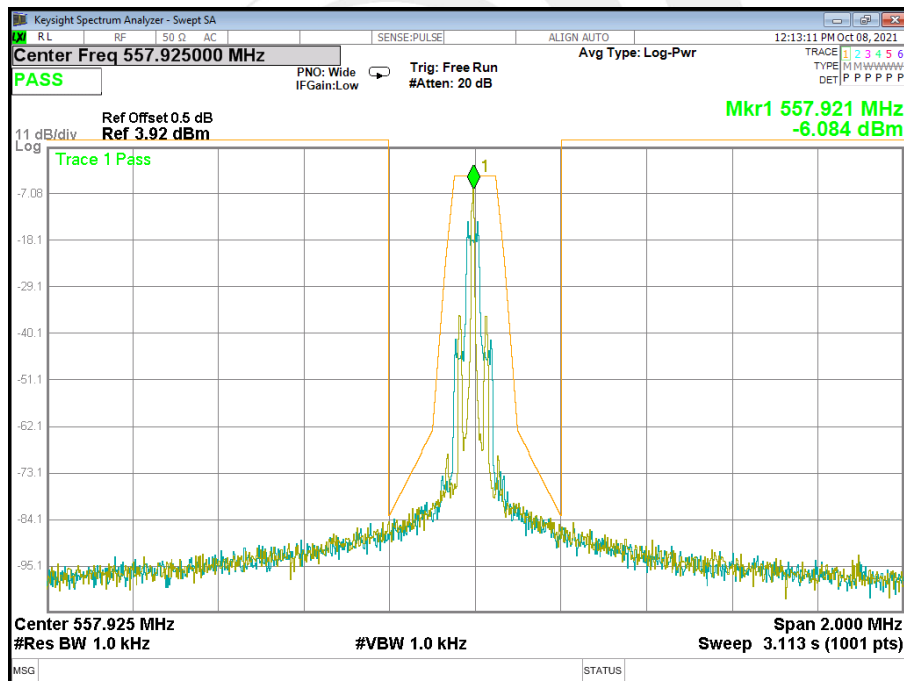
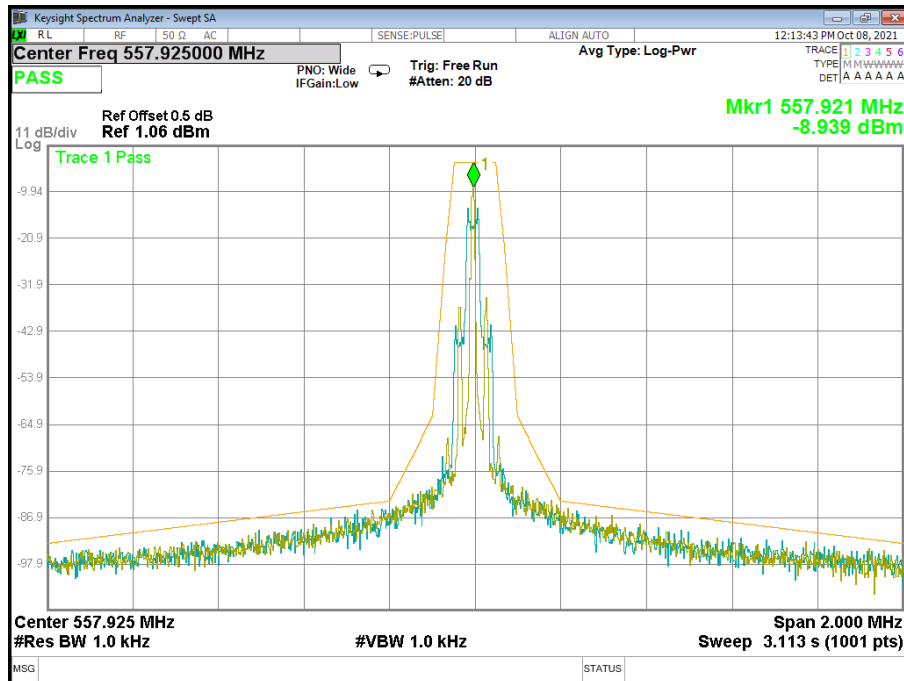
Band A

Frequency	Declared Bandwidth	B/2	0.35B
550.725 MHz	100K	50K	35K
557.925 MHz	100K	50K	35K
565.425 MHz	100K	50K	35K

Low CH

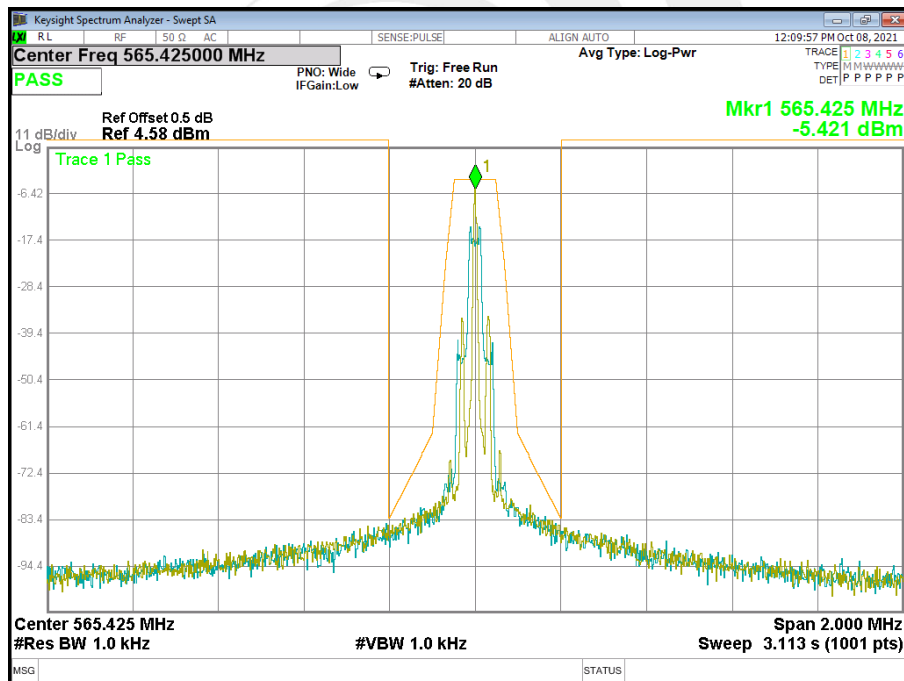
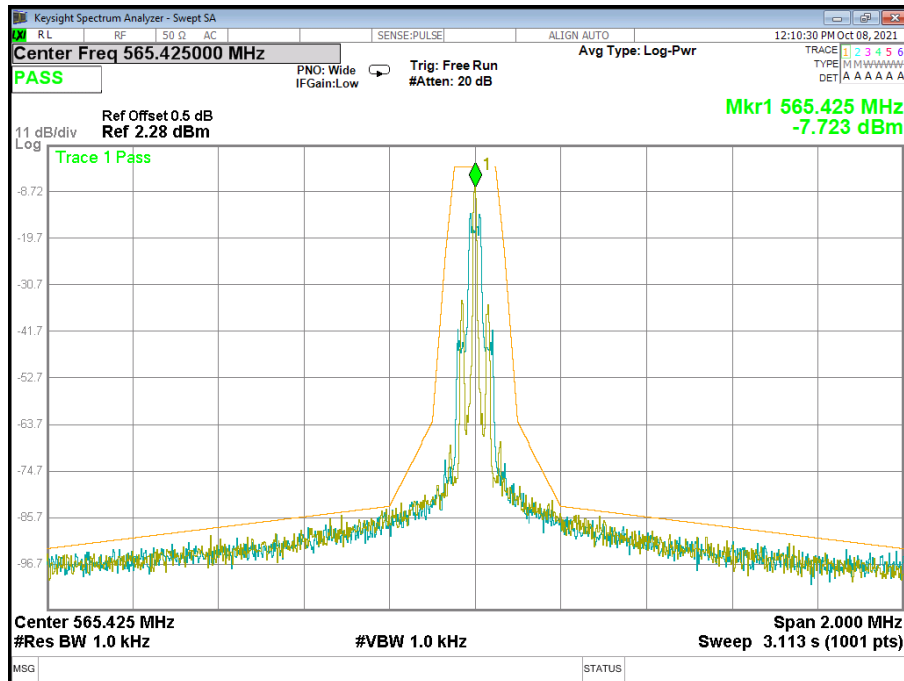


Mid CH





High CH

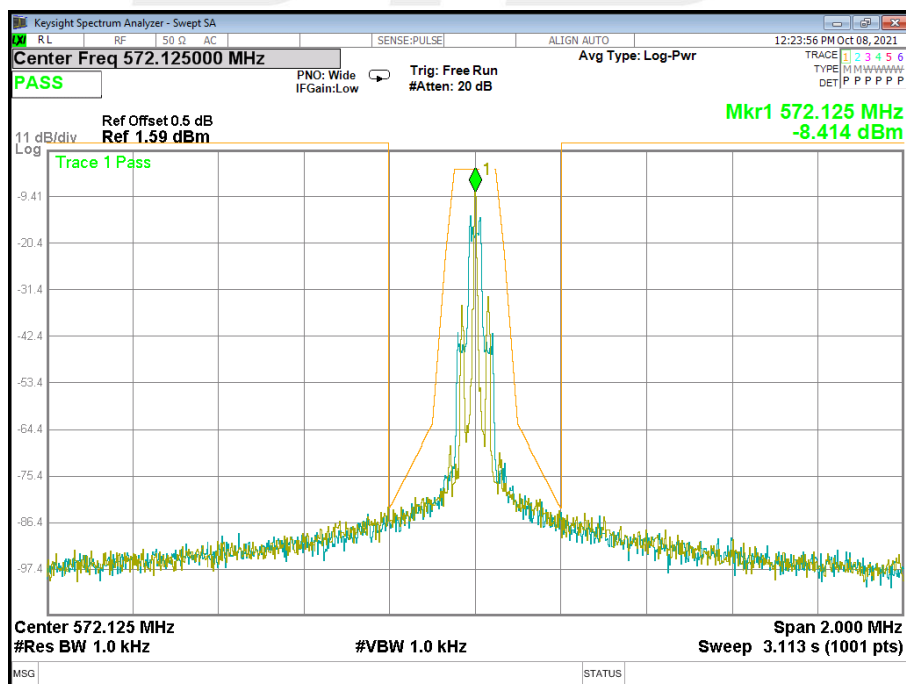
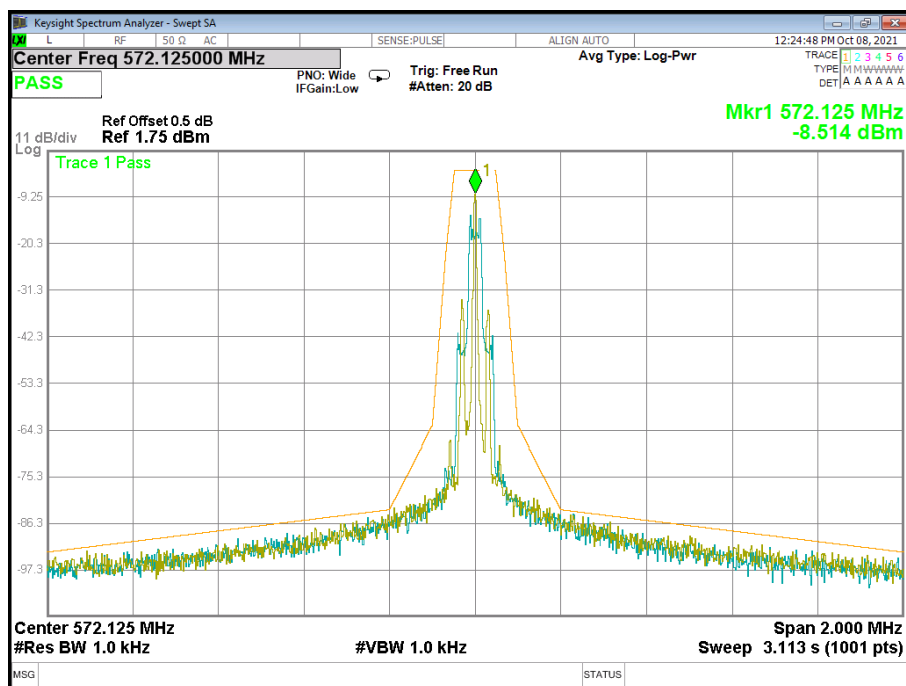




Band B

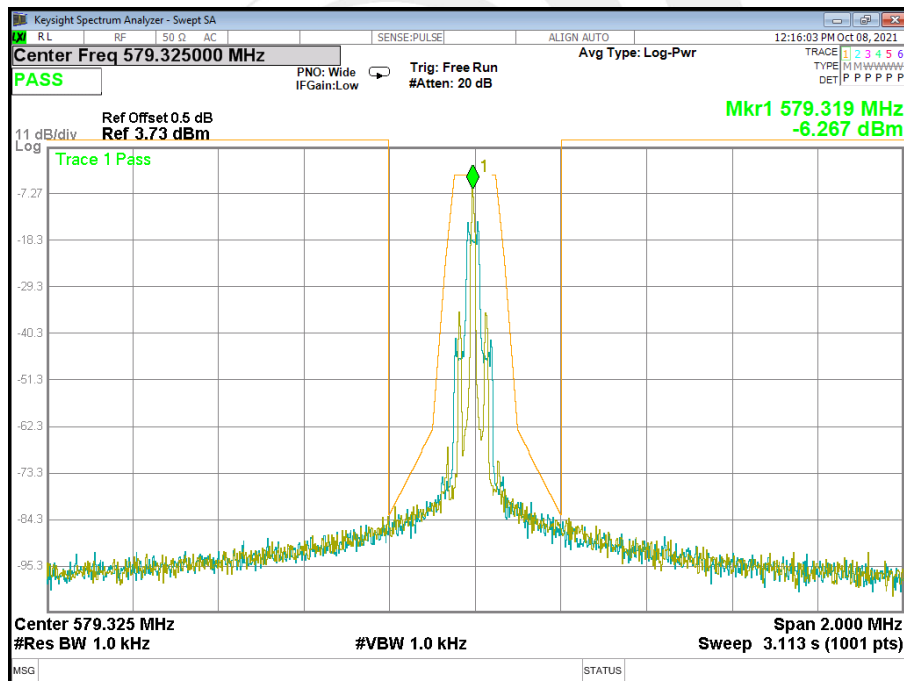
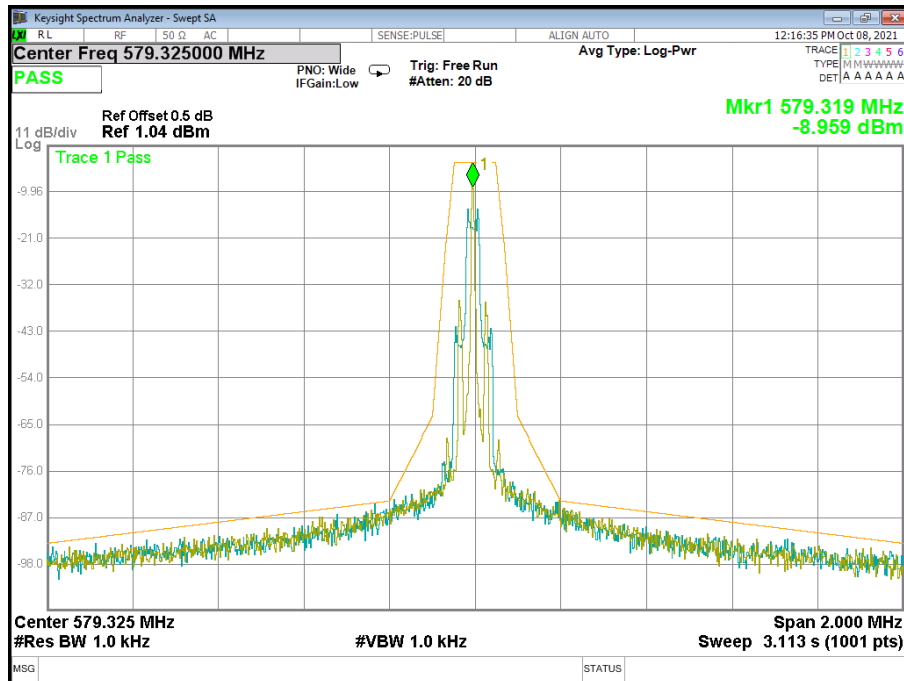
Frequency	Declared Bandwidth	B/2	0.35B
572.125 MHz	100K	50K	35K
579.325 MHz	100K	50K	35K
586.825 MHz	100K	50K	35K

Low CH



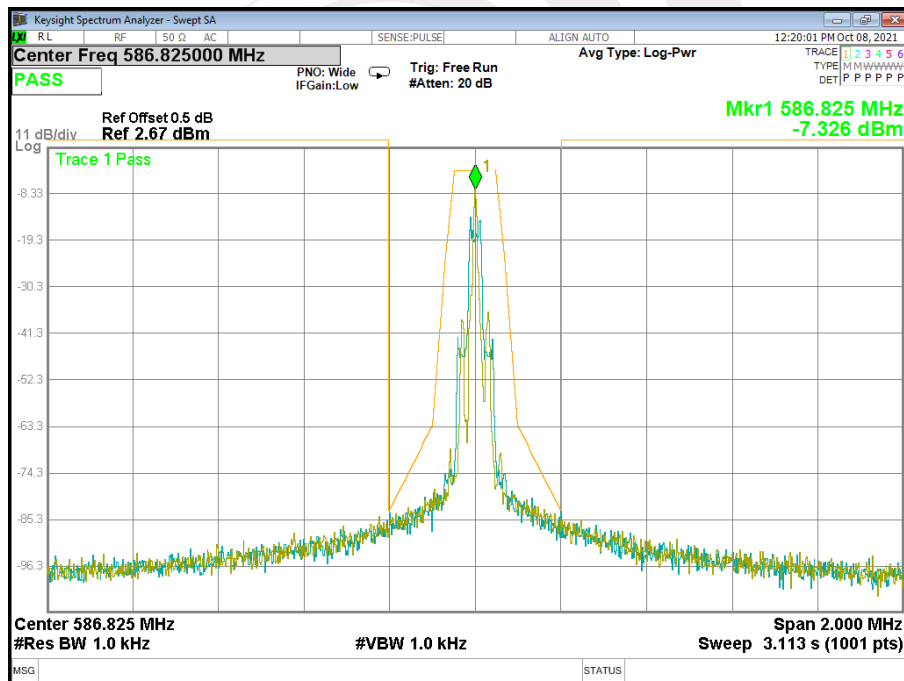
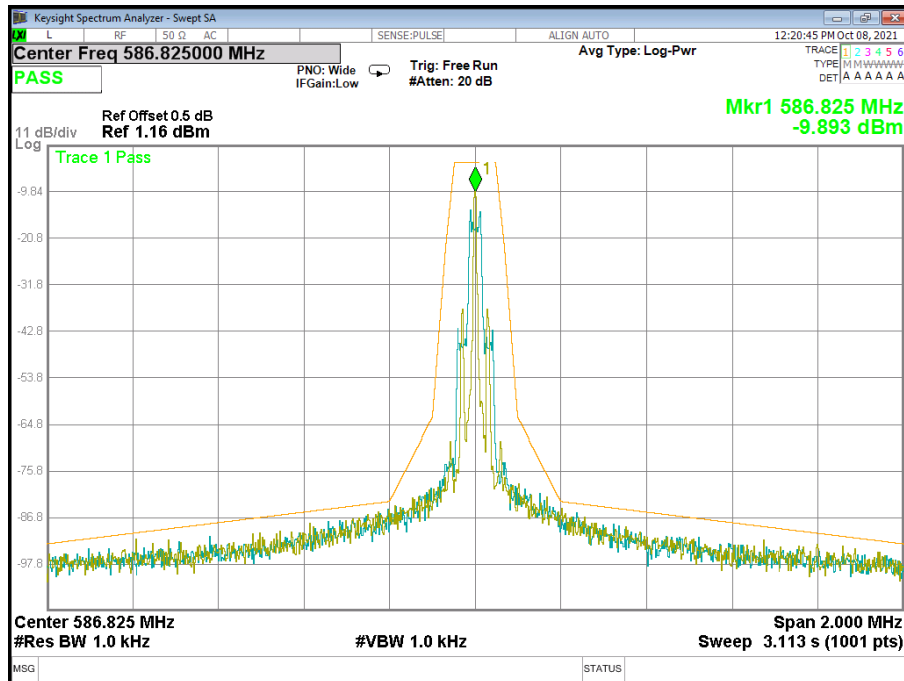


Mid CH





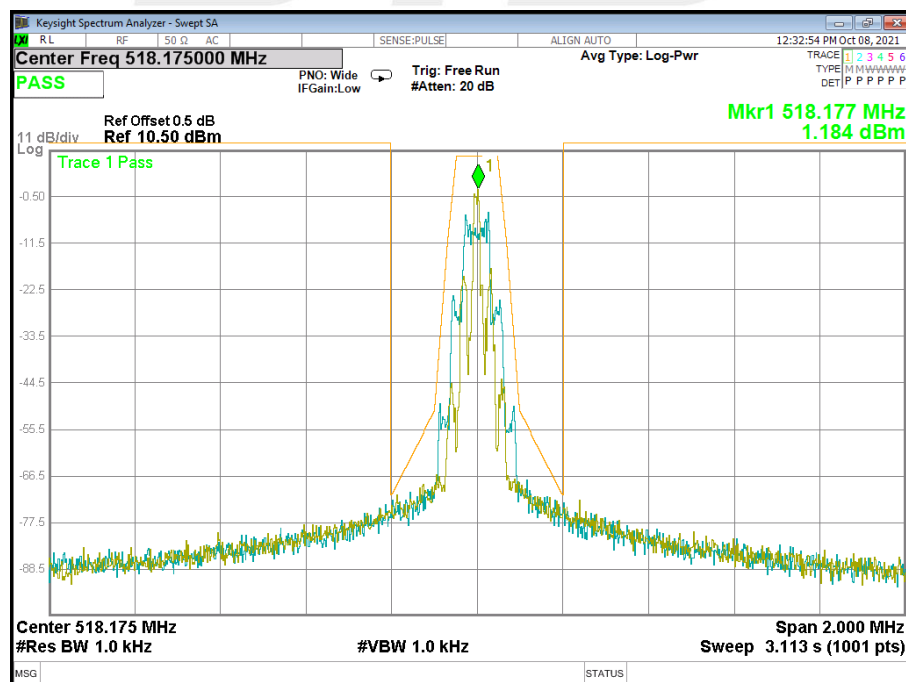
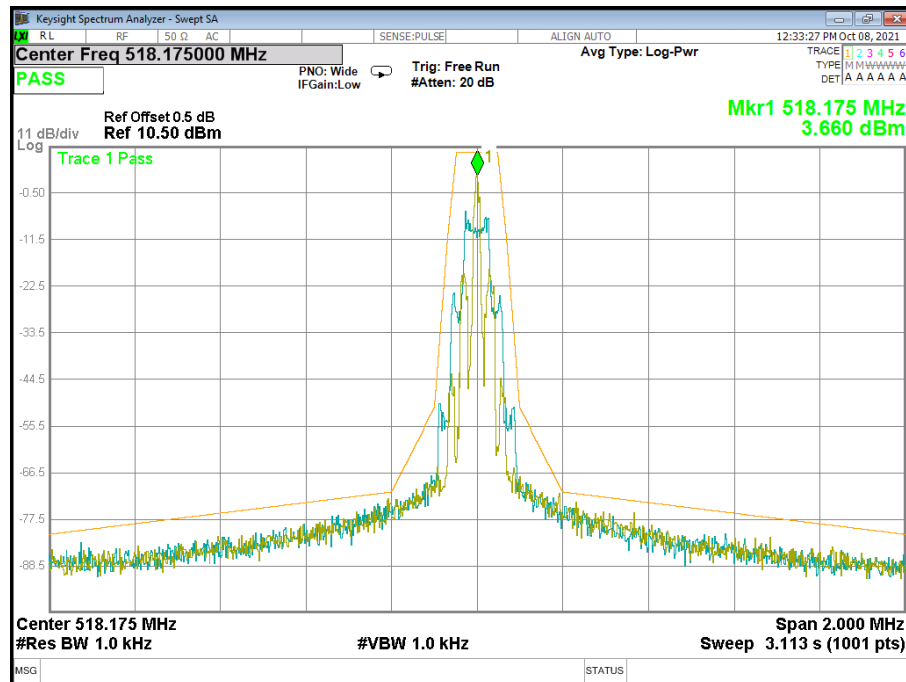
High CH



Band C

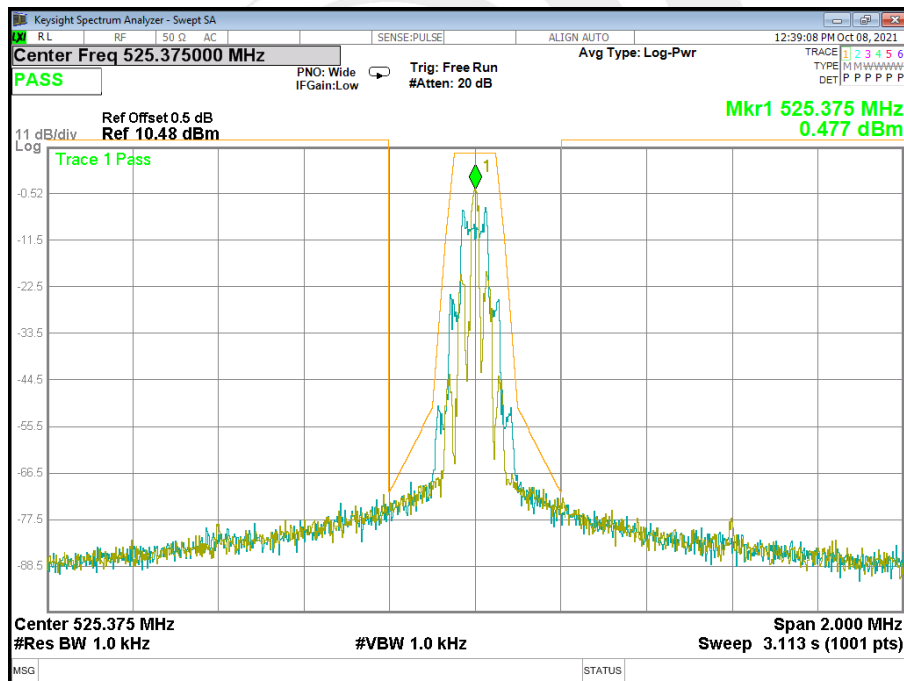
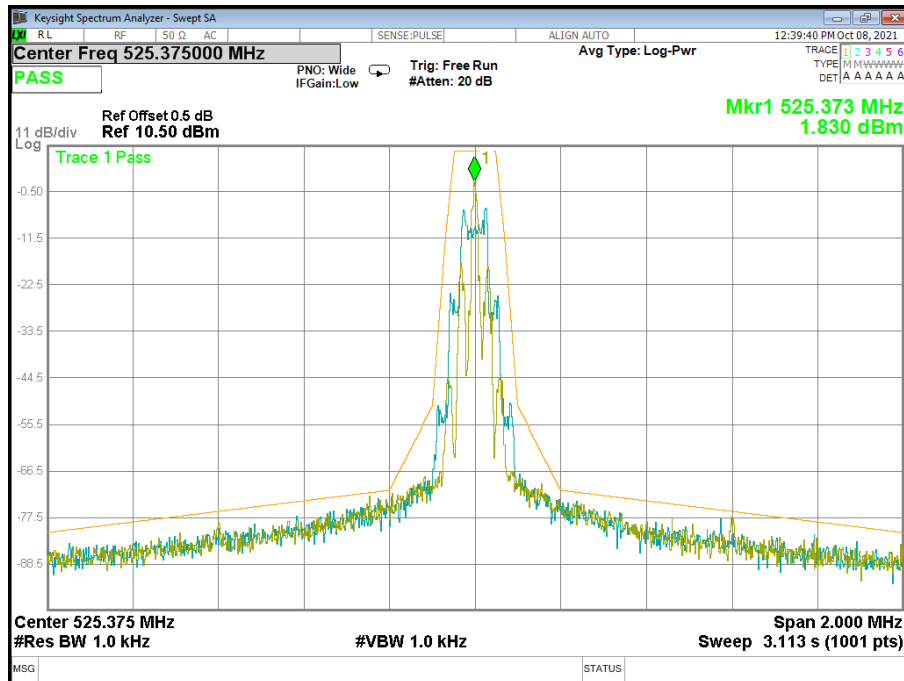
Frequency	Declared Bandwidth	B/2	0.35B
518.175 MHz	100K	50K	35K
525.375 MHz	100K	50K	35K
532.875 MHz	100K	50K	35K

Low CH



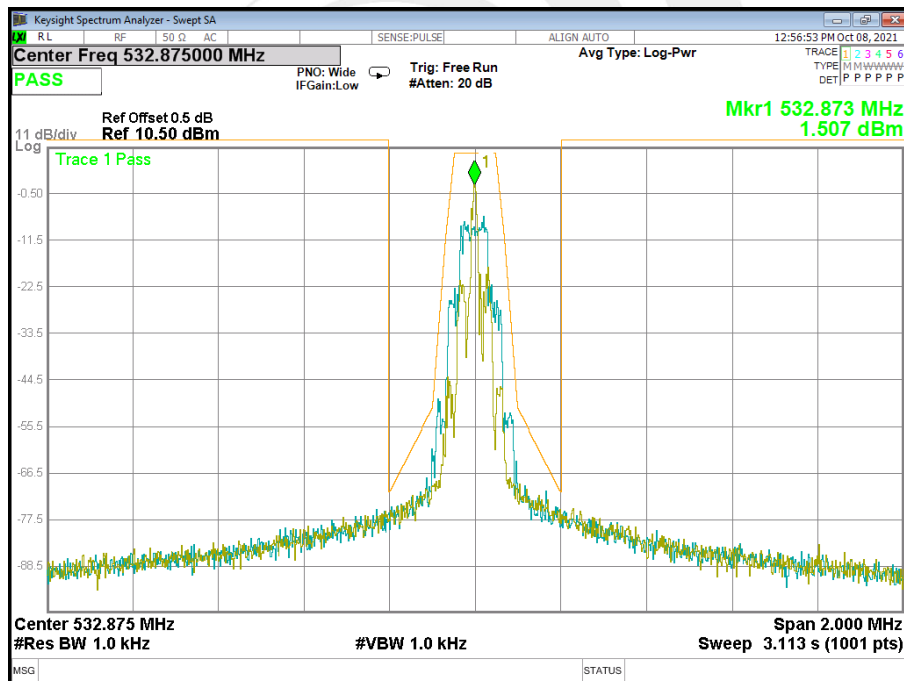
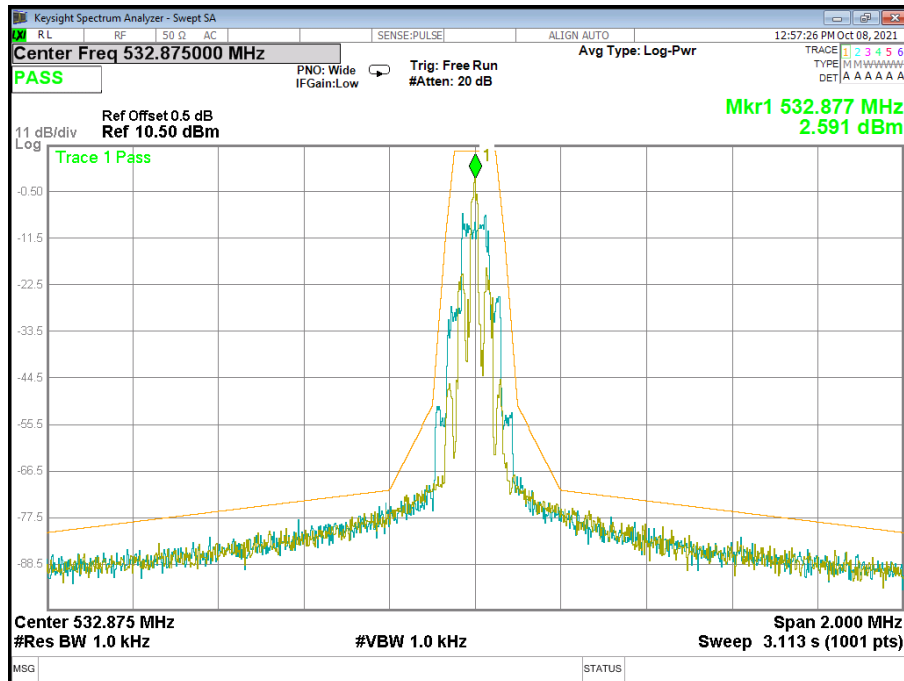


Mid CH





High CH

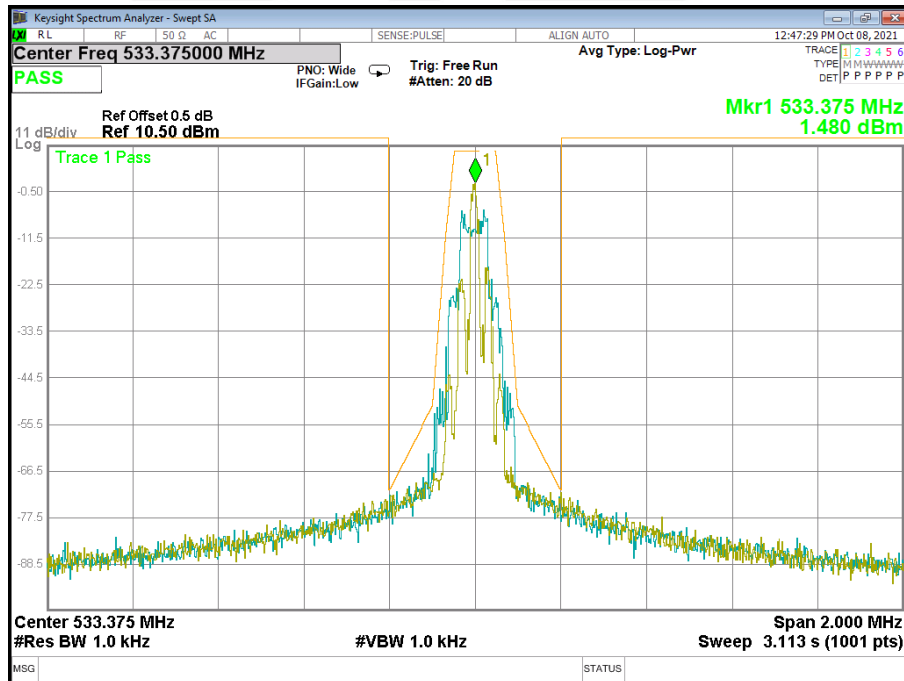
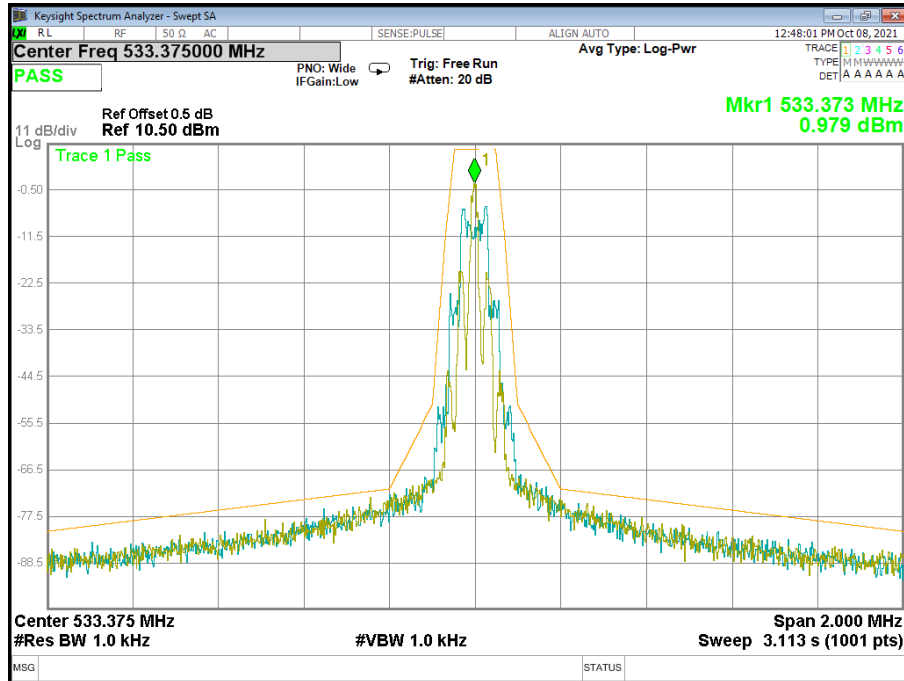




Band D

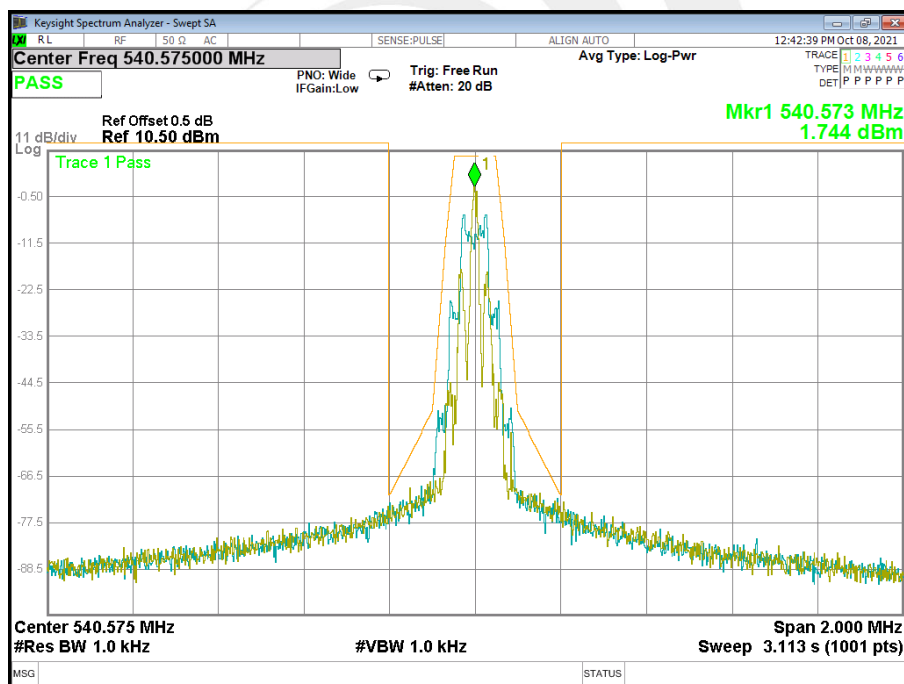
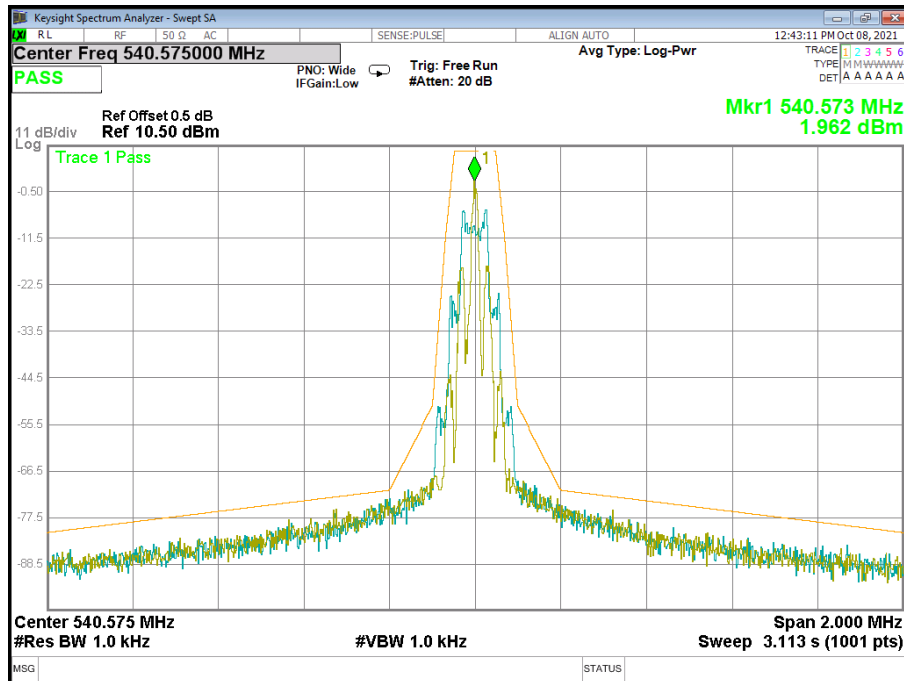
Frequency	Declared Bandwidth	B/2	0.35B
533.375 MHz	100K	50K	35K
540.575 MHz	100K	50K	35K
548.075 MHz	100K	50K	35K

Low CH



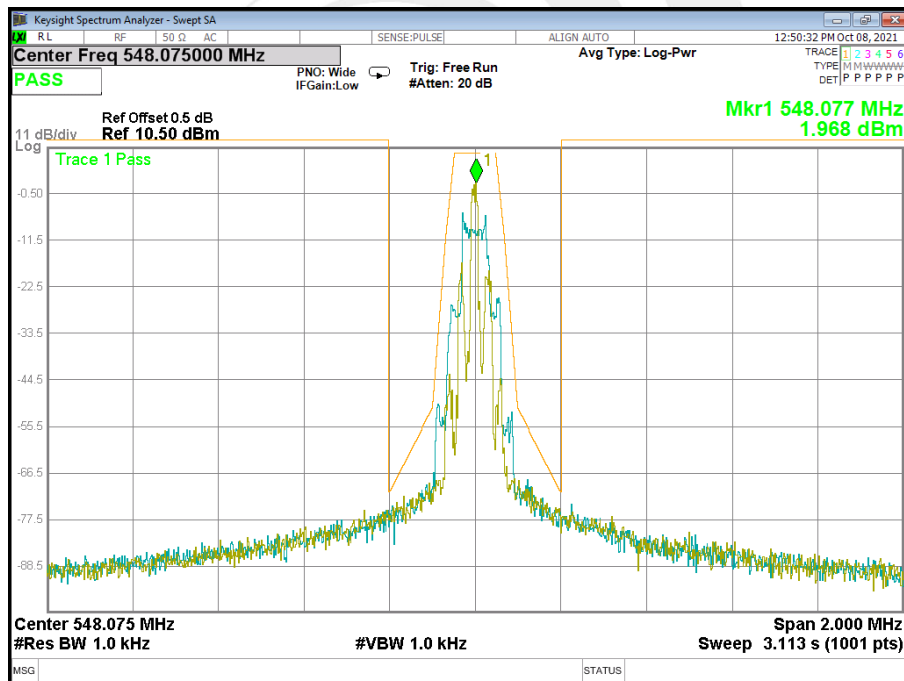
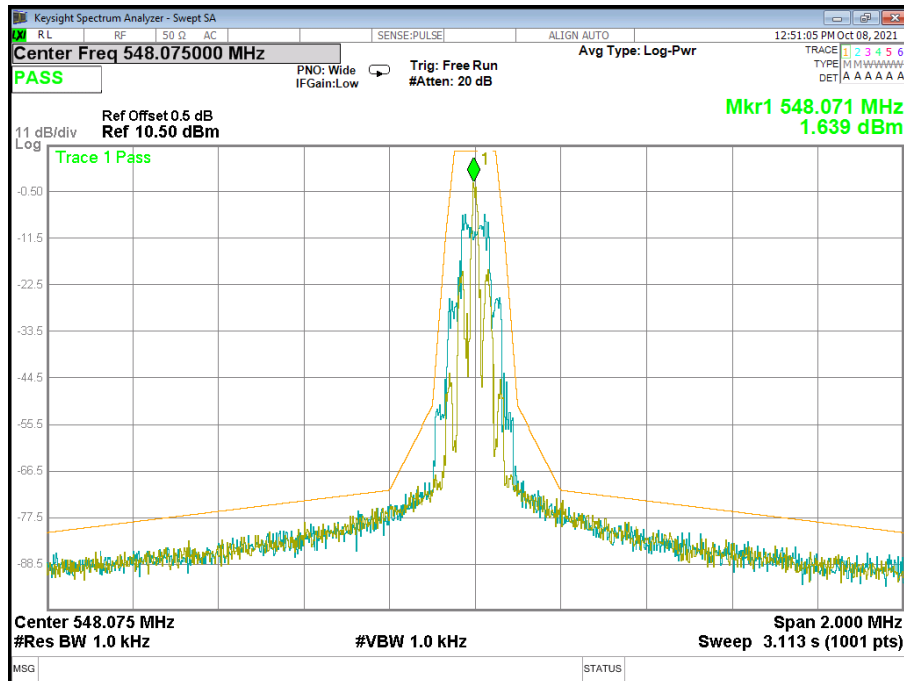


Mid CH





High CH

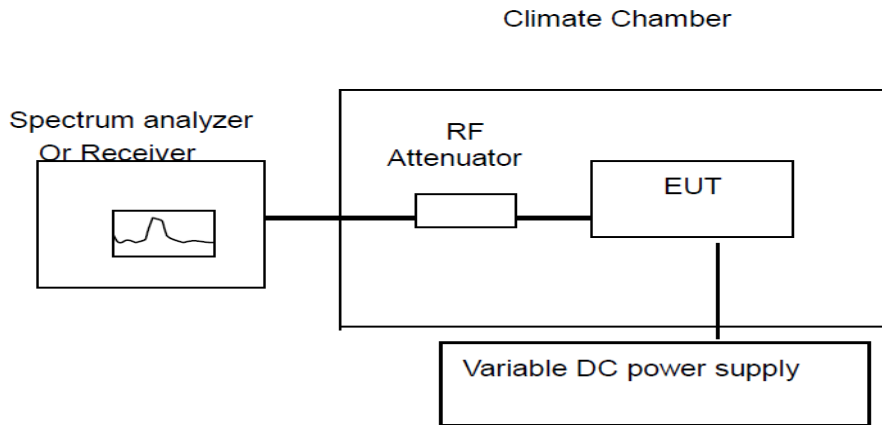


4.4 FREQUENCY STABILITY VS. TEMPERATURE & VOLTAGE

TEST LIMIT

According to CFR 47 section 74.861 e (4), the frequency tolerance of the transmitter shall be 0.005 percent.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was connected to an external DC power supply and the RF output was connected to a frequency counter via feed through attenuators. The EUT was placed inside the temperature chamber. The DC leads and the RF output cable, exited the chamber through an opening made for that purpose.

After the temperature stabilized the frequency output was recorded from the counter.

An external variable DC power supply was connected to the battery terminals of the equipment under test.

- b. For hand carried, battery powered equipment primary supply voltage was reduced to the battery operating end point as specified by the manufacturer. The output frequency was recorded for each battery voltage.

**TEST RESULTS**

- (1) Frequency stability versus input voltage (Supply Nominal voltage is DC 3.7V)
- (2) Frequency stability versus input voltage (Supply battery operating end point which shall be specified by the manufacturer DC 4.07V)

Band A

Reference Frequency: 550.725MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	4284	0.000778
3.70V, DC	20	4288	0.000779
4.07V, DC	20	4284	0.000778
BEP	20	4277	0.000777

Reference Frequency: 550.725MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	4286	0.000778	0.00500	PASS
40	4286	0.000778		
30	4281	0.000777		
20	4288	0.000779		
10	4285	0.000778		
0	4286	0.000778		
-10	4291	0.000779		
-20	4285	0.000778		
-30	4284	0.000778		



Reference Frequency: 557.925MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	4542	0.000814
3.70V, DC	20	4534	0.000813
4.07V, DC	20	4540	0.000814
BEP	20	4533	0.000812

Reference Frequency: 557.925MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	4537	0.000813	0.00500	PASS
40	4537	0.000813		
30	4538	0.000813		
20	4539	0.000814		
10	4533	0.000812		
0	4537	0.000813		
-10	4540	0.000814		
-20	4541	0.000814		
-30	4537	0.000813		



Reference Frequency: 565.425MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	941	0.000166
3.70V, DC	20	943	0.000167
4.07V, DC	20	941	0.000166
BEP	20	944	0.000167

Reference Frequency: 565.425MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	946	0.000167	0.00500	PASS
40	943	0.000167		
30	949	0.000168		
20	951	0.000168		
10	947	0.000167		
0	952	0.000168		
-10	950	0.000168		
-20	949	0.000168		
-30	943	0.000167		

**Band B**

Reference Frequency: 572.125MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	681	0.000119
3.70V, DC	20	685	0.000120
4.07V, DC	20	692	0.000121
BEP	20	683	0.000119

Reference Frequency: 572.125MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	682	0.000119	0.00500	PASS
40	682	0.000119		
30	687	0.000120		
20	684	0.000120		
10	688	0.000120		
0	686	0.000120		
-10	685	0.000120		
-20	680	0.000119		
-30	685	0.000120		



Reference Frequency: 579.325MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	2496	0.000431
3.70V, DC	20	2501	0.000432
4.07V, DC	20	2491	0.000430
BEP	20	2493	0.000430

Reference Frequency: 579.325MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	2496	0.000431	0.00500	PASS
40	2499	0.000431		
30	2495	0.000431		
20	2489	0.000430		
10	2496	0.000431		
0	2497	0.000431		
-10	2500	0.000432		
-20	2492	0.000430		
-30	2496	0.000431		



Reference Frequency: 586.825MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	1404	0.000239
3.70V, DC	20	1409	0.000240
4.07V, DC	20	1404	0.000239
BEP	20	1397	0.000238

Reference Frequency: 586.825MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	1408	0.000240	0.00500	PASS
40	1404	0.000239		
30	1405	0.000239		
20	1405	0.000239		
10	1408	0.000240		
0	1406	0.000240		
-10	1409	0.000240		
-20	1408	0.000240		
-30	1403	0.000239		

**Band C**

Reference Frequency: 518.175MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	1626	0.000314
3.70V, DC	20	1626	0.000314
4.07V, DC	20	1622	0.000313
BEP	20	1629	0.000314

Reference Frequency: 518.175MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	1628	0.000314	0.00500	PASS
40	1628	0.000314		
30	1633	0.000315		
20	1628	0.000314		
10	1630	0.000315		
0	1627	0.000314		
-10	1625	0.000314		
-20	1629	0.000314		
-30	1625	0.000314		



Reference Frequency: 525.375MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	1173	0.000223
3.70V, DC	20	1174	0.000223
4.07V, DC	20	1171	0.000223
BEP	20	1176	0.000224

Reference Frequency: 525.375MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	1172	0.000223	0.00500	PASS
40	1173	0.000223		
30	1169	0.000223		
20	1178	0.000224		
10	1173	0.000223		
0	1166	0.000222		
-10	1169	0.000223		
-20	1174	0.000223		
-30	1175	0.000224		



Reference Frequency: 532.875MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	1040	0.000195
3.70V, DC	20	1044	0.000196
4.07V, DC	20	1039	0.000195
BEP	20	1039	0.000195

Reference Frequency: 532.875MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	1039	0.000195	0.00500	PASS
40	1037	0.000195		
30	1040	0.000195		
20	1035	0.000194		
10	1038	0.000195		
0	1040	0.000195		
-10	1037	0.000195		
-20	1035	0.000194		
-30	1037	0.000195		

**Band D**

Reference Frequency: 533.375MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	1424	0.000267
3.70V, DC	20	1421	0.000266
4.07V, DC	20	1420	0.000266
BEP	20	1416	0.000265

Reference Frequency: 533.375MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	1419	0.000266	0.00500	PASS
40	1421	0.000266		
30	1420	0.000266		
20	1420	0.000266		
10	1419	0.000266		
0	1424	0.000267		
-10	1427	0.000268		
-20	1416	0.000265		
-30	1418	0.000266		



Reference Frequency: 540.575MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	1480	0.000274
3.70V, DC	20	1476	0.000273
4.07V, DC	20	1479	0.000274
BEP	20	1481	0.000274

Reference Frequency: 540.575MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	1481	0.000274	0.00500	PASS
40	1482	0.000274		
30	1481	0.000274		
20	1477	0.000273		
10	1475	0.000273		
0	1484	0.000275		
-10	1481	0.000274		
-20	1479	0.000274		
-30	1483	0.000274		



Reference Frequency: 548.075MHz			
Power Supply	Environment Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)
3.33V, DC	20	1094	0.000200
3.70V, DC	20	1102	0.000201
4.07V, DC	20	1097	0.000200
BEP	20	1096	0.000200

Reference Frequency: 548.075MHz				
Environment Temperature(°C)	Frequency Deviation measured with time Elapse(30 minutes)			
	Frequency Error (Hz)	Frequency Error (%)	Limit (%)	Results
50	1096	0.000200	0.00500	PASS
40	1097	0.000200		
30	1096	0.000200		
20	1092	0.000199		
10	1094	0.000200		
0	1093	0.000199		
-10	1098	0.000200		
-20	1095	0.000200		
-30	1097	0.000200		

4.5 OCCUPIED BANDWIDTH

TEST LIMIT

According to CFR 47 section 74.861 e (5), the operating bandwidth shall no exceed 200 KHz.
Near the carrier an emission mask is defined by the standard.

TEST CONFIGURATION



TEST PROCEDURE

- a. The RF output of the transceiver was connected to the input of the spectrum analyzer through sufficient attenuation.
Set Occupied Bandwidth was measured with a occupied bandwidth function of the analyzer.
- b. The near the carrier emissions are measured by normal power measurement function of the analyzer.
- c. Set SPA Max hold. Mark peak, 99%.

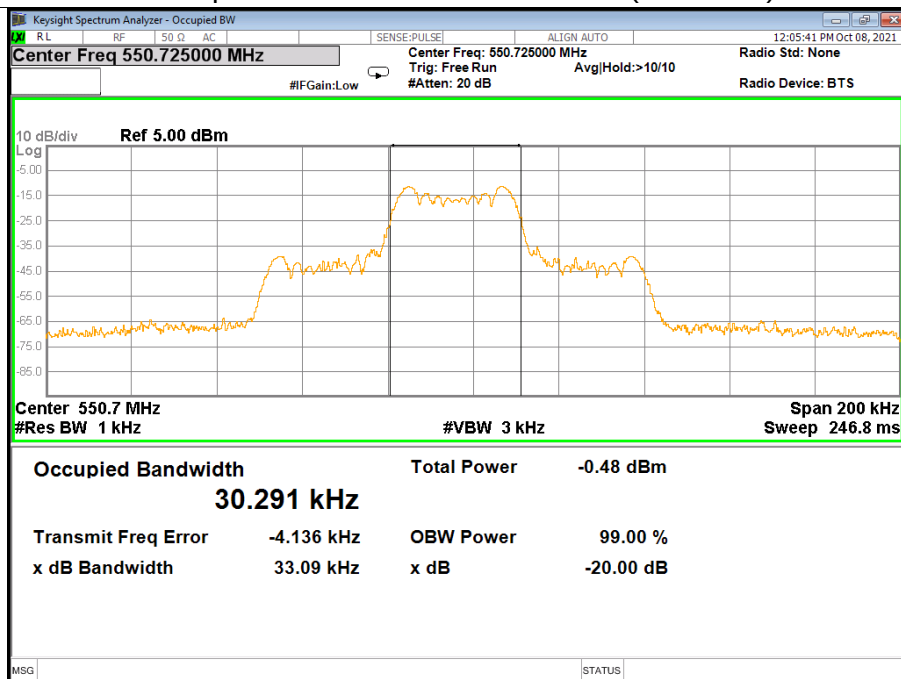


TEST RESULT

Band A

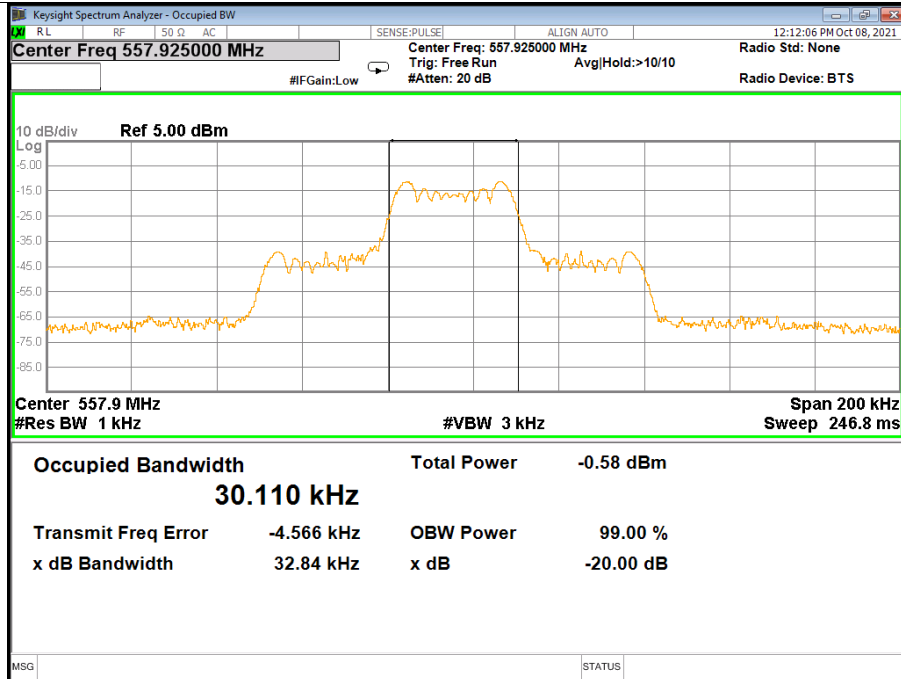
Frequency(MHz)	Occupied Bandwidth(KHz)	Limit(KHz)
550.725	30.291	200
557.925	30.110	200
565.425	30.011	200

Occupied bandwidth of Low Channel (Maximum)

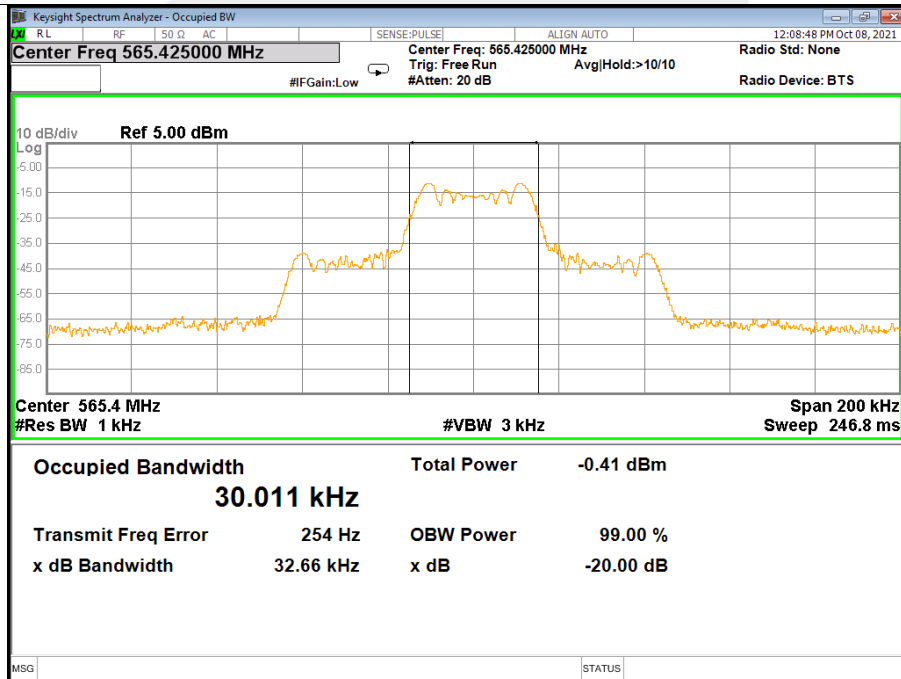




Occupied bandwidth of Mid Channel (Maximum)



Occupied bandwidth of High Channel (Maximum)

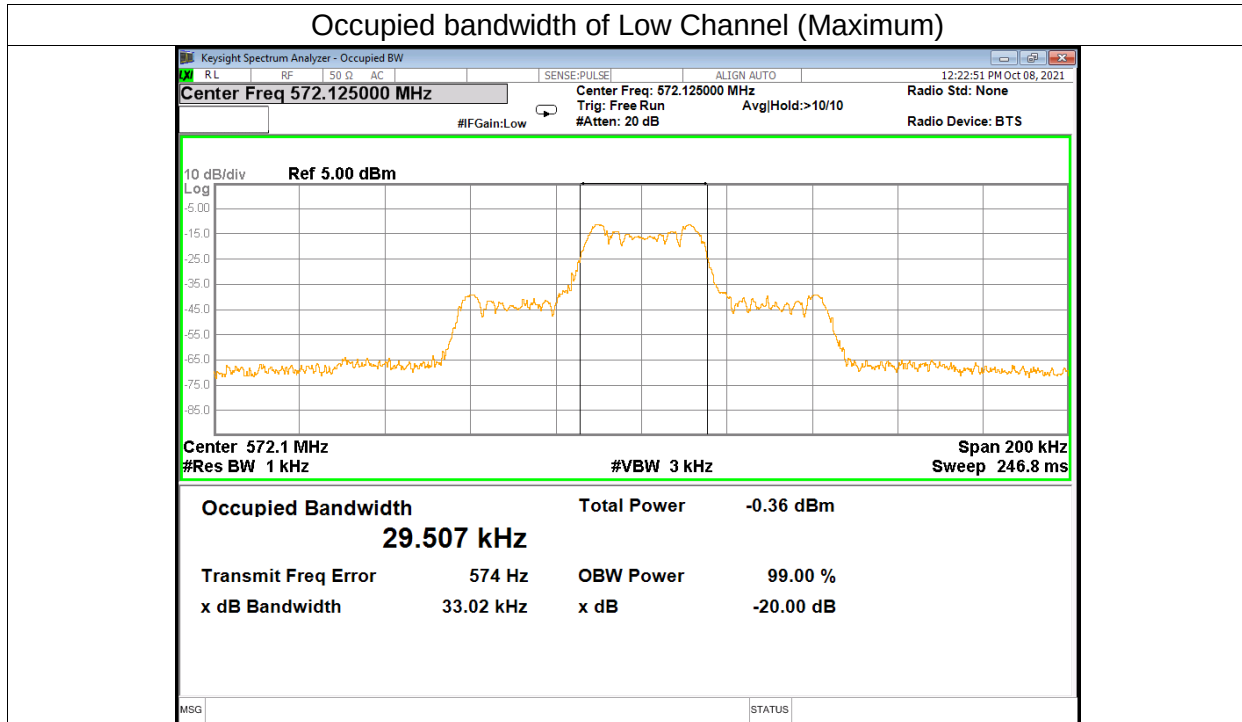




Band B

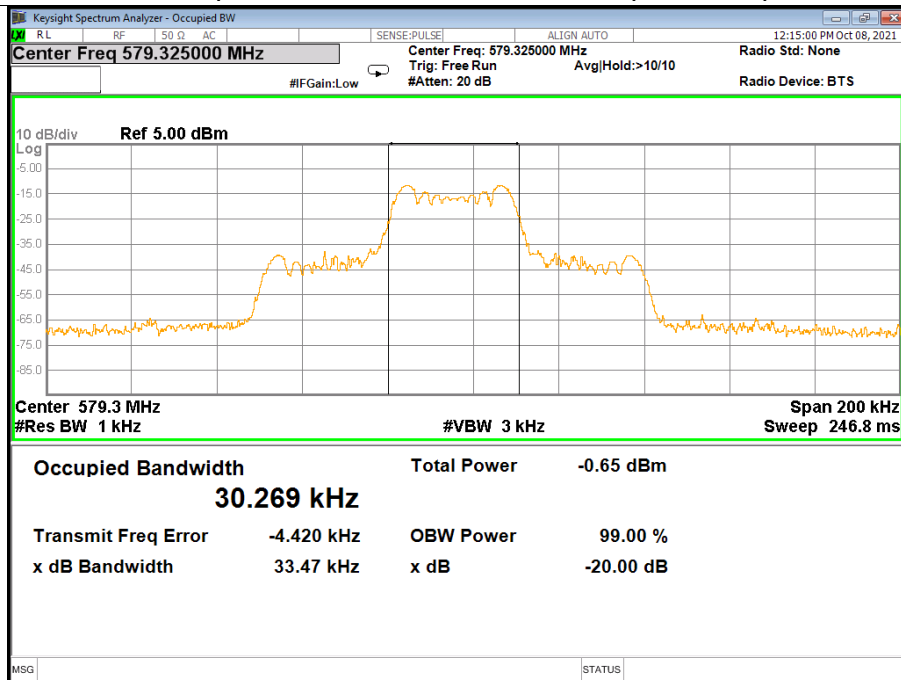
Frequency(MHz)	Occupied Bandwidth(KHz)	Limit(KHz)
572.125	29.507	200
579.325	30.269	200
586.825	29.804	200

Occupied bandwidth of Low Channel (Maximum)

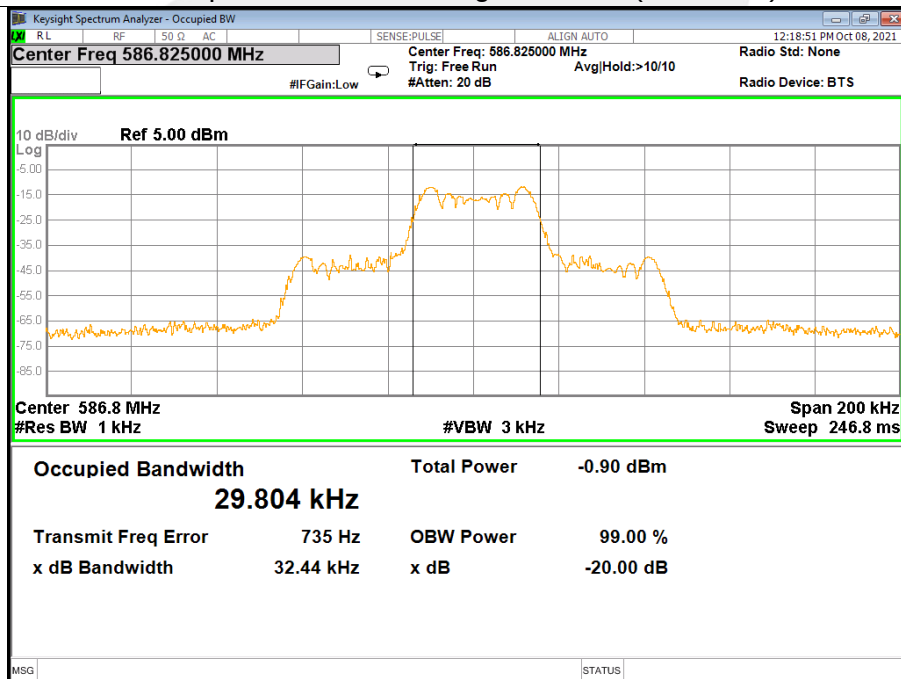




Occupied bandwidth of Mid Channel (Maximum)



Occupied bandwidth of High Channel (Maximum)

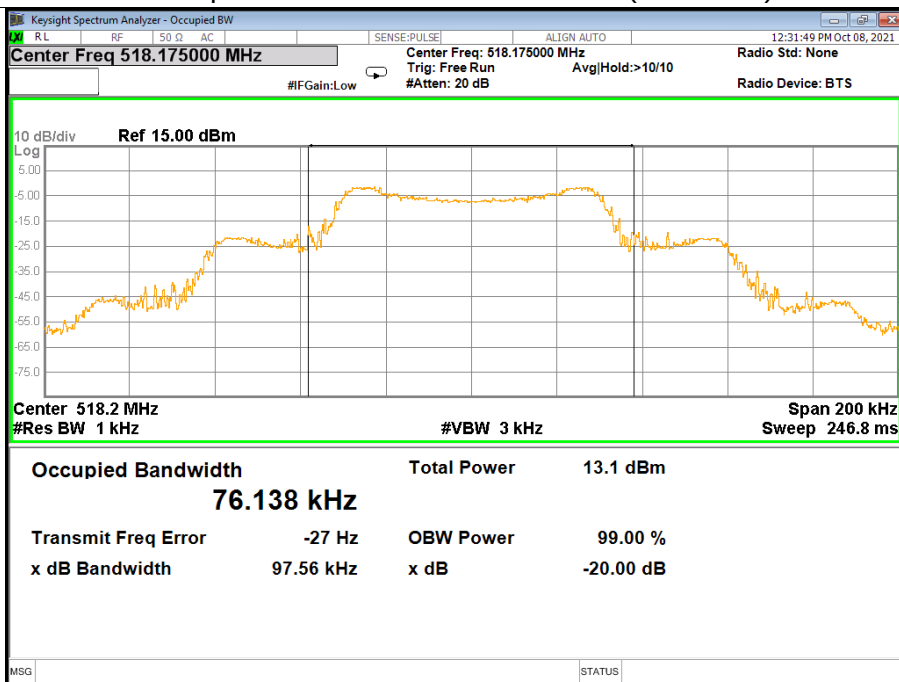




Band C

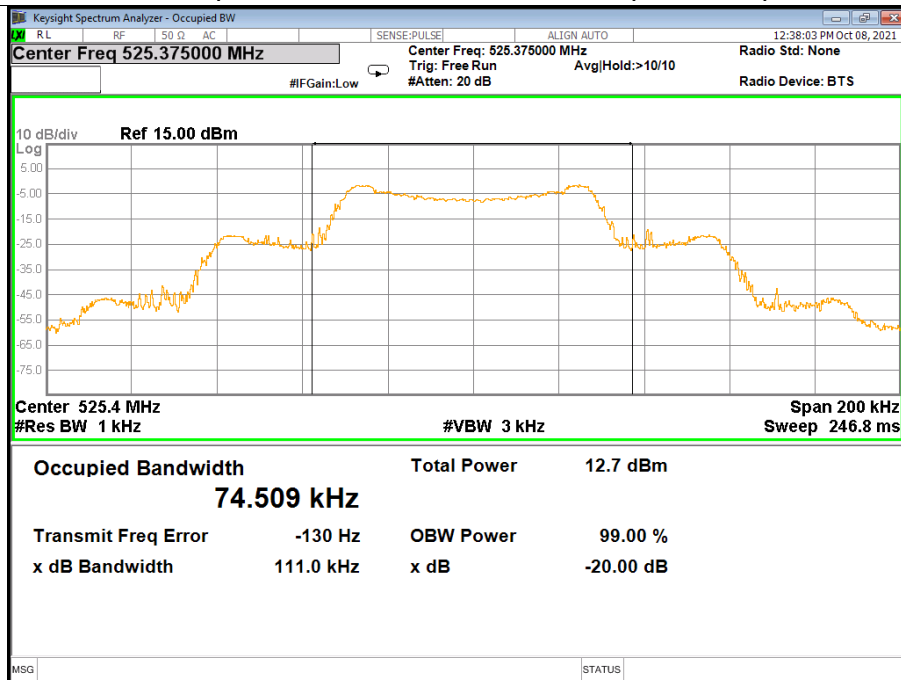
Frequency(MHz)	Occupied Bandwidth(KHz)	Limit(KHz)
518.175	76.138	200
525.375	74.509	200
532.875	76.685	200

Occupied bandwidth of Low Channel (Maximum)

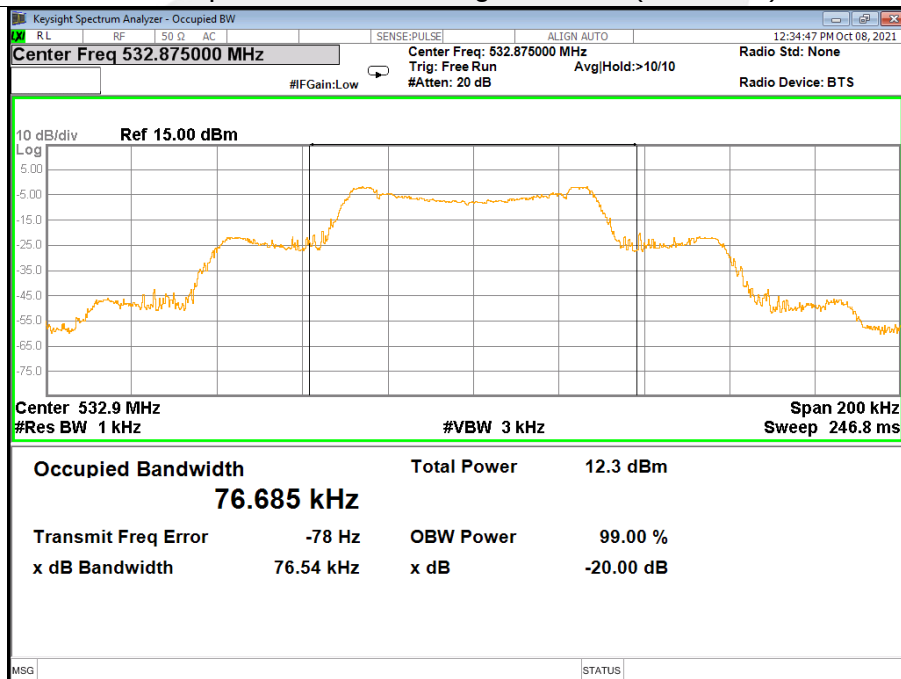




Occupied bandwidth of Mid Channel (Maximum)



Occupied bandwidth of High Channel (Maximum)

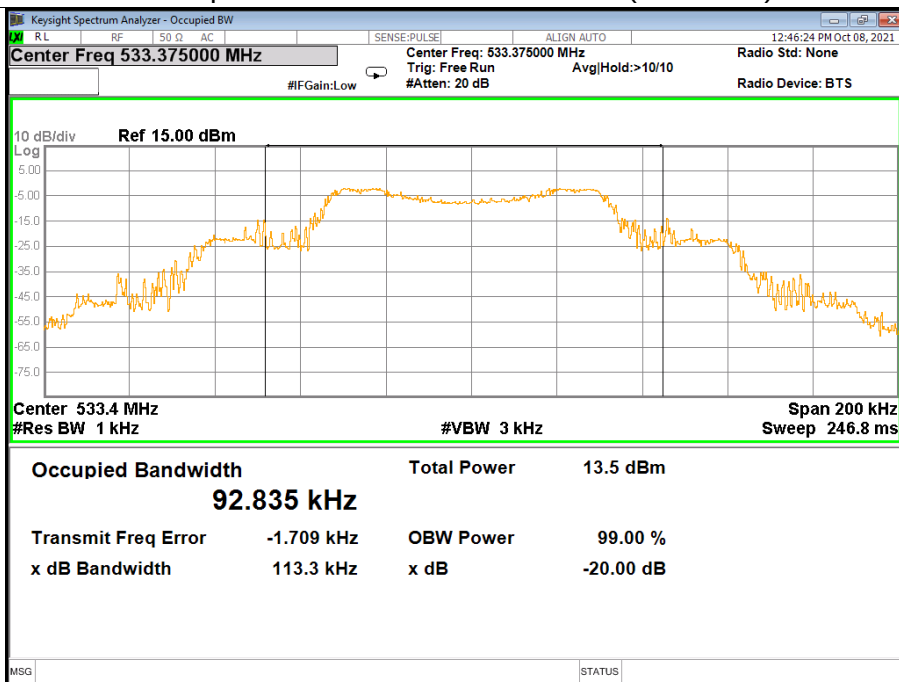




Band D

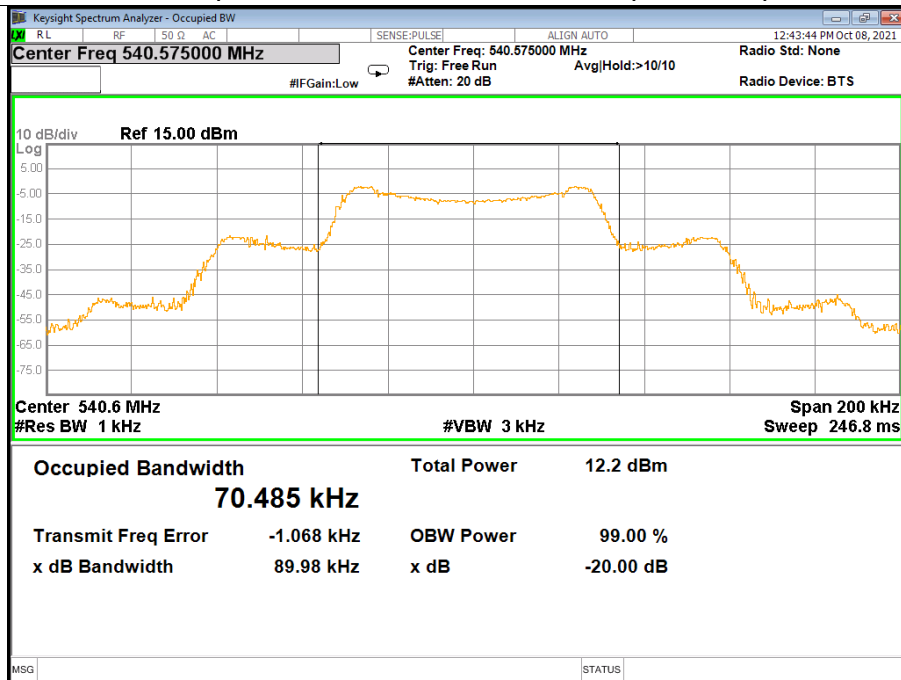
Frequency(MHz)	Occupied Bandwidth(KHz)	Limit(KHz)
533.375	92.835	200
540.575	70.485	200
548.075	89.367	200

Occupied bandwidth of Low Channel (Maximum)

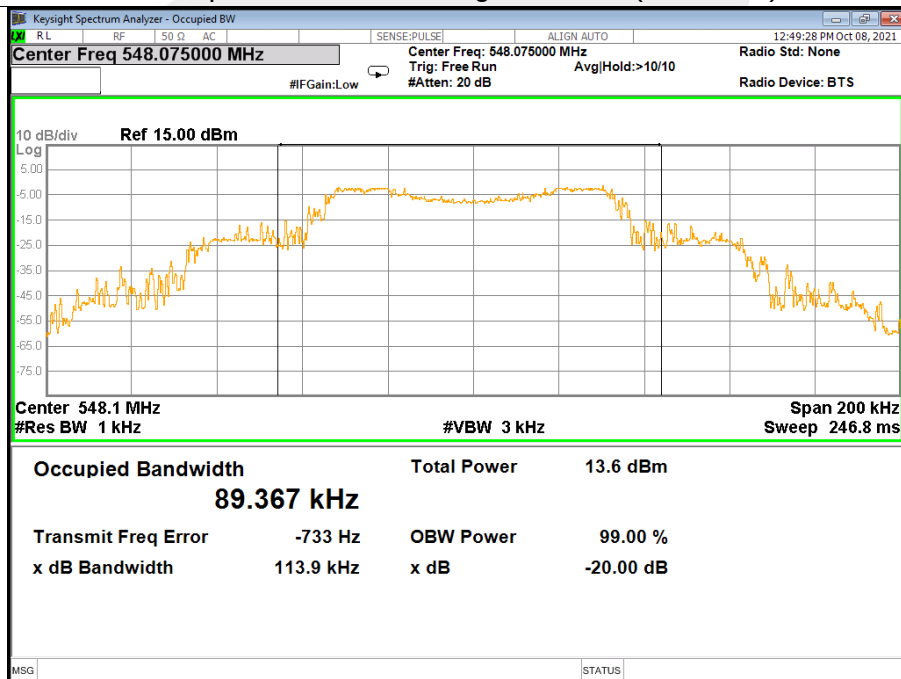




Occupied bandwidth of Mid Channel (Maximum)



Occupied bandwidth of High Channel (Maximum)



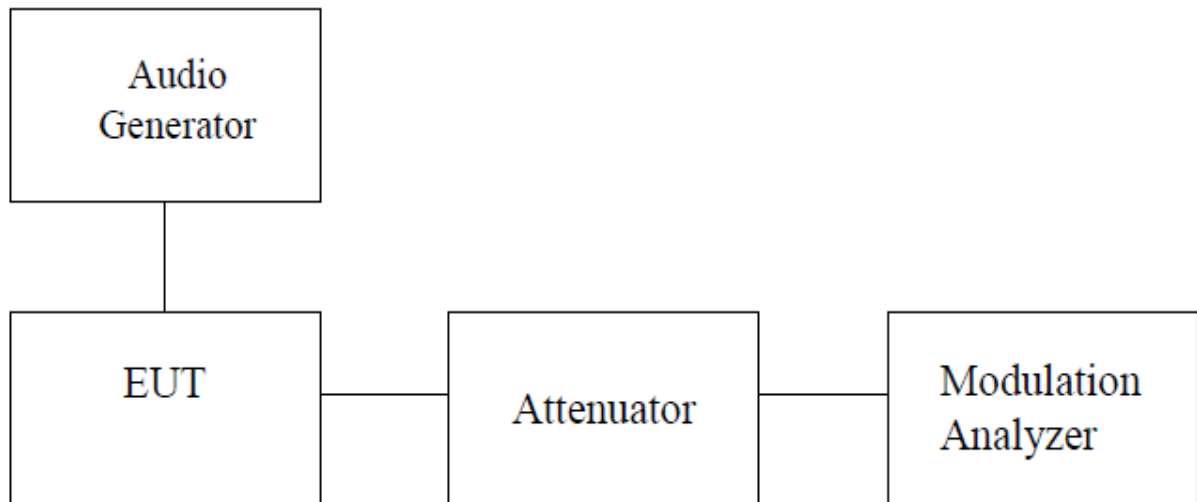
4.6 AUDIO FREQUENCY RESPONSE

TEST LIMIT

The audio frequency response is the degree of closeness to which the frequency deviation of the transmitter follows a prescribed characteristic. The frequency response of the audio modulation part is measured over a frequency range of 100 Hz to 5000 Hz.

According to CFR 47 section 74.861 e (1), any form of modulation may be used. A maximum deviation of ± 75 KHz is permitted when frequency modulation is employed.

TEST CONFIGURATION



TEST PROCEDURE

- The audio frequency response is the degree of the closeness to which the frequency deviation of the transmitter follows prescribed characteristics.
- The frequency response of the audio modulation part is measured over a frequency range of 100Hz to 5000 Hz.
- For 1000 Hz tone reference signal the audio generator level is adjusted to get 20% of the rated system deviation.
The deviations obtained over the frequency range from 100 HZ to 5000 Hz are recorded and
- compared with the reference deviation as follows:
$$\text{Audio Frequency Response} = 20 \log (\text{DEV freq} / \text{Dev ref})$$

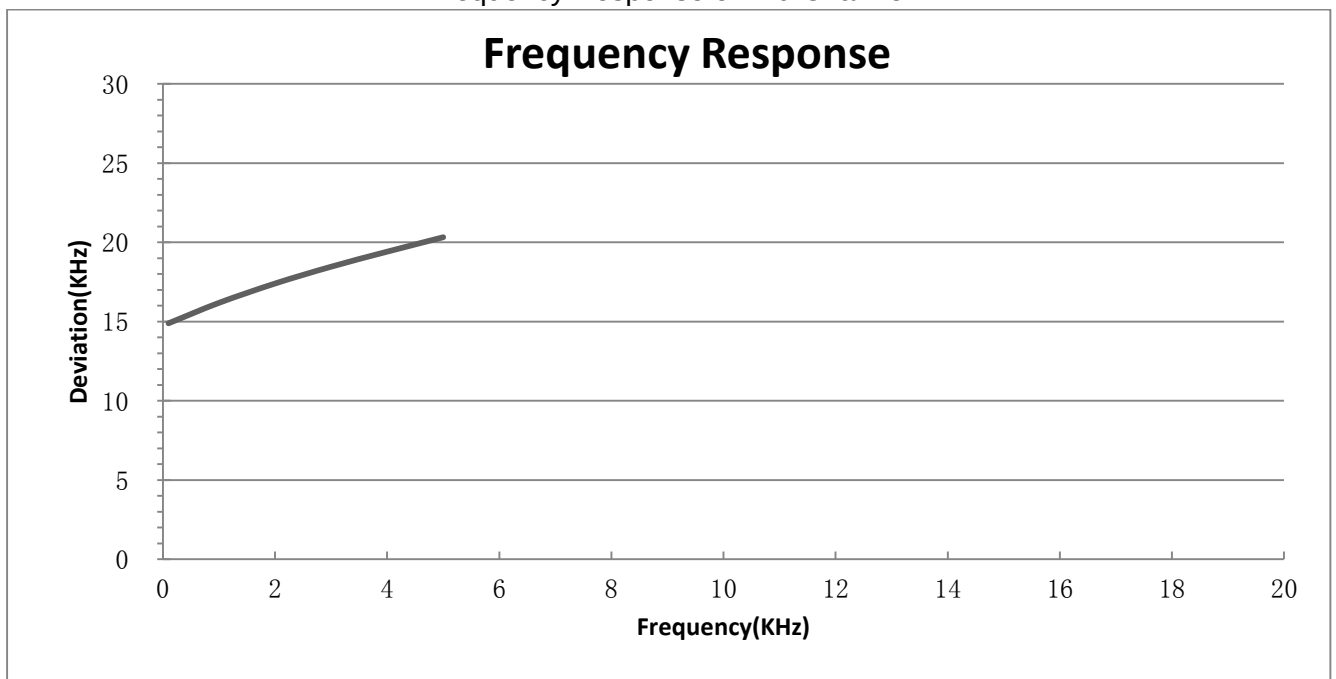
**TEST RESULT**

Audio Frequency Response:

Band A

Frequency(KHz)	Deviation(KHz)
0.01	14.89
1	16.18
2	17.40
3	18.46
4	19.41
5	20.32

Frequency Response of Mid Channel

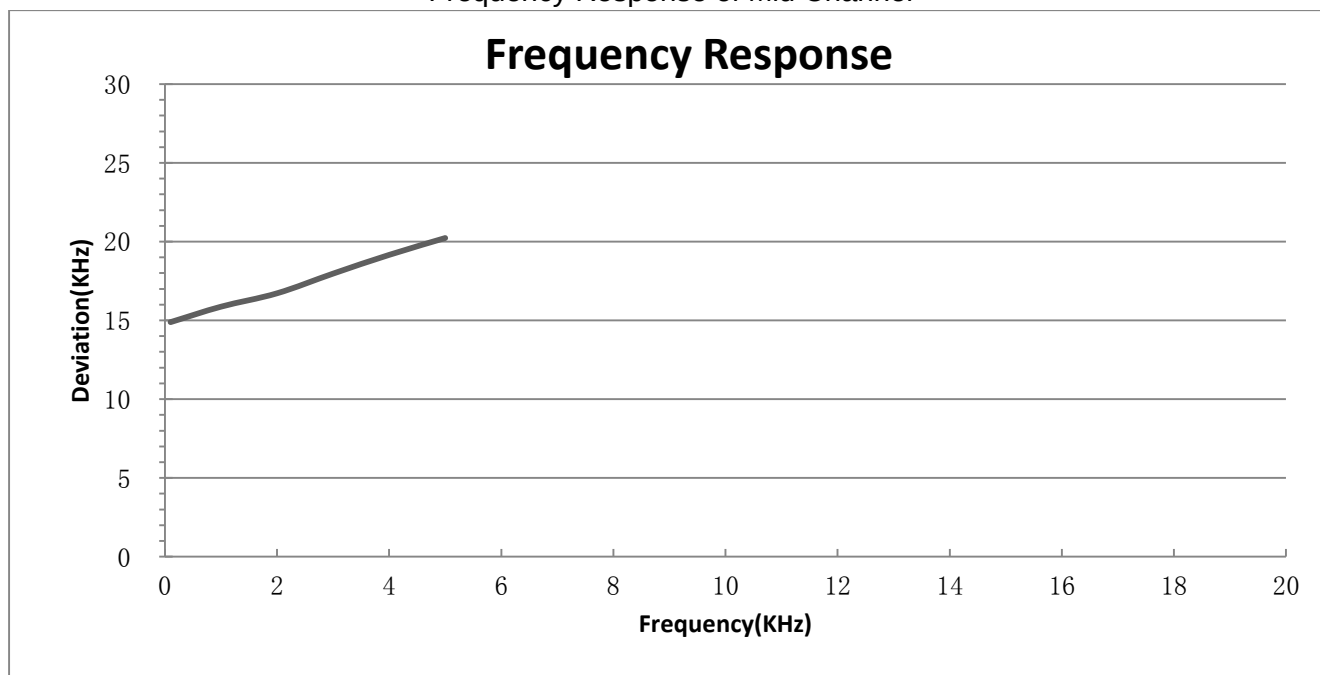




Band B

Frequency(KHz)	Deviation(KHz)
0.01	14.89
1	15.87
2	16.72
3	17.97
4	19.16
5	20.23

Frequency Response of Mid Channel

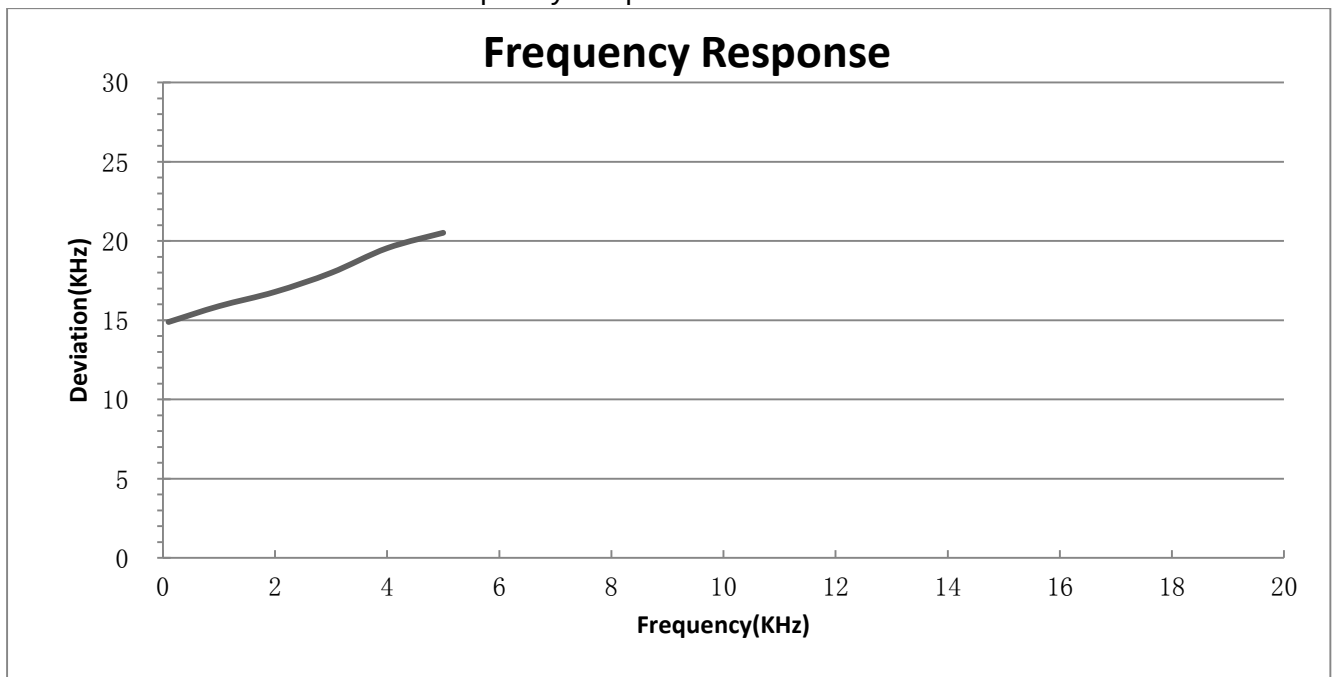




Band C

Frequency(KHz)	Deviation(KHz)
0.01	14.89
1	15.89
2	16.79
3	17.99
4	19.55
5	20.52

Frequency Response of Mid Channel

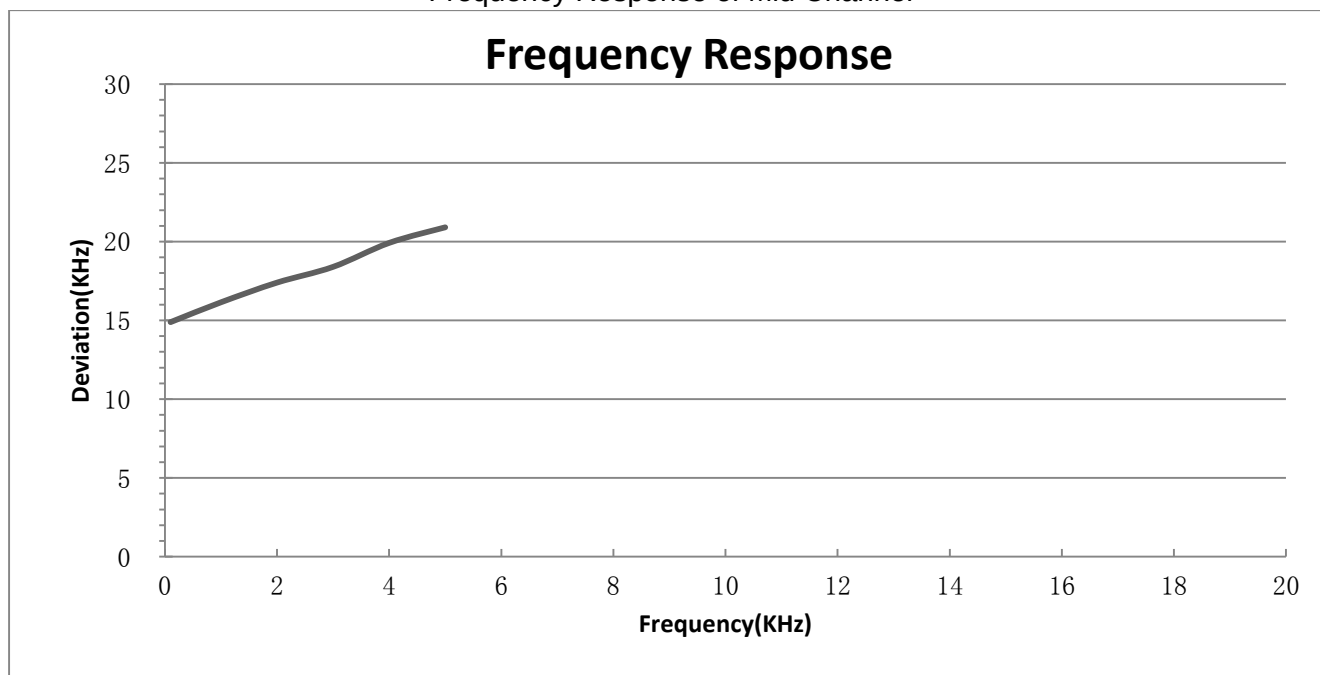




Band B

Frequency(KHz)	Deviation(KHz)
0.01	14.89
1	16.15
2	17.40
3	18.40
4	19.92
5	20.91

Frequency Response of Mid Channel



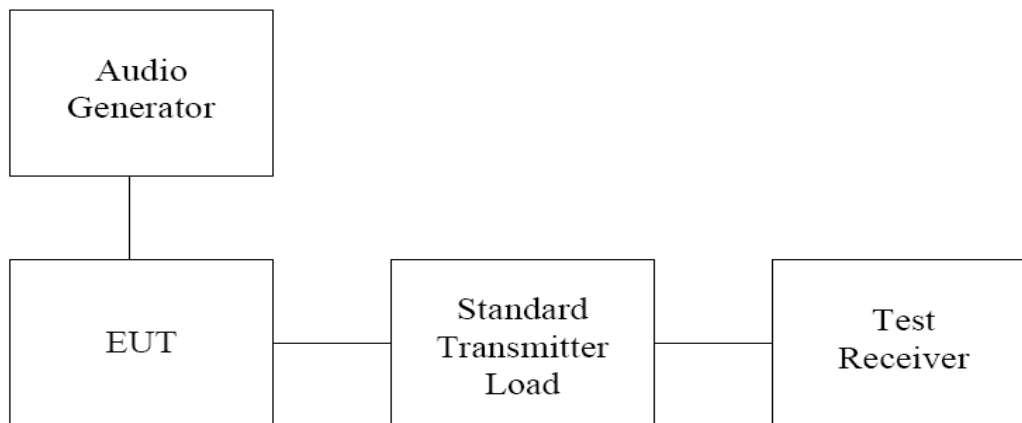
4.7 MODULATION DEVIATION

TEST LIMIT

According to CFR 47 section 2.1047 a, for Voice modulation communication equipment, the frequency response of the audio modulation circuit over a range of 100 to 5000 Hz shall be measured.

According to CFR 47 section 74.861 e (3), any form of modulation may be used. A maximum deviation of ± 75 KHz is permitted when frequency modulation is employed.

TEST CONFIGURATION



TEST PROCEDURE

- a. Modulation limits is the transmitter circuit's ability to limit the transmitter from producing deviations in excess of rated system deviation.
- b. The audio signal generator is connected to the audio input of the EUT with its full rating.
- c. The modulation response is measured at certain modulation frequencies, related to 1000 Hz reference signal.
- d. Tests are performed for positive and negative modulation.

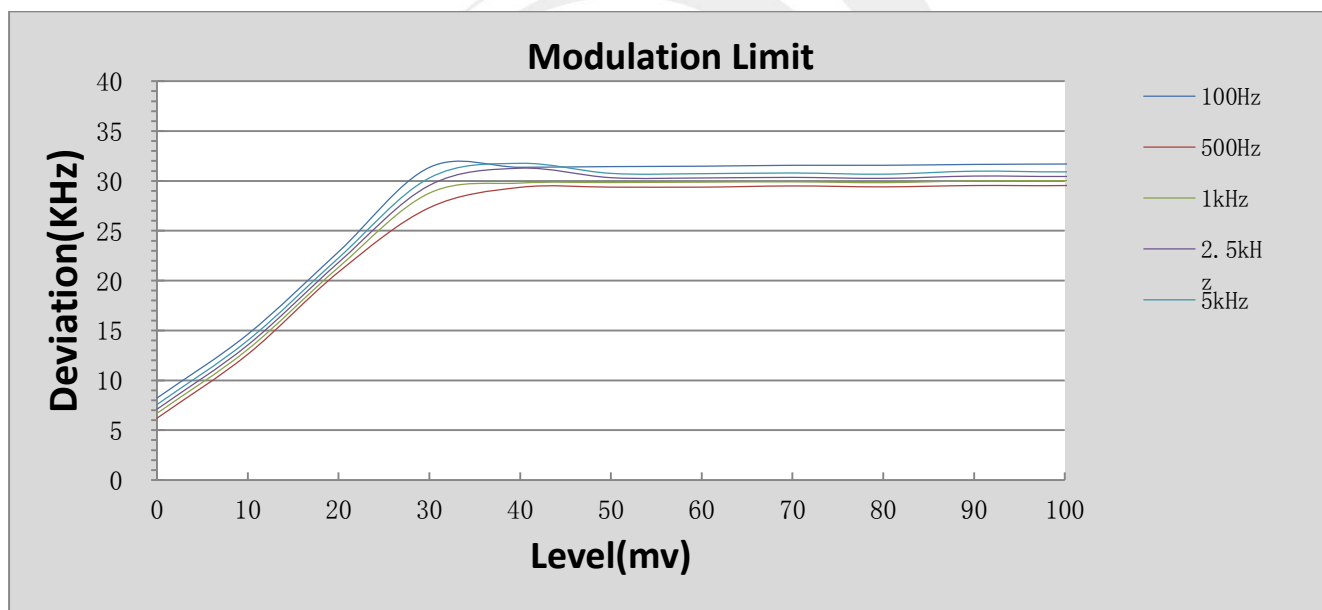
**TEST RESULT**

Modulation Deviation

Band A

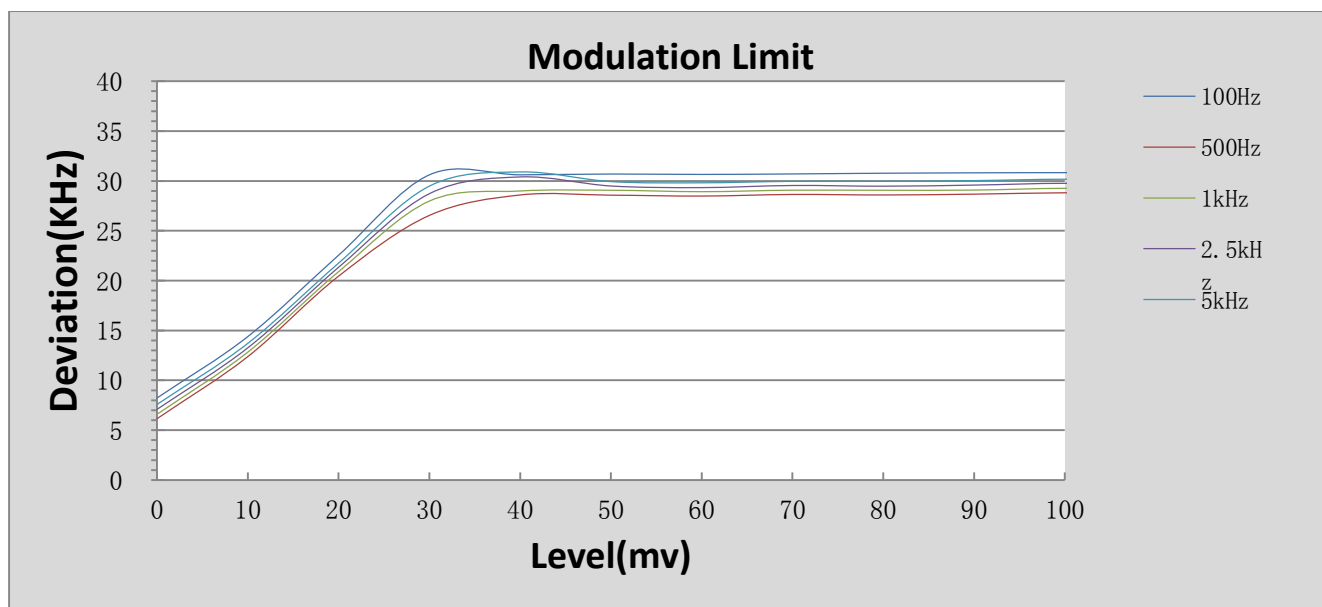
Level(mv)	100Hz	500Hz	1kHz	2.5kHz	5kHz
0	8.23	6.21	6.70	7.11	7.58
10	14.63	12.62	13.11	13.55	14.01
20	22.90	20.87	21.35	21.83	22.29
30	31.36	27.32	28.78	29.56	30.30
40	31.37	29.36	29.79	31.28	31.77
50	31.44	29.38	29.84	30.33	30.76
60	31.48	29.38	29.88	30.30	30.73
70	31.57	29.50	29.91	30.36	30.80
80	31.57	29.41	29.83	30.26	30.68
90	31.66	29.54	30.01	30.49	30.98
100	31.70	29.54	30.03	30.45	30.91
110	31.76	29.76	30.17	30.62	31.11

Modulation Deviation of Mid Channel



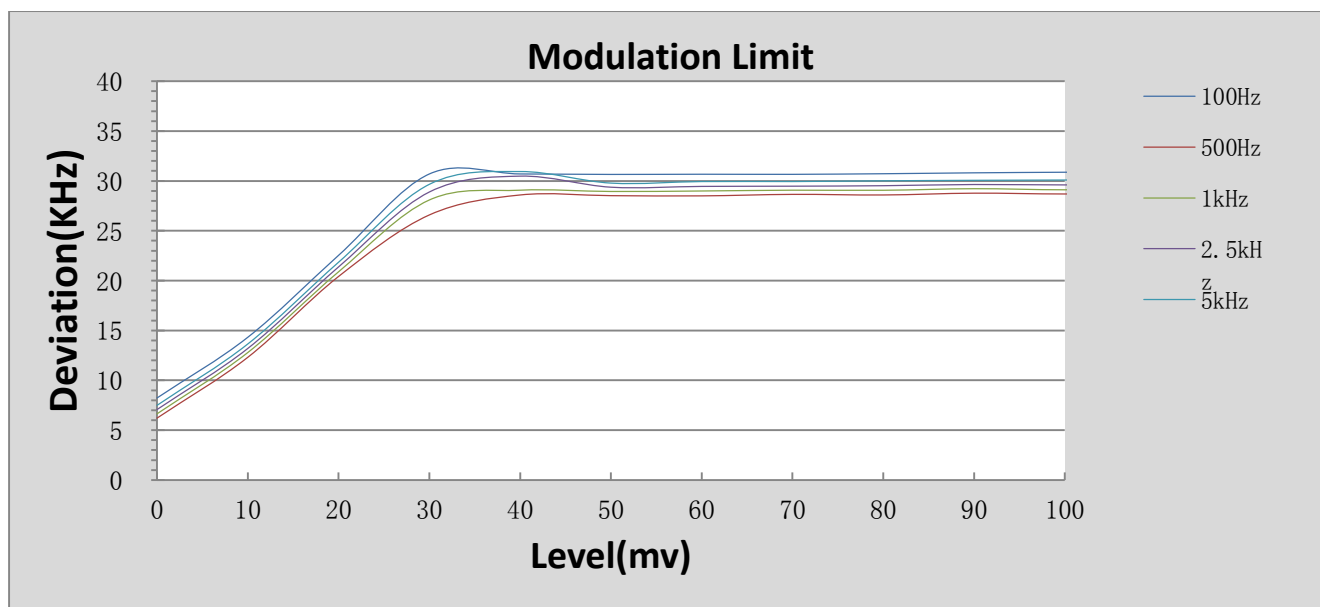
**Band B**

Level(mv)	100Hz	500Hz	1kHz	2.5kHz	5kHz
0	8.23	6.15	6.59	7.09	7.58
10	14.39	12.38	12.83	13.26	13.71
20	22.55	20.45	20.90	21.34	21.76
30	30.61	26.54	27.98	28.72	29.48
40	30.61	28.59	28.99	30.40	30.90
50	30.69	28.57	29.06	29.49	29.93
60	30.65	28.48	28.92	29.33	29.81
70	30.70	28.64	29.07	29.54	29.96
80	30.77	28.59	29.06	29.47	29.96
90	30.81	28.67	29.08	29.58	30.03
100	30.83	28.81	29.26	29.76	30.17
110	30.82	28.75	29.16	29.60	30.04

Modulation Deviation of Mid Channel

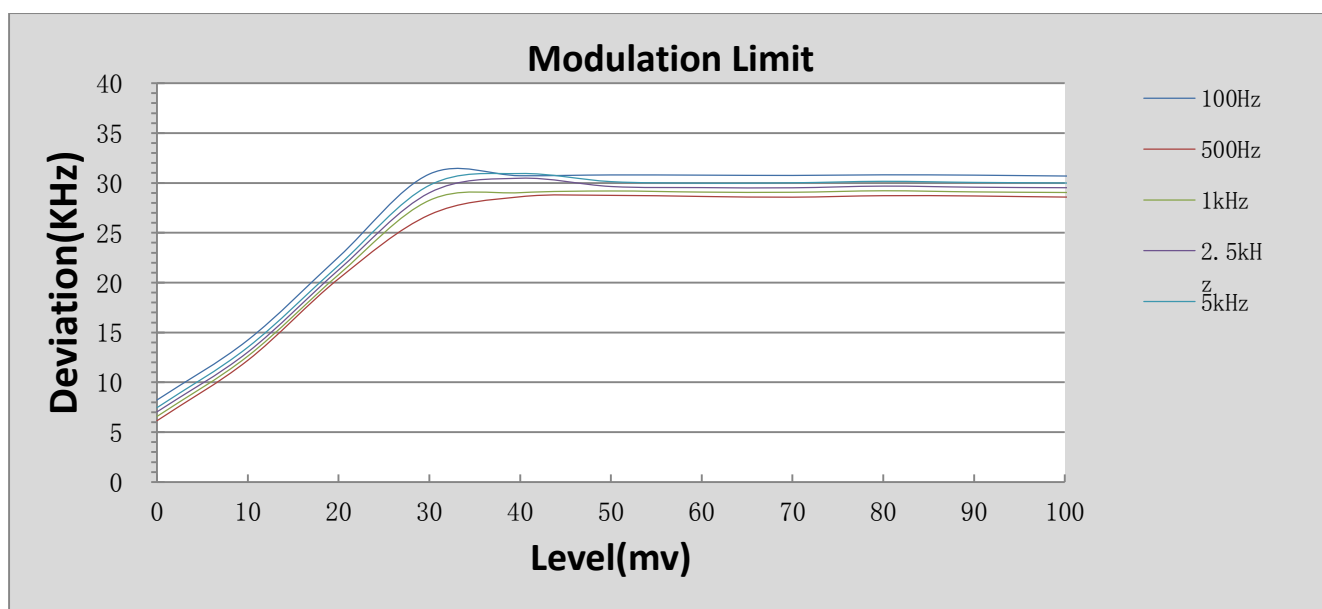
**Band C**

Level(mv)	100Hz	500Hz	1kHz	2.5kHz	5kHz
0	8.23	6.21	6.64	7.07	7.49
10	14.32	12.31	12.79	13.20	13.65
20	22.54	20.42	20.89	21.38	21.85
30	30.70	26.59	28.09	28.89	29.66
40	30.70	28.59	29.07	30.48	30.94
50	30.65	28.52	28.94	29.37	29.78
60	30.67	28.50	28.99	29.45	29.94
70	30.66	28.65	29.07	29.47	29.94
80	30.72	28.59	29.06	29.52	30.01
90	30.81	28.77	29.22	29.64	30.06
100	30.87	28.69	29.11	29.60	30.09
110	30.90	28.77	29.22	29.68	30.15

Modulation Deviation of Mid Channel

**Band D**

Level(mv)	100Hz	500Hz	1kHz	2.5kHz	5kHz
0	8.23	6.15	6.58	7.04	7.46
10	14.24	12.21	12.63	13.03	13.52
20	22.57	20.39	20.80	21.28	21.73
30	30.89	26.80	28.25	29.01	29.76
40	30.72	28.61	29.02	30.47	30.94
50	30.80	28.75	29.19	29.64	30.13
60	30.78	28.64	29.08	29.53	29.98
70	30.75	28.57	29.06	29.51	30.01
80	30.81	28.72	29.21	29.68	30.16
90	30.78	28.69	29.10	29.57	30.05
100	30.69	28.58	29.04	29.52	29.99
110	30.64	28.59	29.01	29.49	29.89

Modulation Deviation of Mid Channel

4.8 RF OUTPUT POWER

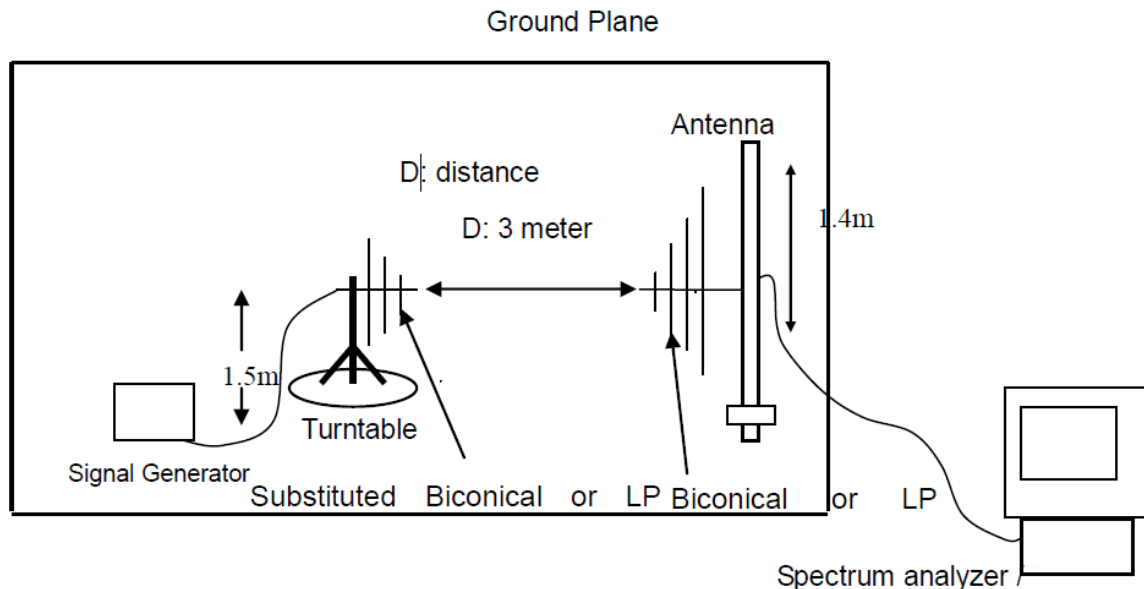
TEST LIMIT

According to CFR 47 section 74.861 e (1), the power of the measured unmodulated carrier power at the output of the transmitter power amplifier (antenna input power) may not exceed the following:

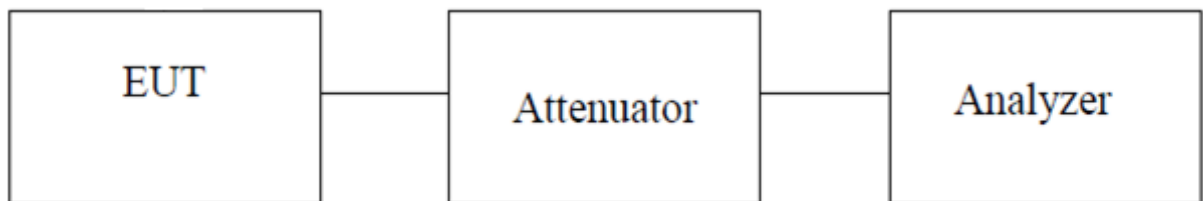
- (i) 54-72, 76-88, and 174-216 MHz bands: 50 mW EIRP
- (ii) 470-608 and 614-698: 250 mW conducted power
- (iii) 600 MHz duplex gap: 20 mW EIRP

TEST CONFIGURATION

Radiation



Conduction



TEST PROCEDURE(Radiation)

- a. On a test site, the EUT shall be placed on a turntable and in the position closest to the normal use as declared by the user.
- b. The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
- c. The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
- d. The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
- e. The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
- f. The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- g. The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.



- h The maximum signal level detected by the measuring receiver shall be noted.
- i The measurement shall be repeated with the test antenna set to horizontal polarization.
- j Replace the antenna with a proper Antenna (substitution antenna).
- k The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
- l The substitution antenna shall be connected to a calibrated signal generator.
- m If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- n The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
- o The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
- p The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
- q The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

TEST PROCEDURE (Conduction)

- a. The RF output of the transceiver was connected to the input of the spectrum analyzer through sufficient attenuation.
- b. Set the RBW >20BW, VBW>3xRBW.
- c. Detector = peak.
- d. Sweep time = auto couple.
- e. Trace mode = max hold.
- f. Allow trace to fully stabilize.
- g. Use the peak marker function to determine the maximum amplitude level.

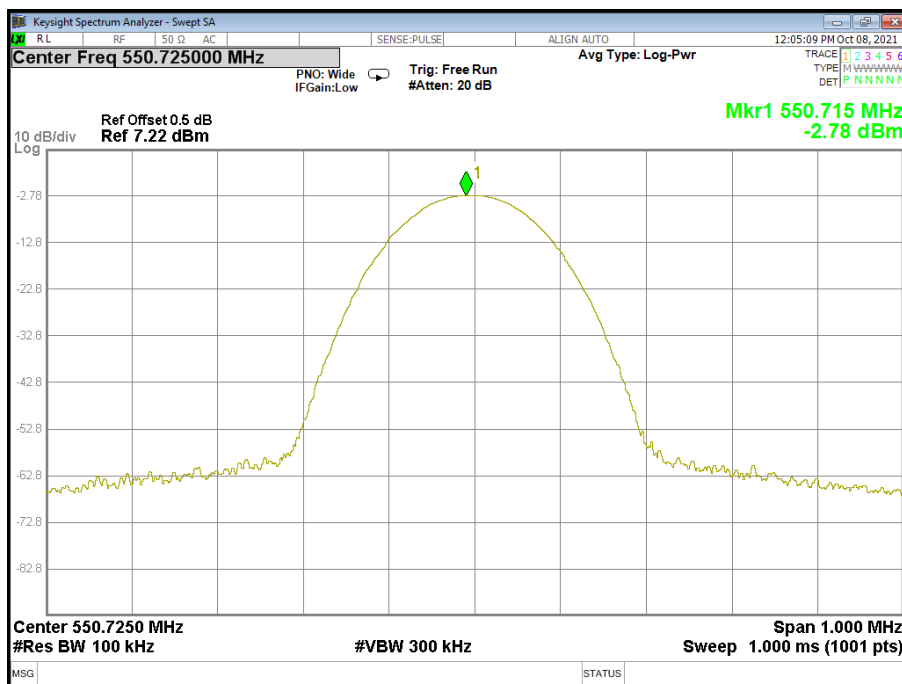


TEST RESULT

Band A

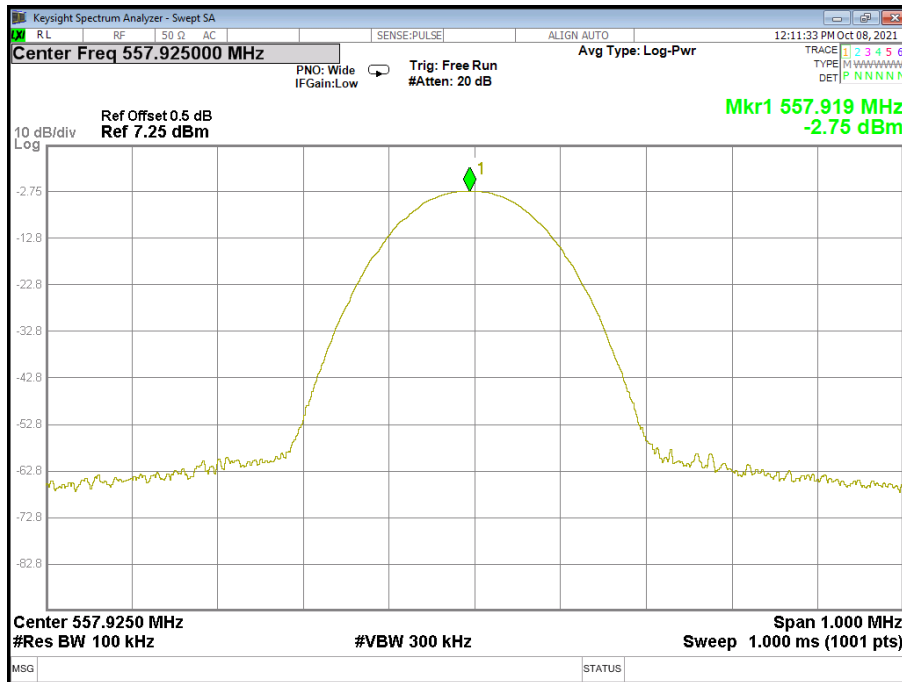
Frequency Channel (MHz)	Peak Output Power (dBm)	Transmitter Power (mW)	Limits (mW)
550.725	-2.78	0.527	250
557.925	-2.75	0.531	250
565.425	-2.7	0.537	250

Low Channel

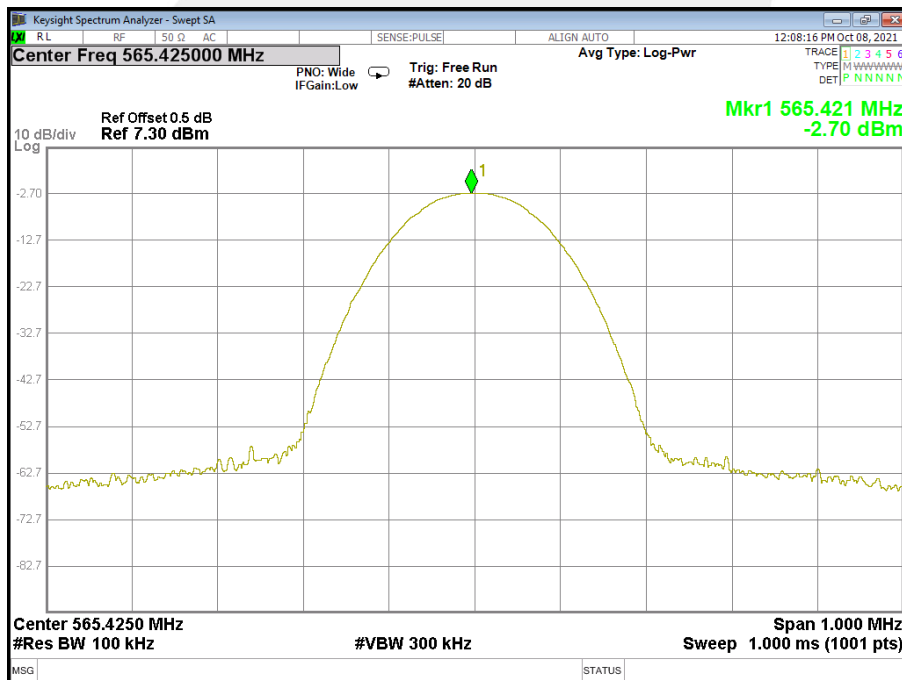




Mid Channel



High Channel

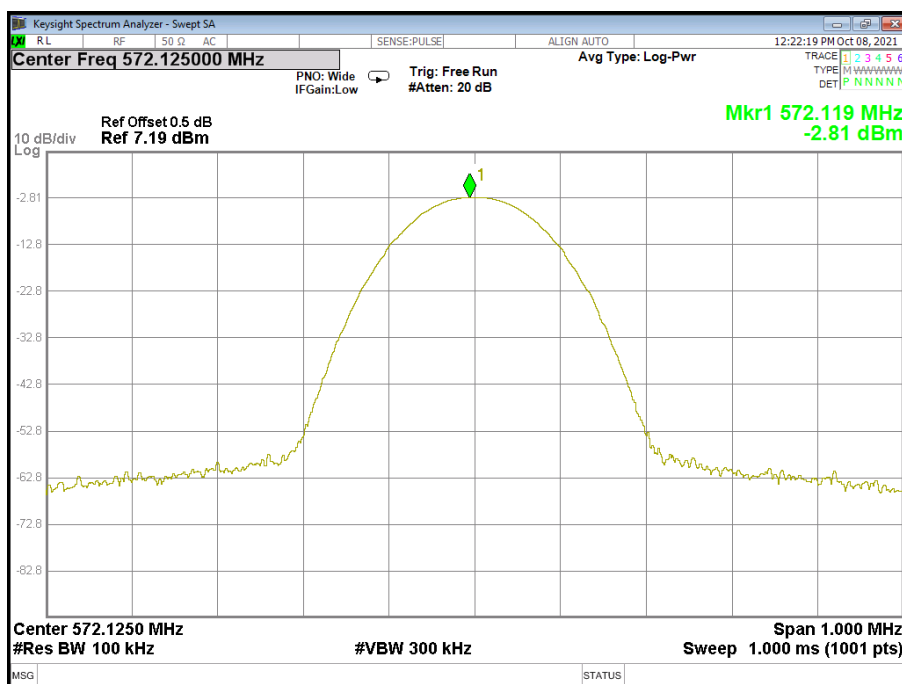




Band B

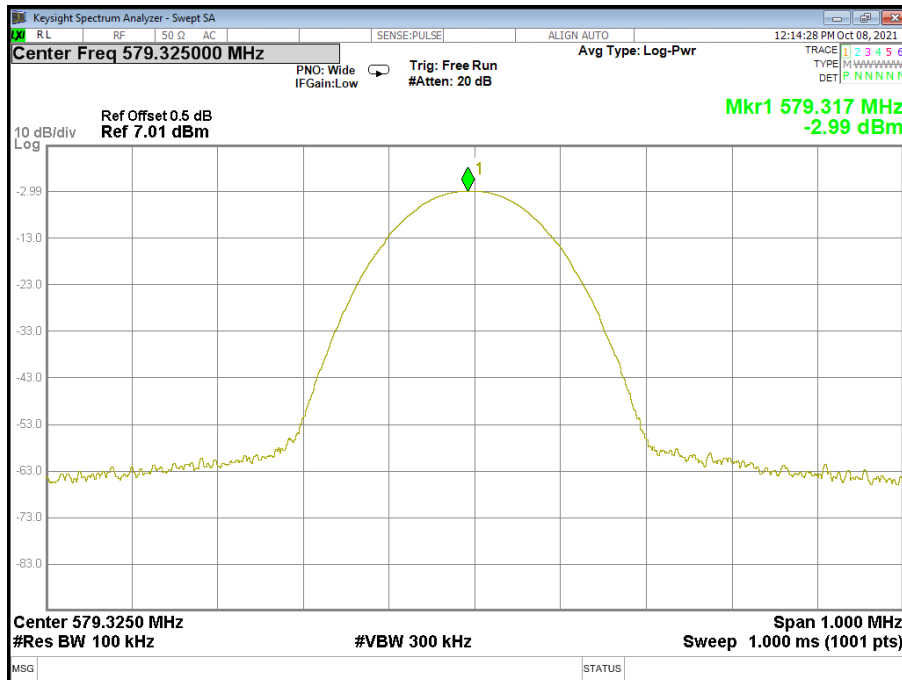
Frequency Channel (MHz)	Peak Output Power (dBm)	Transmitter Power (mW)	Limits (mW)
572.125	-2.81	0.524	250
579.325	-2.99	0.502	250
586.825	-3.23	0.475	250

Low Channel

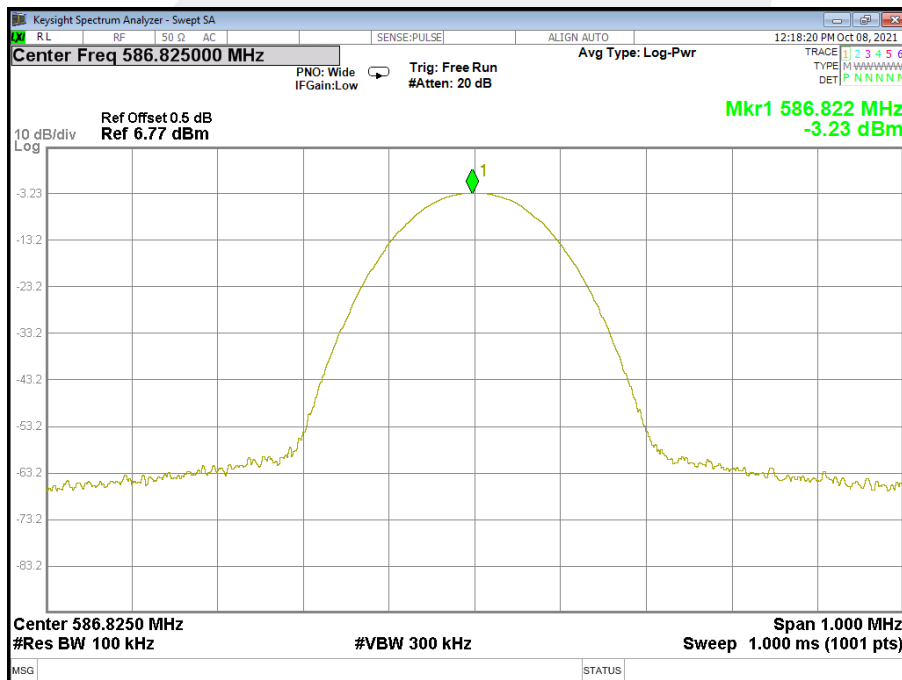




Mid Channel



High Channel

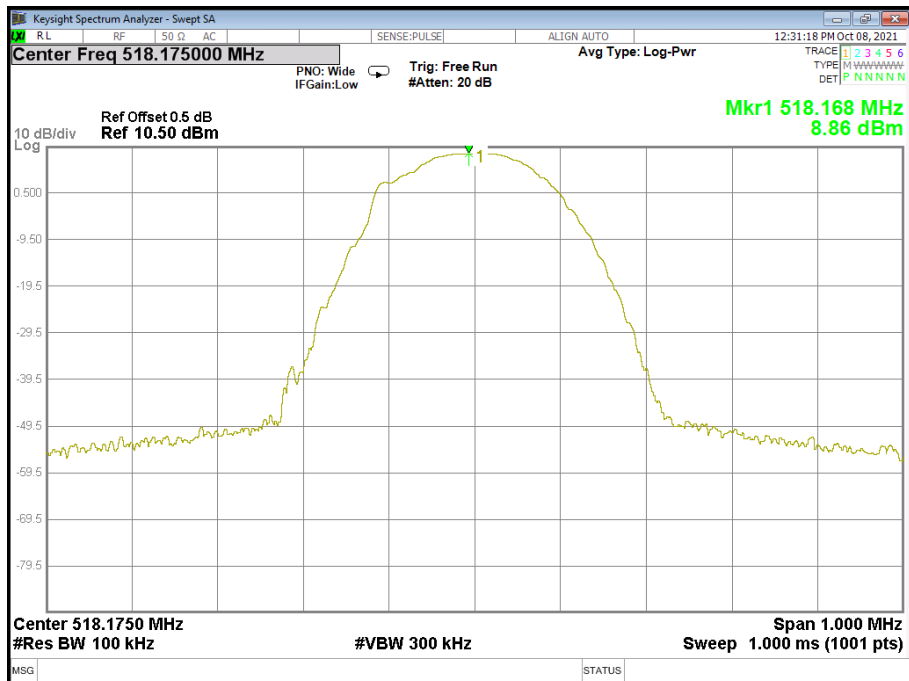




Band C

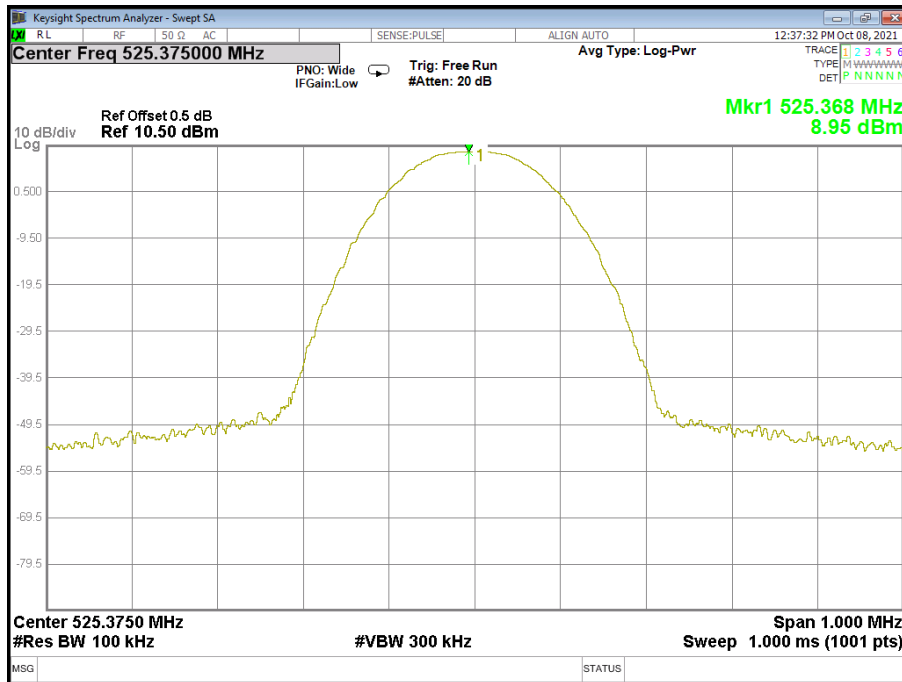
Frequency Channel (MHz)	Peak Output Power (dBm)	Transmitter Power (mW)	Limits (mW)
518.175	8.86	7.691	250
525.375	8.95	7.852	250
532.875	8.67	7.362	250

Low Channel

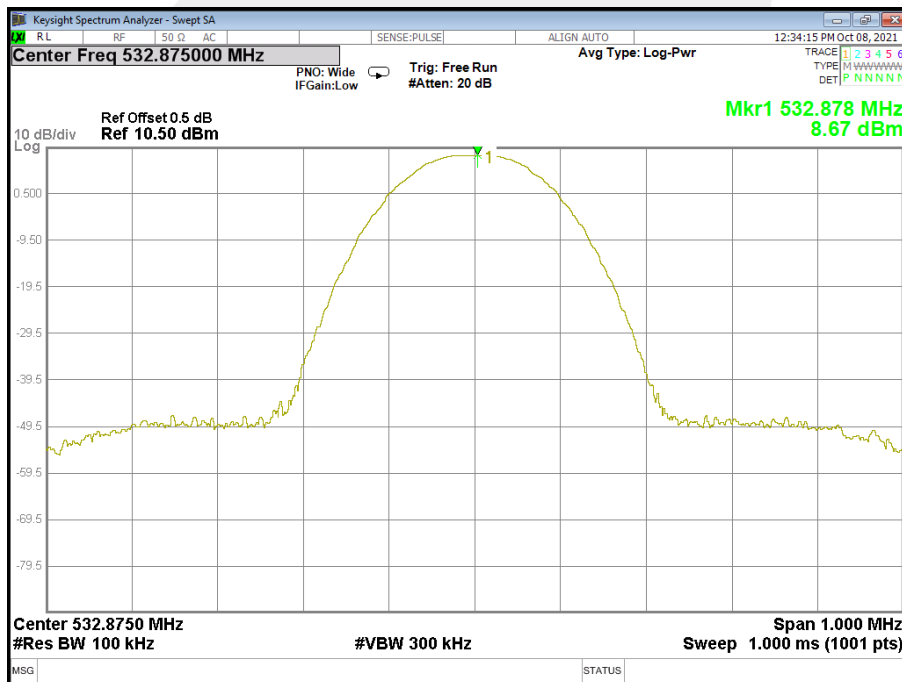




Mid Channel



High Channel

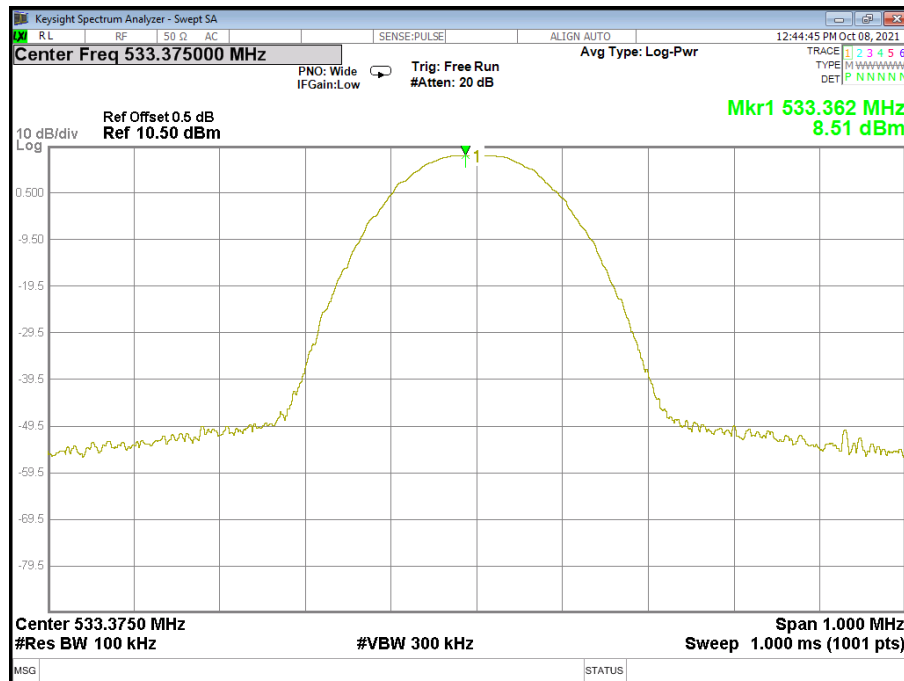




Band D

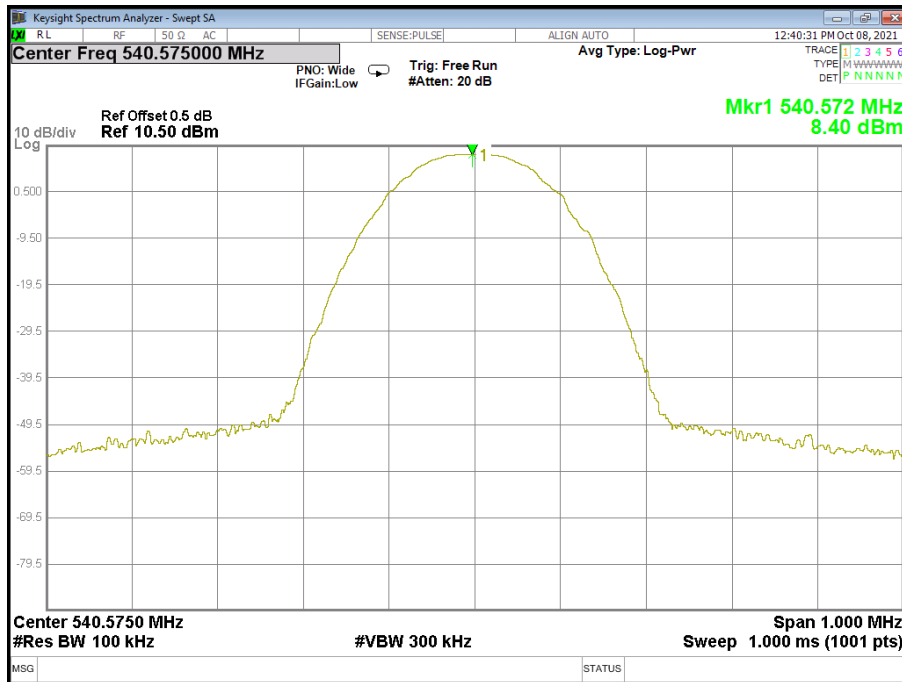
Frequency Channel (MHz)	Peak Output Power (dBm)	Transmitter Power (mW)	Limits (mW)
533.375	8.51	7.096	250
540.575	8.40	6.918	250
548.075	8.30	6.761	250

Low Channel

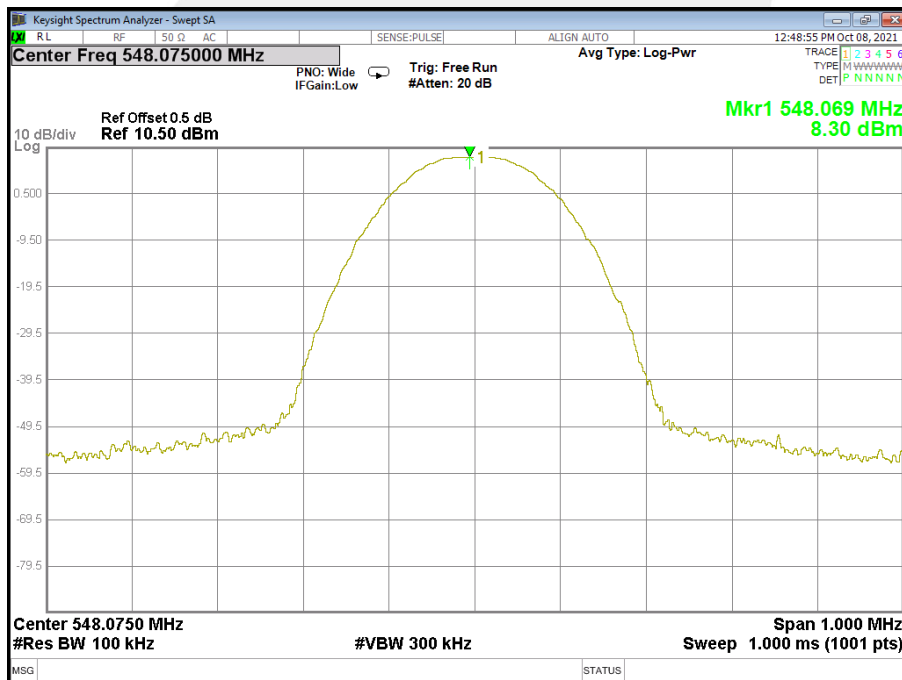




Mid Channel



High Channel





4.9 CONDUCTED EMISSION MEASUREMENT

POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

FREQUENCY (MHz)	Conducted Emissionlimit (dBUV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ * ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

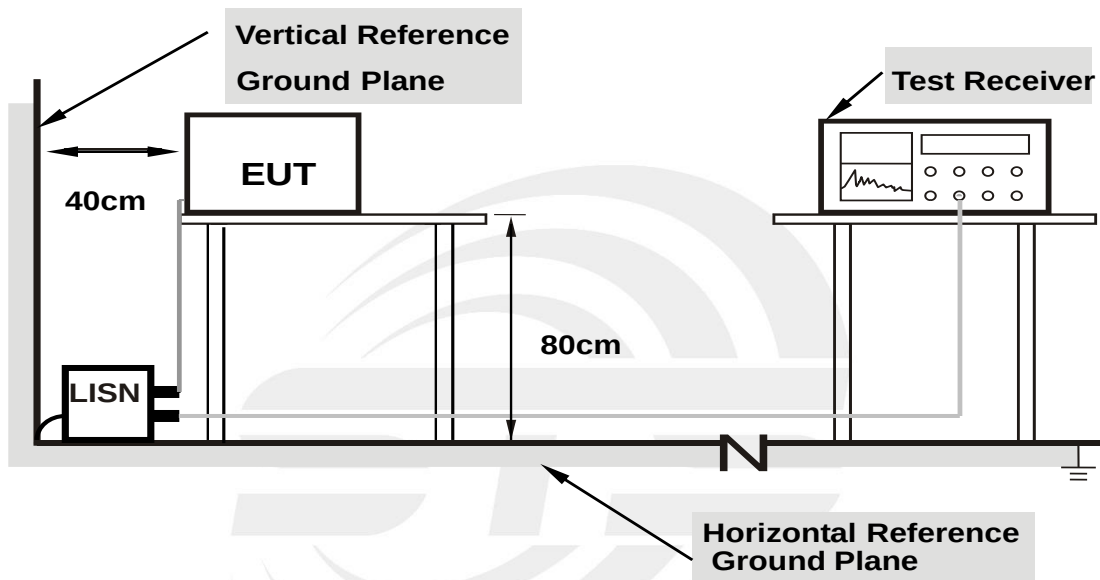
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

TEST PROCEDURE

- The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN is at least 80 cm from the nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

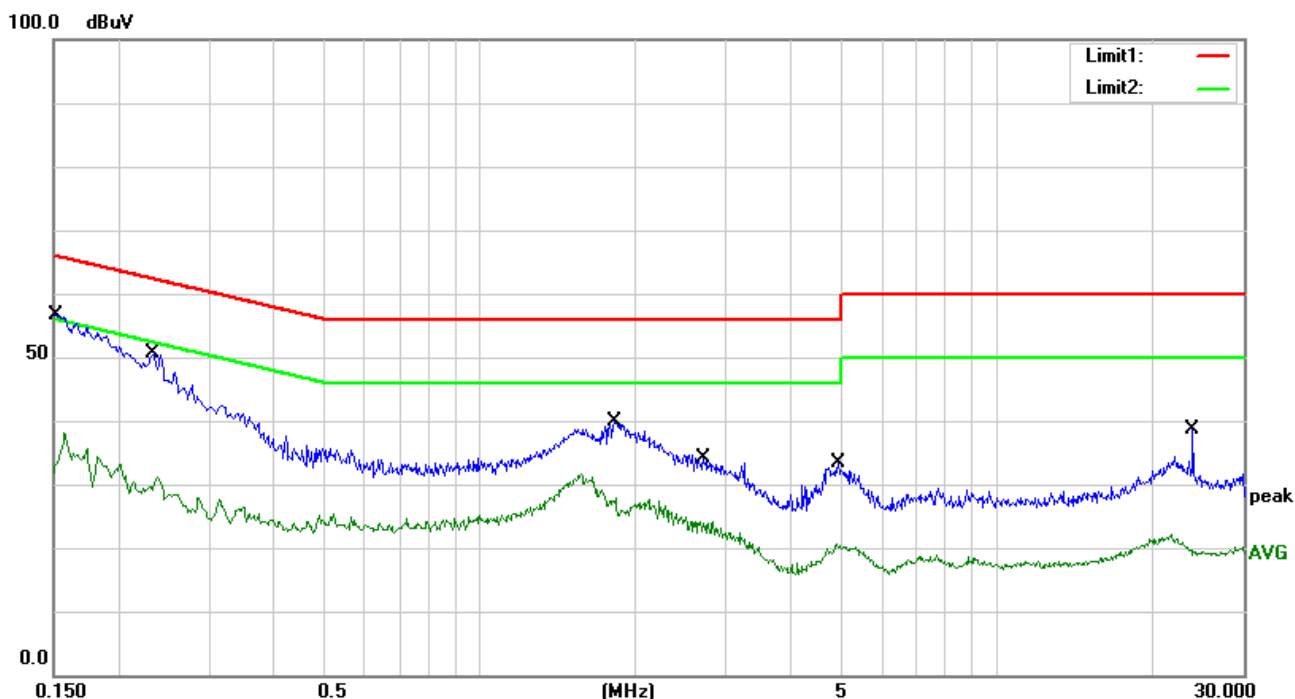
EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



TEST RESULT

Temperature:	26.3°C	Relative Humidity:	58%
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 1/2/3(Mode 2 worst mode)		



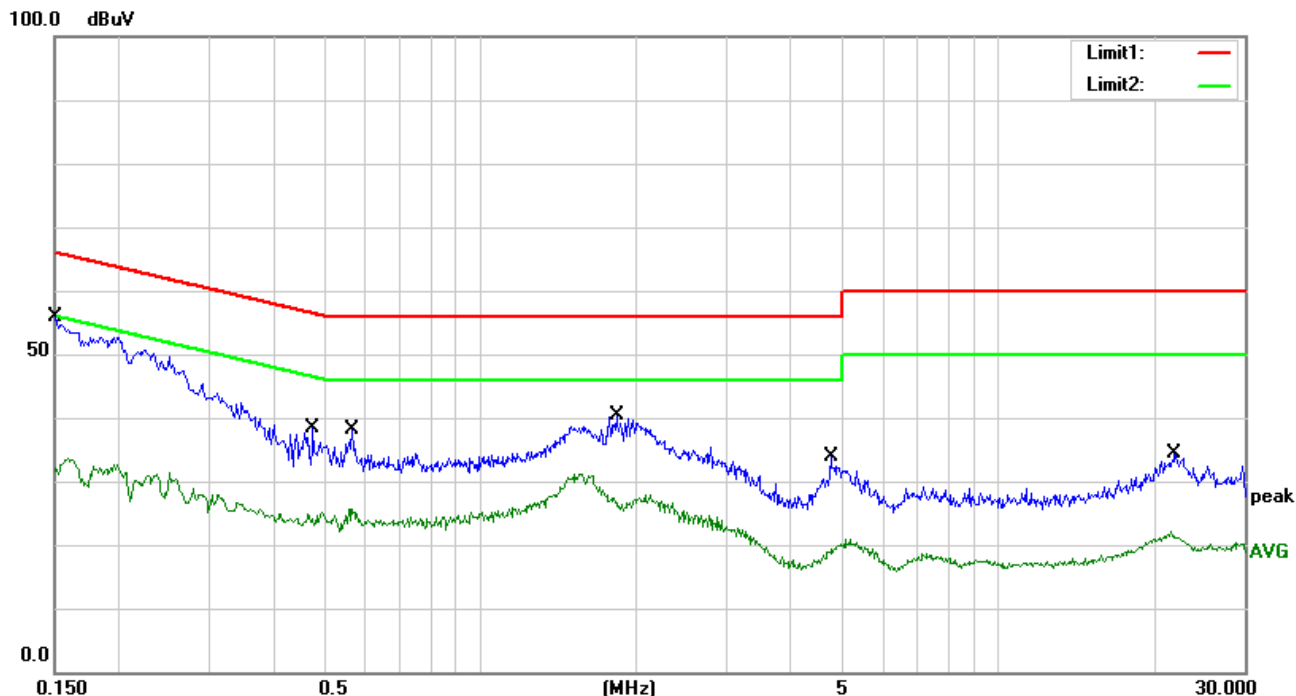
Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) – Limit
3. Factor = LISN factor + Cable loss + Limiter (10dB)

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1516	36.44	20.29	56.73	65.91	-9.18	QP
2	0.1516	17.74	20.29	38.03	55.91	-17.88	AVG
3	0.2341	30.05	20.54	50.59	62.30	-11.71	QP
4	0.2341	10.49	20.54	31.03	52.30	-21.27	AVG
5	1.8260	19.62	20.38	40.00	56.00	-16.00	QP
6	1.8260	11.21	20.38	31.59	46.00	-14.41	AVG
7	2.7180	13.68	20.43	34.11	56.00	-21.89	QP
8	2.7180	6.82	20.43	27.25	46.00	-18.75	AVG
9	4.9220	0.07	20.54	20.61	46.00	-25.39	QP
10	4.9420	12.88	20.53	33.41	56.00	-22.59	AVG
11	23.8900	15.76	22.76	38.52	60.00	-21.48	QP
12	23.8900	-0.71	22.76	22.05	50.00	-27.95	AVG



Temperature:	26.3°C	Relative Humidity:	58%
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	Mode 1/2/3(Mode 2 worst mode)		



Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = LISN factor + Cable loss + Limiter (10dB)

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1507	35.53	20.29	55.82	65.96	-10.14	QP
2	0.1507	13.33	20.29	33.62	55.96	-22.34	AVG
3	0.4740	17.89	20.51	38.40	56.44	-18.04	QP
4	0.4740	5.81	20.51	26.32	46.44	-20.12	AVG
5	0.5660	17.66	20.45	38.11	56.00	-17.89	QP
6	0.5660	5.25	20.45	25.70	46.00	-20.30	AVG
7	1.8340	19.96	20.38	40.34	56.00	-15.66	QP
8	1.8340	10.76	20.38	31.14	46.00	-14.86	AVG
9	4.7500	13.29	20.53	33.82	56.00	-22.18	QP
10	4.7500	0.40	20.53	20.93	46.00	-25.07	AVG
11	22.0620	11.53	22.83	34.36	60.00	-25.64	QP
12	22.0620	-0.76	22.83	22.07	50.00	-27.93	AVG



PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※

