7.4 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation, including GSM and GPRS, were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is 43 + 10 log$_{10}$(P$_{[Watts]}$), where P is the transmitter power in Watts.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 6.0

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW ≥ 1% of the emission bandwidth
4. VBW ≥ 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
8. Sweep time = auto couple
9. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

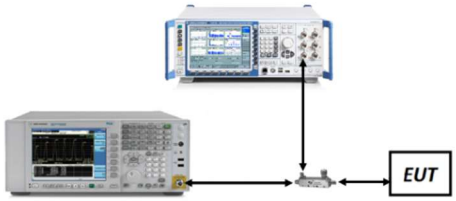


Figure 7-3. Test Instrument & Measurement Setup

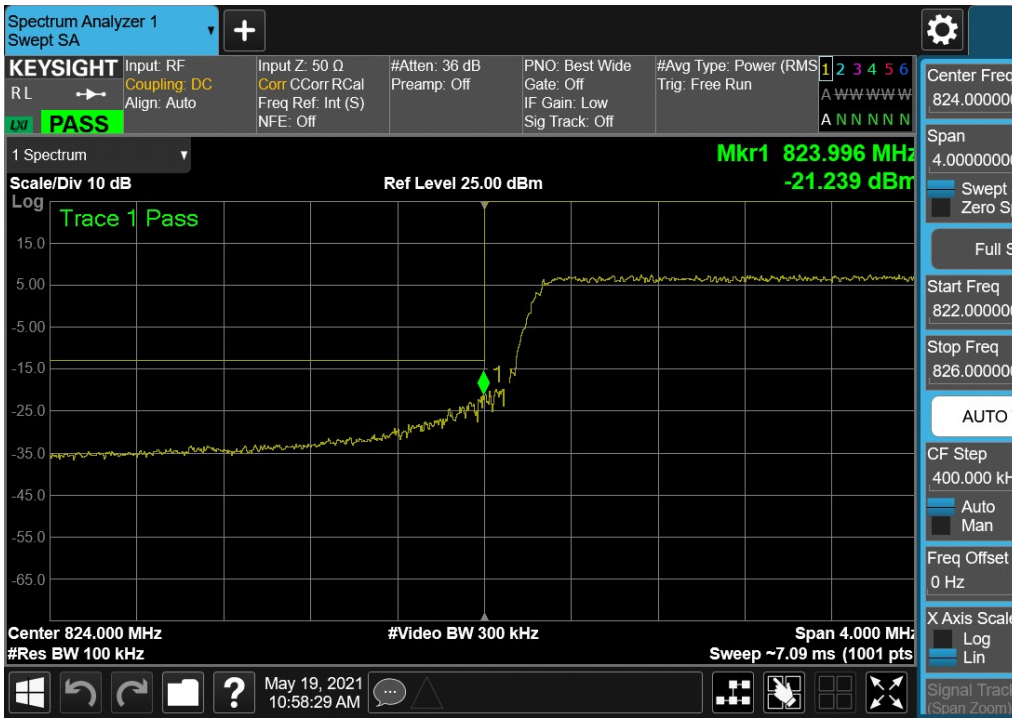
Test Notes

Per 22.917(b) and RSS-132(5.5), in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

LTE Band 5

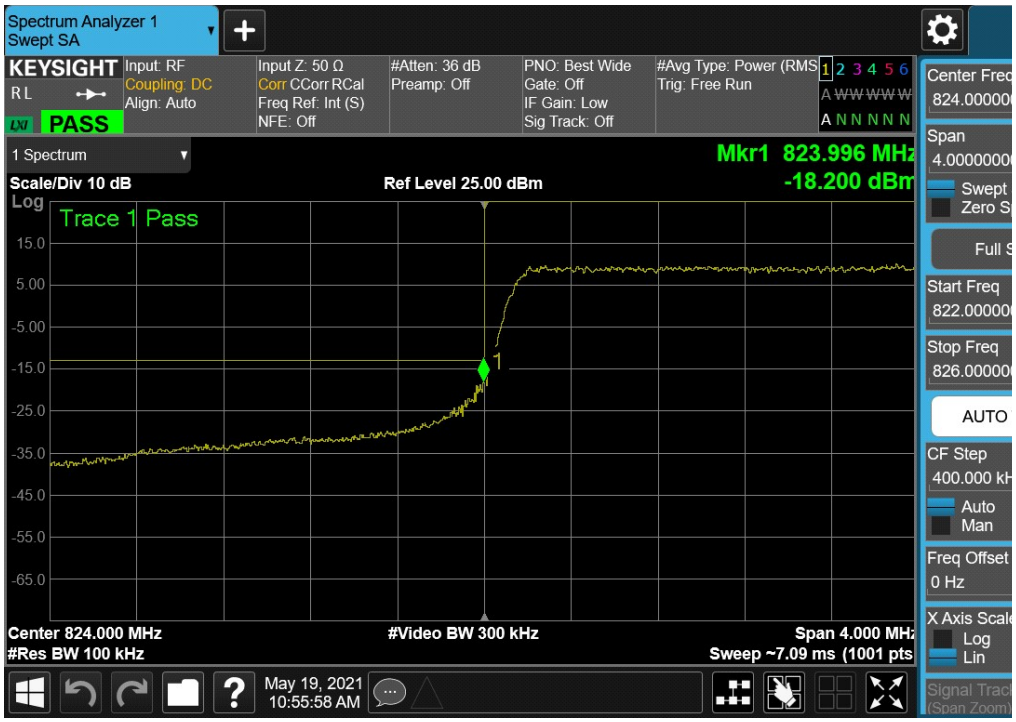
Plot 7-39. Lower Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB)

Plot 7-40. Upper Band Edge Plot (LTE Band 5 - 10MHz QPSK – Full RB)



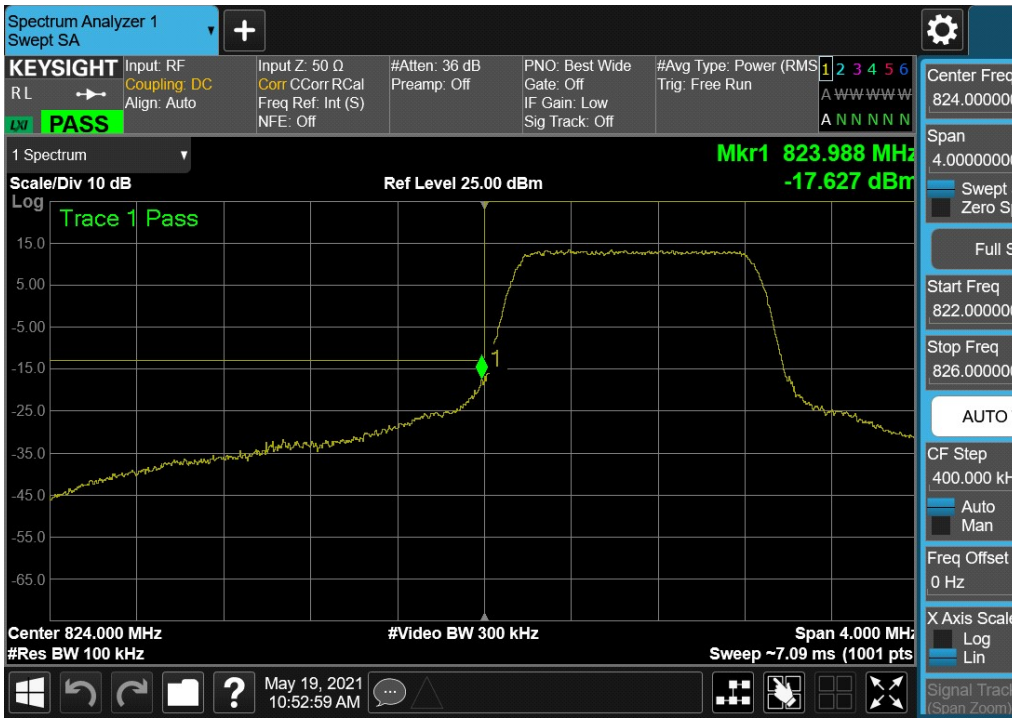
Plot 7-41. Lower Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB)

Plot 7-42. Upper Band Edge Plot (LTE Band 5 - 5MHz QPSK – Full RB)



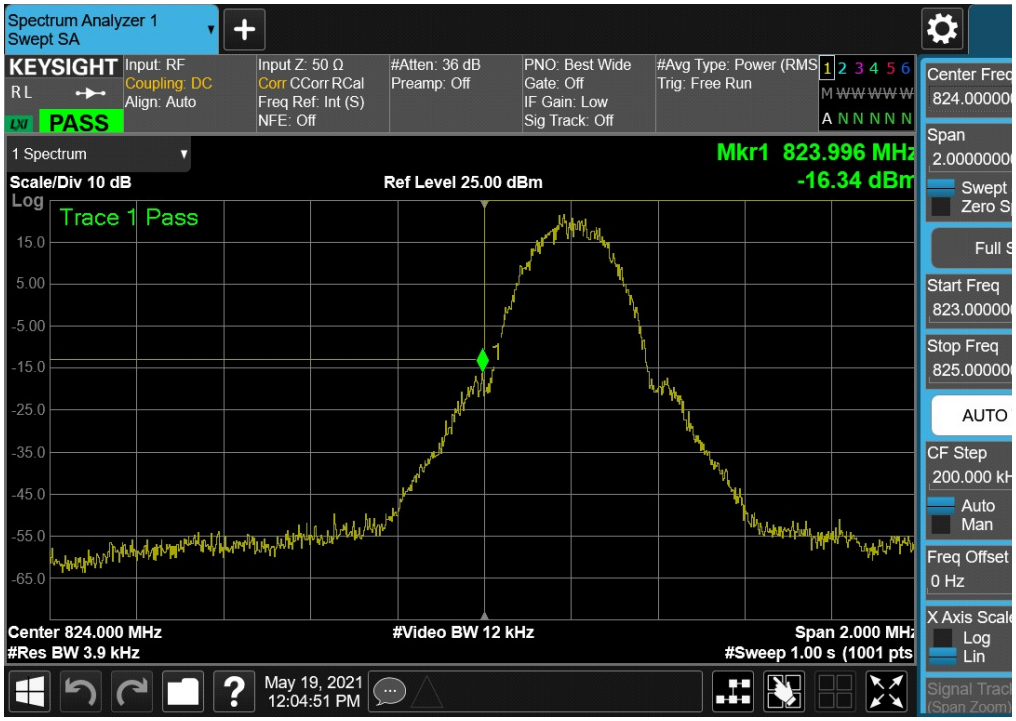
Plot 7-43. Lower Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB)

Plot 7-44. Upper Band Edge Plot (LTE Band 5 - 3MHz QPSK – Full RB)



Plot 7-45. Lower Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB)

Plot 7-46. Upper Band Edge Plot (LTE Band 5 – 1.4MHz QPSK – Full RB)



Plot 7-47. Lower Band Edge Plot (GPRS Cell – Ch. 128)

Plot 7-48. Upper Band Edge Plot (GPRS Cell – Ch. 251)

WCDMA Cell

Plot 7-49. Lower Band Edge Plot (WCDMA Cell – Ch. 4132)

Plot 7-50. Upper Band Edge Plot (WCDMA Cell – Ch. 4233)

7.5 Radiated Power (ERP)

Test Overview

Effective Radiated Power (ERP) measurements are performed using the substitution method described in ANSI/TIA-603-E-2016 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using vertically and horizontally polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.2.1

ANSI/TIA-603-E-2016 – Section 2.2.17

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation. For signals with burst transmission, the signal analyzer's "time domain power" measurement capability is used
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points ≥ 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto". Trigger is set to enable triggering only on full power bursts with the sweep time set less than or equal to the transmission burst duration
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

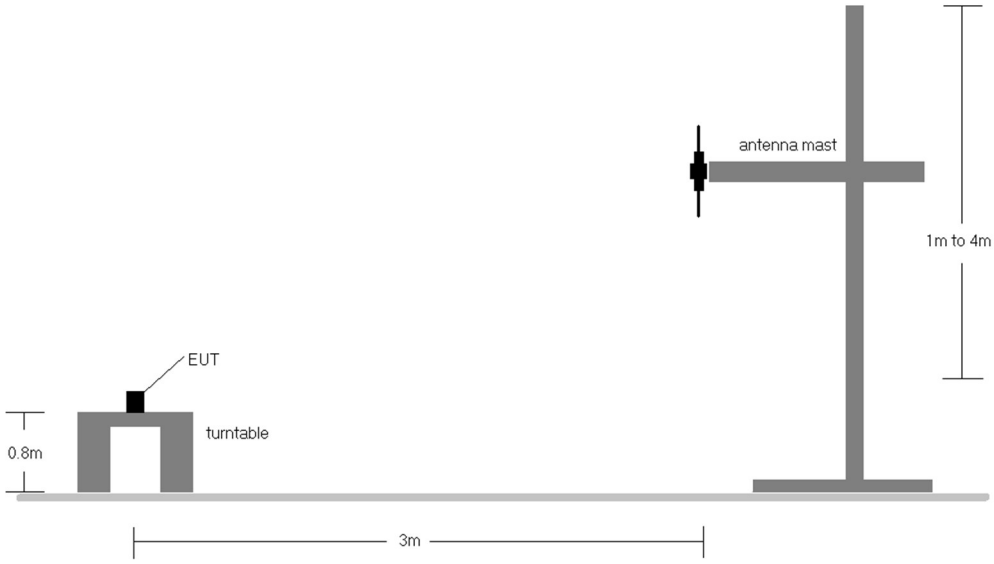


Figure 7-4. Radiated Test Setup <1GHz

Test Notes

1) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers is reported in GPRS mode while transmitting with one slot active.

2) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to “1”.

3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

4) This unit was tested with its standard battery.

Bandwidth	Mod.	Frequency [MHz]	Ant. Pol. [H/V]	EUT Pol.	Antenna Height [cm]	Turntable Azimuth [degree]	Ant. Gain [dBi]	RB Size/Offset	Substitute Level [dBm]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
10 MHz	QPSK	829.0	V	Z	123.0	211.0	1.27	1 / 49	18.93	**18.05**	0.064	38.45	-20.40
		836.5	V	Z	131.0	236.0	1.31	1 / 49	18.83	17.99	0.063	38.45	-20.46
		844.0	V	Z	136.0	200.0	1.35	1 / 25	18.79	17.99	0.063	38.45	-20.46
	16-QAM	829.0	V	Z	123.0	211.0	1.27	1 / 49	17.79	16.91	0.049	38.45	-21.54
		836.5	V	Z	131.0	236.0	1.31	1 / 49	17.59	16.75	0.047	38.45	-21.70
		844.0	V	Z	136.0	200.0	1.35	1 / 25	17.62	16.82	0.048	38.45	-21.63
5 MHz	QPSK	829.0	V	Z	123.0	211.0	1.27	1 / 0	18.75	17.87	0.061	38.45	-20.58
		836.5	V	Z	131.0	236.0	1.31	1 / 0	18.76	**17.92**	0.062	38.45	-20.53
		844.0	V	Z	136.0	200.0	1.35	1 / 12	18.37	17.57	0.057	38.45	-20.88
	16-QAM	829.0	V	Z	123.0	211.0	1.27	1 / 12	17.79	16.91	0.049	38.45	-21.54
		836.5	V	Z	131.0	236.0	1.31	1 / 12	17.52	16.68	0.047	38.45	-21.77
		844.0	V	Z	136.0	200.0	1.35	1 / 12	17.58	16.78	0.048	38.45	-21.67
3 MHz	QPSK	829.0	V	Z	123.0	211.0	1.27	1 / 0	18.61	17.73	0.059	38.45	-20.72
		836.5	V	Z	131.0	236.0	1.31	1 / 14	18.73	**17.89**	0.062	38.45	-20.56
		844.0	V	Z	136.0	200.0	1.35	1 / 0	18.35	17.55	0.057	38.45	-20.90
	16-QAM	829.0	V	Z	123.0	211.0	1.27	1 / 14	17.62	16.74	0.047	38.45	-21.71
		836.5	V	Z	131.0	236.0	1.31	1 / 0	17.75	16.91	0.049	38.45	-21.54
		844.0	V	Z	136.0	200.0	1.35	1 / 14	17.41	16.61	0.046	38.45	-21.84
1.4 MHz	QPSK	829.0	V	Z	123.0	211.0	1.27	1 / 0	18.74	17.86	0.061	38.45	-20.59
		836.5	V	Z	131.0	236.0	1.31	1 / 5	18.71	**17.87**	0.061	38.45	-20.58
		844.0	V	Z	136.0	200.0	1.35	1 / 0	18.47	17.67	0.058	38.45	-20.78
	16-QAM	829.0	V	Z	123.0	211.0	1.27	1 / 0	17.33	16.45	0.044	38.45	-22.00
		836.5	V	Z	131.0	236.0	1.31	1 / 3	17.44	16.60	0.046	38.45	-21.85
		844.0	V	Z	136.0	200.0	1.35	1 / 3	17.11	16.31	0.043	38.45	-22.14
10 MHz	QPSK (Opposite Pol.)	829.0	H	X	219.0	270.0	1.27	0.00	16.34	15.46	0.035	38.45	-22.99

Table 7-2. ERP Data (LTE Band 5)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	Margin [dB]
824.20	GSM850	V	136	239	26.15	1.25	25.25	0.335	-13.20
836.60	GSM850	V	143	218	27.98	1.31	27.14	0.518	-11.31
848.80	GSM850	V	148	240	29.43	1.37	**28.65**	**0.733**	-9.80
848.80	GSM850	H	371	297	28.09	1.37	27.31	0.538	-11.14
848.80	EDGE850	V	148	240	23.08	1.37	**22.30**	0.170	-16.15

Table 7-3. ERP Data (GPRS Cell)

Frequency [MHz]	Mode	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Substitute Level [dBm]	Ant. Gain [dBi]	ERP [dBm]	ERP [Watts]	Margin [dB]
826.40	WCDMA850	V	117	254	18.89	1.26	18.00	0.063	-20.45
836.60	WCDMA850	V	136	224	19.44	1.31	**18.60**	**0.072**	-19.85
846.60	WCDMA850	V	134	282	18.77	1.36	17.98	0.063	-20.47
836.60	WCDMA850	H	215	272	17.52	1.31	16.68	0.047	-21.77

Table 7-4. ERP Data (WCDMA Cell)

7.6 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in KDB 971168 with the EUT transmitting into an integral antenna. Measurements on signals operating below 1GHz are performed using horizontally and vertically polarized tuned dipole antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.

Test Procedures Used

KDB 971168 D01 v03r01 – Section 5.8

Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points ≥ 2 x span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

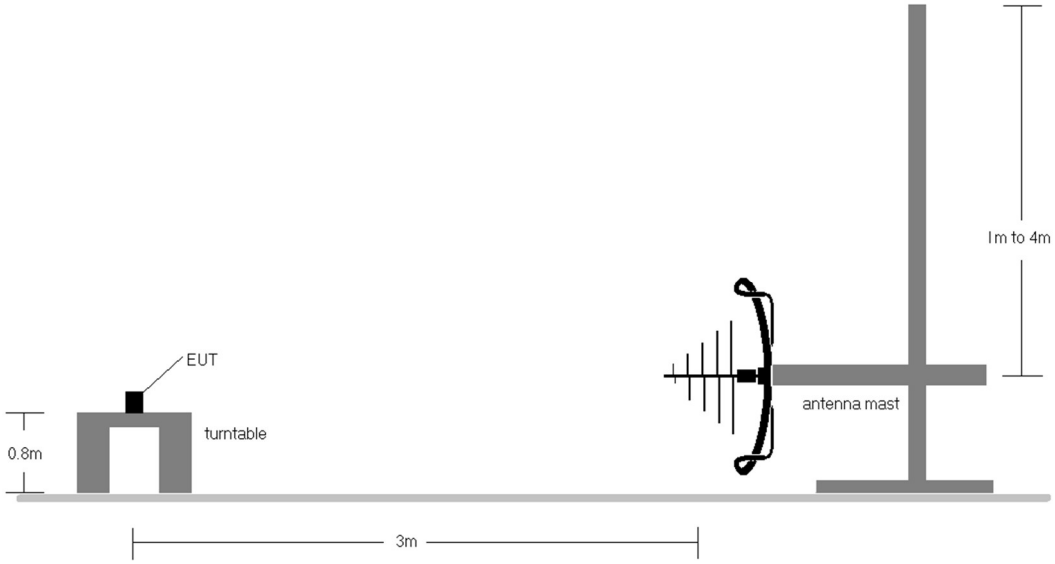


Figure 7-5. Test Instrument & Measurement Setup < 1GHz

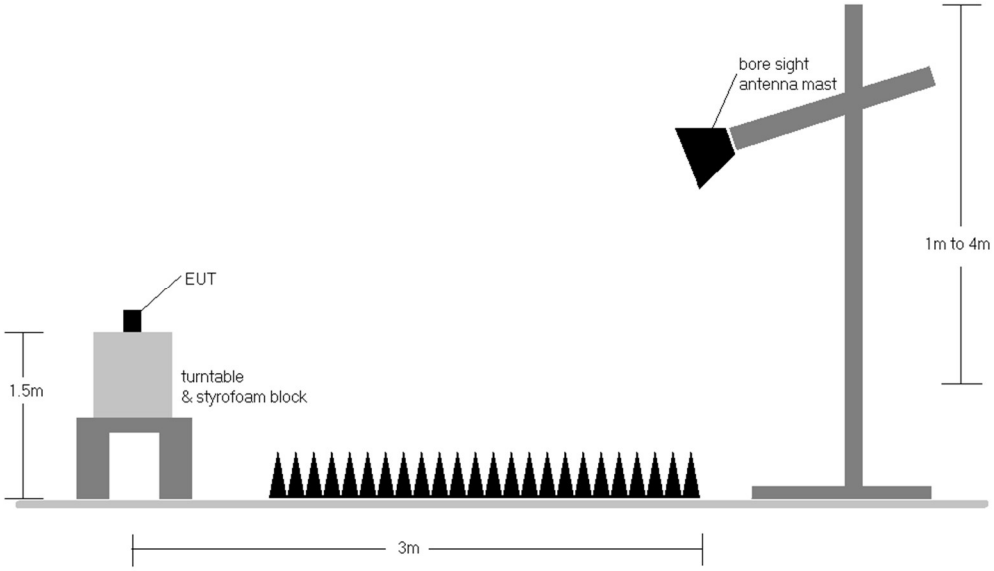


Figure 7-6. Test Instrument & Measurement Setup >1 GHz

Test Notes

1) Field strengths are calculated using the Measurement quantity conversions in KDB 971168 Section 5.8.4.
   a) E(dBµV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m)
   b) EIRP (dBm) = E(dBµV/m) + 20logD – 104.8; where D is the measurement distance in meters.

2) This device employs GSM, GPRS, and EDGE capabilities. The EUT was tested under all configurations and the highest powers is reported in GPRS mode while transmitting with one slot active.

3) This device employs UMTS technology with WCDMA (AMR/RMC) and HSDPA capabilities. The EUT was tested under all configurations and the highest power is reported in WCDMA mode with HSDPA Inactive at 12.2 kbps RMC and TPC bits all set to “1”.

4) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

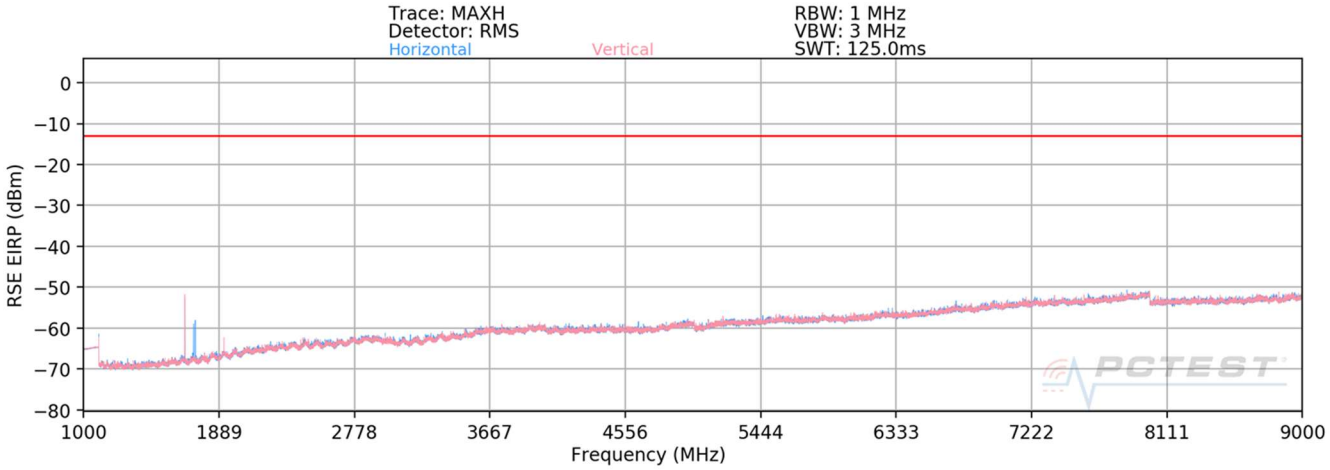
5) This unit was tested with its standard battery.

6) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.

7) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.

8) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

LTE Band 5



Plot 7-51. Radiated Spurious Plot (LTE Band 5)

Bandwidth (MHz):	10
Frequency (MHz):	829.0
RB / Offset:	1 / 0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1658.0	V	130	111	-56.67	-7.12	43.21	-52.05	-13.00	-39.05
2487.0	V	131	143	-73.07	-3.44	30.49	-64.77	-13.00	-51.77
3316.0	V	-	-	-76.09	-0.91	30.00	-65.25	-13.00	-52.25
4145.0	V	-	-	-76.97	1.60	31.63	-63.63	-13.00	-50.63
4974.0	V	-	-	-76.28	2.62	33.34	-61.91	-13.00	-48.91
5803.0	V	-	-	-77.84	5.17	34.33	-60.93	-13.00	-47.93
6632.0	V	-	-	-78.04	7.13	36.09	-59.17	-13.00	-46.17
7461.0	V	-	-	-77.81	8.82	38.01	-57.25	-13.00	-44.25

Table 7-5. Radiated Spurious Data (LTE Band 5 – Low Channel)

Bandwidth (MHz):	10
Frequency (MHz):	836.5
RB / Offset:	1 / 0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.0	V	100	112	-57.23	-7.20	42.57	-52.69	-13.00	-39.69
2509.5	V	144	138	-74.68	-3.32	29.00	-66.26	-13.00	-53.26
3346.0	V	-	-	-76.17	-0.89	29.94	-65.32	-13.00	-52.32
4182.5	V	-	-	-76.77	1.37	31.60	-63.66	-13.00	-50.66
5019.0	V	-	-	-76.24	2.34	33.10	-62.16	-13.00	-49.16
5855.5	V	-	-	-77.60	5.84	35.24	-60.02	-13.00	-47.02
6692.0	V	-	-	-77.91	7.54	36.63	-58.63	-13.00	-45.63
7528.5	V	-	-	-77.87	9.06	38.19	-57.07	-13.00	-44.07

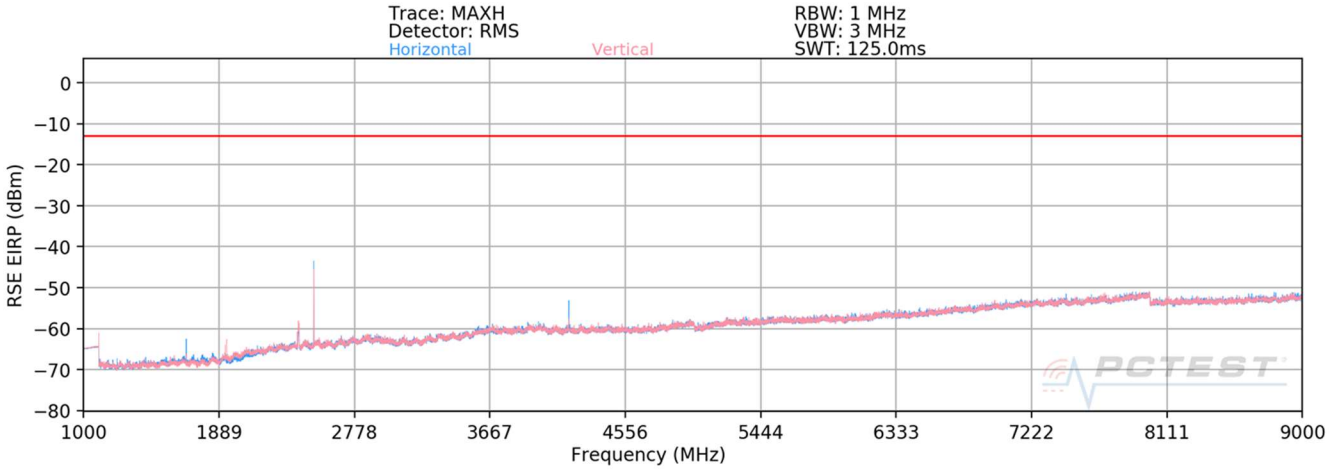
Table 7-6. Radiated Spurious Data (LTE Band 5 – Mid Channel)

Bandwidth (MHz):	10
Frequency (MHz):	844.0
RB / Offset:	1 / 0

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1688.00	V	129	120	-64.38	-7.18	35.44	-59.82	-13.00	-46.82
2532.00	V	113	123	-72.60	-3.34	31.06	-64.20	-13.00	-51.20
3376.00	V	-	-	-75.69	-0.68	30.63	-64.62	-13.00	-51.62
4220.00	V	-	-	-76.91	1.30	31.39	-63.86	-13.00	-50.86
5064.00	V	-	-	-76.21	2.67	33.46	-61.80	-13.00	-48.80
5908.00	V	-	-	-77.76	5.65	34.89	-60.36	-13.00	-47.36
6752.00	V	-	-	-77.85	7.61	36.76	-58.49	-13.00	-45.49
7596.00	V	-	-	-77.67	9.53	38.86	-56.40	-13.00	-43.40

Table 7-7. Radiated Spurious Data (LTE Band 5 – High Channel)

GPRS Cell



Plot 7-52. Radiated Spurious Plot (GPRS Cell)

Mode:	GPRS 1 Tx Slot
Channel:	128
Frequency (MHz):	824.2

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1648.4	H	146	360	-60.32	-7.16	39.52	-55.73	-13.00	-42.73
2472.6	H	116	345	-55.20	-3.45	48.35	-46.91	-13.00	-33.91
3296.8	H	-	-	-70.35	-0.95	35.70	-59.56	-13.00	-46.56
4121.0	H	114	342	-69.73	1.60	38.87	-56.39	-13.00	-43.39
4945.2	H	-	-	-70.46	2.54	39.08	-56.18	-13.00	-43.18
5769.4	H	-	-	-72.16	5.05	39.89	-55.37	-13.00	-42.37
6593.6	H	-	-	-72.93	7.40	41.47	-53.79	-13.00	-40.79

Table 7-8. Radiated Spurious Data (GPRS Cell – Low Channel)

Mode:	GPRS 1 Tx Slot
Channel:	190
Frequency (MHz):	836.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.2	H	111	353	-66.01	-7.20	33.79	-61.47	-13.00	-48.47
2509.8	H	110	351	-52.21	-3.32	51.47	-43.79	-13.00	-30.79
3346.4	H	-	-	-70.41	-0.90	35.69	-59.56	-13.00	-46.56
4183.0	H	106	360	-69.99	1.36	38.37	-56.88	-13.00	-43.88
5019.6	H	-	-	-70.52	2.34	38.82	-56.43	-13.00	-43.43
5856.2	H	-	-	-71.87	5.86	40.99	-54.27	-13.00	-41.27
6692.8	H	-	-	-72.89	7.53	41.64	-53.61	-13.00	-40.61

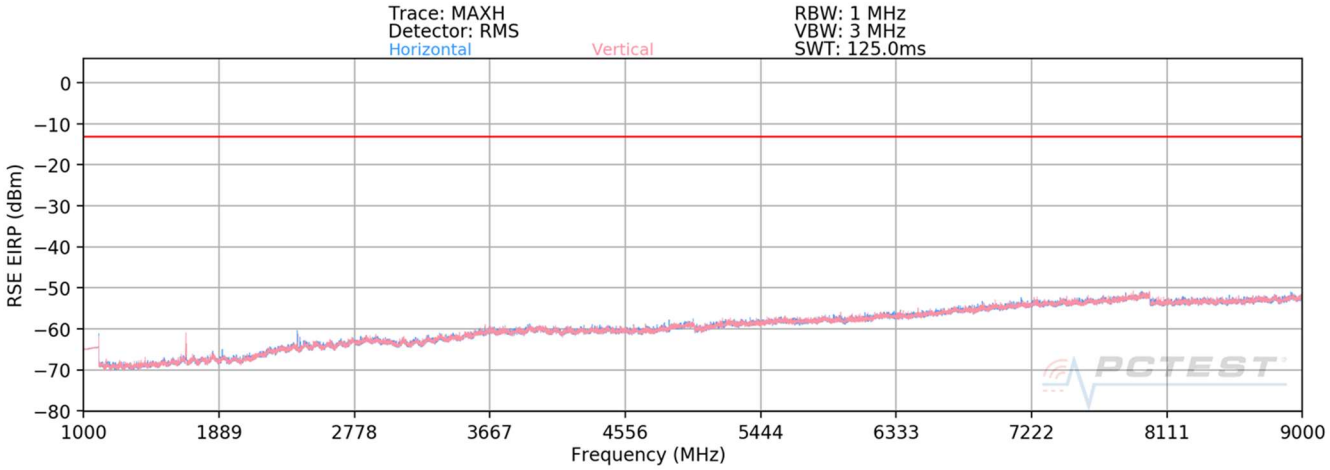
Table 7-9. Radiated Spurious Data (GPRS Cell – Mid Channel)

Mode:	GPRS 1 Tx Slot
Channel:	251
Frequency (MHz):	848.8

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1697.6	H	129	352	-66.61	-7.14	33.25	-62.01	-13.00	-49.01
2546.4	H	107	358	-51.82	-3.37	51.81	-43.45	-13.00	-30.45
3395.2	H	-	-	-70.52	-0.64	35.84	-59.42	-13.00	-46.42
4244.0	H	105	333	-69.46	1.08	38.62	-56.64	-13.00	-43.64
5092.8	H	-	-	-70.61	3.16	39.55	-55.71	-13.00	-42.71
5941.6	H	-	-	-71.59	5.59	41.00	-54.26	-13.00	-41.26
6790.4	H	-	-	-72.23	7.65	42.42	-52.84	-13.00	-39.84

Table 7-10. Radiated Spurious Data (GPRS Cell – High Channel)

WCDMA Cell



Plot 7-53. Radiated Spurious Plot (WCDMA Cell)

Mode:	WCDMA RMC
Channel:	4132
Frequency (MHz):	826.4

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1652.8	H	147	10	-60.39	-7.14	39.47	-55.78	-13.00	-42.78
2479.2	H	-	-	-75.84	-3.46	27.70	-67.56	-13.00	-54.56
3305.6	H	-	-	-76.49	-0.94	29.57	-65.69	-13.00	-52.69
4132.0	H	-	-	-77.53	1.56	31.03	-64.23	-13.00	-51.23
4958.4	H	-	-	-77.44	2.54	32.10	-63.16	-13.00	-50.16
5784.8	H	-	-	-78.84	5.09	33.25	-62.00	-13.00	-49.00
6611.2	H	-	-	-79.88	7.24	34.36	-60.90	-13.00	-47.90

Table 7-11. Radiated Spurious Data (WCDMA Cell – Low Channel)

Mode:	WCDMA RMC
Channel:	4183
Frequency (MHz):	836.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1673.2	H	117	354	-68.18	-7.20	31.62	-63.64	-13.00	-50.64
2509.8	H	-	-	-75.74	-3.32	27.94	-67.32	-13.00	-54.32
3346.4	H	-	-	-76.76	-0.90	29.35	-65.91	-13.00	-52.91
4183.0	H	-	-	-77.51	1.36	30.85	-64.40	-13.00	-51.40
5019.6	H	-	-	-77.34	2.34	32.00	-63.25	-13.00	-50.25
5856.2	H	-	-	-78.35	5.86	34.51	-60.75	-13.00	-47.75
6692.8	H	-	-	-78.98	7.53	35.55	-59.70	-13.00	-46.70

Table 7-12. Radiated Spurious Data (WCDMA Cell – Mid Channel)

Mode:	WCDMA RMC
Channel:	4233
Frequency (MHz):	846.6

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1693.2	H	140	360	-66.82	-7.17	33.01	-62.25	-13.00	-49.25
2539.8	H	-	-	-75.82	-3.33	27.85	-67.40	-13.00	-54.40
3386.4	H	-	-	-76.58	-0.54	29.88	-65.38	-13.00	-52.38
4233.0	H	-	-	-77.42	1.13	30.71	-64.54	-13.00	-51.54
5079.6	H	-	-	-77.31	2.89	32.58	-62.68	-13.00	-49.68
5926.2	H	-	-	-78.51	5.61	34.10	-61.16	-13.00	-48.16
6772.8	H	-	-	-78.94	7.66	35.72	-59.54	-13.00	-46.54

Table 7-13. Radiated Spurious Data (WCDMA Cell – High Channel)

7.7 Frequency Stability / Temperature Variation

Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.

b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 22 and RSS-132, the frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency.

Test Procedure Used

ANSI/TIA-603-E-2016

Test Settings

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.

Test Notes

None