

Transmitter Conducted Output Power And ERP/EIRP GPRS

Test result

Band	Channel	Gamma	Freq (MHz)	Modulation	Slots	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)	ERP/EIRP(limit) (dBm)	Verdict
GSM 850	251	5	848.8	GMSK	1 Tx	33.32	28.83	0.7638	38.45	PASS
GSM 850	251	5	848.8	GMSK	2 Tx	31.23	26.74	0.4721	38.45	PASS
GSM 850	251	5	848.8	GMSK	3 Tx	29.39	24.90	0.3090	38.45	PASS
GSM 850	251	5	848.8	GMSK	4 Tx	27.38	22.89	0.1945	38.45	PASS
GSM 850	190	5	836.6	GMSK	1 Tx	33.23	28.74	0.7482	38.45	PASS
GSM 850	190	5	836.6	GMSK	2 Tx	31.32	26.83	0.4819	38.45	PASS
GSM 850	190	5	836.6	GMSK	3 Tx	29.51	25.02	0.3177	38.45	PASS
GSM 850	190	5	836.6	GMSK	4 Tx	27.43	22.94	0.1968	38.45	PASS
GSM 850	128	5	824.2	GMSK	1 Tx	33.28	28.79	0.7568	38.45	PASS
GSM 850	128	5	824.2	GMSK	2 Tx	31.39	26.90	0.4898	38.45	PASS
GSM 850	128	5	824.2	GMSK	3 Tx	29.61	25.12	0.3251	38.45	PASS
GSM 850	128	5	824.2	GMSK	4 Tx	27.53	23.04	0.2014	38.45	PASS
PCS 1900	810	0	1909.8	GMSK	1 Tx	30.30	30.37	1.0889	33.01	PASS
PCS 1900	810	0	1909.8	GMSK	2 Tx	28.11	28.18	0.6577	33.01	PASS
PCS 1900	810	0	1909.8	GMSK	3 Tx	26.43	26.50	0.4467	33.01	PASS
PCS 1900	810	0	1909.8	GMSK	4 Tx	24.48	24.55	0.2851	33.01	PASS
PCS 1900	661	0	1880.0	GMSK	1 Tx	30.35	30.42	1.1015	33.01	PASS
PCS 1900	661	0	1880.0	GMSK	2 Tx	27.94	28.01	0.6324	33.01	PASS
PCS 1900	661	0	1880.0	GMSK	3 Tx	26.32	26.39	0.4355	33.01	PASS
PCS 1900	661	0	1880.0	GMSK	4 Tx	24.30	24.37	0.2735	33.01	PASS
PCS 1900	512	0	1850.2	GMSK	1 Tx	30.24	30.31	1.0740	33.01	PASS
PCS 1900	512	0	1850.2	GMSK	2 Tx	27.77	27.84	0.6081	33.01	PASS
PCS 1900	512	0	1850.2	GMSK	3 Tx	26.18	26.25	0.4217	33.01	PASS
PCS 1900	512	0	1850.2	GMSK	4 Tx	24.20	24.27	0.2673	33.01	PASS
Note: The ERP is for below 1GHz, EIRP is for above 1GHz $EIRP = \text{Conducted Power (dBm)} - L_c(\text{dB}) + G_r(\text{dBi})$ $ERP = \text{Conducted Power (dBm)} - L_c(\text{dB}) + G_r(\text{dBd})$ $G_r(\text{dBd}) = G_r(\text{dBi}) - 2.15$										

Peak to Average Ratio GPRS

Test result

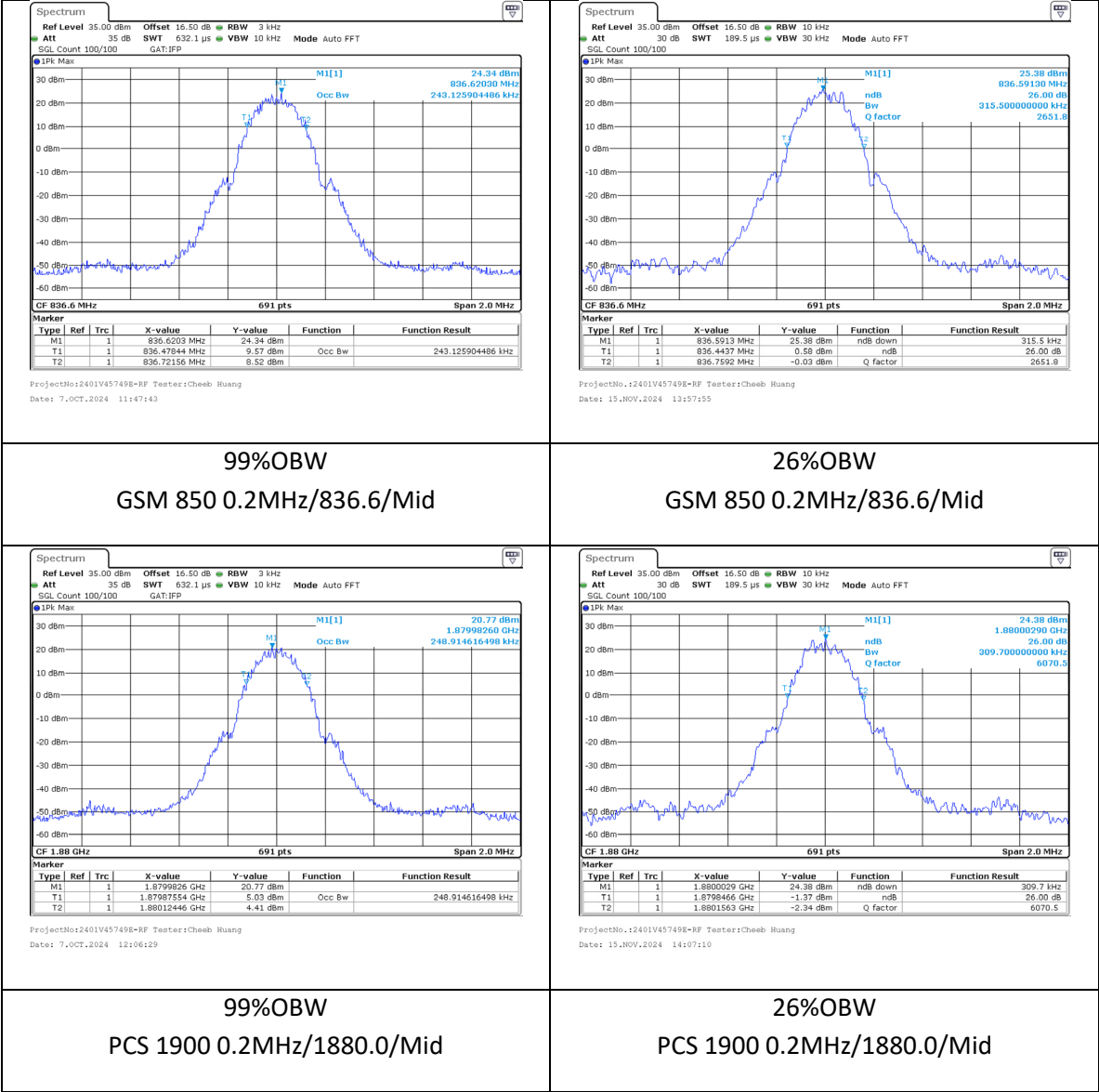
Band	Channel	Freq (MHz)	Slots	Result (dB)	Limit (dB)	Verdict
GSM 850	251	848.8	1 Tx	2.43	13	PASS
GSM 850	190	836.6	1 Tx	2.14	13	PASS
GSM 850	128	824.2	1 Tx	2.41	13	PASS
PCS 1900	810	1909.8	1 Tx	2.41	13	PASS
PCS 1900	661	1880.0	1 Tx	2.42	13	PASS
PCS 1900	512	1850.2	1 Tx	2.48	13	PASS

Occupied Bandwidth GPRS

Test result

Band	Channel	Freq (MHz)	Slots	OBW (MHz)	26dB BW (MHz)	Verdict
GSM 850	190	836.6	1 Tx	0.24313	0.3155	PASS
PCS 1900	661	1880.0	1 Tx	0.24891	0.3097	PASS

Test graph

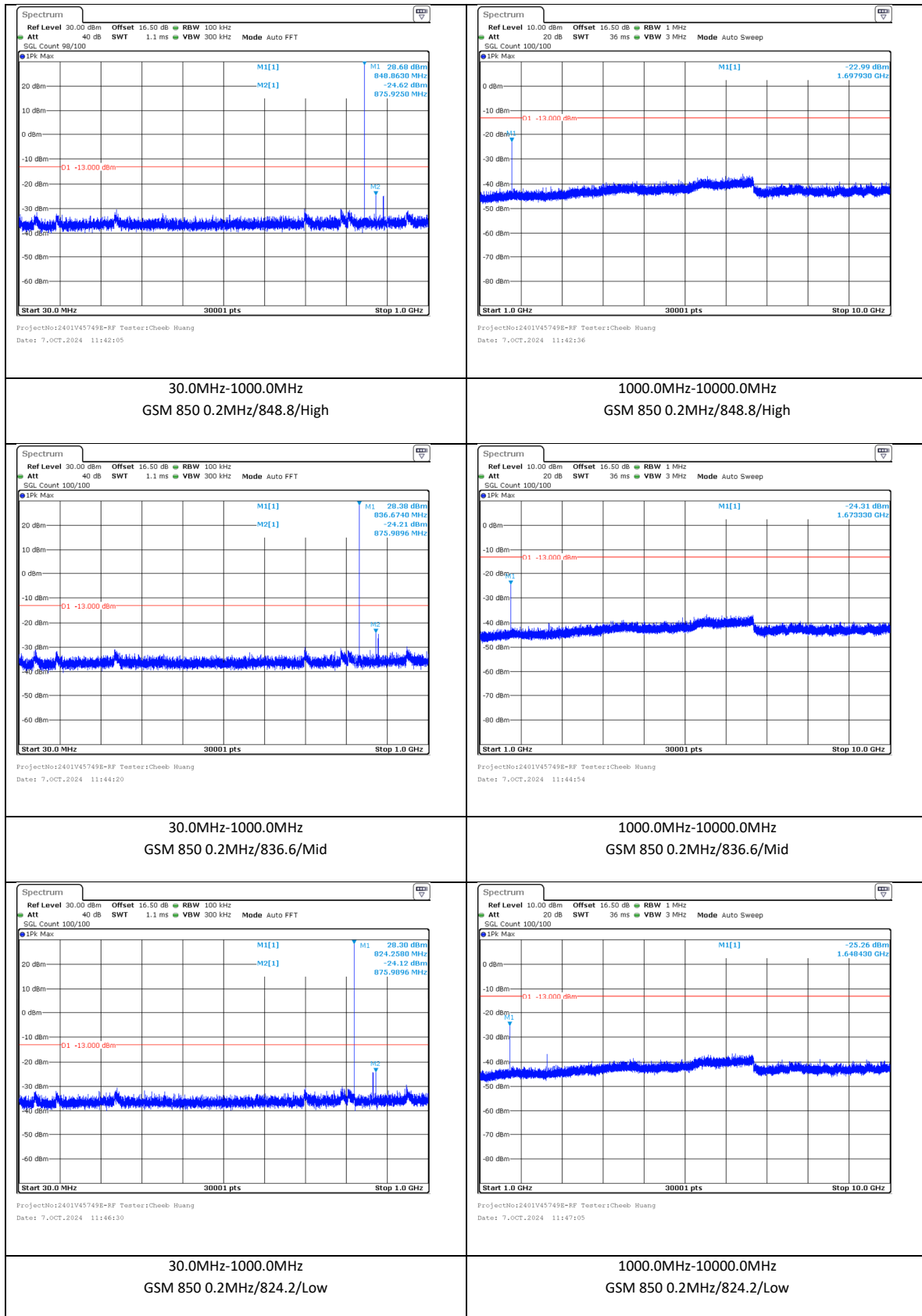


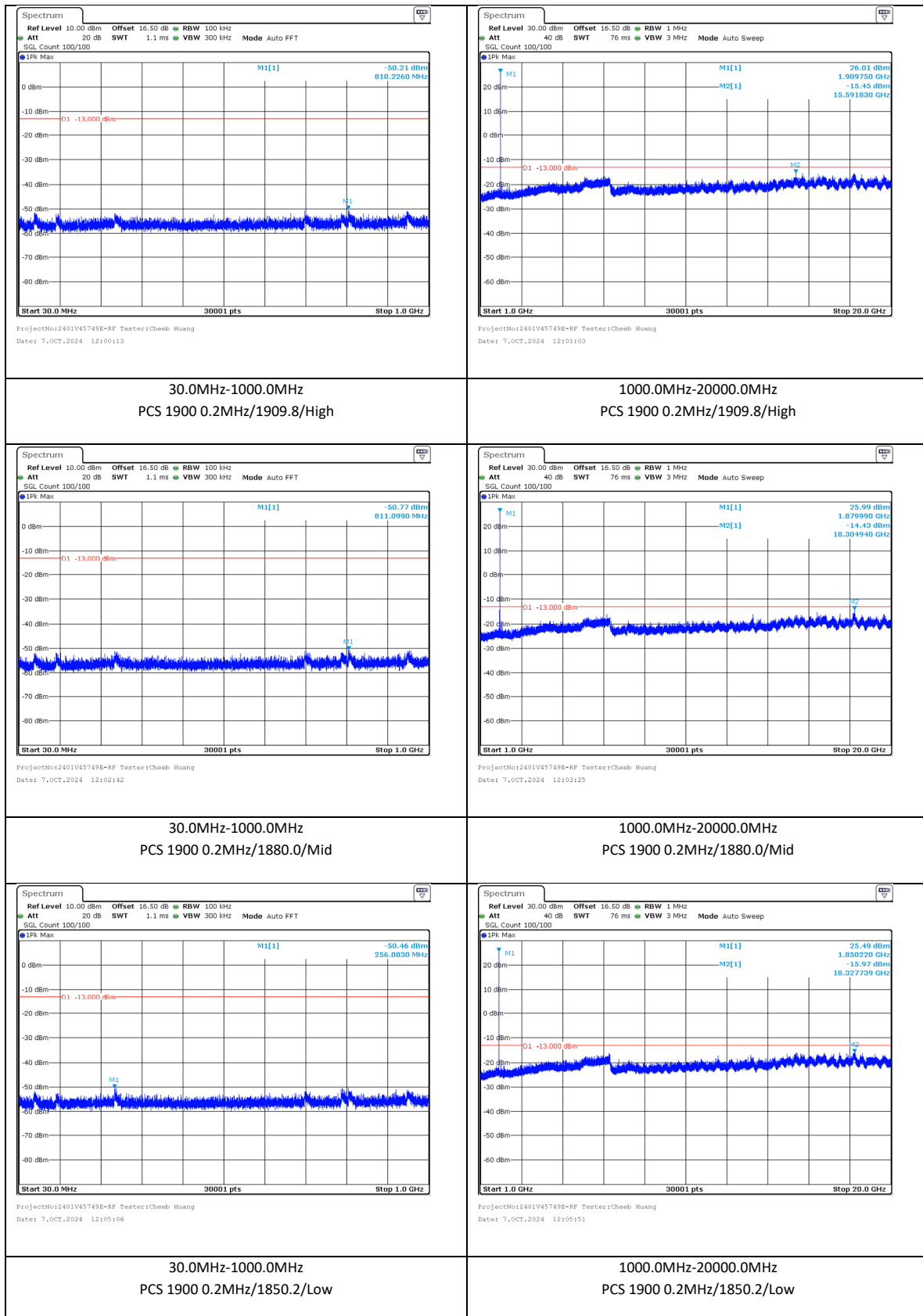
Conducted Spurious Emissions GPRS

Test result

Band	Channel	Freq (MHz)	StartFreq (MHz)	StopFreq (MHz)	Slots	Result (dBm)	Limit (dBm)	Verdict
GSM 850	251	848.8	30.0	1000.0	1 Tx	-24.62	-13	PASS
GSM 850	251	848.8	1000.0	10000.0	1 Tx	-22.99	-13	PASS
GSM 850	190	836.6	30.0	1000.0	1 Tx	-24.21	-13	PASS
GSM 850	190	836.6	1000.0	10000.0	1 Tx	-24.31	-13	PASS
GSM 850	128	824.2	30.0	1000.0	1 Tx	-24.12	-13	PASS
GSM 850	128	824.2	1000.0	10000.0	1 Tx	-25.26	-13	PASS
PCS 1900	810	1909.8	30.0	1000.0	1 Tx	-50.21	-13	PASS
PCS 1900	810	1909.8	1000.0	20000.0	1 Tx	-15.45	-13	PASS
PCS 1900	661	1880.0	30.0	1000.0	1 Tx	-50.77	-13	PASS
PCS 1900	661	1880.0	1000.0	20000.0	1 Tx	-14.43	-13	PASS
PCS 1900	512	1850.2	30.0	1000.0	1 Tx	-50.46	-13	PASS
PCS 1900	512	1850.2	1000.0	20000.0	1 Tx	-15.97	-13	PASS

Test graph



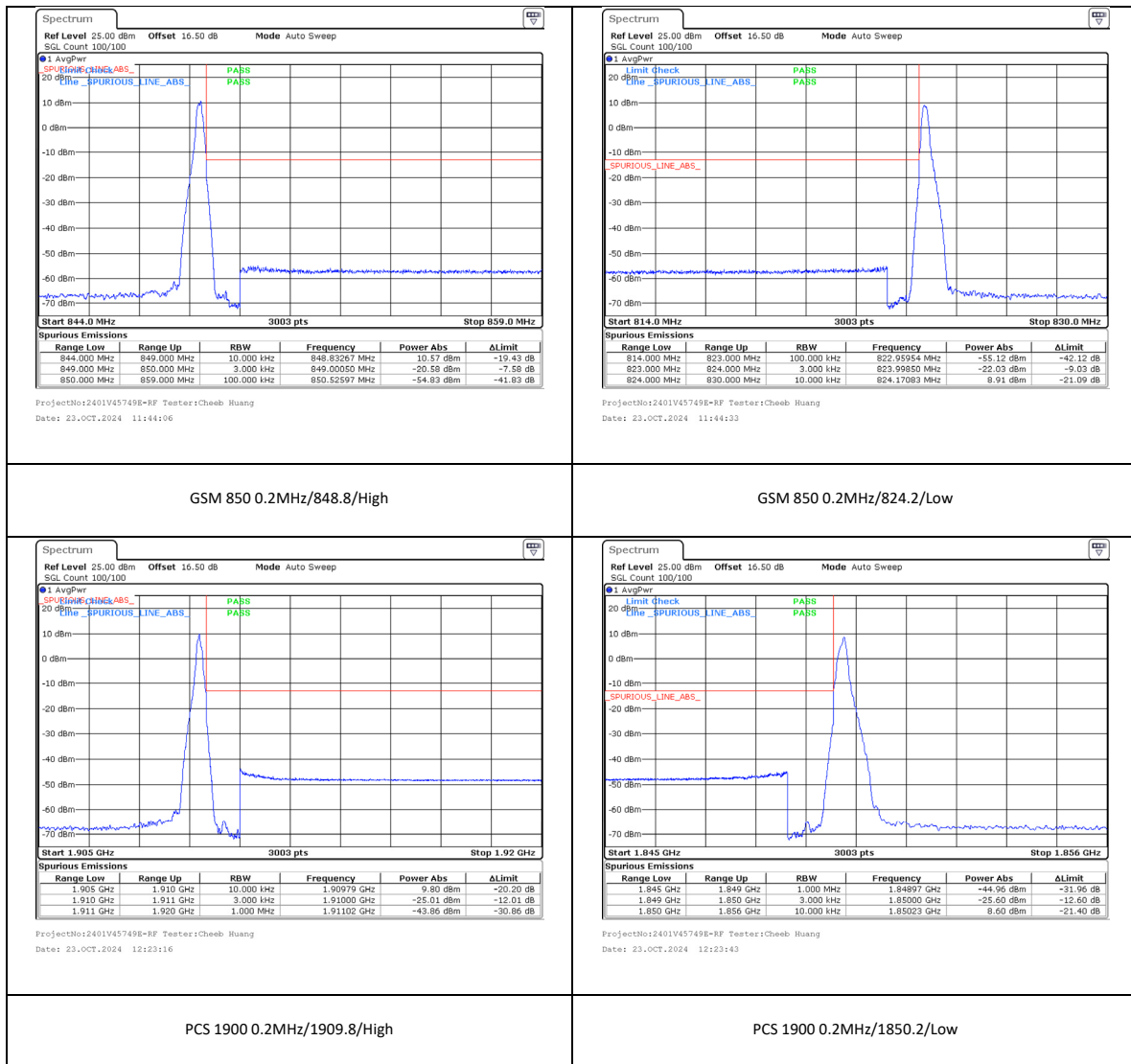


Conducted Band Edge GPRS

Test result

Band	Channel	Freq (MHz)	Slots	Result	Verdict
GSM 850	251	848.8	1 Tx	see graph	PASS
GSM 850	128	824.2	1 Tx	see graph	PASS
PCS 1900	810	1909.8	1 Tx	see graph	PASS
PCS 1900	512	1850.2	1 Tx	see graph	PASS

Test graph



Frequency Stability GPRS

Test result

Band	Channel	Freq (MHz)	Slots	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
GSM 850	251	848.8	1 Tx	-16.47	-0.0194	±2.5	PASS	20°C/8.4V _{DC}
GSM 850	251	848.8	1 Tx	-16.76	-0.01974	±2.5	PASS	20°C/6.8V _{DC}
GSM 850	251	848.8	1 Tx	-17.43	-0.02054	±2.5	PASS	50°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-17.85	-0.02103	±2.5	PASS	40°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-19.08	-0.02248	±2.5	PASS	30°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-18.53	-0.02183	±2.5	PASS	20°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-18.53	-0.02183	±2.5	PASS	10°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-18.63	-0.02195	±2.5	PASS	0°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-18.53	-0.02183	±2.5	PASS	-10°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-18.37	-0.02164	±2.5	PASS	-20°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-18.18	-0.02141	±2.5	PASS	-30°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-19.66	-0.0235	±2.5	PASS	20°C/8.4V _{DC}
GSM 850	190	836.6	1 Tx	-20.15	-0.02408	±2.5	PASS	20°C/6.8V _{DC}
GSM 850	190	836.6	1 Tx	-20.82	-0.02489	±2.5	PASS	50°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-21.08	-0.0252	±2.5	PASS	40°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-20.66	-0.0247	±2.5	PASS	30°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-20.15	-0.02408	±2.5	PASS	20°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-20.79	-0.02485	±2.5	PASS	10°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-20.86	-0.02493	±2.5	PASS	0°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-21.11	-0.02524	±2.5	PASS	-10°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-20.21	-0.02416	±2.5	PASS	-20°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-21.66	-0.0259	±2.5	PASS	-30°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-19.69	-0.0239	±2.5	PASS	20°C/8.4V _{DC}
GSM 850	128	824.2	1 Tx	-18.66	-0.02264	±2.5	PASS	20°C/6.8V _{DC}
GSM 850	128	824.2	1 Tx	-18.76	-0.02276	±2.5	PASS	50°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-18.98	-0.02303	±2.5	PASS	40°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-19.18	-0.02327	±2.5	PASS	30°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-18.92	-0.02295	±2.5	PASS	20°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-18.82	-0.02284	±2.5	PASS	10°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-19.31	-0.02343	±2.5	PASS	0°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-19.08	-0.02315	±2.5	PASS	-10°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-19.11	-0.02319	±2.5	PASS	-20°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-19.5	-0.02366	±2.5	PASS	-30°C/7.4V _{DC}

Frequency Stability Range_GPRS

Test result

Band	Channel (Low/High)	Freq (MHz)	Lower Edge (MHz) (Result)	Limit (1850MHz)	Upper Edge (MHz) (Result)	Limit (1910MHz)	Environment
PCS 1900	512/810	1850.2/1909.8	1850.051	1850.000	1909.862	1910.000	20°C/8.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.160	1850.000	1909.840	1910.000	20°C/6.8V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.108	1850.000	1909.862	1910.000	50°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.071	1850.000	1909.911	1910.000	40°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.073	1850.000	1909.973	1910.000	30°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.121	1850.000	1909.962	1910.000	20°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.118	1850.000	1909.873	1910.000	10°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.166	1850.000	1909.869	1910.000	0°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.175	1850.000	1909.842	1910.000	-10°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.090	1850.000	1909.878	1910.000	-20°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.060	1850.000	1909.936	1910.000	-30°C/7.4V _{DC}

Transmitter Conducted Output Power And ERP/EIRP EGPRS

Test result

Band	Channel	Gamma	Freq (MHz)	Modulation	Slots	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)	ERP/EIRP(limit) (dBm)	Verdict
GSM 850	251	6	848.8	8PSK	1 Tx	26.60	22.11	0.1626	38.45	PASS
GSM 850	251	6	848.8	8PSK	2 Tx	25.24	20.75	0.1189	38.45	PASS
GSM 850	251	6	848.8	8PSK	3 Tx	23.37	18.88	0.0773	38.45	PASS
GSM 850	251	6	848.8	8PSK	4 Tx	20.95	16.46	0.0443	38.45	PASS
GSM 850	190	6	836.6	8PSK	1 Tx	26.60	22.11	0.1626	38.45	PASS
GSM 850	190	6	836.6	8PSK	2 Tx	25.13	20.64	0.1159	38.45	PASS
GSM 850	190	6	836.6	8PSK	3 Tx	23.84	19.35	0.0861	38.45	PASS
GSM 850	190	6	836.6	8PSK	4 Tx	21.26	16.77	0.0475	38.45	PASS
GSM 850	128	6	824.2	8PSK	1 Tx	26.33	21.84	0.1528	38.45	PASS
GSM 850	128	6	824.2	8PSK	2 Tx	25.49	21.00	0.1259	38.45	PASS
GSM 850	128	6	824.2	8PSK	3 Tx	23.20	18.71	0.0743	38.45	PASS
GSM 850	128	6	824.2	8PSK	4 Tx	21.52	17.03	0.0505	38.45	PASS
PCS 1900	810	5	1909.8	8PSK	1 Tx	25.71	25.78	0.3784	33.01	PASS
PCS 1900	810	5	1909.8	8PSK	2 Tx	23.63	23.70	0.2344	33.01	PASS
PCS 1900	810	5	1909.8	8PSK	3 Tx	21.42	21.49	0.1409	33.01	PASS
PCS 1900	810	5	1909.8	8PSK	4 Tx	20.03	20.10	0.1023	33.01	PASS
PCS 1900	661	5	1880.0	8PSK	1 Tx	25.46	25.53	0.3573	33.01	PASS
PCS 1900	661	5	1880.0	8PSK	2 Tx	23.81	23.88	0.2443	33.01	PASS
PCS 1900	661	5	1880.0	8PSK	3 Tx	21.42	21.49	0.1409	33.01	PASS
PCS 1900	661	5	1880.0	8PSK	4 Tx	19.94	20.01	0.1002	33.01	PASS
PCS 1900	512	5	1850.2	8PSK	1 Tx	24.94	25.01	0.3170	33.01	PASS
PCS 1900	512	5	1850.2	8PSK	2 Tx	23.48	23.55	0.2265	33.01	PASS
PCS 1900	512	5	1850.2	8PSK	3 Tx	20.88	20.95	0.1245	33.01	PASS
PCS 1900	512	5	1850.2	8PSK	4 Tx	18.54	18.61	0.0726	33.01	PASS

Note:

The ERP is for below 1GHz, EIRP is for above 1GHz

$EIRP = \text{Conducted Power(dBm)} - L_c(\text{dB}) + G_r(\text{dBi})$

$ERP = \text{Conducted Power(dBm)} - L_c(\text{dB}) + G_r(\text{dBd})$

$G_r(\text{dBd}) = G_r(\text{dBi}) - 2.15$

Peak to Average Ratio EGPRS

Test result

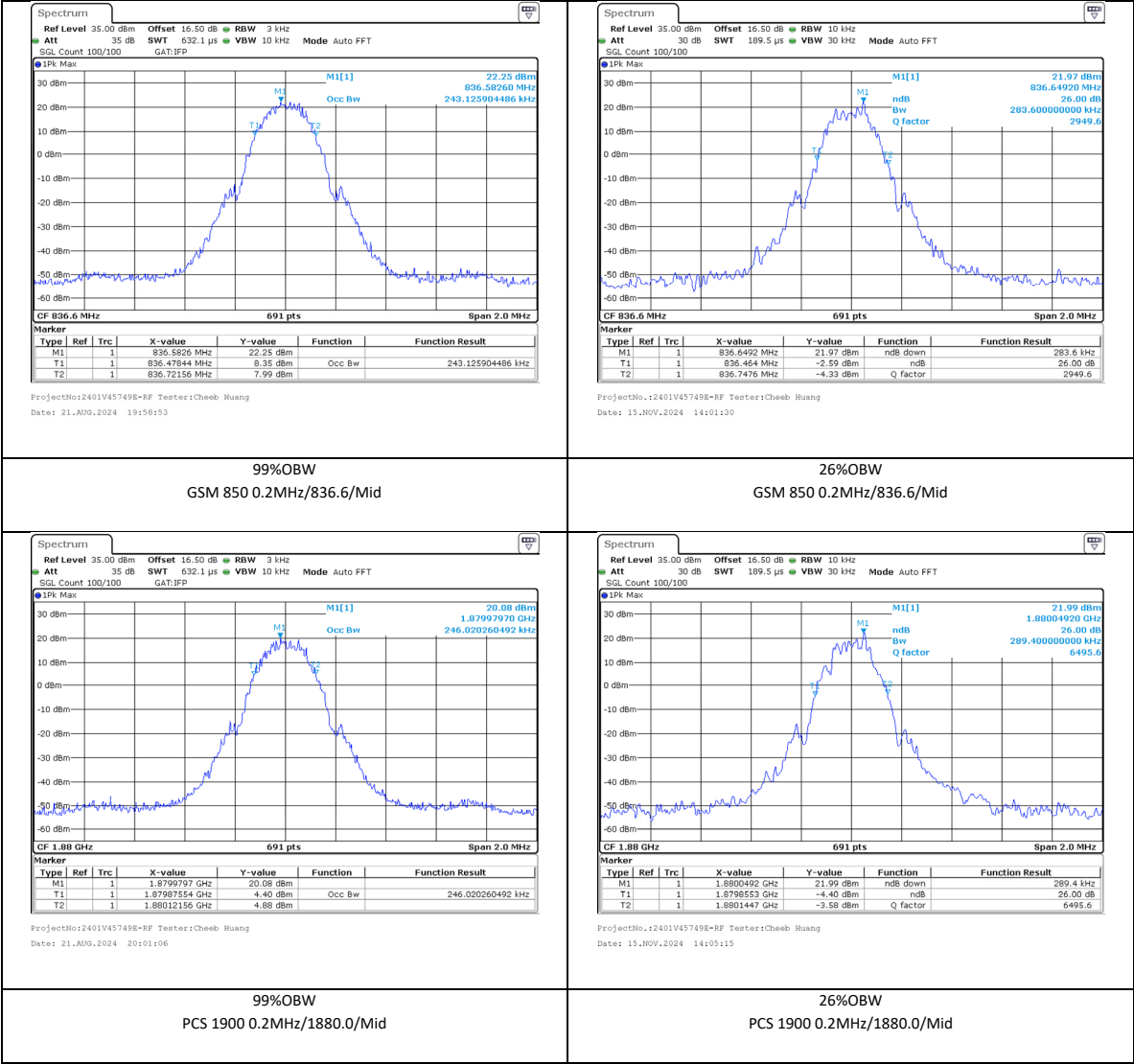
Band	Channel	Freq (MHz)	Slots	Result (dB)	Limit (dB)	Verdict
GSM 850	251	848.8	1 Tx	2.43	13	PASS
GSM 850	190	836.6	1 Tx	2.32	13	PASS
GSM 850	128	824.2	1 Tx	2.52	13	PASS
PCS 1900	810	1909.8	1 Tx	2.20	13	PASS
PCS 1900	661	1880.0	1 Tx	2.88	13	PASS
PCS 1900	512	1850.2	1 Tx	2.20	13	PASS

Occupied Bandwidth EGPRS

Test result

Band	Channel	Freq (MHz)	Slots	OBW (MHz)	26dB BW (MHz)	Verdict
GSM 850	190	836.6	1 Tx	0.24313	0.2836	PASS
PCS 1900	661	1880.0	1 Tx	0.24602	0.2894	PASS

Test graph

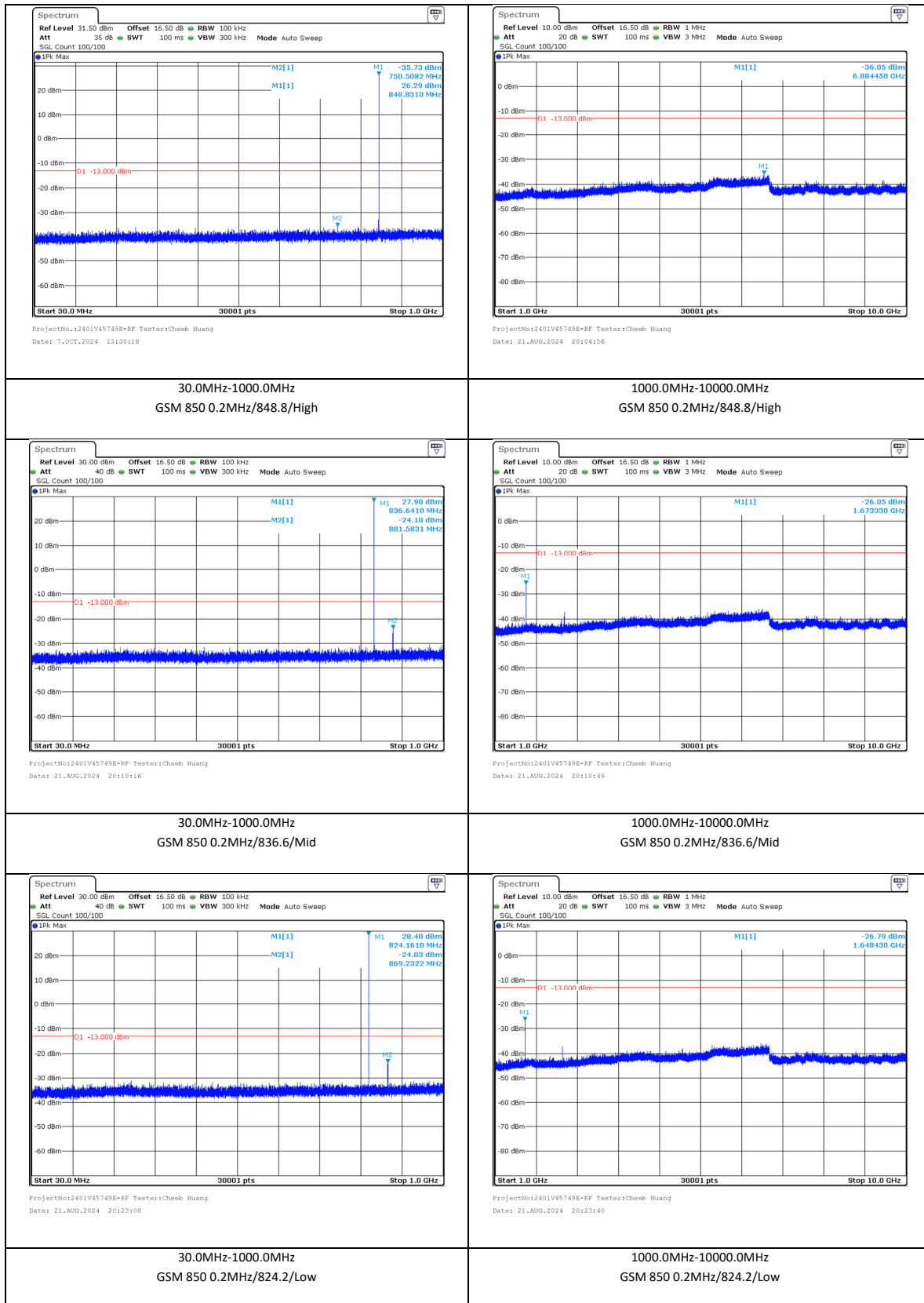


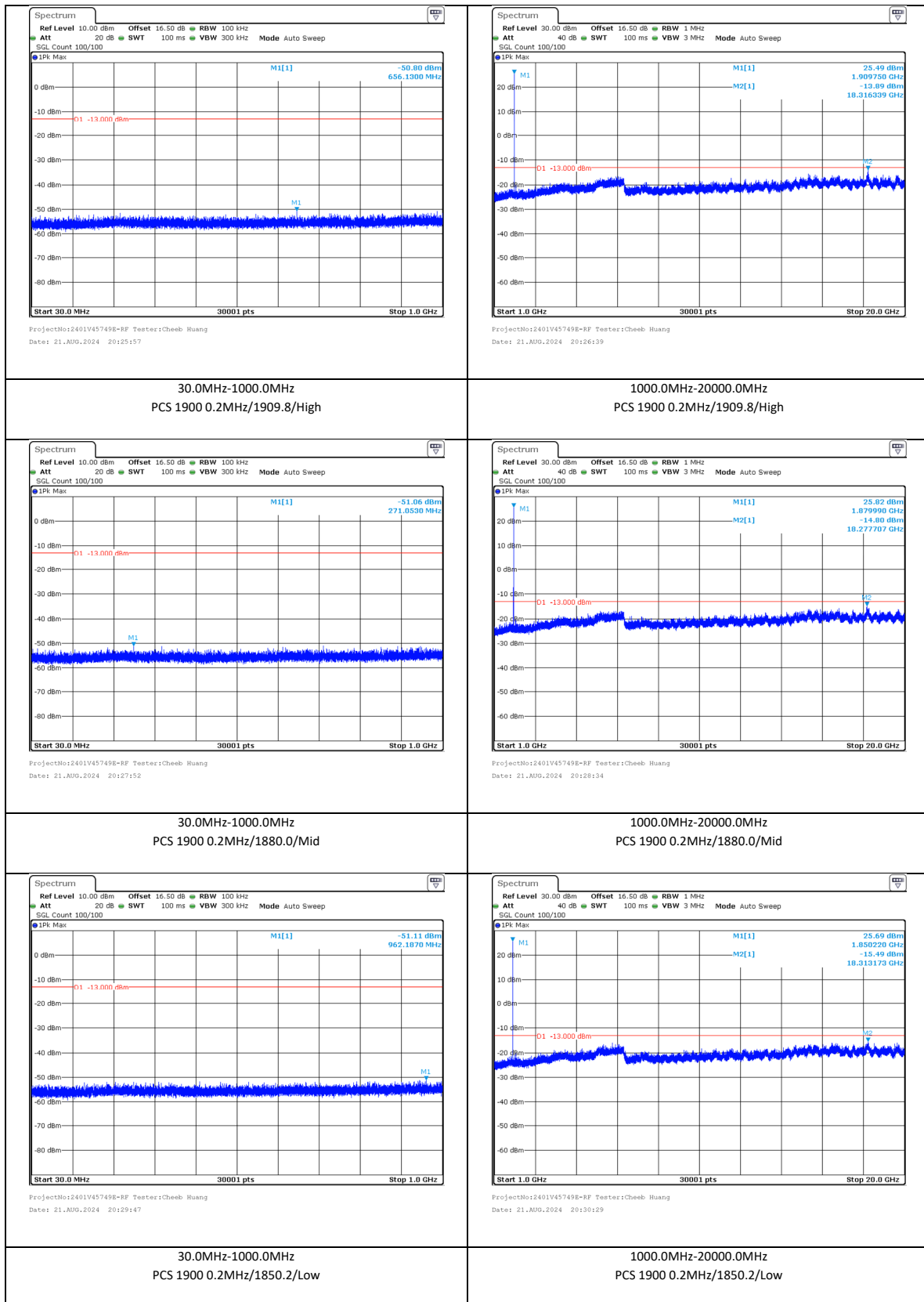
Conducted Spurious Emissions EGPRS

Test result

Band	Channel	Freq (MHz)	StartFreq (MHz)	StopFreq (MHz)	Slots	Result (dBm)	Limit (dBm)	Verdict
GSM 850	251	848.8	30.0	1000.0	1 Tx	-35.73	-13	PASS
GSM 850	251	848.8	1000.0	10000.0	1 Tx	-36.05	-13	PASS
GSM 850	190	836.6	30.0	1000.0	1 Tx	-24.1	-13	PASS
GSM 850	190	836.6	1000.0	10000.0	1 Tx	-26.05	-13	PASS
GSM 850	128	824.2	30.0	1000.0	1 Tx	-24.03	-13	PASS
GSM 850	128	824.2	1000.0	10000.0	1 Tx	-26.79	-13	PASS
PCS 1900	810	1909.8	30.0	1000.0	1 Tx	-50.8	-13	PASS
PCS 1900	810	1909.8	1000.0	20000.0	1 Tx	-13.89	-13	PASS
PCS 1900	661	1880.0	30.0	1000.0	1 Tx	-51.06	-13	PASS
PCS 1900	661	1880.0	1000.0	20000.0	1 Tx	-14.8	-13	PASS
PCS 1900	512	1850.2	30.0	1000.0	1 Tx	-51.11	-13	PASS
PCS 1900	512	1850.2	1000.0	20000.0	1 Tx	-15.49	-13	PASS

Test graph



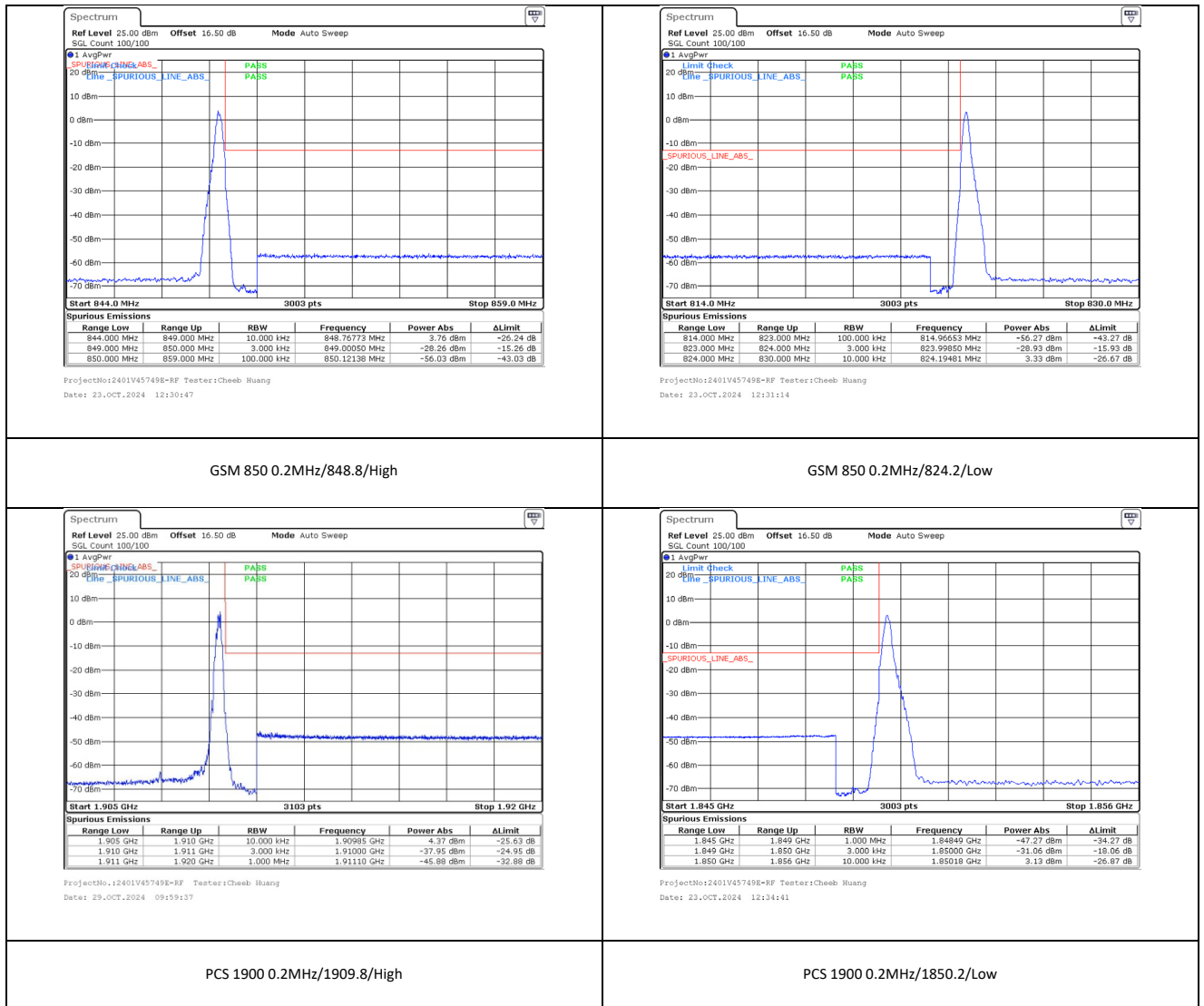


Conducted Band Edge EGPRS

Test result

Band	Channel	Freq (MHz)	Slots	Result	Verdict
GSM 850	251	848.8	1 Tx	see graph	PASS
GSM 850	128	824.2	1 Tx	see graph	PASS
PCS 1900	810	1909.8	1 Tx	see graph	PASS
PCS 1900	512	1850.2	1 Tx	see graph	PASS

Test graph



Frequency Stability Error_EGPRS

Test result

Band	Channel	Freq (MHz)	Slots	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
GSM 850	251	848.8	1 Tx	0.25	0.00029	±2.5	PASS	20°C/8.4V _{DC}
GSM 850	251	848.8	1 Tx	-8.26	-0.00973	±2.5	PASS	20°C/6.8V _{DC}
GSM 850	251	848.8	1 Tx	-4.03	-0.00475	±2.5	PASS	50°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-5.79	-0.00682	±2.5	PASS	40°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-1.97	-0.00232	±2.5	PASS	30°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-1.35	-0.00159	±2.5	PASS	20°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-4.85	-0.00571	±2.5	PASS	10°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-7.96	-0.00938	±2.5	PASS	0°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-2.57	-0.00303	±2.5	PASS	-10°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-4.65	-0.00548	±2.5	PASS	-20°C/7.4V _{DC}
GSM 850	251	848.8	1 Tx	-8.30	-0.00978	±2.5	PASS	-30°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-10.64	-0.01272	±2.5	PASS	20°C/8.4V _{DC}
GSM 850	190	836.6	1 Tx	-4.24	-0.00507	±2.5	PASS	20°C/6.8V _{DC}
GSM 850	190	836.6	1 Tx	-3.33	-0.00398	±2.5	PASS	50°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-14.71	-0.01758	±2.5	PASS	40°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	0.24	0.00029	±2.5	PASS	30°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-7.61	-0.00910	±2.5	PASS	20°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-7.22	-0.00863	±2.5	PASS	10°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	1.91	0.00228	±2.5	PASS	0°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-8.88	-0.01061	±2.5	PASS	-10°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-6.25	-0.00747	±2.5	PASS	-20°C/7.4V _{DC}
GSM 850	190	836.6	1 Tx	-0.91	-0.00109	±2.5	PASS	-30°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-4.46	-0.00541	±2.5	PASS	20°C/8.4V _{DC}
GSM 850	128	824.2	1 Tx	-1.44	-0.00175	±2.5	PASS	20°C/6.8V _{DC}
GSM 850	128	824.2	1 Tx	-3.67	-0.00445	±2.5	PASS	50°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-13.36	-0.01621	±2.5	PASS	40°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-3.03	-0.00368	±2.5	PASS	30°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-13.47	-0.01634	±2.5	PASS	20°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-2.83	-0.00343	±2.5	PASS	10°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-2.62	-0.00318	±2.5	PASS	0°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-0.38	-0.00046	±2.5	PASS	-10°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-7.49	-0.00909	±2.5	PASS	-20°C/7.4V _{DC}
GSM 850	128	824.2	1 Tx	-7.22	-0.00876	±2.5	PASS	-30°C/7.4V _{DC}

Frequency Stability Range_EGPRS

Test result

Band	Channel (Low/High)	Freq (MHz)	Lower Edge (MHz) (Result)	Limit (1850MHz)	Upper Edge (MHz) (Result)	Limit (1910MHz)	Environment
PCS 1900	512/810	1850.2/1909.8	1850.013	1850.000	1909.828	1910.000	20°C/8.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.157	1850.000	1909.887	1910.000	20°C/6.8V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.183	1850.000	1909.910	1910.000	50°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.056	1850.000	1909.922	1910.000	40°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.030	1850.000	1909.980	1910.000	30°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.085	1850.000	1909.980	1910.000	20°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.161	1850.000	1909.900	1910.000	10°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.135	1850.000	1909.872	1910.000	0°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.166	1850.000	1909.858	1910.000	-10°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.071	1850.000	1909.900	1910.000	-20°C/7.4V _{DC}
PCS 1900	512/810	1850.2/1909.8	1850.016	1850.000	1909.970	1910.000	-30°C/7.4V _{DC}