



Appendix B

GSM 850 & 1900



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1. Effective (Isotropic) Radiated Power Output Data

1.1. Test Result

CONFIG 0:

Band	Channel	Slot	Conducted Power (dBm)	ERP (dBm)	Limit(dBm)	Verdict
GSM850	128	---	32.35	23.80	38.45	PASS
GSM850	190	---	32.53	23.98	38.45	PASS
GSM850	251	---	32.55	24.00	38.45	PASS
EGPRS850	128	1	25.75	17.20	38.45	PASS
EGPRS850	128	2	22.89	14.34	38.45	PASS
EGPRS850	128	3	21.28	12.73	38.45	PASS
EGPRS850	128	4	19.95	11.40	38.45	PASS
EGPRS850	190	1	25.84	17.29	38.45	PASS
EGPRS850	190	2	23.17	14.62	38.45	PASS
EGPRS850	190	3	21.27	12.72	38.45	PASS
EGPRS850	190	4	19.81	11.26	38.45	PASS
EGPRS850	251	1	25.86	17.31	38.45	PASS
EGPRS850	251	2	23.05	14.50	38.45	PASS
EGPRS850	251	3	21.34	12.79	38.45	PASS
EGPRS850	251	4	19.80	11.25	38.45	PASS

Band	Channel	Slot	Conducted Power (dBm)	EIRP (dBm)	Limit(dBm)	Verdict
GSM1900	512	---	30.02	27.52	33.00	PASS
GSM1900	661	---	30.21	27.71	33.00	PASS
GSM1900	810	---	30.35	27.85	33.00	PASS
EGPRS1900	512	1	25.66	23.16	33.00	PASS
EGPRS1900	512	2	22.68	20.18	33.00	PASS
EGPRS1900	512	3	20.64	18.14	33.00	PASS
EGPRS1900	512	4	19.03	16.53	33.00	PASS
EGPRS1900	661	1	25.44	22.94	33.00	PASS
EGPRS1900	661	2	22.41	19.91	33.00	PASS
EGPRS1900	661	3	20.53	18.03	33.00	PASS
EGPRS1900	661	4	19.01	16.51	33.00	PASS
EGPRS1900	810	1	25.17	22.67	33.00	PASS
EGPRS1900	810	2	22.19	19.69	33.00	PASS
EGPRS1900	810	3	20.51	18.01	33.00	PASS
EGPRS1900	810	4	19.04	16.54	33.00	PASS



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CONFIG 1:

Band	Channel	Slot	Conducted Power (dBm)	ERP (dBm)	Limit(dBm)	Verdict
GSM850	128	---	33.32	26.47	38.45	PASS
GSM850	190	---	33.05	26.20	38.45	PASS
GSM850	251	---	33.12	26.27	38.45	PASS
EGPRS850	128	1	26.56	19.71	38.45	PASS
EGPRS850	128	2	23.51	16.66	38.45	PASS
EGPRS850	128	3	22.75	15.90	38.45	PASS
EGPRS850	128	4	20.52	13.67	38.45	PASS
EGPRS850	190	1	26.54	19.69	38.45	PASS
EGPRS850	190	2	23.59	16.74	38.45	PASS
EGPRS850	190	3	22.74	15.89	38.45	PASS
EGPRS850	190	4	20.53	13.68	38.45	PASS
EGPRS850	251	1	26.53	19.68	38.45	PASS
EGPRS850	251	2	23.54	16.69	38.45	PASS
EGPRS850	251	3	22.75	15.90	38.45	PASS
EGPRS850	251	4	20.54	13.69	38.45	PASS

Band	Channel	Slot	Conducted Power (dBm)	EIRP (dBm)	Limit(dBm)	Verdict
GSM1900	512	---	30.61	26.81	33.00	PASS
GSM1900	661	---	30.60	26.80	33.00	PASS
GSM1900	810	---	30.63	26.83	33.00	PASS
EGPRS1900	512	1	25.03	21.23	33.00	PASS
EGPRS1900	512	2	22.31	18.51	33.00	PASS
EGPRS1900	512	3	20.38	16.58	33.00	PASS
EGPRS1900	512	4	19.08	15.28	33.00	PASS
EGPRS1900	661	1	25.07	21.27	33.00	PASS
EGPRS1900	661	2	22.33	18.53	33.00	PASS
EGPRS1900	661	3	20.45	16.65	33.00	PASS
EGPRS1900	661	4	19.06	15.26	33.00	PASS
EGPRS1900	810	1	25.01	21.21	33.00	PASS
EGPRS1900	810	2	22.33	18.53	33.00	PASS
EGPRS1900	810	3	20.27	16.47	33.00	PASS
EGPRS1900	810	4	19.07	15.27	33.00	PASS

Remark:

a: For getting the EIRP (Efficient Isotropic Radiated Power), the following formula should be taken to calculate it,

ERP [dBm] = Conducted Power [dBm] + Gain [dBd]

EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]



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2. Peak-to-Average Ratio

2.1. Test Result

Band	Channel	Result(dB)	Limit(dB)	Verdict
GSM850	128	8.9	13	PASS
GSM850	190	8.93	13	PASS
GSM850	251	8.96	13	PASS
EGPRS850	128	12.12	13	PASS
EGPRS850	190	11.97	13	PASS
EGPRS850	251	11.86	13	PASS
GSM1900	512	8.96	13	PASS
GSM1900	661	9.8	13	PASS
GSM1900	810	9.77	13	PASS
EGPRS1900	512	12.46	13	PASS
EGPRS1900	661	12.2	13	PASS
EGPRS1900	810	12.06	13	PASS



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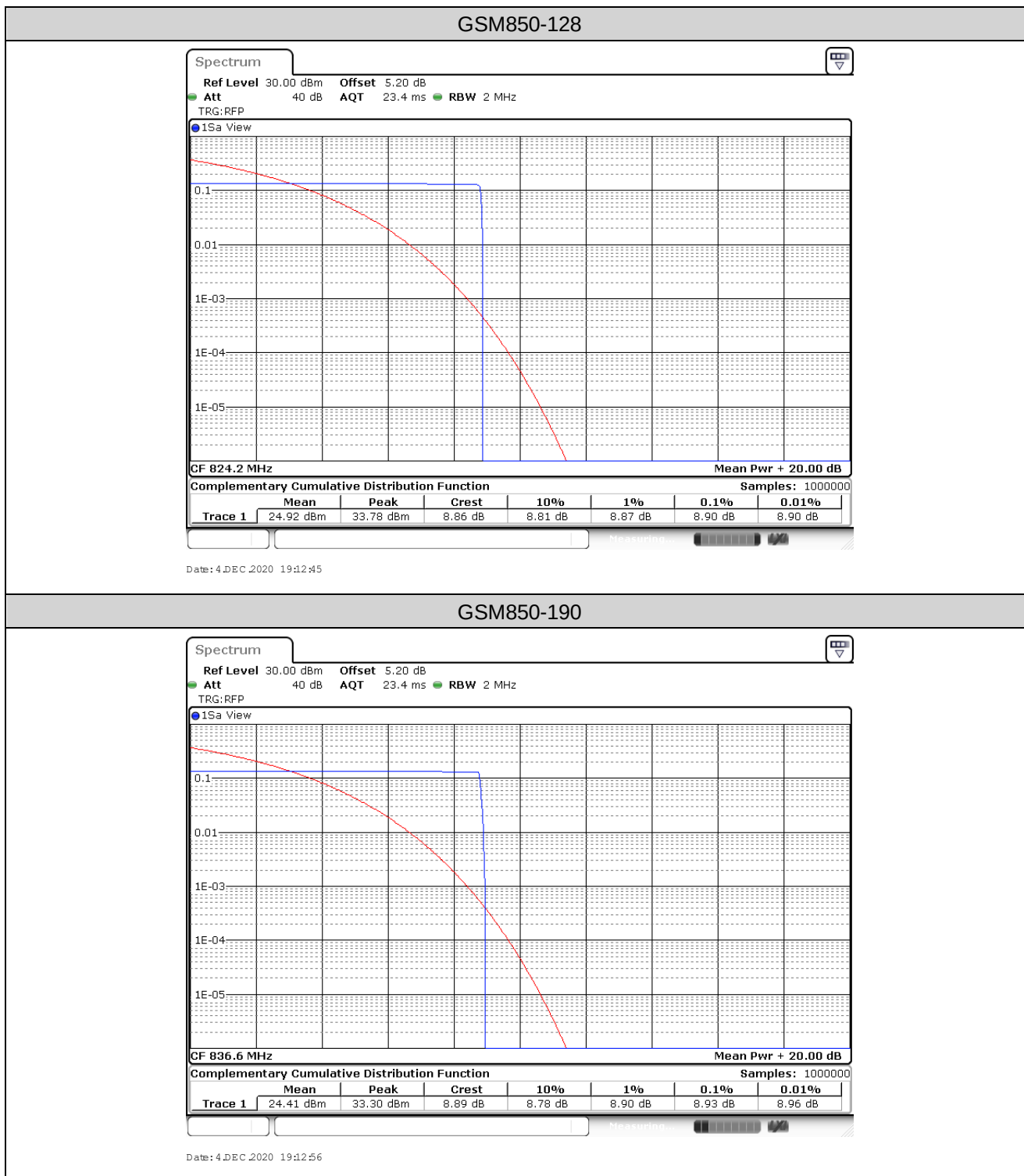
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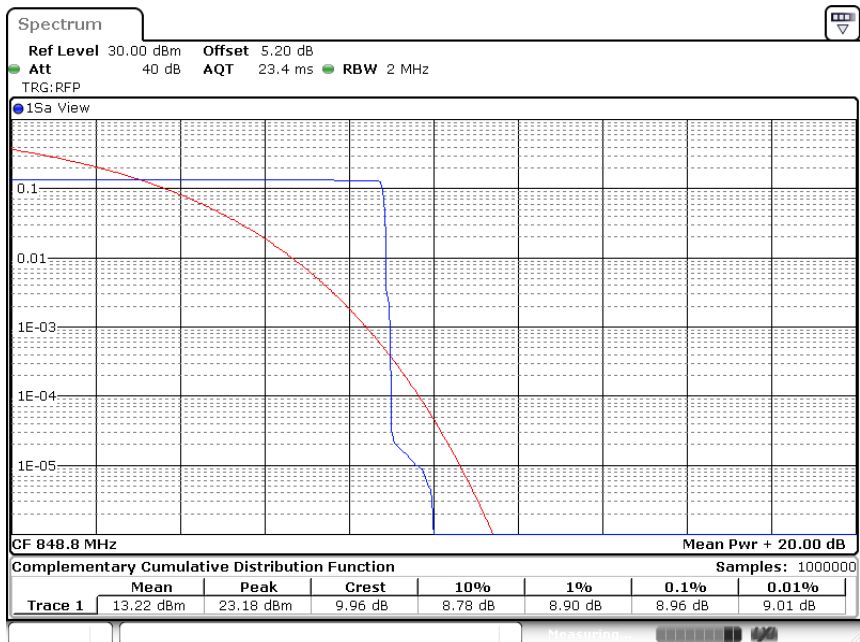
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2.2.Part II - Test Plots

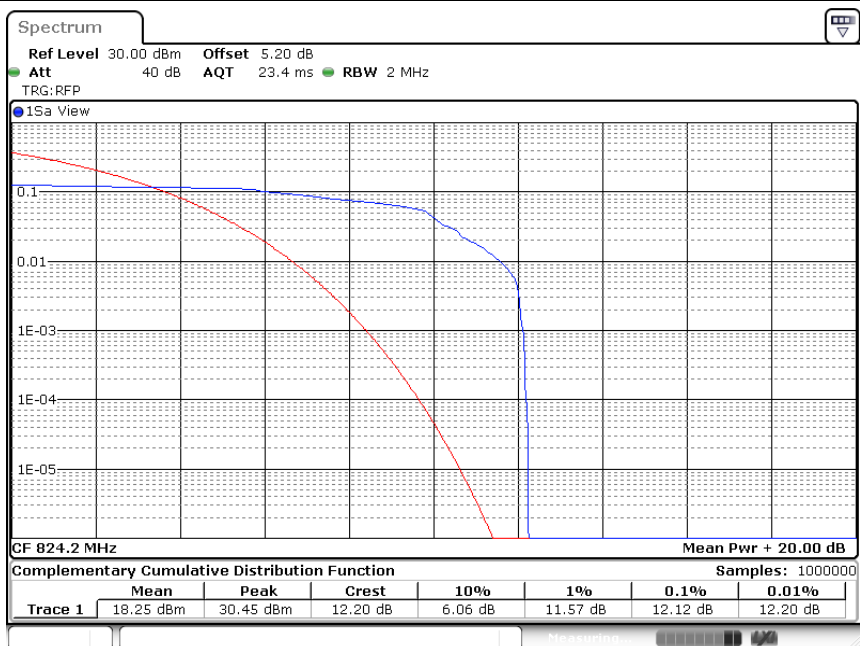


GSM850-251



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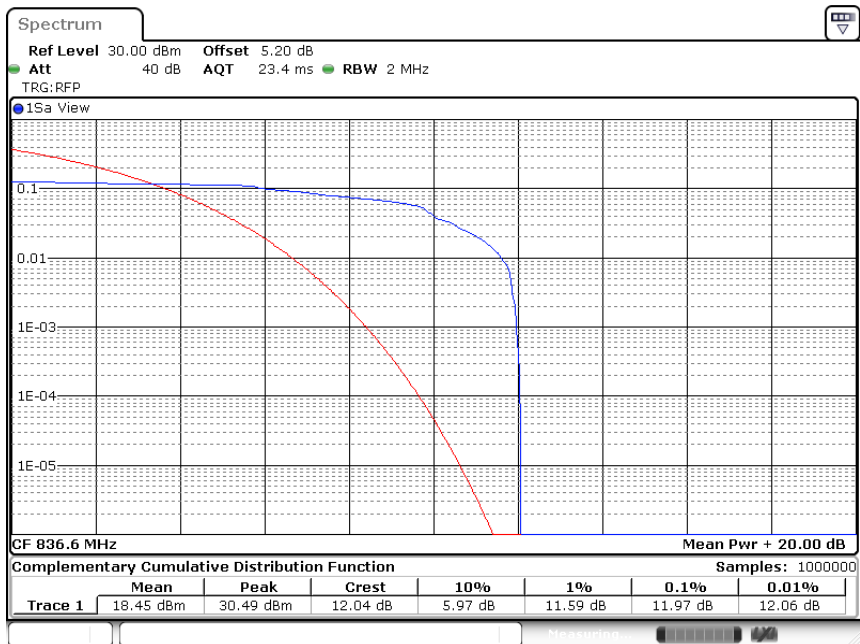
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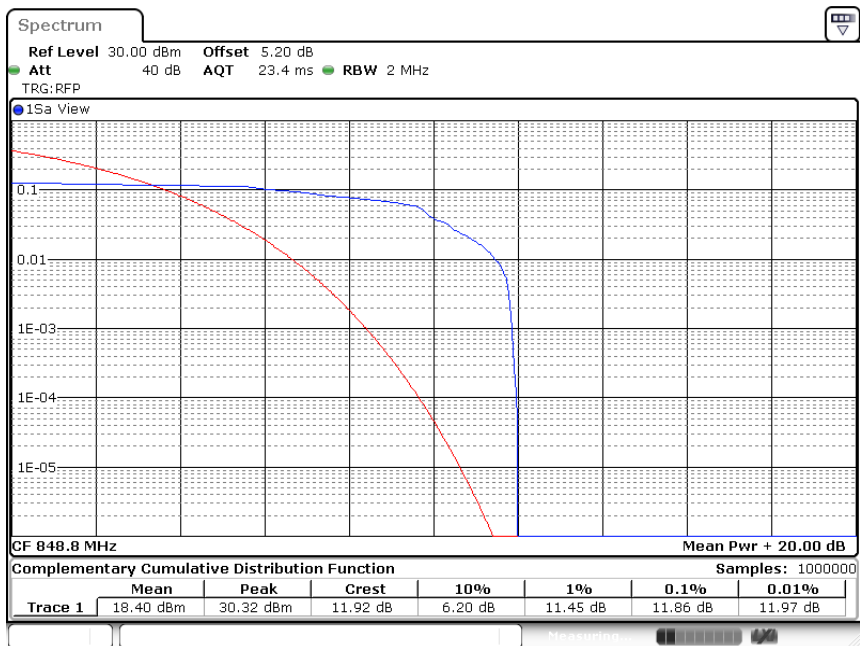


EGPRS850-190



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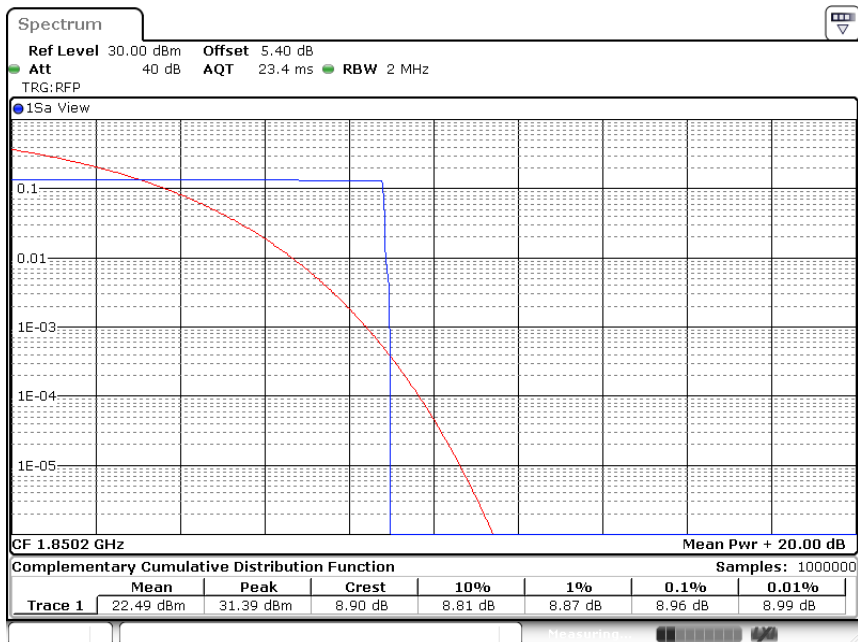
EGPRS850-251



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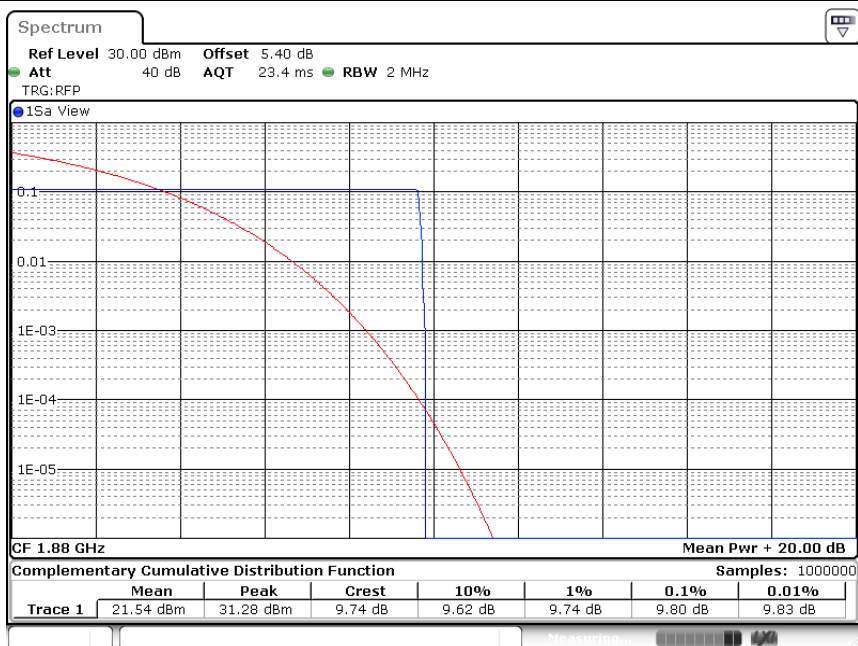


GSM1900-512



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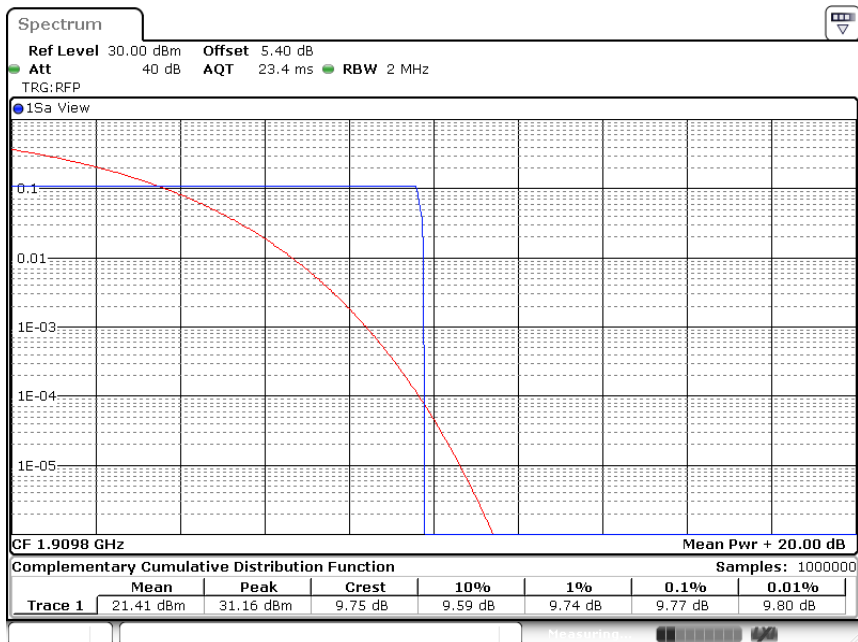
GSM1900-661



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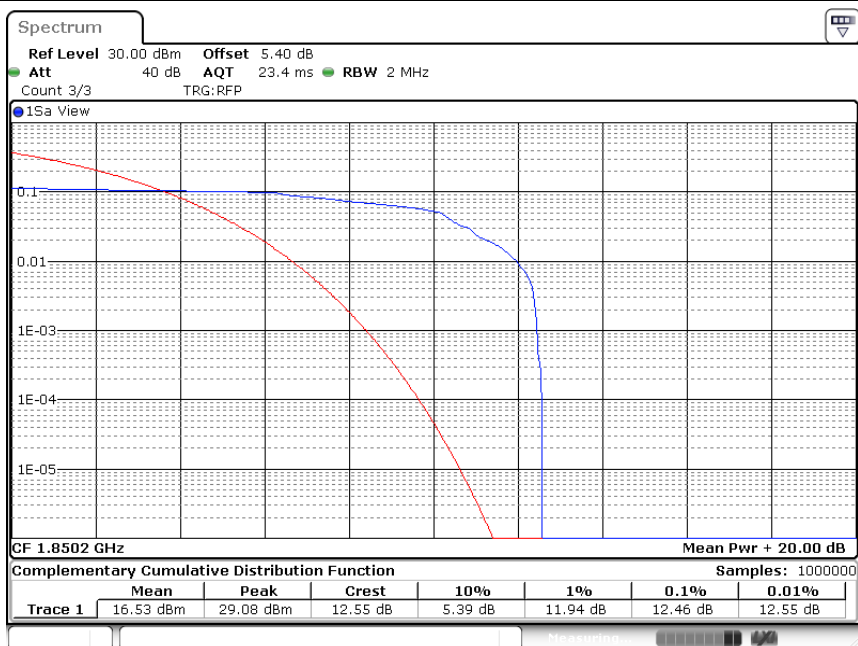


GSM1900-810



Date: 4 DEC 2020 18:53:59

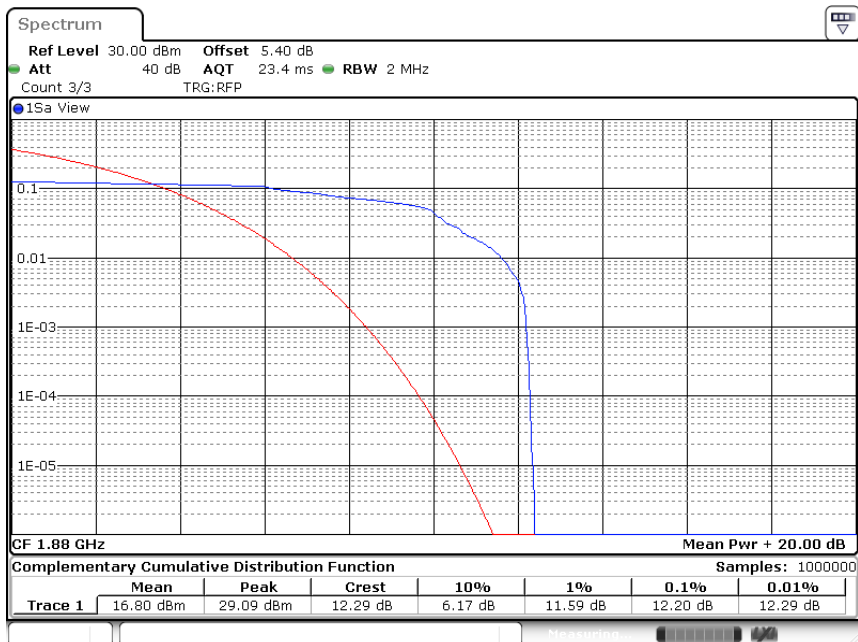
EGPRS1900-512



Date: 4 DEC 2020 18:59:23

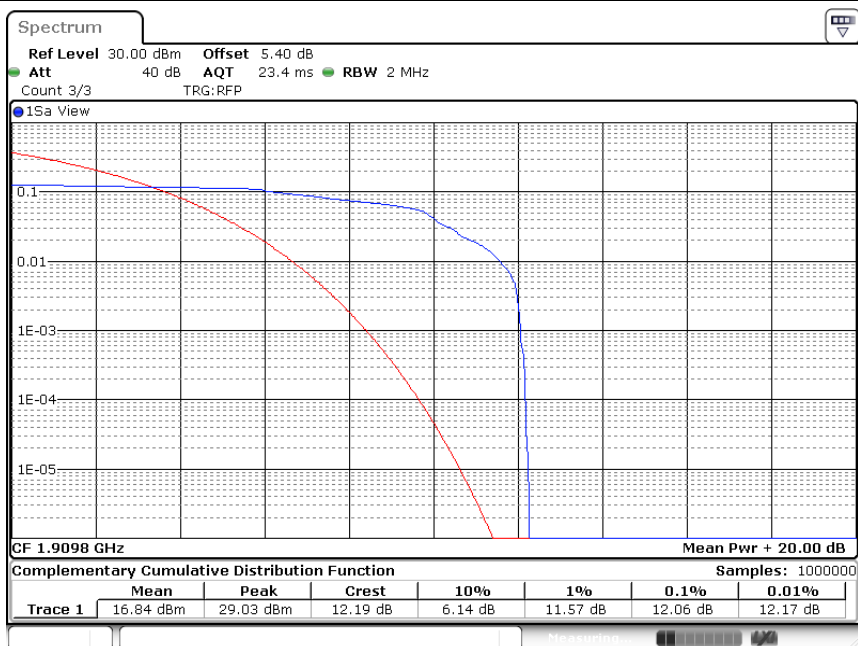


EGPRS1900-661



Date: 4 DEC 2020 18:59:35

EGPRS1900-810



Date: 4 DEC 2020 18:59:48





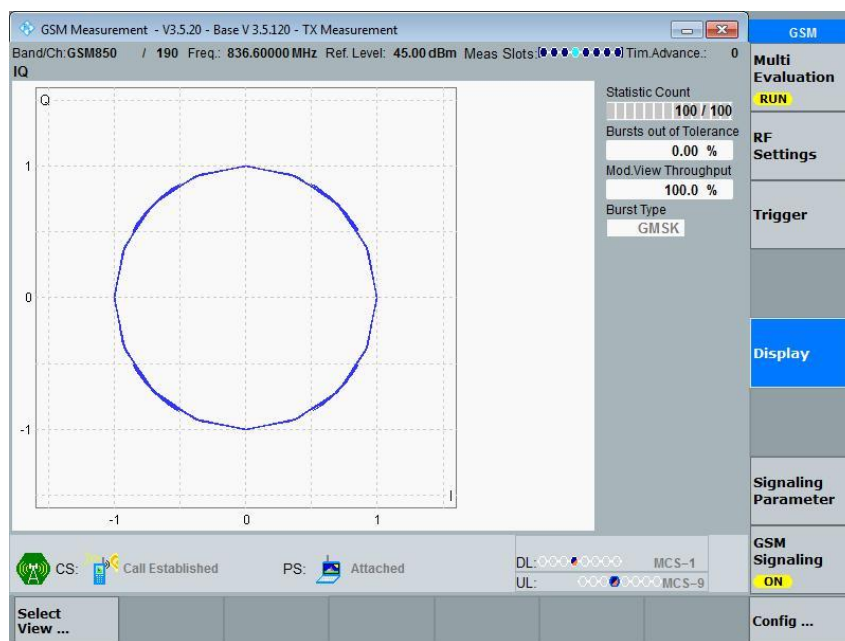
3. Modulation Characteristics

3.1. For GSM

3.1.1. Test Band = GSM 850

3.1.1.1. Test Mode = GSM/TM1

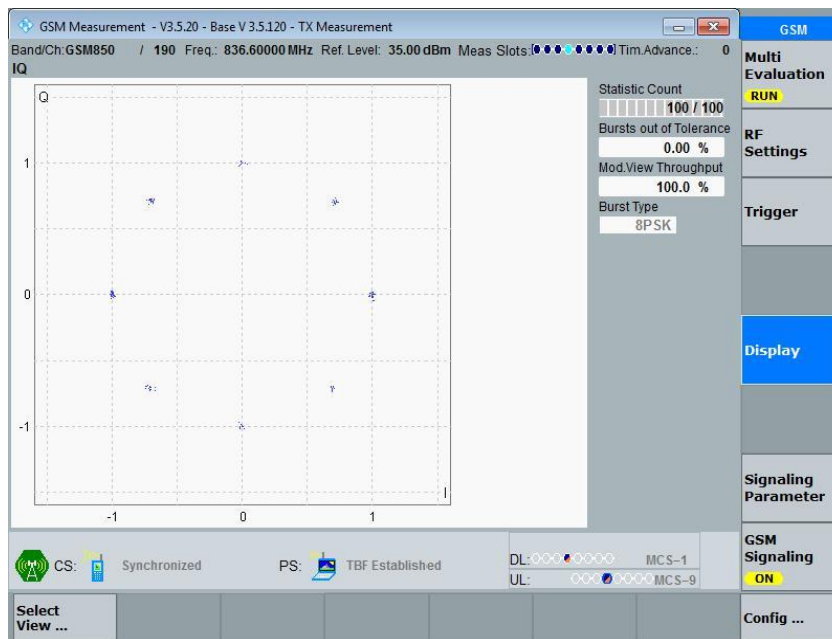
3.1.1.1.1. Test Channel = MCH





3.1.1.2. Test Mode = GSM/TM2

3.1.1.2.1. Test Channel = MCH



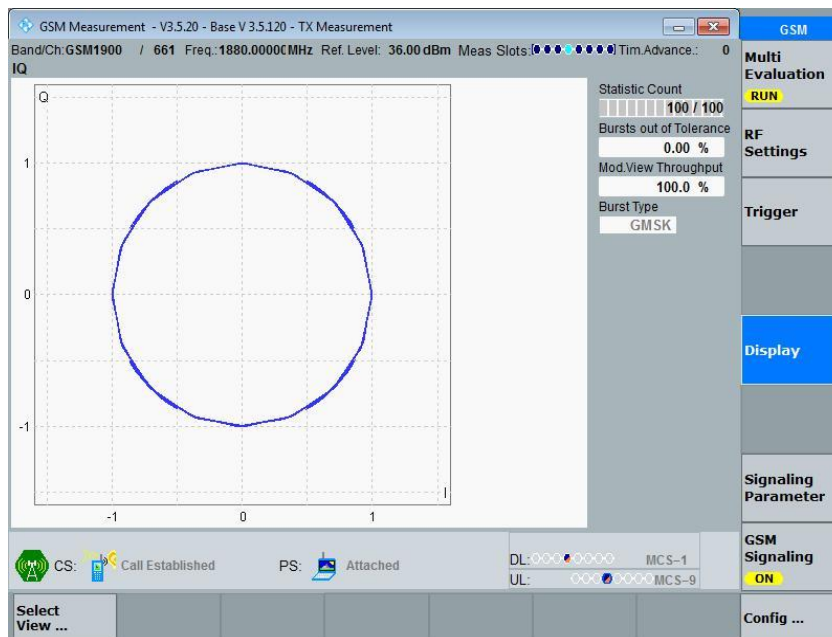
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3.1.2. Test Band = GSM 1900

3.1.2.1. Test Mode = GSM/TM1

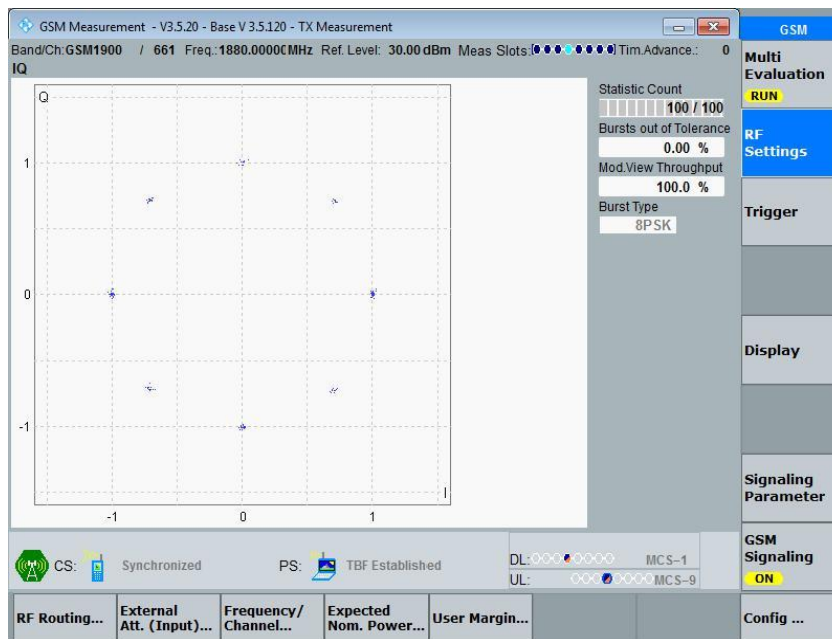
3.1.2.1.1. Test Channel = MCH





3.1.2.2. Test Mode = GSM/TM2

3.1.2.2.1. Test Channel = MCH



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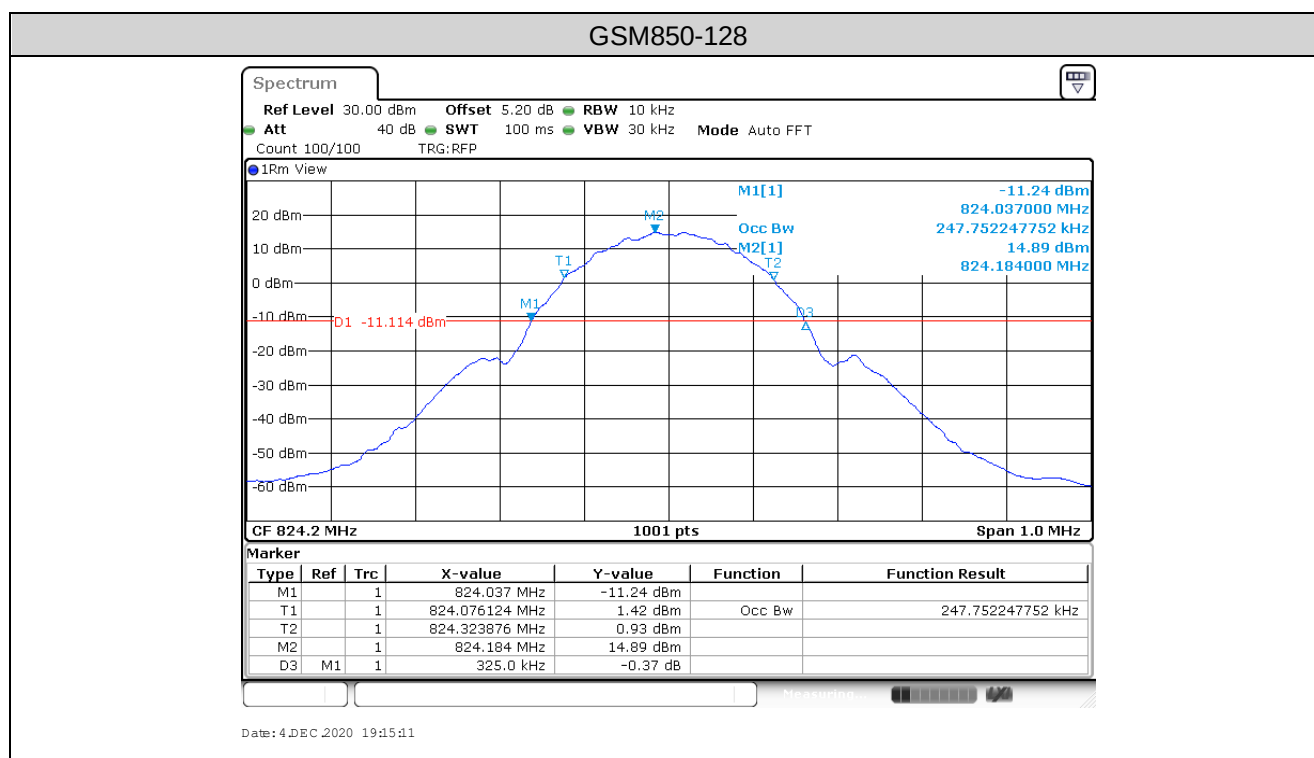


4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

Band	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Limit (MHz)	Verdict
GSM850	128	0.248	0.325	---	PASS
GSM850	190	0.248	0.324	---	PASS
GSM850	251	0.248	0.323	---	PASS
EGPRS850	128	0.244	0.315	---	PASS
EGPRS850	190	0.246	0.317	---	PASS
EGPRS850	251	0.246	0.316	---	PASS
GSM1900	512	0.247	0.325	---	PASS
GSM1900	661	0.247	0.323	---	PASS
GSM1900	810	0.247	0.325	---	PASS
EGPRS1900	512	0.246	0.316	---	PASS
EGPRS1900	661	0.246	0.317	---	PASS
EGPRS1900	810	0.245	0.317	---	PASS

4.2. Test Plots



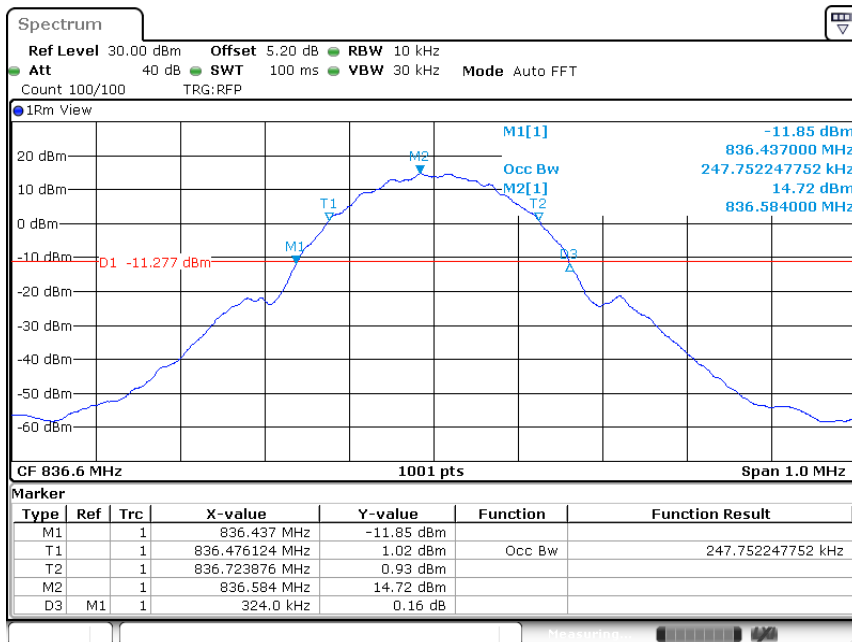
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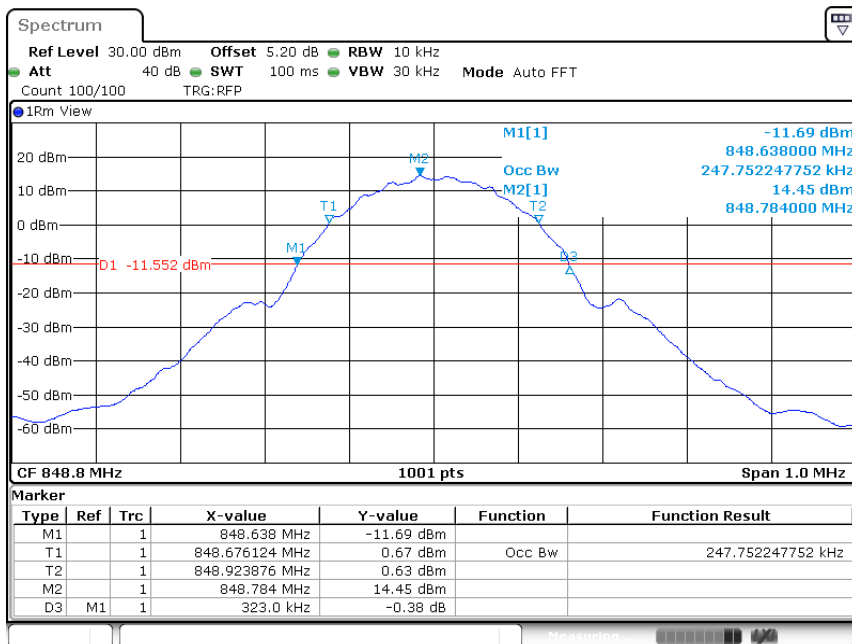
Member of the SGS Group (SGS SA)

GSM850-190



Date: 4 DEC 2020 19:15:32

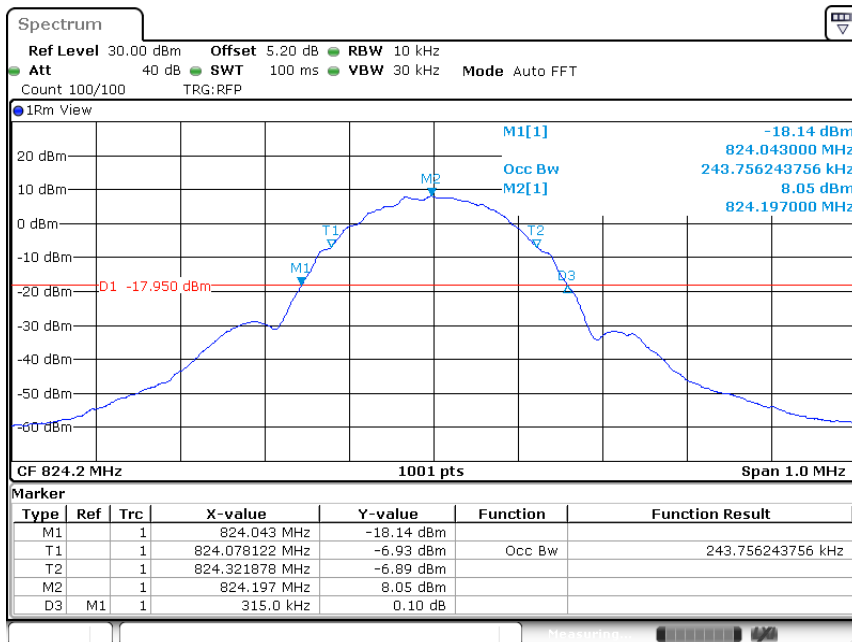
GSM850-251



Date: 4 DEC 2020 19:15:53

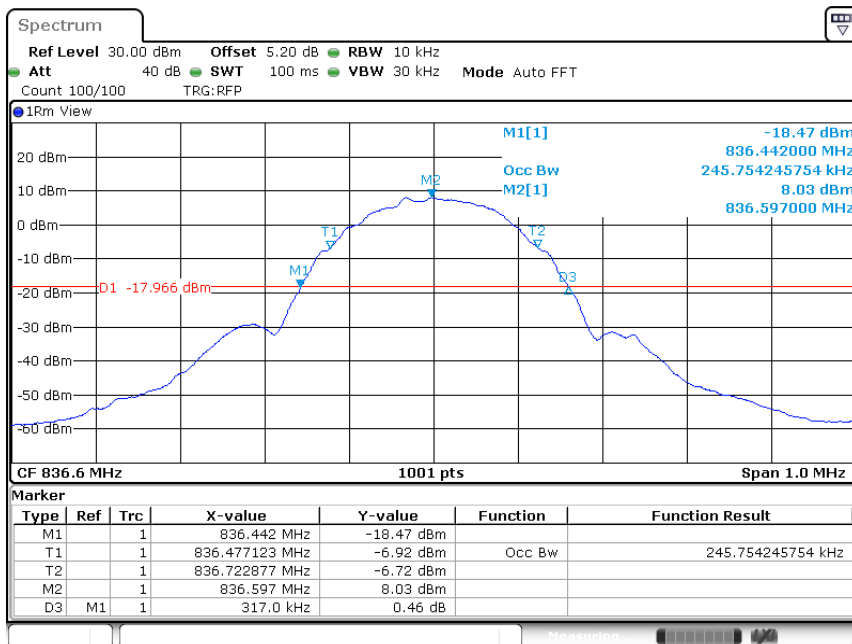


EGPRS850-128



Date: 4 DEC 2020 19:24:03

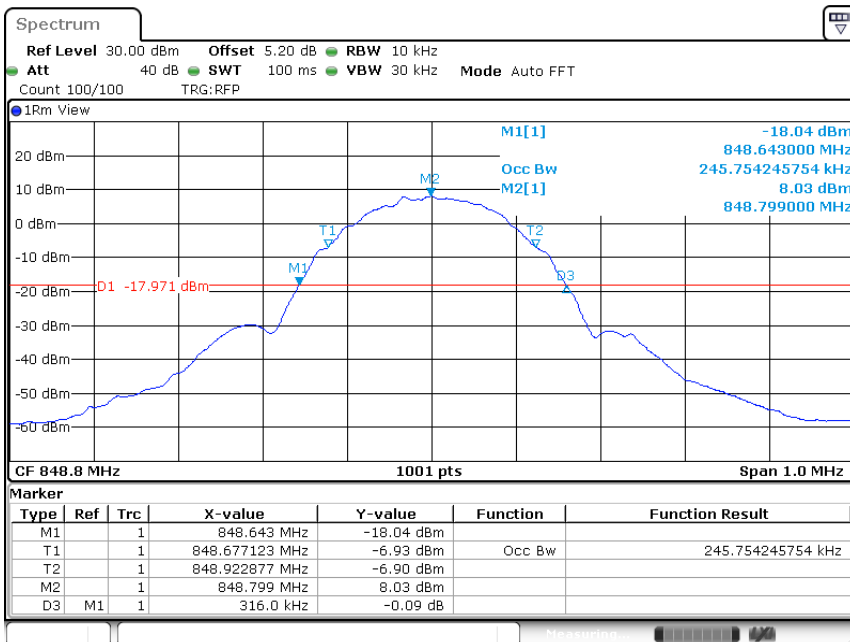
EGPRS850-190



Date: 4 DEC 2020 19:24:24

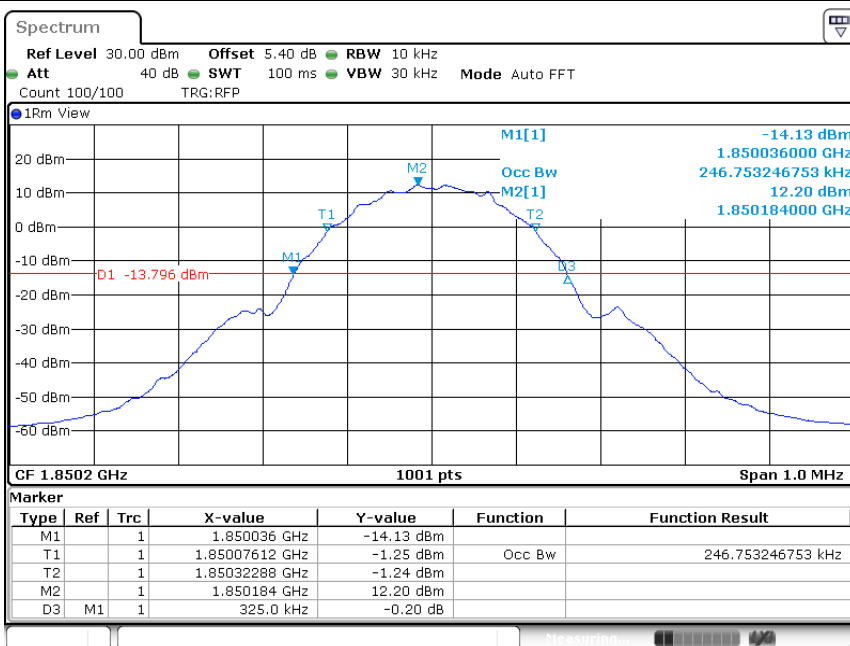


EGPRS850-251



Date: 4 DEC 2020 19:24:46

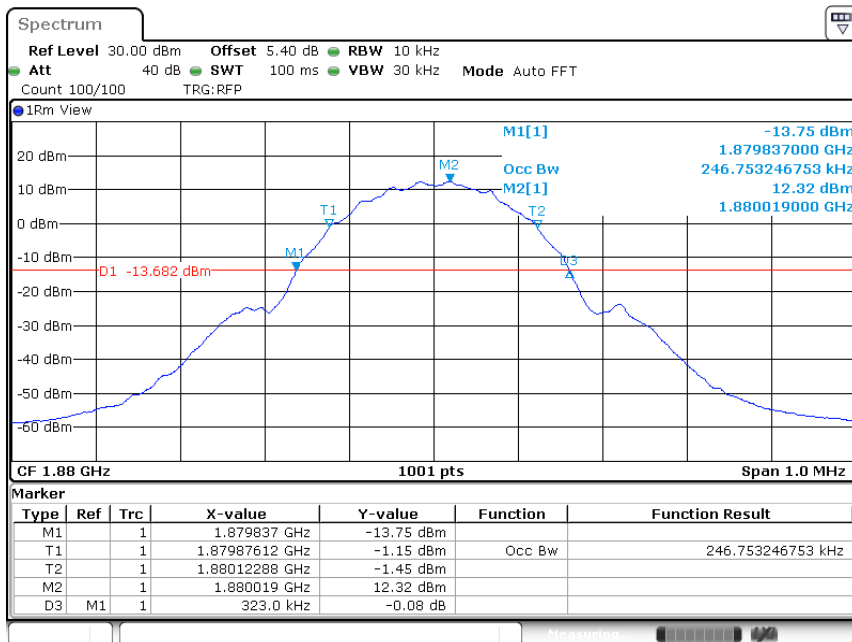
GSM1900-512



Date: 4 DEC 2020 18:55:53

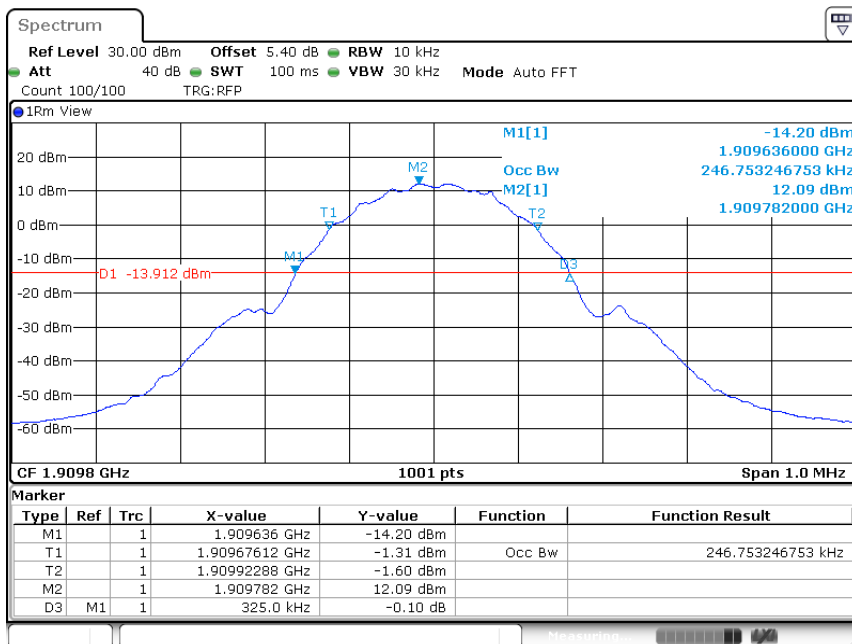


GSM1900-661



Date: 4 DEC 2020 18:56:14

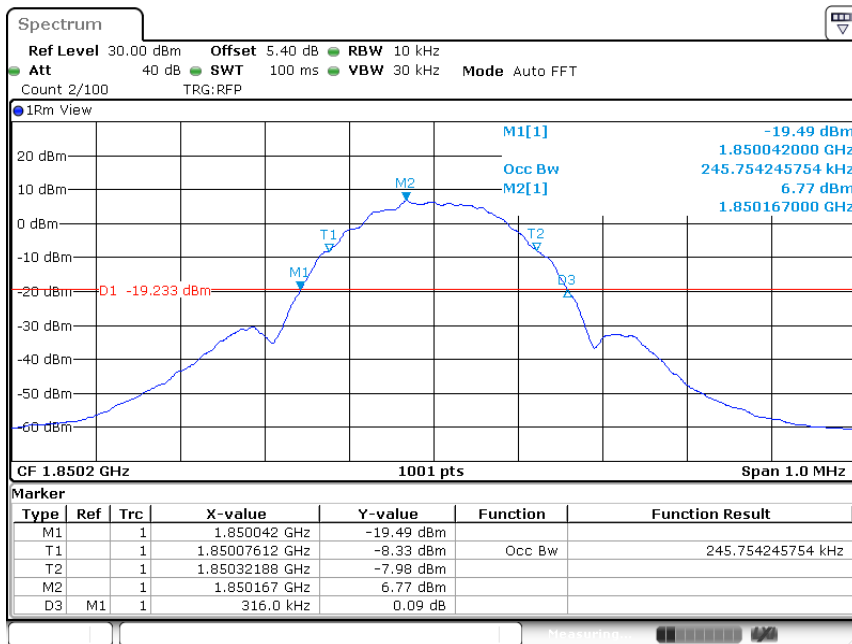
GSM1900-810



Date: 4 DEC 2020 18:56:35

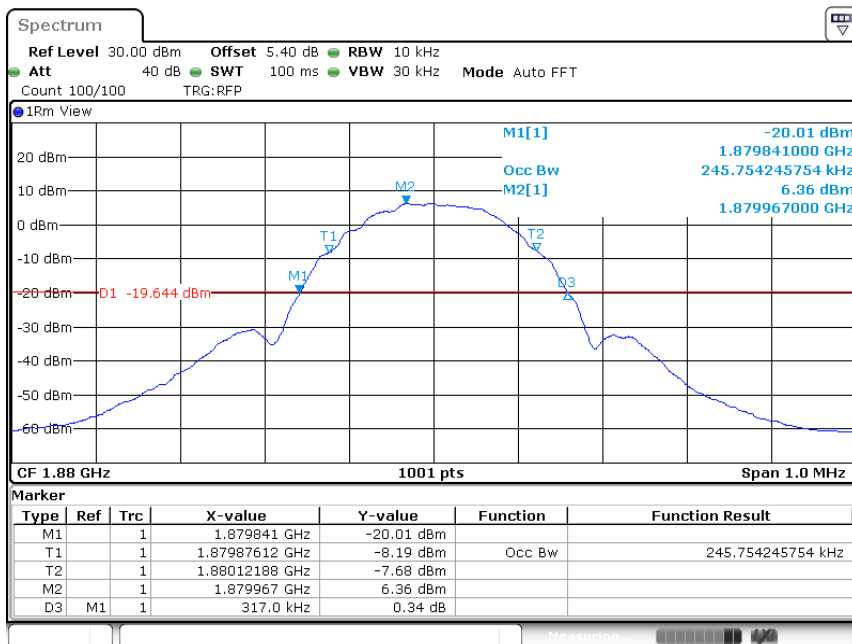


EGPRS1900-512



Date: 4 DEC 2020 19:01:46

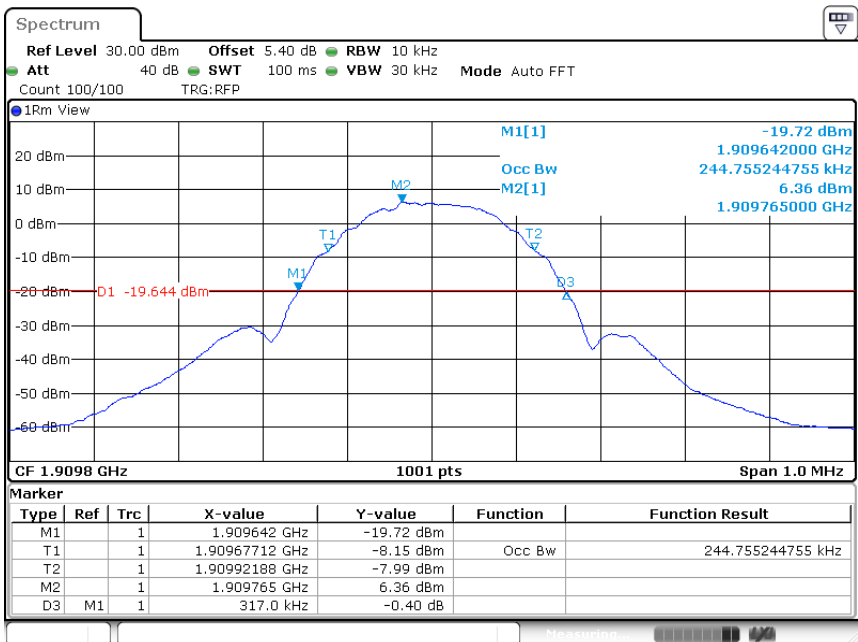
EGPRS1900-661



Date: 4 DEC 2020 19:02:08



EGPRS1900-810



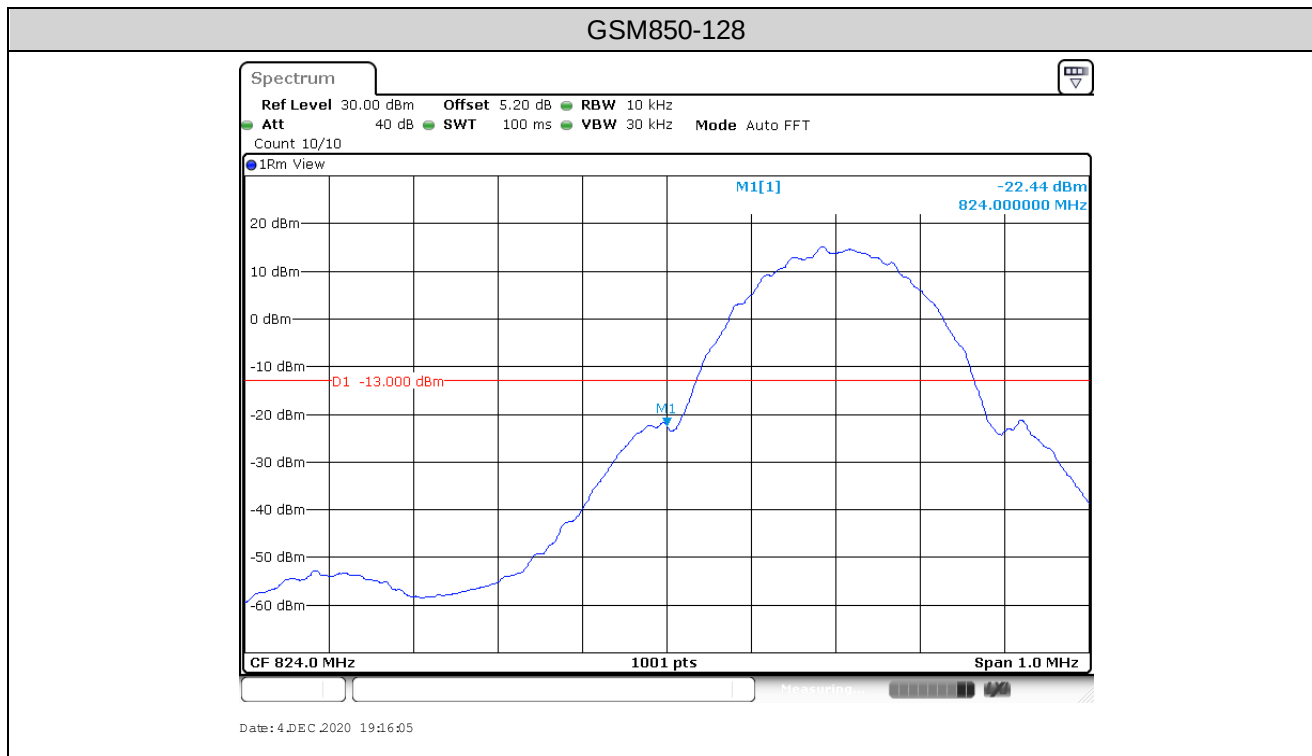
Date: 4 DEC 2020 19:02:29





5. Band Edge Compliance

5.1. Test Plots

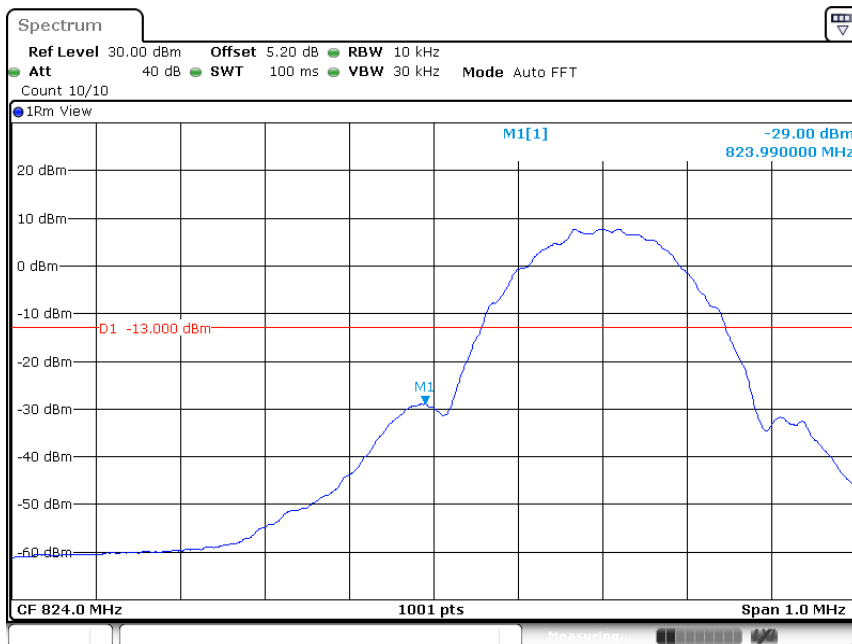


GSM850-251



Date: 4 DEC 2020 19:16:17

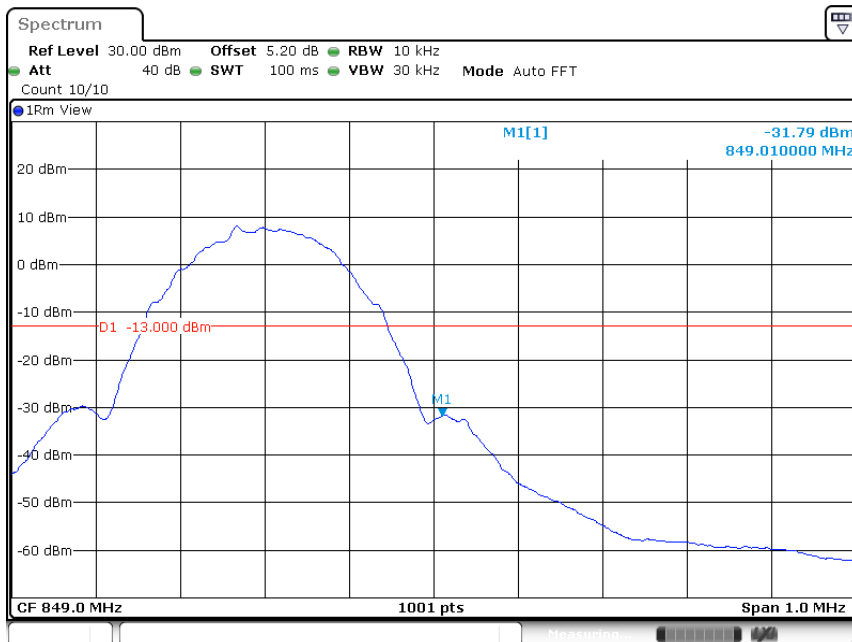
EGPRS850-128



Date: 4 DEC 2020 19:24:59

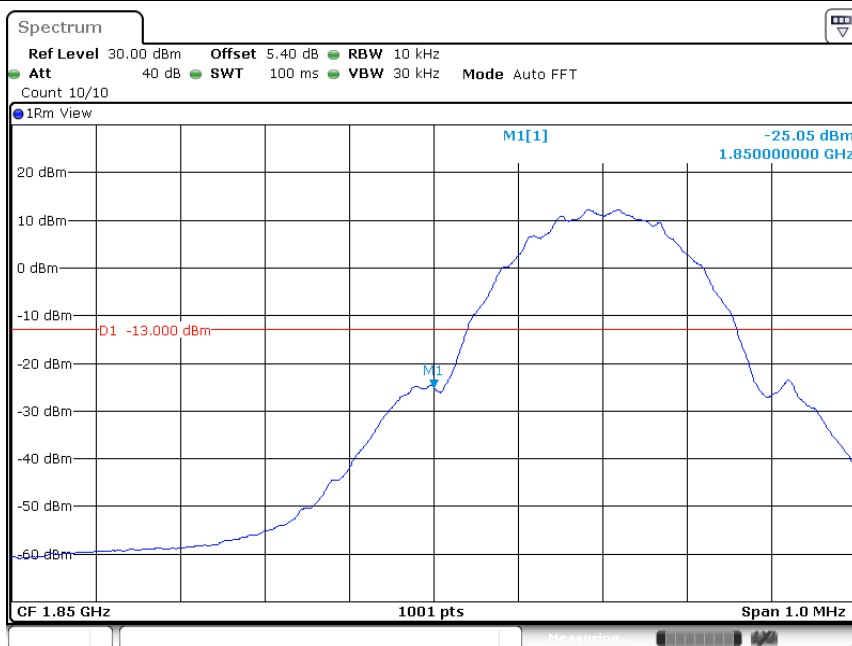


EGPRS850-251



Date: 4 DEC 2020 19:25:12

GSM1900-512



Date: 4 DEC 2020 18:56:48

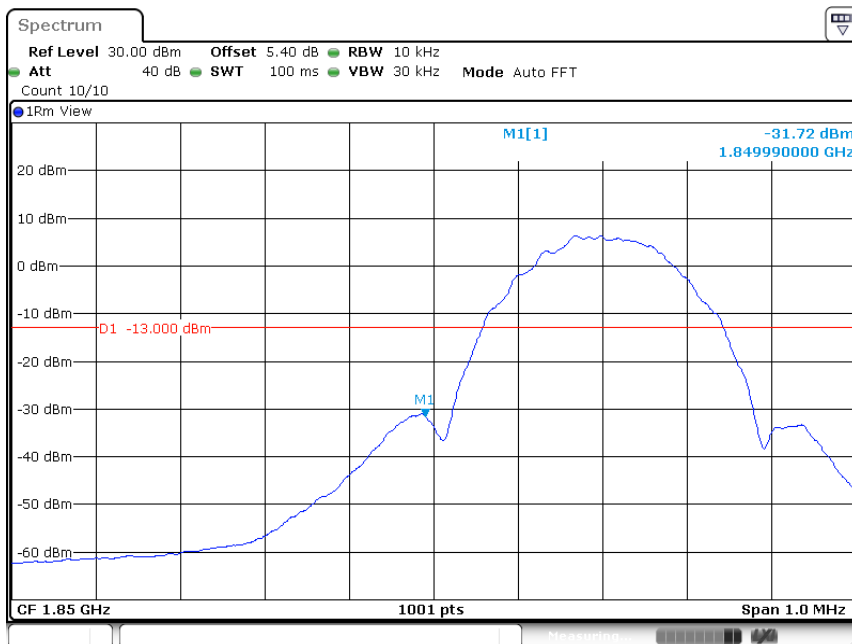


GSM1900-810



Date: 4 DEC 2020 18:56:59

EGPRS1900-512



Date: 4 DEC 2020 19:02:42



EGPRS1900-810



Date: 4 DEC 2020 19:02:55



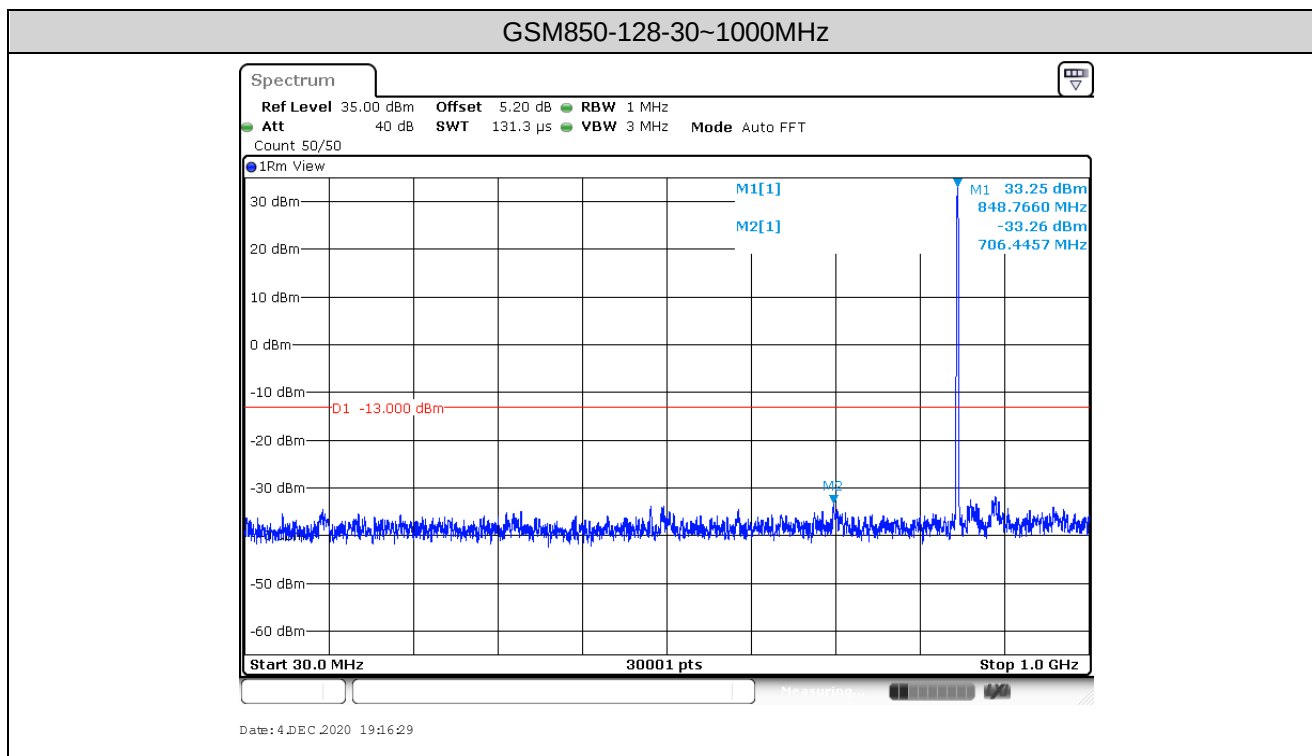


6. Spurious Emission at Antenna Terminal

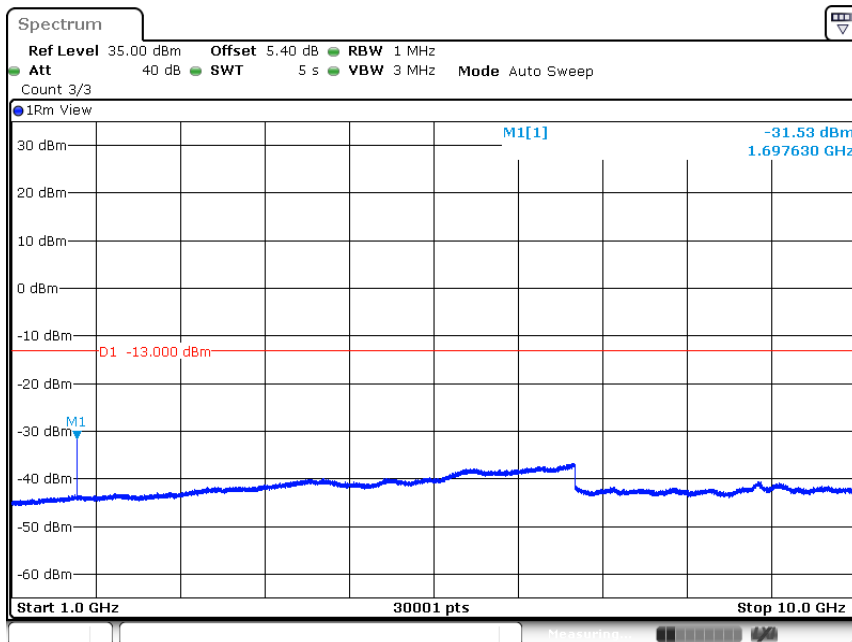
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (\text{Span} / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

6.1. Test Plots

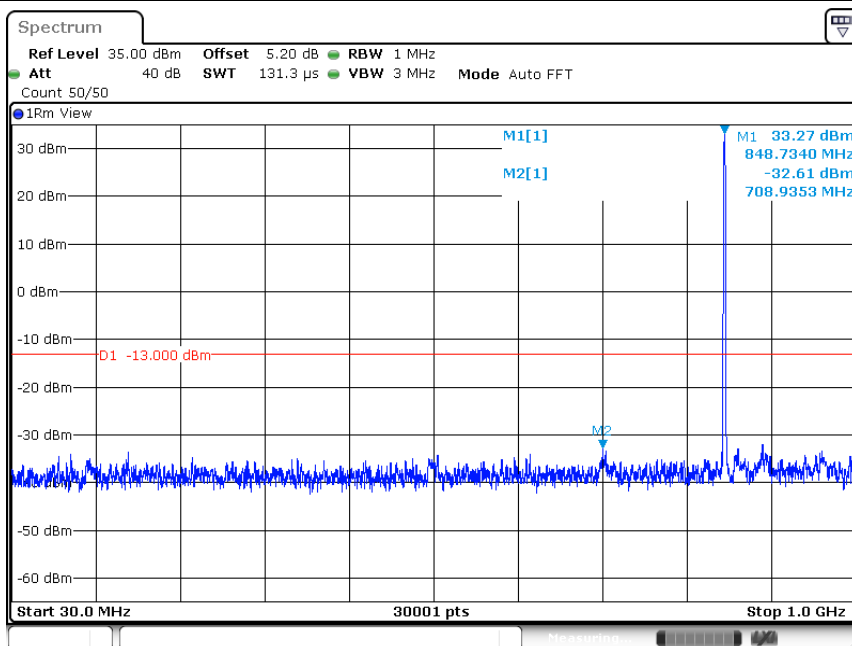


GSM850-128-1000~10000MHz



Date: 4 DEC 2020 19:16:53

GSM850-190-30~1000MHz



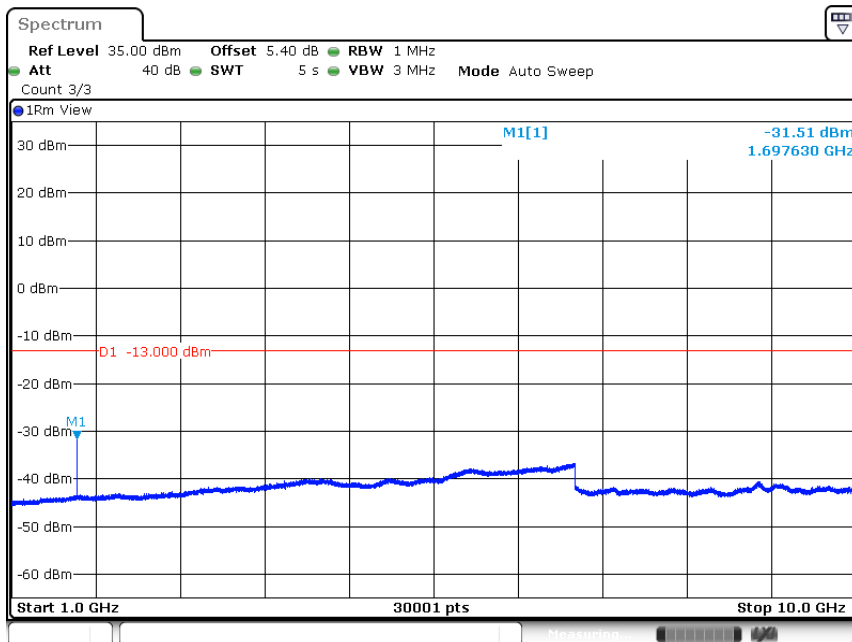
Date: 4 DEC 2020 19:17:04



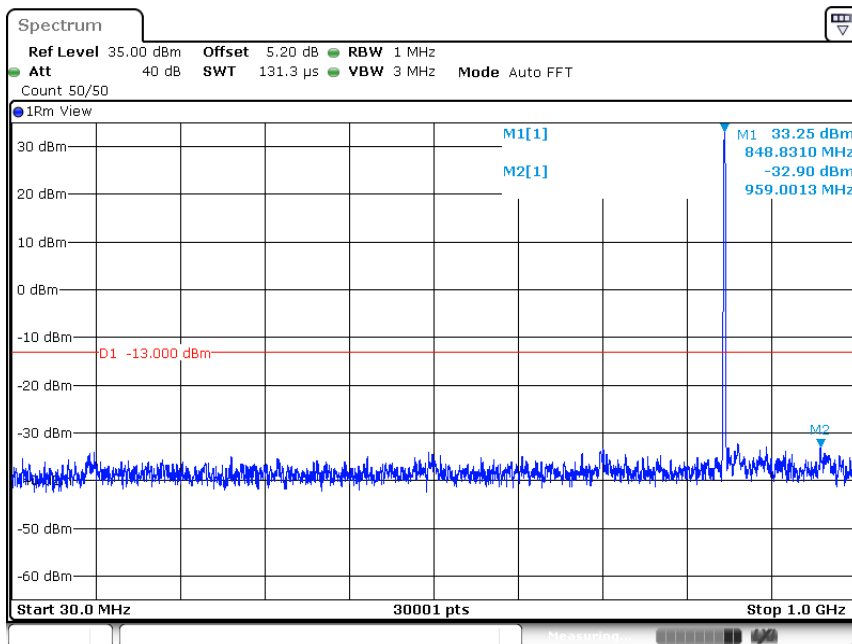
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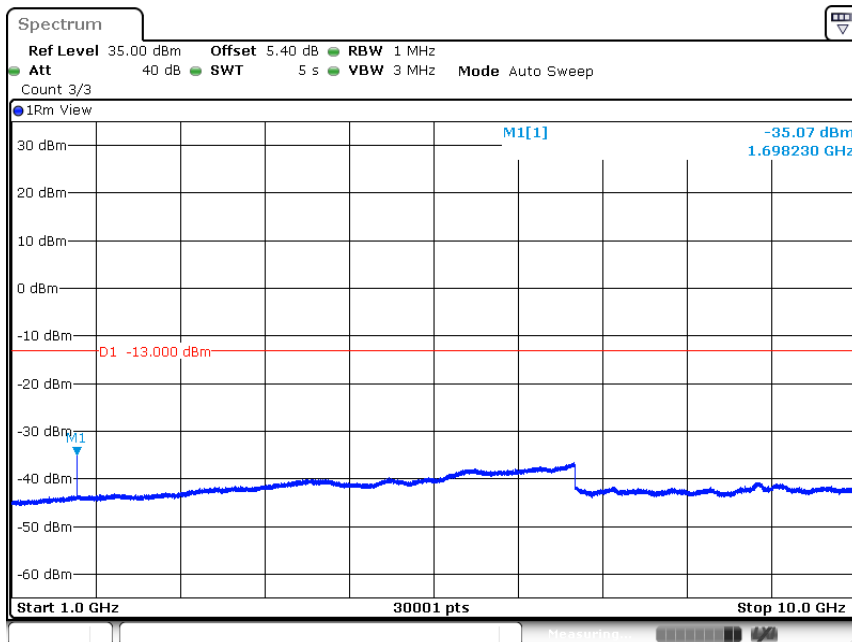
GSM850-190-1000~10000MHz



GSM850-251-30~1000MHz

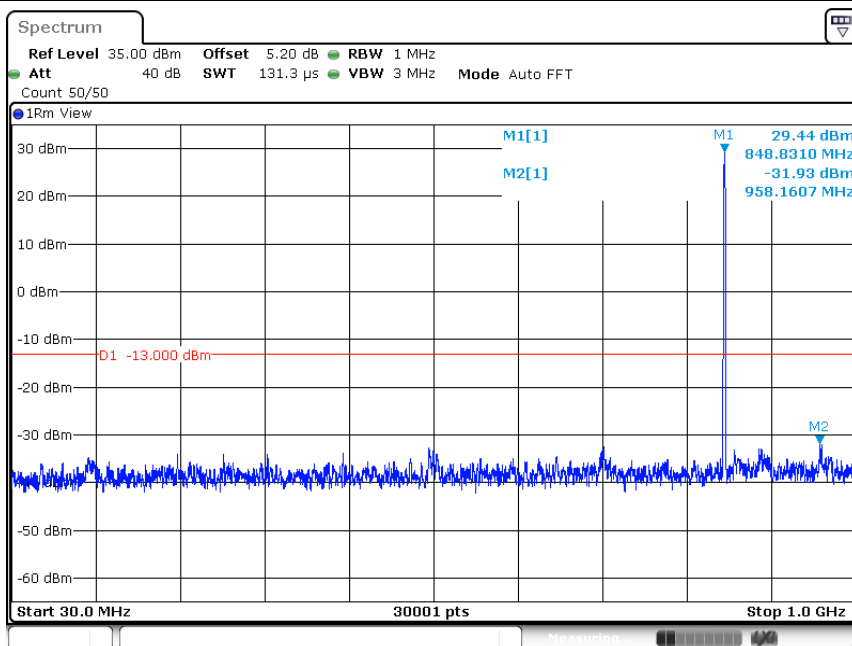


GSM850-251-1000~10000MHz



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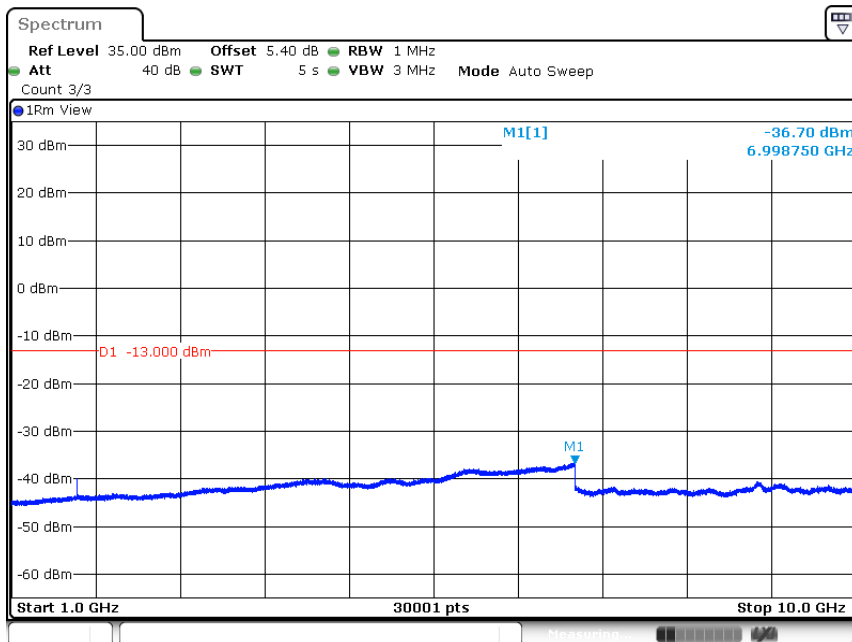
EGPRS850-128-30~1000MHz



Date: 4 DEC 2020 19:25:24

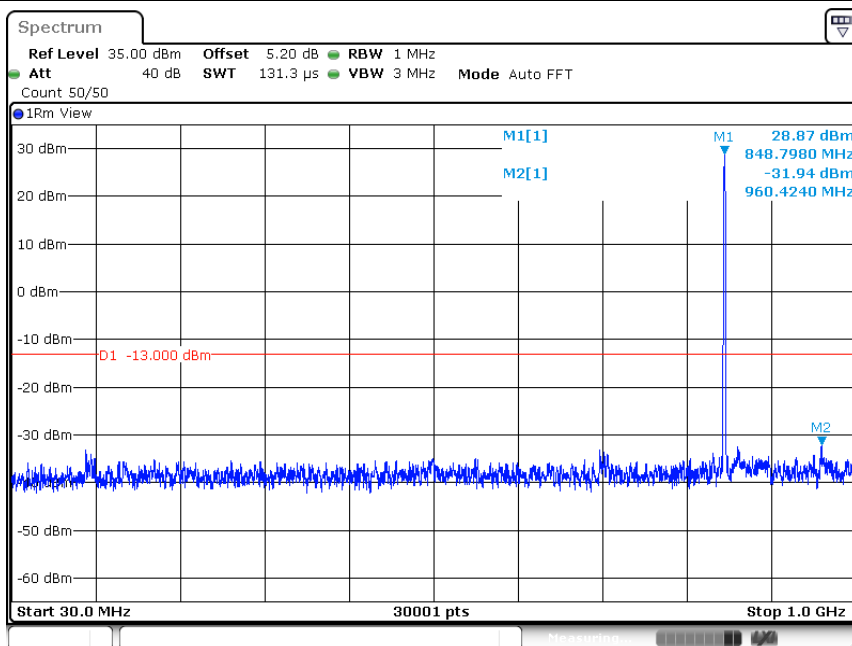


EGPRS850-128-1000~10000MHz



Date: 4 DEC 2020 19:25:49

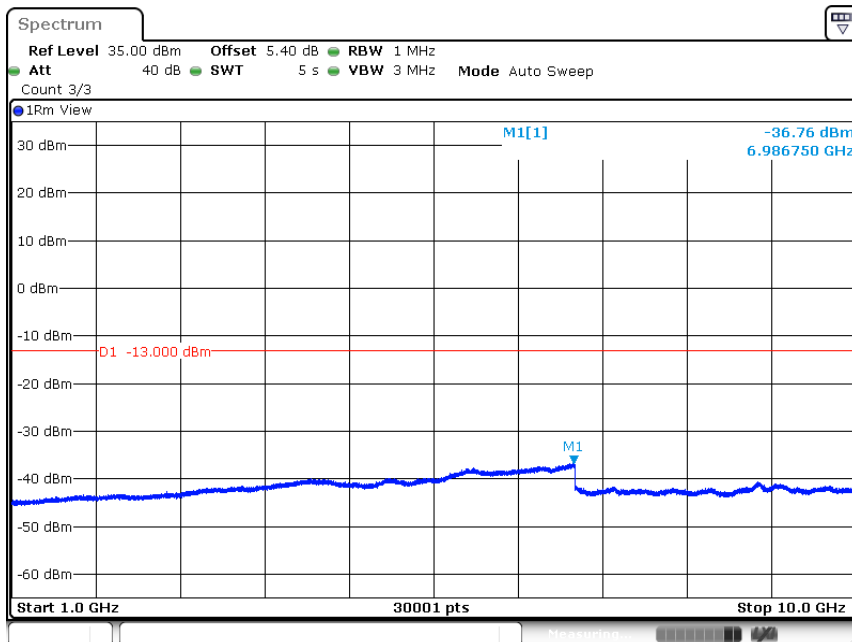
EGPRS850-190-30~1000MHz



Date: 4 DEC 2020 19:26:01

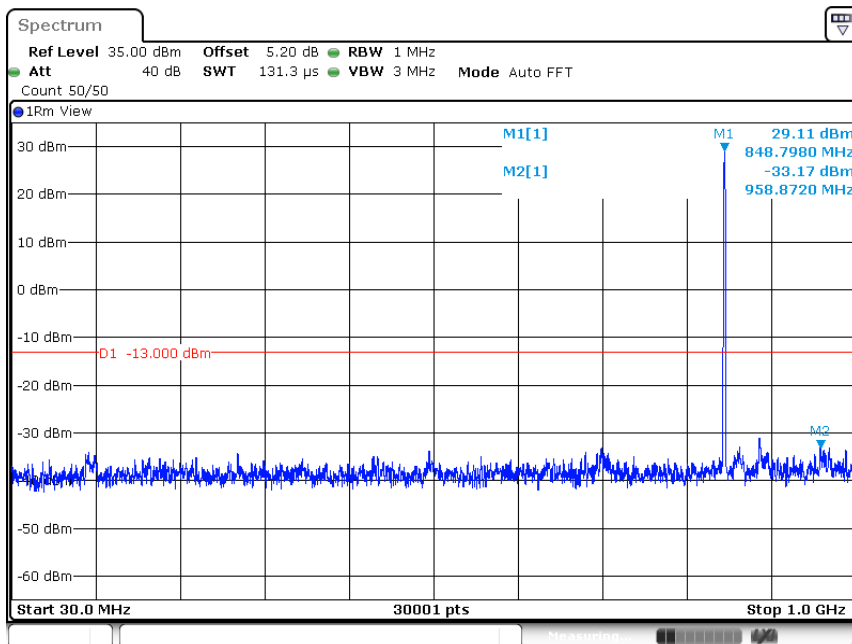


EGPRS850-190-1000~10000MHz



Date: 4 DEC 2020 19:26:28

EGPRS850-251-30~1000MHz



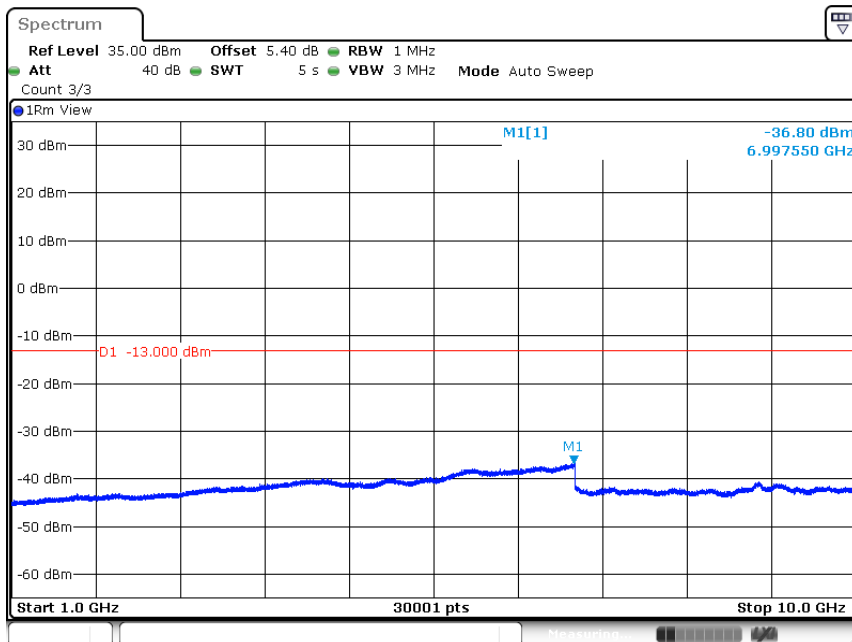
Date: 4 DEC 2020 19:26:40



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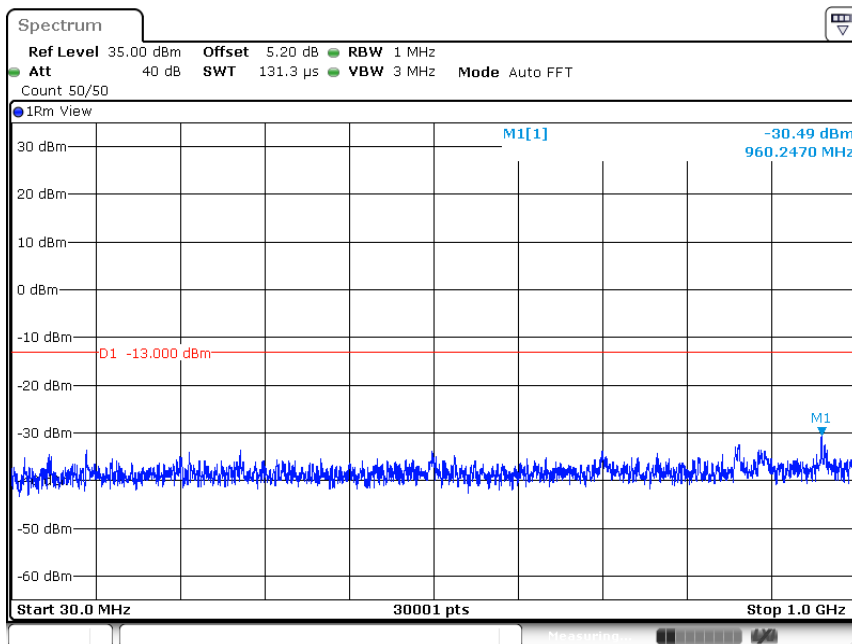
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EGPRS850-251-1000~10000MHz



Date: 4 DEC 2020 19:27:04

GSM1900-512-30~1000MHz



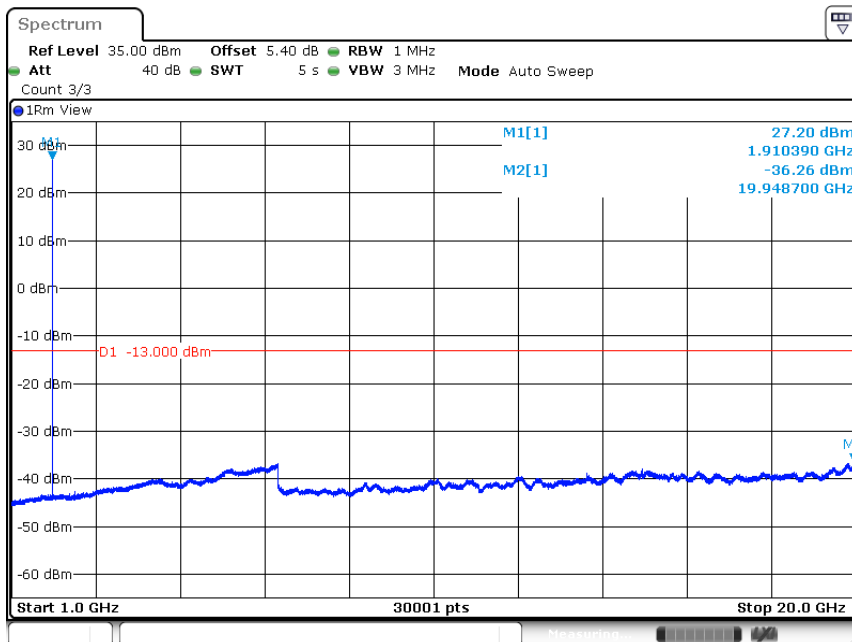
Date: 4 DEC 2020 18:57:10



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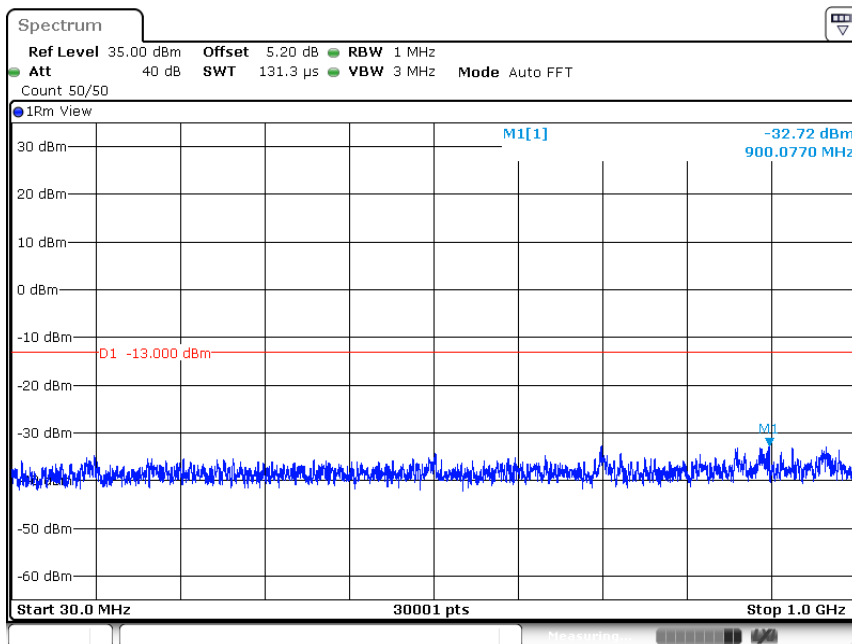
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GSM1900-512-1000~20000MHz



Date: 4 DEC 2020 18:57:36

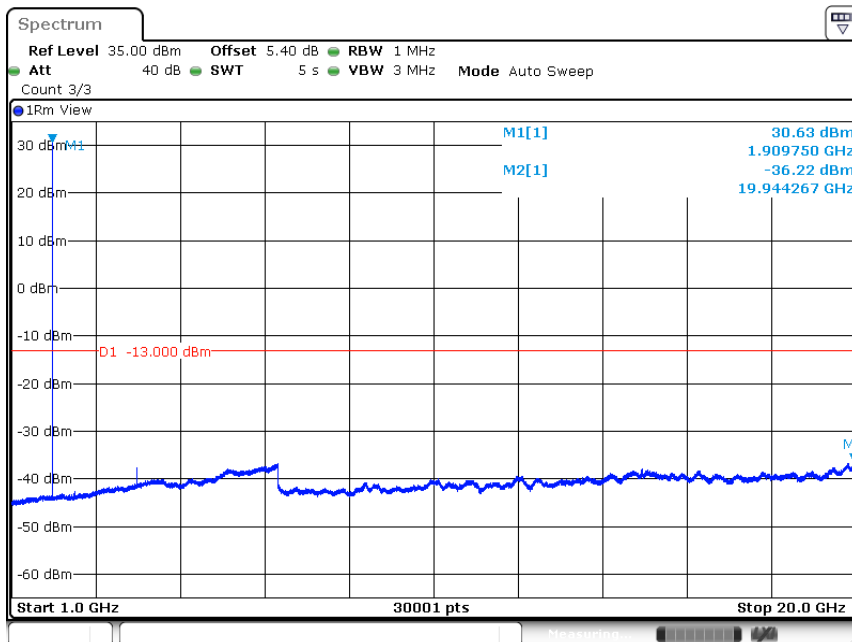
GSM1900-661-30~1000MHz



Date: 4 DEC 2020 18:57:46

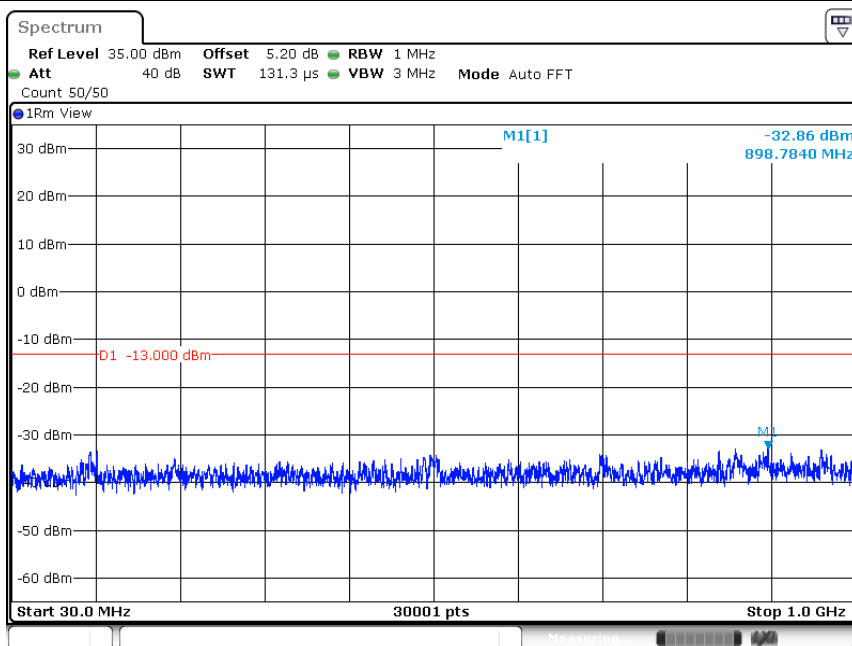


GSM1900-661-1000~20000MHz



Date: 4 DEC 2020 18:58:11

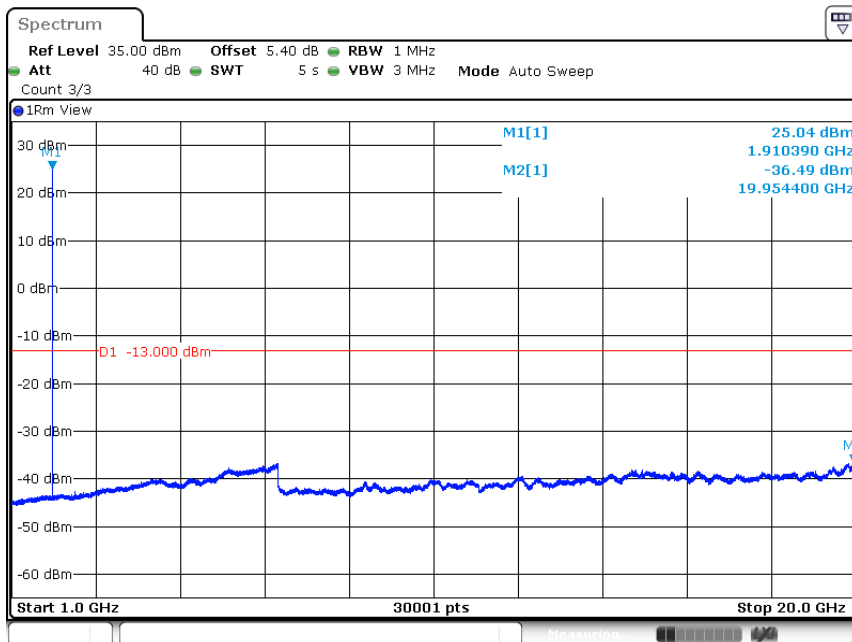
GSM1900-810-30~1000MHz



Date: 4 DEC 2020 18:58:22

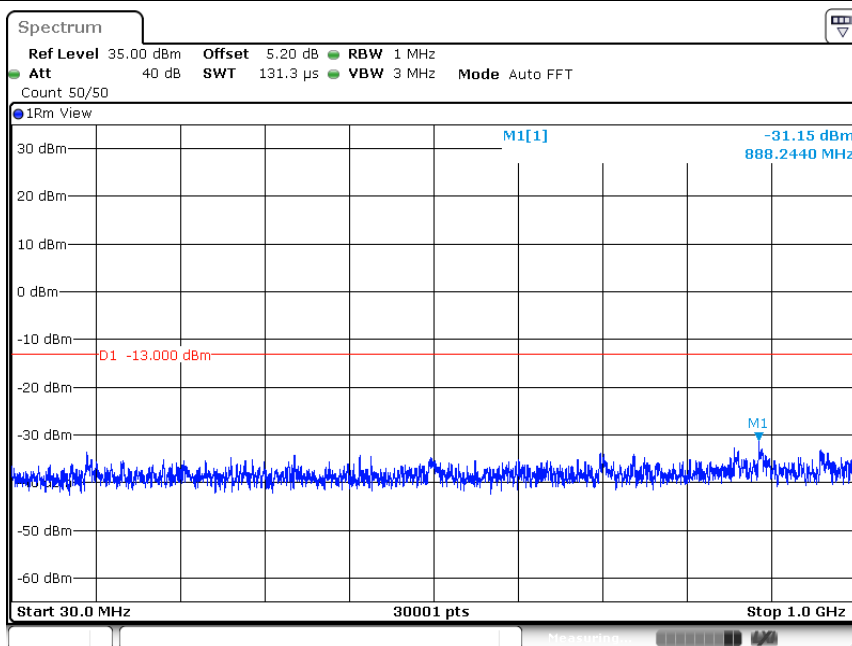


GSM1900-810-1000~20000MHz



Date: 4 DEC 2020 18:58:47

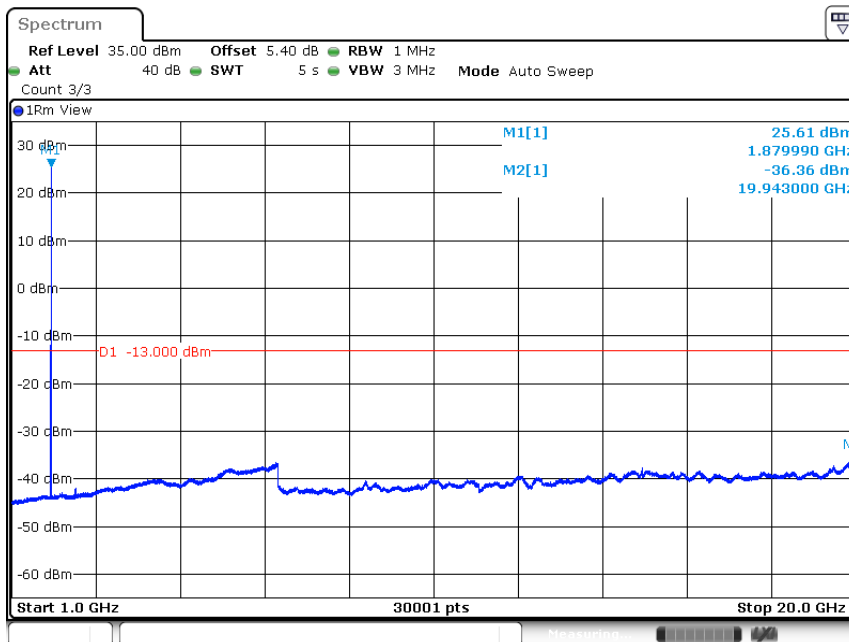
EGPRS1900-512-30~1000MHz



Date: 4 DEC 2020 19:07:34

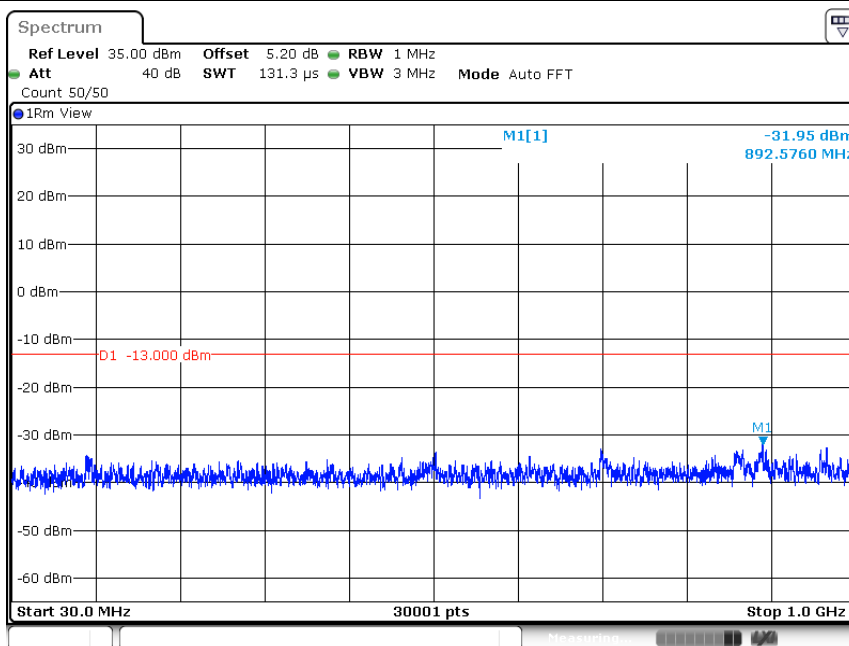


EGPRS1900-512-1000~20000MHz



Date: 4 DEC 2020 19:08:33

EGPRS1900-661-30~1000MHz



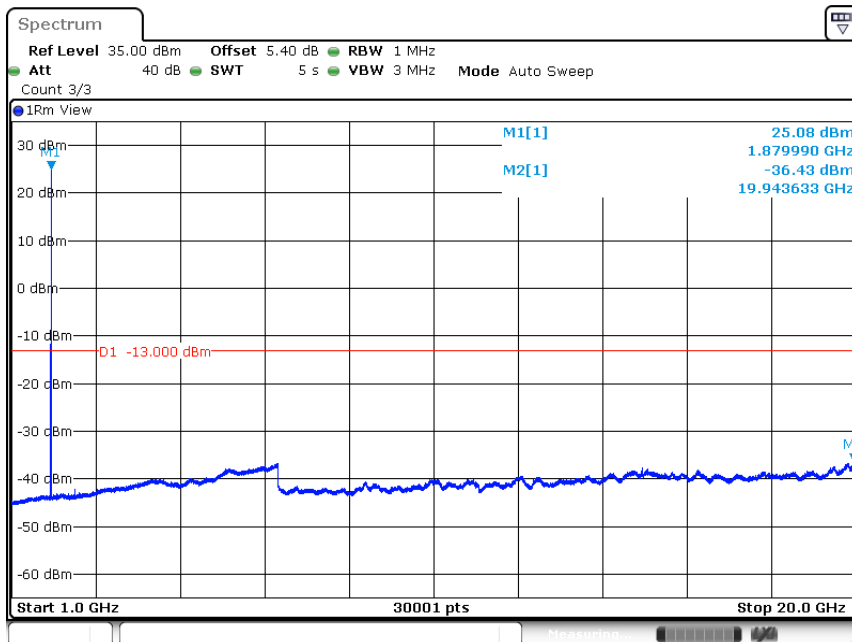
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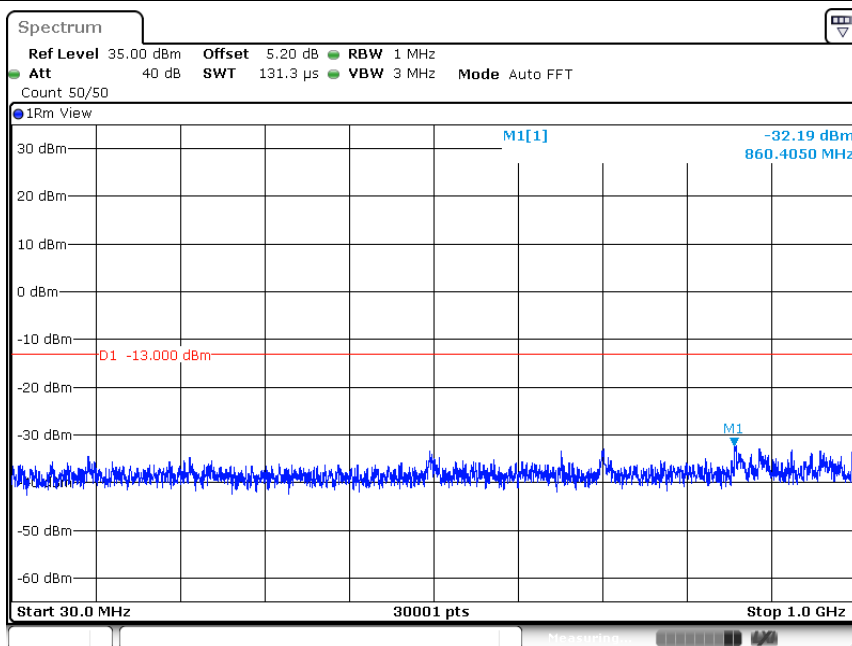
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EGPRS1900-661-1000~20000MHz



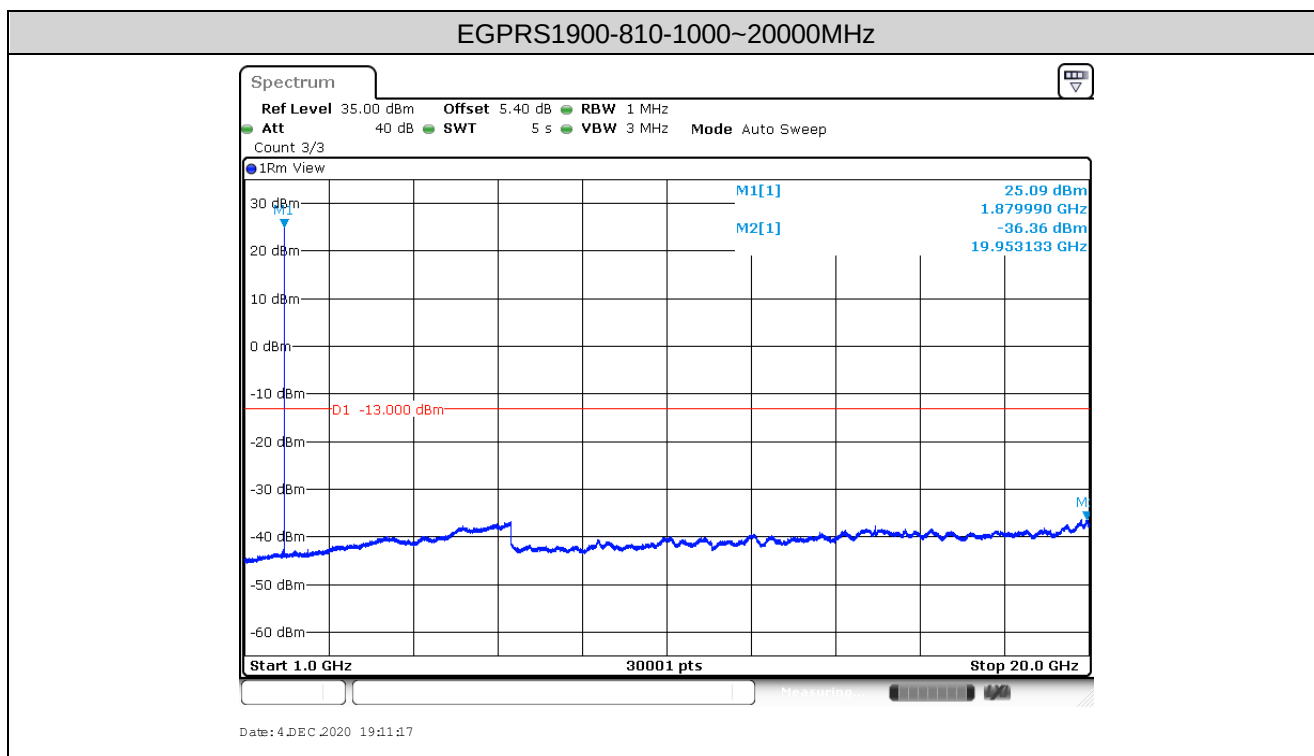
Date: 4 DEC 2020 19:10:20

EGPRS1900-810-30~1000MHz



Date: 4 DEC 2020 19:10:31





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7. Field Strength of Spurious Radiation

7.1. TTest Band = GSM_850 CONFIG 0

7.1.1. Test Channel = Low Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	44.5022	-62.44	-13.00	49.44	Horizontal
2	230.2665	-66.67	-13.00	53.67	Horizontal
3	1648.5297	-43.89	-13.00	30.89	Horizontal
4	2479.8960	-36.56	-13.00	23.56	Horizontal
5	3296.8099	-56.96	-13.00	43.96	Horizontal
6	9316.3105	-52.16	-13.00	39.16	Horizontal



7.2. Test Band = GSM_850 CONFIG 0**7.2.1. Test Channel = Low Channel**

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	51.3411	-71.23	-13.00	58.23	Vertical
2	113.1817	-63.47	-13.00	50.47	Vertical
3	393.0892	-66.75	-13.00	53.75	Vertical
4	1648.1296	-52.89	-13.00	39.89	Vertical
5	2480.2961	-52.87	-13.00	39.87	Vertical
6	9892.6631	-51.41	-13.00	38.41	Vertical



7.3. Test Band = GSM_850 CONFIG 0**7.3.1. Test Channel = Middle Channel**

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	44.8417	-62.89	-13.00	49.89	Horizontal
2	237.0569	-66.81	-13.00	53.81	Horizontal
3	1673.3347	-44.87	-13.00	31.87	Horizontal
4	2509.9020	-47.04	-13.00	34.04	Horizontal
5	3346.5116	-58.61	-13.00	45.61	Horizontal
6	9322.3774	-52.46	-13.00	39.46	Horizontal



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7.4. Test Band = GSM_850 CONFIG 0**7.4.1. Test Channel = Middle Channel**

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	48.3339	-71.48	-13.00	58.48	Vertical
2	110.1745	-63.63	-13.00	50.63	Vertical
3	540.7305	-64.41	-13.00	51.41	Vertical
4	1673.3347	-48.10	-13.00	35.10	Vertical
5	2509.5019	-55.40	-13.00	42.40	Vertical
6	9303.9435	-52.30	-13.00	39.30	Vertical



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7.5. Test Band = GSM_850 CONFIG 0

7.5.1. Test Channel = High Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	42.5621	-62.65	-13.00	49.65	Horizontal
2	238.6574	-66.49	-13.00	53.49	Horizontal
3	639.2875	-61.76	-13.00	48.76	Horizontal
4	1697.7395	-42.82	-13.00	29.82	Horizontal
5	2546.7093	-49.15	-13.00	36.15	Horizontal
6	9312.3437	-52.27	-13.00	39.27	Horizontal



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7.6. Test Band = GSM_850 CONFIG 0**7.6.1. Test Channel = High Channel**

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	52.7476	-70.16	-13.00	57.16	Vertical
2	112.1146	-63.80	-13.00	50.80	Vertical
3	622.3601	-61.83	-13.00	48.83	Vertical
4	1697.7395	-43.13	-13.00	30.13	Vertical
5	3000.0000	-54.71	-13.00	41.71	Vertical
6	9858.1286	-51.53	-13.00	38.53	Vertical



7.7. Test Band = GSM_1900 CONFIG 0**7.7.1. Test Channel = Low Channel**

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	44.2112	-63.39	-13.00	50.39	Horizontal
2	251.7531	-67.55	-13.00	54.55	Horizontal
3	2689.9380	-35.71	-13.00	22.71	Horizontal
4	3700.0233	-53.48	-13.00	40.48	Horizontal
5	5550.5850	-39.45	-13.00	26.45	Horizontal
6	16383.446	-43.21	-13.00	30.21	Horizontal





7.8. Test Band = GSM_1900 CONFIG 0

7.8.1. Test Channel = Low Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	55.1243	-71.89	-13.00	58.89	Vertical
2	110.1745	-64.08	-13.00	51.08	Vertical
3	2684.7369	-37.07	-13.00	24.07	Vertical
4	3700.5234	-58.54	-13.00	45.54	Vertical
5	5550.5850	-39.54	-13.00	26.54	Vertical
6	17997.999	-38.27	-13.00	25.27	Vertical



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7.9. Test Band = GSM_1900 CONFIG 0

7.9.1. Test Channel = Mid Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	44.7447	-63.34	-13.00	50.34	Horizontal
2	242.1496	-67.44	-13.00	54.44	Horizontal
3	2695.9392	-35.87	-13.00	22.87	Horizontal
4	3760.0253	-56.31	-13.00	43.31	Horizontal
5	5640.0880	-38.79	-13.00	25.79	Horizontal
6	16396.946	-43.53	-13.00	30.53	Horizontal





7.10. Test Band = GSM_1900 CONFIG 0

7.10.1. Test Channel = Mid Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	112.3086	-64.41	-13.00	51.41	Vertical
2	496.5448	-65.70	-13.00	52.70	Vertical
3	2697.1394	-37.01	-13.00	24.01	Vertical
4	3760.0253	-59.16	-13.00	46.16	Vertical
5	5640.0880	-40.97	-13.00	27.97	Vertical
6	17998.500	-38.55	-13.00	25.55	Vertical



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7.11. Test Band = GSM_1900 CONFIG 0

7.11.1. Test Channel = High Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	45.4723	-63.35	-13.00	50.35	Horizontal
2	242.3921	-67.40	-13.00	54.40	Horizontal
3	2699.5399	-35.86	-13.00	22.86	Horizontal
4	3819.5273	-54.88	-13.00	41.88	Horizontal
5	5729.5910	-41.36	-13.00	28.36	Horizontal
6	16396.946	-43.15	-13.00	30.15	Horizontal



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7.12. Test Band = GSM_1900 CONFIG 0

7.12.1. Test Channel = High Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	71.2756	-66.45	-13.00	53.45	Vertical
2	110.9505	-64.23	-13.00	51.23	Vertical
3	2708.7417	-36.56	-13.00	23.56	Vertical
4	3819.5273	-57.05	-13.00	44.05	Vertical
5	5729.0910	-45.61	-13.00	32.61	Vertical
6	17996.999	-38.63	-13.00	25.63	Vertical



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7.13. Test Band = GSM_850 CONFIG 1

7.13.1. Test Channel = Low Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	42.6106	-62.96	-13.00	49.96	Horizontal
2	238.8514	-67.19	-13.00	54.19	Horizontal
3	545.1443	-63.77	-13.00	50.77	Horizontal
4	1648.5297	-48.62	-13.00	35.62	Horizontal
5	2630.7261	-52.59	-13.00	39.59	Horizontal
6	9344.3115	-51.49	-13.00	38.49	Horizontal



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7.14. Test Band = GSM_850 CONFIG 1

7.14.1. Test Channel = Low Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	47.5579	-72.13	-13.00	59.13	Vertical
2	110.7565	-63.77	-13.00	50.77	Vertical
3	391.4401	-65.81	-13.00	52.81	Vertical
4	1648.5297	-52.67	-13.00	39.67	Vertical
5	3000.0000	-54.82	-13.00	41.82	Vertical
6	9314.2105	-51.85	-13.00	38.85	Vertical



7.15. Test Band = GSM_850 CONFIG 1**7.15.1. Test Channel = Mid Channel**

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	41.3981	-62.79	-13.00	49.79	Horizontal
2	236.9113	-66.72	-13.00	53.72	Horizontal
3	1673.3347	-49.79	-13.00	36.79	Horizontal
4	2509.9020	-32.34	-13.00	19.34	Horizontal
5	3346.2782	-58.24	-13.00	45.24	Horizontal
6	9348.5116	-51.96	-13.00	38.96	Horizontal



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7.16. Test Band = GSM_850 CONFIG 1

7.16.1. Test Channel = Mid Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	53.6692	-70.97	-13.00	57.97	Vertical
2	112.0176	-63.68	-13.00	50.68	Vertical
3	452.4076	-65.92	-13.00	52.92	Vertical
4	1673.3347	-51.79	-13.00	38.79	Vertical
5	2509.9020	-39.36	-13.00	26.36	Vertical
6	9310.7104	-51.33	-13.00	38.33	Vertical



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7.17. Test Band = GSM_850 CONFIG 1

7.17.1. Test Channel = High Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	40.8160	-63.14	-13.00	50.14	Horizontal
2	224.6887	-67.00	-13.00	54.00	Horizontal
3	555.1843	-62.47	-13.00	49.47	Horizontal
4	1697.3395	-45.36	-13.00	32.36	Horizontal
5	2546.3093	-31.81	-13.00	18.81	Horizontal
6	9317.7106	-52.11	-13.00	39.11	Horizontal



7.18. Test Band = GSM_850 CONFIG 1

7.18.1. Test Channel = High Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	49.3040	-71.34	-13.00	58.34	Vertical
2	110.4170	-63.48	-13.00	50.48	Vertical
3	1697.7395	-51.87	-13.00	38.87	Vertical
4	2546.7093	-43.89	-13.00	30.89	Vertical
5	5069.0356	-61.16	-13.00	48.16	Vertical
6	9876.3292	-51.50	-13.00	38.50	Vertical





7.19. Test Band = GSM_1900 CONFIG 1

7.19.1. Test Channel = Low Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	40.0400	-63.72	-13.00	50.72	Horizontal
2	230.6545	-66.74	-13.00	53.74	Horizontal
3	2699.5399	-35.76	-13.00	22.76	Horizontal
4	3700.5234	-46.12	-13.00	33.12	Horizontal
5	5550.5850	-45.71	-13.00	32.71	Horizontal
6	16400.946	-42.64	-13.00	29.64	Horizontal



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7.20. Test Band = GSM_1900 CONFIG 1**7.20.1. Test Channel = Low Channel**

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	49.8860	-72.14	-13.00	59.14	Vertical
2	111.2901	-64.19	-13.00	51.19	Vertical
3	2697.5395	-36.90	-13.00	23.90	Vertical
4	3700.5234	-56.79	-13.00	43.79	Vertical
5	5550.5850	-51.71	-13.00	38.71	Vertical
6	17999.500	-38.70	-13.00	25.70	Vertical





7.21. Test Band = GSM_1900 CONFIG 1
7.21.1. Test Channel = Middle Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	43.7747	-63.20	-13.00	50.20	Horizontal
2	229.1025	-67.71	-13.00	54.71	Horizontal
3	2697.5395	-35.79	-13.00	22.79	Horizontal
4	3760.0253	-47.64	-13.00	34.64	Horizontal
5	5640.0880	-46.04	-13.00	33.04	Horizontal
6	17996.499	-42.42	-13.00	29.42	Horizontal



7.22. Test Band = GSM_1900 CONFIG 1
7.22.1. Test Channel = Middle Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	50.7590	-71.96	-13.00	58.96	Vertical
2	109.1075	-64.46	-13.00	51.46	Vertical
3	2698.3397	-36.97	-13.00	23.97	Vertical
4	3760.0253	-56.35	-13.00	43.35	Vertical
5	5640.0880	-51.12	-13.00	38.12	Vertical
6	17997.999	-38.62	-13.00	25.62	Vertical



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7.23. Test Band = GSM_1900 CONFIG 1

7.23.1. Test Channel = High Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	41.8831	-63.51	-13.00	50.51	Horizontal
2	239.3850	-67.97	-13.00	54.97	Horizontal
3	2701.5403	-35.49	-13.00	22.49	Horizontal
4	3819.5273	-47.66	-13.00	34.66	Horizontal
5	5729.5910	-46.84	-13.00	33.84	Horizontal
6	16383.446	-43.12	-13.00	30.12	Horizontal



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7.24. Test Band = GSM_1900 CONFIG 1

7.24.1. Test Channel = High Channel

Suspected Data List					
NO.	Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	49.9345	-71.53	-13.00	58.53	Vertical
2	109.1560	-63.51	-13.00	50.51	Vertical
3	2699.1398	-36.98	-13.00	23.98	Vertical
4	3819.5273	-58.17	-13.00	45.17	Vertical
5	5729.0910	-58.93	-13.00	45.93	Vertical
6	17999.500	-38.05	-13.00	25.05	Vertical

Remark:

- 1) According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2) The disturbance above 12.75GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.



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8. Frequency Stability

8.1. Frequency Error Vs Voltage

Voltage							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VL	NT	7.81	0.009476	±2.5	PASS
GSM850	128	VN	NT	86.20	0.104586	±2.5	PASS
GSM850	128	VH	NT	30.28	0.036739	±2.5	PASS
GSM850	190	VL	NT	14.92	0.017834	±2.5	PASS
GSM850	190	VN	NT	16.69	0.019950	±2.5	PASS
GSM850	190	VH	NT	20.79	0.024851	±2.5	PASS
GSM850	251	VL	NT	20.76	0.024458	±2.5	PASS
GSM850	251	VN	NT	12.01	0.014149	±2.5	PASS
GSM850	251	VH	NT	13.14	0.015481	±2.5	PASS
EGPRS850	128	VL	NT	26.86	0.032589	±2.5	PASS
EGPRS850	128	VN	NT	24.92	0.030235	±2.5	PASS
EGPRS850	128	VH	NT	28.44	0.034506	±2.5	PASS
EGPRS850	190	VL	NT	24.41	0.029178	±2.5	PASS
EGPRS850	190	VN	NT	24.41	0.029178	±2.5	PASS
EGPRS850	190	VH	NT	24.38	0.029142	±2.5	PASS
EGPRS850	251	VL	NT	26.93	0.031727	±2.5	PASS
EGPRS850	251	VN	NT	21.70	0.025566	±2.5	PASS
EGPRS850	251	VH	NT	25.41	0.029936	±2.5	PASS
GSM1900	512	VL	NT	14.46	0.007815	±2.5	PASS
GSM1900	512	VN	NT	25.25	0.013647	±2.5	PASS
GSM1900	512	VH	NT	21.18	0.011447	±2.5	PASS
GSM1900	661	VL	NT	5.91	0.003144	±2.5	PASS
GSM1900	661	VN	NT	11.11	0.005910	±2.5	PASS
GSM1900	661	VH	NT	-0.65	-0.000346	±2.5	PASS
GSM1900	810	VL	NT	13.66	0.007153	±2.5	PASS
GSM1900	810	VN	NT	20.24	0.010598	±2.5	PASS
GSM1900	810	VH	NT	18.50	0.009687	±2.5	PASS
EGPRS1900	512	VL	NT	14.24	0.007696	±2.5	PASS
EGPRS1900	512	VN	NT	28.15	0.015215	±2.5	PASS
EGPRS1900	512	VH	NT	22.05	0.011918	±2.5	PASS
EGPRS1900	661	VL	NT	9.04	0.004809	±2.5	PASS



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EGPRS1900	661	VN	NT	25.89	0.013771	±2.5	PASS
EGPRS1900	661	VH	NT	14.82	0.007883	±2.5	PASS
EGPRS1900	810	VL	NT	24.89	0.013033	±2.5	PASS
EGPRS1900	810	VN	NT	22.57	0.011818	±2.5	PASS
EGPRS1900	810	VH	NT	9.46	0.004953	±2.5	PASS

8.2. Frequency Error Vs Temperature

Temperature							
Band	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	NV	-30	20.86	0.025309	±2.5	PASS
GSM850	128	NV	-20	31.58	0.038316	±2.5	PASS
GSM850	128	NV	-10	21.11	0.025613	±2.5	PASS
GSM850	128	NV	0	26.60	0.032274	±2.5	PASS
GSM850	128	NV	10	20.28	0.024606	±2.5	PASS
GSM850	128	NV	20	12.01	0.014572	±2.5	PASS
GSM850	128	NV	30	27.02	0.032783	±2.5	PASS
GSM850	128	NV	40	18.73	0.022725	±2.5	PASS
GSM850	128	NV	50	21.11	0.025613	±2.5	PASS
GSM850	190	NV	-30	20.08	0.024002	±2.5	PASS
GSM850	190	NV	-20	13.14	0.015706	±2.5	PASS
GSM850	190	NV	-10	14.08	0.016830	±2.5	PASS
GSM850	190	NV	0	16.43	0.019639	±2.5	PASS
GSM850	190	NV	10	13.37	0.015981	±2.5	PASS
GSM850	190	NV	20	17.76	0.021229	±2.5	PASS
GSM850	190	NV	30	19.11	0.022842	±2.5	PASS
GSM850	190	NV	40	18.56	0.022185	±2.5	PASS
GSM850	190	NV	50	19.18	0.022926	±2.5	PASS
GSM850	251	NV	-30	23.92	0.028181	±2.5	PASS
GSM850	251	NV	-20	21.60	0.025448	±2.5	PASS
GSM850	251	NV	-10	16.53	0.019475	±2.5	PASS
GSM850	251	NV	0	20.89	0.024611	±2.5	PASS
GSM850	251	NV	10	20.82	0.024529	±2.5	PASS
GSM850	251	NV	20	17.31	0.020393	±2.5	PASS
GSM850	251	NV	30	21.34	0.025141	±2.5	PASS
GSM850	251	NV	40	14.79	0.017425	±2.5	PASS
GSM850	251	NV	50	17.92	0.021112	±2.5	PASS



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EGPRS850	128	NV	-30	29.51	0.035804	±2.5	PASS
EGPRS850	128	NV	-20	30.74	0.037297	±2.5	PASS
EGPRS850	128	NV	-10	27.48	0.033341	±2.5	PASS
EGPRS850	128	NV	0	25.96	0.031497	±2.5	PASS
EGPRS850	128	NV	10	25.60	0.031060	±2.5	PASS
EGPRS850	128	NV	20	28.83	0.034979	±2.5	PASS
EGPRS850	128	NV	30	29.74	0.036083	±2.5	PASS
EGPRS850	128	NV	40	29.35	0.035610	±2.5	PASS
EGPRS850	128	NV	50	31.09	0.037721	±2.5	PASS
EGPRS850	190	NV	-30	25.86	0.030911	±2.5	PASS
EGPRS850	190	NV	-20	26.60	0.031795	±2.5	PASS
EGPRS850	190	NV	-10	28.22	0.033732	±2.5	PASS
EGPRS850	190	NV	0	25.34	0.030289	±2.5	PASS
EGPRS850	190	NV	10	27.60	0.032991	±2.5	PASS
EGPRS850	190	NV	20	20.66	0.024695	±2.5	PASS
EGPRS850	190	NV	30	19.89	0.023775	±2.5	PASS
EGPRS850	190	NV	40	21.41	0.025592	±2.5	PASS
EGPRS850	190	NV	50	21.79	0.026046	±2.5	PASS
EGPRS850	251	NV	-30	25.28	0.029783	±2.5	PASS
EGPRS850	251	NV	-20	25.18	0.029665	±2.5	PASS
EGPRS850	251	NV	-10	24.38	0.028723	±2.5	PASS
EGPRS850	251	NV	0	26.70	0.031456	±2.5	PASS
EGPRS850	251	NV	10	28.22	0.033247	±2.5	PASS
EGPRS850	251	NV	20	24.83	0.029253	±2.5	PASS
EGPRS850	251	NV	30	22.99	0.027085	±2.5	PASS
EGPRS850	251	NV	40	22.28	0.026249	±2.5	PASS
EGPRS850	251	NV	50	30.96	0.036475	±2.5	PASS
GSM1900	512	NV	-30	12.40	0.006702	±2.5	PASS
GSM1900	512	NV	-20	19.73	0.010664	±2.5	PASS
GSM1900	512	NV	-10	11.98	0.006475	±2.5	PASS
GSM1900	512	NV	0	26.60	0.014377	±2.5	PASS
GSM1900	512	NV	10	18.53	0.010015	±2.5	PASS
GSM1900	512	NV	20	29.35	0.015863	±2.5	PASS
GSM1900	512	NV	30	23.31	0.012599	±2.5	PASS
GSM1900	512	NV	40	12.40	0.006702	±2.5	PASS
GSM1900	512	NV	50	11.78	0.006367	±2.5	PASS
GSM1900	661	NV	-30	14.01	0.007452	±2.5	PASS



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GSM1900	661	NV	-20	10.75	0.005718	±2.5	PASS
GSM1900	661	NV	-10	8.23	0.004378	±2.5	PASS
GSM1900	661	NV	0	17.43	0.009271	±2.5	PASS
GSM1900	661	NV	10	11.04	0.005872	±2.5	PASS
GSM1900	661	NV	20	9.07	0.004824	±2.5	PASS
GSM1900	661	NV	30	15.21	0.008090	±2.5	PASS
GSM1900	661	NV	40	4.55	0.002420	±2.5	PASS
GSM1900	661	NV	50	11.56	0.006149	±2.5	PASS
GSM1900	810	NV	-30	18.18	0.009519	±2.5	PASS
GSM1900	810	NV	-20	13.37	0.007001	±2.5	PASS
GSM1900	810	NV	-10	11.43	0.005985	±2.5	PASS
GSM1900	810	NV	0	18.98	0.009938	±2.5	PASS
GSM1900	810	NV	10	8.43	0.004414	±2.5	PASS
GSM1900	810	NV	20	15.95	0.008352	±2.5	PASS
GSM1900	810	NV	30	10.43	0.005461	±2.5	PASS
GSM1900	810	NV	40	3.78	0.001979	±2.5	PASS
GSM1900	810	NV	50	15.63	0.008184	±2.5	PASS
EGPRS1900	512	NV	-30	24.67	0.013334	±2.5	PASS
EGPRS1900	512	NV	-20	19.24	0.010399	±2.5	PASS
EGPRS1900	512	NV	-10	23.92	0.012928	±2.5	PASS
EGPRS1900	512	NV	0	30.15	0.016296	±2.5	PASS
EGPRS1900	512	NV	10	19.76	0.010680	±2.5	PASS
EGPRS1900	512	NV	20	23.60	0.012755	±2.5	PASS
EGPRS1900	512	NV	30	25.44	0.013750	±2.5	PASS
EGPRS1900	512	NV	40	30.25	0.016350	±2.5	PASS
EGPRS1900	512	NV	50	31.45	0.016998	±2.5	PASS
EGPRS1900	661	NV	-30	21.73	0.011559	±2.5	PASS
EGPRS1900	661	NV	-20	4.13	0.002197	±2.5	PASS
EGPRS1900	661	NV	-10	6.42	0.003415	±2.5	PASS
EGPRS1900	661	NV	0	19.53	0.010388	±2.5	PASS
EGPRS1900	661	NV	10	2.84	0.001511	±2.5	PASS
EGPRS1900	661	NV	20	4.49	0.002388	±2.5	PASS
EGPRS1900	661	NV	30	17.40	0.009255	±2.5	PASS
EGPRS1900	661	NV	40	20.02	0.010649	±2.5	PASS
EGPRS1900	661	NV	50	17.89	0.009516	±2.5	PASS
EGPRS1900	810	NV	-30	8.62	0.004514	±2.5	PASS
EGPRS1900	810	NV	-20	10.27	0.005378	±2.5	PASS



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EGPRS1900	810	NV	-10	16.50	0.008640	±2.5	PASS
EGPRS1900	810	NV	0	20.31	0.010635	±2.5	PASS
EGPRS1900	810	NV	10	21.34	0.011174	±2.5	PASS
EGPRS1900	810	NV	20	19.21	0.010059	±2.5	PASS
EGPRS1900	810	NV	30	18.56	0.009718	±2.5	PASS
EGPRS1900	810	NV	40	24.02	0.012577	±2.5	PASS
EGPRS1900	810	NV	50	24.50	0.012829	±2.5	PASS

The End

