

LTE Band12 (Low Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	ERP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH23017 / 699.7MHz, Bandwidth 1.4MHz							
699.7	H	5.290	0.840	7.400	11.85	34.8	-22.95
699.7	V	2.610	0.840	7.400	9.17	34.8	-25.63
QPSK, CH23025 / 700.5MHz, Bandwidth 3MHz							
700.5	H	5.600	0.840	7.400	12.16	34.8	-22.64
700.5	V	2.560	0.840	7.400	9.12	34.8	-25.68
QPSK, CH23035 / 701.5MHz, Bandwidth 5MHz							
701.5	H	5.710	0.840	7.400	12.27	34.8	-22.53
701.5	V	2.600	0.840	7.400	9.16	34.8	-25.64
QPSK, CH23060 / 704MHz, Bandwidth 10MHz							
704	H	5.670	0.840	7.400	12.23	34.8	-22.57
704	V	2.580	0.840	7.400	9.14	34.8	-25.66
16QAM, CH23017 / 699.7MHz, Bandwidth 1.4MHz							
699.7	H	5.040	0.840	7.400	11.60	34.8	-23.20
699.7	V	2.670	0.840	7.400	9.23	34.8	-25.57
16QAM, CH23025 / 700.5MHz, Bandwidth 3MHz							
700.5	H	5.710	0.840	7.400	12.27	34.8	-22.53
700.5	V	2.690	0.840	7.400	9.25	34.8	-25.55
16QAM, CH23035 / 701.5MHz, Bandwidth 5MHz							
701.5	H	5.840	0.840	7.400	12.40	34.8	-22.40
701.5	V	2.840	0.840	7.400	9.40	34.8	-25.40
16QAM, CH23060 / 704MHz, Bandwidth 10MHz							
704	H	5.750	0.840	7.400	12.31	34.8	-22.49
704	V	2.670	0.840	7.400	9.23	34.8	-25.57

NOTES:

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

LTE Band12 (Mid Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	ERP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH23095 / 707.5MHz, Bandwidth 1.4MHz							
707.5	H	5.510	0.840	7.430	12.10	34.8	-22.70
707.5	V	2.450	0.840	7.430	9.04	34.8	-25.76
QPSK, CH23095 / 707.5MHz, Bandwidth 3MHz							
707.5	H	5.850	0.840	7.430	12.44	34.8	-22.36
707.5	V	2.620	0.840	7.430	9.21	34.8	-25.59
QPSK, CH23095 / 707.5MHz, Bandwidth 5MHz							
707.5	H	5.760	0.840	7.430	12.35	34.8	-22.45
707.5	V	2.420	0.840	7.430	9.01	34.8	-25.79
QPSK, CH23095 / 707.5MHz, Bandwidth 10MHz							
707.5	H	5.860	0.840	7.430	12.45	34.8	-22.35
707.5	V	2.750	0.840	7.430	9.34	34.8	-25.46
16QAM, CH23095 / 707.5MHz, Bandwidth 1.4MHz							
707.5	H	5.750	0.840	7.430	12.34	34.8	-22.46
707.5	V	2.620	0.840	7.430	9.21	34.8	-25.59
16QAM, CH23095 / 707.5MHz, Bandwidth 3MHz							
707.5	H	5.840	0.840	7.430	12.43	34.8	-22.37
707.5	V	2.910	0.840	7.430	9.50	34.8	-25.30
16QAM, CH23095 / 707.5MHz, Bandwidth 5MHz							
707.5	H	5.820	0.840	7.430	12.41	34.8	-22.39
707.5	V	2.750	0.840	7.430	9.34	34.8	-25.46
16QAM, CH23095 / 707.5MHz, Bandwidth 10MHz							
707.5	H	5.980	0.840	7.430	12.57	34.8	-22.23
707.5	V	2.620	0.840	7.430	9.21	34.8	-25.59

NOTES:

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

LTE Band12 (High Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	ERP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH23173 / 715.3MHz, Bandwidth 1.4MHz							
715.3	H	4.520	0.840	7.480	11.16	34.8	-23.64
715.3	V	2.040	0.840	7.480	8.68	34.8	-26.12
QPSK, CH23165 / 714.5MHz, Bandwidth 3MHz							
714.5	H	4.620	0.840	7.480	11.26	34.8	-23.54
714.5	V	2.410	0.840	7.480	9.05	34.8	-25.75
QPSK, CH23155 / 713.5MHz, Bandwidth 5MHz							
713.5	H	4.710	0.840	7.480	11.35	34.8	-23.45
713.5	V	2.270	0.840	7.480	8.91	34.8	-25.89
QPSK, CH23130 / 711MHz, Bandwidth 10MHz							
711	H	4.890	0.840	7.480	11.53	34.8	-23.27
711	V	2.640	0.840	7.480	9.28	34.8	-25.52
16QAM, CH23173 / 715.3MHz, Bandwidth 1.4MHz							
715.3	H	4.310	0.840	7.480	10.95	34.8	-23.85
715.3	V	1.870	0.840	7.480	8.51	34.8	-26.29
16QAM, CH23165 / 714.5MHz, Bandwidth 3MHz							
714.5	H	4.480	0.840	7.480	11.12	34.8	-23.68
714.5	V	2.290	0.840	7.480	8.93	34.8	-25.87
16QAM, CH23155 / 713.5MHz, Bandwidth 5MHz							
713.5	H	4.590	0.840	7.480	11.23	34.8	-23.57
713.5	V	2.240	0.840	7.480	8.88	34.8	-25.92
16QAM, CH23130 / 711MHz, Bandwidth 10MHz							
711	H	4.810	0.840	7.480	11.45	34.8	-23.35
711	V	2.510	0.840	7.480	9.15	34.8	-25.65

NOTES:

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

Radiated Spurious Emission

LTE Band2							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH18900 / 1880MHz, Bandwidth 1.4MHz							
3760	H	-47.790	1.360	7.950	-41.20	-13	-28.20
5640	H	-45.670	1.790	10.100	-37.36	-13	-24.36
7520	H	-43.412	1.720	11.722	-33.41	-13	-20.41
3760	V	-47.170	1.360	7.950	-40.58	-13	-27.58
5640	V	-44.960	1.790	10.100	-36.65	-13	-23.65
7520	V	-43.842	1.720	11.722	-33.84	-13	-20.84
QPSK, CH18900 / 1880MHz, Bandwidth 3MHz							
3760	H	-46.940	1.360	7.950	-40.35	-13	-27.35
5640	H	-45.410	1.790	10.100	-37.10	-13	-24.10
7520	H	-42.982	1.720	11.722	-32.98	-13	-19.98
3760	V	-46.940	1.360	7.950	-40.35	-13	-27.35
5640	V	-43.410	1.790	10.100	-35.10	-13	-22.10
7520	V	-42.656	1.720	11.722	-32.65	-13	-19.65
QPSK, CH18900 / 1880MHz, Bandwidth 5MHz							
3760	H	-46.520	1.360	7.950	-39.93	-13	-26.93
5640	H	-44.780	1.790	10.100	-36.47	-13	-23.47
7520	H	-42.682	1.720	11.722	-32.68	-13	-19.68
3760	V	-48.530	1.360	7.950	-41.94	-13	-28.94
5640	V	-46.320	1.790	10.100	-38.01	-13	-25.01
7520	V	-44.562	1.720	11.722	-34.56	-13	-21.56

Note:

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

LTE Band2							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH18900 / 1880MHz, Bandwidth 10MHz							
3760	H	-47.530	1.360	7.950	-40.94	-13	-27.94
5640	H	-45.720	1.790	10.100	-37.41	-13	-24.41
7520	H	-42.482	1.720	11.722	-32.48	-13	-19.48
3760	V	-47.930	1.360	7.950	-41.34	-13	-28.34
5640	V	-44.310	1.790	10.100	-36.00	-13	-23.00
7520	V	-44.722	1.720	11.722	-34.72	-13	-21.72
QPSK, CH18900 / 1880MHz, Bandwidth 15MHz							
3760	H	-46.810	1.360	7.950	-40.22	-13	-27.22
5640	H	-43.770	1.790	10.100	-35.46	-13	-22.46
7520	H	-43.312	1.720	11.722	-33.31	-13	-20.31
3760	V	-47.800	1.360	7.950	-41.21	-13	-28.21
5640	V	-44.920	1.790	10.100	-36.61	-13	-23.61
7520	V	-43.552	1.720	11.722	-33.55	-13	-20.55
QPSK, CH18900 / 1880MHz, Bandwidth 20MHz							
3760	H	-47.220	1.360	7.950	-40.63	-13	-27.63
5640	H	-44.820	1.790	10.100	-36.51	-13	-23.51
7520	H	-42.992	1.720	11.722	-32.99	-13	-19.99
3760	V	-48.050	1.360	7.950	-41.46	-13	-28.46
5640	V	-45.200	1.790	10.100	-36.89	-13	-23.89
7520	V	-43.322	1.720	11.722	-33.32	-13	-20.32

Note:

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

LTE Band4							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH20175 /1732.5MHz, Bandwidth 1.4MHz							
3465	H	-48.536	1.330	7.646	-42.22	-13	-29.22
5197.5	H	-45.830	1.680	9.880	-37.63	-13	-24.63
6930	H	-40.906	1.810	11.146	-31.57	-13	-18.57
3465	V	-48.136	1.330	7.646	-41.82	-13	-28.82
5197.5	V	-45.740	1.680	9.880	-37.54	-13	-24.54
6930	V	-41.476	1.810	11.146	-32.14	-13	-19.14
QPSK, CH20175 /1732.5MHz, Bandwidth 3MHz							
3465	H	-48.076	1.330	7.646	-41.76	-13	-28.76
5197.5	H	-45.410	1.680	9.880	-37.21	-13	-24.21
6930	H	-40.336	1.810	11.146	-31.00	-13	-18.00
3465	V	-47.456	1.330	7.646	-41.14	-13	-28.14
5197.5	V	-44.900	1.680	9.880	-36.70	-13	-23.70
6930	V	-43.206	1.810	11.146	-33.87	-13	-20.87
QPSK, CH20175 /1732.5MHz, Bandwidth 5MHz							
3465	H	-47.436	1.330	7.646	-41.12	-13	-28.12
5197.5	H	-44.890	1.680	9.880	-36.69	-13	-23.69
6930	H	-40.146	1.810	11.146	-30.81	-13	-17.81
3465	V	-47.846	1.330	7.646	-41.53	-13	-28.53
5197.5	V	-45.690	1.680	9.880	-37.49	-13	-24.49
6930	V	-41.896	1.810	11.146	-32.56	-13	-19.56

Note:

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

LTE Band4							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH20175 /1732.5MHz, Bandwidth 10MHz							
3465	H	-47.796	1.330	7.646	-41.48	-13	-28.48
5197.5	H	-45.450	1.680	9.880	-37.25	-13	-24.25
6930	H	-40.066	1.810	11.146	-30.73	-13	-17.73
3465	V	-47.746	1.330	7.646	-41.43	-13	-28.43
5197.5	V	-46.850	1.680	9.880	-38.65	-13	-25.65
6930	V	-41.796	1.810	11.146	-32.46	-13	-19.46
QPSK, CH20175 /1732.5MHz, Bandwidth 15MHz							
3465	H	-47.446	1.330	7.646	-41.13	-13	-28.13
5197.5	H	-45.400	1.680	9.880	-37.20	-13	-24.20
6930	H	-39.846	1.810	11.146	-30.51	-13	-17.51
3465	V	-47.516	1.330	7.646	-41.20	-13	-28.20
5197.5	V	-47.000	1.680	9.880	-38.80	-13	-25.80
6930	V	-41.546	1.810	11.146	-32.21	-13	-19.21
QPSK, CH20175 /1732.5MHz, Bandwidth 20MHz							
3465	H	-48.876	1.330	7.646	-42.56	-13	-29.56
5197.5	H	-44.680	1.680	9.880	-36.48	-13	-23.48
6930	H	-38.686	1.810	11.146	-29.35	-13	-16.35
3465	V	-48.186	1.330	7.646	-41.87	-13	-28.87
5197.5	V	-47.270	1.680	9.880	-39.07	-13	-26.07
6930	V	-42.666	1.810	11.146	-33.33	-13	-20.33

Note:

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

LTE Band5							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	ERP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH20525 / 836.5MHz, Bandwidth 1.4MHz							
1673	H	-49.044	1.050	5.024	-45.07	-13	-32.07
2509.5	H	-48.026	1.140	5.636	-43.53	-13	-30.53
3346	H	-46.712	1.320	7.122	-40.91	-13	-27.91
1673	V	-49.424	1.050	5.024	-45.45	-13	-32.45
2509.5	V	-47.446	1.140	5.636	-42.95	-13	-29.95
3346	V	-47.252	1.320	7.122	-41.45	-13	-28.45
QPSK, CH20525 / 836.5MHz, Bandwidth 3MHz							
1673	H	-48.474	1.050	5.024	-44.50	-13	-31.50
2509.5	H	-48.366	1.140	5.636	-43.87	-13	-30.87
3346	H	-47.002	1.320	7.122	-41.20	-13	-28.20
1673	V	-49.274	1.050	5.024	-45.30	-13	-32.30
2509.5	V	-47.946	1.140	5.636	-43.45	-13	-30.45
3346	V	-47.912	1.320	7.122	-42.11	-13	-29.11

Note:

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

LTE Band5							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	ERP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH20525 / 836.5MHz, Bandwidth 5MHz							
1673	H	-47.184	1.050	5.024	-43.21	-13	-30.21
2509.5	H	-48.476	1.140	5.636	-43.98	-13	-30.98
3346	H	-46.902	1.320	7.122	-41.10	-13	-28.10
1673	V	-48.984	1.050	5.024	-45.01	-13	-32.01
2509.5	V	-47.866	1.140	5.636	-43.37	-13	-30.37
3346	V	-48.702	1.320	7.122	-42.90	-13	-29.90
QPSK, CH20525 / 836.5MHz, Bandwidth 10MHz							
1673	H	-47.544	1.050	5.024	-43.57	-13	-30.57
2509.5	H	-47.876	1.140	5.636	-43.38	-13	-30.38
3346	H	-47.322	1.320	7.122	-41.52	-13	-28.52
1673	V	-48.034	1.050	5.024	-44.06	-13	-31.06
2509.5	V	-47.786	1.140	5.636	-43.29	-13	-30.29
3346	V	-48.002	1.320	7.122	-42.20	-13	-29.20

Note:

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

LTE Band12							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	ERP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH23095 / 707.5MHz, Bandwidth 1.4MHz							
1415	H	-48.394	1.020	4.754	-44.66	-13	-31.66
2122.5	H	-47.532	1.160	4.742	-43.95	-13	-30.95
2830	H	-47.708	1.270	6.438	-42.54	-13	-29.54
1415	V	-45.474	1.020	4.754	-41.74	-13	-28.74
2122.5	V	-45.402	1.160	4.742	-41.82	-13	-28.82
2830	V	-48.108	1.270	6.438	-42.94	-13	-29.94
QPSK, CH23095 / 707.5MHz, Bandwidth 3MHz							
1415	H	-48.004	1.020	4.754	-44.27	-13	-31.27
2122.5	H	-47.722	1.160	4.742	-44.14	-13	-31.14
2830	H	-49.148	1.270	6.438	-43.98	-13	-30.98
1415	V	-44.854	1.020	4.754	-41.12	-13	-28.12
2122.5	V	-44.682	1.160	4.742	-41.10	-13	-28.10
2830	V	-48.668	1.270	6.438	-43.50	-13	-30.50

Note:

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

LTE Band12							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	ERP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH23095 / 707.5MHz, Bandwidth 5MHz							
1415	H	-47.294	1.020	4.754	-43.56	-13	-30.56
2122.5	H	-47.252	1.160	4.742	-43.67	-13	-30.67
2830	H	-47.268	1.270	6.438	-42.10	-13	-29.10
1415	V	-47.864	1.020	4.754	-44.13	-13	-31.13
2122.5	V	-47.482	1.160	4.742	-43.90	-13	-30.90
2830	V	-47.288	1.270	6.438	-42.12	-13	-29.12
QPSK, CH23095 / 707.5MHz, Bandwidth 10MHz							
1415	H	-47.864	1.020	4.754	-44.13	-13	-31.13
2122.5	H	-48.702	1.160	4.742	-45.12	-13	-32.12
2830	H	-48.318	1.270	6.438	-43.15	-13	-30.15
1415	V	-46.014	1.020	4.754	-42.28	-13	-29.28
2122.5	V	-46.272	1.160	4.742	-42.69	-13	-29.69
2830	V	-47.668	1.270	6.438	-42.50	-13	-29.50

Note:

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

7.6. Peak-Average Ratio

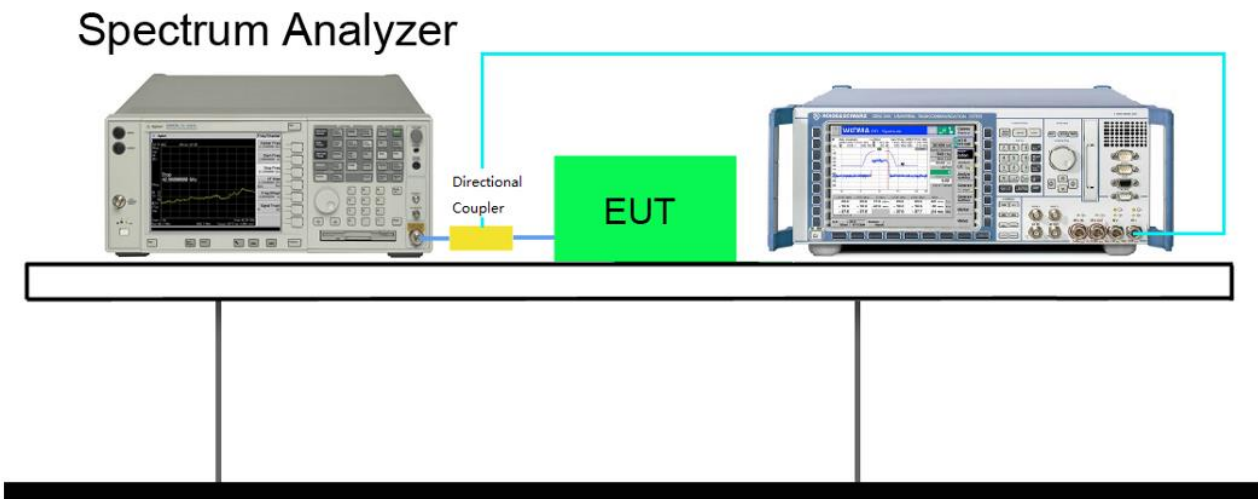
7.6.1 Test Limit

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

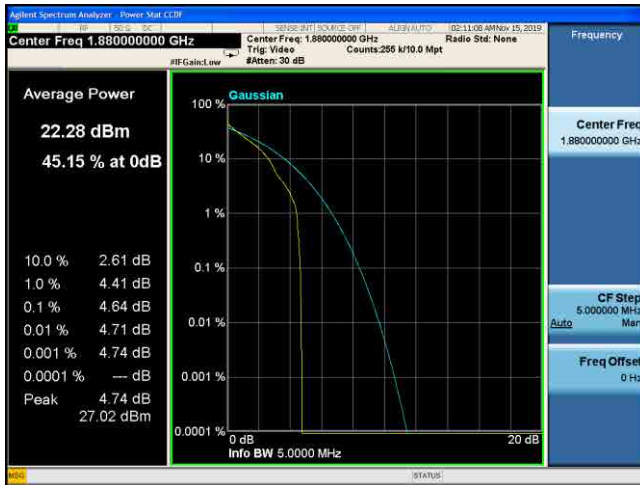
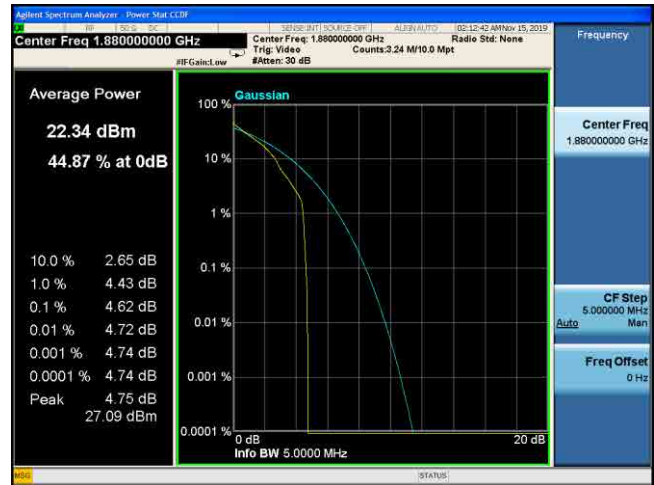
KDB 971168 D01v03r01 - Section 5.7 & ANSI/TIA-603-E-2016

7.6.3 Test Setup

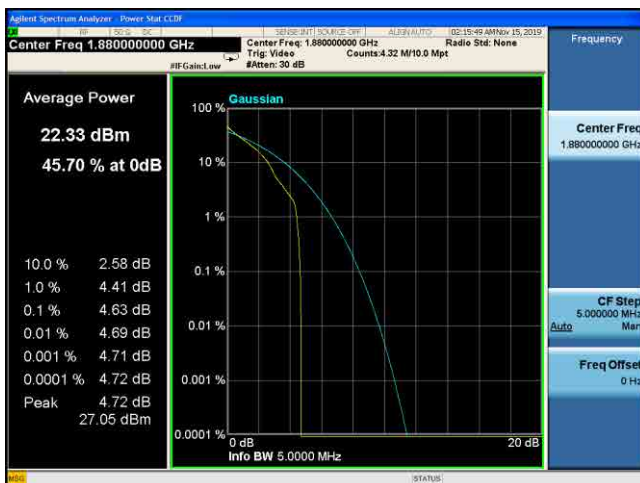


7.6.4 Test Result

Test Mode	Modulation	Channel/ Frequency (MHz)	Bandwidth (MHz)	RB Size	RB Offset	Test Result
LTE Band 2	QPSK	CH18900/1880MHz	1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
			15	1	36	Pass
			20	1	49	Pass
	16QAM		1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
			15	1	36	Pass
			20	1	49	Pass

LTE Band 2 QPSK 1.4MHz CH18900 1RB#2

LTE Band 2 QPSK 3MHz CH18900 1RB#7

LTE Band 2 QPSK 5MHz CH18900 1RB#12

LTE Band 2 QPSK 10MHz CH18900 1RB#25

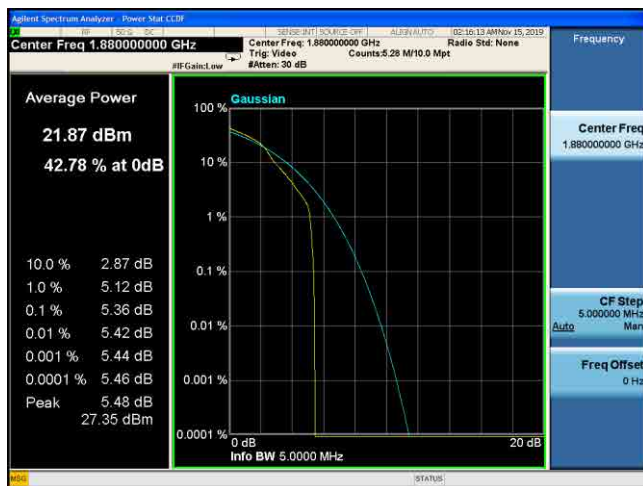
LTE Band 2 QPSK 15MHz CH18900 1RB#36

LTE Band 2 QPSK 20MHz CH18900 1RB#49


LTE Band 2 16QAM 1.4MHz CH18900 1RB#2

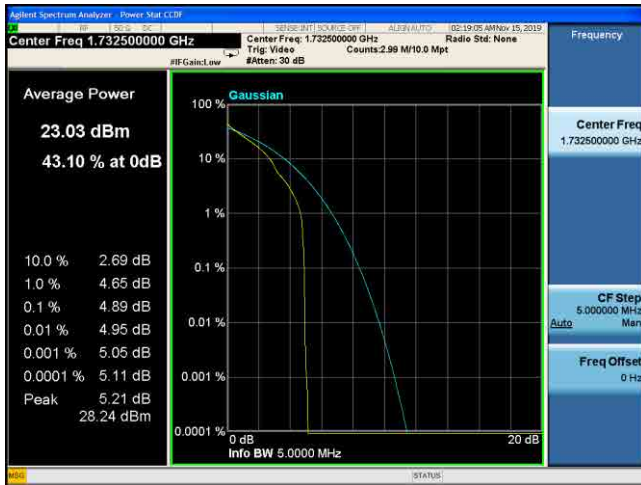
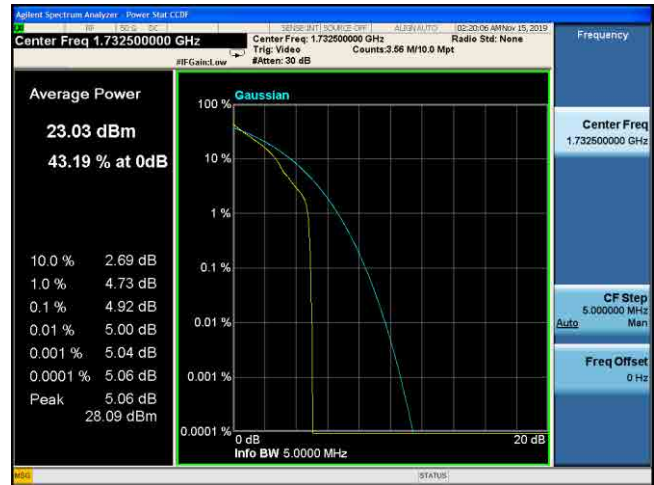
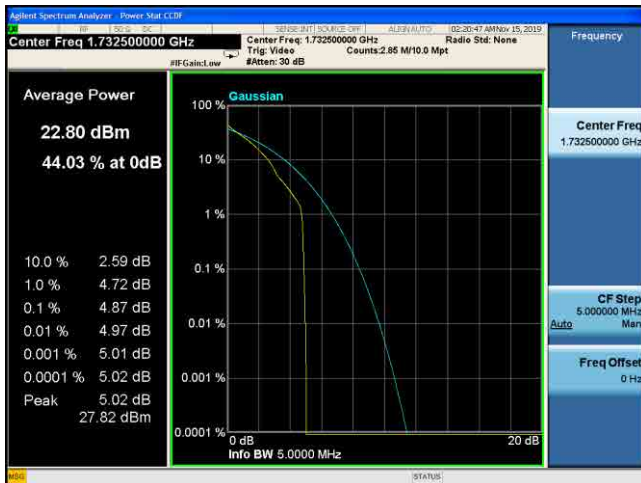
LTE Band 2 16QAM 3MHz CH18900 1RB#7

LTE Band 2 16QAM 5MHz CH18900 1RB#12

LTE Band 2 16QAM 10MHz CH18900 1RB#25

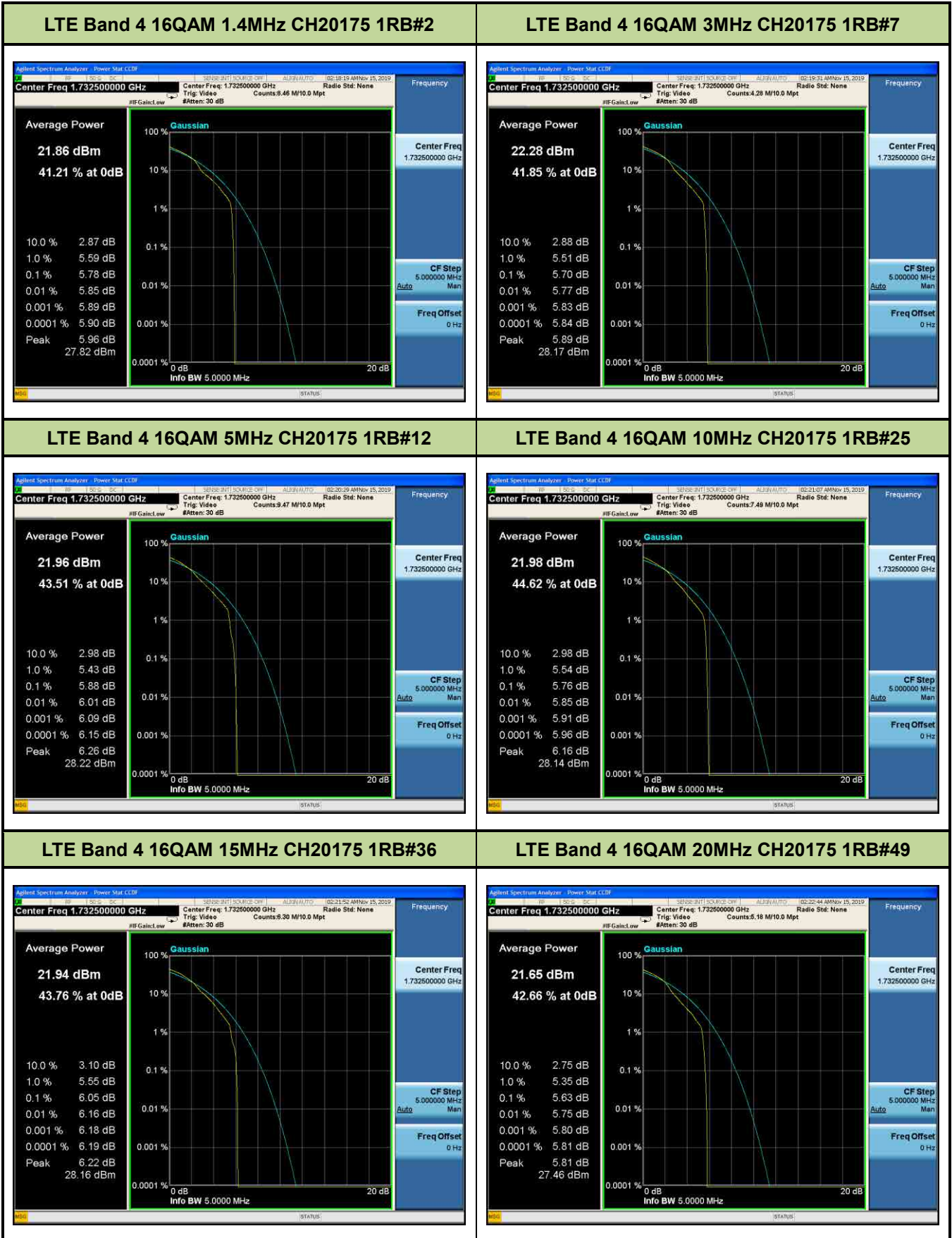
LTE Band 2 16QAM 15MHz CH18900 1RB#36

LTE Band 2 16QAM 20MHz CH18900 1RB#49


Test Mode	Modulation	Channel/ Frequency (MHz)	Bandwidth (MHz)	RB Size	RB Offset	Test Result
LTE Band 4	QPSK	CH20175 / 1732.5MHz	1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
			15	1	36	Pass
			20	1	49	Pass
	16QAM		1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
			15	1	36	Pass
			20	1	49	Pass

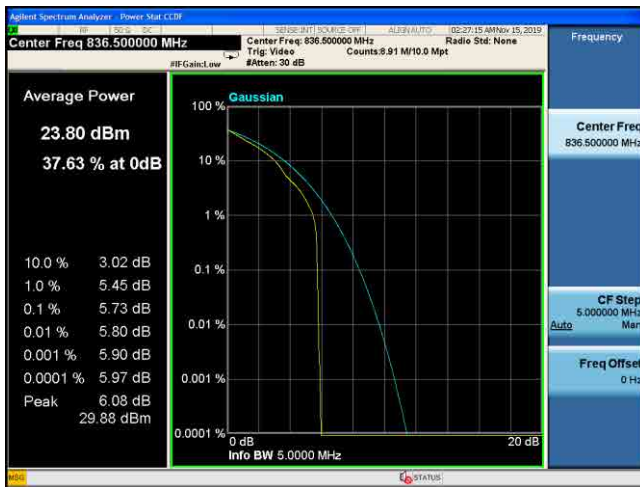
LTE Band 4 QPSK 1.4MHz CH20175 1RB#2

LTE Band 4 QPSK 3MHz CH20175 1RB#7

LTE Band 4 QPSK 5MHz CH20175 1RB#12

LTE Band 4 QPSK 10MHz CH20175 1RB#25

LTE Band 4 QPSK 15MHz CH20175 1RB#36

LTE Band 4 QPSK 20MHz CH20175 1RB#49

Test Mode	Modulation	Channel/ Frequency (MHz)	Bandwidth (MHz)	RB Size	RB Offset	Test Result
LTE Band 5	QPSK	CH20525 / 836.5MHz	1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
	16QAM		1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass

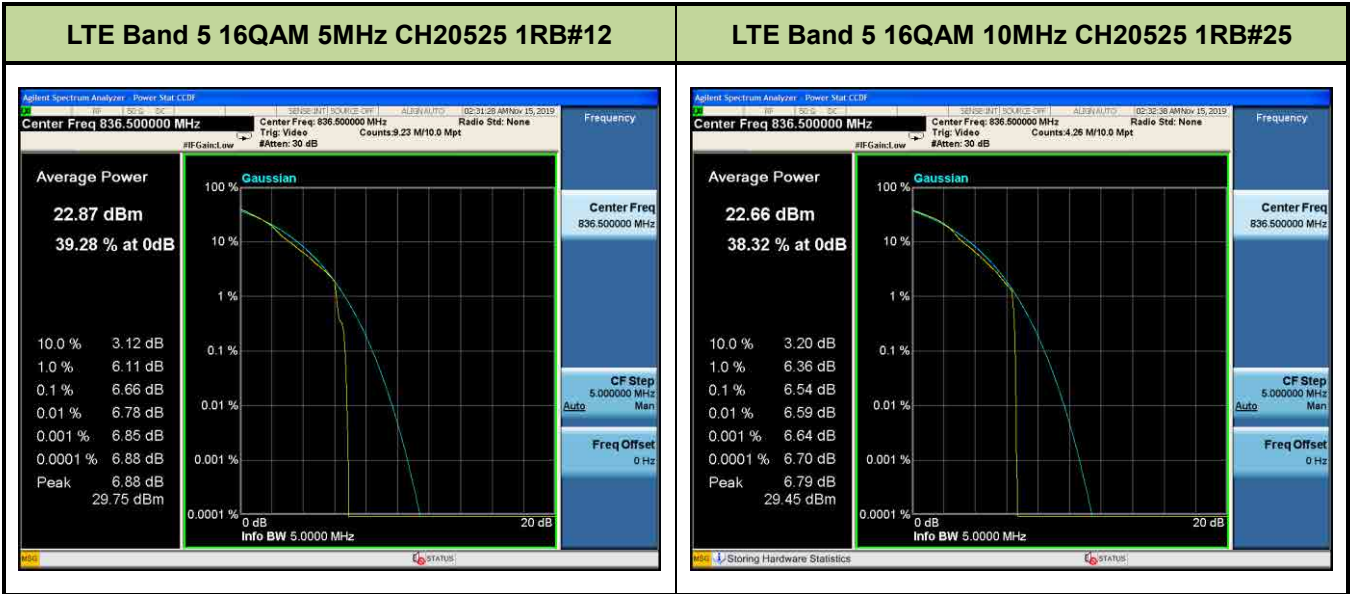
LTE Band 5 QPSK 1.4MHz CH20525 1RB#2

LTE Band 5 QPSK 3MHz CH20525 1RB#7

LTE Band 5 QPSK 5MHz CH20525 1RB#12

LTE Band 5 QPSK 10MHz CH20525 1RB#25

LTE Band 5 16QAM 1.4MHz CH20525 1RB#2

LTE Band 5 16QAM 3MHz CH20525 1RB#7

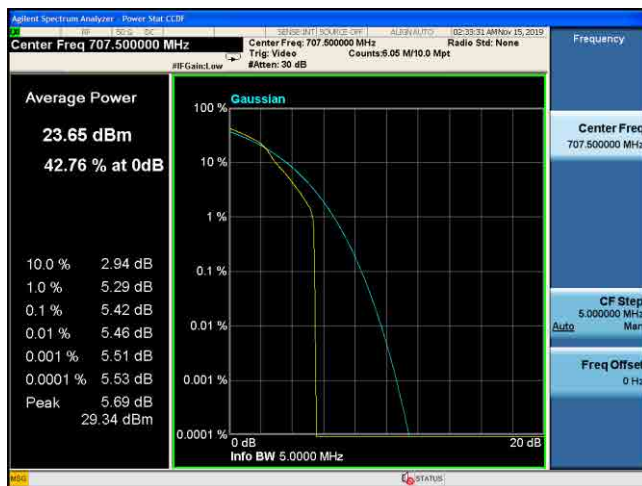
Test Mode	Modulation	Channel/ Frequency (MHz)	Bandwidth (MHz)	RB Size	RB Offset	Test Result
LTE Band 12	QPSK	CH23095 / 707.5MHz	1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
	16QAM		1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass

LTE Band 12 QPSK 1.4MHz CH23095 1RB#2

LTE Band 12 QPSK 3MHz CH23095 1RB#7

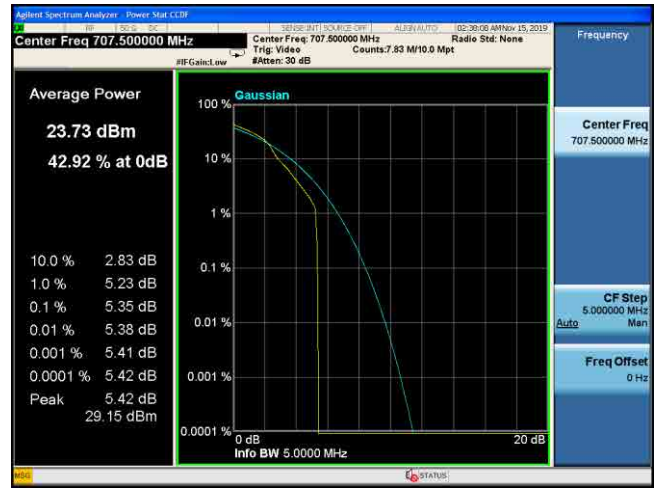
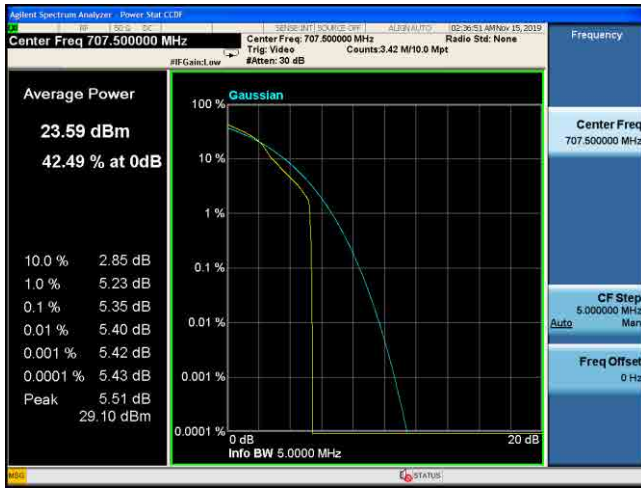
LTE Band 12 QPSK 5MHz CH23095 1RB#12

LTE Band 12 QPSK 10MHz CH23095 1RB#25

LTE Band 12 16QAM 1.4MHz CH23095 1RB#2

LTE Band 12 16QAM 3MHz CH23095 1RB#7


LTE Band 12 16QAM 5MHz CH23095 1RB#12

LTE Band 12 16QAM 10MHz CH23095 1RB#25



7.7. Frequency Stability Under Temperature & Voltage Variations

7.7.1 Test Limit

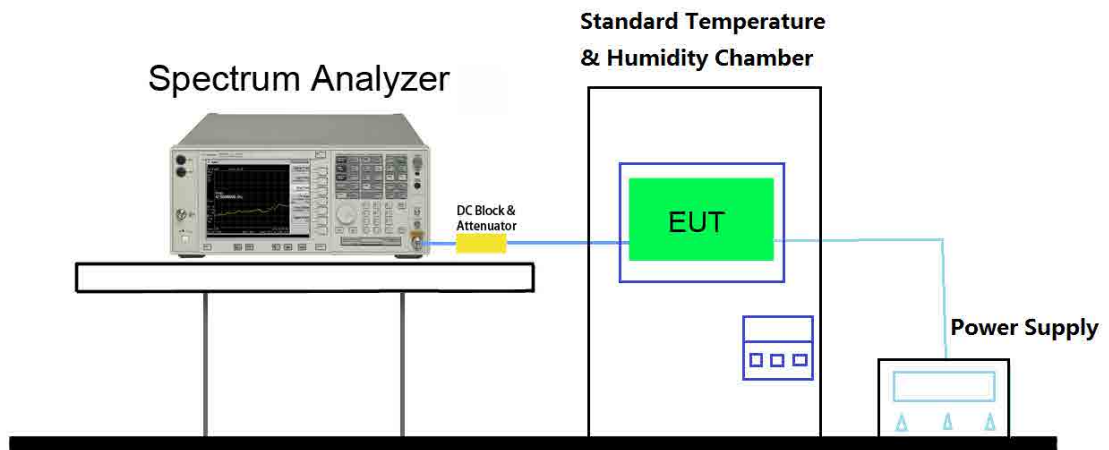
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Limit	$< \pm 2.5$ ppm
-------	-----------------

7.7.2 Test Procedure

KDB 971168 D01v03r01 - Section 9.0 & ANSI/TIA-603-E-2016

7.7.3 Test Setup



7.7.4 Test Result

Operating Frequency	1880MHz
Channel	CH18900
Test Mode	LTE Band 2
Reference Voltage	AC 120V/60Hz

Temperature vs. Frequency Stability						
Voltage (%)	Power (VDC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	DC 3.7V	-30	1880	-8.74	-0.005	±2.5
		-20	1880	-9.70	-0.005	±2.5
		-10	1880	-6.42	-0.003	±2.5
		0	1880	-8.13	-0.004	±2.5
		10	1880	-7.67	-0.004	±2.5
		+ 20 (Ref)	1880	-9.27	-0.005	±2.5
		30	1880	-10.83	-0.006	±2.5
		40	1880	-8.77	-0.005	±2.5
		50	1880	-8.84	-0.005	±2.5
Voltage vs. Frequency Stability						
Voltage (%)	Power (VDC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	DC 3.7V	20	1880	-9.27	-0.005	±2.5
115%	DC 4.3V	20	1880	-8.73	-0.005	±2.5
90%	DC 3.3V	20	1880	-9.50	-0.005	±2.5

Operating Frequency	1732.6MHz
Channel	CH20175
Test Mode	LTE Band 4
Reference Voltage	AC 120V/60Hz

Temperature vs. Frequency Stability						
Voltage (%)	Power (VDC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	DC 3.7V	-30	1732.5	5.99	0.003	±2.5
		-20	1732.5	5.21	0.003	±2.5
		-10	1732.5	5.98	0.003	±2.5
		0	1732.5	5.55	0.003	±2.5
		10	1732.5	5.46	0.003	±2.5
		+ 20 (Ref)	1732.5	5.15	0.003	±2.5
		30	1732.5	-5.55	-0.003	±2.5
		40	1732.5	6.57	0.004	±2.5
		50	1732.5	-5.82	-0.003	±2.5
Voltage vs. Frequency Stability						
Voltage (%)	Power (VDC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	DC 3.7V	20	1732.5	5.15	0.003	±2.5
115%	DC 4.3V	20	1732.5	-5.35	-0.003	±2.5
90%	DC 3.3V	20	1732.5	6.57	0.004	±2.5

Operating Frequency	836.6MHz
Channel	CH20525
Test Mode	LTE Band 5
Reference Voltage	AC 120V/60Hz

Temperature vs. Frequency Stability						
Voltage (%)	Power (VDC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	DC 3.7V	-30	836.5	4.88	0.006	±2.5
		-20	836.5	4.86	0.006	±2.5
		-10	836.5	5.68	0.007	±2.5
		0	836.5	4.88	0.006	±2.5
		10	836.5	4.56	0.005	±2.5
		+ 20 (Ref)	836.5	4.76	0.006	±2.5
		30	836.5	-4.73	-0.006	±2.5
		40	836.5	-3.96	-0.005	±2.5
		50	836.5	-3.76	-0.004	±2.5
Voltage vs. Frequency Stability						
Voltage (%)	Power (VDC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	DC 3.7V	20	836.5	4.76	0.006	±2.5
115%	DC 4.3V	20	836.5	-4.05	-0.005	±2.5
90%	DC 3.3V	20	836.5	-4.15	-0.005	±2.5

Operating Frequency	707.5MHz
Channel	CH23095
Test Mode	LTE Band 12
Reference Voltage	AC 120V/60Hz

Temperature vs. Frequency Stability						
Voltage (%)	Power (VDC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	DC 3.7V	-30	707.5	4.49	0.006	±2.5
		-20	707.5	2.99	0.004	±2.5
		-10	707.5	3.56	0.005	±2.5
		0	707.5	3.85	0.005	±2.5
		10	707.5	3.49	0.005	±2.5
		+ 20 (Ref)	707.5	-5.71	-0.008	±2.5
		30	707.5	-4.39	-0.006	±2.5
		40	707.5	-3.95	-0.006	±2.5
		50	707.5	-4.13	-0.006	±2.5
Voltage vs. Frequency Stability						
Voltage (%)	Power (VDC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	DC 3.7V	20	707.5	-5.71	-0.008	±2.5
115%	DC 4.3V	20	707.5	-3.55	-0.005	±2.5
90%	DC 3.3V	20	707.5	-4.29	-0.006	±2.5

————— The End —————