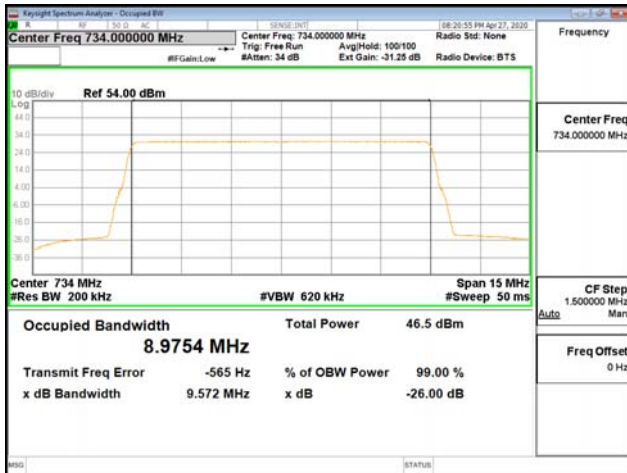
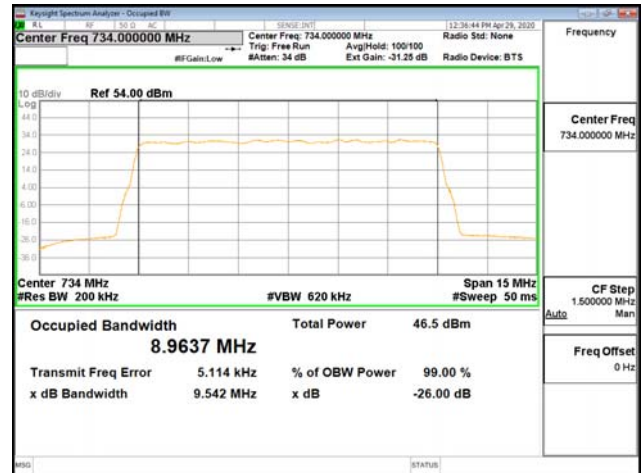


ANT2

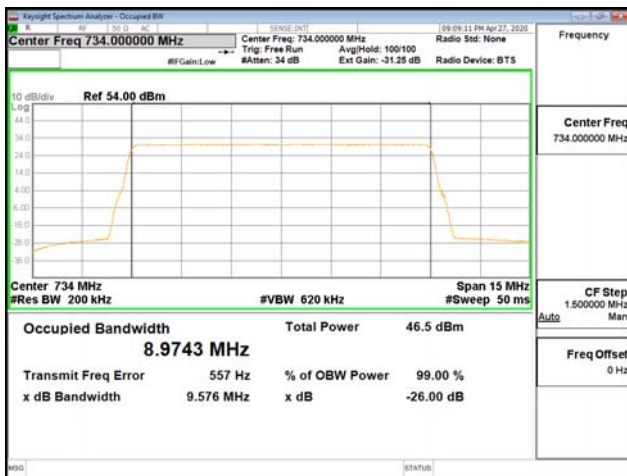
QPSK



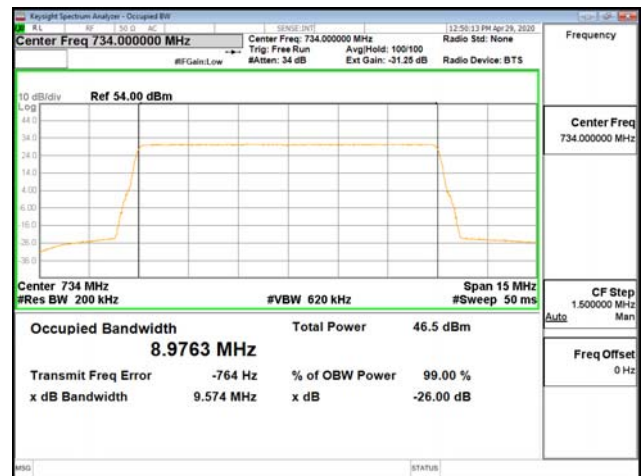
16QAM



64QAM

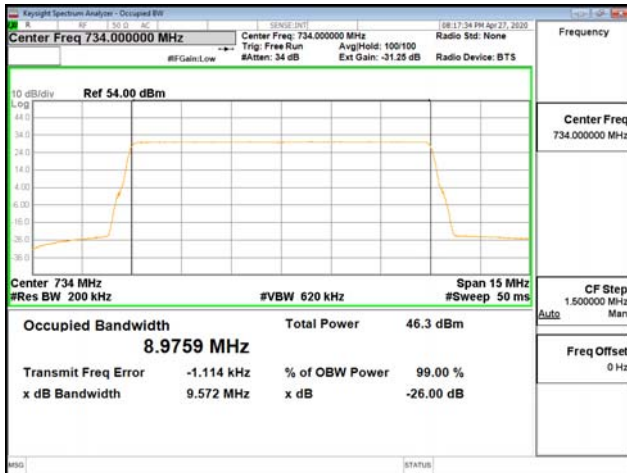


256QAM

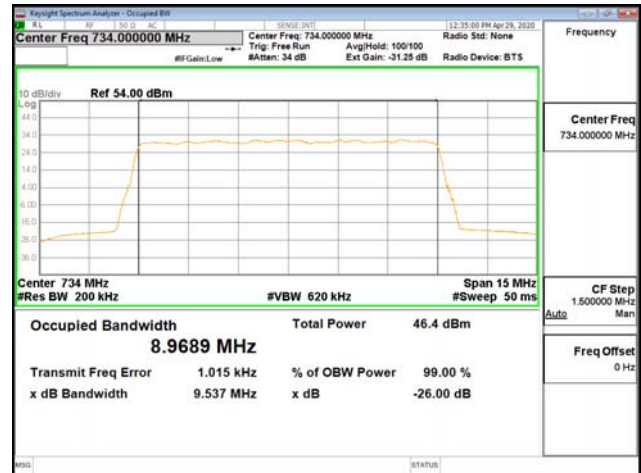


ANT3

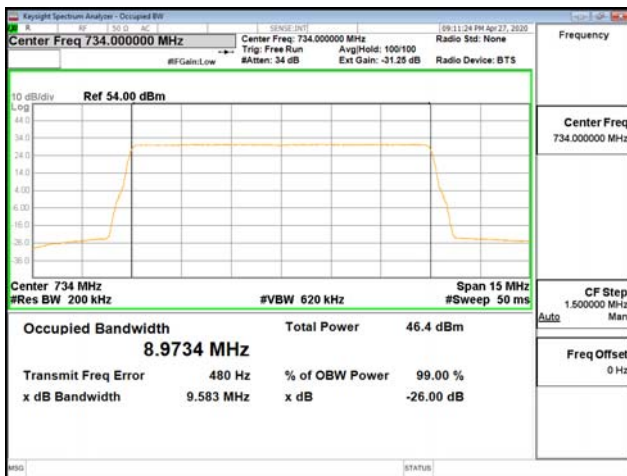
QPSK



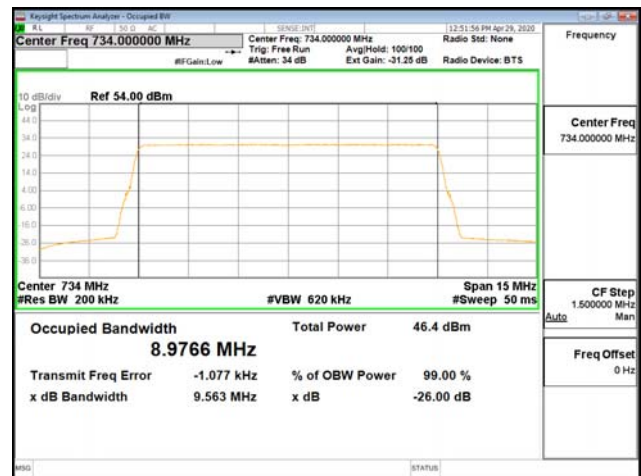
16QAM



64QAM

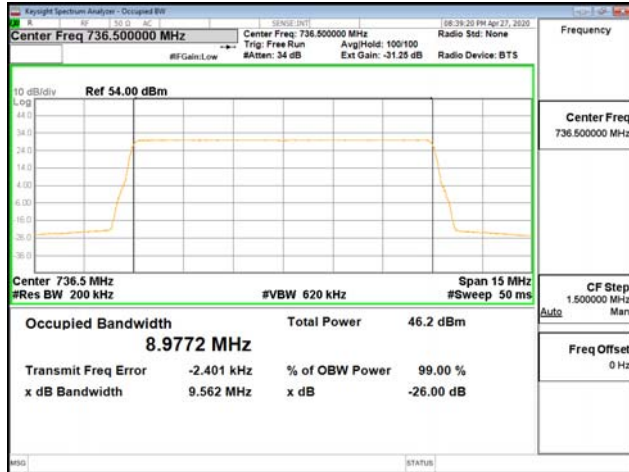


256QAM

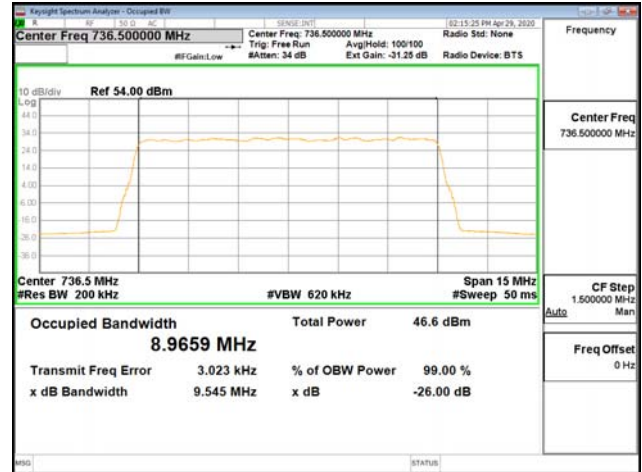


**BW 10MHz, Middle
ANT0**

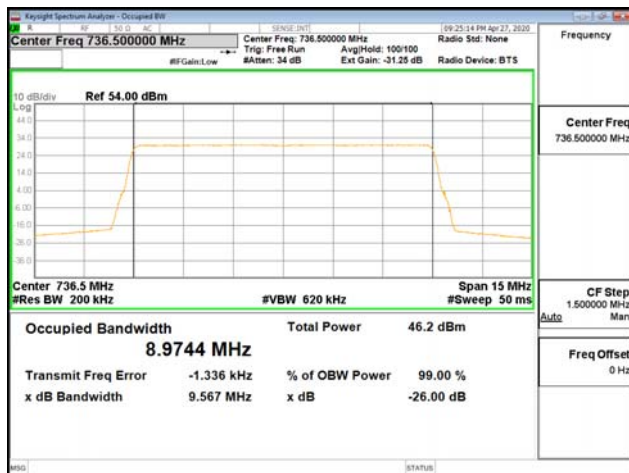
QPSK



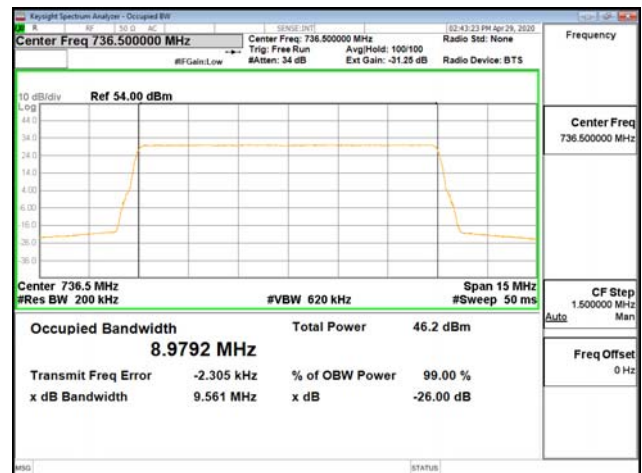
16QAM



64QAM

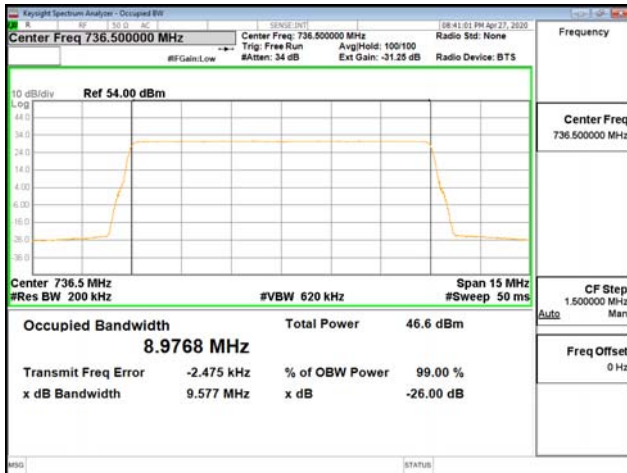


256QAM

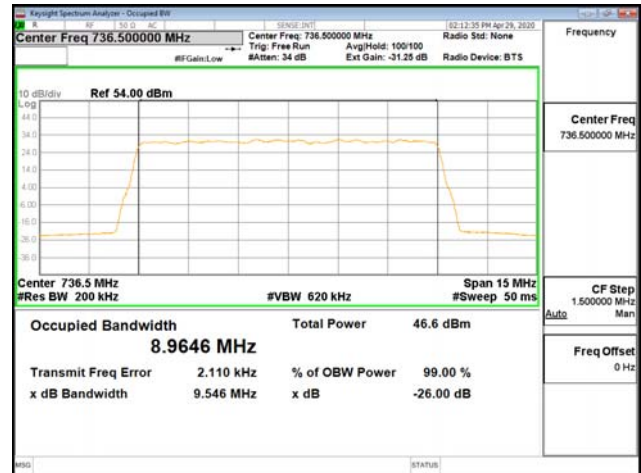


ANT1

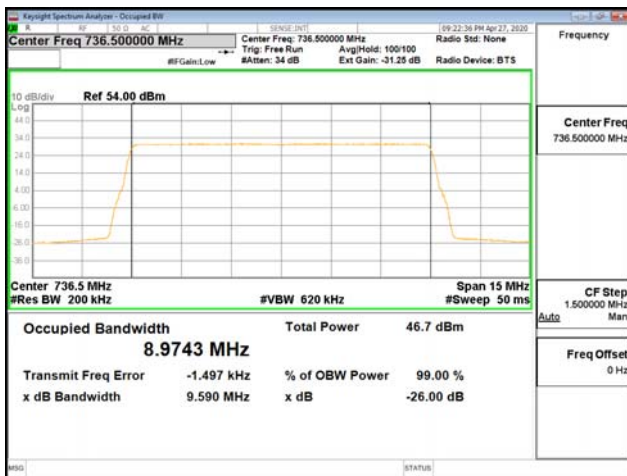
QPSK



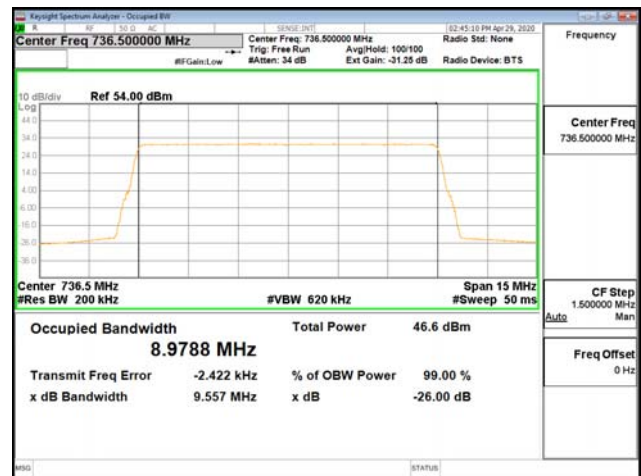
16QAM



64QAM

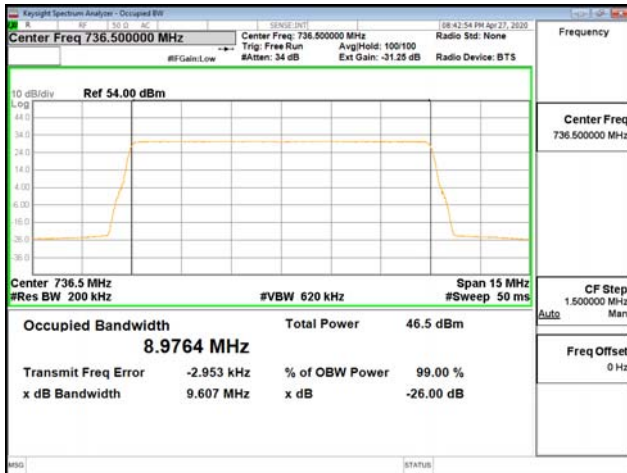


256QAM

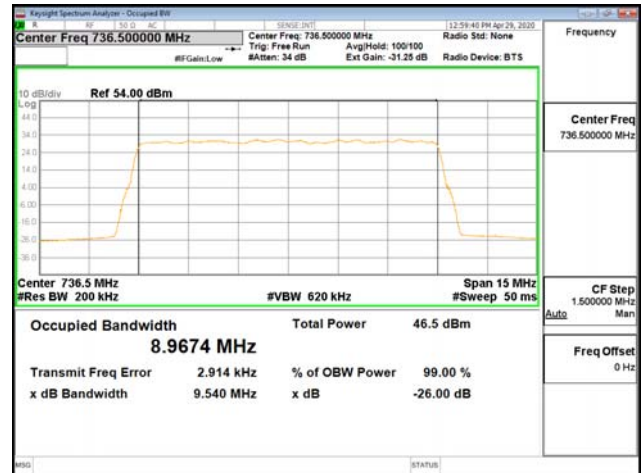


ANT2

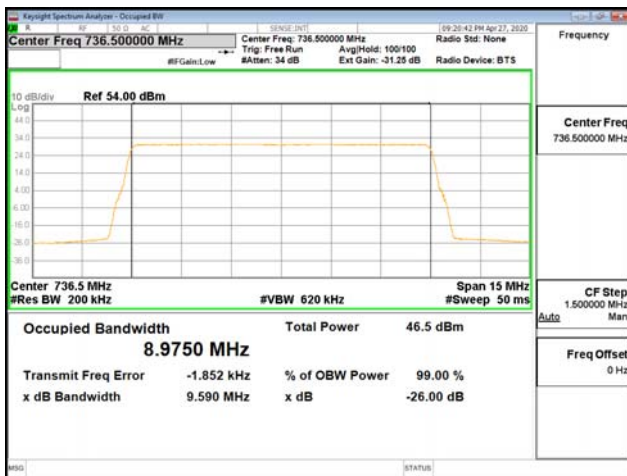
QPSK



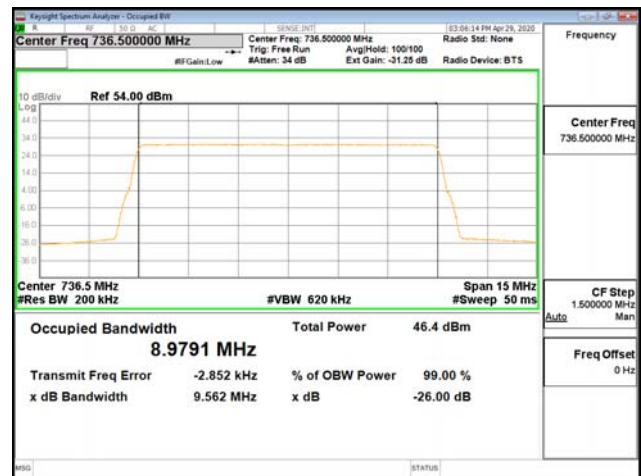
16QAM



64QAM

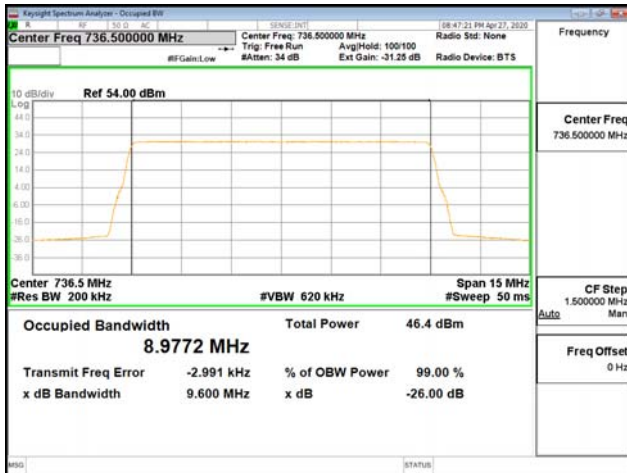


256QAM

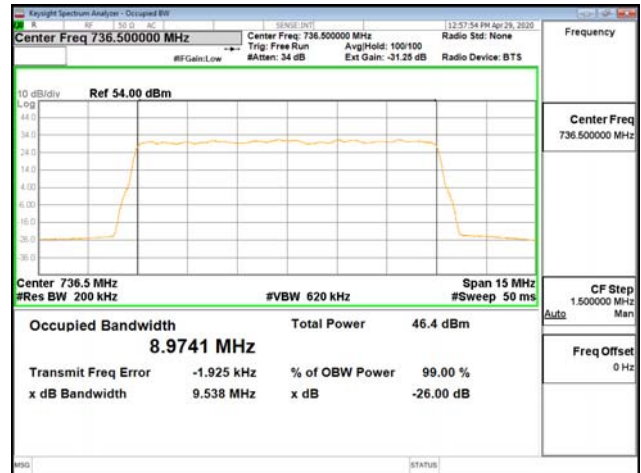


ANT3

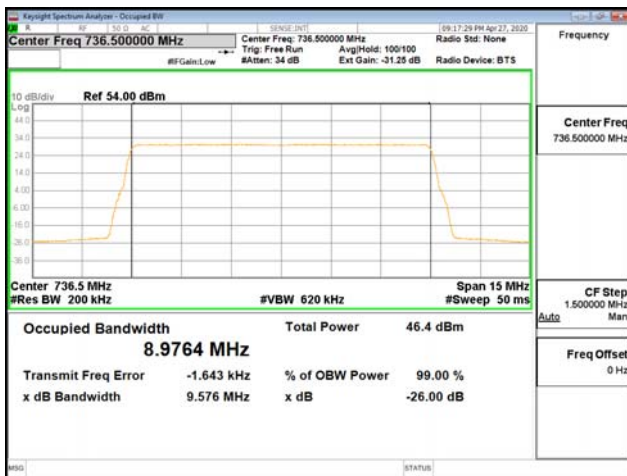
QPSK



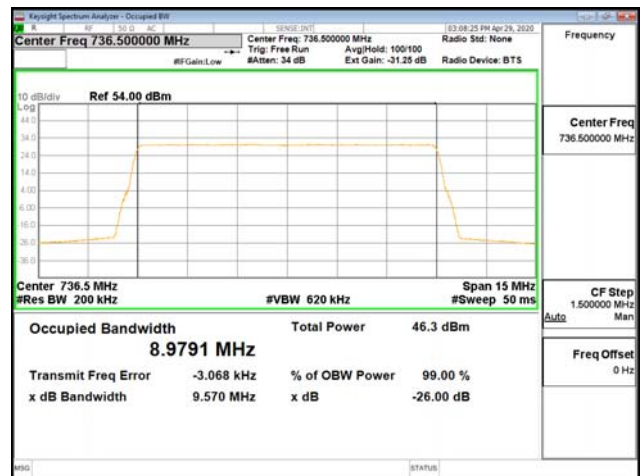
16QAM



64QAM

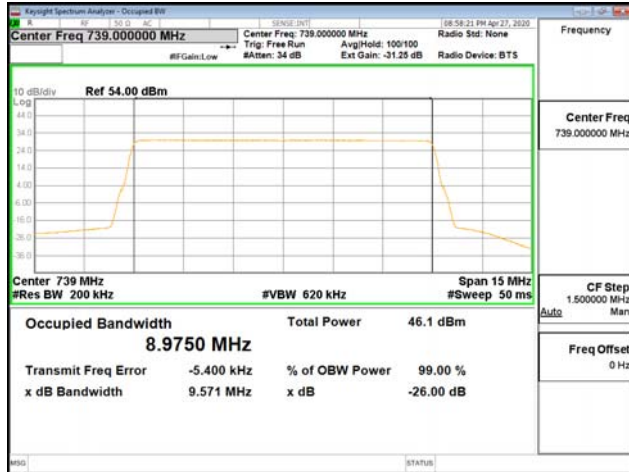


256QAM

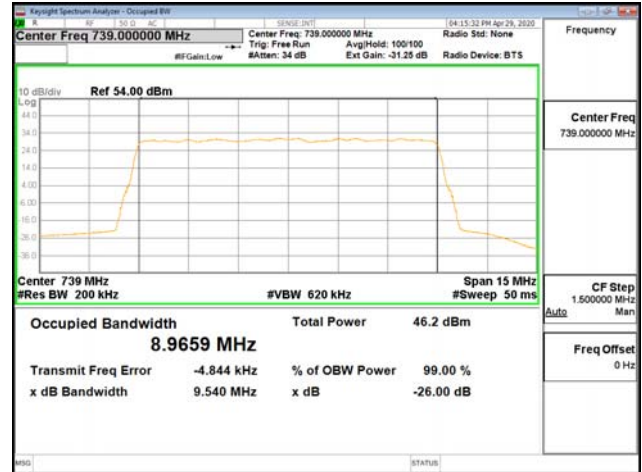


**BW 10MHz, Top
ANT0**

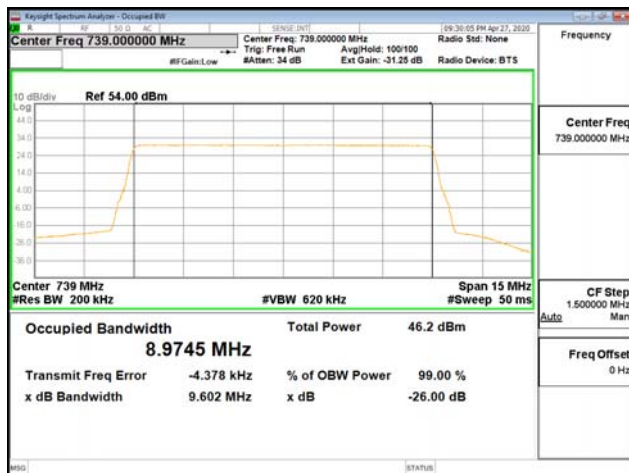
QPSK



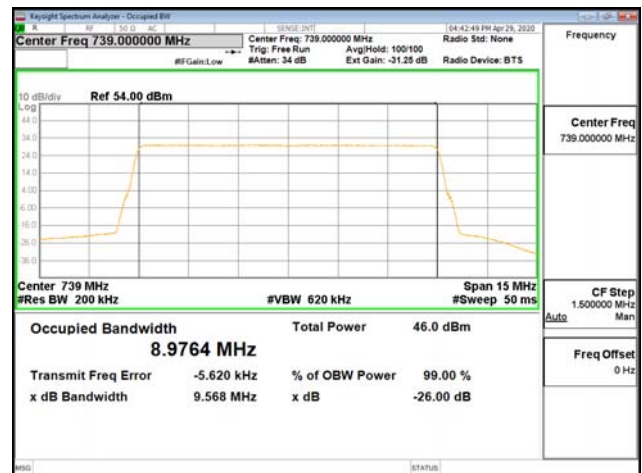
16QAM



64QAM

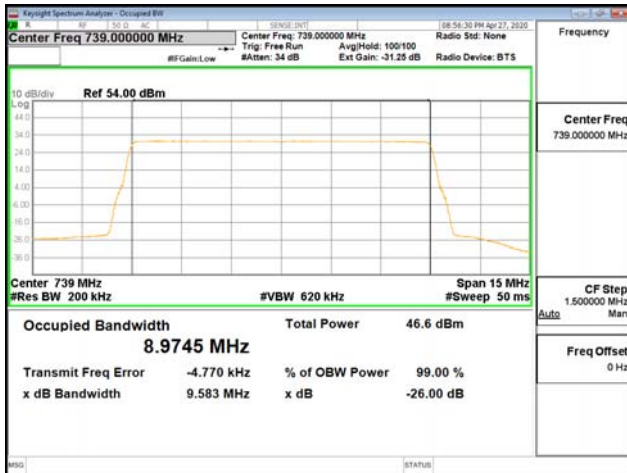


256QAM

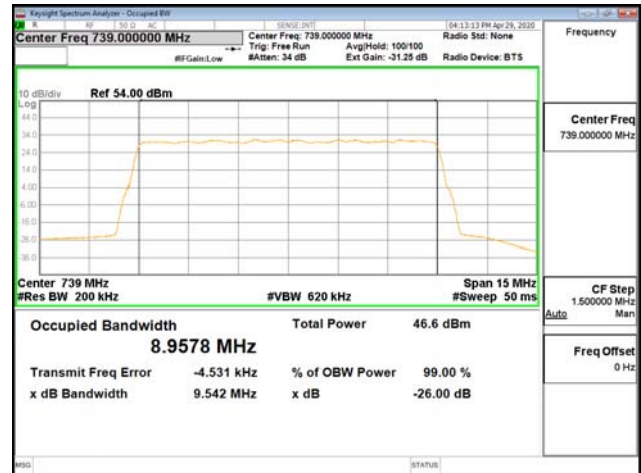


ANT1

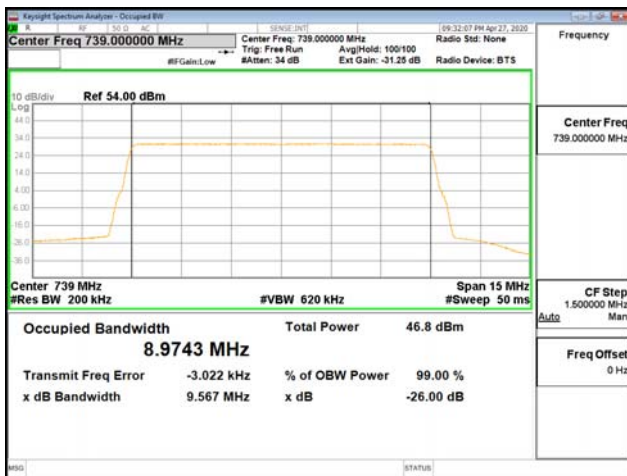
QPSK



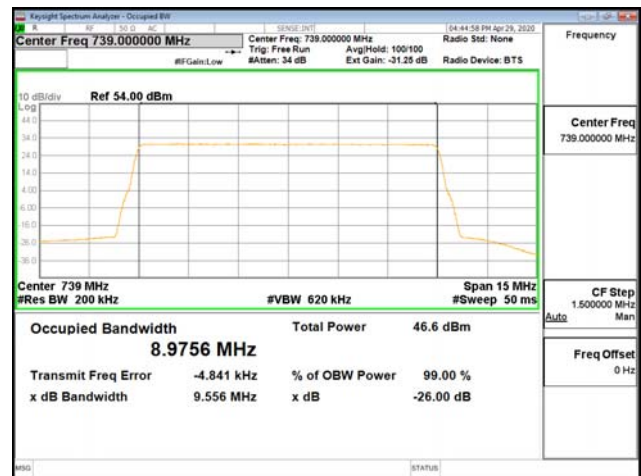
16QAM



64QAM

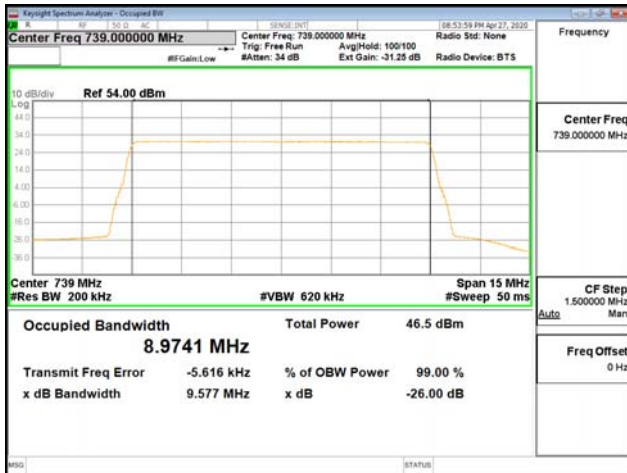


256QAM

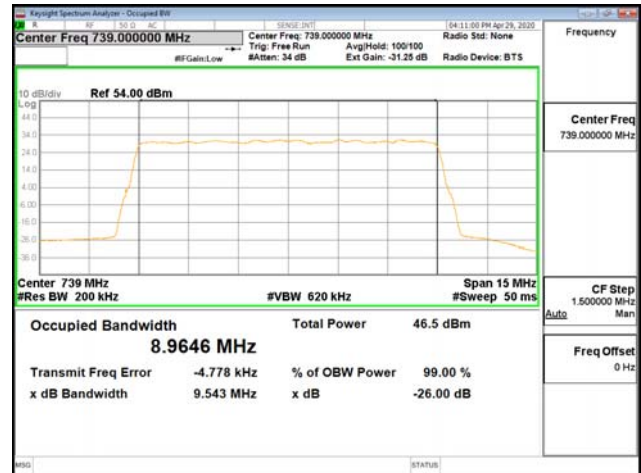


ANT2

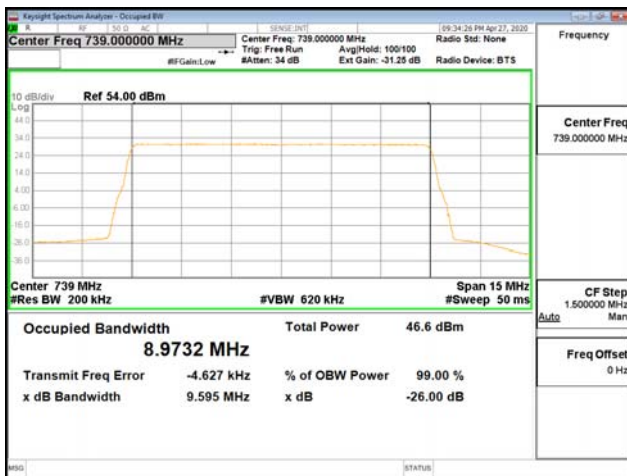
QPSK



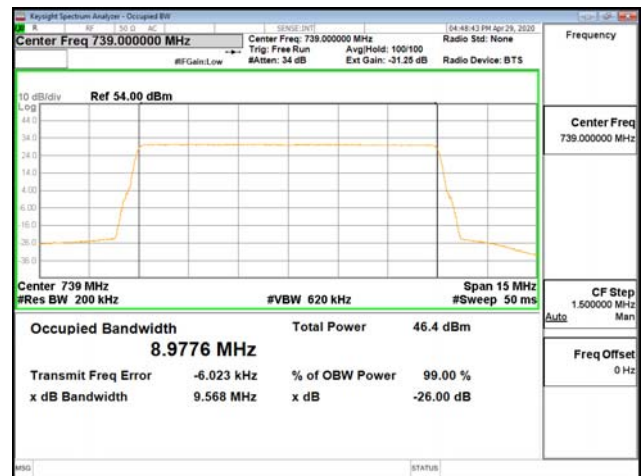
16QAM



64QAM

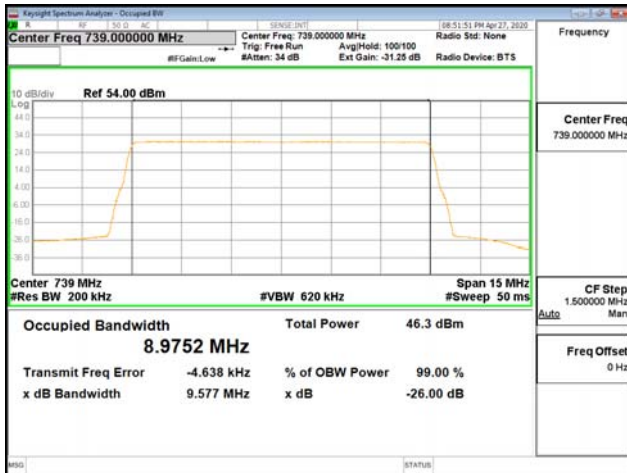


256QAM

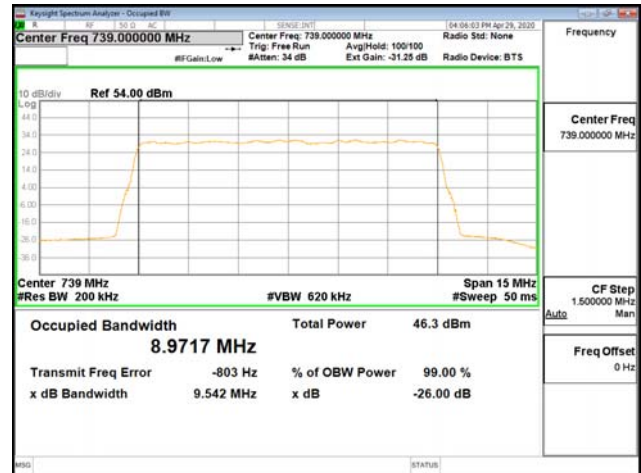


ANT3

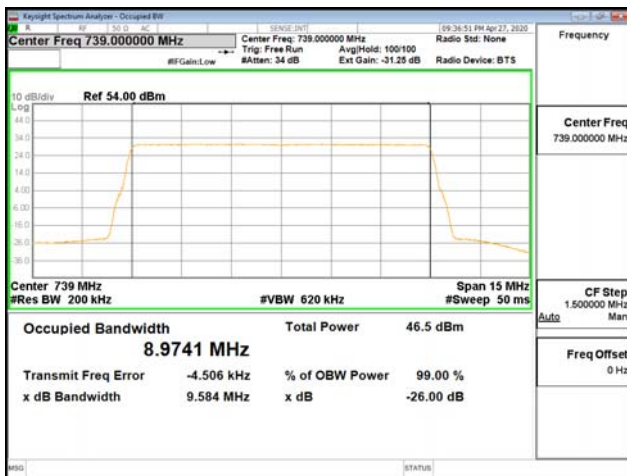
QPSK



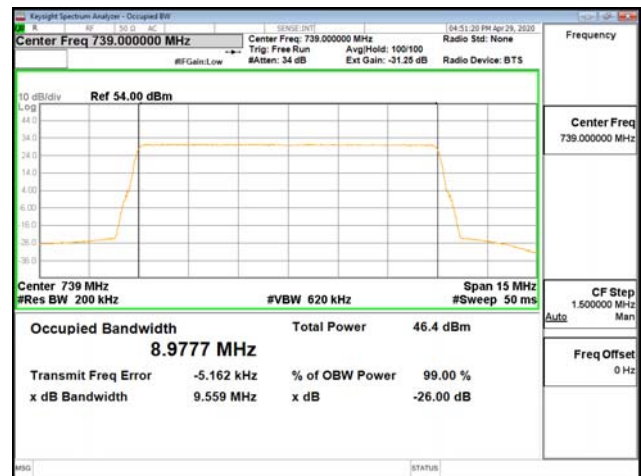
16QAM



64QAM

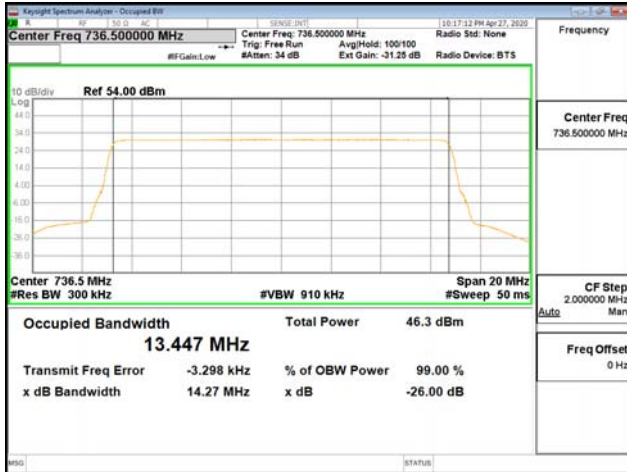


256QAM

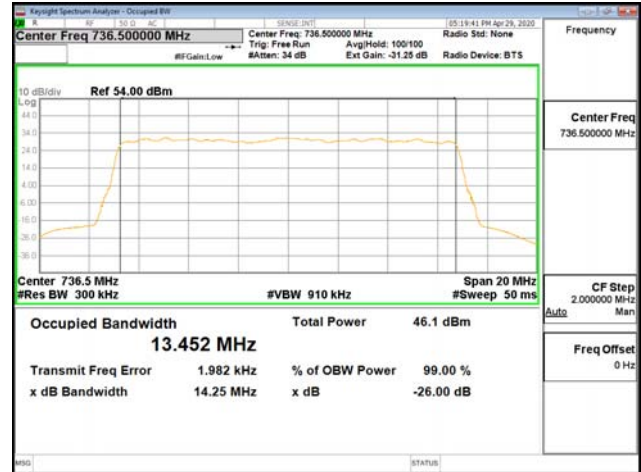


**BW 15MHz, Middle
ANT0**

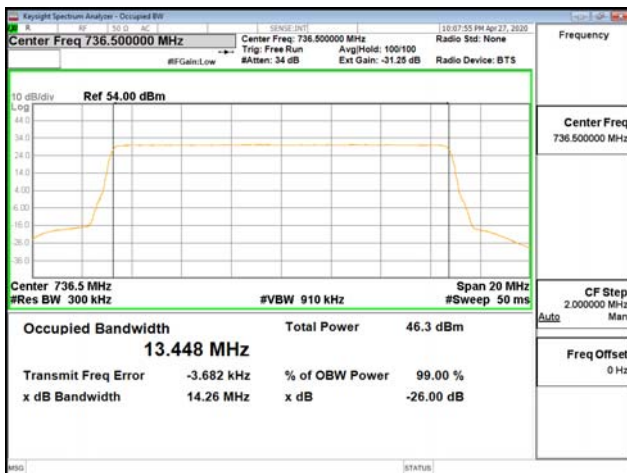
QPSK



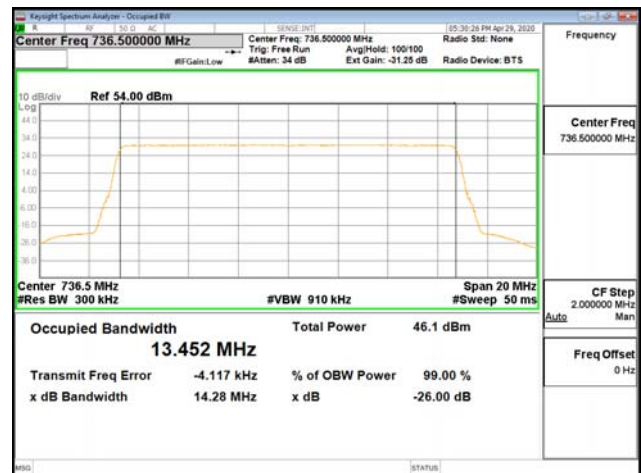
16QAM



64QAM

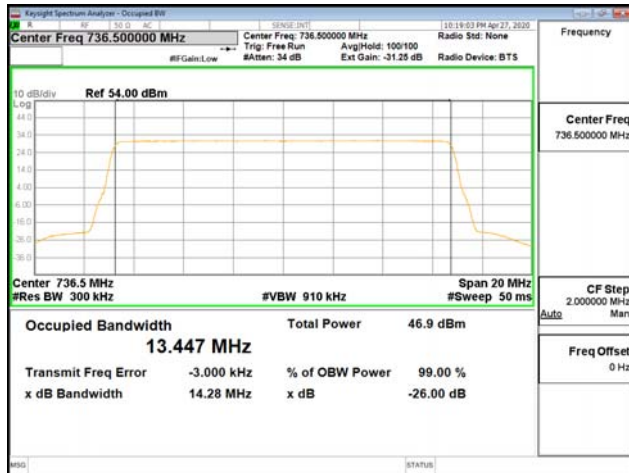


256QAM

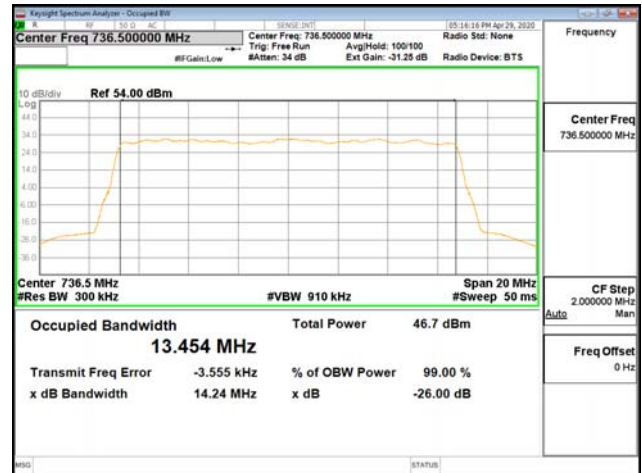


ANT1

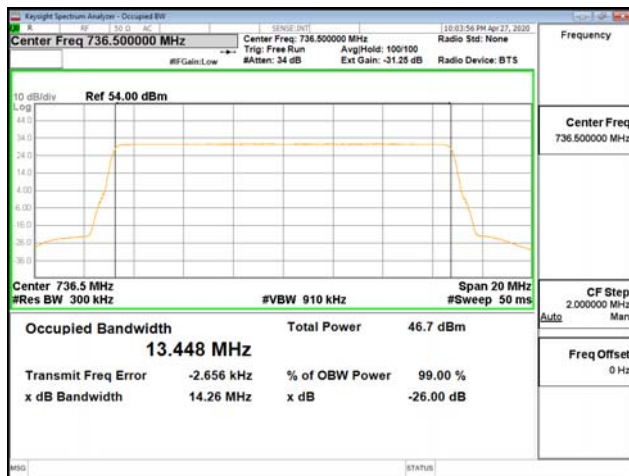
QPSK



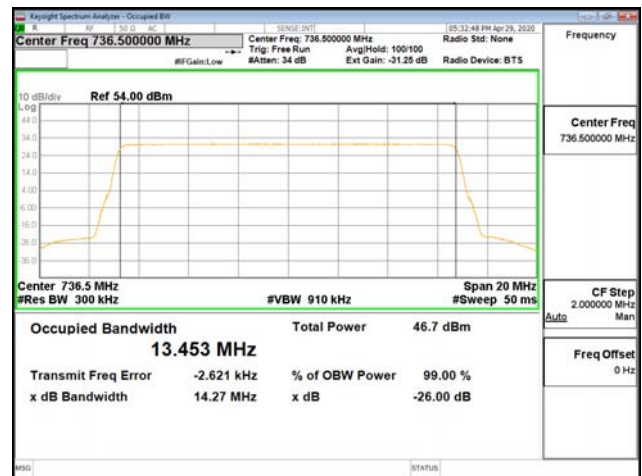
16QAM



64QAM

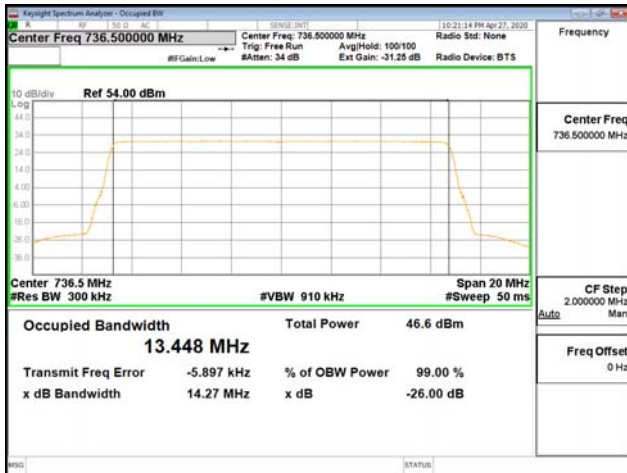


256QAM

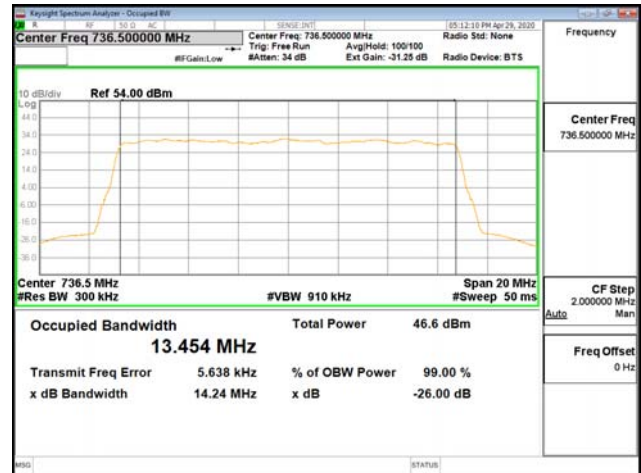


ANT2

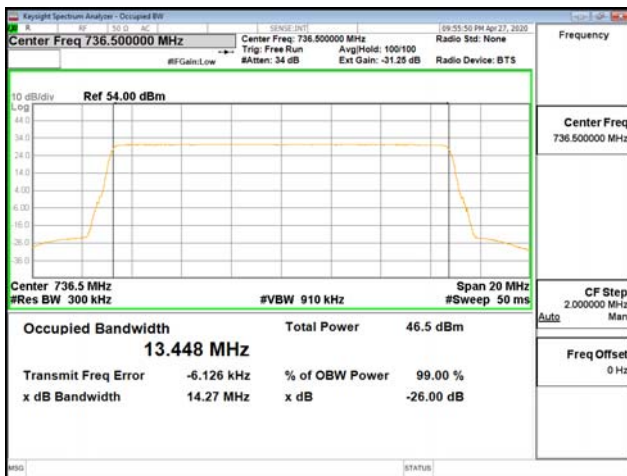
QPSK



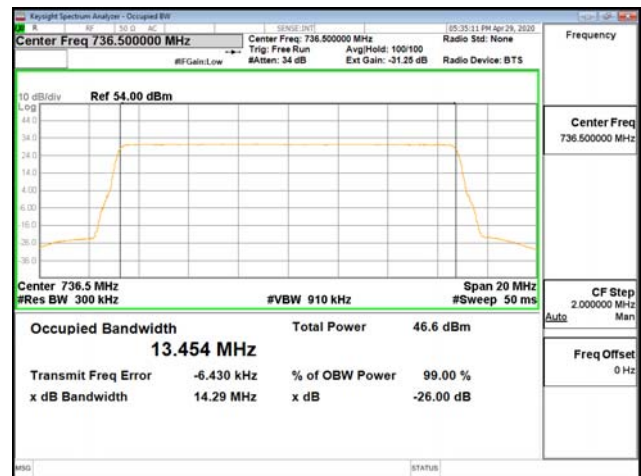
16QAM



64QAM

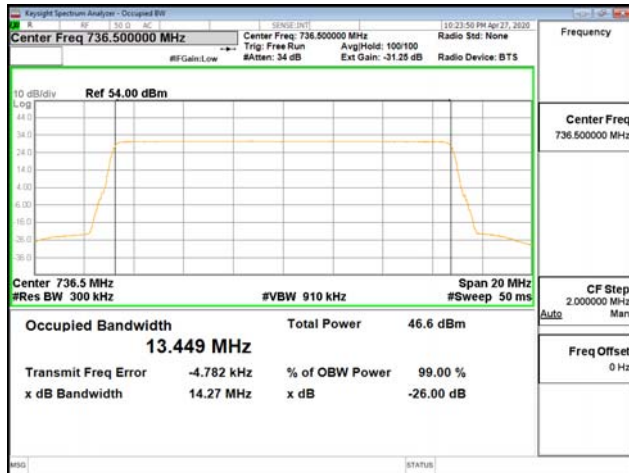


256QAM

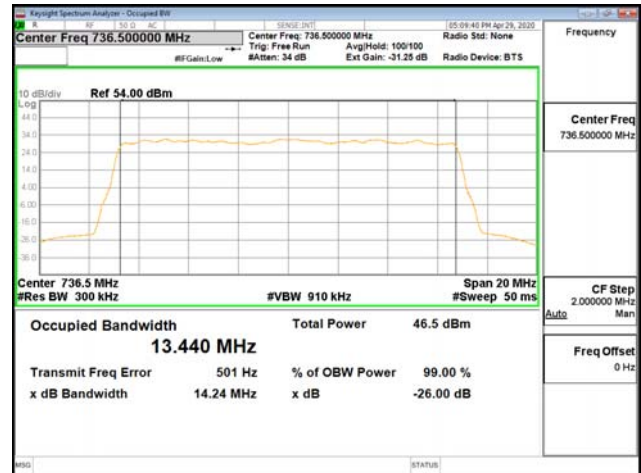


ANT3

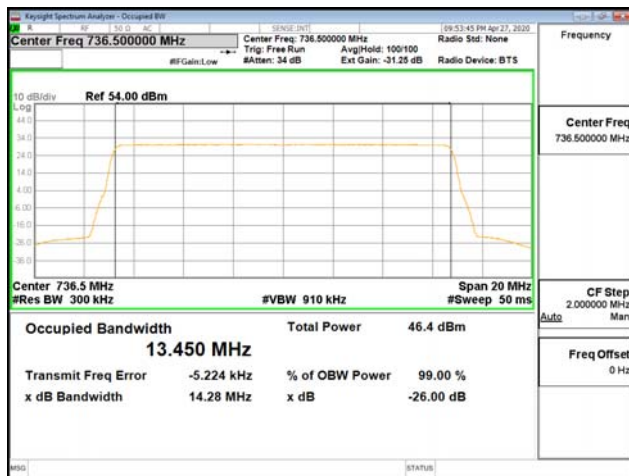
QPSK



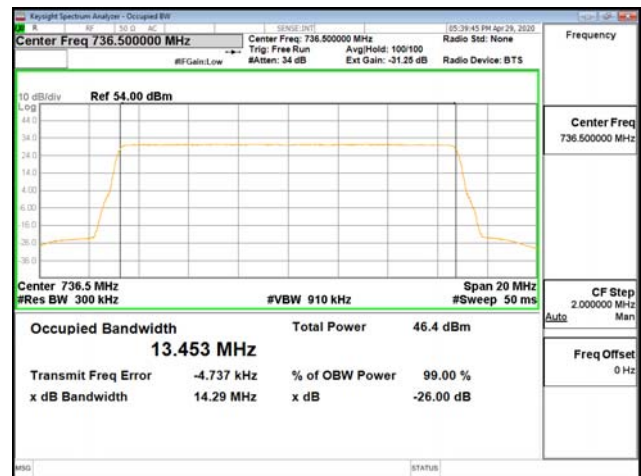
16QAM



64QAM



256QAM



 CTK Co., Ltd. The Prime Leader of Global Regulatory Certification	CTK Co., Ltd. (Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea Tel: +82-31-339-9970 Fax: +82-31-624-9501	Report No.: CTK-2020-01890 Page (71) / (146) Pages	
---	--	---	--

6. Spurious Emission at Antenna Terminal

§ 27.53 Emission limits

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Test Procedures :

The RF Output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.

The resolution bandwidth of the spectrum analyzer was set at 100 kHz(below 1 GHz), 1 MHz(Above 1 GHz). Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

Notes :

1. In 9 kHz - 10 kHz and 150 kHz - 30 MHz bands, RBW was reduced to 1% and 10% of the reference bandwidth for measuring unwanted emission level(typically, 100 kHz if the authorized frequency band is below 1 GHz) and power was integrated.(1% = +20 dB, 10% = +10 dB)
2. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its at maximum power, and at the appropriate frequencies.

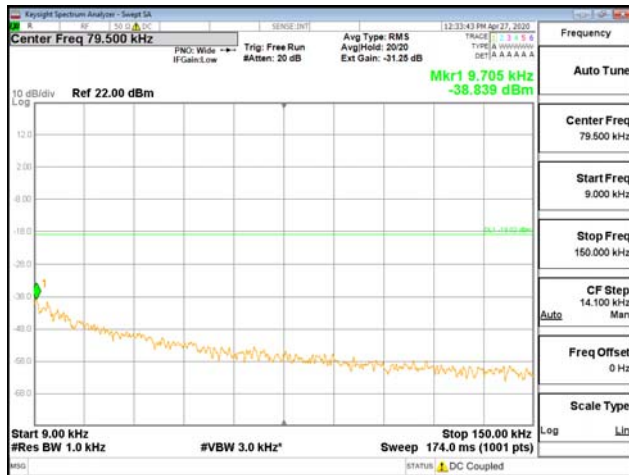
All modulation types were investigated to determine the worst case configuration.

All modulation types of operation were investigated and the worst case configuration results are reported in this section. (Worst case : QPSK, 64QAM)

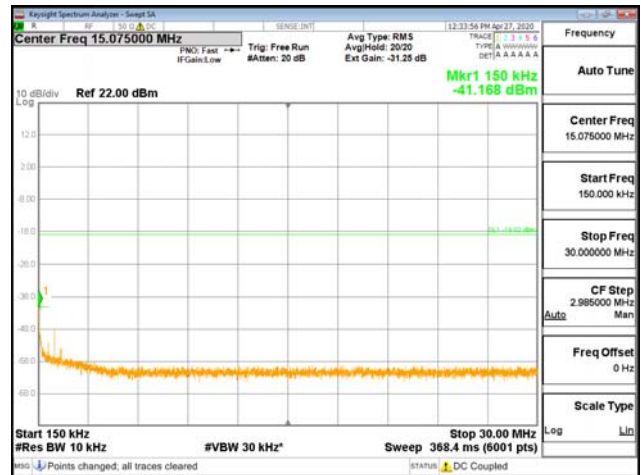
Test Plot at Spurious Emissions

**BW 5 MHz, Bottom, QPSK
ANT0**

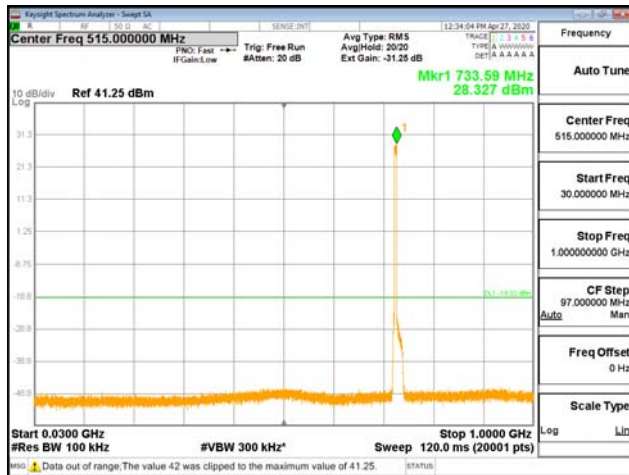
9 kHz - 150 kHz



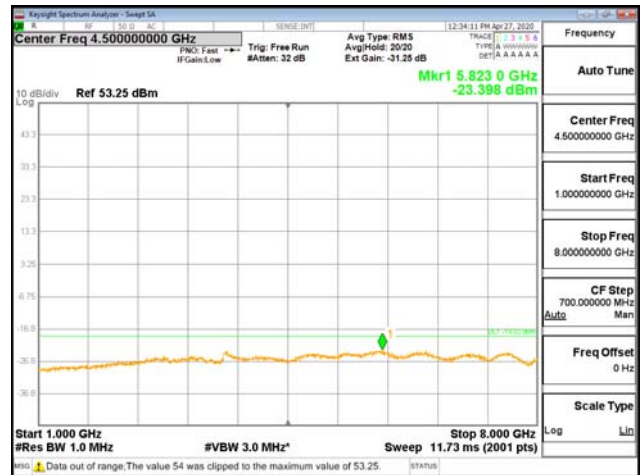
150 kHz - 30 MHz



30 MHz - 1000 MHz

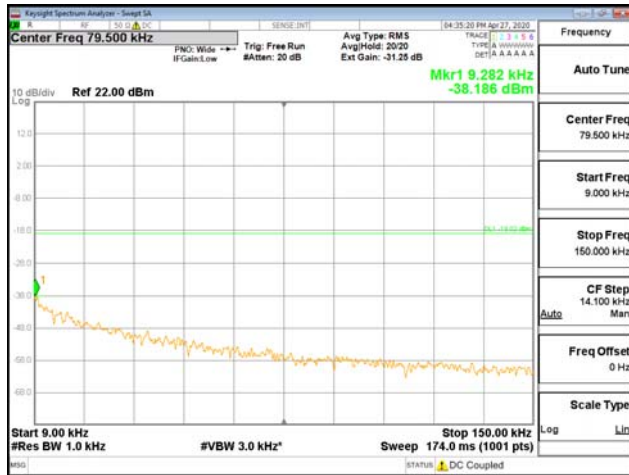


1000 MHz - 8000 MHz

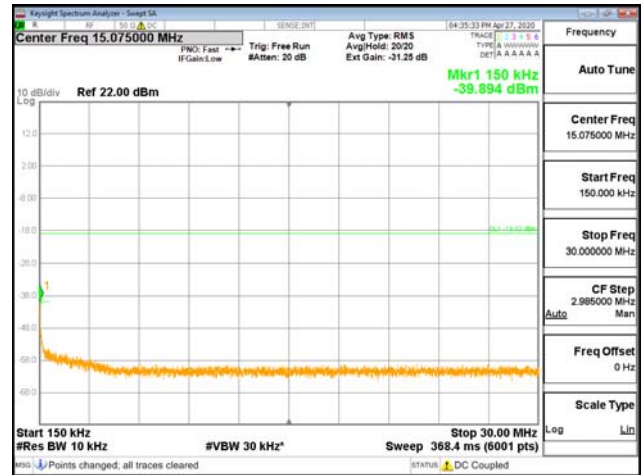


ANT1

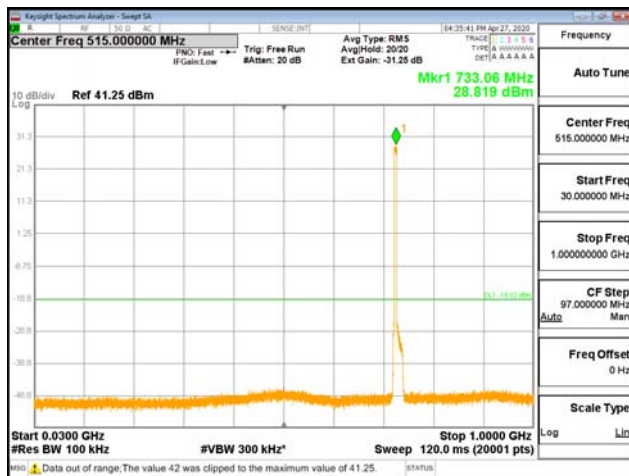
9 kHz - 150 kHz



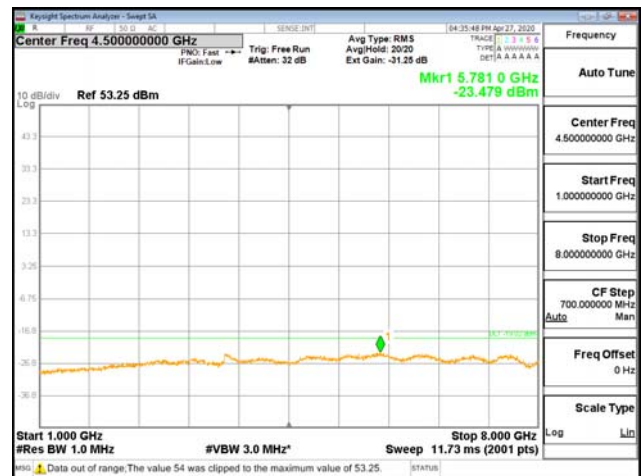
150 kHz - 30 MHz



30 MHz - 1000 MHz

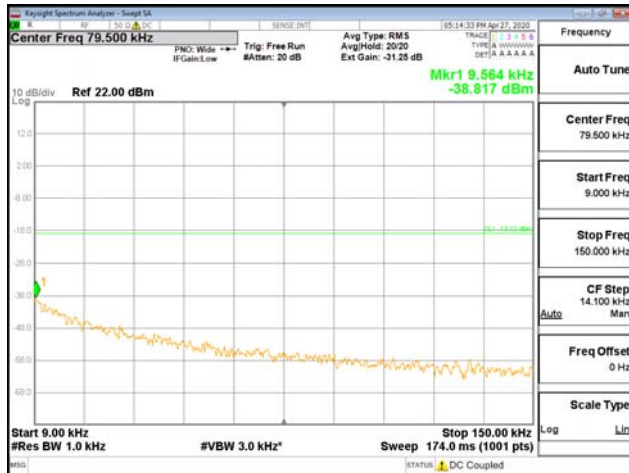


1000 MHz - 8000 MHz

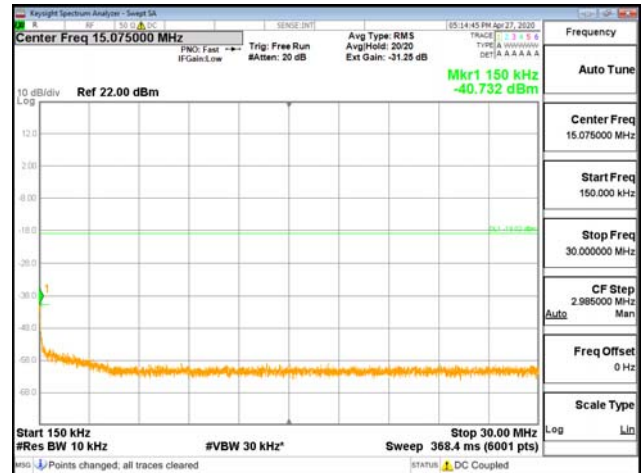


ANT2

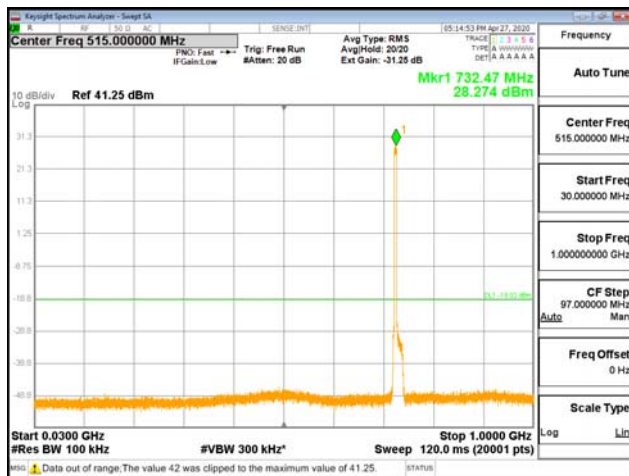
9 kHz - 150 kHz



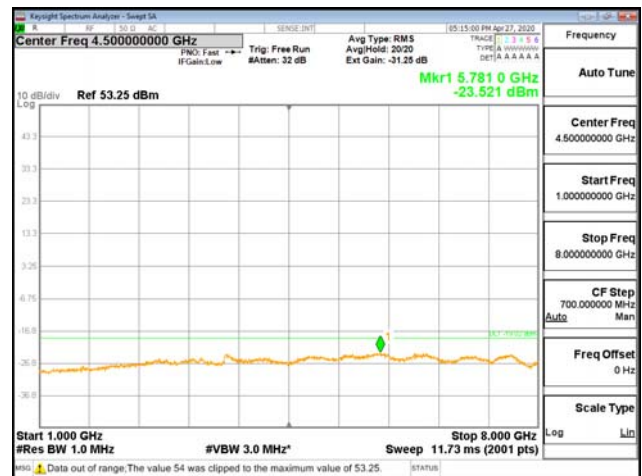
150 kHz - 30 MHz



30 MHz - 1000 MHz

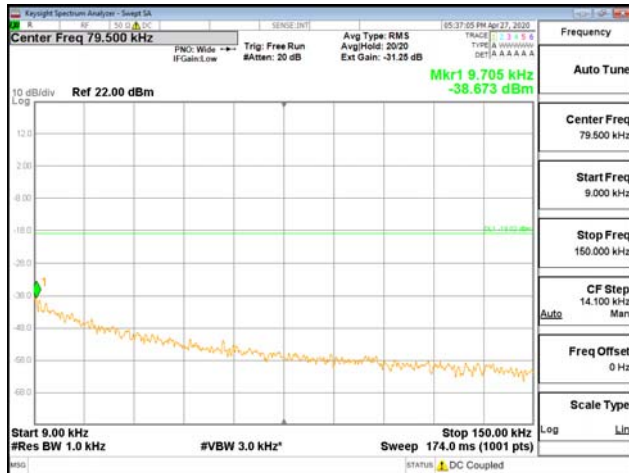


1000 MHz - 8000 MHz

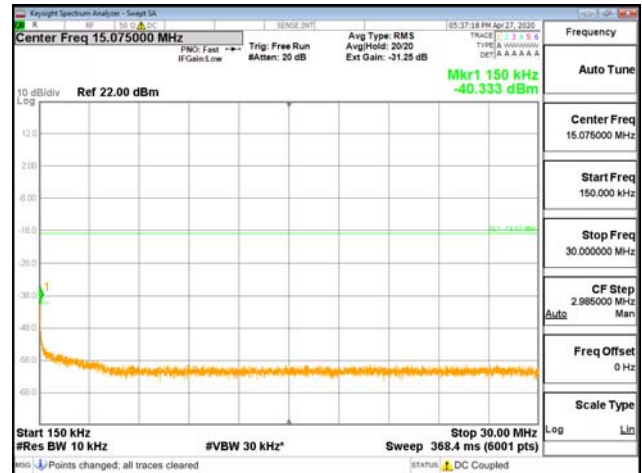


ANT3

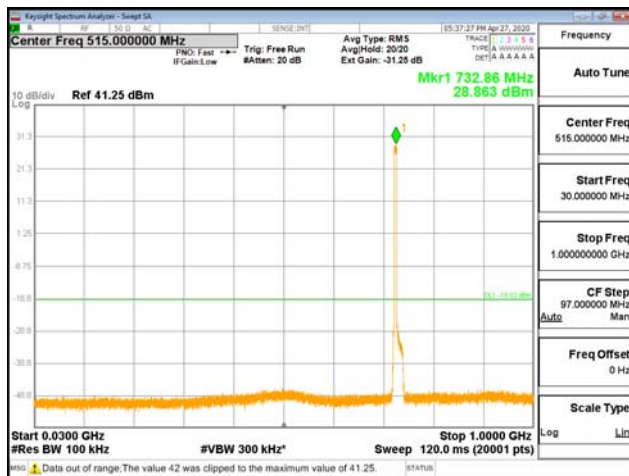
9 kHz - 150 kHz



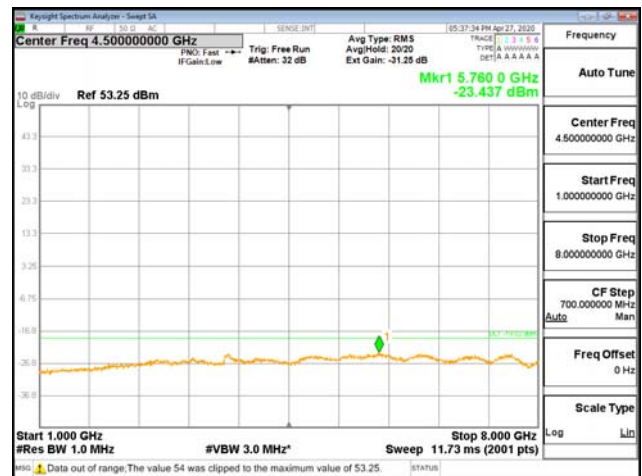
150 kHz - 30 MHz



30 MHz - 1000 MHz

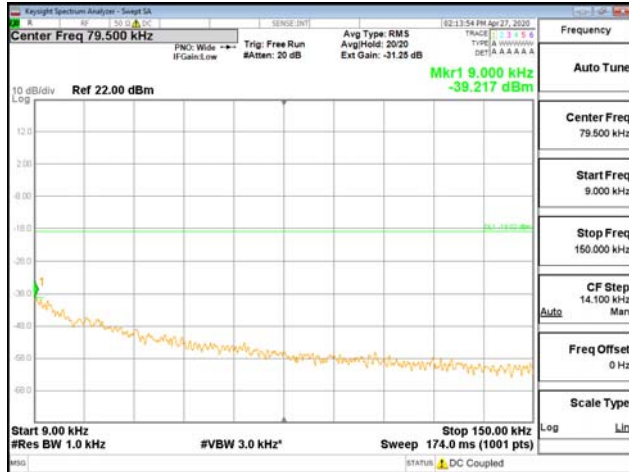


1000 MHz - 8000 MHz

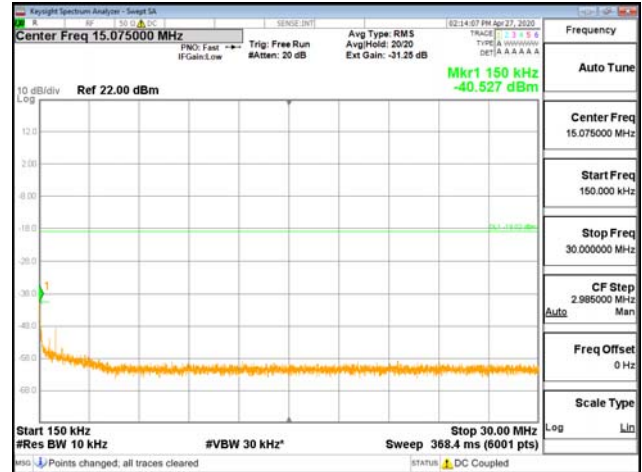


**BW 5MHz, Bottom, 64QAM
ANT0**

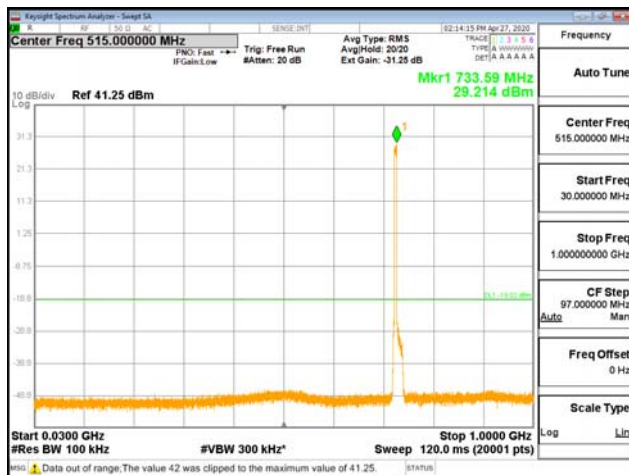
9 kHz - 150 kHz



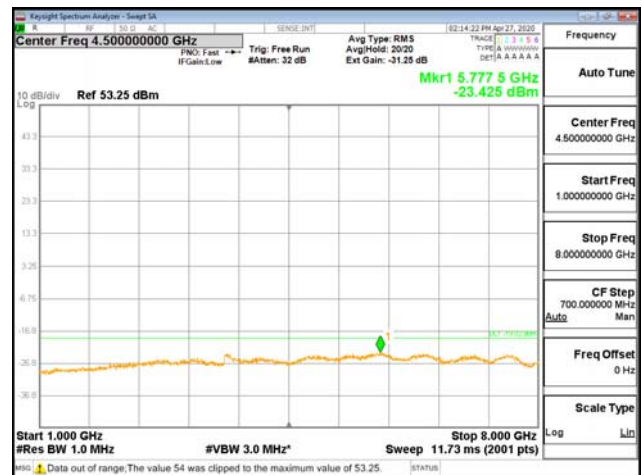
150 kHz - 30 MHz



30 MHz - 1000 MHz

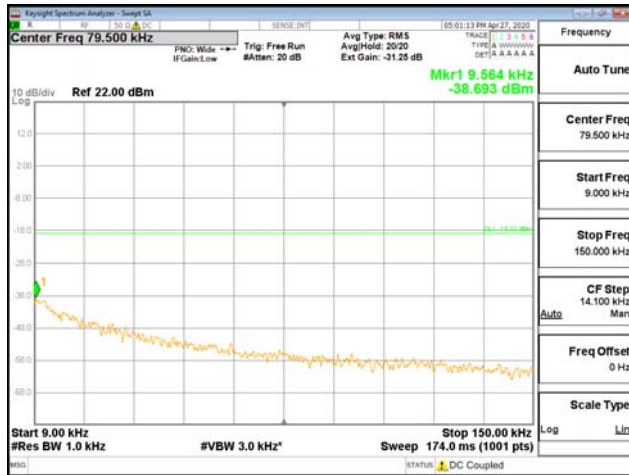


1000 MHz - 8000 MHz

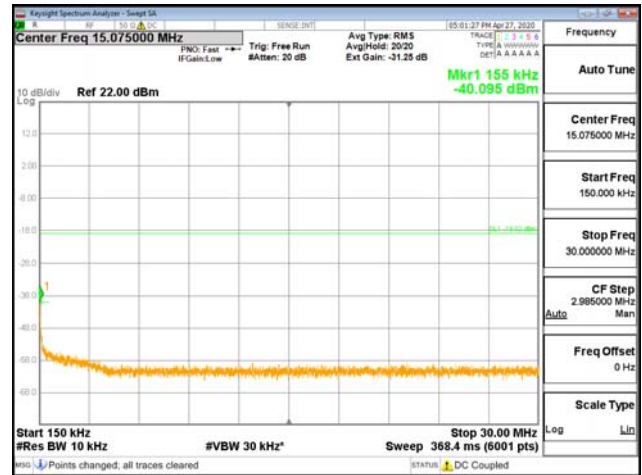


ANT1

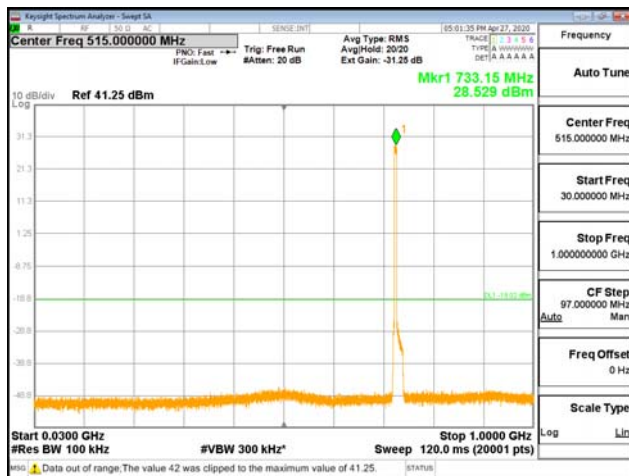
9 kHz - 150 kHz



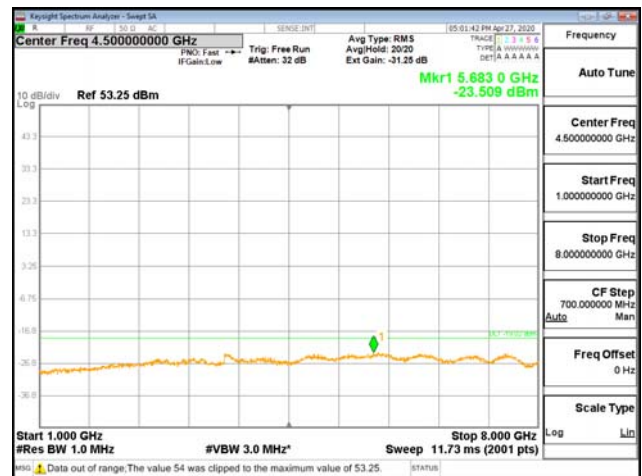
150 kHz - 30 MHz



30 MHz - 1000 MHz

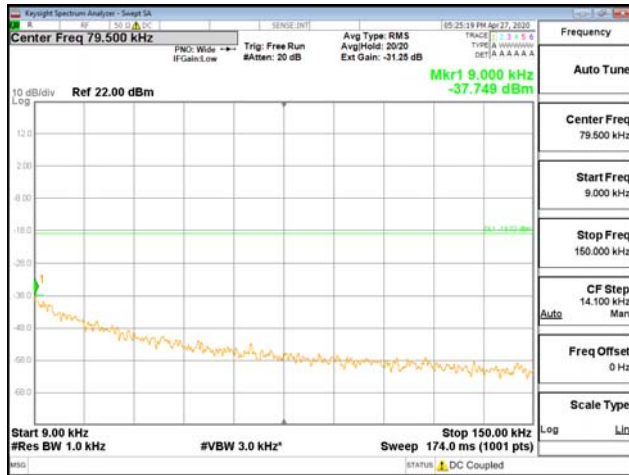


1000 MHz - 8000 MHz

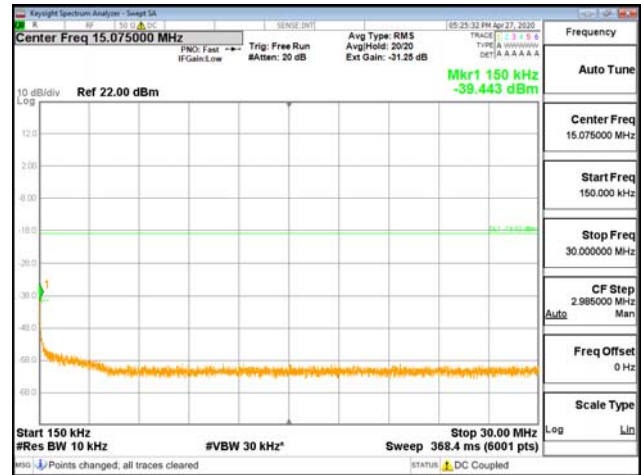


ANT2

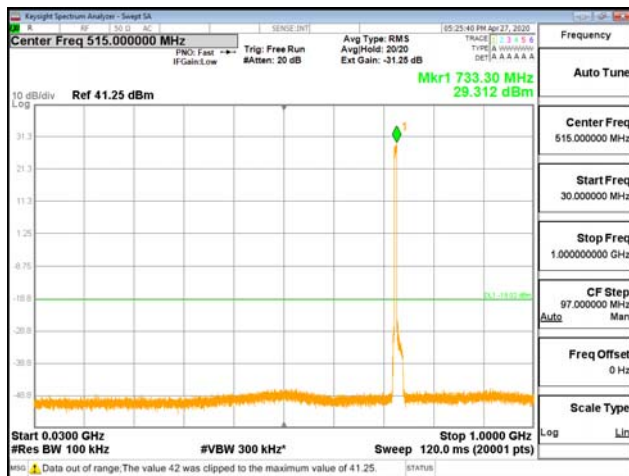
9 kHz - 150 kHz



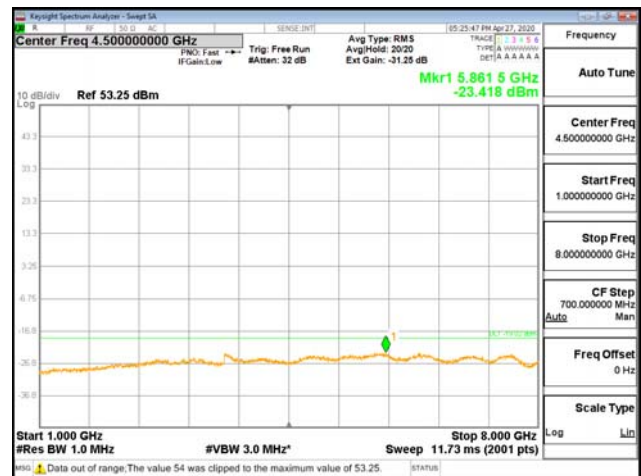
150 kHz - 30 MHz



30 MHz - 1000 MHz

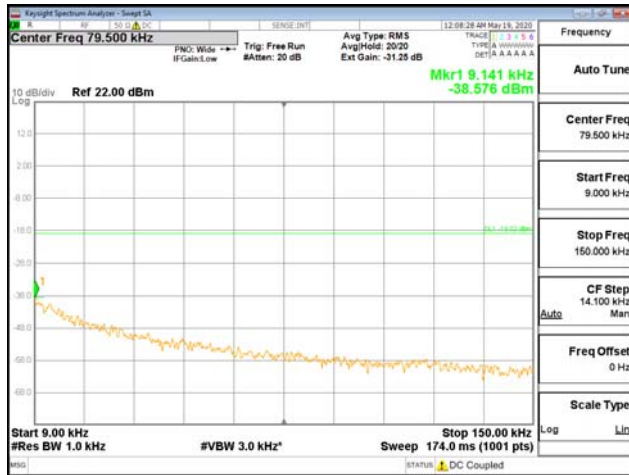


1000 MHz - 8000 MHz

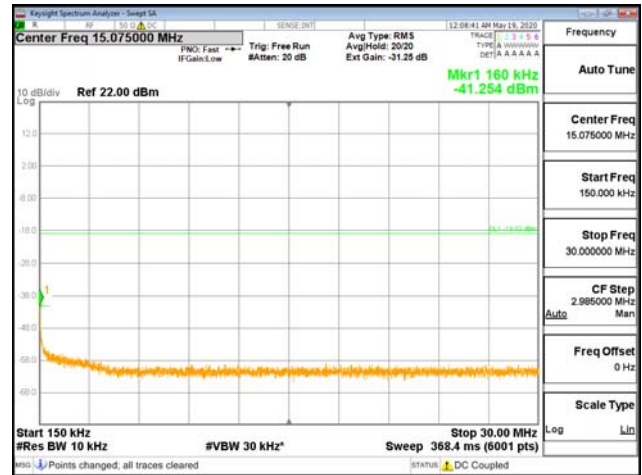


ANT3

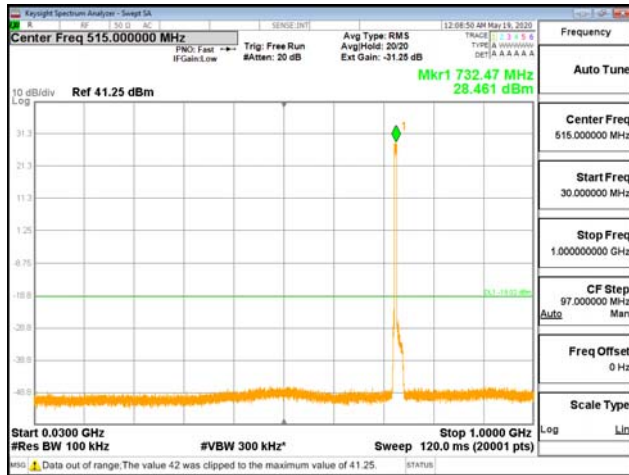
9 kHz - 150 kHz



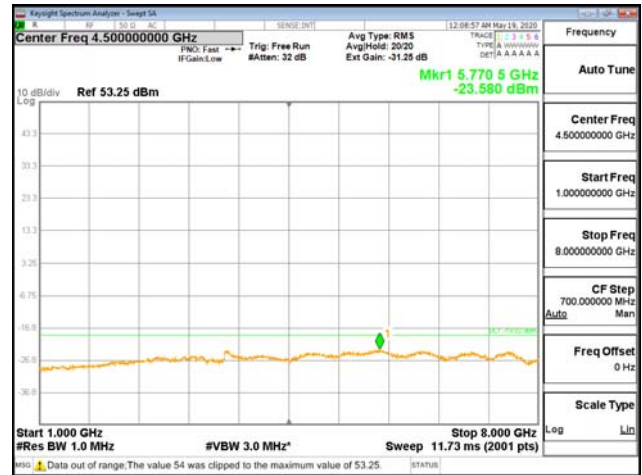
150 kHz - 30 MHz



30 MHz - 1000 MHz

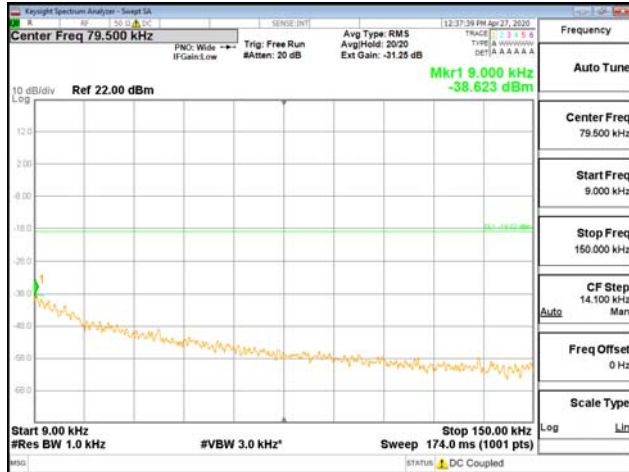


1000 MHz - 8000 MHz

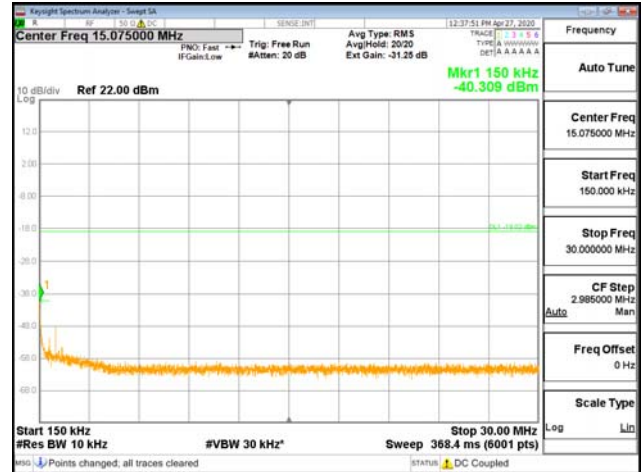


**BW 5MHz, Middle, QPSK
ANT0**

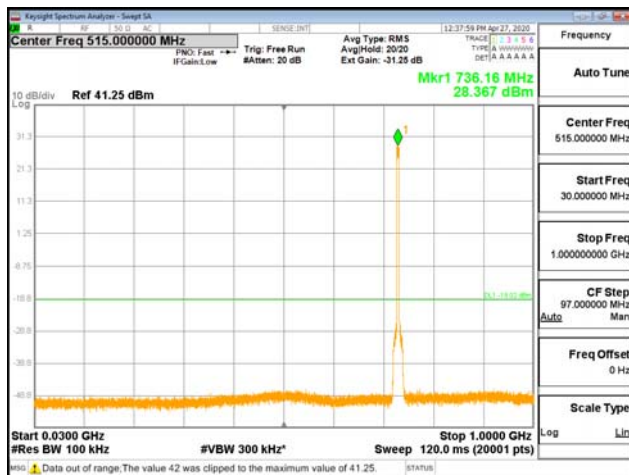
9 kHz - 150 kHz



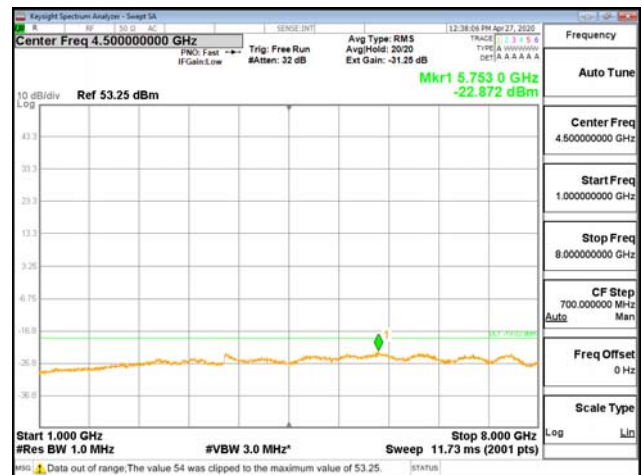
150 kHz - 30 MHz



30 MHz - 1000 MHz

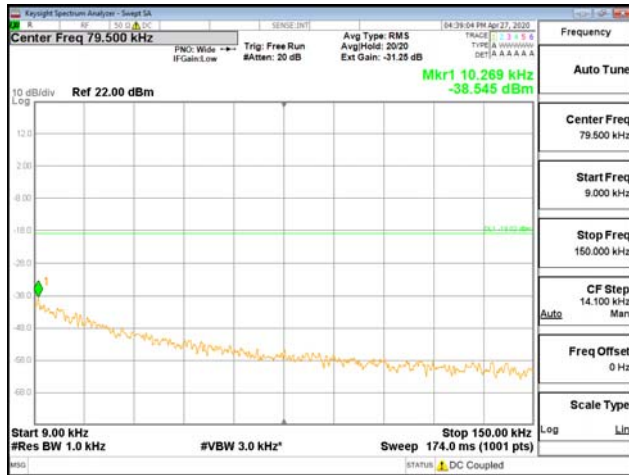


1000 MHz - 8000 MHz

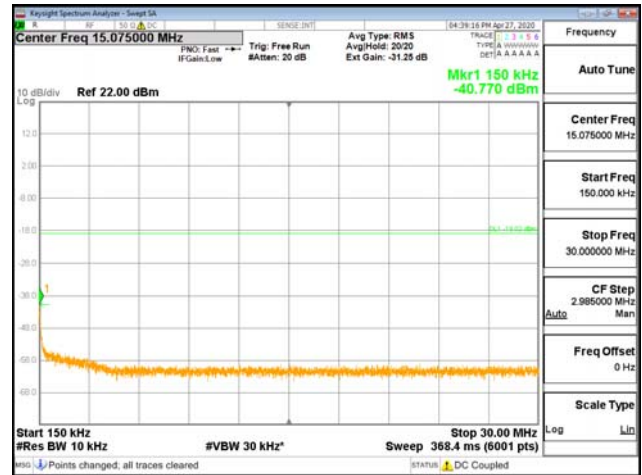


ANT1

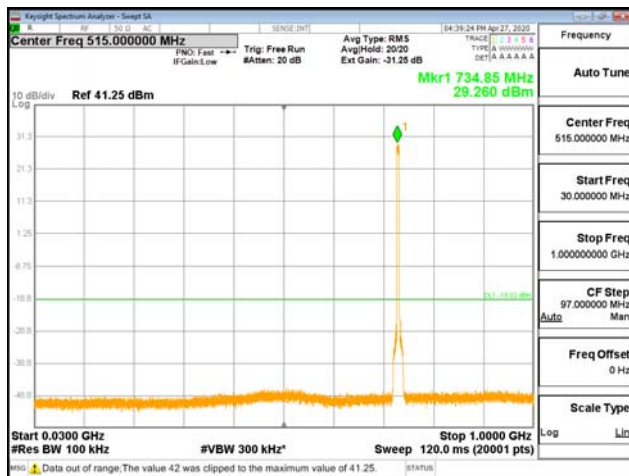
9 kHz - 150 kHz



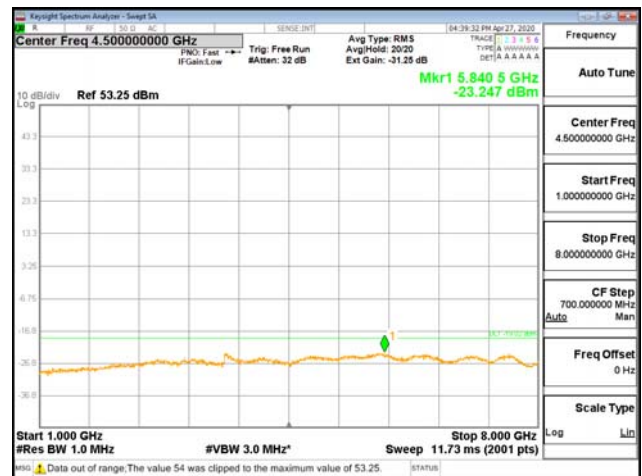
150 kHz - 30 MHz



30 MHz - 1000 MHz

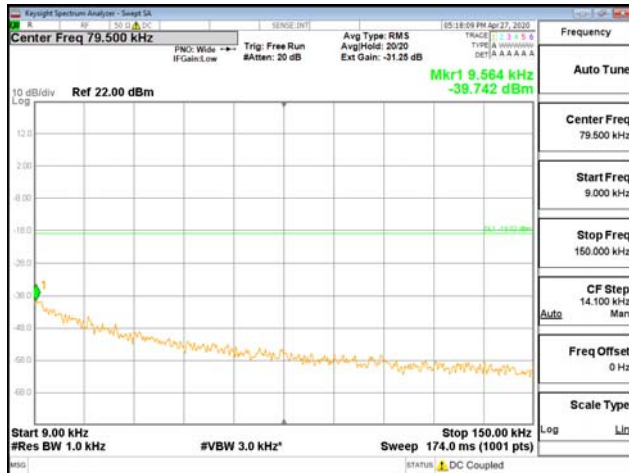


1000 MHz - 8000 MHz

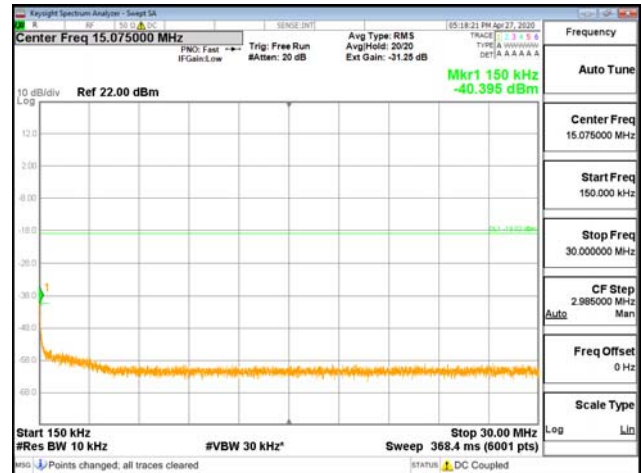


ANT2

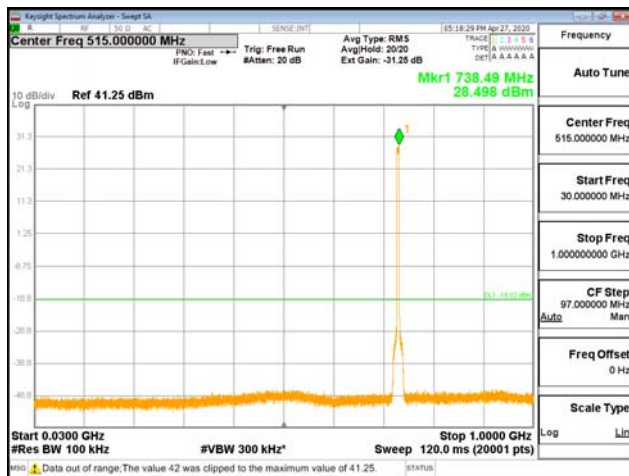
9 kHz - 150 kHz



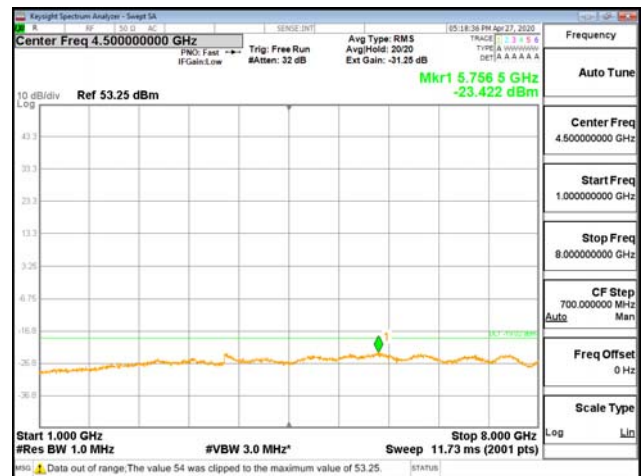
150 kHz - 30 MHz



30 MHz - 1000 MHz

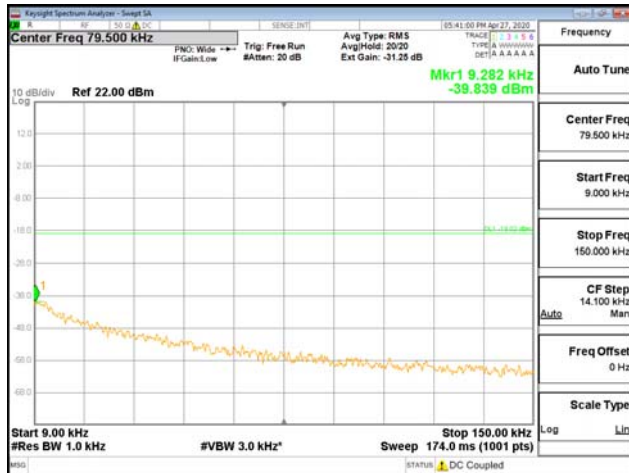


1000 MHz - 8000 MHz

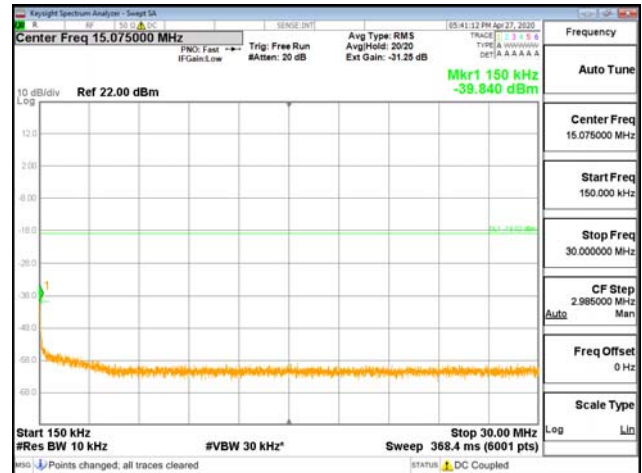


ANT3

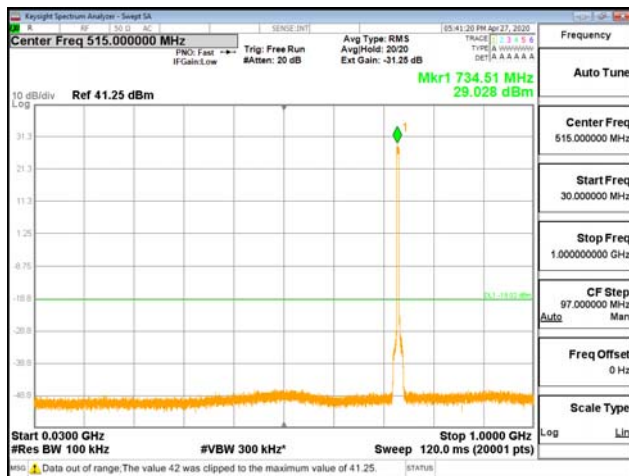
9 kHz - 150 kHz



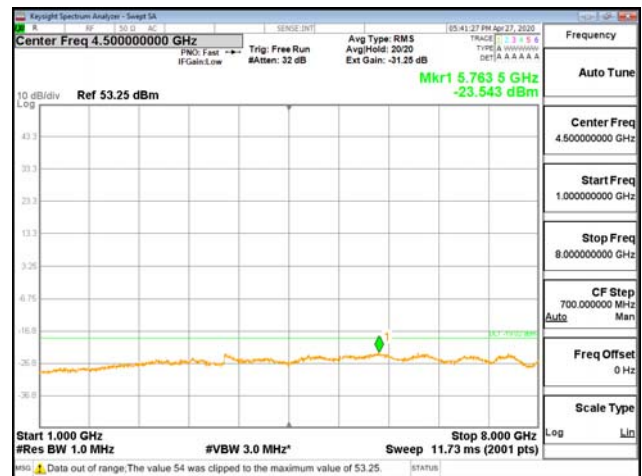
150 kHz - 30 MHz



30 MHz - 1000 MHz

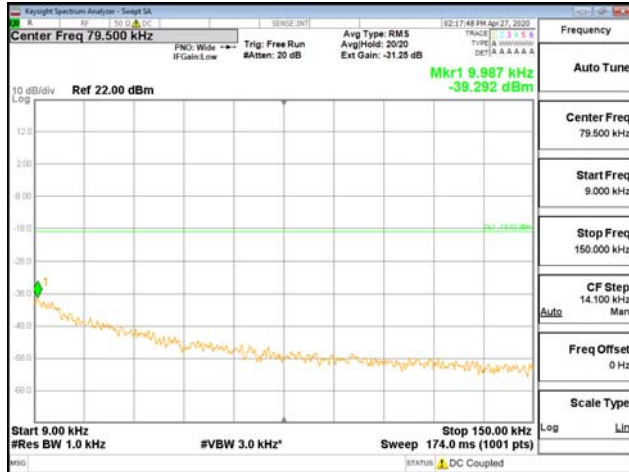


1000 MHz - 8000 MHz

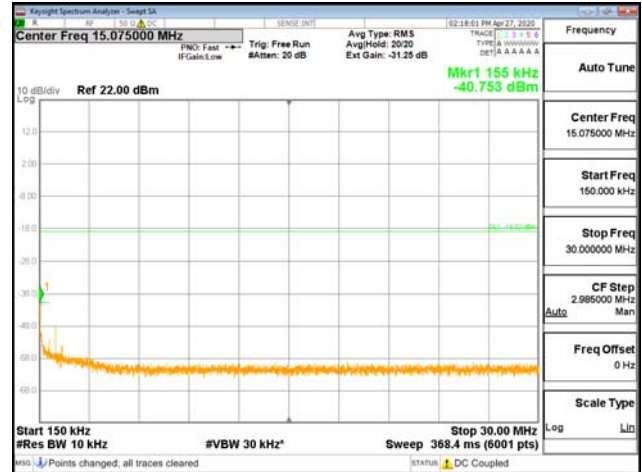


**BW 5MHz, Middle, 64QAM
ANT0**

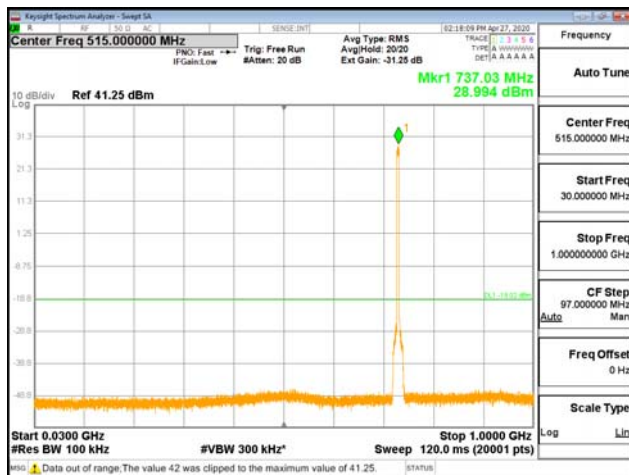
9 kHz - 150 kHz



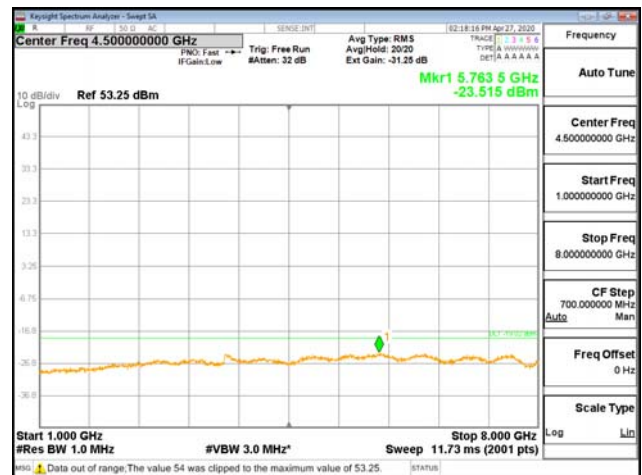
150 kHz - 30 MHz



30 MHz - 1000 MHz

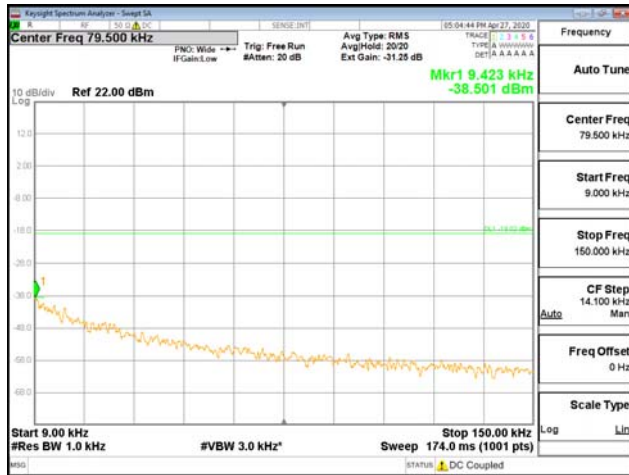


1000 MHz - 8000 MHz

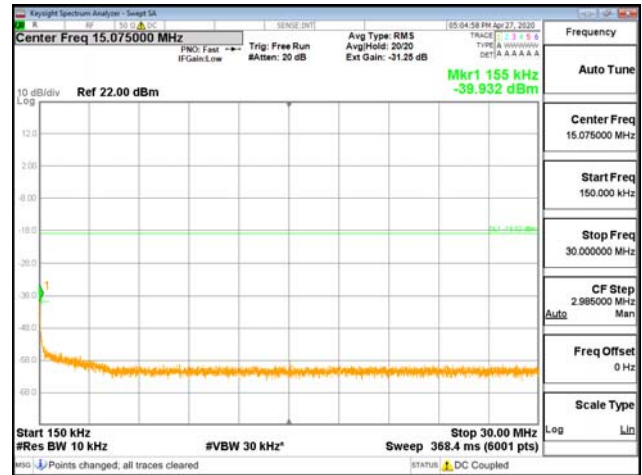


ANT1

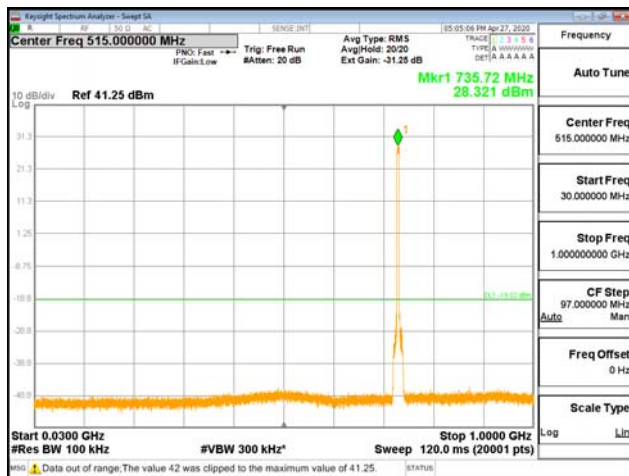
9 kHz - 150 kHz



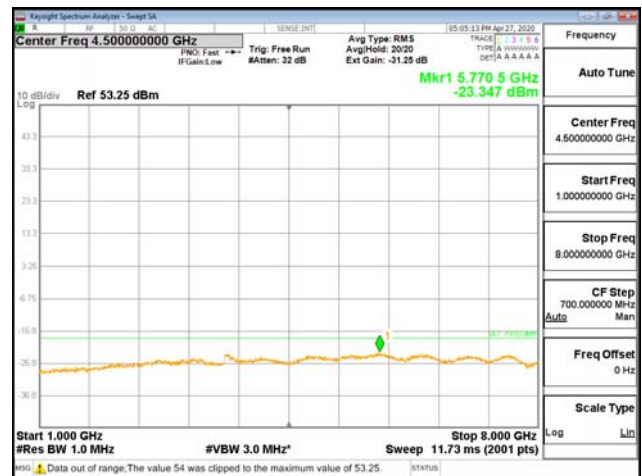
150 kHz - 30 MHz



30 MHz - 1000 MHz

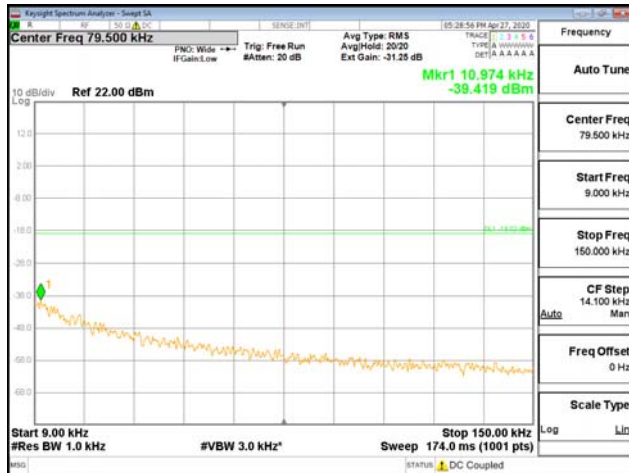


1000 MHz - 8000 MHz

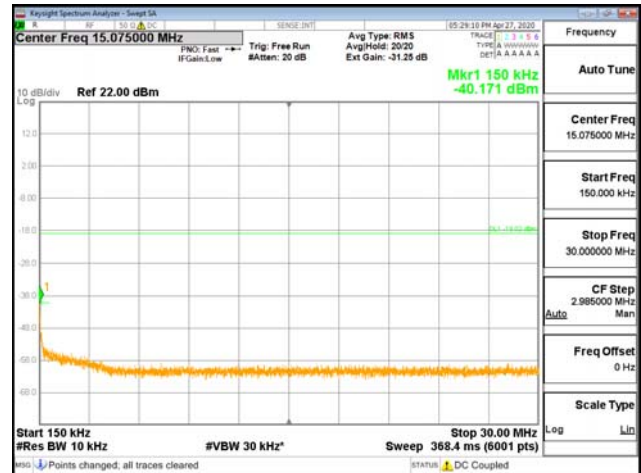


ANT2

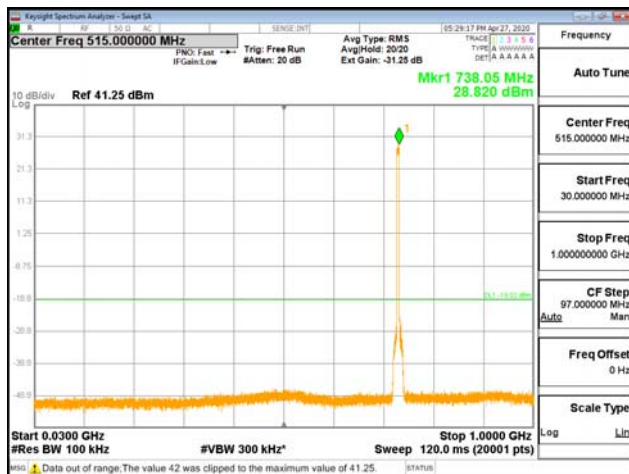
9 kHz - 150 kHz



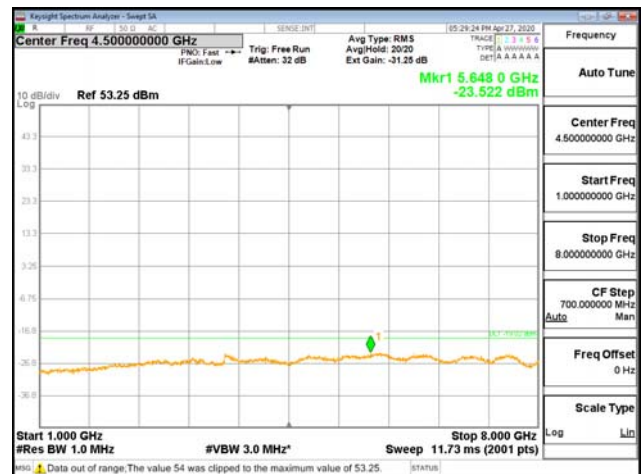
150 kHz - 30 MHz



30 MHz - 1000 MHz

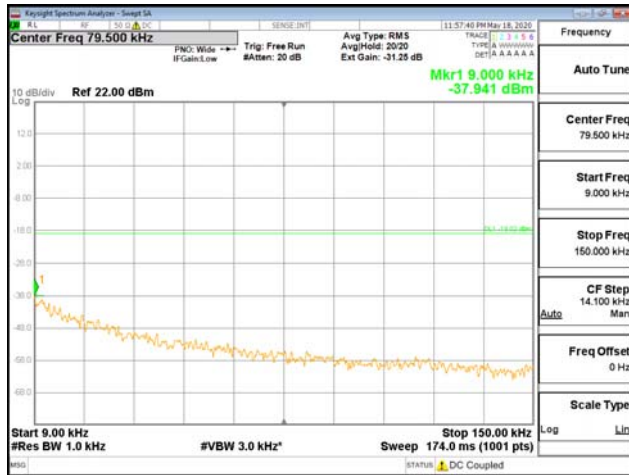


1000 MHz - 8000 MHz

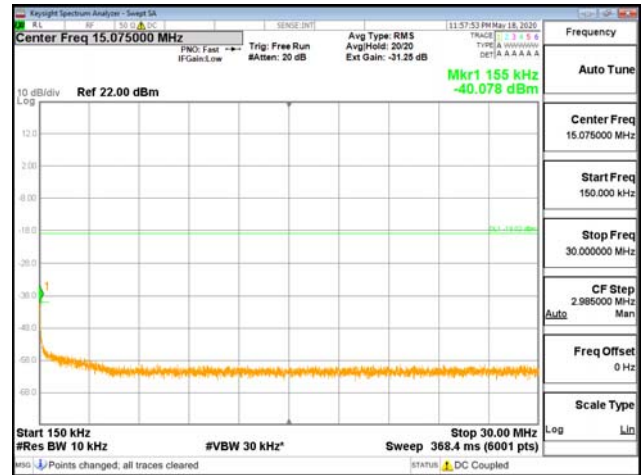


ANT3

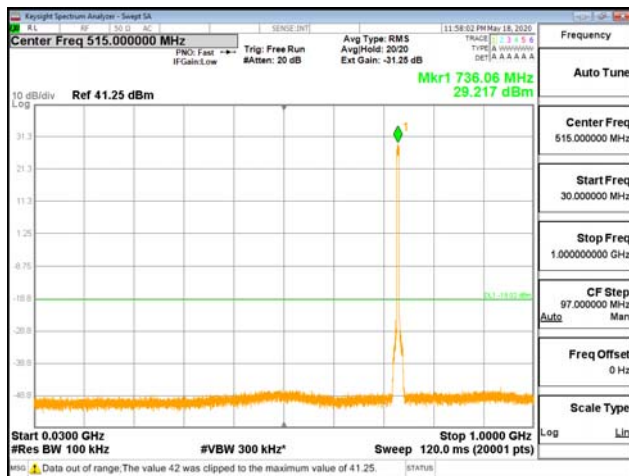
9 kHz - 150 kHz



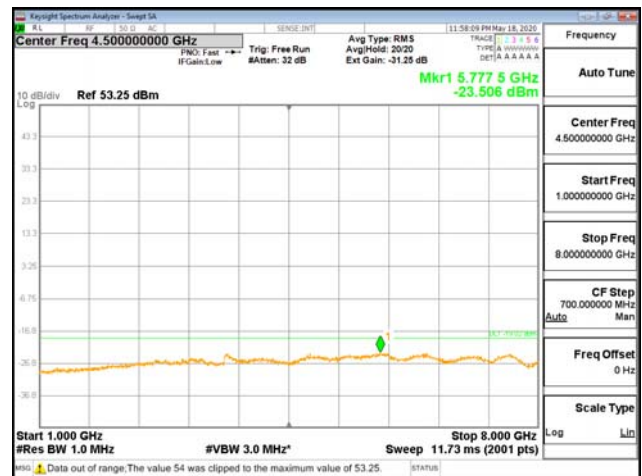
150 kHz - 30 MHz



30 MHz - 1000 MHz

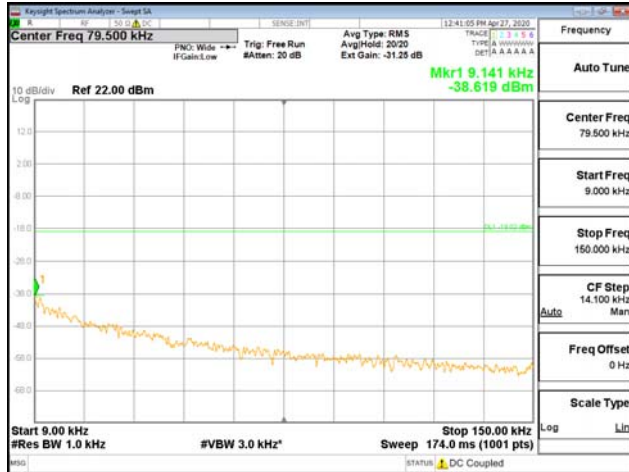


1000 MHz - 8000 MHz

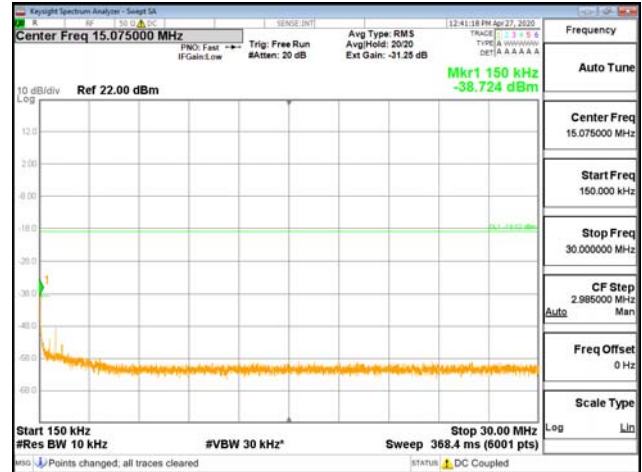


**BW 5MHz, Top, QPSK
ANT0**

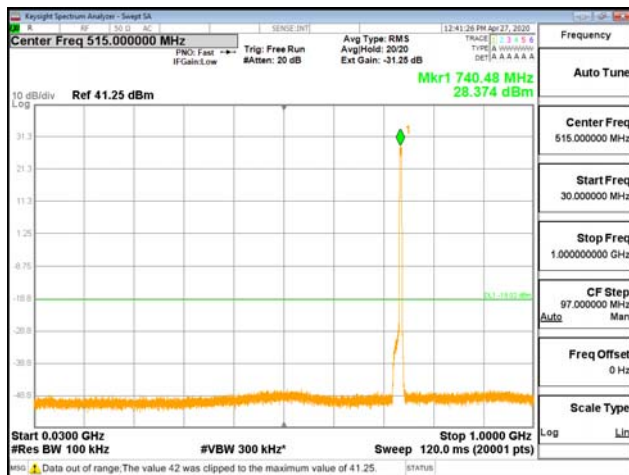
9 kHz - 150 kHz



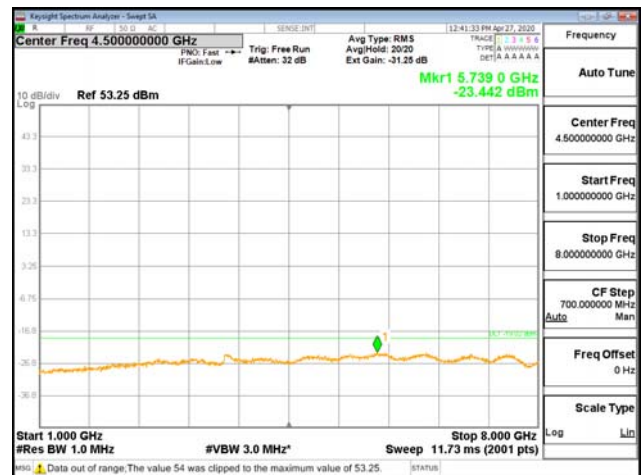
150 kHz - 30 MHz



30 MHz - 1000 MHz

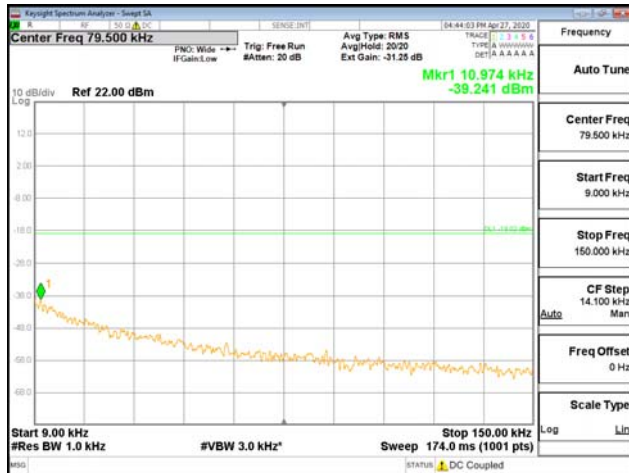


1000 MHz - 8000 MHz

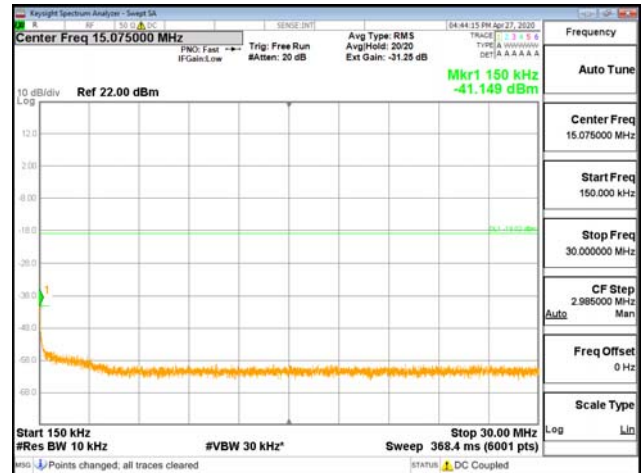


ANT1

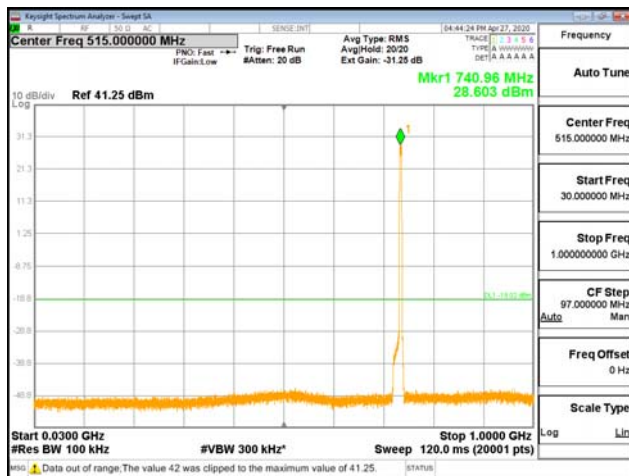
9 kHz - 150 kHz



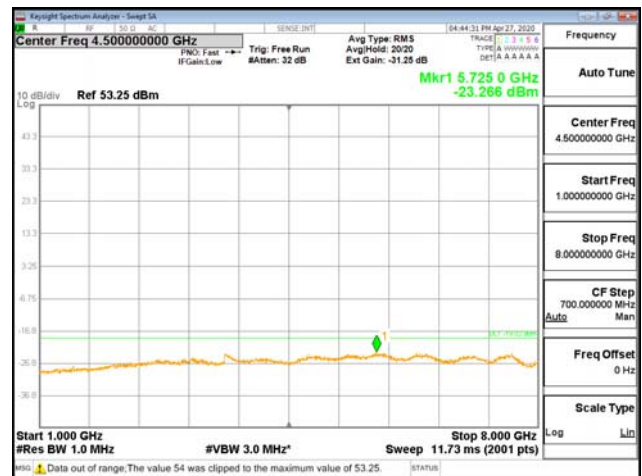
150 kHz - 30 MHz



30 MHz - 1000 MHz

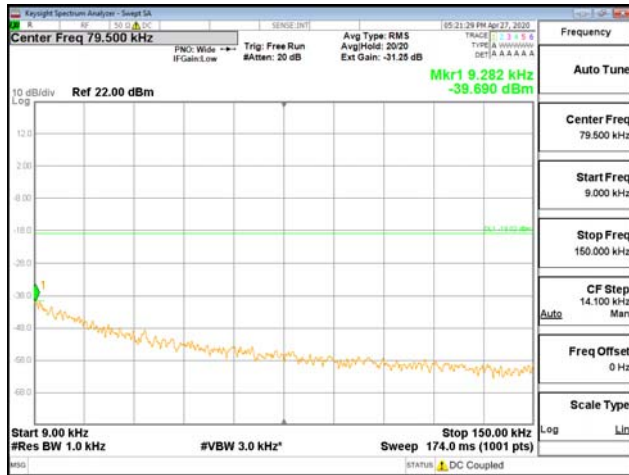


1000 MHz - 8000 MHz

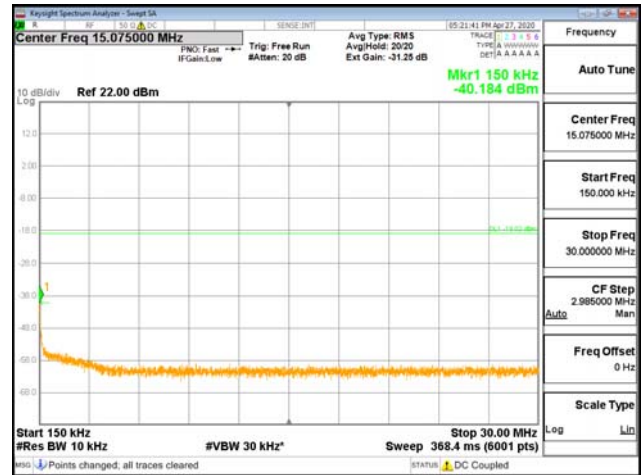


ANT2

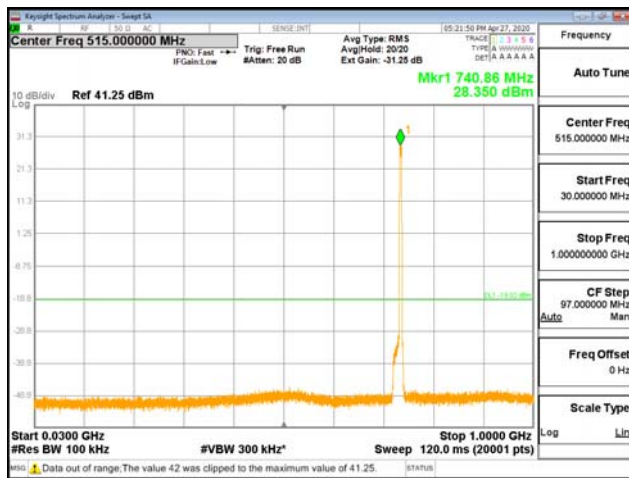
9 kHz - 150 kHz



150 kHz - 30 MHz



30 MHz - 1000 MHz

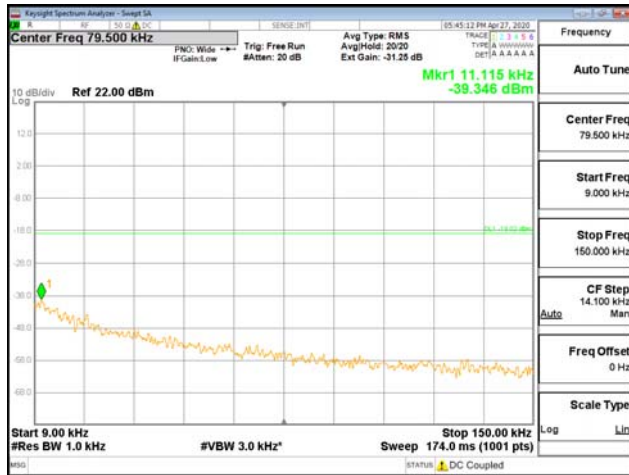


1000 MHz - 8000 MHz

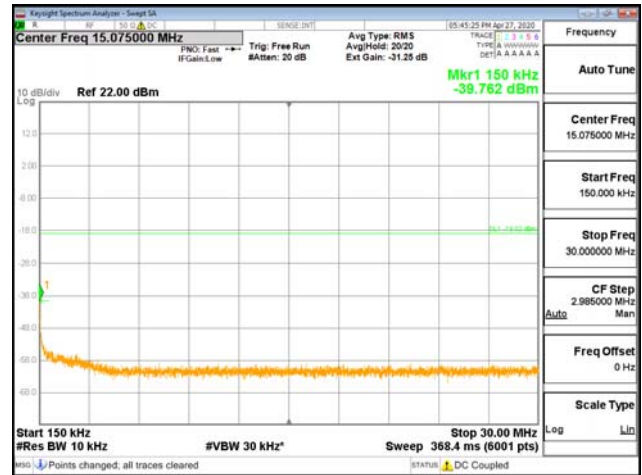


ANT3

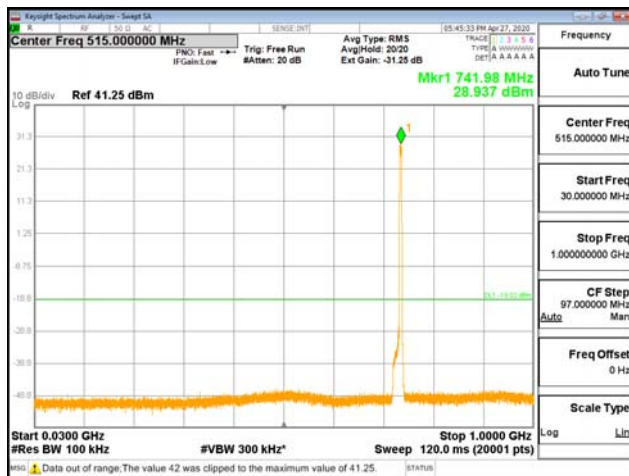
9 kHz - 150 kHz



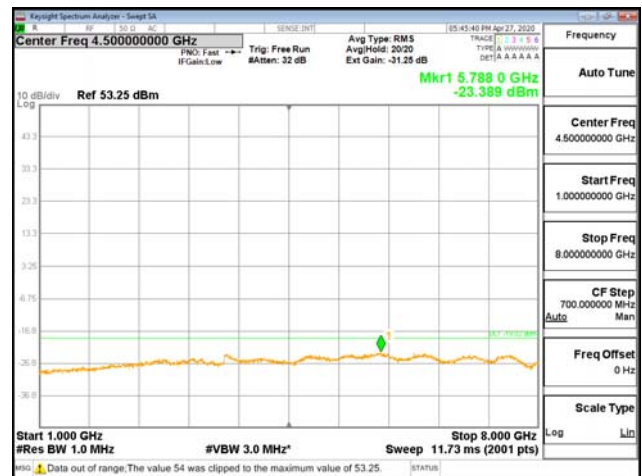
150 kHz - 30 MHz



30 MHz - 1000 MHz

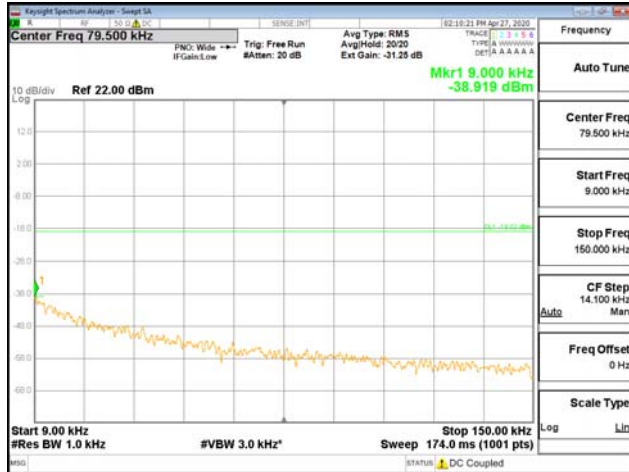


1000 MHz - 8000 MHz

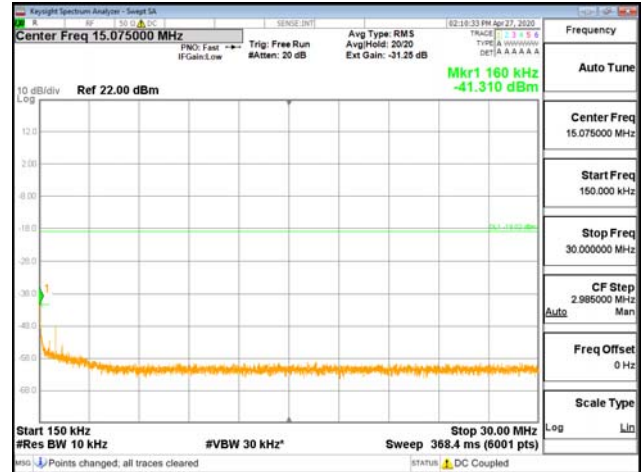


**BW 5MHz, Top, 64QAM
ANT0**

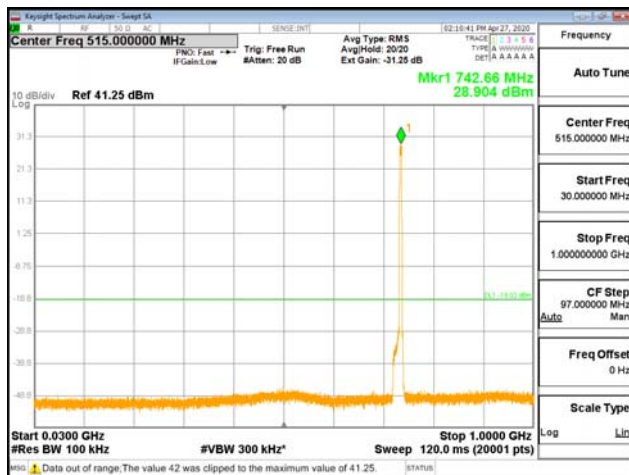
9 kHz - 150 kHz



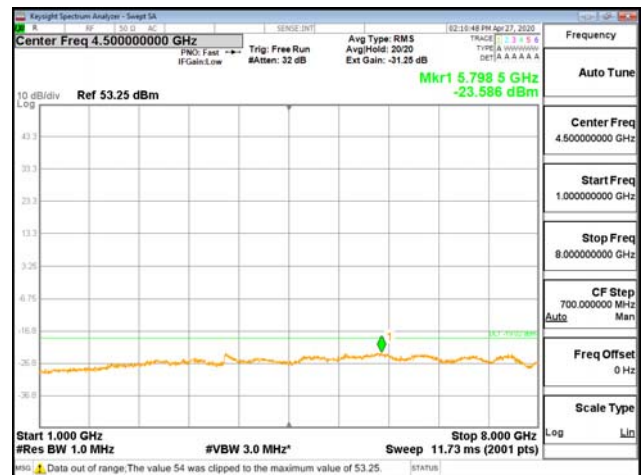
150 kHz - 30 MHz



30 MHz - 1000 MHz

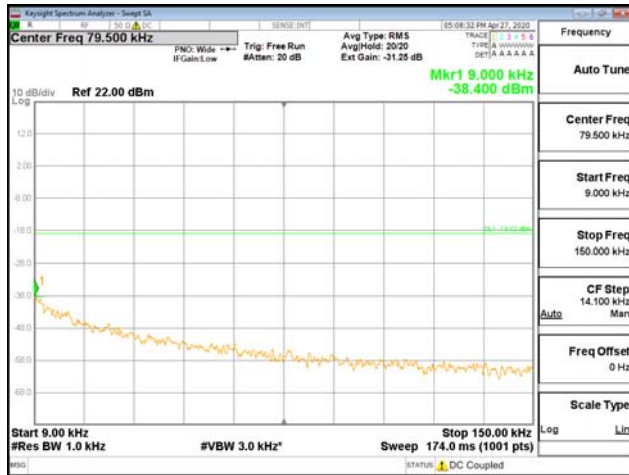


1000 MHz - 8000 MHz

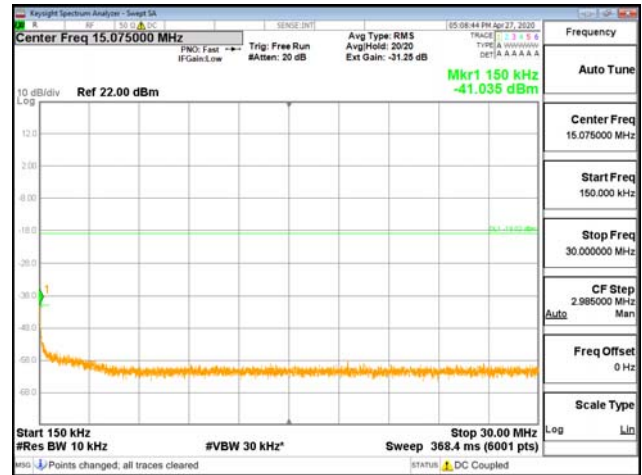


ANT1

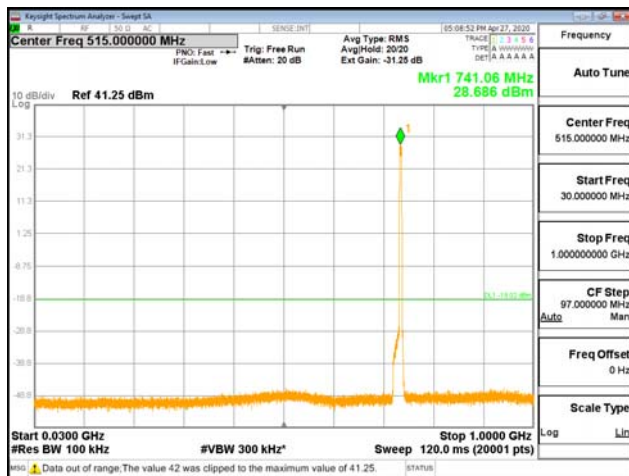
9 kHz - 150 kHz



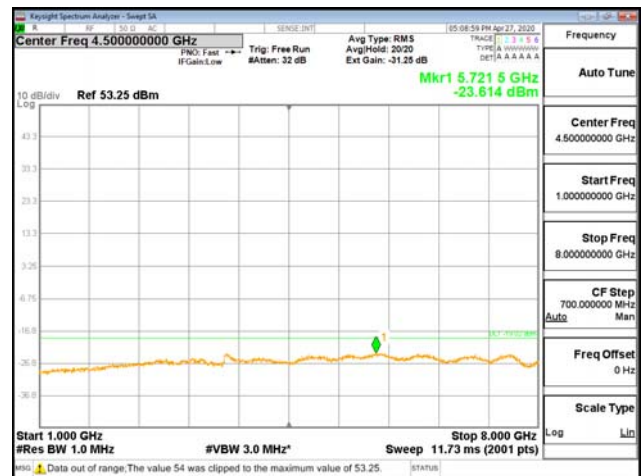
150 kHz - 30 MHz



30 MHz - 1000 MHz

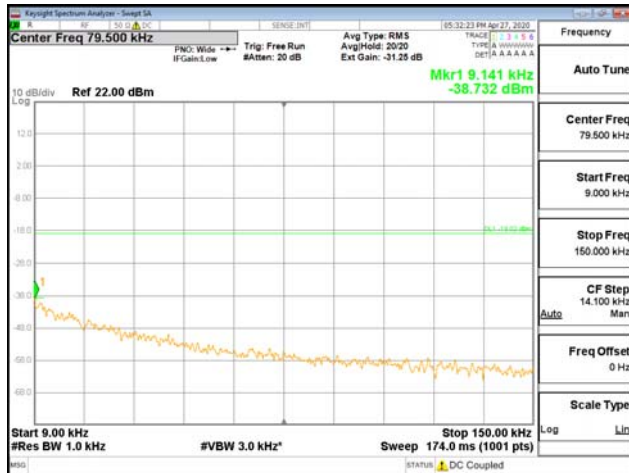


1000 MHz - 8000 MHz

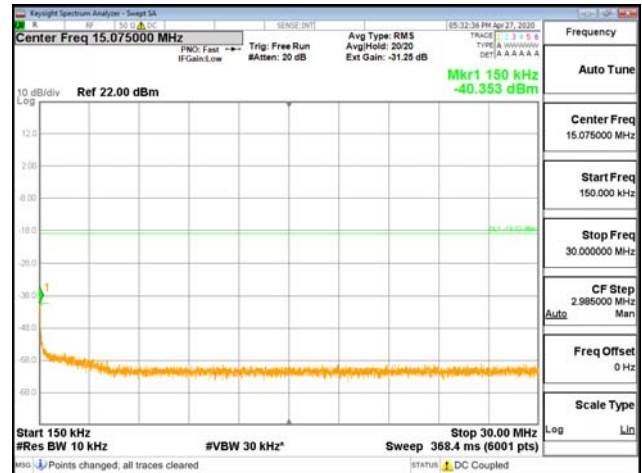


ANT2

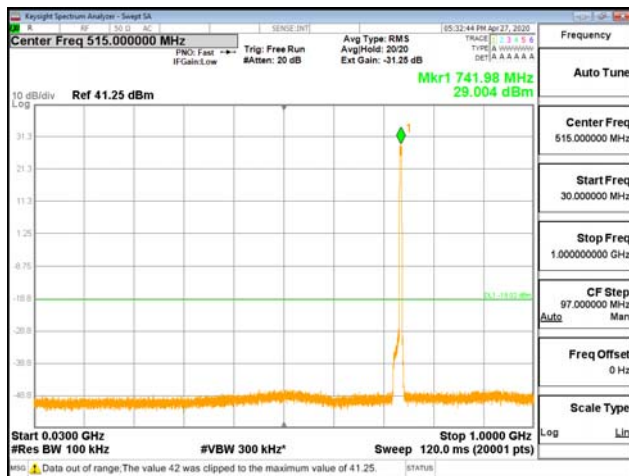
9 kHz - 150 kHz



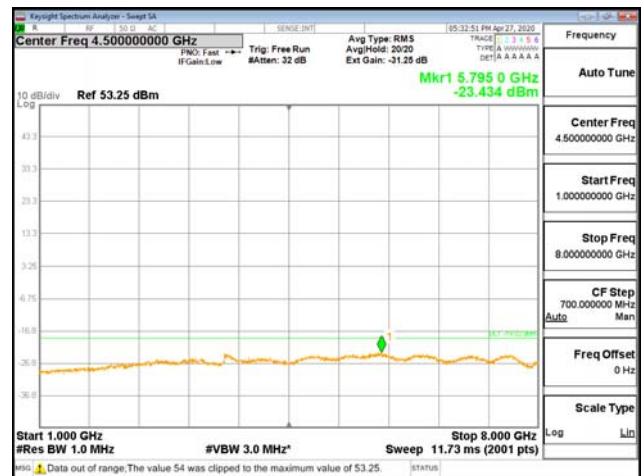
150 kHz - 30 MHz



30 MHz - 1000 MHz

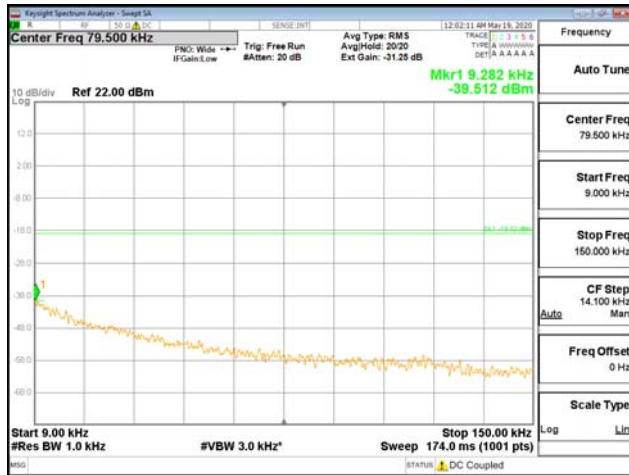


1000 MHz - 8000 MHz

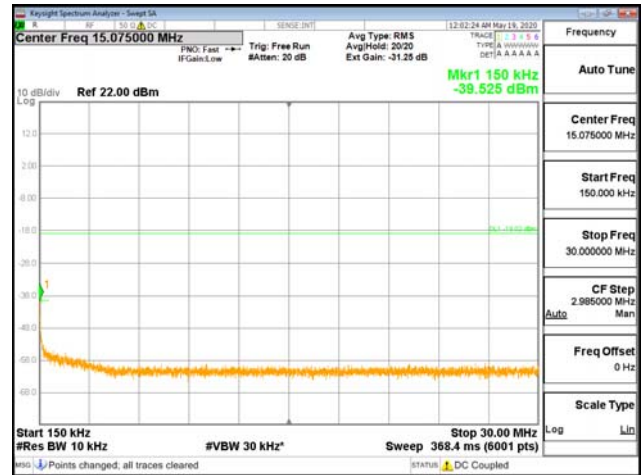


ANT3

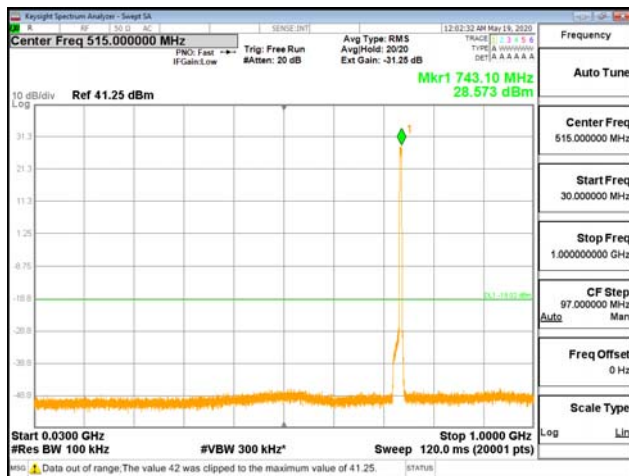
9 kHz - 150 kHz



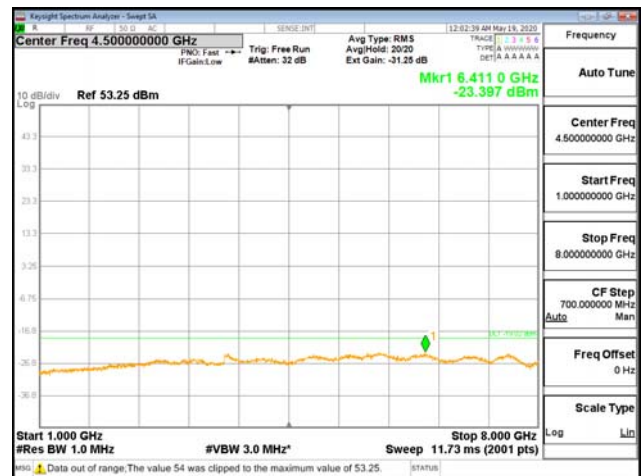
150 kHz - 30 MHz



30 MHz - 1000 MHz

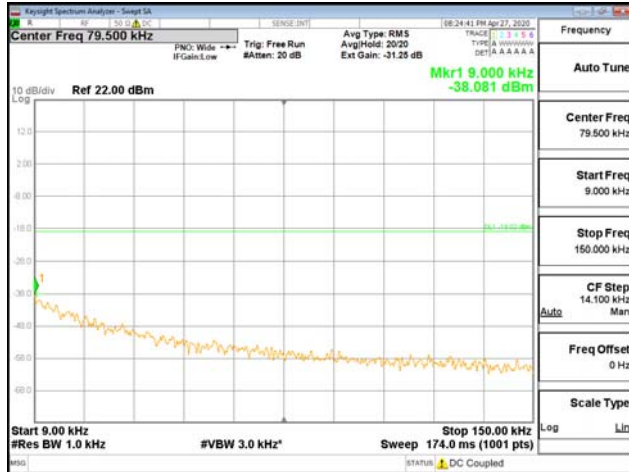


1000 MHz - 8000 MHz

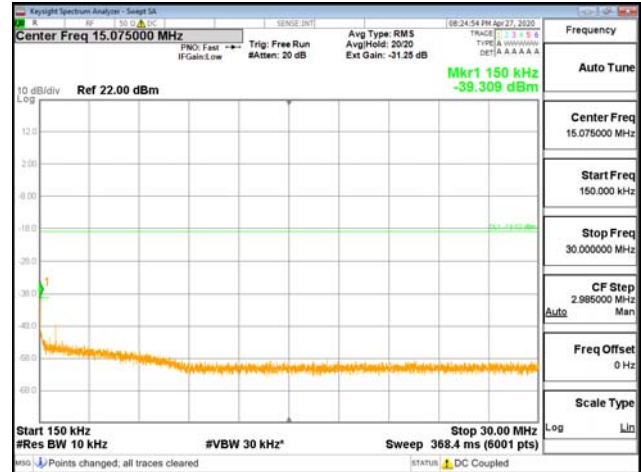


**BW 10MHz, Bottom, QPSK
ANT0**

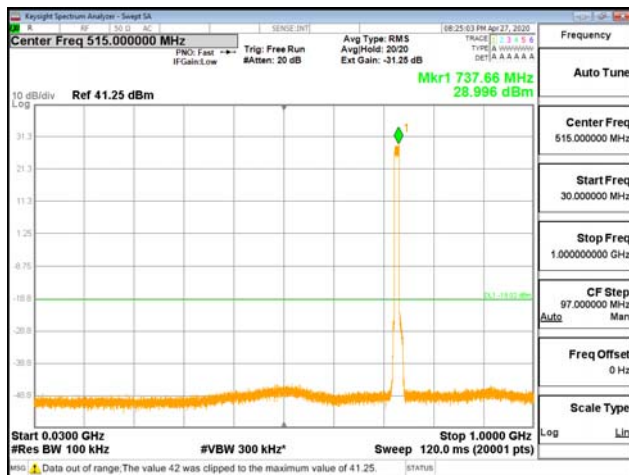
9 kHz - 150 kHz



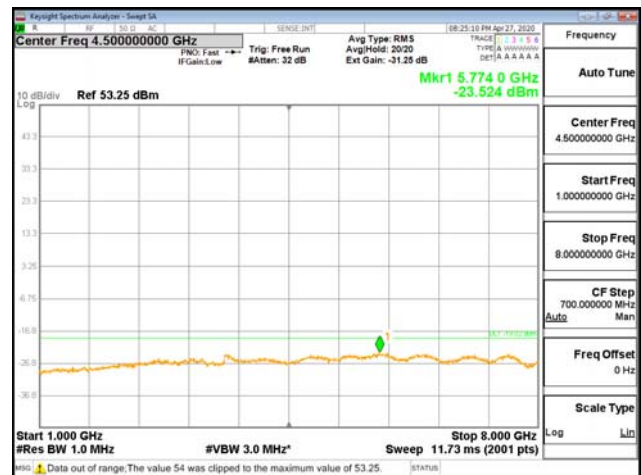
150 kHz - 30 MHz



30 MHz - 1000 MHz

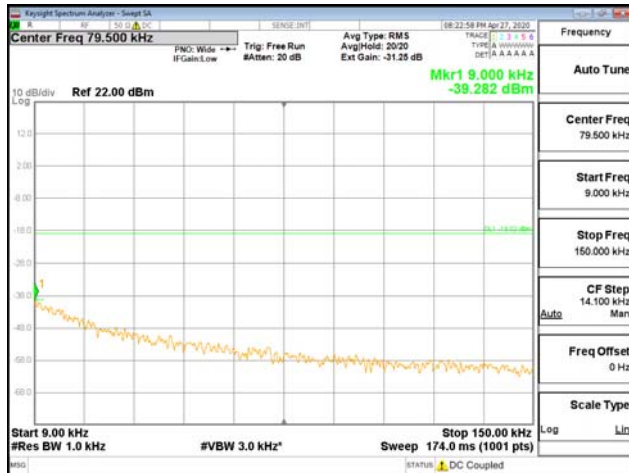


1000 MHz - 8000 MHz

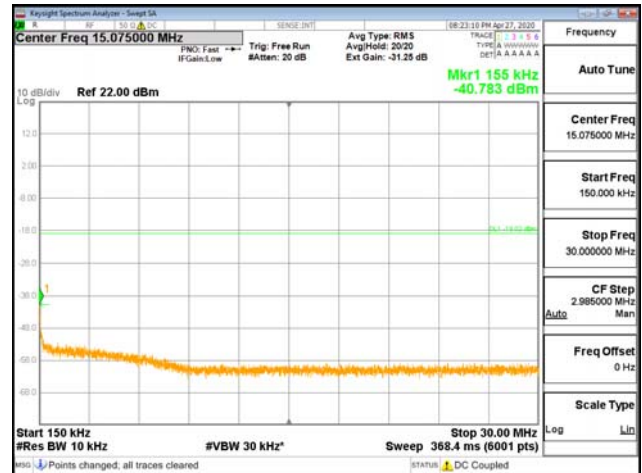


ANT1

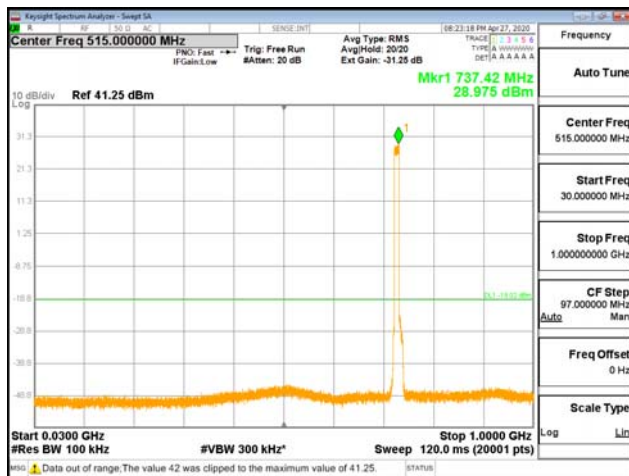
9 kHz - 150 kHz



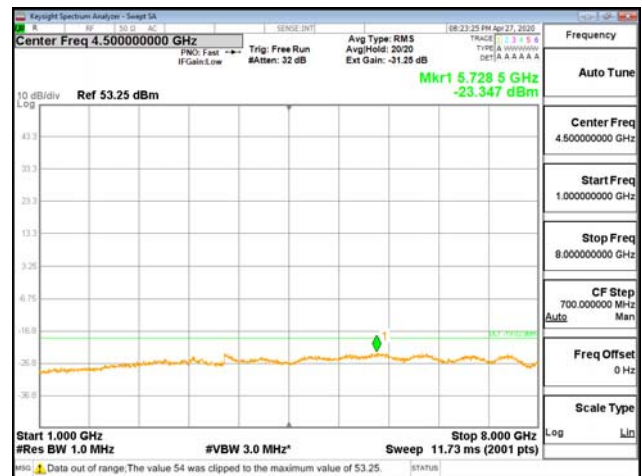
150 kHz - 30 MHz



30 MHz - 1000 MHz

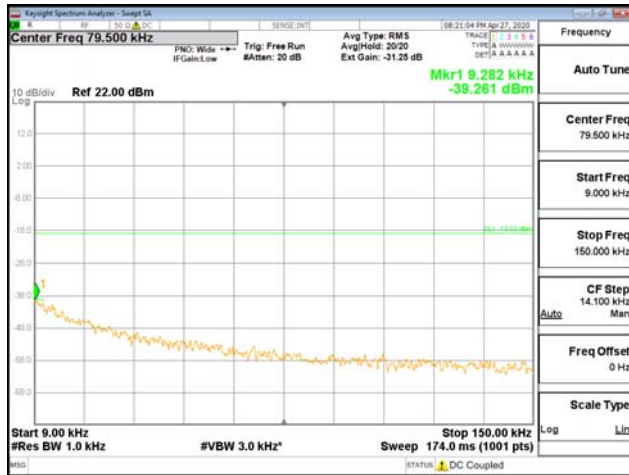


1000 MHz - 8000 MHz

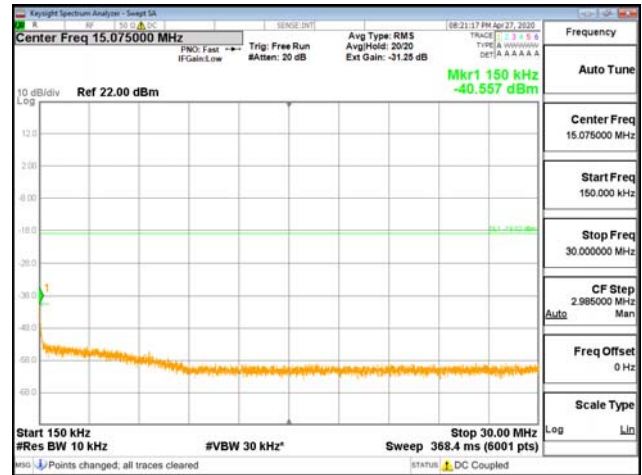


ANT2

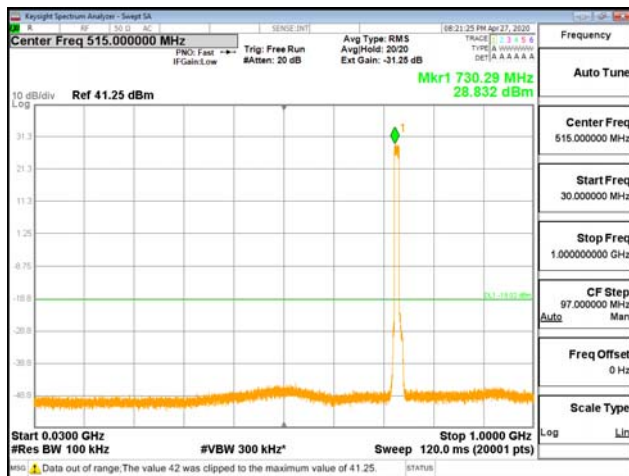
9 kHz - 150 kHz



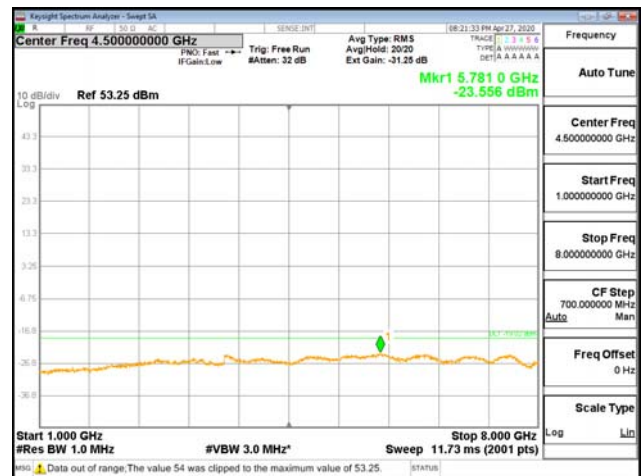
150 kHz - 30 MHz



30 MHz - 1000 MHz

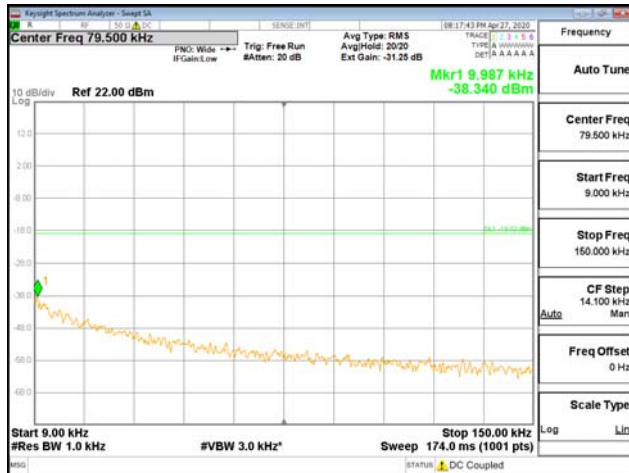


1000 MHz - 8000 MHz

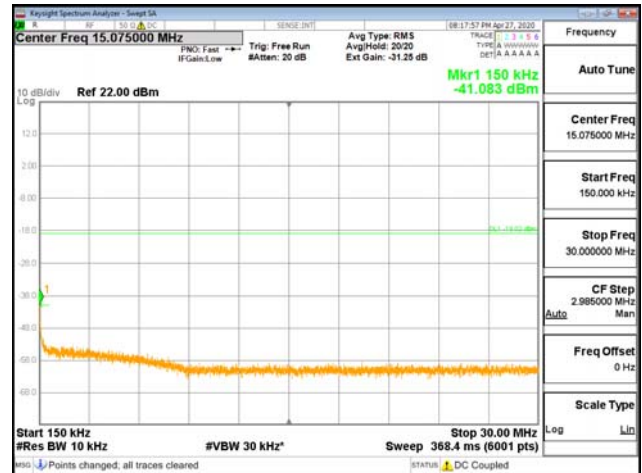


ANT3

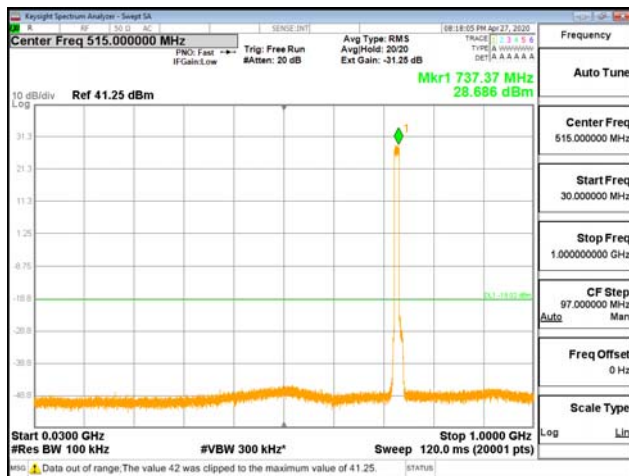
9 kHz - 150 kHz



150 kHz - 30 MHz



30 MHz - 1000 MHz



1000 MHz - 8000 MHz

