

# Appendix B

## GSM 850 & 1900



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## 1. Effective (Isotropic) Radiated Power Output Data

### 1.1. Test Result

**FOR ANT1:**

Band	Channel	Slot	Conducted Power (dBm)	ERP (dBm)	Limit(dBm)	Verdict
GSM850	128	---	32.71	25.56	38.45	PASS
GSM850	190	---	32.83	25.68	38.45	PASS
GSM850	251	---	32.80	25.65	38.45	PASS
EGPRS850	128	1	27.55	20.40	38.45	PASS
EGPRS850	128	2	26.34	19.19	38.45	PASS
EGPRS850	128	3	24.20	17.05	38.45	PASS
EGPRS850	128	4	23.10	15.95	38.45	PASS
EGPRS850	190	1	27.66	20.51	38.45	PASS
EGPRS850	190	2	26.50	19.35	38.45	PASS
EGPRS850	190	3	24.35	17.20	38.45	PASS
EGPRS850	190	4	23.25	16.10	38.45	PASS
EGPRS850	251	1	27.70	20.55	38.45	PASS
EGPRS850	251	2	26.60	19.45	38.45	PASS
EGPRS850	251	3	24.42	17.27	38.45	PASS
EGPRS850	251	4	23.38	16.23	38.45	PASS

Band	Channel	Slot	Conducted Power (dBm)	EIRP (dBm)	Limit(dBm)	Verdict
GSM1900	512	---	29.87	29.49	33.00	PASS
GSM1900	661	---	29.95	29.57	33.00	PASS
GSM1900	810	---	30.00	29.62	33.00	PASS
EGPRS1900	512	1	27.10	26.72	33.00	PASS
EGPRS1900	512	2	26.09	25.71	33.00	PASS
EGPRS1900	512	3	24.00	23.62	33.00	PASS
EGPRS1900	512	4	23.00	22.62	33.00	PASS
EGPRS1900	661	1	27.18	26.8	33.00	PASS
EGPRS1900	661	2	26.17	25.79	33.00	PASS
EGPRS1900	661	3	24.01	23.63	33.00	PASS
EGPRS1900	661	4	23.01	22.63	33.00	PASS
EGPRS1900	810	1	27.33	26.95	33.00	PASS
EGPRS1900	810	2	26.30	25.92	33.00	PASS
EGPRS1900	810	3	24.21	23.83	33.00	PASS
EGPRS1900	810	4	23.12	22.74	33.00	PASS

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**FOR ANT2:**

Band	Channel	Slot	Conducted Power (dBm)	ERP (dBm)	Limit(dBm)	Verdict
GSM850	128	---	32.29	25.80	38.45	PASS
GSM850	190	---	32.45	25.96	38.45	PASS
GSM850	251	---	32.58	26.09	38.45	PASS
EGPRS850	128	1	27.56	21.07	38.45	PASS
EGPRS850	128	2	26.42	19.93	38.45	PASS
EGPRS850	128	3	24.35	17.86	38.45	PASS
EGPRS850	128	4	23.03	16.54	38.45	PASS
EGPRS850	190	1	27.67	21.18	38.45	PASS
EGPRS850	190	2	26.53	20.04	38.45	PASS
EGPRS850	190	3	24.44	17.95	38.45	PASS
EGPRS850	190	4	23.20	16.71	38.45	PASS
EGPRS850	251	1	27.64	21.15	38.45	PASS
EGPRS850	251	2	26.55	20.06	38.45	PASS
EGPRS850	251	3	24.31	17.82	38.45	PASS
EGPRS850	251	4	23.40	16.91	38.45	PASS

Band	Channel	Slot	Conducted Power (dBm)	EIRP (dBm)	Limit(dBm)	Verdict
GSM1900	512	---	30.63	30.24	33.00	PASS
GSM1900	661	---	30.92	30.53	33.00	PASS
GSM1900	810	---	31.11	30.72	33.00	PASS
EGPRS1900	512	1	25.61	25.22	33.00	PASS
EGPRS1900	512	2	25.52	25.13	33.00	PASS
EGPRS1900	512	3	24.37	23.98	33.00	PASS
EGPRS1900	512	4	23.24	22.85	33.00	PASS
EGPRS1900	661	1	25.77	25.38	33.00	PASS
EGPRS1900	661	2	25.60	25.21	33.00	PASS
EGPRS1900	661	3	24.51	24.12	33.00	PASS
EGPRS1900	661	4	23.51	23.12	33.00	PASS
EGPRS1900	810	1	25.82	25.43	33.00	PASS
EGPRS1900	810	2	25.64	25.25	33.00	PASS
EGPRS1900	810	3	24.39	24.00	33.00	PASS
EGPRS1900	810	4	23.43	23.04	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	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
GSM850	128	7.71	13	PASS
GSM850	190	7.71	13	PASS
GSM850	251	7.71	13	PASS
EGPRS850	128	10.81	13	PASS
EGPRS850	190	10.17	13	PASS
EGPRS850	251	10.61	13	PASS
GSM1900	512	10.93	13	PASS
GSM1900	661	7.71	13	PASS
GSM1900	810	7.68	13	PASS
EGPRS1900	512	10.81	13	PASS
EGPRS1900	661	10.93	13	PASS
EGPRS1900	810	10.93	13	PASS

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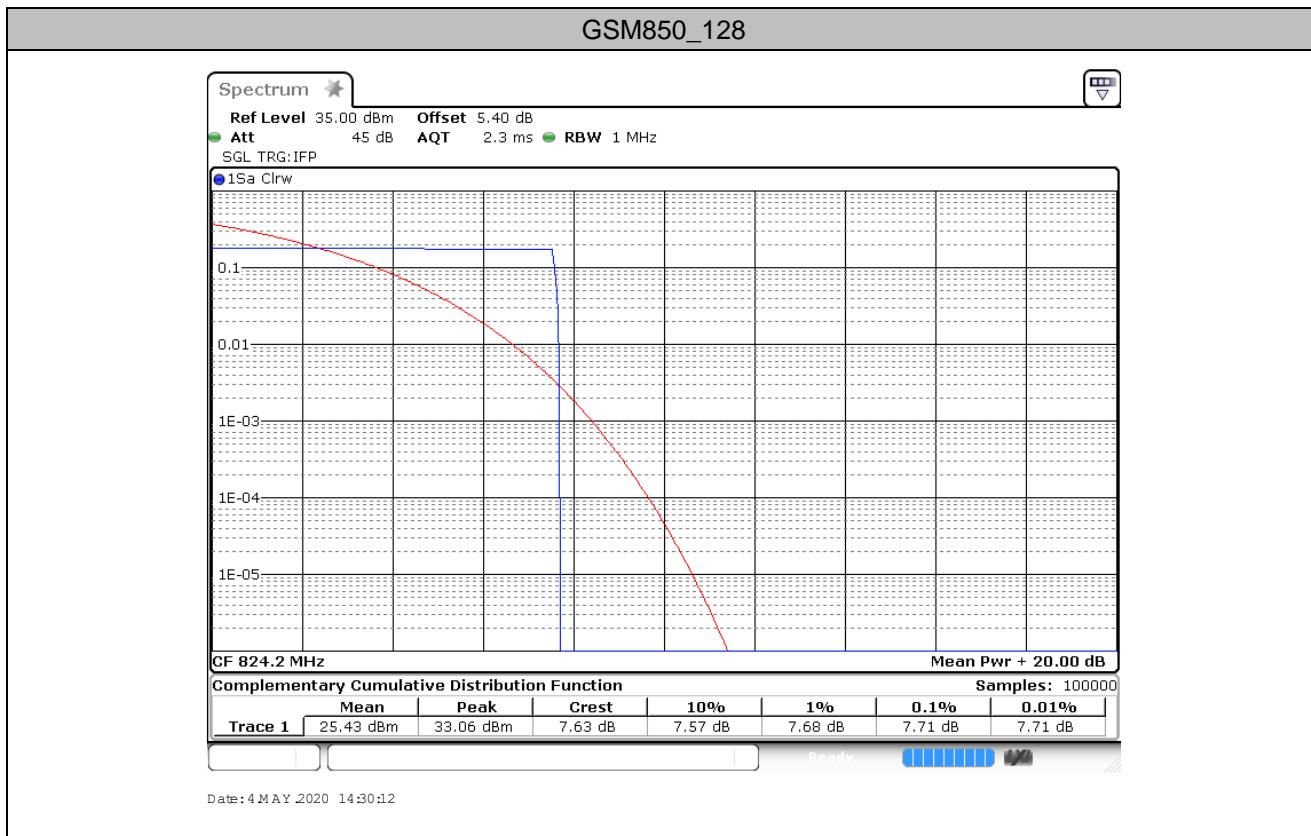
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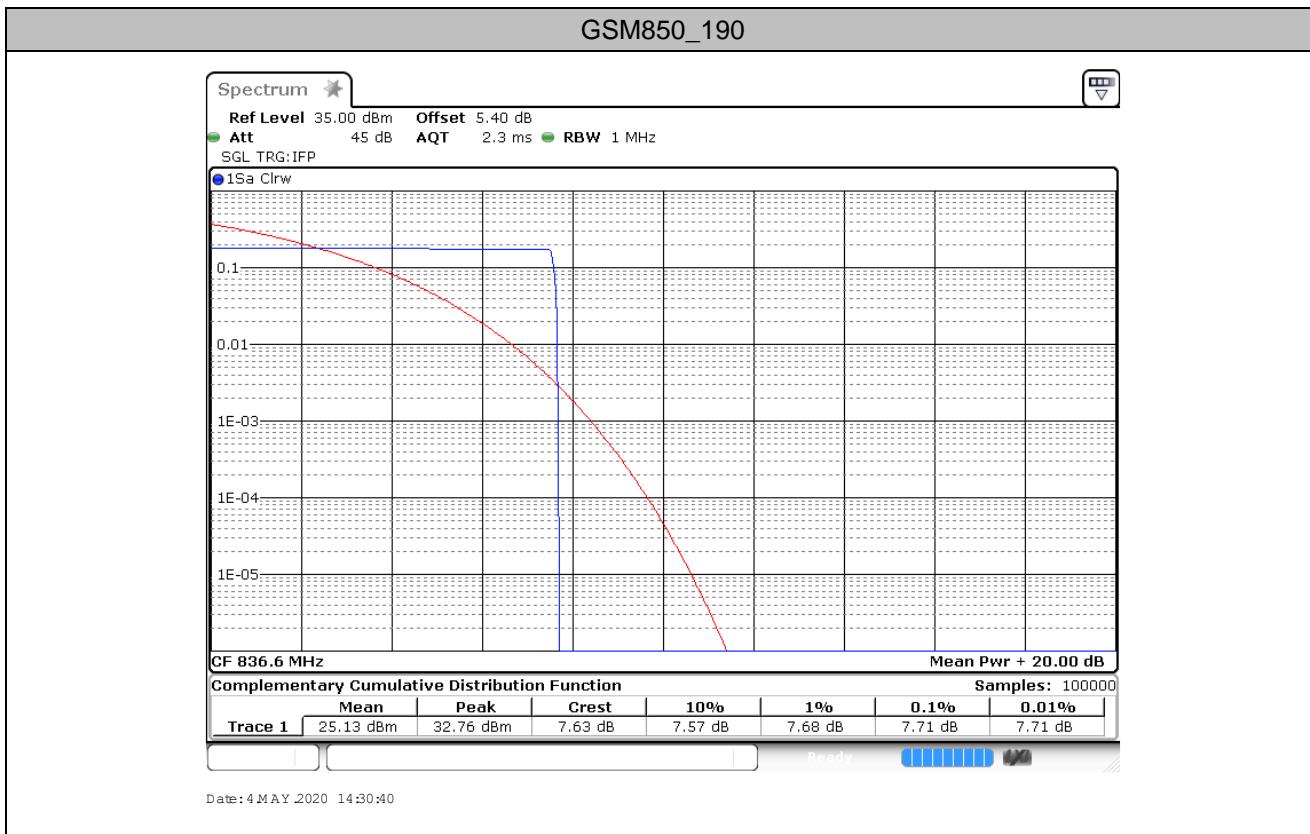
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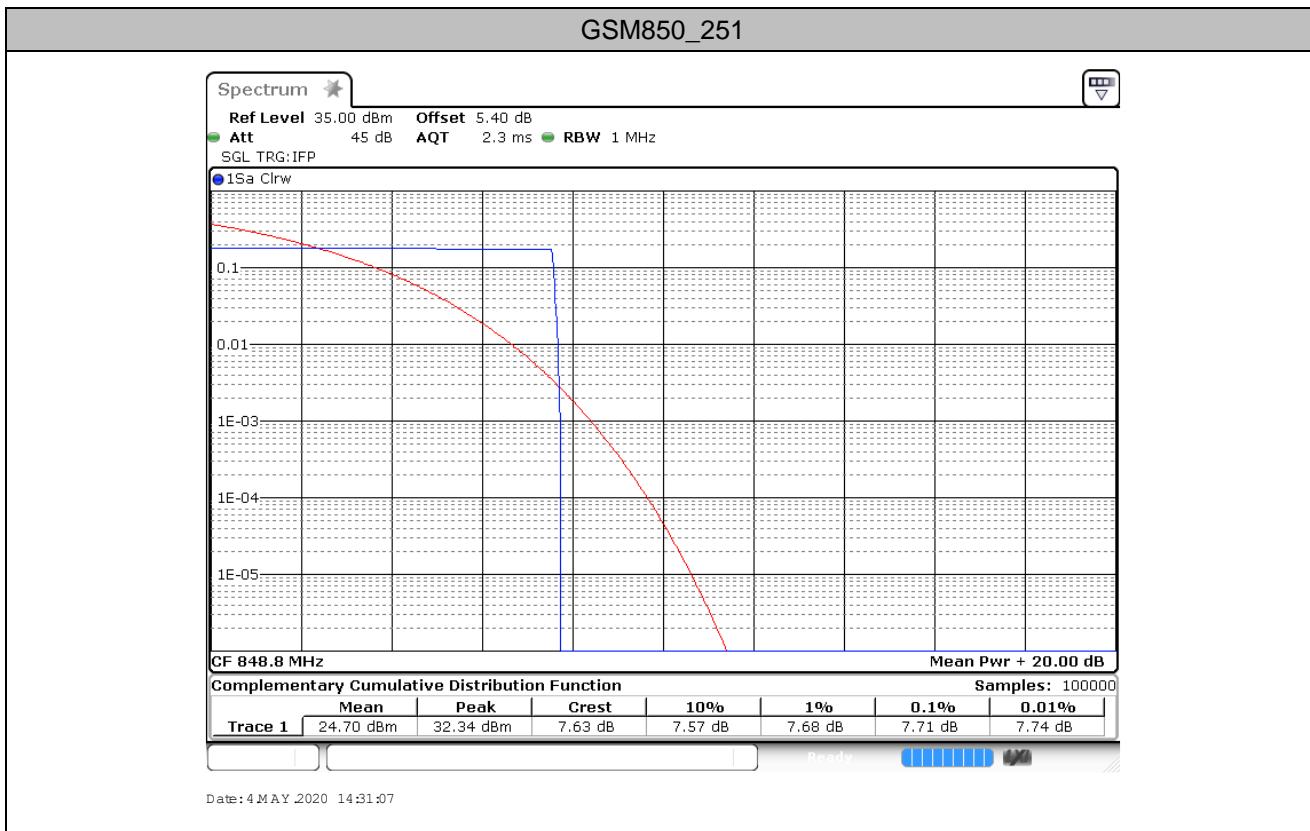
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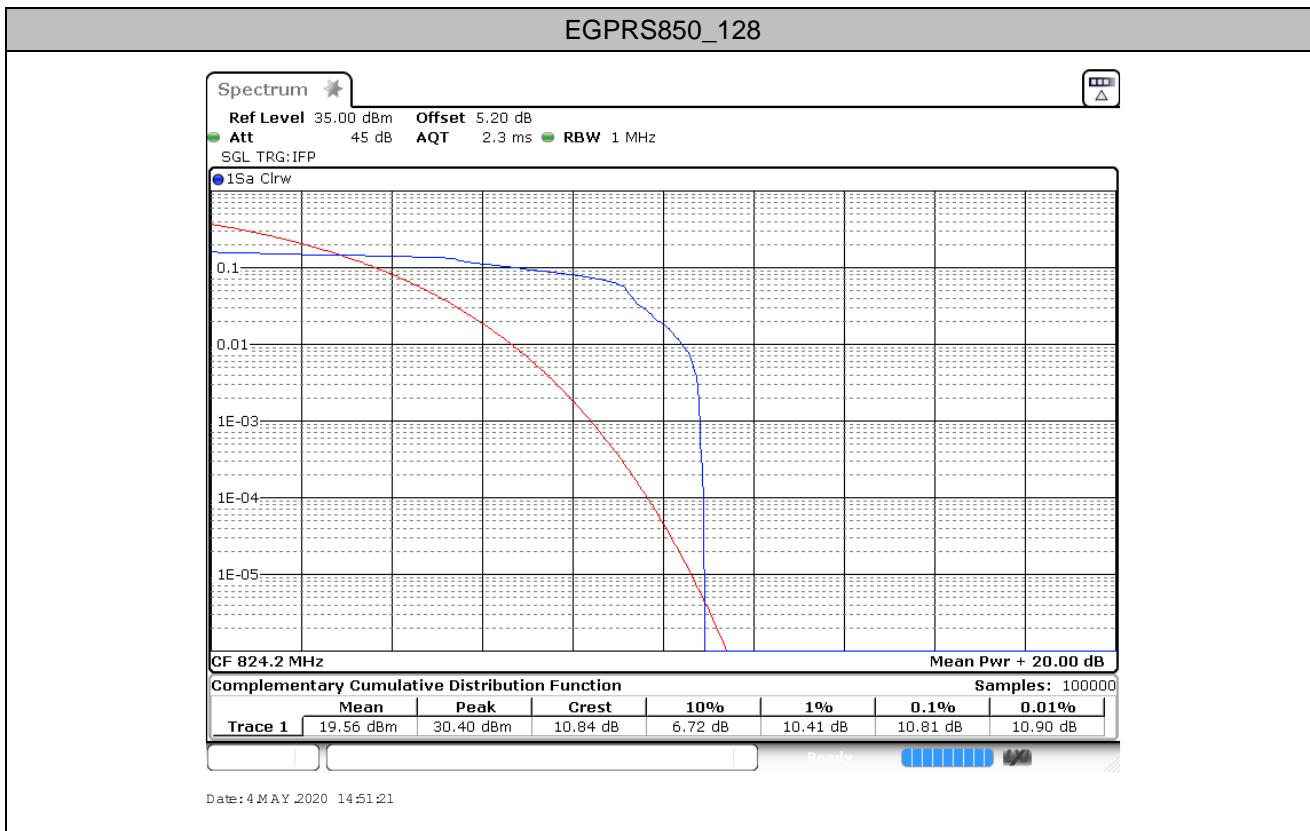
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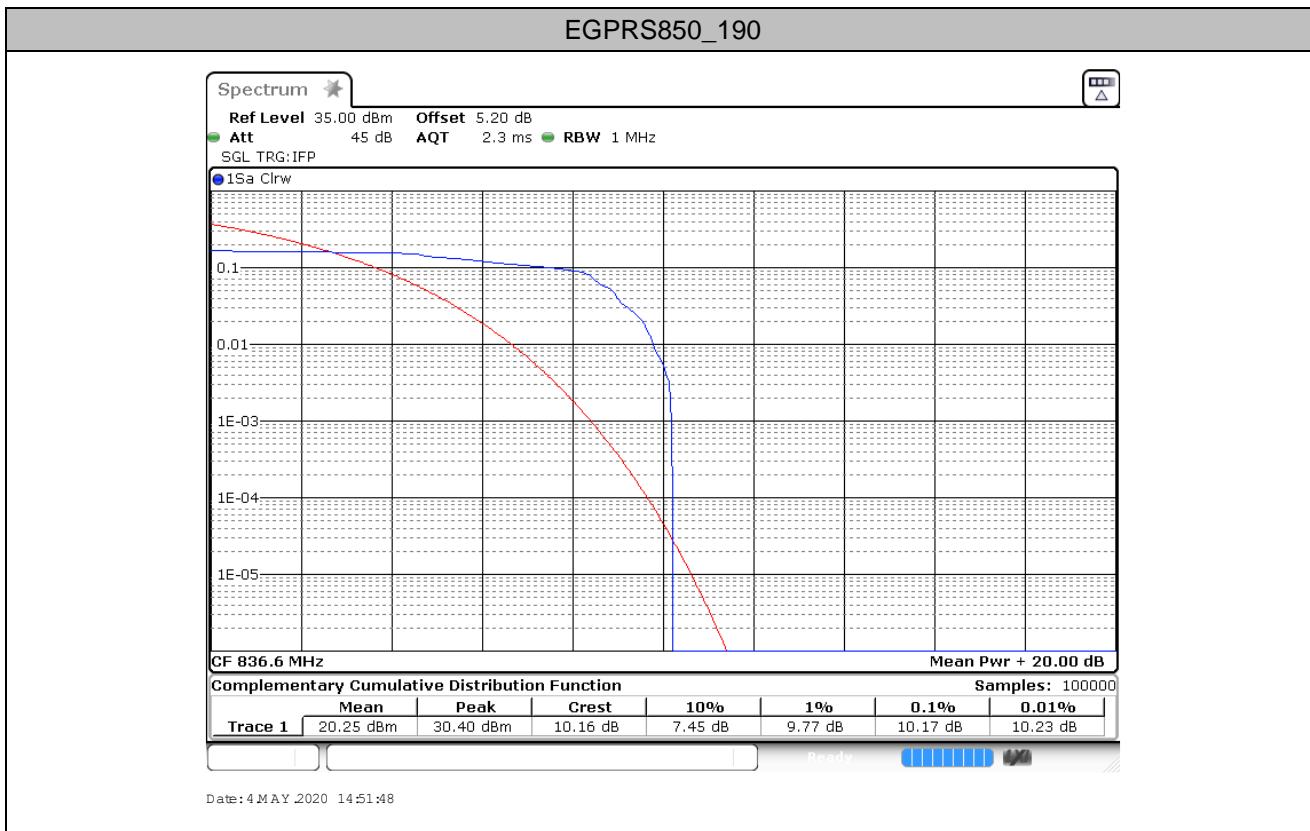




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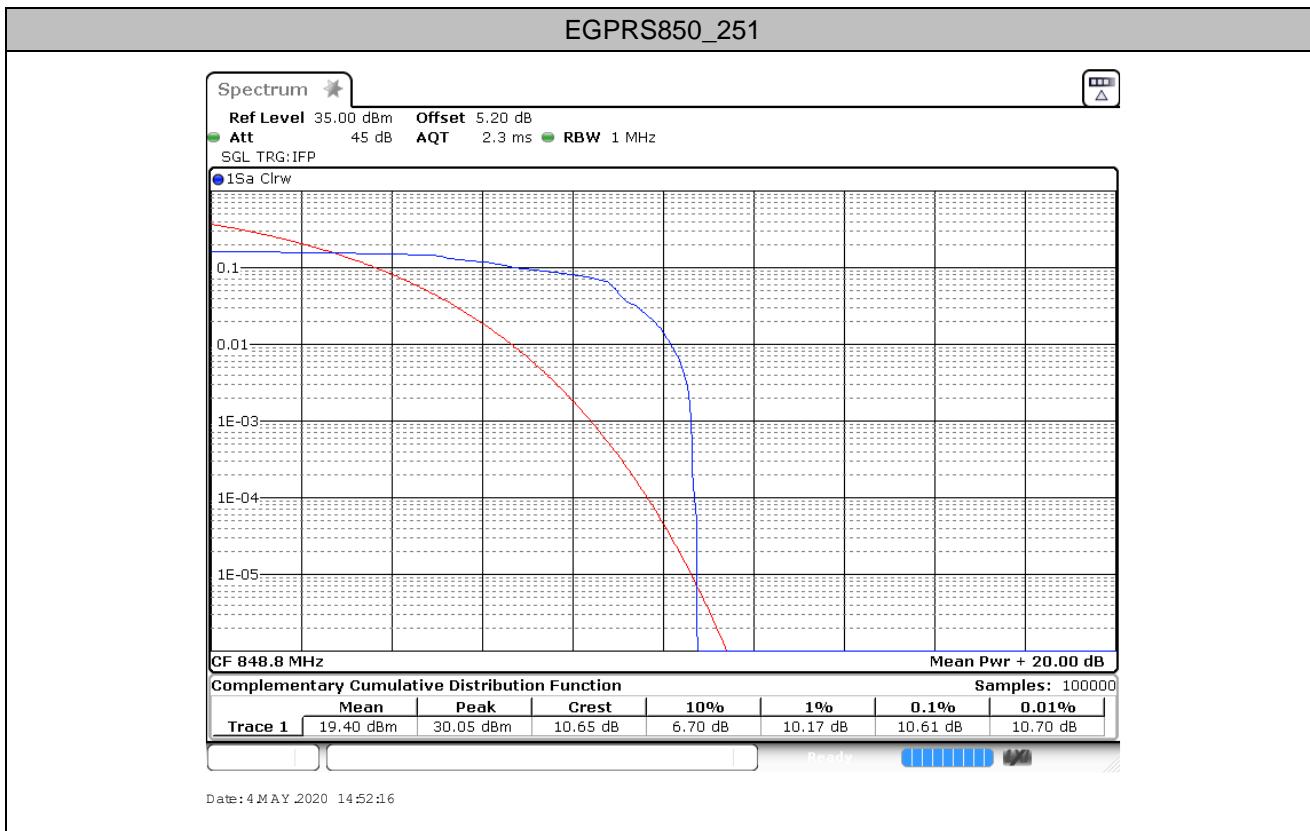


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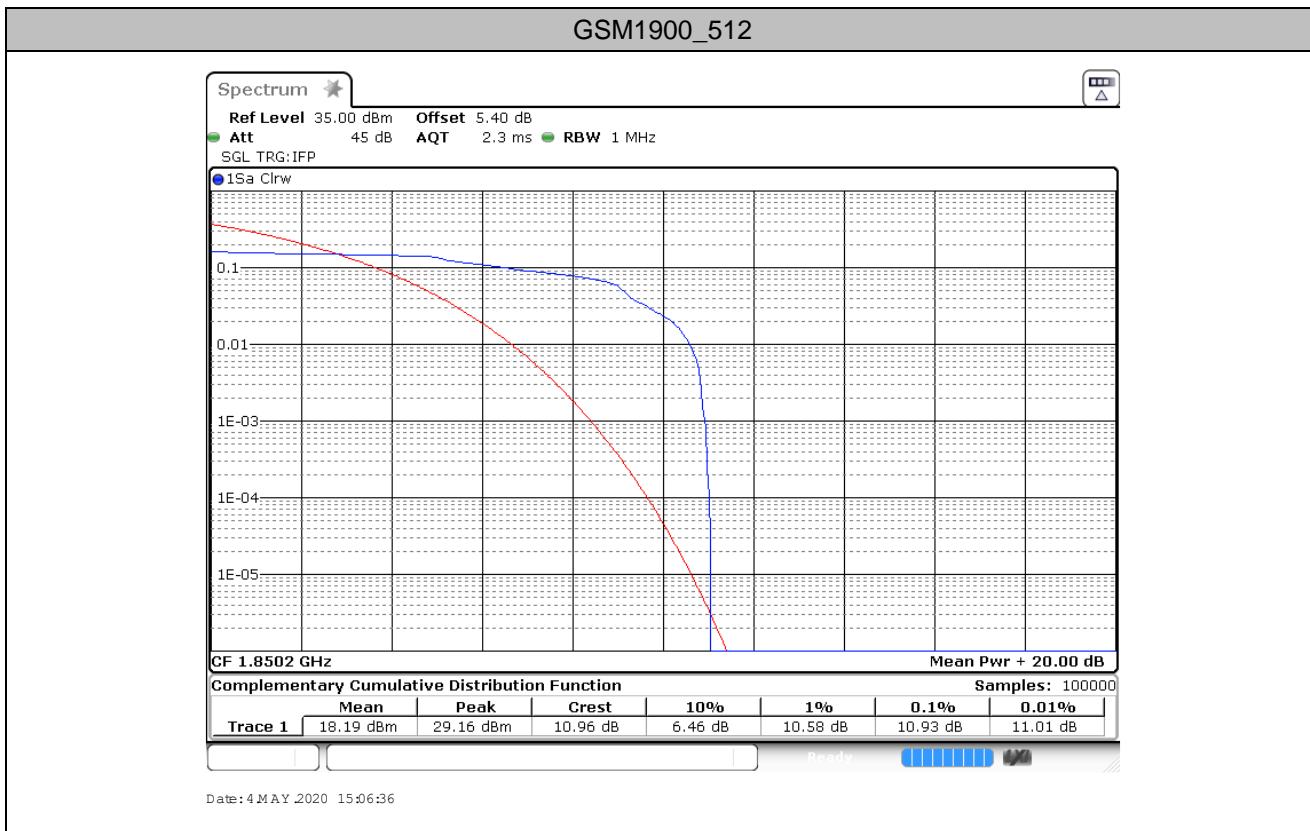
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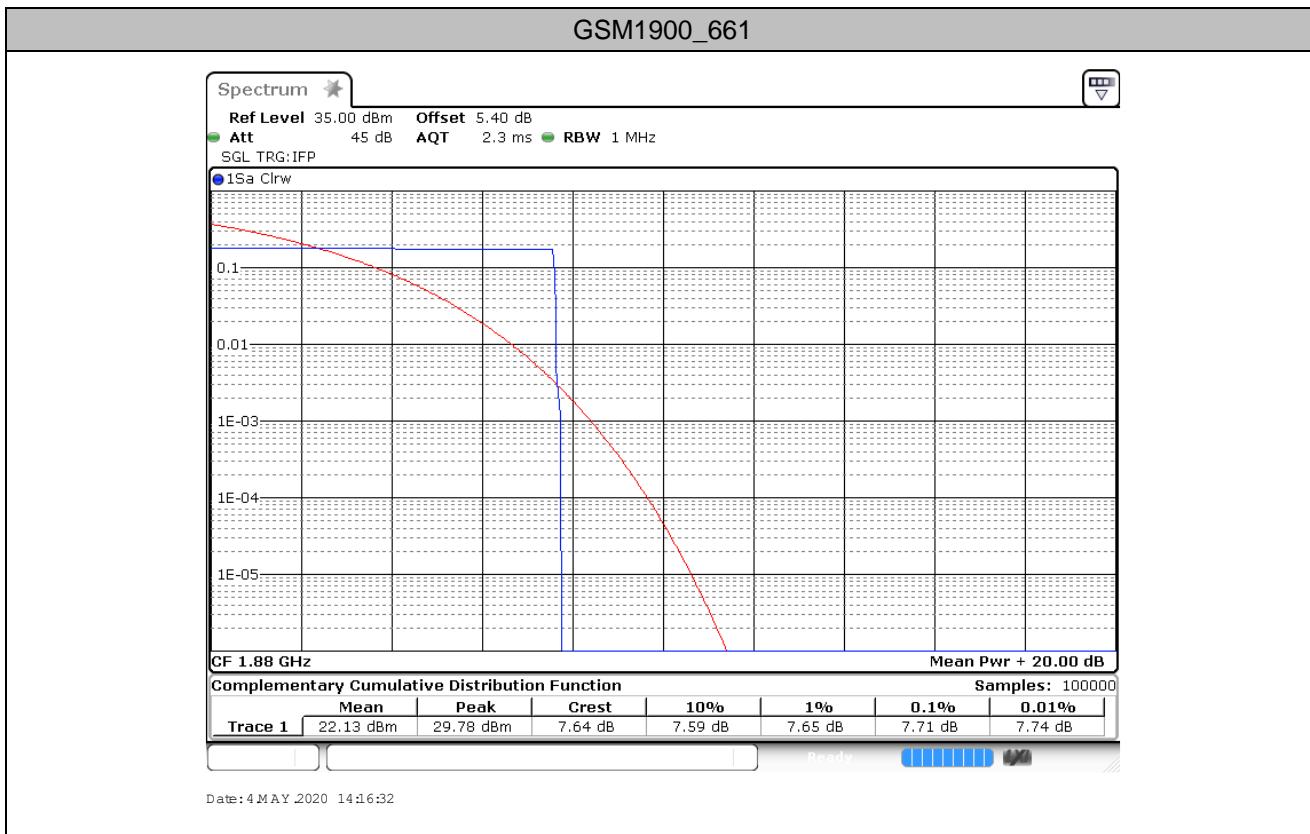


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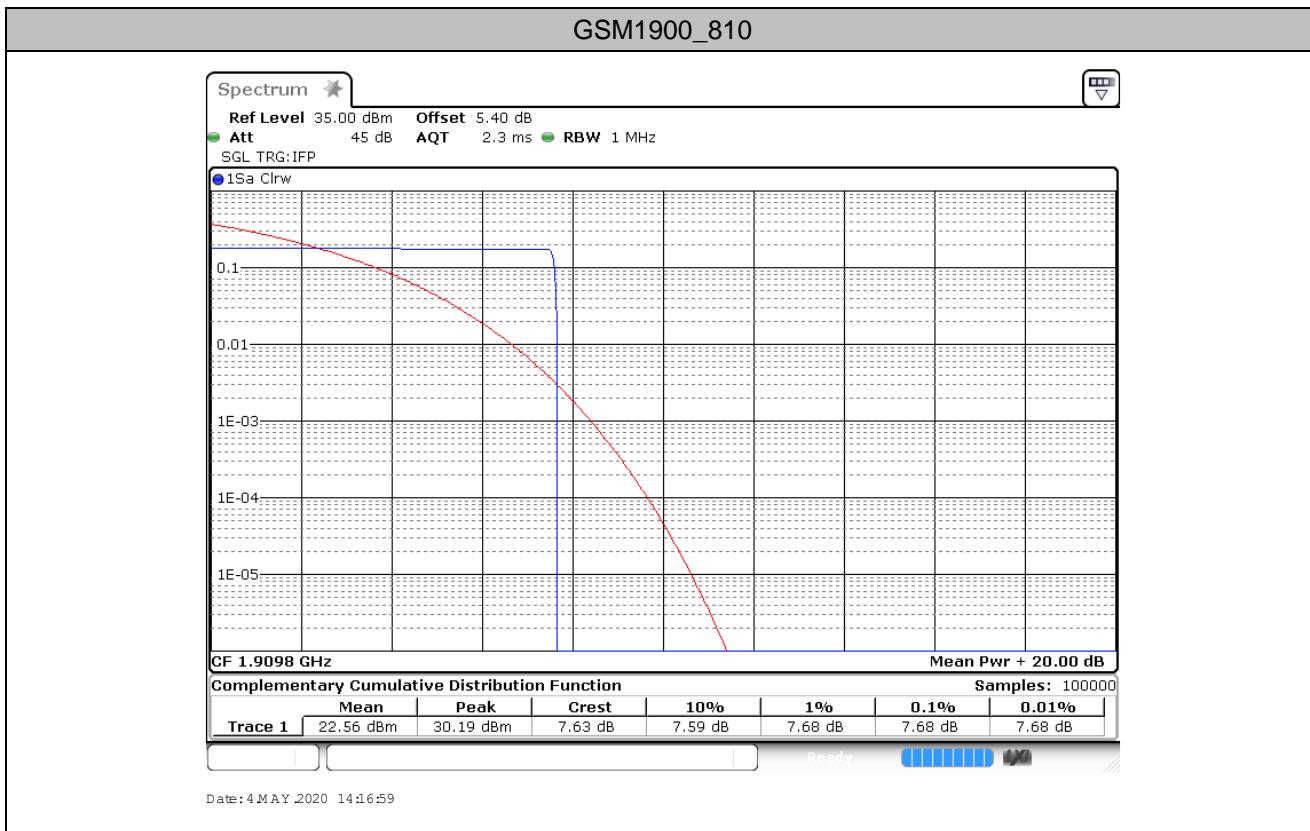
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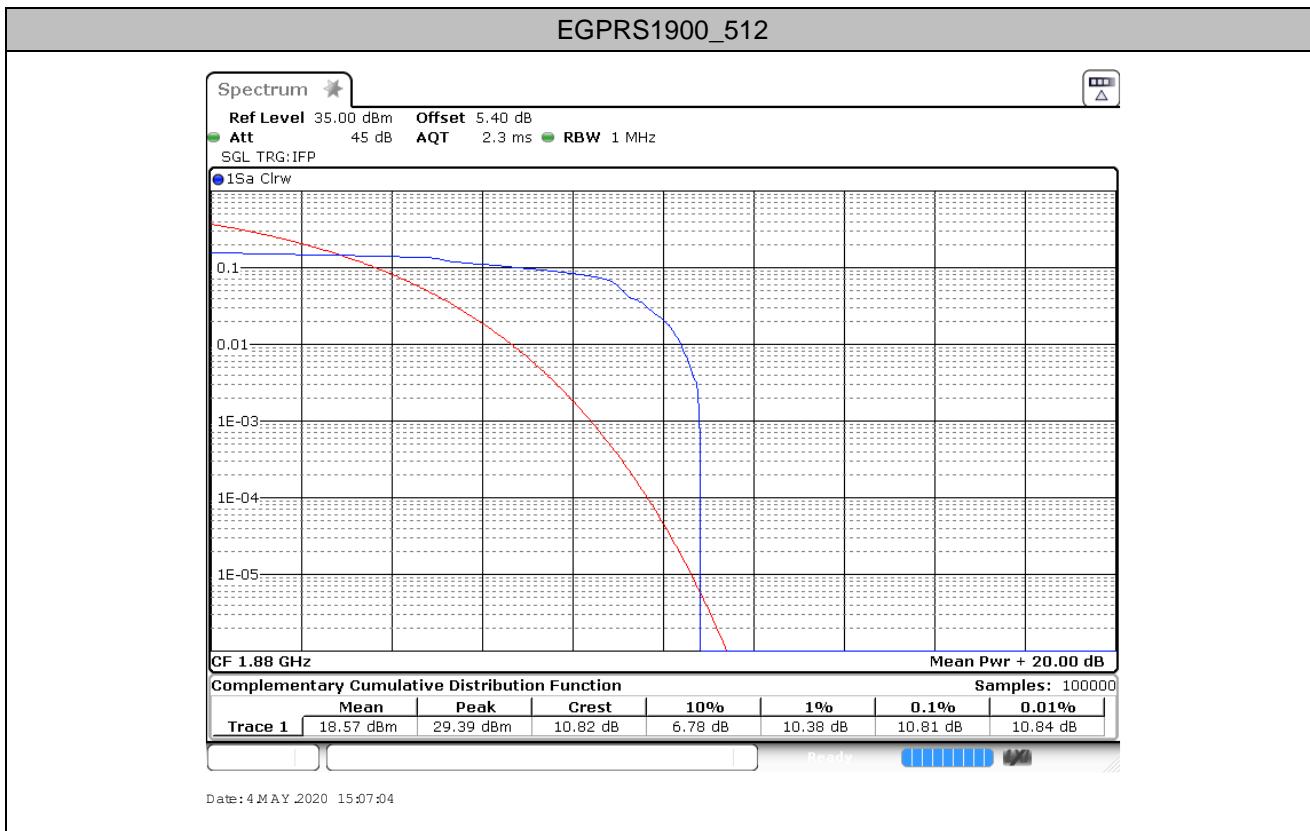
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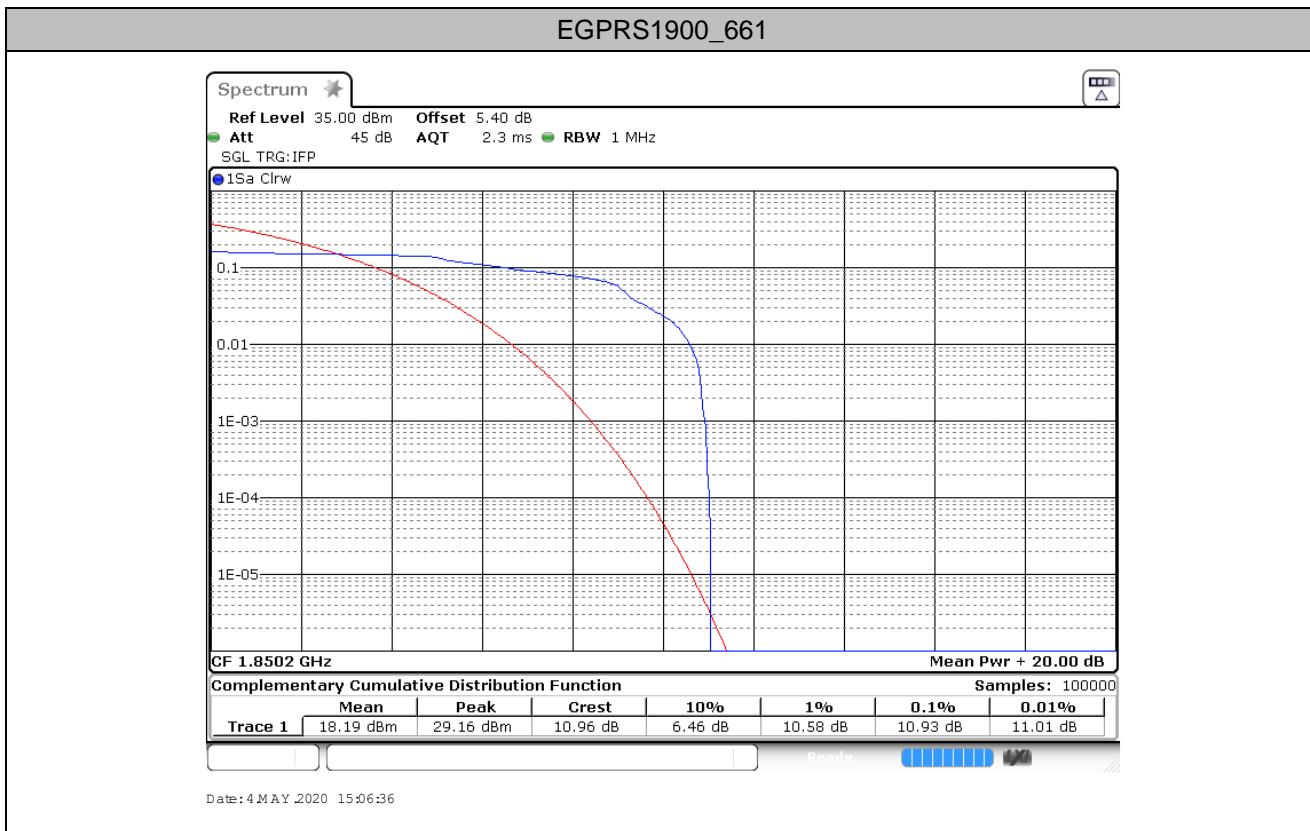
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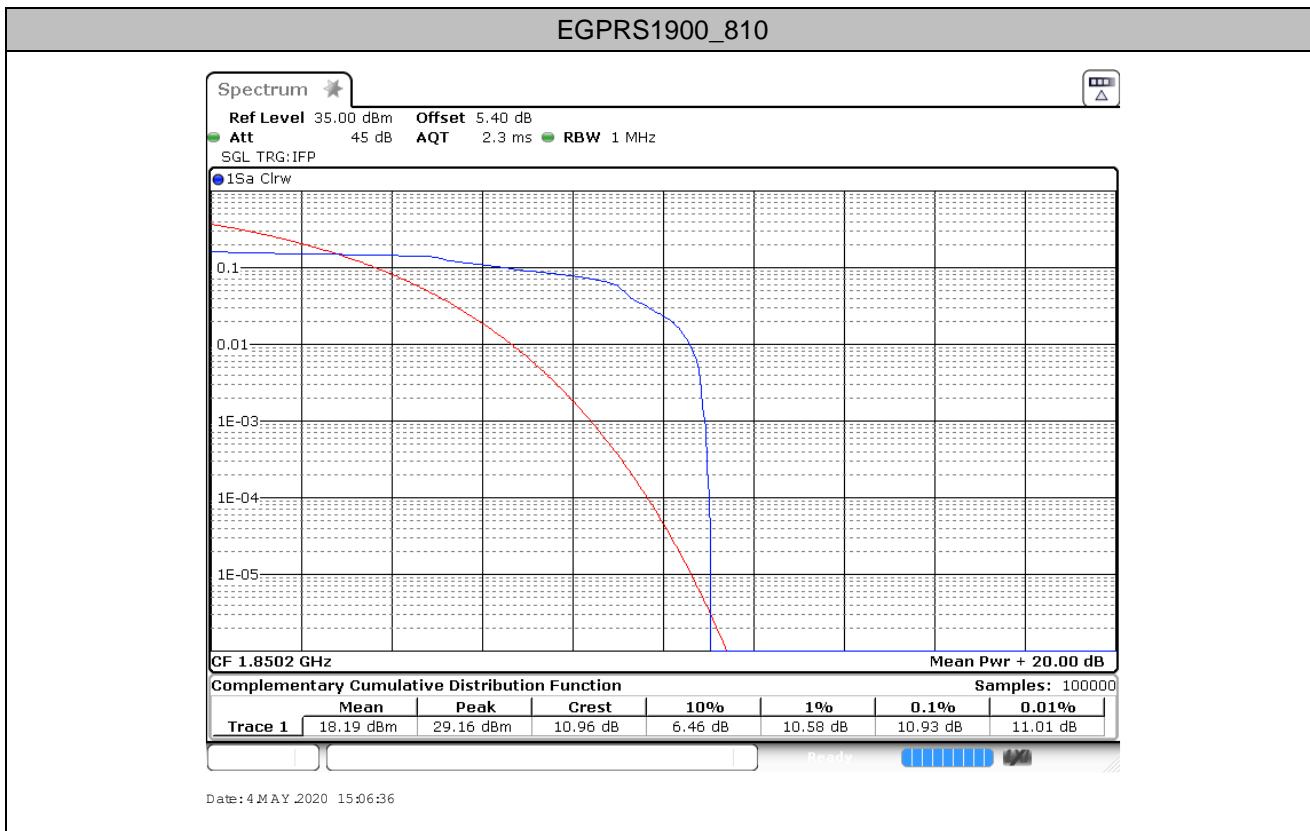
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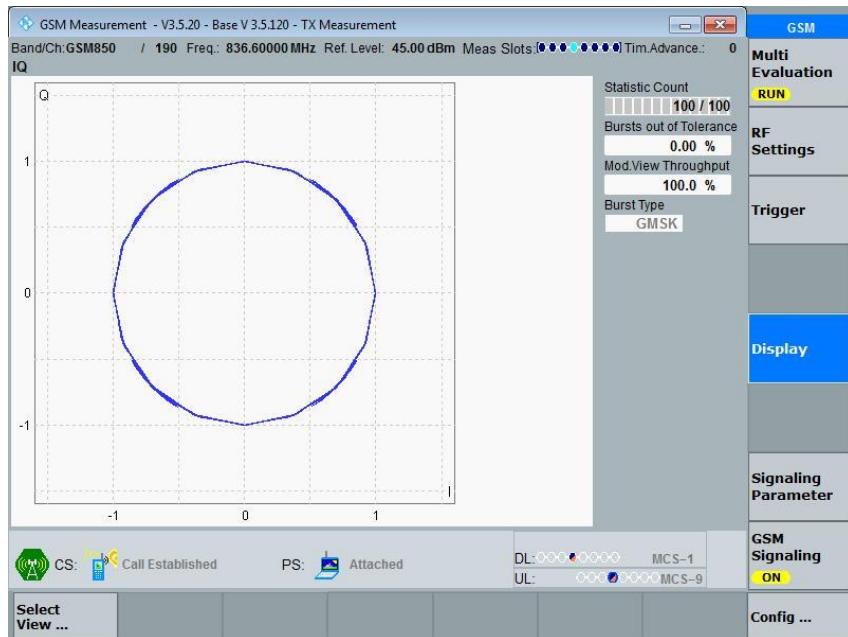
### 3. Modulation Characteristics

### 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



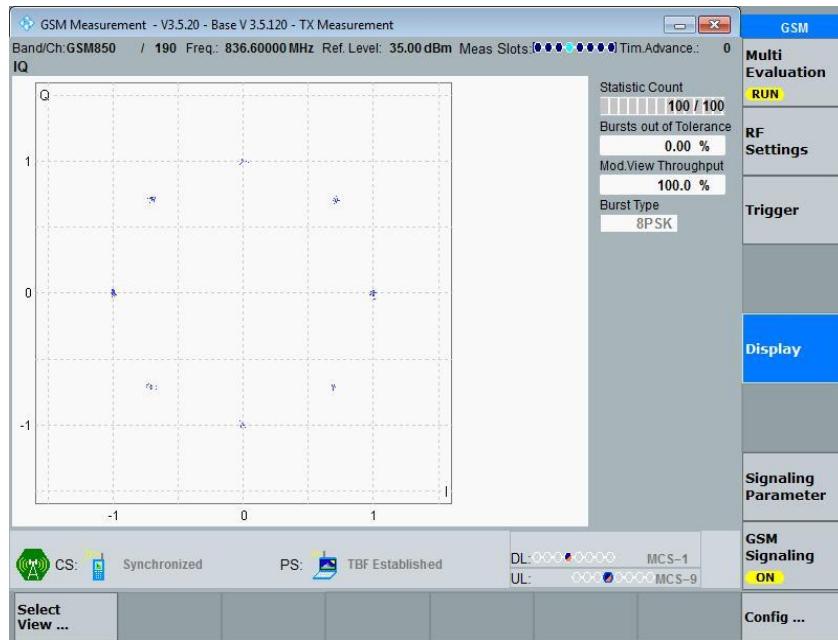
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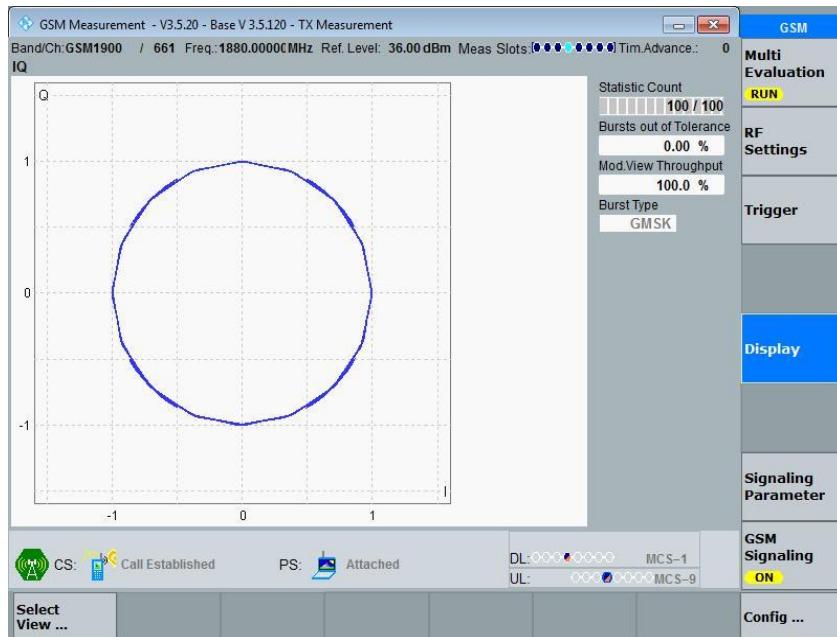
**3.1.1.2. Test Mode = GSM/TM2****3.1.1.2.1. Test Channel = MCH**

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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**

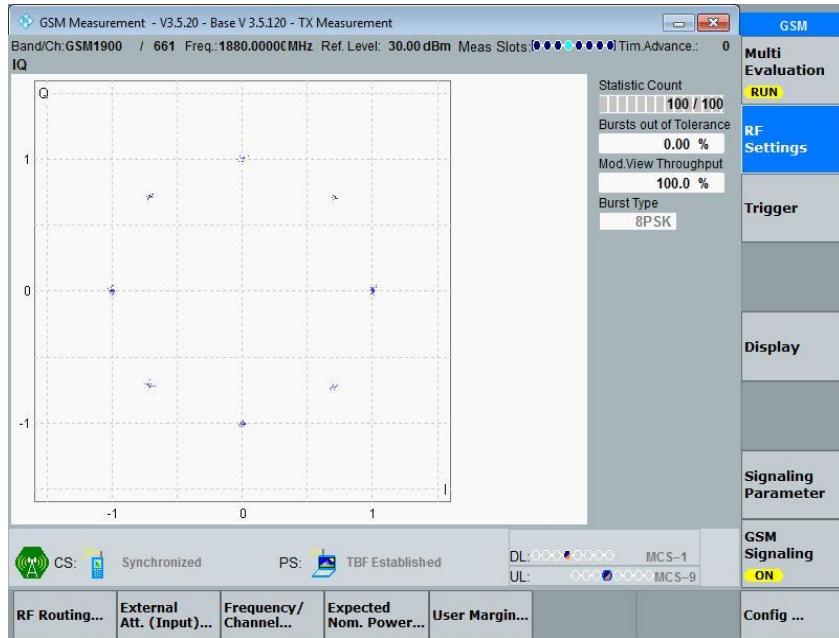
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### 3.1.2.2. Test Mode = GSM/TM2

### 3.1.2.2.1. Test Channel = MCH



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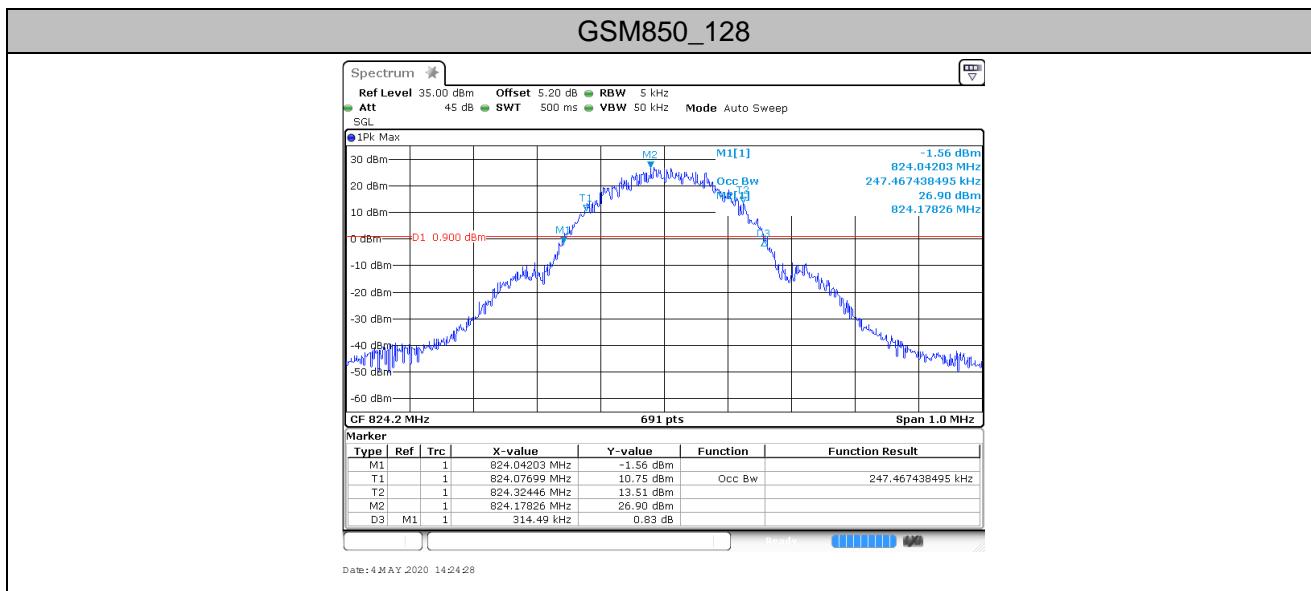
Chlorophyll a fluorescence Laboratory

## 4. 26dB Bandwidth and Occupied Bandwidth

### 4.1. Test Result

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
GSM850	128	247.47	314.49	---	PASS
GSM850	190	247.47	310.14	---	PASS
GSM850	251	246.02	302.90	---	PASS
EGPRS850	128	250.36	297.10	---	PASS
EGPRS850	190	247.47	302.90	---	PASS
EGPRS850	251	250.36	294.20	---	PASS
GSM1900	512	246.02	310.14	---	PASS
GSM1900	661	243.13	307.25	---	PASS
GSM1900	810	246.02	310.14	---	PASS
EGPRS1900	512	244.57	301.45	---	PASS
EGPRS1900	661	247.47	298.55	---	PASS
EGPRS1900	810	247.47	301.45	---	PASS

### 4.2. Test Plots



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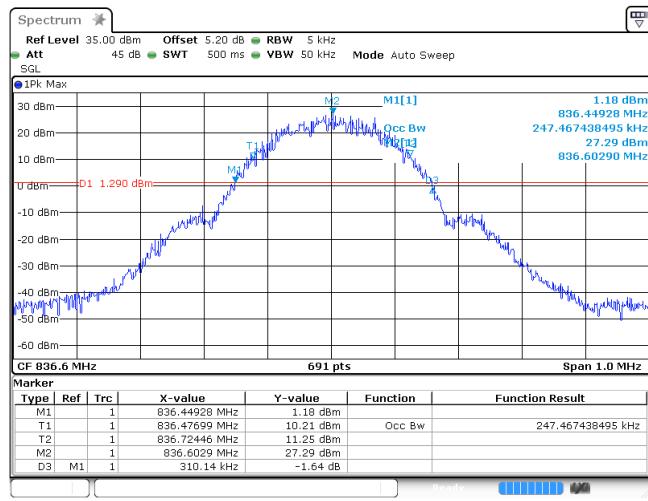
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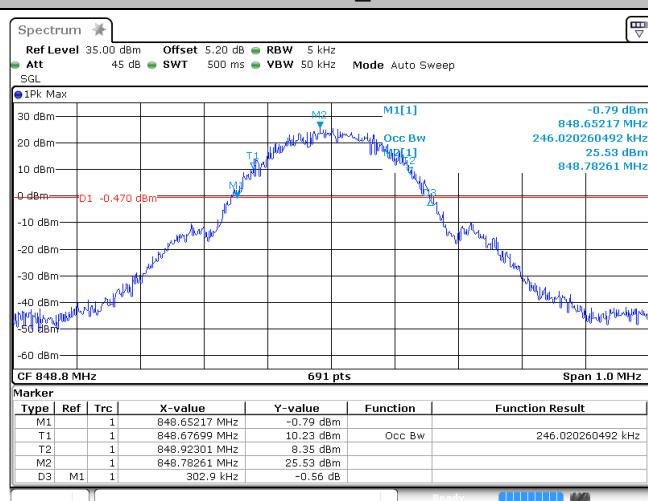
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## GSM850\_190



## GSM850\_251

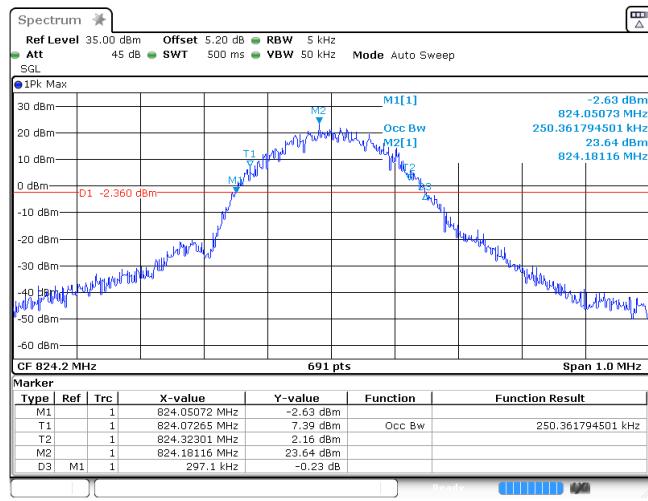


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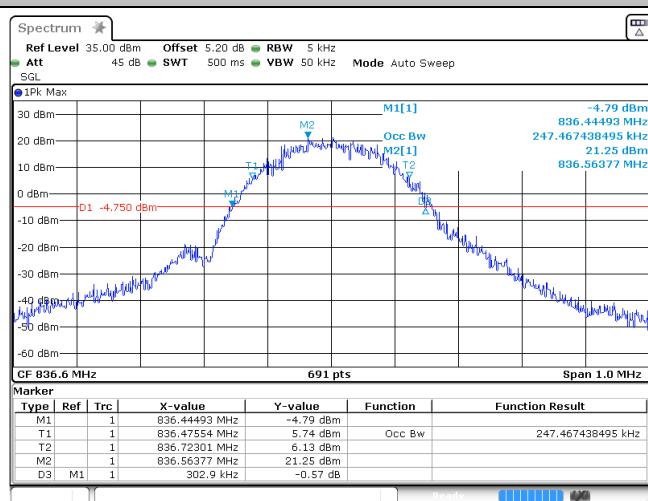
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## EGPRS850\_128



## EGPRS850\_190



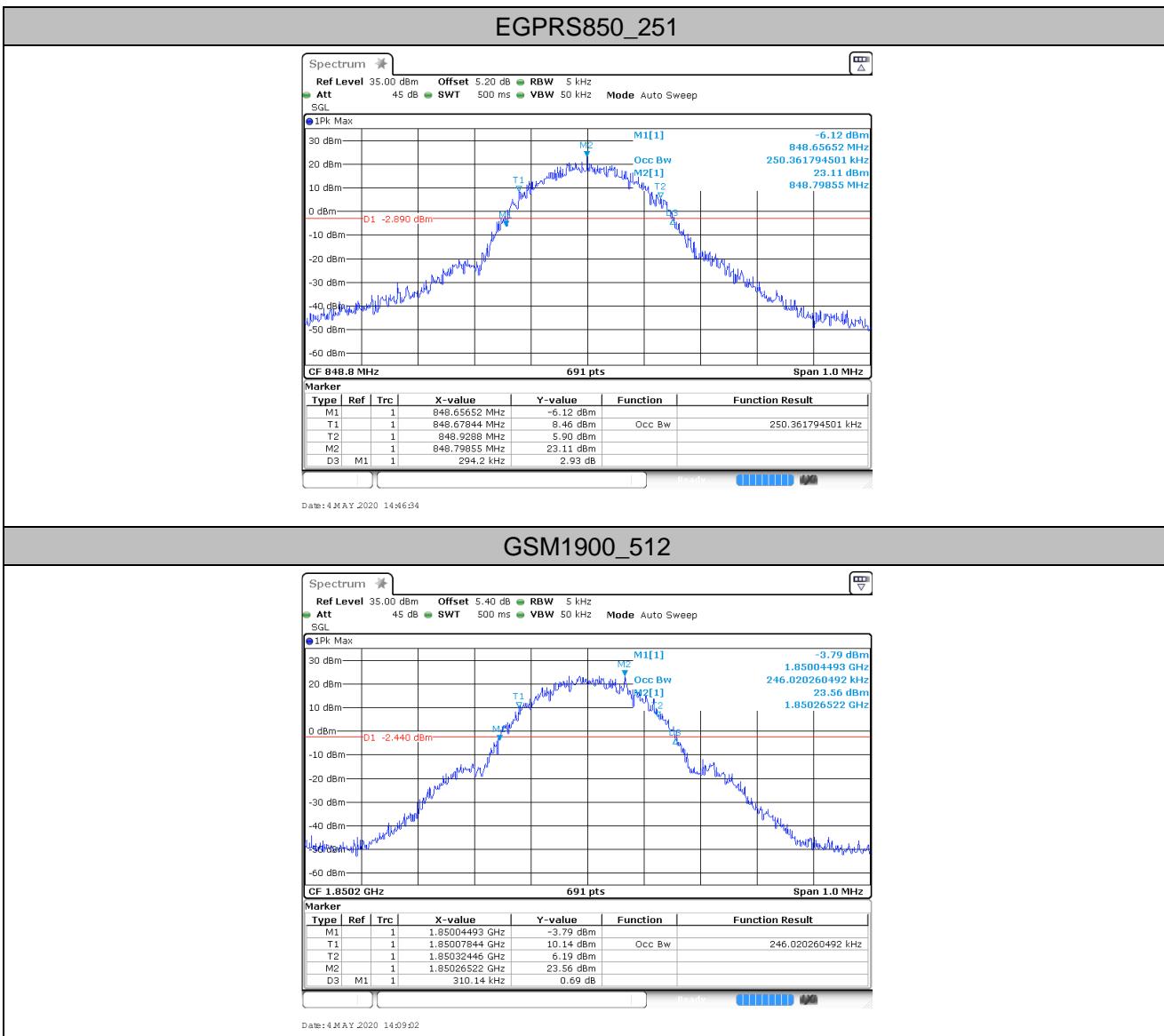
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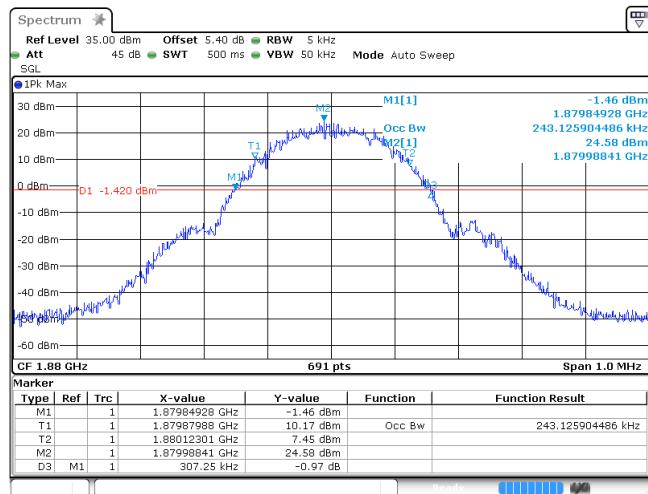


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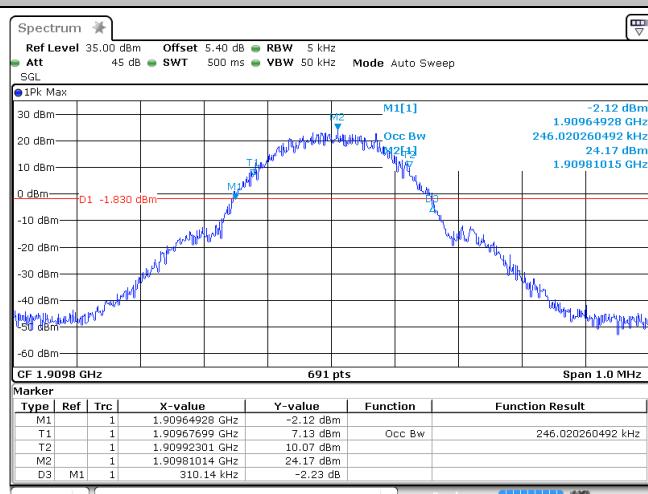
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GSM1900\_661



GSM1900\_810



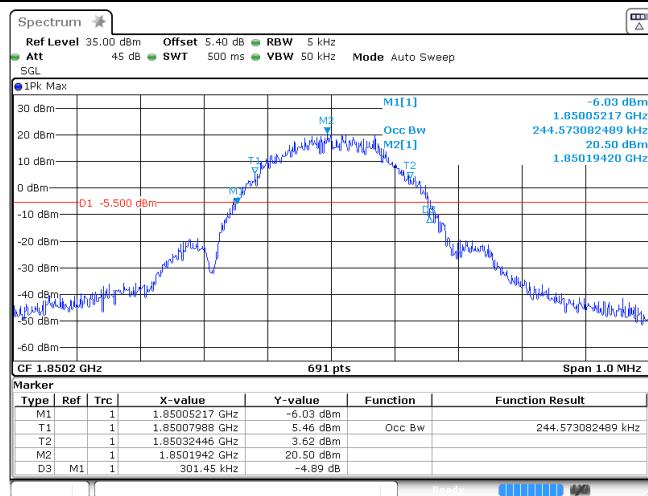
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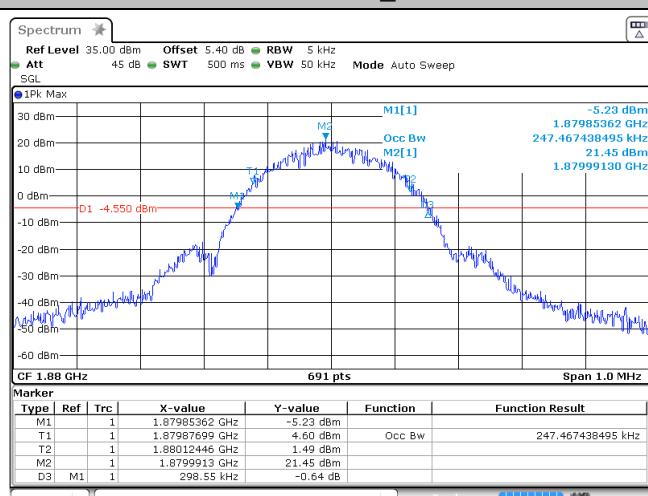




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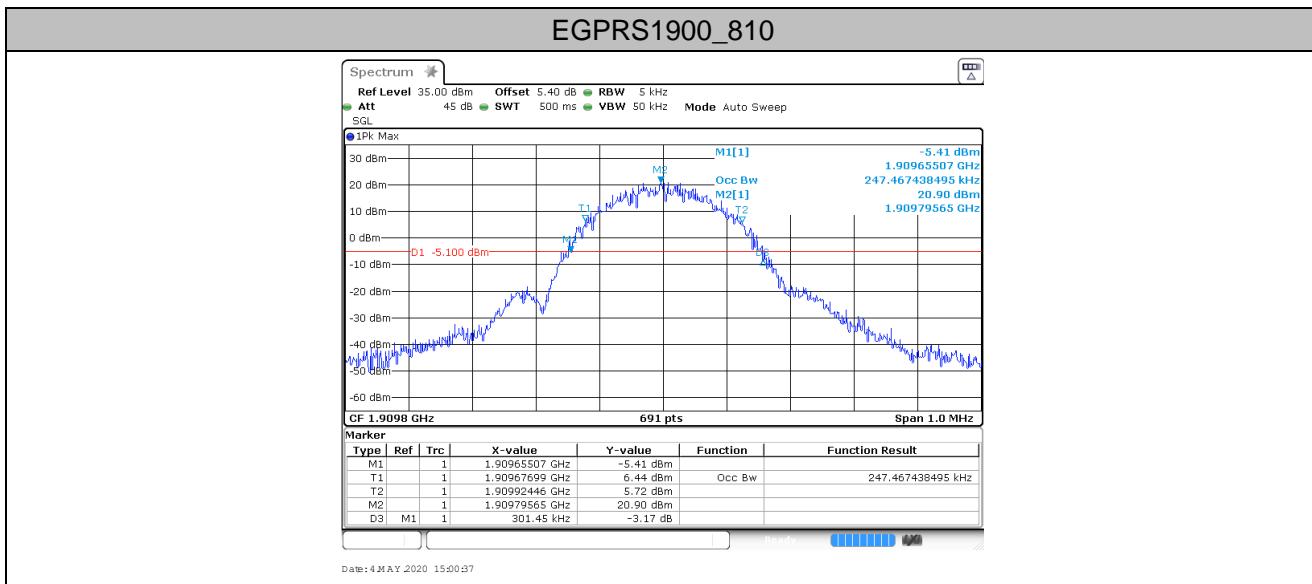
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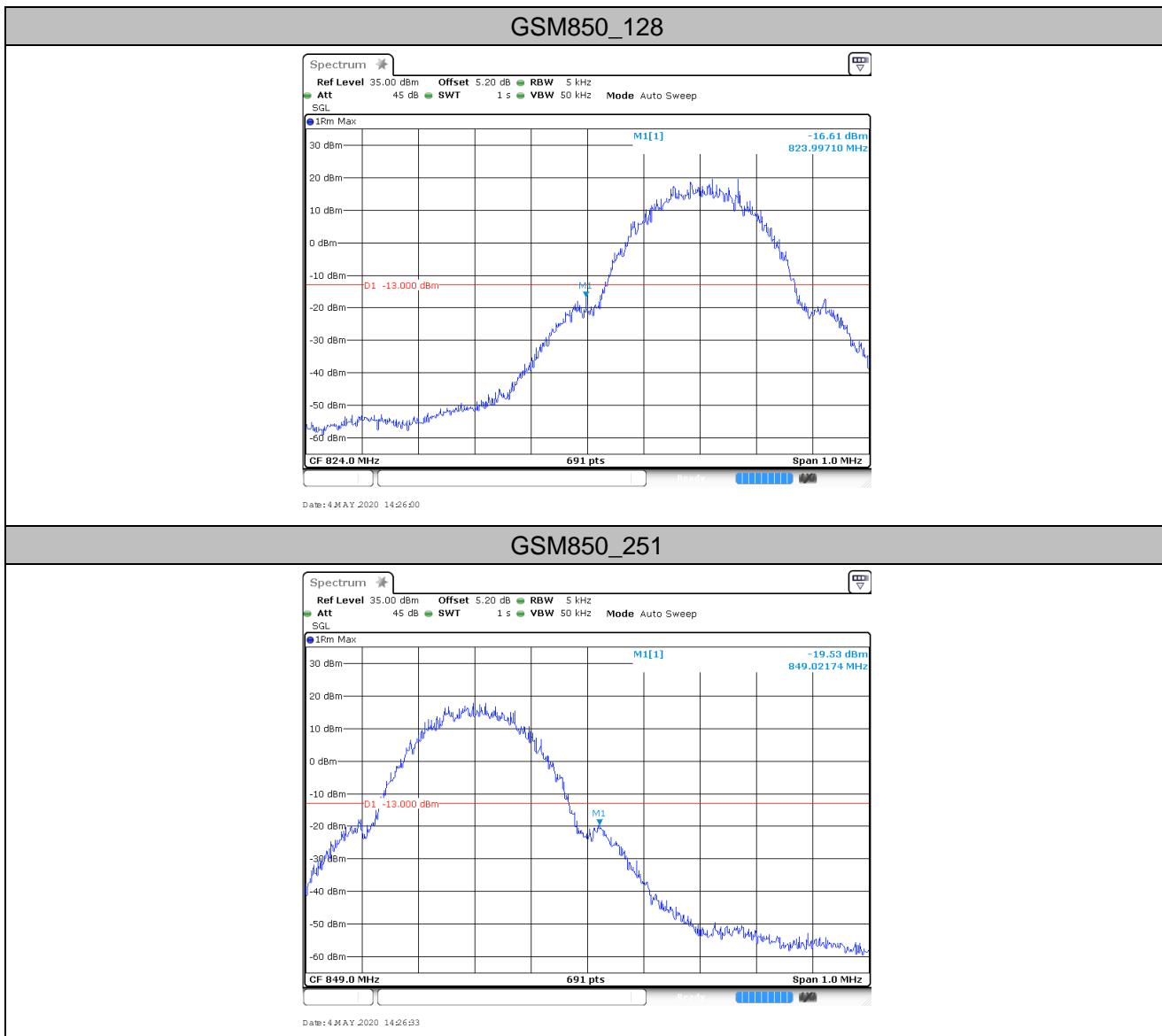


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## 5. Band Edge Compliance

### 5.1. Test Plots



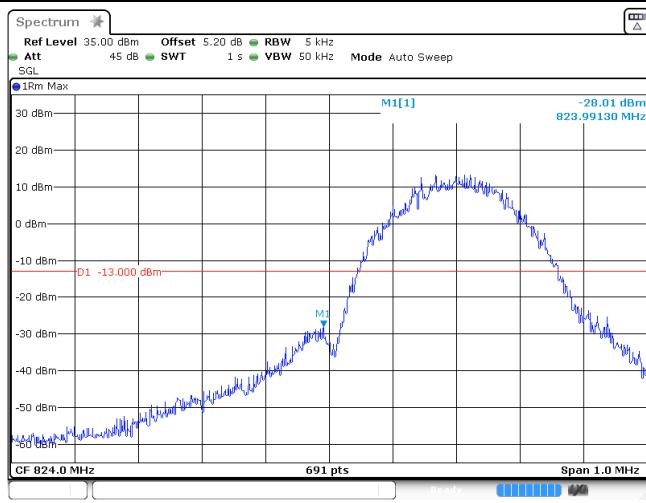
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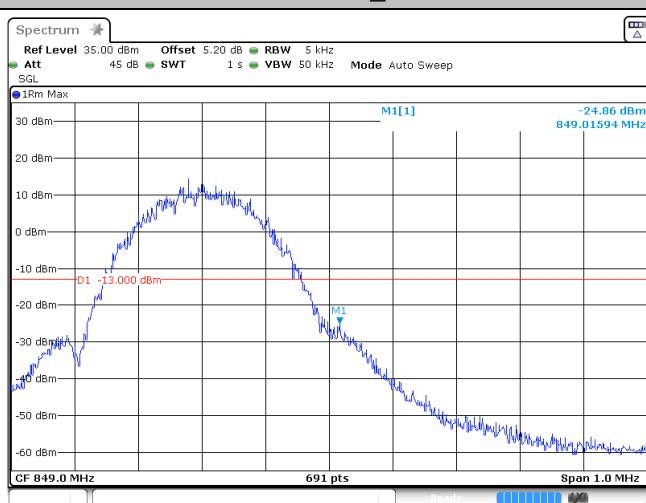


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## EGPRS850\_128



## EGPRS850\_251

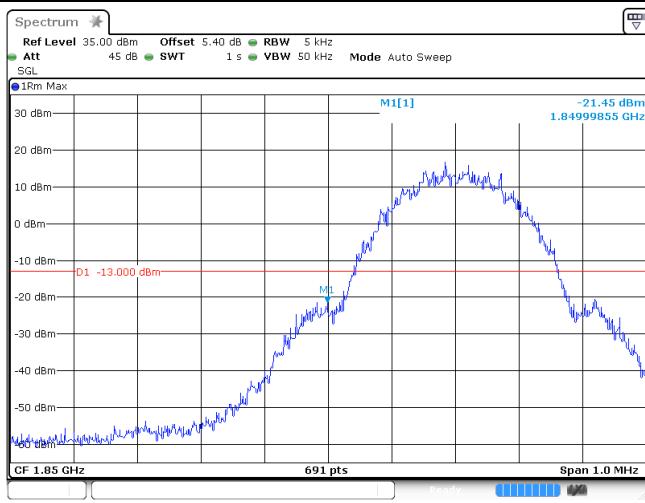


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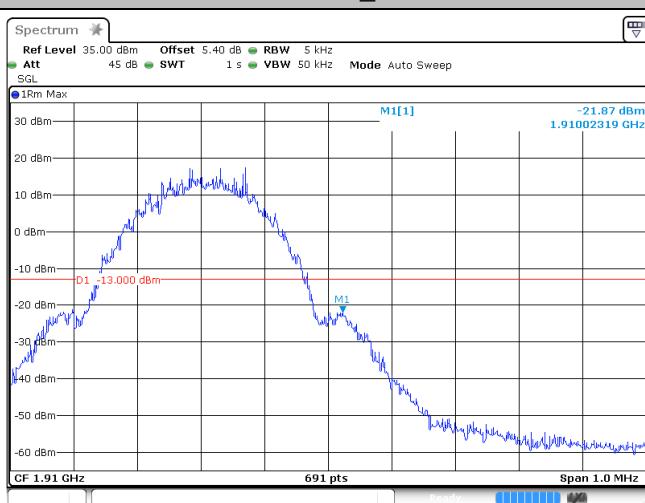
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## GSM1900\_512



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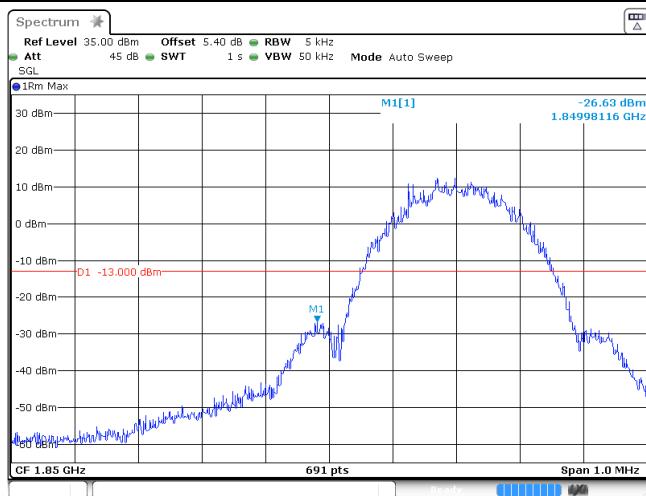
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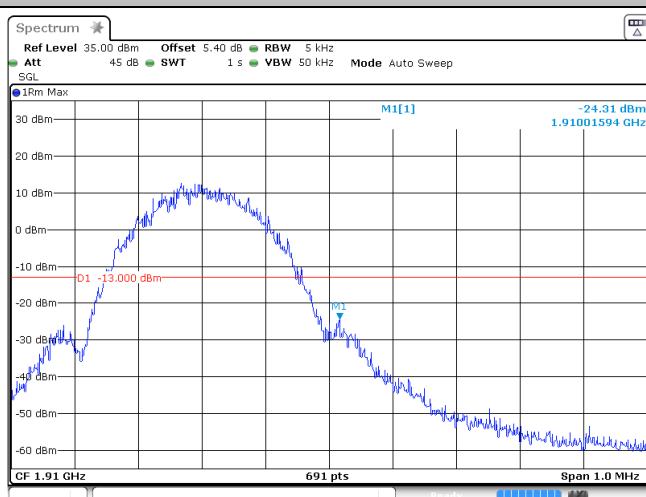
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## EGPRS1900\_810



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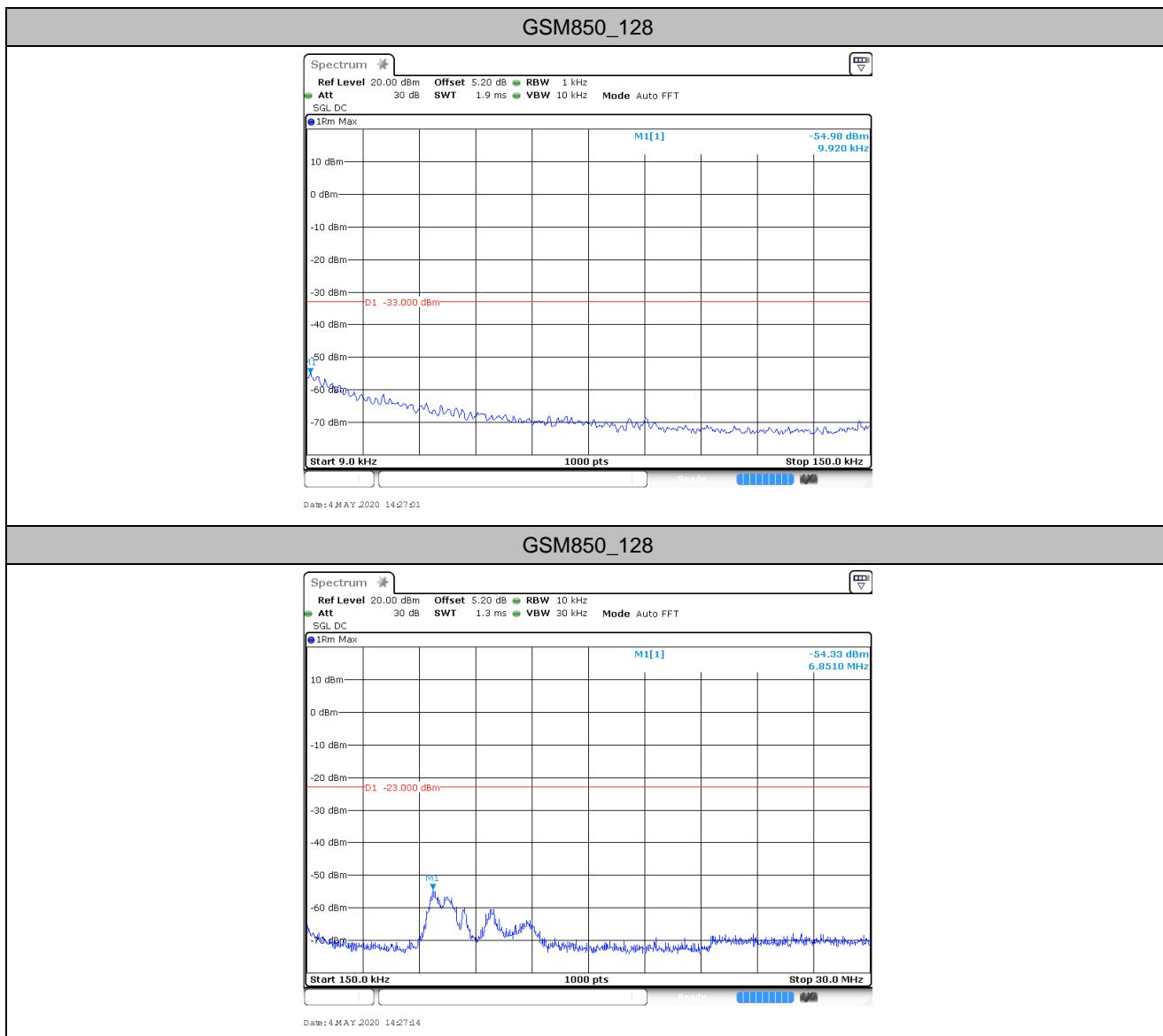
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## 6. Spurious Emission at Antenna Terminal

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  $< \text{RBW}/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (\text{Span} / \text{RBW})$ " 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



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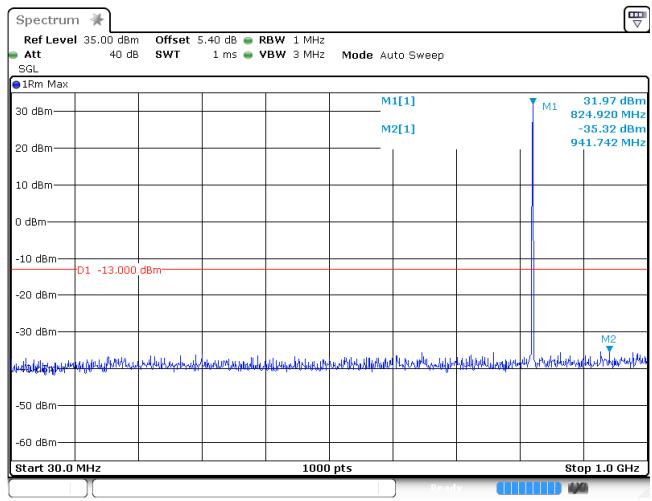


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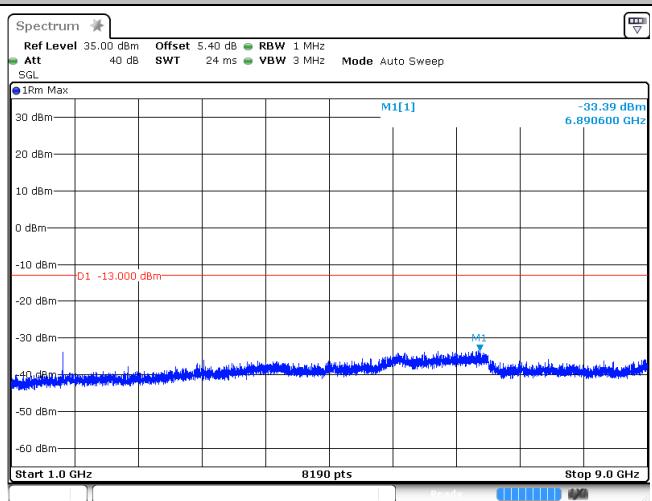


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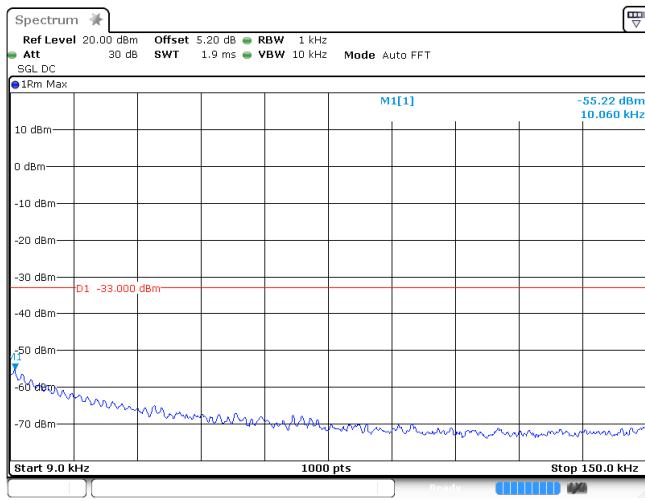


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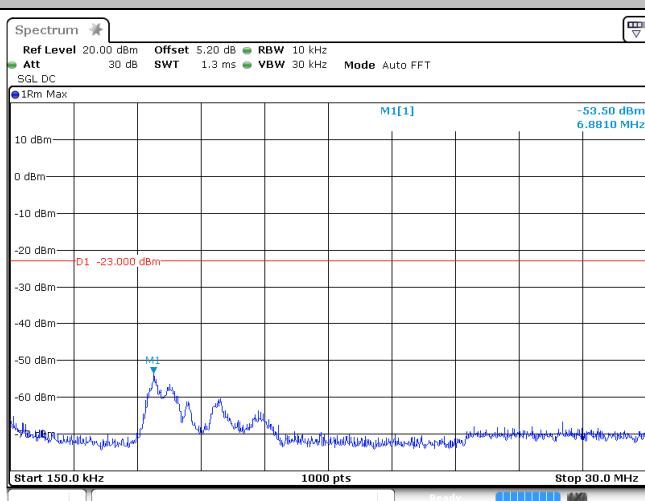
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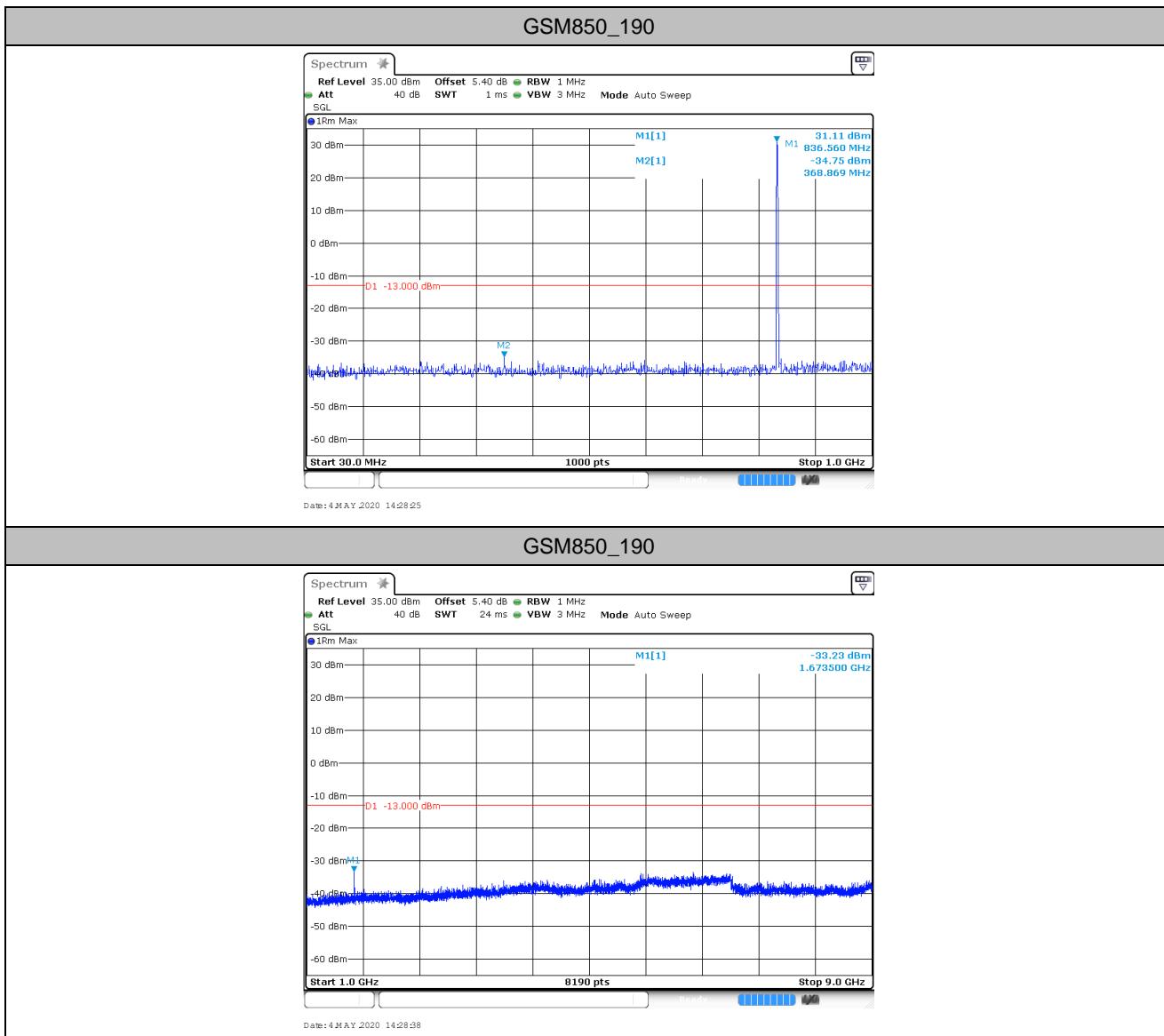
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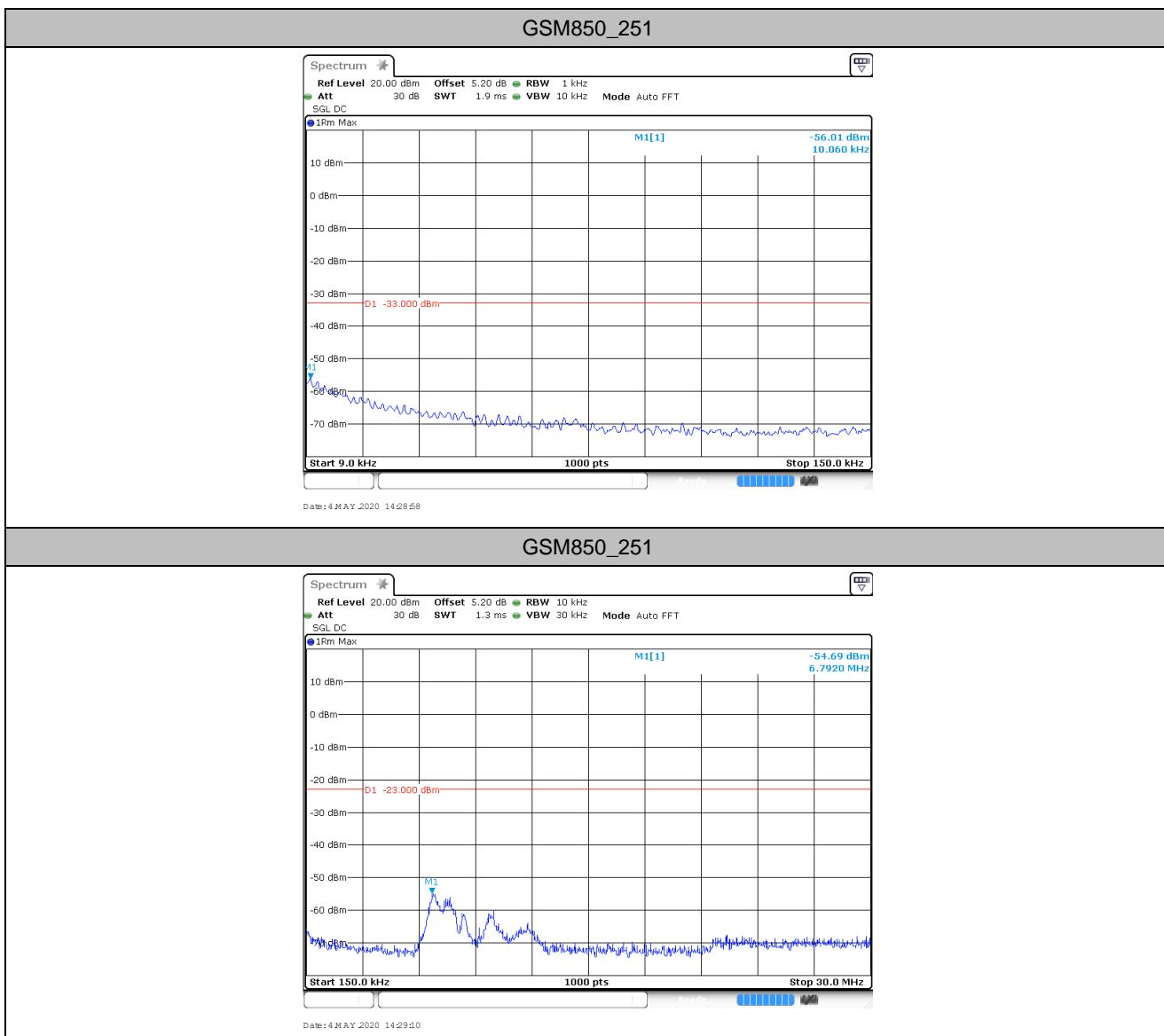


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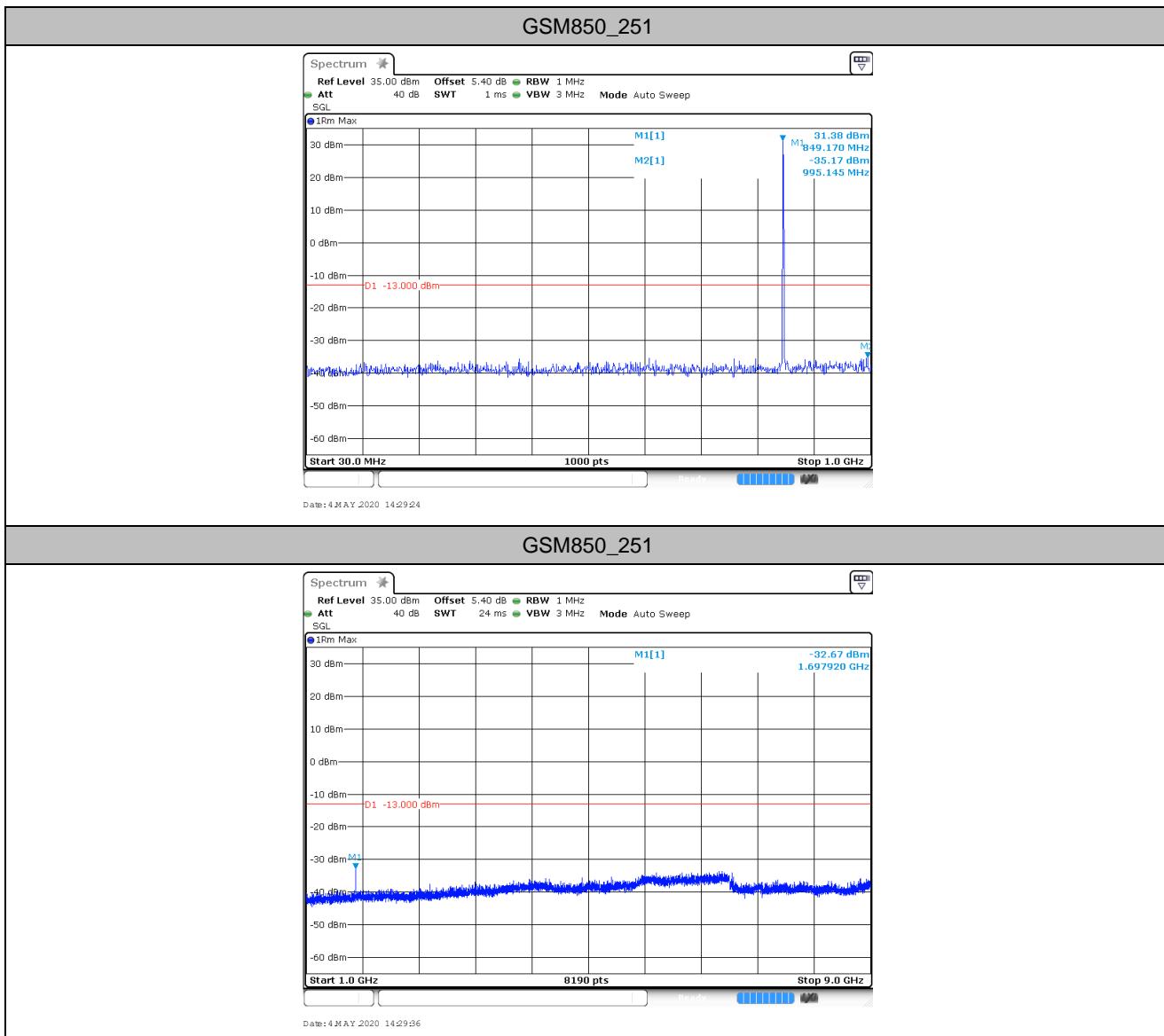
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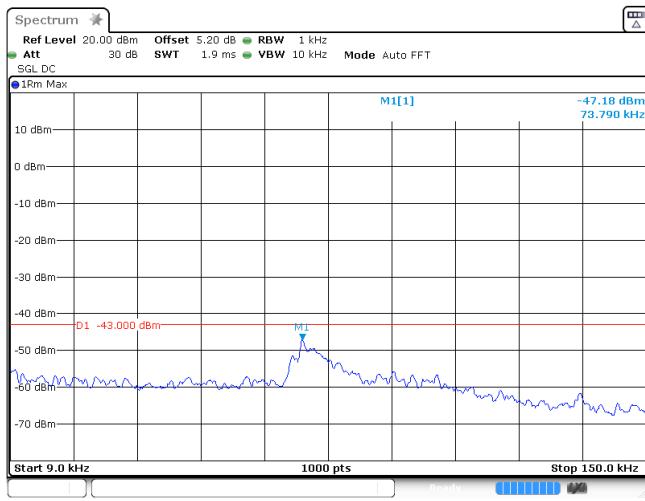
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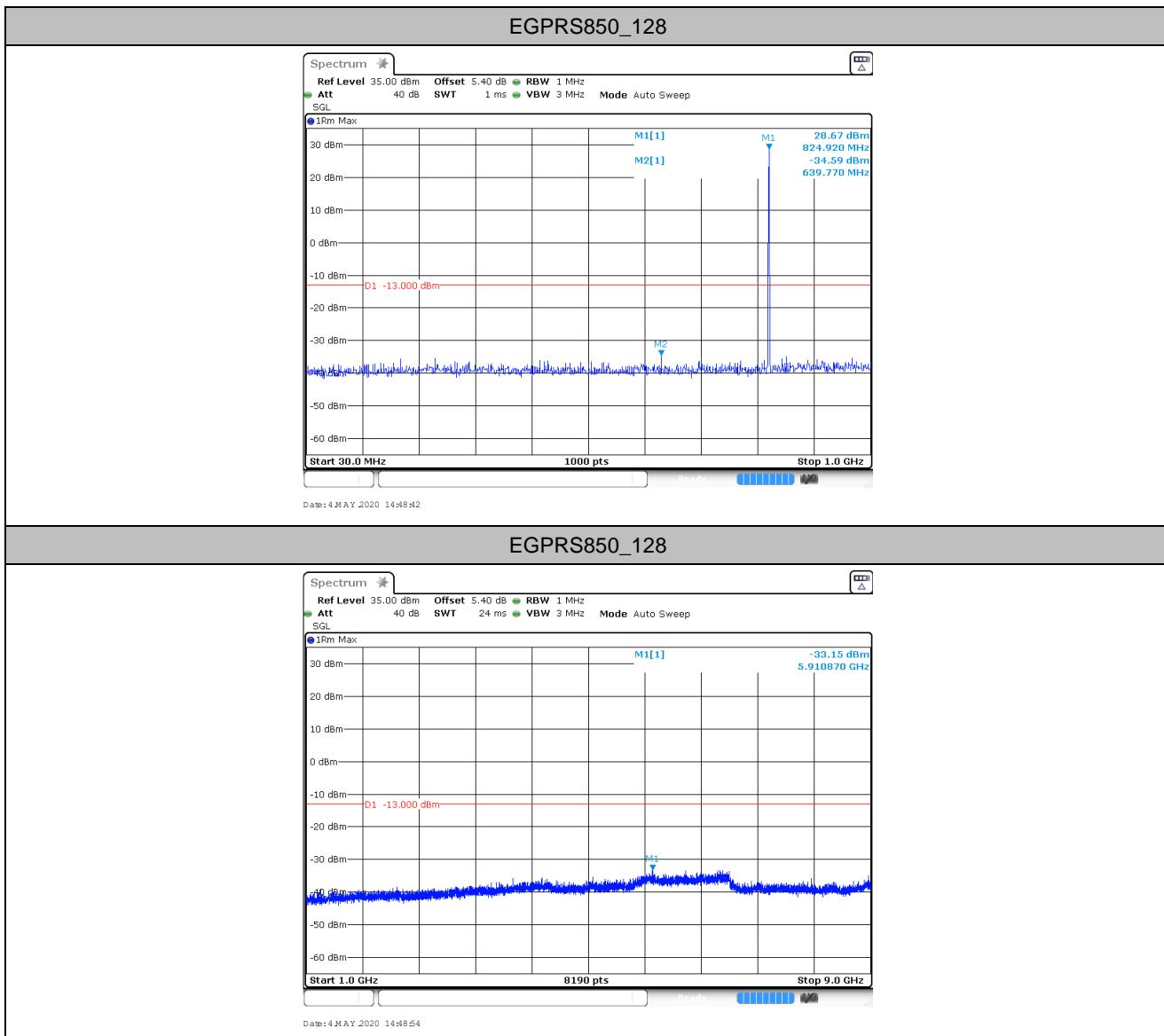
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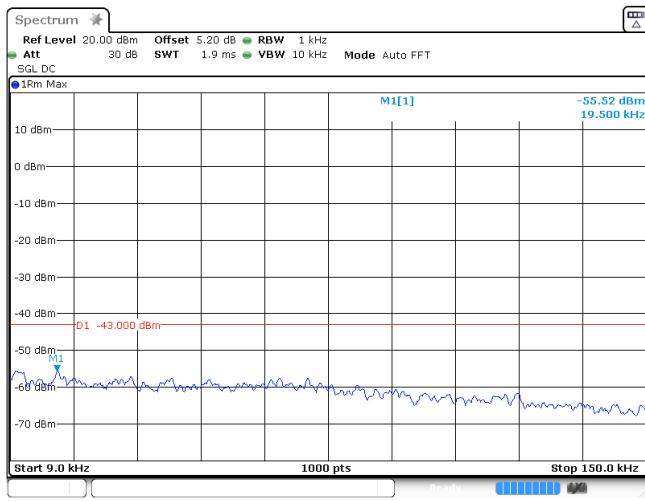
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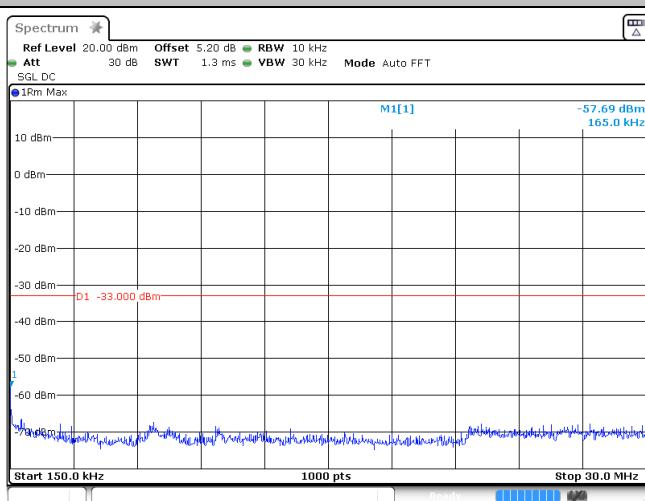
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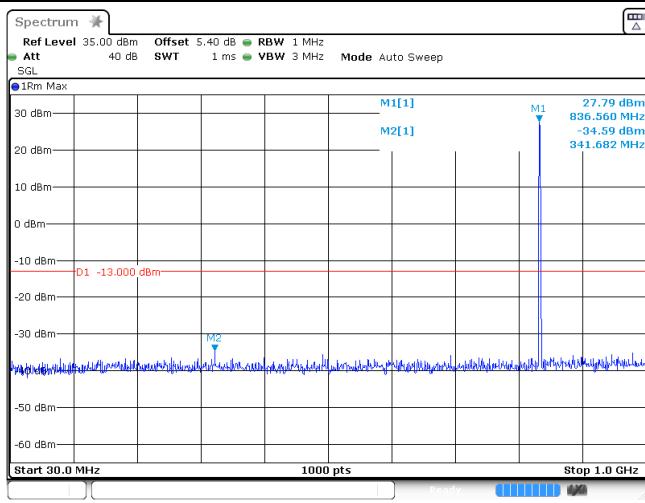


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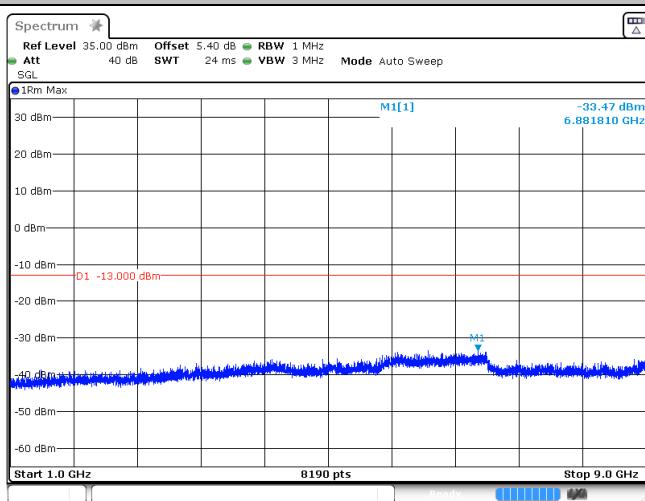


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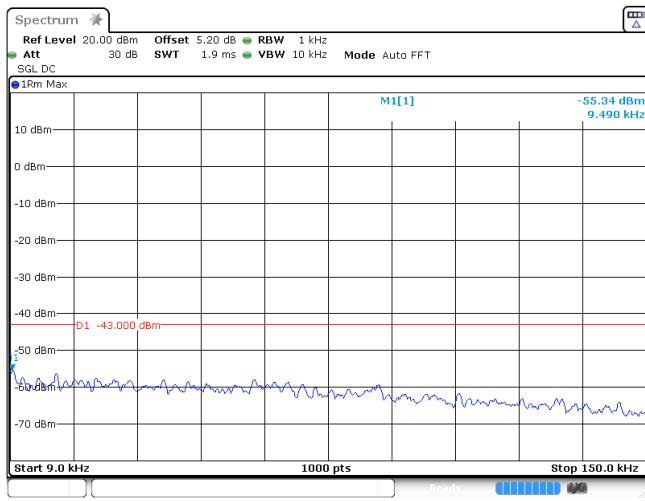


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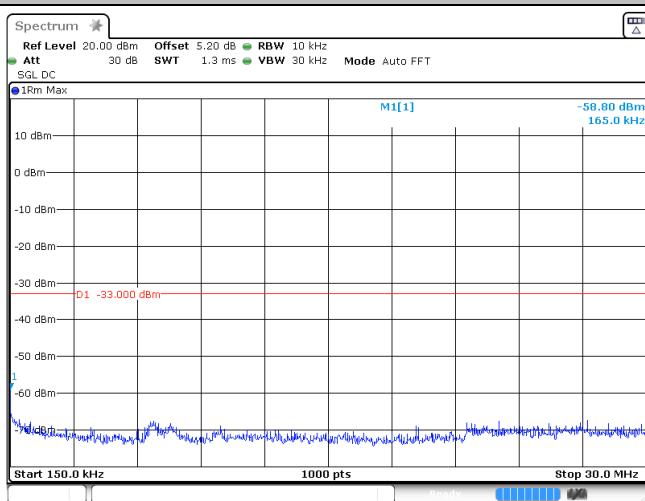


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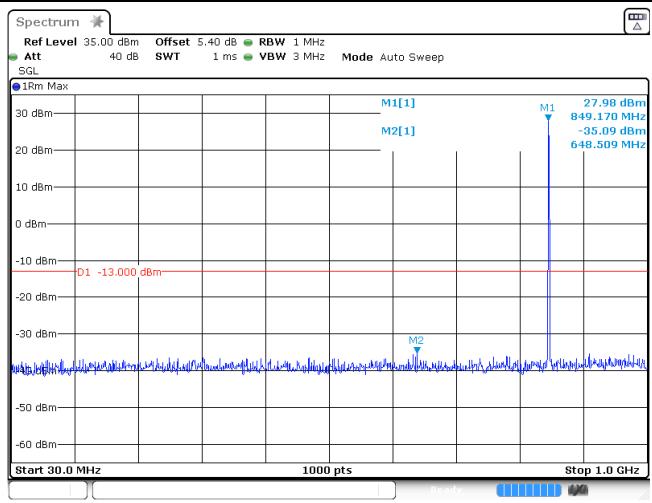
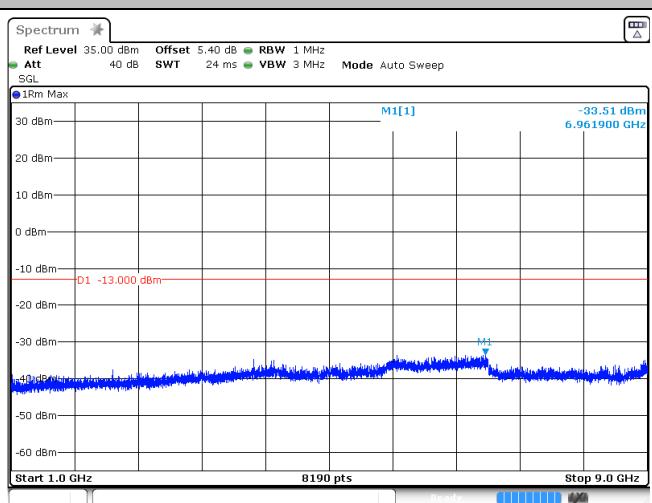
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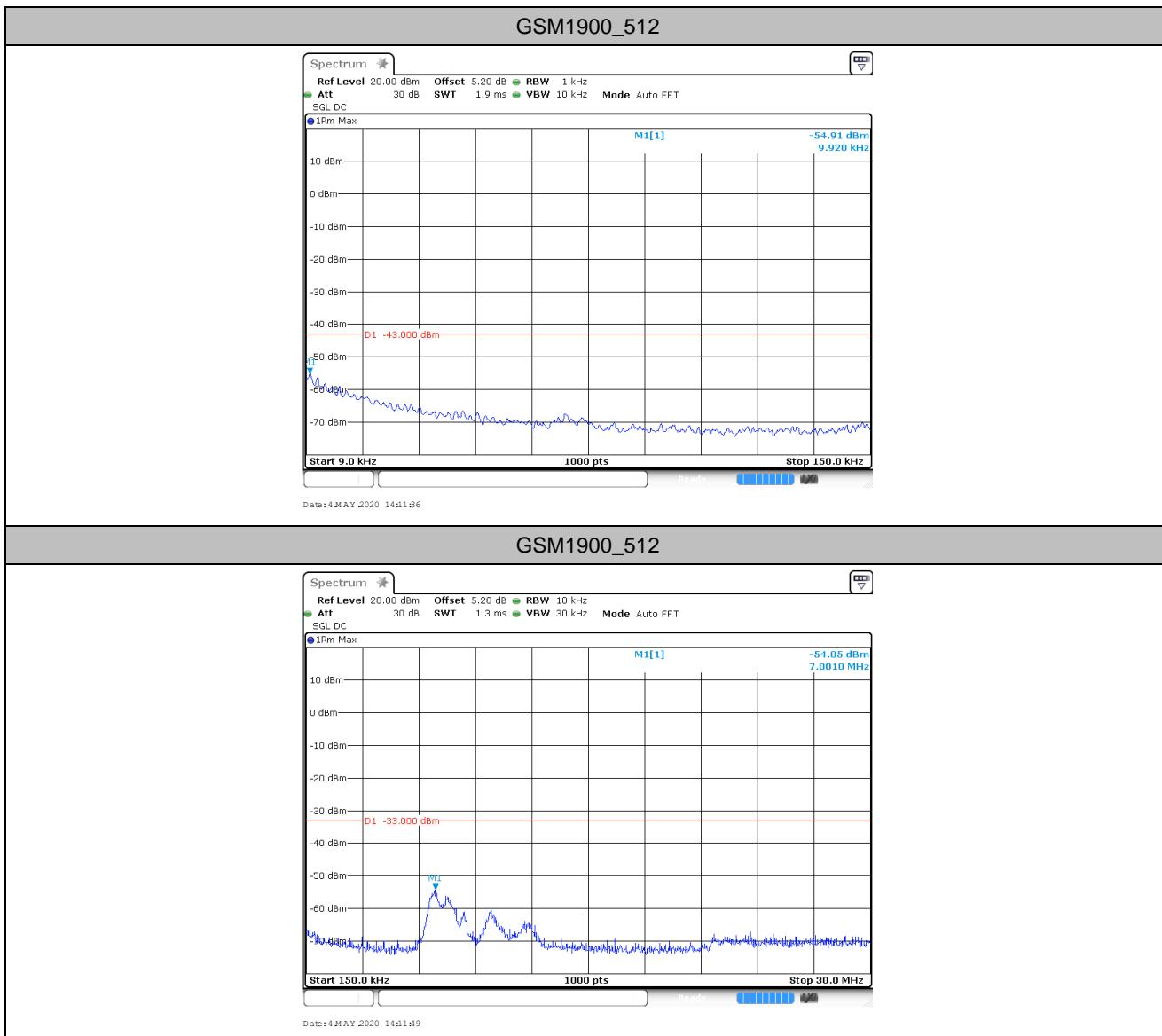
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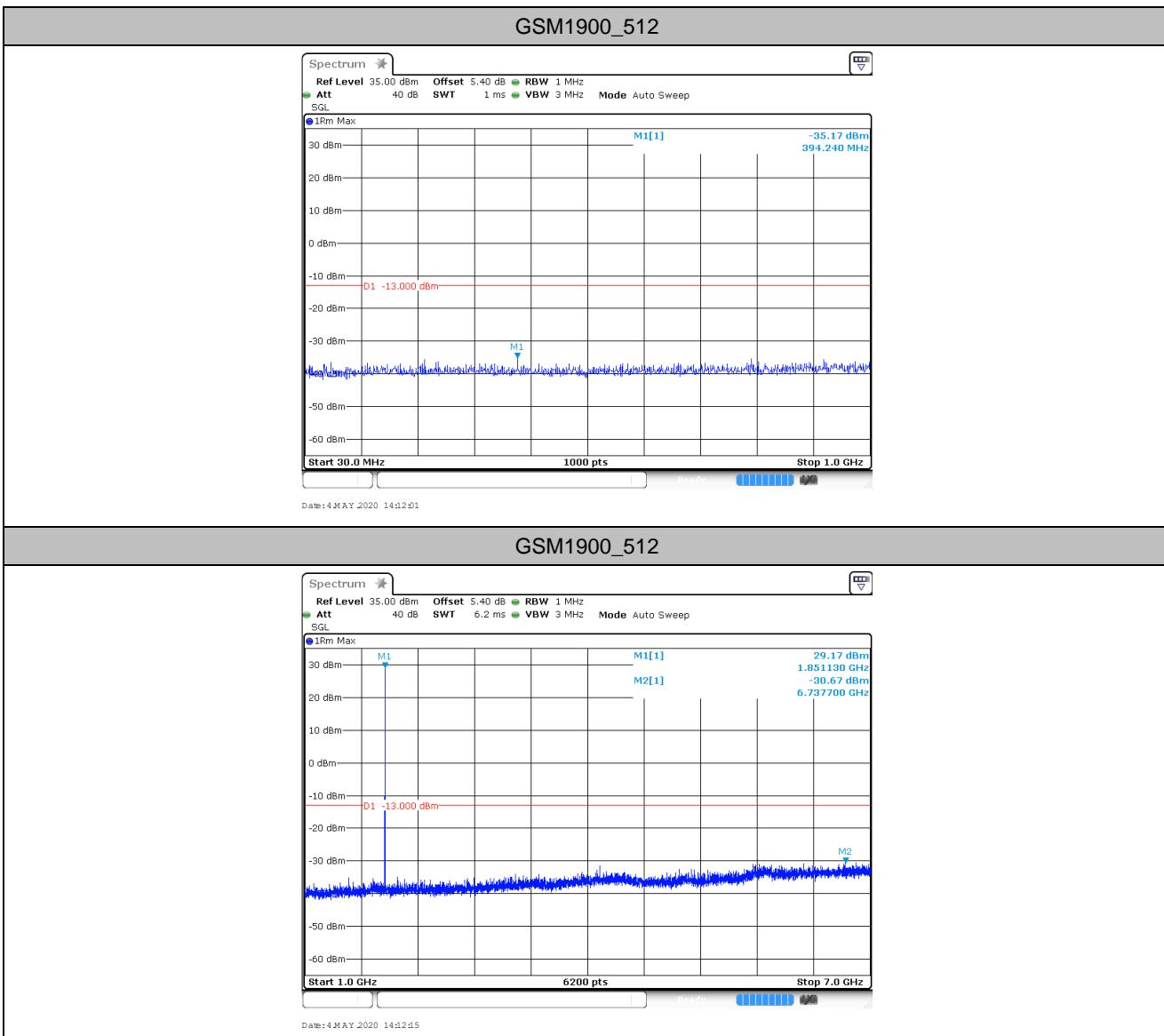


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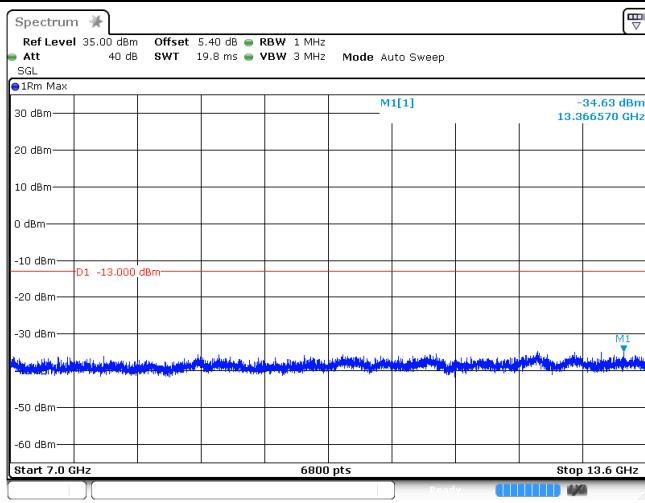
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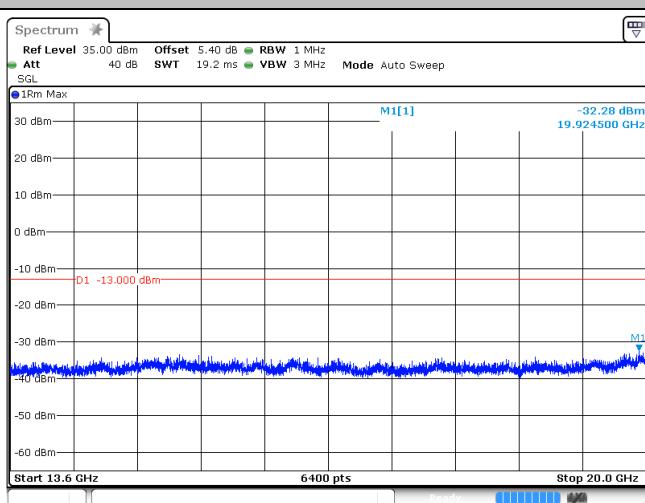
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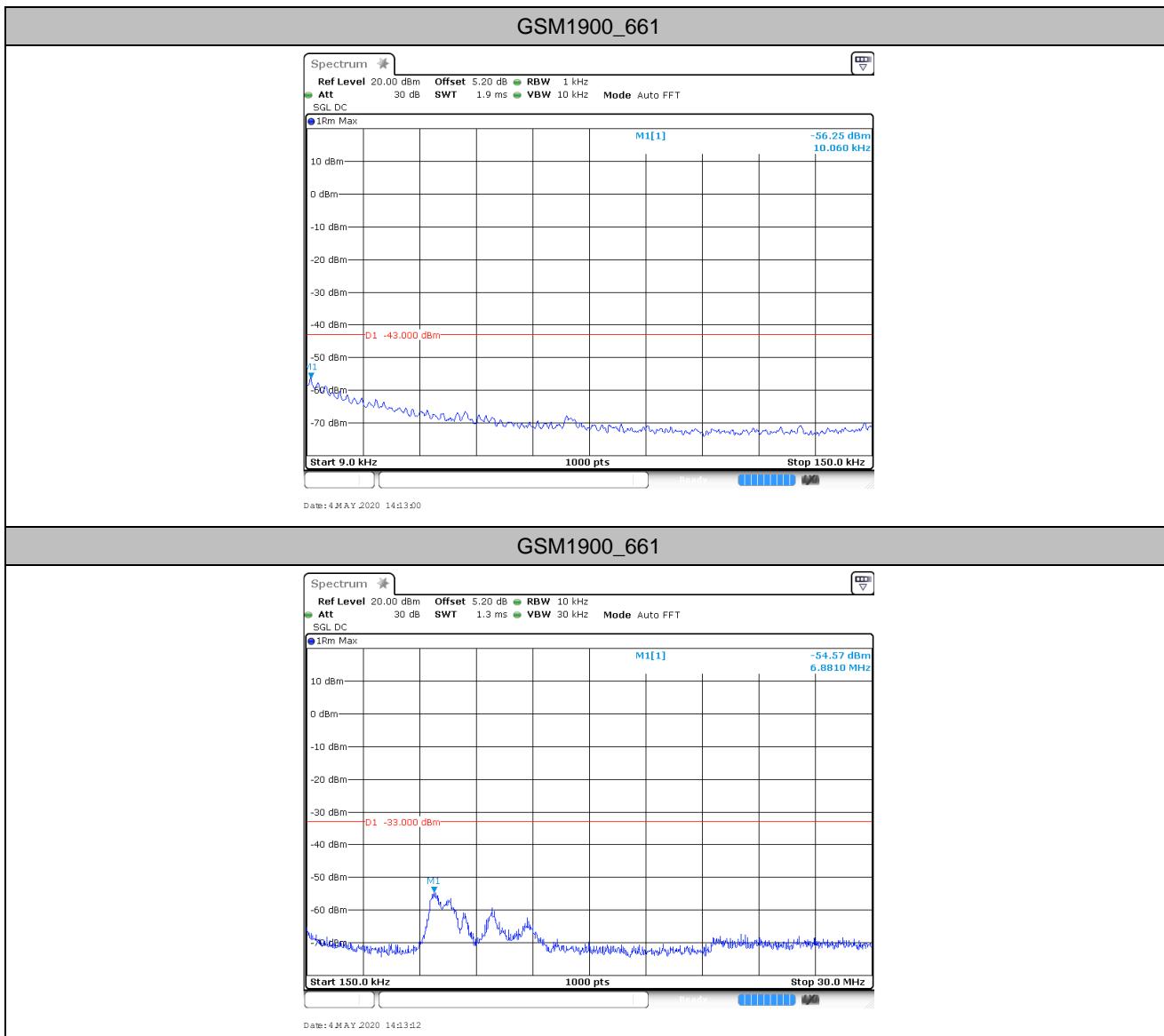
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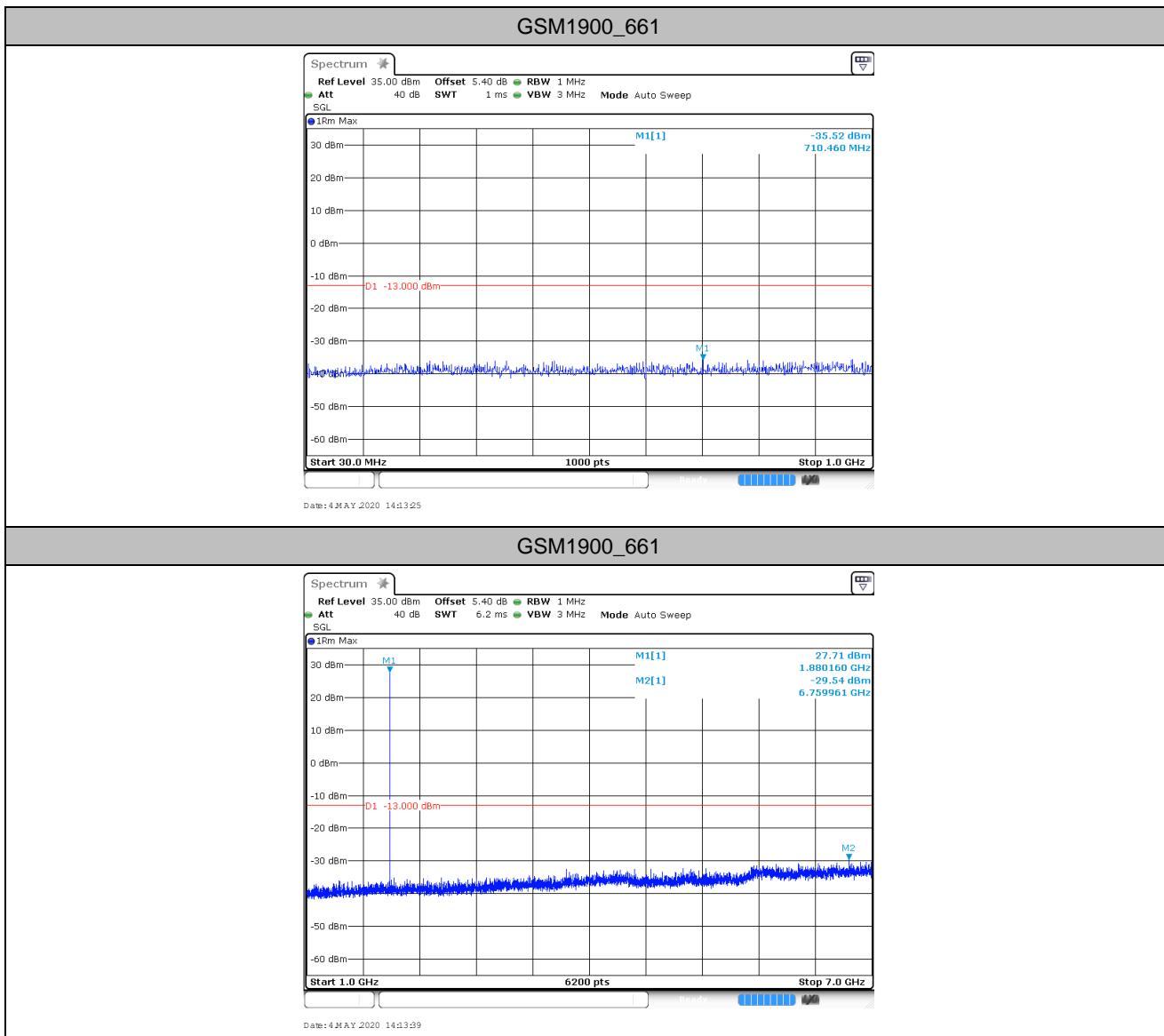
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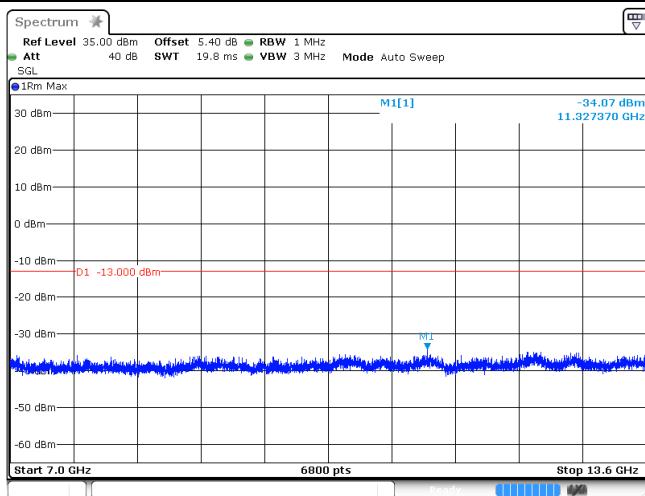


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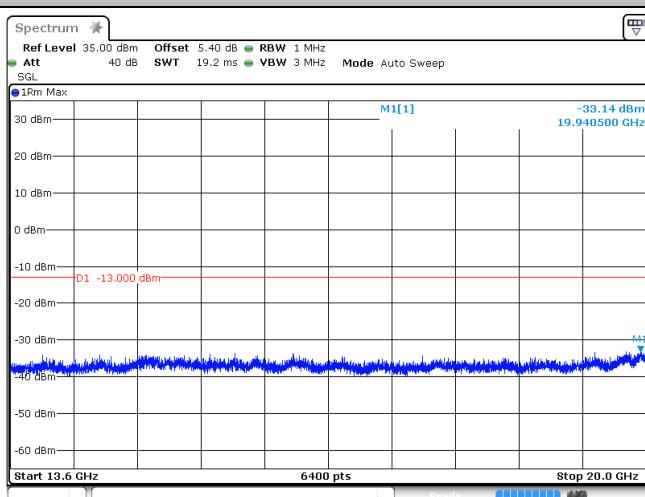
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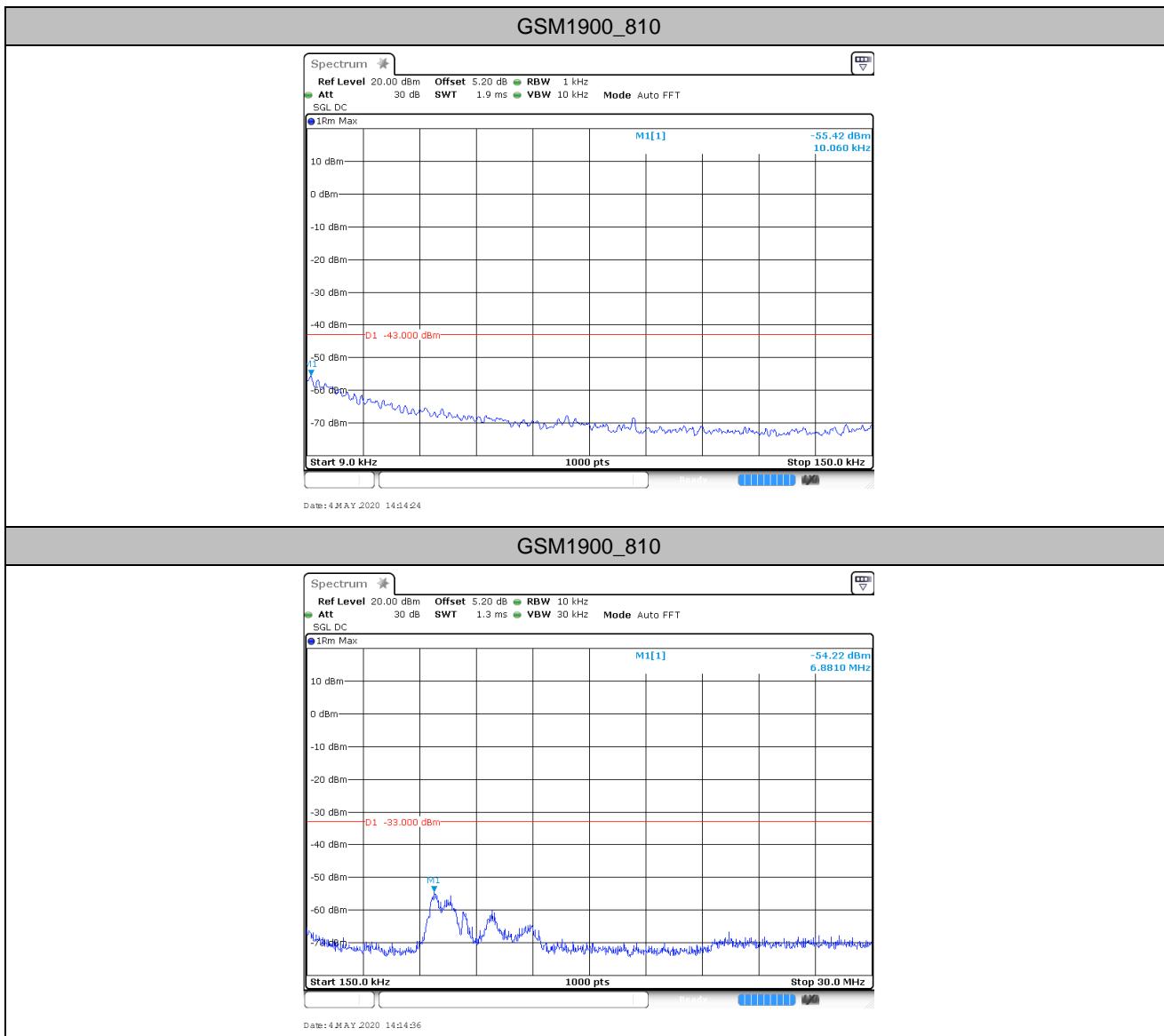
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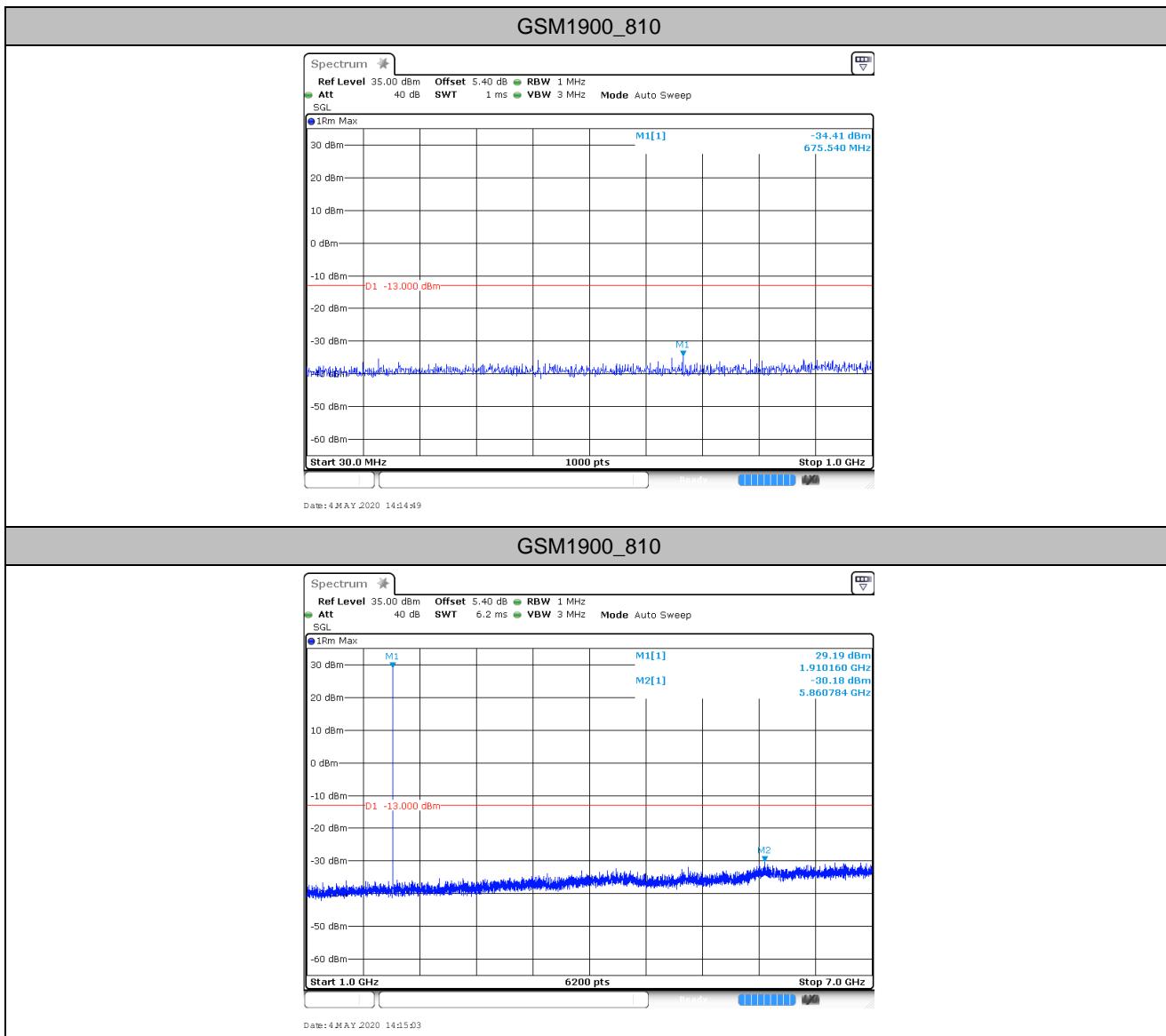
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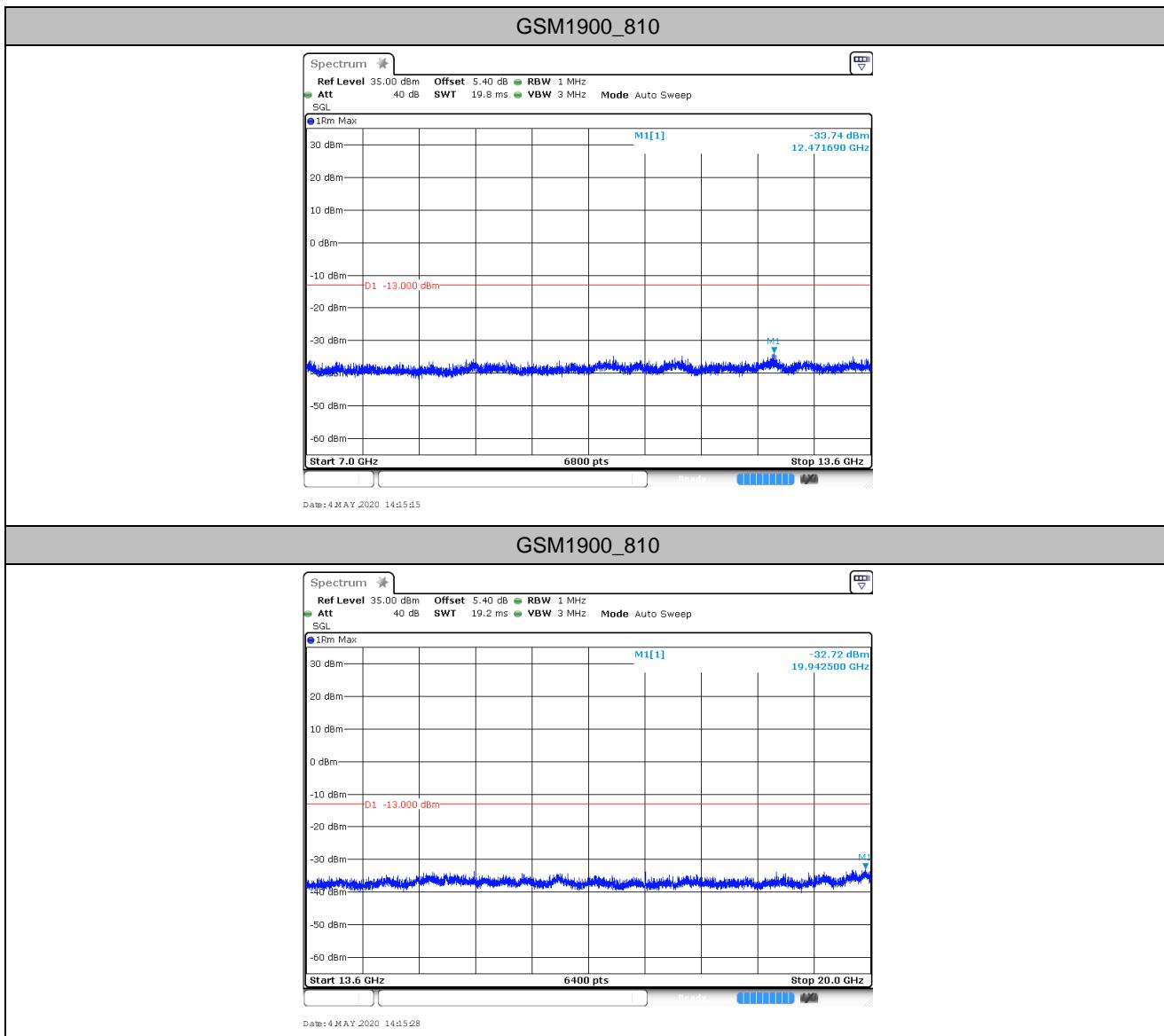


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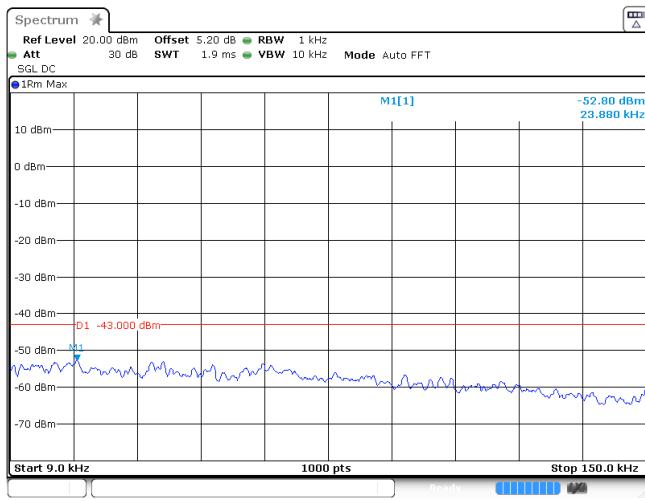


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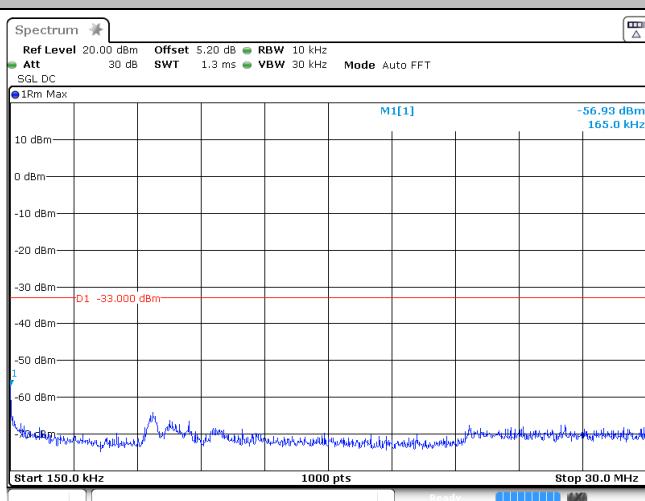
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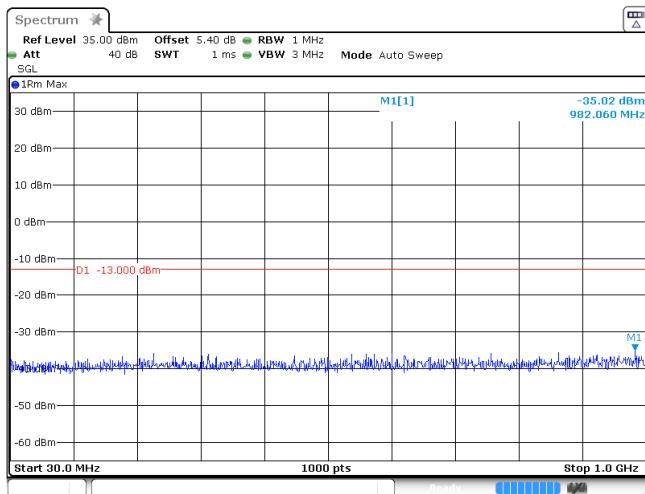


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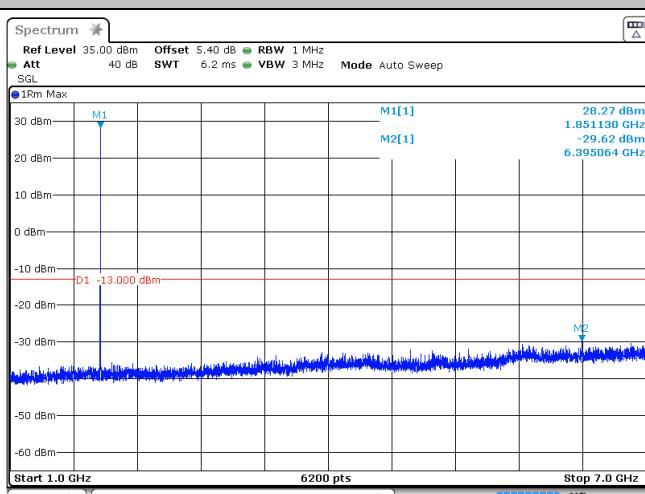
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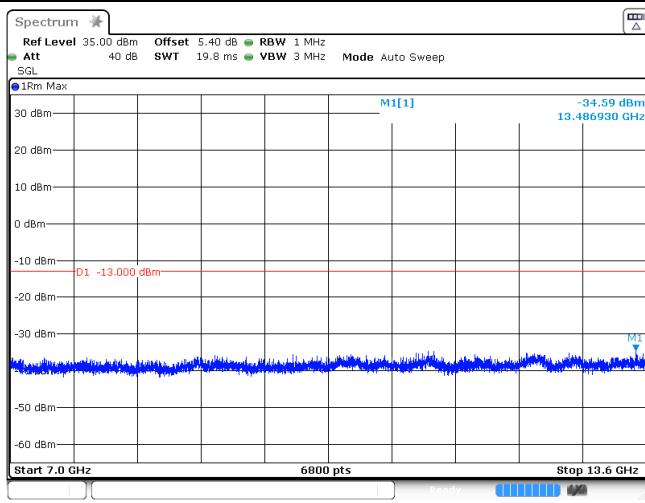


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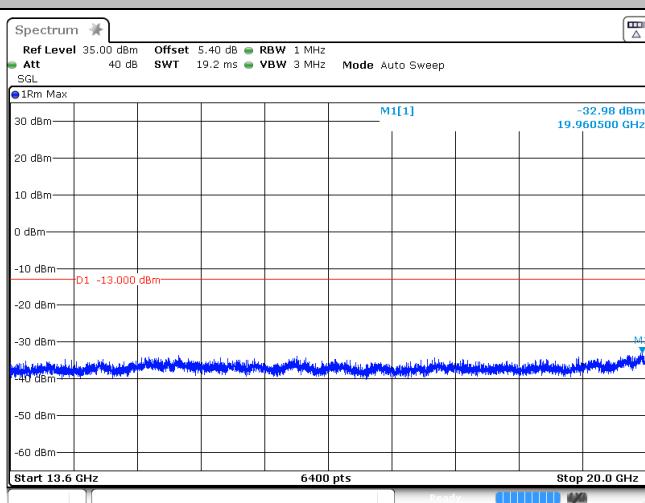
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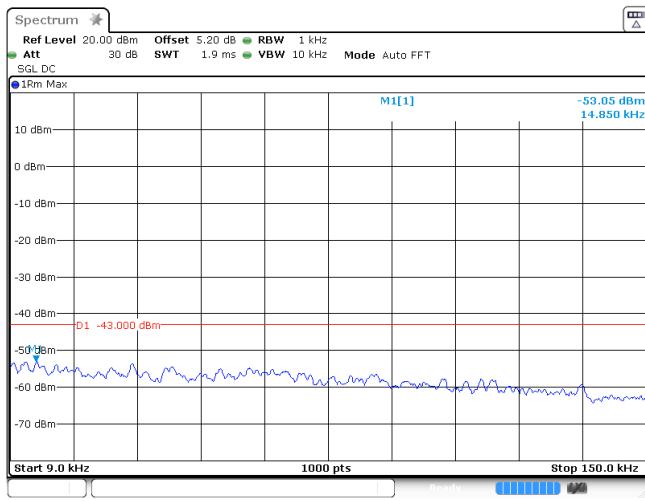


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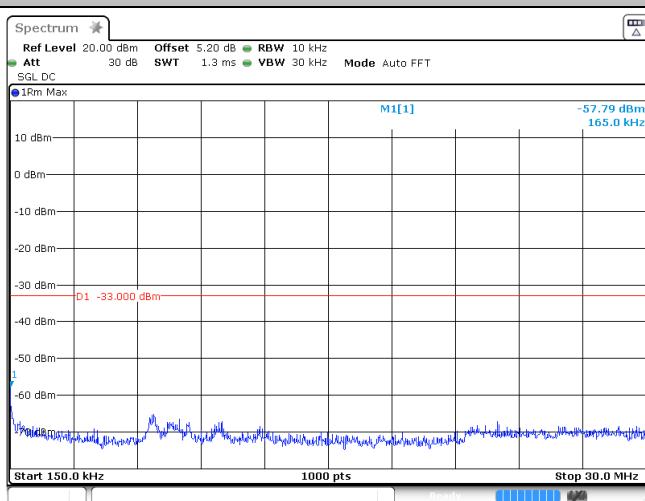
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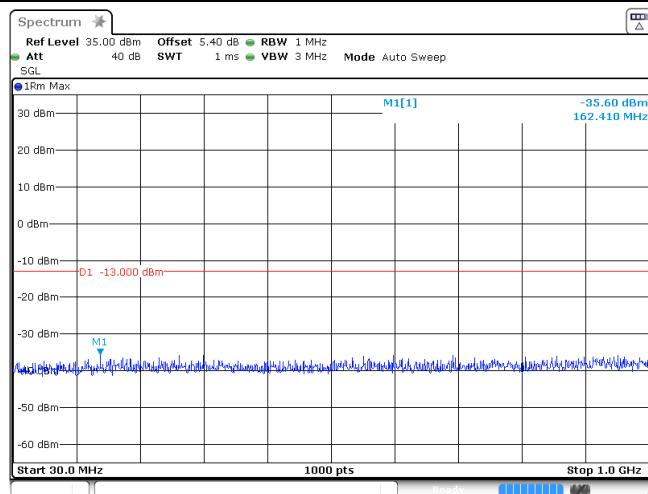


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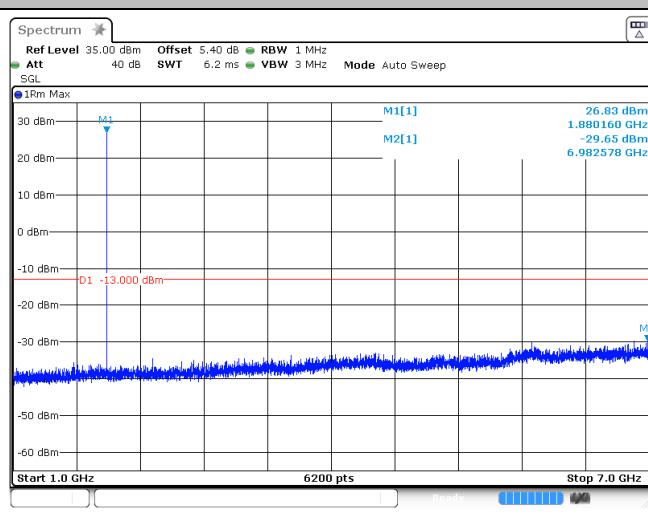
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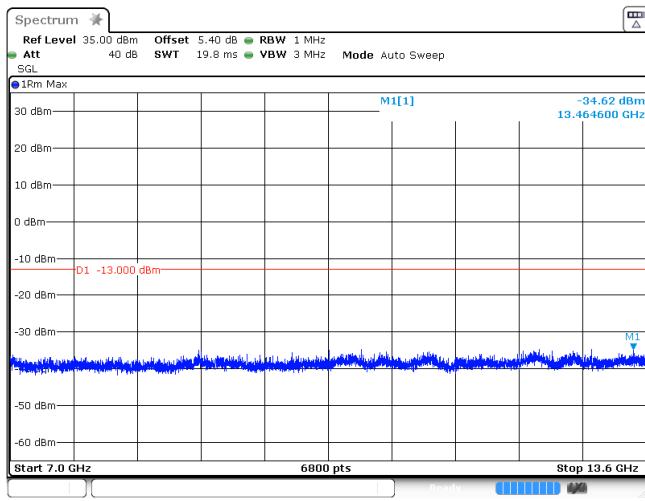


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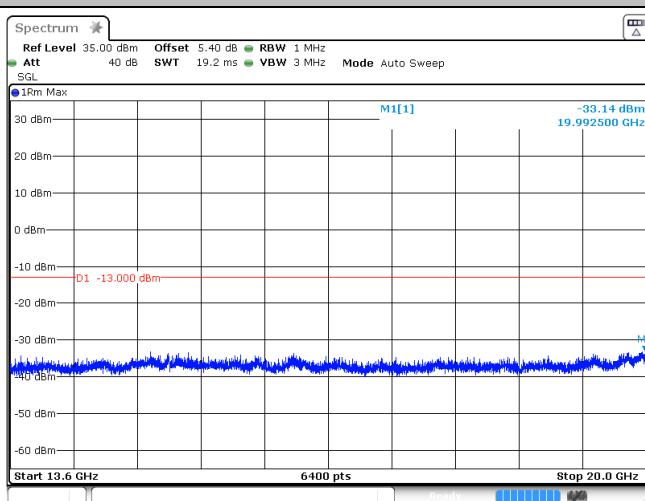
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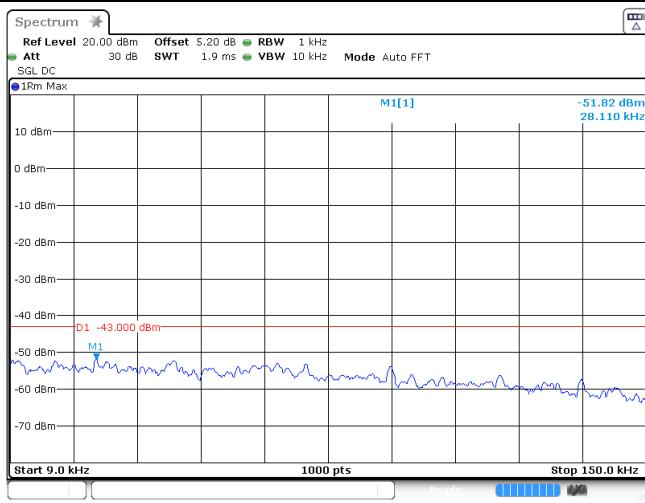


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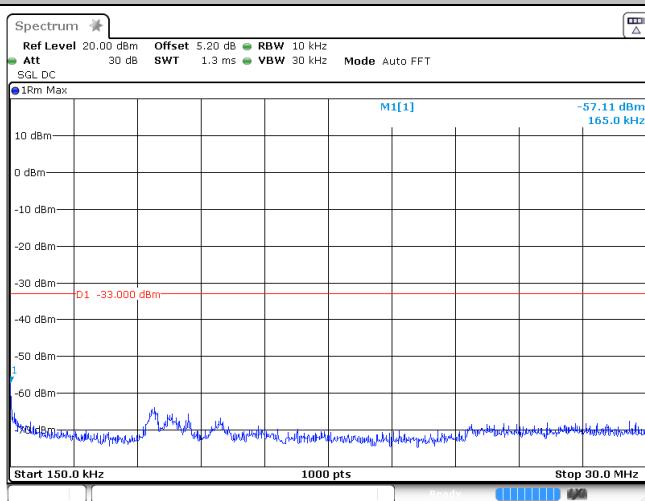


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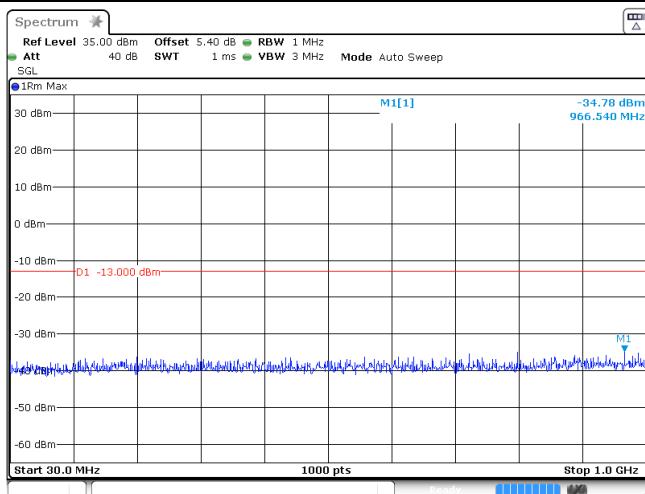


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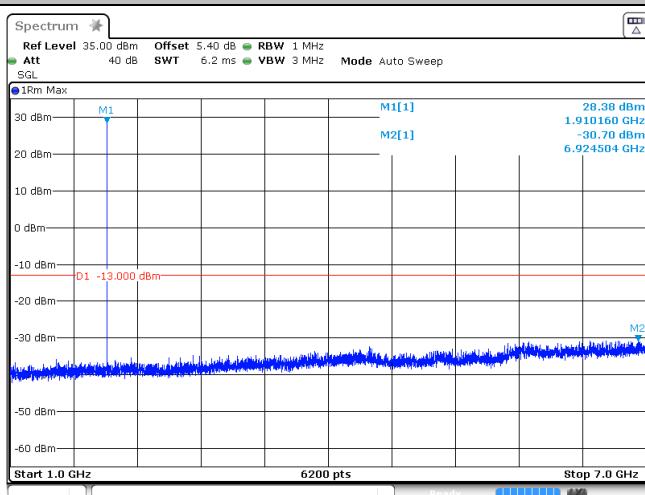


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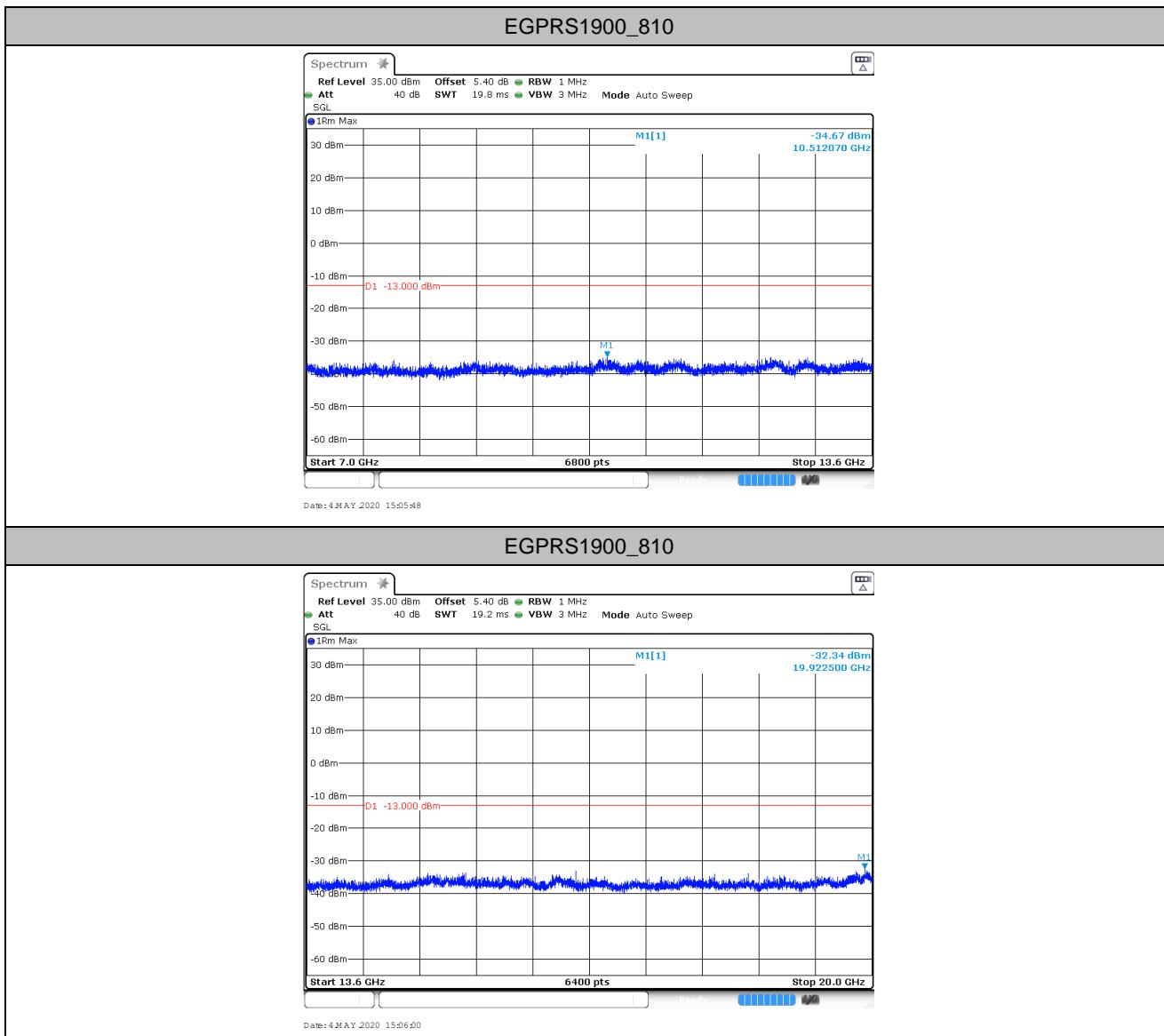
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## 7. Field Strength of Spurious Radiation

### 7.1. Test Band = GSM 1900(Down Antenna)

#### 7.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.744500	-71.61	-13.00	58.61	111	40	Vertical
348.451000	-79.25	-13.00	66.25	203	211	Vertical
945.389000	-71.53	-13.00	58.53	234	225	Vertical
3700.350000	-51.64	-13.00	38.64	123	300	Vertical
5550.450000	-46.83	-13.00	33.83	144	297	Vertical
7706.450000	-52.96	-13.00	39.96	159	293	Vertical
60.312500	-72.38	-13.00	59.38	176	325	Horizontal
224.727500	-78.21	-13.00	65.21	156	176	Horizontal
945.728500	-70.69	-13.00	57.69	150	248	Horizontal
3700.350000	-49.99	-13.00	36.99	288	169	Horizontal
5550.800000	-51.79	-13.00	38.79	279	278	Horizontal
7864.650000	-51.79	-13.00	38.79	227	60	Horizontal

#### 7.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
60.652000	-72.08	-13.00	59.08	113	55	Vertical
225.018500	-76.61	-13.00	63.61	216	114	Vertical
947.038000	-71.11	-13.00	58.11	299	342	Vertical
3759.850000	-49.00	-13.00	36.00	111	29	Vertical
5639.700000	-51.31	-13.00	38.31	164	216	Vertical
7969.300000	-52.19	-13.00	39.19	268	347	Vertical
65.599000	-68.98	-13.00	55.98	277	73	Horizontal
342.534000	-79.05	-13.00	66.05	261	190	Horizontal
967.165500	-71.67	-13.00	58.67	171	309	Horizontal
3759.500000	-48.59	-13.00	35.59	174	34	Horizontal
5639.700000	-46.52	-13.00	33.52	242	61	Horizontal
7520.250000	-51.35	-13.00	38.35	106	251	Horizontal

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**7.1.3. Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.502000	-69.55	-13.00	56.55	101	217	Vertical
341.079000	-78.74	-13.00	65.74	165	42	Vertical
950.918000	-71.42	-13.00	58.42	207	231	Vertical
3819.350000	-45.15	-13.00	32.15	299	199	Vertical
5729.300000	-50.31	-13.00	37.31	179	326	Vertical
7816.000000	-52.03	-13.00	39.03	162	305	Vertical
57.160000	-71.95	-13.00	58.95	250	80	Horizontal
219.635000	-78.69	-13.00	65.69	131	147	Horizontal
954.992000	-71.36	-13.00	58.36	255	17	Horizontal
3819.700000	-51.66	-13.00	38.66	239	144	Horizontal
5730.000000	-53.11	-13.00	40.11	292	245	Horizontal
7806.200000	-53.01	-13.00	40.01	191	273	Horizontal

**7.2. Test Band = GSM 850(Down Antenna)**
**7.2.1. Test Channel = LCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
64.629000	-70.01	-13.00	57.01	151	87	Vertical
335.453000	-79.47	-13.00	66.47	101	27	Vertical
1648.200000	-53.06	-13.00	40.06	272	302	Vertical
2523.075000	-51.36	-13.00	38.36	275	161	Vertical
3438.200000	-57.28	-13.00	44.28	159	181	Vertical
5299.500000	-54.75	-13.00	41.75	230	117	Vertical
61.331000	-71.71	-13.00	58.71	131	268	Horizontal
224.873000	-77.60	-13.00	64.60	217	98	Horizontal
617.335000	-75.03	-13.00	62.03	152	353	Horizontal
1648.425000	-55.02	-13.00	42.02	212	287	Horizontal
2568.600000	-50.69	-13.00	37.69	188	290	Horizontal
3308.000000	-57.73	-13.00	44.73	237	239	Horizontal

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**7.2.2. Test Channel = MCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.502000	-69.24	-13.00	56.24	173	43	Vertical
347.238500	-79.03	-13.00	66.03	269	60	Vertical
1613.850000	-56.16	-13.00	43.16	266	204	Vertical
2561.025000	-51.20	-13.00	38.20	243	252	Vertical
3416.500000	-57.85	-13.00	44.85	200	323	Vertical
4668.100000	-55.98	-13.00	42.98	213	293	Vertical
64.823000	-69.56	-13.00	56.56	236	227	Horizontal
224.727500	-78.76	-13.00	65.76	216	0	Horizontal
1673.475000	-55.02	-13.00	42.02	171	316	Horizontal
2451.525000	-51.80	-13.00	38.80	271	96	Horizontal
3347.550000	-57.29	-13.00	44.29	246	355	Horizontal
5112.950000	-54.73	-13.00	41.73	211	327	Horizontal

**7.2.3. Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.696000	-70.95	-13.00	57.95	114	125	Vertical
340.254500	-78.64	-13.00	65.64	187	30	Vertical
1697.850000	-53.88	-13.00	40.88	118	128	Vertical
2532.825000	-51.27	-13.00	38.27	248	197	Vertical
3585.200000	-56.85	-13.00	43.85	270	2	Vertical
7032.350000	-52.76	-13.00	39.76	201	277	Vertical
60.506500	-69.86	-13.00	56.86	139	221	Horizontal
224.921500	-77.83	-13.00	64.83	147	85	Horizontal
634.067500	-76.65	-13.00	63.65	277	246	Horizontal
1697.250000	-53.28	-13.00	40.28	257	11	Horizontal
2546.100000	-50.85	-13.00	37.85	121	160	Horizontal
3226.100000	-56.51	-13.00	43.51	295	244	Horizontal

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**7.3. Test Band = GSM 1900(Up Antenna)****7.3.1. Test Channel = LCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.744500	-71.61	-13.00	58.61	132	124	Vertical
348.451000	-79.25	-13.00	66.25	254	360	Vertical
945.389000	-71.53	-13.00	58.53	251	294	Vertical
3700.350000	-51.64	-13.00	38.64	118	168	Vertical
5550.450000	-46.83	-13.00	33.83	265	319	Vertical
7706.450000	-52.96	-13.00	39.96	285	347	Vertical
60.312500	-72.38	-13.00	59.38	233	283	Horizontal
224.727500	-78.21	-13.00	65.21	177	146	Horizontal
945.728500	-70.69	-13.00	57.69	243	302	Horizontal
3700.350000	-49.99	-13.00	36.99	260	153	Horizontal
5550.800000	-51.79	-13.00	38.79	236	93	Horizontal
7864.650000	-51.79	-13.00	38.79	238	128	Horizontal

**7.3.2. Test Channel = MCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.599000	-68.98	-13.00	55.98	197	246	Vertical
342.534000	-79.05	-13.00	66.05	132	292	Vertical
967.165500	-71.67	-13.00	58.67	266	40	Vertical
3759.500000	-48.59	-13.00	35.59	180	341	Vertical
5639.700000	-46.52	-13.00	33.52	231	356	Vertical
7520.250000	-51.35	-13.00	38.35	214	125	Vertical
60.652000	-72.08	-13.00	59.08	150	181	Horizontal
225.018500	-76.61	-13.00	63.61	264	189	Horizontal
947.038000	-71.11	-13.00	58.11	136	308	Horizontal
3759.850000	-49.00	-13.00	36.00	208	132	Horizontal
5639.700000	-51.31	-13.00	38.31	212	174	Horizontal
7969.300000	-52.19	-13.00	39.19	228	84	Horizontal

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**7.3.3. Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
57.160000	-71.95	-13.00	58.95	134	153	Vertical
219.635000	-78.69	-13.00	65.69	156	161	Vertical
954.992000	-71.36	-13.00	58.36	212	207	Vertical
3819.700000	-51.66	-13.00	38.66	165	131	Vertical
5730.000000	-53.11	-13.00	40.11	100	325	Vertical
7806.200000	-53.01	-13.00	40.01	267	344	Vertical
65.502000	-69.55	-13.00	56.55	117	292	Horizontal
341.079000	-78.74	-13.00	65.74	202	189	Horizontal
950.918000	-71.42	-13.00	58.42	261	105	Horizontal
3819.350000	-45.15	-13.00	32.15	214	42	Horizontal
5729.300000	-50.31	-13.00	37.31	233	152	Horizontal
7816.000000	-52.03	-13.00	39.03	267	78	Horizontal

**7.4. Test Band = GSM 850(Up Antenna)**
**7.4.1. Test Channel = LCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.793000	-71.24	-13.00	58.24	137	166	Vertical
343.310000	-79.05	-13.00	66.05	217	52	Vertical
1647.975000	-54.60	-13.00	41.60	164	266	Vertical
2564.700000	-51.08	-13.00	38.08	194	39	Vertical
3380.450000	-57.68	-13.00	44.68	150	289	Vertical
5156.350000	-54.66	-13.00	41.66	261	160	Vertical
57.257000	-71.12	-13.00	58.12	236	351	Horizontal
225.261000	-78.32	-13.00	65.32	184	29	Horizontal
634.504000	-76.26	-13.00	63.26	213	25	Horizontal
1699.800000	-54.99	-13.00	41.99	120	229	Horizontal
2425.950000	-51.44	-13.00	38.44	109	305	Horizontal
3284.900000	-57.28	-13.00	44.28	159	279	Horizontal

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**7.4.2. Test Channel = MCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.550500	-70.15	-13.00	57.15	112	235	Vertical
342.146000	-79.49	-13.00	66.49	139	56	Vertical
1673.250000	-53.47	-13.00	40.47	235	50	Vertical
2578.950000	-50.30	-13.00	37.30	166	348	Vertical
3352.100000	-57.69	-13.00	44.69	225	313	Vertical
5032.800000	-55.33	-13.00	42.33	133	334	Vertical
59.536500	-70.95	-13.00	57.95	244	140	Horizontal
220.023000	-78.27	-13.00	65.27	222	210	Horizontal
617.286500	-75.98	-13.00	62.98	253	326	Horizontal
1673.400000	-55.71	-13.00	42.71	255	89	Horizontal
2471.475000	-51.10	-13.00	38.10	270	54	Horizontal
3451.500000	-57.06	-13.00	44.06	270	326	Horizontal

**7.4.3. Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
60.458000	-71.59	-13.00	58.59	141	34	Vertical
224.194000	-79.10	-13.00	66.10	280	231	Vertical
607.247000	-75.55	-13.00	62.55	115	53	Vertical
1697.475000	-53.99	-13.00	40.99	237	214	Vertical
2611.275000	-50.16	-13.00	37.16	229	42	Vertical
3457.100000	-57.04	-13.00	44.04	171	343	Vertical
65.211000	-70.81	-13.00	57.81	258	244	Horizontal
316.974500	-79.10	-13.00	66.10	180	285	Horizontal
1697.175000	-53.00	-13.00	40.00	202	226	Horizontal
2561.850000	-50.35	-13.00	37.35	296	110	Horizontal
3357.700000	-57.43	-13.00	44.43	241	177	Horizontal
4707.300000	-55.27	-13.00	42.27	275	250	Horizontal

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

Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VL	TN	9.98	0.012114	±2.5	PASS
GSM850	128	VN	TN	-9.04	-0.010972	±2.5	PASS
GSM850	128	VH	TN	14.29	0.017340	±2.5	PASS
GSM850	190	VL	TN	-2.74	-0.003276	±2.5	PASS
GSM850	190	VN	TN	-4.02	-0.004802	±2.5	PASS
GSM850	190	VH	TN	-5.39	-0.006440	±2.5	PASS
GSM850	251	VL	TN	11.64	0.013716	±2.5	PASS
GSM850	251	VN	TN	-2.97	-0.003497	±2.5	PASS
GSM850	251	VH	TN	1.02	0.001203	±2.5	PASS
EGPRS850	128	VL	TN	-8.64	-0.010482	±2.5	PASS
EGPRS850	128	VN	TN	14.66	0.017790	±2.5	PASS
EGPRS850	128	VH	TN	-10.60	-0.012865	±2.5	PASS
EGPRS850	190	VL	TN	-1.48	-0.001764	±2.5	PASS
EGPRS850	190	VN	TN	-6.12	-0.007319	±2.5	PASS
EGPRS850	190	VH	TN	12.80	0.015295	±2.5	PASS
EGPRS850	251	VL	TN	8.56	0.010081	±2.5	PASS
EGPRS850	251	VN	TN	0.98	0.001152	±2.5	PASS
EGPRS850	251	VH	TN	5.04	0.005937	±2.5	PASS
GSM1900	512	VL	TN	8.19	0.004425	±2.5	PASS
GSM1900	512	VN	TN	-8.31	-0.004493	±2.5	PASS
GSM1900	512	VH	TN	2.76	0.001492	±2.5	PASS
GSM1900	661	VL	TN	-5.51	-0.002930	±2.5	PASS
GSM1900	661	VN	TN	8.32	0.004424	±2.5	PASS
GSM1900	661	VH	TN	13.35	0.007102	±2.5	PASS
GSM1900	810	VL	TN	-10.58	-0.005538	±2.5	PASS
GSM1900	810	VN	TN	-10.93	-0.005724	±2.5	PASS
GSM1900	810	VH	TN	6.69	0.003505	±2.5	PASS
EGPRS1900	512	VL	TN	-13.66	-0.007385	±2.5	PASS
EGPRS1900	512	VN	TN	8.51	0.004600	±2.5	PASS
EGPRS1900	512	VH	TN	-7.54	-0.004076	±2.5	PASS
EGPRS1900	661	VL	TN	-2.24	-0.001190	±2.5	PASS
EGPRS1900	661	VN	TN	6.16	0.003275	±2.5	PASS
EGPRS1900	661	VH	TN	11.11	0.005912	±2.5	PASS
EGPRS1900	810	VL	TN	-2.88	-0.001508	±2.5	PASS
EGPRS1900	810	VN	TN	5.20	0.002723	±2.5	PASS
EGPRS1900	810	VH	TN	13.83	0.007243	±2.5	PASS

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## 8.2. Frequency Error Vs Temperature

Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VN	-30	11.36	0.013781	±2.5	PASS
GSM850	128	VN	-20	6.68	0.008106	±2.5	PASS
GSM850	128	VN	-10	-3.29	-0.003987	±2.5	PASS
GSM850	128	VN	0	-13.50	-0.016383	±2.5	PASS
GSM850	128	VN	10	10.57	0.012824	±2.5	PASS
GSM850	128	VN	20	0.12	0.000147	±2.5	PASS
GSM850	128	VN	30	10.52	0.012768	±2.5	PASS
GSM850	128	VN	40	-10.47	-0.012703	±2.5	PASS
GSM850	128	VN	50	5.97	0.007245	±2.5	PASS
GSM850	190	VN	-30	14.31	0.017101	±2.5	PASS
GSM850	190	VN	-20	11.78	0.014078	±2.5	PASS
GSM850	190	VN	-10	9.47	0.011319	±2.5	PASS
GSM850	190	VN	0	2.08	0.002491	±2.5	PASS
GSM850	190	VN	10	11.70	0.013982	±2.5	PASS
GSM850	190	VN	20	0.28	0.000333	±2.5	PASS
GSM850	190	VN	30	14.55	0.017392	±2.5	PASS
GSM850	190	VN	40	11.14	0.013319	±2.5	PASS
GSM850	190	VN	50	10.96	0.013099	±2.5	PASS
GSM850	251	VN	-30	7.36	0.008674	±2.5	PASS
GSM850	251	VN	-20	-10.65	-0.012548	±2.5	PASS
GSM850	251	VN	-10	-0.30	-0.000350	±2.5	PASS
GSM850	251	VN	0	-4.44	-0.005236	±2.5	PASS
GSM850	251	VN	10	11.18	0.013166	±2.5	PASS
GSM850	251	VN	20	5.95	0.007008	±2.5	PASS
GSM850	251	VN	30	-4.21	-0.004958	±2.5	PASS
GSM850	251	VN	40	-13.71	-0.016151	±2.5	PASS
GSM850	251	VN	50	4.62	0.005438	±2.5	PASS
EGPRS850	128	VN	-30	4.08	0.004952	±2.5	PASS
EGPRS850	128	VN	-20	-10.67	-0.012949	±2.5	PASS
EGPRS850	128	VN	-10	4.98	0.006047	±2.5	PASS
EGPRS850	128	VN	0	-1.39	-0.001691	±2.5	PASS
EGPRS850	128	VN	10	-5.86	-0.007106	±2.5	PASS
EGPRS850	128	VN	20	-5.48	-0.006648	±2.5	PASS
EGPRS850	128	VN	30	14.20	0.017230	±2.5	PASS
EGPRS850	128	VN	40	6.98	0.008466	±2.5	PASS
EGPRS850	128	VN	50	-8.93	-0.010841	±2.5	PASS
EGPRS850	190	VN	-30	8.65	0.010335	±2.5	PASS
EGPRS850	190	VN	-20	-4.75	-0.005681	±2.5	PASS
EGPRS850	190	VN	-10	-13.14	-0.015706	±2.5	PASS
EGPRS850	190	VN	0	12.56	0.015010	±2.5	PASS
EGPRS850	190	VN	10	4.41	0.005272	±2.5	PASS
EGPRS850	190	VN	20	-13.22	-0.015796	±2.5	PASS
EGPRS850	190	VN	30	14.02	0.016758	±2.5	PASS

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EGPRS850	190	VN	40	3.67	0.004382	±2.5	PASS
EGPRS850	190	VN	50	2.70	0.003228	±2.5	PASS
EGPRS850	251	VN	-30	-7.13	-0.008404	±2.5	PASS
EGPRS850	251	VN	-20	-12.43	-0.014647	±2.5	PASS
EGPRS850	251	VN	-10	-7.88	-0.009287	±2.5	PASS
EGPRS850	251	VN	0	0.33	0.000389	±2.5	PASS
EGPRS850	251	VN	10	12.50	0.014725	±2.5	PASS
EGPRS850	251	VN	20	-14.60	-0.017197	±2.5	PASS
EGPRS850	251	VN	30	-1.56	-0.001835	±2.5	PASS
EGPRS850	251	VN	40	-8.25	-0.009722	±2.5	PASS
EGPRS850	251	VN	50	-11.91	-0.014026	±2.5	PASS
GSM1900	512	VN	-30	-7.08	-0.003825	±2.5	PASS
GSM1900	512	VN	-20	4.96	0.002680	±2.5	PASS
GSM1900	512	VN	-10	-2.25	-0.001215	±2.5	PASS
GSM1900	512	VN	0	-13.25	-0.007161	±2.5	PASS
GSM1900	512	VN	10	5.23	0.002829	±2.5	PASS
GSM1900	512	VN	20	-9.62	-0.005198	±2.5	PASS
GSM1900	512	VN	30	-13.52	-0.007307	±2.5	PASS
GSM1900	512	VN	40	1.87	0.001009	±2.5	PASS
GSM1900	512	VN	50	8.11	0.004383	±2.5	PASS
GSM1900	661	VN	-30	2.76	0.001468	±2.5	PASS
GSM1900	661	VN	-20	-14.76	-0.007852	±2.5	PASS
GSM1900	661	VN	-10	-9.57	-0.005091	±2.5	PASS
GSM1900	661	VN	0	6.90	0.003669	±2.5	PASS
GSM1900	661	VN	10	1.10	0.000583	±2.5	PASS
GSM1900	661	VN	20	-0.85	-0.000454	±2.5	PASS
GSM1900	661	VN	30	9.23	0.004912	±2.5	PASS
GSM1900	661	VN	40	10.24	0.005444	±2.5	PASS
GSM1900	661	VN	50	8.57	0.004559	±2.5	PASS
GSM1900	810	VN	-30	-1.54	-0.000807	±2.5	PASS
GSM1900	810	VN	-20	7.03	0.003681	±2.5	PASS
GSM1900	810	VN	-10	6.83	0.003578	±2.5	PASS
GSM1900	810	VN	0	0.40	0.000208	±2.5	PASS
GSM1900	810	VN	10	-7.21	-0.003773	±2.5	PASS
GSM1900	810	VN	20	-12.65	-0.006623	±2.5	PASS
GSM1900	810	VN	30	-1.56	-0.000815	±2.5	PASS
GSM1900	810	VN	40	11.69	0.006120	±2.5	PASS
GSM1900	810	VN	50	1.86	0.000973	±2.5	PASS
EGPRS1900	512	VN	-30	14.14	0.007641	±2.5	PASS
EGPRS1900	512	VN	-20	3.43	0.001853	±2.5	PASS
EGPRS1900	512	VN	-10	7.54	0.004073	±2.5	PASS
EGPRS1900	512	VN	0	-4.70	-0.002541	±2.5	PASS
EGPRS1900	512	VN	10	3.27	0.001765	±2.5	PASS
EGPRS1900	512	VN	20	8.48	0.004584	±2.5	PASS
EGPRS1900	512	VN	30	-9.11	-0.004925	±2.5	PASS
EGPRS1900	512	VN	40	3.83	0.002068	±2.5	PASS
EGPRS1900	512	VN	50	3.38	0.001827	±2.5	PASS

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EGPRS1900	661	VN	-30	-0.39	-0.000207	±2.5	PASS
EGPRS1900	661	VN	-20	3.07	0.001632	±2.5	PASS
EGPRS1900	661	VN	-10	9.15	0.004865	±2.5	PASS
EGPRS1900	661	VN	0	13.81	0.007347	±2.5	PASS
EGPRS1900	661	VN	10	12.75	0.006782	±2.5	PASS
EGPRS1900	661	VN	20	2.72	0.001446	±2.5	PASS
EGPRS1900	661	VN	30	4.74	0.002520	±2.5	PASS
EGPRS1900	661	VN	40	6.82	0.003629	±2.5	PASS
EGPRS1900	661	VN	50	-2.35	-0.001249	±2.5	PASS
EGPRS1900	810	VN	-30	5.91	0.003095	±2.5	PASS
EGPRS1900	810	VN	-20	10.79	0.005650	±2.5	PASS
EGPRS1900	810	VN	-10	3.48	0.001820	±2.5	PASS
EGPRS1900	810	VN	0	-12.57	-0.006581	±2.5	PASS
EGPRS1900	810	VN	10	4.02	0.002107	±2.5	PASS
EGPRS1900	810	VN	20	8.06	0.004221	±2.5	PASS
EGPRS1900	810	VN	30	6.19	0.003243	±2.5	PASS
EGPRS1900	810	VN	40	-8.27	-0.004331	±2.5	PASS
EGPRS1900	810	VN	50	10.76	0.005635	±2.5	PASS

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