

**Effective (Isotropic) Radiated Power Output Data****Test Result**

Band	Channel	Slot	Power(dBm)	ERP (dBm)	Limit(dBm)	Verdict
GPRS850	128	1	32.08	28.83	38.45	PASS
GPRS850	128	2	31.92	28.67	38.45	PASS
GPRS850	128	3	31.75	28.5	38.45	PASS
GPRS850	128	4	31.57	28.32	38.45	PASS
GPRS850	190	1	32.17	28.92	38.45	PASS
GPRS850	190	2	32.06	28.81	38.45	PASS
GPRS850	190	3	31.91	28.66	38.45	PASS
GPRS850	190	4	31.75	28.5	38.45	PASS
GPRS850	251	1	32.11	28.86	38.45	PASS
GPRS850	251	2	32.02	28.77	38.45	PASS
GPRS850	251	3	31.90	28.65	38.45	PASS
GPRS850	251	4	31.76	28.51	38.45	PASS

Band	Channel	Slot	Power(dBm)	ERP (dBm)	Limit(dBm)	Verdict
EGPRS850	128	1	25.55	22.3	38.45	PASS
EGPRS850	128	2	25.34	22.09	38.45	PASS
EGPRS850	128	3	25.17	21.92	38.45	PASS
EGPRS850	128	4	25.02	21.77	38.45	PASS
EGPRS850	190	1	25.55	22.3	38.45	PASS
EGPRS850	190	2	25.47	22.22	38.45	PASS
EGPRS850	190	3	25.31	22.06	38.45	PASS
EGPRS850	190	4	25.10	21.85	38.45	PASS
EGPRS850	251	1	25.83	22.58	38.45	PASS
EGPRS850	251	2	25.73	22.48	38.45	PASS
EGPRS850	251	3	25.59	22.34	38.45	PASS
EGPRS850	251	4	25.47	22.22	38.45	PASS

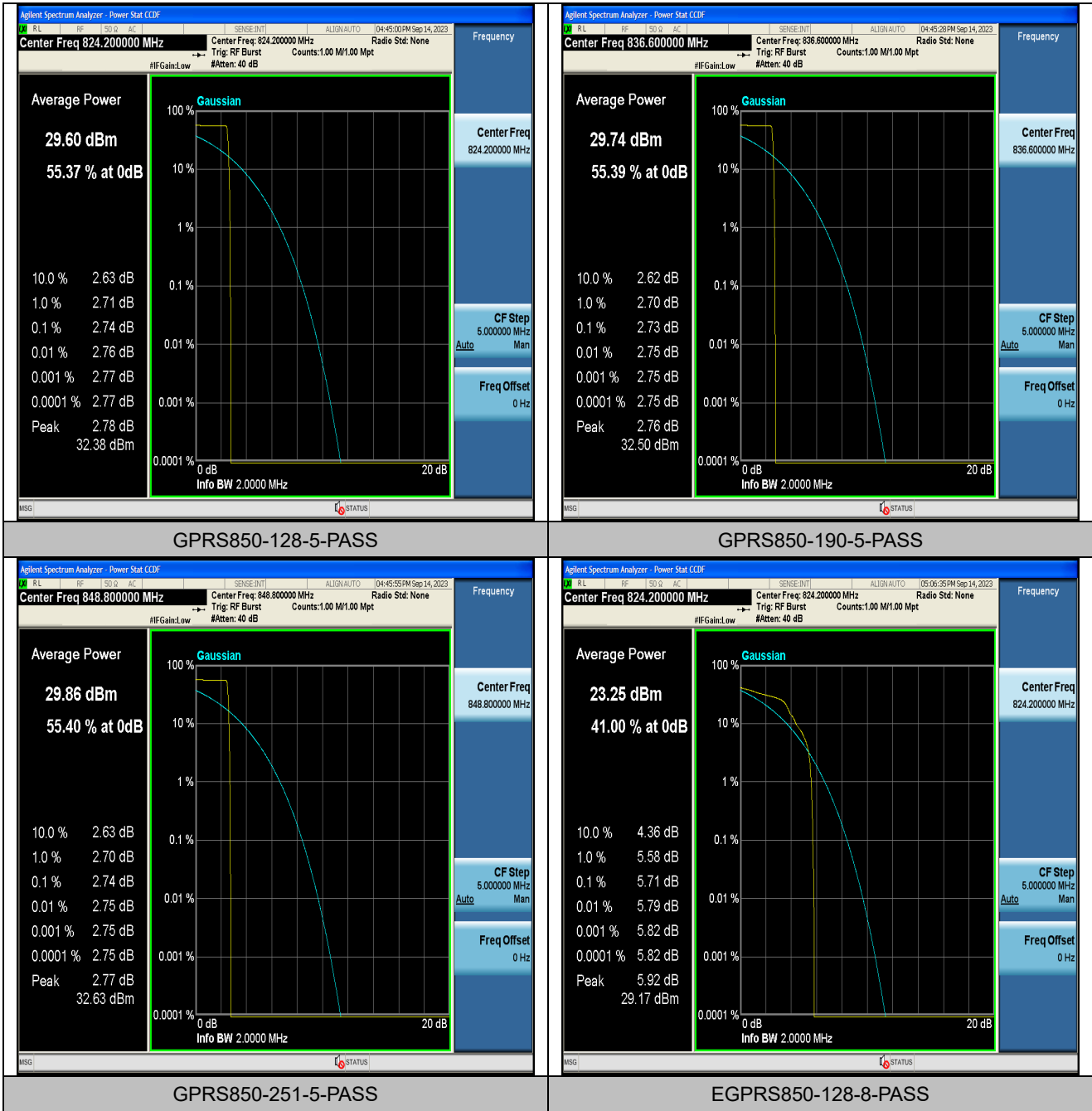
Band	Channel	Slot	Power(dBm)	EIRP(dBm)	Limit(dBm)	Verdict
GPRS1900	512	1	29.94	31.34	33.00	PASS
GPRS1900	512	2	29.79	31.19	33.00	PASS
GPRS1900	512	3	29.63	31.03	33.00	PASS
GPRS1900	512	4	29.45	30.85	33.00	PASS
GPRS1900	661	1	29.65	31.05	33.00	PASS
GPRS1900	661	2	29.55	30.95	33.00	PASS
GPRS1900	661	3	29.40	30.8	33.00	PASS
GPRS1900	661	4	29.23	30.63	33.00	PASS
GPRS1900	810	1	29.70	31.1	33.00	PASS
GPRS1900	810	2	29.59	30.99	33.00	PASS
GPRS1900	810	3	29.45	30.85	33.00	PASS
GPRS1900	810	4	29.27	30.67	33.00	PASS

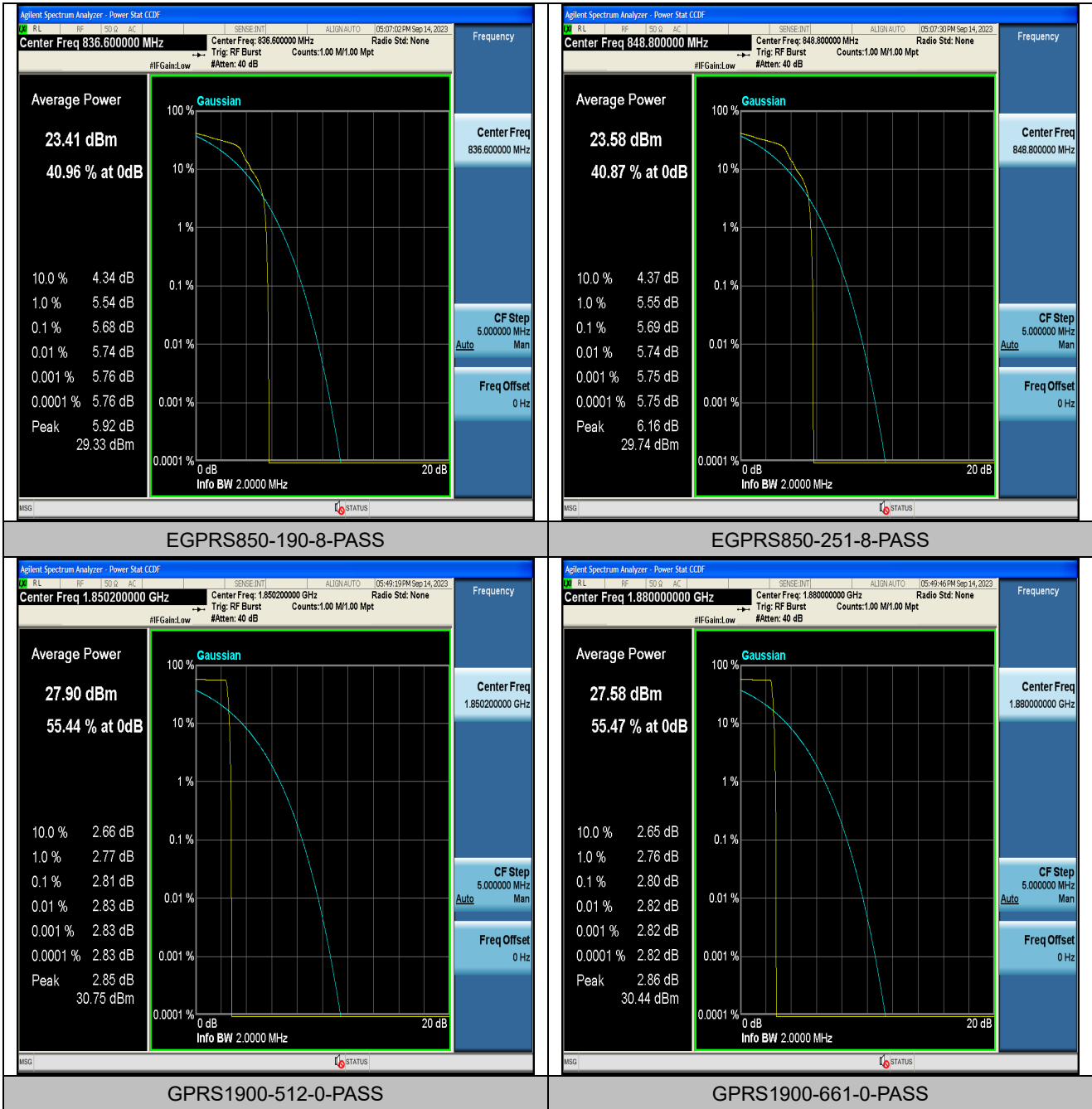
Band	Channel	Slot	Power(dBm)	EIRP(dBm)	Limit(dBm)	Verdict
EGPRS1900	512	1	25.67	27.07	33.00	PASS
EGPRS1900	512	2	25.55	26.95	33.00	PASS
EGPRS1900	512	3	25.33	26.73	33.00	PASS
EGPRS1900	512	4	25.07	26.47	33.00	PASS
EGPRS1900	661	1	25.59	26.99	33.00	PASS
EGPRS1900	661	2	25.48	26.88	33.00	PASS
EGPRS1900	661	3	25.30	26.7	33.00	PASS
EGPRS1900	661	4	25.01	26.41	33.00	PASS
EGPRS1900	810	1	25.44	26.84	33.00	PASS
EGPRS1900	810	2	25.34	26.74	33.00	PASS
EGPRS1900	810	3	25.16	26.56	33.00	PASS
EGPRS1900	810	4	24.91	26.31	33.00	PASS

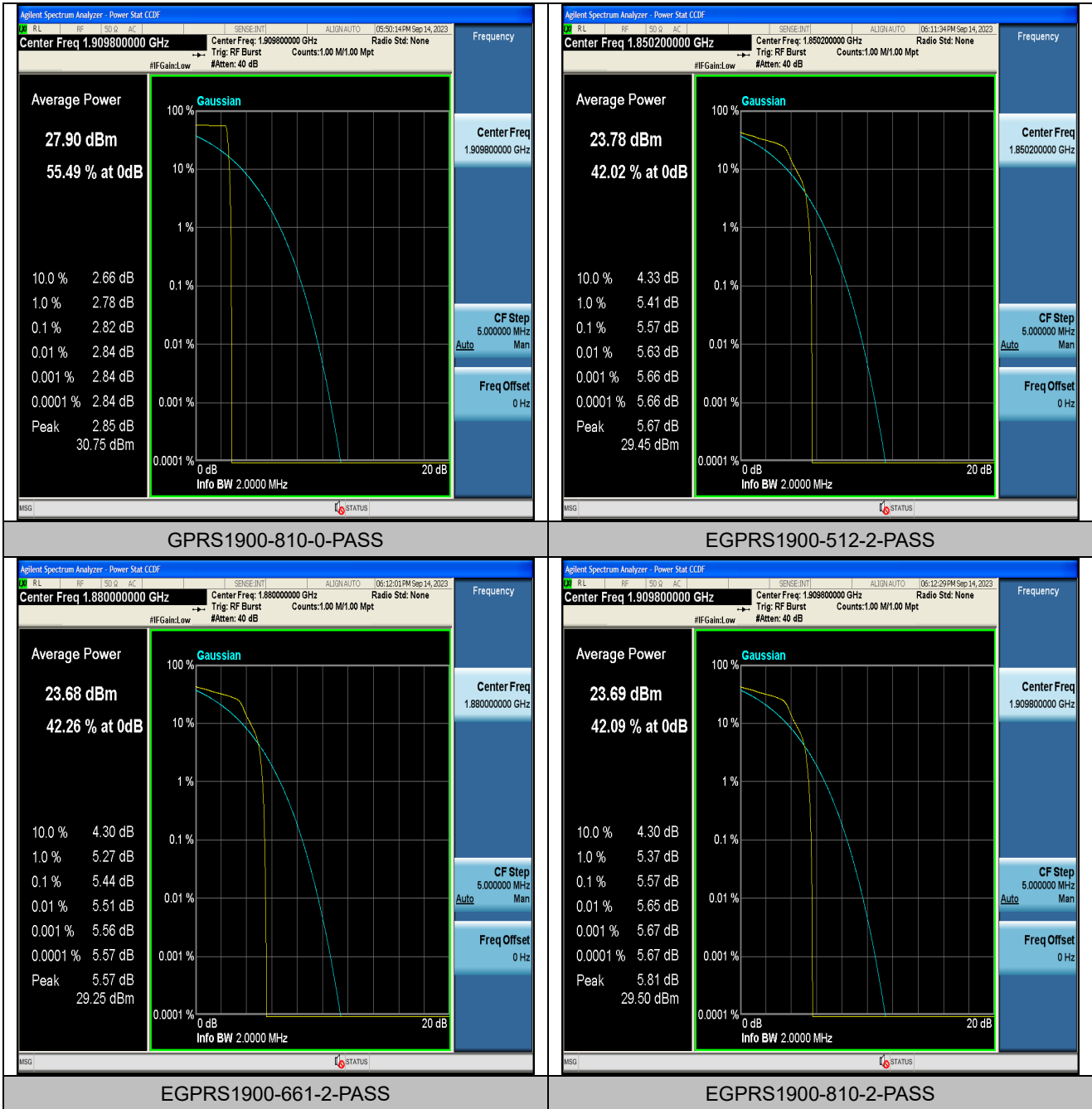
**Peak-to-Average Ratio(CCDF)****Test Result**

Band	Channel	Result(dB)	Limit(dB)	Verdict
GPRS850	128	2.74	13	PASS
GPRS850	190	2.73	13	PASS
GPRS850	251	2.74	13	PASS
EGPRS850	128	5.71	13	PASS
EGPRS850	190	5.68	13	PASS
EGPRS850	251	5.69	13	PASS
GPRS1900	512	2.81	13	PASS
GPRS1900	661	2.8	13	PASS
GPRS1900	810	2.82	13	PASS
EGPRS1900	512	5.57	13	PASS
EGPRS1900	661	5.44	13	PASS
EGPRS1900	810	5.57	13	PASS

Test Graphs



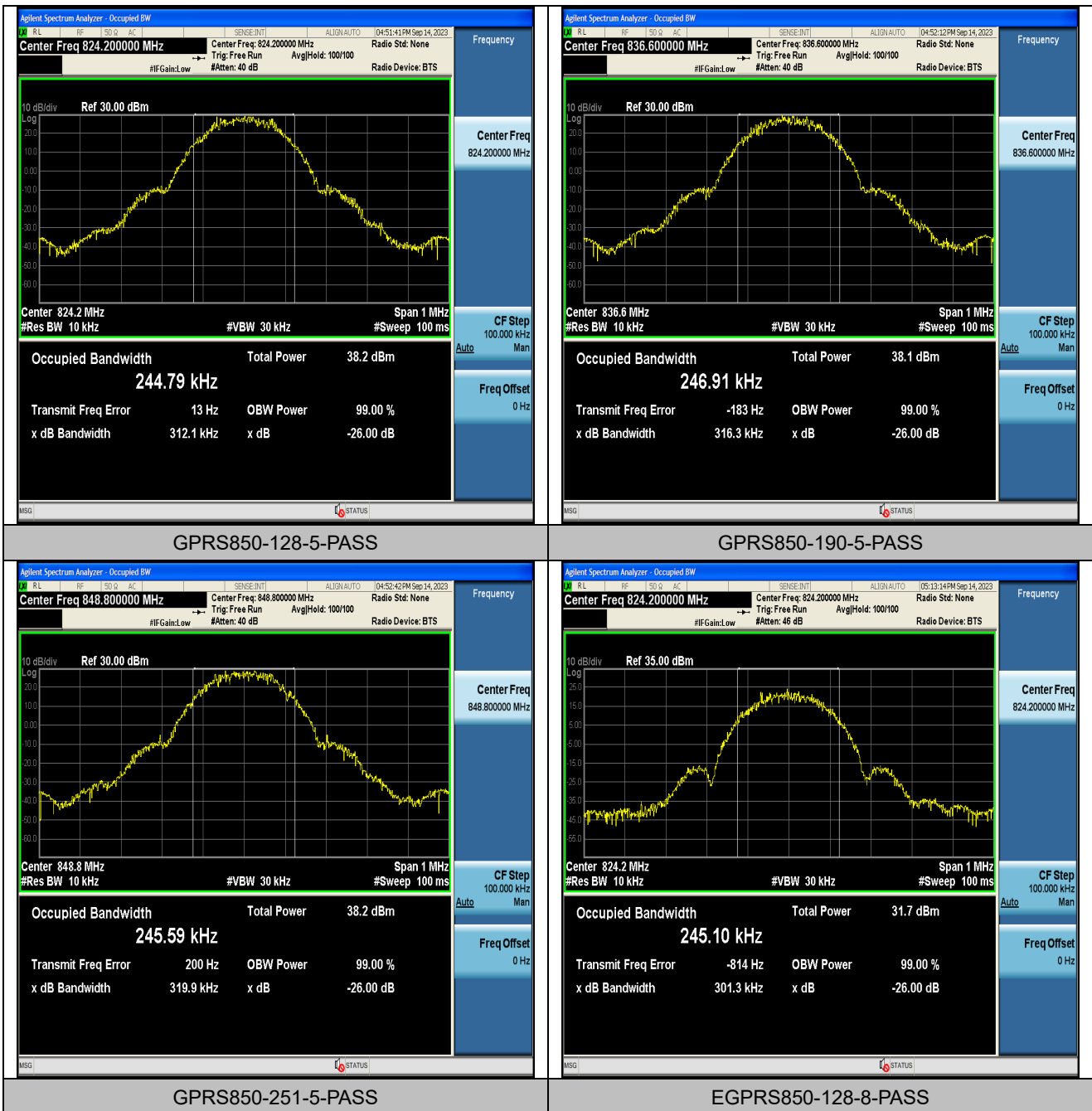




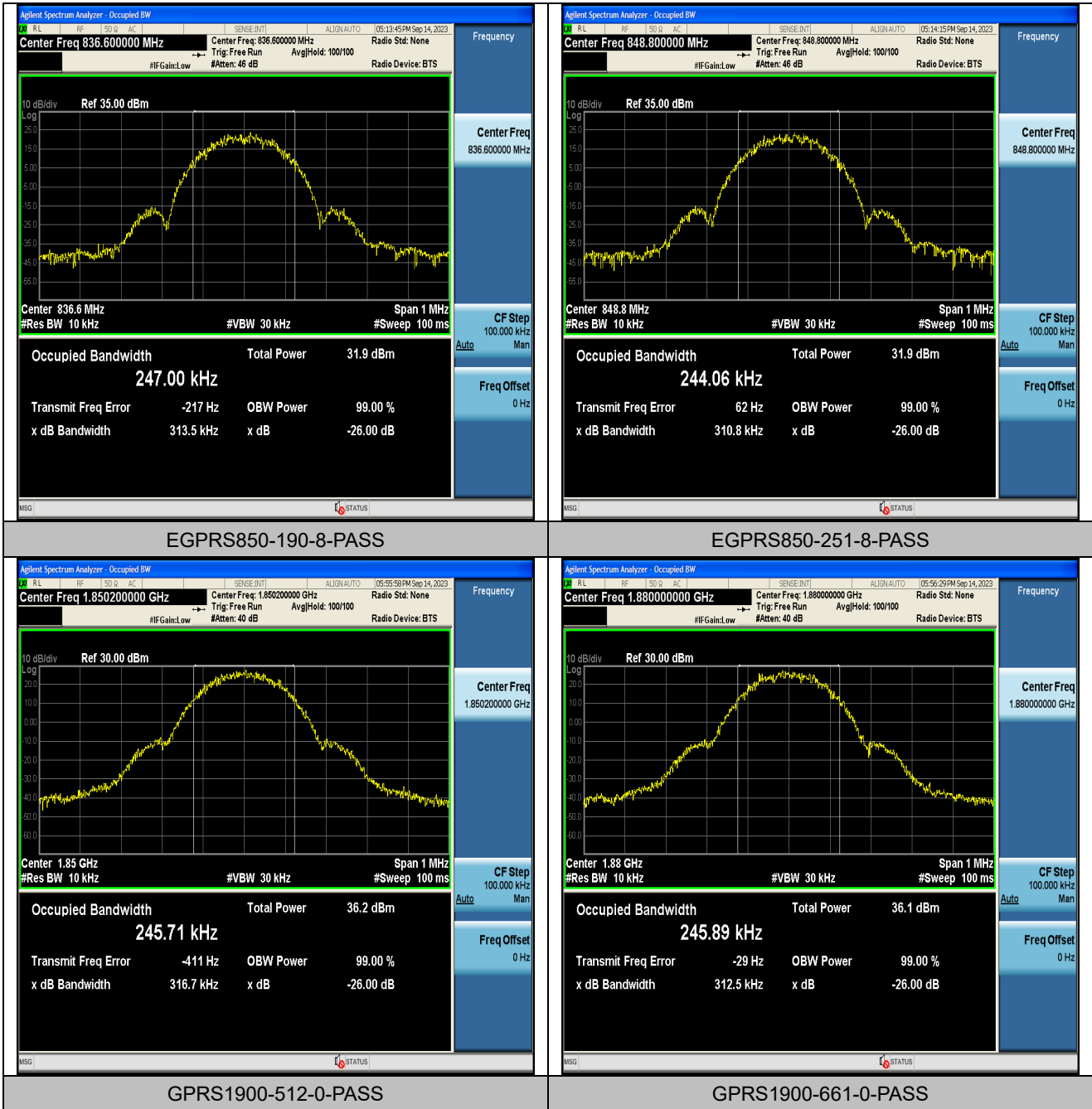
**26dB Bandwidth and Occupied Bandwidth****Test Result**

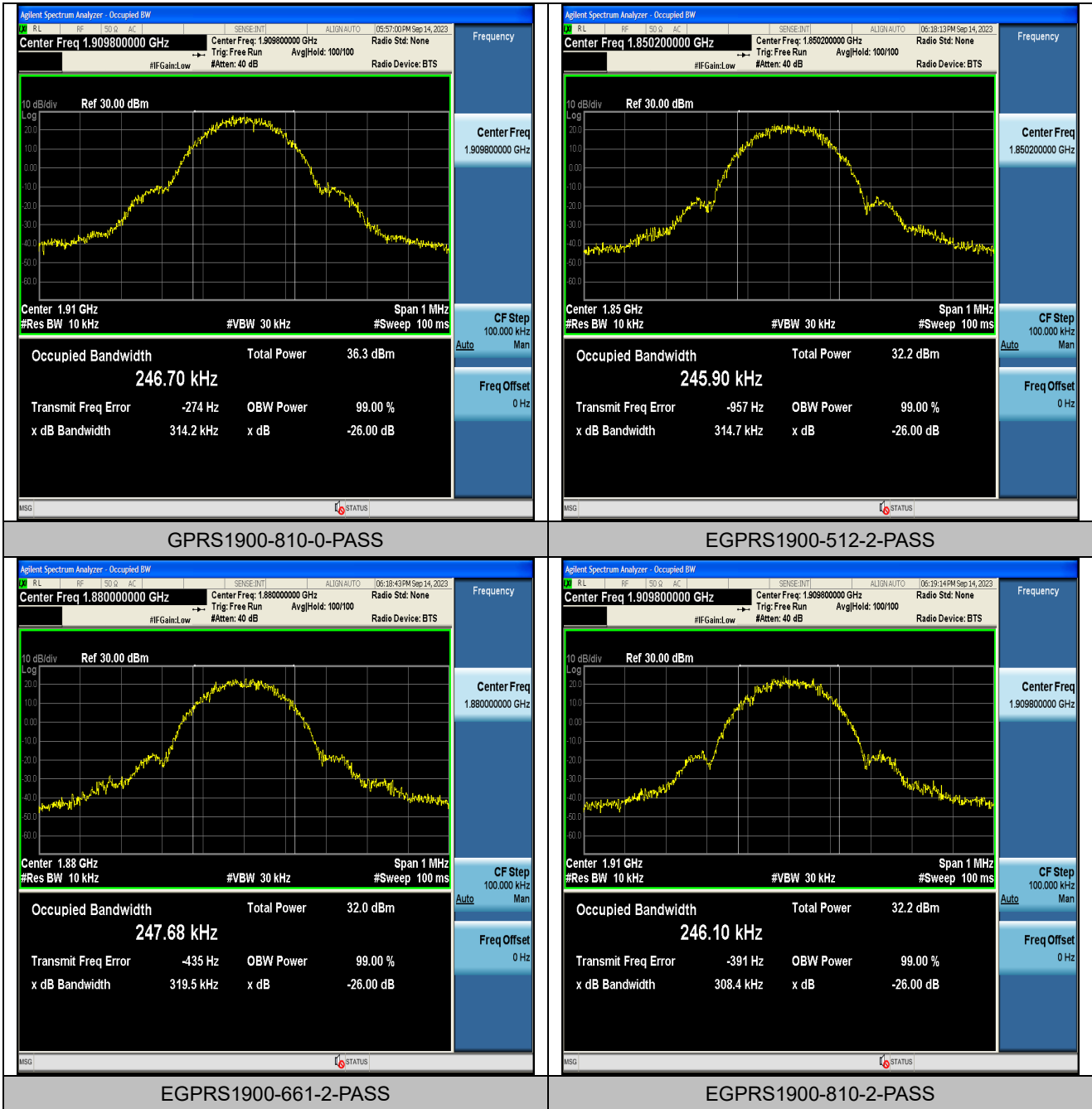
Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GPRS850	128	0.24479	0.3121	---	PASS
GPRS850	190	0.24691	0.3163	---	PASS
GPRS850	251	0.24559	0.3199	---	PASS
EGPRS850	128	0.24510	0.3013	---	PASS
EGPRS850	190	0.24700	0.3135	---	PASS
EGPRS850	251	0.24406	0.3108	---	PASS
GPRS1900	512	0.24571	0.3167	---	PASS
GPRS1900	661	0.24589	0.3125	---	PASS
GPRS1900	810	0.24670	0.3142	---	PASS
EGPRS1900	512	0.24590	0.3147	---	PASS
EGPRS1900	661	0.24768	0.3195	---	PASS
EGPRS1900	810	0.24610	0.3084	---	PASS

Test Graphs



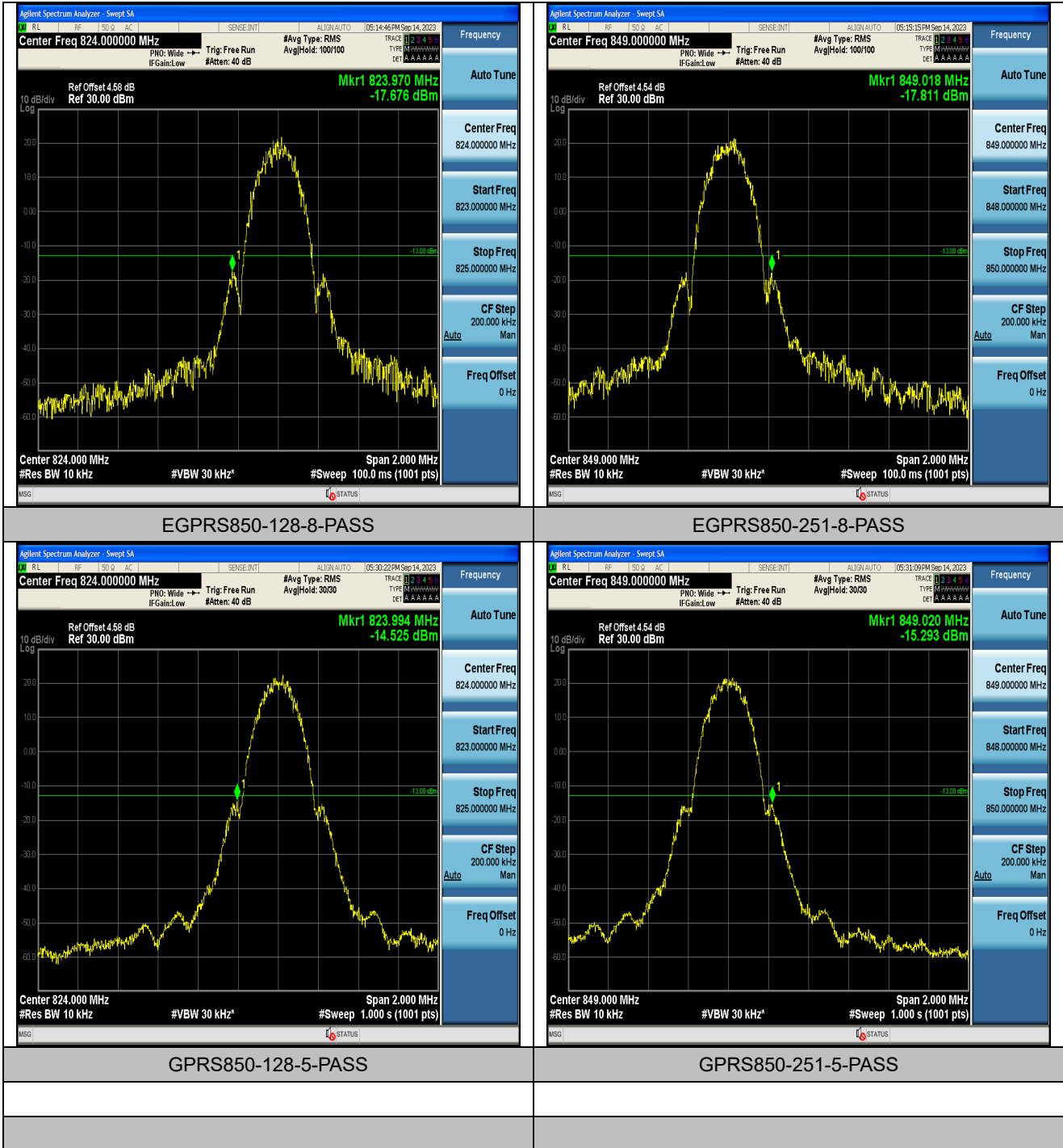


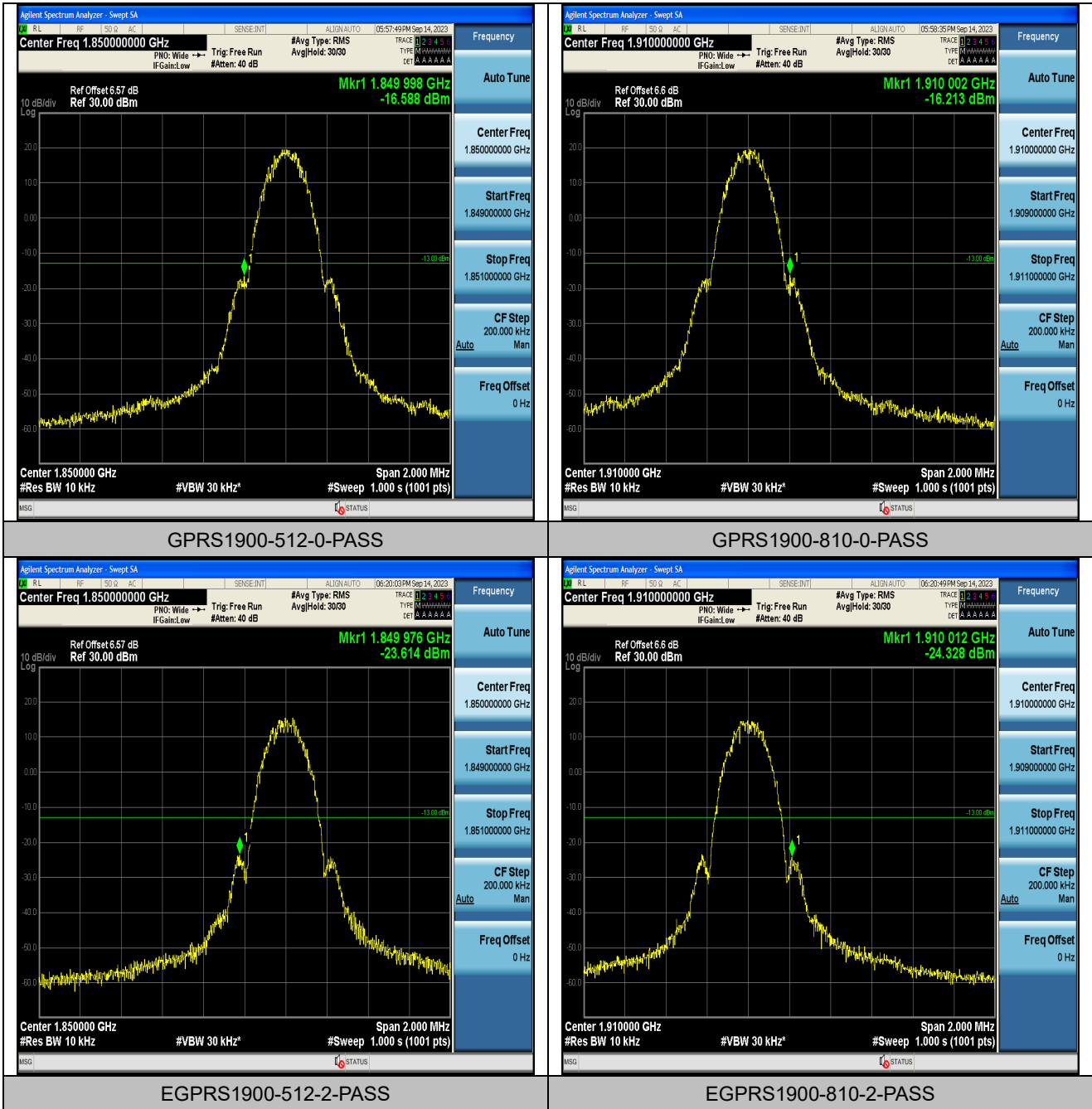




## Band Edge

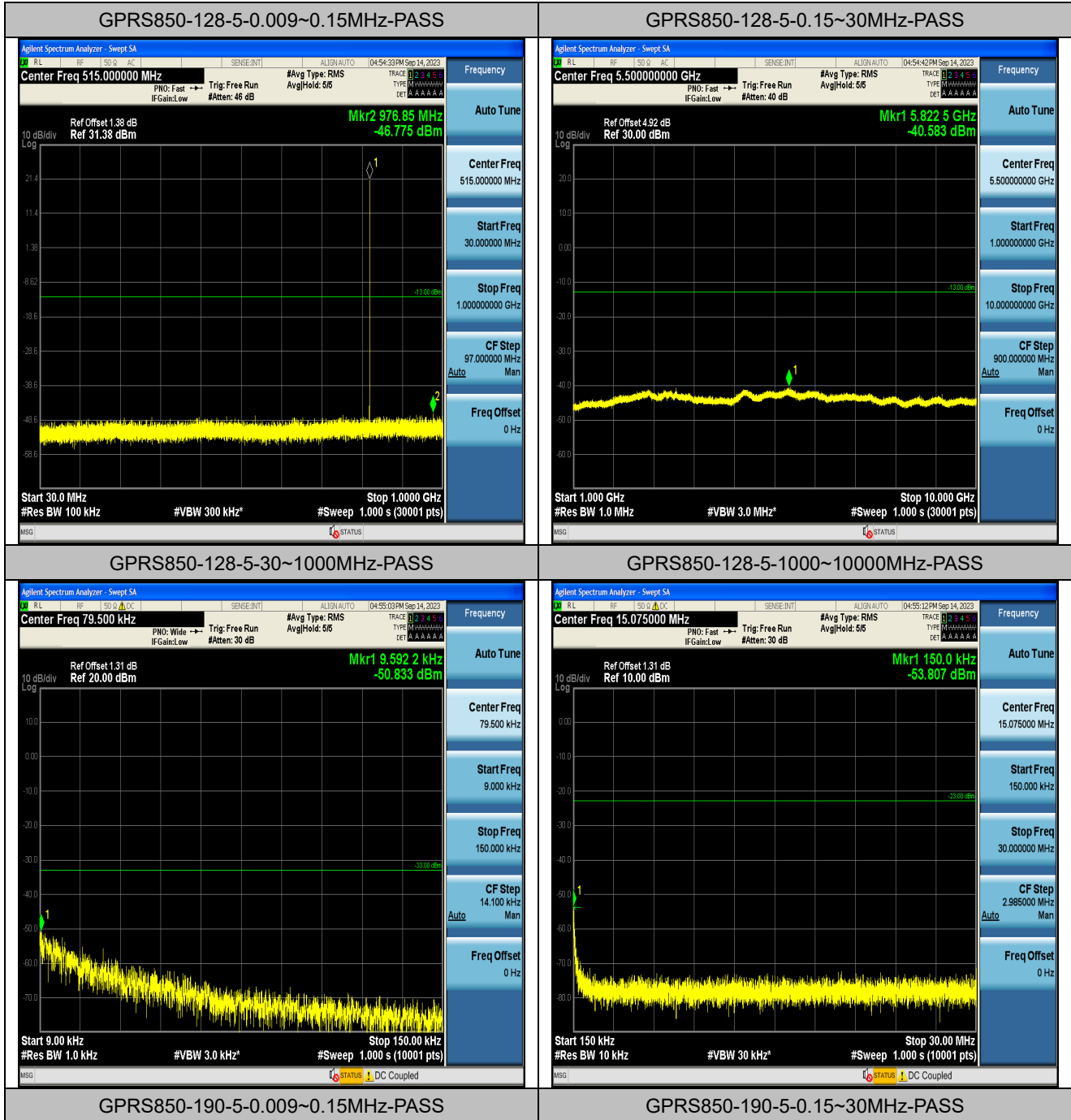
### Test Graphs

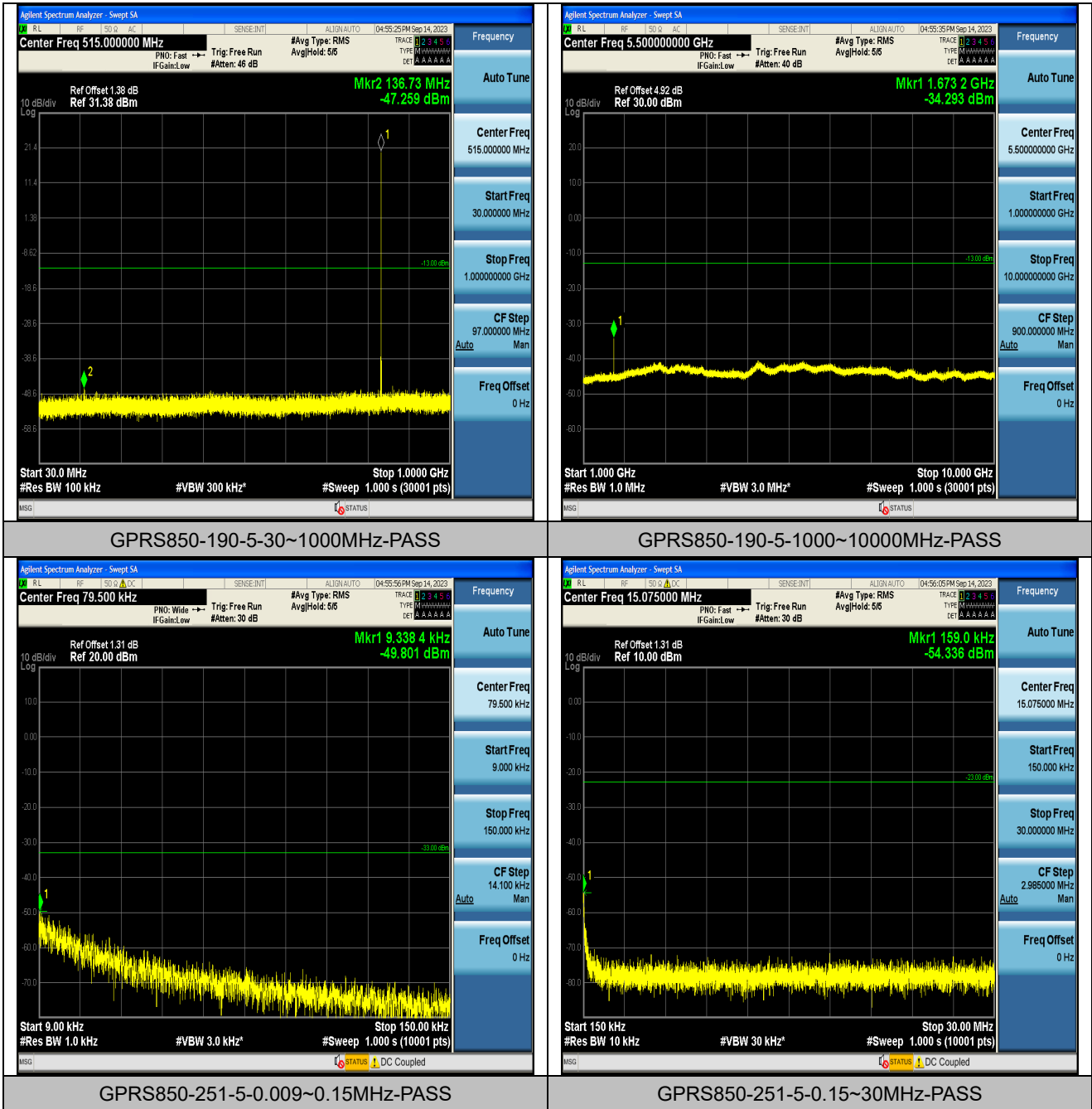


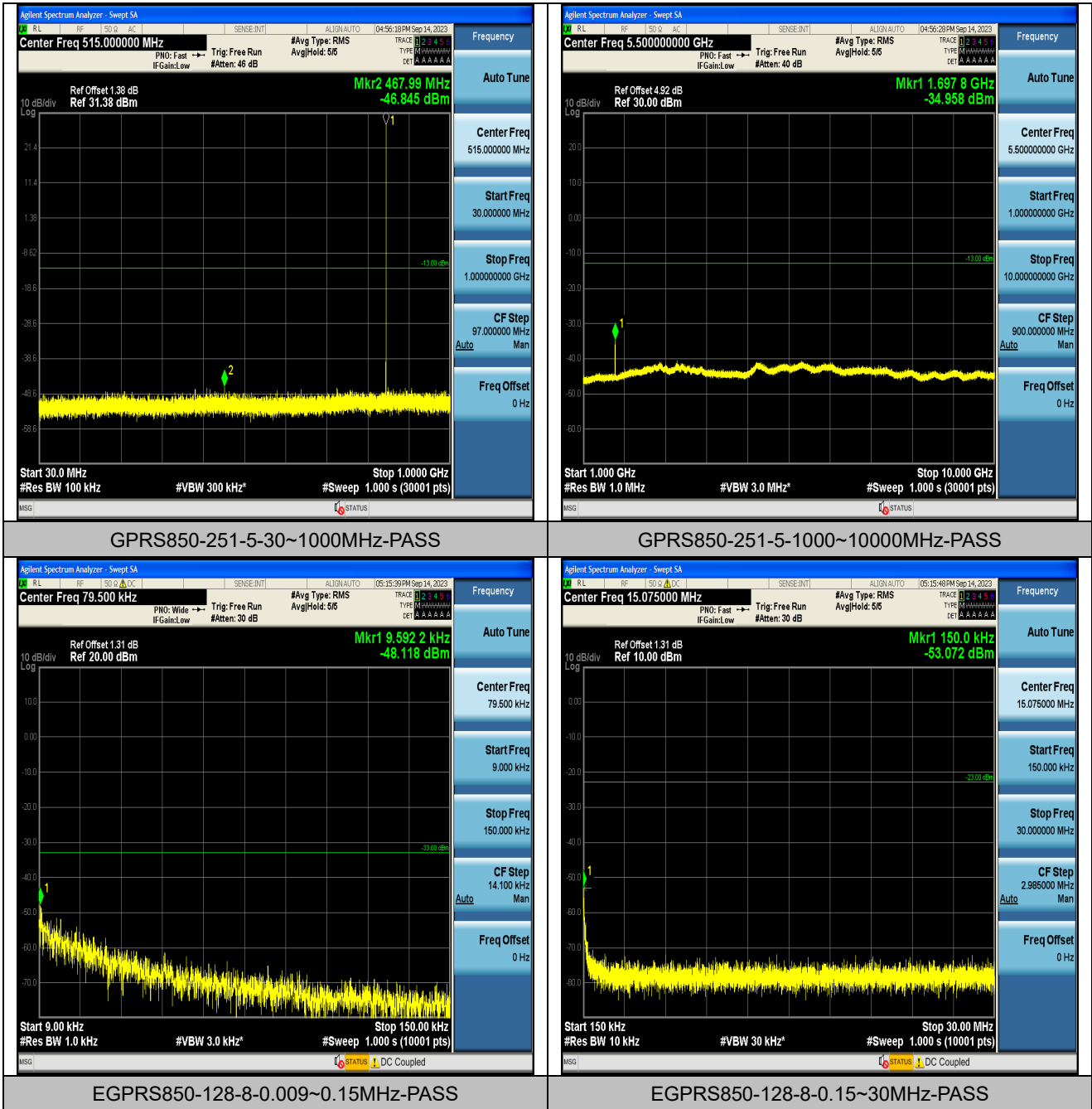


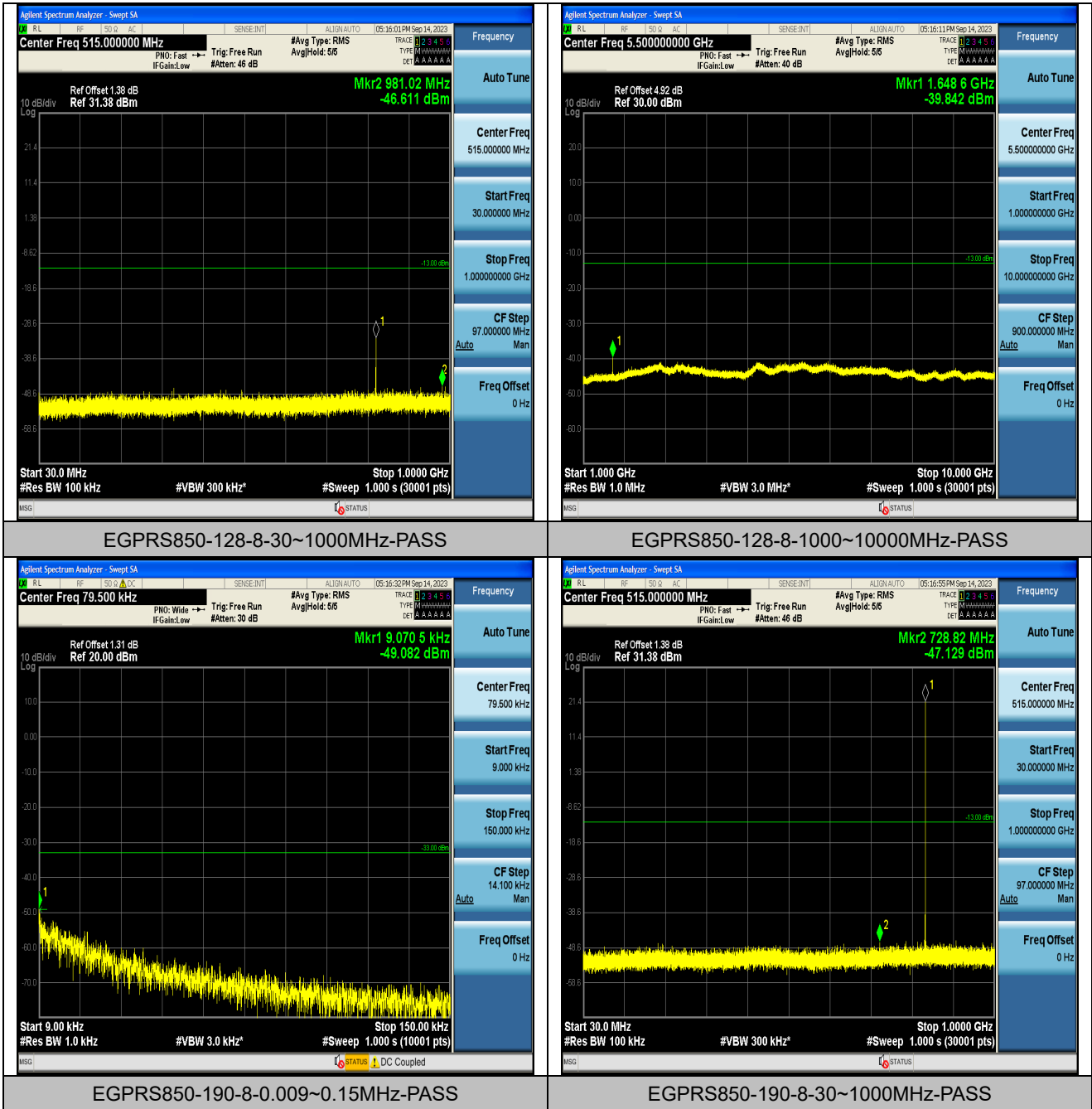
## Conducted Spurious Emission

### Graphs

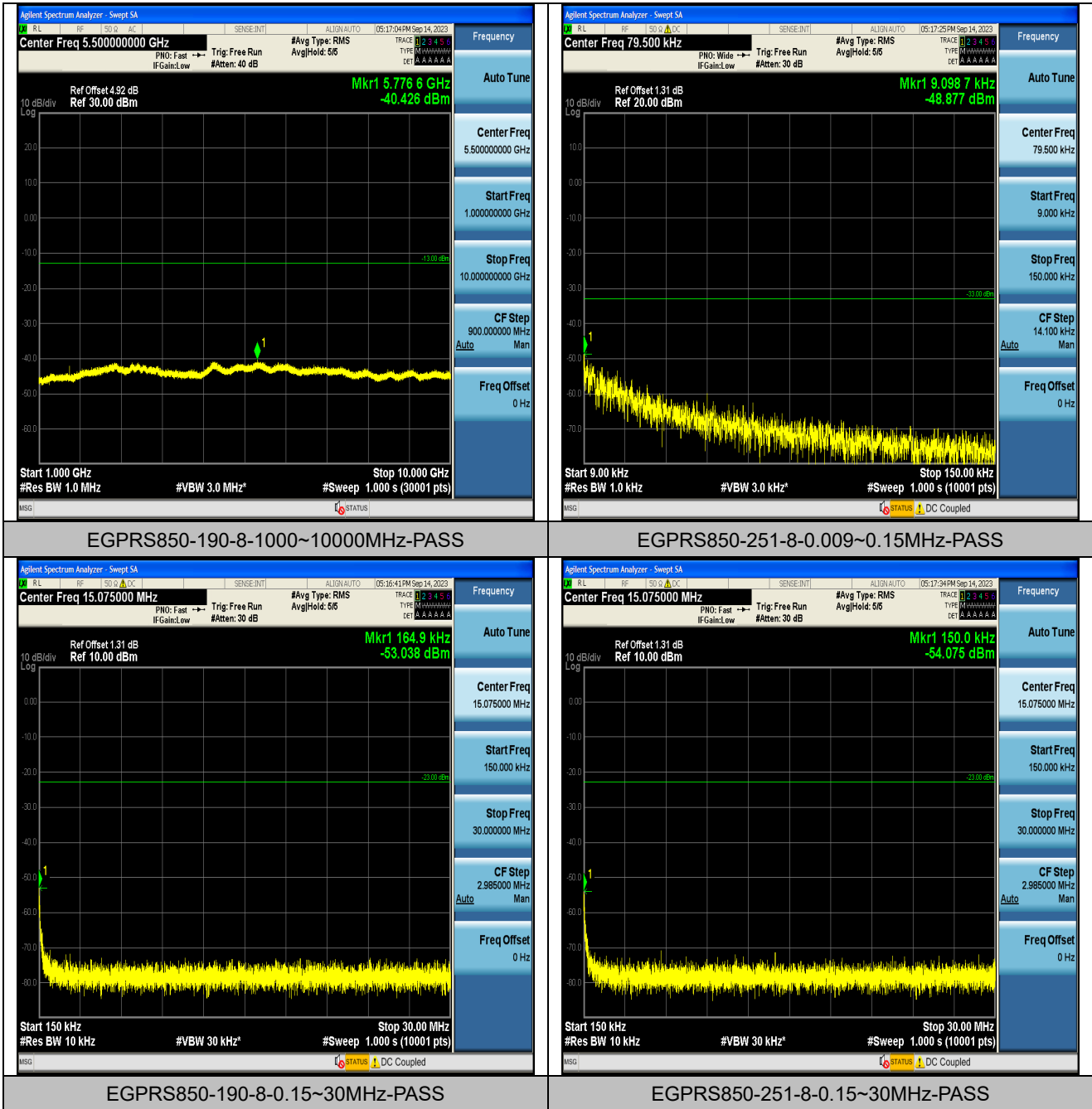


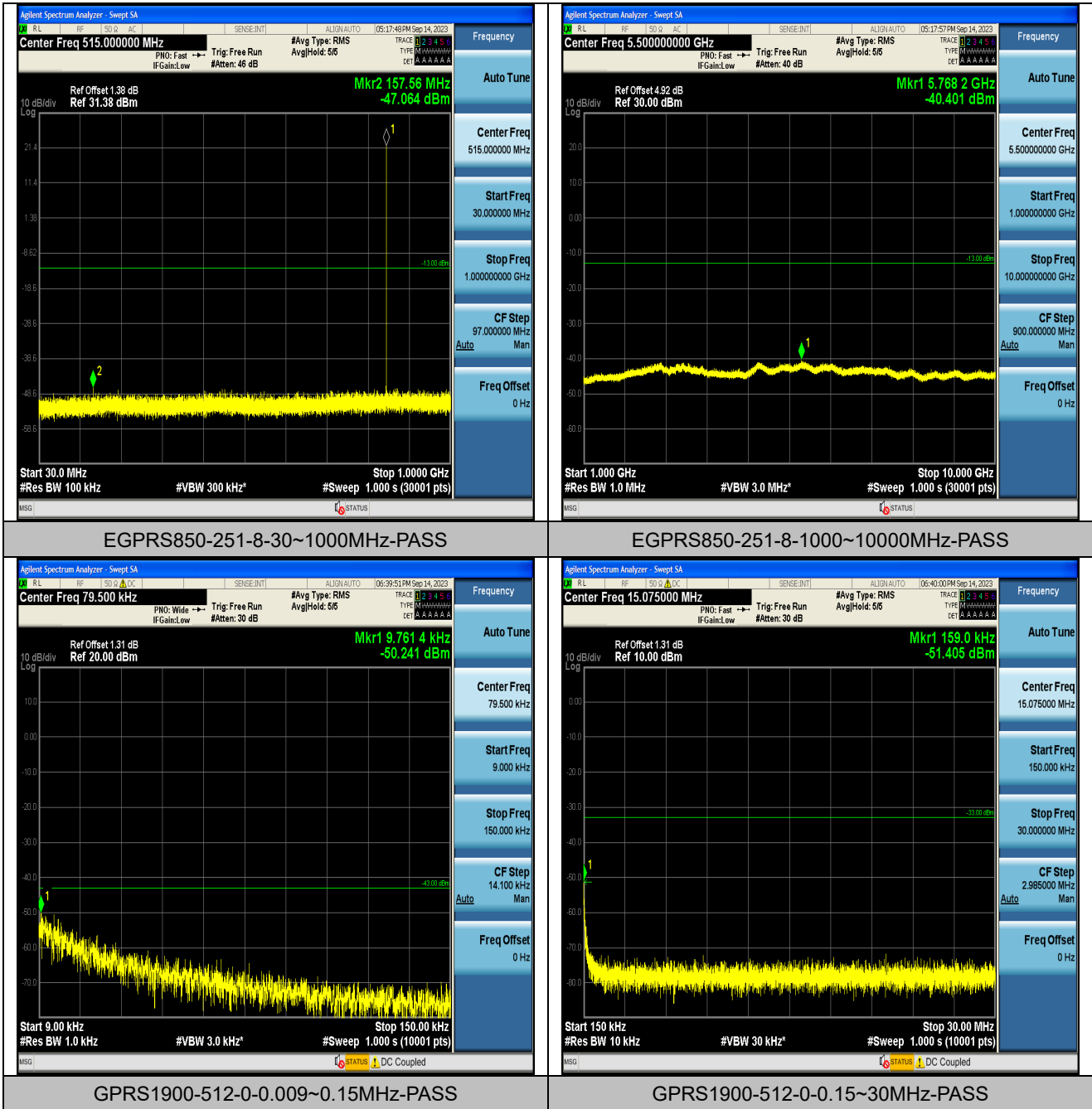


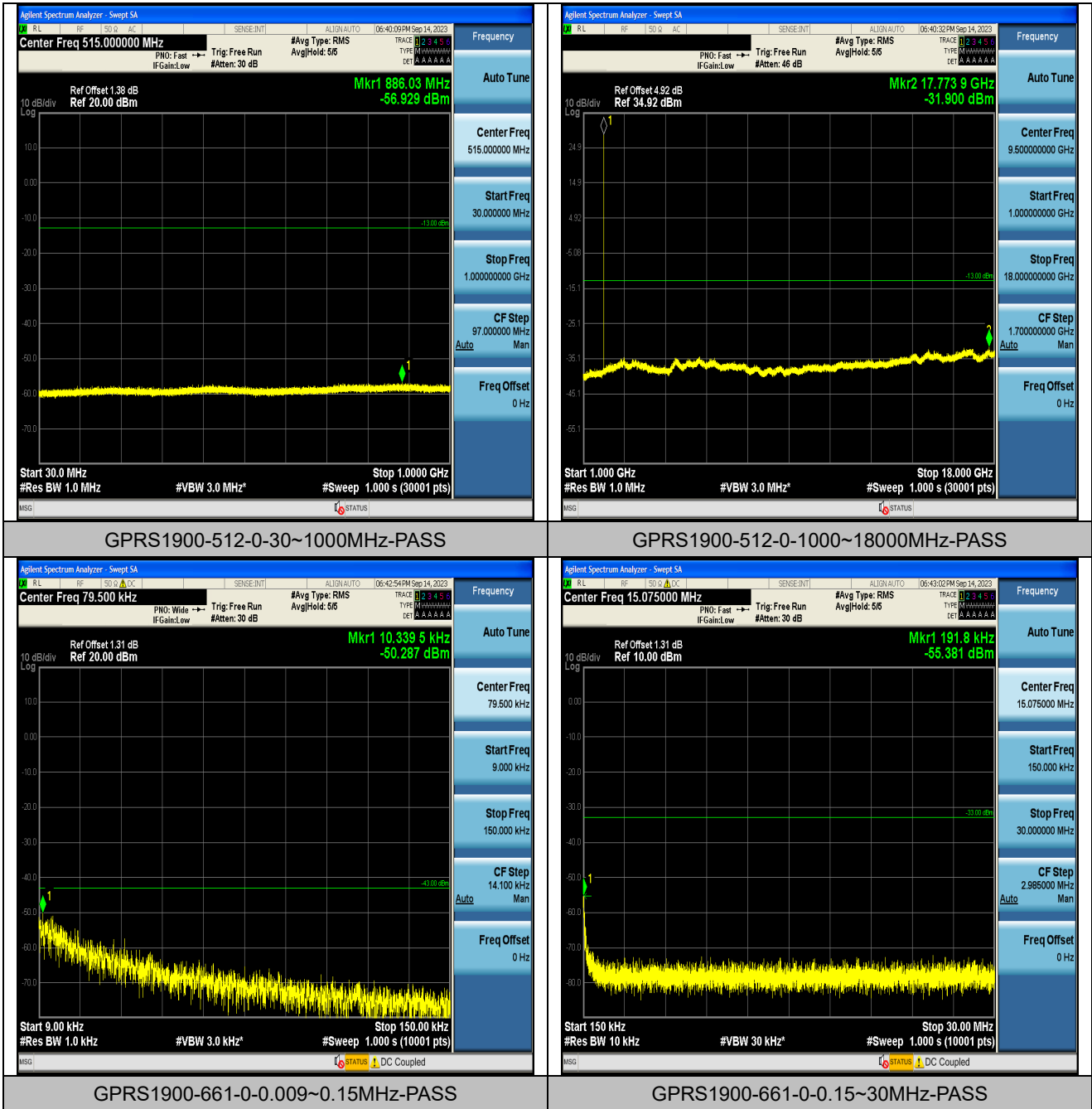


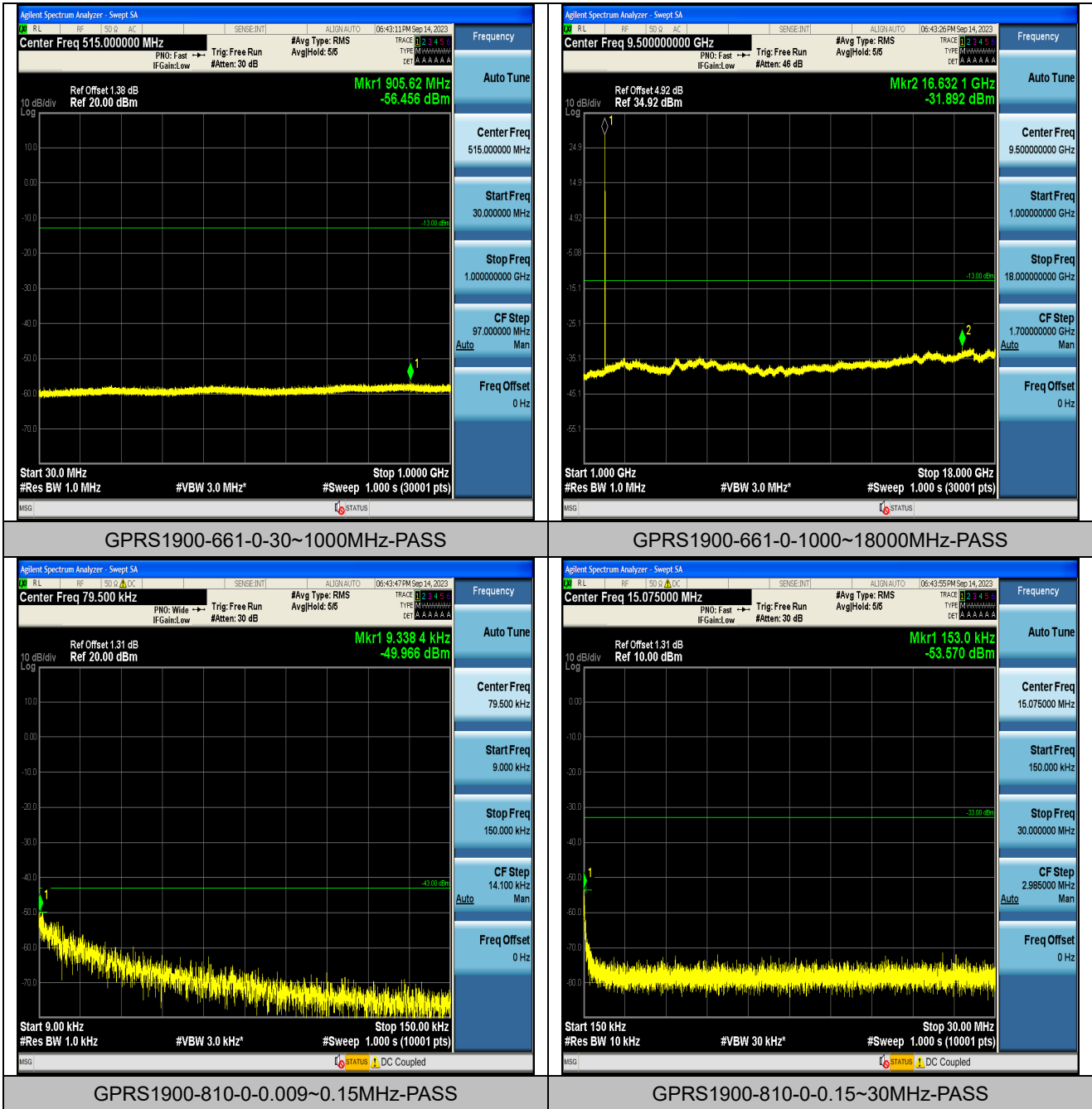


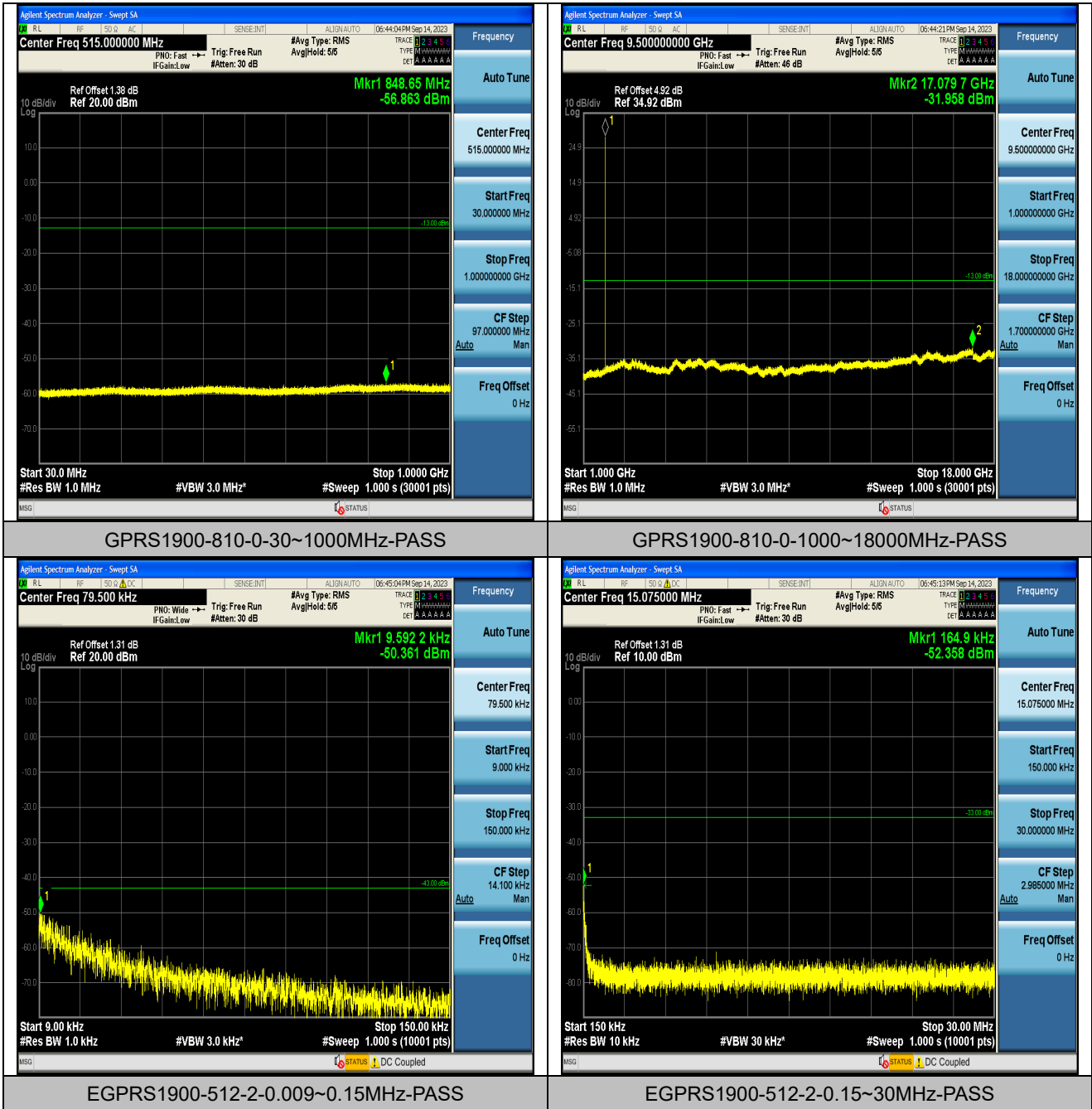


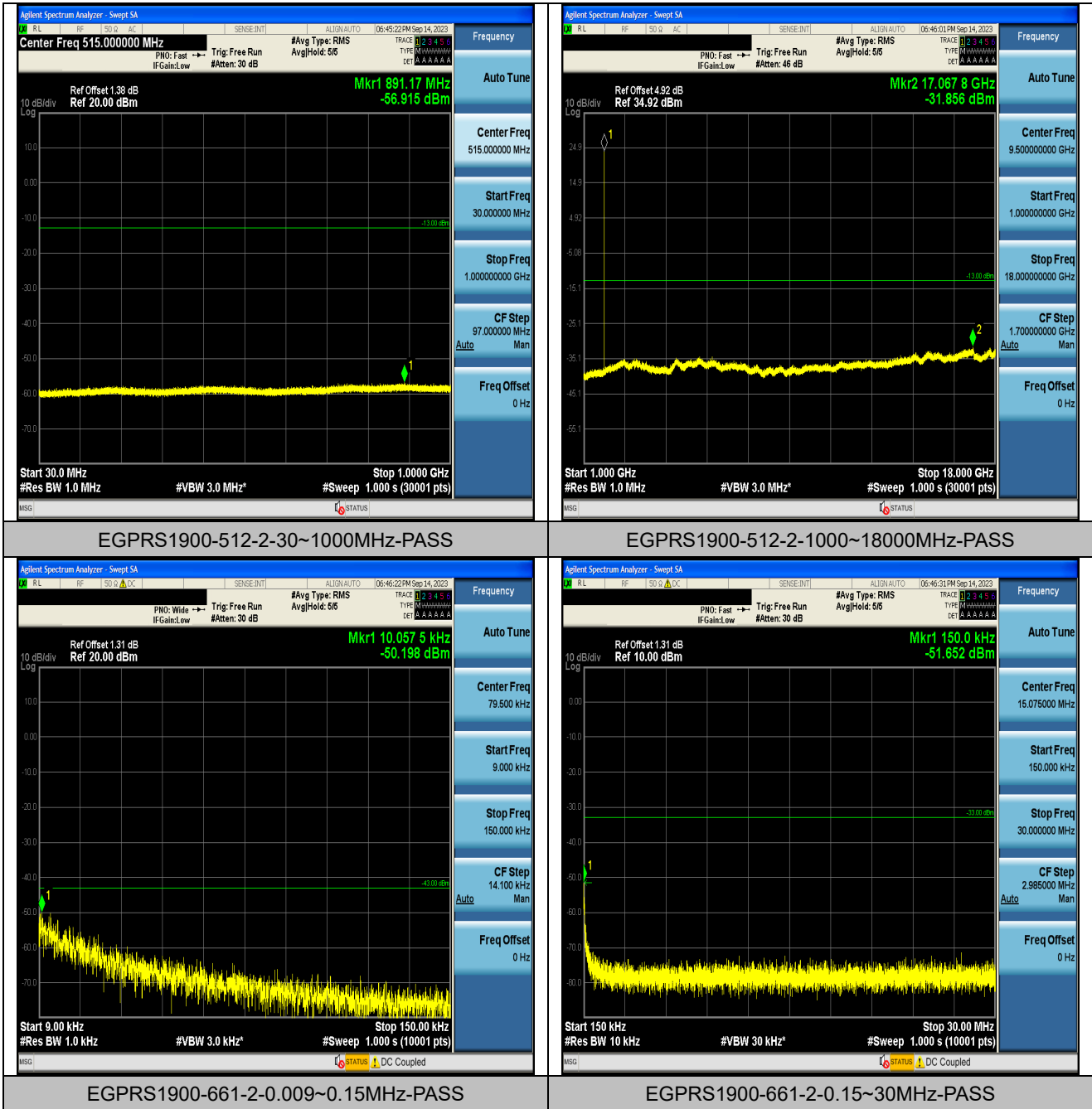


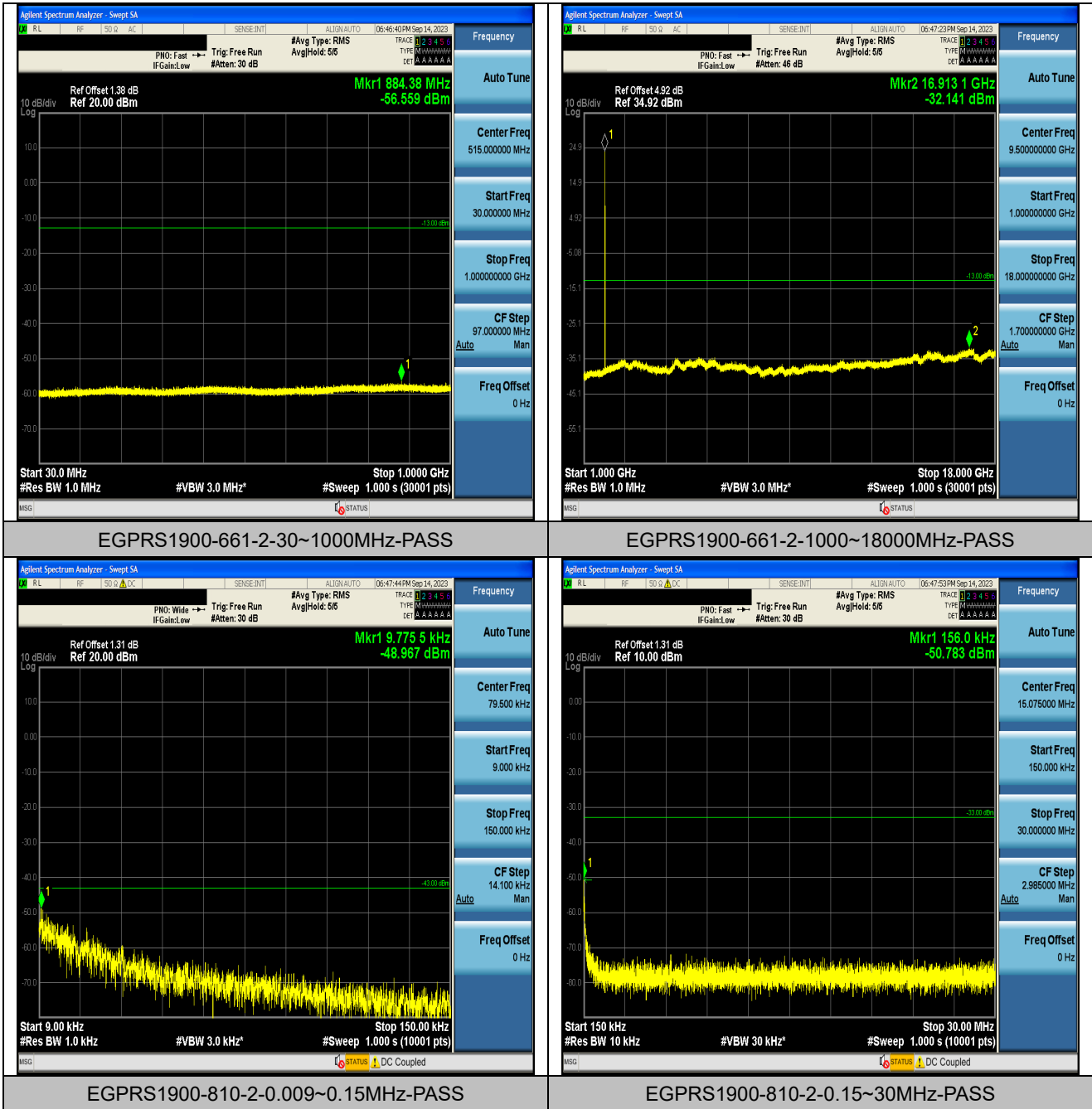


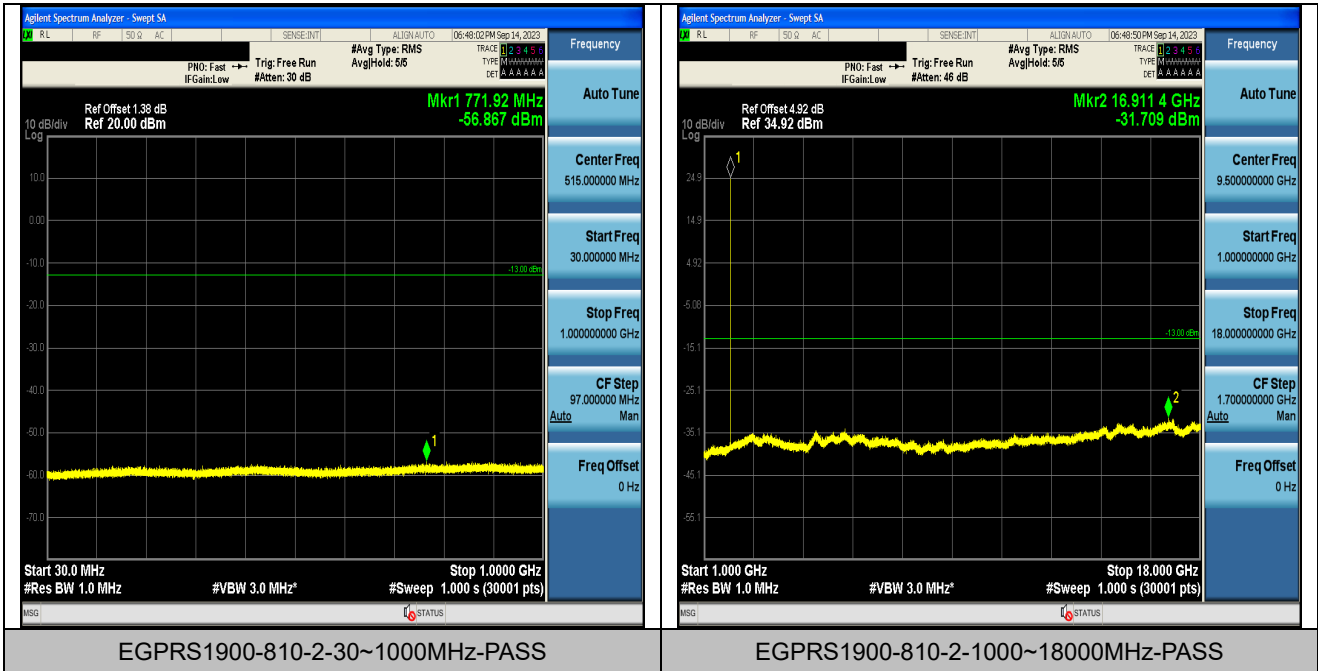












EGPRS1900-810-2-30~1000MHz-PASS

EGPRS1900-810-2-1000~18000MHz-PASS



## Frequency Stability

### Test Result

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GPRS850	190	VN	NT	19.34	0.023117	±2.5	PASS
GPRS850	190	VL	NT	20.92	0.025006	±2.5	PASS
GPRS850	190	VH	NT	19.37	0.023153	±2.5	PASS
EGPRS850	190	VN	NT	19.66	0.023500	±2.5	PASS
EGPRS850	190	VL	NT	15.72	0.018790	±2.5	PASS
EGPRS850	190	VH	NT	17.72	0.021181	±2.5	PASS
GPRS1900	661	VN	NT	12.72	0.006766	--	PASS
GPRS1900	661	VL	NT	7.30	0.003883	--	PASS
GPRS1900	661	VH	NT	6.52	0.003468	--	PASS
EGPRS1900	661	VN	NT	18.34	0.009755	--	PASS
EGPRS1900	661	VL	NT	11.20	0.005957	--	PASS
EGPRS1900	661	VH	NT	13.08	0.006957	--	PASS

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GPRS850	190	NV	-30	21.70	0.025938	±2.5	PASS
GPRS850	190	NV	-20	16.95	0.020261	±2.5	PASS
GPRS850	190	NV	-10	21.08	0.025197	±2.5	PASS
GPRS850	190	NV	0	18.92	0.022615	±2.5	PASS
GPRS850	190	NV	10	19.05	0.022771	±2.5	PASS
GPRS850	190	NV	20	18.37	0.021958	±2.5	PASS
GPRS850	190	NV	30	17.63	0.021073	±2.5	PASS
GPRS850	190	NV	40	19.89	0.023775	±2.5	PASS
GPRS850	190	NV	50	17.11	0.020452	±2.5	PASS
EGPRS850	190	NV	-30	18.34	0.021922	±2.5	PASS
EGPRS850	190	NV	-20	17.40	0.020798	±2.5	PASS
EGPRS850	190	NV	-10	19.05	0.022771	±2.5	PASS
EGPRS850	190	NV	0	20.11	0.024038	±2.5	PASS
EGPRS850	190	NV	10	22.18	0.026512	±2.5	PASS
EGPRS850	190	NV	20	18.73	0.022388	±2.5	PASS
EGPRS850	190	NV	30	18.60	0.022233	±2.5	PASS
EGPRS850	190	NV	40	18.27	0.021838	±2.5	PASS
EGPRS850	190	NV	50	19.47	0.023273	±2.5	PASS
GPRS1900	661	NV	-30	10.20	0.005426	--	PASS
GPRS1900	661	NV	-20	5.78	0.003074	--	PASS
GPRS1900	661	NV	-10	13.66	0.007266	--	PASS

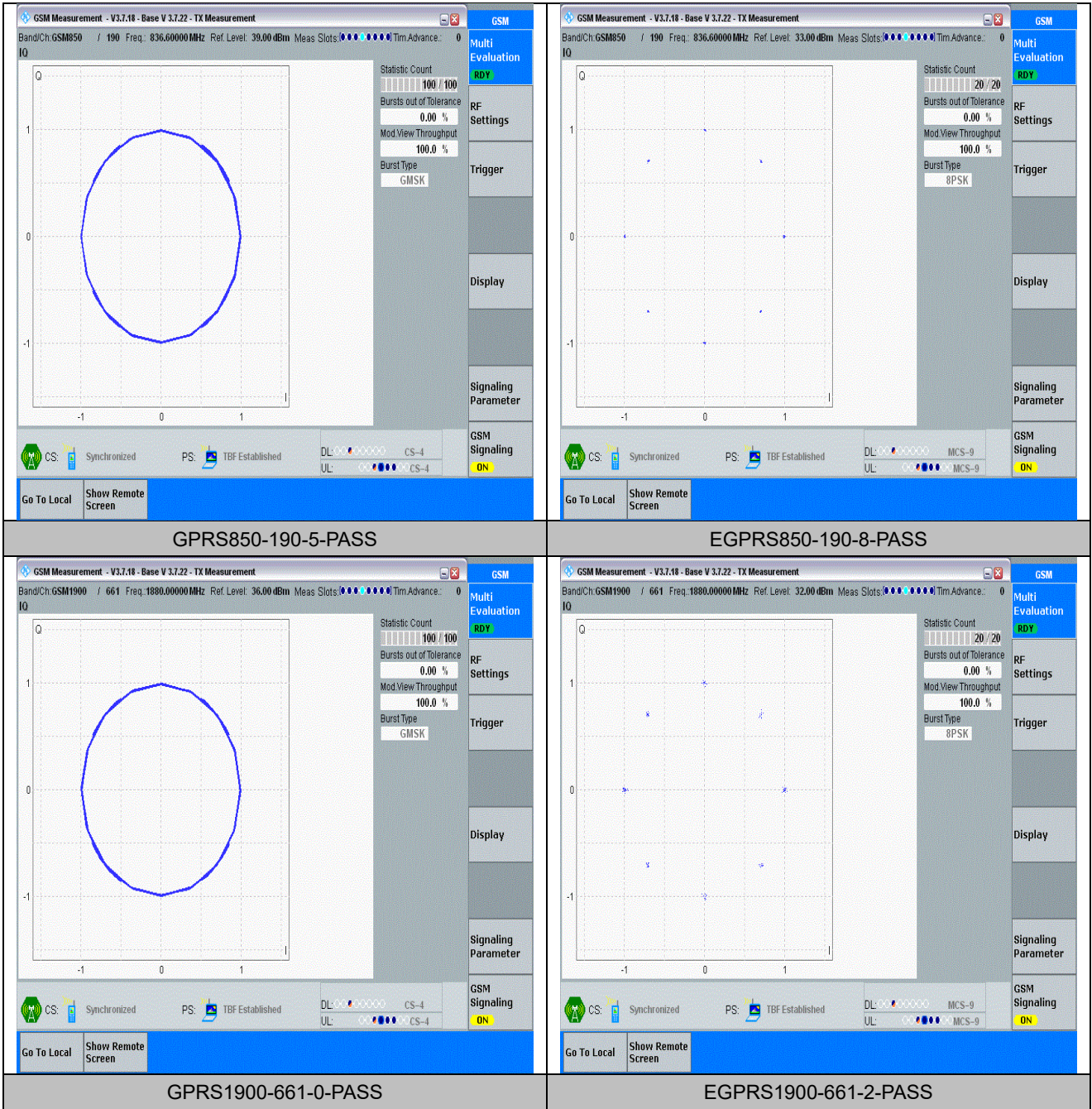
GPRS1900	661	NV	0	3.00	0.001596	--	PASS
GPRS1900	661	NV	10	9.98	0.005309	--	PASS
GPRS1900	661	NV	20	6.52	0.003468	--	PASS
GPRS1900	661	NV	30	6.13	0.003261	--	PASS
GPRS1900	661	NV	40	10.69	0.005686	--	PASS
GPRS1900	661	NV	50	5.84	0.003106	--	PASS
EGPRS1900	661	NV	-30	4.13	0.002197	--	PASS
EGPRS1900	661	NV	-20	11.27	0.005995	--	PASS
EGPRS1900	661	NV	-10	6.75	0.003590	--	PASS
EGPRS1900	661	NV	0	10.85	0.005771	--	PASS
EGPRS1900	661	NV	10	13.66	0.007266	--	PASS
EGPRS1900	661	NV	20	8.62	0.004585	--	PASS
EGPRS1900	661	NV	30	12.24	0.006511	--	PASS
EGPRS1900	661	NV	40	6.36	0.003383	--	PASS
EGPRS1900	661	NV	50	14.33	0.007622	--	PASS

## Modulation Characteristics

### Test Result

Band	Channel	Result	Verdict
GPRS850	190	PASS	PASS
EGPRS850	190	PASS	PASS
GPRS1900	661	PASS	PASS
EGPRS1900	661	PASS	PASS

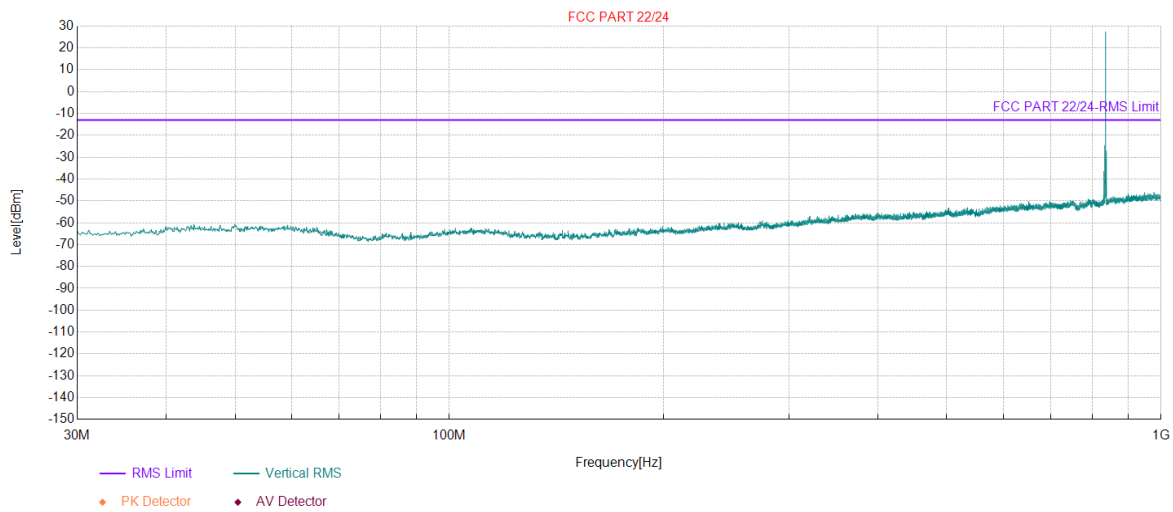
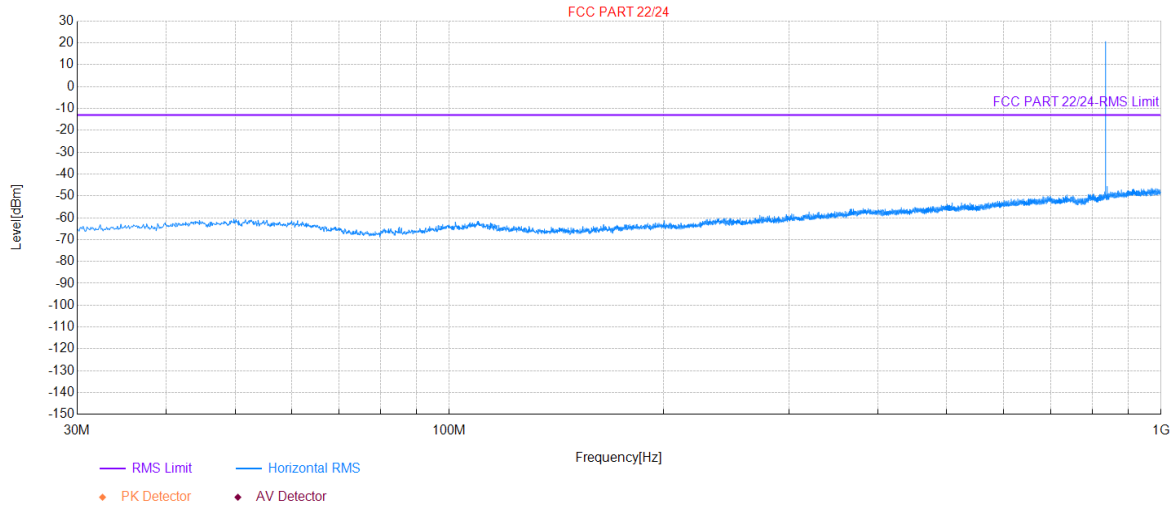
Test Graphs



### Field Strength of Spurious Radiation

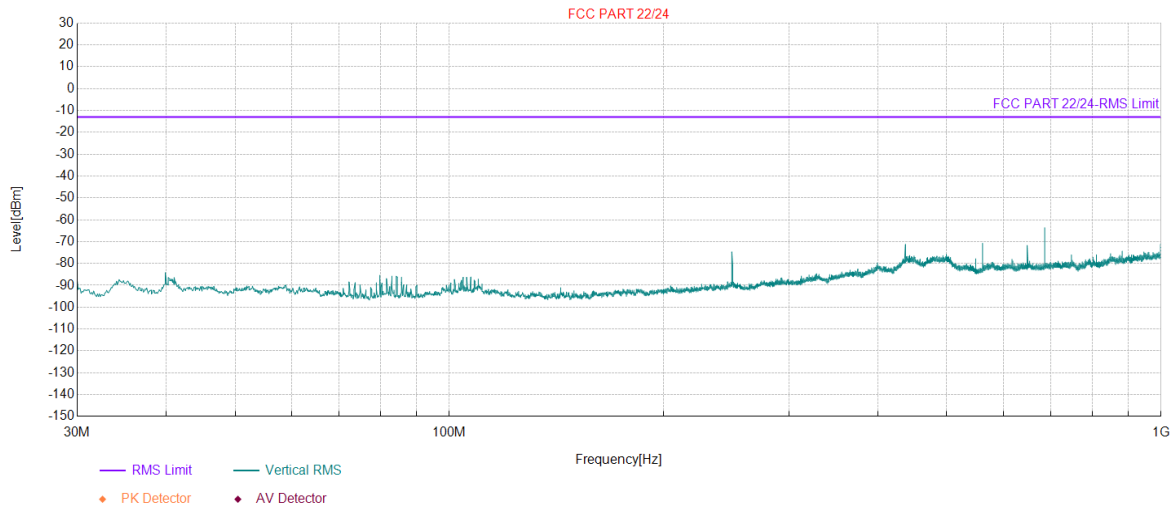
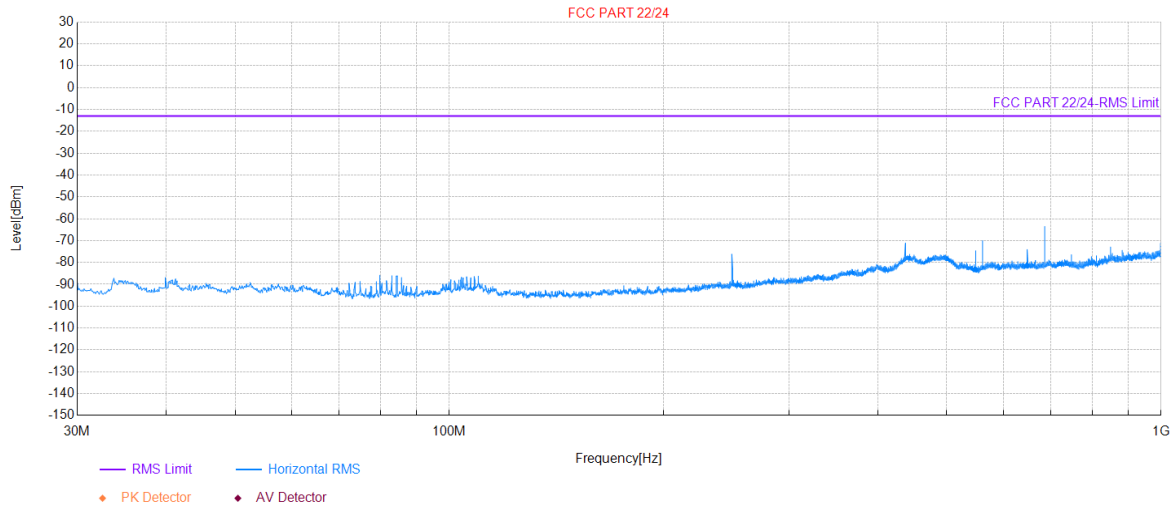
Below 1GHz

GSM850-MCH(worst-case)



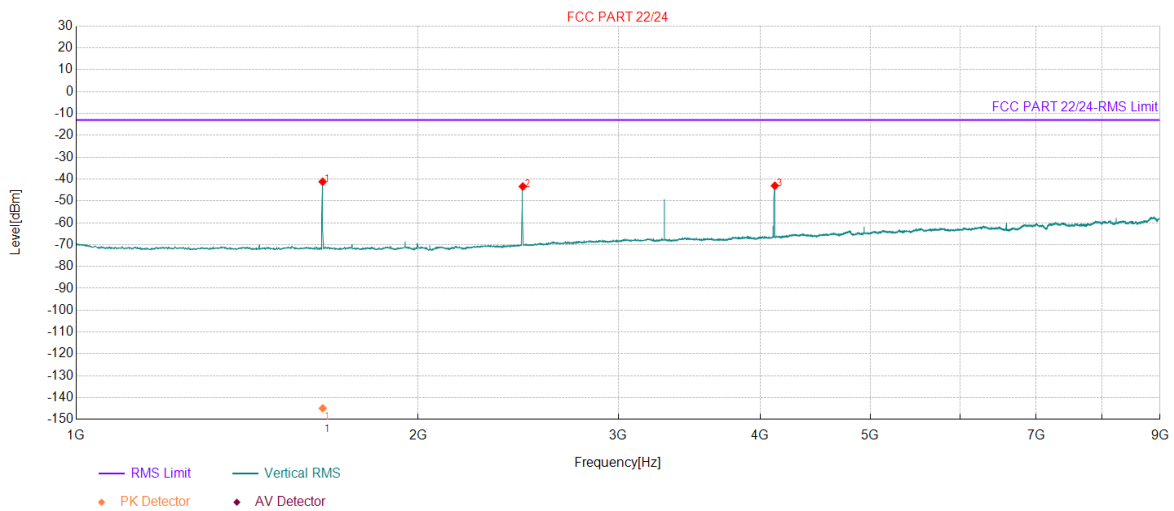
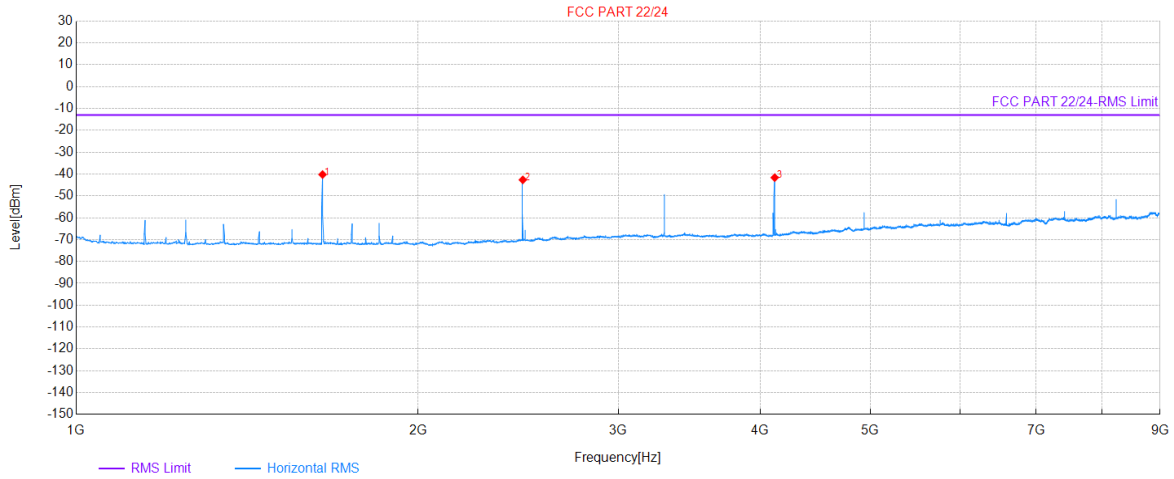


### GSM1900-MCH(worst-case)



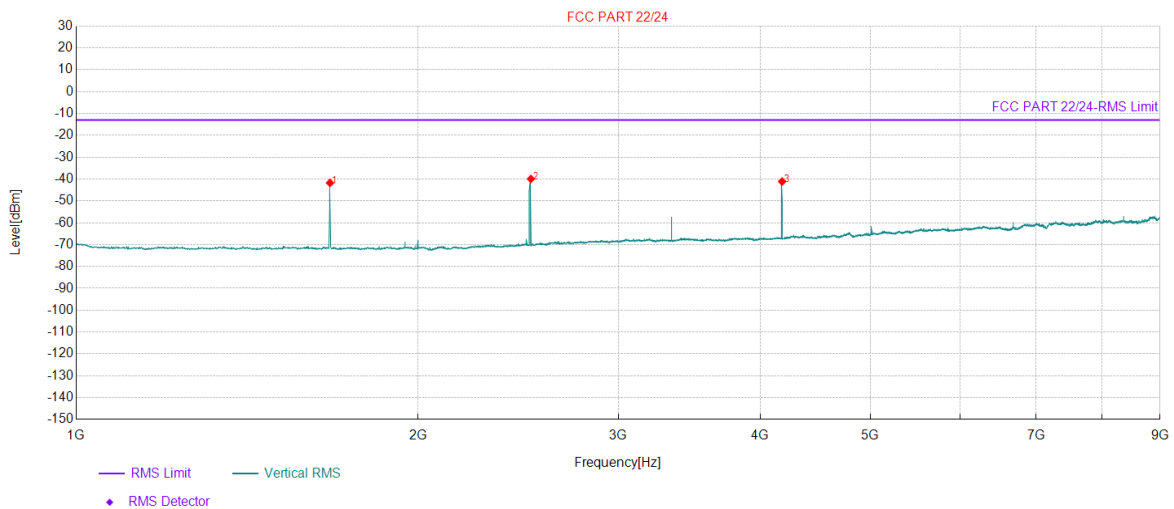
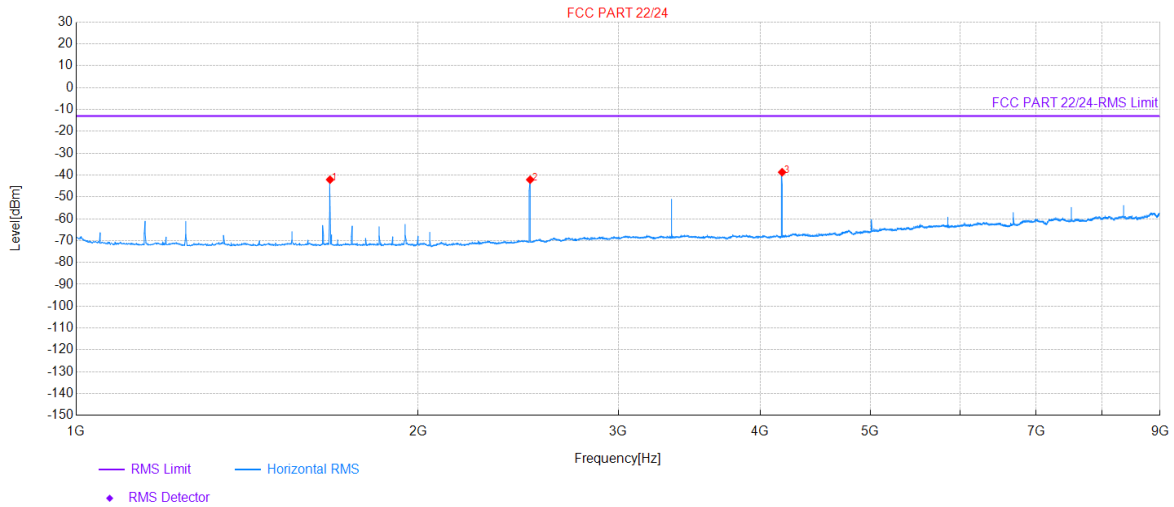
Above1GHz

GSM850-LCH



Data List											
NO.	Freq. [MHz]	Reading [dBuV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Trace	Polarity	Verdict
1	1648	73.86	-114.09	-40.23	-13.00	27.23	223	222	RMS	Horizontal	PASS
2	2473	68.61	-111.25	-42.64	-13.00	29.64	168	128	RMS	Horizontal	PASS
3	4121	64.13	-105.75	-41.62	-13.00	28.62	133	128	RMS	Horizontal	PASS
1	1648	72.85	-114.09	-41.24	-13.00	28.24	336	108	RMS	Vertical	PASS
2	2473	67.84	-111.25	-43.41	-13.00	30.41	251	108	RMS	Vertical	PASS
3	4122	62.66	-105.74	-43.08	-13.00	30.08	259	170	RMS	Vertical	PASS

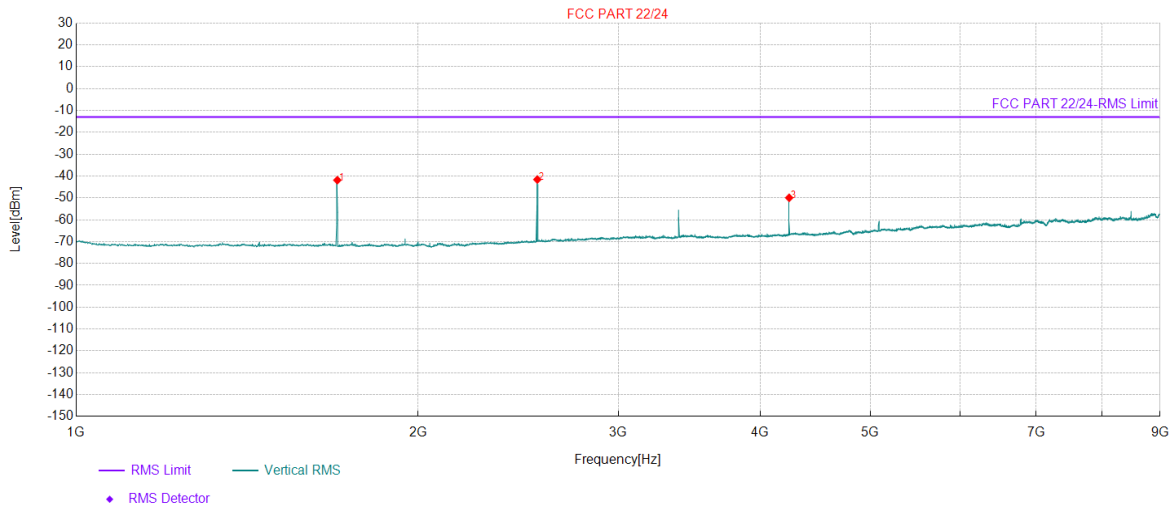
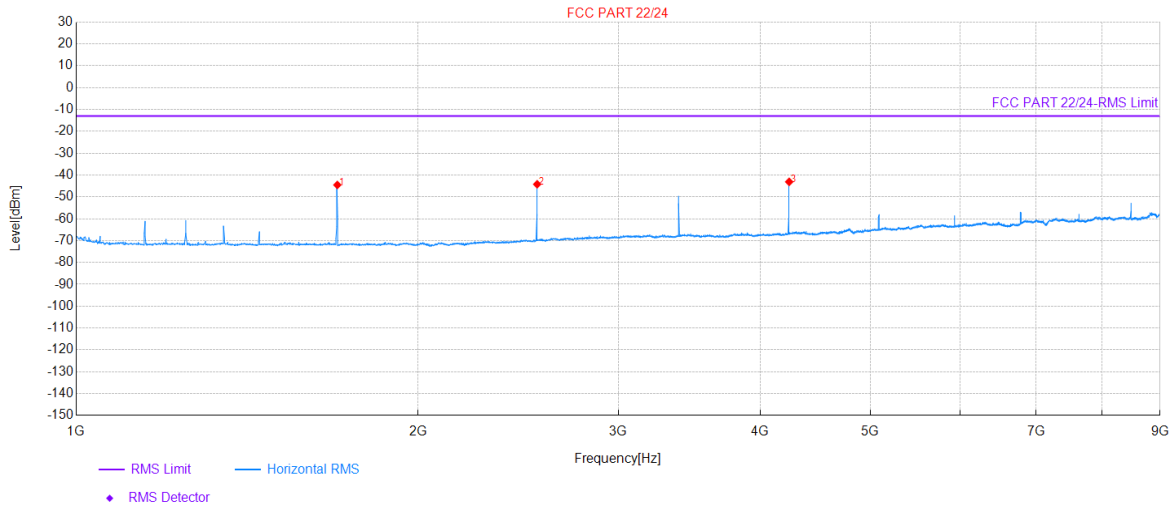
**GSM850-MCH**



Data List											
NO.	Freq. [MHz]	Reading [dBuV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Trace	Polarity	Verdict
1	1673	72.03	-114.14	-42.11	-13.00	29.11	347	222	RMS	Horizontal	PASS
2	2510	69.23	-111.36	-42.13	-13.00	29.13	157	129	RMS	Horizontal	PASS
3	4183	66.75	-105.46	-38.71	-13.00	25.71	163	222	RMS	Horizontal	PASS
1	1673	72.39	-114.14	-41.75	-13.00	28.75	293	201	RMS	Vertical	PASS
2	2514	71.40	-111.34	-39.94	-13.00	26.94	145	295	RMS	Vertical	PASS
3	4183	64.33	-105.46	-41.13	-13.00	28.13	267	138	RMS	Vertical	PASS

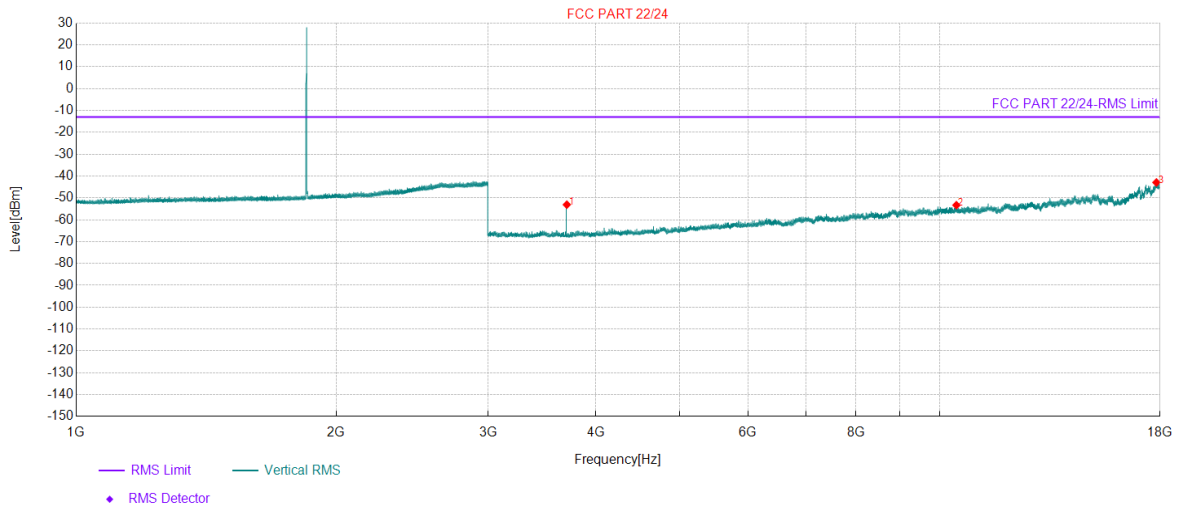
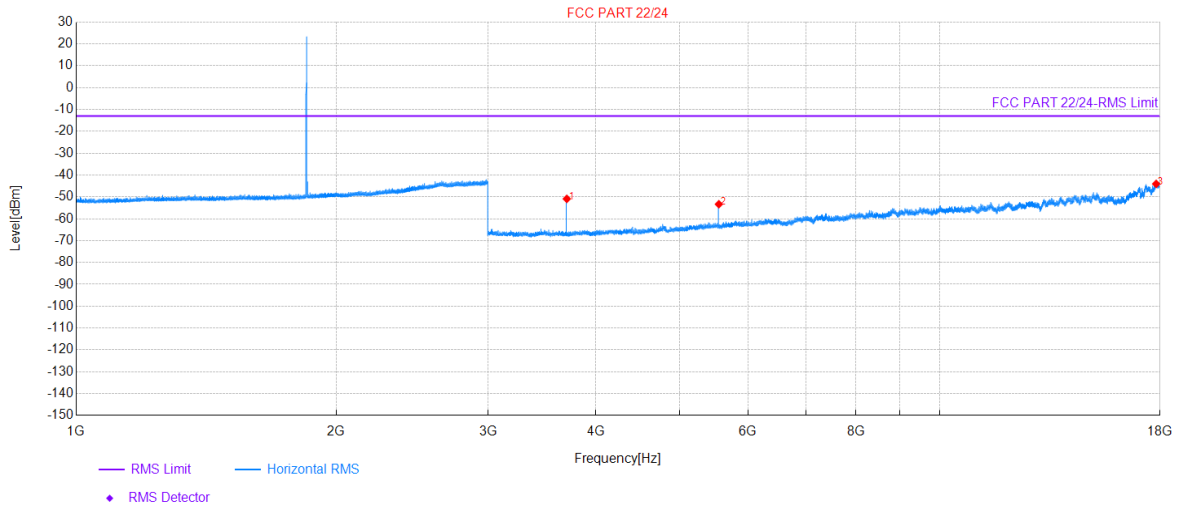


GSM850-HCH



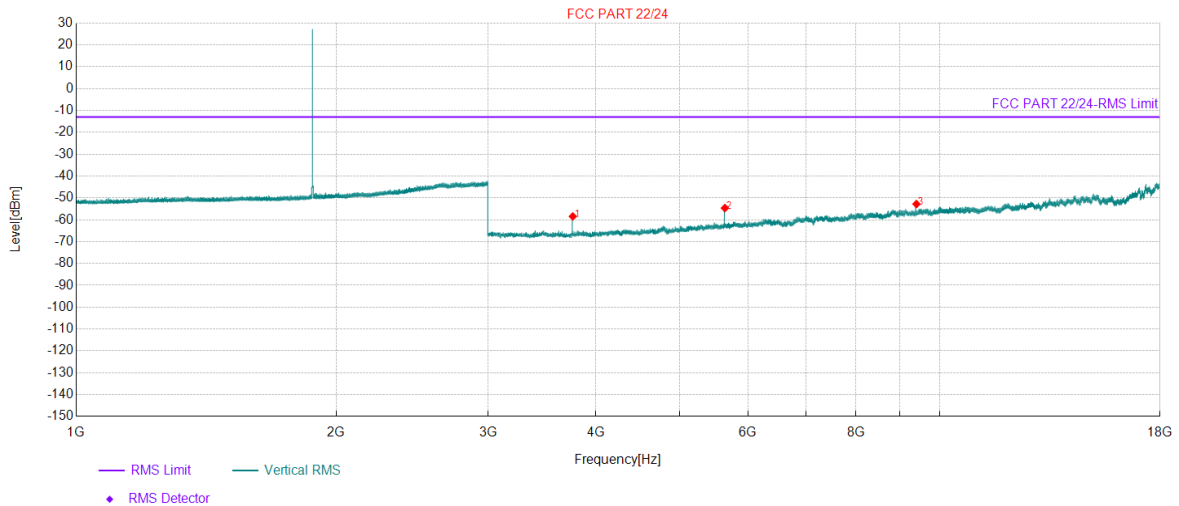
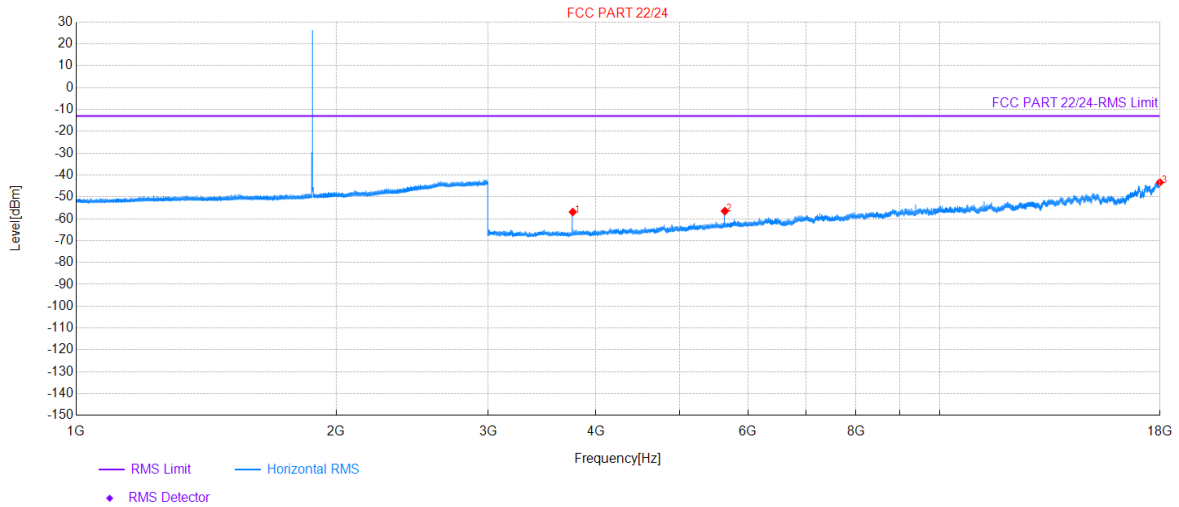
Data List											
NO.	Freq. [MHz]	Reading [dBuV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Trace	Polarity	Verdict
1	1698	69.68	-114.21	-44.53	-13.00	31.53	312	191	RMS	Horizontal	PASS
2	2546	67.01	-111.22	-44.21	-13.00	31.21	177	129	RMS	Horizontal	PASS
3	4244	62.03	-105.13	-43.10	-13.00	30.10	141	222	RMS	Horizontal	PASS
1	1698	72.32	-114.21	-41.89	-13.00	28.89	395	138	RMS	Vertical	PASS
2	2547	69.65	-111.22	-41.57	-13.00	28.57	109	107	RMS	Vertical	PASS
3	4244	55.19	-105.13	-49.94	-13.00	36.94	387	13	RMS	Vertical	PASS

GSM1900-LCH



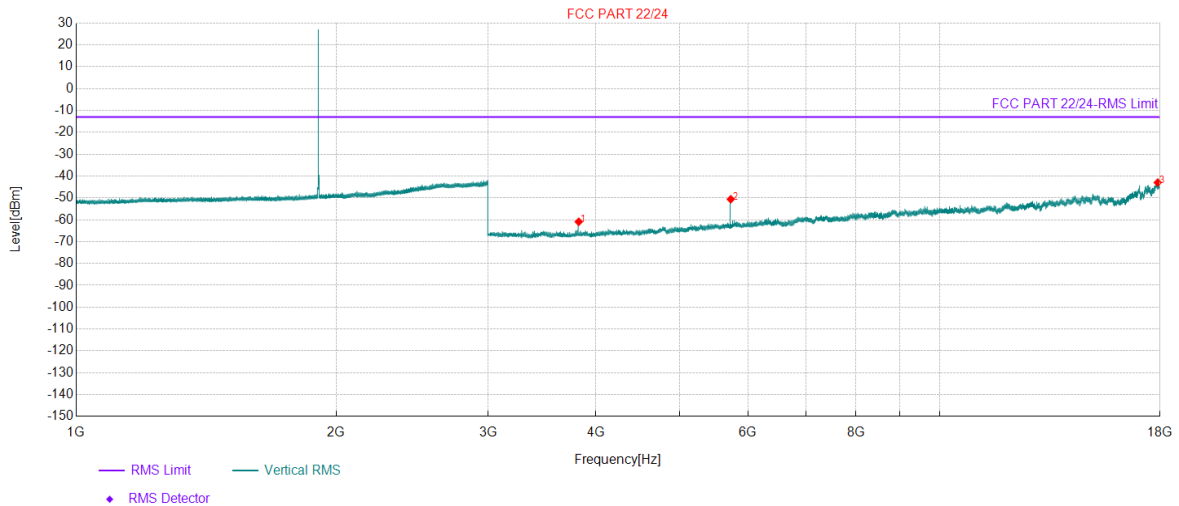
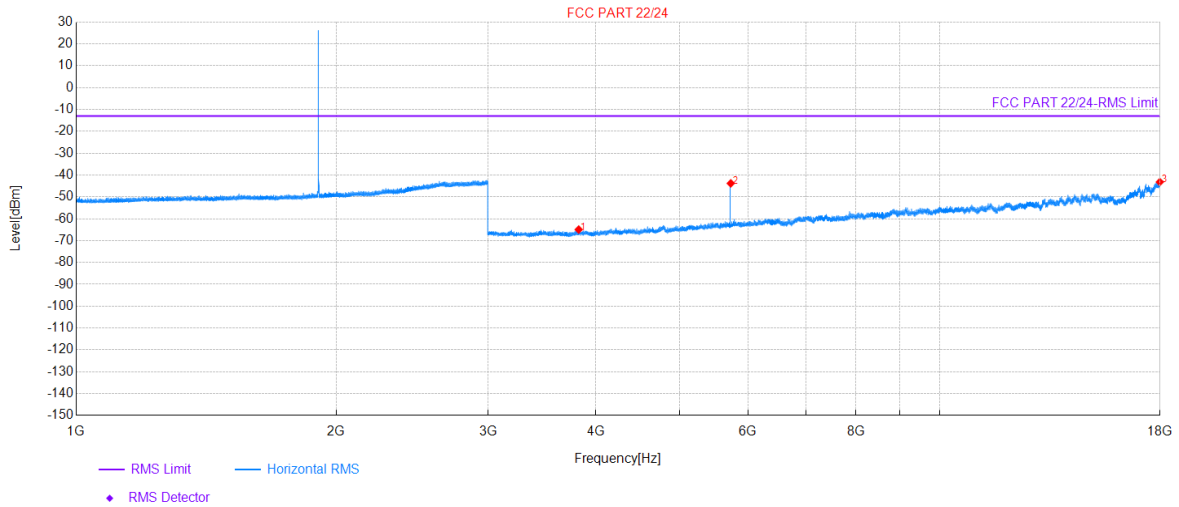
Data List											
NO.	Freq. [MHz]	Reading [dBuV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Trace	Polarity	Verdict
1	3700.5	56.62	-107.51	-50.89	-13.00	37.89	203	164	RMS	Horizontal	PASS
2	5550.5	47.99	-101.32	-53.33	-13.00	40.33	295	121	RMS	Horizontal	PASS
3	17815	38.30	-82.35	-44.05	-13.00	31.05	393	142	RMS	Horizontal	PASS
1	3700.5	54.42	-107.51	-53.09	-13.00	40.09	155	70	RMS	Vertical	PASS
2	10457.5	37.76	-91.09	-53.33	-13.00	40.33	109	228	RMS	Vertical	PASS
3	17827.5	39.22	-82.16	-42.94	-13.00	29.94	206	207	RMS	Vertical	PASS

GSM1900-MCH



Data List											
NO.	Freq. [MHz]	Reading [dBuV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Trace	Polarity	Verdict
1	3760	50.34	-107.25	-56.91	-13.00	43.91	139	257	RMS	Horizontal	PASS
2	5640	44.32	-100.83	-56.51	-13.00	43.51	175	34	RMS	Horizontal	PASS
3	17994	38.56	-81.89	-43.33	-13.00	30.33	358	70	RMS	Horizontal	PASS
1	3760	48.77	-107.25	-58.48	-13.00	45.48	379	178	RMS	Vertical	PASS
2	5640	46.18	-100.83	-54.65	-13.00	41.65	233	171	RMS	Vertical	PASS
3	9400.5	40.53	-93.34	-52.81	-13.00	39.81	155	164	RMS	Vertical	PASS

GSM1900-HCH



Data List											
NO.	Freq. [MHz]	Reading [dBuV]	Factor [dB]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Trace	Polarity	Verdict
1	3819.5	41.62	-106.57	-64.95	-13.00	51.95	281	292	RMS	Horizontal	PASS
2	5729.5	56.95	-100.75	-43.80	-13.00	30.80	380	0	RMS	Horizontal	PASS
3	17990	38.75	-81.94	-43.19	-13.00	30.19	241	68	RMS	Horizontal	PASS
1	3819.5	45.65	-106.57	-60.92	-13.00	47.92	210	191	RMS	Vertical	PASS
2	5729.5	50.16	-100.75	-50.59	-13.00	37.59	303	0	RMS	Vertical	PASS
3	17890	39.34	-82.31	-42.97	-13.00	29.97	273	184	RMS	Vertical	PASS