

## RF Power Output and Effective Radiated Power

GSM 1900		Conducted Power (dBm)		
		Channel 512	Channel 661	Channel 810
		1850.2 (MHz)	1880 (MHz)	1909.8 (MHz)
GSM(GMSK)	Results	29.70	29.72	29.57
GPRS (GMSK)	1TXslot	29.66	29.72	29.51
	2TXslots	28.54	28.62	28.52
	3TXslots	26.65	26.80	26.72
	4TXslots	25.75	25.85	25.84
EGPRS (8PSK)	1TXslot	26.08	26.14	26.10
	2TXslots	25.02	25.03	25.07
	3TXslots	22.88	23.00	22.90
	4TXslots	21.65	21.76	21.76

WCDMA Band II		Conducted Power (dBm)		
		Channel/Frenqucy		
		9262/1852.4	9400/1880	9538/1907.6
RMC	12.2k	23.31	23.41	23.36
HSDPA	Subtest 1	22.77	22.83	22.80
	Subtest 2	22.76	22.85	22.77
	Subtest 3	22.23	22.35	22.29
	Subtest 4	22.24	22.36	22.27
HSUPA	Subtest 1	22.73	22.82	22.75
	Subtest 2	21.72	21.80	21.74
	Subtest 3	22.19	22.28	22.23
	Subtest 4	21.65	21.77	21.71
	Subtest 5	22.66	22.75	22.69
DC-HSDPA	Subtest 1	22.65	22.77	22.70
	Subtest 2	22.64	22.76	22.69
	Subtest 3	22.22	22.25	22.20
	Subtest 4	22.21	22.24	22.19

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	Verdict
LTE Band2	1.4	18607	1	#0	QPSK	23.42	PASS
LTE Band2	1.4	18607	1	#Mid	QPSK	23.33	PASS
LTE Band2	1.4	18607	1	#Max	QPSK	23.25	PASS
LTE Band2	1.4	18607	3	#0	QPSK	23.27	PASS
LTE Band2	1.4	18607	3	#Mid	QPSK	23.27	PASS
LTE Band2	1.4	18607	3	#Max	QPSK	23.27	PASS
LTE Band2	1.4	18607	6	#0	QPSK	22.30	PASS
LTE Band2	1.4	18607	1	#0	QAM16	21.99	PASS
LTE Band2	1.4	18607	1	#Mid	QAM16	22.23	PASS
LTE Band2	1.4	18607	1	#Max	QAM16	22.14	PASS
LTE Band2	1.4	18607	3	#0	QAM16	22.37	PASS
LTE Band2	1.4	18607	3	#Mid	QAM16	22.36	PASS
LTE Band2	1.4	18607	3	#Max	QAM16	22.28	PASS
LTE Band2	1.4	18607	6	#0	QAM16	21.34	PASS
LTE Band2	1.4	18900	1	#0	QPSK	23.02	PASS
LTE Band2	1.4	18900	1	#Mid	QPSK	23.23	PASS
LTE Band2	1.4	18900	1	#Max	QPSK	23.02	PASS
LTE Band2	1.4	18900	3	#0	QPSK	22.88	PASS
LTE Band2	1.4	18900	3	#Mid	QPSK	22.88	PASS
LTE Band2	1.4	18900	3	#Max	QPSK	22.91	PASS
LTE Band2	1.4	18900	6	#0	QPSK	22.06	PASS
LTE Band2	1.4	18900	1	#0	QAM16	21.85	PASS
LTE Band2	1.4	18900	1	#Mid	QAM16	22.02	PASS
LTE Band2	1.4	18900	1	#Max	QAM16	21.88	PASS
LTE Band2	1.4	18900	3	#0	QAM16	22.11	PASS
LTE Band2	1.4	18900	3	#Mid	QAM16	22.11	PASS
LTE Band2	1.4	18900	3	#Max	QAM16	22.12	PASS
LTE Band2	1.4	18900	6	#0	QAM16	21.30	PASS
LTE Band2	1.4	19193	1	#0	QPSK	22.87	PASS
LTE Band2	1.4	19193	1	#Mid	QPSK	23.00	PASS
LTE Band2	1.4	19193	1	#Max	QPSK	22.77	PASS
LTE Band2	1.4	19193	3	#0	QPSK	22.95	PASS
LTE Band2	1.4	19193	3	#Mid	QPSK	22.94	PASS
LTE Band2	1.4	19193	3	#Max	QPSK	22.94	PASS
LTE Band2	1.4	19193	6	#0	QPSK	22.07	PASS
LTE Band2	1.4	19193	1	#0	QAM16	21.69	PASS
LTE Band2	1.4	19193	1	#Mid	QAM16	22.08	PASS
LTE Band2	1.4	19193	1	#Max	QAM16	21.97	PASS
LTE Band2	1.4	19193	3	#0	QAM16	22.27	PASS
LTE Band2	1.4	19193	3	#Mid	QAM16	22.27	PASS

LTE Band2	1.4	19193	3	#Max	QAM16	22.19	PASS
LTE Band2	1.4	19193	6	#0	QAM16	21.19	PASS
LTE Band2	3	18615	1	#0	QPSK	23.32	PASS
LTE Band2	3	18615	1	#Mid	QPSK	23.03	PASS
LTE Band2	3	18615	1	#Max	QPSK	23.07	PASS
LTE Band2	3	18615	8	#0	QPSK	22.13	PASS
LTE Band2	3	18615	8	#Mid	QPSK	22.13	PASS
LTE Band2	3	18615	8	#Max	QPSK	22.14	PASS
LTE Band2	3	18615	15	#0	QPSK	22.14	PASS
LTE Band2	3	18615	1	#0	QAM16	22.03	PASS
LTE Band2	3	18615	1	#Mid	QAM16	22.03	PASS
LTE Band2	3	18615	1	#Max	QAM16	22.04	PASS
LTE Band2	3	18615	8	#0	QAM16	20.92	PASS
LTE Band2	3	18615	8	#Mid	QAM16	20.93	PASS
LTE Band2	3	18615	8	#Max	QAM16	21.24	PASS
LTE Band2	3	18615	15	#0	QAM16	20.99	PASS
LTE Band2	3	18900	1	#0	QPSK	23.01	PASS
LTE Band2	3	18900	1	#Mid	QPSK	22.99	PASS
LTE Band2	3	18900	1	#Max	QPSK	23.05	PASS
LTE Band2	3	18900	8	#0	QPSK	21.98	PASS
LTE Band2	3	18900	8	#Mid	QPSK	21.99	PASS
LTE Band2	3	18900	8	#Max	QPSK	22.00	PASS
LTE Band2	3	18900	15	#0	QPSK	22.06	PASS
LTE Band2	3	18900	1	#0	QAM16	22.15	PASS
LTE Band2	3	18900	1	#Mid	QAM16	22.12	PASS
LTE Band2	3	18900	1	#Max	QAM16	22.12	PASS
LTE Band2	3	18900	8	#0	QAM16	20.95	PASS
LTE Band2	3	18900	8	#Mid	QAM16	20.96	PASS
LTE Band2	3	18900	8	#Max	QAM16	20.97	PASS
LTE Band2	3	18900	15	#0	QAM16	20.84	PASS
LTE Band2	3	19185	1	#0	QPSK	22.84	PASS
LTE Band2	3	19185	1	#Mid	QPSK	22.81	PASS
LTE Band2	3	19185	1	#Max	QPSK	22.77	PASS
LTE Band2	3	19185	8	#0	QPSK	21.95	PASS
LTE Band2	3	19185	8	#Mid	QPSK	21.96	PASS
LTE Band2	3	19185	8	#Max	QPSK	21.89	PASS
LTE Band2	3	19185	15	#0	QPSK	21.94	PASS
LTE Band2	3	19185	1	#0	QAM16	21.81	PASS
LTE Band2	3	19185	1	#Mid	QAM16	21.79	PASS
LTE Band2	3	19185	1	#Max	QAM16	21.88	PASS
LTE Band2	3	19185	8	#0	QAM16	21.14	PASS
LTE Band2	3	19185	8	#Mid	QAM16	21.15	PASS
LTE Band2	3	19185	8	#Max	QAM16	21.08	PASS

LTE Band2	3	19185	15	#0	QAM16	21.07	PASS
LTE Band2	5	18625	1	#0	QPSK	23.09	PASS
LTE Band2	5	18625	1	#Mid	QPSK	23.14	PASS
LTE Band2	5	18625	1	#Max	QPSK	23.15	PASS
LTE Band2	5	18625	12	#0	QPSK	21.96	PASS
LTE Band2	5	18625	12	#Mid	QPSK	21.98	PASS
LTE Band2	5	18625	12	#Max	QPSK	22.10	PASS
LTE Band2	5	18625	25	#0	QPSK	22.06	PASS
LTE Band2	5	18625	1	#0	QAM16	22.39	PASS
LTE Band2	5	18625	1	#Mid	QAM16	22.09	PASS
LTE Band2	5	18625	1	#Max	QAM16	22.32	PASS
LTE Band2	5	18625	12	#0	QAM16	21.04	PASS
LTE Band2	5	18625	12	#Mid	QAM16	21.05	PASS
LTE Band2	5	18625	12	#Max	QAM16	21.07	PASS
LTE Band2	5	18625	25	#0	QAM16	21.17	PASS
LTE Band2	5	18900	1	#0	QPSK	22.97	PASS
LTE Band2	5	18900	1	#Mid	QPSK	22.86	PASS
LTE Band2	5	18900	1	#Max	QPSK	22.84	PASS
LTE Band2	5	18900	12	#0	QPSK	21.95	PASS
LTE Band2	5	18900	12	#Mid	QPSK	21.96	PASS
LTE Band2	5	18900	12	#Max	QPSK	21.94	PASS
LTE Band2	5	18900	25	#0	QPSK	21.92	PASS
LTE Band2	5	18900	1	#0	QAM16	21.94	PASS
LTE Band2	5	18900	1	#Mid	QAM16	21.87	PASS
LTE Band2	5	18900	1	#Max	QAM16	21.88	PASS
LTE Band2	5	18900	12	#0	QAM16	20.68	PASS
LTE Band2	5	18900	12	#Mid	QAM16	20.69	PASS
LTE Band2	5	18900	12	#Max	QAM16	20.69	PASS
LTE Band2	5	18900	25	#0	QAM16	20.97	PASS
LTE Band2	5	19175	1	#0	QPSK	22.87	PASS
LTE Band2	5	19175	1	#Mid	QPSK	22.82	PASS
LTE Band2	5	19175	1	#Max	QPSK	22.75	PASS
LTE Band2	5	19175	12	#0	QPSK	21.94	PASS
LTE Band2	5	19175	12	#Mid	QPSK	21.96	PASS
LTE Band2	5	19175	12	#Max	QPSK	21.77	PASS
LTE Band2	5	19175	25	#0	QPSK	21.93	PASS
LTE Band2	5	19175	1	#0	QAM16	22.09	PASS
LTE Band2	5	19175	1	#Mid	QAM16	22.01	PASS
LTE Band2	5	19175	1	#Max	QAM16	21.90	PASS
LTE Band2	5	19175	12	#0	QAM16	21.02	PASS
LTE Band2	5	19175	12	#Mid	QAM16	21.04	PASS
LTE Band2	5	19175	12	#Max	QAM16	20.95	PASS
LTE Band2	5	19175	25	#0	QAM16	21.07	PASS

LTE Band2	10	18650	1	#0	QPSK	23.07	PASS
LTE Band2	10	18650	1	#Mid	QPSK	23.03	PASS
LTE Band2	10	18650	1	#Max	QPSK	22.93	PASS
LTE Band2	10	18650	25	#0	QPSK	21.96	PASS
LTE Band2	10	18650	25	#Mid	QPSK	21.96	PASS
LTE Band2	10	18650	25	#Max	QPSK	22.08	PASS
LTE Band2	10	18650	50	#0	QPSK	21.94	PASS
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LTE Band2	10	18650	1	#Max	QAM16	21.69	PASS
LTE Band2	10	18650	25	#0	QAM16	20.89	PASS
LTE Band2	10	18650	25	#Mid	QAM16	20.89	PASS
LTE Band2	10	18650	25	#Max	QAM16	21.02	PASS
LTE Band2	10	18650	50	#0	QAM16	20.93	PASS
LTE Band2	10	18900	1	#0	QPSK	22.99	PASS
LTE Band2	10	18900	1	#Mid	QPSK	23.07	PASS
LTE Band2	10	18900	1	#Max	QPSK	22.80	PASS
LTE Band2	10	18900	25	#0	QPSK	21.95	PASS
LTE Band2	10	18900	25	#Mid	QPSK	21.95	PASS
LTE Band2	10	18900	25	#Max	QPSK	21.95	PASS
LTE Band2	10	18900	50	#0	QPSK	21.98	PASS
LTE Band2	10	18900	1	#0	QAM16	22.43	PASS
LTE Band2	10	18900	1	#Mid	QAM16	22.87	PASS
LTE Band2	10	18900	1	#Max	QAM16	22.14	PASS
LTE Band2	10	18900	25	#0	QAM16	20.94	PASS
LTE Band2	10	18900	25	#Mid	QAM16	20.95	PASS
LTE Band2	10	18900	25	#Max	QAM16	20.95	PASS
LTE Band2	10	18900	50	#0	QAM16	20.94	PASS
LTE Band2	10	19150	1	#0	QPSK	22.62	PASS
LTE Band2	10	19150	1	#Mid	QPSK	22.92	PASS
LTE Band2	10	19150	1	#Max	QPSK	22.25	PASS
LTE Band2	10	19150	25	#0	QPSK	21.91	PASS
LTE Band2	10	19150	25	#Mid	QPSK	21.95	PASS
LTE Band2	10	19150	25	#Max	QPSK	22.05	PASS
LTE Band2	10	19150	50	#0	QPSK	21.88	PASS
LTE Band2	10	19150	1	#0	QAM16	21.38	PASS
LTE Band2	10	19150	1	#Mid	QAM16	21.87	PASS
LTE Band2	10	19150	1	#Max	QAM16	20.99	PASS
LTE Band2	10	19150	25	#0	QAM16	21.06	PASS
LTE Band2	10	19150	25	#Mid	QAM16	20.97	PASS
LTE Band2	10	19150	25	#Max	QAM16	20.95	PASS
LTE Band2	10	19150	50	#0	QAM16	20.92	PASS
LTE Band2	15	18675	1	#0	QPSK	22.95	PASS

LTE Band2	15	18675	1	#Mid	QPSK	22.98	PASS
LTE Band2	15	18675	1	#Max	QPSK	22.65	PASS
LTE Band2	15	18675	36	#0	QPSK	22.03	PASS
LTE Band2	15	18675	36	#Mid	QPSK	22.02	PASS
LTE Band2	15	18675	36	#Max	QPSK	21.91	PASS
LTE Band2	15	18675	75	#0	QPSK	22.01	PASS
LTE Band2	15	18675	1	#0	QAM16	22.10	PASS
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LTE Band2	15	18675	1	#Max	QAM16	21.96	PASS
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LTE Band2	15	18675	36	#Max	QAM16	20.83	PASS
LTE Band2	15	18675	75	#0	QAM16	21.03	PASS
LTE Band2	15	18900	1	#0	QPSK	22.85	PASS
LTE Band2	15	18900	1	#Mid	QPSK	22.98	PASS
LTE Band2	15	18900	1	#Max	QPSK	22.83	PASS
LTE Band2	15	18900	36	#0	QPSK	21.89	PASS
LTE Band2	15	18900	36	#Mid	QPSK	21.89	PASS
LTE Band2	15	18900	36	#Max	QPSK	21.88	PASS
LTE Band2	15	18900	75	#0	QPSK	21.85	PASS
LTE Band2	15	18900	1	#0	QAM16	22.06	PASS
LTE Band2	15	18900	1	#Mid	QAM16	22.08	PASS
LTE Band2	15	18900	1	#Max	QAM16	21.87	PASS
LTE Band2	15	18900	36	#0	QAM16	20.87	PASS
LTE Band2	15	18900	36	#Mid	QAM16	20.88	PASS
LTE Band2	15	18900	36	#Max	QAM16	20.82	PASS
LTE Band2	15	18900	75	#0	QAM16	20.72	PASS
LTE Band2	15	19125	1	#0	QPSK	22.69	PASS
LTE Band2	15	19125	1	#Mid	QPSK	22.87	PASS
LTE Band2	15	19125	1	#Max	QPSK	22.24	PASS
LTE Band2	15	19125	36	#0	QPSK	21.69	PASS
LTE Band2	15	19125	36	#Mid	QPSK	21.73	PASS
LTE Band2	15	19125	36	#Max	QPSK	21.90	PASS
LTE Band2	15	19125	75	#0	QPSK	21.72	PASS
LTE Band2	15	19125	1	#0	QAM16	21.19	PASS
LTE Band2	15	19125	1	#Mid	QAM16	21.67	PASS
LTE Band2	15	19125	1	#Max	QAM16	21.04	PASS
LTE Band2	15	19125	36	#0	QAM16	20.68	PASS
LTE Band2	15	19125	36	#Mid	QAM16	20.72	PASS
LTE Band2	15	19125	36	#Max	QAM16	20.86	PASS
LTE Band2	15	19125	75	#0	QAM16	20.84	PASS
LTE Band2	20	18700	1	#0	QPSK	23.00	PASS
LTE Band2	20	18700	1	#Mid	QPSK	23.18	PASS



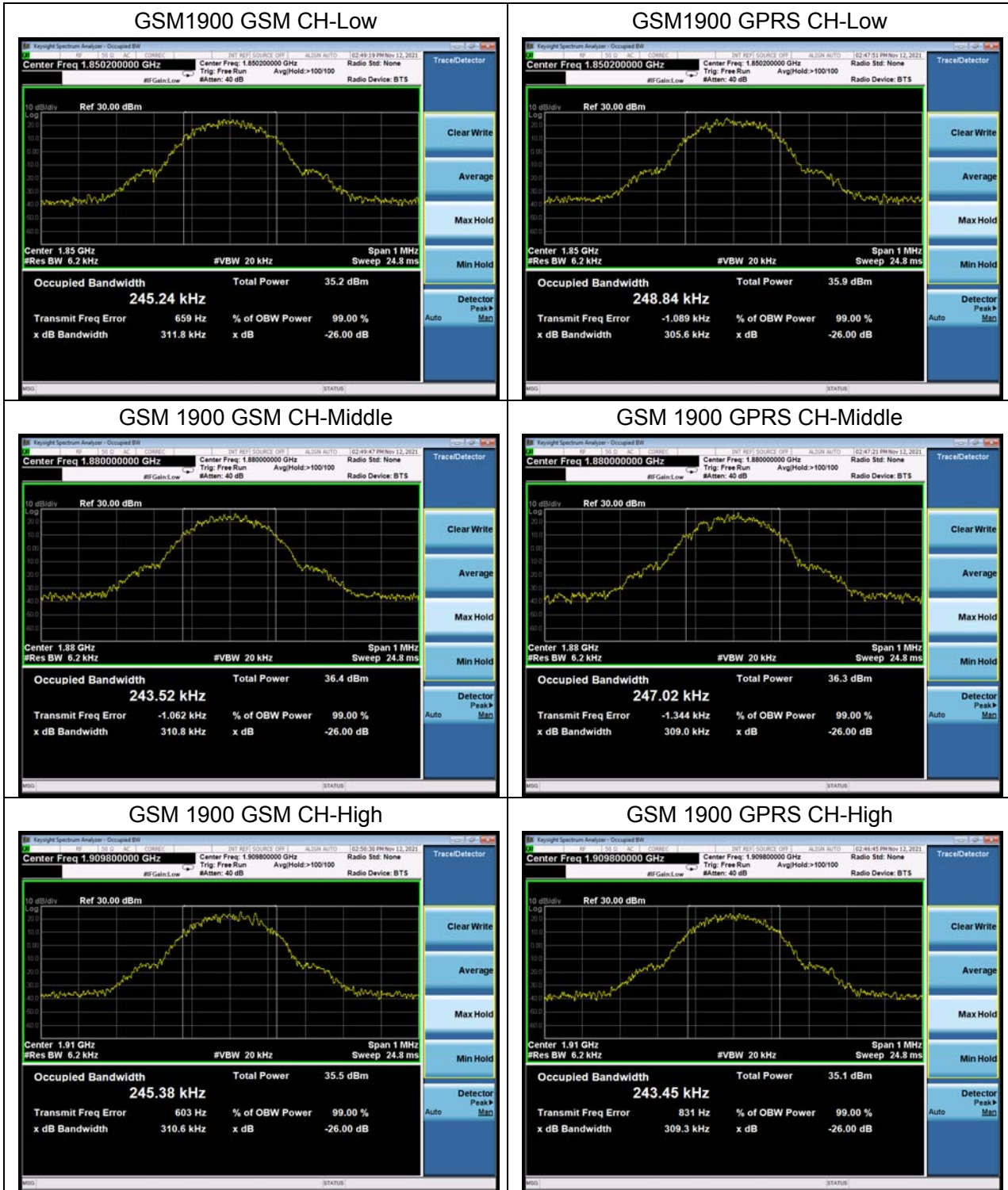
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LTE Band2	20	18700	50	#Max	QPSK	21.81	PASS
LTE Band2	20	18700	100	#0	QPSK	21.78	PASS
LTE Band2	20	18700	1	#0	QAM16	21.98	PASS
LTE Band2	20	18700	1	#Mid	QAM16	22.12	PASS
LTE Band2	20	18700	1	#Max	QAM16	21.87	PASS
LTE Band2	20	18700	50	#0	QAM16	20.99	PASS
LTE Band2	20	18700	50	#Mid	QAM16	20.99	PASS
LTE Band2	20	18700	50	#Max	QAM16	20.85	PASS
LTE Band2	20	18700	100	#0	QAM16	20.77	PASS
LTE Band2	20	18900	1	#0	QPSK	22.85	PASS
LTE Band2	20	18900	1	#Mid	QPSK	23.18	PASS
LTE Band2	20	18900	1	#Max	QPSK	22.64	PASS
LTE Band2	20	18900	50	#0	QPSK	21.80	PASS
LTE Band2	20	18900	50	#Mid	QPSK	21.80	PASS
LTE Band2	20	18900	50	#Max	QPSK	21.73	PASS
LTE Band2	20	18900	100	#0	QPSK	21.75	PASS
LTE Band2	20	18900	1	#0	QAM16	21.26	PASS
LTE Band2	20	18900	1	#Mid	QAM16	21.81	PASS
LTE Band2	20	18900	1	#Max	QAM16	20.99	PASS
LTE Band2	20	18900	50	#0	QAM16	20.69	PASS
LTE Band2	20	18900	50	#Mid	QAM16	20.69	PASS
LTE Band2	20	18900	50	#Max	QAM16	20.62	PASS
LTE Band2	20	18900	100	#0	QAM16	20.75	PASS
LTE Band2	20	19100	1	#0	QPSK	22.59	PASS
LTE Band2	20	19100	1	#Mid	QPSK	22.75	PASS
LTE Band2	20	19100	1	#Max	QPSK	21.90	PASS
LTE Band2	20	19100	50	#0	QPSK	21.74	PASS
LTE Band2	20	19100	50	#Mid	QPSK	21.66	PASS
LTE Band2	20	19100	50	#Max	QPSK	21.79	PASS
LTE Band2	20	19100	100	#0	QPSK	21.64	PASS
LTE Band2	20	19100	1	#0	QAM16	20.85	PASS
LTE Band2	20	19100	1	#Mid	QAM16	21.68	PASS
LTE Band2	20	19100	1	#Max	QAM16	20.50	PASS
LTE Band2	20	19100	50	#0	QAM16	20.76	PASS
LTE Band2	20	19100	50	#Mid	QAM16	20.68	PASS
LTE Band2	20	19100	50	#Max	QAM16	20.87	PASS
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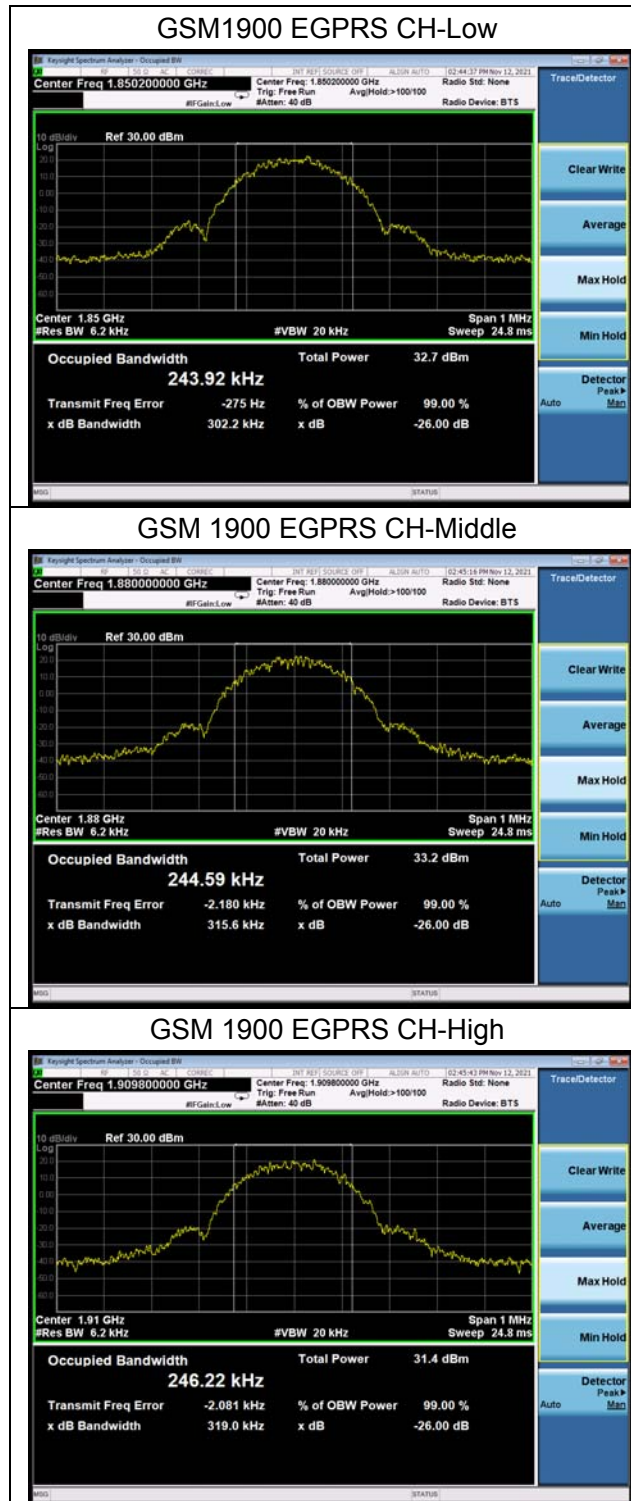
## Occupied Bandwidth

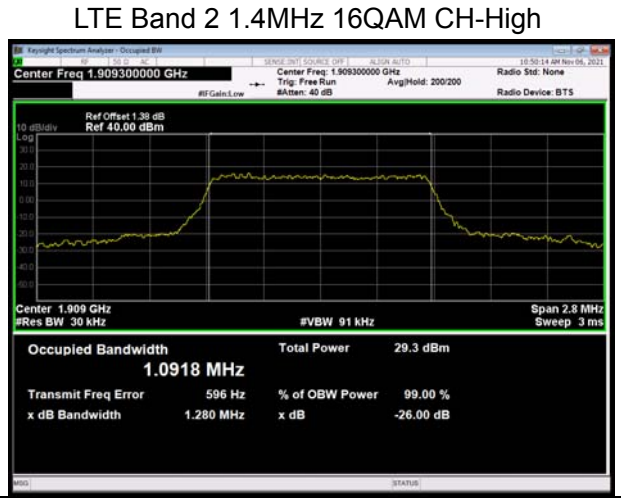
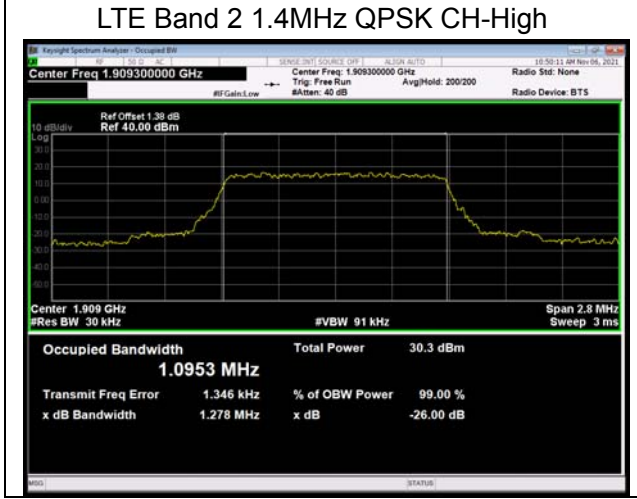
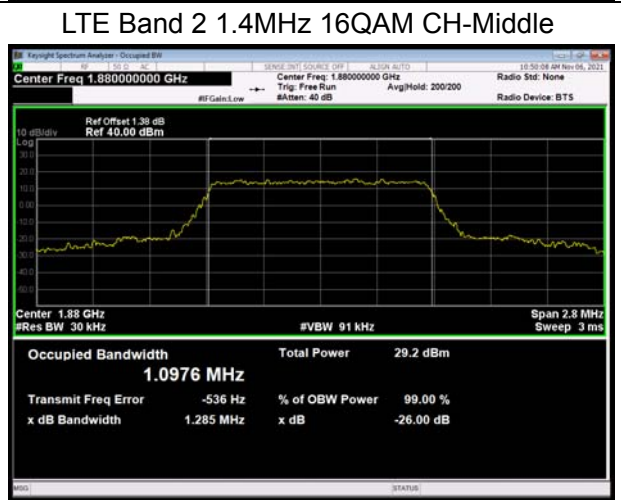
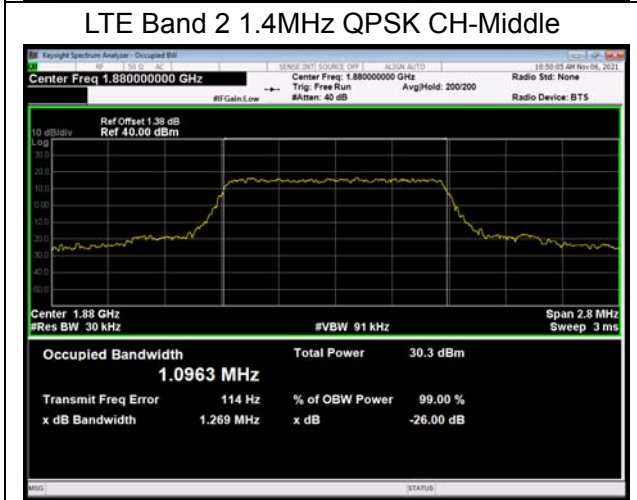
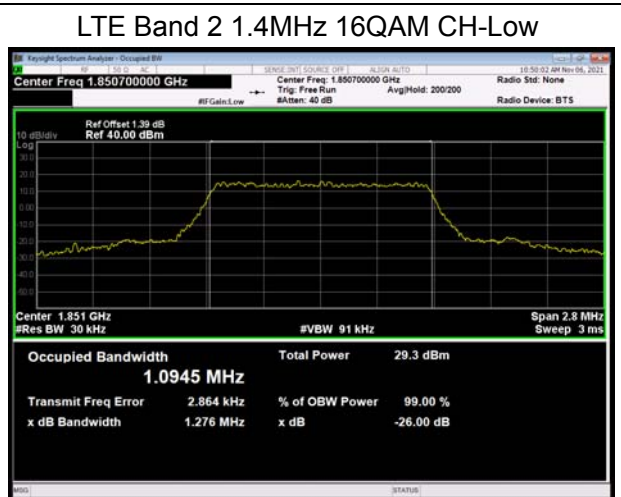
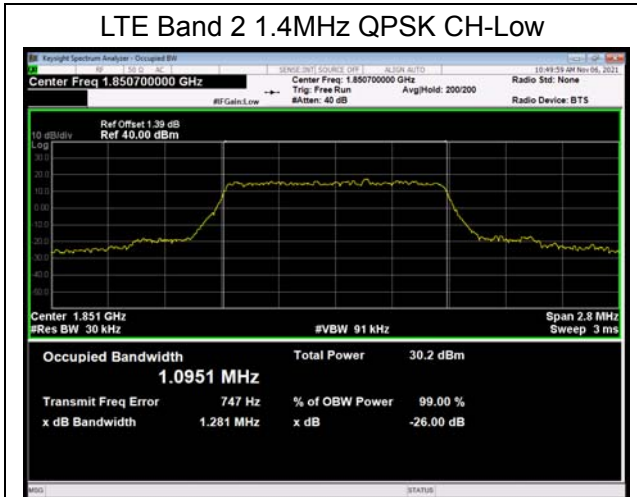
Mode	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
GSM 1900 (GMSK)	512	1850.2	0.24524	0.3118
	661	1880.0	0.24352	0.3108
	810	1909.8	0.24538	0.3106
GPRS 1900 (GMSK)	512	1850.2	0.24884	0.3056
	661	1880.0	0.24702	0.309
	810	1909.8	0.24345	0.3093
EGPRS 1900 (8PSK)	512	1850.2	0.24392	0.3022
	661	1880.0	0.24459	0.3156
	810	1909.8	0.24622	0.319
WCDMA Band II	9262	1852.4	4.1250	4.692
	9400	1880	4.1307	4.685
	9538	1907.6	4.1347	4.697

LTE Band 2						
RB	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	99% Power Bandwidth(MHz)	-26dBc Bandwidth(MHz)
100%	QPSK	1.4	18607	1850.7	1.0951	1.281
			18900	1880	1.0963	1.269
			19193	1909.3	1.0953	1.278
	16QAM	1.4	18607	1850.7	1.0945	1.276
			18900	1880	1.0976	1.285
			19193	1909.3	1.0918	1.280









# Band Edge Compliance

GSM1900 GSM CH-Low



GSM 1900 GSM CH-High



GSM1900 GPRS CH-Low



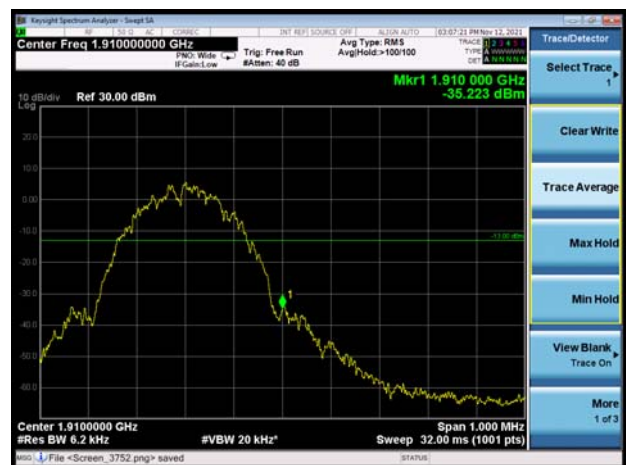
GSM 1900 GPRS CH-High



GSM1900 EGPRS CH-Low



GSM 1900 EGPRS CH-High







### LTE Band 2 1.4MHz QPSK 1RB CH-Low



### LTE Band 2 1.4MHz QPSK 1RB CH-High



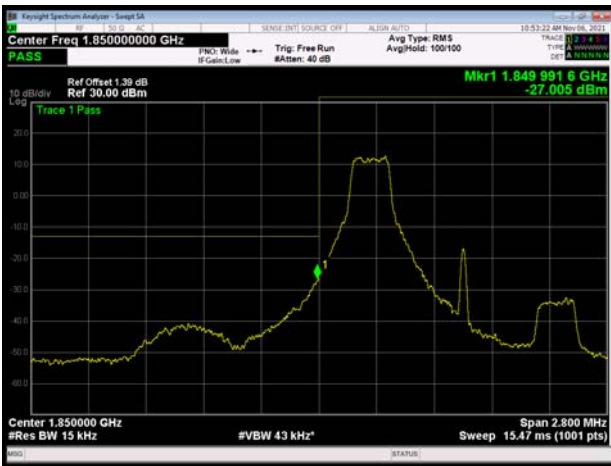
### LTE Band 2 1.4MHz QPSK 100%RB CH-Low



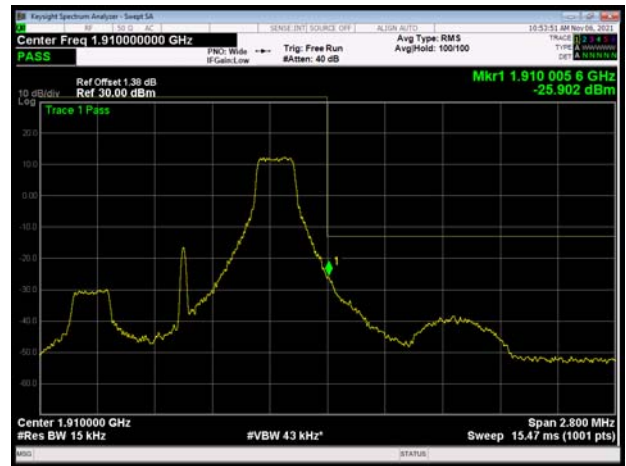
### LTE Band 2 1.4MHz QPSK 100%RB CH-High



### LTE Band 2 1.4MHz 16QAM 1RB CH-Low



### LTE Band 2 1.4MHz 16QAM 1RB CH-High



LTE Band 2 1.4MHz 16QAM 100%RB CH-Low



LTE Band 2 1.4MHz 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 1900 (GMSK)	512	1850.2	30.12	27.37	2.75	≤13	PASS
	661	1880	30.96	28.18	2.78	≤13	PASS
	810	1909.8	29.54	26.76	2.78	≤13	PASS
GPRS 1900 (GMSK)	512	1850.2	30.34	27.55	2.79	≤13	PASS
	661	1880	30.91	28.13	2.78	≤13	PASS
	810	1909.8	29.53	26.73	2.80	≤13	PASS
EGPRS 1900 (8PSK)	512	1850.2	29.58	23.87	5.71	≤13	PASS
	661	1880	30.14	24.57	5.57	≤13	PASS
	810	1909.8	28.75	23.13	5.62	≤13	PASS
WCDMA Band II	9262	1852.4	27.28	24.26	3.02	≤13	PASS
	9400	1880	27.62	24.53	3.09	≤13	PASS
	9538	1907.6	25.76	22.83	2.93	≤13	PASS

LTE Band 2								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	18607	1850.7	27.40	22.22	5.18	≤13	PASS
		18900	1880.0	27.50	22.28	5.22	≤13	PASS
		19193	1909.3	26.96	22.01	4.95	≤13	PASS
	3	18615	1851.5	27.45	22.24	5.21	≤13	PASS
		18900	1880	27.51	22.26	5.25	≤13	PASS
		19185	1908.5	27.13	22.11	5.02	≤13	PASS
	5	18625	1852.5	27.39	22.26	5.13	≤13	PASS
		18900	1880	27.42	22.16	5.26	≤13	PASS
		19175	1907.5	27.18	22.18	5.00	≤13	PASS
	10	18650	1855	27.30	22.21	5.09	≤13	PASS
		18900	1880	27.38	22.20	5.18	≤13	PASS
		19150	1905	27.13	22.17	4.96	≤13	PASS
	15	18675	1857.5	27.54	22.36	5.18	≤13	PASS
		18900	1880	27.56	22.25	5.31	≤13	PASS
		19125	1902.5	27.12	22.05	5.07	≤13	PASS
20	18700	1860	27.22	22.19	5.03	≤13	PASS	
	18900	1880	27.29	22.13	5.16	≤13	PASS	
	19100	1900	26.95	22.01	4.94	≤13	PASS	
16QAM	1.4	18607	1850.7	27.36	21.27	6.09	≤13	PASS





		18900	1880.0	27.38	21.25	6.13	≤13	PASS
		19193	1909.3	26.88	20.95	5.93	≤13	PASS
	3	18615	1851.5	27.22	21.12	6.10	≤13	PASS
		18900	1880	27.52	21.37	6.15	≤13	PASS
		19185	1908.5	27.06	21.10	5.96	≤13	PASS
	5	18625	1852.5	27.20	21.20	6.00	≤13	PASS
		18900	1880	27.28	21.13	6.15	≤13	PASS
		19175	1907.5	27.06	21.18	5.88	≤13	PASS
	10	18650	1855	27.10	21.14	5.96	≤13	PASS
		18900	1880	27.25	21.16	6.09	≤13	PASS
		19150	1905	27.11	21.25	5.86	≤13	PASS
	15	18675	1857.5	27.13	21.10	6.03	≤13	PASS
		18900	1880	27.29	21.16	6.13	≤13	PASS
		19125	1902.5	26.93	21.06	5.87	≤13	PASS
	20	18700	1860	27.01	21.04	5.97	≤13	PASS
		18900	1880	27.11	21.09	6.02	≤13	PASS
		19100	1900	26.92	21.12	5.80	≤13	PASS

# Frequency Stability

GSM1900						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
Temperature	Voltage	GMSK	8PSK	GMSK	8PSK	
Normal (25°C)	Normal	1.35	2.24	0.00072	0.00119	PASS
Extreme (85°C)		7.98	10.02	0.00424	0.00533	PASS
Extreme (80°C)		11.06	9.05	0.00588	0.00482	PASS
Extreme (70°C)		17.61	8.88	0.00937	0.00472	PASS
Extreme (60°C)		7.00	15.00	0.00372	0.00798	PASS
Extreme (50°C)		10.00	14.00	0.00532	0.00745	PASS
Extreme (40°C)		15.00	16.00	0.00798	0.00851	PASS
Extreme (30°C)		11.00	7.00	0.00585	0.00372	PASS
Extreme (20°C)		5.00	13.00	0.00266	0.00691	PASS
Extreme (10°C)		17.68	17.80	0.00941	0.00947	PASS
Extreme (0°C)		1.66	1.06	0.00088	0.00056	PASS
Extreme (-10°C)		13.82	7.07	0.00735	0.00376	PASS
Extreme (-20°C)		1.12	2.21	0.00060	0.00118	PASS
Extreme (-30°C)		1.03	10.08	0.00055	0.00536	PASS
Extreme (-40°C)		1.70	9.39	0.00090	0.00500	PASS
25°C	LV	3.01	13.88	0.00160	0.00738	PASS
	HV	12.35	2.71	0.00657	0.00144	PASS

WCDMA Band II						
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
Temperature	Voltage	BPSK	QPSK	BPSK	QPSK	
Normal (25°C)	Normal	14.73	6.71	0.00784	0.00357	PASS
Extreme (85°C)		11.90	11.86	0.00633	0.00631	PASS
Extreme (80°C)		2.34	6.29	0.00124	0.00335	PASS
Extreme (70°C)		13.85	16.21	0.00737	0.00862	PASS
Extreme (60°C)		2.68	10.24	0.00142	0.00545	PASS
Extreme (50°C)		15.36	5.54	0.00817	0.00295	PASS
Extreme (40°C)		8.32	14.77	0.00442	0.00786	PASS
Extreme (30°C)		6.12	3.52	0.00325	0.00187	PASS
Extreme (20°C)		5.69	12.23	0.00303	0.00651	PASS
Extreme (10°C)		10.86	17.42	0.00578	0.00927	PASS
Extreme (0°C)		5.56	7.96	0.00296	0.00424	PASS
Extreme (-10°C)		10.05	16.22	0.00535	0.00863	PASS
Extreme (-20°C)		11.11	11.25	0.00591	0.00598	PASS
Extreme (-30°C)		17.19	1.12	0.00914	0.00060	PASS
Extreme (-40°C)		1.12	16.45	0.00060	0.00875	PASS
25°C	LV	5.05	12.08	0.00269	0.00643	PASS
	HV	5.42	9.34	0.00289	0.00497	PASS

LTE Band 2						
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°C)	Normal	14.15	14.43	0.00753	0.00768	PASS
Extreme (85°C)		10.87	11.38	0.00578	0.00605	PASS
Extreme (80°C)		1.31	16.80	0.00070	0.00894	PASS
Extreme (70°C)		5.49	12.72	0.00292	0.00677	PASS
Extreme (60°C)		15.56	14.49	0.00827	0.00771	PASS
Extreme (50°C)		8.04	5.26	0.00428	0.00280	PASS
Extreme (40°C)		3.44	11.64	0.00183	0.00619	PASS
Extreme (30°C)		12.61	7.20	0.00671	0.00383	PASS
Extreme (20°C)		13.37	10.25	0.00711	0.00545	PASS
Extreme (10°C)		6.57	11.96	0.00350	0.00636	PASS
Extreme (0°C)		8.35	10.81	0.00444	0.00575	PASS
Extreme (-10°C)		12.21	3.73	0.00650	0.00199	PASS
Extreme (-20°C)		9.62	13.47	0.00512	0.00717	PASS
Extreme (-30°C)		13.54	9.28	0.00720	0.00494	PASS

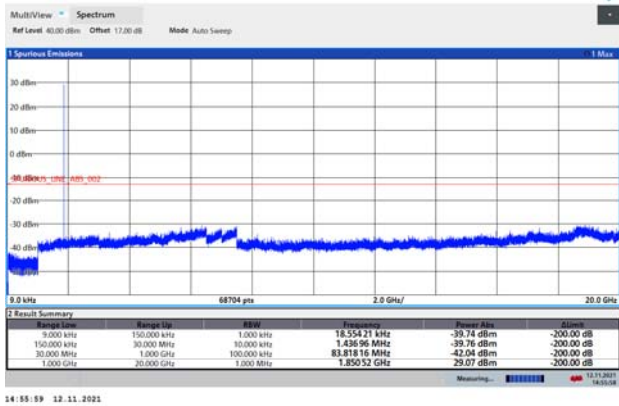
Extreme (-40°C)		4.09	2.15	0.00218	0.00114	PASS
25°C	LV	6.87	10.39	0.00365	0.00552	PASS
	HV	14.00	13.19	0.00745	0.00702	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	3MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	4.68	2.56	0.00249	0.00136	PASS
Extreme (85°C)		9.56	4.73	0.00508	0.00251	PASS
Extreme (80°C)		16.15	5.14	0.00859	0.00273	PASS
Extreme (70°C)		6.48	7.72	0.00345	0.00411	PASS
Extreme (60°C)		9.02	16.90	0.00480	0.00899	PASS
Extreme (50°C)		5.79	6.13	0.00308	0.00326	PASS
Extreme (40°C)		10.97	2.73	0.00583	0.00145	PASS
Extreme (30°C)		15.97	8.12	0.00850	0.00432	PASS
Extreme (20°C)		17.54	8.50	0.00933	0.00452	PASS
Extreme (10°C)		3.12	9.02	0.00166	0.00480	PASS
Extreme (0°C)		15.07	16.35	0.00802	0.00870	PASS
Extreme (-10°C)		3.30	16.34	0.00176	0.00869	PASS
Extreme (-20°C)		10.04	14.18	0.00534	0.00754	PASS
Extreme (-30°C)		9.24	17.36	0.00491	0.00923	PASS
Extreme (-40°C)		14.40	14.03	0.00766	0.00746	PASS
25°C	LV	15.05	9.48	0.00800	0.00504	PASS
	HV	15.49	14.93	0.00824	0.00794	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°C)	Normal	10.32	9.07	0.00549	0.00483	PASS
Extreme (85°C)		14.31	16.27	0.00761	0.00865	PASS
Extreme (80°C)		11.41	16.38	0.00607	0.00871	PASS
Extreme (70°C)		3.65	14.45	0.00194	0.00769	PASS
Extreme (60°C)		6.53	16.95	0.00348	0.00902	PASS
Extreme (50°C)		3.65	2.21	0.00194	0.00117	PASS
Extreme (40°C)		17.94	14.87	0.00954	0.00791	PASS
Extreme (30°C)		9.09	6.76	0.00483	0.00360	PASS
Extreme (20°C)		13.90	17.04	0.00739	0.00906	PASS
Extreme (10°C)		8.12	5.21	0.00432	0.00277	PASS
Extreme (0°C)		11.93	2.58	0.00634	0.00137	PASS
Extreme (-10°C)		9.60	2.63	0.00511	0.00140	PASS
Extreme (-20°C)		7.29	3.13	0.00388	0.00167	PASS
Extreme (-30°C)	14.52	16.25	0.00773	0.00864	PASS	

Extreme (-40°C)		16.08	4.89	0.00855	0.00260	PASS
25°C	LV	13.60	12.20	0.00723	0.00649	PASS
	HV	9.55	13.43	0.00508	0.00714	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°C)	Normal	7.82	10.98	0.00416	0.00584	PASS
Extreme (85°C)		14.20	6.69	0.00756	0.00356	PASS
Extreme (80°C)		4.22	1.03	0.00224	0.00055	PASS
Extreme (70°C)		15.05	14.45	0.00801	0.00768	PASS
Extreme (60°C)		5.18	7.33	0.00276	0.00390	PASS
Extreme (50°C)		5.47	6.42	0.00291	0.00341	PASS
Extreme (40°C)		15.78	5.60	0.00839	0.00298	PASS
Extreme (30°C)		14.00	16.65	0.00745	0.00886	PASS
Extreme (20°C)		9.42	9.06	0.00501	0.00482	PASS
Extreme (10°C)		12.19	5.94	0.00648	0.00316	PASS
Extreme (0°C)		4.06	3.59	0.00216	0.00191	PASS
Extreme (-10°C)		5.72	9.59	0.00304	0.00510	PASS
Extreme (-20°C)		16.41	2.57	0.00873	0.00137	PASS
Extreme (-30°C)		17.60	9.85	0.00936	0.00524	PASS
Extreme (-40°C)		14.88	12.78	0.00792	0.00680	PASS
25°C	LV	2.21	8.10	0.00117	0.00431	PASS
	HV	10.64	3.49	0.00566	0.00186	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	15MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	11.28	3.61	0.00600	0.00192	PASS
Extreme (85°C)		12.63	15.91	0.00672	0.00846	PASS
Extreme (80°C)		3.90	10.51	0.00207	0.00559	PASS
Extreme (70°C)		7.64	12.35	0.00406	0.00657	PASS
Extreme (60°C)		8.15	2.44	0.00433	0.00130	PASS
Extreme (50°C)		17.90	17.56	0.00952	0.00934	PASS
Extreme (40°C)		2.64	17.44	0.00140	0.00928	PASS
Extreme (30°C)		10.12	10.29	0.00538	0.00547	PASS
Extreme (20°C)		10.45	10.45	0.00556	0.00556	PASS
Extreme (10°C)		12.30	8.93	0.00654	0.00475	PASS
Extreme (0°C)		15.69	7.19	0.00835	0.00383	PASS
Extreme (-10°C)		10.30	3.65	0.00548	0.00194	PASS
Extreme (-20°C)		9.52	11.49	0.00506	0.00611	PASS
Extreme (-30°C)		10.07	11.90	0.00536	0.00633	PASS

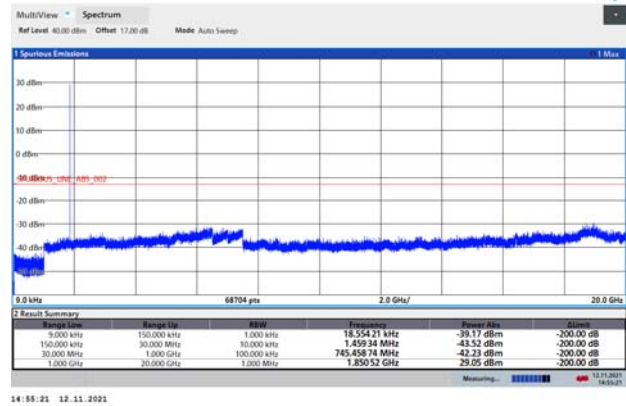
Extreme (-40°C)		5.93	5.30	0.00316	0.00282	PASS
25°C	LV	9.62	14.57	0.00512	0.00775	PASS
	HV	16.00	15.58	0.00851	0.00829	PASS
Condition		Freq.Error (Hz)	Freq.Error (Hz)	Frequency Stability (ppm)	Frequency Stability (ppm)	Verdict
BANDWIDTH	20MHz					
Temperature	Voltage	16QAM	QPSK	16QAM	QPSK	
Normal (25°C)	Normal	3.32	7.72	0.00176	0.00411	PASS
Extreme (85°C)		4.03	2.53	0.00215	0.00134	PASS
Extreme (80°C)		17.69	10.95	0.00941	0.00582	PASS
Extreme (70°C)		16.31	5.08	0.00868	0.00270	PASS
Extreme (60°C)		11.90	9.10	0.00633	0.00484	PASS
Extreme (50°C)		9.25	10.51	0.00492	0.00559	PASS
Extreme (40°C)		10.49	7.69	0.00558	0.00409	PASS
Extreme (30°C)		12.61	10.15	0.00671	0.00540	PASS
Extreme (20°C)		3.71	9.96	0.00198	0.00530	PASS
Extreme (10°C)		8.46	11.80	0.00450	0.00628	PASS
Extreme (0°C)		8.21	6.69	0.00437	0.00356	PASS
Extreme (-10°C)		17.35	15.98	0.00923	0.00850	PASS
Extreme (-20°C)		8.54	2.53	0.00454	0.00135	PASS
Extreme (-30°C)		6.82	2.56	0.00363	0.00136	PASS
Extreme (-40°C)		4.90	15.17	0.00261	0.00807	PASS
25°C	LV	16.64	10.82	0.00885	0.00576	PASS
	HV	16.31	6.76	0.00867	0.00360	PASS

# Spurious Emissions at Antenna Terminals

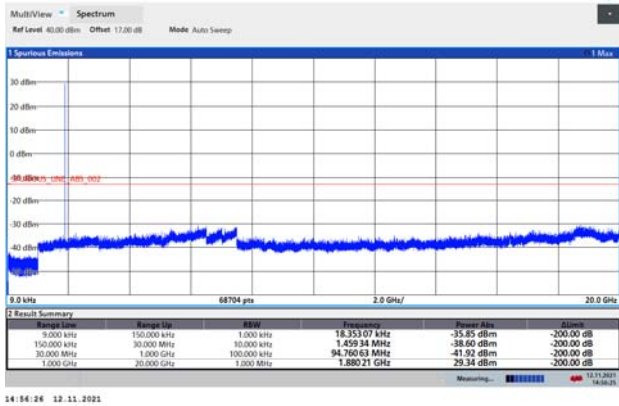
GSM 1900 CH-Low 9kHz ~ 20GHz



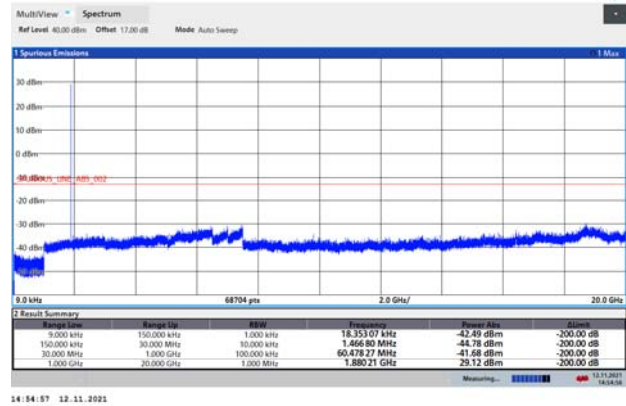
GPRS 1900 CH-Low 9kHz ~ 20GHz



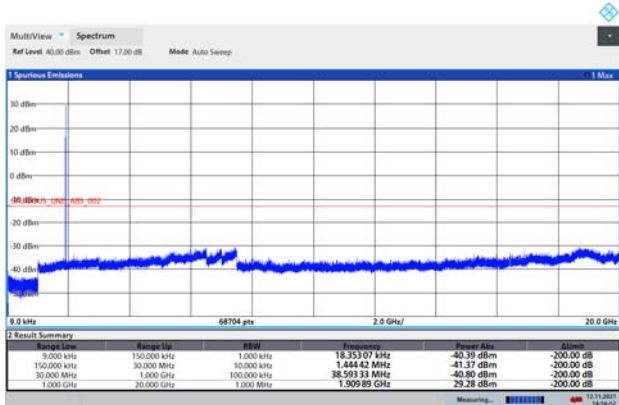
GSM 1900 CH- Middle 9kHz ~ 20GHz



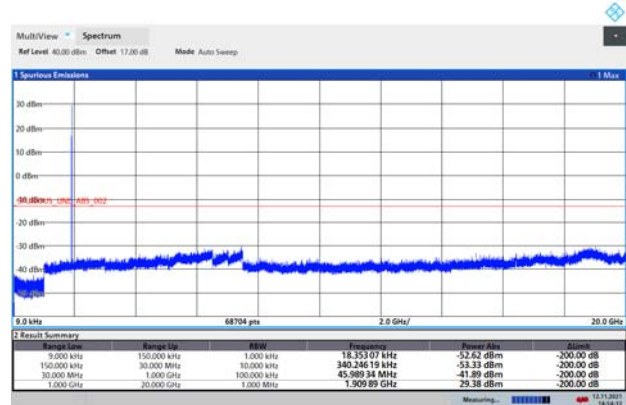
GPRS 1900 CH- Middle 9kHz ~ 20GHz



GSM 1900 CH-High 9kHz ~ 20GHz

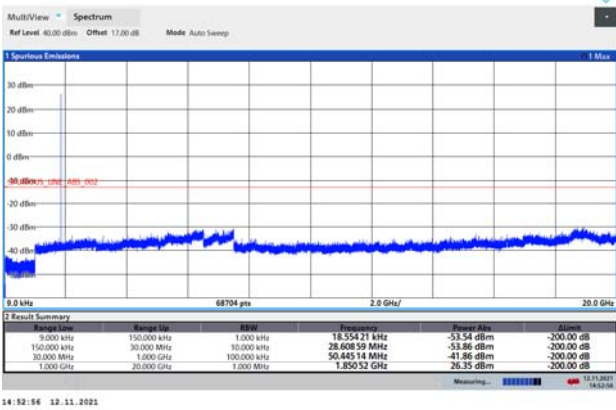


GPRS 1900 CH-High 9kHz ~ 20GHz

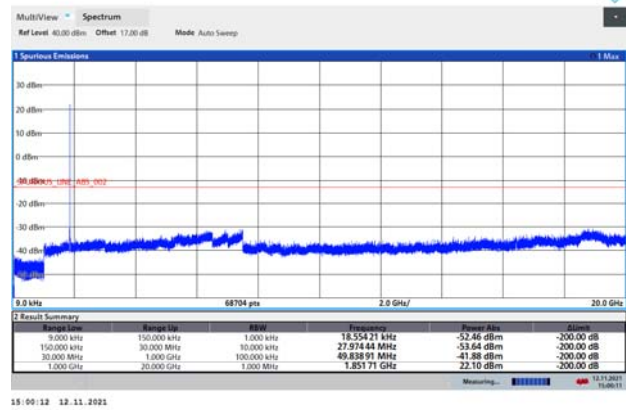




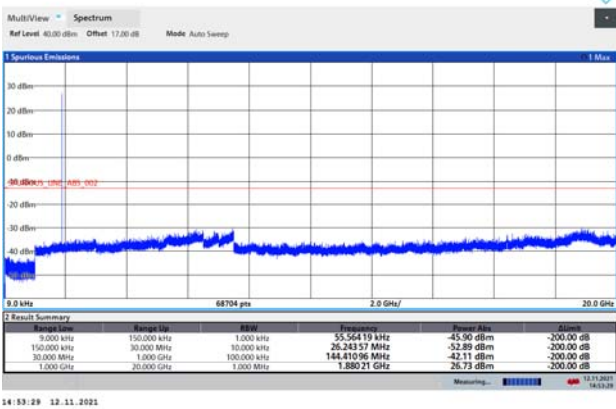
EGPRS 1900 CH-Low 9kHz ~ 20GHz



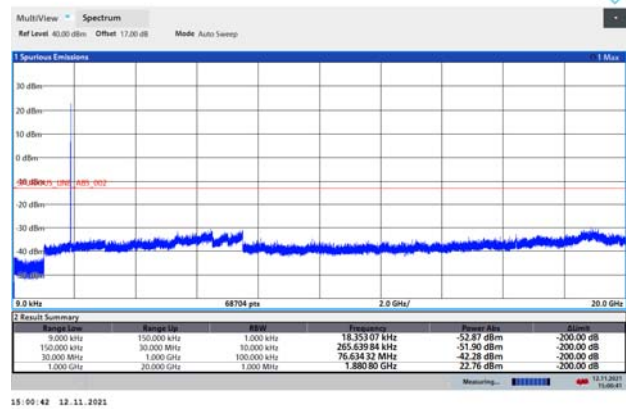
WCDMA BAND II CH-Low 9kHz ~ 20GHz



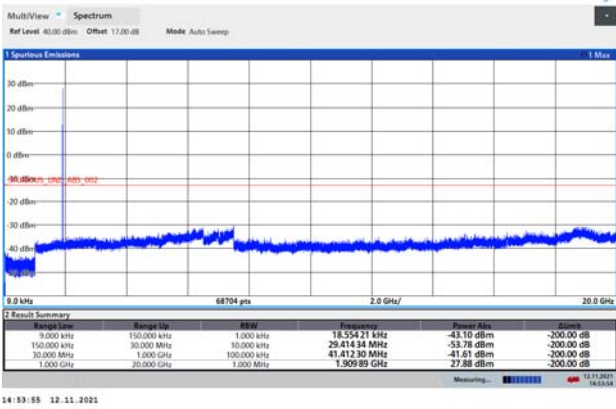
EGPRS 1900 CH- Middle 9kHz ~ 20GHz



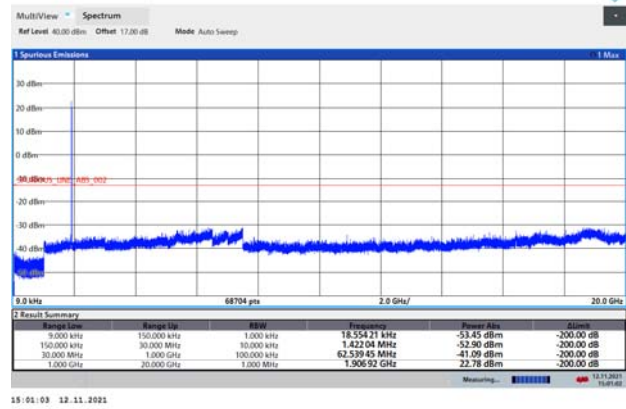
WCDMA BAND II CH- Middle 9kHz ~ 20GHz



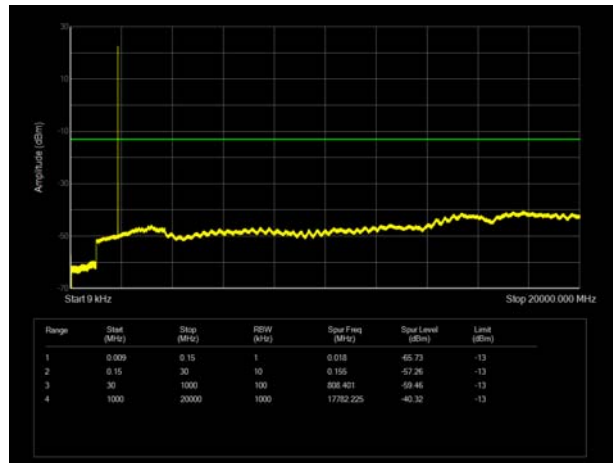
EGPRS 1900 CH-High 9kHz ~ 20GHz



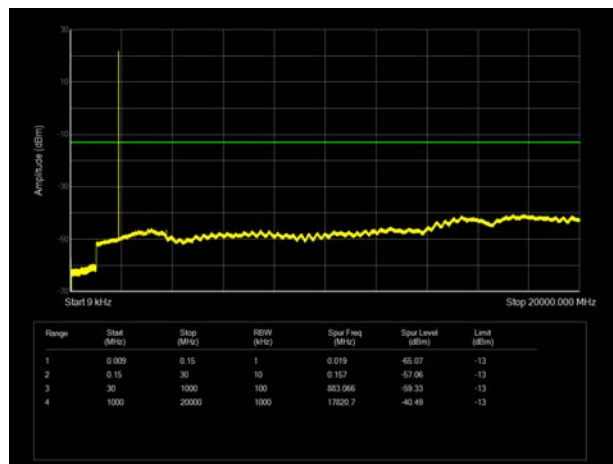
WCDMA BAND II CH-High 9kHz ~ 20GHz



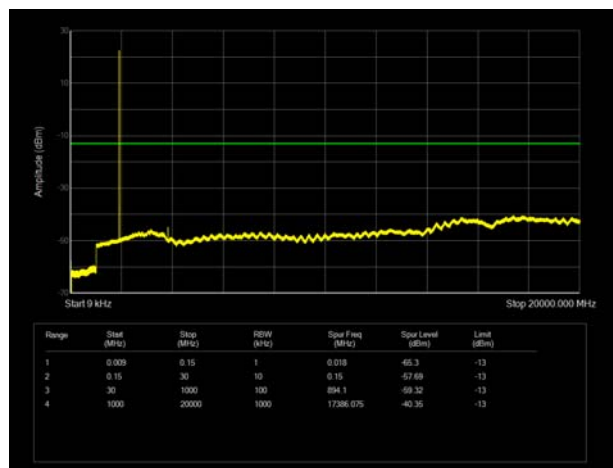
LTE Band 2 1.4MHz CH-Low 9kHz~20GHz



LTE Band 2 1.4MHz CH-Middle 9kHz~20GHz



LTE Band 2 1.4MHz CH-High 9kHz~20GHz



## Radiates Spurious Emission

GSM 1900 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3760.0	-61.32	5.10	11.05	Horizontal	-55.37	-13.00	42.37	225
3	5640.0	-62.10	5.42	12.65	Horizontal	-54.87	-13.00	41.87	45
4	7520.0	-55.47	6.70	13.85	Horizontal	-48.32	-13.00	35.32	135
5	9400.0	-53.62	7.01	14.75	Horizontal	-45.88	-13.00	32.88	90
6	11280.0	-50.27	7.48	15.95	Horizontal	-41.80	-13.00	28.80	135
7	13160.0	-52.35	7.51	16.55	Horizontal	-43.31	-13.00	30.31	45
8	15040.0	-51.35	8.24	15.35	Horizontal	-44.24	-13.00	31.24	45
9	16920.0	-48.98	8.41	14.95	Horizontal	-42.44	-13.00	29.44	90
10	18800.0	--	--	--	--	--	--	--	--

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 II CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3760.0	-60.05	2.60	12.50	Horizontal	-50.15	-13.00	37.15	225
3	5640.0	-61.84	3.30	12.50	Horizontal	-52.64	-13.00	39.64	45
4	7520.0	-57.21	4.20	12.20	Horizontal	-49.21	-13.00	36.21	90
5	9400.0	-53.05	4.30	11.10	Horizontal	-46.25	-13.00	33.25	135
6	11280.0	-49.30	5.90	11.90	Horizontal	-43.30	-13.00	30.30	45
7	13160.0	-51.86	5.70	14.00	Horizontal	-43.56	-13.00	30.56	90
8	15040.0	-52.73	5.80	13.10	Horizontal	-45.43	-13.00	32.43	225
9	16920.0	-52.10	6.10	14.60	Horizontal	-43.60	-13.00	30.60	45
10	18800.0	--	--	--	--	--	--	--	--

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 2 1.4MHz CH-Middle**

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3759.0	-46.92	5.10	11.05	Horizontal	-40.97	-13.00	27.97	270
3	5638.9	-36.09	5.42	12.65	Horizontal	-28.86	-13.00	15.86	45
4	7520.0	-44.40	6.70	13.85	Horizontal	-37.25	-13.00	24.25	180
5	9400.0	-46.14	7.01	14.75	Horizontal	-38.40	-13.00	25.40	0
6	11280.0	-50.83	7.48	15.95	Horizontal	-42.36	-13.00	29.36	270
7	13160.0	-52.90	7.51	16.55	Horizontal	-43.86	-13.00	30.86	135
8	15040.0	-47.07	8.24	15.35	Horizontal	-39.96	-13.00	26.96	45
9	16920.0	-48.86	8.41	14.95	Horizontal	-42.32	-13.00	29.32	0
10	18800.0	--	--	--	--	--	--	--	--

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