

LTE Band2 (Mid Channel)							
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							
1880	H	17.86	1.07	4.61	21.41	33	-11.59
1880	V	16.40	1.07	4.61	19.95	33	-13.05
QPSK, CH18900 / 1880MHz, Bandwidth 3MHz							
1880	H	17.62	1.07	4.59	21.14	33	-11.86
1880	V	16.48	1.07	4.59	20.00	33	-13.00
QPSK, CH18900 / 1880MHz, Bandwidth 5MHz							
1880	H	17.86	1.07	4.56	21.35	33	-11.65
1880	V	16.41	1.07	4.56	19.90	33	-13.10
QPSK, CH18900 / 1880MHz, Bandwidth 10MHz							
1880	H	18.27	1.07	4.56	21.76	33	-11.24
1880	V	16.89	1.07	4.56	20.38	33	-12.62
QPSK, CH18900 / 1880MHz, Bandwidth 15MHz							
1880	H	18.00	1.07	4.56	21.49	33	-11.51
1880	V	16.43	1.07	4.56	19.92	33	-13.08
QPSK, CH18900 / 1880MHz, Bandwidth 20MHz							
1880	H	16.33	1.07	4.56	19.82	33	-13.18
1880	V	14.78	1.07	4.56	18.27	33	-14.73

**NOTES:**

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

LTE Band2 (Mid Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
16QAM, CH18900 / 1880MHz, Bandwidth 1.4MHz							
1880	H	17.64	1.07	4.61	21.19	33	-11.81
1880	V	16.13	1.07	4.61	19.68	33	-13.32
16QAM, CH18900 / 1880MHz, Bandwidth 3MHz							
1880	H	17.41	1.07	4.59	20.93	33	-12.07
1880	V	16.31	1.07	4.59	19.83	33	-13.17
16QAM, CH18900 / 1880MHz, Bandwidth 5MHz							
1880	H	17.70	1.07	4.56	21.19	33	-11.81
1880	V	16.30	1.07	4.56	19.79	33	-13.21
16QAM, CH18900 / 1880MHz, Bandwidth 10MHz							
1880	H	18.02	1.07	4.56	21.51	33	-11.49
1880	V	16.63	1.07	4.56	20.12	33	-12.88
16QAM, CH18900 / 1880MHz, Bandwidth 15MHz							
1880	H	17.70	1.07	4.56	21.19	33	-11.81
1880	V	16.33	1.07	4.56	19.82	33	-13.18
16QAM, CH18900 / 1880MHz, Bandwidth 20MHz							
1880	H	16.06	1.07	4.56	19.55	33	-13.45
1880	V	14.53	1.07	4.56	18.02	33	-14.98

**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 Band2 (High Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH19193 / 1909.3MHz, Bandwidth 1.4MHz							
1909.3	H	17.73	1.07	4.61	21.28	33	-11.72
1909.3	V	16.99	1.07	4.61	20.54	33	-12.46
QPSK, CH19185 / 1908.5MHz, Bandwidth 3MHz							
1908.5	H	17.80	1.07	4.59	21.32	33	-11.68
1908.5	V	17.51	1.07	4.59	21.03	33	-11.97
QPSK, CH19175 / 1907.5MHz, Bandwidth 5MHz							
1907.5	H	18.11	1.07	4.56	21.60	33	-11.40
1907.5	V	17.36	1.07	4.56	20.85	33	-12.15
QPSK, CH19150 / 1905MHz, Bandwidth 10MHz							
1905	H	18.62	1.07	4.56	22.11	33	-10.89
1905	V	17.88	1.07	4.56	21.37	33	-11.63
QPSK, CH19125 / 1902.5MHz, Bandwidth 15MHz							
1902.5	H	18.38	1.07	4.56	21.87	33	-11.13
1902.5	V	17.71	1.07	4.56	21.20	33	-11.80
QPSK, CH19100 / 1900MHz, Bandwidth 20MHz							
1900	H	16.02	1.07	4.56	19.51	33	-13.49
1900	V	16.27	1.07	4.56	19.76	33	-13.24

**NOTES:**

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

LTE Band2 (High Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
16QAM, CH19193 / 1909.3MHz, Bandwidth 1.4MHz							
1909.3	H	17.48	1.07	4.61	21.03	33	-11.97
1909.3	V	16.67	1.07	4.61	20.22	33	-12.78
16QAM, CH19185 / 1908.5MHz, Bandwidth 3MHz							
1908.5	H	17.59	1.07	4.59	21.11	33	-11.89
1908.5	V	17.37	1.07	4.59	20.89	33	-12.11
16QAM, CH19175 / 1907.5MHz, Bandwidth 5MHz							
1907.5	H	17.77	1.07	4.56	21.26	33	-11.74
1907.5	V	17.10	1.07	4.56	20.59	33	-12.41
16QAM, CH19150 / 1905MHz, Bandwidth 10MHz							
1905	H	18.46	1.07	4.56	21.95	33	-11.05
1905	V	17.62	1.07	4.56	21.11	33	-11.89
16QAM, CH19125 / 1902.5MHz, Bandwidth 15MHz							
1902.5	H	18.12	1.07	4.56	21.61	33	-11.39
1902.5	V	17.52	1.07	4.56	21.01	33	-11.99
16QAM, CH19100 / 1900MHz, Bandwidth 20MHz							
1900	H	15.85	1.07	4.56	19.34	33	-13.66
1900	V	16.02	1.07	4.56	19.51	33	-13.49

**NOTES:**

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

LTE Band4 (Low Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH19957 / 1710.7MHz, Bandwidth 1.4MHz							
1710.7	H	17.45	1.10	4.92	21.26	30	-8.74
1710.7	V	13.89	1.10	4.92	17.70	30	-12.30
QPSK, CH19965 / 1711.5MHz, Bandwidth 3MHz							
1711.5	H	16.35	1.10	4.92	20.16	30	-9.84
1711.5	V	14.11	1.10	4.92	17.92	30	-12.08
QPSK, CH19975 / 1712.5MHz, Bandwidth 5MHz							
1712.5	H	16.62	1.10	4.92	20.43	30	-9.57
1712.5	V	13.97	1.10	4.92	17.78	30	-12.22
QPSK, CH20000 / 1715MHz, Bandwidth 10MHz							
1715	H	15.71	1.10	4.92	19.52	30	-10.48
1715	V	13.96	1.10	4.92	17.77	30	-12.23
QPSK, CH20025 / 1717.5MHz, Bandwidth 15MHz							
1717.5	H	16.11	1.10	4.92	19.92	30	-10.08
1717.5	V	14.29	1.10	4.92	18.10	30	-11.90
QPSK, CH20050 / 1720MHz, Bandwidth 20MHz							
1720	H	14.23	1.10	4.92	18.04	30	-11.96
1720	V	12.18	1.10	4.92	15.99	30	-14.01

**NOTES:**

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

LTE Band4 (Low Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
16QAM, CH19957 / 1710.7MHz, Bandwidth 1.4MHz							
1710.7	H	17.22	1.10	4.92	21.03	30	-8.97
1710.7	V	13.63	1.10	4.92	17.44	30	-12.56
16QAM, CH19965 / 1711.5MHz, Bandwidth 3MHz							
1711.5	H	16.09	1.10	4.92	19.90	30	-10.10
1711.5	V	13.98	1.10	4.92	17.79	30	-12.21
16QAM, CH19975 / 1712.5MHz, Bandwidth 5MHz							
1712.5	H	16.50	1.10	4.92	20.31	30	-9.69
1712.5	V	13.78	1.10	4.92	17.59	30	-12.41
16QAM, CH20000 / 1715MHz, Bandwidth 10MHz							
1715	H	15.56	1.10	4.92	19.37	30	-10.63
1715	V	13.75	1.10	4.92	17.56	30	-12.44
16QAM, CH20025 / 1717.5MHz, Bandwidth 15MHz							
1717.5	H	15.93	1.10	4.92	19.74	30	-10.26
1717.5	V	14.10	1.10	4.92	17.91	30	-12.09
16QAM, CH20050 / 1720MHz, Bandwidth 20MHz							
1720	H	14.07	1.10	4.92	17.88	30	-12.12
1720	V	11.91	1.10	4.92	15.72	30	-14.28

**NOTES:**

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

LTE Band4 (Mid Channel)							
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							
1732.5	H	16.81	1.11	4.86	20.56	30	-9.44
1732.5	V	14.84	1.11	4.86	18.59	30	-11.41
QPSK, CH20175 /1732.5MHz, Bandwidth 3MHz							
1732.5	H	16.78	1.11	4.86	20.53	30	-9.47
1732.5	V	14.62	1.11	4.86	18.37	30	-11.63
QPSK, CH20175 /1732.5MHz, Bandwidth 5MHz							
1732.5	H	16.76	1.11	4.86	20.51	30	-9.49
1732.5	V	14.53	1.11	4.86	18.28	30	-11.72
QPSK, CH20175 /1732.5MHz, Bandwidth 10MHz							
1732.5	H	16.62	1.11	4.86	20.37	30	-9.63
1732.5	V	14.73	1.11	4.86	18.48	30	-11.52
QPSK, CH20175 /1732.5MHz, Bandwidth 15MHz							
1732.5	H	16.75	1.11	4.86	20.50	30	-9.50
1732.5	V	14.95	1.11	4.86	18.70	30	-11.30
QPSK, CH20175 /1732.5MHz, Bandwidth 20MHz							
1732.5	H	15.47	1.11	4.86	19.22	30	-10.78
1732.5	V	12.53	1.11	4.86	16.28	30	-13.72

**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 Band4 (Mid Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
16QAM, CH20175 /1732.5MHz, Bandwidth 1.4MHz							
1732.5	H	16.56	1.11	4.86	20.31	30	-9.69
1732.5	V	14.66	1.11	4.86	18.41	30	-11.59
16QAM, CH20175 /1732.5MHz, Bandwidth 3MHz							
1732.5	H	16.53	1.11	4.86	20.28	30	-9.72
1732.5	V	14.47	1.11	4.86	18.22	30	-11.78
16QAM, CH20175 /1732.5MHz, Bandwidth 5MHz							
1732.5	H	16.57	1.11	4.86	20.32	30	-9.68
1732.5	V	14.27	1.11	4.86	18.02	30	-11.98
16QAM, CH20175 /1732.5MHz, Bandwidth 10MHz							
1732.5	H	16.36	1.11	4.86	20.11	30	-9.89
1732.5	V	14.53	1.11	4.86	18.28	30	-11.72
16QAM, CH20175 /1732.5MHz, Bandwidth 15MHz							
1732.5	H	16.64	1.11	4.86	20.39	30	-9.61
1732.5	V	14.80	1.11	4.86	18.55	30	-11.45
16QAM, CH20175 /1732.5MHz, Bandwidth 20MHz							
1732.5	H	15.29	1.11	4.86	19.04	30	-10.96
1732.5	V	12.31	1.11	4.86	16.06	30	-13.94

**NOTES:**

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



LTE Band4 (High Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
QPSK, CH20393 / 1754.3MHz, Bandwidth 1.4MHz							
1754.3	H	17.37	1.11	4.81	21.07	30	-8.93
1754.3	V	16.11	1.11	4.81	19.81	30	-10.19
QPSK, CH20385 / 1753.5MHz, Bandwidth 3MHz							
1753.5	H	17.63	1.11	4.81	21.33	30	-8.67
1753.5	V	15.93	1.11	4.81	19.63	30	-10.37
QPSK, CH20375 / 1752.5MHz, Bandwidth 5MHz							
1752.5	H	16.55	1.11	4.81	20.25	30	-9.75
1752.5	V	15.75	1.11	4.81	19.45	30	-10.55
QPSK, CH20350 / 1750MHz, Bandwidth 10MHz							
1750	H	16.95	1.11	4.81	20.65	30	-9.35
1750	V	15.58	1.11	4.81	19.28	30	-10.72
QPSK, CH20325 / 1747.5MHz, Bandwidth 15MHz							
1747.5	H	16.87	1.11	4.81	20.57	30	-9.43
1747.5	V	15.36	1.11	4.81	19.06	30	-10.94
QPSK, CH20300 / 1745MHz, Bandwidth 20MHz							
1745	H	15.51	1.11	4.81	19.21	30	-10.79
1745	V	13.38	1.11	4.81	17.08	30	-12.92

**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 Band4 (High Channel)							
Frequency (MHz)	Ant. Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Ant Gain (dBi)	EIRP Measure (dBm)	Limit (dBm)	Margin (dB)
16QAM, CH20393 / 1754.3MHz, Bandwidth 1.4MHz							
1754.3	H	17.23	1.11	4.81	20.93	30	-9.07
1754.3	V	15.98	1.11	4.81	19.68	30	-10.32
16QAM, CH20385 / 1753.5MHz, Bandwidth 3MHz							
1753.5	H	17.46	1.11	4.81	21.16	30	-8.84
1753.5	V	15.74	1.11	4.81	19.44	30	-10.56
16QAM, CH20375 / 1752.5MHz, Bandwidth 5MHz							
1752.5	H	16.35	1.11	4.81	20.05	30	-9.95
1752.5	V	15.74	1.11	4.81	19.44	30	-10.56
16QAM, CH20350 / 1750MHz, Bandwidth 10MHz							
1750	H	16.71	1.11	4.81	20.41	30	-9.59
1750	V	15.36	1.11	4.81	19.06	30	-10.94
16QAM, CH20325 / 1747.5MHz, Bandwidth 15MHz							
1747.5	H	16.69	1.11	4.81	20.39	30	-9.61
1747.5	V	15.18	1.11	4.81	18.88	30	-11.12
16QAM, CH20300 / 1745MHz, Bandwidth 20MHz							
1745	H	15.32	1.11	4.81	19.02	30	-10.98
1745	V	13.19	1.11	4.81	16.89	30	-13.11

**NOTES:**

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

LTE Band5 (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, CH20407 / 824.7MHz, Bandwidth 1.4MHz							
824.7	H	2.48	0.88	7.53	9.13	38.5	-29.37
824.7	V	7.87	0.88	7.53	14.52	38.5	-23.98
QPSK, CH20415 / 825.5MHz, Bandwidth 3MHz							
825.5	H	1.61	0.88	7.53	8.26	38.5	-30.24
825.5	V	7.70	0.88	7.53	14.35	38.5	-24.15
QPSK, CH20425 / 826.5MHz, Bandwidth 5MHz							
826.5	H	1.63	0.88	7.53	8.28	38.5	-30.22
826.5	V	8.04	0.88	7.53	14.69	38.5	-23.81
QPSK, CH20450 / 829MHz, Bandwidth 10MHz							
829	H	2.74	0.88	7.53	9.39	38.5	-29.11
829	V	7.75	0.88	7.53	14.40	38.5	-24.10
16QAM, CH20407 / 824.7MHz, Bandwidth 1.4MHz							
824.7	H	2.28	0.88	7.53	8.93	38.5	-29.57
824.7	V	7.74	0.88	7.53	14.39	38.5	-24.11
16QAM, CH20415 / 825.5MHz, Bandwidth 3MHz							
825.5	H	1.37	0.88	7.53	8.02	38.5	-30.48
825.5	V	7.54	0.88	7.53	14.19	38.5	-24.31
16QAM, CH20425 / 826.5MHz, Bandwidth 5MHz							
826.5	H	1.38	0.88	7.53	8.03	38.5	-30.47
826.5	V	7.84	0.88	7.53	14.49	38.5	-24.01
16QAM, CH20450 / 829MHz, Bandwidth 10MHz							
829	H	2.48	0.88	7.53	9.13	38.5	-29.37
829	V	7.59	0.88	7.53	14.24	38.5	-24.26

**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 Band5 (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, CH20525 / 836.5MHz, Bandwidth 1.4MHz							
836.5	H	2.80	0.88	7.53	9.45	38.5	-29.05
836.5	V	9.62	0.88	7.53	16.27	38.5	-22.23
QPSK, CH20525 / 836.5MHz, Bandwidth 3MHz							
836.5	H	2.70	0.88	7.53	9.35	38.5	-29.15
836.5	V	8.97	0.88	7.53	15.62	38.5	-22.88
QPSK, CH20525 / 836.5MHz, Bandwidth 5MHz							
836.5	H	2.58	0.88	7.53	9.23	38.5	-29.27
836.5	V	8.85	0.88	7.53	15.50	38.5	-23.00
QPSK, CH20525 / 836.5MHz, Bandwidth 10MHz							
836.5	H	2.23	0.88	7.53	8.88	38.5	-29.62
836.5	V	8.57	0.88	7.53	15.22	38.5	-23.28
16QAM, CH20525 / 836.5MHz, Bandwidth 1.4MHz							
836.5	H	2.64	0.88	7.53	9.29	38.5	-29.21
836.5	V	9.37	0.88	7.53	16.02	38.5	-22.48
16QAM, CH20525 / 836.5MHz, Bandwidth 3MHz							
836.5	H	2.46	0.88	7.53	9.11	38.5	-29.39
836.5	V	8.77	0.88	7.53	15.42	38.5	-23.08
16QAM, CH20525 / 836.5MHz, Bandwidth 5MHz							
836.5	H	2.43	0.88	7.53	9.08	38.5	-29.42
836.5	V	8.73	0.88	7.53	15.38	38.5	-23.12
16QAM, CH20525 / 836.5MHz, Bandwidth 10MHz							
836.5	H	1.97	0.88	7.53	8.62	38.5	-29.88
836.5	V	8.38	0.88	7.53	15.03	38.5	-23.47

**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 Band5 (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, CH20643 / 848.3MHz, Bandwidth 1.4MHz							
848.3	H	0.54	0.88	7.54	7.20	38.5	-31.30
848.3	V	8.64	0.88	7.54	15.30	38.5	-23.20
QPSK, CH20635 / 847.5MHz, Bandwidth 3MHz							
847.5	H	0.63	0.88	7.54	7.29	38.5	-31.21
847.5	V	9.00	0.88	7.54	15.66	38.5	-22.84
QPSK, CH20625 / 846.5MHz, Bandwidth 5MHz							
846.5	H	-0.30	0.88	7.54	6.36	38.5	-32.14
846.5	V	8.55	0.88	7.54	15.21	38.5	-23.29
QPSK, CH20600 / 844MHz, Bandwidth 10MHz							
844	H	-1.06	0.88	7.54	5.60	38.5	-32.90
844	V	7.52	0.88	7.54	14.18	38.5	-24.32
16QAM, CH20643 / 848.3MHz, Bandwidth 1.4MHz							
848.3	H	0.32	0.88	7.54	6.98	38.5	-31.52
848.3	V	8.46	0.88	7.54	15.12	38.5	-23.38
16QAM, CH20635 / 847.5MHz, Bandwidth 3MHz							
847.5	H	0.37	0.88	7.54	7.03	38.5	-31.47
847.5	V	8.85	0.88	7.54	15.51	38.5	-22.99
16QAM, CH20625 / 846.5MHz, Bandwidth 5MHz							
846.5	H	-0.54	0.88	7.54	6.12	38.5	-32.38
846.5	V	8.37	0.88	7.54	15.03	38.5	-23.47
16QAM, CH20600 / 844MHz, Bandwidth 10MHz							
844	H	-1.23	0.88	7.54	5.43	38.5	-33.07
844	V	7.36	0.88	7.54	14.02	38.5	-24.48

**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 (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	8.27	0.84	7.40	14.83	34.8	-19.97
699.7	V	3.39	0.84	7.40	9.95	34.8	-24.85
QPSK, CH23025 / 700.5MHz, Bandwidth 3MHz							
700.5	H	7.43	0.84	7.40	13.99	34.8	-20.81
700.5	V	2.71	0.84	7.40	9.27	34.8	-25.53
QPSK, CH23035 / 701.5MHz, Bandwidth 5MHz							
701.5	H	7.11	0.84	7.40	13.67	34.8	-21.13
701.5	V	2.14	0.84	7.40	8.70	34.8	-26.10
QPSK, CH23060 / 704MHz, Bandwidth 10MHz							
704	H	7.29	0.84	7.40	13.85	34.8	-20.95
704	V	2.80	0.84	7.40	9.36	34.8	-25.44
16QAM, CH23017 / 699.7MHz, Bandwidth 1.4MHz							
699.7	H	8.07	0.84	7.40	14.63	34.8	-20.17
699.7	V	3.23	0.84	7.40	9.79	34.8	-25.01
16QAM, CH23025 / 700.5MHz, Bandwidth 3MHz							
700.5	H	7.16	0.84	7.40	13.72	34.8	-21.08
700.5	V	2.53	0.84	7.40	9.09	34.8	-25.71
16QAM, CH23035 / 701.5MHz, Bandwidth 5MHz							
701.5	H	6.94	0.84	7.40	13.50	34.8	-21.30
701.5	V	1.97	0.84	7.40	8.53	34.8	-26.27
16QAM, CH23060 / 704MHz, Bandwidth 10MHz							
704	H	7.09	0.84	7.40	13.65	34.8	-21.15
704	V	2.64	0.84	7.40	9.20	34.8	-25.60

**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	6.63	0.84	7.43	13.22	34.8	-21.58
707.5	V	2.68	0.84	7.43	9.27	34.8	-25.53
QPSK, CH23095 / 707.5MHz, Bandwidth 3MHz							
707.5	H	6.78	0.84	7.43	13.37	34.8	-21.43
707.5	V	2.31	0.84	7.43	8.90	34.8	-25.90
QPSK, CH23095 / 707.5MHz, Bandwidth 5MHz							
707.5	H	6.78	0.84	7.43	13.37	34.8	-21.43
707.5	V	2.43	0.84	7.43	9.02	34.8	-25.78
QPSK, CH23095 / 707.5MHz, Bandwidth 10MHz							
707.5	H	6.54	0.84	7.43	13.13	34.8	-21.67
707.5	V	2.05	0.84	7.43	8.64	34.8	-26.16
16QAM, CH23095 / 707.5MHz, Bandwidth 1.4MHz							
707.5	H	6.49	0.84	7.43	13.08	34.8	-21.72
707.5	V	2.53	0.84	7.43	9.12	34.8	-25.68
16QAM, CH23095 / 707.5MHz, Bandwidth 3MHz							
707.5	H	6.59	0.84	7.43	13.18	34.8	-21.62
707.5	V	2.18	0.84	7.43	8.77	34.8	-26.03
16QAM, CH23095 / 707.5MHz, Bandwidth 5MHz							
707.5	H	6.62	0.84	7.43	13.21	34.8	-21.59
707.5	V	2.30	0.84	7.43	8.89	34.8	-25.91
16QAM, CH23095 / 707.5MHz, Bandwidth 10MHz							
707.5	H	6.50	0.84	7.43	13.09	34.8	-21.71
707.5	V	1.92	0.84	7.43	8.51	34.8	-26.29

**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	6.22	0.84	7.48	12.86	34.8	-21.94
715.3	V	0.93	0.84	7.48	7.57	34.8	-27.23
QPSK, CH23165 / 714.5MHz, Bandwidth 3MHz							
714.5	H	6.15	0.84	7.48	12.79	34.8	-22.01
714.5	V	1.16	0.84	7.48	7.80	34.8	-27.00
QPSK, CH23155 / 713.5MHz, Bandwidth 5MHz							
713.5	H	5.18	0.84	7.48	11.82	34.8	-22.98
713.5	V	0.81	0.84	7.48	7.45	34.8	-27.35
QPSK, CH23130 / 711MHz, Bandwidth 10MHz							
711	H	6.37	0.84	7.48	13.01	34.8	-21.79
711	V	0.61	0.84	7.48	7.25	34.8	-27.55
16QAM, CH23173 / 715.3MHz, Bandwidth 1.4MHz							
715.3	H	6.02	0.84	7.48	12.66	34.8	-22.14
715.3	V	0.75	0.84	7.48	7.39	34.8	-27.41
16QAM, CH23165 / 714.5MHz, Bandwidth 3MHz							
714.5	H	6.01	0.84	7.48	12.65	34.8	-22.15
714.5	V	1.02	0.84	7.48	7.66	34.8	-27.14
16QAM, CH23155 / 713.5MHz, Bandwidth 5MHz							
713.5	H	5.13	0.84	7.48	11.77	34.8	-23.03
713.5	V	0.65	0.84	7.48	7.29	34.8	-27.51
16QAM, CH23130 / 711MHz, Bandwidth 10MHz							
711	H	6.24	0.84	7.48	12.88	34.8	-21.92
711	V	0.47	0.84	7.48	7.11	34.8	-27.69

**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	-64.77	1.36	7.95	-58.18	-13	-45.18
5640	H	-58.52	1.79	10.10	-50.21	-13	-37.21
7520	H	-64.33	1.72	11.72	-54.33	-13	-41.33
3760	V	-62.44	1.36	7.95	-55.85	-13	-42.85
5640	V	-57.80	1.79	10.10	-49.49	-13	-36.49
7520	V	-65.32	1.72	11.72	-55.32	-13	-42.32
QPSK, CH18900 / 1880MHz, Bandwidth 3MHz							
3760	H	-64.90	1.36	7.95	-58.31	-13	-45.31
5640	H	-58.49	1.79	10.10	-50.18	-13	-37.18
7520	H	-64.19	1.72	11.72	-54.19	-13	-41.19
3760	V	-62.36	1.36	7.95	-55.77	-13	-42.77
5640	V	-57.78	1.79	10.10	-49.47	-13	-36.47
7520	V	-65.52	1.72	11.72	-55.52	-13	-42.52
QPSK, CH18900 / 1880MHz, Bandwidth 5MHz							
3760	H	-64.84	1.36	7.95	-58.25	-13	-45.25
5640	H	-58.61	1.79	10.10	-50.30	-13	-37.30
7520	H	-64.29	1.72	11.72	-54.29	-13	-41.29
3760	V	-62.50	1.36	7.95	-55.91	-13	-42.91
5640	V	-57.93	1.79	10.10	-49.62	-13	-36.62
7520	V	-65.44	1.72	11.72	-55.44	-13	-42.44

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	-64.70	1.36	7.95	-58.11	-13	-45.11
5640	H	-58.43	1.79	10.10	-50.12	-13	-37.12
7520	H	-64.23	1.72	11.72	-54.23	-13	-41.23
3760	V	-62.33	1.36	7.95	-55.74	-13	-42.74
5640	V	-58.14	1.79	10.10	-49.83	-13	-36.83
7520	V	-65.24	1.72	11.72	-55.24	-13	-42.24
QPSK, CH18900 / 1880MHz, Bandwidth 15MHz							
3760	H	-65.01	1.36	7.95	-58.42	-13	-45.42
5640	H	-58.84	1.79	10.10	-50.53	-13	-37.53
7520	H	-64.38	1.72	11.72	-54.38	-13	-41.38
3760	V	-62.47	1.36	7.95	-55.88	-13	-42.88
5640	V	-58.28	1.79	10.10	-49.97	-13	-36.97
7520	V	-65.42	1.72	11.72	-55.42	-13	-42.42
QPSK, CH18900 / 1880MHz, Bandwidth 20MHz							
3760	H	-64.95	1.36	7.95	-58.36	-13	-45.36
5640	H	-58.59	1.79	10.10	-50.28	-13	-37.28
7520	H	-64.46	1.72	11.72	-54.46	-13	-41.46
3760	V	-62.25	1.36	7.95	-55.66	-13	-42.66
5640	V	-58.14	1.79	10.10	-49.83	-13	-36.83
7520	V	-65.36	1.72	11.72	-55.36	-13	-42.36

Note:

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

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	-63.69	1.33	7.65	-57.37	-13	-44.37
5197.5	H	-66.14	1.68	9.88	-57.94	-13	-44.94
6930	H	-62.22	1.81	11.15	-52.88	-13	-39.88
3465	V	-65.09	1.33	7.65	-58.77	-13	-45.77
5197.5	V	-58.73	1.68	9.88	-50.53	-13	-37.53
6930	V	-61.02	1.81	11.15	-51.68	-13	-38.68
QPSK, CH20175 /1732.5MHz, Bandwidth 3MHz							
3465	H	-63.93	1.33	7.65	-57.61	-13	-44.61
5197.5	H	-66.14	1.68	9.88	-57.94	-13	-44.94
6930	H	-62.18	1.81	11.15	-52.84	-13	-39.84
3465	V	-65.27	1.33	7.65	-58.95	-13	-45.95
5197.5	V	-58.97	1.68	9.88	-50.77	-13	-37.77
6930	V	-61.15	1.81	11.15	-51.81	-13	-38.81
QPSK, CH20175 /1732.5MHz, Bandwidth 5MHz							
3465	H	-63.81	1.33	7.65	-57.49	-13	-44.49
5197.5	H	-66.07	1.68	9.88	-57.87	-13	-44.87
6930	H	-62.30	1.81	11.15	-52.96	-13	-39.96
3465	V	-65.15	1.33	7.65	-58.83	-13	-45.83
5197.5	V	-58.89	1.68	9.88	-50.69	-13	-37.69
6930	V	-61.31	1.81	11.15	-51.97	-13	-38.97

## 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 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	-63.61	1.33	7.65	-57.29	-13	-44.29
5197.5	H	-65.79	1.68	9.88	-57.59	-13	-44.59
6930	H	-62.10	1.81	11.15	-52.76	-13	-39.76
3465	V	-65.00	1.33	7.65	-58.68	-13	-45.68
5197.5	V	-58.64	1.68	9.88	-50.44	-13	-37.44
6930	V	-61.07	1.81	11.15	-51.73	-13	-38.73
QPSK, CH20175 /1732.5MHz, Bandwidth 15MHz							
3465	H	-63.67	1.33	7.65	-57.35	-13	-44.35
5197.5	H	-65.81	1.68	9.88	-57.61	-13	-44.61
6930	H	-62.18	1.81	11.15	-52.84	-13	-39.84
3465	V	-65.11	1.33	7.65	-58.79	-13	-45.79
5197.5	V	-58.71	1.68	9.88	-50.51	-13	-37.51
6930	V	-61.17	1.81	11.15	-51.83	-13	-38.83
QPSK, CH20175 /1732.5MHz, Bandwidth 20MHz							
3465	H	-64.85	1.33	7.65	-58.53	-13	-45.53
5197.5	H	-66.17	1.68	9.88	-57.97	-13	-44.97
6930	H	-62.27	1.81	11.15	-52.93	-13	-39.93
3465	V	-65.26	1.33	7.65	-58.94	-13	-45.94
5197.5	V	-58.99	1.68	9.88	-50.79	-13	-37.79
6930	V	-61.33	1.81	11.15	-51.99	-13	-38.99

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	-63.25	1.05	5.02	-59.28	-13	-46.28
2509.5	H	-63.23	1.14	5.64	-58.73	-13	-45.73
3346	H	-66.31	1.32	7.12	-60.51	-13	-47.51
1673	V	-62.25	1.05	5.02	-58.28	-13	-45.28
2509.5	V	-60.49	1.14	5.64	-55.99	-13	-42.99
3346	V	-64.67	1.32	7.12	-58.87	-13	-45.87
QPSK, CH20525 / 836.5MHz, Bandwidth 3MHz							
1673	H	-63.03	1.05	5.02	-59.06	-13	-46.06
2509.5	H	-62.91	1.14	5.64	-58.41	-13	-45.41
3346	H	-65.91	1.32	7.12	-60.11	-13	-47.11
1673	V	-61.98	1.05	5.02	-58.01	-13	-45.01
2509.5	V	-60.22	1.14	5.64	-55.72	-13	-42.72
3346	V	-64.39	1.32	7.12	-58.59	-13	-45.59

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	-63.08	1.05	5.02	-59.11	-13	-46.11
2509.5	H	-63.06	1.14	5.64	-58.56	-13	-45.56
3346	H	-66.16	1.32	7.12	-60.36	-13	-47.36
1673	V	-62.12	1.05	5.02	-58.15	-13	-45.15
2509.5	V	-60.42	1.14	5.64	-55.92	-13	-42.92
3346	V	-64.56	1.32	7.12	-58.76	-13	-45.76
QPSK, CH20525 / 836.5MHz, Bandwidth 10MHz							
1673	H	-63.29	1.05	5.02	-59.32	-13	-46.32
2509.5	H	-63.28	1.14	5.64	-58.78	-13	-45.78
3346	H	-66.43	1.32	7.12	-60.63	-13	-47.63
1673	V	-62.36	1.05	5.02	-58.39	-13	-45.39
2509.5	V	-60.27	1.14	5.64	-55.77	-13	-42.77
3346	V	-64.68	1.32	7.12	-58.88	-13	-45.88

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	-44.65	1.02	4.75	-40.92	-13	-27.92
2122.5	H	-58.03	1.16	4.74	-54.45	-13	-41.45
2830	H	-45.78	1.27	6.44	-40.61	-13	-27.61
1415	V	-46.54	1.02	4.75	-42.81	-13	-29.81
2122.5	V	-54.21	1.16	4.74	-50.63	-13	-37.63
2830	V	-53.80	1.27	6.44	-48.63	-13	-35.63
QPSK, CH23095 / 707.5MHz, Bandwidth 3MHz							
1415	H	-44.66	1.02	4.75	-40.93	-13	-27.93
2122.5	H	-58.13	1.16	4.74	-54.55	-13	-41.55
2830	H	-45.88	1.27	6.44	-40.71	-13	-27.71
1415	V	-46.61	1.02	4.75	-42.88	-13	-29.88
2122.5	V	-54.24	1.16	4.74	-50.66	-13	-37.66
2830	V	-53.68	1.27	6.44	-48.51	-13	-35.51

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	-44.47	1.02	4.75	-40.74	-13	-27.74
2122.5	H	-57.82	1.16	4.74	-54.24	-13	-41.24
2830	H	-45.51	1.27	6.44	-40.34	-13	-27.34
1415	V	-46.38	1.02	4.75	-42.65	-13	-29.65
2122.5	V	-54.04	1.16	4.74	-50.46	-13	-37.46
2830	V	-53.44	1.27	6.44	-48.27	-13	-35.27
QPSK, CH23095 / 707.5MHz, Bandwidth 10MHz							
1415	H	-44.28	1.02	4.75	-40.55	-13	-27.55
2122.5	H	-57.68	1.16	4.74	-54.10	-13	-41.10
2830	H	-45.32	1.27	6.44	-40.15	-13	-27.15
1415	V	-46.15	1.02	4.75	-42.42	-13	-29.42
2122.5	V	-53.86	1.16	4.74	-50.28	-13	-37.28
2830	V	-53.20	1.27	6.44	-48.03	-13	-35.03

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

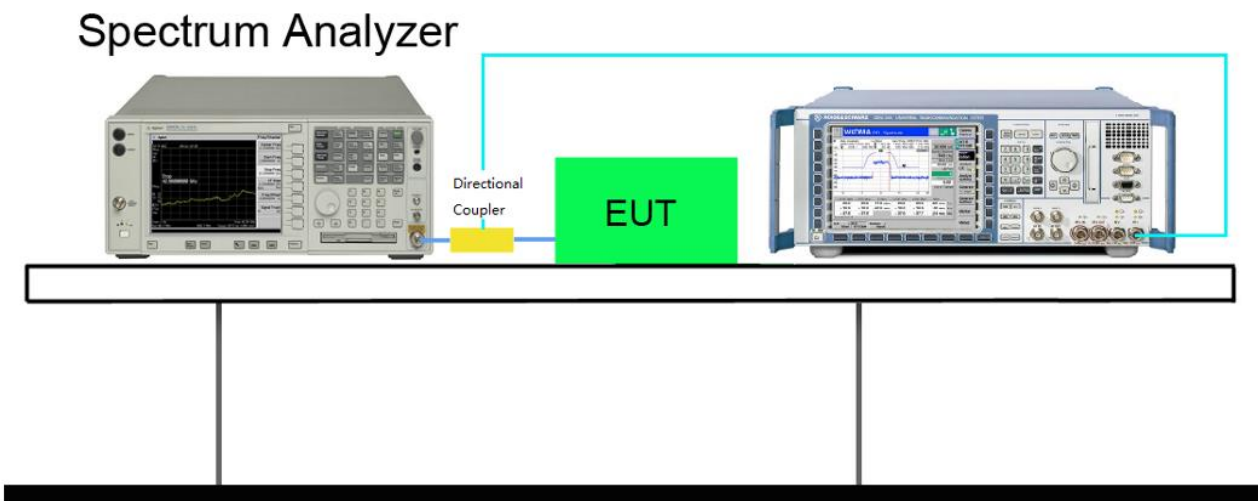
### 7.6.1 Test Limit

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

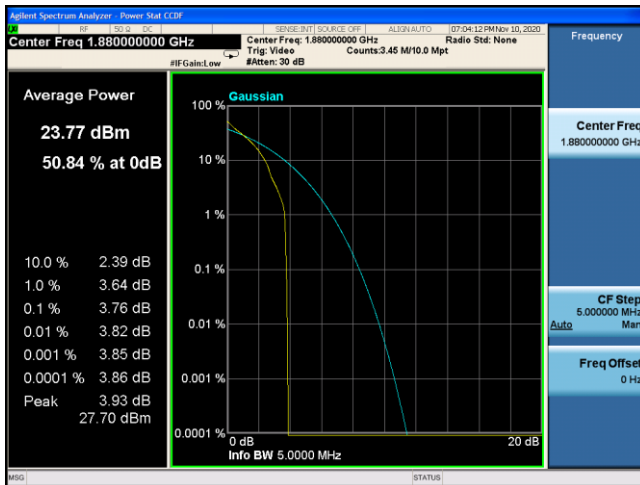
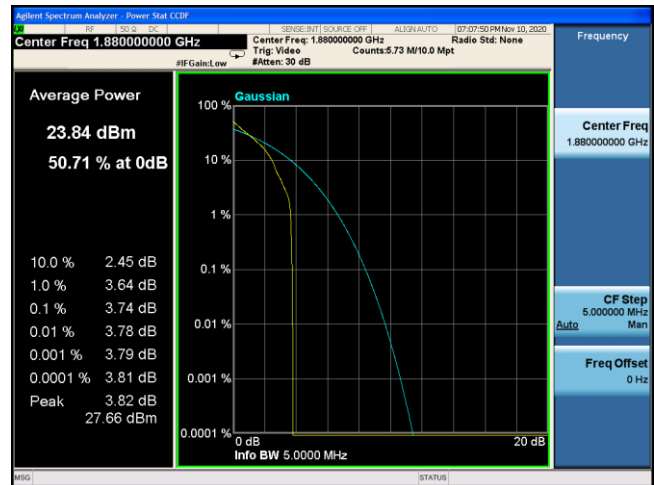
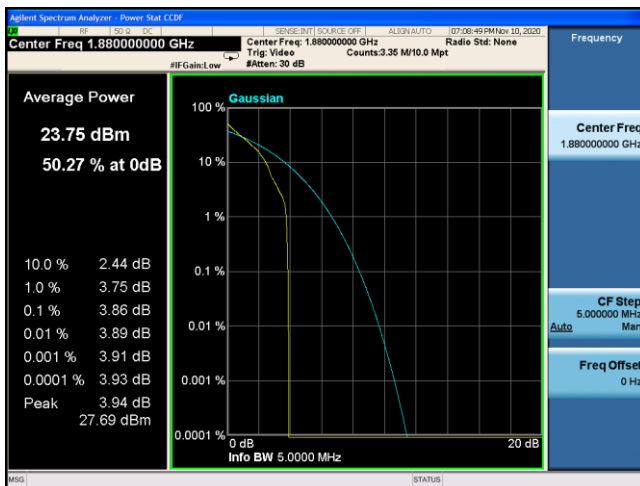


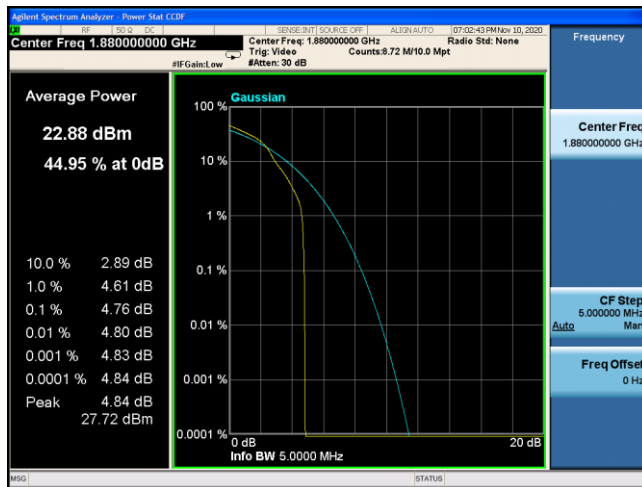
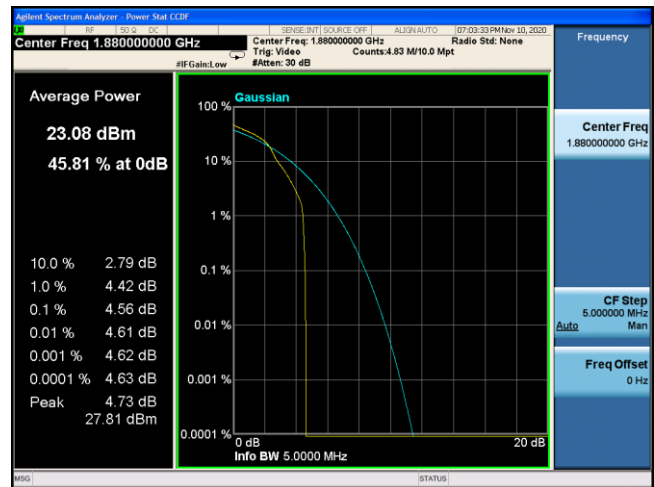
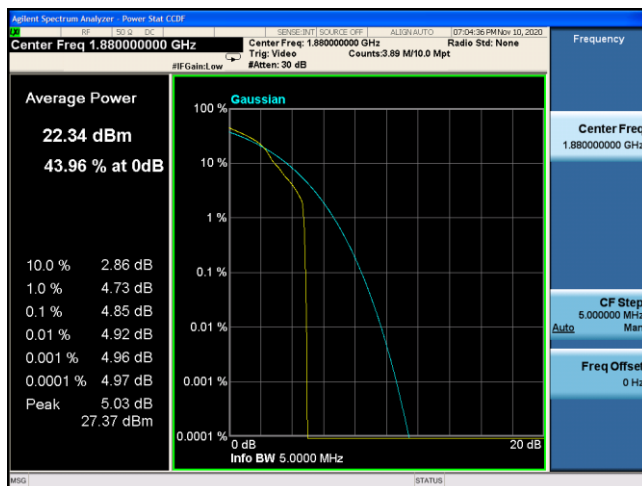
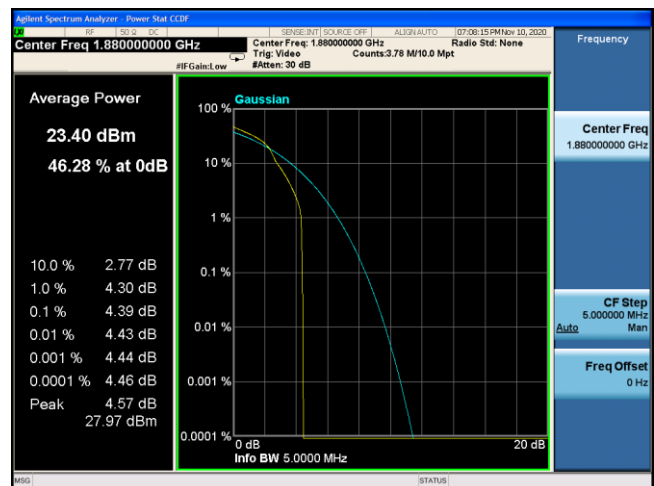
**7.6.4 Test Result**

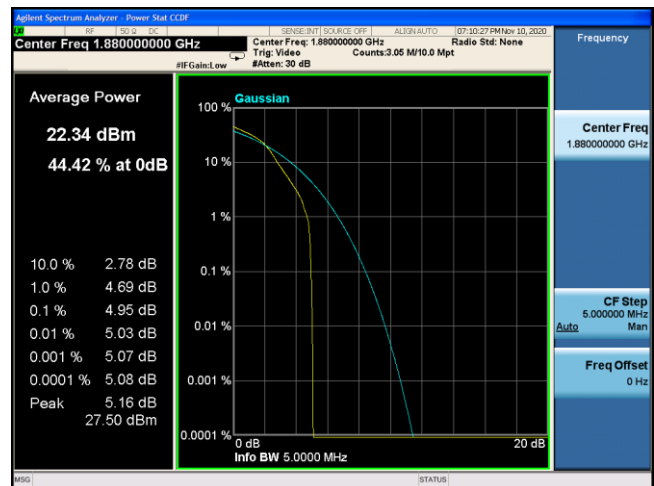
Test Mode	Modulation	Channel/ Frequency (MHz)	Bandwidth (MHz)	RB Size	RB Offset	Test Result
LTE Band 2	QPSK	CH18900/1880MHz	1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
			15	1	36	Pass
			20	1	49	Pass
	16QAM		1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
			15	1	36	Pass
			20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

**LTE Band 2 QPSK 1.4MHz CH18900 1RB#2**

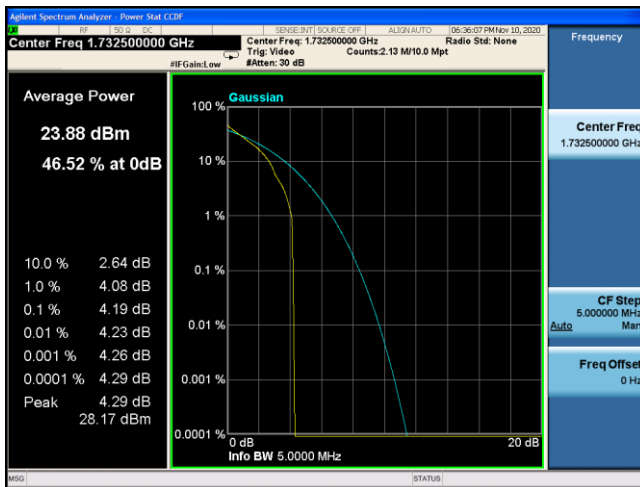
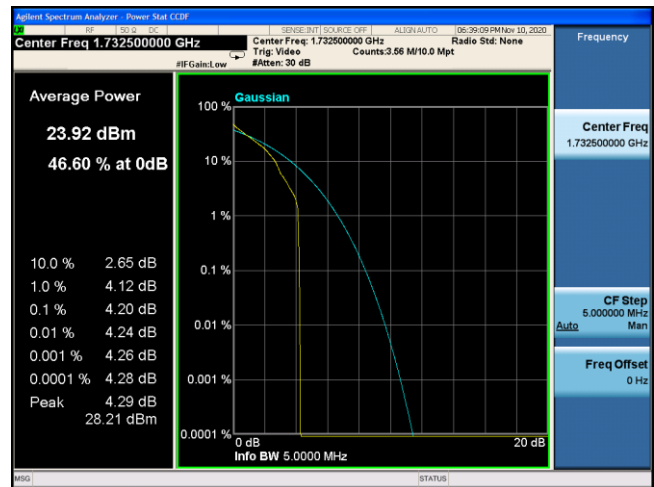
**LTE Band 2 QPSK 3MHz CH18900 1RB#7**

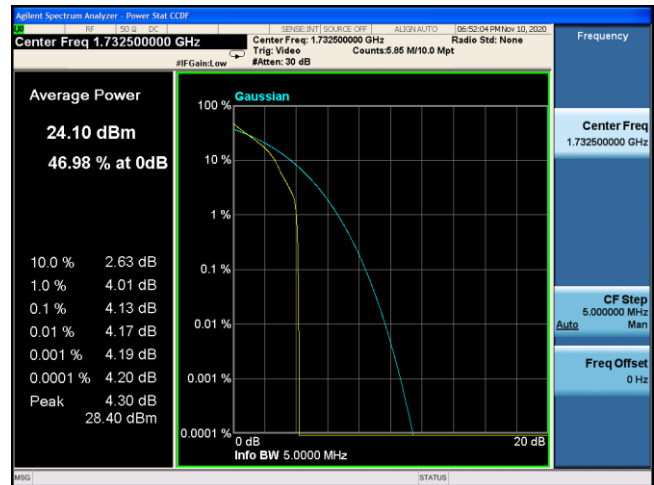
**LTE Band 2 QPSK 5MHz CH18900 1RB#12**

**LTE Band 2 QPSK 10MHz CH18900 1RB#25**

**LTE Band 2 QPSK 15MHz CH18900 1RB#36**

**LTE Band 2 QPSK 20MHz CH18900 1RB#49**

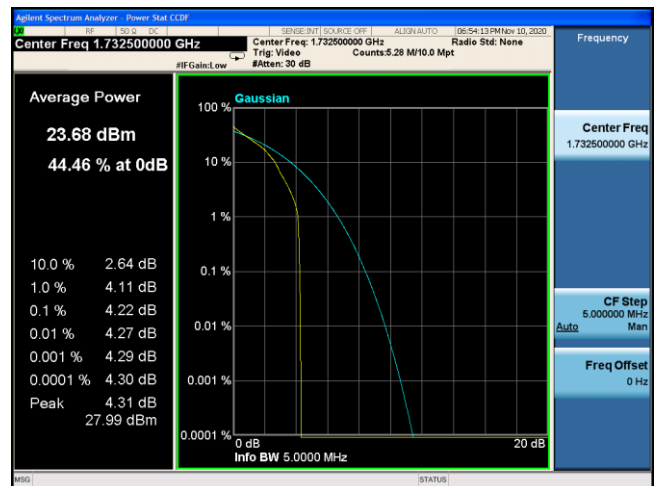

**LTE Band 2 16QAM 1.4MHz CH18900 1RB#2**

**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**

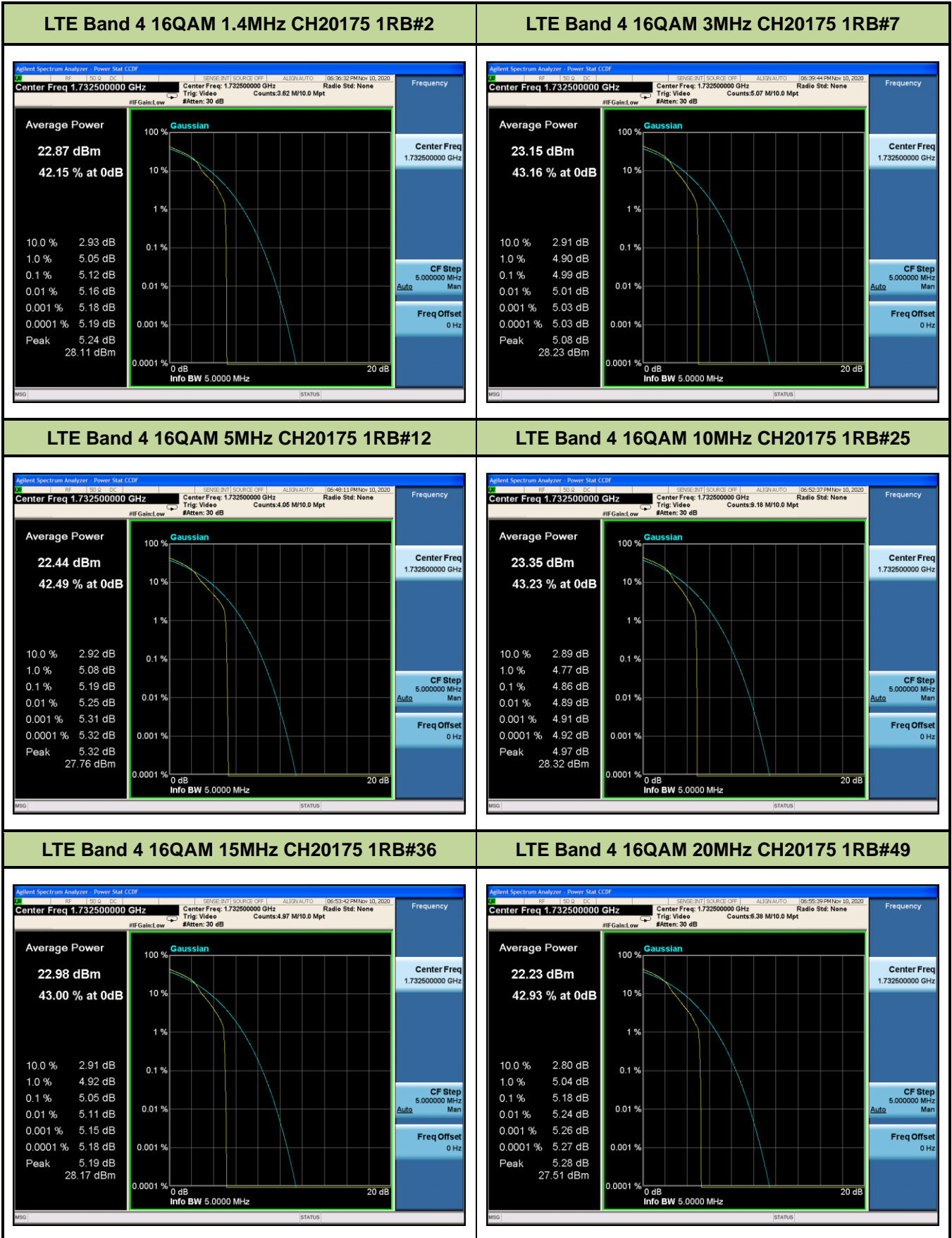
**LTE Band 2 16QAM 20MHz CH18900 1RB#49**


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**

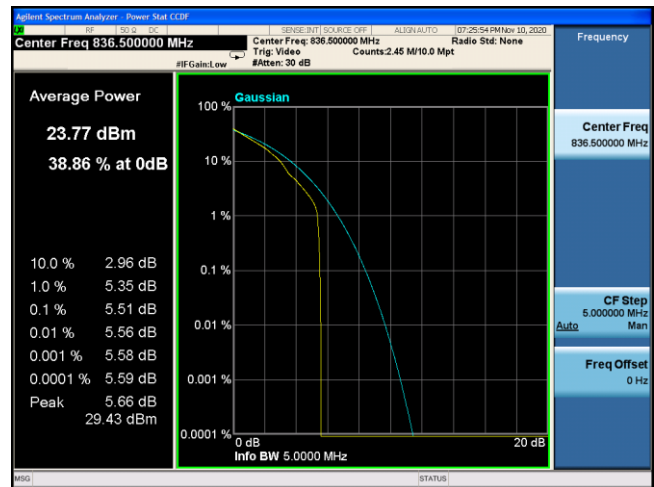
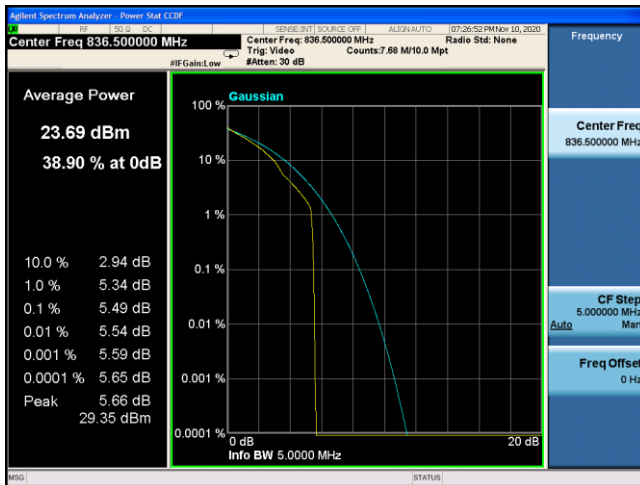
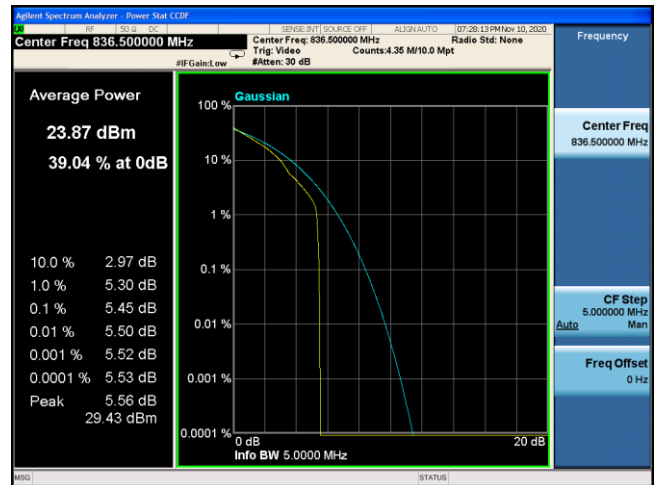
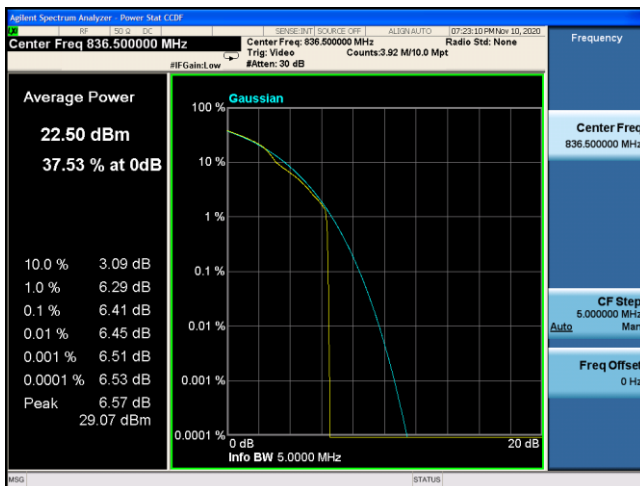
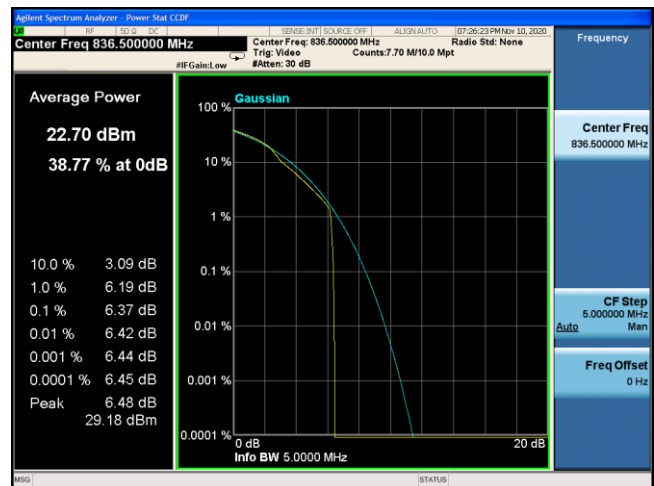
**LTE Band 4 QPSK 20MHz CH20175 1RB#49**


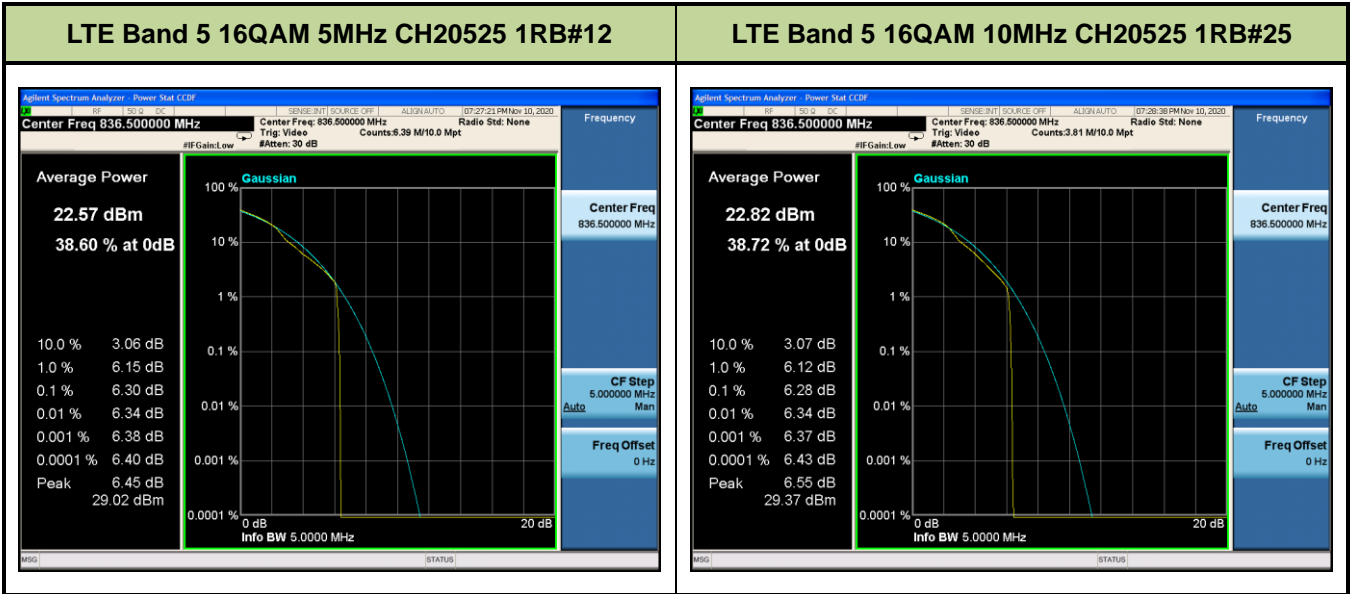


Test Mode	Modulation	Channel/ Frequency (MHz)	Bandwidth (MHz)	RB Size	RB Offset	Test Result
LTE Band 5	QPSK	CH20525 / 836.5MHz	1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass
	16QAM		1.4	1	2	Pass
			3	1	7	Pass
			5	1	12	Pass
			10	1	25	Pass

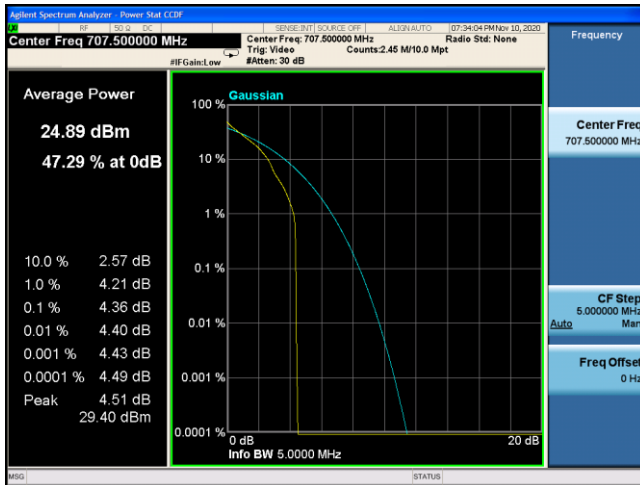
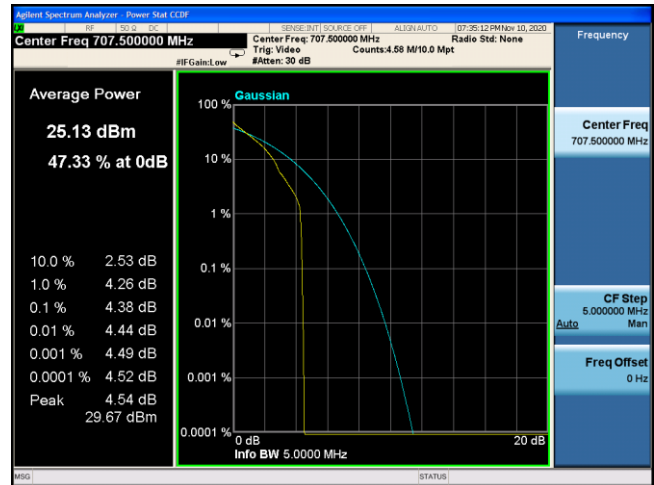
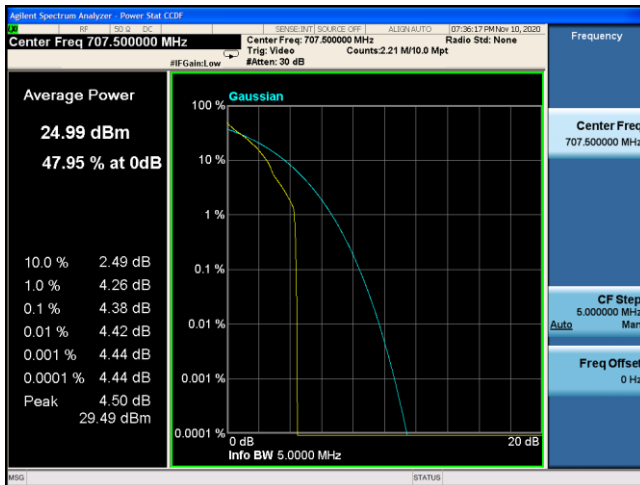
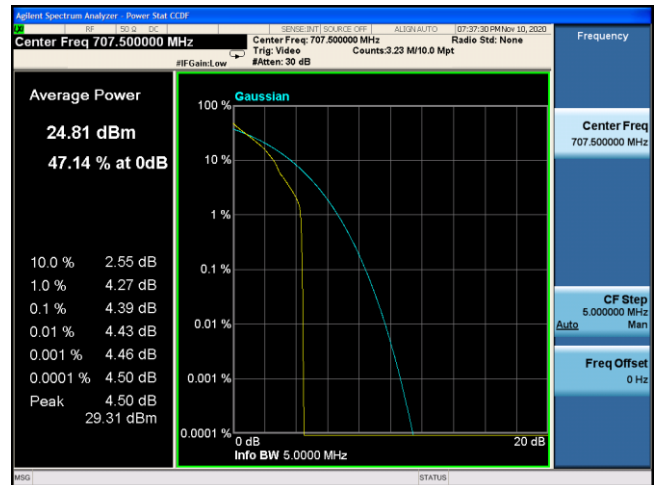
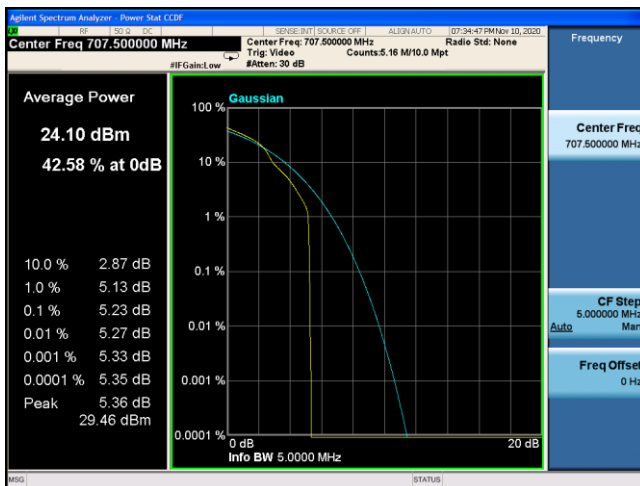
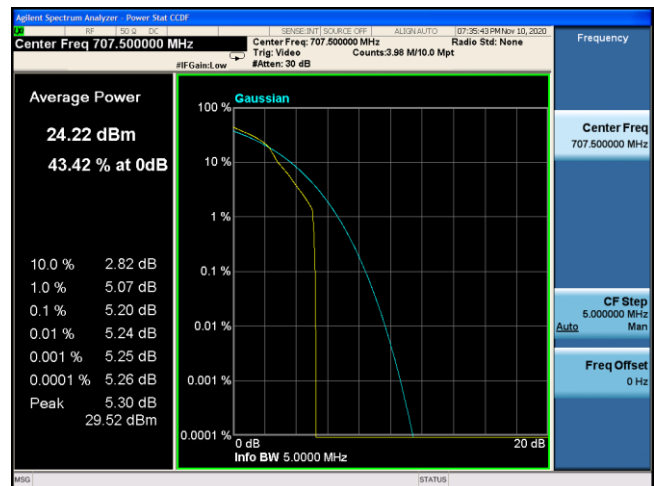


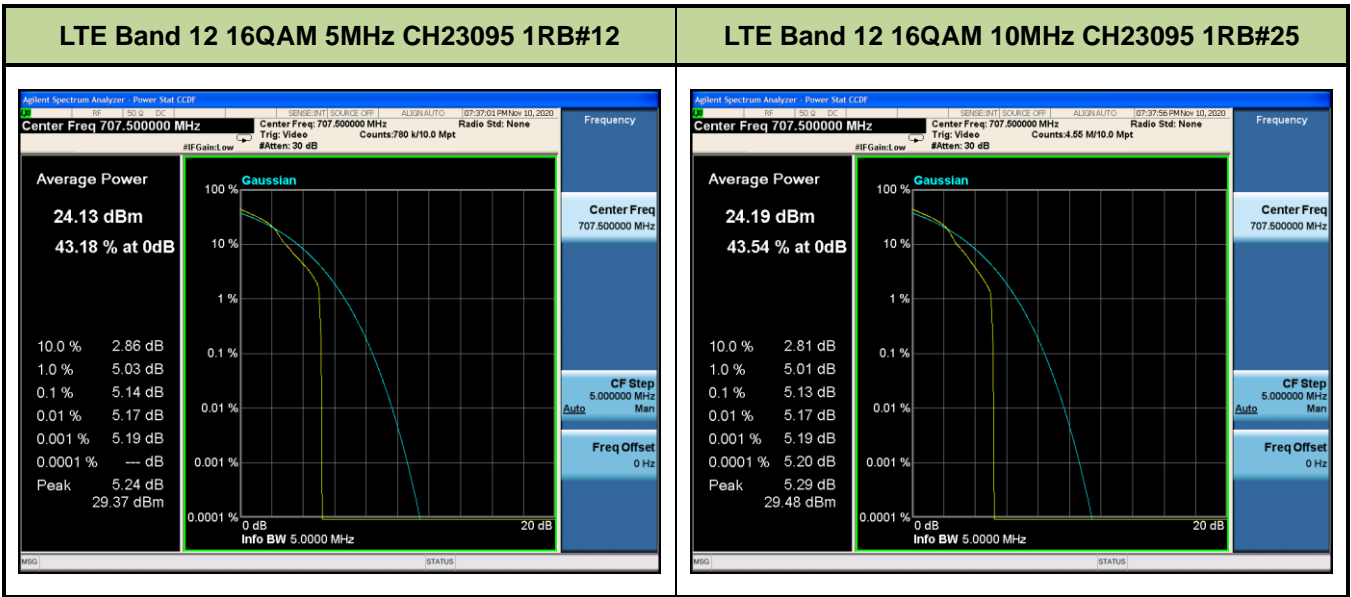
**LTE Band 5 QPSK 1.4MHz CH20525 1RB#2**

**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**




## 7.7. Frequency Stability Under Temperature & Voltage Variations

### 7.7.1 Test Limit

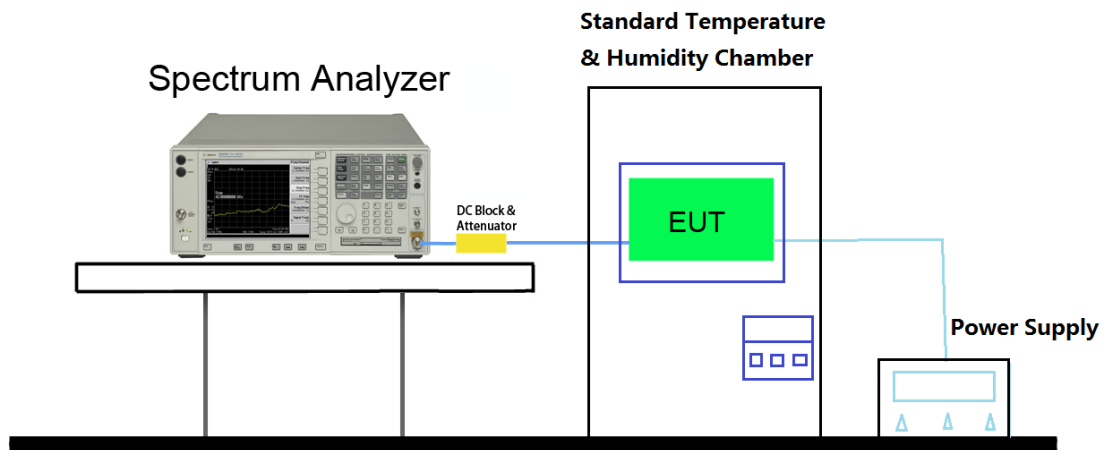
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

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 (VAC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	120V/60Hz	-30	1880	-7.70	-0.004	±2.5
		-20	1880	-7.48	-0.004	±2.5
		-10	1880	-10.09	-0.005	±2.5
		0	1880	-9.31	-0.005	±2.5
		10	1880	-7.67	-0.004	±2.5
		+ 20 (Ref)	1880	-8.43	-0.004	±2.5
		30	1880	-10.49	-0.006	±2.5
		40	1880	-10.44	-0.006	±2.5
		50	1880	-12.16	-0.006	±2.5
Voltage vs. Frequency Stability						
Voltage (%)	Power (VAC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	120V/60Hz	20	1880	-10.81	-0.006	±2.5
115%	138V/60Hz	20	1880	-10.69	-0.006	±2.5
85%	102V/60Hz	20	1880	-9.80	-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 (VAC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	120V/60Hz	-30	1732.6	5.85	0.003	±2.5
		-20	1732.6	-3.73	-0.002	±2.5
		-10	1732.6	7.12	0.004	±2.5
		0	1732.6	5.15	0.003	±2.5
		10	1732.6	6.59	0.004	±2.5
		+ 20 (Ref)	1732.6	7.72	0.004	±2.5
		30	1732.6	4.84	0.003	±2.5
		40	1732.6	-5.16	-0.003	±2.5
		50	1732.6	6.19	0.004	±2.5
Voltage vs. Frequency Stability						
Voltage (%)	Power (VAC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	120V/60Hz	20	1732.6	5.49	0.003	±2.5
115%	138V/60Hz	20	1732.6	-5.85	-0.003	±2.5
85%	102V/60Hz	20	1732.6	5.65	0.003	±2.5



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

Temperature vs. Frequency Stability						
Voltage (%)	Power (VAC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	120V/60Hz	-30	836.6	5.08	0.006	±2.5
		-20	836.6	3.79	0.005	±2.5
		-10	836.6	3.92	0.005	±2.5
		0	836.6	4.43	0.005	±2.5
		10	836.6	3.25	0.004	±2.5
		+ 20 (Ref)	836.6	4.01	0.005	±2.5
		30	836.6	-3.33	-0.004	±2.5
		40	836.6	2.33	0.003	±2.5
		50	836.6	-4.52	-0.005	±2.5
Voltage vs. Frequency Stability						
Voltage (%)	Power (VAC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	120V/60Hz	20	836.6	2.86	0.003	±2.5
115%	138V/60Hz	20	836.6	-3.06	-0.004	±2.5
85%	102V/60Hz	20	836.6	-3.09	-0.004	±2.5

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

Temperature vs. Frequency Stability						
Voltage (%)	Power (VAC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	120V/60Hz	-30	707.5	3.69	0.005	±2.5
		-20	707.5	3.71	0.005	±2.5
		-10	707.5	3.38	0.005	±2.5
		0	707.5	2.78	0.004	±2.5
		10	707.5	3.92	0.006	±2.5
		+ 20 (Ref)	707.5	4.09	0.006	±2.5
		30	707.5	-3.45	-0.005	±2.5
		40	707.5	3.25	0.005	±2.5
		50	707.5	-4.46	-0.006	±2.5
Voltage vs. Frequency Stability						
Voltage (%)	Power (VAC)	Temp (°C)	Declared Frequency (MHz)	Measured Frequency (Hz)	Frequency Tolerance (ppm)	Limit (ppm)
100%	120V/60Hz	20	707.5	3.22	0.005	±2.5
115%	138V/60Hz	20	707.5	-2.95	-0.004	±2.5
85%	102V/60Hz	20	707.5	-2.35	-0.003	±2.5

————— The End —————