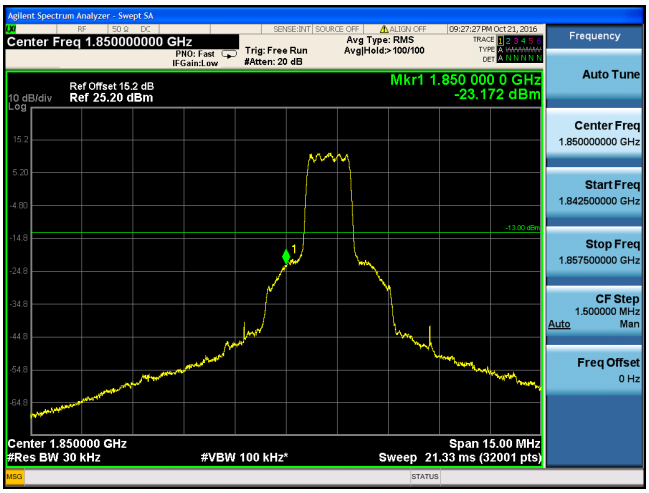
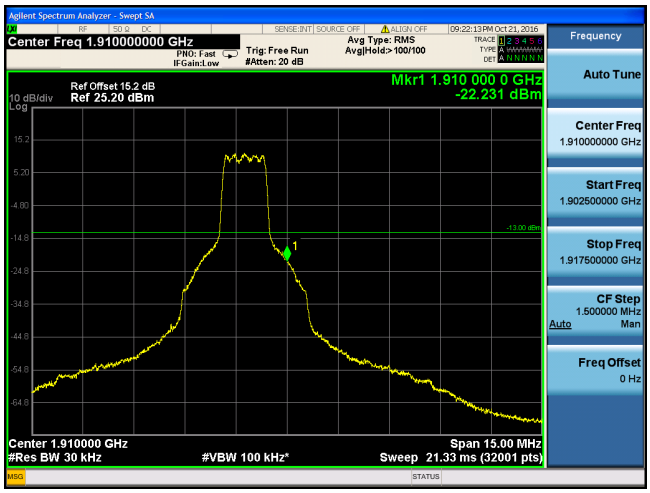
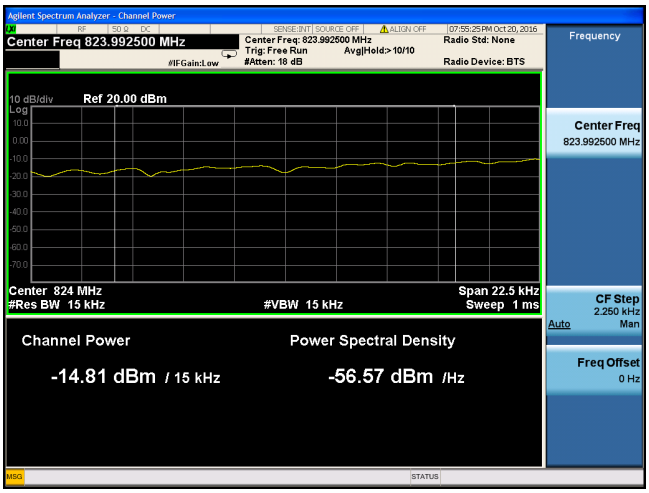
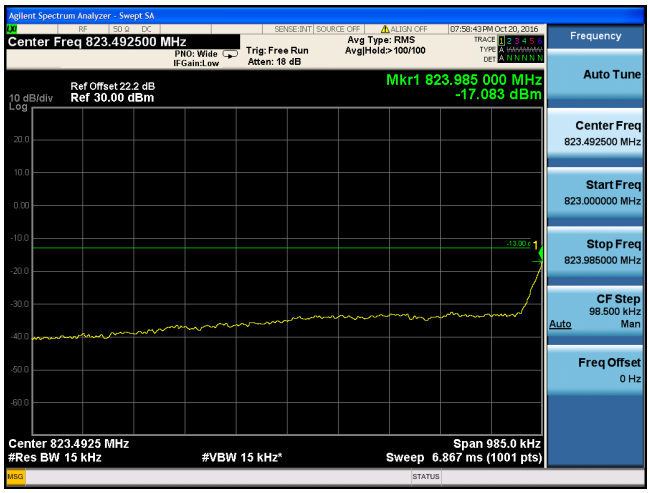
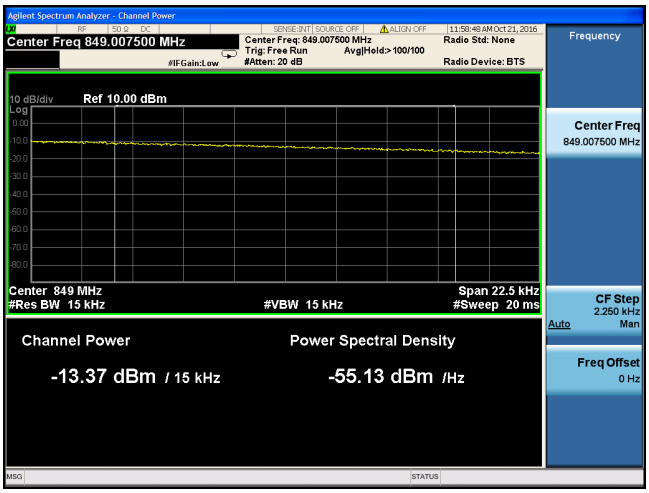
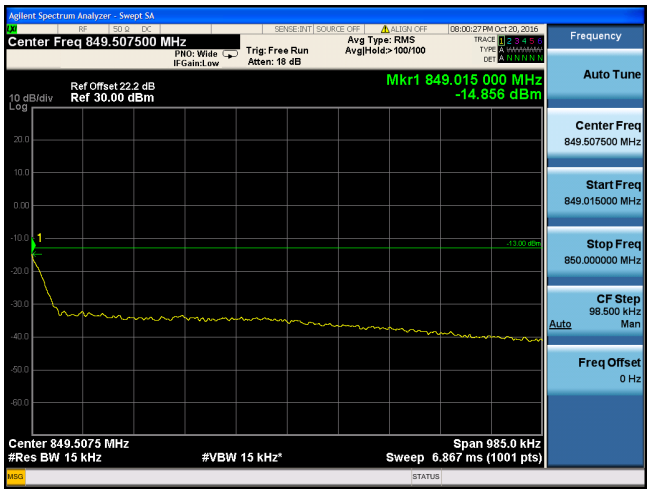
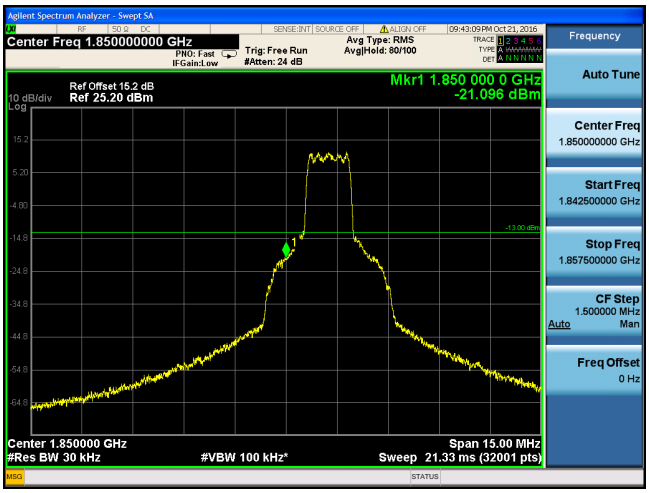
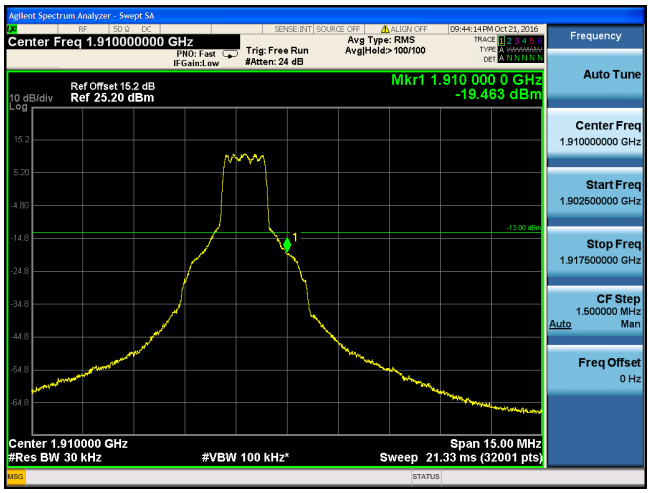
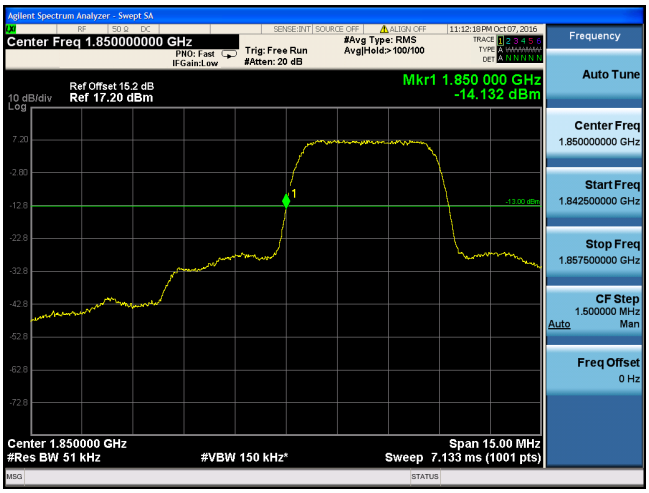
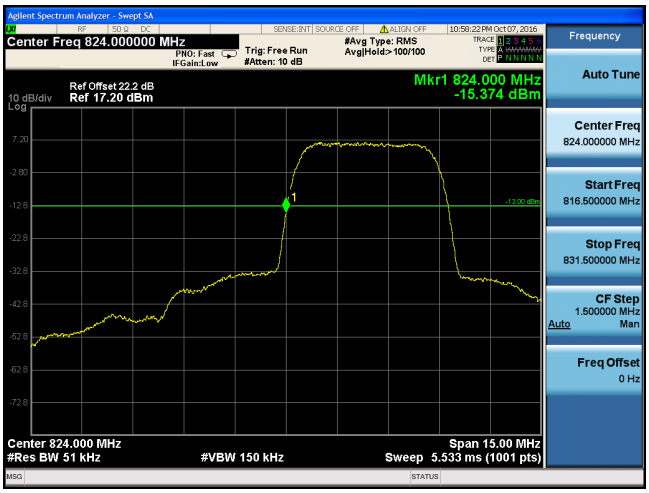
CDMA 1900-CH25	CDMA 1900-CH1175
	
EVDO 850-CH1013	
	
EVDO 850-CH777	
	

EVDO 1900-CH25	EVDO 1900-CH1175
	
WCDMA Band II-CH9262	**WCDMA Band II-CH9538**
	
WCDMA Band V-CH4132	**WCDMA Band V-CH4233**
	

7.5. Power and Radiated Spurious Emissions

7.5.1 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 $43 + 10\log_{10}$ (P) dB.

7.5.2 Test Procedure Used

KDB 971168 D01v02r02 - Section 7.0 & ANSI/TIA-603-D-2010

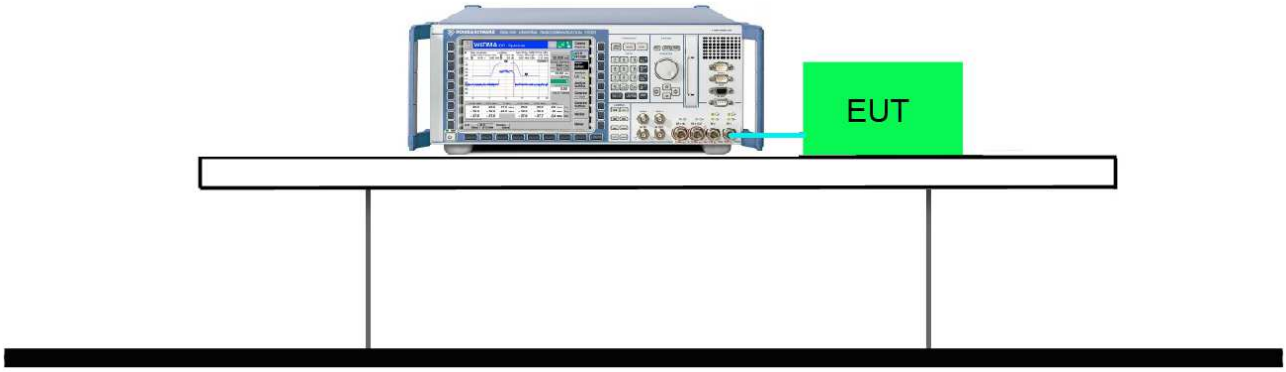
7.5.3 Test Setting

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: 2014.

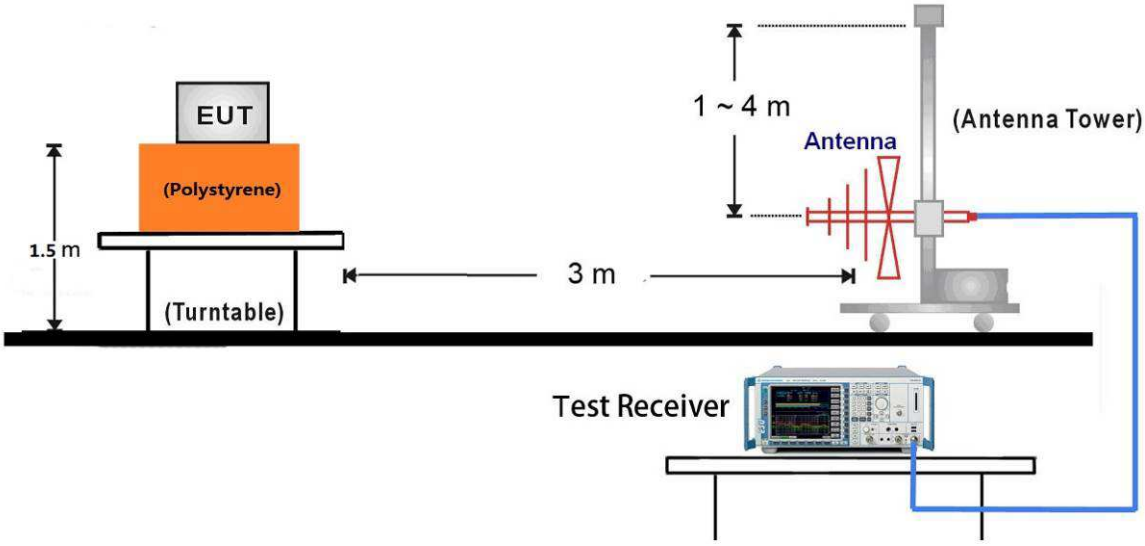
7.5.4 Test Setup

Conducted Power

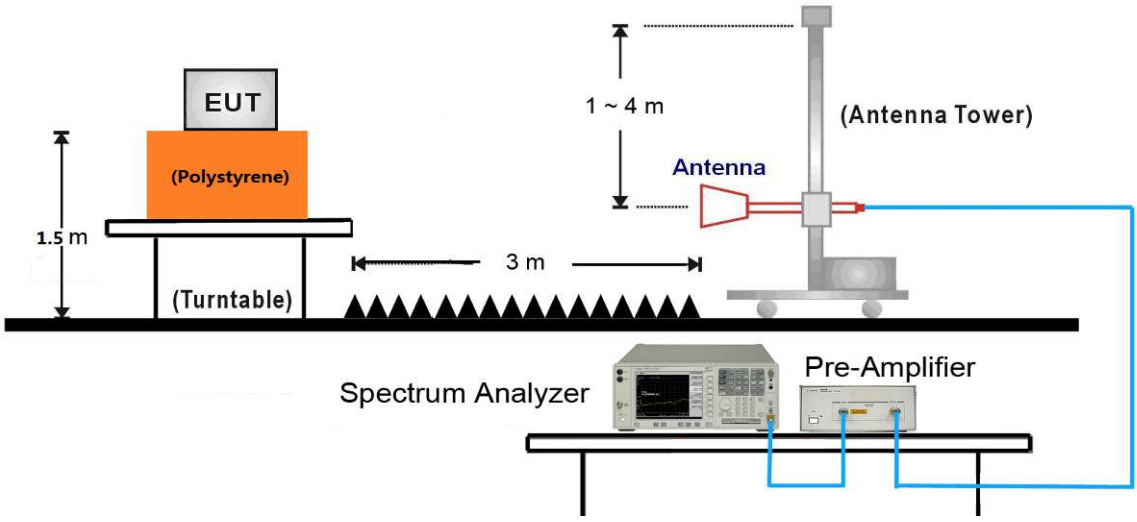


Radiated Power & Radiated Spurious Emissions

30MHz ~ 1GHz Test Setup:



1GHz ~ 10GHz Test Setup:



7.5.5 Test Result

Conducted Power

2G-GSM Mode	Channel No.	Frequency (MHz)	Conducted Power		
			Peak Power (dBm)	Duty Cycle Factor (dB)	Average Power(dBm)
GSM 850	128	824.2	32.40	-9.03	23.37
	190	836.6	32.40	-9.03	23.37
	251	848.8	32.30	-9.03	23.27
GPRS 850 (1 Slot)	128	824.2	32.40	-9.03	23.37
	190	836.6	32.40	-9.03	23.37
	251	848.8	32.30	-9.03	23.27
GPRS 850 (2 Slot)	128	824.2	31.80	-6.02	25.78
	190	836.6	31.80	-6.02	25.78
	251	848.8	31.80	-6.02	25.78
GPRS 850 (3 Slot)	128	824.2	30.20	-4.26	25.94
	190	836.6	30.20	-4.26	25.94
	251	848.8	30.20	-4.26	25.94
GPRS 850 (4 Slot)	128	824.2	29.20	-3.01	26.19
	190	836.6	29.10	-3.01	26.09
	251	848.8	29.00	-3.01	25.99
PCS 1900	512	1850.2	30.00	-9.03	20.97
	661	1880.0	30.20	-9.03	21.17
	810	1909.8	30.30	-9.03	21.27
GPRS 1900 (1 Slot)	512	1850.2	30.00	-9.03	20.97
	661	1880.0	30.20	-9.03	21.17
	810	1909.8	30.30	-9.03	21.27
GPRS 1900 (2 Slot)	512	1850.2	29.40	-6.02	23.38
	661	1880.0	29.60	-6.02	23.58
	810	1909.8	29.70	-6.02	23.68
GPRS 1900 (3 Slot)	512	1850.2	27.80	-4.26	23.54
	661	1880.0	28.00	-4.26	23.74
	810	1909.8	28.20	-4.26	23.94
GPRS 1900 (4 Slot)	512	1850.2	26.60	-3.01	23.59
	661	1880.0	26.90	-3.01	23.89
	810	1909.8	27.20	-3.01	24.19

EGPRS 850 (1 Slot)	128	824.2	27.90	-9.03	18.87
	190	836.6	27.80	-9.03	18.77
	251	848.8	27.70	-9.03	18.67
EGPRS 850 (2 Slot)	128	824.2	26.90	-6.02	20.88
	190	836.6	26.80	-6.02	20.78
	251	848.8	26.70	-6.02	20.68
EGPRS 850 (3 Slot)	128	824.2	25.00	-4.26	20.74
	190	836.6	24.90	-4.26	20.64
	251	848.8	24.80	-4.26	20.54
EGPRS 850 (4 Slot)	128	824.2	23.90	-3.01	20.89
	190	836.6	23.80	-3.01	20.79
	251	848.8	23.70	-3.01	20.69
EGPRS 1900 (1 Slot)	512	1850.2	27.30	-9.03	18.27
	661	1880	27.40	-9.03	18.37
	810	1909.8	27.60	-9.03	18.57
EGPRS 1900 (2 Slot)	512	1850.2	26.20	-9.03	17.17
	661	1880	26.30	-9.03	17.27
	810	1909.8	26.40	-9.03	17.37
EGPRS 1900 (3 Slot)	512	1850.2	24.20	-6.02	18.18
	661	1880	24.30	-6.02	18.28
	810	1909.8	24.40	-6.02	18.38
EGPRS 1900 (4 Slot)	512	1850.2	23.00	-4.26	18.74
	661	1880	23.10	-4.26	18.84
	810	1909.8	23.20	-4.26	18.94

3G-WCDMA Mode	3GPP Subtest	Conducted Power (dBm)			MPR
		Band II Channel			
		CH 9262 (1852.4MHz)	CH 9400 (1880MHz)	CH 9538 (1907.6MHz)	
WCDMA R99	N/A	24.74	24.93	24.98	N/A
Rel5 HSDPA	1	23.57	23.86	24.11	0
	2	22.39	22.73	23.28	0
	3	21.74	21.66	22.36	0.5
	4	21.66	21.61	22.02	0.5
Rel6 HSUPA	1	23.49	23.63	23.14	0
	2	23.26	23.42	23.87	2
	3	22.96	23.20	23.61	1
	4	22.77	22.98	23.39	2
	5	22.55	22.84	24.02	0
3G-WCDMA Mode	3GPP Subtest	Conducted Power (dBm)			MPR
		Band V Channel			
		CH 4132 (826.4MHz)	CH 4182 (836.4MHz)	CH 4233 (846.6.6MHz)	
WCDMA R99	N/A	23.45	23.48	23.32	N/A
Rel5 HSDPA	1	22.24	21.95	22.19	0
	2	22.13	22.02	21.98	0
	3	21.86	21.51	21.83	0.5
	4	21.84	21.75	21.78	0.5
Rel6 HSUPA	1	22.13	22.08	22.03	0
	2	21.76	21.64	21.63	2
	3	21.95	21.98	21.89	1
	4	21.84	21.67	21.77	2
	5	22.28	22.11	22.13	0

3G-CDMA Mode		Conducted Power (dBm)-BC0		
Radio Configuration (RC)	Service Option (SO)	CH 1013 (824.7MHz)	CH 384 (836.52MHz)	CH 777 (848.31MHz)
RC1	2(Loopback)	25.13	24.29	24.11
	55(Loopback)	25.12	24.17	24.07
RC2	9(Loopback)	25.09	24.70	24.11
	55(Loopback)	25.01	24.20	24.03
RC3	2(Loopback)	25.20	23.26	24.12
	55(Loopback)	25.03	24.19	24.10
	32(+F-CH)	25.0	24.18	23.93
	32(+SCH)	25.56	24.71	24.39
RC4	2(Loopback)	25.19	23.30	24.13
	55(Loopback)	25.03	24.18	24.07
	32(+F-CH)	25.28	24.32	24.02
	32(+SCH)	25.65	24.76	24.41
RC5	9(Loopback)	25.18	23.90	24.09
	55(Loopback)	25.01	24.16	24.05
3G-CDMA Mode		Conducted Power (dBm)-BC1		
Radio Configuration (RC)	Service Option (SO)	CH 25 (1851.25MHz)	CH 600 (1880MHz)	CH 1175 (1908.75MHz)
RC1	2(Loopback)	24.81	24.45	25.15
	55(Loopback)	24.68	24.49	25.15
RC2	9(Loopback)	24.74	24.48	25.15
	55(Loopback)	24.68	24.47	25.13
RC3	2(Loopback)	24.83	24.53	25.17
	55(Loopback)	24.77	24.54	25.19
	32(+F-CH)	24.74	24.58	25.21
	32(+SCH)	25.42	24.49	25.40
RC4	2(Loopback)	24.81	24.52	25.18
	55(Loopback)	24.77	24.56	25.20
	32(+F-CH)	24.85	24.55	25.27
	32(+SCH)	24.86	24.69	25.18
RC5	9(Loopback)	24.79	24.05	25.16
	55(Loopback)	24.78	24.54	25.21

3G-EVDO Mode			Conducted Power (dBm)		
Release	FTAP Rate	RTAP Rate	BC0		
			CH 1013 (824.7MHz)	CH 384 (836.52MHz)	CH 777 (848.31MHz)
0	307.2kbps (2 Slot QPSK)	153.6kbps	25.27	25.68	24.45
Release	FETAP Traffice Format	RETAP Payload Size	BC0		
			CH 1013 (824.7MHz)	CH 384 (836.52MHz)	CH 777 (848.31MHz)
A	307.2K, QPSK/ACK Channel is transmitted at all the slots	4096	25.31	25.34	24.53
Release	FTAP Rate	RTAP Rate	BC1		
			CH 25 (1851.25MHz)	CH 600 (1880MHz)	CH 1175 (1908.75MHz)
0	307.2kbps (2 Slot QPSK)	153.6kbps	24.46	24.78	24.91
Release	FETAP Traffice Format	RETAP Payload Size	BC1		
			CH 25 (1851.25MHz)	CH 600 (1880MHz)	CH 1175 (1908.75MHz)
A	307.2K, QPSK/ACK Channel is transmitted at all the slots	4096	24.95	24.61	24.93

Radiated Power

GSM(GPRS) 850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
CH 128							
824.2	H	29.51	0.87	0.68	29.32	38.5	-9.18
824.2	V	26.94	0.87	0.68	26.75	38.5	-11.75
CH 190							
836.6	H	29.3	0.87	0.68	29.11	38.5	-9.39
836.6	V	25.84	0.87	0.68	25.65	38.5	-12.85
CH 251							
848.8	H	30.04	0.88	0.68	29.84	38.5	-8.66
848.8	V	25.33	0.88	0.68	25.13	38.5	-13.37

GSM(GPRS) 1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 512							
1850.2	H	17.94	1.71	10.04	26.27	38.5	-6.73
1850.2	V	19.51	1.71	10.04	27.84	38.5	-5.16
CH 661							
1880	H	17.87	1.71	10.04	26.2	38.5	-6.8
1880	V	19.04	1.71	10.04	27.37	38.5	-5.63
CH 810							
1909.8	H	18.96	1.71	10.04	27.29	38.5	-5.71
1909.8	V	18.69	1.71	10.04	27.02	38.5	-5.98

NOTES:

1. ERP (dBm) / EIRP (dBm)=

   SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
2. This unit was tested with its standard adapter.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

EGPRS 850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
CH 128							
824.2	H	23.82	0.87	0.68	23.63	38.5	-14.87
824.2	V	21.44	0.87	0.68	21.25	38.5	-17.25
CH 190							
836.6	H	22.51	0.87	0.68	22.32	38.5	-16.18
836.6	V	21.24	0.87	0.68	21.05	38.5	-17.45
CH 251							
848.8	H	23.12	0.88	0.68	22.92	38.5	-15.58
848.8	V	21.23	0.88	0.68	21.03	38.5	-17.47

EGPRS 1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 512							
1850.2	H	12.98	1.71	10.04	21.31	33	-11.69
1850.2	V	12	1.71	10.04	20.33	33	-12.67
CH 661							
1880	H	13.51	1.71	10.04	21.84	33	-11.16
1880	V	12.11	1.71	10.04	20.44	33	-12.56
CH 810							
1909.8	H	13.1	1.71	10.04	21.43	33	-11.57
1909.8	V	12.14	1.71	10.04	20.47	33	-12.53

NOTES:

1. ERP (dBm) / EIRP (dBm)=

   SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
2. This unit was tested with its standard adapter.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

WCDMA Band V 850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
CH 4132							
826.4	H	19.67	0.87	0.68	19.48	38.5	-19.02
826.4	V	14.29	0.87	0.68	14.1	38.5	-24.4
CH 4182							
836.4	H	19.69	0.87	0.68	19.5	38.5	-19
836.4	V	14.62	0.87	0.68	14.43	38.5	-24.07
CH 4233							
846.6	H	19.91	0.88	0.68	19.71	38.5	-18.79
846.6	V	14.72	0.88	0.68	14.52	38.5	-23.98

WCDMA Band II 1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 9262							
1852.4	H	17.38	1.71	10.04	25.71	33	-7.29
1852.4	V	15.82	1.71	10.04	24.15	33	-8.85
CH 9400							
1880	H	18.13	1.71	10.04	26.46	33	-6.54
1880	V	15.84	1.71	10.04	24.17	33	-8.83
CH 4233							
1907.6	H	18.67	1.71	10.04	27	33	-6
1907.6	V	15.92	1.71	10.04	24.25	33	-8.75

NOTES:

1. ERP (dBm) / EIRP (dBm)=

   SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
2. This unit was tested with its standard adapter.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

CDMA BC0 850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
CH 1013							
824.7	H	16.73	0.87	0.68	16.54	38.5	-21.96
824.7	V	13.83	0.87	0.68	13.64	38.5	-24.86
CH 384							
836.52	H	17.1	0.87	0.68	16.91	38.5	-21.59
836.52	V	14.95	0.87	0.68	14.76	38.5	-23.74
CH 777							
848.31	H	16.18	0.88	0.68	15.98	38.5	-22.52
848.31	V	14.22	0.88	0.68	14.02	38.5	-24.48

CDMA BC1 1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 25							
1851.25	H	12.19	1.71	10.04	20.52	33	-12.48
1851.25	V	10.79	1.71	10.04	19.12	33	-13.88
CH 600							
1880	H	11.2	1.71	10.04	19.53	33	-13.47
1880	V	11.56	1.71	10.04	19.89	33	-13.11
CH 1175							
1908.75	H	10.03	1.71	10.04	18.36	33	-14.64
1908.75	V	9.63	1.71	10.04	17.96	33	-15.04

NOTES:

1. ERP (dBm) / EIRP (dBm)=

   SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
2. This unit was tested with its standard adapter.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

EVDO BC0 850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
CH 1013							
824.7	H	16.5	0.87	0.68	16.31	38.5	-22.19
824.7	V	13.4	0.87	0.68	13.21	38.5	-25.29
CH 384							
836.52	H	16.68	0.87	0.68	16.49	38.5	-22.01
836.52	V	15.2	0.87	0.68	15.01	38.5	-23.49
CH 777							
848.31	H	16.27	0.88	0.68	16.07	38.5	-22.43
848.31	V	14.07	0.88	0.68	13.87	38.5	-24.63

EVDO BC1 1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 25							
1851.25	H	11.35	1.71	10.04	19.68	33	-13.32
1851.25	V	11.32	1.71	10.04	19.65	33	-13.35
CH 600							
1880	H	11.2	1.71	10.04	19.53	33	-13.47
1880	V	11.1	1.71	10.04	19.43	33	-13.57
CH 1175							
1908.75	H	10.57	1.71	10.04	18.9	33	-14.1
1908.75	V	10.34	1.71	10.04	18.67	33	-14.33

NOTES:

1. ERP (dBm) / EIRP (dBm)=

   SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBd/dBi)
2. This unit was tested with its standard adapter.
3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning.

Radiated Spurious Emission

GSM(GPRS) 850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 128							
2472.6	H	-35.53	1.91	10.75	-26.69	-13	-13.69
4121	H	-35.97	3.3	12.45	-26.82	-13	-13.82
5769.4	H	-44.02	4.12	13	-35.14	-13	-22.14
2472.6	V	-38.02	1.91	10.75	-29.18	-13	-16.18
4121	V	-35.57	3.3	12.45	-26.42	-13	-13.42
5769.4	V	-46.07	4.12	13	-37.19	-13	-24.19
CH 189							
2509.8	H	-35.31	1.91	10.75	-26.47	-13	-13.47
4183	H	-35.98	3.3	12.45	-26.83	-13	-13.83
5856.05	H	-44.89	4.12	13	-36.01	-13	-23.01
2509.8	V	-31.81	1.91	10.75	-22.97	-13	-9.97
4183	V	-35.78	3.3	12.45	-26.63	-13	-13.63
5856.2	V	-46.24	4.12	13	-37.36	-13	-24.36
CH 251							
2546.4	H	-35.21	1.91	10.75	-26.37	-13	-13.37
4244	H	-35.75	3.3	12.45	-26.6	-13	-13.6
5941.6	H	-44.21	4.12	13	-35.33	-13	-22.33
2546.4	V	-31.56	1.91	10.75	-22.72	-13	-9.72
4244	V	-35.59	3.3	12.45	-26.44	-13	-13.44
5941.6	V	-45.57	4.12	13	-36.69	-13	-23.69

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

GSM(GPRS) 1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 512							
3700.4	H	-57.94	3.05	12.32	-48.67	-13	-35.67
5550.6	H	-56.35	4.02	13.02	-47.35	-13	-34.35
3700.4	V	-60.03	3.05	12.32	-50.76	-13	-37.76
5550.6	V	-58.58	4.02	13.02	-49.58	-13	-36.58
CH 661							
3760	H	-58.61	3.05	12.32	-49.34	-13	-36.34
5640	H	-56.56	4.02	13.02	-47.56	-13	-34.56
3760	V	-60.81	3.05	12.32	-51.54	-13	-38.54
5640	V	-58.91	4.02	13.02	-49.91	-13	-36.91
CH 810							
3819.6	H	-57.16	3.05	12.32	-47.89	-13	-34.89
5729.4	H	-54.56	4.02	13.02	-45.56	-13	-32.56
3819.6	V	-59.62	3.05	12.32	-50.35	-13	-37.35
5729.4	V	-56.95	4.02	13.02	-47.95	-13	-34.95

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

EGPRS 850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 128							
2472.6	H	-35.53	1.91	10.75	-26.69	-13	-13.69
4121	H	-35.97	3.3	12.45	-26.82	-13	-13.82
5769.4	H	-44.02	4.12	13	-35.14	-13	-22.14
2472.6	V	-38.02	1.91	10.75	-29.18	-13	-16.18
4121	V	-35.57	3.3	12.45	-26.42	-13	-13.42
5769.4	V	-46.07	4.12	13	-37.19	-13	-24.19
CH 189							
2509.8	H	-35.31	1.91	10.75	-26.47	-13	-13.47
4183	H	-35.98	3.3	12.45	-26.83	-13	-13.83
5856.05	H	-44.89	4.12	13	-36.01	-13	-23.01
2509.8	V	-31.81	1.91	10.75	-22.97	-13	-9.97
4183	V	-35.78	3.3	12.45	-26.63	-13	-13.63
5856.2	V	-46.24	4.12	13	-37.36	-13	-24.36
CH 251							
2546.4	H	-35.21	1.91	10.75	-26.37	-13	-13.37
4244	H	-35.75	3.3	12.45	-26.6	-13	-13.6
5941.6	H	-44.21	4.12	13	-35.33	-13	-22.33
2546.4	V	-31.56	1.91	10.75	-22.72	-13	-9.72
4244	V	-35.59	3.3	12.45	-26.44	-13	-13.44
5941.6	V	-45.57	4.12	13	-36.69	-13	-23.69

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

EGPRS 1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 512							
3700.4	H	-57.94	3.05	12.32	-48.67	-13	-35.67
5550.6	H	-56.35	4.02	13.02	-47.35	-13	-34.35
3700.4	V	-60.03	3.05	12.32	-50.76	-13	-37.76
5550.6	V	-58.58	4.02	13.02	-49.58	-13	-36.58
CH 661							
3760	H	-58.61	3.05	12.32	-49.34	-13	-36.34
5640	H	-56.56	4.02	13.02	-47.56	-13	-34.56
3760	V	-60.81	3.05	12.32	-51.54	-13	-38.54
5640	V	-58.91	4.02	13.02	-49.91	-13	-36.91
CH 810							
3819.6	H	-57.16	3.05	12.32	-47.89	-13	-34.89
5729.4	H	-54.56	4.02	13.02	-45.56	-13	-32.56
3819.6	V	-59.62	3.05	12.32	-50.35	-13	-37.35
5729.4	V	-56.95	4.02	13.02	-47.95	-13	-34.95

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

WCDMA Band V-850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 4132							
4132	H	-65.71	3.3	12.46	-56.55	-13	-43.55
4958.4	H	-50.82	3.78	12.47	-42.13	-13	-29.13
5784.8	H	-53.15	4.12	13	-44.27	-13	-31.27
4132	V	-66.48	3.3	12.46	-57.32	-13	-44.32
4958.4	V	-47.86	3.78	12.47	-39.17	-13	-26.17
5784.8	V	-59.02	4.12	13	-50.14	-13	-37.14
CH 4182							
4182	H	-65.22	3.3	12.46	-56.06	-13	-43.06
5018.4	H	-50.57	3.78	12.47	-41.88	-13	-28.88
5854.8	H	-53.1	4.12	13	-44.22	-13	-31.22
4182	V	-66.15	3.3	12.46	-56.99	-13	-43.99
5018.4	V	-47.64	3.78	12.47	-38.95	-13	-25.95
5854.8	V	-58.9	4.12	13	-50.02	-13	-37.02
CH 4233							
4233	H	-65.22	3.3	12.46	-56.06	-13	-43.06
5079.6	H	-50.07	3.78	12.47	-41.38	-13	-28.38
5926.2	H	-52.56	4.12	13	-43.68	-13	-30.68
4233	V	-65.22	3.3	12.46	-56.06	-13	-43.06
5079.6	V	-50.07	3.78	12.47	-41.38	-13	-28.38
5926.2	V	-52.56	4.12	13	-43.68	-13	-30.68

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

WCDMA Band II-1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 9262							
3704.8	H	-53.27	3.05	12.32	-44	-13	-31
5557.2	H	-56.18	4.02	13.02	-47.18	-13	-34.18
3704.8	V	-56.45	3.05	12.32	-47.18	-13	-34.18
5557.2	V	-58.96	4.02	13.02	-49.96	-13	-36.96
CH 9400							
3760	H	-54.25	3.05	12.32	-44.98	-13	-31.98
5640	H	-56.25	4.02	13.02	-47.25	-13	-34.25
3760	V	-58.16	3.05	12.32	-48.89	-13	-35.89
5640	V	-60.25	4.02	13.02	-51.25	-13	-38.25
CH 9538							
3825.2	H	-54.14	3.05	12.32	-44.87	-13	-31.87
5722.8	H	-55.94	4.02	13.02	-46.94	-13	-33.94
3825.2	V	-57.45	3.05	12.32	-48.18	-13	-35.18
5722.8	V	-59.09	4.02	13.02	-50.09	-13	-37.09

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

CDMA BC0-850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 1013							
1649.4	H	-54.3	1.05	9.71	-45.64	-13	-32.64
2474.1	H	-71.66	1.91	10.6	-62.97	-13	-49.97
3298.8	H	-63.8	3.05	12.24	-54.61	-13	-41.61
1649.4	V	-55.47	1.05	9.71	-46.81	-13	-33.81
2474.1	V	-75.92	1.91	10.6	-67.23	-13	-54.23
3298.8	V	-64.99	3.05	12.24	-55.8	-13	-42.8
CH 384							
1673.04	H	-62.29	1.05	9.71	-53.63	-13	-40.63
2509.56	H	-71.24	1.91	10.6	-62.55	-13	-49.55
3346.08	H	-60.35	3.05	12.24	-51.16	-13	-38.16
1673.04	V	-63.16	1.05	9.71	-54.5	-13	-41.5
2509.56	V	-68.94	1.91	10.6	-60.25	-13	-47.25
3346.08	V	-63.04	3.05	12.24	-53.85	-13	-40.85
CH 777							
1696.62	H	-66.52	1.05	9.71	-57.86	-13	-44.86
2544.93	H	-74.17	1.91	10.6	-65.48	-13	-52.48
3393.24	H	-62.42	3.05	12.24	-53.23	-13	-40.23
1696.62	V	-65.81	1.05	9.71	-57.15	-13	-44.15
2544.93	V	-71.66	1.91	10.6	-62.97	-13	-49.97
3393.24	V	-62.02	3.05	12.24	-52.83	-13	-39.83

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

CDMA BC1-1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 25							
3702.6	H	-51.35	3.05	12.32	-42.08	-13	-29.08
5553.9	H	-56.71	4.02	13.02	-47.71	-13	-34.71
7405.2	H	-47.69	5.31	11.06	-41.94	-13	-28.94
3702.6	V	-49.78	3.05	12.32	-40.51	-13	-27.51
5553.9	V	-57.36	4.02	13.02	-48.36	-13	-35.36
7405.2	V	-47.64	5.31	11.06	-41.89	-13	-28.89
CH 600							
3760	H	-52.07	3.05	12.32	-42.8	-13	-29.8
5640	H	-57.51	4.02	13.02	-48.51	-13	-35.51
7520	H	-49.38	5.31	11.06	-43.63	-13	-30.63
3760	V	-51.23	3.05	12.32	-41.96	-13	-28.96
5640	V	-58.3	4.02	13.02	-49.3	-13	-36.3
7520	V	-49.3	5.31	11.06	-43.55	-13	-30.55
CH 1175							
3817.5	H	-53.05	3.05	12.32	-43.78	-13	-30.78
5726.25	H	-58.15	4.02	13.02	-49.15	-13	-36.15
7635	H	-47.81	5.31	11.06	-42.06	-13	-29.06
3817.5	V	-50.63	3.05	12.32	-41.36	-13	-28.36
5726.25	V	-56	4.02	13.02	-47	-13	-34
7635	V	-48.19	5.31	11.06	-42.44	-13	-29.44

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

EVDO BC0-850

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 1013							
1649.4	H	-54.3	1.05	9.71	-45.64	-13	-32.64
2474.1	H	-71.66	1.91	10.6	-62.97	-13	-49.97
3298.8	H	-63.8	3.05	12.24	-54.61	-13	-41.61
1649.4	V	-55.47	1.05	9.71	-46.81	-13	-33.81
2474.1	V	-75.92	1.91	10.6	-67.23	-13	-54.23
3298.8	V	-64.99	3.05	12.24	-55.8	-13	-42.8
CH 384							
1673.04	H	-62.29	1.05	9.71	-53.63	-13	-40.63
2509.56	H	-71.24	1.91	10.6	-62.55	-13	-49.55
3346.08	H	-60.35	3.05	12.24	-51.16	-13	-38.16
1673.04	V	-63.16	1.05	9.71	-54.5	-13	-41.5
2509.56	V	-68.94	1.91	10.6	-60.25	-13	-47.25
3346.08	V	-63.04	3.05	12.24	-53.85	-13	-40.85
CH 777							
1696.62	H	-66.52	1.05	9.71	-57.86	-13	-44.86
2544.93	H	-74.17	1.91	10.6	-65.48	-13	-52.48
3393.24	H	-62.42	3.05	12.24	-53.23	-13	-40.23
1696.62	V	-65.81	1.05	9.71	-57.15	-13	-44.15
2544.93	V	-71.66	1.91	10.6	-62.97	-13	-49.97
3393.24	V	-62.02	3.05	12.24	-52.83	-13	-39.83

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

EVDO BC1-1900

Frequency (MHz)	Ant. Pol. (H/V)	SA Reading (dBm)	Cable Loss (dB)	Substitute Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
CH 25							
3702.6	H	-51.35	3.05	12.32	-42.08	-13	-29.08
5553.9	H	-56.71	4.02	13.02	-47.71	-13	-34.71
7405.2	H	-47.69	5.31	11.06	-41.94	-13	-28.94
3702.6	V	-49.78	3.05	12.32	-40.51	-13	-27.51
5553.9	V	-57.36	4.02	13.02	-48.36	-13	-35.36
7405.2	V	-47.64	5.31	11.06	-41.89	-13	-28.89
CH 600							
3760	H	-52.07	3.05	12.32	-42.8	-13	-29.8
5640	H	-57.51	4.02	13.02	-48.51	-13	-35.51
7520	H	-49.38	5.31	11.06	-43.63	-13	-30.63
3760	V	-51.23	3.05	12.32	-41.96	-13	-28.96
5640	V	-58.3	4.02	13.02	-49.3	-13	-36.3
7520	V	-49.3	5.31	11.06	-43.55	-13	-30.55
CH 1175							
3817.5	H	-53.05	3.05	12.32	-43.78	-13	-30.78
5726.25	H	-58.15	4.02	13.02	-49.15	-13	-36.15
7635	H	-47.81	5.31	11.06	-42.06	-13	-29.06
3817.5	V	-50.63	3.05	12.32	-41.36	-13	-28.36
5726.25	V	-56	4.02	13.02	-47	-13	-34
7635	V	-48.19	5.31	11.06	-42.44	-13	-29.44

Note:

1. Spurious emissions within 30-1000MHz & Other harmonic were found more than 20dB below limit line.
2. EIRP (dBm) = SG (dBm) - Cable Loss (dB) + Substitute Antenna Gain (dBi)

7.6. Peak-Average Ratio

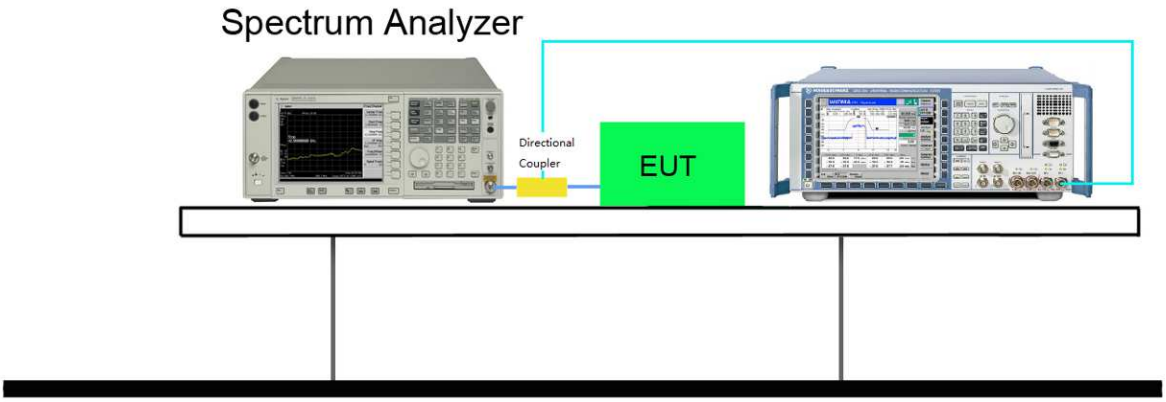
7.6.1 Test Limit

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.

7.6.2 Test Procedure

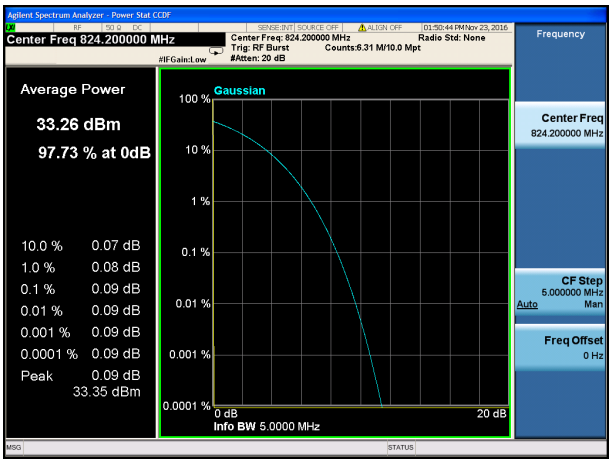
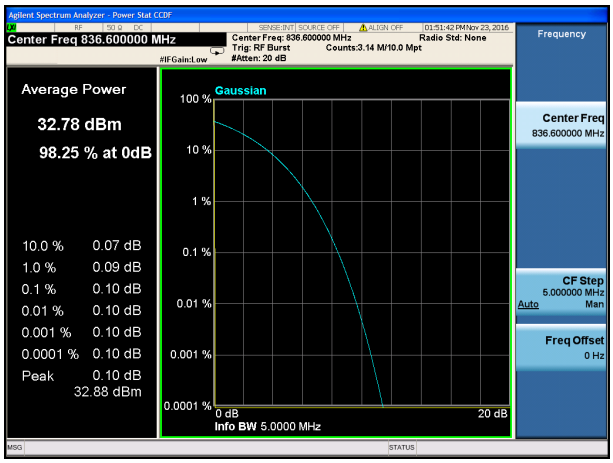
KDB 971168 D01v02r02 - Section 5.7 & ANSI/TIA-603-D-2010

7.6.3 Test Setup



7.6.4 Test Result

Mode	Channel No.	Frequency (MHz)	Modulation	Test Result (13dBm)
GSM850	128	824.20	GMSK	Pass
	190	836.60	GMSK	Pass
	251	848.80	GMSK	Pass
PCS1900	512	1850.20	GMSK	Pass
	661	1880.0	GMSK	Pass
	810	1909.80	GMSK	Pass
EGPRS850	128	824.20	8PSK	Pass
	190	836.60	8PSK	Pass
	251	848.80	8PSK	Pass
EGPRS1900	512	1850.20	8PSK	Pass
	661	1880.0	8PSK	Pass
	810	1909.80	8PSK	Pass
CDMA 850	1013	824.7	QPSK	Pass
	384	836.52	QPSK	Pass
	777	848.31	QPSK	Pass
CDMA 1900	25	1851.25	QPSK	Pass
	600	1880	QPSK	Pass
	1175	1908.75	QPSK	Pass
EVDO 850	1013	824.7	QPSK	Pass
	384	836.52	QPSK	Pass
	777	848.31	QPSK	Pass
EVDO 1900	25	1851.25	QPSK	Pass
	600	1880	QPSK	Pass
	1175	1908.75	QPSK	Pass
WCDMA Band II	9262	1852.4	QPSK	Pass
	9400	1880.0	QPSK	Pass
	9538	1907.6	QPSK	Pass
WCDMA Band V	4132	826.40	QPSK	Pass
	4182	836.4	QPSK	Pass
	4233	846.60	QPSK	Pass

GPRS850-CH128	GPRS850-CH190
	
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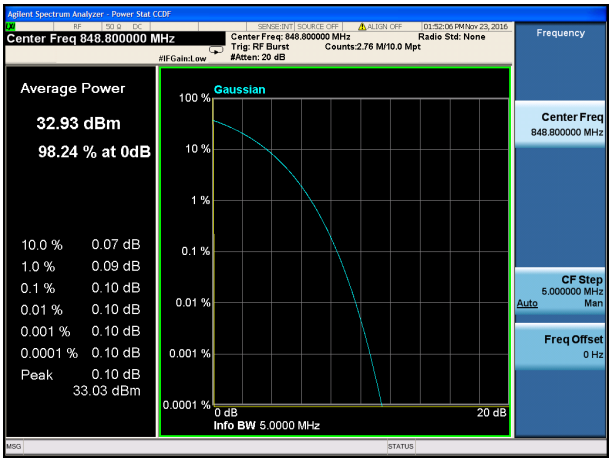	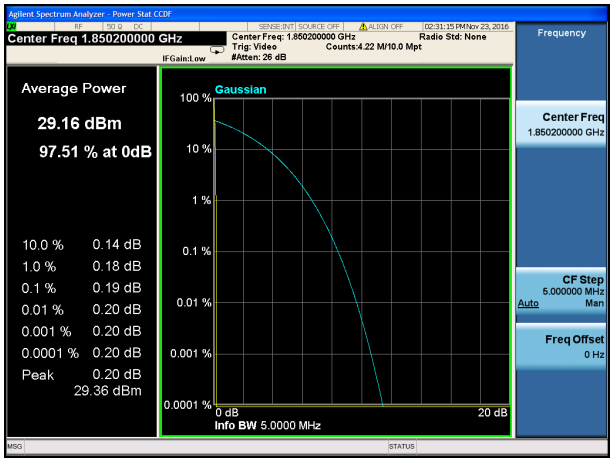
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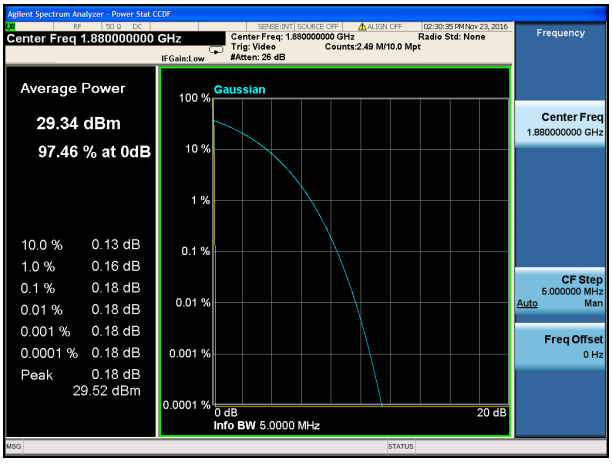
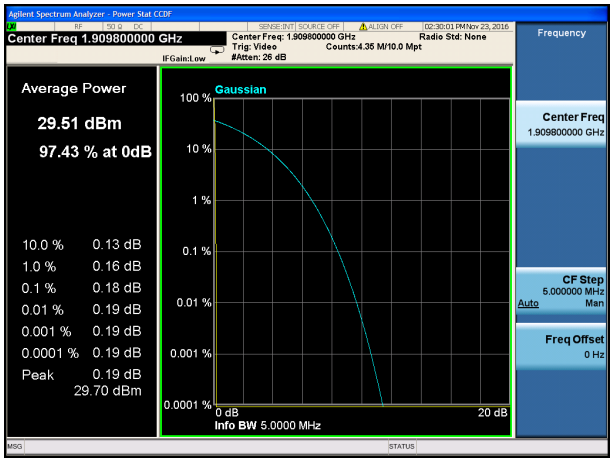
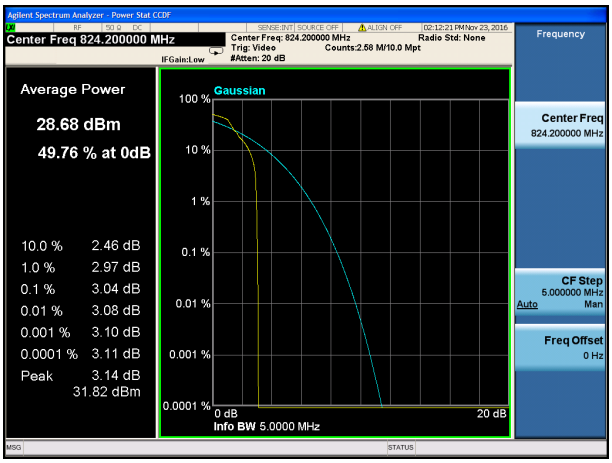
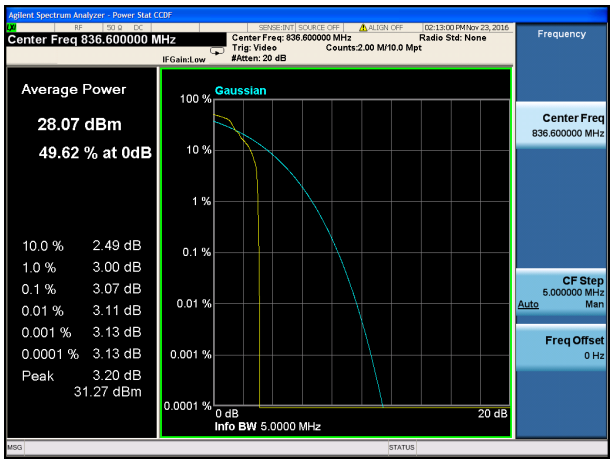
	

EGPRS850-CH128	EGPRS850-CH190
	
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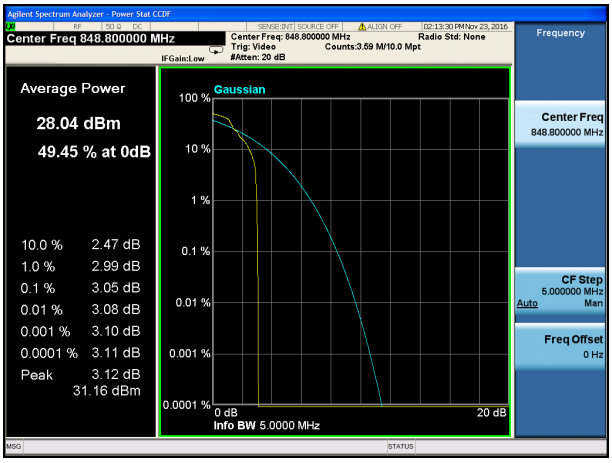	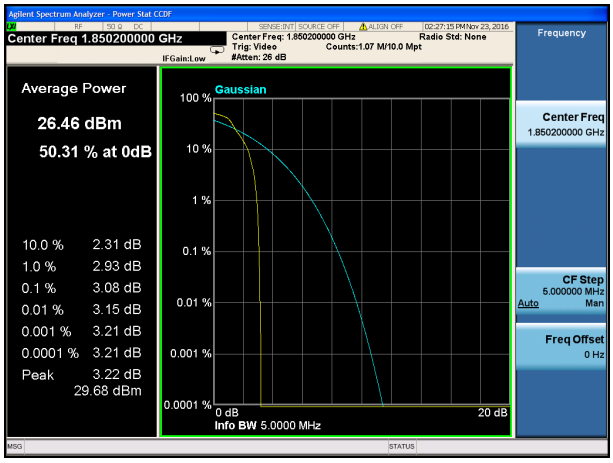
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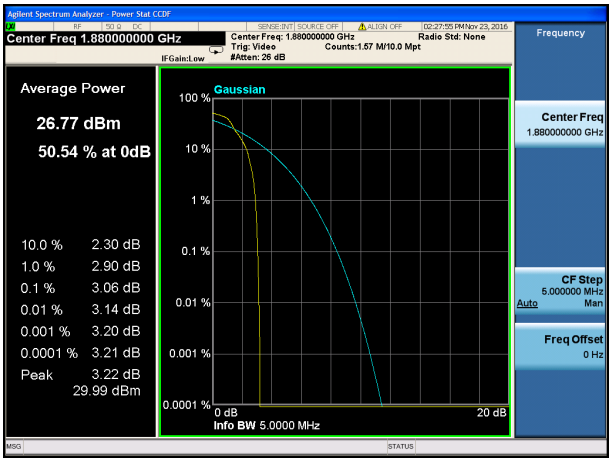
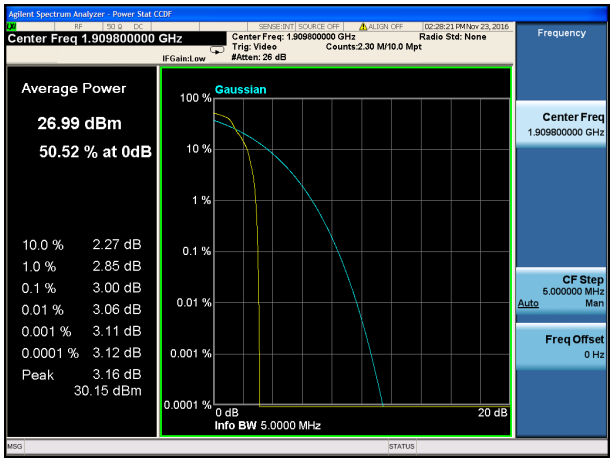
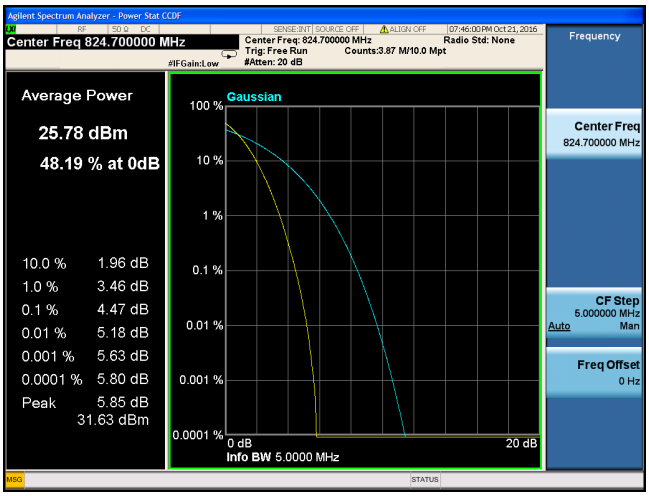
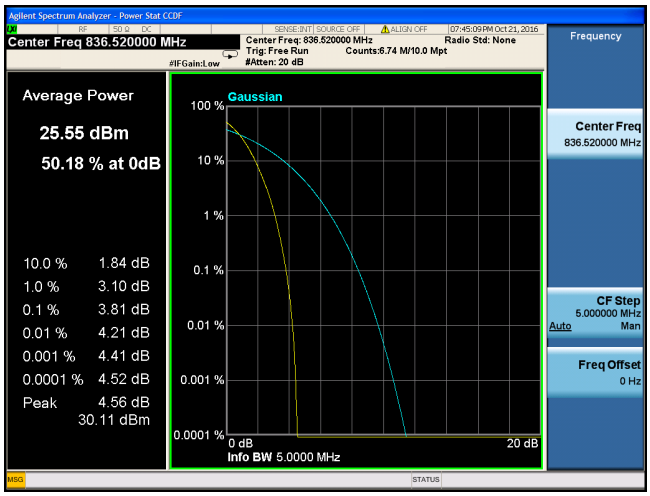
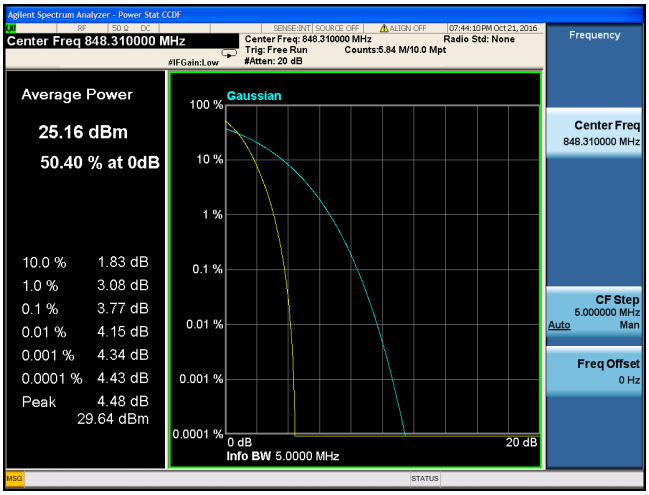
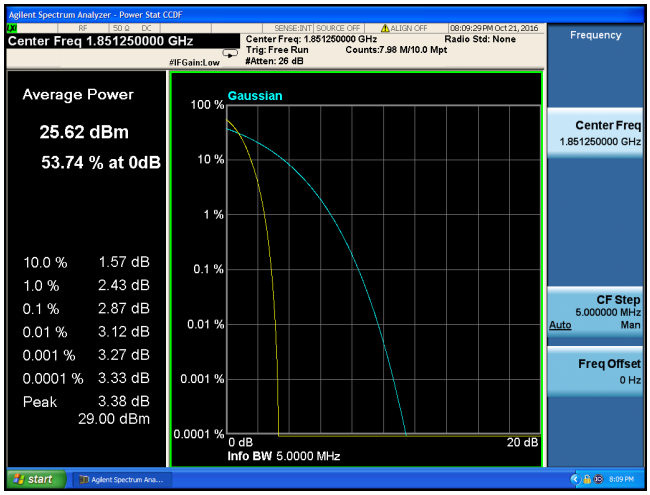
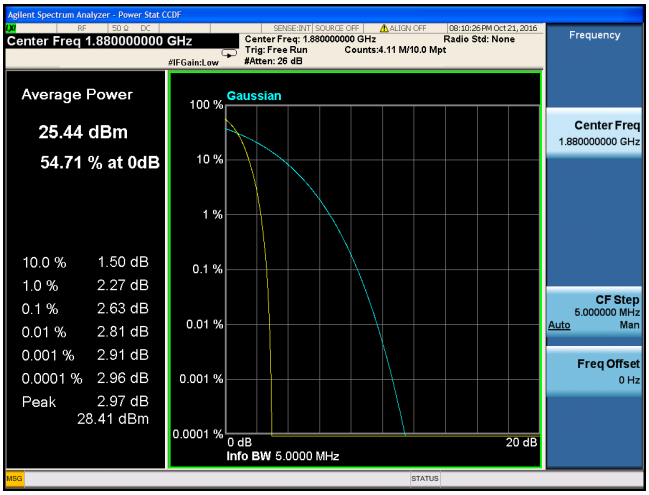
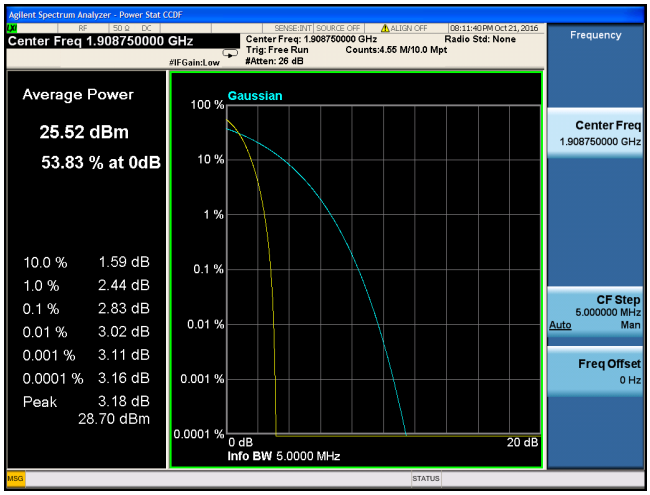
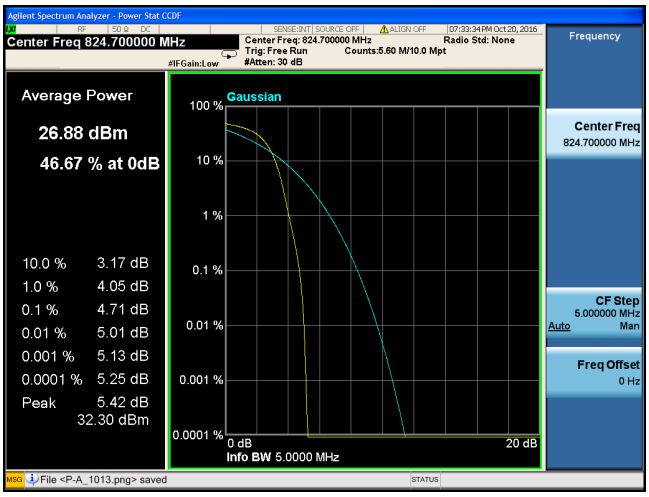
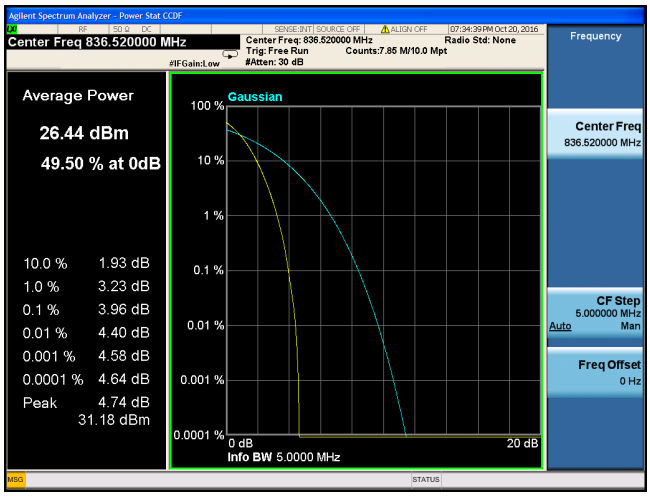
	

CDMA BC0(850) -CH1013	CDMA BC0(850) -CH384
	
CDMA BC0(850) -CH777	**CDMA BC1(1900) -CH25**
	
CDMA BC1(1900) -CH600	**CDMA BC1(1900) -CH1175**
	

EVDO BC0(850)-CH1013	EVDO BC0(850)-CH384
	
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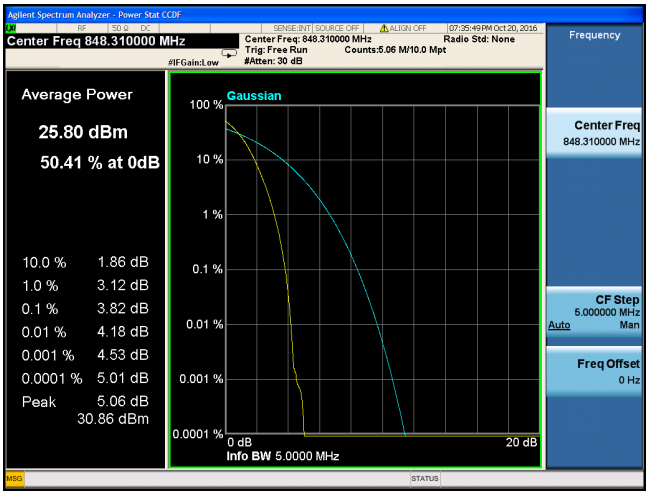
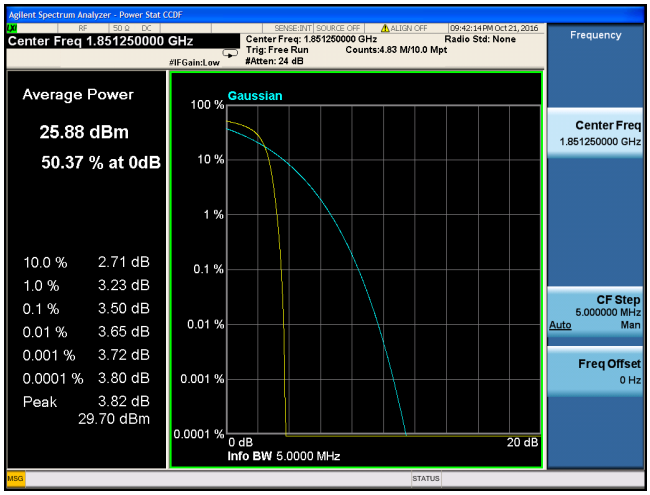
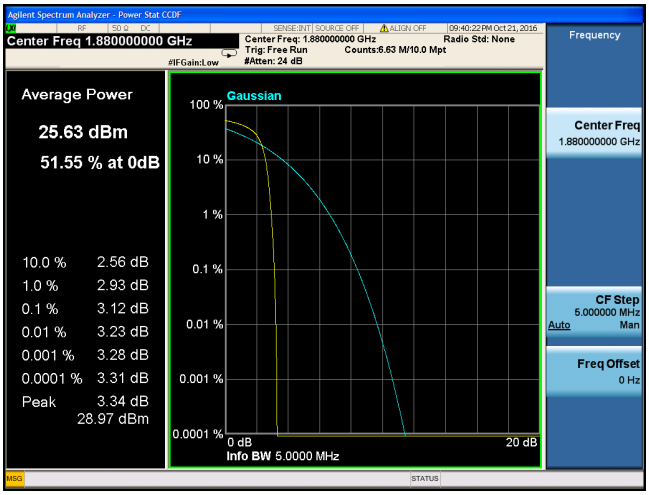
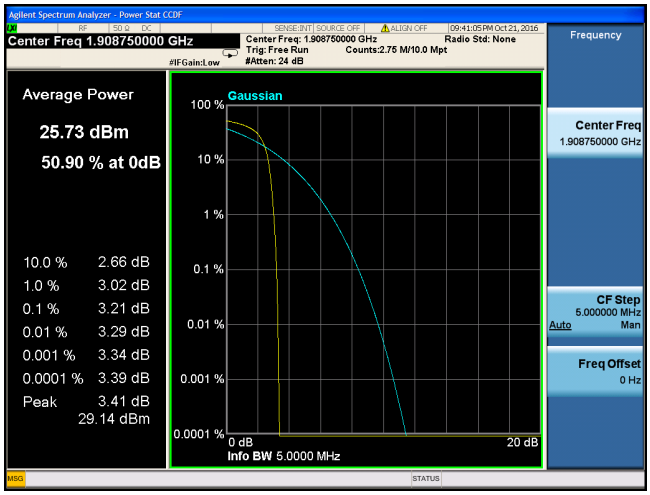
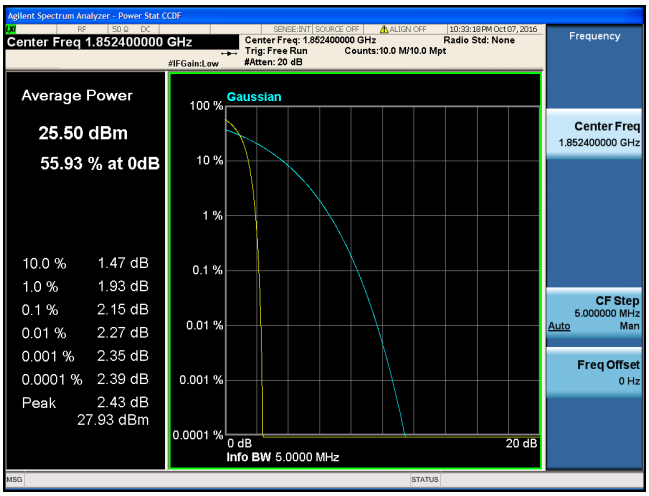
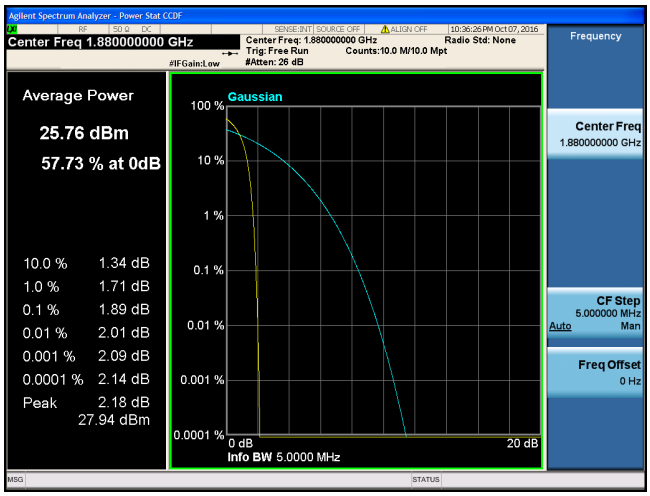
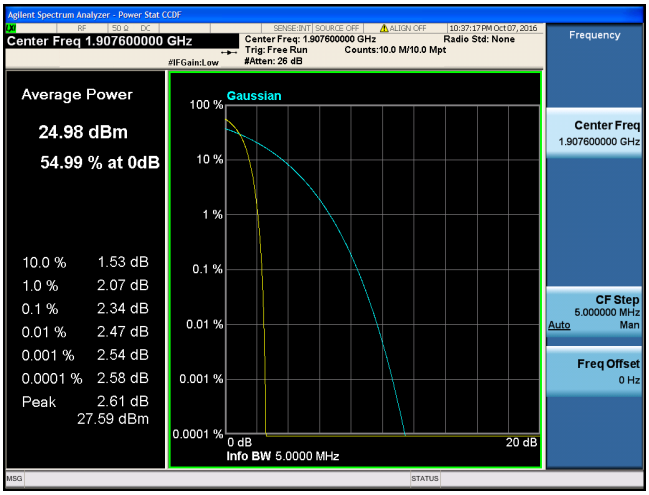
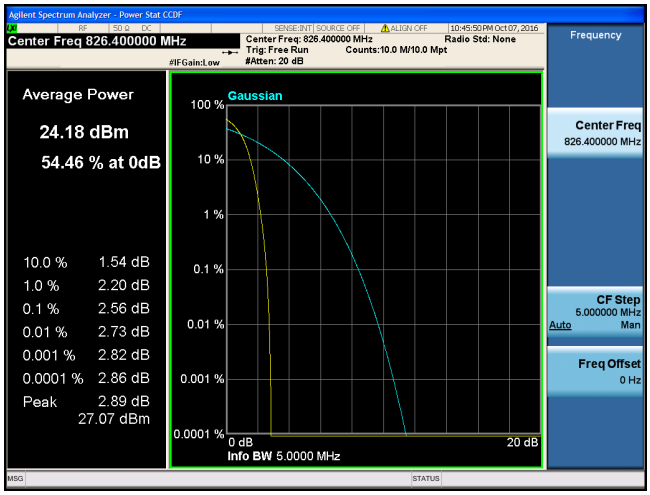
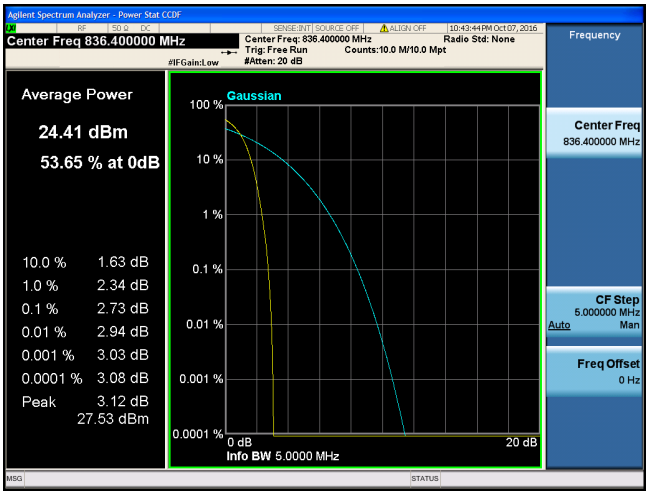
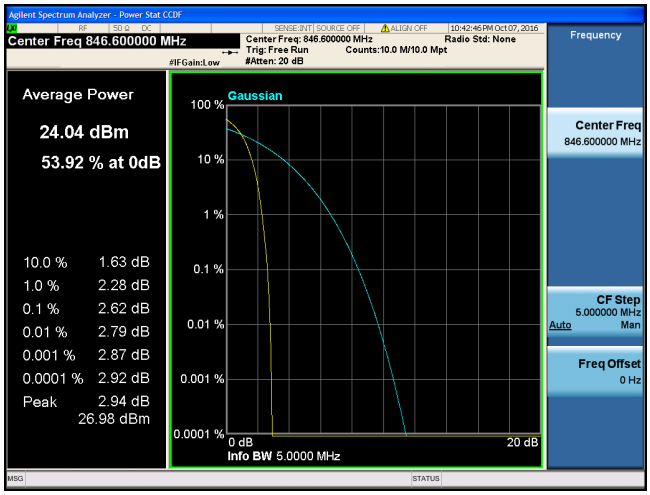
	
EVDO BC1(1900)-CH600	**EVDO BC1(1900)-CH1175**
	

WCDMA Band II -CH9262	WCDMA Band II -CH9400
	
WCDMA Band II -CH9538	**WCDMA Band V -CH4132**
	
WCDMA Band V -CH4182	**WCDMA Band V -CH4233**
	

7.7. Frequency Stability Under Temperature & Voltage Variations

7.7.1 Test Limit

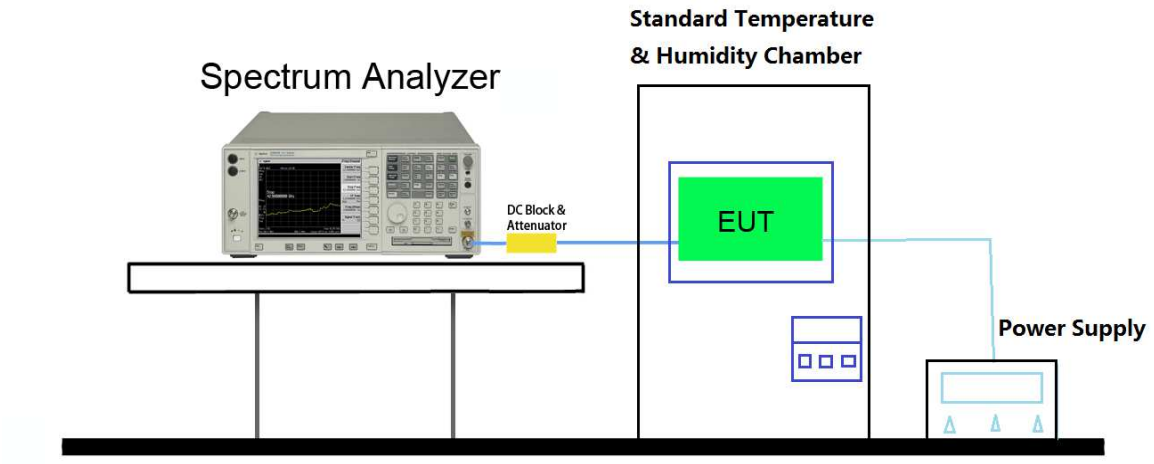
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Limit	< ± 2.5 ppm

7.7.2 Test Procedure

KDB 971168 D01v02r02 - Section 9.0 & ANSI/TIA-603-D-2010

7.7.3 Test Setup



7.7.4 Test Result

Operating Frequency	836.6MHz
Channel	190
Test Mode	GSM-850
Reference Voltage	DC 3.7V

Voltage (%)	Power (DC)	TEMP (℃)	Freq. Dev. (kHz)	Limit (kHz)
100%	3.7V	50	0.0052	2.09
100%		40	0.0039	2.09
100%		30	0.0021	2.09
100%		20	0.0030	2.09
100%		10	0.0024	2.09
100%		0	0.0035	2.09
100%		-10	0.0041	2.09
100%		-20	0.0053	2.09
100%		-30	0.0048	2.09
115%	4.26	25	0.0031	2.09
End point	3.40	25	0.0037	2.09

Operating Frequency	1880MHz
Channel	190
Test Mode	GSM-1900
Reference Voltage	DC 3.7V

Voltage (%)	Power (DC)	TEMP (℃)	Freq. Dev. (kHz)	Limit (kHz)
100%	3.7V	50	0.0031	4.7
100%		40	0.0048	4.7
100%		30	0.0023	4.7
100%		20	0.0066	4.7
100%		10	0.0024	4.7
100%		0	0.0075	4.7
100%		-10	0.0055	4.7
100%		-20	0.0014	4.7
100%		-30	0.0063	4.7
115%	4.26	25	0.0021	4.7
End point	3.40	25	0.0053	4.7

Operating Frequency	1880MHz
Channel	9400
Test Mode	WCDMA Band II-1900
Reference Voltage	DC 3.7V

Voltage (%)	Power (DC)	TEMP (℃)	Freq. Dev. (kHz)	Limit (kHz)
100%	3.7V	50	0.0023	4.7
100%		40	0.0056	4.7
100%		30	0.0035	4.7
100%		20	0.0073	4.7
100%		10	0.0075	4.7
100%		0	0.0036	4.7
100%		-10	0.0066	4.7
100%		-20	0.0046	4.7
100%		-30	0.0073	4.7
115%	4.26	25	0.0072	4.7
End point	3.40	25	0.0036	4.7

Operating Frequency	836.6MHz
Channel	4182
Test Mode	WCDMA Band V-850
Reference Voltage	DC 3.7V

Voltage (%)	Power (DC)	TEMP (℃)	Freq. Dev. (kHz)	Limit (kHz)
100%	3.7V	50	0.0024	2.09
100%		40	0.0055	2.09
100%		30	0.0052	2.09
100%		20	0.0035	2.09
100%		10	0.0073	2.09
100%		0	0.0025	2.09
100%		-10	0.0075	2.09
100%		-20	0.0035	2.09
100%		-30	0.0063	2.09
115%	4.26	30	0.0033	2.09
End point	3.40	30	0.0035	2.09

Operating Frequency	836.52MHz
Channel	384
Test Mode	CDMA BC0
Reference Voltage	DC 3.7V

Voltage (%)	Power (DC)	TEMP (℃)	Freq. Dev. (kHz)	Limit (kHz)
100%	3.7V	50	0.0024	2.09
100%		40	0.0063	2.09
100%		30	0.0027	2.09
100%		20	0.0035	2.09
100%		10	0.0036	2.09
100%		0	0.0066	2.09
100%		-10	0.0025	2.09
100%		-20	0.0063	2.09
100%		-30	0.0025	2.09
115%	4.26	30	0.0077	2.09
End point	3.40	30	0.0073	2.09

Operating Frequency	1880MHz
Channel	600
Test Mode	CDMA BC1
Reference Voltage	DC 3.7V

Voltage (%)	Power (DC)	TEMP (℃)	Freq. Dev. (kHz)	Limit (kHz)
100%	3.7V	50	0.0052	4.7
100%		40	0.0039	4.7
100%		30	0.0021	4.7
100%		20	0.0030	4.7
100%		10	0.0024	4.7
100%		0	0.0035	4.7
100%		-10	0.0041	4.7
100%		-20	0.0053	4.7
100%		-30	0.0048	4.7
115%	4.26	30	0.0031	4.7
End point	3.40	30	0.0037	4.7