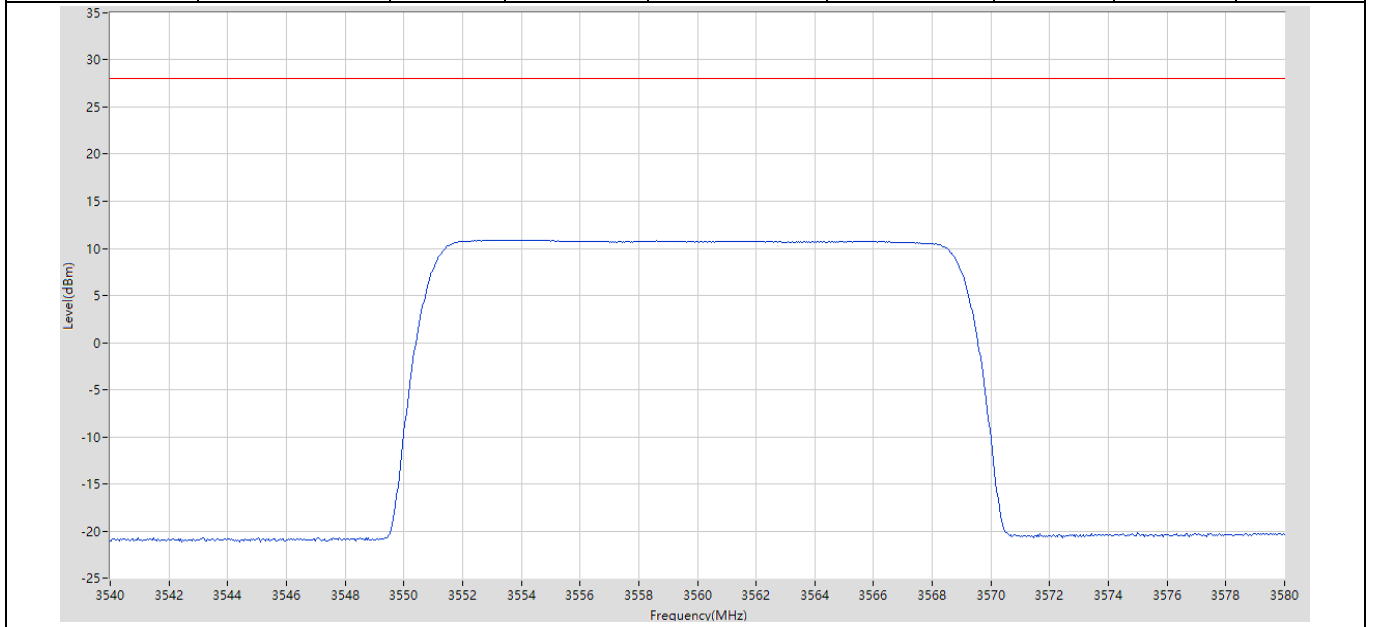


2.2.6 PSD of Ant6

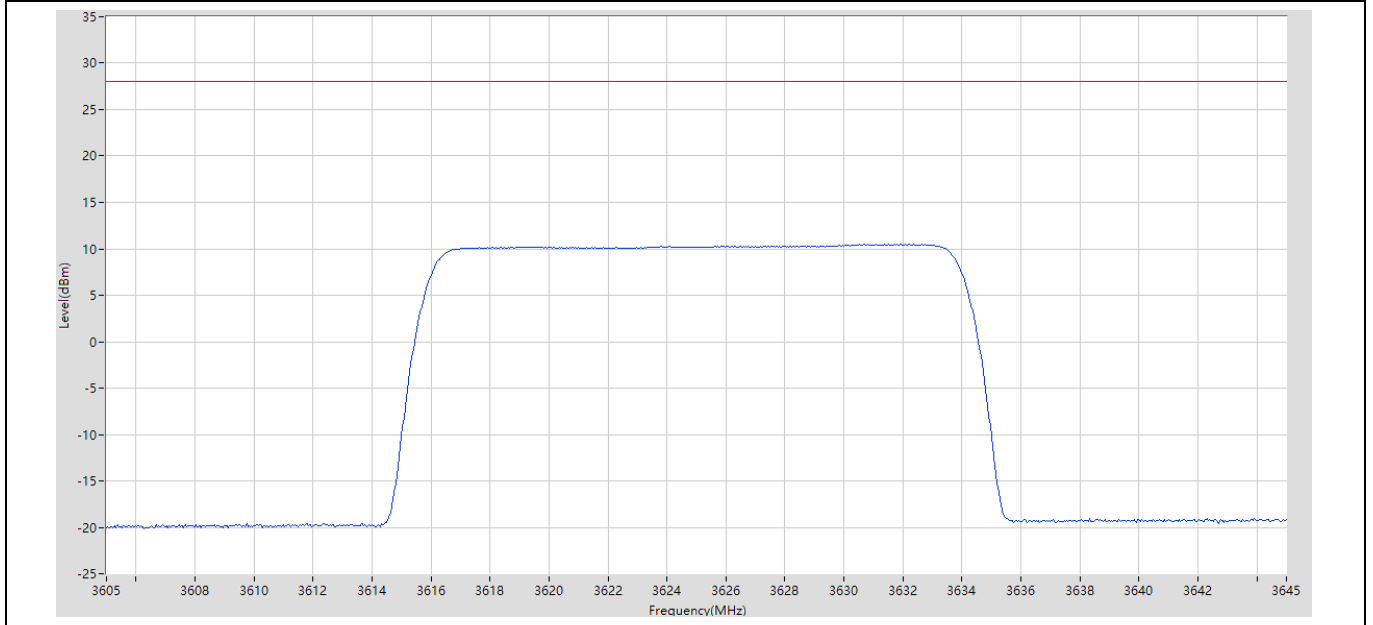
2.2.6.1 TX_1L_20M_TM1.1_B

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3580	1	RMS	3554.4 M	10.89	28	Pass	1001



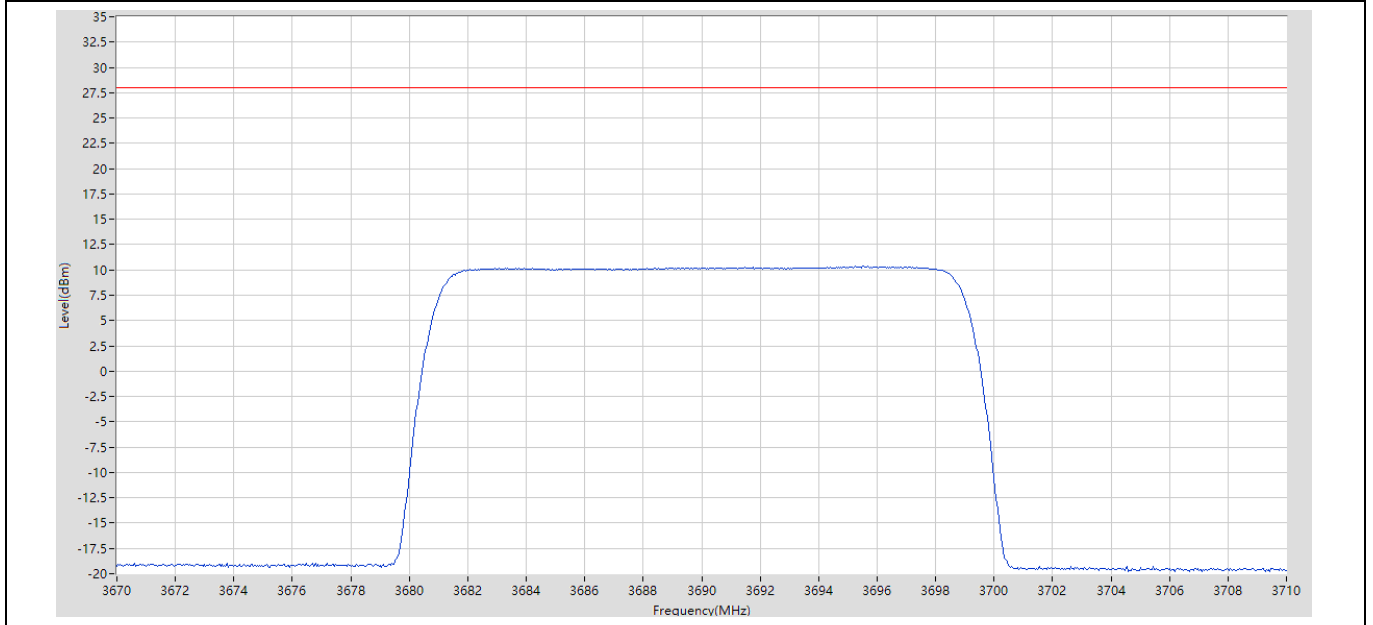
2.2.6.2 TX_1L_20M_TM1.1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3605	3645	1	RMS	3632.36 M	10.5	28	Pass	1001



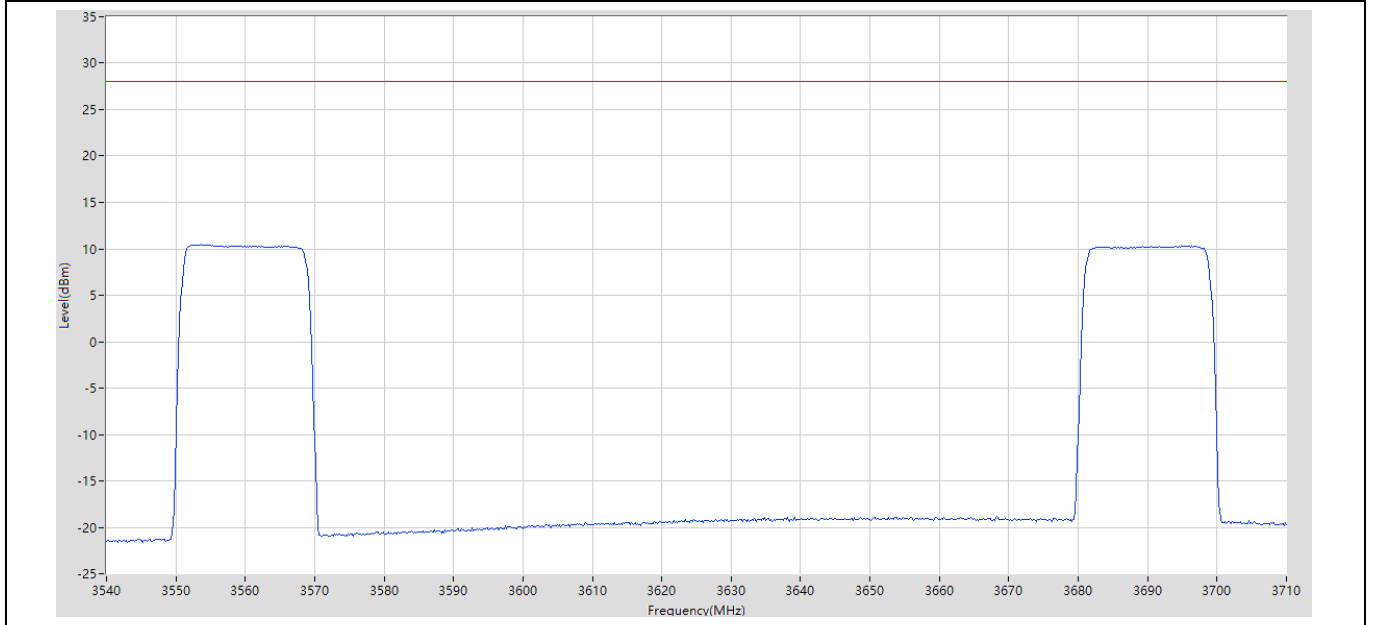
2.2.6.3 TX_1L_20M_TM1.1_T

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3670	3710	1	RMS	3695.52 M	10.36	28	Pass	1001



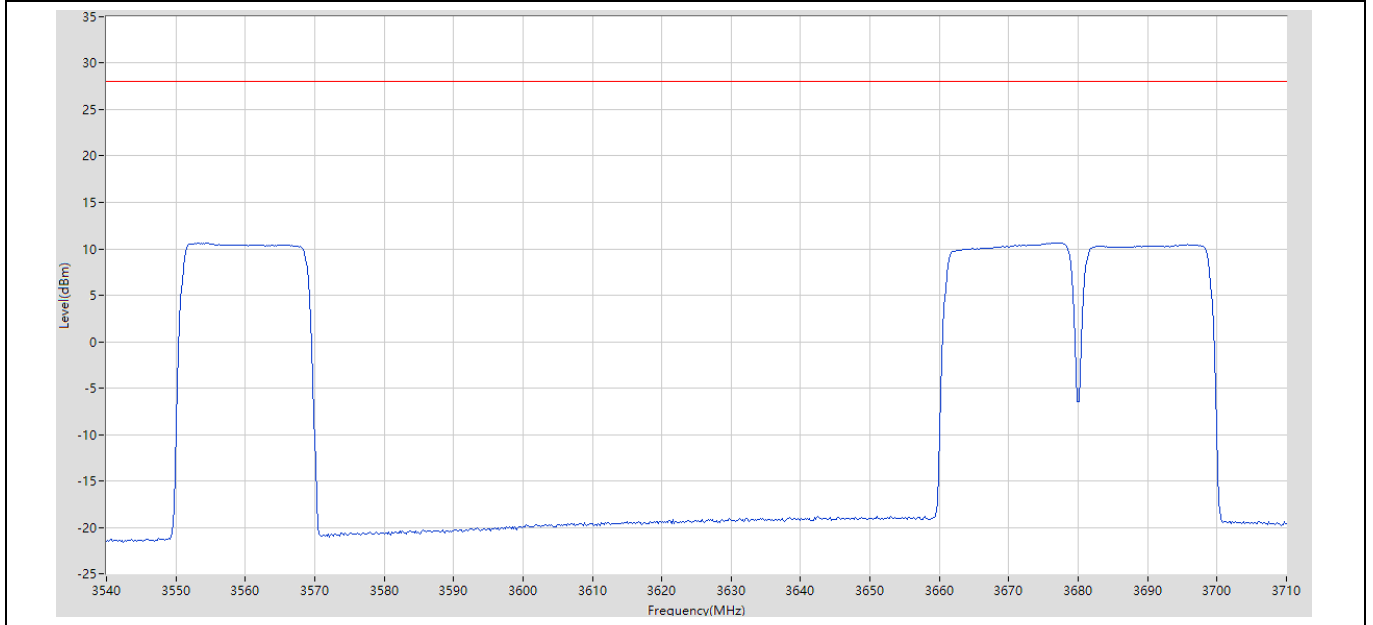
2.2.6.4 TX_2L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3553.6 M	10.46	28	Pass	1001



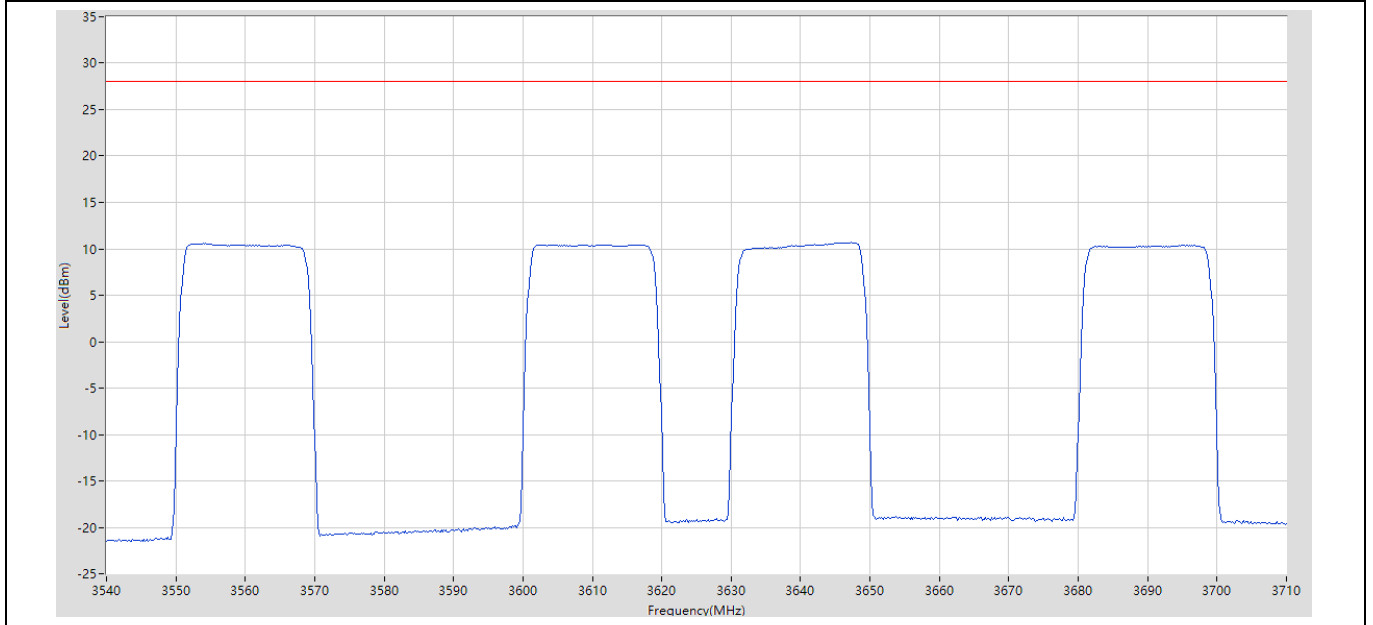
2.2.6.5 TX_3L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3676.85 M	10.66	28	Pass	1001



2.2.6.6 TX_4L_20M_TM1_M

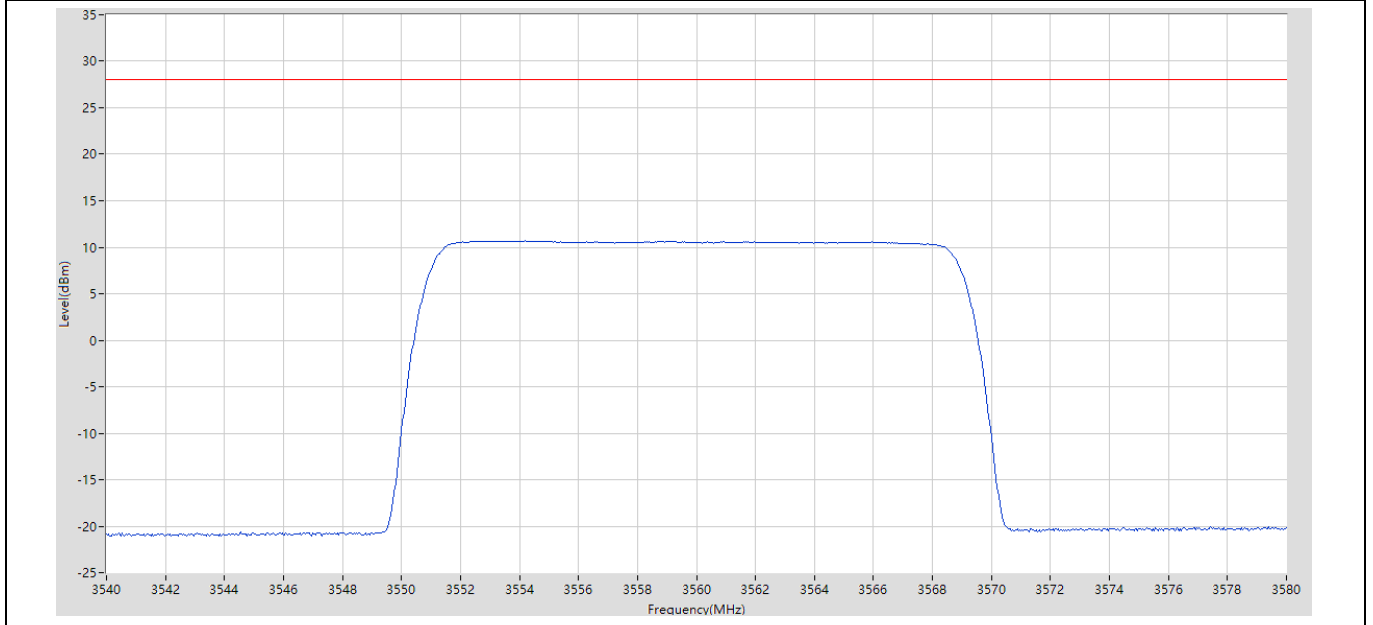
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3647.27 M	10.71	28	Pass	1001



2.2.7 PSD of Ant7

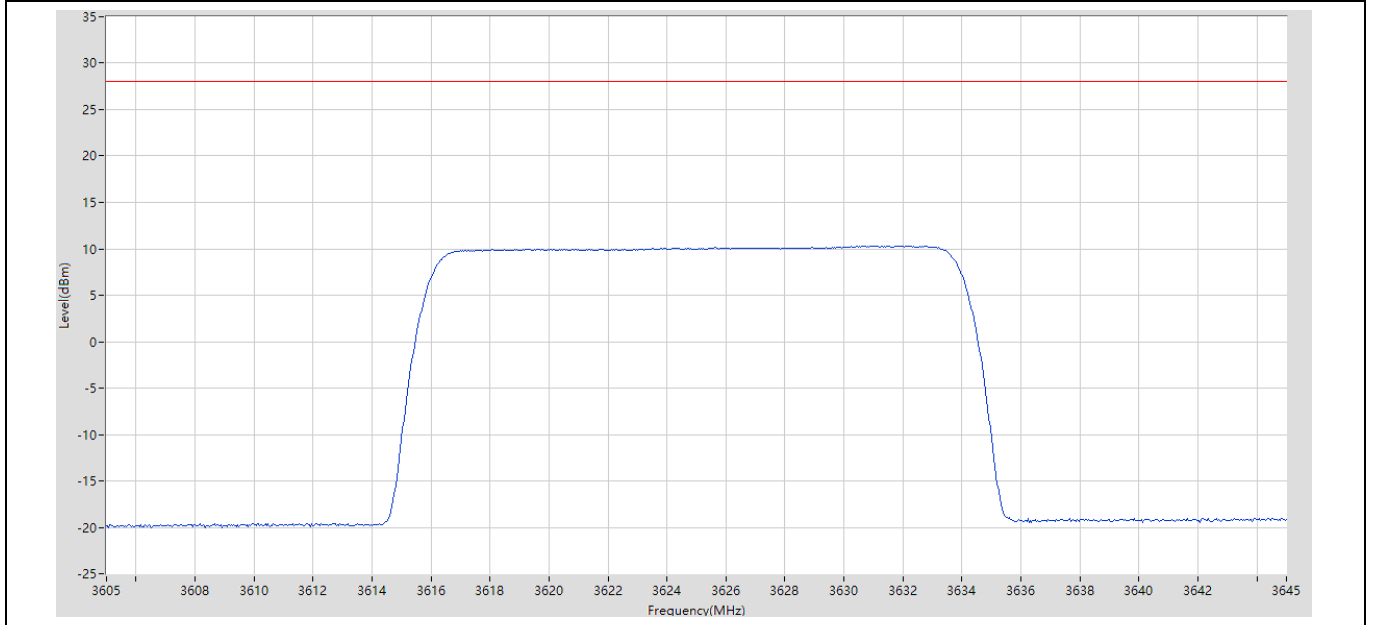
2.2.7.1 TX_1L_20M_TM1.1_B

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3580	1	RMS	3554.2 M	10.69	28	Pass	1001



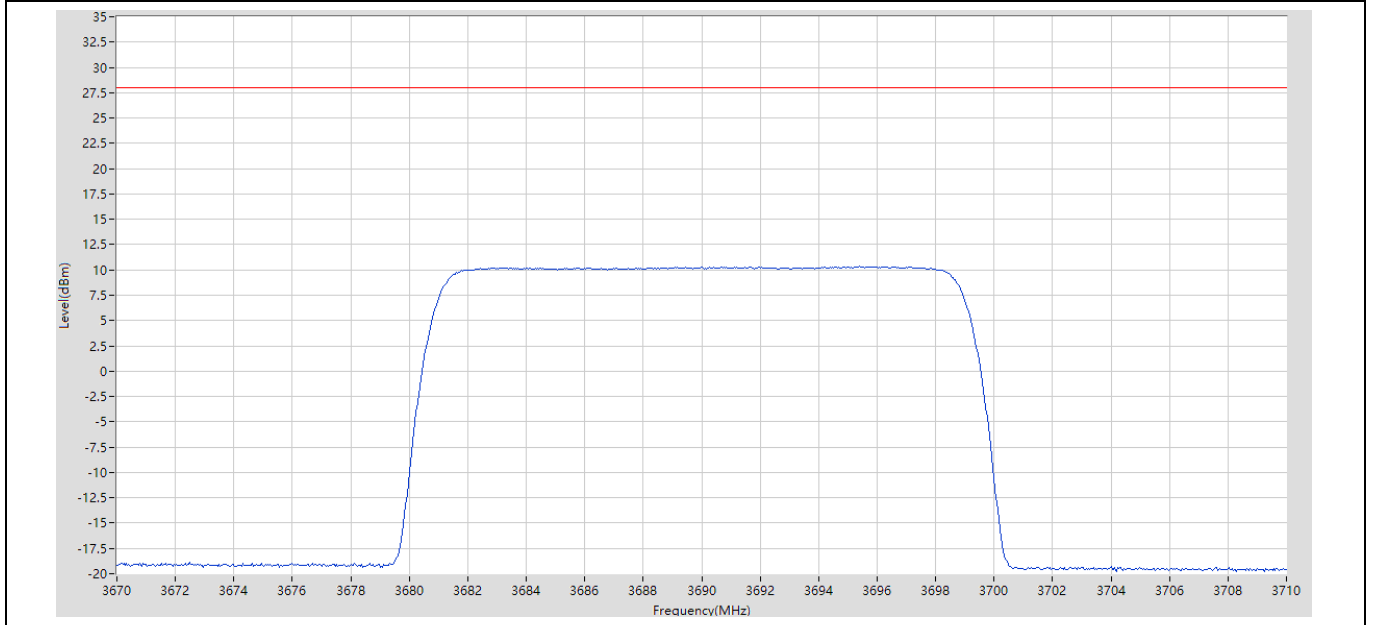
2.2.7.2 TX_1L_20M_TM1.1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3605	3645	1	RMS	3631.44 M	10.31	28	Pass	1001



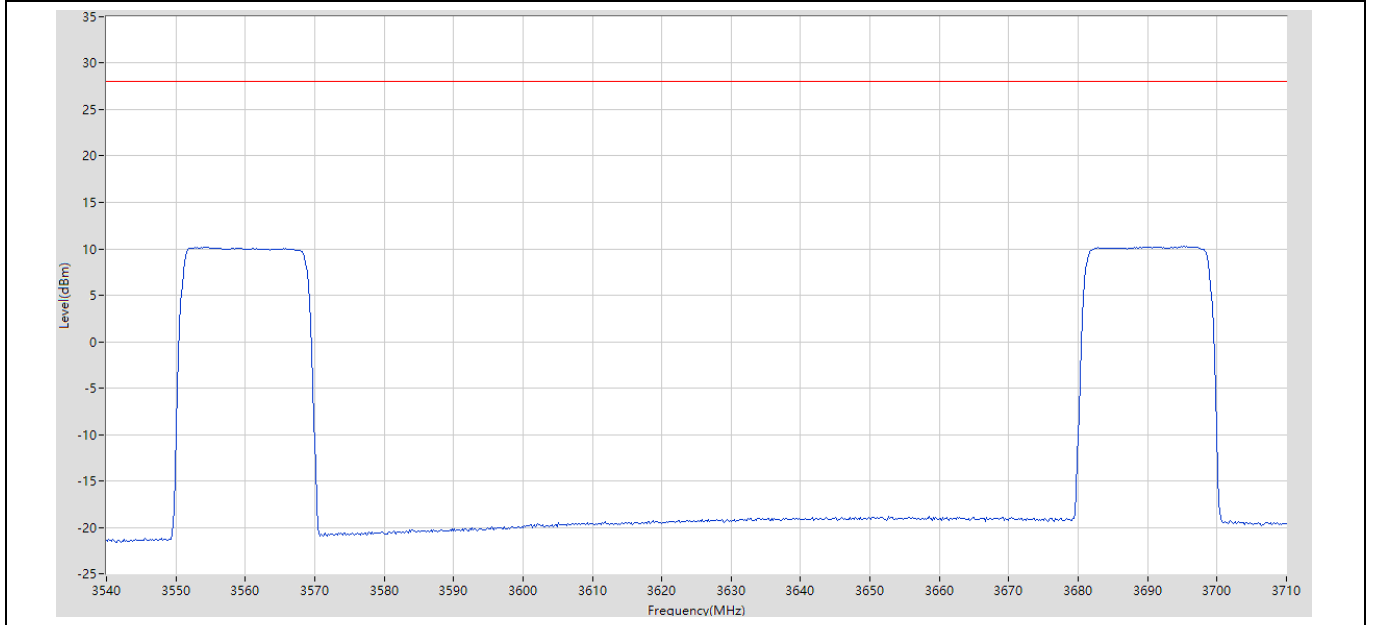
2.2.7.3 TX_1L_20M_TM1.1_T

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3670	3710	1	RMS	3695.4 M	10.33	28	Pass	1001



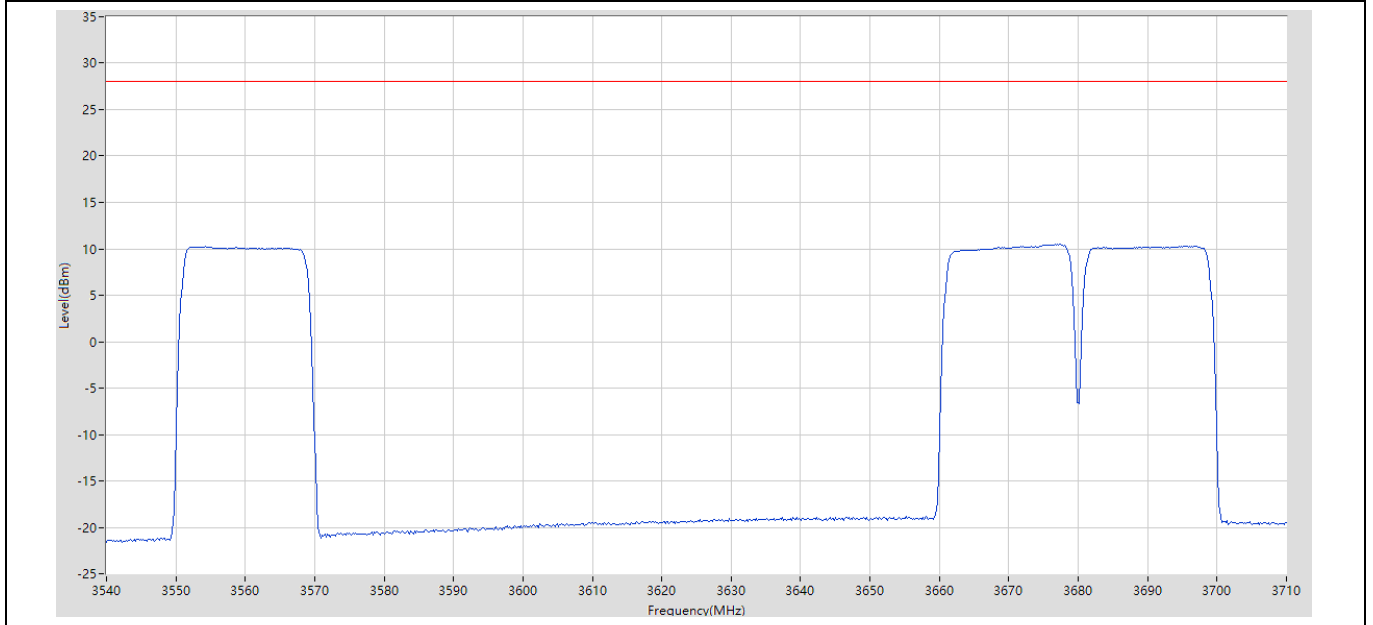
2.2.7.4 TX_2L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3695.55 M	10.25	28	Pass	1001



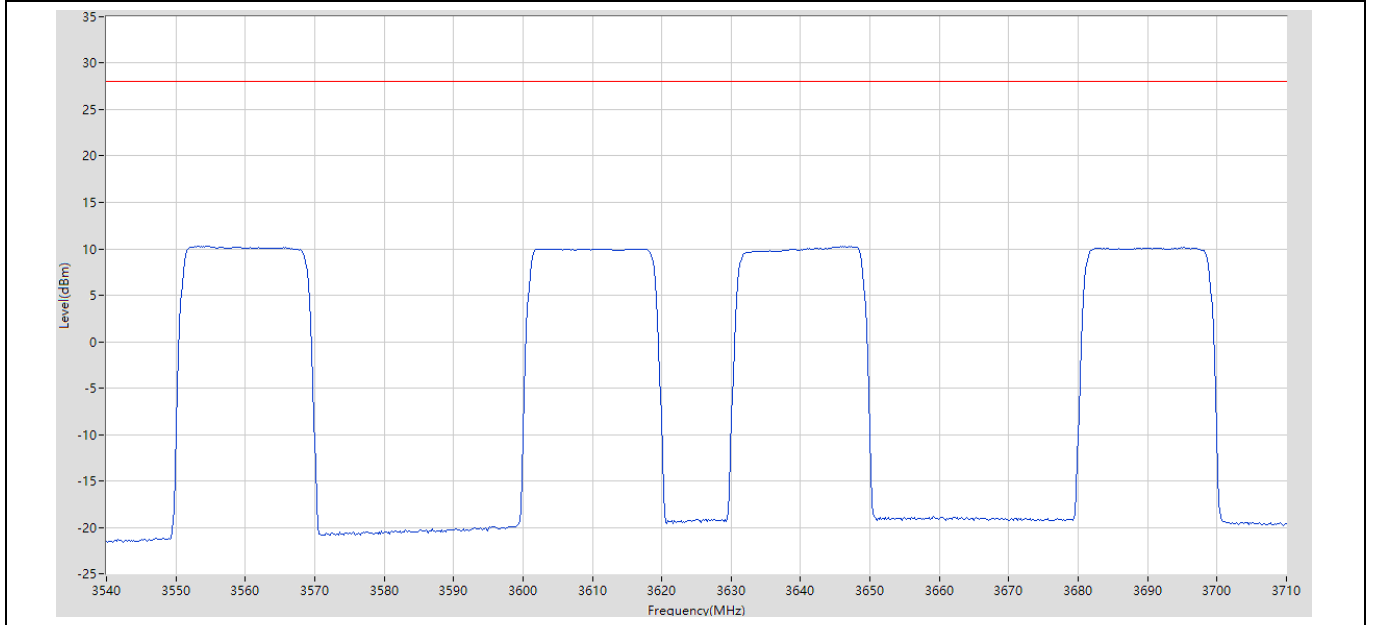
2.2.7.5 TX_3L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3677.02 M	10.51	28	Pass	1001



2.2.7.6 TX_4L_20M_TM1_M

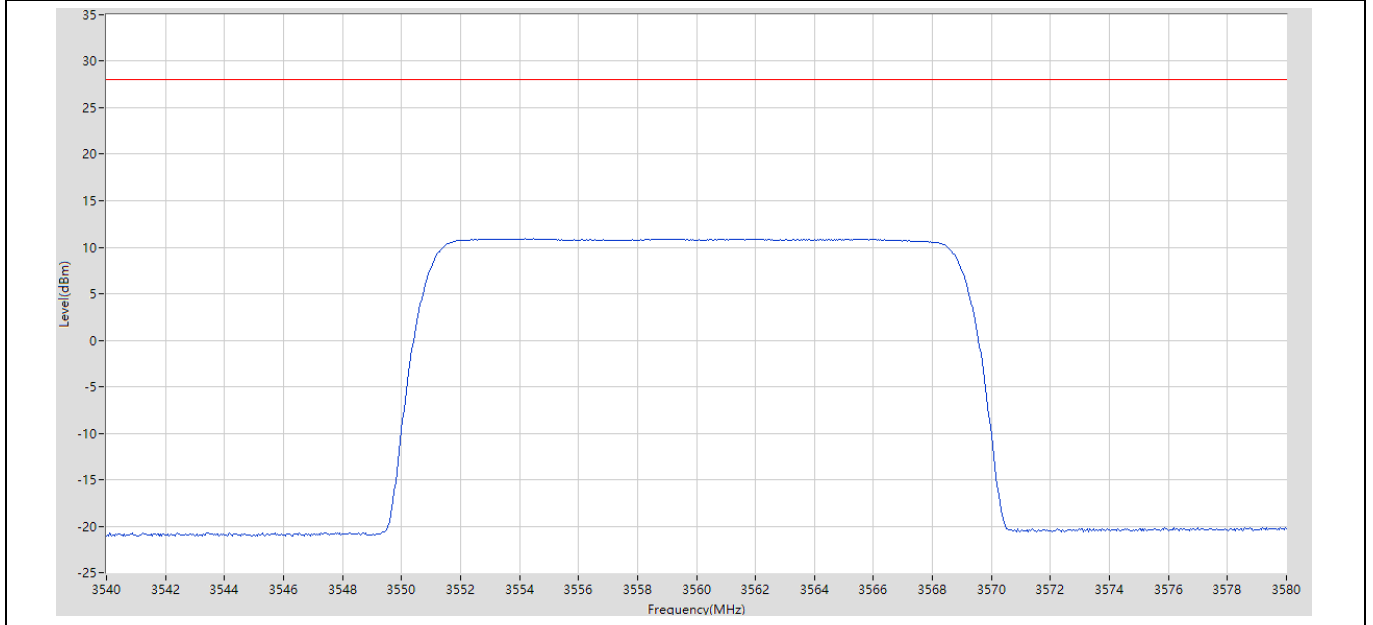
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3554.28 M	10.25	28	Pass	1001



2.2.8 PSD of Ant8

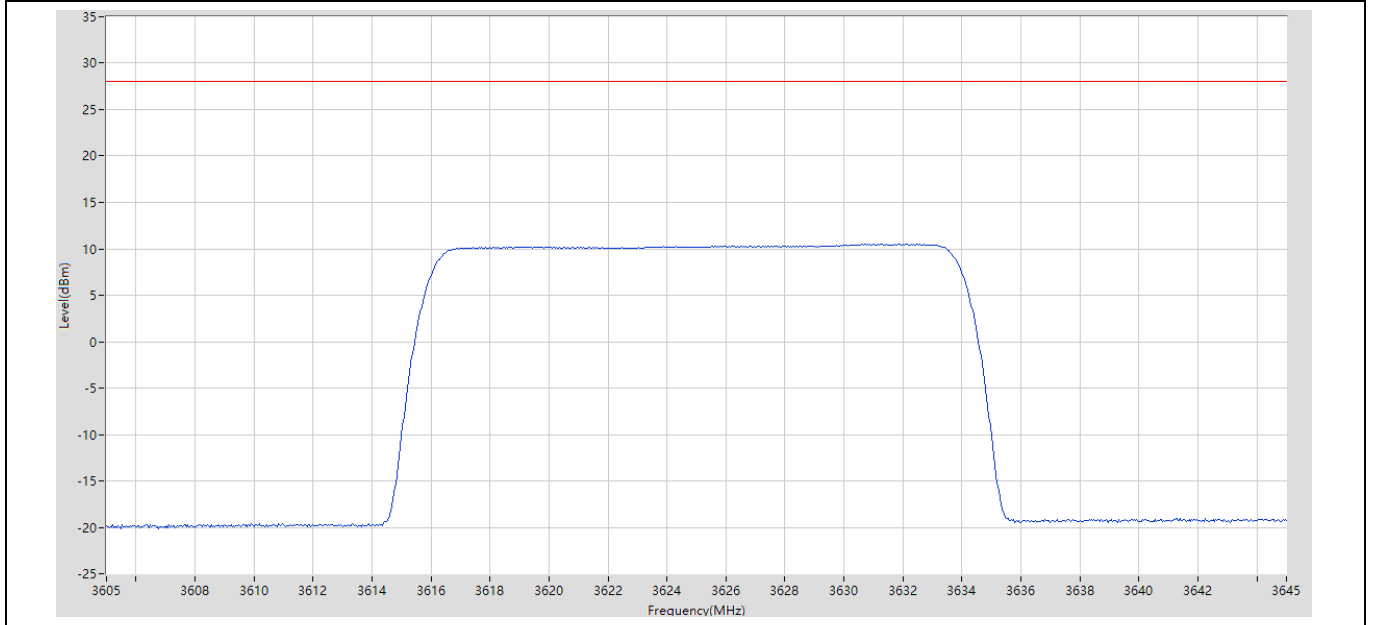
2.2.8.1 TX_1L_20M_TM1.1_B

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3580	1	RMS	3554.2 M	10.91	28	Pass	1001



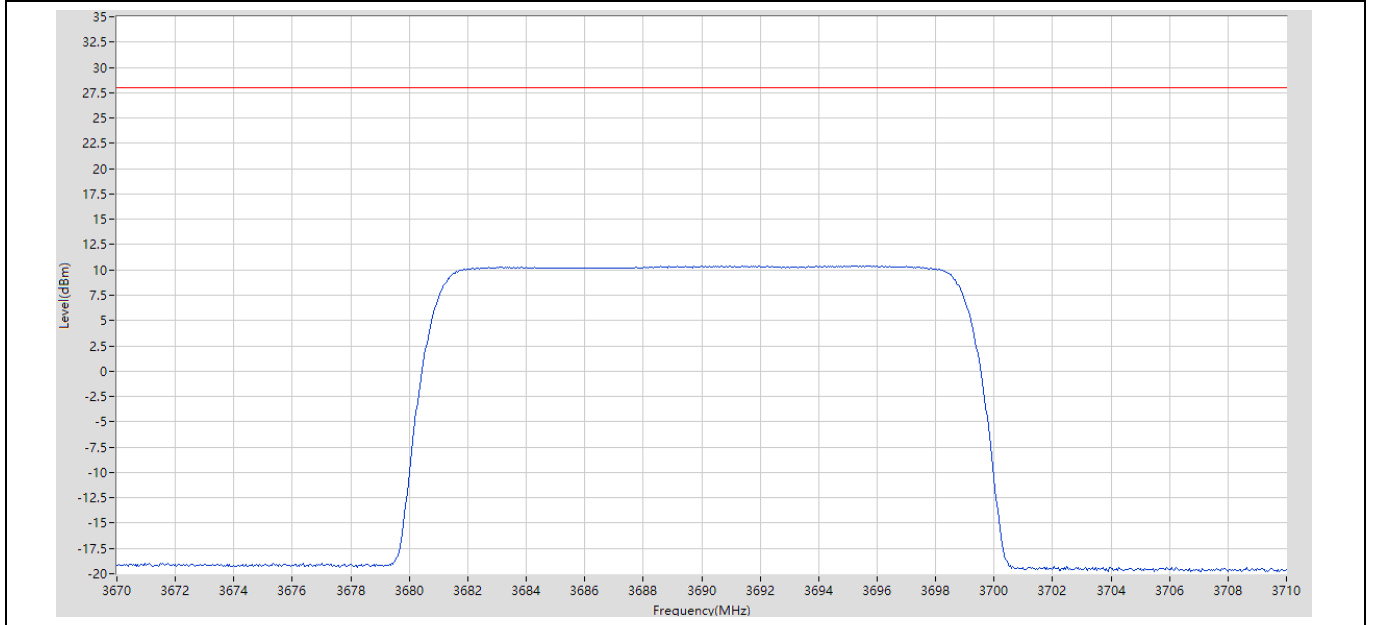
2.2.8.2 TX_1L_20M_TM1.1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3605	3645	1	RMS	3631.72 M	10.51	28	Pass	1001



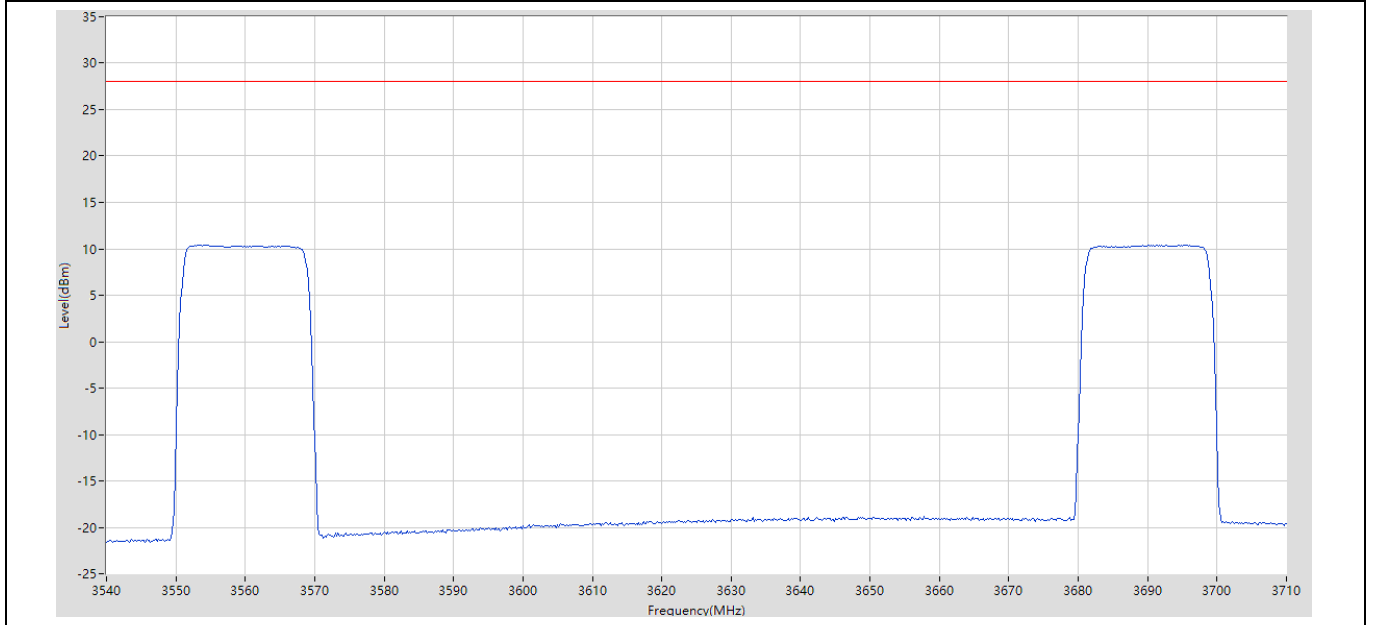
2.2.8.3 TX_1L_20M_TM1.1_T

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3670	3710	1	RMS	3695.32 M	10.43	28	Pass	1001



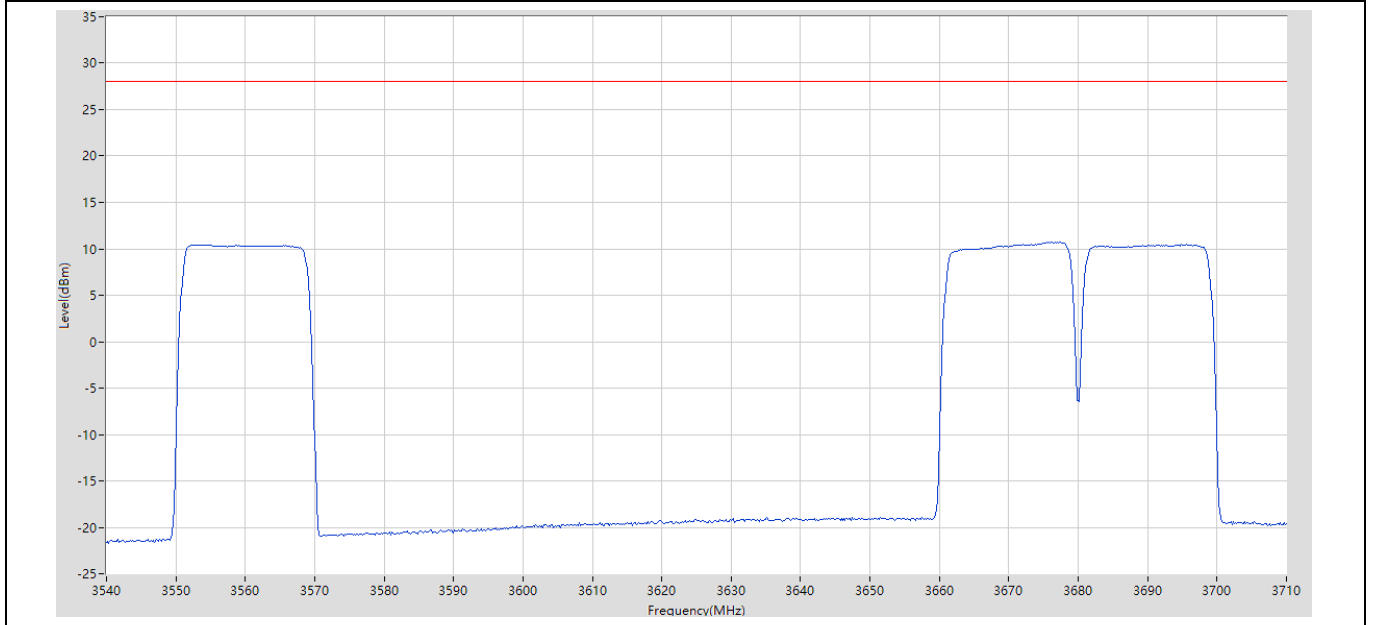
2.2.8.4 TX_2L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3695.55 M	10.44	28	Pass	1001



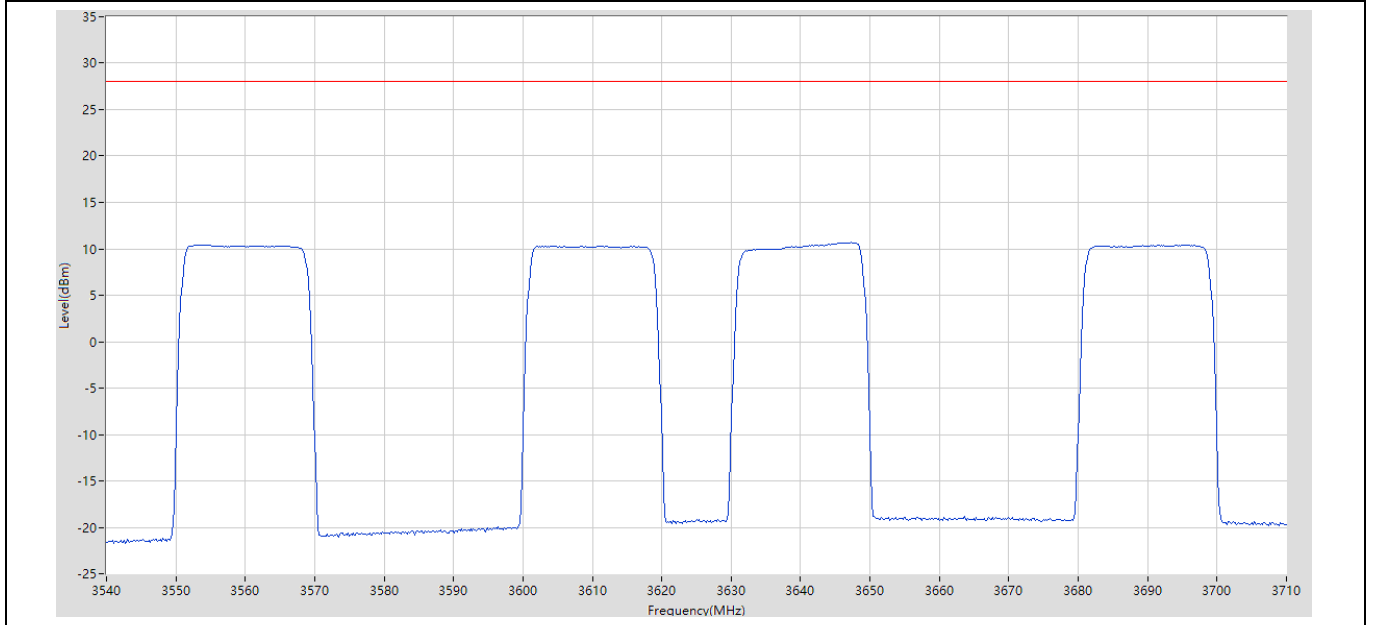
2.2.8.5 TX_3L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3677.02 M	10.73	28	Pass	1001



2.2.8.6 TX_4L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
3540	3710	1	RMS	3647.27 M	10.68	28	Pass	1001



2.3 Peak-to-Average Ratio

2.3.1 TX_1L_20M_TM1.1_B



2.3.2 TX_1L_20M_TM1.1_M



2.3.3 TX_1L_20M_TM1.1_T



Test item 2

Bandwidth

1 Result Table

1.1 Occupied Bandwidth

EUT Conf.	Occupied Bandwidth [MHz]	Verdict
TX_1L_20M_TM1.1_B	17.880	Pass
TX_1L_20M_TM1.1_M	17.891	Pass
TX_1L_20M_TM1.1_T	17.874	Pass

1.2 Emission Bandwidth

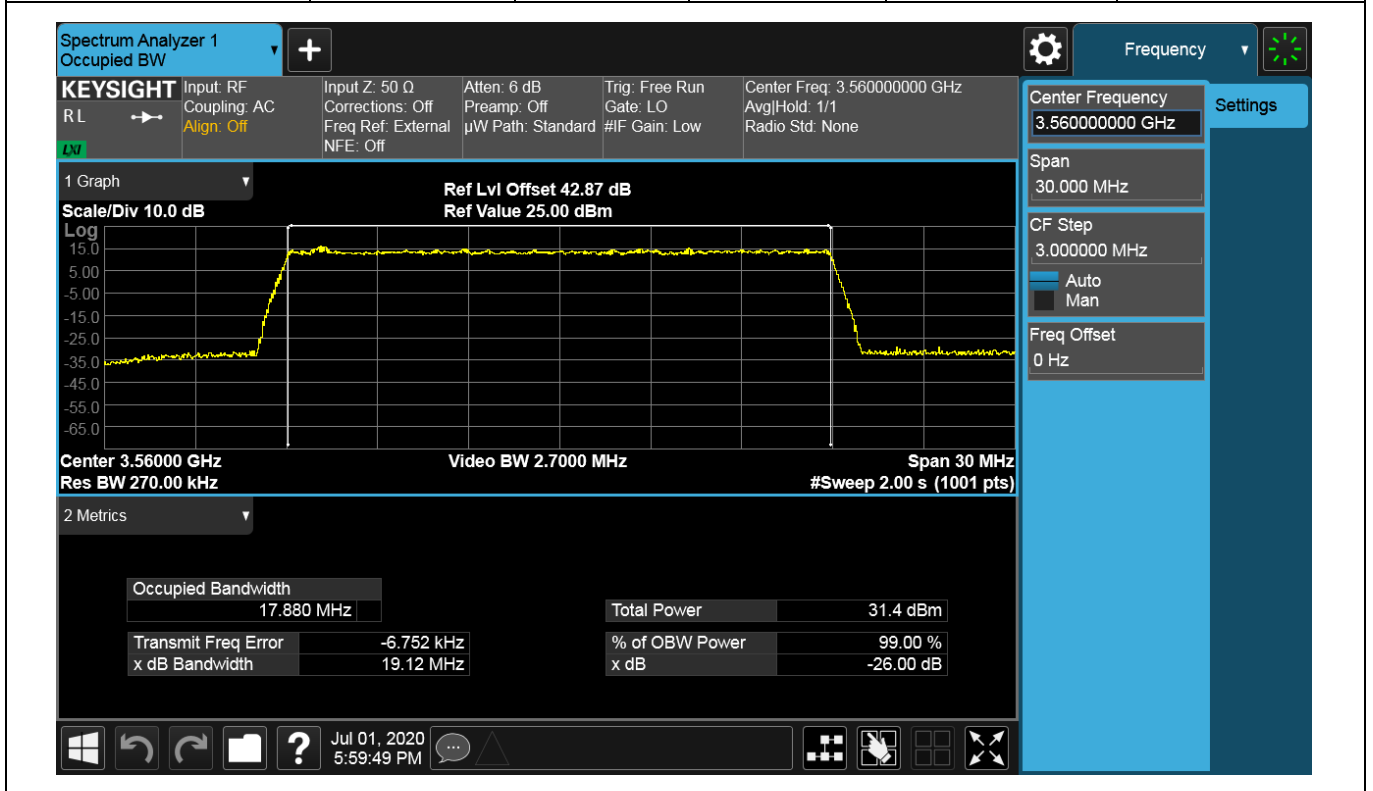
EUT Conf.	Emission Bandwidth, -26 dBc [MHz]	Verdict
TX_1L_20M_TM1.1_B	19.12	Pass
TX_1L_20M_TM1.1_M	19.10	Pass
TX_1L_20M_TM1.1_T	19.13	Pass

2 Test Plot

2.1 Occupied Bandwidth

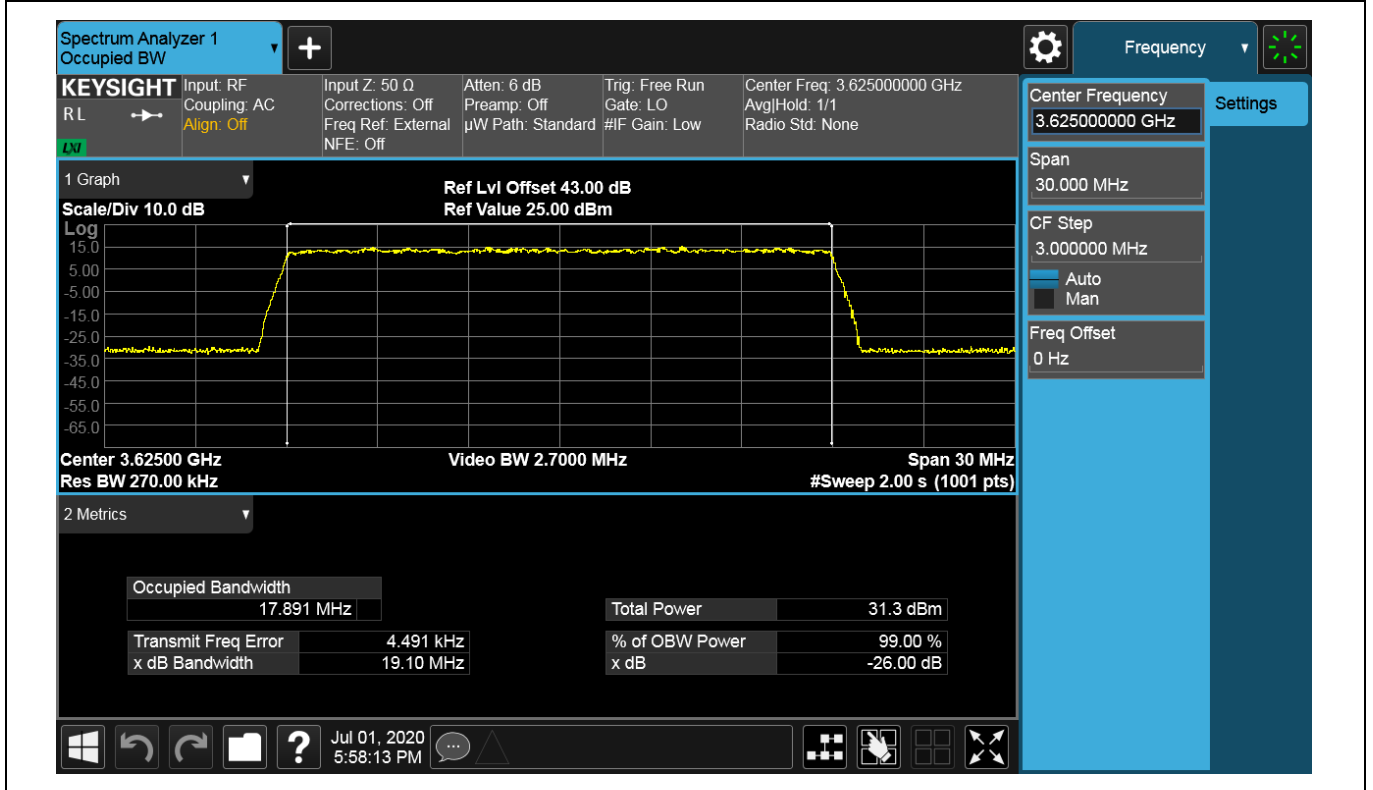
2.1.1 TX_1L_20M_TM1.1_B

Center Frequency [MHz]	OBW Power [%]	RBW [MHz]	Detector	OBW [MHz]	Verdict
3560	99	Auto	Peak	17.879608	No Conclusion



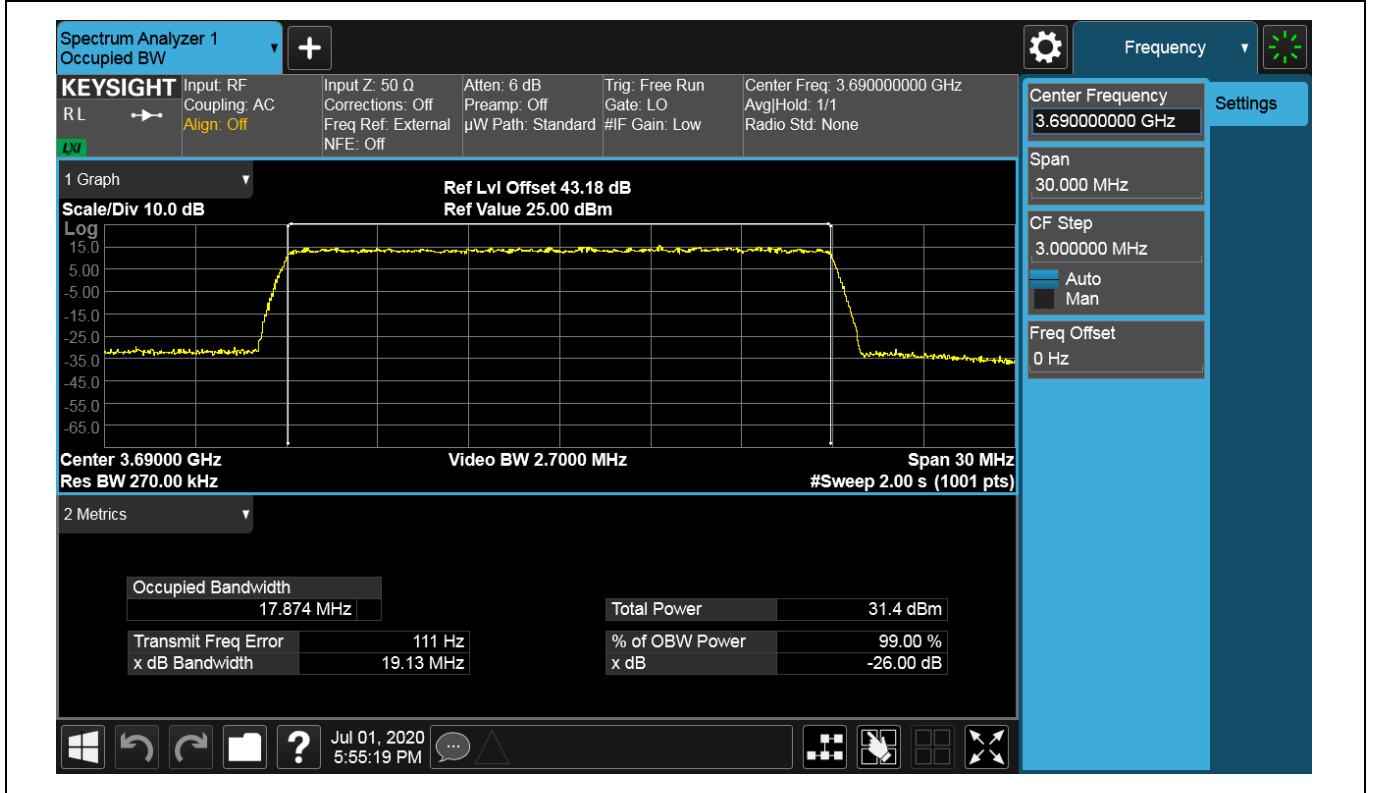
2.1.2 TX_1L_20M_TM1.1_M

Center Frequency [MHz]	OBW Power [%]	RBW [MHz]	Detector	OBW [MHz]	Verdict
3625	99	Auto	Peak	17.891091	No Conclusion



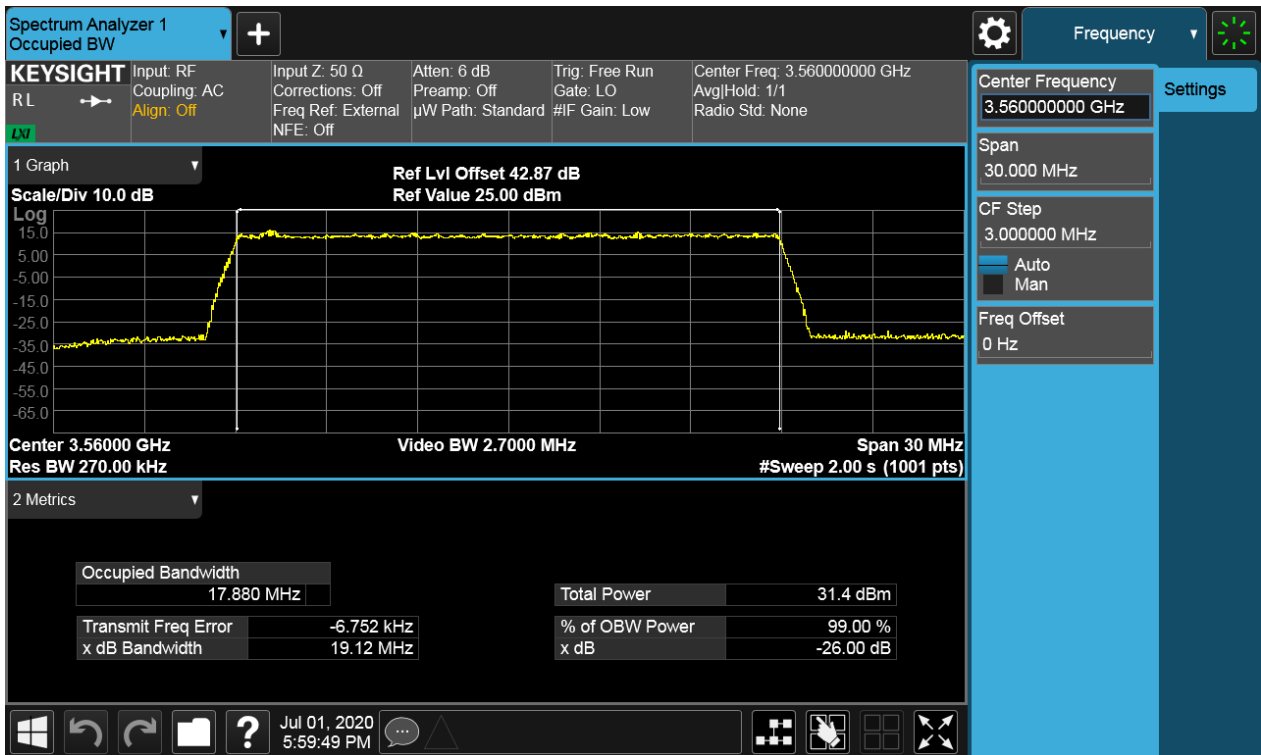
2.1.3 TX_1L_20M_TM1.1_T

Center Frequency [MHz]	OBW Power [%]	RBW [MHz]	Detector	OBW [MHz]	Verdict
3690	99	Auto	Peak	17.873667	No Conclusion

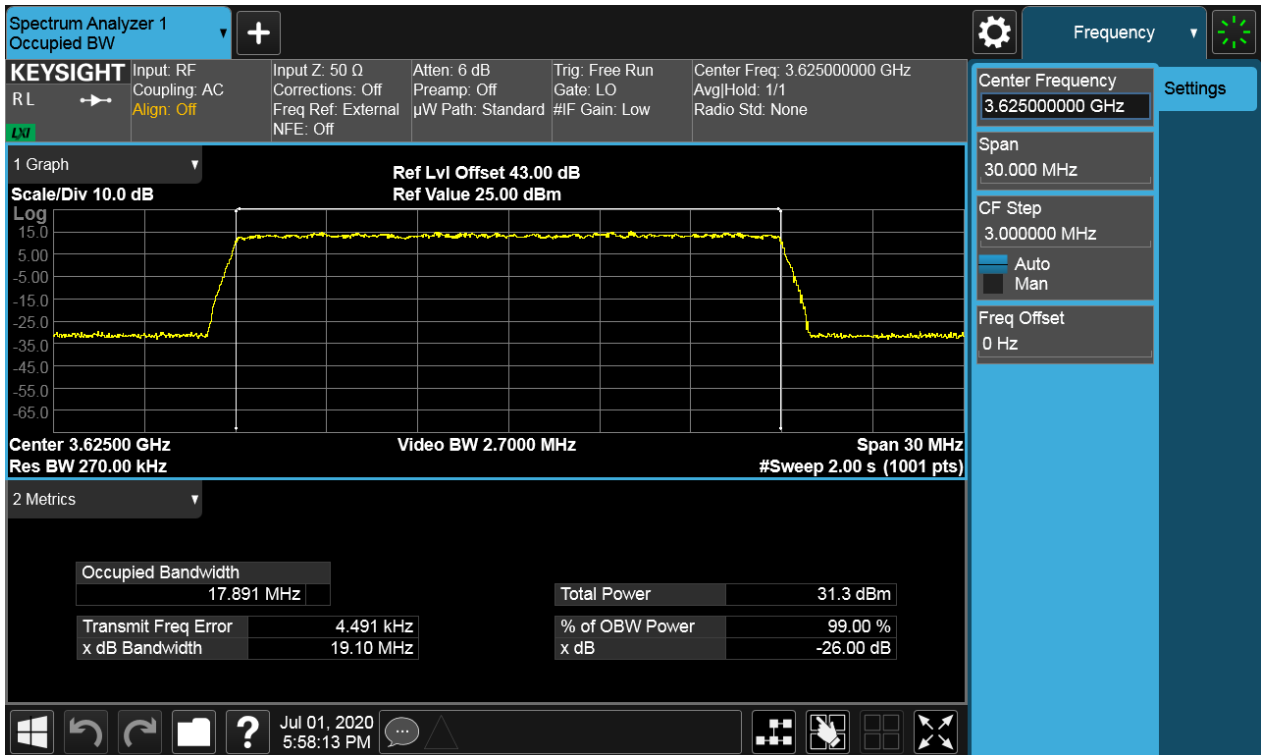


2.2 Emission Bandwidth

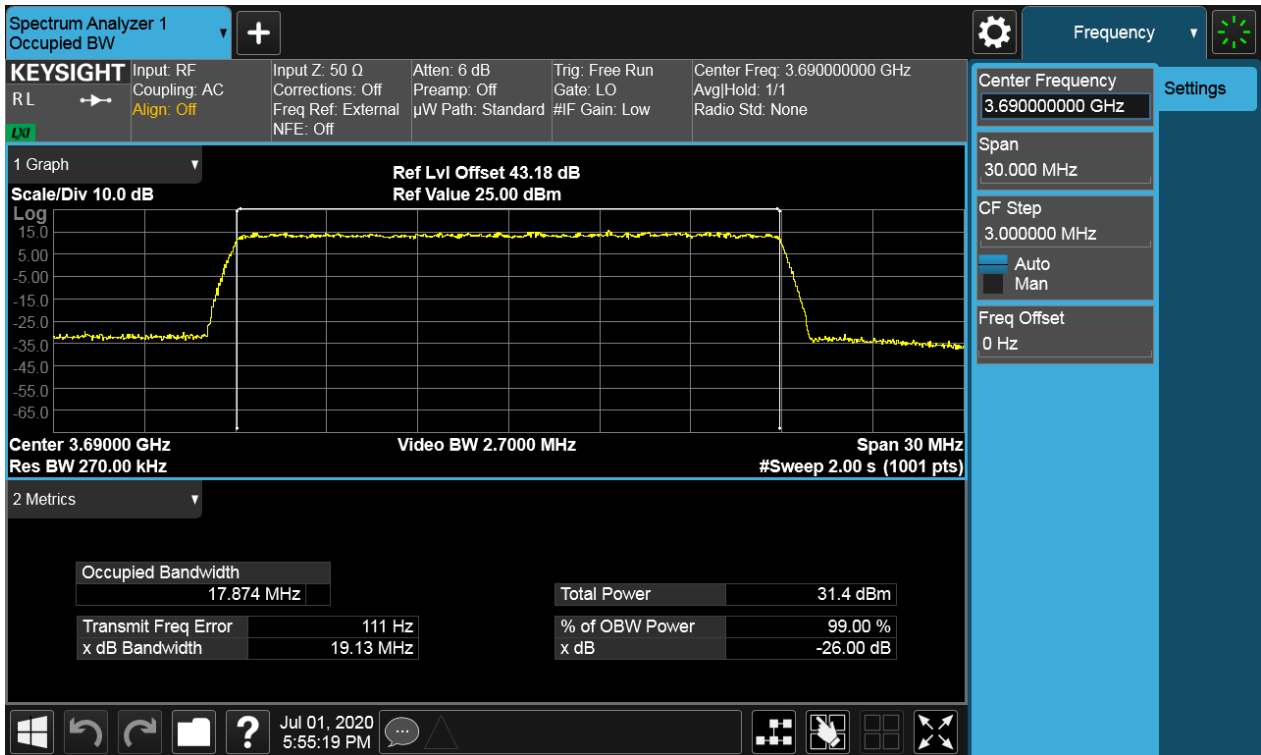
2.2.1 TX_1L_20M_TM1.1_B



2.2.2 TX_1L_20M_TM1.1_M



2.2.3 TX_1L_20M_TM1.1_T



Test item 3
Band Edges Compliance / Emission Mask

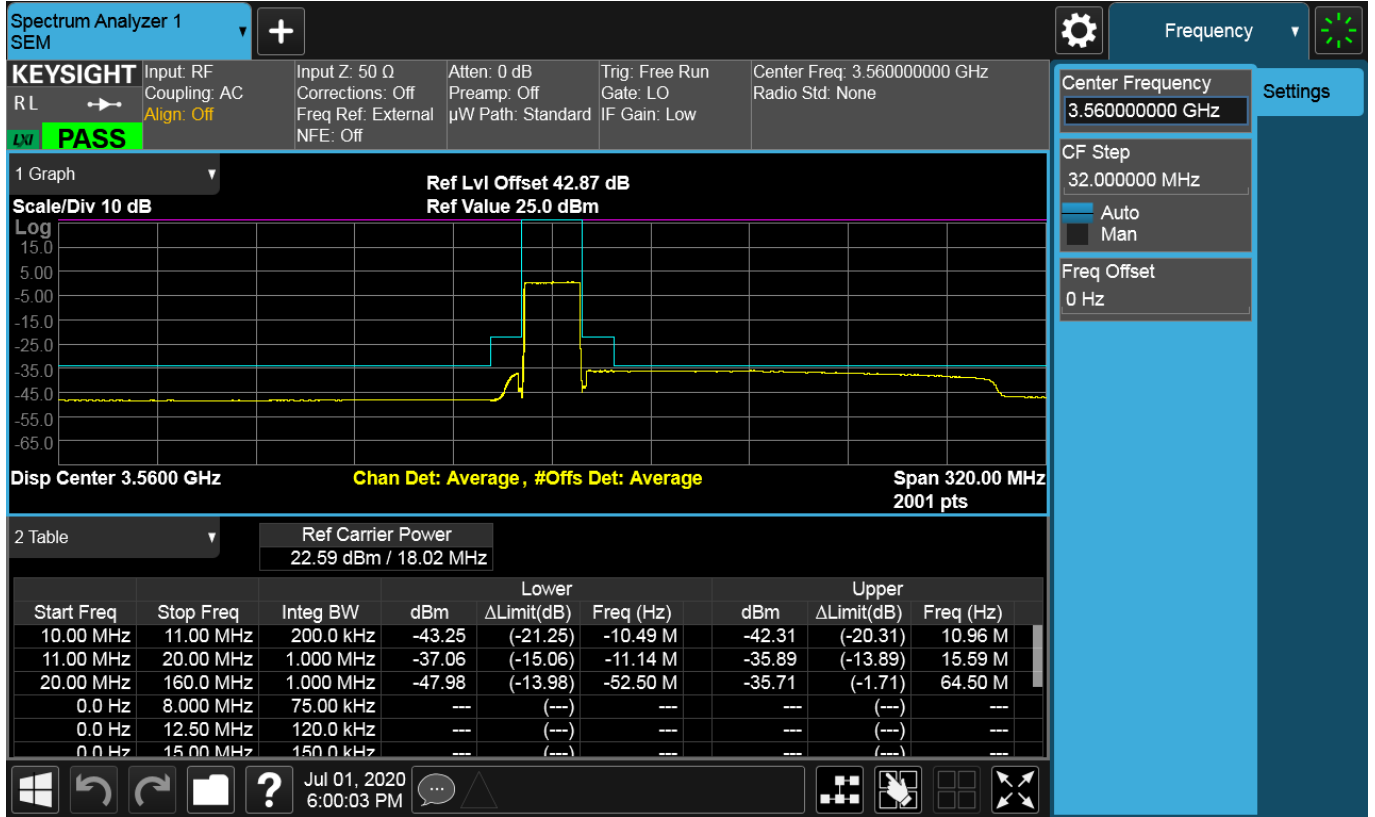
1 Result Table

NOTE 1: The method of 'Measure and add [$10 \log(N_{out})$]' in ANSI C63.26 is used for unwanted emissions, where N_{out} is the number of outputs. For each output port, the maximum emission should be below compliance limit - $10 \log(N_{out})$.

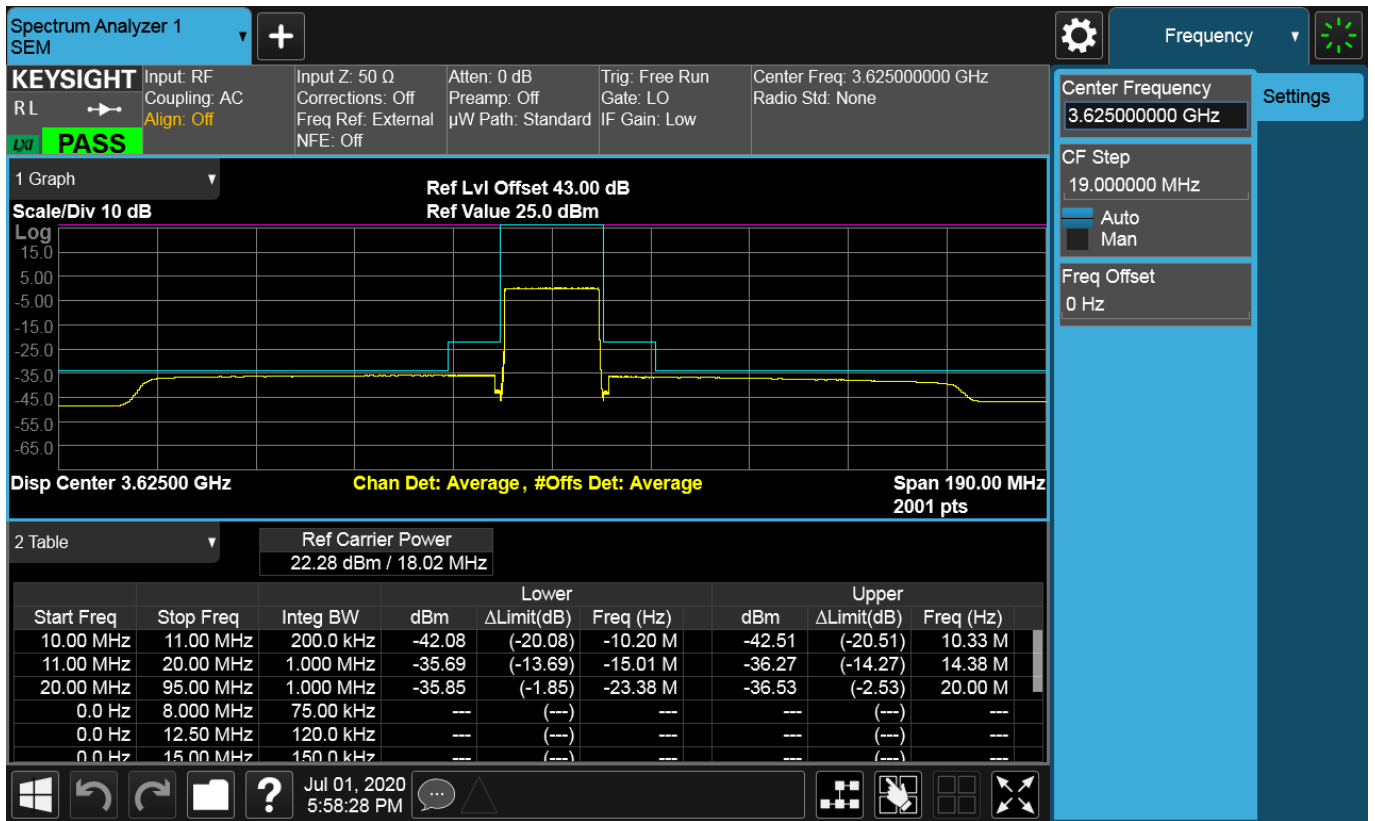
EUT Conf.	Verdict
TX_1L_20M_TM1.1_B	Pass
TX_1L_20M_TM1.1_M	Pass
TX_1L_20M_TM1.1_T	Pass
TX_2L_20M_TM1_M	Pass
TX_3L_20M_TM1_M	Pass
TX_4L_20M_TM1_M	Pass

2 Test Plot

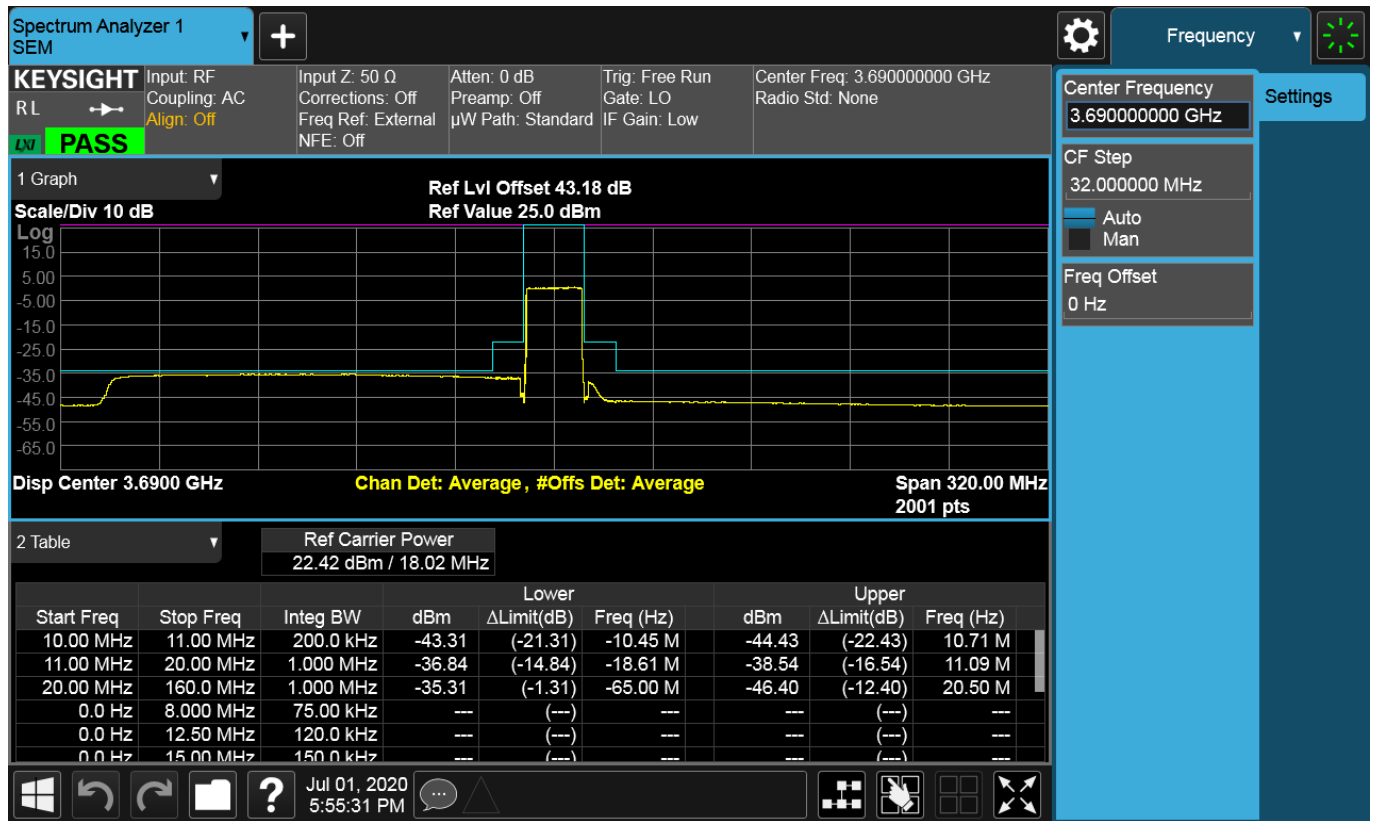
2.1 TX_1L_20M_TM1.1_B



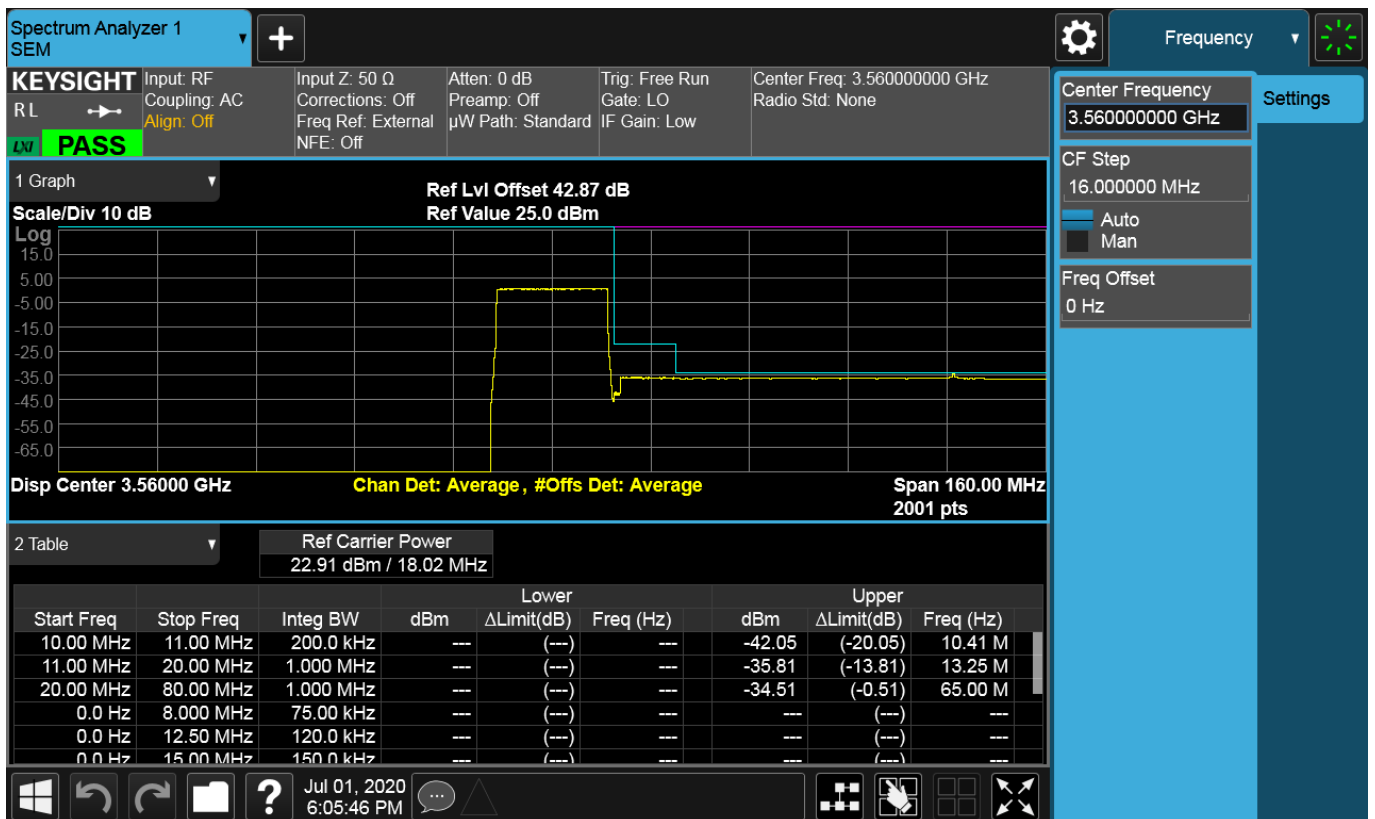
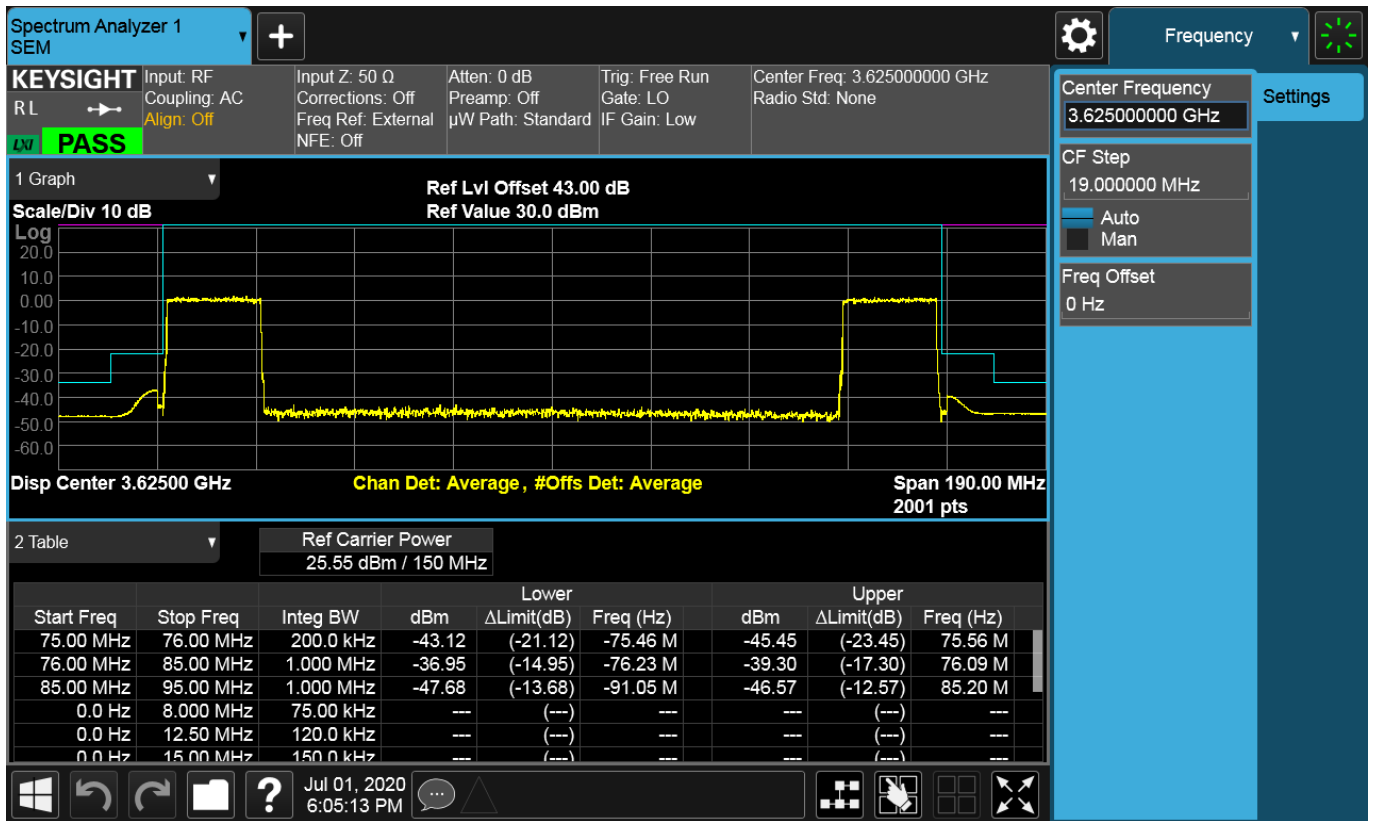
2.2 TX_1L_20M_TM1.1_M

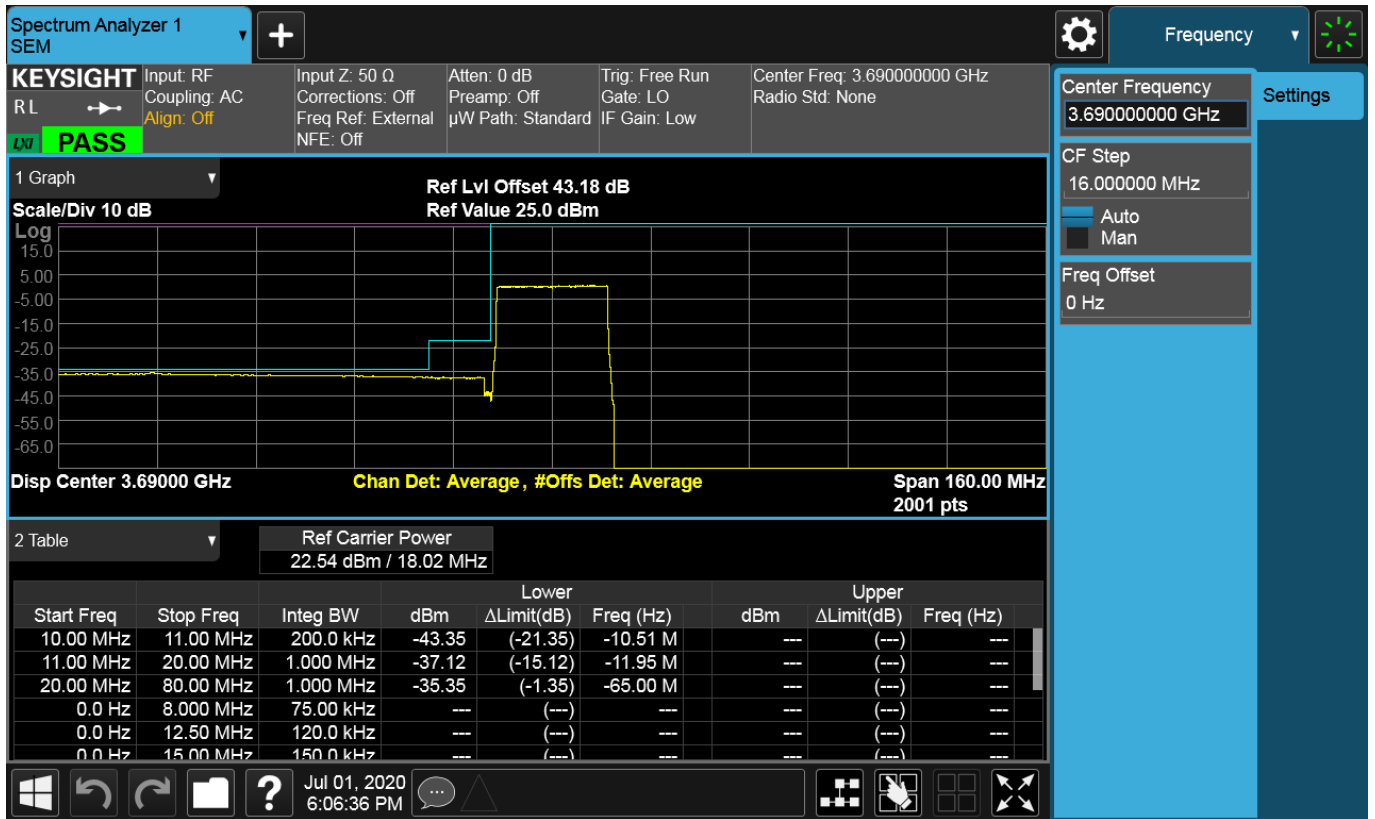


2.3 TX_1L_20M_TM1.1_T

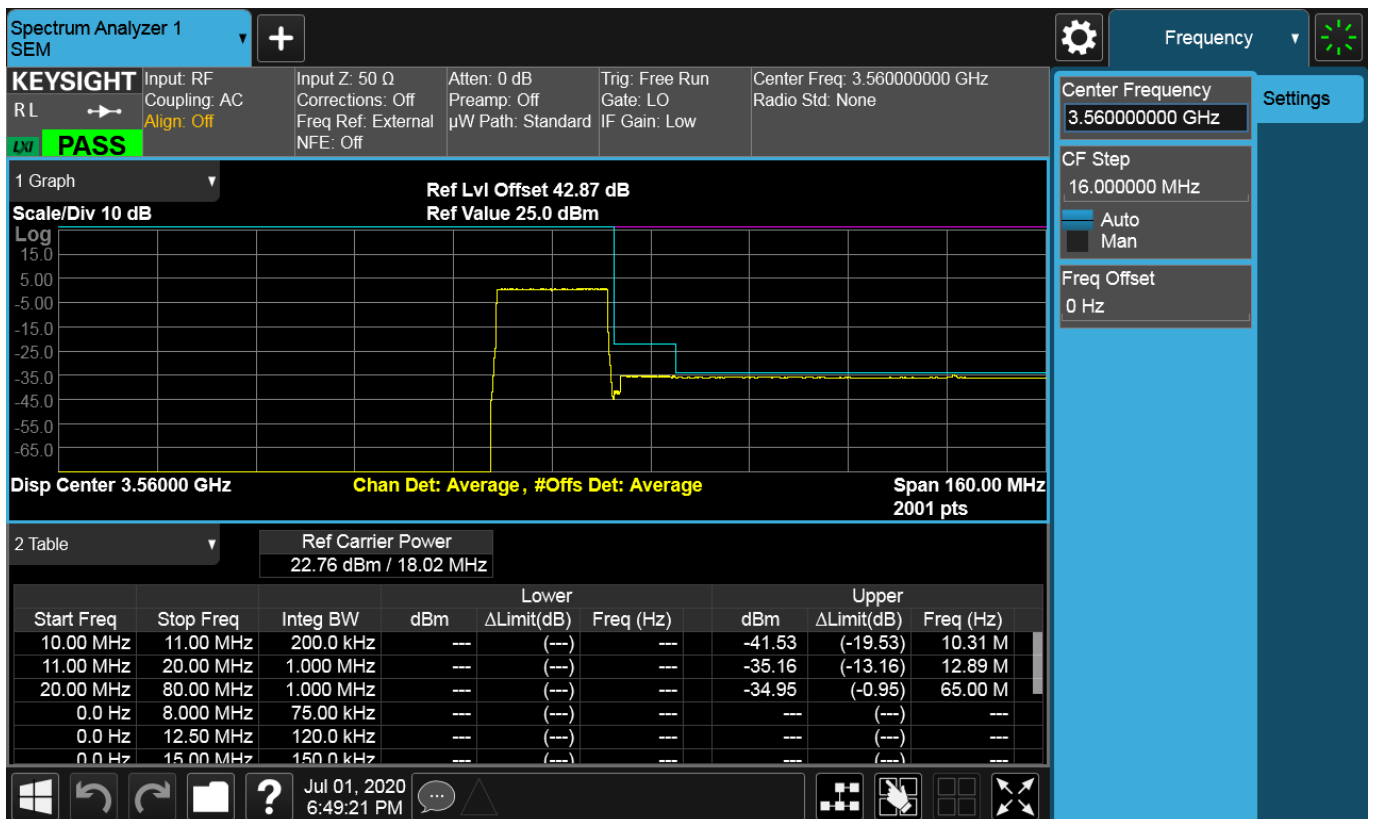
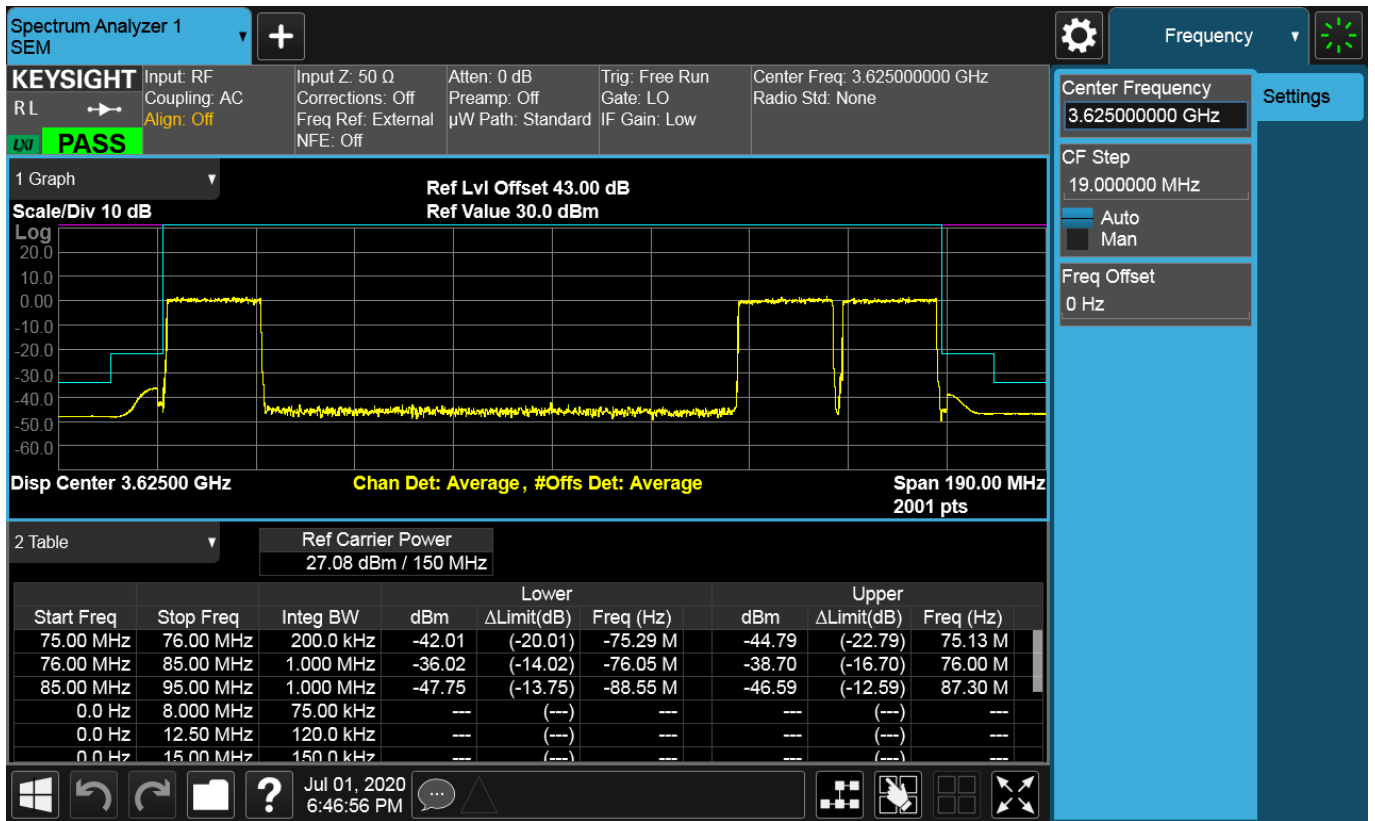


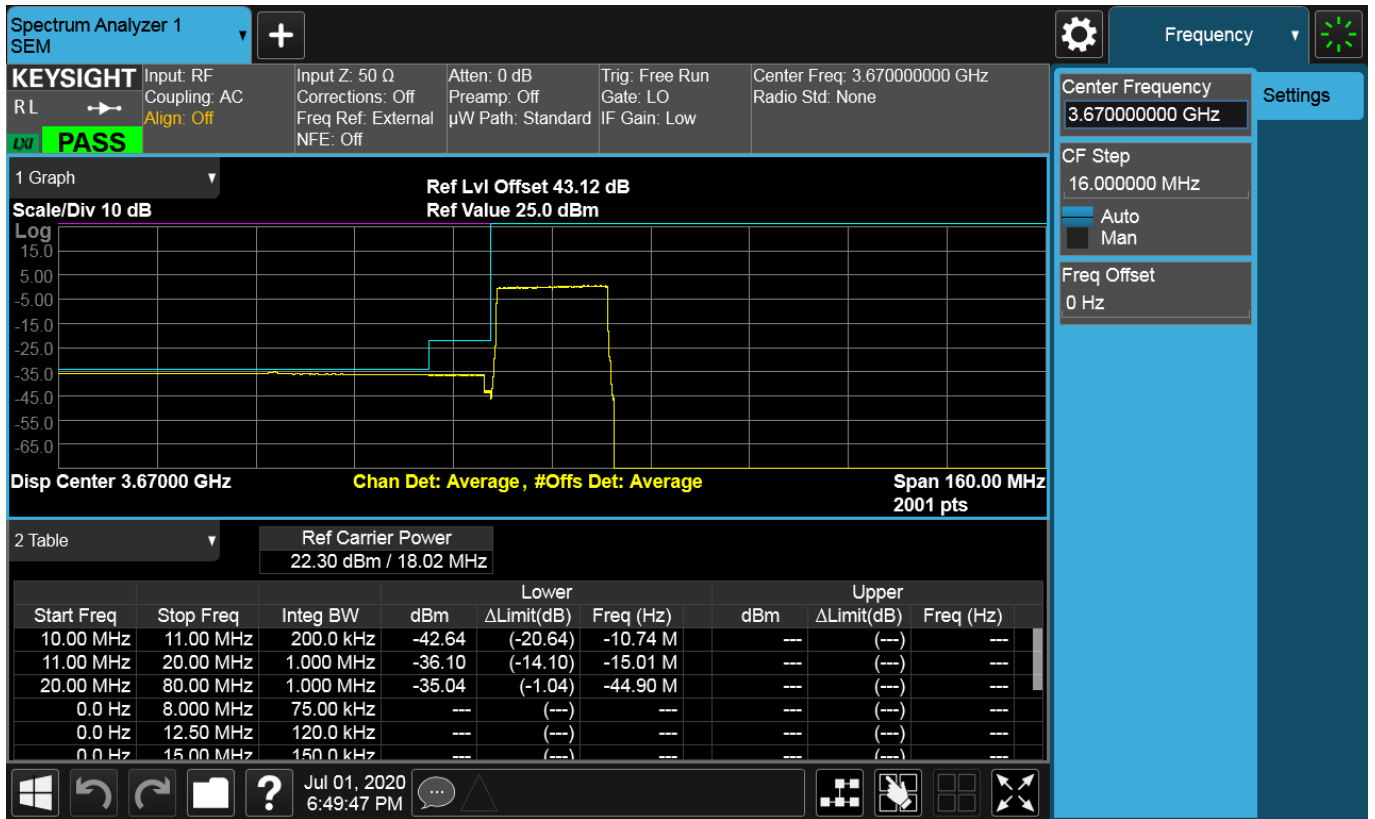
2.4 TX_2L_20M_TM1_M



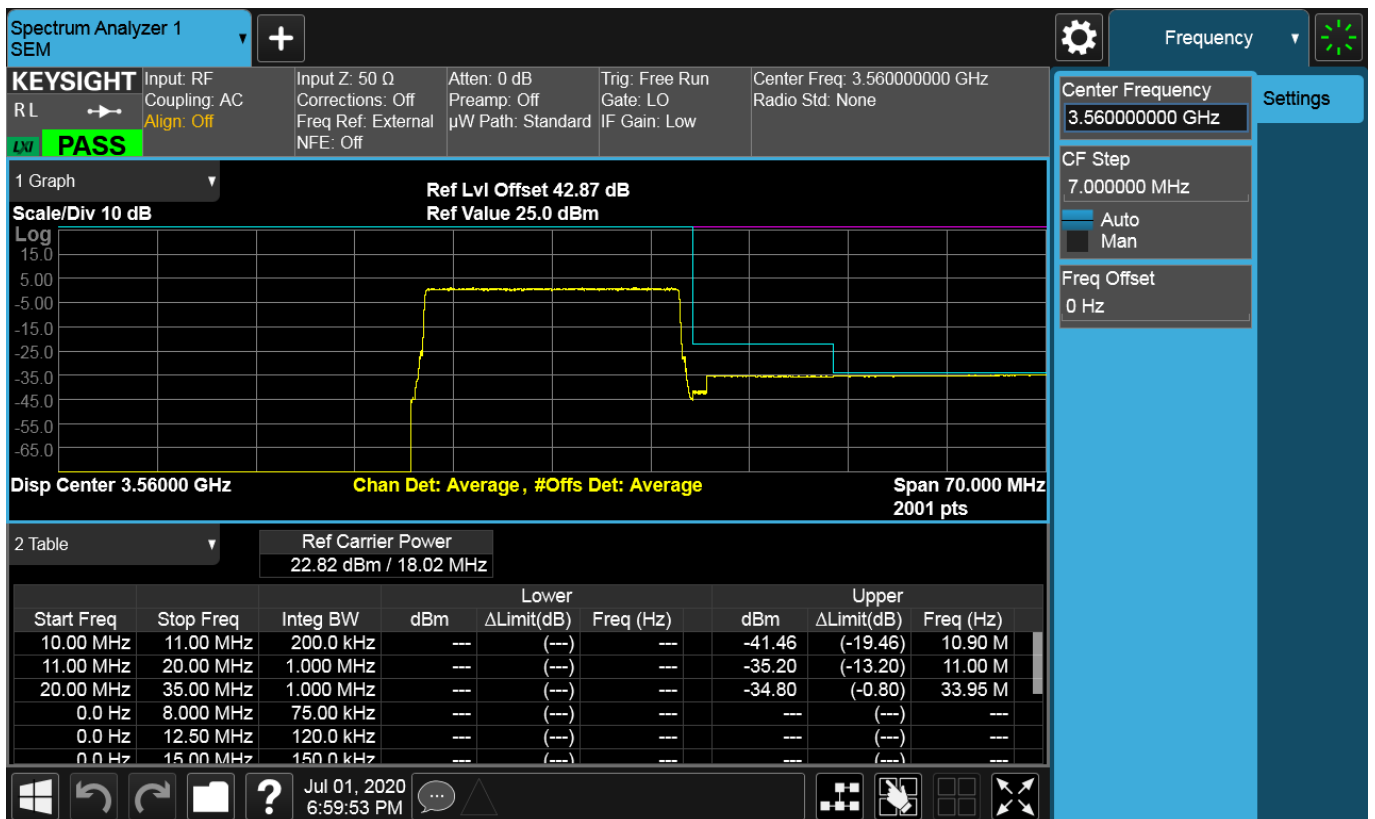
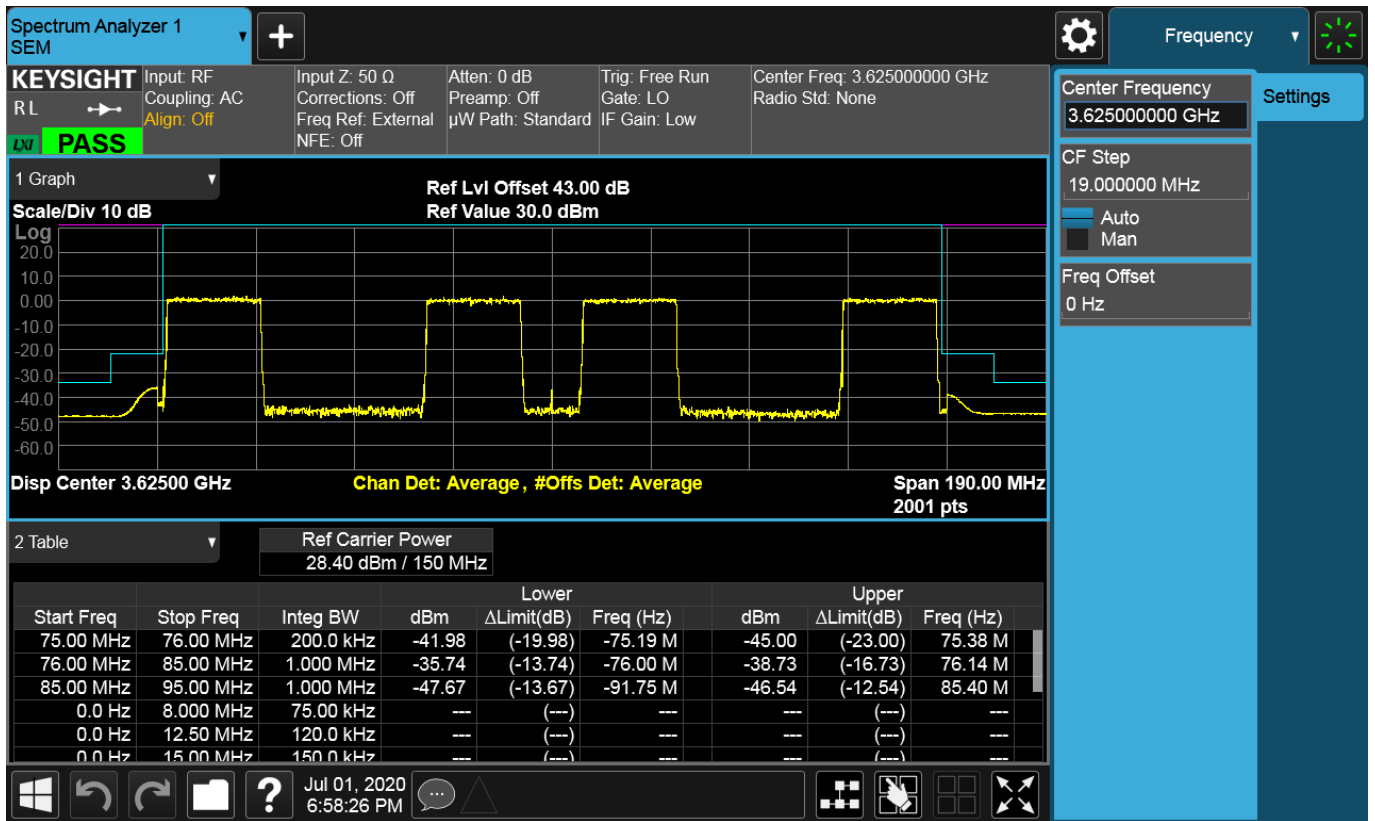


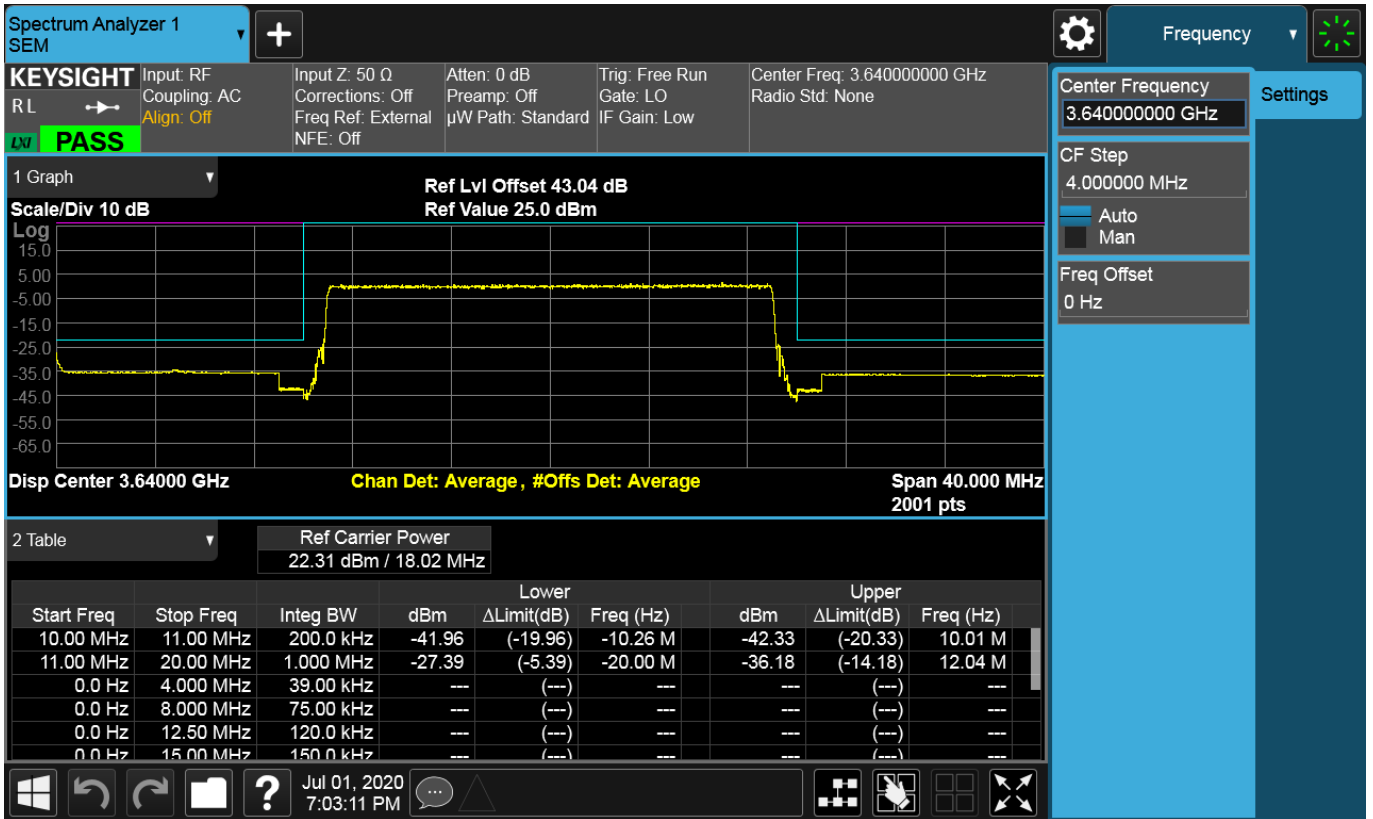
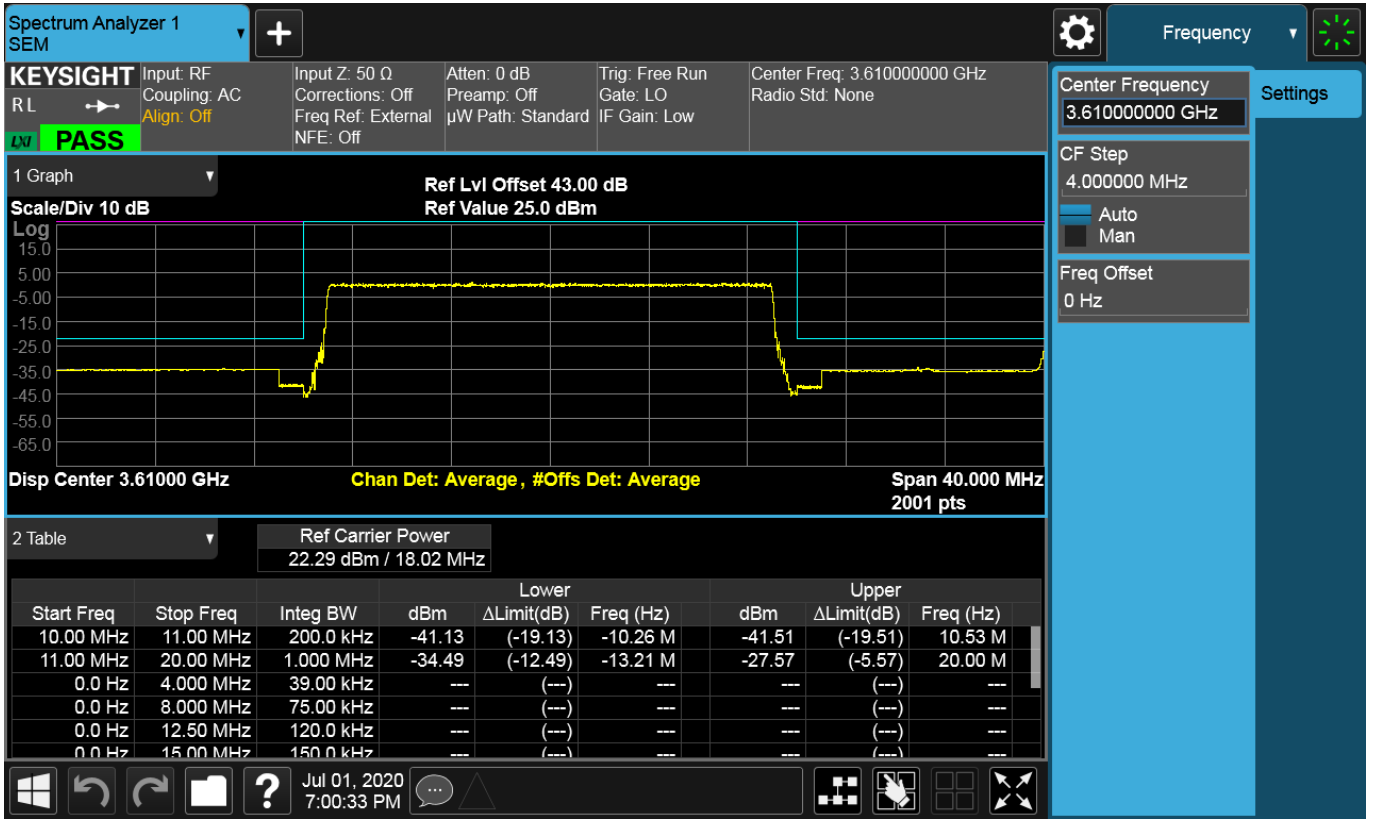
2.5 TX_3L_20M_TM1_M

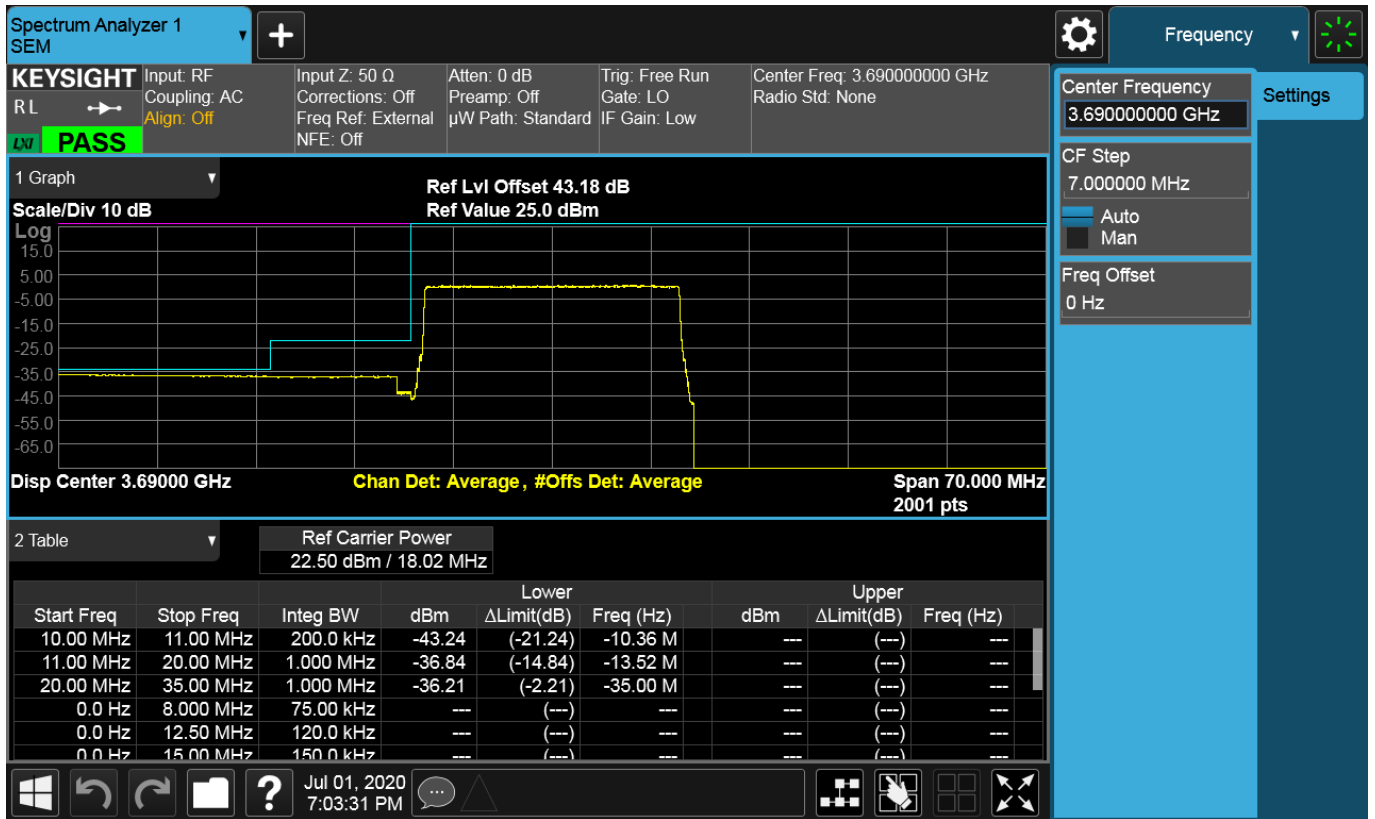




2.6 TX_4L_20M_TM1_M







Test item 4
Spurious emissions at antenna terminals

1 Result Table

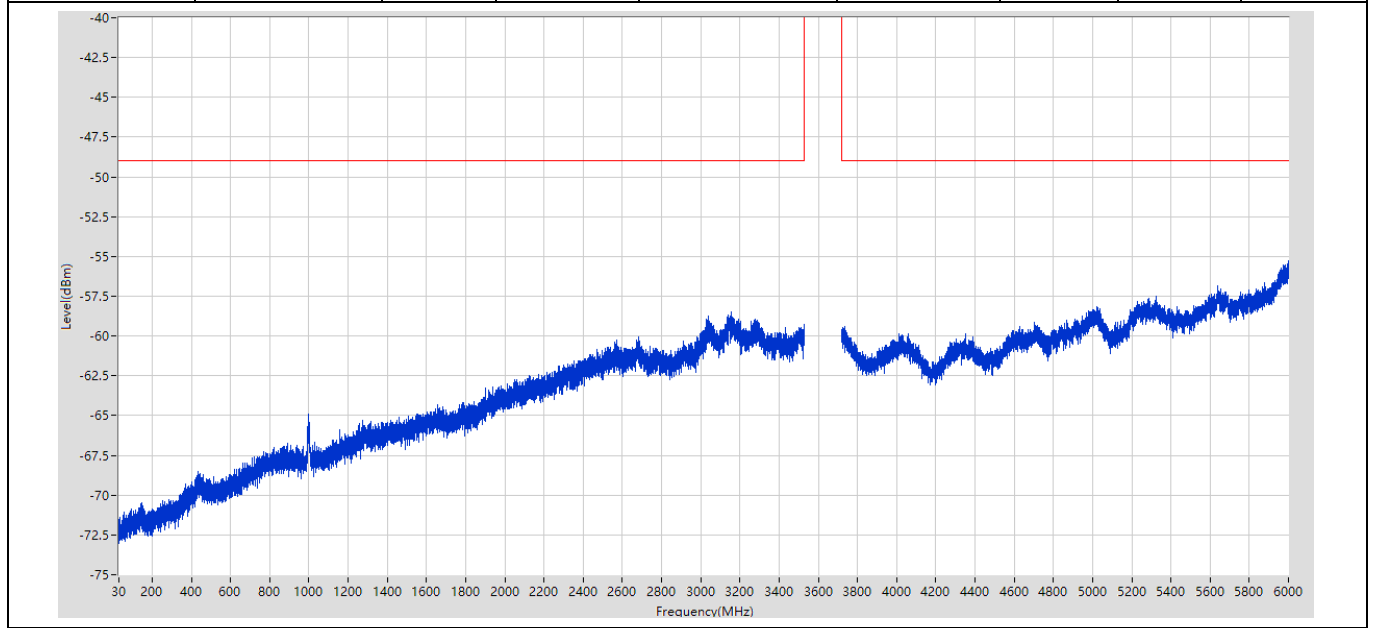
NOTE 1: The method of 'Measure and add [$10 \log (N_{out})$]' in ANSI C63.26 is used for unwanted emissions, where N_{out} is the number of outputs. For each output port, the maximum emission should be below compliance limit - $10 \log (N_{out})$.

EUT Conf.	Verdict
TX_1L_20M_TM1.1_B	Pass
TX_1L_20M_TM1.1_M	Pass
TX_1L_20M_TM1.1_T	Pass
TX_2L_20M_TM1_M	Pass
TX_3L_20M_TM1_M	Pass
TX_4L_20M_TM1_M	Pass

2 Test Plot

2.1 TX_1L_20M_TM1.1_B

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	3530	1	RMS	3158.178753 M	-58.47	-49	Pass	17500
3720	6000	1	RMS	5998.999912 M	-55.27	-49	Pass	11400

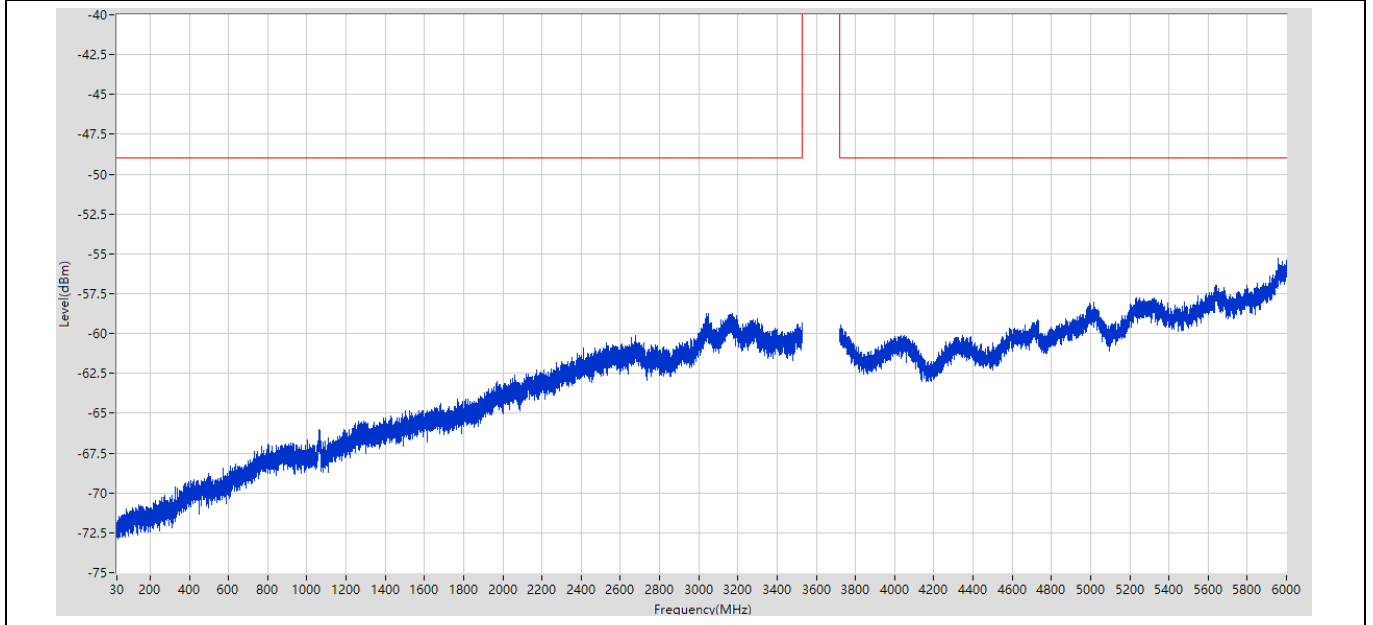


Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
6000	40000	1	RMS	37166.7085 M	-52.86	-49	Pass	170006

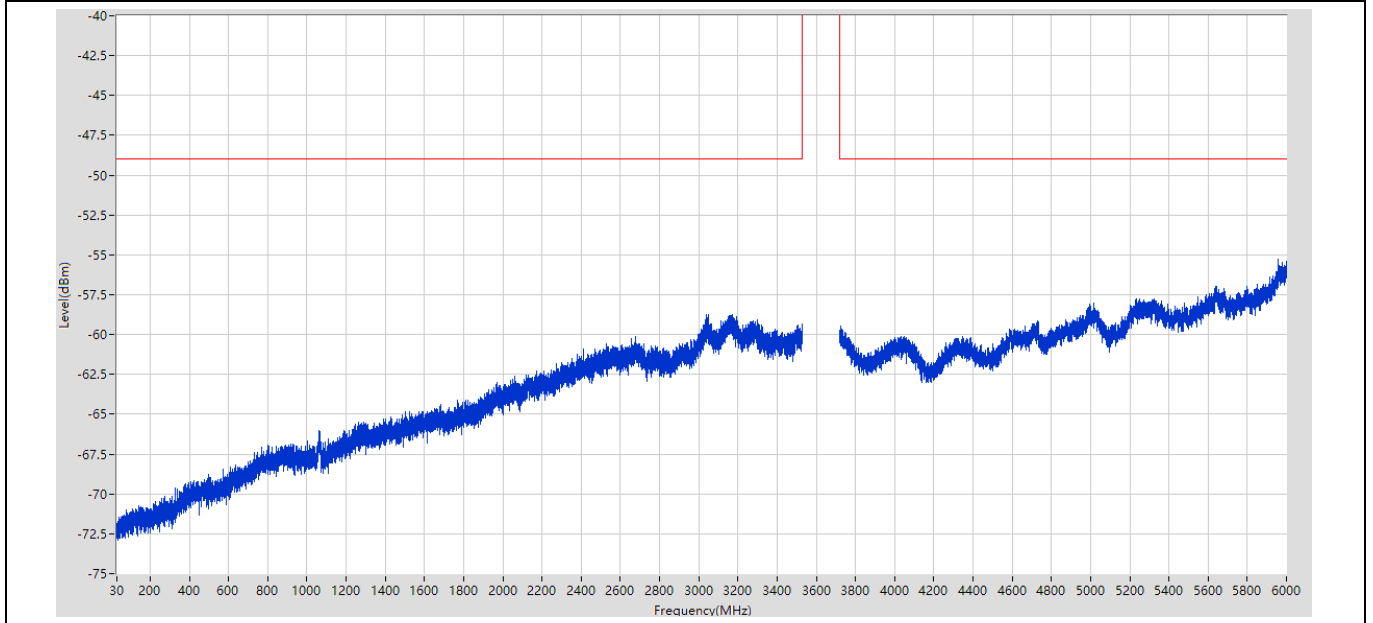


2.2 TX_1L_20M_TM1.1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	3530	1	RMS	3052.172696 M	-58.73	-49	Pass	17500
3720	6000	1	RMS	5958.796386 M	-55.3	-49	Pass	11400

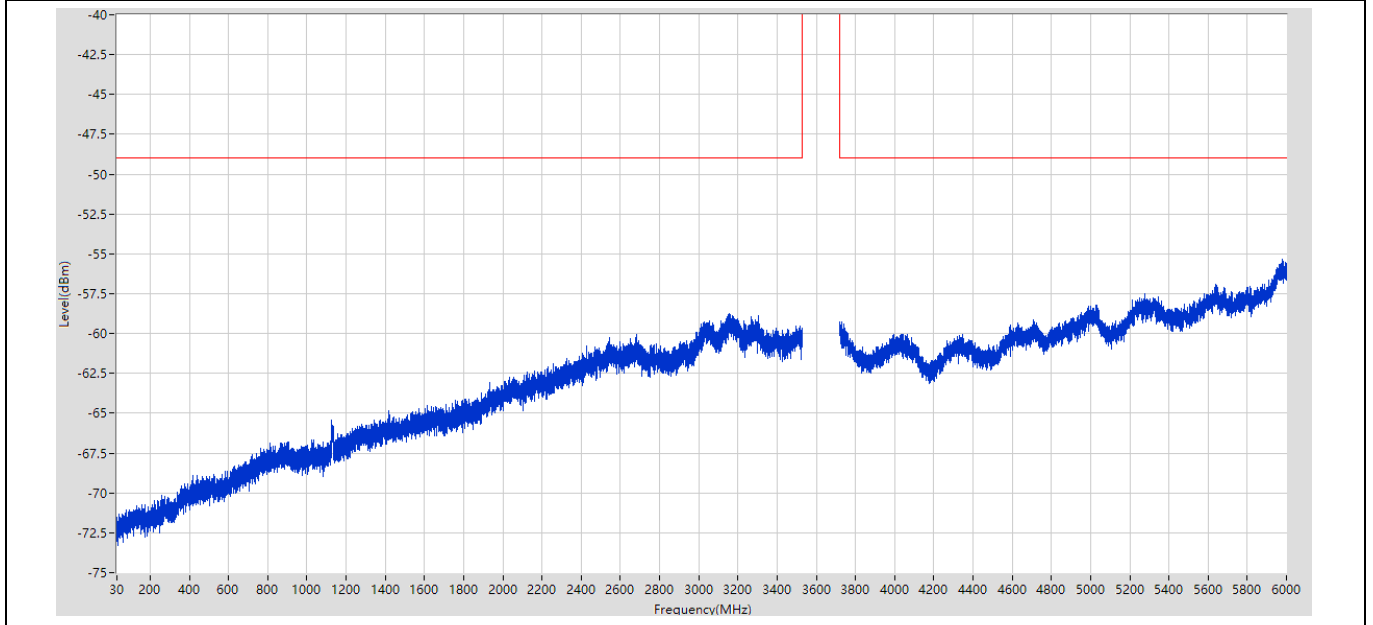


Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	3530	1	RMS	3052.172696 M	-58.73	-49	Pass	17500
3720	6000	1	RMS	5958.796386 M	-55.3	-49	Pass	11400

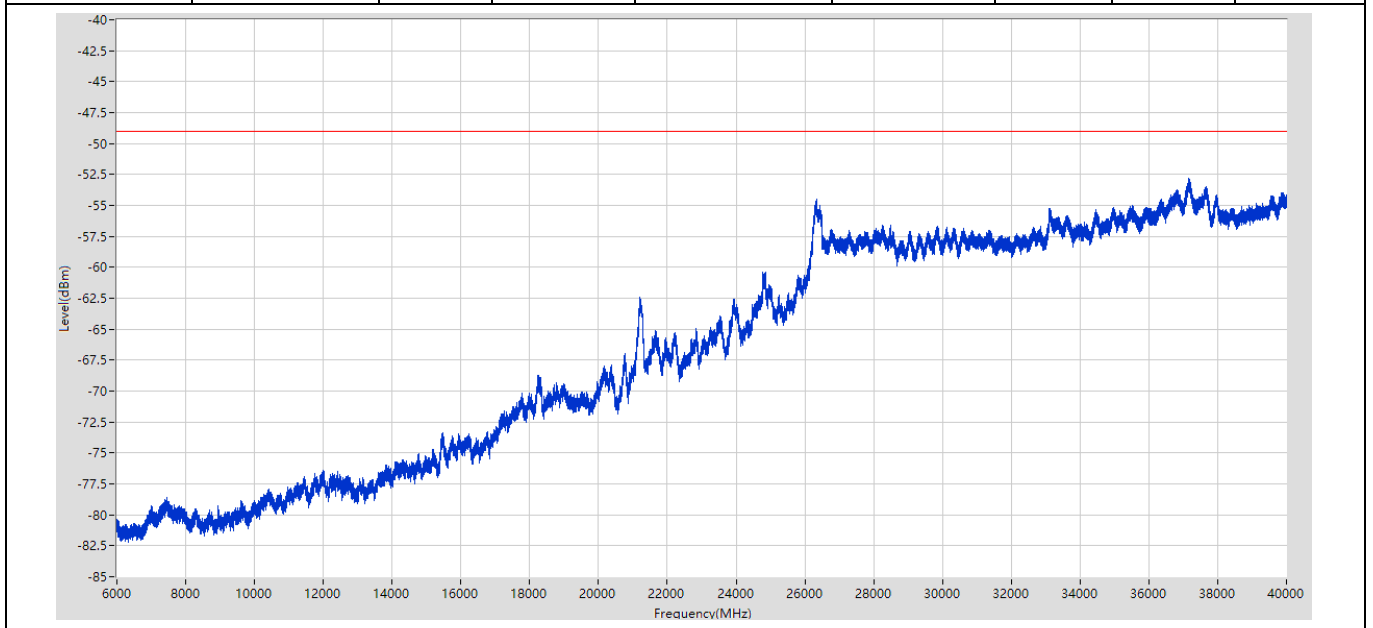


2.3 TX_1L_20M_TM1.1_T

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	3530	1	RMS	3154.378536 M	-58.72	-49	Pass	17500
3720	6000	1	RMS	5977.398017 M	-55.34	-49	Pass	11400

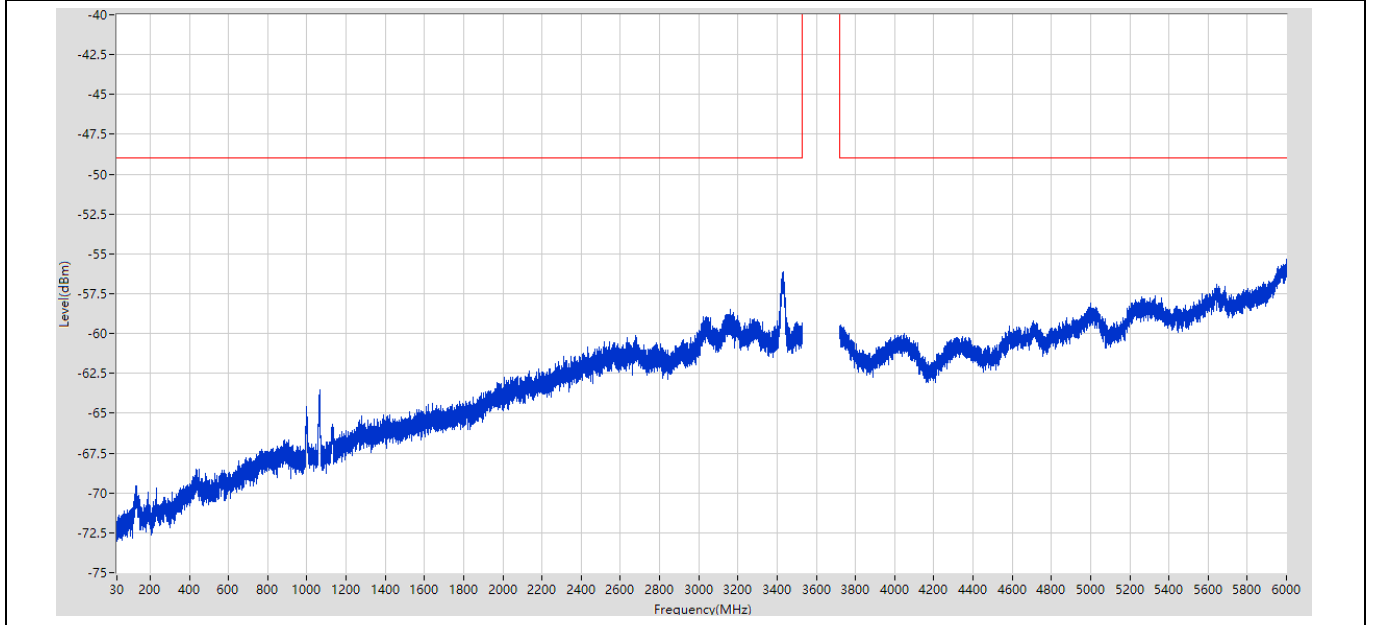


Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
6000	40000	1	RMS	37158.51055 M	-52.82	-49	Pass	170006

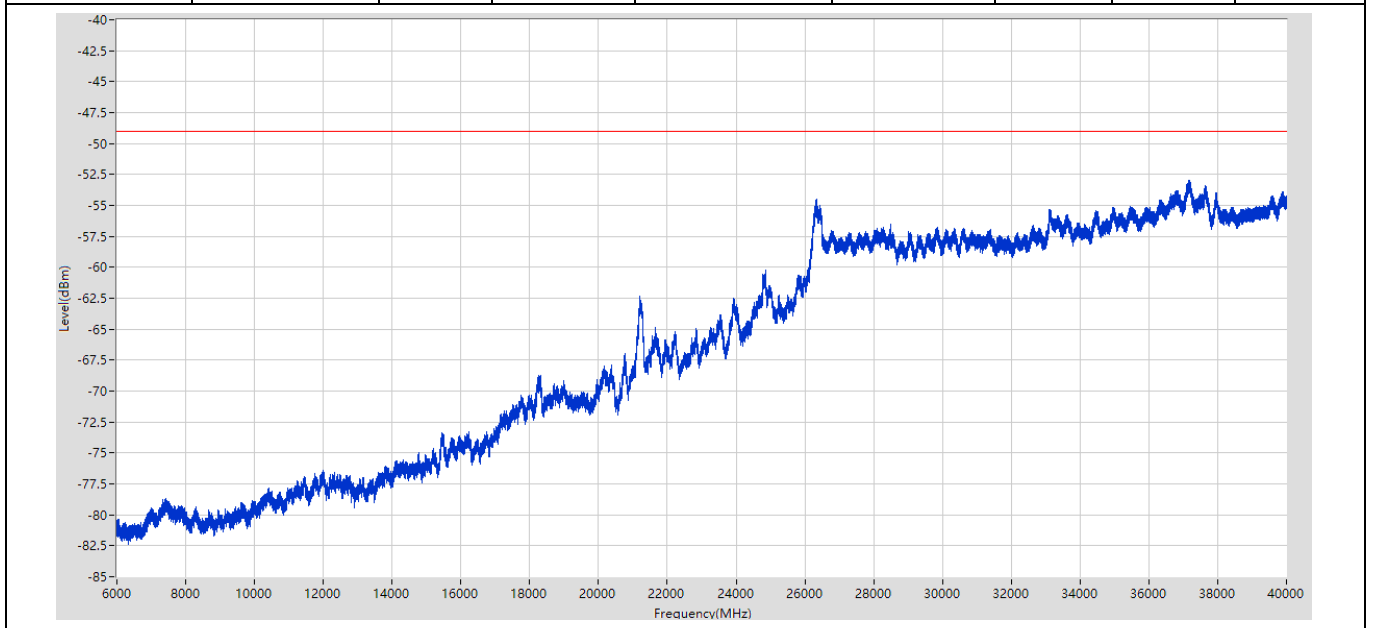


2.4 TX_2L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	3530	1	RMS	3430.994343 M	-56.15	-49	Pass	17500
3720	6000	1	RMS	5999.399947 M	-55.37	-49	Pass	11400

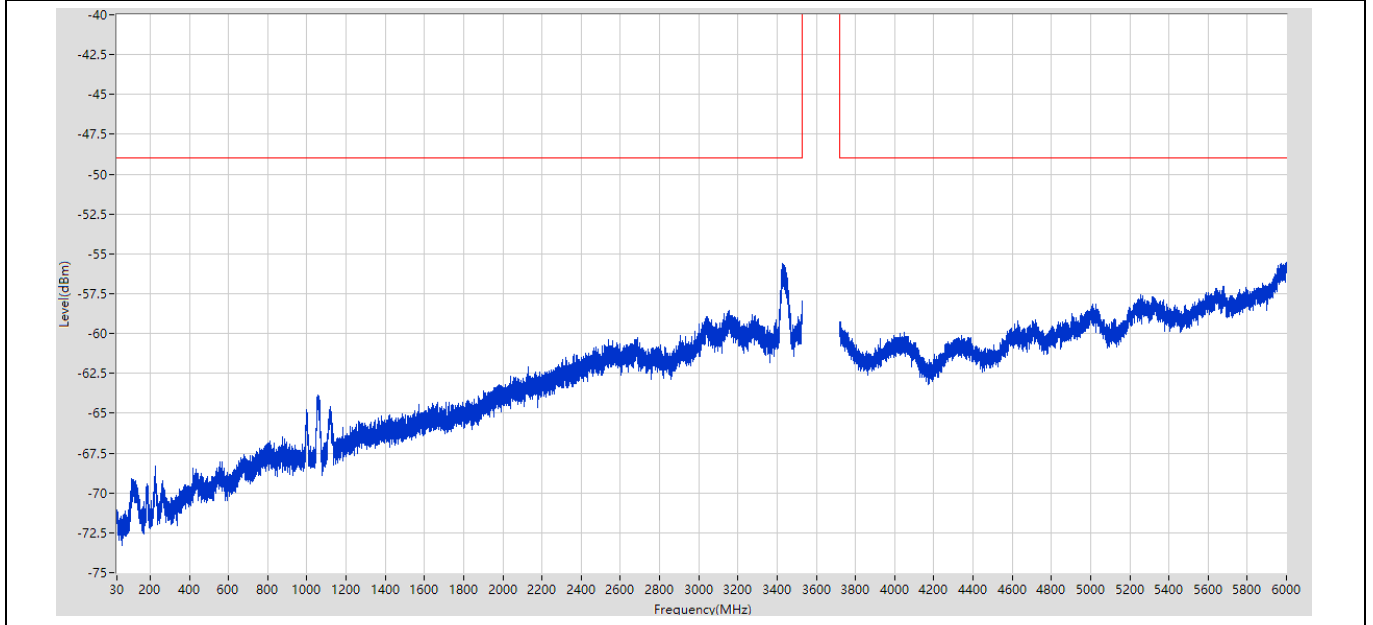


Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
6000	40000	1	RMS	37168.50805 M	-53.02	-49	Pass	170006

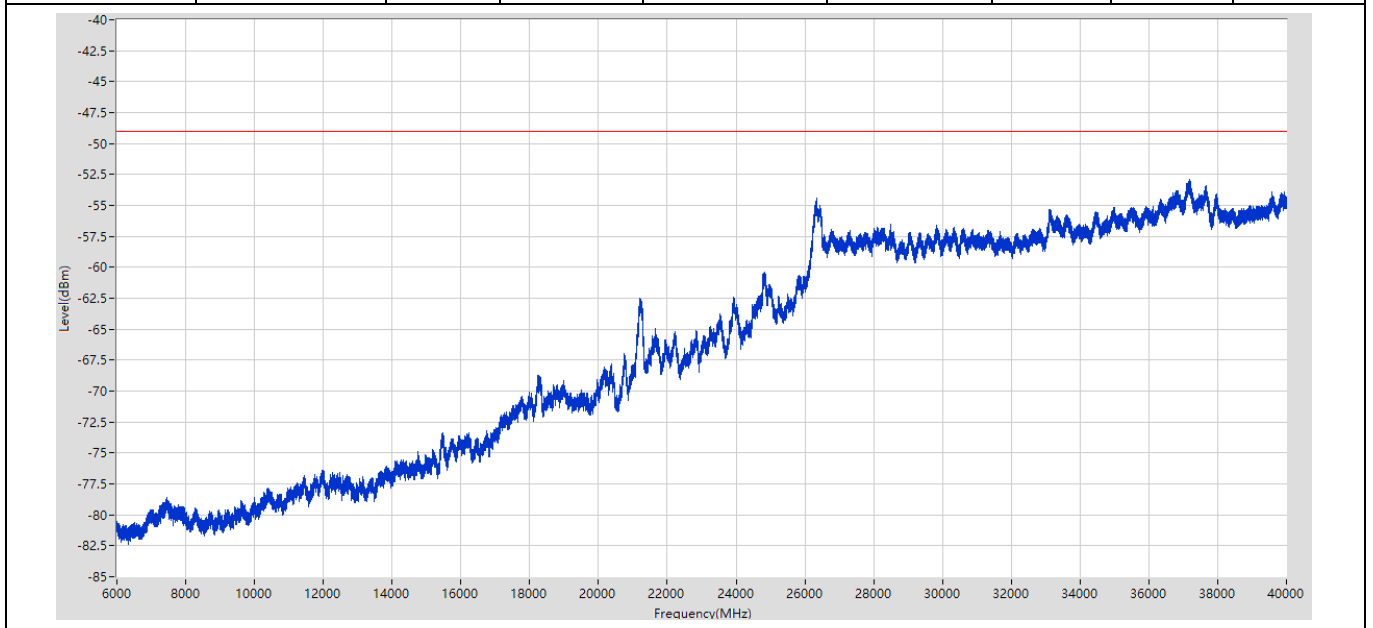


2.5 TX_3L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	3530	1	RMS	3427.994171 M	-55.63	-49	Pass	17500
3720	6000	1	RMS	5999.19993 M	-55.53	-49	Pass	11400

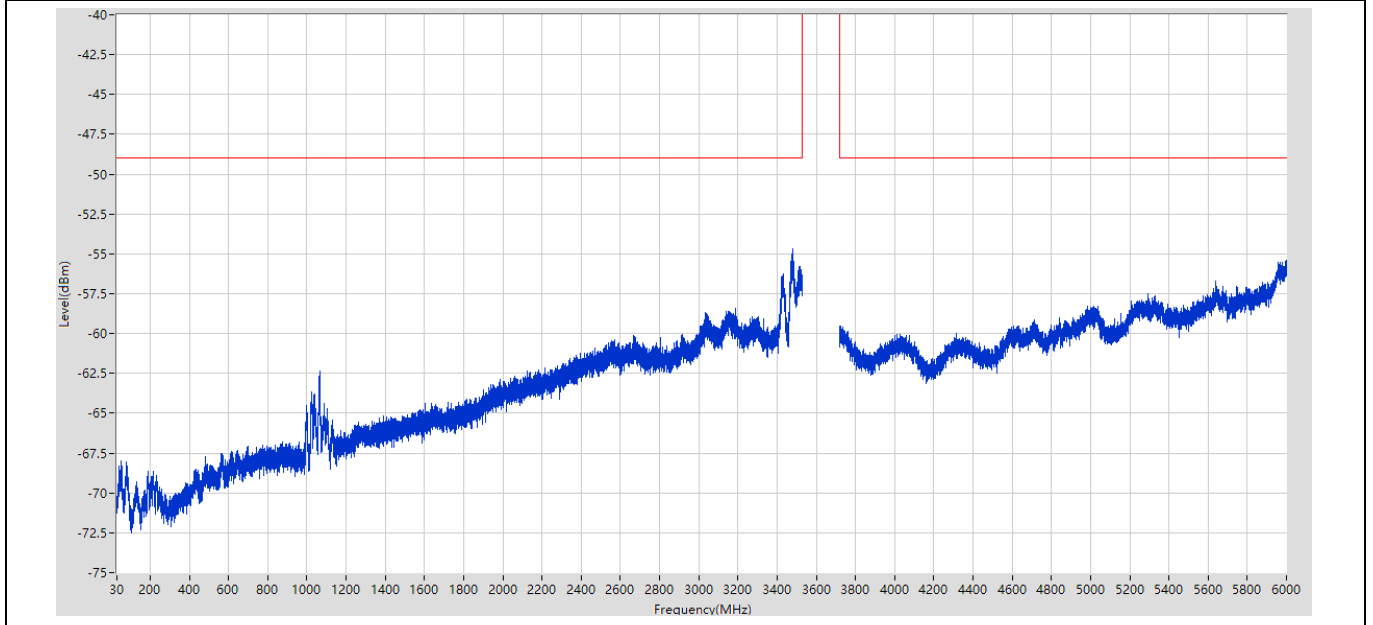


Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
6000	40000	1	RMS	37184.3041 M	-52.88	-49	Pass	170006

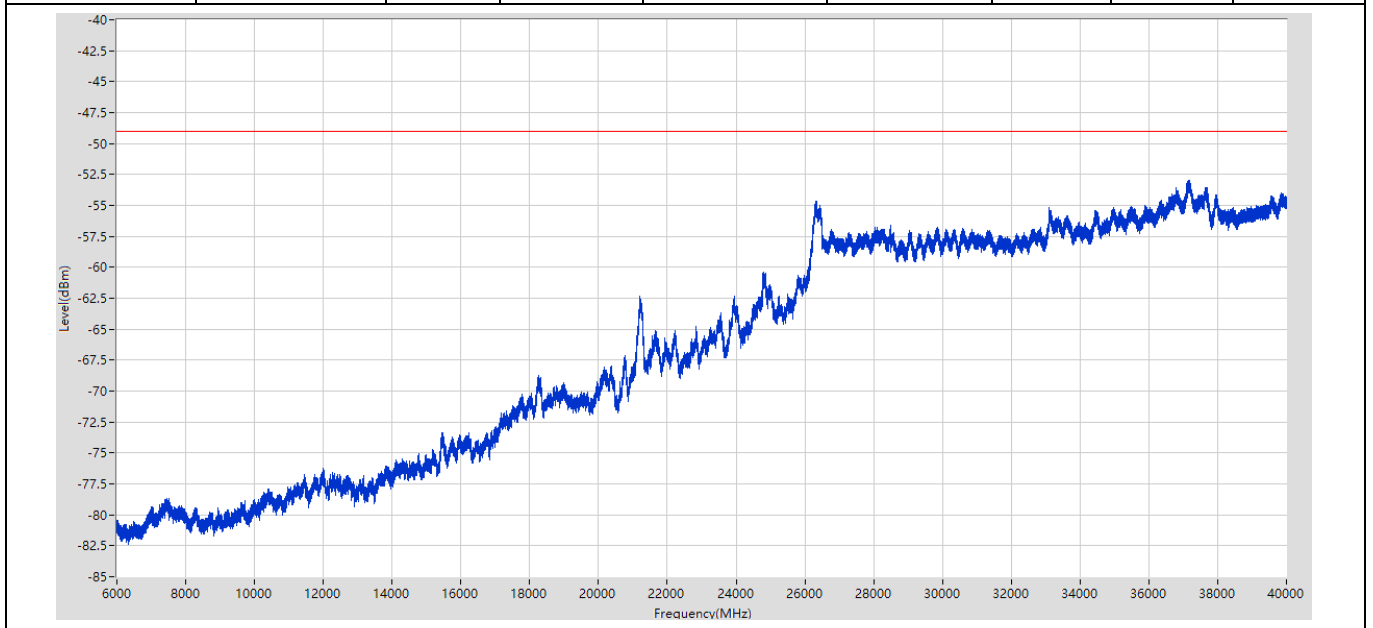


2.6 TX_4L_20M_TM1_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	3530	1	RMS	3478.597063 M	-54.66	-49	Pass	17500
3720	6000	1	RMS	5999.799982 M	-55.38	-49	Pass	11400



Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
6000	40000	1	RMS	37167.1084 M	-52.94	-49	Pass	170006



Test item 5
Field strength of spurious radiation

1 Result Table

NOTE 1: As to unwanted emission, according to §7 of FCC KDB publication 971168 D01:

(1) When antenna-port conducted measurements (hereinafter as “CSE”, per FCC §2.1051) are performed to demonstrate compliance to the applicable unwanted emission limits, a separate radiated measurement (hereinafter as “FSE”, per FCC §2.1053) is required to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Note that when radiated measurements considerations for spurious emissions at antenna terminals (hereinafter as “RSE”, see §6.2 of KDB 971168 D01) are performed to demonstrate compliance to the unwanted emission limits (e.g., for an EUT with integral transmit antenna), the “FSE” measurement is not required. In summary, unwanted emissions can be performed by “CSE” + “FSE”, or by “RSE”.

(2) The “FSE” measurements are performed with the transmit antenna port(s) terminated.

(3) Unless otherwise specified in the applicable rule section, the same limits applicable to spurious (unwanted) emissions at the antenna terminals (“CSE”) also apply to radiated spurious emissions (“FSE” and “RSE”).

NOTE 2: If applicable, according to FCC KDB 971168 §5.8.3, for the requirement of a fixed limit (e.g. -40 dBm), the power limit can be mathematically converted to an equivalent field strength limit. The relationship is:

(1) $E \text{ [dB}\mu\text{V/m]} = \text{EIRP [dBm]} - 20 \cdot \lg(D) + 104.8$; where D is the measurement distance in meters.

(2) $\text{EIRP [dBm]} = \text{ERP [dBm]} + 2.15$.

Also according to FCC §2.1053(a), emissions are assumed radiated from halfwave dipole antennas, so the power limit refer to the ERP.

(For example, the fixed power limit -40 dBm can be converted to the field strength limit 57.4 dB μ V/m at 3 m measurement distance, and to 66.94 dB μ V/m at 1 m measurement distance assuming in the far-field region of both the transmit and receive antennas.)

1.1 Radiated Measurements for Spurious Emissions at Antenna Terminals

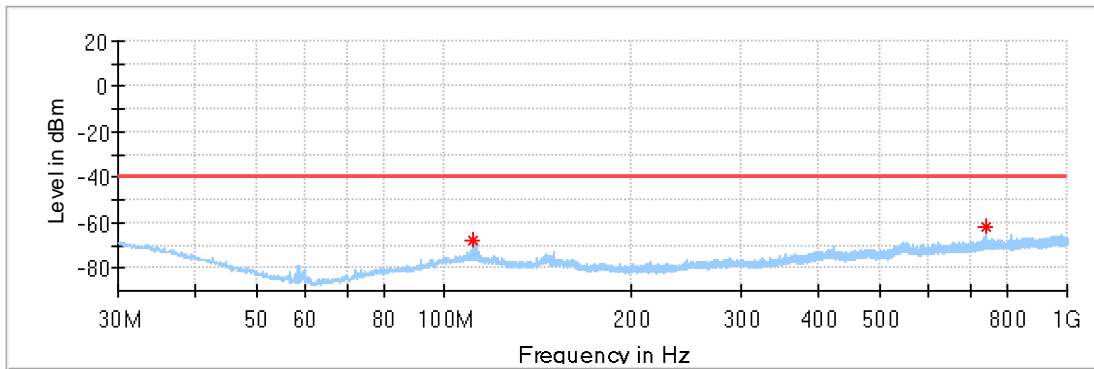
Test Range	EUT Conf.	Maximum Emission	Verdict
30 MHz to 1 GHz	TX_4L_20M_TM1_M	< -40 dBm	Pass
1 GHz to 12.75 GHz	TX_4L_20M_TM1_M	< -40 dBm	Pass
12.75 GHz to 18 GHz	TX_4L_20M_TM1_M	< 57.4 dB μ V/m	Pass
18 GHz to 26.5 GHz	TX_4L_20M_TM1_M	< 57.4 dB μ V/m	Pass
26.5G to 40 GHz	TX_4L_20M_TM1_M	< 66.94 dB μ V/m	Pass

2 Test Plot

2.1 Radiated Measurements for Spurious Emissions at Antenna Terminals

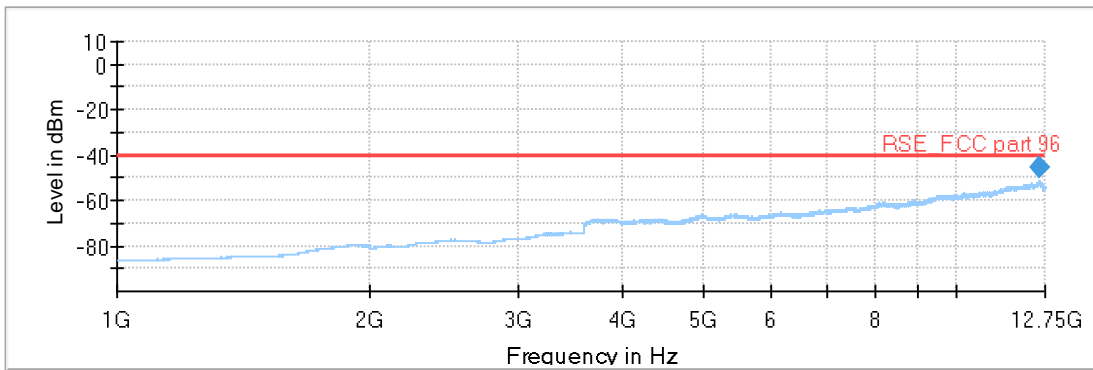
2.1.1 Test range of "30 MHz to 1 GHz"

2.1.1.1 TX_4L_20M_TM1_M



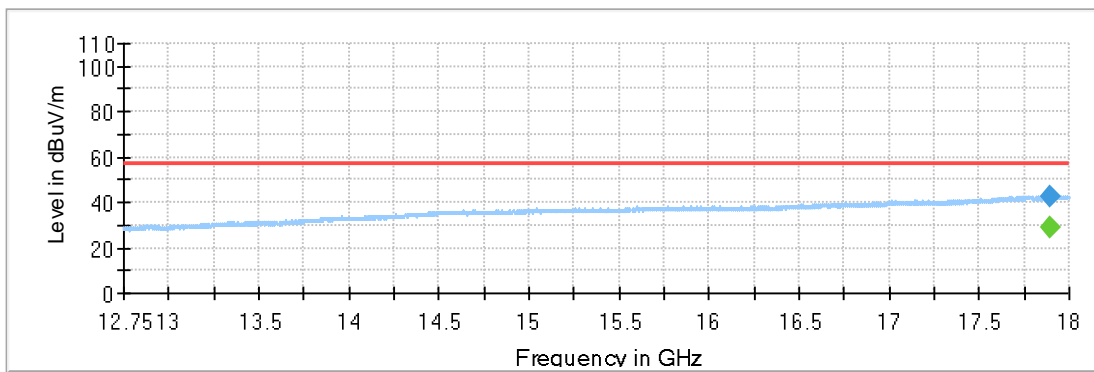
2.1.2 Test range of "1 GHz to 12.75 GHz"

2.1.2.1 TX_4L_20M_TM1_M



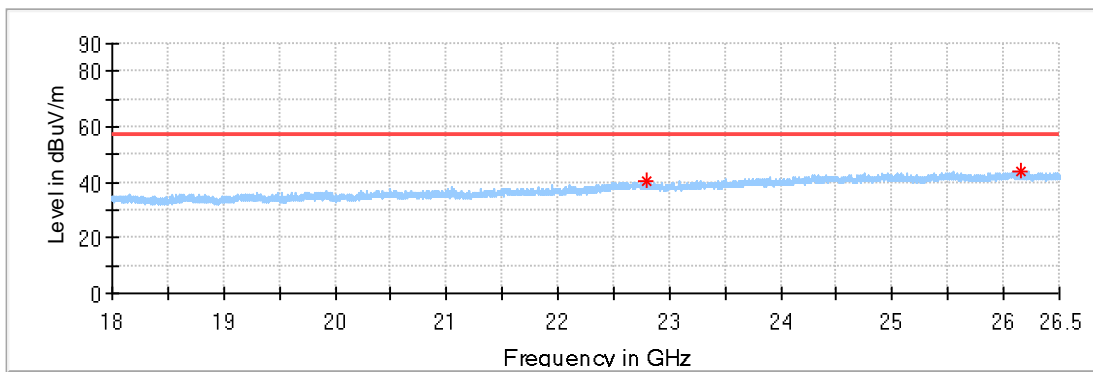
2.1.3 Test range of "12.75 GHz to 18 GHz"

2.1.3.1 TX_4L_20M_TM1_M



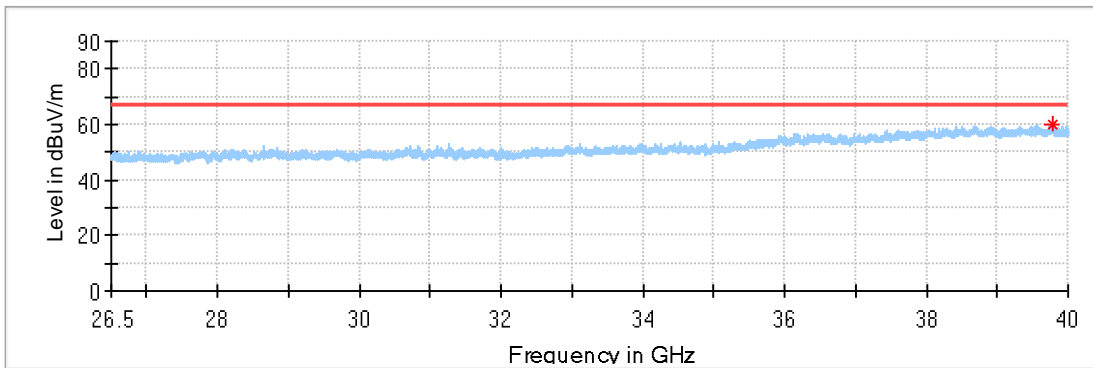
2.1.4 Test range of "18 GHz to 26.5 GHz"

2.1.4.1 TX_4L_20M_TM1_M



2.1.5 Test range of "26.5 GHz to 40 GHz"

2.1.5.1 TX_4L_20M_TM1_M



Test item 6

Frequency stability

1 Result Table

1.1 Frequency Error

EUT Conf.	Environment Parameter (Temperature & Voltage)	Freq. Error, f(offset) [Hz]	Verdict
TX_1L_20M_TM1.1_B	20°C_100%NV(20°C_NV)	0.32	Pass
	20°C_85%NV	-0.08	Pass
	20°C_115%NV	0.89	Pass
	-30°C_NV	-0.78	Pass
	-20°C_NV	4.21	Pass
	-10°C_NV	-2.26	Pass
	0°C_NV	0.95	Pass
	10°C_NV	1.29	Pass
	30°C_NV	-0.98	Pass
	40°C_NV	1.09	Pass
	50°C_NV	0.78	Pass
	TX_1L_20M_TM1.1_M	20°C_100%NV (20°C_NV)	1.73
20°C_85%NV		-1.17	Pass
20°C_115%NV		-0.66	Pass
-30°C_NV		-0.59	Pass
-20°C_NV		-0.48	Pass
-10°C_NV		-0.48	Pass
0°C_NV		0.66	Pass
10°C_NV		0.59	Pass
30°C_NV		-0.82	Pass
40°C_NV		-0.75	Pass
50°C_NV		-0.14	Pass
TX_1L_20M_TM1.1_T		20°C_100%NV (20°C_NV)	-0.30
	20°C_85%NV	0.23	Pass
	20°C_115%NV	0.29	Pass
	-30°C_NV	-0.59	Pass
	-20°C_NV	0.80	Pass
	-10°C_NV	1.18	Pass
	0°C_NV	5.41	Pass
	10°C_NV	1.74	Pass
	30°C_NV	0.16	Pass
	40°C_NV	-0.20	Pass
	50°C_NV	15.28	Pass

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END