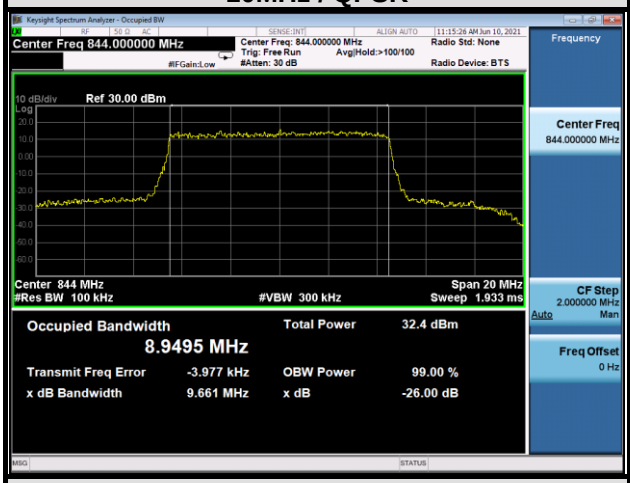
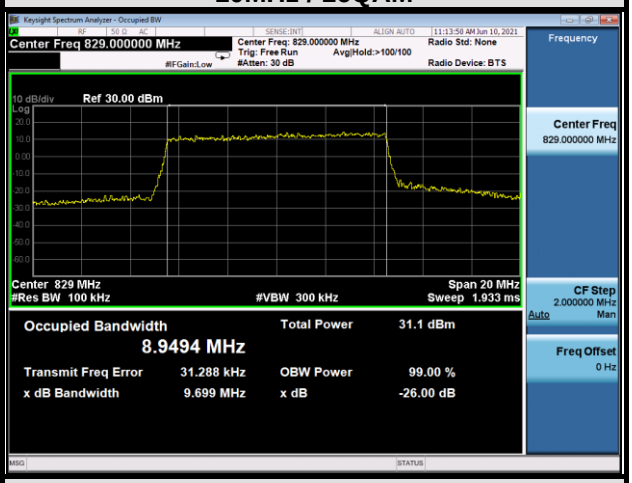
CHANNEL BANDWIDTH: 10MHz							
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)			26 dB bandwidth (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20450	829	8.95	8.95	8.95	9.68	9.70	9.66
20525	836.5	8.93	8.92	8.93	9.62	9.58	9.68
20600	844	8.95	8.94	8.94	9.66	9.66	9.66

SPECTRUM PLOT OF WORST VALUE of 99% Occupied Bandwidth/26 dB Occupied Bandwidth

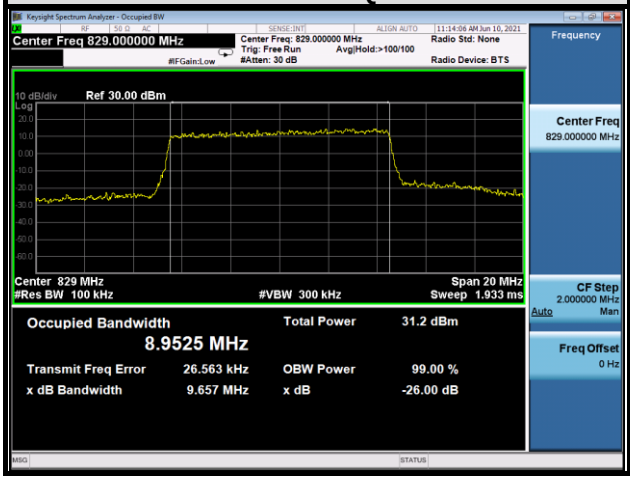
10MHz / QPSK



10MHz / 16QAM



10MHz / 64QAM

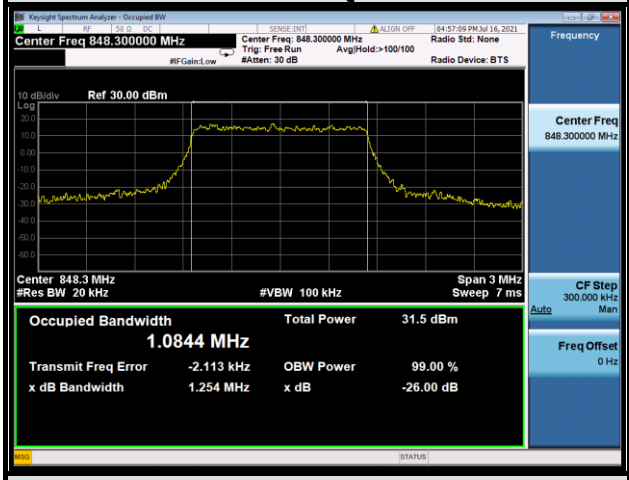


LTE BAND 26

CHANNEL BANDWIDTH: 1.4MHz							
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)			26 dB bandwidth (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
26865	831.5	1.08	1.09	1.09	1.25	1.26	1.28
26915	836.5	1.08	1.09	1.09	1.27	1.28	1.30
26965	841.5	1.08	1.09	1.09	1.25	1.28	1.30

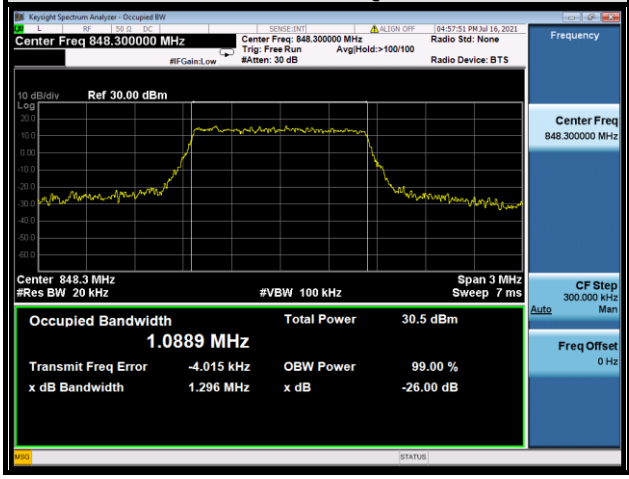
SPECTRUM PLOT OF WORST VALUE of 99% Occupied Bandwidth/26 dB Occupied Bandwidth

1.4MHz / QPSK



1.4MHz / 16QAM

1.4MHz / 64QAM

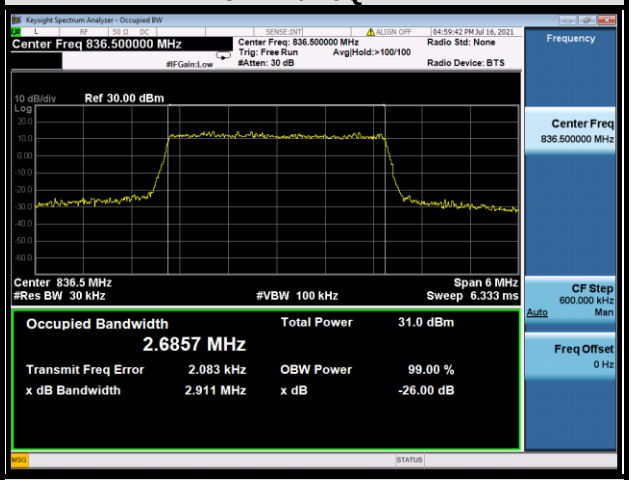


CHANNEL BANDWIDTH: 3MHz							
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)			26 dB bandwidth (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
26805	825.5	2.70	2.68	2.69	2.92	2.94	2.95
26915	836.5	2.69	2.69	2.68	2.93	2.91	2.94
27025	847.5	2.68	2.68	2.68	2.91	2.91	2.94

SPECTRUM PLOT OF WORST VALUE of 99% Occupied Bandwidth/26 dB Occupied Bandwidth

3MHz / QPSK

3MHz / 16QAM

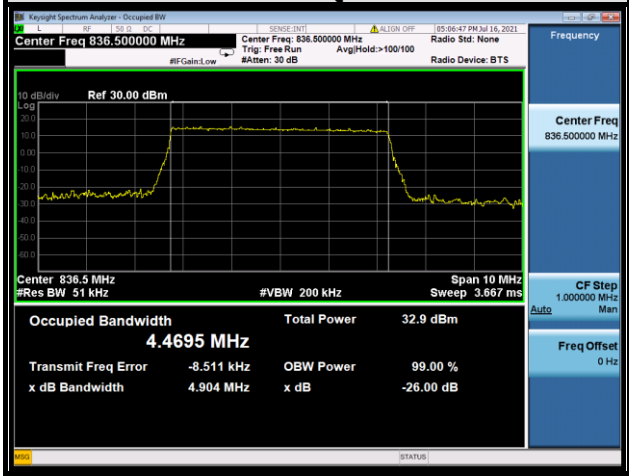


3MHz / 64QAM

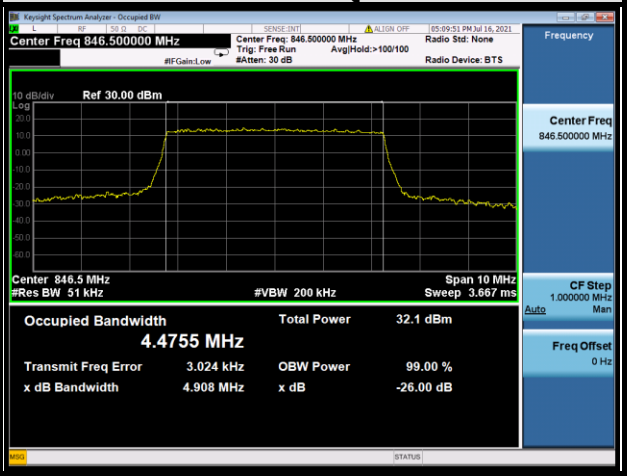
CHANNEL BANDWIDTH: 5MHz							
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)			26 dB bandwidth (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
26815	826.5	4.46	4.47	4.49	4.87	4.92	4.95
26915	836.5	4.47	4.47	4.47	4.90	4.91	4.89
27015	846.5	4.46	4.48	4.46	4.86	4.91	4.90

SPECTRUM PLOT OF WORST VALUE of 99% Occupied Bandwidth/26 dB Occupied Bandwidth

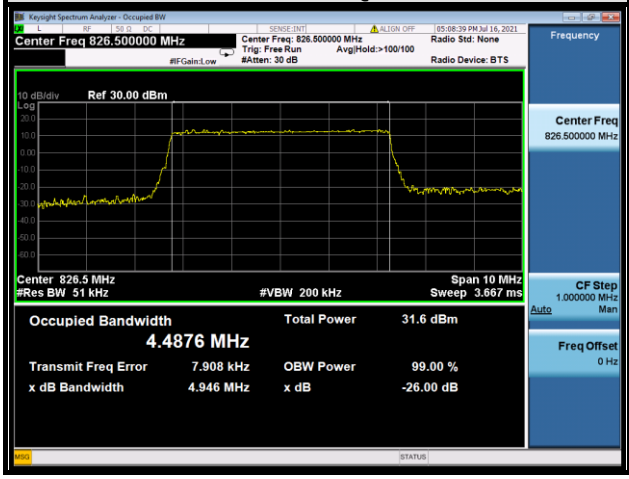
5MHz / QPSK



5MHz / 16QAM



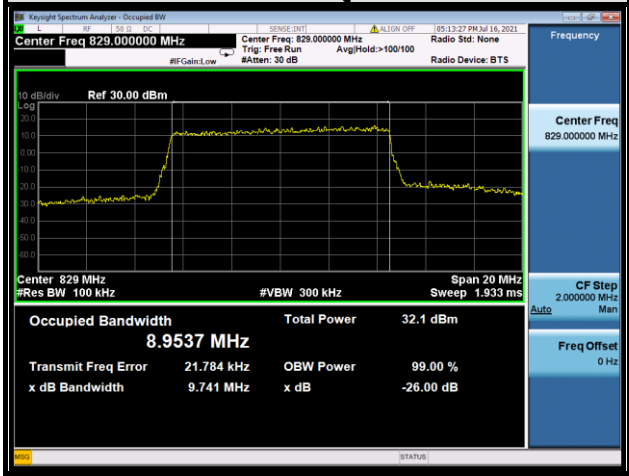
5MHz / 64QAM



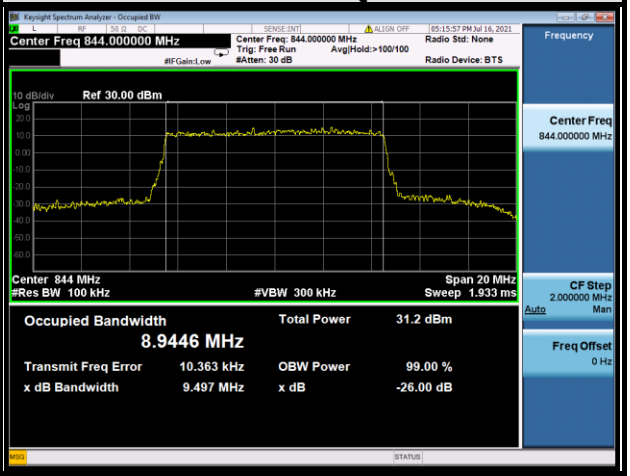
CHANNEL BANDWIDTH: 10MHz							
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)			26 dB bandwidth (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
26840	829	8.95	8.94	8.93	9.74	9.68	9.62
26915	836.5	8.93	8.92	8.94	9.62	9.65	9.64
26990	844	8.93	8.94	8.93	9.66	9.50	9.70

SPECTRUM PLOT OF WORST VALUE of 99% Occupied Bandwidth/26 dB Occupied Bandwidth

10MHz / QPSK



10MHz / 16QAM

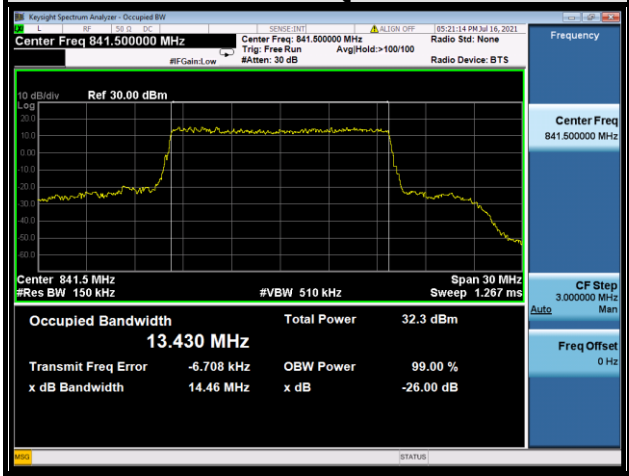


10MHz / 64QAM

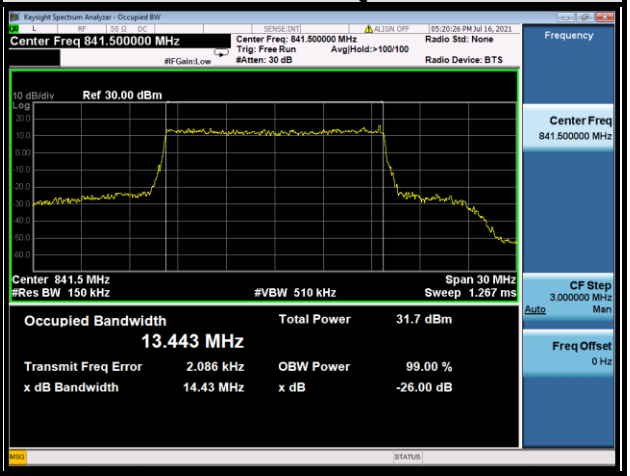
CHANNEL BANDWIDTH: 15MHz							
CHANNEL	Frequency (MHz)	99% OCCUPIED Bandwidth (MHz)			26 dB bandwidth (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
26865	831.5	13.36	13.36	13.37	14.24	14.38	14.36
26915	836.5	13.39	13.39	13.41	14.50	14.46	14.43
26965	841.5	13.43	13.44	13.46	14.46	14.43	14.45

SPECTRUM PLOT OF WORST VALUE of 99% Occupied Bandwidth/26 dB Occupied Bandwidth

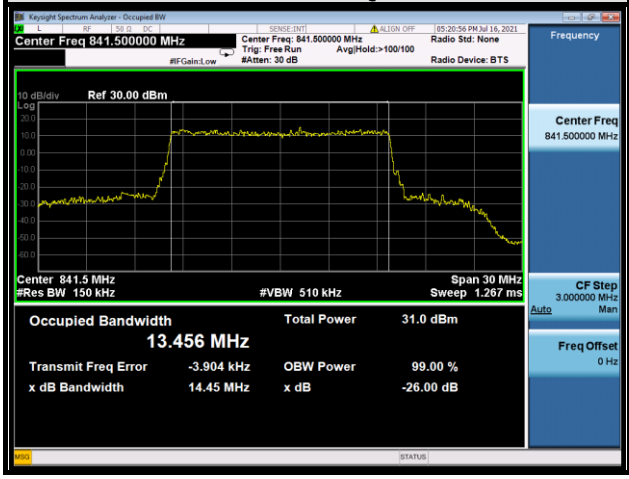
15MHz / QPSK



15MHz / 16QAM



15MHz / 64QAM

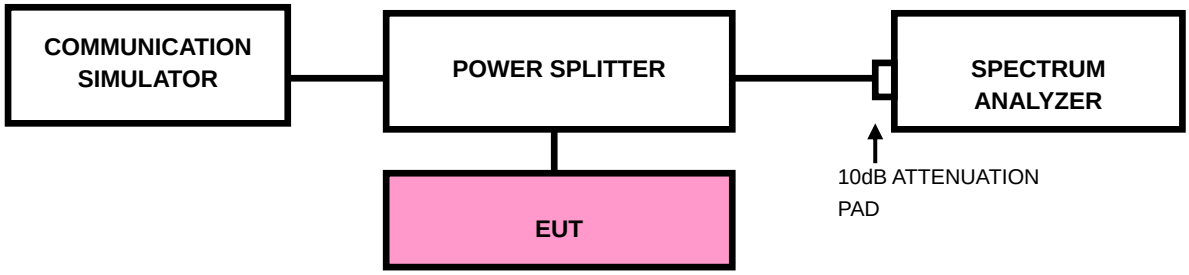


3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

a. All measurements were done at low and high operational frequency range.

b. The center frequency of spectrum is the band edge frequency and span is 1.5MHz. RBW of the spectrum is 10kHz and VBW of the spectrum is 30kHz (GSM/GPRS/ EDGE).

c. The center frequency of spectrum is the band edge frequency and span is 10MHz. RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz (WCDMA).

d. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 20kHz and VBW of the spectrum is 100 kHz. (LTE bandwidth 1.4MHz).

e. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 30kHz and VBW of the spectrum is 100kHz. (LTE bandwidth 3MHz)

f. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 50kHz and VBW of the spectrum is 200kHz. (LTE bandwidth 5MHz)

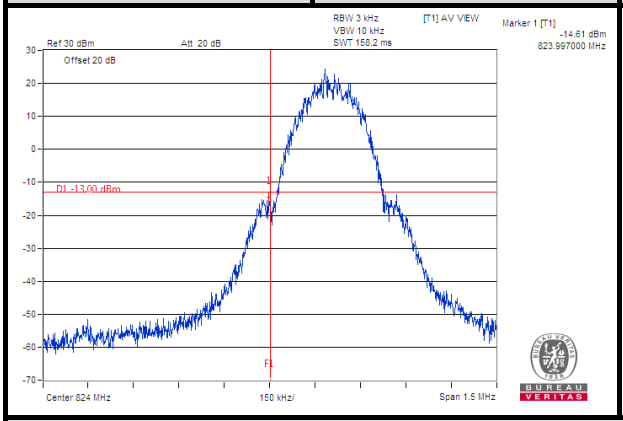
g. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz. (LTE bandwidth 10MHz)

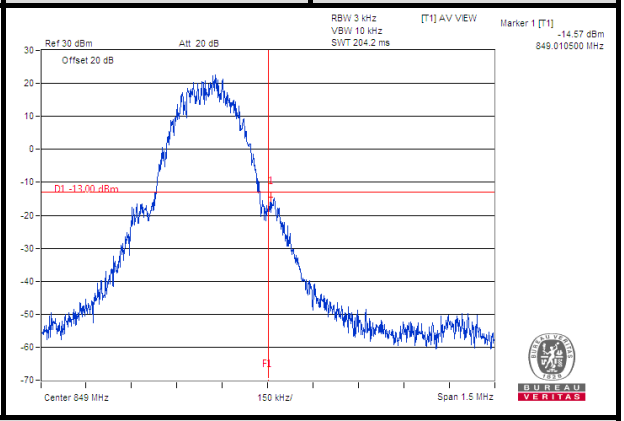
h. Record the max trace plot into the test report.

3.4.4 TEST RESULTS

GSM

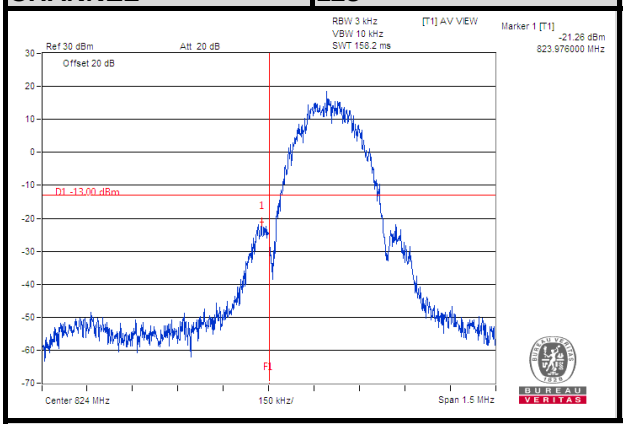
CHANNEL	128	CHANNEL	251

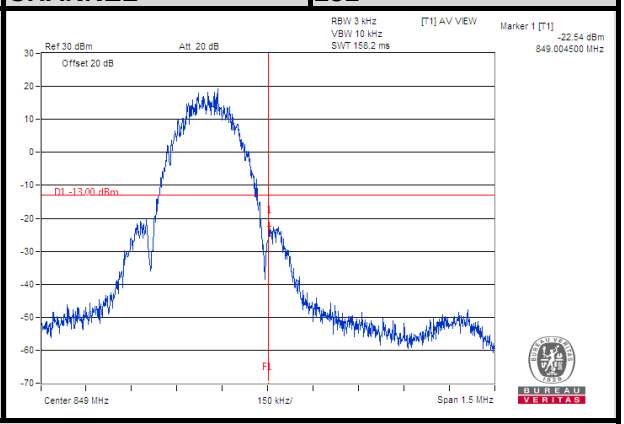




EDGE

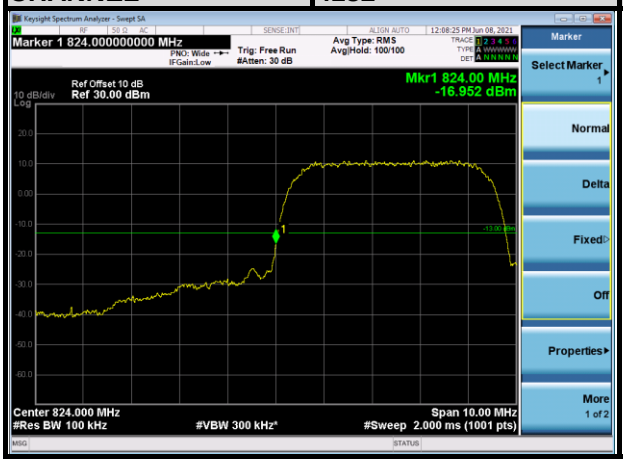
CHANNEL	128	CHANNEL	251





WCDMA

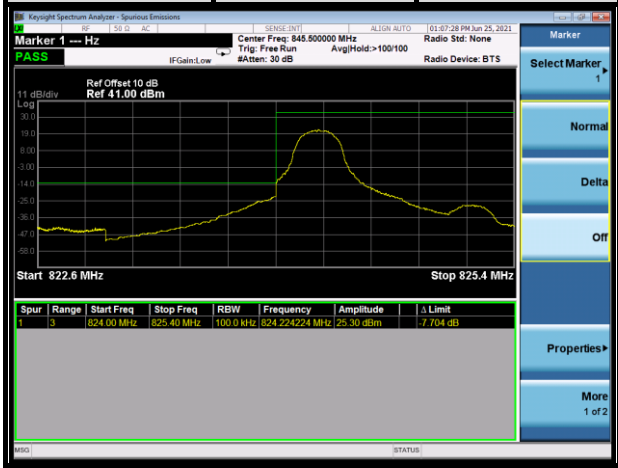
CHANNEL	4132	CHANNEL	4233

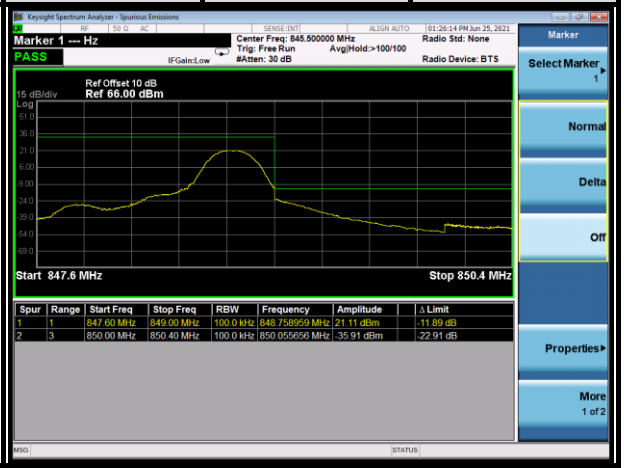


LTE Band5

Channel Bandwidth: 1.4MHz QPSK

CHANNEL	20407	1 RB	CHANNEL	20643	1 RB

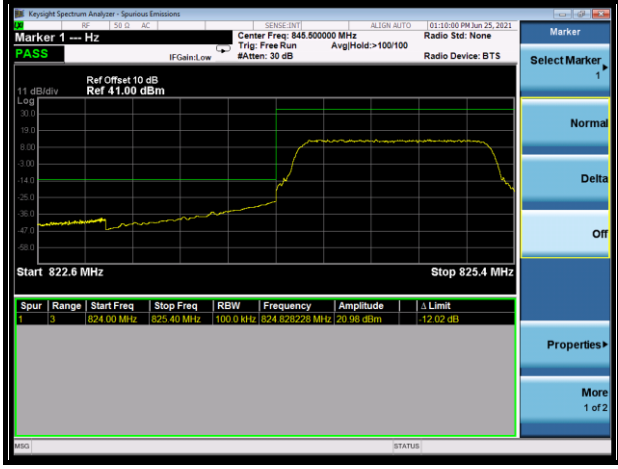


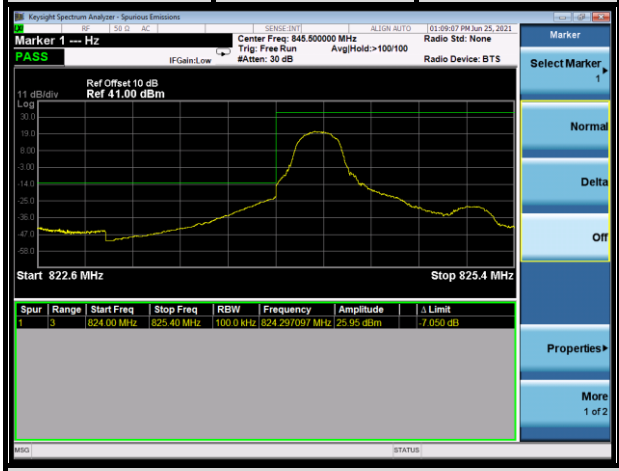
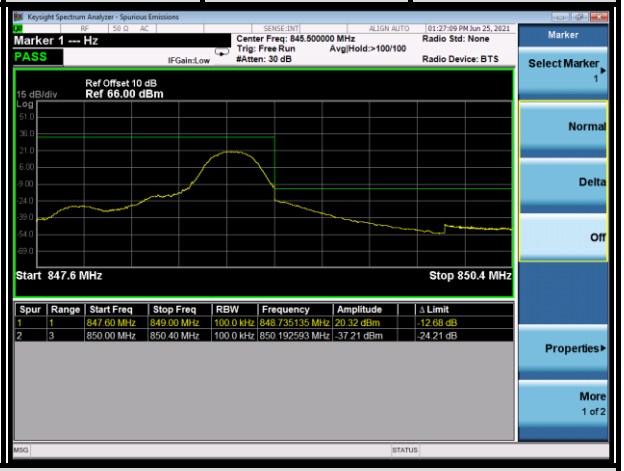


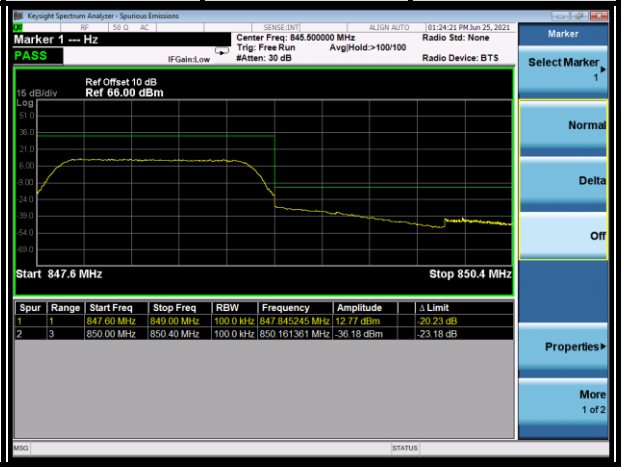
LTE Band5

Channel Bandwidth: 1.4MHz QPSK

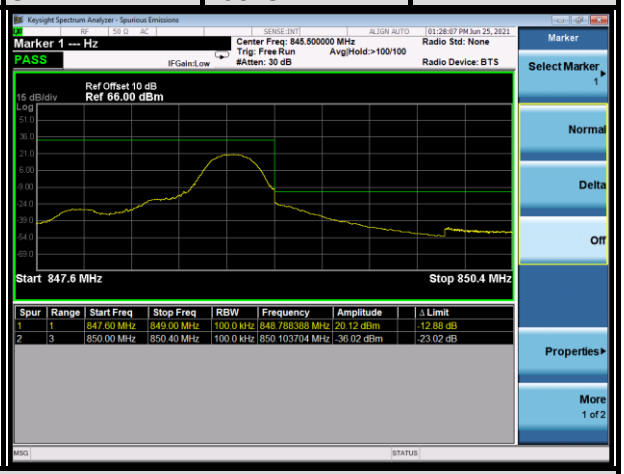
CHANNEL	20407	Full RB	CHANNEL	20643	Full RB



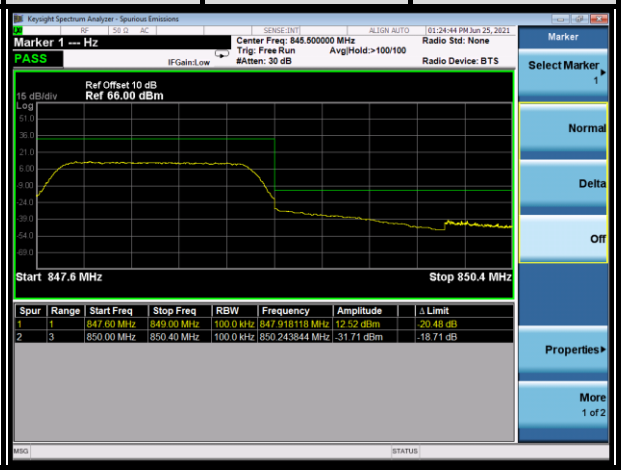
LTE Band5					
Channel Bandwidth: 1.4MHz 16QAM					
CHANNEL	20407	1 RB	CHANNEL	20643	1 RB
					

LTE Band5					
Channel Bandwidth: 1.4MHz 16QAM					
CHANNEL	20407	Full RB	CHANNEL	20643	Full RB
					

LTE Band5					
Channel Bandwidth: 1.4MHz 64QAM					
CHANNEL	20407	1 RB	CHANNEL	20643	1 RB



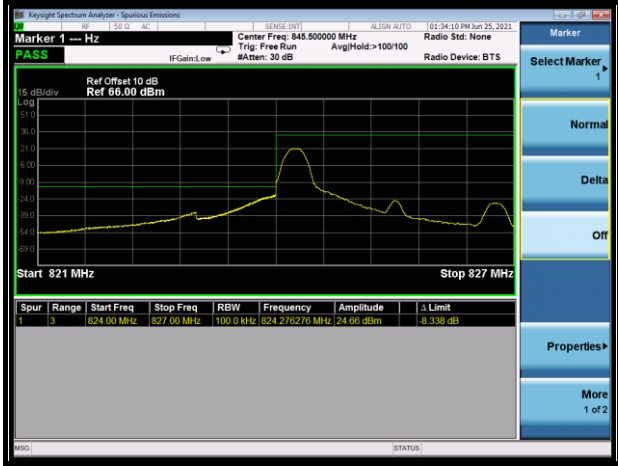
LTE Band5					
Channel Bandwidth: 1.4MHz 64QAM					
CHANNEL	20407	Full RB	CHANNEL	20643	Full RB

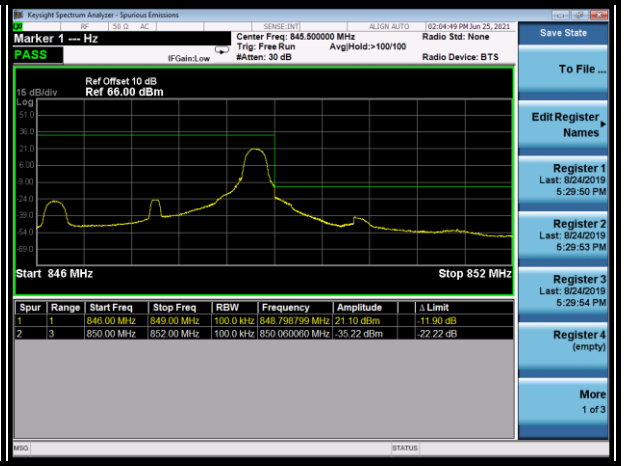


LTE Band5

Channel Bandwidth: 3MHz QPSK

CHANNEL	20415	1 RB	CHANNEL	20635	1 RB

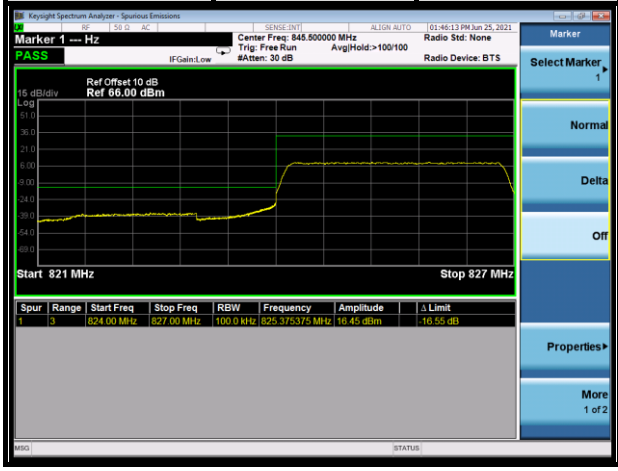


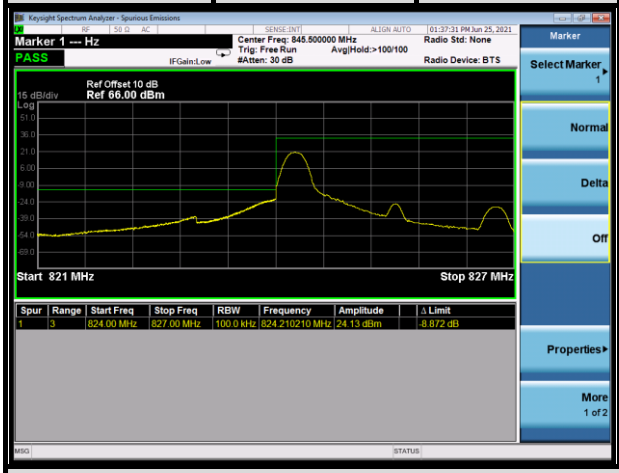
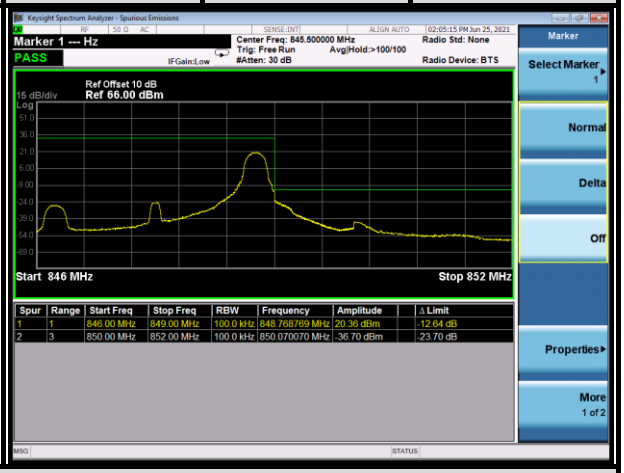


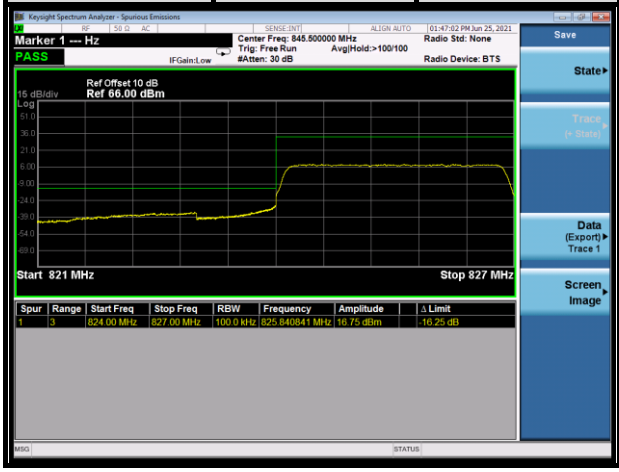
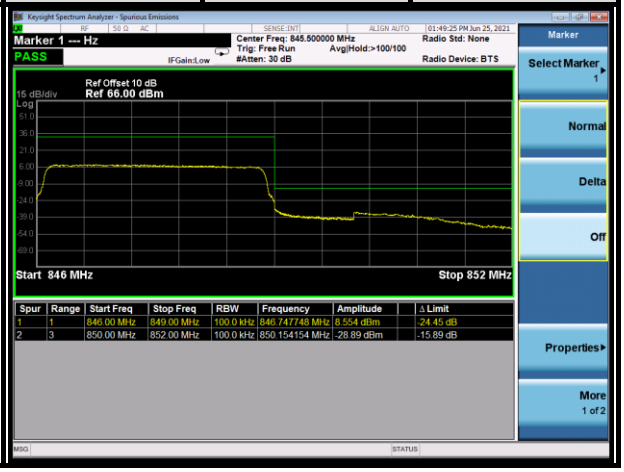
LTE Band5

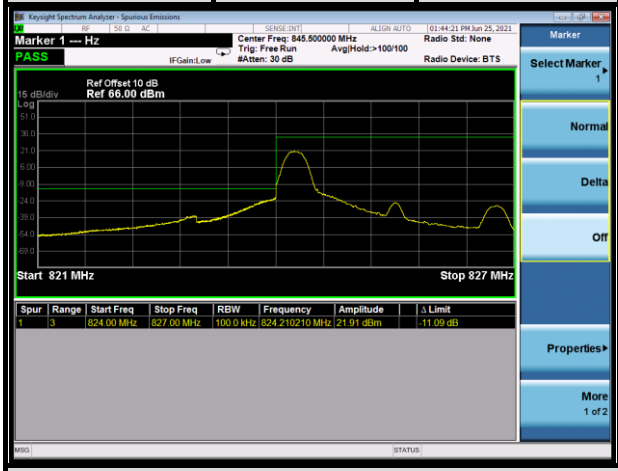
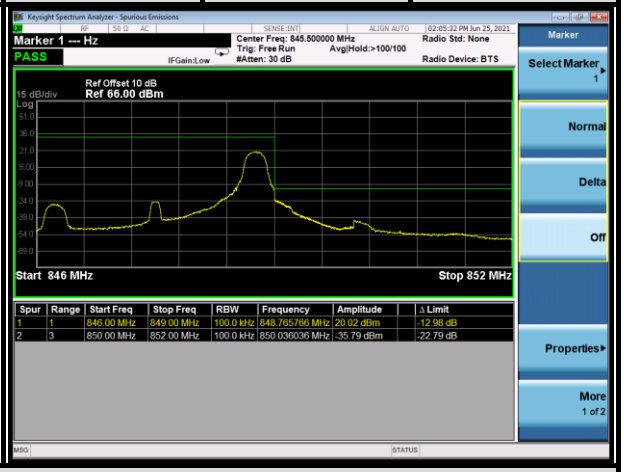
Channel Bandwidth: 3MHz QPSK

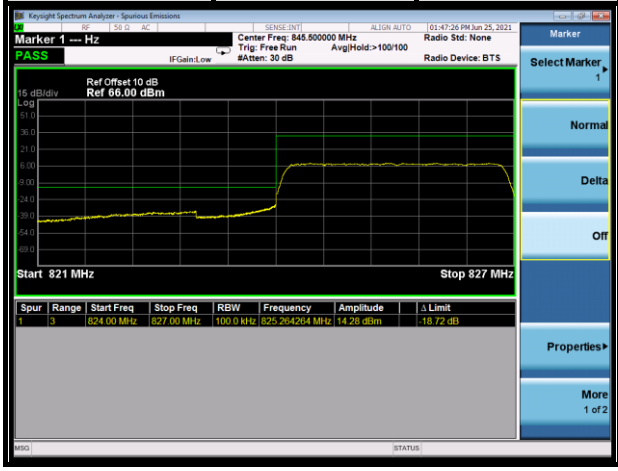
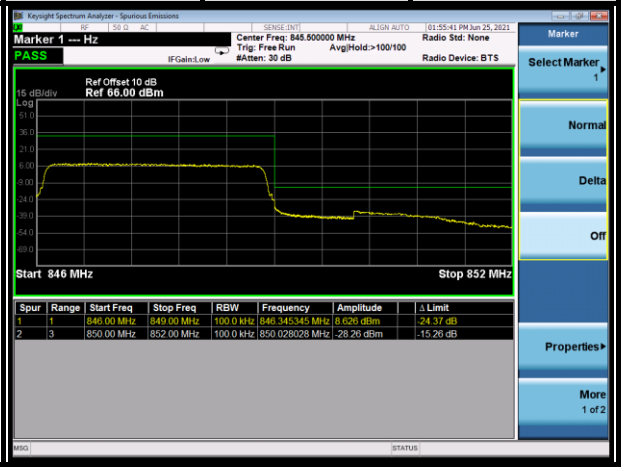
CHANNEL	20415	Full RB	CHANNEL	20635	Full RB



LTE Band5					
Channel Bandwidth: 3MHz 16QAM					
CHANNEL	20415	1 RB	CHANNEL	20635	1 RB
					

LTE Band5					
Channel Bandwidth: 3MHz 16QAM					
CHANNEL	20415	Full RB	CHANNEL	20635	Full RB
					

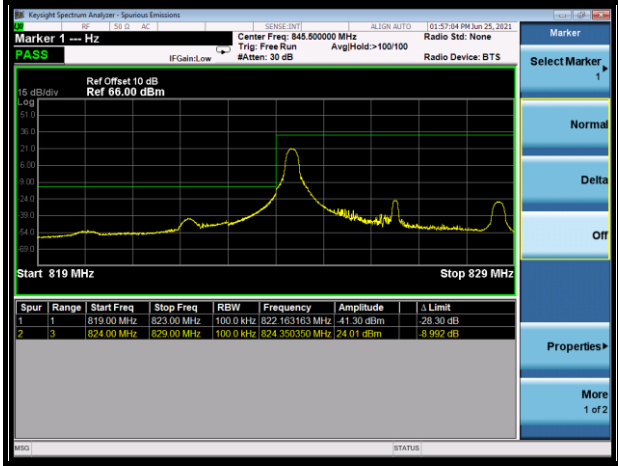
LTE Band5					
Channel Bandwidth: 3MHz 64QAM					
CHANNEL	20415	1 RB	CHANNEL	20643	1 RB
					

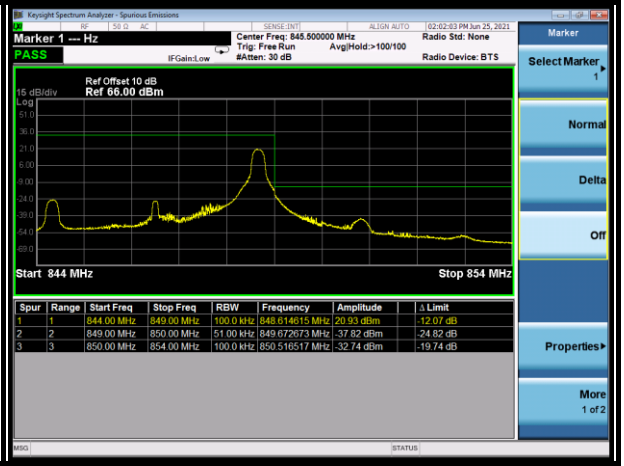
LTE Band5					
Channel Bandwidth: 3MHz 64QAM					
CHANNEL	20415	Full RB	CHANNEL	20643	Full RB
					

LTE Band5

Channel Bandwidth: 5MHz QPSK

CHANNEL	20425	1 RB	CHANNEL	20625	1 RB

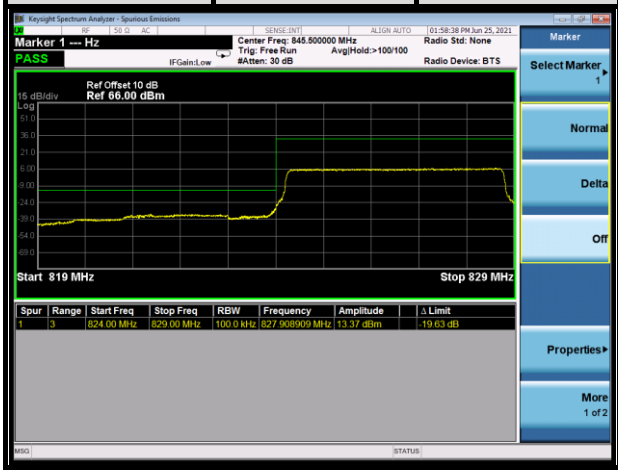


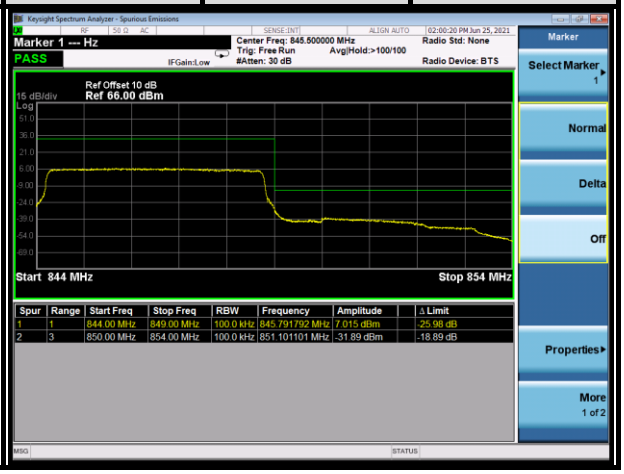


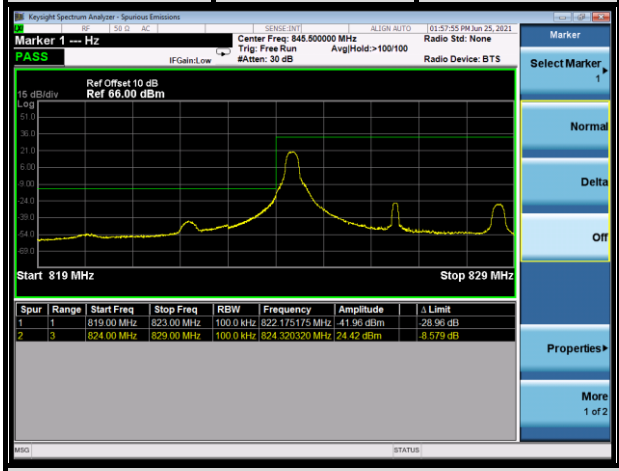
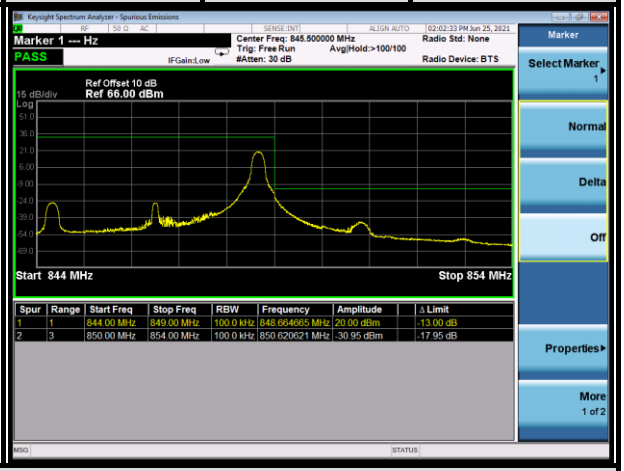
LTE Band5

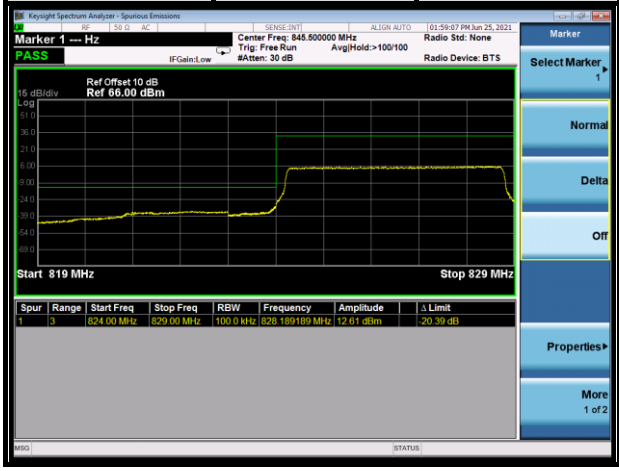
Channel Bandwidth: 5MHz QPSK

CHANNEL	20425	Full RB	CHANNEL	20625	Full RB





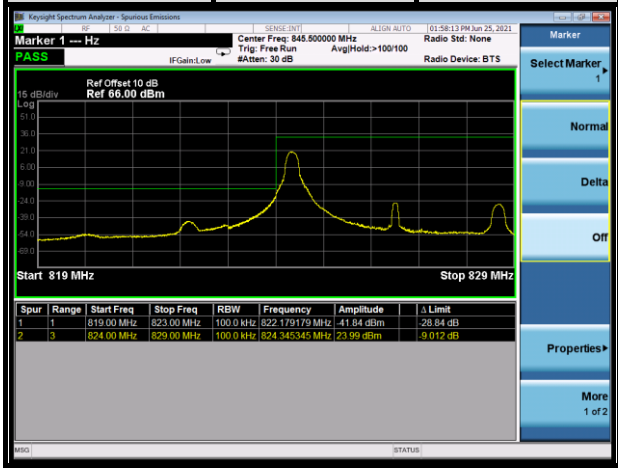
LTE Band5					
Channel Bandwidth: 5MHz 16QAM					
CHANNEL	20425	1 RB	CHANNEL	20625	1 RB
					

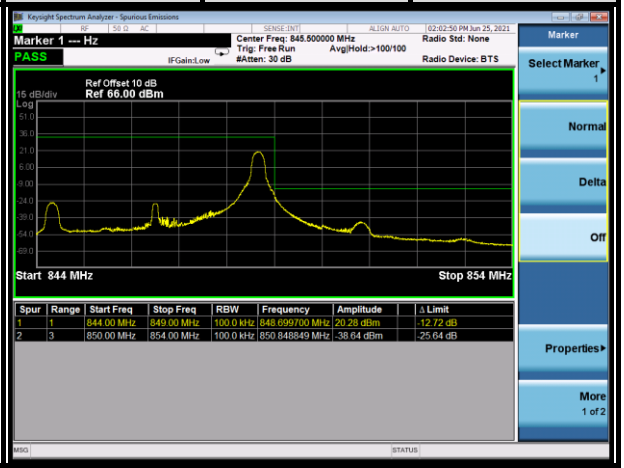
LTE Band5					
Channel Bandwidth: 5MHz 16QAM					
CHANNEL	20425	Full RB	CHANNEL	20625	Full RB
					

LTE Band5

Channel Bandwidth: 5MHz 64QAM

CHANNEL	20425	1 RB	CHANNEL	20643	1 RB

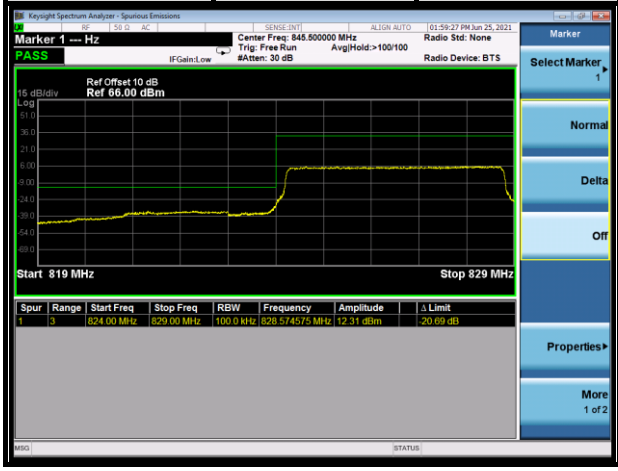




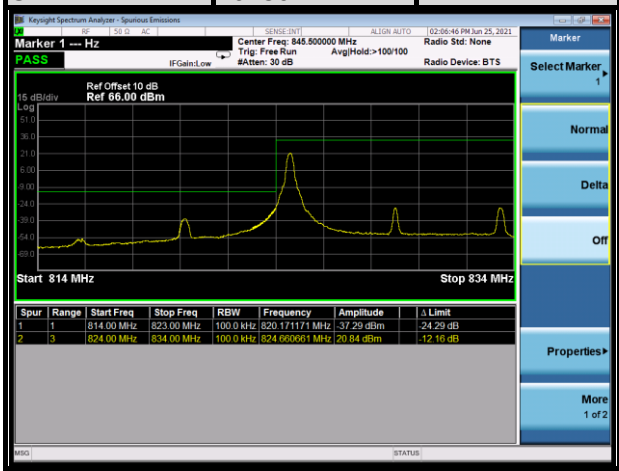
LTE Band5

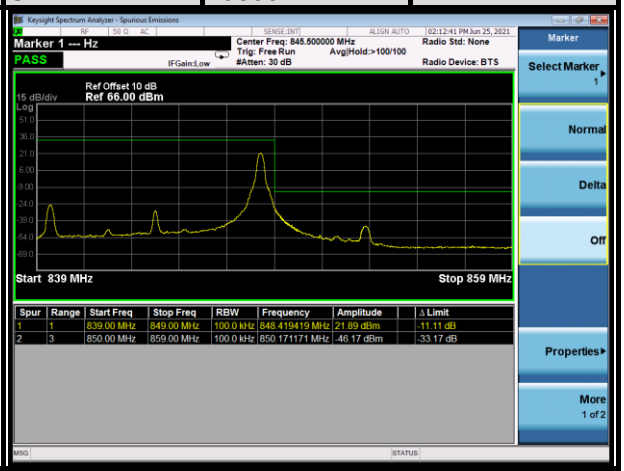
Channel Bandwidth: 5MHz 64QAM

CHANNEL	20425	Full RB	CHANNEL	20643	Full RB

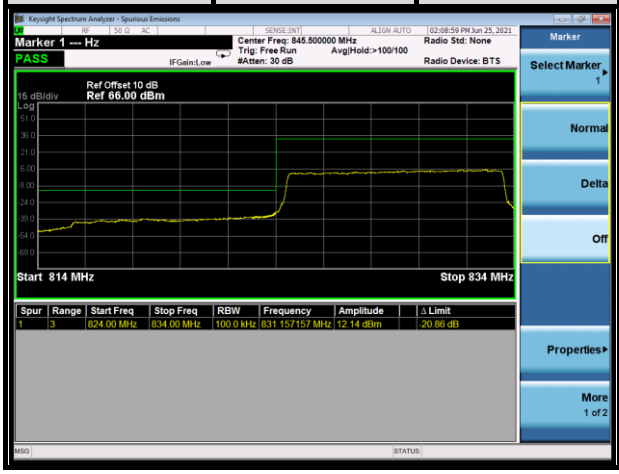


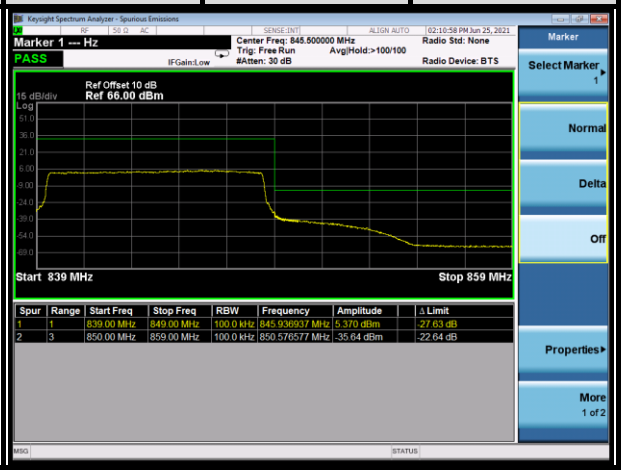
LTE Band5					
Channel Bandwidth: 10MHz QPSK					
CHANNEL	20450	1 RB	CHANNEL	20600	1 RB





LTE Band5					
Channel Bandwidth: 10MHz QPSK					
CHANNEL	20450	Full RB	CHANNEL	20600	Full RB

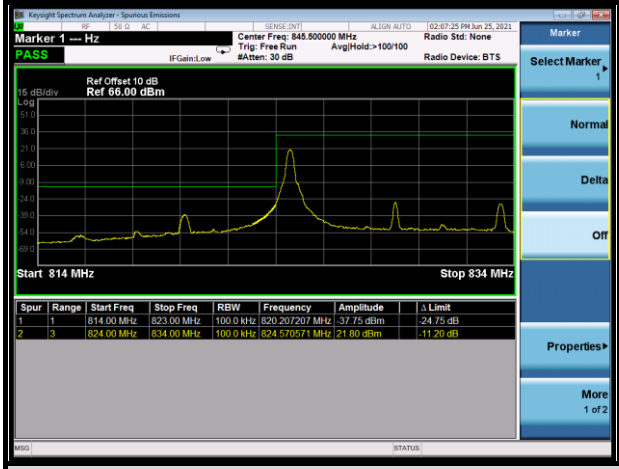


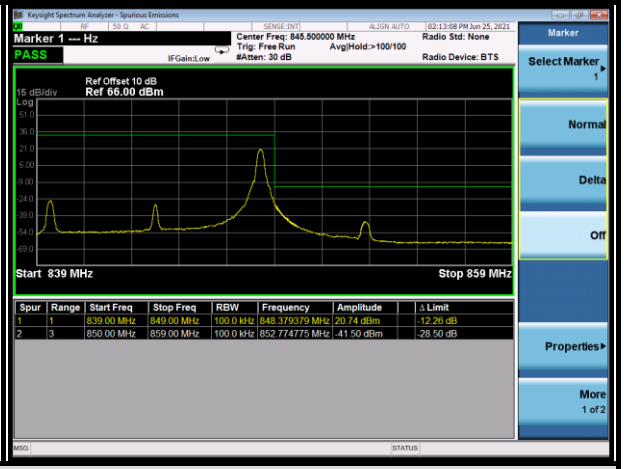


LTE Band5

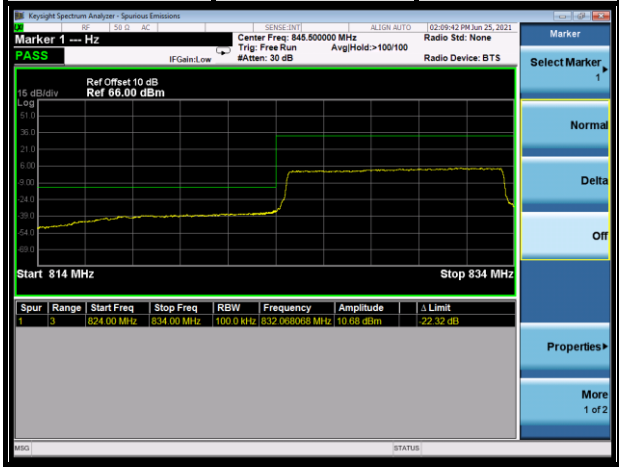
Channel Bandwidth: 10MHz 16QAM

CHANNEL	20450	1 RB	CHANNEL	20600	1 RB





LTE Band5

Channel Bandwidth: 10MHz 16QAM

CHANNEL	20450	Full RB	CHANNEL	20600	Full RB