Measurement Result for 12.5 KHz Channel Separation @ 173.975MHz-7W

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
173.975	H	0		pass
347.950	H	71.23	58.45	pass
521.925	H	71.18	58.45	pass
695.900	H	73.56	58.45	pass
869.875	H	74.23	58.45	pass
1043.850	H	75.23	58.45	pass
1217.825	H	76.96	58.45	pass
1391.800	H	79.15	58.45	pass
1565.775	H	82.76	58.45	pass
1739.750	H	80.48	58.45	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
173.975	V	0		pass
347.950	V	71.56	58.45	pass
521.925	V	71.43	58.45	pass
695.900	V	74.91	58.45	pass
869.875	V	73.75	58.45	pass
1043.850	V	75.19	58.45	pass
1217.825	V	76.56	58.45	pass
1391.800	V	77.97	58.45	pass
1565.775	V	80.23	58.45	pass
1739.750	V	79.87	58.45	pass

Measurement Result for 12.5 KHz Channel Separation @ 136.025MHz-0.2W

Emission Frequency (MHz)	Ant. Polarity(H/H)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
136.025	V	0		pass
272.050	V	71.97	43.01	pass
408.08	V	72.08	43.01	pass
544.100	V	74.23	43.01	pass
680.125	V	75.11	43.01	pass
816.150	V	78.08	43.01	pass
952.175	V	77.34	43.01	pass
1088.200	V	78.94	43.01	pass
1224.225	V	80.24	43.01	pass
1360.250	V	81.29	43.01	pass

Measurement Result for 12.5 KHz Channel Separation @ 151.850MHz-0.2W

Frequency (MHz)	Ant. Polarity(H/V)	Result Below carrier(dBc)	below carrier(dBc)	Result(P/F)
151.850	H	0		pass
303.700	H	69.78	43.01	pass
455.55	H	72.16	43.01	pass
607.400	H	73.86	43.01	pass
759.250	H	75.34	43.01	pass
911.100	H	75.65	43.01	pass
1062.950	H	76.23	43.01	pass
1214.800	H	76.86	43.01	pass
1366.650	H	78.22	43.01	pass
1518.500	H	81.19	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/H)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
151.850	V	0		pass
303.700	V	71.12	43.01	pass
455.55	V	72.78	43.01	pass
607.400	V	73.34	43.01	pass
759.250	V	75.07	43.01	pass
911.100	V	74.23	43.01	pass
1062.950	V	76.11	43.01	pass
1214.800	V	75.96	43.01	pass
1366.650	V	81.75	43.01	pass
1518.500	V	80.34	43.01	pass

Measurement Result for 12.5 KHz Channel Separation @ 155.025MHz-0.2W

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
155.025	H	0		pass
310.050	H	69.86	43.01	pass
465.075	H	71.34	43.01	pass
620.100	H	72.19	43.01	pass
775.125	H	75.65	43.01	pass
930.150	H	75.34	43.01	pass
1085.175	H	78.18	43.01	pass
1240.200	H	78.56	43.01	pass
1395.225	H	81.85	43.01	pass
1550.250	H	80.66	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/H)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
155.025	V	0		pass
310.050	V	69.34	43.01	pass
465.075	V	71.96	43.01	pass
620.100	V	73.49	43.01	pass
775.125	V	75.72	43.01	pass
930.150	V	77.33	43.01	pass
1085.175	V	76.86	43.01	pass
1240.200	V	79.18	43.01	pass
1395.225	V	81.59	43.01	pass
1550.250	V	82.34	43.01	pass

Measurement Result for 12.5 KHz Channel Separation @ 161.610MHz-0.2W

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
161.610	H	0		pass
323.220	H	69.11	43.01	pass
484.83	H	71.58	43.01	pass
646.440	H	73.31	43.01	pass
808.050	H	74.75	43.01	pass
969.660	H	75.86	43.01	pass
1131.270	H	76.23	43.01	pass
1292.880	H	76.85	43.01	pass
1454.490	H	78.29	43.01	pass
1616.100	H	81.75	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/H)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
161.610	V	0		pass
323.220	V	71.44	43.01	pass
484.83	V	72.18	43.01	pass
646.440	V	74.53	43.01	pass
808.050	V	74.07	43.01	pass
969.660	V	76.60	43.01	pass
1131.270	V	75.06	43.01	pass
1292.880	V	76.44	43.01	pass
1454.490	V	79.97	43.01	pass
1616.100	V	80.43	43.01	pass

Measurement Result for 12.5 KHz Channel Separation @ 173.975MHz-0.2W

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
173.975	H	0		pass
347.950	H	69.78	43.01	pass
521.925	H	69.1	43.01	pass
695.900	H	71.75	43.01	pass
869.875	H	73.19	43.01	pass
1043.850	H	76.97	43.01	pass
1217.825	H	77.34	43.01	pass
1391.800	H	78.88	43.01	pass
1565.775	H	79.27	43.01	pass
1739.750	H	80.97	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
173.975	V	0		pass
347.950	V	70.26	43.01	pass
521.925	V	70.75	43.01	pass
695.900	V	72.18	43.01	pass
869.875	V	75.18	43.01	pass
1043.850	V	76.00	43.01	pass
1217.825	V	78.18	43.01	pass
1391.800	V	79.32	43.01	pass
1565.775	V	81.86	43.01	pass
1739.750	V	80.54	43.01	pass

UHF:

Analog:

TEST RESULTS--6W

Measurement Result for 12.5 KHz Channel Separation @ 400.025MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
400.025	H	0		pass
800.050	H	68.34	57.78	pass
1200.075	H	69.86	57.78	pass
1600.100	H	71.17	57.78	pass
2000.125	H	72.66	57.78	pass
2400.150	H	75.36	57.78	pass
2800.175	H	77.22	57.78	pass
3200.200	H	79.84	57.78	pass
3600.225	H	78.77	57.78	pass
4000.250	H	81.51	57.78	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
400.025	V	0		pass
800.050	V	70.17	57.78	pass
1200.075	V	72.55	57.78	pass
1600.100	V	71.23	57.78	pass
2000.125	V	75.86	57.78	pass
2400.150	V	76.43	57.78	pass
2800.175	V	75.12	57.78	pass
3200.200	V	77.24	57.78	pass
3600.225	V	79.75	57.78	pass
4000.250	V	80.22	57.78	pass

Measurement Result for 12.5 KHz Channel Separation @ 454.025MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
454.025	H	0		pass
908.050	H	67.12	57.78	pass
1362.075	H	70.86	57.78	pass
1816.100	H	70.53	57.78	pass
2270.125	H	74.17	57.78	pass
2724.150	H	75.91	57.78	pass
3178.175	H	79.43	57.78	pass
3632.200	H	78.28	57.78	pass
4086.225	H	81.55	57.78	pass
4540.250	H	81.34	57.78	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
454.025	V	0		pass
908.050	V	70.53	57.78	pass
1362.075	V	71.51	57.78	pass
1816.100	V	74.27	57.78	pass
2270.125	V	73.45	57.78	pass
2724.150	V	74.18	57.78	pass
3178.175	V	75.06	57.78	pass
3632.200	V	79.14	57.78	pass
4086.225	V	78.84	57.78	pass
4540.250	V	81.22	57.78	pass

Measurement Result for 12.5 KHz Channel Separation @ 479.975MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
479.975	H	0		pass
959.950	H	67.43	57.78	pass
1439.925	H	68.11	57.78	pass
1919.900	H	69.86	57.78	pass
2399.875	H	71.01	57.78	pass
2879.850	H	72.11	57.78	pass
3359.825	H	75.38	57.78	pass
3839.800	H	76.76	57.78	pass
4319.775	H	79.82	57.78	pass
4799.750	H	81.82	57.78	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
479.975	V	0		pass
959.950	V	67.86	57.78	pass
1439.925	V	69.22	57.78	pass
1919.900	V	70.63	57.78	pass
2399.875	V	71.29	57.78	pass
2879.850	V	73.39	57.78	pass
3359.825	V	78.57	57.78	pass
3839.800	V	80.74	57.78	pass
4319.775	V	80.63	57.78	pass
4799.750	V	81.19	57.78	pass

TEST RESULTS—0.2W

Measurement Result for 12.5 KHz Channel Separation @ 400.025MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
400.025	H	0		pass
800.050	H	70.75	43.01	pass
1200.075	H	71.18	43.01	pass
1600.100	H	73.53	43.01	pass
2000.125	H	75.31	43.01	pass
2400.150	H	76.56	43.01	pass
2800.175	H	77.86	43.01	pass
3200.200	H	78.97	43.01	pass
3600.225	H	80.44	43.01	pass
4000.250	H	81.19	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
400.025	V	0		pass
800.050	V	70.63	43.01	pass
1200.075	V	71.75	43.01	pass
1600.100	V	73.18	43.01	pass
2000.125	V	74.64	43.01	pass
2400.150	V	75.86	43.01	pass
2800.175	V	76.44	43.01	pass
3200.200	V	77.65	43.01	pass
3600.225	V	79.71	43.01	pass
4000.250	V	80.16	43.01	pass

Measurement Result for 12.5 KHz Channel Separation @ 454.025MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
454.025	H	0		pass
908.050	H	70.82	43.01	pass
1362.075	H	70.18	43.01	pass
1816.100	H	74.82	43.01	pass
2270.125	H	74.45	43.01	pass
2724.150	H	76.22	43.01	pass
3178.175	H	75.17	43.01	pass
3632.200	H	76.68	43.01	pass
4086.225	H	79.54	43.01	pass
4540.250	H	81.33	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
454.025	V	0		pass
908.050	V	68.08	43.01	pass
1362.075	V	69.2	43.01	pass
1816.100	V	70.77	43.01	pass
2270.125	V	73.03	43.01	pass
2724.150	V	76.92	43.01	pass
3178.175	V	78.11	43.01	pass
3632.200	V	79.64	43.01	pass
4086.225	V	80.34	43.01	pass
4540.250	V	80.69	43.01	pass

Measurement Result for 12.5 KHz Channel Separation @ 479.975MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
479.975	H	0		pass
959.950	H	70.83	43.01	pass
1439.925	H	71.56	43.01	pass
1919.900	H	73.72	43.01	pass
2399.875	H	75.14	43.01	pass
2879.850	H	76.66	43.01	pass
3359.825	H	78.54	43.01	pass
3839.800	H	79.22	43.01	pass
4319.775	H	80.16	43.01	pass
4799.750	H	81.08	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
479.975	V	0		pass
959.950	V	70.52	43.01	pass
1439.925	V	71.35	43.01	pass
1919.900	V	72.19	43.01	pass
2399.875	V	74.24	43.01	pass
2879.850	V	76.80	43.01	pass
3359.825	V	77.65	43.01	pass
3839.800	V	78.46	43.01	pass
4319.775	V	79.90	43.01	pass
4799.750	V	80.75	43.01	pass

Digital:

TEST RESULTS-6W

Measurement Result for 12.5 KHz Channel Separation @ 400.025MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
400.025	H	0		pass
800.050	H	70.77	57.78	pass
1200.075	H	71.17	57.78	pass
1600.100	H	72.55	57.78	pass
2000.125	H	74.82	57.78	pass
2400.150	H	75.16	57.78	pass
2800.175	H	77.43	57.78	pass
3200.200	H	78.51	57.78	pass
3600.225	H	79.18	57.78	pass
4000.250	H	80.50	57.78	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
400.025	V	0		pass
800.050	V	70.38	57.78	pass
1200.075	V	71.81	57.78	pass
1600.100	V	72.44	57.78	pass
2000.125	V	75.86	57.78	pass
2400.150	V	76.43	57.78	pass
2800.175	V	75.95	57.78	pass
3200.200	V	78.23	57.78	pass
3600.225	V	79.73	57.78	pass
4000.250	V	80.17	57.78	pass

Measurement Result for 12.5 KHz Channel Separation @ 454.025MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
454.025	H	0		pass
908.050	H	70.24	57.78	pass
1362.075	H	71.62	57.78	pass
1816.100	H	74.22	57.78	pass
2270.125	H	74.18	57.78	pass
2724.150	H	76.55	57.78	pass
3178.175	H	77.37	57.78	pass
3632.200	H	79.56	57.78	pass
4086.225	H	81.22	57.78	pass
4540.250	H	80.03	57.78	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
454.025	V	0		pass
908.050	V	70.72	57.78	pass
1362.075	V	71.24	57.78	pass
1816.100	V	72.55	57.78	pass
2270.125	V	73.61	57.78	pass
2724.150	V	75.74	57.78	pass
3178.175	V	74.32	57.78	pass
3632.200	V	77.17	57.78	pass
4086.225	V	78.55	57.78	pass
4540.250	V	81.03	57.78	pass

Measurement Result for 12.5 KHz Channel Separation @ 479.975MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
479.975	H	0		pass
959.950	H	71.85	57.78	pass
1439.925	H	70.86	57.78	pass
1919.900	H	73.34	57.78	pass
2399.875	H	75.56	57.78	pass
2879.850	H	78.04	57.78	pass
3359.825	H	77.19	57.78	pass
3839.800	H	79.72	57.78	pass
4319.775	H	79.1	57.78	pass
4799.750	H	80.68	57.78	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
479.975	V	0		pass
959.950	V	71.04	57.78	pass
1439.925	V	72.27	57.78	pass
1919.900	V	74.74	57.78	pass
2399.875	V	75.96	57.78	pass
2879.850	V	76.42	57.78	pass
3359.825	V	77.66	57.78	pass
3839.800	V	78.13	57.78	pass
4319.775	V	79.72	57.78	pass
4799.750	V	80.24	57.78	pass

TEST RESULTS-0.2W

Measurement Result for 12.5 KHz Channel Separation @ 400.025MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
400.025	H	0		pass
800.050	H	70.18	43.01	pass
1200.075	H	71.29	43.01	pass
1600.100	H	72.53	43.01	pass
2000.125	H	73.39	43.01	pass
2400.150	H	74.24	43.01	pass
2800.175	H	75.19	43.01	pass
3200.200	H	76.66	43.01	pass
3600.225	H	78.44	43.01	pass
4000.250	H	79.90	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
400.025	V	0		pass
800.050	V	70.75	43.01	pass
1200.075	V	71.45	43.01	pass
1600.100	V	74.25	43.01	pass
2000.125	V	75.05	43.01	pass
2400.150	V	76.54	43.01	pass
2800.175	V	78.62	43.01	pass
3200.200	V	81.27	43.01	pass
3600.225	V	80.83	43.01	pass
4000.250	V	81.41	43.01	pass

Measurement Result for 12.5 KHz Channel Separation @ 454.025MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
454.025	H	0		pass
908.050	H	70.74	43.01	pass
1362.075	H	72.26	43.01	pass
1816.100	H	73.74	43.01	pass
2270.125	H	76.46	43.01	pass
2724.150	H	75.75	43.01	pass
3178.175	H	77.23	43.01	pass
3632.200	H	78.65	43.01	pass
4086.225	H	81.18	43.01	pass
4540.250	H	80.46	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
454.025	V	0		pass
908.050	V	69.18	43.01	pass
1362.075	V	71.06	43.01	pass
1816.100	V	70.65	43.01	pass
2270.125	V	72.75	43.01	pass
2724.150	V	74.13	43.01	pass
3178.175	V	76.64	43.01	pass
3632.200	V	77.66	43.01	pass
4086.225	V	78.03	43.01	pass
4540.250	V	81.13	43.01	pass

Measurement Result for 12.5 KHz Channel Separation @ 479.975MHz

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
479.975	H	0		pass
959.950	H	70.44	43.01	pass
1439.925	H	71.64	43.01	pass
1919.900	H	74.14	43.01	pass
2399.875	H	76.62	43.01	pass
2879.850	H	77.95	43.01	pass
3359.825	H	78.55	43.01	pass
3839.800	H	79.72	43.01	pass
4319.775	H	80.44	43.01	pass
4799.750	H	82.85	43.01	pass

Emission Frequency (MHz)	Ant. Polarity(H/V)	Measurement Result Below carrier(dBc)	Limit below carrier(dBc)	Result(P/F)
479.975	V	0		pass
959.950	V	69.86	43.01	pass
1439.925	V	71.23	43.01	pass
1919.900	V	72.57	43.01	pass
2399.875	V	74.73	43.01	pass
2879.850	V	75.58	43.01	pass
3359.825	V	76.42	43.01	pass
3839.800	V	77.74	43.01	pass
4319.775	V	78.66	43.01	pass
4799.750	V	80.88	43.01	pass

7.5 EMISSION MASK PLOT

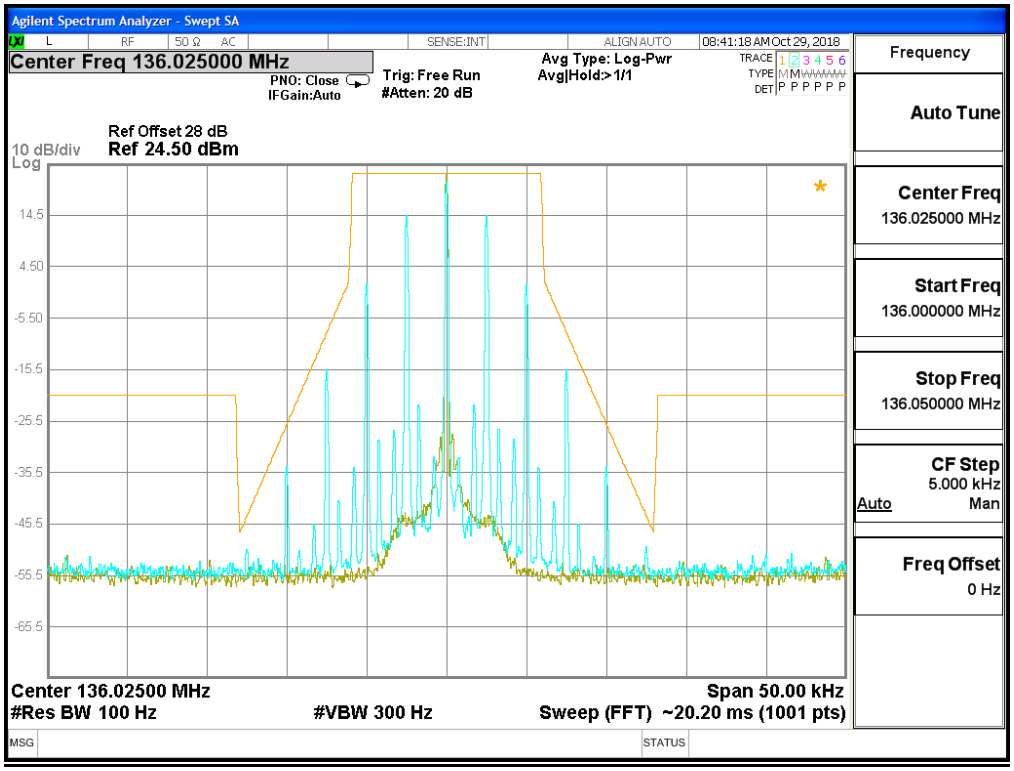
The detailed procedure employed for Emission Mask measurements are specified as following:

- The transmitter shall be modulated by a 2.5 kHz audio signal,
- The level of the audio signal employed is 16 dB greater than that necessary to produce 50% of rated system deviation. Rated system deviation is 2.5 kHz.

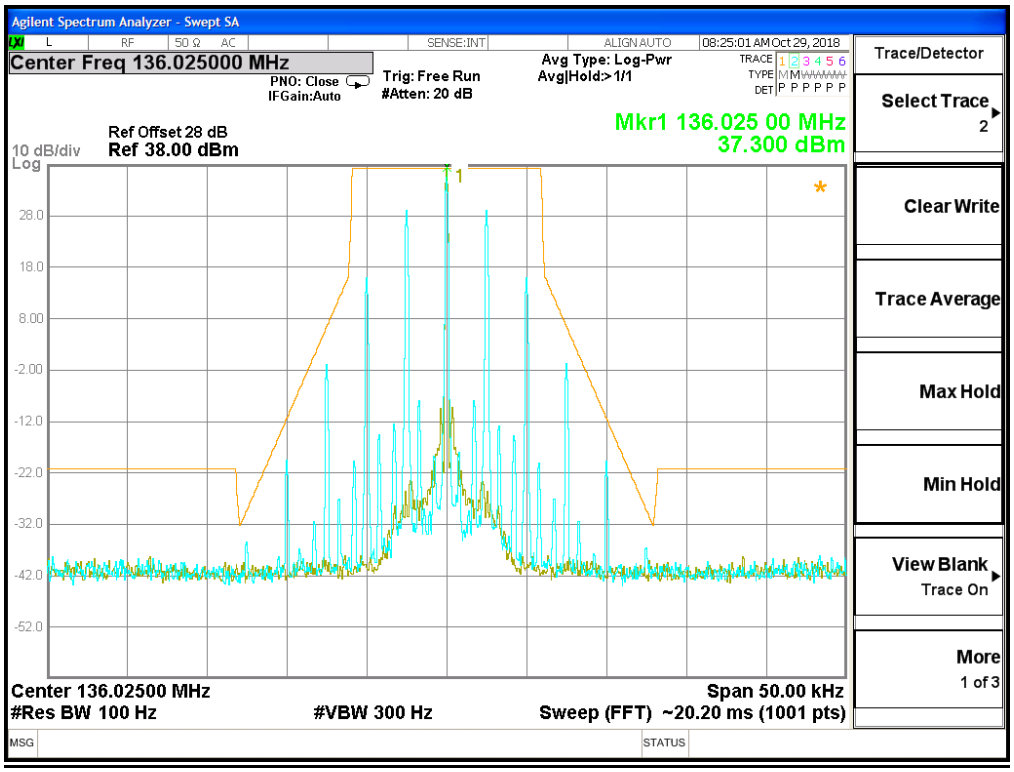
VHF:

Analog:

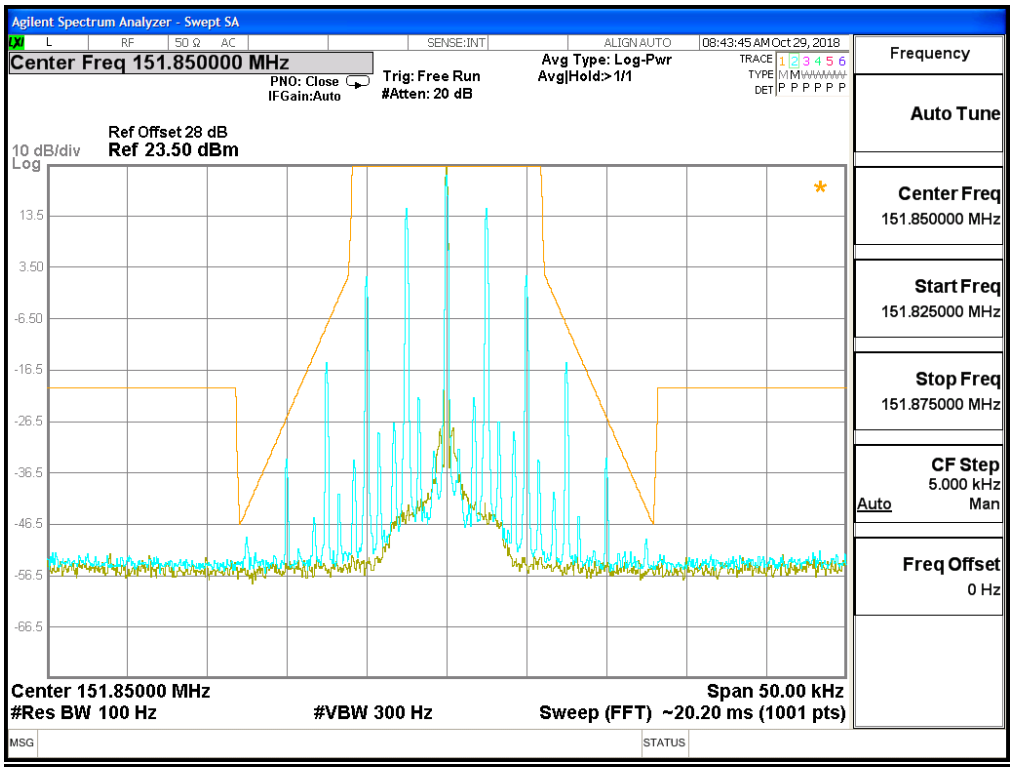
The Worst Emission Mask for (136.025MHz) of 12.5 KHz channel Separation (0.2W)



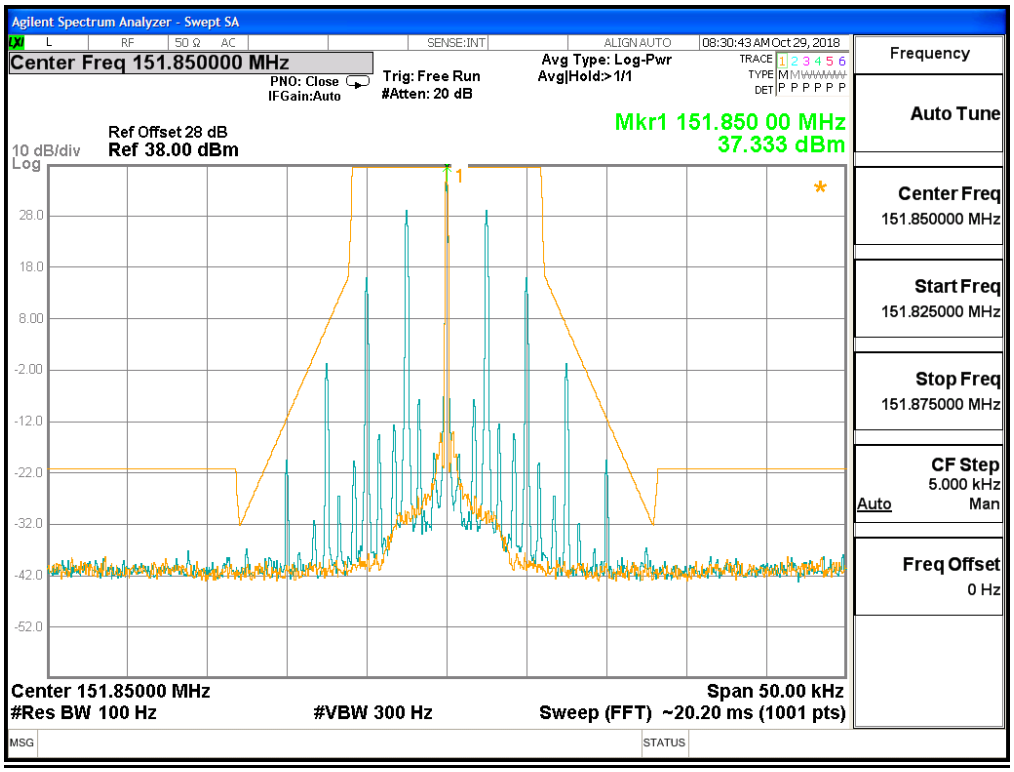
The Worst Emission Mask for (136.025MHz) of 12.5 KHz channel Separation (7W)



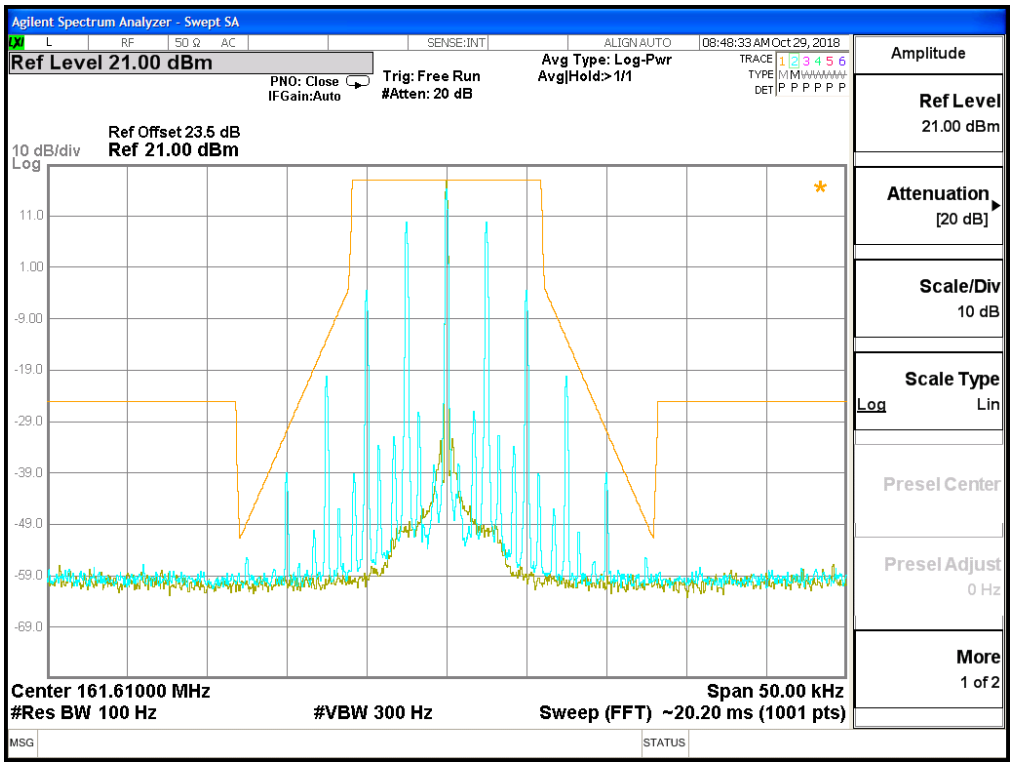
The Worst Emission Mask for (151.85MHz) of 12.5 KHz channel Separation (0.2W)



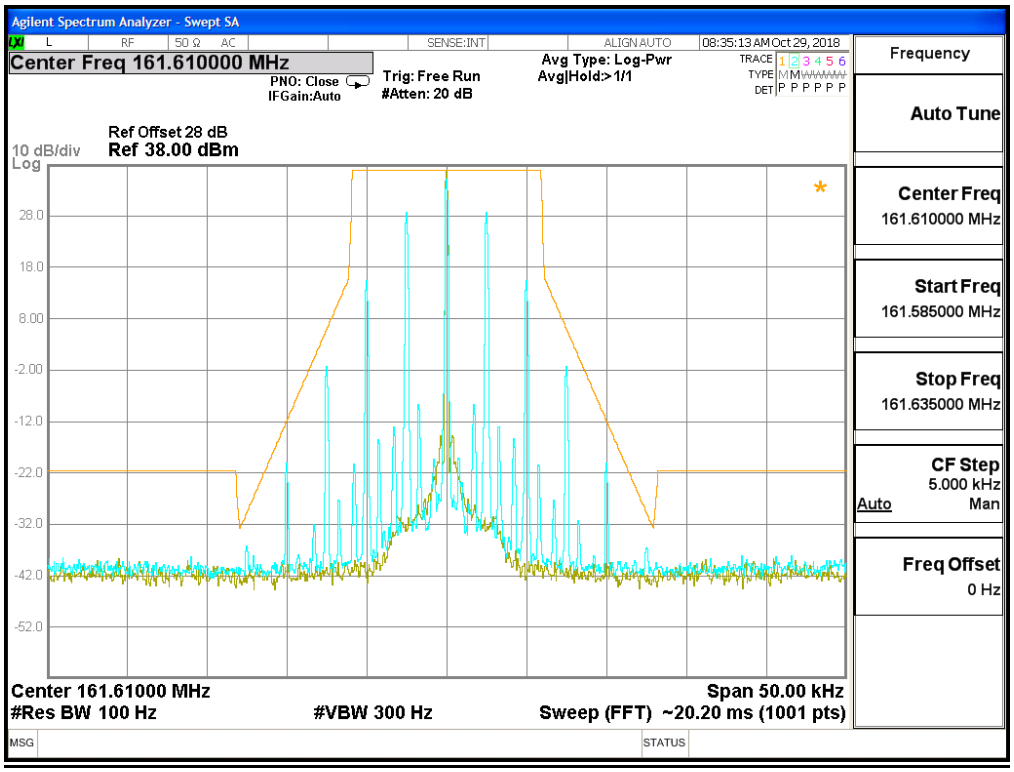
The Worst Emission Mask for (151.85MHz) of 12.5 KHz channel Separation (7W)



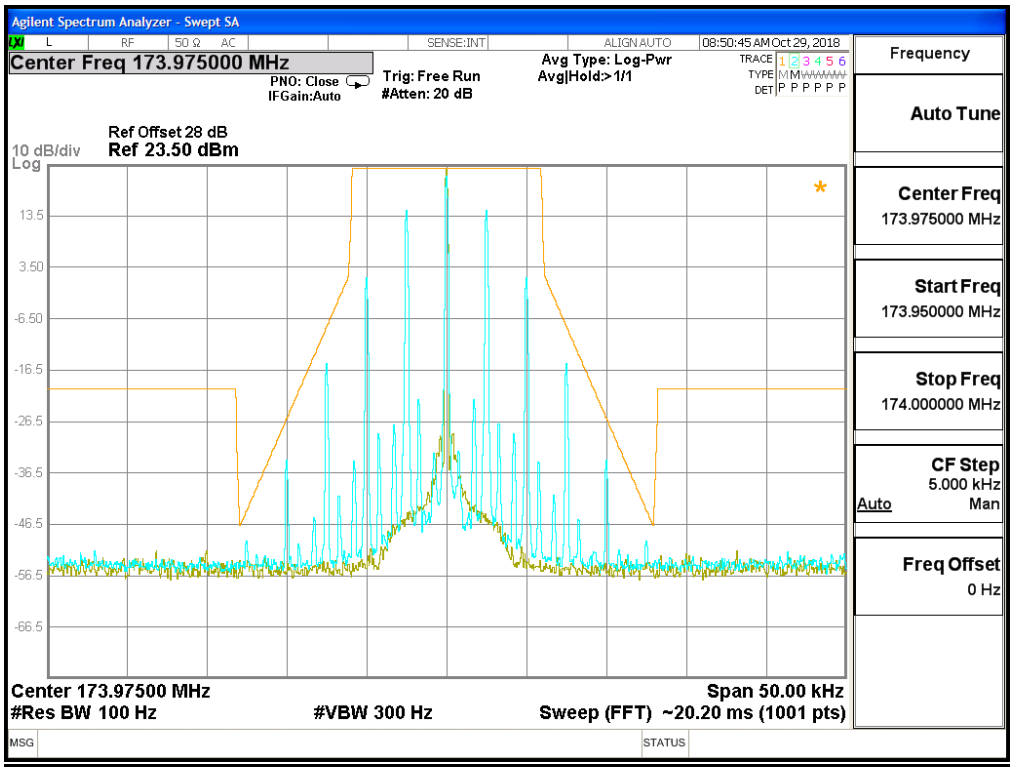
The Worst Emission Mask for (161.61MHz) of 12.5 KHz channel Separation (0.2W)



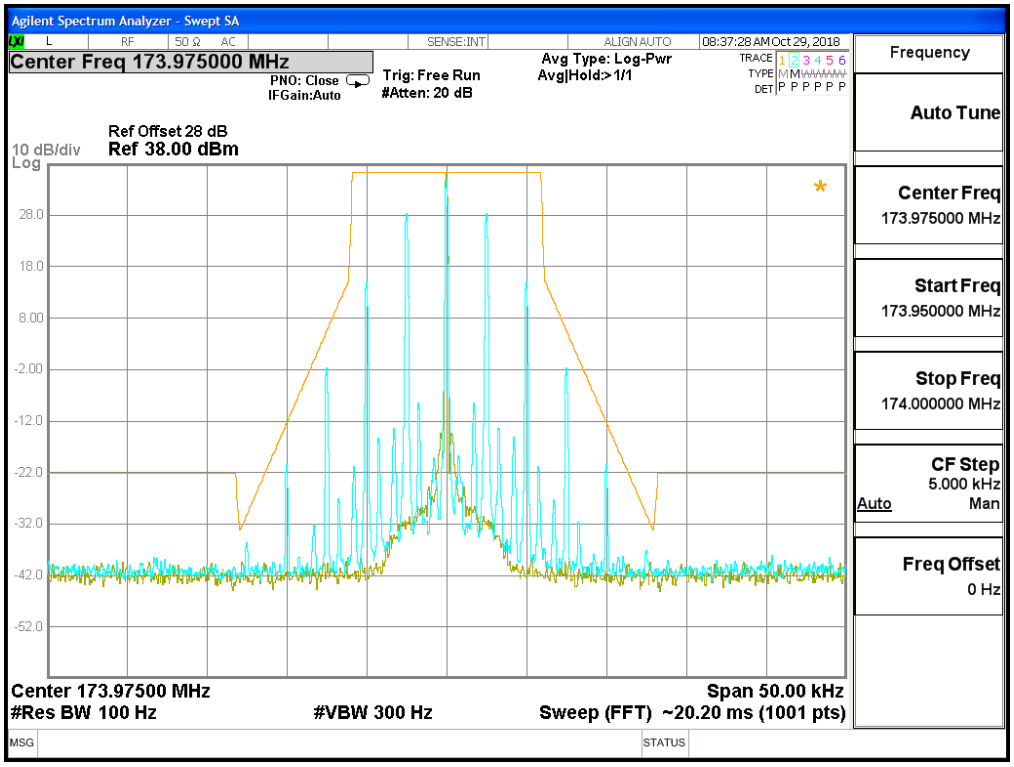
The Worst Emission Mask for (161.61MHz) of 12.5 KHz channel Separation (7W)



The Worst Emission Mask for (173.975MHz) of 12.5 KHz channel Separation (0.2W)

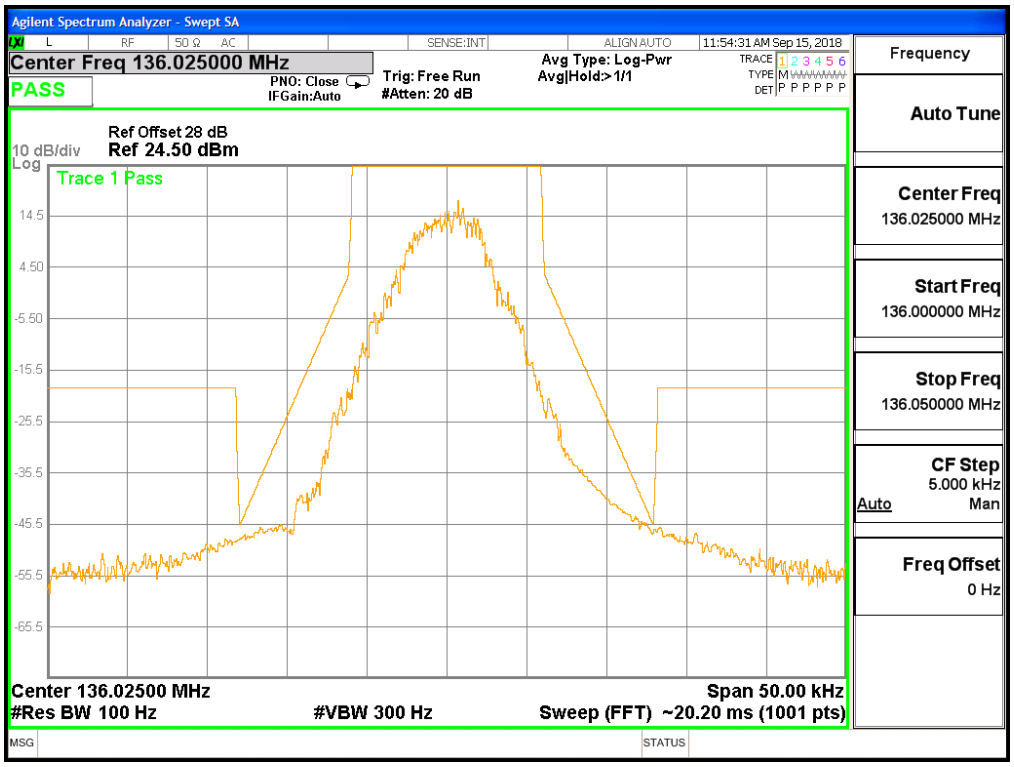


The Worst Emission Mask for (173.975MHz) of 12.5 KHz channel Separation (7W)

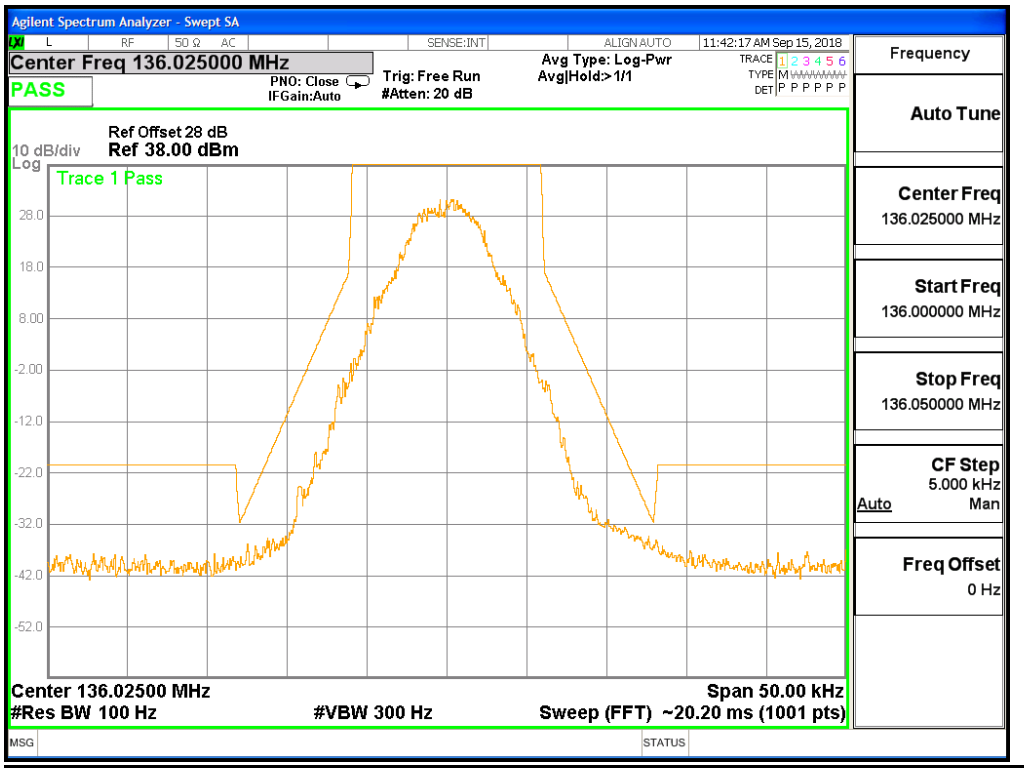


Digital：

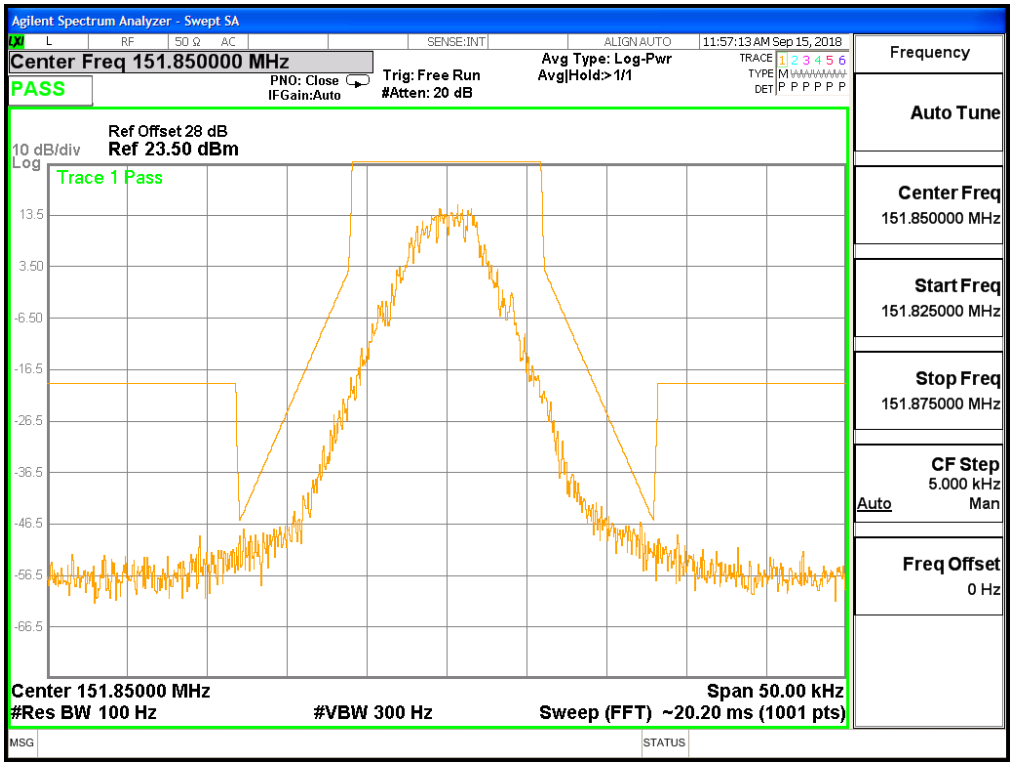
The Worst Emission Mask D for (136.025MHz) of 12.5 KHz channel Separation (0.2W)



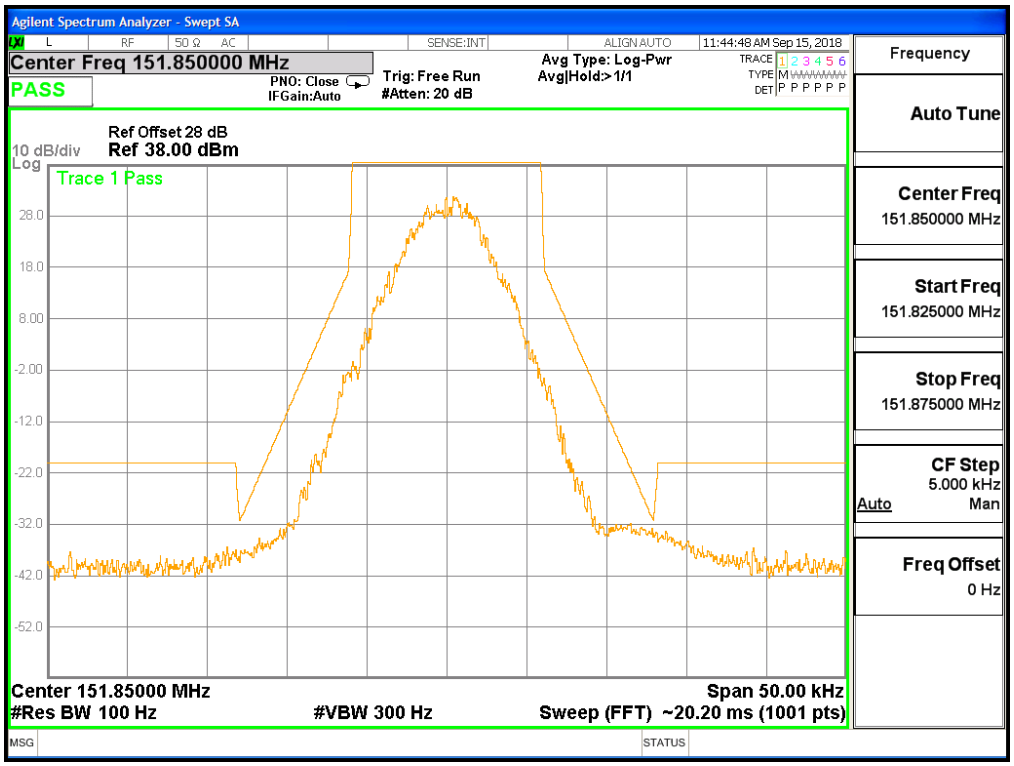
The Worst Emission Mask D for (136.025MHz) of 12.5 KHz channel Separation (7W)



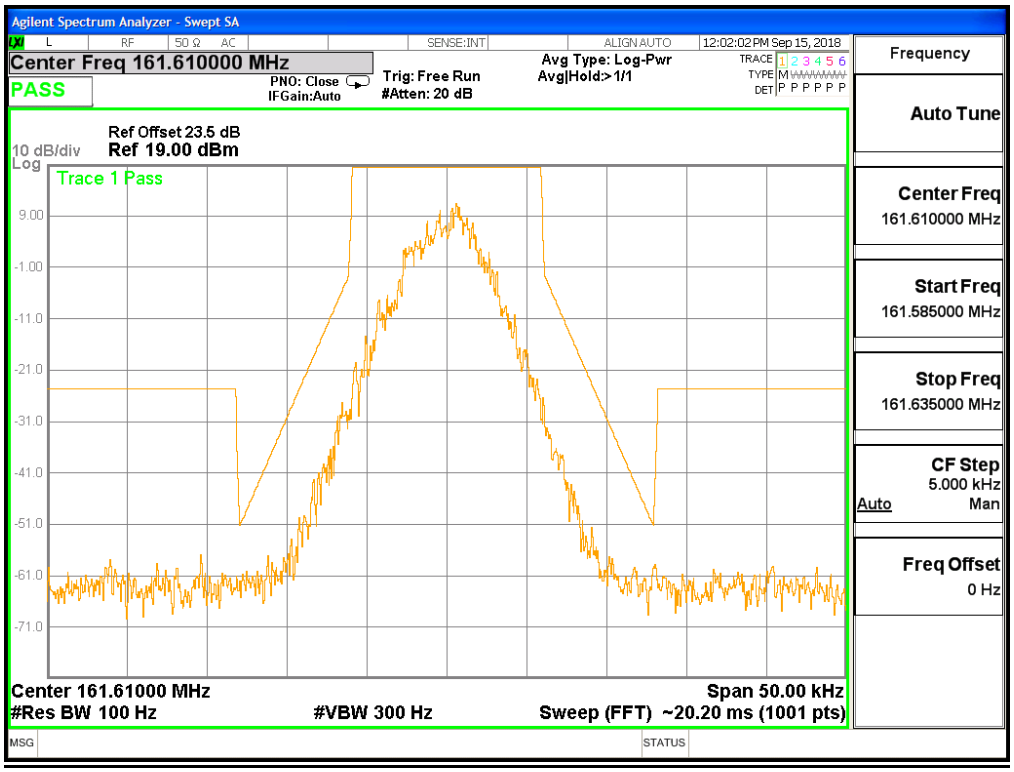
The Worst Emission Mask D for (151.85MHz) of 12.5 KHz channel Separation (0.2W)



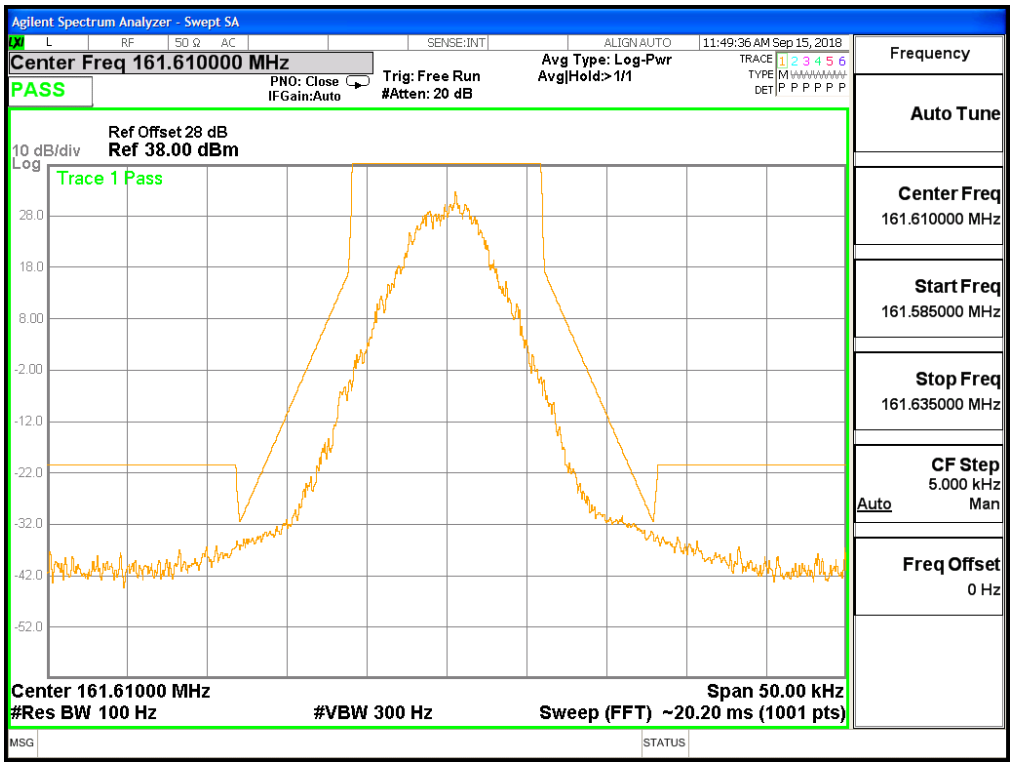
The Worst Emission Mask D for (151.85MHz) of 12.5 KHz channel Separation (7W)



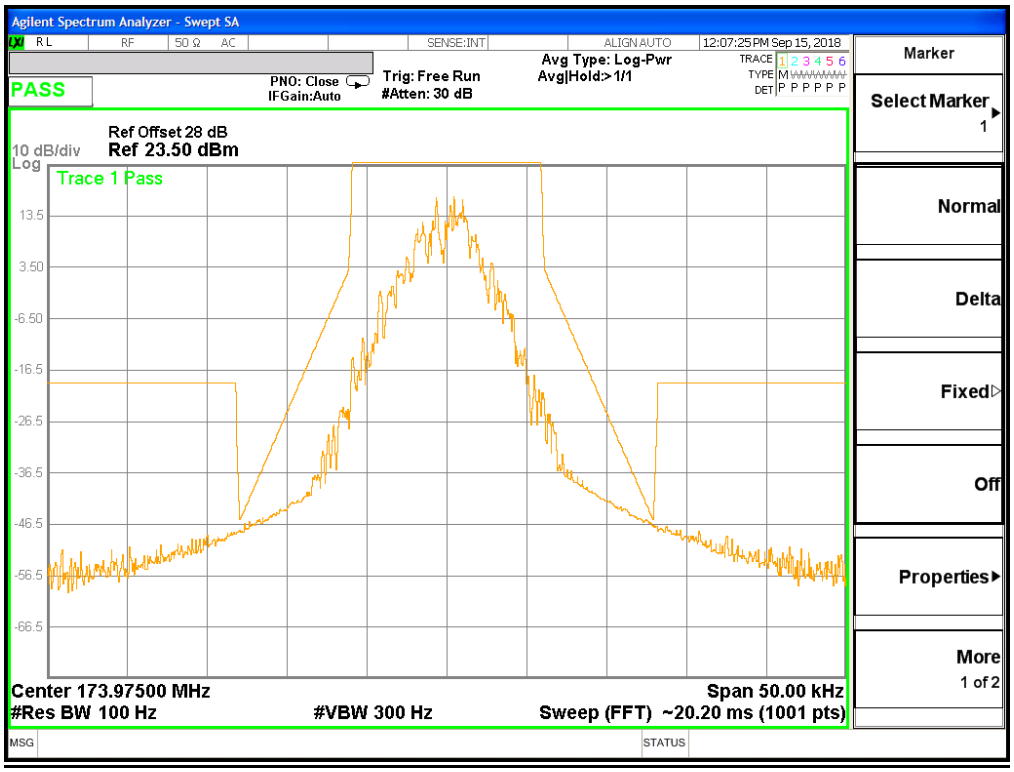
The Worst Emission Mask D for (161.61MHz) of 12.5 KHz channel Separation (0.2W)



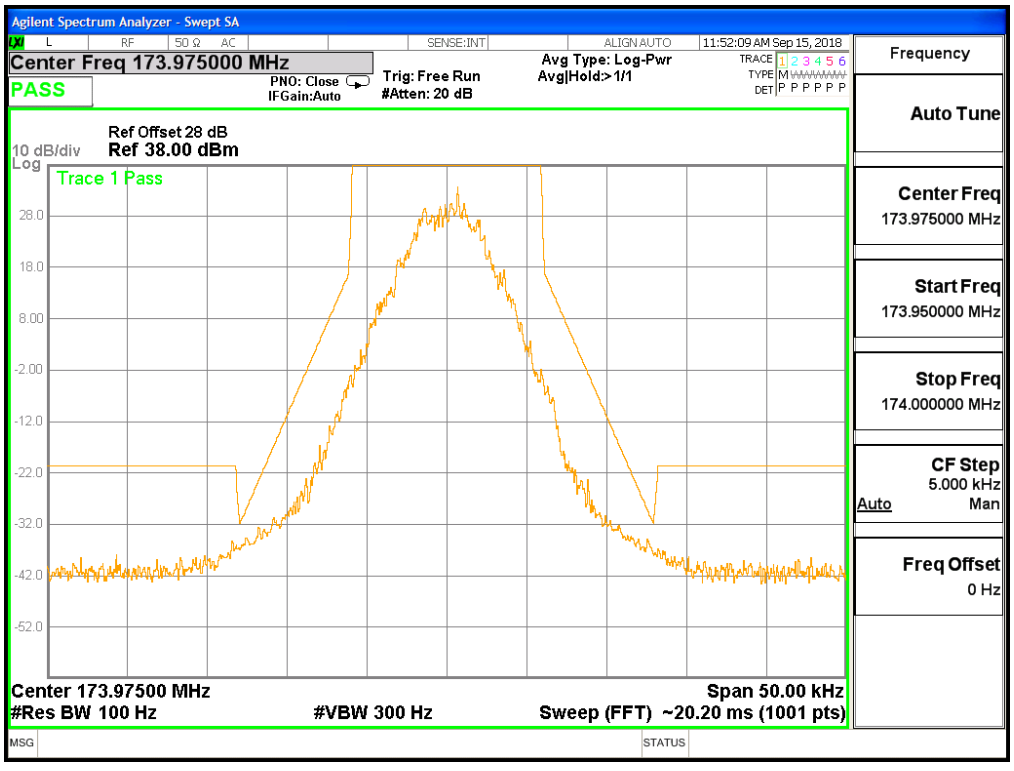
The Worst Emission Mask D for (161.61MHz) of 12.5 KHz channel Separation (7W)



The Worst Emission Mask D for (173.975MHz) of 12.5 KHz channel Separation (0.2W)



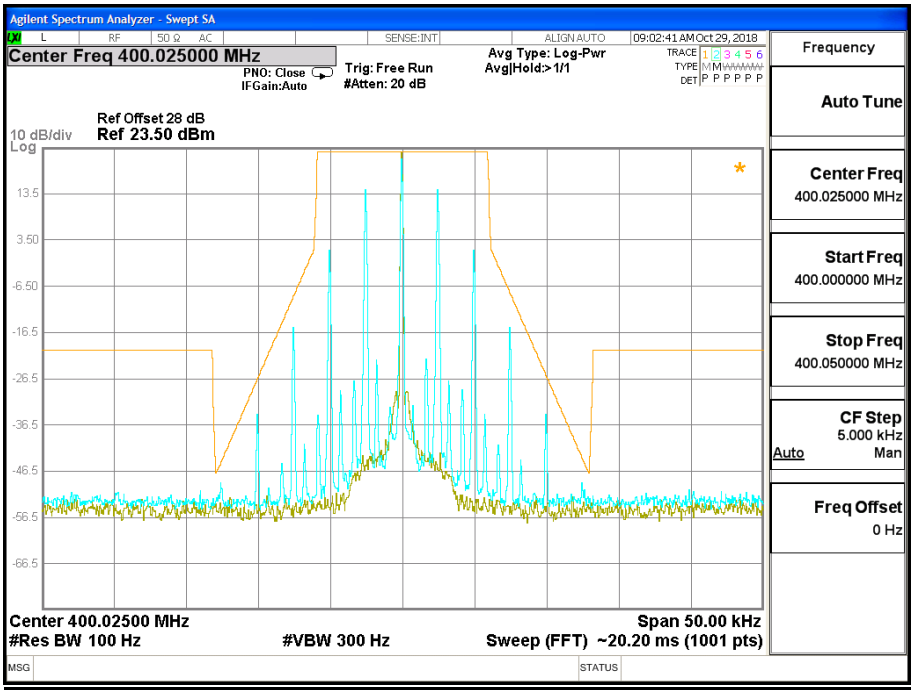
The Worst Emission Mask D for (173.975MHz) of 12.5 KHz channel Separation (7W)



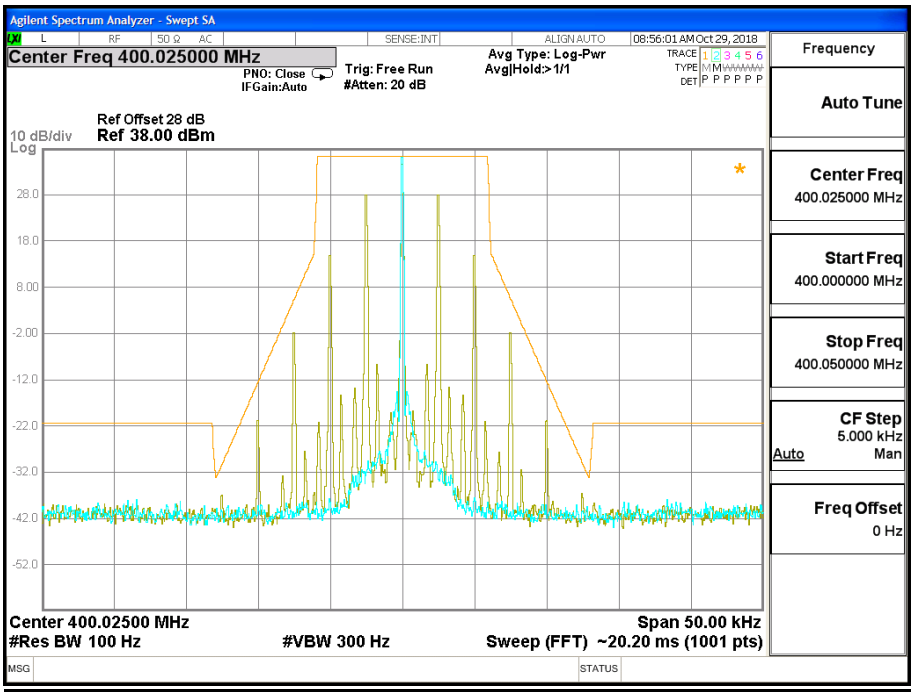
UHF:

Analog:

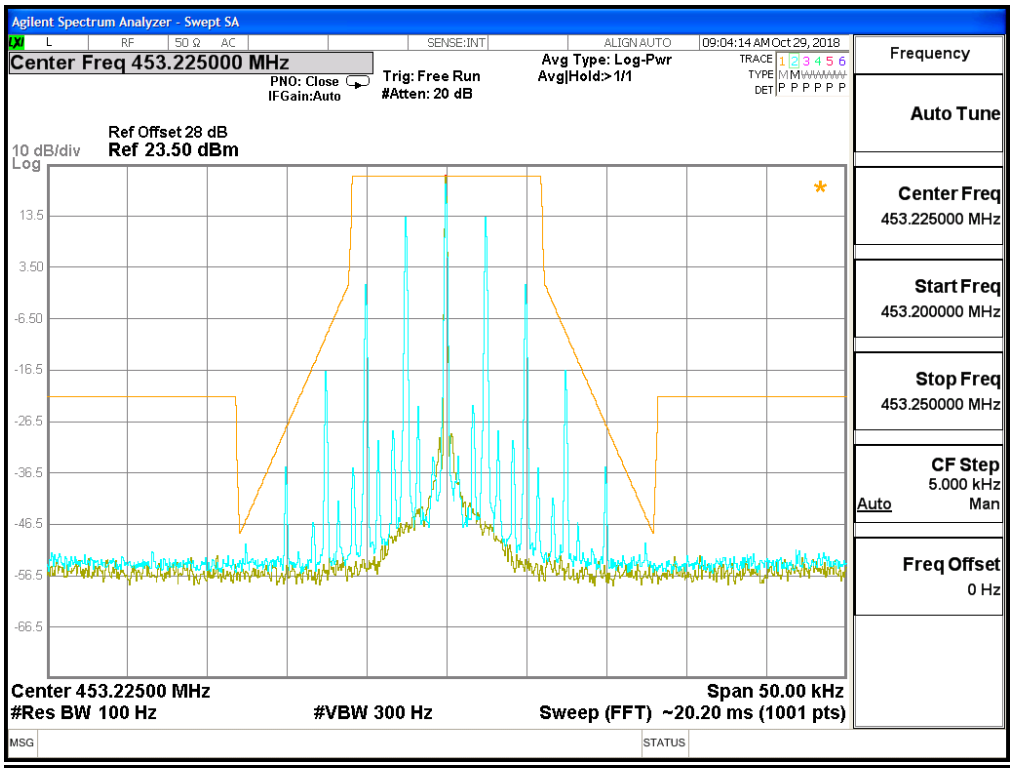
The Worst Emission Mask for (400.025 MHz) of 12.5 KHz channel Separation (0.2W)



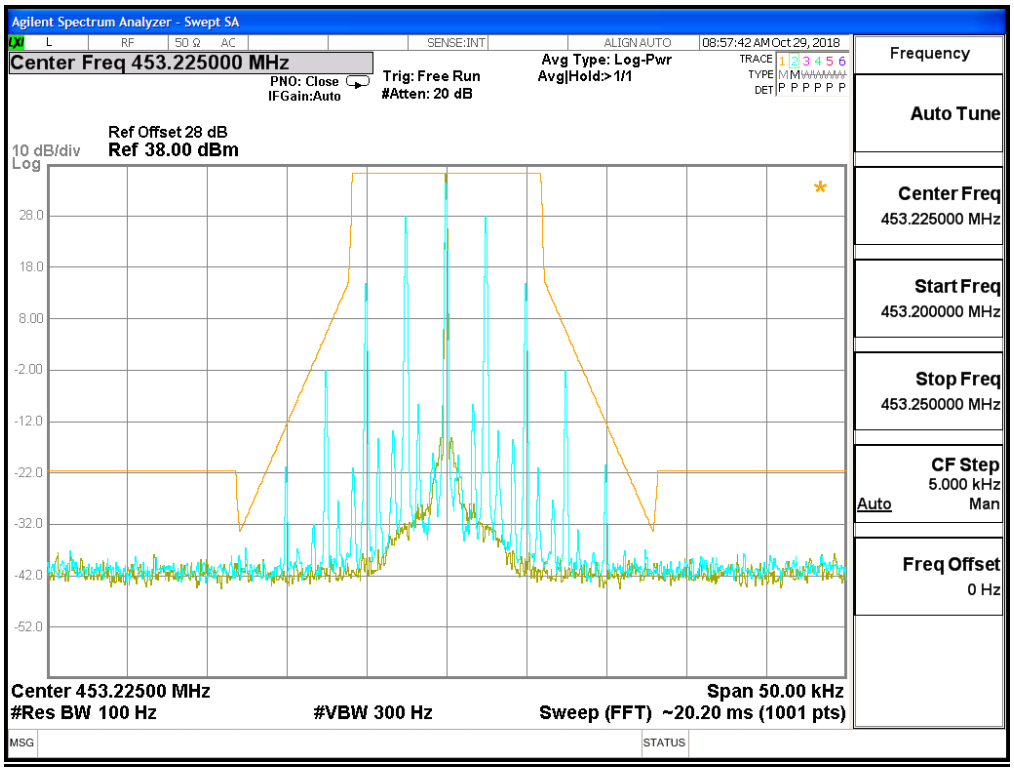
The Worst Emission Mask for (400.025 MHz) of 12.5 KHz channel Separation (6W)



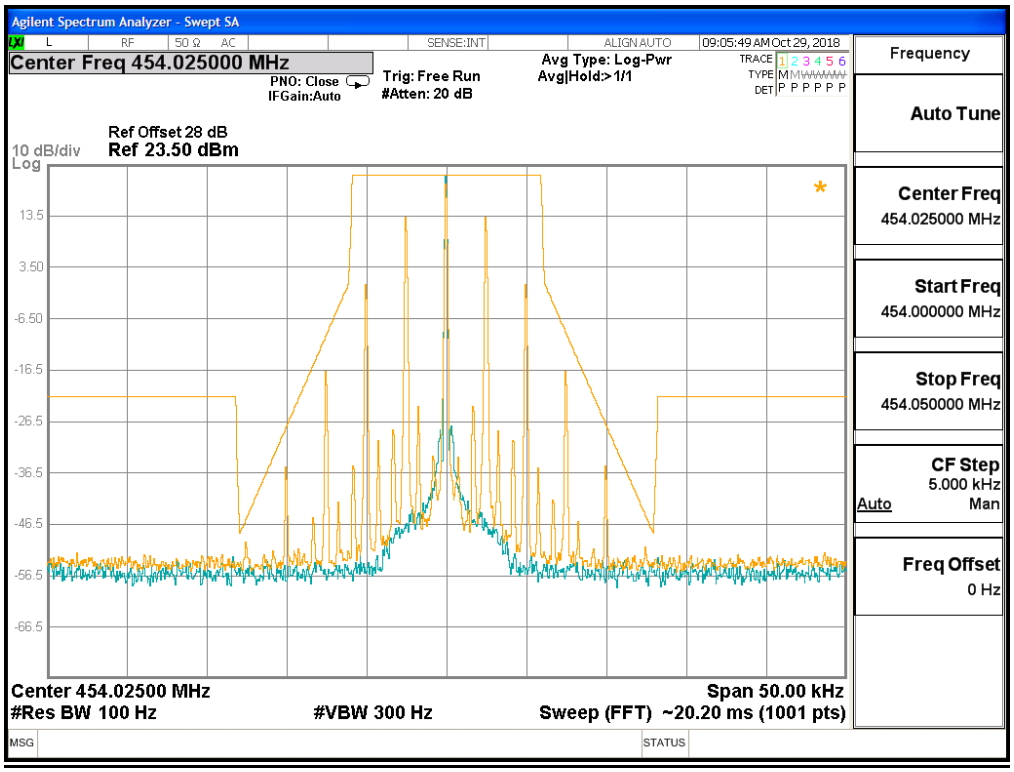
The Worst Emission Mask for (453.225 MHz) of 12.5 KHz channel Separation (0.2W)



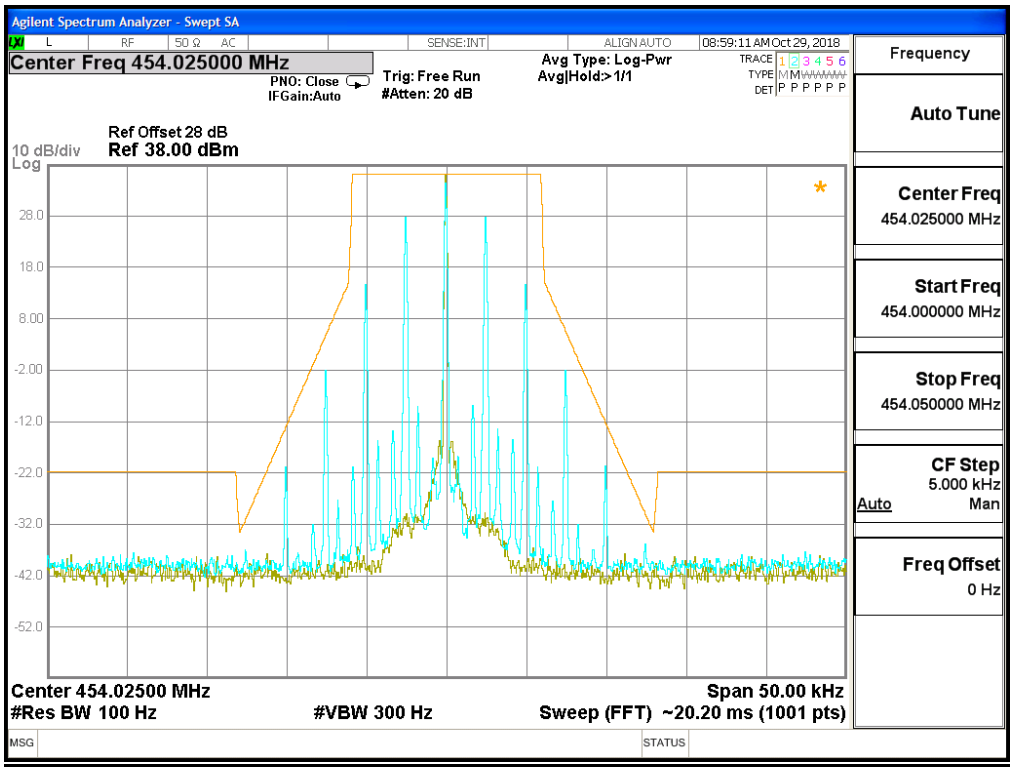
The Worst Emission Mask for (453.225 MHz) of 12.5 KHz channel Separation (6W)



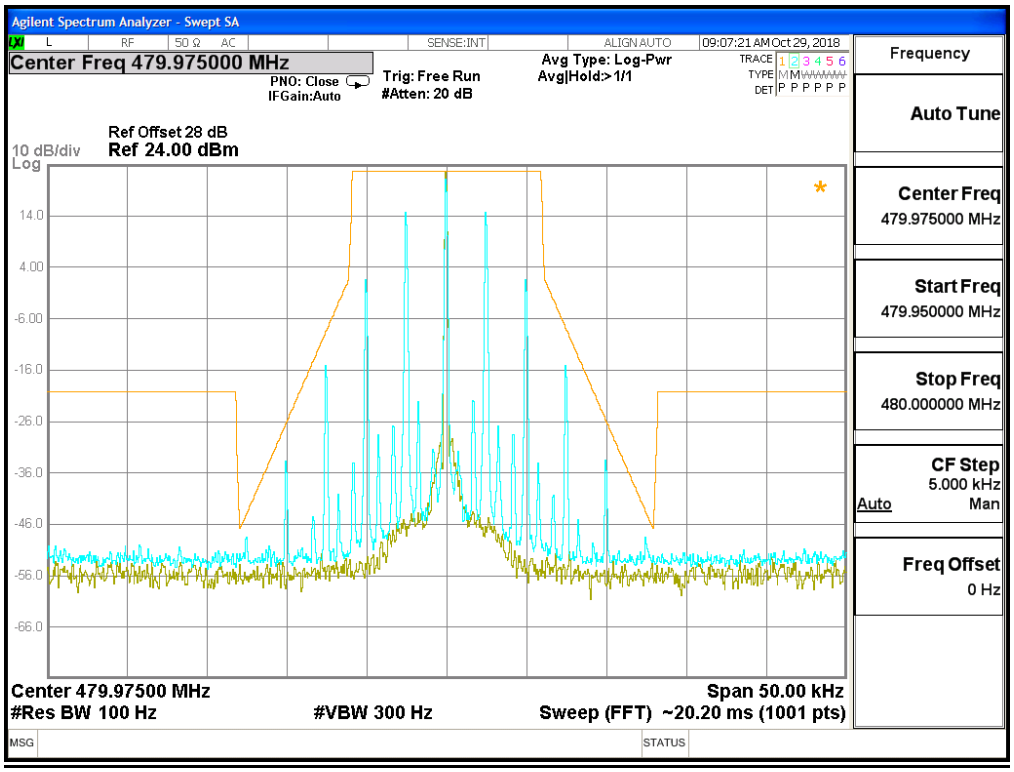
The Worst Emission Mask for (454.025 MHz) of 12.5 KHz channel Separation (0.2W)



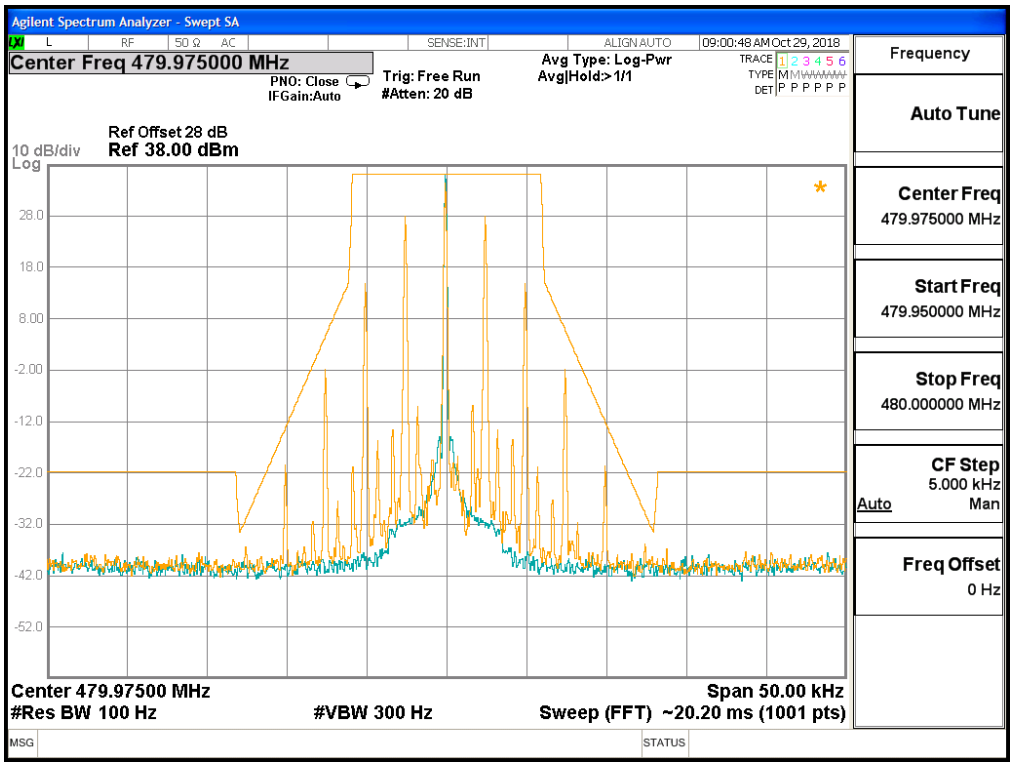
The Worst Emission Mask for (454.025 MHz) of 12.5 KHz channel Separation (6W)



The Worst Emission Mask for (479.975 MHz) of 12.5 KHz channel Separation (0.2W)

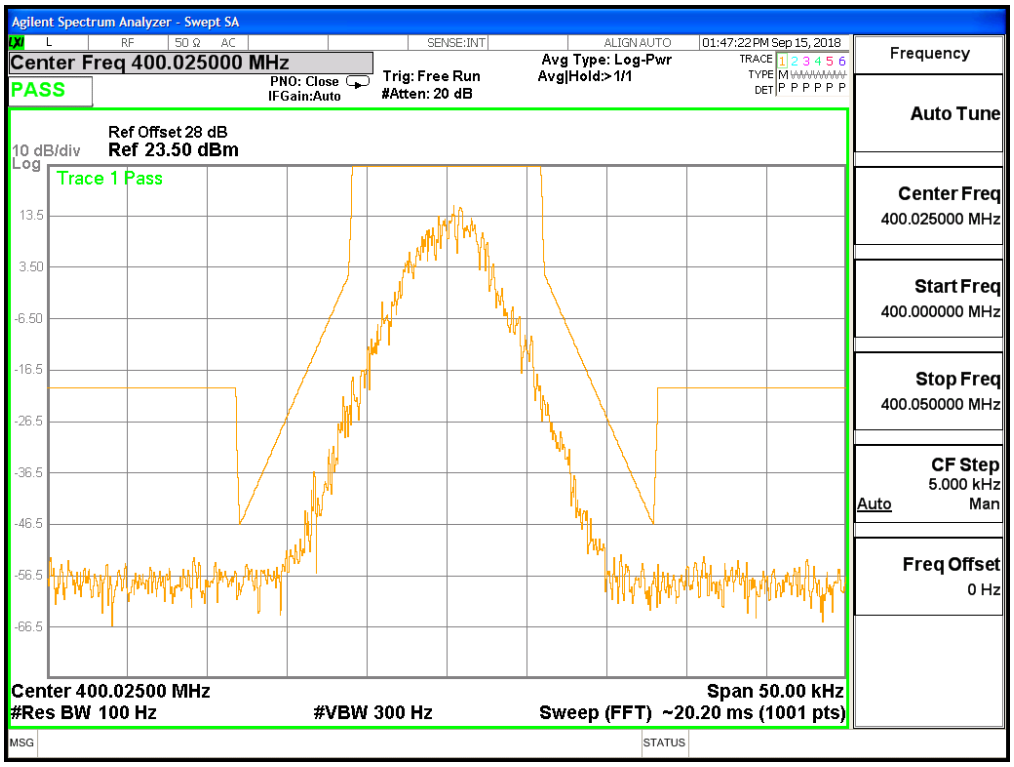


The Worst Emission Mask for (479.9755 MHz) of 12.5 KHz channel Separation (6W)

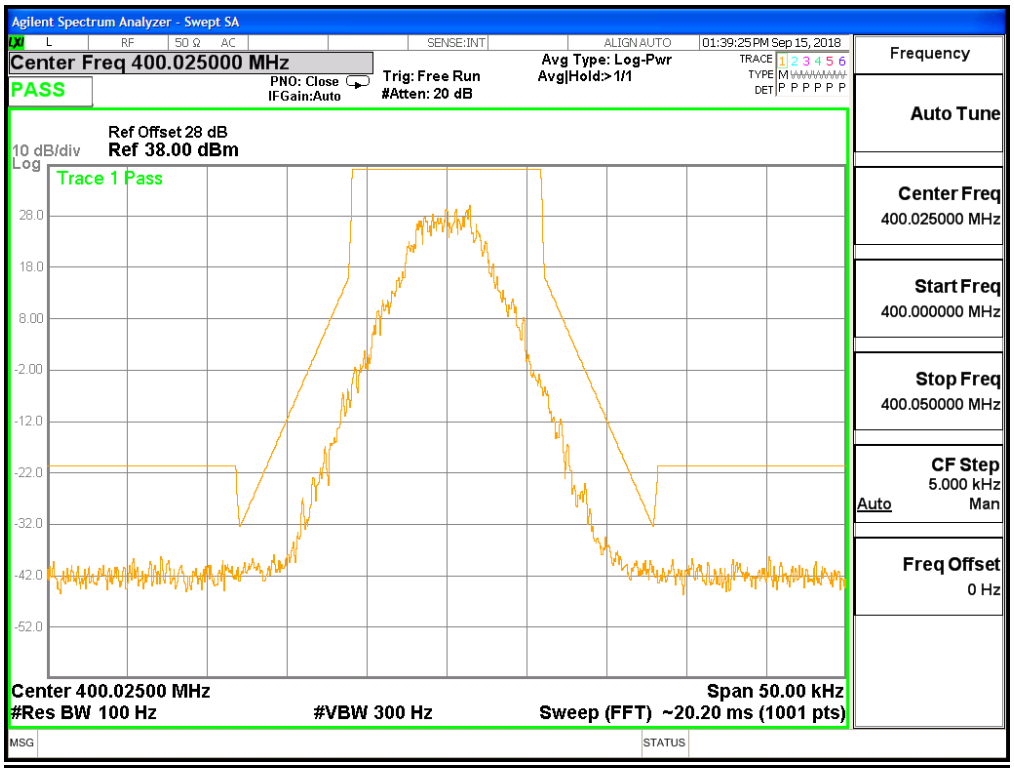


Digital：

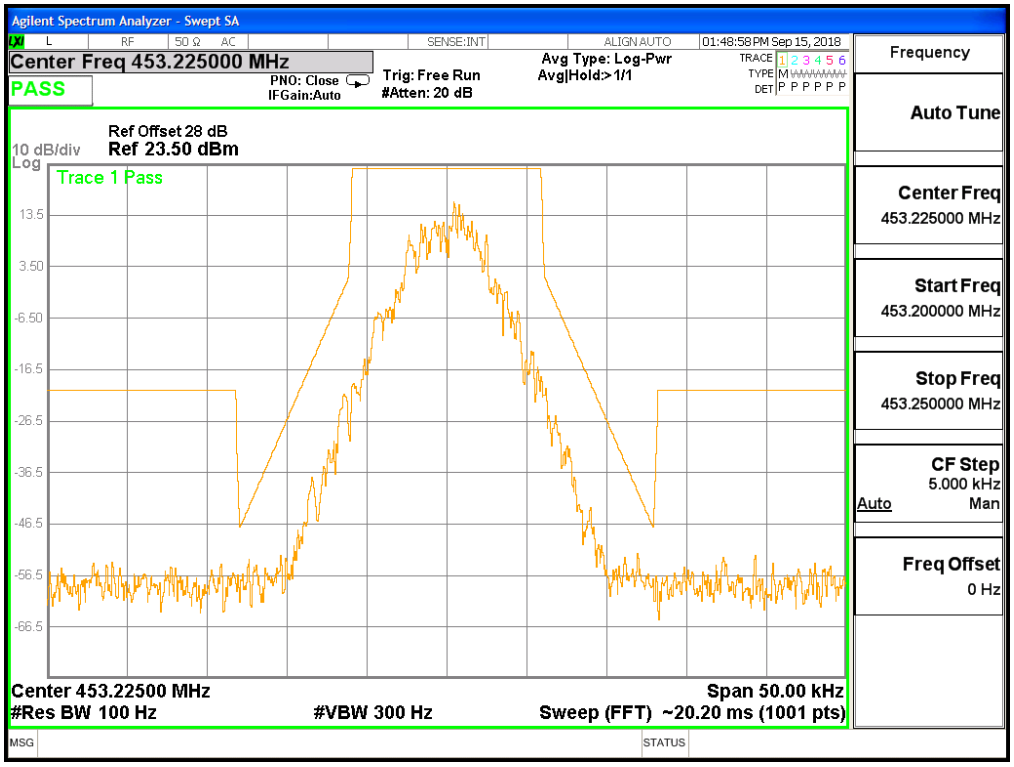
The Worst Emission Mask D for (400.025 MHz) of 12.5 KHz channel Separation (0.2W)



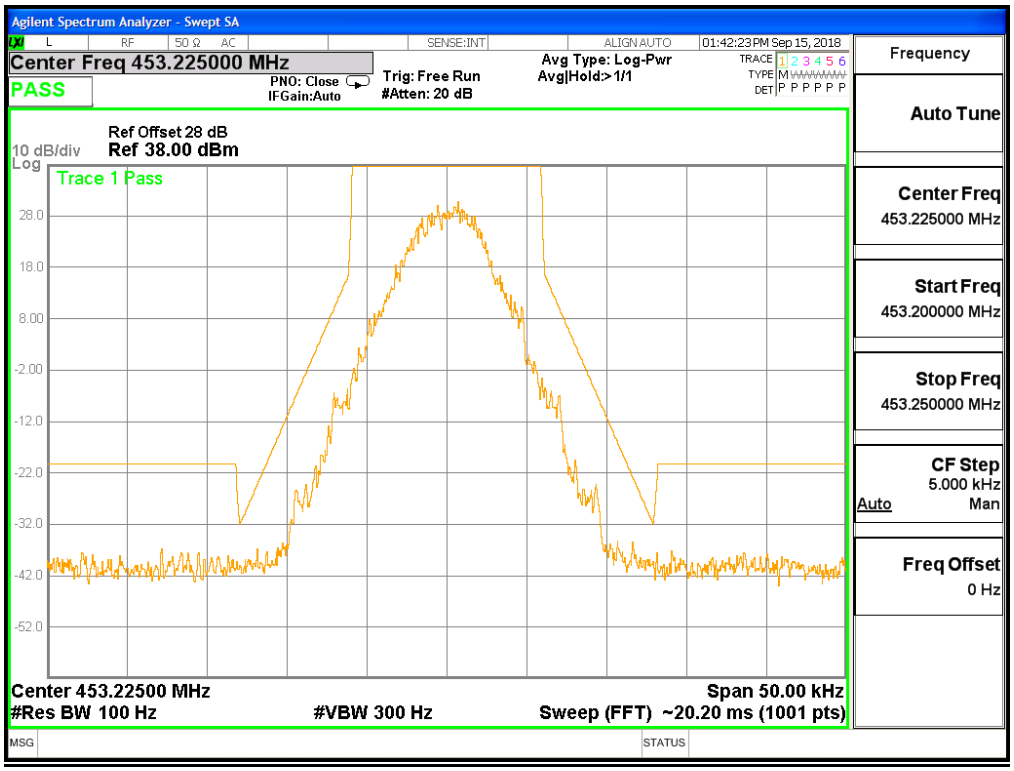
The Worst Emission Mask D for (400.025 MHz) of 12.5 KHz channel Separation (6W)



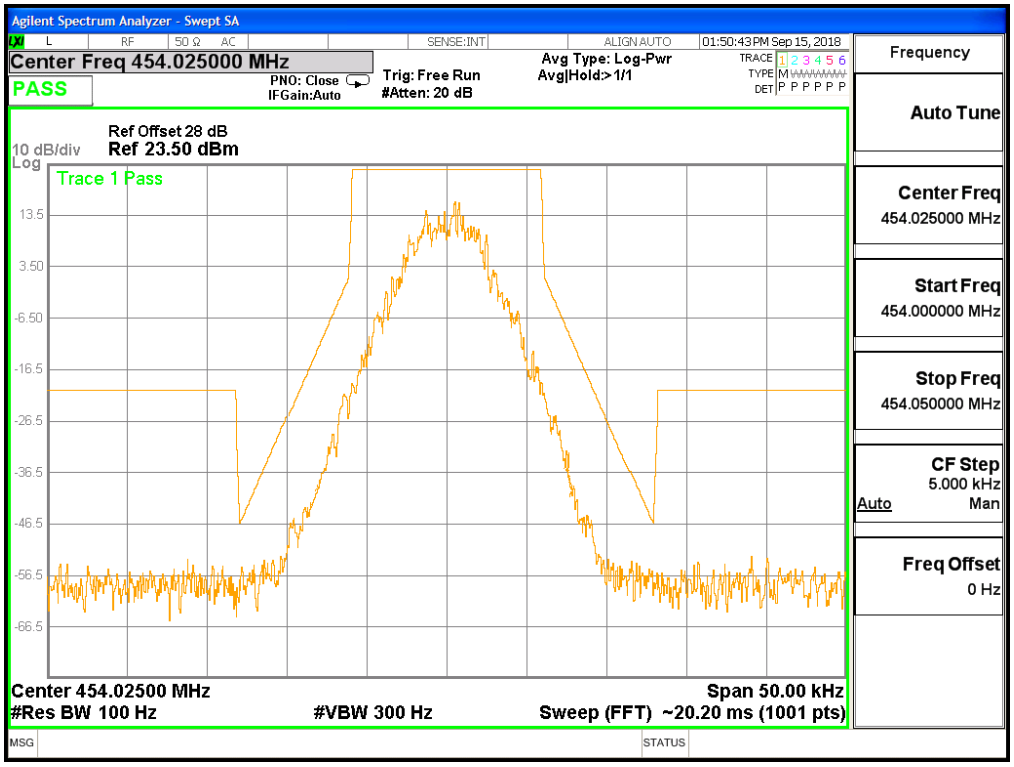
The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (0.2W)



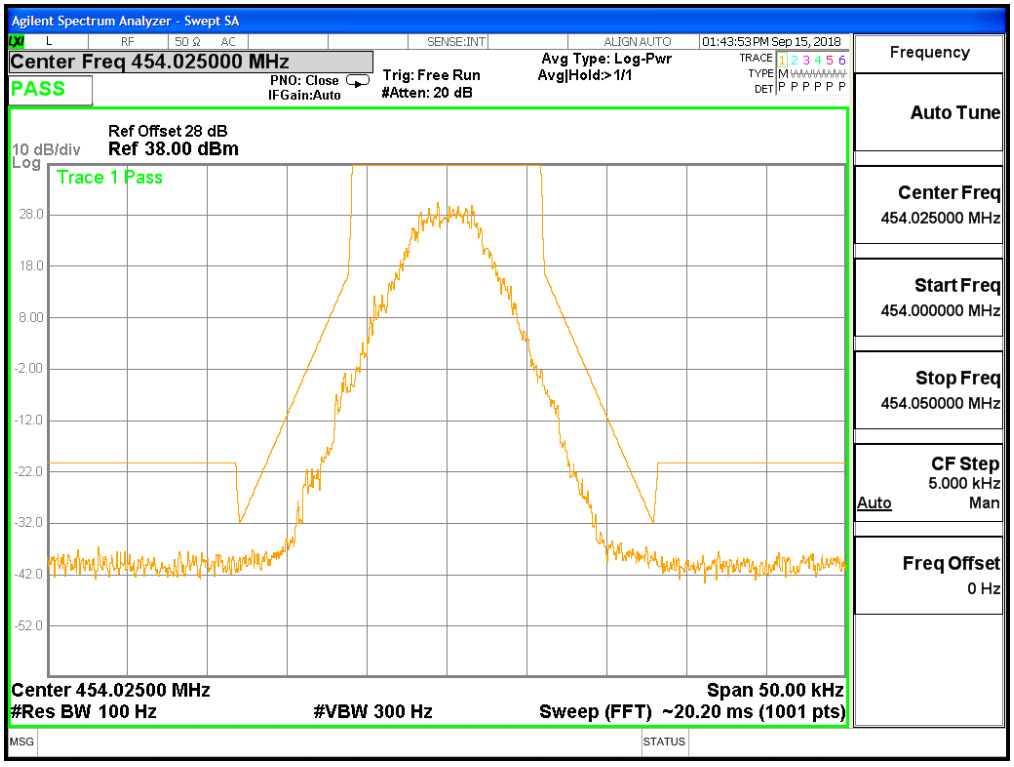
The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (6W)



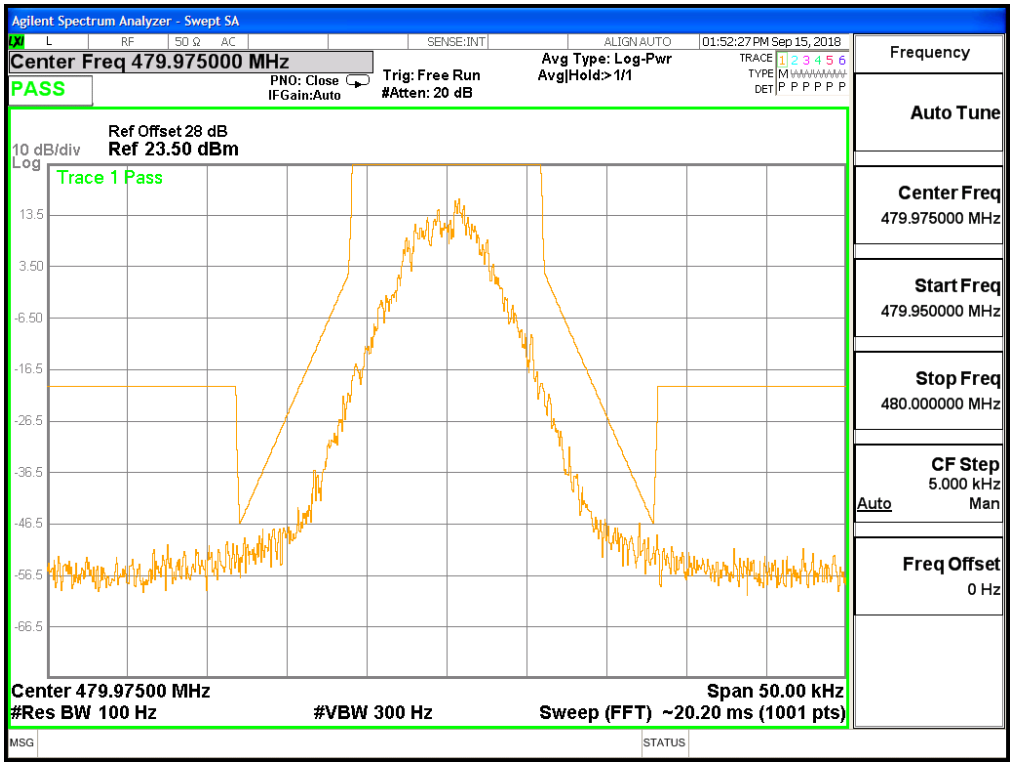
The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (0.2W)



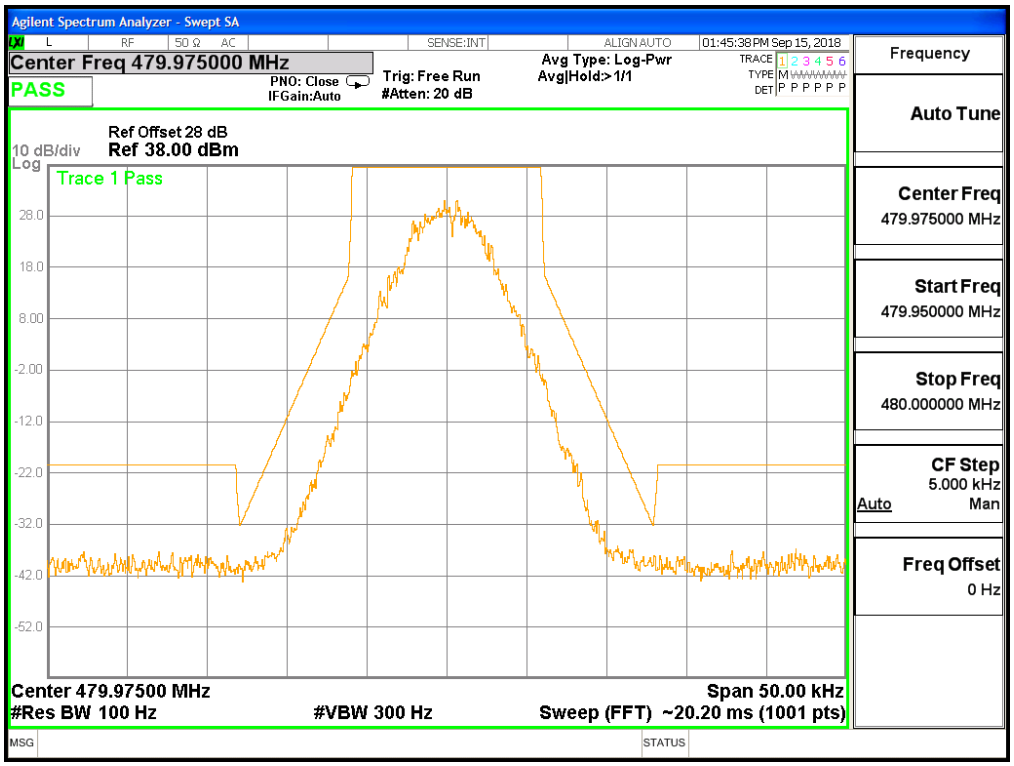
The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (6W)



The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (0.2W)



The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (6W)



8. MODULATION CHARACTERISTICS

8.1 PROVISIONS APPLICABLE

According to FCC§2.1047 and §90.207, for Voice Modulation Communication Equipment, the frequency response of the audio modulation circuit over a range of 100 to 5000Hz shall be measured.

8.2 MEASUREMENT METHOD

8.2.1 Modulation Limit

(1). Configure the EUT as shown in figure 1, adjust the audio input for 60% of rated system deviation at 1KHz using this level as a reference (0dB) and vary the input level from –20 to +20dB. Record the frequency deviation obtained as a function of the input level.

(2). Repeat step 1 with input frequency changing to 300, 1000, 1500 and 3000Hz in sequence.

8.2.2 Audio Frequency Response

(1). Configure the EUT as shown in figure 1.

(2). Adjust the audio input for 20% of rated system deviation at 1 KHz using this level as a reference (0 dB).

(3). Vary the Audio frequency from 100 Hz to 10 KHz and record the frequency deviation.

(4). Audio Frequency Response = 20log10 (Deviation of test frequency/Deviation of 1 KHz reference).

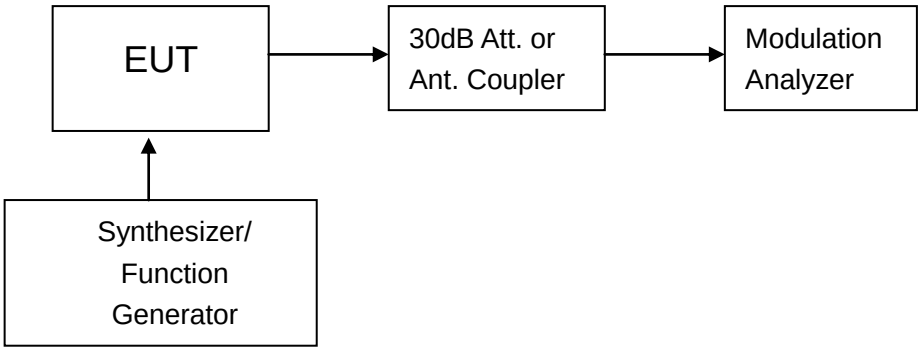


Figure 1: Modulation characteristic measurement configuration

8.3 MEASUREMENT RESULT

VHF:

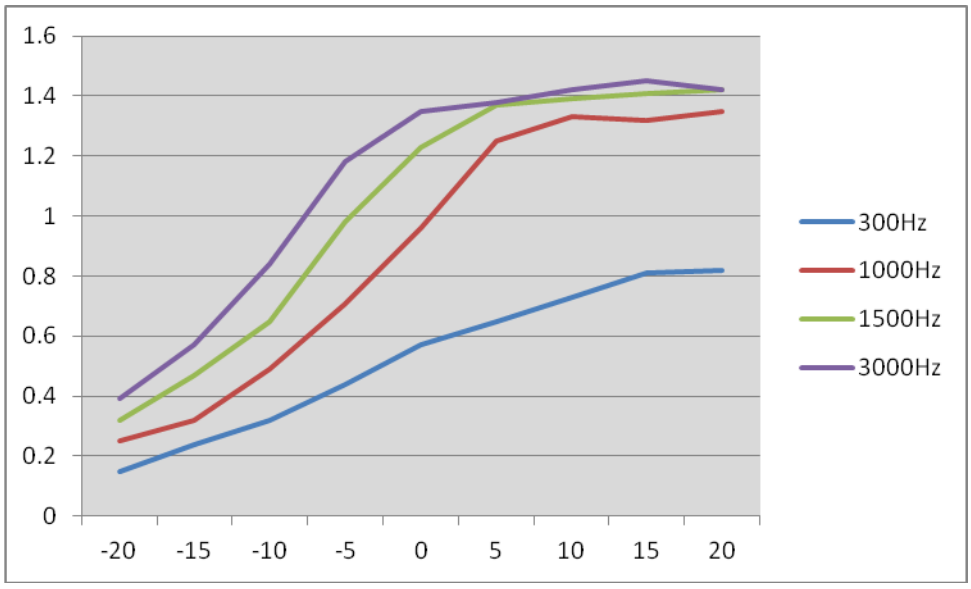
Analog:

TEST RESULTS FOR H POWER

(A). MODULATION LIMIT:

Middle Channel @ 12.5 KHz Channel Separations

Modulation Level (dB)	Peak Freq. Deviation At 300 Hz	Peak Freq. Deviation At 1000 Hz	Peak Freq. Deviation At 1500 Hz	Peak Freq. Deviation At 3000 Hz
-20	0.15	0.25	0.32	0.39
-15	0.24	0.32	0.47	0.57
-10	0.32	0.49	0.65	0.84
-5	0.44	0.71	0.98	1.18
0	0.57	0.96	1.23	1.35
+5	0.65	1.25	1.37	1.38
+10	0.73	1.33	1.39	1.42
+15	0.81	1.32	1.41	1.45
+20	0.82	1.35	1.42	1.42



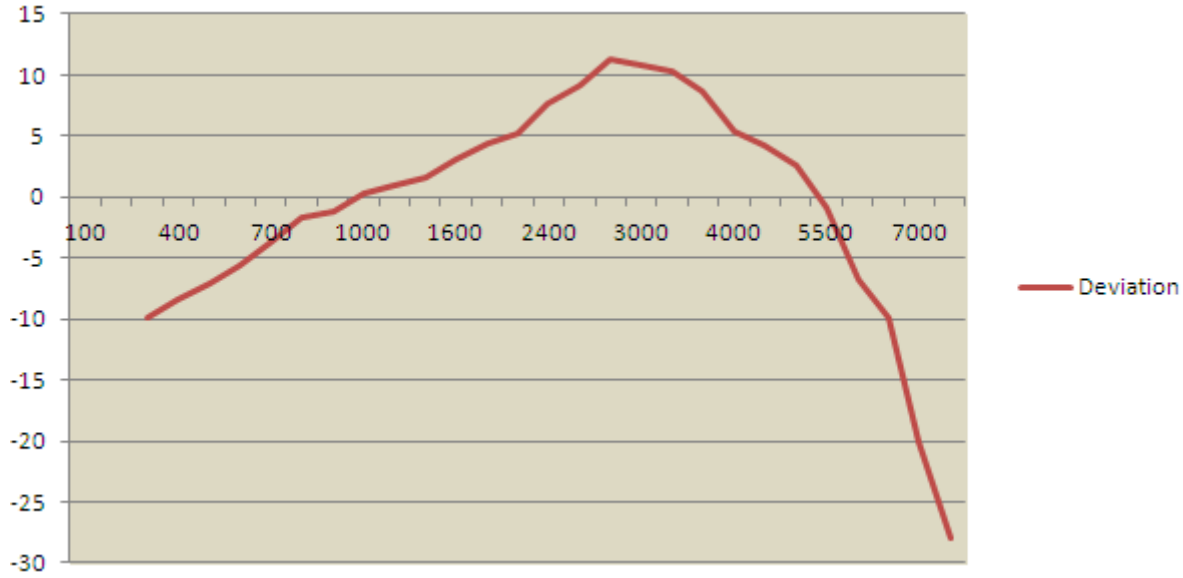
Note: All the modes had been tested, but only the worst data recorded in the report.

(B). AUDIO FREQUENCY RESPONSE:

Middle Channel @ 12.5 KHz Channel Separations

Frequency (Hz)	Deviation (KHz)	Audio Frequency Response(dB)
100	--	--
200	--	--
300	0.16	-9.90
400	0.19	-8.40
500	0.22	-7.13
600	0.26	-5.68
700	0.33	-3.61
800	0.41	-1.72
900	0.44	-1.11
1000	0.52	0.34
1200	0.56	0.98
1400	0.6	1.58
1600	0.71	3.05
1800	0.83	4.40
2000	0.91	5.20
2400	1.22	7.75
2500	1.43	9.13
2800	1.84	11.32
3000	1.72	10.73
3200	1.63	10.26
3600	1.36	8.69
4000	0.93	5.39
4500	0.81	4.19
5000	0.67	2.54
5500	0.45	-0.92
6000	0.23	-6.74
6500	0.16	-9.90
7000	0.05	-20.00
7500	0.02	-27.96
9000	--	--
10000	--	--
14000	--	--
18000	--	--
20000	--	--
30000	--	--

Frequency Response of Middle Channel



Note: All the modes had been tested, but only the worst data recorded in the report.

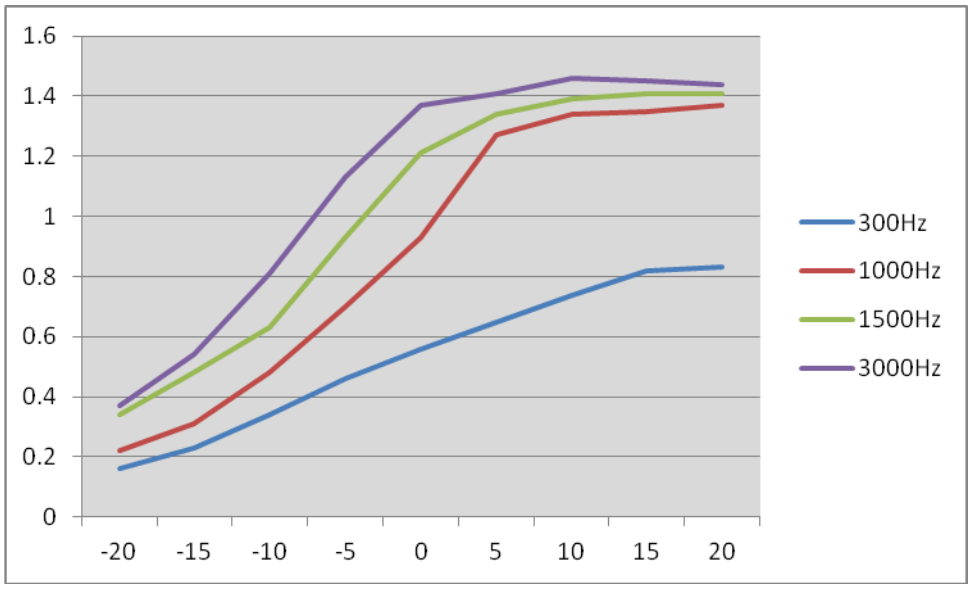
Digital:

TEST RESULTS FOR H POWER

(A). MODULATION LIMIT:

Middle Channel @ 12.5 KHz Channel Separations

Modulation Level (dB)	Peak Freq. Deviation At 300 Hz	Peak Freq. Deviation At 1000 Hz	Peak Freq. Deviation At 1500 Hz	Peak Freq. Deviation At 3000 Hz
-20	0.16	0.22	0.34	0.37
-15	0.23	0.31	0.48	0.54
-10	0.34	0.48	0.63	0.81
-5	0.46	0.7	0.93	1.13
0	0.56	0.93	1.21	1.37
+5	0.65	1.27	1.34	1.41
+10	0.74	1.34	1.39	1.46
+15	0.82	1.35	1.41	1.45
+20	0.83	1.37	1.41	1.44



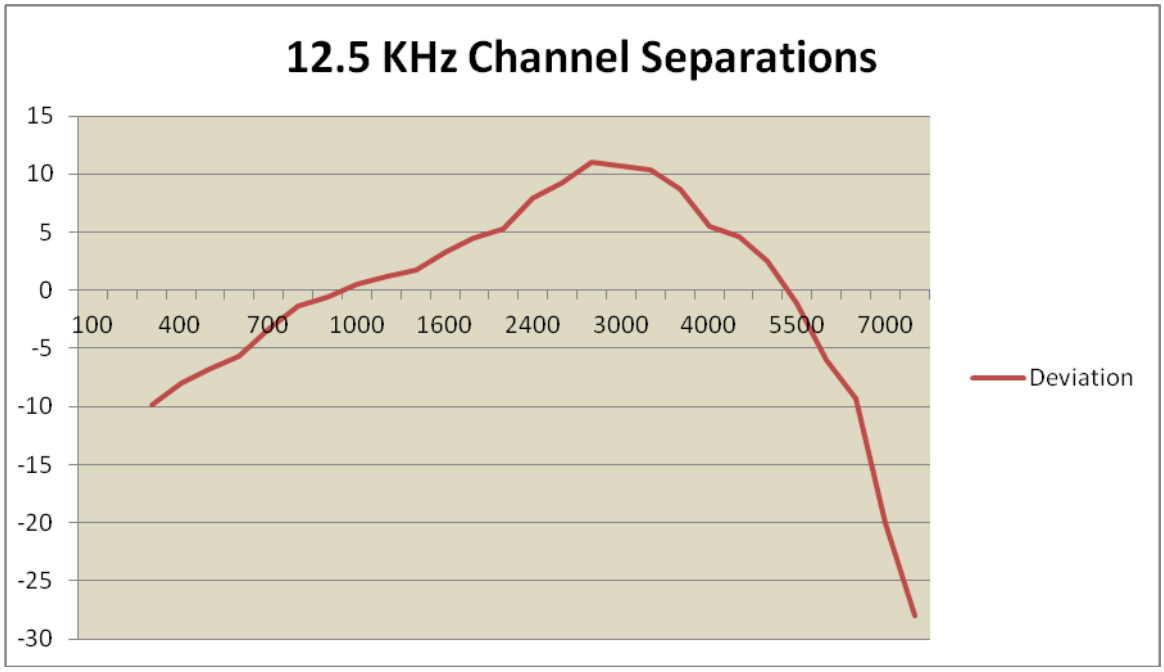
Note: All the modes had been tested, but only the worst data recorded in the report.

(B). AUDIO FREQUENCY RESPONSE:

Bottom Channel @ 12.5 KHz Channel Separations

Frequency (Hz)	Deviation (KHz)	Audio Frequency Response(dB)
100	--	--
200	--	--
300	0.16	-9.90
400	0.2	-7.96
500	0.23	-6.74
600	0.26	-5.68
700	0.34	-3.35
800	0.43	-1.31
900	0.47	-0.54
1000	0.53	0.51
1200	0.57	1.14
1400	0.61	1.73
1600	0.73	3.29
1800	0.84	4.51
2000	0.92	5.30
2400	1.25	7.96
2500	1.46	9.31
2800	1.77	10.98
3000	1.71	10.68
3200	1.64	10.32
3600	1.37	8.76
4000	0.94	5.48
4500	0.85	4.61
5000	0.67	2.54
5500	0.44	-1.11
6000	0.25	-6.02
6500	0.17	-9.37
7000	0.05	-20.00
7500	0.02	-27.96
9000	--	--
10000	--	--
14000	--	--
18000	--	--
20000	--	--
30000	--	--

Frequency Response of Bottom Channel



Note: All the modes had been tested, but only the worst data recorded in the report.

UHF:

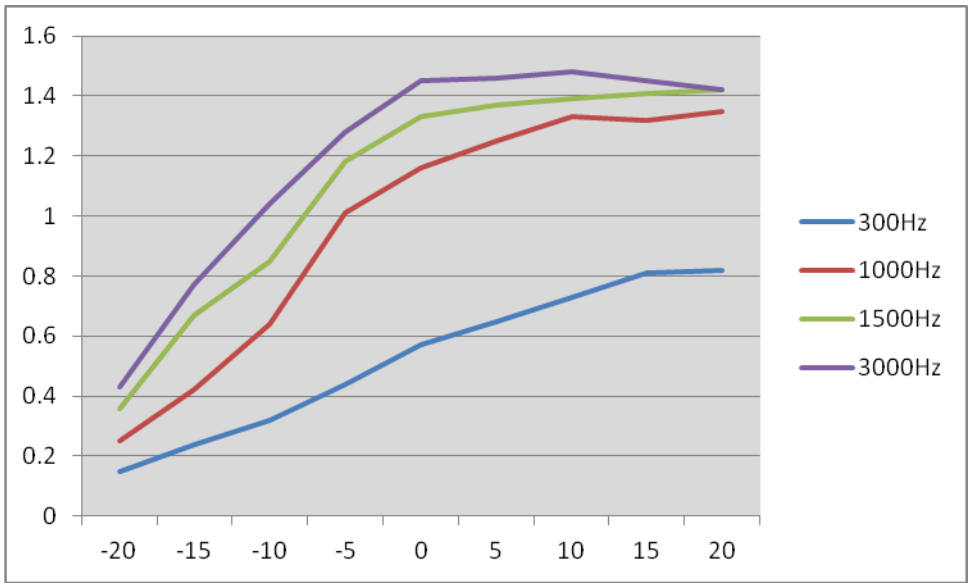
Analog:

TEST RESULT TS FOR H POWER H LEVEL

(A). MODULATION LIMIT:

Middle Channel @ 12.5 KHz Channel Separations

Modulation Level (dB)	Peak Freq. Deviation At 300 Hz	Peak Freq. Deviation At 1000 Hz	Peak Freq. Deviation At 1500 Hz	Peak Freq. Deviation At 3000 Hz
-20	0.15	0.25	0.36	0.43
-15	0.24	0.42	0.67	0.77
-10	0.32	0.64	0.85	1.04
-5	0.44	1.01	1.18	1.28
0	0.57	1.16	1.33	1.45
+5	0.65	1.25	1.37	1.46
+10	0.73	1.33	1.39	1.48
+15	0.81	1.32	1.41	1.45
+20	0.82	1.35	1.42	1.42



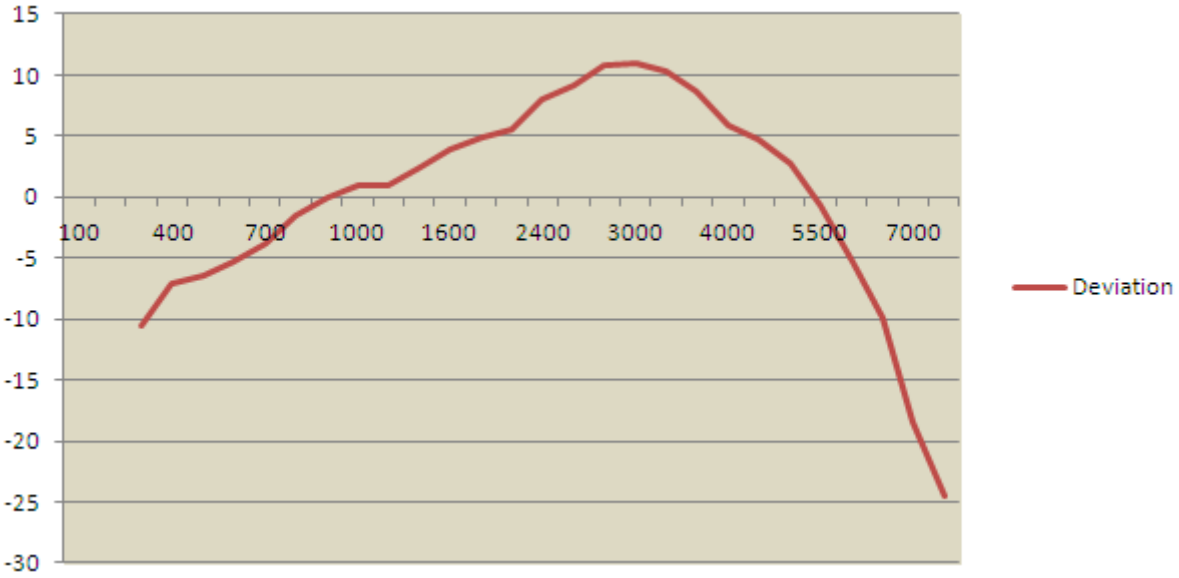
Note: All the modes had been tested, but only the worst data recorded in the report.

(B). AUDIO FREQUENCY RESPONSE:

Middle Channel @ 12.5 KHz Channel Separations

Frequency (Hz)	Deviation (KHz)	Audio Frequency Response(dB)
100	--	--
200	--	--
300	0.15	-10.46
400	0.22	-7.13
500	0.24	-6.38
600	0.27	-5.35
700	0.32	-3.88
800	0.42	-1.51
900	0.5	0.00
1000	0.56	0.98
1200	0.56	0.98
1400	0.66	2.41
1600	0.78	3.86
1800	0.88	4.91
2000	0.94	5.48
2400	1.26	8.03
2500	1.44	9.19
2800	1.72	10.73
3000	1.76	10.93
3200	1.64	10.32
3600	1.36	8.69
4000	0.98	5.85
4500	0.87	4.81
5000	0.69	2.80
5500	0.46	-0.72
6000	0.27	-5.35
6500	0.16	-9.90
7000	0.06	-18.42
7500	0.03	-24.44
9000	--	--
10000	--	--
14000	--	--
18000	--	--
20000	--	--
30000	--	--

Frequency Response of High Channel



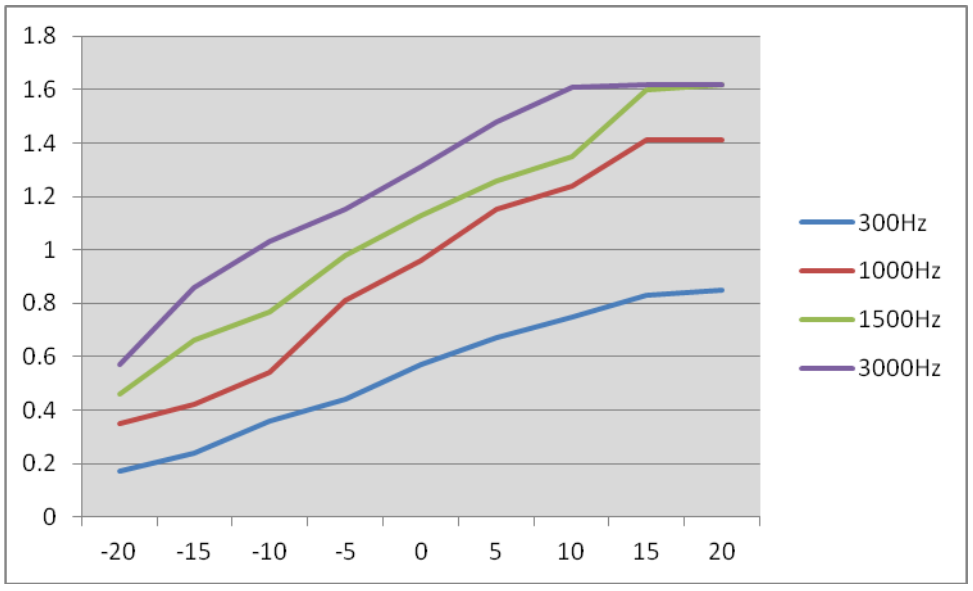
Note: All the modes had been tested, but only the worst data recorded in the report.

Digital:

(A). MODULATION LIMIT:

Middle Channel @ 12.5 KHz Channel Separations---H Power

Modulation Level (dB)	Peak Freq. Deviation At 300 Hz	Peak Freq. Deviation At 1000 Hz	Peak Freq. Deviation At 1500 Hz	Peak Freq. Deviation At 3000 Hz
-20	0.17	0.35	0.46	0.57
-15	0.24	0.42	0.66	0.86
-10	0.36	0.54	0.77	1.03
-5	0.44	0.81	0.98	1.15
0	0.57	0.96	1.13	1.31
+5	0.67	1.15	1.26	1.48
+10	0.75	1.24	1.35	1.61
+15	0.83	1.41	1.6	1.62
+20	0.85	1.41	1.62	1.62



Note: All the modes had been tested, but only the worst data recorded in the report.

(B). AUDIO FREQUENCY RESPONSE:

Middle Channel @ 12.5 KHz Channel Separations---H Power

Frequency (Hz)	Deviation (KHz)	Audio Frequency Response(dB)
100	--	--
200	--	--
300	0.14	-11.06
400	0.19	-8.40
500	0.25	-6.02
600	0.28	-5.04
700	0.3	-4.44
800	0.41	-1.72
900	0.48	-0.35
1000	0.54	0.67
1200	0.57	1.14
1400	0.68	2.67
1600	0.79	3.97
1800	0.85	4.61
2000	0.92	5.30
2400	1.25	7.96
2500	1.47	9.37
2800	1.75	10.88
3000	1.72	10.73
3200	1.69	10.58
3600	1.37	8.76
4000	0.96	5.67
4500	0.84	4.51
5000	0.66	2.41
5500	0.47	-0.54
6000	0.24	-6.38
6500	0.14	-11.06
7000	0.07	-17.08
7500	0.04	-21.94
9000	--	--
10000	--	--
14000	--	--
18000	--	--
20000	--	--
30000	--	--

Frequency Response of Bottom Channel---H Power

Note: All the modes had been tested, but only the worst data recorded in the report.

9. MAXIMUMN TRANSMITTER POWER (CONDUCTED OUTPUT POWER) PEAK POWER

9.1 PROVISIONS APPLICABLE

Per FCC §2.1046 § 22.565 and §90.205: Maximum ERP is dependent upon the station's antenna HAAT and required service area.

9.2 TEST PROCEDURE

The RF output of Two-way Radio was conducted to a spectrum analyzer through an appropriate attenuator.

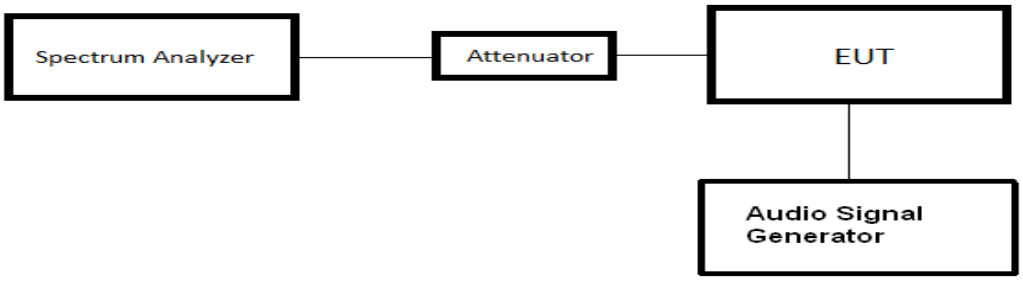
In the semi-anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height of Turn Table, rotated the table 45 degree each interval to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power for each degree interval. The "Read Value" is the spectrum reading of maximum power value.

The substitution antenna is substituted for DUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the Measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.

EIRP = "Read Value" + Measured substitution value + 2.15.

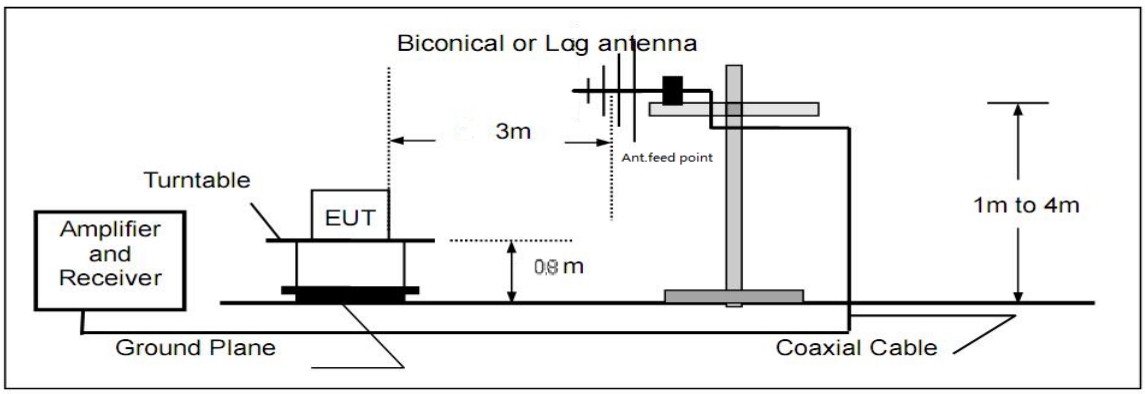
9.3 TEST CONFIGURATION

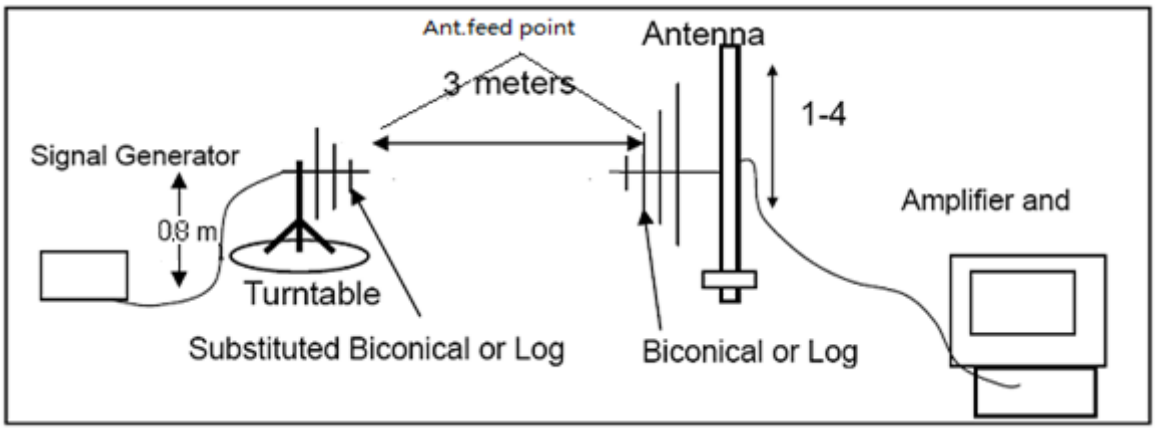
Conducted Output Power:



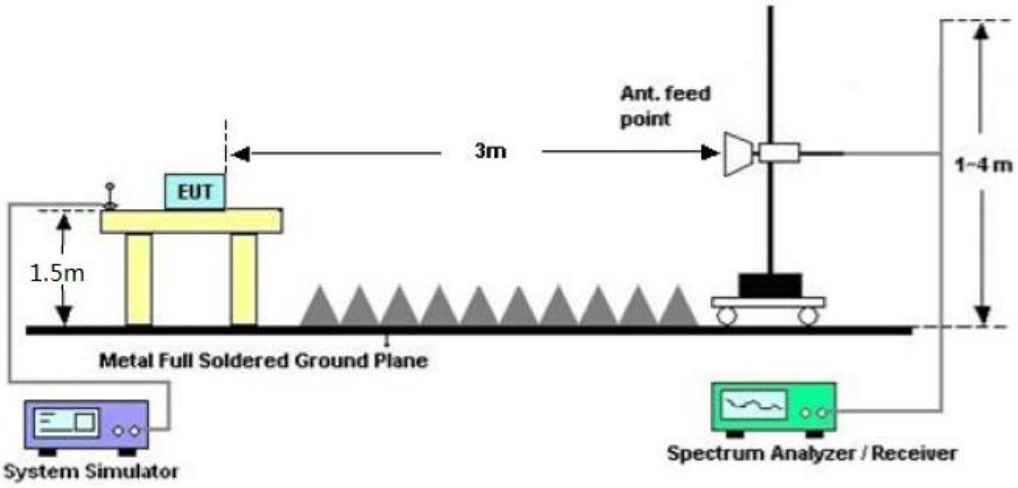
Effective Radiated Power

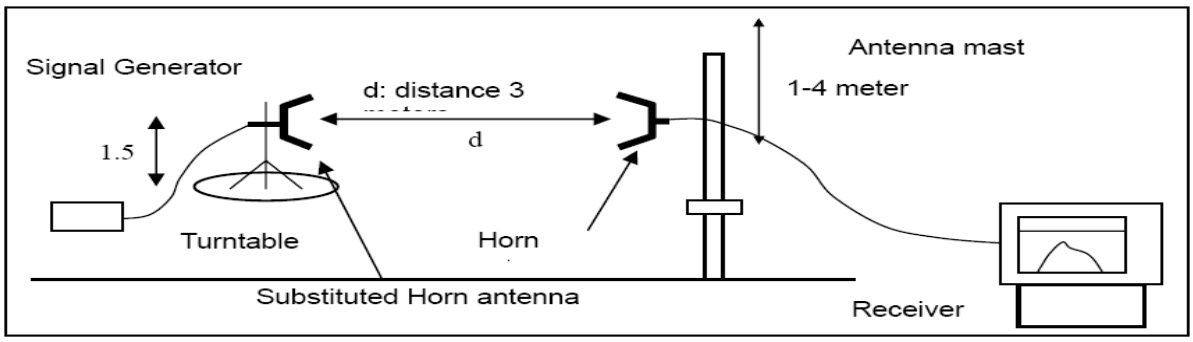
Radiated Below1GHz





Radiated Above 1 GHz





9.4 TEST RESULT

The maximum Conducted Power (CP) for VHF/UHF is

Analog: 7W/0.2 W for 12.5 KHz Channel Separation VHF

Analog: 6W/0.2 W for 12.5 KHz Channel Separation UHF

Digital: 7W/0.2 W for 12.5 KHz Channel Separation VHF

Digital: 6W/0.2 W for 12.5 KHz Channel Separation UHF

Calculation Formula: CP = R + A + L

Note:

CP: The final Conducted Power

R : The reading value from spectrum analyzer

A : The attenuation value of the used attenuator

L : The loss of all connection cables

VHF:

Analog:

Conducted Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 38.45dBm(7W)
12.5 KHz	Bottom(136.025MHz)	38.37
	Middle(151.850MHz)	38.42
	Middle(155.025MHz)	38.40
	Middle(161.610MHz)	38.37
	Top (173.975MHz)	38.44

Radiated Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 38.45dBm(7W)
12.5 KHz	Bottom(136.025MHz)	38.31
	Middle(151.850MHz)	38.36
	Middle(155.025MHz)	38.38
	Middle(161.610MHz)	38.31
	Top (173.975MHz)	38.40

Conducted Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(136.025MHz)	22.86
	Middle(151.850MHz)	22.89
	Middle(155.025MHz)	22.95
	Middle(161.610MHz)	22.89
	Top (173.975MHz)	22.93

Radiated Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(136.025MHz)	22.81
	Middle(151.850MHz)	22.85
	Middle(155.025MHz)	22.90
	Middle(161.610MHz)	22.86
	Top (173.975MHz)	22.89

Digital:

Date + voice:

Conducted Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 38.45dBm(7W)
12.5 KHz	Bottom(136.025MHz)	38.36
	Middle(151.850MHz)	38.38
	Middle(155.025MHz)	38.34
	Middle(161.610MHz)	38.36
	Top (173.975MHz)	38.34

Radiated Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 38.45dBm(7W)
12.5 KHz	Bottom(136.025MHz)	38.27
	Middle(151.850MHz)	38.21
	Middle(155.025MHz)	38.31
	Middle(161.610MHz)	38.34
	Top (173.975MHz)	38.27

Date transmission mode:

Conducted Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 38.45dBm(7W)
12.5 KHz	Bottom(136.025MHz)	38.34
	Middle(151.850MHz)	38.31
	Middle(155.025MHz)	38.38
	Middle(161.610MHz)	38.33
	Top (173.975MHz)	38.36

Radiated Power Measurement Results		
Channel Separation	Channel	Measurement Result (dBm)
		For 38.45dBm(7W)
12.5 KHz	Bottom(136.025MHz)	38.25
	Middle(151.850MHz)	38.28
	Middle(155.025MHz)	38.31
	Middle(161.610MHz)	38.31
	Top (173.975MHz)	38.33

Date + voice:

Conducted Power Measurement Results		
Channel Separation	Channel	Measurement Result (dBm)
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(136.025MHz)	22.88
	Middle(151.850MHz)	22.71
	Middle(155.025MHz)	22.83
	Middle(161.610MHz)	22.82
	Top (173.975MHz)	22.71

Radiated Power Measurement Results		
Channel Separation	Channel	Measurement Result (dBm)
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(136.025MHz)	22.81
	Middle(151.850MHz)	22.79
	Middle(155.025MHz)	22.81
	Middle(161.610MHz)	22.70
	Top (173.975MHz)	22.65

Date transmission mode:

Conducted Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(136.025MHz)	22.72
	Middle(151.850MHz)	22.85
	Middle(155.025MHz)	22.79
	Middle(161.610MHz)	22.89
	Top (173.975MHz)	22.87

Radiated Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(136.025MHz)	22.69
	Middle(151.850MHz)	22.74
	Middle(155.025MHz)	22.73
	Middle(161.610MHz)	22.84
	Top (173.975MHz)	22.86

UHF:
Analog:

Conducted Power Measurement Results-6W		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 37.78dBm(6W)
12.5 KHz	Bottom(400.025MHz)	37.64
	Middle(453.225MHz)	37.59
	Middle(454.025MHz)	37.68
	Top (479.975MHz)	37.61

Radiated Power Measurement Results-6W		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 37.78dBm(6W)
12.5 KHz	Bottom(400.025MHz)	37.60
	Middle(453.225MHz)	37.46
	Middle(454.025MHz)	37.51
	Top (479.975MHz)	37.58

Conducted Power Measurement Results-0.2W		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(400.025MHz)	22.86
	Middle(453.225MHz)	22.91
	Middle(454.025MHz)	22.89
	Top (479.975MHz)	22.88

Radiated Power Measurement Results-0.2W		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(400.025MHz)	22.83
	Middle(453.225MHz)	22.87
	Middle(454.025MHz)	22.89
	Top (479.975MHz)	22.78

Digital:

Date + voice:

Conducted Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 37.78dBm(6W)
12.5 KHz	Bottom(400.025MHz)	37.64
	Middle(453.225MHz)	37.63
	Middle(454.025MHz)	37.69
	Top (479.975MHz)	37.71

Radiated Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 37.78dBm(6W)
12.5 KHz	Bottom(400.025MHz)	37.60
	Middle(453.225MHz)	37.63
	Middle(454.025MHz)	37.51
	Top (479.975MHz)	37.66

Date transmission mode:

Conducted Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 37.78dBm(6W)
12.5 KHz	Bottom(400.025MHz)	37.52
	Middle(453.225MHz)	37.65
	Middle(454.025MHz)	37.53
	Top (479.975MHz)	37.50

Radiated Power Measurement Results		
Channel Separation	Channel	Measurement Result (dBm)
		For 37.78dBm(6W)
12.5 KHz	Bottom(400.025MHz)	37.56
	Middle(453.225MHz)	37.57
	Middle(454.025MHz)	37.62
	Top (479.975MHz)	37.61

Date + voice:

Conducted Power Measurement Results		
Channel Separation	Channel	Measurement Result (dBm)
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(400.025MHz)	22.88
	Middle(453.225MHz)	22.89
	Middle(454.025MHz)	22.94
	Top (479.975MHz)	22.89

Radiated Power Measurement Results		
Channel Separation	Channel	Measurement Result (dBm)
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(400.025MHz)	22.79
	Middle(453.225MHz)	22.81
	Middle(454.025MHz)	22.86
	Top (479.975MHz)	22.84

Date transmission mode:

Conducted Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(400.025MHz)	22.79
	Middle(453.225MHz)	22.82
	Middle(454.025MHz)	22.86
	Top (479.975MHz)	22.87

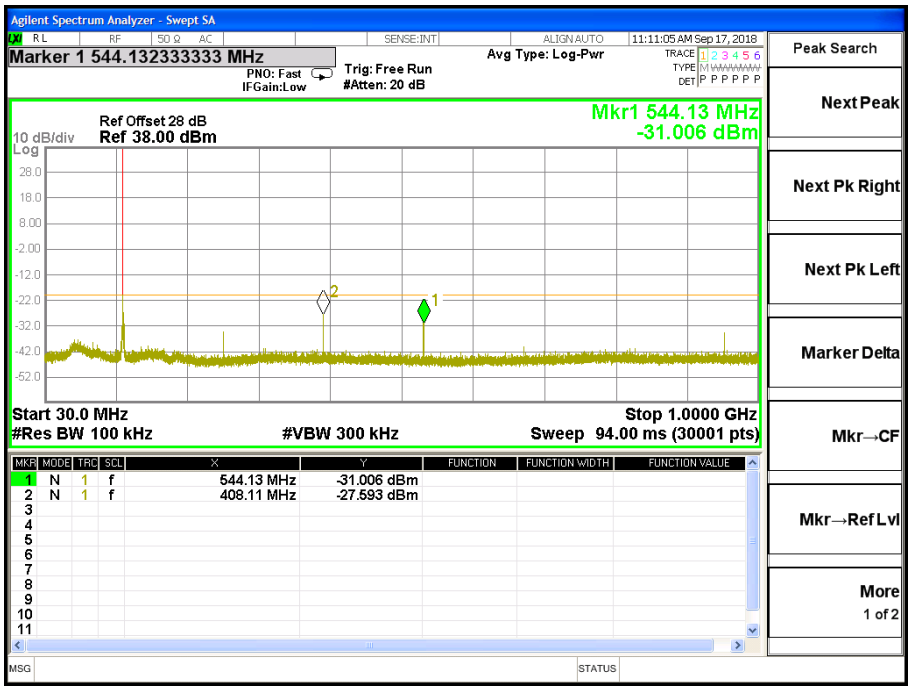
Radiated Power Measurement Results		
Channel Separation	**Channel**	**Measurement Result (dBm)**
		For 23.01dBm(0.2W)
12.5 KHz	Bottom(400.025MHz)	22.83
	Middle(453.225MHz)	22.74
	Middle(454.025MHz)	22.71
	Top (479.975MHz)	22.79

9.5 CONDUCT SPURIOUS PLOT

VHF: Analog:

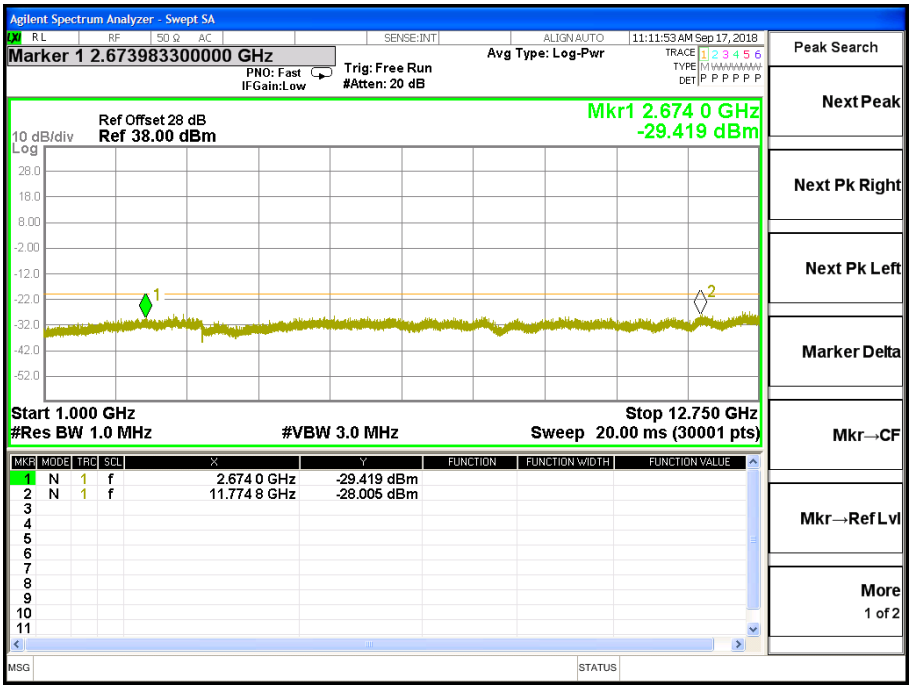
Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-7W

30MHz-1GHz



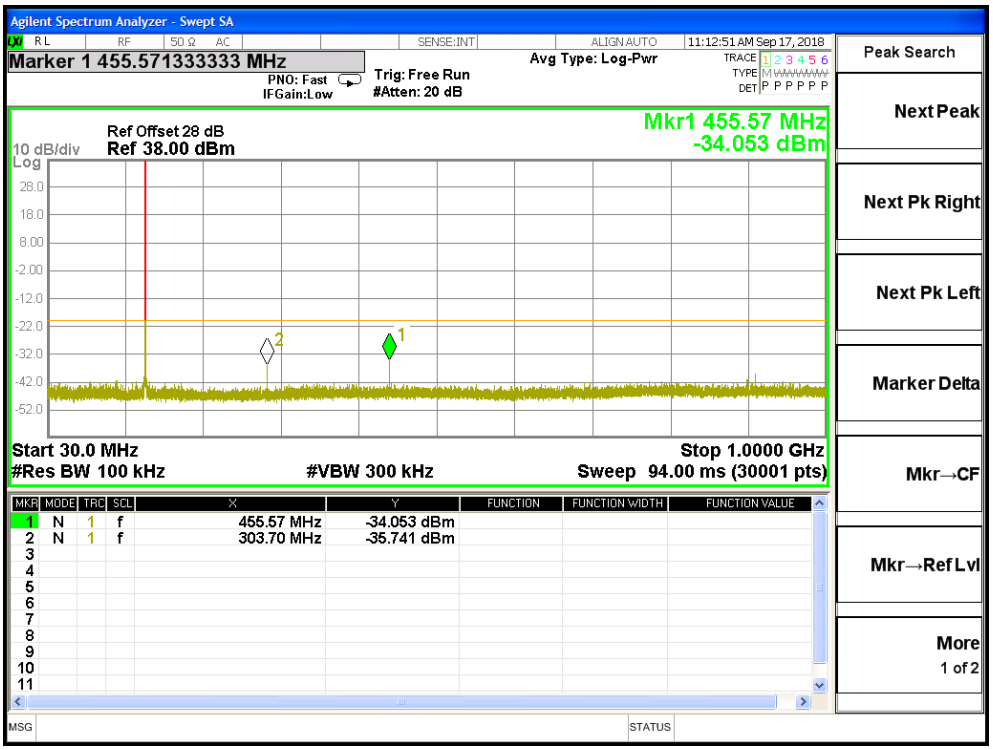
Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-7W

1GHz-12.75GHz



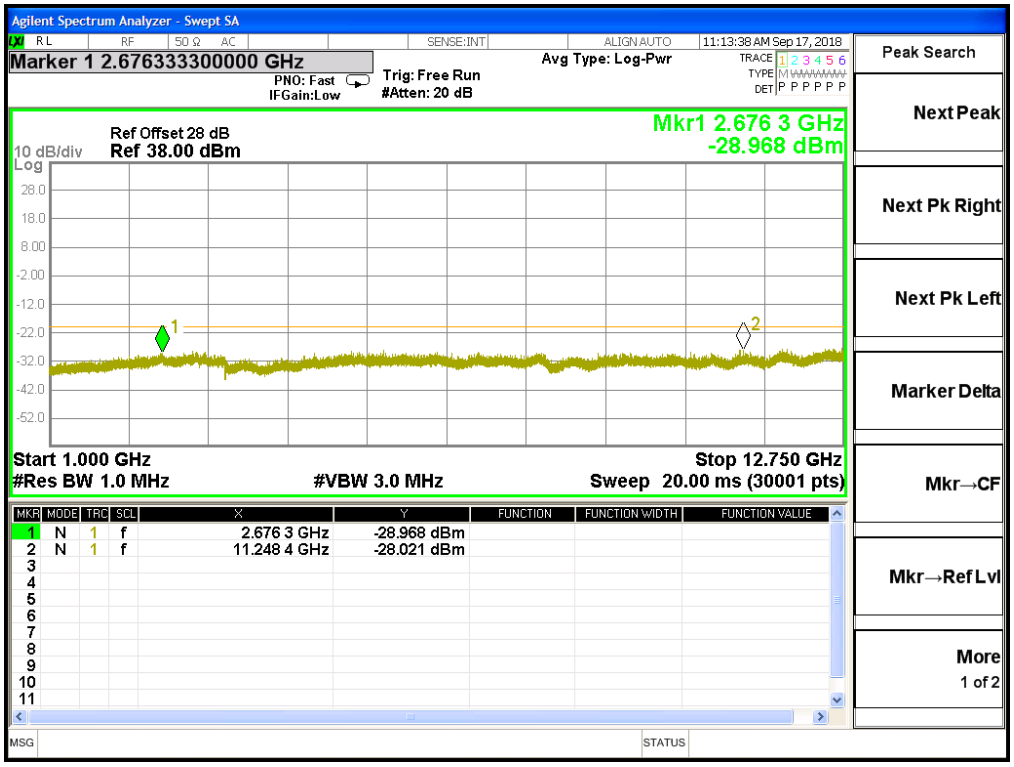
Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-7W

30MHz-1GHz



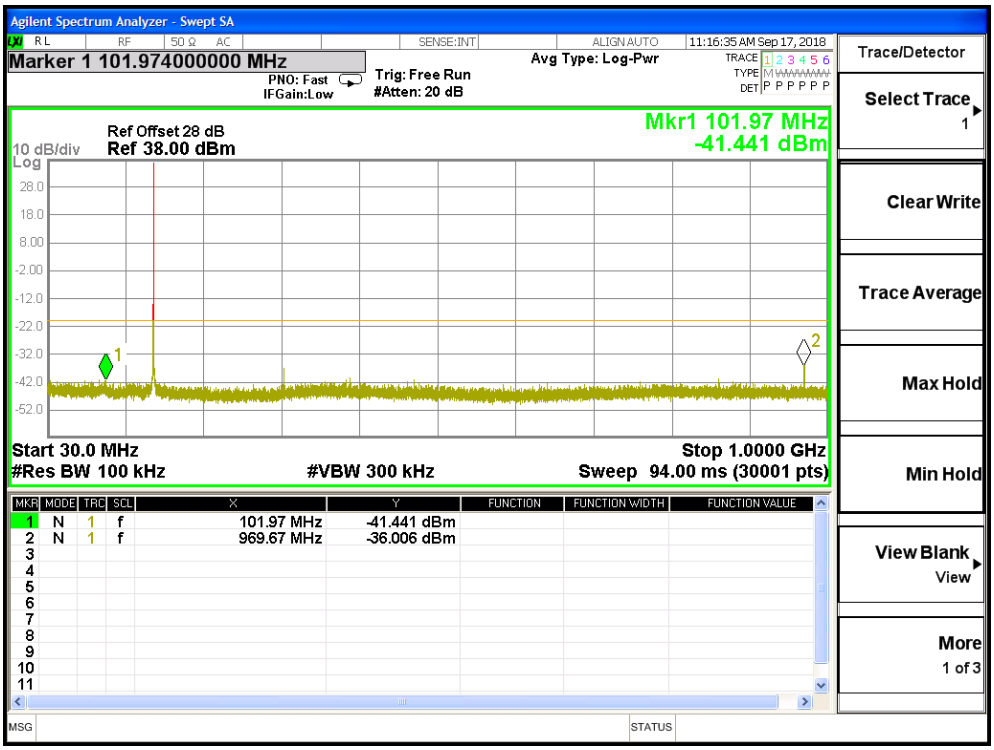
Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-7W

1GHz-12.75GHz



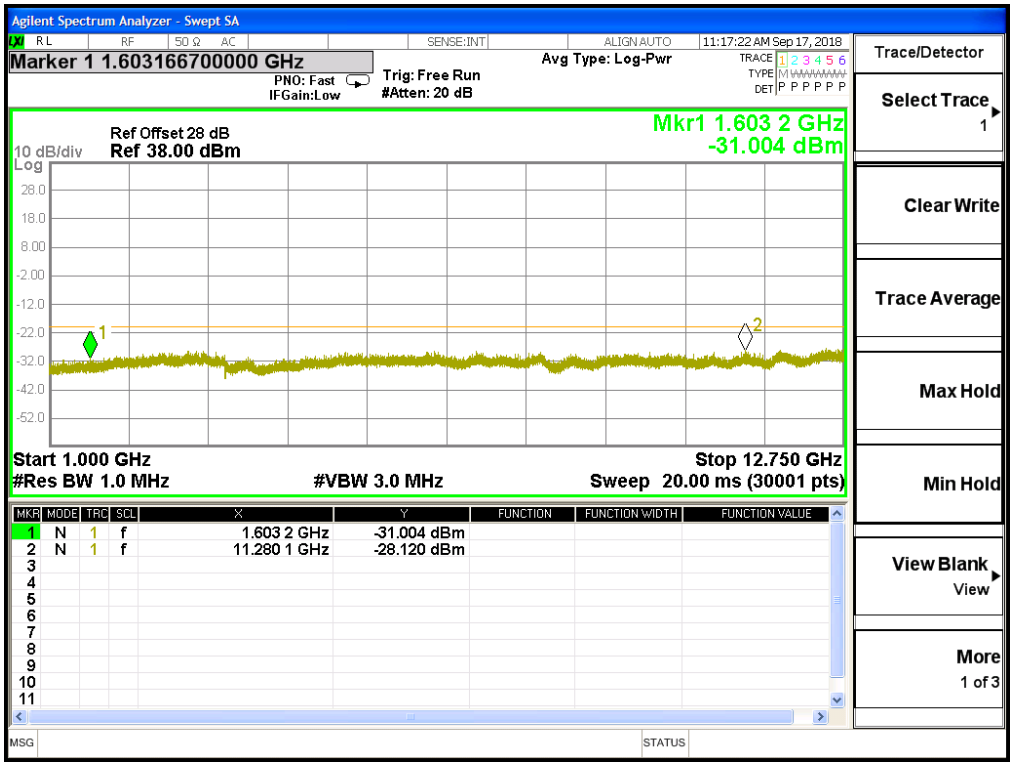
Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-7W

30MHz-1GHz



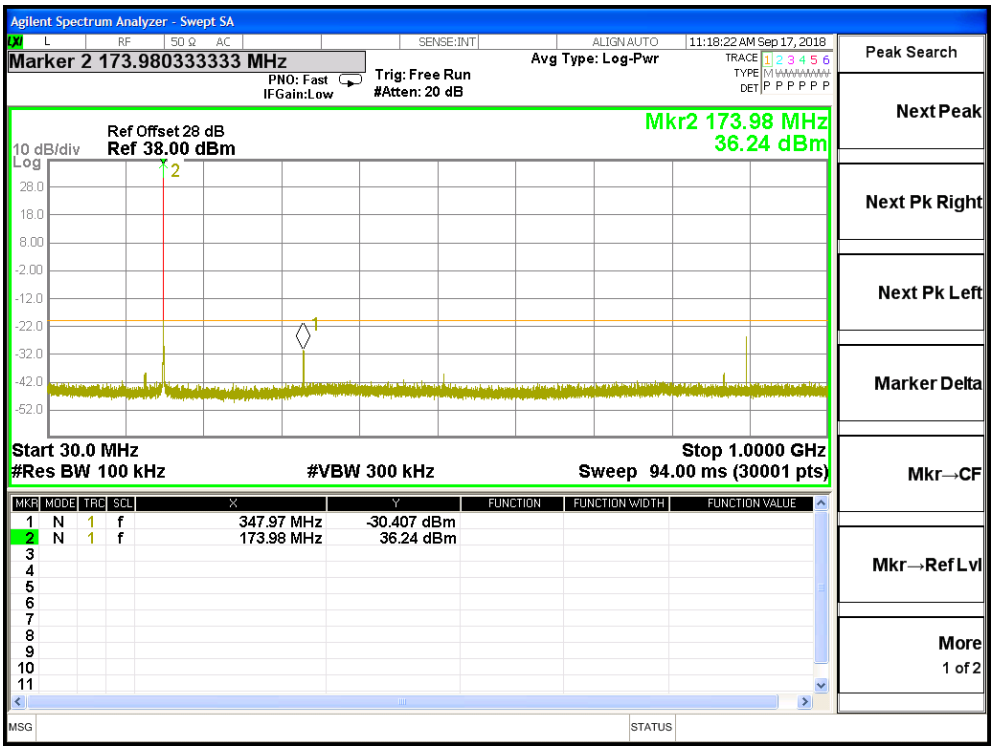
Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-7W

1GHz-12.75GHz



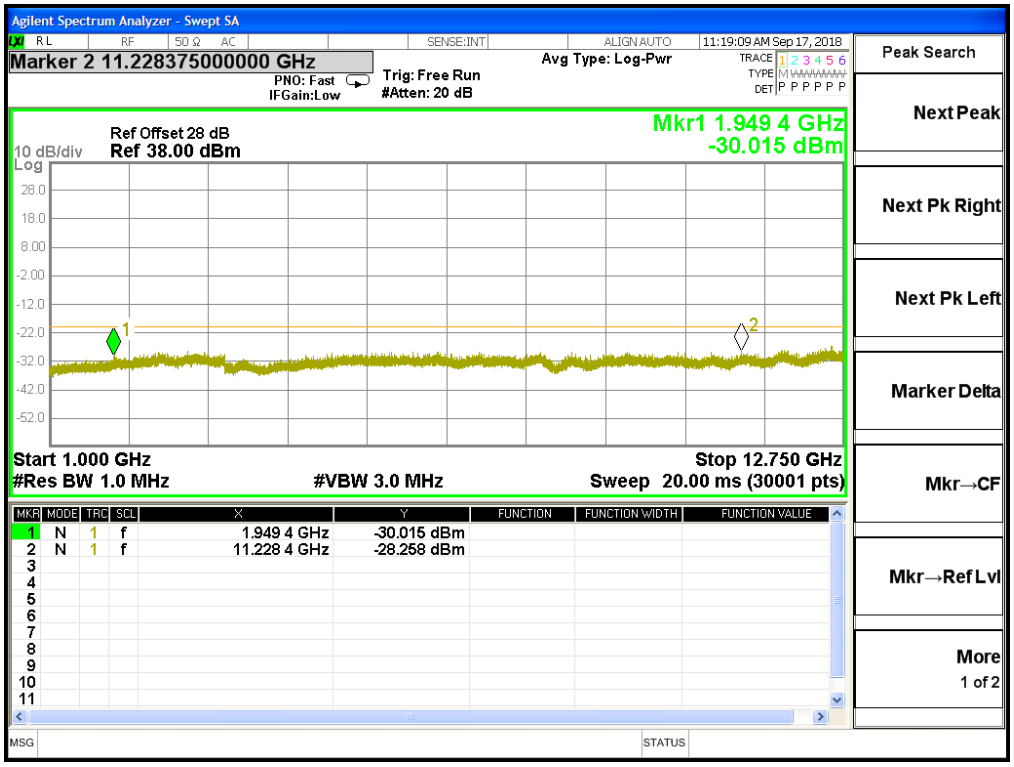
Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-7W

30MHz-1GHz



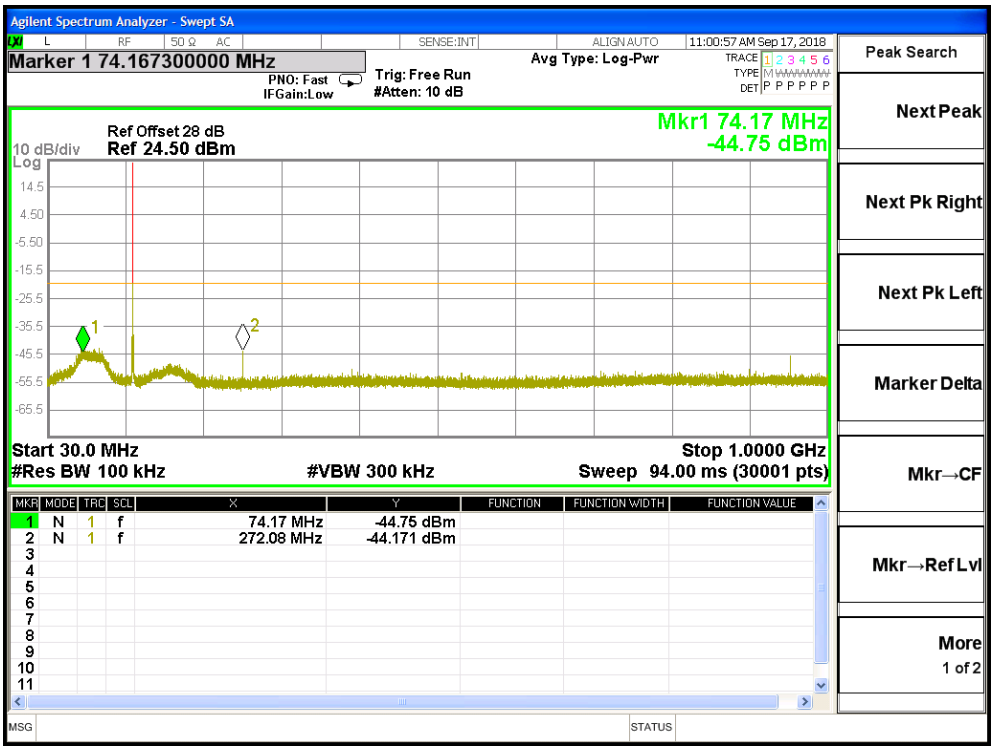
Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-7W

1GHz-12.75GHz



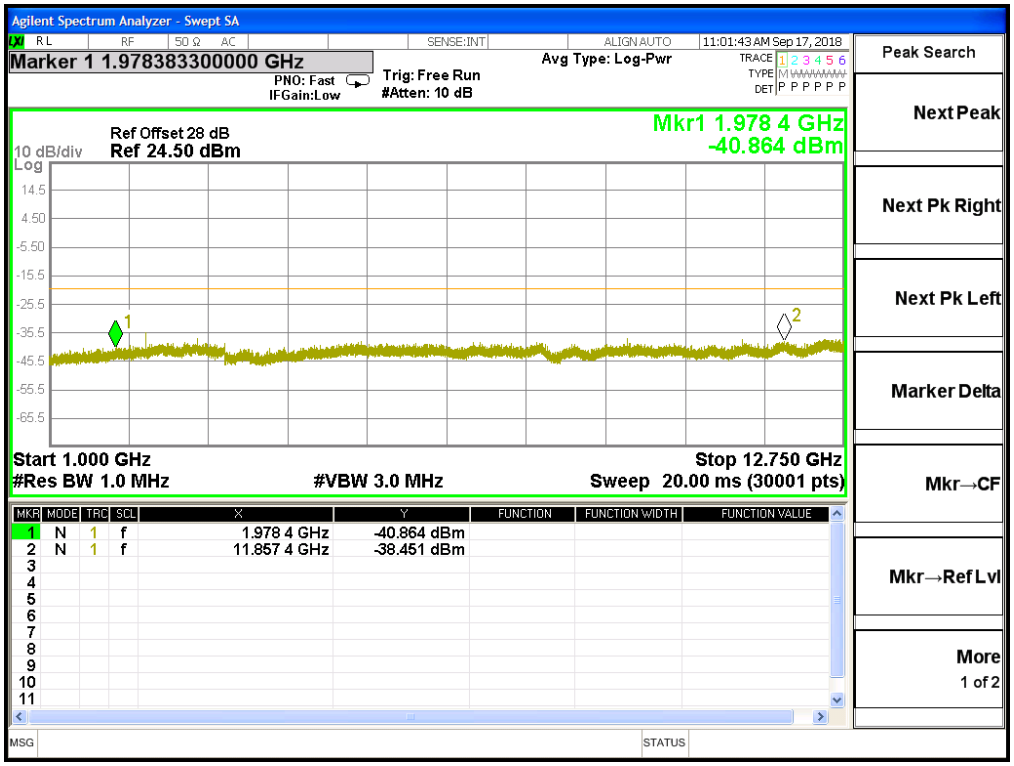
Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



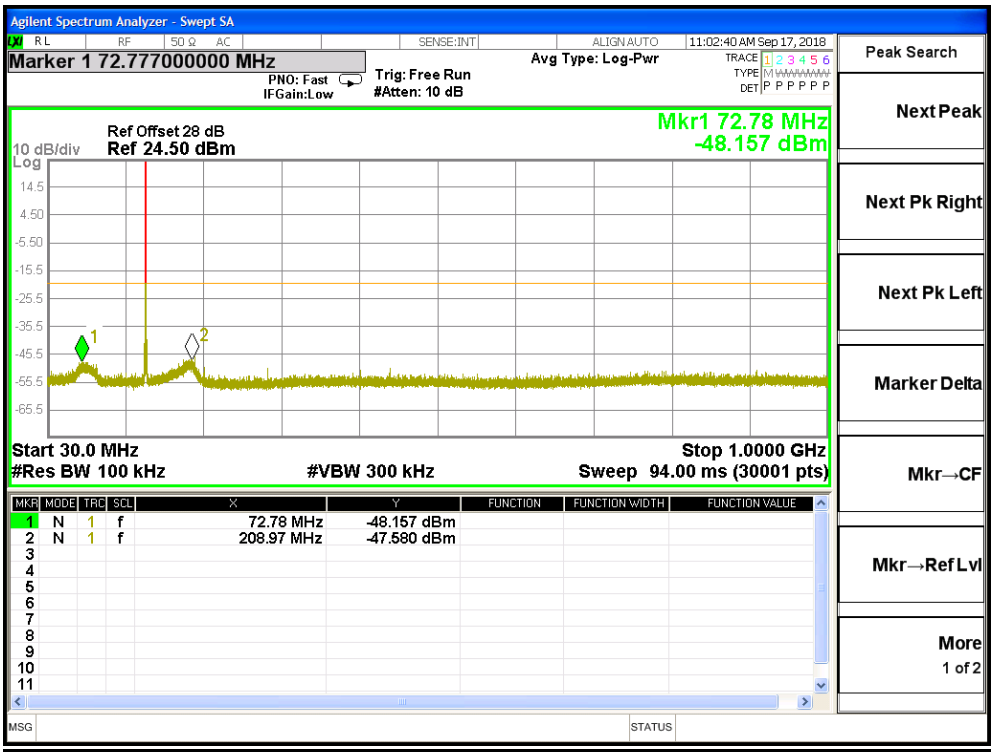
Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



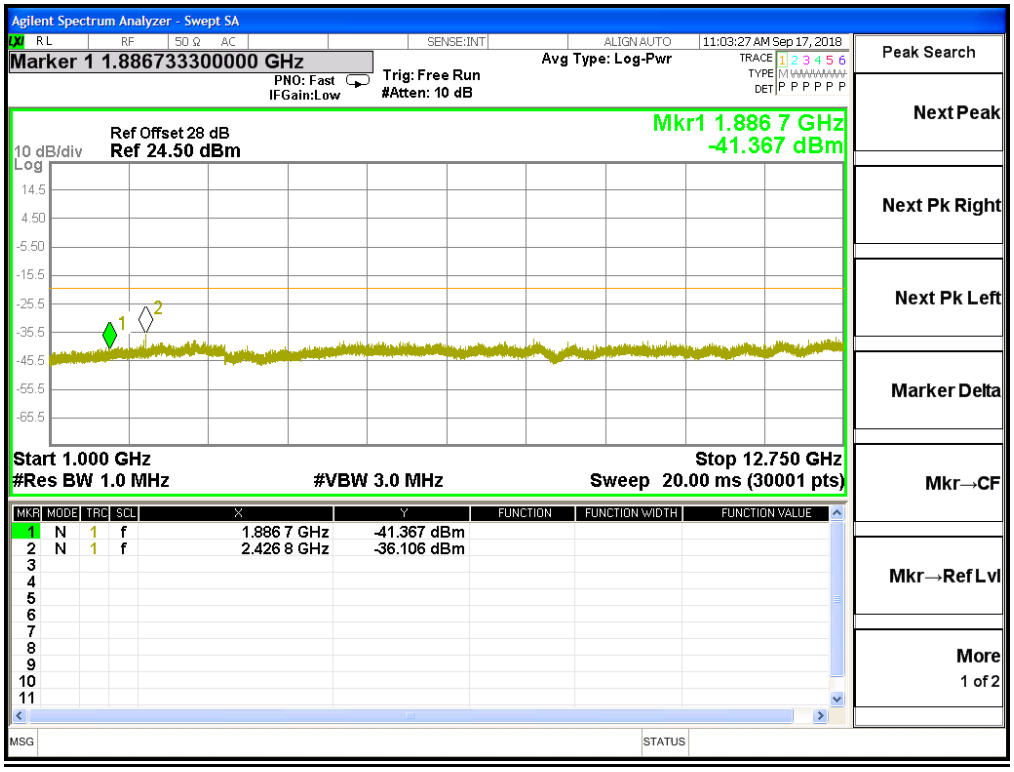
Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



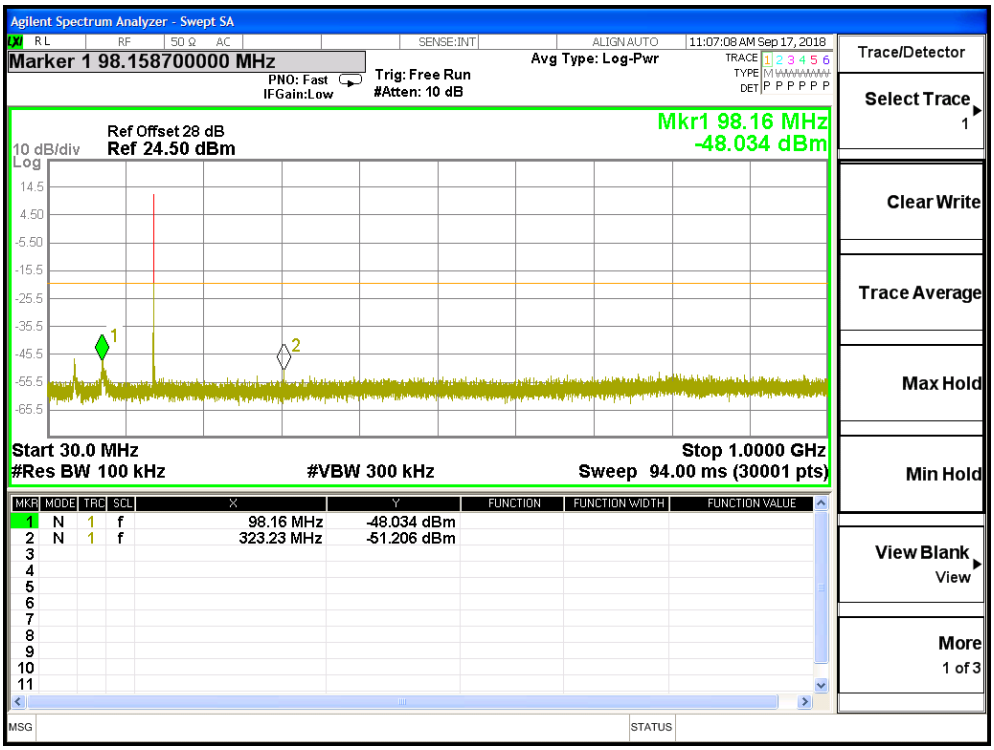
Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



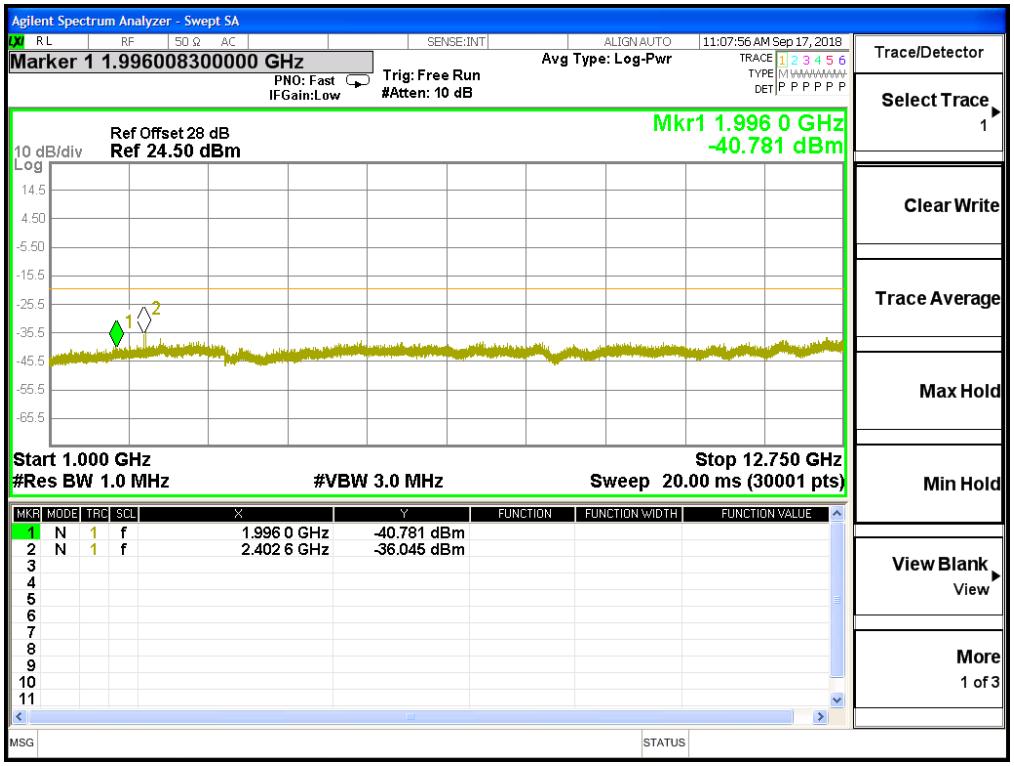
Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



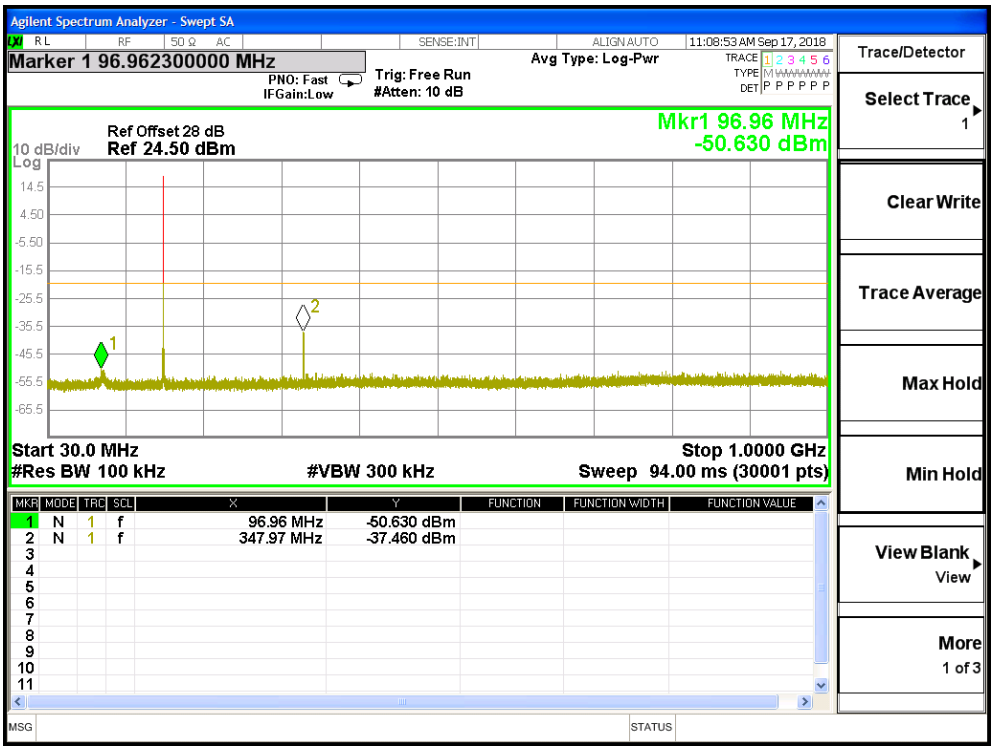
Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



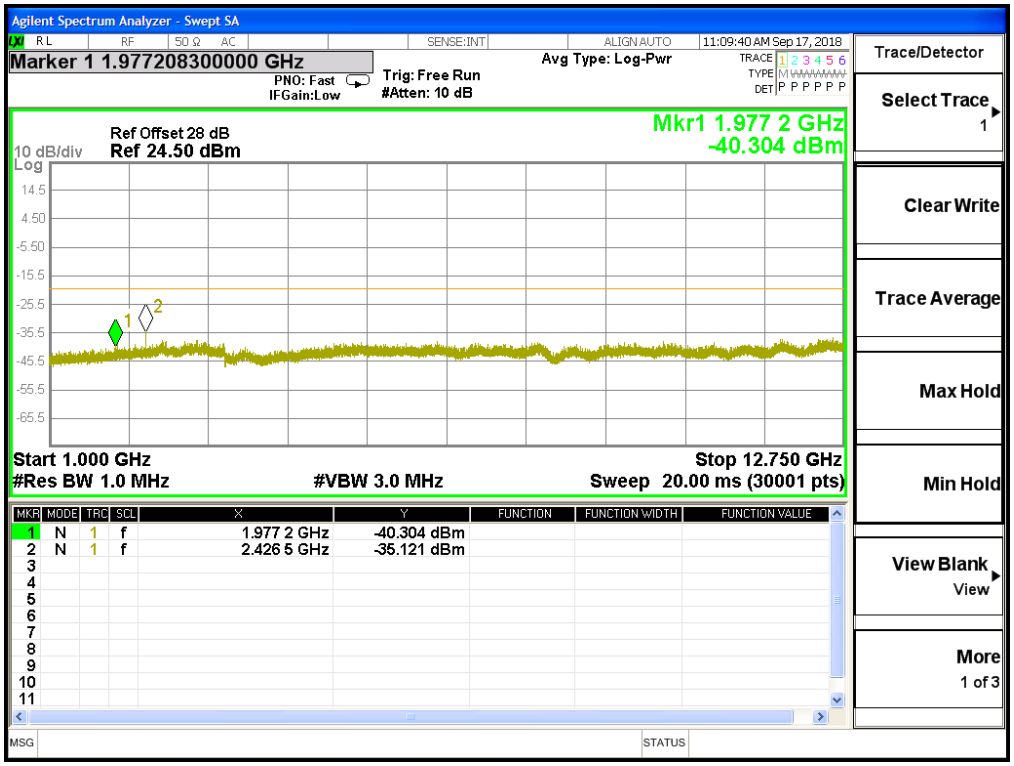
Conducted Spurious Emission (worst) @173.975MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-0.2W

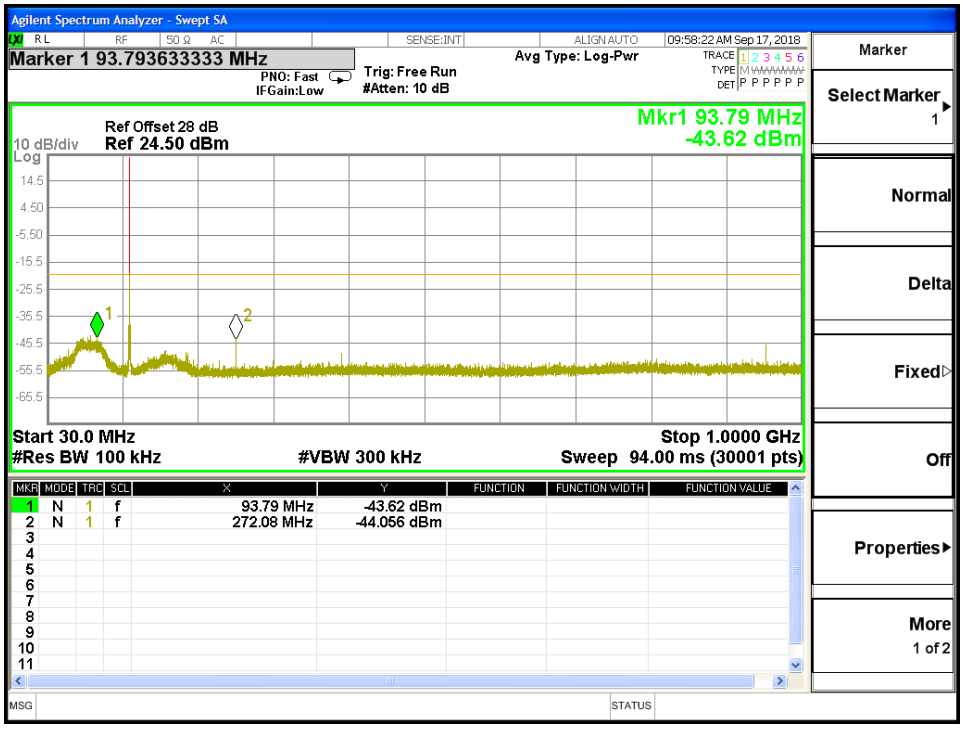
1GHz-12.75GHz



Digital:

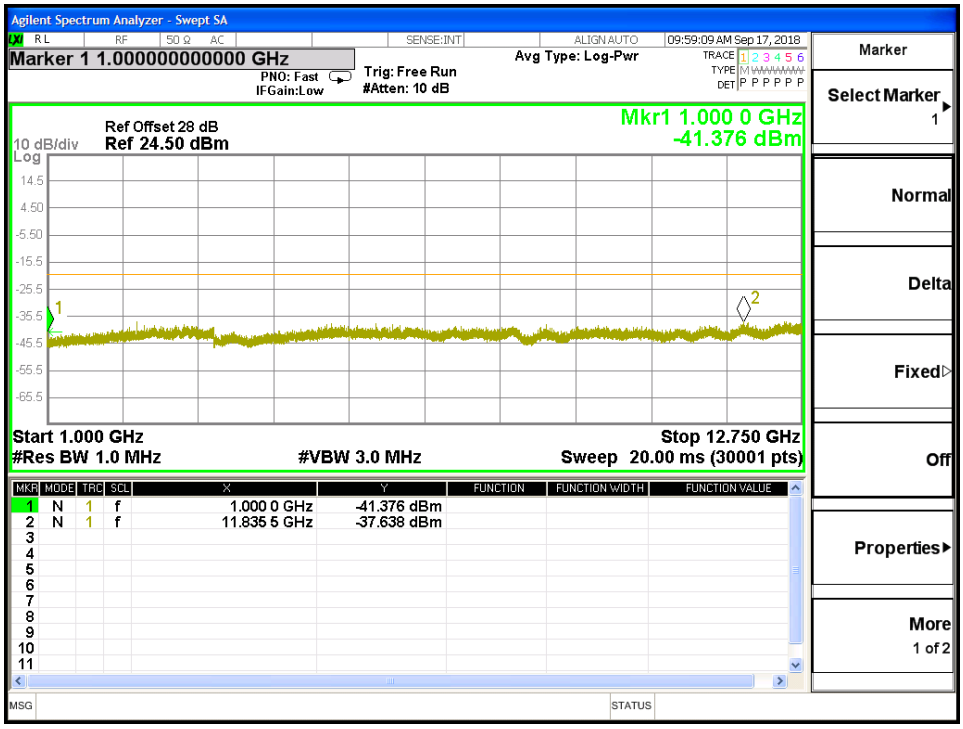
Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



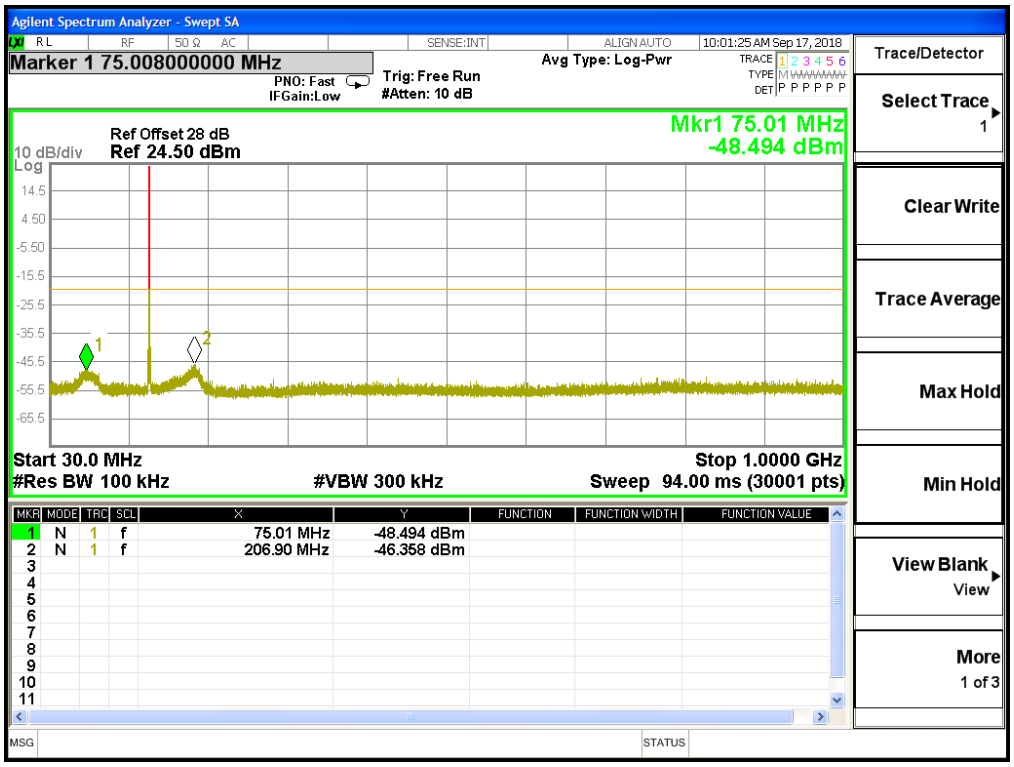
Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



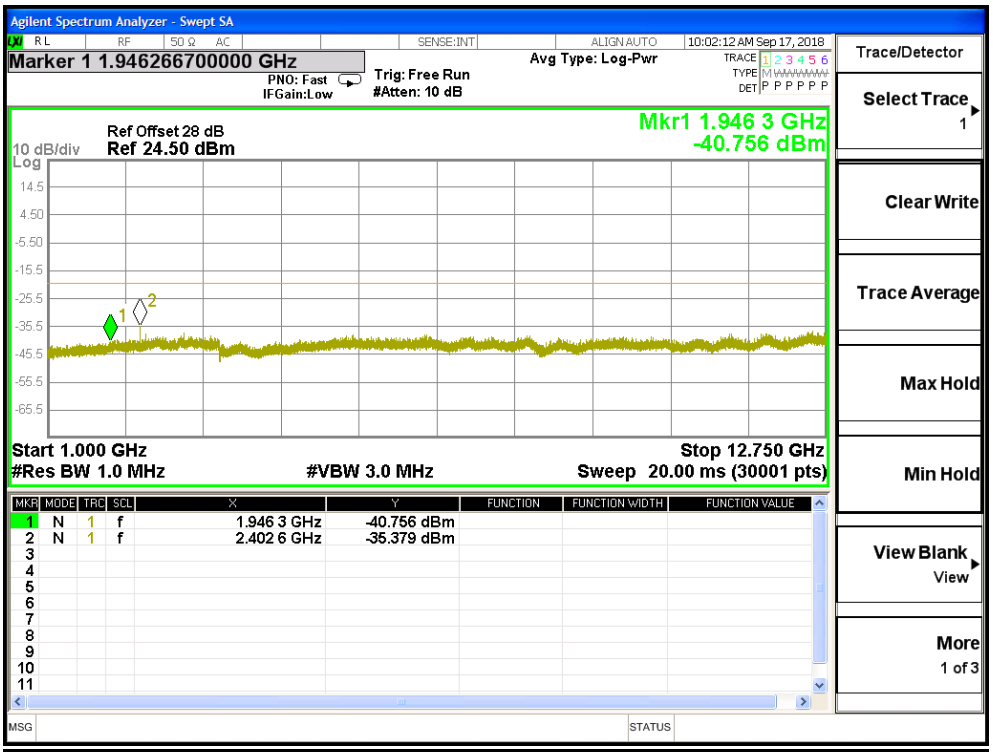
Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



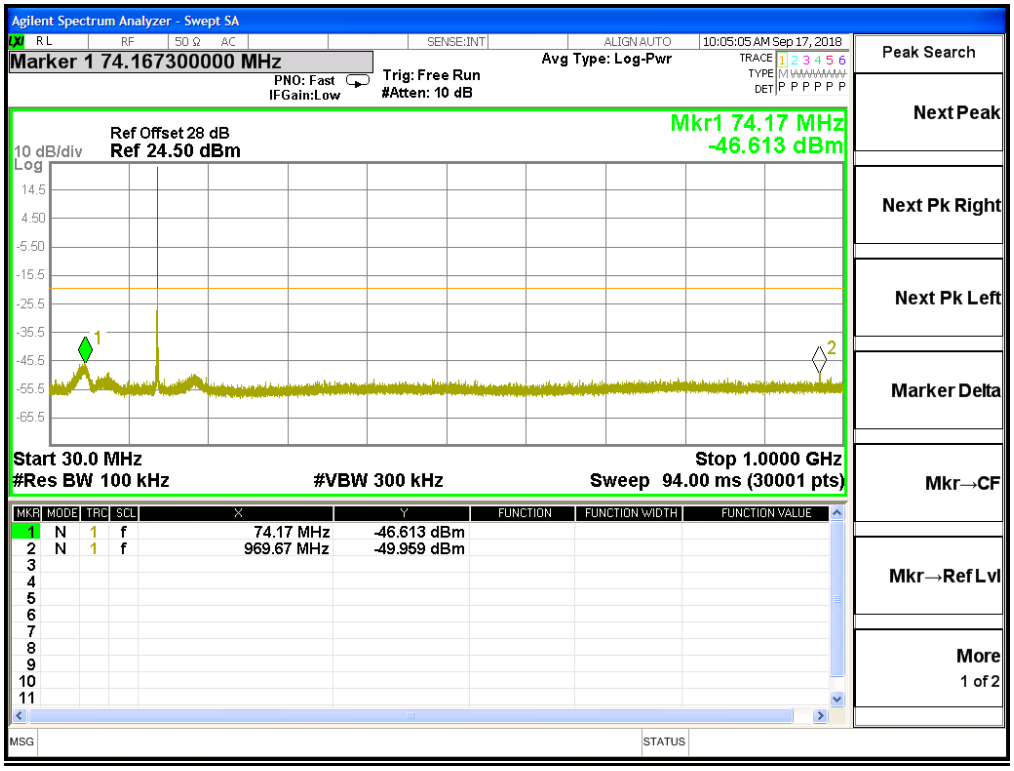
Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



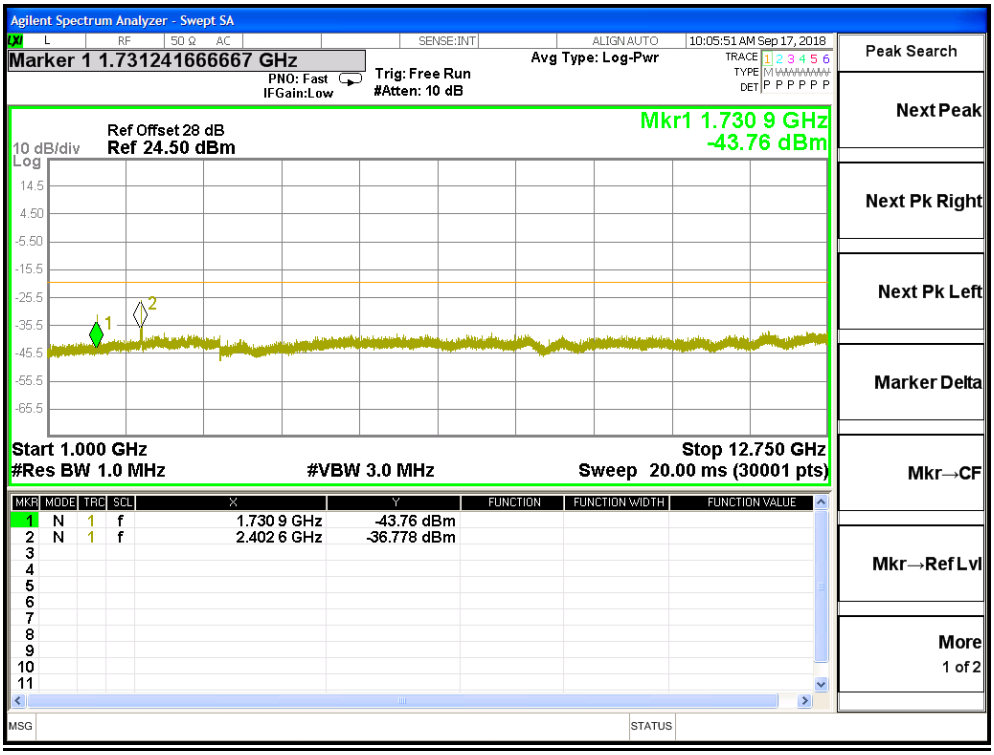
Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



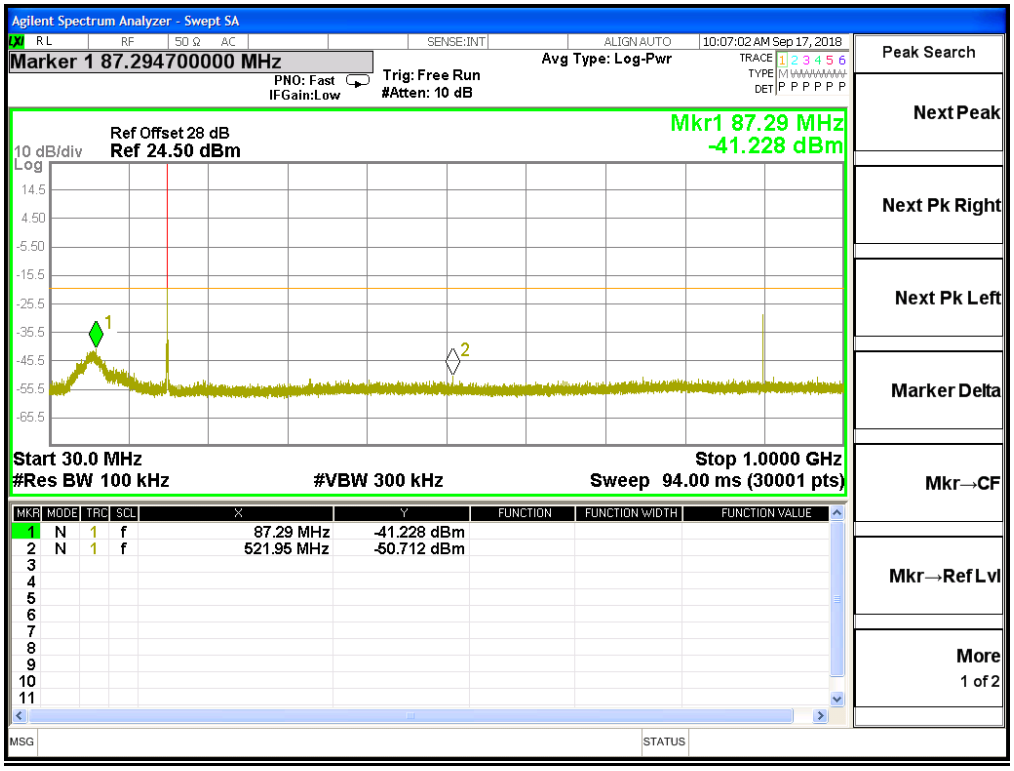
Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



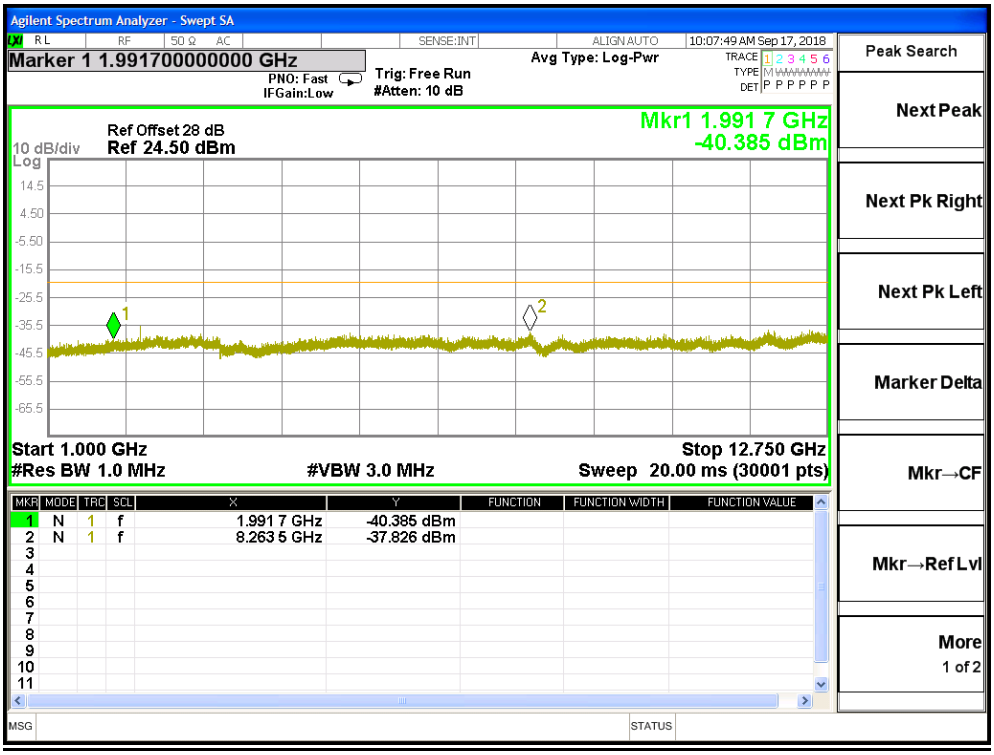
Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



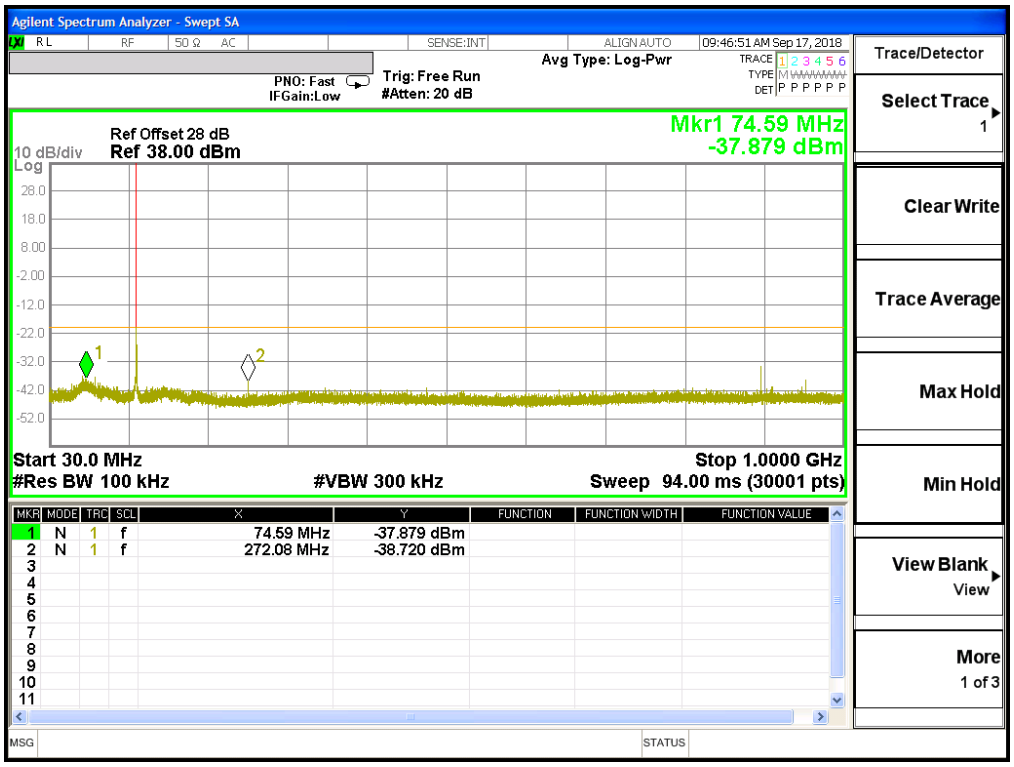
Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-7W

30MHz-1GHz

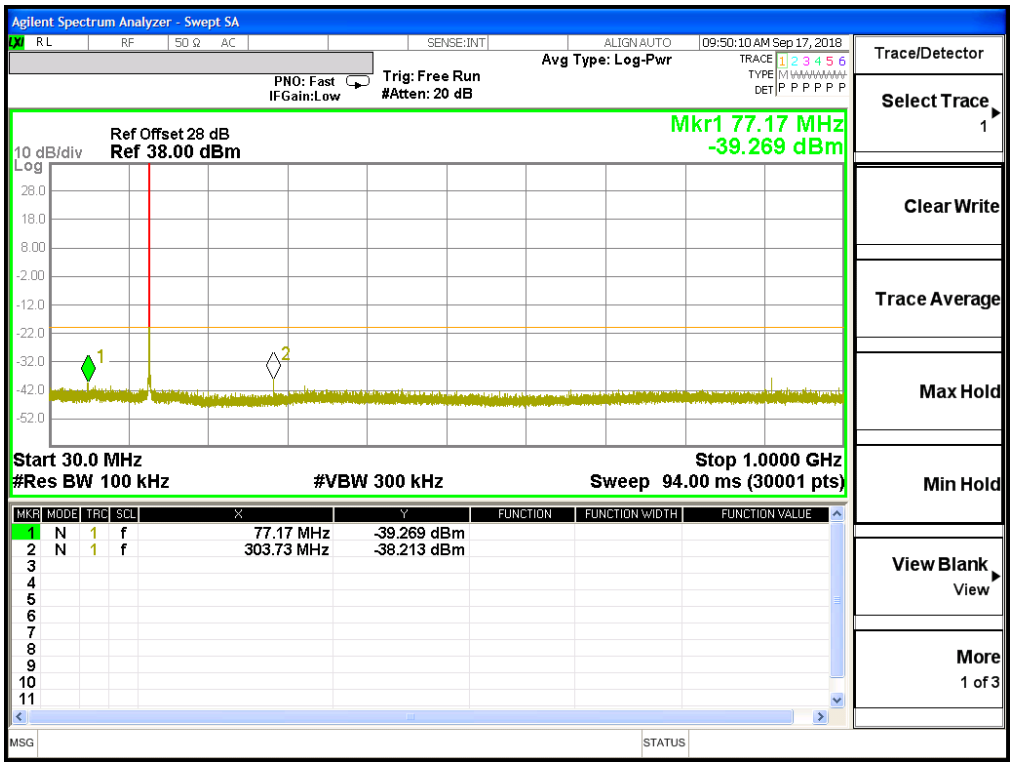


Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-7W

1GHz-12.75GHz

Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-7W

30MHz-1GHz

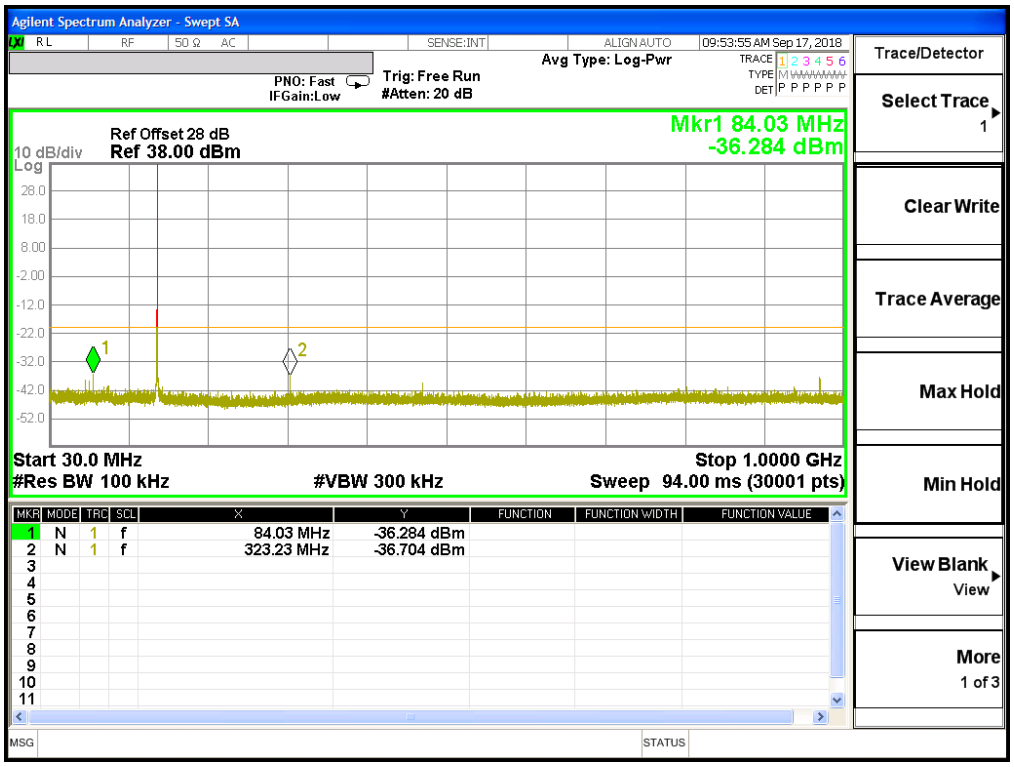


Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-7W

1GHz-12.75GHz

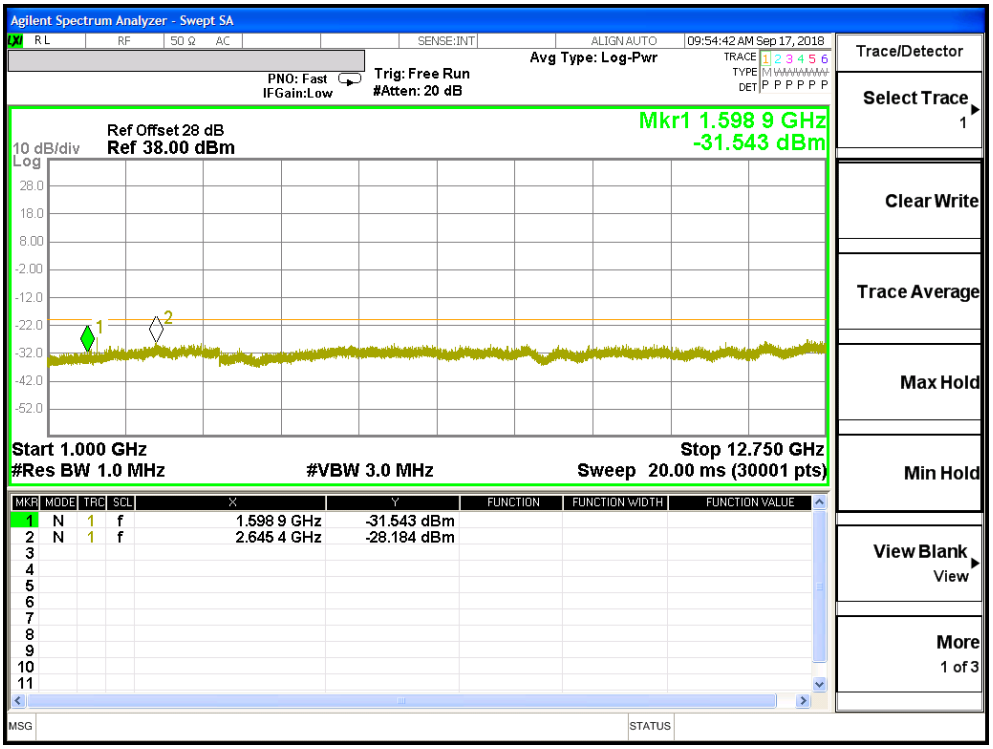
Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



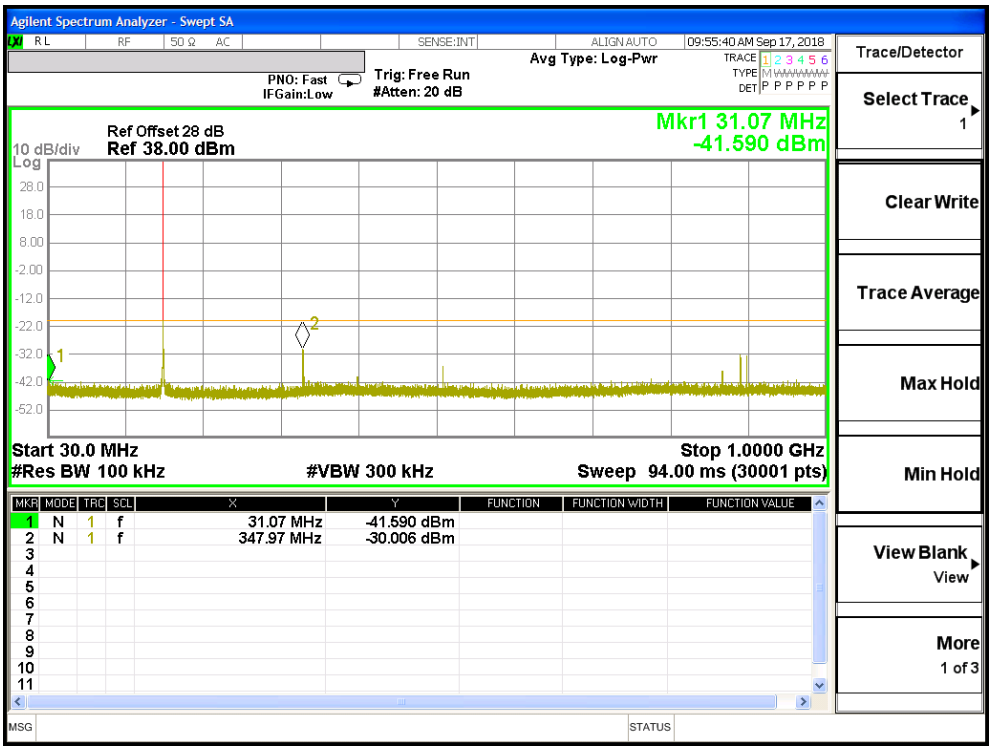
Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



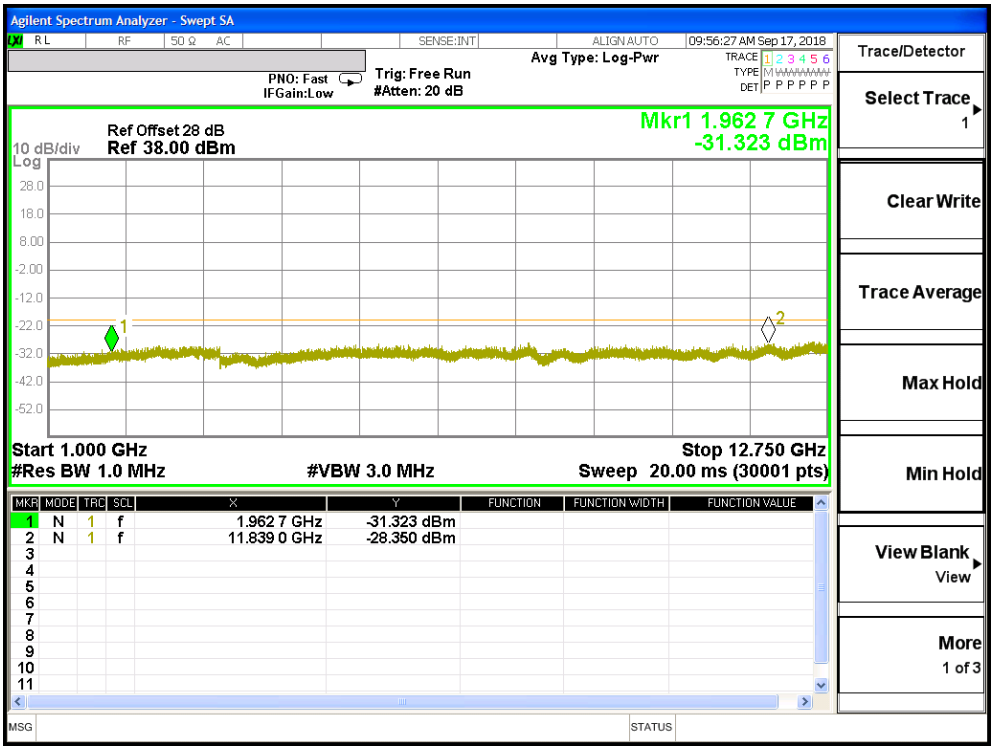
Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



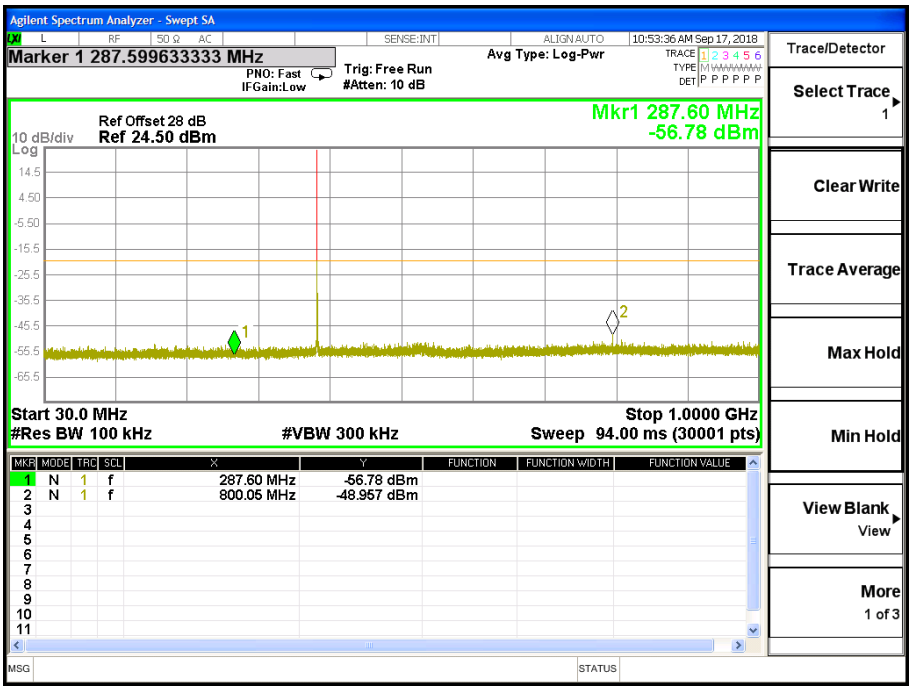
Note: *only result the worst case in this part.*

UHF:

Analog:

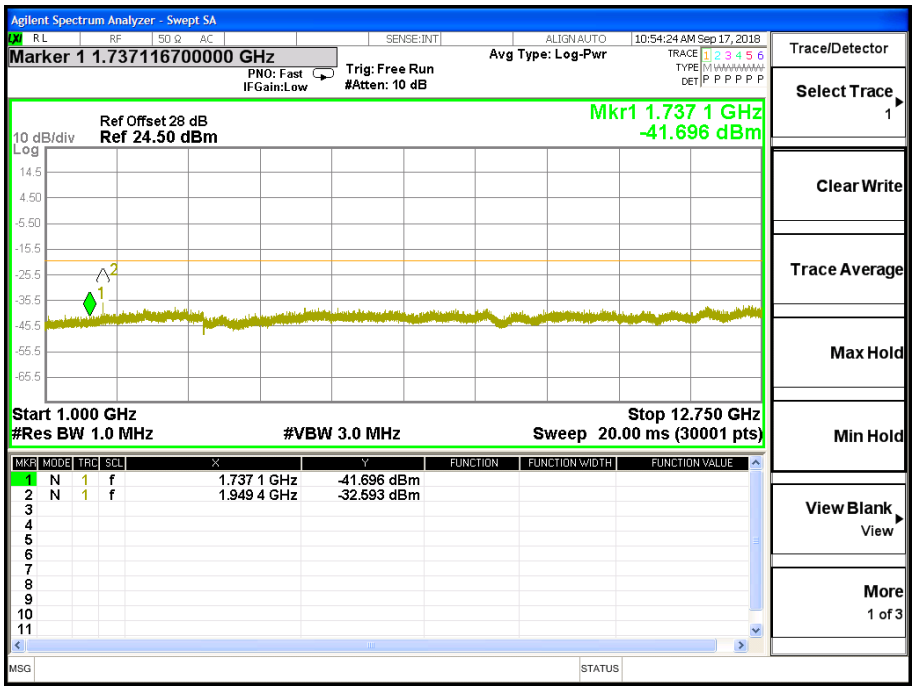
Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



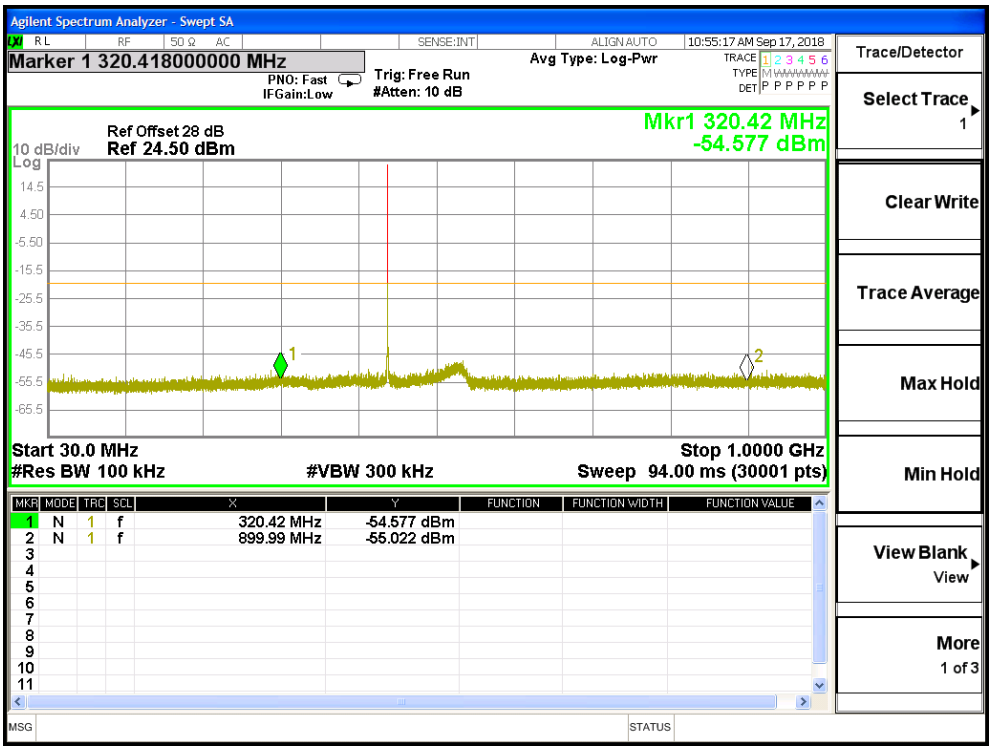
Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



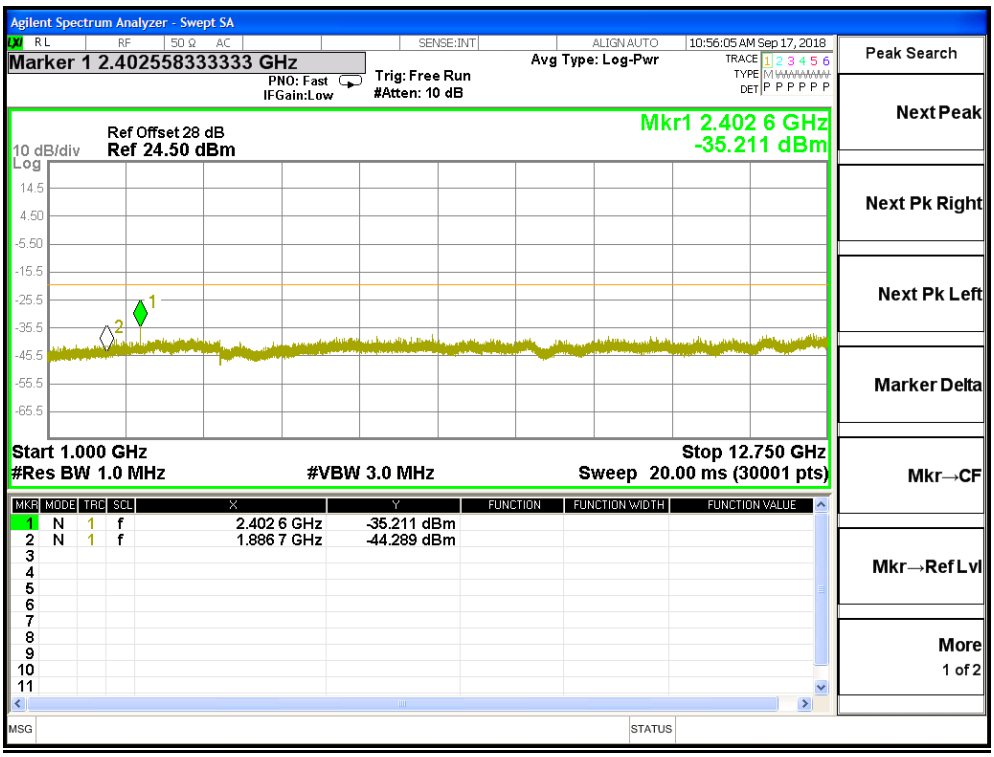
Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



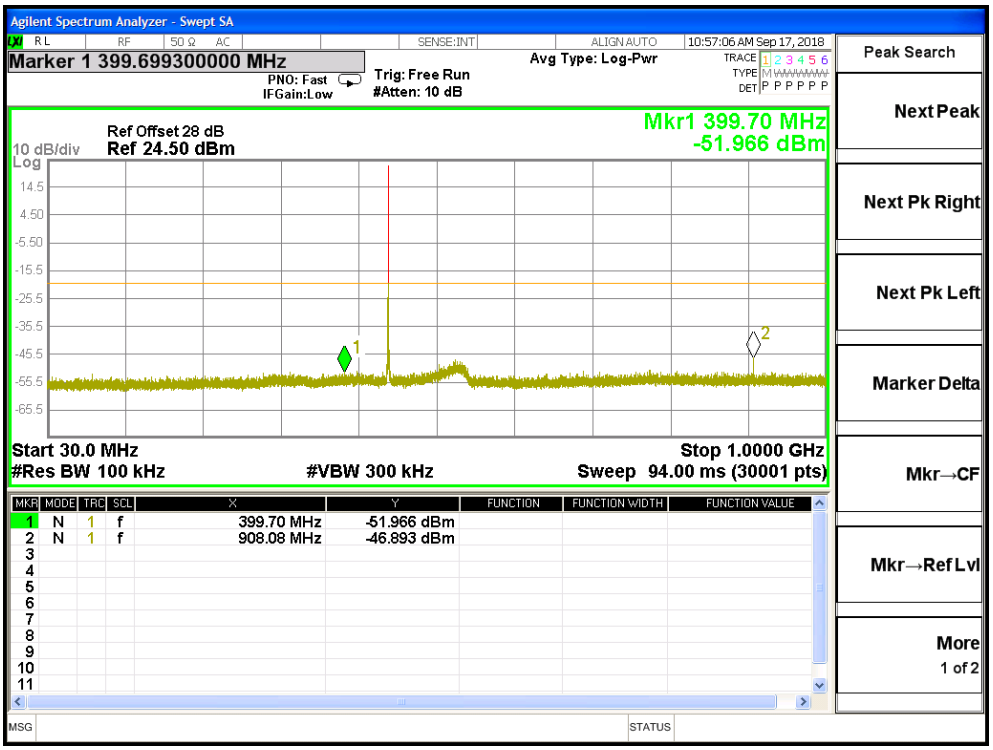
Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



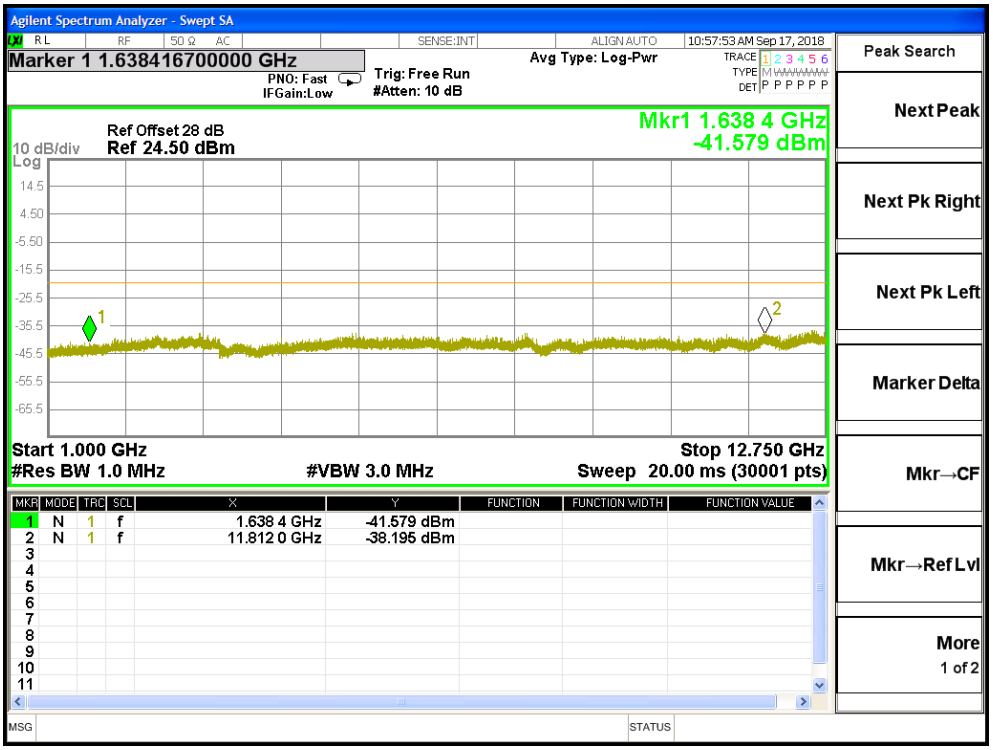
Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



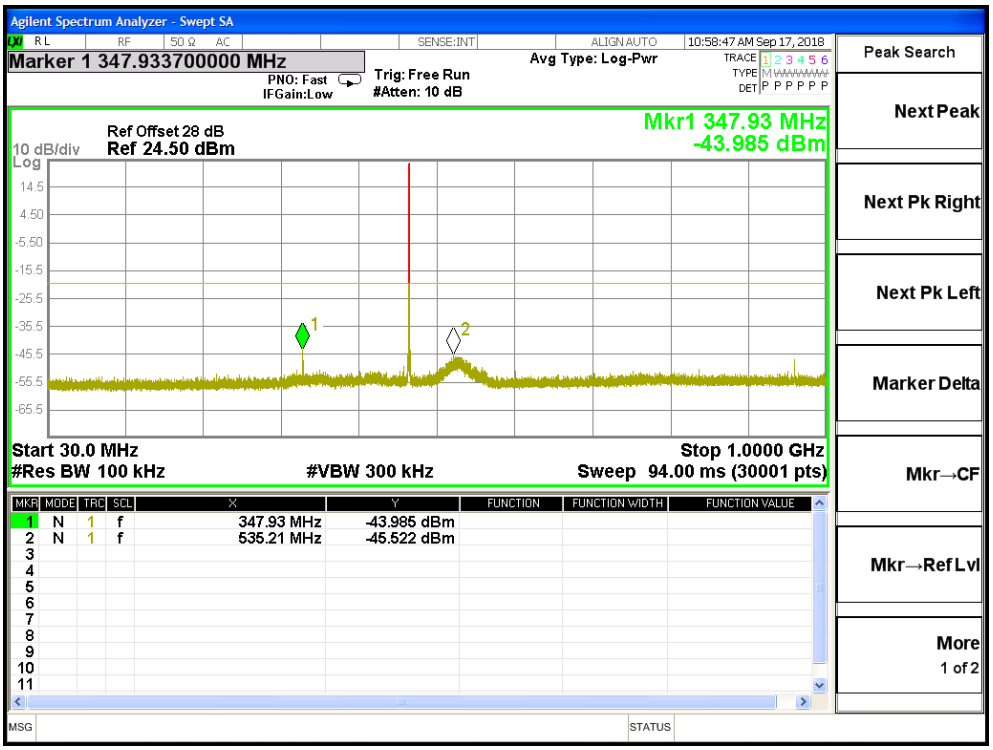
Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



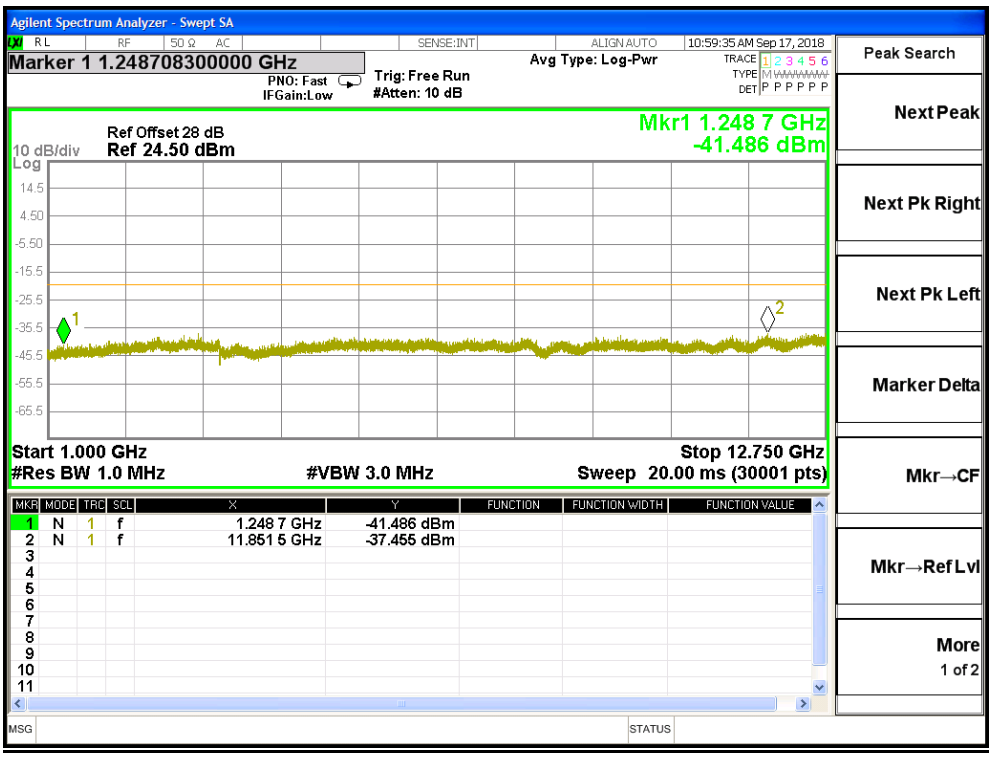
Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



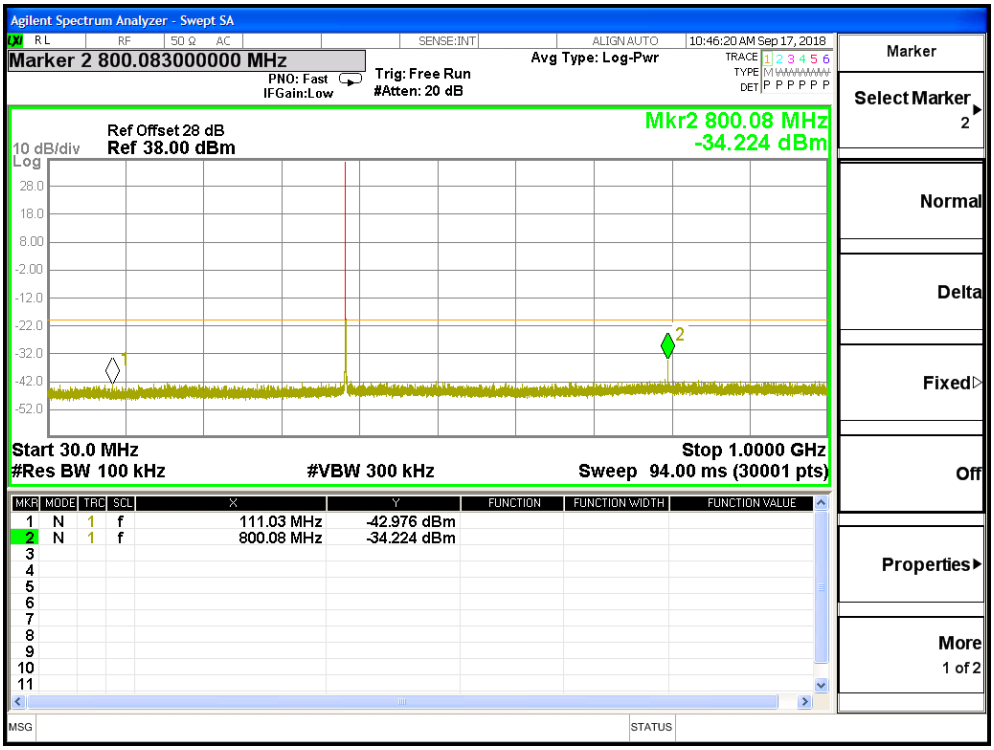
Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



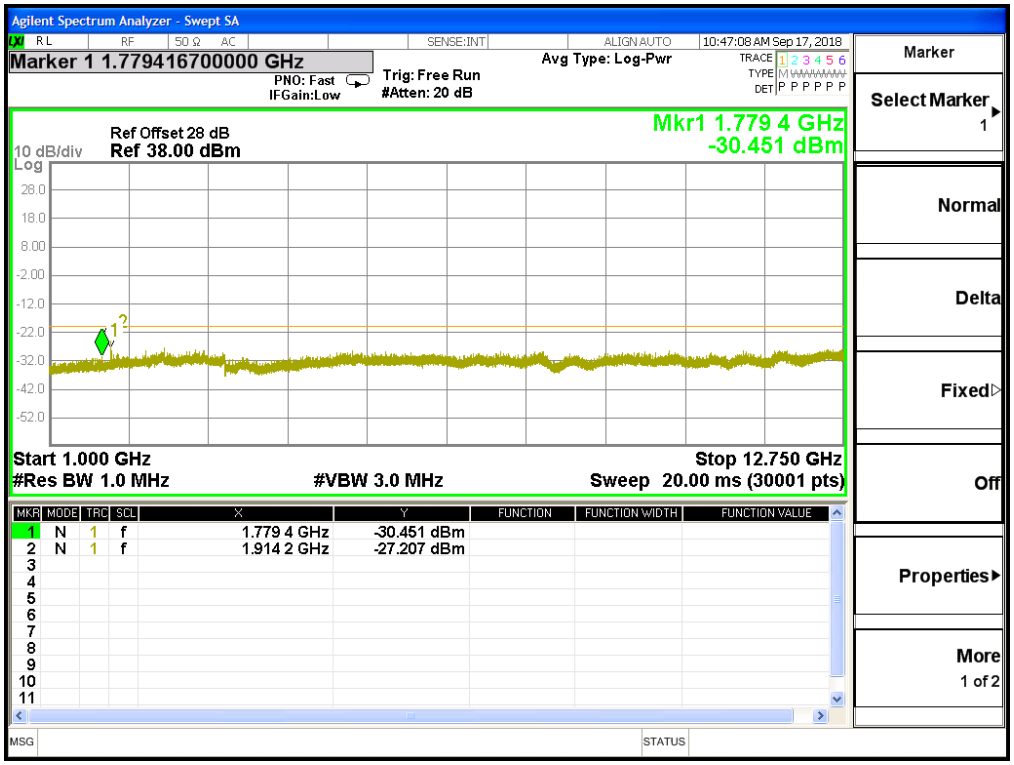
Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



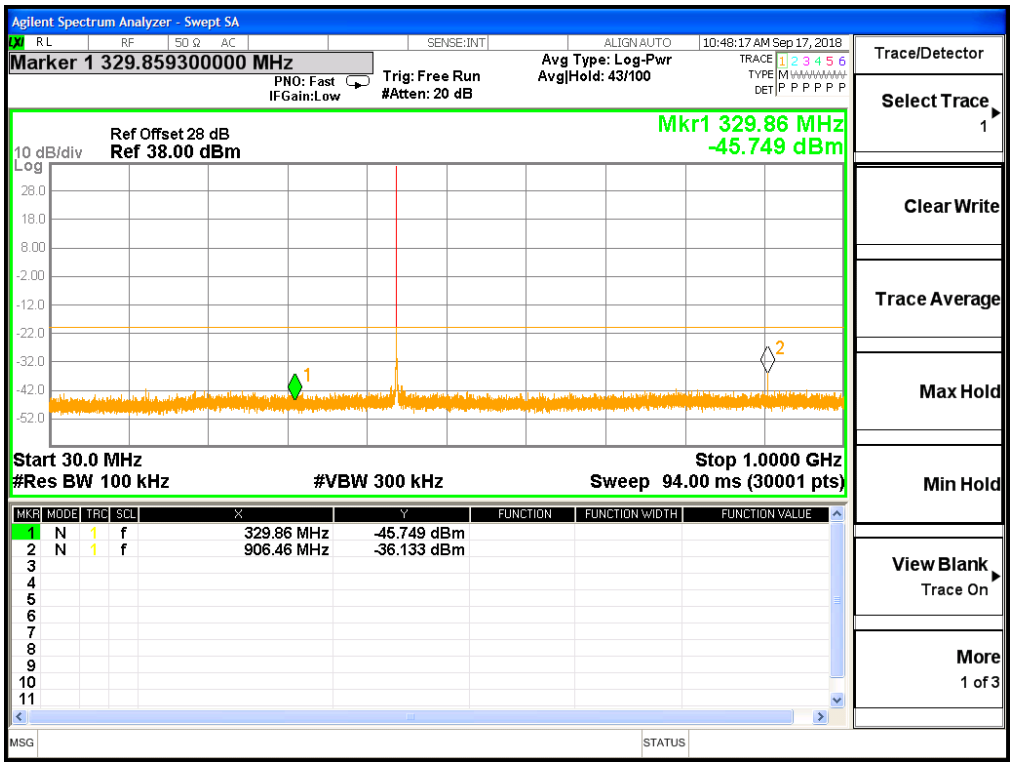
Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



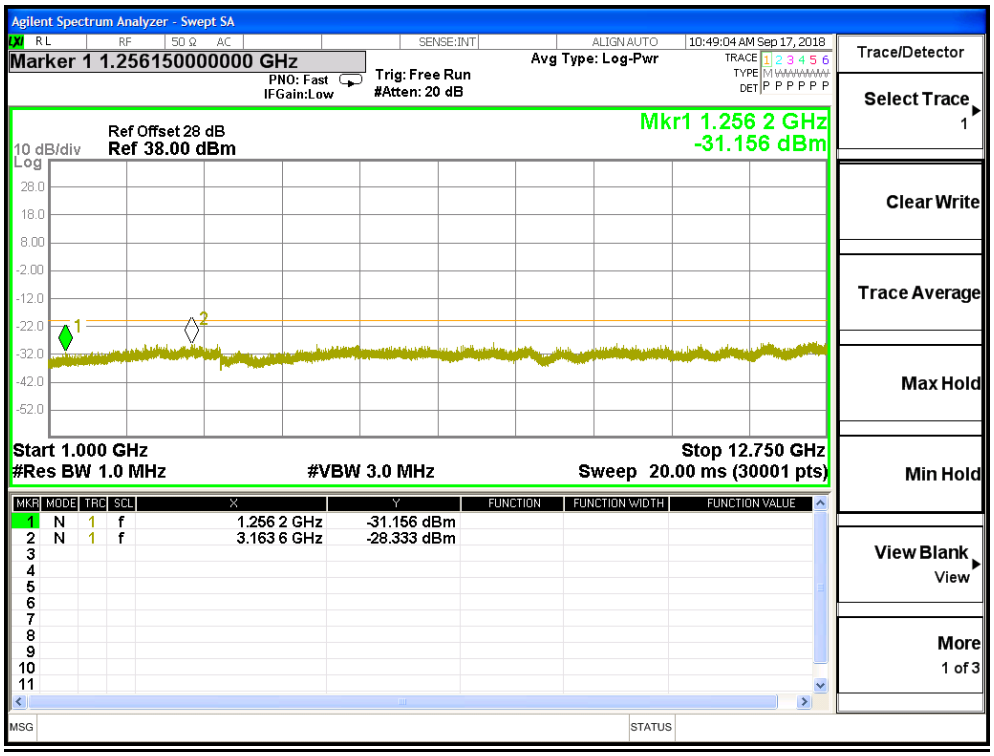
Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



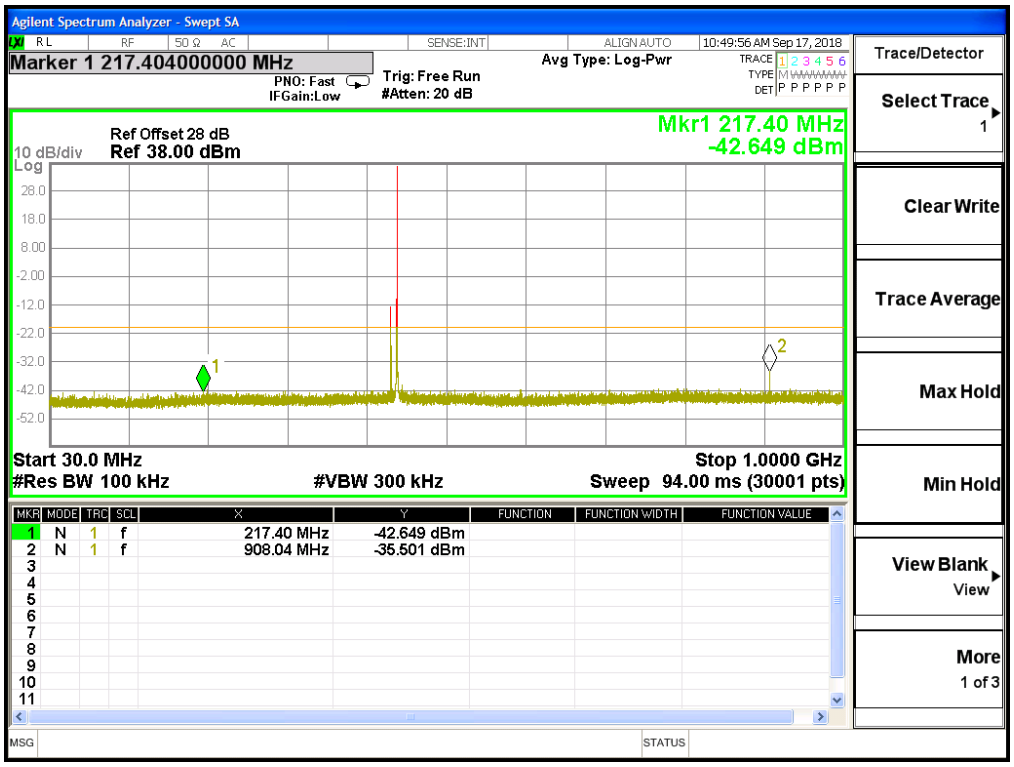
Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



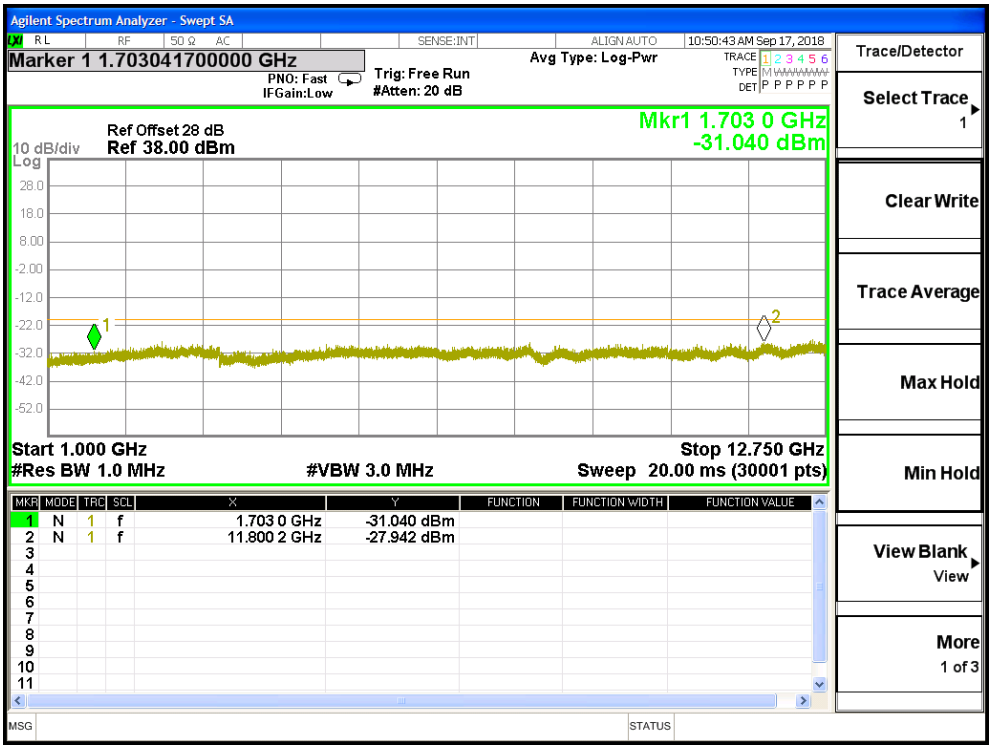
Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



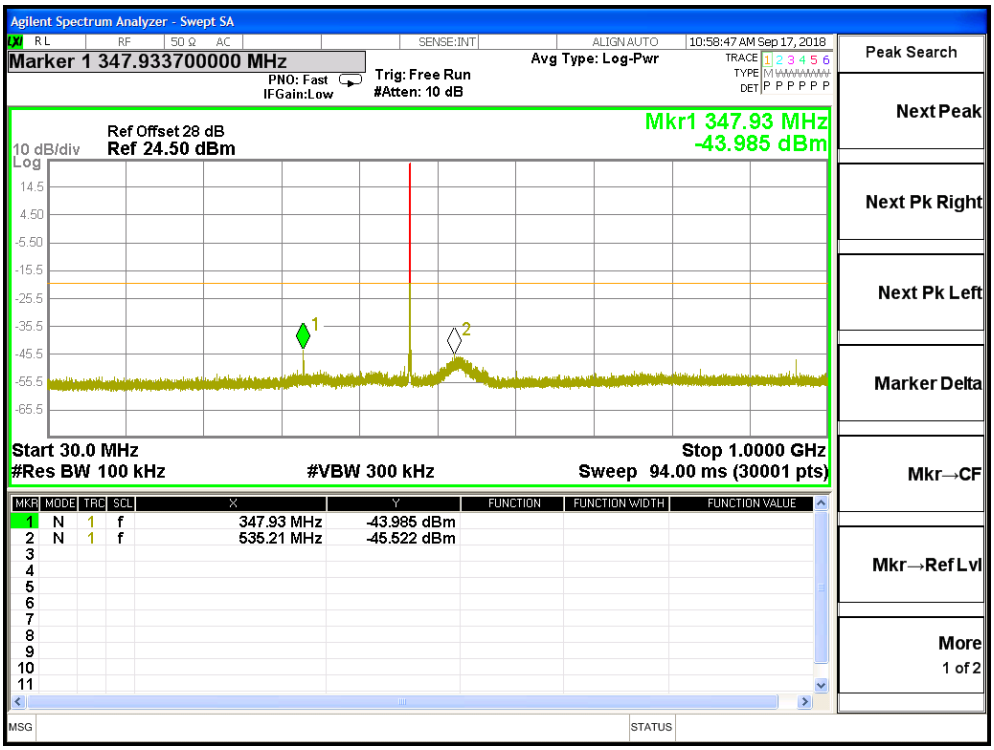
Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



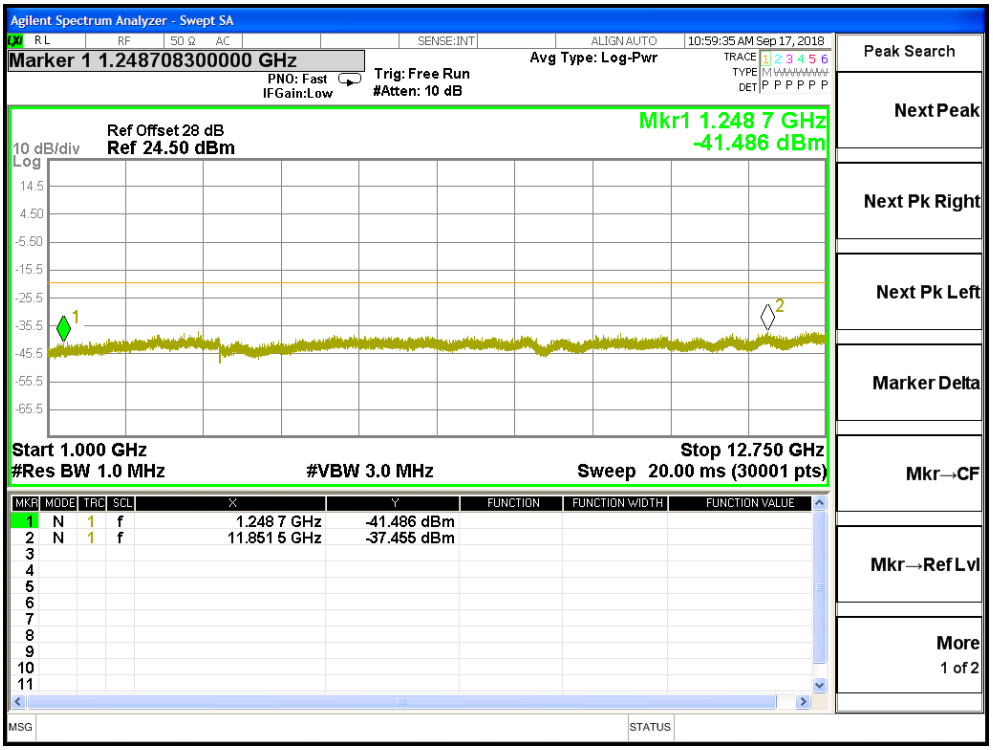
Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz

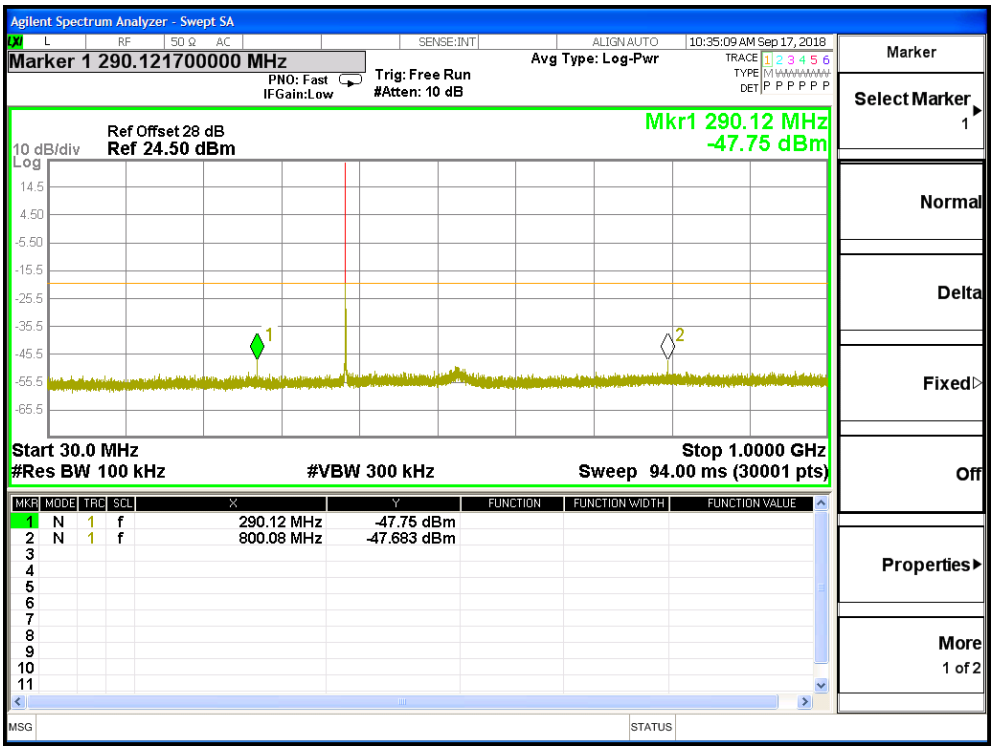


Note: All the test frequencies was tested, but only the worst data be recorded in this part.

Digital:

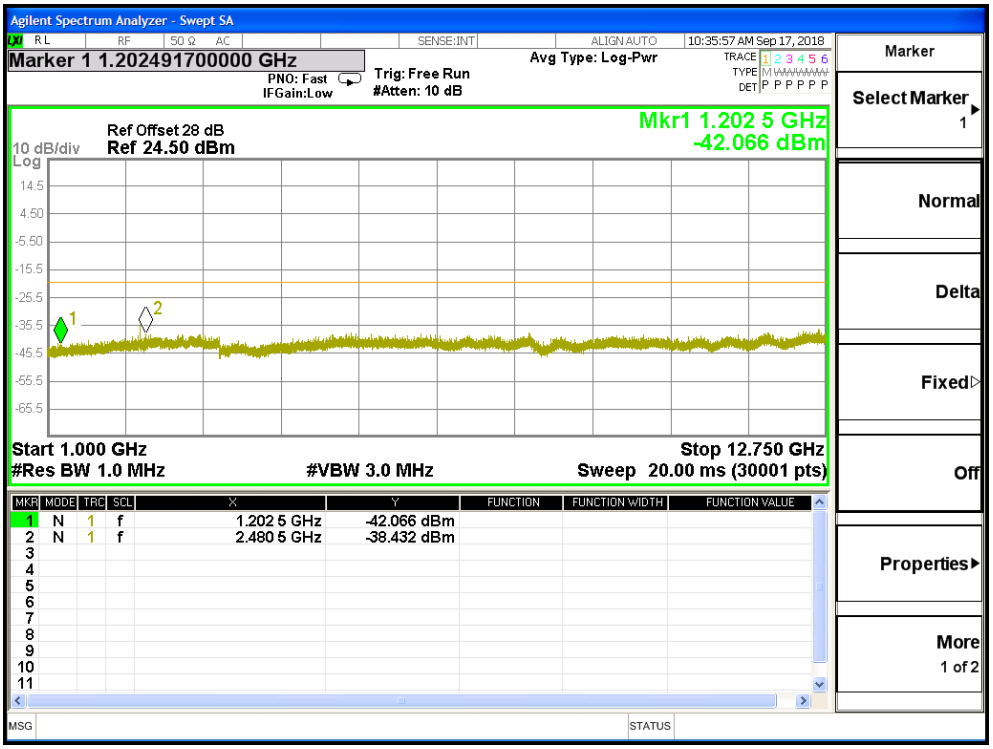
Conducted Spurious Emission (worst) @400.025MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



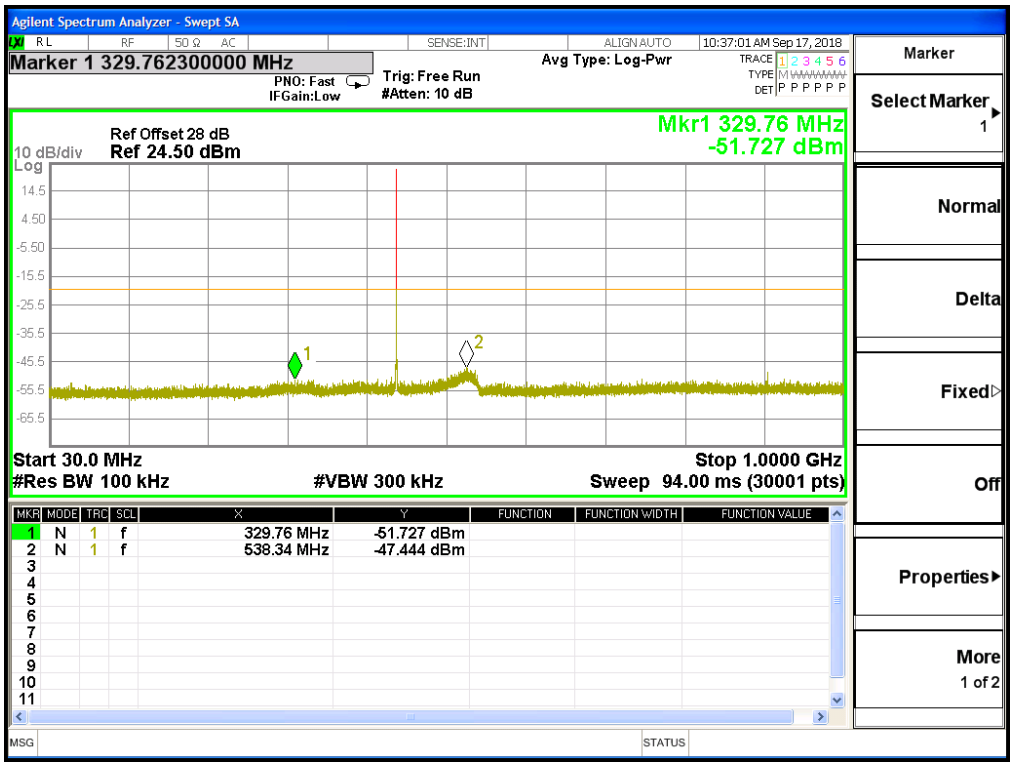
Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



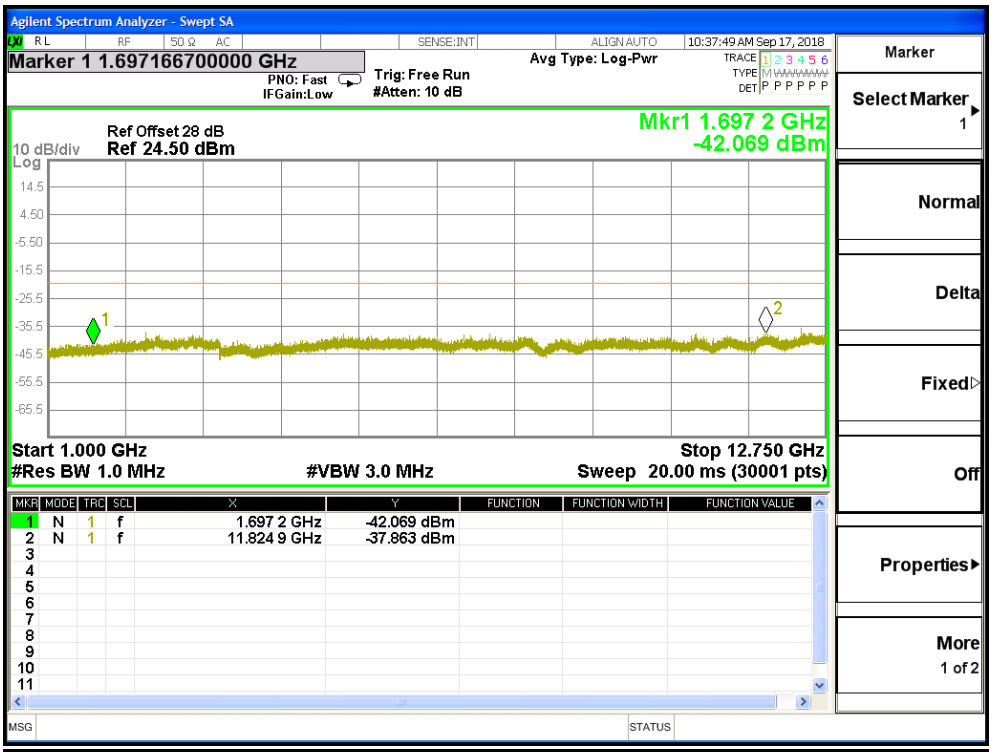
Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



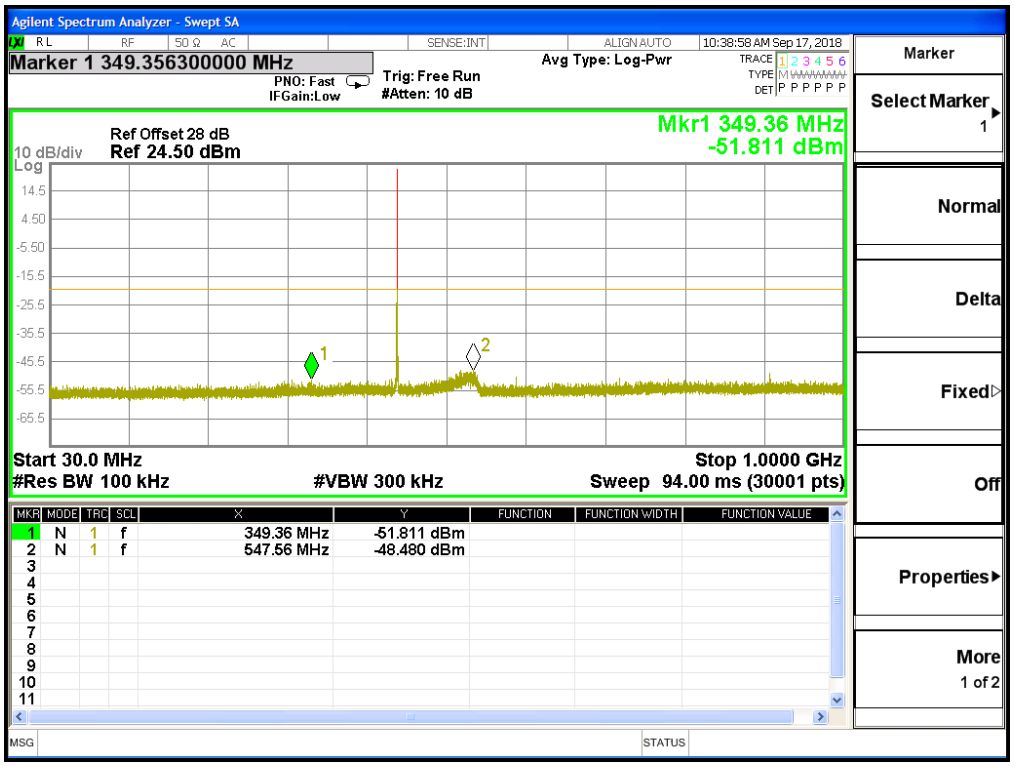
Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



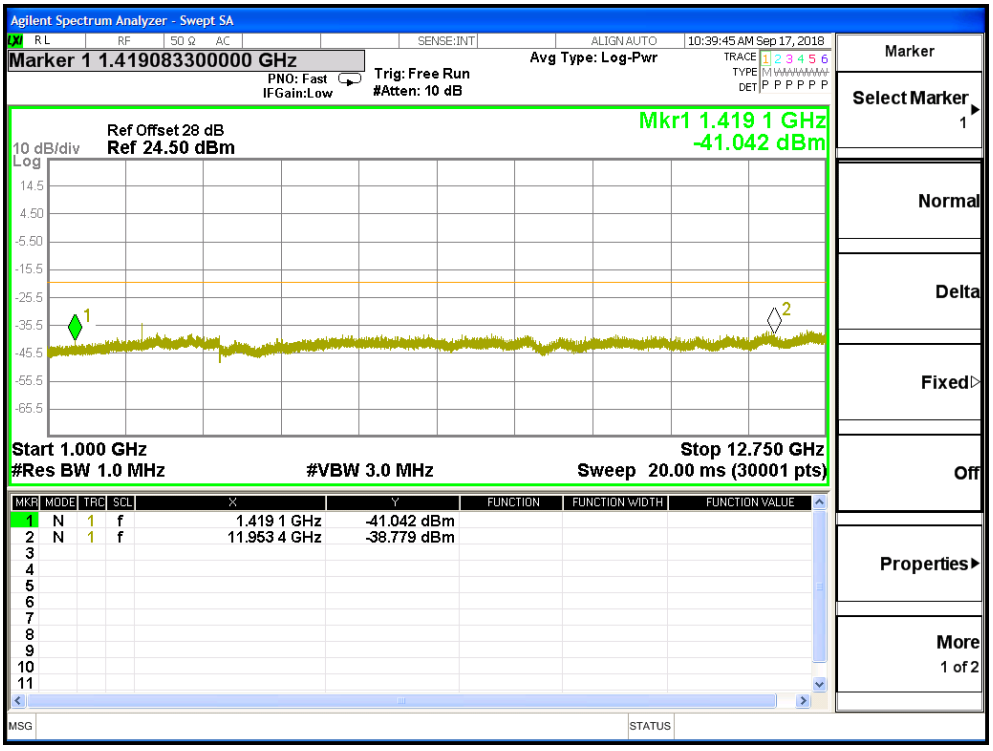
Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



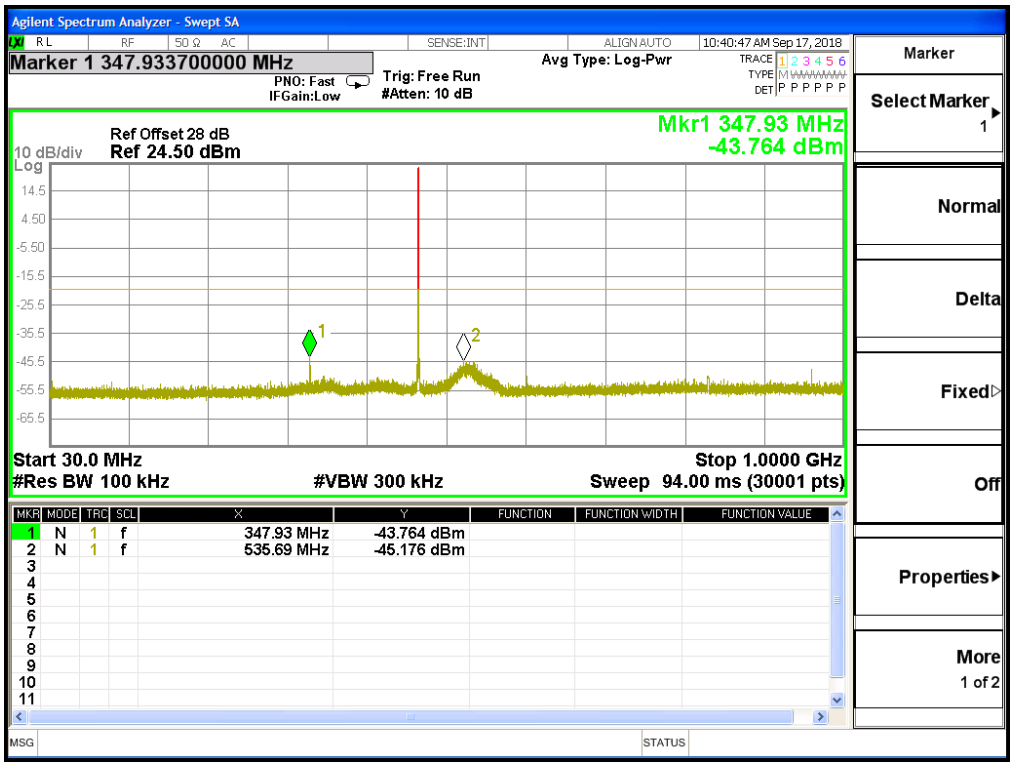
Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



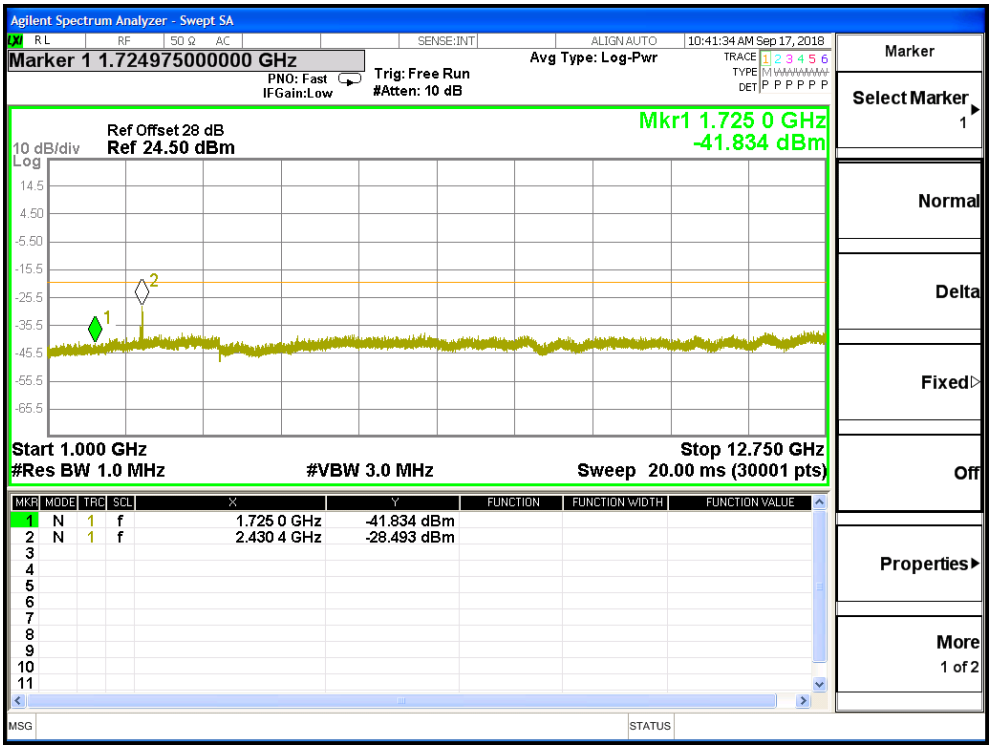
Conducted Spurious Emission (worst) @ 479.975 MHz With 12.5 KHz Channel Separation-0.2W

30MHz-1GHz



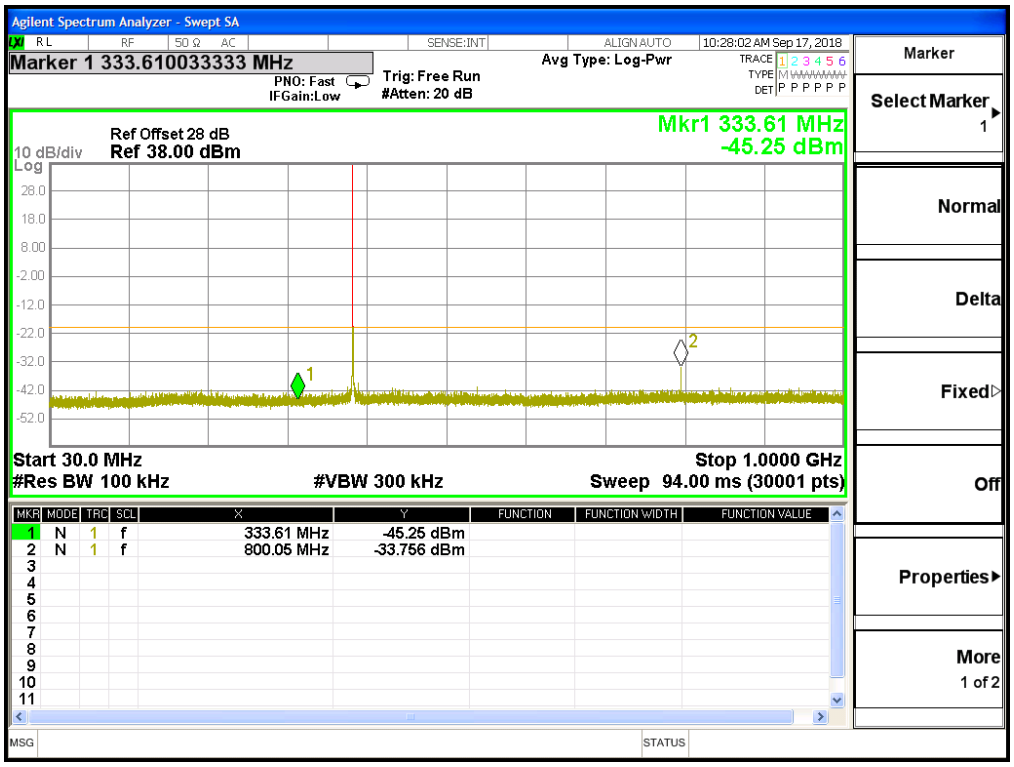
Conduct Spurious Emission (worst) @ 479.975 MHz With 12.5 KHz Channel Separation-0.2W

1GHz-12.75GHz



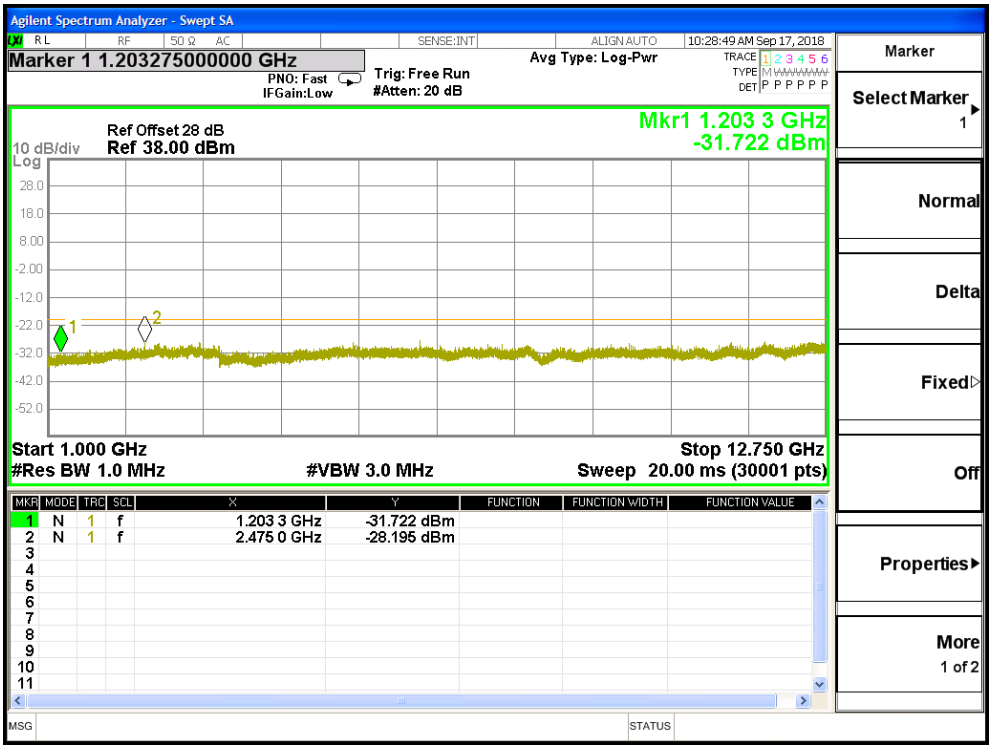
Conducted Spurious Emission (worst) @ 400.025MHz MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



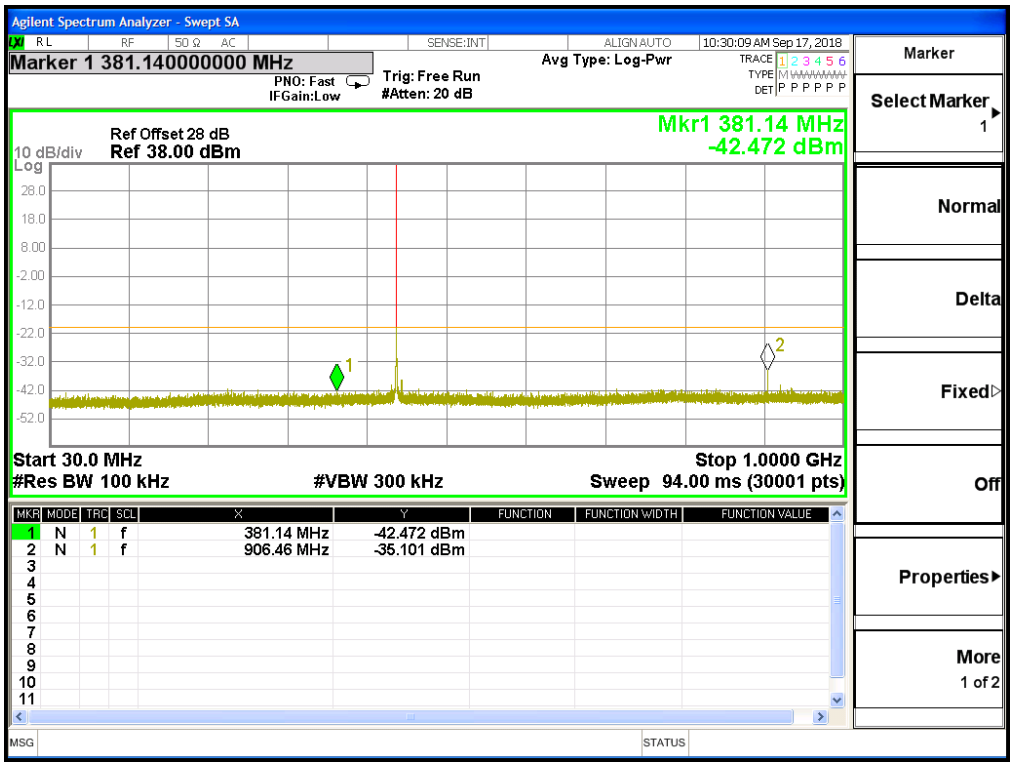
Conduct Spurious Emission (worst) @ 400.025MHz MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



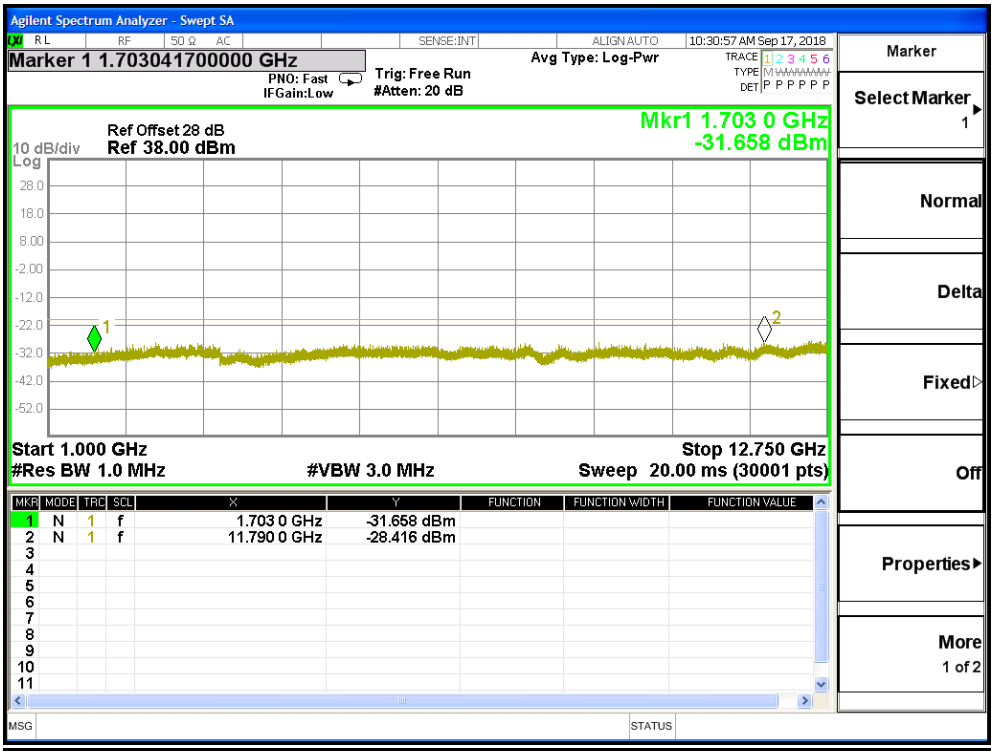
Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



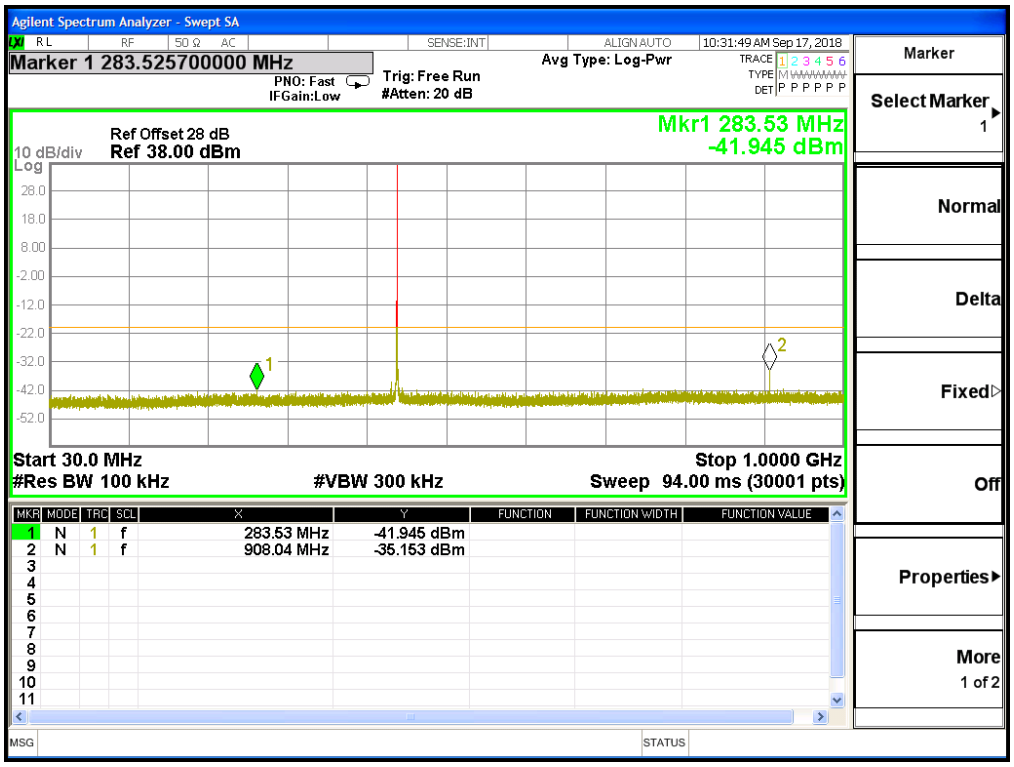
Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



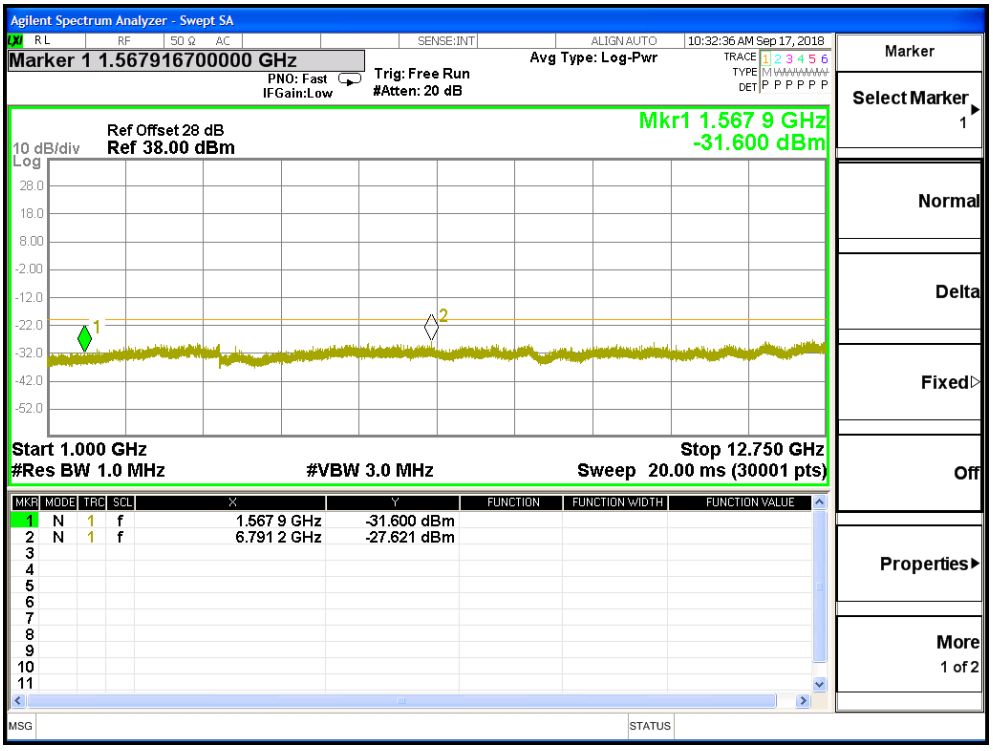
Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



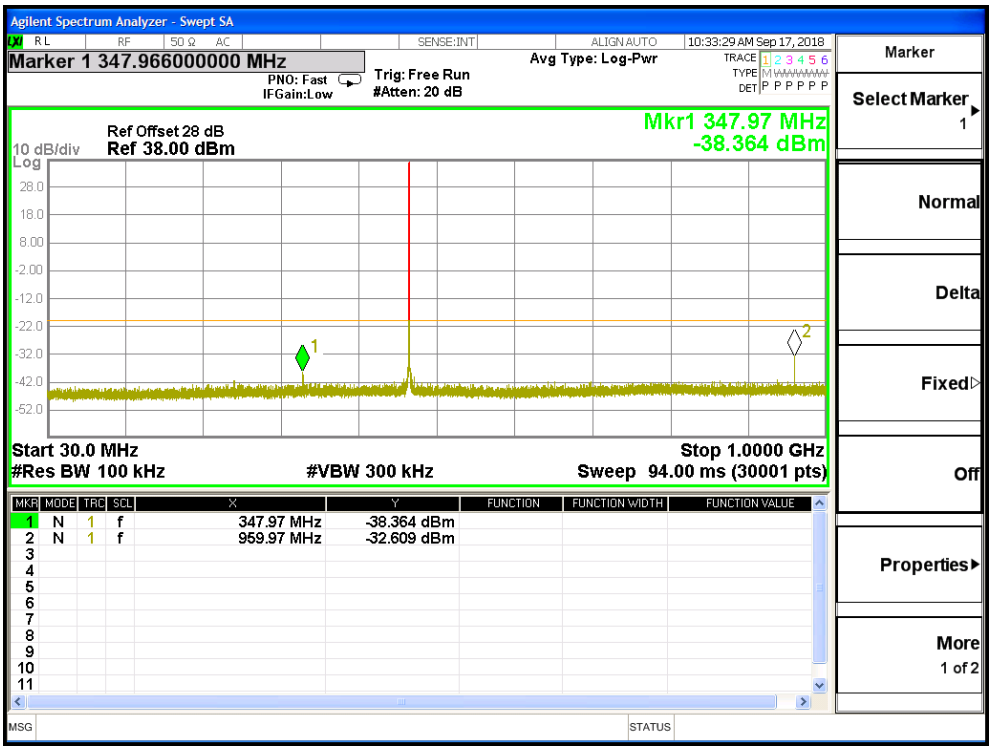
Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



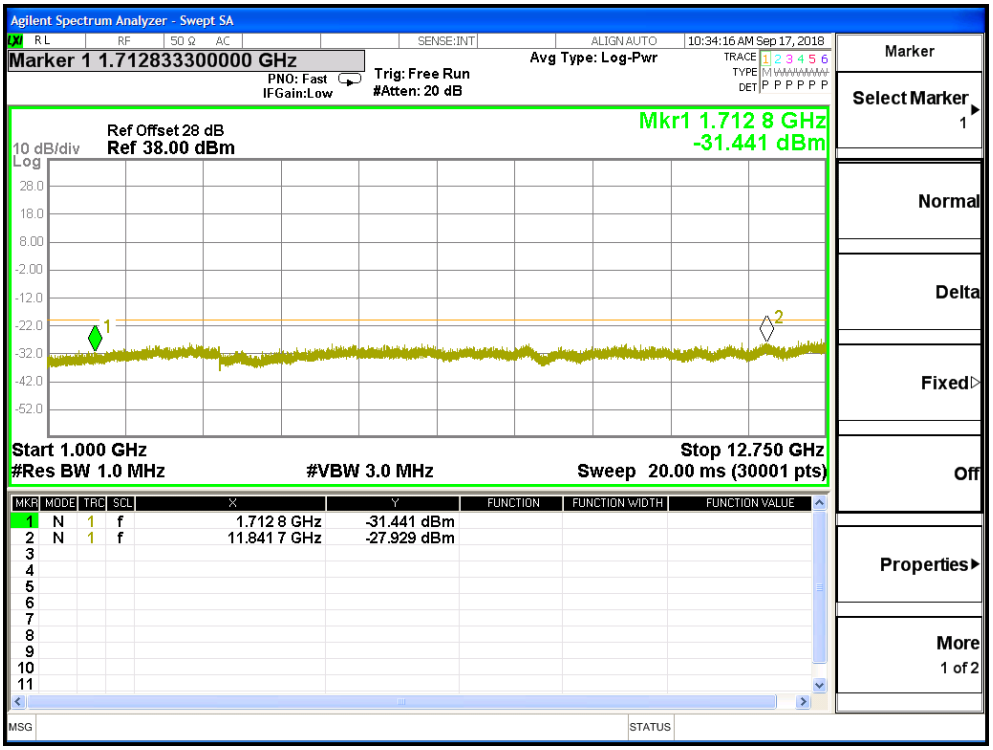
Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-6W

30MHz-1GHz



Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-6W

1GHz-12.75GHz



Note: All the test frequencies was tested, but only the worst data be recorded in this part.

10. RANSMITTER FREQUENCY BEHAVIOR

10.1PROVISIONS APPLICABLE

FCC §90.214

Time intervals [1, 2]	Maximum frequency difference [3]	All equipment	
		150 to 174 MHz	421 to 512 MHz
Transient Frequency Behavior for Equipment Designed to Operate on 25 kHz Channels			
t_1 [4]	± 25.0 kHz	5.0 ms	10.0 ms
t_2	± 12.5 kHz	20.0 ms	25.0 ms
t_3 [4]	± 25.0 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 12.5 kHz Channels			
t_1 [4]	± 12.5 kHz	5.0 ms	10.0 ms
t_2	± 6.25 kHz	20.0 ms	25.0 ms
t_3 [4]	± 12.5 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 6.25 kHz Channels			
t_1 [4]	± 6.25 kHz	5.0 ms	10.0 ms
t_2	± 3.125 kHz	20.0 ms	25.0 ms
t_3 [4]	± 6.25 kHz	5.0 ms	10.0 ms

[1] t_{on} is the instant when a 1 kHz test signal is completely suppressed, including any capture time due to phasing.
t_1 is the time period immediately following t_{on}.
t_2 is the time period immediately following t_1.
t_3 is the time period from the instant when the transmitter is turned off until t_{off}.
t_{off} is the instant when the 1 kHz test signal starts to rise.
[2] During the time from the end of t_2 to the beginning of t_3, the frequency difference must not exceed the limits specified in § 90.213.
[3] Difference between the actual transmitter frequency and the assigned transmitter frequency.
[4] If the transmitter carrier output power rating is 6 watts or less, the frequency difference during this time period may exceed the maximum frequency difference for this time period.

10.2 TEST METHOD

TIA/EIA-603 2.2.19.3

10.3 DESCRIBE LIMIT LINE OF RANSMITTER FREQUENCY BEHAVIOR

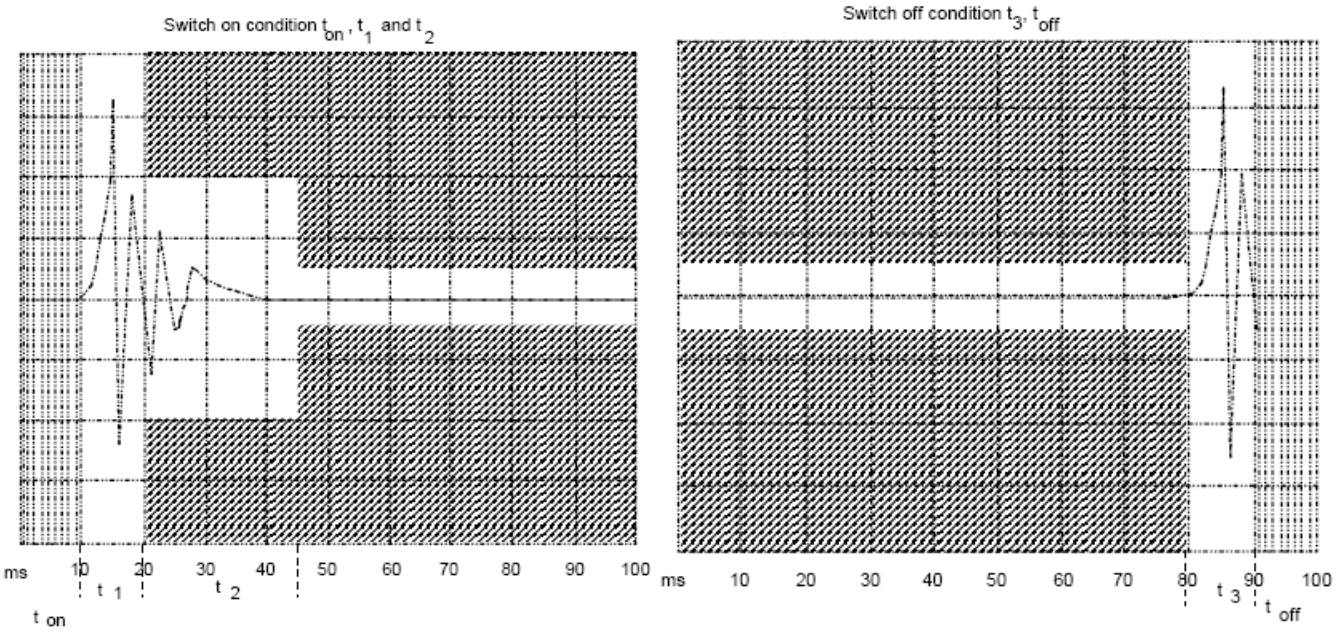
ton: The switch-on instant ton of a transmitter is defined by the condition when the output power, measured at the antenna terminal, exceeds 0,1 % of the full output power (-30 dBc).

t1: period of time starting at ton and finishing according to above 11.1

t2: period of time starting at the end of t1 and finishing according to above 11.1

toff: switch-off instant defined by the condition when the output power falls below 0,1 % of the full output power (-30 dBc).

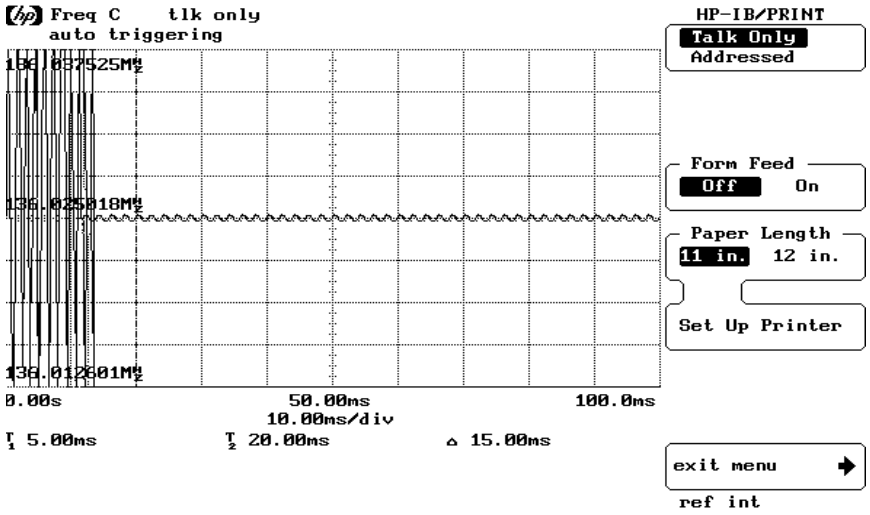
t3: period of time that finishing at toff and starting according to above 11.1



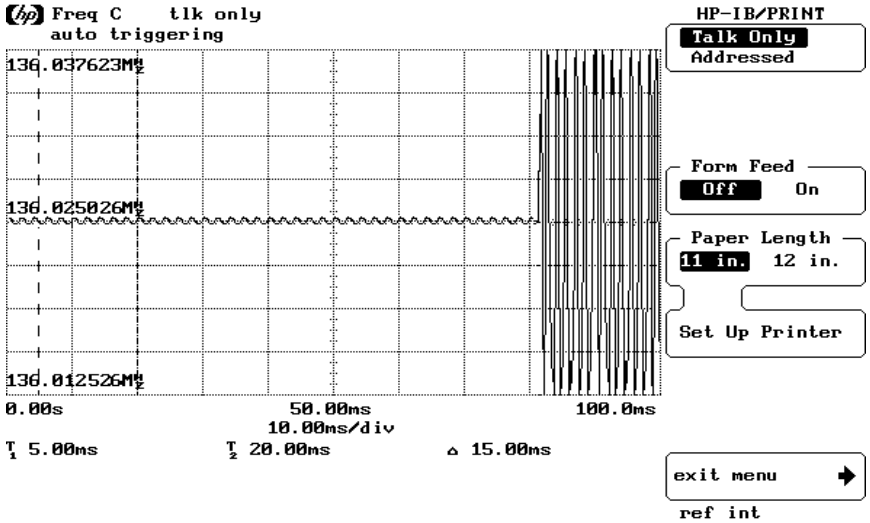
10.4 MEASURE RESULT

VHF:

Transmitter Frequency Behavior @ 12.5 KHz Channel Separation--Off to On

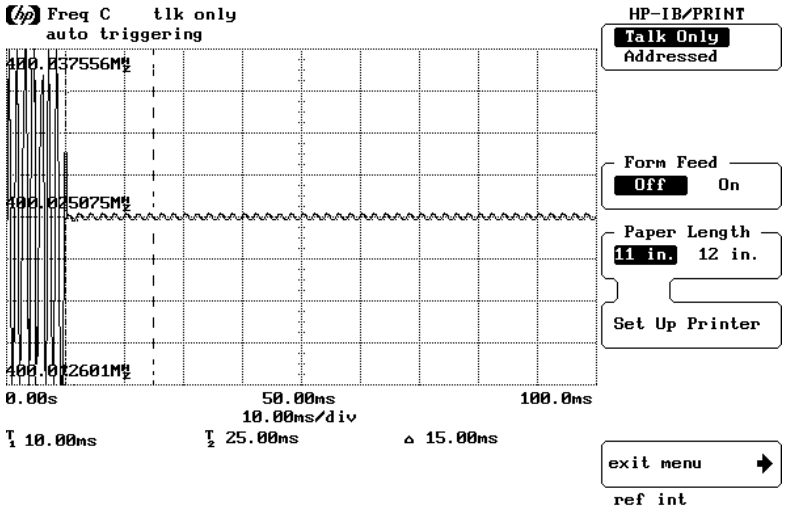


Transmitter Frequency Behavior @ 12.5 KHz Channel Separation--On to Off

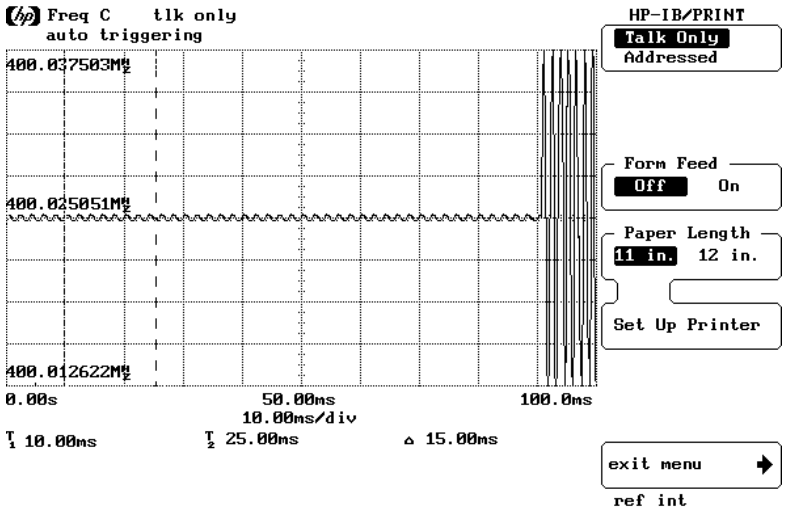


UHF:

Transmitter Frequency Behavior @ 12.5 KHz Channel Separation--Off to On



Transmitter Frequency Behavior @ 12.5 KHz Channel Separation--On to Off



11. AUDIO LOW PASS FILTER RESPONSE

11.1 LIMITS

2.1047(a): Voice modulated communication equipment. A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted. For equipment required to have an audio low-pass filter, a curve showing the frequency response of the filter or of all circuitry installed between the modulation limiter and the modulated stage shall be submitted.
90.242(b)(8): Recommended audio filter attenuation characteristics are given below:

Audio band	Minimum Attenuation Rel. to 1 KHz Attenuation
3 –20 KHz	60 $\log_{10}$(f/3) dB where f is in KHz
20 – 30 KHz	50dB

11.2. METHOD OF MEASUREMENTS

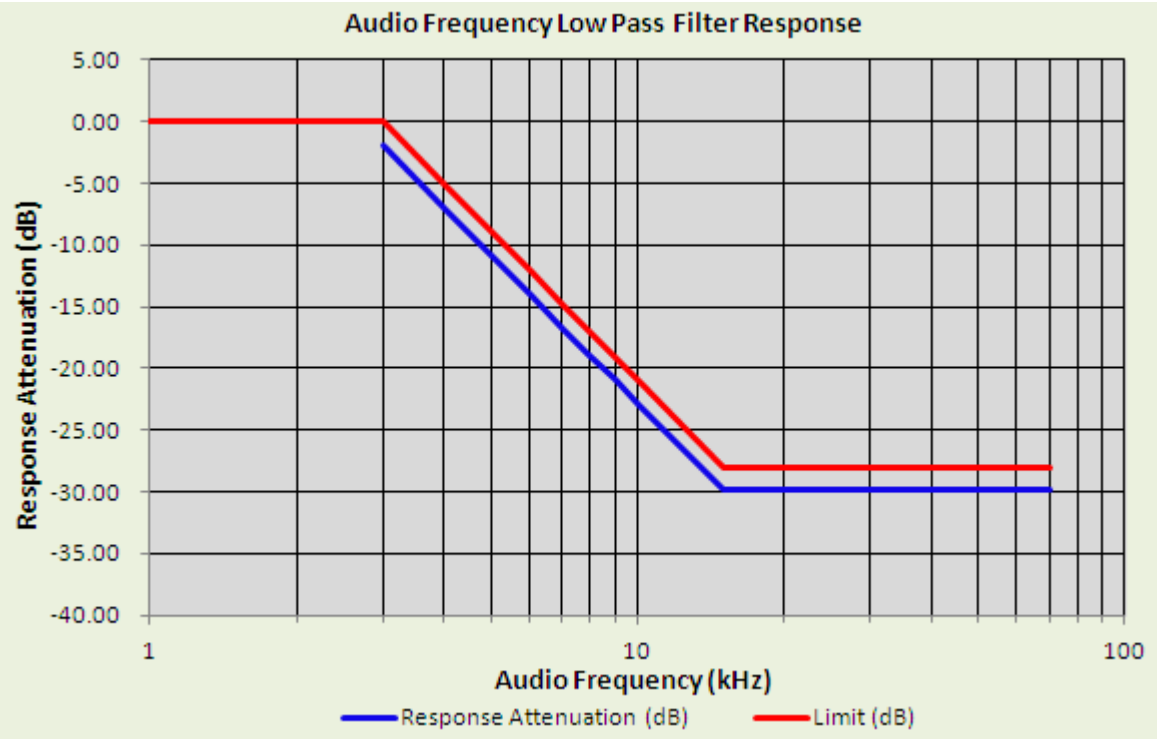
The rated audio input signal was applied to the input of the audio low-pass filter (or of all modulation stages) using an audio oscillator, this input signal level and its corresponding output signal were then measured and recorded using the FFT Digital Spectrum Analyzer. Tests were repeated at different audio signal frequencies from 0 to 50 KHz.

11.3 TEST DATA

Analog:

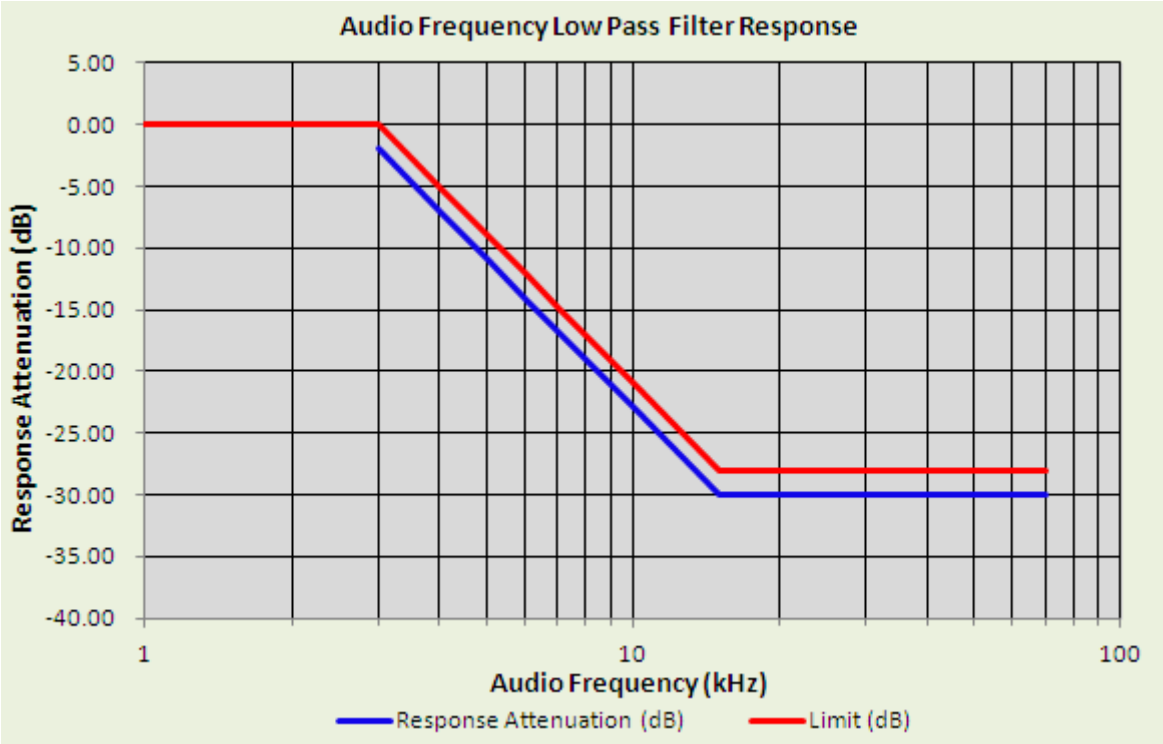
12.5 KHZ CHANNEL SPACING, F3E, FREQUENCY OF ALL MODULATION STATES (TEST RESULT FOR UHF)-6W

Audio Frequency (kHz)	Response Attenuation (dB)	Limit (dB)
1	0	/
3	-1.89	0.00
4	-6.89	-5.00
5	-10.76	-8.87
6	-13.93	-12.04
7	-16.61	-14.72
8	-18.93	-17.04
9	-20.97	-19.08
10	-22.81	-20.92
15	-29.89	-28.00
20	-29.89	-28.00
30	-29.89	-28.00
50	-29.89	-28.00
70	-29.89	-28.00



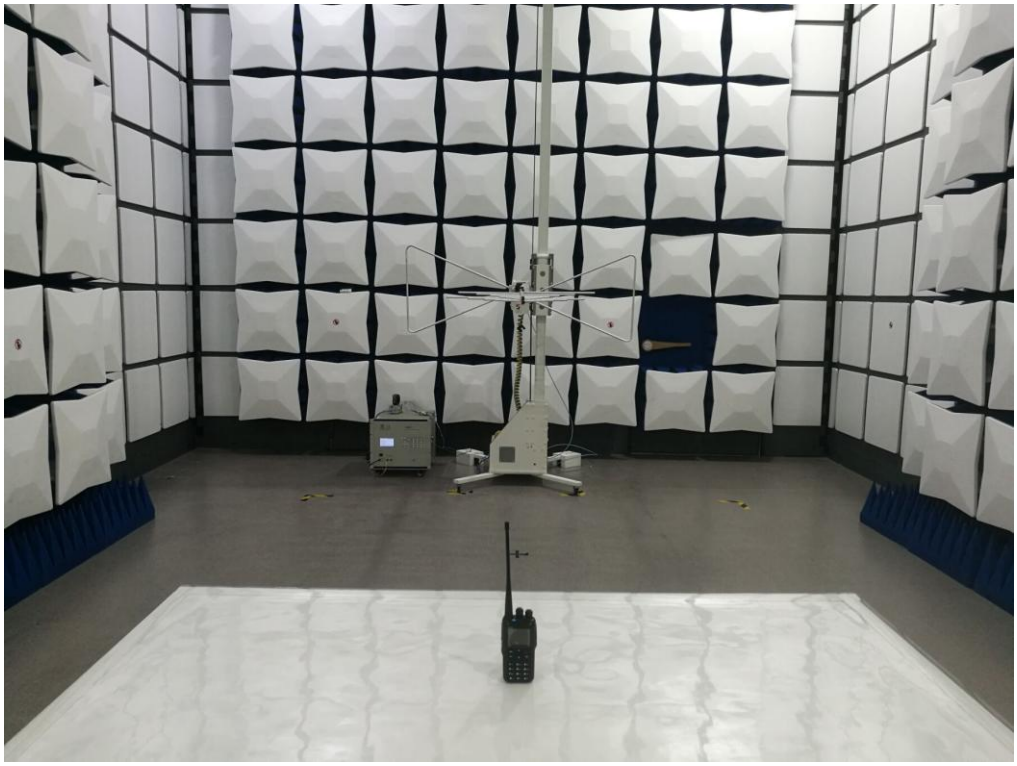
12.5KHZ CHANNEL SPACING, F3E, FREQUENCY OF ALL MODULATION STATES (TEST RESULT FOR VHF)-7W

Audio Frequency (kHz)	Response Attenuation (dB)	Limit (dB)
1	0	/
3	-1.97	0.00
4	-6.97	-5.00
5	-10.84	-8.87
6	-14.01	-12.04
7	-16.69	-14.72
8	-19.01	-17.04
9	-21.05	-19.08
10	-22.89	-20.92
15	-29.97	-28.00
20	-29.97	-28.00
30	-29.97	-28.00
50	-29.97	-28.00
70	-29.97	-28.00



APPENDIX I: PHOTOGRAPHS OF SETUP

RADIATED EMISSION TEST SETUP



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