Transmitter Conducted Output Power And ERP/EIRP

Band	Channel	PCL	Freq (MHz)	Conducted Power(dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GSM 850	251	5	848.8	32.40	30.41	38.45	PASS
GSM 850	190	5	836.6	32.32	30.33	38.45	PASS
GSM 850	128	5	824.2	32.04	30.05	38.45	PASS
PCS 1900	810	0	1909.8	29.68	31.08	33.01	PASS
PCS 1900	661	0	1880.0	29.41	30.81	33.01	PASS
PCS 1900	512	0	1850.2	28.77	30.17	33.01	PASS

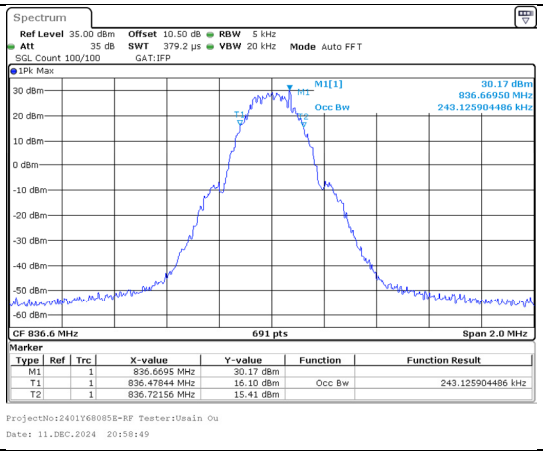
Note:
The ERP is for below 1GHz, EIRP is for above 1GHz
EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

Peak to Average Ratio

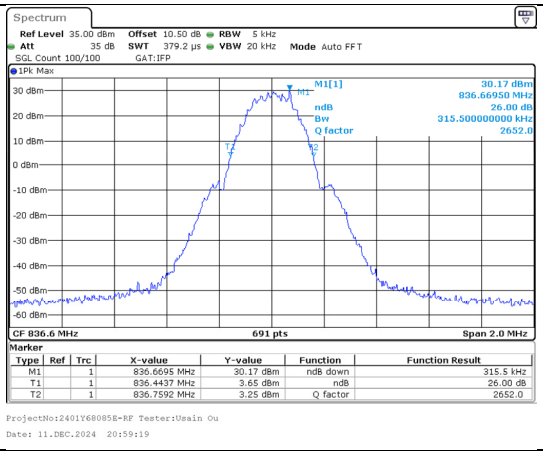
Band	Channel	Freq (MHz)	Result (dB)	Limit (dB)	Verdict
GSM 850	251	848.8	2.45	13	PASS
GSM 850	190	836.6	2.43	13	PASS
GSM 850	128	824.2	2.45	13	PASS
PCS 1900	810	1909.8	2.47	13	PASS
PCS 1900	661	1880.0	2.42	13	PASS
PCS 1900	512	1850.2	2.52	13	PASS

Occupied Bandwidth

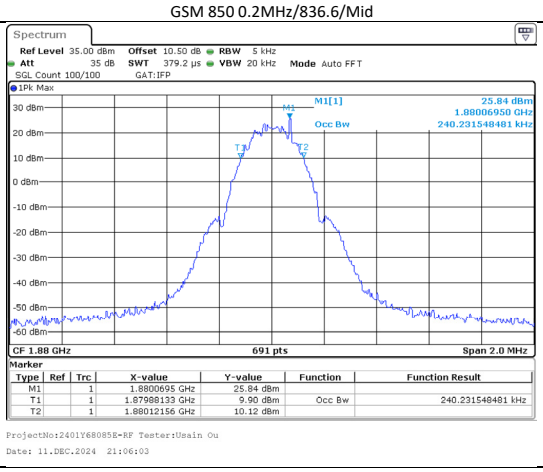
Band	Channel	Freq (MHz)	OBW (MHz)	26dB BW (MHz)	Verdict
GSM 850	190	836.6	0.24313	0.3155	PASS
PCS 1900	661	1880.0	0.24023	0.3097	PASS



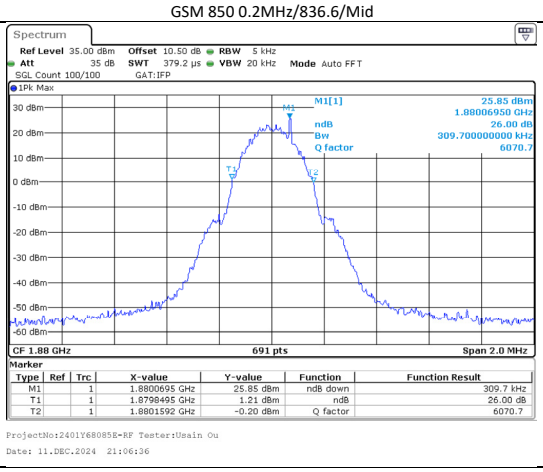
99%OBW
GSM 850 0.2MHz/836.6/Mid



26%OBW
GSM 850 0.2MHz/836.6/Mid

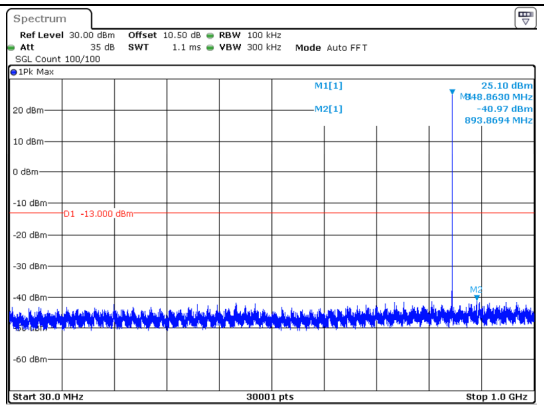


99%OBW
PCS 1900 0.2MHz/1880.0/Mid

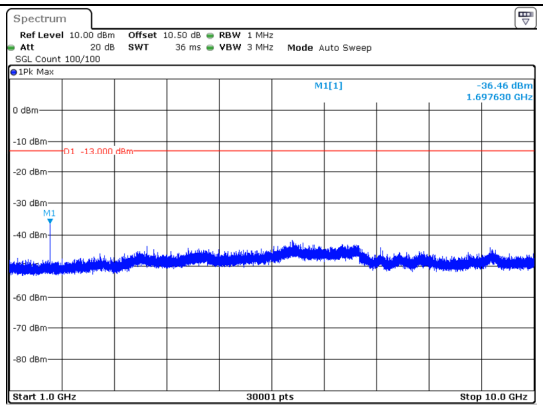


26%OBW
PCS 1900 0.2MHz/1880.0/Mid

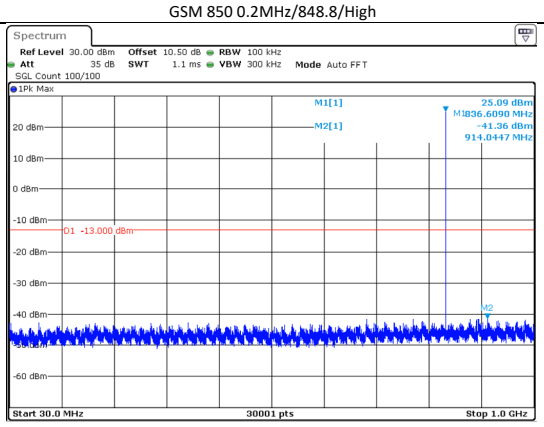
Conducted Spurious Emissions



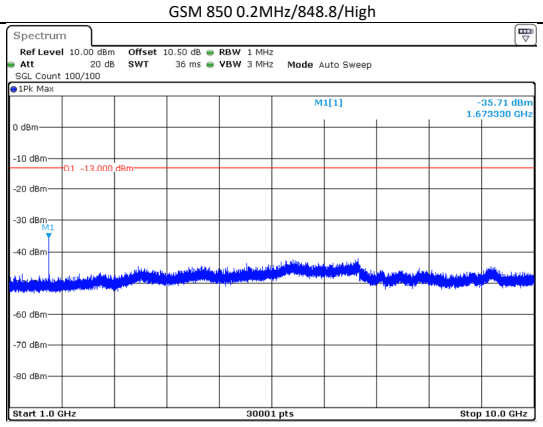
30.0MHz-1000.0MHz
GSM 850 0.2MHz/848.8/High



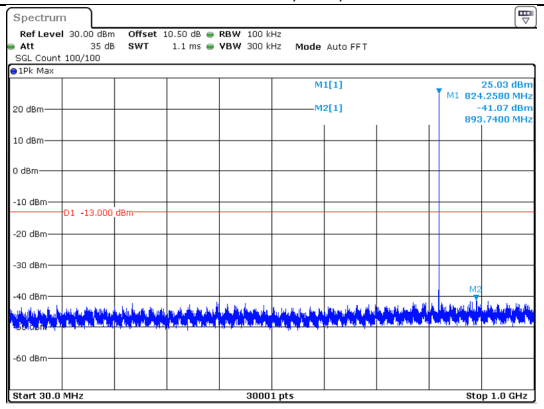
1000.0MHz-10000.0MHz
GSM 850 0.2MHz/848.8/High



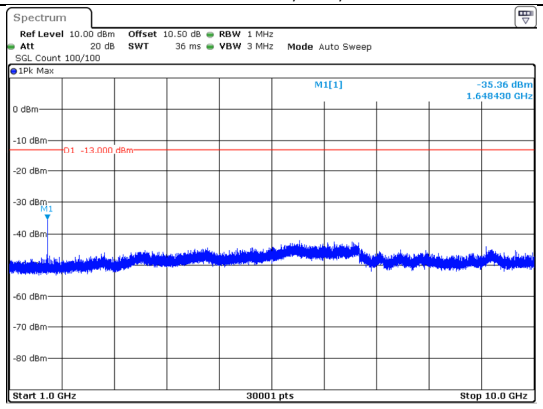
30.0MHz-1000.0MHz
GSM 850 0.2MHz/836.6/Mid



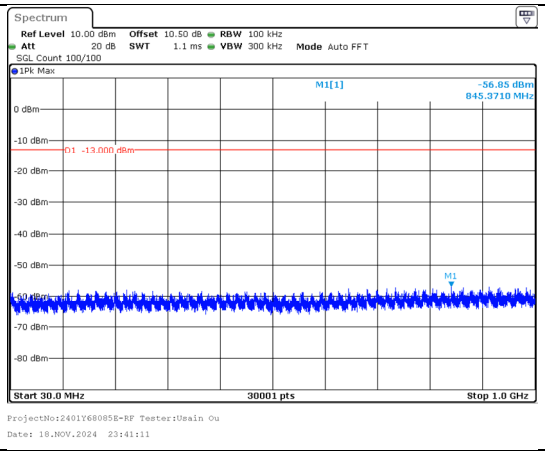
1000.0MHz-10000.0MHz
GSM 850 0.2MHz/836.6/Mid



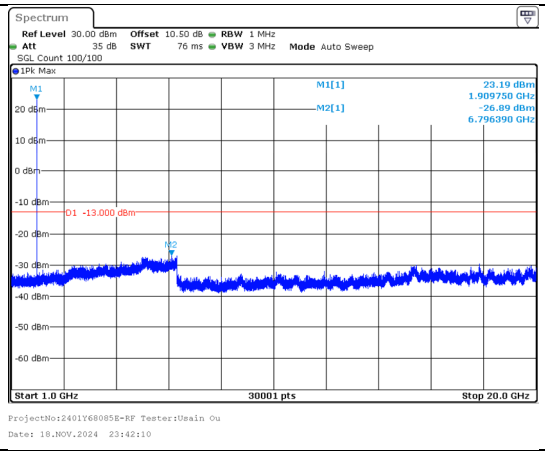
30.0MHz-1000.0MHz
GSM 850 0.2MHz/824.2/Low



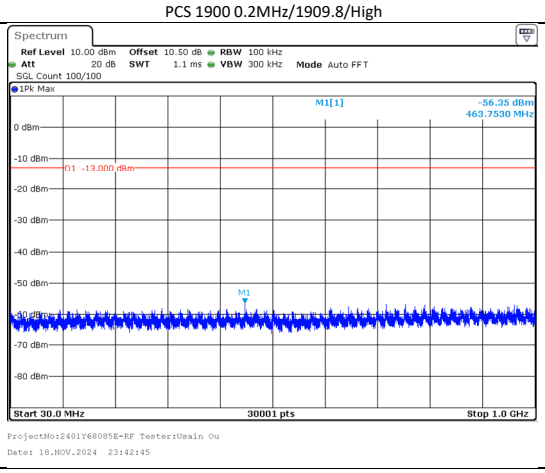
1000.0MHz-10000.0MHz
GSM 850 0.2MHz/824.2/Low



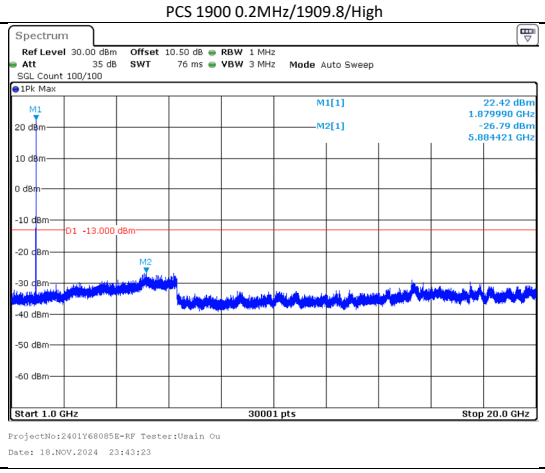
30.0MHz-1000.0MHz
PCS 1900 0.2MHz/1909.8/High



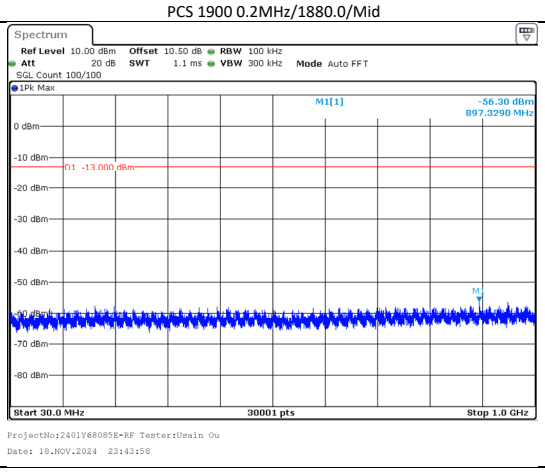
1000.0MHz-20000.0MHz
PCS 1900 0.2MHz/1909.8/High



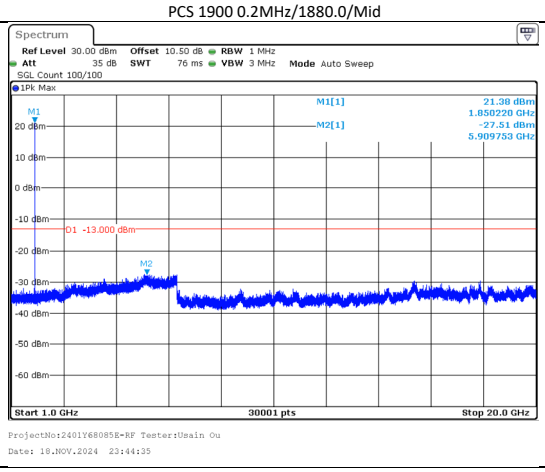
30.0MHz-1000.0MHz
PCS 1900 0.2MHz/1880.0/Mid



1000.0MHz-20000.0MHz
PCS 1900 0.2MHz/1880.0/Mid

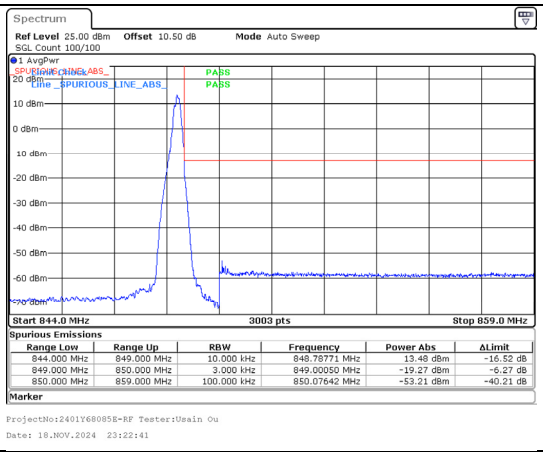


30.0MHz-1000.0MHz
PCS 1900 0.2MHz/1850.2/Low

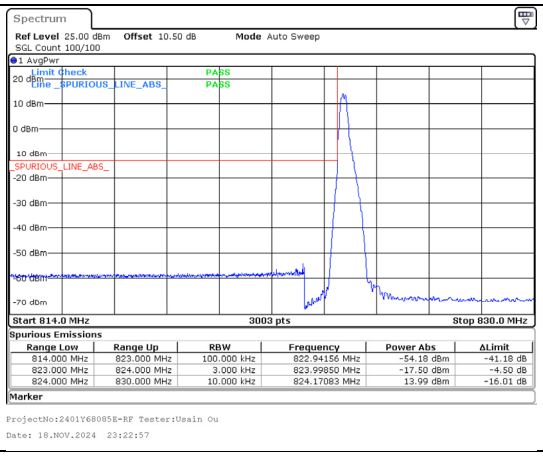


1000.0MHz-20000.0MHz
PCS 1900 0.2MHz/1850.2/Low

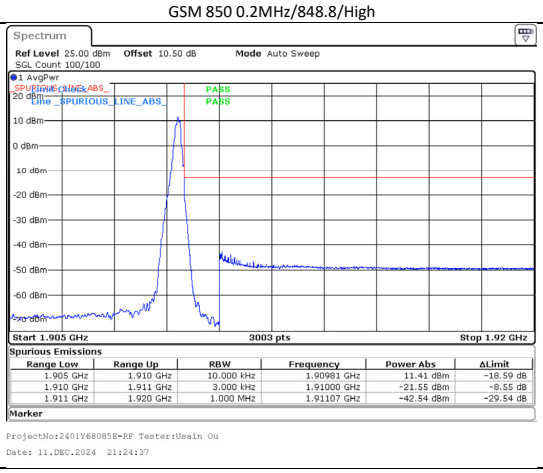
Conducted Band Edge



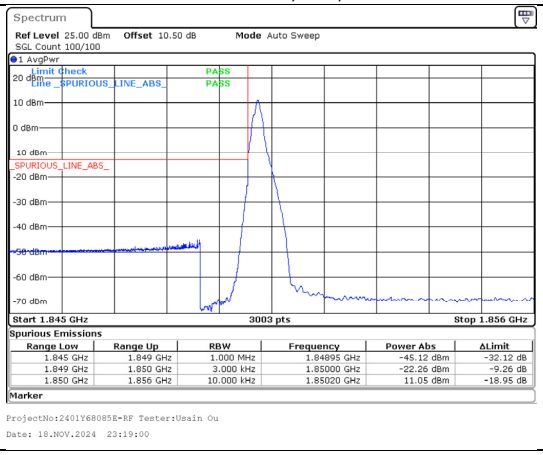
GSM 850 0.2MHz/848.8/High



GSM 850 0.2MHz/824.2/Low



PCS 1900 0.2MHz/1909.8/High



PCS 1900 0.2MHz/1850.2/Low

Transmitter Conducted Output Power And ERP/EIRP GPRS

Band	Channel	PCL	Freq (MHz)	Modulation	Slots	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GSM 850	251	3	848.8	GMSK	1 Tx	32.40	30.41	38.45	PASS
GSM 850	251	3	848.8	GMSK	2 Tx	31.81	29.82	38.45	PASS
GSM 850	251	3	848.8	GMSK	3 Tx	30.40	28.41	38.45	PASS
GSM 850	251	3	848.8	GMSK	4 Tx	29.51	27.52	38.45	PASS
GSM 850	190	3	836.6	GMSK	1 Tx	32.25	30.26	38.45	PASS
GSM 850	190	3	836.6	GMSK	2 Tx	31.69	29.70	38.45	PASS
GSM 850	190	3	836.6	GMSK	3 Tx	30.27	28.28	38.45	PASS
GSM 850	190	3	836.6	GMSK	4 Tx	29.39	27.40	38.45	PASS
GSM 850	128	3	824.2	GMSK	1 Tx	31.97	29.98	38.45	PASS
GSM 850	128	3	824.2	GMSK	2 Tx	31.39	29.40	38.45	PASS
GSM 850	128	3	824.2	GMSK	3 Tx	29.98	27.99	38.45	PASS
GSM 850	128	3	824.2	GMSK	4 Tx	29.08	27.09	38.45	PASS
PCS 1900	810	3	1909.8	GMSK	1 Tx	29.69	31.09	33.01	PASS
PCS 1900	810	3	1909.8	GMSK	2 Tx	29.38	30.78	33.01	PASS
PCS 1900	810	3	1909.8	GMSK	3 Tx	27.97	29.37	33.01	PASS
PCS 1900	810	3	1909.8	GMSK	4 Tx	26.89	28.29	33.01	PASS
PCS 1900	661	3	1880.0	GMSK	1 Tx	29.37	30.77	33.01	PASS
PCS 1900	661	3	1880.0	GMSK	2 Tx	29.07	30.47	33.01	PASS
PCS 1900	661	3	1880.0	GMSK	3 Tx	27.63	29.03	33.01	PASS
PCS 1900	661	3	1880.0	GMSK	4 Tx	26.56	27.96	33.01	PASS
PCS 1900	512	3	1850.2	GMSK	1 Tx	28.75	30.15	33.01	PASS
PCS 1900	512	3	1850.2	GMSK	2 Tx	28.45	29.85	33.01	PASS
PCS 1900	512	3	1850.2	GMSK	3 Tx	27.05	28.45	33.01	PASS
PCS 1900	512	3	1850.2	GMSK	4 Tx	25.97	27.37	33.01	PASS

Note:
The ERP is for below 1GHz, EIRP is for above 1GHz
EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

Transmitter Conducted Output Power And ERP/EIRP EGPRS

Band	Channel	PCL	Freq (MHz)	Modulation	Slots	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP Limit (dBm)	Verdict
GSM 850	251	6	848.8	8PSK	1 Tx	26.49	24.50	38.45	PASS
GSM 850	251	6	848.8	8PSK	2 Tx	25.64	23.65	38.45	PASS
GSM 850	251	6	848.8	8PSK	3 Tx	23.04	21.05	38.45	PASS
GSM 850	251	6	848.8	8PSK	4 Tx	21.67	19.68	38.45	PASS
GSM 850	190	6	836.6	8PSK	1 Tx	26.60	24.61	38.45	PASS
GSM 850	190	6	836.6	8PSK	2 Tx	25.10	23.11	38.45	PASS
GSM 850	190	6	836.6	8PSK	3 Tx	23.31	21.32	38.45	PASS
GSM 850	190	6	836.6	8PSK	4 Tx	22.21	20.22	38.45	PASS
GSM 850	128	6	824.2	8PSK	1 Tx	26.79	24.80	38.45	PASS
GSM 850	128	6	824.2	8PSK	2 Tx	25.08	23.09	38.45	PASS
GSM 850	128	6	824.2	8PSK	3 Tx	23.21	21.22	38.45	PASS
GSM 850	128	6	824.2	8PSK	4 Tx	22.15	20.16	38.45	PASS
PCS 1900	810	5	1909.8	8PSK	1 Tx	24.18	25.58	33.01	PASS
PCS 1900	810	5	1909.8	8PSK	2 Tx	23.52	24.92	33.01	PASS
PCS 1900	810	5	1909.8	8PSK	3 Tx	20.58	21.98	33.01	PASS
PCS 1900	810	5	1909.8	8PSK	4 Tx	18.48	19.88	33.01	PASS
PCS 1900	661	5	1880.0	8PSK	1 Tx	25.03	26.43	33.01	PASS
PCS 1900	661	5	1880.0	8PSK	2 Tx	24.10	25.50	33.01	PASS
PCS 1900	661	5	1880.0	8PSK	3 Tx	21.48	22.88	33.01	PASS
PCS 1900	661	5	1880.0	8PSK	4 Tx	19.93	21.33	33.01	PASS
PCS 1900	512	5	1850.2	8PSK	1 Tx	25.47	26.87	33.01	PASS
PCS 1900	512	5	1850.2	8PSK	2 Tx	24.39	25.79	33.01	PASS
PCS 1900	512	5	1850.2	8PSK	3 Tx	21.78	23.18	33.01	PASS
PCS 1900	512	5	1850.2	8PSK	4 Tx	19.86	21.26	33.01	PASS

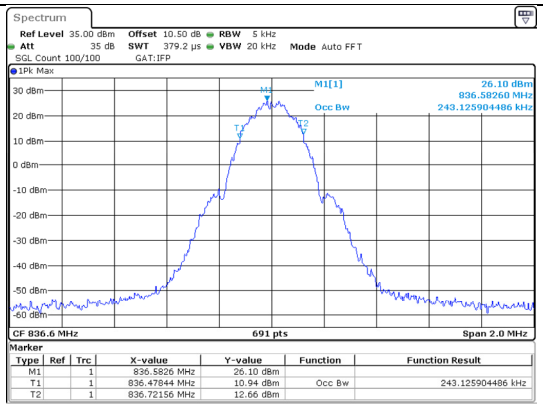
Note:
The ERP is for below 1GHz, EIRP is for above 1GHz
EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

Peak to Average Ratio EGPRS

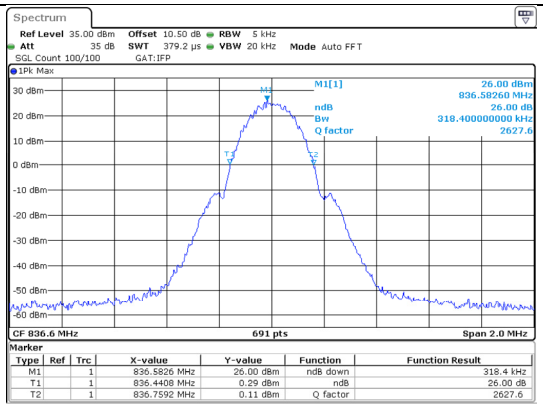
Band	Channel	Freq (MHz)	Slots	Result (dB)	Limit (dB)	Verdict
GSM 850	251	848.8	1 Tx	2.90	13	PASS
GSM 850	190	836.6	1 Tx	2.03	13	PASS
GSM 850	128	824.2	1 Tx	2.09	13	PASS
PCS 1900	810	1909.8	1 Tx	2.72	13	PASS
PCS 1900	661	1880.0	1 Tx	2.67	13	PASS
PCS 1900	512	1850.2	1 Tx	2.61	13	PASS

Occupied Bandwidth EGPRS

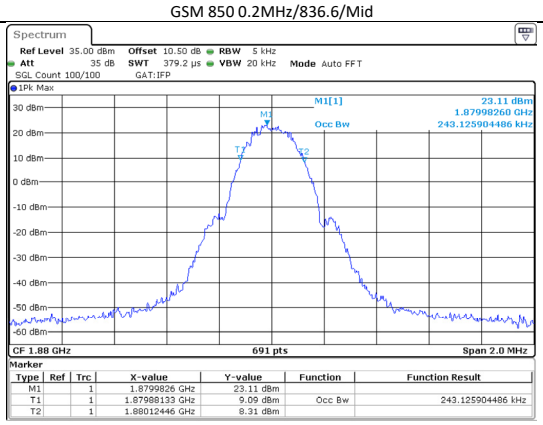
Band	Channel	Freq (MHz)	Slots	OBW (MHz)	26dB BW (MHz)	Verdict
GSM 850	190	836.6	1 Tx	0.24313	0.3184	PASS
PCS 1900	661	1880.0	1 Tx	0.24313	0.3213	PASS



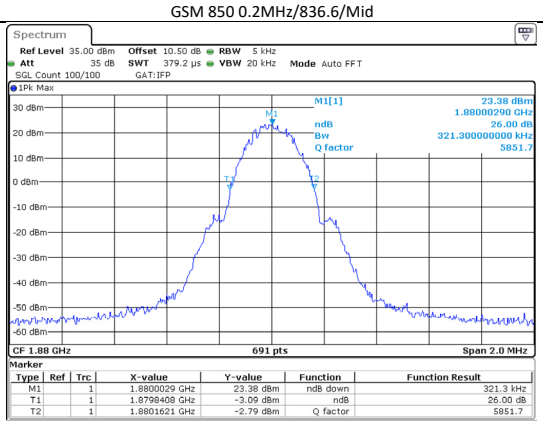
99%OBW
GSM 850 0.2MHz/836.6/Mid



26%OBW
GSM 850 0.2MHz/836.6/Mid

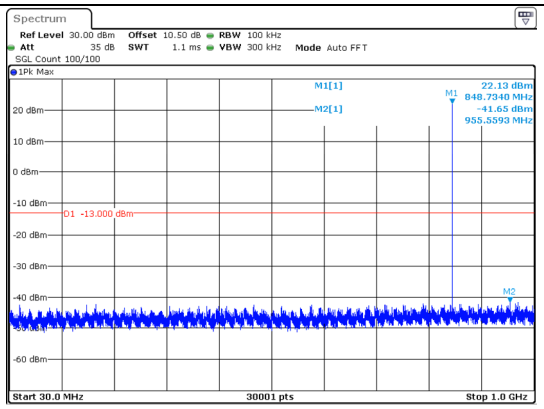


99%OBW
PCS 1900 0.2MHz/1880.0/Mid

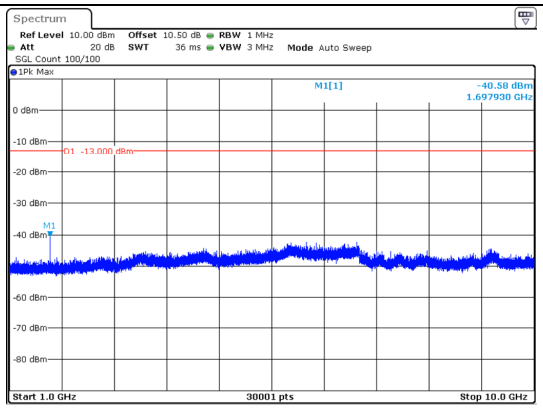


26%OBW
PCS 1900 0.2MHz/1880.0/Mid

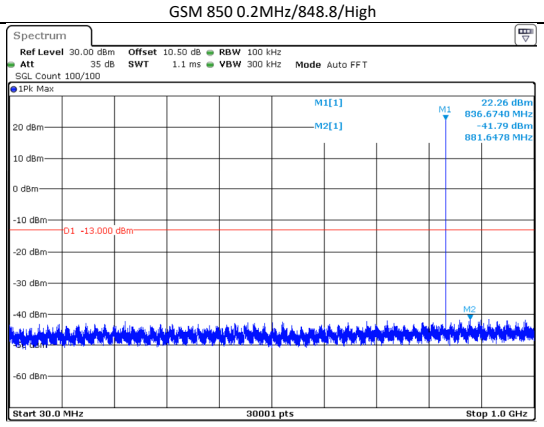
Conducted Spurious Emissions EGPRS



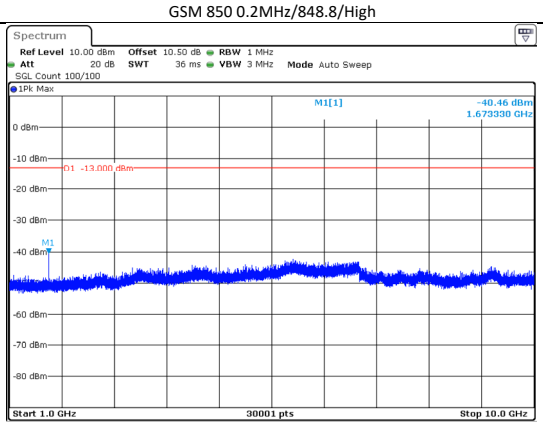
30.0MHz-1000.0MHz
GSM 850 0.2MHz/848.8/High



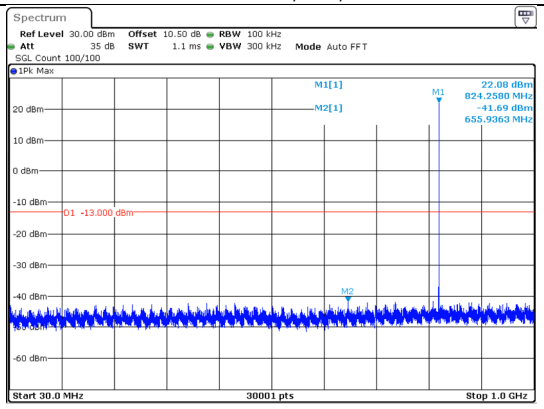
1000.0MHz-10000.0MHz
GSM 850 0.2MHz/848.8/High



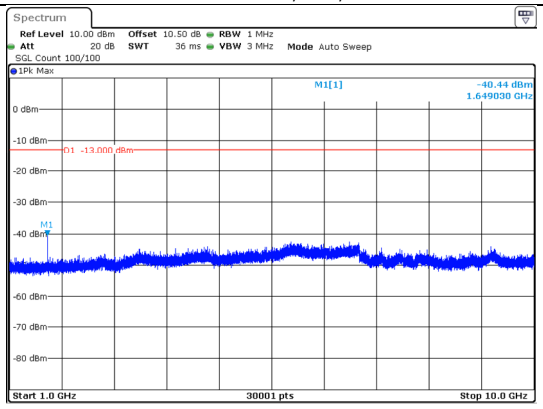
30.0MHz-1000.0MHz
GSM 850 0.2MHz/836.6/Mid



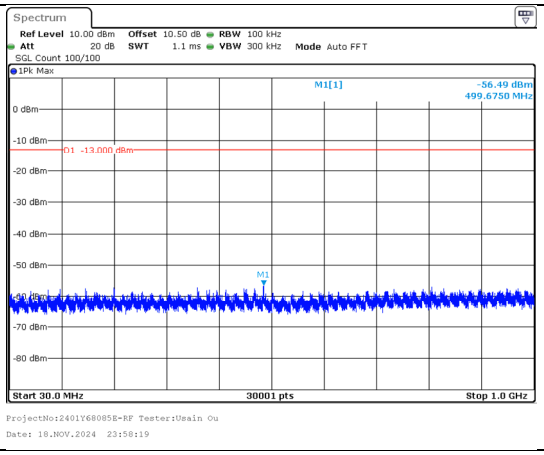
1000.0MHz-10000.0MHz
GSM 850 0.2MHz/836.6/Mid



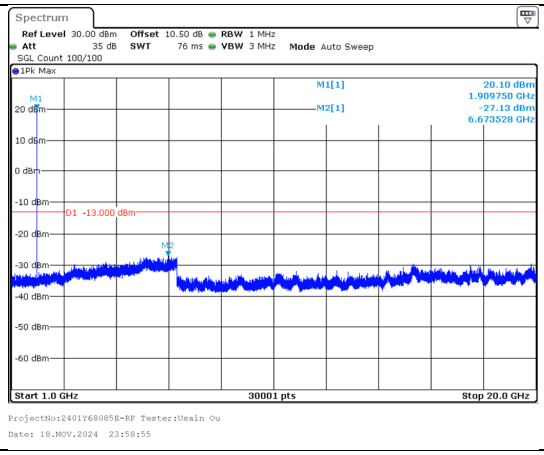
30.0MHz-1000.0MHz
GSM 850 0.2MHz/824.2/Low



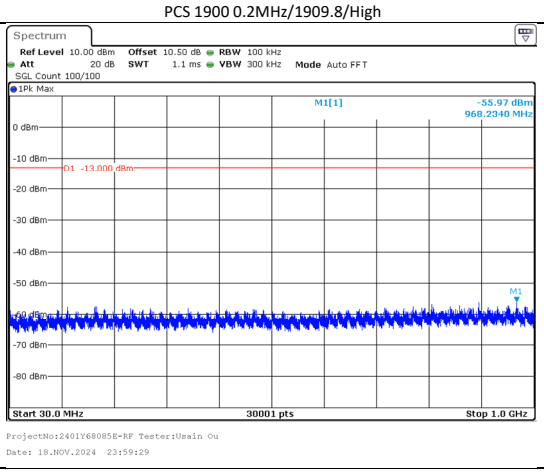
1000.0MHz-10000.0MHz
GSM 850 0.2MHz/824.2/Low



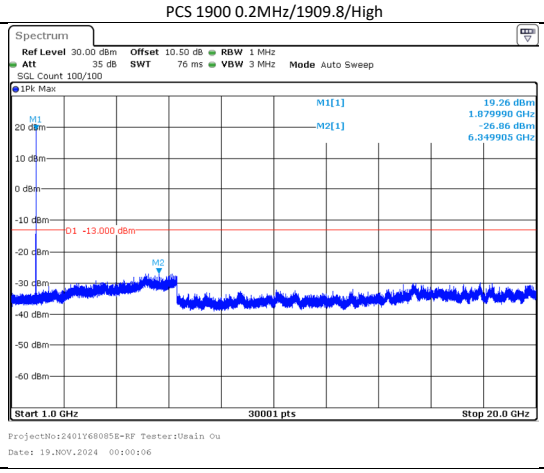
30.0MHz-1000.0MHz
PCS 1900 0.2MHz/1909.8/High



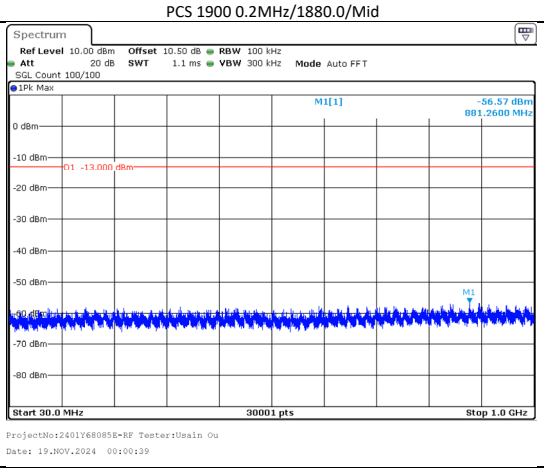
1000.0MHz-20000.0MHz
PCS 1900 0.2MHz/1909.8/High



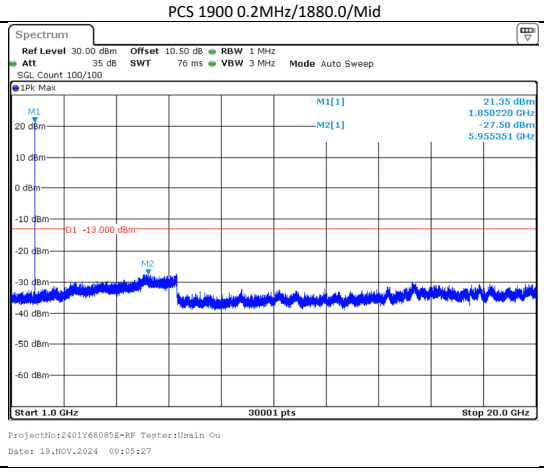
30.0MHz-1000.0MHz
PCS 1900 0.2MHz/1880.0/Mid



1000.0MHz-20000.0MHz
PCS 1900 0.2MHz/1880.0/Mid

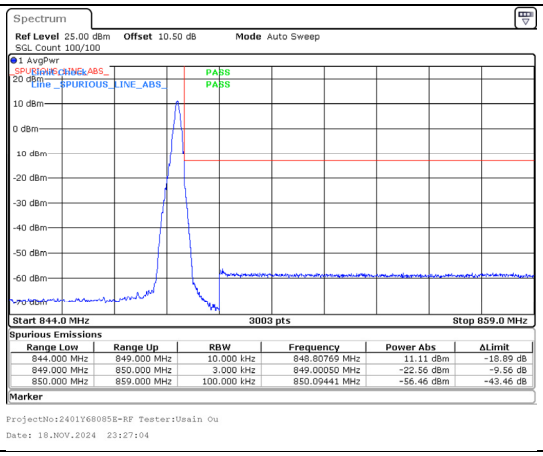


30.0MHz-1000.0MHz
PCS 1900 0.2MHz/1850.2/Low

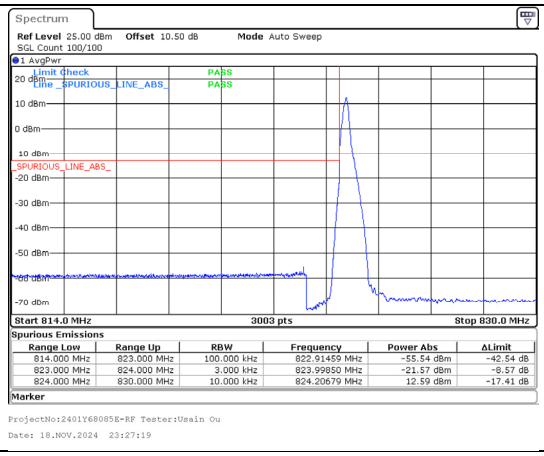


1000.0MHz-20000.0MHz
PCS 1900 0.2MHz/1850.2/Low

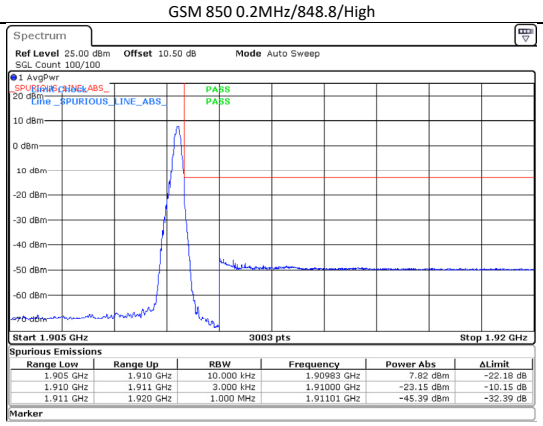
Conducted Band Edge EGPRS



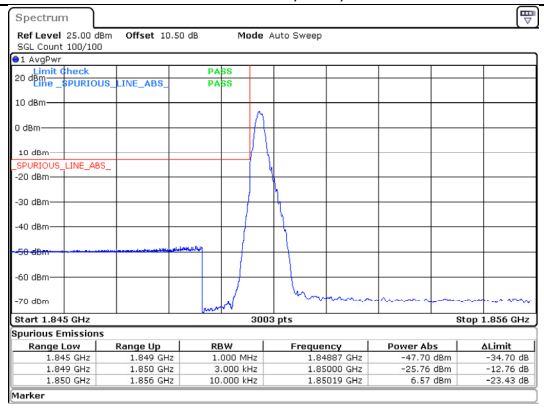
GSM 850 0.2MHz/848.8/High



GSM 850 0.2MHz/824.2/Low



PCS 1900 0.2MHz/1909.8/High



PCS 1900 0.2MHz/1850.2/Low

Frequency Stability

GSM 850:

Test Modulation:	GMSK		Test Channel:	836.6	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	NV	-10.64	-0.01272	2.5
	-20	NV	-4.24	-0.00507	2.5
	-10	NV	-3.33	-0.00398	2.5
	0	NV	-14.71	-0.01758	2.5
	10	NV	0.24	0.00029	2.5
	20	NV	-7.61	-0.00910	2.5
	30	NV	-7.22	-0.00863	2.5
	40	NV	1.91	0.00228	2.5
	50	NV	-8.88	-0.01061	2.5
Frequency Stability vs. Voltage	20	LV	-6.25	-0.00747	2.5
	20	HV	-0.91	-0.00109	2.5
				Result:	**Pass**

Test Modulation:	8PSK		Test Channel:	836.6	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	NV	-4.46	-0.00533	2.5
	-20	NV	-1.44	-0.00172	2.5
	-10	NV	-3.67	-0.00439	2.5
	0	NV	-13.36	-0.01597	2.5
	10	NV	-3.03	-0.00362	2.5
	20	NV	-13.47	-0.01610	2.5
	30	NV	-2.83	-0.00338	2.5
	40	NV	-2.62	-0.00313	2.5
	50	NV	-0.38	-0.00045	2.5
Frequency Stability vs. Voltage	20	LV	-7.49	-0.00895	2.5
	20	HV	-7.22	-0.00863	2.5
				Result:	**Pass**

PCS1900:

Test Mode:	GMSK	Test Channel: Lowest for Lower Edge, Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	NV	1850.0801	1850.000	1909.9192	1910.000
	-20	NV	1850.0800	1850.000	1909.9228	1910.000
	-10	NV	1850.0775	1850.000	1909.9224	1910.000
	0	NV	1850.0801	1850.000	1909.9218	1910.000
	10	NV	1850.0784	1850.000	1909.9216	1910.000
	20	NV	1850.0764	1850.000	1909.9264	1910.000
	30	NV	1850.0781	1850.000	1909.9216	1910.000
	40	NV	1850.0790	1850.000	1909.9241	1910.000
	50	NV	1850.0824	1850.000	1909.9187	1910.000
Frequency Stability vs. Voltage	20	LV	1850.0830	1850.000	1909.9233	1910.000
	20	HV	1850.0774	1850.000	1909.9220	1910.000
					Result:	**Pass**

Test Mode:	8PSK	Test Channel: Lowest for Lower Edge, Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	NV	1850.0737	1850.000	1909.9316	1910.000
	-20	NV	1850.0703	1850.000	1909.9319	1910.000
	-10	NV	1850.0735	1850.000	1909.9260	1910.000
	0	NV	1850.0751	1850.000	1909.9250	1910.000
	10	NV	1850.0726	1850.000	1909.9271	1910.000
	20	NV	1850.0774	1850.000	1909.9291	1910.000
	30	NV	1850.0705	1850.000	1909.9252	1910.000
	40	NV	1850.0715	1850.000	1909.9293	1910.000
	50	NV	1850.0704	1850.000	1909.9295	1910.000
Frequency Stability vs. Voltage	20	LV	1850.0733	1850.000	1909.9273	1910.000
	20	HV	1850.0714	1850.000	1909.9268	1910.000
					Result:	**Pass**