



Appendix A2: Transmitter Output Power

1 Result Table

1.1 Channel Power, Total

NOTE 1: If applicable, the EIRP [W] = $10^{((\text{Channel Power [dBm]} + \text{Antenna Gain [dBi]}) / 10 - 3)}$, and the ERP [W] = EIRP [W] / 1.64.

NOTE 2: When the EUT is put into service, the practical maximum antenna gain may exceed the value as described below, and if exceed, the combination of the practical output power and the practical antenna gain should NOT exceed the required ERP/EIRP limit.

EUT Conf.	Channel Power [dBm]	Total Channel Power [W]	Antenna Gain [dBi]	EIRP [W]	ERP [W]	Verdict
5M_B	20.72	0.12	4	---	---	Pass
5M_M	20.5	0.11	4	---	---	Pass
5M_T	20.31	0.11	4	---	---	Pass
10M_B	20.59	0.11	4	---	---	Pass
10M_M	20.1	0.10	4	---	---	Pass
10M_T	20.12	0.10	4	---	---	Pass
15M_B	20.77	0.12	4	---	---	Pass
15M_M	20.24	0.11	4	---	---	Pass
15M_T	20.45	0.11	4	---	---	Pass
20M_B	20.48	0.11	4	---	---	Pass
20M_M	20.3	0.11	4	---	---	Pass
20M_T	20.3	0.11	4	---	---	Pass
1U_B	23.95	0.25	4	---	---	Pass
1U_M	23.6	0.23	4	---	---	Pass
1U_T	23.75	0.24	4	---	---	Pass
2U_B	21.08,21.06	0.26	4	---	---	Pass
2U_M	20.95,20.57	0.24	4	---	---	Pass
2U_T	20.94,20.22	0.23	4	---	---	Pass

1.2 Power Spectral Density

NOTE 1: If applicable, the EIRP [W/MHz] = $10^{((\text{Power Spectral Density [dBm/MHz]} + \text{Antenna Gain [dBi]}) / 10 - 3)}$, and the ERP [W/MHz] = EIRP [W/MHz] / 1.64.

NOTE 2: When the EUT is put into service, the practical maximum antenna gain may exceed the value as described below, and if exceed, the combination of the practical output power and the practical antenna gain should NOT exceed the required EIRP limit.



EUT Conf.	Power Spectral Density [dBm/MHz]	Antenna Gain [dBi]	EIRP [W/MHz]	Verdict
5M_B	14.62	4	0.07	Pass
5M_M	14.32	4	0.07	Pass
5M_T	14.23	4	0.07	Pass
1U_B	18.39	4	0.17	Pass
1U_M	18.01	4	0.16	Pass
1U_T	18.28	4	0.17	Pass

1.3 Peak-to-Average Ratio

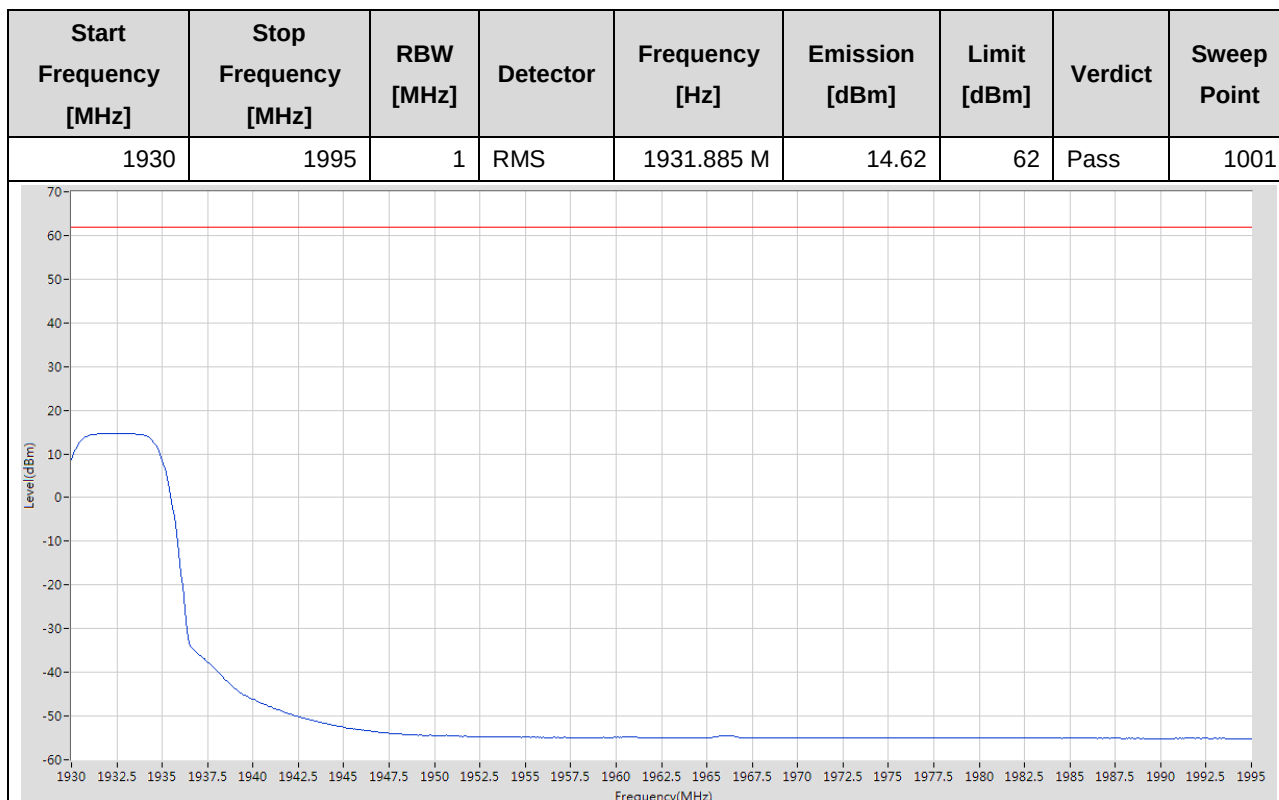
EUT Conf.	Peak-to-Average Ratio [dB]	Verdict
5M_B	7.58	Pass
5M_M	7.57	Pass
5M_T	7.54	Pass
1U_B	7.43	Pass
1U_M	7.51	Pass
1U_T	7.44	Pass

2 Test Plot

NOTE: Only the test plots for the measurements of Spectral Density and Peak-to-Average Ratio are supplied.

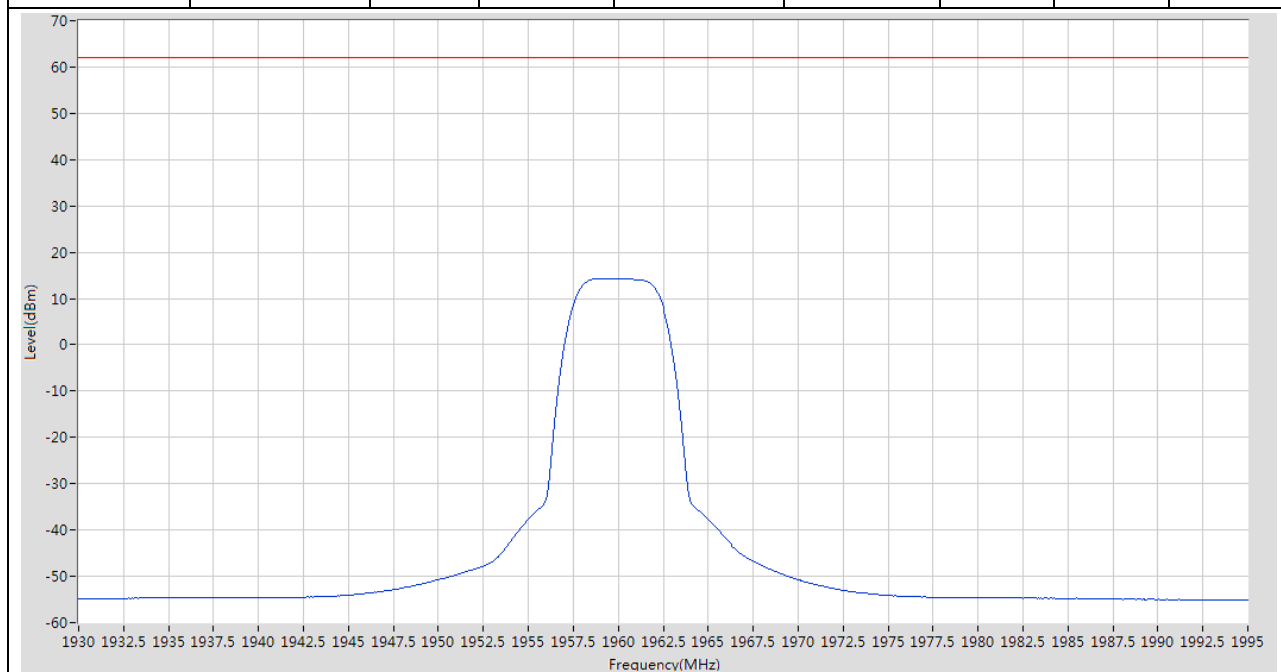
2.1 Power Spectral Density

2.1.1 5M_B

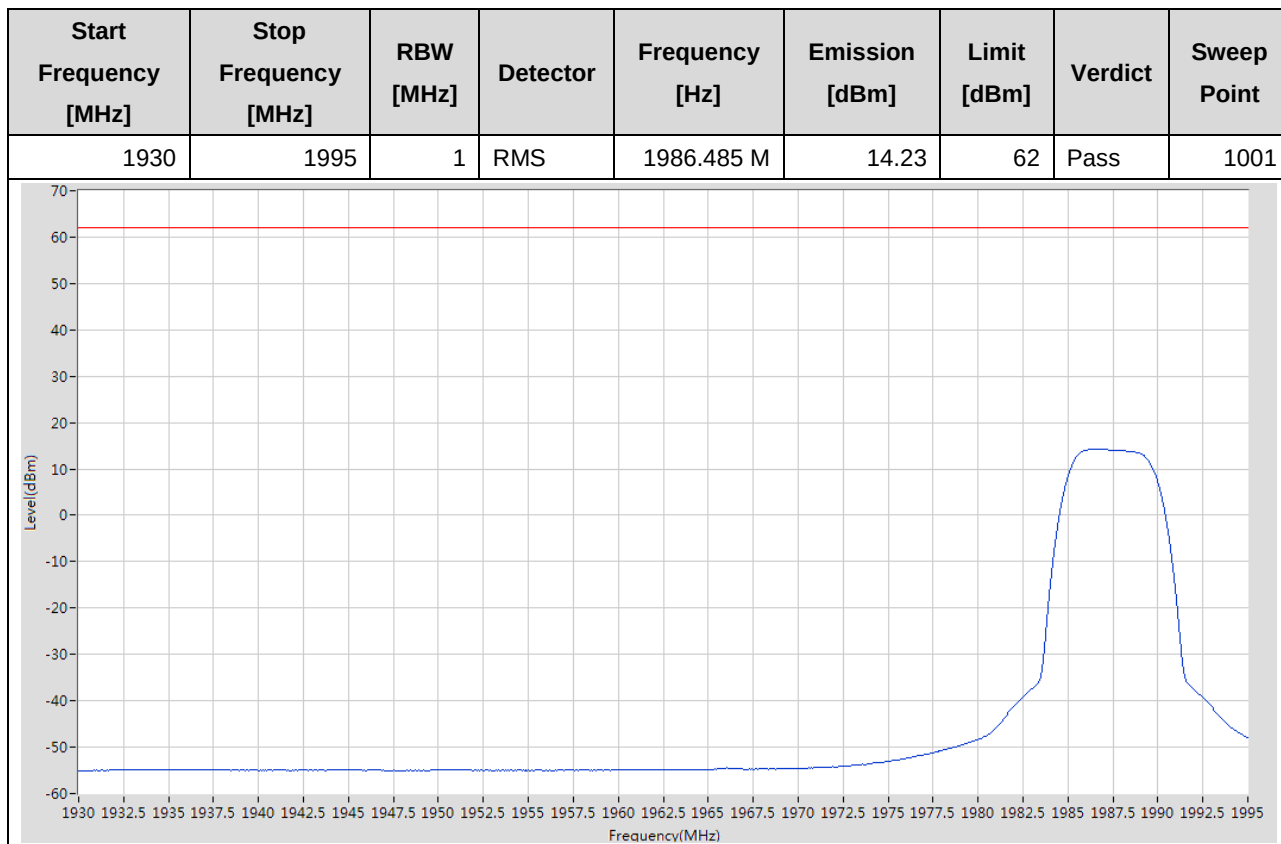


2.1.2 5M_M

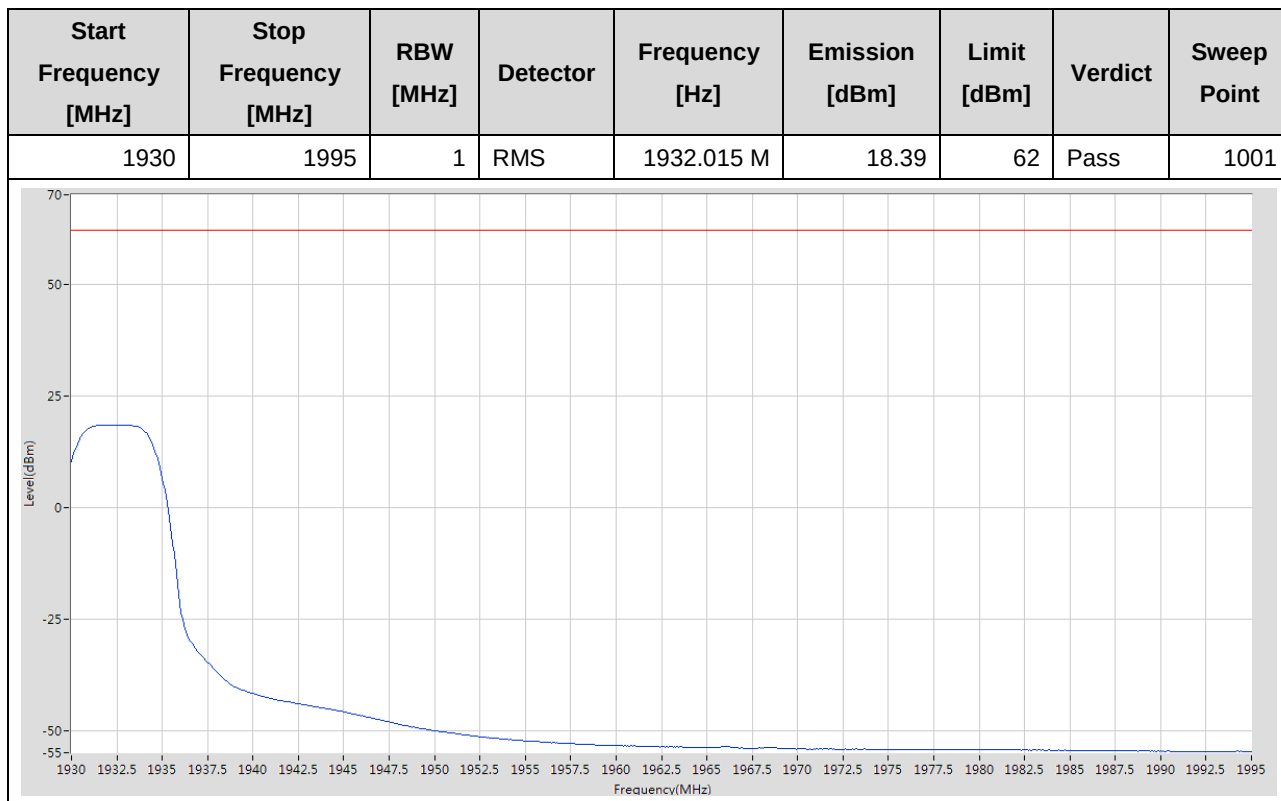
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
1930	1995	1	RMS	1959.185 M	14.32	62	Pass	1001



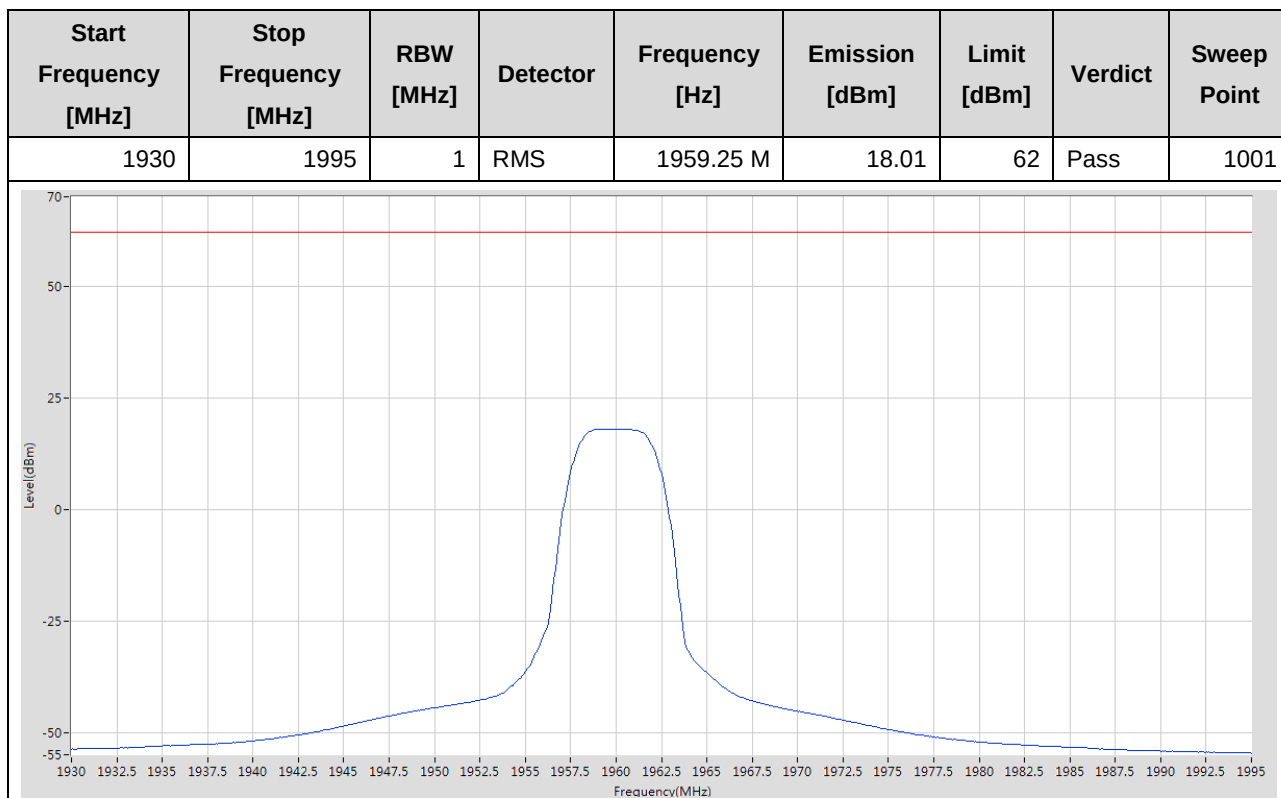
2.1.3 5M_T



2.1.4 1U_B

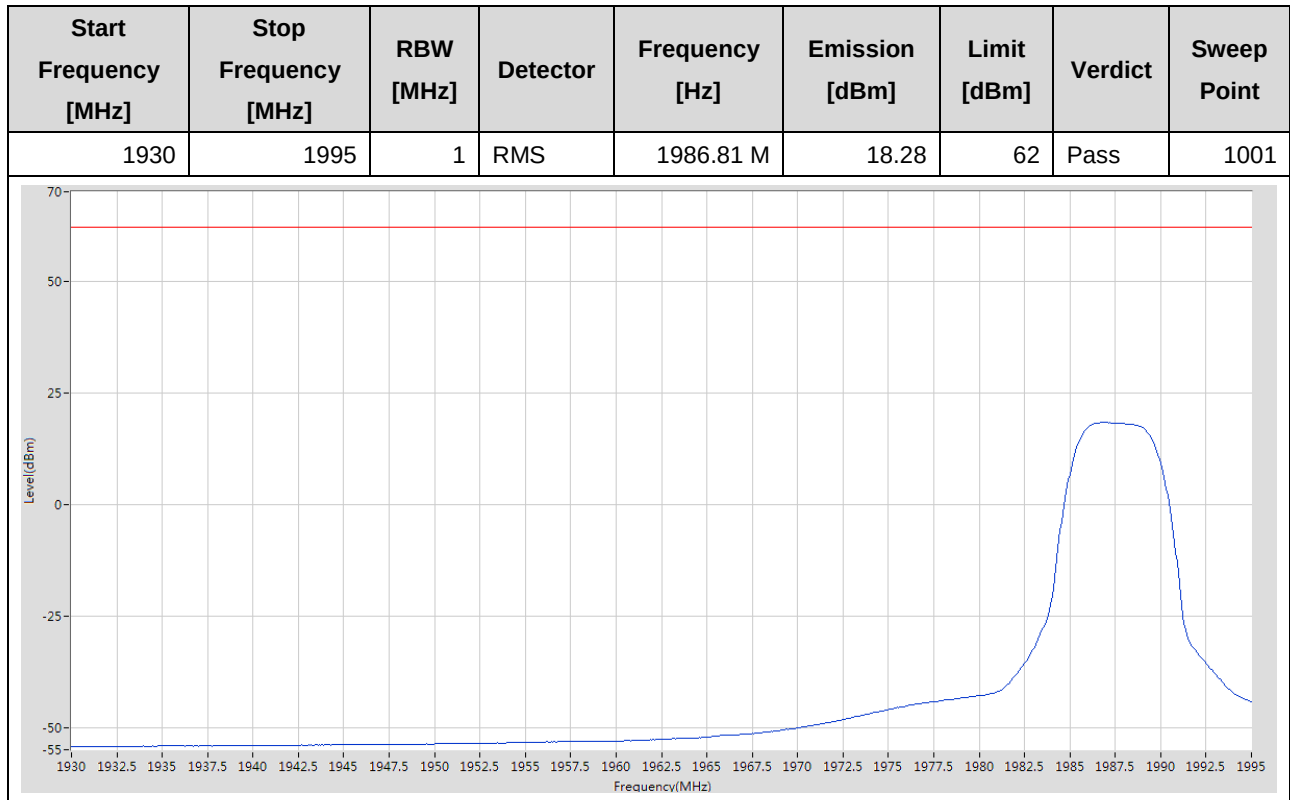


2.1.5 1U_M



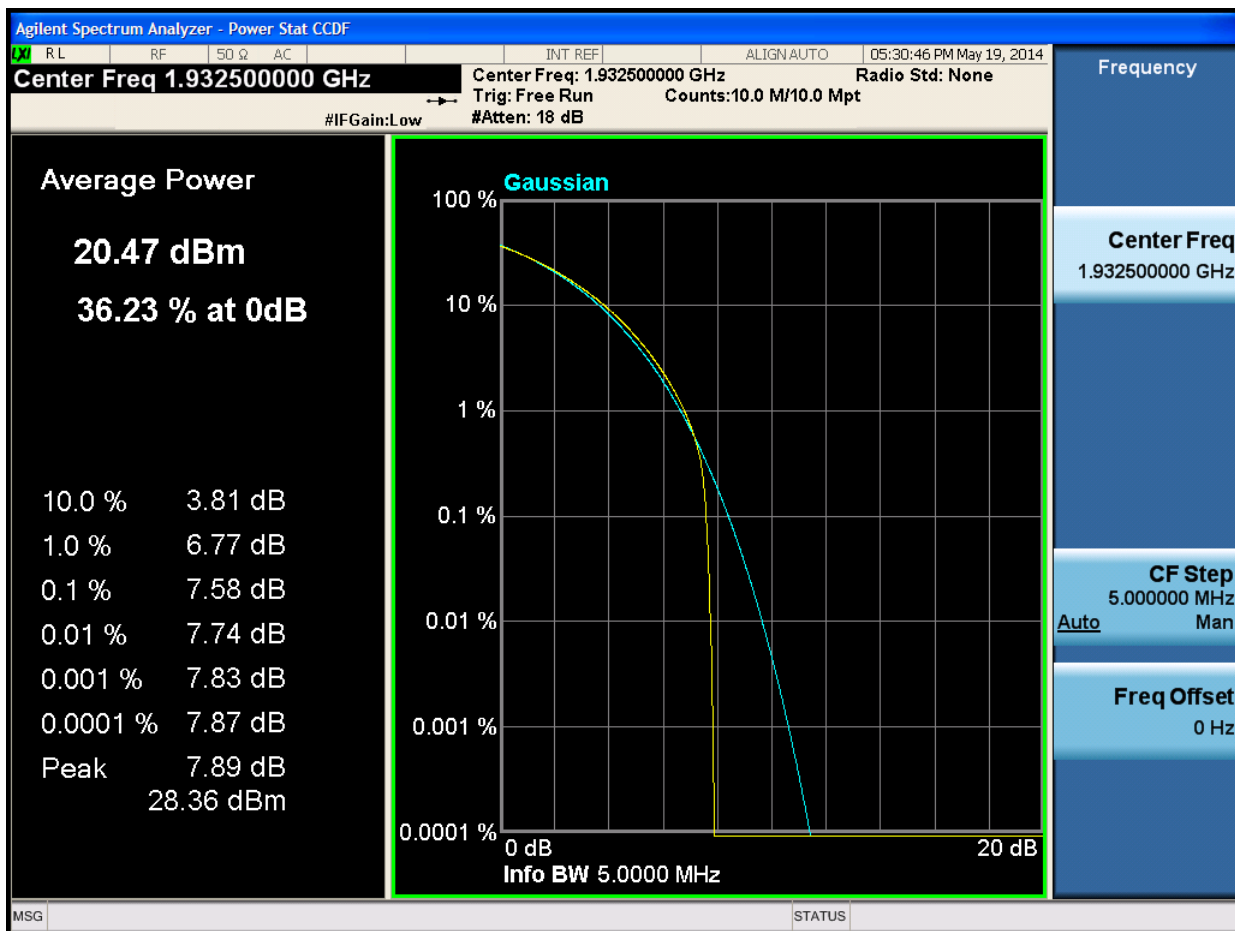


2.1.6 1U_T



2.2 Peak-to-Average Ratio

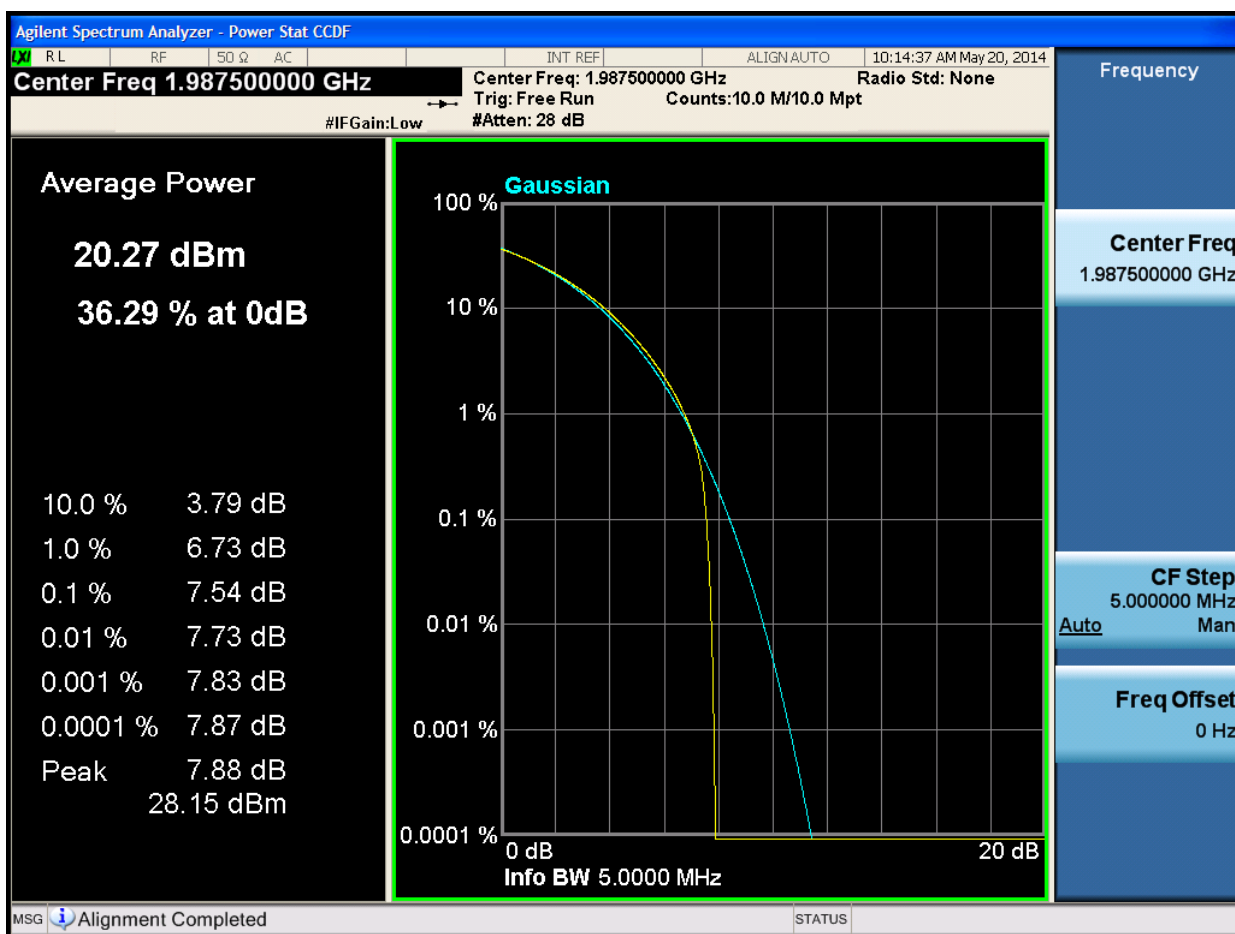
2.2.1 5M_B



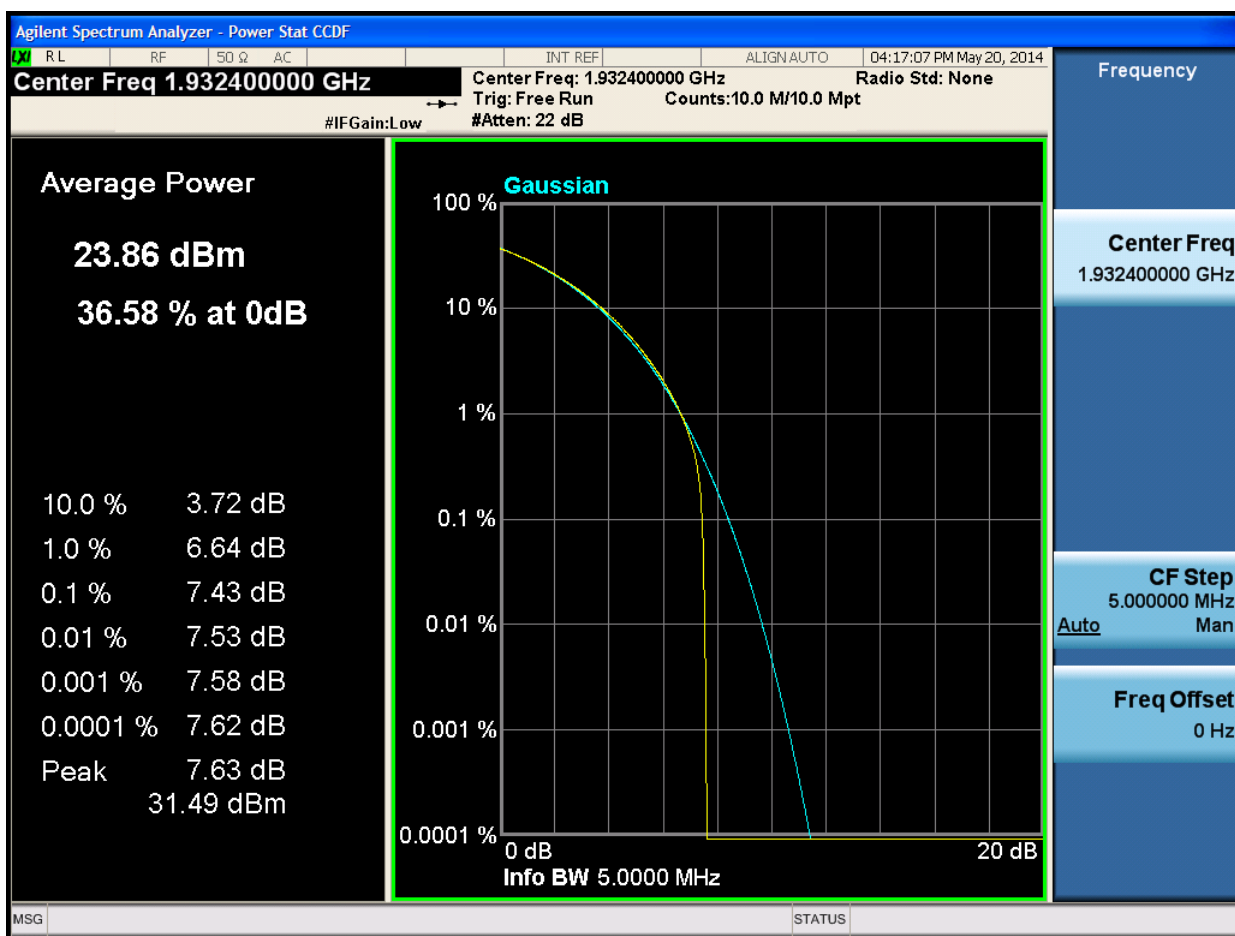
2.2.2 5M_M



2.2.3 5M_T



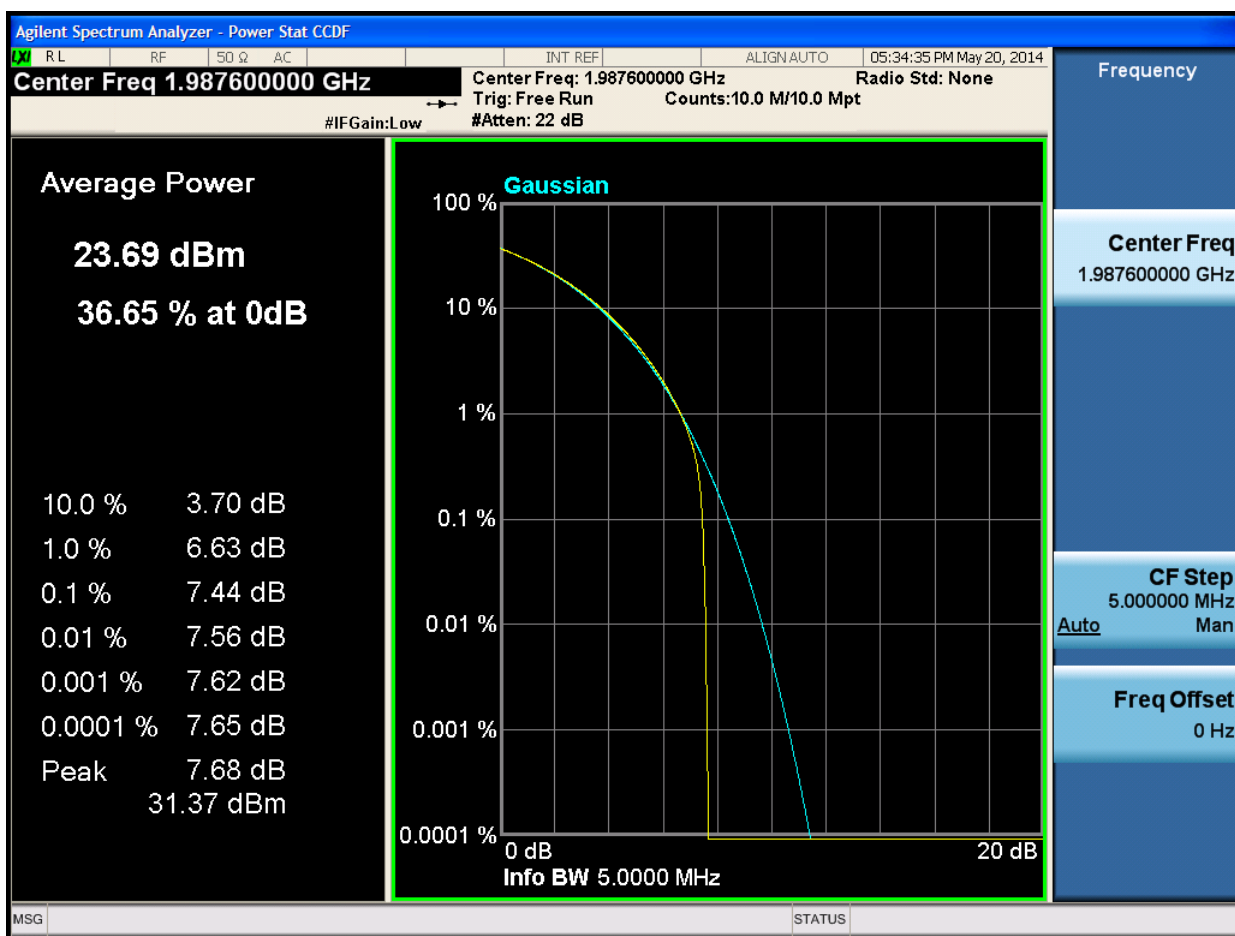
2.2.4 1U_B



2.2.5 1U_M



2.2.6 1U_T





Appendix B2: Bandwidth

1 Result Table

1.1 Occupied Bandwidth

EUT Conf.	Occupied Bandwidth [MHz]	Verdict
5M_B	4.497367	---
5M_M	4.498012	---
5M_T	4.495244	---
10M_B	8.978878	---
10M_M	8.978188	---
10M_T	8.967628	---
15M_B	13.467136	---
15M_M	13.458413	---
15M_T	13.436235	---
20M_B	17.933176	---
20M_M	17.917725	---
20M_T	17.896821	---
1U_B	4.176049	---
1U_M	4.176861	---
1U_T	4.171563	---

1.2 Emission Bandwidth

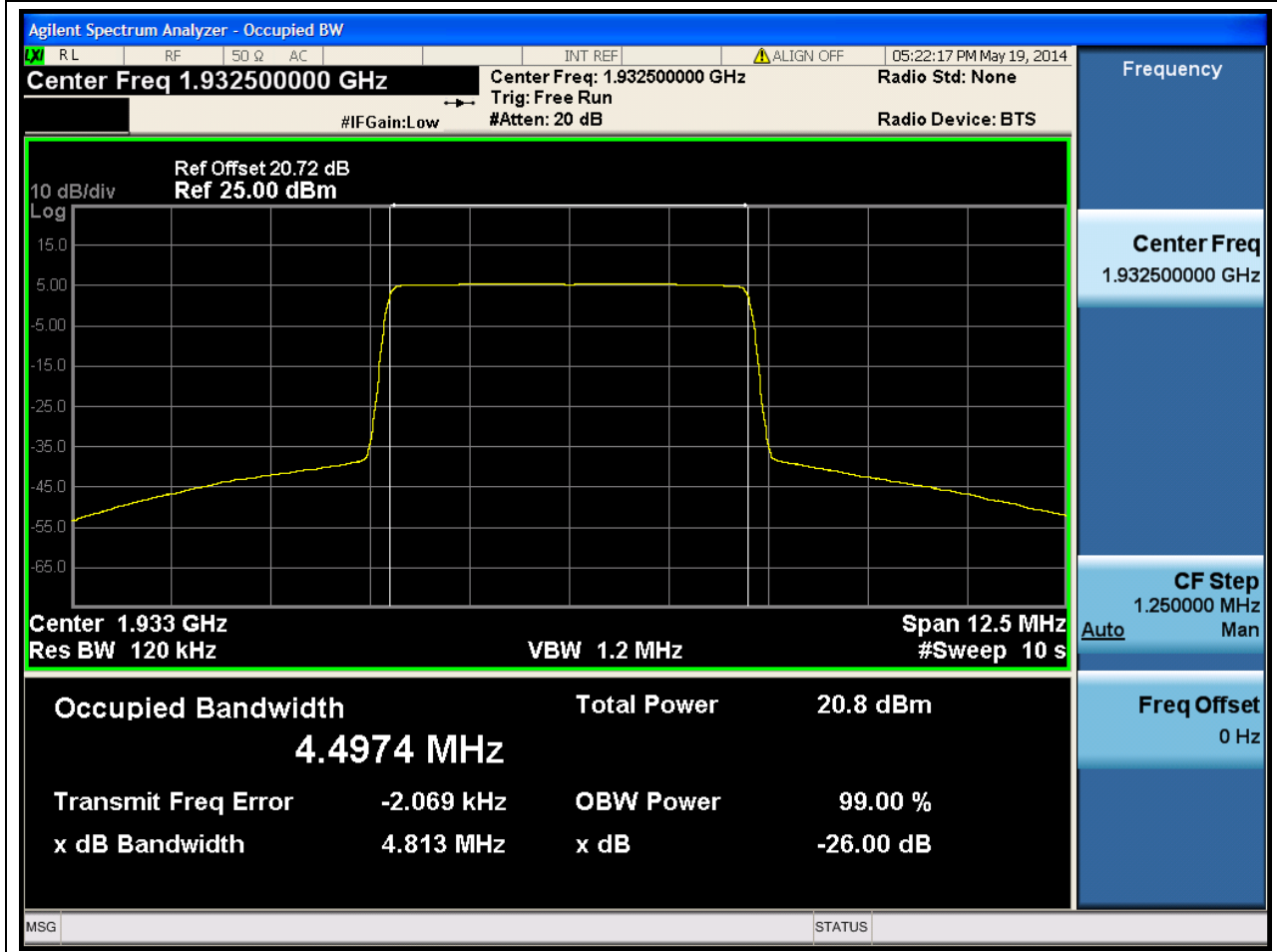
EUT Conf.	Emission Bandwidth, -26 dBc [MHz]	Emission Bandwidth, -20 dBc [MHz]	Verdict
5M_B	4.783872	---	---
5M_M	4.773888	---	---
5M_T	4.77376	---	---
10M_B	9.373824	---	---
10M_M	9.363712	---	---
10M_T	9.353728	---	---
15M_B	14.013696	---	---
15M_M	13.953664	---	---
15M_T	13.923712	---	---
20M_B	18.523776	---	---
20M_M	18.473728	---	---
20M_T	18.473728	---	---
1U_B	4.683776	---	---
1U_M	4.69376	---	---
1U_T	4.683776	---	---

2 Test Plot

2.1 Occupied Bandwidth

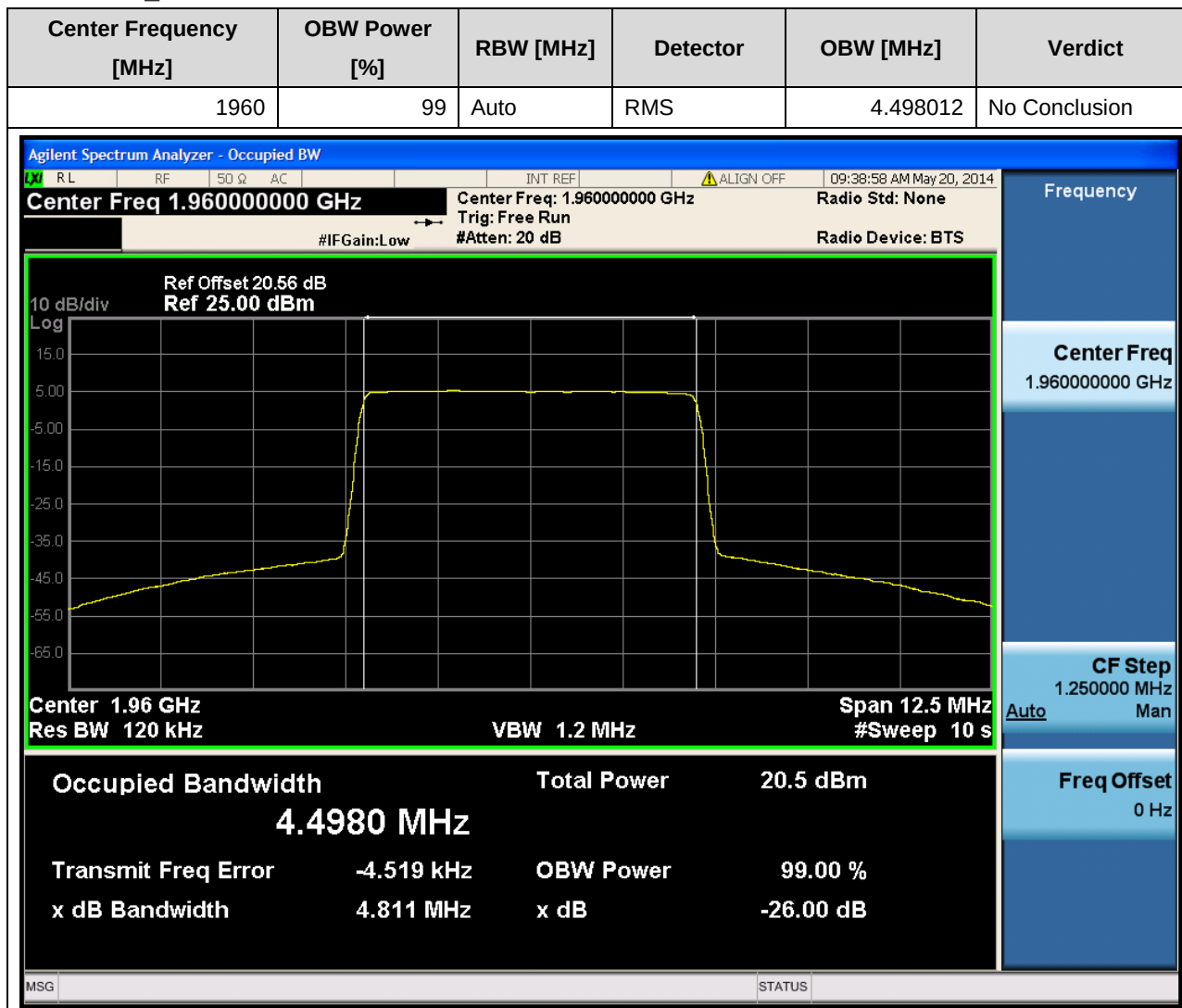
2.1.1 5M_B

Center Frequency [MHz]	OBW Power [%]	RBW [MHz]	Detector	OBW [MHz]	Verdict
1932.5	99	Auto	RMS	4.497367	No Conclusion



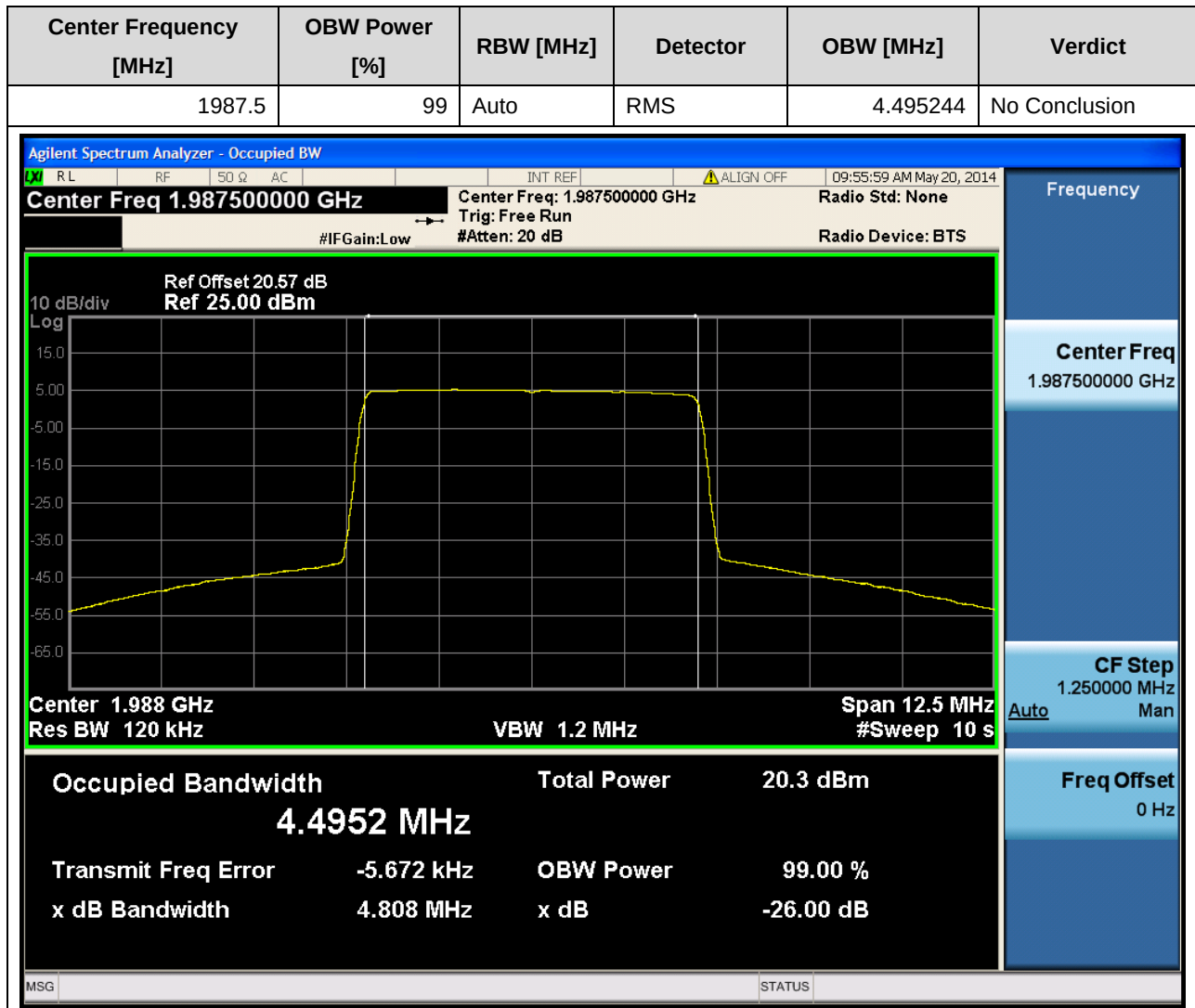


2.1.2 5M_M



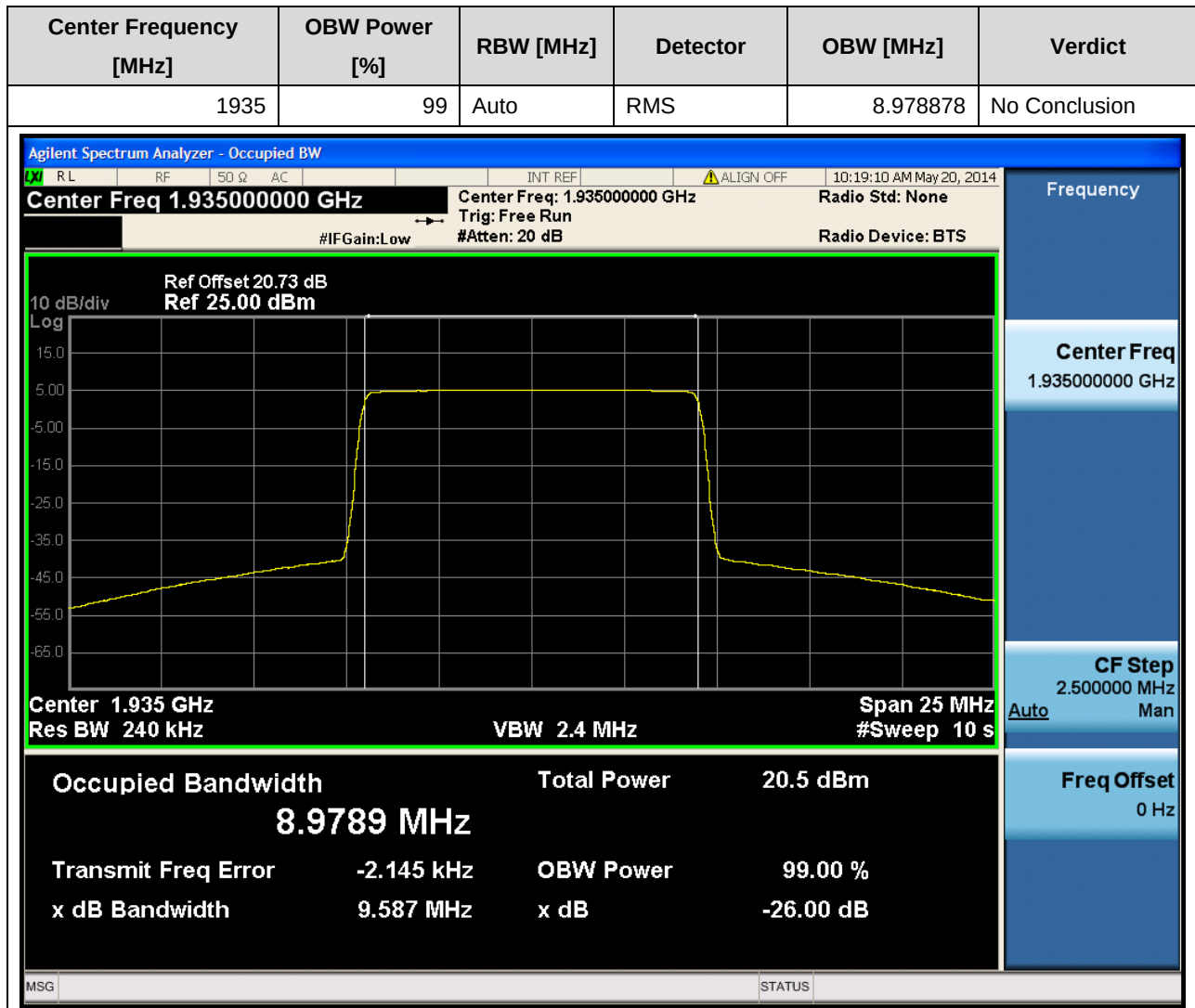


2.1.3 5M_T



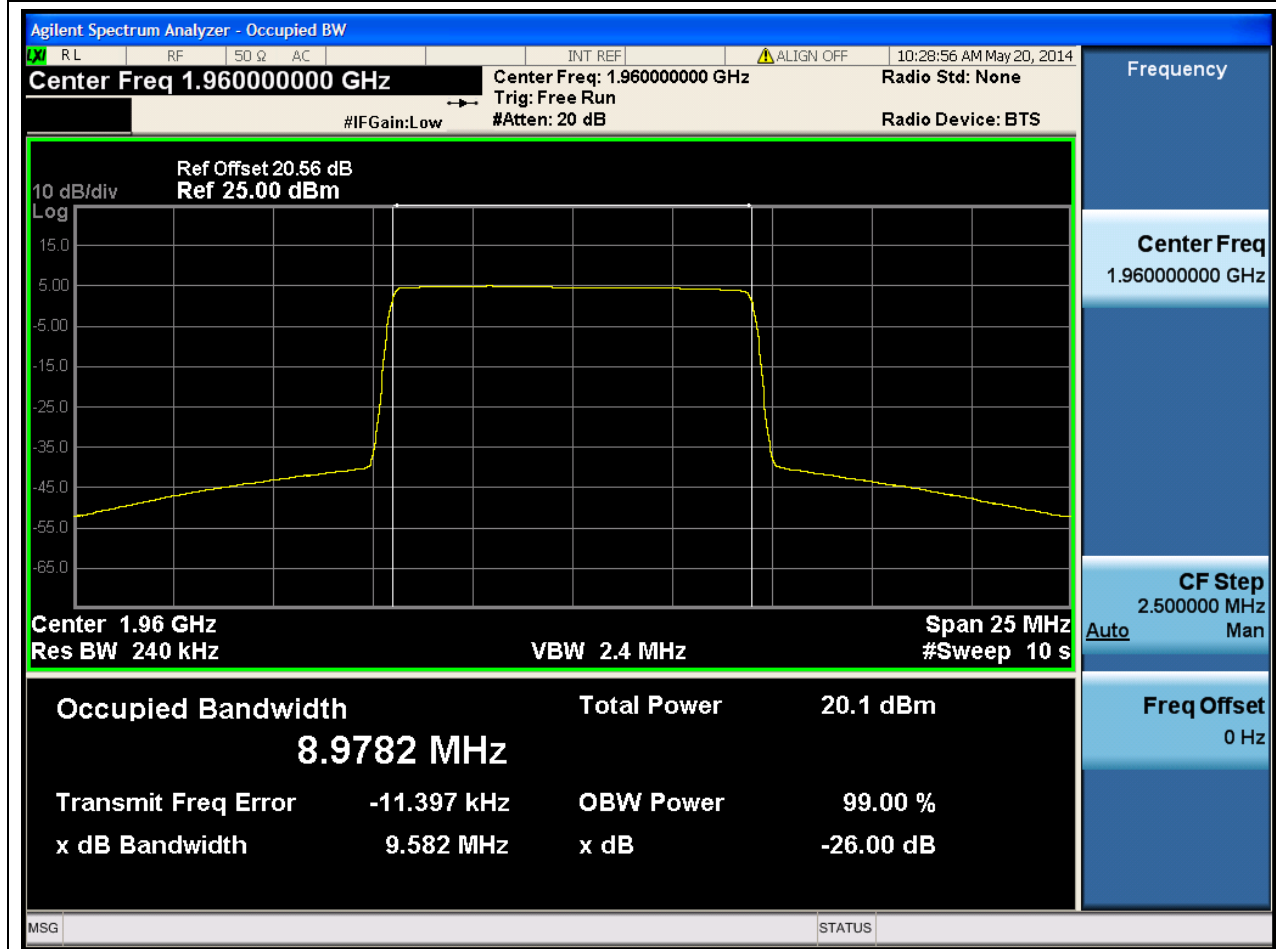


2.1.4 10M_B

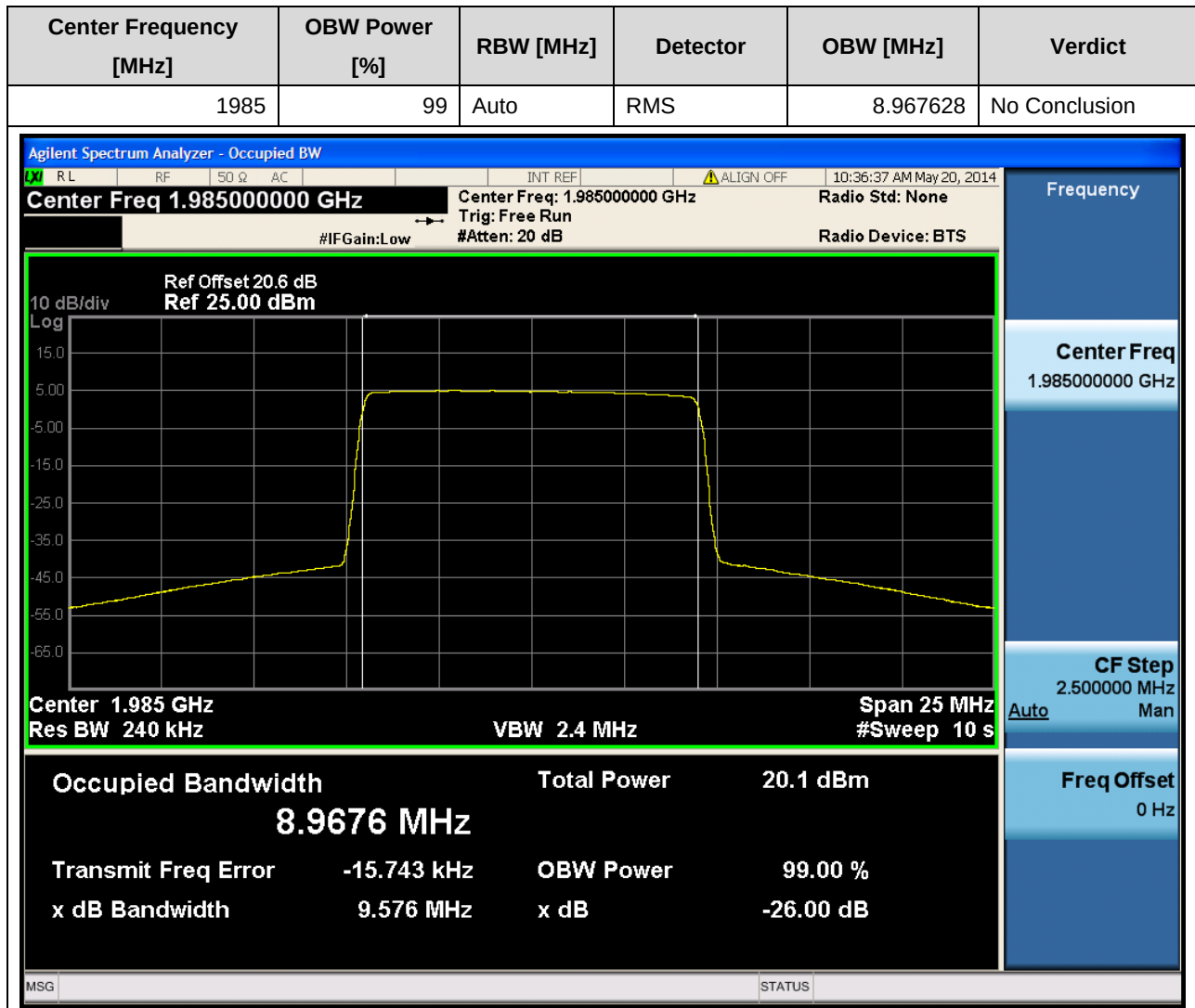


2.1.5 10M_M

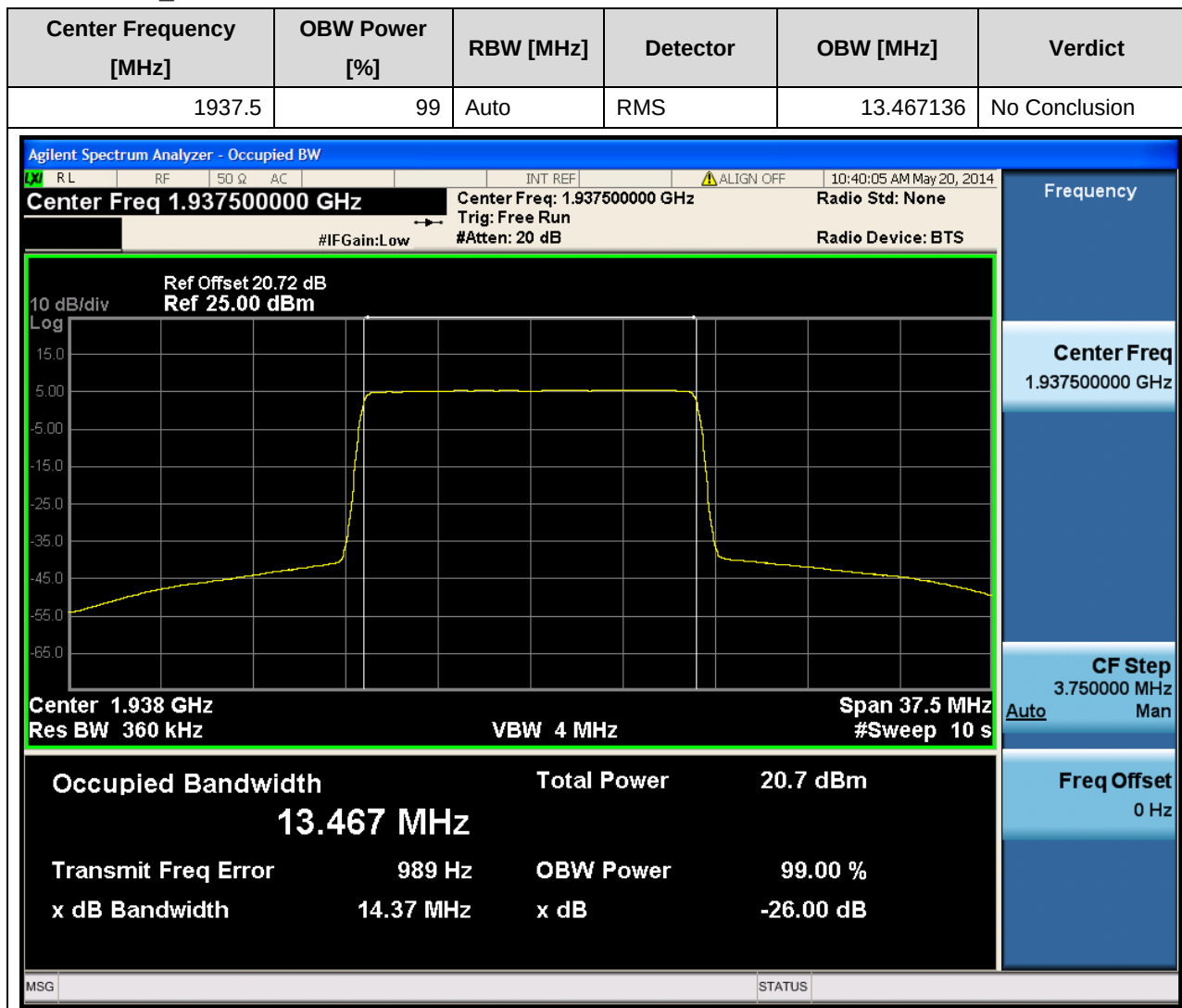
Center Frequency [MHz]	OBW Power [%]	RBW [MHz]	Detector	OBW [MHz]	Verdict
1960	99	Auto	RMS	8.978188	No Conclusion



2.1.6 10M_T

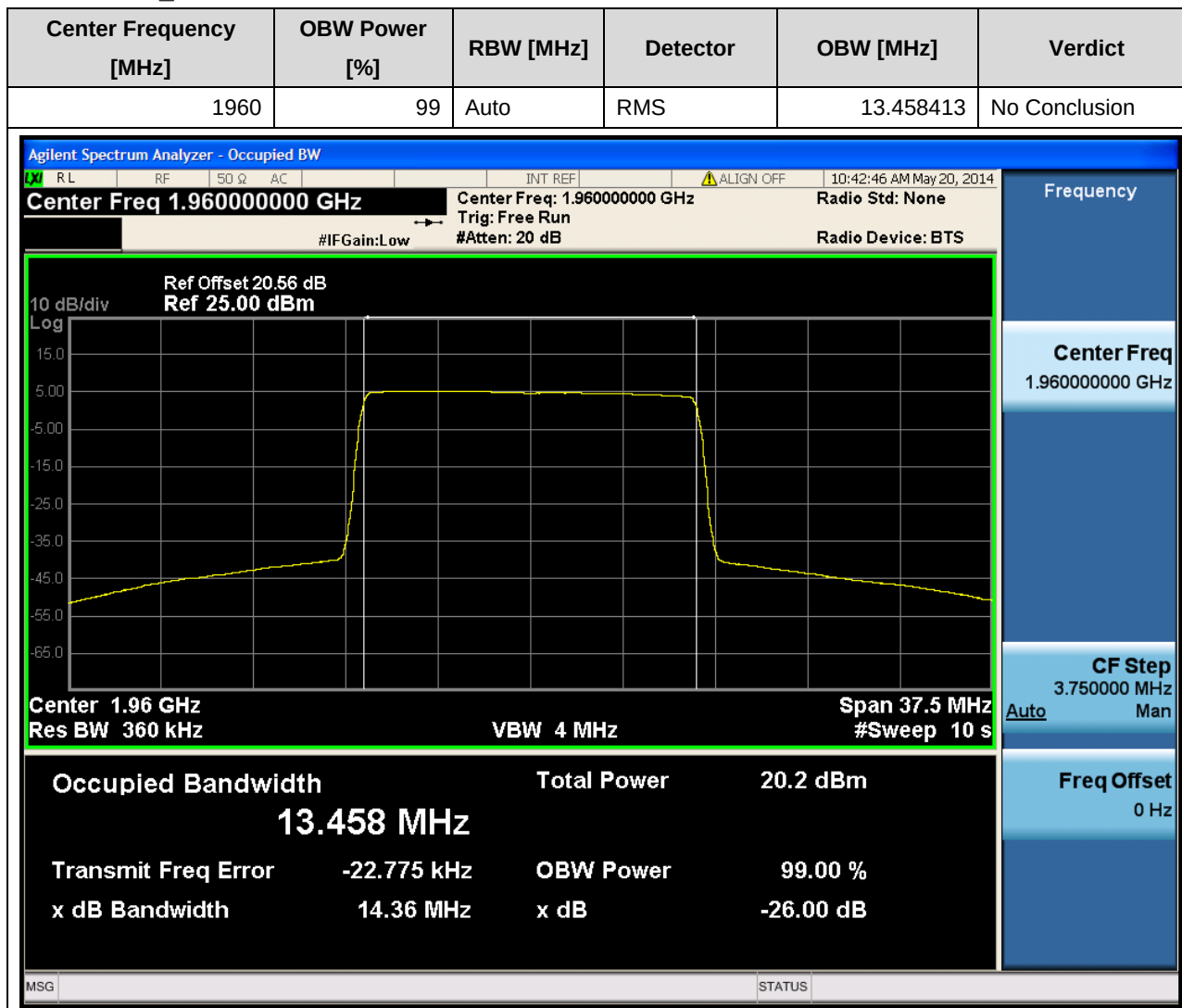


2.1.7 15M_B

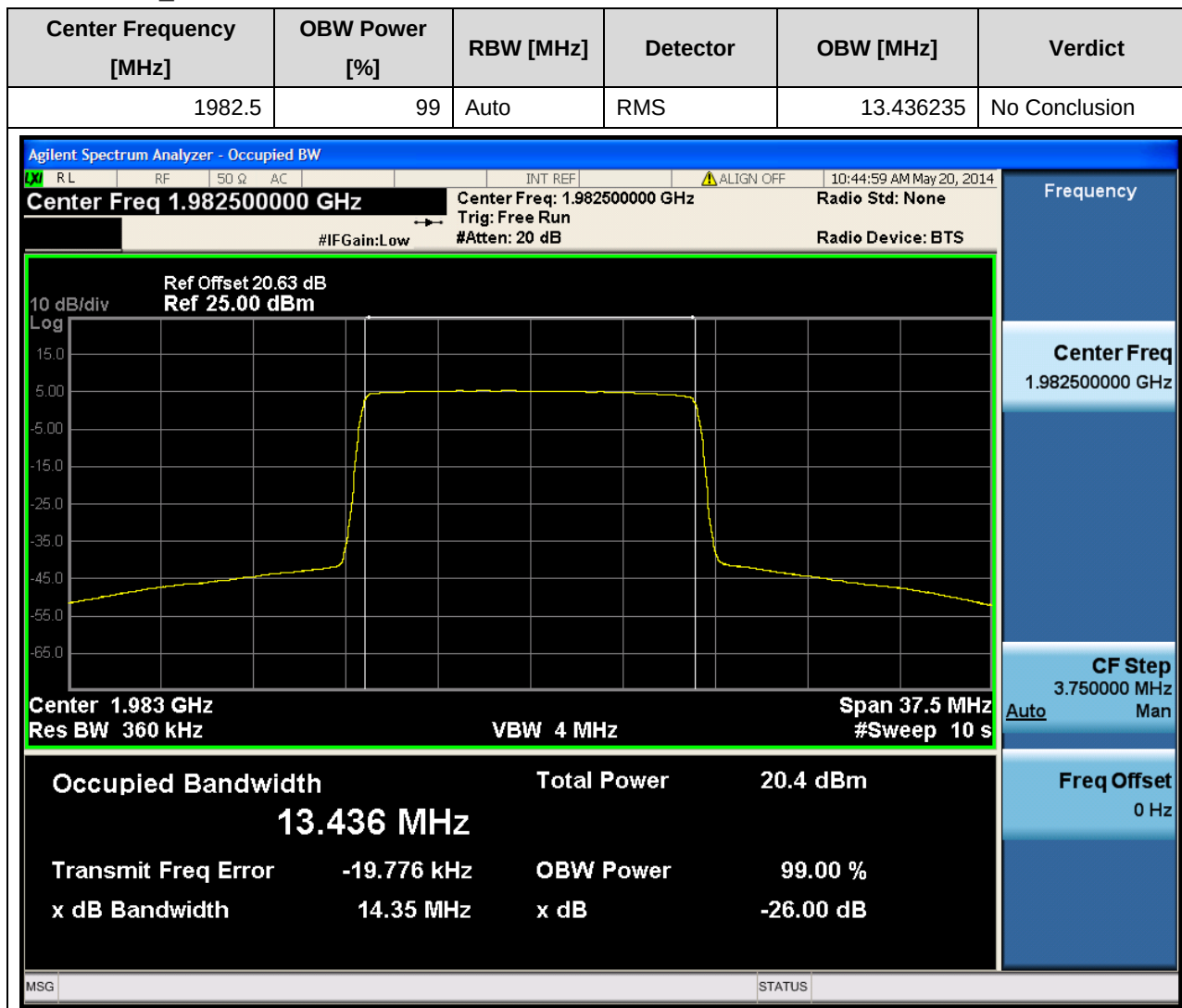




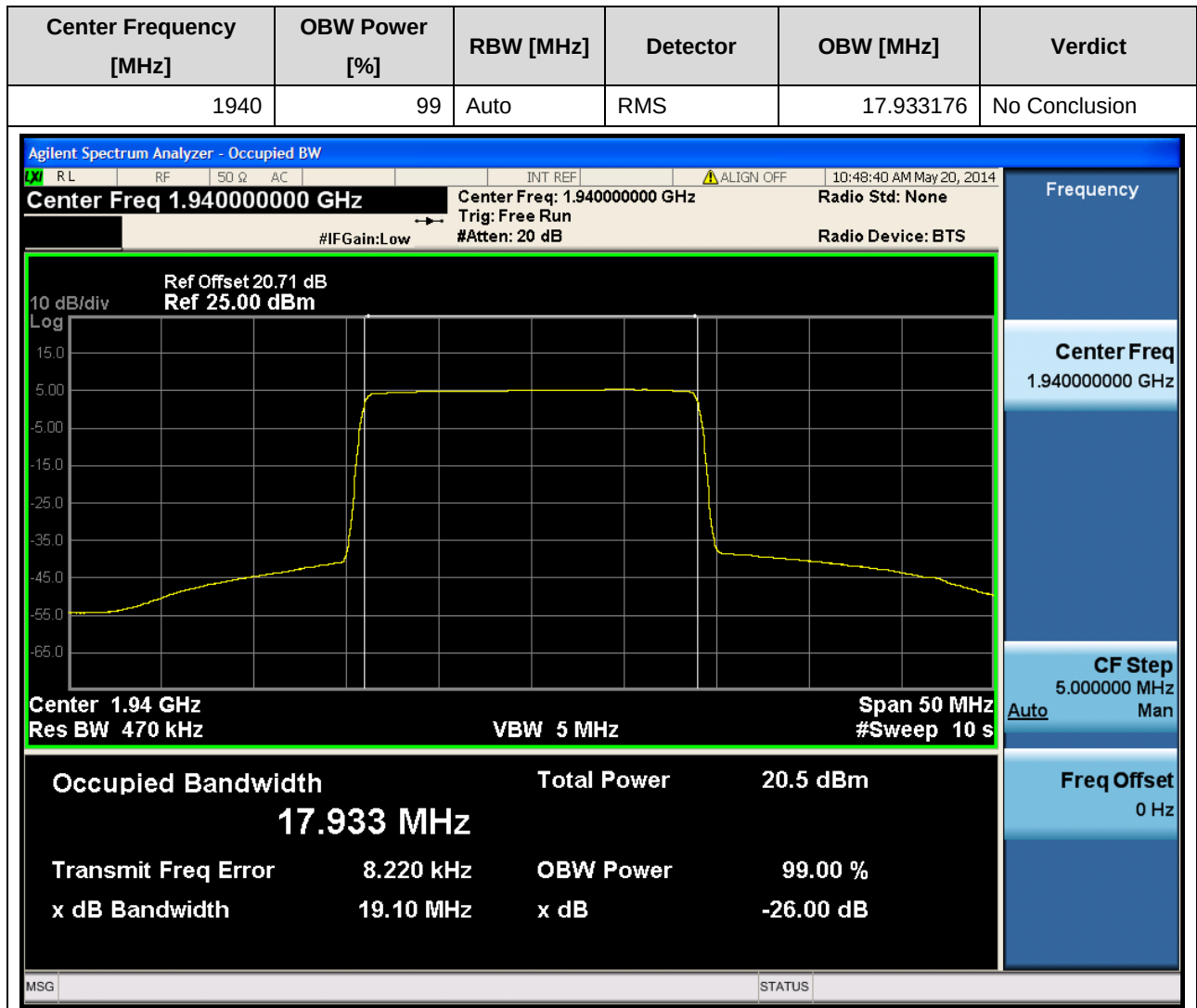
2.1.8 15M_M



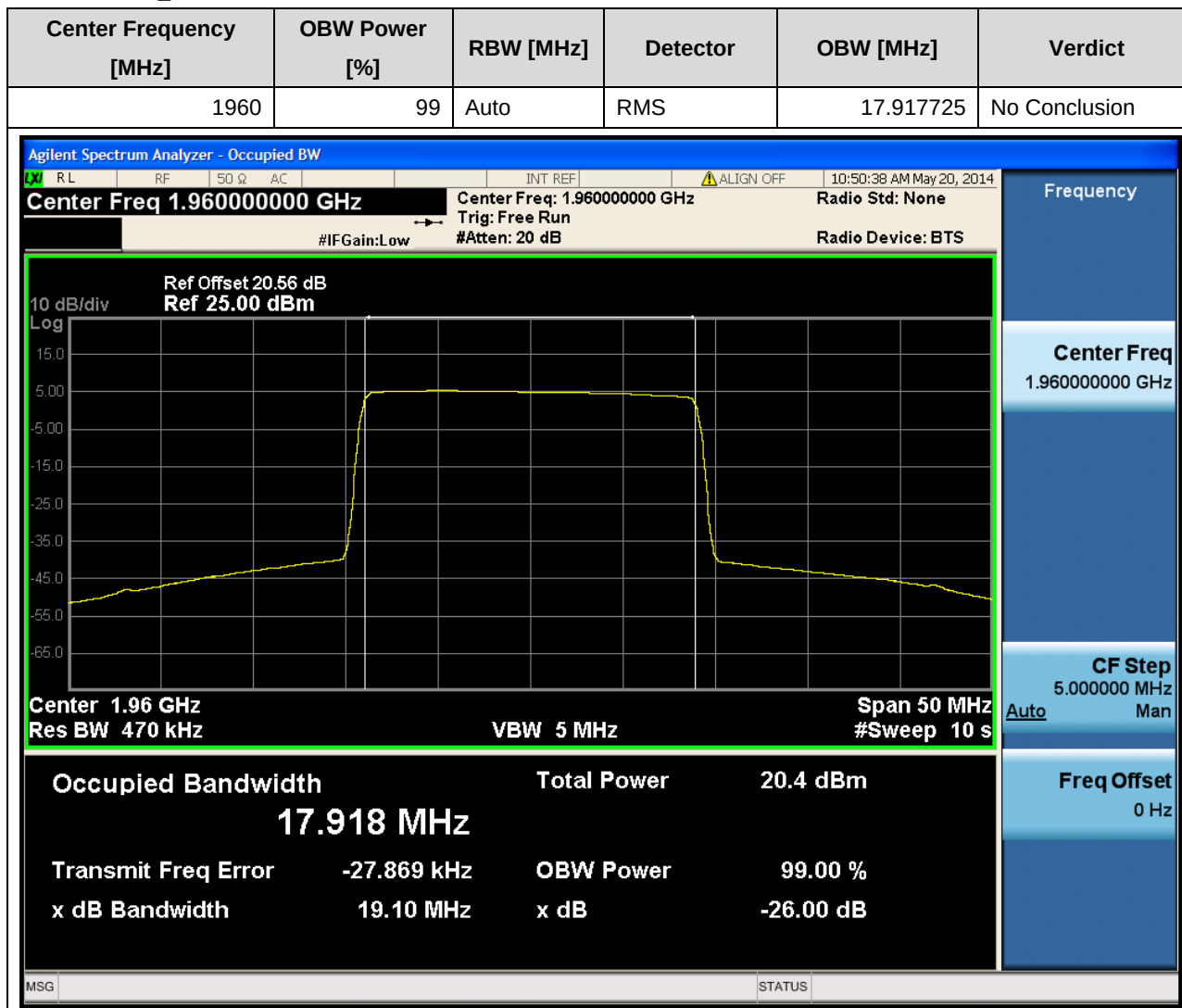
2.1.9 15M_T



2.1.10 20M_B

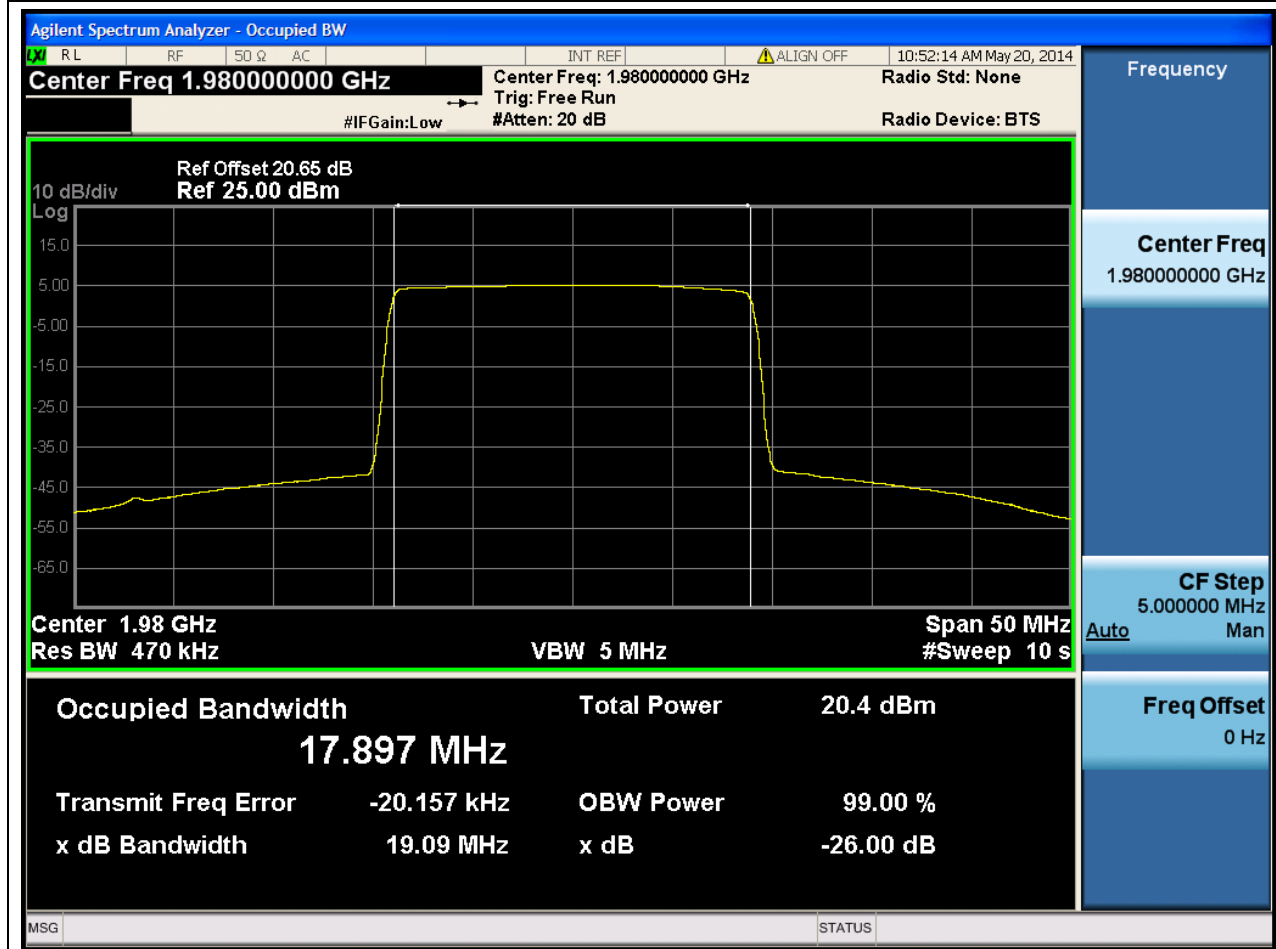


2.1.11 20M_M

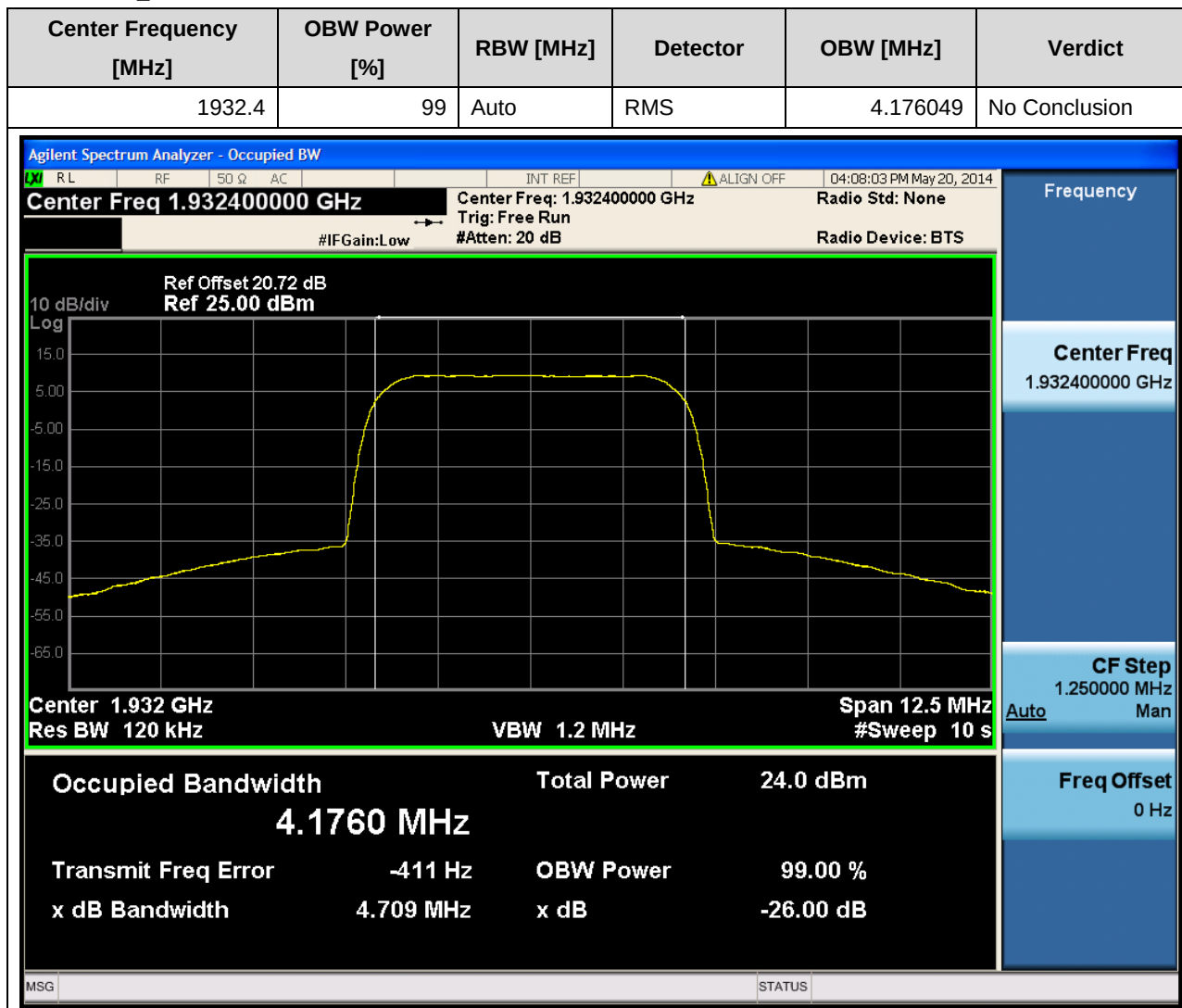


2.1.12 20M_T

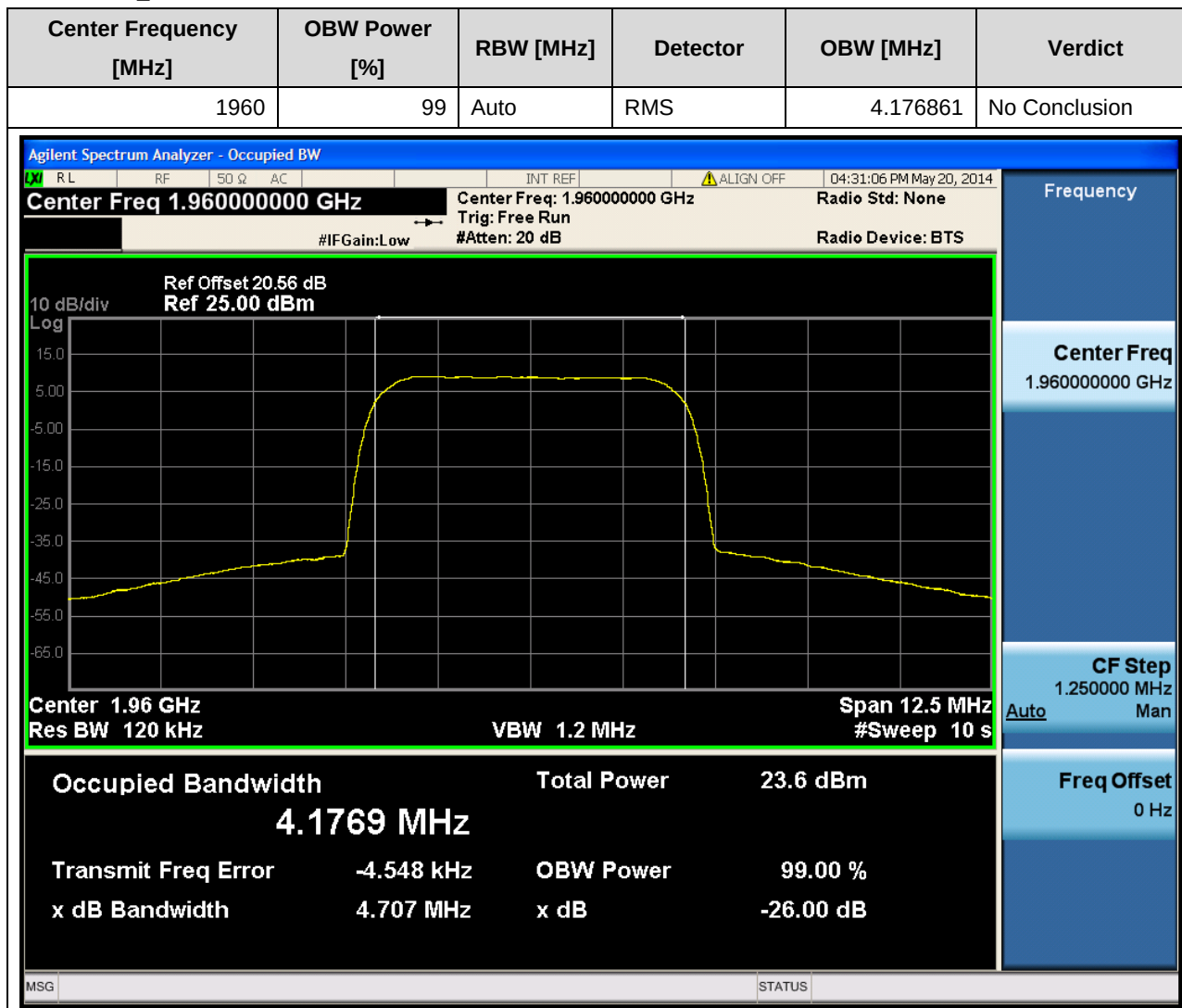
Center Frequency [MHz]	OBW Power [%]	RBW [MHz]	Detector	OBW [MHz]	Verdict
1980	99	Auto	RMS	17.896821	No Conclusion



2.1.13 1U_B

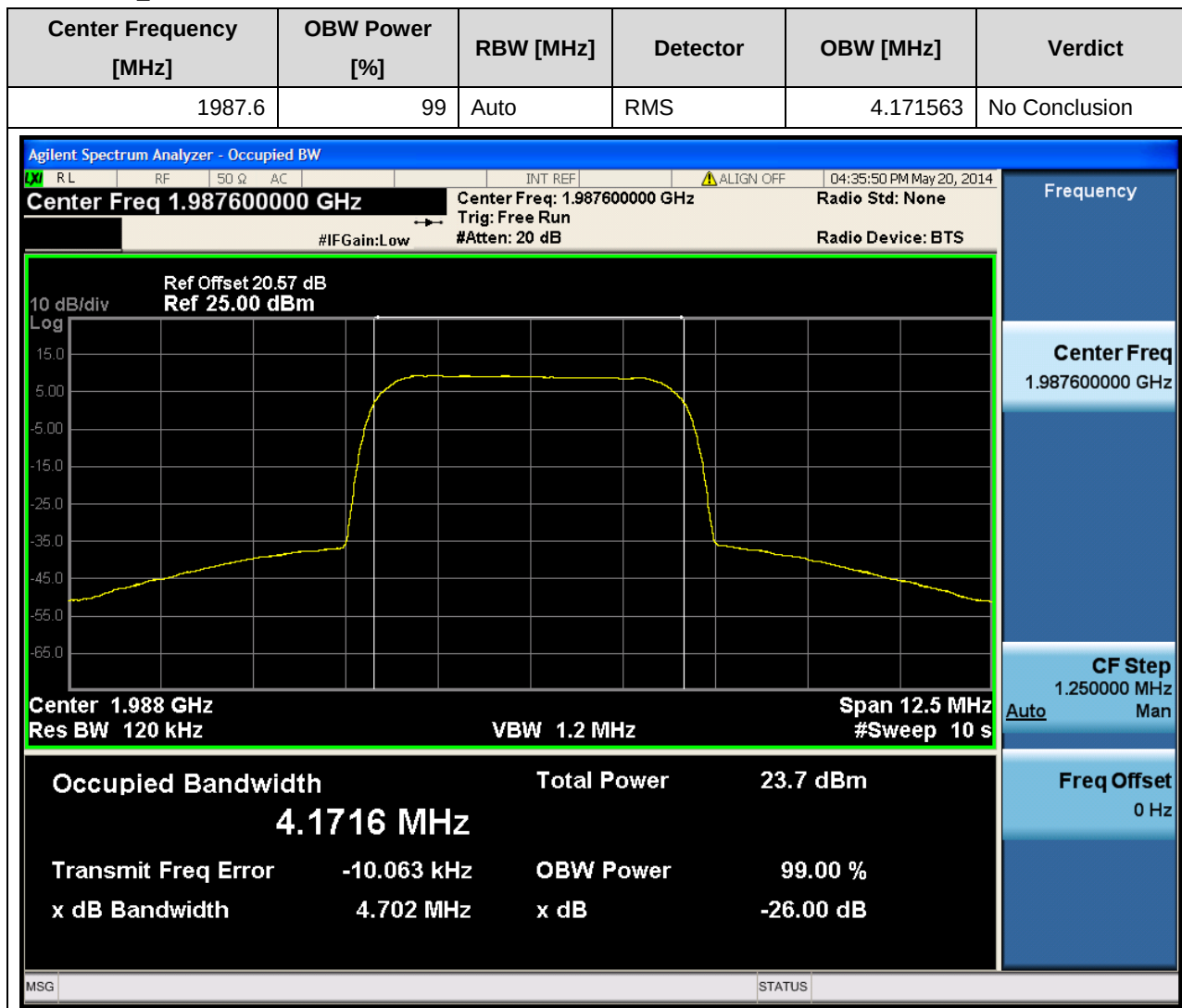


2.1.14 1U_M





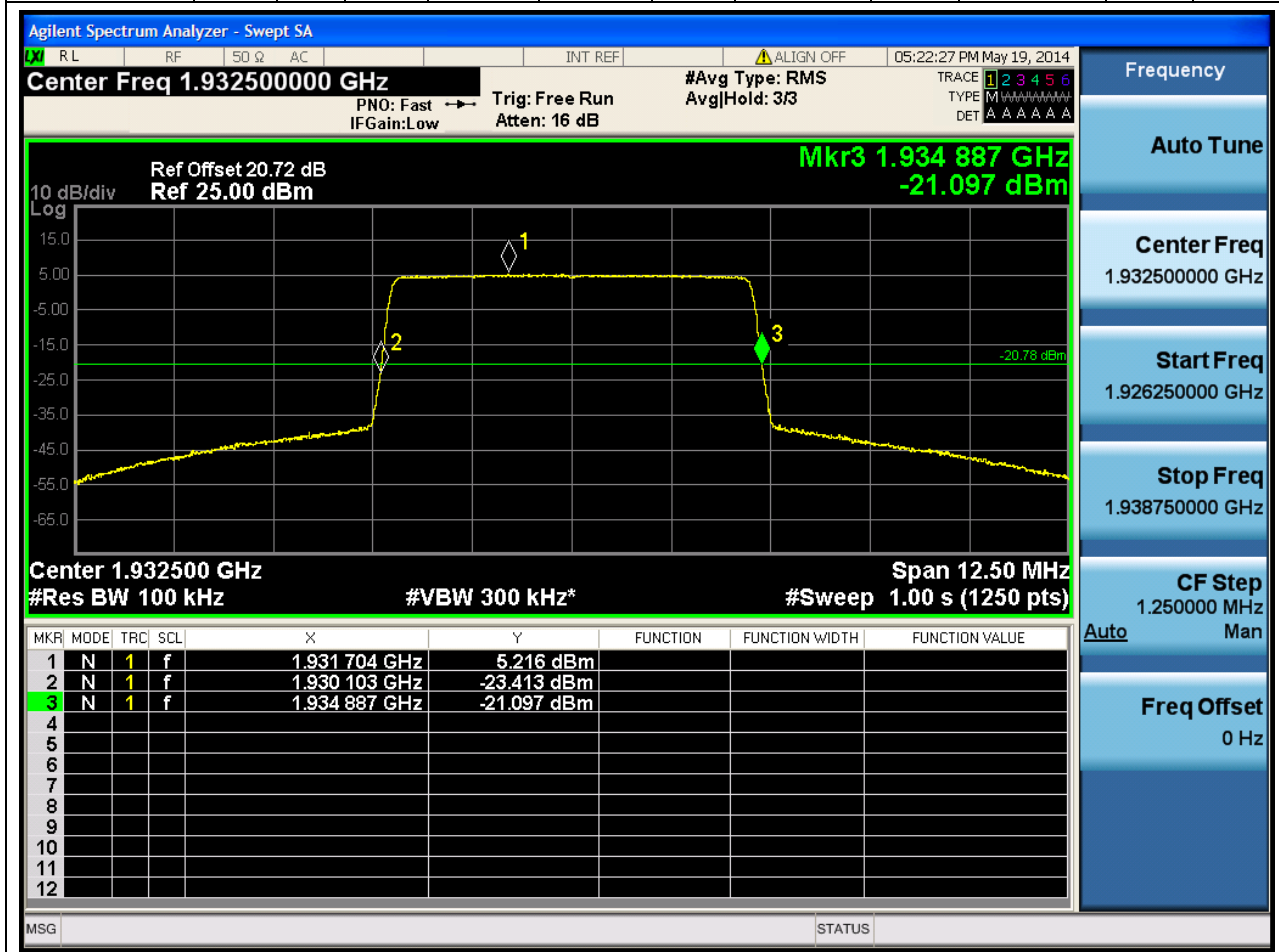
2.1.15 1U_T



2.2 Emission Bandwidth

2.2.1 5M_B

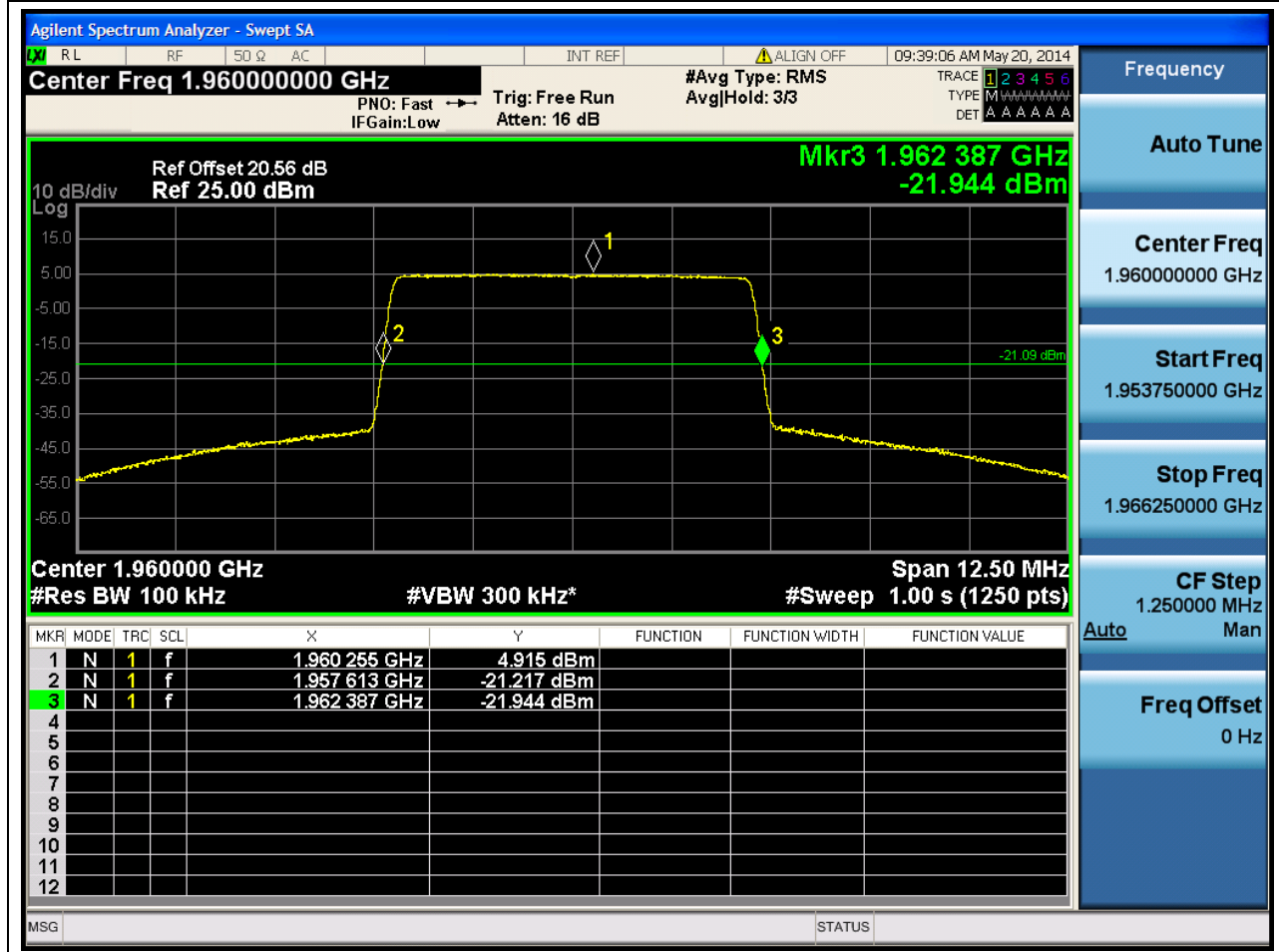
Center Frequency[M Hz]	Spa n [MH z]	nd B [dB]	RB W [MH z]	Detect or	ndB BW [MHz]	BW Limi t [MH z]	Lower Freq [MHz]	Low er Limit [MHz]	Upper Freq [MHz]	Upp er Limit [MHz]	Verdi ct
1932.5	12.5	26	0.1	RMS	4.7838 72	5	1930.103 04	1930	1934.8869 12	1990	Pass





2.2.2 5M_M

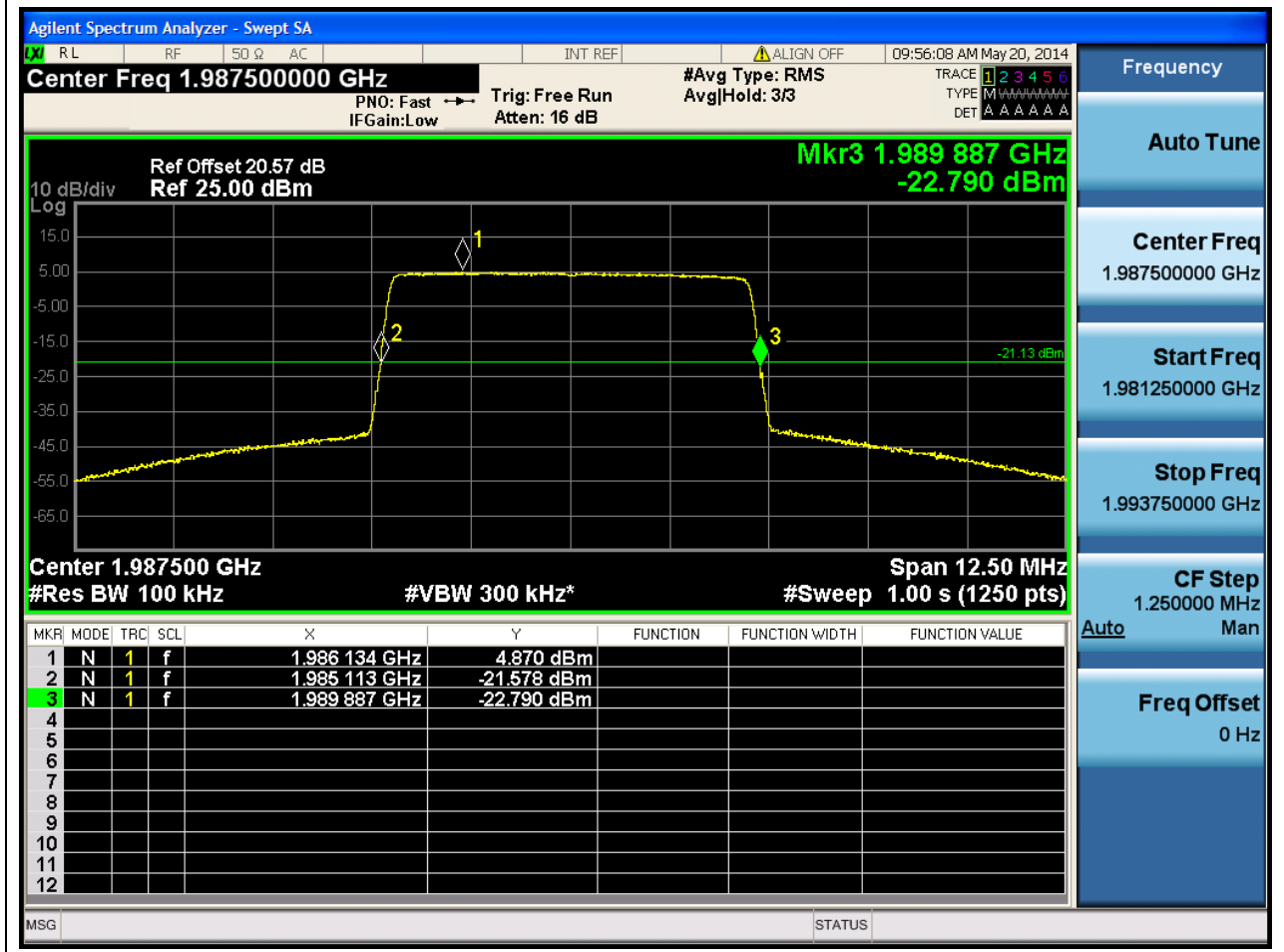
Center Frequency[MHz]	Span [MHz]	nd B [dB]	RB W [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Low er Limit [MHz]	Upper Freq [MHz]	Upp er Limit [MHz]	Verdict
1960	12.5	26	0.1	RMS	4.773888	5	1957.613056	1930	1962.386944	1990	Pass





2.2.3 5M_T

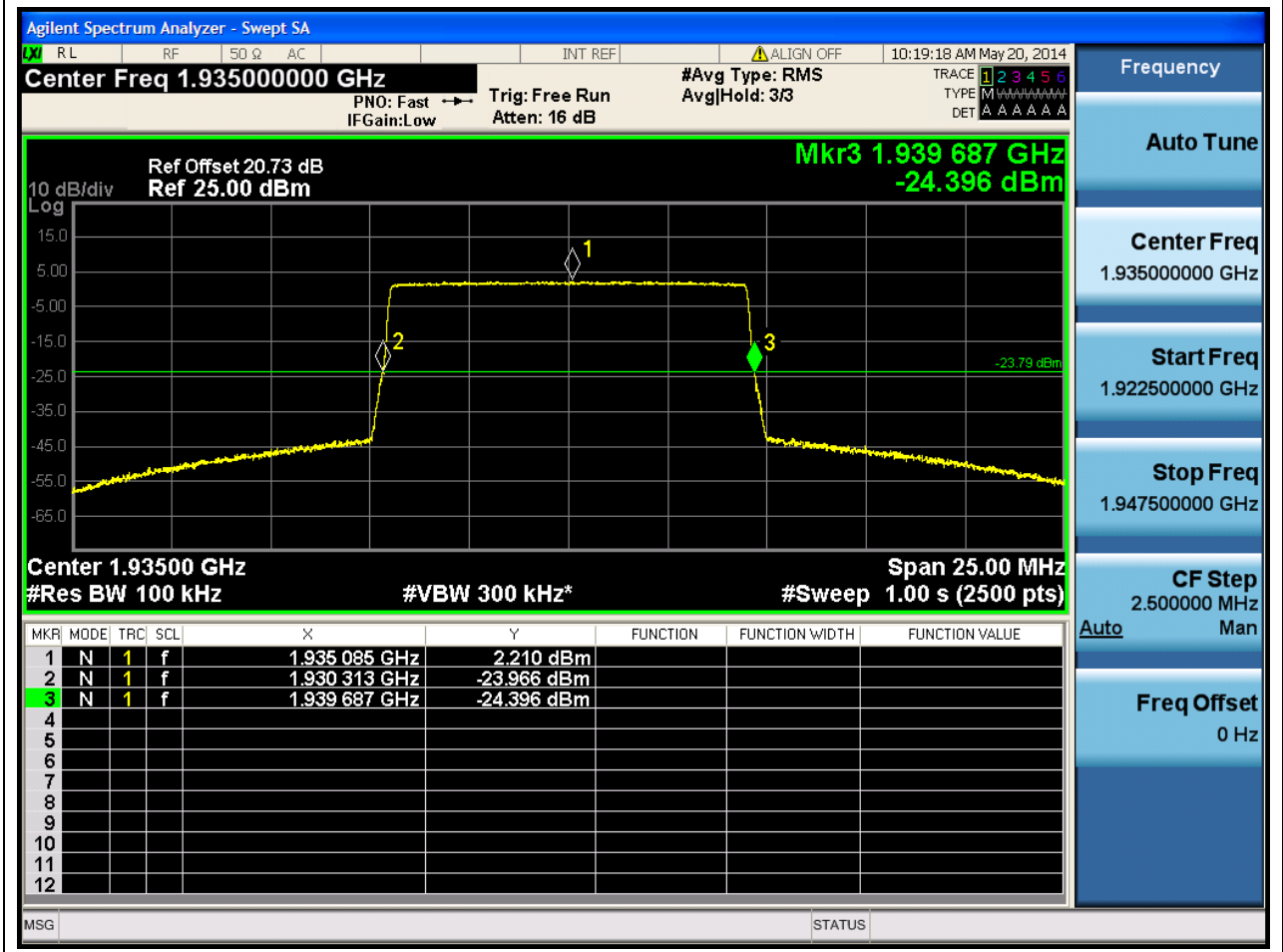
Center Frequency[MHz]	Span [MHz]	nd B [dB]	RBW [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1987.5	12.5	26	0.1	RMS	4.77376	5	1985.113088	1930	1989.886848	1990	Pass





2.2.4 10M_B

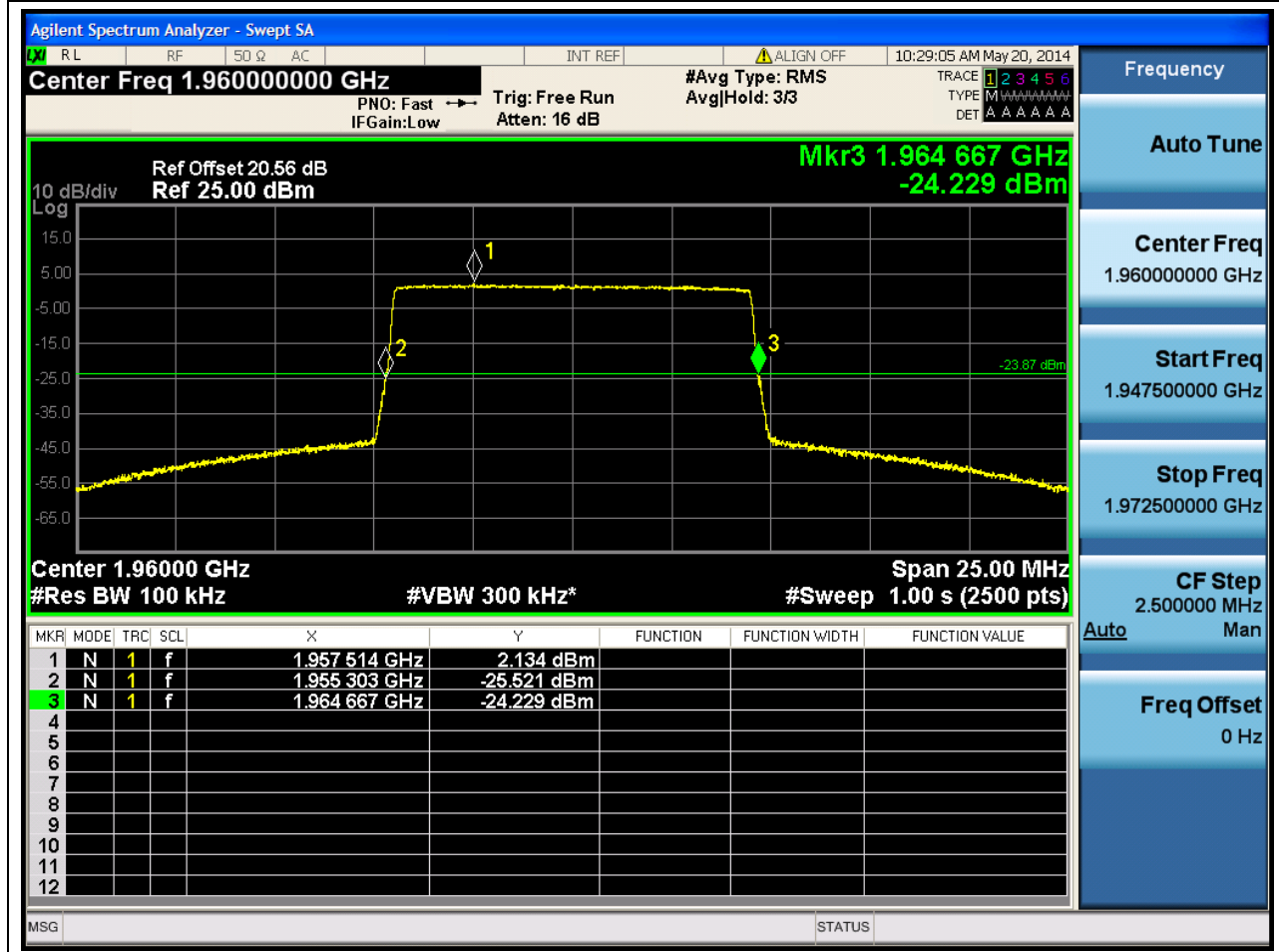
Center Frequency[MHz]	Span [MHz]	nd B [dB]	RB W [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Low er Limit [MHz]	Upper Freq [MHz]	Upp er Limit [MHz]	Verdict
1935	25	26	0.1	RMS	9.373824	10	1930.313088	1930	1939.686912	1990	Pass





2.2.5 10M_M

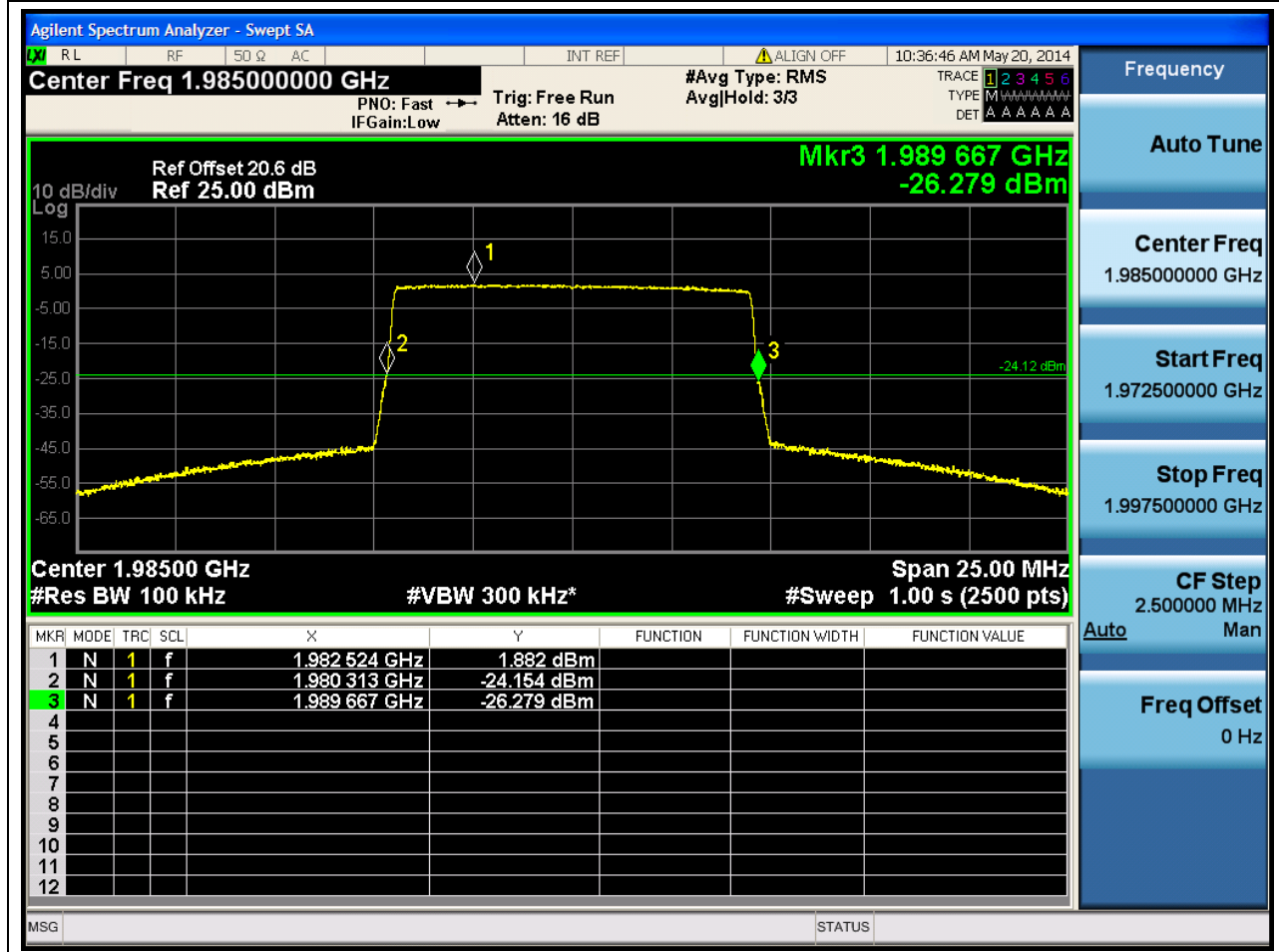
Center Frequency[MHz]	Span [MHz]	nd B [dB]	RBW [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1960	25	26	0.1	RMS	9.363712	10	1955.303168	1930	1964.66688	1990	Pass





2.2.6 10M_T

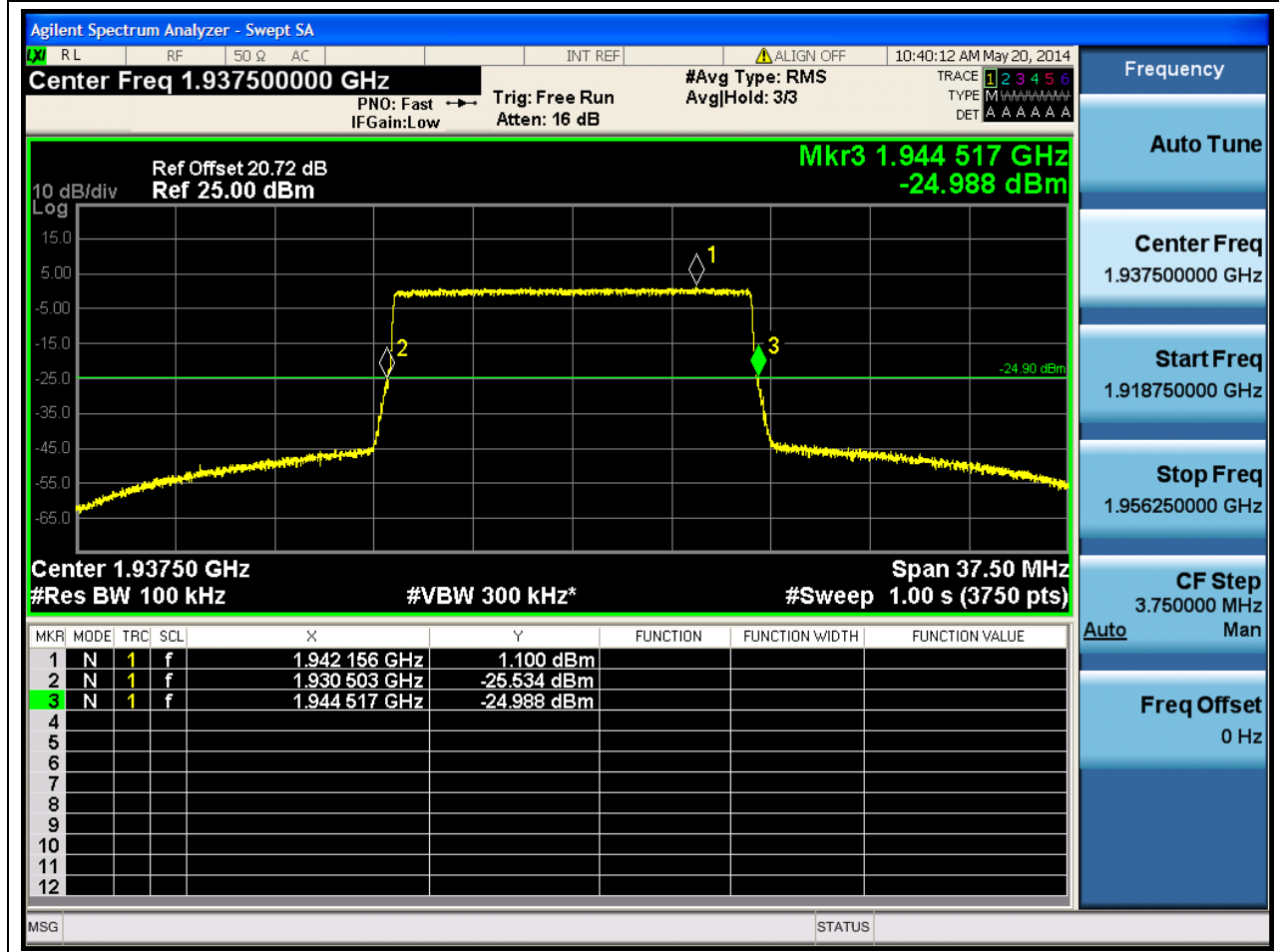
Center Frequency[MHz]	Span [MHz]	nd B [dB]	RB W [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Low er Limit [MHz]	Upper Freq [MHz]	Upp er Limit [MHz]	Verdict
1985	25	26	0.1	RMS	9.353728	10	1980.313088	1930	1989.666816	1990	Pass





2.2.7 15M_B

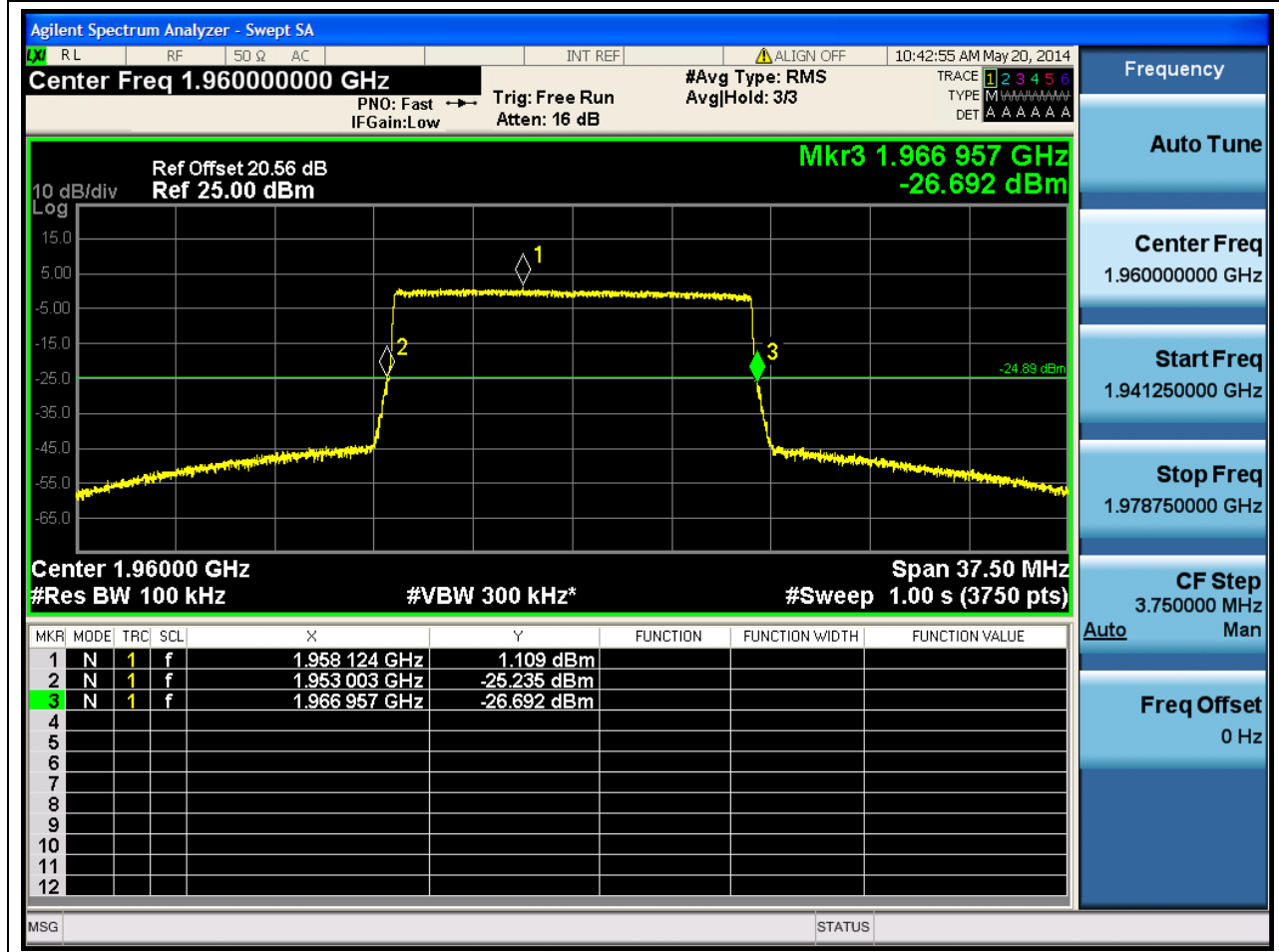
Center Frequency[MHz]	Span [MHz]	nd B [dB]	RB W [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1937.5	37.5	26	0.1	RMS	14.013696	15	1930.503168	1930	1944.516864	1990	Pass





2.2.8 15M_M

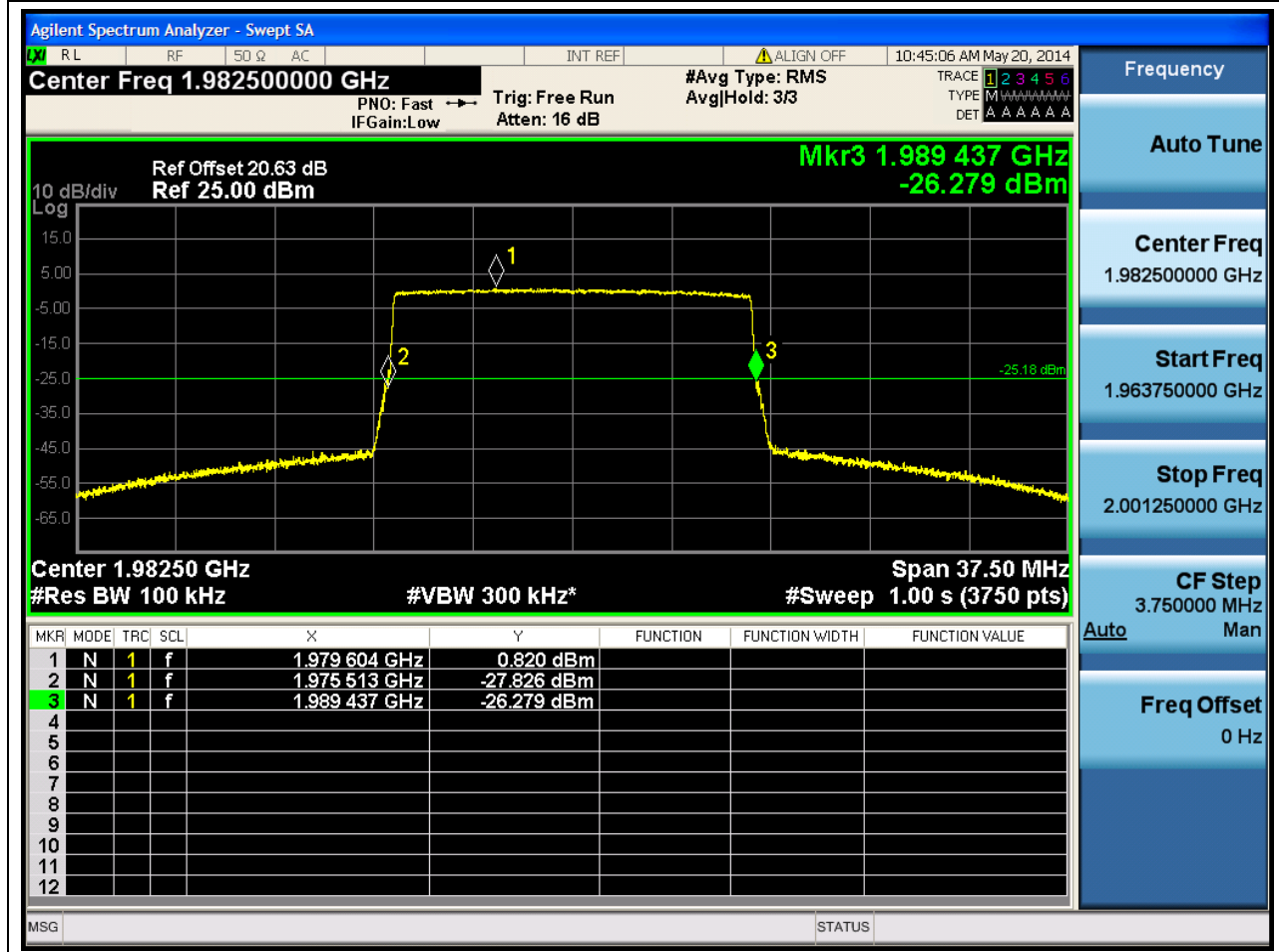
Center Frequency[MHz]	Span [MHz]	ndB [dB]	RBW [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1960	37.5	26	0.1	RMS	13.953664	15	1953.003136	1930	1966.9568	1990	Pass





2.2.9 15M_T

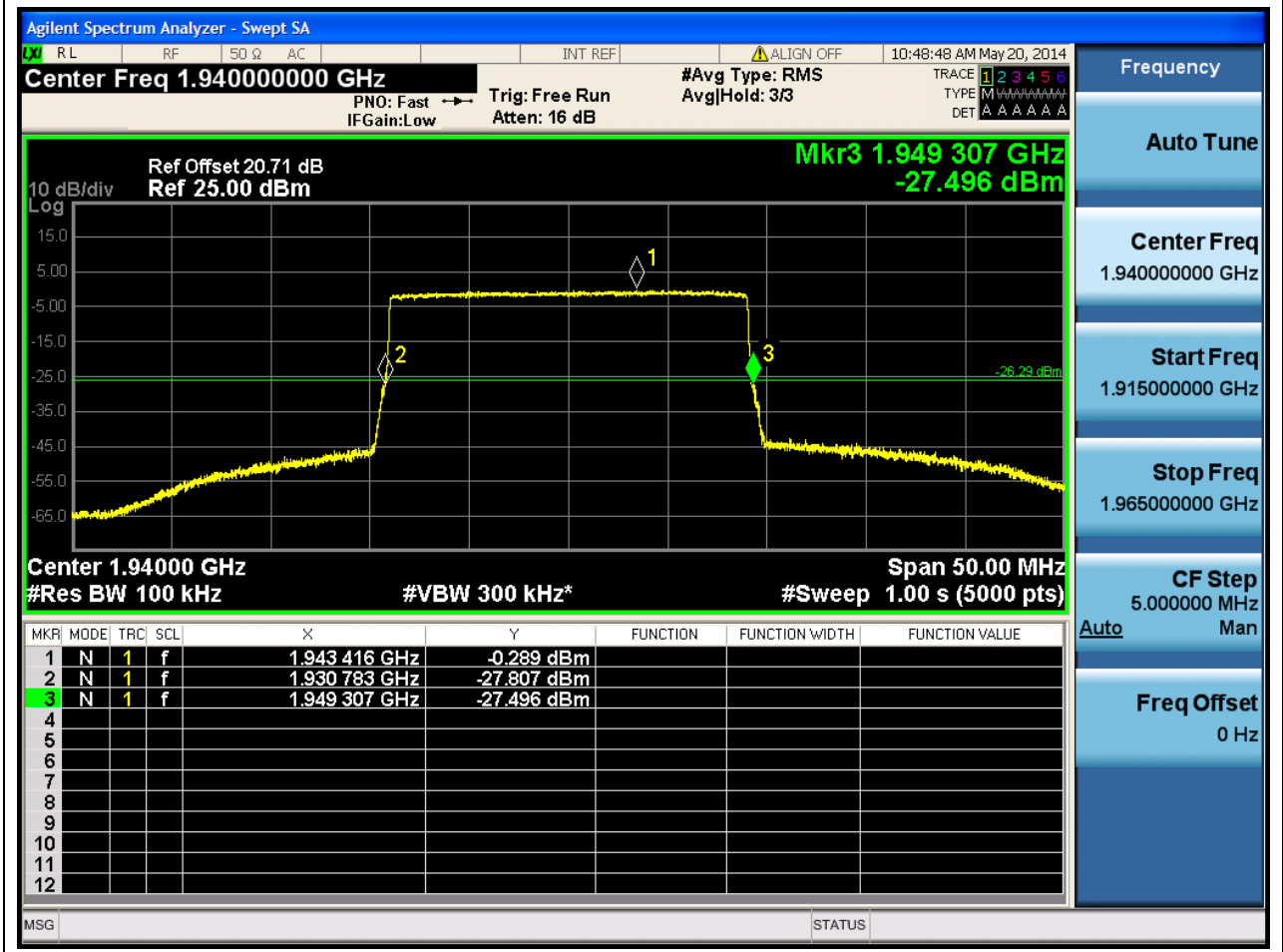
Center Frequency[MHz]	Span [MHz]	ndB [dB]	RBW [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1982.5	37.5	26	0.1	RMS	13.923712	15	1975.513088	1930	1989.4368	1990	Pass





2.2.10 20M_B

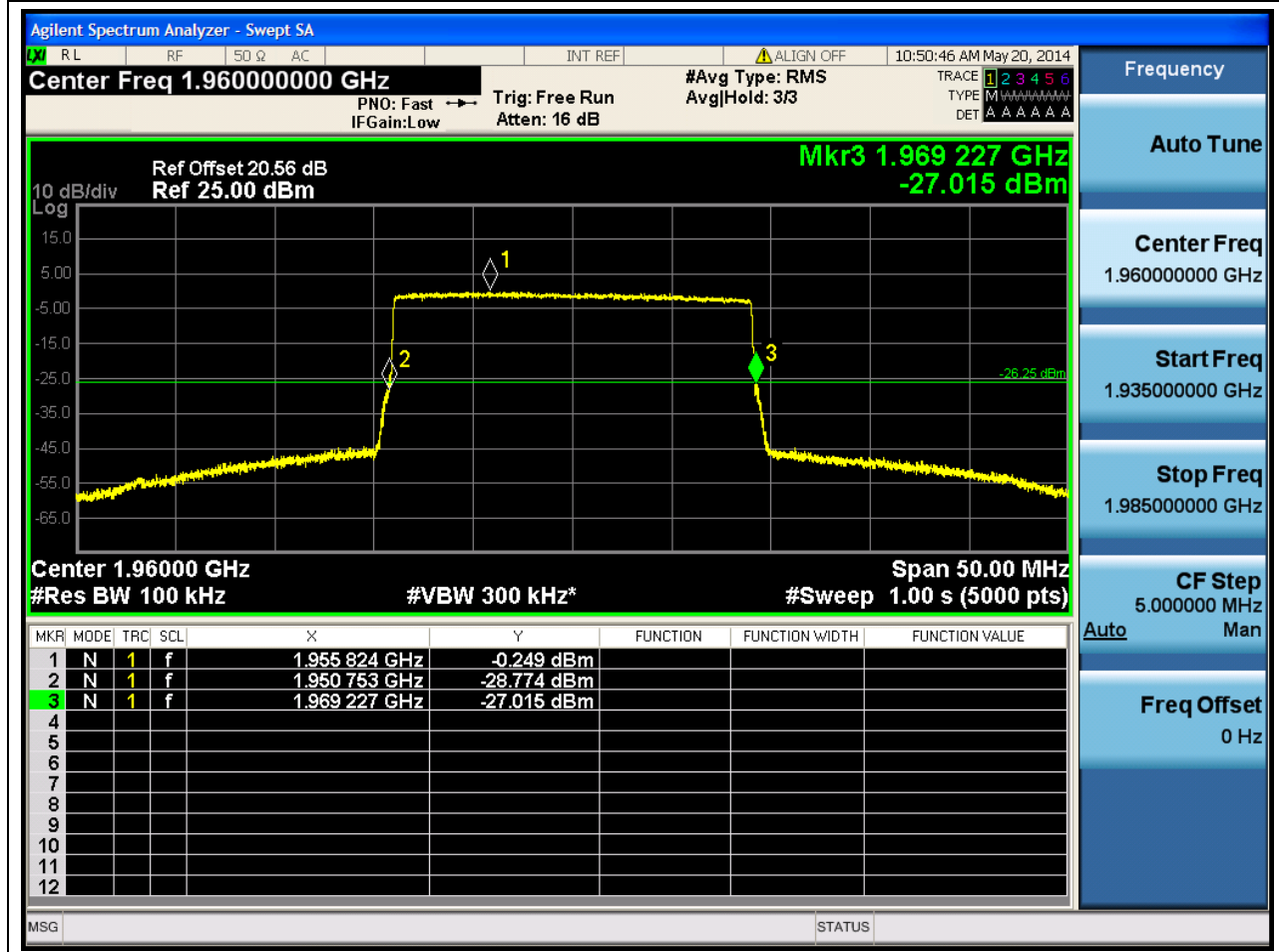
Center Frequency[MHz]	Span [MHz]	ndB [dB]	RBW [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1940	50	26	0.1	RMS	18.523776	20	1930.783104	1930	1949.30688	1990	Pass





2.2.11 20M_M

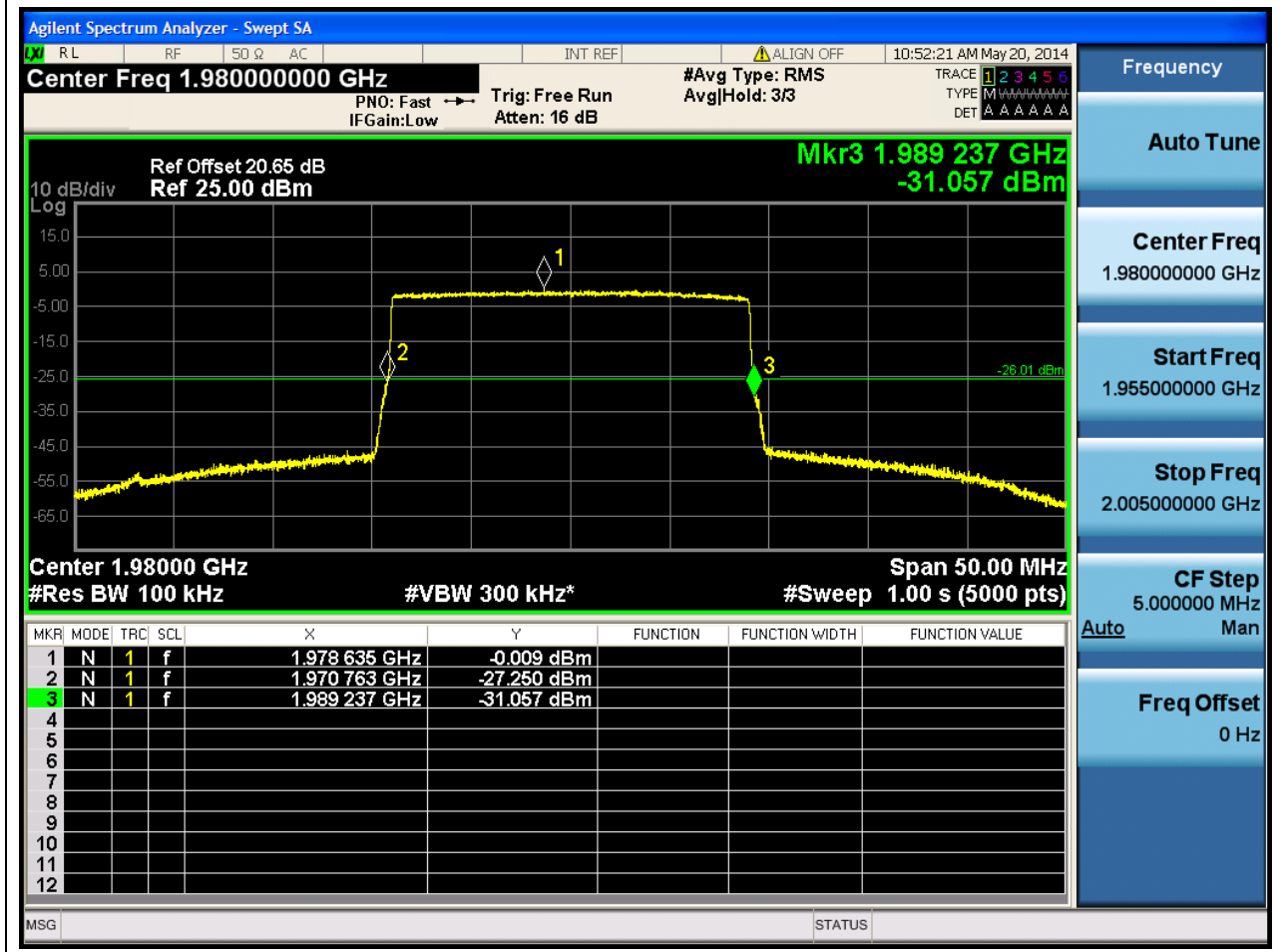
Center Frequency[MHz]	Span [MHz]	ndB [dB]	RBW [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1960	50	26	0.1	RMS	18.473728	20	1950.753152	1930	1969.22688	1990	Pass





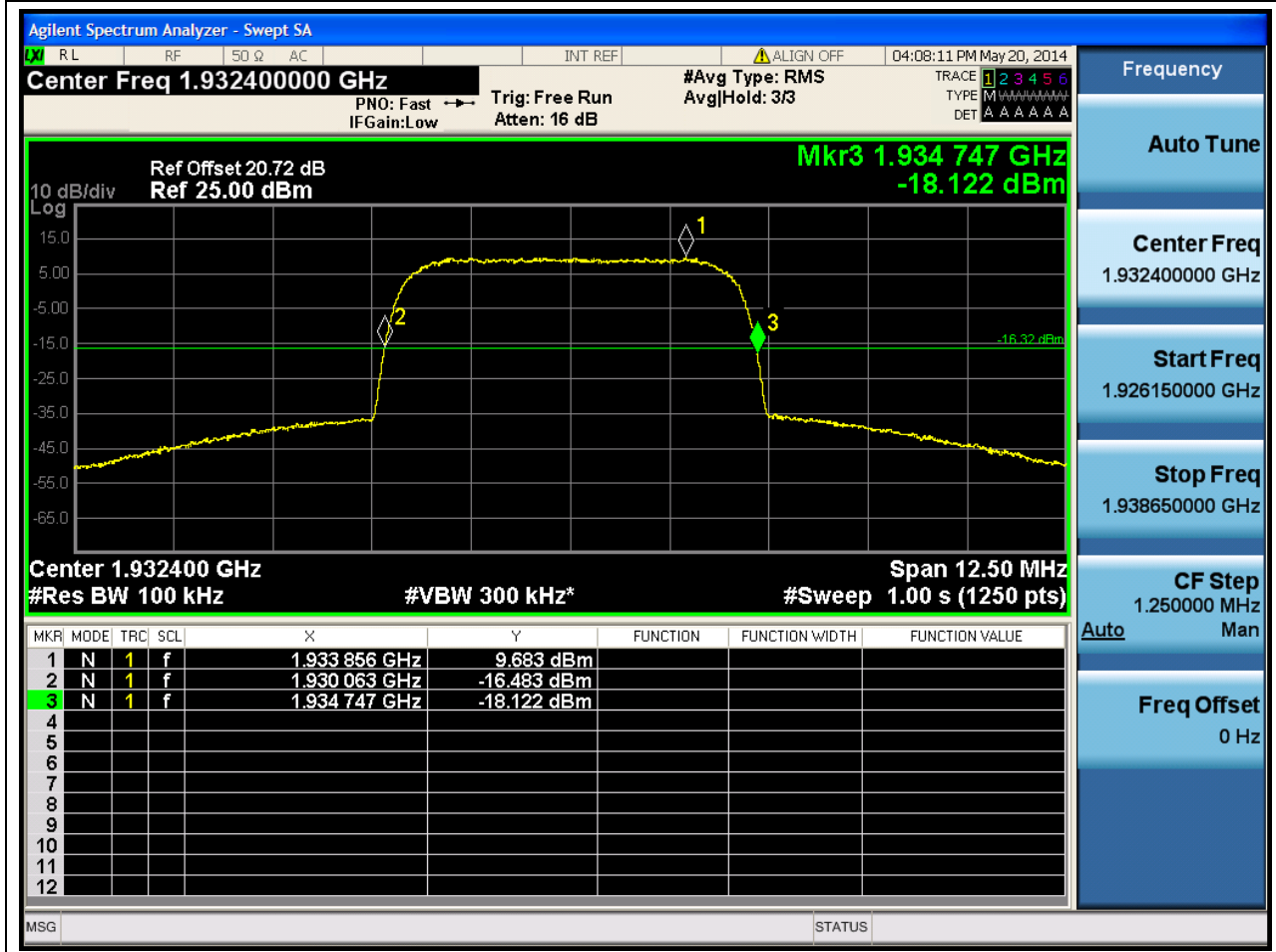
2.2.12 20M_T

Center Frequency[MHz]	Span [MHz]	nd B [dB]	RB W [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1980	50	26	0.1	RMS	18.473728	20	1970.763136	1930	1989.236864	1990	Pass



2.2.13 1U_B

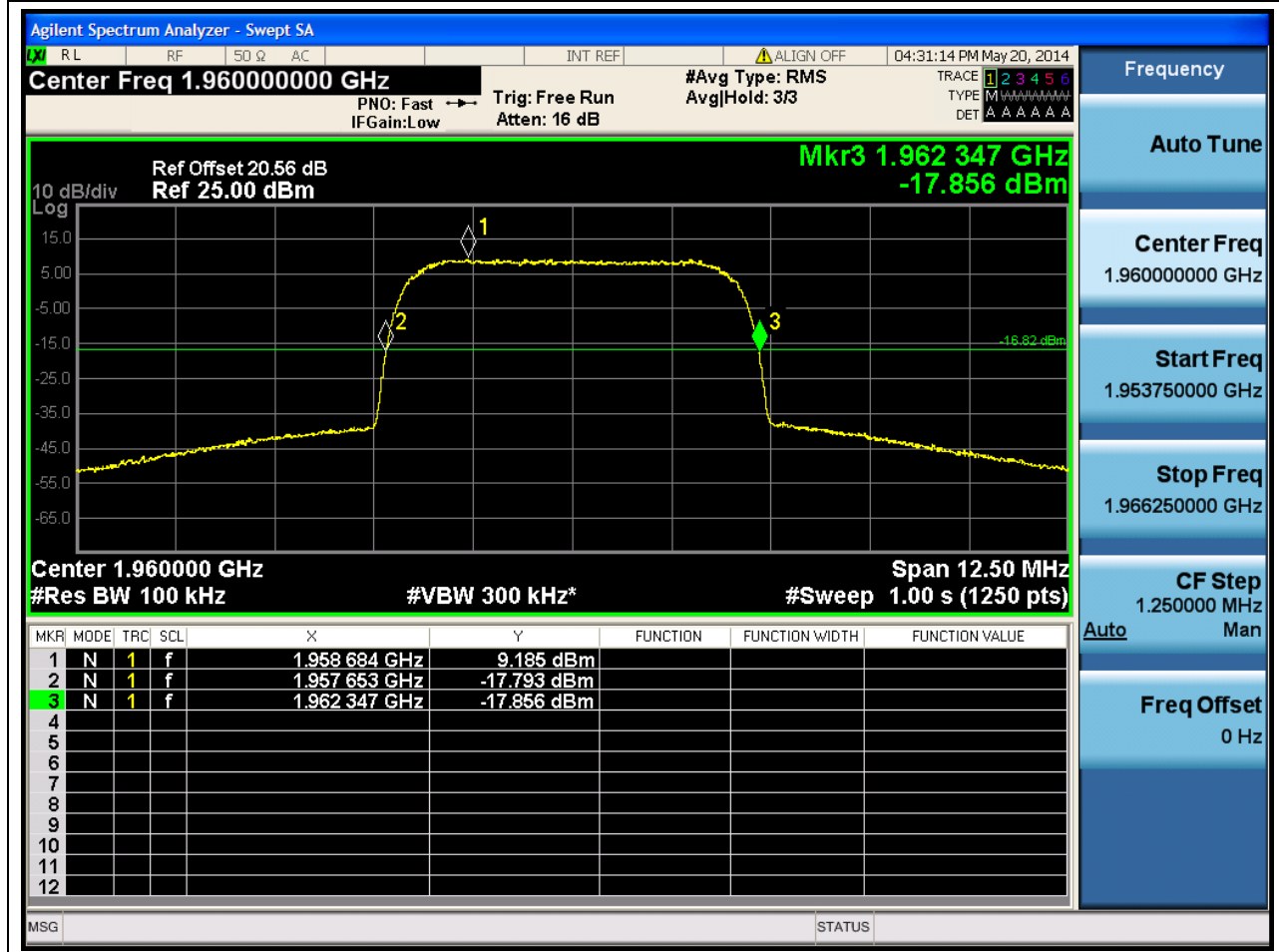
Center Frequency[M Hz]	Spa n [MH z]	nd B [dB]	RB W [MH z]	Detect or	ndB BW [MHz]	BW Limi t [MH z]	Lower Freq [MHz]	Low er Limit [MHz]	Upper Freq [MHz]	Upp er Limit [MHz]	Verdi ct
1932.4	12.5	26	0.1	RMS	4.6837 76	5	1930.0631 04	1930	1934.746 88	1990	Pass





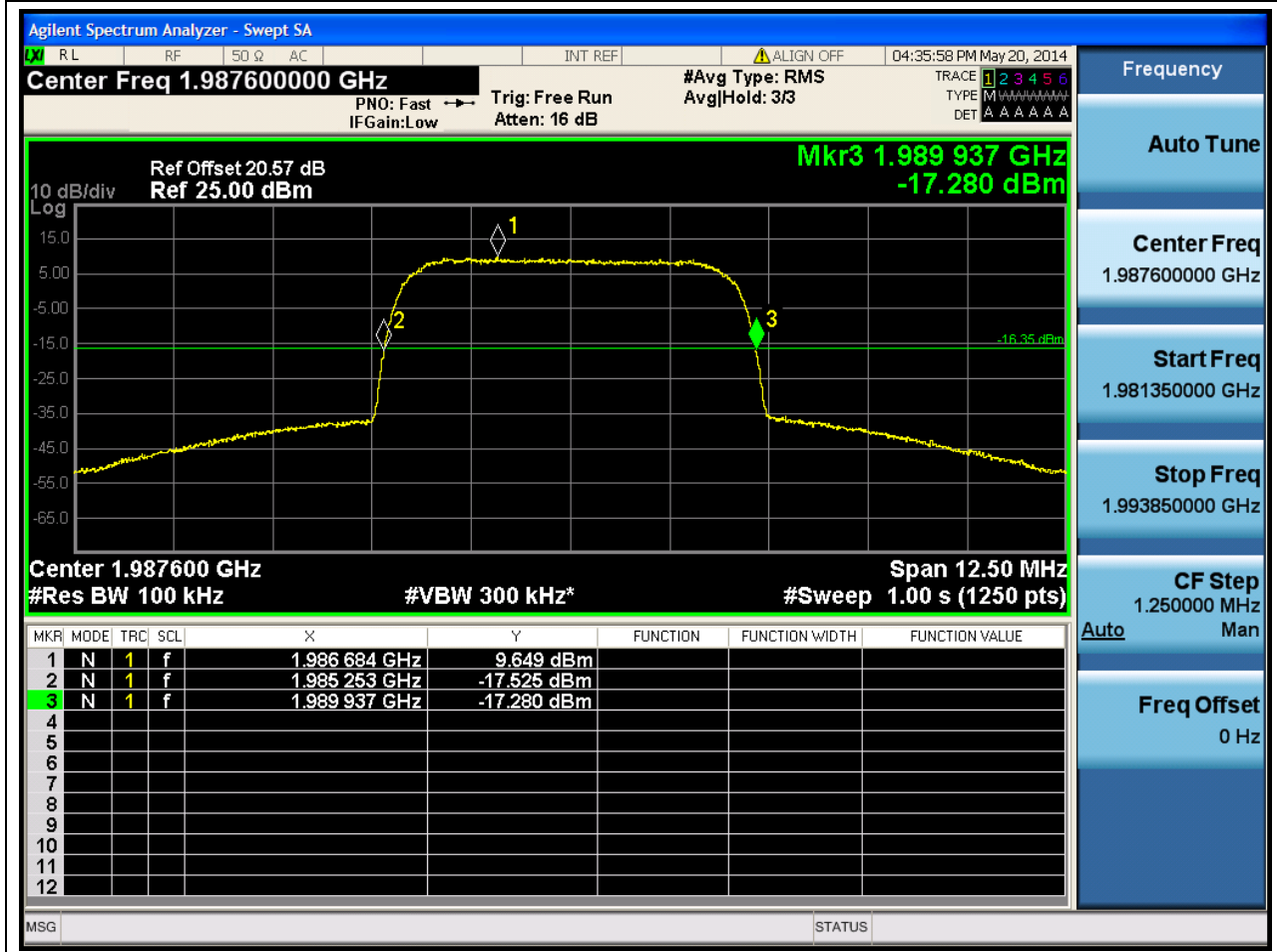
2.2.14 1U_M

Center Frequency[MHz]	Span [MHz]	nd B [dB]	RBW [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1960	12.5	26	0.1	RMS	4.69376	5	1957.65312	1930	1962.34688	1990	Pass



2.2.15 1U_T

Center Frequency[MHz]	Span [MHz]	ndB [dB]	RBW [MHz]	Detect or	ndB BW [MHz]	BW Limit [MHz]	Lower Freq [MHz]	Lower Limit [MHz]	Upper Freq [MHz]	Upper Limit [MHz]	Verdict
1987.6	12.5	26	0.1	RMS	4.683776	5	1985.25312	1930	1989.936896	1990	Pass





Appendix C2: Band Edges Compliance



1 Result Table

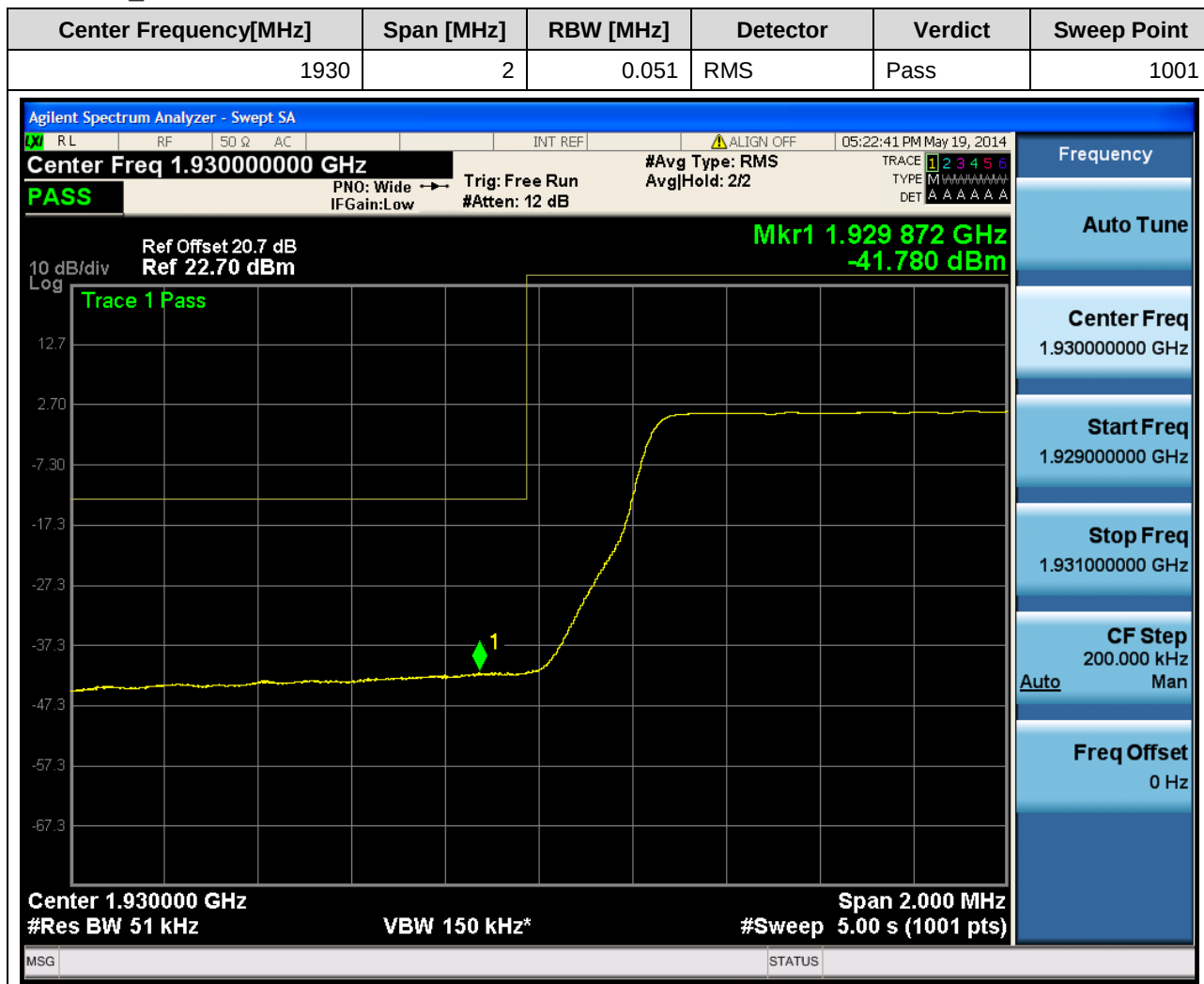
NOTE: The offset of measurement filter -3dB point may be considered when identifying the maximum emission for e.g. the CDMA, WCDMA, WiMAX, LTE systems.

EUT Conf.	Maximum Emission [dBm]	Verdict
5M_B	<-13	Pass
5M_T	<-13	Pass
20M_B	<-13	Pass
20M_T	<-13	Pass
1U_B	<-13	Pass
1U_T	<-13	Pass
2U_B	<-13	Pass
2U_T	<-13	Pass



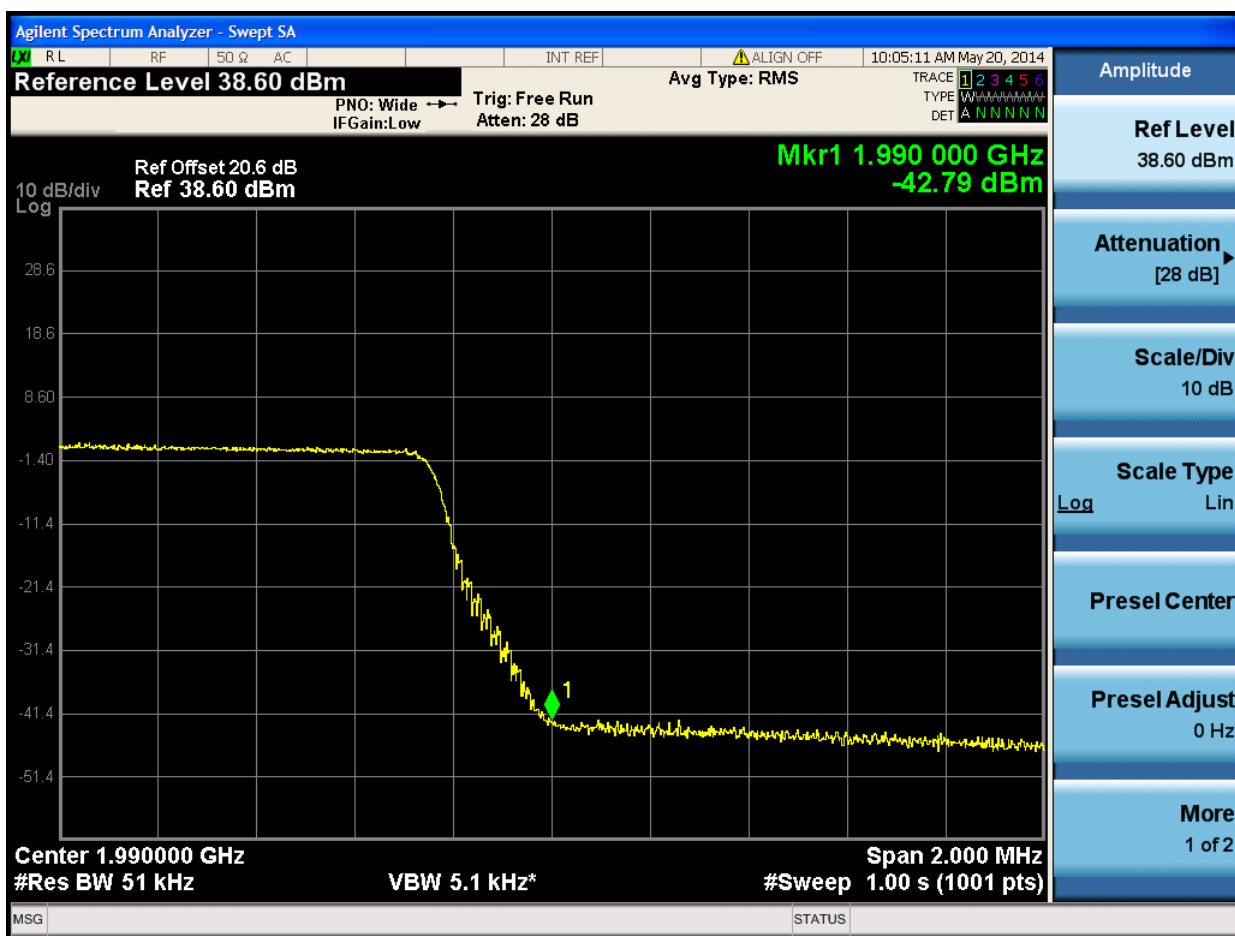
2 Test Plot

2.1 5M_B





2.2 5M_T



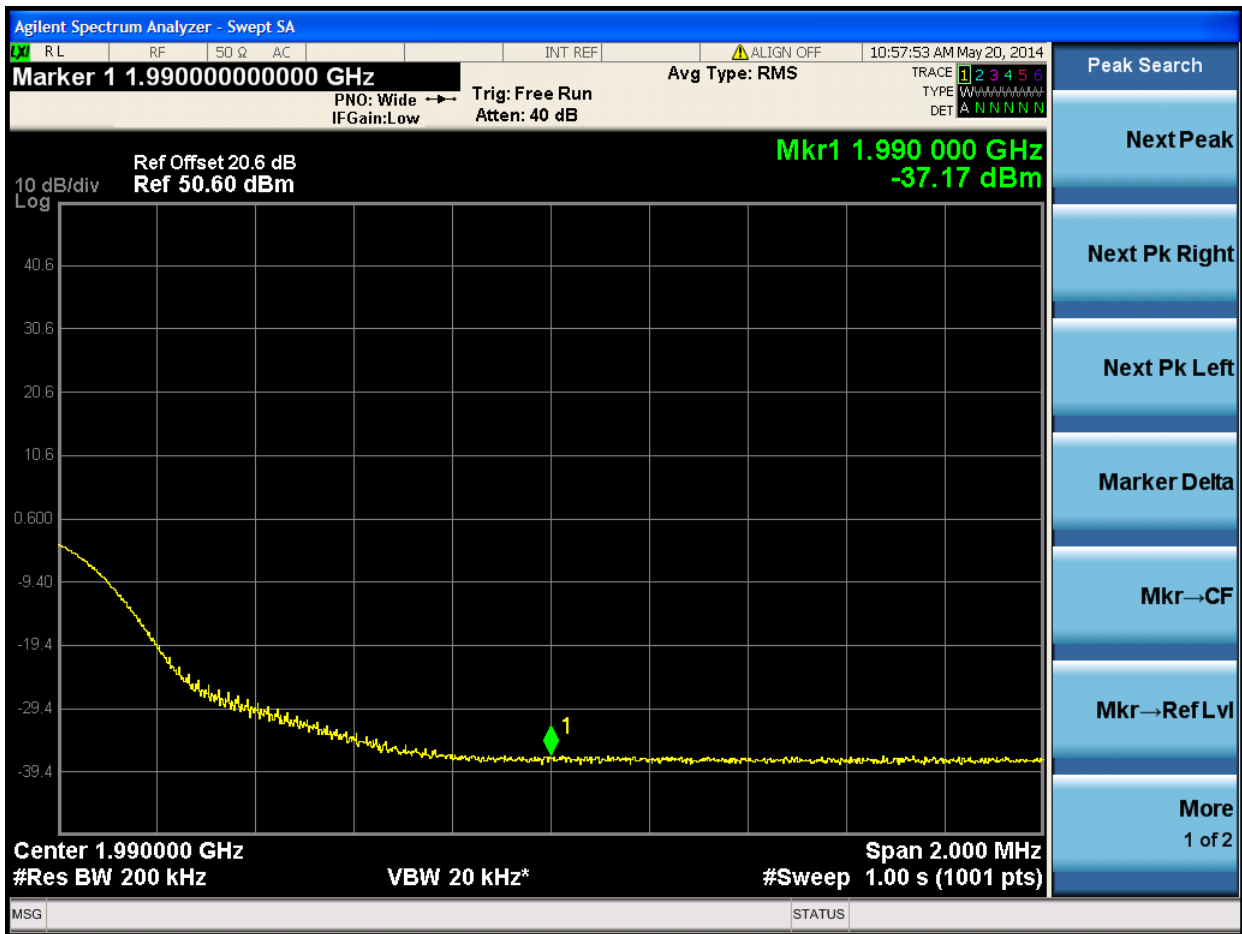


2.3 20M_B





2.4 20M_T



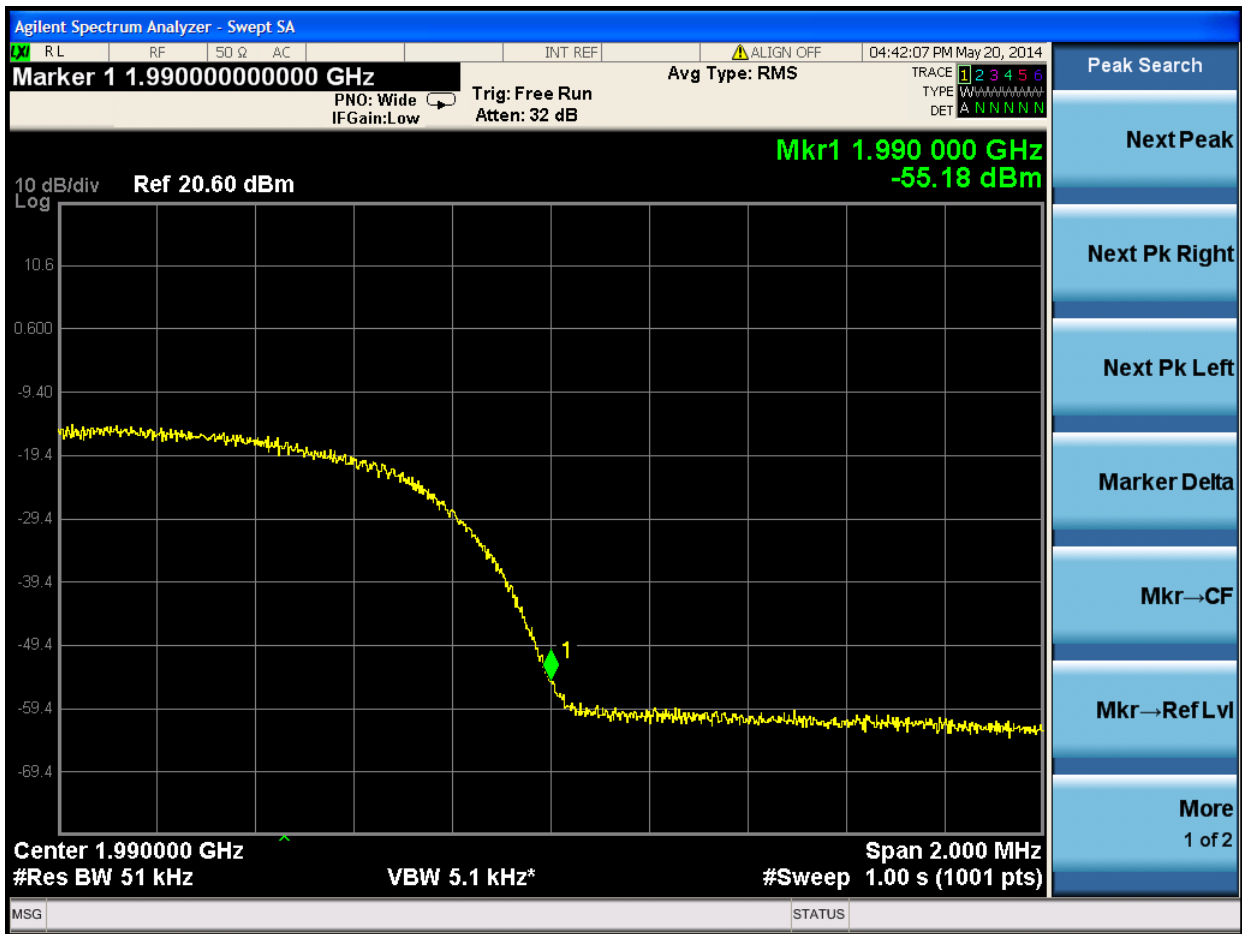


2.5 1U_B





2.6 1U_T



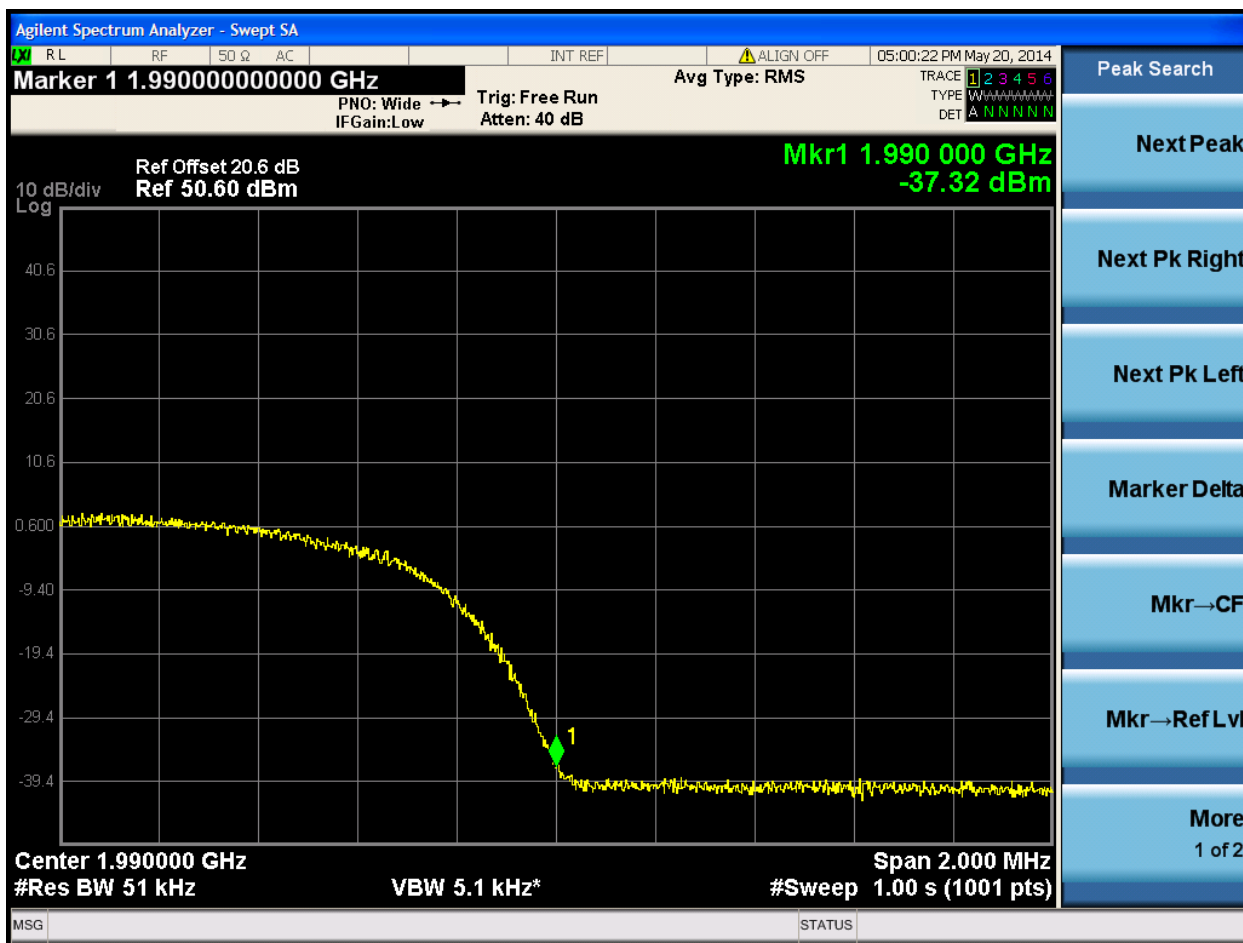


2.7 2U_B





2.8 2U_T





Appendix D2: Spurious Emission at Antenna Terminals



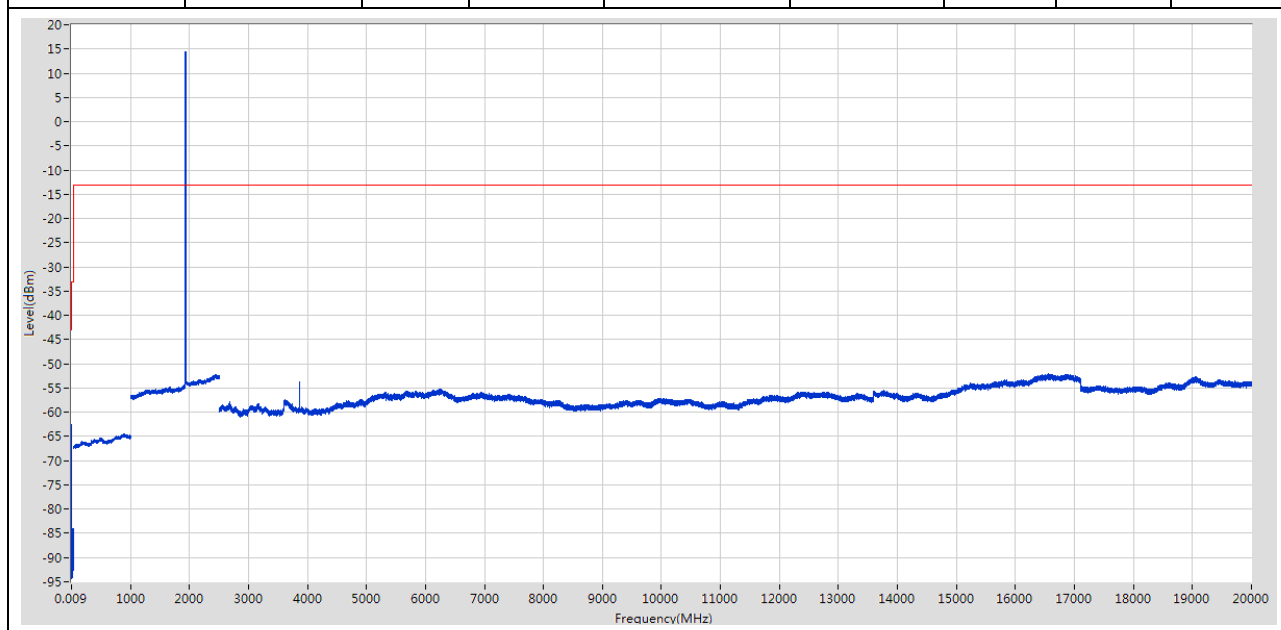
1 Result Table

EUT Conf.	Maximum Emission [dBm]	Verdict
5M_B	<-13	Pass
5M_M	<-13	Pass
5M_T	<-13	Pass
1U_B	<-13	Pass
1U_M	<-13	Pass
1U_T	<-13	Pass
2U_B	<-13	Pass
2U_M	<-13	Pass
2U_T	<-13	Pass

2 Test Plot

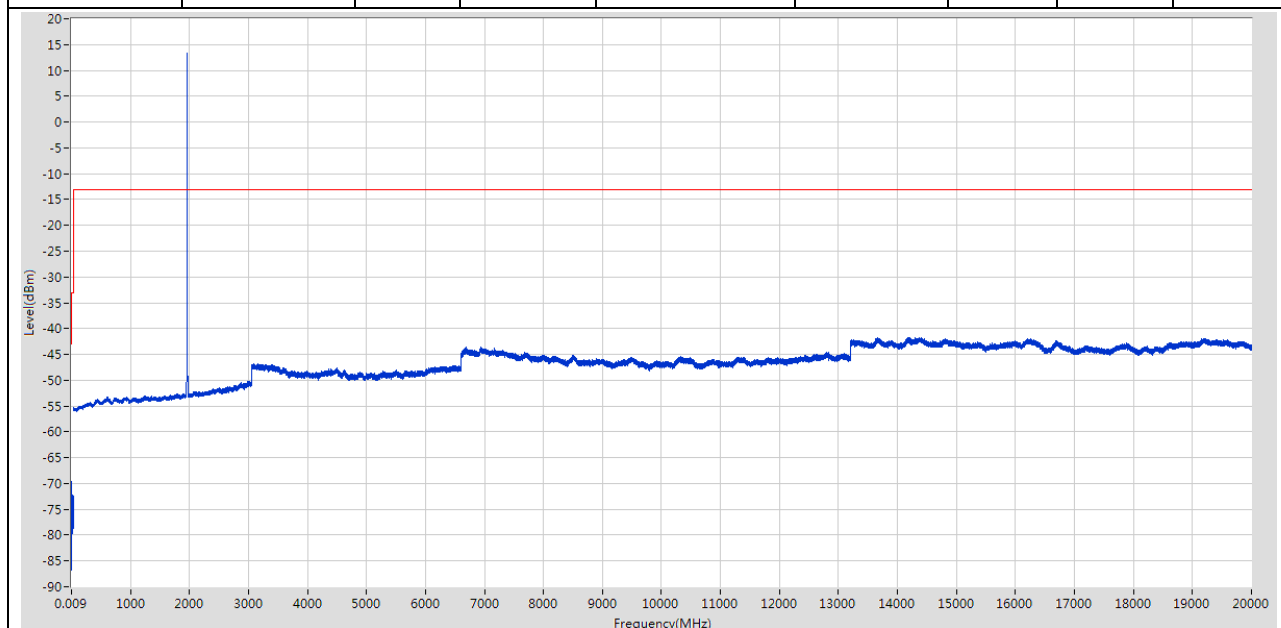
2.1 5M_B

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	10.833 k	-62.45	-43	Pass	1001
0.15	30	0.01	RMS	150 k	-64.31	-33	Pass	14925
30	1000	1	RMS	894.178181 M	-64.43	-13	Pass	4850
1000	2500	1	RMS	1932.32431 M	14.46	-13	---	7500
2500	20000	1	RMS	16555.95139 M	-52.1	-13	Pass	87500



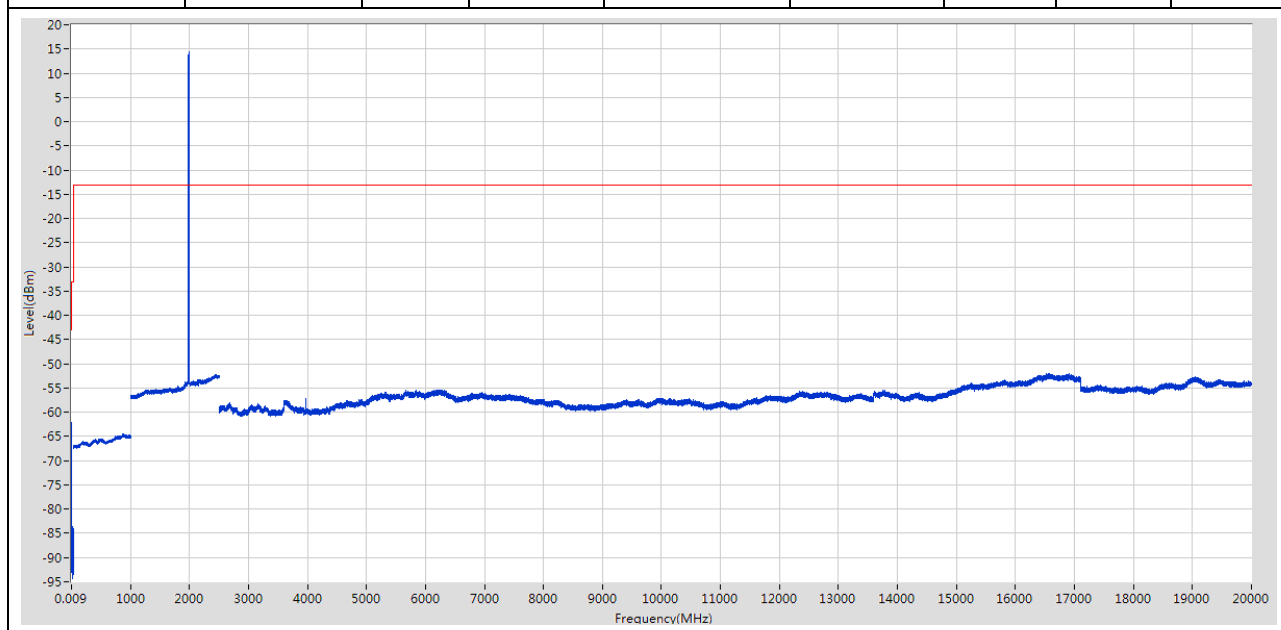
2.2 5M_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	9.401 k	-78.35	-43	Pass	705
0.15	30	0.01	RMS	392.03 k	-69.64	-33	Pass	14925
30	1000	1	RMS	608.719324 M	-53.3	-13	Pass	4850
1000	2500	1	RMS	1958.72783 M	13.4	-13	---	7500
2500	20000	1	RMS	14184.226297 M	-41.71	-13	Pass	87500



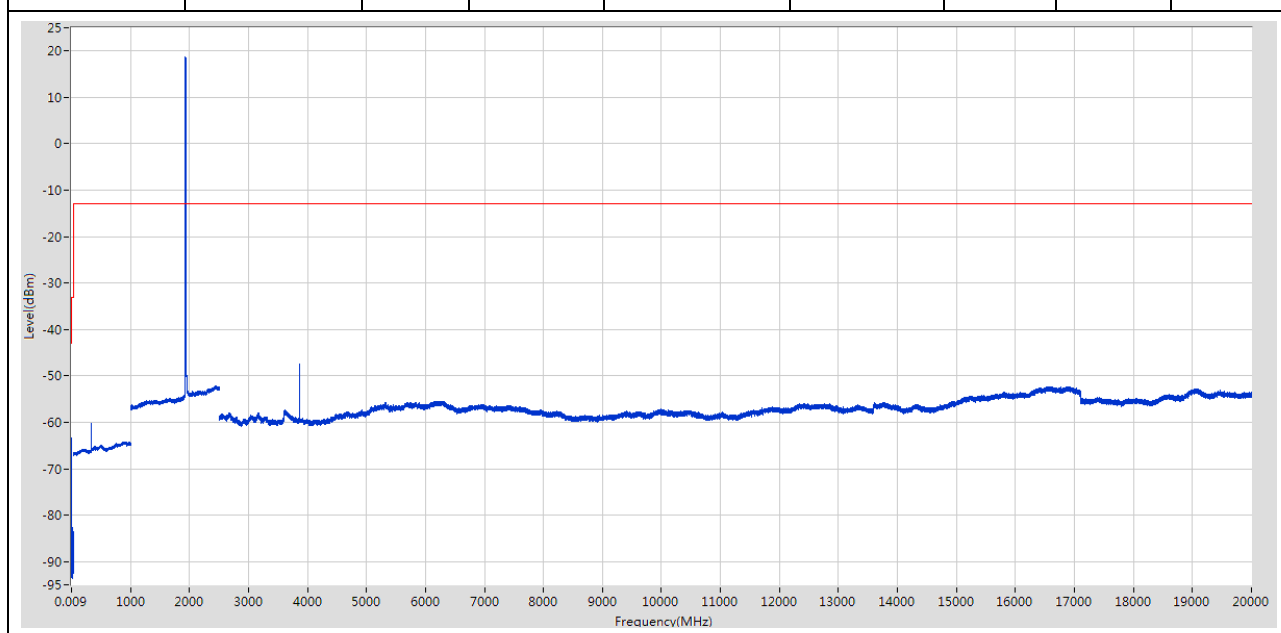
2.3 5M_T

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	9.282 k	-62.08	-43	Pass	1001
0.15	30	0.01	RMS	162.001 k	-65.32	-33	Pass	14925
30	1000	1	RMS	882.375748 M	-64.56	-13	Pass	4850
1000	2500	1	RMS	1986.331511 M	14.48	-13	---	7500
2500	20000	1	RMS	16571.15177 M	-52.03	-13	Pass	87500



2.4 1U_B

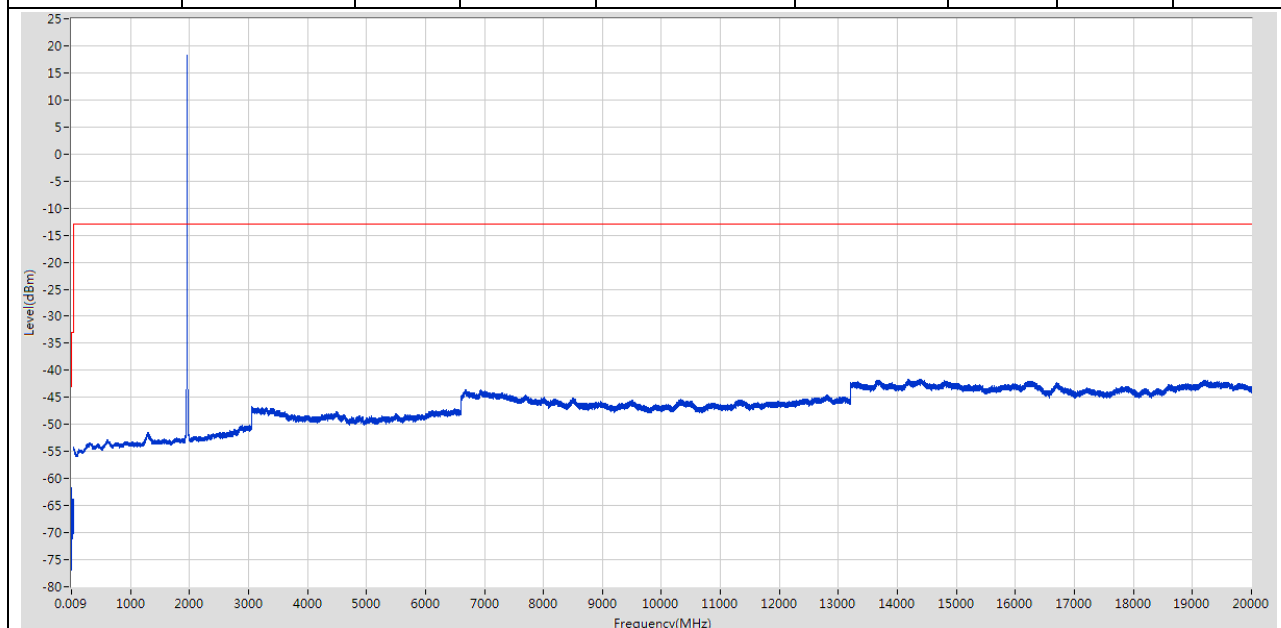
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	9.282 k	-63.3	-43	Pass	1001
0.15	30	0.01	RMS	154 k	-63.97	-33	Pass	14925
30	1000	1	RMS	337.263353 M	-60.26	-13	Pass	4850
1000	2500	1	RMS	1932.724363 M	18.62	-13	---	7500
2500	20000	1	RMS	3864.634115 M	-47.4	-13	Pass	87500





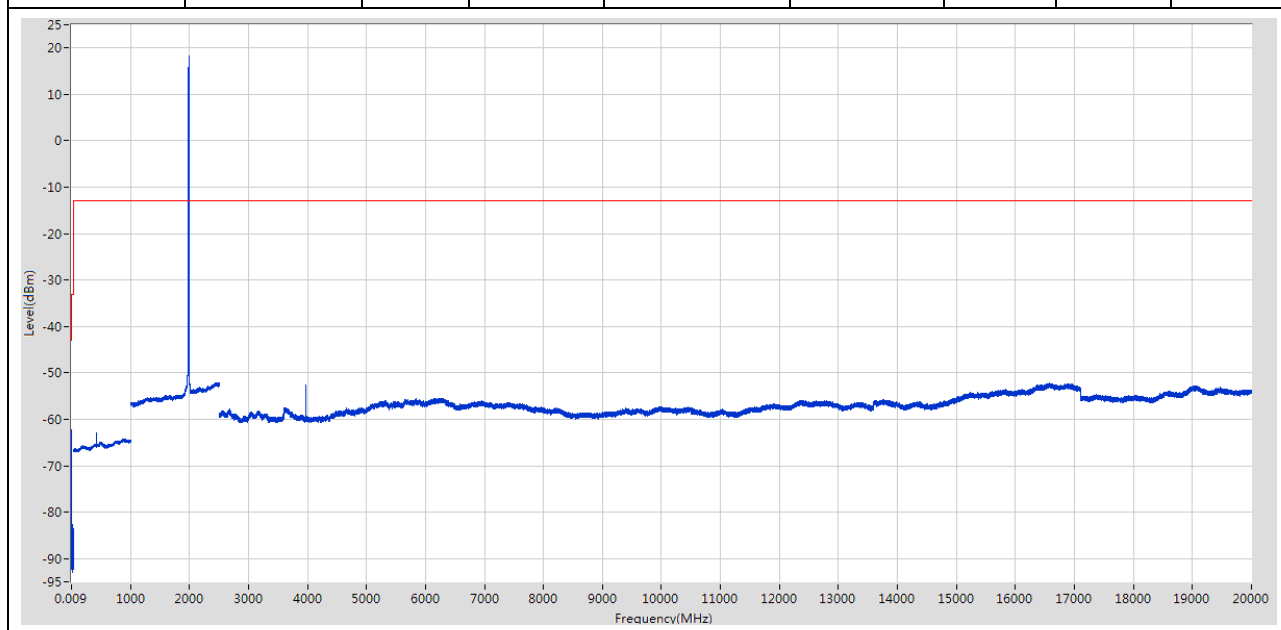
2.5 1U_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	14.007 k	-70.5	-43	Pass	705
0.15	30	0.01	RMS	356.025 k	-61.76	-33	Pass	14925
30	1000	1	RMS	608.719324 M	-52.89	-13	Pass	4850
1000	2500	1	RMS	1958.927857 M	18.19	-13	---	7500
2500	20000	1	RMS	14403.653083 M	-41.57	-13	Pass	87500



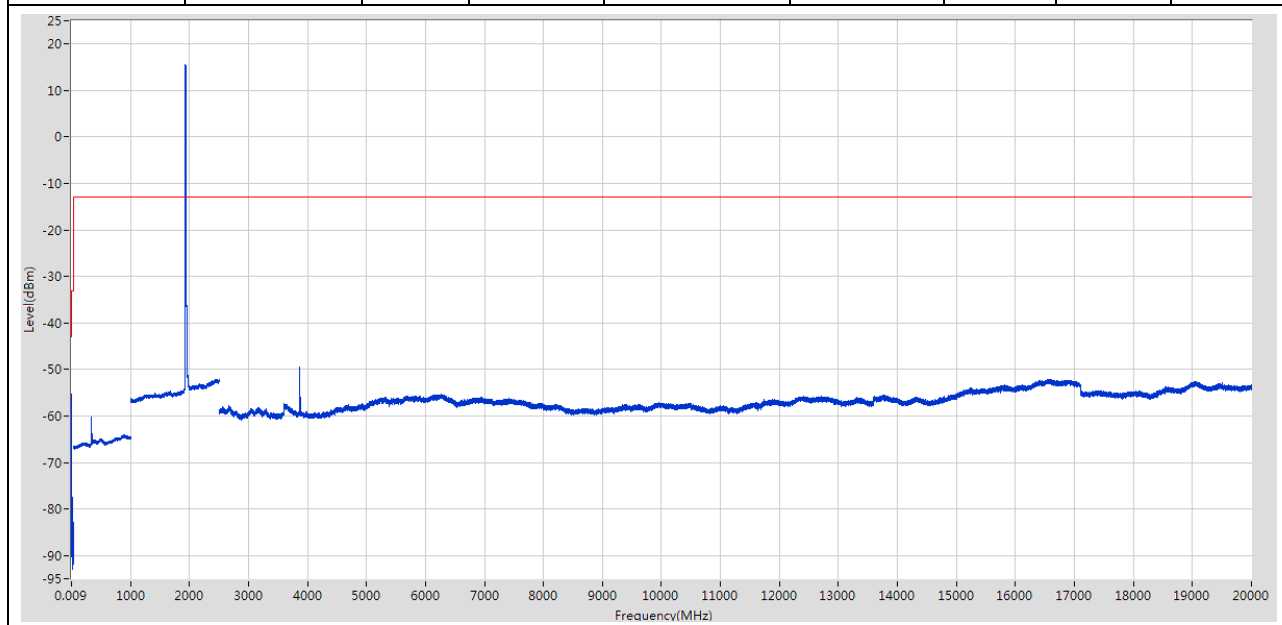
2.6 1U_T

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	10.269 k	-62.15	-43	Pass	1001
0.15	30	0.01	RMS	166.001 k	-64.74	-33	Pass	14925
30	1000	1	RMS	419.880388 M	-62.86	-13	Pass	4850
1000	2500	1	RMS	1986.731564 M	18.3	-13	---	7500
2500	20000	1	RMS	16567.95169 M	-52.07	-13	Pass	87500



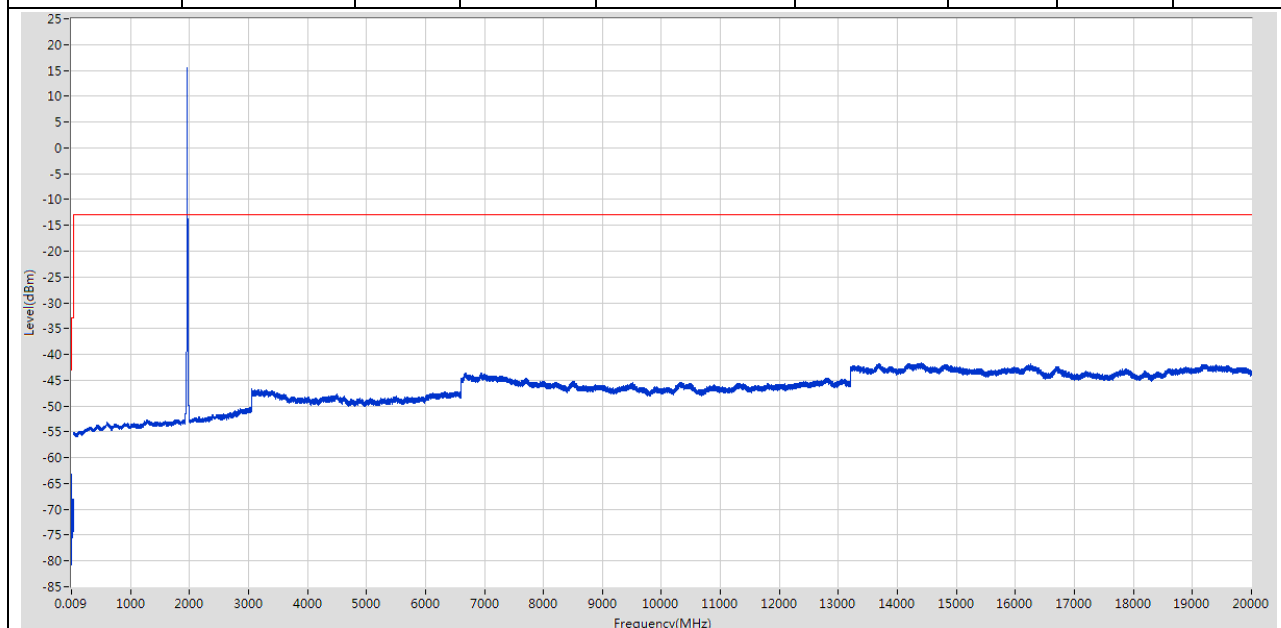
2.7 2U_B

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	9.141 k	-62.31	-43	Pass	1001
0.15	30	0.01	RMS	5.000325 M	-55.29	-33	Pass	14925
30	1000	1	RMS	342.064343 M	-60.22	-13	Pass	4850
1000	2500	1	RMS	1932.32431 M	15.58	-13	---	7500
2500	20000	1	RMS	3869.434235 M	-49.4	-13	Pass	87500



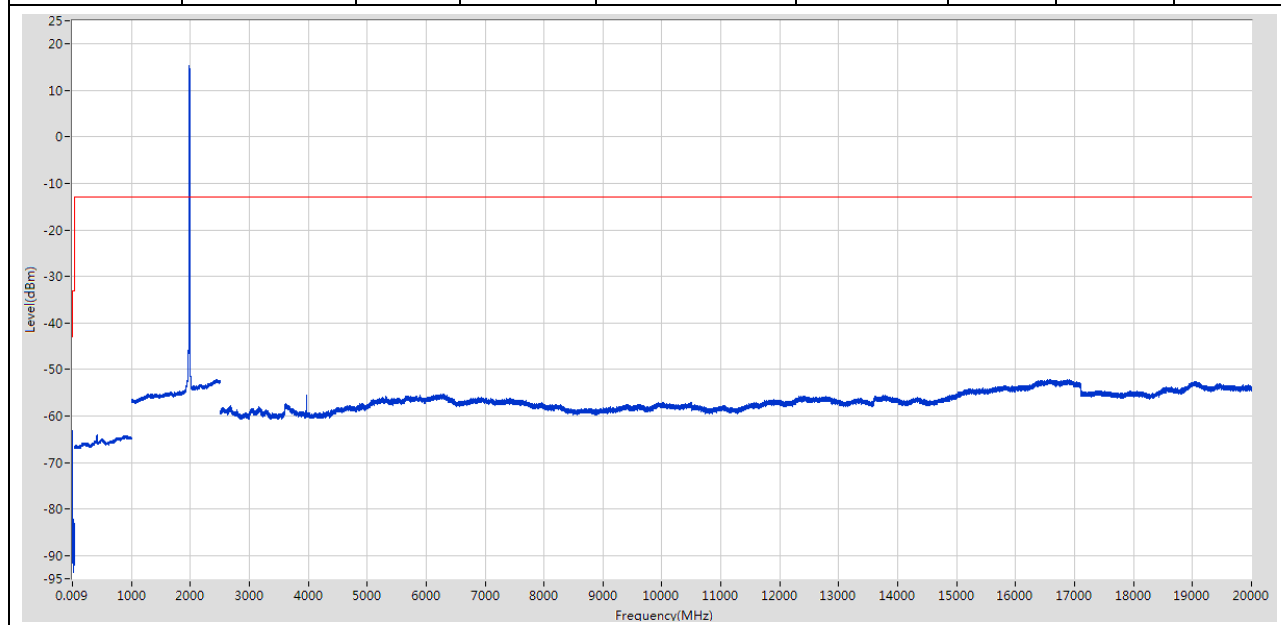
2.8 2U_M

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	13.006 k	-71.99	-43	Pass	705
0.15	30	0.01	RMS	1.794201 M	-63.25	-33	Pass	14925
30	1000	1	RMS	608.319241 M	-53.13	-13	Pass	4850
1000	2500	1	RMS	1959.727964 M	15.53	-13	---	7500
2500	20000	1	RMS	14402.052887 M	-41.7	-13	Pass	87500



2.9 2U_T

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	9 k	-63.18	-43	Pass	1001
0.15	30	0.01	RMS	150 k	-65	-33	Pass	14925
30	1000	1	RMS	414.879357 M	-64.04	-13	Pass	4850
1000	2500	1	RMS	1982.330977 M	15.44	-13	---	7500
2500	20000	1	RMS	16590.152245 M	-52.13	-13	Pass	87500





Appendix E2: Frequency Stability

1 Result Table

1.1 Frequency Error

(1) Frequency Error vs. Temperature:

EUT Conf.	Voltage	Temperature	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
5M_M	100%	-30 °C	-3.42	-0.0017449	0.000398	Pass
		-20 °C	-4.92	-0.0025102	-0.0003673	Pass
		-10 °C	-6.22	-0.0031735	-0.0010306	Pass
		0 °C	-5.99	-0.0030561	-0.0009133	Pass
		+10 °C	-6.03	-0.0030765	-0.0009337	Pass
		+20 °C	-4.2	-0.0021429	---	Pass
		+30 °C	-6.3	-0.0032143	-0.0010714	Pass
		+40 °C	-3.71	-0.0018929	0.00025	Pass
		+50 °C	-5.32	-0.0027143	-0.0005714	Pass

(2) Frequency Error vs. Voltage:

EUT Conf.	Temperature	Voltage	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
5M_M	+20 °C	85 %	-5.45	-0.0027806	-0.0006378	Pass
		100 %	-4.2	-0.0021429	---	Pass
		115 %	-4.71	-0.0024031	-0.0002602	Pass

1.2 Frequency Range

(Not applicable)



2 Test Plot

NOTE: Only the test plots for the measurements of Frequency Range are supplied.

(Not applicable)



Appendix F2: Receiver Spurious Emissions



1 Result Table

(Not applicable)

2 Test Plot

(Not applicable)

END