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Appendix A: Effective (Isotropic) Radiated Power Output Data

Band	Channel	PCL	ERP/EIRP (dBm)	ERP/EIRP (W)	FCC Limit (W)	ISED Limit (W)	Verdict
GSM850	128	5	32.38	1.73	7	11.5	PASS
GSM850	190	5	32.53	1.79	7	11.5	PASS
GSM850	251	5	32.32	1.71	7	11.5	PASS
GSM1900	512	0	30.85	1.22	2	2	PASS
GSM1900	661	0	30.74	1.19	2	2	PASS
GSM1900	810	0	30.79	1.20	2	2	PASS

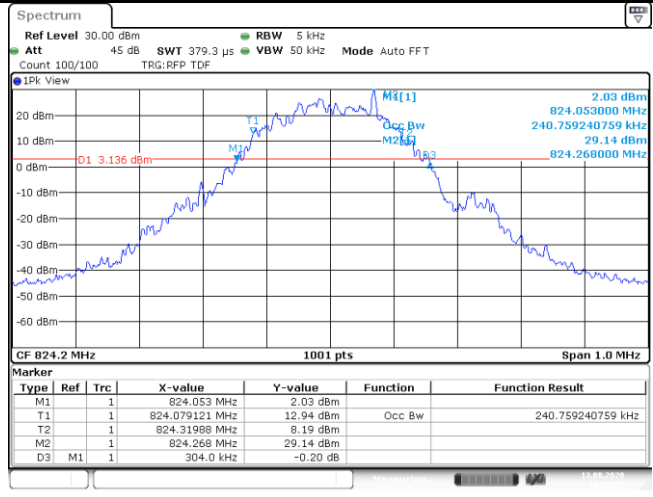
Appendix B: Occupied Bandwidth and 26dB Bandwidth

Test Result

Band	Channel	PCL	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	5	0.241	0.304	---	PASS
GSM850	190	5	0.246	0.304	---	PASS
GSM850	251	5	0.242	0.303	---	PASS
GSM1900	512	0	0.242	0.295	---	PASS
GSM1900	661	0	0.242	0.302	---	PASS
GSM1900	810	0	0.244	0.303	---	PASS

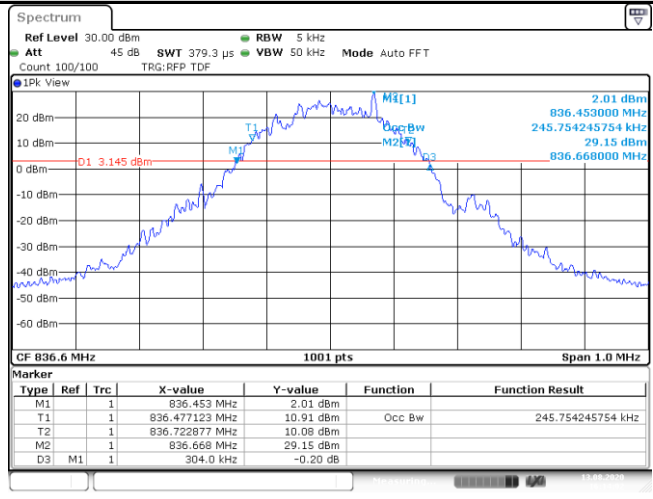
Test Graphs

GSM850-128-3



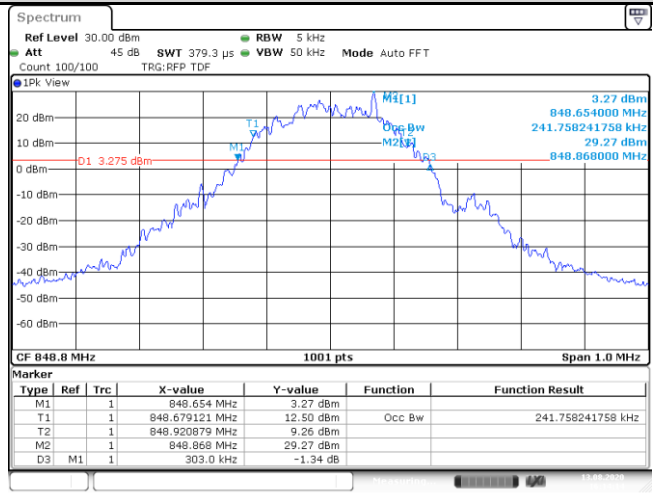
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GSM850-190-3



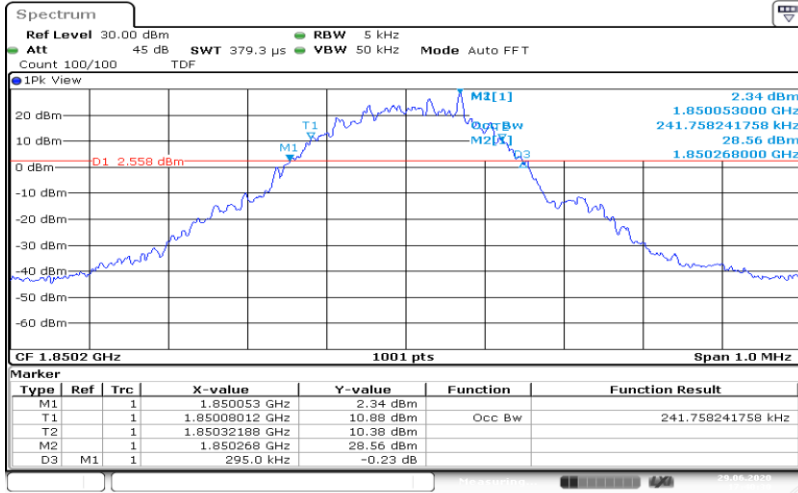
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GSM850-251-3



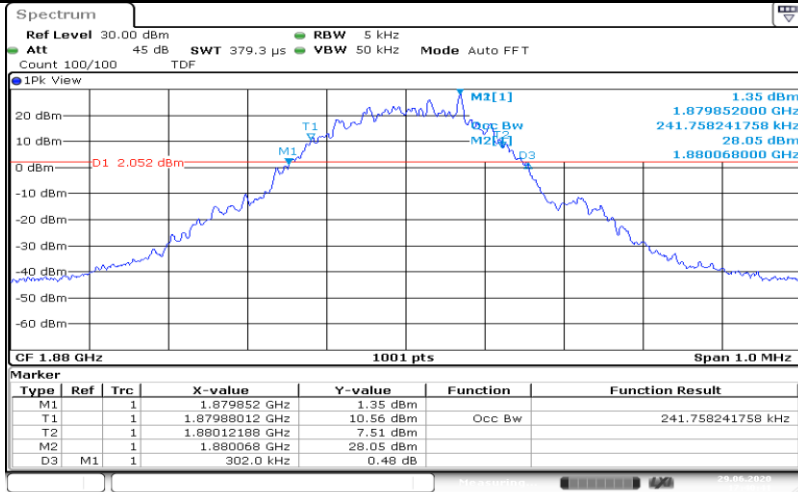
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GSM1900-512-0



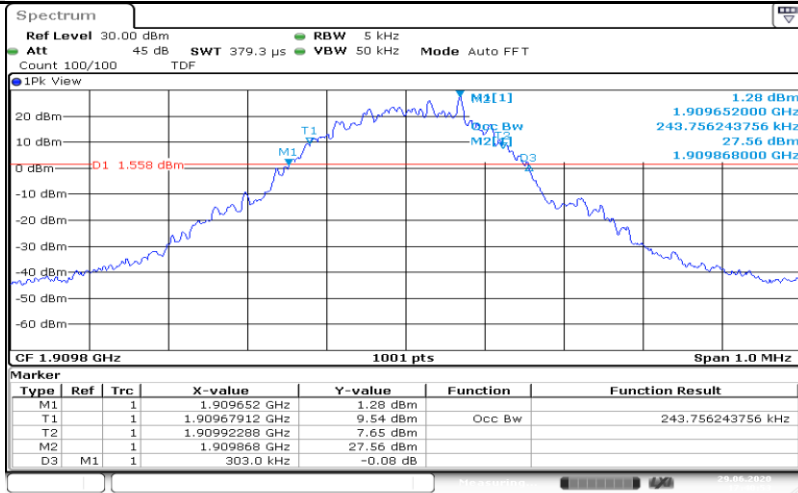
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GSM1900-661-0



Date: 29.JUN.2020 17:40:41

GSM1900-810-0



Date: 29.JUN.2020 17:40:53

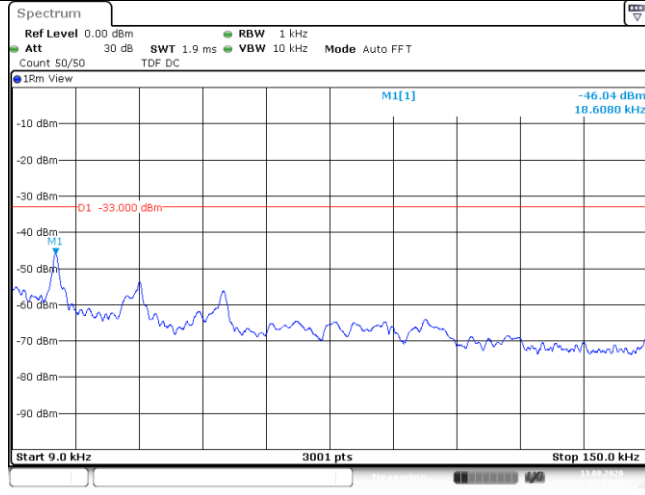
Appendix C: Spurious Emissions at Antenna Terminals

Test Result

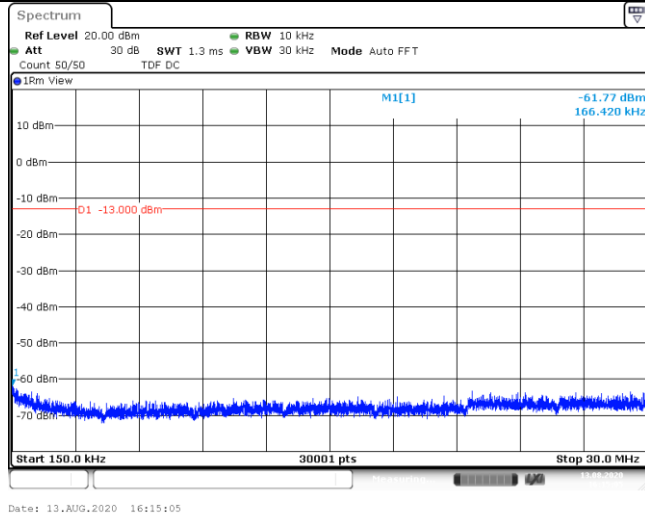
Band	Channel	PCL	Frequency Range(MHz)	Max.Freq. (MHz)	Result (dBm)	Limit (dBm)	Verdict
GSM850	128	5	0.009~0.15MHz	0.02	-46.04	-33	PASS
GSM850	128	5	0.15~30MHz	0.17	-61.77	-13	PASS
GSM850	128	5	30~1000MHz	996.99	-44.88	-13	PASS
GSM850	128	5	1000~1500MHz	1002.21	-43.73	-13	PASS
GSM850	128	5	1500~3000MHz	2973.33	-44.79	-13	PASS
GSM850	128	5	3000~10000MHz	3395.14	-42.33	-13	PASS
GSM850	190	5	0.009~0.15MHz	0.02	-46.15	-33	PASS
GSM850	190	5	0.15~30MHz	0.2	-61.31	-13	PASS
GSM850	190	5	30~1000MHz	985.68	-44.72	-13	PASS
GSM850	190	5	1000~1500MHz	1002.39	-43.82	-13	PASS
GSM850	190	5	1500~3000MHz	2971.33	-44.84	-13	PASS
GSM850	190	5	3000~10000MHz	3394.67	-44.95	-13	PASS
GSM850	251	5	0.009~0.15MHz	0.02	-45.78	-33	PASS
GSM850	251	5	0.15~30MHz	0.18	-59.74	-13	PASS
GSM850	251	5	30~1000MHz	961.04	-44.42	-13	PASS
GSM850	251	5	1000~1500MHz	1002.21	-43.83	-13	PASS
GSM850	251	5	1500~3000MHz	2950.88	-44.78	-13	PASS
GSM850	251	5	3000~10000MHz	3395.14	-41.92	-13	PASS
GSM1900	512	0	0.009~0.15MHz	0.02	-46.4	-43	PASS
GSM1900	512	0	0.15~30MHz	0.2	-62.75	-23	PASS
GSM1900	512	0	30~1000MHz	986.05	-44.71	-13	PASS
GSM1900	512	0	1000~3000MHz	2975.4	-41.53	-13	PASS
GSM1900	512	0	3000~10000MHz	3819.32	-42.38	-13	PASS
GSM1900	512	0	10000~18000MHz	17635.88	-38.31	-13	PASS
GSM1900	661	0	0.009~0.15MHz	0.02	-46.53	-43	PASS
GSM1900	661	0	0.15~30MHz	0.17	-60.83	-23	PASS
GSM1900	661	0	30~1000MHz	915.56	-44.16	-13	PASS
GSM1900	661	0	1000~3000MHz	2968.93	-41.42	-13	PASS
GSM1900	661	0	3000~10000MHz	6914.39	-48.04	-13	PASS
GSM1900	661	0	10000~18000MHz	17642.55	-38.04	-13	PASS
GSM1900	810	0	0.009~0.15MHz	0.02	-46.37	-43	PASS
GSM1900	810	0	0.15~30MHz	0.2	-61.82	-23	PASS
GSM1900	810	0	30~1000MHz	992.42	-44.6	-13	PASS
GSM1900	810	0	1000~3000MHz	2967.2	-41.41	-13	PASS
GSM1900	810	0	3000~10000MHz	3820.02	-42.52	-13	PASS
GSM1900	810	0	10000~18000MHz	17659.88	-38.31	-13	PASS

Test Graphs

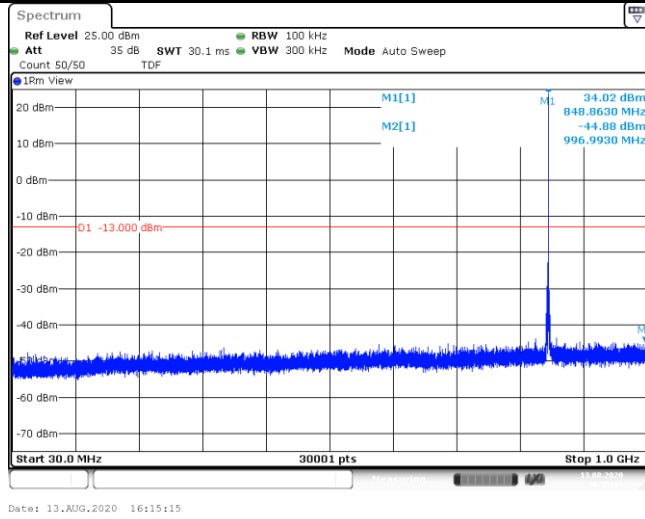
GSM850-128-3-0.009~0.15MHz-0.02



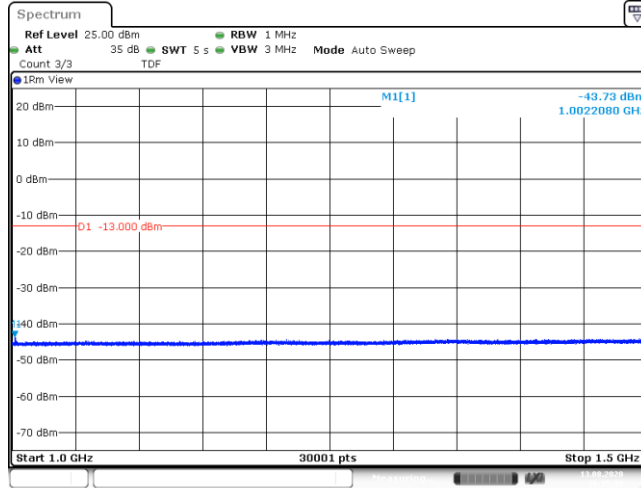
GSM850-128-3-0.15~30MHz-0.17



GSM850-128-3-30~1000MHz-996.99

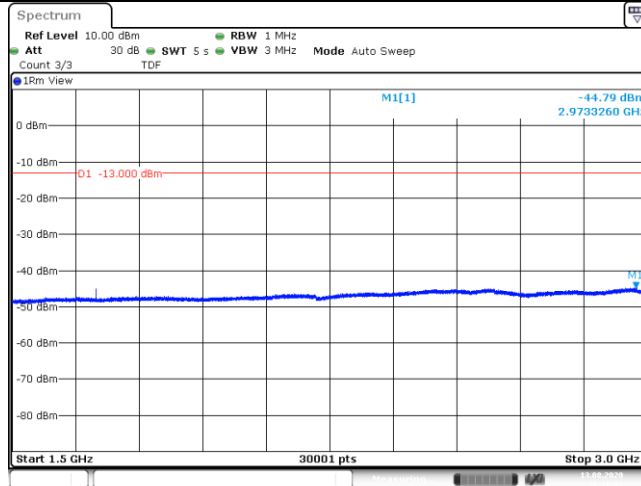


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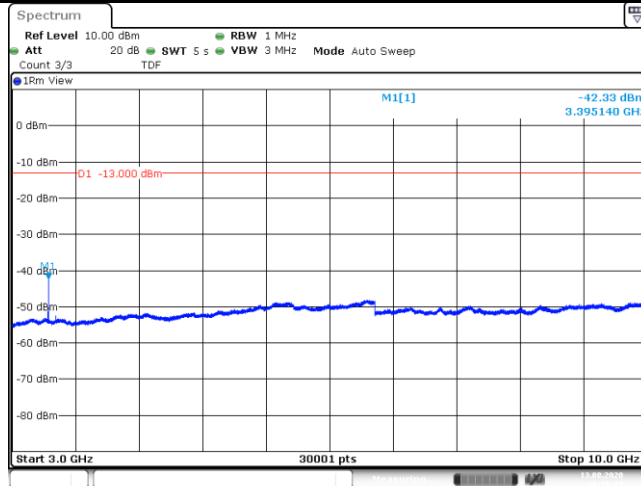
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GSM850-128-3-1500~3000MHz-2973.33



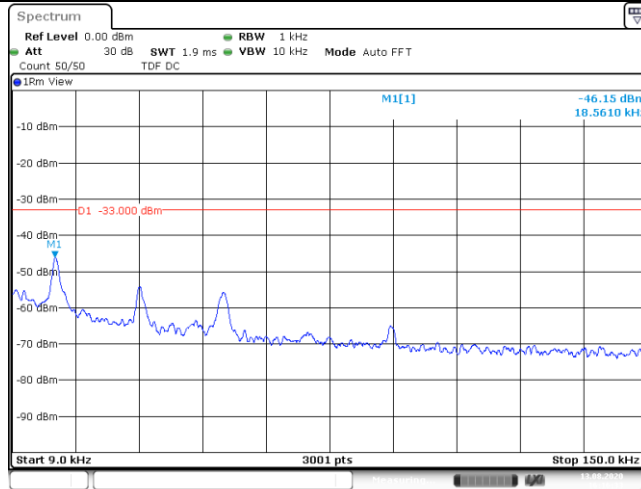
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GSM850-128-3-3000~10000MHz-3395.14



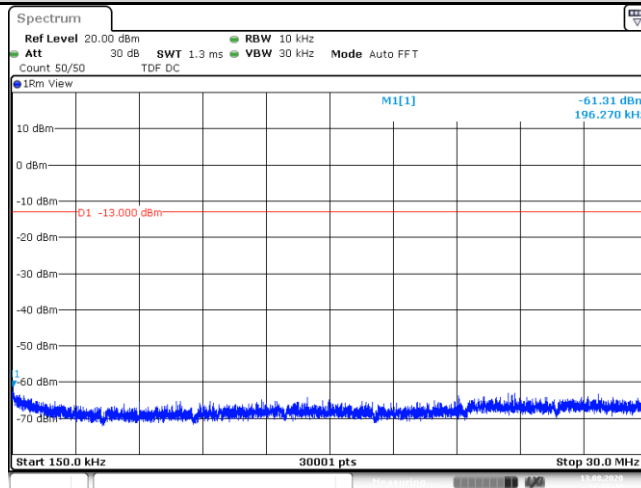
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GSM850-190-3-0.009~0.15MHz-0.02



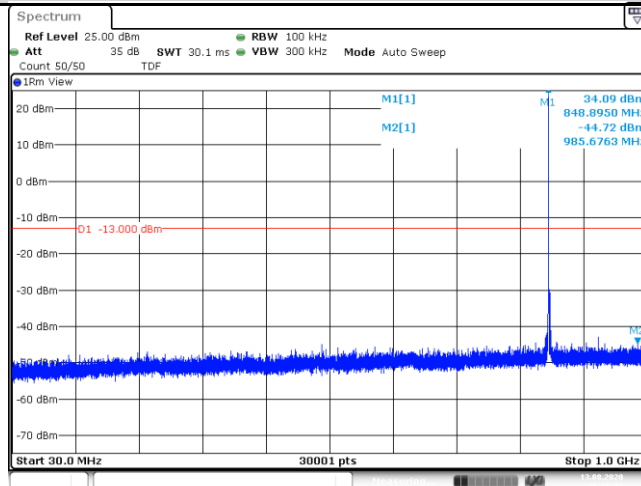
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GSM850-190-3-0.15~30MHz-0.2



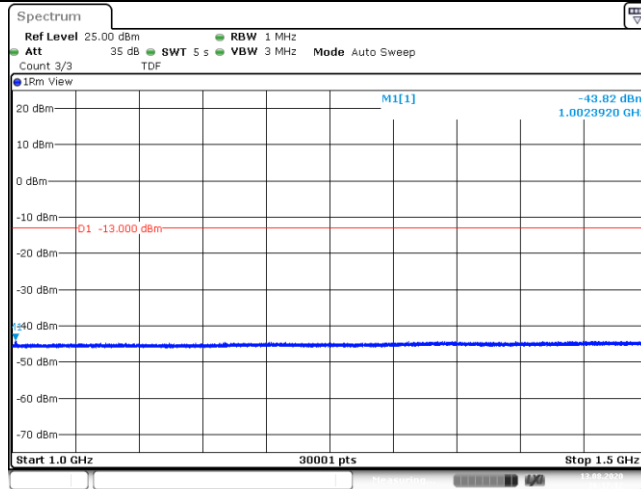
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GSM850-190-3-30~1000MHz-985.68



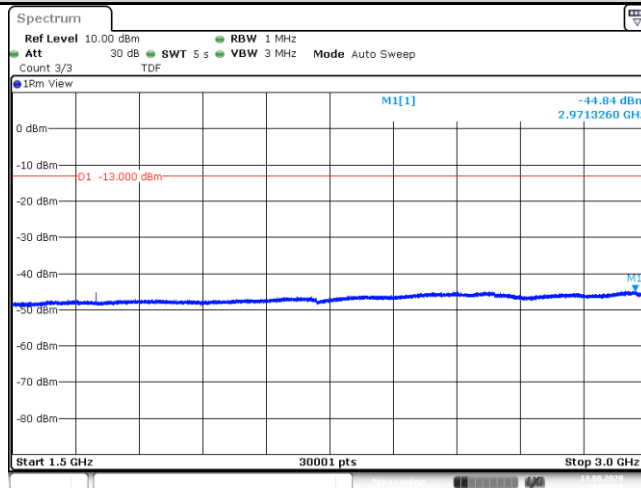
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GSM850-190-3-1000~1500MHz-1002.39



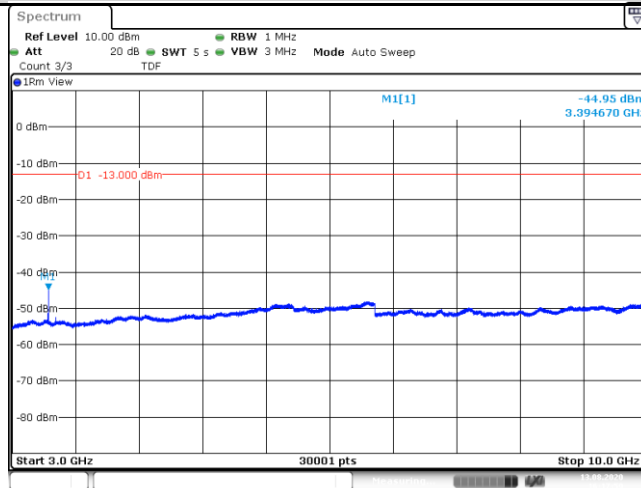
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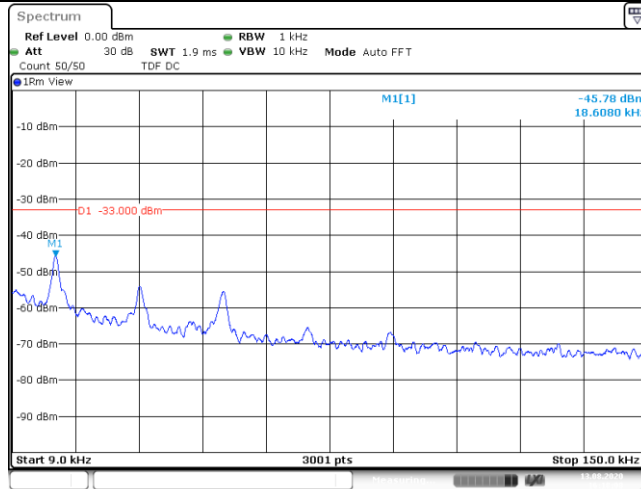
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GSM850-190-3-3000~10000MHz-3394.67



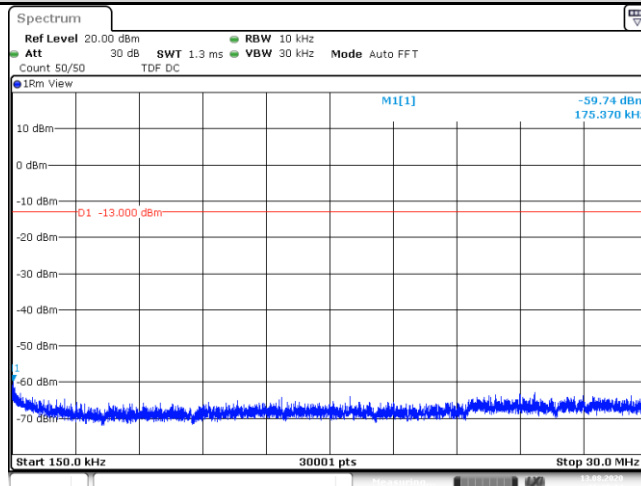
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GSM850-251-3-0.009~0.15MHz-0.02



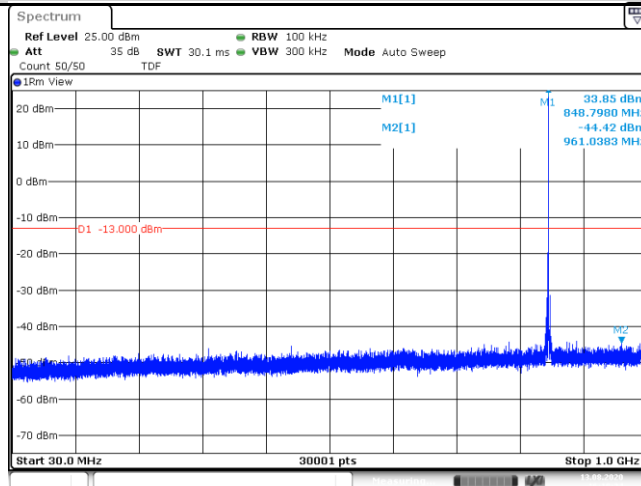
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GSM850-251-3-0.15~30MHz-0.18



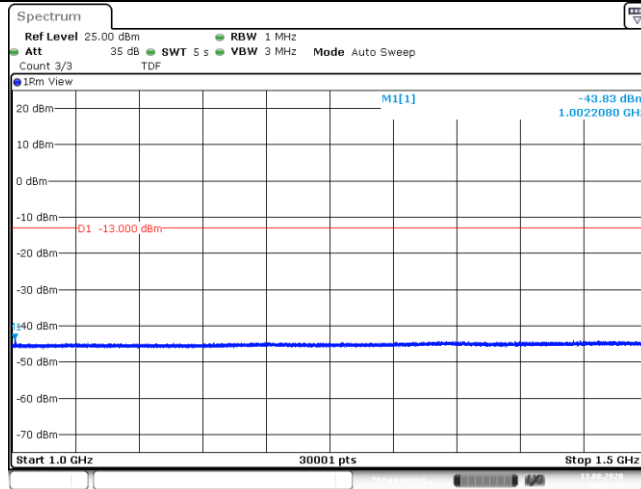
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GSM850-251-3-30~1000MHz-961.04



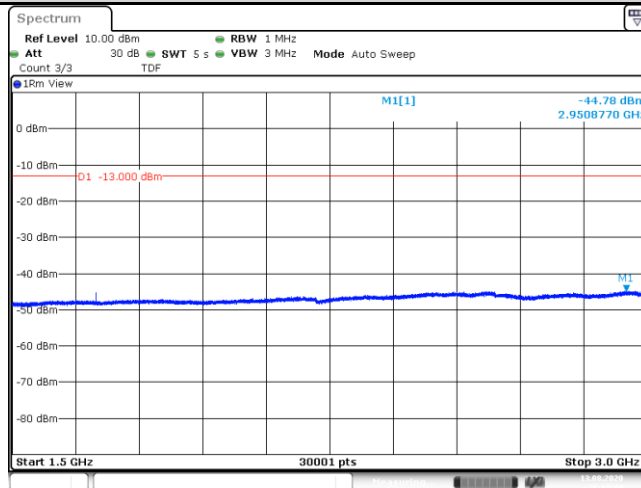
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GSM850-251-3-1000~1500MHz-1002.21



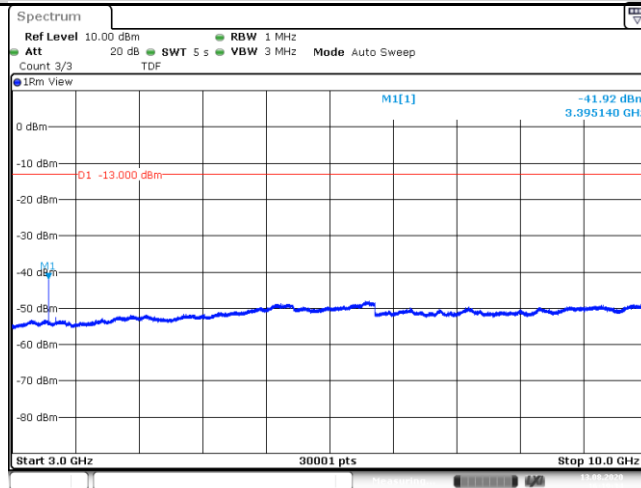
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GSM850-251-3-1500~3000MHz-2950.88



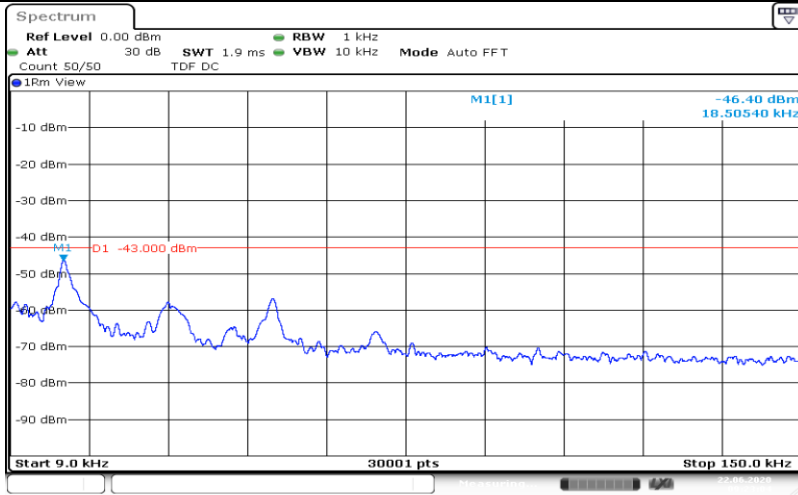
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GSM850-251-3-3000~10000MHz-3395.14



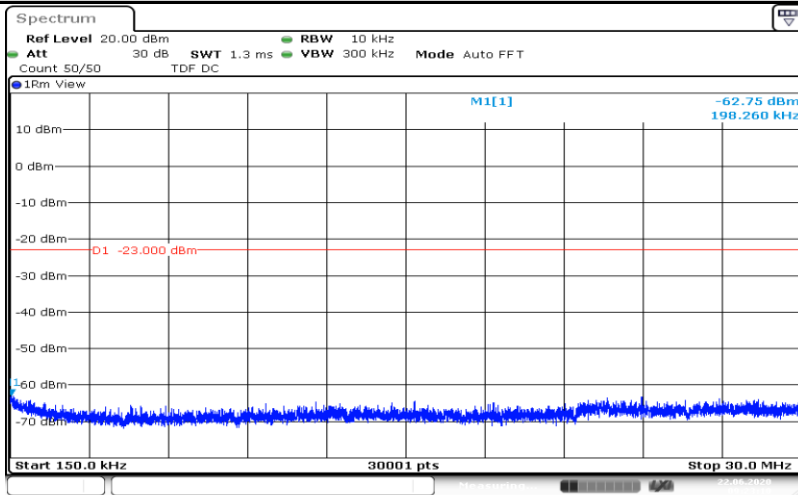
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GSM1900-512-0-0.009~0.15MHz-0.02



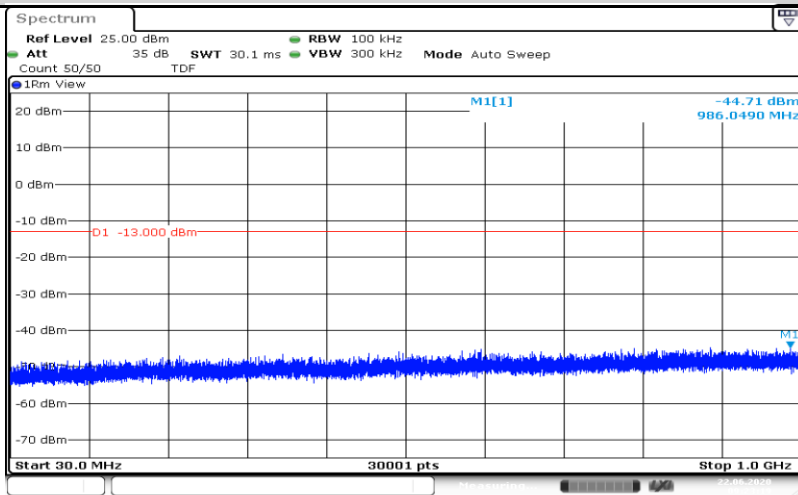
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GSM1900-512-0-0.15~30MHz-0.2



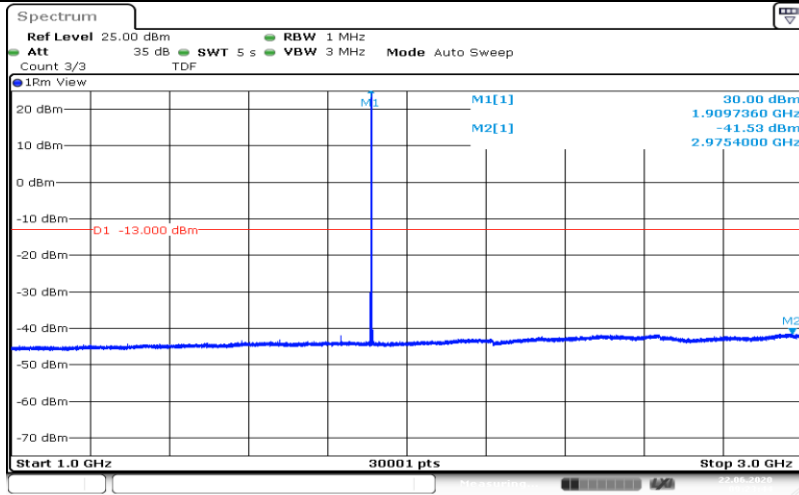
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GSM1900-512-0-30~1000MHz-986.05

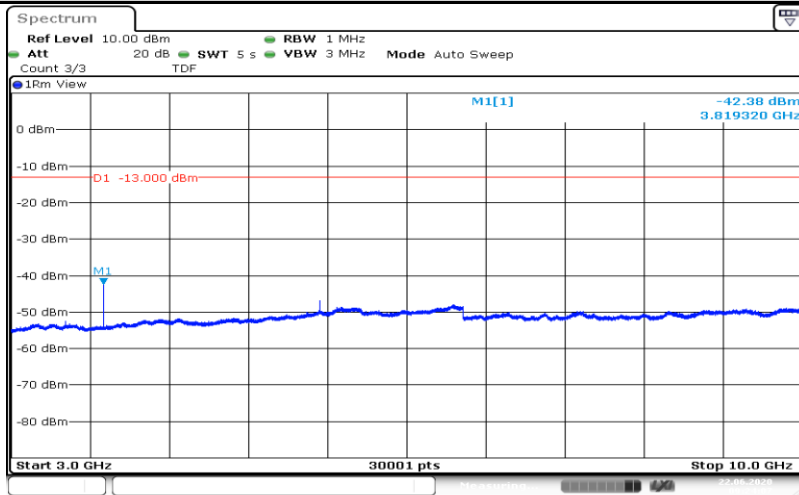


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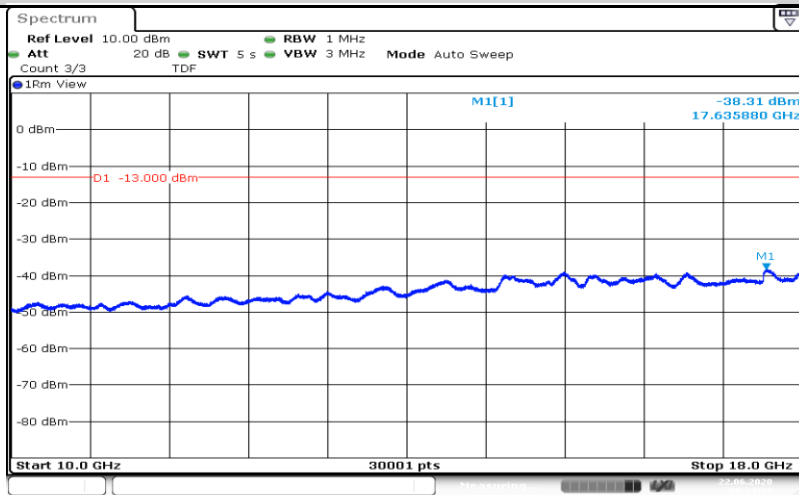
GSM1900-512-0-1000~3000MHz-2975.4



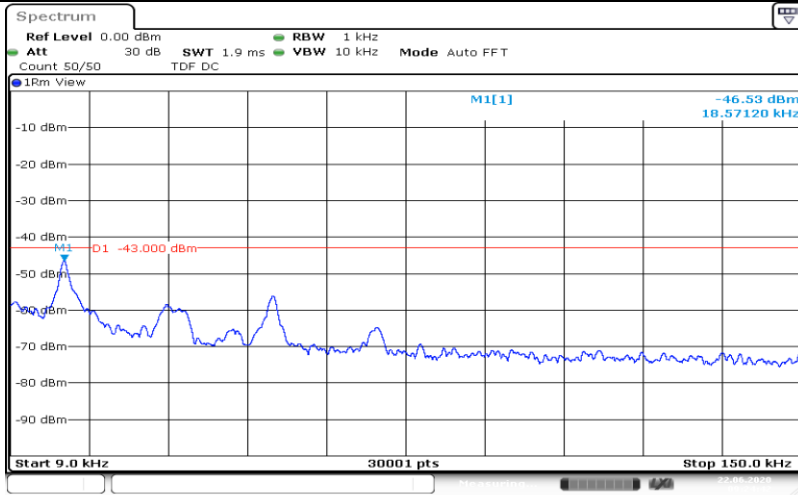
GSM1900-512-0-3000~10000MHz-3819.32



GSM1900-512-0-10000~18000MHz-17635.88

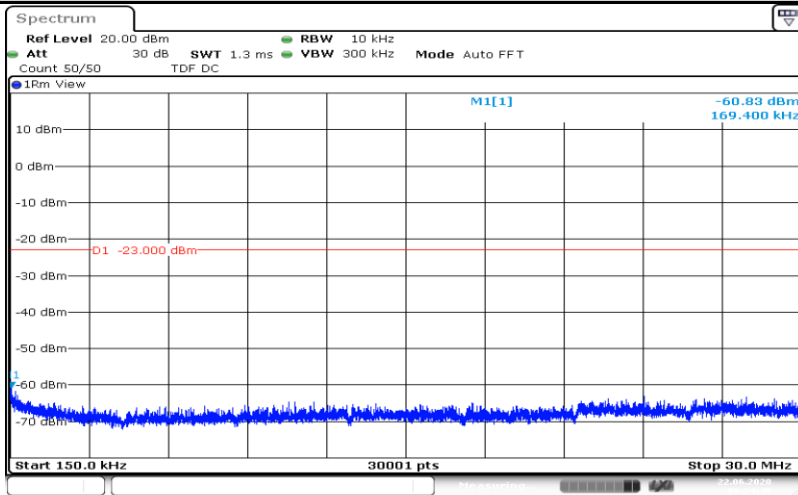


GSM1900-661-0-0.009~0.15MHz-0.02



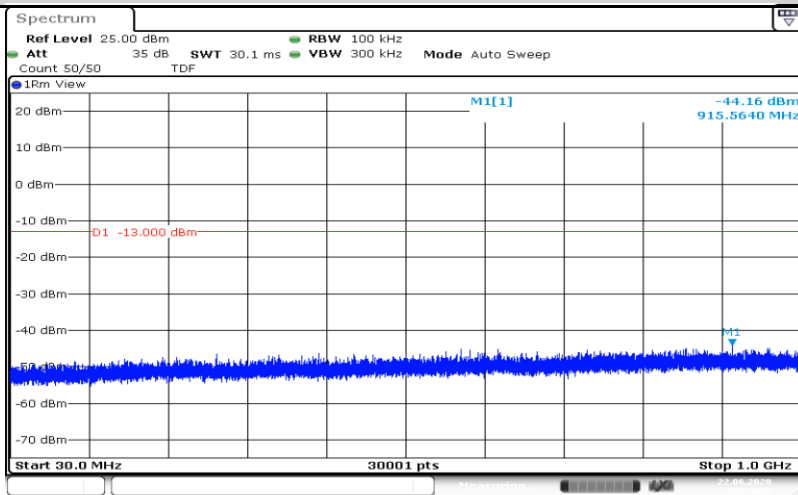
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GSM1900-661-0-0.15~30MHz-0.17



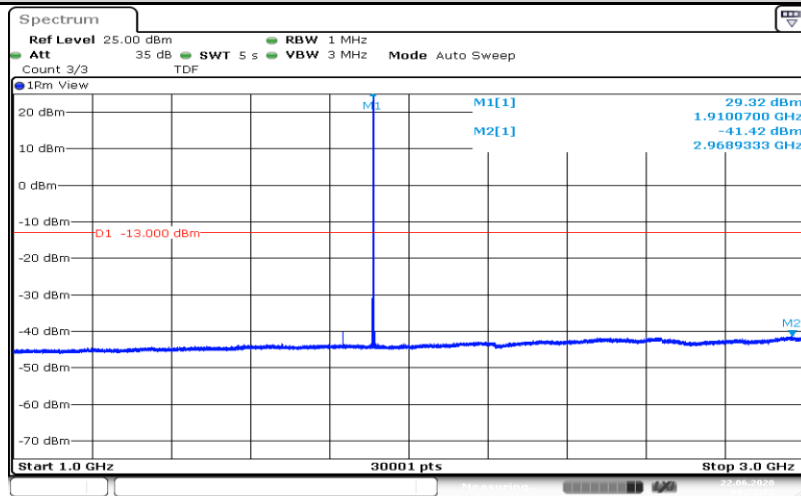
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GSM1900-661-0-30~1000MHz-915.56



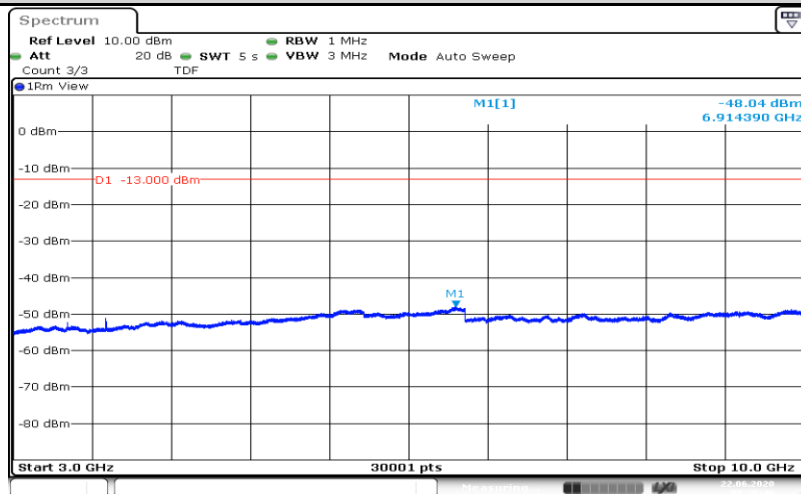
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GSM1900-661-0-1000~3000MHz-2968.93



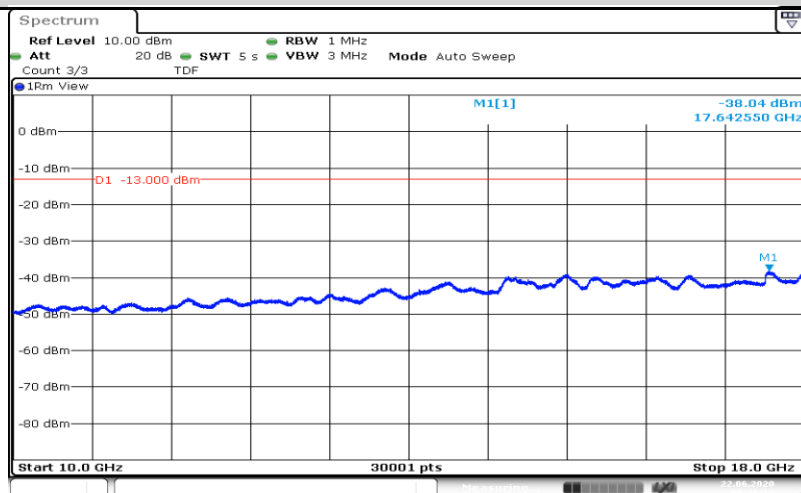
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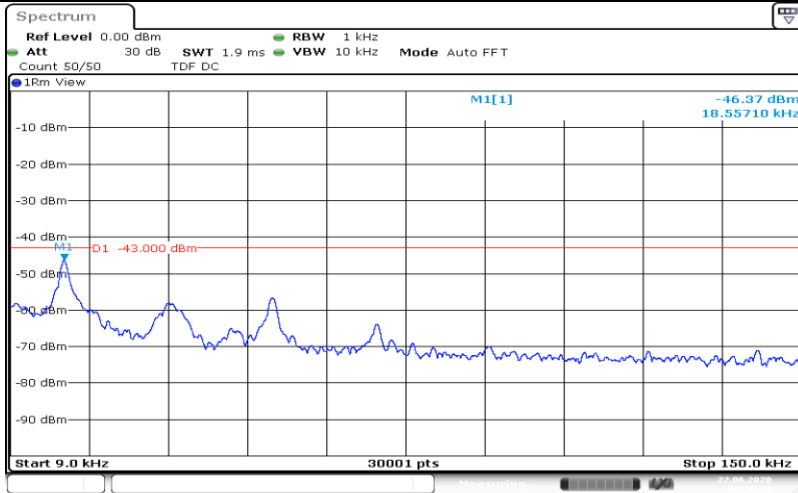
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GSM1900-661-0-10000~18000MHz-17642.55



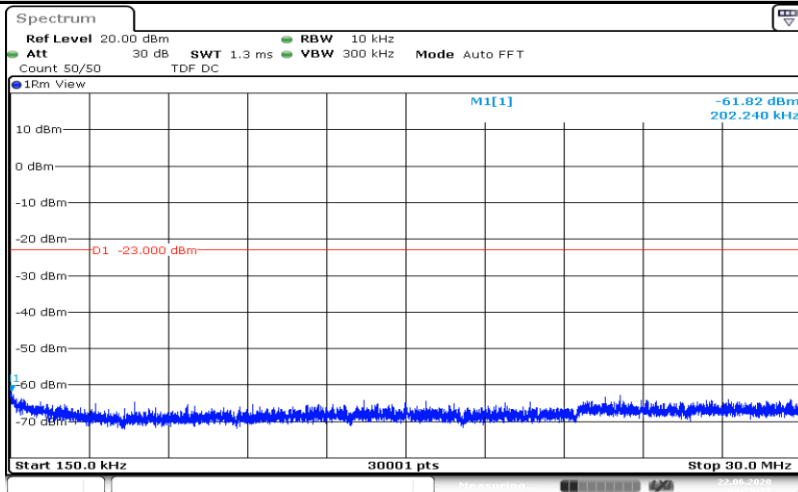
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GSM1900-810-0-0.009~0.15MHz-0.02



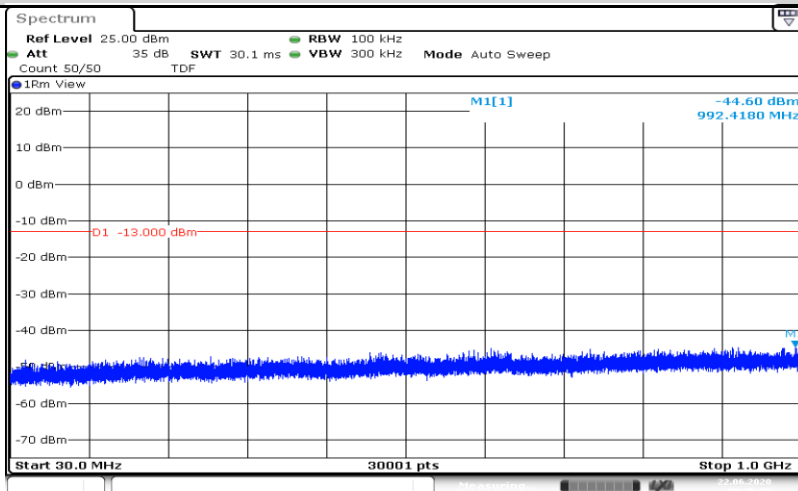
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GSM1900-810-0-0.15~30MHz-0.2



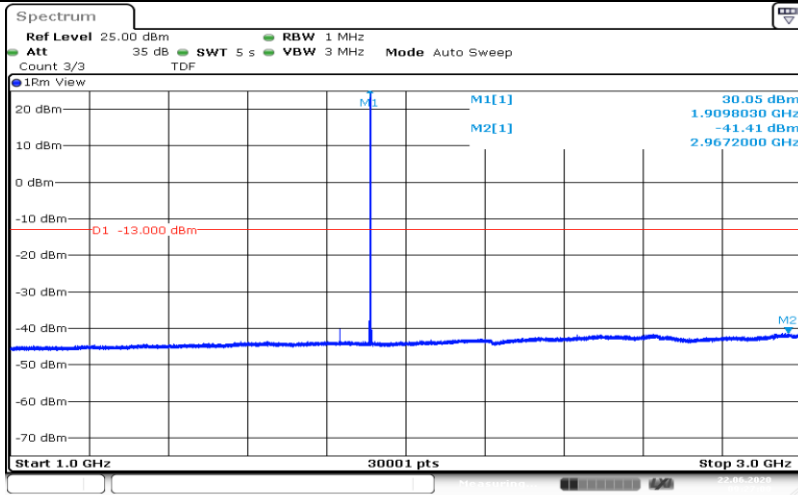
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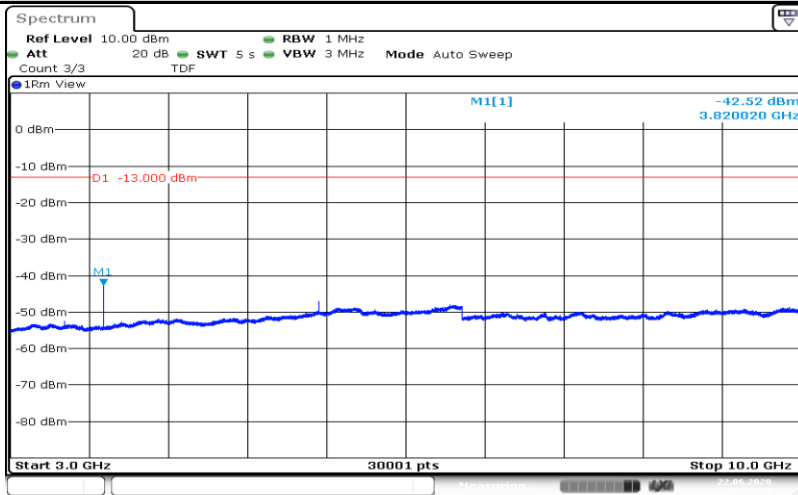


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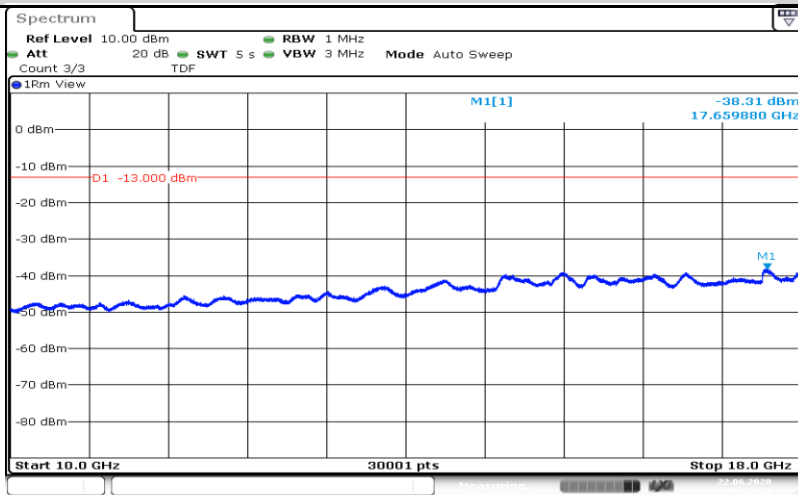
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GSM1900-810-0-3000~10000MHz-3820.02



GSM1900-810-0-10000~18000MHz-17659.88



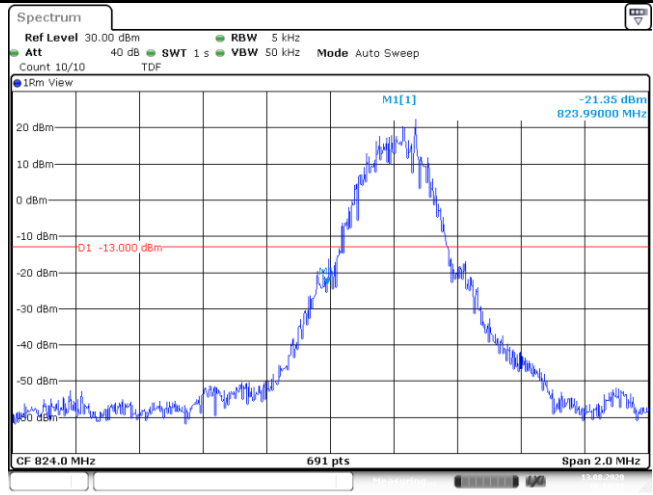
Appendix D: Spruious Emissions at Antenna Terminals - Band Edge

Test Result

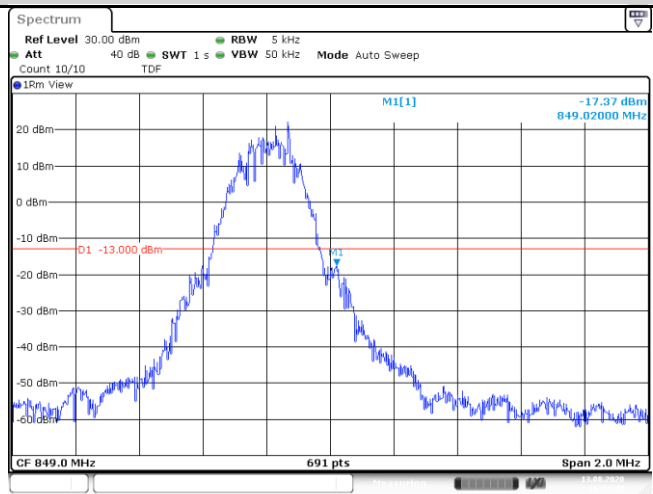
Band	Channel	PCL	Freq (MHz)	Result (dBm)	Limit(dBm)	Verdict
GSM850	128	5	823.99	-16.26	-13	PASS
GSM850	251	5	849.02	-17.37	-13	PASS
GSM1900	512	0	1850.00	-18.89	-13	PASS
GSM1900	810	0	1910.03	-21.23	-13	PASS

Test Graphs

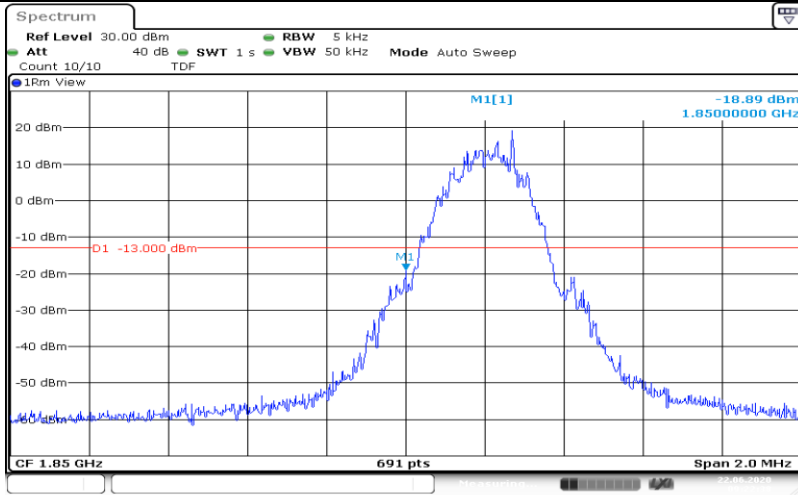
GSM850-128-3-824.00



GSM850-251-3-849.02

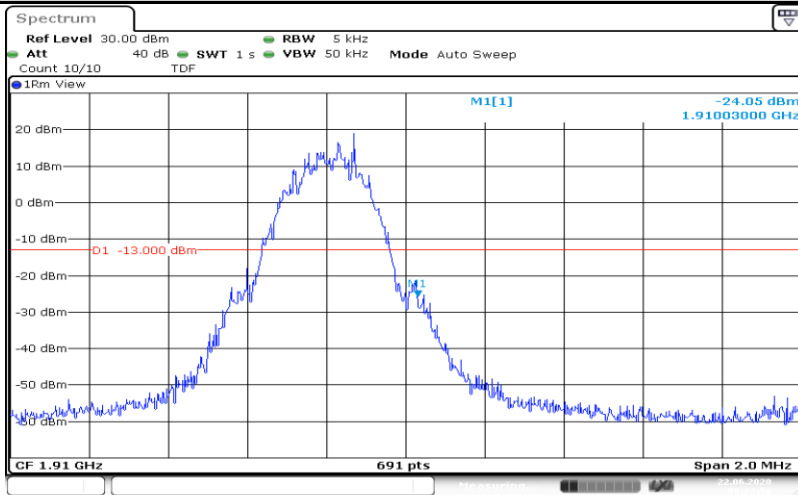


GSM1900-512-0-1850.00



Date: 22. JUN. 2020 09:22:39

GSM1900-810-0-1910.03



Date: 22. JUN. 2020 09:22:56

Appendix E: Frequency Stability

Test Result

Voltage								
Band	Channel	PCL	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	5	VL	NT	18.60	0.022567	±2.5	PASS
GSM850	128	5	VN	NT	16.05	0.019473	±2.5	PASS
GSM850	128	5	VH	NT	15.43	0.018721	±2.5	PASS
GSM850	190	5	VL	NT	13.11	0.015671	±2.5	PASS
GSM850	190	5	VN	NT	18.24	0.021803	±2.5	PASS
GSM850	190	5	VH	NT	16.56	0.019794	±2.5	PASS
GSM850	251	5	VL	NT	10.85	0.012783	±2.5	PASS
GSM850	251	5	VN	NT	12.98	0.015292	±2.5	PASS
GSM850	251	5	VH	NT	16.01	0.018862	±2.5	PASS
GSM1900	512	0	VL	NT	13.01	0.007032	±2.5	PASS
GSM1900	512	0	VN	NT	6.30	0.003405	±2.5	PASS
GSM1900	512	0	VH	NT	14.27	0.007713	±2.5	PASS
GSM1900	661	0	VL	NT	10.69	0.005686	±2.5	PASS
GSM1900	661	0	VN	NT	14.30	0.007606	±2.5	PASS
GSM1900	661	0	VH	NT	9.78	0.005202	±2.5	PASS
GSM1900	810	0	VL	NT	4.91	0.002571	±2.5	PASS
GSM1900	810	0	VN	NT	8.94	0.004681	±2.5	PASS
GSM1900	810	0	VH	NT	0.39	0.000204	±2.5	PASS

Temperature								
Band	Channel	PCL	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	5	NV	-40	16.27	0.019740	±2.5	PASS
GSM850	128	5	NV	-30	19.18	0.023271	±2.5	PASS
GSM850	128	5	NV	-20	17.63	0.021390	±2.5	PASS
GSM850	128	5	NV	-10	18.85	0.022871	±2.5	PASS
GSM850	128	5	NV	0	13.04	0.015821	±2.5	PASS
GSM850	128	5	NV	10	20.76	0.025188	±2.5	PASS
GSM850	128	5	NV	20	18.27	0.022167	±2.5	PASS
GSM850	128	5	NV	30	17.60	0.021354	±2.5	PASS
GSM850	128	5	NV	40	17.89	0.021706	±2.5	PASS
GSM850	128	5	NV	50	14.92	0.018102	±2.5	PASS
GSM850	128	5	NV	55	16.50	0.020019	±2.5	PASS
GSM850	128	5	NV	60	18.73	0.022725	±2.5	PASS
GSM850	128	5	NV	70	14.56	0.017666	±2.5	PASS
GSM850	128	5	NV	80	19.95	0.024205	±2.5	PASS
GSM850	128	5	NV	85	17.43	0.021148	±2.5	PASS
GSM850	190	5	NV	-40	16.21	0.019376	±2.5	PASS
GSM850	190	5	NV	-30	15.56	0.018599	±2.5	PASS
GSM850	190	5	NV	-20	15.27	0.018252	±2.5	PASS
GSM850	190	5	NV	-10	16.05	0.019185	±2.5	PASS
GSM850	190	5	NV	0	16.40	0.019603	±2.5	PASS
GSM850	190	5	NV	10	16.27	0.019448	±2.5	PASS
GSM850	190	5	NV	20	8.52	0.010184	±2.5	PASS
GSM850	190	5	NV	30	9.43	0.011272	±2.5	PASS
GSM850	190	5	NV	40	12.14	0.014511	±2.5	PASS

Produkte
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GSM850	190	5	NV	50	14.27	0.017057	±2.5	PASS
GSM850	190	5	NV	55	15.85	0.018946	±2.5	PASS
GSM850	190	5	NV	60	15.82	0.018910	±2.5	PASS
GSM850	190	5	NV	70	12.88	0.015396	±2.5	PASS
GSM850	190	5	NV	80	12.62	0.015085	±2.5	PASS
GSM850	190	5	NV	85	15.43	0.018444	±2.5	PASS
GSM850	251	5	NV	-40	14.46	0.017036	±2.5	PASS
GSM850	251	5	NV	-30	14.75	0.017377	±2.5	PASS
GSM850	251	5	NV	-20	6.33	0.007458	±2.5	PASS
GSM850	251	5	NV	-10	7.75	0.009131	±2.5	PASS
GSM850	251	5	NV	0	9.17	0.010803	±2.5	PASS
GSM850	251	5	NV	10	11.07	0.013042	±2.5	PASS
GSM850	251	5	NV	20	14.01	0.016506	±2.5	PASS
GSM850	251	5	NV	30	7.23	0.008518	±2.5	PASS
GSM850	251	5	NV	40	10.46	0.012323	±2.5	PASS
GSM850	251	5	NV	50	12.98	0.015292	±2.5	PASS
GSM850	251	5	NV	55	20.99	0.024729	±2.5	PASS
GSM850	251	5	NV	60	8.68	0.010226	±2.5	PASS
GSM850	251	5	NV	70	10.36	0.012205	±2.5	PASS
GSM850	251	5	NV	80	12.91	0.015210	±2.5	PASS
GSM850	251	5	NV	85	8.23	0.009696	±2.5	PASS
GSM1900	512	0	NV	-40	17.69	0.009561	±2.5	PASS
GSM1900	512	0	NV	-30	22.60	0.012215	±2.5	PASS
GSM1900	512	0	NV	-20	12.82	0.006929	±2.5	PASS
GSM1900	512	0	NV	-10	9.88	0.005340	±2.5	PASS
GSM1900	512	0	NV	0	10.49	0.005670	±2.5	PASS
GSM1900	512	0	NV	10	13.92	0.007524	±2.5	PASS
GSM1900	512	0	NV	20	19.44	0.010507	±2.5	PASS
GSM1900	512	0	NV	30	14.11	0.007626	±2.5	PASS
GSM1900	512	0	NV	40	8.94	0.004832	±2.5	PASS
GSM1900	512	0	NV	50	25.89	0.013993	±2.5	PASS
GSM1900	512	0	NV	60	24.63	0.013312	±2.5	PASS
GSM1900	512	0	NV	70	25.38	0.013717	±2.5	PASS
GSM1900	512	0	NV	80	9.91	0.005356	±2.5	PASS
GSM1900	512	0	NV	85	12.66	0.006843	±2.5	PASS
GSM1900	661	0	NV	-40	-6.91	-0.003676	±2.5	PASS
GSM1900	661	0	NV	-30	-2.39	-0.001271	±2.5	PASS
GSM1900	661	0	NV	-20	-0.48	-0.000255	±2.5	PASS
GSM1900	661	0	NV	-10	8.56	0.004553	±2.5	PASS
GSM1900	661	0	NV	0	-2.91	-0.001548	±2.5	PASS
GSM1900	661	0	NV	10	3.45	0.001835	±2.5	PASS
GSM1900	661	0	NV	20	-6.62	-0.003521	±2.5	PASS
GSM1900	661	0	NV	30	1.26	0.000670	±2.5	PASS
GSM1900	661	0	NV	40	-9.10	-0.004840	±2.5	PASS
GSM1900	661	0	NV	50	2.26	0.001202	±2.5	PASS
GSM1900	661	0	NV	60	-6.30	-0.003351	±2.5	PASS
GSM1900	661	0	NV	70	4.00	0.002128	±2.5	PASS
GSM1900	661	0	NV	80	-5.04	-0.002681	±2.5	PASS
GSM1900	661	0	NV	85	4.97	0.002644	±2.5	PASS
GSM1900	810	0	NV	-40	10.04	0.005257	±2.5	PASS
GSM1900	810	0	NV	-30	1.03	0.000539	±2.5	PASS
GSM1900	810	0	NV	-20	12.53	0.006561	±2.5	PASS
GSM1900	810	0	NV	-10	4.97	0.002602	±2.5	PASS
GSM1900	810	0	NV	0	-2.52	-0.001320	±2.5	PASS

Produkte
Products

GSM1900	810	0	NV	10	9.56	0.005006	±2.5	PASS
GSM1900	810	0	NV	20	1.49	0.000780	±2.5	PASS
GSM1900	810	0	NV	30	-3.71	-0.001943	±2.5	PASS
GSM1900	810	0	NV	40	6.42	0.003362	±2.5	PASS
GSM1900	810	0	NV	50	1.29	0.000675	±2.5	PASS
GSM1900	810	0	NV	60	-4.97	-0.002602	±2.5	PASS
GSM1900	810	0	NV	70	6.94	0.003634	±2.5	PASS
GSM1900	810	0	NV	80	0.45	0.000236	±2.5	PASS
GSM1900	810	0	NV	85	-6.49	-0.003398	±2.5	PASS

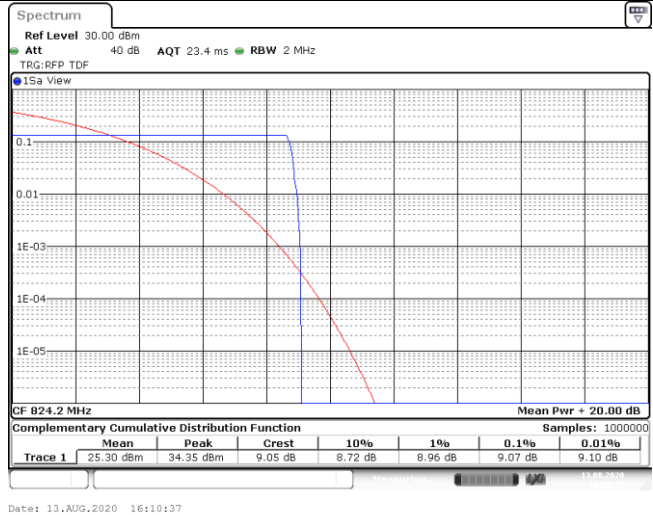
Appendix F: Peak-to-Average Ratio

Test Result

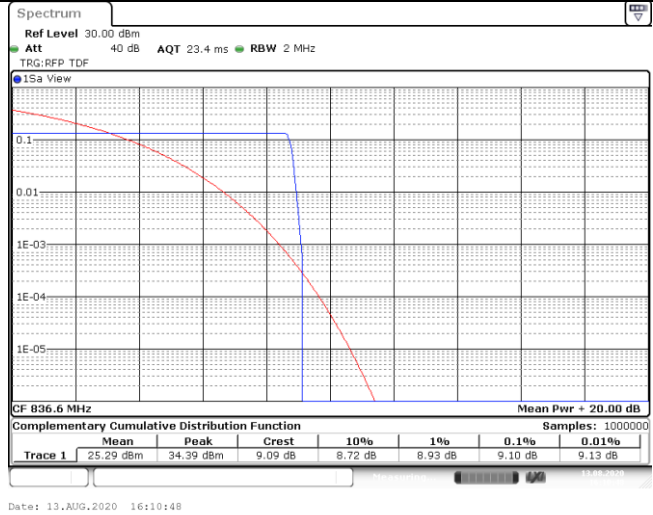
Band	Channel	PCL	Result(dB)	Limit(dB)	Verdict
GSM850	128	5	9.07	13	PASS
GSM850	190	5	9.10	13	PASS
GSM850	251	5	9.13	13	PASS
GSM1900	512	0	9.01	13	PASS
GSM1900	661	0	9.01	13	PASS
GSM1900	810	0	9.01	13	PASS

Test Graphs

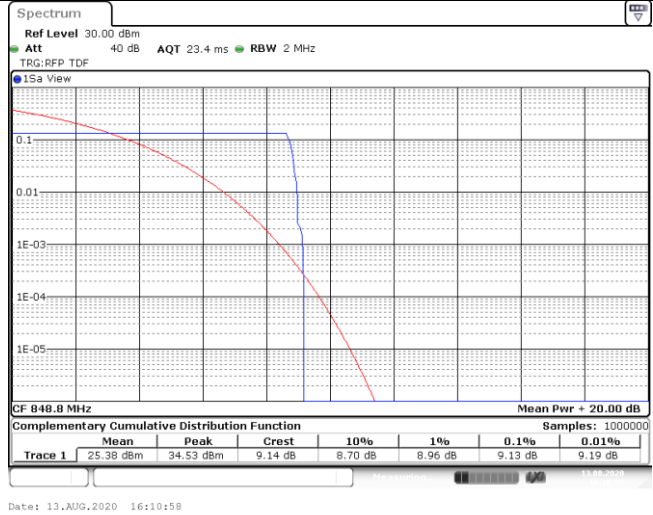
GSM850-128-3



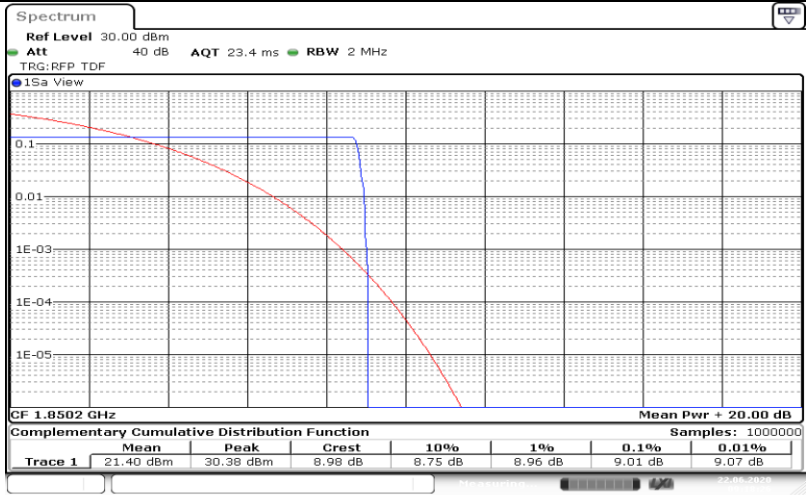
GSM850-190-3



GSM850-251-3

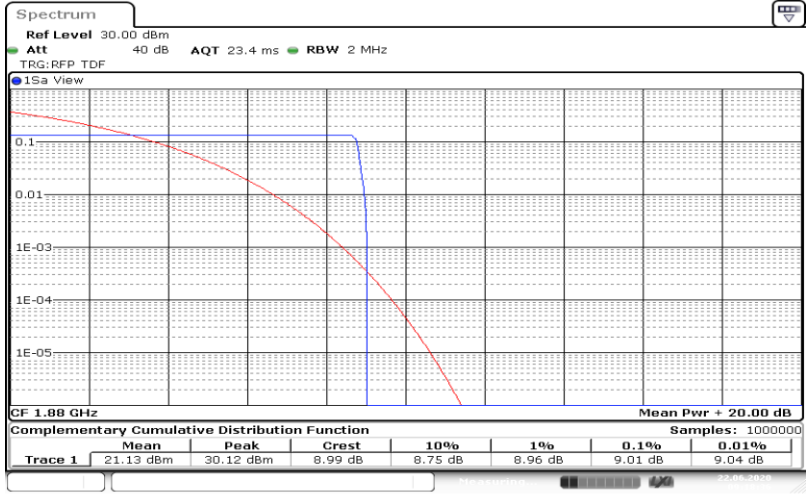


GSM1900-512-0



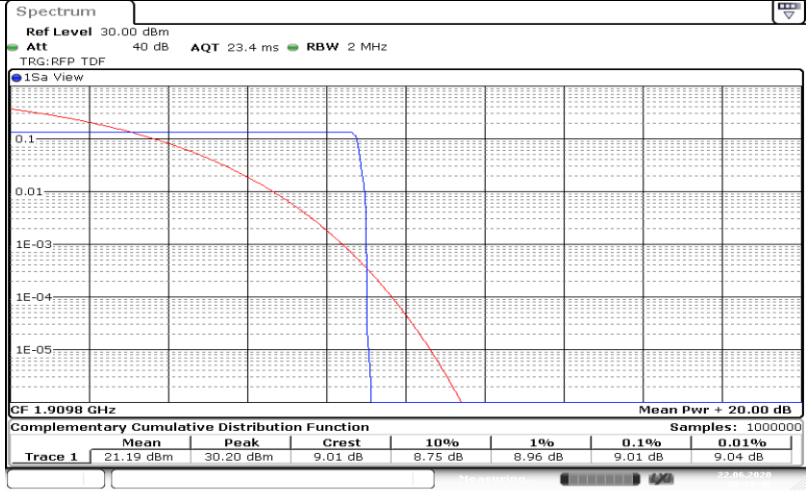
Date: 22. JUN. 2020 09:18:27

GSM1900-661-0



Date: 22. JUN. 2020 09:18:37

GSM1900-810-0



Date: 22. JUN. 2020 09:18:47