5.2. Occupied Bandwidth

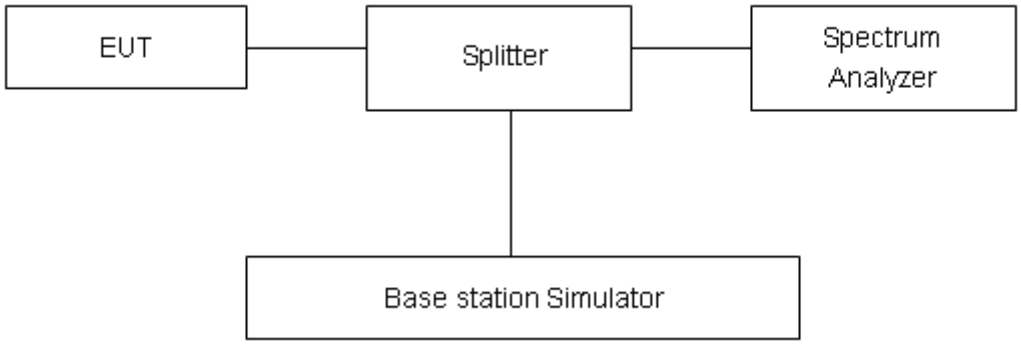
Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer.
RBW is set to 100 kHz, VBW is set to 300 kHz for LTE Band 43 (5MHz),
RBW is set to 300 kHz, VBW is set to 1MHz for LTE Band 43 (10MHz/15MHz/20MHz).
99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

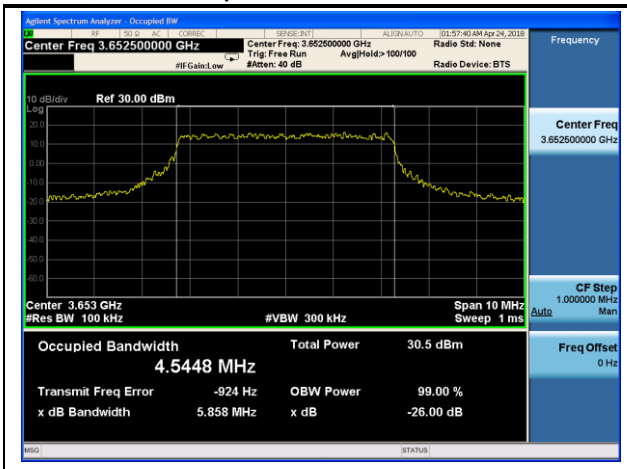
No specific occupied bandwidth requirements.

Measurement Uncertainty

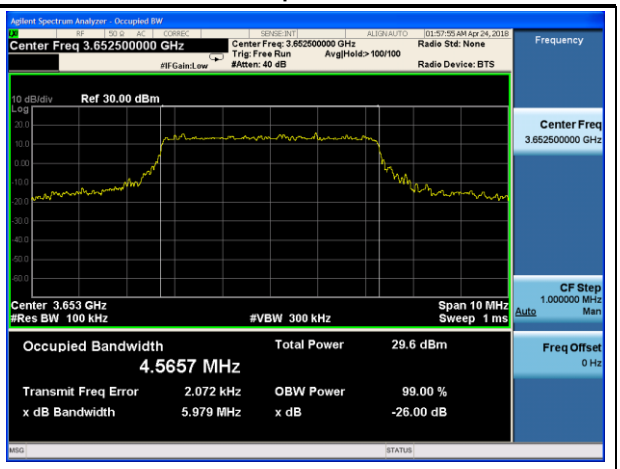
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2,U=624Hz.

Test Result

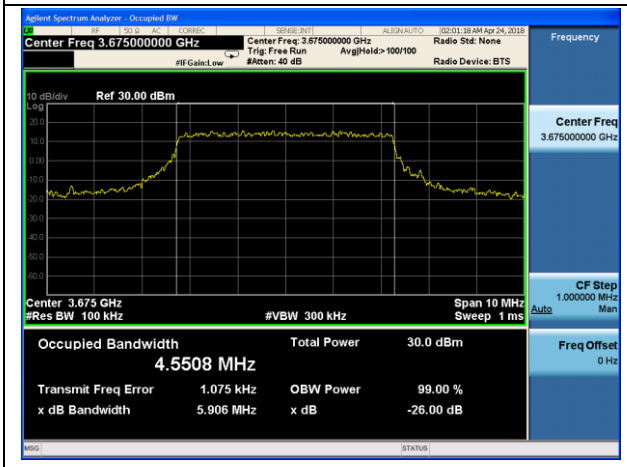
LTE Band 43						
RB	**Modulation**	**Bandwidth (MHz)**	**Channel**	**Frequency (MHz)**	**99% Power Bandwidth (MHz)**	**-26dBc Bandwidth (MHz)**
100%	QPSK	5	44115	3652.5	4.5448	5.858
			44340	3675	4.5508	5.906
			44565	3697.5	4.5694	6.198
		10	44140	3655	9.1408	11.62
			44340	3675	9.1265	11.40
			44540	3695	9.1753	12.02
		15	44165	3657.5	13.496	16.16
			44340	3675	13.562	16.32
			44515	3692.5	13.525	16.45
		20	44190	3670	18.047	20.37
			44340	3675	18.065	20.64
			44490	3690	18.031	20.86
	16QAM	5	44115	3652.5	4.5657	5.979
			44340	3675	4.6025	6.206
			44565	3697.5	4.5713	6.342
		10	44140	3655	9.1834	11.59
			44340	3675	9.1423	11.76
			44540	3695	9.1353	11.71
		15	44165	3657.5	13.576	16.03
			44340	3675	13.531	15.72
			44515	3692.5	13.548	15.64
		20	44190	3670	18.032	20.92
			44340	3675	18.071	20.95
			44490	3690	18.051	25.63



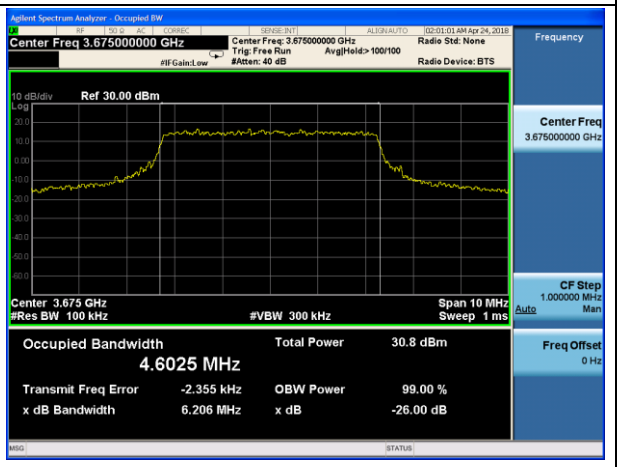
LTE Band 43 QPSK 5MHz CH44115



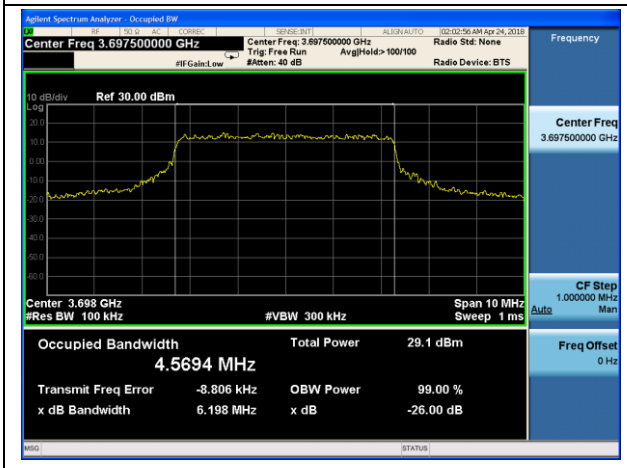
LTE Band 43 16QAM 5MHz CH44115



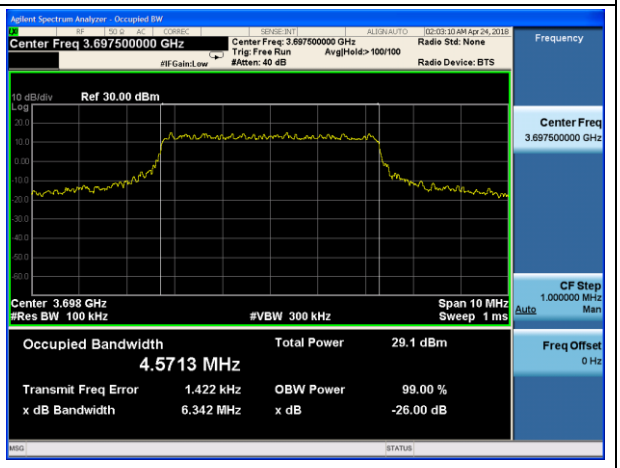
LTE Band 43 QPSK 5MHz CH44340



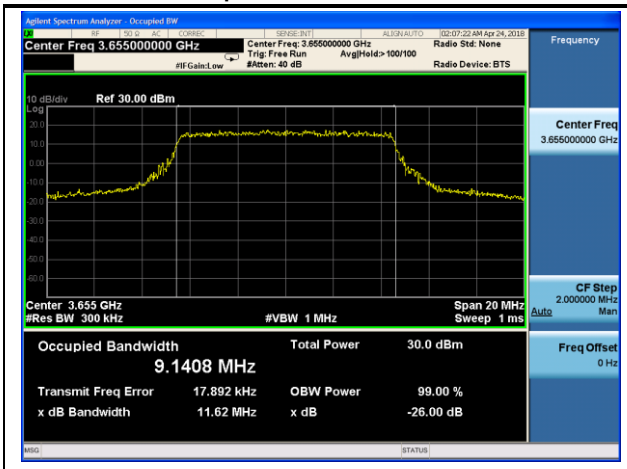
LTE Band 43 16QAM 5MHz CH44340



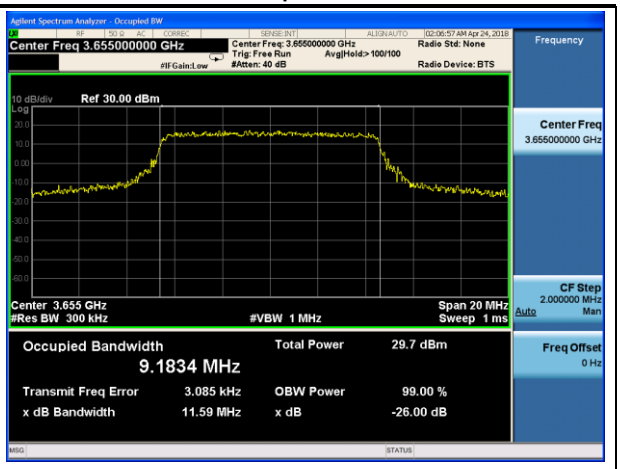
LTE Band 43 QPSK 5MHz CH44565



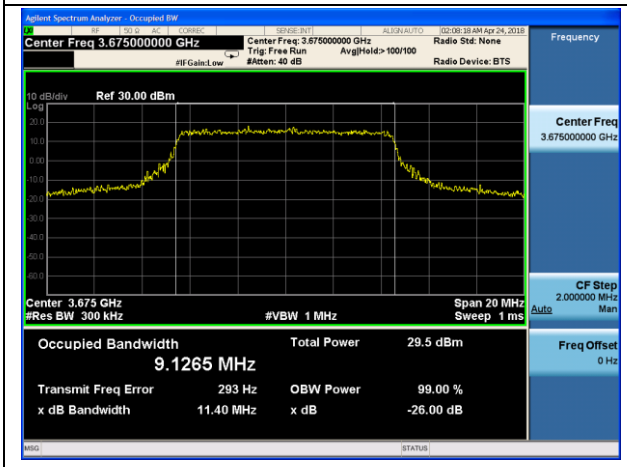
LTE Band 43 16QAM 5MHz CH44565



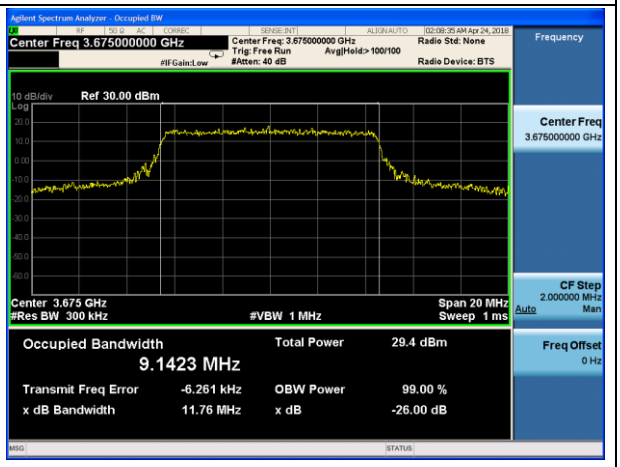
LTE Band 43 QPSK 10MHz CH44140



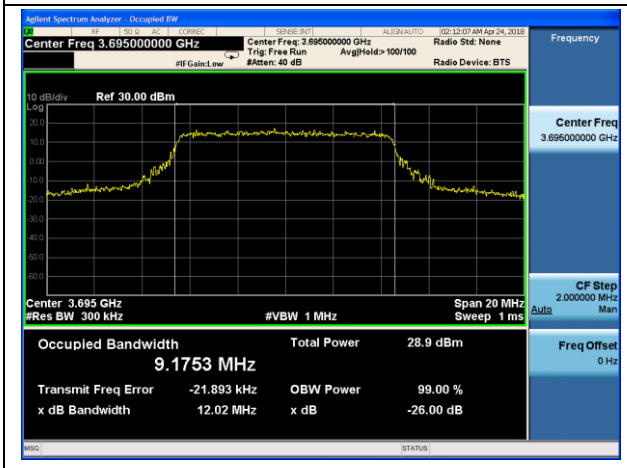
LTE Band 43 16QAM 10MHz CH44140



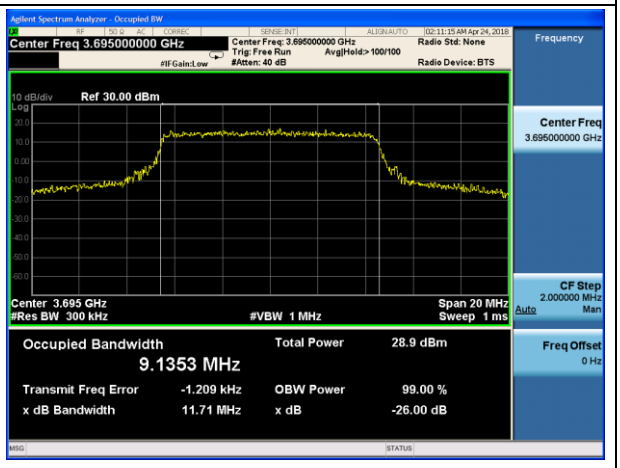
LTE Band 43 QPSK 10MHz CH44340



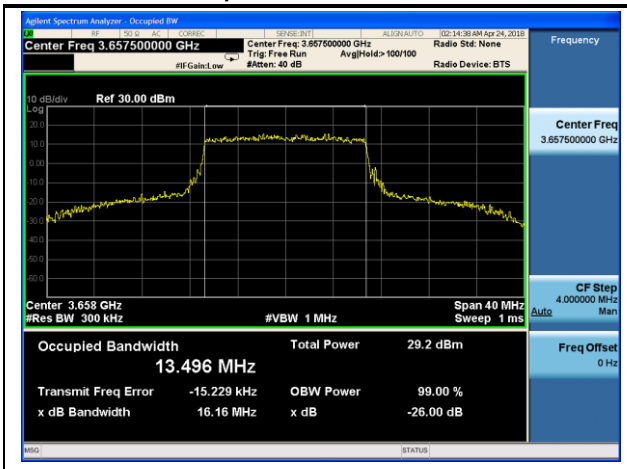
LTE Band 43 16QAM 10MHz CH44340



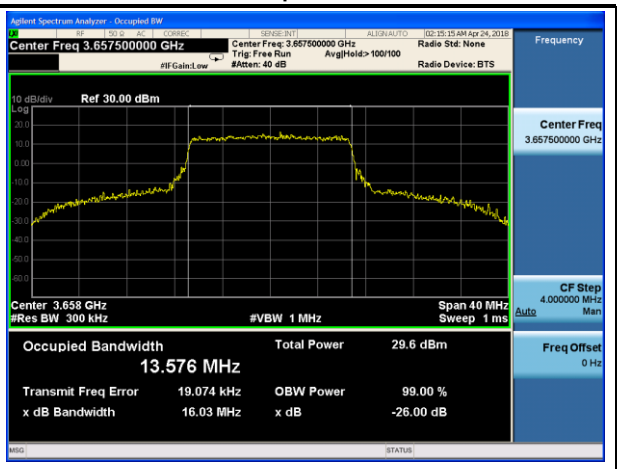
LTE Band 43 QPSK 10MHz CH44540



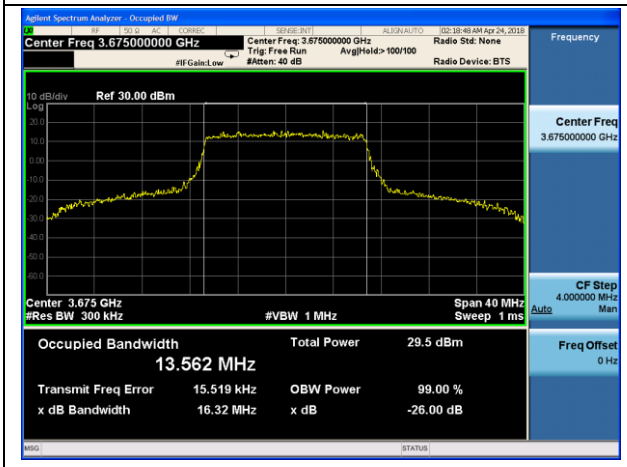
LTE Band 43 16QAM 10MHz CH44540



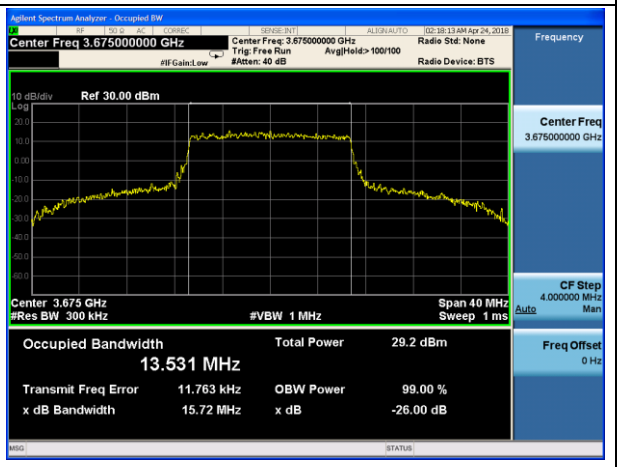
LTE Band 43 QPSK 15MHz CH44165



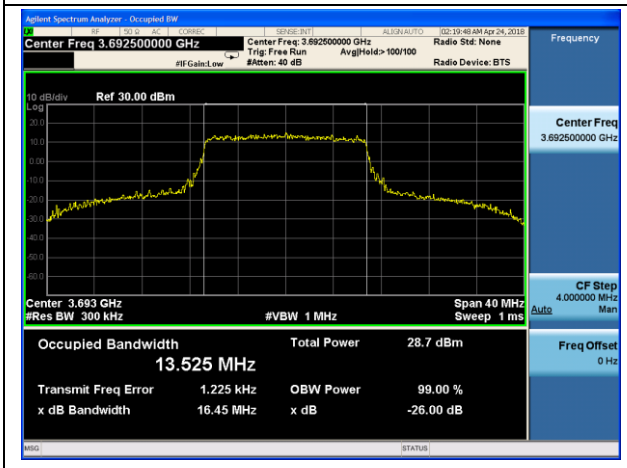
LTE Band 43 16QAM 15MHz CH44165



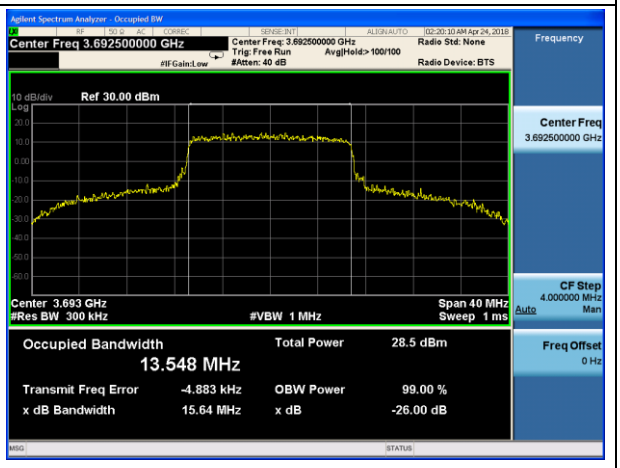
LTE Band 43 QPSK 15MHz CH44340



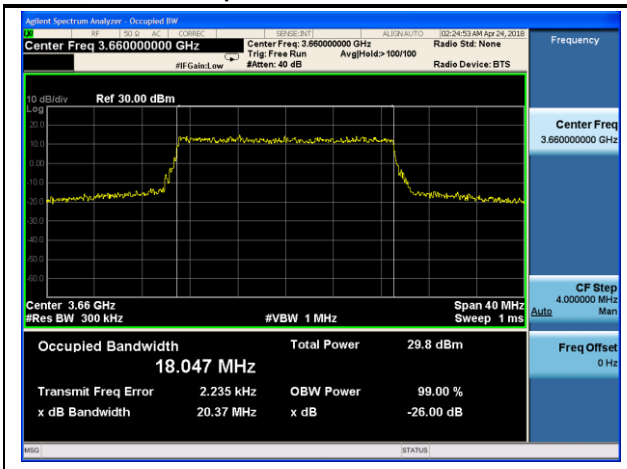
LTE Band 43 16QAM 15MHz CH44340



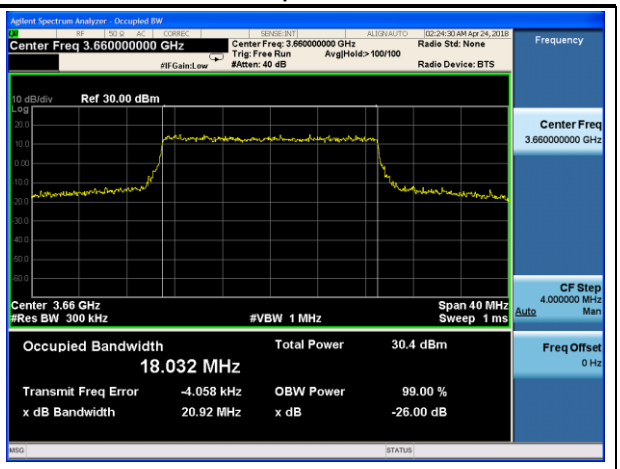
LTE Band 43 QPSK 15MHz CH44515



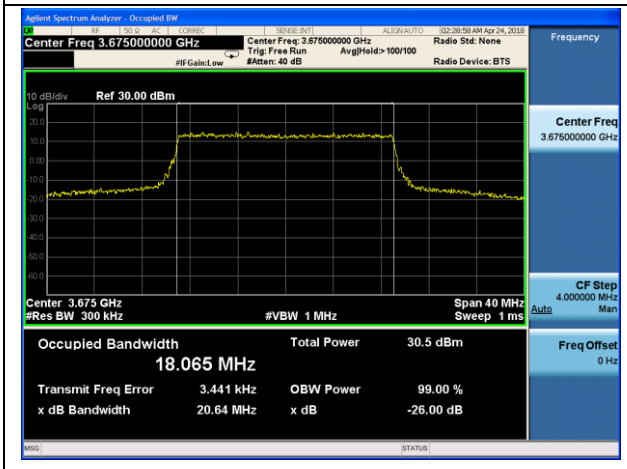
LTE Band 43 16QAM 15MHz CH44515



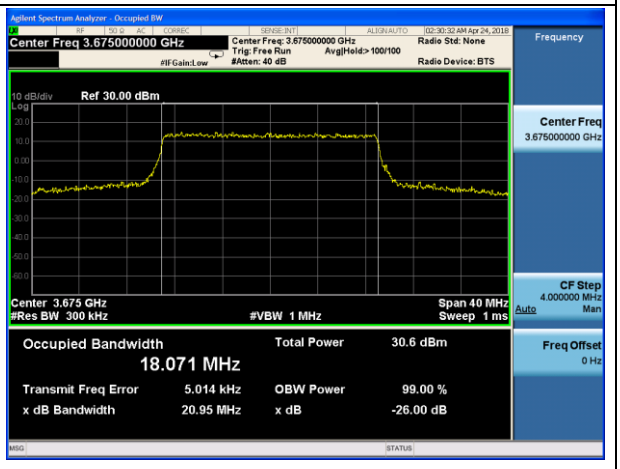
LTE Band 43 QPSK 20MHz CH44190



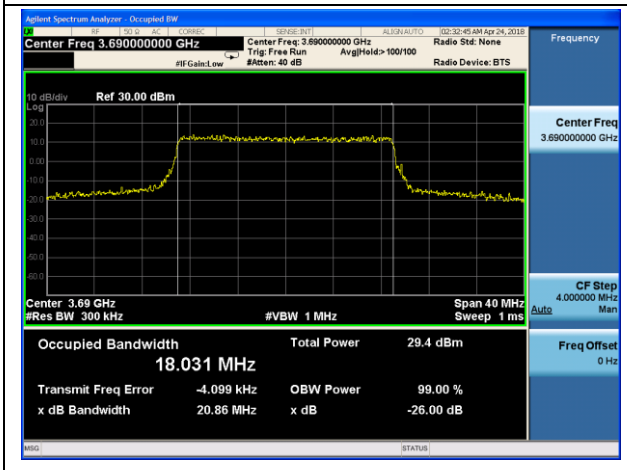
LTE Band 43 16QAM 20MHz CH44190



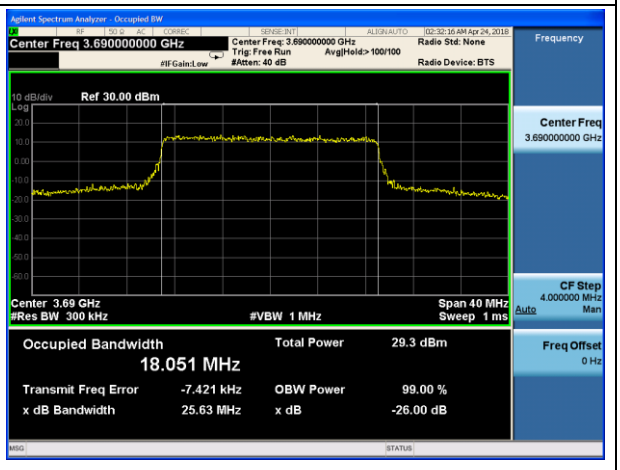
LTE Band 43 QPSK 20MHz CH44340



LTE Band 43 16QAM 20MHz CH44340



LTE Band 43 QPSK 20MHz CH44490



LTE Band 43 16QAM 20MHz CH44490

5.3. Band Edge Compliance

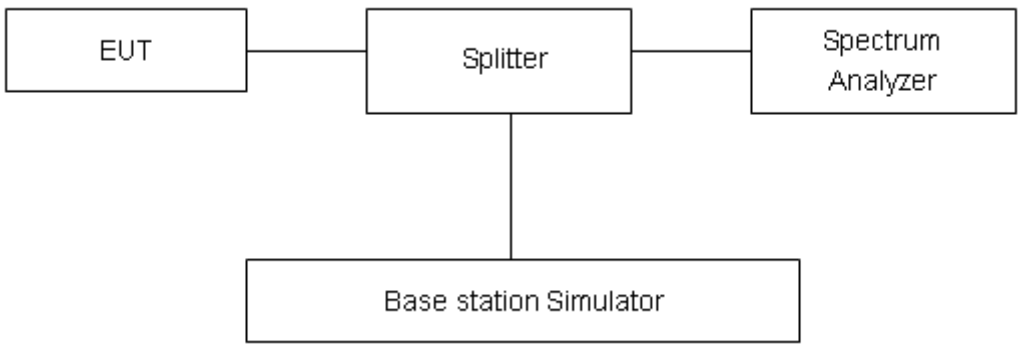
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The average detector is used.
1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The band edges of low and high channels for the highest RF powers were measured.
3. For LTE Band 43 Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
RBW is set to 51 kHz, VBW is set to 160 kHz for LTE Band 43 (5MHz).
RBW is set to 100 kHz, VBW is set to 300kHz for LTE Band 43 (10MHz).
RBW is set to 150 kHz, VBW is set to 510 kHz for LTE Band 43 (15MHz).
RBW is set to 200 kHz, VBW is set to 620 kHz for LTE Band 43 (20MHz) onspectrumanalyzer.
4. Set spectrum analyzer with RMS detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. Checked that all the results comply with the emission limit line.

Test Setup



Limits

Rule Part 2.1051&90.1323 specifies that “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.”

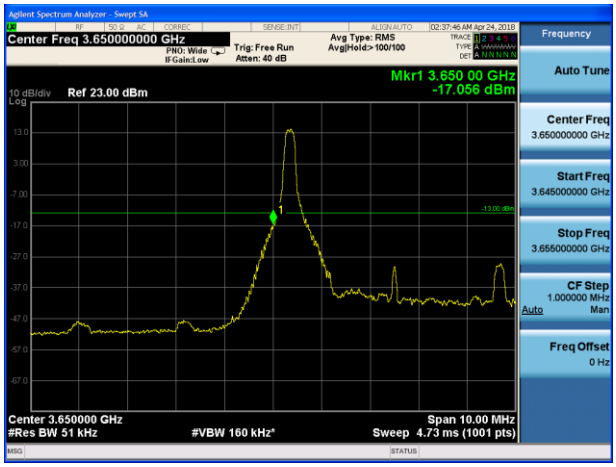
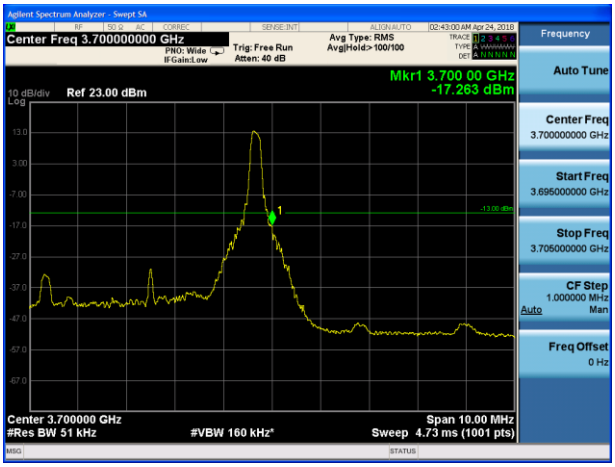
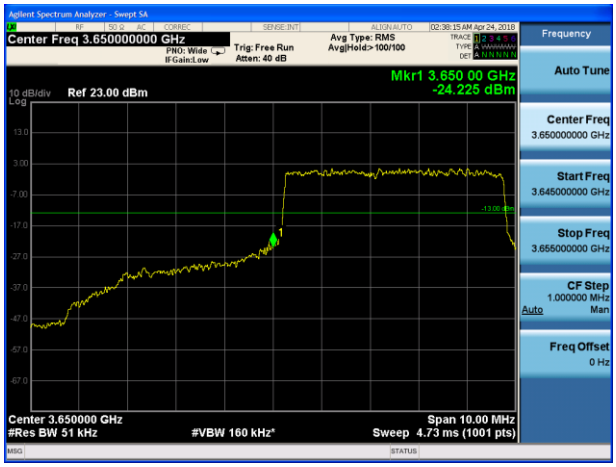
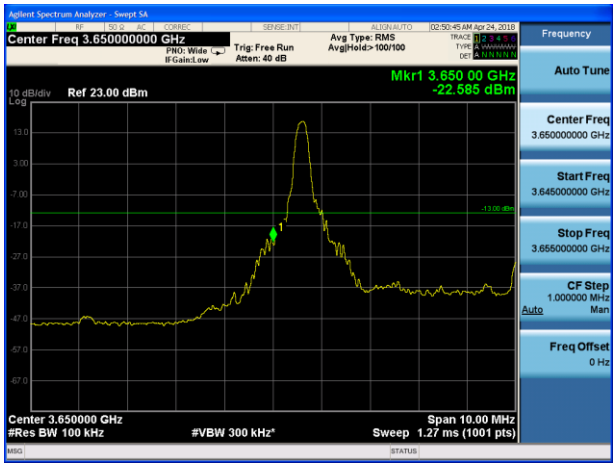
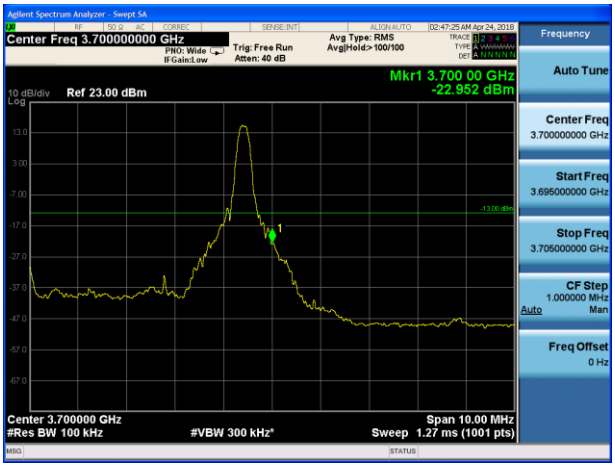
Limit	-13 dBm

Measurement Uncertainty

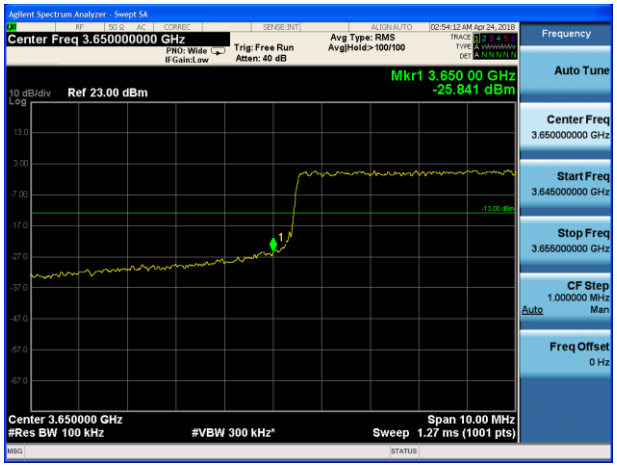
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U=0.684dB.

Test Result

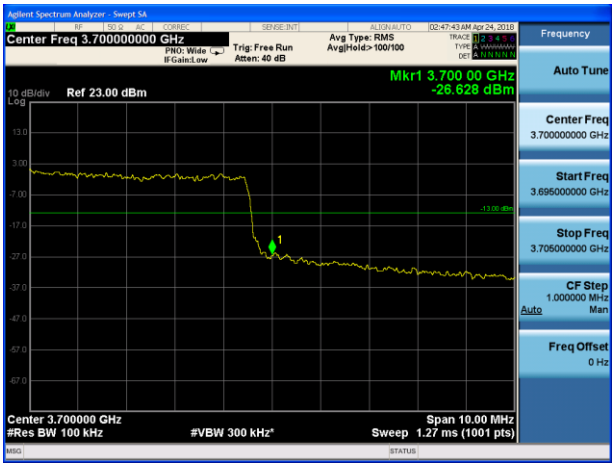
All the test traces in the plots shows the test results clearly.

LTE Band 43 QPSK 5MHz CH-Low, RB 1	LTE Band 43 QPSK 5MHz CH-High, RB 1
	
LTE Band 43 QPSK 5MHz CH-Low, RB 25	LTE Band 43 QPSK 5MHz CH-High, RB 25
	
LTE Band 43 QPSK 10MHz CH-Low, RB 1	LTE Band 43 QPSK 10MHz CH-High, RB 1
	

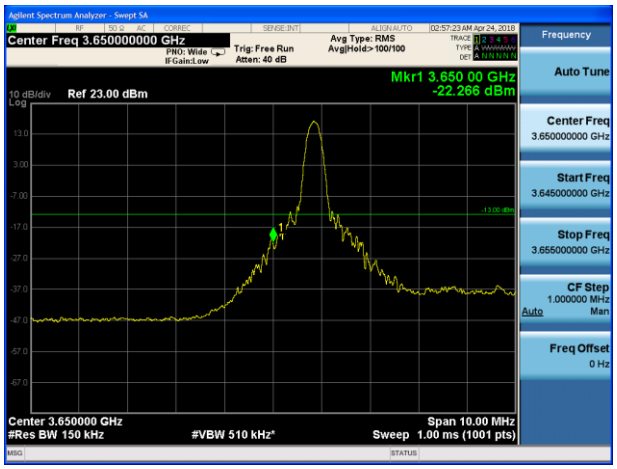
LTE Band 43 QPSK 10MHz CH-Low, RB 50



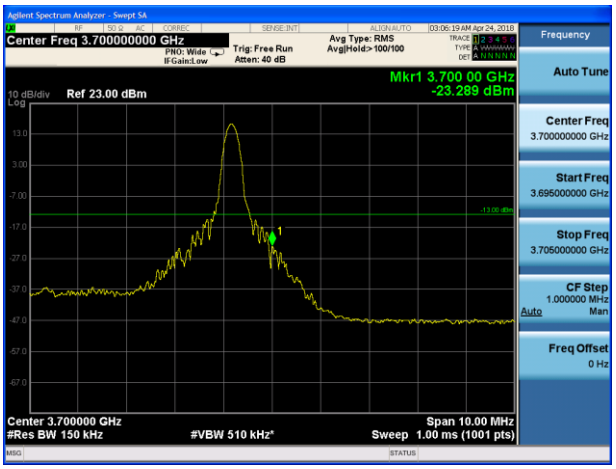
LTE Band 43 QPSK 10MHz CH-High, RB 50



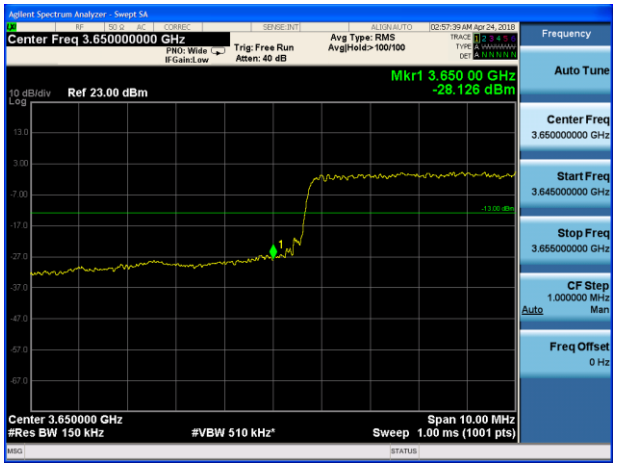
LTE Band 43 QPSK 15MHz CH-Low, RB 1



LTE Band 43 QPSK 15MHz CH-High, RB 1

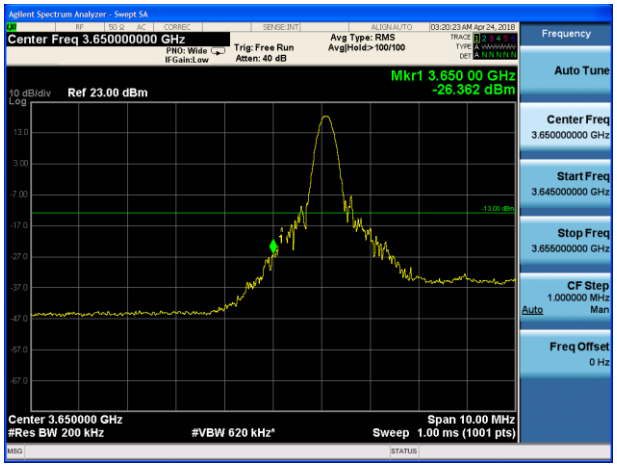


LTE Band 43 QPSK 15MHz CH-Low, RB 75

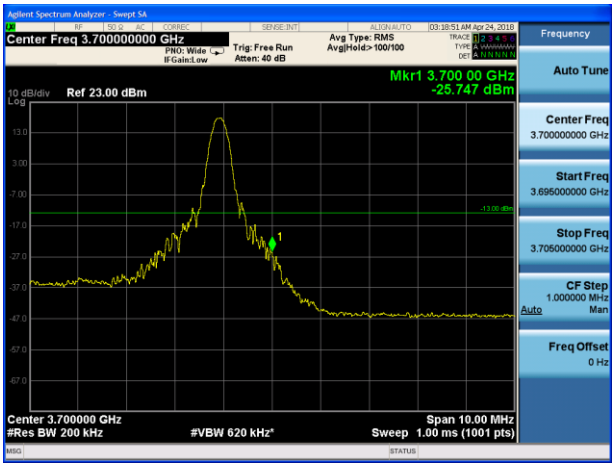


LTE Band 43 QPSK 15MHz CH-High, RB 75

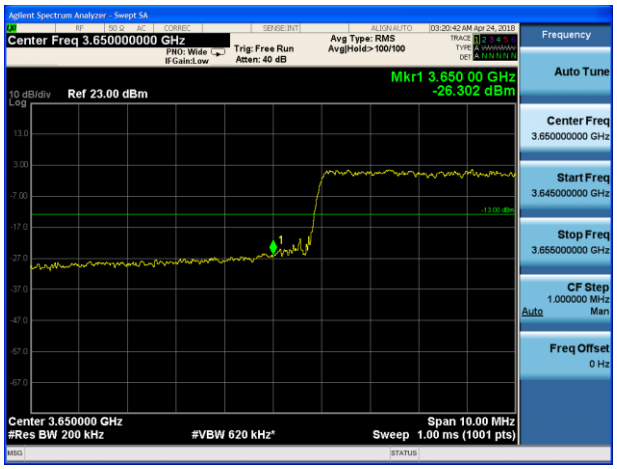
LTE Band 43 QPSK 20MHz CH-Low, RB 1



LTE Band 43 QPSK 20MHz CH-High, RB 1

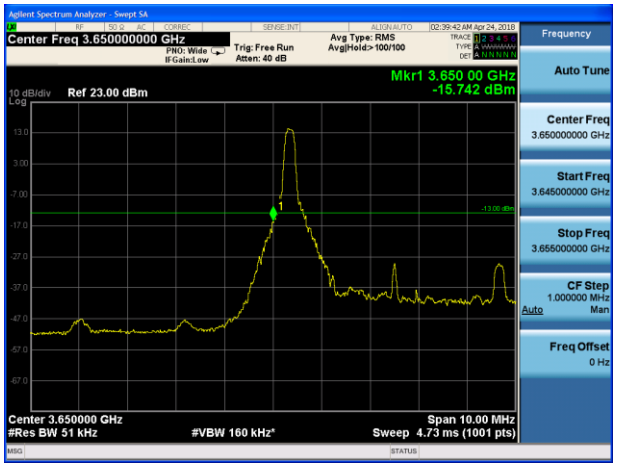


LTE Band 43 QPSK 20MHz CH-Low, RB 100

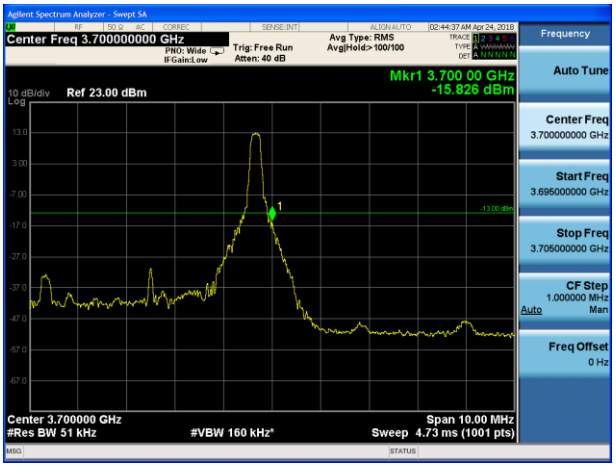


LTE Band 43 QPSK 20MHz CH-High, RB 100

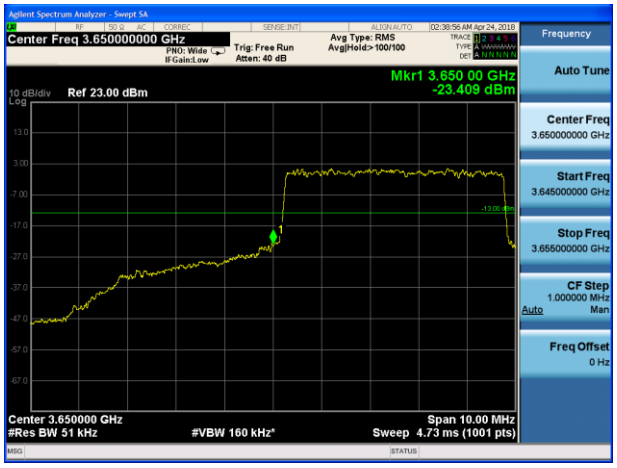
LTE Band 43 16QAM 5MHz CH-Low, RB 1



LTE Band 43 16QAM 5MHz CH-High, RB 1

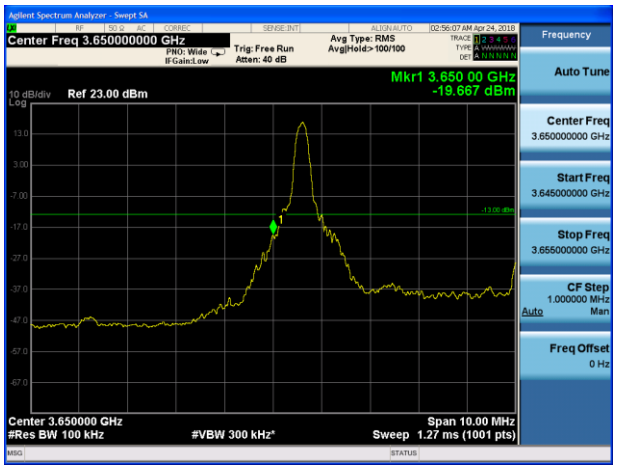


LTE Band 43 16QAM 5MHz CH-Low, RB 25

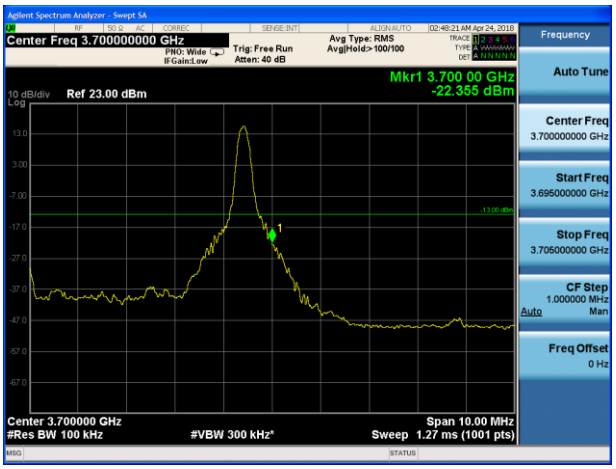


LTE Band 43 16QAM 5MHz CH-High, RB 25

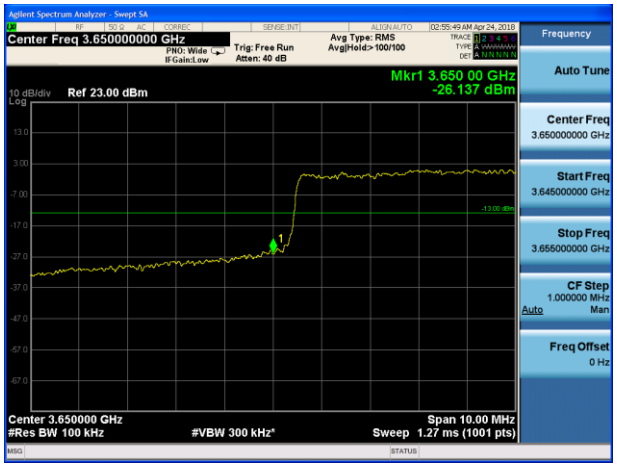
LTE Band 43 16QAM 10MHz CH-Low, RB 1



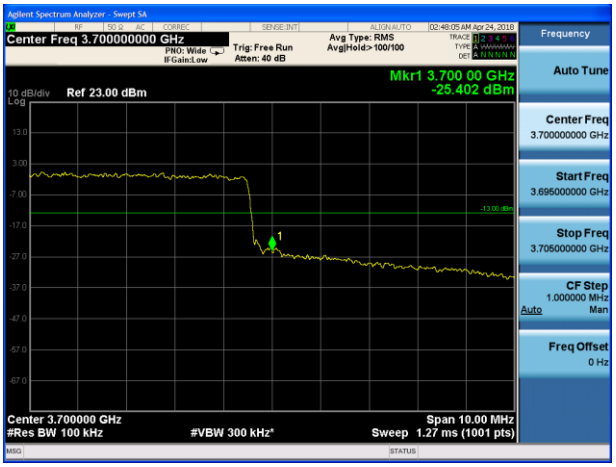
LTE Band 43 16QAM 10MHz CH-High, RB 1



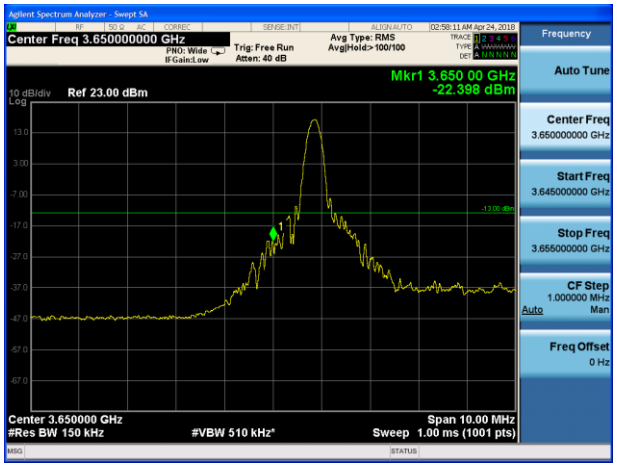
LTE Band 43 16QAM 10MHz CH-Low, RB 50



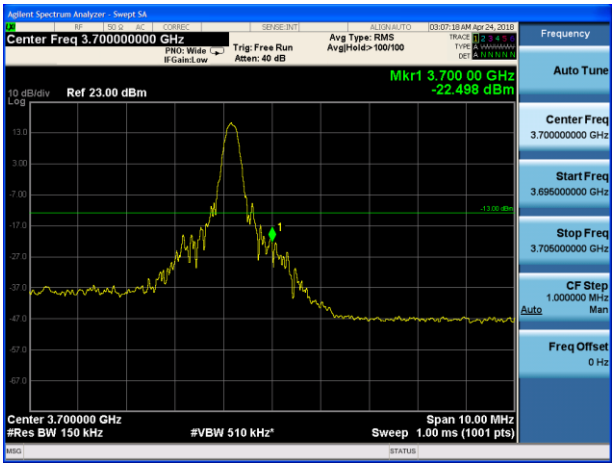
LTE Band 43 16QAM 10MHz CH-High, RB 50



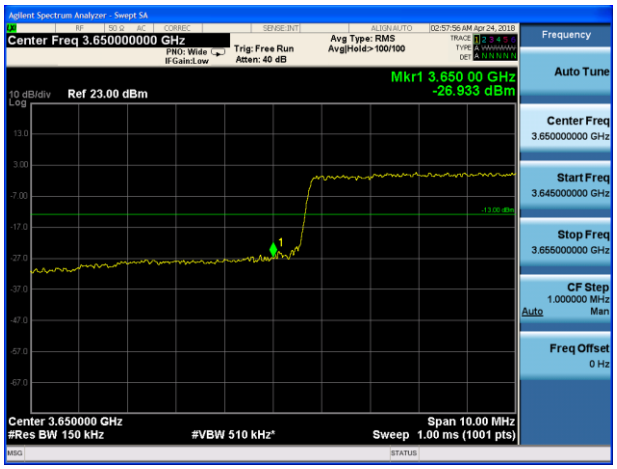
LTE Band 43 16QAM 15MHz CH-Low, RB 1



LTE Band 43 16QAM 15MHz CH-High, RB 1

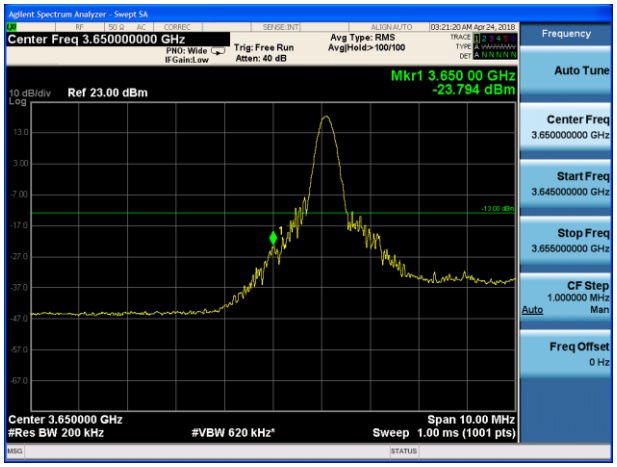


LTE Band 43 16QAM 15MHz CH-Low, RB 75

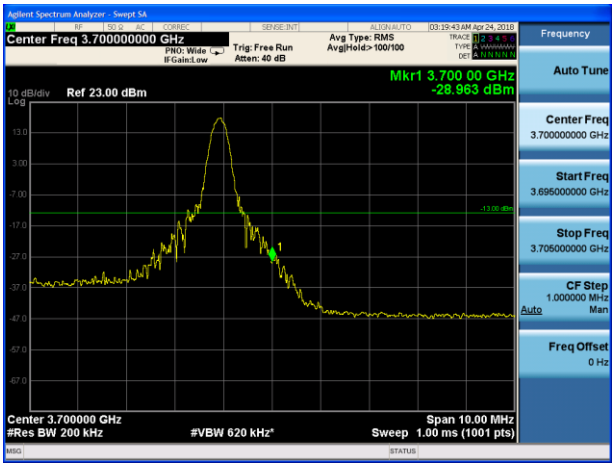


LTE Band 43 16QAM 15MHz CH-High, RB 75

LTE Band 43 16QAM 20MHz CH-Low, RB 1



LTE Band 43 16QAM 20MHz CH-High, RB 1



LTE Band 43 16QAM 20MHz CH-Low, RB 100	LTE Band 43 16QAM 20MHz CH-High, RB 100