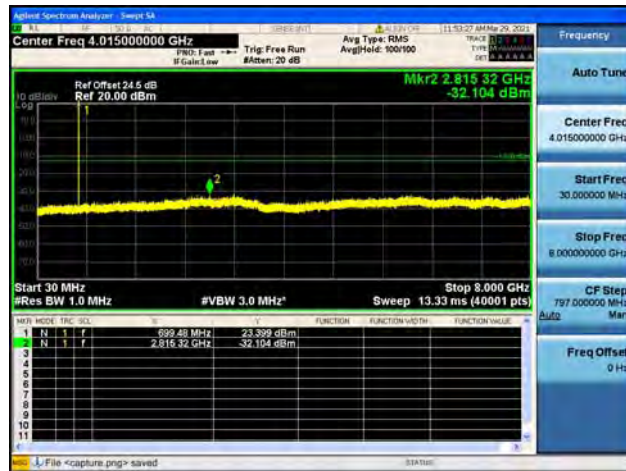




Band12 / 1.4MHz / Low CH / QPSK



Band12 / 1.4MHz / Low CH / 16QAM



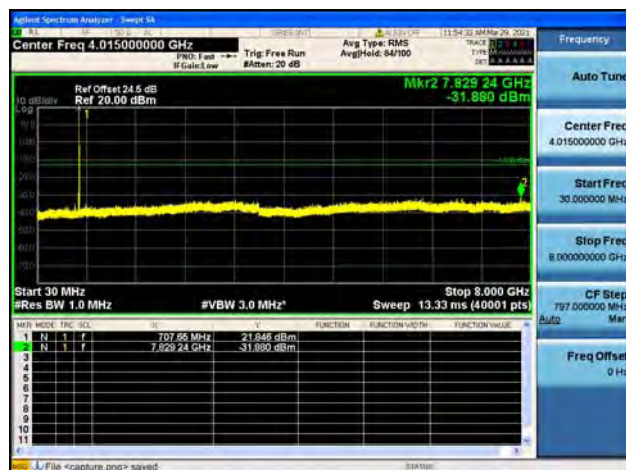
Band12 / 1.4MHz / Low CH / 64QAM



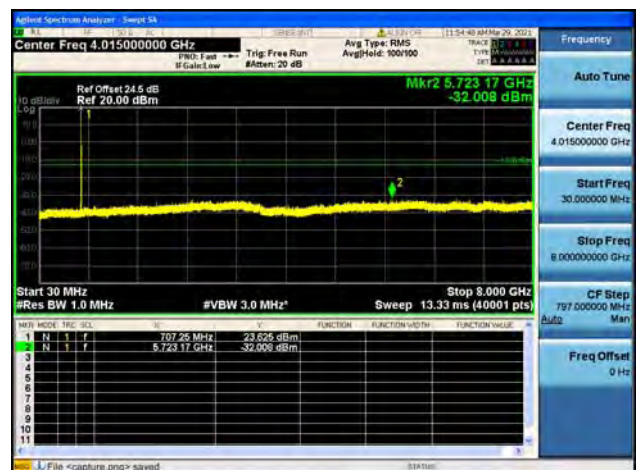
Band12 / 1.4MHz / Mid CH / QPSK



Band12 / 1.4MHz / Mid CH / 16QAM

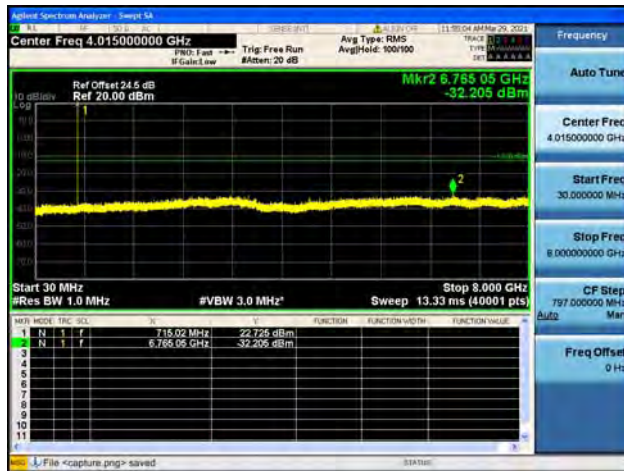


Band12 / 1.4MHz / Mid CH / 64QAM





Band12 / 1.4MHz / High CH / QPSK



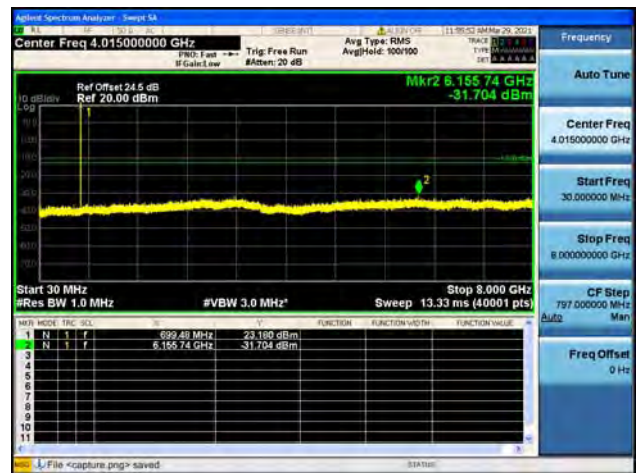
Band12 / 1.4MHz / High CH / 16QAM



Band12 / 1.4MHz / High CH / 64QAM



Band12 / 3MHz / Low CH / QPSK



Band12 / 3MHz / Low CH / 16QAM



Band12 / 3MHz / Low CH / 64QAM





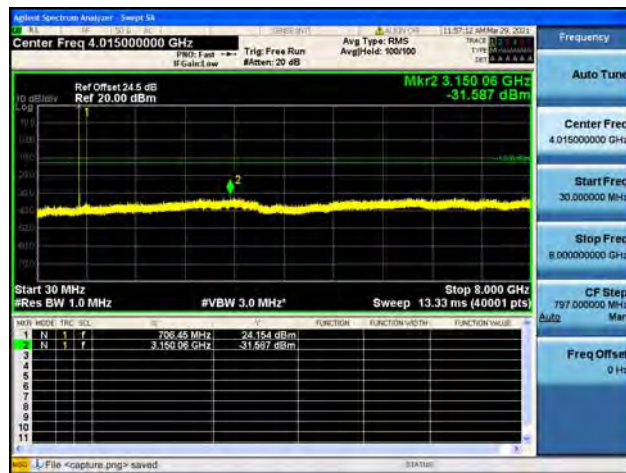
Band12 / 3MHz / Mid CH / QPSK



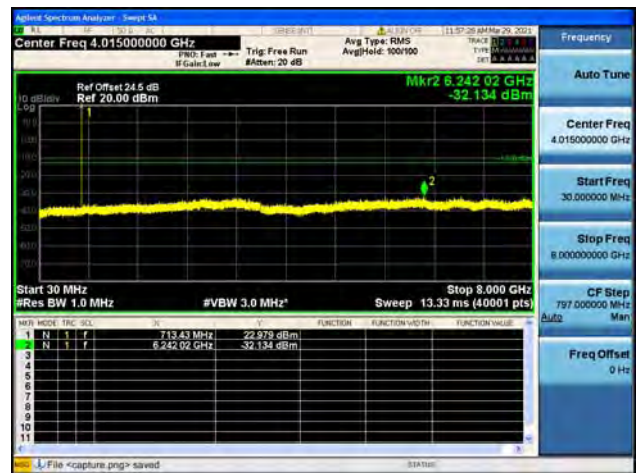
Band12 / 3MHz / Mid CH / 16QAM



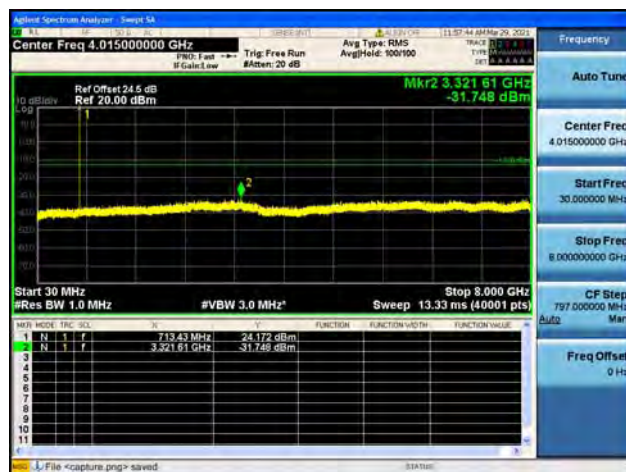
Band12 / 3MHz / Mid CH / 64QAM



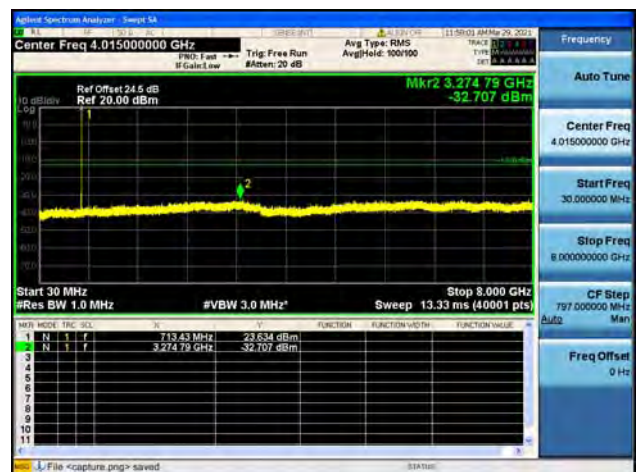
Band12 / 3MHz / High CH / QPSK



Band12 / 3MHz / High CH / 16QAM

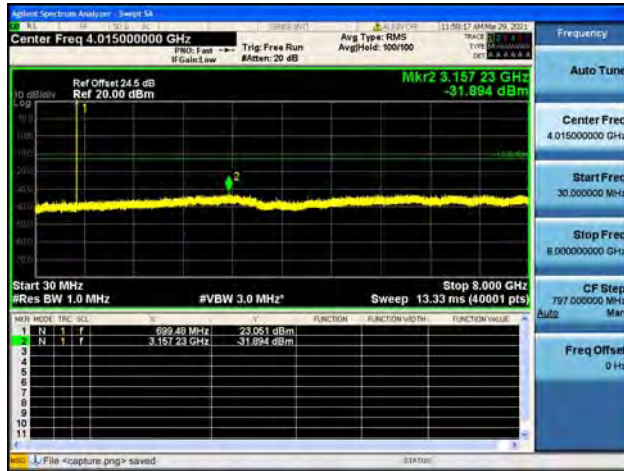


Band12 / 3MHz / High CH / 64QAM





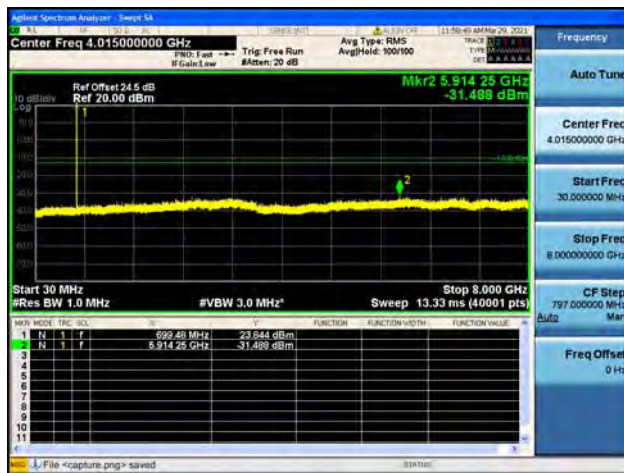
Band12 / 5MHz / Low CH / QPSK



Band12 / 5MHz / Low CH / 16QAM



Band12 / 5MHz / Low CH / 64QAM



Band12 / 5MHz / Mid CH / QPSK



Band12 / 5MHz / Mid CH / 16QAM



Band12 / 5MHz / Mid CH / 64QAM





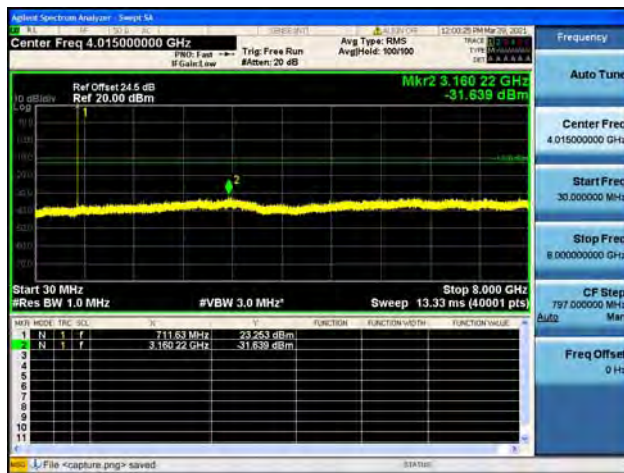
Band12 / 5MHz / High CH / QPSK



Band12 / 5MHz / High CH / 16QAM



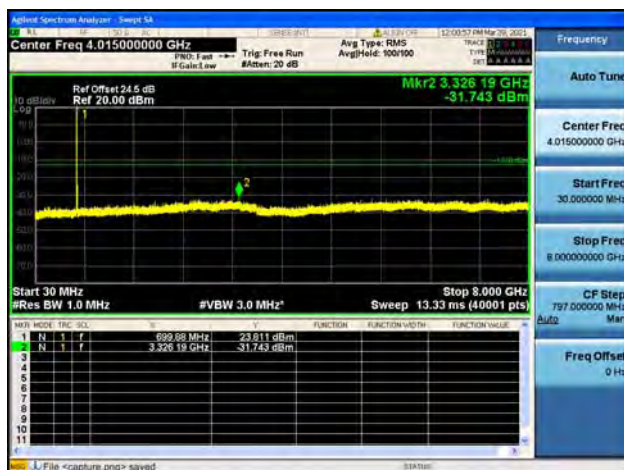
Band12 / 5MHz / High CH / 64QAM



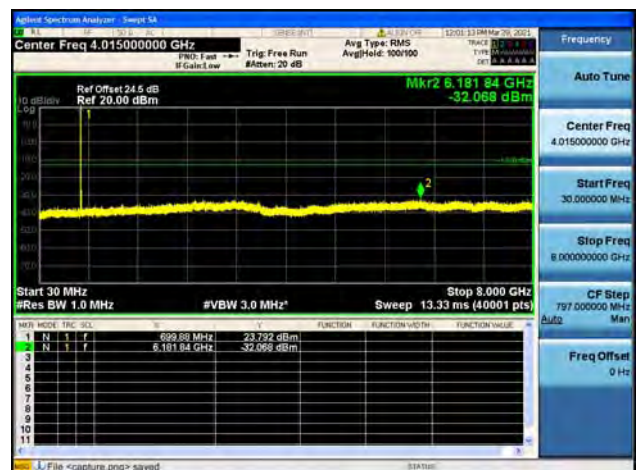
Band12 / 10MHz / Low CH / QPSK



Band12 / 10MHz / Low CH / 16QAM



Band12 / 10MHz / Low CH / 64QAM

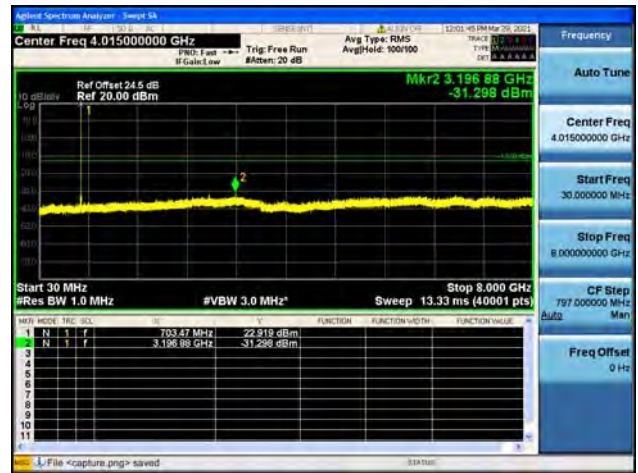




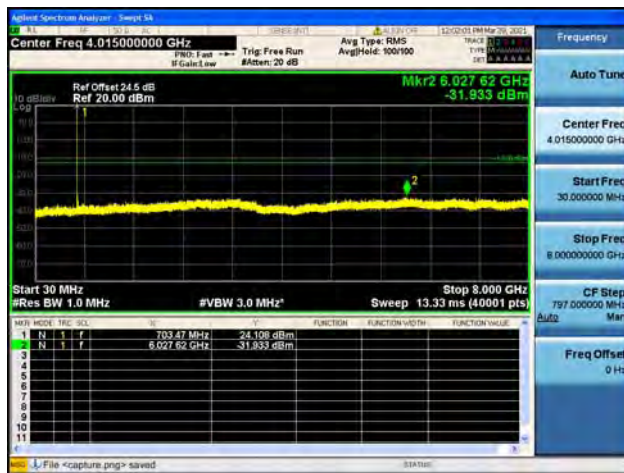
Band12 / 10MHz / Mid CH / QPSK



Band12 / 10MHz / Mid CH / 16QAM



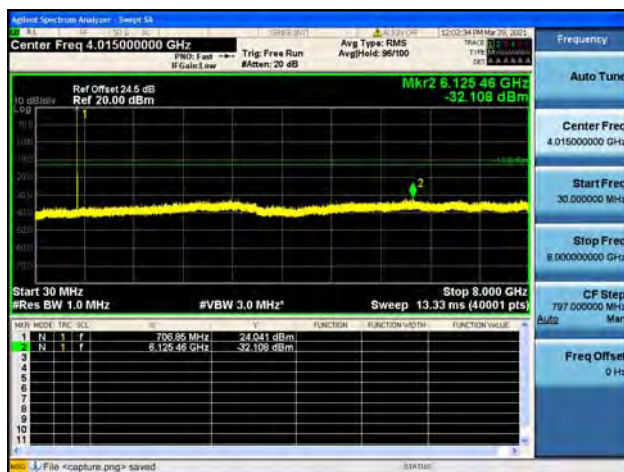
Band12 / 10MHz / Mid CH / 64QAM



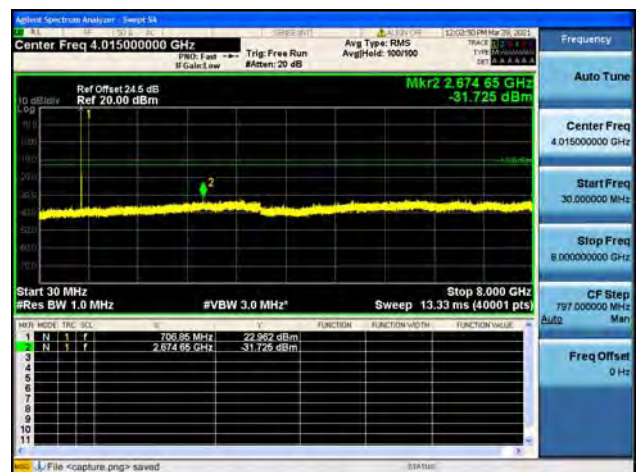
Band12 / 10MHz / High CH / QPSK



Band12 / 10MHz / High CH / 16QAM



Band12 / 10MHz / High CH / 64QAM





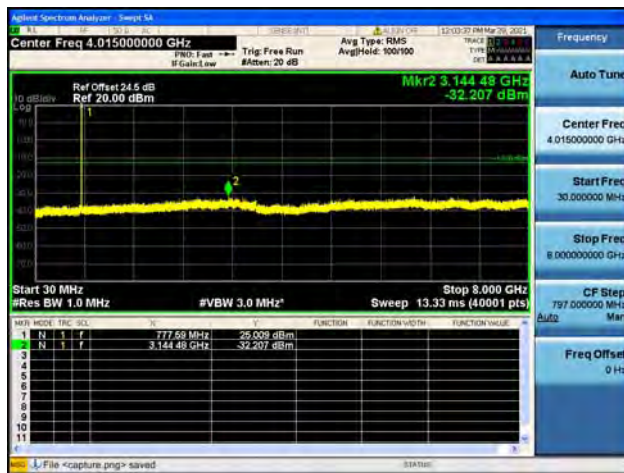
Band13 / 5MHz / Low CH / QPSK



Band13 / 5MHz / Low CH / 16QAM



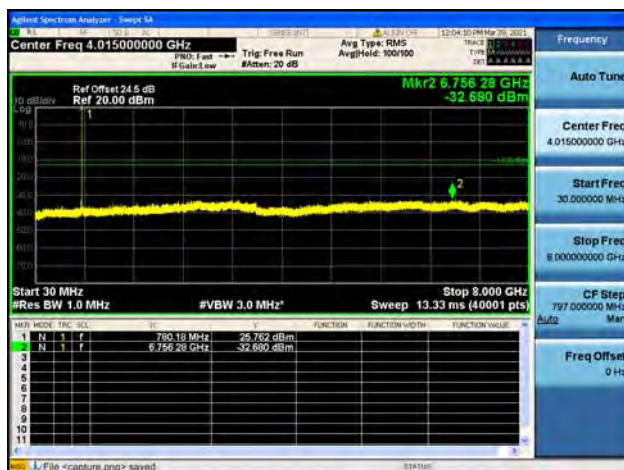
Band13 / 5MHz / Low CH / 64QAM



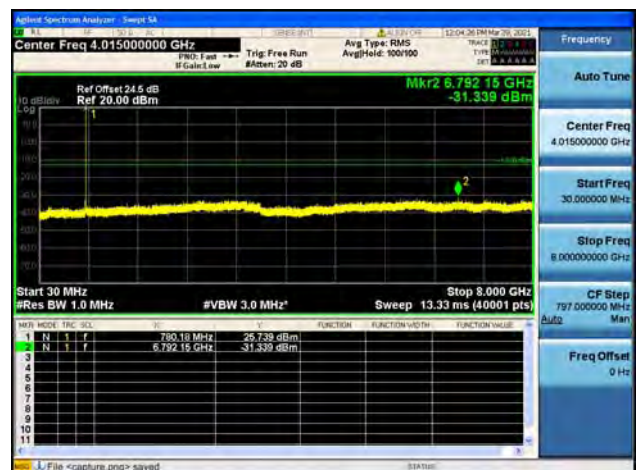
Band13 / 5MHz / Mid CH / QPSK



Band13 / 5MHz / Mid CH / 16QAM



Band13 / 5MHz / Mid CH / 64QAM





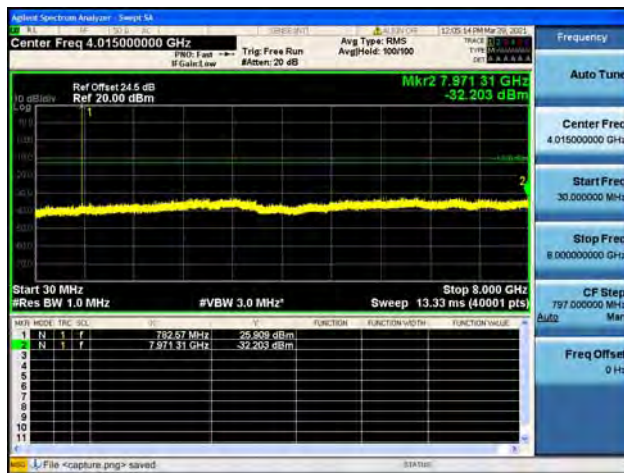
Band13 / 5MHz / High CH / QPSK



Band13 / 5MHz / High CH / 16QAM



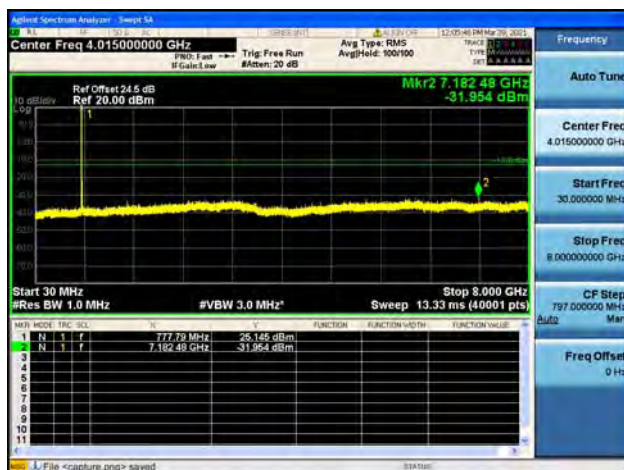
Band13 / 5MHz / High CH / 64QAM



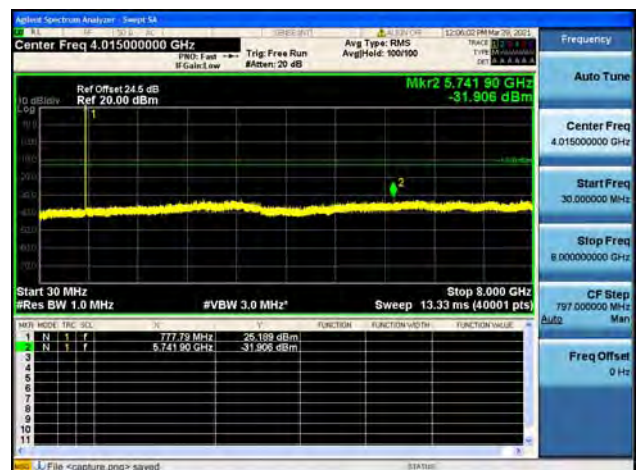
Band13 / 10MHz / Low CH / QPSK



Band13 / 10MHz / Low CH / 16QAM



Band13 / 10MHz / Low CH / 64QAM





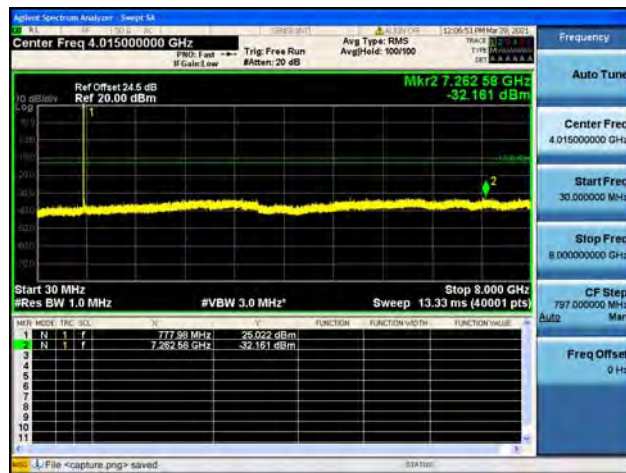
Band13 / 10MHz / Mid CH / QPSK



Band13 / 10MHz / Mid CH / 16QAM



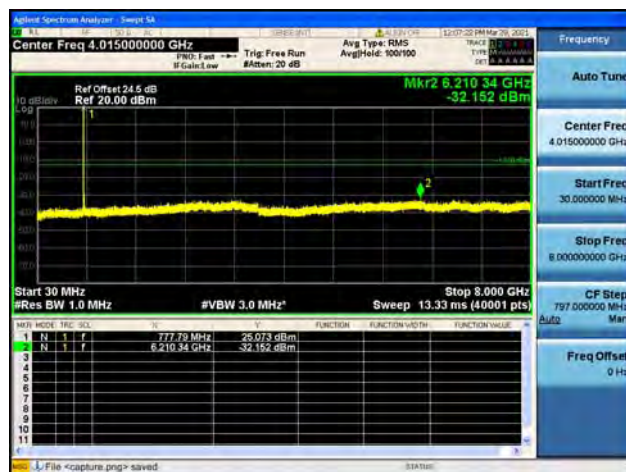
Band13 / 10MHz / Mid CH / 64QAM



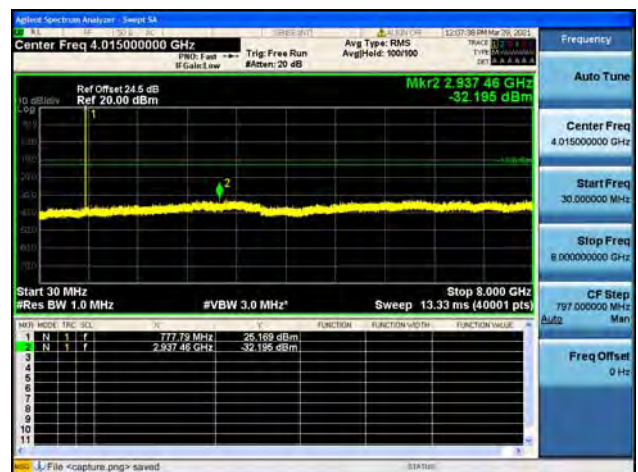
Band13 / 10MHz / High CH / QPSK



Band13 / 10MHz / High CH / 16QAM



Band13 / 10MHz / High CH / 64QAM

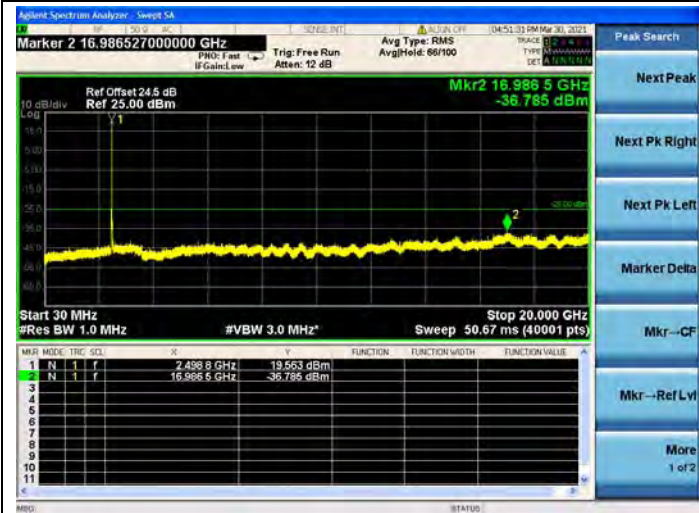




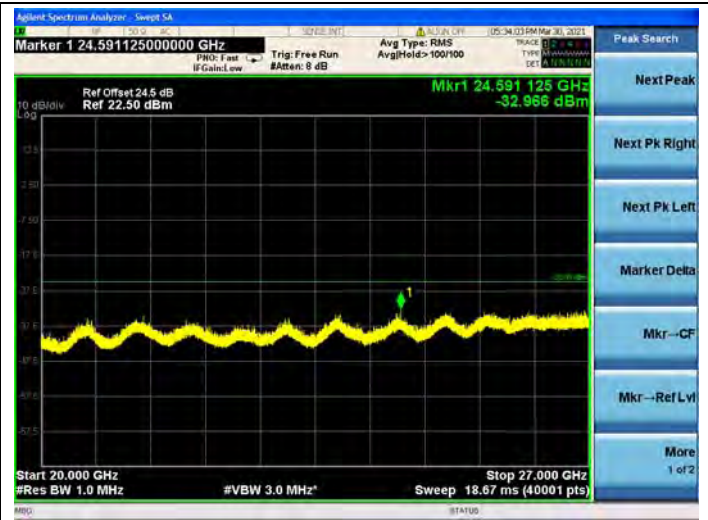
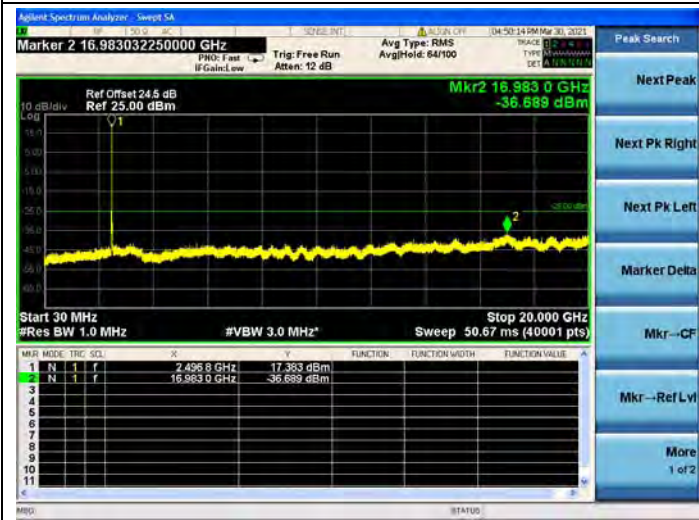
Band 41 / 5MHz / Low CH / QPSK



Band 41 / 5MHz / Low CH / 16QAM

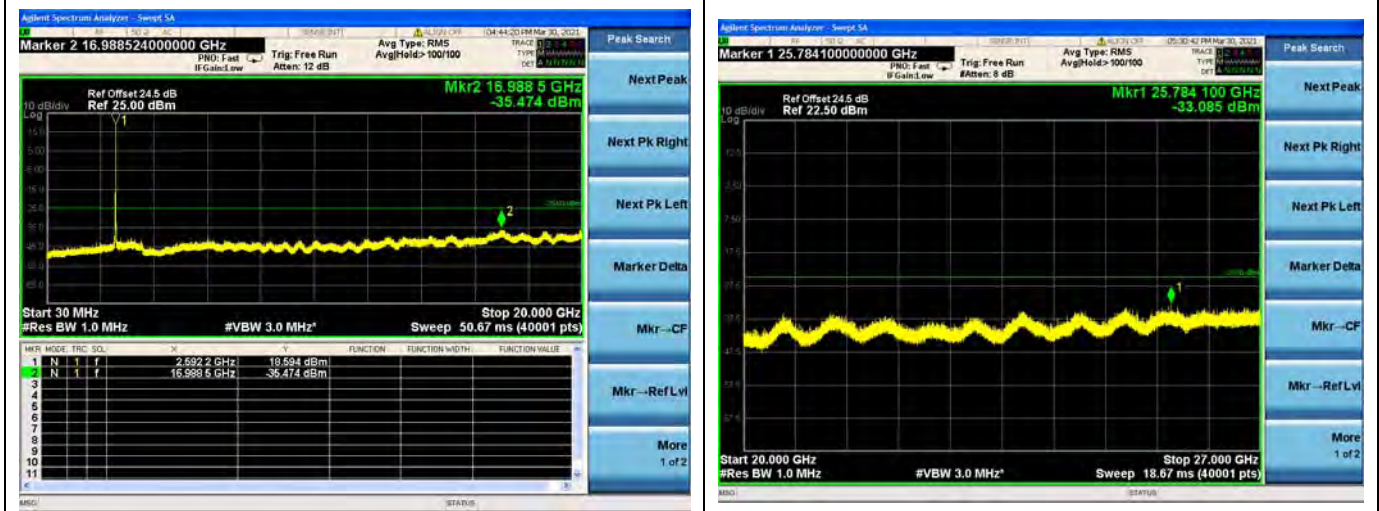


Band 41 / 5MHz / Low CH / 64QAM

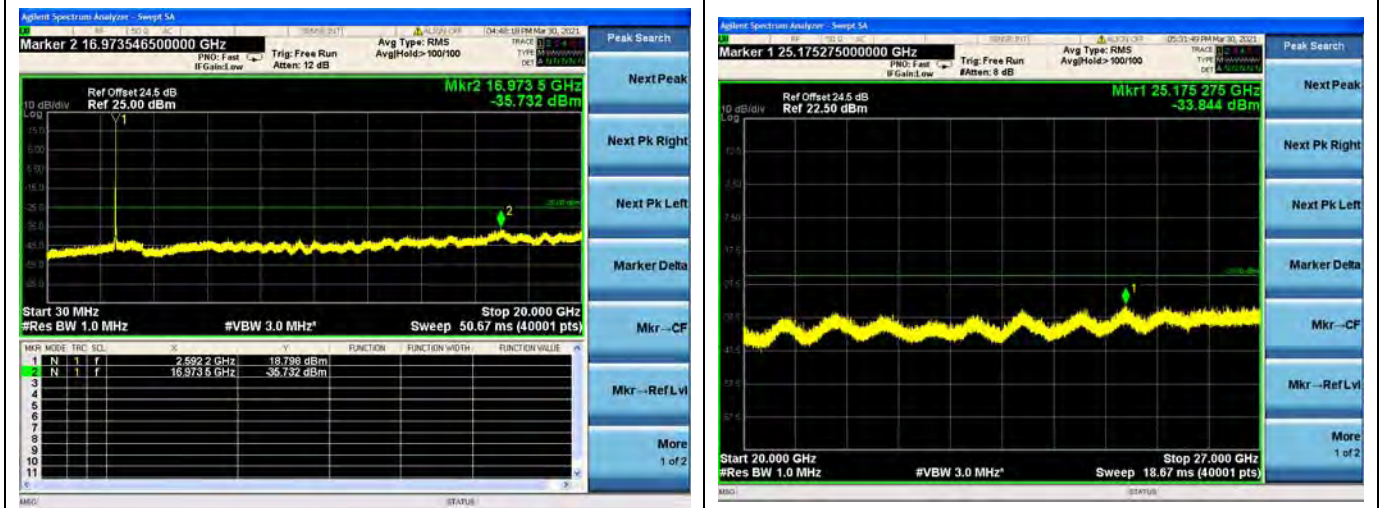




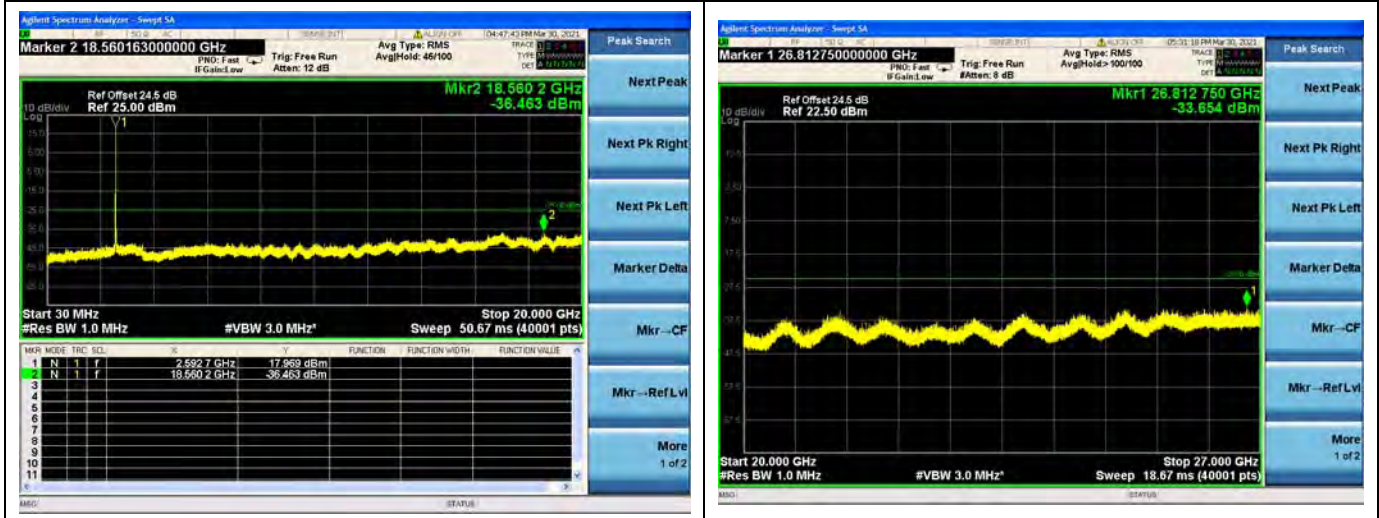
Band 41 / 5MHz / Mid CH / QPSK



Band 41 / 5MHz / Mid CH / 16QAM

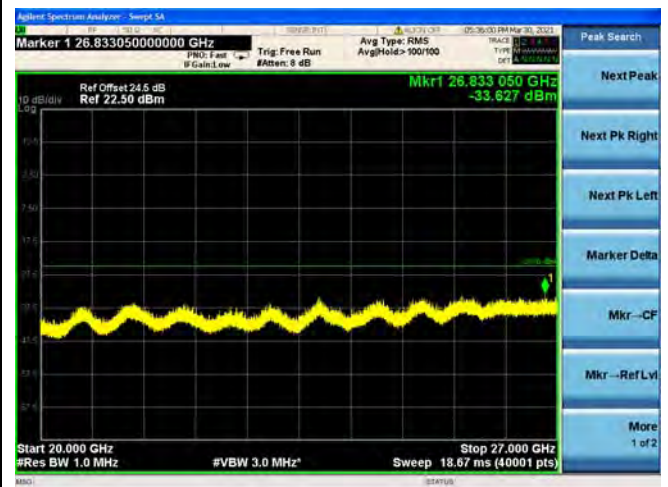
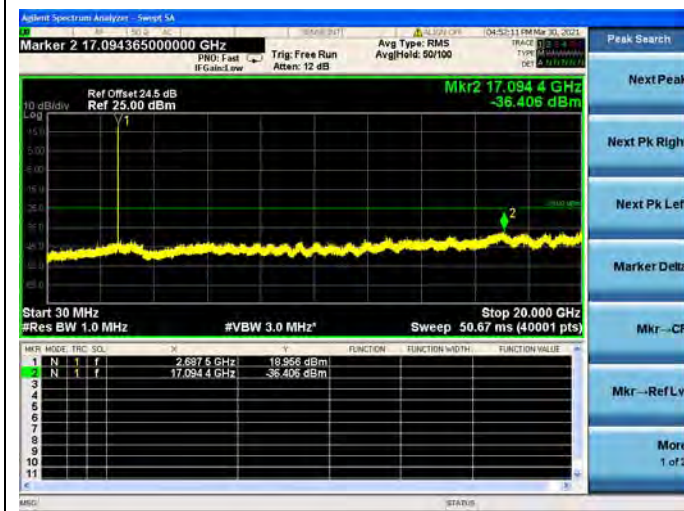


Band 41 / 5MHz / Mid CH / 64QAM

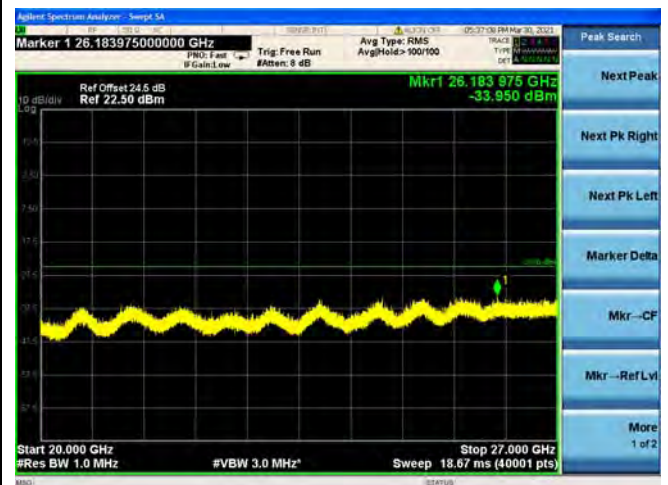
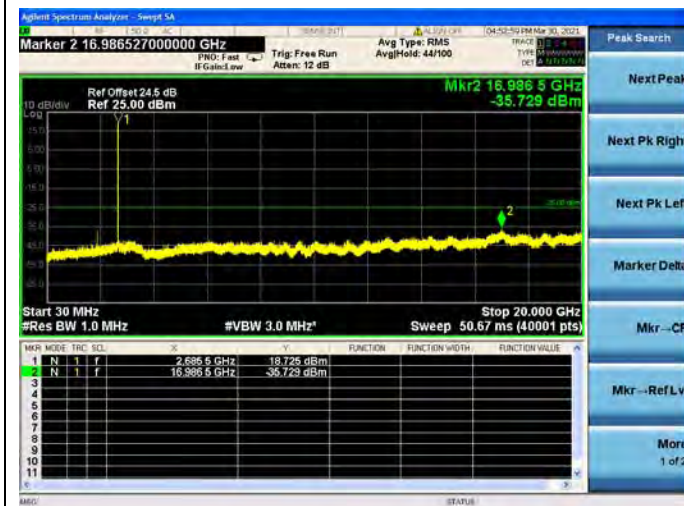




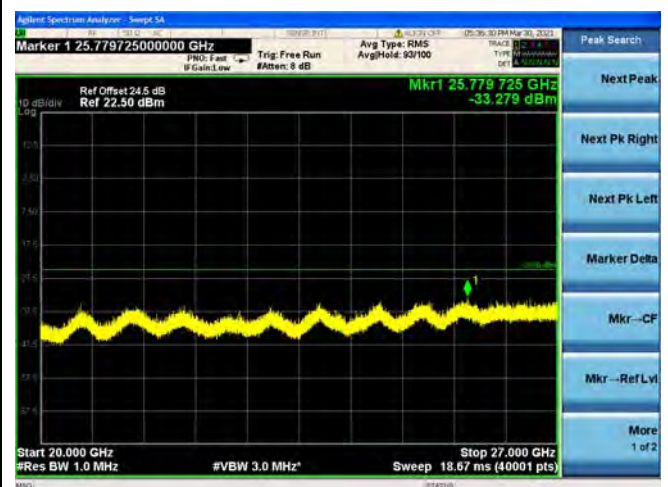
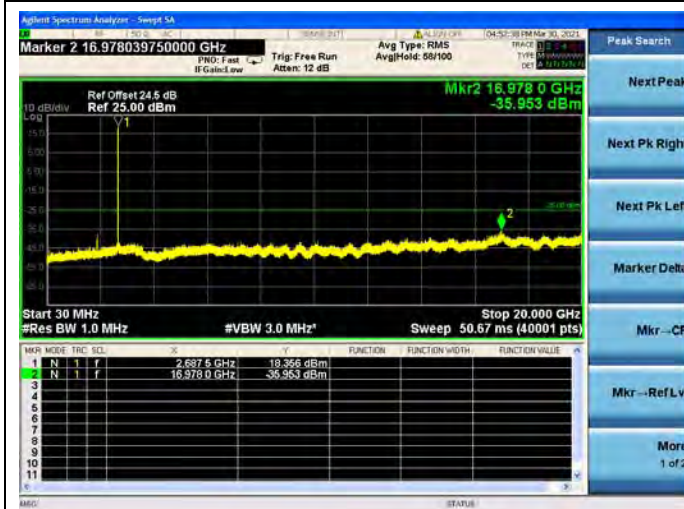
Band 41 / 5MHz / High CH / QPSK



Band 41 / 5MHz / High CH / 16QAM

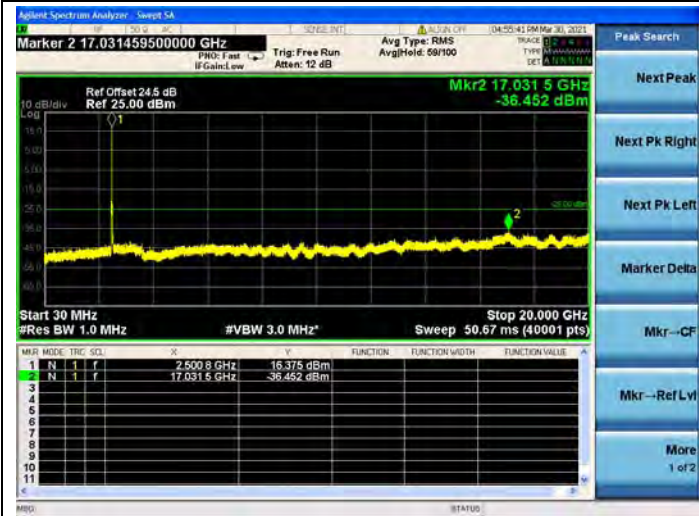


Band 41 / 5MHz / High CH / 64QAM

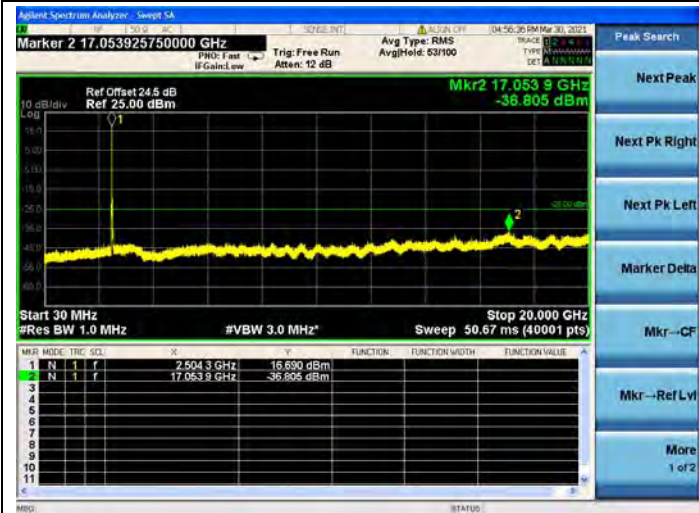




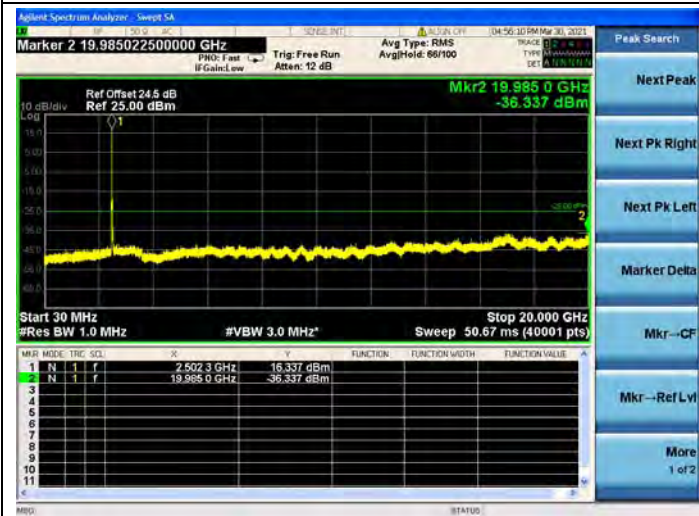
Band 41 / 10MHz / Low CH / QPSK



Band 41 / 10MHz / Low CH / 16QAM

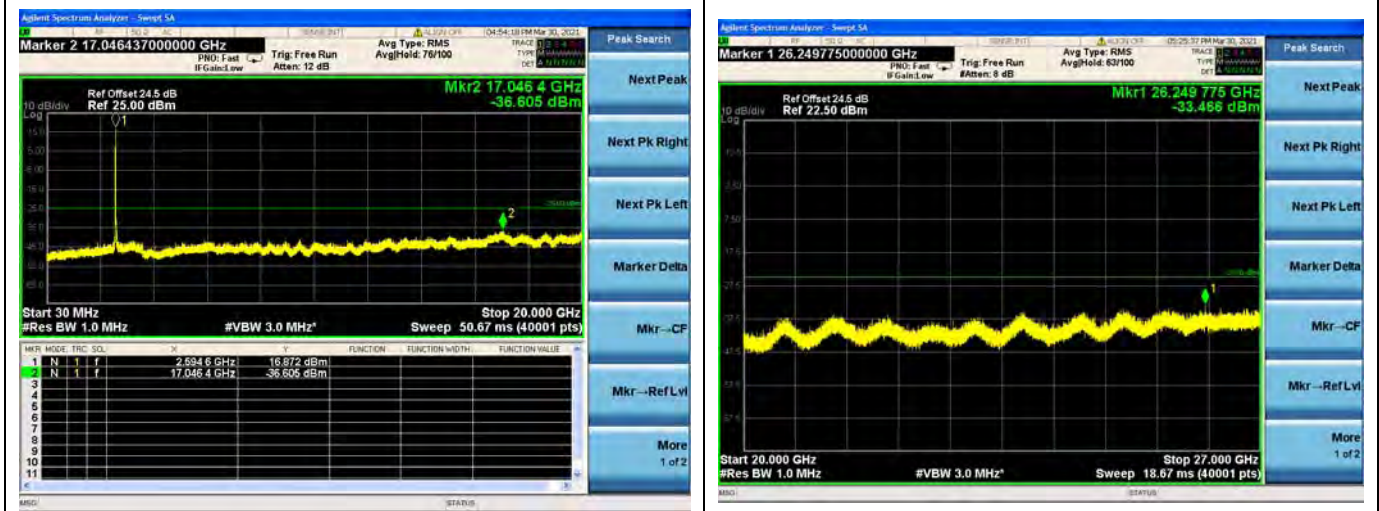


Band 41 / 10MHz / Low CH / 64QAM

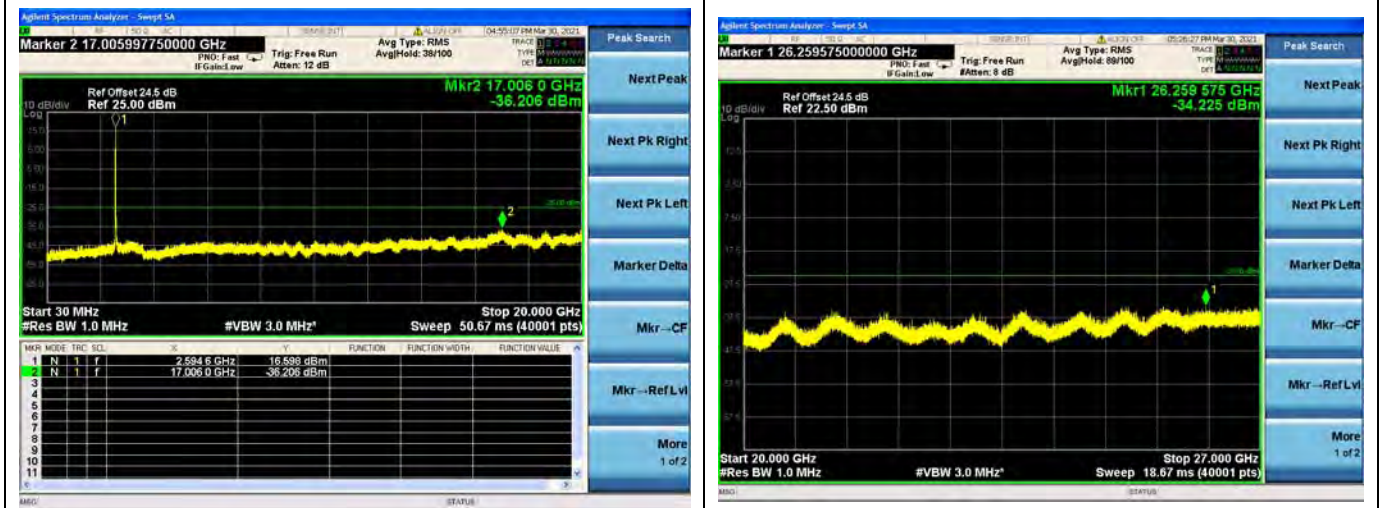




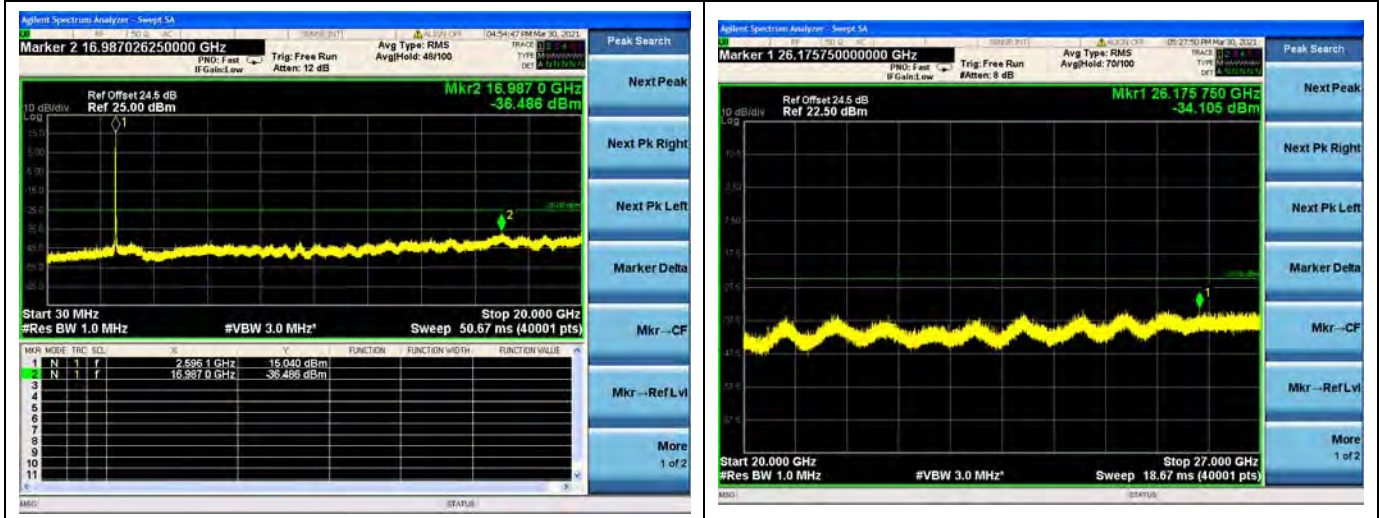
Band 41 / 10MHz / Mid CH / QPSK



Band 41 / 10MHz / Mid CH / 16QAM



Band 41 / 10MHz / Mid CH / 64QAM





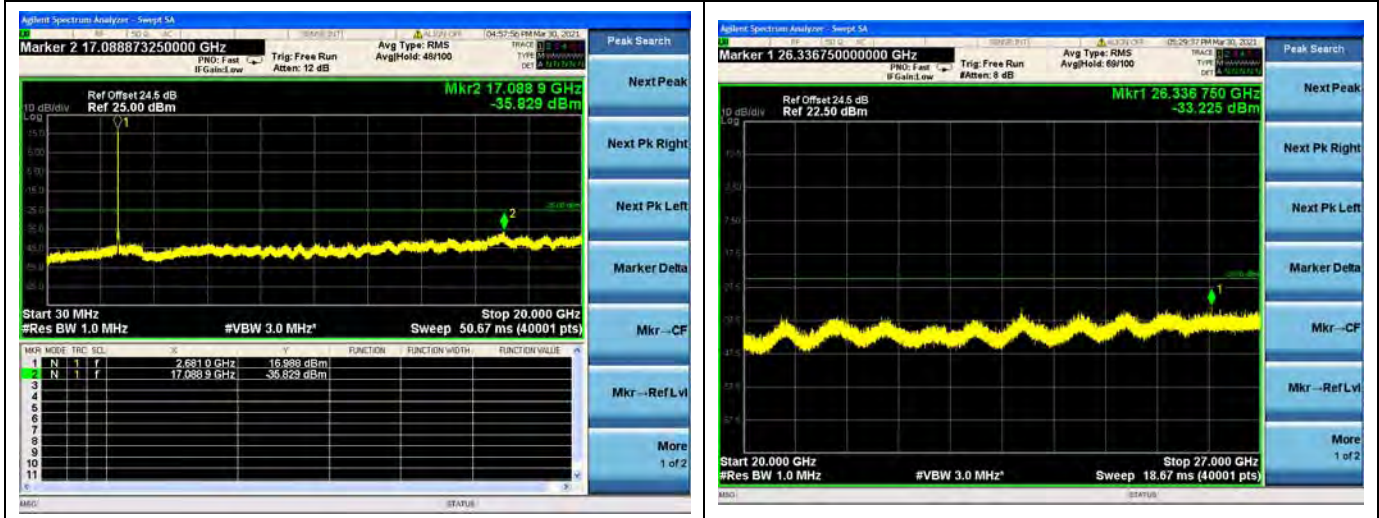
Band 41 / 10MHz / High CH / QPSK



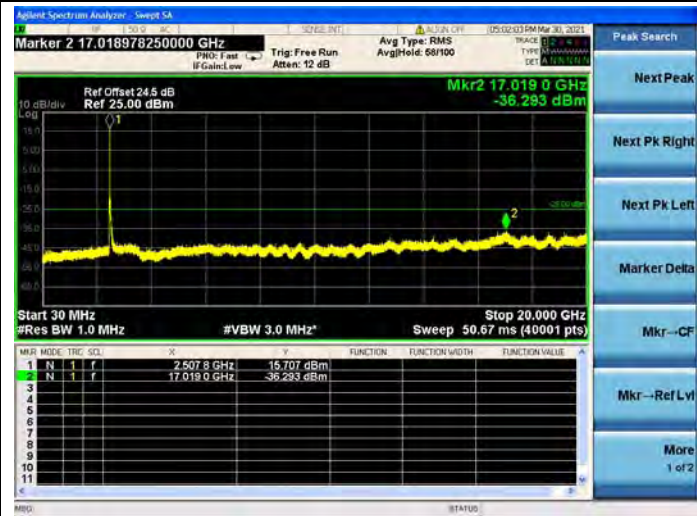
Band 41 / 10MHz / High CH / 16QAM



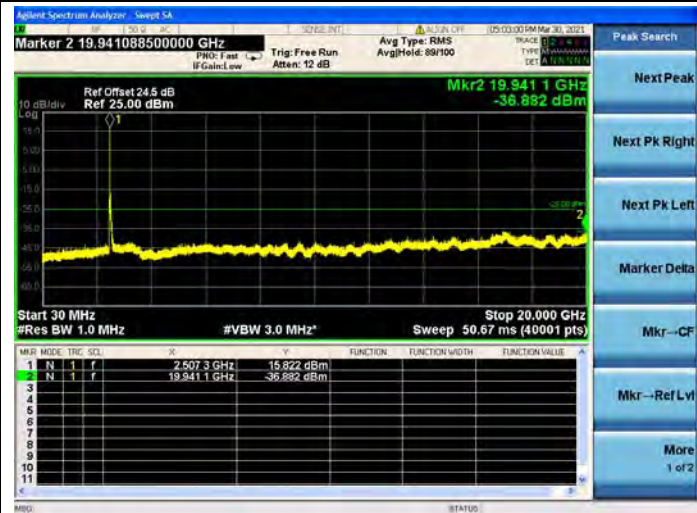
Band 41 / 10MHz / High CH / 64QAM



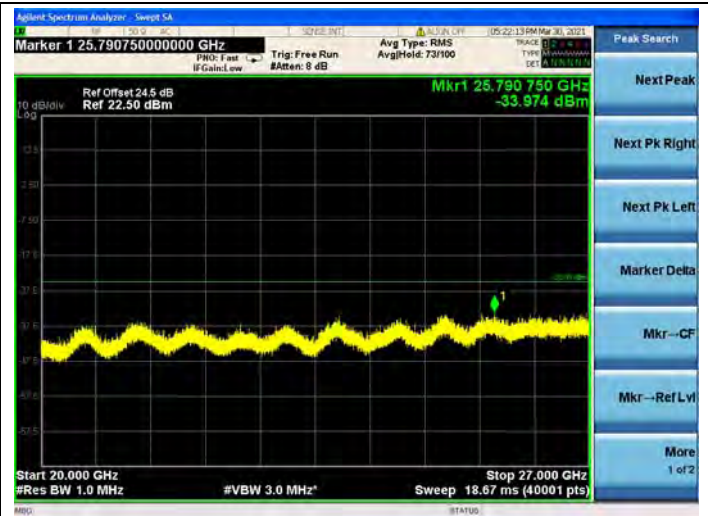
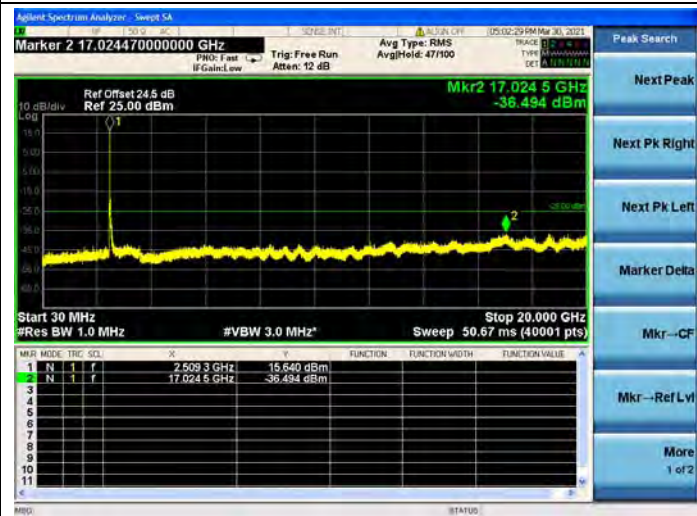
Band 41 / 15MHz / Low CH / QPSK



Band 41 / 15MHz / Low CH / 16QAM

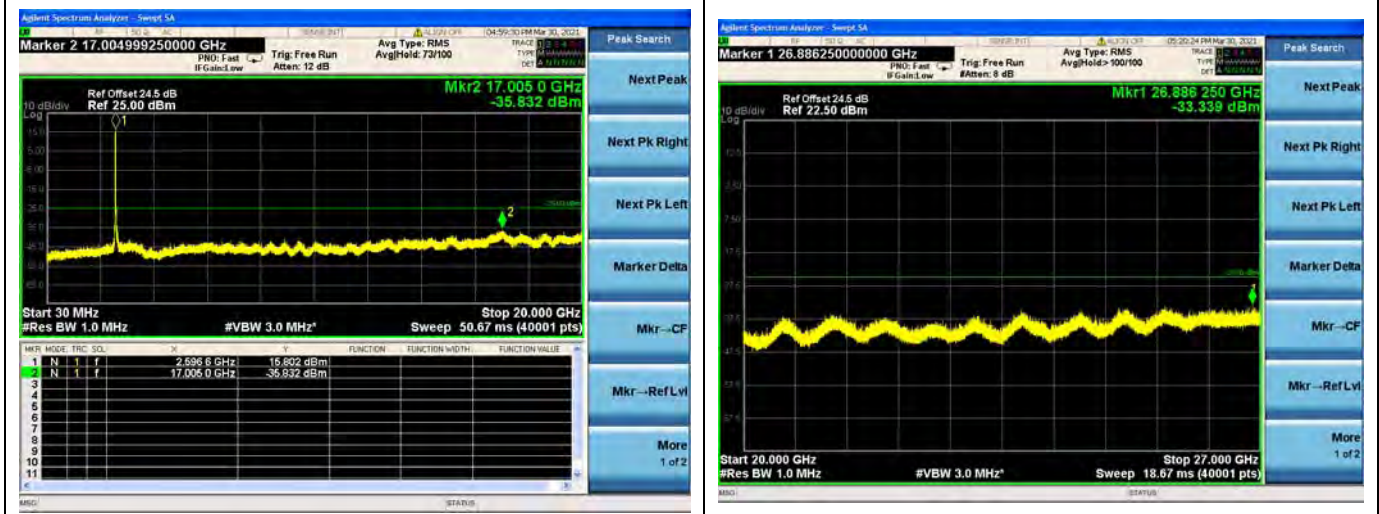


Band 41 / 15MHz / Low CH / 64QAM

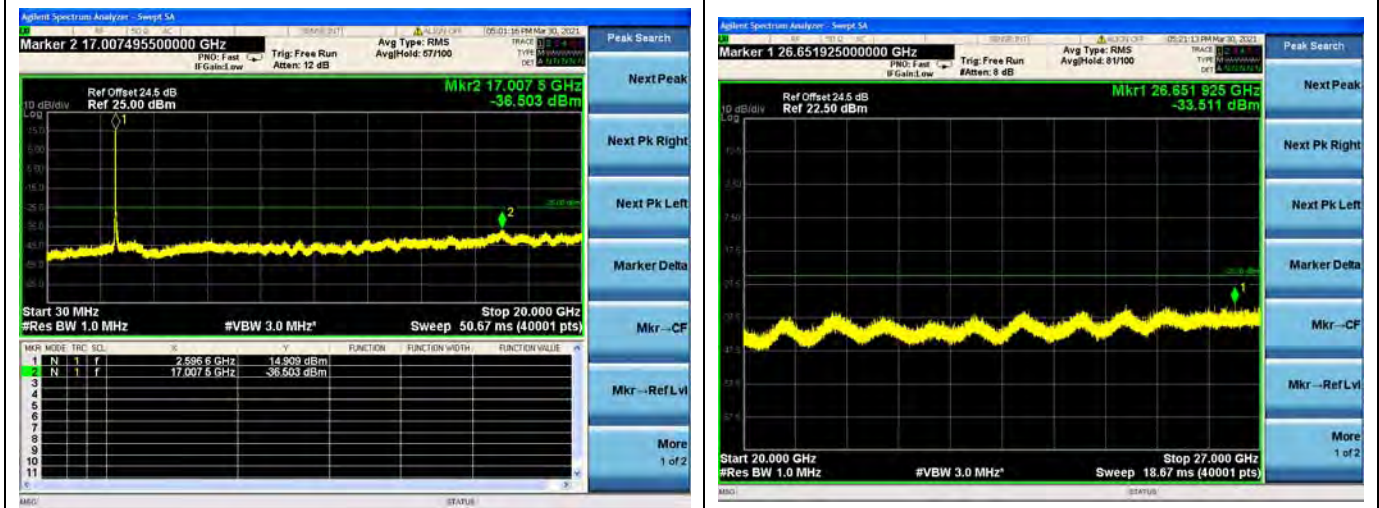




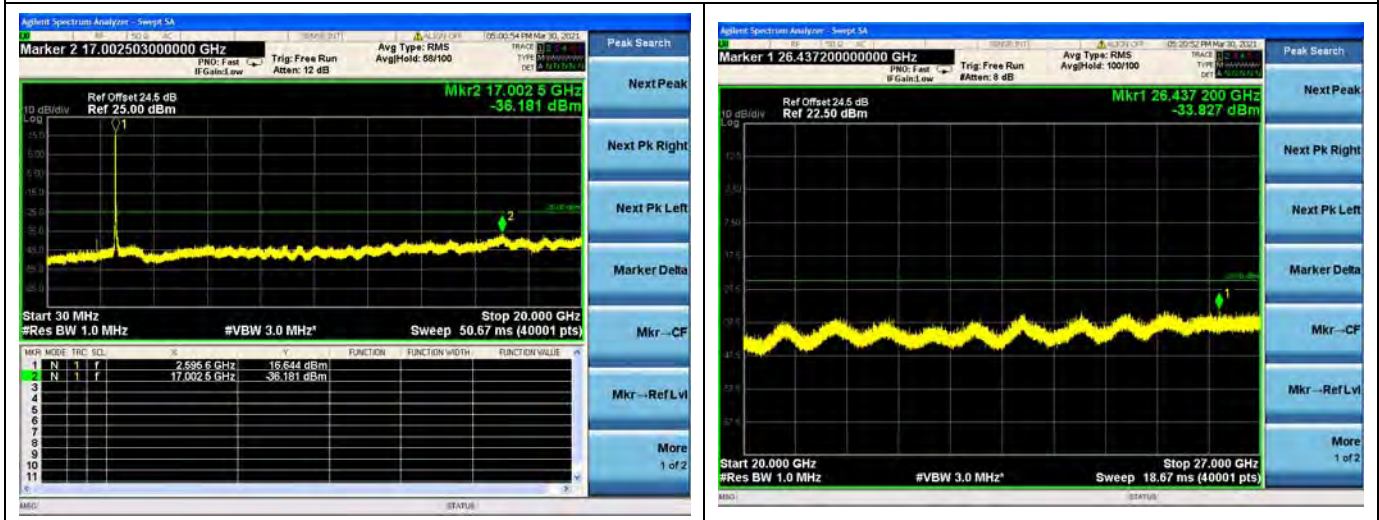
Band 41 / 15MHz / Mid CH / QPSK



Band 41 / 15MHz / Mid CH / 16QAM

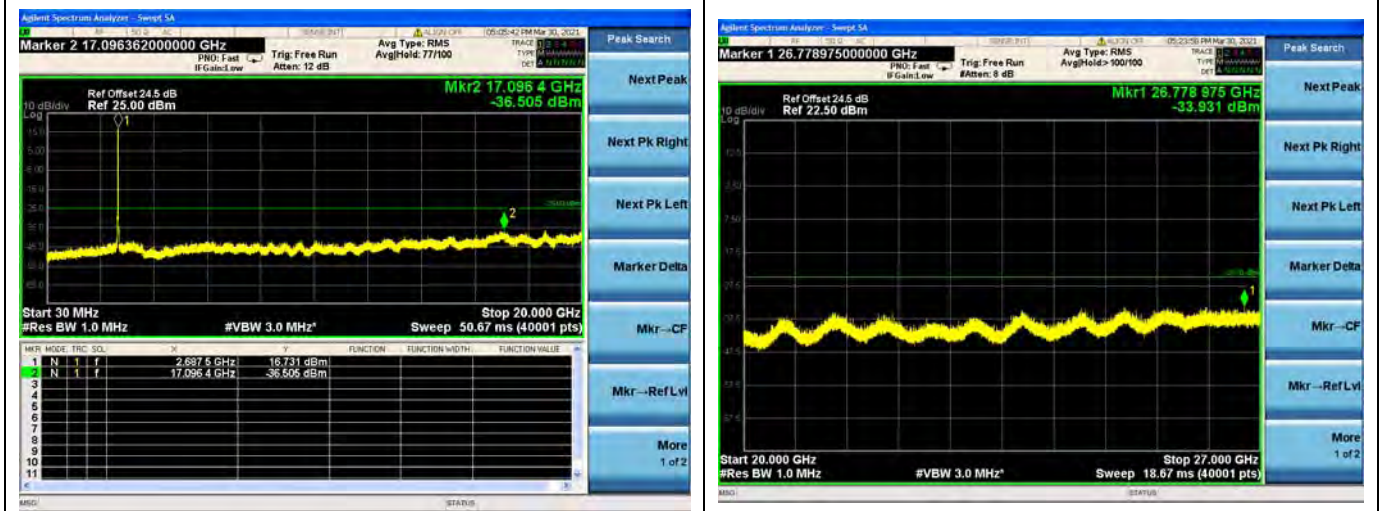


Band 41 / 15MHz / Mid CH / 64QAM





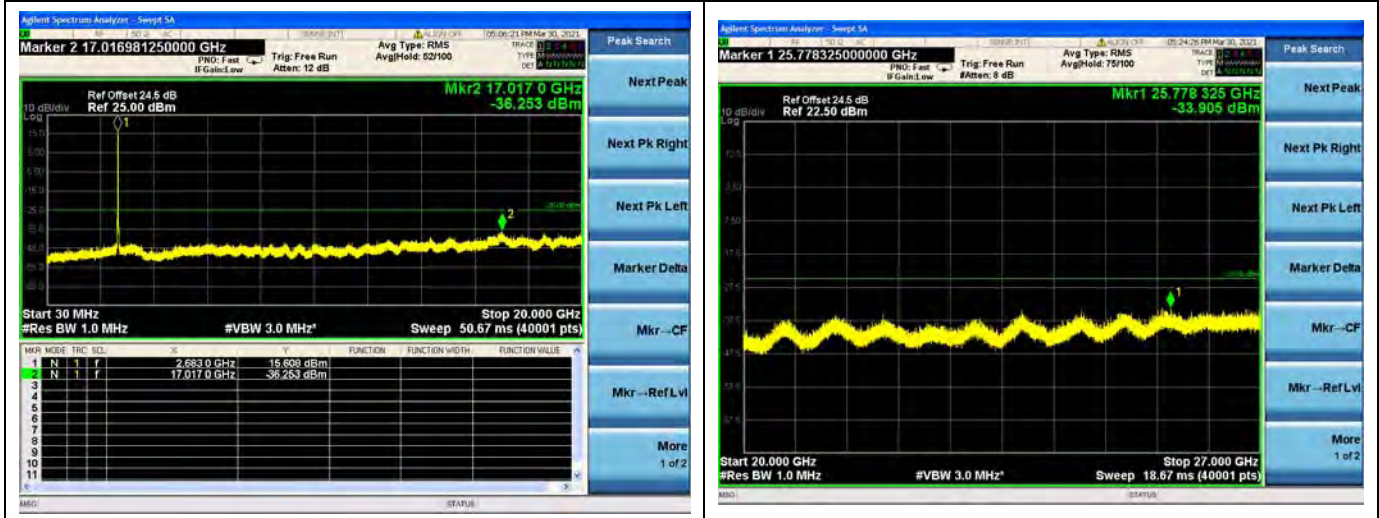
Band 41 / 15MHz / High CH / QPSK



Band 41 / 15MHz / High CH / 16QAM



Band 41 / 15MHz / High CH / 64QAM





Agilent Spectra Analyzer - Sweep SA

Marker 1 25.885075000000 GHz

Ref Offset 24.5 dB
Ref 22.50 dBm

Mkr1 25.885 075 GHz
-33.940 dBm

Start 20.000 GHz
#Res BW 1.0 MHz

Stop 20.000 GHz
Sweep 18.67 ms (40001 pts)

VBW 3.0 MHz*

Agilent Spectrum Analyzer - Sweep SA

Marker 1 25.251400000 GHz

Ref Offset 24.5 dB
Ref 22.50 dBm

PRO: Freq
IF Gain: Low

Trig: Free Run
#Atten: 8 dB

Avg Type: RMS
Avg Hold: 92/100

Marker 1 25.251400 GHz
-33.785 dBm

Start 20.000 GHz
#Res BW 1.0 MHz

Stop 27.000 GHz
Sweep 18.67 ms (40001 pts)

#VBW 3.0 MHz*

10 dB/div
Log

Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr--CF
Mkr--Ref Lvl
More
1 of 2

Agilent SpectraMax Analyzer - Sweep SA

Marker 1 25.688900000000 GHz

Ref Offset 24.5 dB
Ref 22.50 dBm

Start 20.000 GHz
#Res BW 1.0 MHz

Stop 27.000 GHz
#VBW 3.0 MHz*

Avg Type: RMS
Avtl Hold: 91/100

Trig: Free Run
#Atten: 8 dB

Peak 1 25.688900 GHz
-33.414 dBm

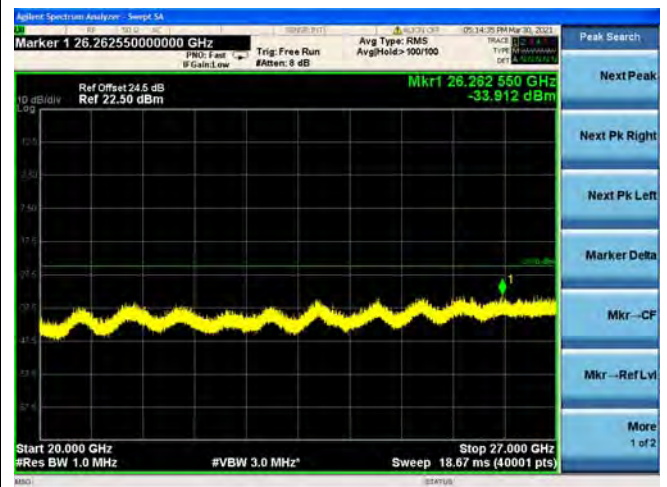
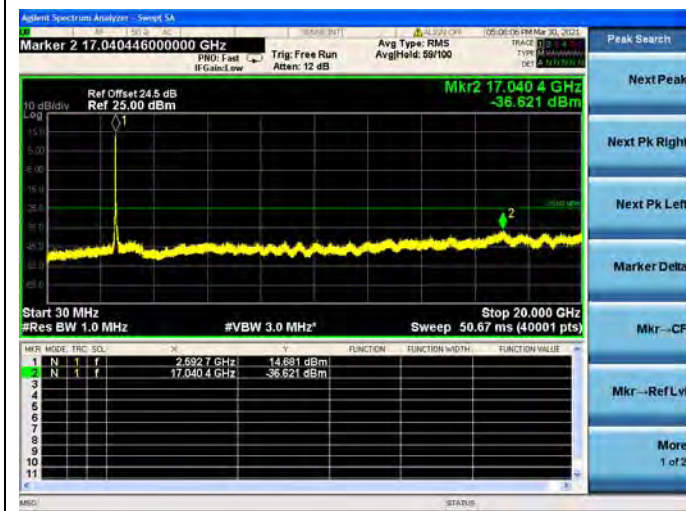
10 dB/div
Log

Start 20.000 GHz
Stop 27.000 GHz
Sweep 18.67 ms (40001 pts)

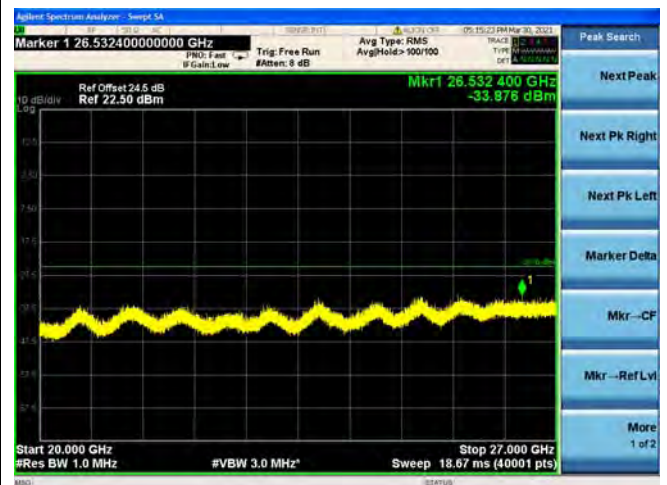
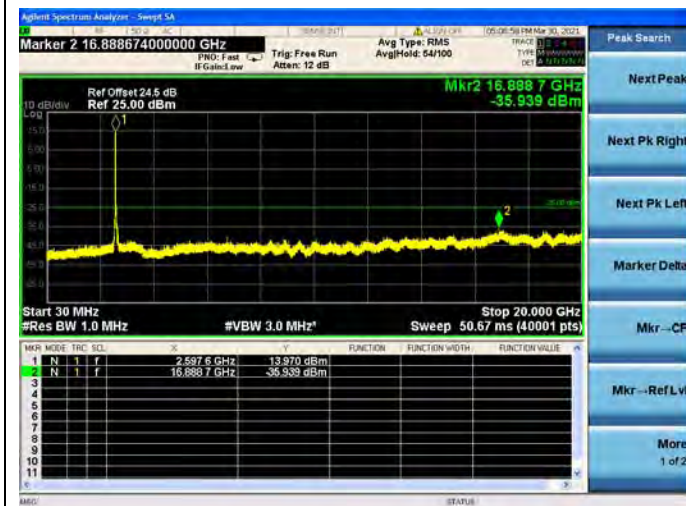
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr--CF
Mkr--Ref Lvl
More
1 of 2



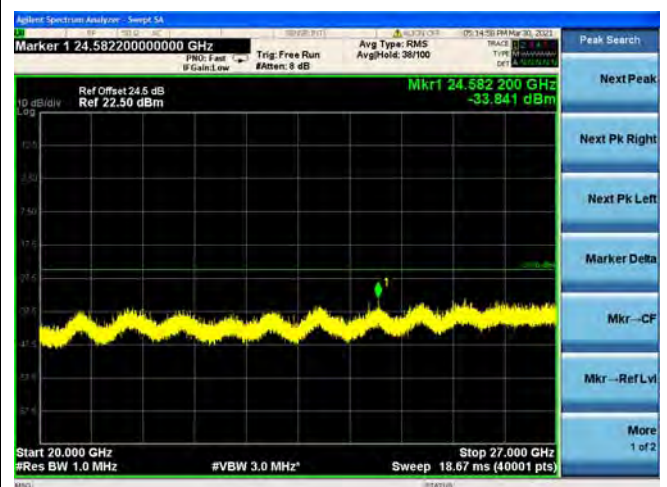
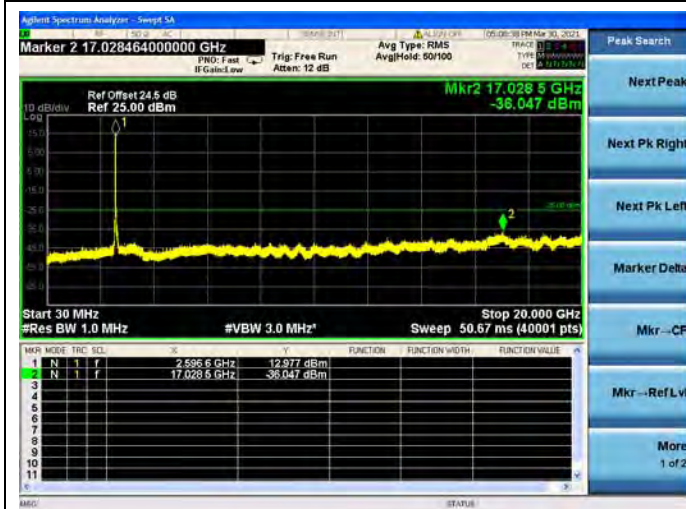
Band 41 / 20MHz / Mid CH / QPSK



Band 41 / 20MHz / Mid CH / 16QAM

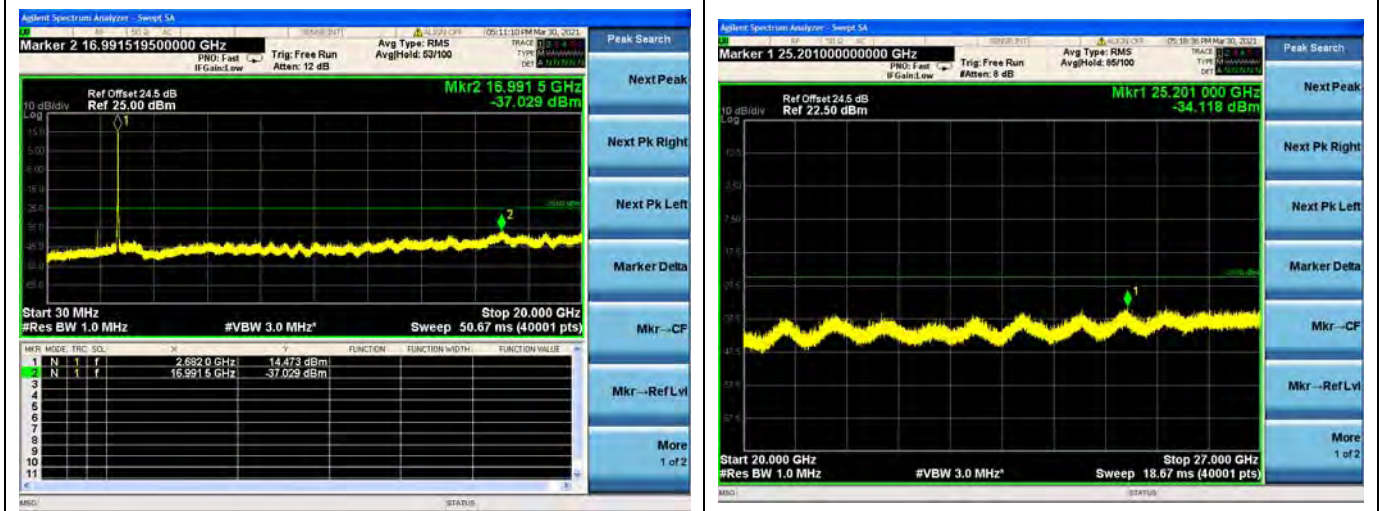


Band 41 / 20MHz / Mid CH / 64QAM





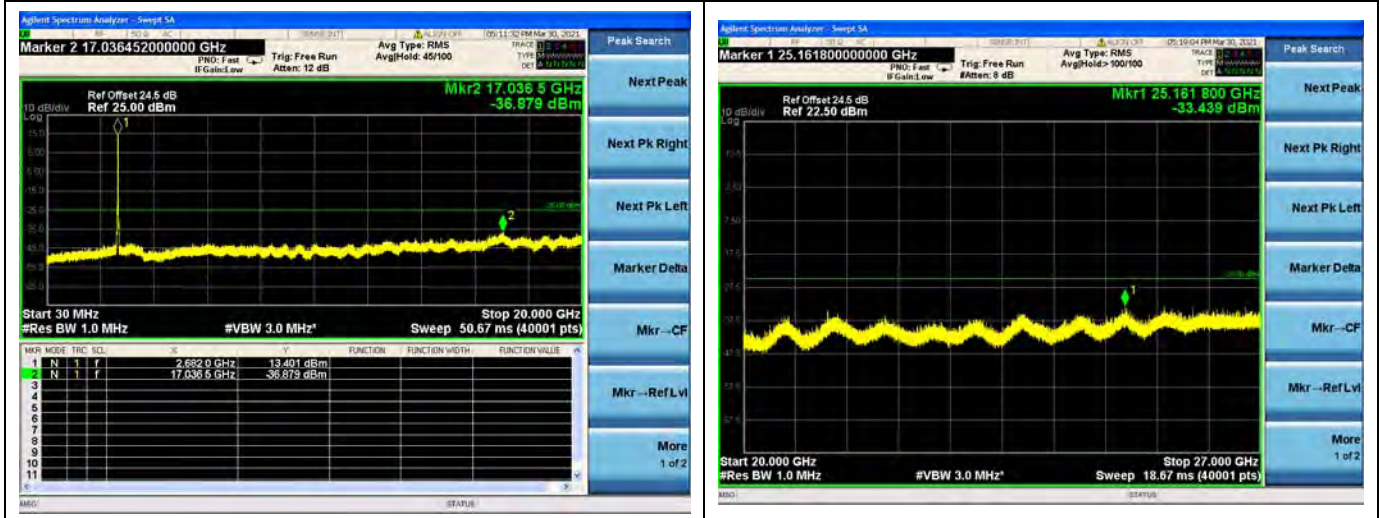
Band 41 / 20MHz / High CH / QPSK



Band 41 / 20MHz / High CH / 16QAM

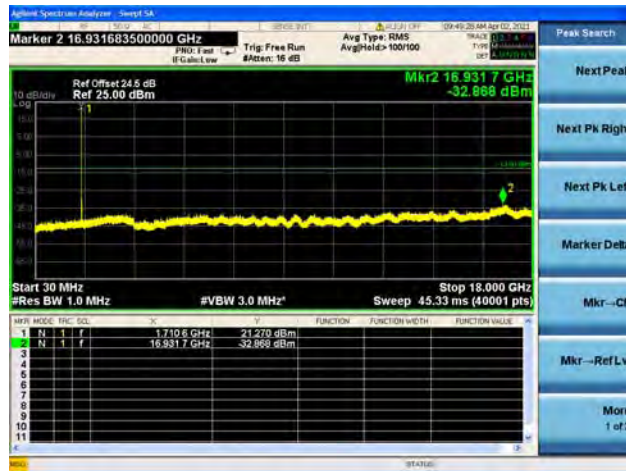


Band 41 / 20MHz / High CH / 64QAM





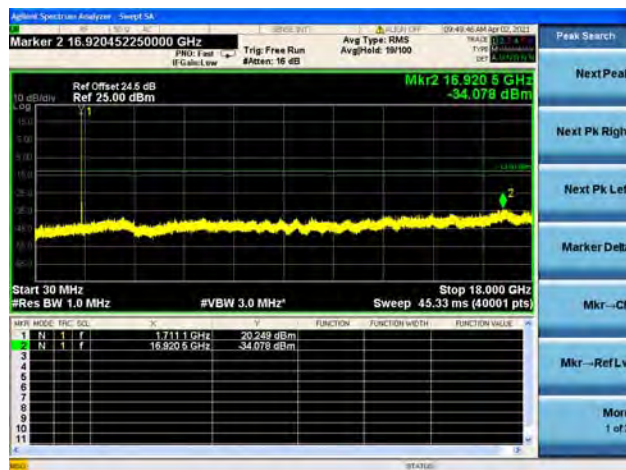
Band66 / 1.4MHz / Low CH / QPSK



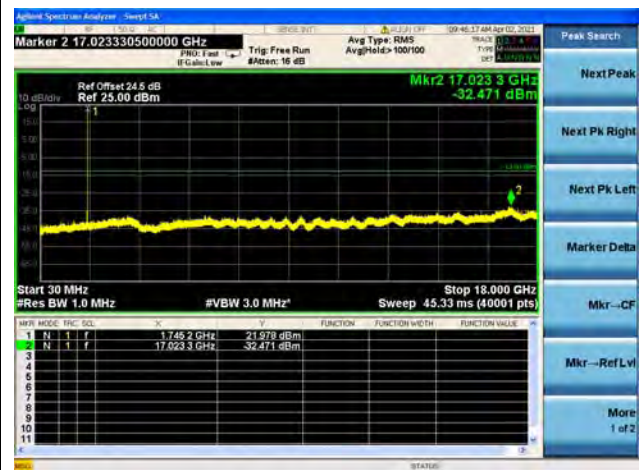
Band66 / 1.4MHz / Low CH / 16QAM



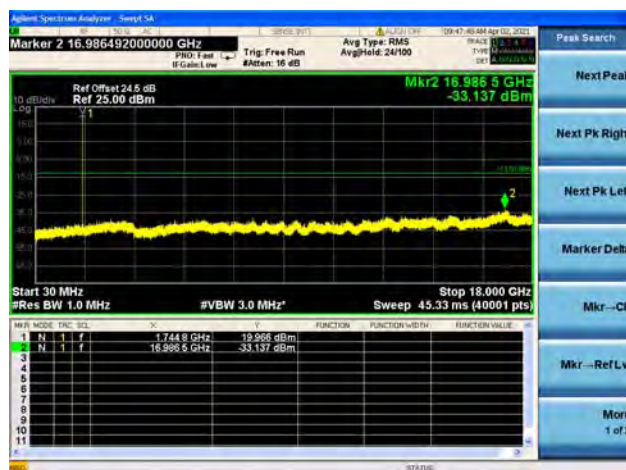
Band66 / 1.4MHz / Low CH / 64QAM



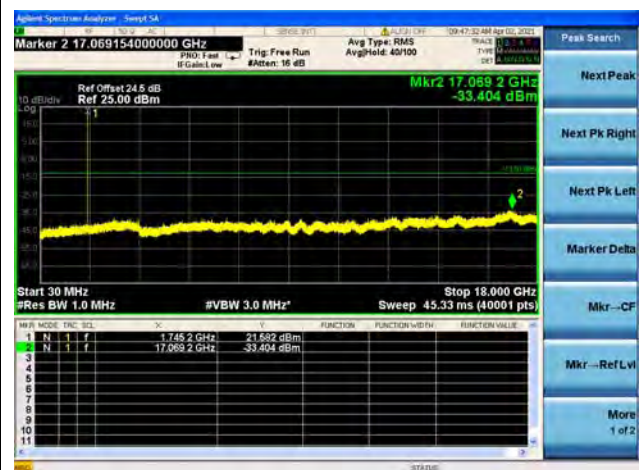
Band66 / 1.4MHz / Mid CH / QPSK



Band66 / 1.4MHz / Mid CH / 16QAM



Band66 / 1.4MHz / Mid CH / 64QAM





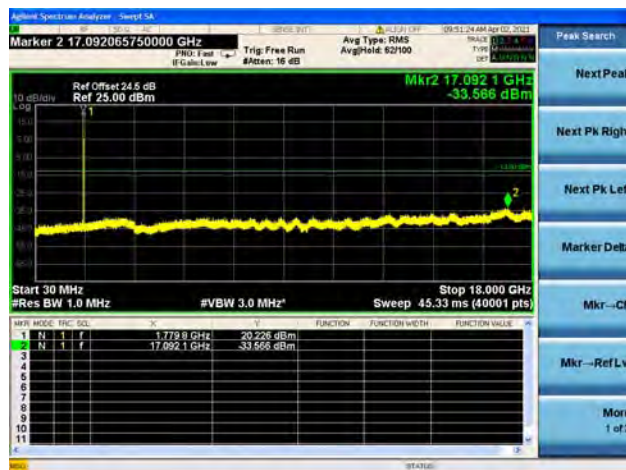
Band66 / 1.4MHz / High CH / QPSK



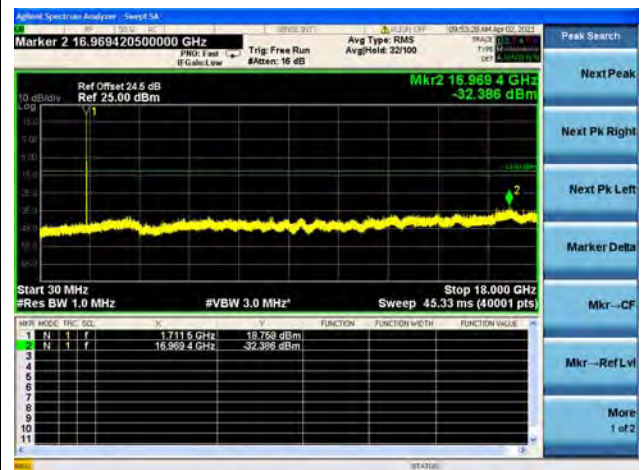
Band66 / 1.4MHz / High CH / 16QAM



Band66 / 1.4MHz / High CH / 64QAM



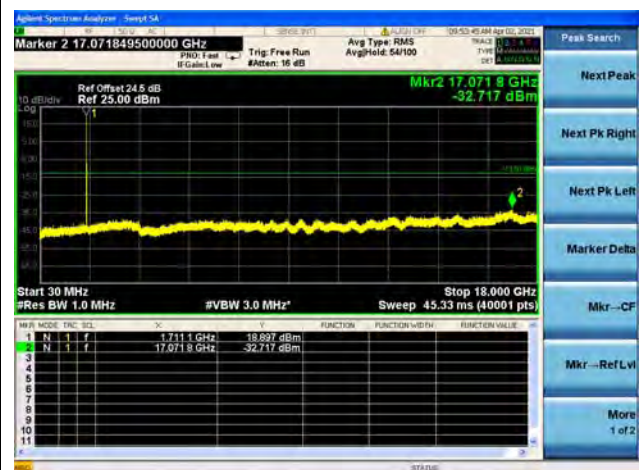
Band66 / 3MHz / Low CH / QPSK



Band66 / 3MHz / Low CH / 16QAM

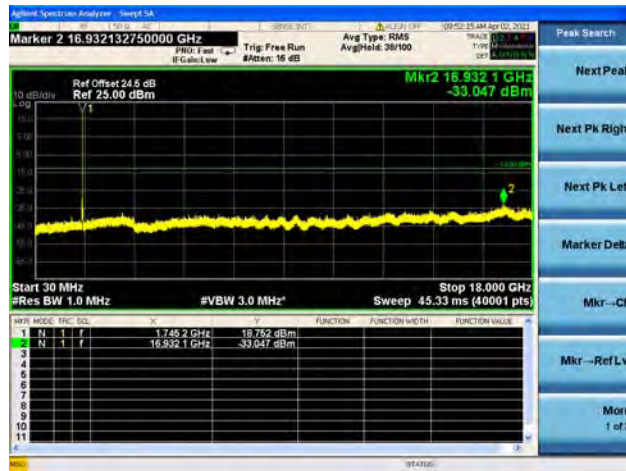


Band66 / 3MHz / Low CH / 64QAM

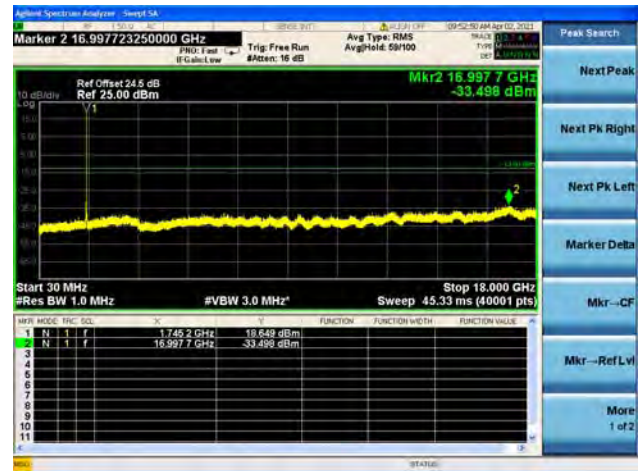




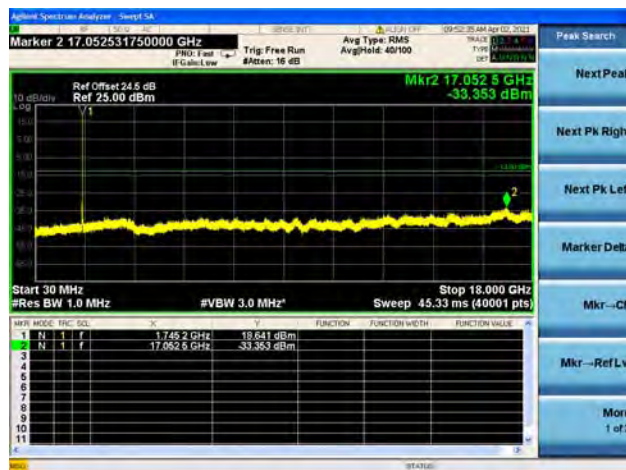
Band66 / 3MHz / Mid CH / QPSK



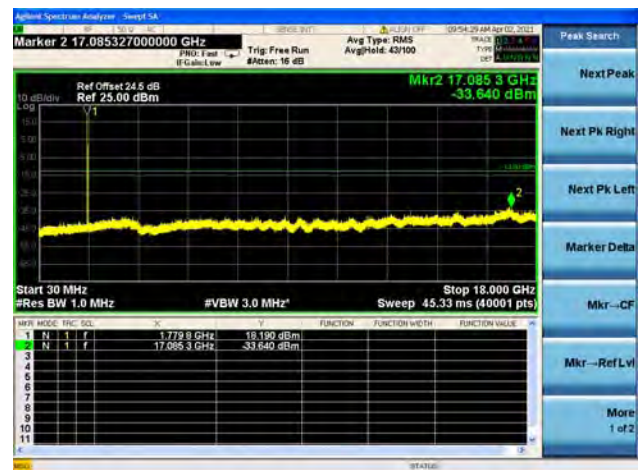
Band66 / 3MHz / Mid CH / 16QAM



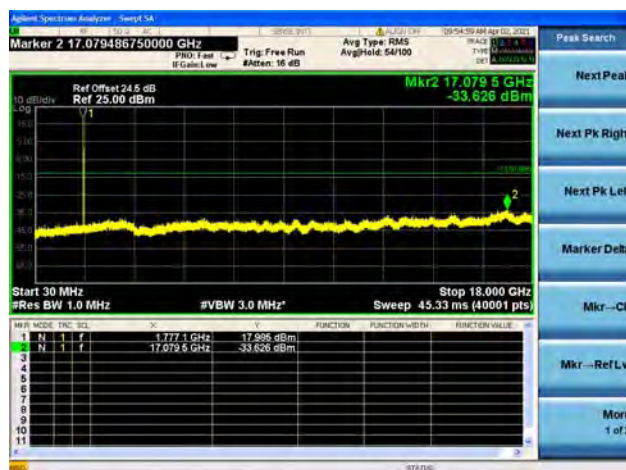
Band66 / 3MHz / Mid CH / 64QAM



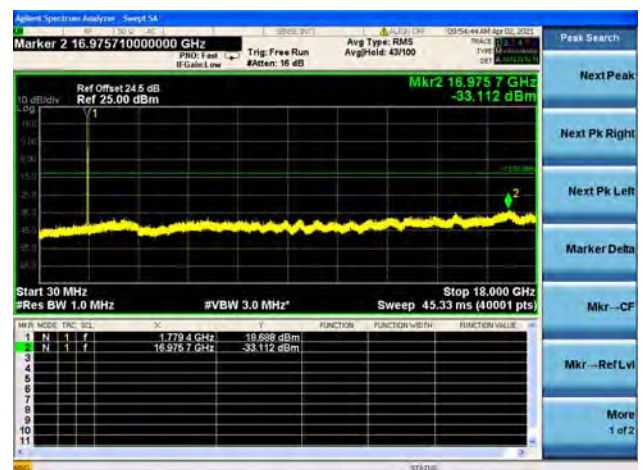
Band66 / 3MHz / High CH / QPSK



Band66 / 3MHz / High CH / 16QAM

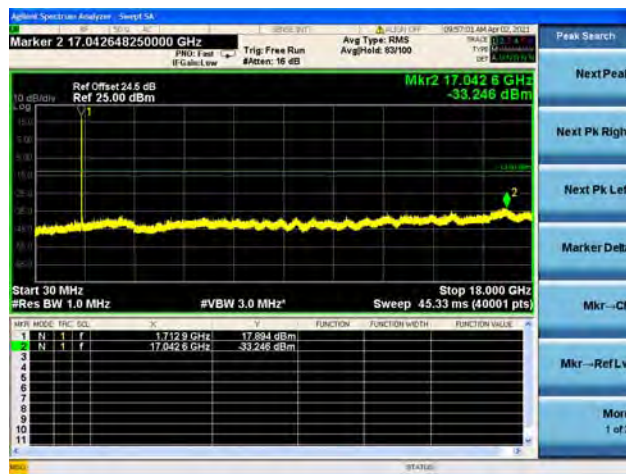


Band66 / 3MHz / High CH / 64QAM

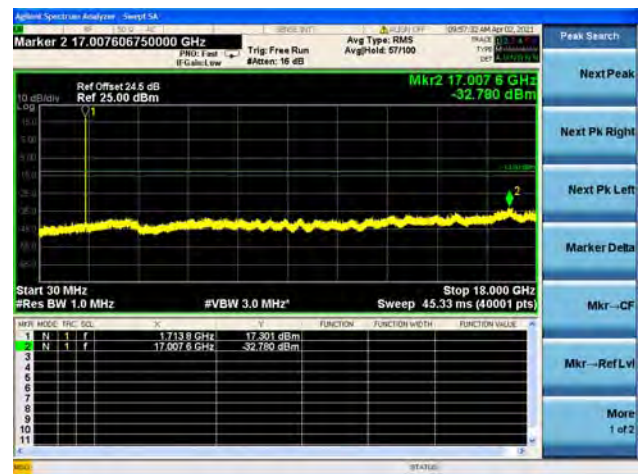




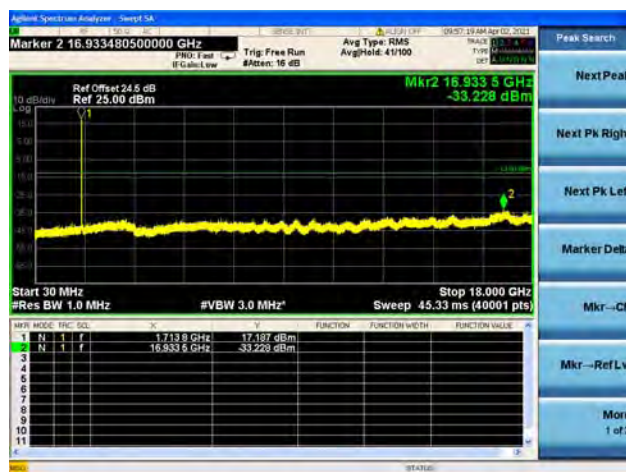
Band66 / 5MHz / Low CH / QPSK



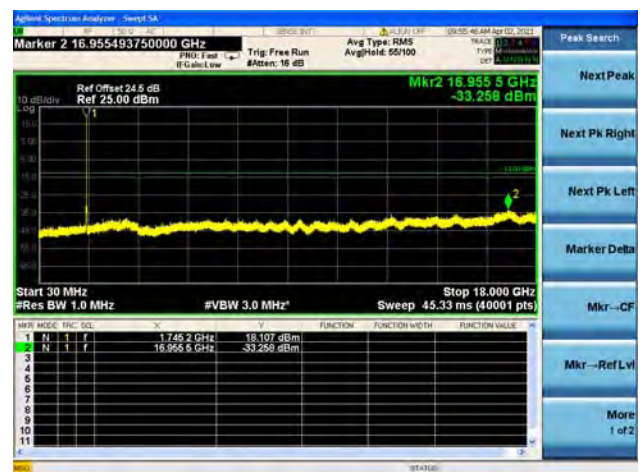
Band66 / 5MHz / Low CH / 16QAM



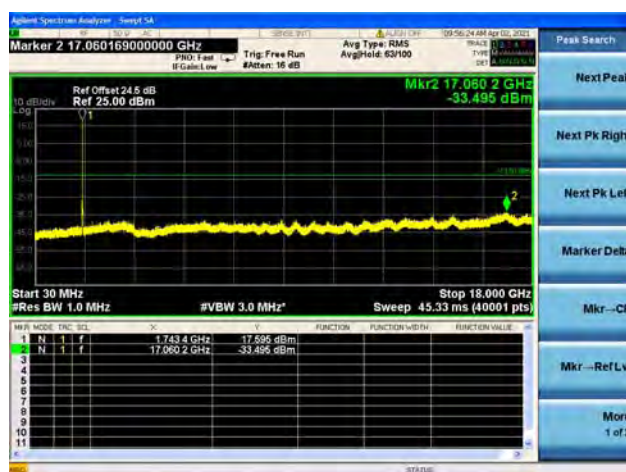
Band66 / 5MHz / Low CH / 64QAM



Band66 / 5MHz / Mid CH / QPSK



Band66 / 5MHz / Mid CH / 16QAM

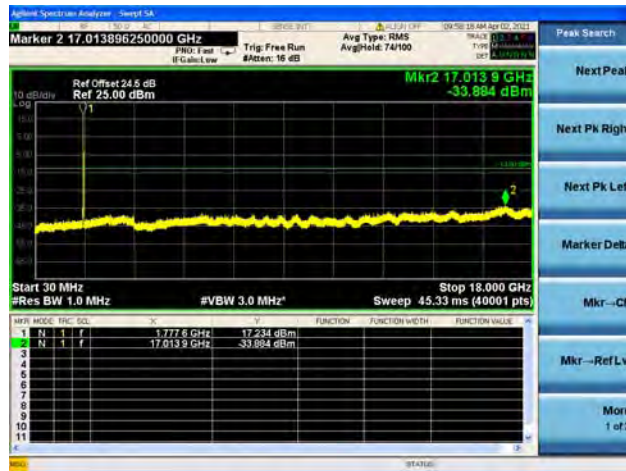


Band66 / 5MHz / Mid CH / 64QAM

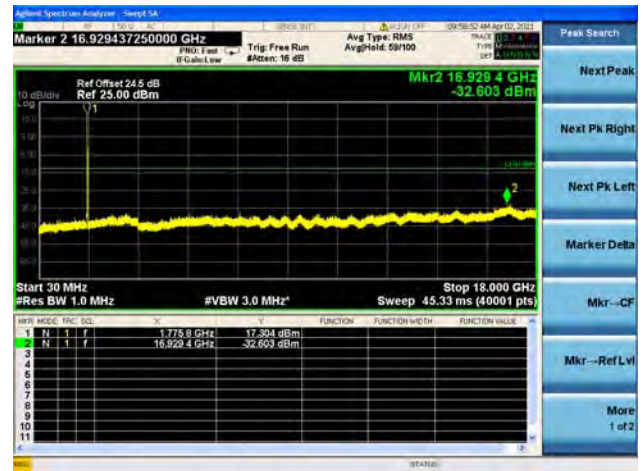




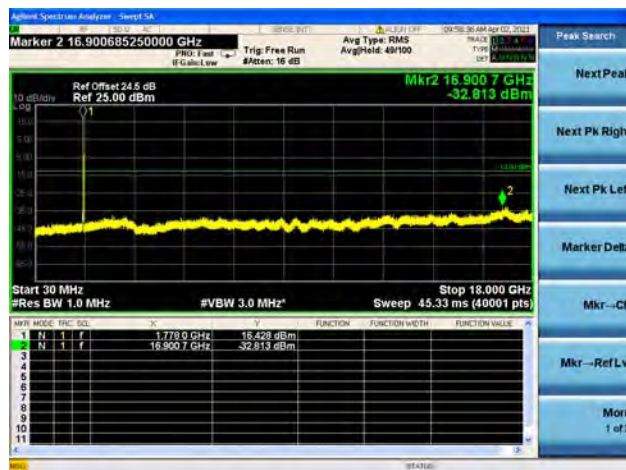
Band66 / 5MHz / High CH / QPSK



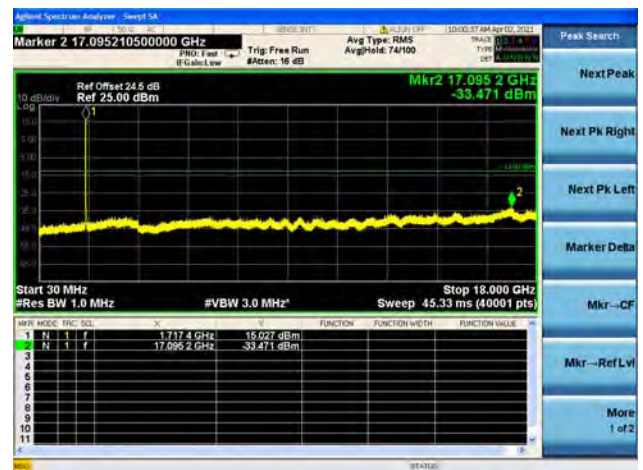
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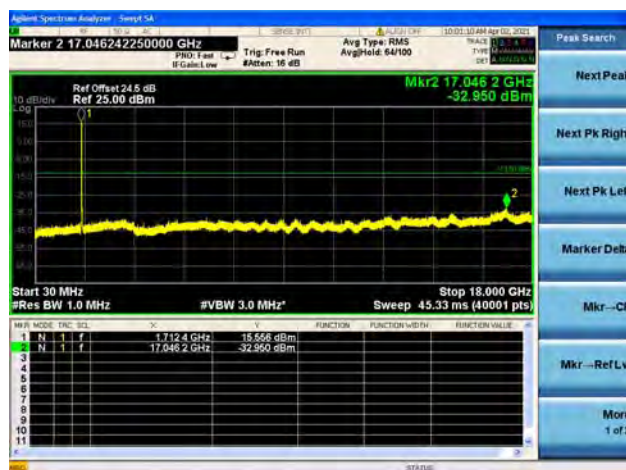
Band66 / 5MHz / High CH / 64QAM



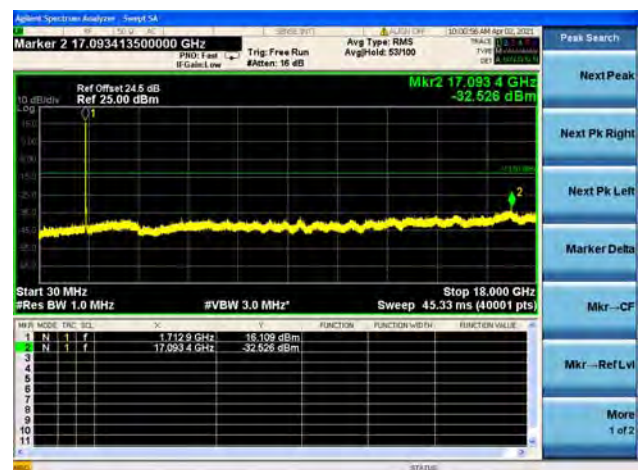
Band66 / 10MHz / Low CH / QPSK



Band66 / 10MHz / Low CH / 16QAM

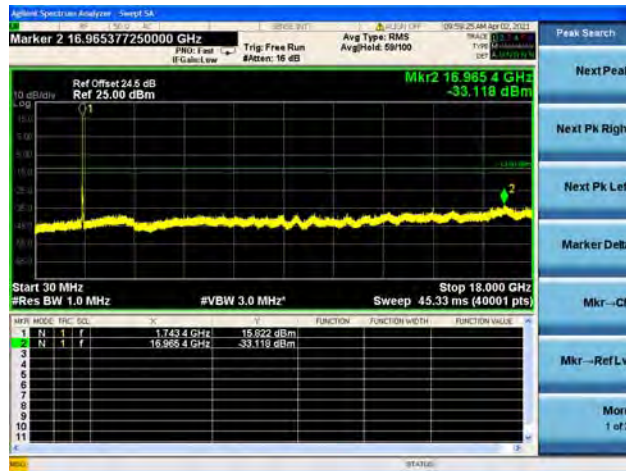


Band66 / 10MHz / Low CH / 64QAM

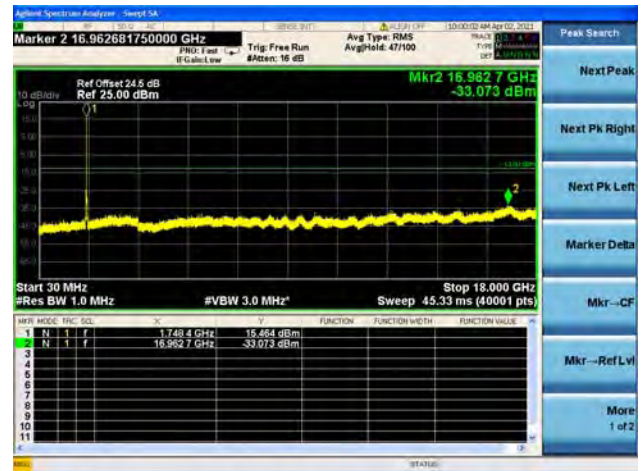




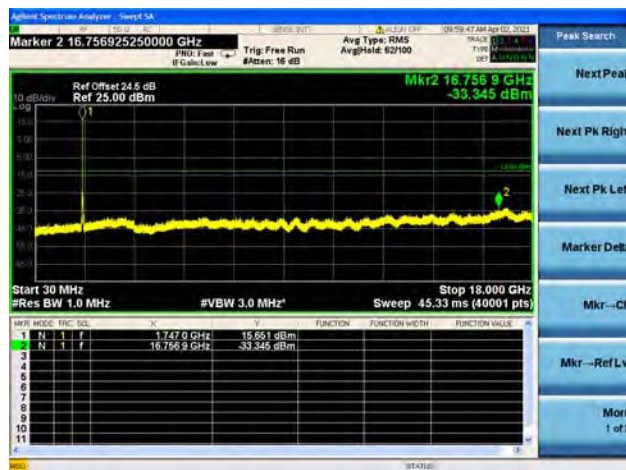
Band66 / 10MHz / Mid CH / QPSK



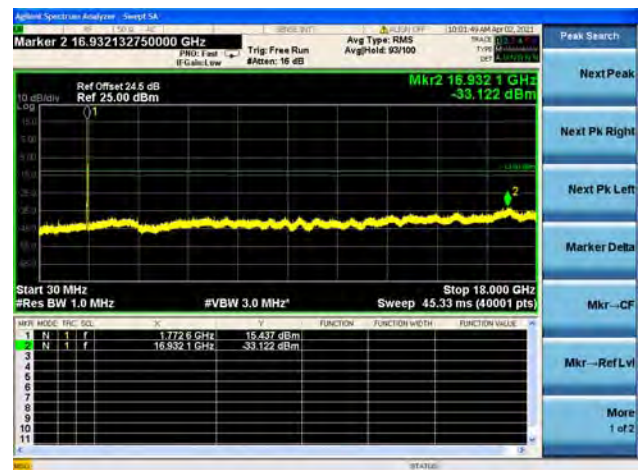
Band66 / 10MHz / Mid CH / 16QAM



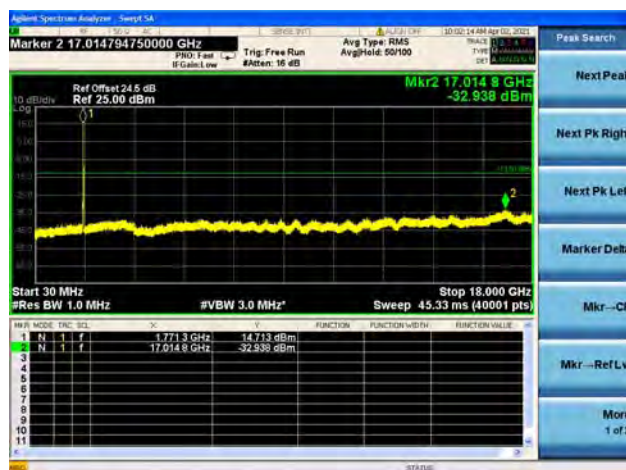
Band66 / 10MHz / Mid CH / 64QAM



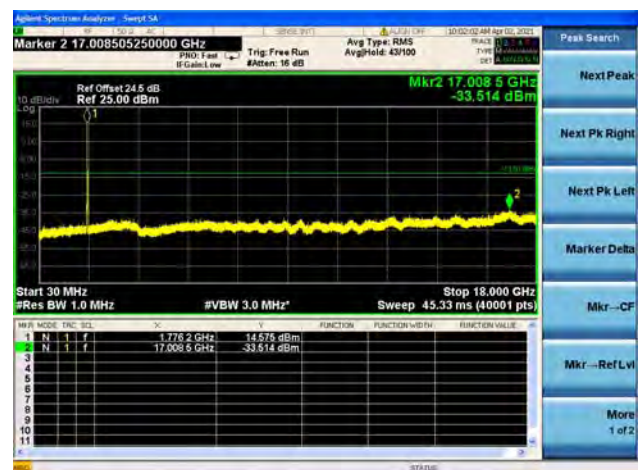
Band66 / 10MHz / High CH / QPSK



Band66 / 10MHz / High CH / 16QAM

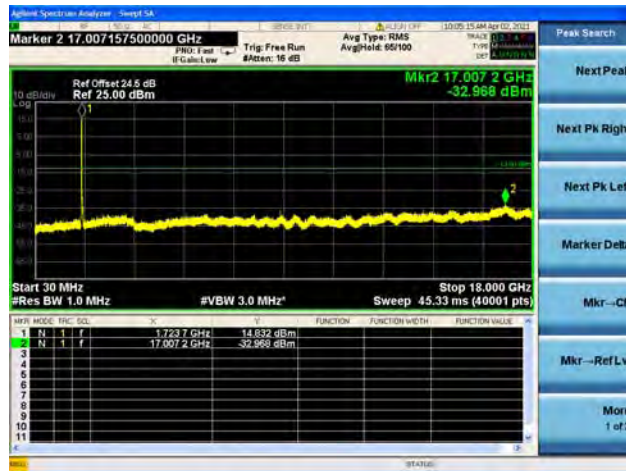


Band66 / 10MHz / High CH / 64QAM

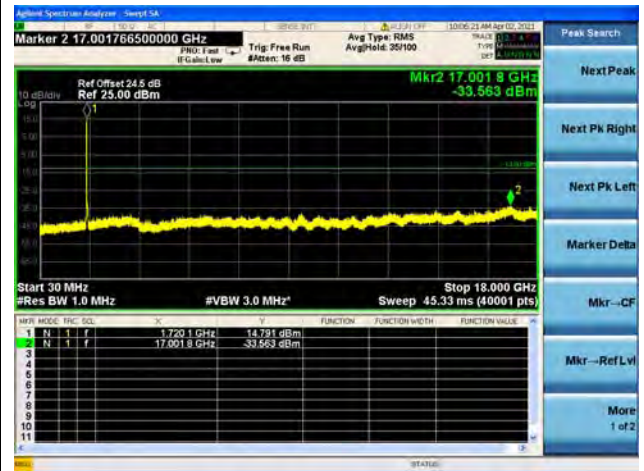




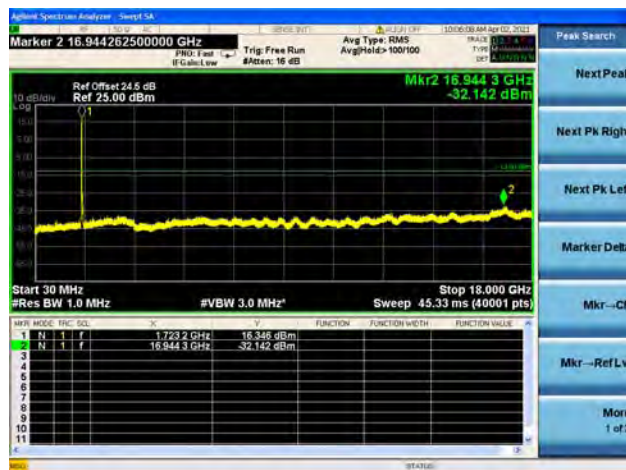
Band66 / 15MHz / Low CH / QPSK



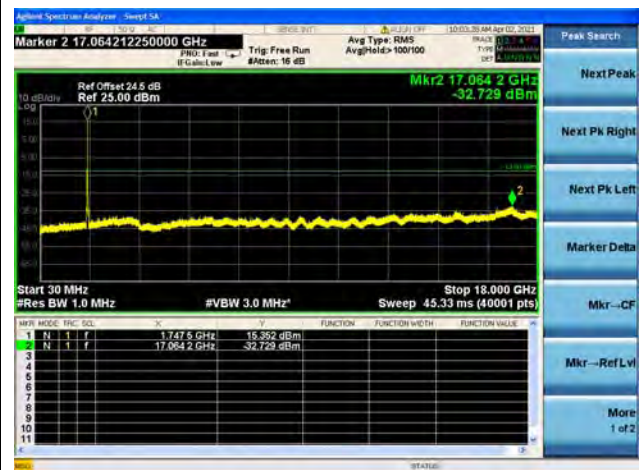
Band66 / 15MHz / Low CH / 16QAM



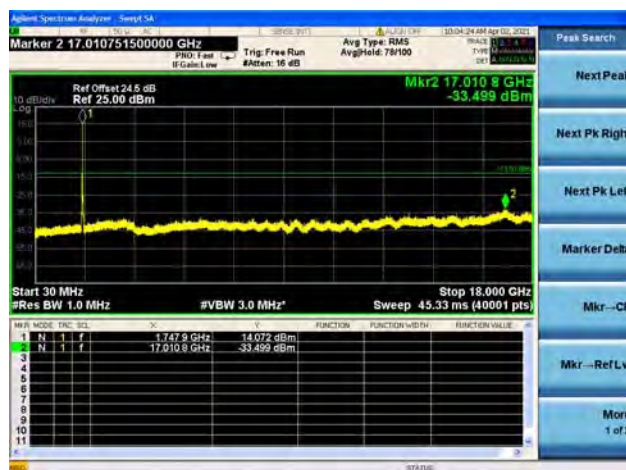
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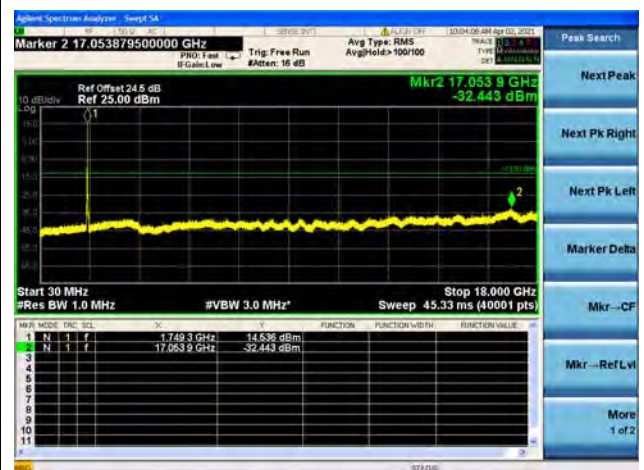
Band66 / 15MHz / Mid CH / QPSK



Band66 / 15MHz / Mid CH / 16QAM

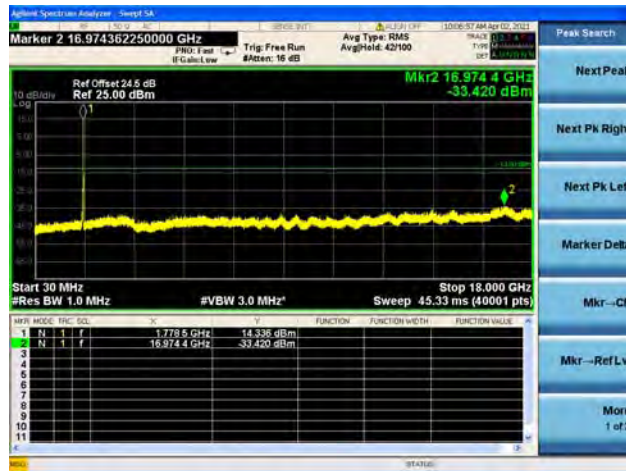


Band66 / 15MHz / Mid CH / 64QAM

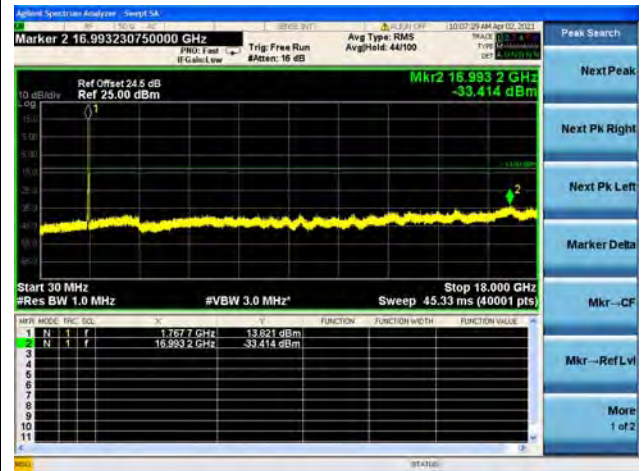




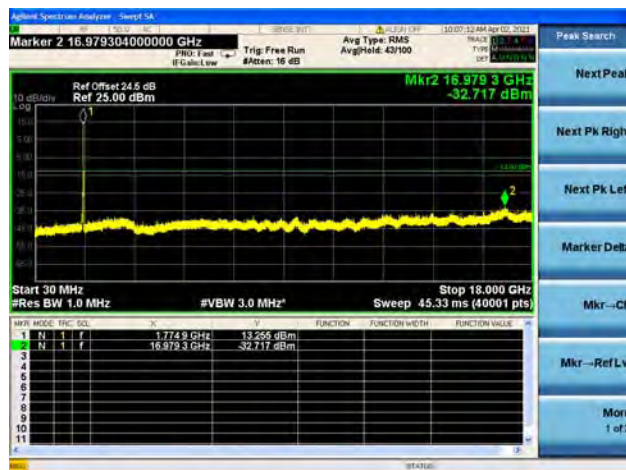
Band66 / 15MHz / High CH / QPSK



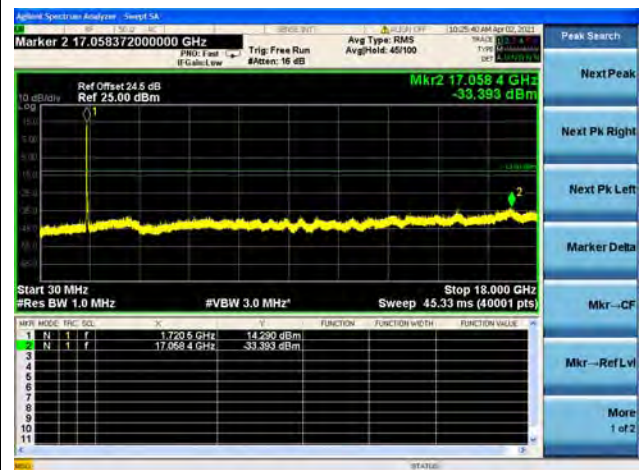
Band66 / 15MHz / High CH / 16QAM



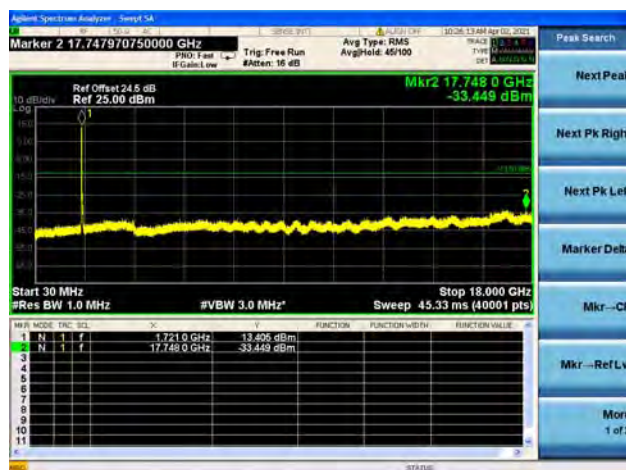
Band66 / 15MHz / High CH / 64QAM



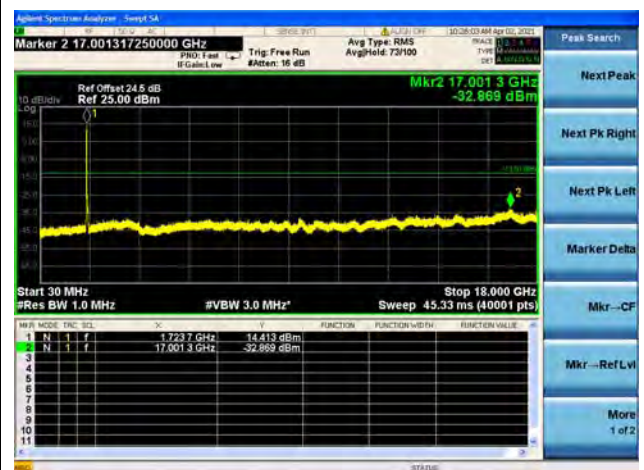
Band66 / 20MHz / Low CH / QPSK



Band66 / 20MHz / Low CH / 16QAM

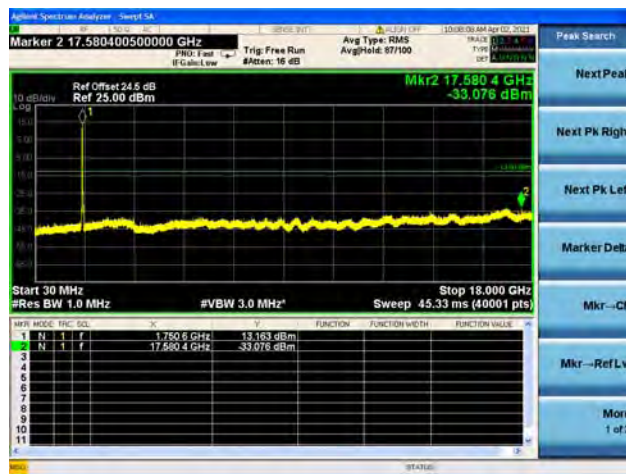


Band66 / 20MHz / Low CH / 64QAM

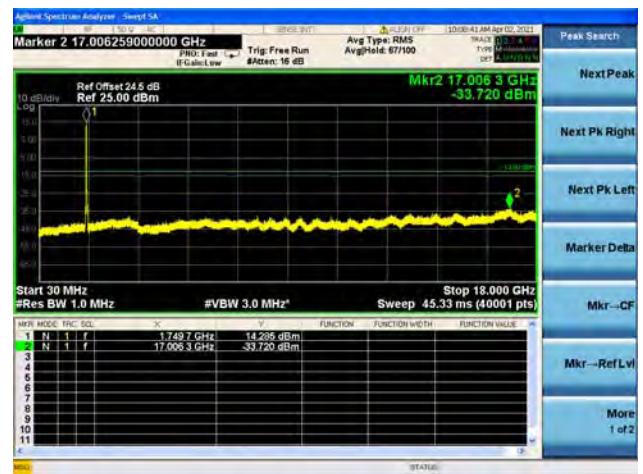




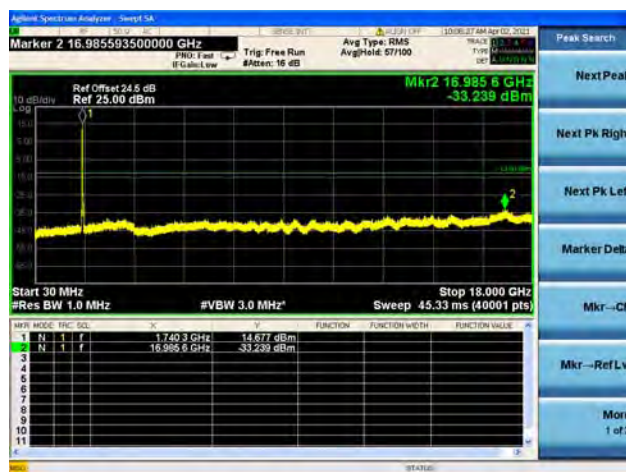
Band66 / 20MHz / Mid CH / QPSK



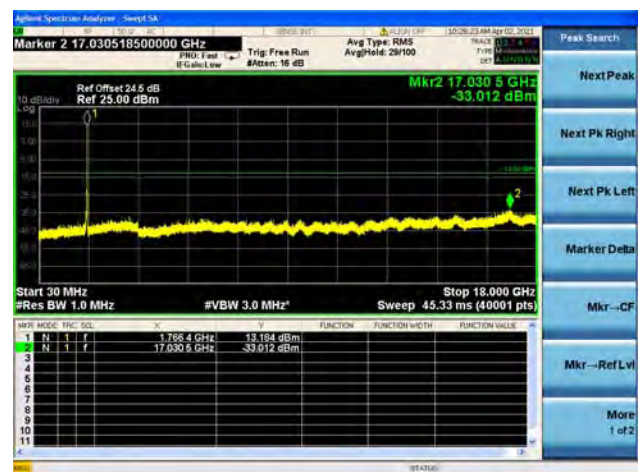
Band66 / 20MHz / Mid CH / 16QAM



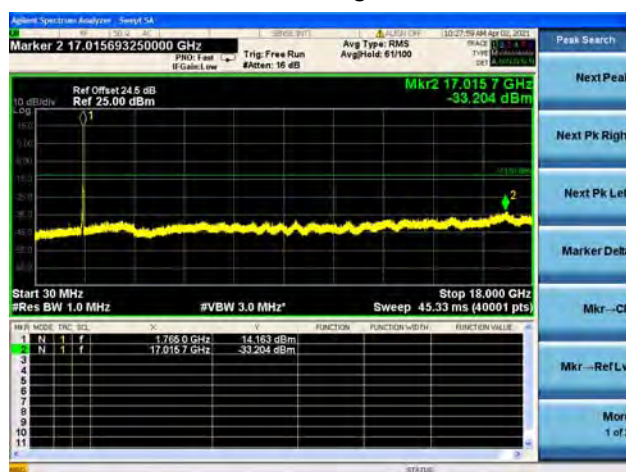
Band66 / 20MHz / Mid CH / 64QAM



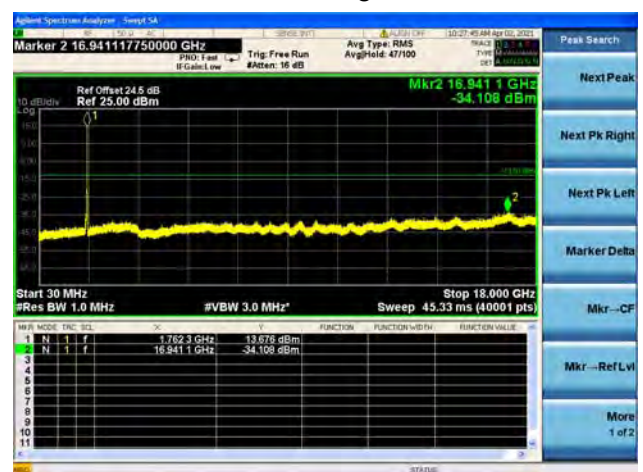
Band66 / 20MHz / High CH / QPSK



Band66 / 20MHz / High CH / 16QAM

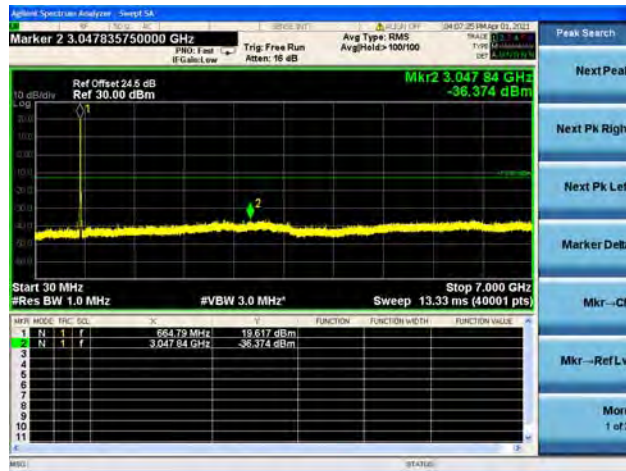


Band66 / 20MHz / High CH / 64QAM

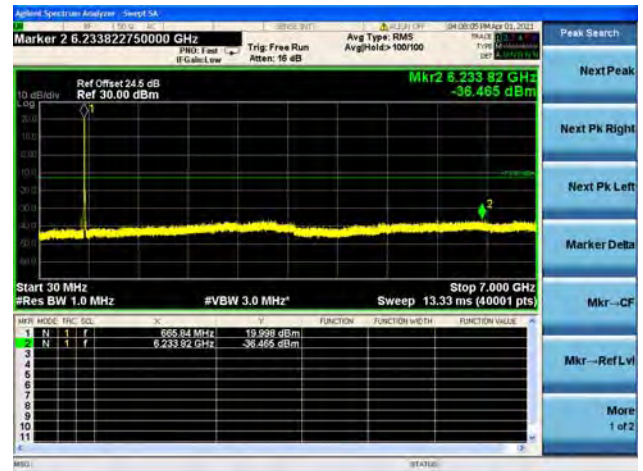




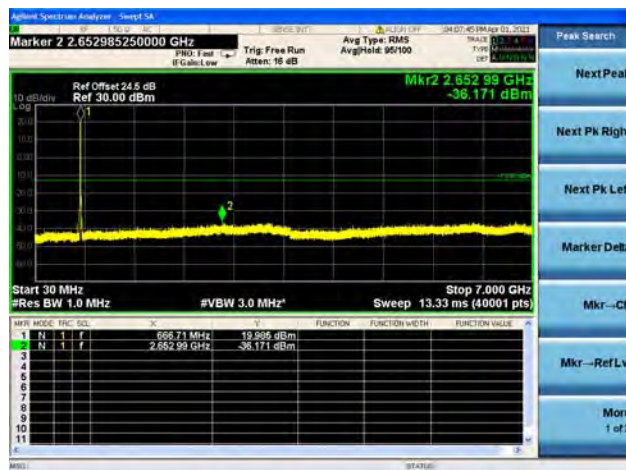
Band71 / 5MHz / Low CH / QPSK



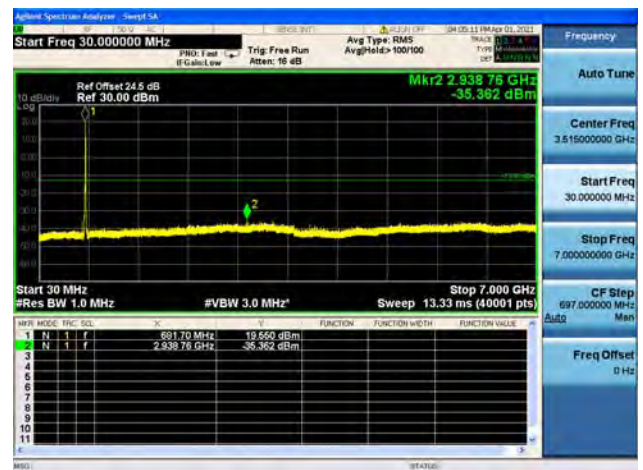
Band71 / 5MHz / Low CH / 16QAM



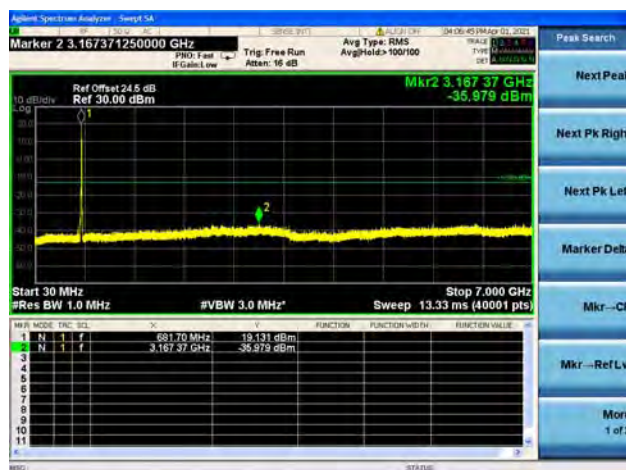
Band71 / 5MHz / Low CH / 64QAM



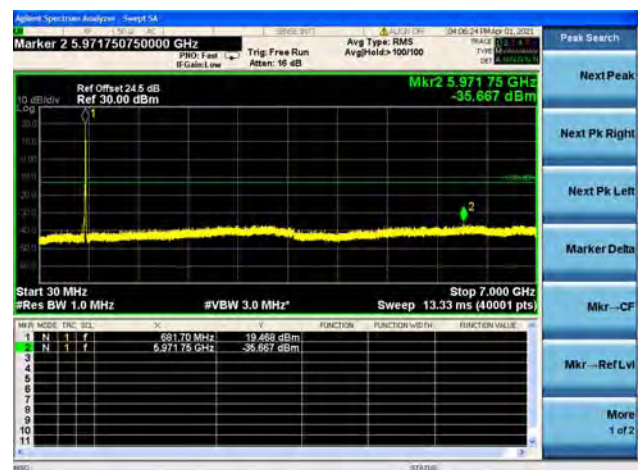
Band71 / 5MHz / Mid CH / QPSK



Band71 / 5MHz / Mid CH / 16QAM

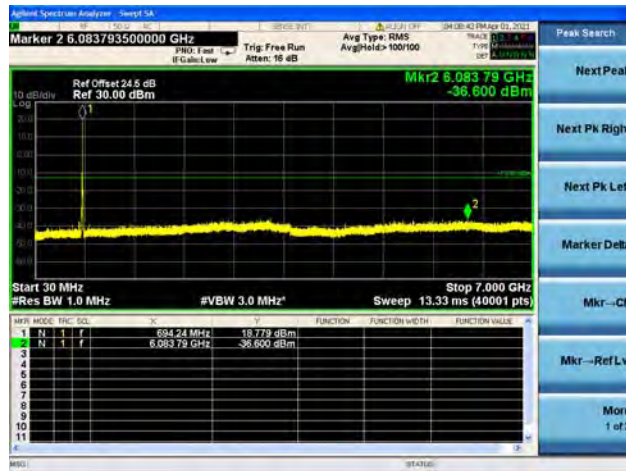


Band71 / 5MHz / Mid CH / 64QAM

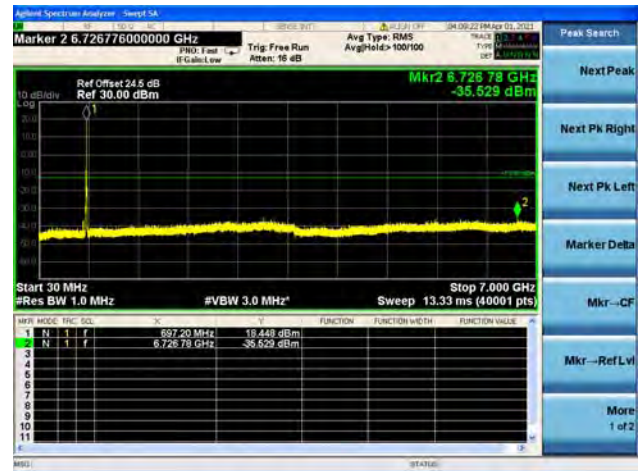




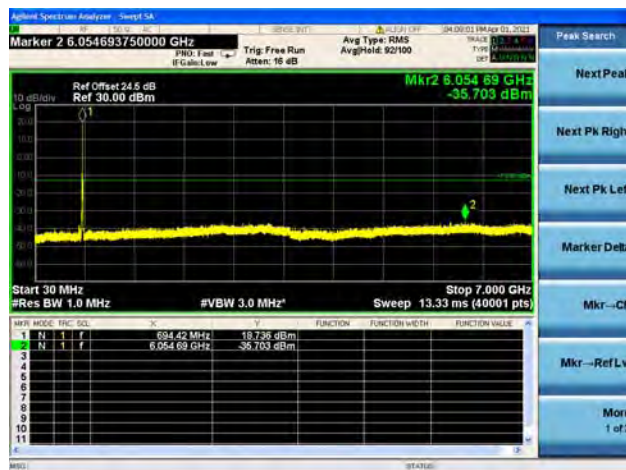
Band71 / 5MHz / High CH / QPSK



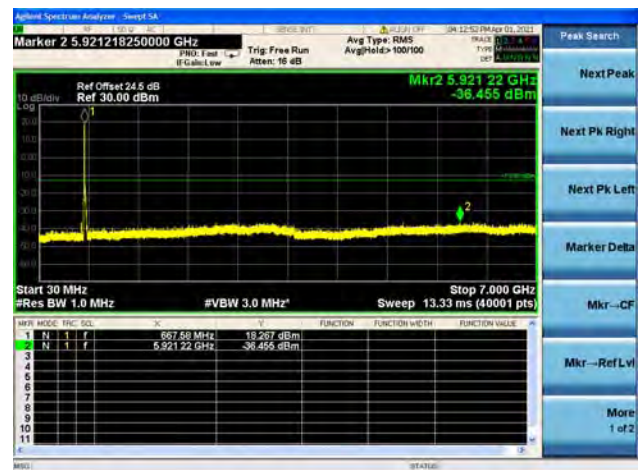
Band71 / 5MHz / High CH / 16QAM



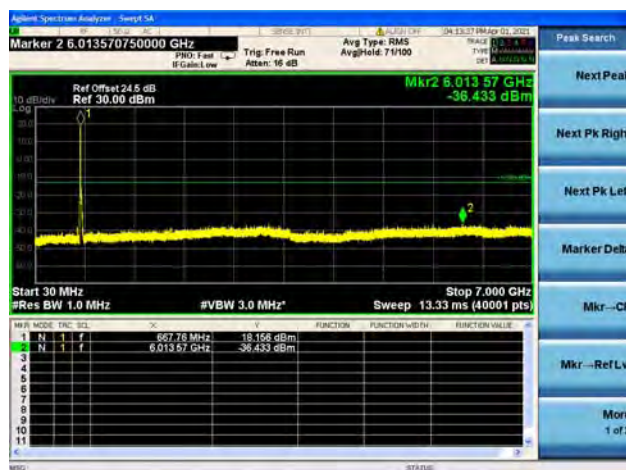
Band71 / 5MHz / High CH / 64QAM



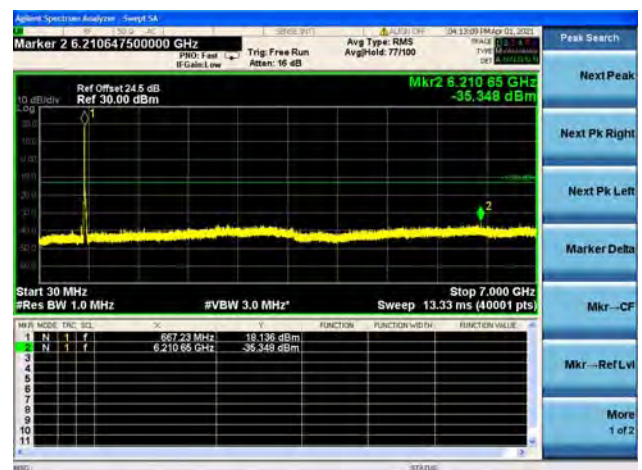
Band71 / 10MHz / Low CH / QPSK



Band71 / 10MHz / Low CH / 16QAM

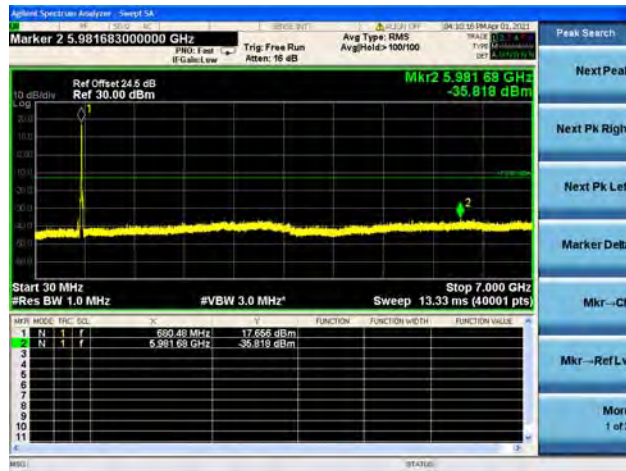


Band71 / 10MHz / Low CH / 64QAM

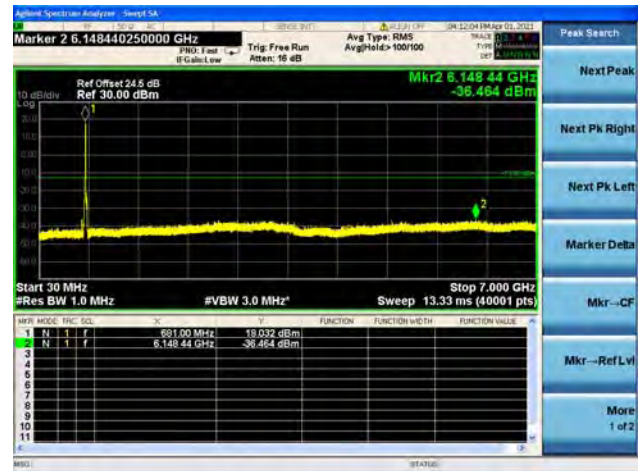




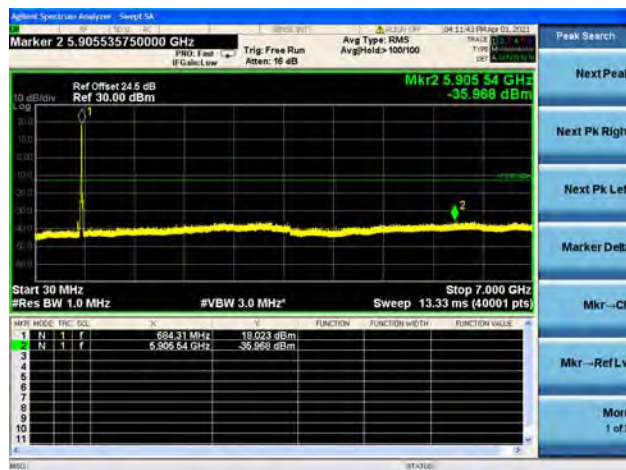
Band71 / 10MHz / Mid CH / QPSK



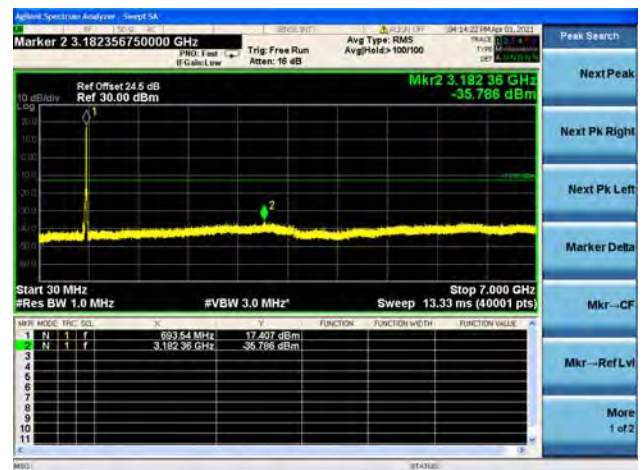
Band71 / 10MHz / Mid CH / 16QAM



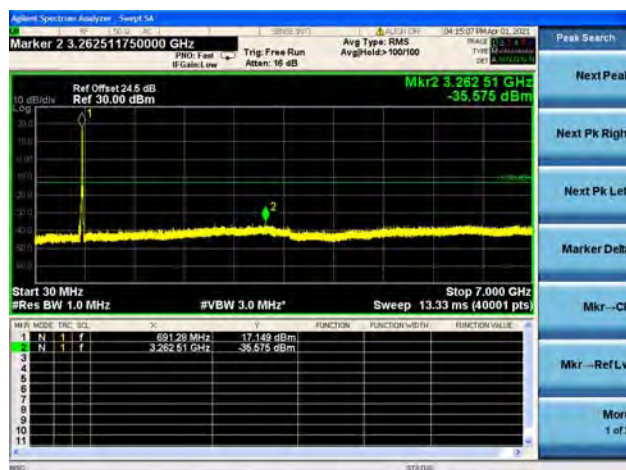
Band71 / 10MHz / Mid CH / 64QAM



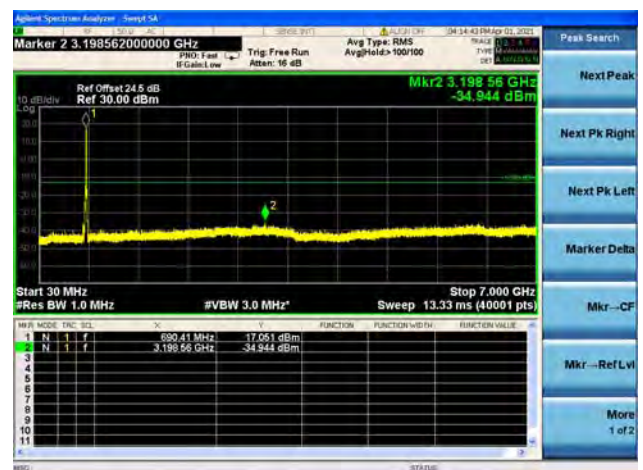
Band71 / 10MHz / High CH / QPSK



Band71 / 10MHz / High CH / 16QAM

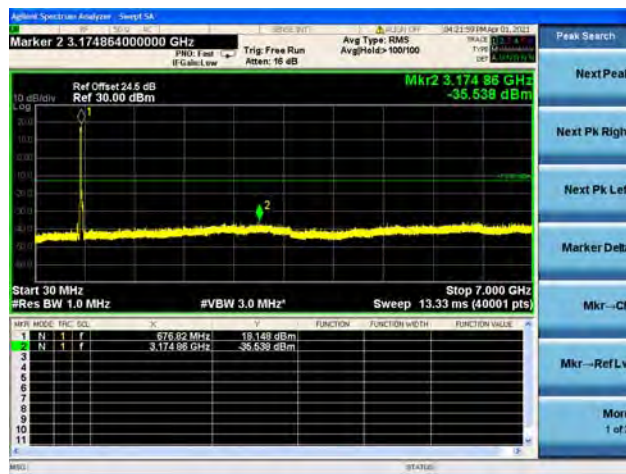


Band71 / 10MHz / High CH / 64QAM

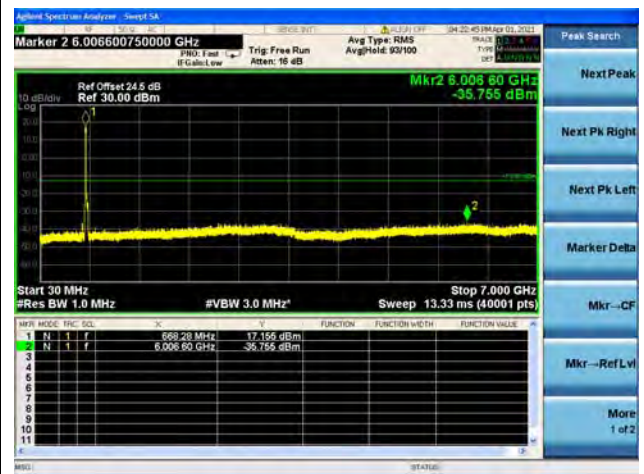




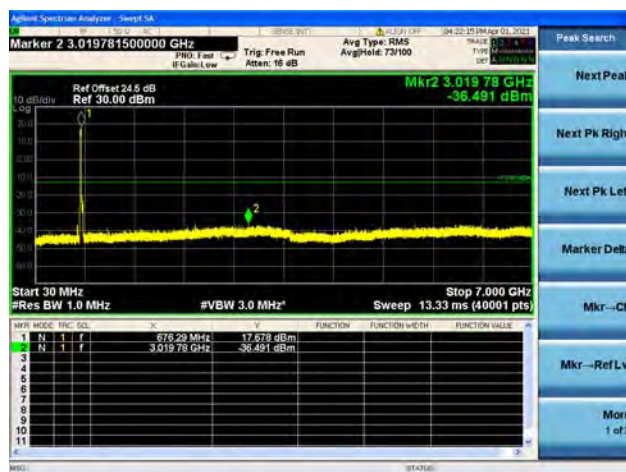
Band71 / 15MHz / Low CH / QPSK



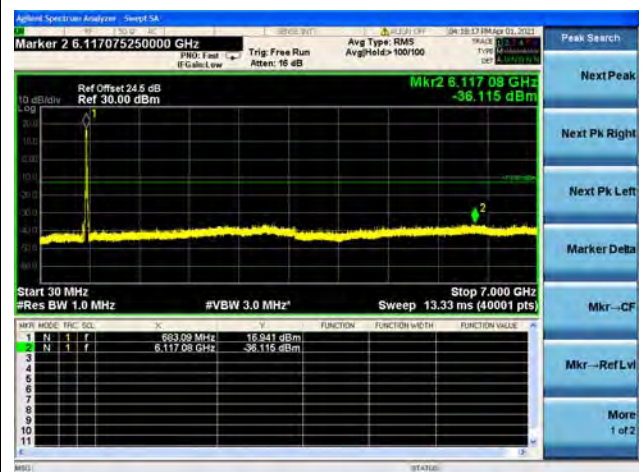
Band71 / 15MHz / Low CH / 16QAM



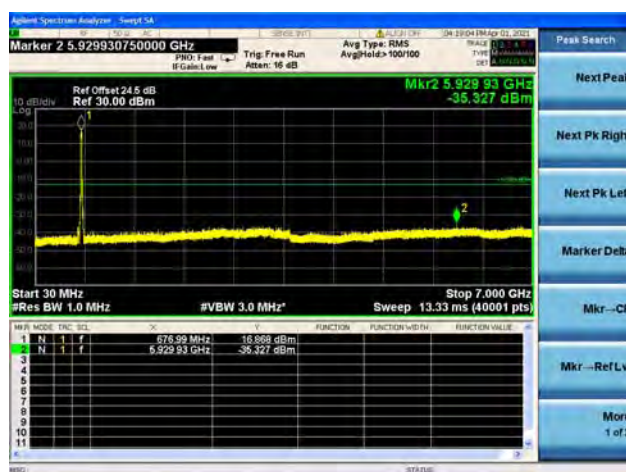
Band71 / 15MHz / Low CH / 64QAM



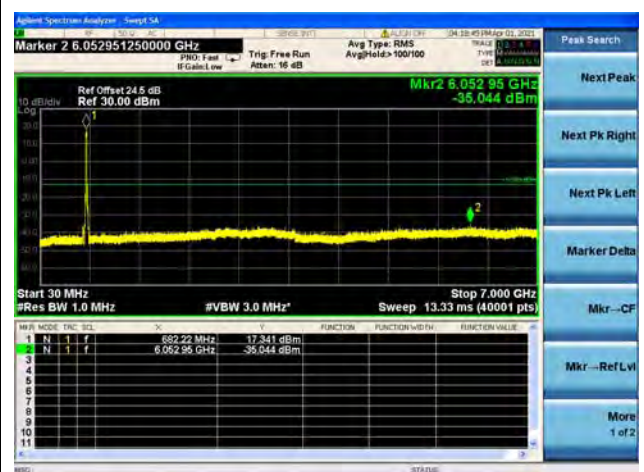
Band71 / 15MHz / Mid CH / QPSK



Band71 / 15MHz / Mid CH / 16QAM

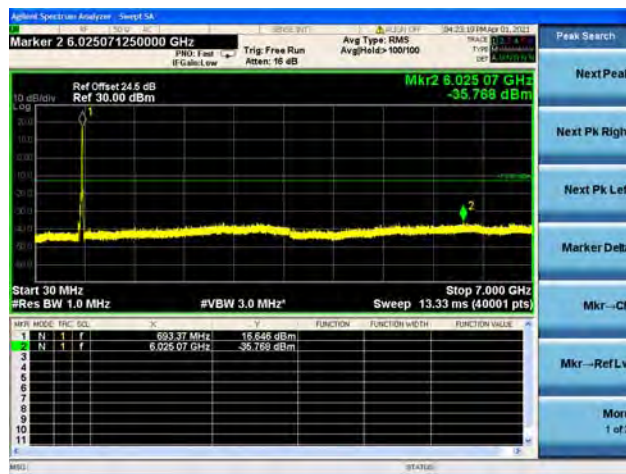


Band71 / 15MHz / Mid CH / 64QAM

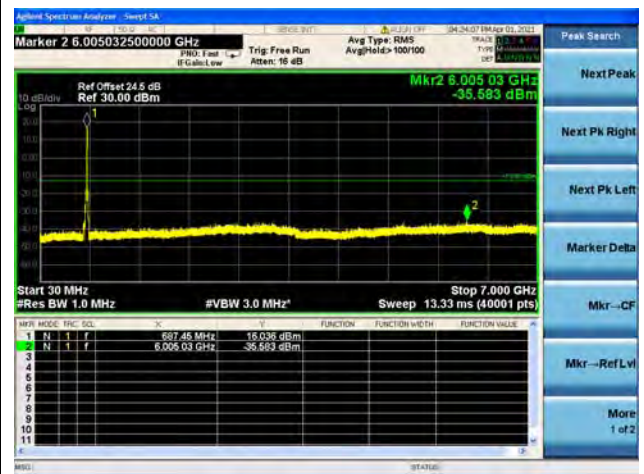




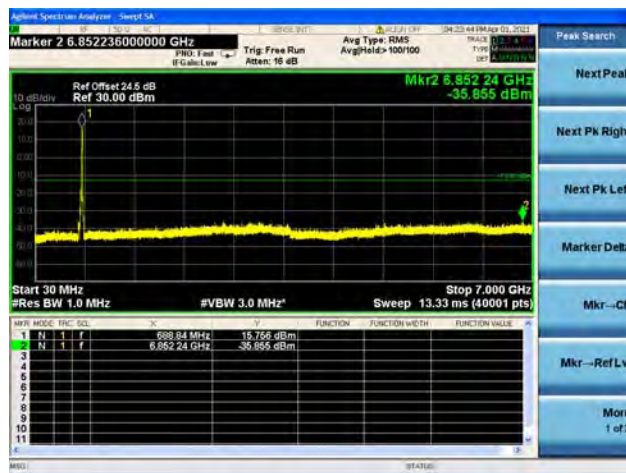
Band71 / 15MHz / High CH / QPSK



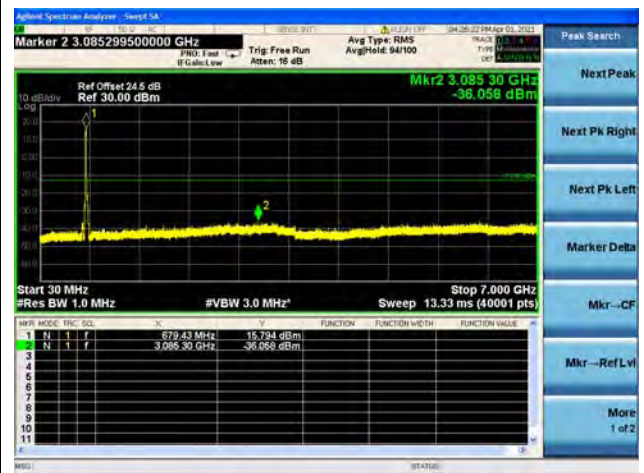
Band71 / 15MHz / High CH / 16QAM



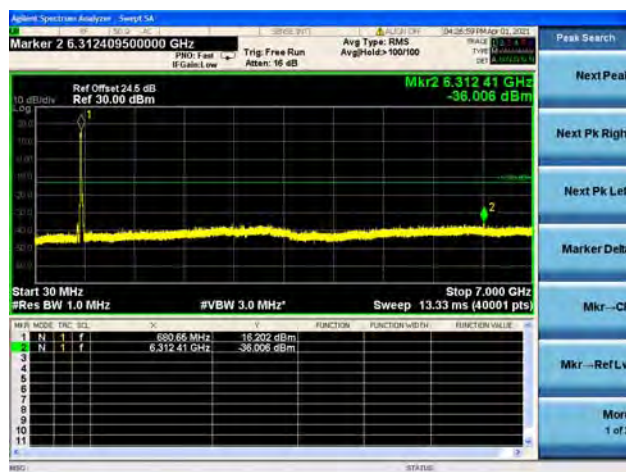
Band71 / 15MHz / High CH / 64QAM



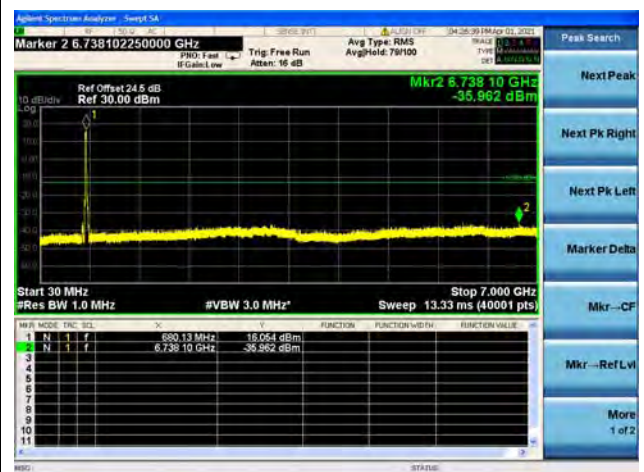
Band71 / 20MHz / Low CH / QPSK



Band71 / 20MHz / Low CH / 16QAM

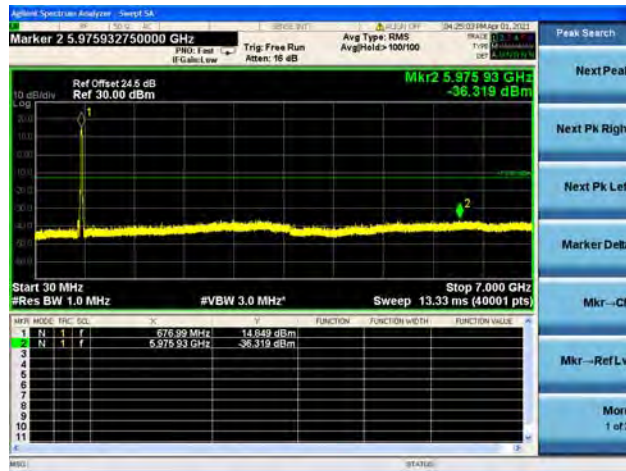


Band71 / 20MHz / Low CH / 64QAM

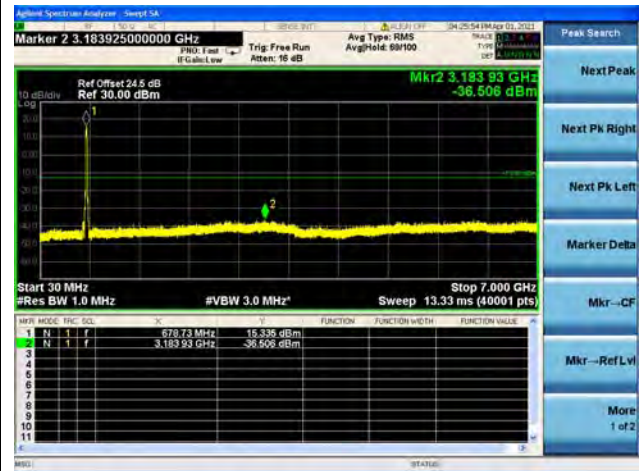




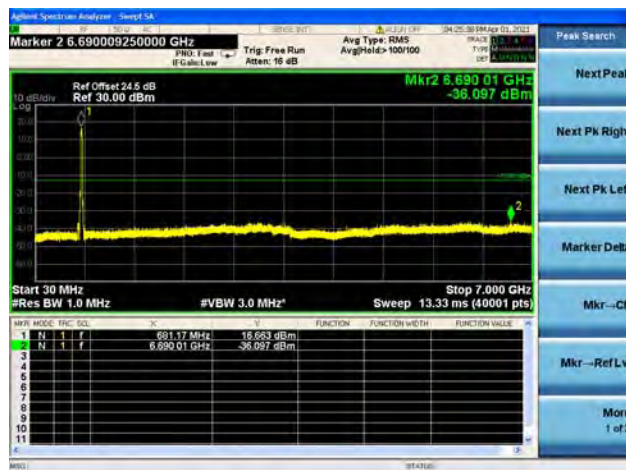
Band71 / 20MHz / Mid CH / QPSK



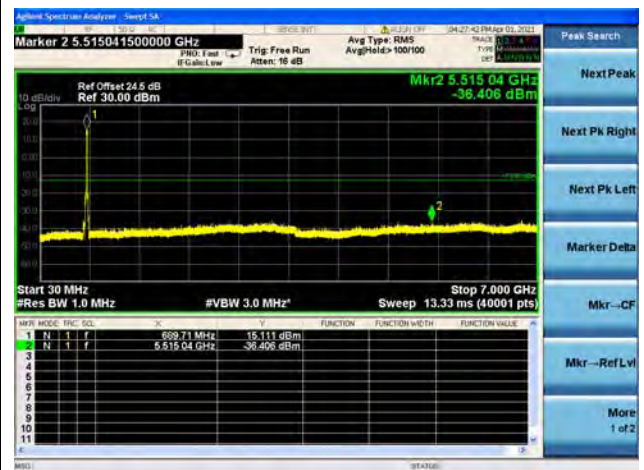
Band71 / 20MHz / Mid CH / 16QAM



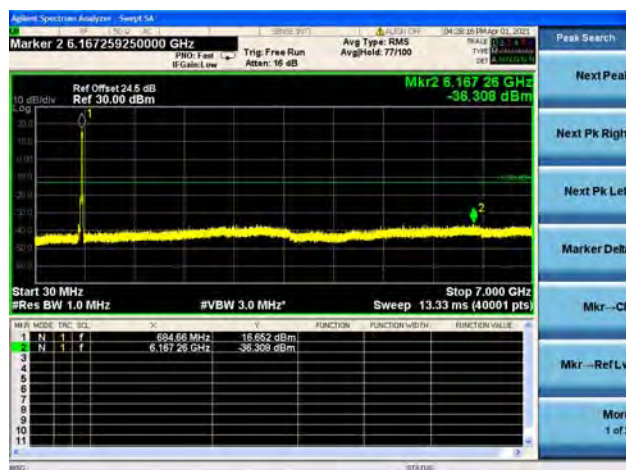
Band71 / 20MHz / Mid CH / 64QAM



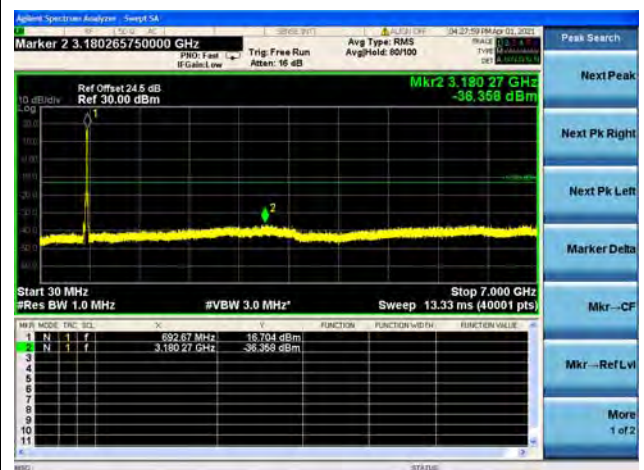
Band71 / 20MHz / High CH / QPSK



Band77 / 20MHz / High CH / 16QAM



Band71 / 20MHz / High CH / 64QAM





2.6. Band Edge

2.6.1. Requirement

Band 2

According to FCC section 24.238(a), for operations in the 1850–1910MHz bands, 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 in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 4, 66

According to FCC section 27.53(h), for operations in the 1710–1755MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 5

According to FCC section 22.917(a), for operations in the 824–849MHz bands, 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 in a 100kHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 12, 71

According to FCC section 27.53(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.

Band 13

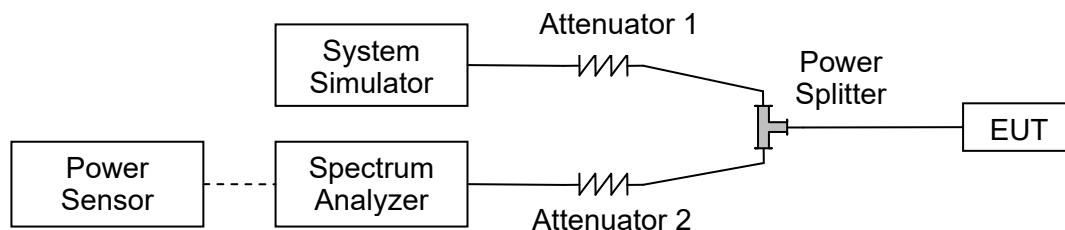
According to FCC section 27.53(c)(2), any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB in a 100kHz bandwidth. However, in the 100 kHz bands immediately outside and

adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Band 41

According to FCC section 27.53(m) (4), for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

2.6.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.6.3. Test Procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.



2.6.4. Test Result

Band2 / 1.4MHz / Low CH / QPSK / 1 RB



Band2 / 1.4MHz / Low CH / QPSK / FULL RB



Band2 / 1.4MHz / High CH / QPSK / 1 RB



Band2 / 1.4MHz / High CH / QPSK / FULL RB



Band2 / 3MHz / Low CH / QPSK / 1 RB



Band2 / 3MHz / Low CH / QPSK / FULL RB





Band2 / 3MHz / High CH / QPSK / 1 RB



Band2 / 3MHz / High CH / QPSK / FULL RB



Band2 / 5MHz / Low CH / QPSK / 1 RB



Band2 / 5MHz / Low CH / QPSK / FULL RB



Band2 / 5MHz / High CH / QPSK / 1 RB



Band2 / 5MHz / High CH / QPSK / FULL RB





Band2 / 10MHz / Low CH / QPSK / 1 RB



Band2 / 10MHz / Low CH / QPSK / FULL RB



Band2 / 10MHz / High CH / QPSK / 1 RB



Band2 / 10MHz / High CH / QPSK / FULL RB



Band2 / 15MHz / Low CH / QPSK / 1 RB



Band2 / 15MHz / Low CH / QPSK / FULL RB





Band2 / 15MHz / High CH / QPSK / 1 RB



Band2 / 15MHz / High CH / QPSK / FULL RB



Band2 / 20MHz / Low CH / QPSK / 1 RB



Band2 / 20MHz / Low CH / QPSK / FULL RB



Band2 / 20MHz / High CH / QPSK / 1 RB



Band2 / 20MHz / High CH / QPSK / FULL RB





Band4 / 1.4MHz / Low CH / QPSK / 1 RB



Band4 / 1.4MHz / Low CH / QPSK / FULL RB



Band4 / 1.4MHz / High CH / QPSK / 1 RB



Band4 / 1.4MHz / High CH / QPSK / FULL RB



Band4 / 3MHz / Low CH / QPSK / 1 RB



Band4 / 3MHz / Low CH / QPSK / FULL RB





Band4 / 3MHz / High CH / QPSK / 1 RB



Band4 / 3MHz / High CH / QPSK / FULL RB



Band4 / 5MHz / Low CH / QPSK / 1 RB



Band4 / 5MHz / Low CH / QPSK / FULL RB



Band4 / 5MHz / High CH / QPSK / 1 RB



Band4 / 5MHz / High CH / QPSK / FULL RB





Band4 / 10MHz / Low CH / QPSK / 1 RB



Band4 / 10MHz / Low CH / QPSK / FULL RB



Band4 / 10MHz / High CH / QPSK / 1 RB



Band4 / 10MHz / High CH / QPSK / FULL RB



Band4 / 15MHz / Low CH / QPSK / 1 RB



Band4 / 15MHz / Low CH / QPSK / FULL RB

