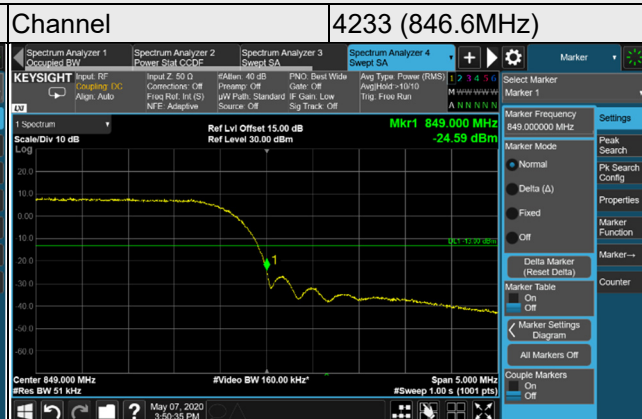
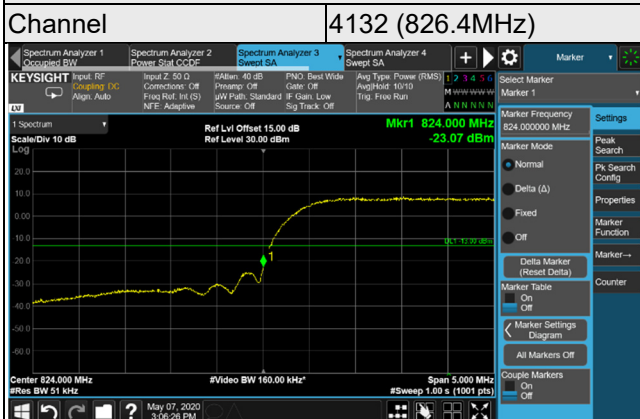
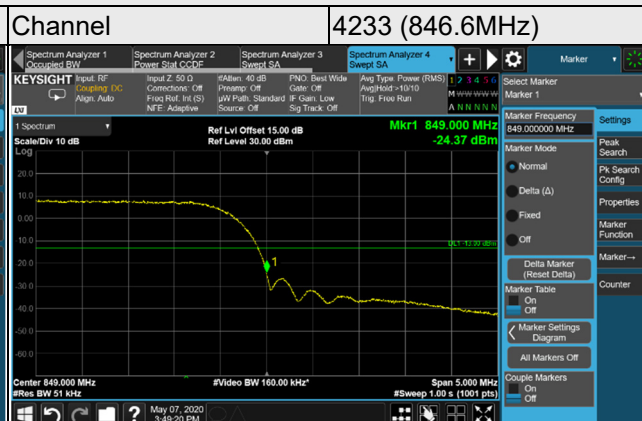
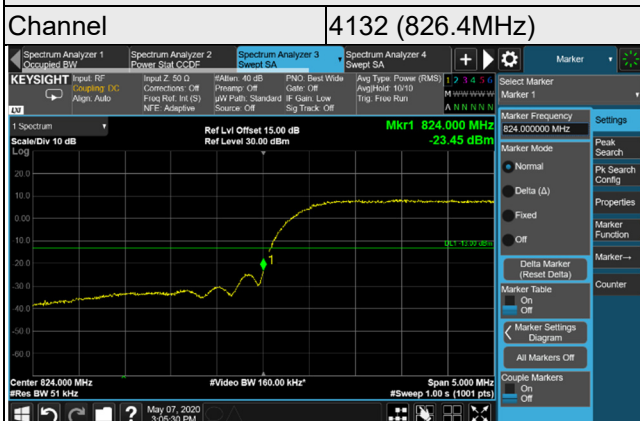


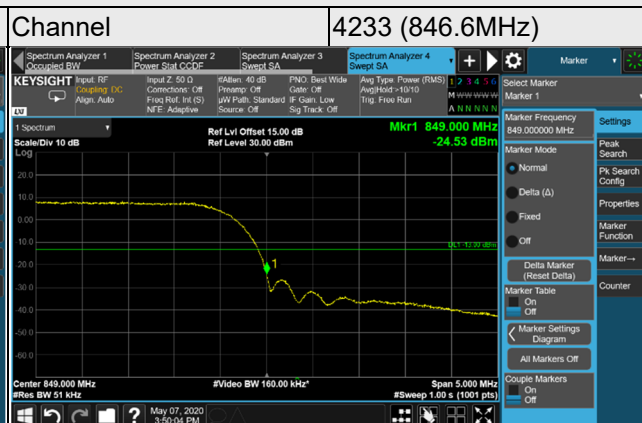
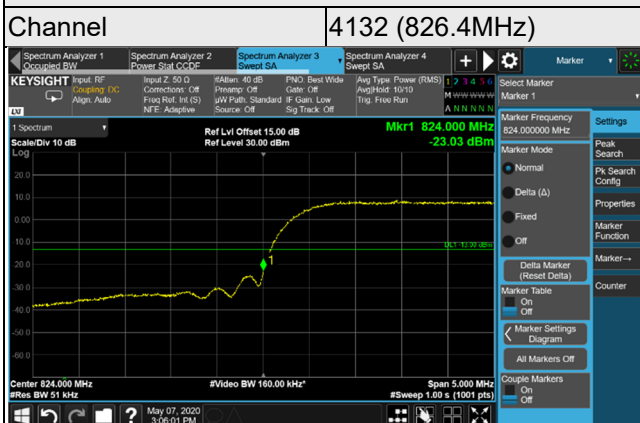
WCDMA



HSDPA



HSUPA



LTE Band 5, Channel Bandwidth 1.4MHz

Channel 20407
(824.7MHz)

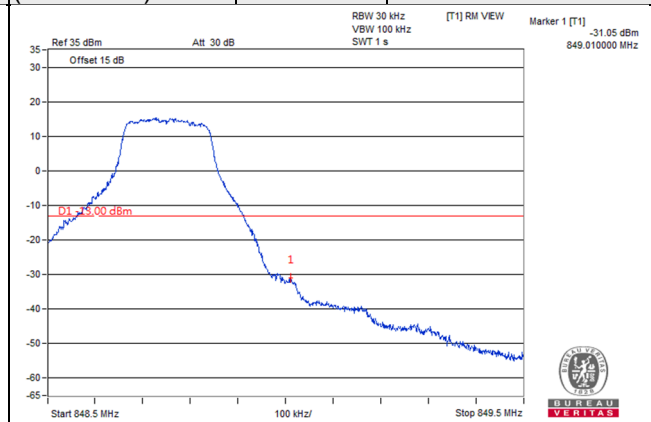
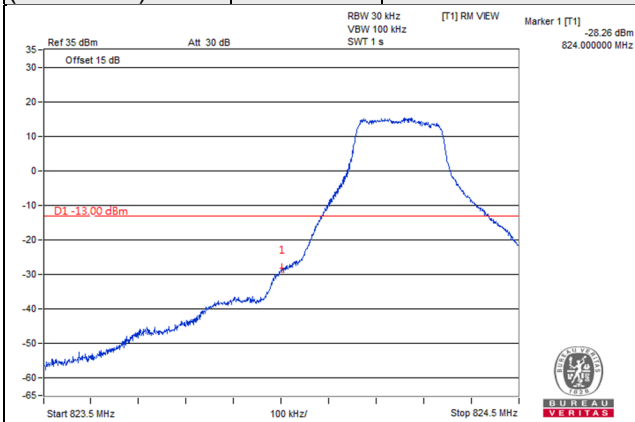
QPSK

1 RB / 0 RB Offset

Channel 20643
(848.3MHz)

QPSK

1 RB / 5 RB Offset



Channel 20407
(824.7MHz)

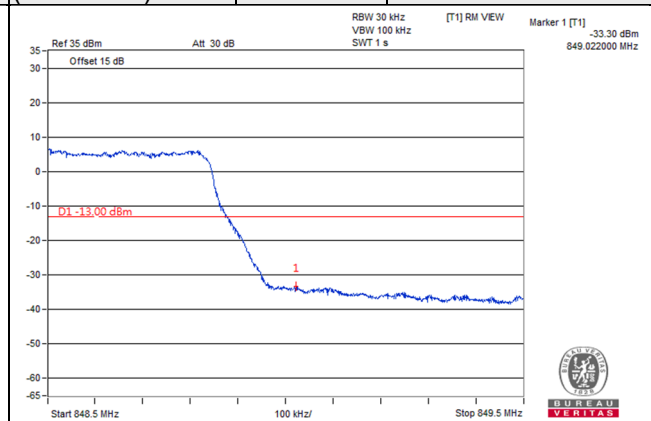
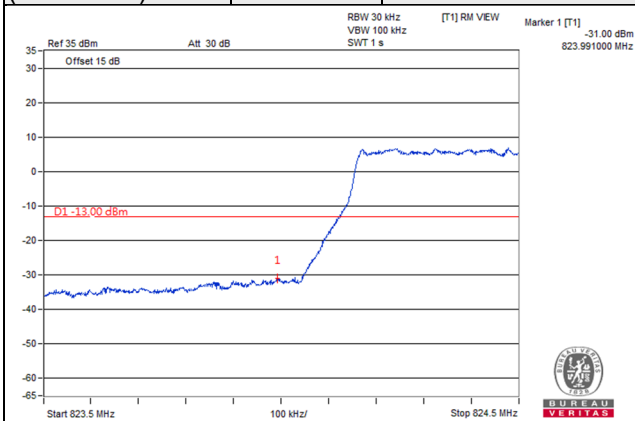
QPSK

6 RB / 0 RB Offset

Channel 20643
(848.3MHz)

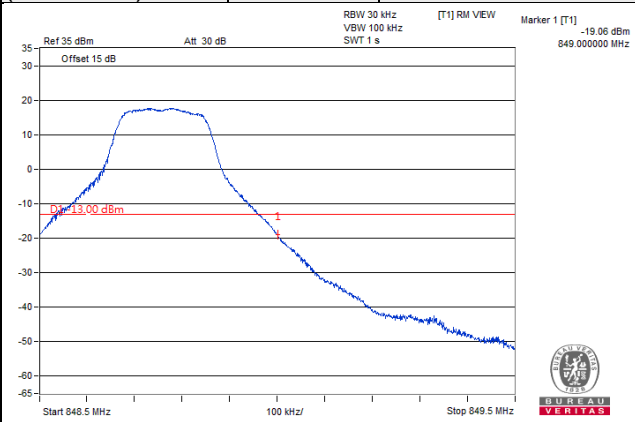
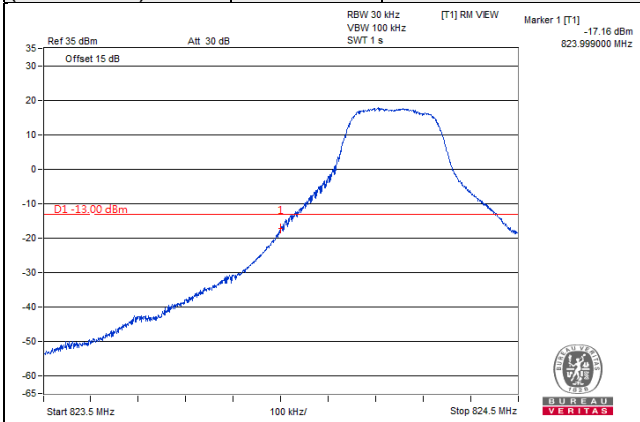
QPSK

6 RB / 0 RB Offset

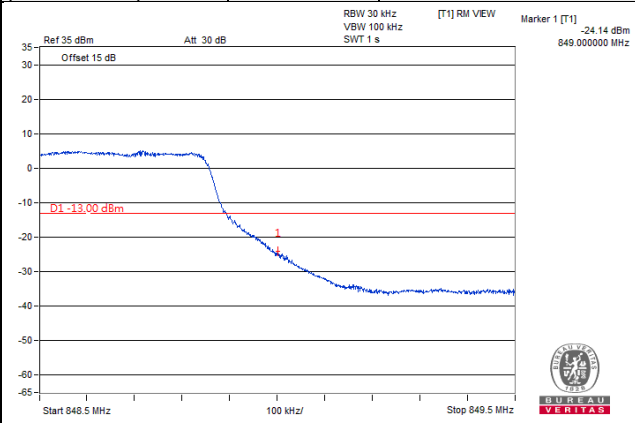
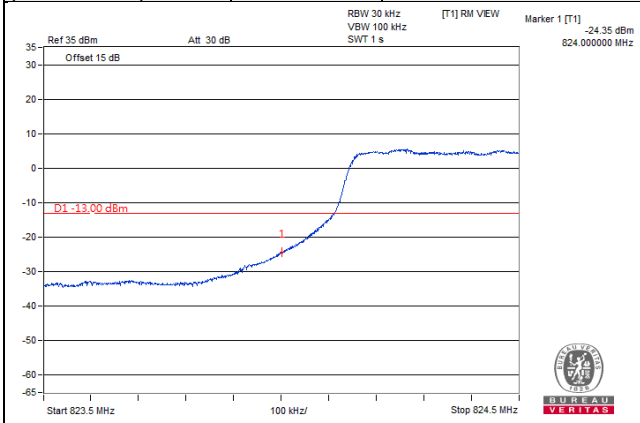


LTE Band 5, Channel Bandwidth 3MHz

Channel 20415 (825.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 20635 (847.5MHz)	QPSK	1 RB / 14 RB Offset
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Channel 20415 (825.5MHz)	QPSK	15 RB / 0 RB Offset	Channel 20635 (847.5MHz)	QPSK	15 RB / 0 RB Offset
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LTE Band 5, Channel Bandwidth 5MHz

Channel 20425
(826.5MHz)

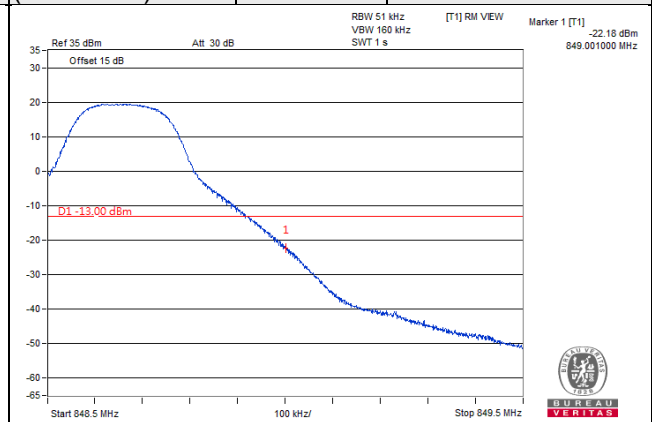
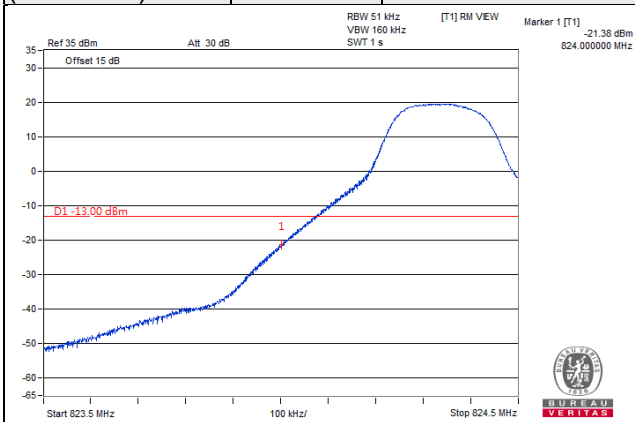
QPSK

1 RB / 0 RB Offset

Channel 20625
(846.5MHz)

QPSK

1 RB / 24 RB Offset



Channel 20425
(826.5MHz)

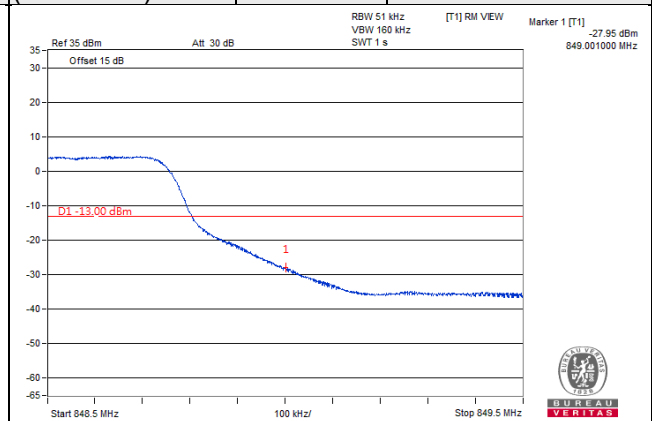
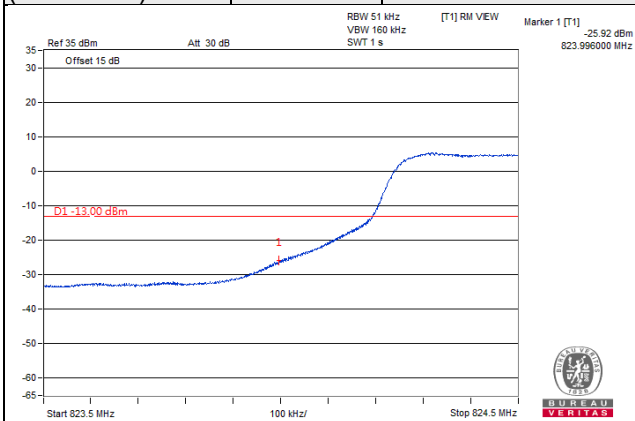
QPSK

25 RB / 0 RB Offset

Channel 20625
(846.5MHz)

QPSK

25 RB / 0 RB Offset



LTE Band 5, Channel Bandwidth 10MHz

Channel 20450
(829.0MHz)

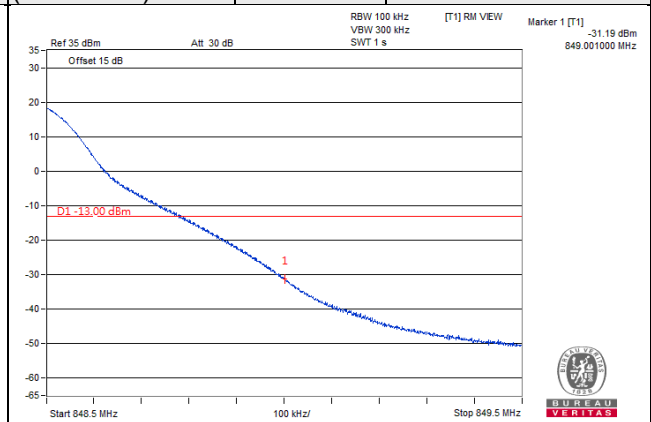
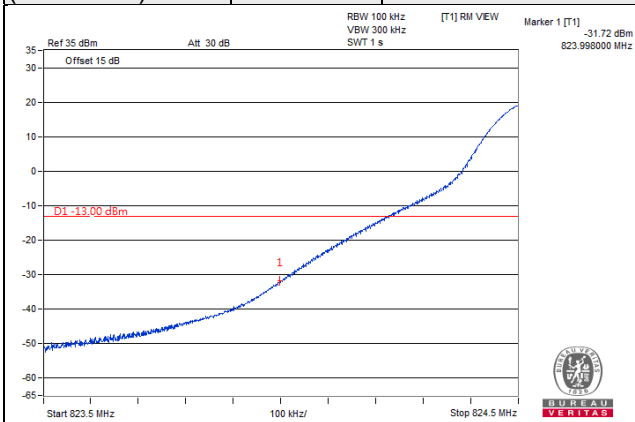
QPSK

1 RB / 0 RB Offset

Channel 20600
(844.0MHz)

QPSK

1 RB / 49 RB Offset



Channel 20450
(829.0MHz)

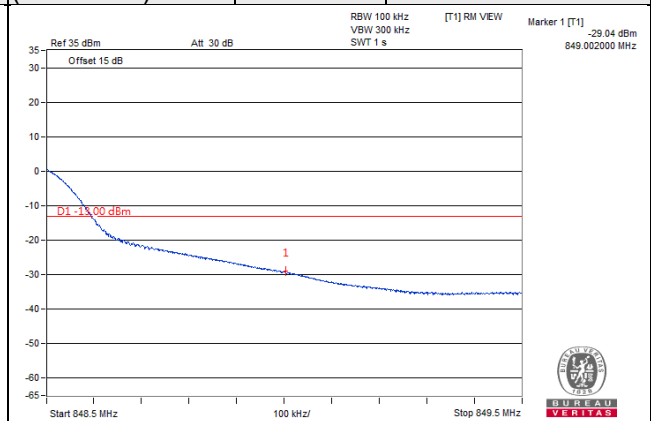
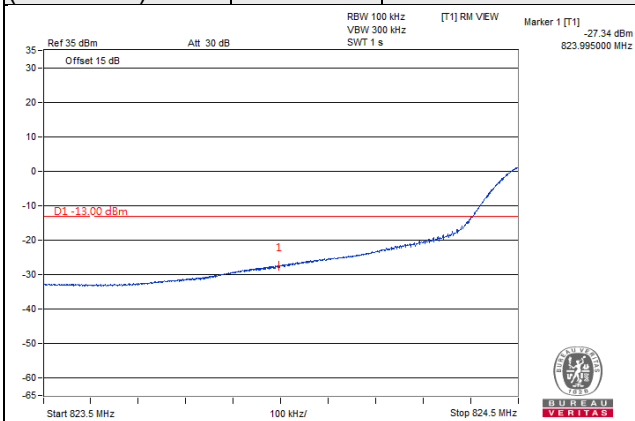
QPSK

50 RB / 0 RB Offset

Channel 20600
(844.0MHz)

QPSK

50 RB / 0 RB Offset

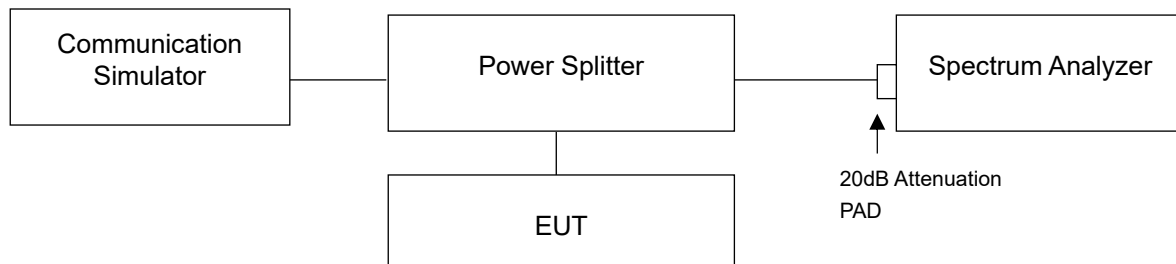


4.6 Peak to Average Ratio

4.6.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

4.6.2 Test Setup



4.6.3 Test Procedures

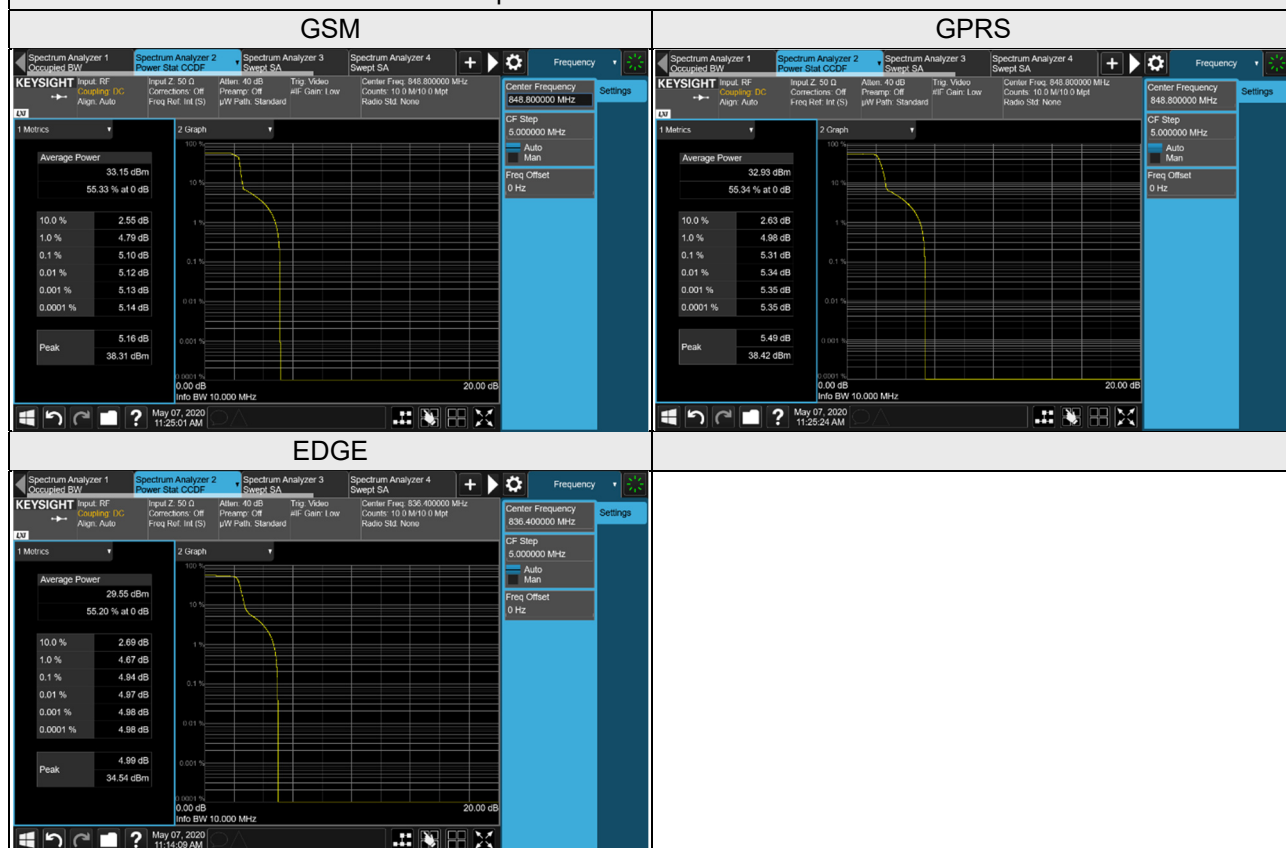
- Set resolution/measurement bandwidth \geq signal's occupied bandwidth;
- Set the number of counts to a value that stabilizes the measured CCDF curve;
- Record the maximum PAPR level associated with a probability of 0.1%.

4.6.4 Test Results

GSM

Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		GSM	GPRS	EDGE
128	824.2	4.57	4.49	4.47
189	836.4	4.28	4.05	4.94
251	848.8	5.10	5.31	4.20

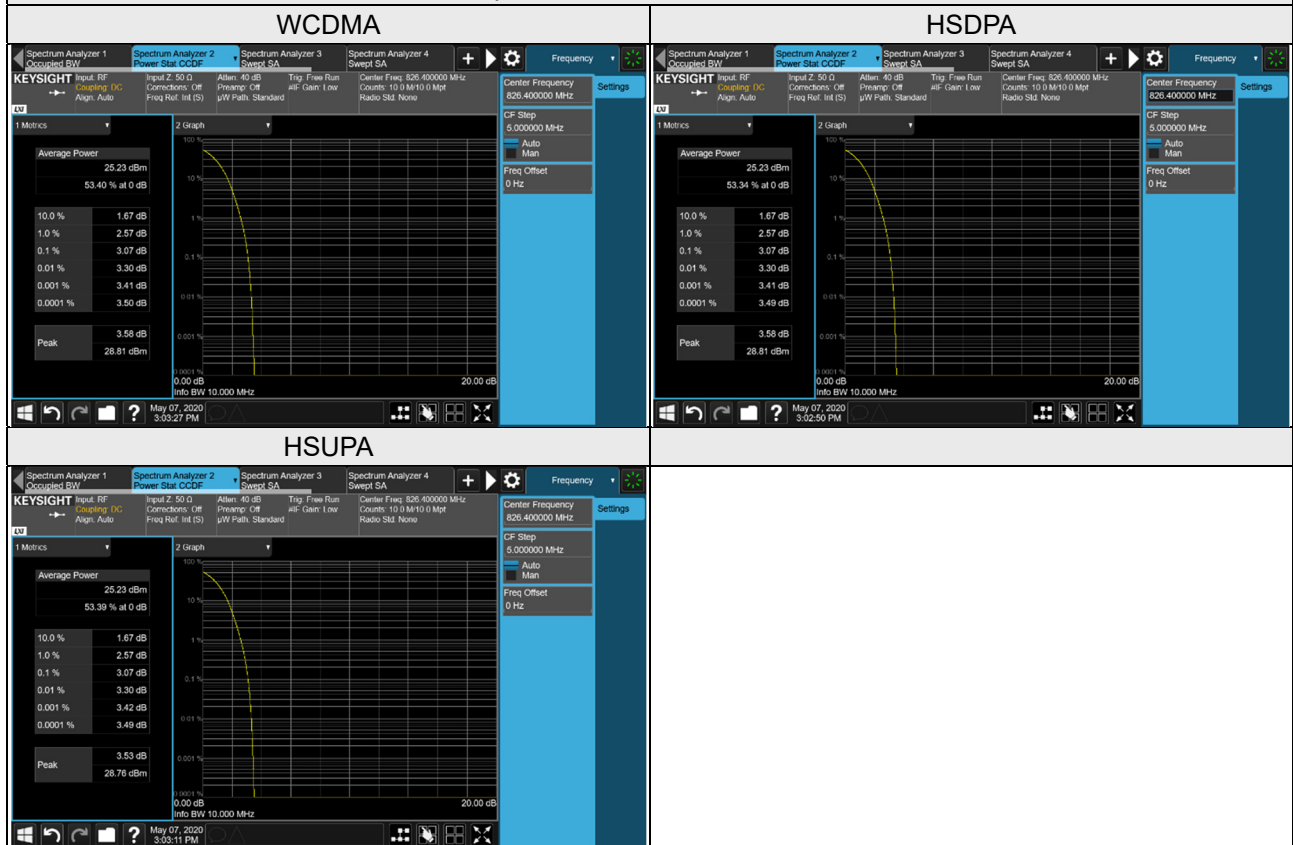
Spectrum Plot of Worst Value



WCDMA Band 5

Channel	Frequency (MHz)	Peak To Average Ratio (dB)		
		WCDMA	HSDPA	HSUPA
4132	826.4	3.07	3.07	3.07
4182	836.4	3.06	3.07	3.06
4233	846.6	3.06	3.05	3.05

Spectrum Plot of Worst Value

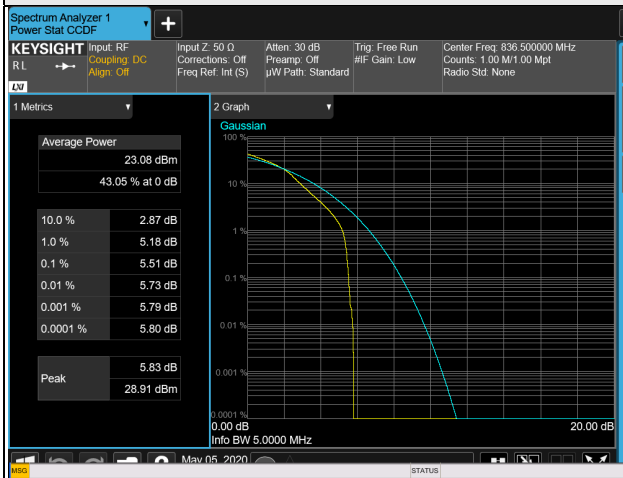


LTE Band 5

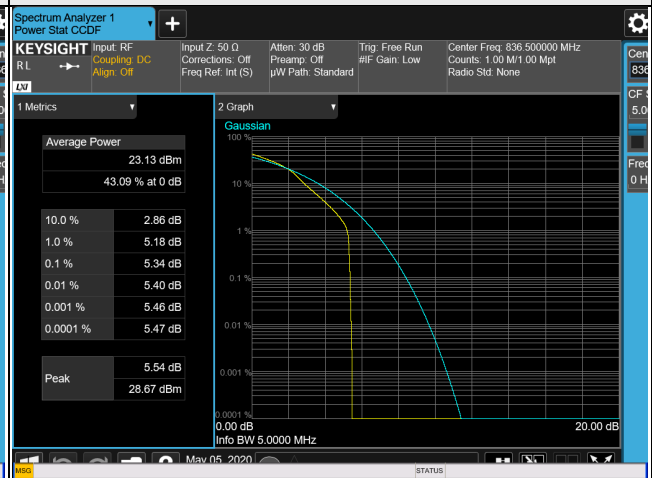
LTE Band 5, Channel Bandwidth 1.4MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20407	824.7	3.80	5.45
20525	836.5	3.81	5.51
20643	848.3	3.80	5.42
LTE Band 5, Channel Bandwidth 3MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20415	825.5	3.57	5.30
20525	836.5	3.58	5.34
20635	847.5	3.58	5.30
LTE Band 5, Channel Bandwidth 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20425	826.5	3.55	5.29
20525	836.5	3.54	5.33
20625	846.5	3.55	5.29
LTE Band 5, Channel Bandwidth 10MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		QPSK	16QAM
20450	829.0	3.48	5.24
20525	836.5	3.54	5.26
20600	844.0	3.46	5.20

Spectrum Plot of Worst Value

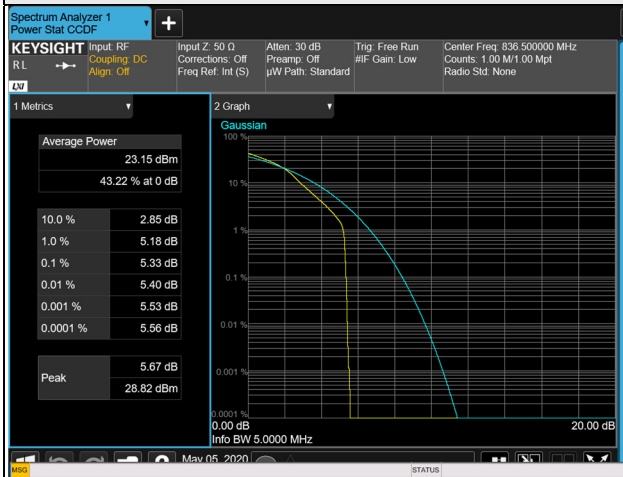
1.4MHz / 16QAM



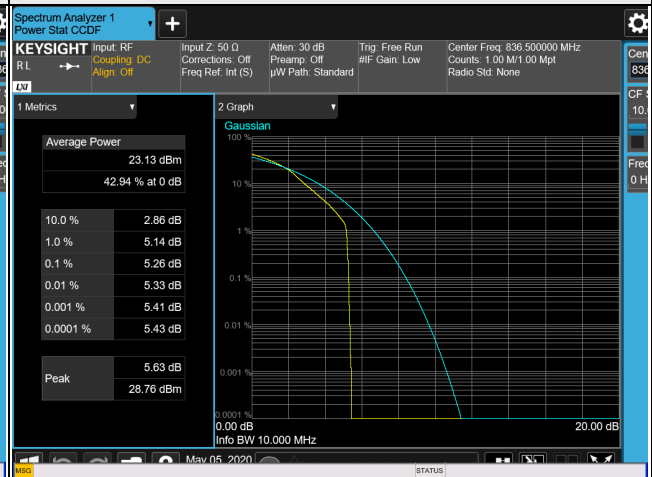
3MHz / 16QAM



5MHz / 16QAM



10MHz / 16QAM

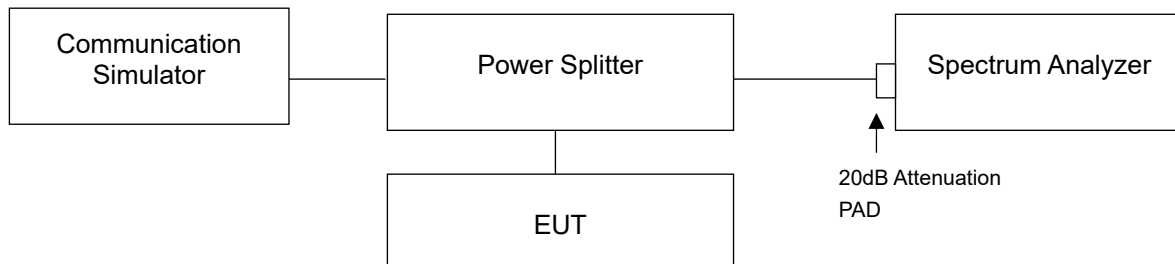


4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

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. The emission limit equal to -13dBm .

4.7.2 Test Setup



4.7.3 Test Procedure

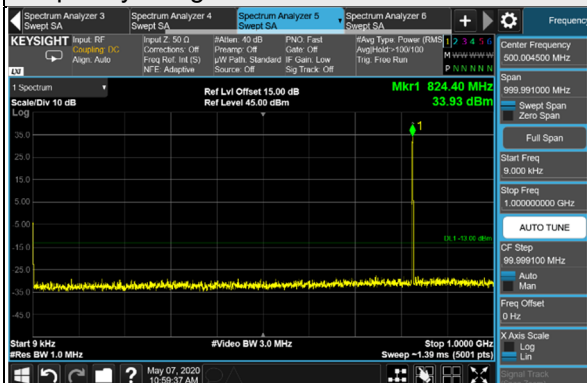
- The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- Measuring frequency range is from 9 kHz to 1GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.
- Measuring frequency range is from 1GHz to 9GHz or 10GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

4.7.4 Test Results

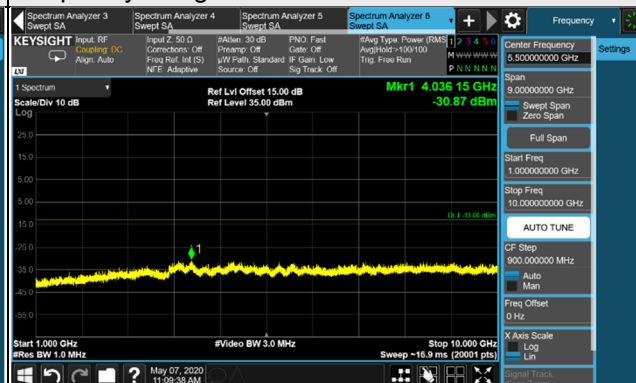
GSM

Channel 128 (824.2MHz)

Frequency Range : 9kHz~1GHz

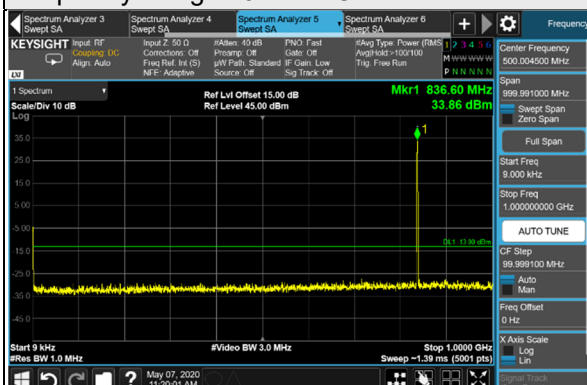


Frequency Range : 1GHz~10GHz

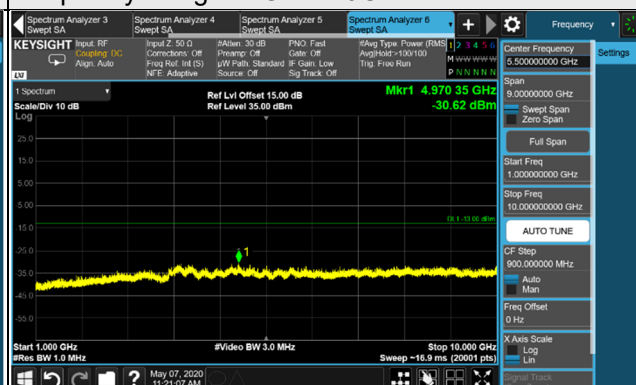


Channel 189 (836.4MHz)

Frequency Range : 9kHz~1GHz

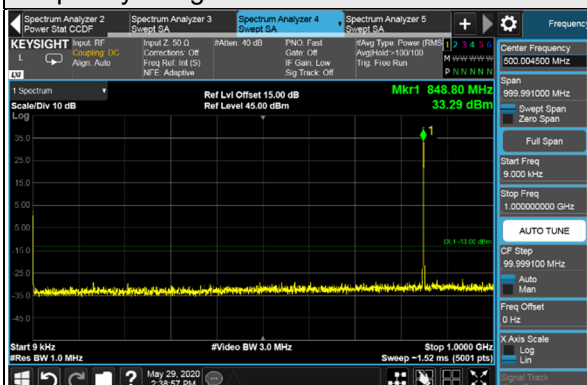


Frequency Range : 1GHz~10GHz

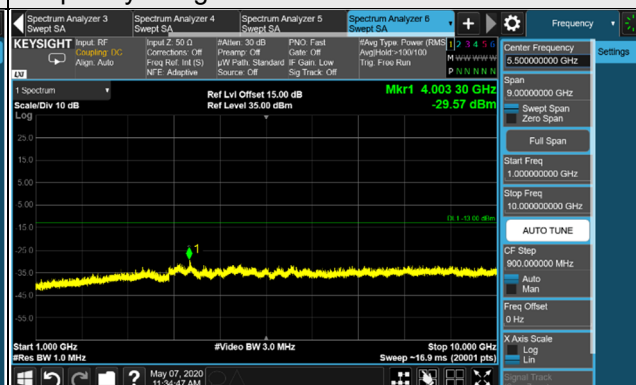


Channel 251 (848.8MHz)

Frequency Range : 9kHz~1GHz



Frequency Range : 1GHz~10GHz

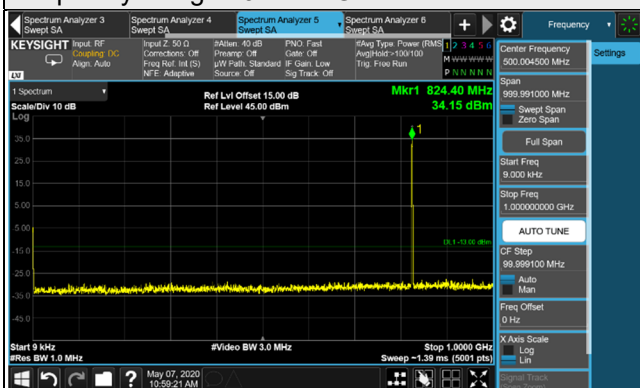


*The 9kHz signal over the limit is from Spectrum.

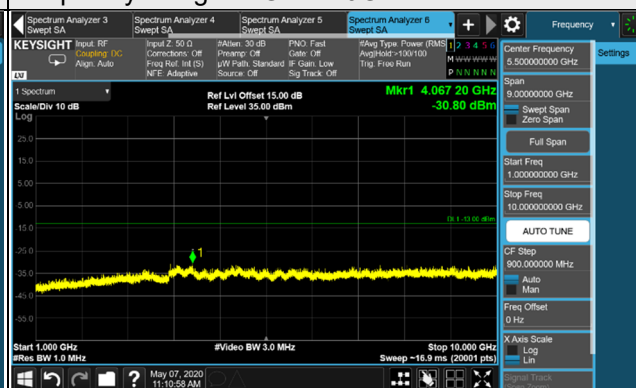
GPRS

Channel 128 (824.2MHz)

Frequency Range : 9kHz~1GHz

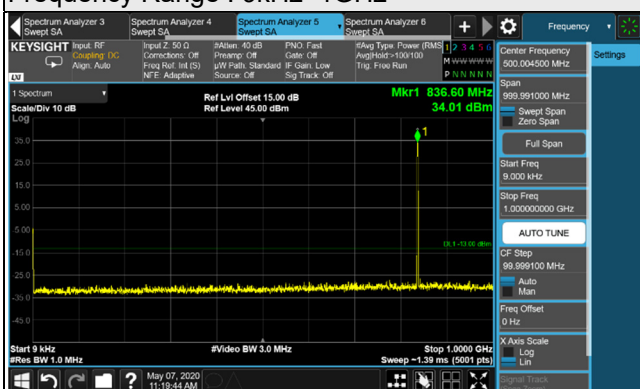


Frequency Range : 1GHz~10GHz



Channel 189 (836.4MHz)

Frequency Range : 9kHz~1GHz

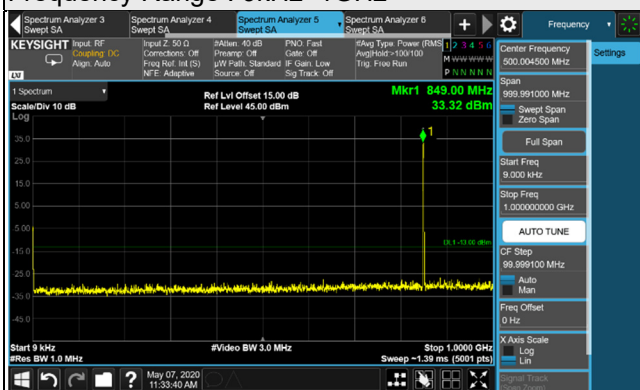


Frequency Range : 1GHz~10GHz

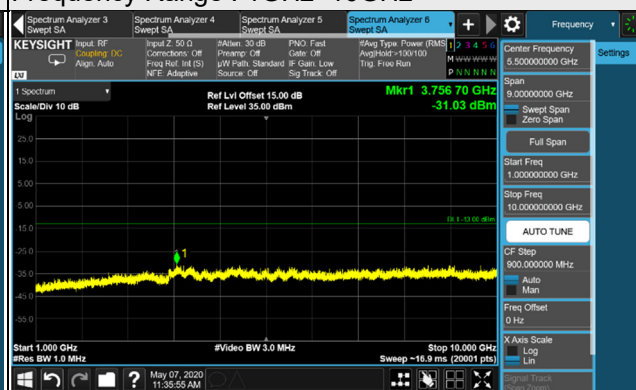


Channel 251 (848.8MHz)

Frequency Range : 9kHz~1GHz



Frequency Range : 1GHz~10GHz



*The 9kHz signal over the limit is from Spectrum.