

Appendix A. Test Result of RF Output Power

GSM 850 Maximum Peak Power (dBm)						
Mode		128 (824.2 MHz)	190 (836.6 MHz)	251 (848.8 MHz)	ERP	ERP Limit
		(dBm)	(dBm)	(dBm)	(dBm)	(W)
Voice		33.41	33.38	33.35	33.35	2.163
GPRS	1 TX slot	33.35	33.29	33.24	33.29	2.133
	2 TX slot	33.28	33.25	33.19		
EGPRS	1 TX slot	27.38	27.3	27.26	27.32	0.54
	2 TX slot	27.34	27.26	27.21		

Note:

1. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)
2. EIRP (W) = $(10^{(\text{Power(dBm)}/10)}) \times 10^{-3}$
3. ERP (dBm) = EIRP (dBm) - 2.15

GSM 1900 Maximum Peak Power (dBm)						
Mode		512 (1850.2 MHz)	661 (1880.0 MHz)	810 (1909.8 MHz)	EIRP	EIRP Limit
		(dBm)	(dBm)	(dBm)	(dBm)	(W)
Voice		30.12	30.19	30.21	33.2	2.089
GPRS	1 TX slot	30.08	30.13	30.17	33.16	2.07
	2 TX slot	29.87	29.94	29.95		
EGPRS	1 TX slot	25.18	25.24	25.27	28.26	0.67
	2 TX slot	24.96	25.01	25.09		

Note:

1. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

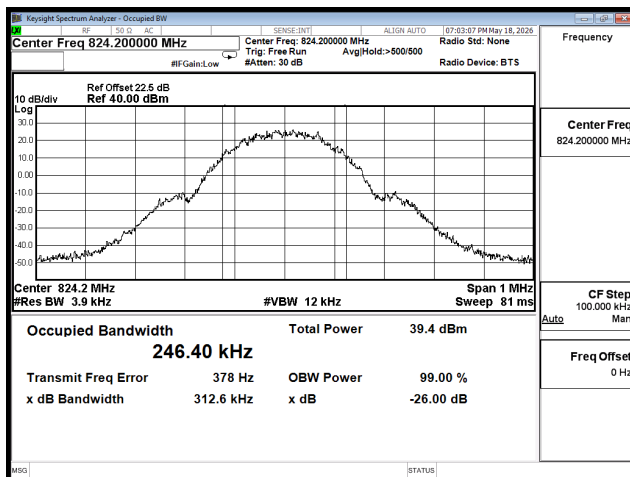
2. EIRP (W) = $(10^{(\text{Power(dBm)}/10)}) \cdot 10^{-3}$

Appendix B. Test Result of Occupied Bandwidth

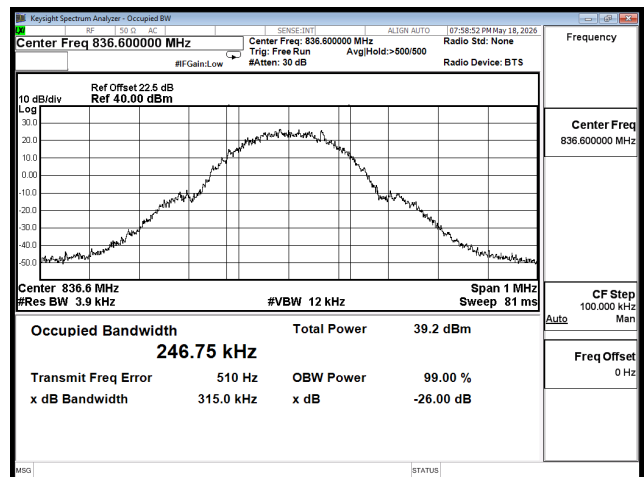
GSM 850					
Modulation	Channel	Frequency (MHz)	Measure Level (kHz)		Limit (MHz)
			99% OBW	26dB BW	
Voice	128	824.2	246.40	312.6	N/A
	190	836.6	246.75	315.0	N/A
	251	848.8	245.19	312.6	N/A
EGPRS (1TX slot)	128	824.2	244.81	314.9	N/A
	190	836.6	246.48	309.6	N/A
	251	848.8	245.97	315.7	N/A

GSM 1900					
Modulation	Channel	Frequency (MHz)	Measure Level (kHz)		Limit (MHz)
			99% OBW	26dB BW	
Voice	512	1850.2	245.37	317.0	N/A
	661	1880.0	247.67	313.1	N/A
	810	1909.8	246.40	315.2	N/A
EGPRS (1TX slot)	512	1850.2	246.36	319.6	N/A
	661	1880.0	245.75	315.8	N/A
	810	1909.8	247.41	312.5	N/A

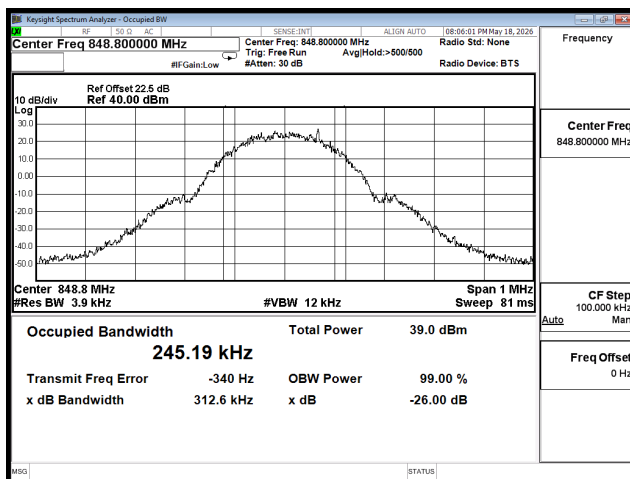
GSM 850 / Voice / 824.2 MHz



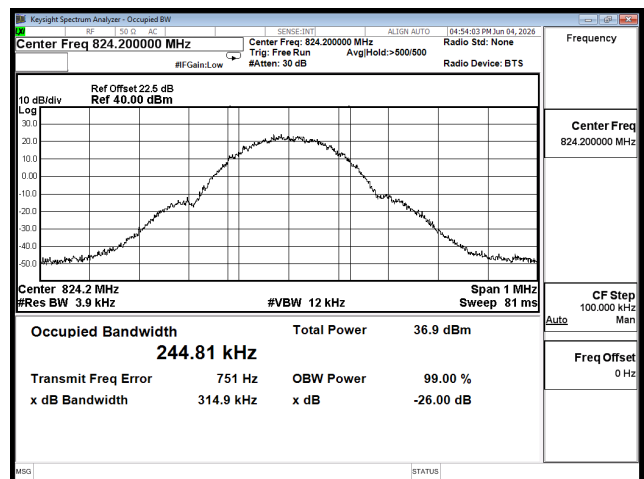
GSM 850 / Voice / 836.6 MHz



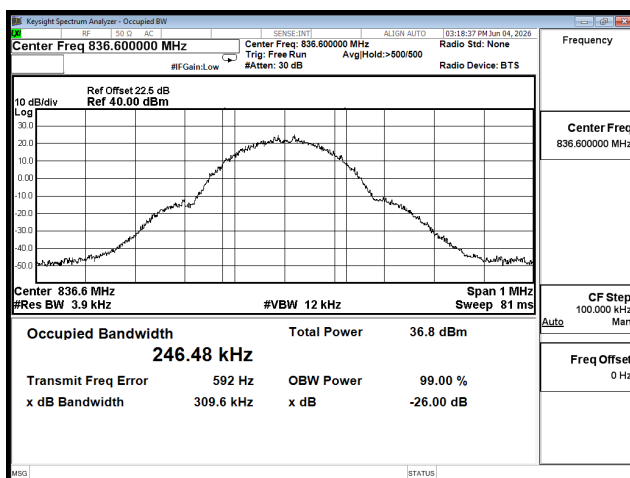
GSM 850 / Voice / 848.8 MHz



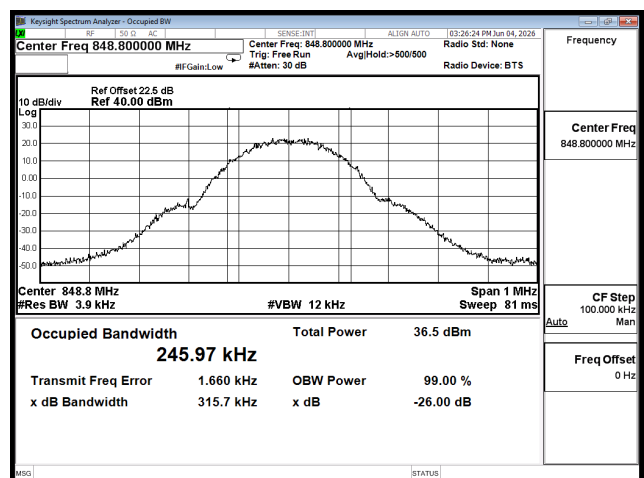
GSM 850 / EGPRS / 824.2 MHz



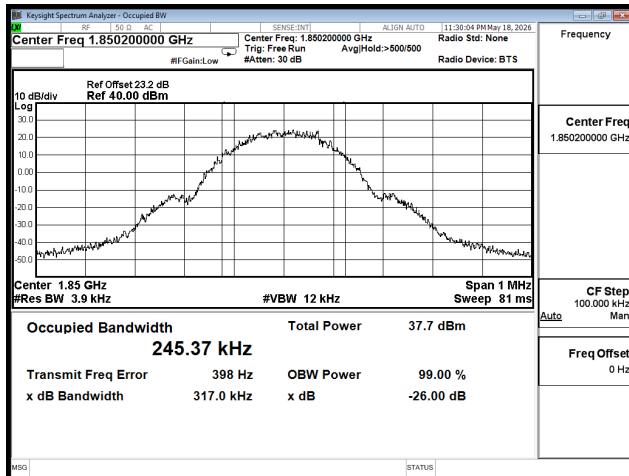
GSM 850 / EGPRS / 836.6 MHz



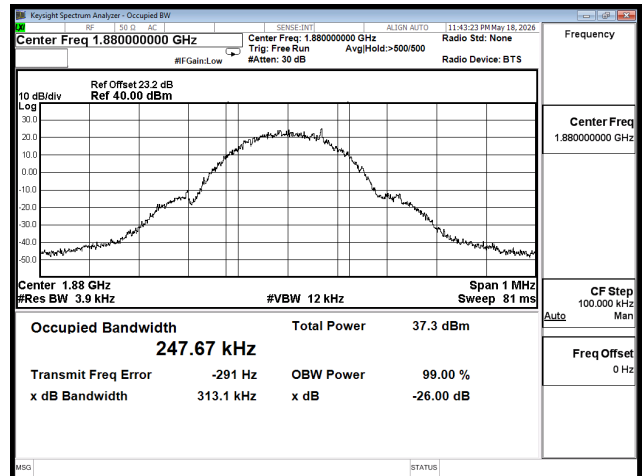
GSM 850 / EGPRS / 848.8 MHz



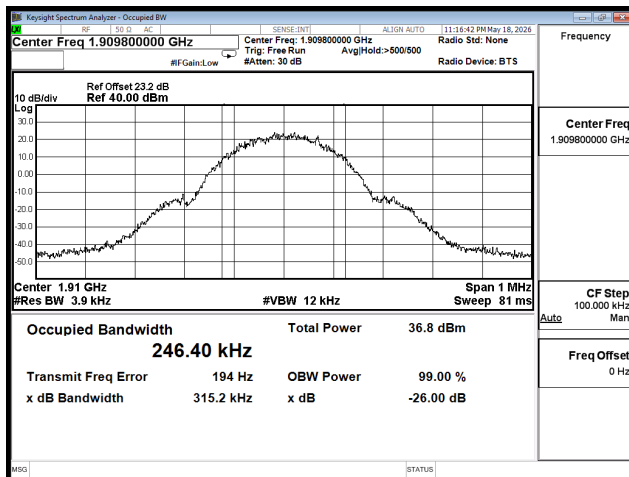
GSM 1900 / Voice / 1850.2 MHz



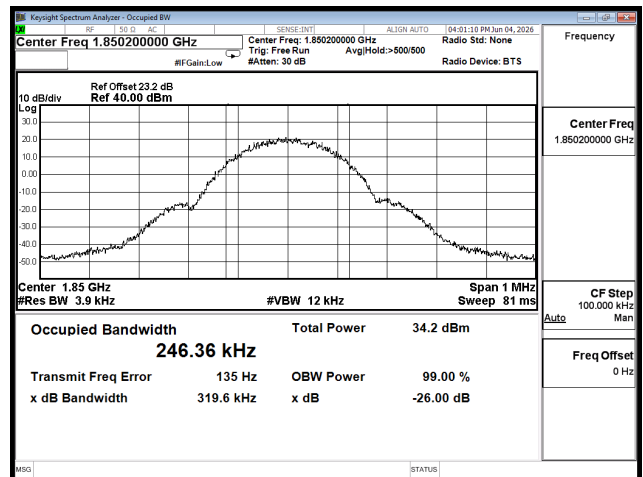
GSM 1900 / Voice / 1880.0 MHz



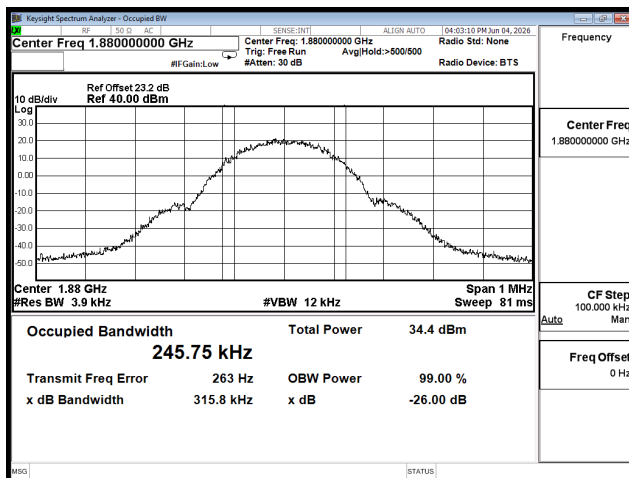
GSM 1900 / Voice / 1909.8 MHz



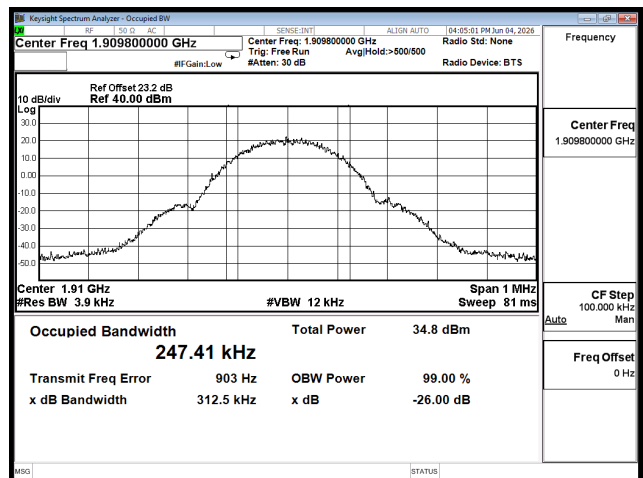
GSM 1900 / EGPRS / 1850.2 MHz



GSM 1900 / EGPRS / 1880.0 MHz

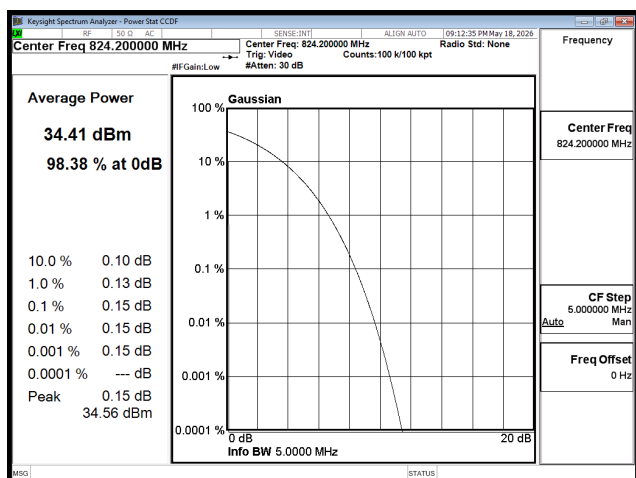


GSM 1900 / EGPRS / 1909.8 MHz

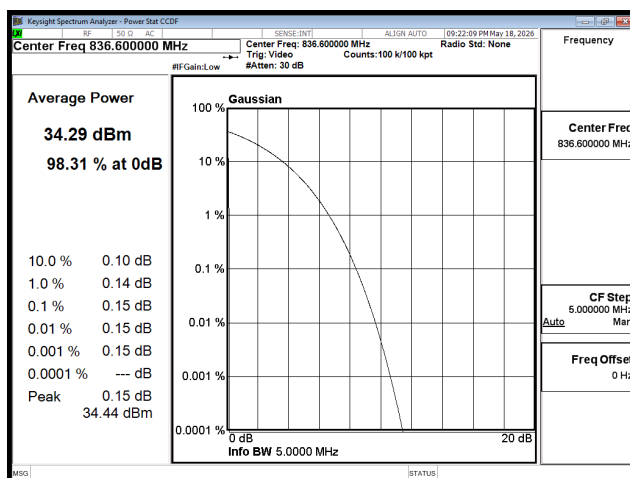


Appendix C. Test Result of Peak to Average Power Ratio

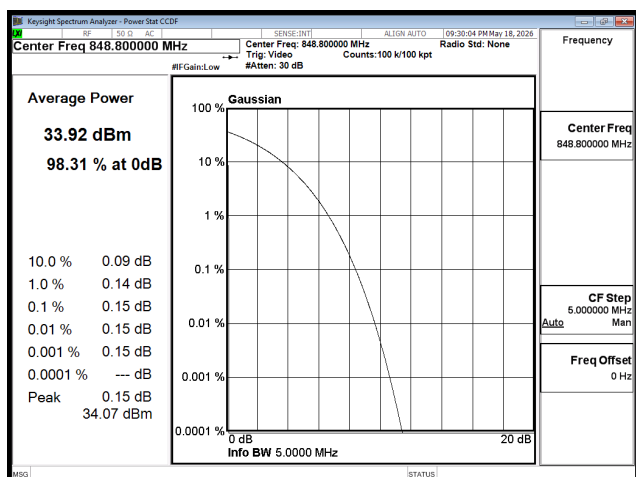
GSM 850 / Voice / 824.2 MHz



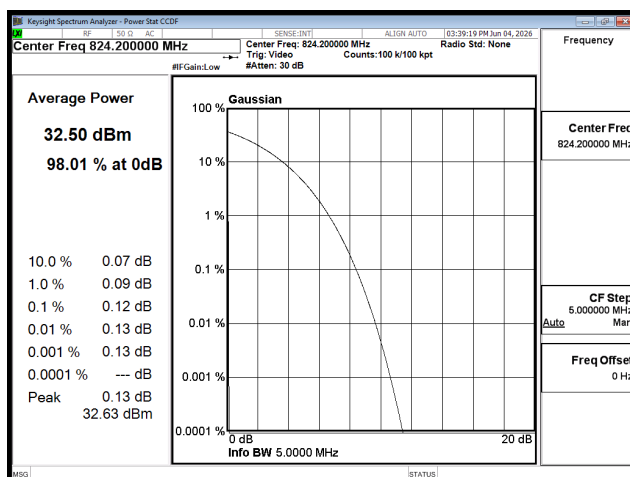
GSM 850 / Voice / 836.6 MHz



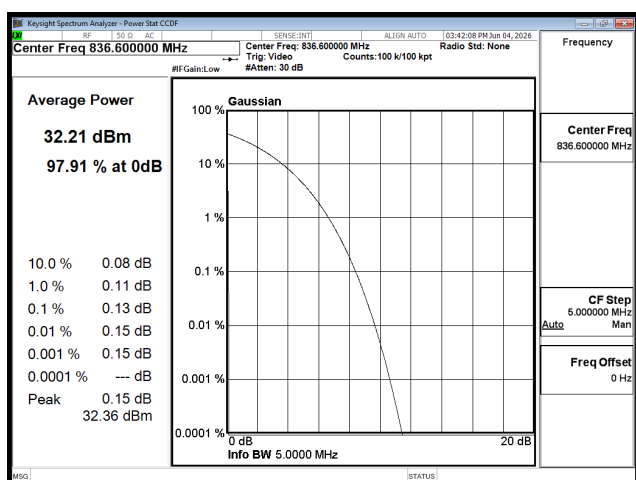
GSM 850 / Voice / 848.8 MHz



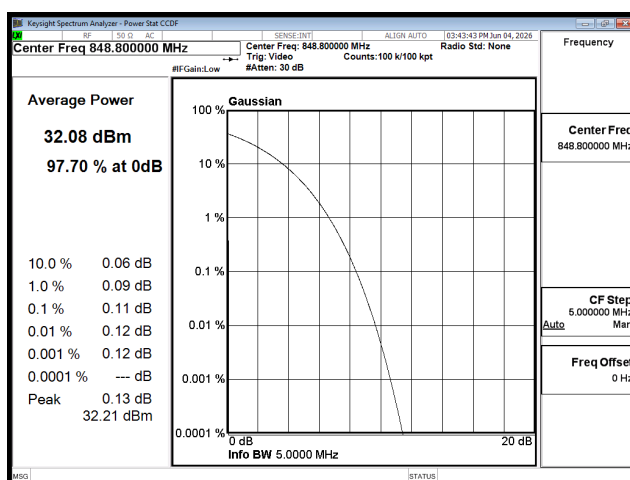
GSM 850 / EGPRS / 824.2 MHz



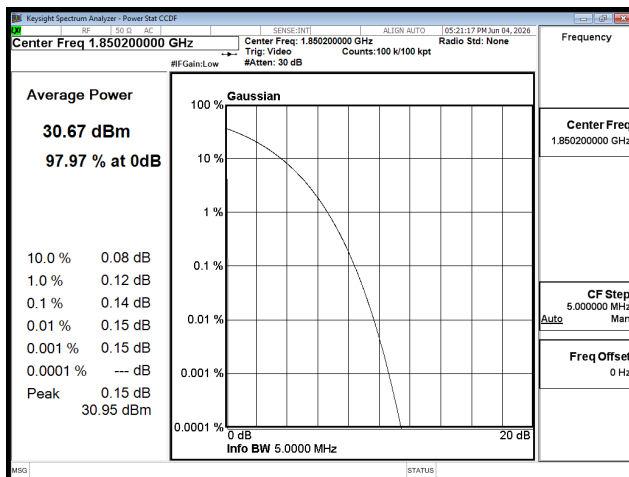
GSM 850 / EGPRS / 836.6 MHz



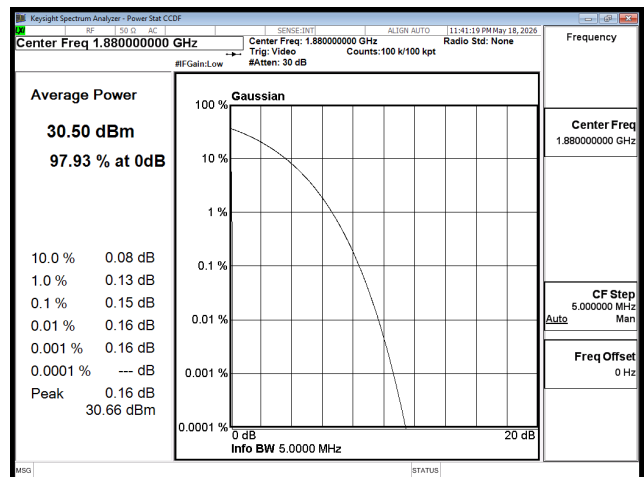
GSM 850 / EGPRS / 848.8 MHz



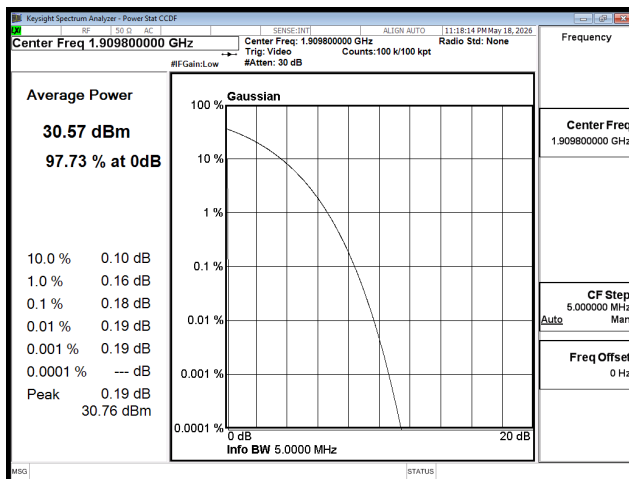
GSM 1900 / Voice / 1850.2 MHz



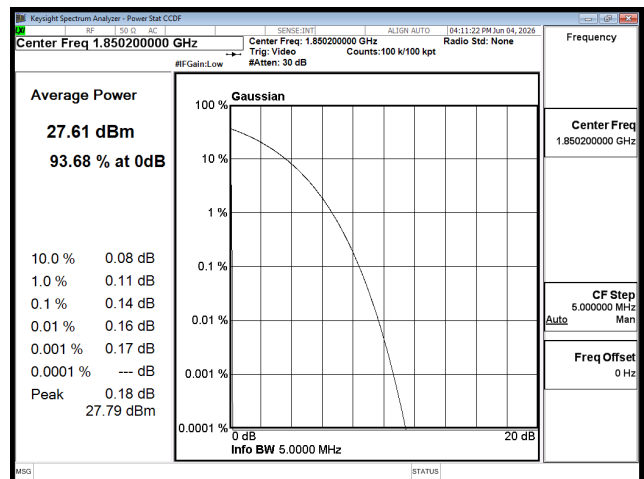
GSM 1900 / Voice / 1880.0 MHz



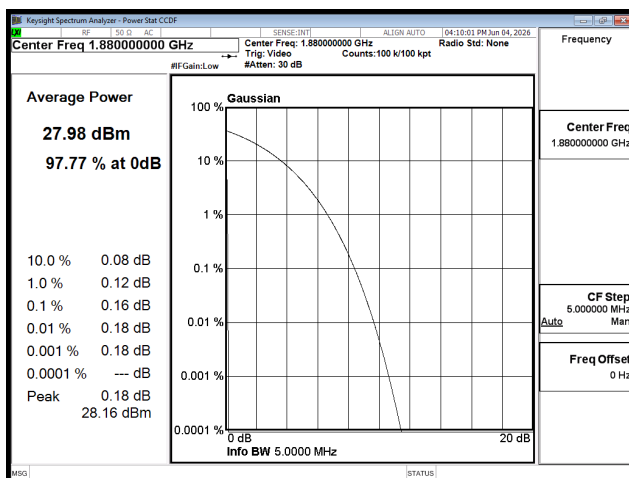
GSM 1900 / Voice / 1909.8 MHz



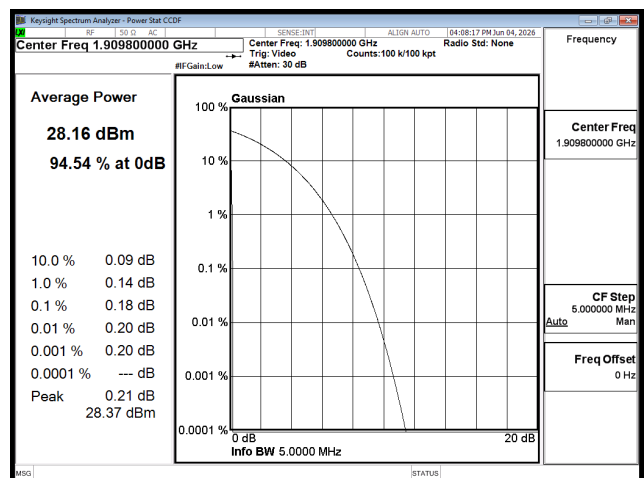
GSM 1900 / EGPRS / 1850.2 MHz



GSM 1900 / EGPRS / 1880.0 MHz

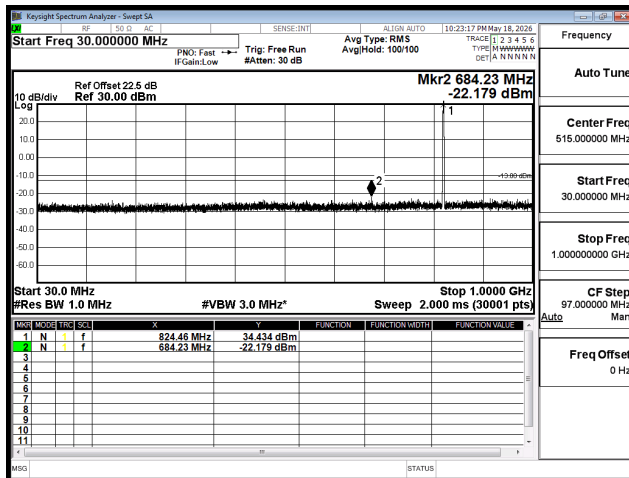


GSM 1900 / EGPRS / 1909.8 MHz

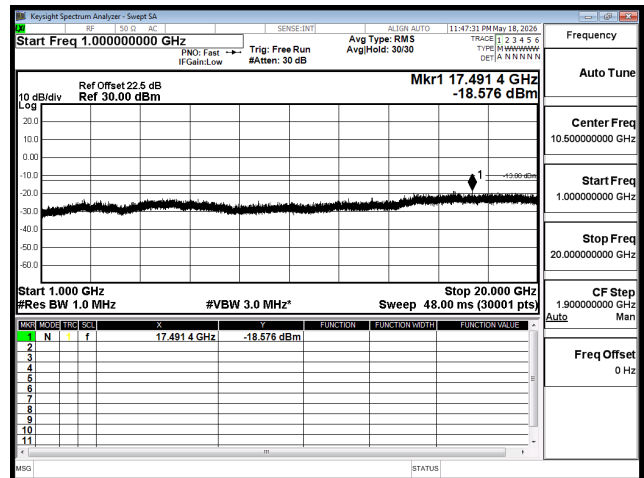


Appendix D.1 Test Result of Conducted Spurious Emission

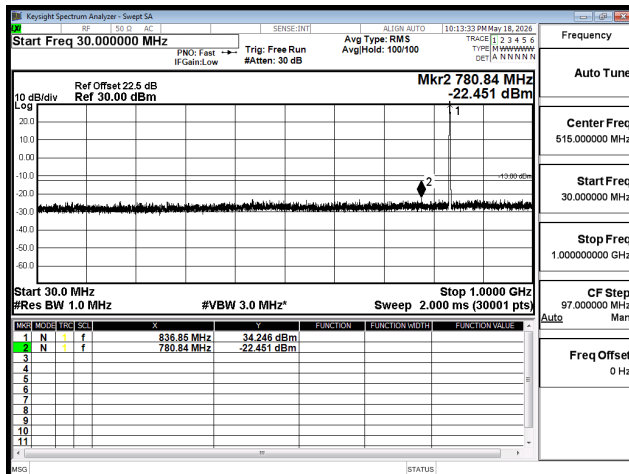
GSM 850 / Voice / 824.2 MHz (below 1GHz)



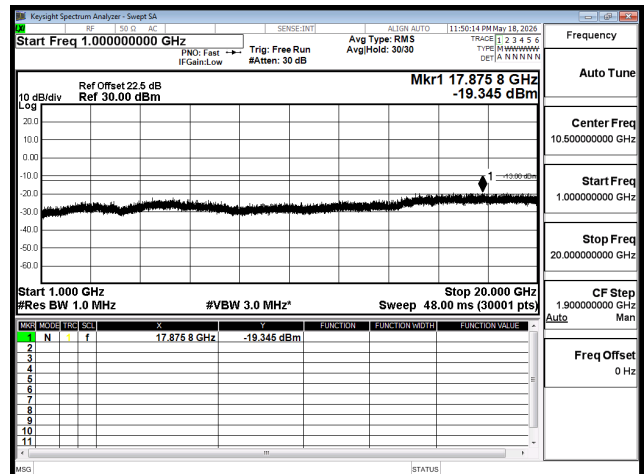
GSM 850 / Voice / 824.2 MHz (above 1GHz)



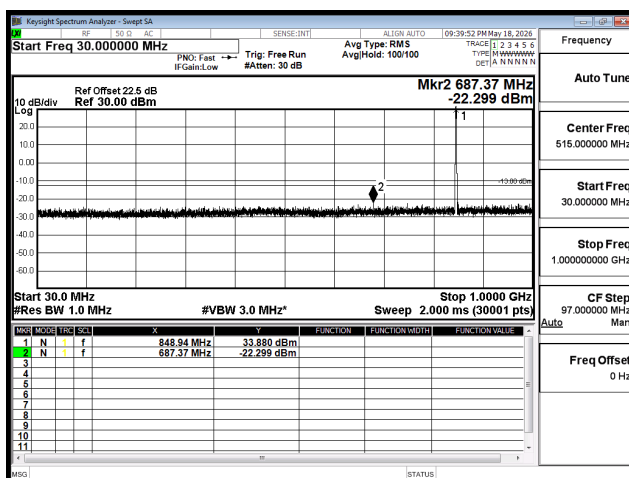
GSM 850 / Voice / 836.6 MHz (below 1GHz)



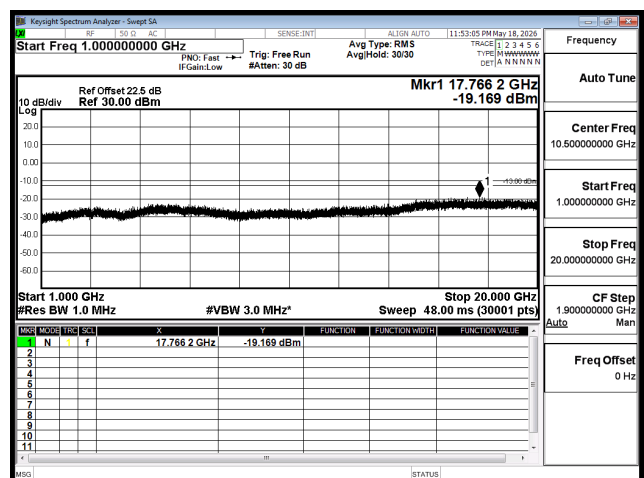
GSM 850 / Voice / 836.6 MHz (above 1GHz)



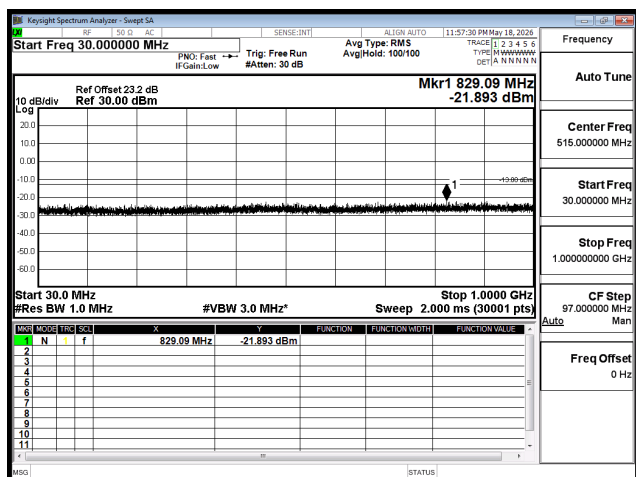
GSM 850 / Voice / 848.8 MHz (below 1GHz)



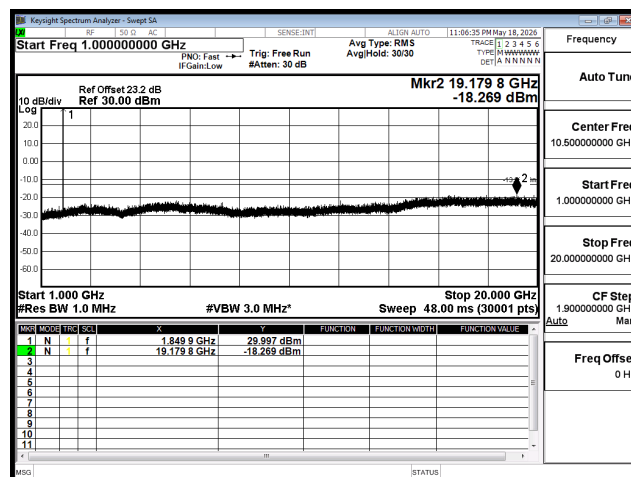
GSM 850 / Voice / 848.8 MHz (above 1GHz)



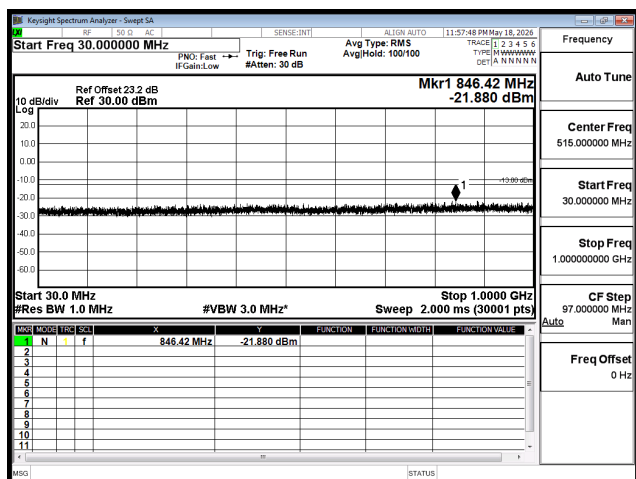
GSM 1900 / Voice / 1850.2 MHz (below 1GHz)



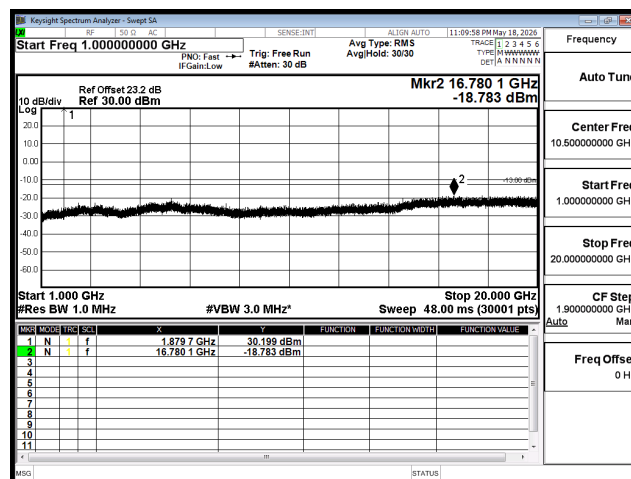
GSM 1900 / Voice / 1850.2 MHz (above 1GHz)



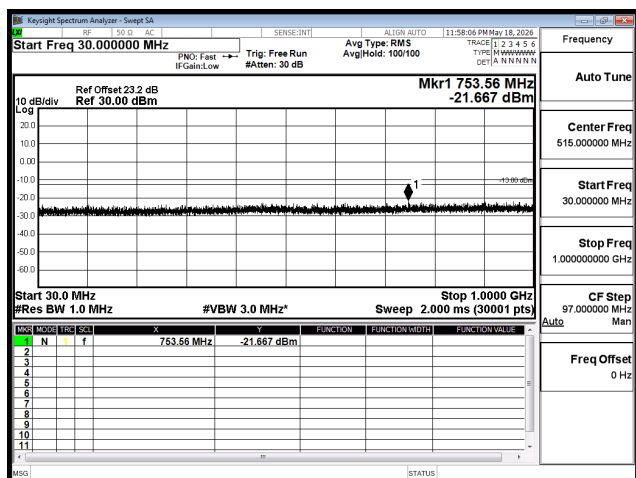
GSM 1900 / Voice / 1880.0 MHz (below 1GHz)



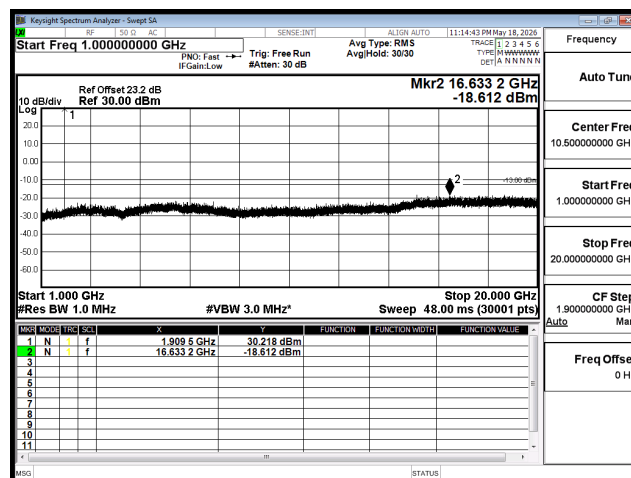
GSM 1900 / Voice / 1880.0 MHz (above 1GHz)



GSM 1900 / Voice / 1909.8 MHz (below 1GHz)

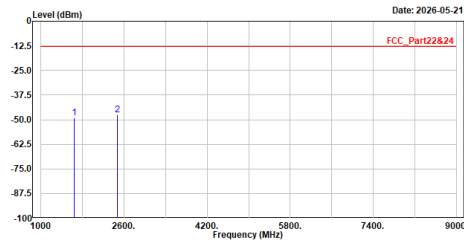


GSM 1900 / Voice / 1909.8 MHz (above 1GHz)



Appendix D.2 Test Result of Radiated Spurious Emission

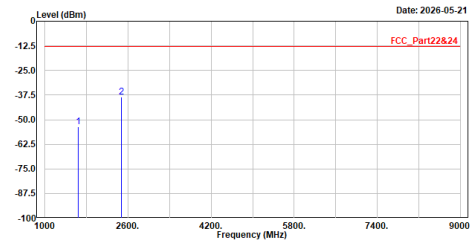
Site :HY-CB03
Condition :3m ,Horizontal
Mode :GSM850_Voice_CH128
Test BY :Ashton



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	1648.400	-49.14	-13.00	-36.14	-33.61	-15.53	Peak
2	2472.600	-47.66	-13.00	-34.66	-33.46	-14.20	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= $107 + 20\log(3) - 104.8 = 11.8$ dB
5. The other emission levels were very low against the limit.

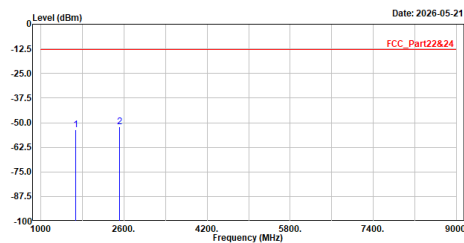
Site :HY-CB03
Condition :3m ,Vertical
Mode :GSM850_Voice_CH128
Test BY :Ashton



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	1648.400	-53.64	-13.00	-40.64	-38.11	-15.53	Peak
2	2472.600	-38.53	-13.00	-25.53	-24.33	-14.20	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= $107 + 20\log(3) - 104.8 = 11.8$ dB
5. The other emission levels were very low against the limit.

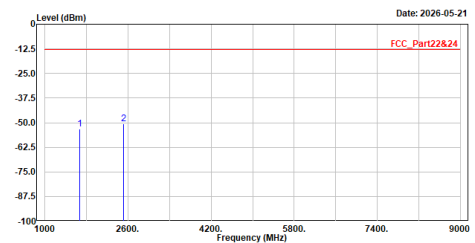
Site :HY-CB03
Condition :3m ,Horizontal
Mode :GSM850_Voice_CH190
Test BY :Ashton



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	1673.200	-53.69	-13.00	-40.69	-37.86	-15.83	Peak
2	2509.800	-52.13	-13.00	-39.13	-37.92	-14.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= $107 + 20\log(3) - 104.8 = 11.8$ dB
5. The other emission levels were very low against the limit.

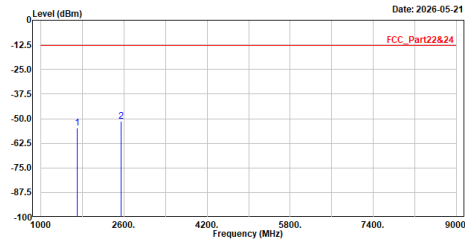
Site :HY-CB03
Condition :3m ,Vertical
Mode :GSM850_Voice_CH190
Test BY :Ashton



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	1673.200	-53.31	-13.00	-40.31	-37.48	-15.83	Peak
2	2509.800	-50.52	-13.00	-37.52	-36.31	-14.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= $107 + 20\log(3) - 104.8 = 11.8$ dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Horizontal
Mode :GSM850_Voice_CH251
Test BY :Ashton

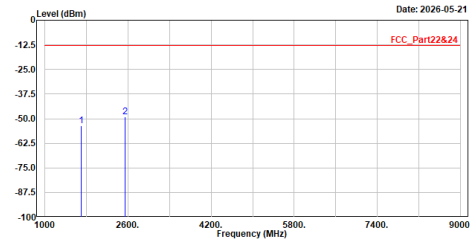


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	1697.600	-54.78	-13.00	-41.78	-38.95	-15.83	Peak
2	2546.400	-51.37	-13.00	-38.37	-37.41	-13.96	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Vertical
Mode :GSM850_Voice_CH251
Test BY :Ashton

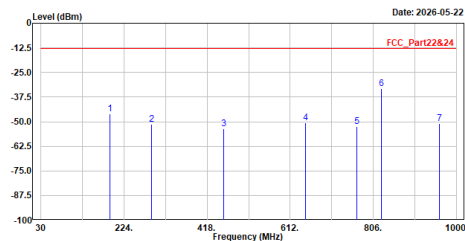


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	1697.600	-53.42	-13.00	-40.42	-37.59	-15.83	Peak
2	2546.400	-49.12	-13.00	-36.12	-35.16	-13.96	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Horizontal
Mode :GSM850_Voice_CH128
Test BY :Rock

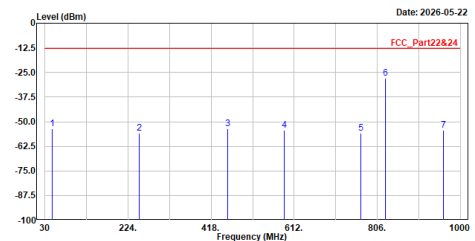


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	191.990	-45.92	-13.00	-32.92	-31.20	-14.72	Peak
2	288.020	-51.44	-13.00	-38.44	-39.87	-11.57	Peak
3	456.121	-53.75	-13.00	-40.75	-46.64	-7.11	Peak
4	648.084	-50.41	-13.00	-37.41	-47.21	-3.20	Peak
5	768.170	-52.31	-13.00	-39.31	-51.22	-1.09	Peak
6	824.200	-33.37	-13.00	-20.37	-32.77	-0.60	Peak
7	960.133	-51.08	-13.00	-38.08	-52.19	1.11	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Vertical
Mode :GSM850_Voice_CH128
Test BY :Rock

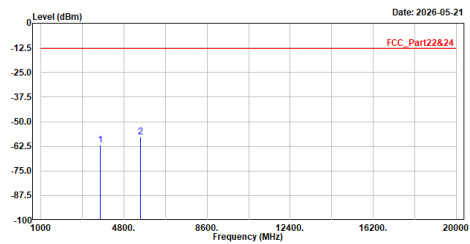


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	47.751	-53.53	-13.00	-40.53	-41.81	-11.72	Peak
2	249.996	-55.71	-13.00	-42.71	-42.65	-13.06	Peak
3	456.121	-53.54	-13.00	-40.54	-46.43	-7.11	Peak
4	580.041	-54.33	-13.00	-41.33	-49.97	-4.36	Peak
5	768.170	-55.91	-13.00	-42.91	-54.82	-1.09	Peak
6	824.200	-28.03	-13.00	-15.03	-27.43	-0.60	Peak
7	960.133	-54.17	-13.00	-41.17	-55.28	1.11	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Horizontal
Mode :GSM1900_Voice_CH512
Test BY :Ashton

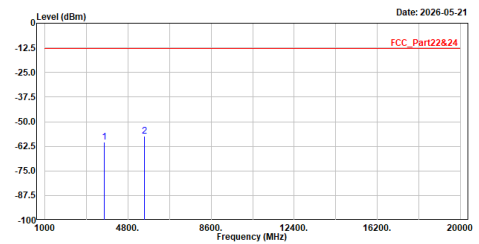


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	3700.400	-61.75	-13.00	-48.75	-53.60	-8.15	Peak
2	5550.600	-57.66	-13.00	-44.66	-56.73	-8.93	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Vertical
Mode :GSM1900_Voice_CH512
Test BY :Ashton

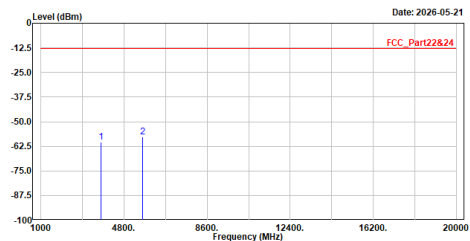


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	3700.400	-60.36	-13.00	-47.36	-52.21	-8.15	Peak
2	5550.600	-57.24	-13.00	-44.24	-56.31	-8.93	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Horizontal
Mode :GSM1900_Voice_CH661
Test BY :Ashton

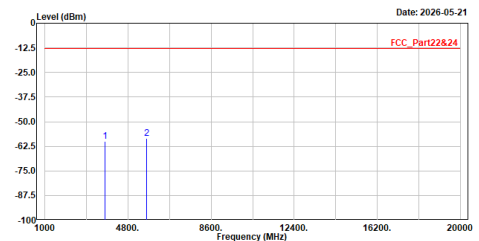


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	3760.000	-60.40	-13.00	-47.40	-52.66	-7.74	Peak
2	5640.000	-57.89	-13.00	-44.89	-57.58	-8.31	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Vertical
Mode :GSM1900_Voice_CH661
Test BY :Ashton

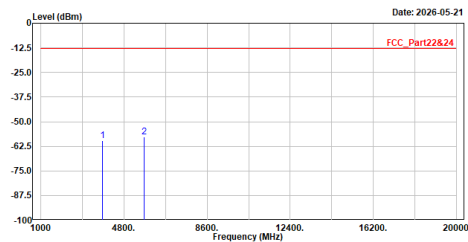


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	3760.000	-60.09	-13.00	-47.09	-52.35	-7.74	Peak
2	5640.000	-58.51	-13.00	-45.51	-58.20	-8.31	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Horizontal
Mode :GSM1900_Voice_Ch810
Test BY :Ashton

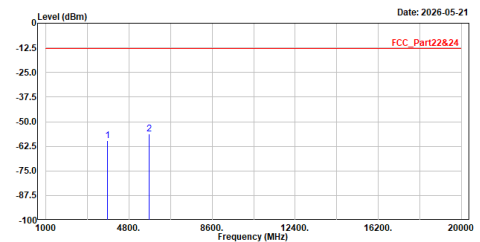


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	3819.600	-59.72	-13.00	-46.72	-52.50	-7.22	Peak
2	5729.480	-57.62	-13.00	-44.62	-57.70	0.08	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Vertical
Mode :GSM1900_Voice_Ch810
Test BY :Ashton

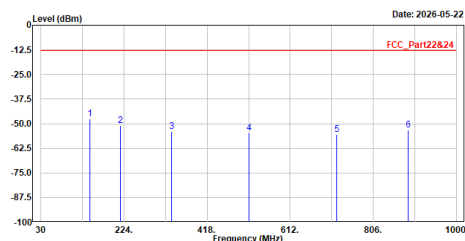


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	3819.600	-59.60	-13.00	-46.60	-52.38	-7.22	Peak
2	5729.480	-56.35	-13.00	-43.35	-56.43	0.08	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Site :HY-CB03
Condition :3m ,Horizontal
Mode :GSM1900_Voice_Ch810
Test BY :Rock

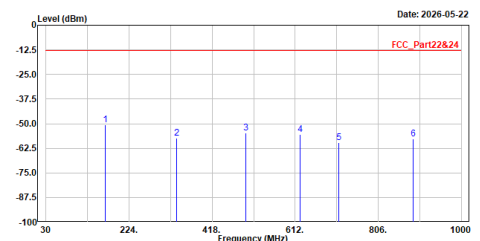


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	143.975	-47.59	-13.00	-34.59	-35.33	-12.26	Peak
2	216.046	-50.97	-13.00	-37.97	-36.25	-14.72	Peak
3	336.035	-54.02	-13.00	-41.02	-43.80	-10.22	Peak
4	516.067	-54.68	-13.00	-41.68	-48.73	-5.95	Peak
5	729.155	-55.30	-13.00	-42.30	-53.38	-1.92	Peak
6	888.159	-53.36	-13.00	-40.36	-53.31	-0.05	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

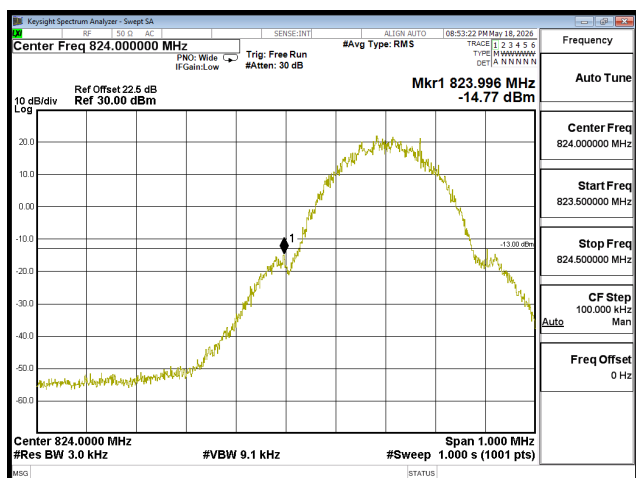
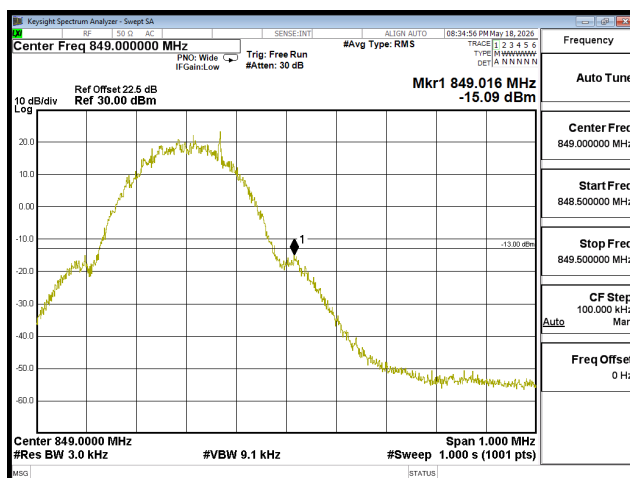
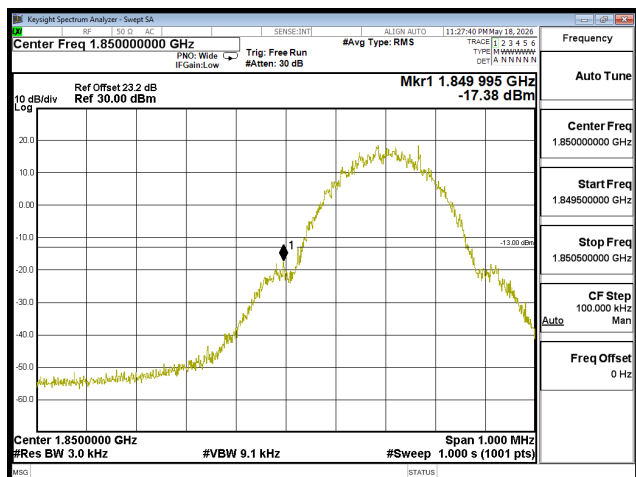
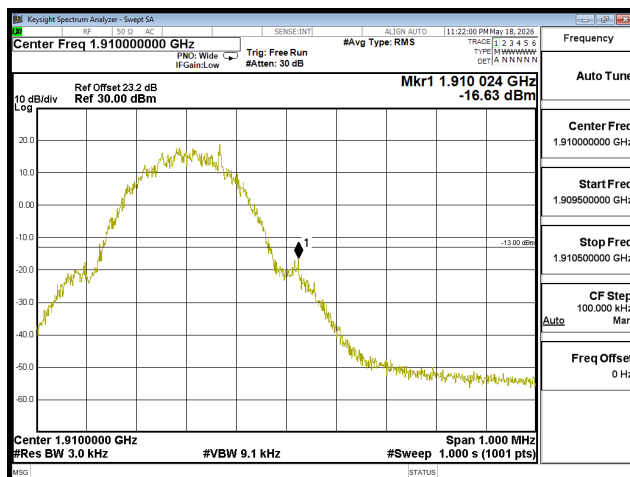
Site :HY-CB03
Condition :3m ,Vertical
Mode :GSM1900_Voice_Ch810
Test BY :Rock



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	168.031	-50.49	-13.00	-37.49	-38.02	-12.47	Peak
2	336.035	-57.32	-13.00	-44.32	-47.10	-10.22	Peak
3	496.085	-54.82	-13.00	-41.82	-48.33	-6.49	Peak
4	624.125	-55.34	-13.00	-42.34	-51.03	-3.51	Peak
5	713.074	-59.63	-13.00	-46.63	-57.54	-2.09	Peak
6	888.159	-57.89	-13.00	-44.89	-57.84	-0.05	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.

Appendix E. Test Result of Conducted Band Edge**GSM 850 / Voice / 824.2 MHz****GSM 850 / Voice / 848.8 MHz****GSM 1900 / Voice / 1850.2 MHz****GSM 1900 / Voice / 1909.8 MHz**

Appendix F. Test Result of Frequency Stability

Mode 1: GSM 850

Temperature Variations

Temperature Interval (°C)	Test Channel	Deviation (kHz)	Limit (kHz)
		Voice	
-30	Mid	0.0033	±2.09
-20	Mid	-0.0053	±2.09
-10	Mid	0.0034	±2.09
0	Mid	0.0045	±2.09
10	Mid	0.0038	±2.09
20	Mid	-0.0035	±2.09
30	Mid	0.0026	±2.09
40	Mid	0.0040	±2.09
50	Mid	0.0055	±2.09

Voltage Variations

DC Voltage (V)	Test Channel	Deviation (kHz)	Limit (kHz)
		Voice	
4.715	Mid	0.0042	±2.09
4.1	Mid	-0.0035	±2.09
3.485	Mid	0.0033	±2.09

Mode 2: GSM 1900**Temperature Variations**

Temperature Interval(°C)	Test Channel	Deviation (kHz)	Limit (kHz)
		Voice	
-30	Mid	-0.0072	±4.70
-20	Mid	0.0062	±4.70
-10	Mid	0.0095	±4.70
0	Mid	-0.0083	±4.70
10	Mid	0.0099	±4.70
20	Mid	0.0082	±4.70
30	Mid	0.0098	±4.70
40	Mid	-0.0083	±4.70
50	Mid	0.0075	±4.70

Voltage Variations

DC Voltage (V)	Test Channel	Deviation (kHz)	Limit (kHz)
		Voice	
4.715	Mid	0.0092	±4.70
4.1	Mid	0.0082	±4.70
3.485	Mid	-0.0079	±4.70