



2.21 EUT Conf. 28





Appendix D: Spurious Emission at Antenna Terminals



1 Result Table

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

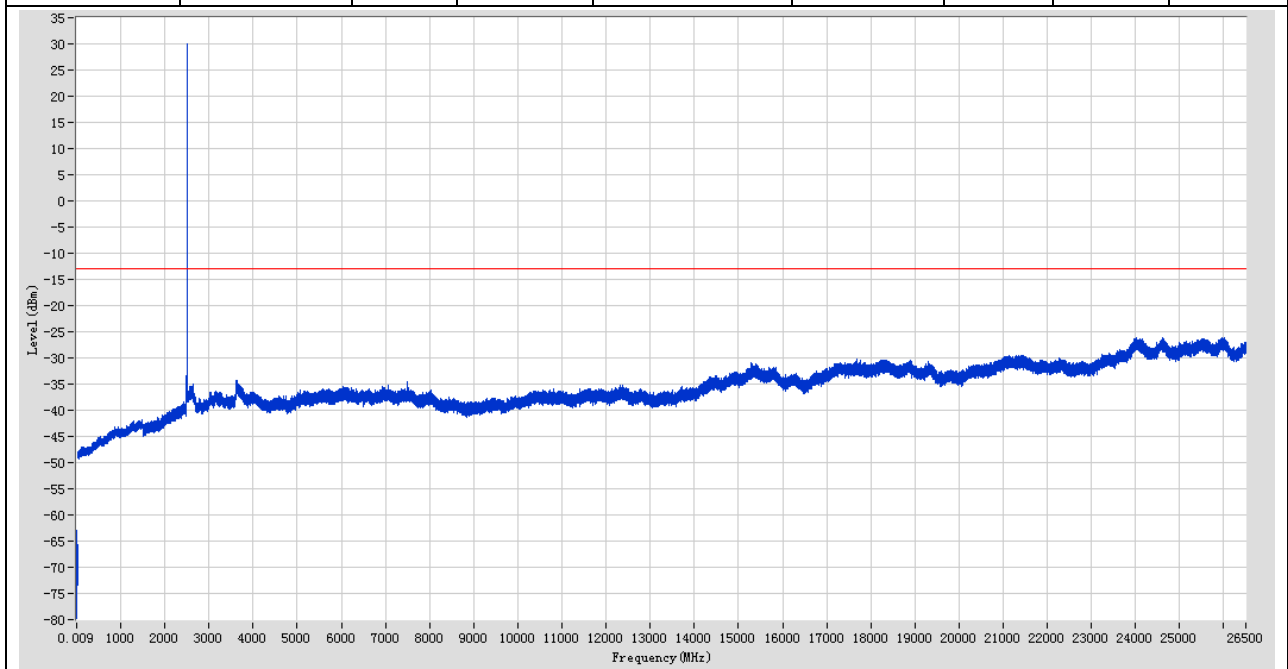
EUT Conf.	Maximum Emission [dBm]	Verdict
EUT Conf. 1	<-13	Pass
EUT Conf. 2	<-13	Pass
EUT Conf. 3	<-13	Pass
EUT Conf. 4	<-13	Pass
EUT Conf. 5	<-13	Pass
EUT Conf. 6	<-13	Pass
EUT Conf. 7	<-13	Pass
EUT Conf. 8	<-13	Pass
EUT Conf. 9	<-13	Pass
EUT Conf. 10	<-13	Pass
EUT Conf. 11	<-13	Pass
EUT Conf. 12	<-13	Pass
EUT Conf. 25	<-13	Pass
EUT Conf. 26	<-13	Pass
EUT Conf. 27	<-13	Pass
EUT Conf.28	<-13	Pass



2 Test Plot

2.1 EUT Conf. 1

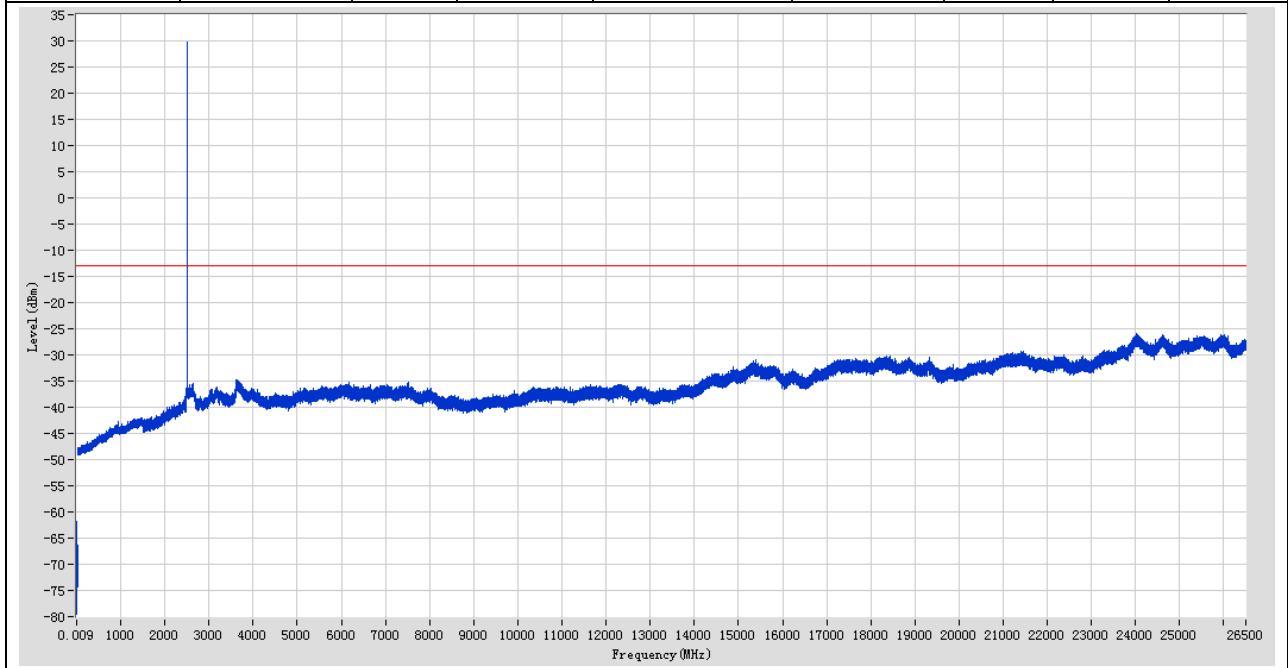
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	11.538 k	-69.51	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-63.07	-13	Pass	14925
30	1500	1	RMS	1480.197306 M	-41.92	-13	Pass	7350
1500	4500	1	RMS	2499.466631 M	29.92	-13	NA	15000
4500	26500	1	RMS	26014.783825 M	-26.08	-13	Pass	110000





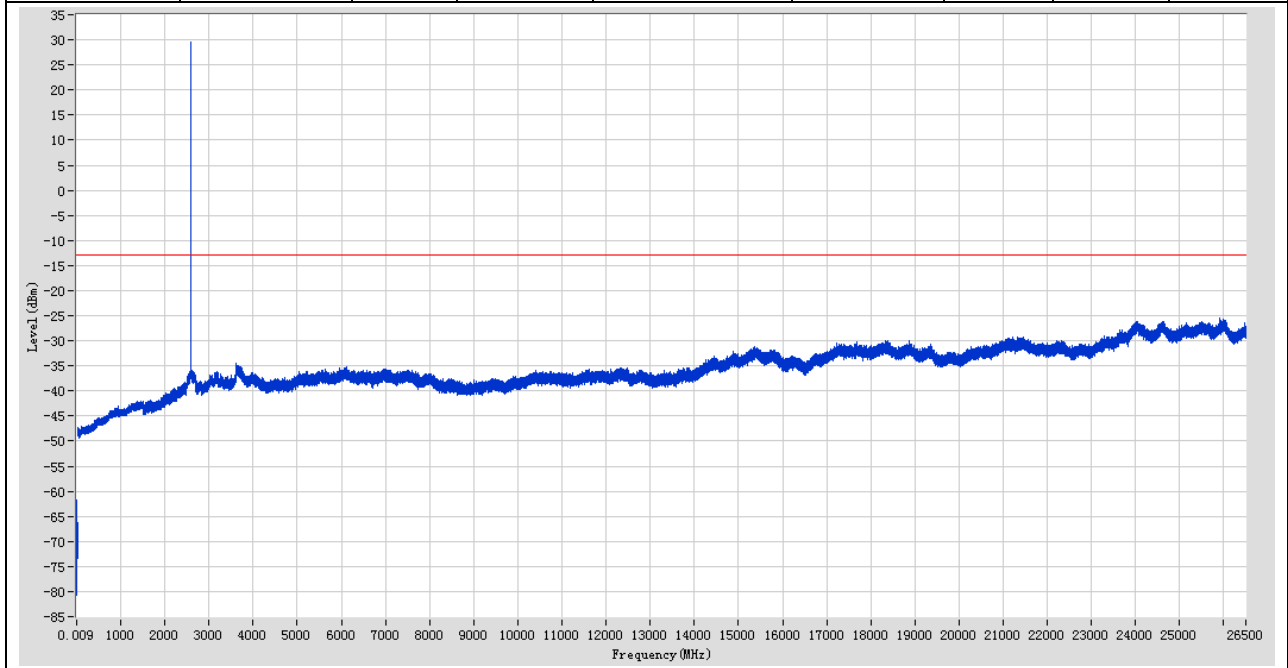
2.2 EUT Conf. 2

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	15.768 k	-67.38	-13	Pass	1001
0.15	30	0.01	RMS	298.01 k	-61.79	-13	Pass	14925
30	1500	1	RMS	1487.998367 M	-41.99	-13	Pass	7350
1500	4500	1	RMS	2503.866924 M	29.67	-13	NA	15000
4500	26500	1	RMS	24017.717252 M	-25.99	-13	Pass	110000



2.3 EUT Conf. 3

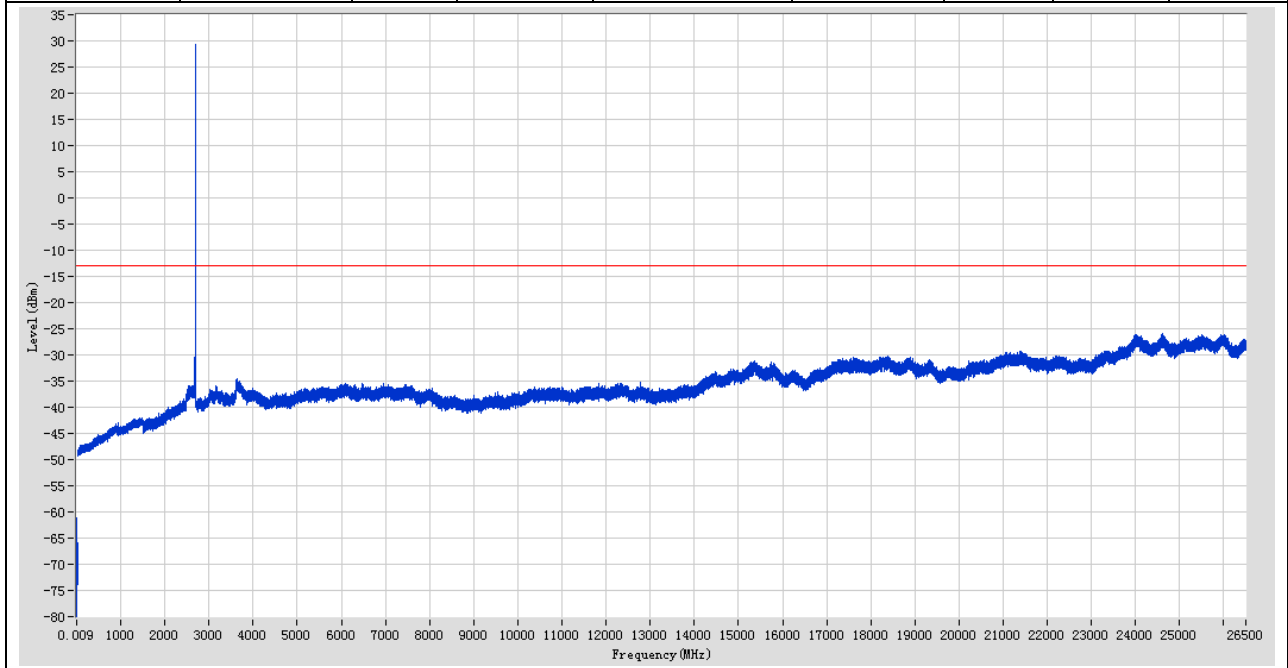
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	15.345 k	-67.78	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-61.66	-13	Pass	14925
30	1500	1	RMS	1499.799973 M	-41.98	-13	Pass	7350
1500	4500	1	RMS	2593.072872 M	29.64	-13	NA	15000
4500	26500	1	RMS	25913.180438 M	-25.38	-13	Pass	110000





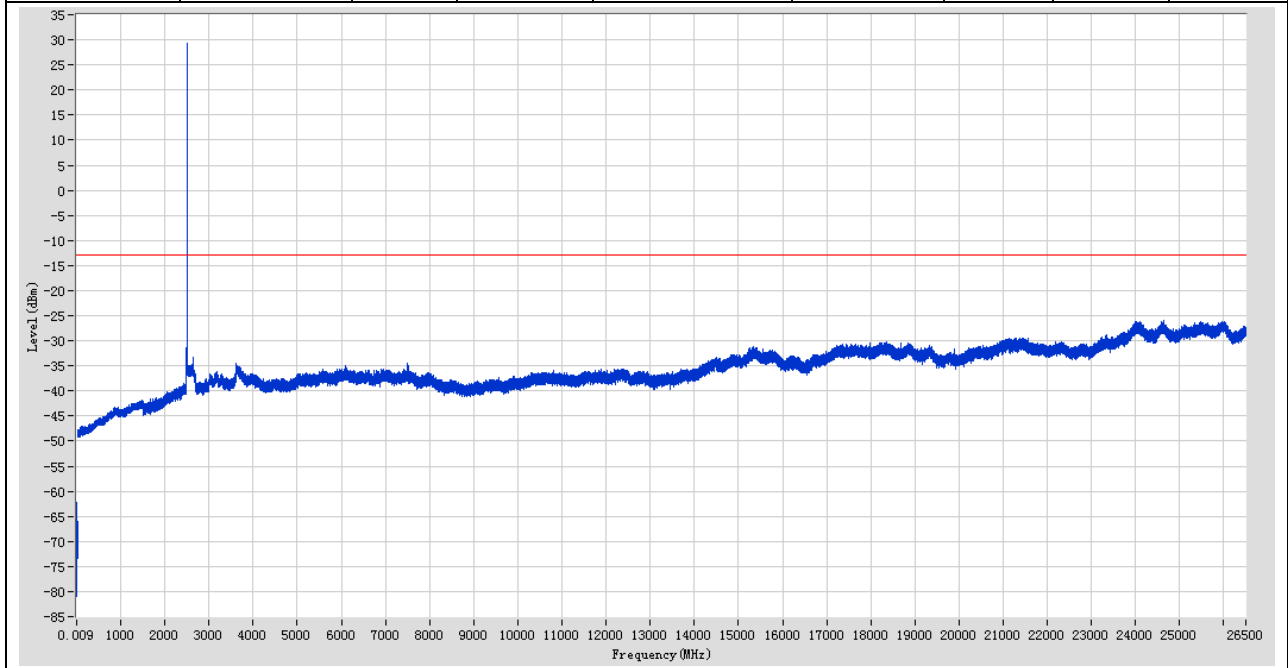
2.4 EUT Conf. 4

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	15.768 k	-66.28	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-61.18	-13	Pass	14925
30	1500	1	RMS	1431.79072 M	-42.01	-13	Pass	7350
1500	4500	1	RMS	2686.479099 M	29.29	-13	NA	15000
4500	26500	1	RMS	24616.537214 M	-25.92	-13	Pass	110000



2.5 EUT Conf. 5

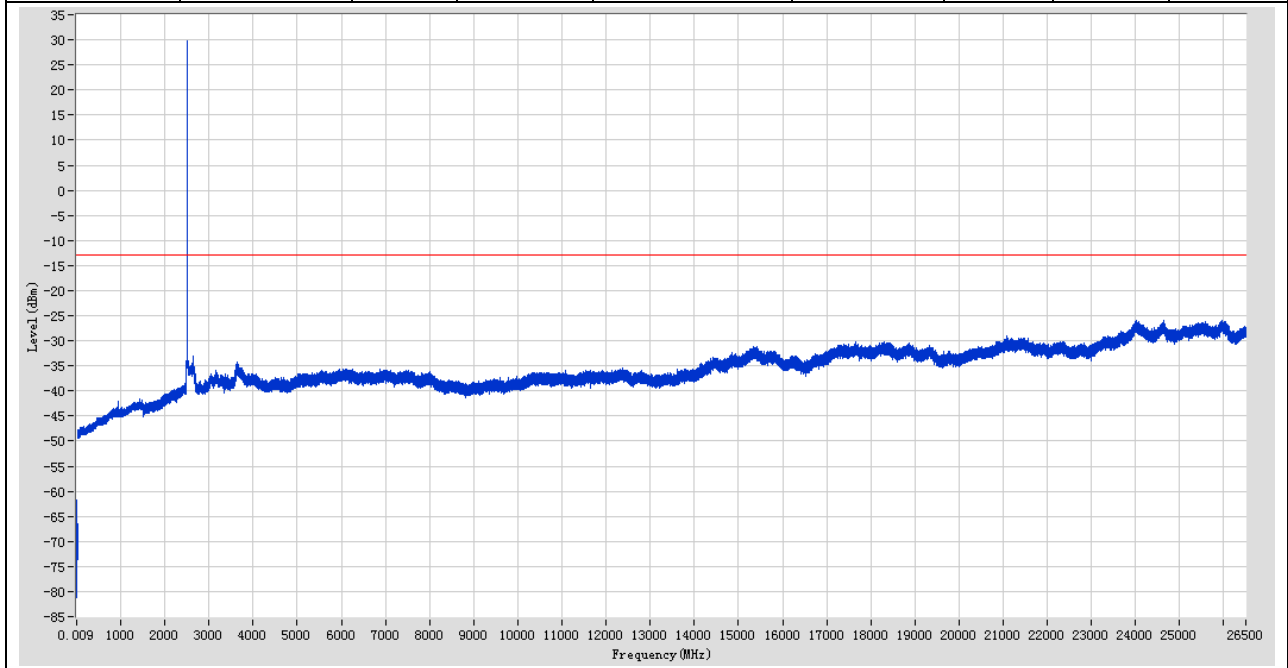
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	15.204 k	-67.34	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-62.29	-13	Pass	14925
30	1500	1	RMS	1487.998367 M	-41.94	-13	Pass	7350
1500	4500	1	RMS	2502.066804 M	29.42	-13	NA	15000
4500	26500	1	RMS	24651.938394 M	-25.96	-13	Pass	110000





2.6 EUT Conf. 6

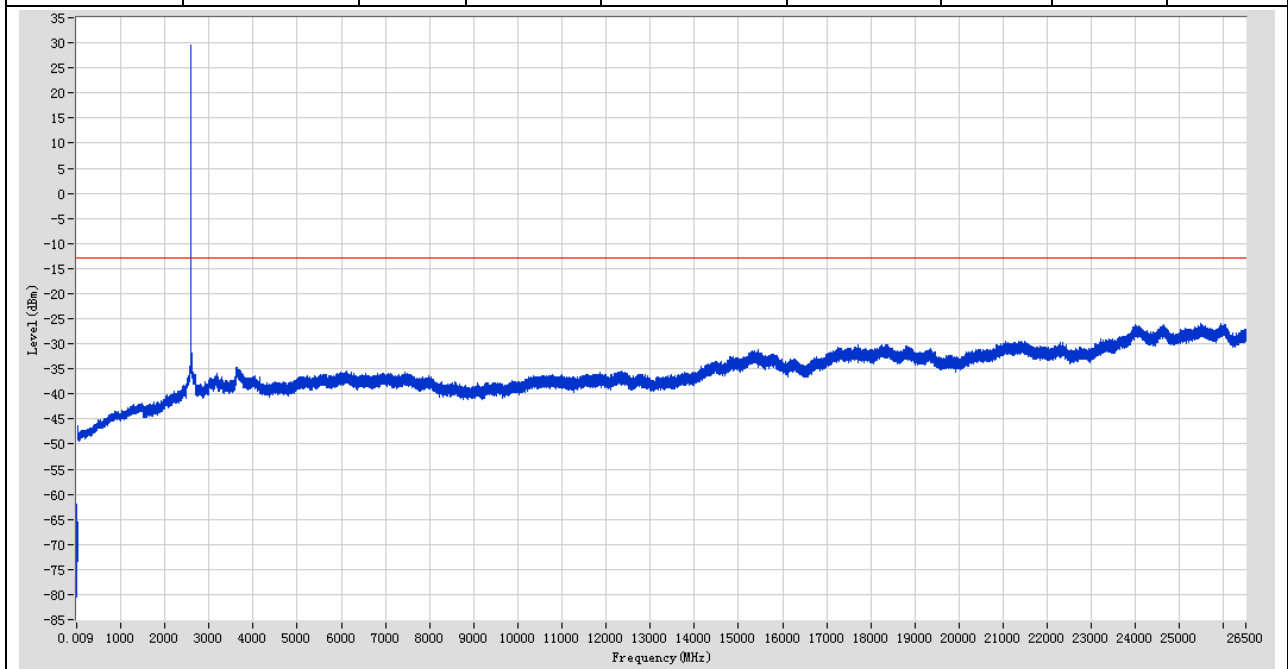
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	15.627 k	-68.95	-13	Pass	1001
0.15	30	0.01	RMS	292.01 k	-61.75	-13	Pass	14925
30	1500	1	RMS	1430.590557 M	-41.55	-13	Pass	7350
1500	4500	1	RMS	2503.866924 M	29.69	-13	NA	15000
4500	26500	1	RMS	24020.917358 M	-25.86	-13	Pass	110000





2.7 EUT Conf. 7

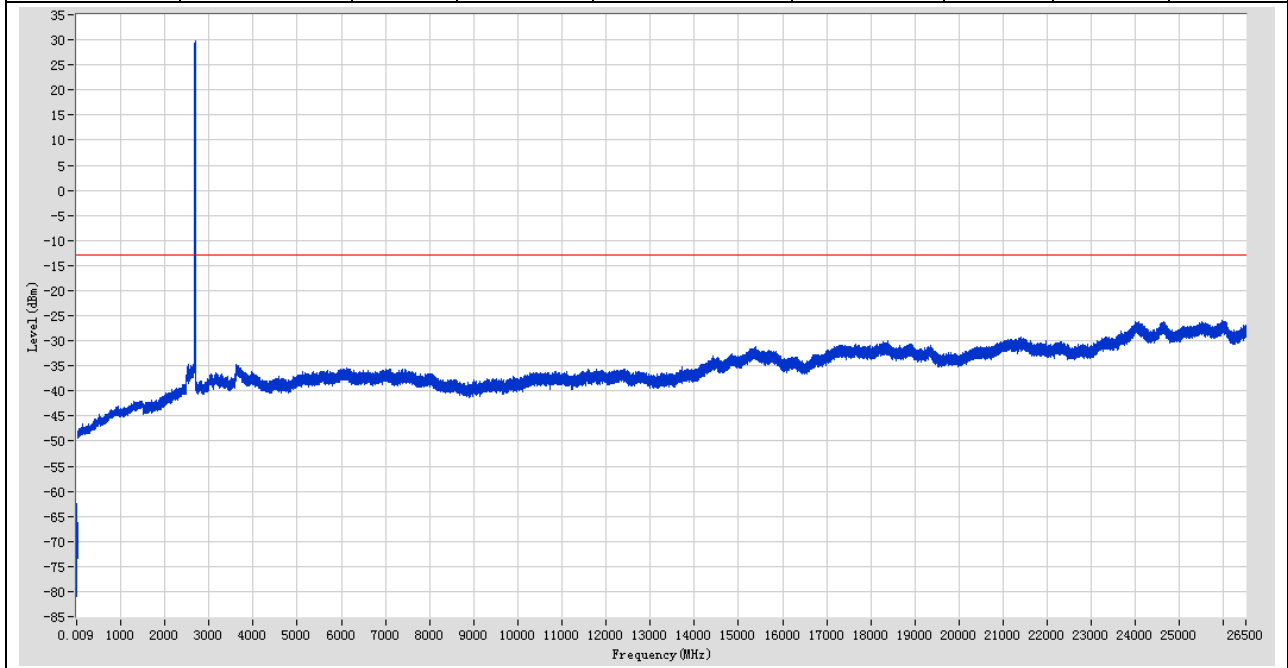
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	14.499 k	-67.9	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-62.09	-13	Pass	14925
30	1500	1	RMS	1473.796435 M	-41.84	-13	Pass	7350
1500	4500	1	RMS	2596.273085 M	29.6	-13	NA	15000
4500	26500	1	RMS	25487.56625 M	-25.95	-13	Pass	110000





2.8 EUT Conf. 8

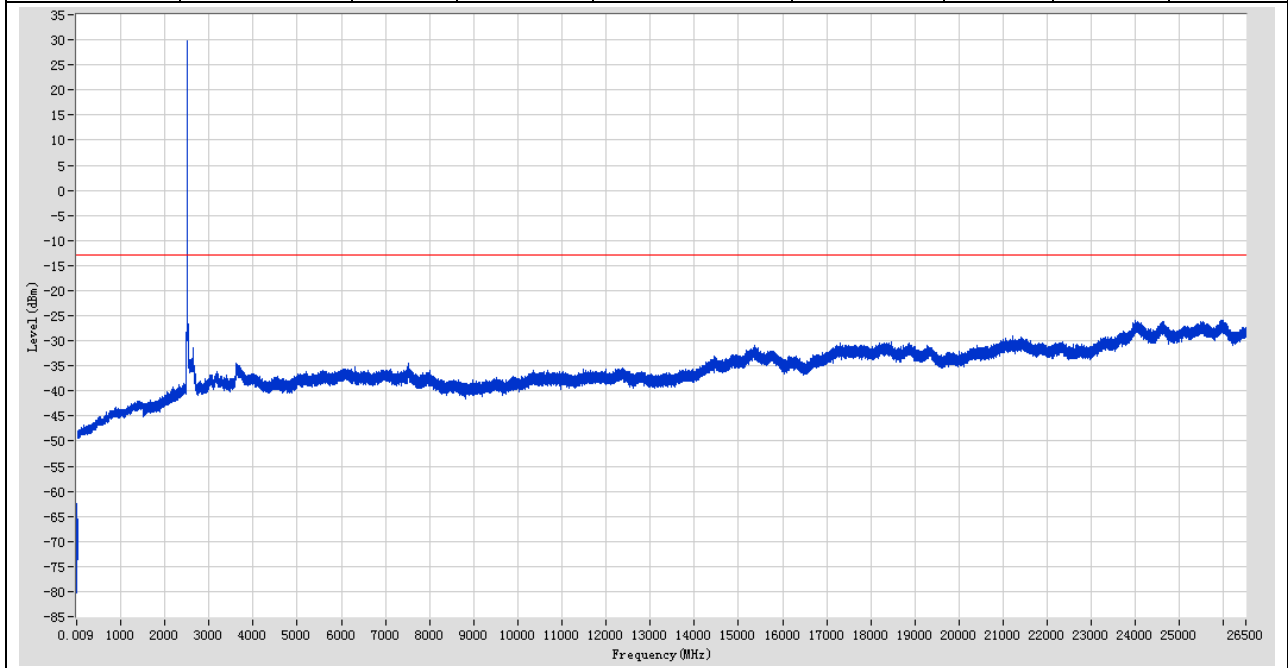
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	13.794 k	-69.17	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-62.56	-13	Pass	14925
30	1500	1	RMS	1436.191319 M	-42.06	-13	Pass	7350
1500	4500	1	RMS	2683.078872 M	29.72	-13	NA	15000
4500	26500	1	RMS	25953.181772 M	-26.01	-13	Pass	110000





2.9 EUT Conf. 9

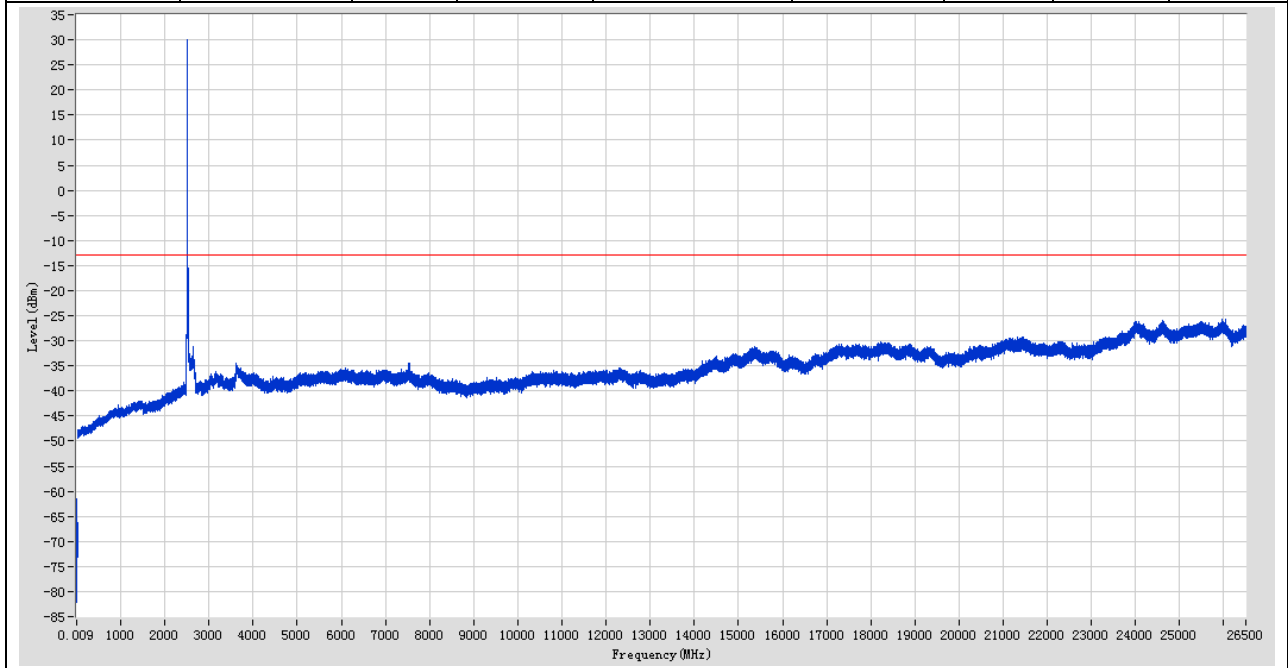
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	14.358 k	-67.78	-13	Pass	1001
0.15	30	0.01	RMS	298.01 k	-62.42	-13	Pass	14925
30	1500	1	RMS	1423.989658 M	-41.99	-13	Pass	7350
1500	4500	1	RMS	2507.267151 M	29.68	-13	NA	15000
4500	26500	1	RMS	25980.782692 M	-25.91	-13	Pass	110000





2.10 EUT Conf. 10

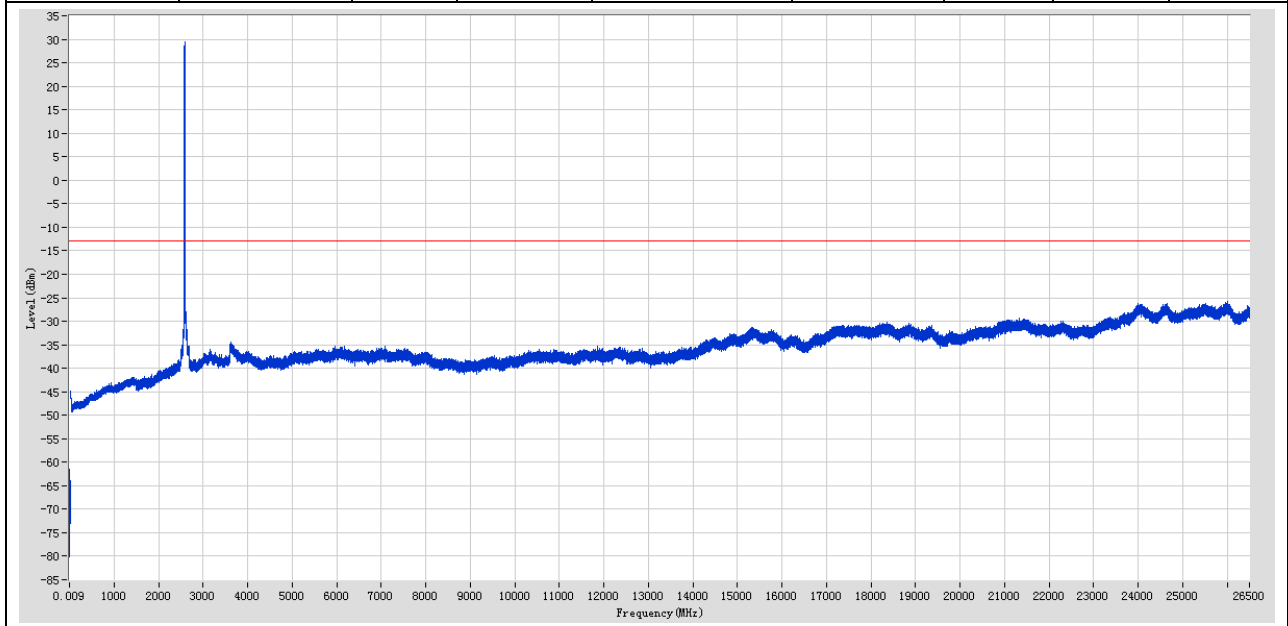
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	16.614 k	-68.27	-13	Pass	1001
0.15	30	0.01	RMS	294.01 k	-61.46	-13	Pass	14925
30	1500	1	RMS	1427.390121 M	-41.98	-13	Pass	7350
1500	4500	1	RMS	2502.466831 M	29.9	-13	NA	15000
4500	26500	1	RMS	26033.184438 M	-25.74	-13	Pass	110000





2.11 EUT Conf. 11

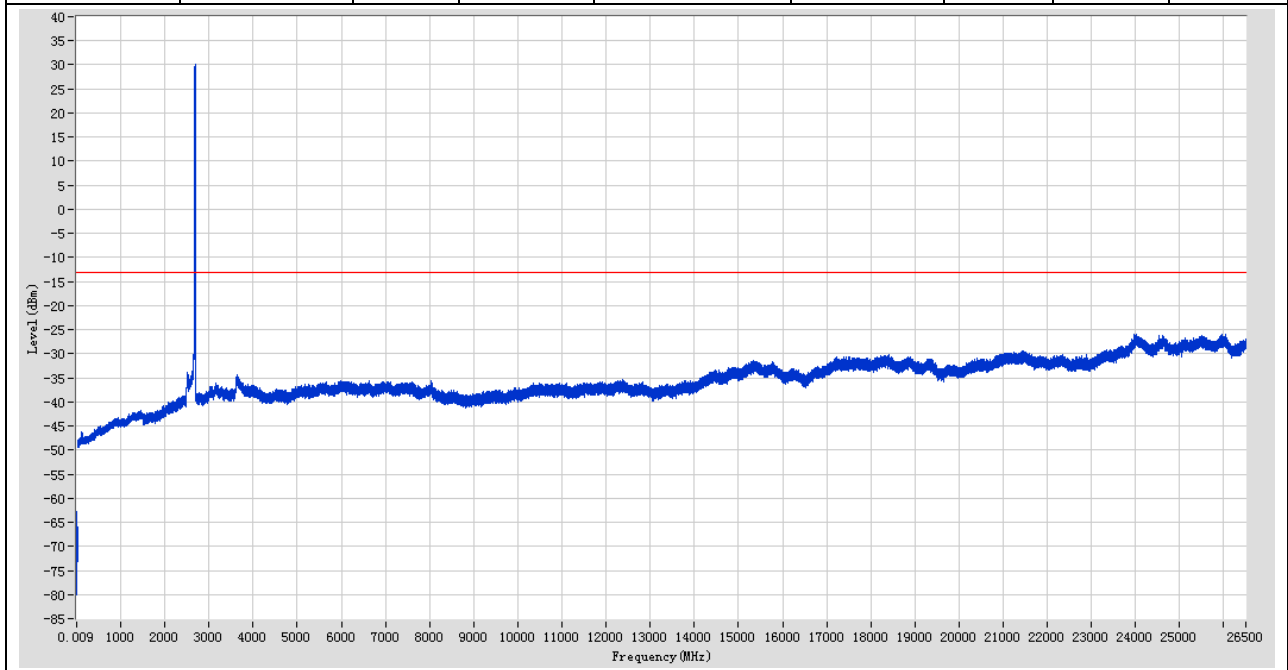
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	79.359 k	-68.91	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-61.39	-13	Pass	14925
30	1500	1	RMS	1436.191319 M	-41.98	-13	Pass	7350
1500	4500	1	RMS	2596.073072 M	29.54	-13	NA	15000
4500	26500	1	RMS	26006.183538 M	-25.88	-13	Pass	110000





2.12 EUT Conf. 12

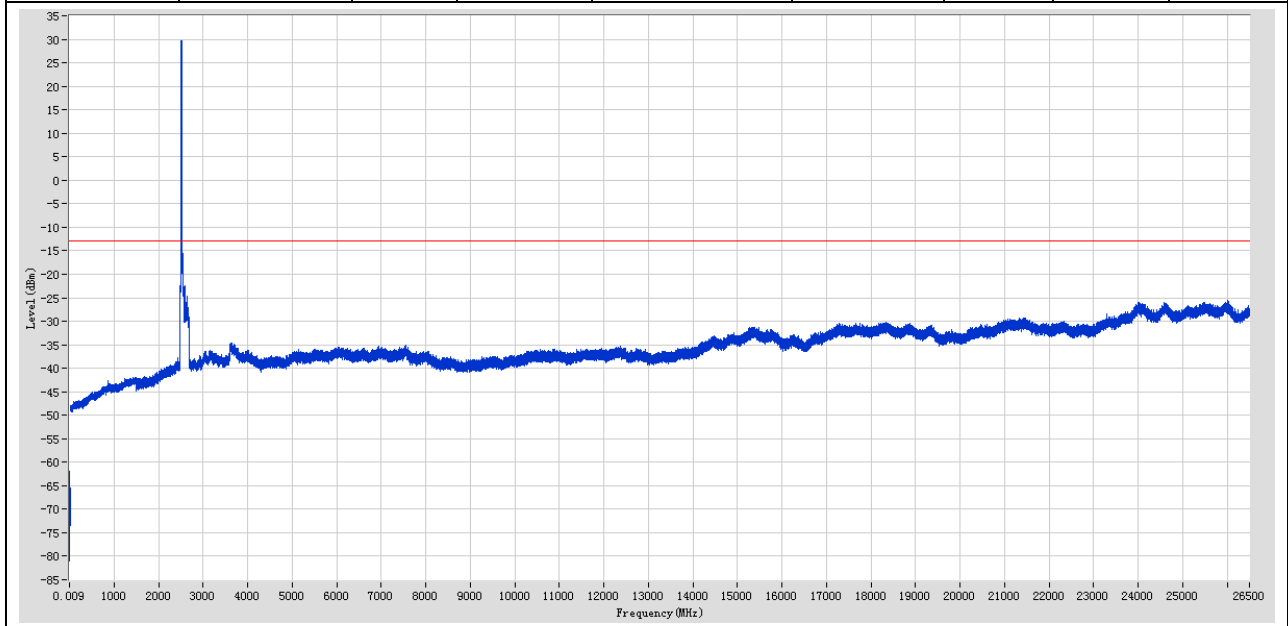
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	15.204 k	-66.38	-13	Pass	1001
0.15	30	0.01	RMS	294.01 k	-62.7	-13	Pass	14925
30	1500	1	RMS	1469.195809 M	-41.86	-13	Pass	7350
1500	4500	1	RMS	2685.279019 M	30	-13	NA	15000
4500	26500	1	RMS	24011.917058 M	-26	-13	Pass	110000





2.13 EUT Conf. 25

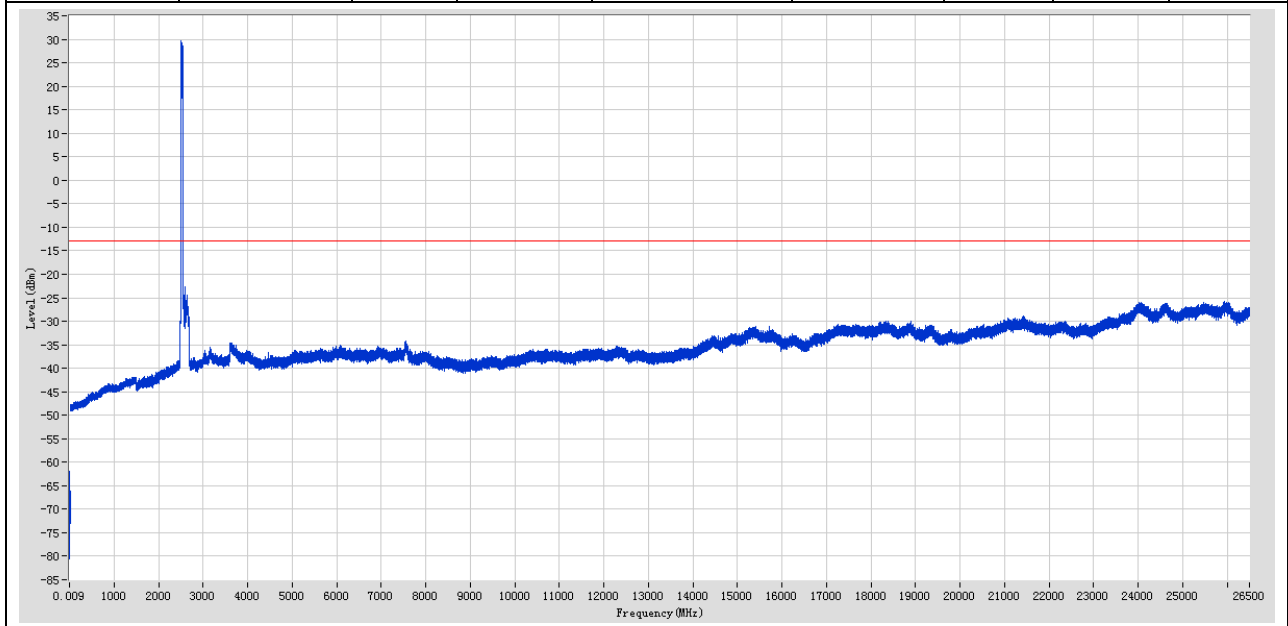
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	16.332 k	-68.12	-13	Pass	1001
0.15	30	0.01	RMS	292.01 k	-61.94	-13	Pass	14925
30	1500	1	RMS	1427.590148 M	-41.9	-13	Pass	7350
1500	4500	1	RMS	2509.867324 M	29.79	-13	NA	15000
4500	26500	1	RMS	26016.183872 M	-25.63	-13	Pass	110000





2.14 EUT Conf. 26

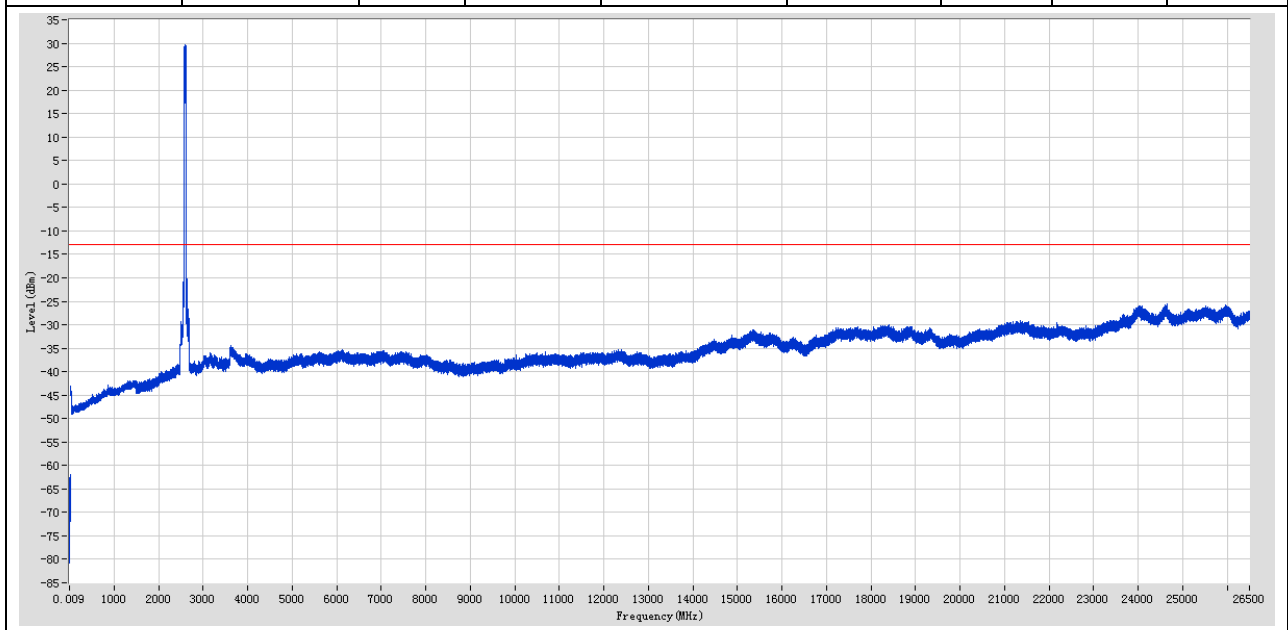
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	15.627 k	-67.06	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-61.96	-13	Pass	14925
30	1500	1	RMS	1427.790176 M	-41.93	-13	Pass	7350
1500	4500	1	RMS	2511.467431 M	29.59	-13	NA	15000
4500	26500	1	RMS	25938.781291 M	-25.81	-13	Pass	110000





2.15 EUT Conf. 27

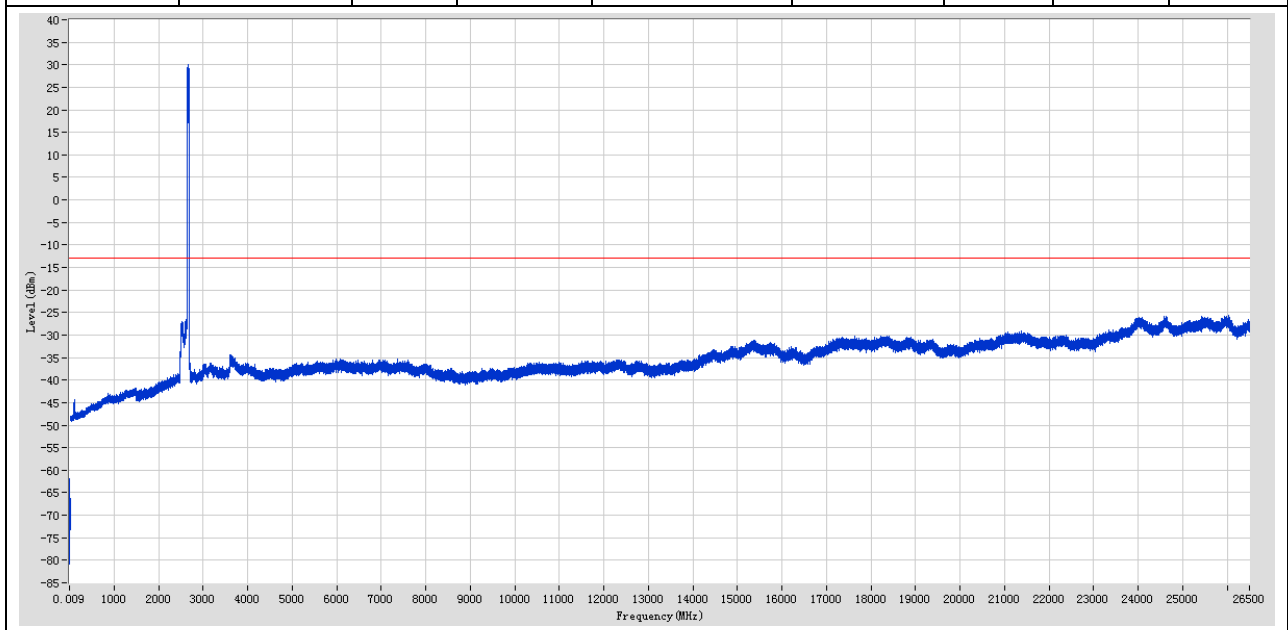
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	RMS	16.05 k	-68.42	-13	Pass	1001
0.15	30	0.01	RMS	29.093939 M	-61.9	-13	Pass	14925
30	1500	1	RMS	1477.596952 M	-41.89	-13	Pass	7350
1500	4500	1	RMS	2585.872391 M	29.75	-13	NA	15000
4500	26500	1	RMS	24649.1383 M	-25.66	-13	Pass	110000





2.16 EUT Conf. 28

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	-70.37	-13	Pass	1001
0.15	30	0.01	RMS	296.01 k	-61.85	-13	Pass	14925
30	1500	1	RMS	1478.197034 M	-41.81	-13	Pass	7350
1500	4500	1	RMS	2657.077138 M	30.04	-13	NA	15000
4500	26500	1	RMS	26036.184538 M	-25.62	-13	Pass	110000





Appendix E: Field Strength of Spurious Radiation



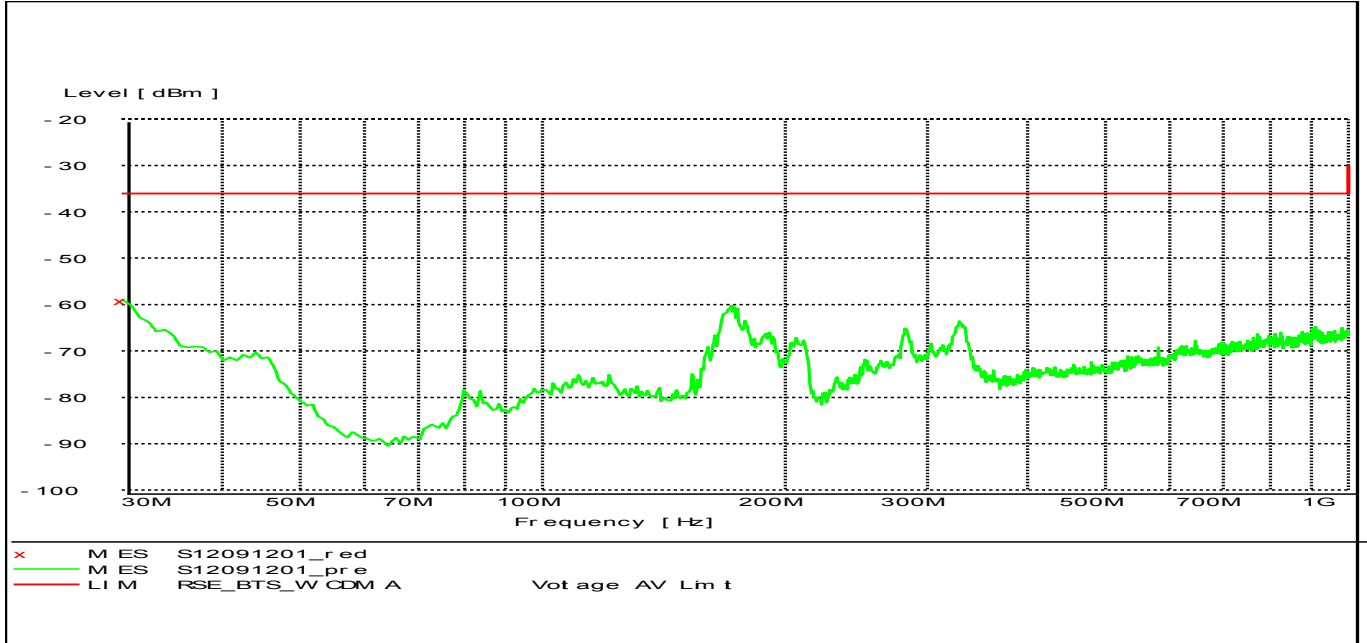
1 Result Table

EUT Conf.	Maximum Emission [dBm]	Verdict
EUT Conf. 11	<-13	Pass

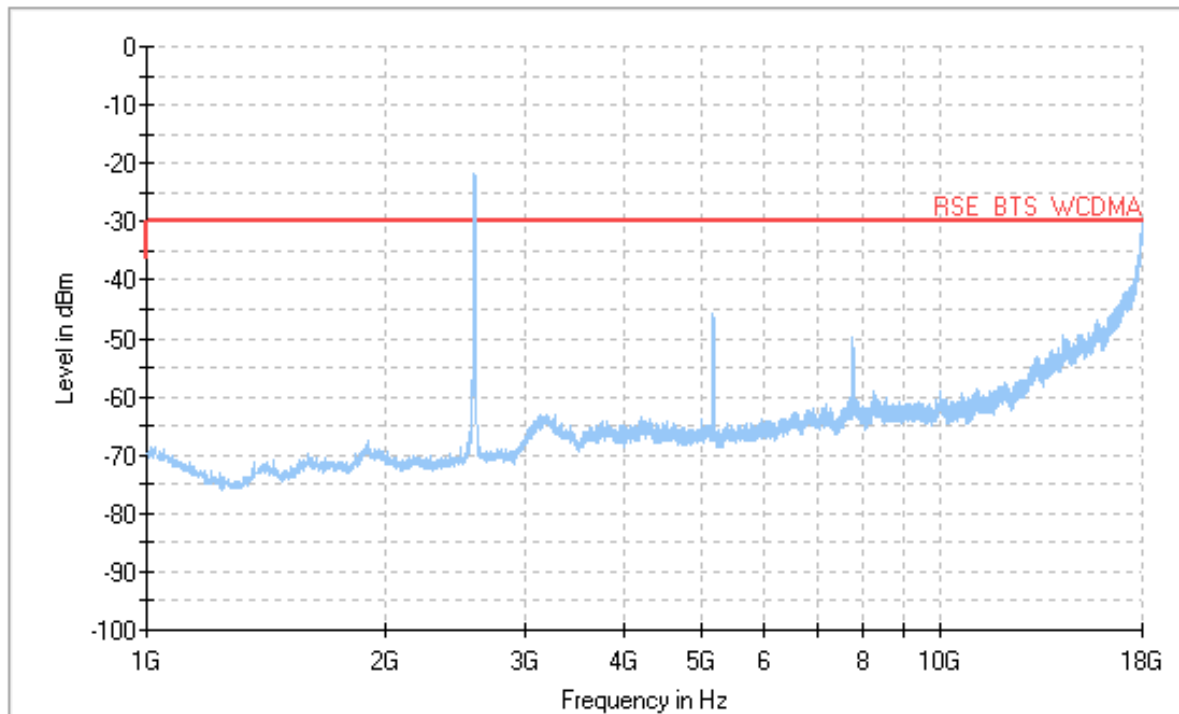


2 Test Plot

2.1 EUT Conf. 11



5m_Turntable_RSE_WCDMA_M





Appendix F: 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
EUT Conf. 3	100%	-30 °C	-2.6	-0.001	---	Pass
		-20 °C	6.1	0.002	---	Pass
		-10 °C	2.8	0.001	---	Pass
		0 °C	-8.9	-0.003	---	Pass
		+10 °C	7.5	0.003	---	Pass
		+20 °C	4.2	0.002	---	Pass
		+30 °C	-1.7	-0.001	---	Pass
		+40 °C	-1.0	-0.001	---	Pass
		+50 °C	6.2	0.002	---	Pass

EUT Conf.	Voltage	Temperature	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
EUT Conf. 11	100%	-30 °C	6.7	0.002	---	Pass
		-20 °C	-1.9	-0.001	---	Pass
		-10 °C	5.7	0.002	---	Pass
		0 °C	2.1	0.001	---	Pass
		+10 °C	-1.1	-0.001	---	Pass
		+20 °C	5.3	0.002	---	Pass
		+30 °C	3.2	0.001	---	Pass
		+40 °C	-0.7	-0.001	---	Pass
		+50 °C	-3.7	-0.001	---	Pass

(2) Frequency Error vs. Voltage:

EUT Conf.	Temperature	Voltage	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
EUT Conf. 3	+20 °C	85 %	6.1	0.002	---	Pass
		100 %	2.6	0.001	---	Pass
		115 %	5.9	0.002	---	Pass

EUT Conf.	Temperature	Voltage	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Verdict
EUT Conf. 11	+20 °C	85 %	2.1	0.001	---	Pass
		100 %	6.1	0.002	---	Pass
		115 %	-4.3	-0.002	---	Pass



Appendix G: Receiver Spurious Emissions



1 Result Table

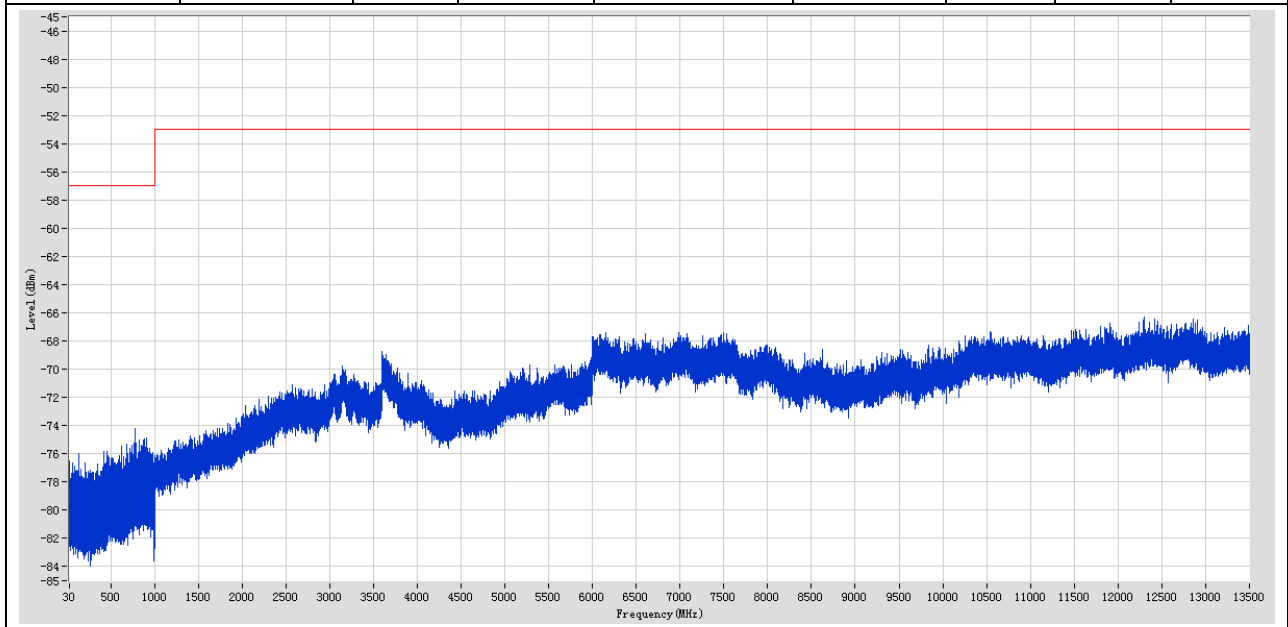
EUT Conf.	Maximum Emission [dBm]	Verdict
EUT Conf. 3	-66.33	Pass
EUT Conf.11	-66.54	Pass



2 Test Plot

2.1 EUT Conf. 3

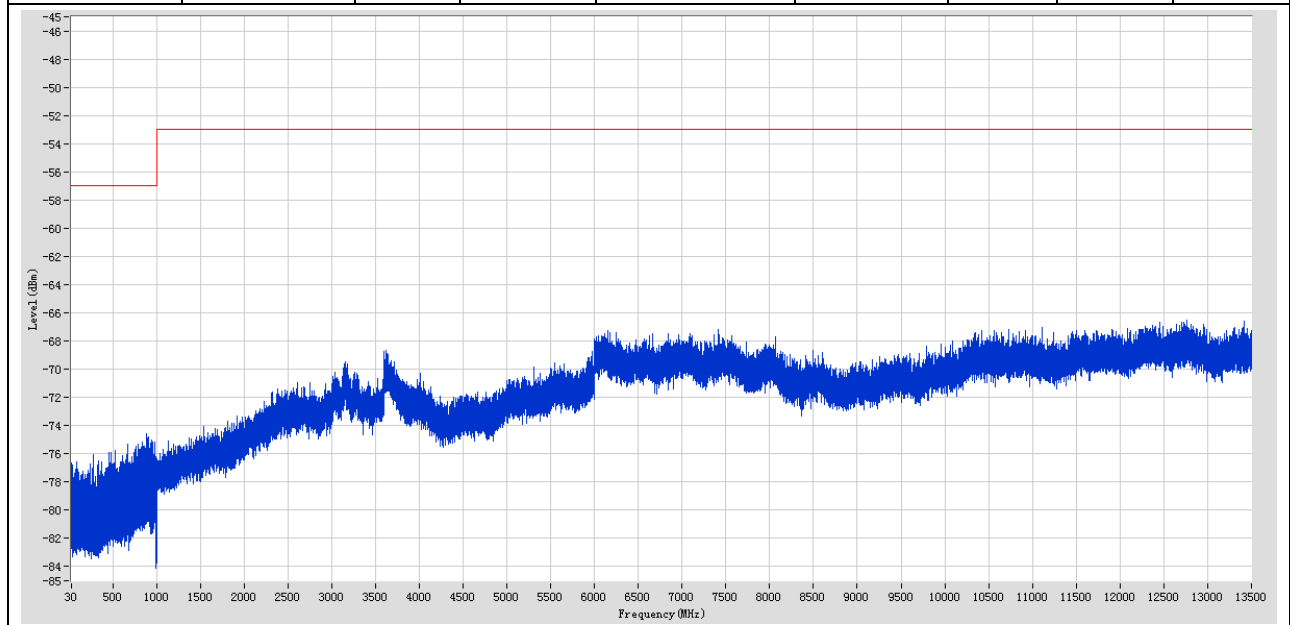
Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	1000	0.12	Peak	776.562664 M	-74.18	-57	Pass	41002
1000	13500	1	RMS	12294.346413 M	-66.33	-53	Pass	62500





2.2 EUT Conf.11

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
30	1000	0.12	Peak	883.773344 M	-74.58	-57	Pass	41002
1000	13500	1	RMS	12760.767144 M	-66.54	-53	Pass	62500

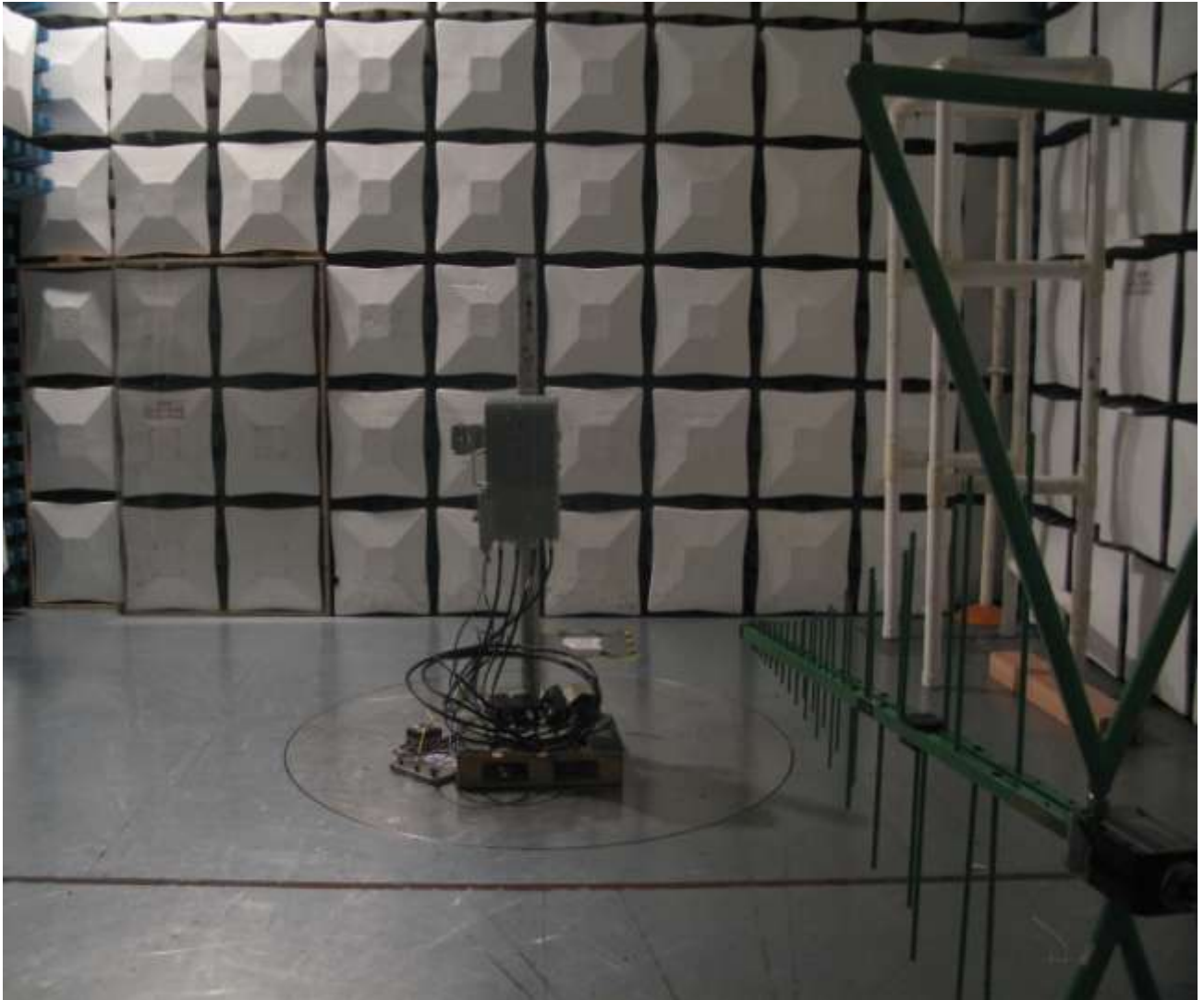




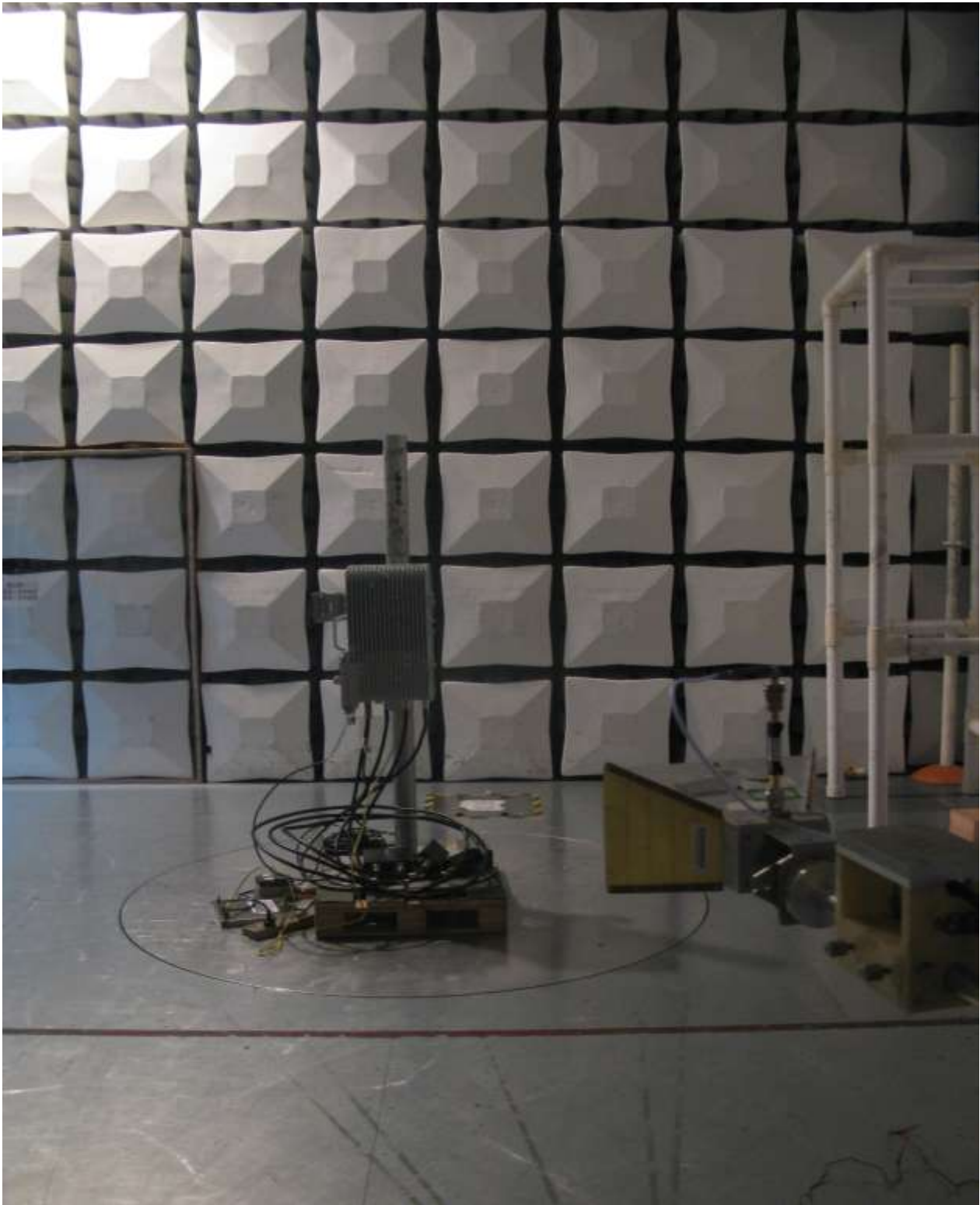
Appendix H: Photos of Test Setups

1 Test Setup 3

1.1 Frequency range below 1 GHz



1.2 Frequency range above 1 GHz



END