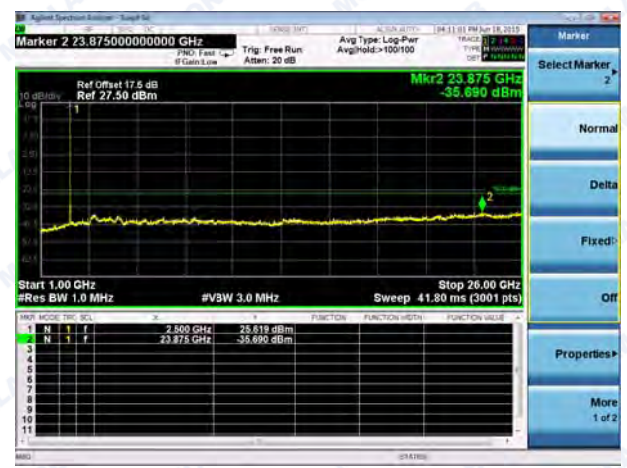


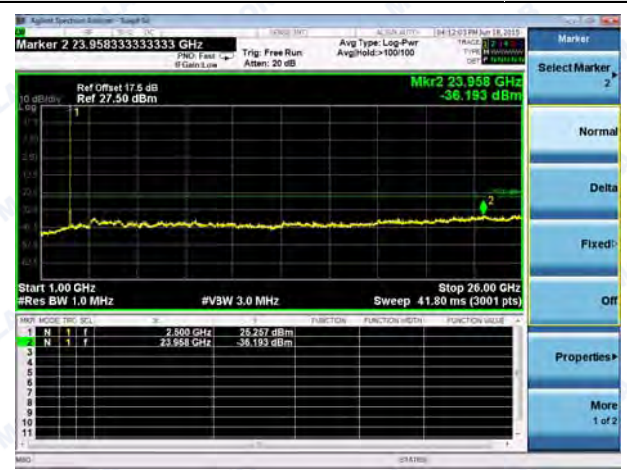
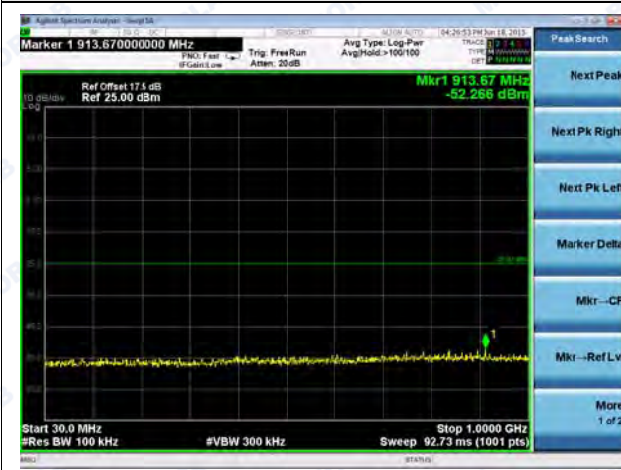


LTE Band 7 10MHz BW Low Channel

QPSK



16QAM



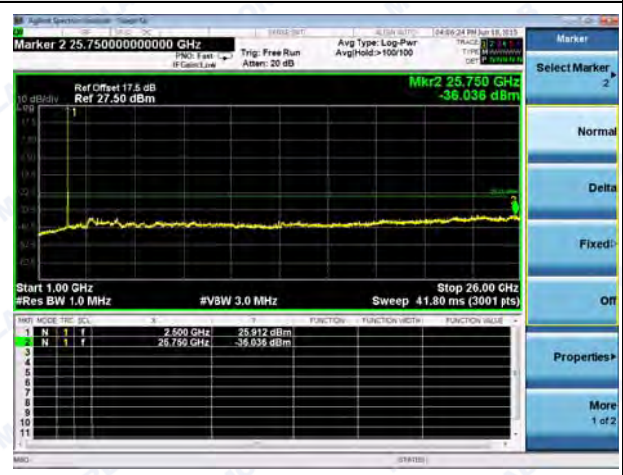


LTE Band 7 15MHz BW Low Channel

QPSK



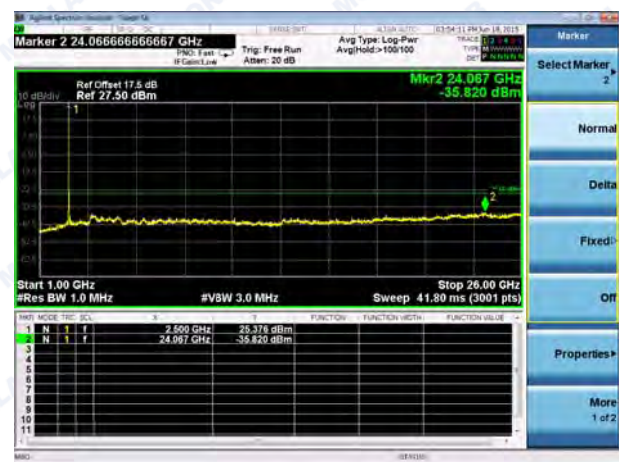
16QAM



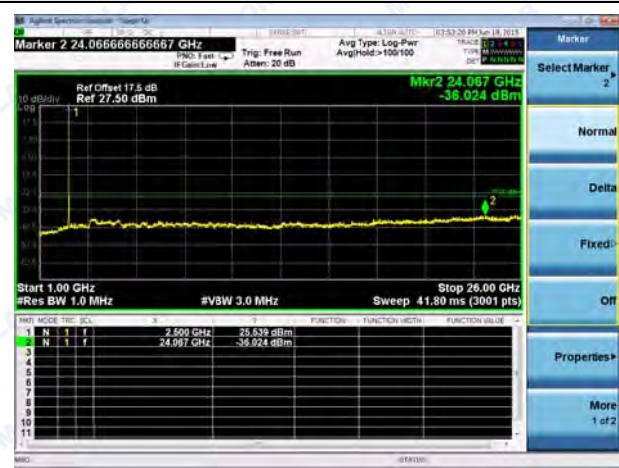


LTE Band 7 20MHz BW Low Channel

QPSK



16QAM

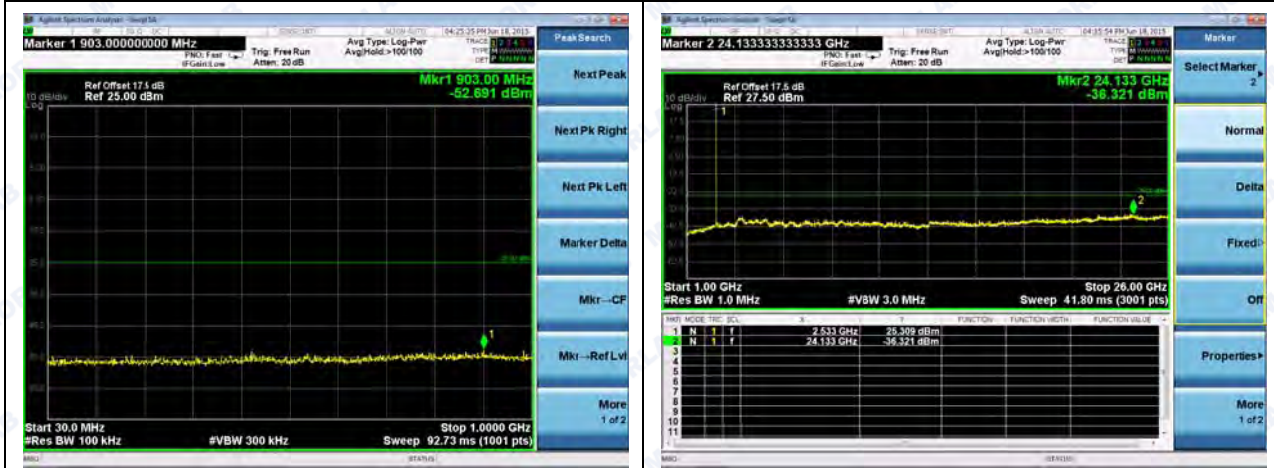




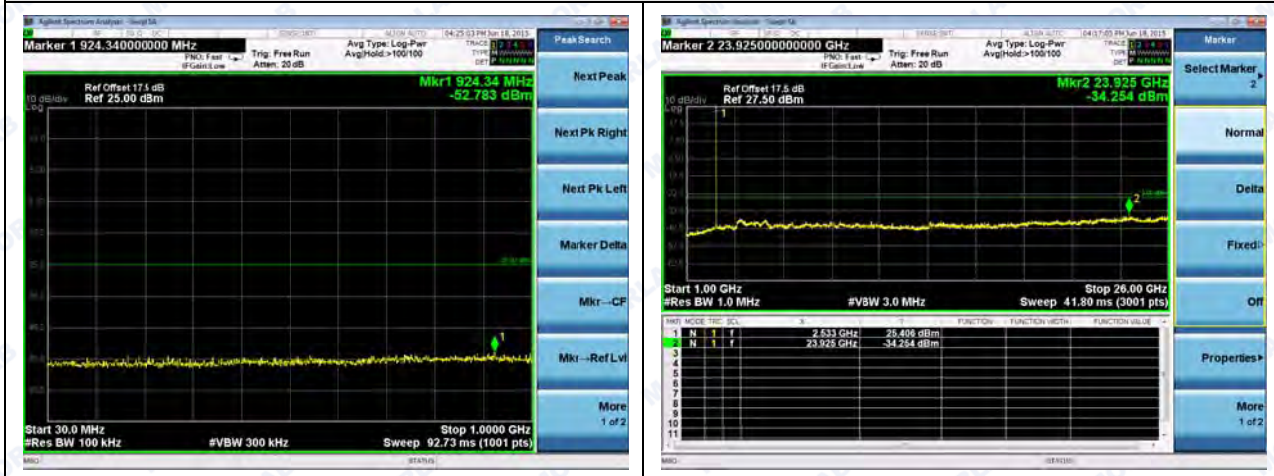
Middle channel:

LTE Band 7 5MHz BW Mid Channel

QPSK



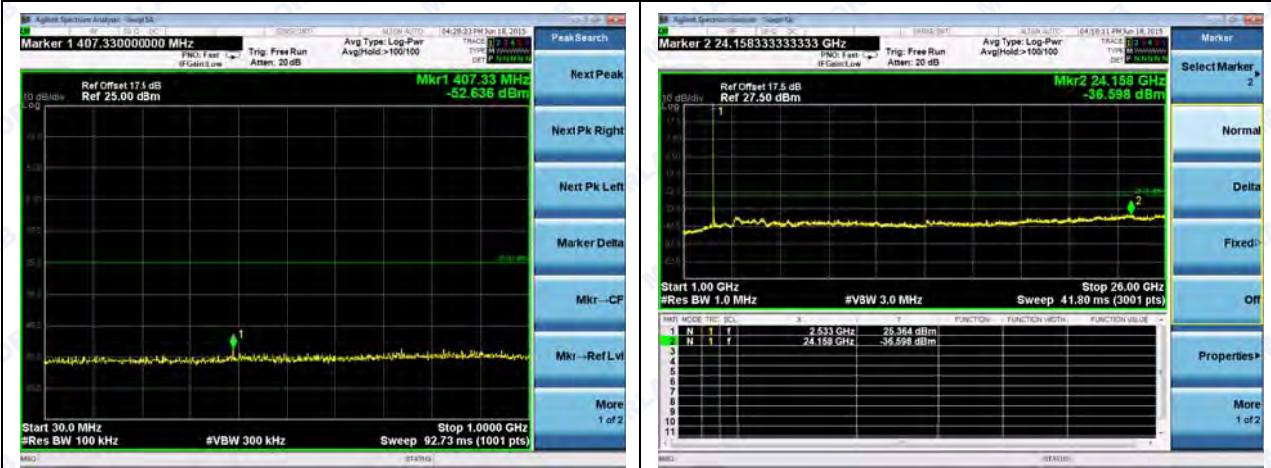
16QAM





LTE Band 7 10MHz BW Mid Channel

QPSK



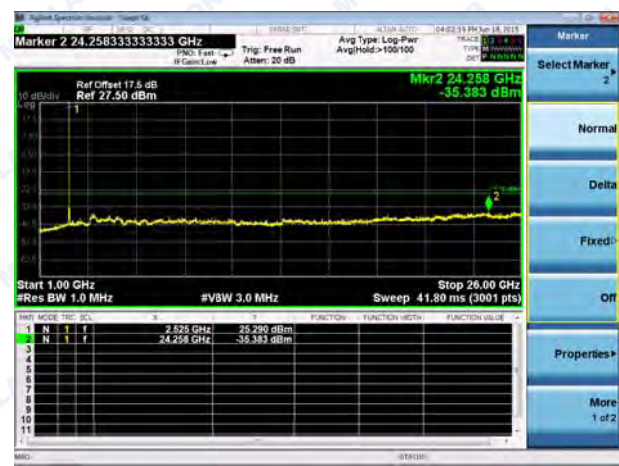
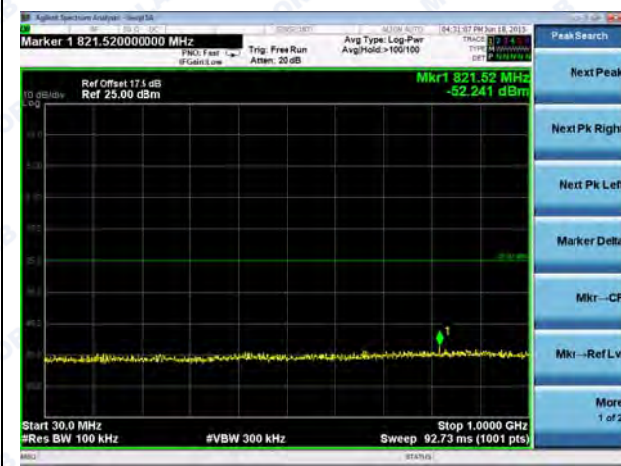
16QAM



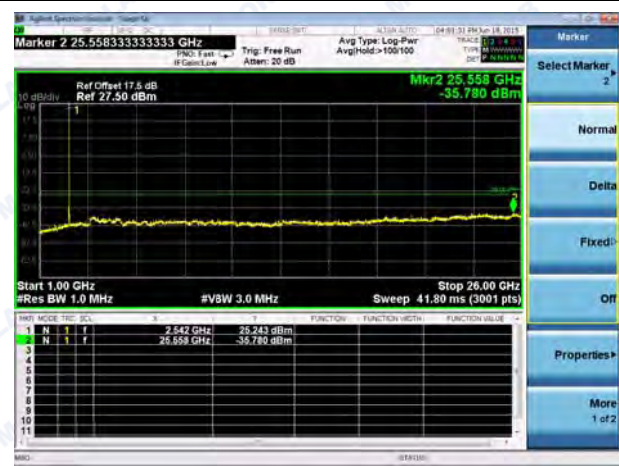
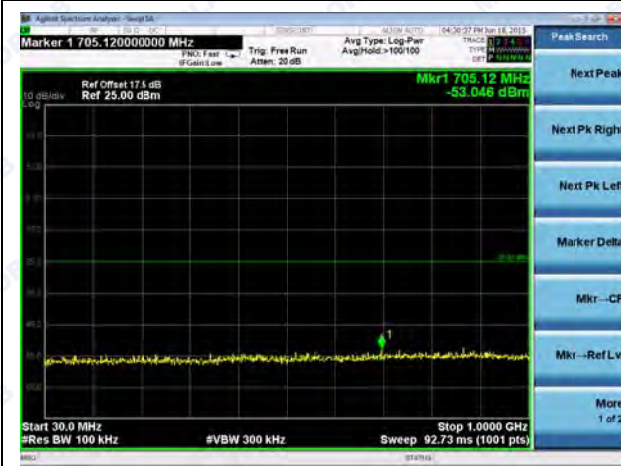


LTE Band 7 15MHz BW Mid Channel

QPSK



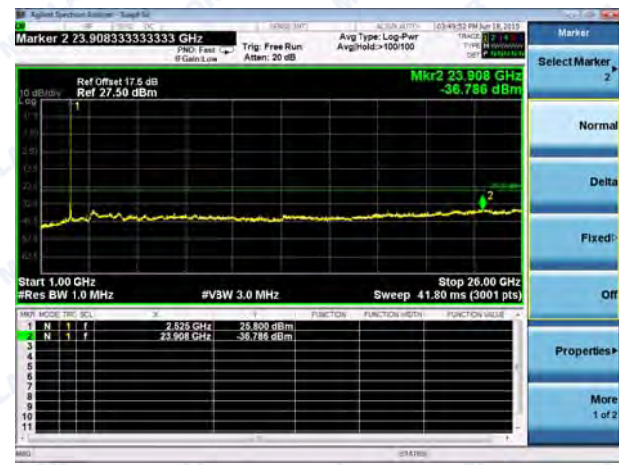
16QAM



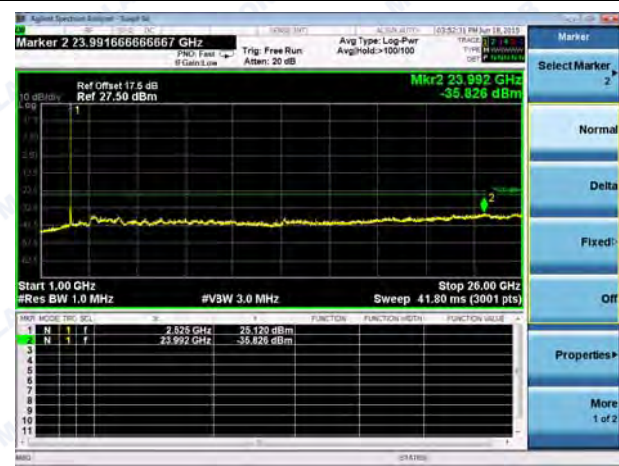


LTE Band 7 20MHz BW Mid Channel

QPSK



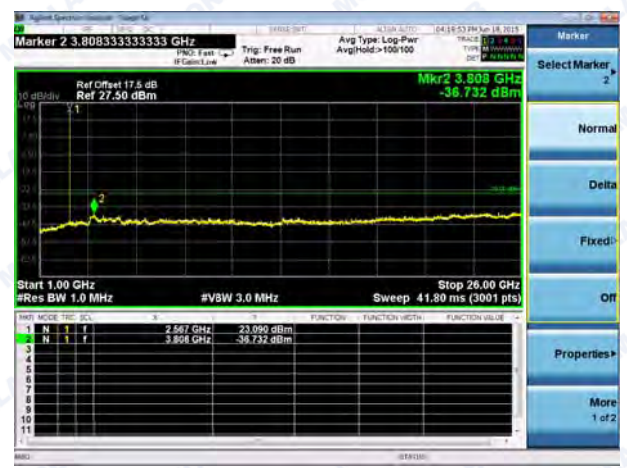
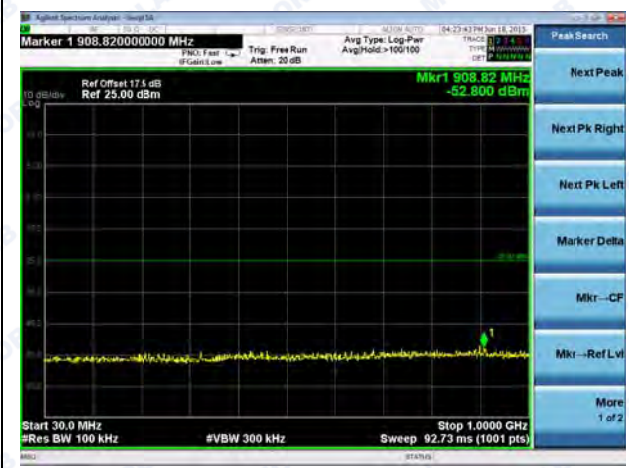
16QAM



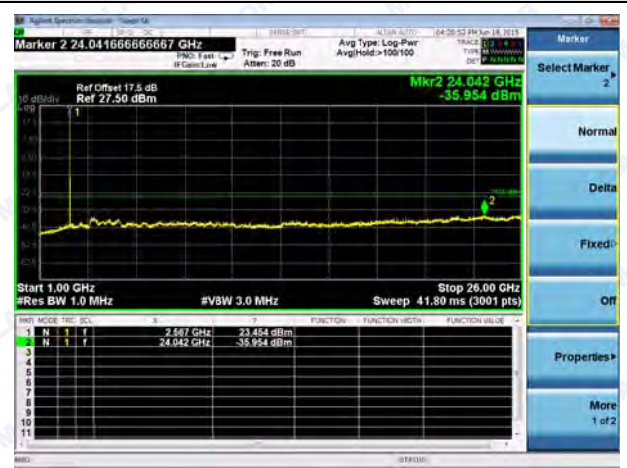


LTE Band 7 5MHz BW High Channel

QPSK



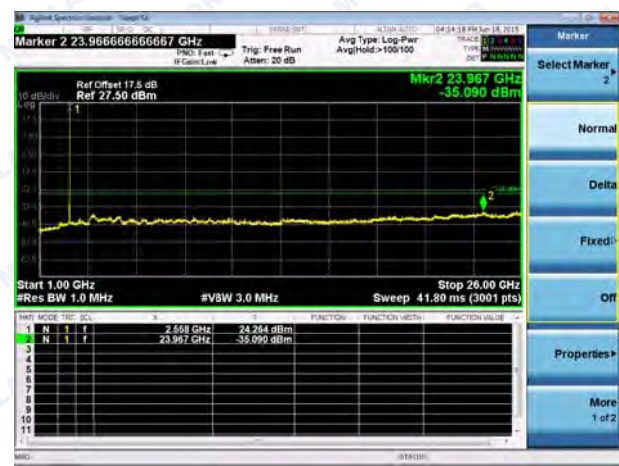
16QAM



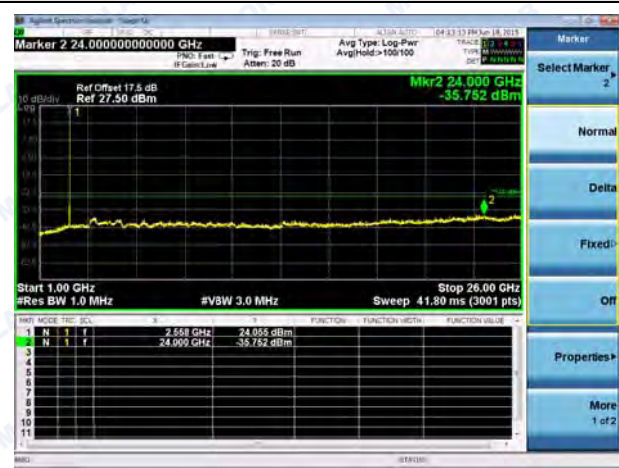


LTE Band 7 10MHz BW High Channel

QPSK



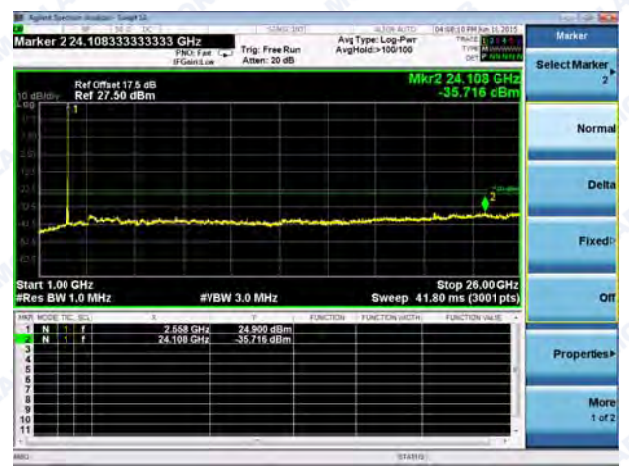
16QAM



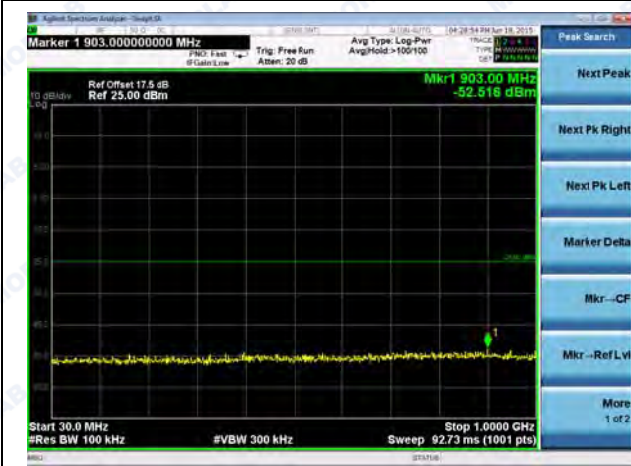


LTE Band 7 15MHz BW High Channel

QPSK



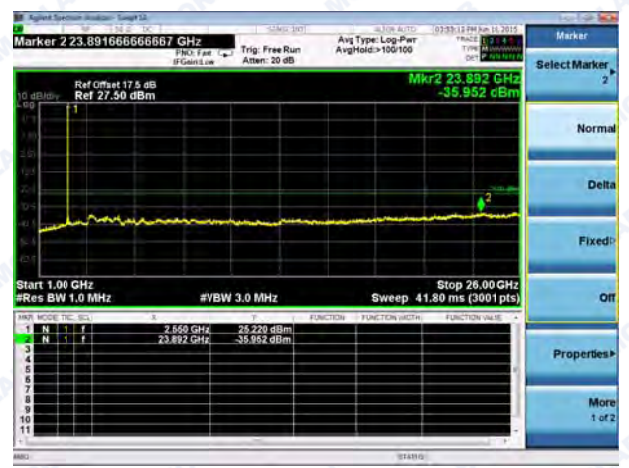
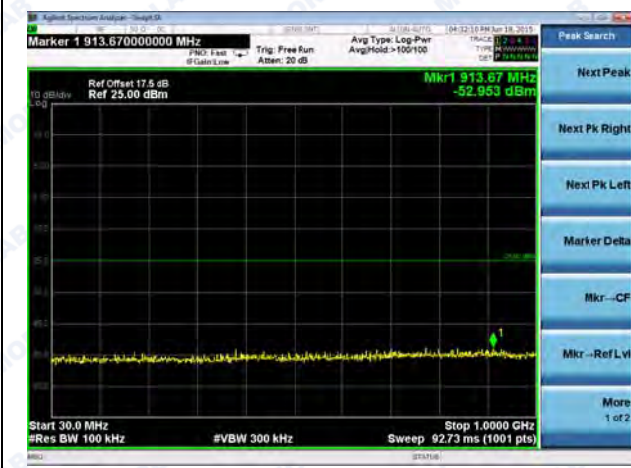
16QAM



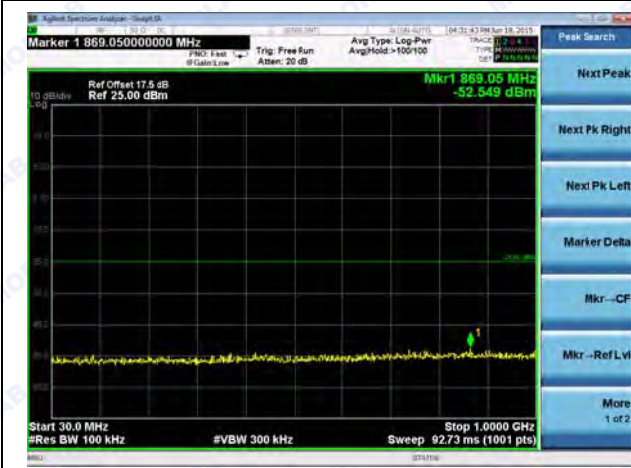


LTE Band 7 20MHz BW High Channel

QPSK



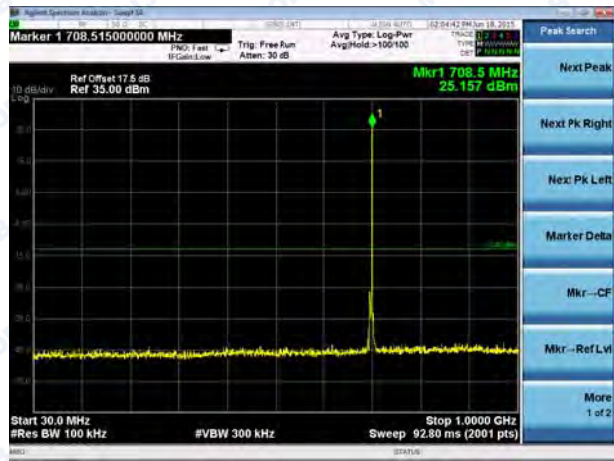
16QAM



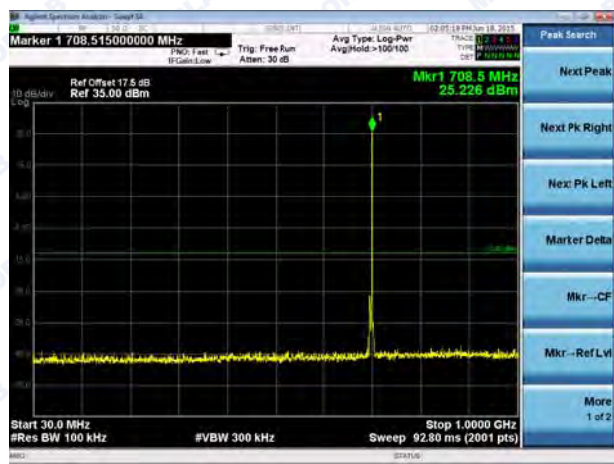


LTE Band 17 5MHz BW Low Channel

QPSK



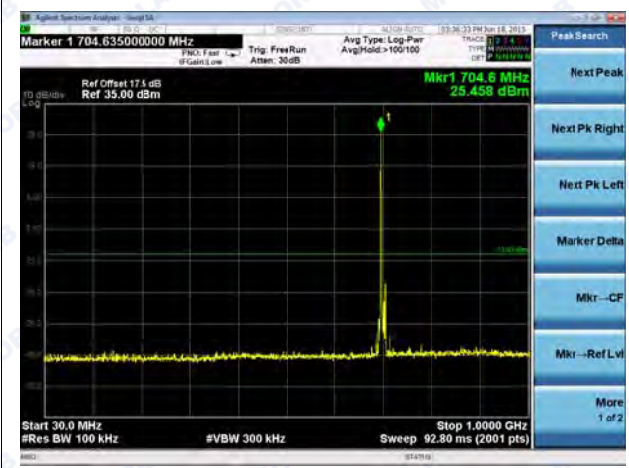
16QAM



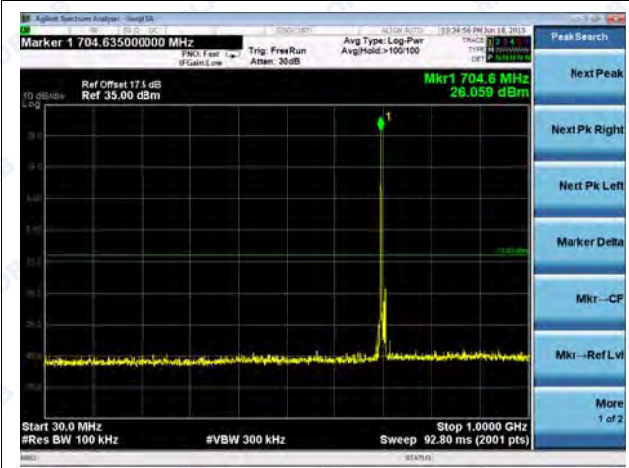


LTE Band 17 10MHz BW Low Channel

QPSK



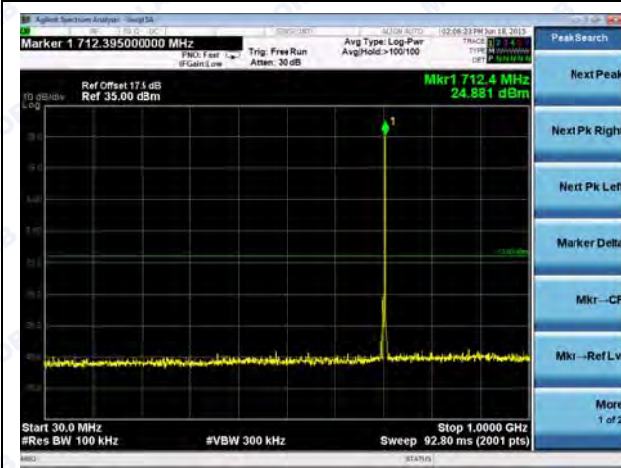
16QAM



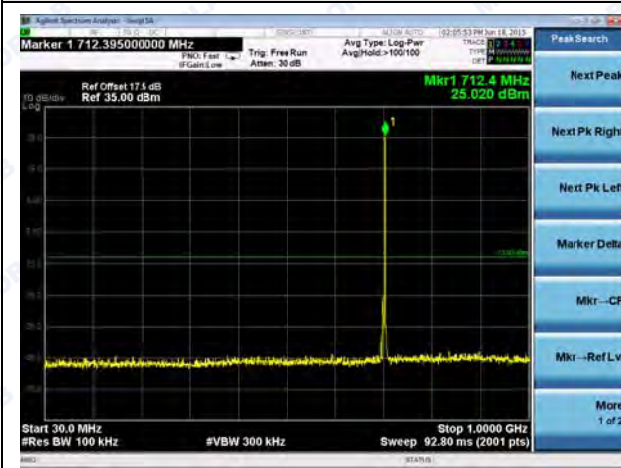


LTE Band 17 5MHz BW Mid Channel

QPSK



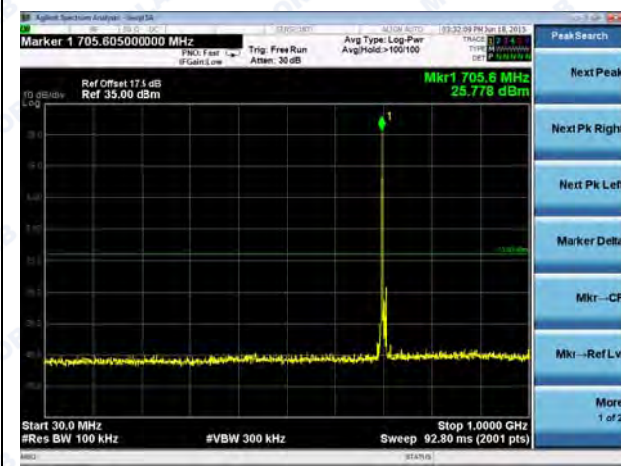
16QAM



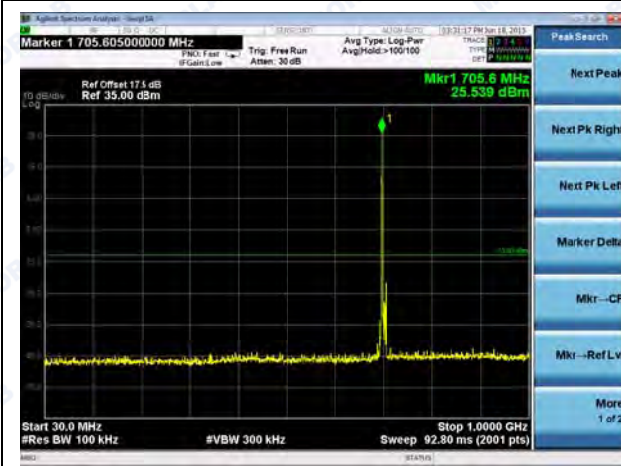


LTE Band 17 10MHz BW Mid Channel

QPSK



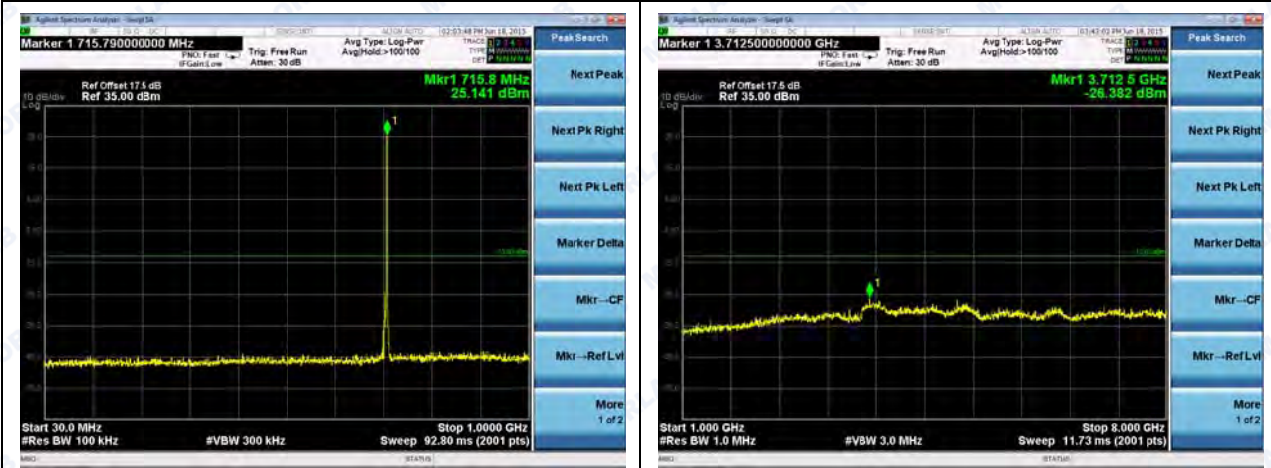
16QAM





LTE Band 17 5MHz BW High Channel

QPSK



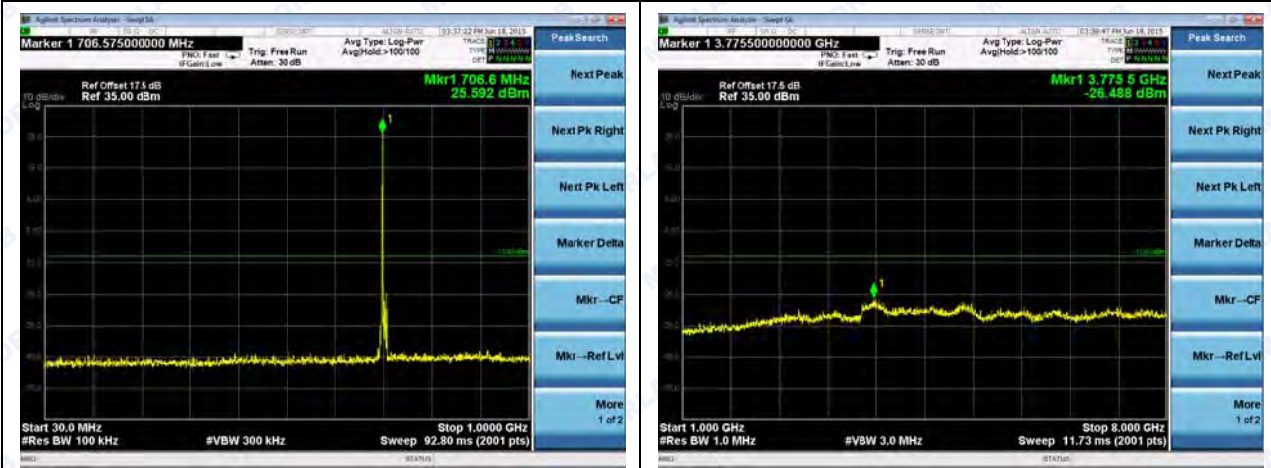
16QAM



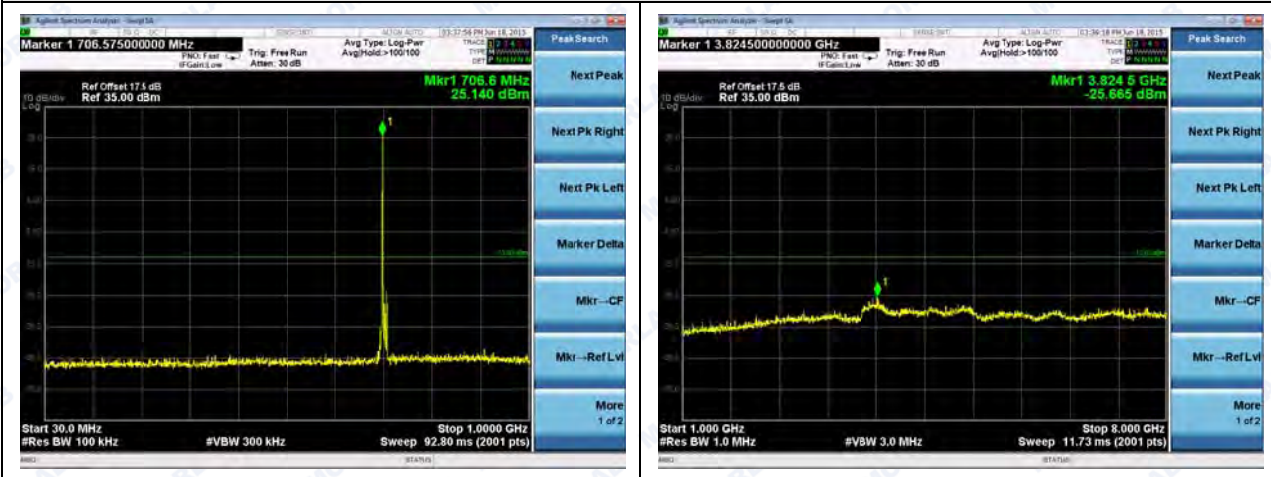


LTE Band 17 10MHz BW High Channel

QPSK



16QAM





2.6 Band Edge

2.6.1 Requirement

According to FCC section 27.53(g) (h), (g) For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(h) For operations in the 1710–1755 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB.

2.6.2 Test Description

See section 2.1.2 of this report.

2.6.3 Test Result

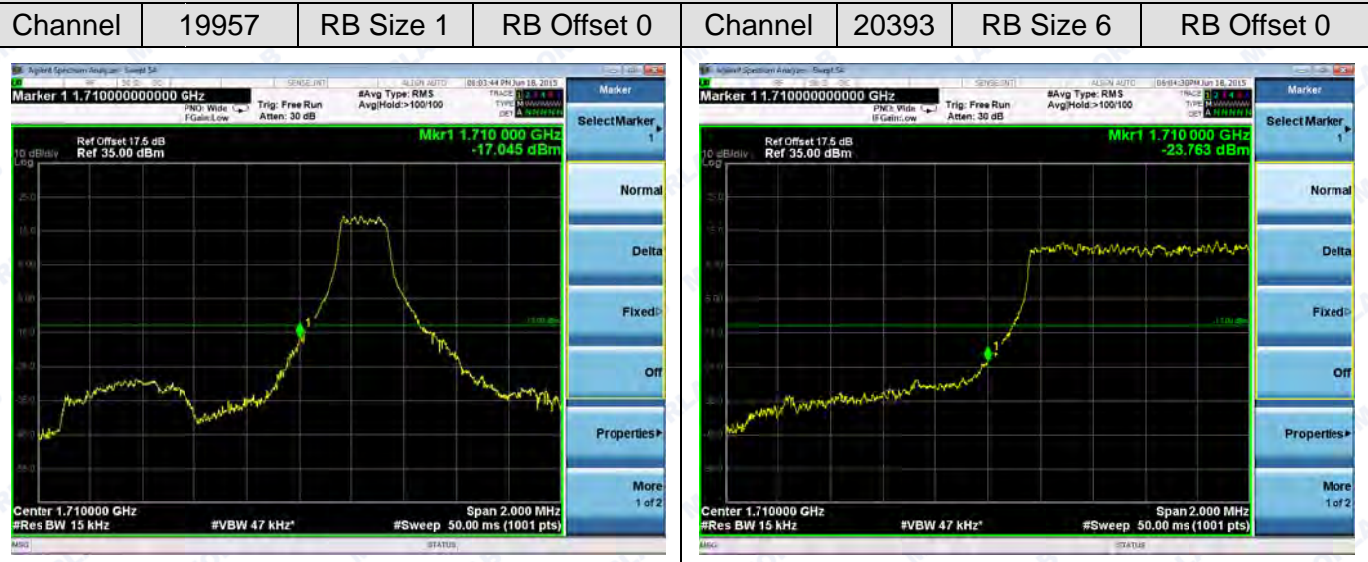
The center frequency of spectrum is the band edge frequency and span is 2MHz, Record the max trace into the test report.

PASS. See the attached plots.



LTE Band 4

Channel Bandwidth: 1.4MHz



Channel Bandwidth: 1.4MHz

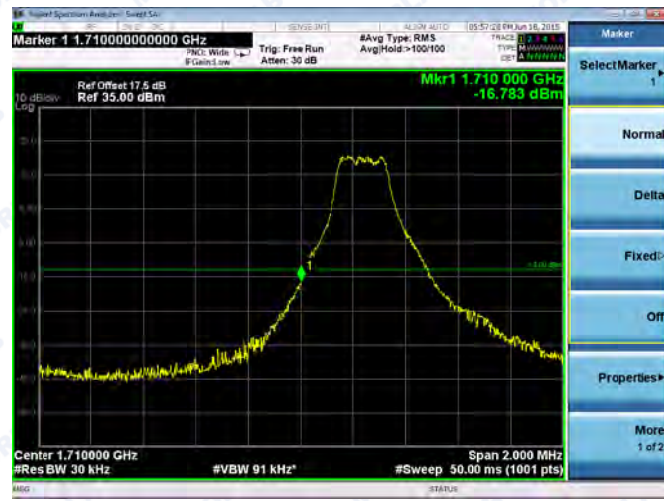




LTE Band 4

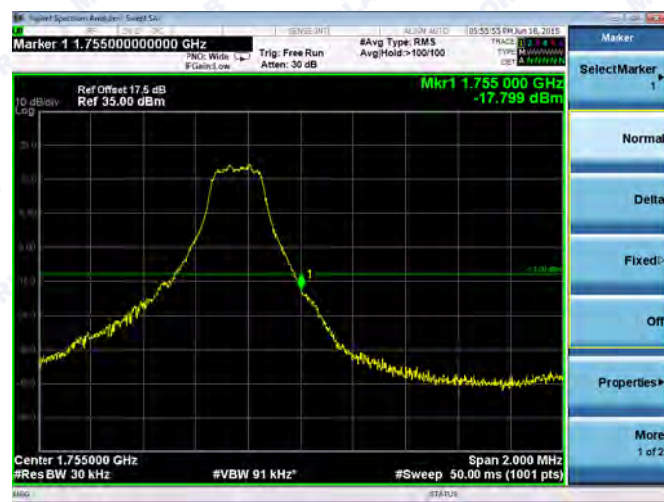
Channel Bandwidth: 3MHz

Channel	19965	RB Size 1	RB Offset 0	Channel	20385	RB Size 15	RB Offset 0
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Channel Bandwidth: 3MHz

Channel	19965	RB Size 1	RB Offset 14	Channel	20385	RB Size 15	RB Offset 0
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LTE Band 4

Channel Bandwidth: 5MHz

Channel	19975	RB Size 1	RB Offset 0	Channel	20375	RB Size 25	RB Offset 0
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Channel Bandwidth: 5MHz

Channel	19975	RB Size 1	RB Offset 24	Channel	20375	RB Size 25	RB Offset 0
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LTE Band 4

Channel Bandwidth: 10MHz

Channel	20000	RB Size 1	RB Offset 0	Channel	20350	RB Size 50	RB Offset 0
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Channel Bandwidth: 10MHz

Channel	20000	RB Size 1	RB Offset 49	Channel	20350	RB Size 50	RB Offset 0
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LTE Band 4

Channel Bandwidth: 15MHz

Channel	20025	RB Size 1	RB Offset 0	Channel	20325	RB Size 75	RB Offset 0
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Channel Bandwidth: 15MHz

Channel	20025	RB Size 1	RB Offset 74	Channel	20325	RB Size 75	RB Offset 0
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LTE Band 4

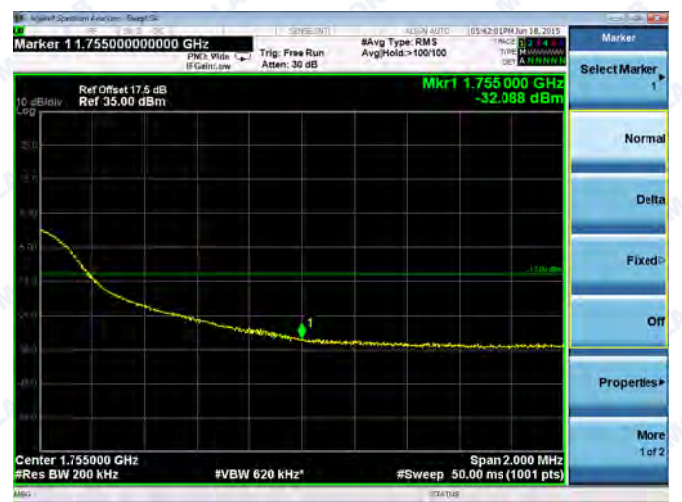
Channel Bandwidth: 20MHz

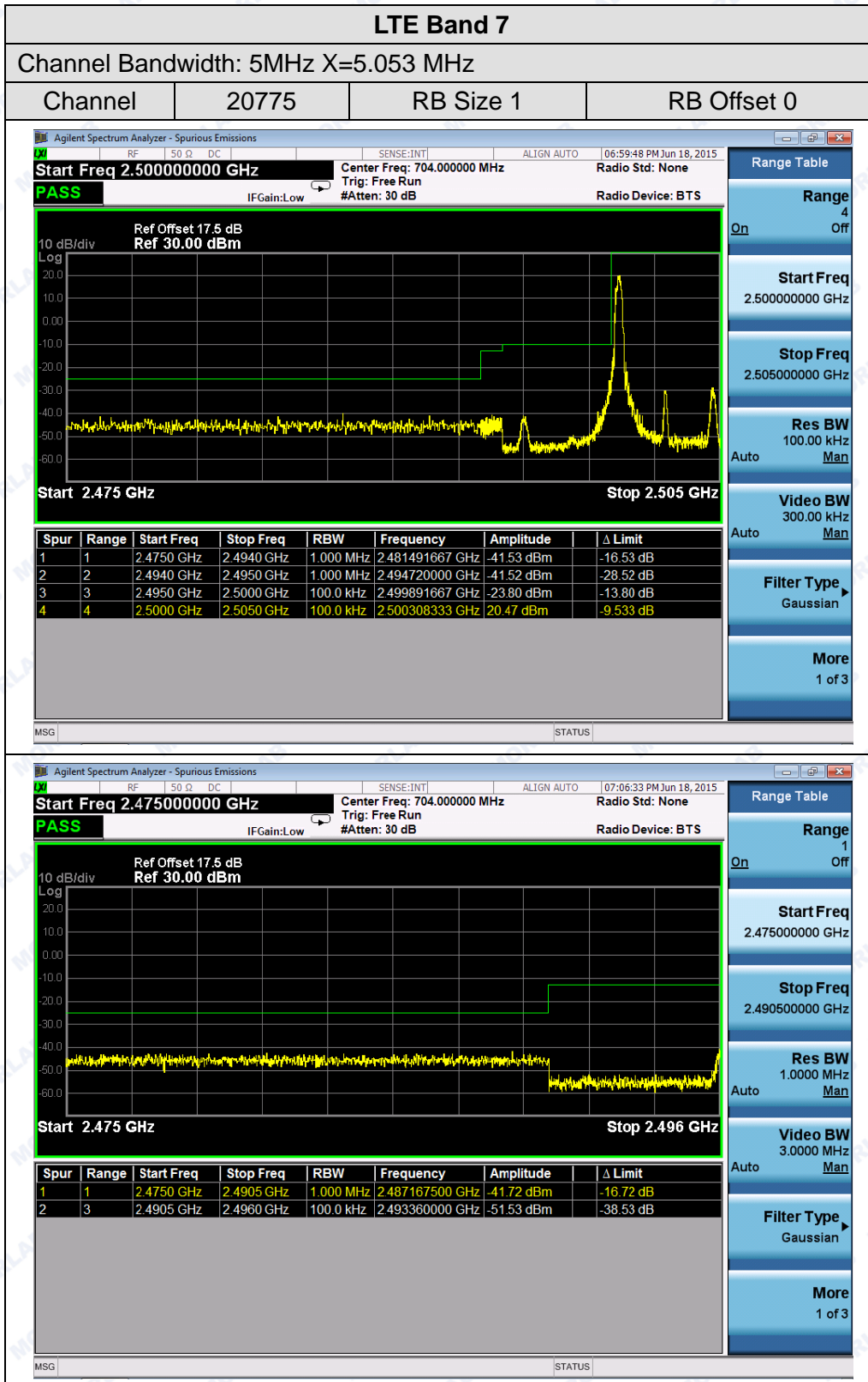
Channel	20050	RB Size 1	RB Offset 0	Channel	20300	RB Size 100	RB Offset 0
---------	-------	-----------	-------------	---------	-------	-------------	-------------

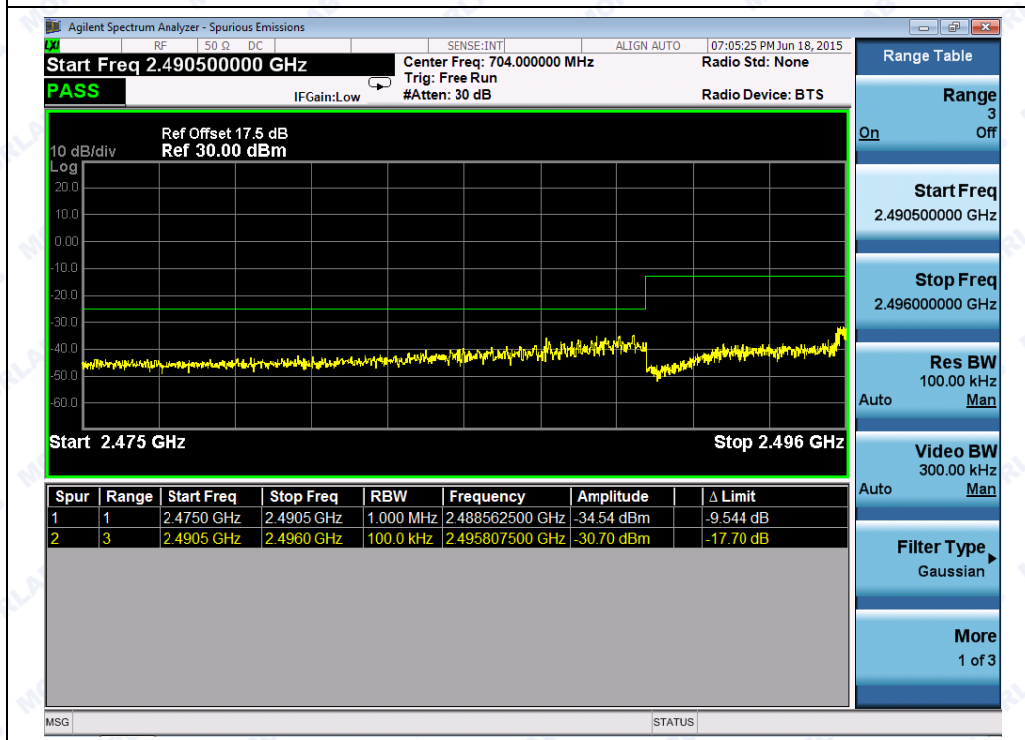
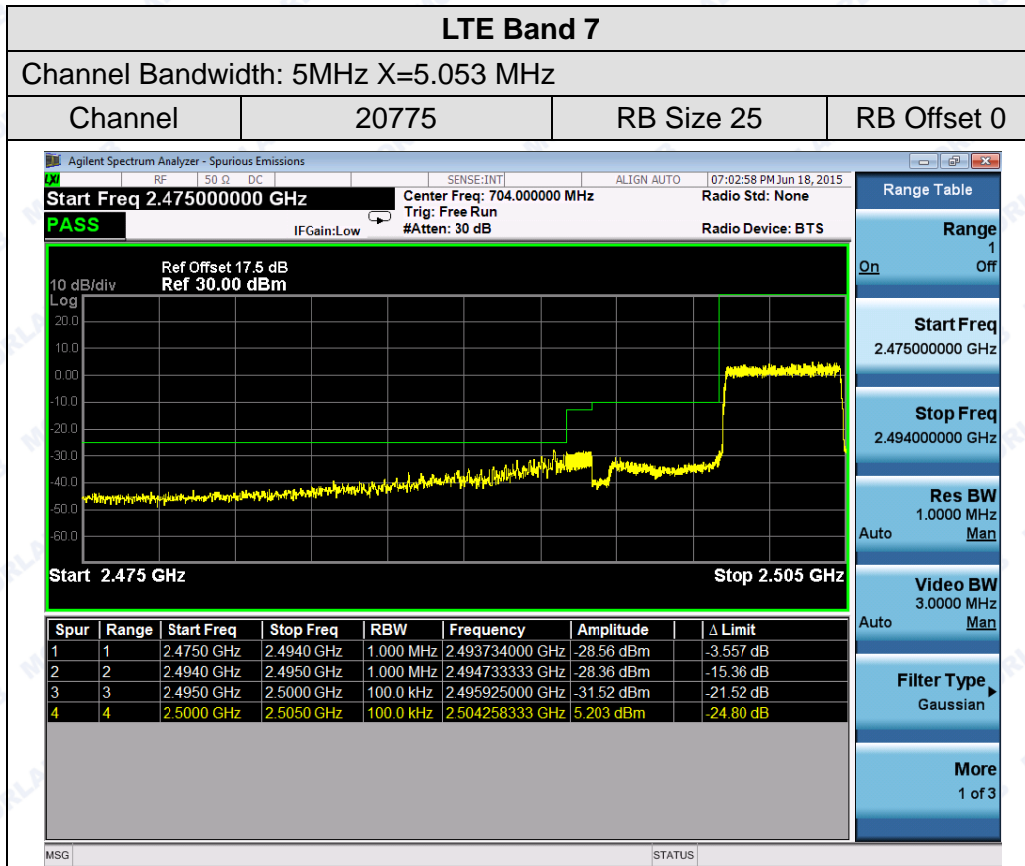


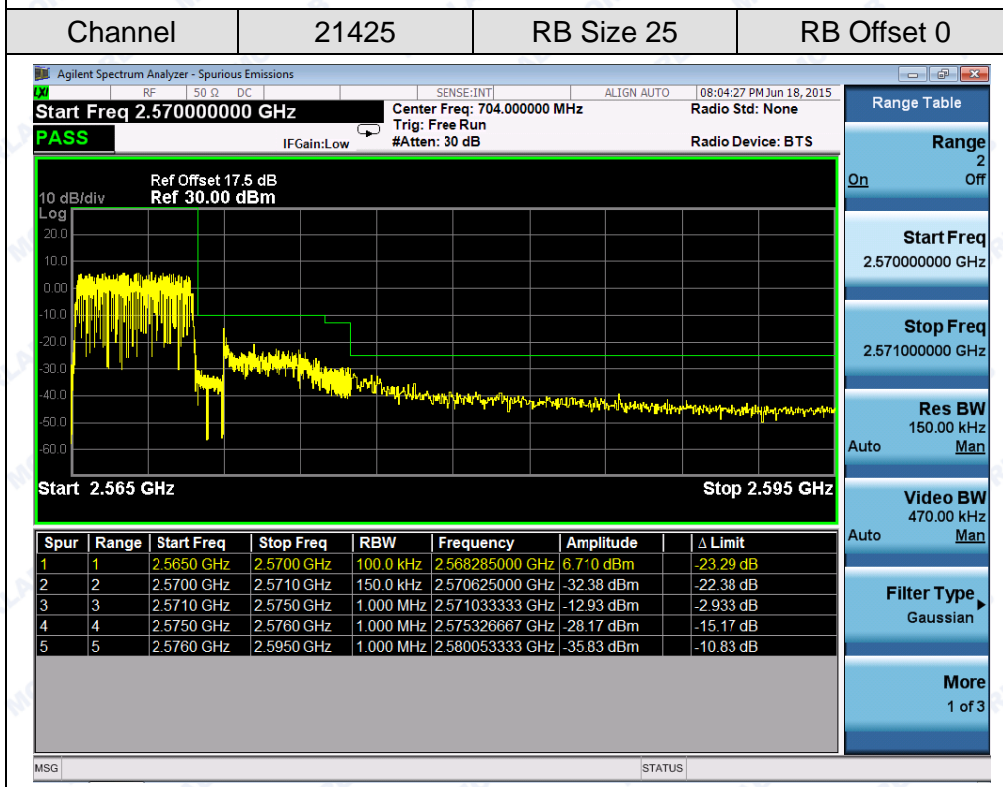
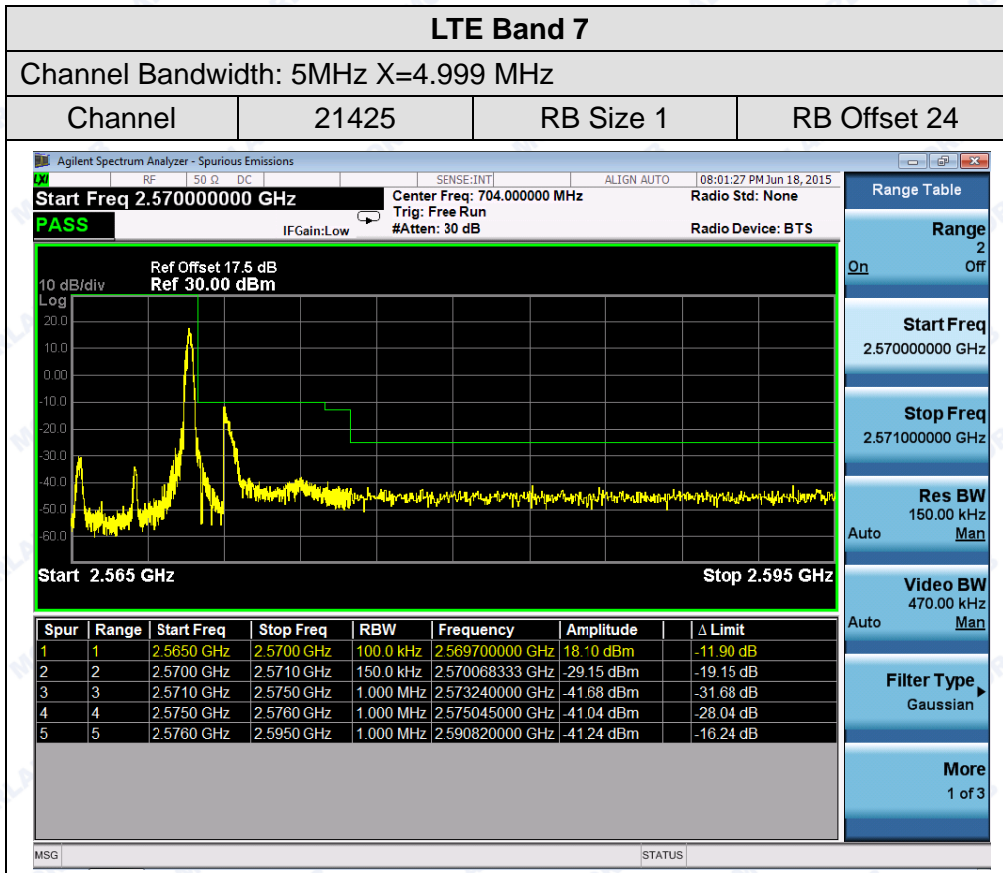
Channel Bandwidth: 20MHz

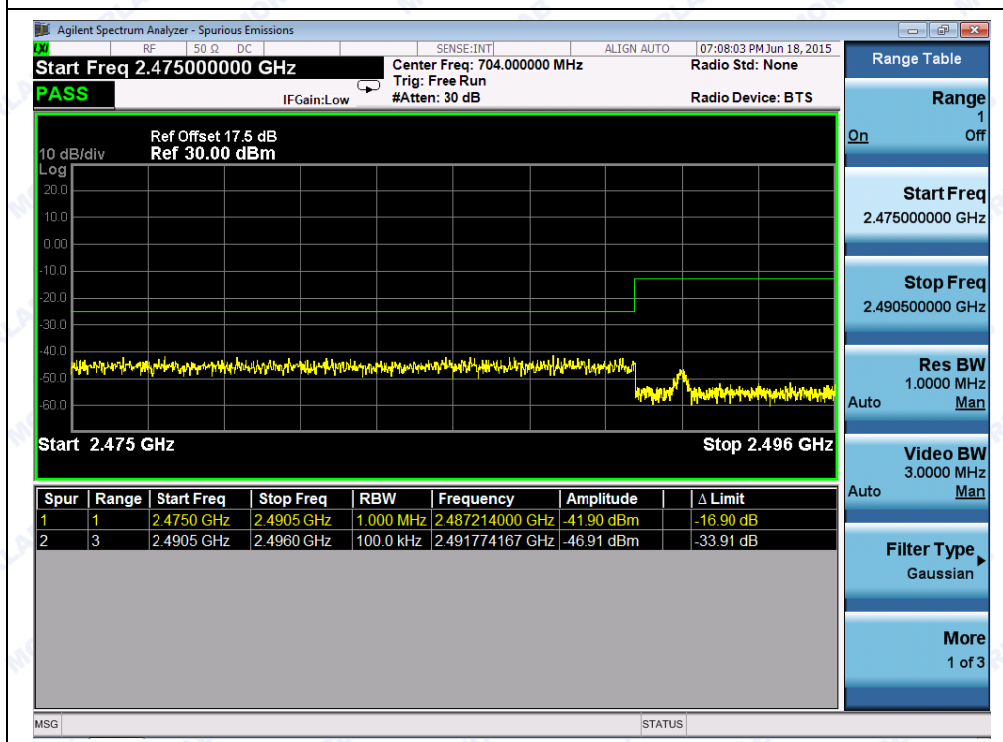
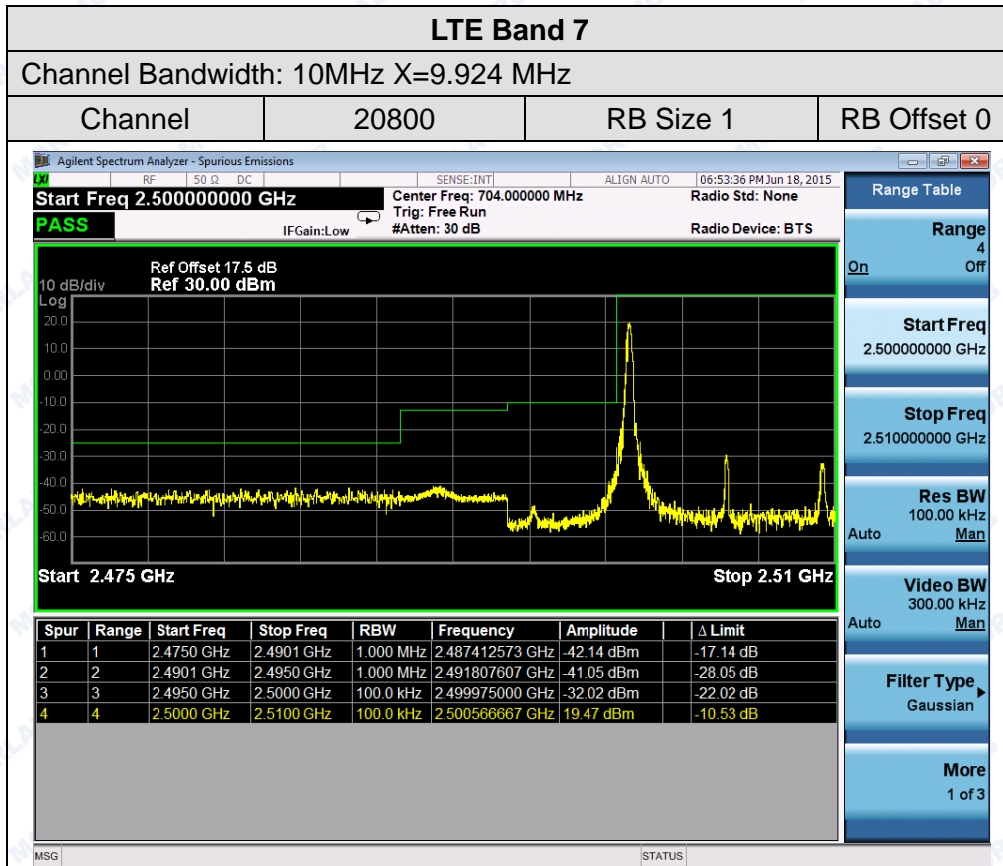
Channel	20050	RB Size 1	RB Offset 99	Channel	20300	RB Size 100	RB Offset 0
---------	-------	-----------	--------------	---------	-------	-------------	-------------

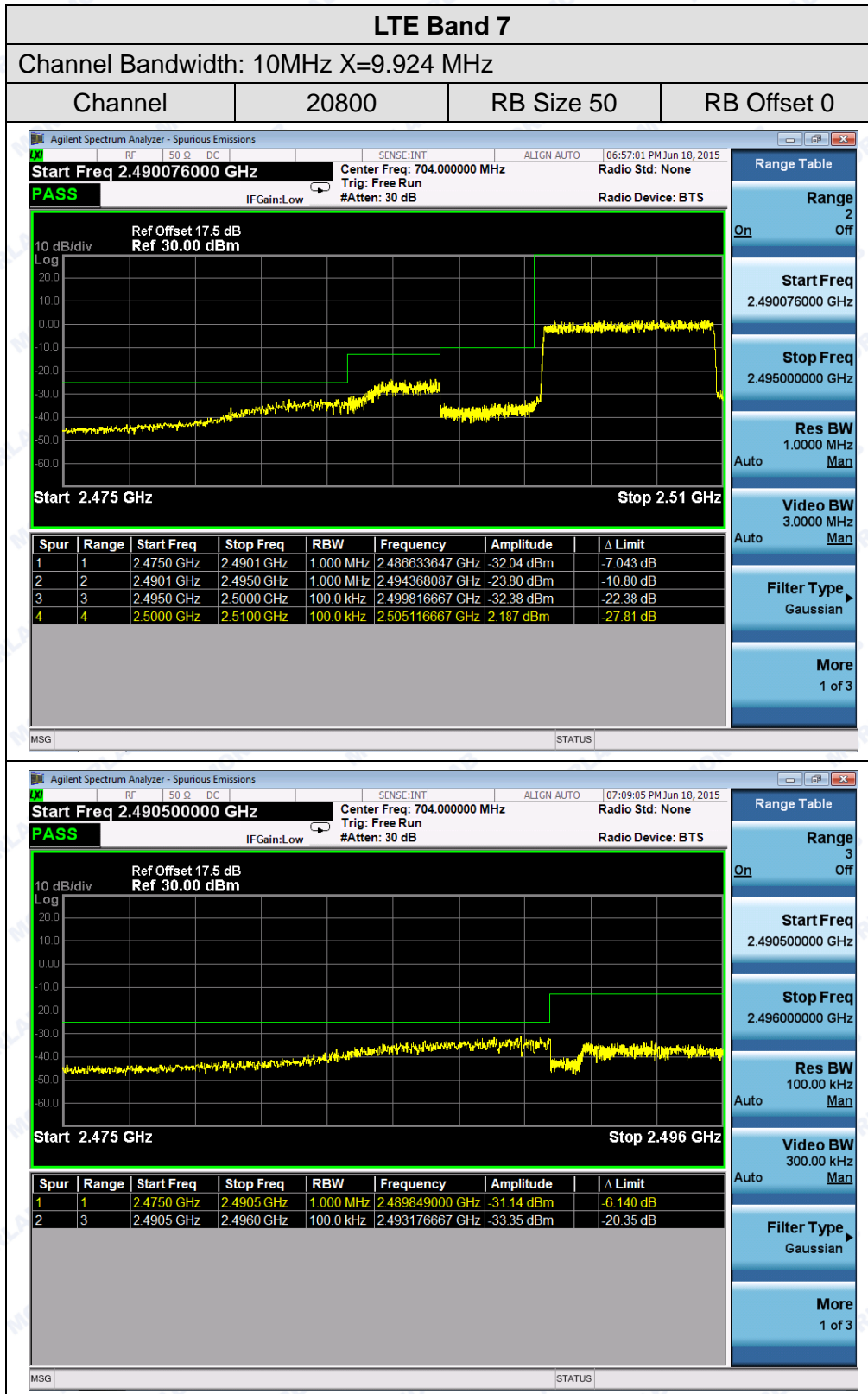


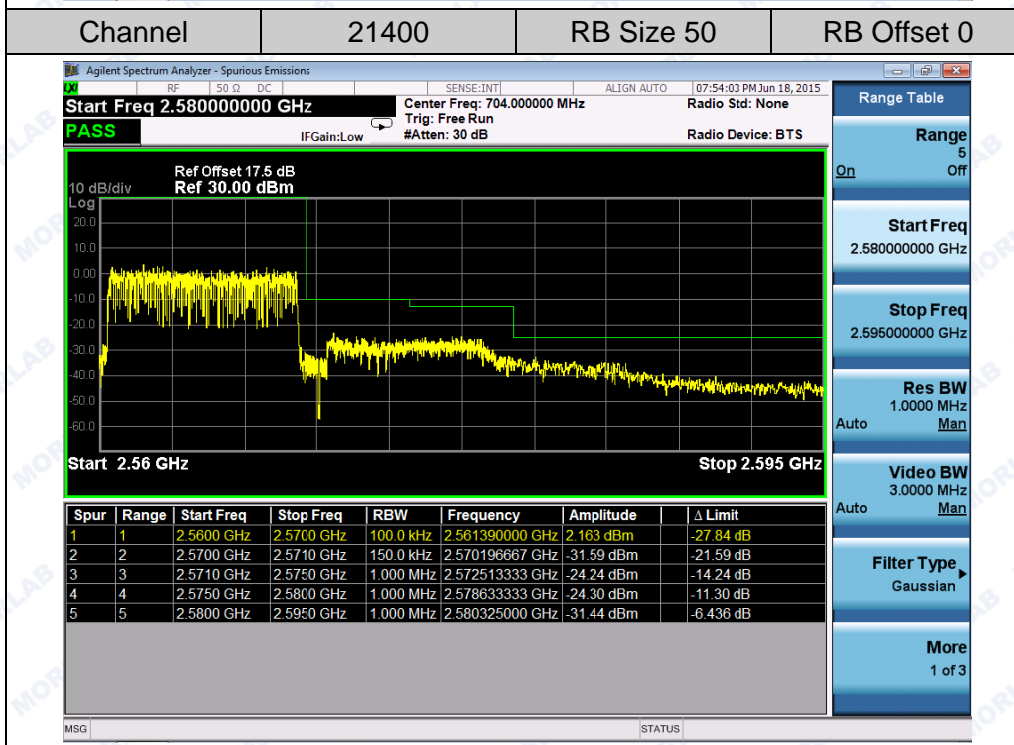
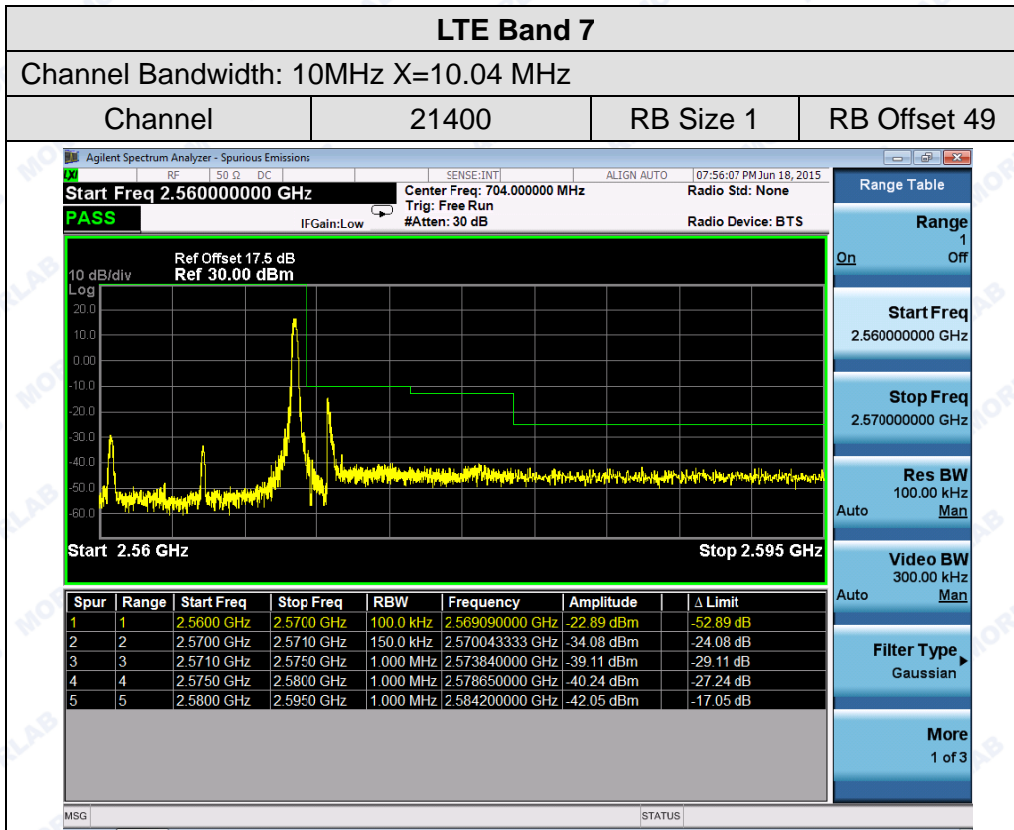


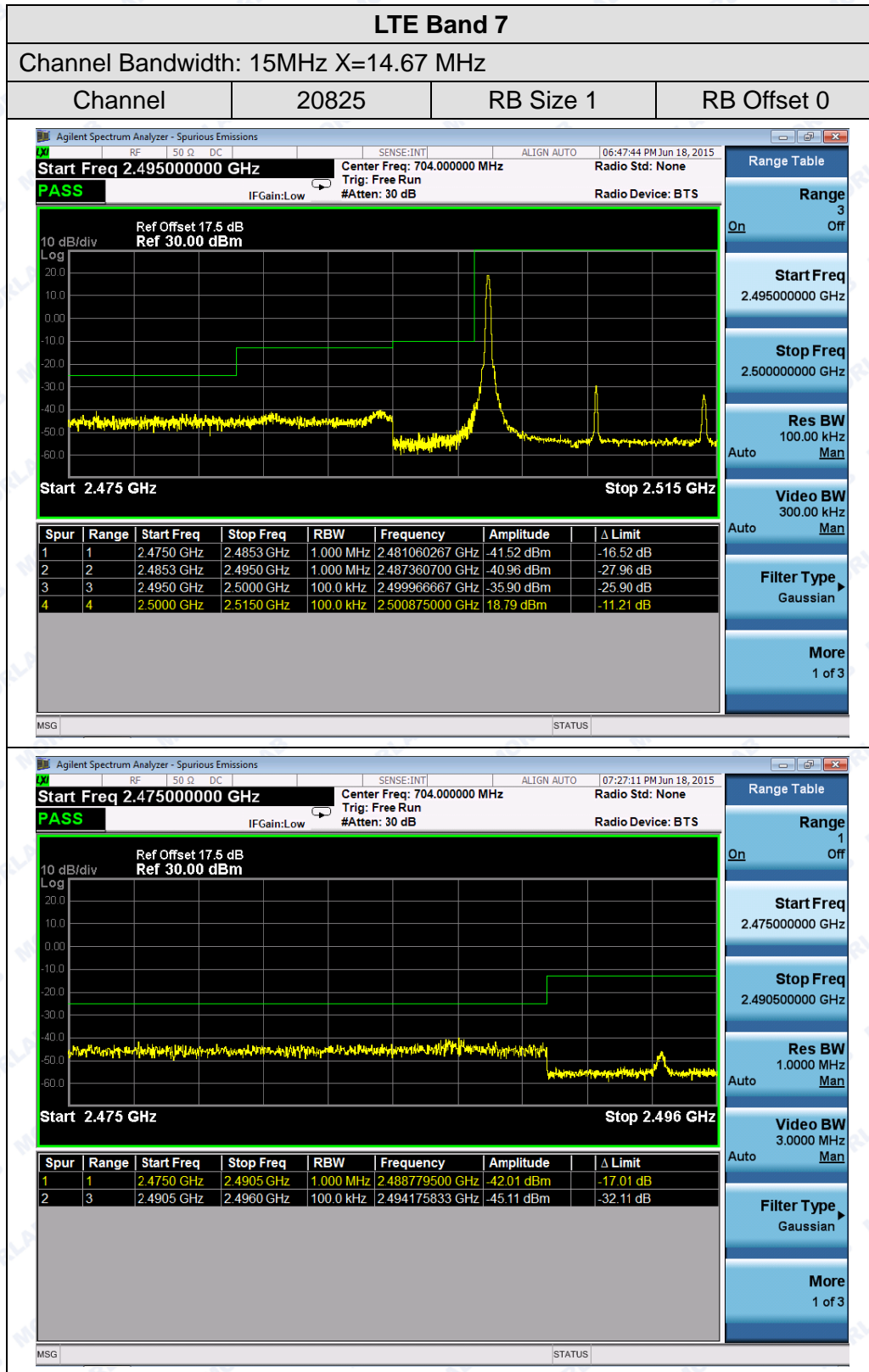


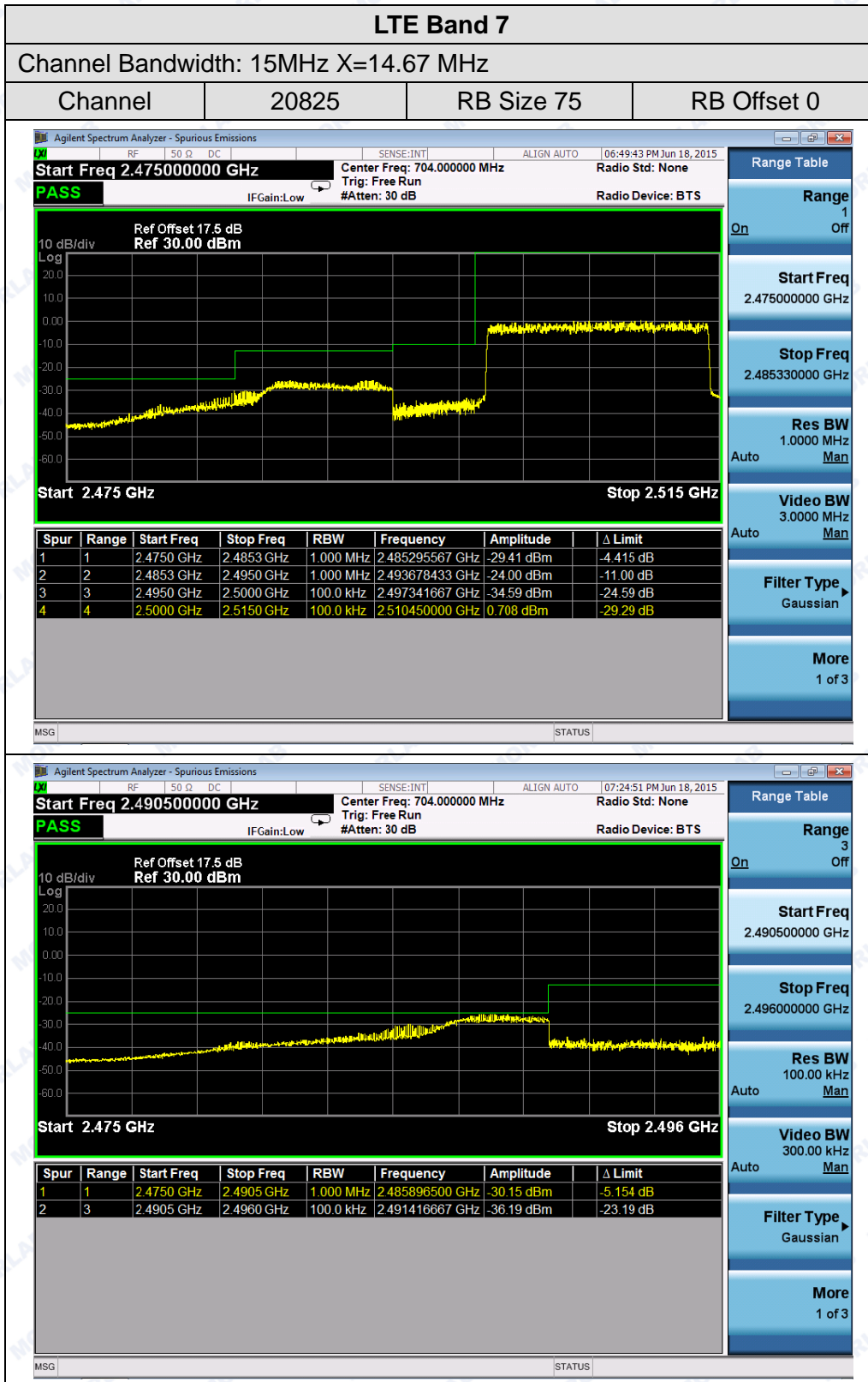










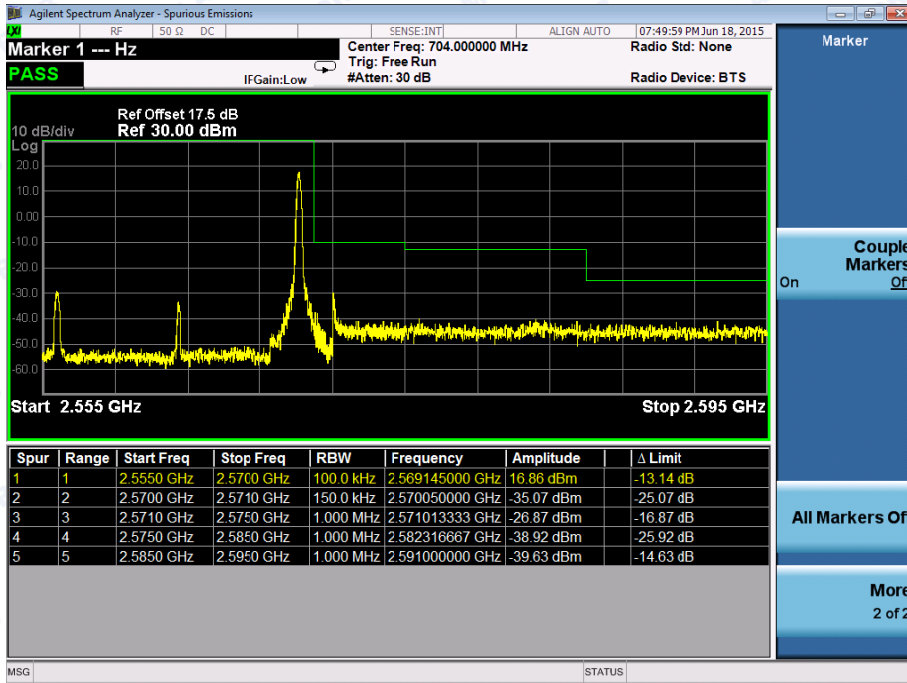




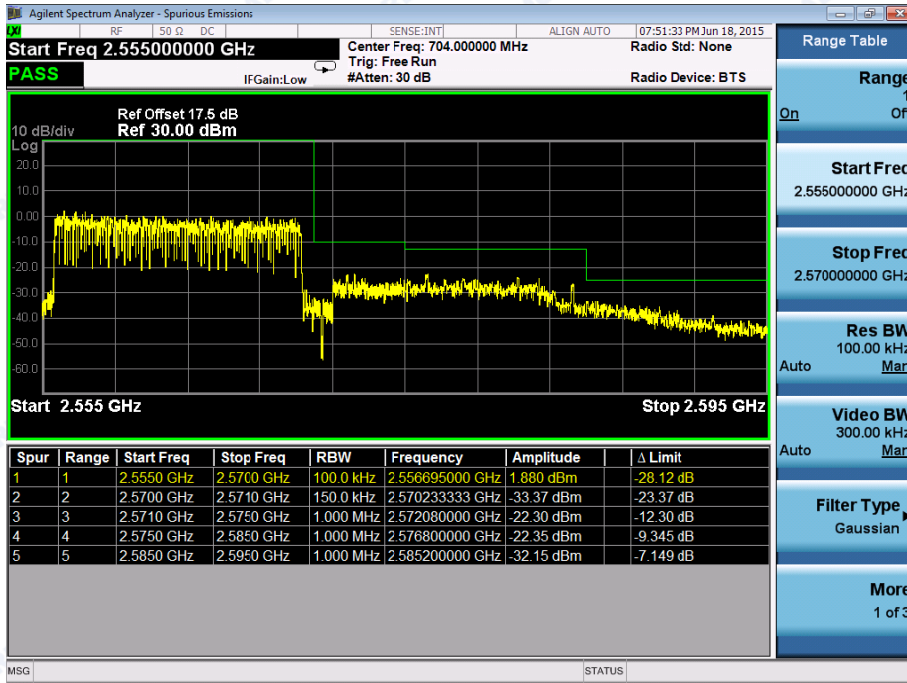
LTE Band 7

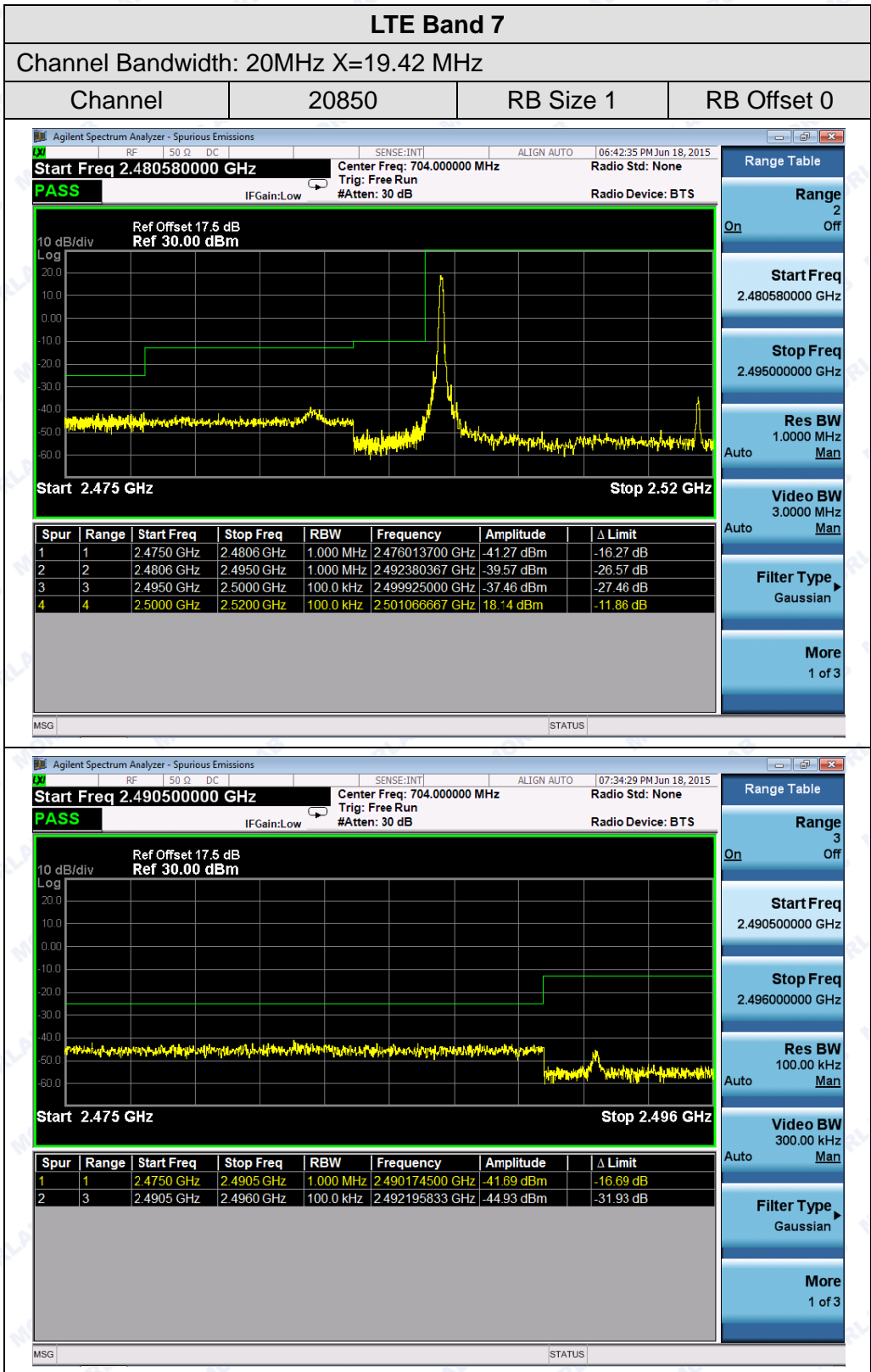
Channel Bandwidth: 15MHz X=14.80 MHz

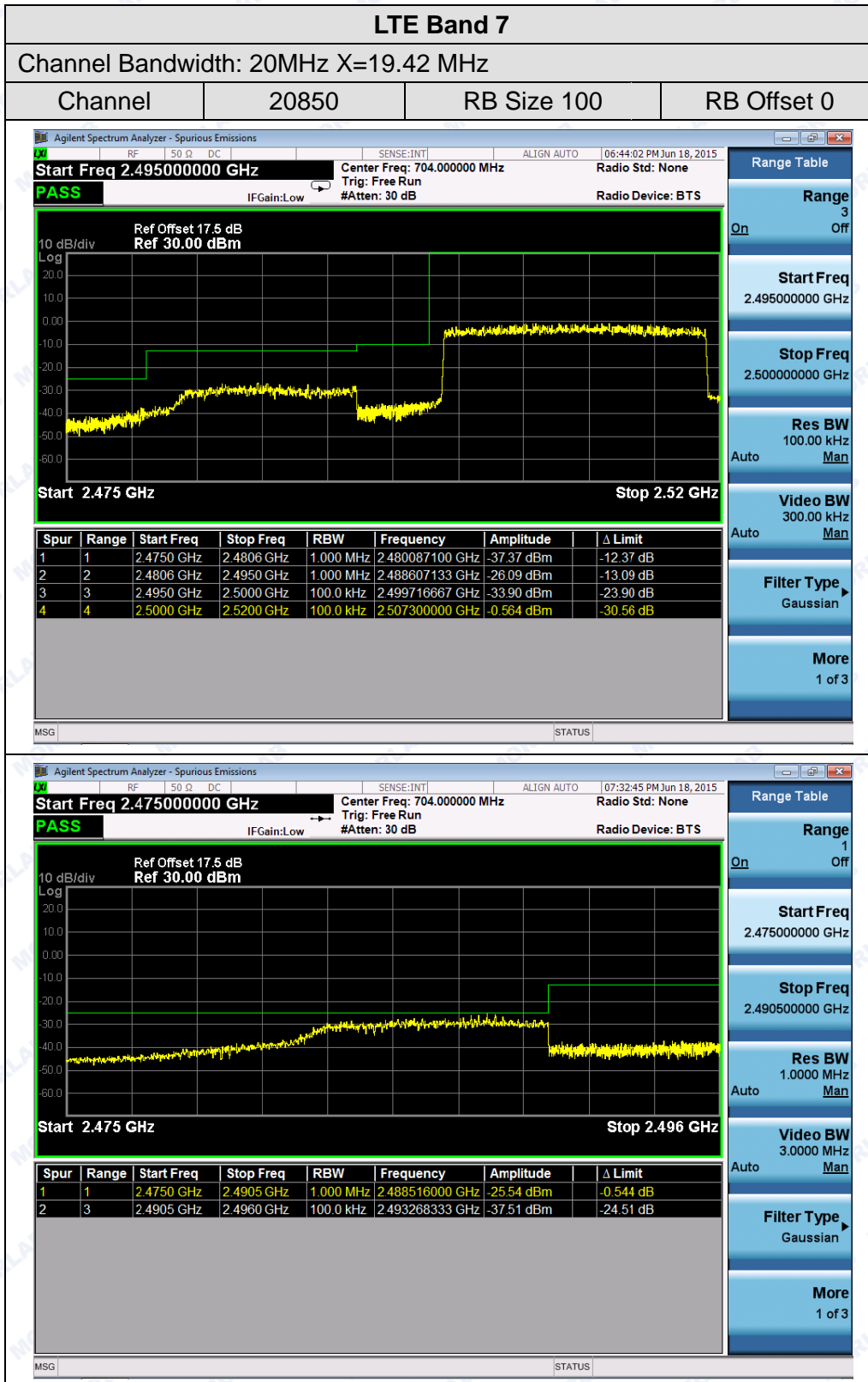
Channel	21375	RB Size 1	RB Offset 74
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Channel	21375	RB Size 75	RB Offset 0
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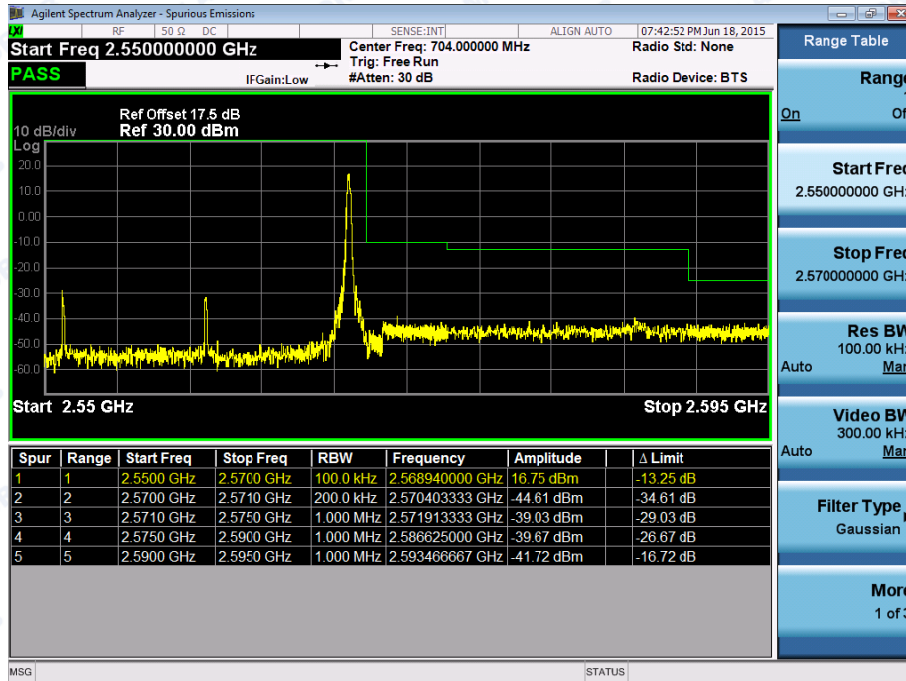




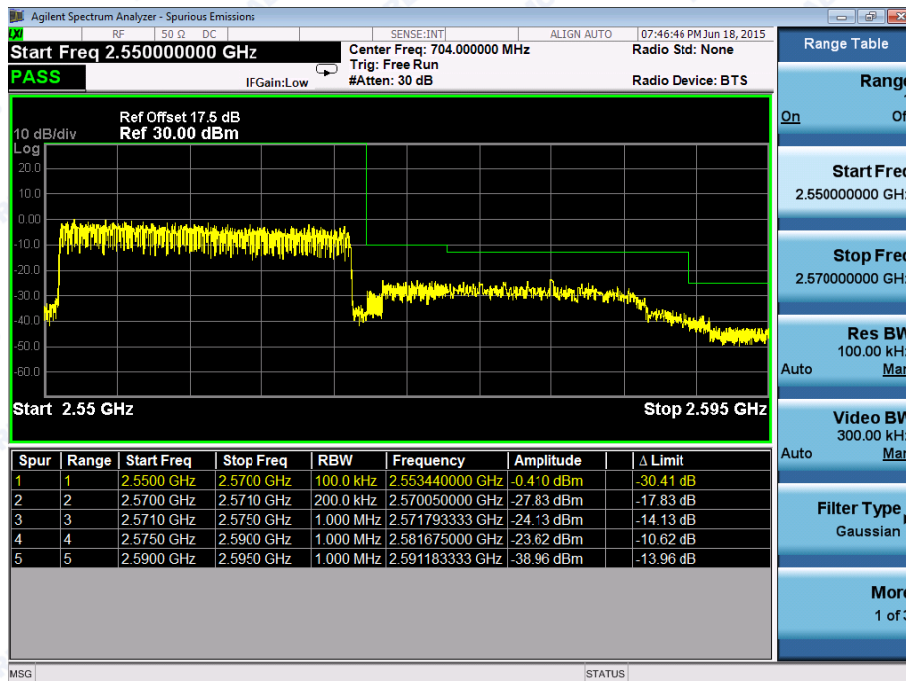
LTE Band 7

Channel Bandwidth: 20MHz X=19.61 MHz

Channel	21350	RB Size 1	RB Offset 99
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Channel	21350	RB Size 100	RB Offset 0
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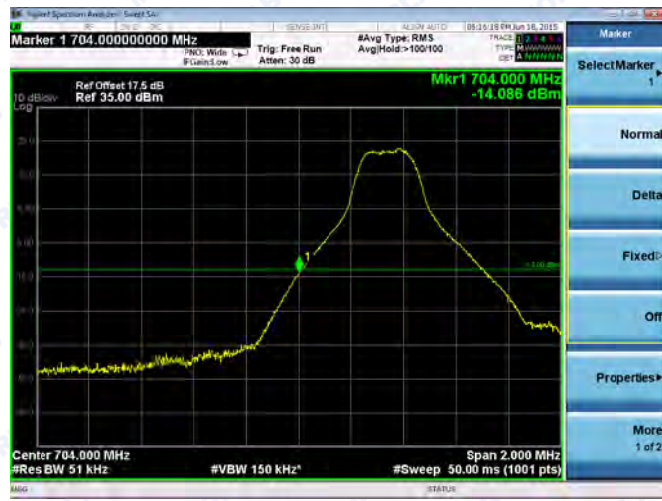




LTE Band 17

Channel Bandwidth: 5MHz

Channel	23755	RB Size 1	RB Offset 0	Channel	23755	RB Size 25	RB Offset 0
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Channel Bandwidth: 5MHz

Channel	23825	RB Size 1	RB Offset 24	Channel	23825	RB Size 25	RB Offset 0
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LTE Band 17

Channel Bandwidth: 10MHz

Channel	23780	RB Size 1	RB Offset 0	Channel	23780	RB Size 50	RB Offset 0
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Channel Bandwidth: 10MHz

Channel	23800	RB Size 1	RB Offset 49	Channel	23800	RB Size 50	RB Offset 0
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2.7 Transmitter Radiated Power (EIRP/ERP)

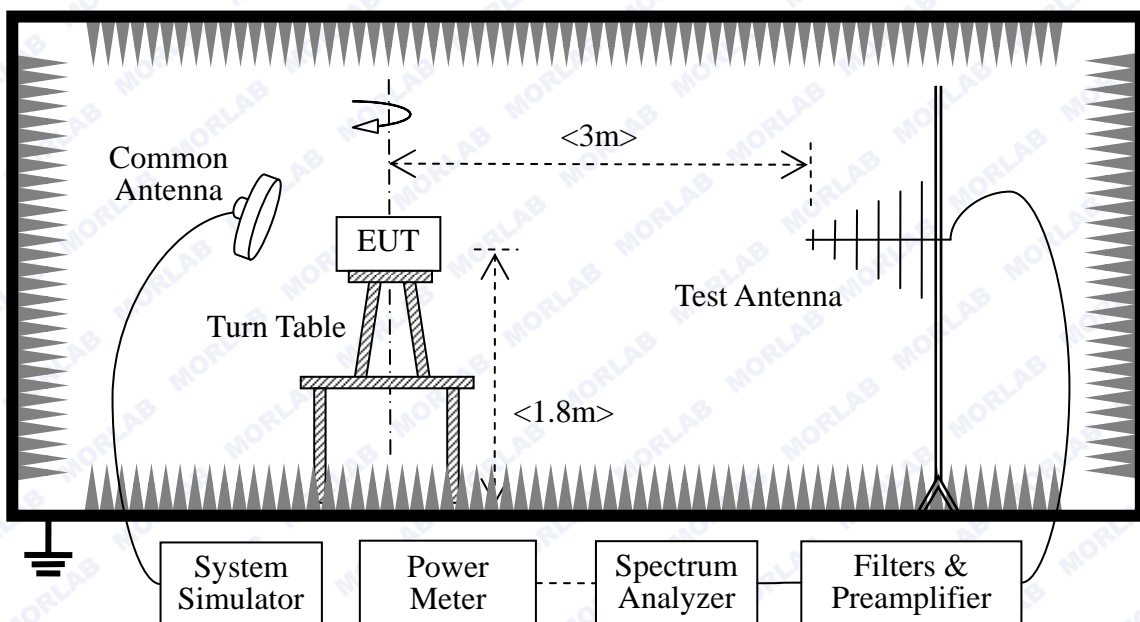
2.7.1 Requirement

According to FCC section 27.50 (d), fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat EIRP.

Portable stations (hand-held devices) operating in the 704-716MHz band are limited to 3watts ERP.

2.7.2 Test Description

Test Setup:



The EUT, which is powered by the PC, is located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

The Test Antenna is a Bi-Log one (used for 30MHz to 1GHz) or a Horn one (used for above 3GHz), and it's located at the same height as the EUT. The Filters consists of Notch Filters and High Pass Filter.



Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Rohde& Schwarz	CMW500	1201.0002k50/ 124534/wk	2015.02.26	2016.02.25
Spectrum Analyzer	Rohde& Schwarz	FSL	10246	2015.02.26	2016.02.25
Spectrum Analyzer	Agilent	E4445A	MY44200685	2015.02.26	2016.02.25
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2015.02.26	2016.02.25
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2015.02.26	2016.02.25
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2015.02.26	2016.02.25

2.7.3 Test Result

The EUT was verified under all configurations (RB size and offset) and the worst case radiated power reported for each modulation/channel bandwidth.

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested.

The substitution corrections are obtained as described below:

$$A_{\text{SUBST}} = P_{\text{SUBST_TX}} - P_{\text{SUBST_RX}} - L_{\text{SUBST_CABLES}} + G_{\text{SUBST_TX_ANT}}$$

$$A_{\text{TOT}} = L_{\text{CABLES}} + A_{\text{SUBST}}$$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

$P_{\text{SUBST_TX}}$ is signal generator level,

$P_{\text{SUBST_RX}}$ is receiver level,

$L_{\text{SUBST_CABLES}}$ is cable losses including TX cable,

$G_{\text{SUBST_TX_ANT}}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of A_{TOT} .



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 4	20MHz	L 20050	1720.0	QPSK	1	0	22.82
					100	0	21.43
				16-QAM	1	0	22.13
					100	0	20.86
		M 20175	1732.5	QPSK	1	0	22.46
					100	0	21.37
				16-QAM	1	0	21.89
					100	0	20.44
		H 20300	1745.0	QPSK	1	0	22.38
					100	0	21.61
				16-QAM	1	0	21.75
					100	0	20.82
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 4	15MHz	L 20025	1717.5	QPSK	1	0	22.78
					75	0	21.22
				16-QAM	1	0	21.92
					75	0	20.39
		M 20175	1732.5	QPSK	1	0	22.55
					75	0	21.29
				16-QAM	1	0	21.42
					75	0	20.53
		H 20325	1747.5	QPSK	1	0	22.68
					75	0	21.49
				16-QAM	1	0	21.63
					75	0	20.72
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 4	10MHz	L 20000	1715.0	QPSK	1	0	22.79
					50	0	21.57
				16-QAM	1	0	22.55
					50	0	20.36
		M 20175	1732.5	QPSK	1	0	22.06
					50	0	21.11
				16-QAM	1	0	21.41
					50	0	20.06
		H 20350	1750.0	QPSK	1	0	21.82
					50	0	21.24
				16-QAM	1	0	20.56
					50	0	19.96



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 4	5MHz	L 19975	1712.5	QPSK	1	0	22.83
					25	0	21.87
				16-QAM	1	0	22.08
					25	0	20.69
		M 20175	1732.5	QPSK	1	0	21.77
					25	0	21.03
				16-QAM	1	0	20.86
					25	0	20.10
		H 20375	1752.5	QPSK	1	0	21.05
					25	0	20.13
				16-QAM	1	0	19.93
					25	0	19.52
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 4	3MHz	L 19965	1711.5	QPSK	1	0	22.81
					15	0	21.55
				16-QAM	1	0	21.71
					15	0	20.65
		M 20175	1732.5	QPSK	1	0	20.82
					15	0	20.38
				16-QAM	1	0	20.48
					15	0	19.63
		H 20385	1753.5	QPSK	1	0	20.75
					15	0	19.93
				16-QAM	1	0	19.77
					15	0	19.07
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 4	1.4MHz	L 19957	1710.7	QPSK	1	0	22.98
					6	0	22.03
				16-QAM	1	0	22.42
					6	0	21.12
		M 20175	1732.5	QPSK	1	0	22.33
					6	0	21.58
				16-QAM	1	0	21.69
					6	0	20.73
		H 20393	1754.3	QPSK	1	0	21.82
					6	0	20.67
				16-QAM	1	0	20.24
					6	0	19.82



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 7	20MHz	L 20850	2510	QPSK	1	0	22.52
					100	0	22.05
				16-QAM	1	0	21.85
					100	0	20.96
		M 21100	2535	QPSK	1	0	21.76
					100	0	21.82
				16-QAM	1	0	21.11
					100	0	20.82
		H 21350	2560	QPSK	1	0	22.62
					100	0	21.91
				16-QAM	1	0	22.77
					100	0	20.82
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 7	15MHz	L 20825	2507.5	QPSK	1	0	22.96
					75	0	22.13
				16-QAM	1	0	22.86
					75	0	21.35
		M 21100	2535	QPSK	1	0	21.82
					75	0	21.94
				16-QAM	1	0	21.06
					75	0	20.85
		H 21375	2562.5	QPSK	1	0	22.42
					75	0	21.37
				16-QAM	1	0	21.19
					75	0	20.67
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 7	10MHz	L 20800	2505	QPSK	1	0	22.69
					50	0	22.05
				16-QAM	1	0	22.34
					50	0	21.26
		M 21100	2535	QPSK	1	0	22.27
					50	0	21.86
				16-QAM	1	0	21.81
					50	0	20.93
		H 21400	2565	QPSK	1	0	21.82
					50	0	21.15
				16-QAM	1	0	20.79
					50	0	20.34



Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 7	5MHz	L 20775	2502.5	QPSK	1	0	22.81
					25	0	22.00
				16-QAM	1	0	22.41
					25	0	20.83
		M 21100	2535	QPSK	1	0	22.13
					25	0	20.96
				16-QAM	1	0	21.16
					25	0	20.86
		H 21425	2567.5	QPSK	1	0	21.71
					25	0	21.32
				16-QAM	1	0	21.58
					25	0	20.46

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 17	10MHz	L 23780	709	QPSK	1	0	23.86
					50	0	22.89
				16-QAM	1	0	23.24
					50	0	22.21
		M 23790	710	QPSK	1	0	23.92
					50	0	22.95
				16-QAM	1	0	23.76
					50	0	22.06
		H 23800	711	QPSK	1	0	23.92
					50	0	22.96
				16-QAM	1	0	22.52
					50	0	22.13

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP (dBm)
					RB Size	RB Offset	
LTE Band 17	5MHz	L 23755	706.5	QPSK	1	0	23.86
					25	0	22.91
				16-QAM	1	0	23.75
					25	0	22.17
		M 23790	710	QPSK	1	0	23.81
					25	0	22.96
				16-QAM	1	0	22.84
					25	0	22.20
		H 23825	713.5	QPSK	1	0	23.67
					25	0	22.93
				16-QAM	1	0	23.52
					25	0	22.10



2.8 Radiated Spurious Emissions

2.8.1 Requirement

According to FCC section 2.1053 and section 27.53(g), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43+10*\log(P)$ dB. This calculated to be -13dBm.

2.8.2 Test Description

See section 2.7.2 of this report.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.8.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

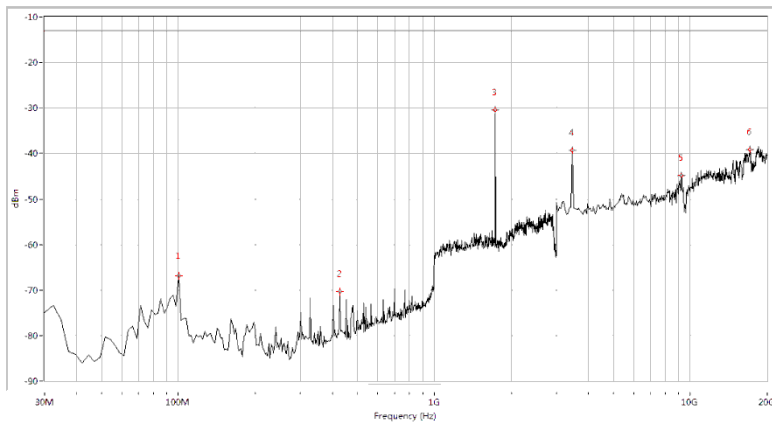
Test Plots for the Whole Measurement Frequency Range:

Note1: the power of the EUT transmitting frequency should be ignored.

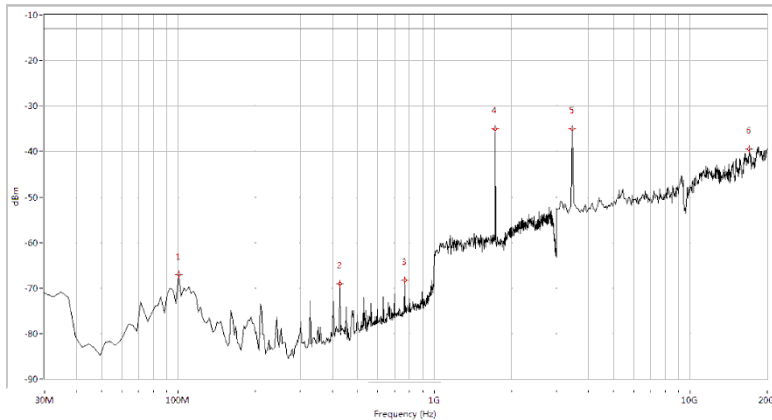
Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.



LTE Band 4 1.4MHz BW, Mid Channel, QPSK



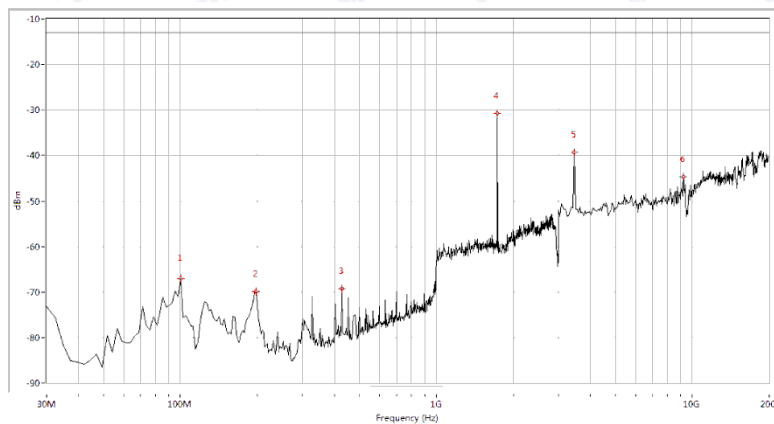
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-66.94	-13.0	53.9	Horizontal	PASS
426.708	-70.29	-13.0	57.3	Horizontal	PASS
1733.167	-30.39	-13.0	17.4	Horizontal	N.A
3466.334	-39.32	-13.0	26.3	Horizontal	PASS
9231.920	-44.93	-13.0	31.9	Horizontal	PASS
17159.601	-39.22	-13.0	26.2	Horizontal	PASS



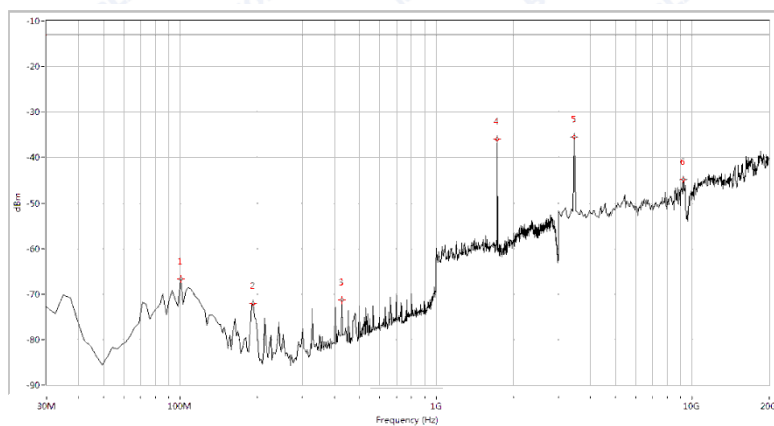
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-66.97	-13.0	54.0	Vertical	PASS
426.708	-69.03	-13.0	56.0	Vertical	PASS
765.362	-68.29	-13.0	55.3	Vertical	PASS
1733.167	-34.95	-13.0	22.0	Vertical	N.A
3466.334	-34.98	-13.0	22.0	Vertical	PASS
16947.631	-39.53	-13.0	26.5	Vertical	PASS



LTE Band 4 1.4MHz BW, Mid Channel, 16QAM



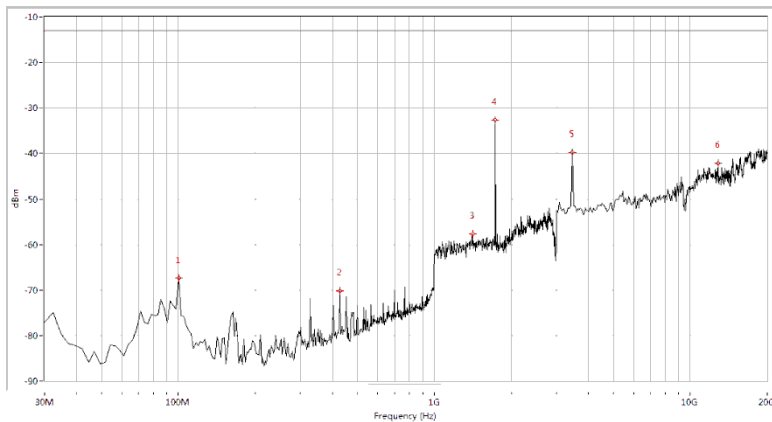
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-67.06	-13.0	54.1	Horizontal	PASS
196.908	-69.80	-13.0	56.8	Horizontal	PASS
426.708	-69.32	-13.0	56.3	Horizontal	PASS
1733.167	-30.75	-13.0	17.7	Horizontal	N.A
3466.334	-39.38	-13.0	26.4	Horizontal	PASS
9231.920	-44.65	-13.0	31.6	Horizontal	PASS



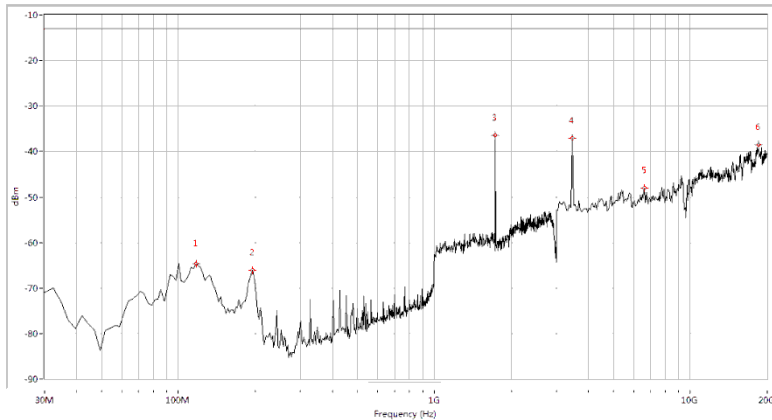
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-66.68	-13.0	53.7	Vertical	PASS
192.070	-72.16	-13.0	59.2	Vertical	PASS
426.708	-71.23	-13.0	58.2	Vertical	PASS
1733.167	-36.02	-13.0	23.0	Vertical	N.A
3466.334	-35.47	-13.0	22.5	Vertical	PASS
9231.920	-44.82	-13.0	31.8	Vertical	PASS



LTE Band 4 3MHz BW, Mid Channel, QPSK



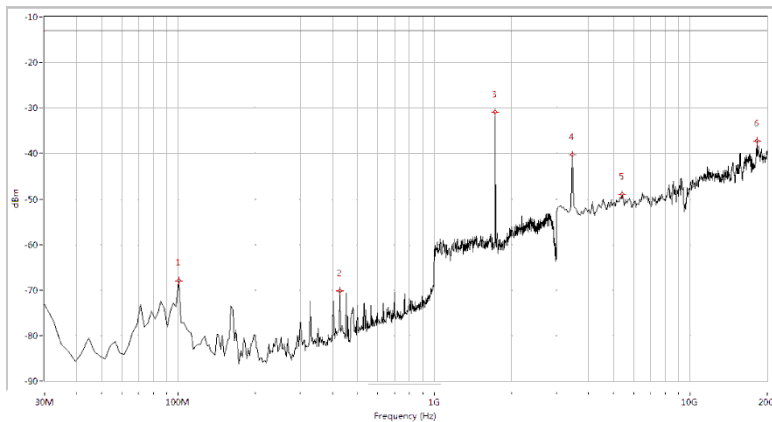
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-67.29	-13.0	54.3	Horizontal	PASS
426.708	-70.19	-13.0	57.2	Horizontal	PASS
1408.978	-57.76	-13.0	44.8	Horizontal	PASS
1728.180	-32.59	-13.0	19.6	Horizontal	N.A
3466.334	-39.83	-13.0	26.8	Horizontal	PASS
12835.411	-42.15	-13.0	29.1	Horizontal	PASS



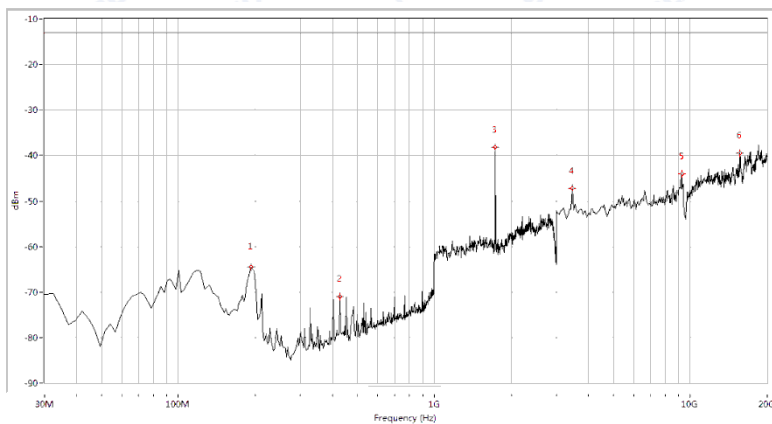
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
117.082	-64.70	-13.0	51.7	Vertical	PASS
194.489	-66.07	-13.0	53.1	Vertical	PASS
1728.180	-36.45	-13.0	23.4	Vertical	N.A
3466.334	-37.14	-13.0	24.1	Vertical	PASS
6645.885	-47.94	-13.0	34.9	Vertical	PASS
18516.209	-38.48	-13.0	25.5	Vertical	PASS



LTE Band 4 3MHz BW, Mid Channel, 16QAM



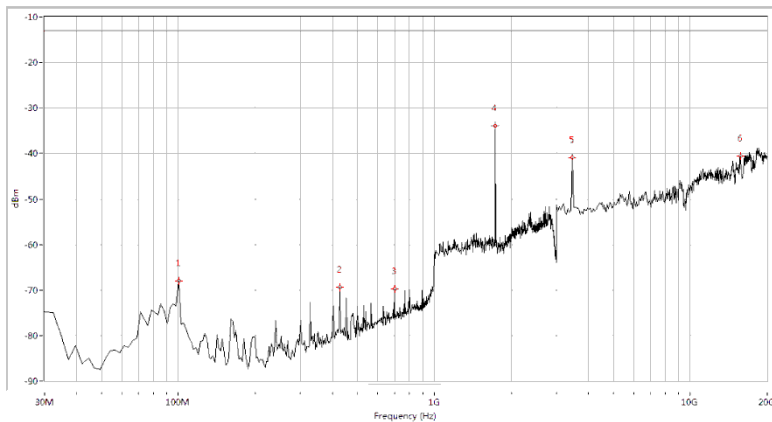
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-67.98	-13.0	55.0	Horizontal	PASS
426.708	-70.14	-13.0	57.1	Horizontal	PASS
1728.180	-30.92	-13.0	17.9	Horizontal	N.A
3466.334	-40.22	-13.0	27.2	Horizontal	PASS
5416.459	-48.98	-13.0	36.0	Horizontal	PASS
18219.451	-37.18	-13.0	24.2	Horizontal	PASS



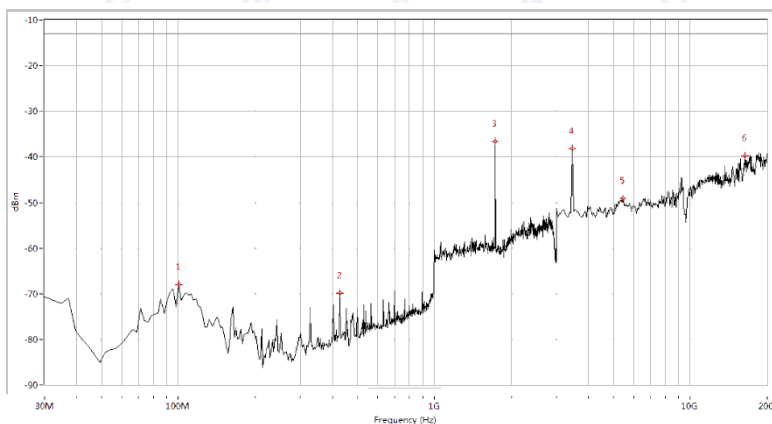
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
192.070	-64.51	-13.0	51.5	Vertical	PASS
426.708	-71.04	-13.0	58.0	Vertical	PASS
1728.180	-38.21	-13.0	25.2	Vertical	N.A
3466.334	-47.29	-13.0	34.3	Vertical	PASS
9274.314	-44.00	-13.0	31.0	Vertical	PASS
15675.810	-39.42	-13.0	26.4	Vertical	PASS



LTE Band 4 5MHz BW, Mid Channel, QPSK



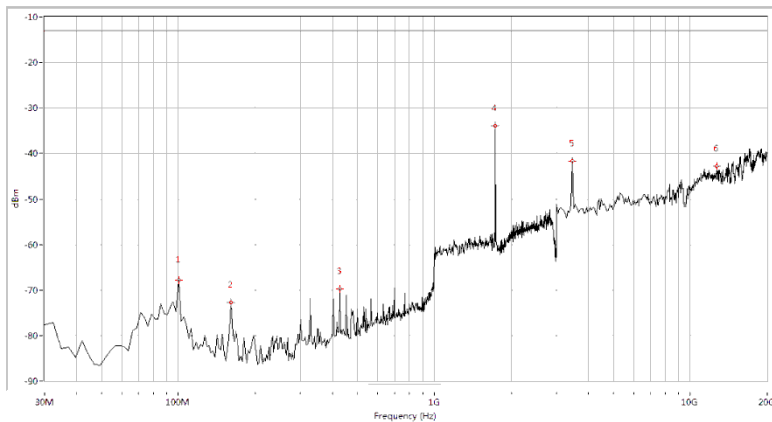
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-67.99	-13.0	55.0	Horizontal	PASS
426.708	-69.36	-13.0	56.4	Horizontal	PASS
700.050	-69.71	-13.0	56.7	Horizontal	PASS
1728.180	-33.91	-13.0	20.9	Horizontal	N.A
3466.334	-40.86	-13.0	27.9	Horizontal	PASS
15718.204	-40.55	-13.0	27.6	Horizontal	PASS



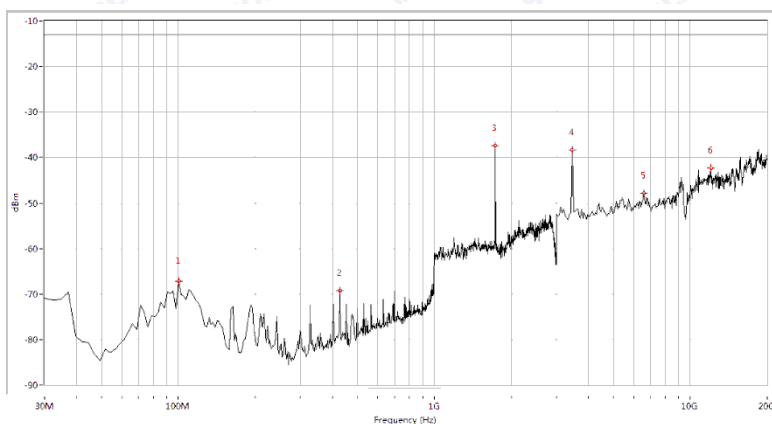
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-68.02	-13.0	55.0	Vertical	PASS
426.708	-69.92	-13.0	56.9	Vertical	PASS
1728.180	-36.65	-13.0	23.6	Vertical	N.A
3466.334	-38.15	-13.0	25.2	Vertical	PASS
5458.853	-49.11	-13.0	36.1	Vertical	PASS
16396.509	-39.78	-13.0	26.8	Vertical	PASS



LTE Band 4 5MHz BW, Mid Channel, 16QAM



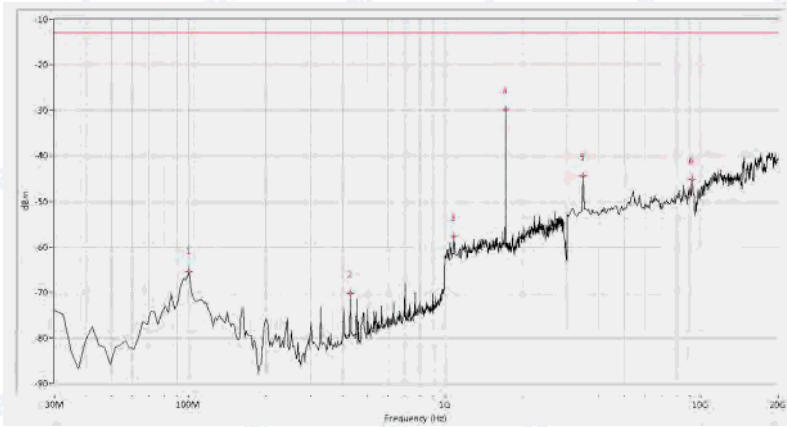
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-67.75	-13.0	54.7	Horizontal	PASS
160.623	-72.78	-13.0	59.8	Horizontal	PASS
426.708	-69.78	-13.0	56.8	Horizontal	PASS
1728.180	-33.95	-13.0	20.9	Horizontal	N.A
3466.334	-41.70	-13.0	28.7	Horizontal	PASS
12708.229	-42.86	-13.0	29.9	Horizontal	PASS



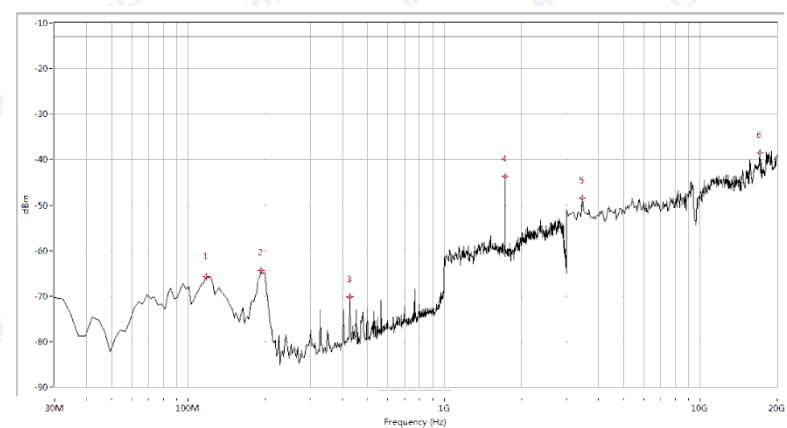
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-67.20	-13.0	54.2	Vertical	PASS
426.708	-69.28	-13.0	56.3	Vertical	PASS
1728.180	-37.43	-13.0	24.4	Vertical	N.A
3466.334	-38.32	-13.0	25.3	Vertical	PASS
6603.491	-47.88	-13.0	34.9	Vertical	PASS
12029.925	-42.31	-13.0	29.3	Vertical	PASS



LTE Band 4 10MHz BW, Mid Channel, QPSK



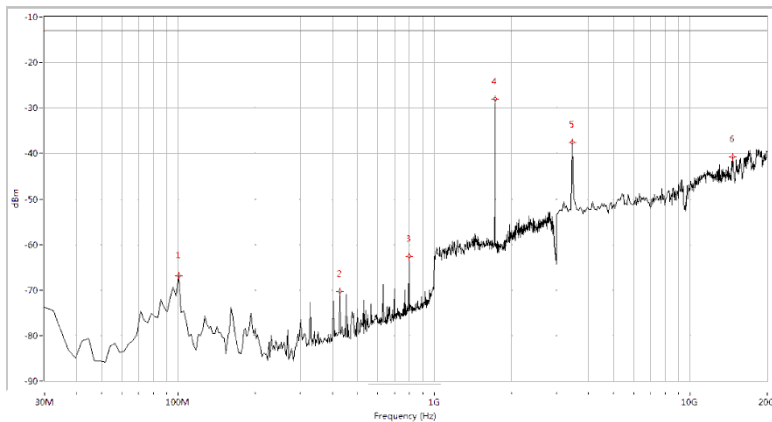
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-65.44	-13.0	52.4	Horizontal	PASS
426.708	-70.17	-13.0	57.2	Horizontal	PASS
1084.788	-57.61	-13.0	44.6	Horizontal	PASS
1728.180	-29.75	-13.0	16.7	Horizontal	N.A
3466.334	-44.45	-13.0	31.5	Horizontal	PASS
9231.920	-45.21	-13.0	32.2	Horizontal	PASS



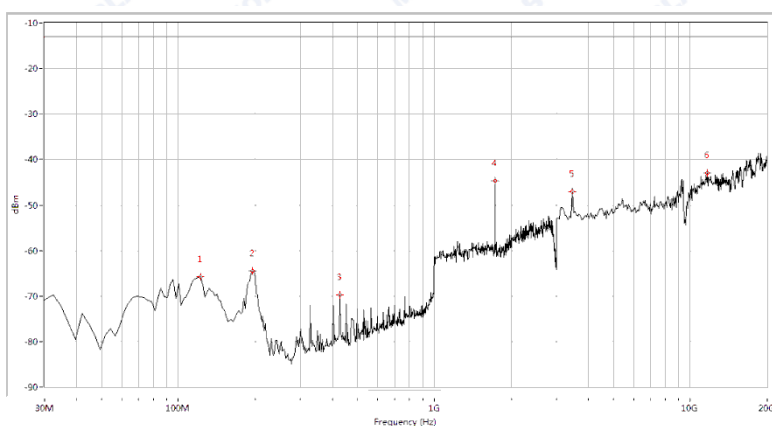
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
117.082	-65.84	-13.0	52.8	Vertical	PASS
192.070	-64.37	-13.0	51.4	Vertical	PASS
426.708	-70.12	-13.0	57.1	Vertical	PASS
1728.180	-43.79	-13.0	30.8	Vertical	N.A
3466.334	-48.43	-13.0	35.4	Vertical	PASS
17159.601	-38.57	-13.0	25.6	Vertical	PASS



LTE Band 4 10MHz BW, Mid Channel, 16QAM



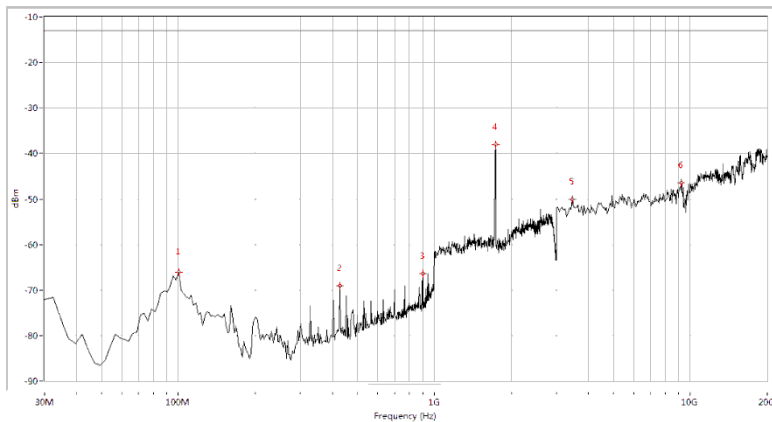
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-66.81	-13.0	53.8	Horizontal	PASS
426.708	-70.39	-13.0	57.4	Horizontal	PASS
796.808	-62.59	-13.0	49.6	Horizontal	PASS
1728.180	-28.10	-13.0	15.1	Horizontal	N.A
3466.334	-37.50	-13.0	24.5	Horizontal	PASS
14615.960	-40.80	-13.0	27.8	Horizontal	PASS



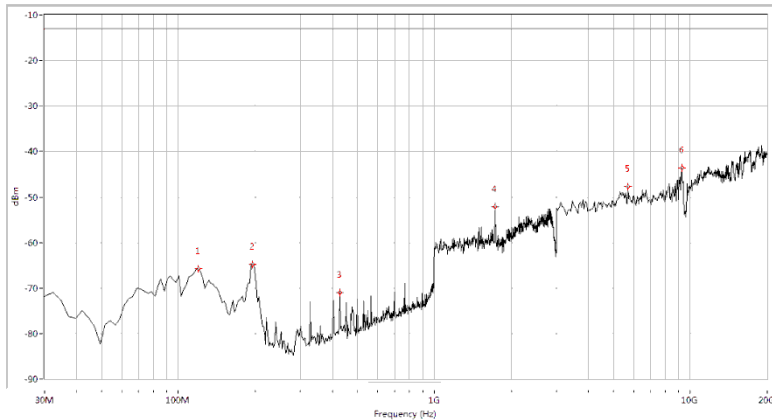
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
121.920	-65.81	-13.0	52.8	Vertical	PASS
194.489	-64.50	-13.0	51.5	Vertical	PASS
426.708	-69.78	-13.0	56.8	Vertical	PASS
1728.180	-44.76	-13.0	31.8	Vertical	N.A
3466.334	-47.02	-13.0	34.0	Vertical	PASS
11648.379	-42.97	-13.0	30.0	Vertical	PASS



LTE Band 4 15MHz BW, Mid Channel, QPSK



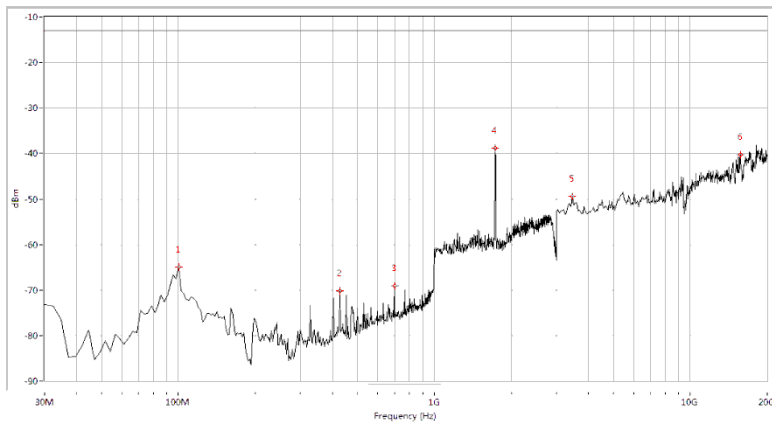
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-66.03	-13.0	53.0	Horizontal	PASS
426.708	-69.03	-13.0	56.0	Horizontal	PASS
900.823	-66.37	-13.0	53.4	Horizontal	PASS
1738.155	-38.01	-13.0	25.0	Horizontal	N.A
3466.334	-50.09	-13.0	37.1	Horizontal	PASS
9231.920	-46.41	-13.0	33.4	Horizontal	PASS



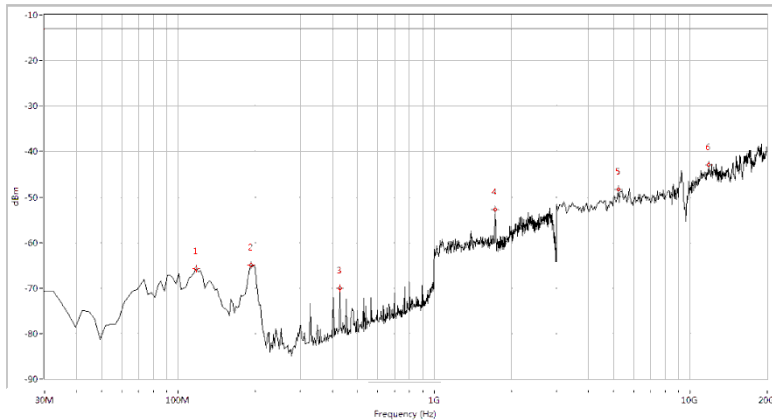
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
119.501	-65.80	-13.0	52.8	Vertical	PASS
194.489	-64.83	-13.0	51.8	Vertical	PASS
426.708	-71.03	-13.0	58.0	Vertical	PASS
1728.180	-52.20	-13.0	39.2	Vertical	N.A
5713.217	-47.76	-13.0	34.8	Vertical	PASS
9274.314	-43.62	-13.0	30.6	Vertical	PASS



LTE Band 4 15MHz BW, Mid Channel, 16QAM



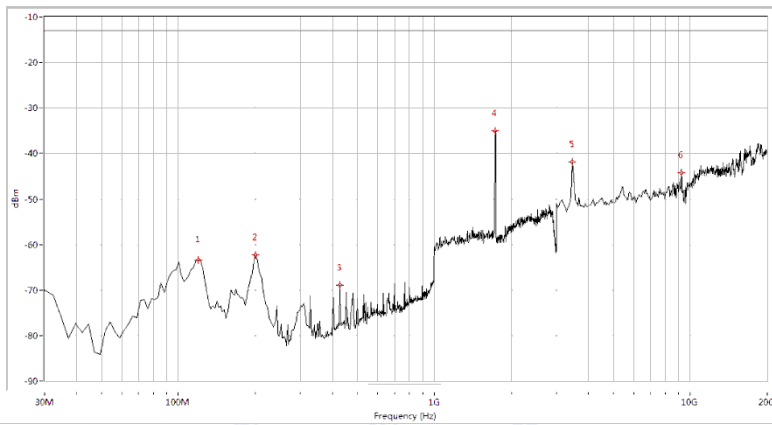
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-64.90	-13.0	51.9	Horizontal	PASS
426.708	-70.25	-13.0	57.2	Horizontal	PASS
700.050	-69.03	-13.0	56.0	Horizontal	PASS
1728.180	-38.90	-13.0	25.9	Horizontal	N.A
3466.334	-49.48	-13.0	36.5	Horizontal	PASS
15718.204	-40.31	-13.0	27.3	Horizontal	PASS



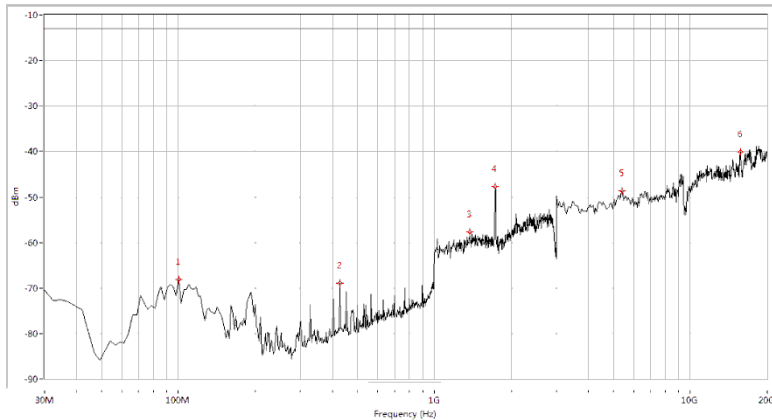
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
117.082	-65.69	-13.0	52.7	Vertical	PASS
192.070	-64.93	-13.0	51.9	Vertical	PASS
426.708	-70.09	-13.0	57.1	Vertical	PASS
1723.192	-52.78	-13.0	39.8	Vertical	N.A
5246.883	-48.30	-13.0	35.3	Vertical	PASS
11817.955	-42.96	-13.0	30.0	Vertical	PASS



LTE Band 4 20MHz BW, Mid Channel, QPSK



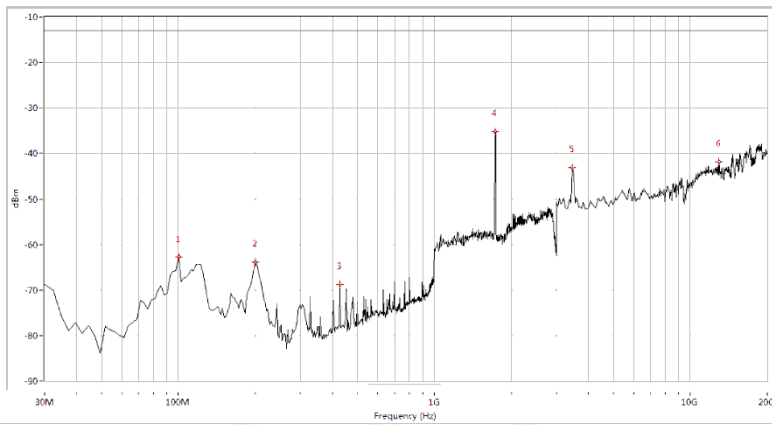
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
119.501	-63.46	-13.0	50.5	Horizontal	PASS
199.327	-62.33	-13.0	49.3	Horizontal	PASS
426.708	-68.99	-13.0	56.0	Horizontal	PASS
1728.180	-35.04	-13.0	22.0	Horizontal	N.A
3466.334	-41.84	-13.0	28.8	Horizontal	PASS
9231.920	-44.26	-13.0	31.3	Horizontal	PASS



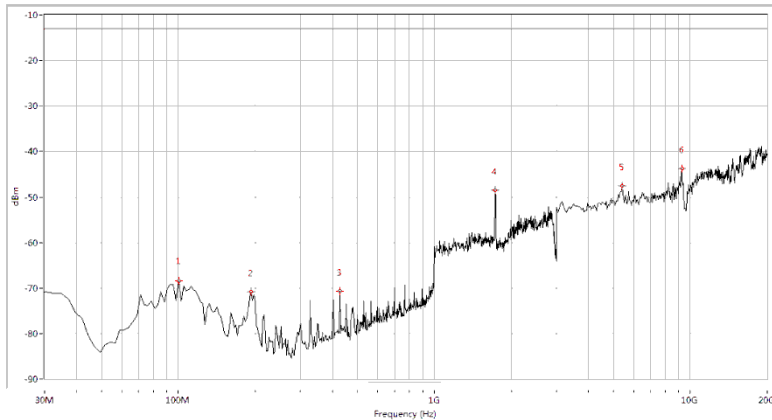
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-68.15	-13.0	55.1	Vertical	PASS
426.708	-68.99	-13.0	56.0	Vertical	PASS
1374.065	-57.69	-13.0	44.7	Vertical	PASS
1723.192	-47.65	-13.0	34.7	Vertical	N.A
5416.459	-48.67	-13.0	35.7	Vertical	PASS
15718.204	-40.14	-13.0	27.1	Vertical	PASS



LTE Band 4 20MHz BW, Mid Channel, 16QAM



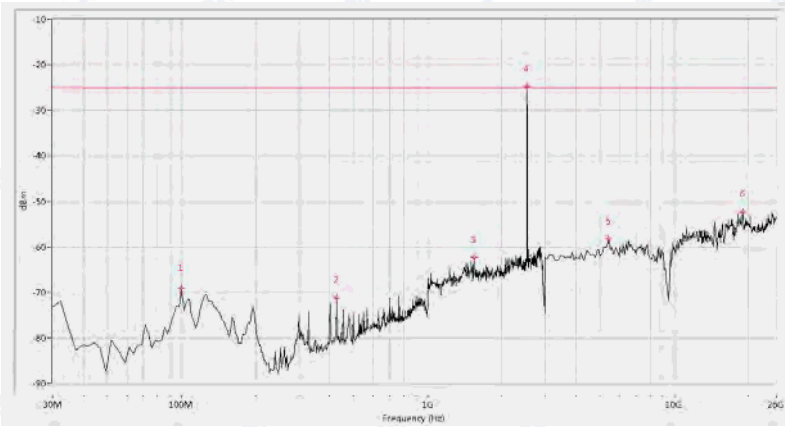
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-62.70	-13.0	49.7	Horizontal	PASS
199.327	-63.83	-13.0	50.8	Horizontal	PASS
426.708	-68.70	-13.0	55.7	Horizontal	PASS
1723.192	-35.12	-13.0	22.1	Horizontal	N.A
3466.334	-43.15	-13.0	30.1	Horizontal	PASS
12962.594	-41.91	-13.0	28.9	Horizontal	PASS



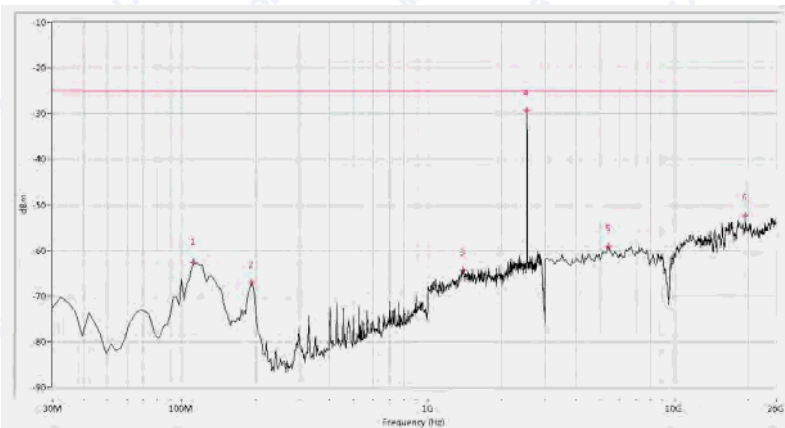
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-68.52	-13.0	55.5	Vertical	PASS
192.070	-70.77	-13.0	57.8	Vertical	PASS
426.708	-70.72	-13.0	57.7	Vertical	PASS
1733.167	-48.45	-13.0	35.4	Vertical	N.A
5416.459	-47.49	-13.0	34.5	Vertical	PASS
9274.314	-43.67	-13.0	30.7	Vertical	PASS



LTE Band 7 5MHz BW, Mid Channel, QPSK



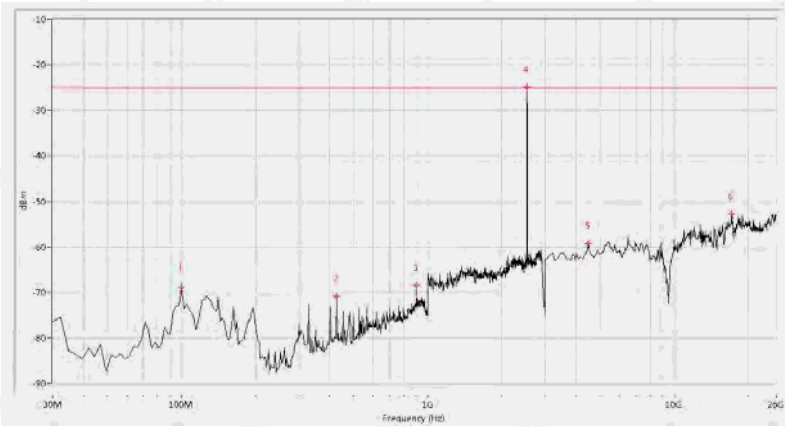
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-69.05	-25.0	44.1	Horizontal	PASS
426.708	-71.10	-25.0	46.1	Horizontal	PASS
1538.653	-62.32	-25.0	37.3	Horizontal	PASS
2531.172	-24.67	-25.0	-0.3	Horizontal	N.A
5408.978	-58.33	-25.0	33.3	Horizontal	PASS
19059.850	-52.29	-25.0	27.3	Horizontal	PASS



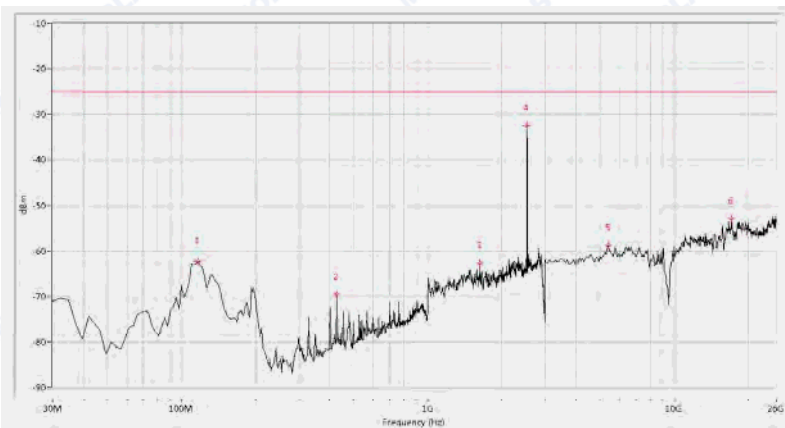
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
112.244	-62.62	-25.0	37.6	Vertical	PASS
192.070	-67.10	-25.0	42.1	Vertical	PASS
1389.027	-64.39	-25.0	39.4	Vertical	PASS
2531.172	-29.34	-25.0	4.3	Vertical	N.A
5408.978	-59.15	-25.0	34.2	Vertical	PASS
19461.347	-52.35	-25.0	27.4	Vertical	PASS



LTE Band 7 5MHz BW, Mid Channel, 16QAM



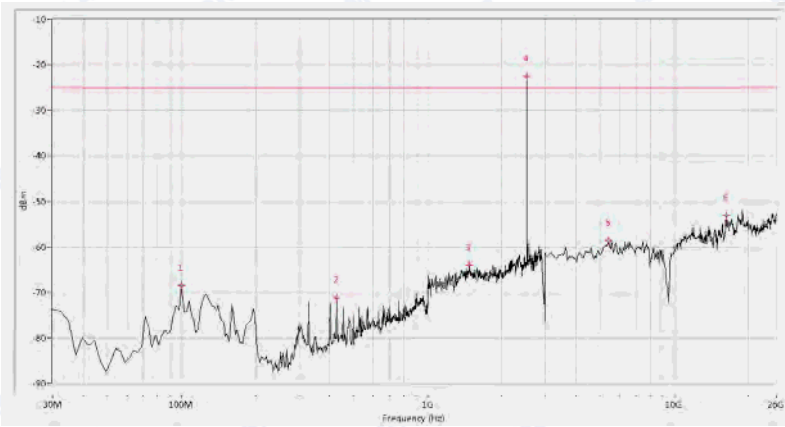
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-68.99	-25.0	44.0	Horizontal	PASS
426.708	-70.91	-25.0	45.9	Horizontal	PASS
898.404	-68.47	-25.0	43.5	Horizontal	PASS
2531.172	-24.97	-25.0	-0.0	Horizontal	N.A
4491.272	-59.34	-25.0	34.3	Horizontal	PASS
17109.726	-52.81	-25.0	27.8	Horizontal	PASS



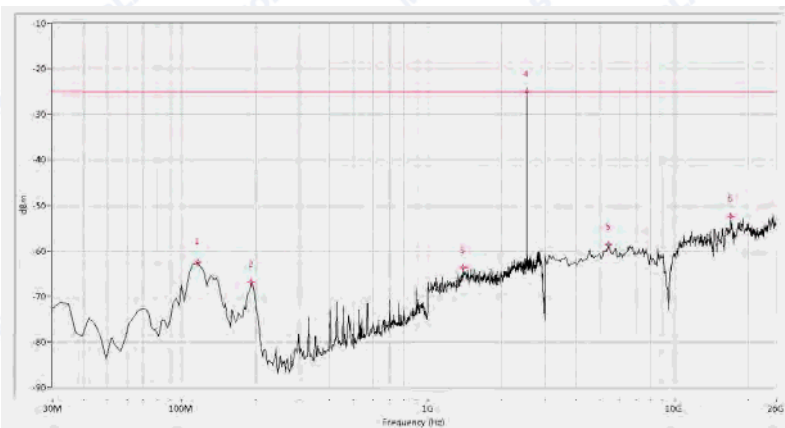
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
117.082	-62.26	-25.0	37.3	Vertical	PASS
426.708	-69.60	-25.0	44.6	Vertical	PASS
1628.429	-62.78	-25.0	37.8	Vertical	PASS
2531.172	-32.48	-25.0	7.5	Vertical	N.A
5408.978	-58.76	-25.0	33.8	Vertical	PASS
17109.726	-53.00	-25.0	28.0	Vertical	PASS



LTE Band 7 10MHz BW, Mid Channel, QPSK



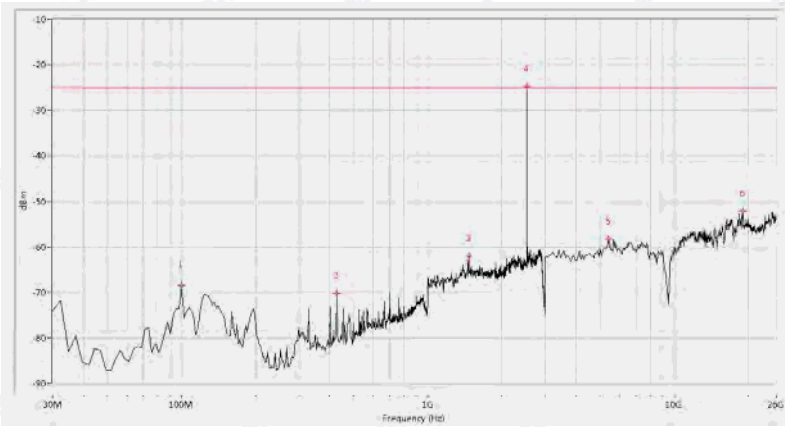
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-68.47	-25.0	43.5	Horizontal	PASS
426.708	-71.09	-25.0	46.1	Horizontal	PASS
1468.828	-64.05	-25.0	39.0	Horizontal	PASS
2526.185	-22.51	-25.0	-2.5	Horizontal	N.A
5408.978	-58.65	-25.0	33.7	Horizontal	PASS
16306.733	-53.11	-25.0	28.1	Horizontal	PASS



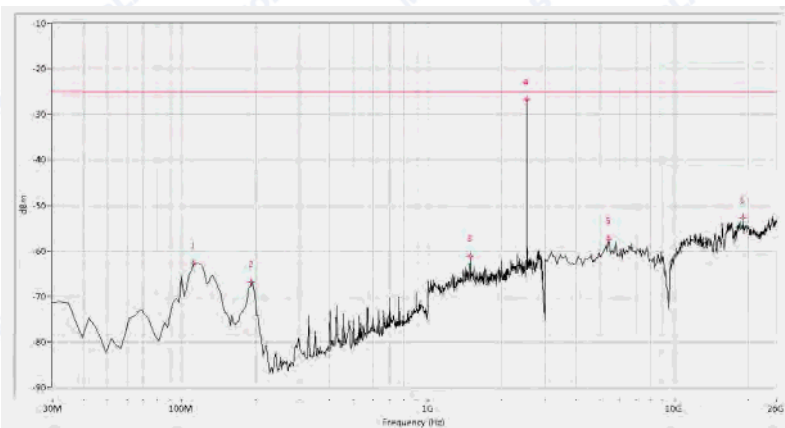
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
117.082	-62.39	-25.0	37.4	Vertical	PASS
192.070	-66.86	-25.0	41.9	Vertical	PASS
1394.015	-63.71	-25.0	38.7	Vertical	PASS
2526.185	-25.05	-25.0	0.0	Vertical	N.A
5408.978	-58.68	-25.0	33.7	Vertical	PASS
16995.012	-52.51	-25.0	27.5	Vertical	PASS



LTE Band 7 10MHz BW, Mid Channel, 16QAM



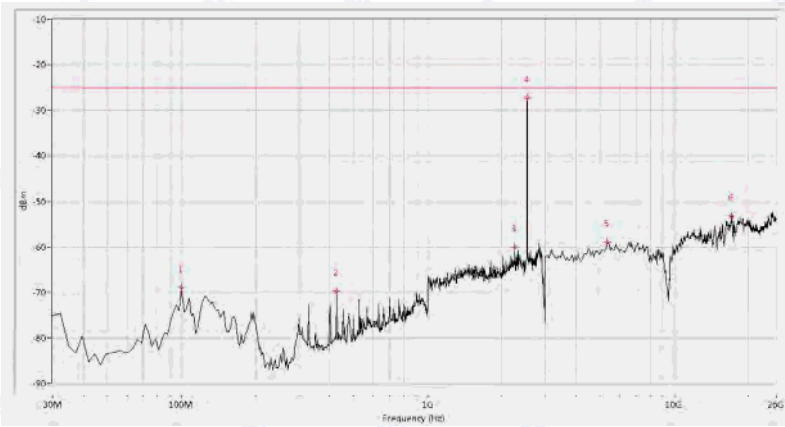
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-68.38	-25.0	43.4	Horizontal	PASS
426.708	-70.20	-25.0	45.2	Horizontal	PASS
1468.828	-62.00	-25.0	37.0	Horizontal	PASS
2526.185	-24.66	-25.0	-0.3	Horizontal	N.A
5408.978	-58.37	-25.0	33.4	Horizontal	PASS
19002.494	-52.11	-25.0	27.1	Horizontal	PASS



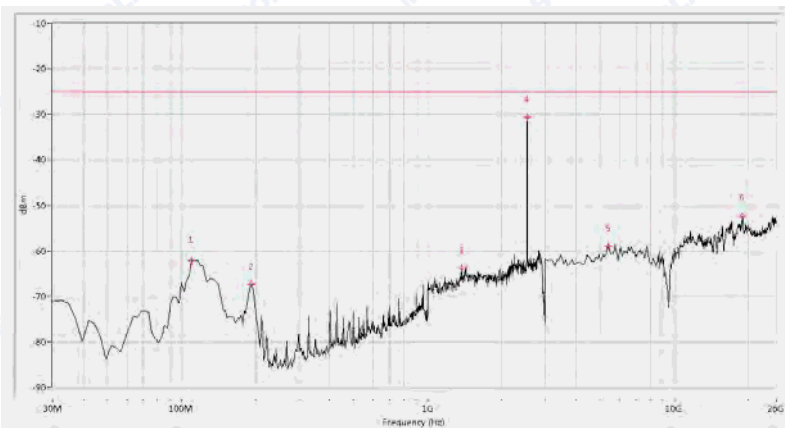
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
112.244	-62.77	-25.0	37.8	Vertical	PASS
192.070	-66.89	-25.0	41.9	Vertical	PASS
1488.778	-61.22	-25.0	36.2	Vertical	PASS
2526.185	-26.78	-25.0	1.8	Vertical	N.A
5408.978	-57.31	-25.0	32.3	Vertical	PASS
19117.207	-52.75	-25.0	27.7	Vertical	PASS



LTE Band 7 15MHz BW, Mid Channel, QPSK



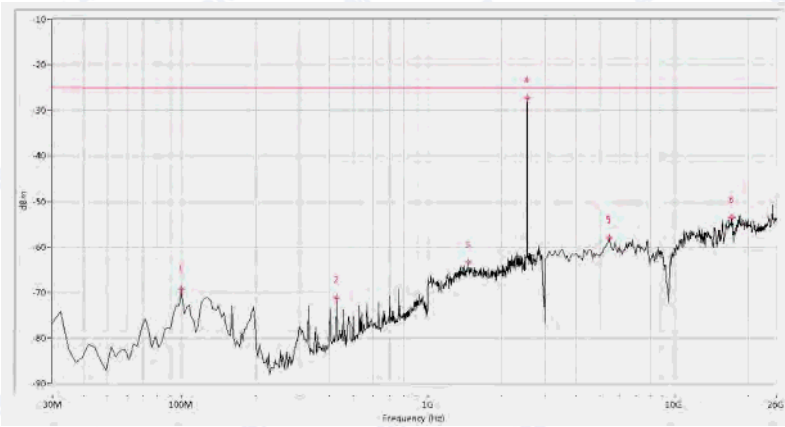
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-68.91	-25.0	43.9	Horizontal	PASS
426.708	-69.65	-25.0	44.6	Horizontal	PASS
2251.870	-60.13	-25.0	35.1	Horizontal	PASS
2536.160	-27.22	-25.0	2.2	Horizontal	N.A
5351.621	-58.93	-25.0	33.9	Horizontal	PASS
17109.726	-53.20	-25.0	28.2	Horizontal	PASS



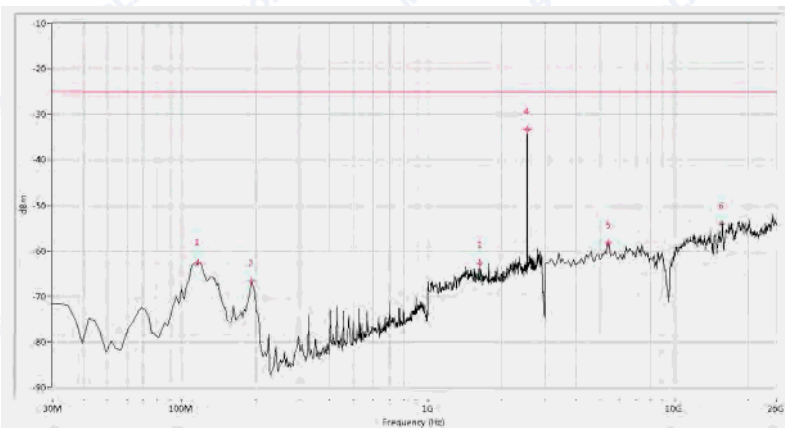
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
109.825	-62.11	-25.0	37.1	Vertical	PASS
192.070	-67.37	-25.0	42.4	Vertical	PASS
1374.065	-63.82	-25.0	38.8	Vertical	PASS
2536.160	-30.56	-25.0	5.6	Vertical	N.A
5408.978	-58.99	-25.0	34.0	Vertical	PASS
18887.781	-52.32	-25.0	27.3	Vertical	PASS



LTE Band 7 15MHz BW, Mid Channel, 16QAM



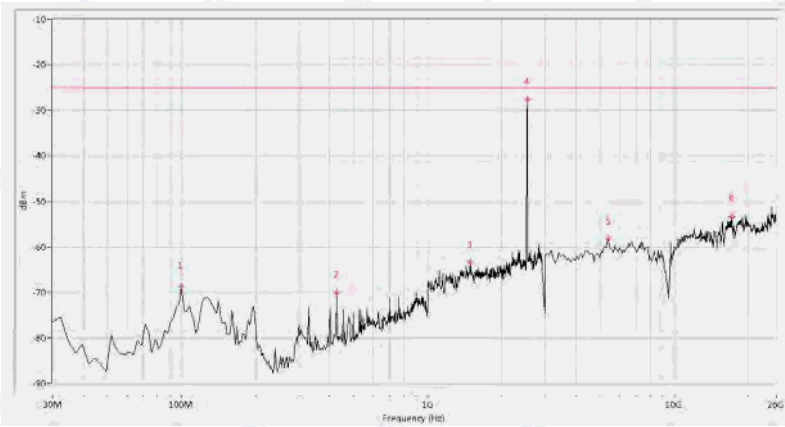
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-69.18	-25.0	44.2	Horizontal	PASS
426.708	-71.10	-25.0	46.1	Horizontal	PASS
1463.840	-63.32	-25.0	38.3	Horizontal	PASS
2536.160	-27.30	-25.0	2.3	Horizontal	N.A
5466.334	-57.96	-25.0	33.0	Horizontal	PASS
17167.082	-53.51	-25.0	28.5	Horizontal	PASS



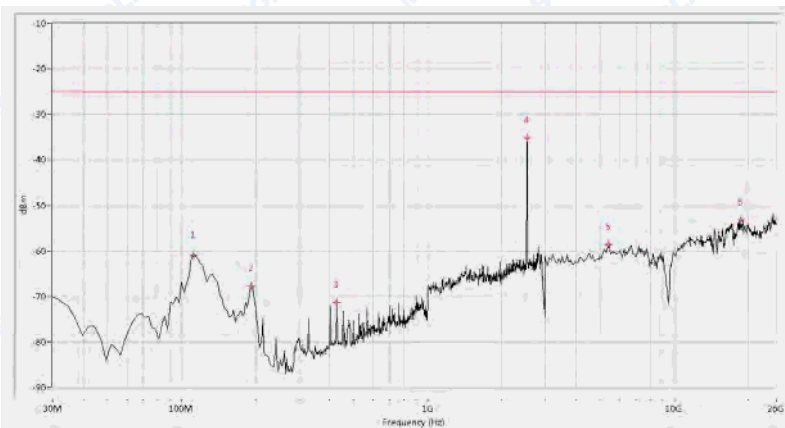
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
117.082	-62.65	-25.0	37.6	Vertical	PASS
192.070	-66.73	-25.0	41.7	Vertical	PASS
1633.416	-62.78	-25.0	37.8	Vertical	PASS
2536.160	-33.36	-25.0	8.4	Vertical	N.A
5408.978	-58.35	-25.0	33.3	Vertical	PASS
15675.810	-54.09	-25.0	29.1	Vertical	PASS



LTE Band 7 20MHz BW, Mid Channel, QPSK



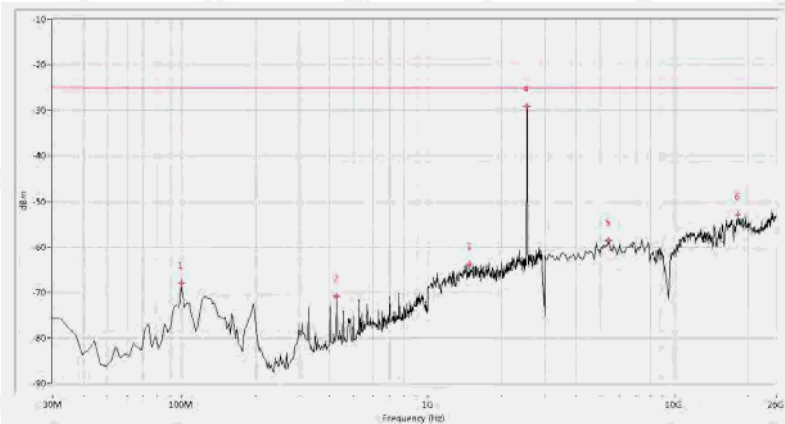
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-68.56	-25.0	43.6	Horizontal	PASS
426.708	-70.07	-25.0	45.1	Horizontal	PASS
1488.778	-63.44	-25.0	38.4	Horizontal	PASS
2536.160	-27.61	-25.0	2.6	Horizontal	N.A
5408.978	-58.29	-25.0	33.3	Horizontal	PASS
17167.082	-53.48	-25.0	28.5	Horizontal	PASS



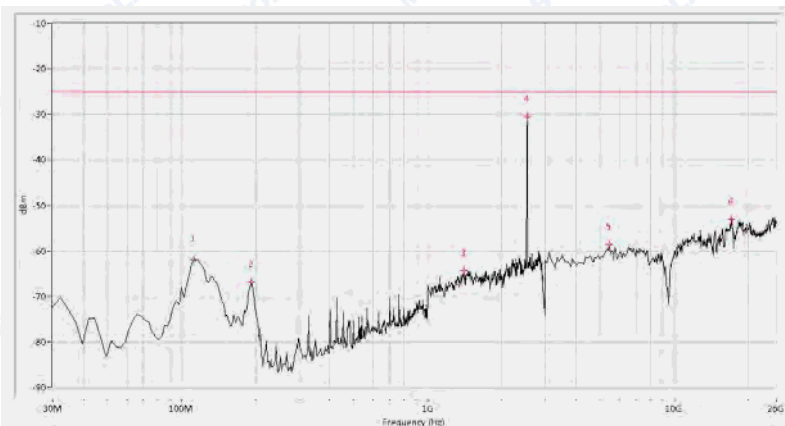
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
112.244	-60.98	-25.0	36.0	Vertical	PASS
192.070	-67.63	-25.0	42.6	Vertical	PASS
426.708	-71.36	-25.0	46.4	Vertical	PASS
2536.160	-35.26	-25.0	10.3	Vertical	N.A
5408.978	-58.65	-25.0	33.6	Vertical	PASS
18715.711	-53.18	-25.0	28.2	Vertical	PASS



LTE Band 7 20MHz BW, Mid Channel, 16QAM



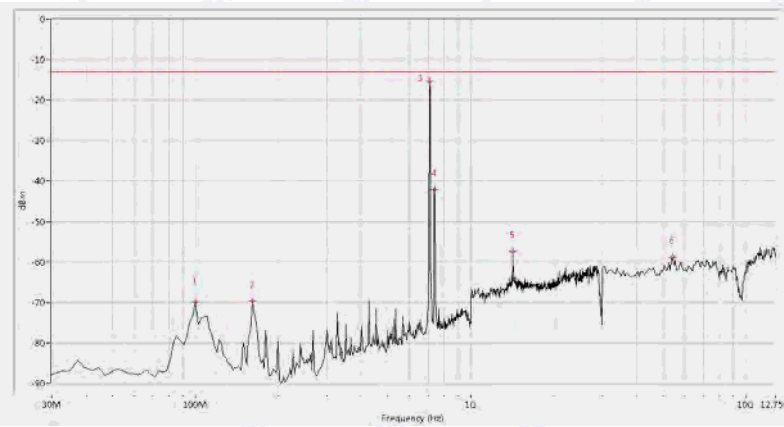
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-67.97	-25.0	43.0	Horizontal	PASS
426.708	-70.89	-25.0	45.9	Horizontal	PASS
1483.791	-63.92	-25.0	38.9	Horizontal	PASS
2531.172	-29.15	-25.0	4.1	Horizontal	N.A
5408.978	-58.62	-25.0	33.6	Horizontal	PASS
18142.145	-52.95	-25.0	28.0	Horizontal	PASS



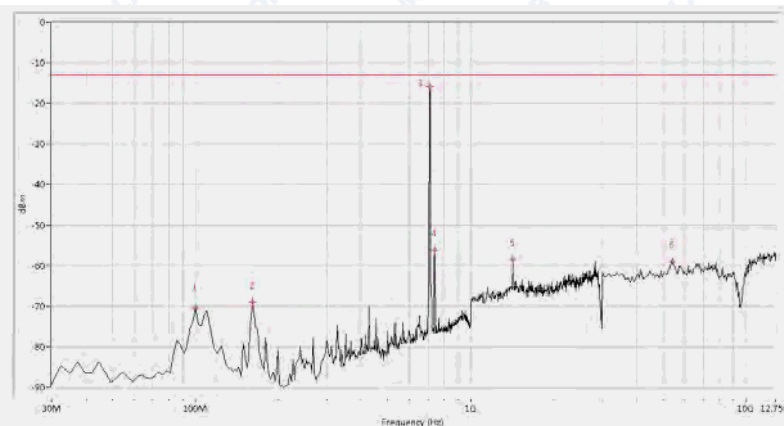
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
112.244	-61.92	-25.0	36.9	Vertical	PASS
192.070	-66.81	-25.0	41.8	Vertical	PASS
1399.002	-64.37	-25.0	39.4	Vertical	PASS
2536.160	-30.37	-25.0	5.4	Vertical	N.A
5466.334	-58.68	-25.0	33.7	Vertical	PASS
17109.726	-53.06	-25.0	28.1	Vertical	PASS



LTE Band 17 5MHz BW, Mid Channel, QPSK



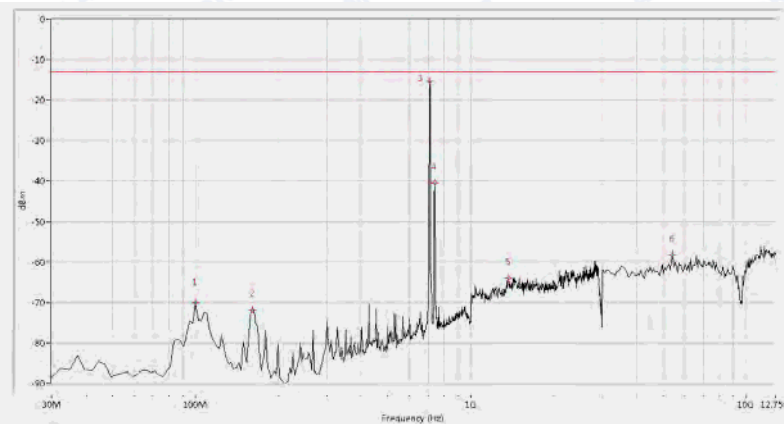
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-69.80	-13.0	56.8	Horizontal	PASS
160.623	-69.75	-13.0	56.7	Horizontal	PASS
709.726	-15.37	-13.0	2.4	Horizontal	N.A
741.172	-41.97	-13.0	29.0	Horizontal	N.A
1423.940	-57.35	-13.0	44.4	Horizontal	PASS
5408.978	-58.78	-13.0	45.8	Horizontal	PASS



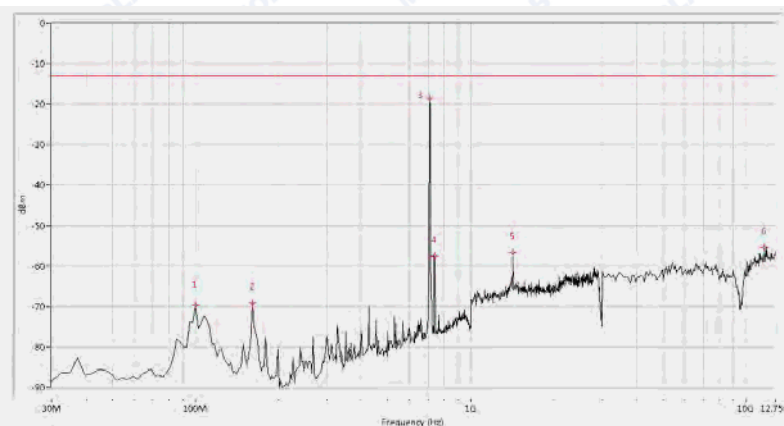
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-70.42	-13.0	57.4	Vertical	PASS
160.623	-69.03	-13.0	56.0	Vertical	PASS
709.726	-15.85	-13.0	2.9	Vertical	N.A
738.753	-56.06	-13.0	43.1	Vertical	N.A
1423.940	-58.45	-13.0	45.4	Vertical	PASS
5408.978	-59.02	-13.0	46.0	Vertical	PASS



LTE Band 17 5MHz BW, Mid Channel, 16QAM



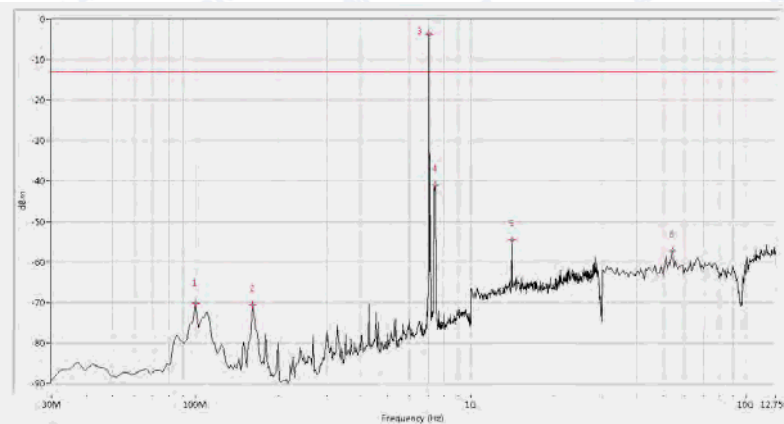
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-69.99	-13.0	57.0	Horizontal	PASS
160.623	-71.87	-13.0	58.9	Horizontal	PASS
709.726	-15.38	-13.0	2.4	Horizontal	N.A
741.172	-40.38	-13.0	27.4	Horizontal	N.A
1369.077	-63.98	-13.0	51.0	Horizontal	PASS
5408.978	-58.22	-13.0	45.2	Horizontal	PASS



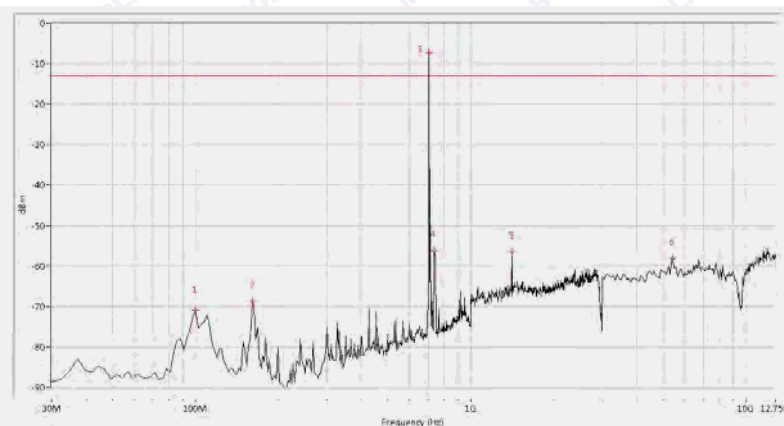
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-69.77	-13.0	56.8	Vertical	PASS
160.623	-69.23	-13.0	56.2	Vertical	PASS
709.726	-18.56	-13.0	5.6	Vertical	N.A
738.753	-57.65	-13.0	44.6	Vertical	N.A
1423.940	-56.64	-13.0	43.6	Vertical	PASS
11660.848	-55.48	-13.0	42.5	Vertical	PASS



LTE Band 17 10MHz BW, Mid Channel, QPSK



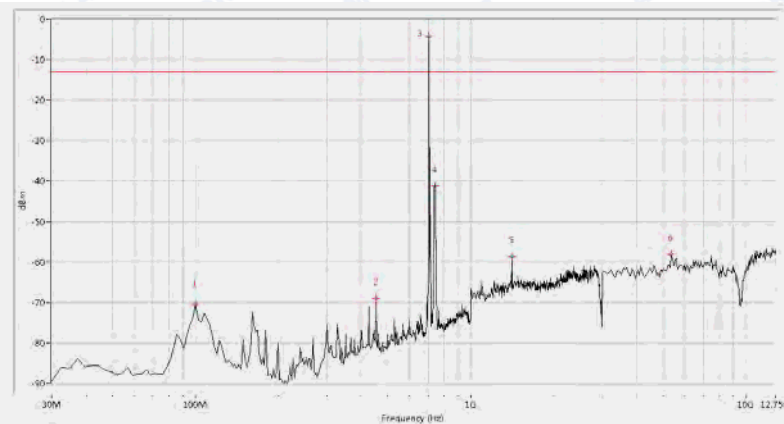
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-70.24	-13.0	57.2	Horizontal	PASS
160.623	-70.54	-13.0	57.5	Horizontal	PASS
704.888	-3.71	-13.0	-9.3	Horizontal	N.A
743.591	-40.99	-13.0	28.0	Horizontal	N.A
1408.978	-54.53	-13.0	41.5	Horizontal	PASS
5408.978	-57.19	-13.0	44.2	Horizontal	PASS



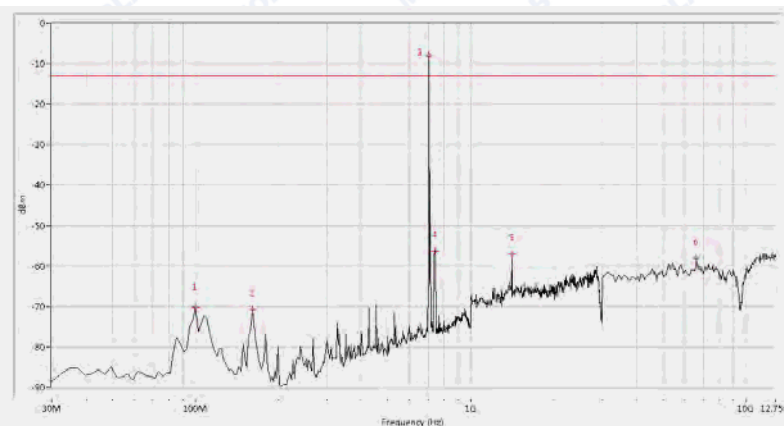
Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-70.89	-13.0	57.9	Vertical	PASS
160.623	-68.86	-13.0	55.9	Vertical	PASS
704.888	-7.25	-13.0	-5.8	Vertical	N.A
736.334	-56.12	-13.0	43.1	Vertical	N.A
1408.978	-56.53	-13.0	43.5	Vertical	PASS
5408.978	-58.08	-13.0	45.1	Vertical	PASS



LTE Band 17 10MHz BW, Mid Channel, 16QAM



Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-70.48	-13.0	57.5	Horizontal	PASS
453.317	-69.01	-13.0	56.0	Horizontal	PASS
704.888	-4.35	-13.0	-8.6	Horizontal	N.A
743.591	-41.24	-13.0	28.2	Horizontal	N.A
1408.978	-58.55	-13.0	45.5	Horizontal	PASS
5351.621	-58.15	-13.0	45.1	Horizontal	PASS



Fre. (MHz)	Peak	Limit(PK)	Margin	Antenna	Verdict
100.150	-70.19	-13.0	57.2	Vertical	PASS
160.623	-70.81	-13.0	57.8	Vertical	PASS
704.888	-8.08	-13.0	-4.9	Vertical	N.A
743.591	-56.23	-13.0	43.2	Vertical	N.A
1408.978	-57.11	-13.0	44.1	Vertical	PASS
6613.466	-58.15	-13.0	45.1	Vertical	PASS

***** END OF REPORT *****