

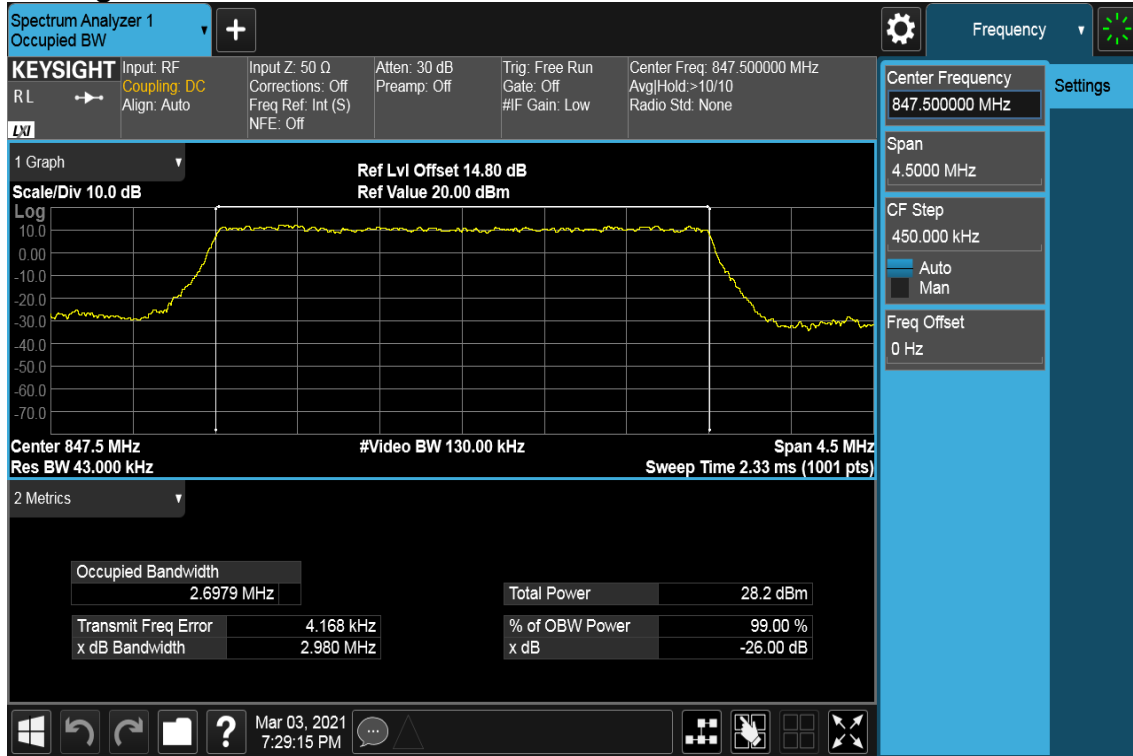


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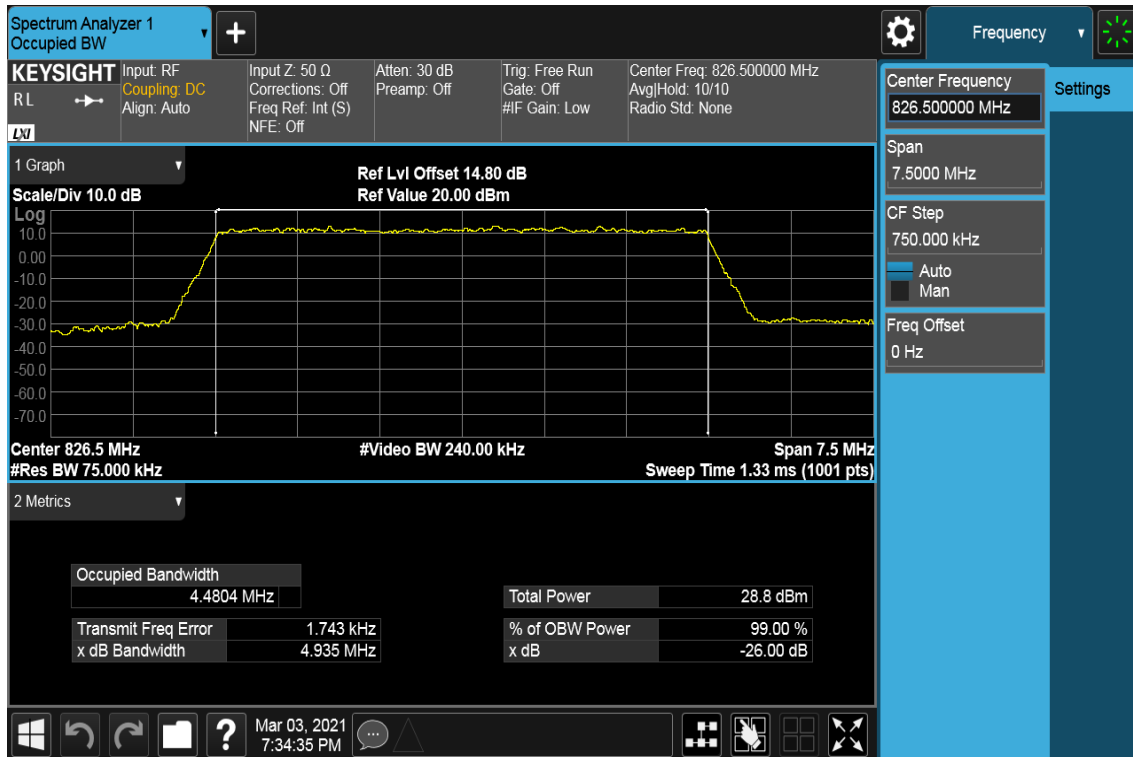
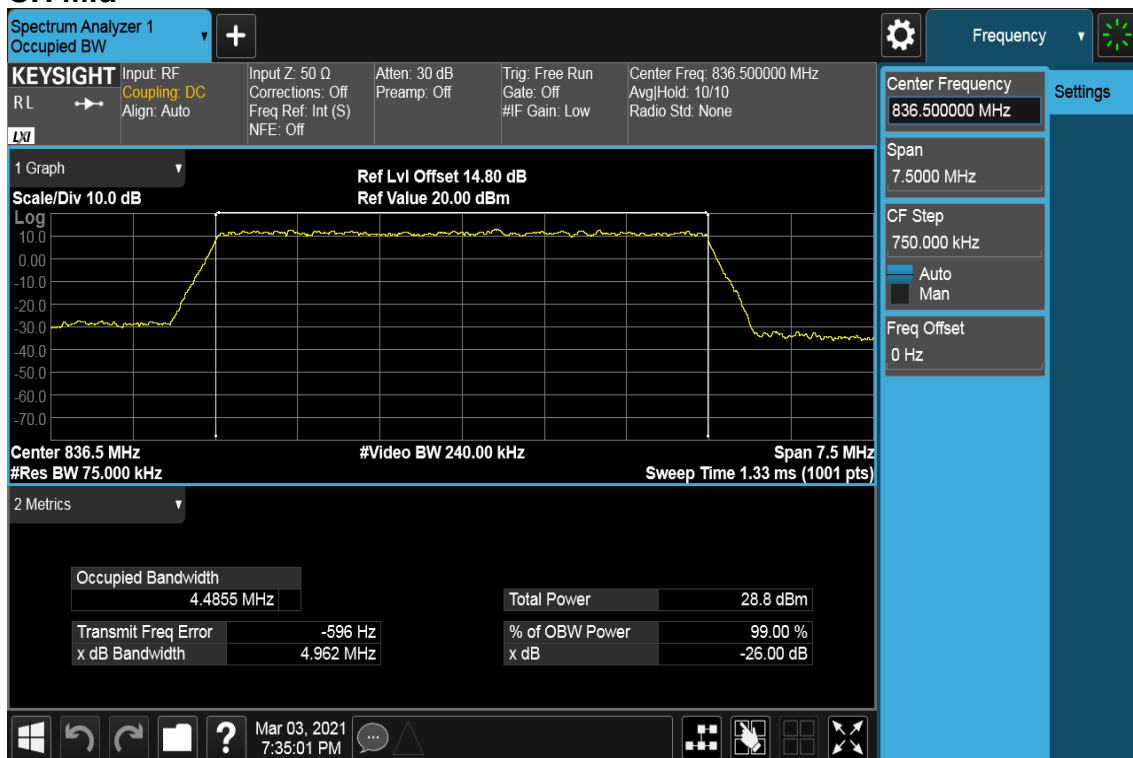
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CH High



Report No.: T201102D09-RP9

BW: 5MHz / QPSK / RB =25, RB Offset = 0
CH Low**CH Mid**

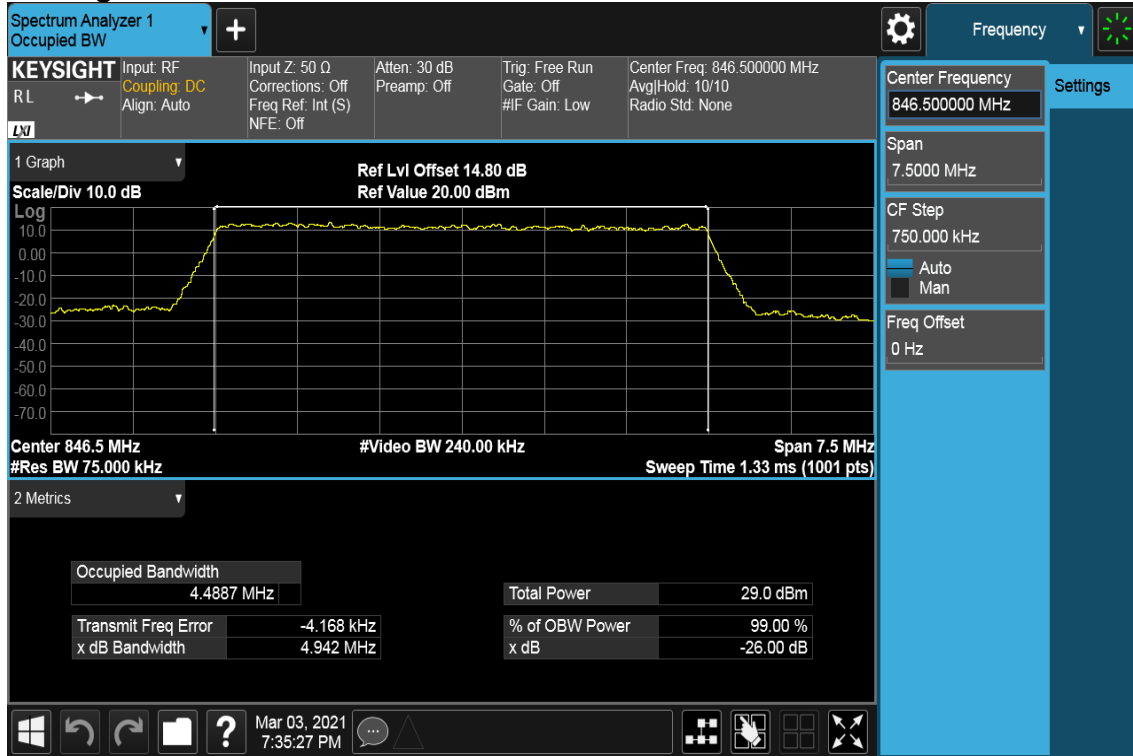


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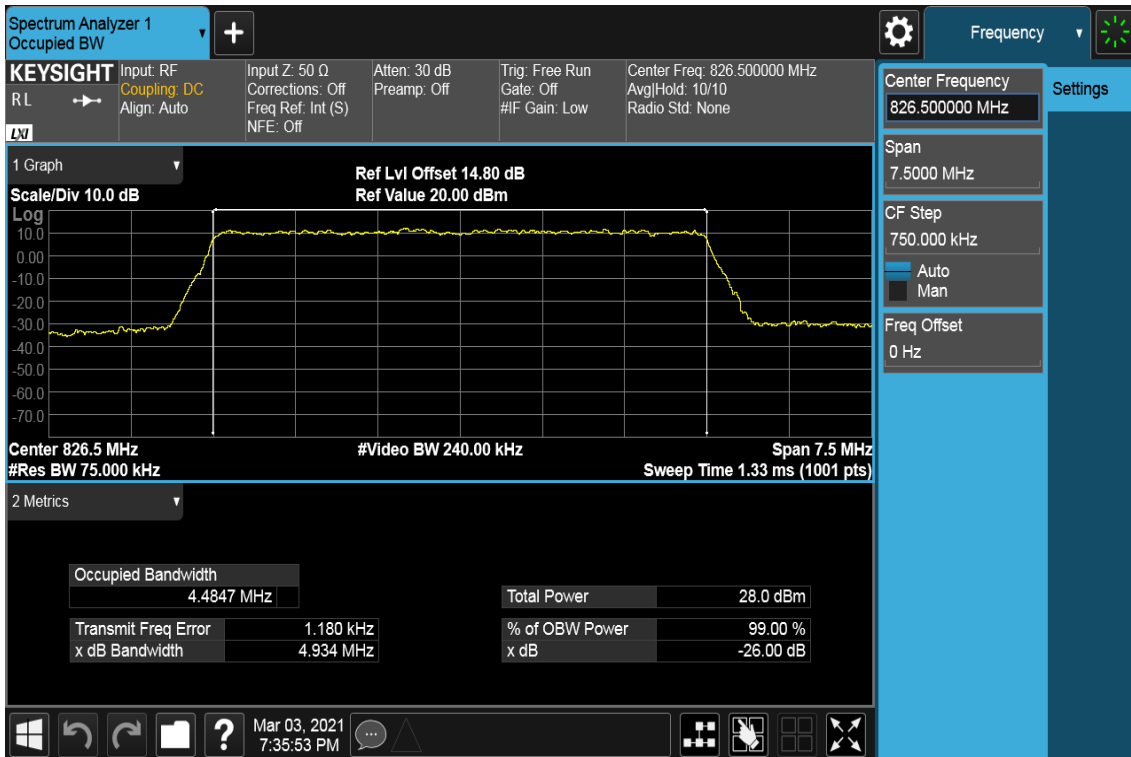
Rev.: 00

CH High

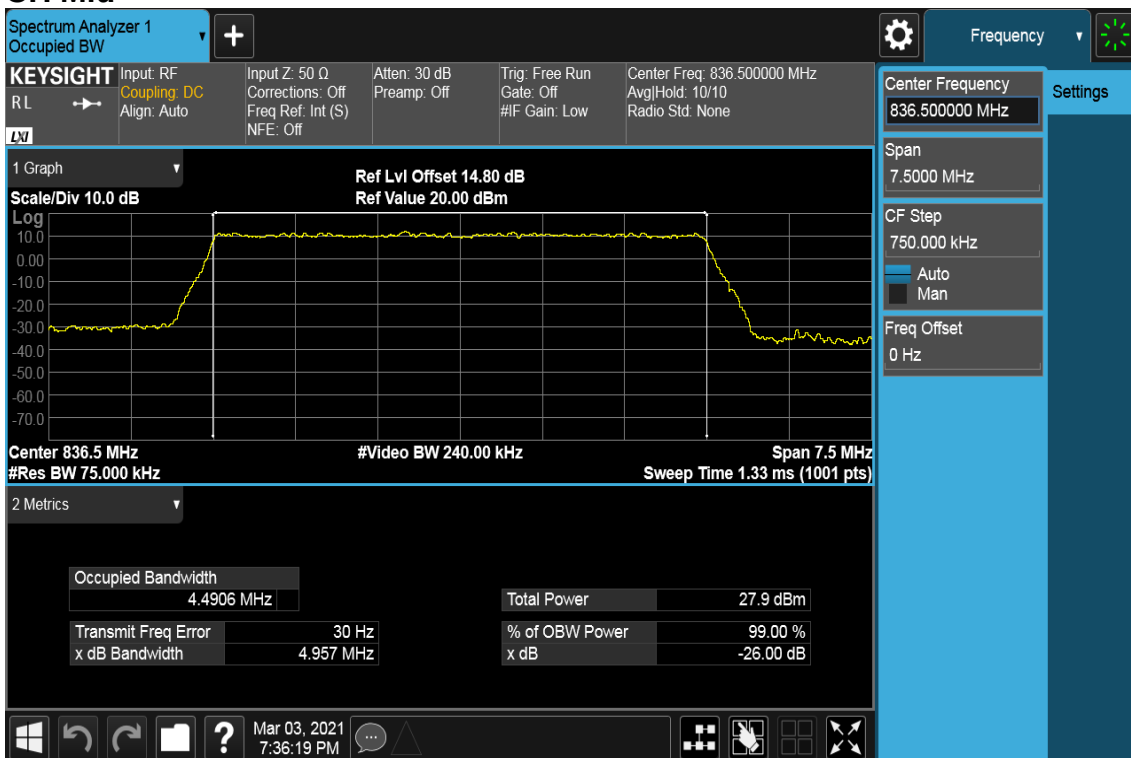


Report No.: T201102D09-RP9

BW: 5MHz / 16QAM / RB =25, RB Offset = 0
CH Low



CH Mid



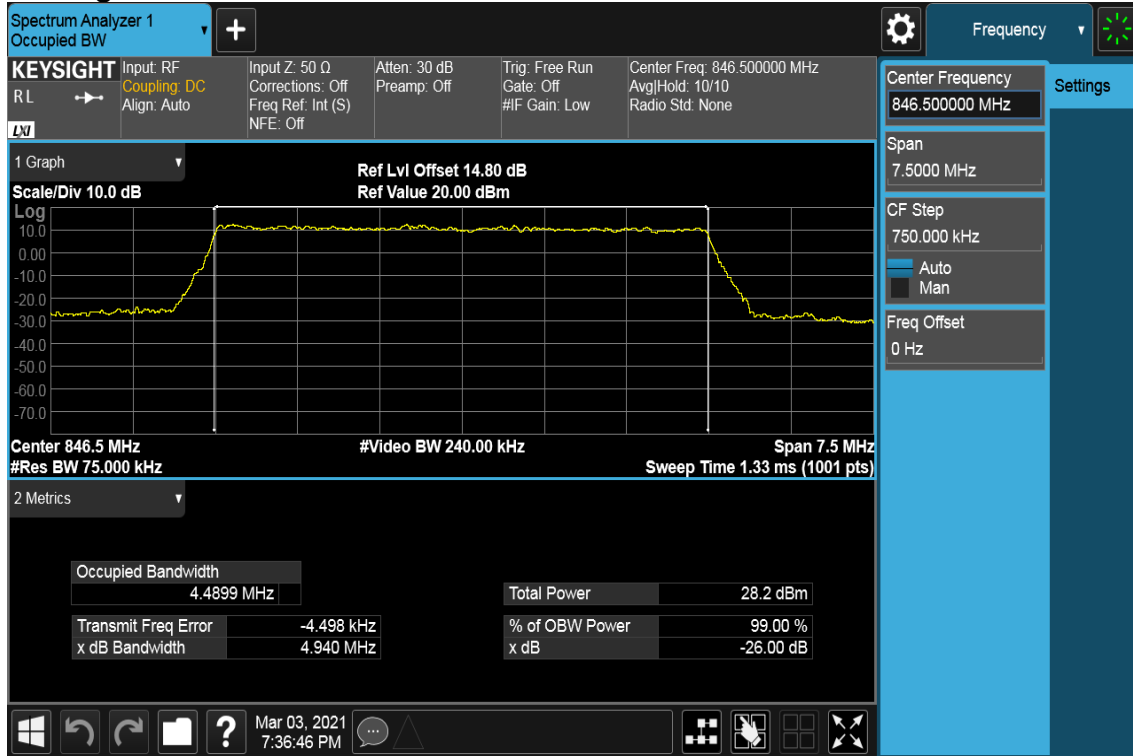


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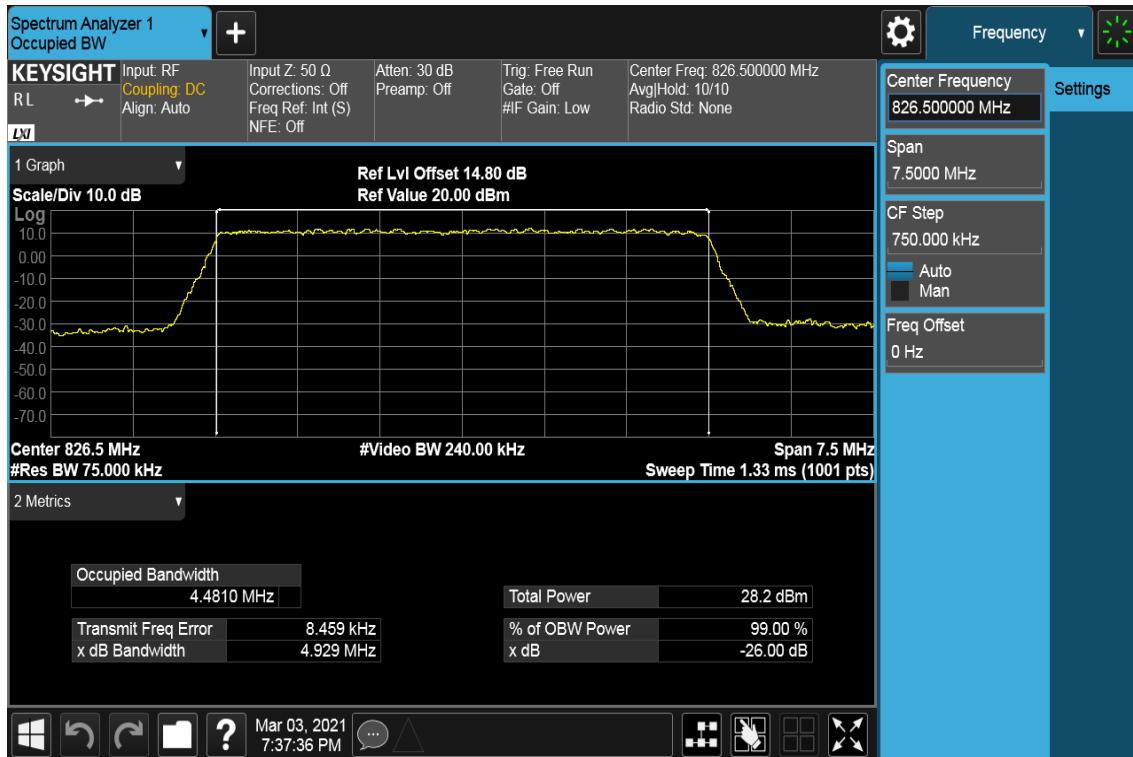
Rev.: 00

CH High

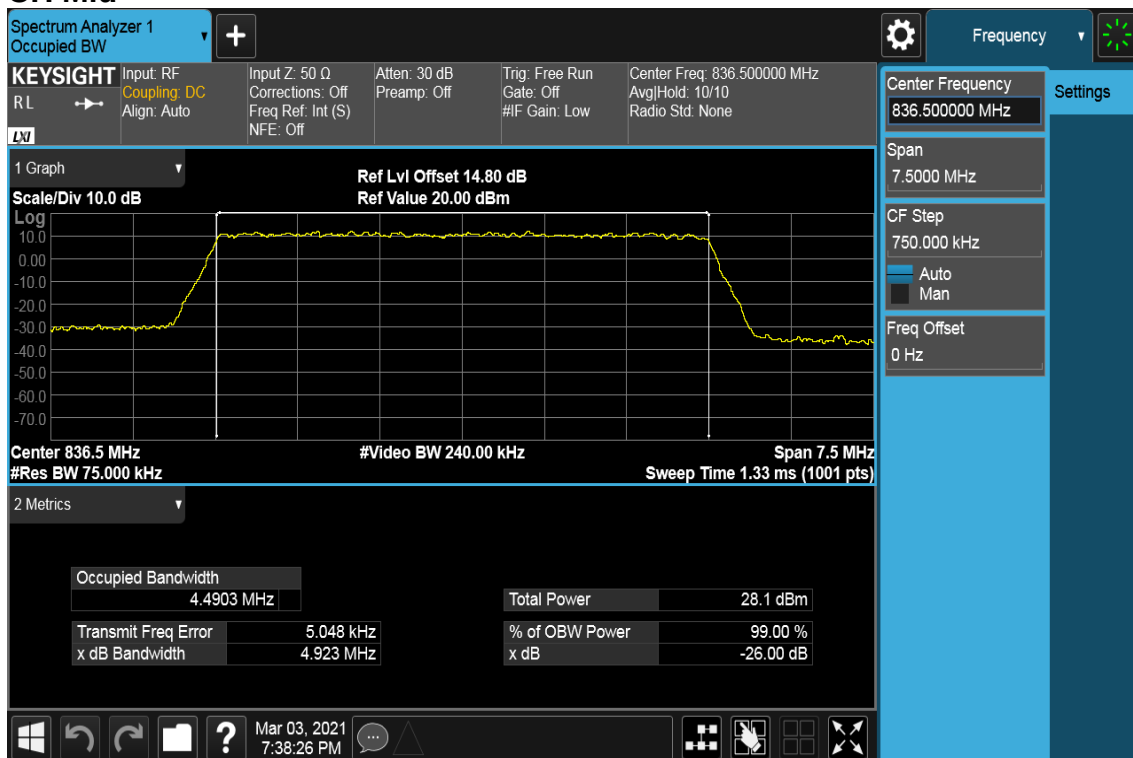


Report No.: T201102D09-RP9

BW: 5MHz / 64QAM / RB =25, RB Offset = 0
CH Low



CH Mid



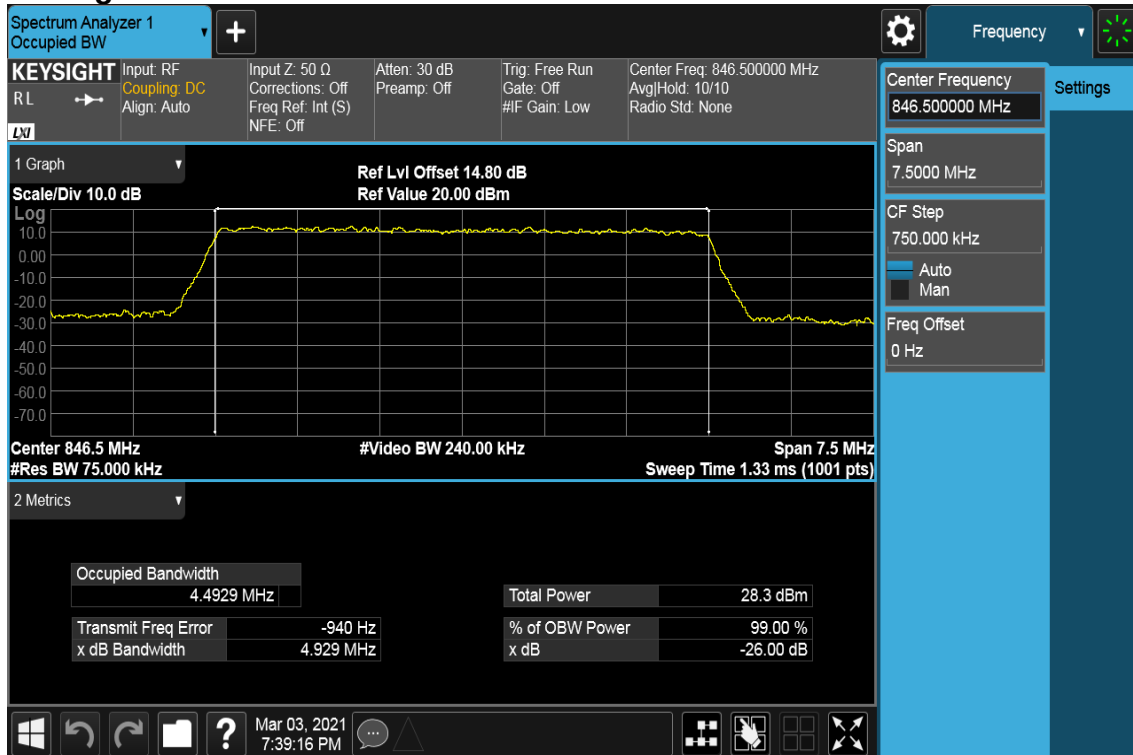


Report No.: T201102D09-RP9

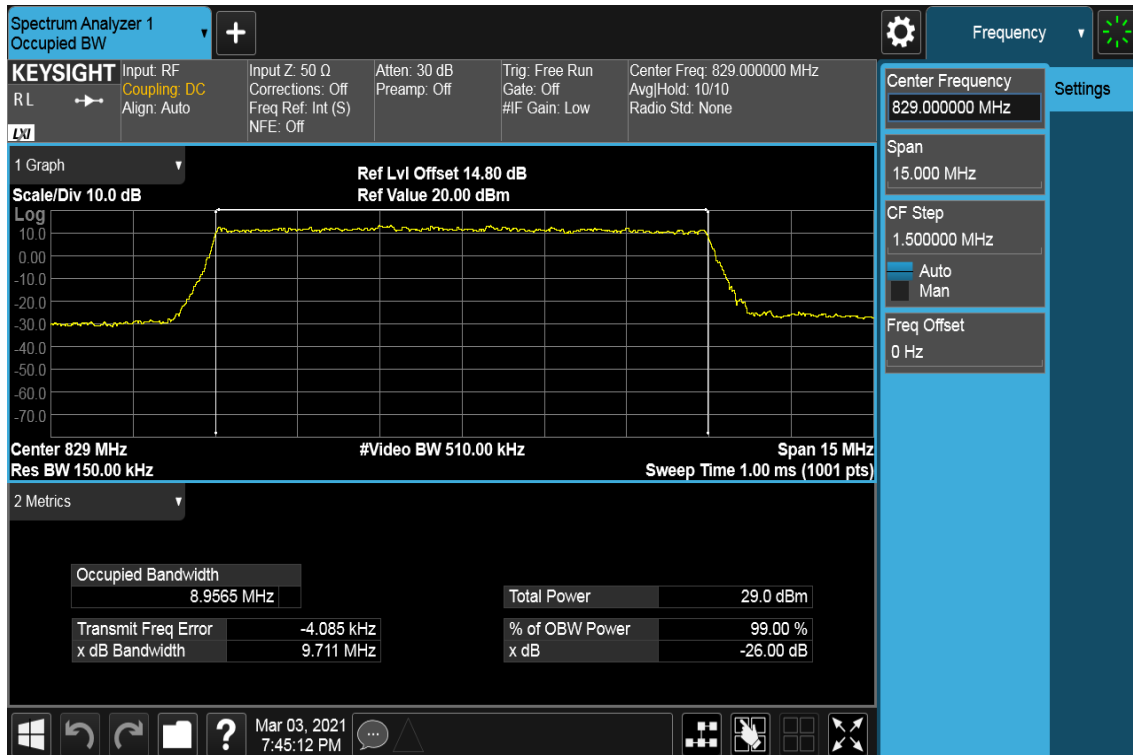
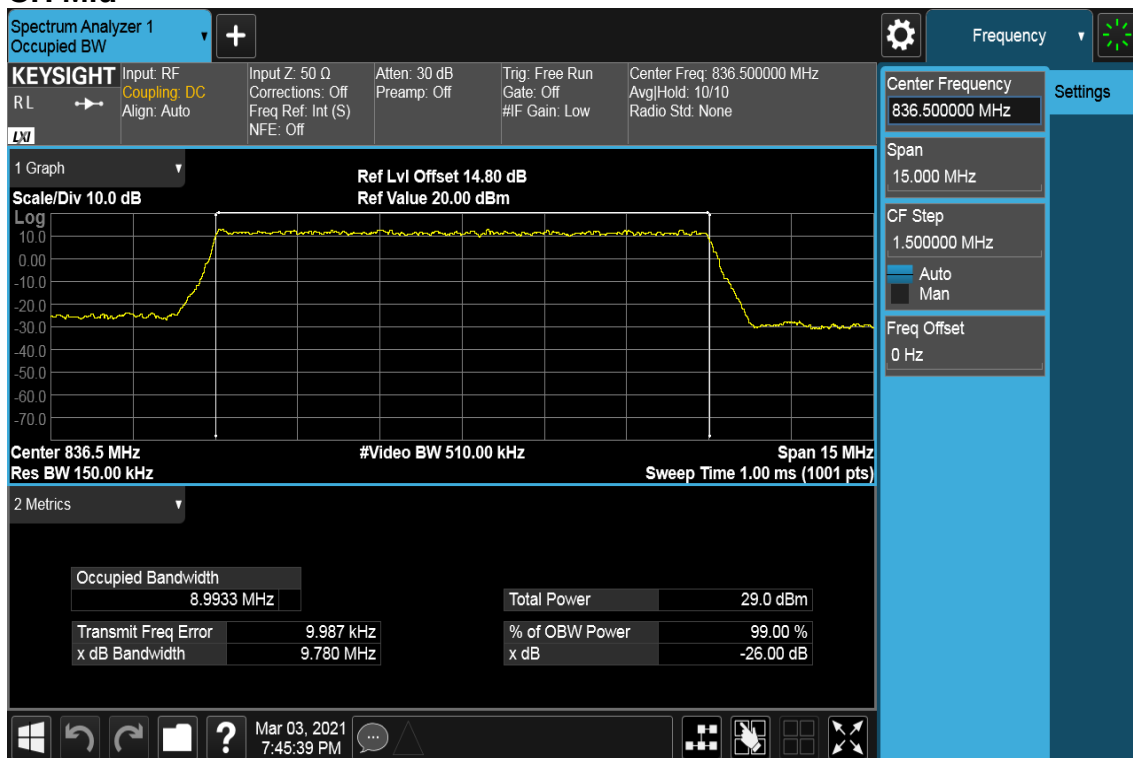
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CH High



Report No.: T201102D09-RP9

BW: 10MHz / QPSK / RB =50, RB Offset = 0**CH Low****CH Mid**

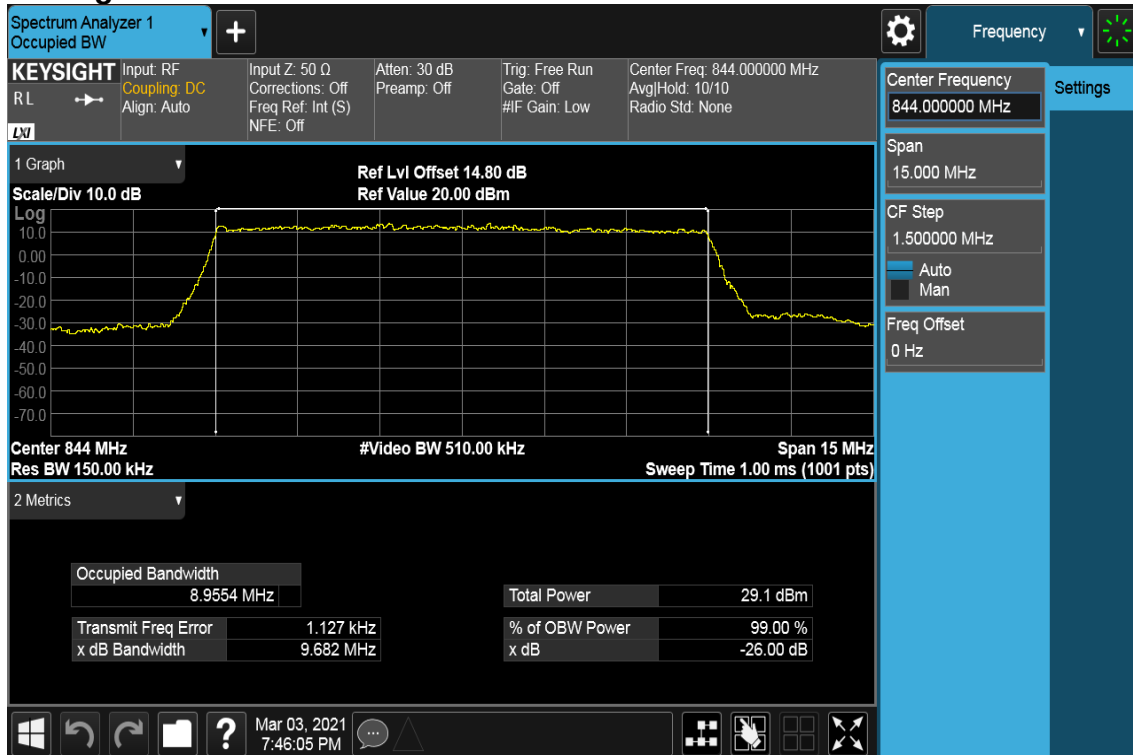


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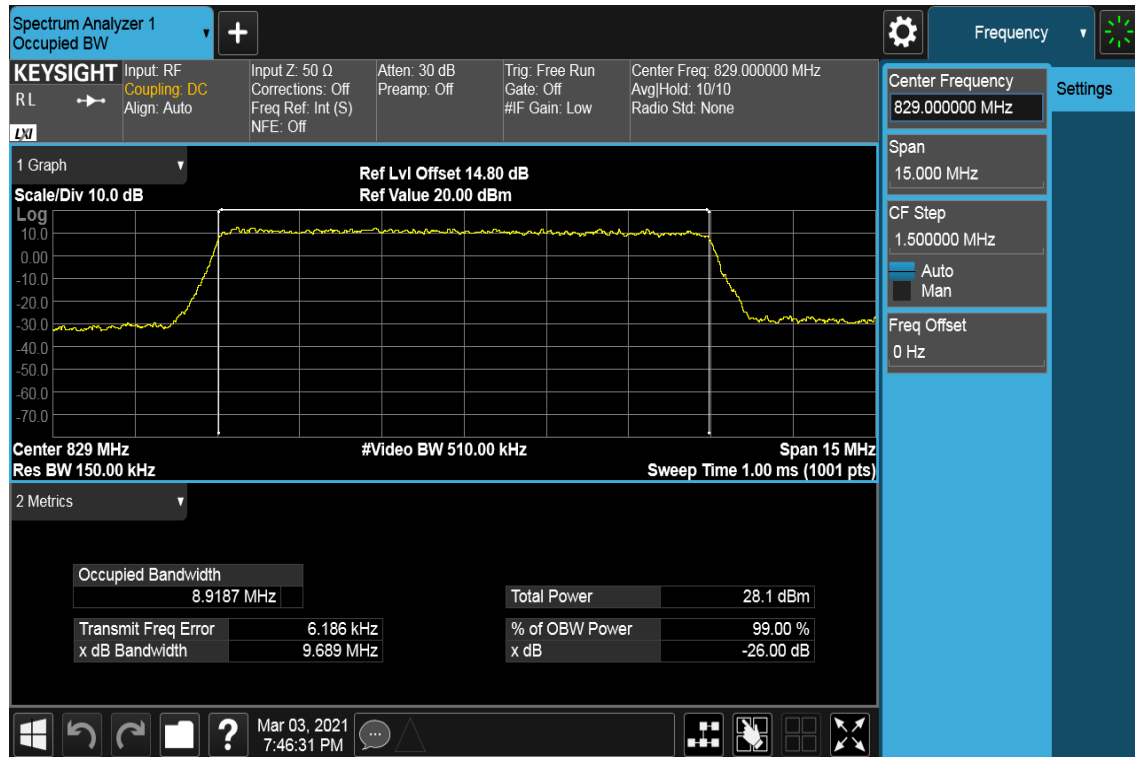
CH High



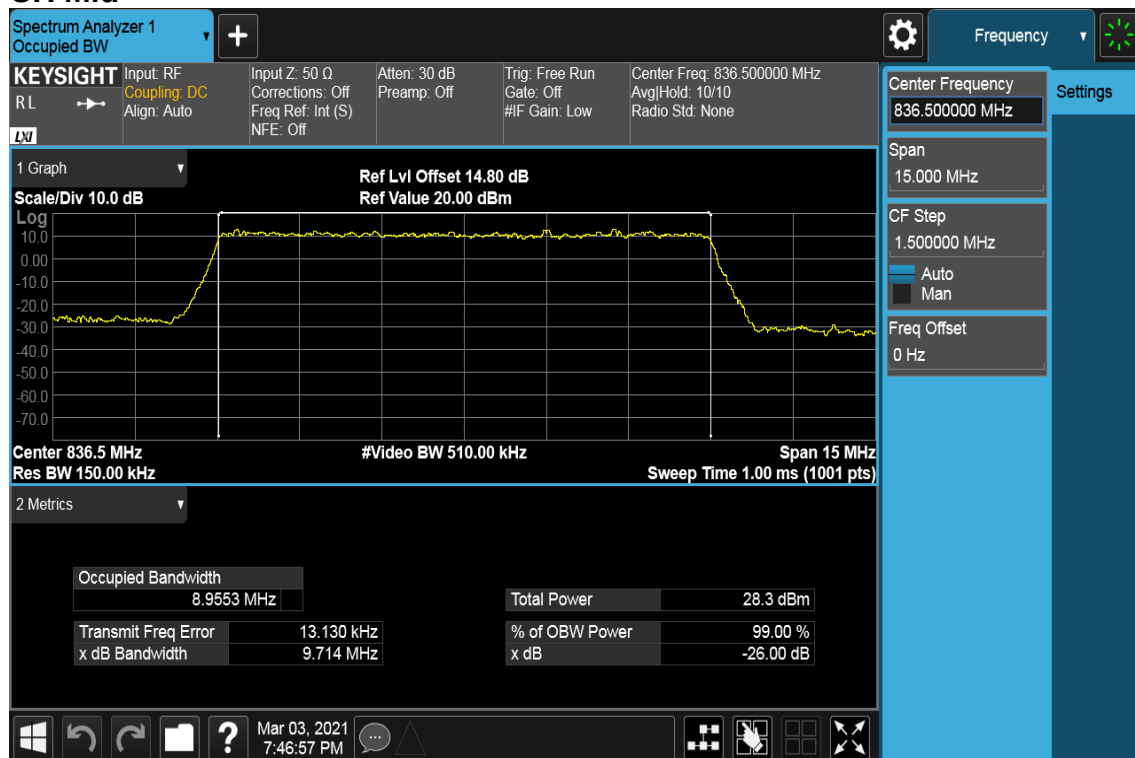
Report No.: T201102D09-RP9

BW: 10MHz / 16QAM / RB =50, RB Offset = 0

CH Low



CH Mid



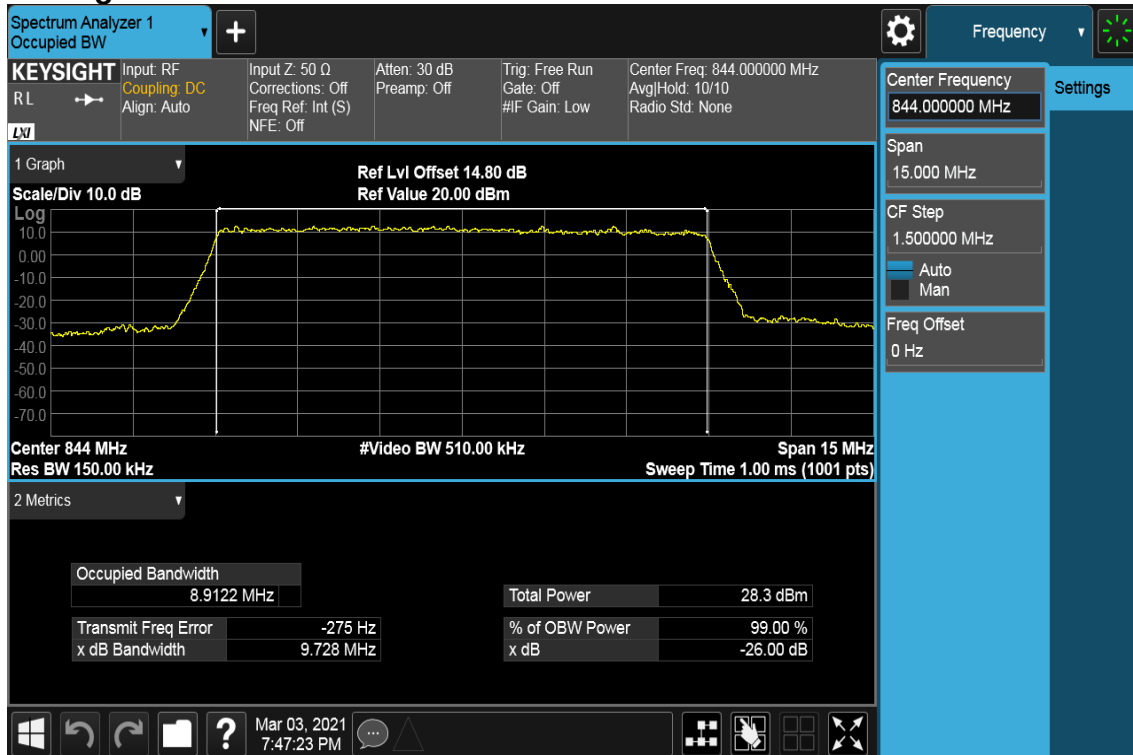


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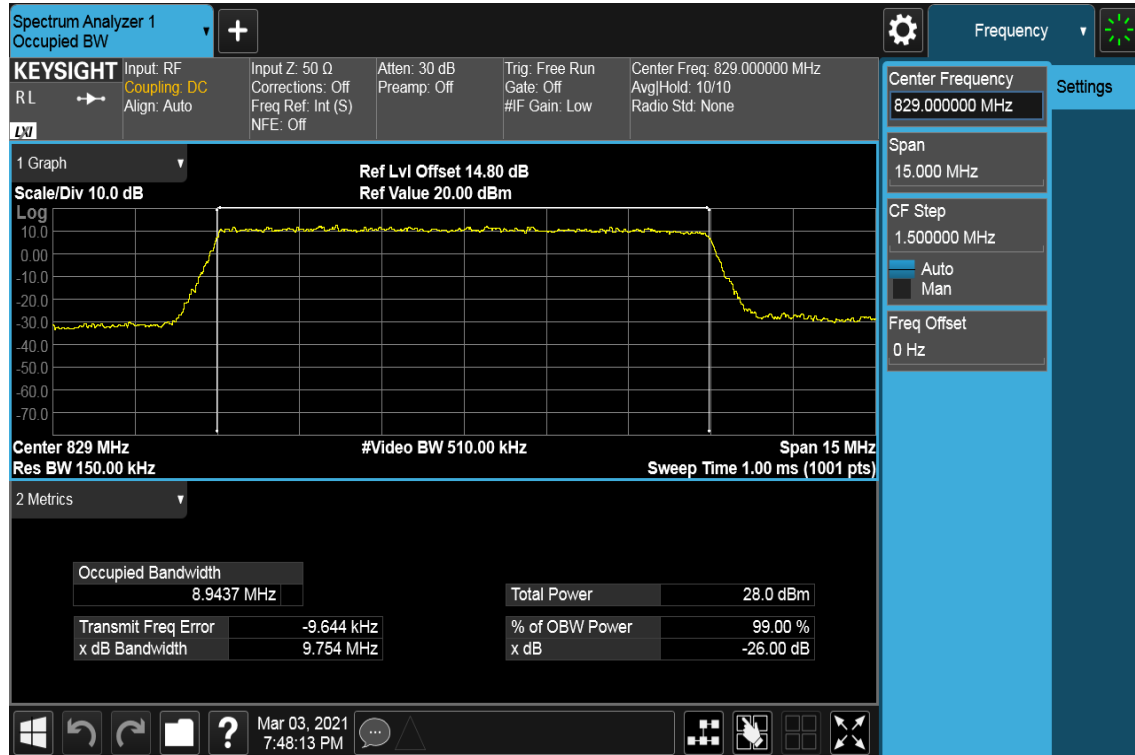
CH High



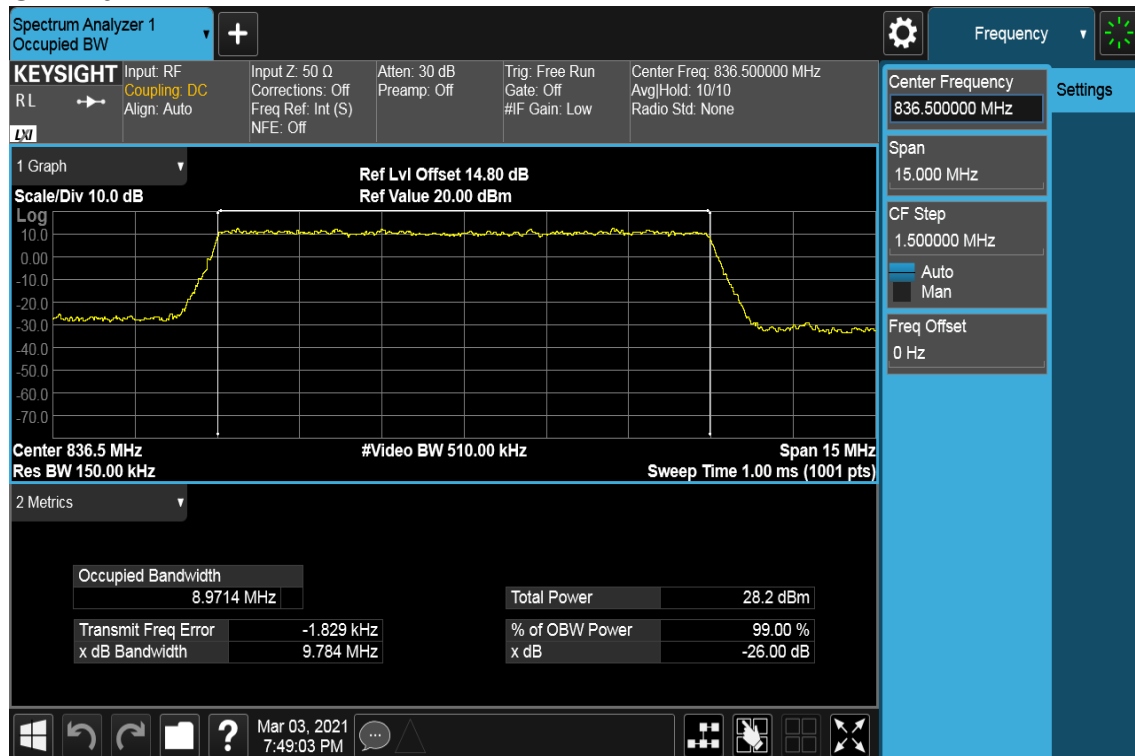
Report No.: T201102D09-RP9

BW: 10MHz / 64QAM / RB =50, RB Offset = 0

CH Low



CH Mid



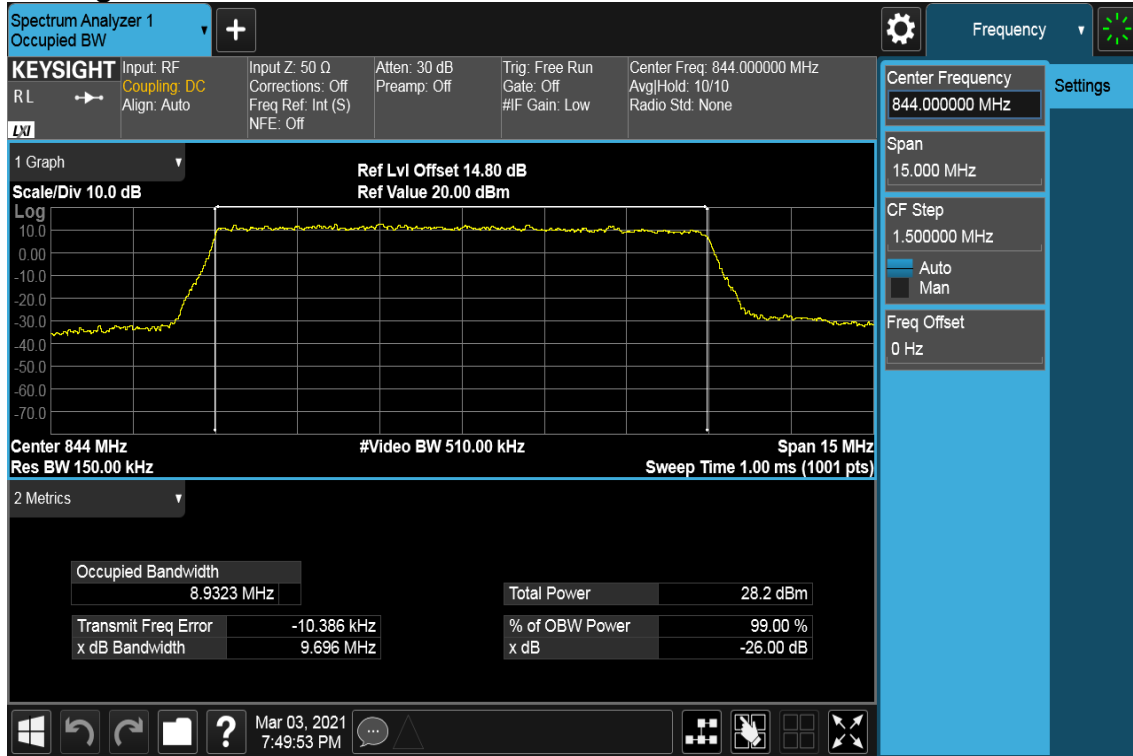


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CH High





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8.4 PEAK TO AVERAGE POWER RATIO

Limit

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

Test Procedures

1. According to KDB 971168 D01,
2. The EUT was connect to spectrum analyzer and call box.
3. Set the CCDF function in spectrum analyzer.
4. The highest RF output power were measured and recorded the maximum PAPR level associated with a probability of 0.1%.
5. Record the Peak to Average Power Ratio.

Note: We selected worst case to performed test in middle channel, the results can be meet other channel.

Test Results

Temperature: 23.2°C

Humidity: 56.9% RH

Tested by: Jerry Chang

Test Date: March 3, 2021

Temperature: 25°C

Humidity: 48.6% RH

Tested by: Jerry Chang

Test Date: August 20, 2021

LTE Band 2

LTE BAND 2							
Channel bandwidth: 1.4MHz				Channel bandwidth: 3MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
1850.7	18607	5.51	13	1851.5	18615	5.70	13
1880.0	18900	5.56	13	1880.0	18900	5.53	13
1909.3	19193	5.54	13	1908.5	19185	5.76	13

LTE BAND 2							
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
1852.5	18625	5.80	13	1855.0	18650	5.64	13
1880.0	18900	5.35	13	1880.0	18900	5.56	13
1907.5	19175	5.34	13	1905.0	19150	5.55	13

LTE BAND 2							
Channel bandwidth: 15MHz				Channel bandwidth: 20MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
1857.5	18675	5.72	13	1860.0	18700	5.86	13
1880.0	18900	5.64	13	1880.0	18900	5.69	13
1902.5	19125	5.70	13	1900.0	19100	5.62	13

LTE Band 5

LTE BAND 5							
Channel bandwidth: 1.4MHz				Channel bandwidth: 3MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
824.7	20407	6.00	13	825.5	20415	6.05	13
836.5	20525	5.83	13	836.5	20525	6.03	13
848.3	20643	5.55	13	847.5	20635	5.70	13

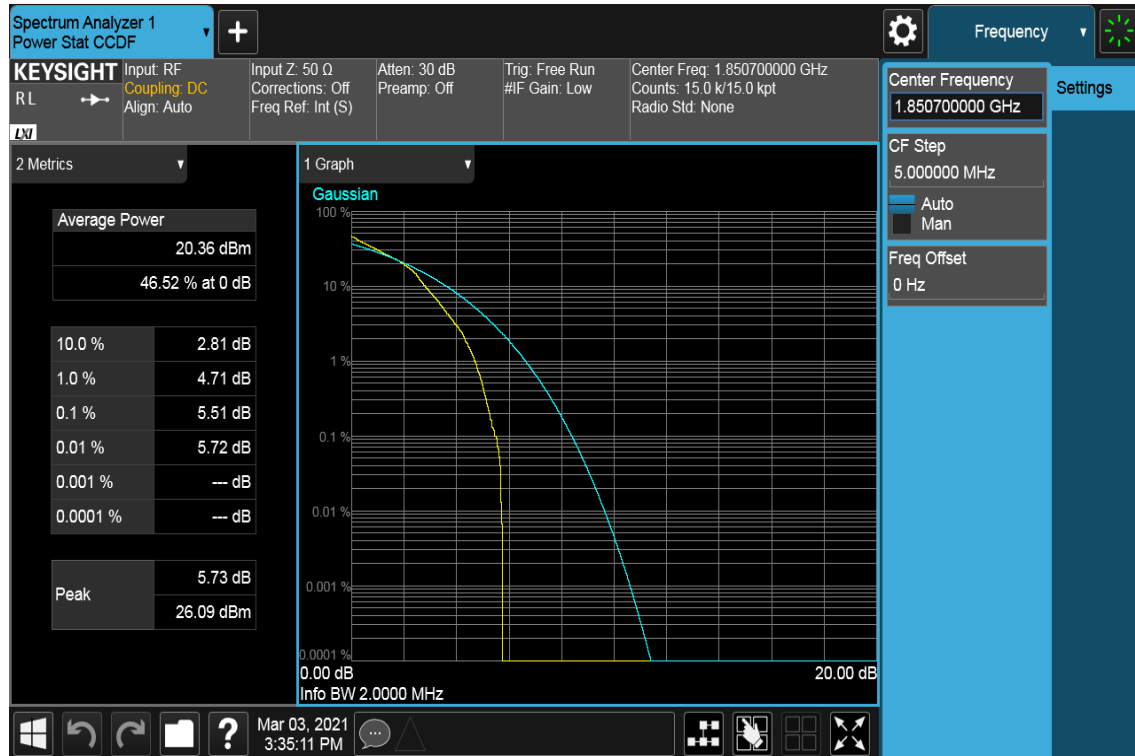
LTE BAND 5							
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
826.5	20425	6.02	13	829.0	20450	5.89	13
836.5	20525	5.84	13	836.5	20525	5.97	13
846.5	20625	5.69	13	844.0	20600	5.89	13

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LTE Band 2

BW: 1.4MHz / 64QAM / RB =6, RB Offset = 0

CH Low



CH Mid



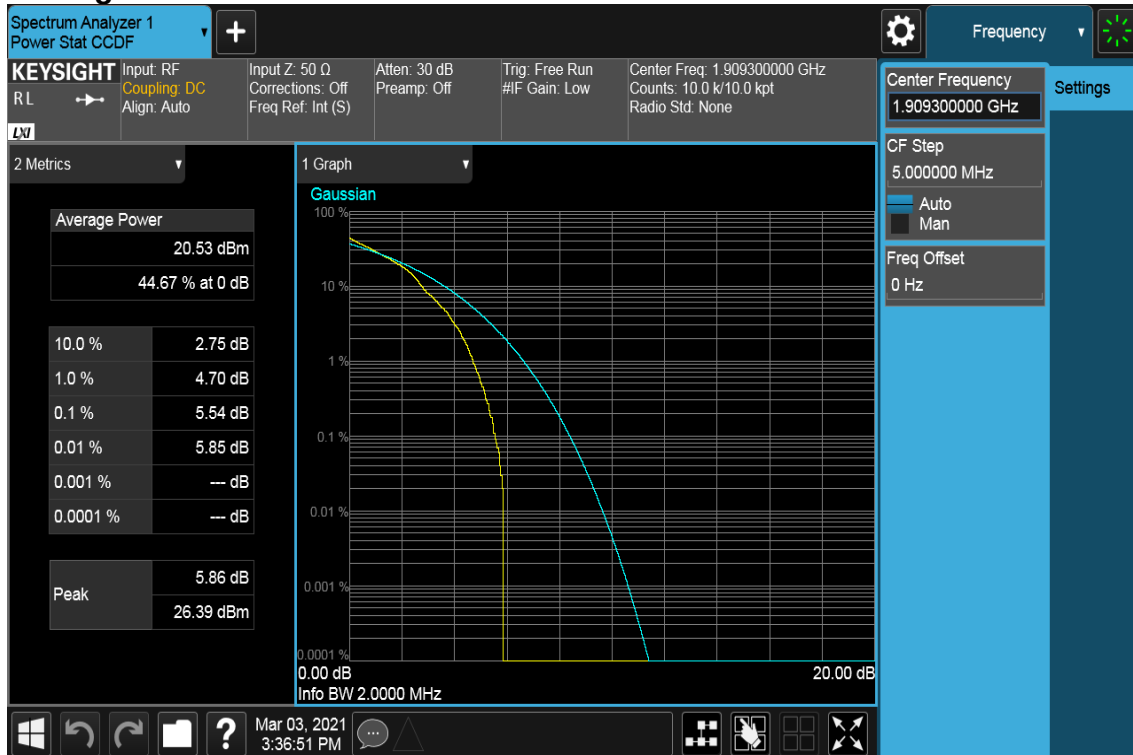


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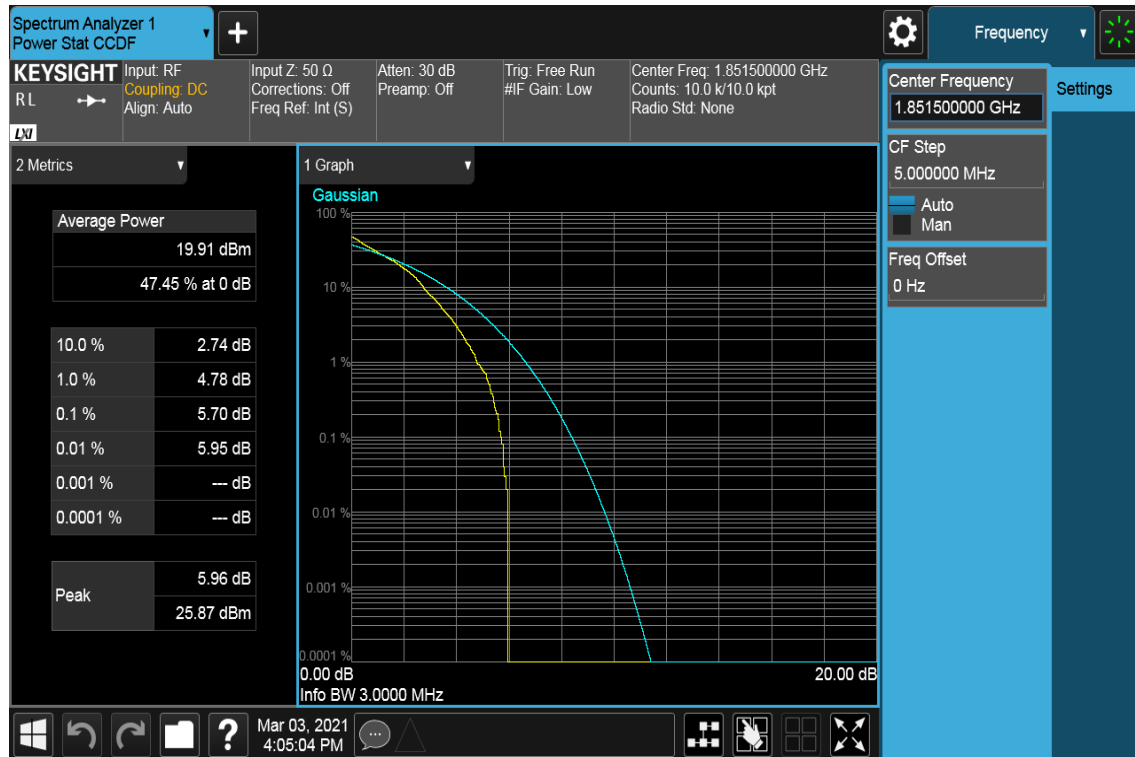
Rev.: 00

CH High

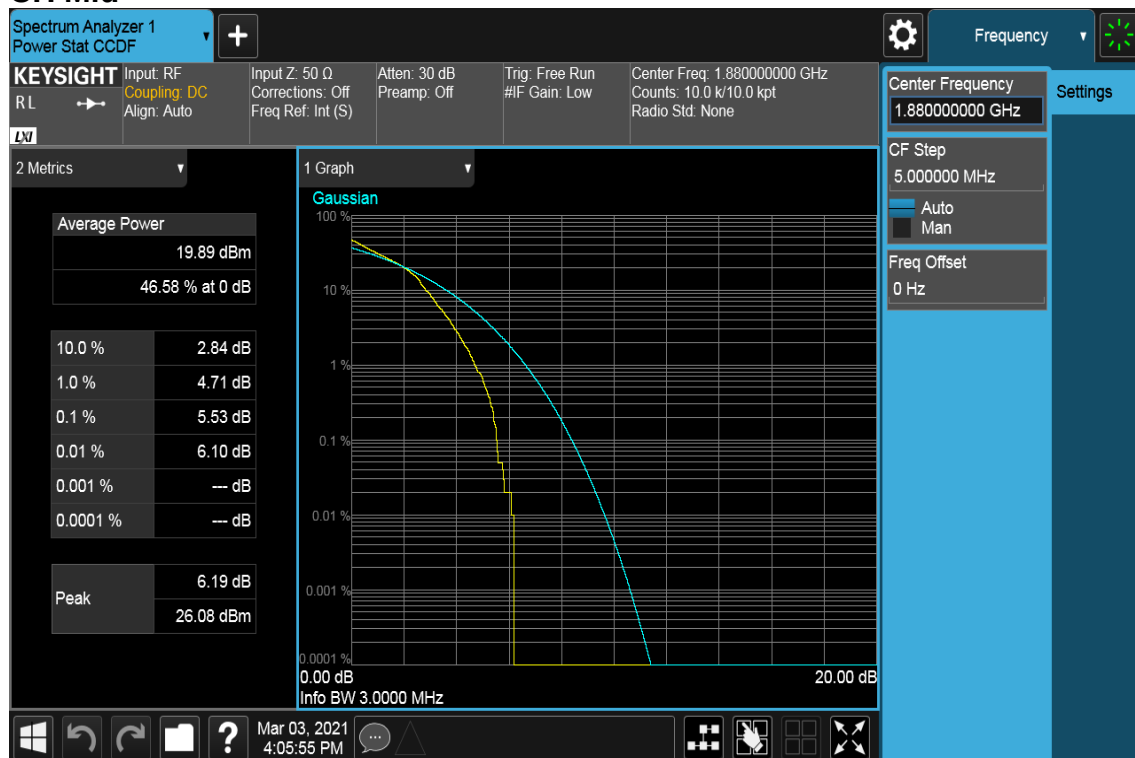


Report No.: T201102D09-RP9

BW: 3MHz / 64QAM / RB =15, RB Offset = 0
CH Low



CH Mid



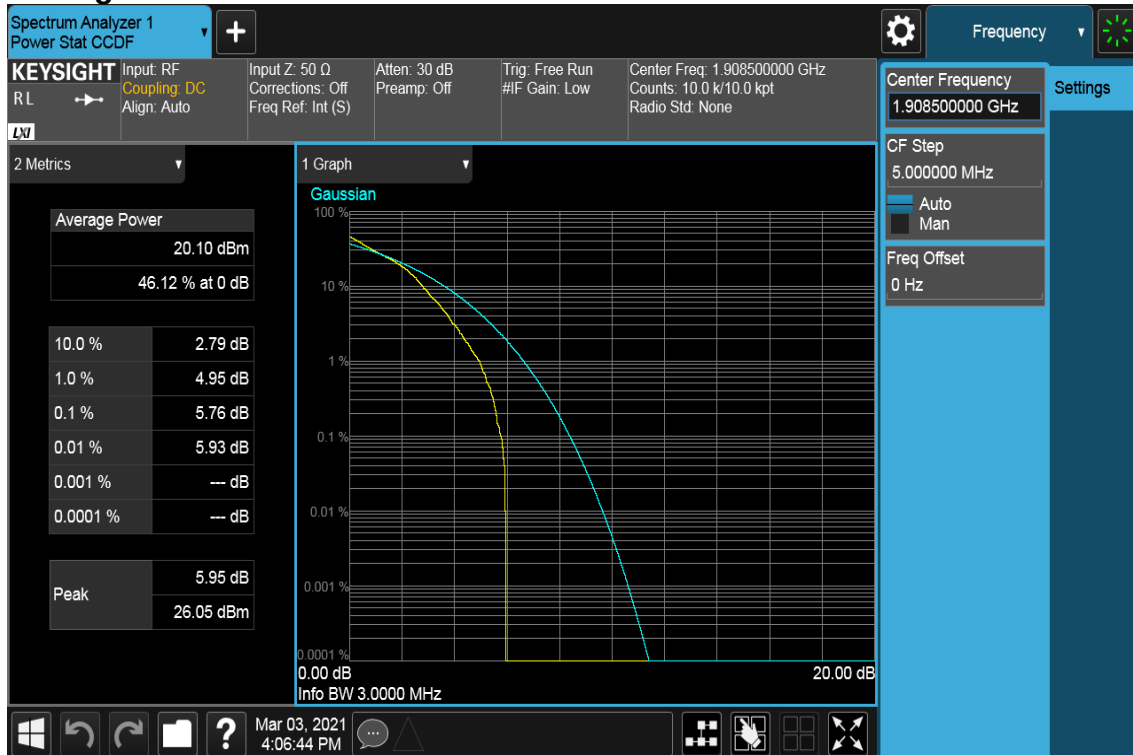


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CH High



Report No.: T201102D09-RP9

BW: 5MHz / 64QAM / RB =25, RB Offset = 0
CH Low



CH Mid



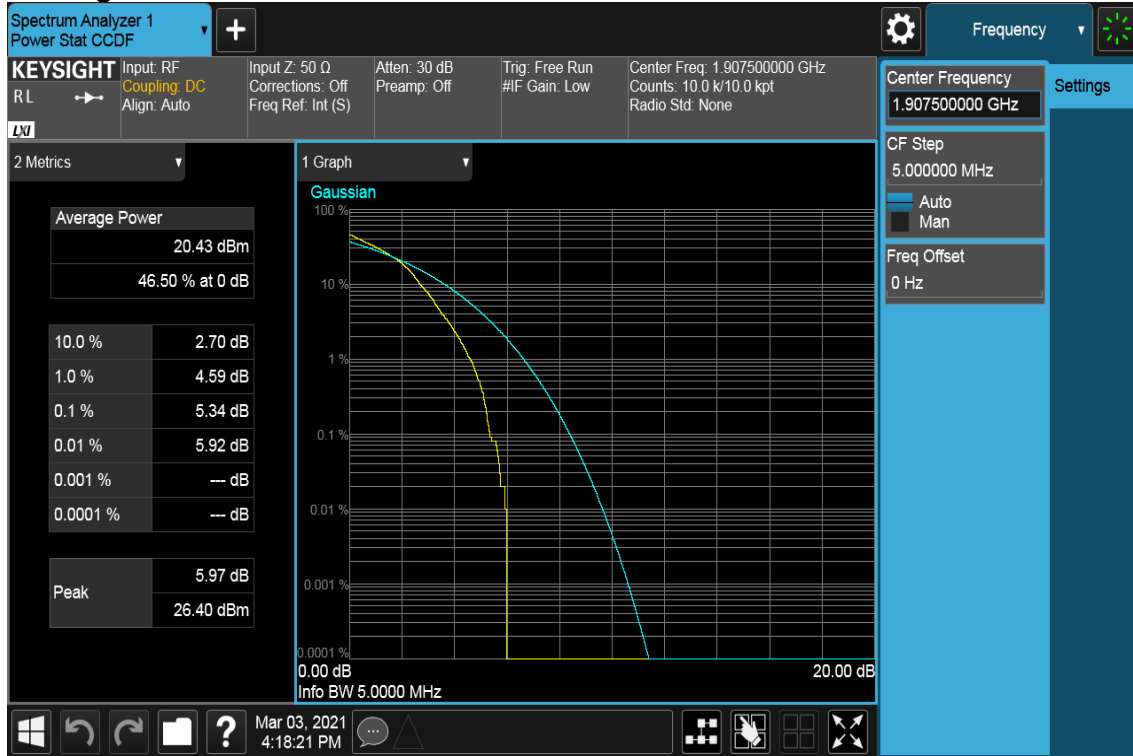


Report No.: T201102D09-RP9

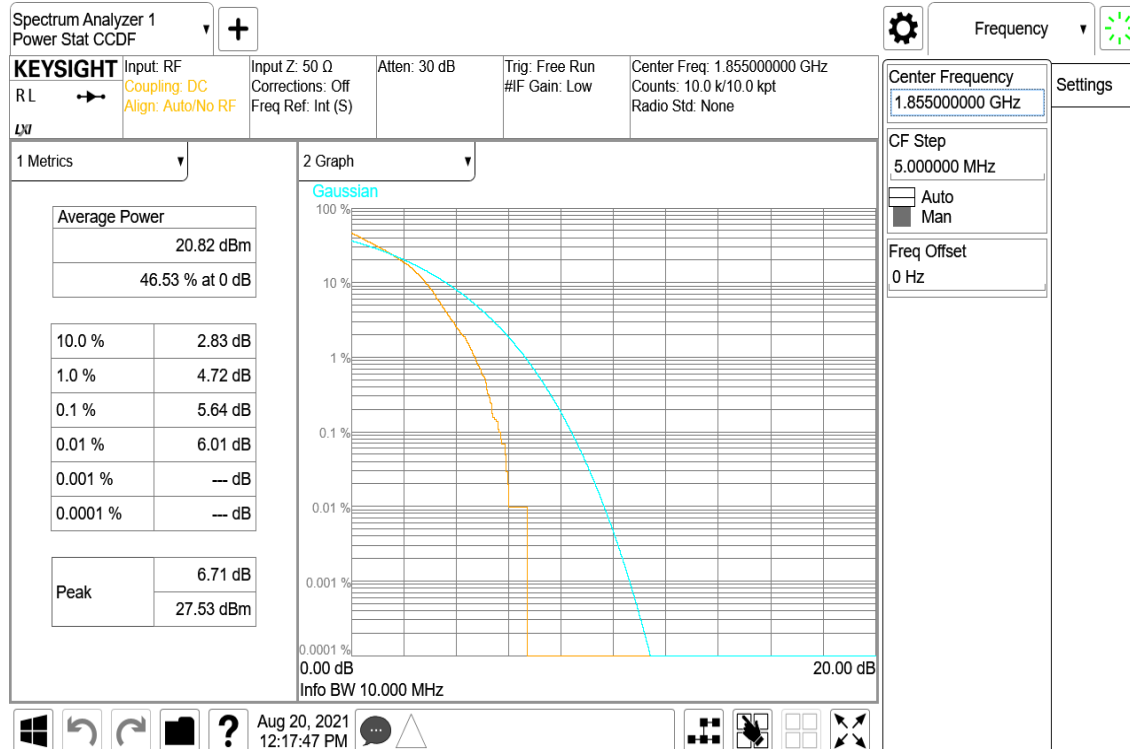
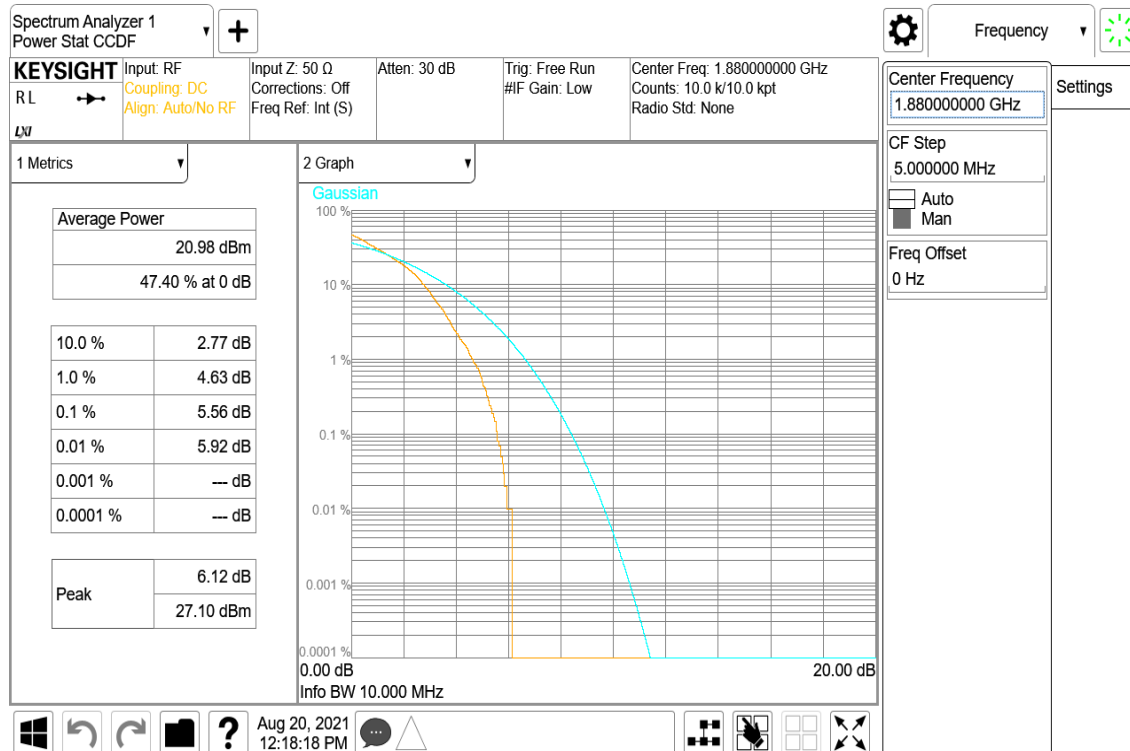
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CH High

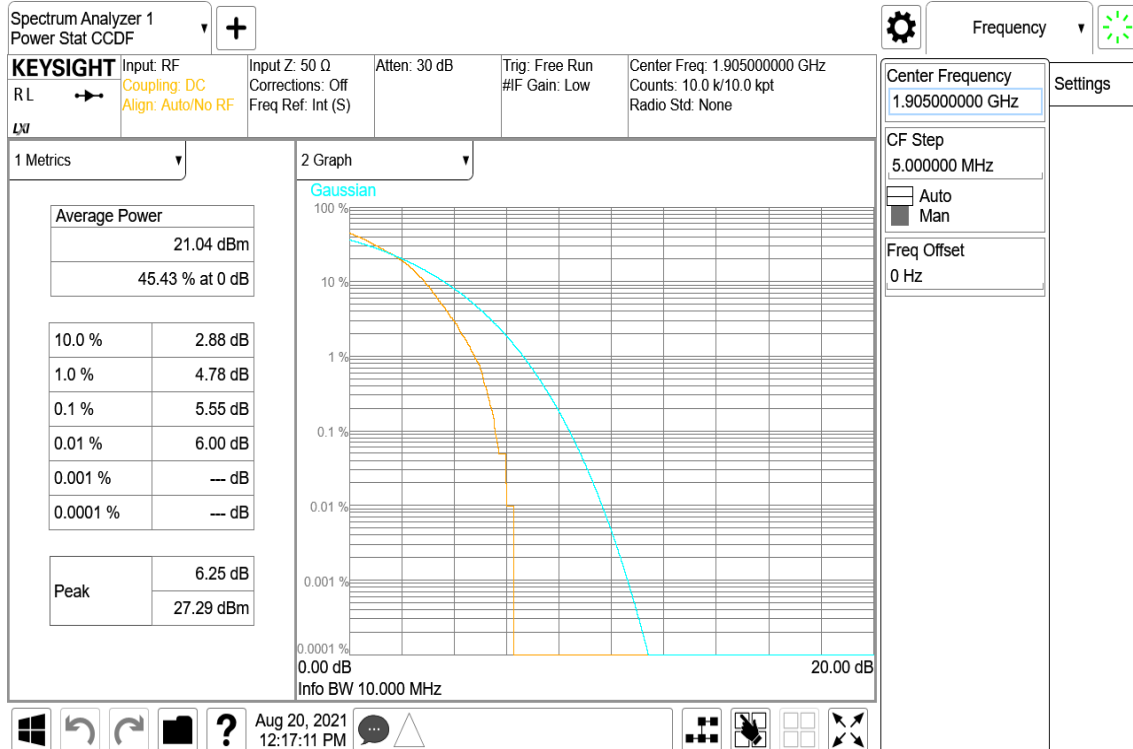


Report No.: T201102D09-RP9

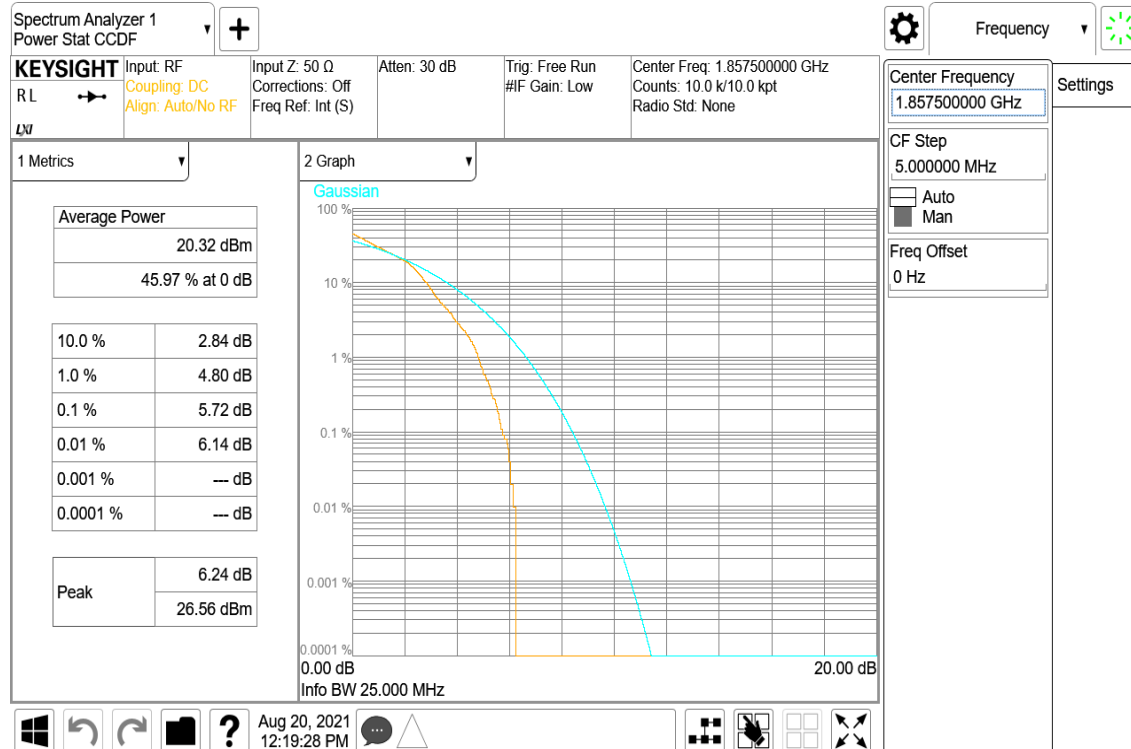
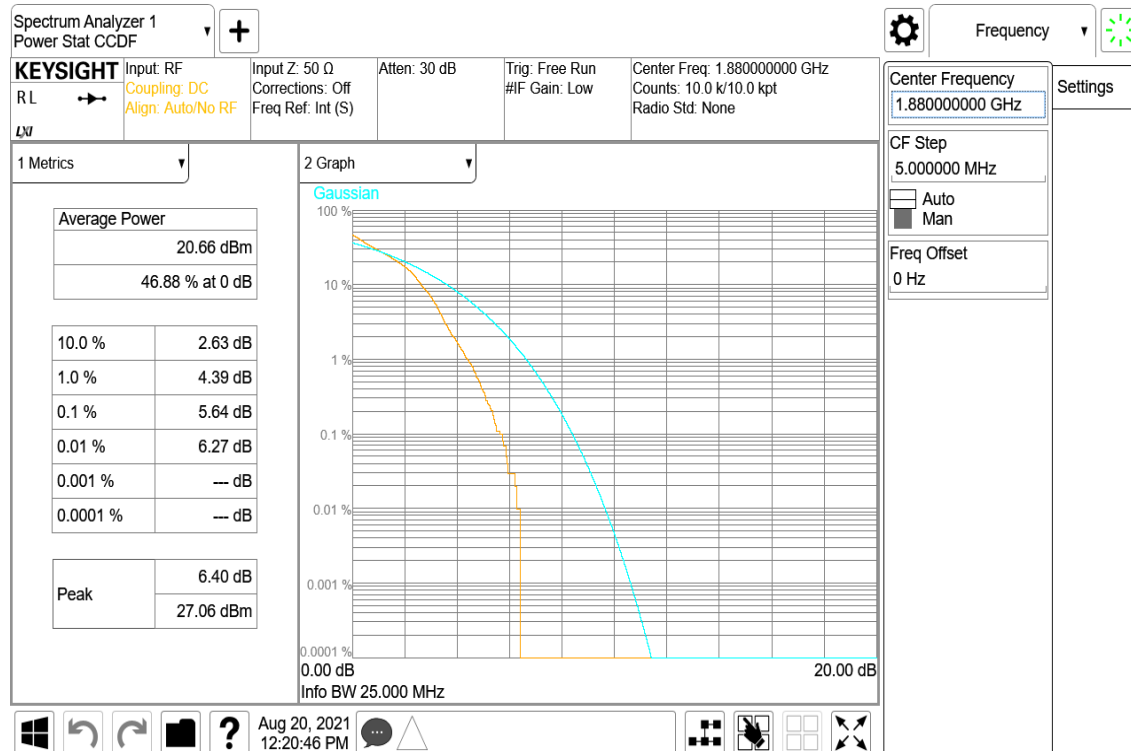
BW: 10MHz / 64QAM /RB =50, RB Offset = 0
CH Low

CH Mid




Report No.: T201102D09-RP9

CH High

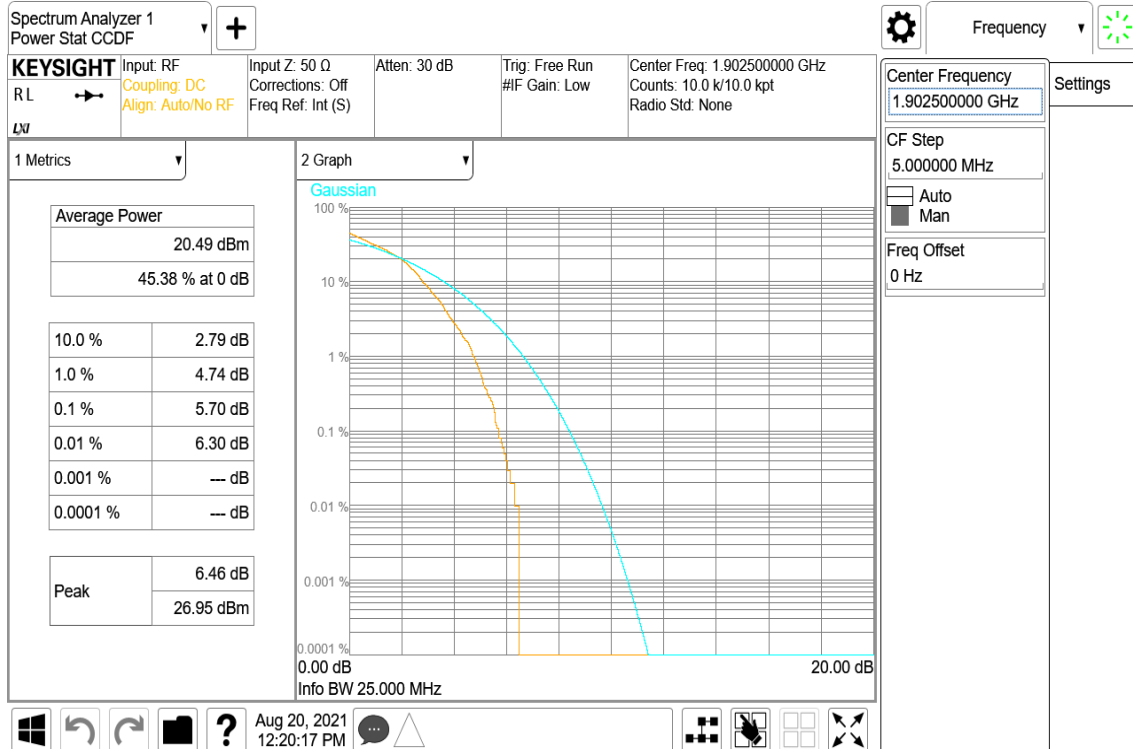
Report No.: T201102D09-RP9

BW: 15MHz / 64QAM /RB =75, RB Offset = 0
CH Low

CH Mid




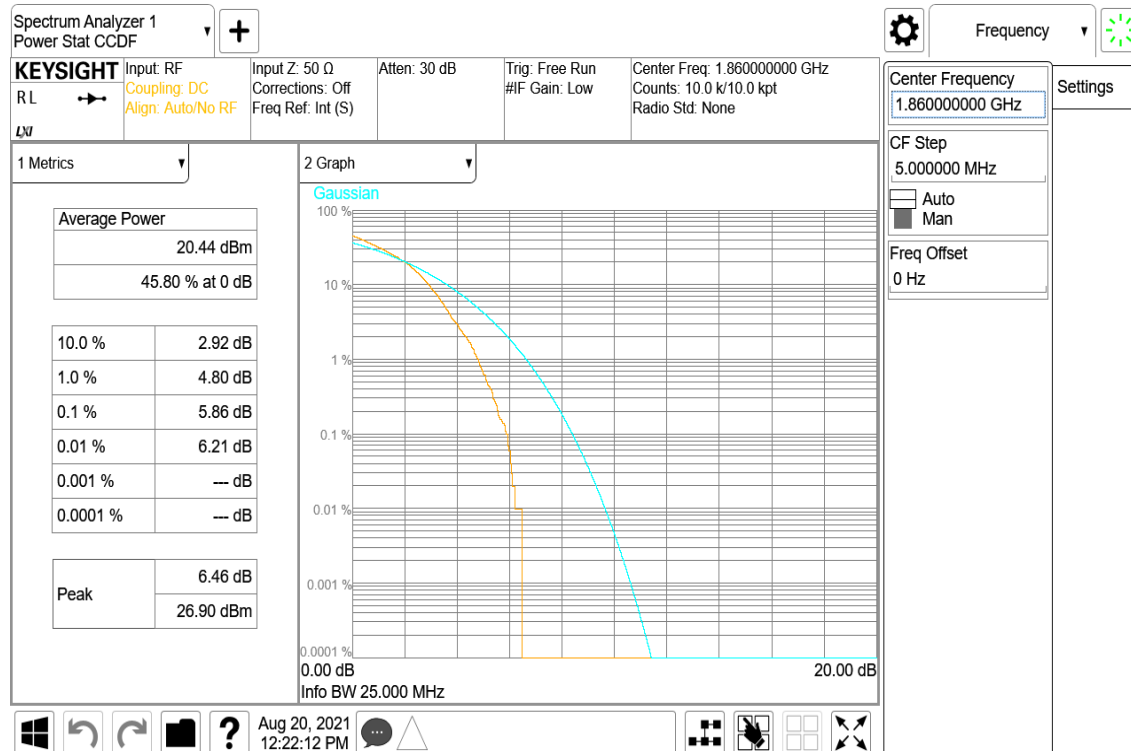
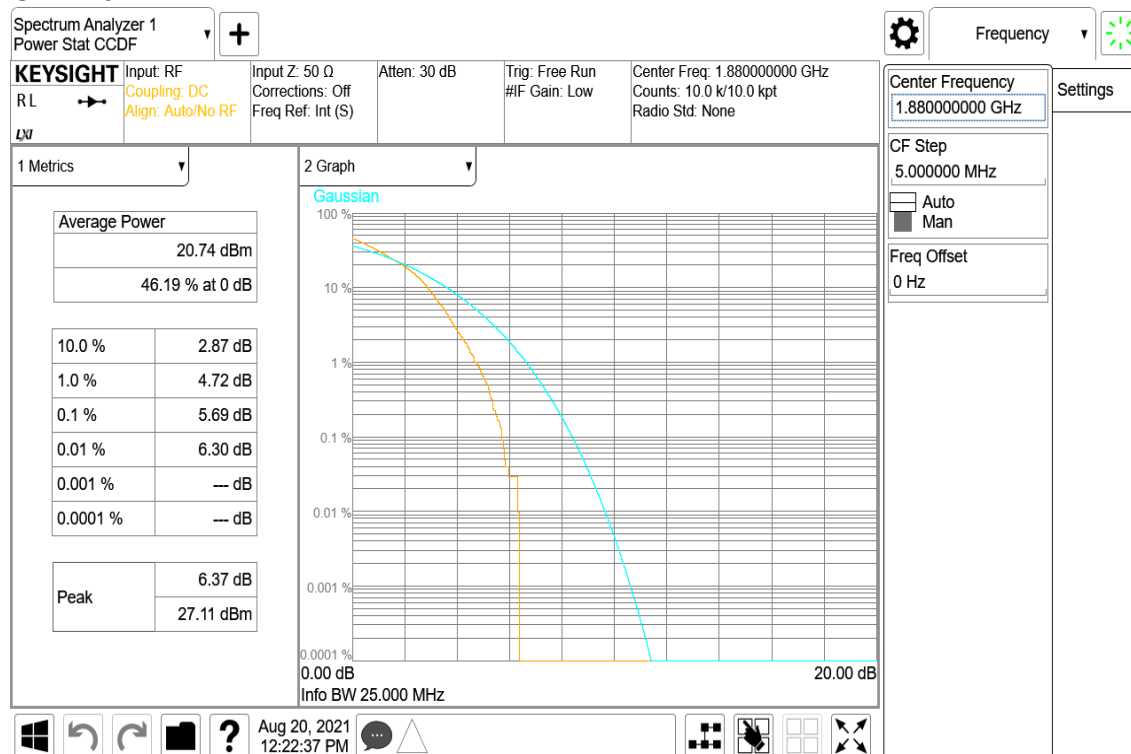
Report No.: T201102D09-RP9

CH High





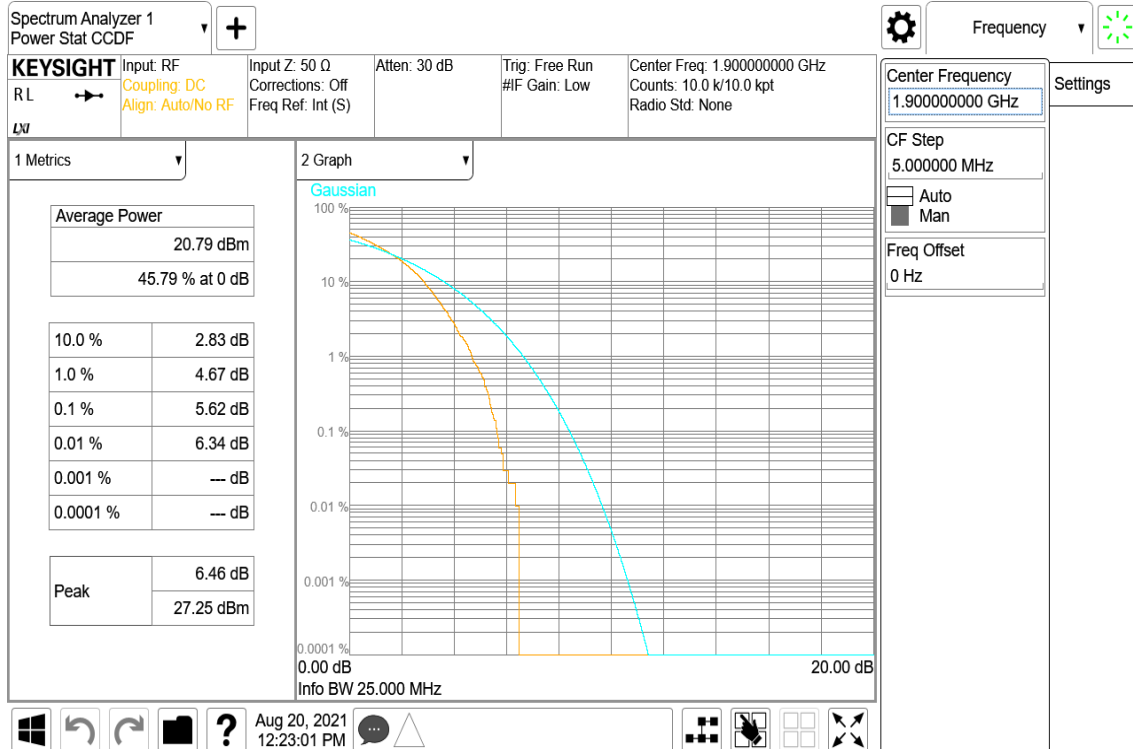
Report No.: T201102D09-RP9

BW: 20MHz / 64QAM / RB =100, RB Offset = 0**CH Low****CH Mid**



Report No.: T201102D09-RP9

CH High

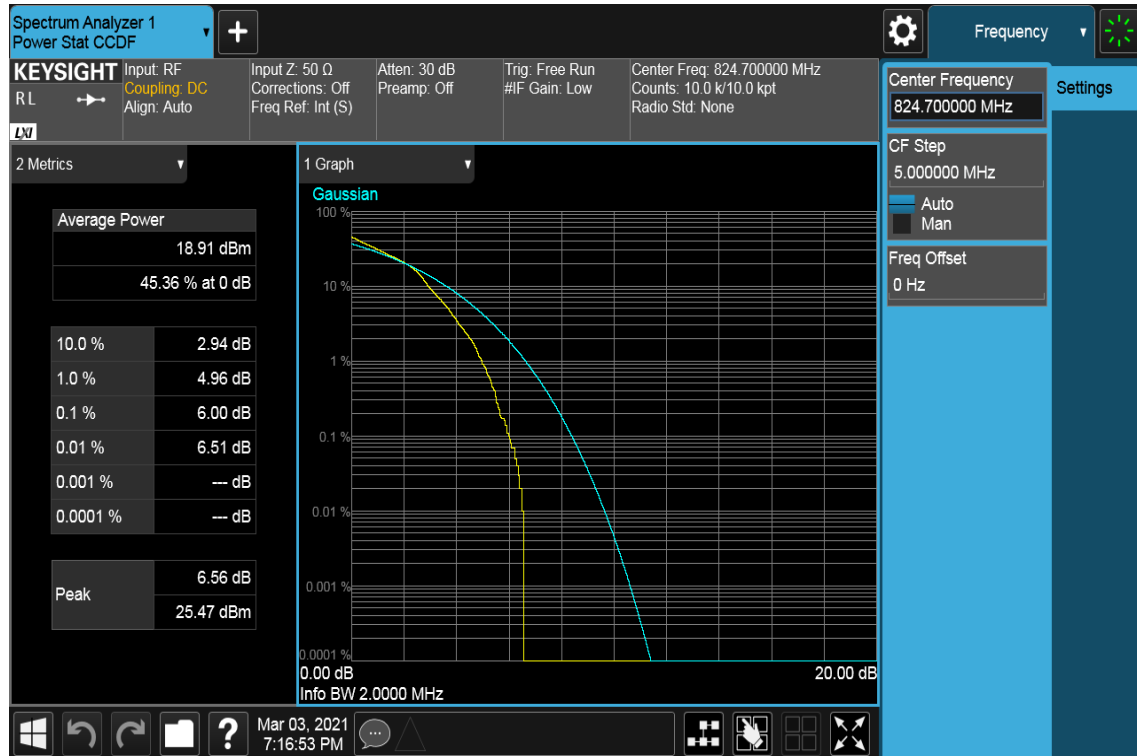


Report No.: T201102D09-RP9

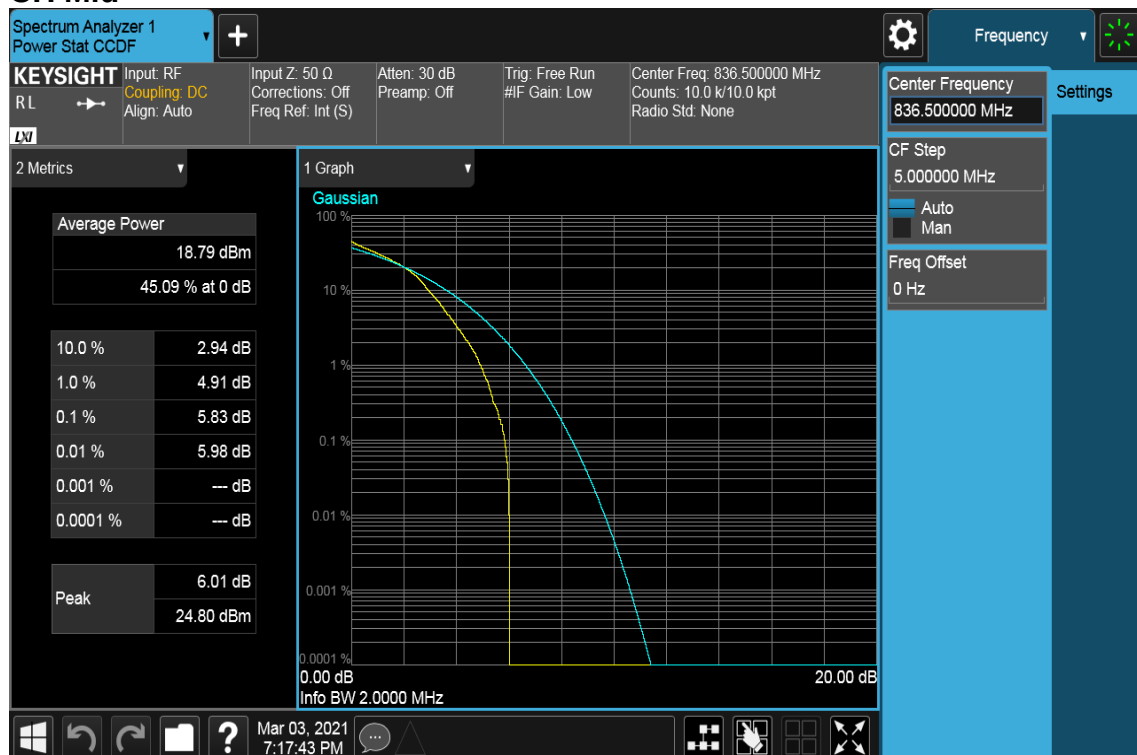
LTE Band 5

BW: 1.4MHz / 64QAM / RB =6, RB Offset = 0

CH Low



CH Mid



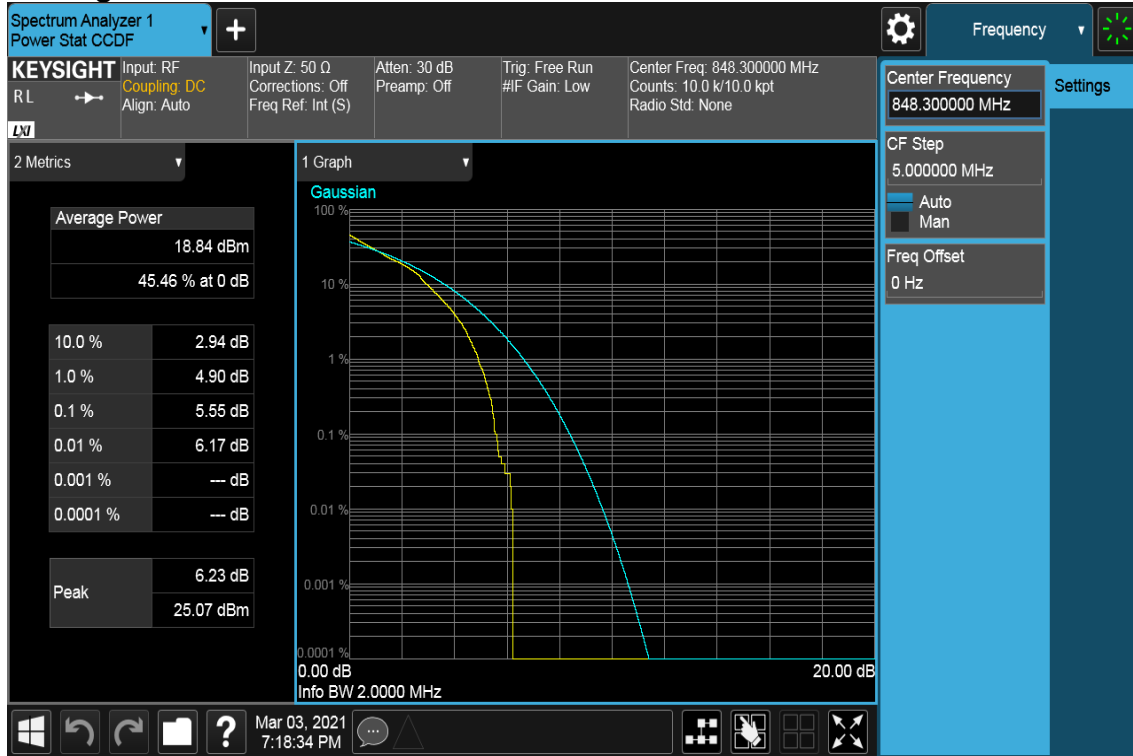


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CH High

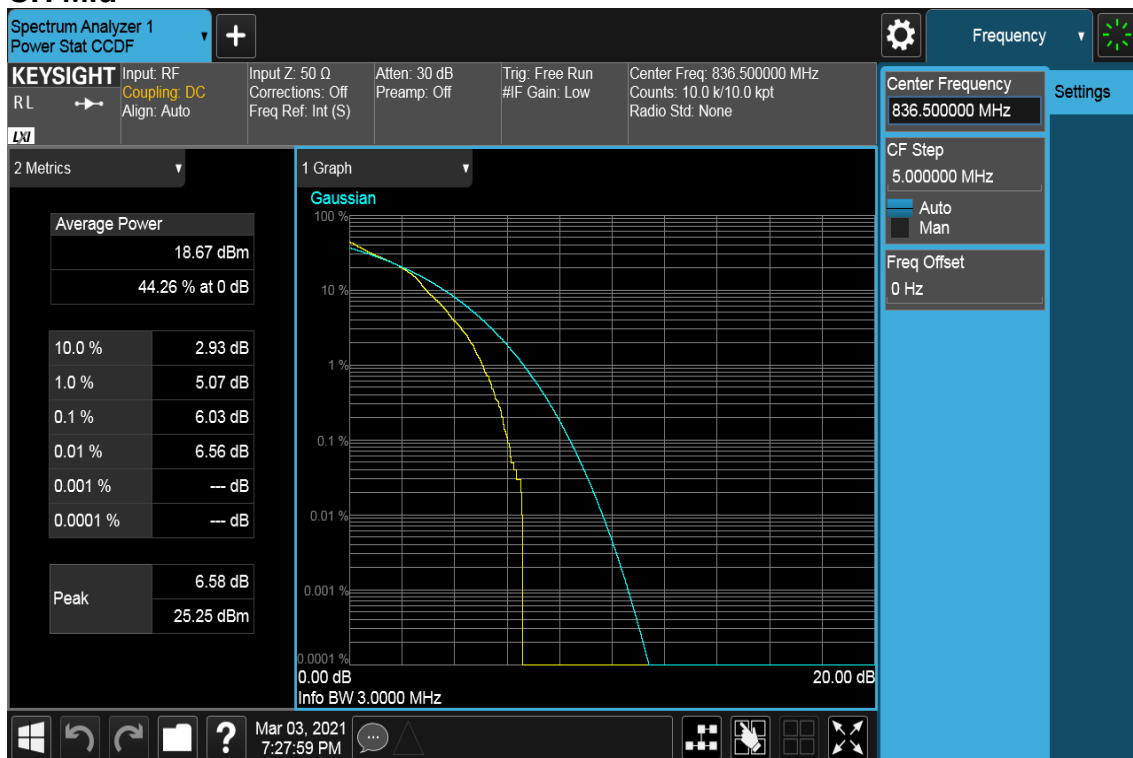


Report No.: T201102D09-RP9

BW: 3MHz / 64QAM / RB =15, RB Offset = 0
CH Low



CH Mid





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CH High

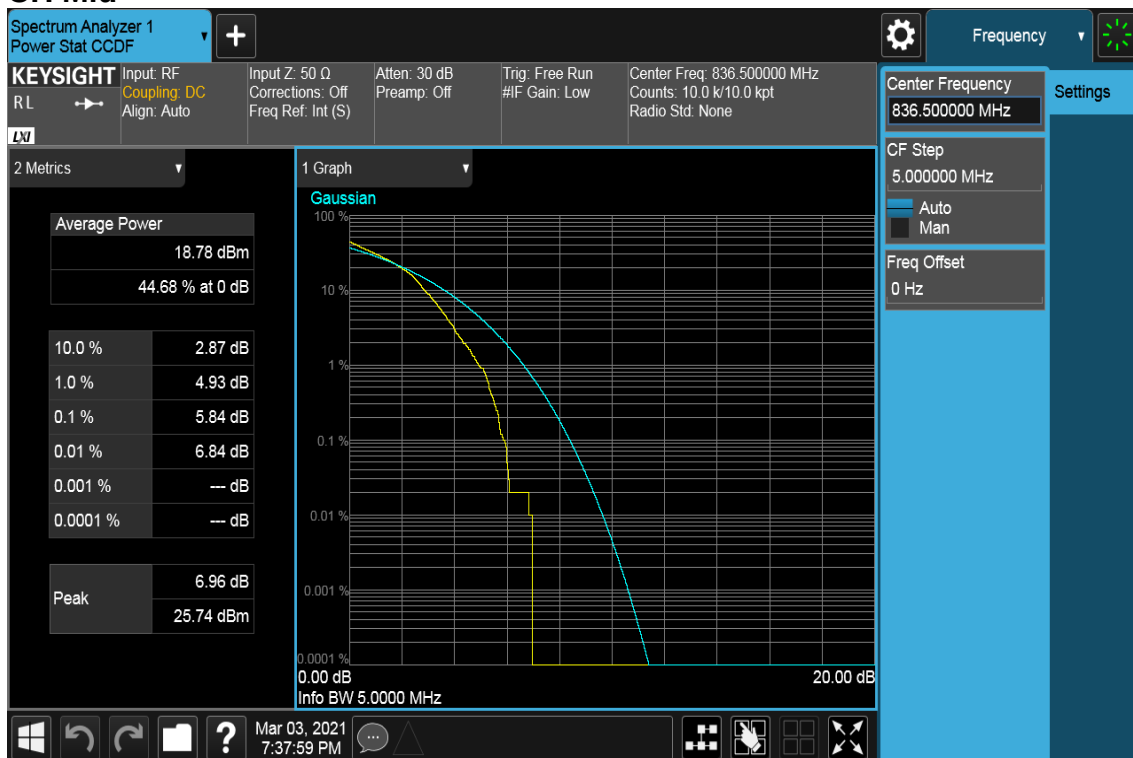


Report No.: T201102D09-RP9

BW: 5MHz / 64QAM / RB =25, RB Offset = 0
CH Low



CH Mid



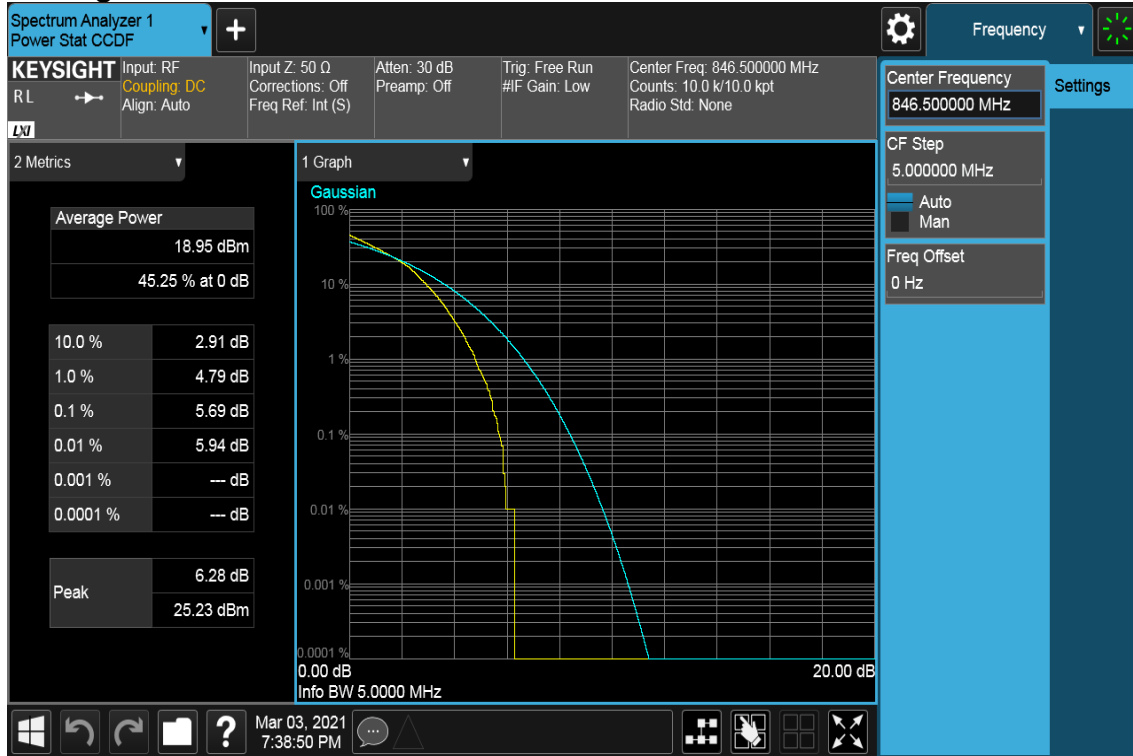


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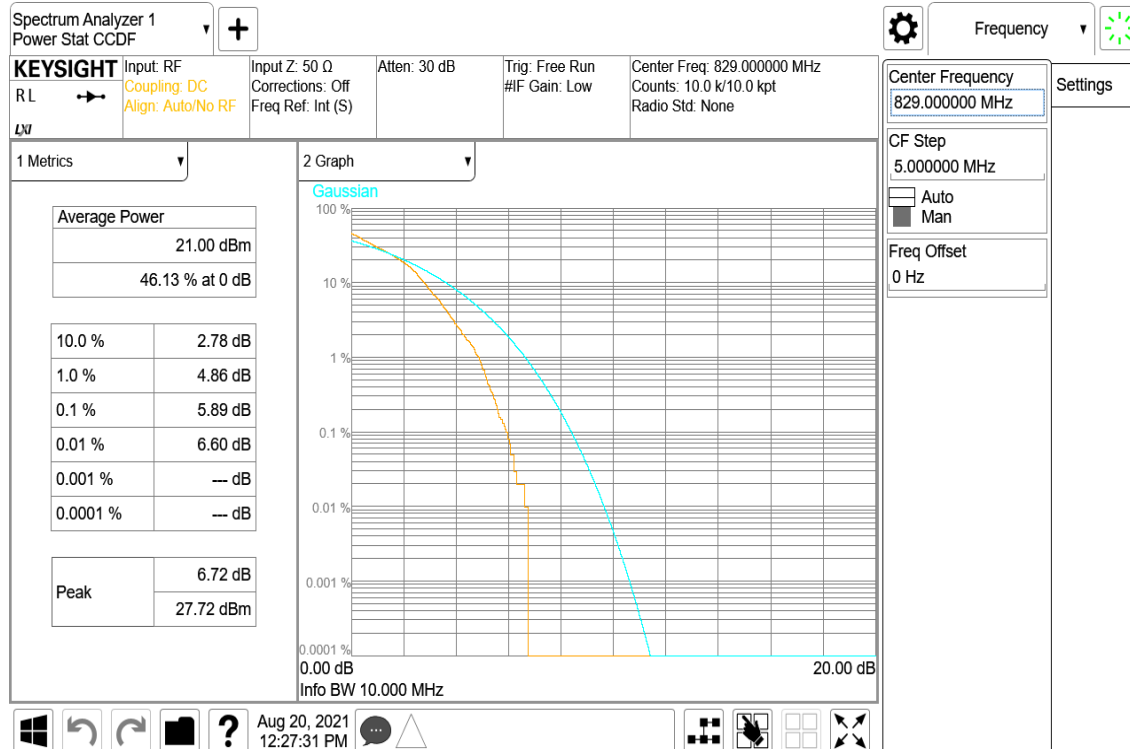
Rev.: 00

CH High

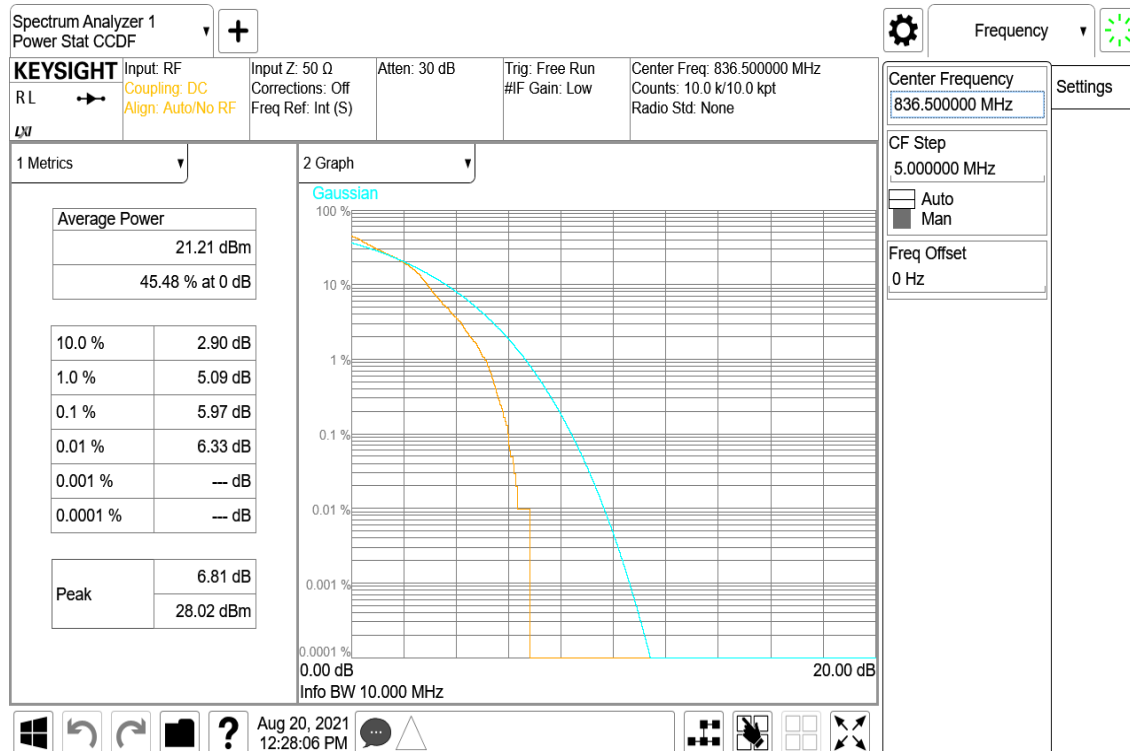


Report No.: T201102D09-RP9

BW: 10MHz / 64QAM /RB =50, RB Offset = 0 CH Low



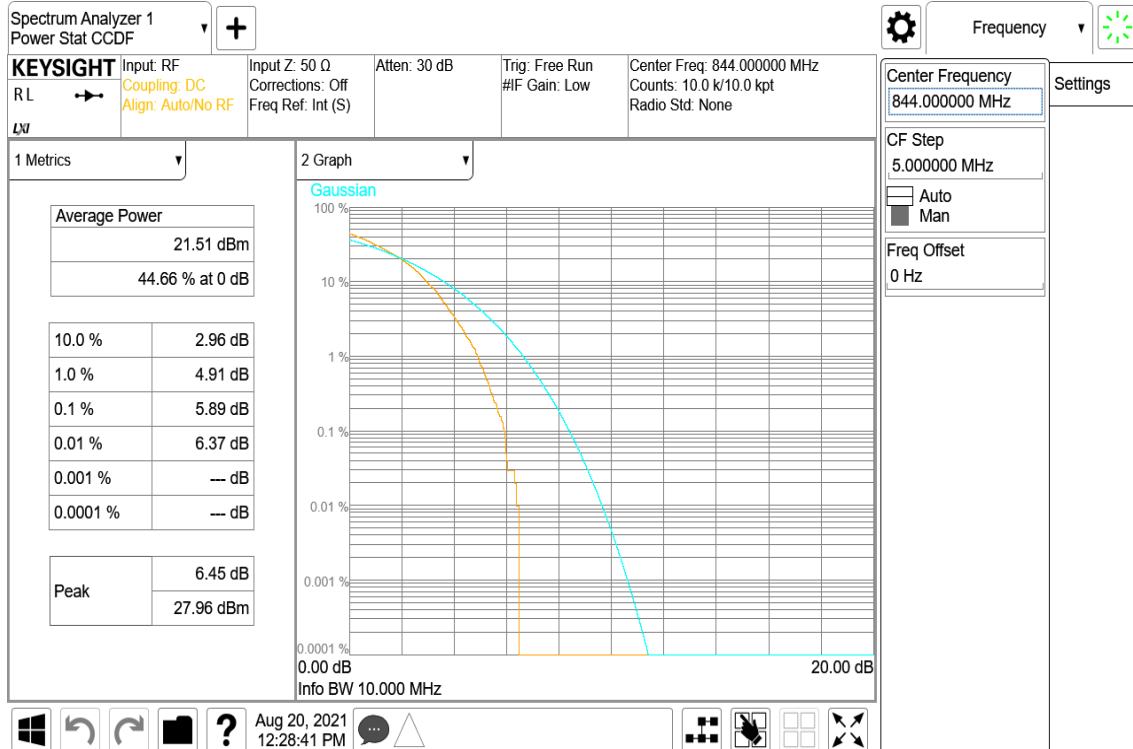
CH Mid





Report No.: T201102D09-RP9

CH High





8.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

Limit

FCC §22.917(a), Band 5

For operations in the 824-849 MHz band ,Out of band emissions. 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.

FCC §24.238(a), Band 2

For operations in the 1850-1910 and 1930-1950 MHz band , Out of band emissions. 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.

RSS-132 section 5.5 and RSS-133 section 6.5

In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).

Test Procedures

KDB 971168 D01,

1. RBW $\geq$ 1% of the emission bandwidth
2. VBW $\geq$ 3 x RBW
3. Span was set large enough so as to capture all out of emissions near the band edge.

Test Results:

Temperature: 23.2°C

Humidity: 56.9% RH

Tested by: Jerry Chang

Test Date: March 3, 2021

Temperature: 25°C

Humidity: 48.6% RH

Tested by: Jerry Chang

Test Date: August 20, 2021

Band Edge

LTE Band 2

CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =6, RB Offset = 0

LOWER BAND EDGE

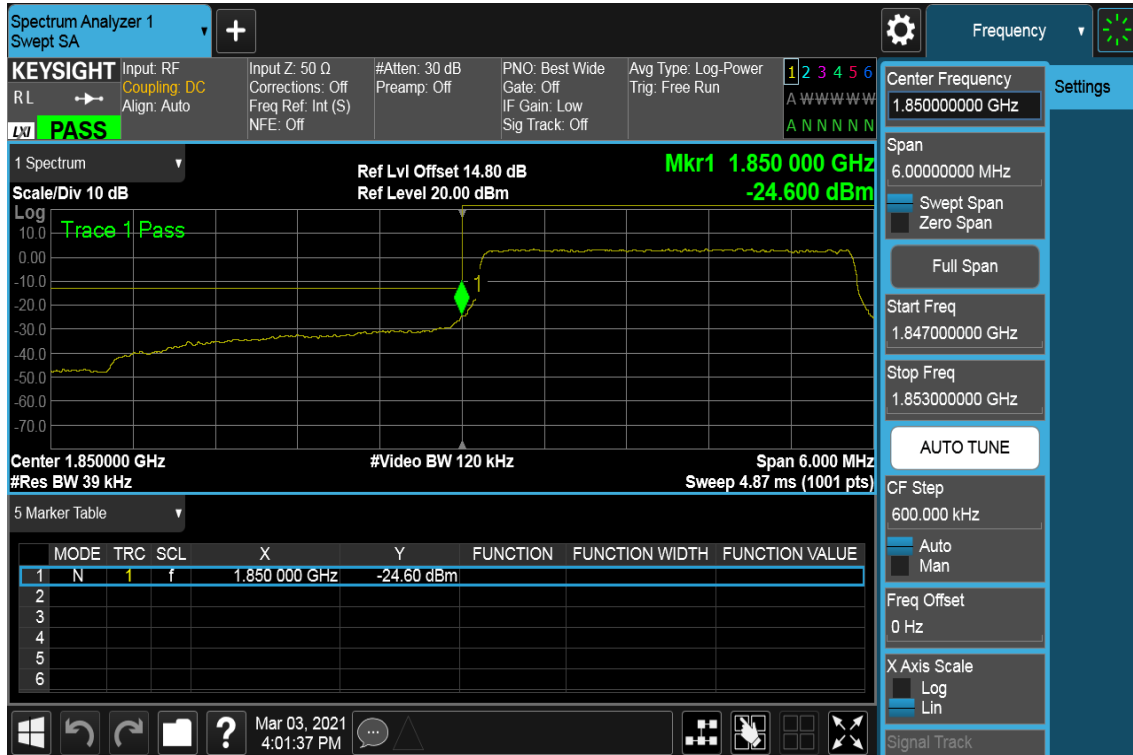


HIGHER BAND EDGE

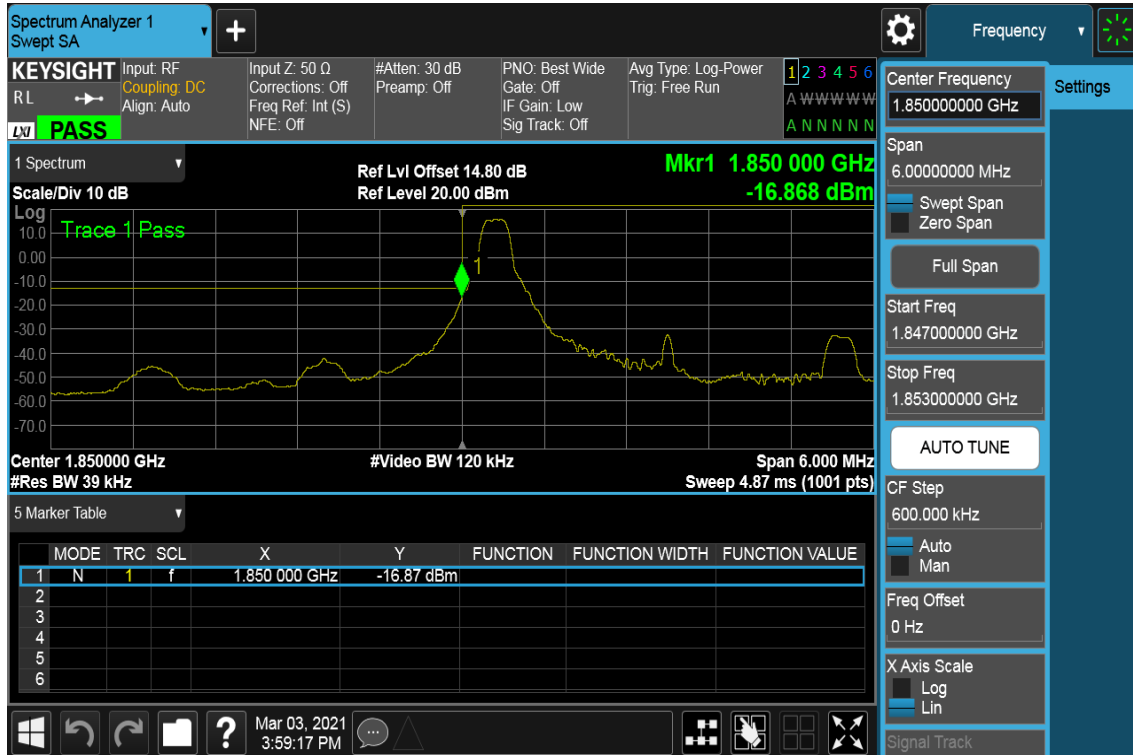


Report No.: T201102D09-RP9

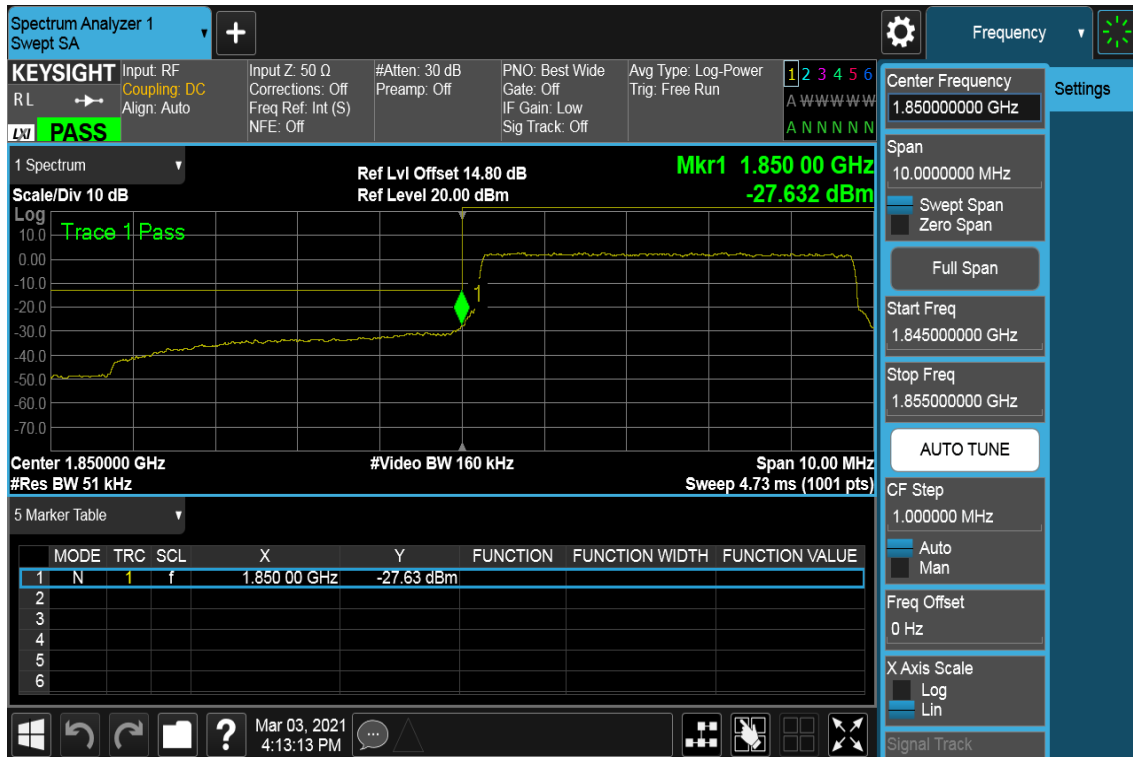
CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE**CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =1, RB Offset = 5**
HIGHER BAND EDGE

CHANNEL BANDWIDTH: 3MHz / QPSK / RB =15, RB Offset = 0
LOWER BAND EDGE**HIGHER BAND EDGE**

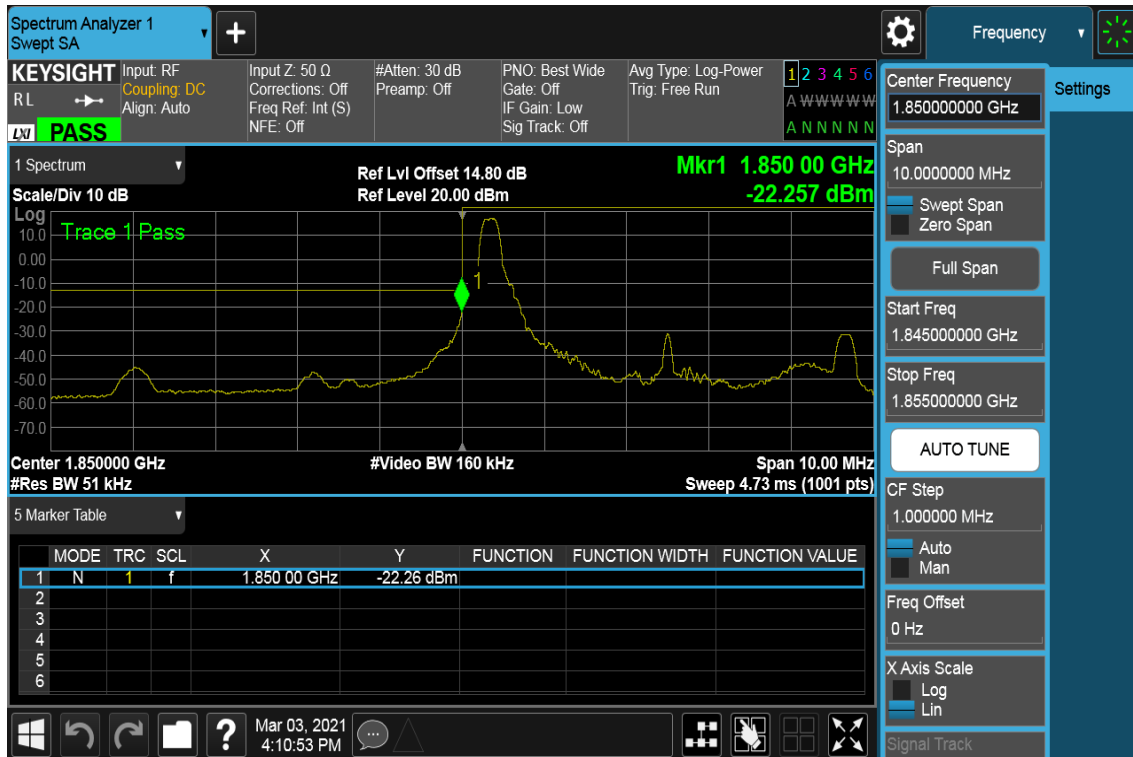
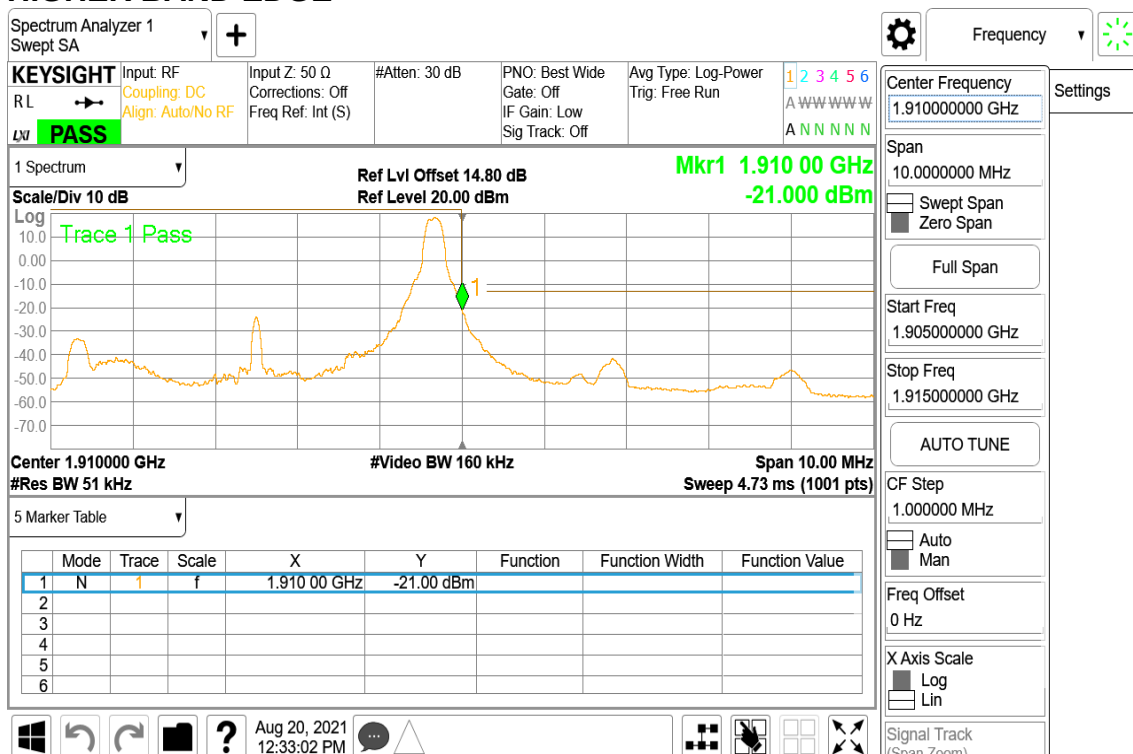
Report No.: T201102D09-RP9

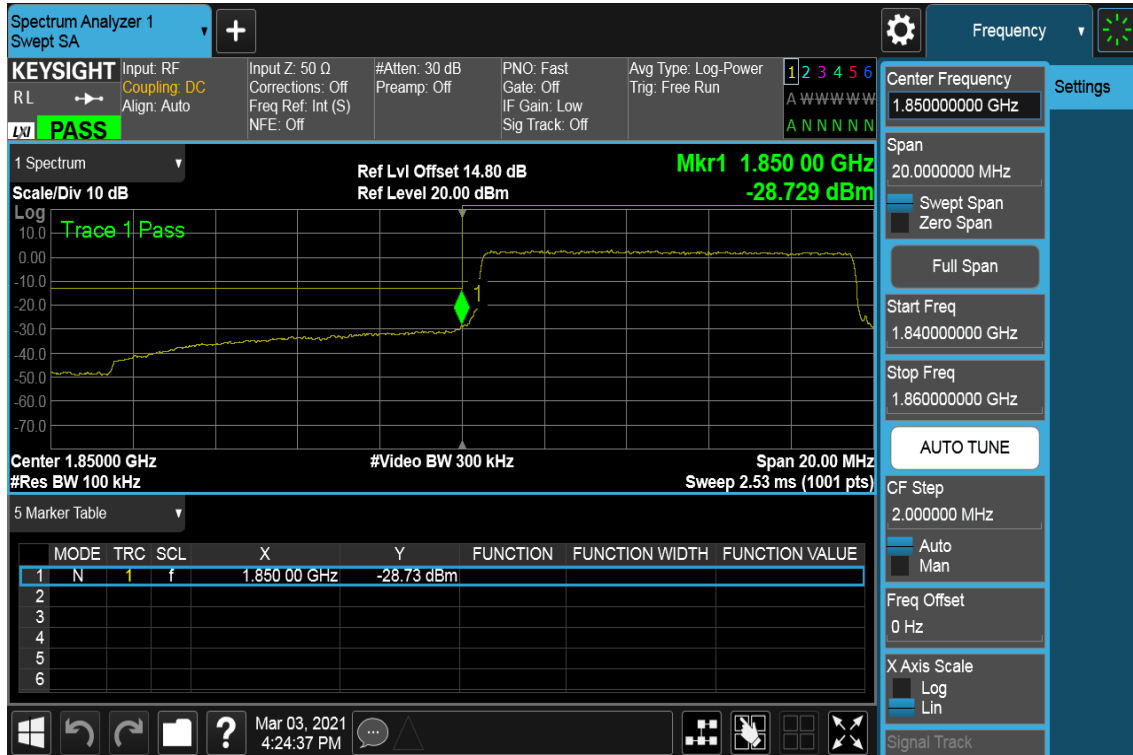
CHANNEL BANDWIDTH: 3MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE**CHANNEL BANDWIDTH: 3MHz / QPSK / RB =1, RB Offset = 14**
HIGHER BAND EDGE

Report No.: T201102D09-RP9

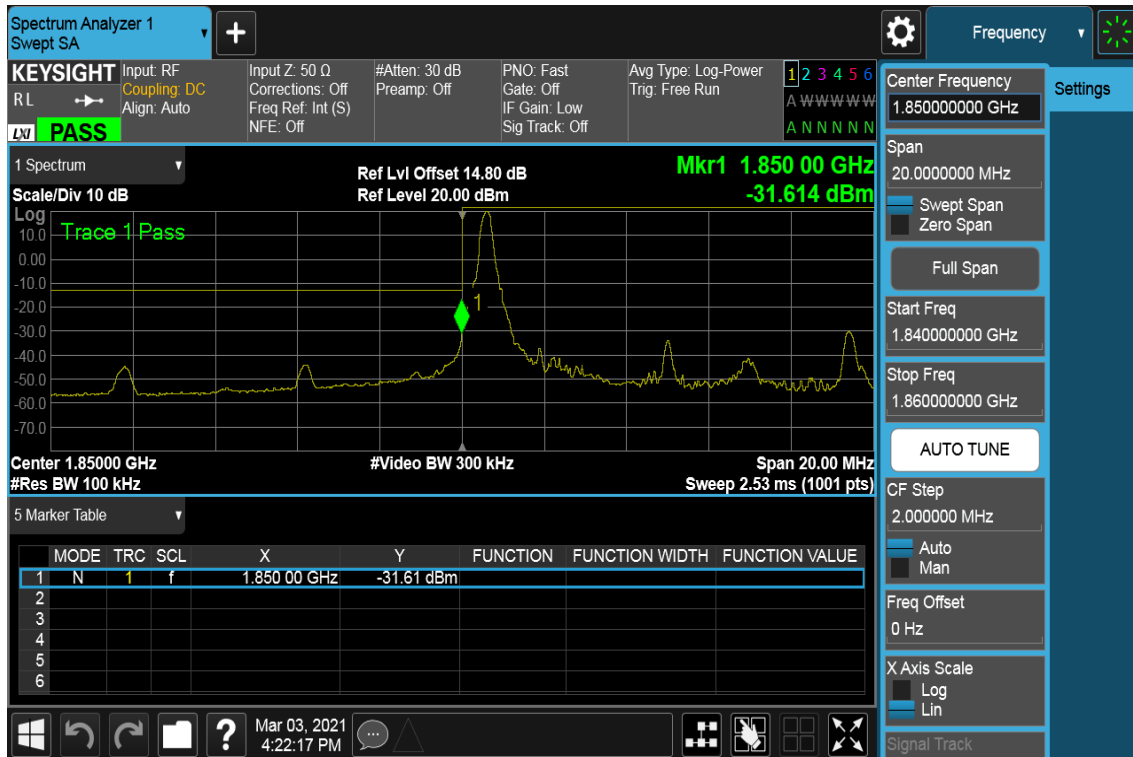
CHANNEL BANDWIDTH: 5MHz / QPSK / RB =25, RB Offset = 0
LOWER BAND EDGE**HIGHER BAND EDGE**

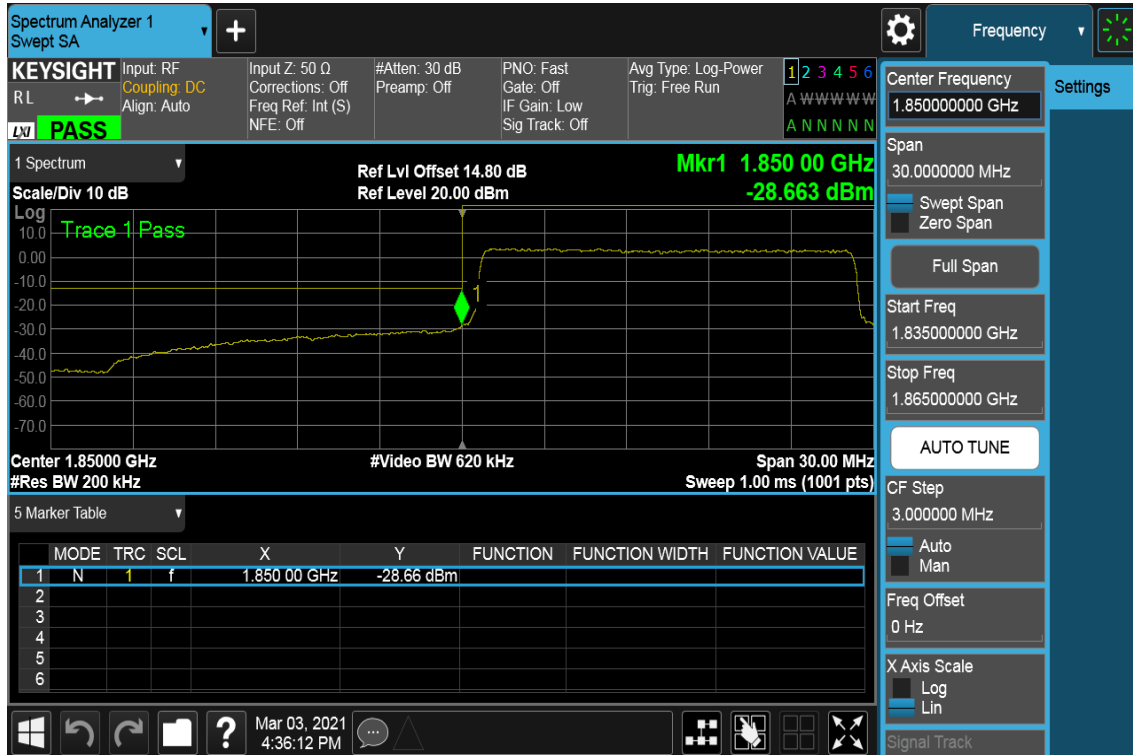
Report No.: T201102D09-RP9

CHANNEL BANDWIDTH: 5MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE**CHANNEL BANDWIDTH: 5MHz / QPSK / RB =1, RB Offset = 24**
HIGHER BAND EDGE

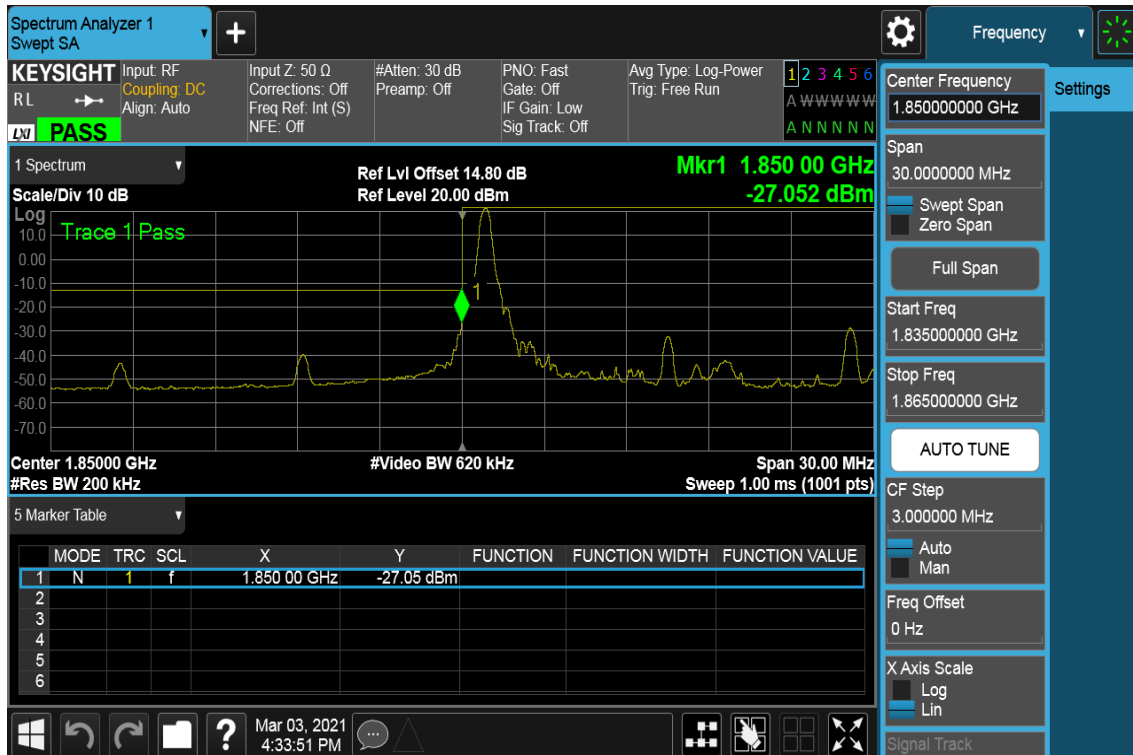
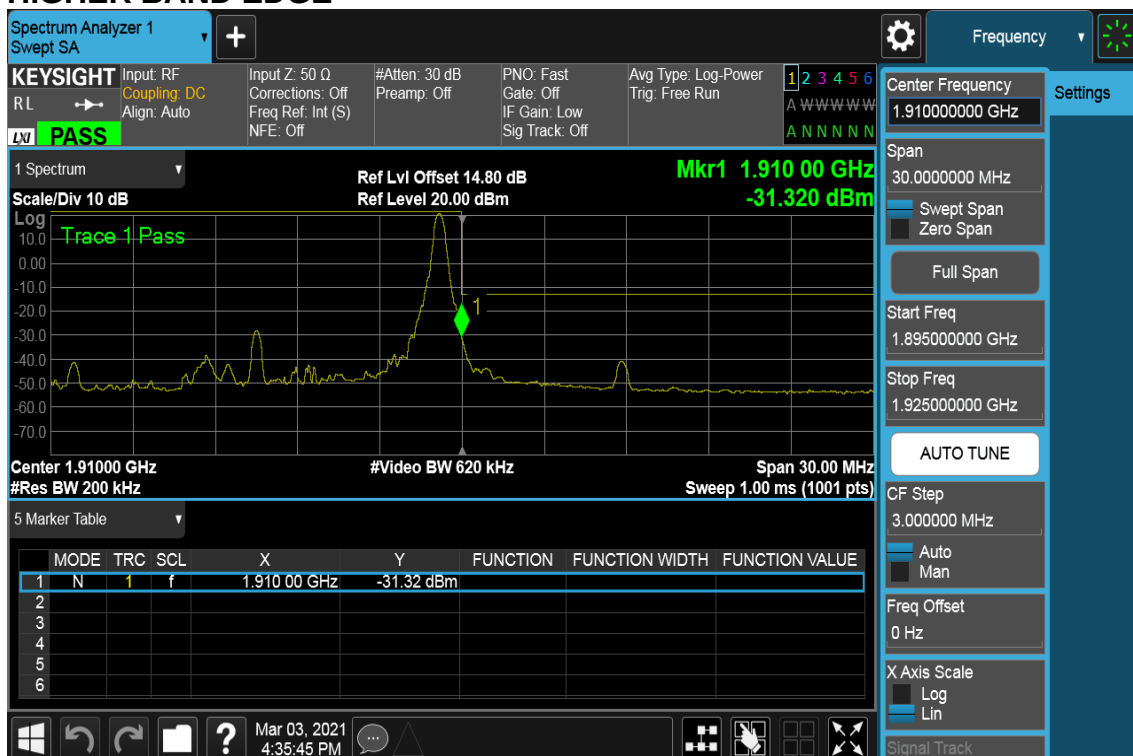
CHANNEL BANDWIDTH: 10MHz / QPSK / RB =50, RB Offset = 0
LOWER BAND EDGE**HIGHER BAND EDGE**

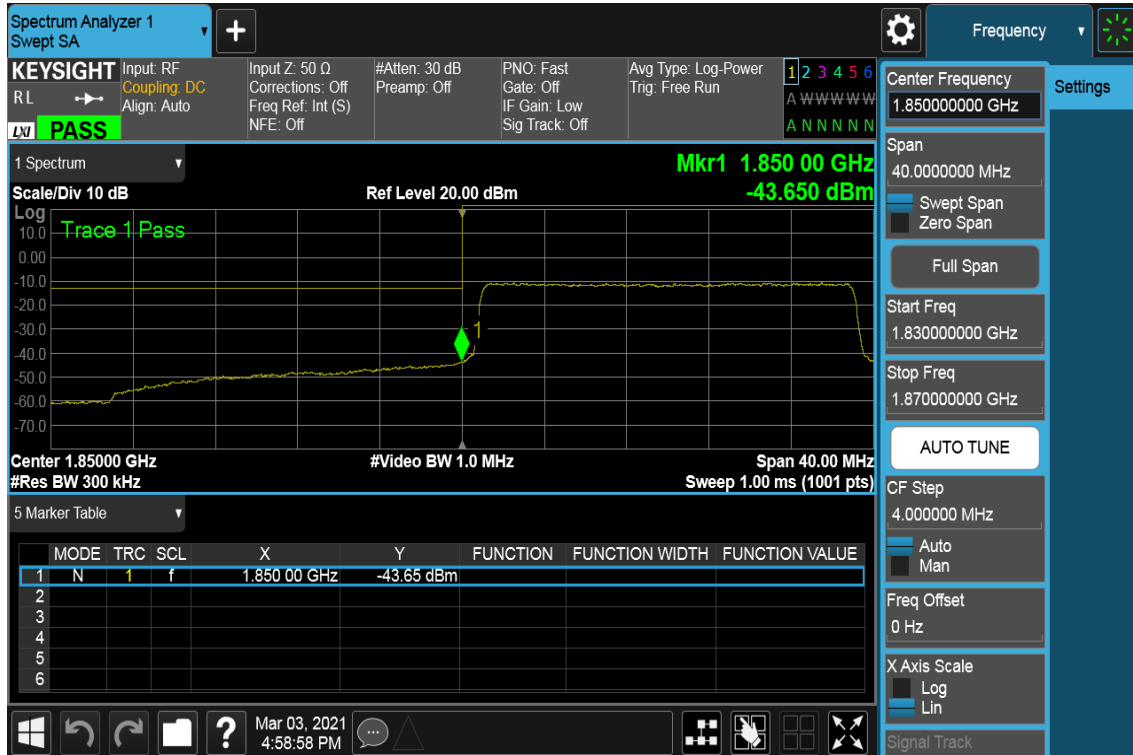
Report No.: T201102D09-RP9

CHANNEL BANDWIDTH: 10MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE**CHANNEL BANDWIDTH: 10MHz / QPSK / RB =1, RB Offset = 49**
HIGHER BAND EDGE

CHANNEL BANDWIDTH: 15MHz / QPSK / RB =75, RB Offset = 0
LOWER BAND EDGE**HIGHER BAND EDGE**

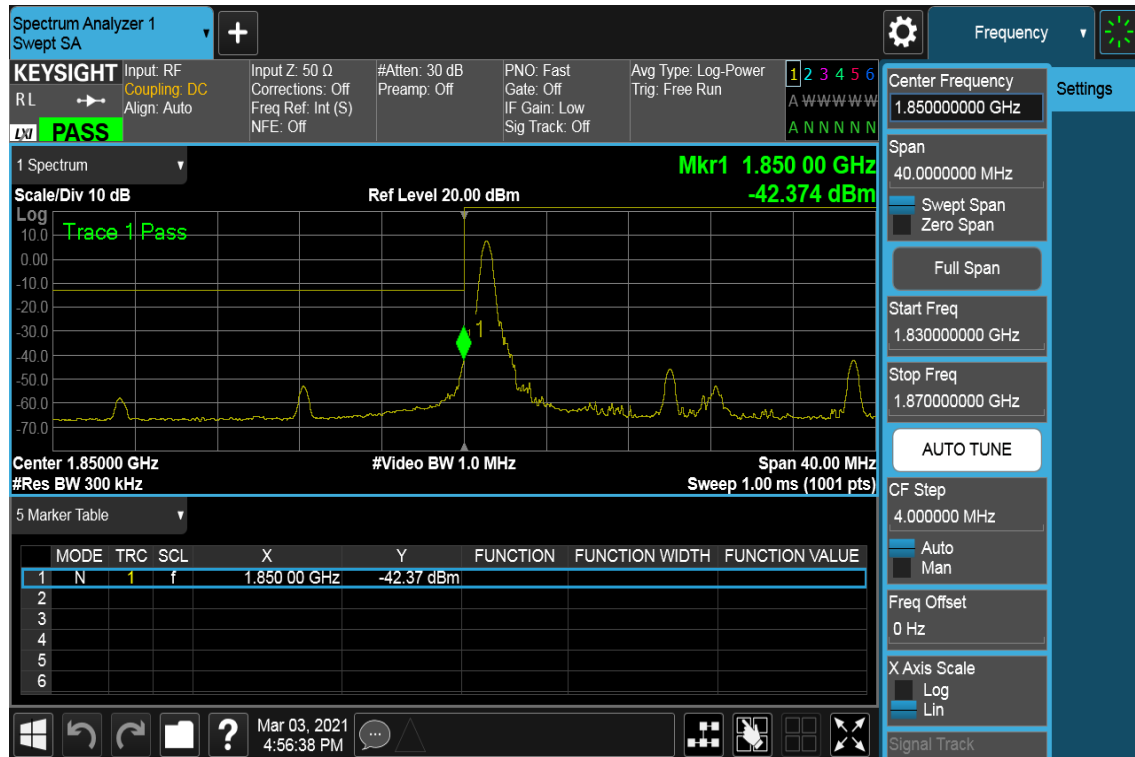
Report No.: T201102D09-RP9

**CHANNEL BANDWIDTH: 15MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE****CHANNEL BANDWIDTH: 15MHz / QPSK / RB =1, RB Offset = 74
HIGHER BAND EDGE**

**CHANNEL BANDWIDTH: 20MHz / QPSK / RB =100, RB Offset = 0
LOWER BAND EDGE****HIGHER BAND EDGE**

CHANNEL BANDWIDTH: 20MHz / QPSK / RB =1, RB Offset = 0

LOWER BAND EDGE



CHANNEL BANDWIDTH: 20MHz / QPSK / RB =1, RB Offset = 99

HIGHER BAND EDGE

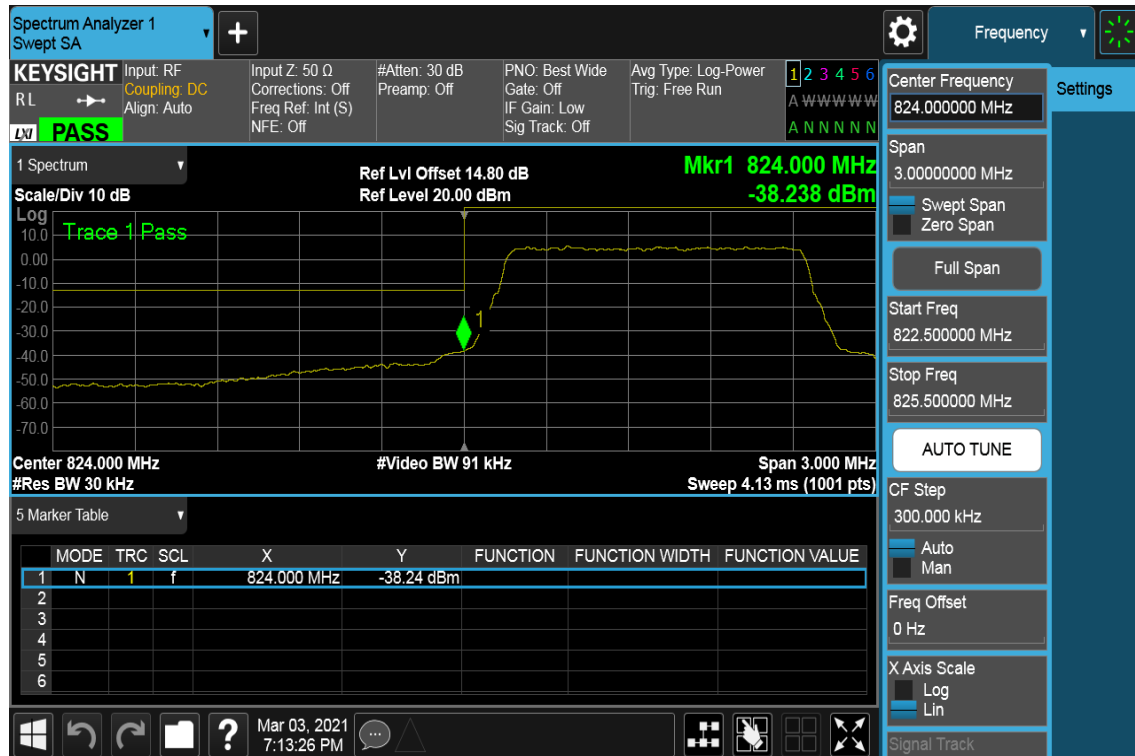


Band Edge

LTE Band 5

CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =6, RB Offset = 0

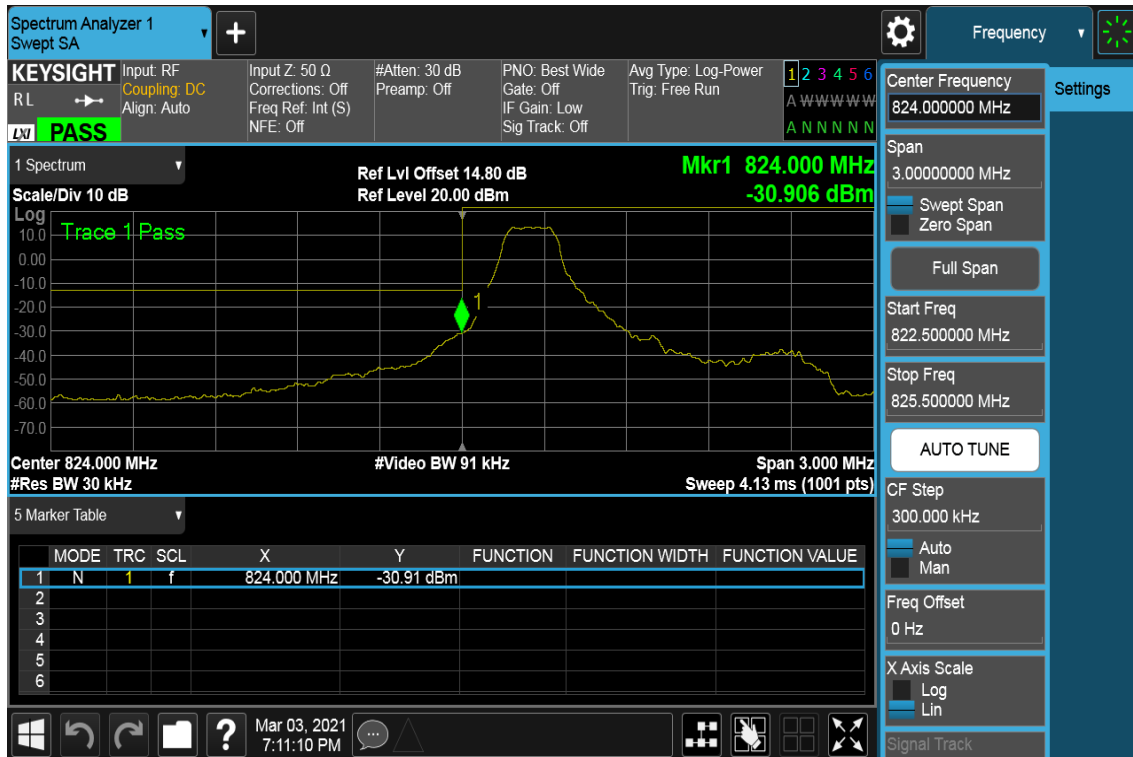
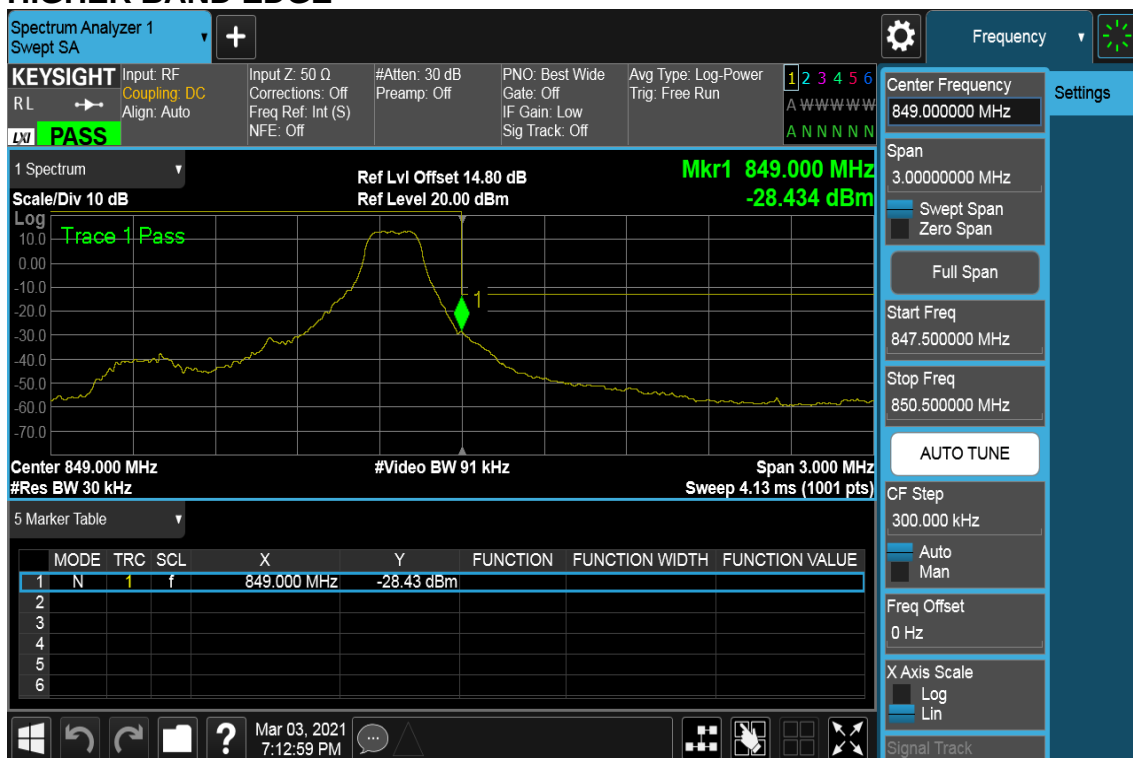
LOWER BAND EDGE



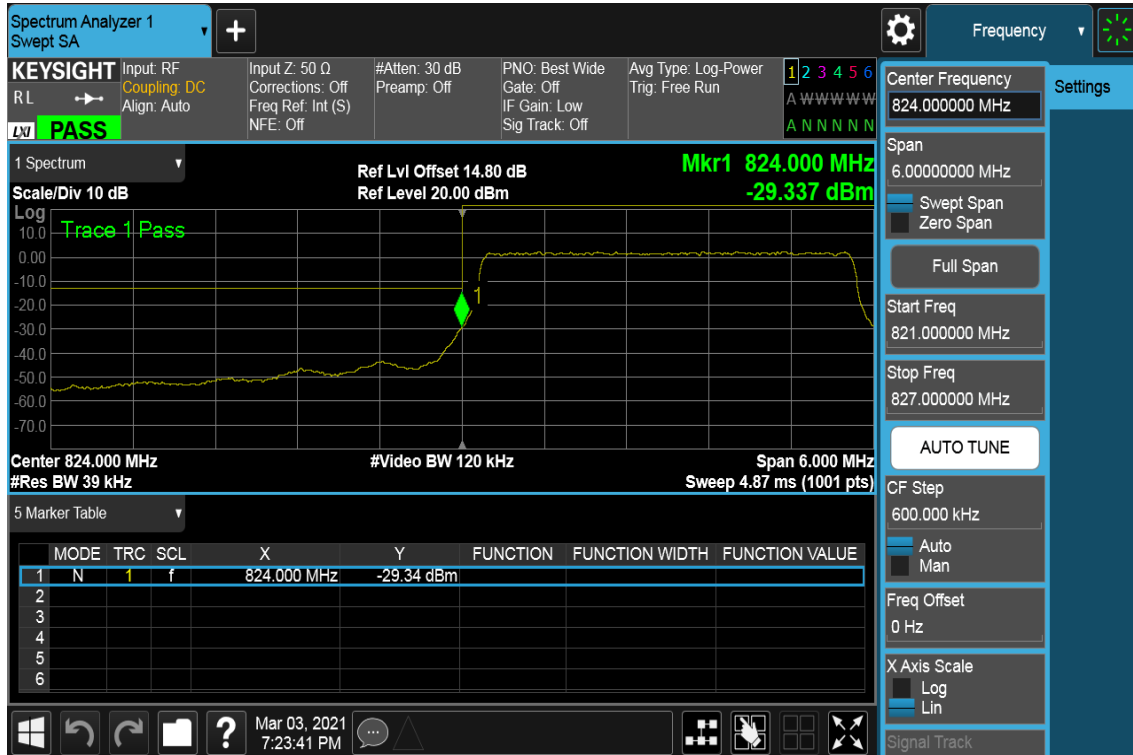
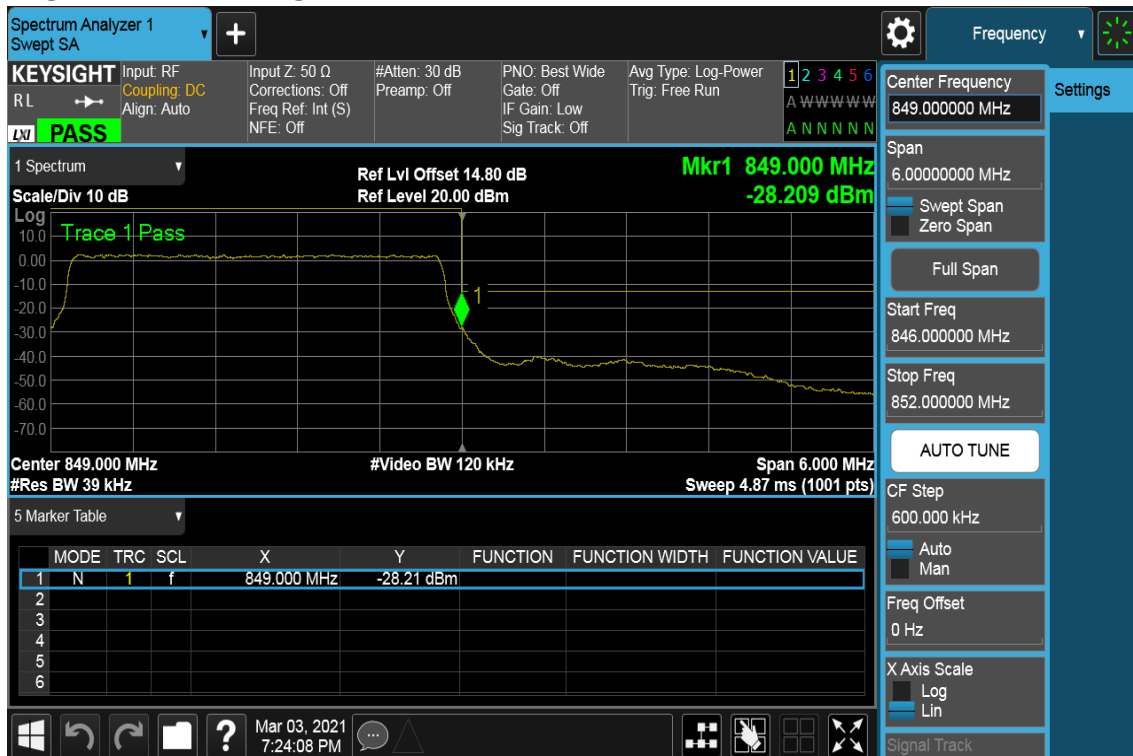
HIGHER BAND EDGE



Report No.: T201102D09-RP9

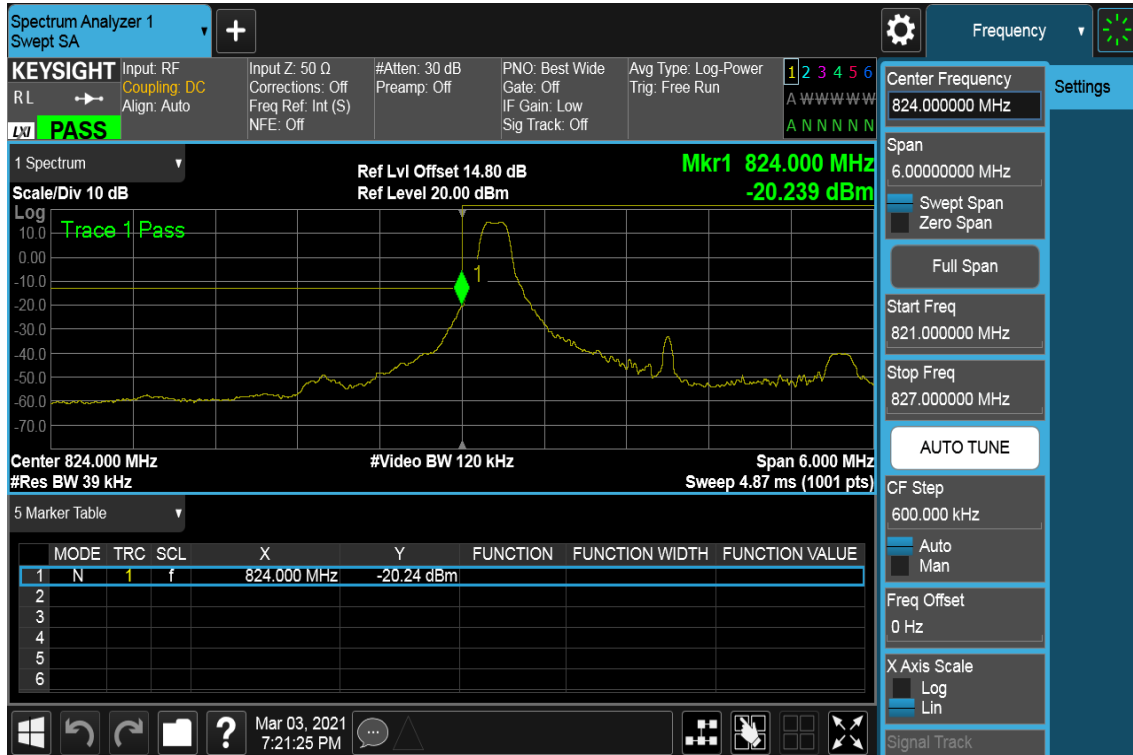
CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE**CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =1, RB Offset = 5**
HIGHER BAND EDGE

Report No.: T201102D09-RP9

CHANNEL BANDWIDTH: 3MHz / QPSK / RB =15, RB Offset = 0
LOWER BAND EDGE**HIGHER BAND EDGE**

Report No.: T201102D09-RP9

CHANNEL BANDWIDTH: 3MHz / QPSK / RB =1, RB Offset = 0 LOWER BAND EDGE



CHANNEL BANDWIDTH: 3MHz / QPSK / RB =1, RB Offset = 14 HIGHER BAND EDGE

