

A1. GSM

Peak-to-Average Ratio

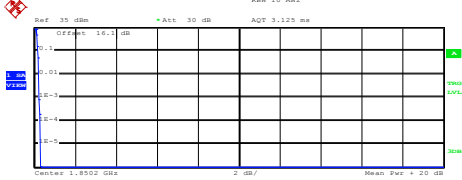
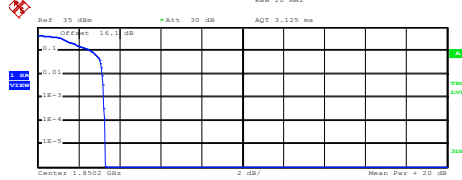
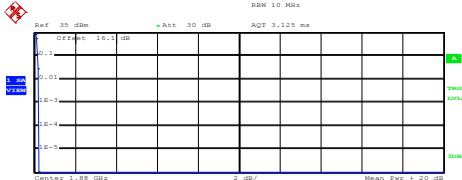
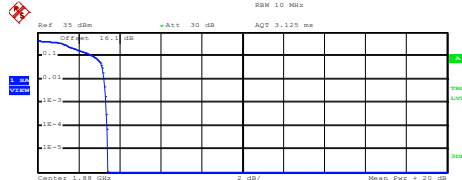
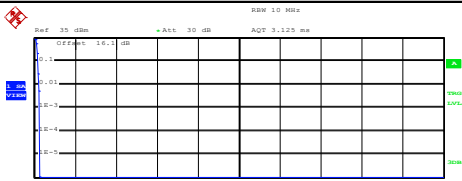
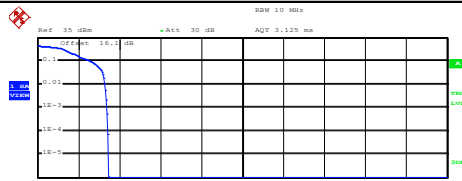
Mode	GSM850		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.28	3.28	PASS
Middle CH	0.24	3.32	
Highest CH	0.20	3.24	

Mode	GSM1900		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.24	3.24	PASS
Middle CH	0.24	3.36	
Highest CH	0.28	3.40	



GSM850 (GPRS class 8)		GSM850 (EDGE class 8)	
Lowest Channel		Lowest Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 824.2 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 31.70 dBm Peak 31.94 dBm Crest 0.24 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.28 dB .01 % 0.28 dB Date: 9.OCT.2016 09:20:21		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 824.2 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 26.01 dBm Peak 29.33 dBm Crest 3.31 dB 10 % 2.68 dB 1 % 3.20 dB .1 % 3.28 dB .01 % 3.32 dB Date: 9.OCT.2016 09:46:06	
Middle Channel		Middle Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 836.4 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 31.64 dBm Peak 31.87 dBm Crest 0.23 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.24 dB Date: 9.OCT.2016 09:20:37		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 836.4 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.90 dBm Peak 29.26 dBm Crest 3.36 dB 10 % 2.72 dB 1 % 3.24 dB .1 % 3.32 dB .01 % 3.36 dB Date: 9.OCT.2016 09:46:22	
Highest Channel		Highest Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 848.8 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 31.61 dBm Peak 31.80 dBm Crest 0.19 dB 10 % 0.20 dB 1 % 0.20 dB .1 % 0.20 dB .01 % 0.20 dB Date: 9.OCT.2016 09:20:57		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 848.8 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.92 dBm Peak 29.26 dBm Crest 3.34 dB 10 % 2.64 dB 1 % 3.16 dB .1 % 3.24 dB .01 % 3.28 dB Date: 9.OCT.2016 09:46:38	

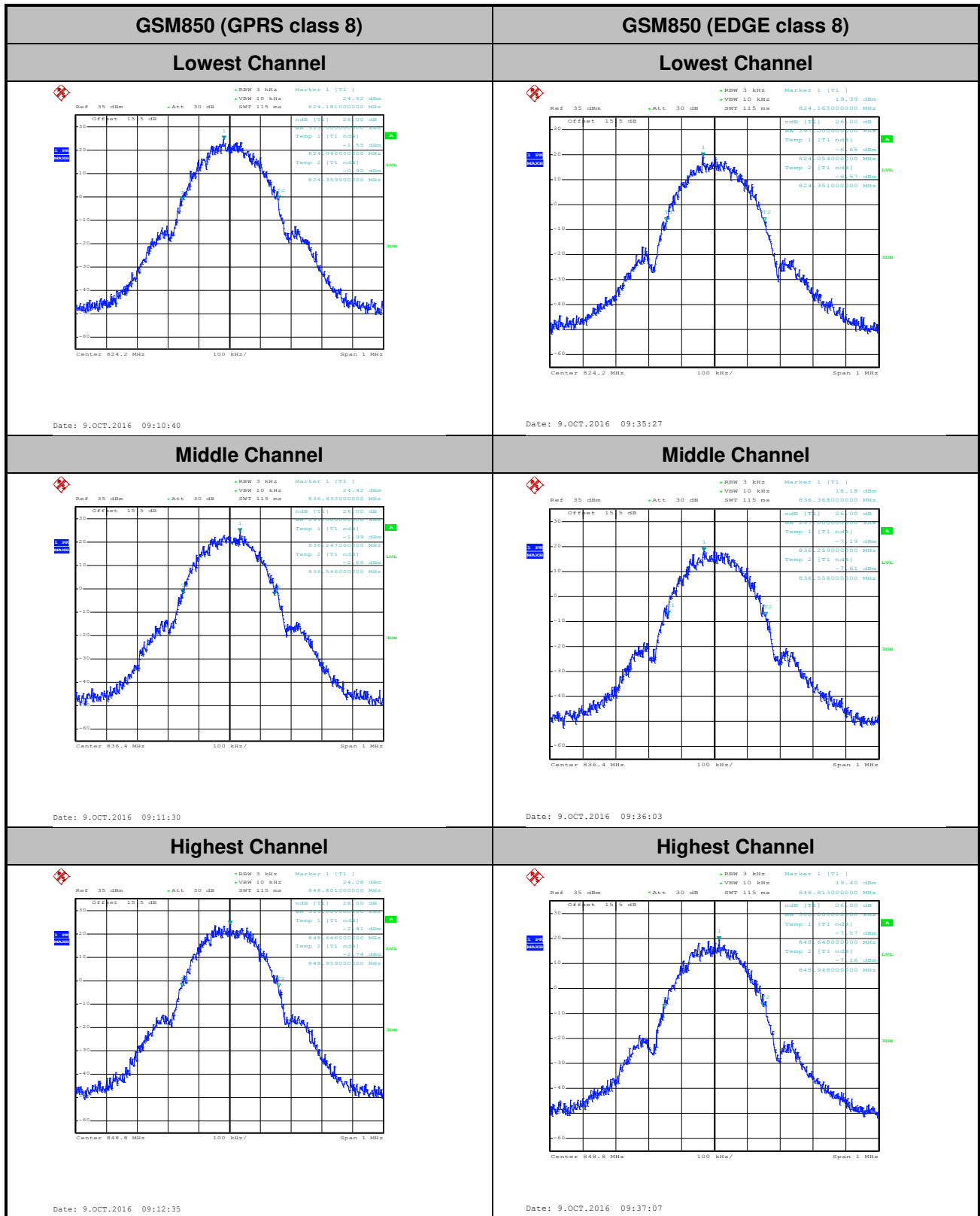


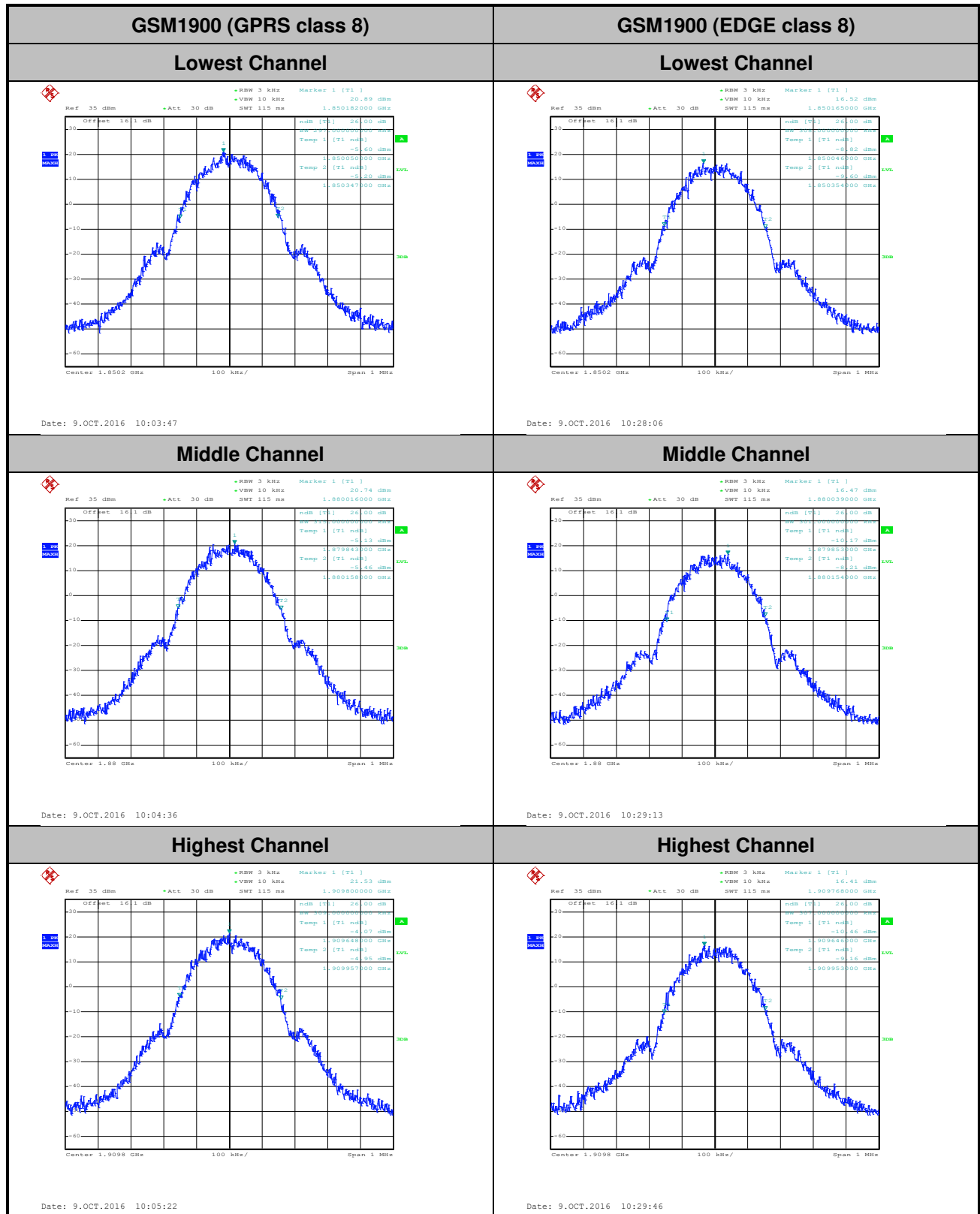
GSM1900 (GPRS class 8)		GSM1900 (EDGE class 8)	
Lowest Channel		Lowest Channel	
 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 28.33 dBm Peak 28.62 dBm Crest 0.29 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.28 dB Date: 9.OCT.2016 10:15:25		 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 24.33 dBm Peak 27.63 dBm Crest 3.30 dB 10 % 2.60 dB 1 % 3.16 dB .1 % 3.24 dB .01 % 3.28 dB Date: 9.OCT.2016 10:39:42	
Middle Channel		Middle Channel	
 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 28.45 dBm Peak 28.69 dBm Crest 0.24 dB 10 % 0.16 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.24 dB Date: 9.OCT.2016 10:15:44		 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 24.35 dBm Peak 27.77 dBm Crest 3.43 dB 10 % 2.72 dB 1 % 3.24 dB .1 % 3.36 dB .01 % 3.40 dB Date: 9.OCT.2016 10:40:07	
Highest Channel		Highest Channel	
 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 28.44 dBm Peak 28.69 dBm Crest 0.25 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.28 dB .01 % 0.28 dB Date: 9.OCT.2016 10:16:03		 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 24.30 dBm Peak 27.77 dBm Crest 3.47 dB 10 % 2.60 dB 1 % 3.28 dB .1 % 3.40 dB .01 % 3.44 dB Date: 9.OCT.2016 10:40:26	

26dB Bandwidth

Mode	GSM850	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.313	0.297
Middle CH	0.299	0.297
Highest CH	0.313	0.300

Mode	GSM1900	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.297	0.308
Middle CH	0.315	0.301
Highest CH	0.309	0.307

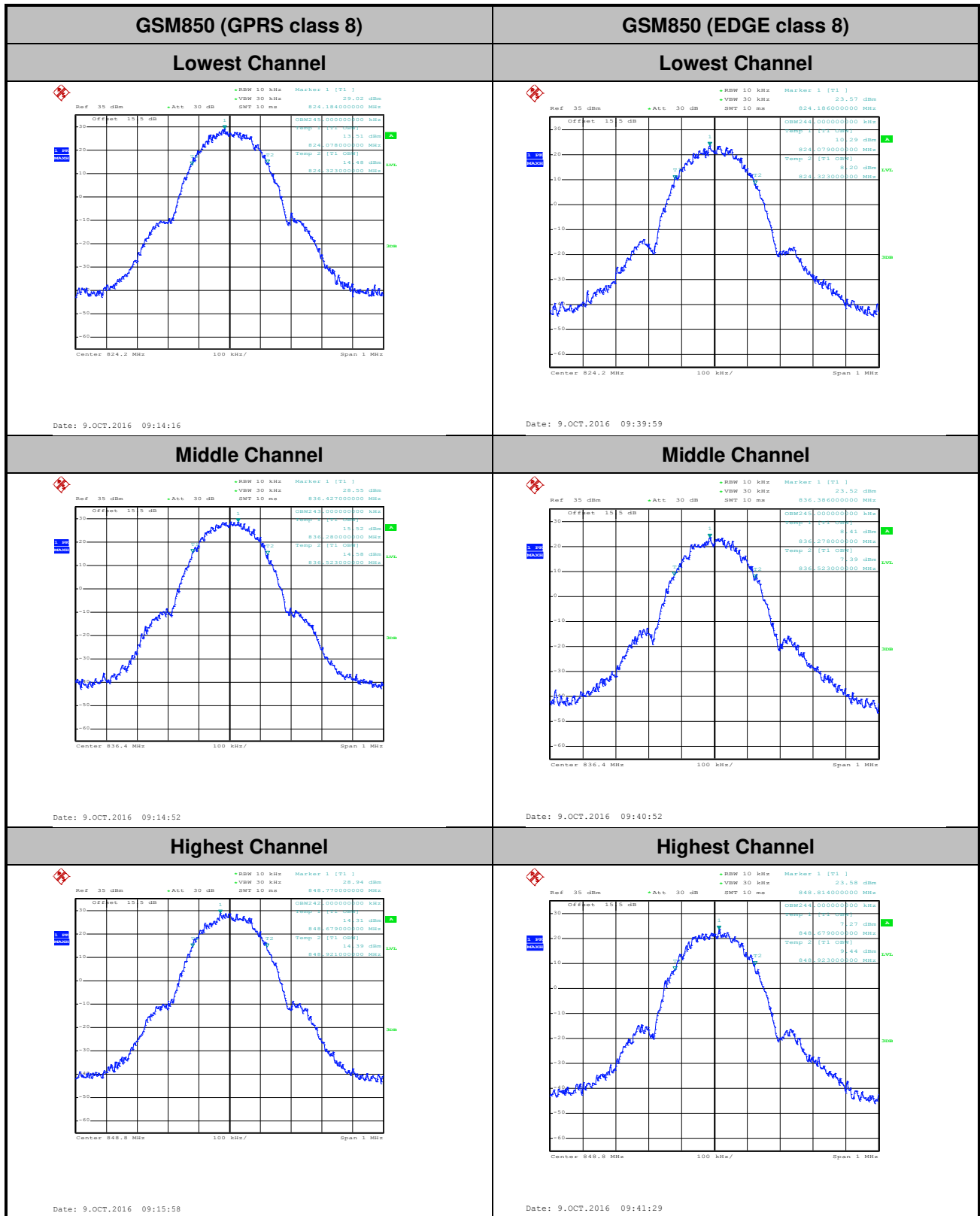


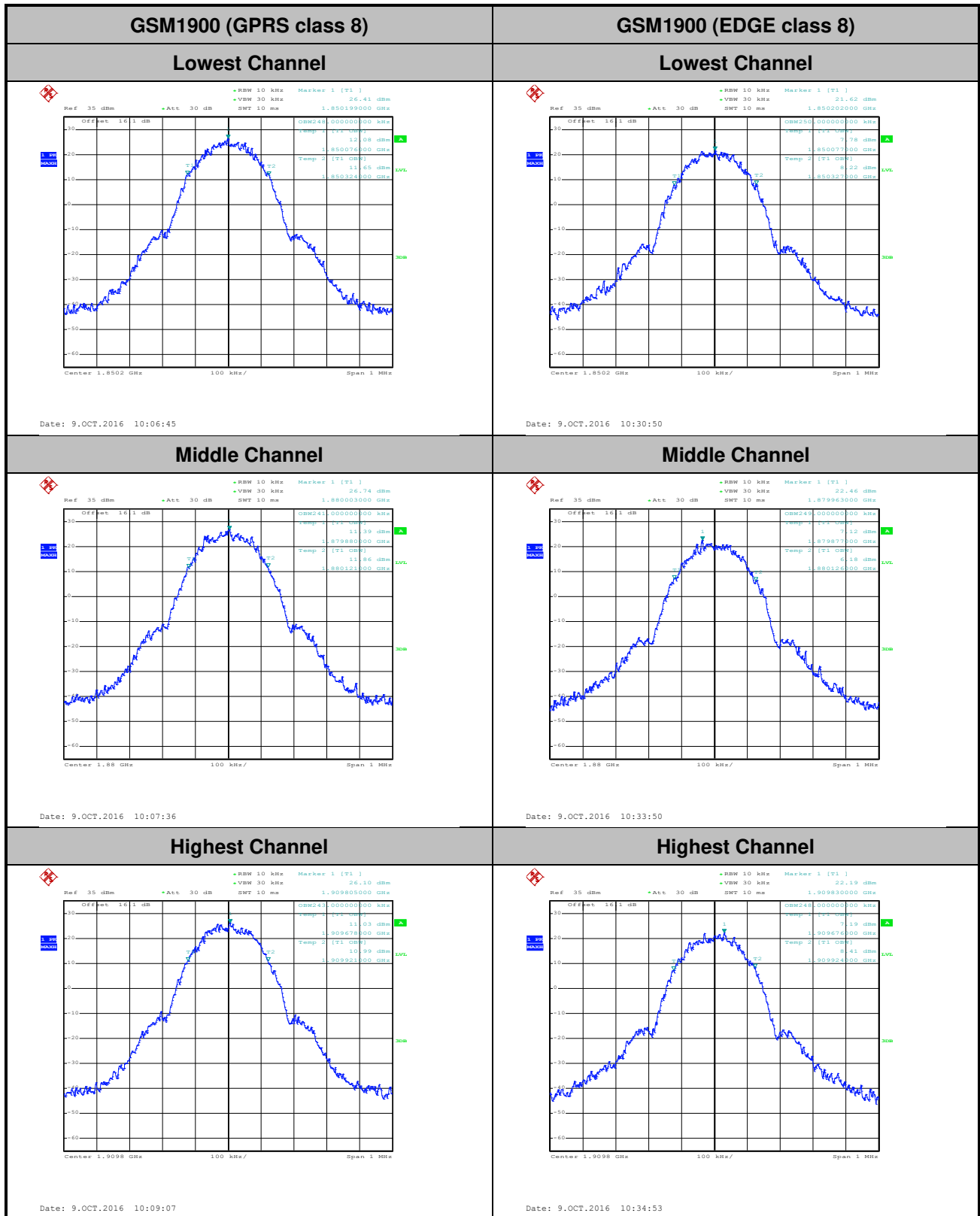


**Occupied Bandwidth**

Mode	GSM850	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.245	0.244
Middle CH	0.243	0.245
Highest CH	0.242	0.244

Mode	GSM1900	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.248	0.250
Middle CH	0.241	0.249
Highest CH	0.243	0.248



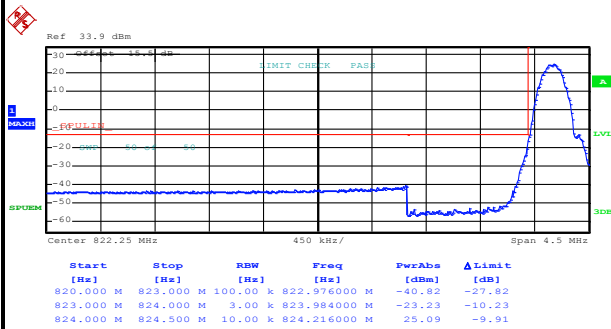




Conducted Band Edge

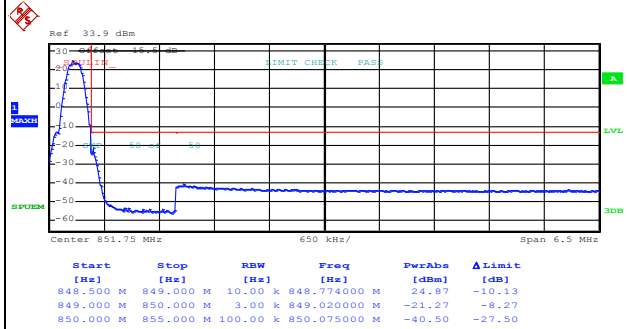
GSM850 (GPRS class 8)

Lowest Band Edge



Date: 9.OCT.2016 09:23:47

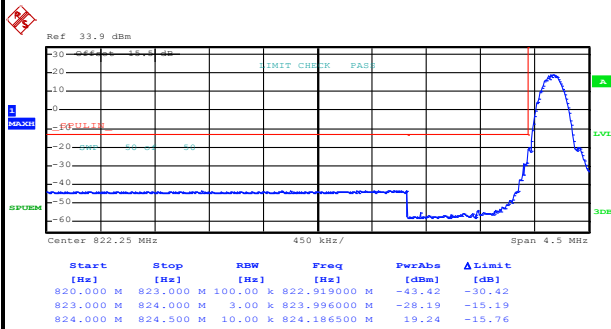
Highest Band Edge



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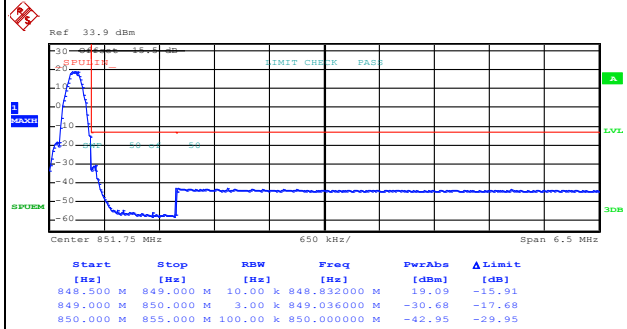
GSM850 (EDGE class 8)

Lowest Band Edge



Date: 9.OCT.2016 09:48:15

Highest Band Edge

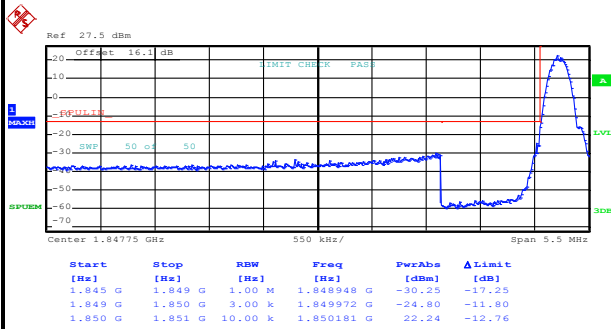


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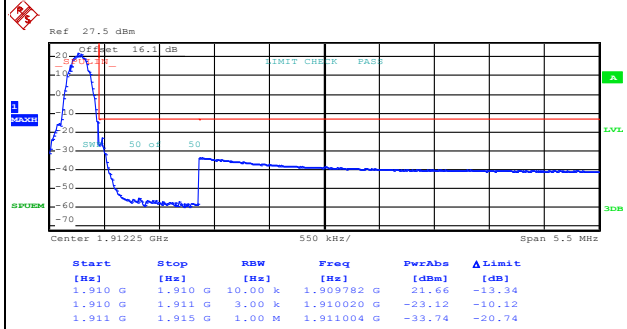
GSM1900 (GPRS class 8)

Lowest Band Edge



Date: 9.OCT.2016 10:17:38

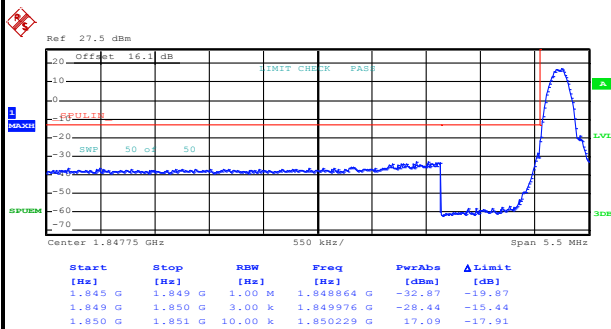
Highest Band Edge



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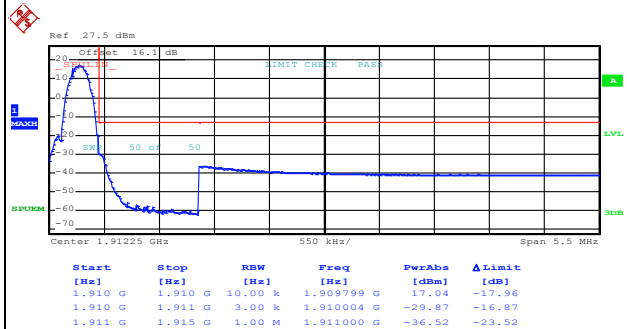
GSM1900 (EDGE class 8)

Lowest Band Edge



Date: 9.OCT.2016 10:42:04

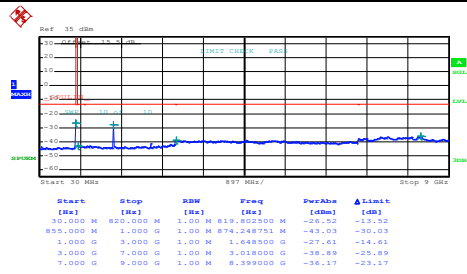
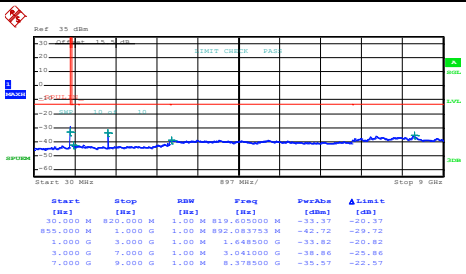
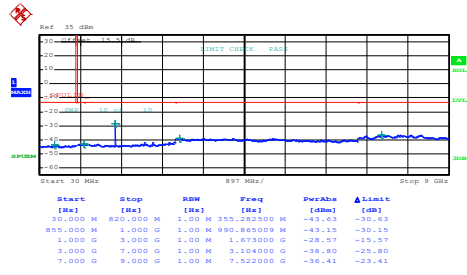
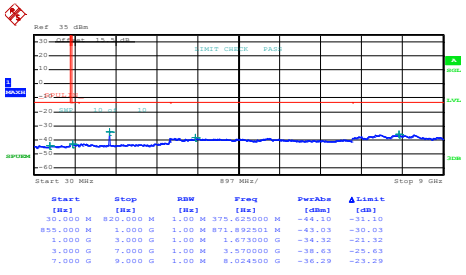
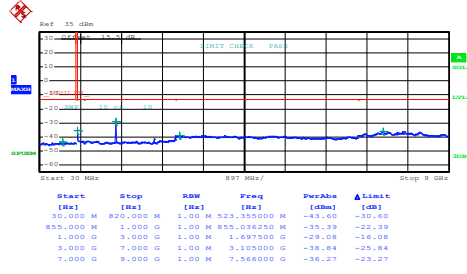
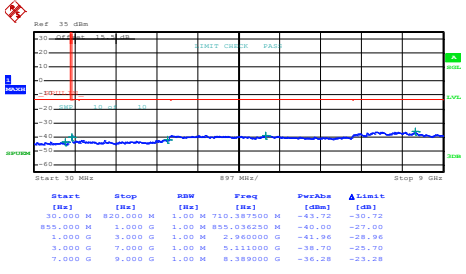
Highest Band Edge

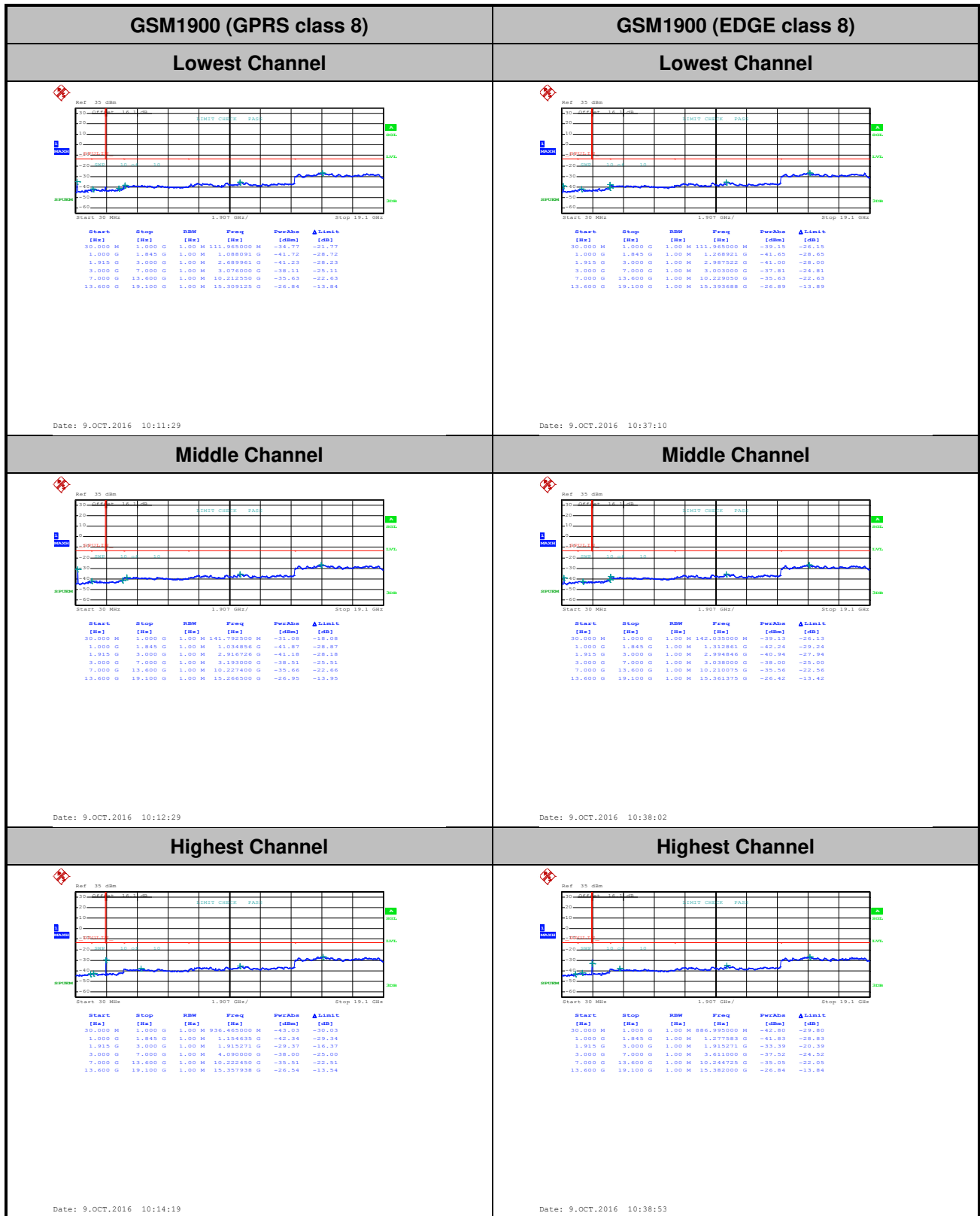


Date: 9.OCT.2016 10:43:43



Conducted Spurious Emission

GSM850 (GPRS class 8)		GSM850 (EDGE class 8)																																																																																					
Lowest Channel		Lowest Channel																																																																																					
 <table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>819.802500 M</td><td>-26.52</td><td>-13.52</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>874.248751 M</td><td>-43.03</td><td>-30.03</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>1.6485000 G</td><td>-27.61</td><td>-24.61</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>3.0180000 G</td><td>-38.89</td><td>-25.89</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>8.3990000 G</td><td>-36.17</td><td>-23.17</td></tr></table> Date: 9.OCT.2016 09:17:16		Start	Stop	RBW	Freq	PerAbn	ΔLimit	[Hz]	[Hz]	[Hz]	[Hz]	[dBm]	[dB]	30.000 M	820.000 M	1.00 M	819.802500 M	-26.52	-13.52	850.000 M	1.000 G	1.00 M	874.248751 M	-43.03	-30.03	1.000 G	3.000 G	1.00 M	1.6485000 G	-27.61	-24.61	3.000 G	7.000 G	1.00 M	3.0180000 G	-38.89	-25.89	7.000 G	9.000 G	1.00 M	8.3990000 G	-36.17	-23.17	 <table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>819.805000 M</td><td>-33.37</td><td>-20.37</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>892.083753 M</td><td>-42.72</td><td>-29.72</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>1.6485000 G</td><td>-33.82</td><td>-20.82</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>3.0410000 G</td><td>-38.86</td><td>-25.86</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>8.3785000 G</td><td>-35.57</td><td>-22.57</td></tr></table> Date: 9.OCT.2016 09:43:14		Start	Stop	RBW	Freq	PerAbn	ΔLimit	[Hz]	[Hz]	[Hz]	[Hz]	[dBm]	[dB]	30.000 M	820.000 M	1.00 M	819.805000 M	-33.37	-20.37	850.000 M	1.000 G	1.00 M	892.083753 M	-42.72	-29.72	1.000 G	3.000 G	1.00 M	1.6485000 G	-33.82	-20.82	3.000 G	7.000 G	1.00 M	3.0410000 G	-38.86	-25.86	7.000 G	9.000 G	1.00 M	8.3785000 G	-35.57	-22.57
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 <table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>523.355000 M</td><td>-43.60</td><td>-30.60</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>855.036250 M</td><td>-35.39</td><td>-22.39</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>1.6975000 G</td><td>-29.08</td><td>-16.08</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>3.1050000 G</td><td>-38.84</td><td>-25.84</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>7.5660000 G</td><td>-36.27</td><td>-23.27</td></tr></table> Date: 9.OCT.2016 09:19:28		Start	Stop	RBW	Freq	PerAbn	ΔLimit	[Hz]	[Hz]	[Hz]	[Hz]	[dBm]	[dB]	30.000 M	820.000 M	1.00 M	523.355000 M	-43.60	-30.60	850.000 M	1.000 G	1.00 M	855.036250 M	-35.39	-22.39	1.000 G	3.000 G	1.00 M	1.6975000 G	-29.08	-16.08	3.000 G	7.000 G	1.00 M	3.1050000 G	-38.84	-25.84	7.000 G	9.000 G	1.00 M	7.5660000 G	-36.27	-23.27	 <table><tr><th>Start</th><th>Stop</th><th>RBW</th><th>Freq</th><th>PerAbn</th><th>ΔLimit</th></tr><tr><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[Hz]</th><th>[dBm]</th><th>[dB]</th></tr><tr><td>30.000 M</td><td>820.000 M</td><td>1.00 M</td><td>710.387500 M</td><td>-43.72</td><td>-30.72</td></tr><tr><td>850.000 M</td><td>1.000 G</td><td>1.00 M</td><td>855.036250 M</td><td>-40.00</td><td>-27.00</td></tr><tr><td>1.000 G</td><td>3.000 G</td><td>1.00 M</td><td>2.9400000 G</td><td>-41.96</td><td>-28.96</td></tr><tr><td>3.000 G</td><td>7.000 G</td><td>1.00 M</td><td>5.1110000 G</td><td>-38.70</td><td>-25.70</td></tr><tr><td>7.000 G</td><td>9.000 G</td><td>1.00 M</td><td>8.3890000 G</td><td>-36.28</td><td>-23.28</td></tr></table> Date: 9.OCT.2016 09:45:14		Start	Stop	RBW	Freq	PerAbn	ΔLimit	[Hz]	[Hz]	[Hz]	[Hz]	[dBm]	[dB]	30.000 M	820.000 M	1.00 M	710.387500 M	-43.72	-30.72	850.000 M	1.000 G	1.00 M	855.036250 M	-40.00	-27.00	1.000 G	3.000 G	1.00 M	2.9400000 G	-41.96	-28.96	3.000 G	7.000 G	1.00 M	5.1110000 G	-38.70	-25.70	7.000 G	9.000 G	1.00 M	8.3890000 G	-36.28	-23.28
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Frequency Stability

Test Conditions	Middle Channel	GSM850 (GPRS class 8)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0060	0.0012	PASS
40	Normal Voltage	0.0036	0.0036	
30	Normal Voltage	0.0012	0.0012	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0036	0.0024	
0	Normal Voltage	0.0024	0.0012	
-10	Normal Voltage	0.0036	0.0000	
-20	Normal Voltage	0.0012	0.0024	
-30	Normal Voltage	0.0024	0.0024	
20	Maximum Voltage	0.0012	0.0024	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0036	0.0024	

Note:

1. Normal Voltage = 3.7V. ; Battery End Point (BEP) = 3.3 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Test Conditions	Middle Channel	GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0165	0.0005	PASS
40	Normal Voltage	0.0011	0.0027	
30	Normal Voltage	0.0154	0.0016	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0011	0.0032	
0	Normal Voltage	0.0005	0.0005	
-10	Normal Voltage	0.0149	0.0021	
-20	Normal Voltage	0.0165	0.0021	
-30	Normal Voltage	0.0011	0.0027	
20	Maximum Voltage	0.0170	0.0005	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0160	0.0005	

Note:

1. Normal Voltage = 3.7V. ; Battery End Point (BEP) = 3.3 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.