

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

RF Power Output-FCC Part2.1046

GSM850

Antenna Gain=-2.10dBi

GSM Measured Power:

Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
824.2	128	33.13
836.4	189	33.03
848.8	251	33.09

GPRS Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
824.2	128	4Downlink1uplink	33.08
836.4	189		32.96
848.8	251		33.04
824.2	128	3Downlink2uplink	30.93
836.4	189		30.87
848.8	251		30.97
824.2	128	2Downlink3uplink	29.12
836.4	189		29.18
848.8	251		29.21
824.2	128	1Downlink4uplink	27.21
836.4	189		27.18
848.8	251		27.25

EGPRS (GMSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
824.2	128	GMSK 4Downlink1uplink	33.11
836.4	189		32.97
848.8	251		33.01
824.2	128	GMSK 3Downlink2uplink	30.95
836.4	189		30.92
848.8	251		30.99
824.2	128	GMSK 2Downlink3uplink	29.11
836.4	189		29.07
848.8	251		29.13
824.2	128	GMSK 1Downlink4uplink	27.13
836.4	189		27.07
848.8	251		27.11

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
824.2	128	8DPSK 4Downlink1uplink	25.89
836.4	189		25.81
848.8	251		25.86
824.2	128	8DPSK 3Downlink2uplink	24.84
836.4	189		24.68
848.8	251		24.77
824.2	128	8DPSK 2Downlink3uplink	22.66
836.4	189		22.55
848.8	251		22.68
824.2	128	8DPSK 1Downlink4uplink	19.67
836.4	189		19.56
848.8	251		19.62

PCS1900

Antenna Gain=-1.40dBi

GSM Measured Power:

Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
1850.2	512	29.77
1880.0	661	29.68
1909.8	810	29.88

GPRS Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
1850.2	512	4Downlink1uplink	29.70
1880.0	661		29.66
1909.8	810		29.87
1850.2	512	3Downlink2uplink	27.63
1880.0	661		27.57
1909.8	810		27.62
1850.2	512	2Downlink3uplink	26.14
1880.0	661		26.05
1909.8	810		26.11
1850.2	512	1Downlink4uplink	24.12
1880.0	661		24.04
1909.8	810		24.09

EGPRS (GMSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
1850.2	512	GMSK 4Downlink1uplink	29.77
1880.0	661		29.69
1909.8	810		29.82
1850.2	512	GMSK 3Downlink2uplink	27.64
1880.0	661		27.57
1909.8	810		27.62
1850.2	512	GMSK 2Downlink3uplink	26.15
1880.0	661		26.07
1909.8	810		26.09
1850.2	512	GMSK 1Downlink4uplink	24.13
1880.0	661		24.03
1909.8	810		24.11

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
1850.2	512	8DPSK 4Downlink1uplink	26.54
1880.0	661		26.49
1909.8	810		26.42
1850.2	512	8DPSK 3Downlink2uplink	24.95
1880.0	661		24.79
1909.8	810		24.83
1850.2	512	8DPSK 2Downlink3uplink	22.55
1880.0	661		22.47
1909.8	810		22.43
1850.2	512	8DPSK 1Downlink4uplink	21.44
1880.0	661		21.37
1909.8	810		21.35

Occupied Bandwidth-FCC Part2.1049

GSM850

GSM/GPRS MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
824.2	128	241.42
836.4	189	242.40
848.8	251	245.32

EDGE (GMSK) MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
824.2	128	243.65
836.4	189	241.53
848.8	251	241.75

EDGE (8PSK) MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
824.2	128	246.46
836.4	189	247.30
848.8	251	242.74

PCS1900

GSM/GPRS MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
1850.2	512	238.75
1880.0	661	241.63
1909.8	810	239.96

EDGE (GMSK) MODE:

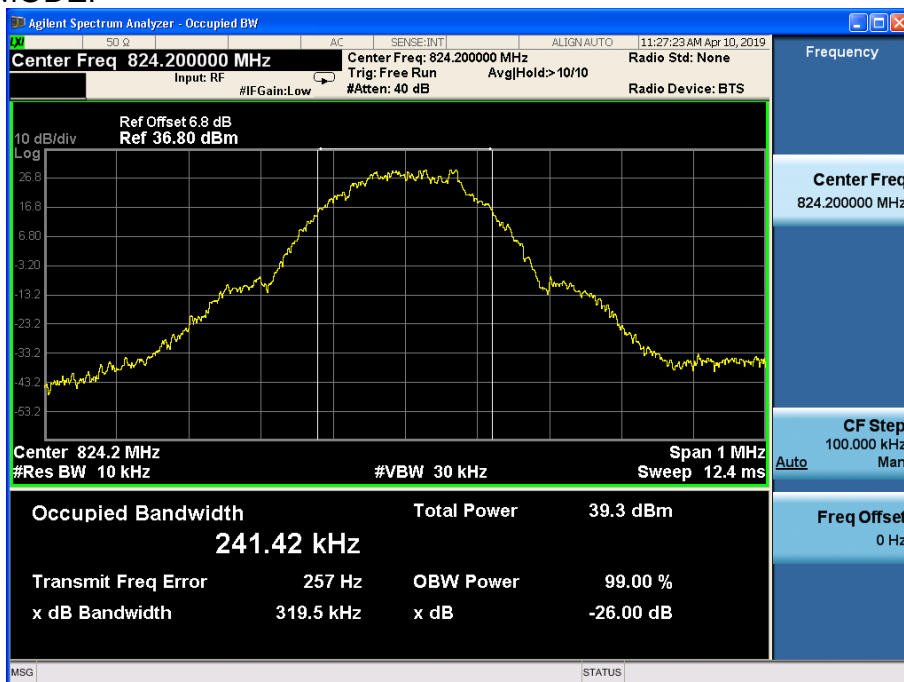
Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
1850.2	512	238.88
1880.0	661	242.83
1909.8	810	240.91

EDGE (8PSK) MODE:

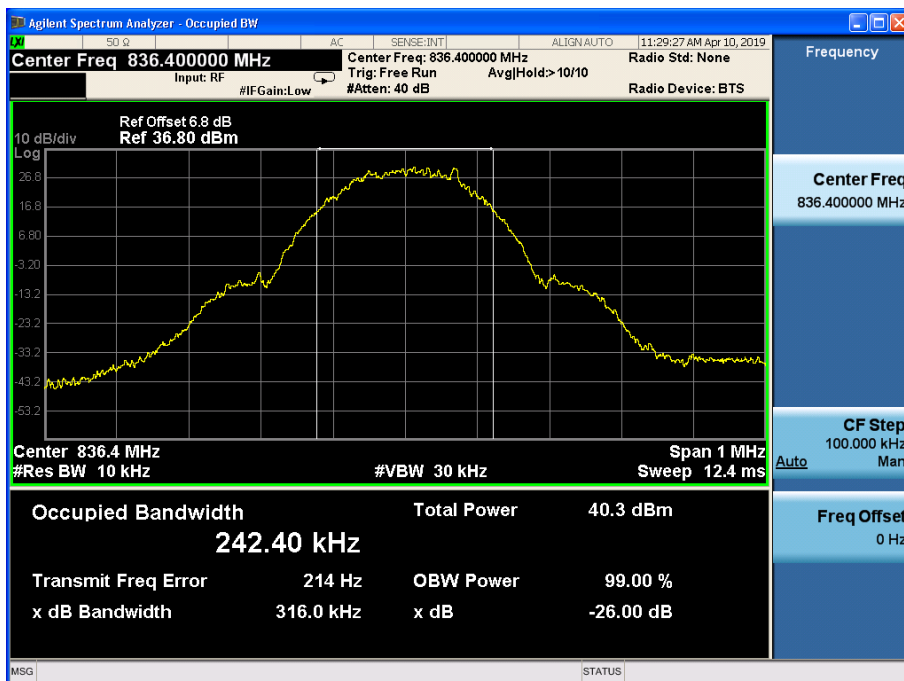
Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
1850.2	512	237.59
1880.0	661	241.58
1909.8	810	242.85

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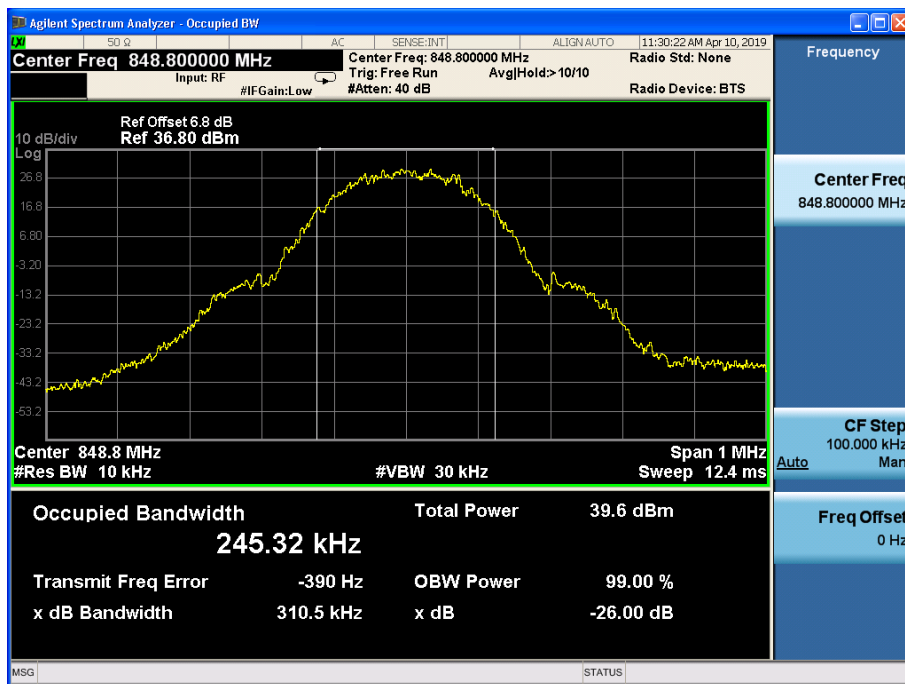
GSM/GPRS MODE:



Channel 128

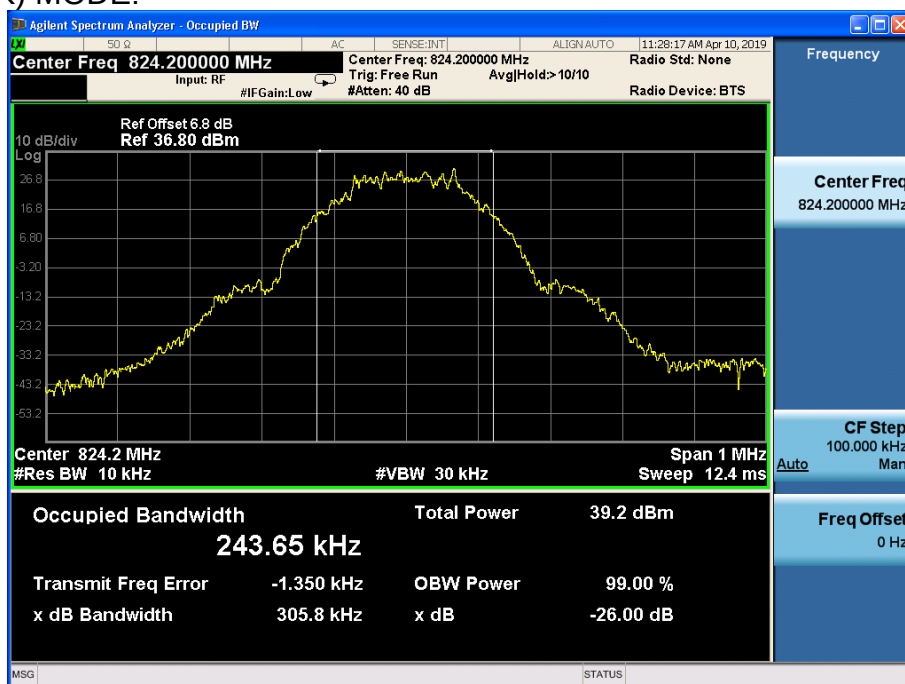


Channel 189

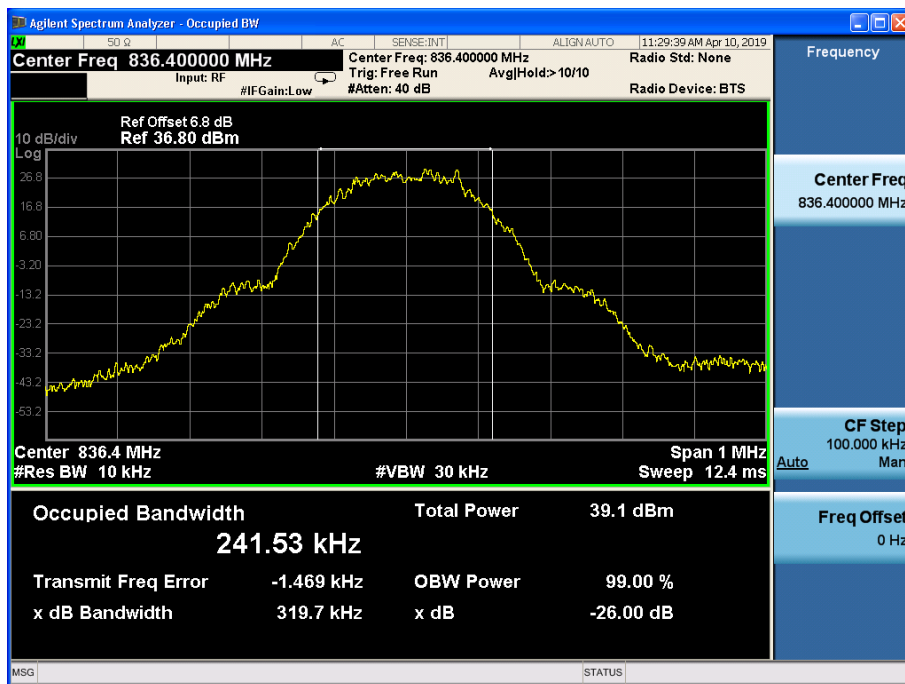


Channel 251

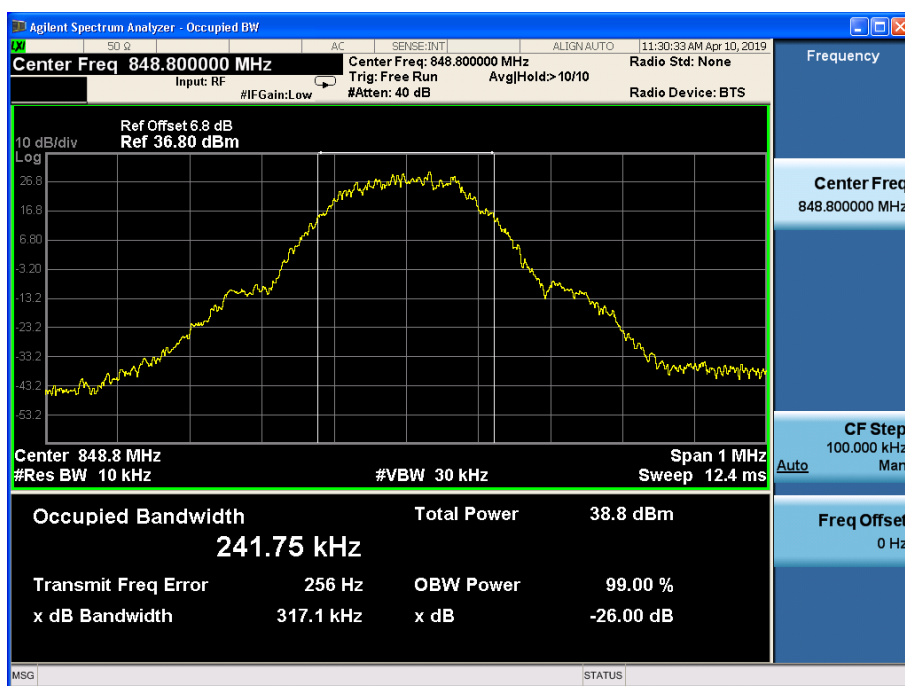
EDGE (GMSK) MODE:



Channel 128

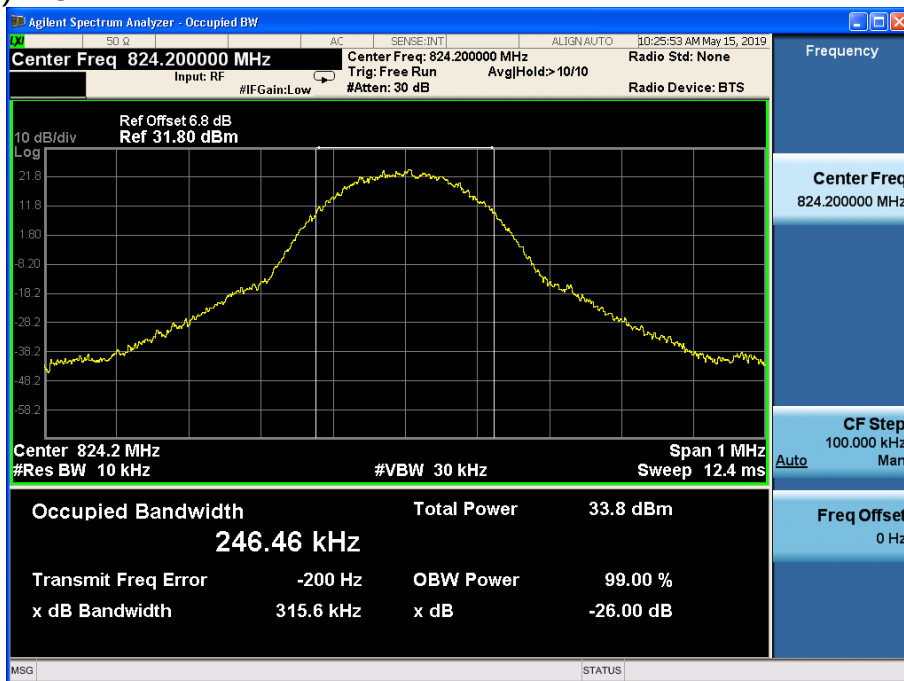


Channel 189

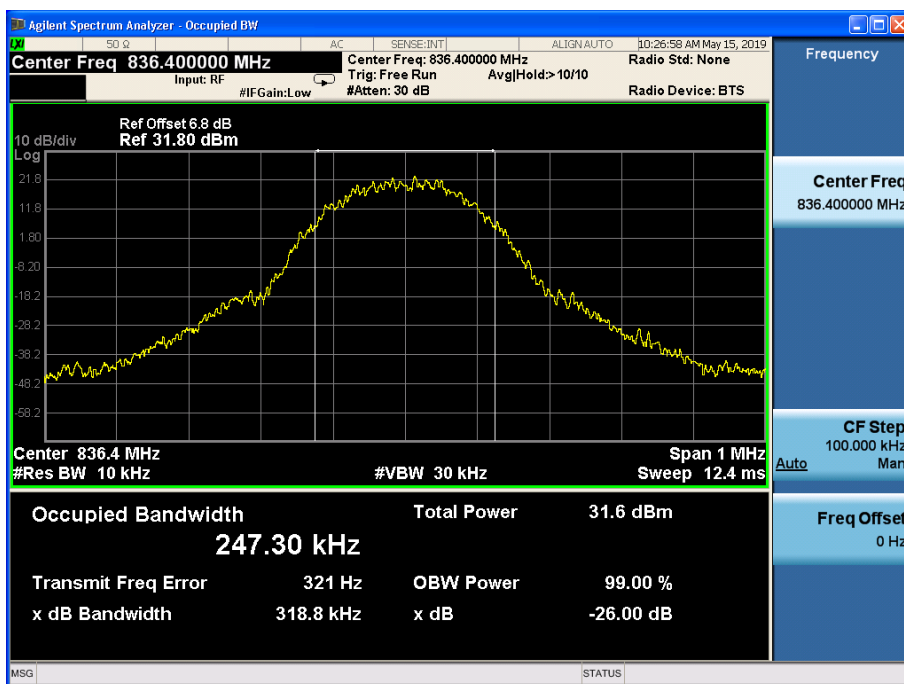


Channel 251

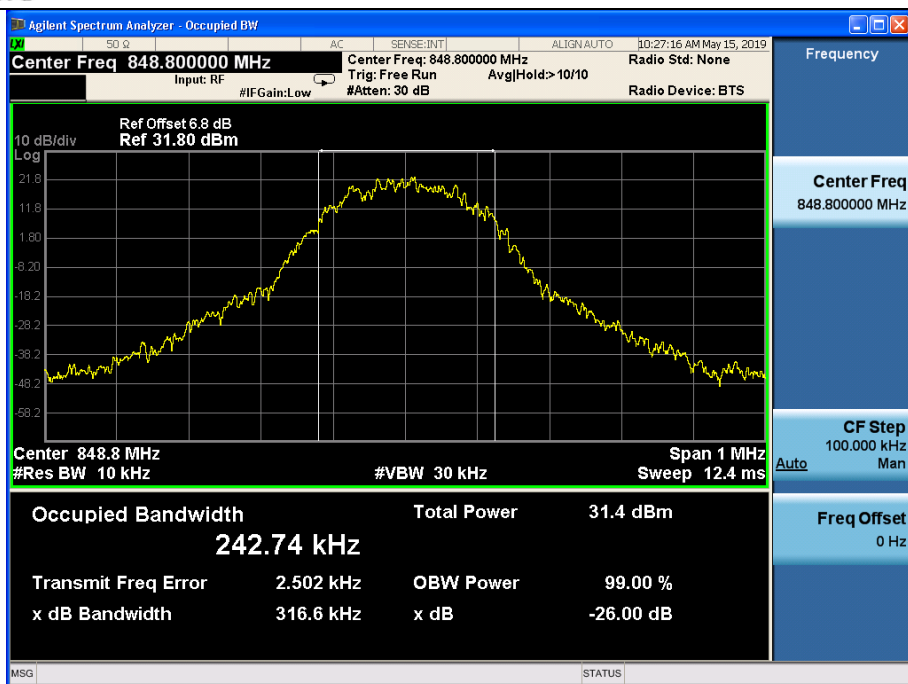
EDGE (8PSK) MODE:



Channel 128



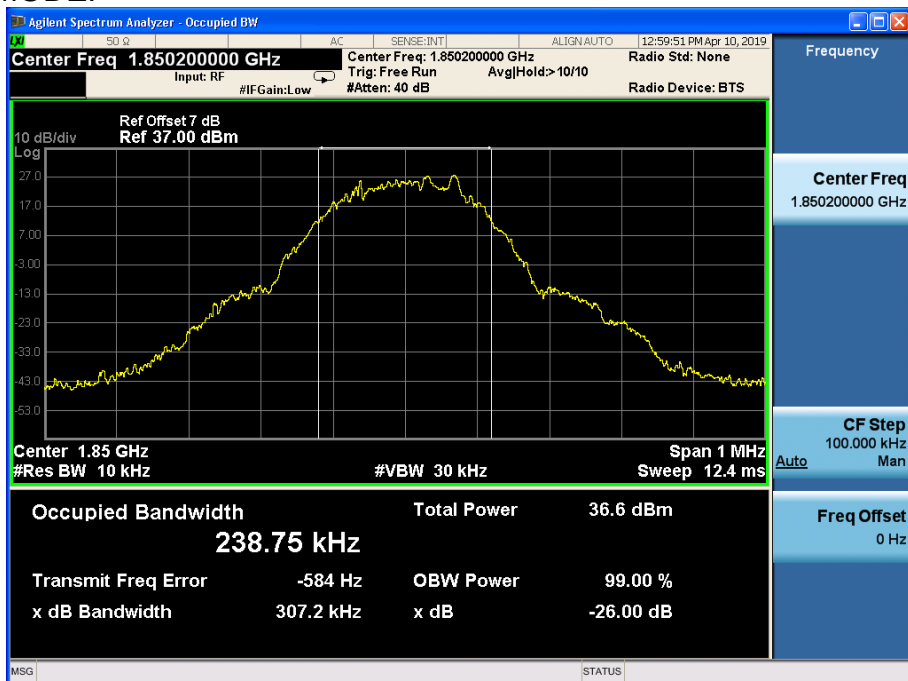
Channel 189



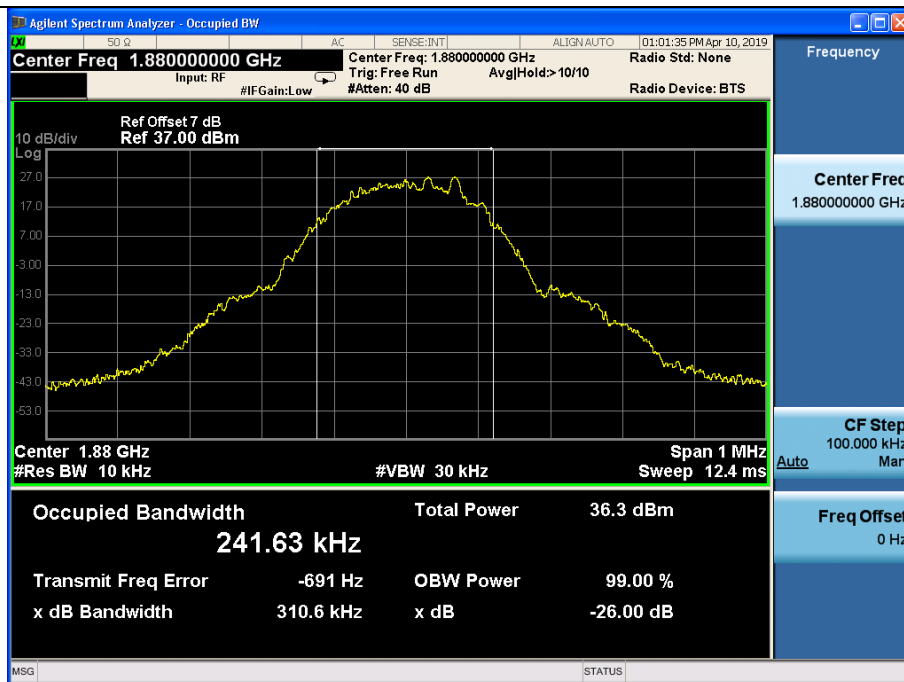
Channel 251

PCS1900

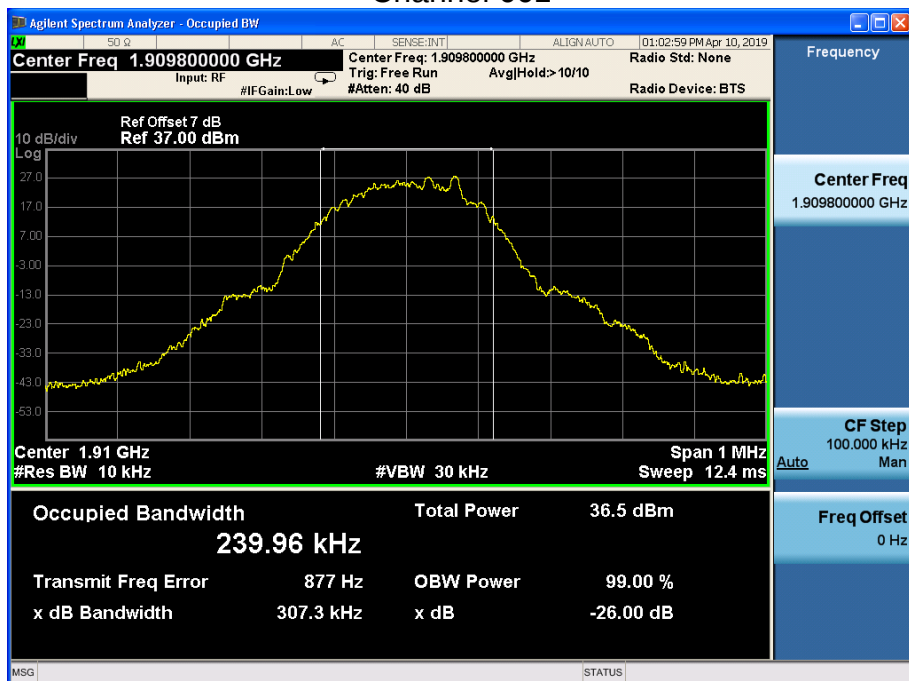
GSM/GPRS MODE:



Channel 512

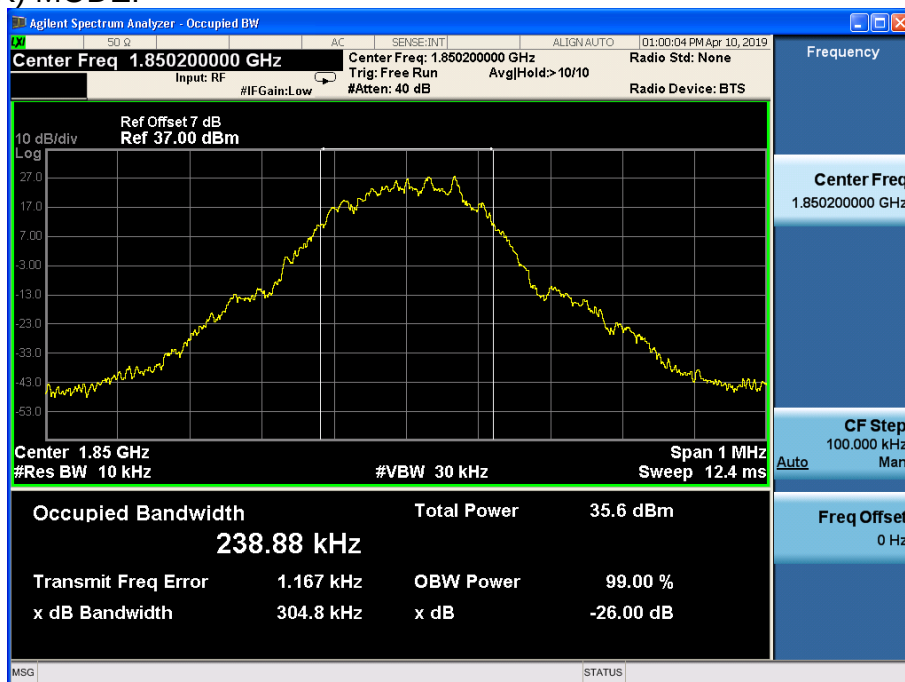


Channel 661

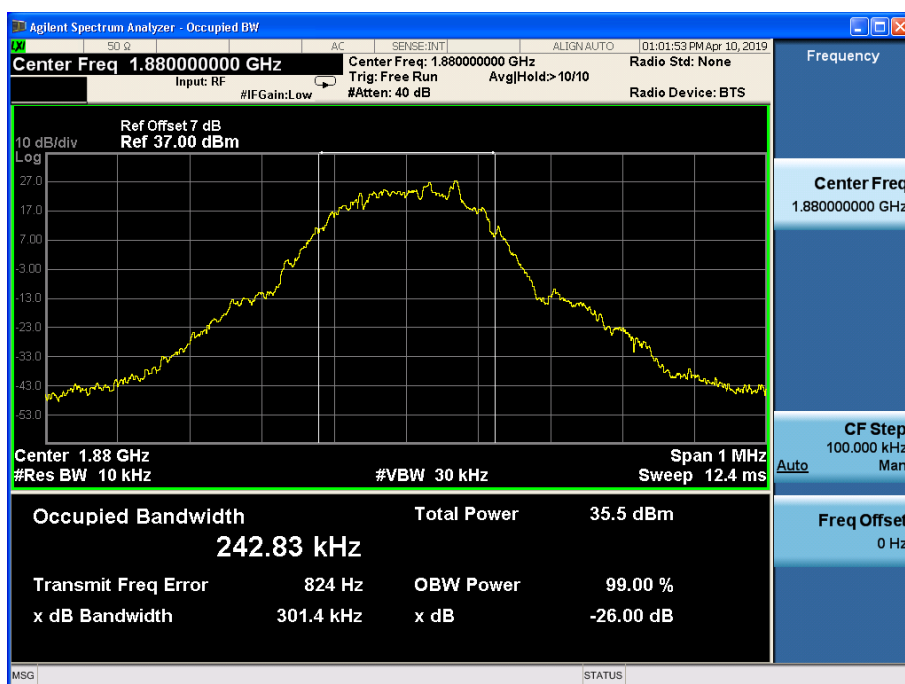


Channel 810

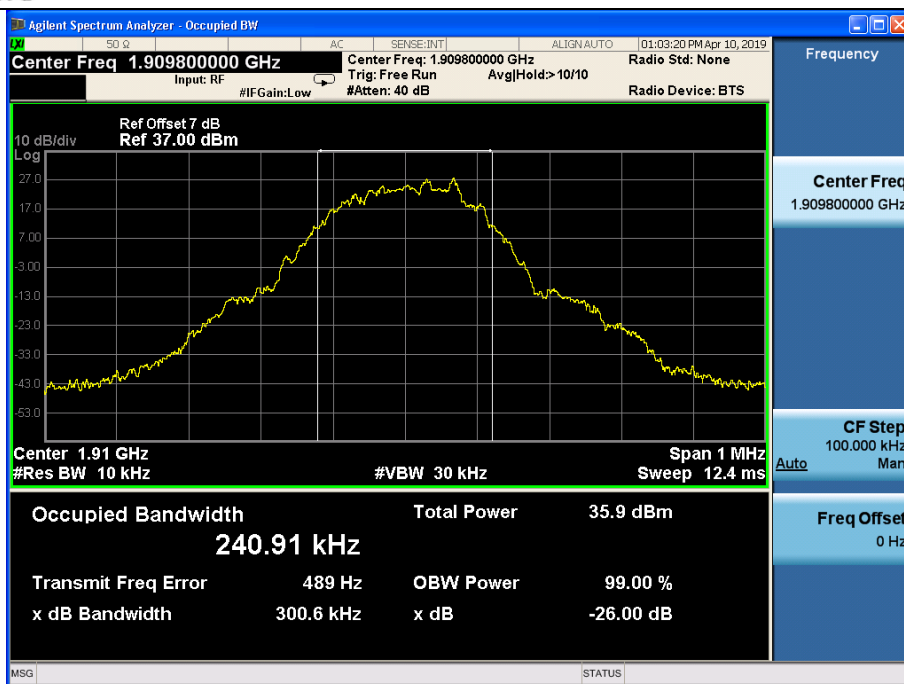
EDGE (GMSK) MODE:



Channel 512

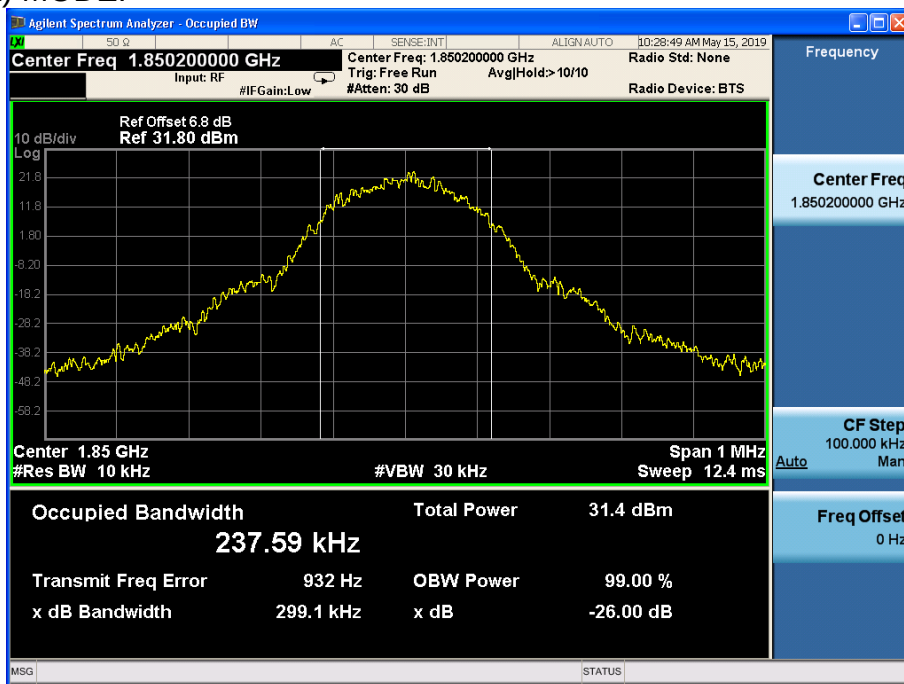


Channel 661

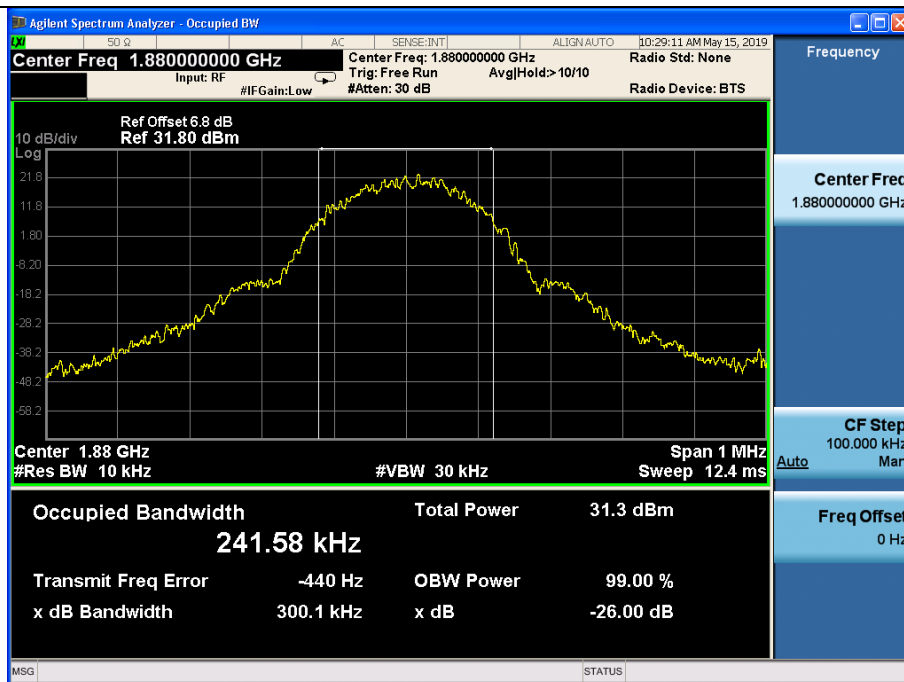


Channel 810

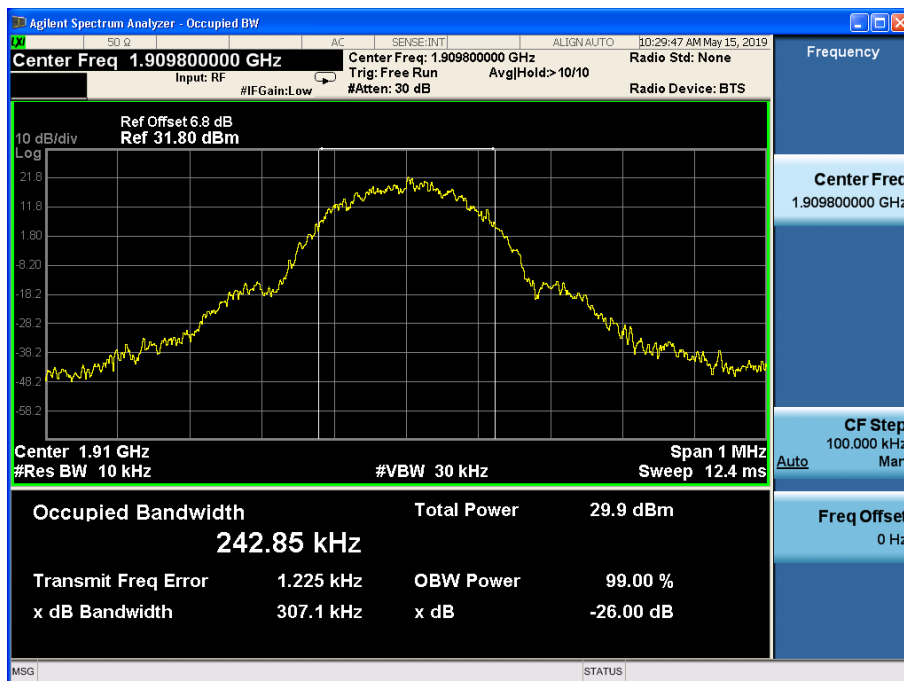
EDGE (8PSK) MODE:



Channel 512



Channel 661



Channel 810

Emission Bandwidth-FCC Part 22.917(b)/Part 24.238(b)

GSM850

GSM/GPRS MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power (kHz)
824.2	128	319.5
836.4	189	316.0
848.8	251	310.5

EDGE (GMSK) MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power (kHz)
824.2	128	305.8
836.4	189	319.7
848.8	251	317.1

EDGE (8PSK) MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power (kHz)
824.2	128	315.6
836.4	189	318.8
848.8	251	316.6

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GSM/GPRS MODE:

Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power (kHz)
1850.2	512	307.2
1880.0	661	310.6
1909.8	810	307.3

EDGE (GMSK) MODE:

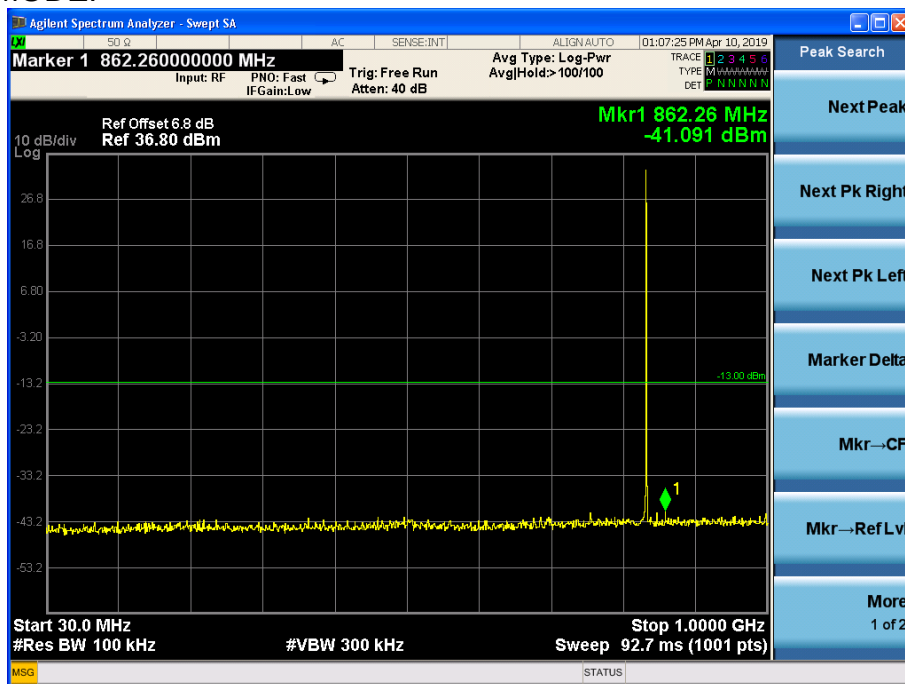
Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power (kHz)
1850.2	512	304.8
1880.0	661	301.4
1909.8	810	300.6

EDGE (8PSK) MODE:

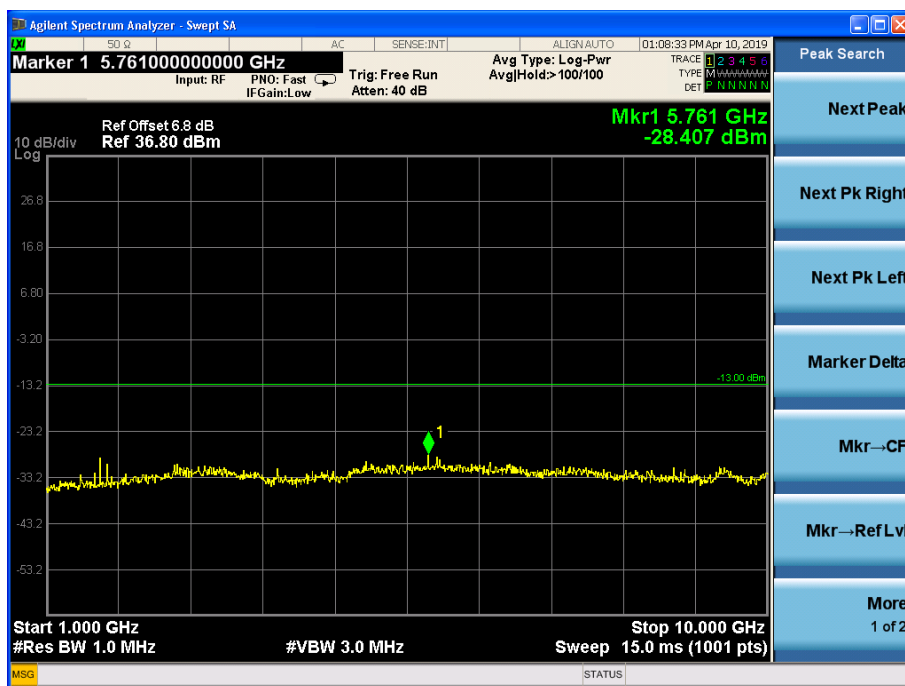
Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power (kHz)
1850.2	512	299.1
1880.0	661	300.1
1909.8	810	307.1

Spurious Emissions at antenna terminal- FCC Part 2.1051/ 22.917(a) /Part 24.238(a) GSM850

GSM/GPRS MODE:



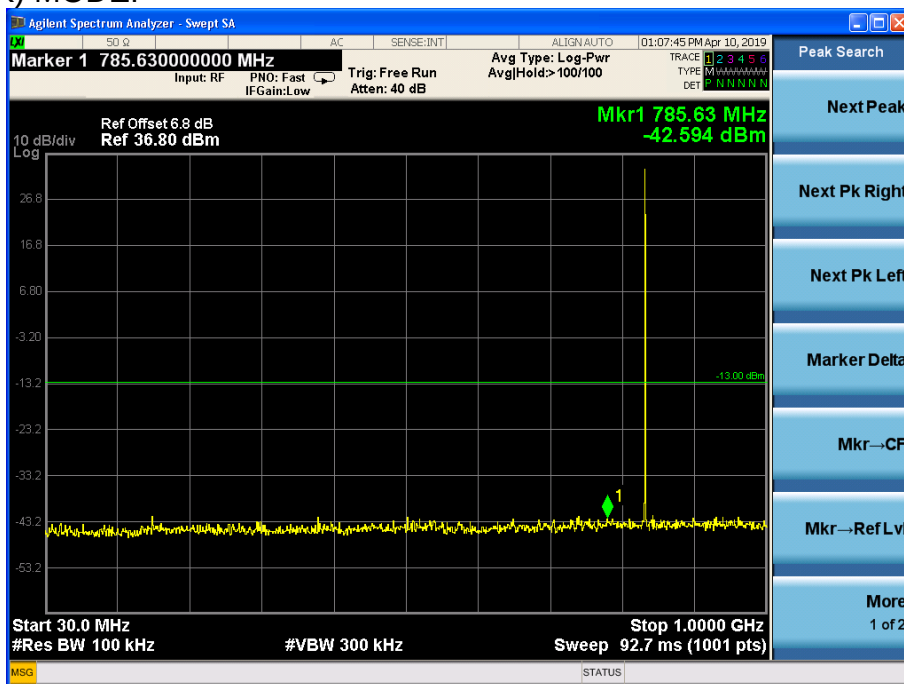
Channel 189, 30MHz~1GHz



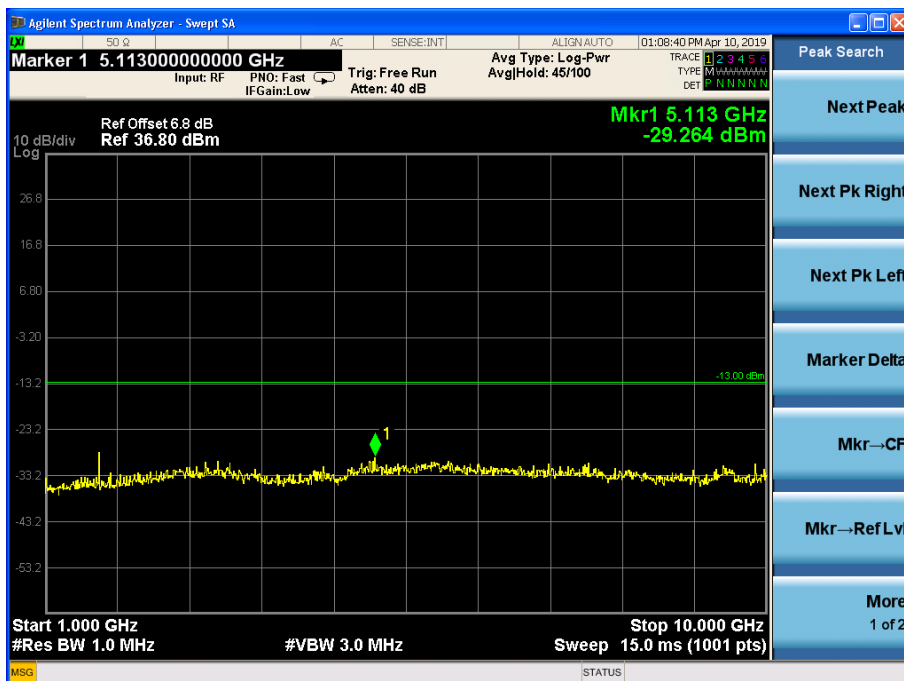
Channel 189, 1GHz~10GHz

Note: The signal beyond the limit is the signal transmitted by EUT.

EDGE (GMSK) MODE:



Channel 189, 30MHz~1GHz

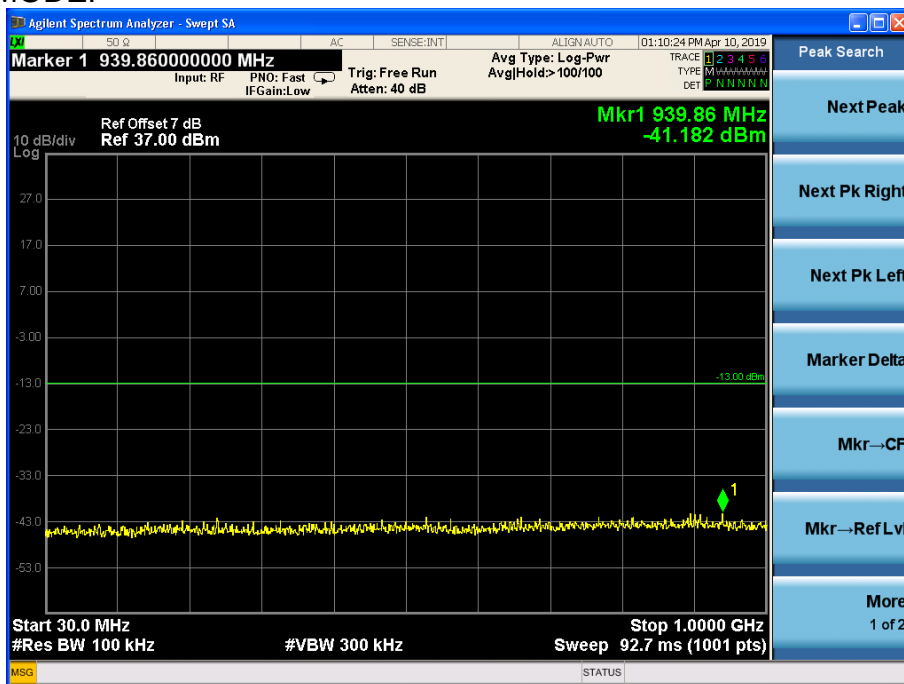


Channel 189, 1GHz~10GHz

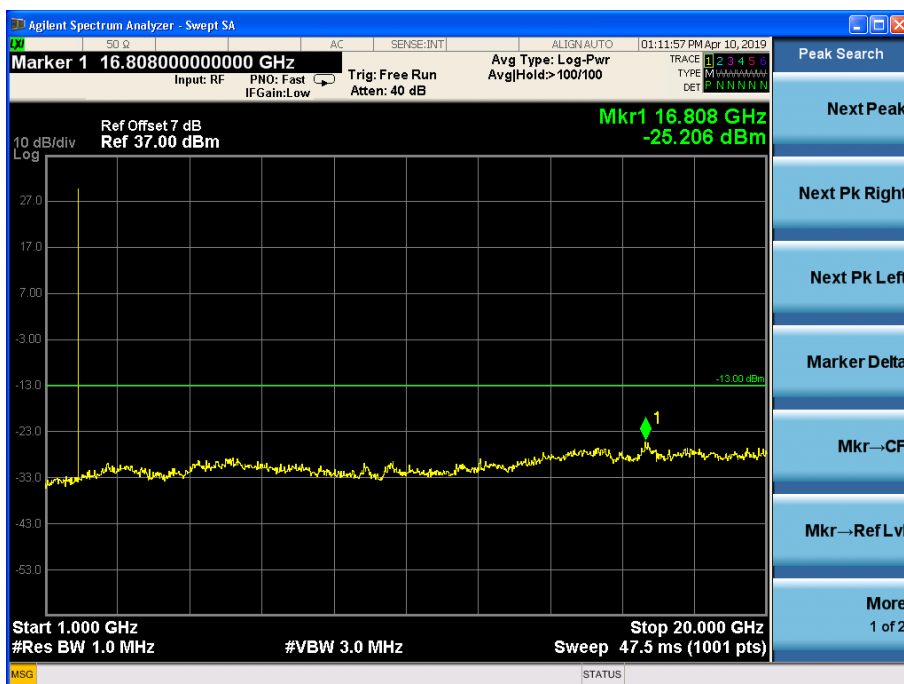
Note: The signal beyond the limit is the signal transmitted by EUT.

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GSM/GPRS MODE:



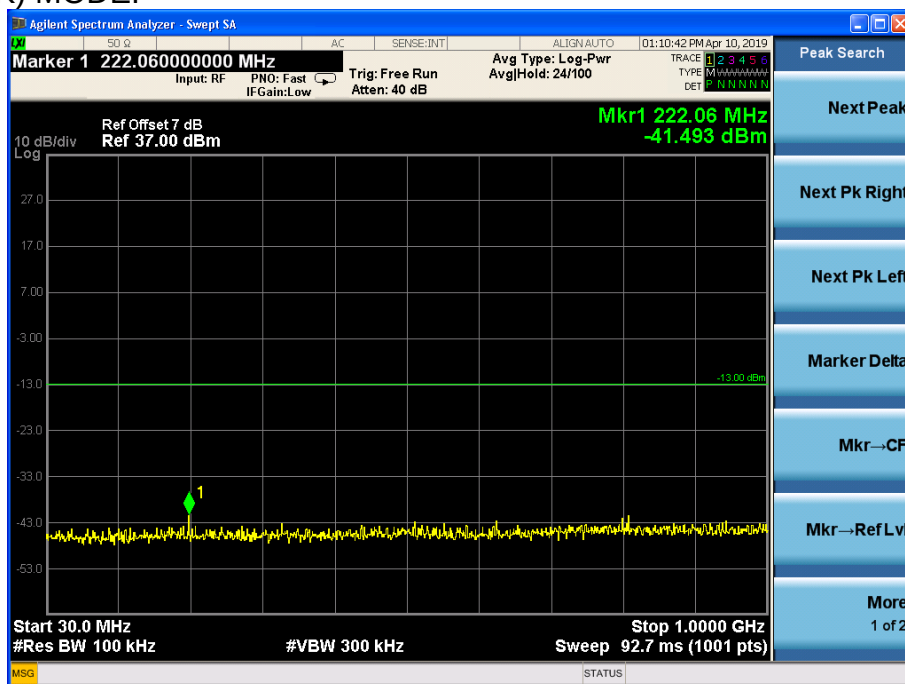
Channel 661, 30MHz~1GHz



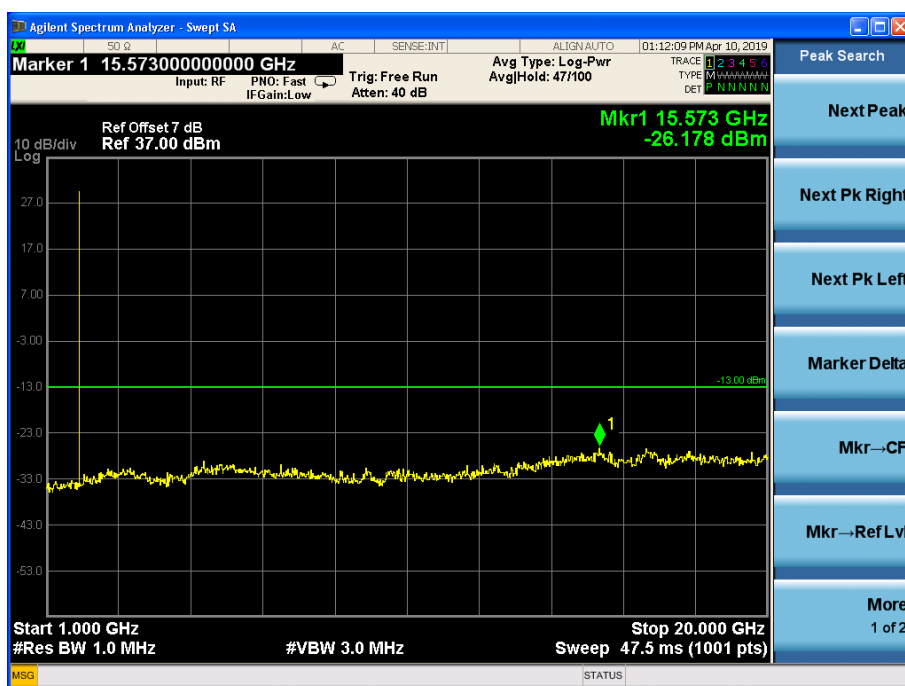
Channel 661, 1GHz~20GHz

Note: The signal beyond the limit is the signal transmitted by EUT.

EDGE (GMSK) MODE:



Channel 661, 30MHz~1850MHz



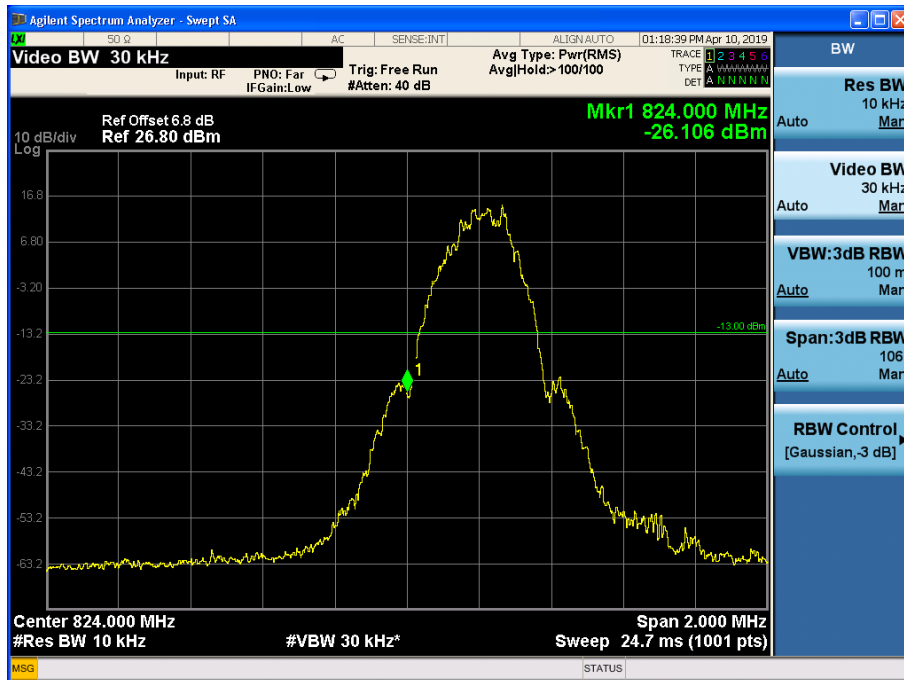
Channel 661, 1GHz~20GHz

Note: The signal beyond the limit is the signal transmitted by EUT.

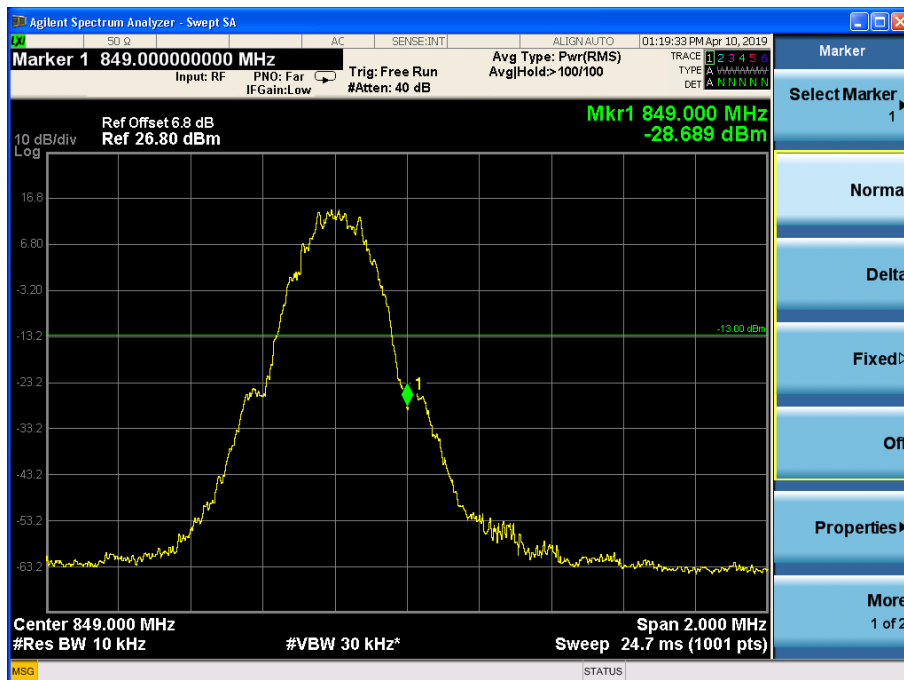
Band Edges Compliance- FCC Part 2.1051/ 22.917(a) /Part 24.238(a)

GSM850

GSM/GPRS MODE:

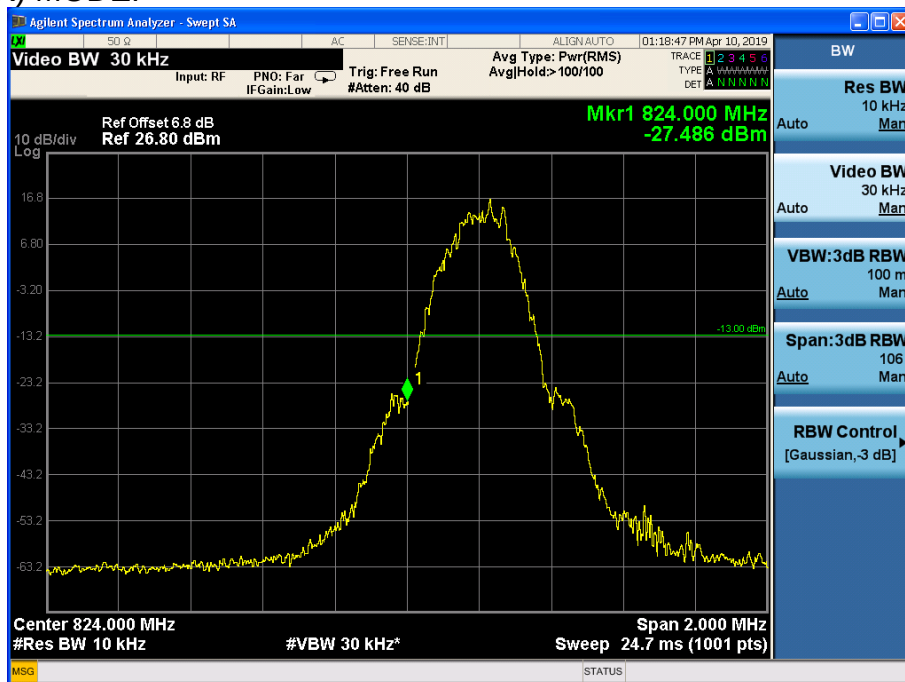


Channel 128

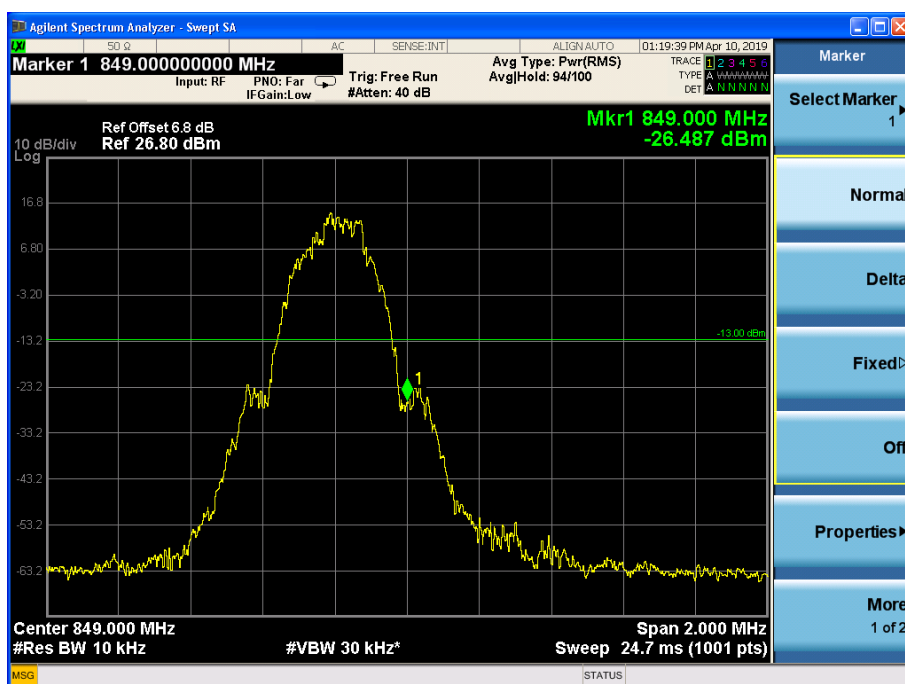


Channel 251

EDGE (GMSK) MODE:



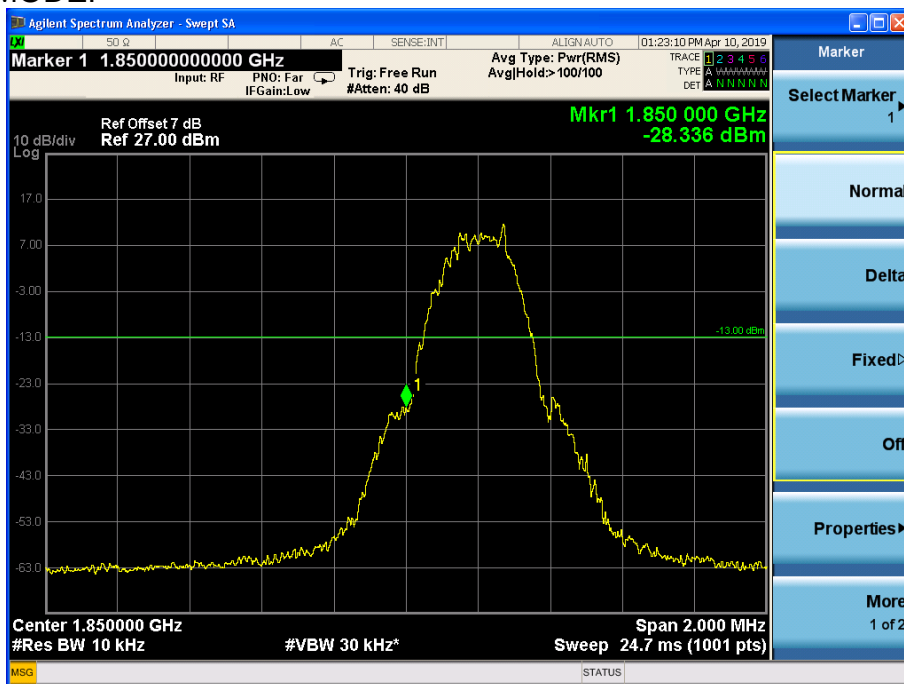
Channel 128



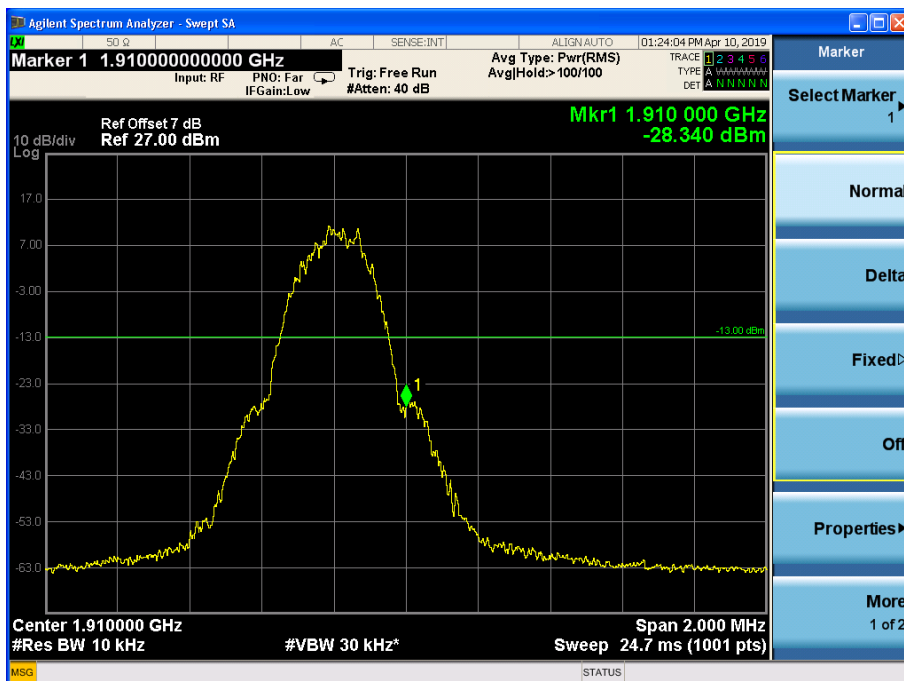
Channel 251

PCS1900

GSM/GPRS MODE:

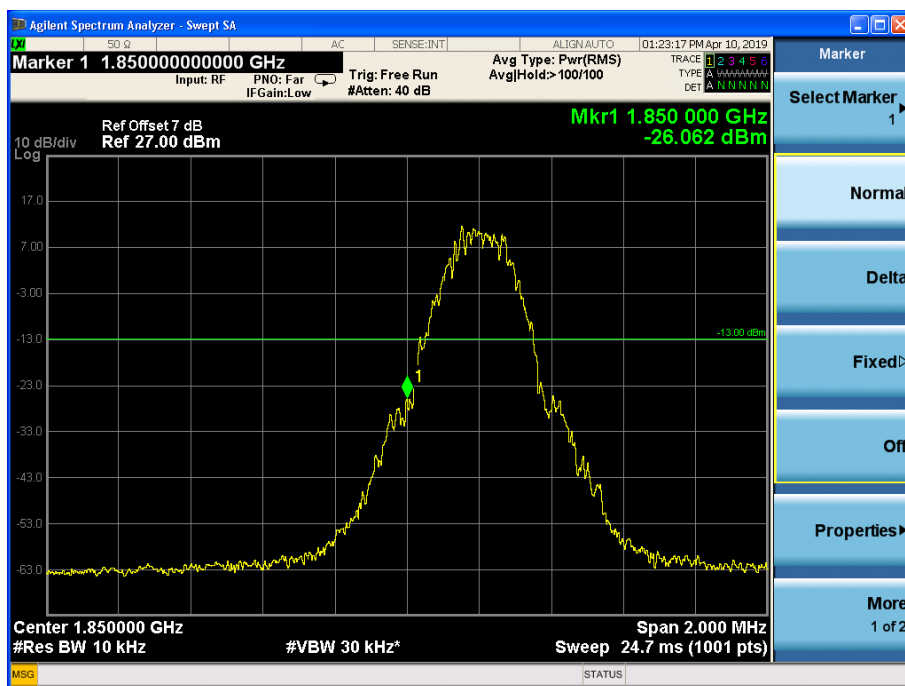


Channel 512

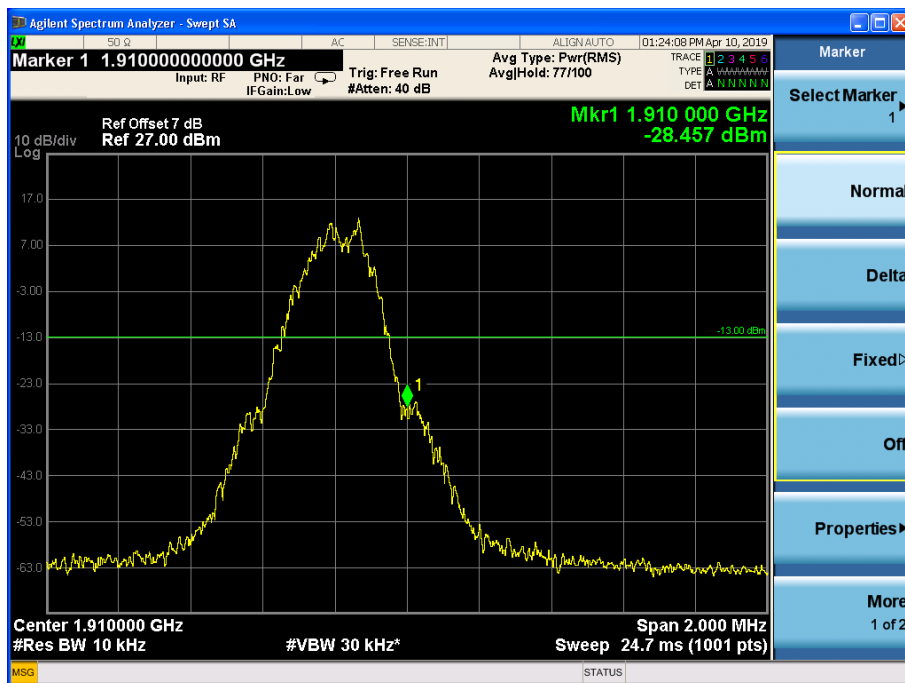


Channel 810

EDGE (GMSK) MODE:



Channel 512



Channel 810

Frequency Stability- FCC Part 2.1055/22.355 /Part 24.235

GSM850

GSM/GPRS MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 128	Channel 189	Channel 251
0	0.024	-0.014	0.023
+10	0.001	0.016	0.002
+20	0.016	0.003	0.010
+30	-0.022	-0.011	-0.003
+40	0.004	0.001	-0.004
+50	-0.023	-0.009	0.000
+55	-0.007	0.009	0.005
Voltage	Test Result (ppm)@NT		
	Channel 128	Channel 189	Channel 251
LV	0.001	0.007	0.007
HV	0.015	0.007	0.006

EDGE (GMSK) MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 128	Channel 189	Channel 251
0	0.007	-0.002	-0.006
+10	0.000	0.008	-0.005
+20	0.007	-0.003	0.011
+30	-0.017	0.000	-0.012
+40	-0.015	-0.002	-0.007
+50	-0.002	0.012	0.007
+55	0.018	-0.008	0.010
Voltage	Test Result (ppm)@NT		
	Channel 128	Channel 189	Channel 251
LV	0.021	0.011	-0.014
HV	-0.012	-0.003	0.011

EDGE (8PSK) MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 128	Channel 189	Channel 251
0	0.007	-0.012	-0.006
+10	0.000	0.008	-0.005
+20	0.007	-0.003	0.011
+30	-0.017	0.000	-0.012
+40	-0.015	-0.002	-0.007
+50	-0.002	0.012	0.007
+55	0.018	-0.005	0.010
Voltage	Test Result (ppm)@NT		
	Channel 128	Channel 189	Channel 251
LV	0.021	0.011	-0.014
HV	-0.012	-0.004	0.008

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GSM/GPRS MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 512	Channel 661	Channel 810
0	0.002	-0.001	-0.012
+10	-0.005	0.012	0.015
+20	0.008	0.006	0.004
+30	0.003	0.004	0.012
+40	0.014	-0.001	-0.010
+50	-0.006	0.009	-0.002
+55	0.015	-0.013	0.012
Voltage	Test Result (ppm)@NT		
	Channel 512	Channel 661	Channel 810
LV	0.001	-0.002	0.006
HV	0.008	-0.008	0.011

EDGE (GMSK) MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 512	Channel 661	Channel 810
0	0.019	-0.006	0.000
+10	0.000	-0.006	0.003
+20	0.013	-0.014	0.004
+30	-0.010	-0.002	0.013
+40	0.002	0.009	0.006
+50	0.013	0.011	-0.012
+55	-0.012	0.000	-0.006
Voltage	Test Result (ppm)@NT		
	Channel 512	Channel 661	Channel 810
LV	0.015	0.001	-0.010
HV	0.010	-0.014	-0.001

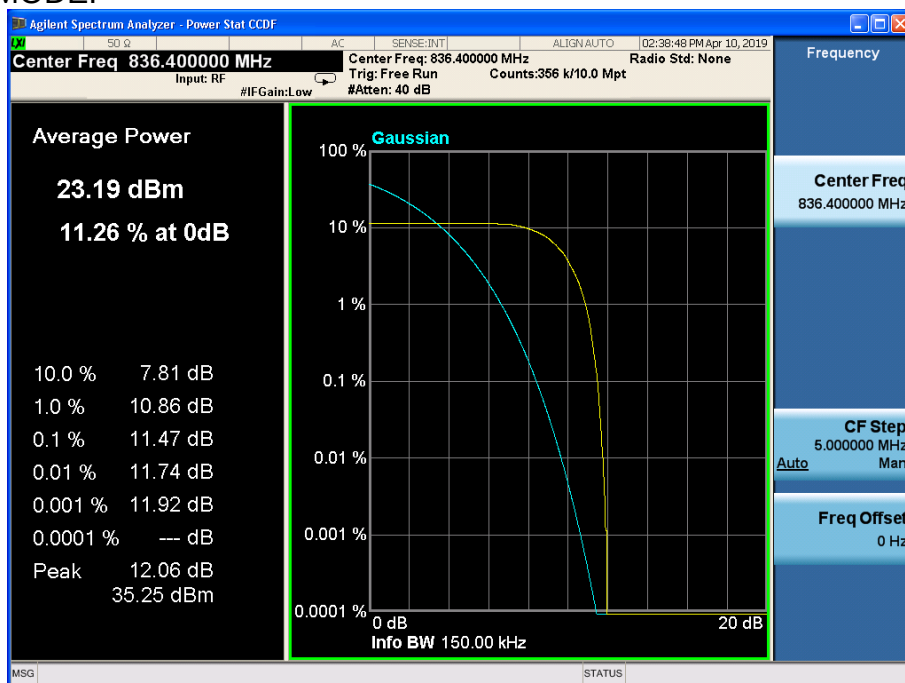
EDGE (8PSK) MODE:

Temperature(°C)	Test Result (ppm)@NV		
	Channel 512	Channel 661	Channel 810
0	0.019	-0.006	0.000
+10	0.000	-0.006	0.003
+20	0.010	-0.014	0.004
+30	-0.010	-0.002	0.012
+40	0.002	0.009	0.006
+50	0.005	0.004	-0.012
+55	-0.012	0.000	-0.006
Voltage	Test Result (ppm)@NT		
	Channel 512	Channel 661	Channel 810
LV	0.012	0.001	-0.008
HV	0.010	-0.011	-0.001

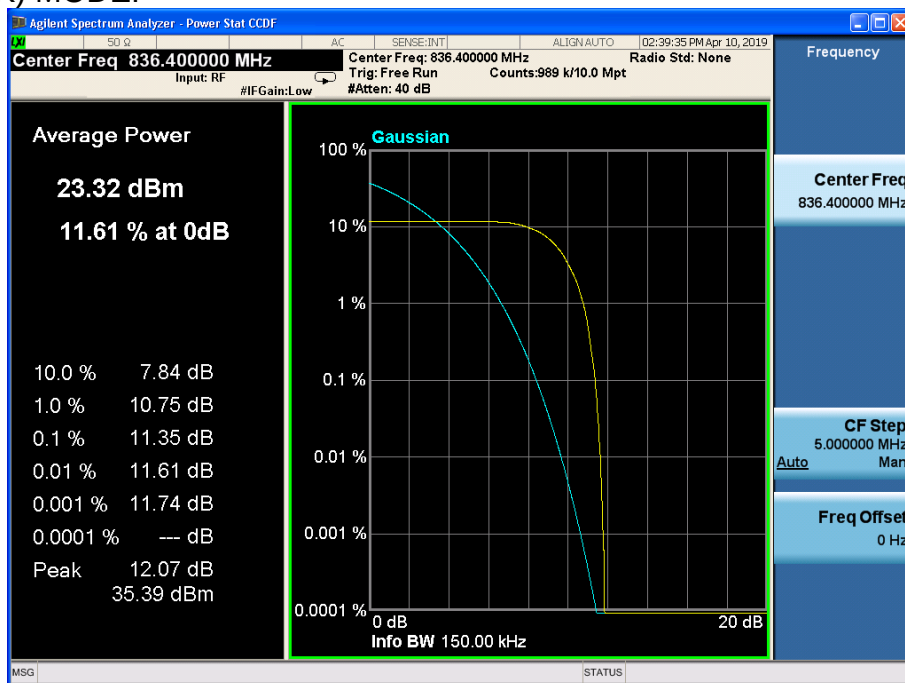
Peak-Average Ratio -FCC Part 24.232(d)

GSM850

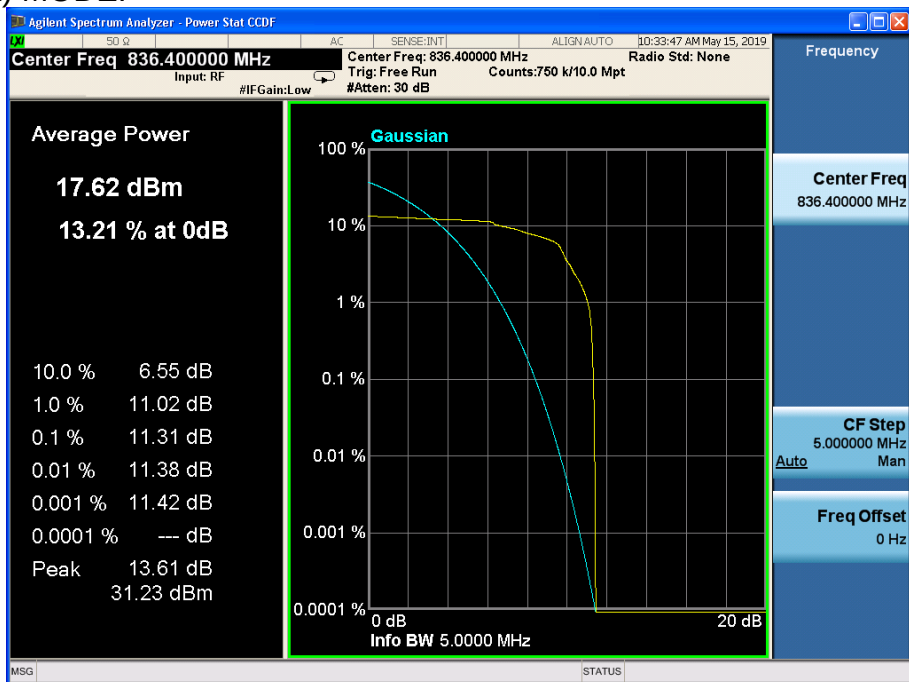
GSM/GPRS MODE:



EDGE (GMSK) MODE:

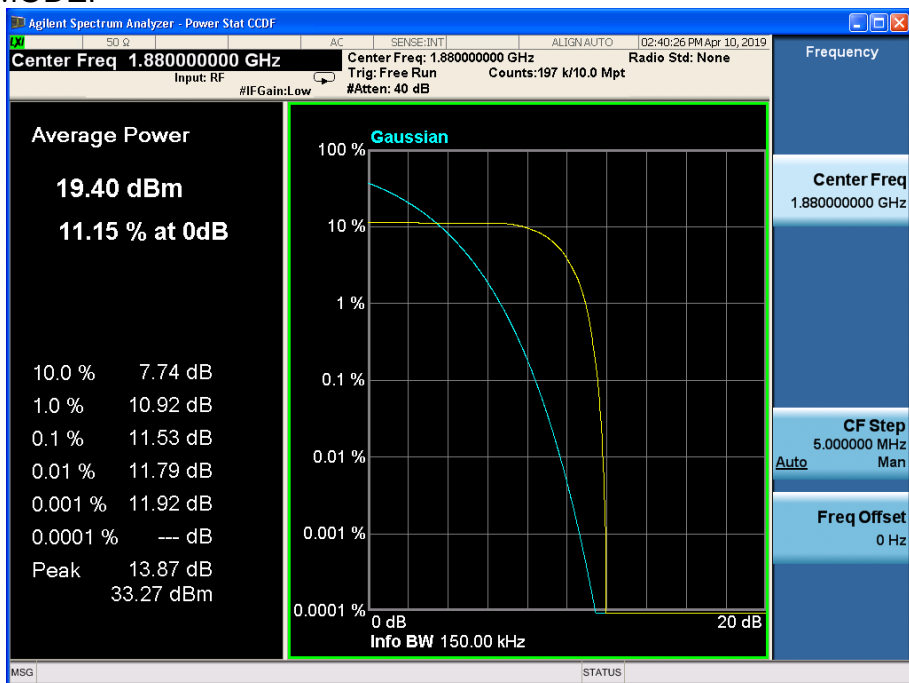


EDGE (8PSK) MODE:

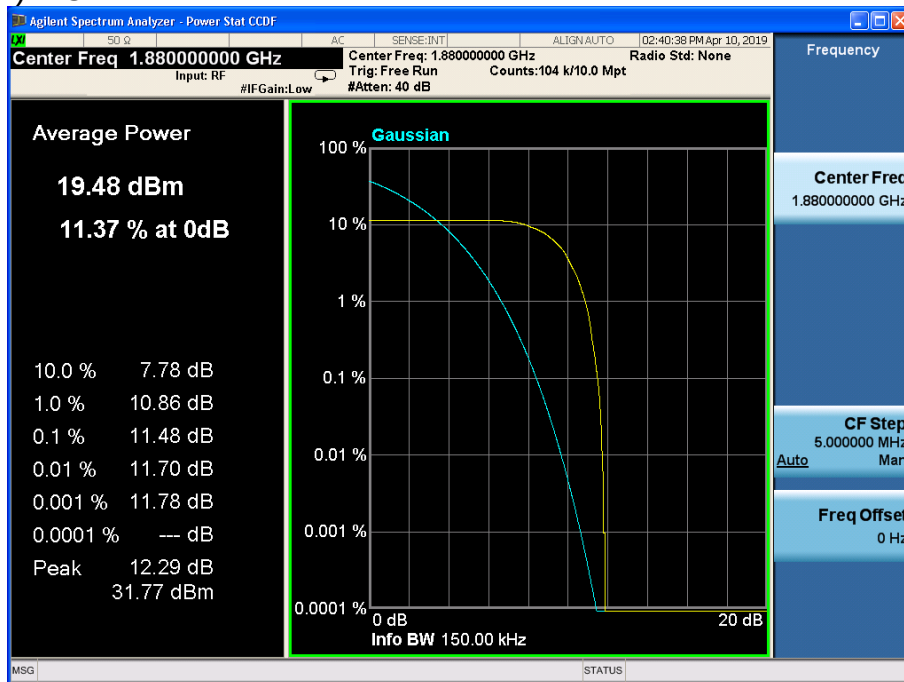


PCS1900

GSM/GPRS MODE:



EDGE (GMSK) MODE:



EDGE (8PSK) MODE:

