

RF Power Output and Effective Radiated Power

GSM 850		Conducted Power (dBm)		
		Channel/Frenqucy(MHz)		
		128/824.2	190/836.6	251/848.8
GSM	CS	31.82	31.70	31.85
GPRS(GMSK)	1 Tx Slot	31.78	31.88	31.81
	2 Tx Slots	31.23	31.27	31.20
	3 Tx Slots	29.21	29.01	29.28
	4 Tx Slots	28.06	27.95	28.27
EGPRS (8PSK)	1 Tx Slot	25.64	25.66	25.67
	2 Tx Slots	25.43	25.56	25.60
	3 Tx Slots	23.34	23.44	23.58
	4 Tx Slots	22.21	22.24	22.25

WCDMA Band V		Conducted Power (dBm)		
		Channel/Frenqucy		
		4132/826.4	4183/836.6	4233/846.6
RMC	12.2k	23.36	23.12	23.15
HSDPA	Subtest 1	22.82	22.54	22.59
	Subtest 2	22.81	22.56	22.56
	Subtest 3	22.28	22.06	22.08
	Subtest 4	22.29	22.07	22.06
HSUPA	Subtest 1	22.78	22.53	22.54
	Subtest 2	21.77	21.51	21.53
	Subtest 3	22.24	21.99	22.02
	Subtest 4	21.70	21.48	21.50
	Subtest 5	22.71	22.46	22.48
DC-HSDPA	Subtest 1	22.70	22.48	22.49
	Subtest 2	22.69	22.47	22.48
	Subtest 3	22.27	21.96	21.99
	Subtest 4	22.26	21.95	21.98

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	Verdict
LTE Band5	1.4	20407	1	#0	QPSK	23.45	PASS
LTE Band5	1.4	20407	1	#Mid	QPSK	23.43	PASS
LTE Band5	1.4	20407	1	#Max	QPSK	23.42	PASS
LTE Band5	1.4	20407	3	#0	QPSK	23.16	PASS
LTE Band5	1.4	20407	3	#Mid	QPSK	23.16	PASS
LTE Band5	1.4	20407	3	#Max	QPSK	23.12	PASS
LTE Band5	1.4	20407	6	#0	QPSK	22.11	PASS
LTE Band5	1.4	20407	1	#0	QAM16	22.45	PASS
LTE Band5	1.4	20407	1	#Mid	QAM16	22.52	PASS
LTE Band5	1.4	20407	1	#Max	QAM16	22.33	PASS
LTE Band5	1.4	20407	3	#0	QAM16	22.26	PASS
LTE Band5	1.4	20407	3	#Mid	QAM16	22.18	PASS
LTE Band5	1.4	20407	3	#Max	QAM16	22.06	PASS
LTE Band5	1.4	20407	6	#0	QAM16	21.13	PASS
LTE Band5	1.4	20525	1	#0	QPSK	23.18	PASS
LTE Band5	1.4	20525	1	#Mid	QPSK	23.29	PASS
LTE Band5	1.4	20525	1	#Max	QPSK	23.11	PASS
LTE Band5	1.4	20525	3	#0	QPSK	23.25	PASS
LTE Band5	1.4	20525	3	#Mid	QPSK	23.25	PASS
LTE Band5	1.4	20525	3	#Max	QPSK	23.26	PASS
LTE Band5	1.4	20525	6	#0	QPSK	22.47	PASS
LTE Band5	1.4	20525	1	#0	QAM16	22.27	PASS
LTE Band5	1.4	20525	1	#Mid	QAM16	22.55	PASS
LTE Band5	1.4	20525	1	#Max	QAM16	22.41	PASS
LTE Band5	1.4	20525	3	#0	QAM16	22.41	PASS
LTE Band5	1.4	20525	3	#Mid	QAM16	22.41	PASS
LTE Band5	1.4	20525	3	#Max	QAM16	22.44	PASS
LTE Band5	1.4	20525	6	#0	QAM16	21.36	PASS
LTE Band5	1.4	20643	1	#0	QPSK	23.37	PASS
LTE Band5	1.4	20643	1	#Mid	QPSK	23.17	PASS
LTE Band5	1.4	20643	1	#Max	QPSK	22.94	PASS
LTE Band5	1.4	20643	3	#0	QPSK	23.17	PASS
LTE Band5	1.4	20643	3	#Mid	QPSK	23.17	PASS
LTE Band5	1.4	20643	3	#Max	QPSK	23.04	PASS
LTE Band5	1.4	20643	6	#0	QPSK	22.10	PASS
LTE Band5	1.4	20643	1	#0	QAM16	21.67	PASS
LTE Band5	1.4	20643	1	#Mid	QAM16	21.71	PASS
LTE Band5	1.4	20643	1	#Max	QAM16	21.70	PASS
LTE Band5	1.4	20643	3	#0	QAM16	22.08	PASS
LTE Band5	1.4	20643	3	#Mid	QAM16	22.10	PASS



LTE Band5	1.4	20643	3	#Max	QAM16	22.15	PASS
LTE Band5	1.4	20643	6	#0	QAM16	21.39	PASS
LTE Band5	3	20415	1	#0	QPSK	23.28	PASS
LTE Band5	3	20415	1	#Mid	QPSK	22.80	PASS
LTE Band5	3	20415	1	#Max	QPSK	22.97	PASS
LTE Band5	3	20415	8	#0	QPSK	22.09	PASS
LTE Band5	3	20415	8	#Mid	QPSK	22.09	PASS
LTE Band5	3	20415	8	#Max	QPSK	22.04	PASS
LTE Band5	3	20415	15	#0	QPSK	22.08	PASS
LTE Band5	3	20415	1	#0	QAM16	22.62	PASS
LTE Band5	3	20415	1	#Mid	QAM16	21.65	PASS
LTE Band5	3	20415	1	#Max	QAM16	21.88	PASS
LTE Band5	3	20415	8	#0	QAM16	20.90	PASS
LTE Band5	3	20415	8	#Mid	QAM16	20.91	PASS
LTE Band5	3	20415	8	#Max	QAM16	20.86	PASS
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LTE Band5	3	20525	8	#0	QPSK	22.08	PASS
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LTE Band5	3	20525	1	#Mid	QAM16	22.42	PASS
LTE Band5	3	20525	1	#Max	QAM16	22.89	PASS
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LTE Band5	3	20635	8	#Mid	QPSK	22.19	PASS
LTE Band5	3	20635	8	#Max	QPSK	22.13	PASS
LTE Band5	3	20635	15	#0	QPSK	22.19	PASS
LTE Band5	3	20635	1	#0	QAM16	21.96	PASS
LTE Band5	3	20635	1	#Mid	QAM16	21.82	PASS
LTE Band5	3	20635	1	#Max	QAM16	21.81	PASS
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LTE Band5	3	20635	8	#Mid	QAM16	20.88	PASS
LTE Band5	3	20635	8	#Max	QAM16	20.83	PASS



LTE Band5	3	20635	15	#0	QAM16	21.12	PASS
LTE Band5	5	20425	1	#0	QPSK	23.44	PASS
LTE Band5	5	20425	1	#Mid	QPSK	22.96	PASS
LTE Band5	5	20425	1	#Max	QPSK	22.97	PASS
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LTE Band5	5	20425	12	#Mid	QPSK	22.09	PASS
LTE Band5	5	20425	12	#Max	QPSK	22.09	PASS
LTE Band5	5	20425	25	#0	QPSK	22.03	PASS
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LTE Band5	5	20425	1	#Max	QAM16	22.01	PASS
LTE Band5	5	20425	12	#0	QAM16	20.97	PASS
LTE Band5	5	20425	12	#Mid	QAM16	20.98	PASS
LTE Band5	5	20425	12	#Max	QAM16	20.96	PASS
LTE Band5	5	20425	25	#0	QAM16	21.15	PASS
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LTE Band5	5	20525	1	#Mid	QPSK	23.08	PASS
LTE Band5	5	20525	1	#Max	QPSK	23.15	PASS
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LTE Band5	5	20625	12	#Max	QPSK	22.18	PASS
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LTE Band5	5	20625	1	#Mid	QAM16	21.84	PASS
LTE Band5	5	20625	1	#Max	QAM16	21.81	PASS
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LTE Band5	5	20625	12	#Max	QAM16	20.95	PASS
LTE Band5	5	20625	25	#0	QAM16	21.01	PASS



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LTE Band5	10	20450	1	#Mid	QPSK	23.01	PASS
LTE Band5	10	20450	1	#Max	QPSK	22.68	PASS
LTE Band5	10	20450	25	#0	QPSK	22.20	PASS
LTE Band5	10	20450	25	#Mid	QPSK	22.12	PASS
LTE Band5	10	20450	25	#Max	QPSK	22.11	PASS
LTE Band5	10	20450	50	#0	QPSK	22.16	PASS
LTE Band5	10	20450	1	#0	QAM16	22.39	PASS
LTE Band5	10	20450	1	#Mid	QAM16	22.34	PASS
LTE Band5	10	20450	1	#Max	QAM16	22.09	PASS
LTE Band5	10	20450	25	#0	QAM16	21.17	PASS
LTE Band5	10	20450	25	#Mid	QAM16	21.17	PASS
LTE Band5	10	20450	25	#Max	QAM16	21.16	PASS
LTE Band5	10	20450	50	#0	QAM16	21.06	PASS
LTE Band5	10	20525	1	#0	QPSK	23.21	PASS
LTE Band5	10	20525	1	#Mid	QPSK	23.51	PASS
LTE Band5	10	20525	1	#Max	QPSK	23.41	PASS
LTE Band5	10	20525	25	#0	QPSK	22.12	PASS
LTE Band5	10	20525	25	#Mid	QPSK	22.13	PASS
LTE Band5	10	20525	25	#Max	QPSK	22.13	PASS
LTE Band5	10	20525	50	#0	QPSK	22.08	PASS
LTE Band5	10	20525	1	#0	QAM16	22.94	PASS
LTE Band5	10	20525	1	#Mid	QAM16	22.87	PASS
LTE Band5	10	20525	1	#Max	QAM16	23.14	PASS
LTE Band5	10	20525	25	#0	QAM16	21.12	PASS
LTE Band5	10	20525	25	#Mid	QAM16	21.05	PASS
LTE Band5	10	20525	25	#Max	QAM16	21.13	PASS
LTE Band5	10	20525	50	#0	QAM16	21.15	PASS
LTE Band5	10	20600	1	#0	QPSK	23.35	PASS
LTE Band5	10	20600	1	#Mid	QPSK	23.67	PASS
LTE Band5	10	20600	1	#Max	QPSK	23.44	PASS
LTE Band5	10	20600	25	#0	QPSK	22.03	PASS
LTE Band5	10	20600	25	#Mid	QPSK	22.17	PASS
LTE Band5	10	20600	25	#Max	QPSK	22.20	PASS
LTE Band5	10	20600	50	#0	QPSK	22.13	PASS
LTE Band5	10	20600	1	#0	QAM16	21.60	PASS
LTE Band5	10	20600	1	#Mid	QAM16	21.88	PASS
LTE Band5	10	20600	1	#Max	QAM16	22.01	PASS
LTE Band5	10	20600	25	#0	QAM16	20.98	PASS
LTE Band5	10	20600	25	#Mid	QAM16	21.16	PASS
LTE Band5	10	20600	25	#Max	QAM16	21.18	PASS
LTE Band5	10	20600	50	#0	QAM16	21.14	PASS

Occupied Bandwidth

Mode	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
GSM 850 (GSM)	128	824.2	0.2465	0.3097
	190	836.6	0.2419	0.3098
	251	848.8	0.2401	0.3050
GPRS 850 (GMSK)	128	824.2	0.2458	0.3113
	190	836.6	0.2435	0.3059
	251	848.8	0.2429	0.3079
EGPRS 850 (8-PSK)	128	824.2	0.2534	0.3194
	190	836.6	0.2467	0.3136
	251	848.8	0.2434	0.3044
WCDMA Band V (RMC)	4132	826.4	4.1282	4.688
	4183	836.6	4.1228	4.704
	4233	846.6	4.1255	4.668

LTE Band 5						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	10	20450	829	8.9671	9.7830
			20525	836.5	8.9581	9.9360
			20600	844	8.9647	9.8360
	16QAM	10	20450	829	8.9766	9.8200
			20525	836.5	8.9756	9.7770
			20600	844	8.9738	9.6240



GSM 850 CH-Low



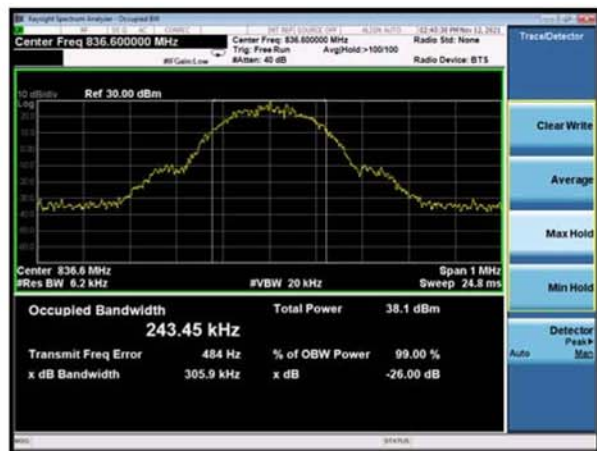
GSM 850 GPRS CH-Low



GSM 850 CH-Middle



GSM 850 GPRS CH-Middle



GSM 850 CH-High



GSM 850 GPRS CH-High





GSM 850 EGPRS CH-Low



WCDMA Band V CH-Low



GSM 850 EGPRS CH-Middle



WCDMA Band V CH-Middle

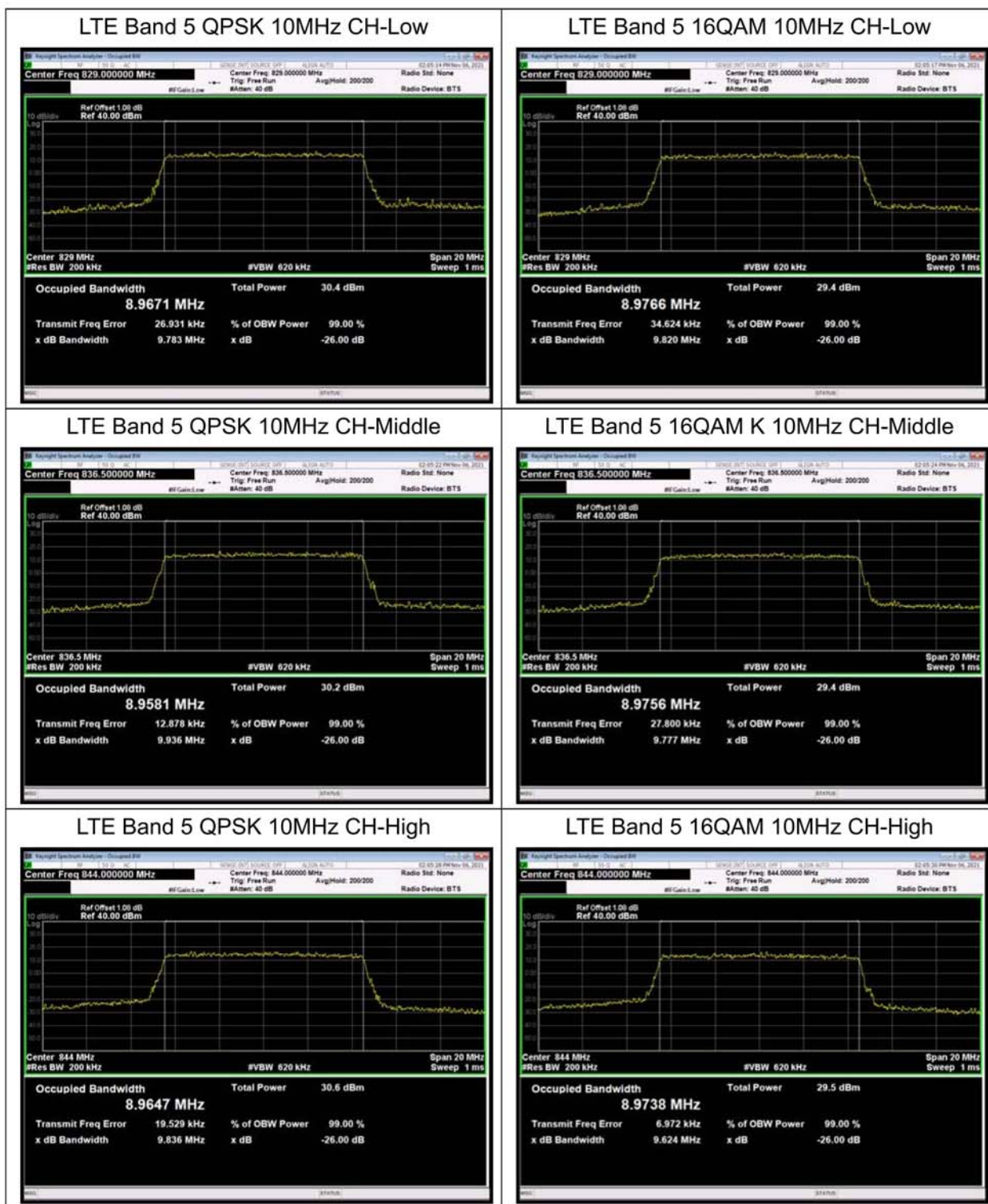


GSM 850 EGPRS CH-High



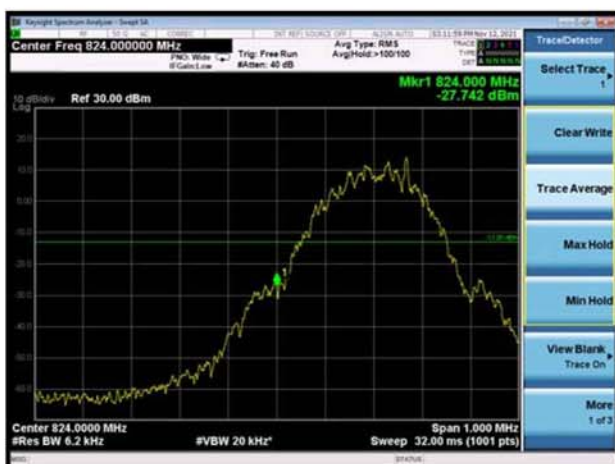
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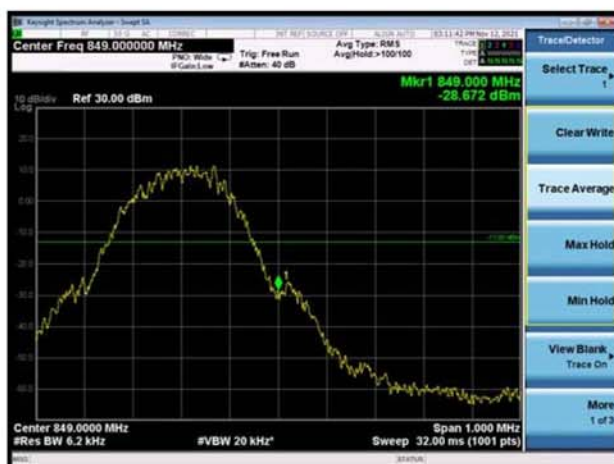


Band Edge Compliance

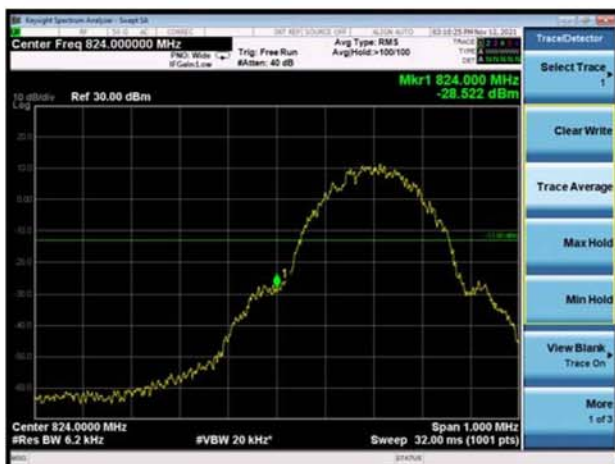
GSM850 GSM CH-Low



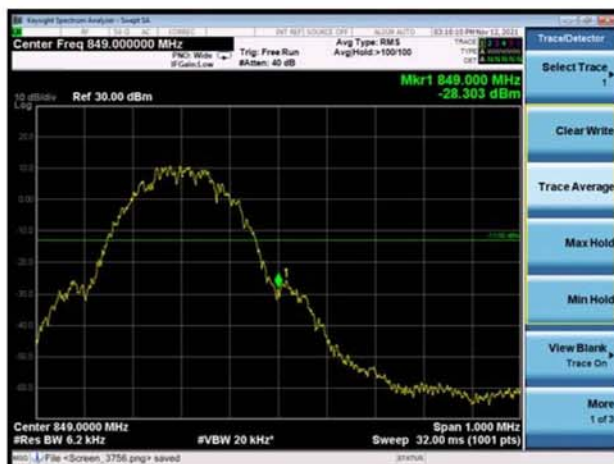
GSM 850 GSM CH-High



GSM850 GPRS CH-Low



GSM 850 GPRS CH-High



GSM850 EGPRS CH-Low



GSM 850 EGPRS CH-High



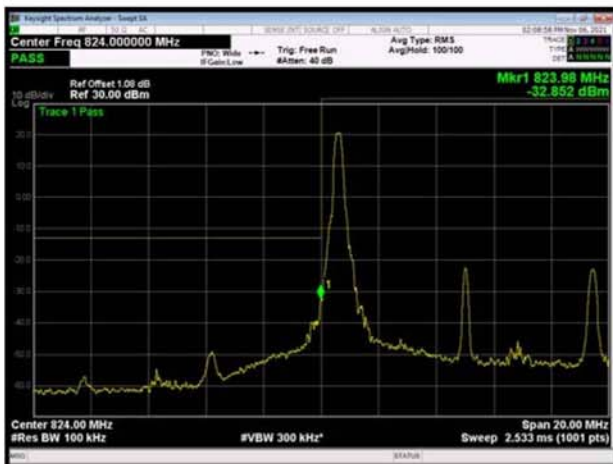
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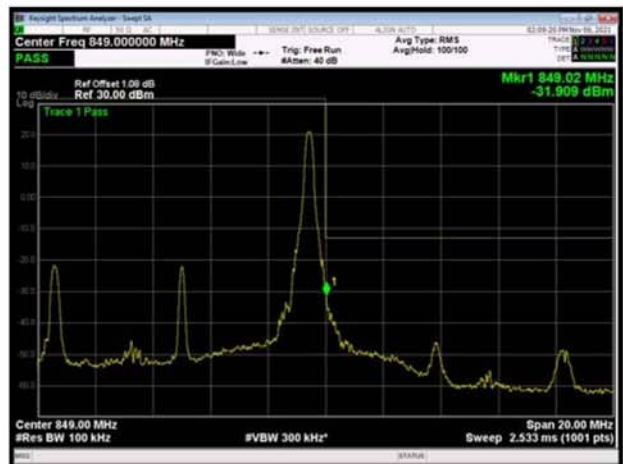
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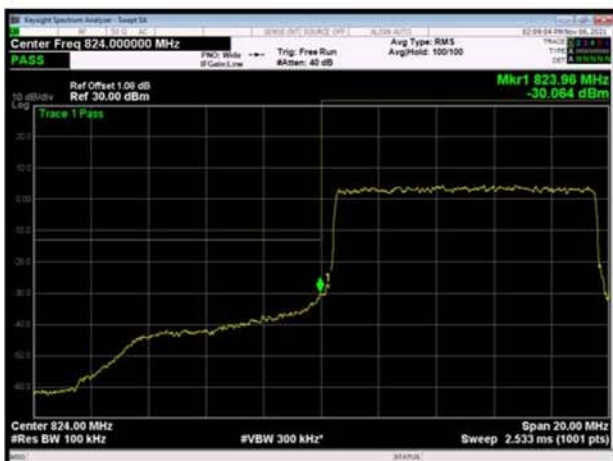
LTE Band 5 10MHz QPSK 1RB CH-Low



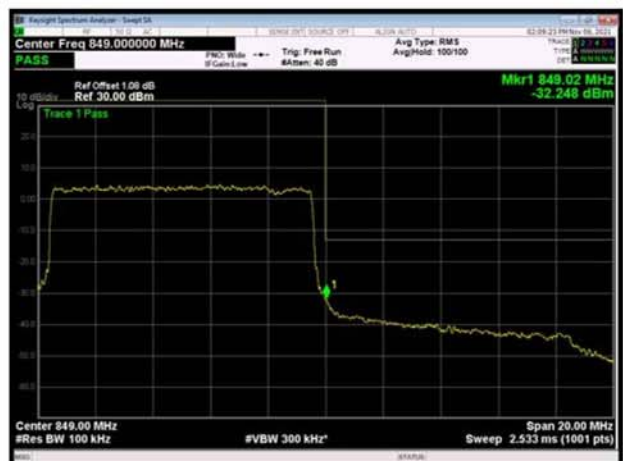
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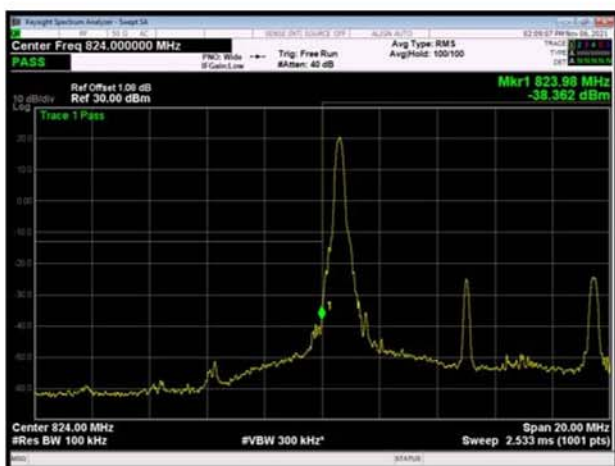
LTE Band 5 10MHz QPSK 100%RB CH-Low



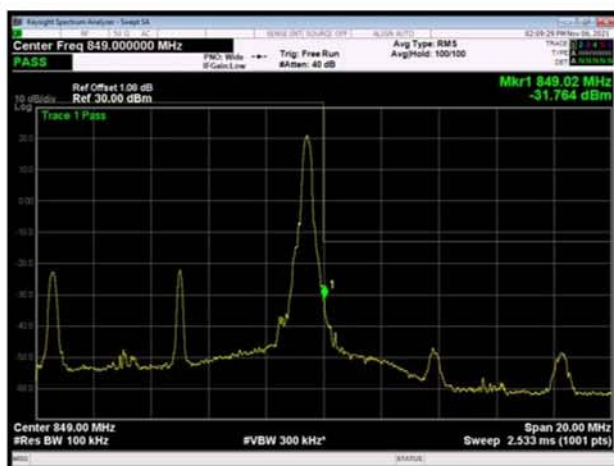
LTE Band 5 10MHz QPSK 100%RB CH-High



LTE Band 5 10MHz 16QAM 1RB CH-Low



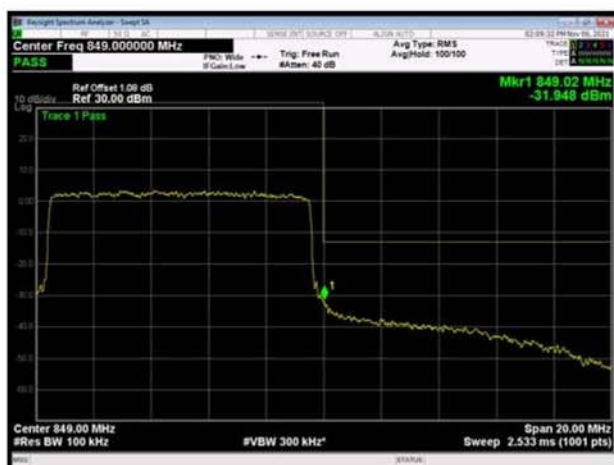
LTE Band 5 10MHz 16QAM 1RB CH-High



LTE Band 5 10MHz 16QAM 100%RB CH-Low



LTE Band 5 10MHz 16QAM 100%RB CH-High



Peak-to-Average Power Ratio (PAPR)

Mode	Channel	Frequency (MHz)	Peak(dBm)	Avg(dBm)	PAPR(dB)	Limit(dB)	Conclusion
GSM 850 (GMSK)	128	824.2	31.97	29.30	2.67	≤13	PASS
	190	836.6	32.16	29.46	2.70	≤13	PASS
	251	848.8	32.10	29.40	2.70	≤13	PASS
GPRS 850 (GMSK)	128	824.2	32.07	29.40	2.67	≤13	PASS
	190	836.6	32.28	29.59	2.69	≤13	PASS
	251	848.8	32.25	29.54	2.71	≤13	PASS
EGPRS 850 (8PSK)	128	824.2	28.96	23.20	5.76	≤13	PASS
	190	836.6	28.92	23.17	5.75	≤13	PASS
	251	848.8	29.05	23.31	5.74	≤13	PASS
WCDMA Band V (RMC)	4132	826.4	26.74	23.82	2.92	≤13	PASS
	4183	836.6	26.39	23.67	2.72	≤13	PASS
	4233	846.6	26.59	23.67	2.92	≤13	PASS

LTE Band 5								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	20407	824.7	27.20	22.57	4.63	≤13	PASS
		20525	836.5	27.15	22.66	4.49	≤13	PASS
		20643	848.3	27.03	22.57	4.46	≤13	PASS
	3	20415	825.5	27.38	22.68	4.70	≤13	PASS
		20525	836.5	27.04	22.46	4.58	≤13	PASS
		20635	847.5	27.18	22.58	4.60	≤13	PASS
	5	20425	826.5	27.34	22.58	4.76	≤13	PASS
		20525	836.5	27.07	22.55	4.52	≤13	PASS
		20625	846.5	27.26	22.62	4.64	≤13	PASS
	10	20450	829	27.32	22.63	4.69	≤13	PASS
		20525	836.5	27.14	22.50	4.64	≤13	PASS
		20600	844	27.37	22.58	4.79	≤13	PASS
16QAM	1.4	20407	824.7	27.03	21.36	5.67	≤13	PASS
		20525	836.5	27.10	21.71	5.39	≤13	PASS
		20643	848.3	27.05	21.67	5.38	≤13	PASS
	3	20415	825.5	27.28	21.67	5.61	≤13	PASS
		20525	836.5	26.97	21.44	5.53	≤13	PASS
		20635	847.5	27.11	21.61	5.50	≤13	PASS



	5	20425	826.5	27.18	21.44	5.74	≤13	PASS
		20525	836.5	26.97	21.53	5.44	≤13	PASS
		20625	846.5	27.18	21.61	5.57	≤13	PASS
	10	20450	829	27.21	21.59	5.62	≤13	PASS
		20525	836.5	27.08	21.59	5.49	≤13	PASS
		20600	844	27.34	21.64	5.70	≤13	PASS

Frequency Stability

GSM850						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
Temperature	Voltage	GMSK	8PSK	GMSK	8PSK	
Normal (25℃)	Normal	10.80	13.57	0.01291	0.01622	PASS
Extreme (85℃)		7.20	2.17	0.00860	0.00260	PASS
Extreme (80℃)		2.65	1.22	0.00317	0.00146	PASS
Extreme (70℃)		6.93	8.21	0.00828	0.00981	PASS
Extreme (60℃)		6.38	4.87	0.00762	0.00582	PASS
Extreme (50℃)		15.57	6.84	0.01861	0.00818	PASS
Extreme (40℃)		4.72	5.09	0.00565	0.00608	PASS
Extreme (30℃)		8.66	1.14	0.01036	0.00137	PASS
Extreme (20℃)		8.69	5.93	0.01039	0.00709	PASS
Extreme (10℃)		1.50	1.12	0.00179	0.00134	PASS
Extreme (0℃)		10.72	16.12	0.01281	0.01927	PASS
Extreme (-10℃)		6.97	16.09	0.00833	0.01923	PASS
Extreme (-20℃)		15.96	4.32	0.01908	0.00517	PASS
Extreme (-30℃)		1.75	13.54	0.00209	0.01619	PASS
Extreme (-40℃)		10.37	8.29	0.01240	0.00990	PASS
25℃	LV	12.26	17.75	0.01466	0.02122	PASS
	HV	10.94	10.74	0.01308	0.01283	PASS



WCDMA Band 5						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
Temperature	Voltage	BPSK	QPSK	BPSK	QPSK	
Normal (25℃)	Normal	17.38	17.82	0.02077	0.02130	PASS
Extreme (85℃)		6.00	8.00	0.00717	0.00956	PASS
Extreme (80℃)		7.00	9.00	0.00837	0.01076	PASS
Extreme (70℃)		8.00	4.00	0.00956	0.00478	PASS
Extreme (60℃)		5.00	1.00	0.00598	0.00120	PASS
Extreme (50℃)		1.00	3.00	0.00120	0.00359	PASS
Extreme (40℃)		10.42	17.42	0.01246	0.02082	PASS
Extreme (30℃)		10.08	3.58	0.01205	0.00428	PASS
Extreme (20℃)		4.95	3.56	0.00592	0.00425	PASS
Extreme (10℃)		2.44	2.65	0.00291	0.00317	PASS
Extreme (0℃)		7.18	16.86	0.00858	0.02016	PASS
Extreme (-10℃)		2.60	1.57	0.00311	0.00188	PASS
Extreme (-20℃)		9.82	1.46	0.01174	0.00175	PASS
Extreme (-30℃)		14.96	2.70	0.01788	0.00323	PASS
Extreme (-40℃)		12.42	16.75	0.01485	0.02002	PASS
25℃	LV	17.85	6.48	0.02133	0.00774	PASS
	HV	9.73	4.51	0.01163	0.00539	PASS

LTE Band 5						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	1.4MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	16.05	2.87	0.01919	0.00344	PASS
Extreme (85℃)		10.34	5.08	0.01236	0.00608	PASS
Extreme (80℃)		15.95	5.30	0.01907	0.00634	PASS
Extreme (70℃)		2.61	9.58	0.00312	0.01145	PASS
Extreme (60℃)		11.44	17.72	0.01367	0.02119	PASS
Extreme (50℃)		7.34	15.42	0.00878	0.01843	PASS
Extreme (40℃)		5.78	8.22	0.00691	0.00982	PASS
Extreme (30℃)		2.21	3.22	0.00264	0.00385	PASS
Extreme (20℃)		5.33	9.07	0.00638	0.01084	PASS
Extreme (10℃)		13.97	15.87	0.01670	0.01898	PASS
Extreme (0℃)		5.94	5.92	0.00710	0.00708	PASS



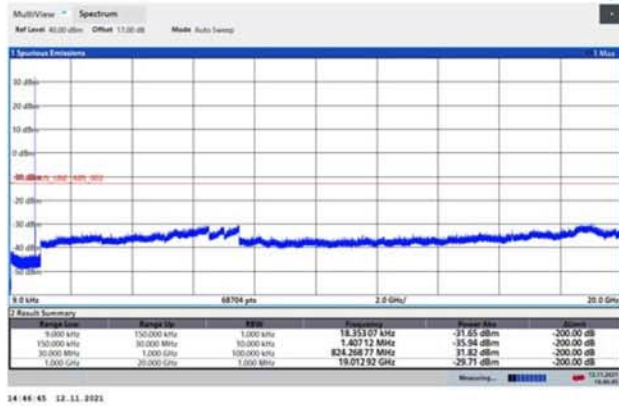
Extreme (-10℃)		2.47	2.68	0.00296	0.00321	PASS
Extreme (-20℃)		9.62	12.25	0.01150	0.01465	PASS
Extreme (-30℃)		3.66	2.44	0.00437	0.00292	PASS
Extreme (-40℃)		16.39	7.74	0.01959	0.00926	PASS
25℃	LV	11.30	13.54	0.01351	0.01618	PASS
	HV	1.51	16.69	0.00181	0.01995	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	3MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	17.81	17.46	0.02129	0.02087	PASS
Extreme (85℃)		17.49	12.16	0.02091	0.01454	PASS
Extreme (80℃)		5.09	7.38	0.00608	0.00882	PASS
Extreme (70℃)		2.29	8.08	0.00274	0.00966	PASS
Extreme (60℃)		11.16	13.10	0.01334	0.01567	PASS
Extreme (50℃)		8.76	13.93	0.01047	0.01665	PASS
Extreme (40℃)		10.24	15.59	0.01225	0.01864	PASS
Extreme (30℃)		13.09	1.34	0.01564	0.00160	PASS
Extreme (20℃)		12.07	3.74	0.01443	0.00447	PASS
Extreme (10℃)		11.77	8.19	0.01407	0.00979	PASS
Extreme (0℃)		12.41	13.89	0.01484	0.01660	PASS
Extreme (-10℃)		7.56	15.18	0.00904	0.01815	PASS
Extreme (-20℃)		13.27	3.03	0.01587	0.00362	PASS
Extreme (-30℃)		16.92	4.51	0.02023	0.00539	PASS
Extreme (-40℃)		4.51	3.31	0.00539	0.00396	PASS
25℃	LV	16.68	15.16	0.01994	0.01812	PASS
	HV	1.07	15.90	0.00129	0.01901	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	5MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	16.00	15.60	0.01913	0.01865	PASS
Extreme (85℃)		1.07	4.06	0.00128	0.00486	PASS
Extreme (80℃)		13.02	13.54	0.01556	0.01619	PASS
Extreme (70℃)		17.27	17.22	0.02064	0.02058	PASS
Extreme (60℃)		6.02	8.96	0.00719	0.01071	PASS
Extreme (50℃)		1.05	11.66	0.00126	0.01394	PASS
Extreme (40℃)		12.86	6.30	0.01537	0.00754	PASS
Extreme (30℃)		10.91	10.24	0.01305	0.01225	PASS
Extreme (20℃)		10.81	12.65	0.01293	0.01512	PASS
Extreme (10℃)		1.37	17.91	0.00163	0.02141	PASS
Extreme (0℃)		6.72	5.88	0.00803	0.00703	PASS



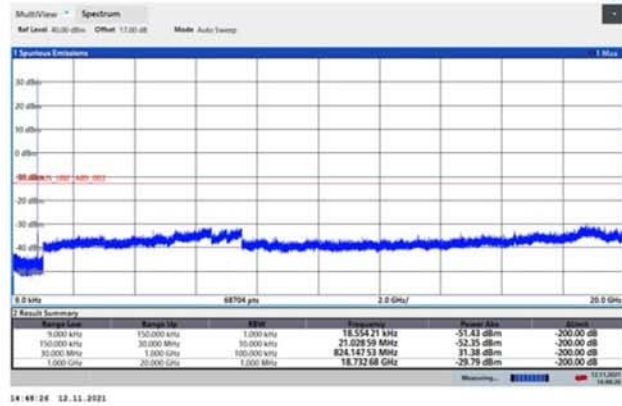
Extreme (-10℃)		11.91	16.02	0.01423	0.01915	PASS
Extreme (-20℃)		2.34	9.51	0.00280	0.01137	PASS
Extreme (-30℃)		9.35	5.34	0.01118	0.00638	PASS
Extreme (-40℃)		8.55	17.82	0.01022	0.02130	PASS
25℃	LV	12.92	2.06	0.01544	0.00246	PASS
	HV	4.05	4.73	0.00484	0.00565	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	10MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25℃)	Normal	4.66	4.04	0.00557	0.00483	PASS
Extreme (85℃)		13.42	5.79	0.01604	0.00693	PASS
Extreme (80℃)		7.93	12.86	0.00948	0.01537	PASS
Extreme (70℃)		15.81	17.39	0.01891	0.02079	PASS
Extreme (60℃)		12.76	9.94	0.01525	0.01188	PASS
Extreme (50℃)		1.09	11.89	0.00131	0.01422	PASS
Extreme (40℃)		3.36	9.93	0.00402	0.01187	PASS
Extreme (30℃)		14.30	5.67	0.01710	0.00678	PASS
Extreme (20℃)		9.82	2.10	0.01174	0.00252	PASS
Extreme (10℃)		14.80	10.29	0.01770	0.01230	PASS
Extreme (0℃)		3.58	1.63	0.00428	0.00195	PASS
Extreme (-10℃)		2.24	16.86	0.00268	0.02015	PASS
Extreme (-20℃)		14.51	12.70	0.01735	0.01518	PASS
Extreme (-30℃)		14.09	9.98	0.01684	0.01193	PASS
Extreme (-40℃)		15.84	17.63	0.01894	0.02108	PASS
25℃	LV	2.40	17.28	0.00287	0.02066	PASS
	HV	3.88	17.36	0.00464	0.02076	PASS

Spurious Emissions at Antenna Terminals

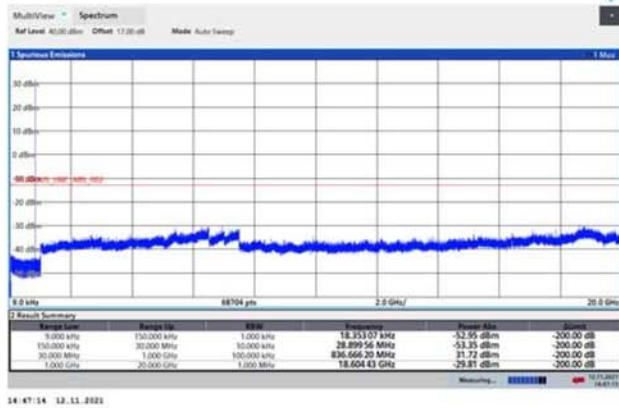
GSM 850 CH-Low 9kHz ~ 20GHz



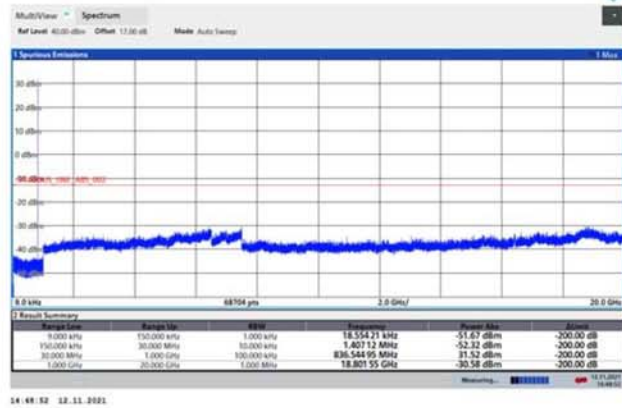
GPRS 850 CH-Low 9kHz ~ 20GHz



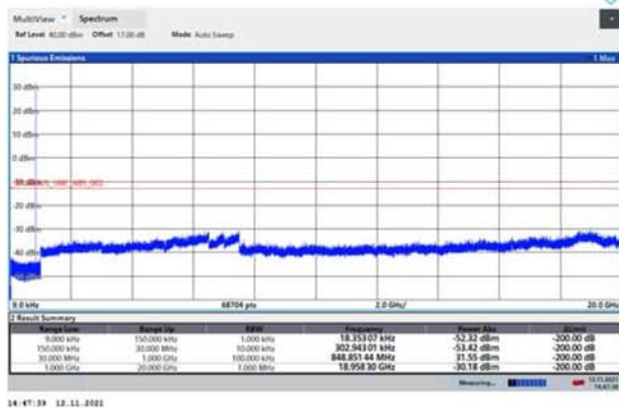
GSM 850 CH- Middle 9kHz ~ 20GHz



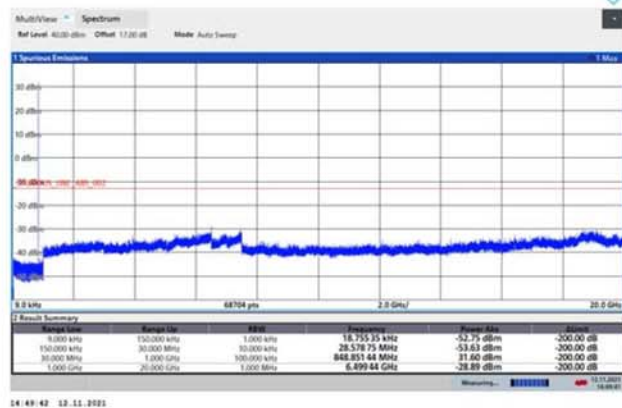
GPRS 850 CH- Middle 9kHz ~ 20GHz



GSM 850 CH-High 9kHz ~ 20GHz

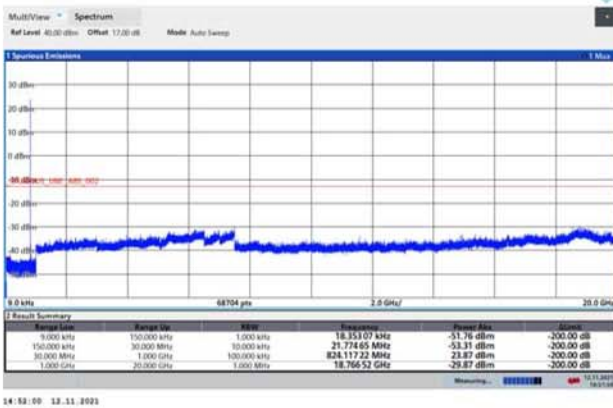


GPRS 850 CH-High 9kHz ~ 20GHz



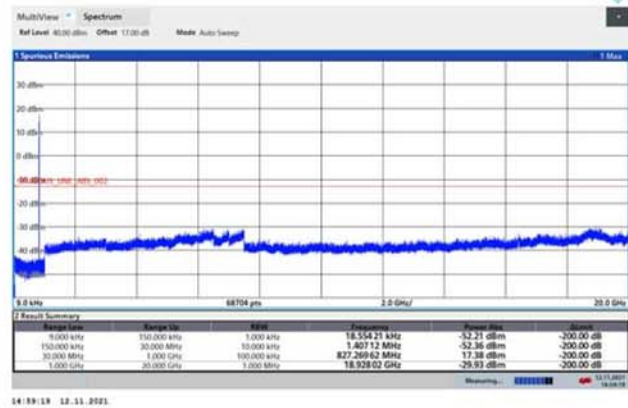


EGPRS 850 CH-Low 9kHz ~ 20GHz



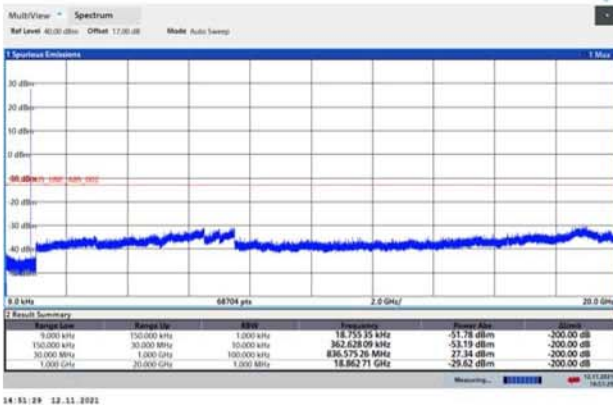
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WCDMA Band V CH-Low 9kHz~20GHz



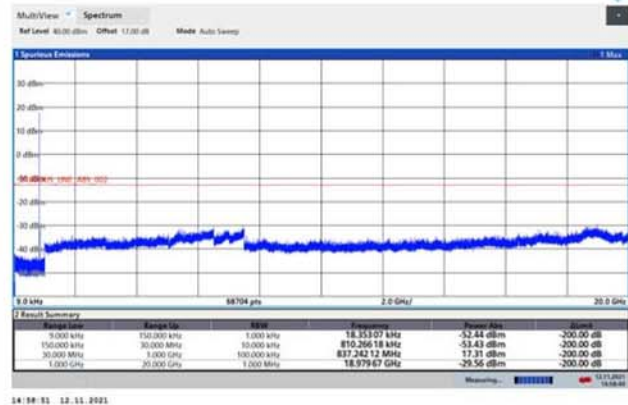
14:59:19 12.11.2021

EGPRS 850 CH- Middle 9kHz ~ 20GHz



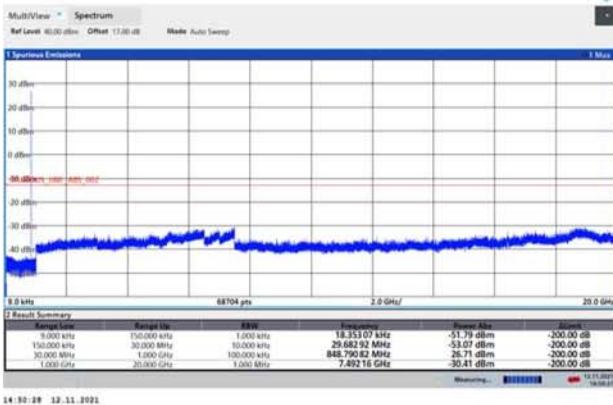
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WCDMA Band V CH-Middle 9kHz~20GHz



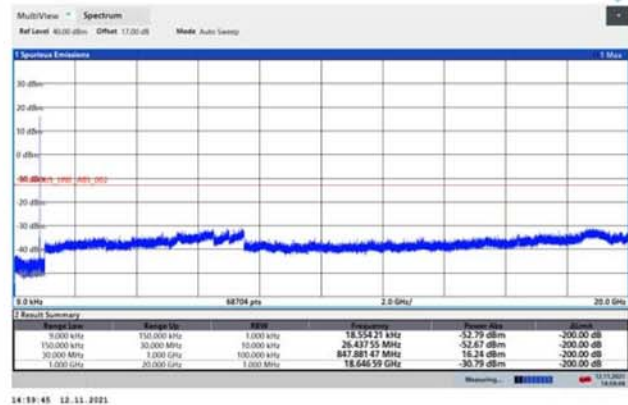
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EGPRS 850 CH-High 9kHz ~ 20GHz



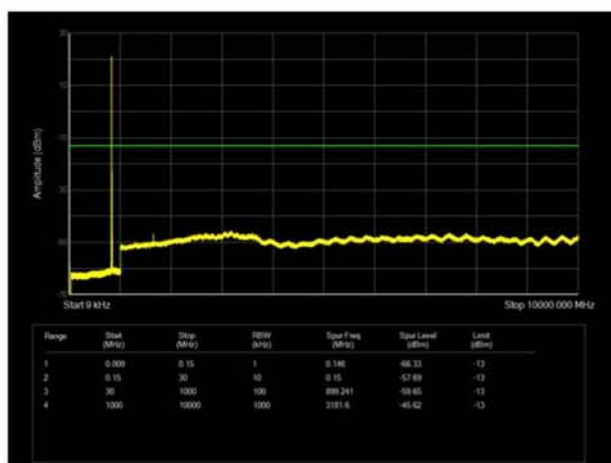
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WCDMA Band V CH-High 9kHz~20GHz

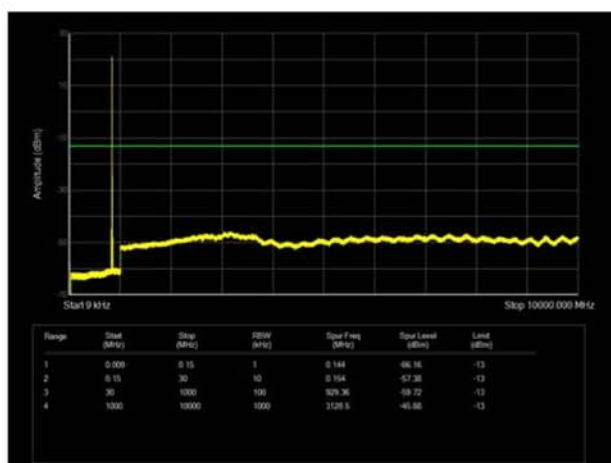


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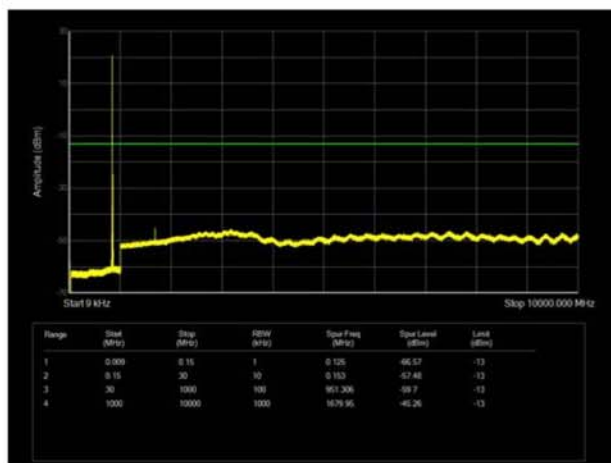
LTE Band 5 10MHz CH-Low 9kHz~20GHz



LTE Band 5 10MHz CH-Middle 9kHz~20GHz



LTE Band 5 10MHz CH-High 9kHz~20GHz



Radiates Spurious Emission

GSM 850 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1672.9	-66.71	2.00	10.75	Horizontal	-60.11	-13.00	47.11	45
3	2509.8	-63.37	2.51	11.05	Horizontal	-56.98	-13.00	43.98	135
4	3346.4	-60.52	4.20	11.15	Horizontal	-55.72	-13.00	42.72	225
5	4183.0	-56.96	5.20	11.15	Horizontal	-53.16	-13.00	40.16	45
6	5019.6	-55.35	5.50	11.95	Horizontal	-51.05	-13.00	38.05	90
7	5856.2	-56.46	5.70	13.55	Horizontal	-50.76	-13.00	37.76	45
8	6692.8	-57.17	6.30	13.75	Horizontal	-51.87	-13.00	38.87	135
9	7529.4	-52.68	6.80	13.85	Horizontal	-47.78	-13.00	34.78	225
10	8366.0	-52.76	6.90	14.25	Horizontal	-47.56	-13.00	34.56	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

WCDMA Band V CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1652.8	-65.03	1.70	8.70	Horizontal	-60.18	-13.00	47.18	45
3	2479.2	-66.12	2.30	12.00	Horizontal	-58.57	-13.00	45.57	90
4	3305.6	-59.97	2.70	12.70	Horizontal	-52.12	-13.00	39.12	45
5	4132.0	-63.07	3.00	12.50	Horizontal	-55.72	-13.00	42.72	135
6	4958.4	-60.30	3.40	12.50	Horizontal	-53.35	-13.00	40.35	90
7	5784.8	-57.43	3.40	12.80	Horizontal	-50.18	-13.00	37.18	135
8	6611.2	-56.89	4.10	11.50	Horizontal	-51.64	-13.00	38.64	90
9	7437.6	-53.07	4.20	12.20	Horizontal	-47.22	-13.00	34.22	135
10	8264.0	-54.37	4.30	12.50	Horizontal	-48.32	-13.00	35.32	90

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

LTE Band 5 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1671.9	-66.83	2.00	10.75	Horizontal	-60.23	-13.00	47.23	135
3	2507.9	-48.86	2.51	11.05	Horizontal	-42.47	-13.00	29.47	45
4	3343.9	-47.31	4.20	11.15	Horizontal	-42.51	-13.00	29.51	270
5	4180.1	-52.11	5.20	11.15	Horizontal	-48.31	-13.00	35.31	180
6	5016.4	-54.87	5.50	11.95	Horizontal	-50.57	-13.00	37.57	90
7	5852.6	-57.13	5.70	13.55	Horizontal	-51.43	-13.00	38.43	315
8	6688.9	-58.36	6.30	13.75	Horizontal	-53.06	-13.00	40.06	225
9	7525.1	-53.19	6.80	13.85	Horizontal	-48.29	-13.00	35.29	135
10	8361.4	-54.20	6.90	14.25	Horizontal	-49.00	-13.00	36.00	45

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

LTE Band 5 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1668.6	-66.28	2.00	10.75	Horizontal	-59.68	-13.00	46.68	90
3	2502.8	-50.23	2.51	11.05	Horizontal	-43.84	-13.00	30.84	315
4	3337.1	-47.85	4.20	11.15	Horizontal	-43.05	-13.00	30.05	90
5	4171.9	-51.22	5.20	11.15	Horizontal	-47.42	-13.00	34.42	135
6	5006.6	-54.81	5.50	11.95	Horizontal	-50.51	-13.00	37.51	270
7	5841.4	-57.32	5.70	13.55	Horizontal	-51.62	-13.00	38.62	180
8	6676.1	-58.23	6.30	13.75	Horizontal	-52.93	-13.00	39.93	90
9	7510.9	-54.07	6.80	13.85	Horizontal	-49.17	-13.00	36.17	315
10	8345.6	-54.70	6.90	14.25	Horizontal	-49.50	-13.00	36.50	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.



LTE Band 5 10MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1664.3	-65.76	2.00	10.75	Horizontal	-59.16	-13.00	46.16	180
3	2496.2	-53.65	2.51	11.05	Horizontal	-47.26	-13.00	34.26	135
4	3328.1	-50.78	4.20	11.15	Horizontal	-45.98	-13.00	32.98	135
5	4160.3	-49.53	5.20	11.15	Horizontal	-45.73	-13.00	32.73	315
6	4992.4	-54.97	5.50	11.95	Horizontal	-50.67	-13.00	37.67	180
7	5824.5	-56.24	5.70	13.55	Horizontal	-50.54	-13.00	37.54	90
8	6656.6	-58.04	6.30	13.75	Horizontal	-52.74	-13.00	39.74	0
9	7488.8	-53.19	6.80	13.85	Horizontal	-48.29	-13.00	35.29	45
10	8320.9	-54.89	6.90	14.25	Horizontal	-49.69	-13.00	36.69	315

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2.The worst emission was found in the antenna is Horizontal position.

Main Test Instruments

Date of Testing (variant): November 6, 2021 ~ November 25, 2021

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMW500	113824	2021-05-15	2022-05-14
Climate Chamber	Weiss	VT4002	58226119450010	2021-05-15	2022-05-14
Spectrum Analyzer	Key sight	N9020	MY52330084	2021-05-15	2022-05-14
Signal Analyzer	R&S	FSV3030	101411	2020-12-13	2021-12-12
Signal Analyzer	R&S	FSV30	100815	2020-12-13	2021-12-12
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	01111	2019--9-12	2022-09-11
Horn Antenna	Schwarzbeck	BBHA 9120D	1594	2020-12-17	2021-12-16