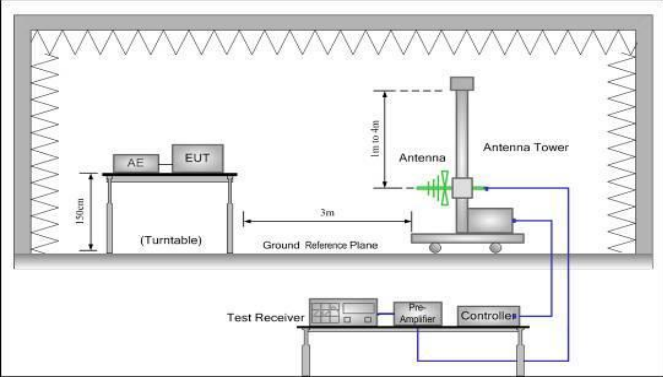
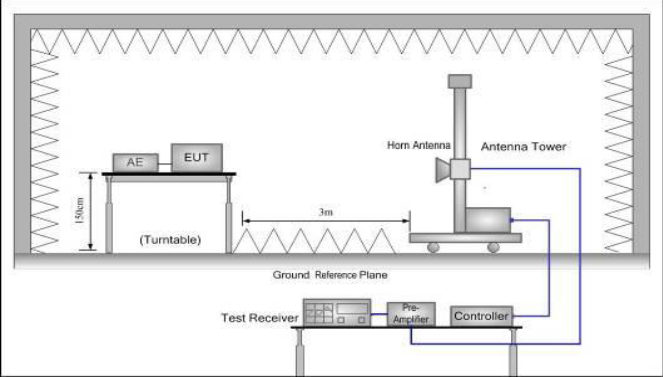


## 6.5 Field strength of spurious radiation measurement

<p>Test Requirement:</p>	<p>Part 22.917(a), Part 24.238(a), Part 27.53(g), Part 27.53(m), Part 27.53(h), Part 90.691(a)</p>
<p>Test Method:</p>	<p>ANSI/TIA-603-D 2010</p>
<p>Limit:</p>	<p>LTE Band 2 &amp; 4 &amp; 5 &amp; 12 &amp; 17 &amp; 25 &amp; 26:          The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least <math>43 + 10 \log_{10}(P)</math> dB (-13 dBm).          LTE Band 7 &amp; 41:          For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log(P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log(P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log(P)</math> dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that <math>43 + 10 \log(P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log(P)</math> dB at or below 2490.5 MHz.</p>
<p>Test setup:</p>	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
<p>Test Procedure:</p>	<ol style="list-style-type: none"> <li>1. The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</li> <li>2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.</li> <li>3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels).</li> </ol>

	<p>Once spurious emission was identified, the power of the emission was determined using the substitution method.</p> <p>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.</p> $\text{ERP / EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain(dB/dBi)} - \text{Cable Loss (dB)}$
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details.
Test results:	Passed

**Measurement Data:**

**LTE Band 4 part:**

LTE Band 4, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3421.40	Vertical	-43.06	-13.00	Pass
5132.10	V	-43.32		
6842.80	V	-37.27		
3421.40	Horizontal	-46.18		
5132.10	H	-43.23		
6842.80	H	-36.77		
<b>Middle Channel</b>				
3465.00	Vertical	-38.96	-13.00	Pass
5197.50	V	-41.94		
6930.00	V	-36.88		
3465.00	Horizontal	-44.03		
5197.50	H	-42.63		
6930.00	H	-36.78		
<b>Highest Channel</b>				
3508.60	Vertical	-39.85	-13.00	Pass
5262.90	V	-37.02		
7017.20	V	-36.61		
3508.60	Horizontal	-45.07		
5262.90	H	-41.40		
7017.20	H	-37.11		
<p>Note:</p> <ol style="list-style-type: none"> <li>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</li> <li>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</li> </ol>				

LTE Band 4, WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3423.00	Vertical	-43.02	-13.00	Pass
5134.50	V	-43.94		
6846.00	V	-37.03		
3423.00	Horizontal	-46.94		
5134.50	H	-43.91		
6846.00	H	-36.41		
<b>Middle Channel</b>				
3465.00	Vertical	-38.94	-13.00	Pass
5197.50	V	-41.77		
6930.00	V	-36.61		
3465.00	Horizontal	-44.77		
5197.50	H	-42.23		
6930.00	H	-36.49		
<b>Highest Channel</b>				
3507.00	Vertical	-39.41	-13.00	Pass
5260.50	V	-37.46		
7014.00	V	-36.43		
3507.00	Horizontal	-45.93		
5260.50	H	-41.52		
7014.00	H	-37.62		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

LTE Band 4, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3425.00	Vertical	-43.35	-13.00	Pass
5137.50	V	-43.52		
6850.00	V	-37.70		
3425.00	Horizontal	-46.50		
5137.50	H	-43.25		
6850.00	H	-36.27		
<b>Middle Channel</b>				
3465.00	Vertical	-38.07	-13.00	Pass
5197.50	V	-41.57		
6930.00	V	-36.02		
3465.00	Horizontal	-44.76		
5197.50	H	-42.65		
6930.00	H	-36.82		
<b>Highest Channel</b>				
3505.00	Vertical	-39.93	-13.00	Pass
5257.50	V	-37.88		
7010.00	V	-36.41		
3505.00	Horizontal	-45.85		
5257.50	H	-41.37		
7010.00	H	-37.86		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 4, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3430.00	Vertical	-43.55	-13.00	Pass
5145.00	V	-43.71		
6860.00	V	-37.94		
3430.00	Horizontal	-46.99		
5145.00	H	-43.08		
6860.00	H	-36.12		
<b>Middle Channel</b>				
3465.00	Vertical	-38.08	-13.00	Pass
5197.50	V	-41.41		
6930.00	V	-36.12		
3465.00	Horizontal	-44.45		
5197.50	H	-42.92		
6930.00	H	-36.94		
<b>Highest Channel</b>				
3500.00	Vertical	-39.33	-13.00	Pass
5250.00	V	-37.15		
7000.00	V	-36.49		
3500.00	Horizontal	-45.32		
5250.00	H	-41.92		
7000.00	H	-37.16		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

LTE Band 4, WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3435.00	Vertical	-43.57	-13.00	Pass
5152.50	V	-43.39		
6870.00	V	-37.09		
3435.00	Horizontal	-46.57		
5152.50	H	-43.93		
6870.00	H	-36.57		
<b>Middle Channel</b>				
3465.00	Vertical	-38.65	-13.00	Pass
5197.50	V	-41.51		
6930.00	V	-36.16		
3465.00	Horizontal	-44.51		
5197.50	H	-42.45		
6930.00	H	-36.12		
<b>Highest Channel</b>				
3495.00	Vertical	-39.51	-13.00	Pass
5242.50	V	-37.88		
6990.00	V	-36.45		
3495.00	Horizontal	-45.85		
5242.50	H	-41.99		
6990.00	H	-37.86		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

LTE Band 4, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3440.00	Vertical	-43.49	-13.00	Pass
5160.00	V	-43.10		
6880.00	V	-37.45		
3440.00	Horizontal	-36.33		
5160.00	H	-43.77		
6880.00	H	-36.43		
<b>Middle Channel</b>				
3465.00	Vertical	-38.45	-13.00	Pass
5197.50	V	-41.52		
6930.00	V	-36.40		
3465.00	Horizontal	-44.99		
5197.50	H	-42.16		
6930.00	H	-36.41		
<b>Highest Channel</b>				
3490.00	Vertical	-39.32	-13.00	Pass
5235.00	V	-37.08		
6980.00	V	-36.11		
3490.00	Horizontal	-45.12		
5235.00	H	-41.16		
6980.00	H	-37.57		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

**LTE Band 7 part:**

LTE Band 7, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
5005.00	Vertical	-36.54	-25.00	Pass
7507.50	V	-36.73		
10010.00	V	-34.72		
5005.00	Horizontal	-42.20		
7507.50	H	-36.05		
10010.00	H	-34.19		
<b>Middle Channel</b>				
5070.00	Vertical	-38.79	-25.00	Pass
7605.00	V	-36.49		
10140.00	V	-33.21		
5070.00	Horizontal	-43.20		
7605.00	H	-36.87		
10140.00	H	-33.41		
<b>Highest Channel</b>				
5135.00	Vertical	-42.74	-25.00	Pass
7702.50	V	-35.45		
10270.00	V	-33.49		
5135.00	Horizontal	-42.45		
7702.50	H	-36.26		
10270.00	H	-31.73		
<p>Note:</p> <ol style="list-style-type: none"> <li>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</li> <li>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</li> </ol>				



LTE Band 7, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
5010.00	Vertical	-36.79	-25.00	Pass
7515.00	V	-36.61		
10020.00	V	-34.86		
5010.00	Horizontal	-42.93		
7515.00	H	-36.57		
10020.00	H	-34.56		
<b>Middle Channel</b>				
5070.00	Vertical	-38.89	-25.00	Pass
7605.00	V	-36.74		
10140.00	V	-33.74		
5070.00	Horizontal	-43.24		
7605.00	H	-36.99		
10140.00	H	-33.51		
<b>Highest Channel</b>				
5130.00	Vertical	-42.56	-25.00	Pass
7695.00	V	-35.93		
10260.00	V	-33.68		
5130.00	Horizontal	-42.78		
7695.00	H	-36.32		
10260.00	H	-31.79		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 7, WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
5015.00	Vertical	-36.51	-25.00	Pass
7522.50	V	-36.77		
10030.00	V	-34.10		
5015.00	Horizontal	-42.13		
7522.50	H	-36.70		
10030.00	H	-34.02		
<b>Middle Channel</b>				
5070.00	Vertical	-38.38	-25.00	Pass
7605.00	V	-36.02		
10140.00	V	-33.26		
5070.00	Horizontal	-43.69		
7605.00	H	-36.85		
10140.00	H	-33.22		
<b>Highest Channel</b>				
5125.00	Vertical	-42.93	-25.00	Pass
7687.50	V	-35.57		
10250.00	V	-33.27		
5125.00	Horizontal	-42.32		
7687.50	H	-36.93		
10250.00	H	-31.68		
<p>Note:</p> <ol style="list-style-type: none"> <li>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</li> <li>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</li> </ol>				

LTE Band 7, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
5020.00	Vertical	-36.45	-25.00	Pass
7530.00	V	-36.89		
10040.00	V	-34.74		
5020.00	Horizontal	-42.49		
7530.00	H	-36.75		
10040.00	H	-34.15		
<b>Middle Channel</b>				
5070.00	Vertical	-38.17	-25.00	Pass
7605.00	V	-36.04		
10140.00	V	-33.99		
5070.00	Horizontal	-43.75		
7605.00	H	-36.42		
10140.00	H	-33.24		
<b>Highest Channel</b>				
5120.00	Vertical	-42.61	-25.00	Pass
7680.00	V	-35.42		
10240.00	V	-33.45		
5120.00	Horizontal	-42.51		
7680.00	H	-36.42		
10240.00	H	-31.75		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

**LTE Band 12 part:**

LTE Band 12, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1399.40	Vertical	-56.96	-13.00	Pass
2099.10	V	-36.19		
2798.80	V	-50.25		
1399.40	Horizontal	-54.05		
2099.10	H	-26.04		
2798.80	H	-47.74		
<b>Middle Channel</b>				
1415.00	Vertical	-55.13	-13.00	Pass
2122.50	V	-36.20		
2830.00	V	-51.27		
1415.00	Horizontal	-55.23		
2122.50	H	-27.98		
2830.00	H	-48.99		
<b>Highest Channel</b>				
1430.60	Vertical	-56.77	-13.00	Pass
2145.90	V	-35.05		
2861.20	V	-52.19		
1430.60	Horizontal	-53.03		
2145.90	H	-29.61		
2861.20	H	-49.75		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

LTE Band 12, WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1401.00	Vertical	-56.55	-13.00	Pass
2101.50	V	-36.29		
2802.00	V	-50.58		
1401.00	Horizontal	-54.74		
2101.50	H	-26.23		
2802.00	H	-47.19		
<b>Middle Channel</b>				
1415.00	Vertical	-55.43	-13.00	Pass
2122.50	V	-36.33		
2830.00	V	-51.94		
1415.00	Horizontal	-55.36		
2122.50	H	-27.37		
2830.00	H	-48.41		
<b>Highest Channel</b>				
1429.00	Vertical	-56.67	-13.00	Pass
2143.50	V	-35.78		
2858.00	V	-52.11		
1429.00	Horizontal	-53.73		
2143.50	H	-29.24		
2858.00	H	-49.05		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 12, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1403.00	Vertical	-56.39	-13.00	Pass
2104.50	V	-36.09		
2806.00	V	-50.79		
1403.00	Horizontal	-54.97		
2104.50	H	-26.98		
2806.00	H	-47.99		
<b>Middle Channel</b>				
1415.00	Vertical	-55.75	-13.00	Pass
2122.50	V	-36.88		
2830.00	V	-51.93		
1415.00	Horizontal	-55.51		
2122.50	H	-27.85		
2830.00	H	-48.34		
<b>Highest Channel</b>				
1427.00	Vertical	-56.16	-13.00	Pass
2410.50	V	-35.54		
2854.00	V	-52.48		
1427.00	Horizontal	-53.65		
2410.50	H	-29.42		
2854.00	H	-49.85		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

LTE Band 12, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1408.00	Vertical	-56.41	-13.00	Pass
2112.00	V	-36.99		
2816.00	V	-50.06		
1408.00	Horizontal	-54.75		
2112.00	H	-26.34		
2816.00	H	-47.12		
<b>Middle Channel</b>				
1415.00	Vertical	-55.03	-13.00	Pass
2122.50	V	-36.74		
2830.00	V	-51.67		
1415.00	Horizontal	-55.12		
2122.50	H	-27.61		
2830.00	H	-48.51		
<b>Highest Channel</b>				
1422.00	Vertical	-56.77	-13.00	Pass
2133.00	V	-35.05		
2844.00	V	-52.42		
1422.00	Horizontal	-53.74		
2133.00	H	-29.36		
2844.00	H	-49.66		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

**LTE Band 17 part:**

LTE Band 17, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1413.00	Vertical	-54.04	-13.00	Pass
2119.50	V	-34.14		
2826.00	V	-50.40		
1413.00	Horizontal	-54.65		
2119.50	H	-27.84		
2826.00	H	-48.11		
<b>Middle Channel</b>				
1420.00	Vertical	-55.14	-13.00	Pass
2130.00	V	-36.21		
2840.00	V	-51.28		
1420.00	Horizontal	-53.40		
2130.00	H	-26.11		
2840.00	H	-47.81		
<b>Highest Channel</b>				
1427.00	Vertical	-55.62	-13.00	Pass
2140.50	V	-33.65		
2854.00	V	-49.94		
1427.00	Horizontal	-52.65		
2140.50	H	-29.37		
2854.00	H	-46.57		
<p>Note:</p> <ol style="list-style-type: none"> <li>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</li> <li>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</li> </ol>				



LTE Band 17, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1418.00	Vertical	-54.62	-13.00	Pass
2127.00	V	-34.43		
2836.00	V	-50.15		
1418.00	Horizontal	-54.03		
2127.00	H	-27.99		
2836.00	H	-48.81		
<b>Middle Channel</b>				
1420.00	Vertical	-55.36	-13.00	Pass
2130.00	V	-36.43		
2840.00	V	-51.55		
1420.00	Horizontal	-53.51		
2130.00	H	-26.41		
2840.00	H	-47.67		
<b>Highest Channel</b>				
1422.00	Vertical	-55.81	-13.00	Pass
2133.00	V	-33.15		
2844.00	V	-49.43		
1422.00	Horizontal	-52.58		
2133.00	H	-29.05		
2844.00	H	-46.15		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

**LTE Band 25 part:**

LTE Band 25, WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3701.40	Vertical	-37.33	-13.00	Pass
5552.10	V	-29.59		
7402.80	V	-36.44		
3701.40	Horizontal	-40.50		
5552.10	H	-49.58		
7402.80	H	-36.31		
<b>Middle Channel</b>				
3765.00	Vertical	-38.60	-13.00	Pass
5647.50	V	-27.03		
7530.00	V	-37.10		
3765.00	Horizontal	-39.69		
5647.50	H	-26.27		
7530.00	H	-37.88		
<b>Highest Channel</b>				
3828.60	Vertical	-37.66	-13.00	Pass
5742.90	V	-26.63		
7657.20	V	-35.60		
3828.60	Horizontal	-39.44		
5742.90	H	-27.95		
7657.20	H	-35.40		
<p>Note:</p> <p>3. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</p> <p>4. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</p>				

LTE Band 25, WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3703.00	Vertical	-37.37	-13.00	Pass
5554.50	V	-29.56		
7406.00	V	-36.75		
3703.00	Horizontal	-40.76		
5554.50	H	-49.64		
7406.00	H	-36.52		
<b>Middle Channel</b>				
3765.00	Vertical	-38.66	-13.00	Pass
5647.50	V	-27.46		
7530.00	V	-37.27		
3765.00	Horizontal	-39.67		
5647.50	H	-26.60		
7530.00	H	-37.78		
<b>Highest Channel</b>				
3827.00	Vertical	-37.78	-13.00	Pass
5740.50	V	-26.07		
7654.00	V	-35.82		
3827.00	Horizontal	-39.85		
5740.50	H	-27.79		
7654.00	H	-35.26		
<p><i>Note:</i></p> <p>3. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</p> <p>4. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</p>				

LTE Band 25, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3825.00	Vertical	-37.75	-13.00	Pass
5737.50	V	-26.58		
7650.00	V	-35.16		
3825.00	Horizontal	-39.57		
5737.50	H	-27.86		
7650.00	H	-35.65		
<b>Middle Channel</b>				
3765.00	Vertical	-38.24	-13.00	Pass
5647.50	V	-27.47		
7530.00	V	-37.63		
3765.00	Horizontal	-39.47		
5647.50	H	-26.75		
7530.00	H	-37.31		
<b>Highest Channel</b>				
3825.00	Vertical	-37.75	-13.00	Pass
5737.50	V	-26.58		
7650.00	V	-35.16		
3825.00	Horizontal	-39.57		
5737.50	H	-27.86		
7650.00	H	-35.65		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 25, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3710.00	Vertical	-37.54	-13.00	Pass
5565.00	V	-29.94		
7420.00	V	-36.65		
3710.00	Horizontal	-40.48		
5565.00	H	-49.43		
7420.00	H	-36.57		
<b>Middle Channel</b>				
3765.00	Vertical	-38.89	-13.00	Pass
5647.50	V	-27.31		
7530.00	V	-37.77		
3765.00	Horizontal	-39.92		
5647.50	H	-26.16		
7530.00	H	-37.72		
<b>Highest Channel</b>				
3820.00	Vertical	-37.24	-13.00	Pass
5730.00	V	-26.64		
7640.00	V	-35.25		
3820.00	Horizontal	-39.61		
5730.00	H	-27.11		
7640.00	H	-35.45		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

LTE Band 25, WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3715.00	Vertical	-37.74	-13.00	Pass
5572.50	V	-29.64		
7430.00	V	-36.55		
3715.00	Horizontal	-40.49		
5572.50	H	-49.44		
7430.00	H	-36.55		
<b>Middle Channel</b>				
3765.00	Vertical	-38.95	-13.00	Pass
5647.50	V	-27.42		
7530.00	V	-37.65		
3765.00	Horizontal	-39.59		
5647.50	H	-26.24		
7530.00	H	-37.52		
<b>Highest Channel</b>				
3815.00	Vertical	-37.94	-13.00	Pass
5722.50	V	-26.44		
7630.00	V	-35.25		
3815.00	Horizontal	-39.42		
5722.50	H	-27.47		
7630.00	H	-35.50		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 25, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
3720.00	Vertical	-37.16	-13.00	Pass
5580.00	V	-29.17		
7440.00	V	-36.58		
3720.00	Horizontal	-40.60		
5580.00	H	-49.74		
7440.00	H	-36.84		
<b>Middle Channel</b>				
3765.00	Vertical	-38.05	-13.00	Pass
5647.50	V	-27.45		
7530.00	V	-37.44		
3765.00	Horizontal	-39.41		
5647.50	H	-26.41		
7530.00	H	-37.42		
<b>Highest Channel</b>				
3810.00	Vertical	-37.75	-13.00	Pass
5715.00	V	-26.85		
7620.00	V	-35.37		
3810.00	Horizontal	-39.38		
5715.00	H	-27.27		
7620.00	H	-35.37		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

**LTE Band 5&26(part 22H):**

LTE Band 5&26(part 22H), WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1649.40	Vertical	-49.58	-13.00	Pass
2474.10	V	-33.56		
3298.80	V	-48.76		
1649.40	Horizontal	-55.25		
2474.10	H	-32.66		
3298.80	H	-48.79		
<b>Middle Channel</b>				
1673.00	Vertical	-50.91	-13.00	Pass
2509.50	V	-34.57		
3346.00	V	-47.47		
1673.00	Horizontal	-54.24		
2509.50	H	-33.32		
3346.00	H	-49.96		
<b>Highest Channel</b>				
1696.60	Vertical	-51.51	-13.00	Pass
2544.90	V	-33.15		
3393.20	V	-48.58		
1696.60	Horizontal	-54.98		
2544.90	H	-34.48		
3393.20	H	-49.58		
<p>Note:</p> <ol style="list-style-type: none"> <li>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</li> <li>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</li> </ol>				



LTE Band 5&26(part 22H), WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1651.00	Vertical	-49.45	-13.00	Pass
2476.50	V	-33.73		
3302.00	V	-48.95		
1651.00	Horizontal	-55.51		
2476.50	H	-32.38		
3302.00	H	-48.58		
<b>Middle Channel</b>				
1673.00	Vertical	-50.18	-13.00	Pass
2509.50	V	-34.89		
3346.00	V	-47.09		
1673.00	Horizontal	-54.81		
2509.50	H	-33.98		
3346.00	H	-49.09		
<b>Highest Channel</b>				
1695.00	Vertical	-51.13	-13.00	Pass
2542.50	V	-33.83		
3390.00	V	-48.94		
1695.00	Horizontal	-54.37		
2542.50	H	-34.39		
3390.00	H	-49.42		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 5&26(part 22H), WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1653.00	Vertical	-49.16	-13.00	Pass
2479.50	V	-33.24		
3306.00	V	-48.32		
1653.00	Horizontal	-55.64		
2479.50	H	-32.47		
3306.00	H	-48.29		
<b>Middle Channel</b>				
1673.00	Vertical	-50.48	-13.00	Pass
2509.50	V	-34.71		
3346.00	V	-47.96		
1673.00	Horizontal	-54.88		
2509.50	H	-33.15		
3346.00	H	-49.64		
<b>Highest Channel</b>				
1693.00	Vertical	-51.88	-13.00	Pass
2539.50	V	-33.55		
3386.00	V	-48.43		
1693.00	Horizontal	-54.84		
2539.50	H	-34.57		
3386.00	H	-49.39		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 5&26(part 22H), WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1658.00	Vertical	-49.71	-13.00	Pass
2487.00	V	-33.97		
3316.00	V	-48.22		
1658.00	Horizontal	-55.15		
2487.00	H	-32.70		
3316.00	H	-48.25		
<b>Middle Channel</b>				
1673.00	Vertical	-50.53	-13.00	Pass
2509.50	V	-34.04		
3346.00	V	-47.55		
1673.00	Horizontal	-54.39		
2509.50	H	-33.47		
3346.00	H	-49.55		
<b>Highest Channel</b>				
1688.00	Vertical	-51.91	-13.00	Pass
2532.00	V	-33.79		
3376.00	V	-48.52		
1688.00	Horizontal	-54.14		
2532.00	H	-34.94		
3376.00	H	-49.24		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

LTE Band 26(part 22H), WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1663.00	Vertical	-49.59	-13.00	Pass
2494.50	V	-33.57		
3326.00	V	-48.77		
1663.00	Horizontal	-55.36		
2494.50	H	-32.05		
3326.00	H	-48.57		
<b>Middle Channel</b>				
1673.00	Vertical	-50.12	-13.00	Pass
2509.50	V	-34.36		
3346.00	V	-47.38		
1673.00	Horizontal	-54.07		
2509.50	H	-33.91		
3346.00	H	-49.49		
<b>Highest Channel</b>				
1683.00	Vertical	-51.33	-13.00	Pass
2524.50	V	-33.48		
3366.00	V	-48.56		
1683.00	Horizontal	-54.81		
2524.50	H	-34.39		
3366.00	H	-49.76		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

**LTE Band 26(part 90S):**

LTE Band 26(part 90S), WB: 1.4MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1629.40	Vertical	-47.38	-13.00	Pass
2444.10	V	-33.27		
3258.80	V	-47.42		
1629.40	Horizontal	-54.32		
2444.10	H	-40.71		
3258.80	H	-49.24		
<b>Middle Channel</b>				
1638.00	Vertical	-48.14	-13.00	Pass
2457.00	V	-34.41		
3276.00	V	-46.89		
1638.00	Horizontal	-55.06		
2457.00	H	-40.11		
3276.00	H	-50.75		
<b>Highest Channel</b>				
1646.60	Vertical	-48.52	-13.00	Pass
2469.90	V	-33.52		
3293.20	V	-46.45		
1646.60	Horizontal	-53.14		
2469.90	H	-41.52		
3293.20	H	-50.22		
<p>Note:</p> <ol style="list-style-type: none"> <li>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</li> <li>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</li> </ol>				

LTE Band 26(part 90S), WB: 3MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1631.00	Vertical	-47.52	-13.00	Pass
2446.50	V	-33.86		
3262.00	V	-47.89		
1631.00	Horizontal	-54.41		
2446.50	H	-40.12		
3262.00	H	-49.99		
<b>Middle Channel</b>				
1638.00	Vertical	-48.06	-13.00	Pass
2457.00	V	-34.39		
3276.00	V	-46.42		
1638.00	Horizontal	-55.14		
2457.00	H	-40.37		
3276.00	H	-50.89		
<b>Highest Channel</b>				
1645.00	Vertical	-48.54	-13.00	Pass
2467.50	V	-33.41		
3290.00	V	-46.52		
1645.00	Horizontal	-53.45		
2467.50	H	-41.86		
3290.00	H	-50.47		
<i>Note:</i>				
1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.				
2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 26(part 90S), WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1633.00	Vertical	-47.32	-13.00	Pass
2449.50	V	-33.24		
3266.00	V	-47.32		
1633.00	Horizontal	-54.89		
2449.50	H	-40.29		
3266.00	H	-49.58		
<b>Middle Channel</b>				
1638.00	Vertical	-48.62	-13.00	Pass
2457.00	V	-34.44		
3276.00	V	-46.25		
1638.00	Horizontal	-55.29		
2457.00	H	-40.42		
3276.00	H	-50.28		
<b>Highest Channel</b>				
1643.00	Vertical	-48.97	-13.00	Pass
2464.50	V	-33.28		
3286.00	V	-46.81		
1643.00	Horizontal	-53.74		
2464.50	H	-41.86		
3286.00	H	-50.17		
<p><i>Note:</i></p> <ol style="list-style-type: none"> <li><i>The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</i></li> <li><i>For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</i></li> </ol>				

LTE Band 26(part 90S), WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Middle Channel</b>				
1638.00	Vertical	-48.14	-13.00	Pass
2457.00	V	-34.06		
3276.00	V	-46.72		
1638.00	Horizontal	-55.14		
2457.00	H	-40.76		
3276.00	H	-50.32		
<i>Note:</i> 1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. 2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				

LTE Band 26(part 90S), WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
1643.00	Vertical	-48.54	-13.00	Pass
2464.50	V	-33.33		
3286.00	V	-48.25		
1643.00	Horizontal	-53.92		
2464.50	H	-40.33		
3286.00	H	-50.25		
<i>Note:</i> 1. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report. 2. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.				



**LTE Band 41 part:**

LTE Band 41, WB: 5MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
4997.00	Vertical	-43.27	-25.00	Pass
7495.50	V	-37.04		
9994.00	V	-34.51		
4997.00	Horizontal	-43.35		
7495.50	H	-36.74		
9994.00	H	-34.00		
<b>Middle Channel</b>				
5186.00	Vertical	-44.49	-25.00	Pass
7779.00	V	-37.75		
10372.00	V	-33.10		
5186.00	Horizontal	-41.99		
7779.00	H	-37.50		
10372.00	H	-32.11		
<b>Highest Channel</b>				
5375.00	Vertical	-42.96	-25.00	Pass
8062.50	V	-35.08		
10750.00	V	-33.12		
5375.00	Horizontal	-41.69		
8062.50	H	-33.68		
10750.00	H	-37.21		
<p>Note:</p> <p>3. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</p> <p>4. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</p>				

LTE Band 41, WB: 10MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
5002.00	Vertical	-43.94	-25.00	Pass
7503.00	V	-37.35		
10004.00	V	-34.99		
5002.00	Horizontal	-43.24		
7503.00	H	-36.74		
10004.00	H	-34.41		
<b>Middle Channel</b>				
5186.00	Vertical	-44.99	-25.00	Pass
7779.00	V	-37.84		
10372.00	V	-33.36		
5186.00	Horizontal	-41.24		
7779.00	H	-37.36		
10372.00	H	-32.75		
<b>Highest Channel</b>				
5370.00	Vertical	-42.74	-25.00	Pass
8055.00	V	-35.90		
10740.00	V	-33.37		
5370.00	Horizontal	-41.35		
8055.00	H	-33.18		
10740.00	H	-37.11		
<p><i>Note:</i></p> <p>3. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</p> <p>4. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</p>				

LTE Band 41, WB: 15MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
5007.00	Vertical	-43.45	-25.00	Pass
7510.50	V	-37.36		
10014.00	V	-34.43		
5007.00	Horizontal	-43.35		
7510.50	H	-36.99		
10014.00	H	-34.01		
<b>Middle Channel</b>				
5186.00	Vertical	-44.42	-25.00	Pass
7779.00	V	-37.51		
10372.00	V	-33.18		
5186.00	Horizontal	-41.75		
7779.00	H	-37.24		
10372.00	H	-32.99		
<b>Highest Channel</b>				
5365.00	Vertical	-42.84	-25.00	Pass
8047.50	V	-35.74		
10730.00	V	-33.71		
5365.00	Horizontal	-41.88		
8047.50	H	-33.24		
10730.00	H	-37.54		
<p>Note:</p> <p>3. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</p> <p>4. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</p>				

LTE Band 41, WB: 20MHz				
RB size 1 & RB offset 0				
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
	Polarization	Level (dBm)		
<b>Lowest Channel</b>				
5012.00	Vertical	-43.40	-25.00	Pass
7518.00	V	-37.41		
10024.00	V	-34.88		
5012.00	Horizontal	-43.36		
7518.00	H	-36.12		
10024.00	H	-34.81		
<b>Middle Channel</b>				
5186.00	Vertical	-44.17	-25.00	Pass
7779.00	V	-37.91		
10372.00	V	-33.37		
5186.00	Horizontal	-41.31		
7779.00	H	-37.21		
10372.00	H	-32.88		
<b>Highest Channel</b>				
5360.00	Vertical	-42.24	-25.00	Pass
8040.00	V	-35.99		
10720.00	V	-33.24		
5360.00	Horizontal	-41.91		
8040.00	H	-33.94		
10720.00	H	-37.74		
<p><i>Note:</i></p> <p>3. The emission levels of below 1 GHz are 20 dB lower than the limit so not show in this report.</p> <p>4. For above 1 GHz, all test modes were performed, and just the worst case shown in the report.</p>				

## 6.6 Frequency stability V.S. Temperature measurement

Test Requirement:	Part 22.355, Part 24.235, Part 27.54, Part 2.1055(a)(1)(b)
Test Method:	ANSI/TIA-603-D 2010
Limit:	±2.5ppm
Test setup:	
Test procedure:	<ol style="list-style-type: none"> <li>1. The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>3. The EUT was placed inside the temperature chamber.</li> <li>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached</li> </ol>
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data (worst case):**

**LTE Band 4 part:**

Reference Frequency: LTE Band 4 (10MHz) Middle channel=20175 channel=1732.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.80	-30	196	0.113131	±2.5	Pass
	-20	153	0.088312		
	-10	161	0.092929		
	0	121	0.069841		
	10	186	0.107359		
	20	172	0.099278		
	30	112	0.064646		
	40	103	0.059452		
	50	148	0.085426		
<b>16QAM</b>					
3.80	-30	121	0.069841	±2.5	Pass
	-20	148	0.085426		
	-10	164	0.094661		
	0	120	0.069264		
	10	142	0.081962		
	20	138	0.079654		
	30	154	0.088889		
	40	131	0.075613		
	50	136	0.078499		
<i>Note: Only the worst case shown in the report.</i>					

**LTE Band 7 part:**

Reference Frequency: LTE Band 7 (10MHz) Middle channel=21100 Frequency=2535.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.80	-30	197	0.0777120	±2.5	Pass
	-20	154	0.0607495		
	-10	162	0.0639053		
	0	122	0.0481262		
	10	187	0.0737673		
	20	173	0.0682446		
	30	113	0.0445759		
	40	104	0.0410256		
	50	149	0.0587771		
<b>16QAM</b>					
3.80	-30	122	0.0481262	±2.5	Pass
	-20	149	0.0587771		
	-10	165	0.0650888		
	0	121	0.0477318		
	10	143	0.0564103		
	20	139	0.0548323		
	30	155	0.0611440		
	40	132	0.0520710		
	50	137	0.0540434		
<i>Note: Only the worst case shown in the report.</i>					

**LTE Band 12 part:**

Reference Frequency: LTE Band 12 (10MHz) Middle channel=23095 channel=707.50MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.80	-30	195	0.275618	±2.5	Pass
	-20	152	0.214841		
	-10	160	0.226148		
	0	120	0.169611		
	10	185	0.261484		
	20	171	0.241696		
	30	111	0.156890		
	40	102	0.144170		
	50	147	0.207774		
<b>16QAM</b>					
3.80	-30	120	0.169611	±2.5	Pass
	-20	147	0.207774		
	-10	163	0.230389		
	0	119	0.168198		
	10	141	0.199293		
	20	137	0.193640		
	30	153	0.216254		
	40	130	0.183746		
	50	135	0.190813		
<i>Note: Only the worst case shown in the report.</i>					



**LTE Band 17 part:**

Reference Frequency: LTE Band 17 (10MHz) Middle channel=23790 channel=710.00MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.80	-30	199	0.280282	±2.5	Pass
	-20	156	0.219718		
	-10	164	0.230986		
	0	124	0.174648		
	10	189	0.266197		
	20	175	0.246479		
	30	115	0.161972		
	40	106	0.149296		
	50	151	0.212676		
<b>16QAM</b>					
3.80	-30	124	0.174648	±2.5	Pass
	-20	151	0.212676		
	-10	167	0.235211		
	0	123	0.173239		
	10	145	0.204225		
	20	141	0.198592		
	30	157	0.221127		
	40	134	0.188732		
	50	139	0.195775		
<i>Note: Only the worst case shown in the report.</i>					

**LTE Band 25 part:**

Reference Frequency: LTE Band 25 (10MHz) Middle channel=26365 channel=1882.5MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.80	-30	182	0.096680	±2.5	Pass
	-20	171	0.090837		
	-10	169	0.089774		
	0	119	0.063214		
	10	136	0.072244		
	20	170	0.090305		
	30	110	0.058433		
	40	160	0.084993		
	50	146	0.077556		
<b>16QAM</b>					
3.80	-30	177	0.094024	±2.5	Pass
	-20	150	0.079681		
	-10	144	0.076494		
	0	122	0.064807		
	10	161	0.085525		
	20	140	0.074369		
	30	156	0.082869		
	40	133	0.070651		
	50	140	0.074369		
<i>Note: Only the worst case shown in the report.</i>					

**LTE Band 5&26(part 22H):**

Reference Frequency: LTE Band 5&26(part 22H) (10MHz) Middle channel=26915 channel=836.5MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	188	0.224746	±2.5	Pass
	-20	134	0.160191		
	-10	160	0.191273		
	0	111	0.132696		
	10	167	0.199641		
	20	173	0.206814		
	30	111	0.132696		
	40	102	0.121937		
	50	152	0.181710		
16QAM					
3.80	-30	151	0.180514	±2.5	Pass
	-20	124	0.148237		
	-10	145	0.173341		
	0	123	0.147041		
	10	142	0.169755		
	20	141	0.168559		
	30	149	0.178123		
	40	134	0.160191		
	50	139	0.166169		

*Note: Only the worst case shown in the report.*

**LTE Band 26(part 90S):**

Reference Frequency: LTE Band 26(part 90S (10MHz) Middle channel=26740 channel=819.0MHz)					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.80	-30	189	0.230769	±2.5	Pass
	-20	135	0.164835		
	-10	161	0.196581		
	0	116	0.141636		
	10	161	0.196581		
	20	169	0.206349		
	30	108	0.131868		
	40	104	0.126984		
	50	151	0.184371		
<b>16QAM</b>					
3.80	-30	152	0.185592	±2.5	Pass
	-20	125	0.152625		
	-10	140	0.170940		
	0	123	0.150183		
	10	139	0.169719		
	20	140	0.170940		
	30	141	0.172161		
	40	133	0.162393		
	50	114	0.139194		
<i>Note: Only the worst case shown in the report.</i>					

**LTE Band 41:**

Reference Frequency: LTE Band 41 (10MHz)Middle channel=40620 channel=2593.0MHz					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.8	-30	190	0.073274	±2.5	Pass
	-20	136	0.052449		
	-10	162	0.062476		
	0	117	0.045121		
	10	162	0.062476		
	20	170	0.065561		
	30	109	0.042036		
	40	105	0.040494		
	50	152	0.058619		
<b>16QAM</b>					
3.8	-30	153	0.059005	±2.5	Pass
	-20	126	0.048592		
	-10	141	0.054377		
	0	124	0.047821		
	10	140	0.053992		
	20	141	0.054377		
	30	142	0.054763		
	40	134	0.051678		
	50	115	0.044350		
<i>Note: Only the worst case shown in the report.</i>					

## 6.7 Frequency stability V.S. Voltage measurement

Test Requirement:	Part 22.355, Part 24.235, Part 27.54, Part 2.1055(d)(2)
Test Method:	ANSI/TIA-603-D 2010
Limit:	±2.5ppm
Test setup:	
Test procedure:	<ol style="list-style-type: none"> <li>1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</li> </ol>
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data (worst case):**

**LTE Band 4 part:**

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 channel=1732.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	96	0.055411	±2.5	Pass
	3.80	63	0.036364		
	3.50	72	0.041558		
16QAM					
25	4.35	80	0.046176	±2.5	Pass
	3.80	96	0.055411		
	3.50	48	0.027706		

*Note: Only the worst case shown in the report.*

**LTE Band 7 part:**

Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	97	0.0382643	±2.5	Pass
	3.80	64	0.0252465		
	3.50	73	0.0287968		
16QAM					
25	4.35	79	0.0311637	±2.5	Pass
	3.80	95	0.0374753		
	3.50	47	0.0185404		

*Note: Only the worst case shown in the report.*

**LTE Band 12 part:**

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 channel=707.50MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	95	0.134276	±2.5	Pass
	3.80	62	0.087633		
	3.50	71	0.100353		
16QAM					
25	4.35	77	0.108834	±2.5	Pass
	3.80	93	0.131449		
	3.50	45	0.063604		

*Note: Only the worst case shown in the report.*

**LTE Band 17 part:**

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 channel=710.00MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	99	0.139437	±2.5	Pass
	3.80	66	0.092958		
	3.50	75	0.105634		
16QAM					
25	4.35	81	0.114085	±2.5	Pass
	3.80	97	0.136620		
	3.50	49	0.069014		

*Note: Only the worst case shown in the report.*

**LTE Band 25 part:**

Reference Frequency: LTE Band 25(10MHz) Middle channel=26365 channel=1882.5MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	53	0.028154	±2.5	Pass
	3.80	92	0.048871		
	3.50	64	0.033997		
16QAM					
25	4.35	81	0.043028	±2.5	Pass
	3.80	79	0.041965		
	3.50	63	0.033466		

*Note: Only the worst case shown in the report.*

**LTE Band 5&26(part 22H):**

Reference Frequency: LTE Band 5&26(part 22H) (10MHz) Middle channel=26915 channel=836.5MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	44	0.052599	±2.5	Pass
	3.80	92	0.109979		
	3.50	63	0.075312		
16QAM					
25	4.35	88	0.105198	±2.5	Pass
	3.80	92	0.109979		
	3.50	62	0.074117		

*Note: Only the worst case shown in the report.*



**LTE Band 26(part 90S):**

Reference Frequency: LTE Band 26(part 90S) (10MHz) Middle channel=26740 channel=819.0MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	44	0.053724	±2.5	Pass
	3.80	91	0.111111		
	3.50	59	0.072039		
16QAM					
25	4.35	87	0.106227	±2.5	Pass
	3.80	94	0.114774		
	3.50	51	0.062271		

*Note: Only the worst case shown in the report.*

**LTE Band 41:**

Reference Frequency: LTE Band 41 (10MHz) Middle channel=40620 channel=2593.0MHz					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.35	99	0.057143	±2.5	Pass
	3.80	63	0.036364		
	3.50	72	0.041558		
16QAM					
25	4.35	81	0.046753	±2.5	Pass
	3.80	97	0.055988		
	3.50	49	0.028283		

*Note: Only the worst case shown in the report.*