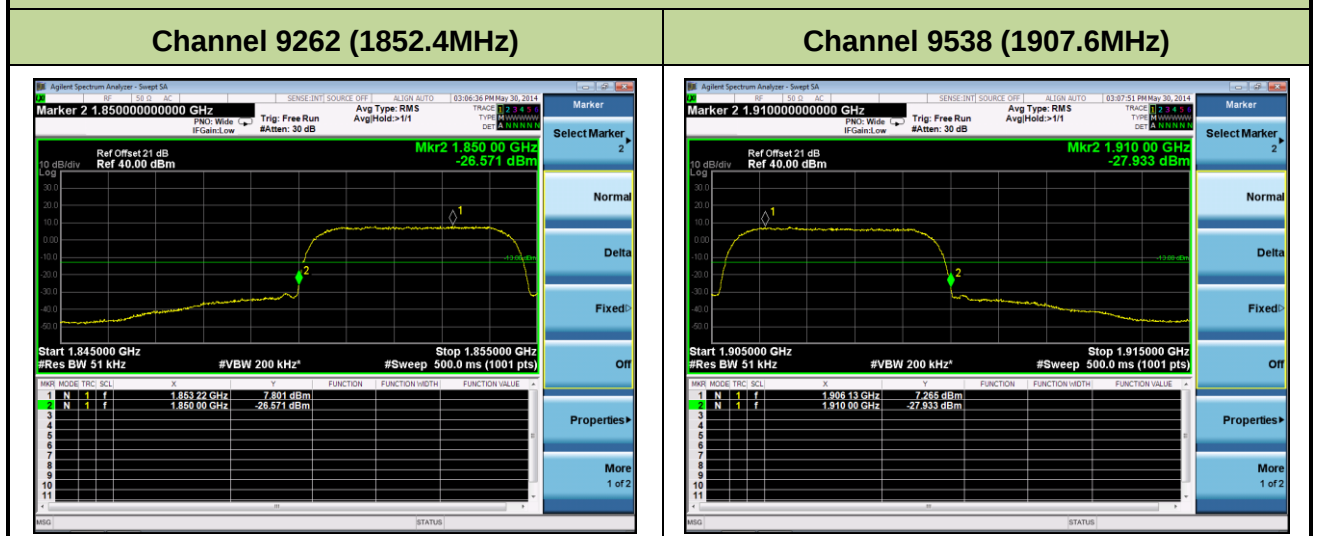
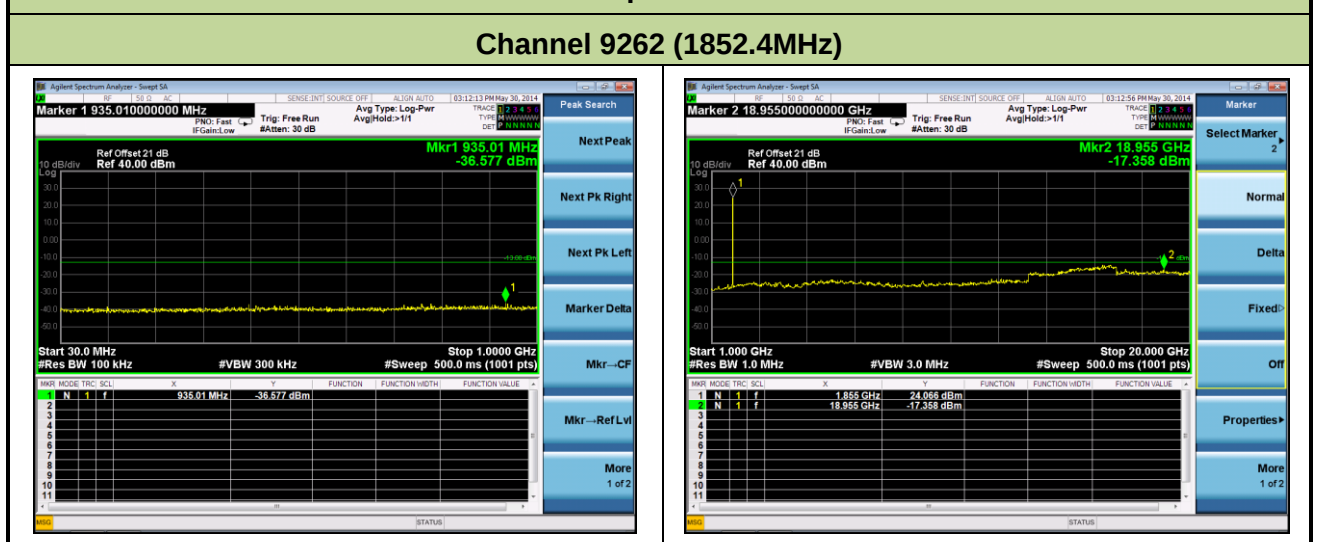


Mode	Channel No.	Frequency (MHz)	Modulation	Test Result
WCDMA Band II	9262	1852.40	QPSK	Pass
WCDMA Band II	9400	1880.00	QPSK	Pass
WCDMA Band II	9538	1907.60	QPSK	Pass

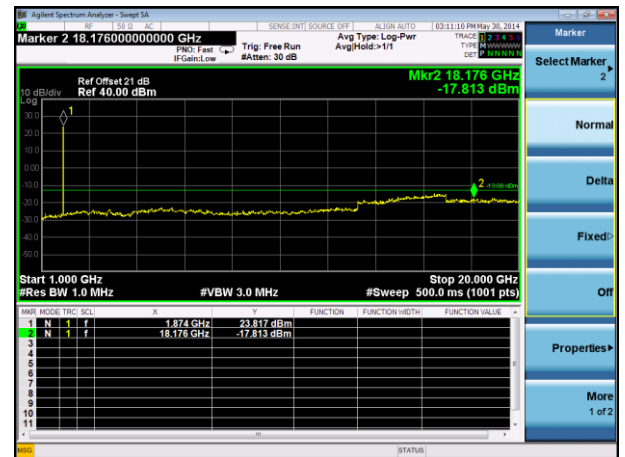
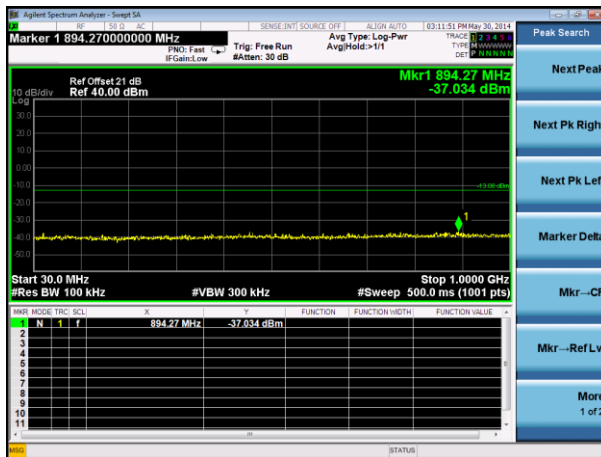
Band Edge



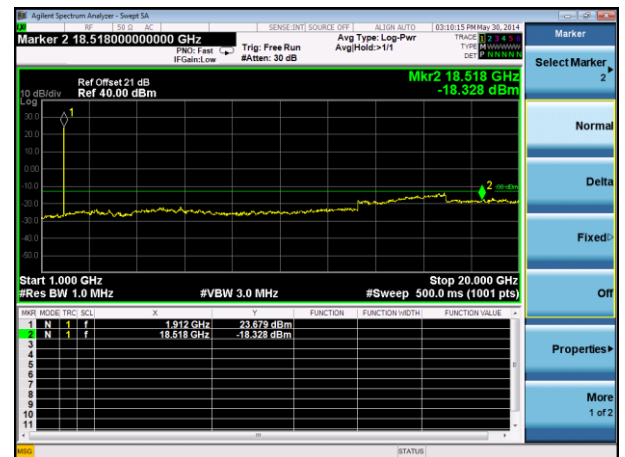
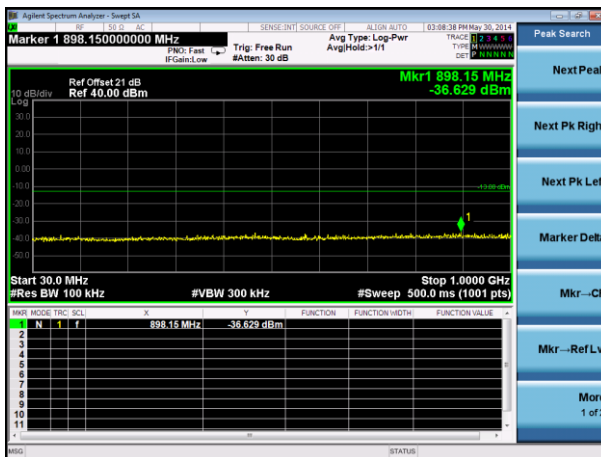
Conducted Spurious Emission



Channel 9400 (1880.0MHz)



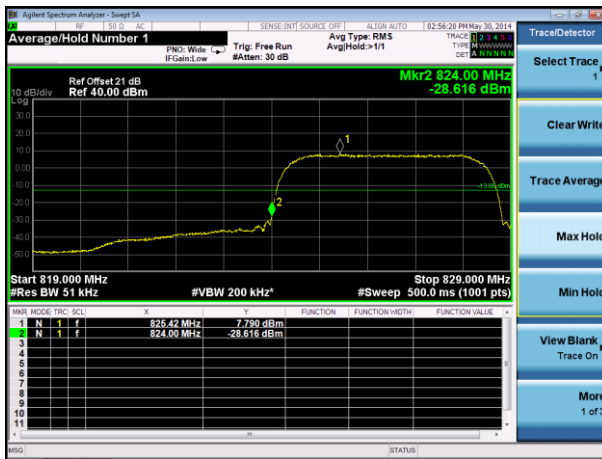
Channel 9538 (1907.6MHz)



Mode	Channel No.	Frequency (MHz)	Modulation	Test Result
WCDMA Band V	4132	826.40	QPSK	Pass
WCDMA Band V	4182	836.40	QPSK	Pass
WCDMA Band V	4233	846.60	QPSK	Pass

Band Edge

Channel 4132 (826.4MHz)

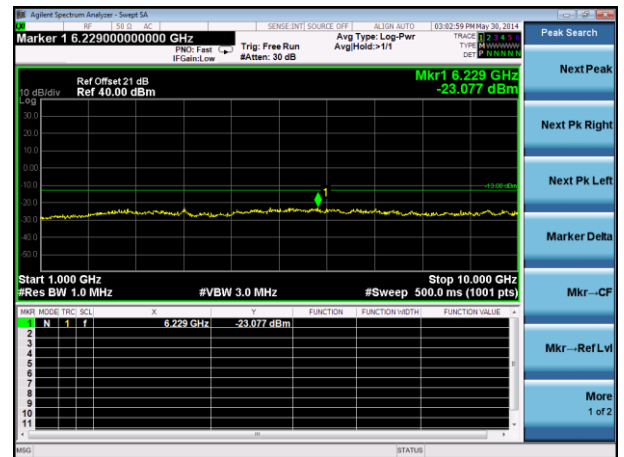
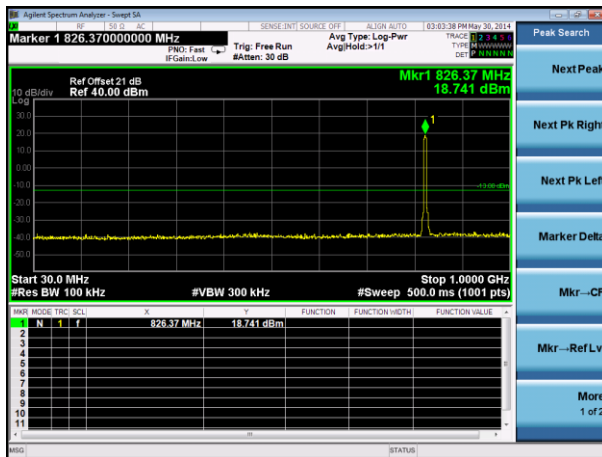


Channel 4233 (846.6MHz)

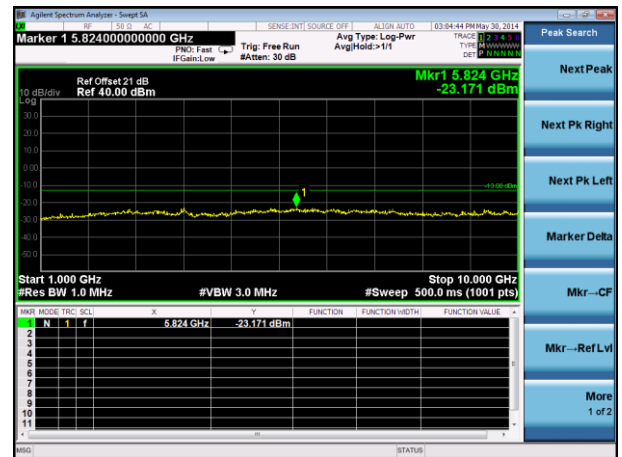
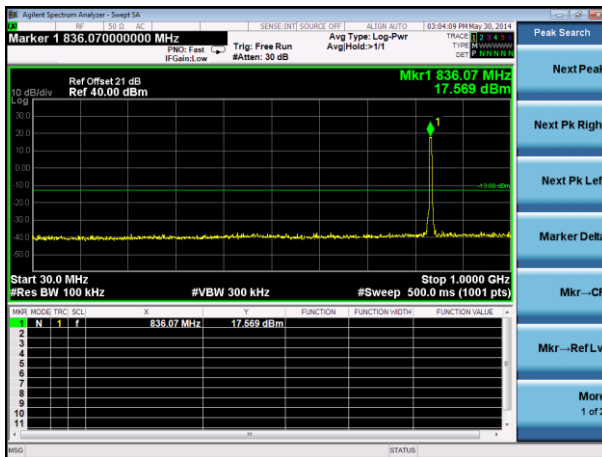


Conducted Spurious Emission

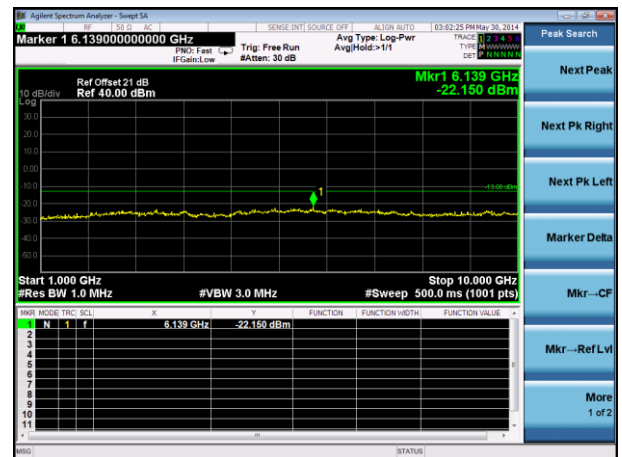
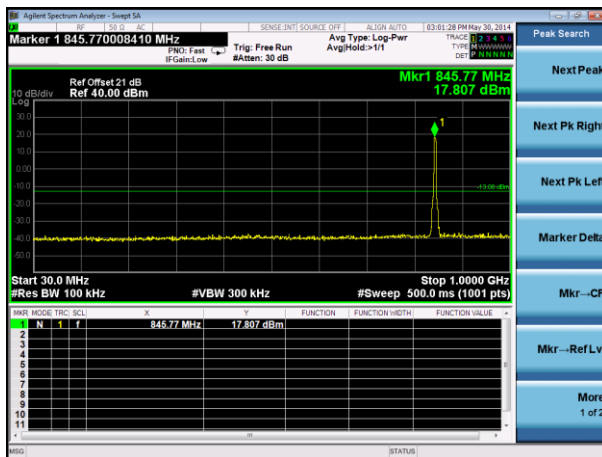
Channel 4132 (826.4MHz)



Channel 4182 (836.4MHz)



Channel 4233 (846.6MHz)



7.4. Conducted & Radiated Power and Radiated Spurious Emissions

7.4.1. Test Limit

Radiated Power

For FCC Part 22.913(a)(2):

The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(b):

The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

Radiated Spurious Emissions

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

7.4.2. Test Procedure Used

KDB 971168 D01v02r01 - Section 7.0 & ANSI/TIA-603-C-2004

7.4.3. Test Setting

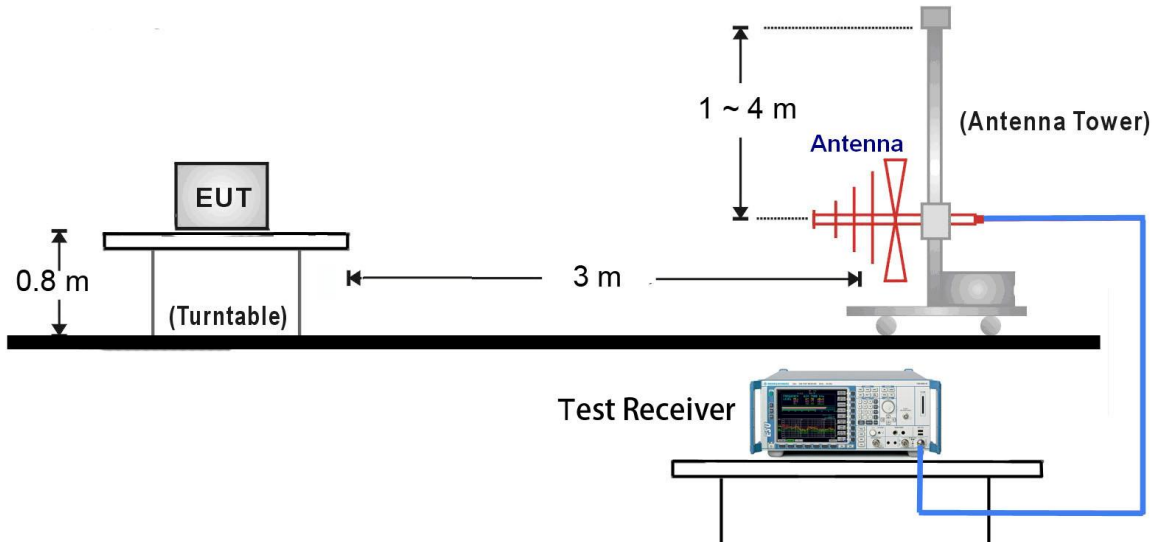
1. The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter
3. The output of the test antenna shall be connected to the measuring receiver.
4. The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
5. The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
6. The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7. The test antenna shall be raised and lowered again through the specified range of height

until a maximum signal level is detected by the measuring receiver.

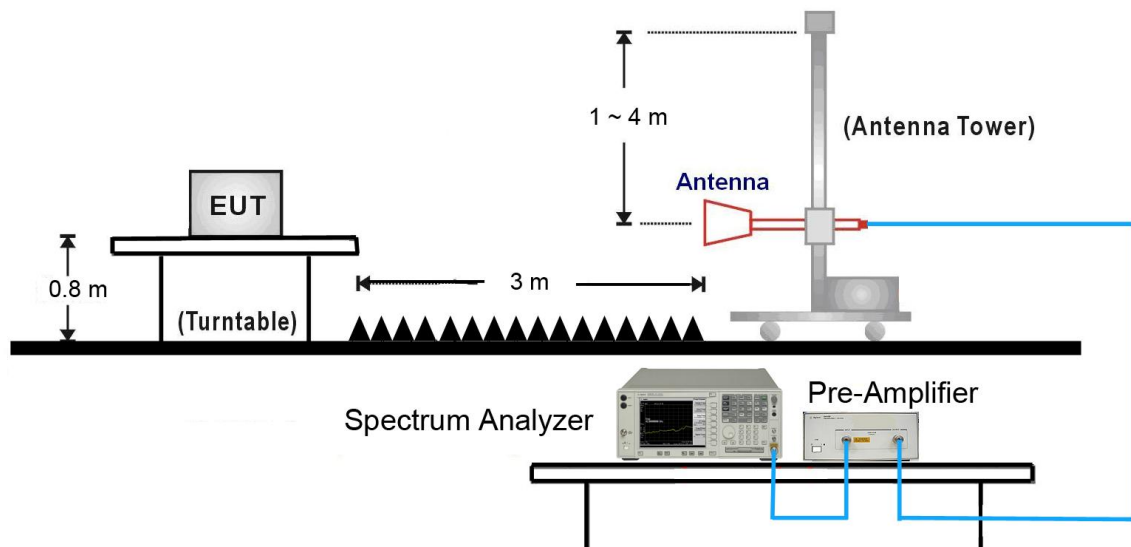
8. The maximum signal level detected by the measuring receiver shall be noted.
9. The transmitter shall be replaced by a substitution antenna.
10. The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
11. The substitution antenna shall be connected to a calibrated signal generator.
12. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
14. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
16. The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
17. Test site anechoic chamber refer to ANSI C63.4: 2009.

7.4.4. Test Setup

30MHz ~ 1GHz Test Setup:



1GHz ~ 20GHz Test Setup:



7.4.5. Test Result

Conducted Power

Mode	Frequency (MHz)	Avg. Burst Power (dBm)	Duty Cycle Factor (dB)	Frame Power (dBm)
GSM850	824.2	32.00	-9	23.00
	836.4	31.85	-9	22.85
	848.8	31.69	-9	22.69
GPRS850(1 Slot)	824.2	32.00	-9	23.00
	836.4	31.84	-9	22.84
	848.8	31.68	-9	22.68
GPRS850(2 Slot)	824.2	31.48	-6	25.48
	836.4	31.43	-6	25.43
	848.8	31.33	-6	25.33
GPRS850(3 Slot)	824.2	29.32	-4.25	25.07
	836.4	29.17	-4.25	24.92
	848.8	28.97	-4.25	24.72
GPRS850(4 Slot)	824.2	28.31	-3	25.31
	836.4	28.35	-3	25.35
	848.8	28.16	-3	25.16
EDGE850(1 Slot)	824.2	27.93	-9	18.93
	836.4	27.77	-9	18.77
	848.8	27.69	-9	18.69
EDGE850(2 Slot)	824.2	26.90	-6	20.90
	836.4	26.76	-6	20.76
	848.8	26.65	-6	20.65
EDGE850(3 Slot)	824.2	25.87	-4.25	21.62
	836.4	25.73	-4.25	21.48
	848.8	25.63	-4.25	21.38
EDGE850(4 Slot)	824.2	24.85	-3	21.85
	836.4	24.71	-3	21.71
	848.8	24.62	-3	21.62
PCS1900	1850.2	28.81	-3	25.81
	1880.0	28.81	-3	25.81
	1909.8	28.38	-3	25.38
GPRS1900(1 Slot)	1850.2	28.79	-9	19.79
	1880.0	28.76	-9	19.76

	1909.8	28.33	-9	19.33
GPRS1900(2 Slot)	1850.2	28.17	-6	22.17
	1880.0	28.23	-6	22.23
	1909.8	28.32	-6	22.32
GPRS1900(3 Slot)	1850.2	25.91	-4.25	21.66
	1880.0	25.92	-4.25	21.67
	1909.8	25.47	-4.25	21.22
GPRS1900(4 Slot)	1850.2	25.11	-3	22.11
	1880.0	25.13	-3	22.13
	1909.8	24.89	-3	21.89
EDGE1900(1 Slot)	1850.2	25.98	-9	16.98
	1880.0	26.09	-9	17.09
	1909.8	26.06	-9	17.06
EDGE1900(2 Slot)	1850.2	24.91	-6	18.91
	1880.0	25.05	-6	19.05
	1909.8	25.02	-6	19.02
EDGE1900(3 Slot)	1850.2	23.88	-4.25	19.63
	1880.0	24.02	-4.25	19.77
	1909.8	23.99	-4.25	19.74
EDGE1900(4 Slot)	1850.2	22.85	-3	19.85
	1880.0	22.96	-3	19.96
	1909.8	22.93	-3	19.93

Note: Frame Power (dBm) = Avg. Burst Power (dBm) + Duty Cycle Factor (dB)

Mode	3GPP Subtest	Conducted Power (dBm)						MPR
		Band II Channel			Band V Channel			
		9262	9400	9538	4132	4182	4233	
WCDMA R99	1	21.48	21.86	21.52	22.37	22.46	22.37	N/A
Rel5 HSDPA	1	21.44	21.78	21.51	22.36	22.44	22.35	0
	2	21.35	21.38	21.45	22.34	22.35	22.35	0
	3	21.32	21.56	21.36	22.45	22.47	22.36	0.5
	4	21.11	21.46	21.54	22.12	22.39	22.37	0.5
Rel6 HSUPA	1	21.47	21.85	21.49	22.38	22.45	22.36	0.0
	2	21.47	21.79	21.47	22.36	22.44	22.35	2.0
	3	21.48	21.56	21.45	22.35	22.32	22.35	1.0
	4	22.45	21.69	21.36	22.37	22.41	22.21	2.0
	5	22.39	21.68	21.46	22.23	22.24	22.13	0.0

Radiated Power

GSM850

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 128 (824.20MHz)							
824.2	H	23.28	1.78	6.52	28.02	38.50	-10.48
824.2	V	15.86	1.78	6.38	20.46	38.50	-18.04
Middle Channel 189 (836.40MHz)							
836.4	H	23.84	1.80	6.63	28.67	38.50	-9.83
836.4	V	16.72	1.80	6.15	21.07	38.50	-17.43
High Channel 251 (848.80MHz)							
848.8	H	23.82	1.82	6.80	28.80	38.50	-9.70
848.8	V	17.12	1.82	6.54	21.84	38.50	-16.66

PCS1900

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 512 (1850.20MHz)							
1850.2	H	23.79	2.70	4.64	25.73	33.00	-7.27
1850.2	V	12.43	2.70	4.64	14.37	33.00	-18.63
Middle Channel 661 (1880.00MHz)							
1880.0	H	22.27	2.72	4.59	24.14	33.00	-8.86
1880.0	V	11.96	2.72	4.59	13.83	33.00	-19.17
High Channel 810 (1909.80MHz)							
1909.8	H	22.70	2.75	4.54	24.49	33.00	-8.51
1909.8	V	12.62	2.75	4.54	14.41	33.00	-18.59

EDGE850

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 128 (824.20MHz)							
824.2	H	19.46	1.78	6.52	24.20	38.50	-14.30
824.2	V	11.86	1.78	6.38	16.46	38.50	-22.04
Middle Channel 189 (836.40MHz)							
836.4	H	19.83	1.80	6.63	24.66	38.50	-13.84
836.4	V	12.72	1.80	6.15	17.07	38.50	-21.43
High Channel 251 (848.80MHz)							
848.8	H	19.86	1.82	6.80	24.84	38.50	-13.66
848.8	V	13.11	1.82	6.54	17.83	38.50	-20.67

EDGE1900

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 512 (1850.20MHz)							
1850.2	H	19.83	2.70	4.64	21.77	33.00	-11.23
1850.2	V	8.43	2.70	4.64	10.37	33.00	-22.63
Middle Channel 661 (1880.00MHz)							
1880.0	H	19.27	2.72	4.59	21.14	33.00	-11.86
1880.0	V	8.96	2.72	4.59	10.83	33.00	-22.17
High Channel 810 (1909.80MHz)							
1909.8	H	19.70	2.75	4.54	21.49	33.00	-11.51
1909.8	V	9.62	2.75	4.54	11.41	33.00	-21.59

WCDMA Band II

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 9262 (1852.40MHz)							
1852.4	H	15.57	2.70	4.64	17.51	33.00	-15.49
1852.4	V	5.48	2.70	4.64	7.42	33.00	-25.58
Middle Channel 9400 (1880.00MHz)							
1880.0	H	15.77	2.72	4.59	17.64	33.00	-15.36
1880.0	V	5.24	2.72	4.59	7.11	33.00	-25.89
High Channel 9538 (1907.60MHz)							
1907.6	H	15.77	2.75	4.55	17.57	33.00	-15.43
1907.6	V	4.60	2.75	4.55	6.40	33.00	-26.60

WCDMA Band V

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 4132 (826.40MHz)							
826.4	H	14.24	1.79	6.50	18.95	38.50	-19.55
826.4	V	6.28	1.79	6.30	10.79	38.50	-27.71
Middle Channel 4182 (836.40MHz)							
836.4	H	13.82	1.80	6.63	18.65	38.50	-19.85
836.4	V	6.80	1.80	6.15	11.15	38.50	-27.35
High Channel 4233 (846.60MHz)							
846.6	H	13.94	1.82	6.80	18.92	38.50	-19.58
846.6	V	6.83	1.82	6.51	11.52	38.50	-26.98

NOTES:

- ERP (dBm) / EIRP (dBm)= SG Reading (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd)
- This device was tested under all configurations and the highest power is reported in GSM mode. This device employs UMTS technology with WCDMA (AMR/RMC), HSDPA, HSUPA and GSM/GPRS/EDGE capabilities. For WCDMA and HSPA transmission, all configurations were investigated and the worst case UMTS emissions were found in RMC WCDMA mode at 12.2kbps rate.

3. This unit was tested with its standard adapter.
4. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The “H” positioning is defined with the EUT lying flat on the test surface, the “H2” positioning is defined with the EUT standing up on its side, and the “V” positioning is defined with the EUT standing upright. The worst case test configuration was found in the EUT in the V positioning. The data reported in the table above was measured in this test setup.

Radiated Spurious Emission

GSM850

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 128 (824.20MHz)							
1646.0	V	-44.21	2.55	5.13	-41.63	-13.0	-28.63
2470.5	V	-42.18	3.14	5.54	-39.78	-13.0	-26.78
1646.0	H	-43.94	2.55	5.13	-41.36	-13.0	-28.36
2470.5	H	-38.29	3.14	5.54	-35.89	-13.0	-22.89
Middle Channel 189 (836.40MHz)							
1671.5	V	-49.44	2.57	5.05	-46.96	-13.0	-33.96
2513.0	V	-40.07	3.18	5.64	-37.61	-13.0	-24.61
1671.5	H	-46.64	2.57	5.05	-44.16	-13.0	-31.16
2513.0	H	-35.98	3.18	5.64	-33.52	-13.0	-20.52
High Channel 251 (848.80MHz)							
1697.0	V	-42.39	2.59	4.97	-40.01	-13.0	-27.01
2547.0	V	-42.73	3.20	5.73	-40.20	-13.0	-27.20
1697.0	H	-46.08	2.59	4.97	-43.70	-13.0	-30.70
2547.0	H	-35.50	3.20	5.73	-32.97	-13.0	-19.97

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $ERP\ (dBm) = SG\ Reading\ (dBm) - Cable\ Loss\ (dB) + Substitute\ Antenna\ Gain\ (dBd)$

PCS1900

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 512 (1850.20MHz)							
3703.0	V	-46.45	3.90	7.88	-42.47	-13.0	-29.47
5547.5	V	-51.22	4.85	10.10	-45.97	-13.0	-32.97
3703.0	H	-46.57	3.90	7.88	-42.59	-13.0	-29.59
5547.5	H	-45.54	4.85	10.10	-40.29	-13.0	-27.29
Middle Channel 661 (1880.00MHz)							
3762.5	V	-47.70	3.94	7.93	-43.71	-13.0	-30.71
5641.0	V	-48.22	4.90	10.10	-43.02	-13.0	-30.02
3762.5	H	-51.47	3.94	7.93	-47.48	-13.0	-34.48
5641.0	H	-44.62	4.90	10.10	-39.42	-13.0	-26.42
High Channel 810 (1909.80MHz)							
3822.0	V	-45.80	3.98	8.07	-41.71	-13.0	-28.71
5726.0	V	-48.81	5.00	10.10	-43.71	-13.0	-30.71
3822.0	H	-47.99	3.98	8.07	-43.90	-13.0	-30.90
5726.0	H	-44.69	5.00	10.10	-39.59	-13.0	-26.59

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $EIRP (dBm) = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBd)}$

EDGE850

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 128 (824.20MHz)							
1646.0	V	-51.90	2.55	5.13	-49.32	-13.0	-36.32
2470.5	V	-48.68	3.14	5.54	-46.28	-13.0	-33.28
1646.0	H	-49.70	2.55	5.13	-47.12	-13.0	-34.12
2470.5	H	-47.86	3.14	5.54	-45.46	-13.0	-32.46
Middle Channel 189 (836.40MHz)							
1671.5	V	-54.13	2.57	5.05	-51.65	-13.0	-38.65
2513.0	V	-47.92	3.18	5.64	-45.46	-13.0	-32.46
1671.5	H	-53.32	2.57	5.05	-50.84	-13.0	-37.84
2513.0	H	-44.83	3.18	5.64	-42.37	-13.0	-29.37
High Channel 251 (848.80MHz)							
1697.0	V	-52.42	2.59	4.97	-50.04	-13.0	-37.04
2547.0	V	-46.99	3.20	5.73	-44.46	-13.0	-31.46
1697.0	H	-54.02	2.59	4.97	-51.64	-13.0	-38.64
2547.0	H	-44.91	3.20	5.73	-42.38	-13.0	-29.38

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $ERP\ (dBm) = SG\ Reading\ (dBm) - Cable\ Loss\ (dB) + Substitute\ Antenna\ Gain\ (dBd)$

EDGE1900

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 512 (1850.20MHz)							
3703.0	V	-48.72	3.90	7.88	-44.74	-13.0	-31.74
5547.5	V	-52.66	4.85	10.10	-47.41	-13.0	-34.41
3703.0	H	-49.00	3.90	7.88	-45.02	-13.0	-32.02
5547.5	H	-51.26	4.85	10.10	-46.01	-13.0	-33.01
Middle Channel 661 (1880.00MHz)							
3762.5	V	-51.79	3.94	7.93	-47.80	-13.0	-34.80
5641.0	V	-50.10	4.90	10.10	-44.90	-13.0	-31.90
3762.5	H	-54.64	3.94	7.93	-50.65	-13.0	-37.65
5641.0	H	-50.02	4.90	10.10	-44.82	-13.0	-31.82
High Channel 810 (1909.80MHz)							
3822.0	V	-50.39	3.98	8.07	-46.30	-13.0	-33.30
5726.0	V	-47.78	5.00	10.10	-42.68	-13.0	-29.68
3822.0	H	-45.29	3.98	8.07	-41.20	-13.0	-28.20
5726.0	H	-49.71	5.00	10.10	-44.61	-13.0	-31.61

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $EIRP (dBm) = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBd)}$

WCDMA Band II

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 9262 (1852.40MHz)							
3703.0	V	-35.12	3.90	7.88	-31.14	-13.0	-18.14
5556.0	V	-46.10	4.83	10.10	-40.83	-13.0	-27.83
3703.0	H	-35.69	3.90	7.88	-31.71	-13.0	-18.71
5556.0	H	-41.34	4.83	10.10	-36.07	-13.0	-23.07
Middle Channel 9400 (1880.00MHz)							
3762.5	V	-34.80	3.94	7.93	-30.81	-13.0	-17.81
5641.0	V	-43.74	4.90	10.10	-38.54	-13.0	-25.54
3762.5	H	-35.50	3.94	7.93	-31.51	-13.0	-18.51
5641.0	H	-39.21	4.90	10.10	-34.01	-13.0	-21.01
High Channel 9538 (1907.60MHz)							
3813.5	V	-33.68	3.97	8.05	-29.60	-13.0	-16.60
5726.0	V	-43.65	5.00	10.10	-38.55	-13.0	-25.55
3813.5	H	-35.46	3.97	8.05	-31.38	-13.0	-18.38
5726.0	H	-38.90	5.00	10.10	-33.80	-13.0	-20.80

Note:

1. Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
2. $EIRP (dBm) = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBd)}$

WCDMA Band V

Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 4132 (826.40MHz)							
1658.0	V	-51.70	2.56	5.09	-49.17	-13.0	-36.17
2477.0	V	-51.39	3.15	5.55	-48.99	-13.0	-35.99
1658.0	H	-48.72	2.56	5.09	-46.19	-13.0	-33.19
2477.0	H	-50.07	3.15	5.55	-47.67	-13.0	-34.67
Middle Channel 4182 (836.40MHz)							
1672.0	V	-54.56	2.57	5.05	-52.08	-13.0	-39.08
2512.0	V	-51.53	3.18	5.63	-49.08	-13.0	-36.08
1672.0	H	-51.74	2.57	5.05	-49.26	-13.0	-36.26
2512.0	H	-50.34	3.18	5.63	-47.89	-13.0	-34.89
High Channel 4233 (846.60MHz)							
1693.0	V	-51.96	2.59	4.98	-49.57	-13.0	-36.57
2533.0	V	-50.77	3.19	5.69	-48.27	-13.0	-35.27
1693.0	H	-50.44	2.59	4.98	-48.05	-13.0	-35.05
2533.0	H	-53.03	3.19	5.69	-50.53	-13.0	-37.53

Note:

- Spurious emissions within 30-1000MHz were found more than 20dB below limit line.
- $ERP \text{ (dBm)} = SG \text{ Reading (dBm)} - Cable \text{ Loss (dB)} + Substitute \text{ Antenna Gain (dBd)}$

7.5. Peak-Average Ratio

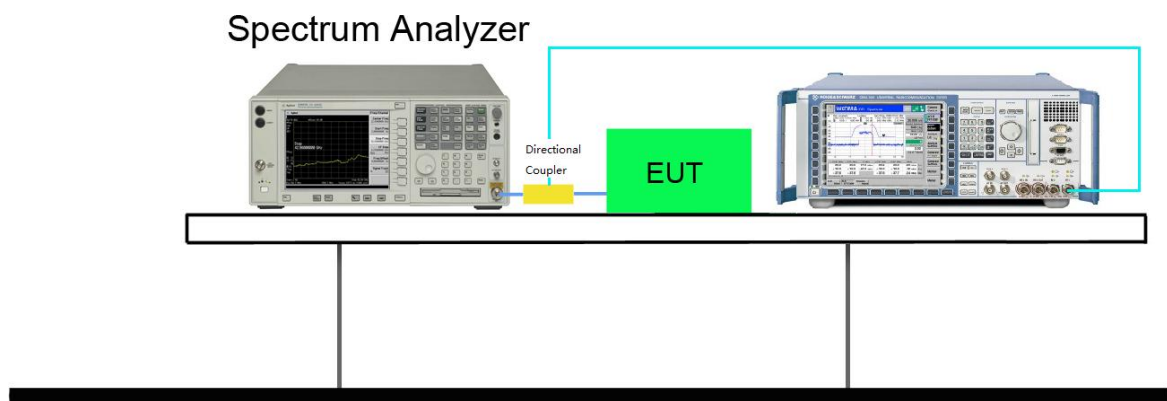
7.5.1. Test Limit

The transmitter's peak-to-average power ratio (PAPR) shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

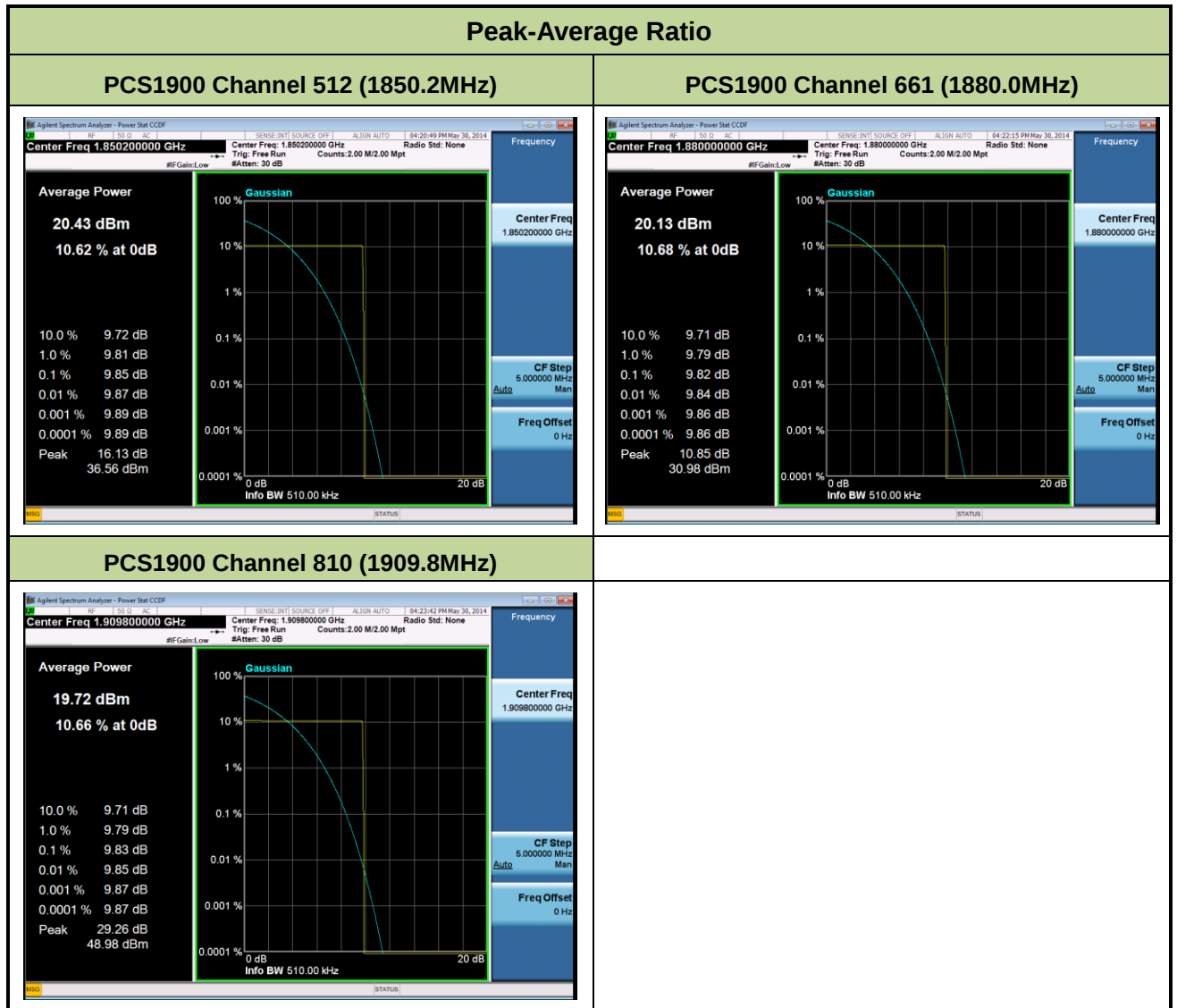
7.5.2. Test Procedure

KDB 971168 D01v02r01 - Section 5.7 & ANSI/TIA-603-C-2004

7.5.3. Test Setup

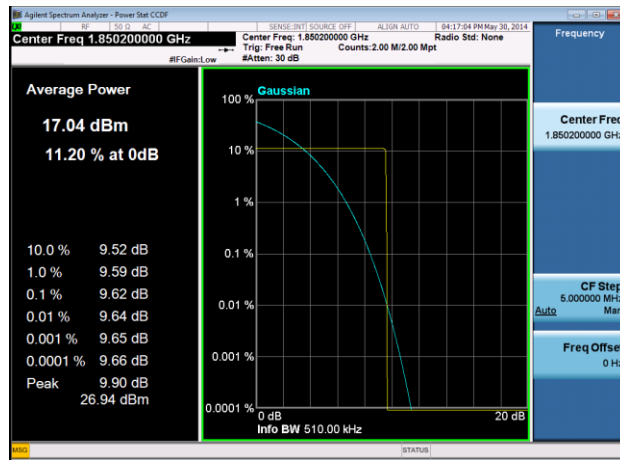


7.5.4. Test Result

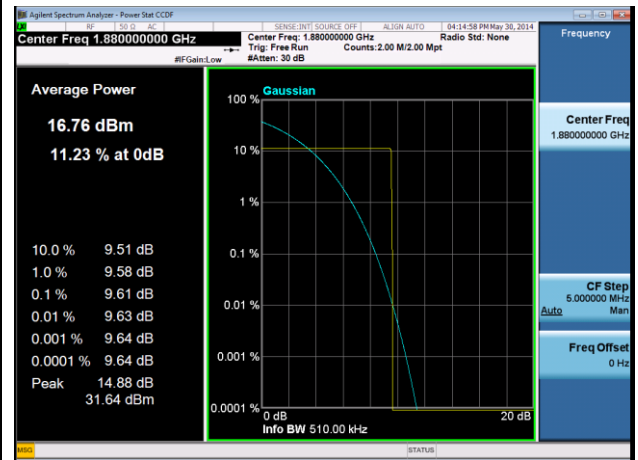


Peak-Average Ratio

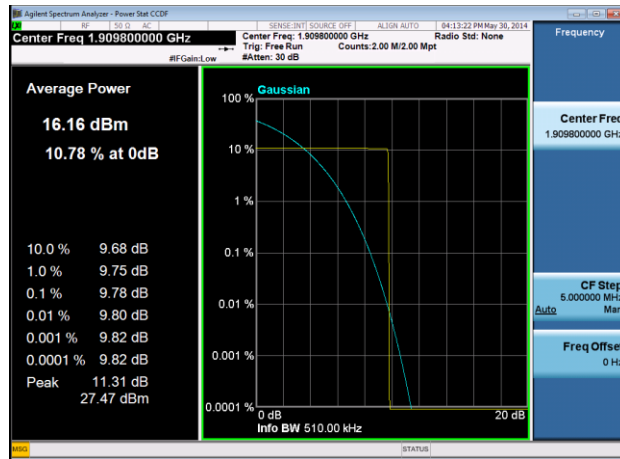
EDGE1900 Channel 512 (1850.2MHz)



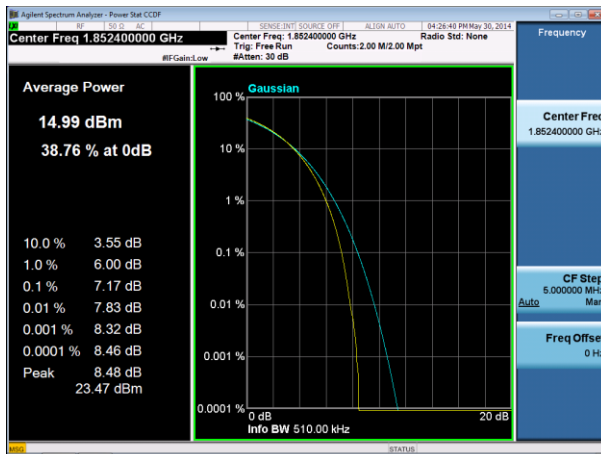
EDGE1900 Channel 661 (1880.0MHz)



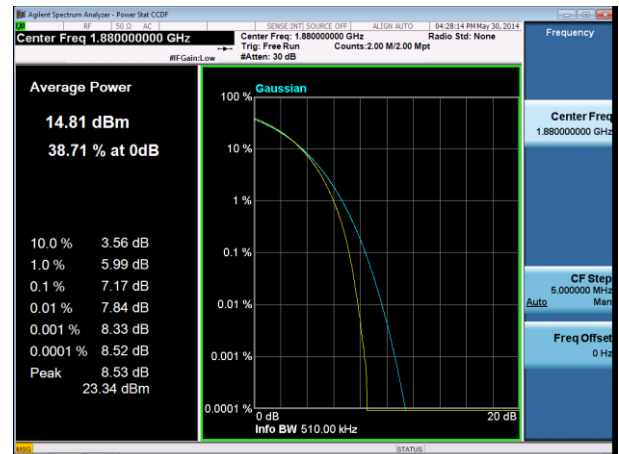
EDGE1900 Channel 810 (1909.8MHz)



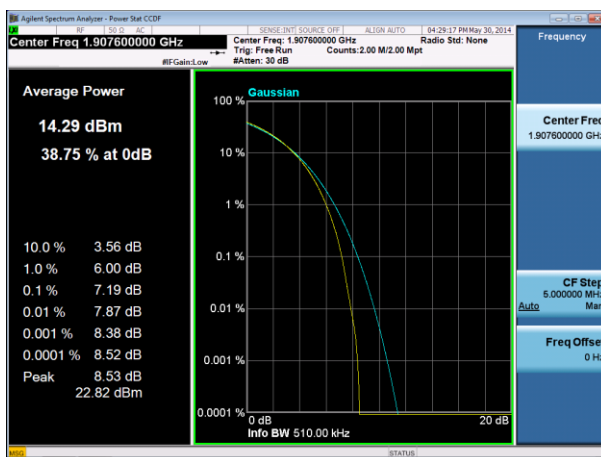
WCDMA Band II Channel 9262 (1852.4MHz)



WCDMA Band II Channel 9400 (1880.0MHz)



WCDMA Band II Channel 9538 (1907.6MHz)



7.6. Frequency Stability Under Temperature & Voltage Variations

7.6.1. Test Limit

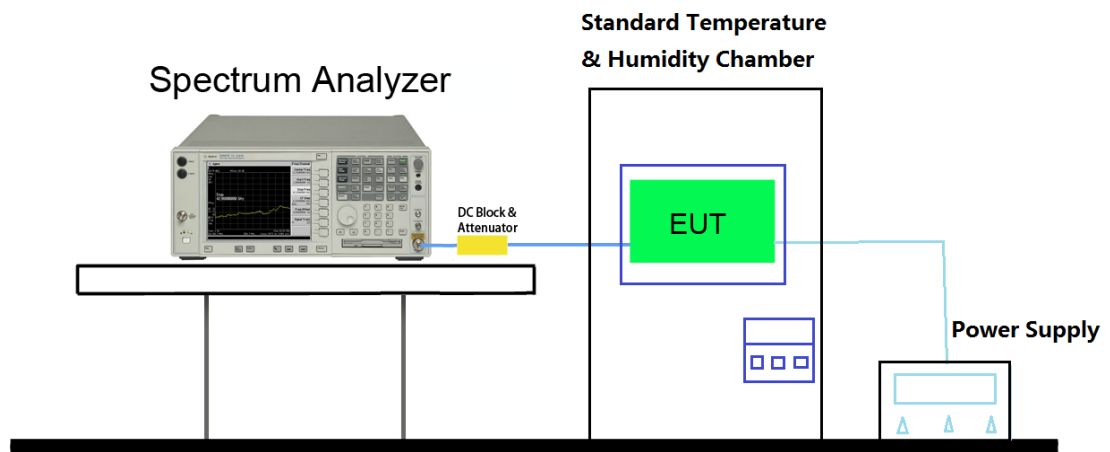
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Limit	$< \pm 2.5$ ppm
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7.6.2. Test Procedure

KDB 971168 D01v02r01 - Section 9.0 & ANSI/TIA-603-C-2004

7.6.3. Test Setup



7.6.4. Test Result

Operating Frequency	836,400,000 Hz
Channel	189
Test Mode	GSM850
Reference Voltage	3.7 VDC
Deviation Limit	±0.00025% or 2.5ppm

Voltage (%)	Power (VDC)	TEMP (%)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100%	3.7	+20(Ref)	836,400,000	37	0.00000442
100%		-30	836,400,000	29	0.00000347
100%		-20	836,400,000	54	0.00000646
100%		-10	836,400,000	26	0.00000311
100%		0	836,400,000	-32	-0.00000383
100%		+10	836,400,000	43	0.00000514
100%		+20	836,400,000	35	0.00000418
100%		+30	836,400,000	7	0.00000084
100%		+40	836,400,000	-13	-0.00000155
100%		+50	836,400,000	38	0.00000454
115%	4.2	+20	836,400,000	31	0.00000371
BAT.ENDPOINT	3.6	+20	836,400,000	-11	-0.00000132

Operating Frequency	1,880,000,000 Hz
Channel	661
Test Mode	PCS1900
Reference Voltage	3.7 VDC
Deviation Limit	±0.00025% or 2.5ppm

Voltage (%)	Power (VDC)	TEMP (%)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100%	3.7	+20(Ref)	1,880,000,000	-27	-0.00000144
100%		-30	1,880,000,000	66	0.00000351
100%		-20	1,880,000,000	4	0.00000021
100%		-10	1,880,000,000	-29	-0.00000154
100%		0	1,880,000,000	44	0.00000234
100%		+10	1,880,000,000	38	0.00000202
100%		+20	1,880,000,000	-11	-0.00000059
100%		+30	1,880,000,000	47	0.00000250
100%		+40	1,880,000,000	24	0.00000128
100%		+50	1,880,000,000	-34	-0.00000181
115%	4.2	+20	1,880,000,000	39	0.00000207
BAT.ENDPOINT	3.6	+20	1,880,000,000	67	0.00000356

Operating Frequency	836,400,000 Hz
Channel	189
Test Mode	EDGE850
Reference Voltage	3.7 VDC
Deviation Limit	±0.00025% or 2.5ppm

Voltage (%)	Power (VDC)	TEMP (%)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100%	3.7	+20(Ref)	836,400,000	39	0.00000466
100%		-30	836,400,000	51	0.00000610
100%		-20	836,400,000	70	0.00000837
100%		-10	836,400,000	-34	-0.00000407
100%		0	836,400,000	44	0.00000526
100%		+10	836,400,000	56	0.00000670
100%		+20	836,400,000	38	0.00000454
100%		+30	836,400,000	8	0.00000096
100%		+40	836,400,000	-19	-0.00000227
100%		+50	836,400,000	41	0.00000490
115%	4.2	+20	836,400,000	47	0.00000562
BAT.ENDPOINT	3.6	+20	836,400,000	-9	-0.00000108

Operating Frequency	1,880,000,000 Hz
Channel	661
Test Mode	EDGE1900
Reference Voltage	3.7 VDC
Deviation Limit	±0.00025% or 2.5ppm

Voltage (%)	Power (VDC)	TEMP (%)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100%	3.7	+20(Ref)	1,880,000,000	-6	-0.00000032
100%		-30	1,880,000,000	52	0.00000277
100%		-20	1,880,000,000	-9	-0.00000048
100%		-10	1,880,000,000	-24	-0.00000128
100%		0	1,880,000,000	68	0.00000362
100%		+10	1,880,000,000	31	0.00000165
100%		+20	1,880,000,000	-17	-0.00000090
100%		+30	1,880,000,000	64	0.00000340
100%		+40	1,880,000,000	31	0.00000165
100%		+50	1,880,000,000	-29	-0.00000154
115%	4.2	+20	1,880,000,000	43	0.00000229
BAT.ENDPOINT	3.6	+20	1,880,000,000	88	0.00000468

Operating Frequency	1,880,000,000 Hz
Channel	9400
Test Mode	WCDMA Band II
Reference Voltage	3.7 VDC
Deviation Limit	±0.00025% or 2.5ppm

Voltage (%)	Power (VDC)	TEMP (%)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100%	3.7	+20(Ref)	1,880,000,000	37	0.00000197
100%		-30	1,880,000,000	21	0.00000112
100%		-20	1,880,000,000	29	0.00000154
100%		-10	1,880,000,000	63	0.00000335
100%		0	1,880,000,000	19	0.00000101
100%		+10	1,880,000,000	34	0.00000181
100%		+20	1,880,000,000	55	0.00000293
100%		+30	1,880,000,000	-19	-0.00000101
100%		+40	1,880,000,000	-44	-0.00000234
100%		+50	1,880,000,000	41	0.00000218
115%	4.2	+20	1,880,000,000	64	0.00000340
BAT.ENDPOINT	3.6	+20	1,880,000,000	79	0.00000420

Operating Frequency	836,400,000 Hz
Channel	4182
Test Mode	WCDMA Band V
Reference Voltage	3.7 VDC
Deviation Limit	±0.00025% or 2.5ppm

Voltage (%)	Power (VDC)	TEMP (%)	Frequency (Hz)	Freq. Dev. (Hz)	Deviation (%)
100%	3.7	+20(Ref)	836,400,000	38	0.00000454
100%		-30	836,400,000	21	0.00000251
100%		-20	836,400,000	33	0.00000395
100%		-10	836,400,000	44	0.00000526
100%		0	836,400,000	-11	-0.00000132
100%		+10	836,400,000	24	0.00000287
100%		+20	836,400,000	66	0.00000789
100%		+30	836,400,000	3	0.00000036
100%		+40	836,400,000	-17	-0.00000203
100%		+50	836,400,000	52	0.00000622
115%	4.2	+20	836,400,000	68	0.00000813
BAT.ENDPOINT	3.6	+20	836,400,000	39	0.00000466

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **Smart Phone FCC ID:**

2AAA6-S850 compliance with all the requirements of Parts 2, 22, 24 of the FCC Rules.