

# EMISSION BANDWIDTH



XMIT 2019.09.05

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5171B-506	TEW	2-May-18	2-May-21
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	19-Mar-19	19-Mar-20

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The 99% bandwidth was measured utilizing the analyzer's peak detector and measuring the carrier's 26 dB occupied bandwidth based on the peak output power level measured. A plot was taken to show the occupied bandwidth is contained within the allowable transmit band. (within band is 5 or 10 MHz where applicable)

The method in section 5.4 of ANSI C63.26 was used to make the measurement.

The spectrum analyzer settings were as follows:

RBW = Approx. 1% of the emission bandwidth (B). This was an iterative process to determine the RBW based on the emissions bandwidth (B).

VBW = > RBW

A peak detector was used

Trace max hold.

The occupied bandwidth was measured with the EUT configured in the modes called out in the data sheets.

FCC 22.917(b)(1) defines the 26dB emission bandwidth requirement.

# EMISSION BANDWIDTH



TbTx 2019.08.30.0

XMI 2019.08.05

EUT:	AHBCC Remote Radio Head (RRH)	Work Order:	NOKI0002		
Serial Number:	K9180332366	Date:	4-Dec-19		
Customer:	Nokia Solutions and Networks	Temperature:	23.6 °C		
Attendees:	Mitchell Hill, John Rattanavong	Humidity:	30.6% RH		
Project:	None	Barometric Pres.:	1021 mbar		
Tested by:	Brandon Hobbs	Power:	54VDC		
TEST SPECIFICATIONS		Test Method	ANSI C63.26:2015		
FCC 22H:2019					
COMMENTS					
Testing was completed on the highest output power antenna port (Port 4). All conducted losses were accounted for between the radio and the spectrum analyzer. The EUT was operating at 100% duty cycle for all measurements made.					
DEVIATIONS FROM TEST STANDARD					
None					
Configuration #	1	Signature			
Band 5					
Port 4					
5 MHz Bandwidth					
QPSK	Mid Channel, 881.5 MHz	4.488 MHz	4.861 MHz	Within Band	Pass
16QAM	Mid Channel, 881.5 MHz	4.468 MHz	4.824 MHz	Within Band	Pass
64QAM	Mid Channel, 881.5 MHz	4.486 MHz	4.862 MHz	Within Band	Pass
256QAM	Mid Channel, 881.5 MHz	4.486 MHz	4.866 MHz	Within Band	Pass
10 MHz Bandwidth					
QPSK	Mid Channel, 881.5 MHz	9.328 MHz	9.878 MHz	Within Band	Pass
16QAM	Mid Channel, 881.5 MHz	9.202 MHz	9.841 MHz	Within Band	Pass
64QAM	Mid Channel, 881.5 MHz	9.313 MHz	9.892 MHz	Within Band	Pass
256QAM	Mid Channel, 881.5 MHz	9.325 MHz	9.935 MHz	Within Band	Pass

## Band n5 Emission Designators

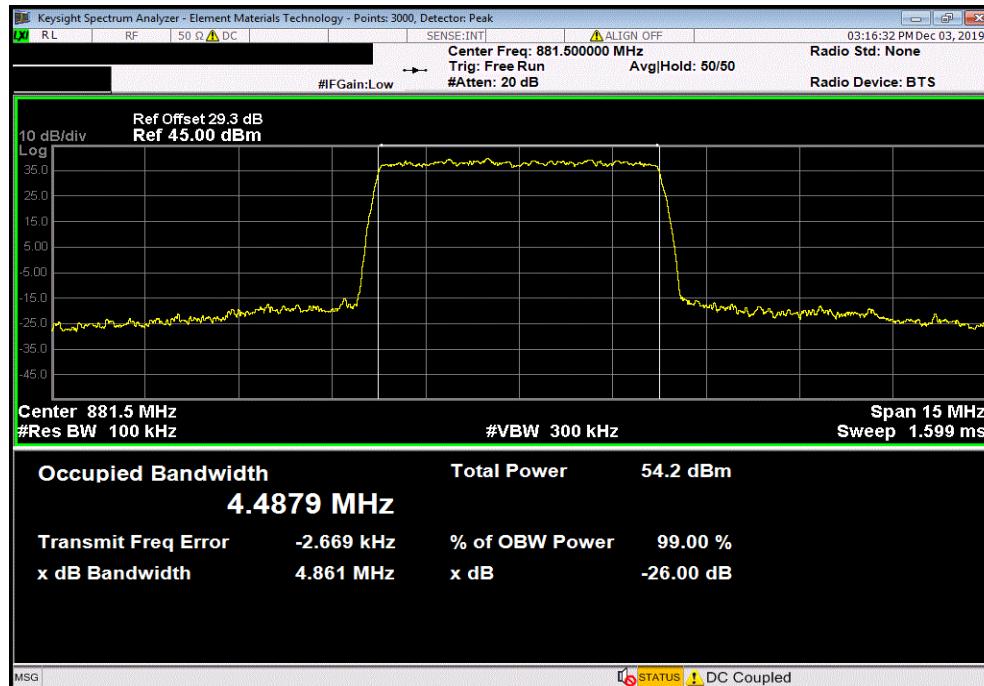
Band n5 (869MHz to 894MHz ) Emission Designators				
Channel Bandwidth	5G-NR: QPSK	5G-NR: 16QAM	5G-NR: 64QAM	5G-NR: 256QAM
5M	4M86G7W	4M82G7W	4M86G7W	4M87G7W
10M	9M88G7W	9M84G7W	9M89G7W	9M94G7W
Note: Based on 26dB emission bandwidth				

# EMISSION BANDWIDTH

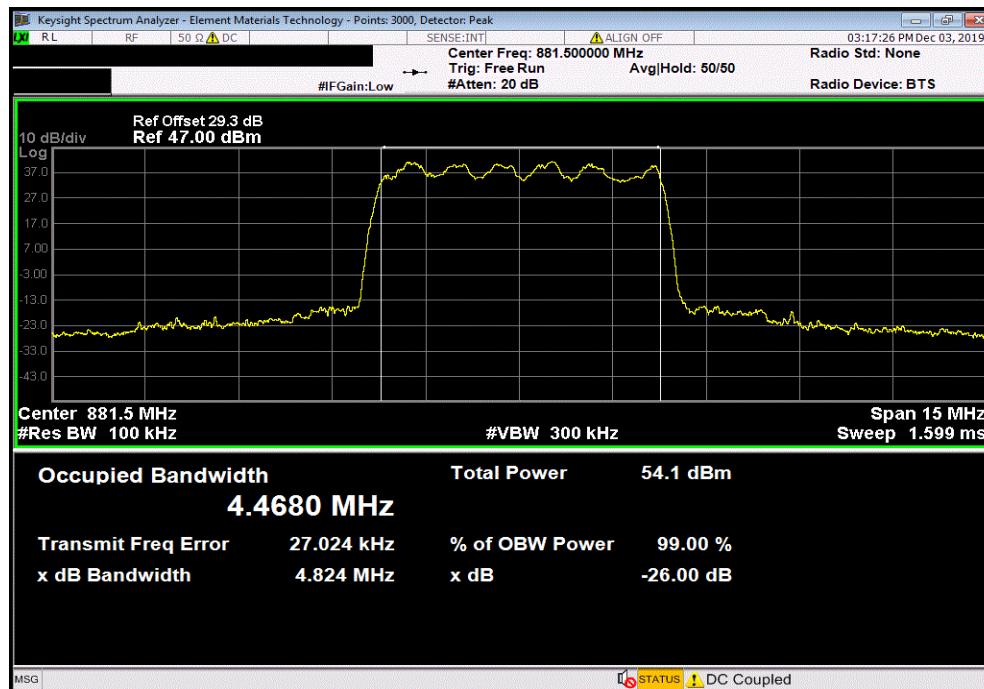


TbtTx 2019.08.30.0 XMI 2019.09.05

Band 5, Port 4, 5 MHz Bandwidth , QPSK, Mid Channel, 881.5 MHz					
	Value 99%	Value 26dB	Limit (<)	Result	
	4.488 MHz	4.861 MHz	Within Band	Pass	



Band 5, Port 4, 5 MHz Bandwidth , 16QAM, Mid Channel, 881.5 MHz					
	Value 99%	Value 26dB	Limit (<)	Result	
	4.468 MHz	4.824 MHz	Within Band	Pass	

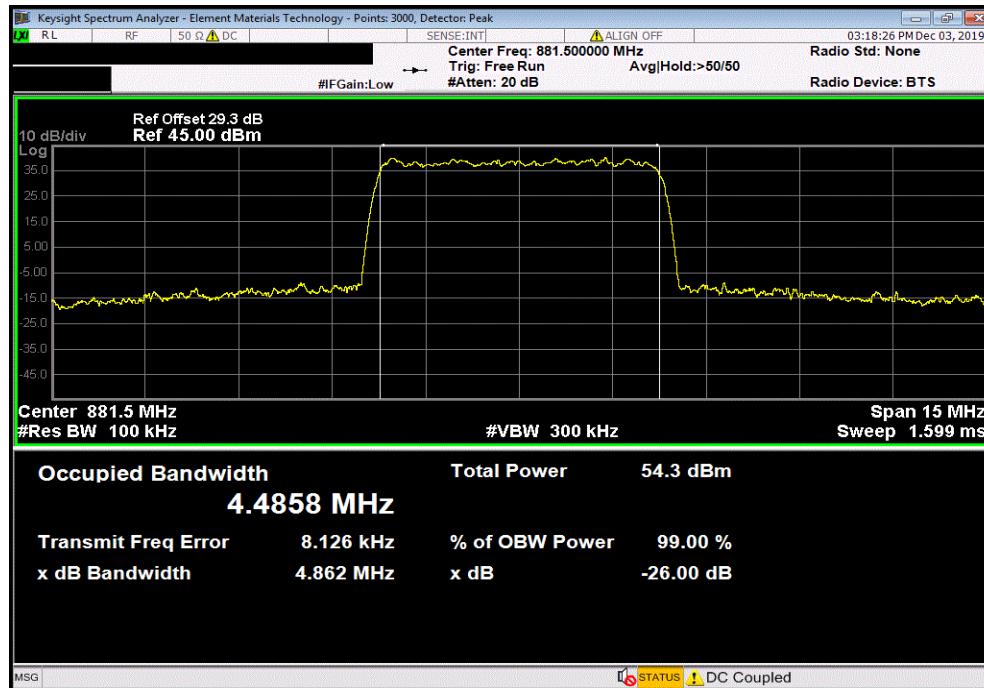


# EMISSION BANDWIDTH

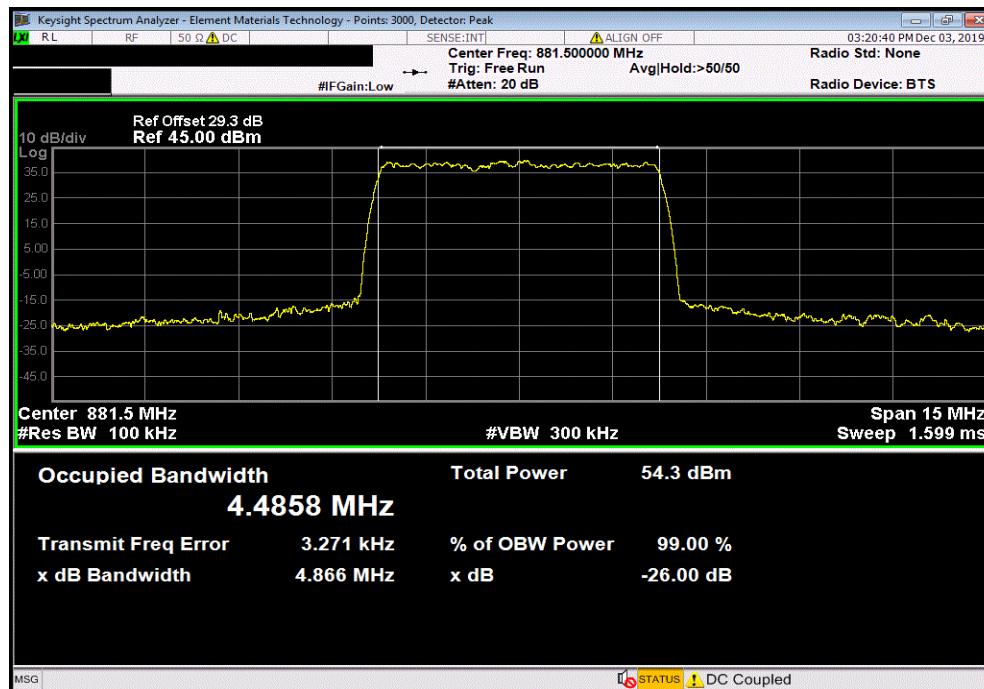


TbtTx 2019.08.30.0 XMI 2019.09.05

Band 5, Port 4, 5 MHz Bandwidth , 64QAM, Mid Channel, 881.5 MHz				Result
Value 99%	Value 26dB	Limit (<)		
4.486 MHz	4.862 MHz	Within Band	Pass	Result



Band 5, Port 4, 5 MHz Bandwidth , 256QAM, Mid Channel, 881.5 MHz				Result
Value 99%	Value 26dB	Limit (<)		
4.486 MHz	4.866 MHz	Within Band	Pass	Result

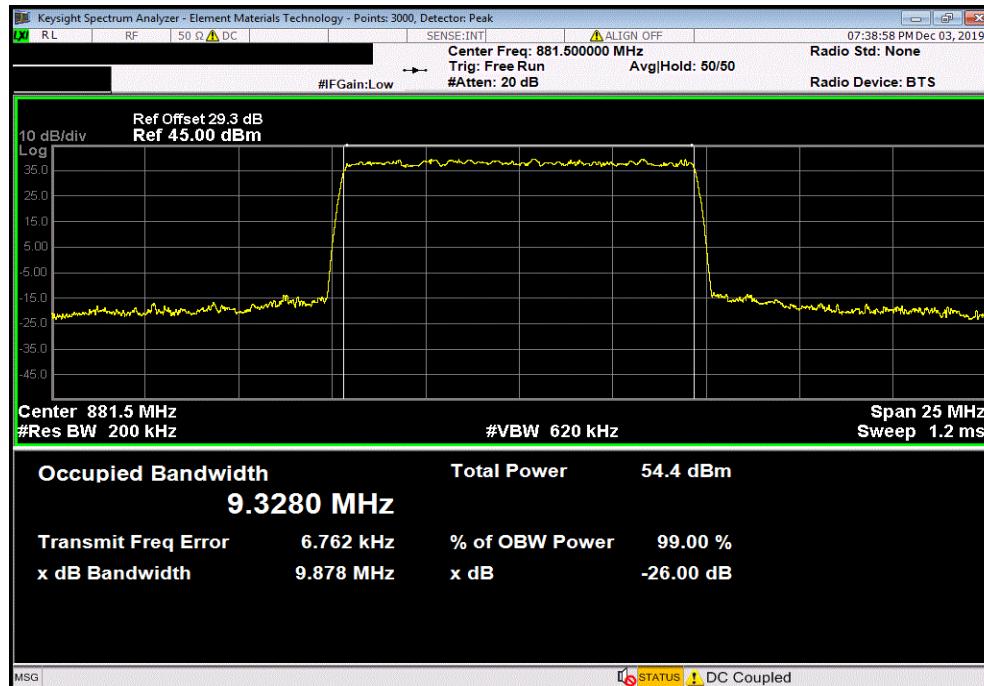


# EMISSION BANDWIDTH

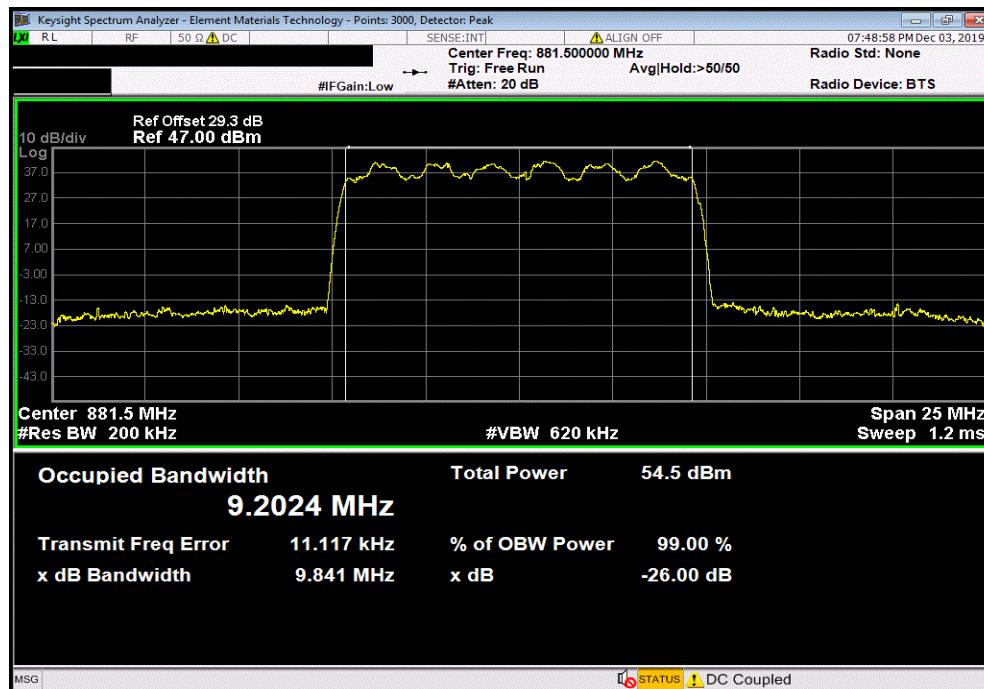


TbtTx 2019.08.30.0 XMI 2019.09.05

Band 5, Port 4, 10 MHz Bandwidth , QPSK, Mid Channel, 881.5 MHz					
	Value 99%	Value 26dB	Limit (<)	Result	
	9.328 MHz	9.878 MHz	Within Band		Pass



Band 5, Port 4, 10 MHz Bandwidth , 16QAM, Mid Channel, 881.5 MHz					
	Value 99%	Value 26dB	Limit (<)	Result	
	9.202 MHz	9.841 MHz	Within Band		Pass

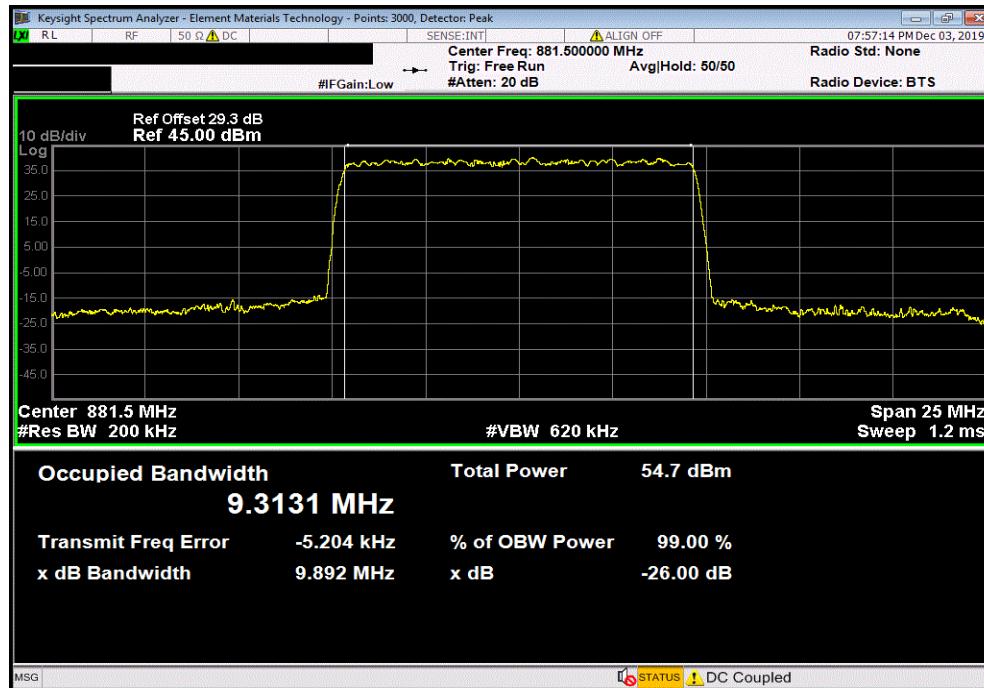


# EMISSION BANDWIDTH

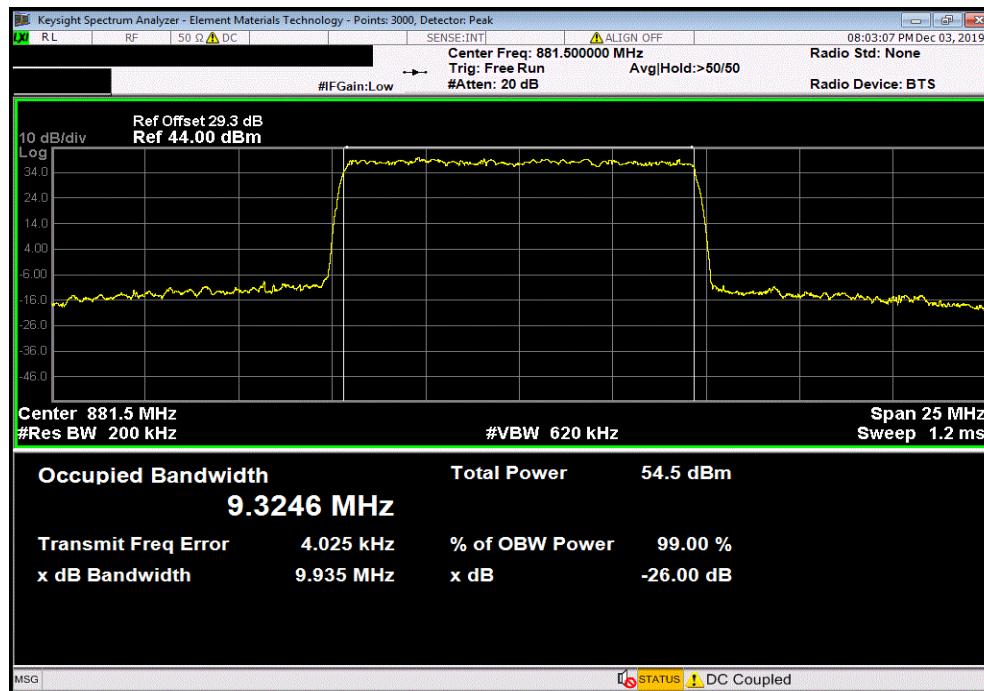


TbtTx 2019.08.30.0 XMI 2019.09.05

Band 5, Port 4, 10 MHz Bandwidth , 64QAM, Mid Channel, 881.5 MHz					
Value 99%	Value 26dB	Limit (<)	Result		
9.313 MHz	9.892 MHz	Within Band	Pass		



Band 5, Port 4, 10 MHz Bandwidth , 256QAM, Mid Channel, 881.5 MHz					
Value 99%	Value 26dB	Limit (<)	Result		
9.325 MHz	9.935 MHz	Within Band	Pass		



# BAND EDGE COMPLIANCE



XMit 2019.09.05

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5171B-506	TEW	2-May-18	2-May-21
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	19-Mar-19	19-Mar-20

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in the available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

All limits were adjusted by a factor of  $[-10 \log(4)]$  dB to account for the device operation as a 4 port MIMO transmitter, as per FCC KDB 622911.

Per FCC 22.917(b), the power of any emission outside of the authorized operating frequency range cannot exceed -13 dBm. The limit is adjusted to -19 dBm [-13 dBm -10 log (4)] per FCC KDB 662911D01 v02r01 because the BTS may operate as a 4 port MIMO transmitter.

Per FCC 22.917(b)(1), emissions seen up to 1 MHz outside of authorized operating frequency range band edges shall be measured with a RBW of 1% of the measured emission bandwidth. Any emission seen to be > 1 MHz further outside the band edges shall be measured with a RBW of 100 kHz. However, a narrower RBW of at least 1% of the emission bandwidth is still allowed provided that the measured power is integrated over the full reference bandwidth of 100 kHz or 1% of the emission bandwidth.

# BAND EDGE COMPLIANCE



XMi 2019.09.05

EUT:	AHBCC Remote Radio Head (RRH)	Work Order:	NOKI0002
Serial Number:	K9180332366	Date:	5-Dec-19
Customer:	Nokia Solutions and Networks	Temperature:	23.1 °C
Attendees:	Mitchell Hill, John Rattanavong	Humidity:	31.1% RH
Project:	None	Barometric Pres.:	1018 mbar
Tested by:	Brandon Hobbs	Power:	54VDC
TEST SPECIFICATIONS		Test Method	Job Site: IX09
FCC 22H:2019		ANSI C63.26:2015	
COMMENTS			
Testing was completed on the highest output power antenna port (Port 4). All conducted losses were accounted for between the radio and the spectrum analyzer. The EUT was operating at 100% duty cycle for all measurements made.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature	
Port 4, Band 5	Value (dBm)	Limit (dBm)	Result
5 MHz Bandwidth			
QPSK			
Low Channel, 871.5 MHz			
First Range Lower Band Edge	-23.958	-19	Pass
Second Range Lower Band Edge	-32.034	-19	Pass
High Channel, 891.5 MHz			
First Range Upper Band Edge	-23.384	-19	Pass
Second Range Upper Band Edge	-31.828	-19	Pass
16QAM			
Low Channel, 871.5 MHz			
First Range Lower Band Edge	-25.371	-19	Pass
Second Range Lower Band Edge	-24.796	-19	Pass
High Channel, 891.5 MHz			
First Range Upper Band Edge	-23.161	-19	Pass
Second Range Upper Band Edge	-31.892	-19	Pass
64QAM			
Low Channel, 871.5 MHz			
First Range Lower Band Edge	-24.672	-19	Pass
Second Range Lower Band Edge	-22.173	-19	Pass
High Channel, 891.5 MHz			
First Range Upper Band Edge	-23.308	-19	Pass
Second Range Upper Band Edge	-29.778	-19	Pass
256QAM			
Low Channel, 871.5 MHz			
First Range Lower Band Edge	-24.764	-19	Pass
Second Range Lower Band Edge	-31	-19	Pass
High Channel, 891.5 MHz			
First Range Upper Band Edge	-24.034	-19	Pass
Second Range Upper Band Edge	-30.144	-19	Pass
10 MHz Bandwidth			
QPSK			
Low Channel, 874 MHz			
First Range Lower Band Edge	-27.051	-19	Pass
Second Range Lower Band Edge	-33.93	-19	Pass
High Channel, 889 MHz			
First Range Upper Band Edge	-25.958	-19	Pass
Second Range Upper Band Edge	-32.187	-19	Pass
16QAM			
Low Channel, 874 MHz			
First Range Lower Band Edge	-27.823	-19	Pass
Second Range Lower Band Edge	-34.206	-19	Pass
High Channel, 889 MHz			
First Range Upper Band Edge	-25.389	-19	Pass
Second Range Upper Band Edge	-32.296	-19	Pass
64QAM			
Low Channel, 874 MHz			
First Range Lower Band Edge	-27.552	-19	Pass
Second Range Lower Band Edge	-34.297	-19	Pass
High Channel, 889 MHz			
First Range Upper Band Edge	-26.256	-19	Pass
Second Range Upper Band Edge	-33.014	-19	Pass
256QAM			
Low Channel, 874 MHz			
First Range Lower Band Edge	-26.389	-19	Pass
Second Range Lower Band Edge	-33.418	-19	Pass
High Channel, 889 MHz			
First Range Upper Band Edge	-25.681	-19	Pass
Second Range Upper Band Edge	-31.807	-19	Pass

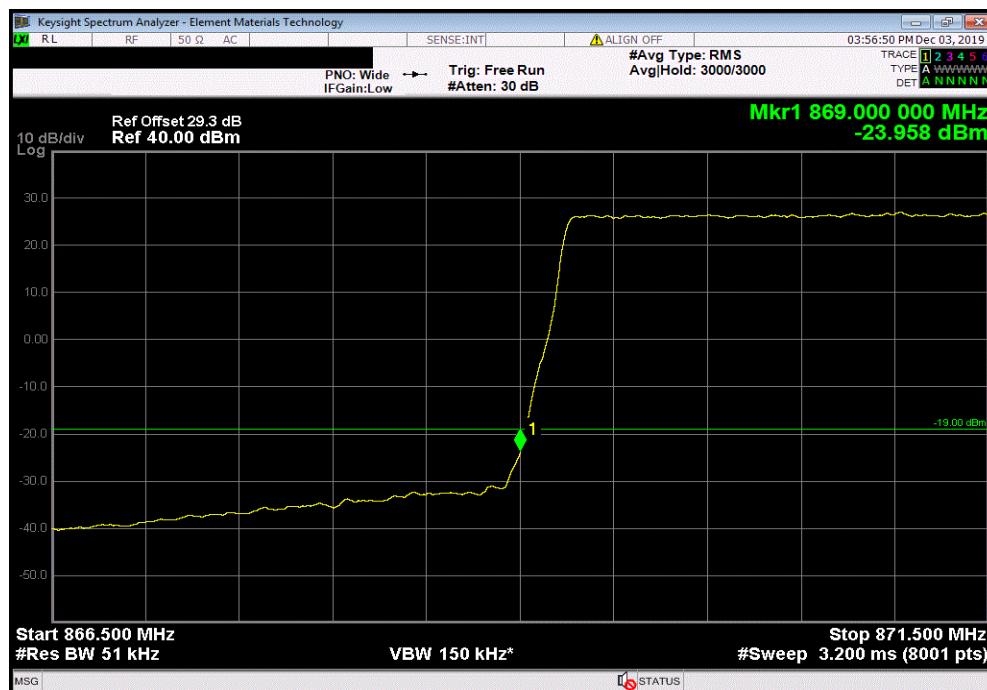
# BAND EDGE COMPLIANCE



XMT 2019.09.05

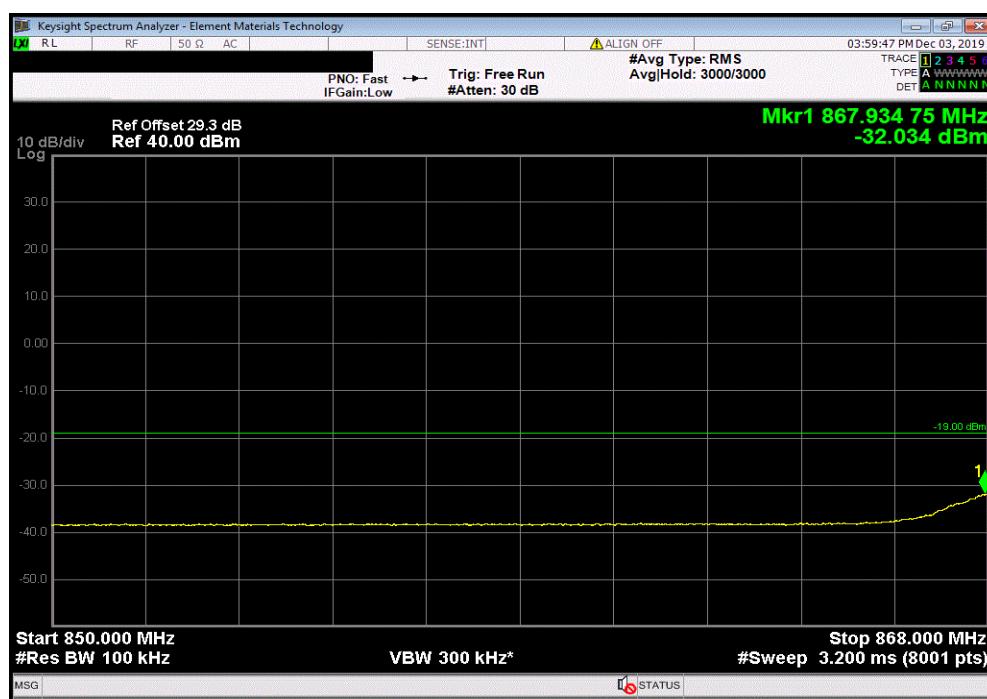
Port 4, Band 5, 5 MHz Bandwidth, QPSK, Low Channel, 871.5 MHz, First Range Lower Band Edge

Value (dBm)	Limit (dBm)	Result
-23.958	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, QPSK, Low Channel, 871.5 MHz, Second Range Lower Band Edge

Value (dBm)	Limit (dBm)	Result
-32.034	-19	Pass



# BAND EDGE COMPLIANCE



XMT 2019.09.05

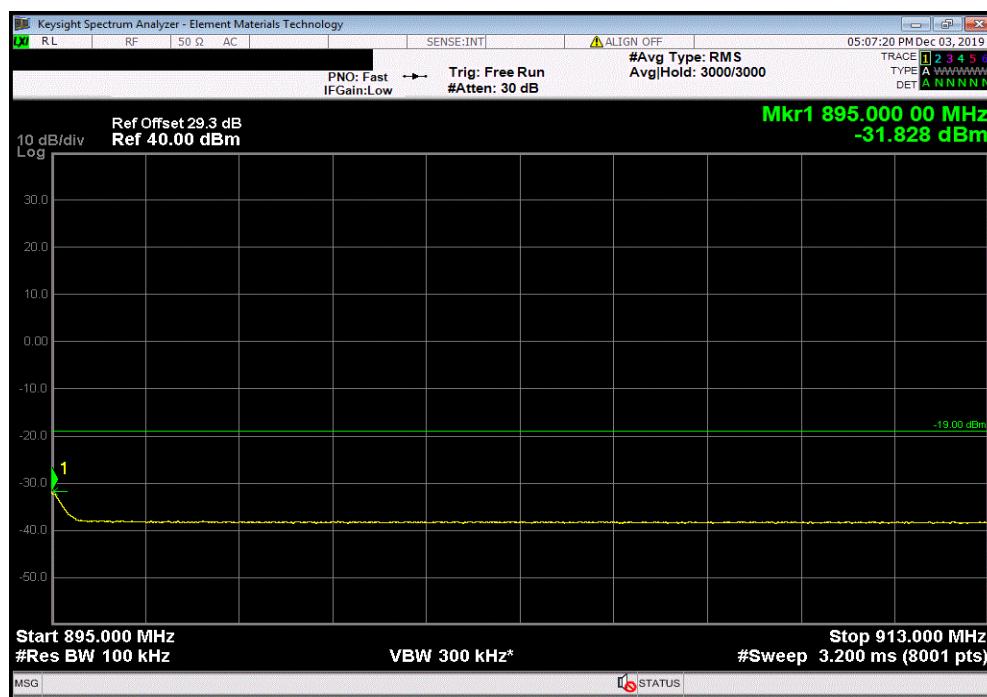
Port 4, Band 5, 5 MHz Bandwidth, QPSK, High Channel, 891.5 MHz, First Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-23.384	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, QPSK, High Channel, 891.5 MHz, Second Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-31.828	-19	Pass



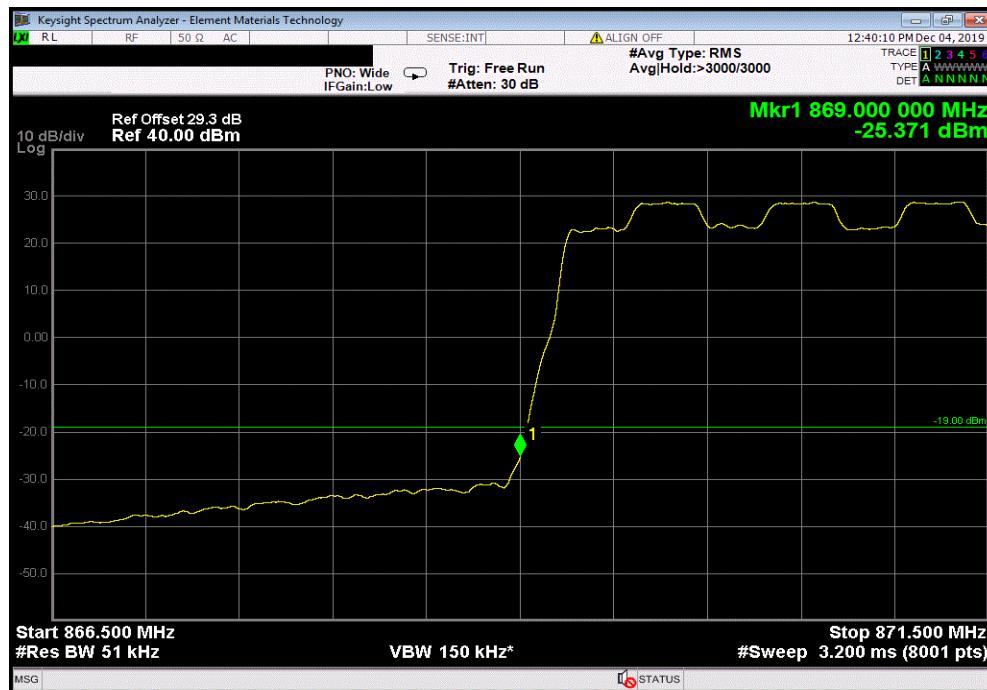
# BAND EDGE COMPLIANCE



XMT 2019.09.05

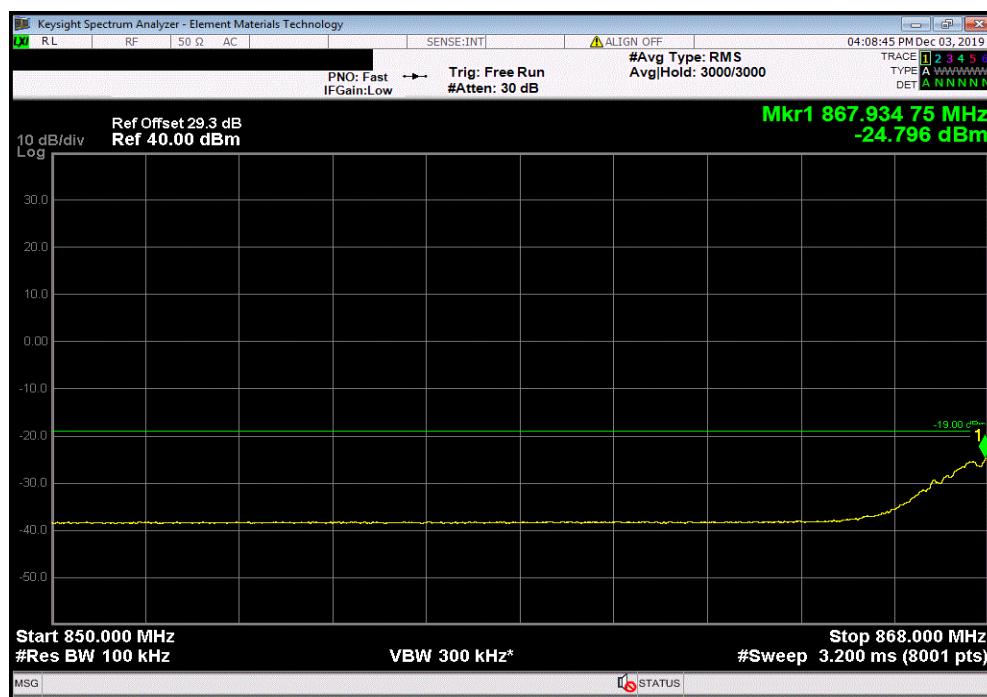
Port 4, Band 5, 5 MHz Bandwidth, 16QAM, Low Channel, 871.5 MHz, First Range Lower Band Edge

	Value (dBm)	Limit (dBm)	Result
	-25.371	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 16QAM, Low Channel, 871.5 MHz, Second Range Lower Band Edge

	Value (dBm)	Limit (dBm)	Result
	-24.796	-19	Pass



# BAND EDGE COMPLIANCE



XMT 2019.09.05

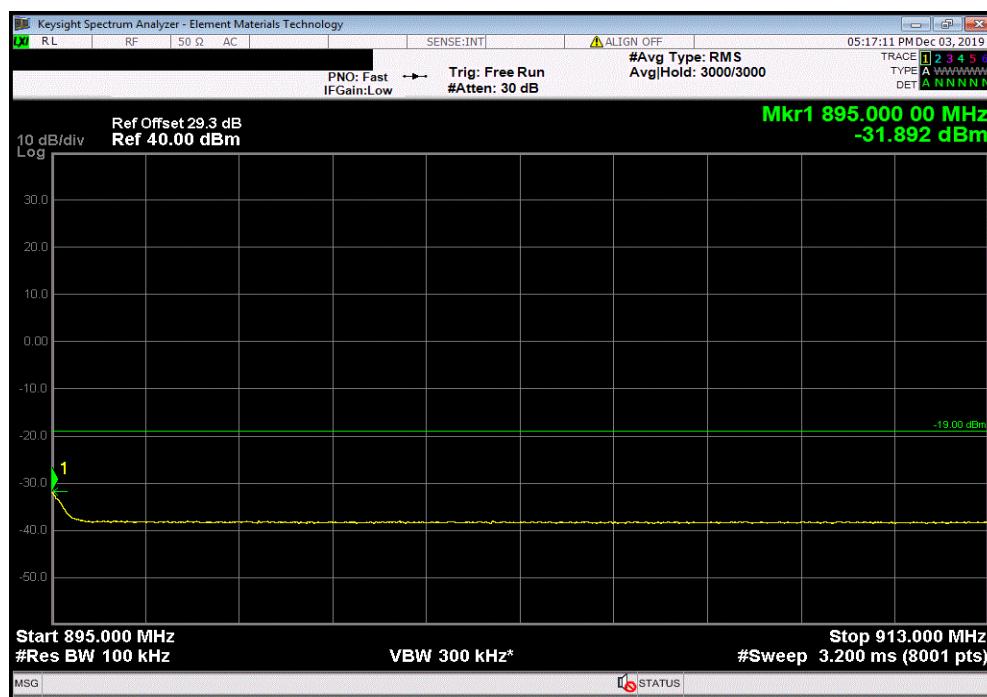
Port 4, Band 5, 5 MHz Bandwidth, 16QAM, High Channel, 891.5 MHz, First Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-23.161	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 16QAM, High Channel, 891.5 MHz, Second Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-31.892	-19	Pass



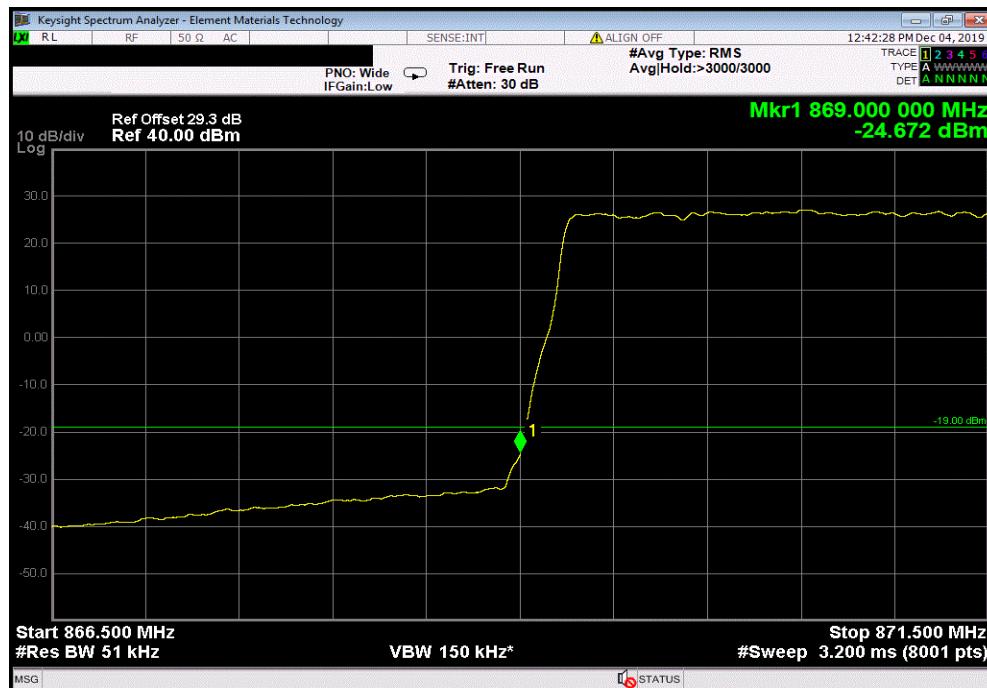
# BAND EDGE COMPLIANCE



XMT 2019.09.05

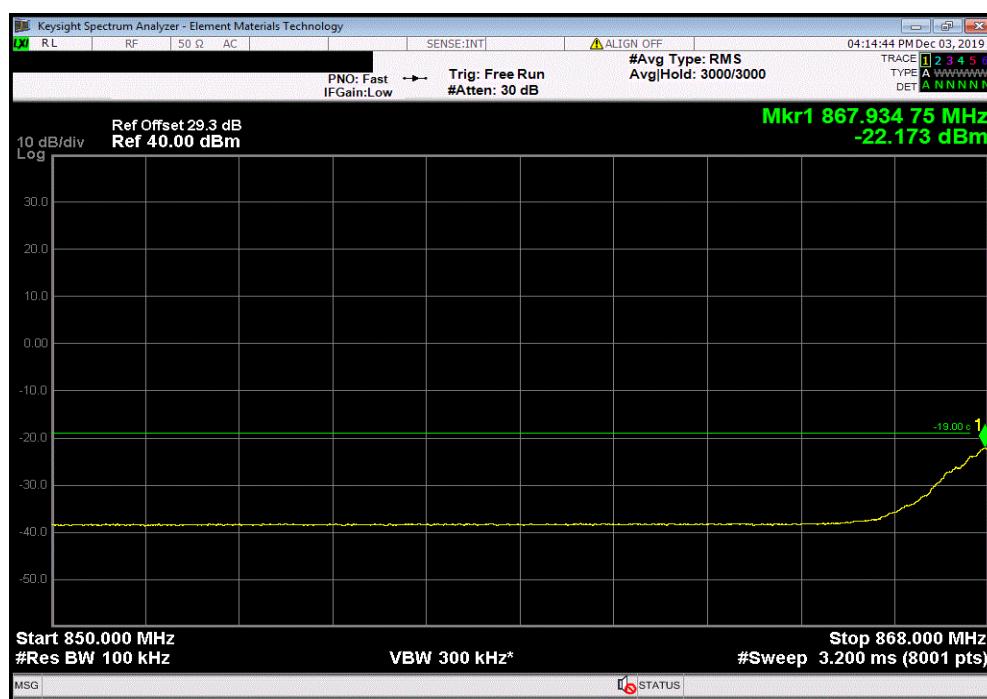
Port 4, Band 5, 5 MHz Bandwidth, 64QAM, Low Channel, 871.5 MHz, First Range Lower Band Edge

	Value (dBm)	Limit (dBm)	Result
	-24.672	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 64QAM, Low Channel, 871.5 MHz, Second Range Lower Band Edge

	Value (dBm)	Limit (dBm)	Result
	-22.173	-19	Pass



# BAND EDGE COMPLIANCE



XMT 2019.09.05

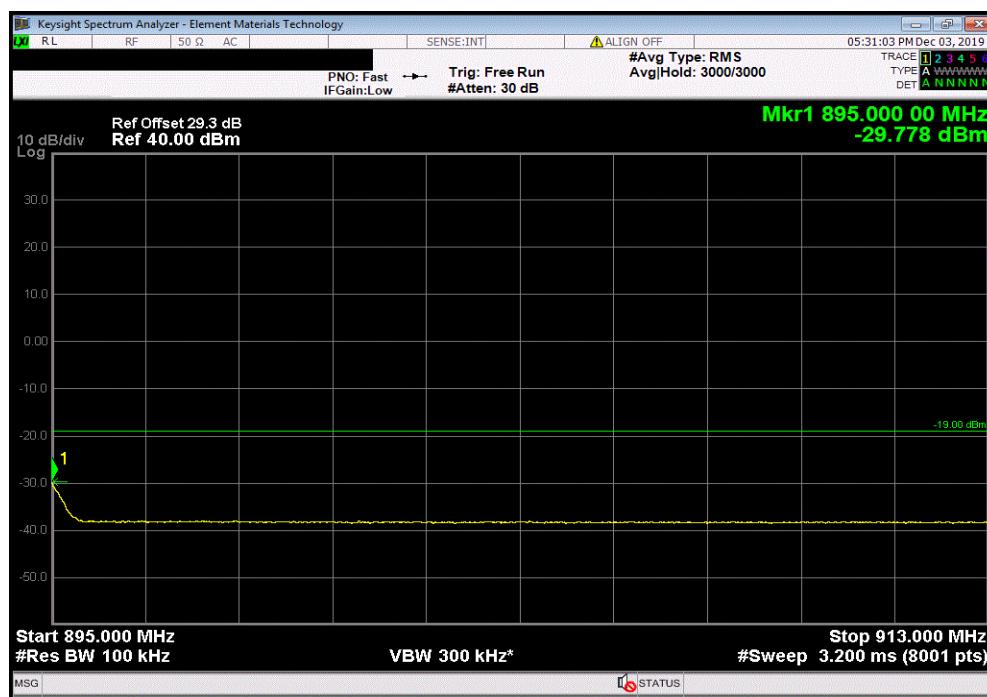
Port 4, Band 5, 5 MHz Bandwidth, 64QAM, High Channel, 891.5 MHz, First Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-23.308	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 64QAM, High Channel, 891.5 MHz, Second Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-29.778	-19	Pass



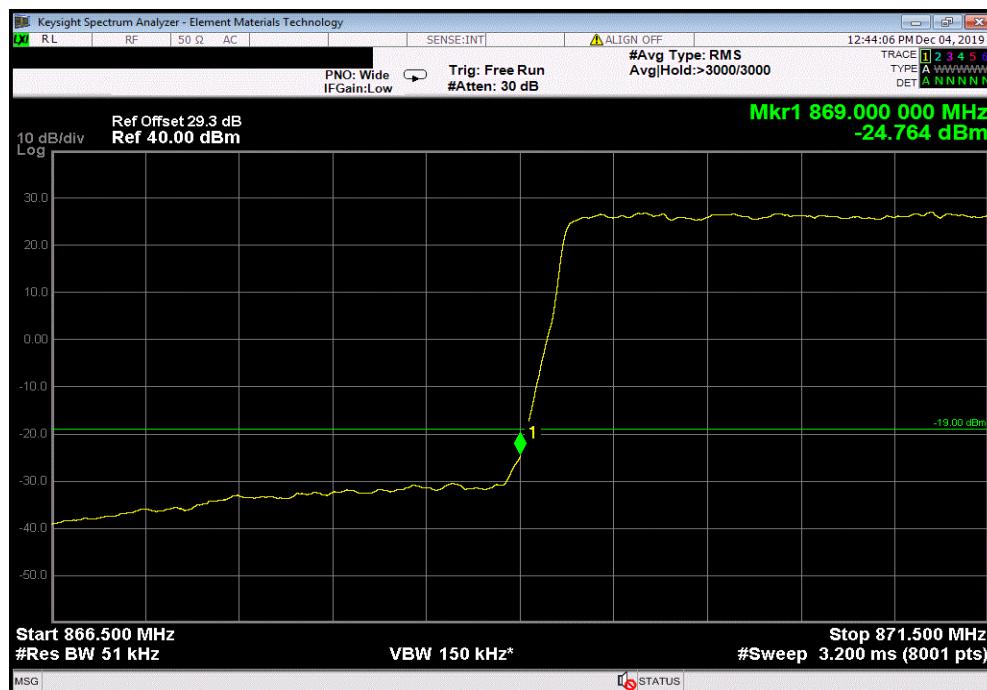
# BAND EDGE COMPLIANCE



XMT 2019.09.05

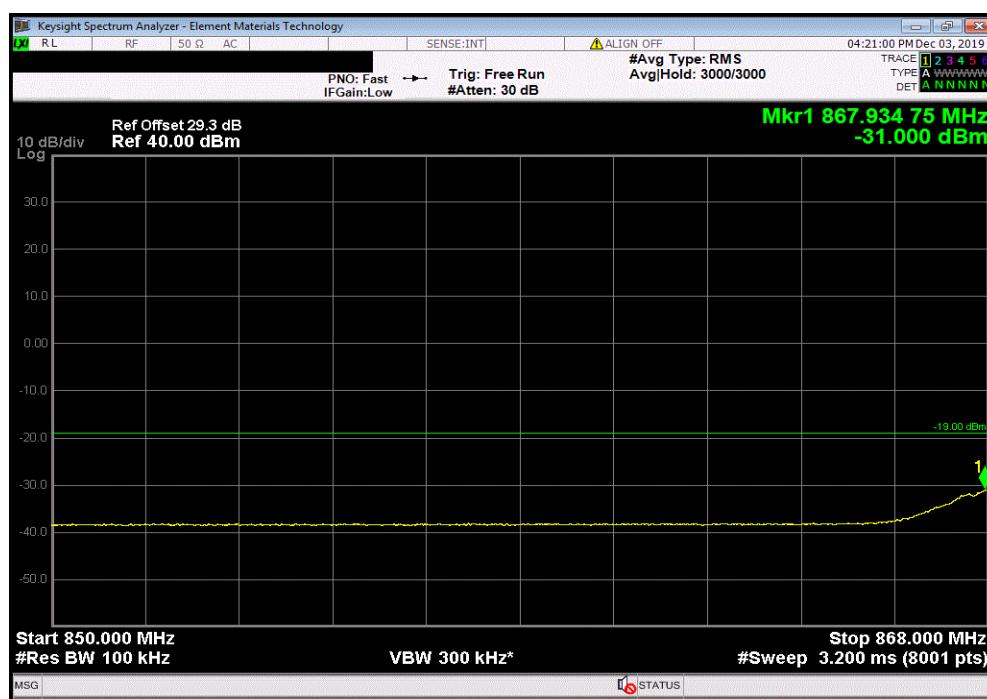
Port 4, Band 5, 5 MHz Bandwidth, 256QAM, Low Channel, 871.5 MHz, First Range Lower Band Edge

Value (dBm)	Limit (dBm)	Result
-24.764	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 256QAM, Low Channel, 871.5 MHz, Second Range Lower Band Edge

Value (dBm)	Limit (dBm)	Result
-31	-19	Pass



# BAND EDGE COMPLIANCE



XMT 2019.09.05

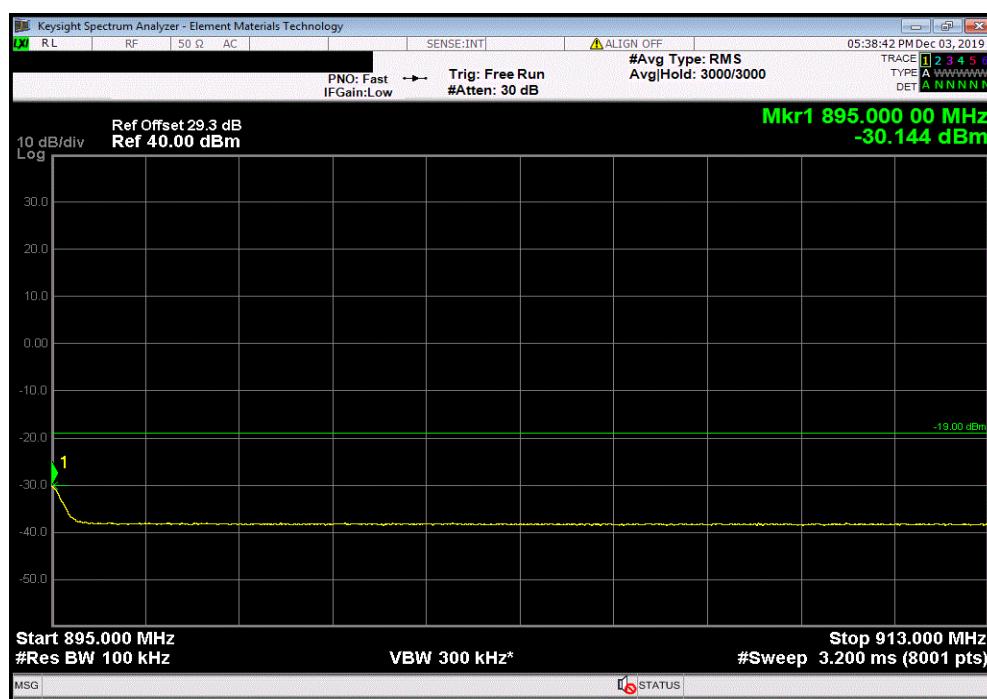
Port 4, Band 5, 5 MHz Bandwidth, 256QAM, High Channel, 891.5 MHz, First Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-24.034	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 256QAM, High Channel, 891.5 MHz, Second Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-30.144	-19	Pass

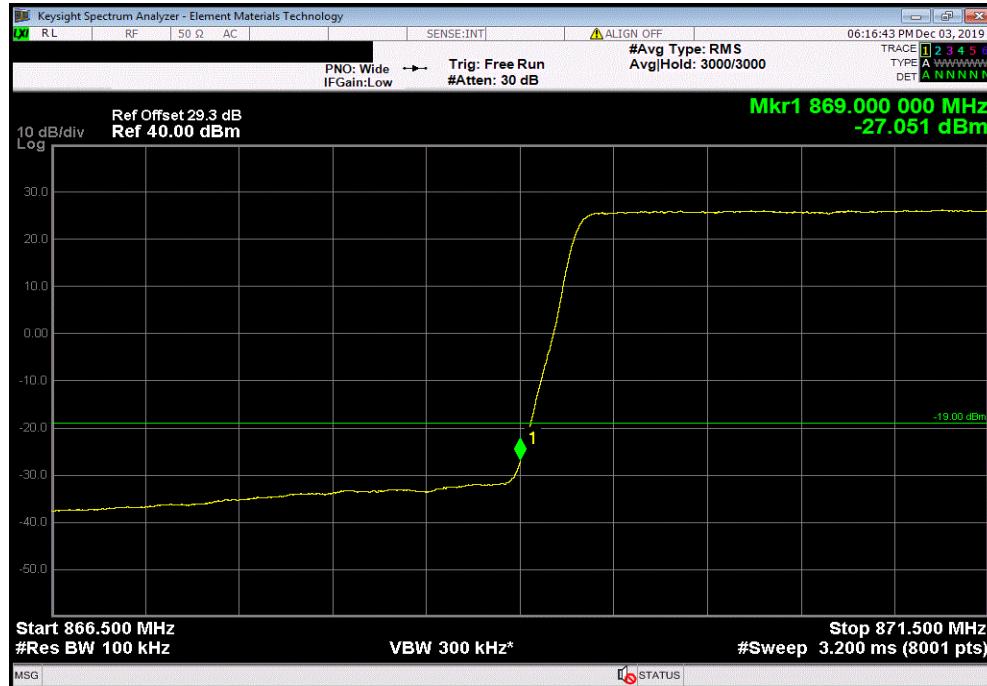


# BAND EDGE COMPLIANCE

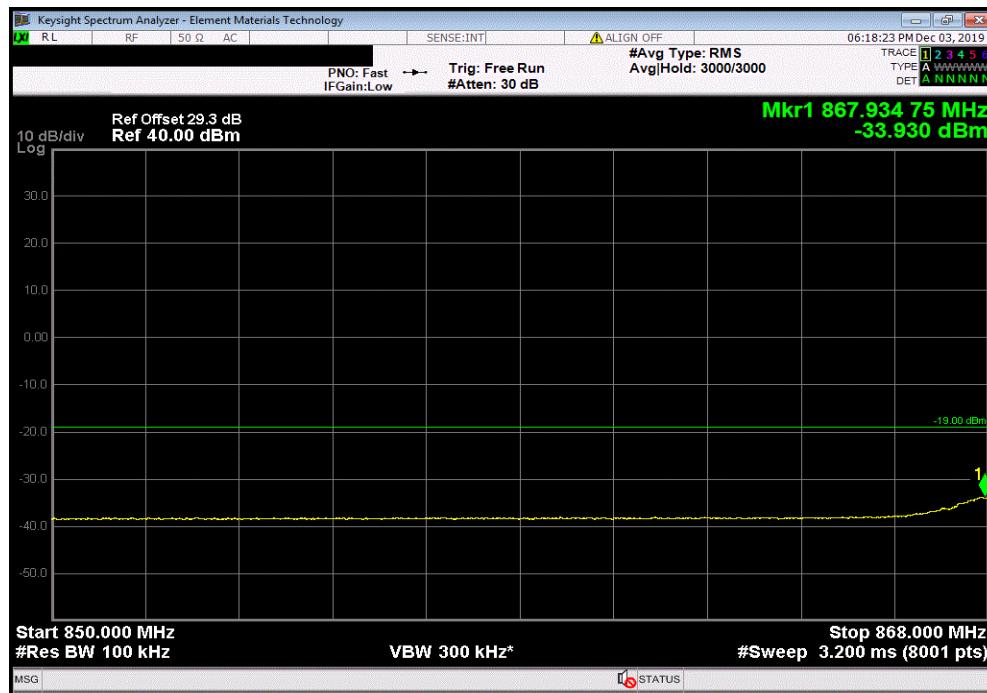


XMT 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, QPSK, Low Channel, 874 MHz, First Range Lower Band Edge			
	Value (dBm)	Limit (dBm)	Result
	-27.051	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, QPSK, Low Channel, 874 MHz, Second Range Lower Band Edge			
	Value (dBm)	Limit (dBm)	Result
	-33.93	-19	Pass



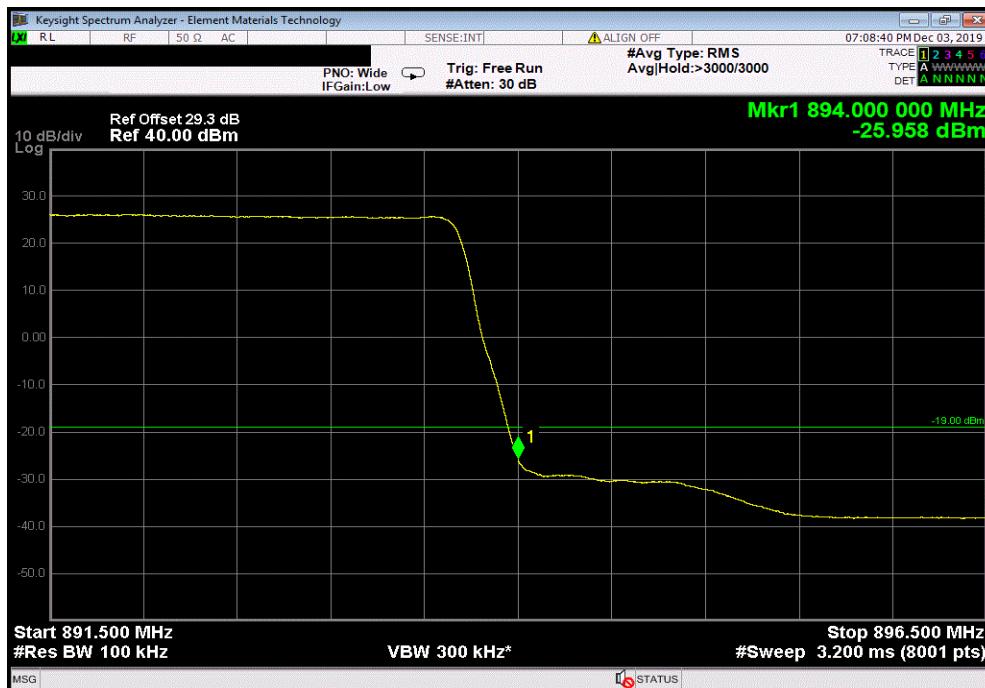
# BAND EDGE COMPLIANCE



XMT 2019.09.05

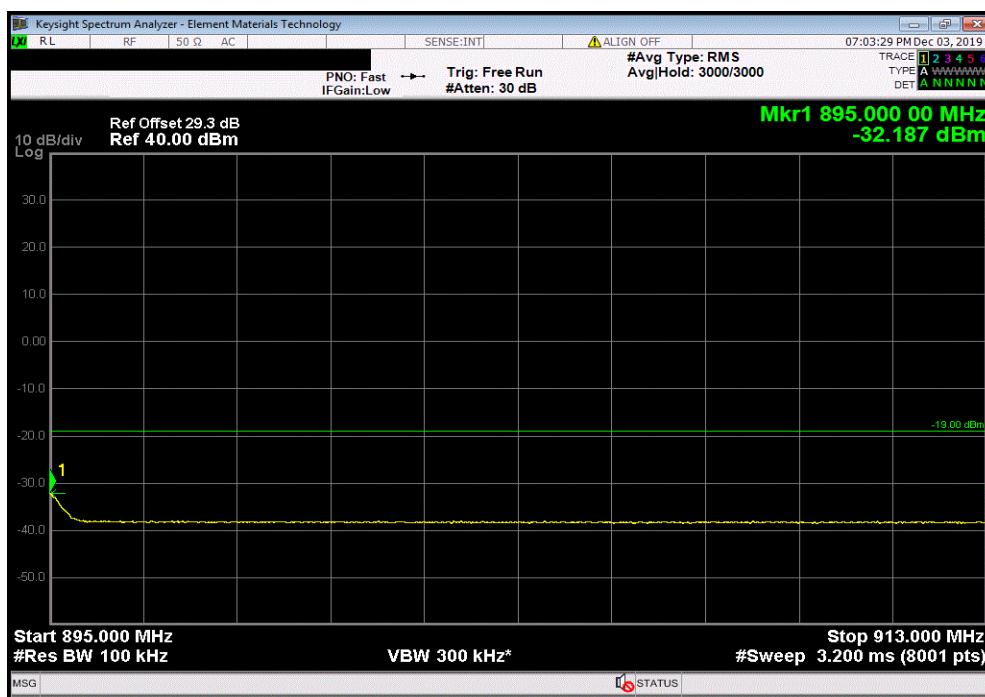
Port 4, Band 5, 10 MHz Bandwidth, QPSK, High Channel, 889 MHz, First Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-25.958	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, QPSK, High Channel, 889 MHz, Second Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-32.187	-19	Pass



# BAND EDGE COMPLIANCE

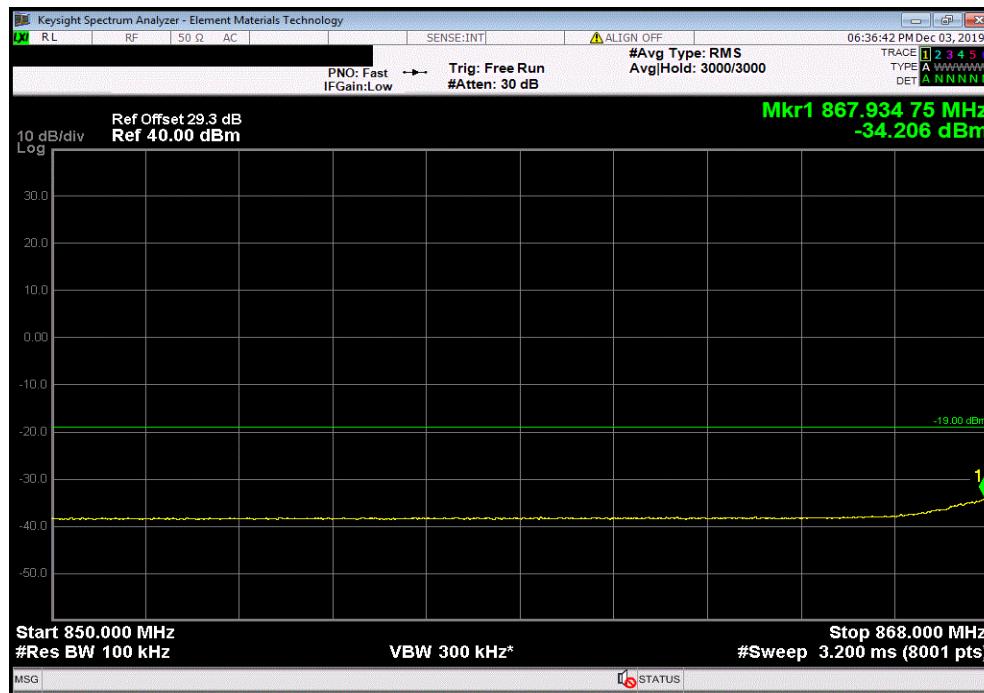


XMT 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 16QAM, Low Channel, 874 MHz, First Range Lower Band Edge		
Value (dBm)	Limit (dBm)	Result
-27.823	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 16QAM, Low Channel, 874 MHz, Second Range Lower Band Edge		
Value (dBm)	Limit (dBm)	Result
-34.206	-19	Pass



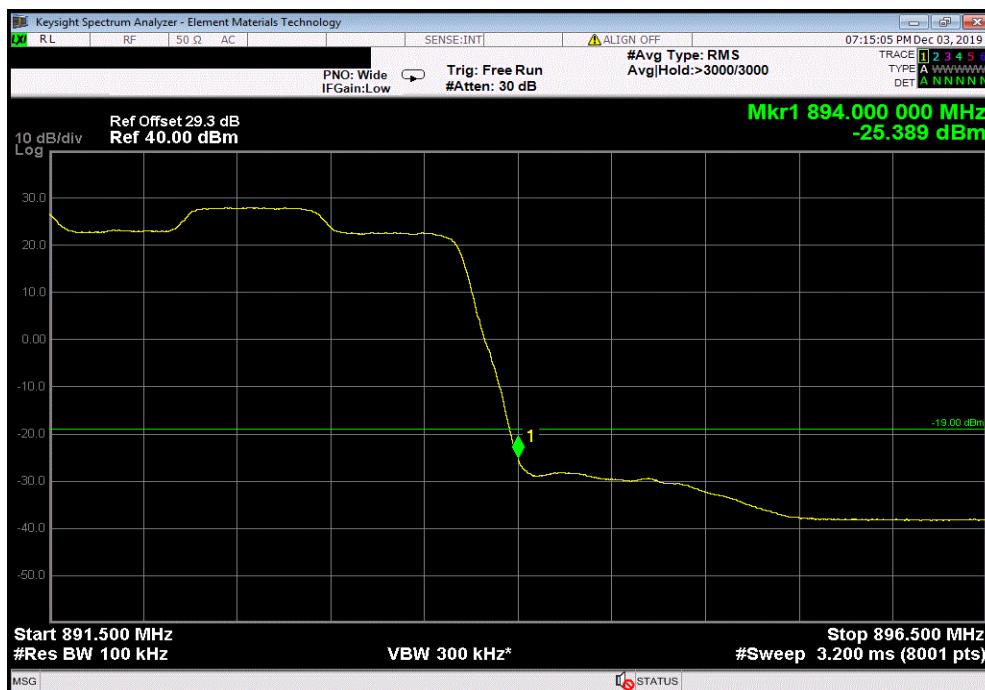
## BAND EDGE COMPLIANCE



XMit 2019.09.05

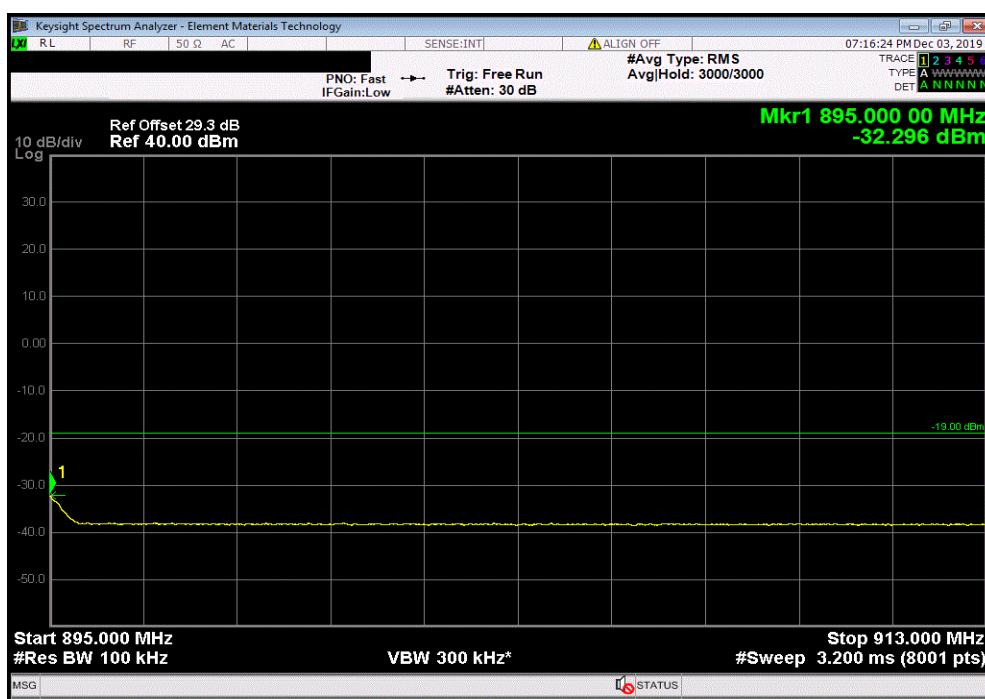
Port 4, Band 5, 10 MHz Bandwidth, 16QAM, High Channel, 889 MHz, First Range Upper Band Edge

Value (dBm)	Limit (dBm)	Result
-25.389	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 16QAM, High Channel, 889 MHz, Second Range Upper Band Edge

Value (dBm)	Limit (dBm)	Result
-60.000	-10	Pass

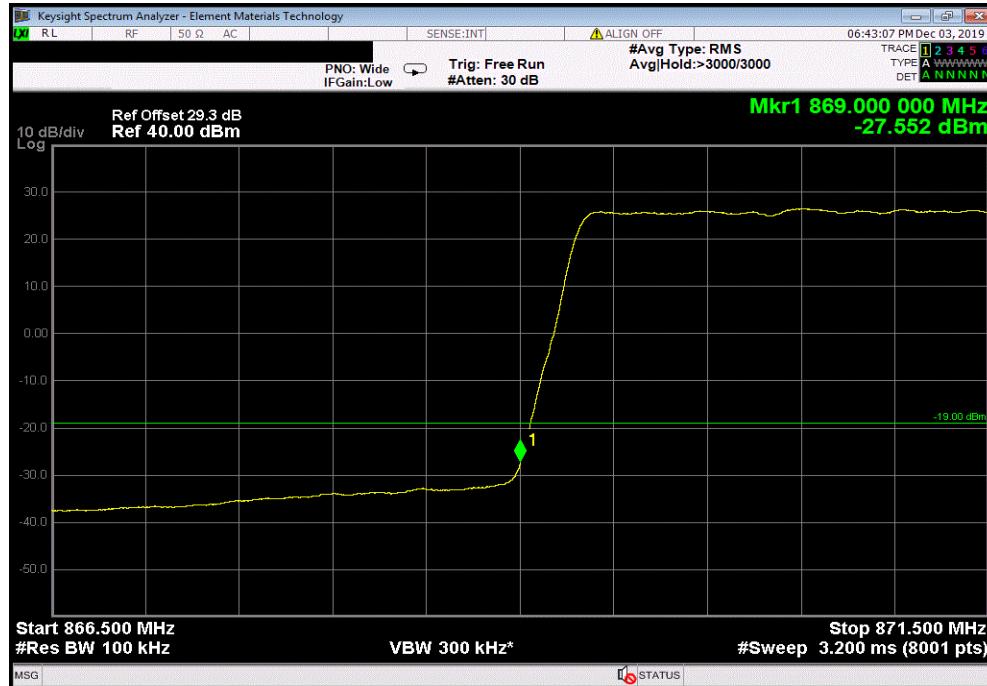


# BAND EDGE COMPLIANCE

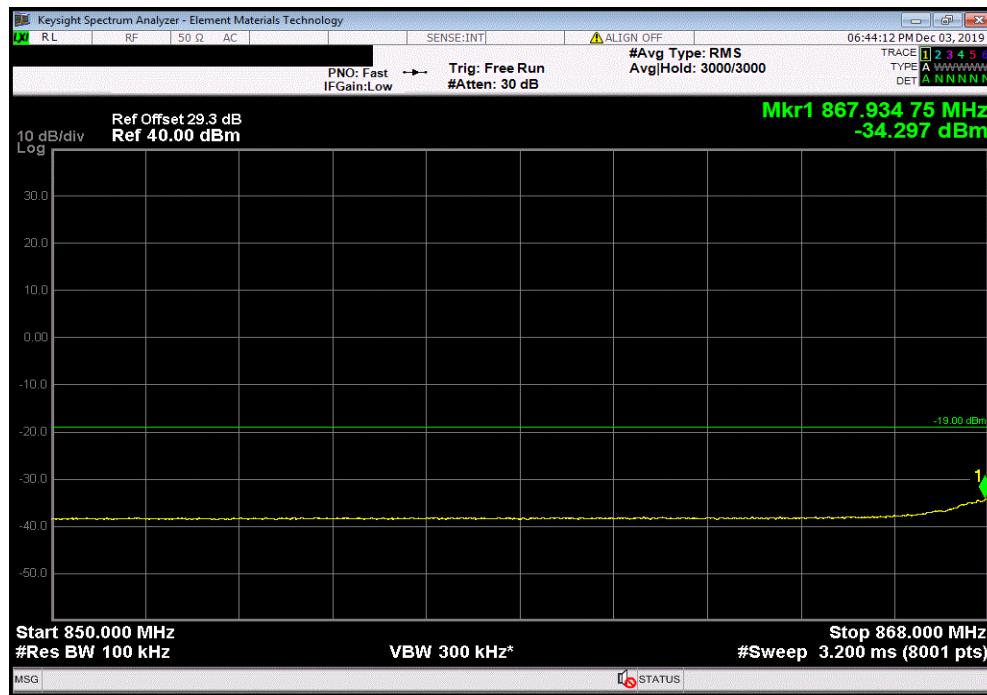


XMT 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 64QAM, Low Channel, 874 MHz, First Range Lower Band Edge			
	Value (dBm)	Limit (dBm)	Result
	-27.552	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 64QAM, Low Channel, 874 MHz, Second Range Lower Band Edge			
	Value (dBm)	Limit (dBm)	Result
	-34.297	-19	Pass

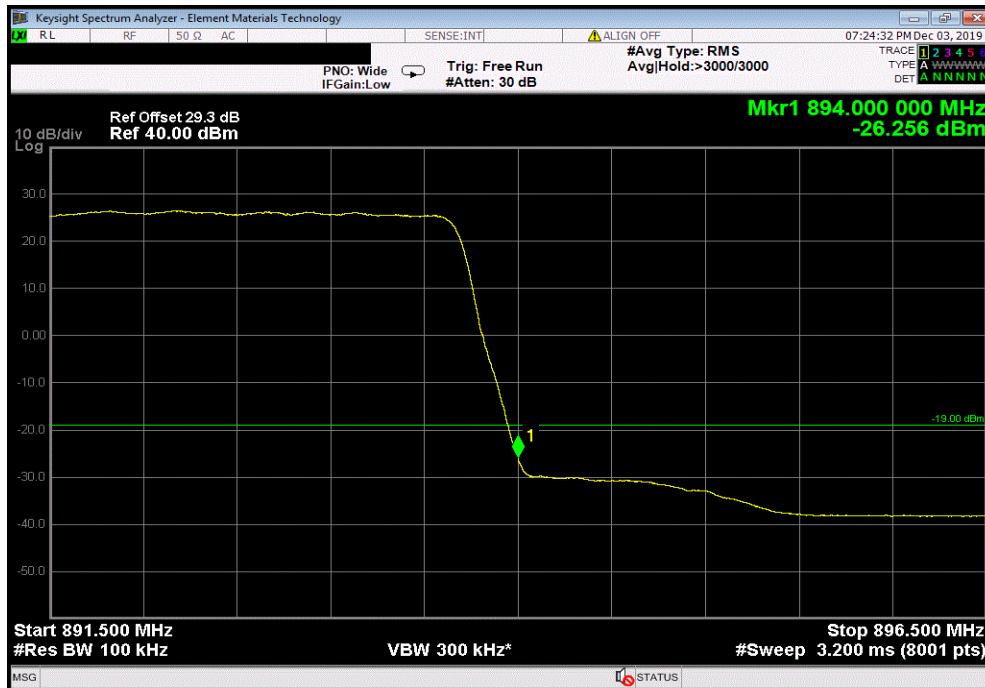


# BAND EDGE COMPLIANCE

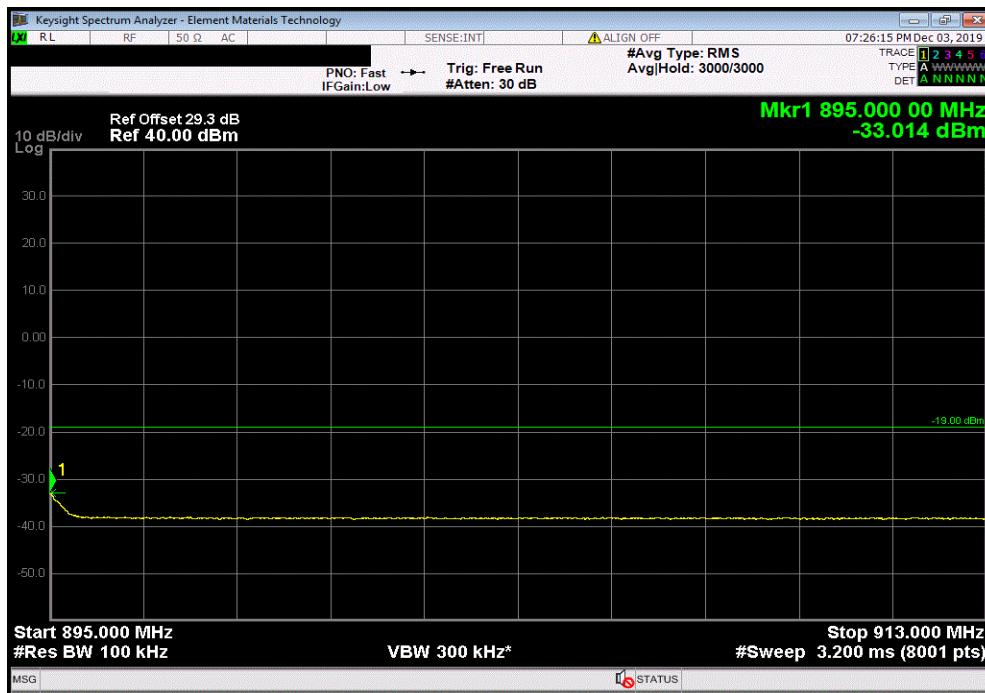


XMT 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 64QAM, High Channel, 889 MHz, First Range Upper Band Edge		
Value (dBm)	Limit (dBm)	Result
-26.256	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 64QAM, High Channel, 889 MHz, Second Range Upper Band Edge		
Value (dBm)	Limit (dBm)	Result
-33.014	-19	Pass



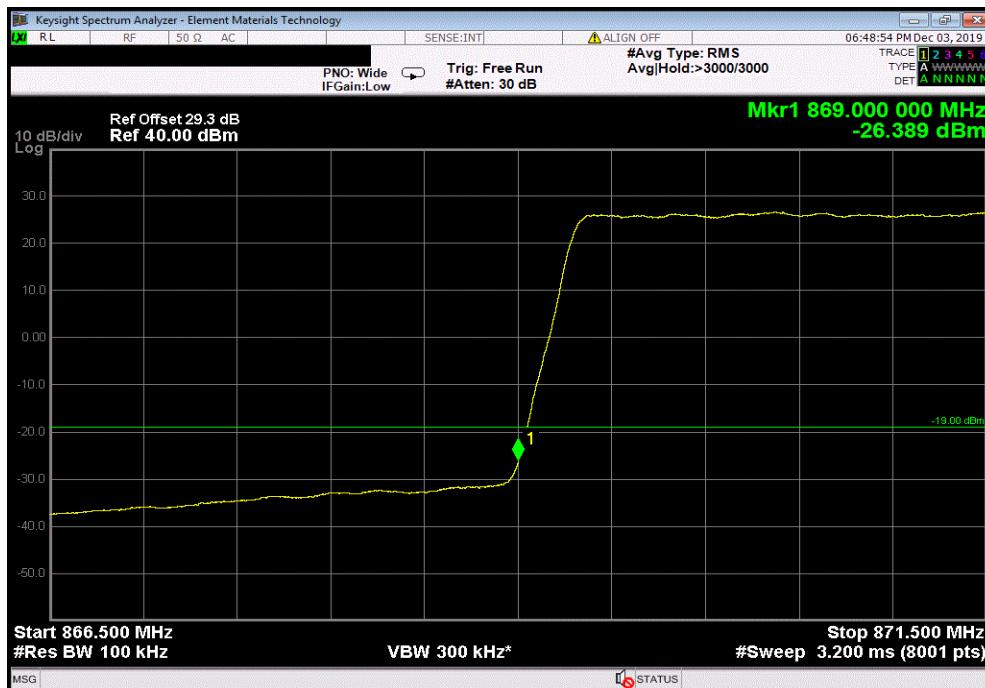
# BAND EDGE COMPLIANCE



XMT 2019.09.05

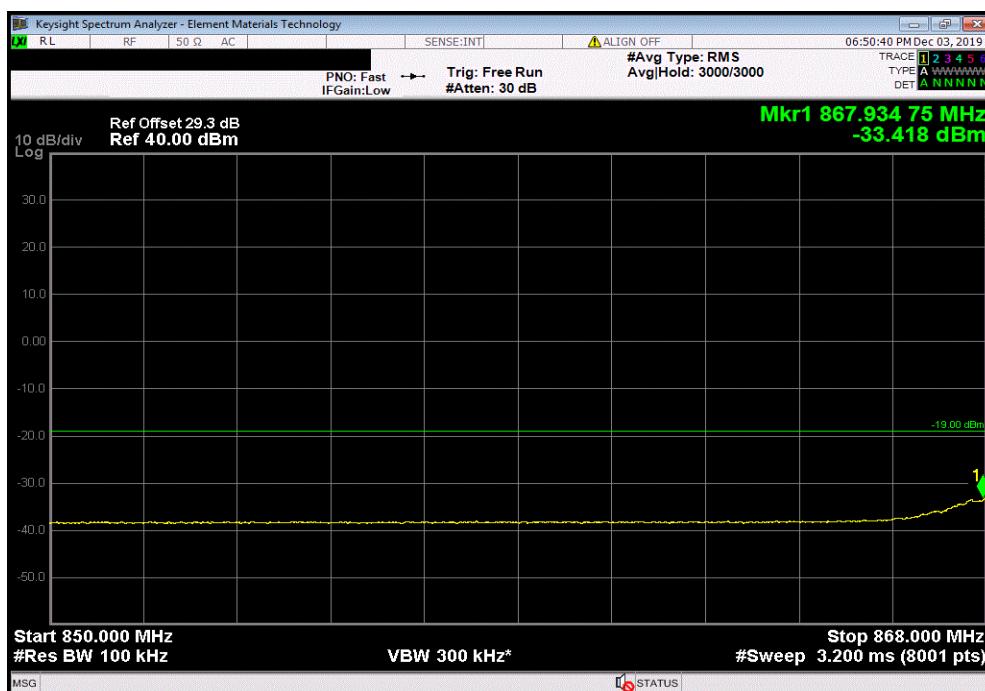
Port 4, Band 5, 10 MHz Bandwidth, 256QAM, Low Channel, 874 MHz, First Range Lower Band Edge

Value (dBm)	Limit (dBm)	Result
-26.389	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 256QAM, Low Channel, 874 MHz, Second Range Lower Band Edge

Value (dBm)	Limit (dBm)	Result
-33.418	-19	Pass



# BAND EDGE COMPLIANCE



XMT 2019.09.05

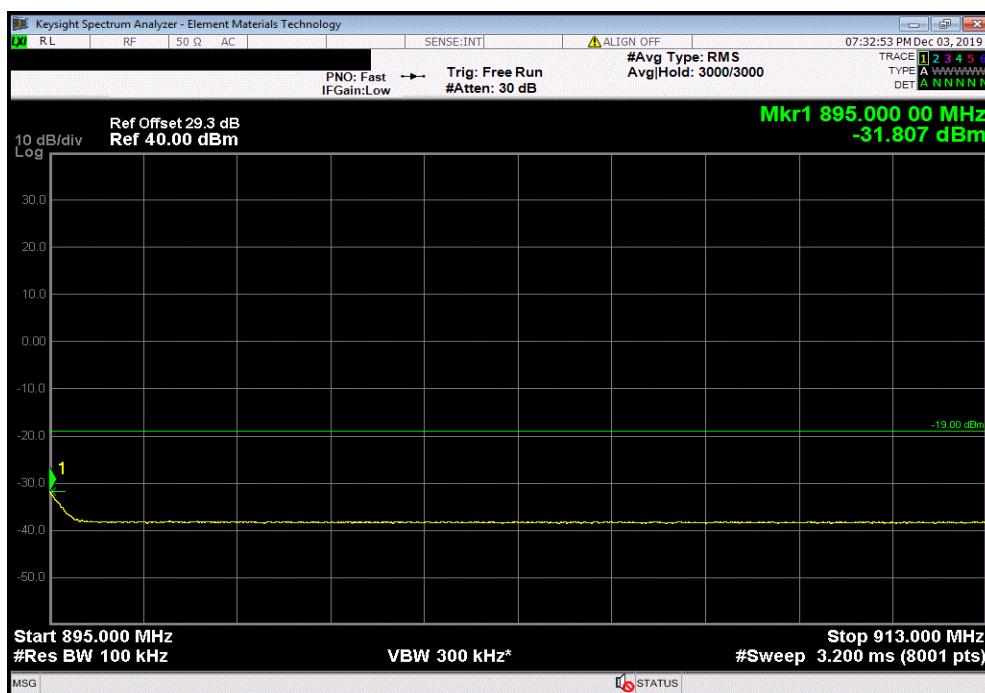
Port 4, Band 5, 10 MHz Bandwidth, 256QAM, High Channel, 889 MHz, First Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-25.681	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 256QAM, High Channel, 889 MHz, Second Range Upper Band Edge

	Value (dBm)	Limit (dBm)	Result
	-31.807	-19	Pass



# SPURIOUS CONDUCTED EMISSIONS



XMit 2019.09.05

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E8257D	TGU	15-Feb-18	15-Feb-21
Generator - Signal	Keysight	N5182B-506	TEV	23-Apr-18	23-Apr-21
Generator - Signal	Keysight	N5171B-506	TEW	2-May-18	2-May-21
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	19-Mar-19	19-Mar-20

## TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to the middle channel. The EUT was transmitting at the data rate(s) and bandwidths listed in the datasheet. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

All limits were adjusted by a factor of  $[-10 \log(4)]$  dB to account for the device operation as a 4 port MIMO transmitter, as per FCC KDB 662911.

Per FCC 22.917(a), 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 which was given to be -13 dBm. The limit was then adjusted to -19 dBm [-13 dBm -10 log (4)] per FCC KDB 662911D01 v02r01 because the BTS may operate as a 4 port MIMO transmitter.

Per FCC 22.917(b), Any emission seen to be > 1 MHz further outside the band edges shall be measured with a RBW of 100 kHz. However, a narrower RBW of at least 1% of the emission bandwidth is still allowed provided that the measured power is integrated over the full reference bandwidth of 100 kHz or 1% of the 26 dB emission bandwidth. For measurements made in the spectrum > 1 GHz a 1 MHz reference bandwidth should be used.

The limit for the 9kHz to 150kHz frequency range was adjusted to -39dBm to correct for a spectrum analyzer RBW of 1kHz versus required RBW of 100kHz [i.e.:  $-39\text{dBm} = -19\text{dBm} - 10\log(100\text{kHz}/1\text{kHz})$ ]. The limit for the 150kHz to 20MHz frequency range was adjusted to -29dBm to correct for a spectrum analyzer RBW of 10kHz versus required RBW of 100kHz [i.e.:  $-29\text{dBm} = -19\text{dBm} - 10\log(100\text{kHz}/10\text{kHz})$ ].

# SPURIOUS CONDUCTED EMISSIONS



XMr 2019.09.05

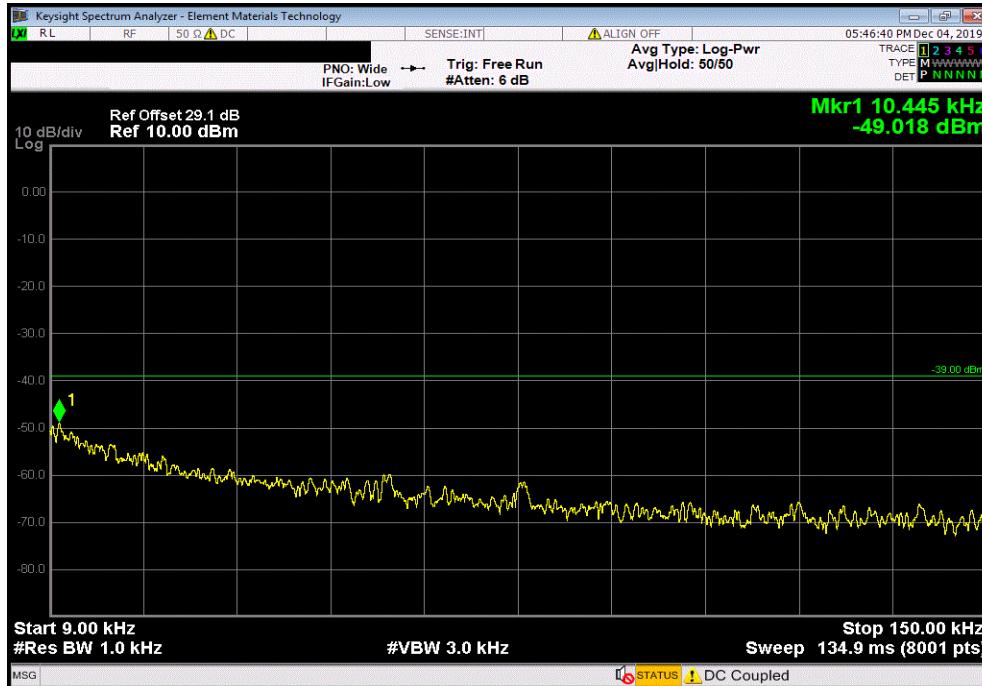
EUT:	AHBCC Remote Radio Head (RRH)	Work Order:	NOKI0002	
Serial Number:	K9180332366	Date:	5-Dec-19	
Customer:	Nokia Solutions and Networks	Temperature:	23.3 °C	
Attendee:	Mitchell Hill, John Rattanavong	Humidity:	32.8% RH	
Project:	None	Barometric Pres.:	1017 mbar	
Tested by:	Brandon Hobbs	Power:	54VDC	
TEST SPECIFICATIONS		Test Method	ANSI C63.2B:2015	
FCC 22H:2019				
COMMENTS				
Testing was completed on the highest output power antenna port (Port 4). All conducted losses were accounted for between the radio and the spectrum analyzer. The EUT was operating at 100% duty cycle for all measurements made. Measurements were made using a RBW and limit defined per the client's written test approach document.				
DEVIATIONS FROM TEST STANDARD				
None				
Configuration #	1,2,3	Signature		
Port 4, Band 5		Value (dBm)	Limit (dBm)	Result
5 MHz Bandwidth	QPSK			
Mid Channel, 881.5 MHz				
9kHz to 150kHz (Range1) -49.018 -39 Pass				
150kHz to 20MHz (Range2) -52.922 -29 Pass				
20MHz to 800MHz (Range3) -32.323 -19 Pass				
800MHz to 1.2GHz (Range4) -38.239 -19 Pass				
1.2GHz to 9GHz (Range5) -36.019 -19 Pass				
16QAM	Mid Channel, 881.5 MHz			
9kHz to 150kHz (Range1) -47.958 -39 Pass				
150kHz to 20MHz (Range2) -51.840 -29 Pass				
20MHz to 800MHz (Range3) -32.285 -19 Pass				
800MHz to 1.2GHz (Range4) -38.284 -19 Pass				
1.2GHz to 9GHz (Range5) -36.172 -19 Pass				
64QAM	Mid Channel, 881.5 MHz			
9kHz to 150kHz (Range1) -47.595 -39 Pass				
150kHz to 20MHz (Range2) -51.151 -29 Pass				
20MHz to 800MHz (Range3) -31.499 -19 Pass				
800MHz to 1.2GHz (Range4) -38.082 -19 Pass				
1.2GHz to 9GHz (Range5) -36.663 -19 Pass				
256QAM	Mid Channel, 881.5 MHz			
9kHz to 150kHz (Range1) -49.674 -39 Pass				
150kHz to 20MHz (Range2) -51.151 -29 Pass				
20MHz to 800MHz (Range3) -32.515 -19 Pass				
800MHz to 1.2GHz (Range4) -37.575 -19 Pass				
1.2GHz to 9GHz (Range5) -36.548 -19 Pass				
10 MHz Bandwidth	QPSK			
Mid Channel, 881.5 MHz				
9kHz to 150kHz (Range1) -50.017 -39 Pass				
150kHz to 20MHz (Range2) -50.347 -29 Pass				
20MHz to 800MHz (Range3) -31.630 -19 Pass				
800MHz to 1.2GHz (Range4) -38.240 -19 Pass				
1.2GHz to 9GHz (Range5) -36.499 -19 Pass				
16QAM	Mid Channel, 881.5 MHz			
9kHz to 150kHz (Range1) -49.373 -39 Pass				
150kHz to 20MHz (Range2) -51.307 -29 Pass				
20MHz to 800MHz (Range3) -32.691 -19 Pass				
800MHz to 1.2GHz (Range4) -38.560 -19 Pass				
1.2GHz to 9GHz (Range5) -35.948 -19 Pass				
64QAM	Mid Channel, 881.5 MHz			
9kHz to 150kHz (Range1) -49.540 -39 Pass				
150kHz to 20MHz (Range2) -50.454 -29 Pass				
20MHz to 800MHz (Range3) -31.348 -19 Pass				
800MHz to 1.2GHz (Range4) -38.039 -19 Pass				
1.2GHz to 9GHz (Range5) -36.078 -19 Pass				
256QAM	Mid Channel, 881.5 MHz			
9kHz to 150kHz (Range1) -47.991 -39 Pass				
150kHz to 20MHz (Range2) -50.014 -29 Pass				
20MHz to 800MHz (Range3) -32.476 -19 Pass				
800MHz to 1.2GHz (Range4) -37.675 -19 Pass				
1.2GHz to 9GHz (Range5) -36.144 -19 Pass				

# SPURIOUS CONDUCTED EMISSIONS

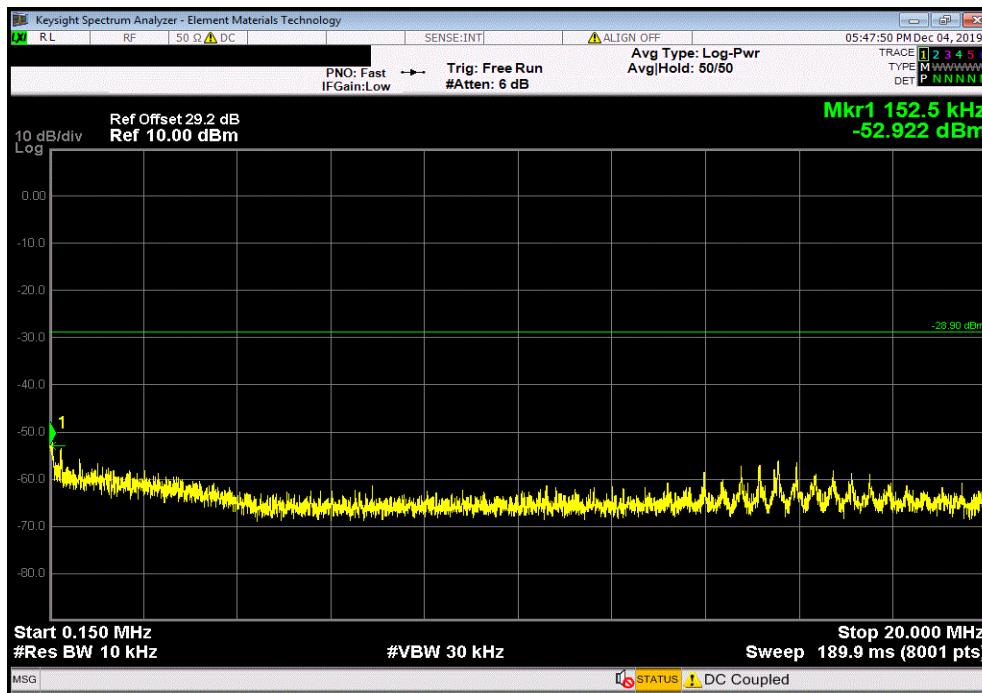


XMT 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 9kHz to 150kHz (Range1)		
	Value (dBm)	Limit (dBm)
	-49.018	-39



Port 4, Band 5, 5 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 150kHz to 20MHz (Range2)		
	Value (dBm)	Limit (dBm)
	-52.922	-29

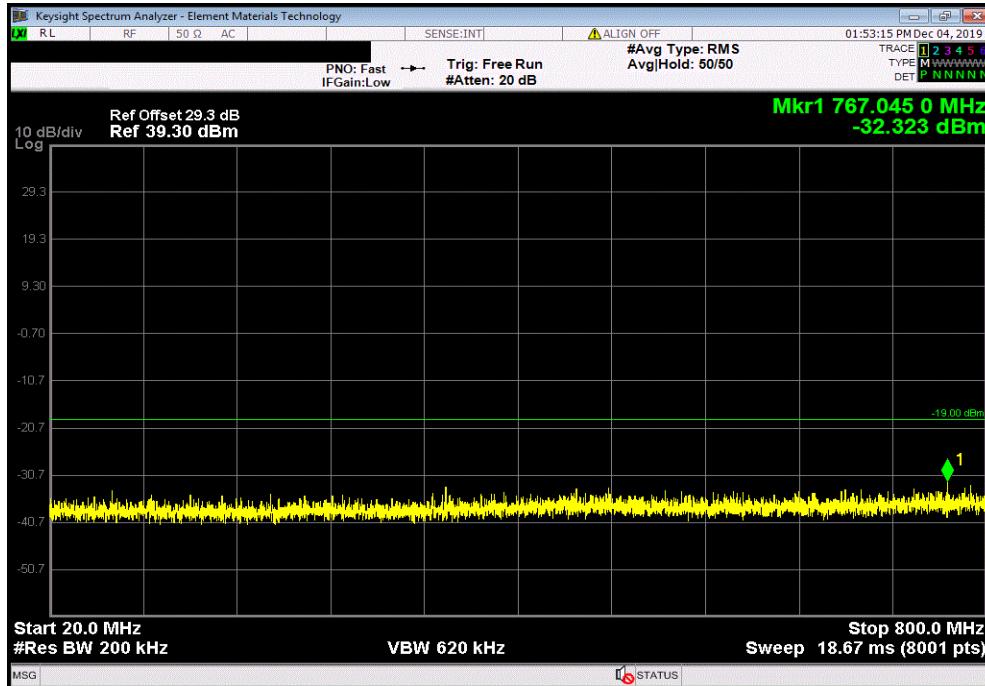


# SPURIOUS CONDUCTED EMISSIONS

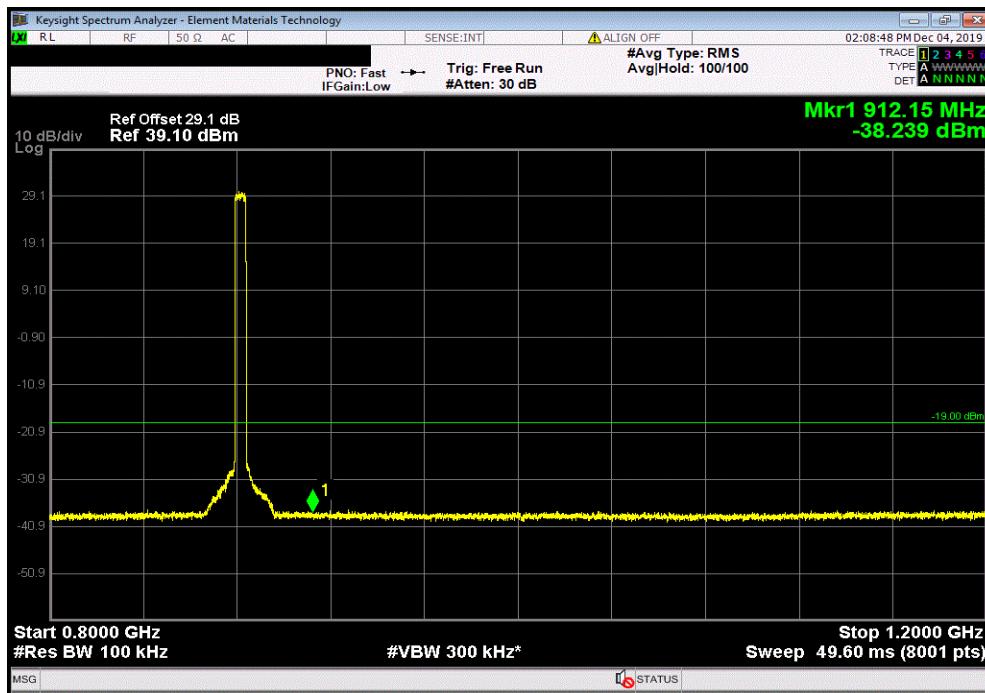


XMT 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 20MHz to 800MHz (Range3)		
Value (dBm)	Limit (dBm)	Result
-32.323	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 800MHz to 1.2GHz (Range4)		
Value (dBm)	Limit (dBm)	Result
-38.239	-19	Pass

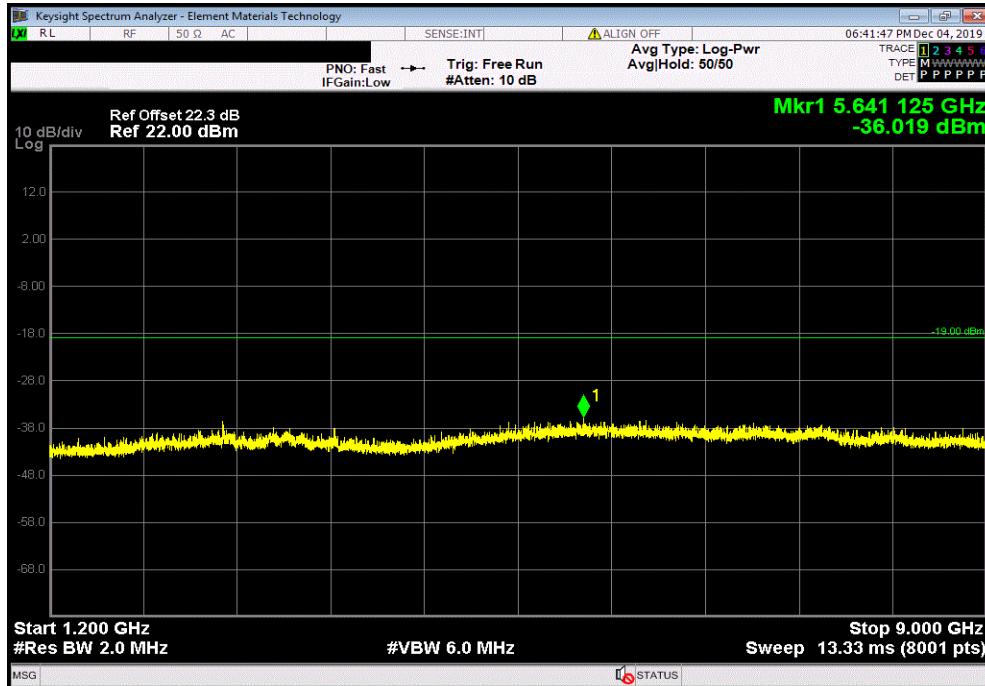


# SPURIOUS CONDUCTED EMISSIONS

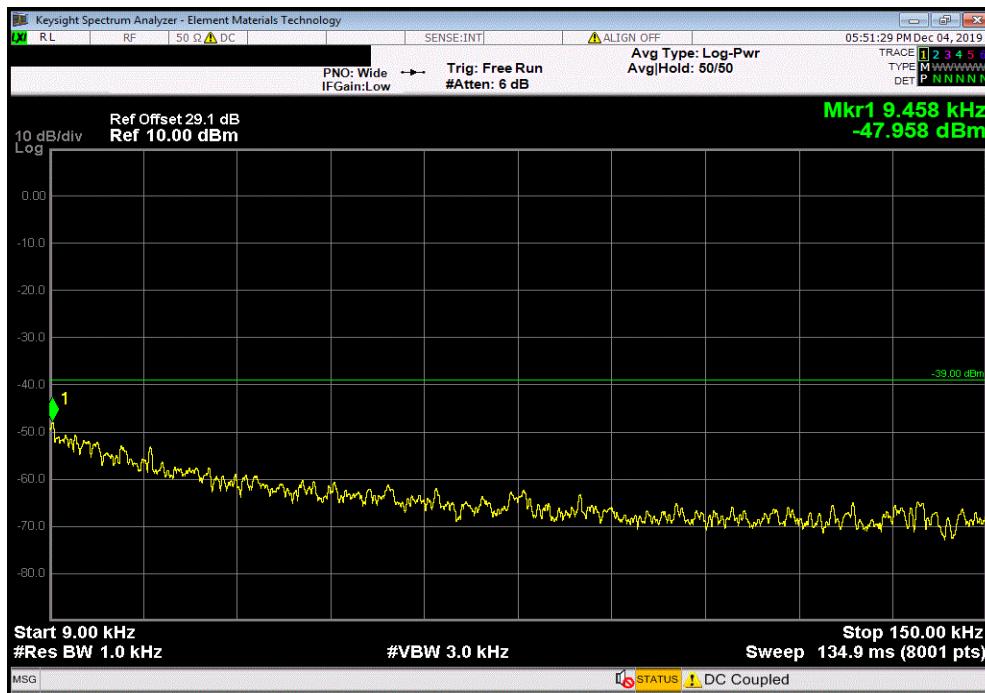


XMT 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 1.2GHz to 9GHz (Range5)		
Value (dBm)	Limit (dBm)	Result
-36.019	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 9kHz to 150kHz (Range1)		
Value (dBm)	Limit (dBm)	Result
-47.958	-39	Pass

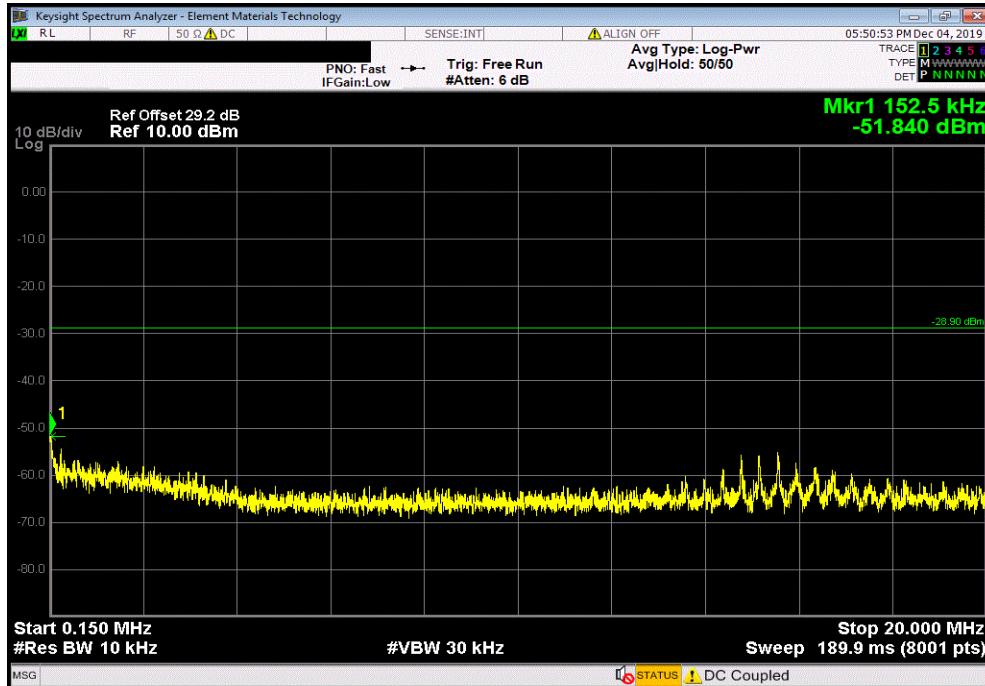


# SPURIOUS CONDUCTED EMISSIONS

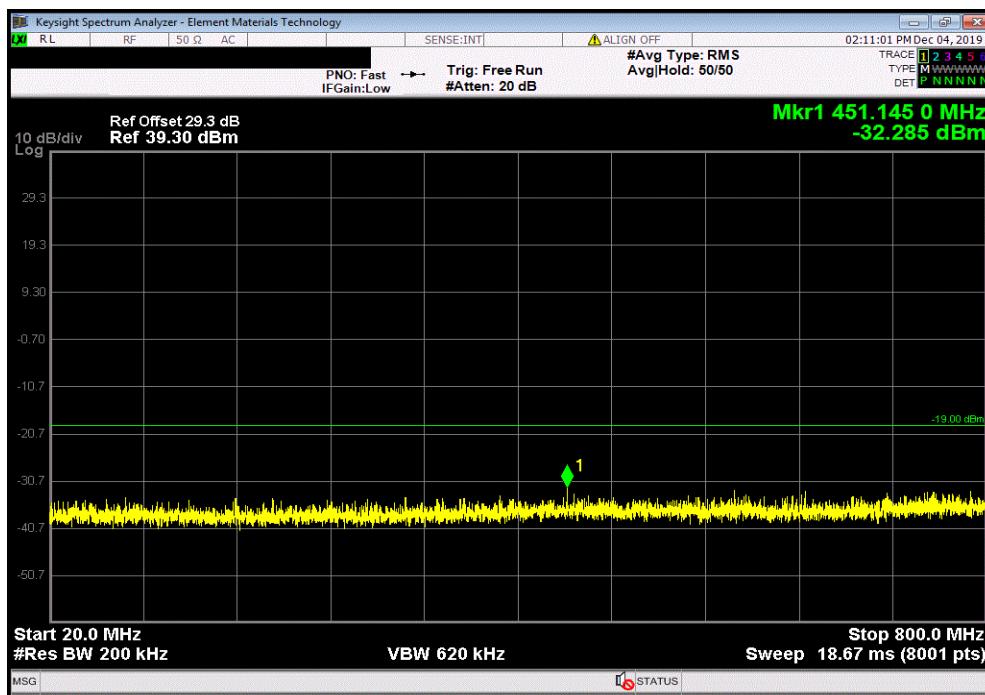


XMI 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 150kHz to 20MHz (Range2)			
	Value (dBm)	Limit (dBm)	Result
	-51.84	-29	Pass



Port 4, Band 5, 5 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 20MHz to 800MHz (Range3)			
	Value (dBm)	Limit (dBm)	Result
	-32.285	-19	Pass

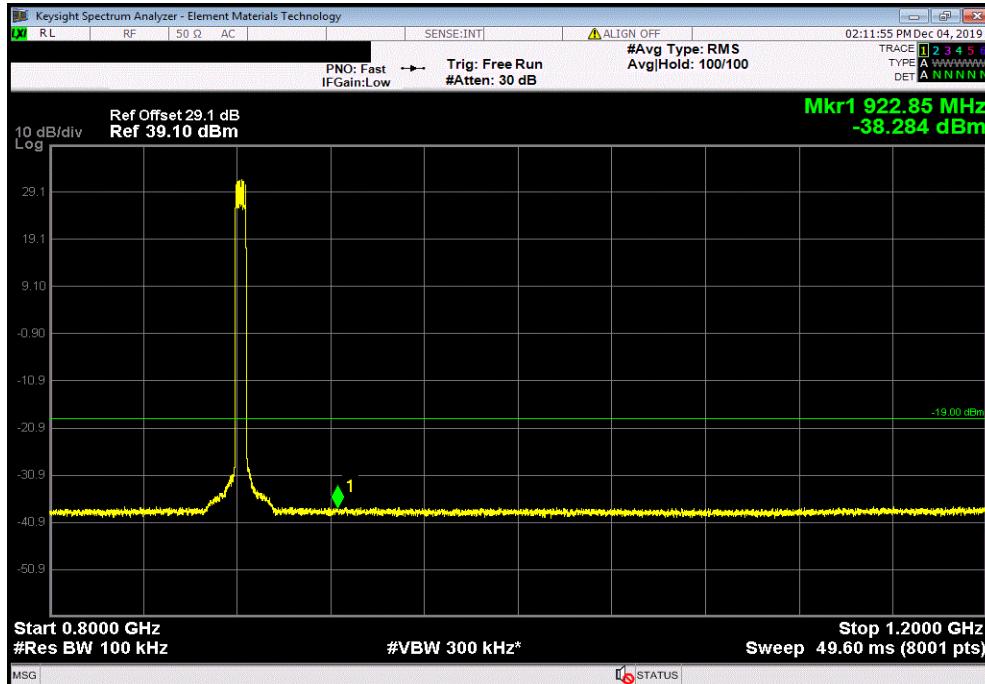


# SPURIOUS CONDUCTED EMISSIONS

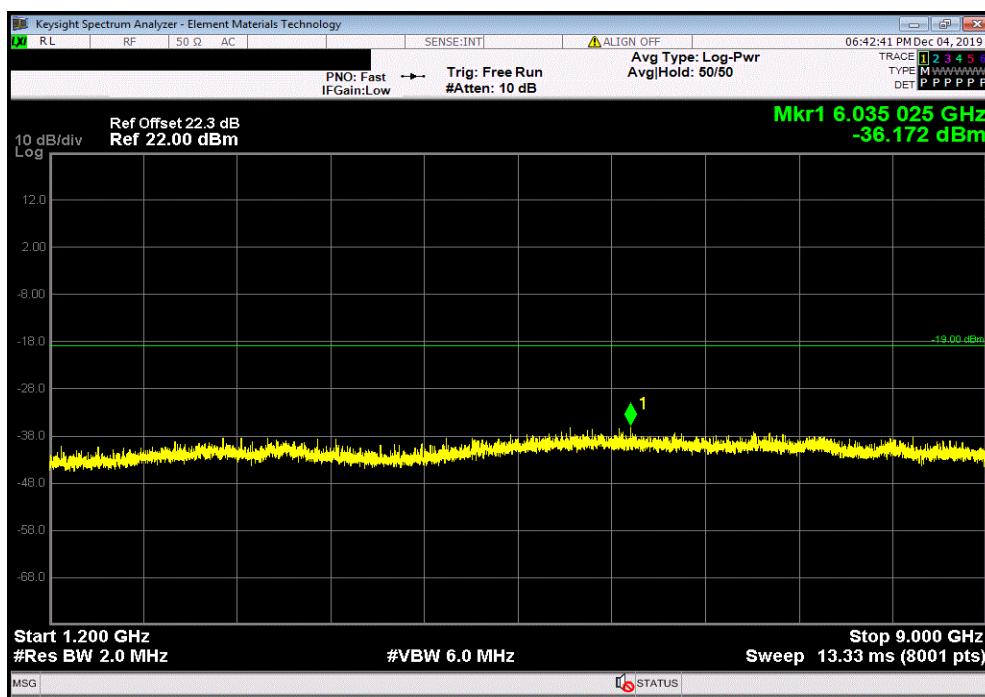


XMT 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 800MHz to 1.2GHz (Range4)		
Value (dBm)	Limit (dBm)	Result
-38.284	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 1.2GHz to 9GHz (Range5)		
Value (dBm)	Limit (dBm)	Result
-36.172	-19	Pass

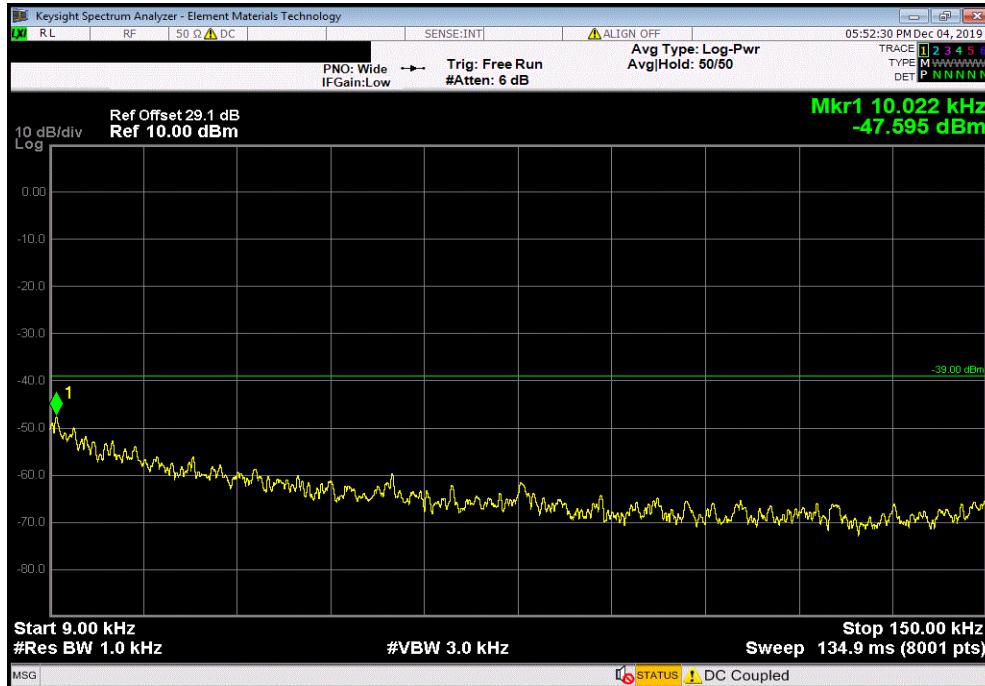


# SPURIOUS CONDUCTED EMISSIONS

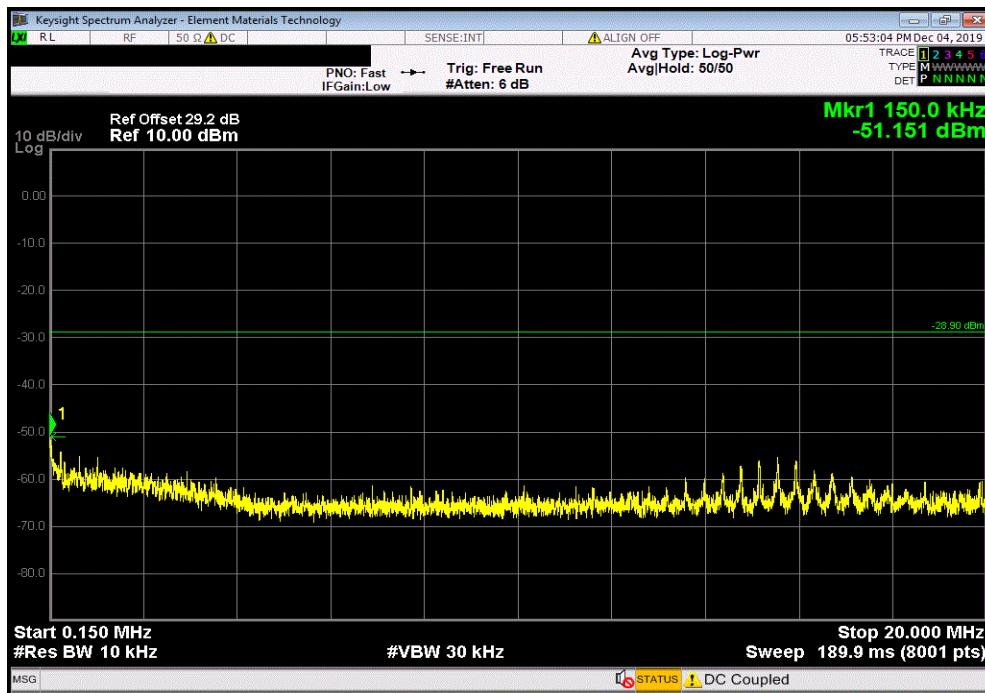


XMI 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 9kHz to 150kHz (Range1)		
Value (dBm)	Limit (dBm)	Result
-47.595	-39	Pass



Port 4, Band 5, 5 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 150kHz to 20MHz (Range2)		
Value (dBm)	Limit (dBm)	Result
-51.151	-29	Pass

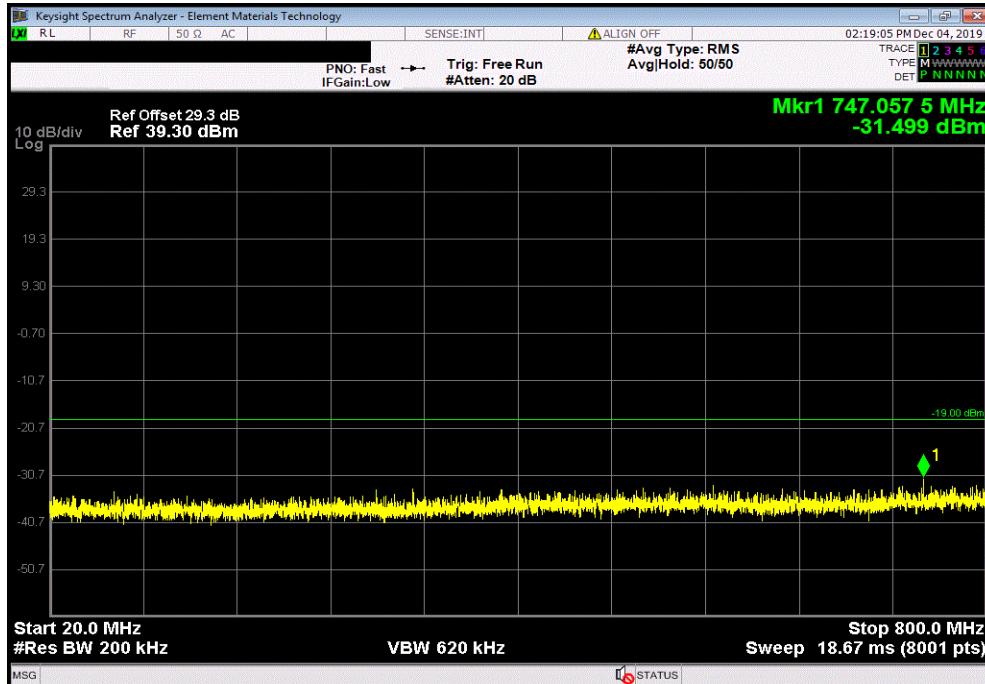


# SPURIOUS CONDUCTED EMISSIONS

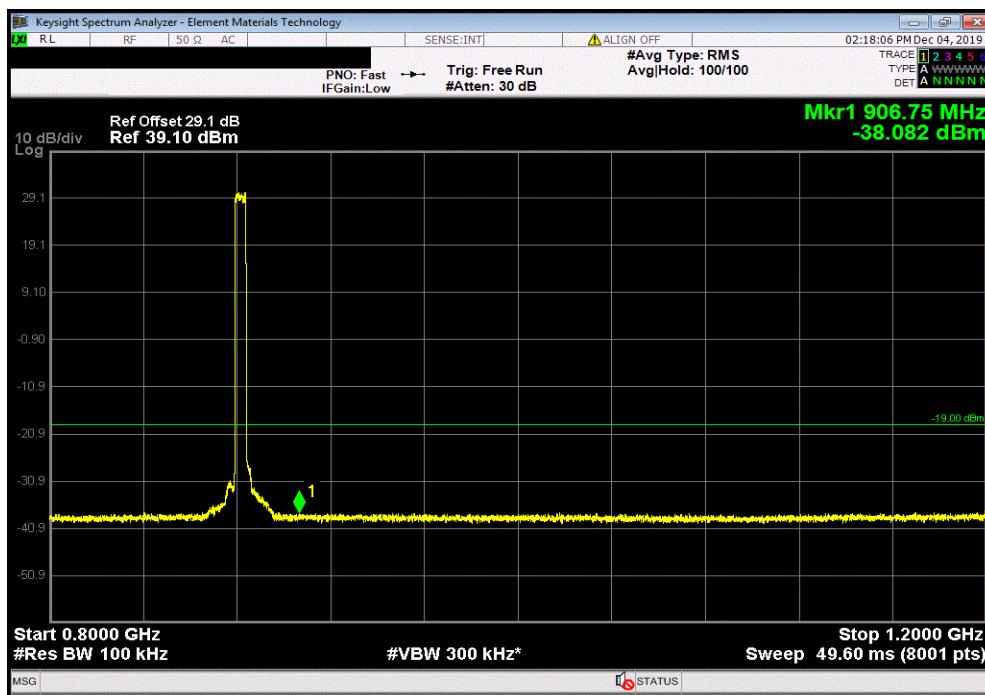


XMT 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 20MHz to 800MHz (Range3)		
Value (dBm)	Limit (dBm)	Result
-31.499	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 800MHz to 1.2GHz (Range4)		
Value (dBm)	Limit (dBm)	Result
-38.082	-19	Pass

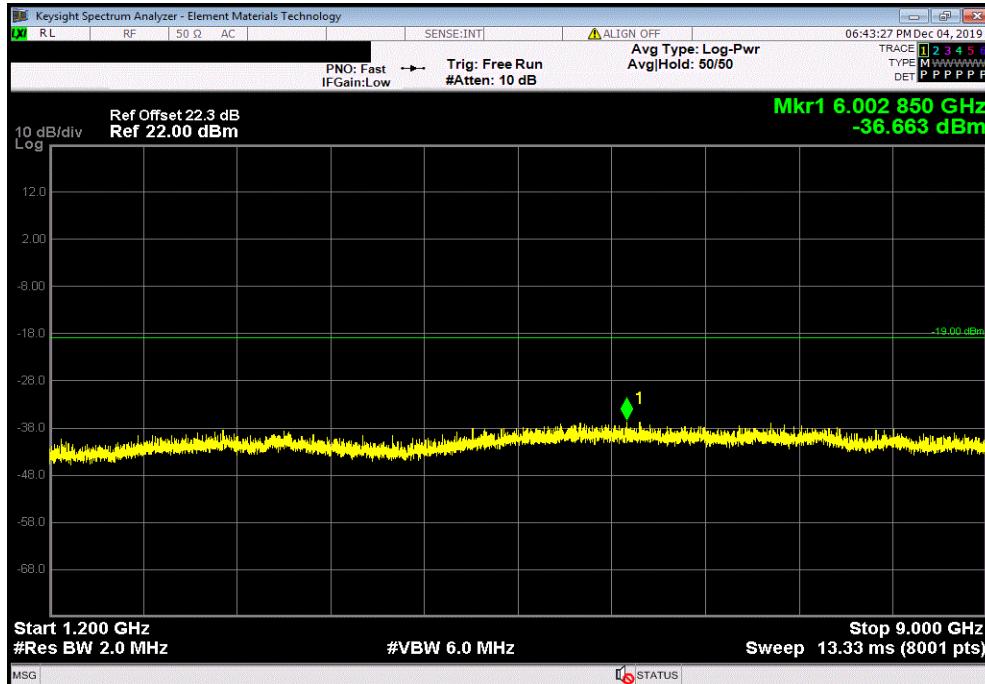


# SPURIOUS CONDUCTED EMISSIONS



XMT 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 1.2GHz to 9GHz (Range5)		
Value (dBm)	Limit (dBm)	Result
-36.663	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 9kHz to 150kHz (Range1)		
Value (dBm)	Limit (dBm)	Result
-49.674	-39	Pass

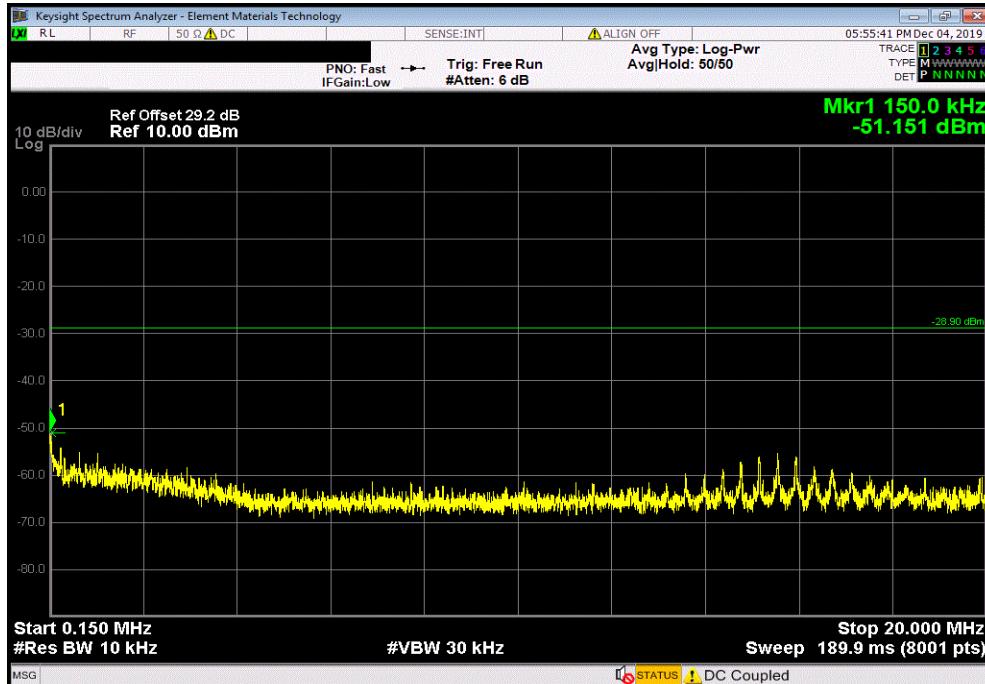


# SPURIOUS CONDUCTED EMISSIONS

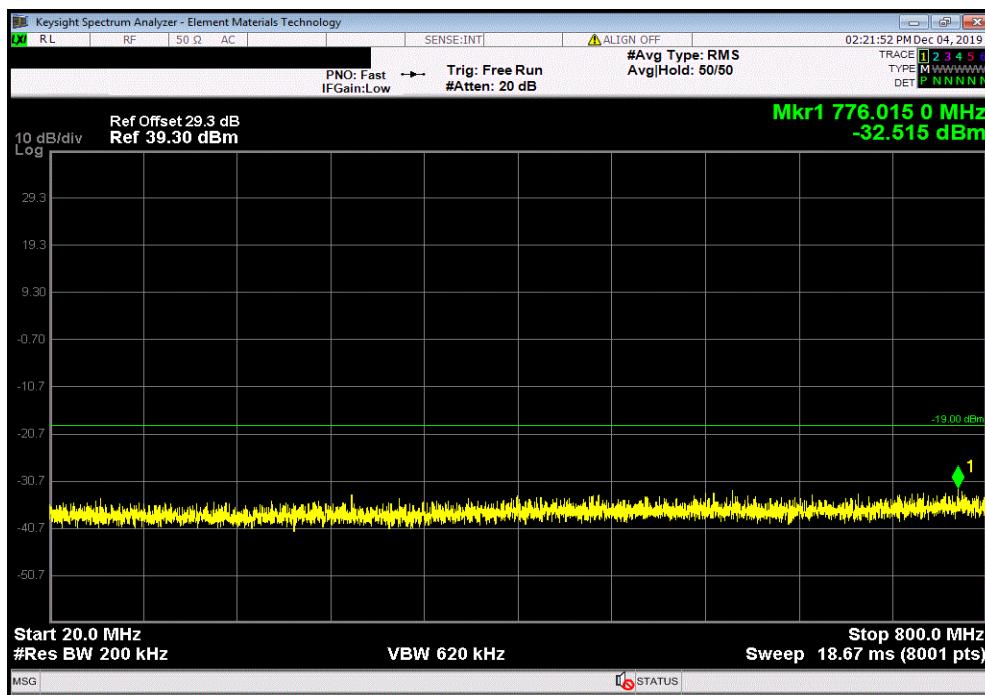


XMT 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 150kHz to 20MHz (Range2)			
	Value (dBm)	Limit (dBm)	Result
	-51.151	-29	Pass



Port 4, Band 5, 5 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 20MHz to 800MHz (Range3)			
	Value (dBm)	Limit (dBm)	Result
	-32.515	-19	Pass

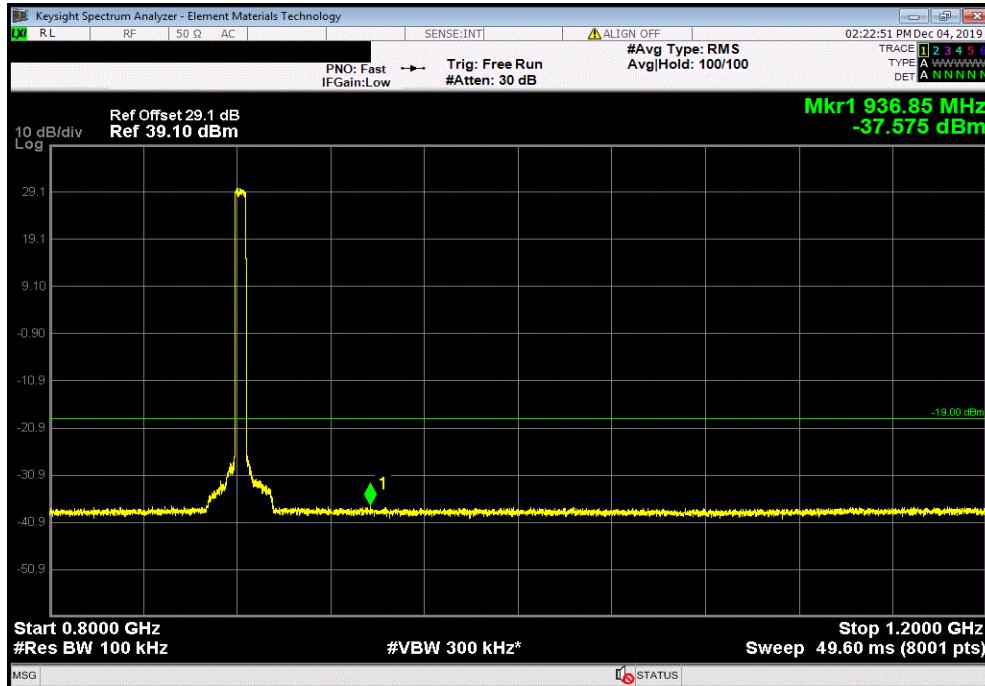


# SPURIOUS CONDUCTED EMISSIONS

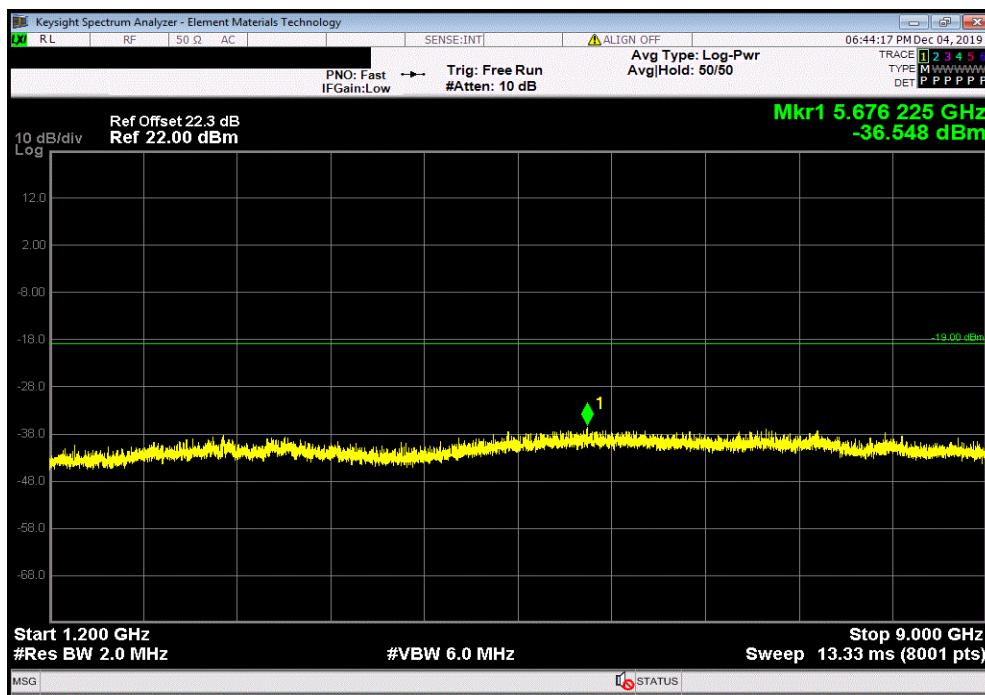


XMT 2019.09.05

Port 4, Band 5, 5 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 800MHz to 1.2GHz (Range4)		
Value (dBm)	Limit (dBm)	Result
-37.575	-19	Pass



Port 4, Band 5, 5 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 1.2GHz to 9GHz (Range5)		
Value (dBm)	Limit (dBm)	Result
-36.548	-19	Pass

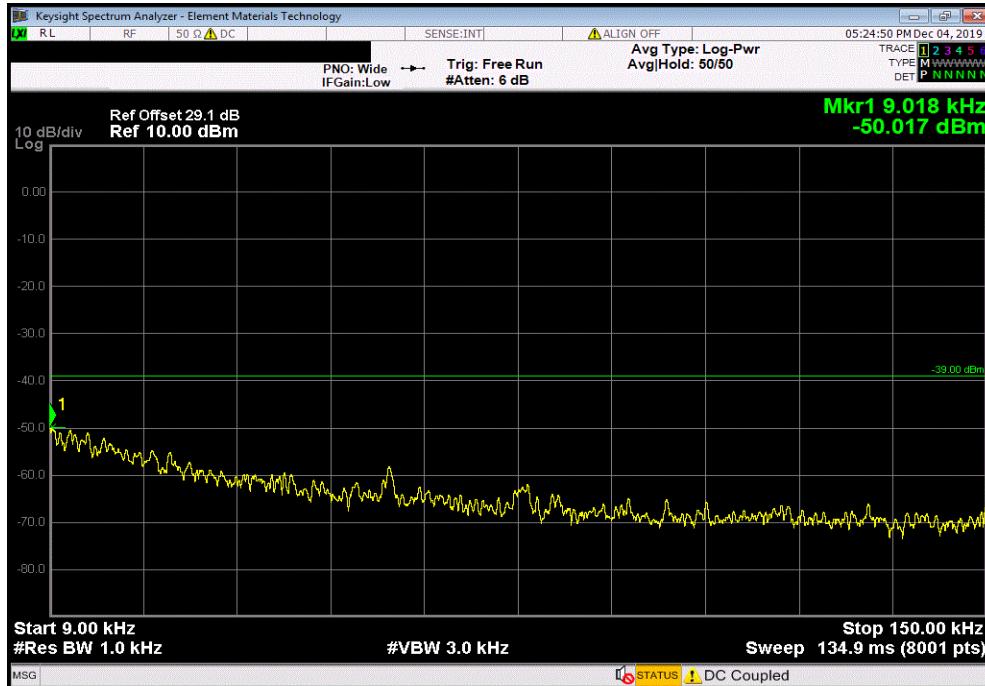


# SPURIOUS CONDUCTED EMISSIONS

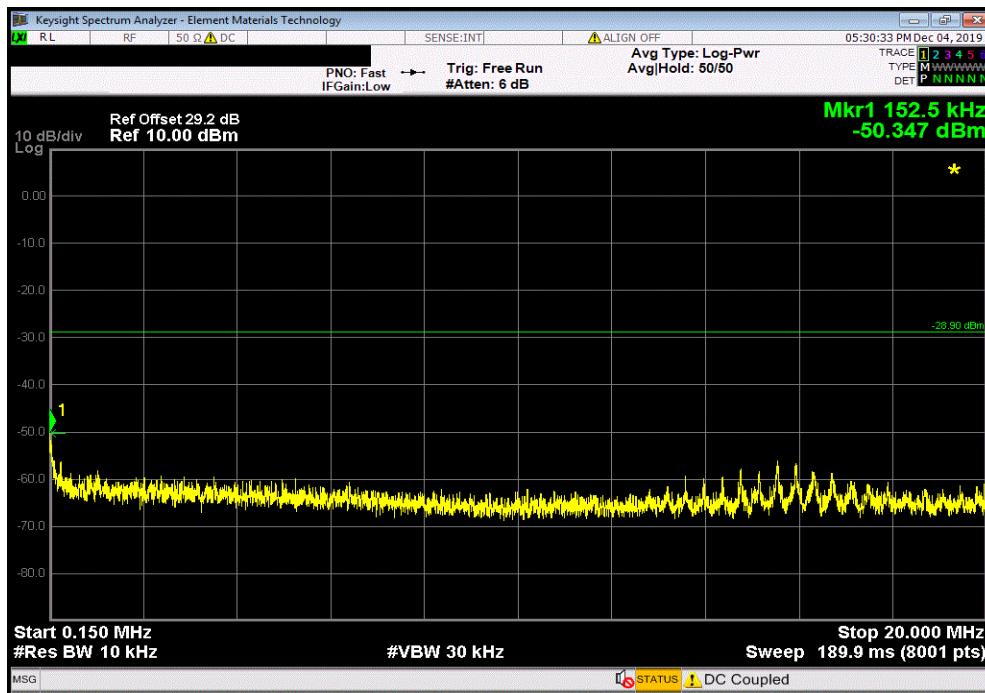


XMI 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 9kHz to 150kHz (Range1)		
Value (dBm)	Limit (dBm)	Result
-50.017	-39	Pass



Port 4, Band 5, 10 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 150kHz to 20MHz (Range2)		
Value (dBm)	Limit (dBm)	Result
-50.347	-29	Pass

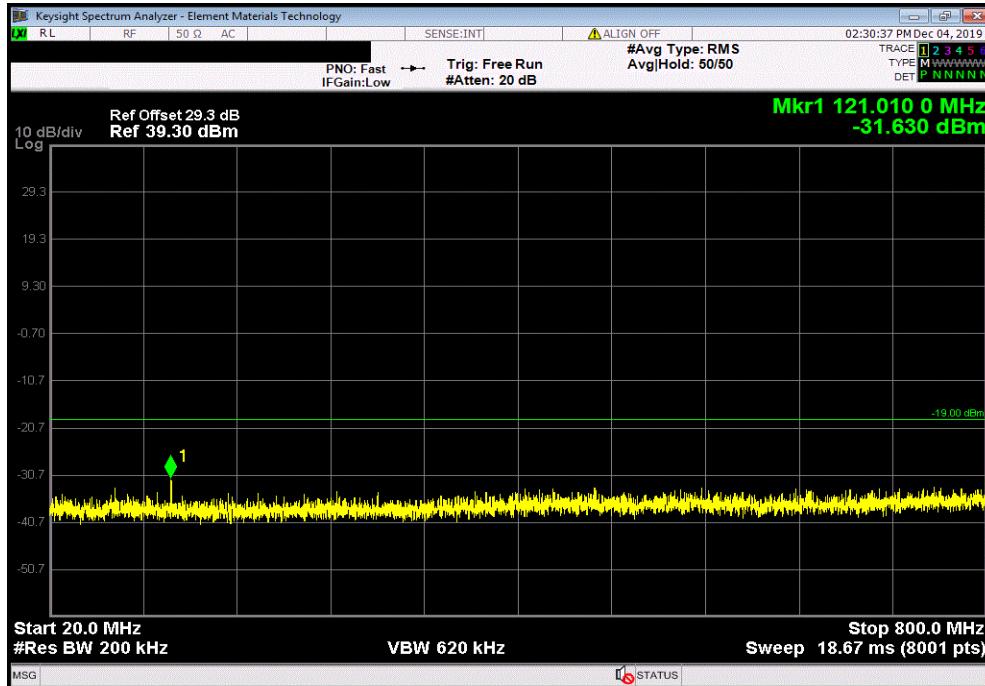


# SPURIOUS CONDUCTED EMISSIONS

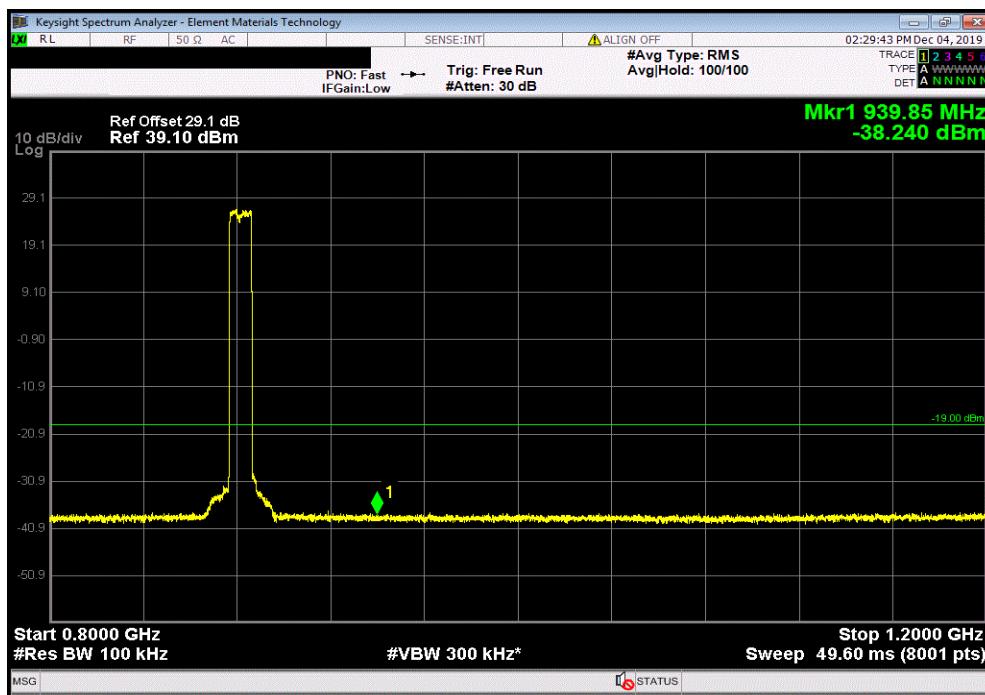


XMT 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 20MHz to 800MHz (Range3)		
Value (dBm)	Limit (dBm)	Result
-31.63	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 800MHz to 1.2GHz (Range4)		
Value (dBm)	Limit (dBm)	Result
-38.24	-19	Pass

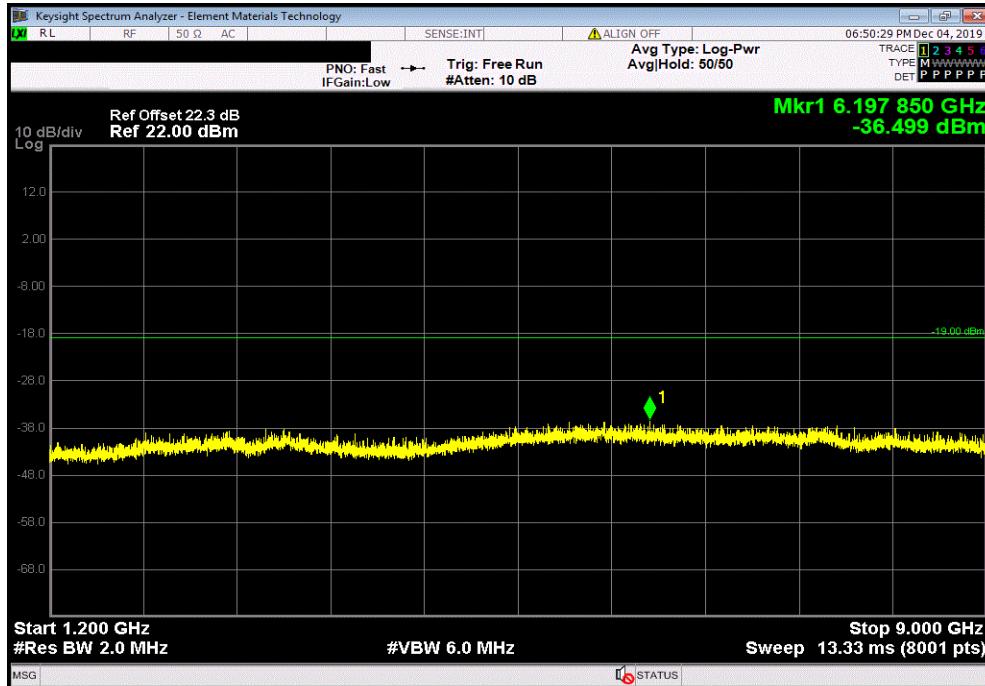


# SPURIOUS CONDUCTED EMISSIONS

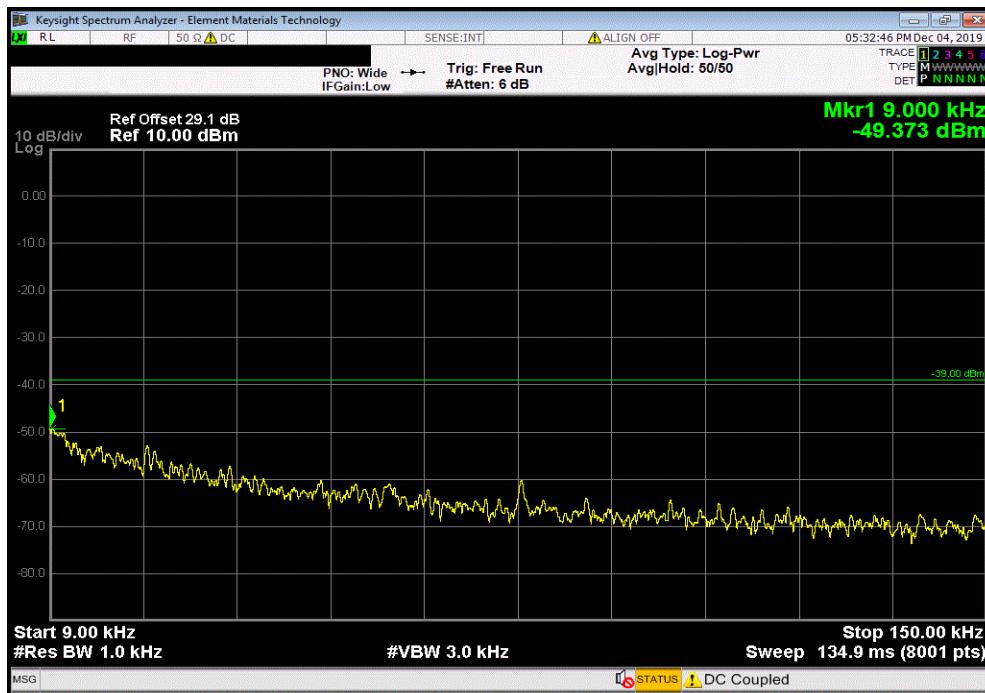


XMI 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, QPSK, Mid Channel, 881.5 MHz, 1.2GHz to 9GHz (Range5)		
	Value (dBm)	Limit (dBm)
	-36.499	-19



Port 4, Band 5, 10 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 9kHz to 150kHz (Range1)		
	Value (dBm)	Limit (dBm)
	-49.373	-39

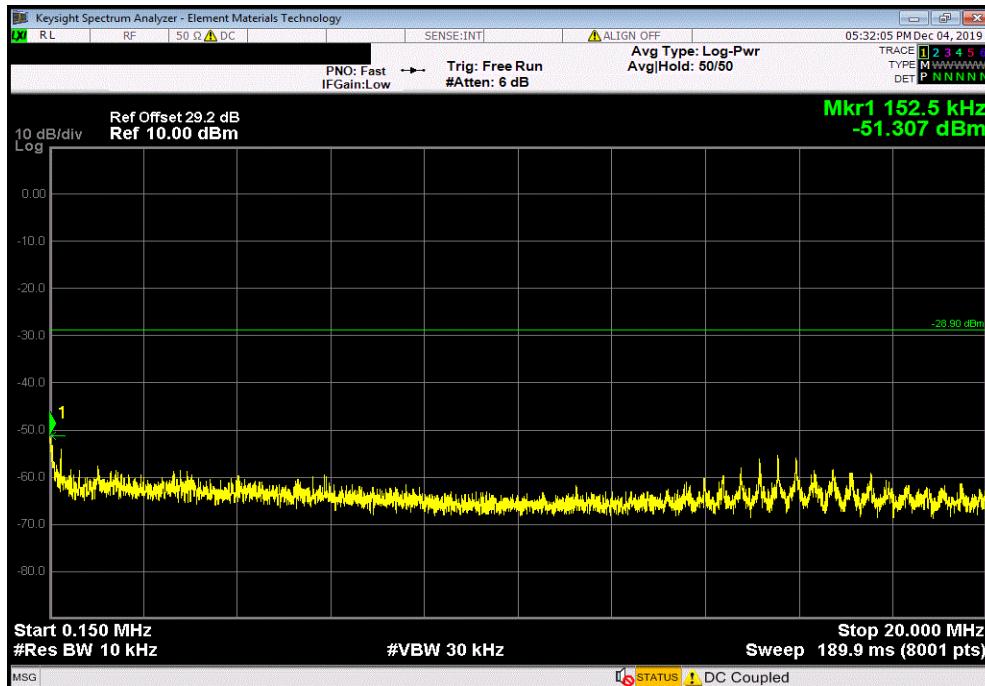


# SPURIOUS CONDUCTED EMISSIONS

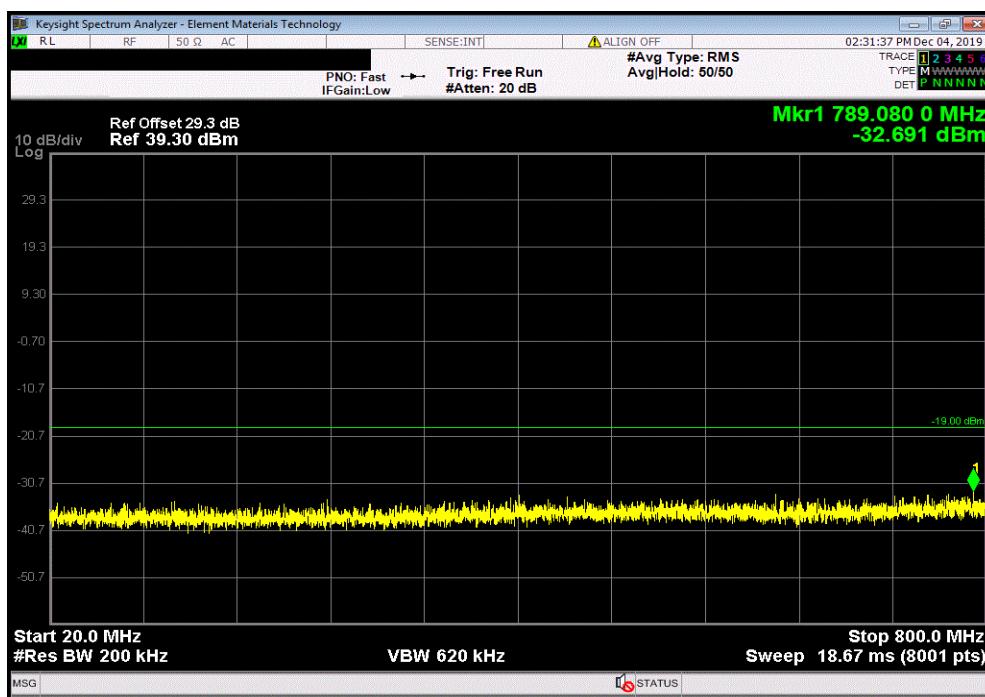


XMI 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 150kHz to 20MHz (Range2)		
	Value (dBm)	Limit (dBm)
	-51.307	-29



Port 4, Band 5, 10 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 20MHz to 800MHz (Range3)		
	Value (dBm)	Limit (dBm)
	-32.691	-19

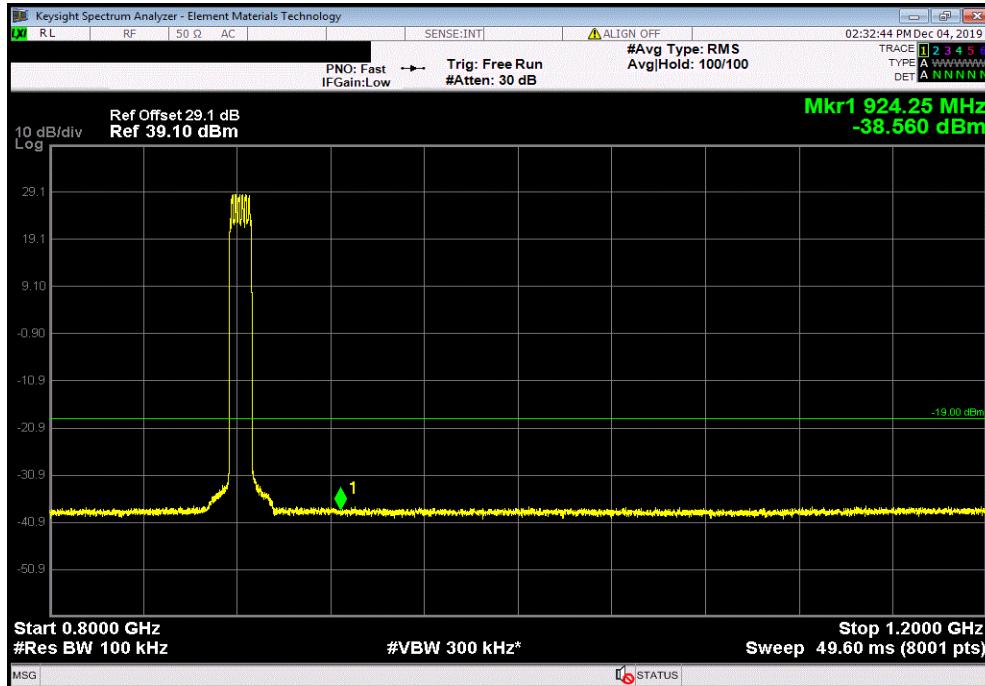


# SPURIOUS CONDUCTED EMISSIONS

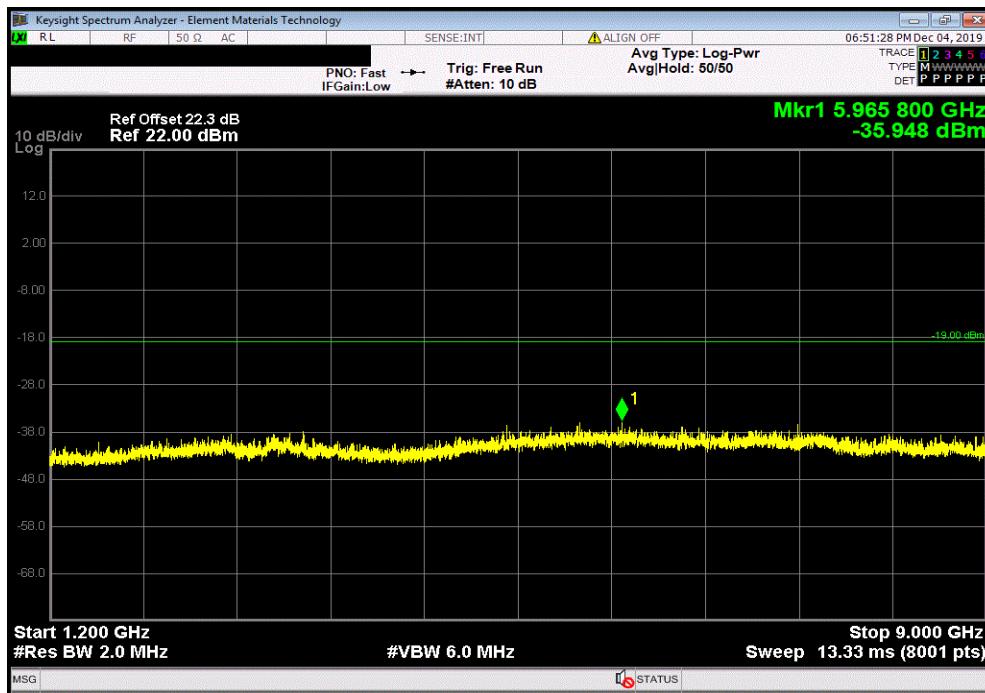


XMT 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 800MHz to 1.2GHz (Range4)		
	Value (dBm)	Limit (dBm)
	-38.56	-19



Port 4, Band 5, 10 MHz Bandwidth, 16QAM, Mid Channel, 881.5 MHz, 1.2GHz to 9GHz (Range5)		
	Value (dBm)	Limit (dBm)
	-35.948	-19

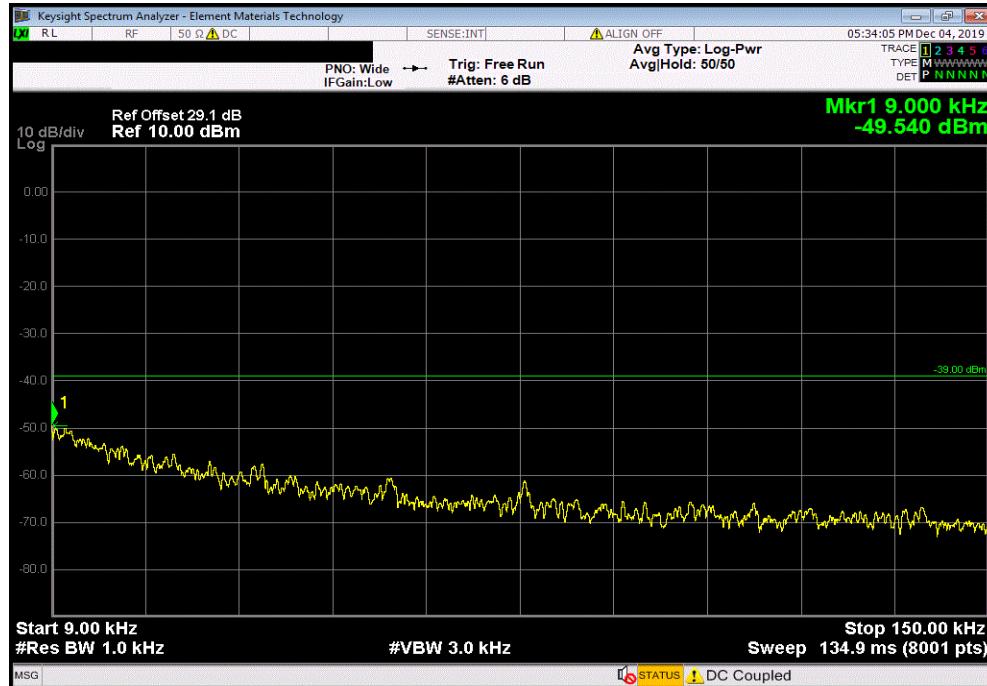


# SPURIOUS CONDUCTED EMISSIONS

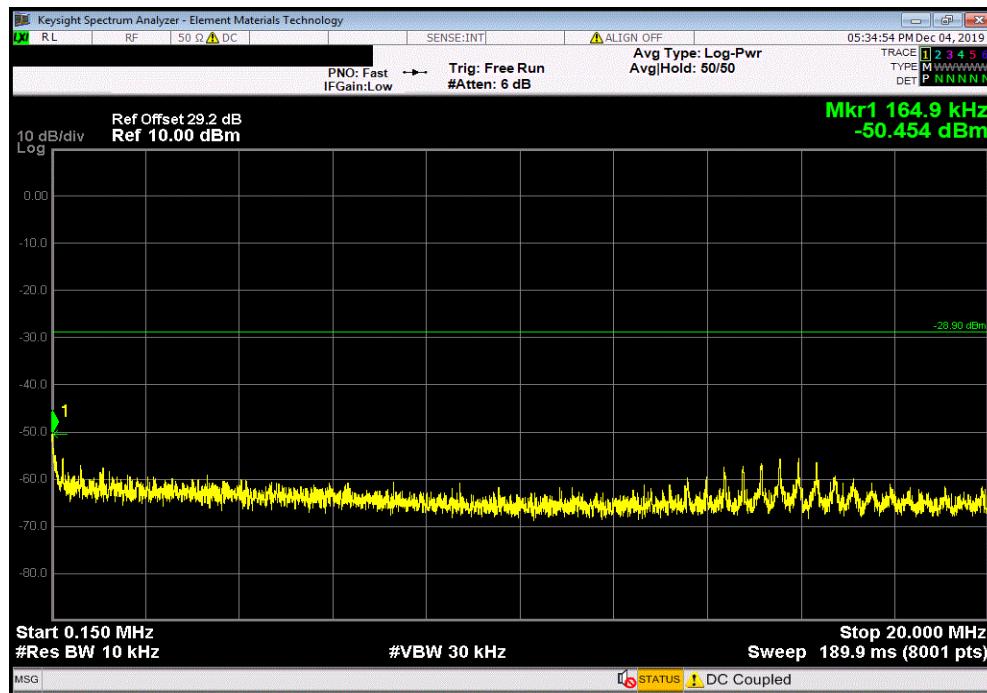


XMI 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 9kHz to 150kHz (Range1)		
Value (dBm)	Limit (dBm)	Result
-49.54	-39	Pass



Port 4, Band 5, 10 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 150kHz to 20MHz (Range2)		
Value (dBm)	Limit (dBm)	Result
-50.454	-29	Pass

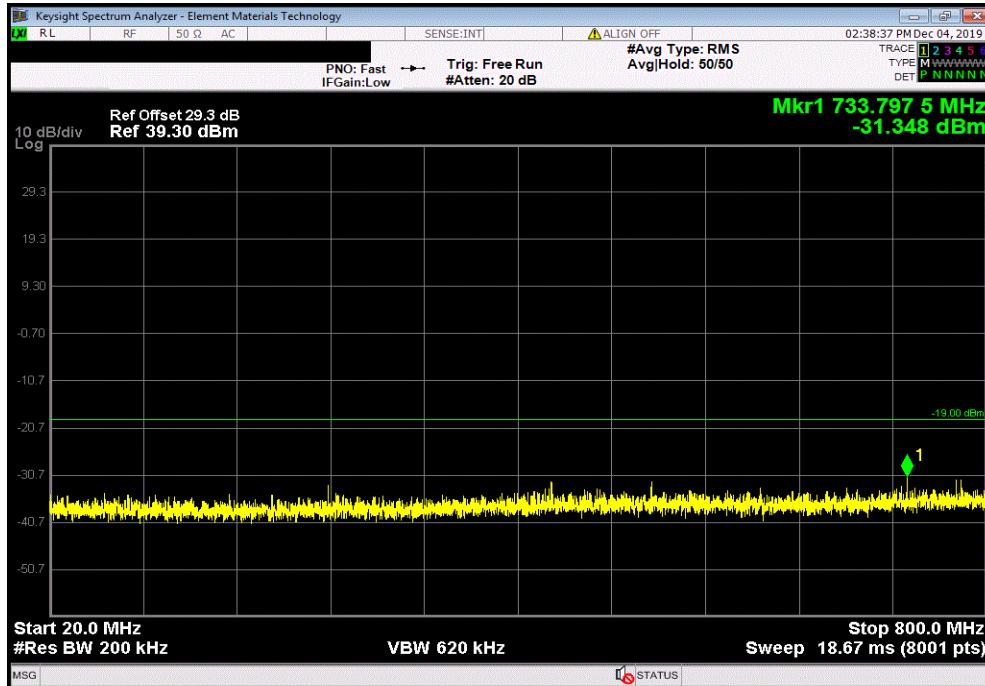


# SPURIOUS CONDUCTED EMISSIONS

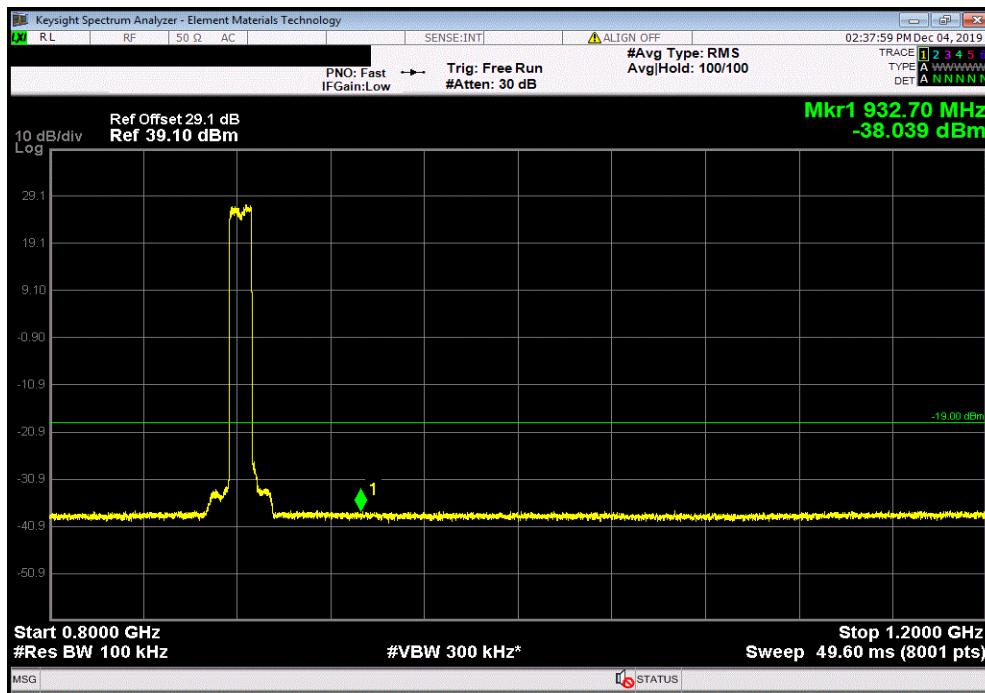


XMT 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 20MHz to 800MHz (Range3)		
Value (dBm)	Limit (dBm)	Result
-31.348	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 800MHz to 1.2GHz (Range4)		
Value (dBm)	Limit (dBm)	Result
-38.039	-19	Pass



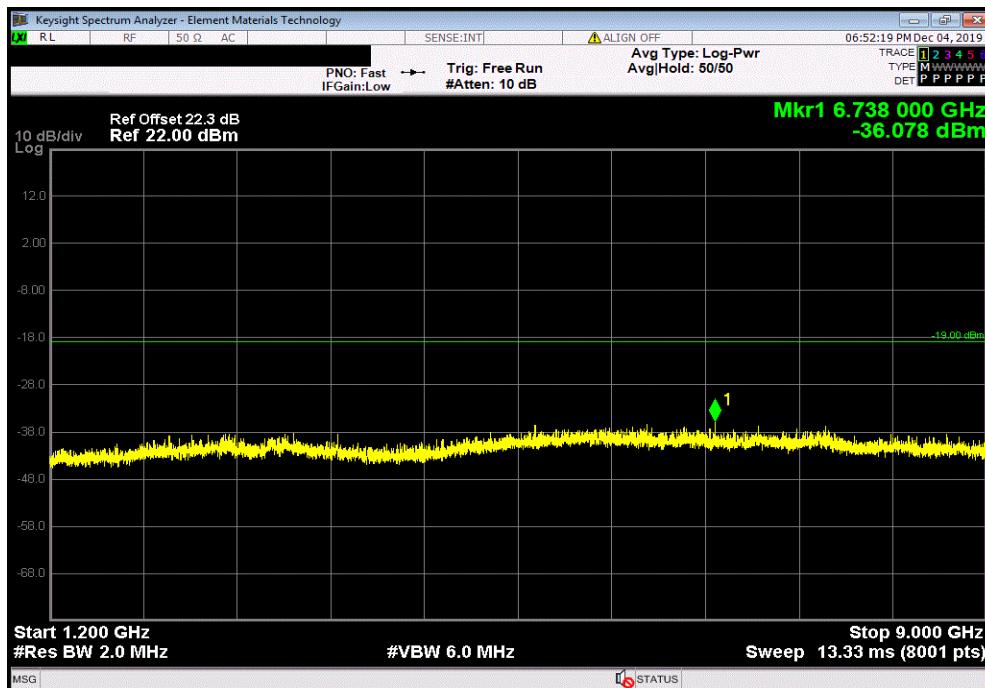
# SPURIOUS CONDUCTED EMISSIONS



XMI 2019.09.05

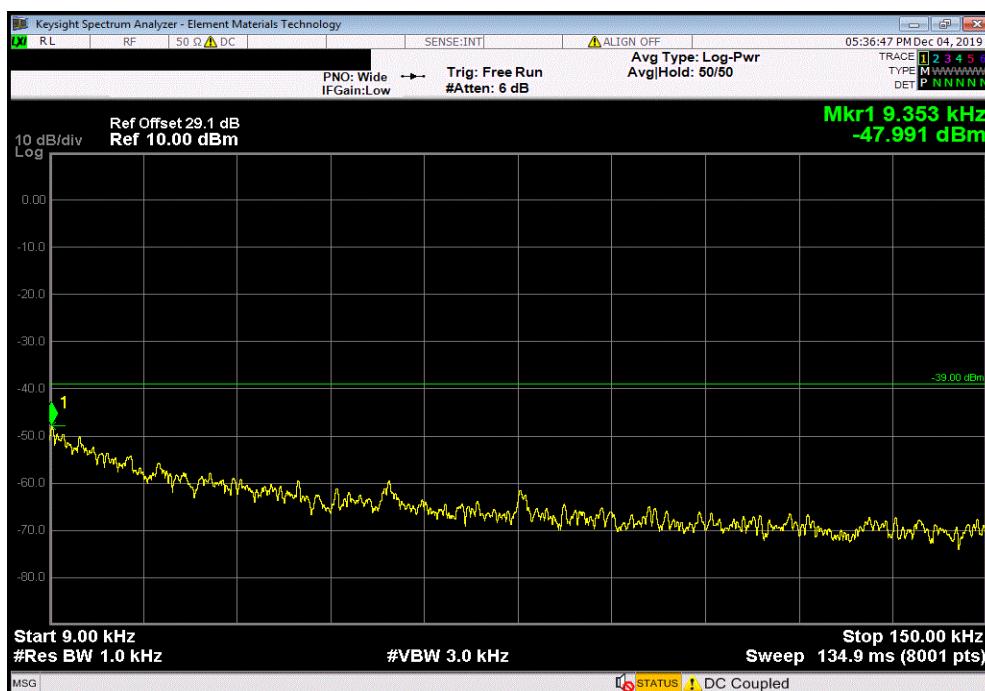
Port 4, Band 5, 10 MHz Bandwidth, 64QAM, Mid Channel, 881.5 MHz, 1.2GHz to 9GHz (Range5)

	Value (dBm)	Limit (dBm)	Result
	-36.078	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 9kHz to 150kHz (Range1)

	Value (dBm)	Limit (dBm)	Result
	-47.991	-39	Pass

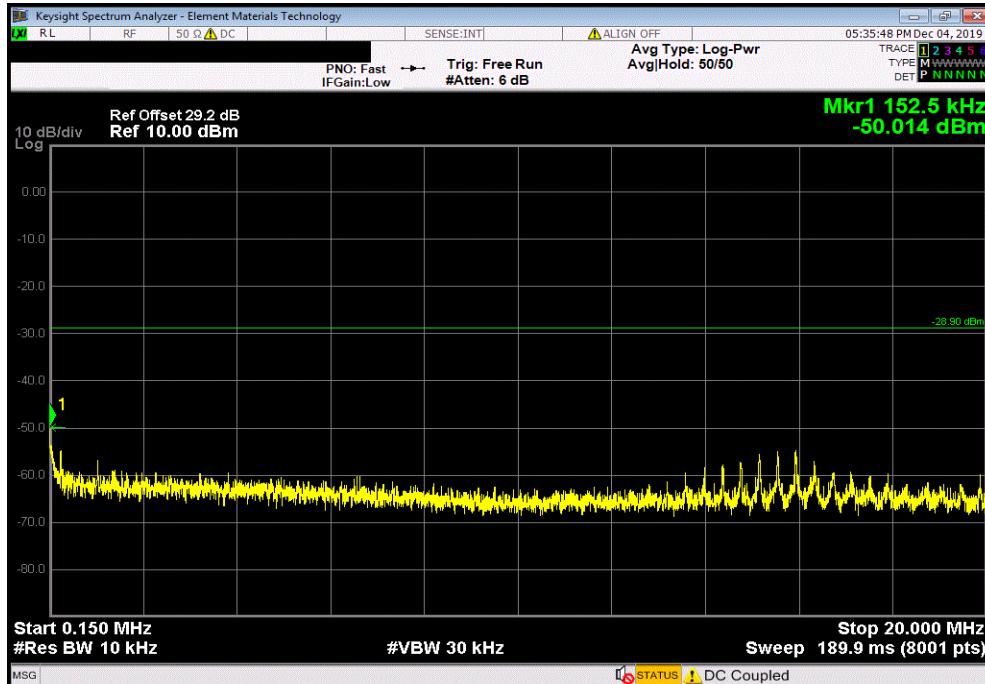


# SPURIOUS CONDUCTED EMISSIONS

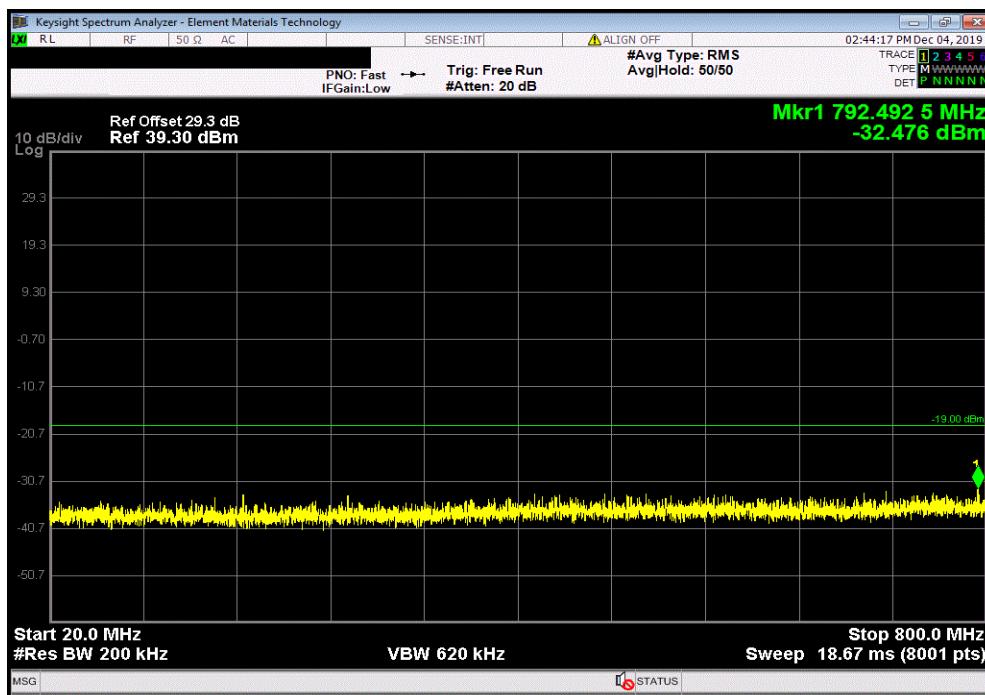


XMI 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 150kHz to 20MHz (Range2)		
	Value (dBm)	Limit (dBm)
	-50.014	-29



Port 4, Band 5, 10 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 20MHz to 800MHz (Range3)		
	Value (dBm)	Limit (dBm)
	-32.476	-19

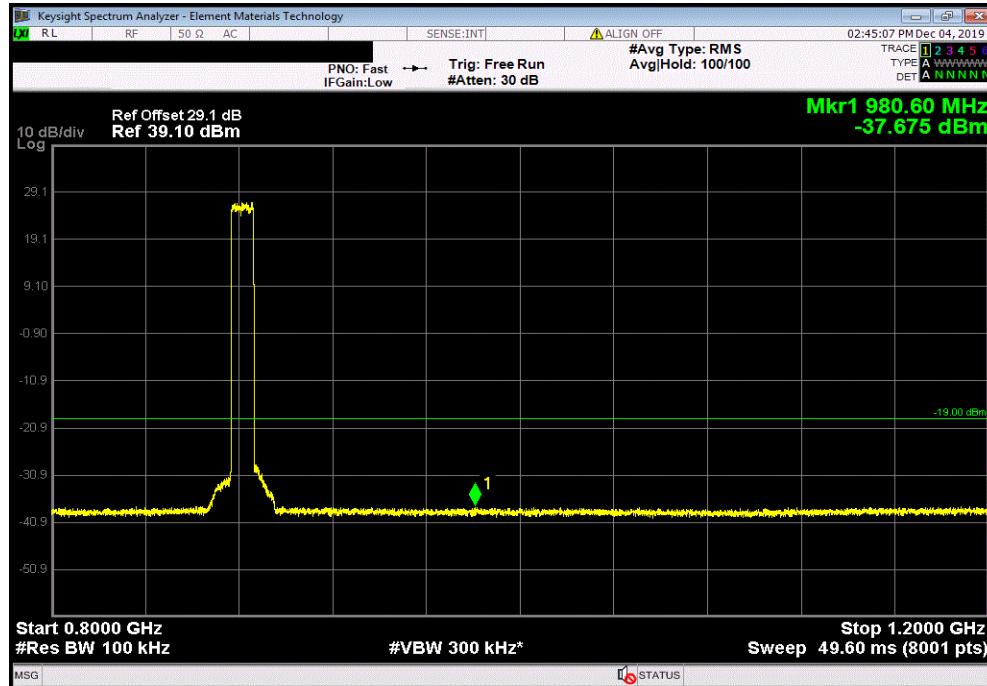


# SPURIOUS CONDUCTED EMISSIONS



XMT 2019.09.05

Port 4, Band 5, 10 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 800MHz to 1.2GHz (Range4)		
Value (dBm)	Limit (dBm)	Result
-37.675	-19	Pass



Port 4, Band 5, 10 MHz Bandwidth, 256QAM, Mid Channel, 881.5 MHz, 1.2GHz to 9GHz (Range5)		
Value (dBm)	Limit (dBm)	Result
-36.144	-19	Pass

