



Test Report Serial Number: **45461712 R1.0**
Test Report Date: **2 March 2022**
Project Number: **1576**

EMC Test Report - New Filing

Applicant:



President Electronics USA
1007 Collier Center Way
Naples, FL, 34110
USA

FCC ID:

2AEOCPC209

Product Model Number / HVIN

RANDY II FCC

IC Registration Number

Product Name / PMN

RANDY II FCC

In Accordance With:

FCC 47 CFR Part 95 Subpart D, Part 15 Subpart B
Licensed Non-Broadcast Station Transmitter (TNB)

Approved By:

Ben Hewson, President
Celltech Labs Inc.
21-364 Lougheed Rd.
Kelowna, BC, V1X 7R8
Canada



Test Lab Certificate: 2470.01



**Industry
Canada**

IC Registration 3874A



FCC Registration: CA3874

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Revision History

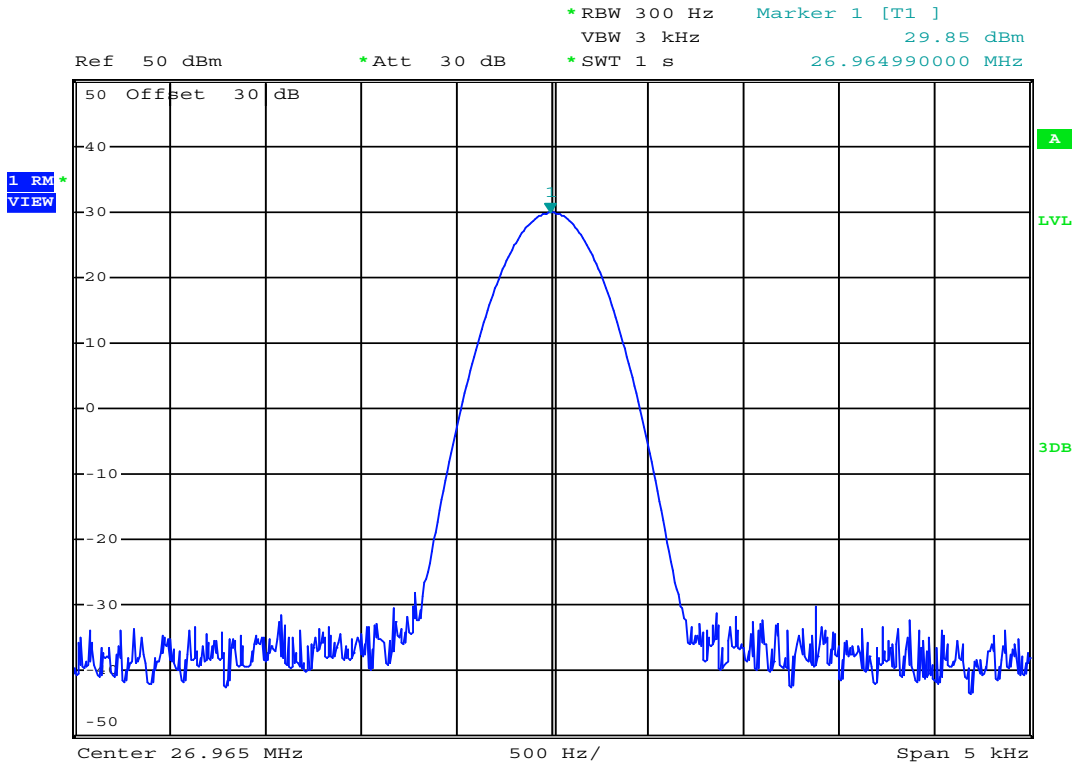
Samples Tested By:	Art Voss, P.Eng., Trevor Whillock	Date(s) of Evaluation:	23 - 29 December 2020	
Samples Tested By:	Art Voss, P.Eng., Trevor Whillock	Date(s) of Evaluation:	13 October 2021	
Samples Tested By:	Art Voss, P.Eng.	Date(s) of Evaluation:	7 - 21 February, 2022	
Report Prepared By:	Art Voss, P.Eng.	Report Reviewed By:	Ben Hewson	
Report Revision	Description of Revision	Revised Section	Revised By	Revision Date
0.1	Draft	n/a	Art Voss	22 February 2022
1.0	Initial Release	n/a	Art Voss	2 March 2022

Conducted Power Measurement Results:

Channel Number	Frequency (MHz)	Power Setting	Modulation	Measured Power [P _{Meas}] (dBm)	Measured Power [P _{Meas}] (W)	Limit [P _{Lim}] (dBm)	Limit [P _{Lim}] (W)	Margin (dB)
1	26.97	1W	AM	29.850	0.97	36	4.0	6.2
19	27.19			29.990	1.00			6.0
40	27.41			30.080	1.02			5.9
1	26.97		FM	29.530	0.90			6.5
19	27.19			29.710	0.94			6.3
40	27.41			29.940	0.99			6.1
1	26.97	4W	AM	35.300	3.39	36	4.0	0.7
19	27.19			35.460	3.52			0.5
40	27.41			35.540	3.58			0.5
1	26.97		FM	35.700	3.72			0.3
19	27.19			35.860	3.85			0.1
40	27.41			36.000	3.98			0.0
Result:								Complies

Conducted Margin = P_{Limit} - P_{Meas}

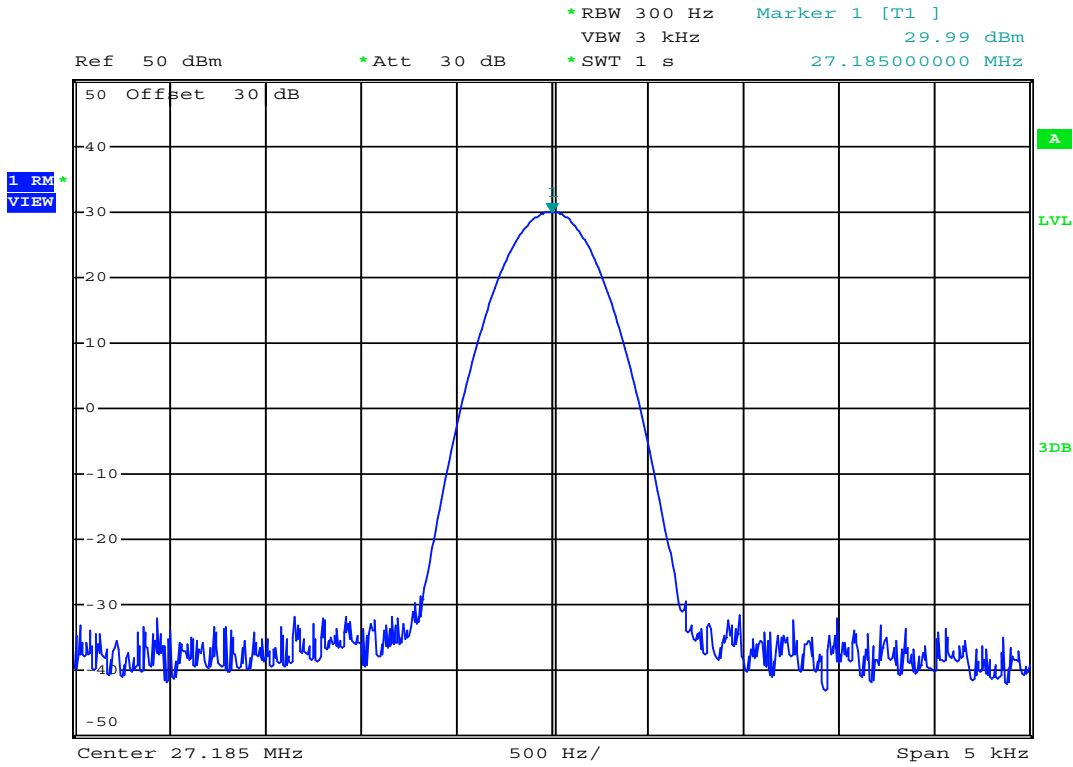
Conducted Power:



Date: 23.DEC.2020 12:43:42

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
1	26.965	1W	AM	29.85

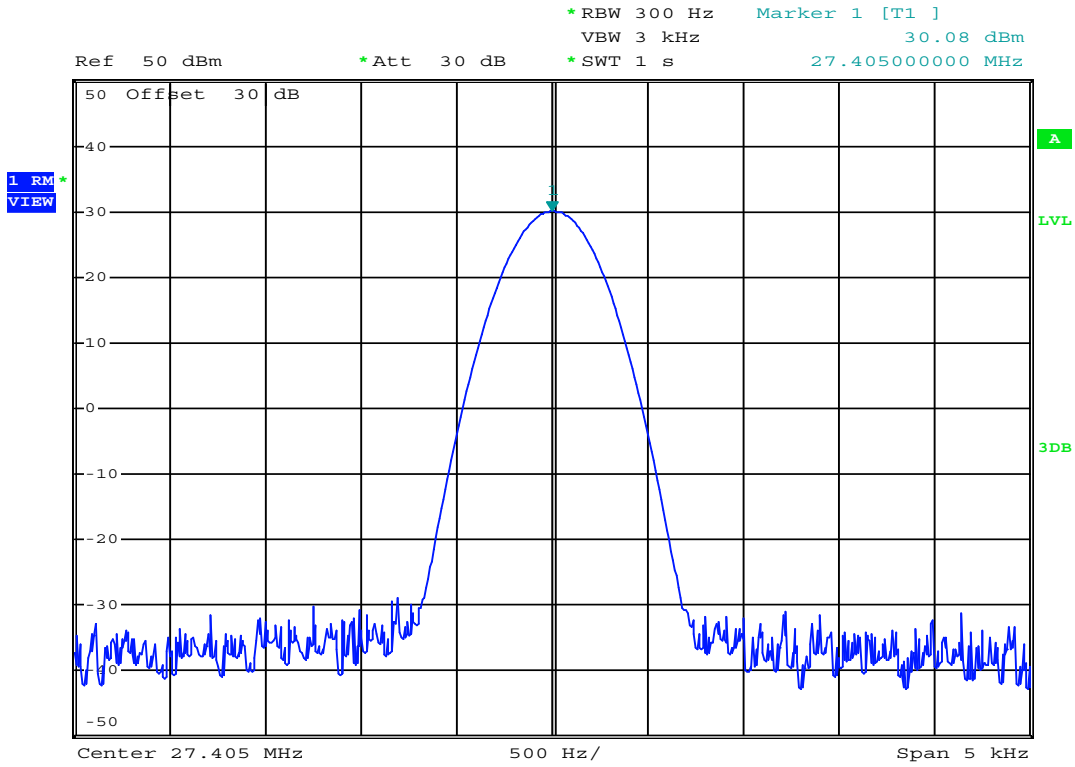
Conducted Power:



Date: 23.DEC.2020 12:44:39

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
19	27.185	1W	AM	29.99

Conducted Power:



Date: 23.DEC.2020 12:46:44

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
40	27.405	1W	AM	30.08

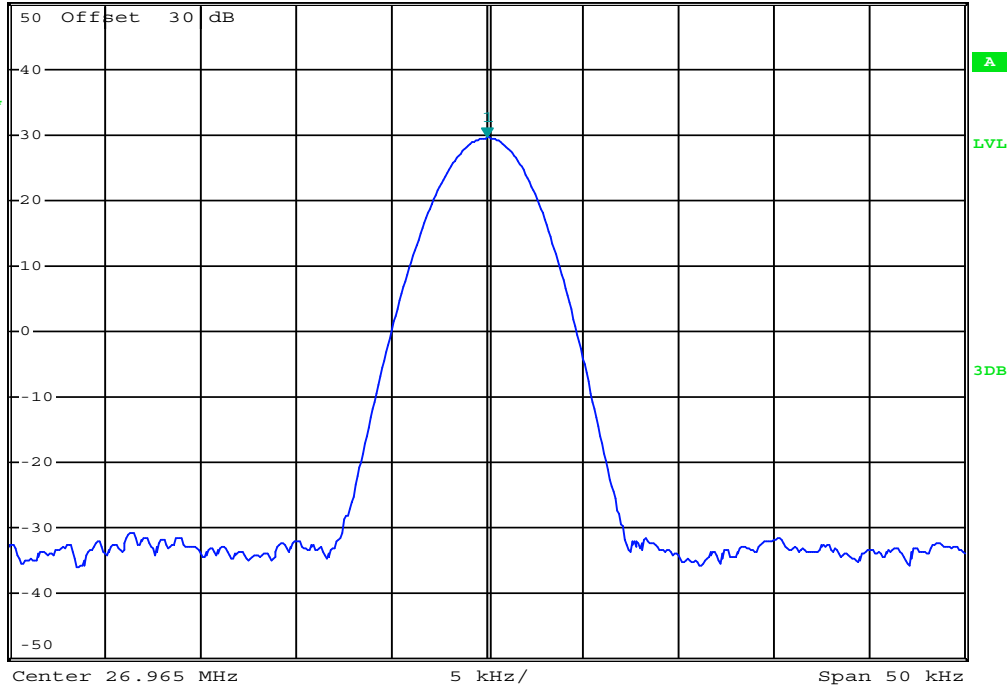
Conducted Power:



*RBW 3 kHz Marker 1 [T1]
 VBW 30 kHz 29.53 dBm
 SWT 10 ms 26.965000000 MHz

Ref 50 dBm *Att 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 10:39:12

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
1	26.965	1W	FM	29.53

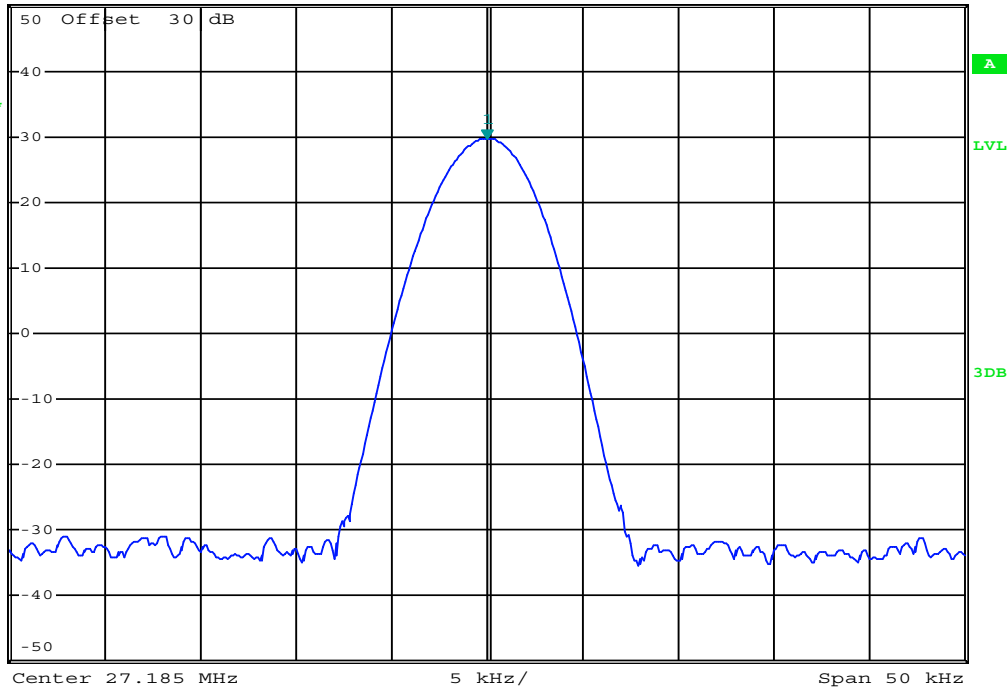
Conducted Power:



*RBW 3 kHz Marker 1 [T1]
 VBW 30 kHz 29.71 dBm
 SWT 10 ms 27.185000000 MHz

Ref 50 dBm *Att 30 dB

1 RM *
 VIEW



Date: 7.FEB.2022 10:38:29

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
19	27.185	1W	FM	29.71

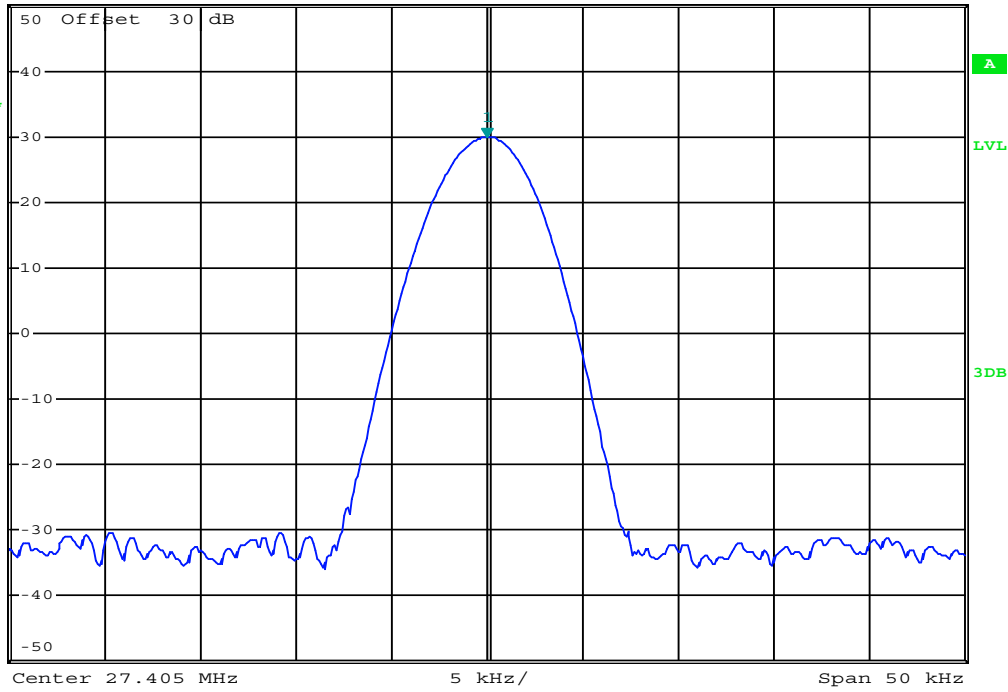
Conducted Power:



*RBW 3 kHz Marker 1 [T1]
 VBW 30 kHz 29.94 dBm
 SWT 10 ms 27.405000000 MHz

Ref 50 dBm *Att 30 dB

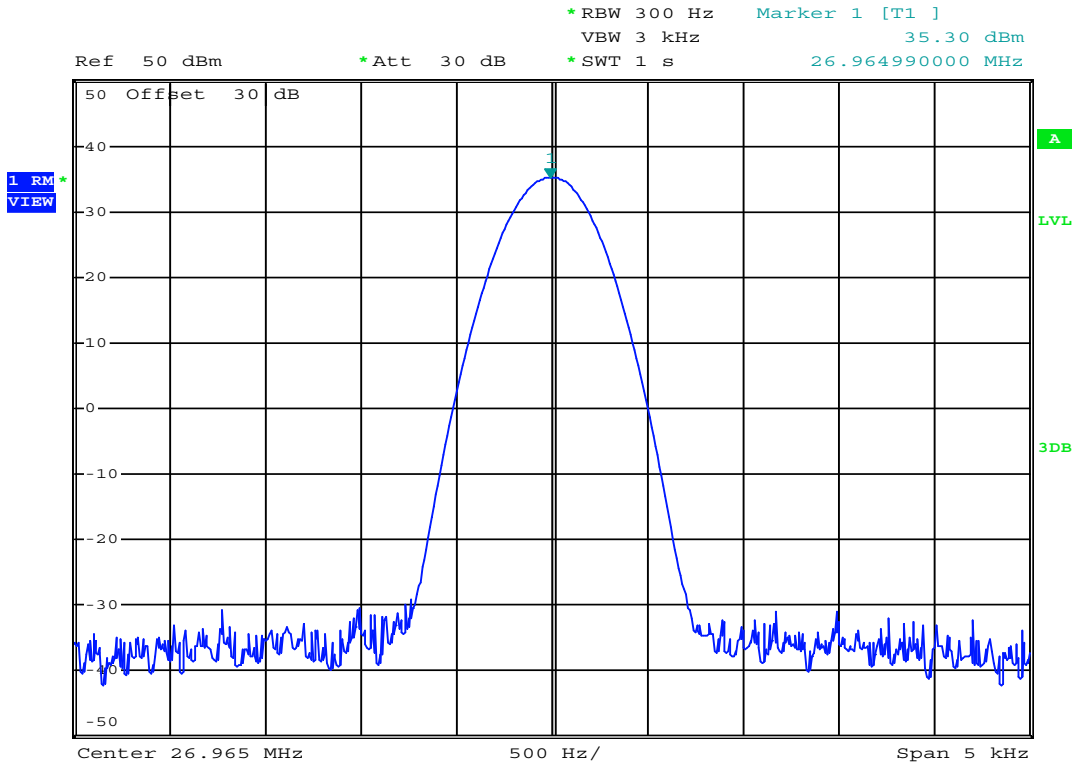
1 RM*
 VIEW



Date: 7.FEB.2022 10:39:53

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
40	27.405	1W	FM	29.94

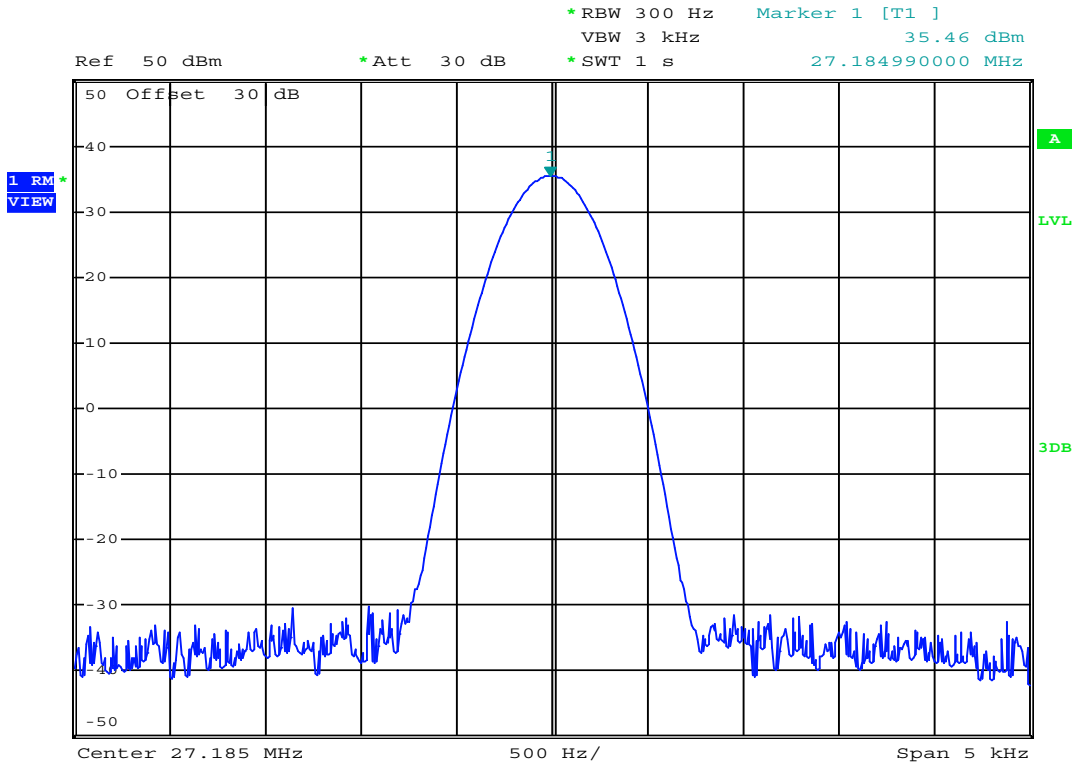
Conducted Power:



Date: 23.DEC.2020 12:42:54

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
1	26.965	4W	AM	35.30

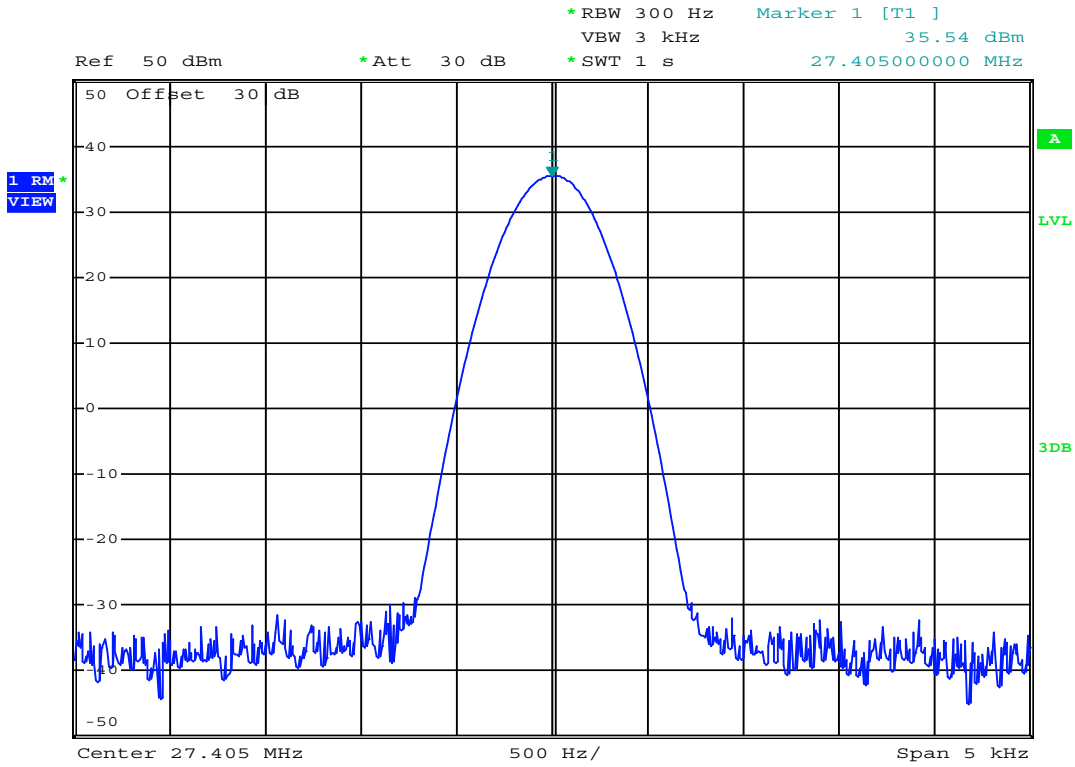
Conducted Power:



Date: 23.DEC.2020 12:41:10

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
19	27.185	4W	AM	35.46

Conducted Power:



Date: 23.DEC.2020 12:42:07

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
40	27.405	4W	AM	35.54

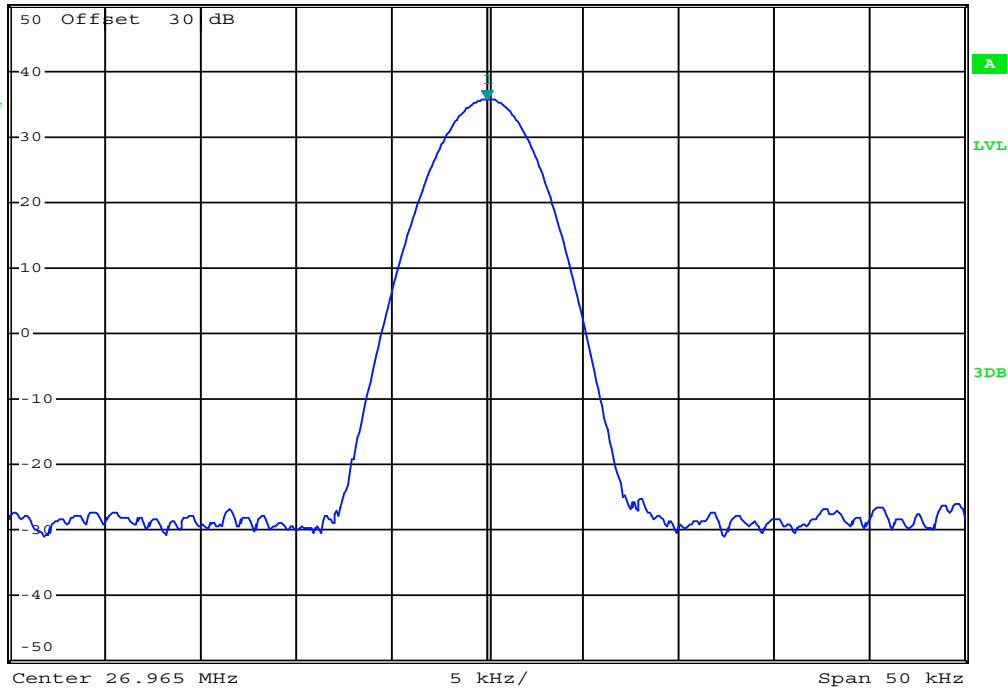
Conducted Power:



*RBW 3 kHz Marker 1 [T1]
 VBW 30 kHz 35.70 dBm
 SWT 10 ms 26.965000000 MHz

Ref 50 dBm *Att 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 10:34:03

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
1	26.965	4W	FM	35.70

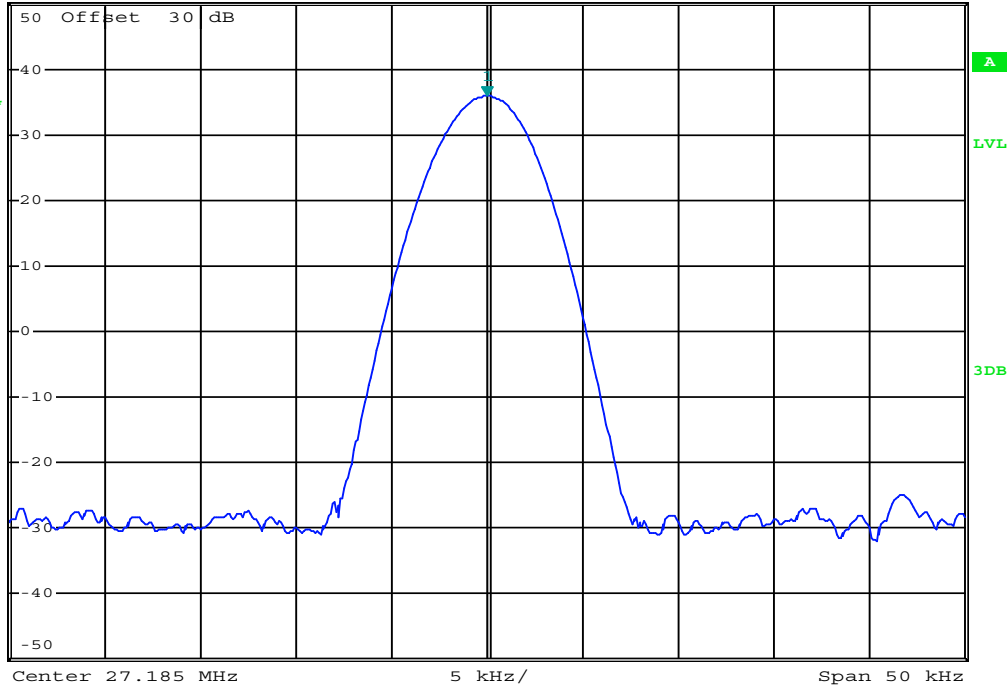
Conducted Power:



*RBW 3 kHz Marker 1 [T1]
 VBW 30 kHz 35.89 dBm
 SWT 10 ms 27.185000000 MHz

Ref 50 dBm *Att 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 10:37:20

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
19	27.185	4W	FM	35.86

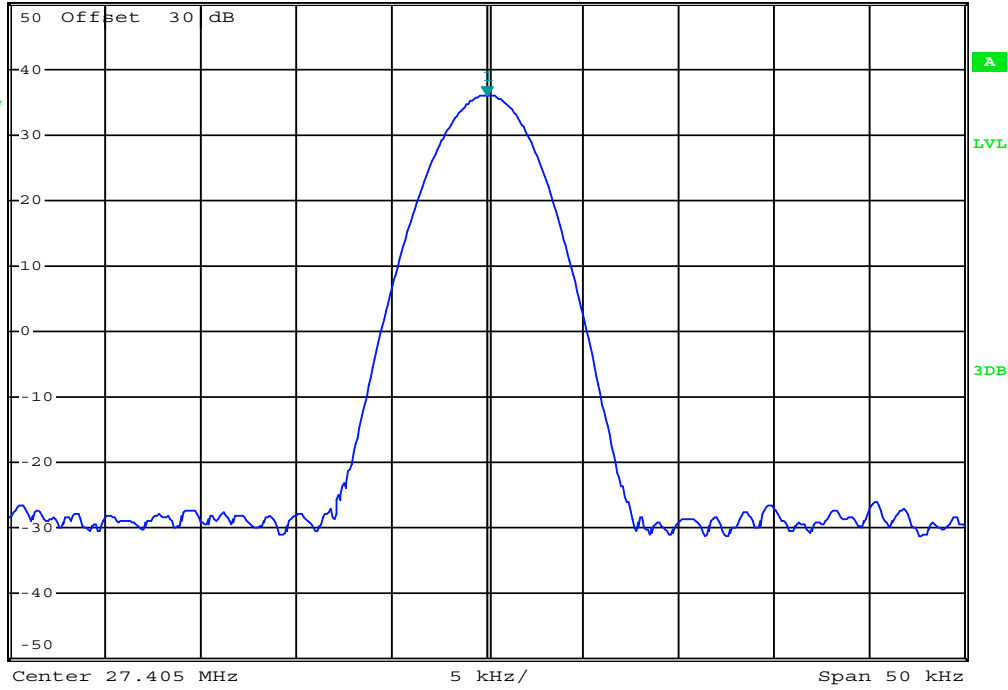
Conducted Power:



*RBW 3 kHz Marker 1 [T1]
 VBW 30 kHz 36.00 dBm
 SWT 10 ms 27.405000000 MHz

Ref 50 dBm *Att 30 dB

1 RM *
 VIEW



Date: 7.FEB.2022 10:36:36

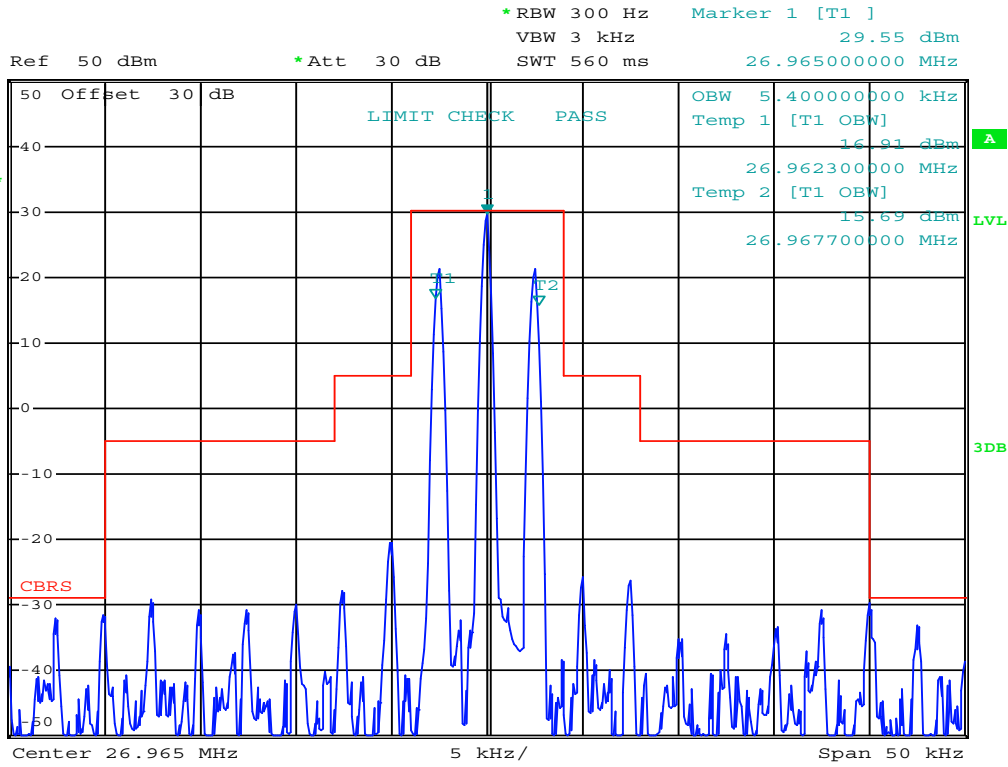
Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Conducted Power (dBm)
40	27.405	4W	FM	36.00

Occupied Bandwidth Results:

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured Occupied Bandwidth (kHz)	Emission Designator	Emissions Mask Results
1	26.965	1W	AM	5.40	5K40A3E	PASS
19	27.185			5.40	5K40A3E	PASS
40	27.405			5.40	5K40A3E	PASS
1	26.965		FM	5.45	5K45F3E	PASS
19	27.185			5.45	5K45F3E	PASS
40	27.405			5.43	5K43F3E	PASS
1	26.965	4W	AM	5.40	5K40A3E	PASS
19	27.185			5.40	5K40A3E	PASS
40	27.405			5.40	5K40A3E	PASS
1	26.965		FM	5.45	5K45F3E	PASS
19	27.185			5.43	5K43F3E	PASS
40	27.405			5.45	5K45F3E	PASS

Result: Complies

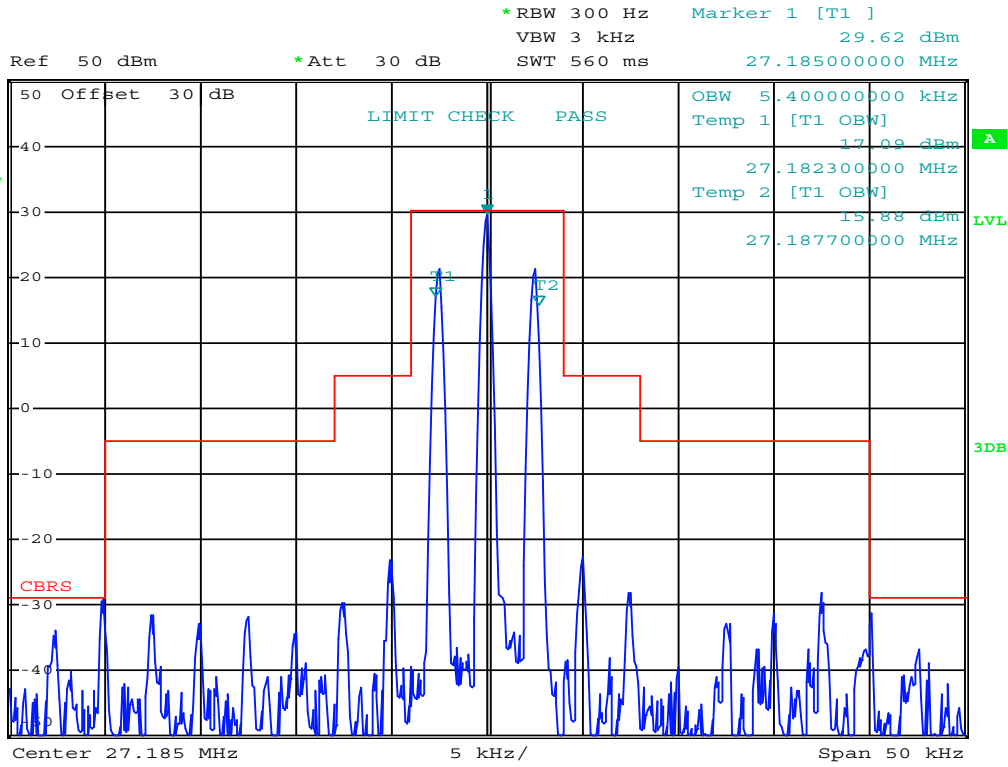
Occupied Bandwidth



Date: 29.DEC.2020 13:44:19

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
1	26.965	1W	AM	5.40

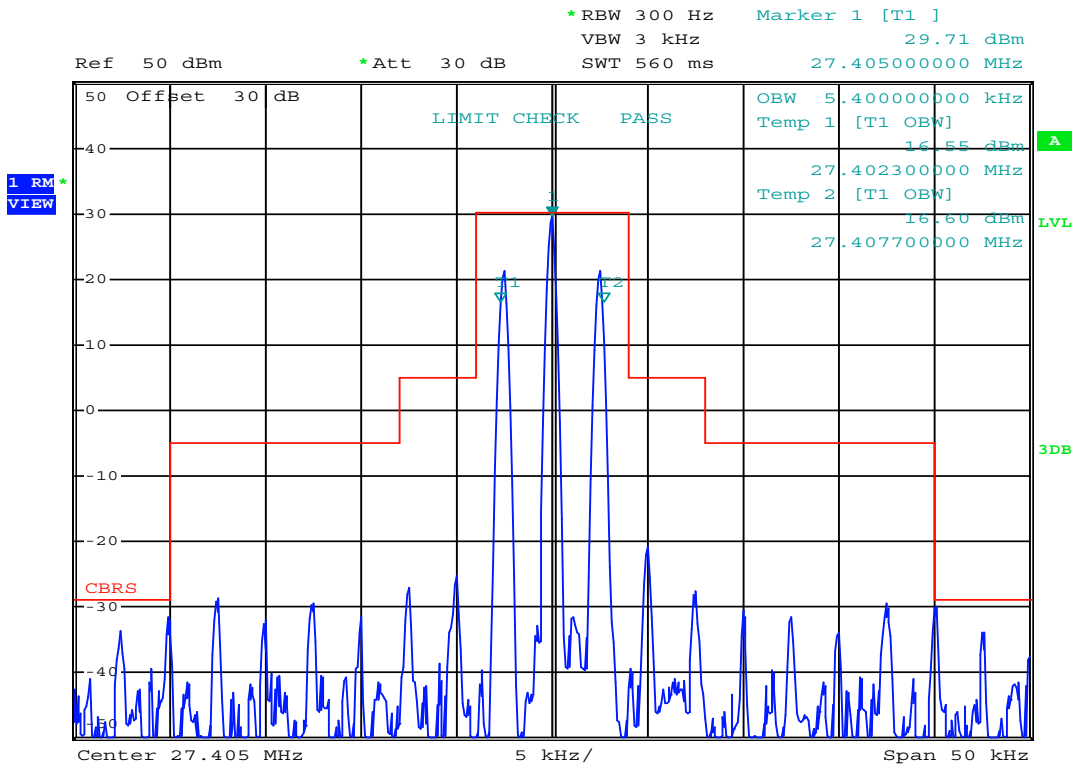
Emissions Mask



Date: 29.DEC.2020 13:45:01

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
19	27.185	1W	AM	5.40

Emissions Mask



Date: 29.DEC.2020 13:45:47

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
40	27.405	1W	AM	5.40

Emissions Mask

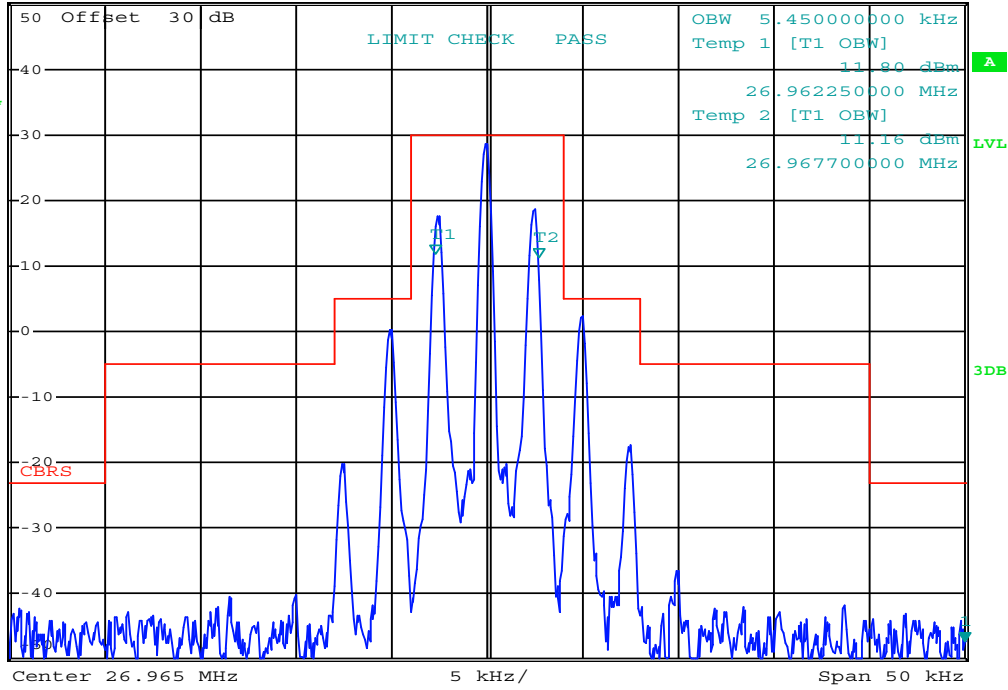


*RBW 300 Hz Marker 1 [T1]
 VBW 3 kHz -47.27 dBm
 SWT 560 ms 26.990000000 MHz

Ref 50 dBm

*Att 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 14:37:31

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
1	26.965	1W	FM	5.45

Emissions Mask

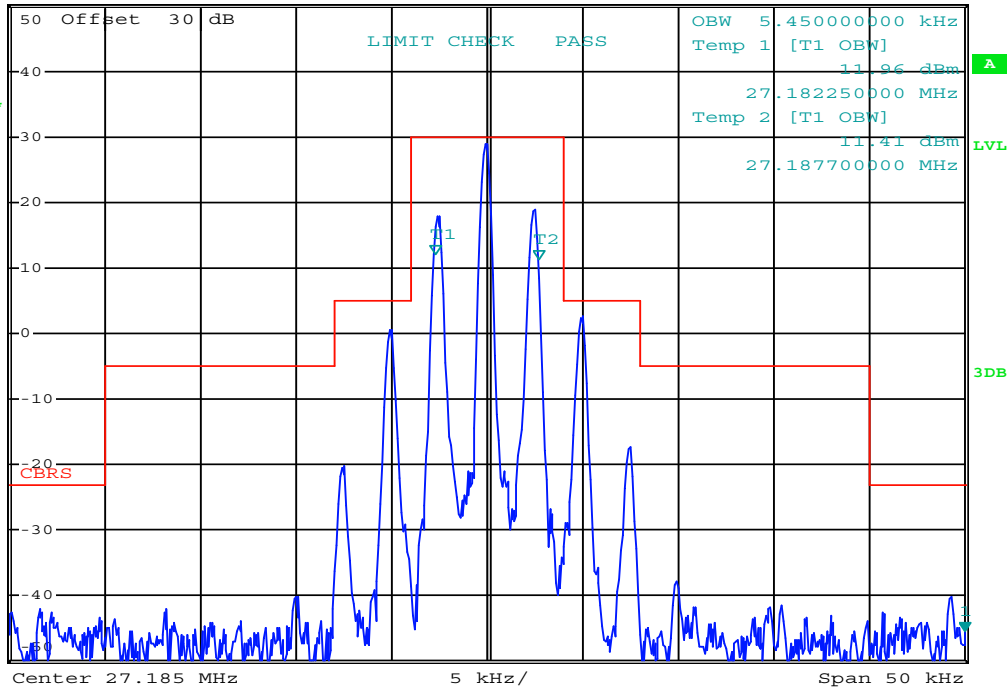


*RBW 300 Hz Marker 1 [T1]
 VBW 3 kHz -45.32 dBm
 SWT 560 ms 27.210000000 MHz

Ref 50 dBm

*Att 30 dB

1 RM*
 VIEW



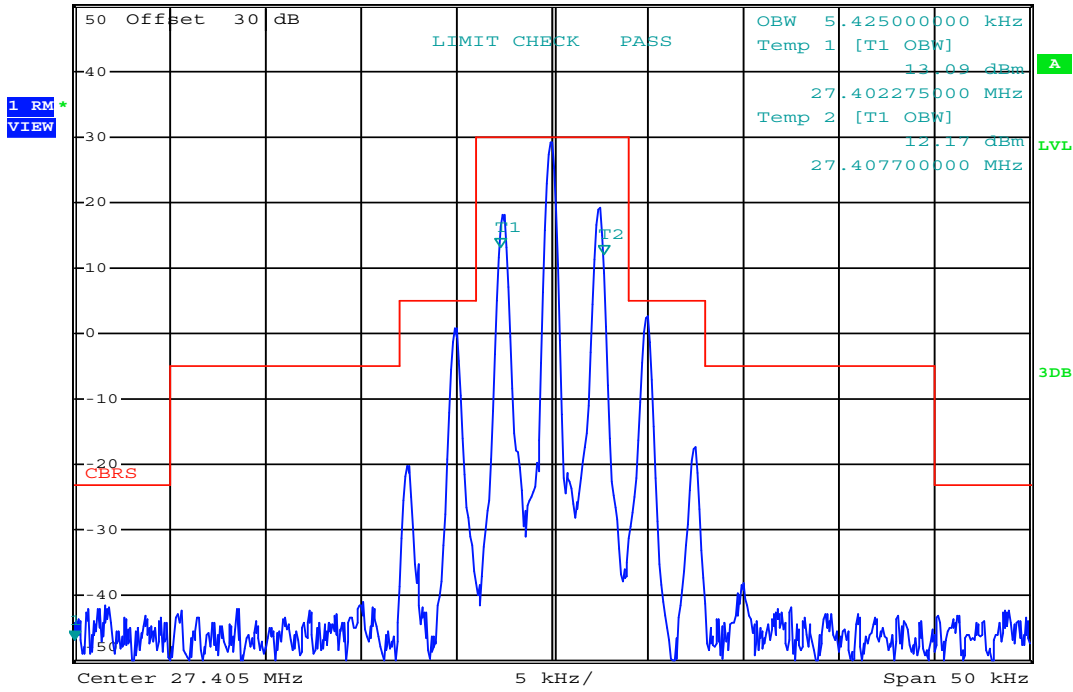
Date: 7.FEB.2022 14:36:53

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
19	27.185	1W	FM	5.45

Emissions Mask



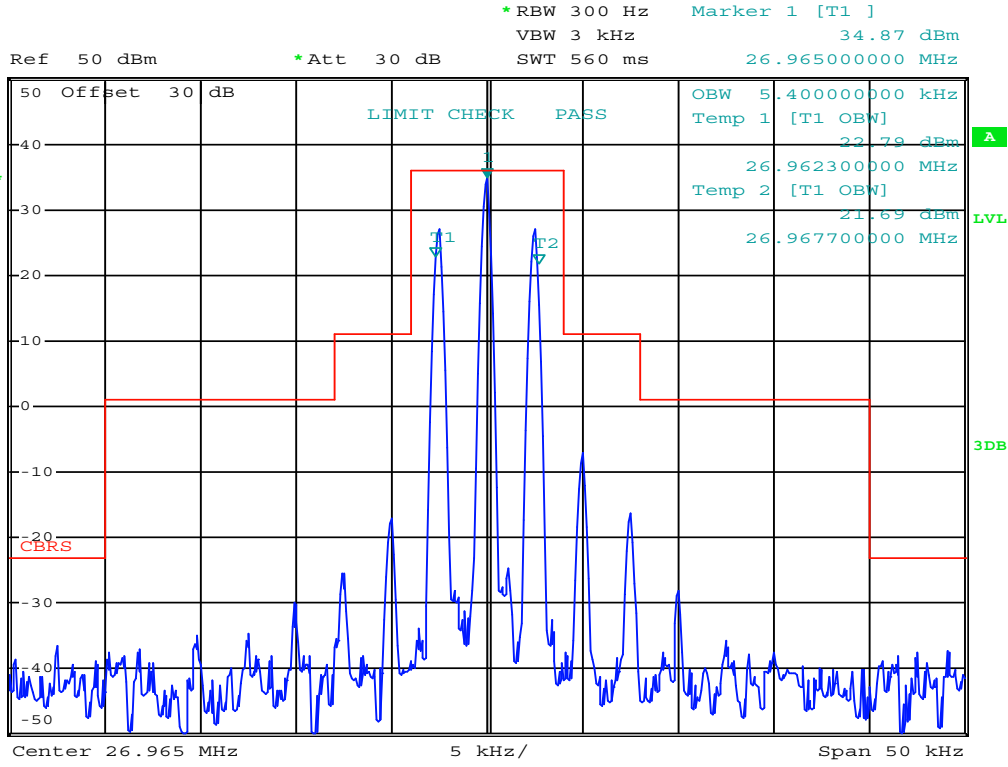
*RBW 300 Hz Marker 1 [T1]
 VBW 3 kHz -46.63 dBm
 Ref 50 dBm *Att 30 dB SWT 560 ms 27.380000000 MHz



Date: 7.FEB.2022 14:38:17

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
40	27.405	1W	FM	5.43

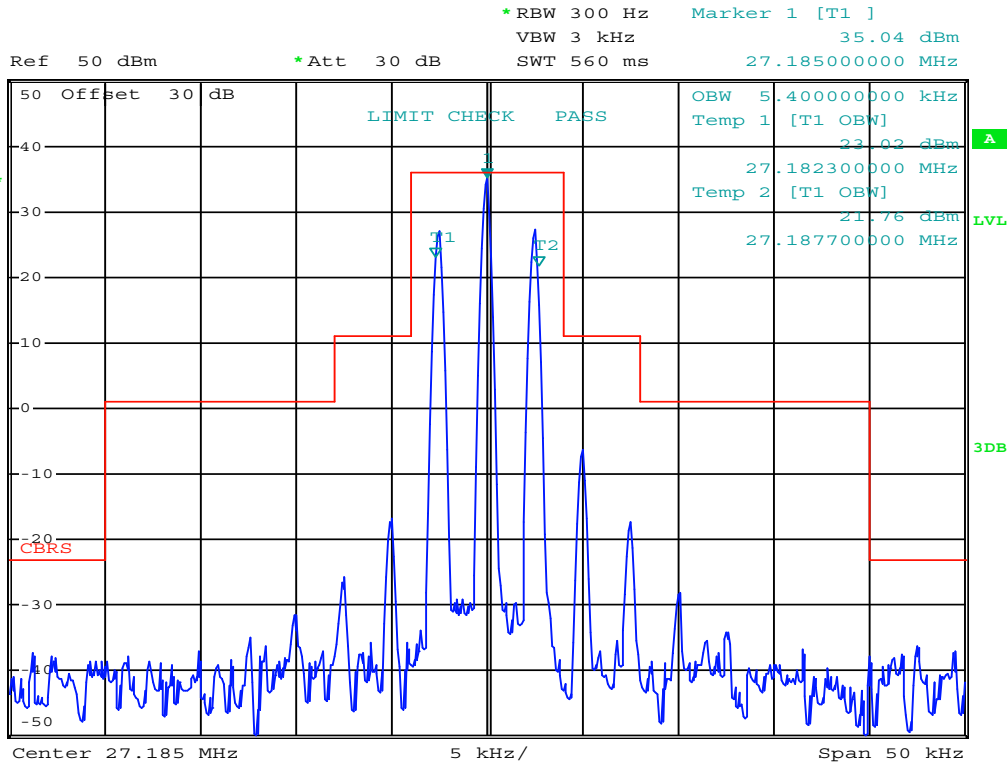
Occupied Bandwidth



Date: 29.DEC.2020 13:47:31

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
1	26.965	4W	AM	5.40

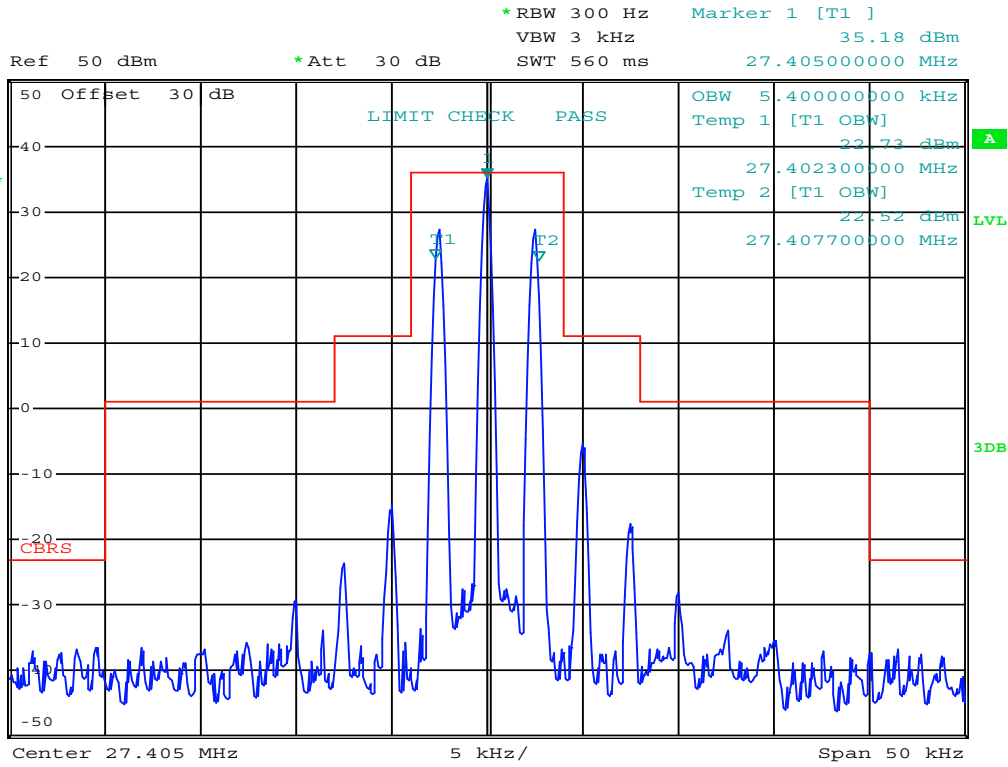
Emissions Mask



Date: 29.DEC.2020 13:48:00

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
19	27.185	4W	AM	5.40

Emissions Mask



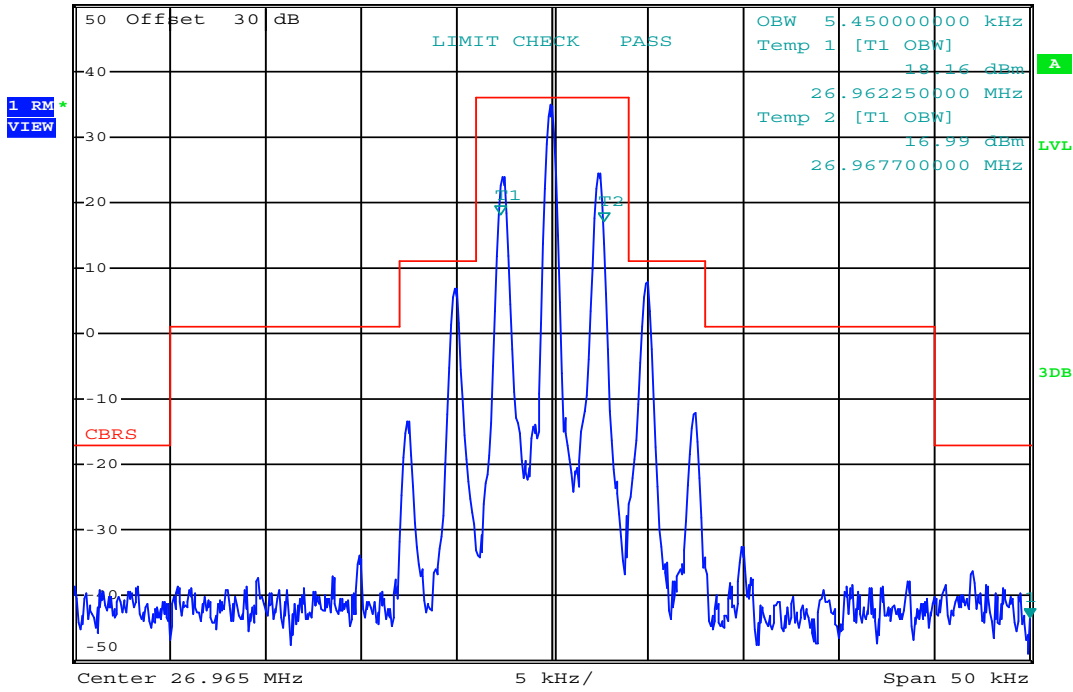
Date: 29.DEC.2020 13:46:55

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
40	27.405	4W	AM	5.40

Emissions Mask



*RBW 300 Hz Marker 1 [T1]
 VBW 3 kHz -43.39 dBm
 Ref 50 dBm *Att 30 dB SWT 560 ms 26.990000000 MHz



Date: 7.FEB.2022 14:33:30

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
1	26.965	4W	FM	5.45

Emissions Mask

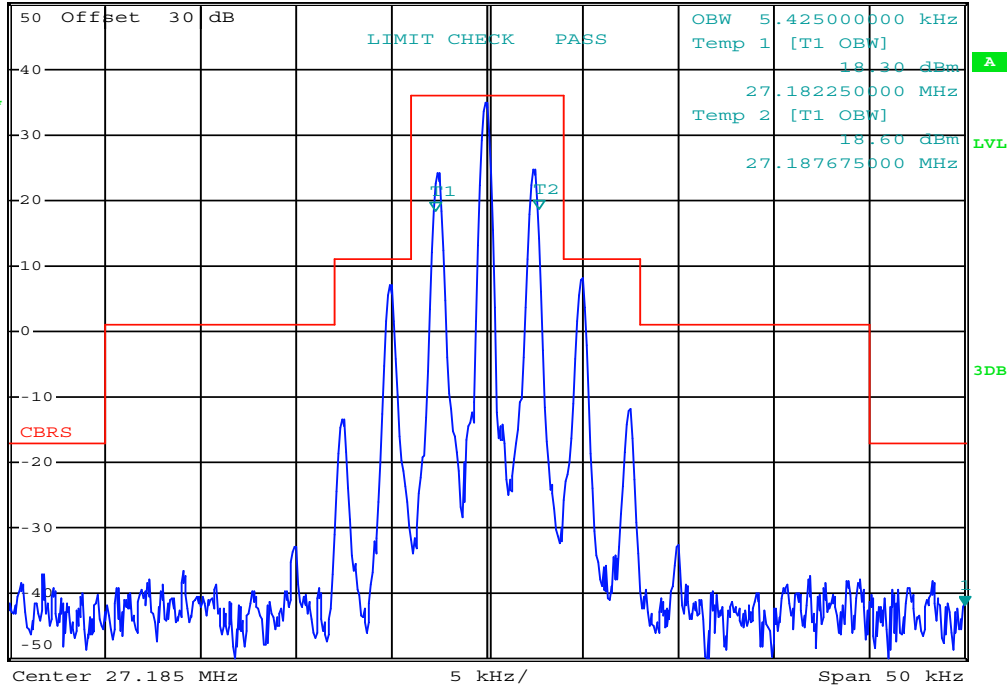


*RBW 300 Hz Marker 1 [T1]
 VBW 3 kHz -41.70 dBm
 SWT 560 ms 27.210000000 MHz

Ref 50 dBm

*Att 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 14:34:51

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
19	27.185	4W	FM	5.43

Emissions Mask

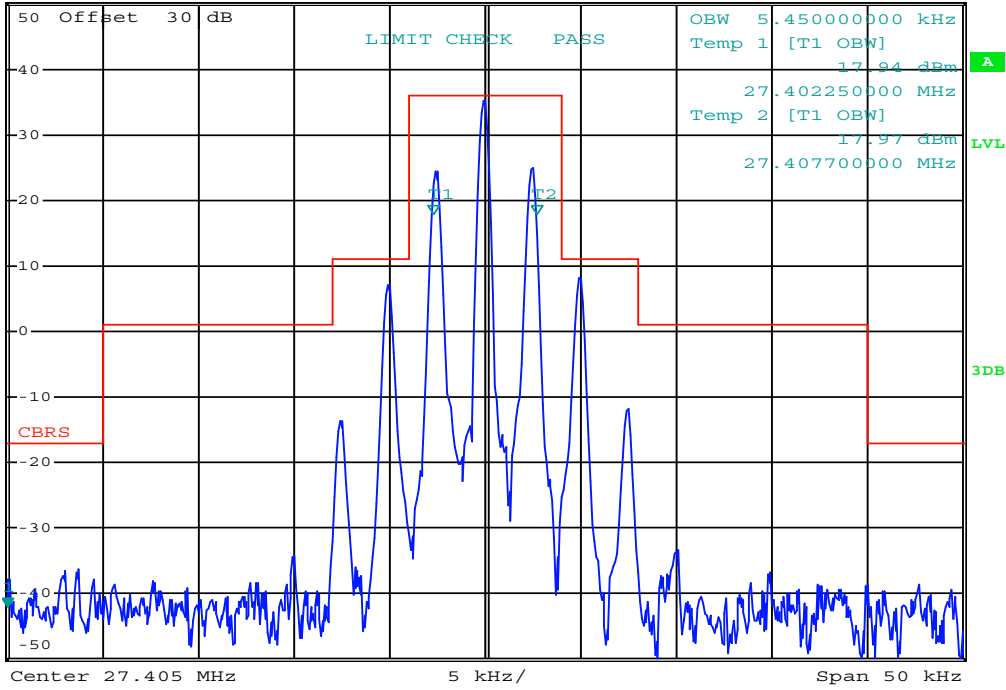


*RBW 300 Hz Marker 1 [T1]
 VBW 3 kHz -42.02 dBm
 SWT 560 ms 27.380000000 MHz

Ref 50 dBm

*Att 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 14:34:09

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Measured OBW (kHz)
40	27.405	4W	FM	5.45

Conducted Spurious Emissions Measurement Results:

Channel Number	Frequency (MHz)	Power Setting	Modulation	Fundamental Power [P _{Fund}] (dBm)	Emission Frequency (MHz)	Measured Emission [P _{Meas}] (dBm)	Attenuation [Att] (dBm)	Limit (dB)	Margin (dB)
1	26.965	1W	AM	29.85	ND	ND	-	60.0	-
19	27.185			29.90	ND	ND	-		-
40	27.405			30.08	ND	ND	-		-
1	26.965		FM	29.53	53.85	-38.34	67.87		7.9
19	27.185			29.71	54.41	-38.28	67.99		8.0
40	27.405			29.94	54.81	-38.80	68.74		8.7
1	26.965	4W	AM	35.30	53.90	-27.24	62.54		2.5
19	27.185			35.46	54.31	-27.50	62.96		3.0
40	27.405			35.54	54.80	-28.03	63.57		3.6
1	26.965		FM	35.70	53.91	-33.06	68.76		8.8
19	27.185			35.86	54.37	-32.86	68.72		8.7
40	27.405			36.00	54.80	-32.65	68.65		8.7
Result:								Complies	

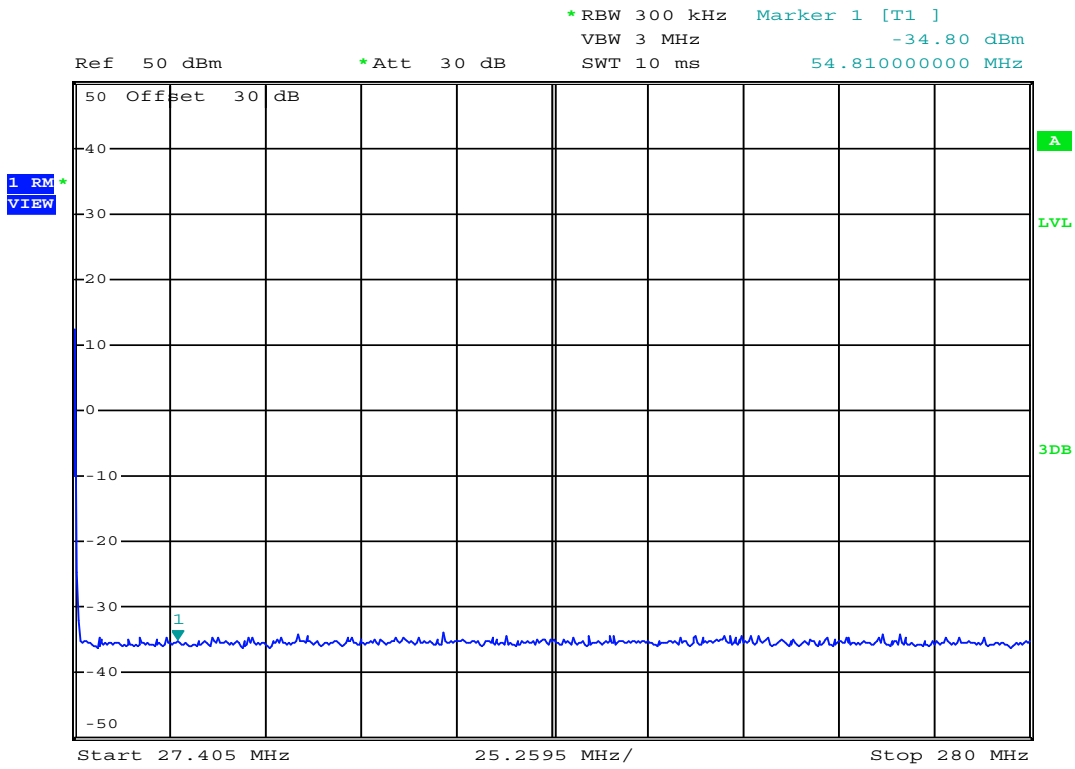
Attenuation [Att] = Fundamental Power [P_{f_{und}}] - Measured Emission [P_{meas}]

Margin = [Att] - Limit

ND = None Detected

No other emissions were detected

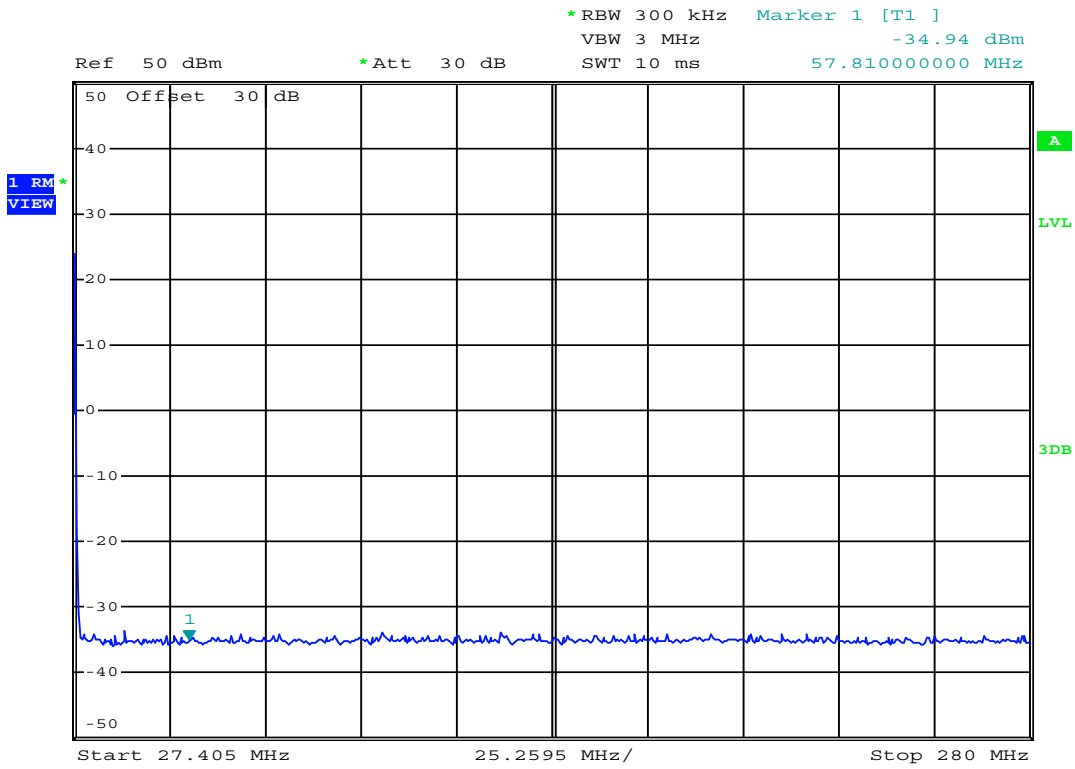
Conducted Spurious Emissions



Date: 24.DEC.2020 11:19:45

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
1	26.965	1W	AM	29.85	-	-

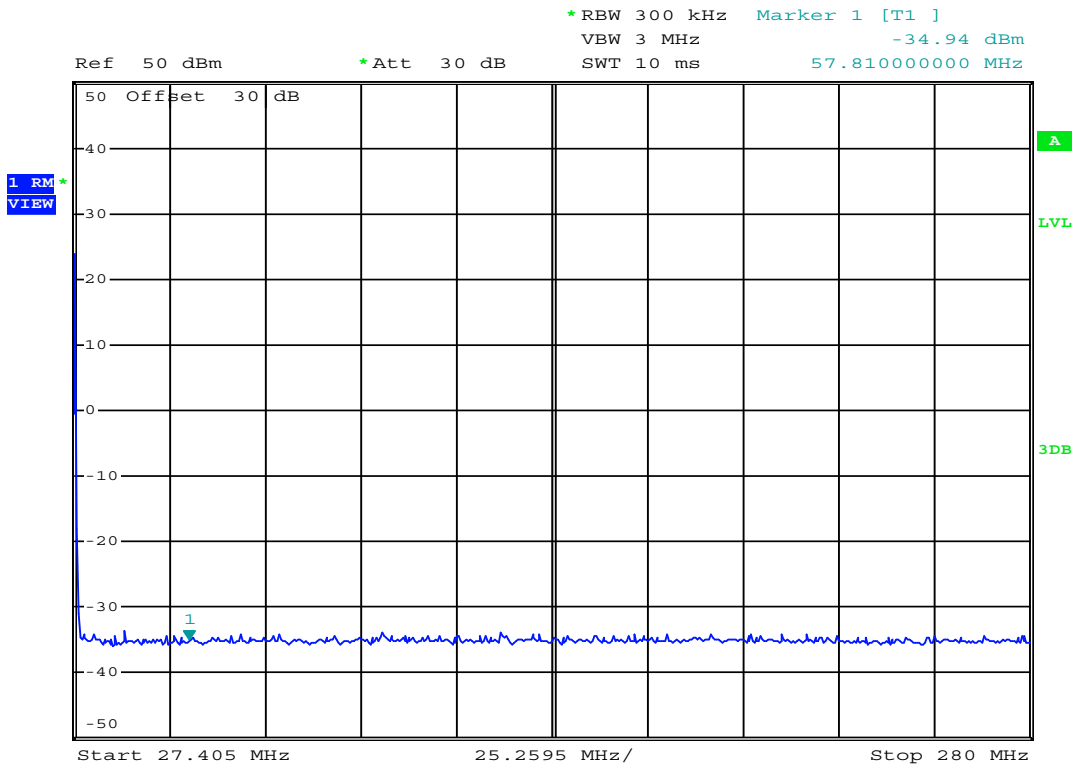
Conducted Spurious Emissions



Date: 24.DEC.2020 10:56:03

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
19	27.185	1W	AM	29.9	-	-

Conducted Spurious Emissions



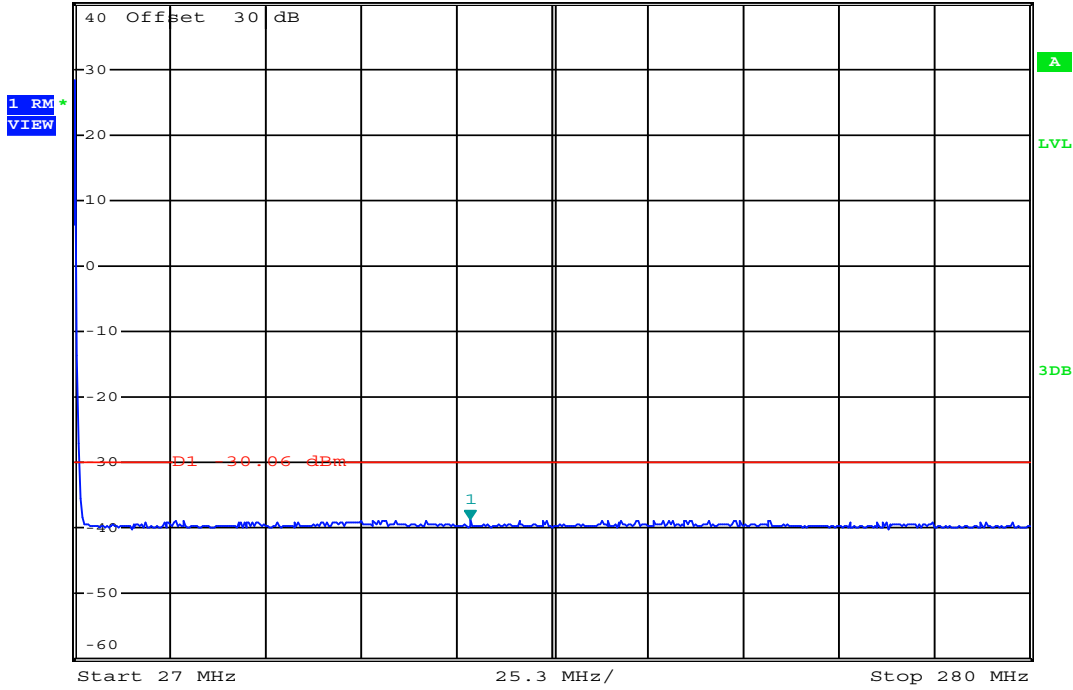
Date: 24.DEC.2020 10:56:03

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
40	27.405	1W	AM	30.08	-	-

Conducted Spurious Emissions



Ref 40 dBm *Att 30 dB *RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -38.71 dBm
 *SWT 1 s 131.868500000 MHz



Date: 7.FEB.2022 14:54:32

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
1	26.965	1W	FM	29.53	-	-

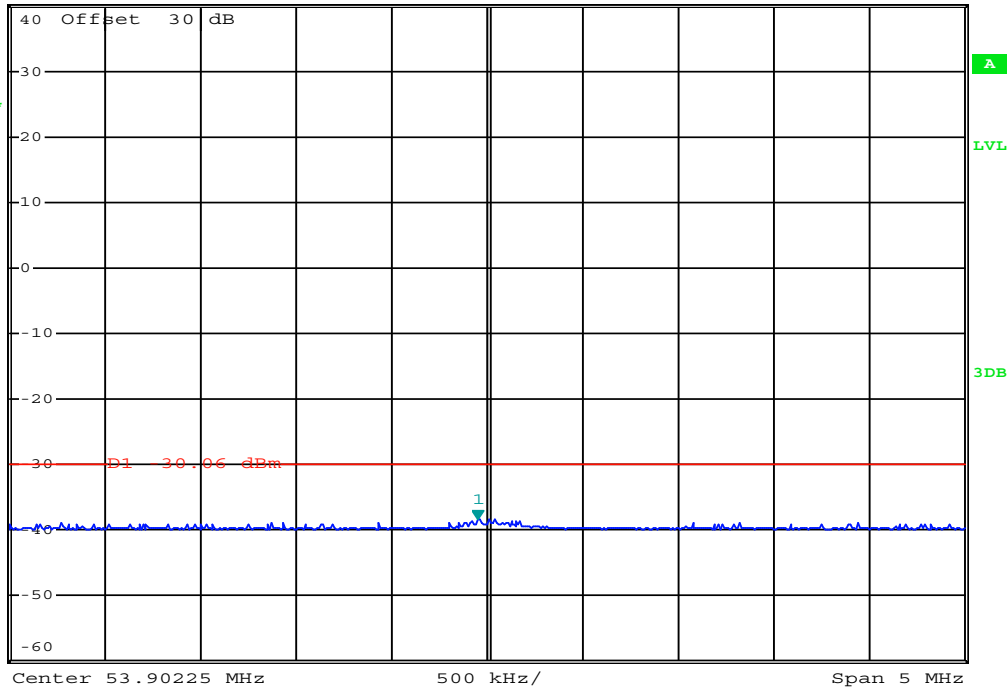
Conducted Spurious Emissions



*RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -38.34 dBm
 *SWT 1 s 53.852250000 MHz

Ref 40 dBm *Att 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 15:04:38

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
1	26.965	1W	FM	29.53	53.85	-38.34

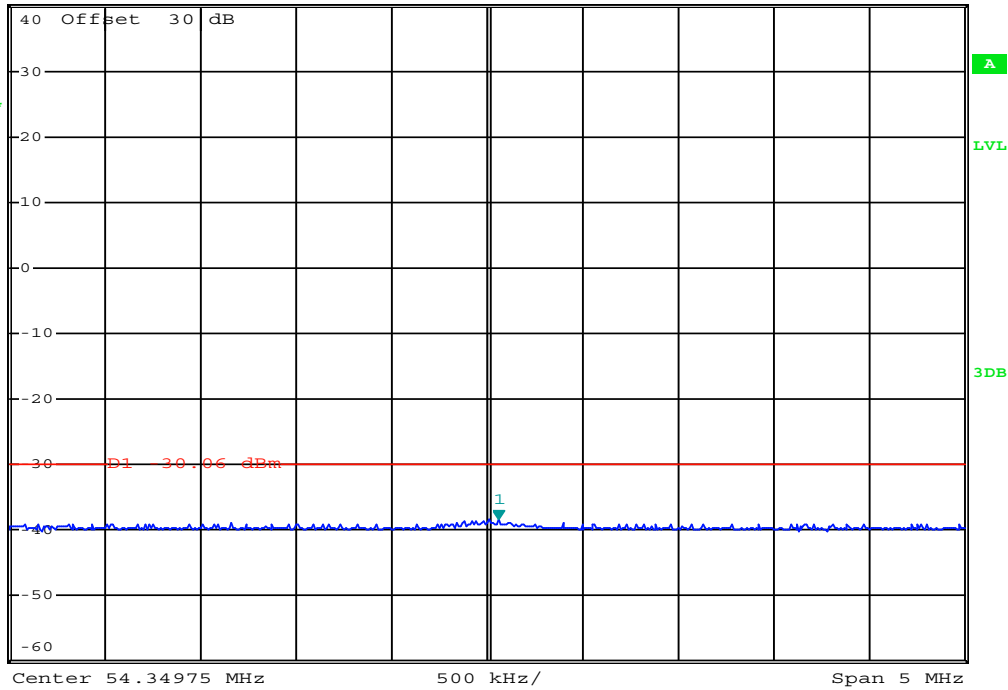
Conducted Spurious Emissions



*RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -38.28 dBm
 *SWT 1 s 54.407250000 MHz

Ref 40 dBm *Att 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 15:05:15

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
19	27.185	1W	FM	29.71	54.41	-38.28

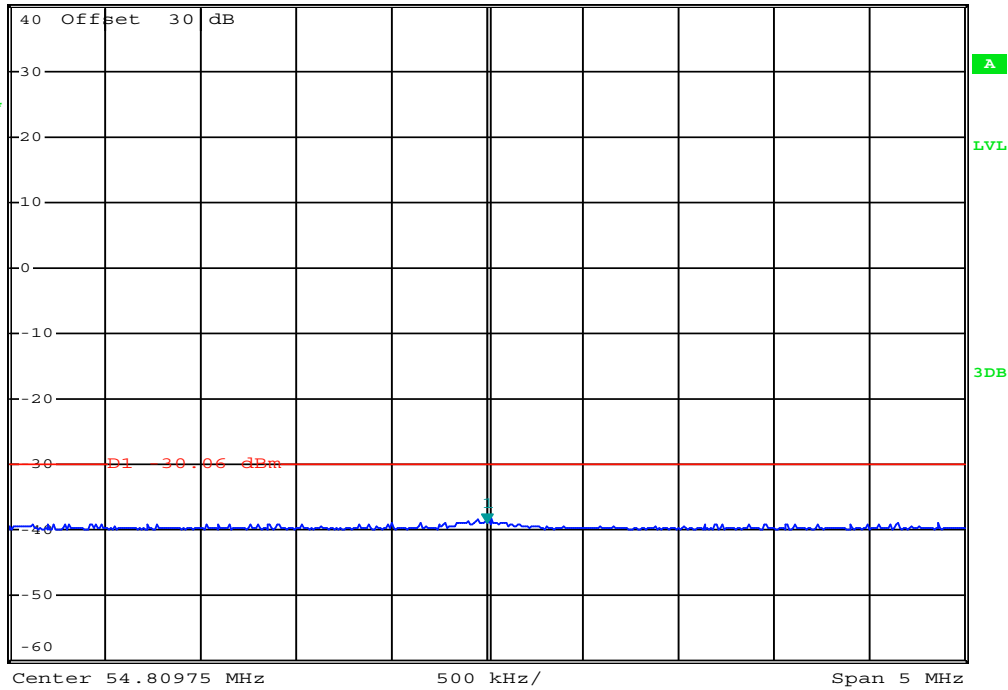
Conducted Spurious Emissions



*RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -38.80 dBm
 *SWT 1 s 54.809750000 MHz

Ref 40 dBm *Att 30 dB

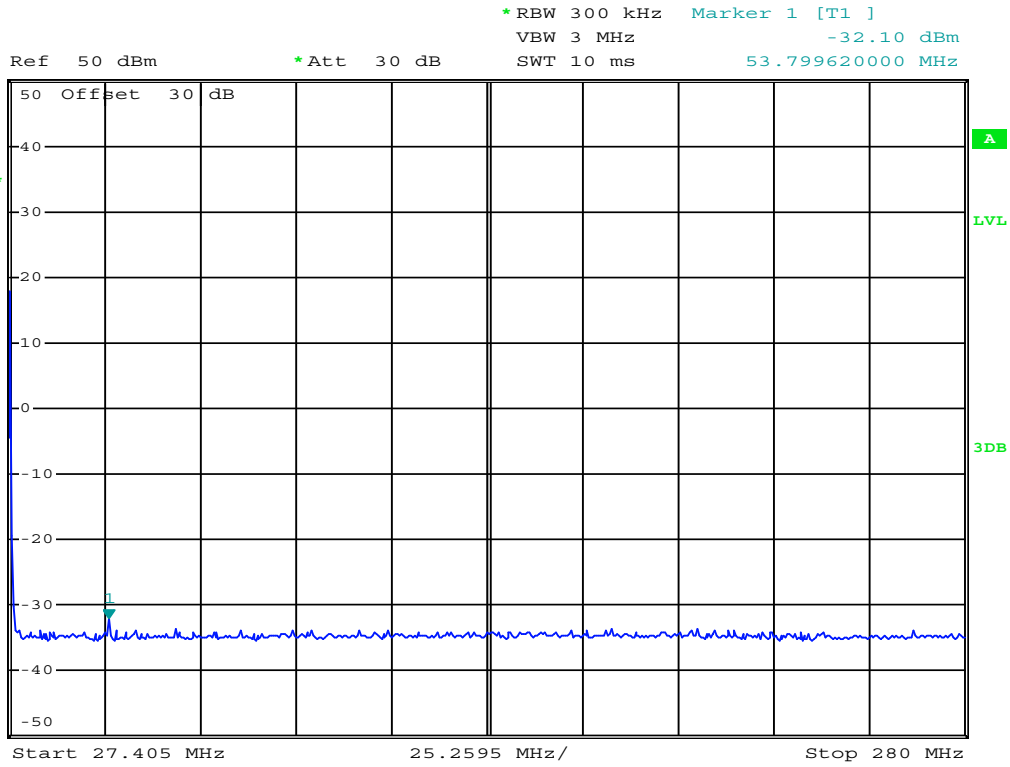
1 RM*
 VIEW



Date: 7.FEB.2022 15:04:10

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
40	27.405	1W	FM	29.94	54.81	-38.80

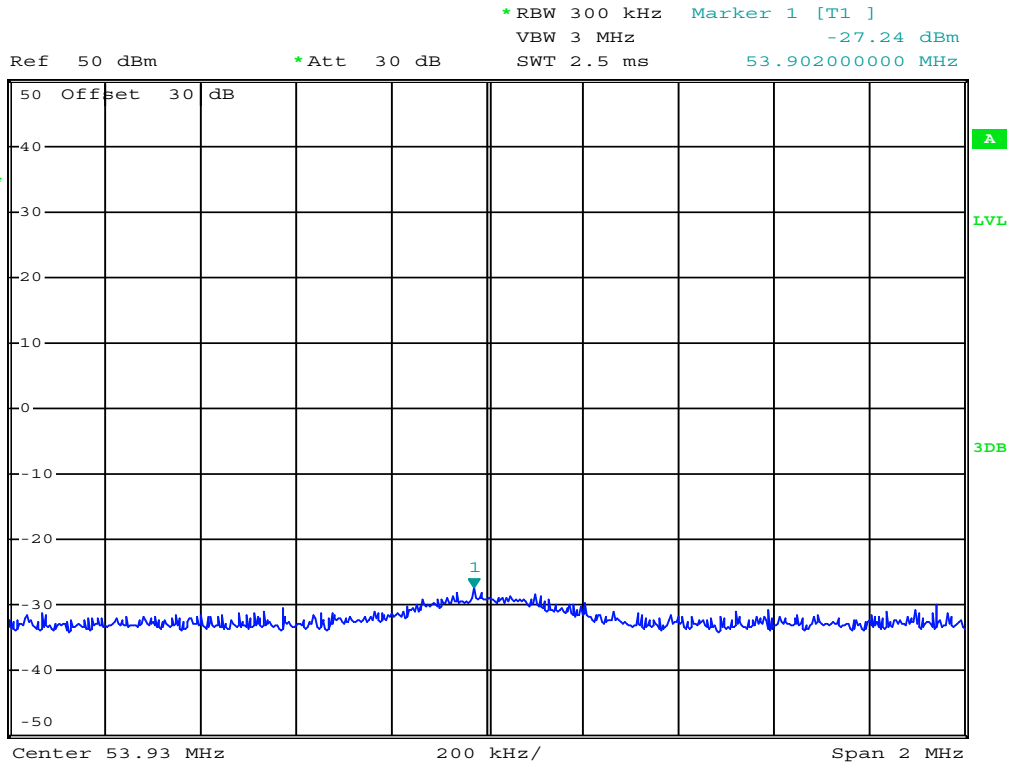
Conducted Spurious Emissions



Date: 24.DEC.2020 11:21:09

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
1	26.965	4W	AM	35.3	-	-

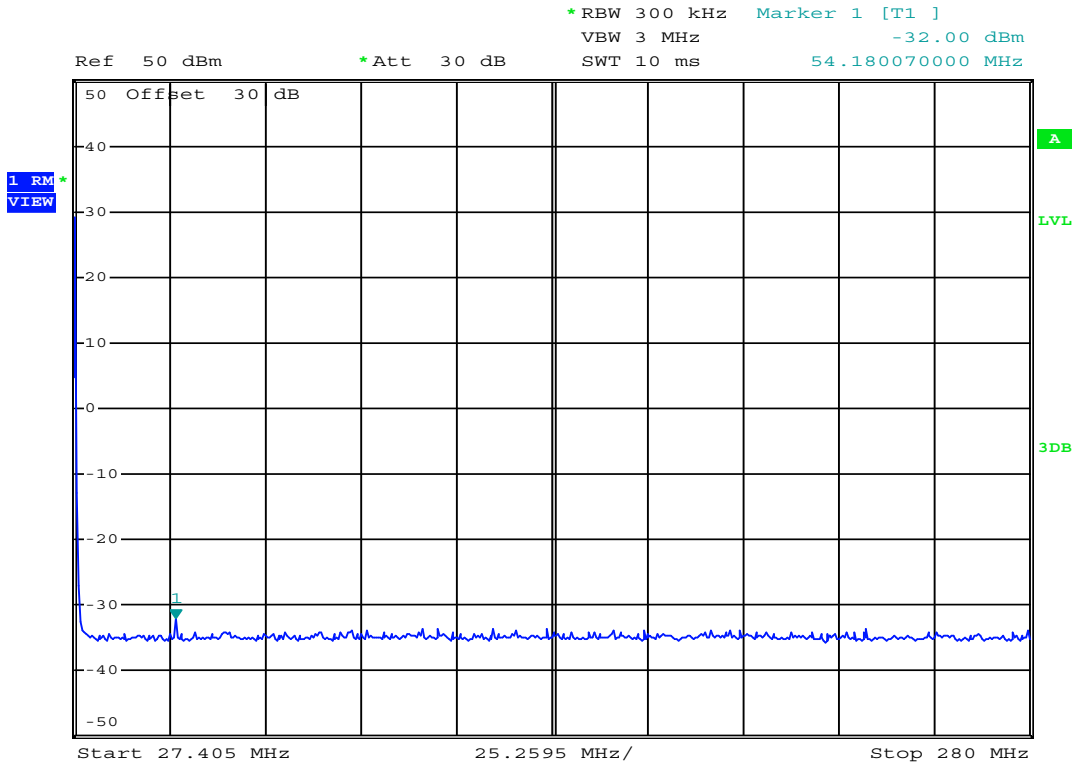
Conducted Spurious Emissions



Date: 24.DEC.2020 11:22:59

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
1	26.965	4W	AM	35.3	53.90	-27.24

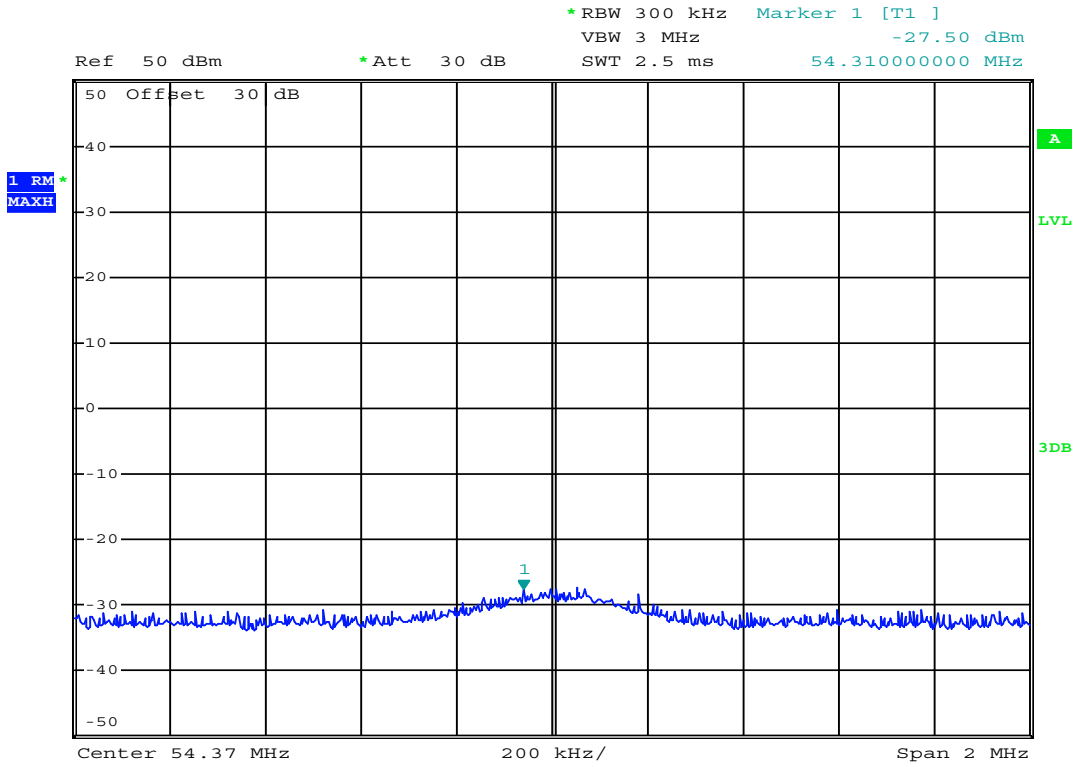
Conducted Spurious Emissions



Date: 24.DEC.2020 10:51:50

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
19	27.185	4W	AM	35.46	-	-

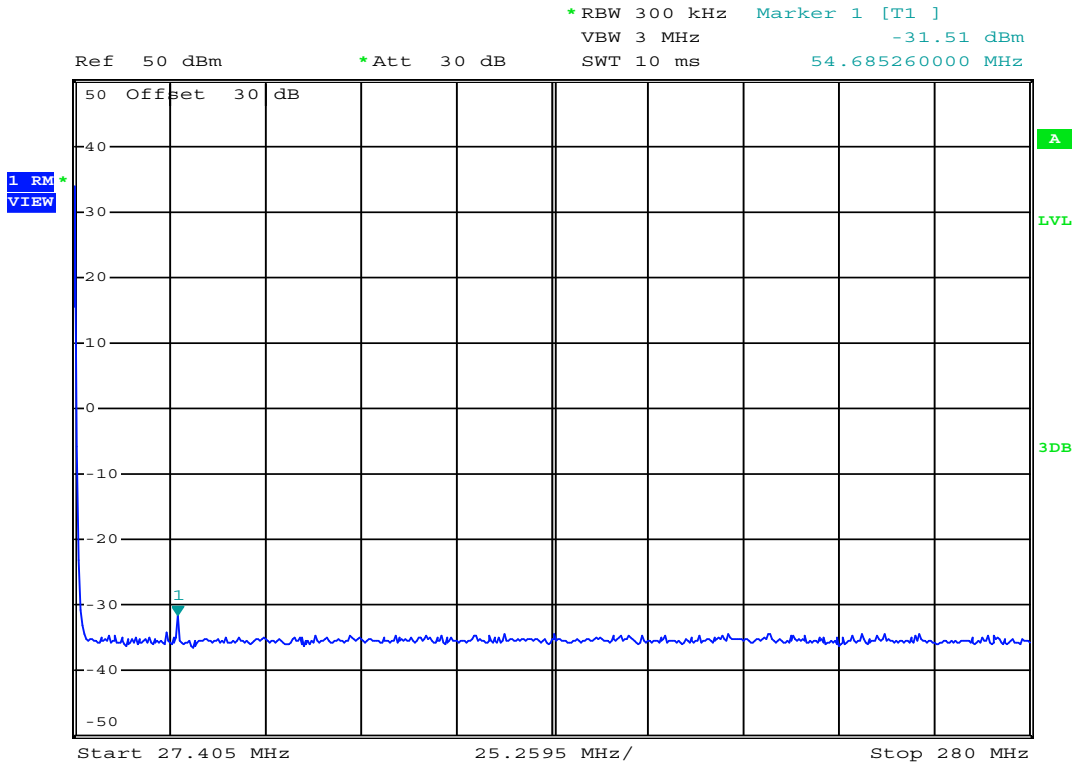
Conducted Spurious Emissions



Date: 24.DEC.2020 10:53:07

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
19	27.185	4W	AM	35.46	54.31	-27.50

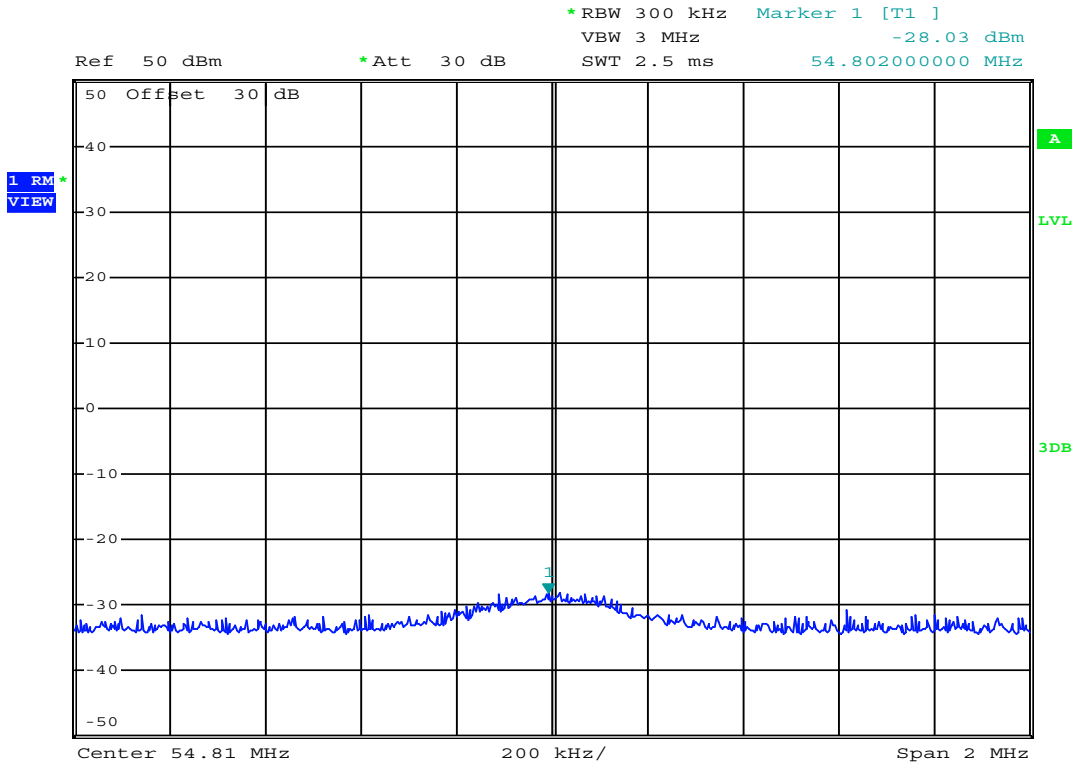
Conducted Spurious Emissions



Date: 24.DEC.2020 11:15:08

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
40	27.405	4W	AM	35.54	-	-

Conducted Spurious Emissions



Date: 24.DEC.2020 11:17:04

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
40	27.405	4W	AM	35.54	54.80	-28.03

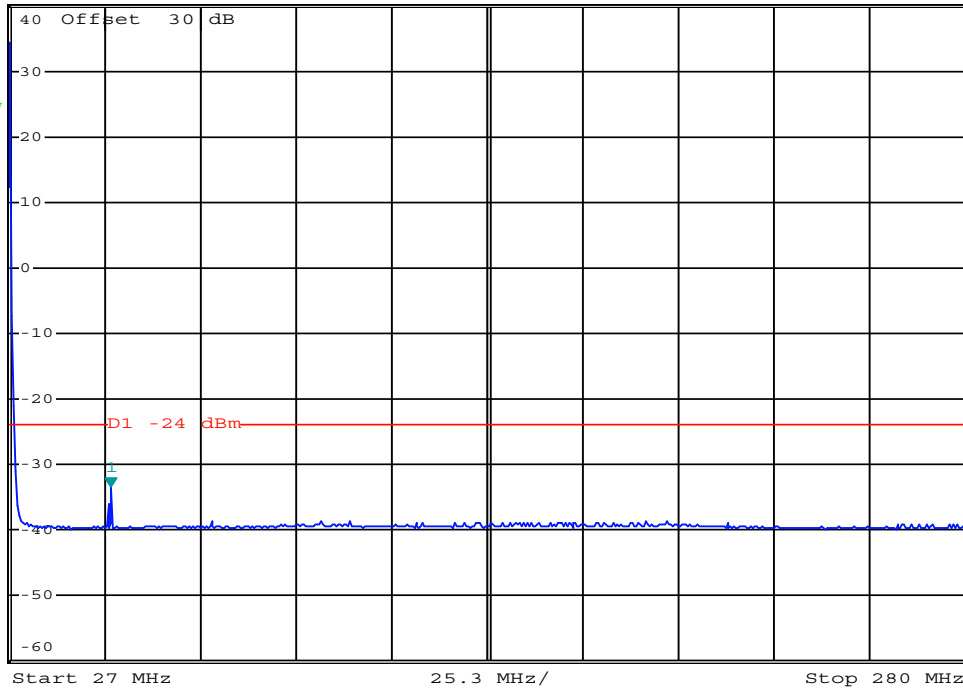
Conducted Spurious Emissions



*RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -33.32 dBm
 *Att 30 dB *SWT 1 s 53.944500000 MHz

Ref 40 dBm Offset 30 dB

1 RM*
 VIEW



Date: 7.FEB.2022 14:57:45

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
1	26.965	4W	FM	35.7	-	-

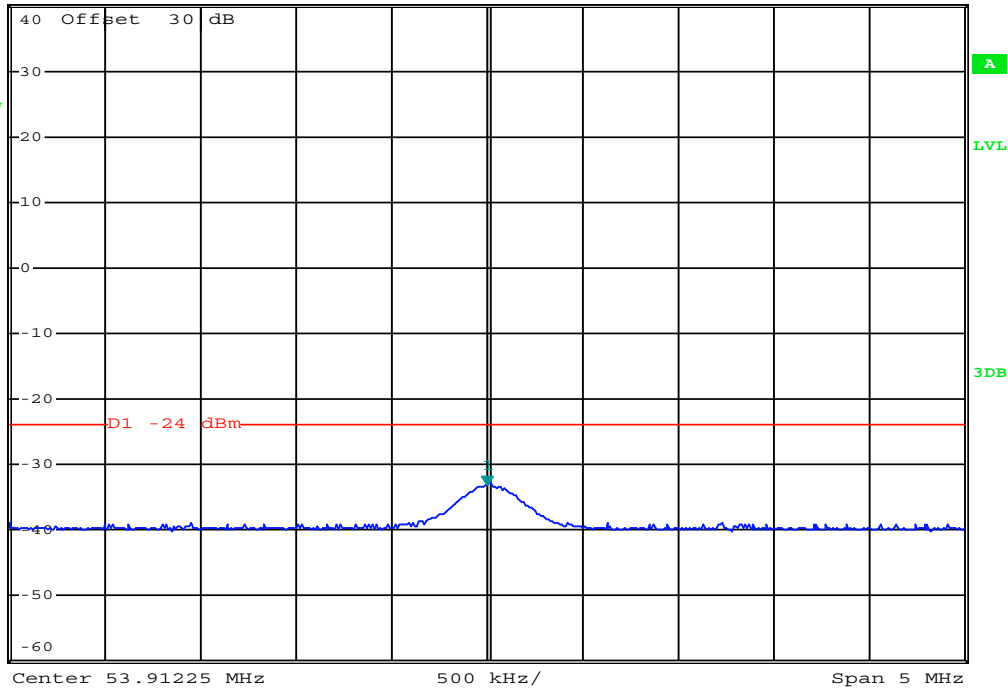
Conducted Spurious Emissions



*RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -33.06 dBm
 *SWT 1 s 53.912250000 MHz

Ref 40 dBm *Att 30 dB

1 RM *
 VIEW



Date: 7.FEB.2022 15:02:02

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
1	26.965	4W	FM	35.7	53.91	-33.06

Conducted Spurious Emissions



*RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -32.98 dBm
 *Att 30 dB 54.324000000 MHz

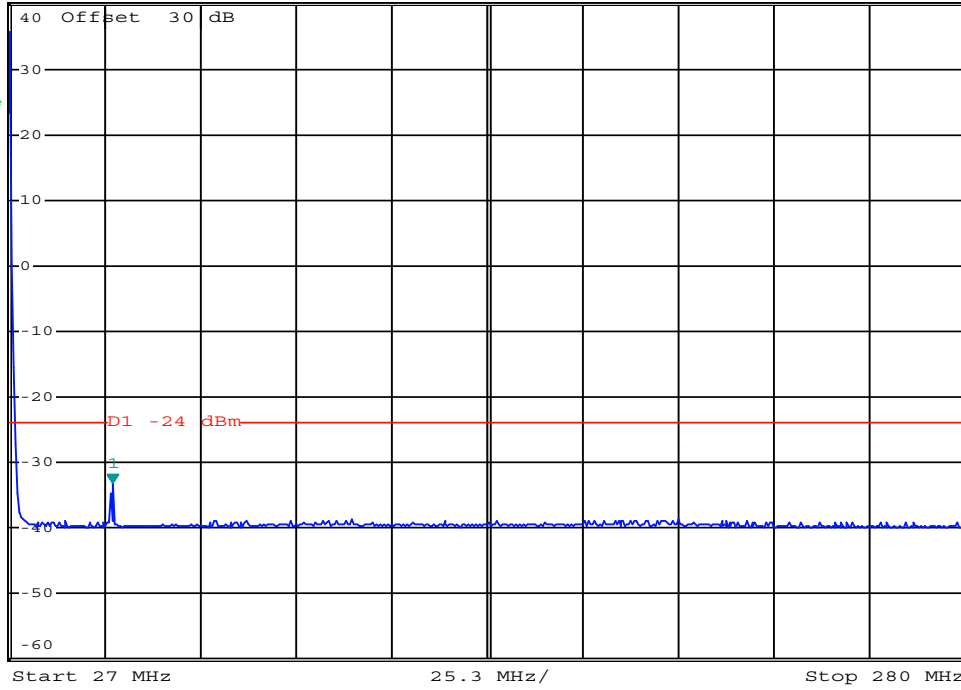
Ref 40 dBm

*Att 30 dB

*SWT 1 s

54.324000000 MHz

1 RM*
 VIEW



Date: 7.FEB.2022 14:58:19

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
19	27.185	4W	FM	35.86	-	-

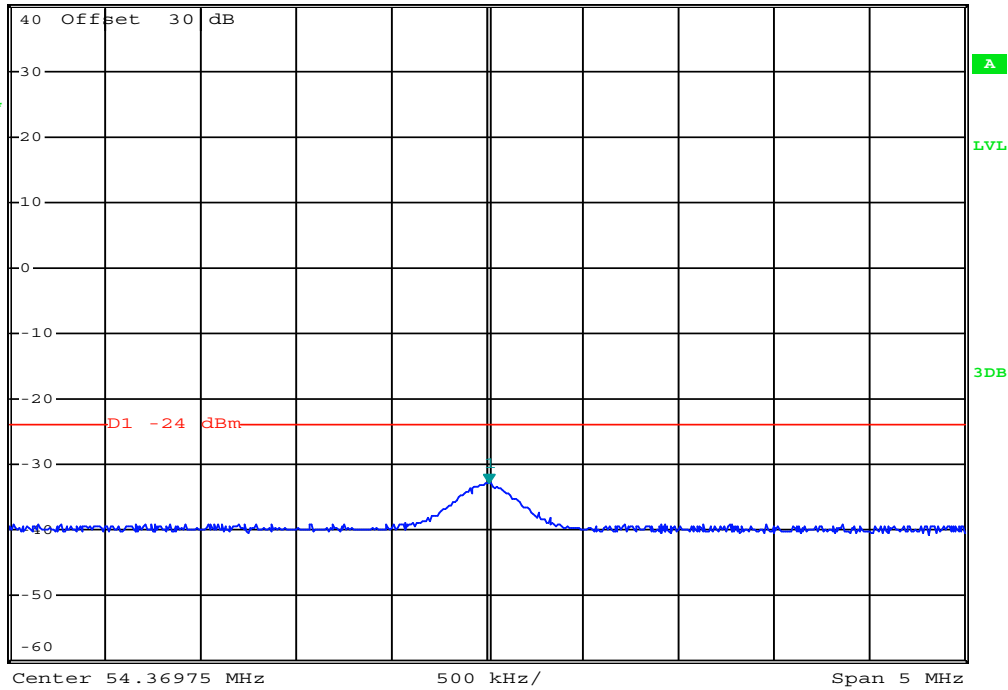
Conducted Spurious Emissions



*RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -32.86 dBm
 *SWT 1 s 54.374750000 MHz

Ref 40 dBm *Att 30 dB

1 RM *
 VIEW



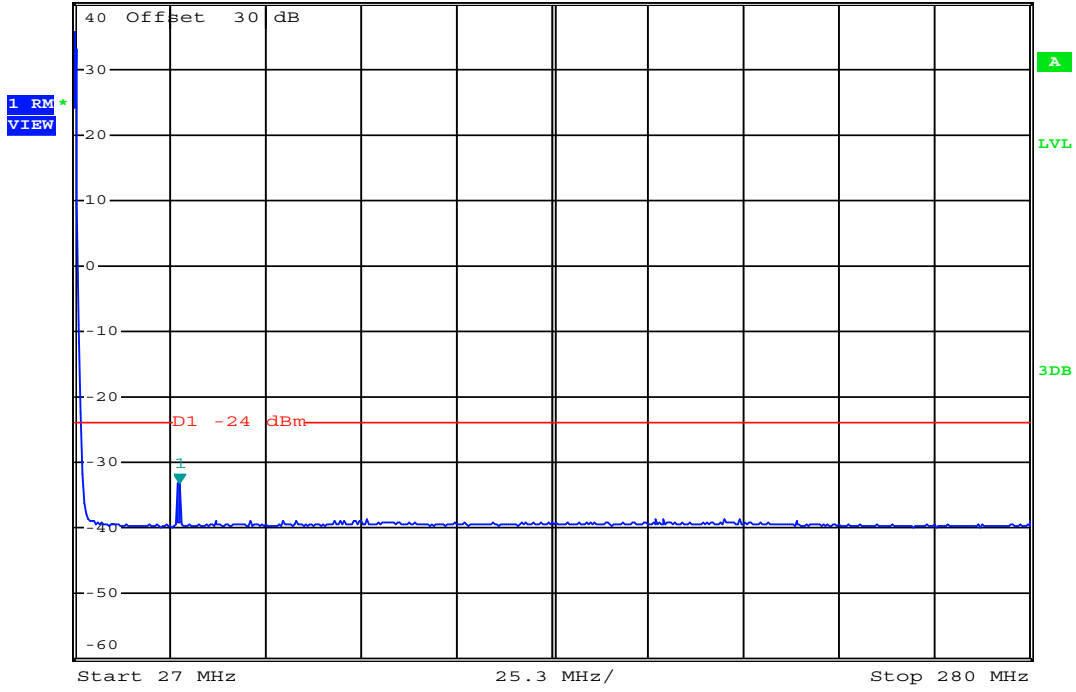
Date: 7.FEB.2022 15:01:21

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
19	27.185	4W	FM	35.86	54.37	-32.86

Conducted Spurious Emissions



Ref 40 dBm *Att 30 dB *RBW 300 kHz Marker 1 [T1] -33.15 dBm
 VBW 3 MHz *SWT 1 s 54.830000000 MHz



Date: 7.FEB.2022 14:57:00

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
40	27.405	4W	FM	36	-	-

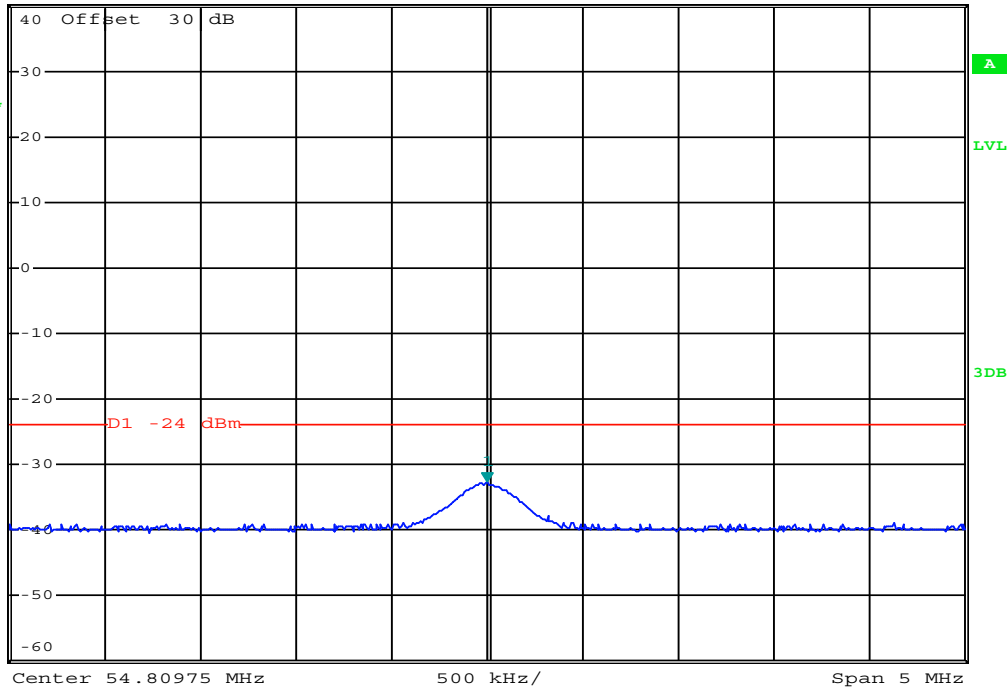
Conducted Spurious Emissions



*RBW 300 kHz Marker 1 [T1]
 VBW 3 MHz -32.65 dBm
 *SWT 1 s 54.809750000 MHz

Ref 40 dBm *Att 30 dB

1 RM *
 VIEW



Date: 7.FEB.2022 15:02:37

Channel Number	Channel Frequency (MHz)	Power Setting	Modulation	Fund. Power (dBm)	Emission Frequency (MHz)	Measured Emission (dBm)
40	27.405	4W	FM	36	54.80	-32.65

Summary of Radiated Tx Emissions (AM)

Measured Frequency Range (MHz)	Channel Frequency (MHz)	Antenna Polarization	Emission Frequency	Measured Emission [E _{Meas}] (dBuV)	Antenna ACF [ACF] (dB)	Cable Loss [L _C] (dB)	Amplifier Gain [G _A] (dB)	Corrected Emission [E _{Corr}] (dBuV/m)	Limit (dBuV)	Margin (dB)
9kHz - 30MHz	27.2	Front *	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
9kHz - 30MHz	27.2	Side *	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
9kHz - 30MHz	27.2	Front **	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
9kHz - 30MHz	27.2	Side **	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
30-1000MHz	27.2	Horizontal *	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
30-1000MHz	27.2	Vertical *	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
30-1000MHz	27.2	Horizontal **	82.38MHz	29.5	12.60	0.50	0.00 (3)	29.5 (2)	40.0	10.5
30-1000MHz	27.2	Horizontal **	794.2MHz	39.20	28.30	0.75	0.00 (3)	39.2 (2)	46.0	6.8
30-1000MHz	27.2	Vertical **	55.11MHz	29.00	11.30	0.50	0.00 (3)	29.0 (2)	40.0	11.0
30-1000MHz	27.2	Vertical **	82.38MHz	29.50	12.60	0.50	0.00 (3)	29.5 (2)	40.0	10.5
30-1000MHz	27.2	Vertical **	848.1MHz	41.50	29.50	0.75	0.00 (3)	41.5 (2)	46.0	4.5
Results:									Complies	

(1) No Emissions Detected (ND) above ambient or within 20dB of the limit

(2) Antenna ACF, Cable Loss and Amplifier Gain corrected in Spectrum Analyzer Transducer Factor

(3) External Amplifier not used

$$E_{\text{Corr}} = E_{\text{Meas}} + \text{ACF}^E + L_C - G_A$$

Where ACF^E is the Electric Antenna Correction Factor

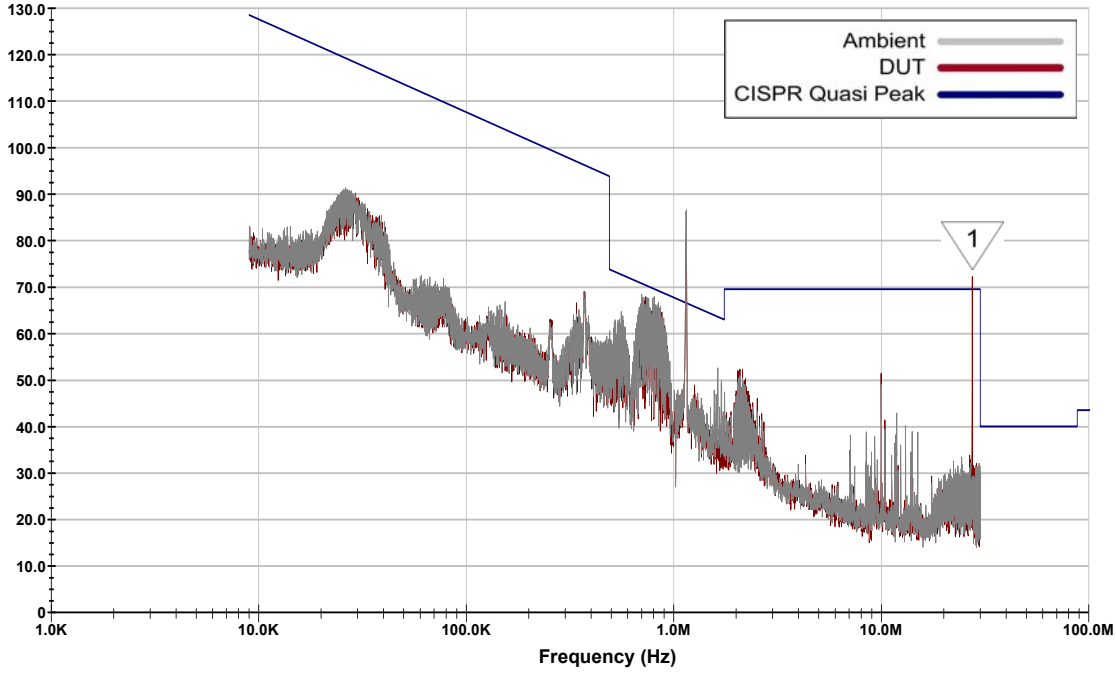
* Without Manufacturer's Accessories, ** With Manufacturer's Accessories

Radiated Tx Emissions:

President - RANDY II FCC w/o Accessories

Radiated Tx Emissions - 9kHz - 30MHz

OATS - Loop Front



02:03:43 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Front	ND	ND

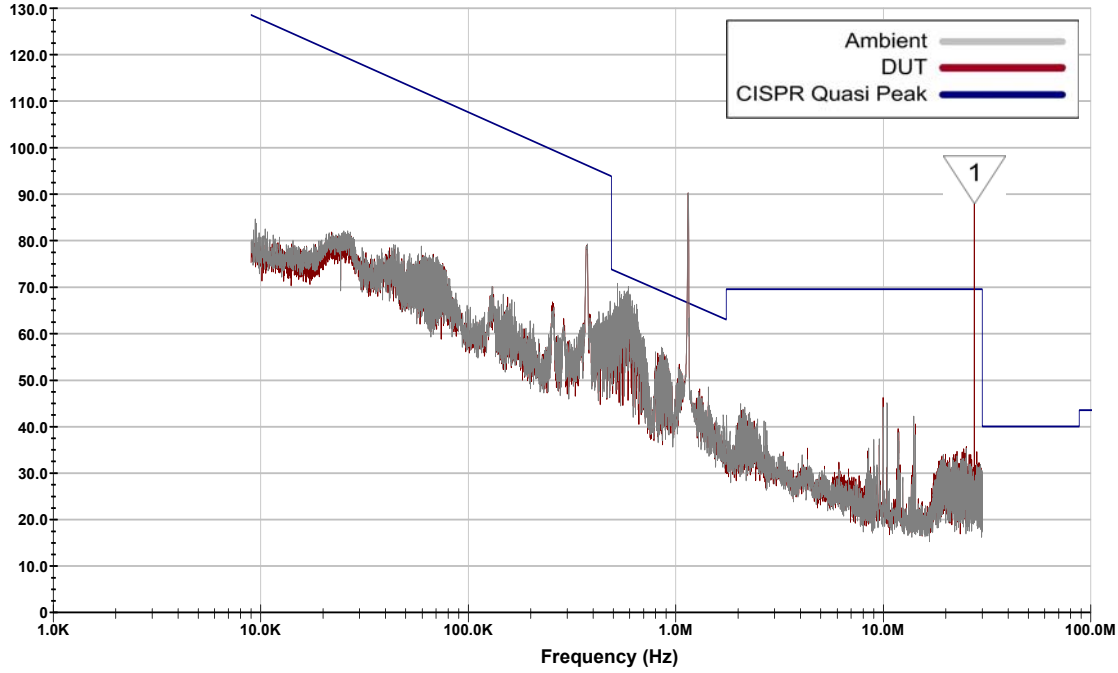
Marker 1: Fundamental

Radiated Tx Emissions:

President - RANDY II FCC w/o Accessories

Radiated Tx Emissions - 9kHz - 30MHz

OATS - Loop Side



02:03:43 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Side	ND	ND

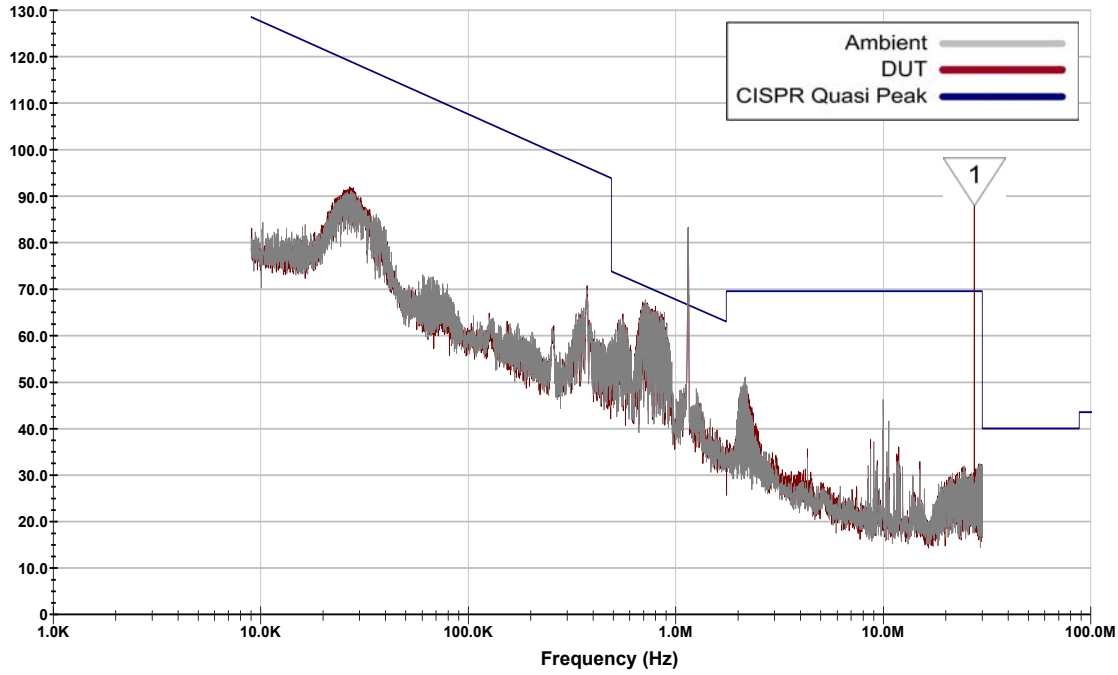
Marker 1: Fundamental

Radiated Tx Emissions:

President - RANDY II FCC w/ Accessories

Radiated Tx Emissions - 9kHz - 30MHz

OATS - Loop Front



01:52:39 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Front	ND	ND

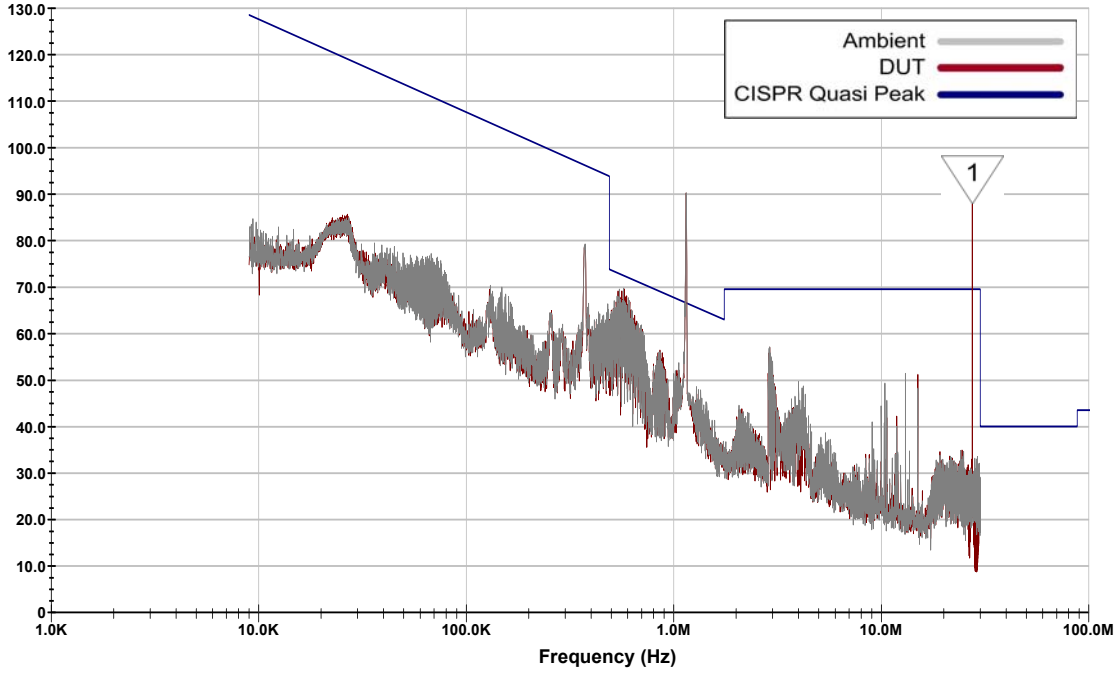
Marker 1: Fundamental

Radiated Tx Emissions:

President - RANDY II FCC w/ Accessories

Radiated Tx Emissions - 9kHz - 30MHz

OATS - Loop Side



01:52:39 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Side	ND	ND

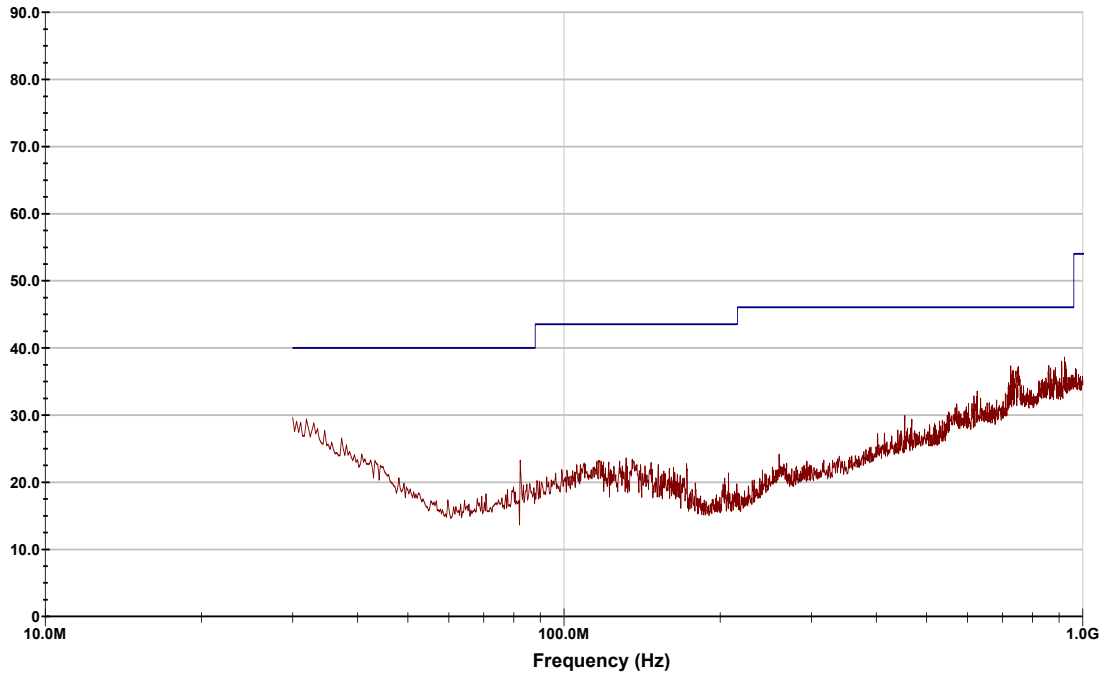
Marker 1: Fundamental

Radiated Tx Emissions:

President - RANDY II FCC w/o Accessories

Radiated Tx Emissions - 30MHz-1GHz

OATS Horizontal



02:33:12 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

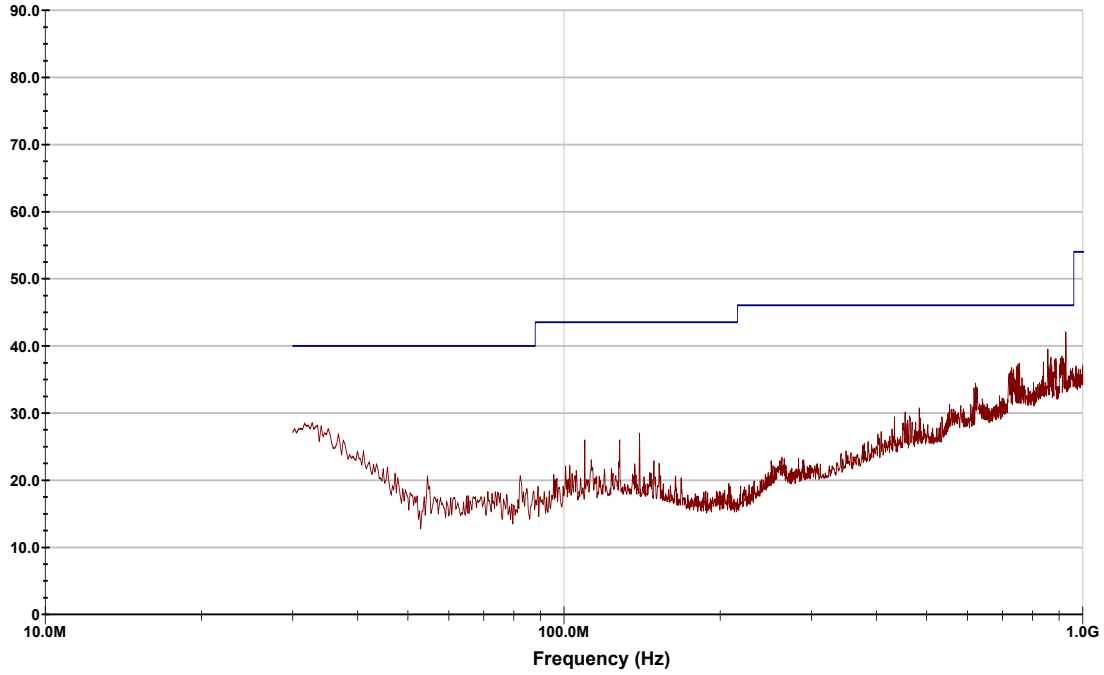
Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Horizontal	-	-

Radiated Tx Emissions:

President - RANDY II FCC w/o Accessories

Radiated Tx Emissions 30 MHz - 1 GHz

OATS Vertical



02:33:12 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

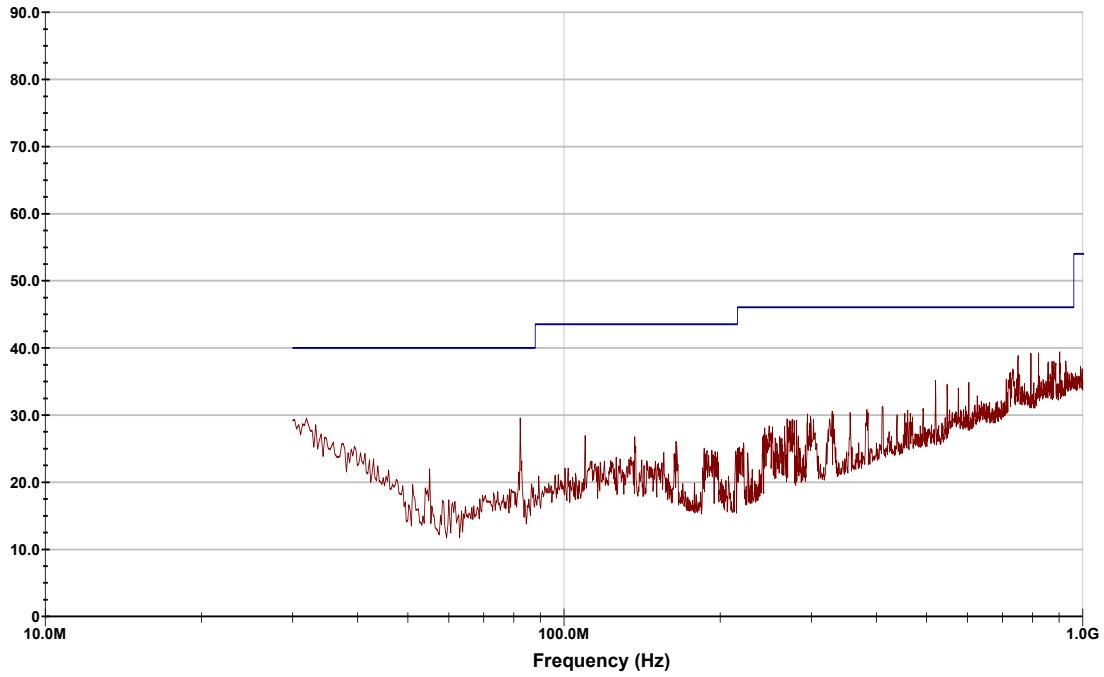
Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Vertical	-	-

Radiated Tx Emissions:

President - RANDY II FCC w/ Accessories

Radiated Tx Emissions - 30MHz-1GHz

OATS Horizontal



02:27:27 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

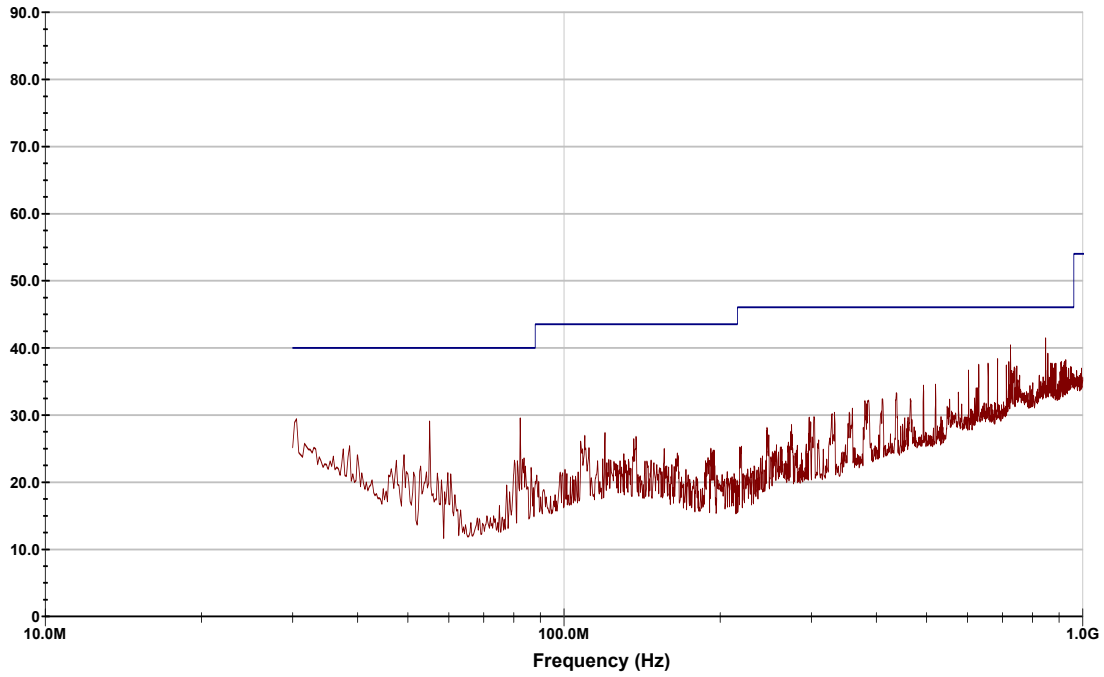
Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Horizontal	-	-

Radiated Tx Emissions:

President - RANDY II FCC w/ Accessories

Radiated Tx Emissions 30 MHz - 1 GHz

OATS Vertical



02:27:27 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Vertical	-	-

Summary of Radiated Tx Emissions (AM)

Measured Frequency Range (MHz)	Channel Frequency (MHz)	Antenna Polarization	Emission Frequency	Measured Emission [E _{Meas}] (dBuV)	Antenna ACF [ACF] (dB)	Cable Loss [L _C] (dB)	Amplifier Gain [G _A] (dB)	Corrected Emission [E _{Corr}] (dBuV/m)	Limit (dBuV)	Margin (dB)
9kHz - 30MHz	27.405	Front *	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
9kHz - 30MHz	27.405	Side *	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
9kHz - 30MHz	27.405	Front **	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
9kHz - 30MHz	27.405	Side **	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
30-1000MHz	27.405	Horizontal *	89.40 MHz	14.1	11.70	0.77	0.00 (3)	26.6 (2)	40.0	n/a
30-1000MHz	27.405	Horizontal *	271.92 MHz	10.8	17.90	1.35	0.00 (3)	30.1 (2)	46.0	n/a
30-1000MHz	27.405	Horizontal *	745.20 MHz	9.5	28.70	2.60	0.00 (3)	40.8 (2)	46.0	10.5
30-1000MHz	27.405	Horizontal *	794.20 MHz	8.3	28.30	2.60	0.00 (3)	39.2 (2)	46.0	6.8
30-1000MHz	27.405	Vertical *	856.50 MHz	10.4	29.50	2.78	0.00 (3)	42.7 (2)	46.0	11.0
30-1000MHz	27.405	Horizontal **	89.40 MHz	9.8	13.40	0.77	0.00 (3)	24.0 (2)	43.5	10.5
30-1000MHz	27.405	Horizontal **	103.44 MHz	14.5	15.40	0.99	0.00 (3)	30.9 (2)	43.5	4.5
30-1000MHz	27.405	Horizontal **	136.11 MHz	7.1	16.60	0.99	0.00 (3)	24.6 (2)	43.5	n/a
30-1000MHz	27.405	Horizontal **	155.55 MHz	34.6	15.80	0.99	0.00 (3)	51.4 (2)	43.5	n/a
30-1000MHz	27.405	Horizontal **	155.82 MHz	34.3	15.80	0.99	0.00 (3)	51.0 (2)	43.5	10.5
30-1000MHz	27.405	Horizontal **	156.09 MHz	11.1	15.70	0.99	0.00 (3)	27.8 (2)	43.5	6.8
30-1000MHz	27.405	Horizontal **	244.65 MHz	11.3	16.80	1.35	0.00 (3)	29.4 (2)	46.0	11.0
30-1000MHz	27.405	Horizontal **	244.92 MHz	9.5	16.80	1.35	0.00 (3)	27.7 (2)	46.0	10.5
30-1000MHz	27.405	Horizontal **	352.50 MHz	9.1	19.50	1.64	0.00 (3)	30.3 (2)	46.0	4.5
30-1000MHz	27.405	Horizontal **	353.20 MHz	9.5	19.50	1.64	0.00 (3)	30.7 (2)	46.0	n/a
30-1000MHz	27.405	Horizontal **	407.10 MHz	13.0	21.50	1.91	0.00 (3)	36.4 (2)	46.0	n/a
30-1000MHz	27.405	Horizontal **	407.80 MHz	13.5	21.50	1.91	0.00 (3)	36.9 (2)	46.0	10.5
30-1000MHz	27.405	Horizontal **	878.90 MHz	8.1	29.30	2.78	0.00 (3)	40.1 (2)	46.0	6.8
30-1000MHz	27.405	Horizontal **	886.60 MHz	7.4	29.10	2.78	0.00 (3)	39.2 (2)	46.0	11.0
30-1000MHz	27.405	Vertical **	128.01 MHz	8.8	16.70	0.99	0.00 (3)	26.5 (2)	43.5	10.5
30-1000MHz	27.405	Vertical **	139.62 MHz	8.6	16.50	0.99	0.00 (3)	26.1 (2)	43.5	4.5
30-1000MHz	27.405	Vertical **	139.89 MHz	6.7	16.50	0.99	0.00 (3)	24.2 (2)	43.5	n/a
30-1000MHz	27.405	Vertical **	407.10 MHz	5.4	21.50	1.91	0.00 (3)	28.8 (2)	46.0	n/a
30-1000MHz	27.405	Vertical **	407.80 MHz	9.4	21.50	1.91	0.00 (3)	32.8 (2)	46.0	10.5
30-1000MHz	27.405	Vertical **	867.70 MHz	7.9	29.40	2.78	0.00 (3)	40.1 (2)	46.0	6.8
30-1000MHz	27.405	Vertical **	884.50 MHz	8.2	29.20	2.78	0.00 (3)	40.1 (2)	46.0	11.0
30-1000MHz	27.405	Vertical **	885.20 MHz	3.6	29.10	2.78	0.00 (3)	35.5 (2)	46.0	10.5
30-1000MHz	27.405	Vertical **	926.50 MHz	3.9	30.00	2.92	0.00 (3)	36.8 (2)	46.0	4.5
Results:									Complies	

(1) No Emissions Detected (ND) above ambient or within 20dB of the limit

(2) Antenna ACF, Cable Loss and Amplifier Gain corrected in Spectrum Analyzer Transducer Factor

(3) External Amplifier not used

$$E_{\text{Corr}} = E_{\text{Meas}} + ACF^E + L_C - G_A$$

Where ACF^E is the Electric Antenna Correction Factor

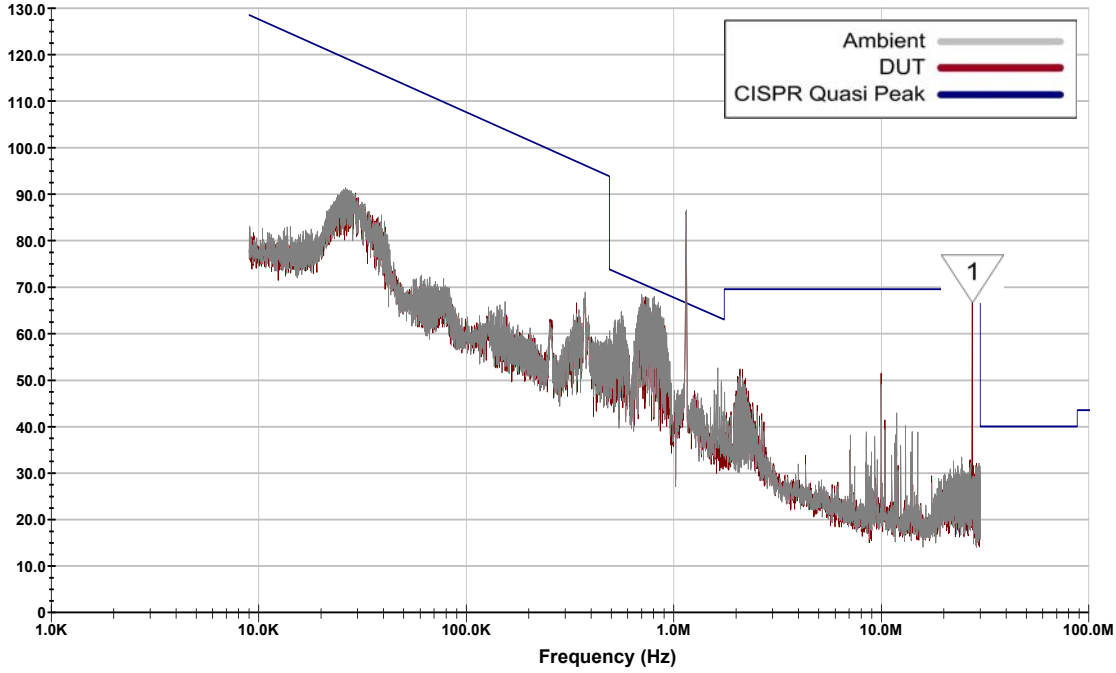
* Without Manufacturer's Accessories, ** With Manufacturer's Accessories

Radiated Tx Emissions:

President - RANDY II FCC w/o Accessories

Radiated Tx Emissions - 9kHz - 30MHz

OATS - Loop Front



12:03:20 PM, Friday, February 25, 2022

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Front	ND	ND

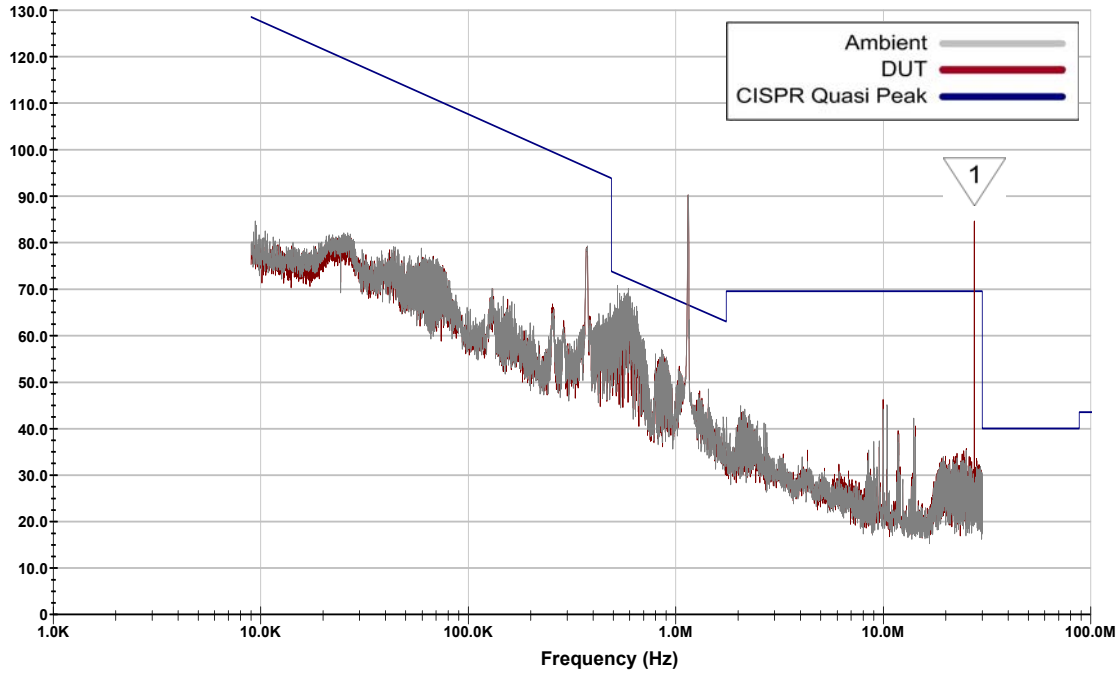
Marker 1: Fundamental

Radiated Tx Emissions:

President - RANDY II FCC w/o Accessories

Radiated Tx Emissions - 9kHz - 30MHz

OATS - Loop Side



12:03:20 PM, Friday, February 25, 2022

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Side	ND	ND

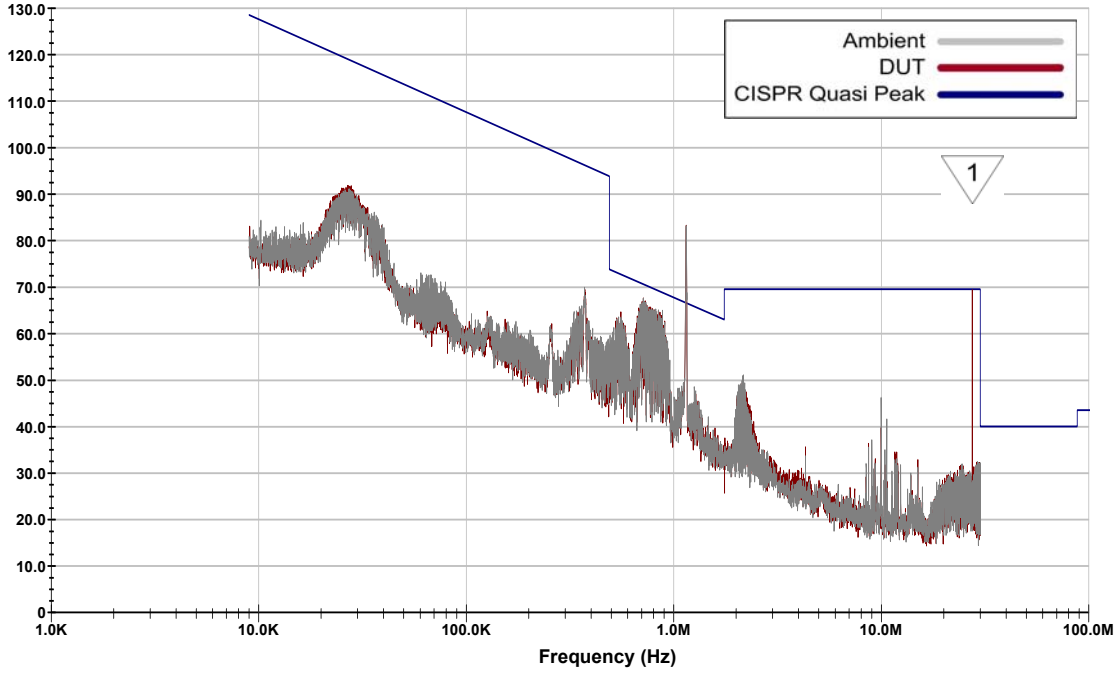
Marker 1: Fundamental

Radiated Tx Emissions:

President - RANDY II FCC w/ Accessories

Radiated Tx Emissions - 9kHz - 30MHz

OATS - Loop Front



12:34:41 PM, Friday, February 25, 2022

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Front	ND	ND

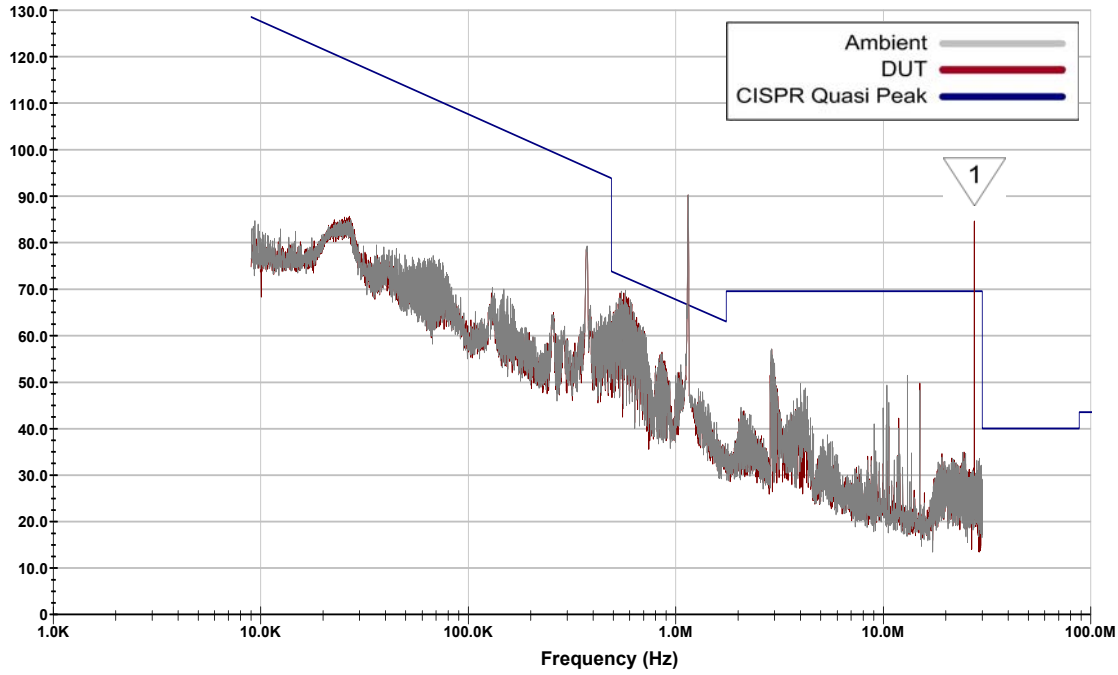
Marker 1: Fundamental

Radiated Tx Emissions:

President - RANDY II FCC w/ Accessories

Radiated Tx Emissions - 9kHz - 30MHz

OATS - Loop Side



12:34:41 PM, Friday, February 25, 2022

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Side	ND	ND

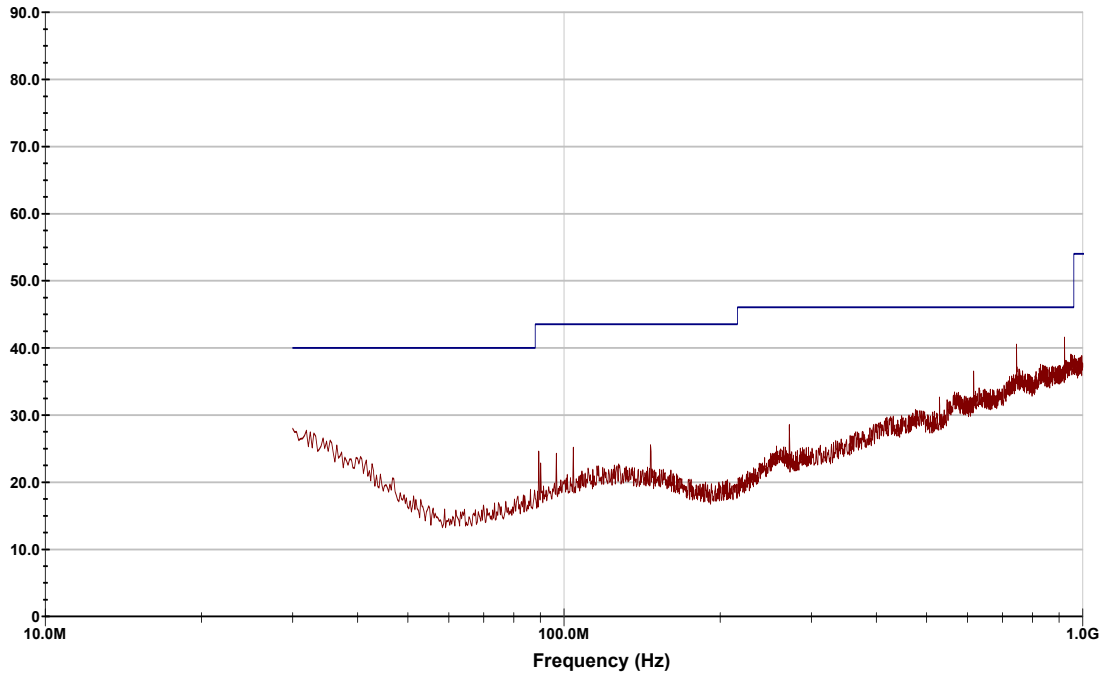
Marker 1: Fundamental

Radiated Tx Emissions:

President - RANDY II FCC w/o Accessories

Radiated Tx Emissions - 30MHz-1GHz

OATS Horizontal



11:16:48 AM, Friday, February 25, 2022

Profile Build: 2020.10.19

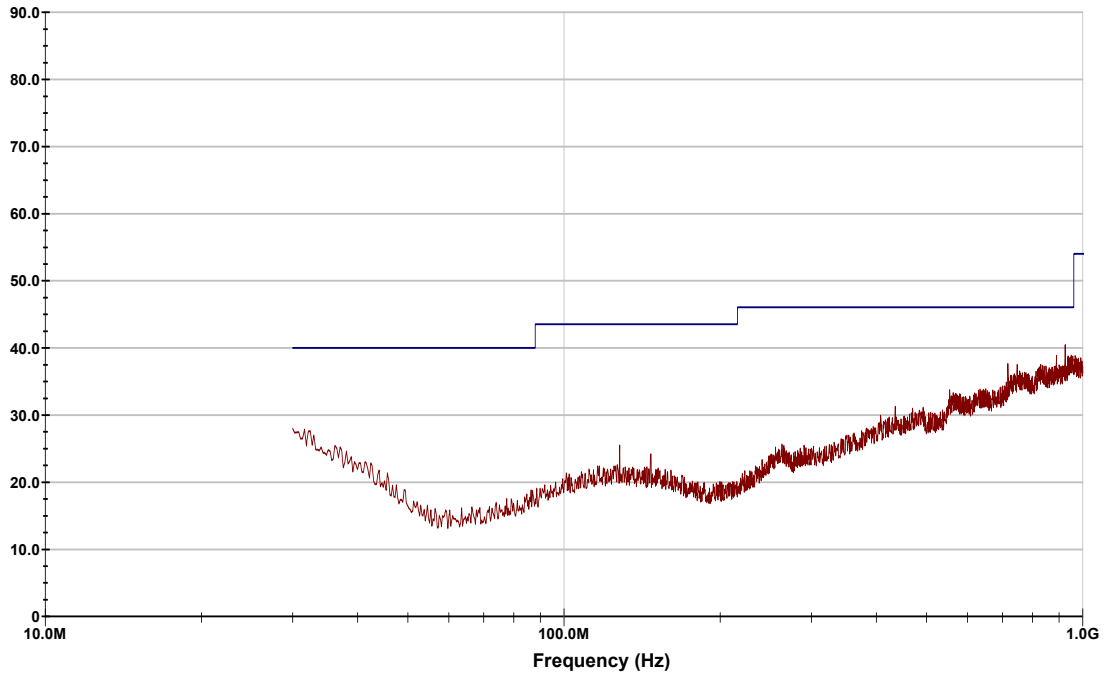
Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Horizontal	-	-

Radiated Tx Emissions:

President - RANDY II FCC w/o Accessories

Radiated Tx Emissions 30 MHz - 1 GHz

OATS Vertical



11:16:48 AM, Friday, February 25, 2022

Profile Build: 2020.10.19

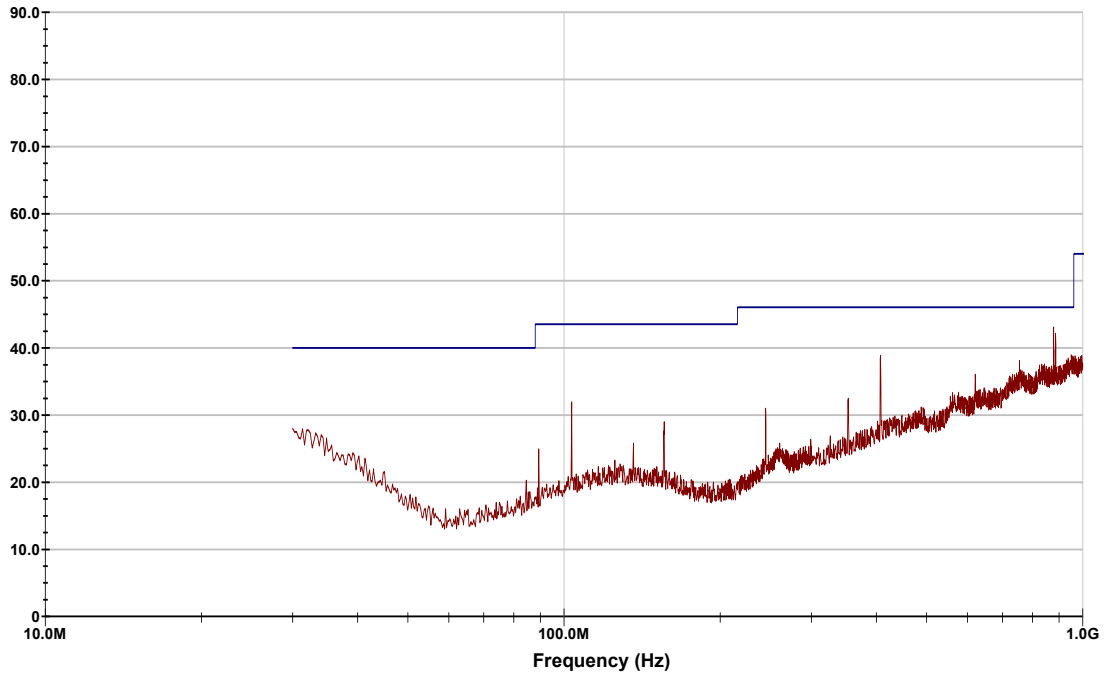
Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Vertical	-	-

Radiated Tx Emissions:

President - RANDY II FCC - w/ Accessories

Radiated Tx Emissions - 30MHz-1GHz

OATS Horizontal



11:48:05 AM, Thursday, February 24, 2022

Profile Build: 2020.10.19

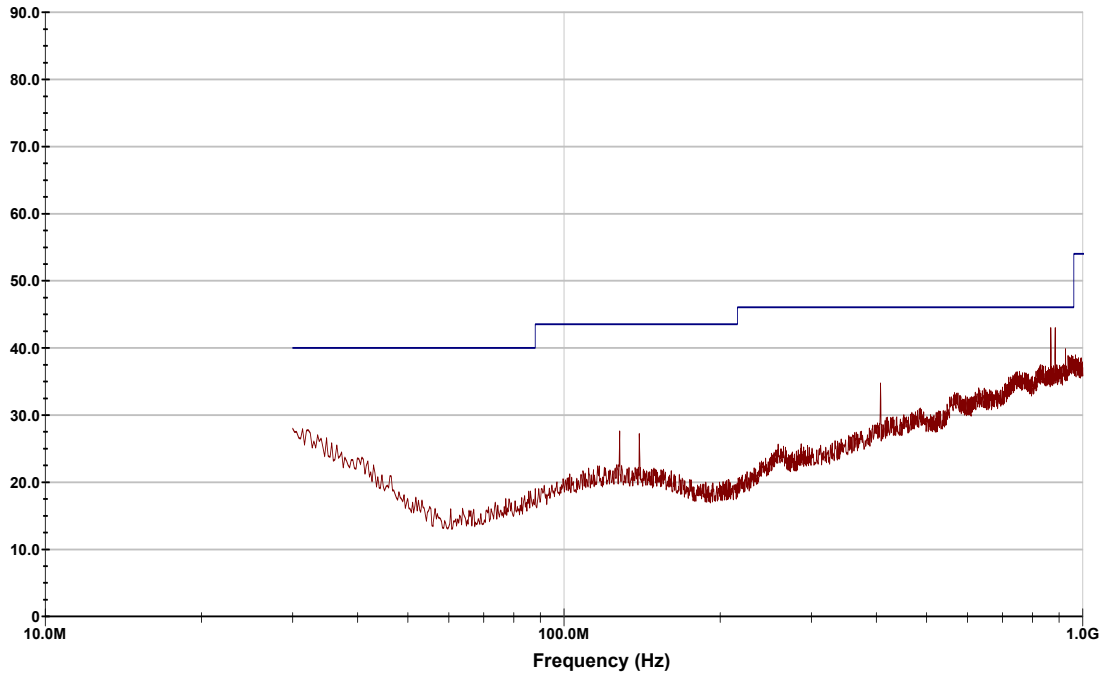
Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Horizontal	-	-

Radiated Tx Emissions:

President - RANDY II FCC - w/ Accessories

Radiated Tx Emissions 30 MHz - 1 GHz

OATS Vertical



11:48:05 AM, Thursday, February 24, 2022

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Vertical	-	-

Summary of Radiated Tx Emissions (AM)

Measured Frequency Range (MHz)	Channel Frequency (MHz)	Antenna Polarization	Emission Frequency	Measured Emission [E _{Meas}] (dBuV)	Antenna ACF [ACF] (dB)	Cable Loss [L _c] (dB)	Amplifier Gain [G _A] (dB)	Corrected Emission [E _{Corr}] (dBuV/m)	Limit (dBuV)	Margin (dB)
9kHz - 30MHz	27.405	Front	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
9kHz - 30MHz	27.405	Side	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
30-1000MHz	27.405	Horizontal	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
30-1000MHz	27.405	Vertical	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
Results:									Complies	

(1) No Emissions Detected (ND) above ambient or within 20dB of the limit

(2) Antenna ACF, Cable Loss and Amplifier Gain corrected in Spectrum Analyzer Transducer Factor

(3) External Amplifier not used

$$E_{\text{Corr}} = E_{\text{Meas}} + ACF^E + L_C - G_A$$

Where ACF^E is the Electric Antenna Correction Factor

Summary of Radiated Tx Emissions FM)

Measured Frequency Range (MHz)	Channel Frequency (MHz)	Antenna Polarization	Emission Frequency	Measured Emission [E _{Meas}] (dBuV)	Antenna ACF [ACF] (dB)	Cable Loss [L _c] (dB)	Amplifier Gain [G _A] (dB)	Corrected Emission [E _{Corr}] (dBuV/m)	Limit (dBuV)	Margin (dB)
9kHz - 30MHz	27.405	Front	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
9kHz - 30MHz	27.405	Side	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
30-1000MHz	27.405	Horizontal	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
30-1000MHz	27.405	Vertical	ND	ND (1)	0.00	0.00	0.00 (3)	ND (2)	n/a	n/a
Results:									Complies	

(1) No Emissions Detected (ND) above ambient or within 20dB of the limit

(2) Antenna ACF, Cable Loss and Amplifier Gain corrected in Spectrum Analyzer Transducer Factor

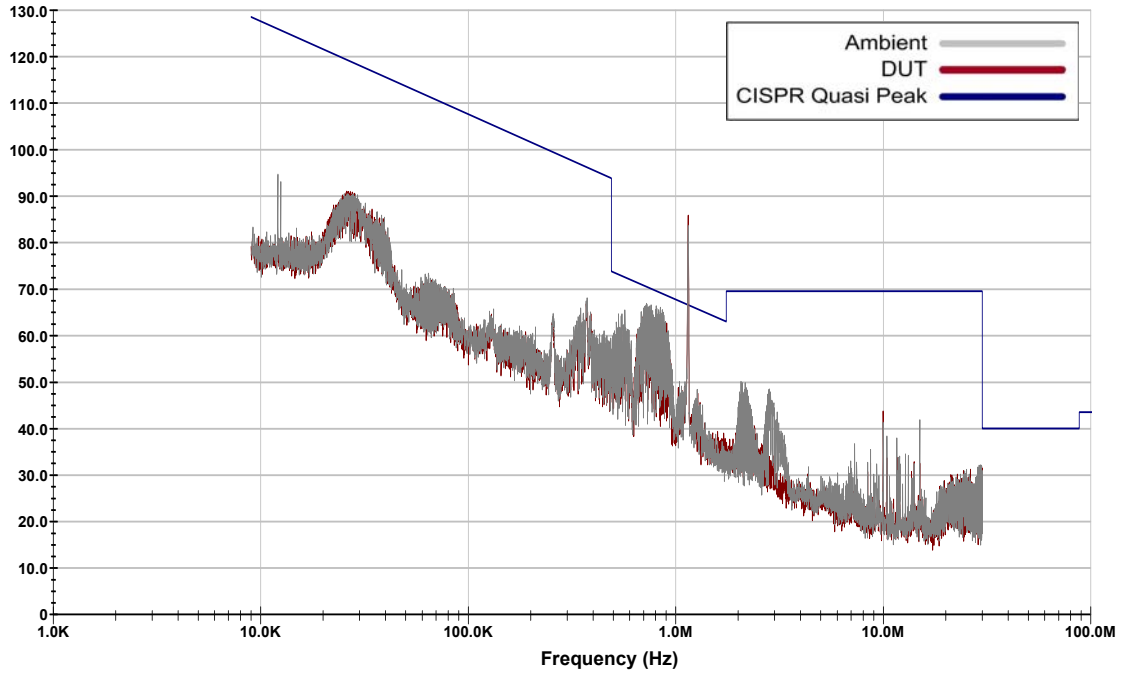
(3) External Amplifier not used

$$E_{\text{Corr}} = E_{\text{Meas}} + ACF^E + L_C - G_A$$

Where ACF^E is the Electric Antenna Correction Factor

Radiated Rx Emissions:

President - RANDY II FCC
Radiated Rx Emissions - 9kHz - 30MHz
OATS - Loop Front



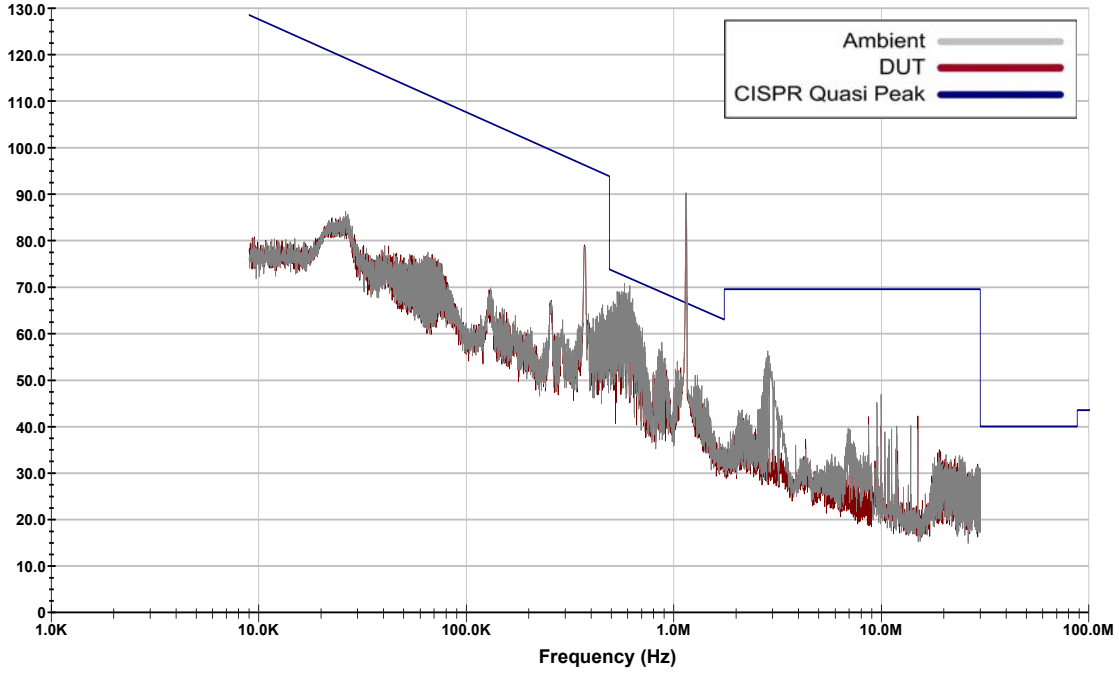
01:27:25 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Front	ND	ND

Radiated Rx Emissions:

President - RANDY II FCC
Radiated Rx Emissions - 9kHz - 30MHz
OATS - Loop Side



01:27:25 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.19

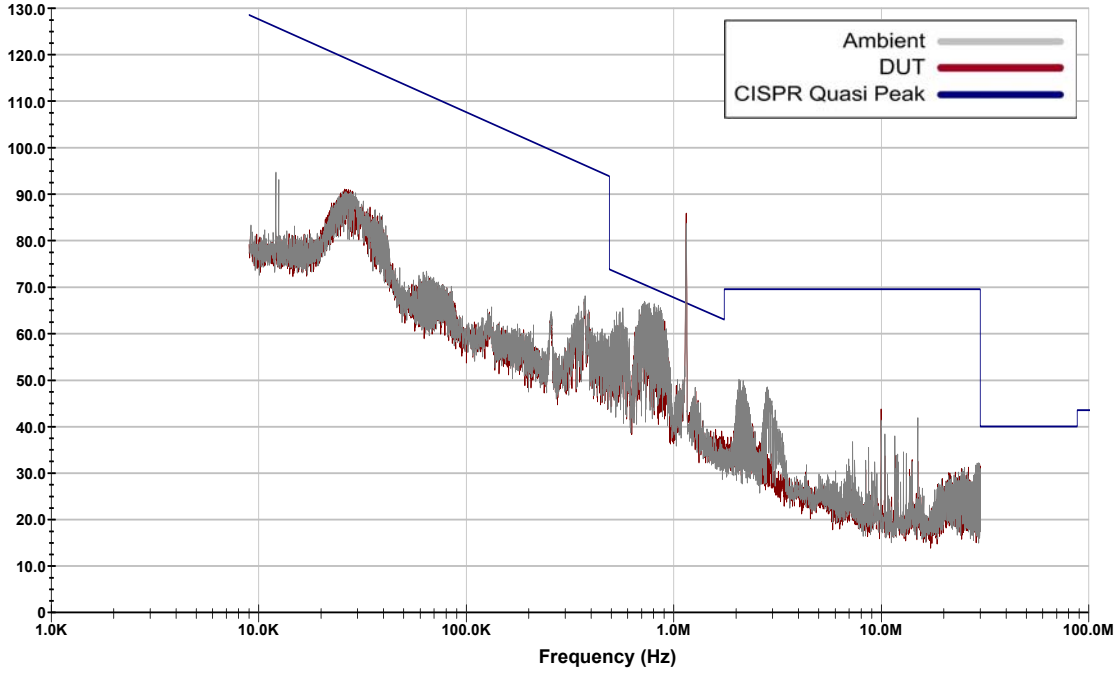
Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Side	ND	ND

Radiated Rx Emissions:

President - RANDY II FCC

Radiated Rx Emissions - 9kHz - 30MHz

OATS - Loop Front



12:39:28 PM, Friday, February 25, 2022

Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Front	ND	ND

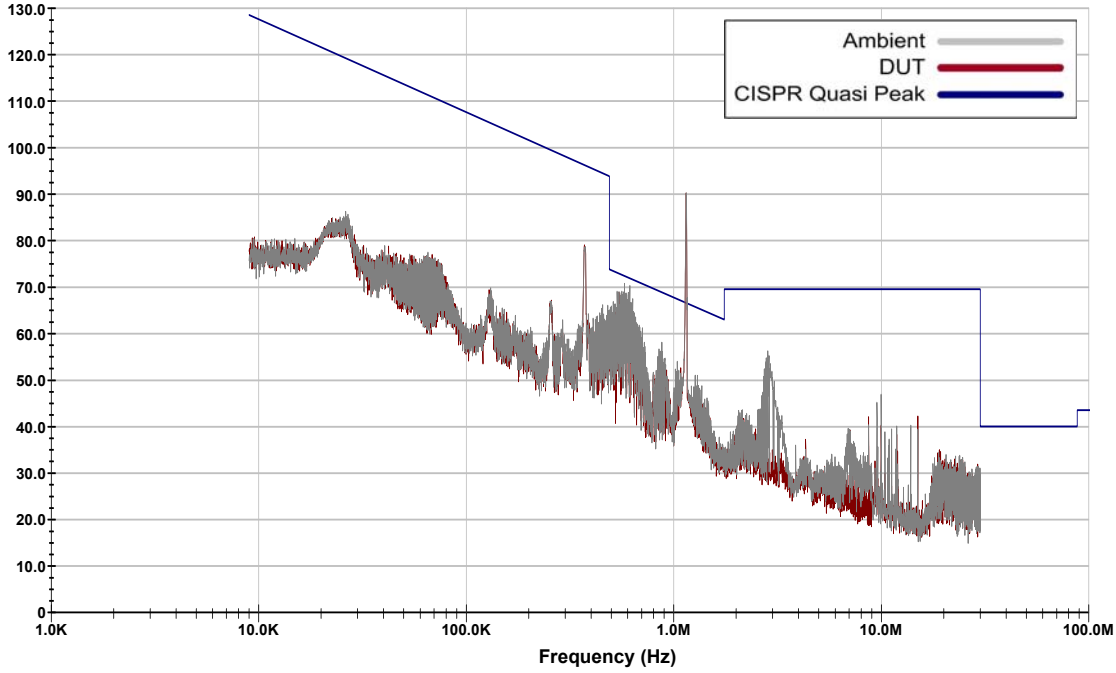
Marker 1: Fundamental

Radiated Rx Emissions:

President - RANDY II FCC

Radiated Rx Emissions - 9kHz - 30MHz

OATS - Loop Side



12:39:28 PM, Friday, February 25, 2022

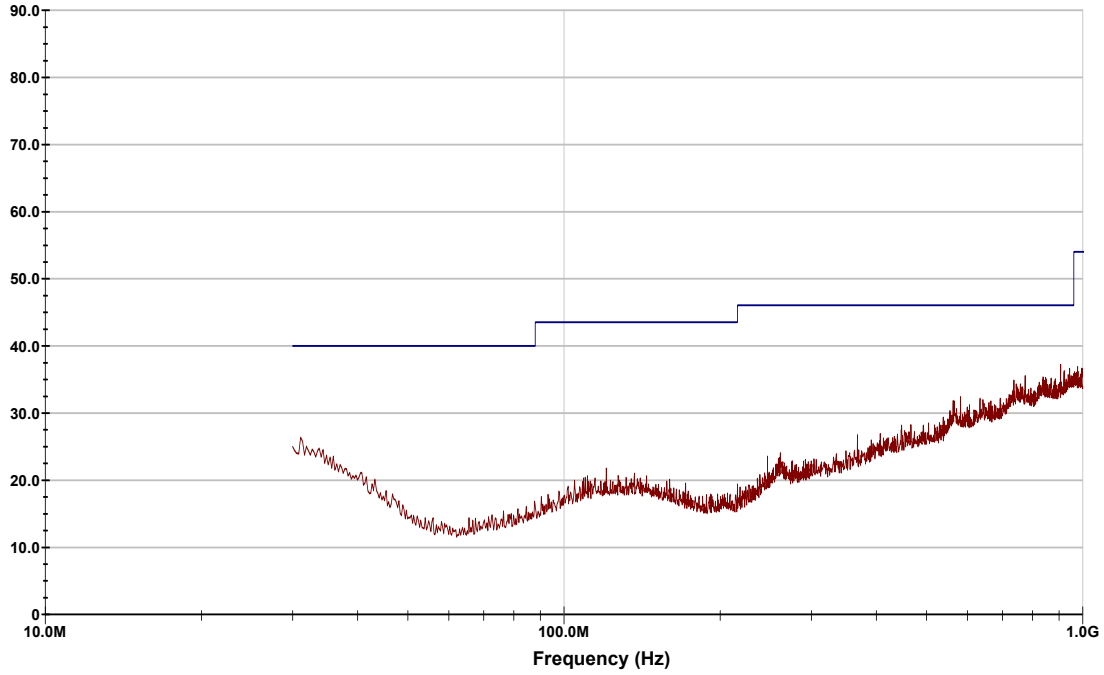
Profile Build: 2020.10.19

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Side	ND	ND

Marker 1: Fundamental

Radiated Rx Emissions:

President - RANDY II FCC
Radiated Rx Emissions - 30MHz-1GHz
OATS Horizontal



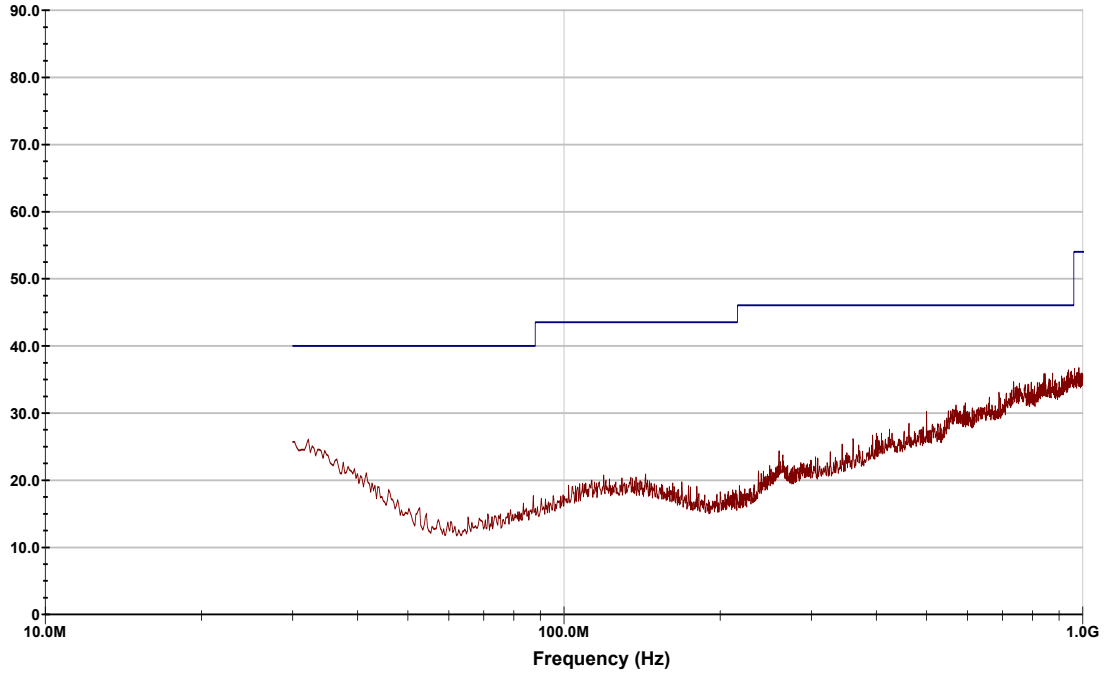
01:32:01 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.01

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Horizontal	ND	ND

Radiated Rx Emissions:

President - RANDY II FCC
Radiated Rx Emissions 30 MHz - 1 GHz
OATS Vertical



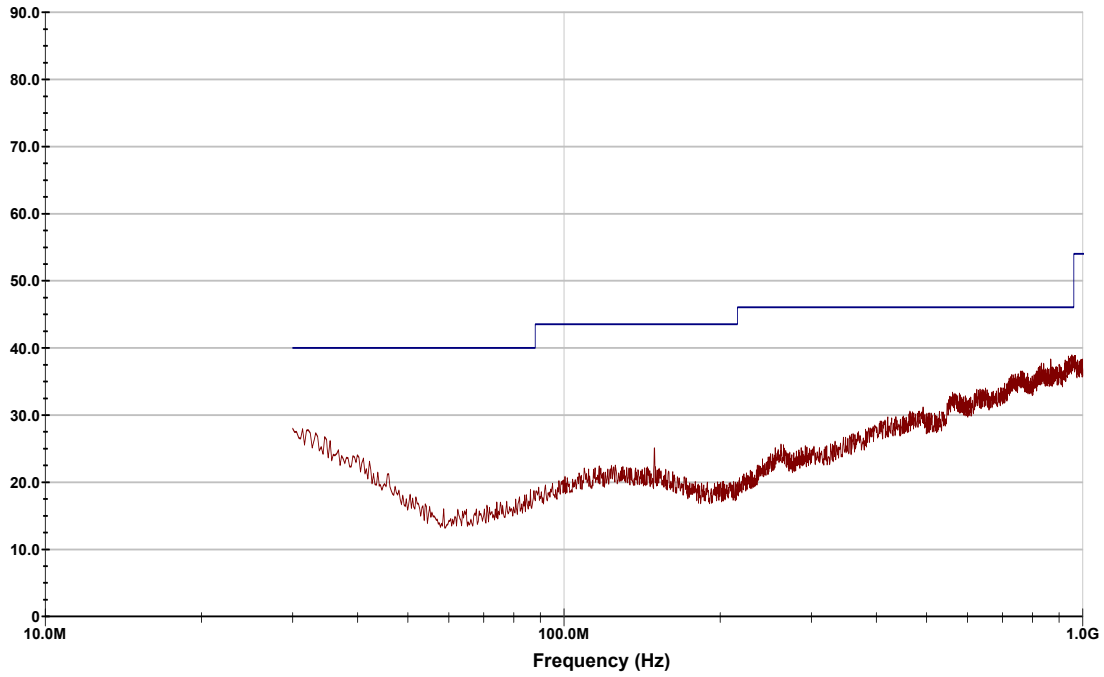
01:32:01 PM, Tuesday, December 29, 2020

Profile Build: 2020.10.01

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
AM	Vertical	ND	ND

Radiated Rx Emissions:

President - RANDY II FCC
Radiated Rx Emissions - 30MHz-1GHz
OATS Horizontal



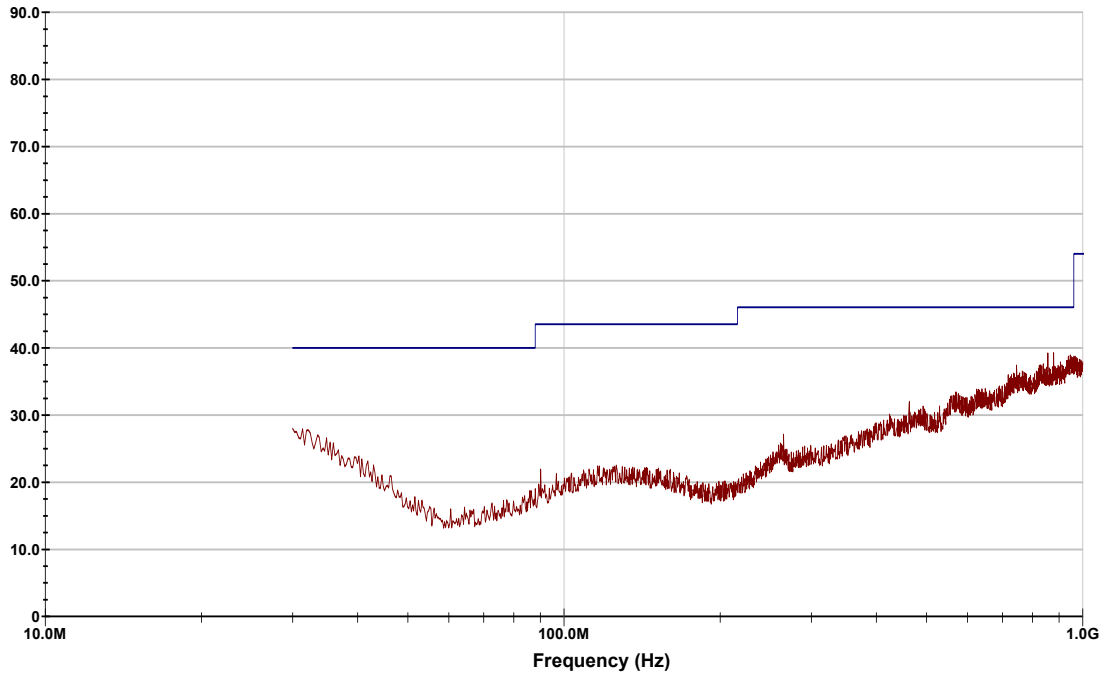
11:22:32 AM, Friday, February 25, 2022

Profile Build: 2020.10.01

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Horizontal	ND	ND

Radiated Rx Emissions:

President - RANDY II FCC
Radiated Rx Emissions 30 MHz - 1 GHz
OATS Vertical



11:22:32 AM, Friday, February 25, 2022

Profile Build: 2020.10.01

Modulation	Antenna Polarization	Emission Frequency (MHz)	Measured Emission (dBm)
FM	Vertical	ND	ND