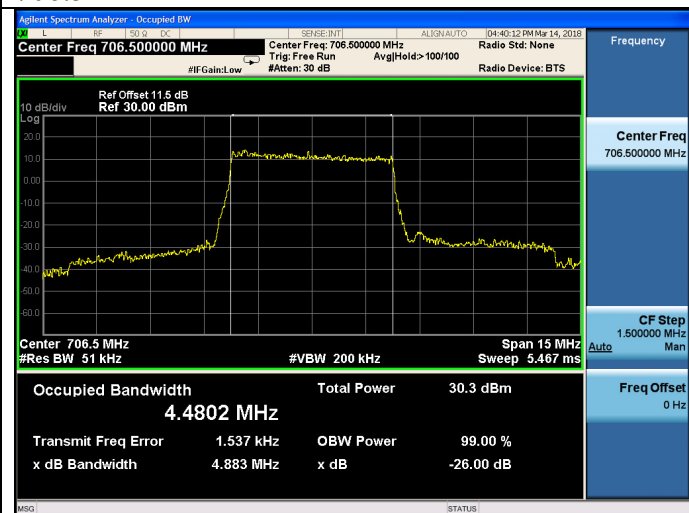


Band 17:

5MHz Bandwidth

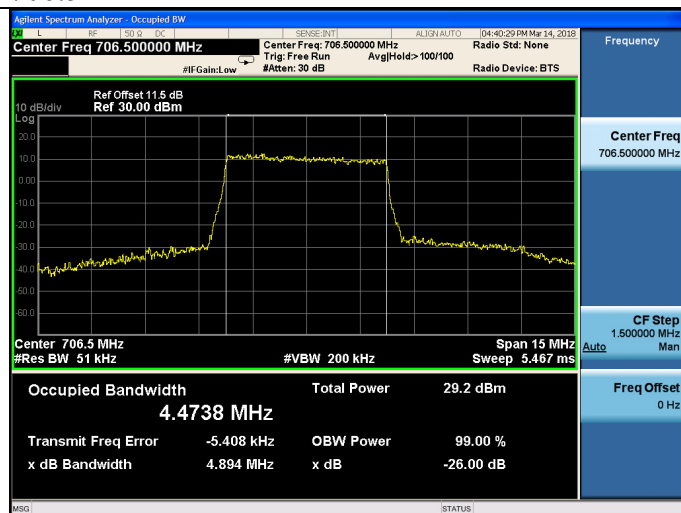
QPSK

706.5MHz

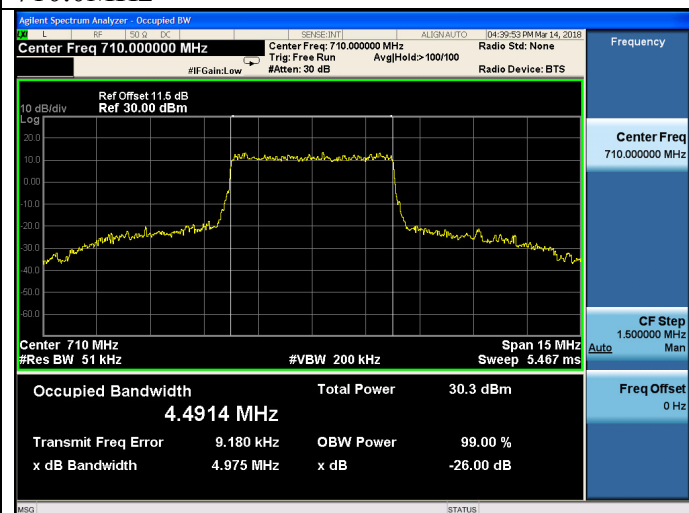


16QAM

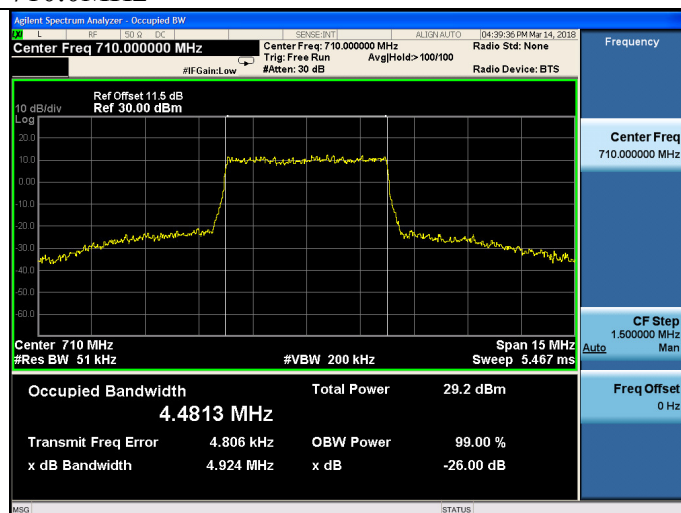
706.5MHz



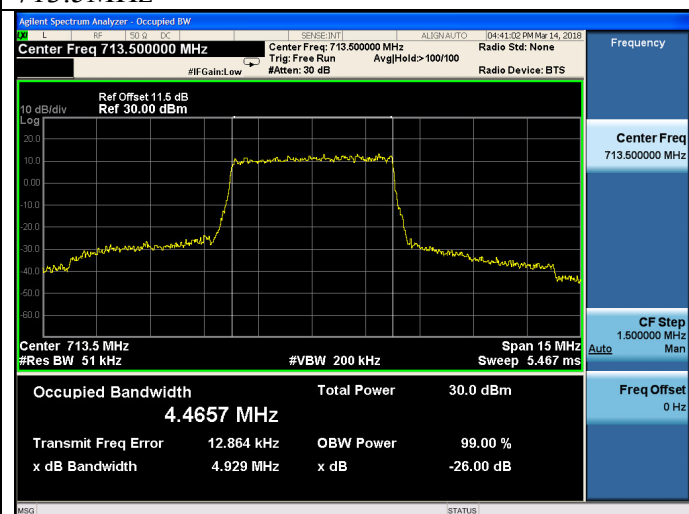
710.0MHz



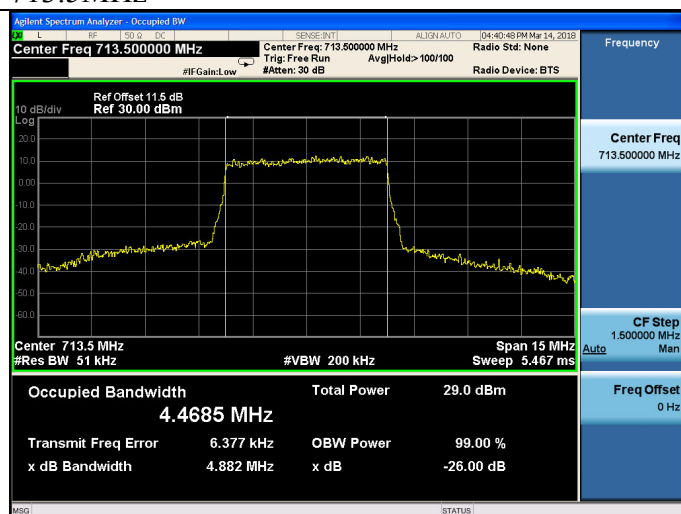
710.0MHz



713.5MHz



713.5MHz

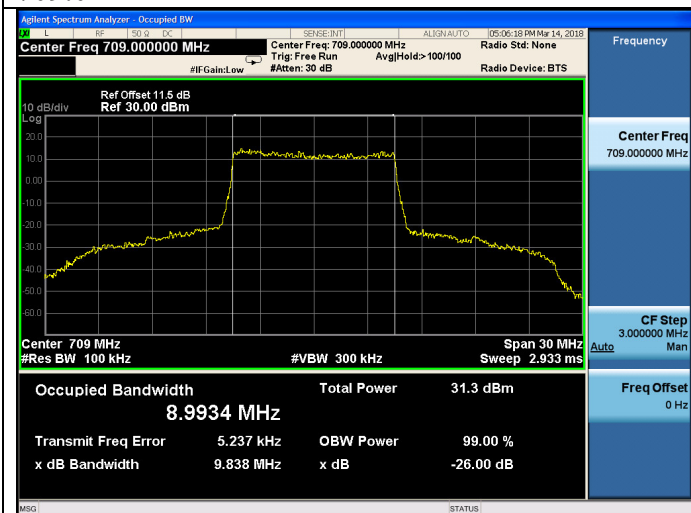


Band 17:

10MHz Bandwidth

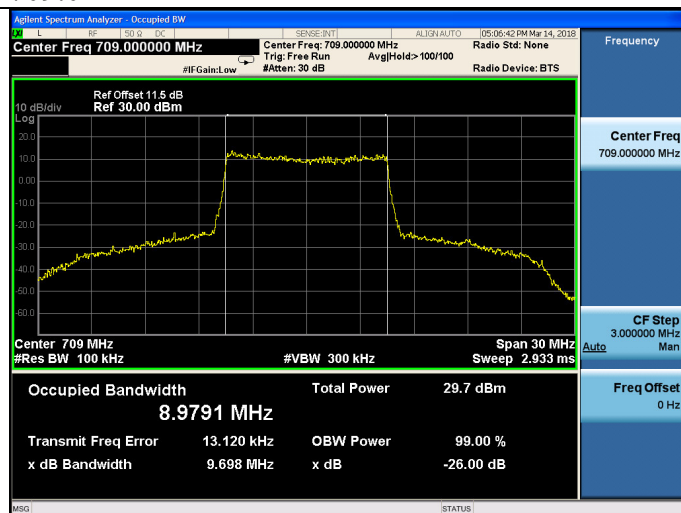
QPSK

709.0MHz

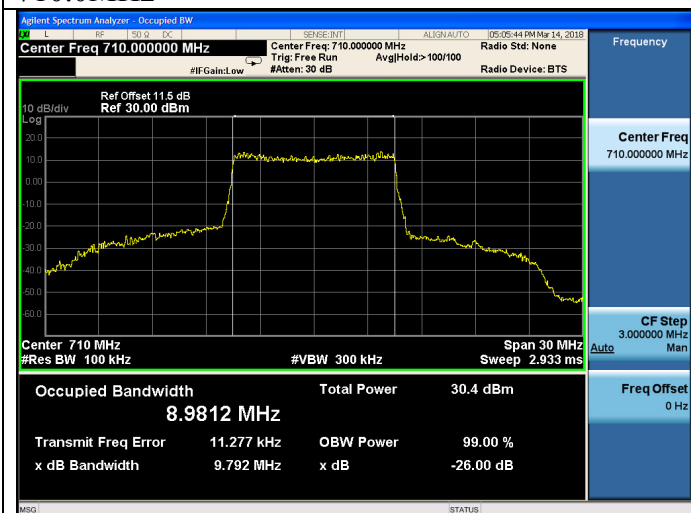


16QAM

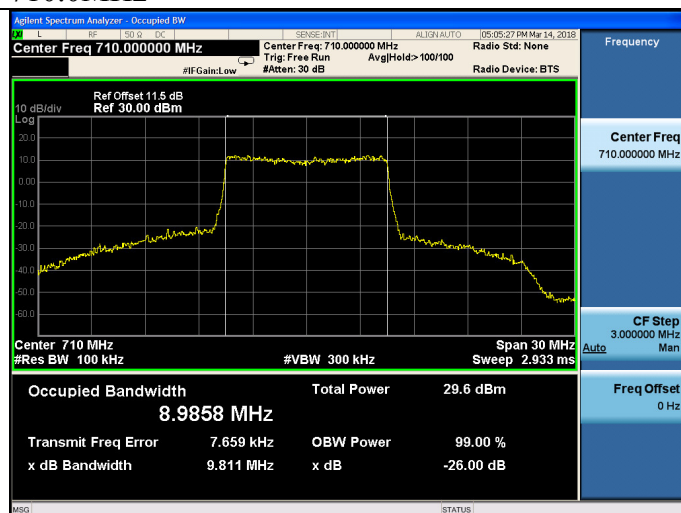
709.0MHz



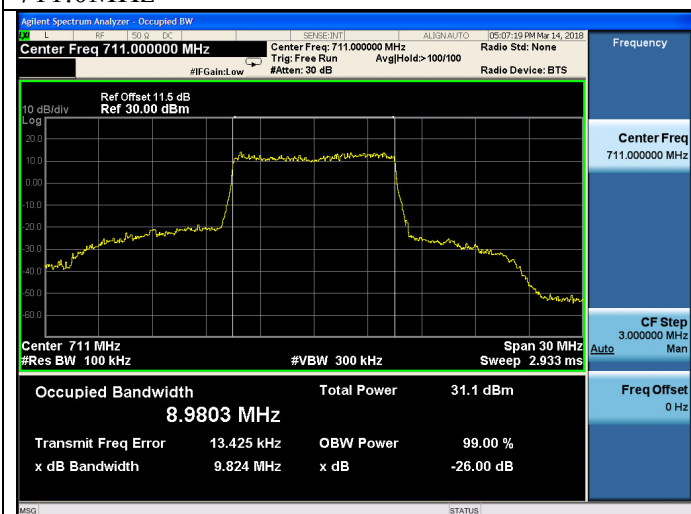
710.0MHz



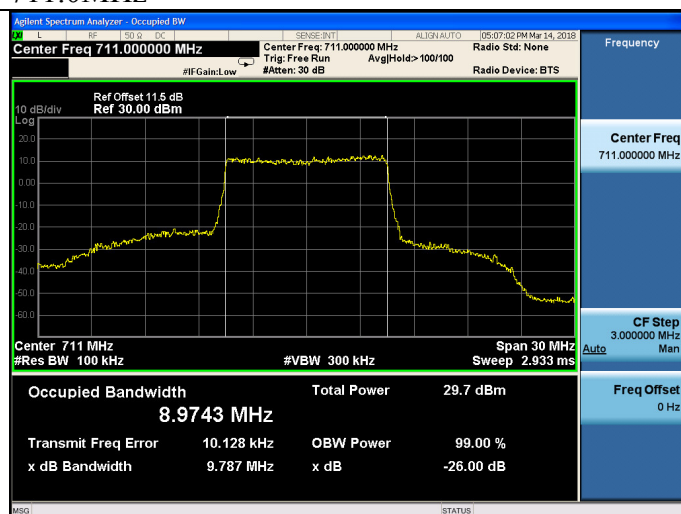
710.0MHz



711.0MHz



711.0MHz



5. OUT OF BAND EMISSIONS AT ANTENNA TERMINALS AND BAND EDGE

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY53311015	Oct.15,17	1 Year
2.	Attenuator	Agilent	8491B	MY39262165	Apr.27,17	1 Year
3.	RF Cable	Marvelous Microwave Inc	SFL402105FLEX	NO.1	Oct.15,17	1 Year
4.	HF Cable	Hubersuhner	Sucoflex104	274094/4	Apr.22,17	1 Year

5.2. Limit

FCC part 22.917(a), 24.238(a), 27.53(h)

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.

Part 27.53(a)

For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands: by a factor of not less than $43 + 10 \log(P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log(P)$ dB above 2365 MHz.

Part 27.53(c)

For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the 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, in accordance with the following:

- (1) On any frequency outside the 746-758 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;
- (2) On 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;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. 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;
- (6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

Part 27.53(m)(6)

Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

Part 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.

5.3. Test Procedure

According to KDB 971168, a relaxation of the reference bandwidth is often provided for measurements within a specified frequency range at the edge of the authorized frequency block/band. This is often implemented by permitting the use of a narrower RBW (typically limited to a minimum RBW of 1% of the OBW) for measuring the out-of-band emissions without a requirement to integrate the result over the full reference bandwidth.

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emission is any up to 10th harmonic. For the out of band: set RBW, VBW=1MHz, stat=30MHz, stop= 10 th harmonic. Limit= -13dBm Band Edge requirements: In 1Mhz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 % of bandwidth of fundamental emission of the transmitter may be employed to measure the out of band emission. Limit=-13dBm.

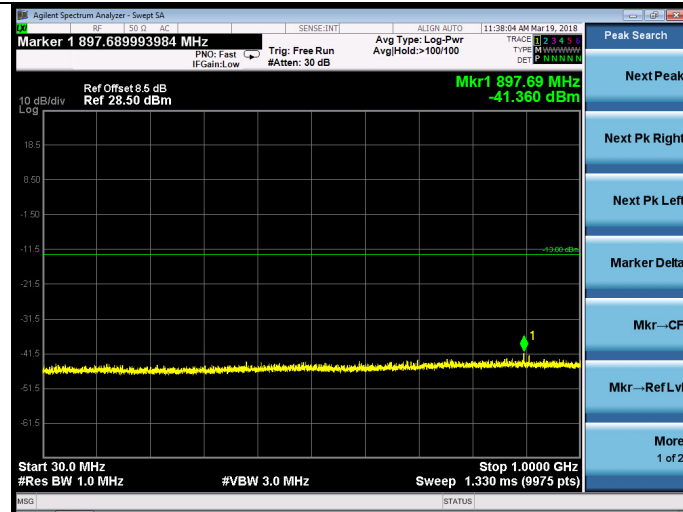
5.4. Test result

PASS (The testing data was attached in the next pages.)

Out of Band Emissions at antenna Terminals

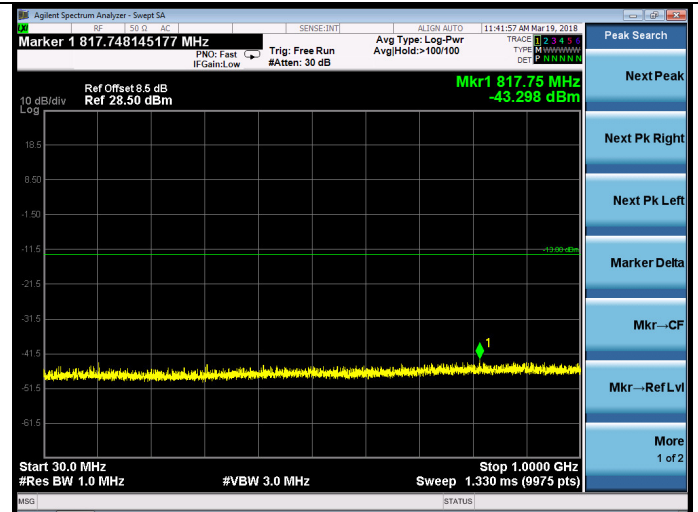
Band 2 QPSK

30MHz~1GHz

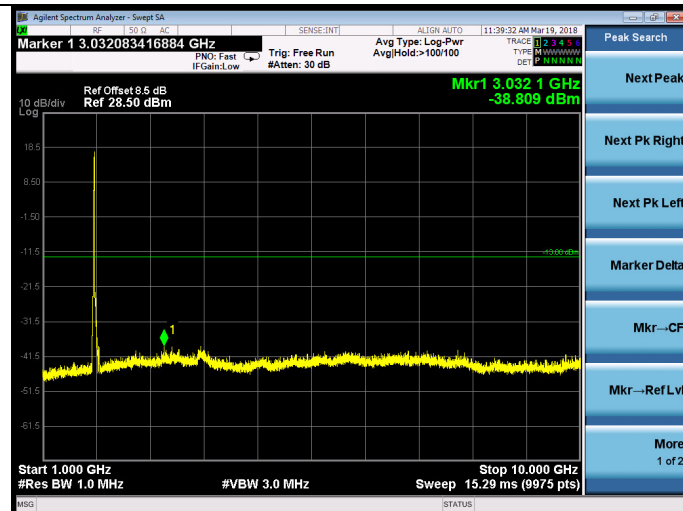


Band 4 QPSK

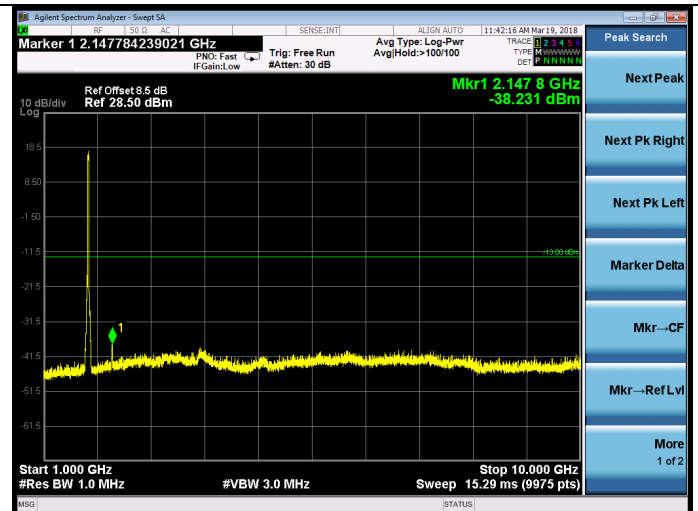
30MHz~1GHz



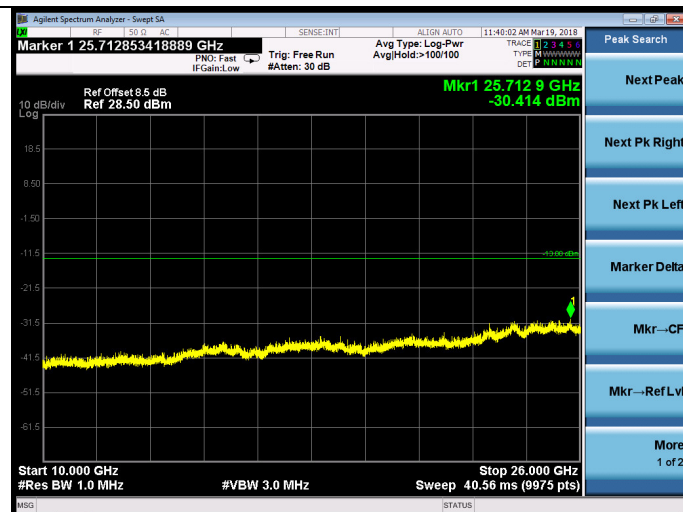
1GHz~10GHz



1GHz~10GHz



10GHz~26GHz

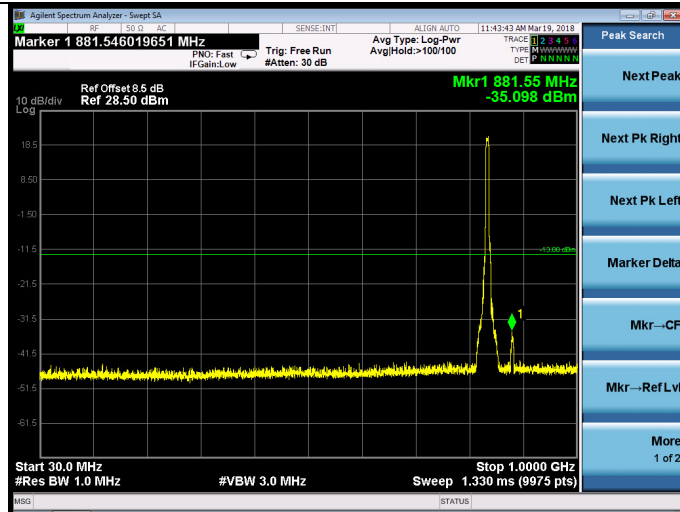


10GHz~26GHz



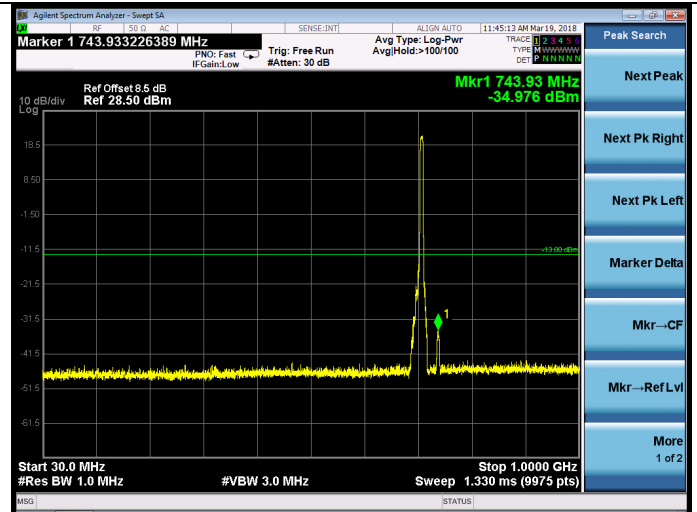
Band 5 QPSK

30MHz~1GHz

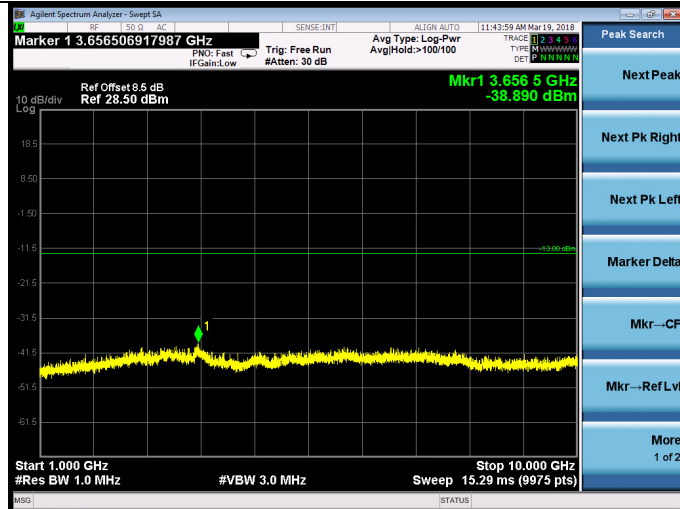


Band 12 QPSK

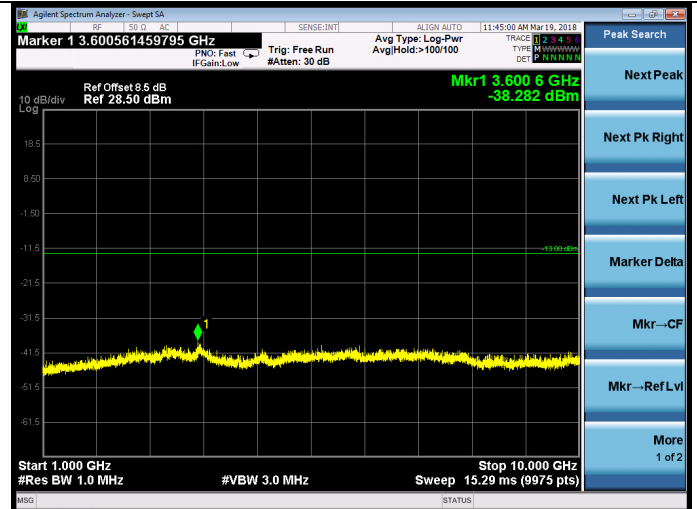
30MHz~1GHz



1GHz~10GHz

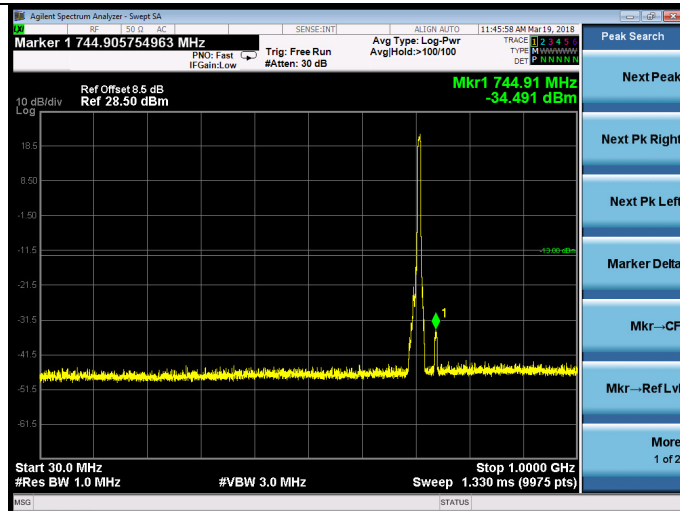


1GHz~10GHz

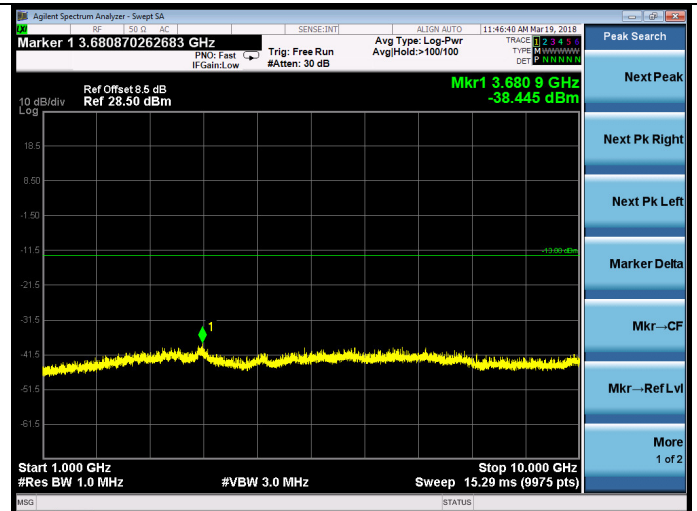


Band 17 QPSK

30MHz~1GHz



1GHz~10GHz

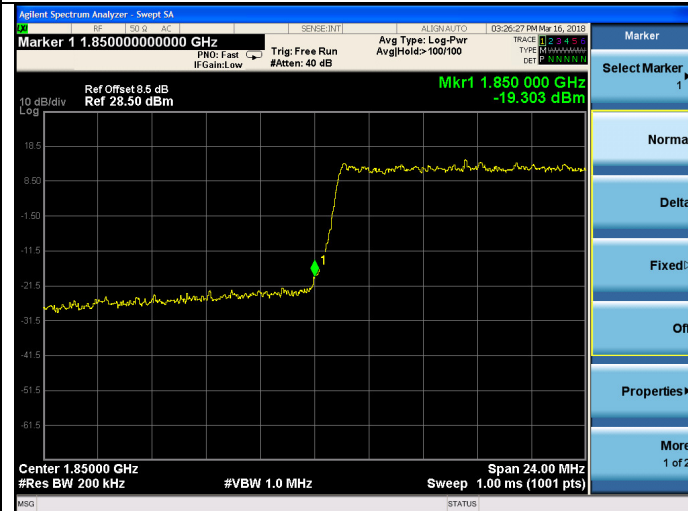


Band Edge

Band 2 QPSK:

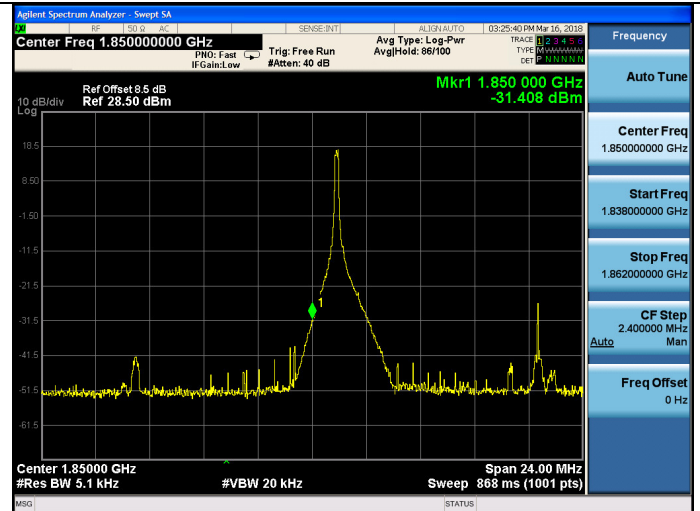
Full RB

Low Ch



1RB

Low Ch



High Ch



High Ch

