FCC GSM Test Data

General Description of EUT	
Product Name:	GPS Tracker G28
Test Model:	G28S
Sample ID:	RW-C-202304-0245-3-2#
Environmental Conditions	
Temperature:	24.4℃
Relative Humidity:	50%
Test Voltage:	DC 3.7V
Test Engineer:	Huangjianping
Note: For a more detailed features description, please refer to the report TBR-C-202304-0245-7.	

Appendix A: Conducted Output Power Data

Test Result

Band	Channel	PCL	Conducted Output Power (dBm)	Limit(dBm)	Verdict
GSM850	128	5	31.64	38.45	PASS
GSM850	190	5	32.05	38.45	PASS
GSM850	251	5	32.12	38.45	PASS
GSM1900	512	0	27.98	33.00	PASS
GSM1900	661	0	28.17	33.00	PASS
GSM1900	810	0	28.18	33.00	PASS

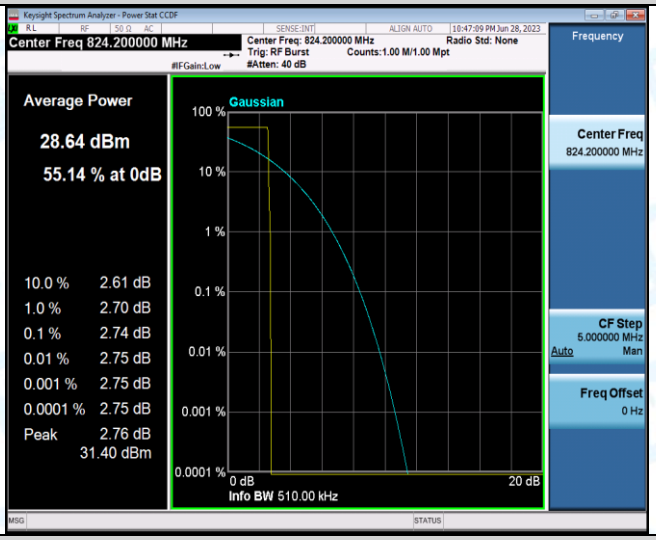
Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

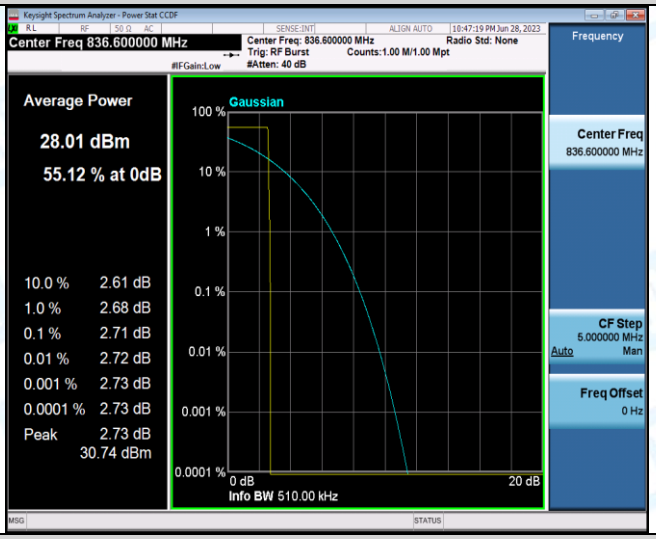
Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	128	5	2.74	13	PASS
GSM850	190	5	2.71	13	PASS
GSM850	251	5	2.72	13	PASS
GSM1900	512	0	2.7	13	PASS
GSM1900	661	0	2.7	13	PASS
GSM1900	810	0	2.7	13	PASS

Test Graphs

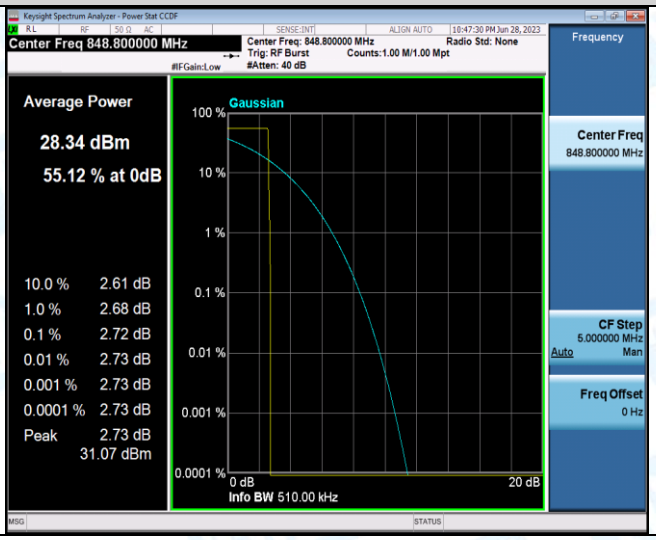
GSM850-128

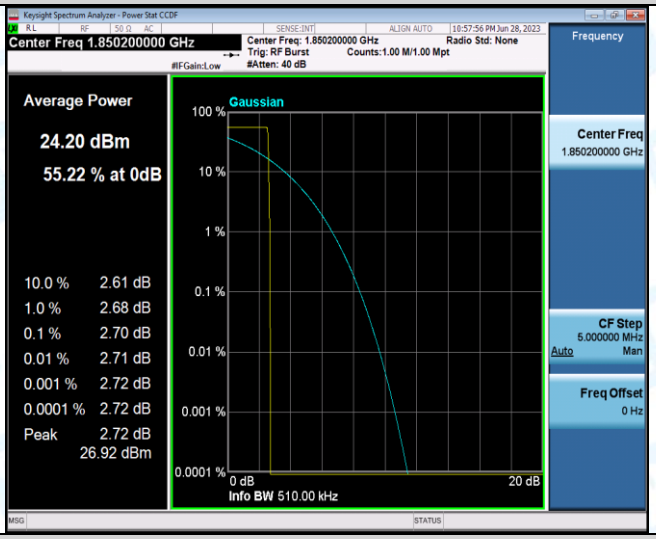
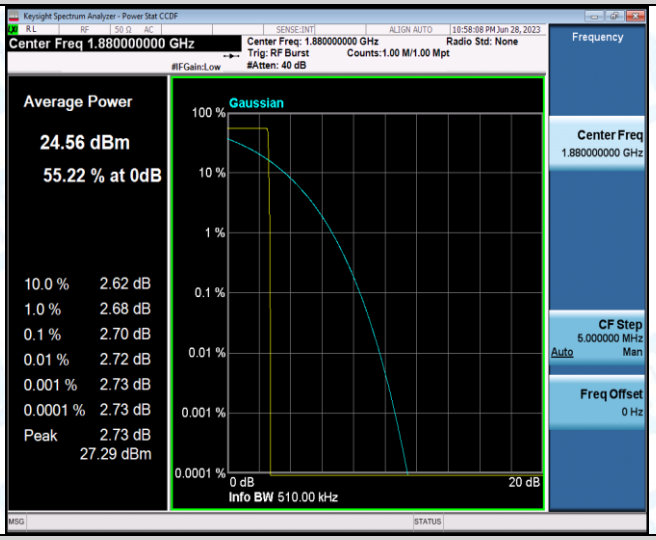
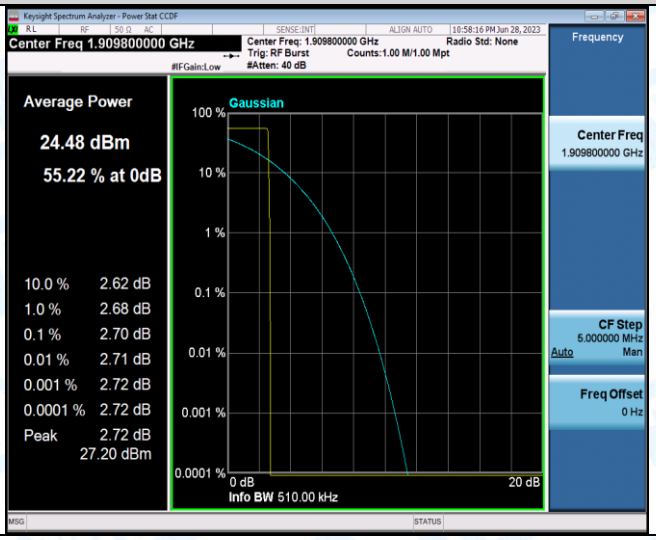


GSM850-190



GSM850-251



GSM1900-512

GSM1900-661

GSM1900-810


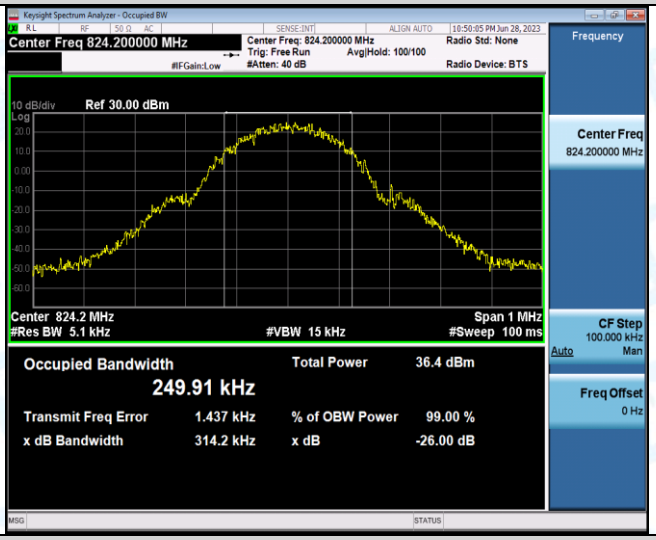
Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

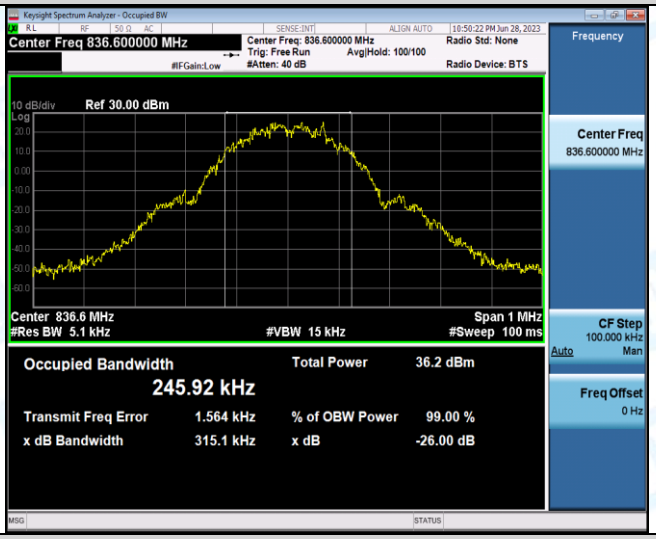
Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.24991	0.3142	---	PASS
GSM850	190	5	0.24592	0.3151	---	PASS
GSM850	251	5	0.24811	0.3123	---	PASS
GSM1900	512	0	0.24696	0.3191	---	PASS
GSM1900	661	0	0.24739	0.3163	---	PASS
GSM1900	810	0	0.24695	0.3120	---	PASS

Test Graphs

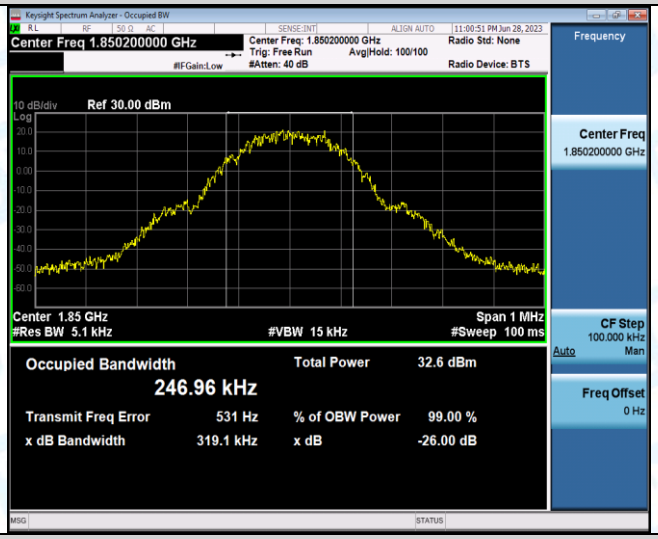
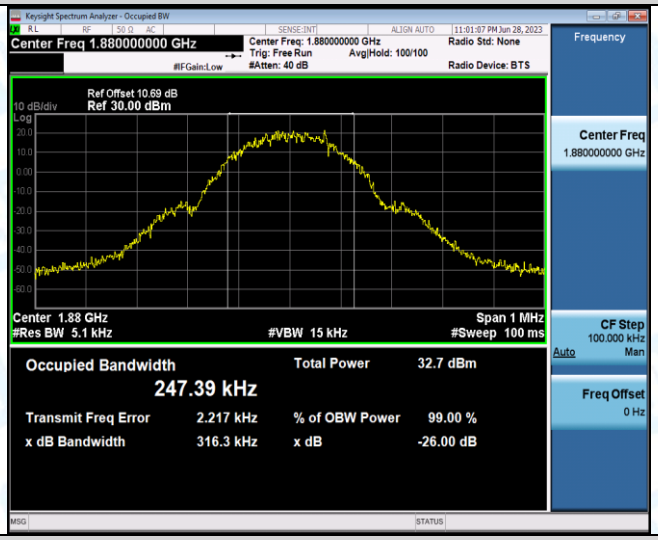
GSM850-128



GSM850-190



GSM850-251

GSM1900-512

GSM1900-661

GSM1900-810

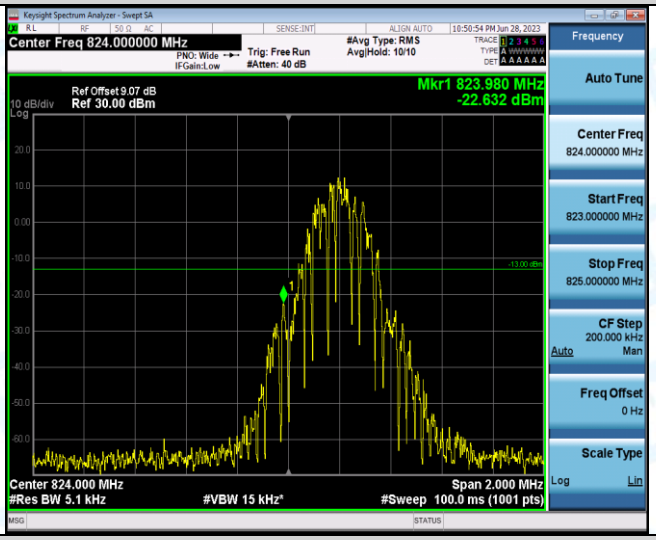

Appendix D: Band Edge

Test Result

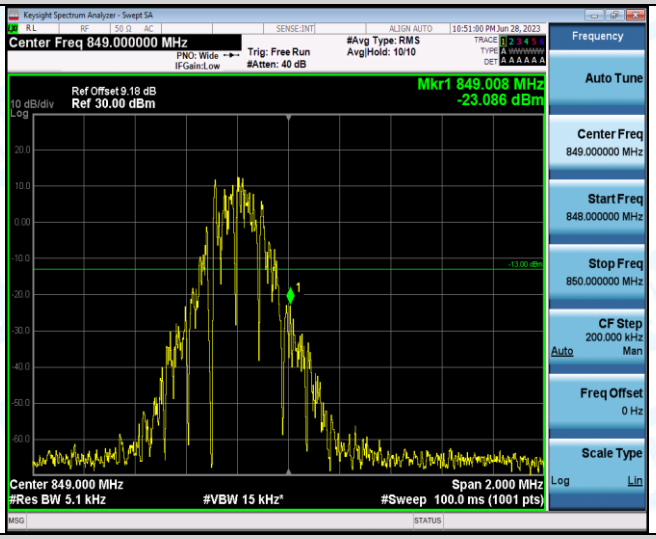
Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.98	-22.63	-13	PASS
GSM850	251	5	849.01	-23.09	-13	PASS
GSM1900	512	0	1849.99	-28.70	-13	PASS
GSM1900	810	0	1910.02	-28.41	-13	PASS

Test Graphs

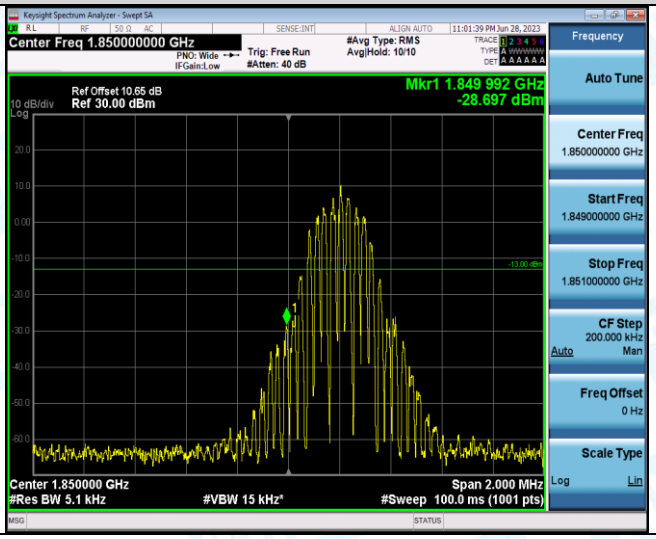
GSM850-128

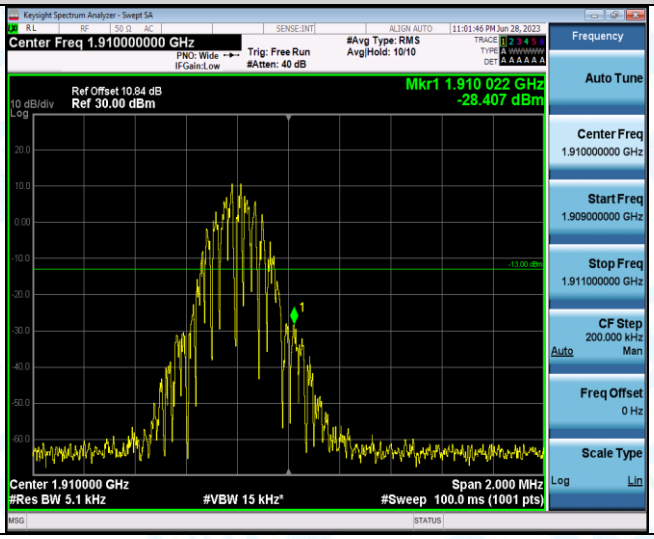


GSM850-251



GSM1900-512



GSM1900-810


Keysight Spectrum Analyzer - Swept SA
Center Freq 1.910000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 10/10
11:01:46 PM Jun 28, 2023
Ref Offset 10.84 dB
10 dB/div
Ref 30.00 dBm
Mkr1 1.910 022 GHz
-28.407 dBm
Center 1.910000 GHz
#Res BW 5.1 kHz
#VBW 15 kHz*
Span 2.000 MHz
#Sweep 100.0 ms (1001 pts)
Frequency
Auto Tune
Center Freq
1.910000000 GHz
Start Freq
1.909000000 GHz
Stop Freq
1.911000000 GHz
CF Step
200.000 kHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

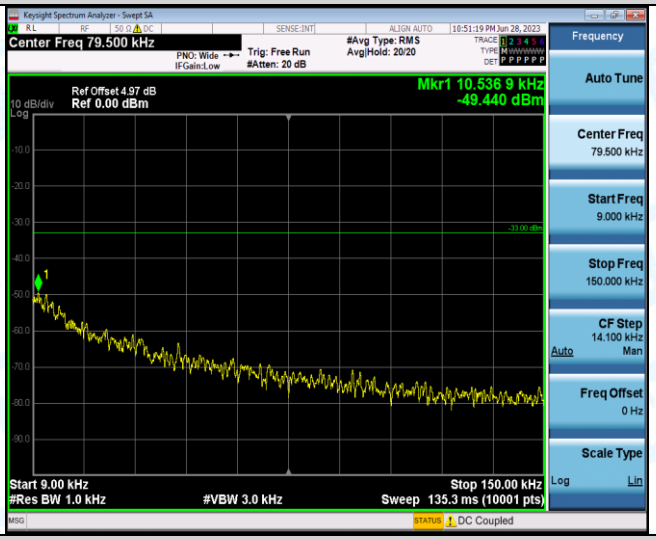
Appendix E: Conducted Spurious Emission

Test Result

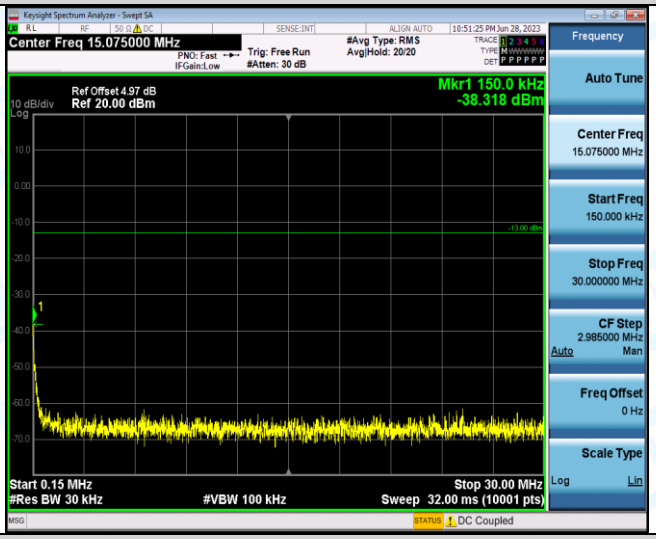
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.01	-49.44	-33	PASS
GSM850	128	5	0.15~30MHz	0.15	-38.32	-13	PASS
GSM850	128	5	30~1000MHz	927.99	-44.52	-13	PASS
GSM850	128	5	1000~10000MHz	1697.5	-31.14	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.01	-47.06	-33	PASS
GSM850	190	5	0.15~30MHz	0.16	-40.16	-13	PASS
GSM850	190	5	30~1000MHz	530.49	-43.22	-13	PASS
GSM850	190	5	1000~10000MHz	1697.8	-31.53	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.01	-49.51	-33	PASS
GSM850	251	5	0.15~30MHz	0.16	-38.69	-13	PASS
GSM850	251	5	30~1000MHz	486.35	-44.52	-13	PASS
GSM850	251	5	1000~10000MHz	1697.5	-31.6	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.01	-48.01	-43	PASS
GSM1900	512	0	0.15~30MHz	0.15	-37.37	-23	PASS
GSM1900	512	0	30~1000MHz	933.3	-45.15	-13	PASS
GSM1900	512	0	1000~18000MHz	17071.8	-16.04	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.01	-48.77	-43	PASS
GSM1900	661	0	0.15~30MHz	0.15	-38.17	-23	PASS
GSM1900	661	0	30~1000MHz	921.24	-45.27	-13	PASS
GSM1900	661	0	1000~18000MHz	16900.67	-15.76	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.01	-44.96	-43	PASS
GSM1900	810	0	0.15~30MHz	0.16	-40.22	-23	PASS
GSM1900	810	0	30~1000MHz	803.25	-45.65	-13	PASS
GSM1900	810	0	1000~18000MHz	17231.03	-16.35	-13	PASS

Test Graphs

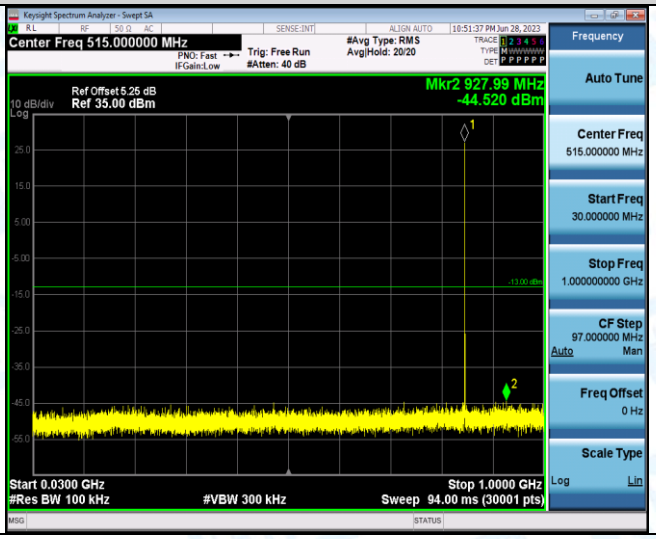
GSM850-128-0.009~0.15MHz



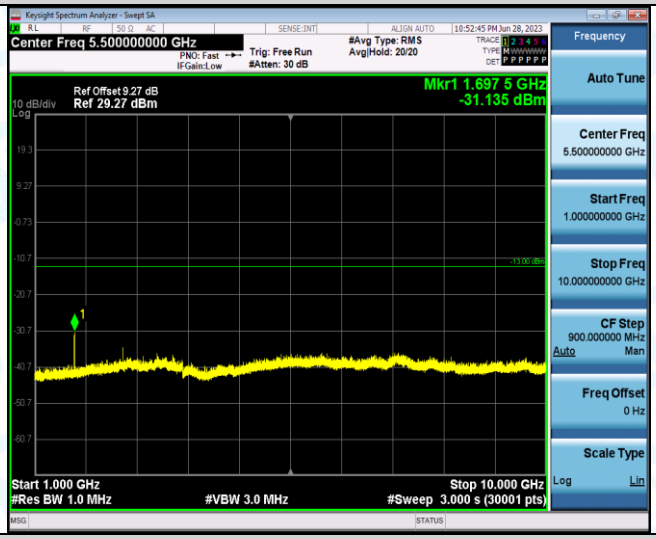
GSM850-128-0.15~30MHz



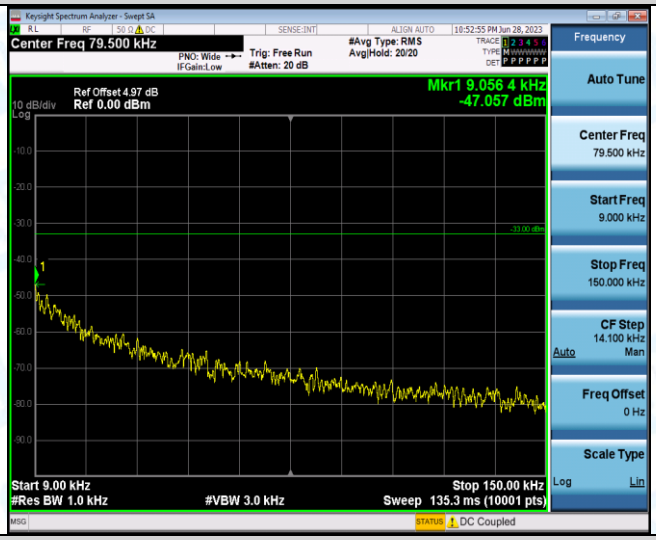
GSM850-128-30~1000MHz



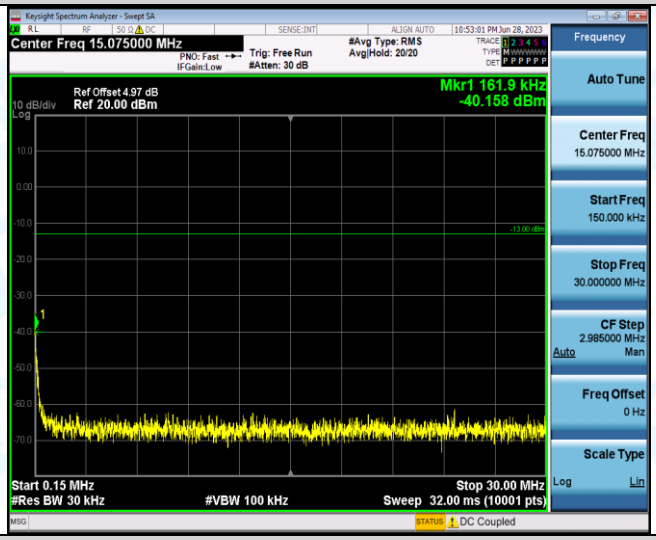
GSM850-128-1000~10000MHz



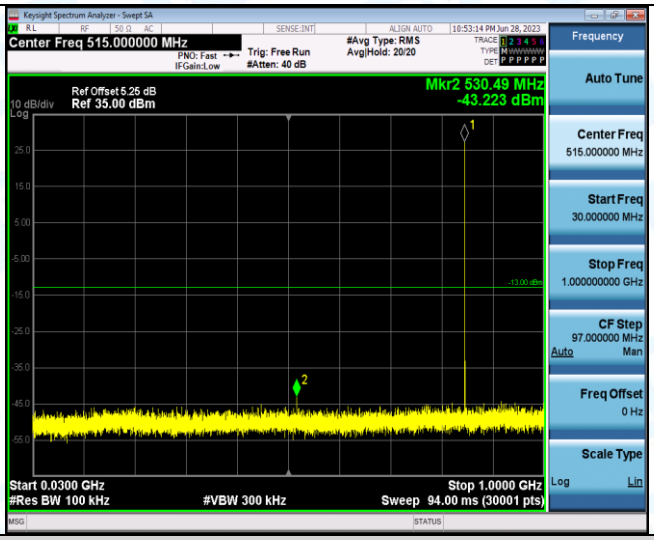
GSM850-190-0.009~0.15MHz



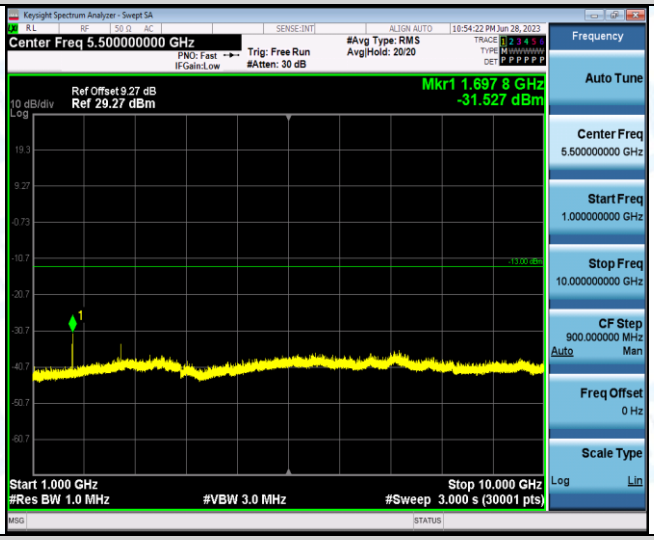
GSM850-190-0.15~30MHz



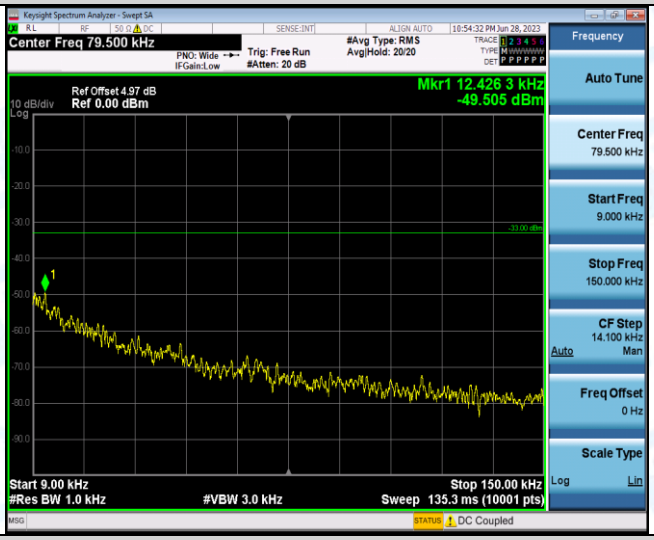
GSM850-190-30~1000MHz



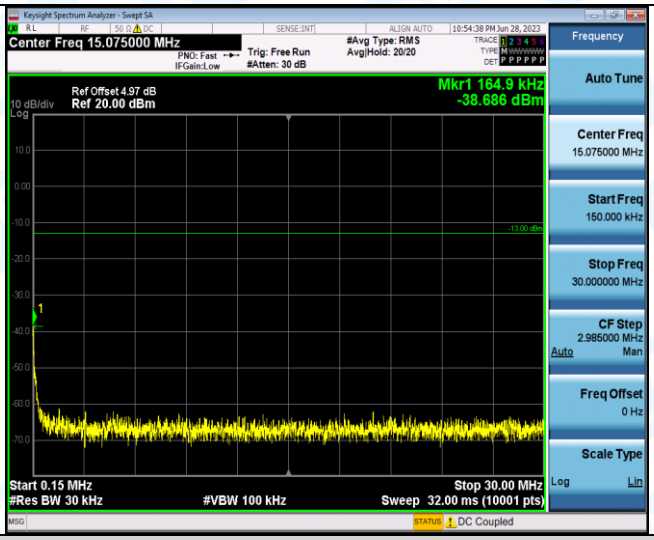
GSM850-190-1000~10000MHz



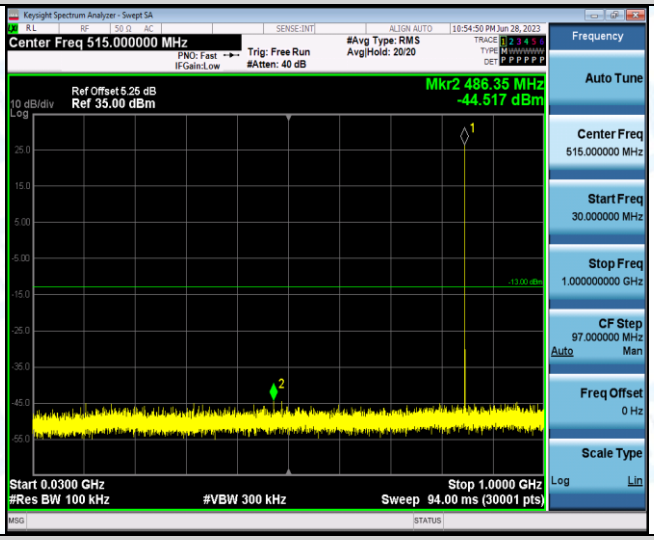
GSM850-251-0.009~0.15MHz



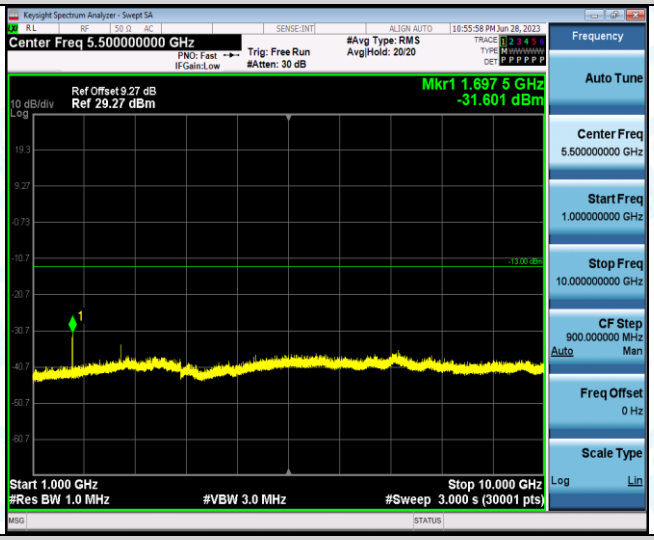
GSM850-251-0.15~30MHz



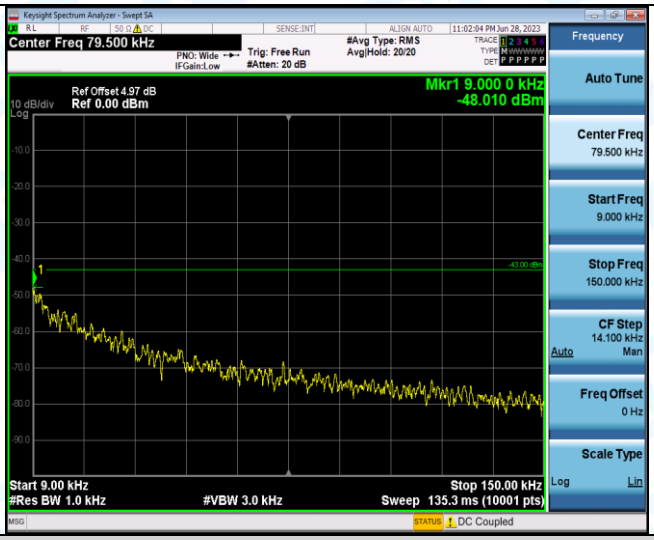
GSM850-251-30~1000MHz



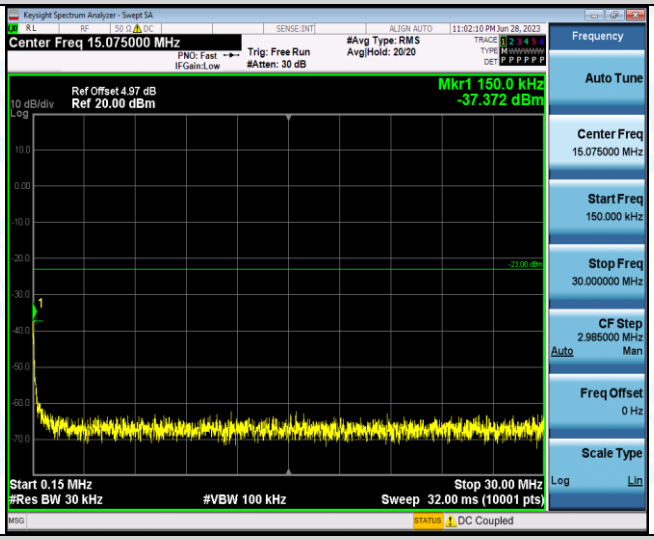
GSM850-251-1000~10000MHz



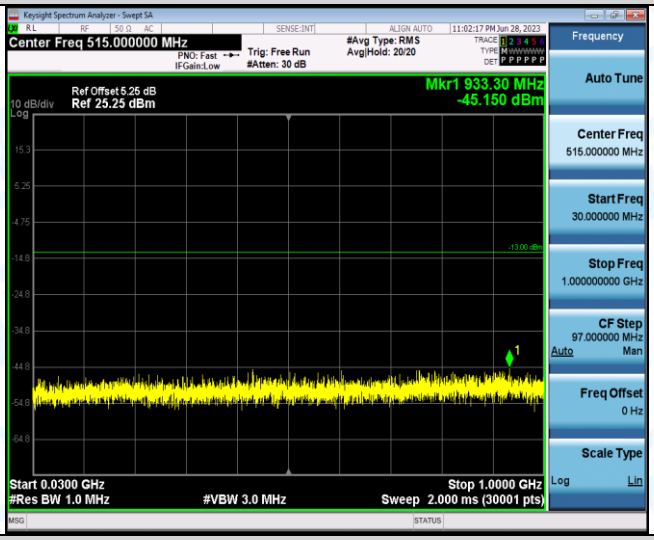
GSM1900-512-0.009~0.15MHz



GSM1900-512-0.15~30MHz

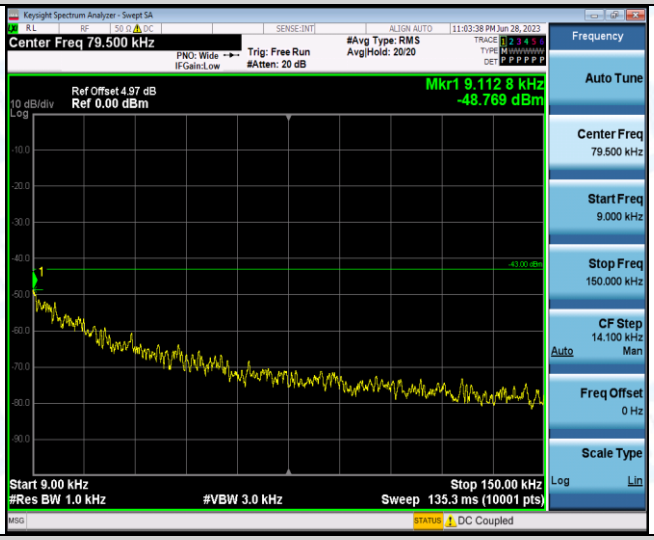


GSM1900-512-30~1000MHz

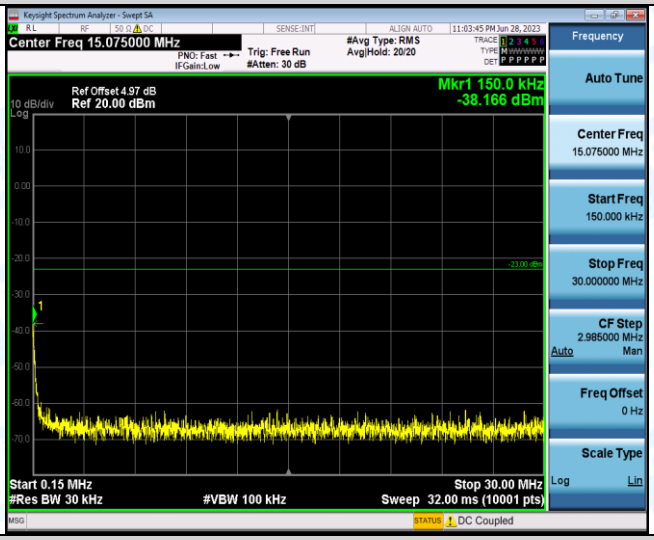


GSM1900-512-1000~18000MHz

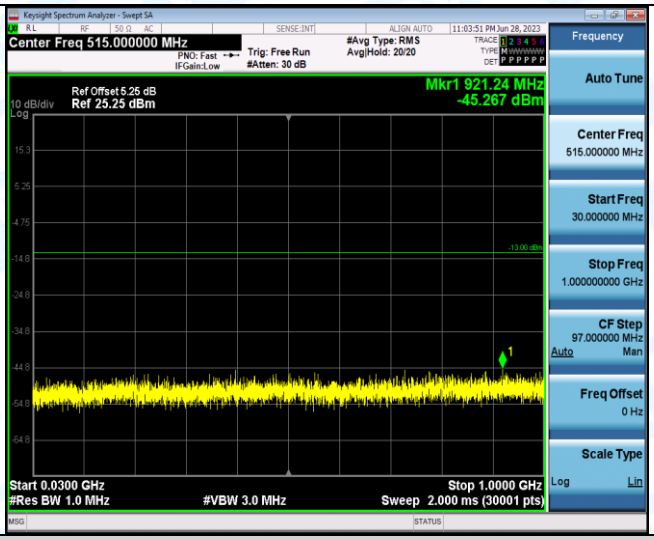
GSM1900-661-0.009~0.15MHz



GSM1900-661-0.15~30MHz

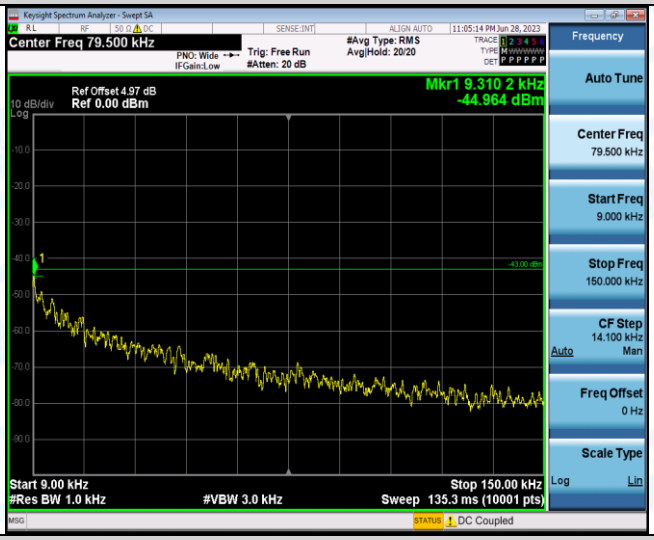


GSM1900-661-30~1000MHz

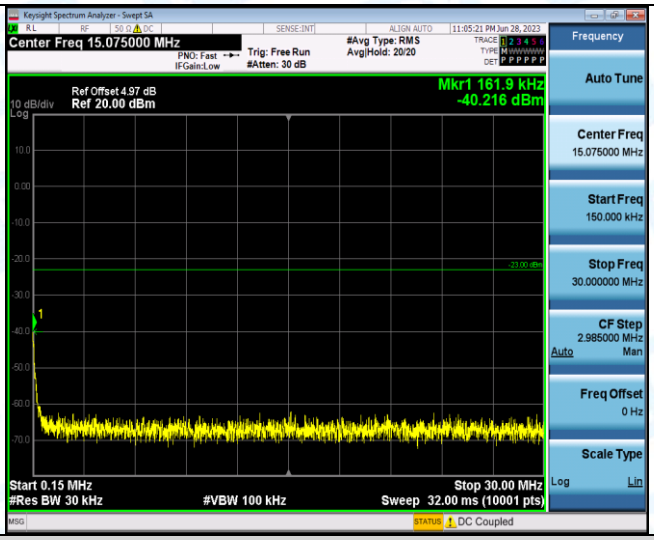


GSM1900-661-1000~18000MHz

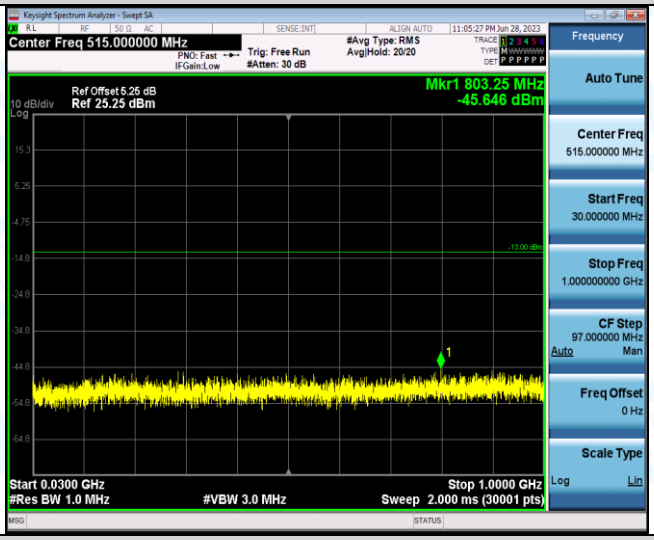
GSM1900-810-0.009~0.15MHz



GSM1900-810-0.15~30MHz



GSM1900-810-30~1000MHz



GSM1900-810-1000~18000MHz

Appendix F: Frequency Stability

Test Result

Voltage								
Band	Channel	PCL	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	5	VL	NT	16.37	0.019862	±2.5	PASS
GSM850	128	5	VN	NT	15.92	0.019316	±2.5	PASS
GSM850	128	5	VH	NT	16.85	0.020444	±2.5	PASS
GSM850	190	5	VL	NT	14.43	0.017248	±2.5	PASS
GSM850	190	5	VN	NT	13.27	0.015862	±2.5	PASS
GSM850	190	5	VH	NT	17.47	0.020882	±2.5	PASS
GSM850	251	5	VL	NT	17.50	0.020617	±2.5	PASS
GSM850	251	5	VN	NT	10.36	0.012205	±2.5	PASS
GSM850	251	5	VH	NT	14.92	0.017578	±2.5	PASS
GSM1900	512	0	VL	NT	107.16	0.057918	±2.5	PASS
GSM1900	512	0	VN	NT	109.58	0.059226	±2.5	PASS
GSM1900	512	0	VH	NT	111.90	0.060480	±2.5	PASS
GSM1900	661	0	VL	NT	105.48	0.056106	±2.5	PASS
GSM1900	661	0	VN	NT	110.09	0.058559	±2.5	PASS
GSM1900	661	0	VH	NT	111.68	0.059404	±2.5	PASS
GSM1900	810	0	VL	NT	115.91	0.060692	±2.5	PASS
GSM1900	810	0	VN	NT	114.20	0.059797	±2.5	PASS
GSM1900	810	0	VH	NT	117.91	0.061739	±2.5	PASS

Temperature								
Band	Channel	PCL	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	5	NV	-30	15.01	0.018212	±2.5	PASS
GSM850	128	5	NV	-20	18.89	0.022919	±2.5	PASS
GSM850	128	5	NV	-10	15.63	0.018964	±2.5	PASS
GSM850	128	5	NV	0	15.92	0.019316	±2.5	PASS
GSM850	128	5	NV	10	16.79	0.020371	±2.5	PASS
GSM850	128	5	NV	20	16.50	0.020019	±2.5	PASS
GSM850	128	5	NV	30	7.36	0.008930	±2.5	PASS
GSM850	128	5	NV	40	6.23	0.007559	±2.5	PASS
GSM850	128	5	NV	50	8.07	0.009791	±2.5	PASS
GSM850	190	5	NV	-30	17.18	0.020536	±2.5	PASS
GSM850	190	5	NV	-20	12.69	0.015169	±2.5	PASS
GSM850	190	5	NV	-10	15.30	0.018288	±2.5	PASS
GSM850	190	5	NV	0	13.27	0.015862	±2.5	PASS
GSM850	190	5	NV	10	15.34	0.018336	±2.5	PASS
GSM850	190	5	NV	20	14.08	0.016830	±2.5	PASS
GSM850	190	5	NV	30	14.69	0.017559	±2.5	PASS
GSM850	190	5	NV	40	18.40	0.021994	±2.5	PASS
GSM850	190	5	NV	50	11.33	0.013543	±2.5	PASS
GSM850	251	5	NV	-30	13.46	0.015858	±2.5	PASS
GSM850	251	5	NV	-20	15.85	0.018673	±2.5	PASS
GSM850	251	5	NV	-10	16.59	0.019545	±2.5	PASS
GSM850	251	5	NV	0	14.01	0.016506	±2.5	PASS
GSM850	251	5	NV	10	15.05	0.017731	±2.5	PASS
GSM850	251	5	NV	20	12.66	0.014915	±2.5	PASS
GSM850	251	5	NV	30	15.66	0.018450	±2.5	PASS
GSM850	251	5	NV	40	15.05	0.017731	±2.5	PASS
GSM850	251	5	NV	50	11.91	0.014032	±2.5	PASS
GSM1900	512	0	NV	-30	112.97	0.061058	±2.5	PASS
GSM1900	512	0	NV	-20	110.48	0.059712	±2.5	PASS
GSM1900	512	0	NV	-10	107.06	0.057864	±2.5	PASS
GSM1900	512	0	NV	0	109.58	0.059226	±2.5	PASS
GSM1900	512	0	NV	10	111.61	0.060323	±2.5	PASS
GSM1900	512	0	NV	20	110.87	0.059923	±2.5	PASS

GSM1900	512	0	NV	30	106.83	0.057740	±2.5	PASS
GSM1900	512	0	NV	40	109.22	0.059031	±2.5	PASS
GSM1900	512	0	NV	50	104.74	0.056610	±2.5	PASS
GSM1900	661	0	NV	-30	111.87	0.059505	±2.5	PASS
GSM1900	661	0	NV	-20	107.09	0.056963	±2.5	PASS
GSM1900	661	0	NV	-10	110.93	0.059005	±2.5	PASS
GSM1900	661	0	NV	0	109.26	0.058117	±2.5	PASS
GSM1900	661	0	NV	10	107.71	0.057293	±2.5	PASS
GSM1900	661	0	NV	20	108.55	0.057739	±2.5	PASS
GSM1900	661	0	NV	30	107.80	0.057340	±2.5	PASS
GSM1900	661	0	NV	40	107.67	0.057271	±2.5	PASS
GSM1900	661	0	NV	50	105.70	0.056223	±2.5	PASS
GSM1900	810	0	NV	-30	116.36	0.060928	±2.5	PASS
GSM1900	810	0	NV	-20	121.36	0.063546	±2.5	PASS
GSM1900	810	0	NV	-10	119.39	0.062514	±2.5	PASS
GSM1900	810	0	NV	0	119.04	0.062331	±2.5	PASS
GSM1900	810	0	NV	10	117.10	0.061315	±2.5	PASS
GSM1900	810	0	NV	20	114.87	0.060148	±2.5	PASS
GSM1900	810	0	NV	30	111.42	0.058341	±2.5	PASS
GSM1900	810	0	NV	40	111.68	0.058477	±2.5	PASS
GSM1900	810	0	NV	50	109.55	0.057362	±2.5	PASS