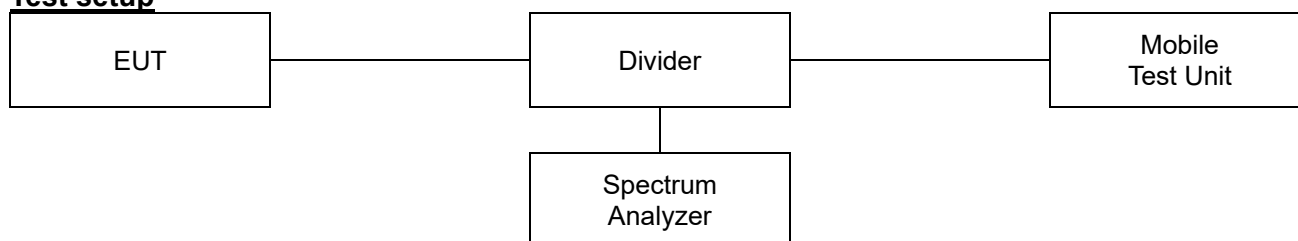


7.4. Spurious Emissions at Antenna Terminal

Test setup



Limit

According to §27.53(l)(2),

The following emission limits apply to stations transmitting in the 3700-3980 MHz band:

- (2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

According to §27.53(n)(2),

The following emission limits apply to stations transmitting in the 3450-3550 MHz band:

- (2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.

Test procedure

971168 D01 v03r01 - Section 6

ANSI 63.26-2015 – Section 5.7

Test settings

- 1) Start frequency was set to 30 MHz and stop frequency was set to at least 10th the fundamental frequency.
- 2) Detector = RMS
- 3) Sweep time = auto couple.
- 4) Trace mode = trace average
- 5) Allow trace to fully stabilize.
- 6) Please see test notes below RBW and VBW settings.

Notes:

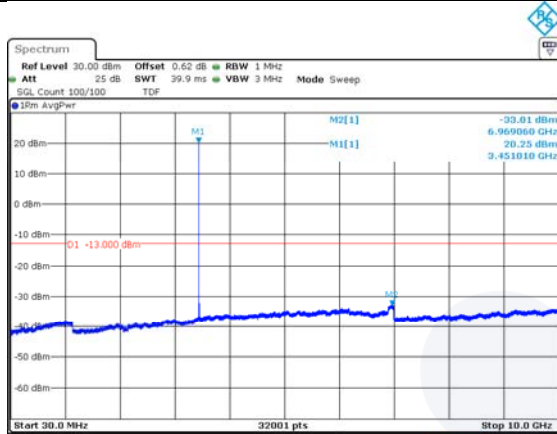
1. Per 27.53(l)(2) and 27.53(n)(2), compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for frequencies less than 1 GHz and 1 MHz or greater for frequencies greater than 1 GHz.
 The emission bandwidth is defined as 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.
2. All modes of operation were investigated and the worst-case configuration results are reported.

Test results

Test mode: 5G NR n77/78 (Lower)(PC2) DFT-s OFDM

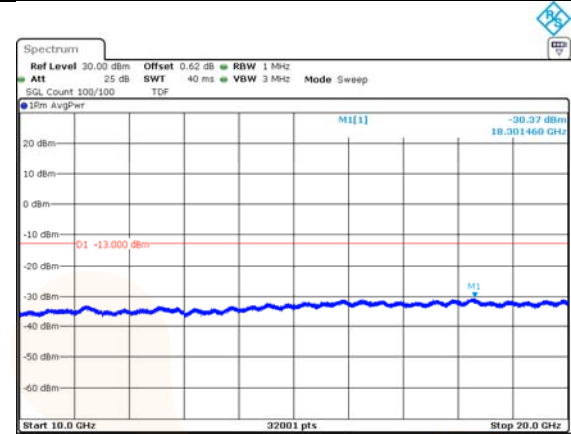
10M BW QPSK

Low channel (30 MHz ~ 10 GHz)



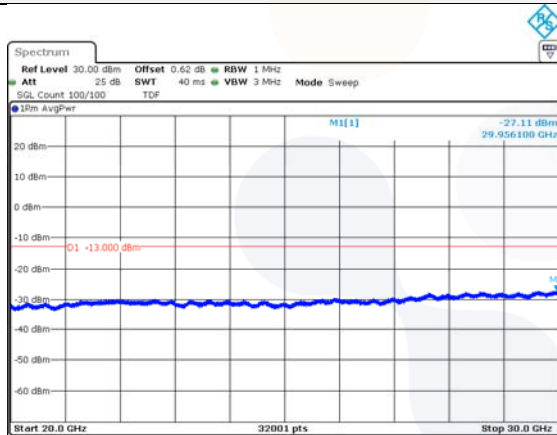
Date: 10 FEB 2025 12:14:19

Low channel (10 GHz ~ 20 GHz)



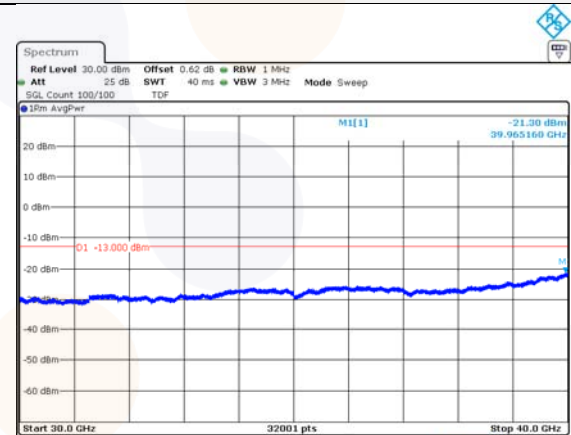
Date: 8 FEB 2025 17:05:51

Low channel (20 GHz ~ 30 GHz)



Date: 8 FEB 2025 17:06:10

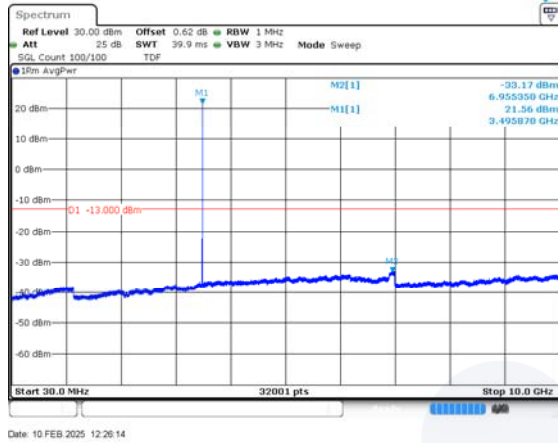
Low channel (30 GHz ~ 40 GHz)



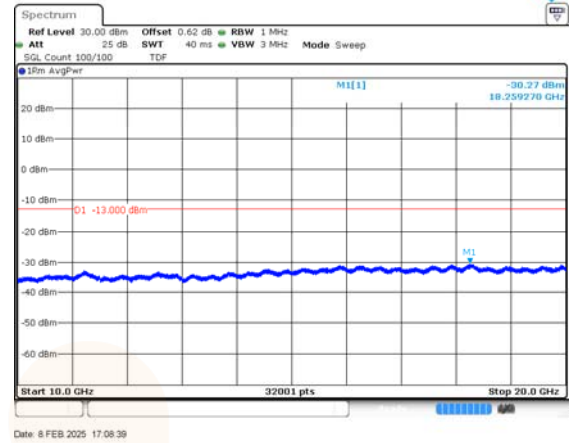
Date: 8 FEB 2025 17:06:29

10M BW QPSK

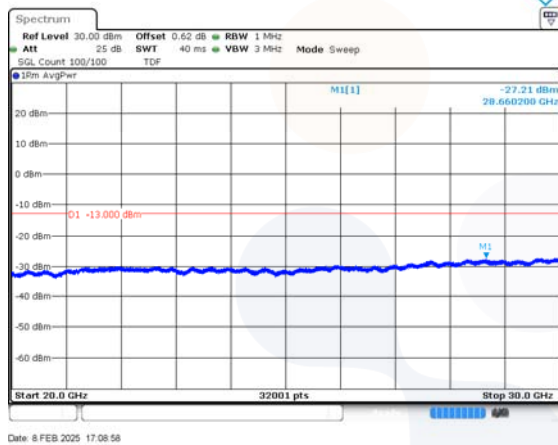
Middle channel (30 MHz ~ 10 GHz)



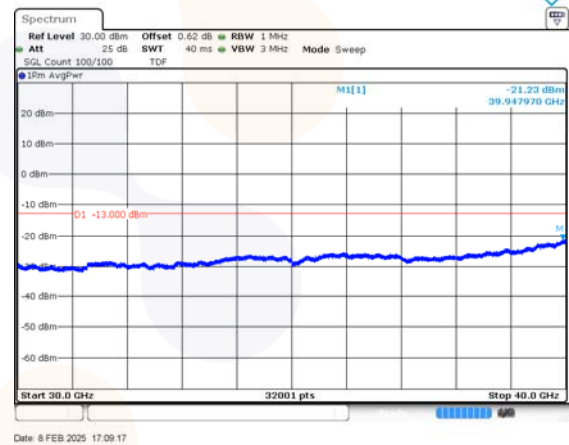
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

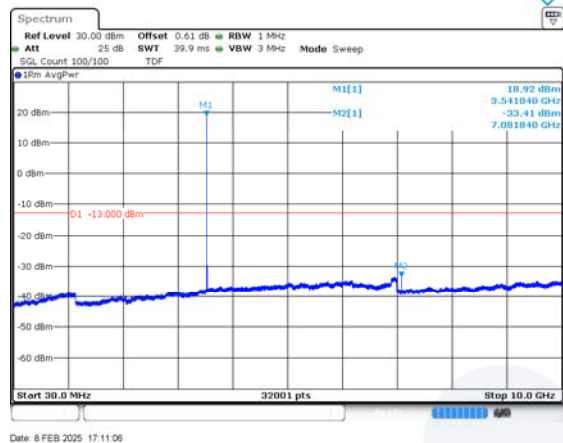


Middle channel (30 GHz ~ 40 GHz)

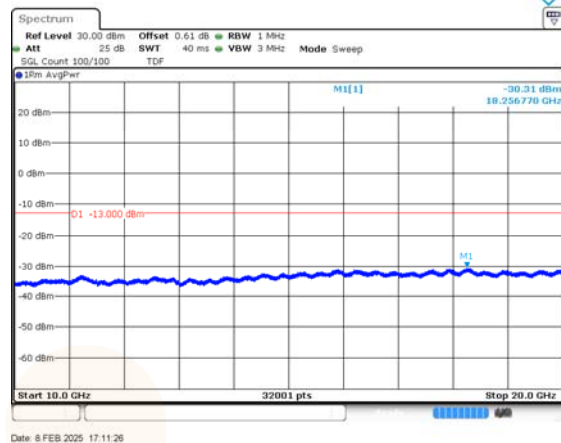


10M BW QPSK

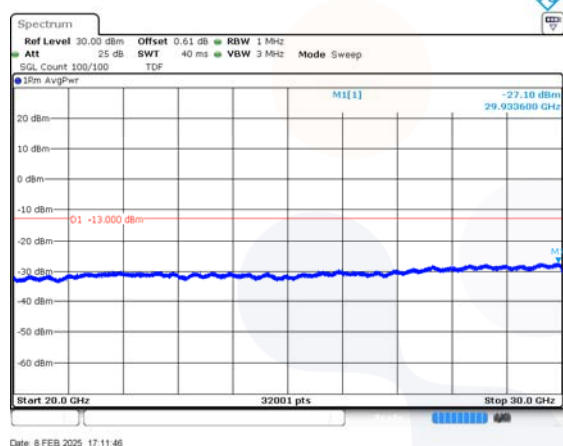
High channel (30 MHz ~ 10 GHz)



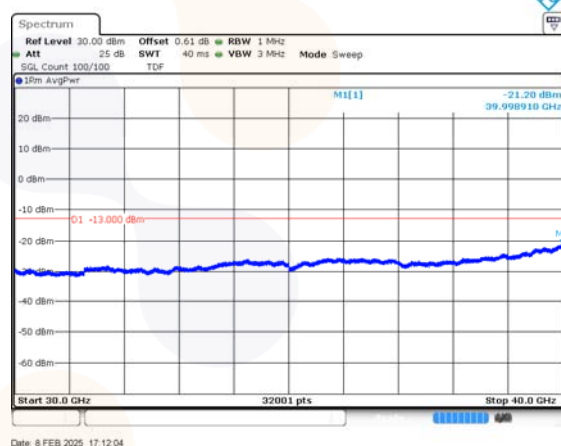
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

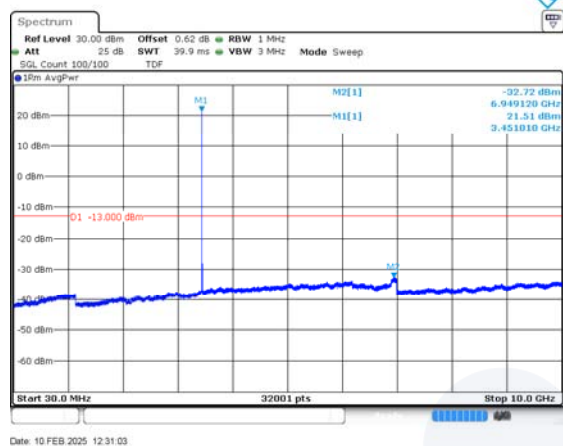


High channel (30 GHz ~ 40 GHz)

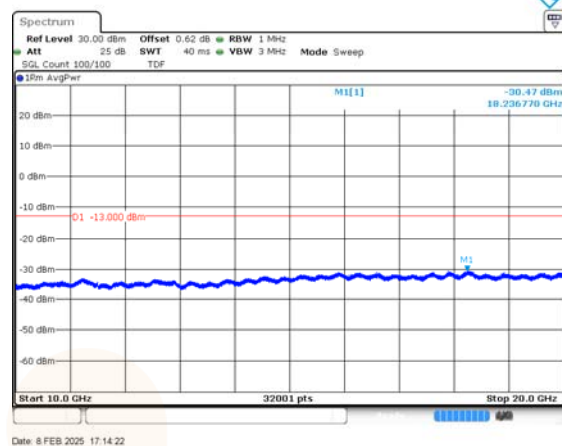


15M BW QPSK

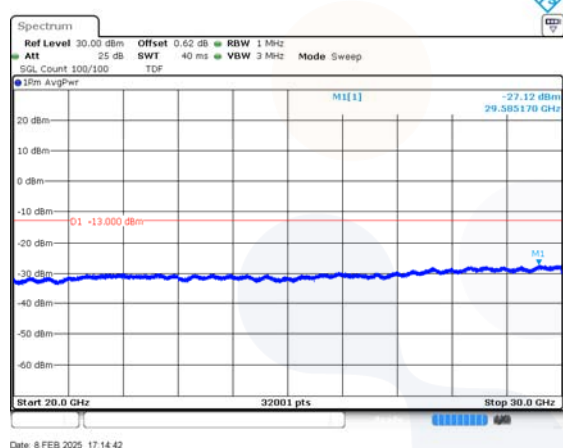
Low channel (30 MHz ~ 10 GHz)



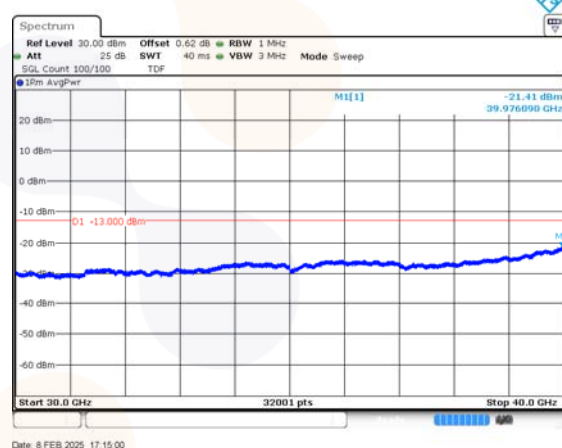
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

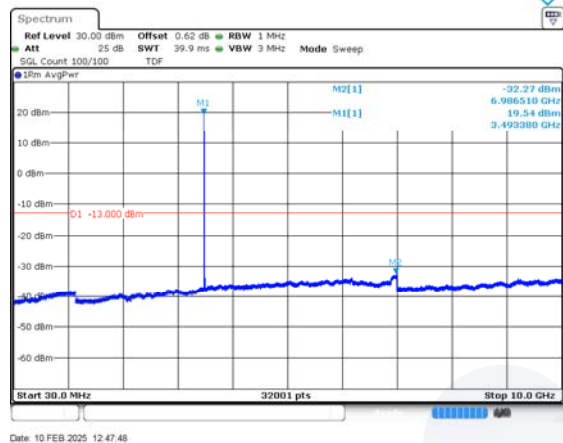


Low channel (30 GHz ~ 40 GHz)

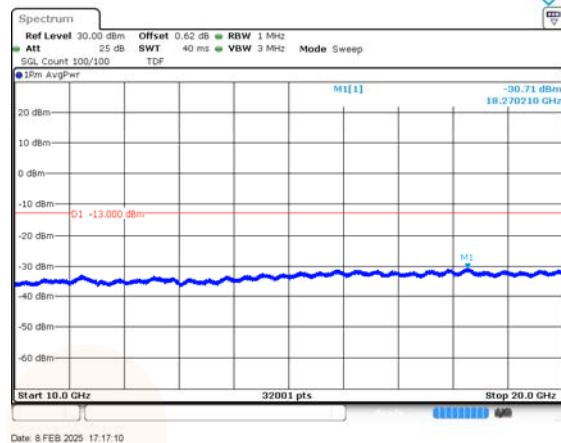


15M BW QPSK

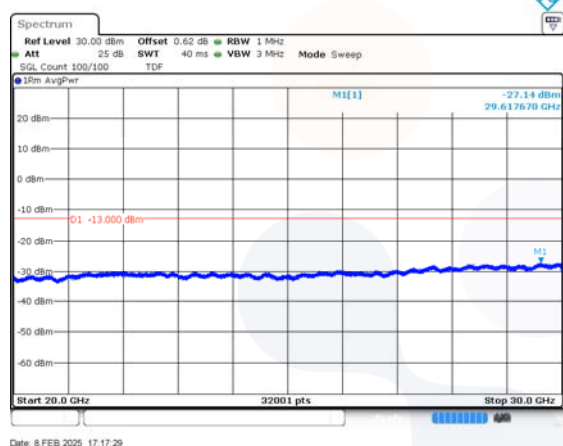
Middle channel (30 MHz ~ 10 GHz)



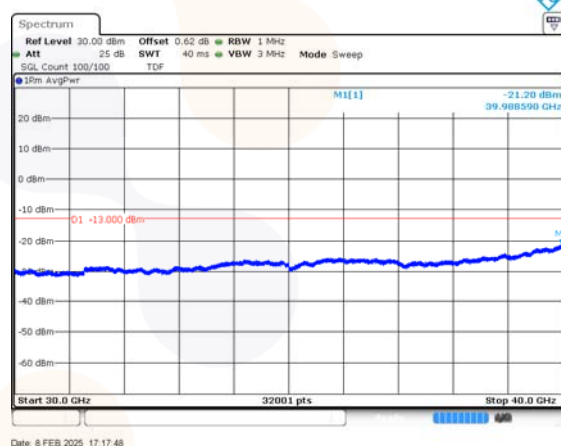
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

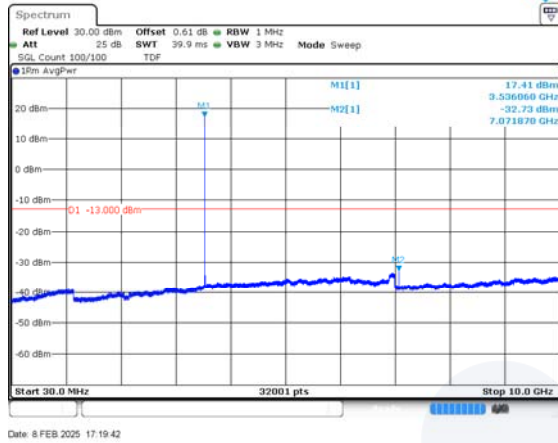


Middle channel (30 GHz ~ 40 GHz)

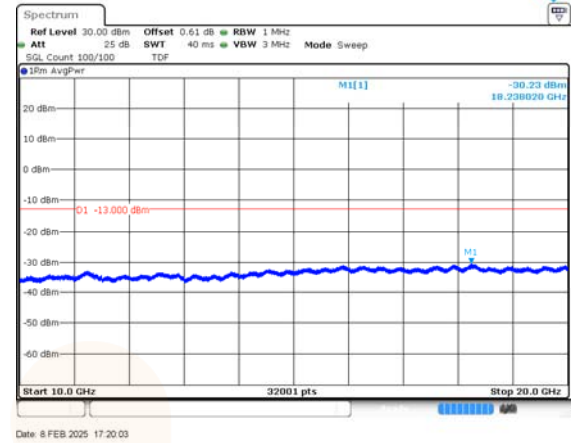


15M BW QPSK

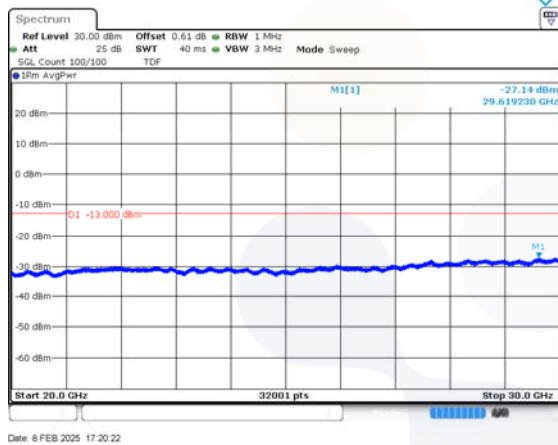
High channel (30 MHz ~ 10 GHz)



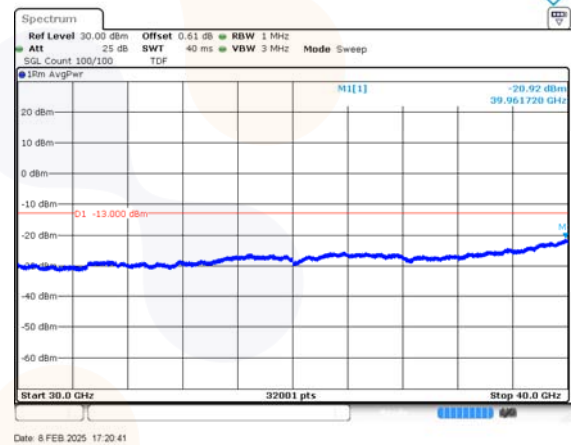
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

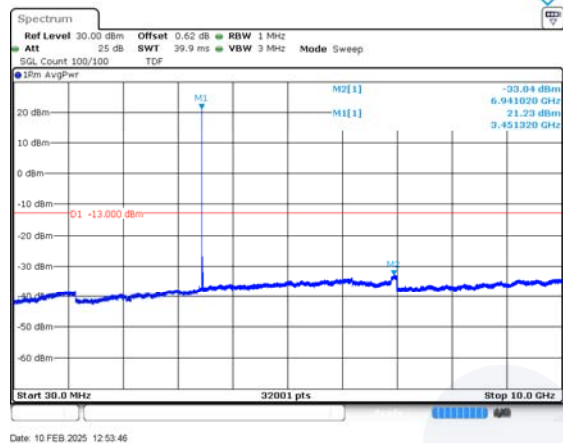


High channel (30 GHz ~ 40 GHz)

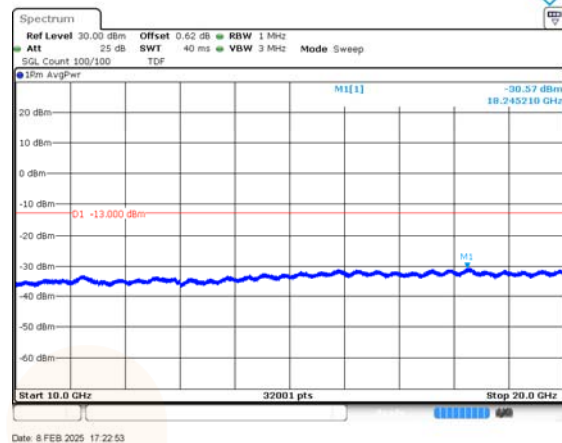


20M BW QPSK

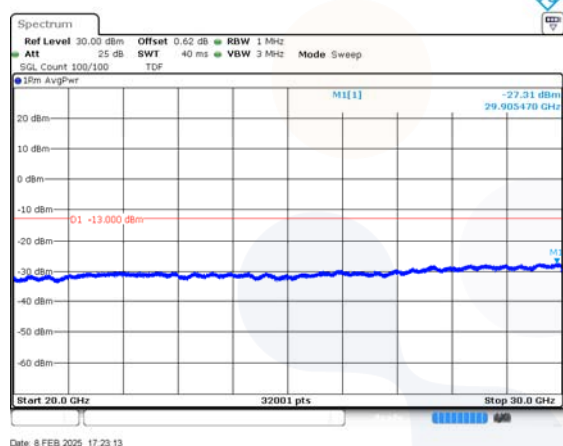
Low channel (30 MHz ~ 10 GHz)



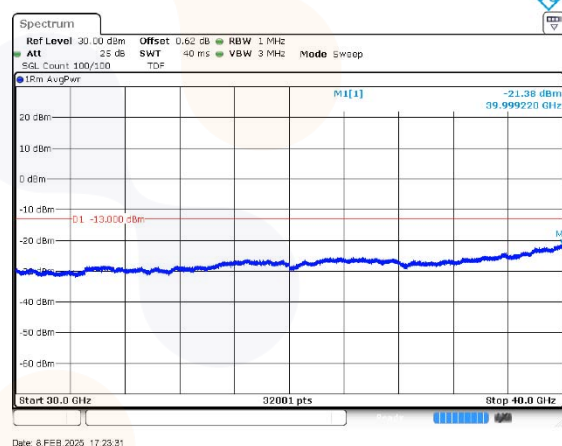
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

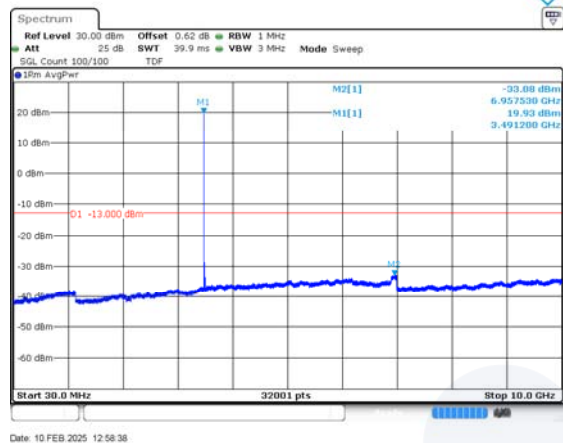


Low channel (30 GHz ~ 40 GHz)

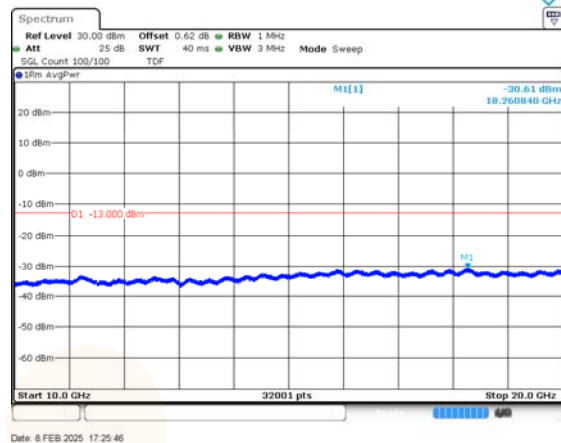


20M BW QPSK

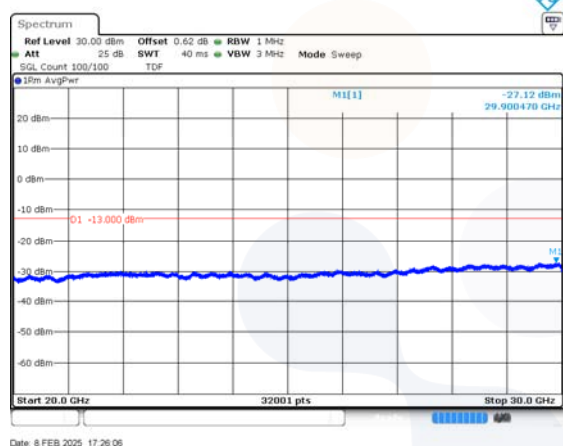
Middle channel (30 MHz ~ 10 GHz)



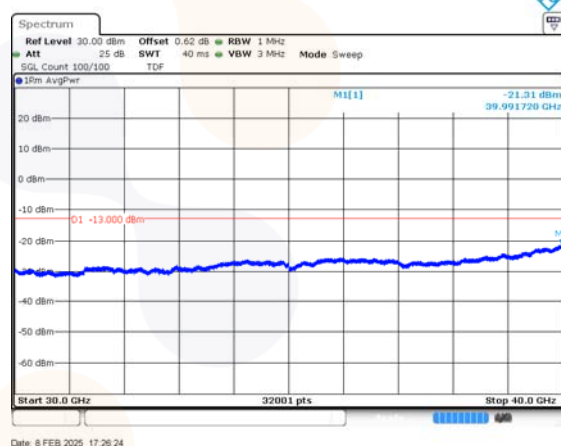
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

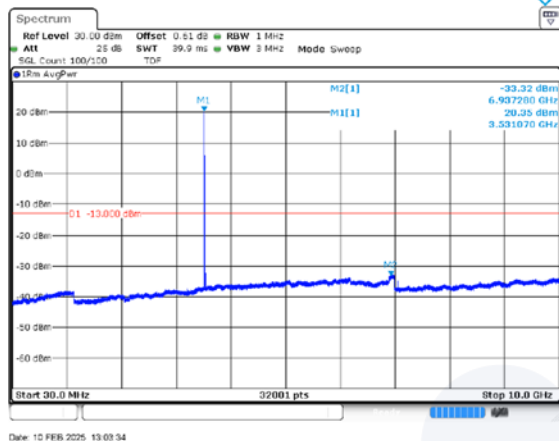


Middle channel (30 GHz ~ 40 GHz)

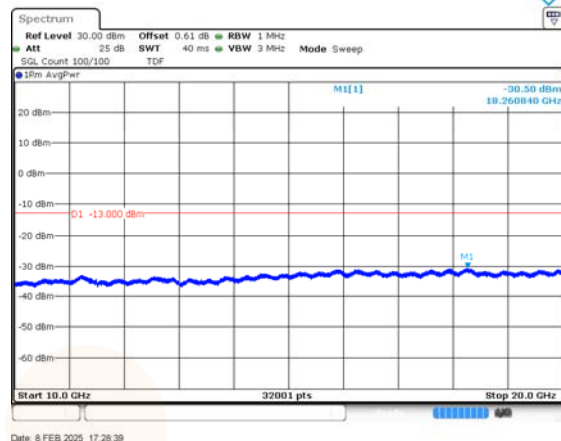


20M BW QPSK

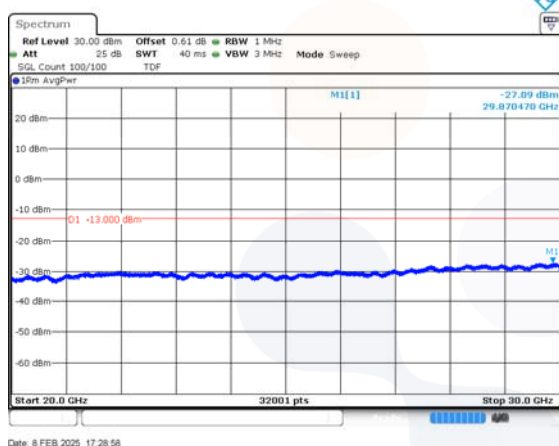
High channel (30 MHz ~ 10 GHz)



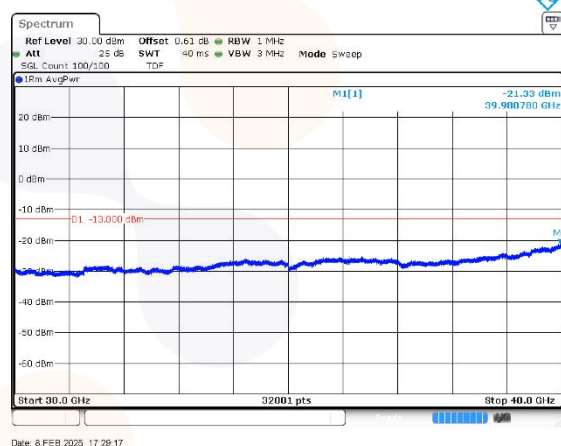
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

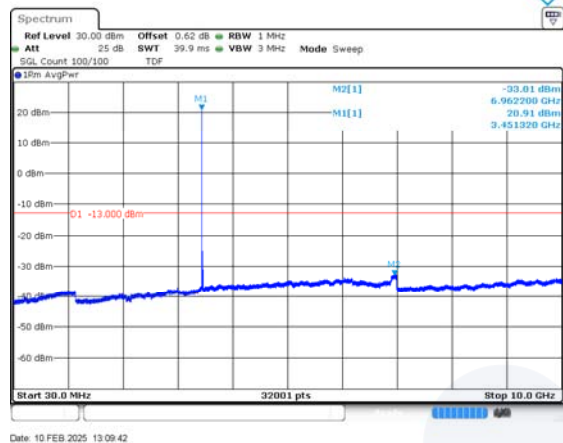


High channel (30 GHz ~ 40 GHz)

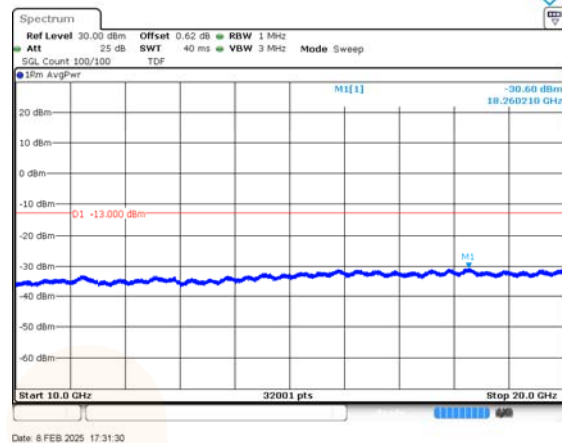


30M BW QPSK

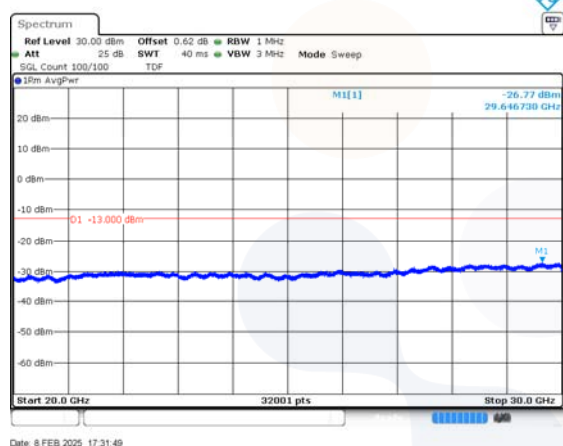
Low channel (30 MHz ~ 10 GHz)



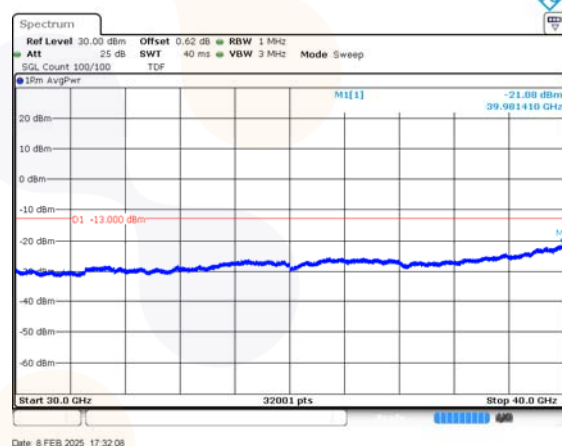
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

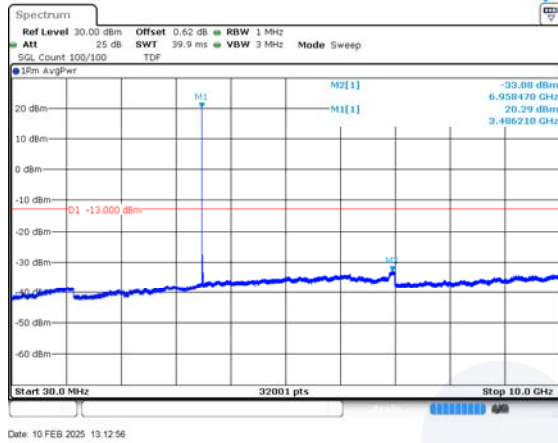


Low channel (30 GHz ~ 40 GHz)

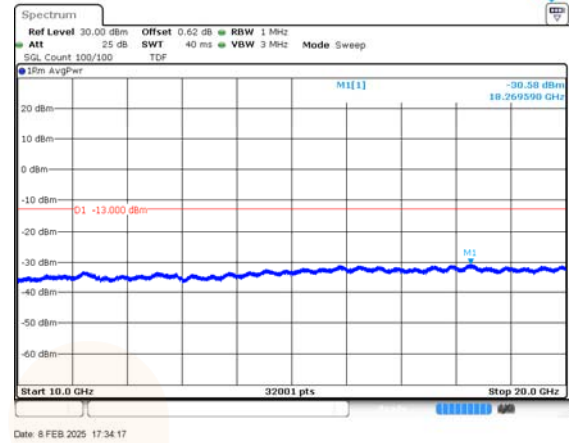


30M BW QPSK

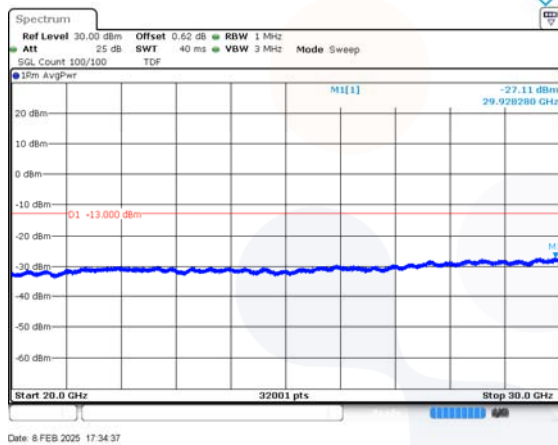
Middle channel (30 MHz ~ 10 GHz)



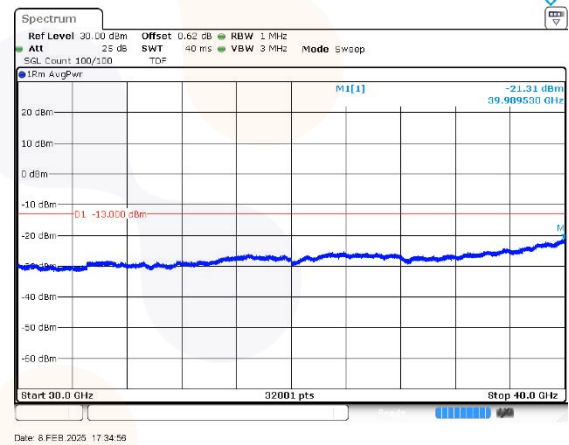
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

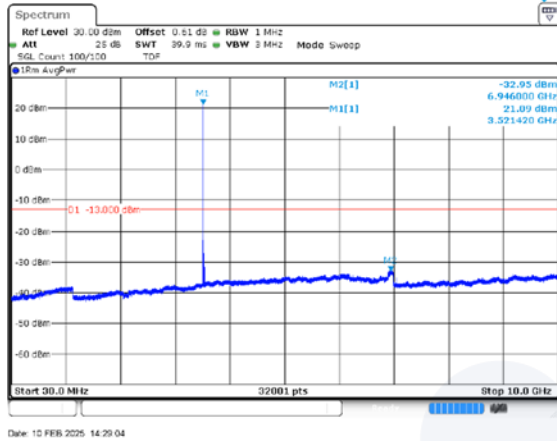


Middle channel (30 GHz ~ 40 GHz)

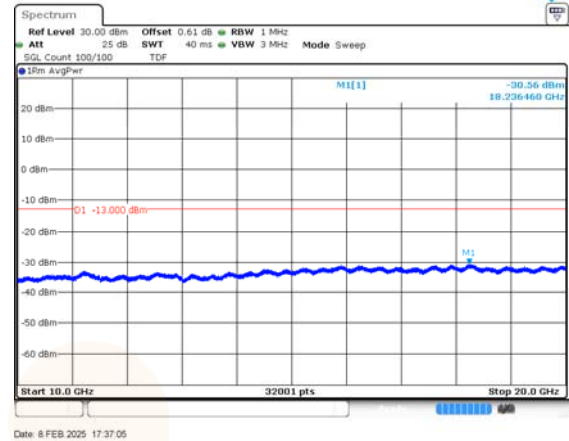


30M BW QPSK

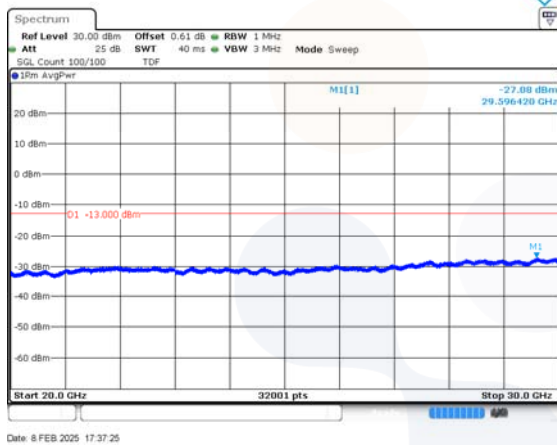
High channel (30 MHz ~ 10 GHz)



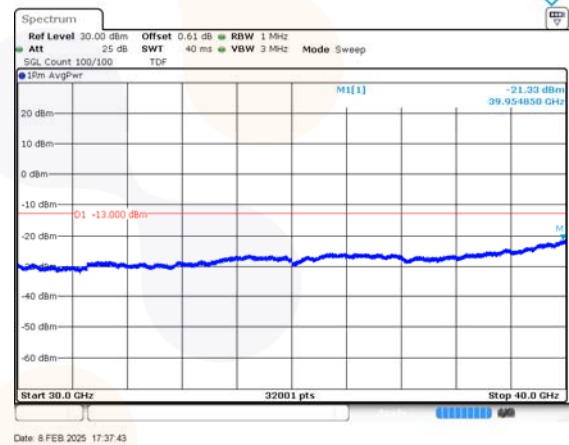
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

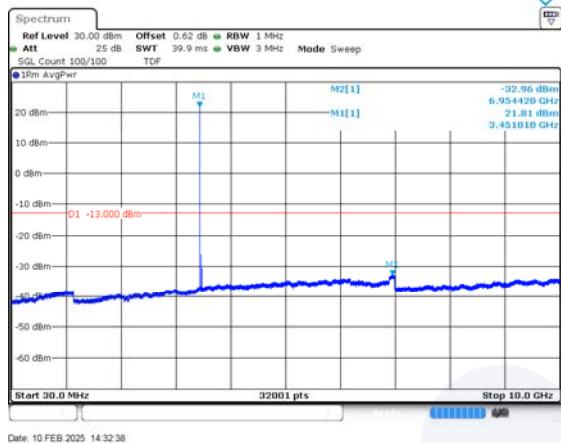


High channel (30 GHz ~ 40 GHz)

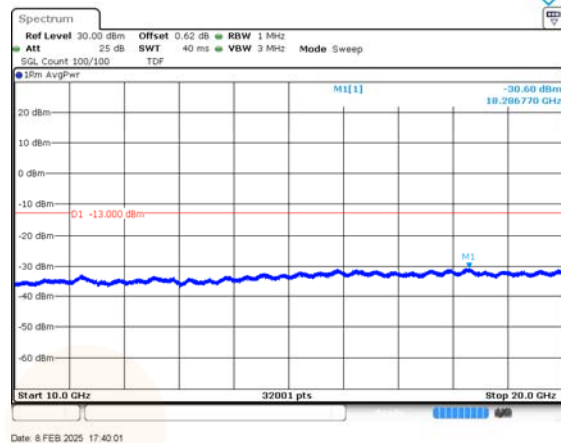


40M BW QPSK

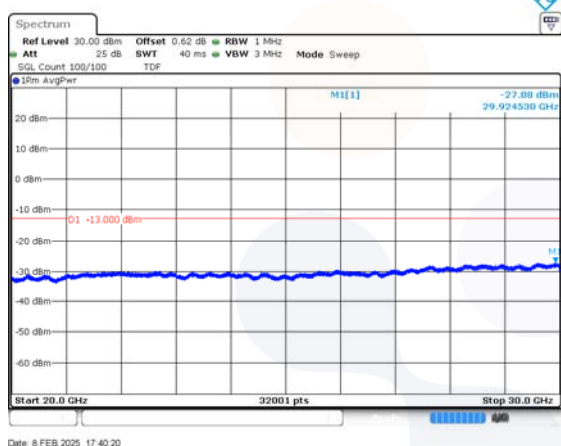
Low channel (30 MHz ~ 10 GHz)



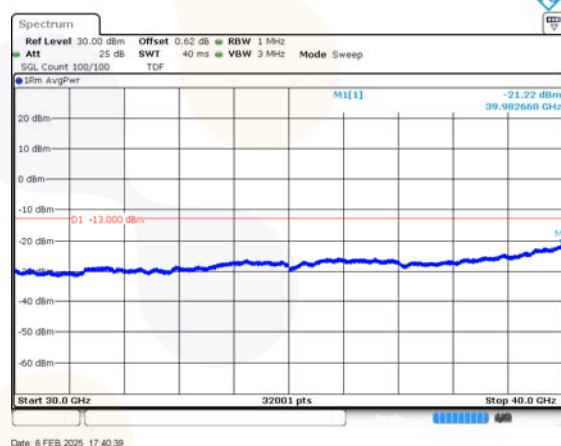
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

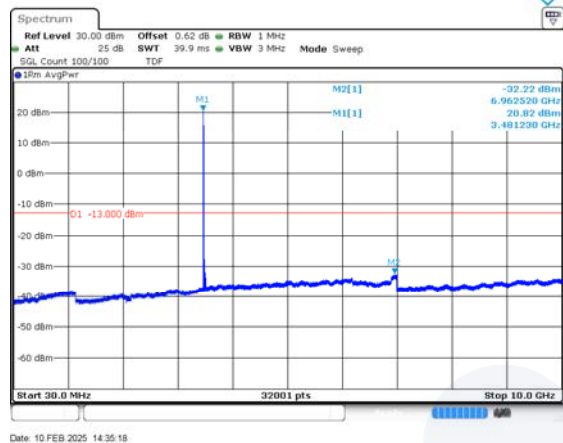


Low channel (30 GHz ~ 40 GHz)

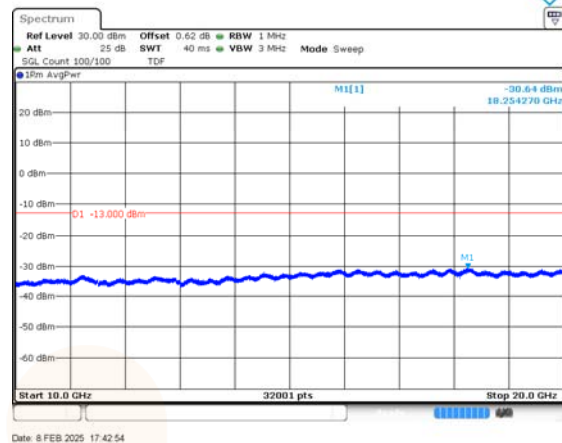


40M BW QPSK

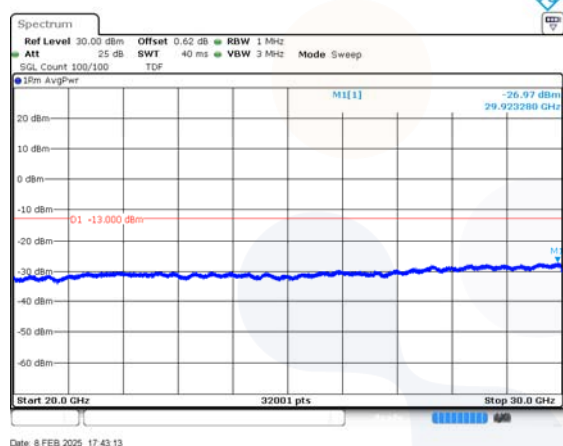
Middle channel (30 MHz ~ 10 GHz)



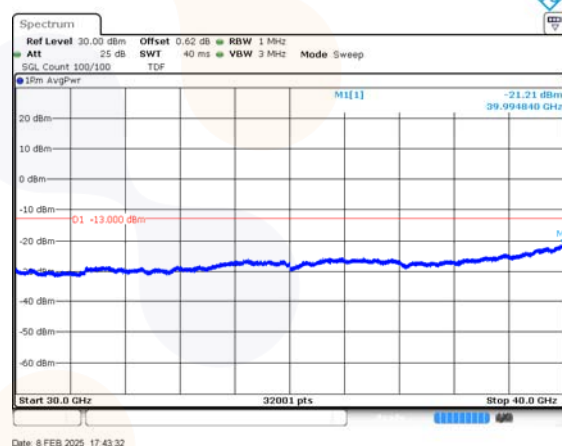
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

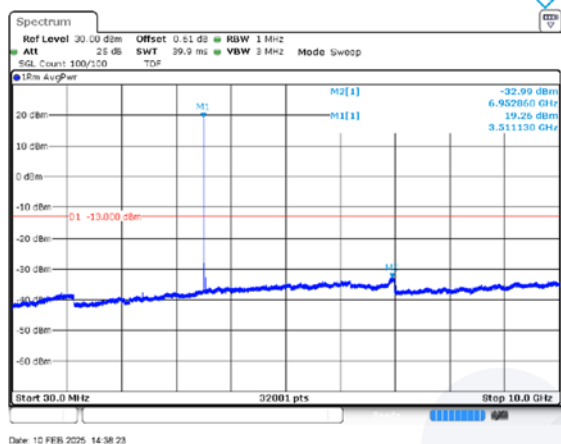


Middle channel (30 GHz ~ 40 GHz)

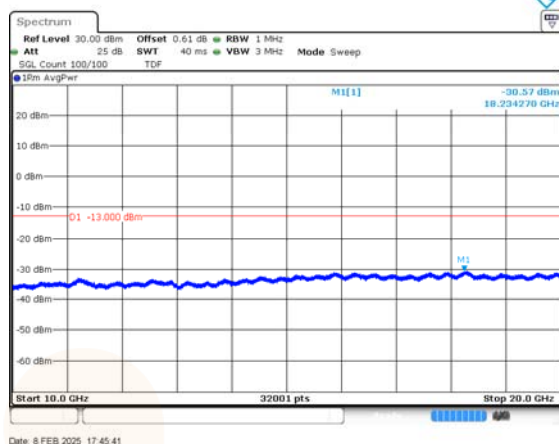


40M BW QPSK

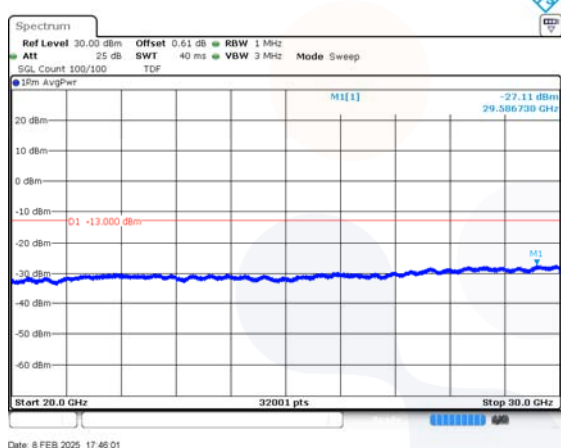
High channel (30 MHz ~ 10 GHz)



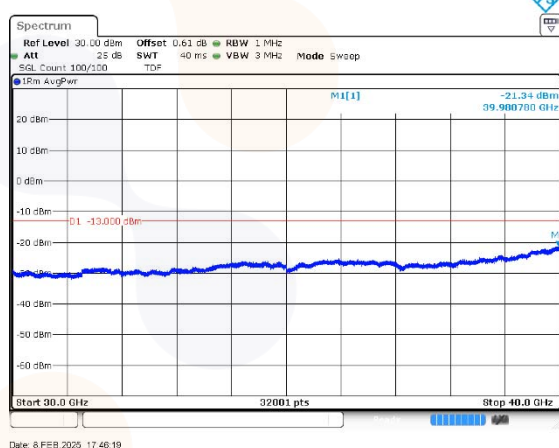
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

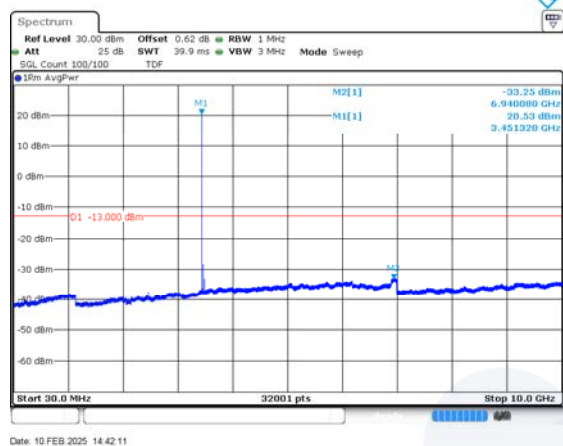


High channel (30 GHz ~ 40 GHz)

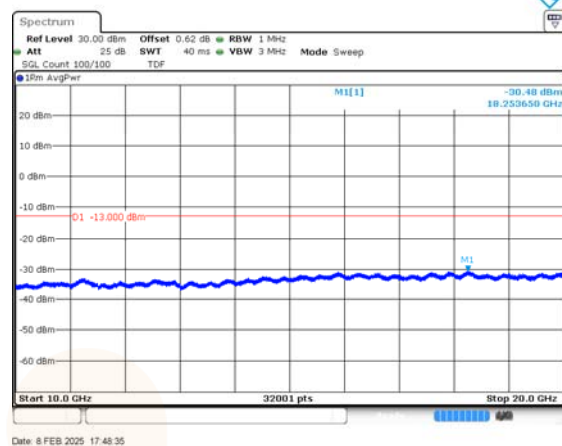


50M BW QPSK

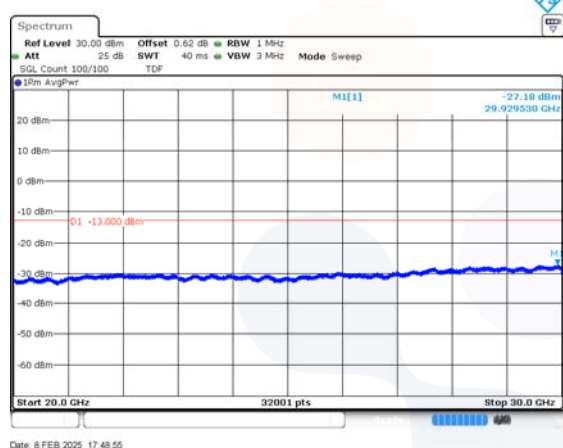
Low channel (30 MHz ~ 10 GHz)



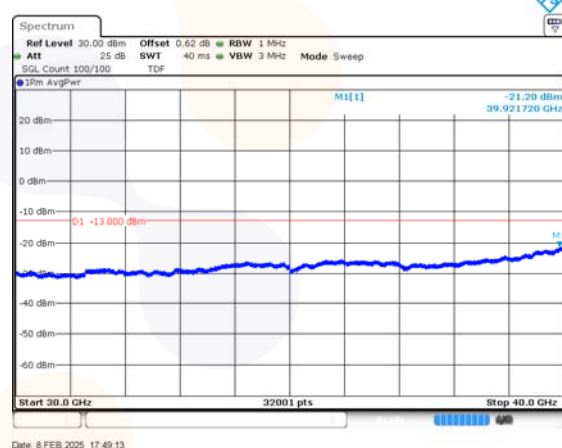
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

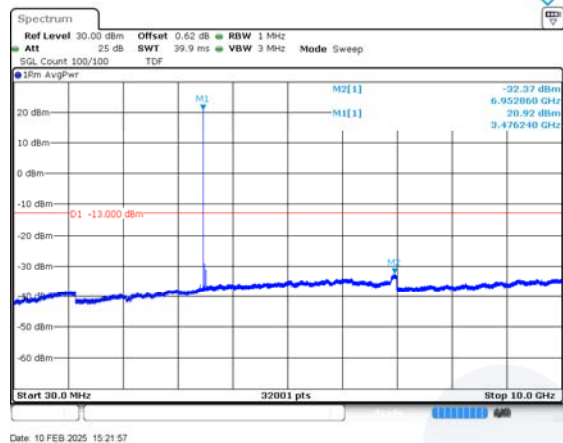


Low channel (30 GHz ~ 40 GHz)

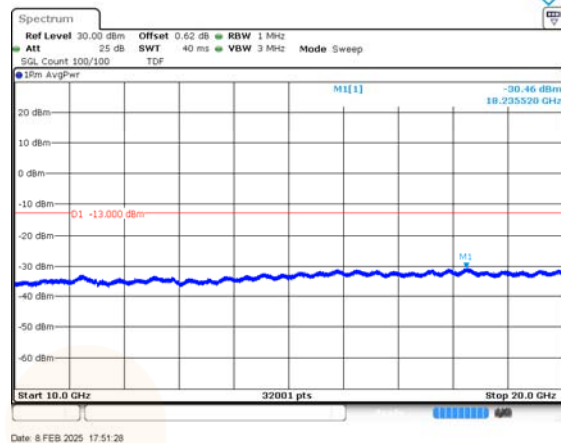


50M BW QPSK

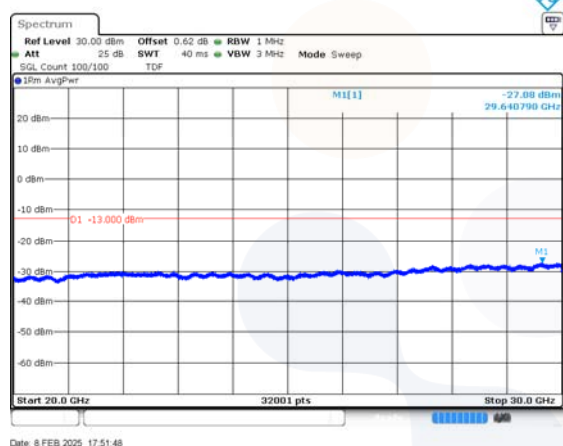
Middle channel (30 MHz ~ 10 GHz)



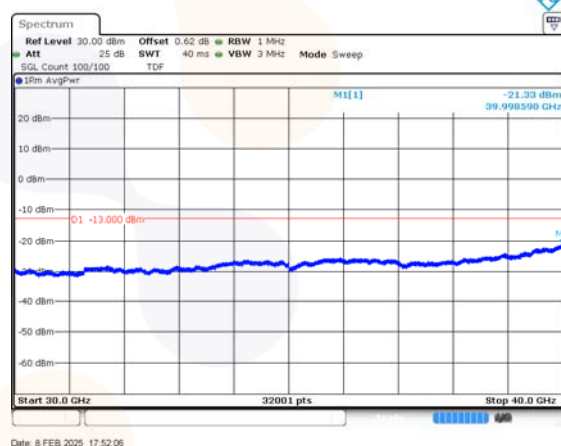
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

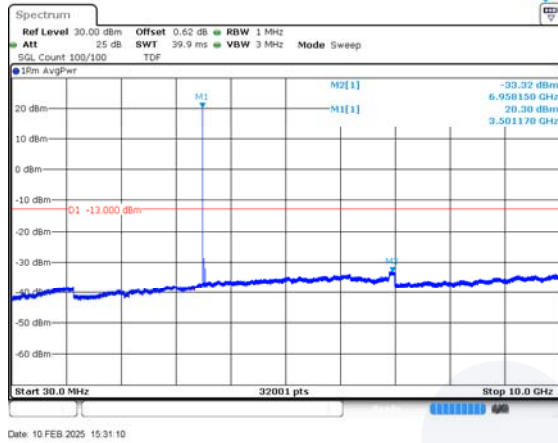


Middle channel (30 GHz ~ 40 GHz)

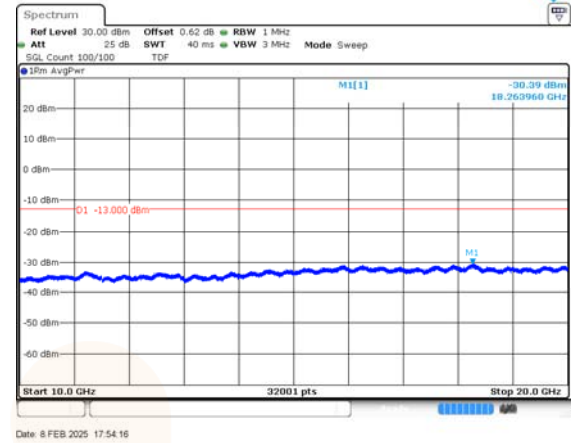


50M BW QPSK

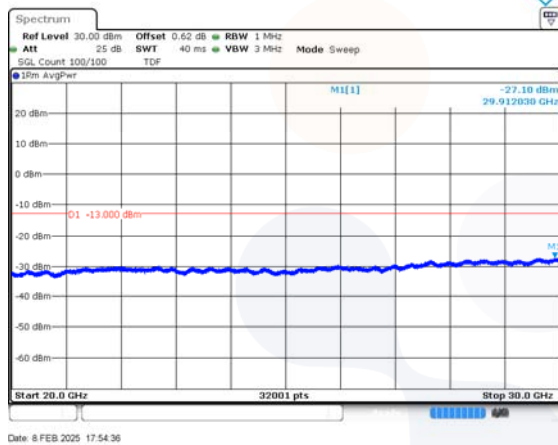
High channel (30 MHz ~ 10 GHz)



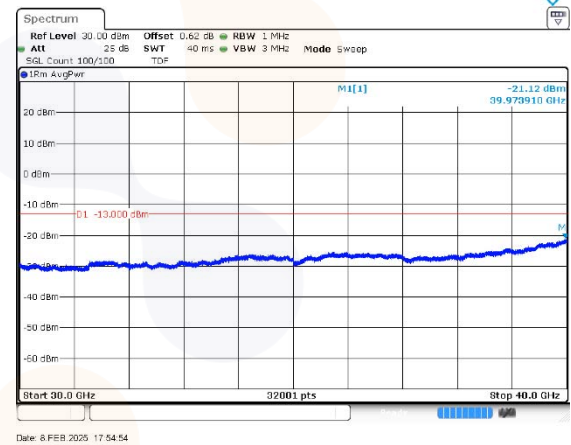
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

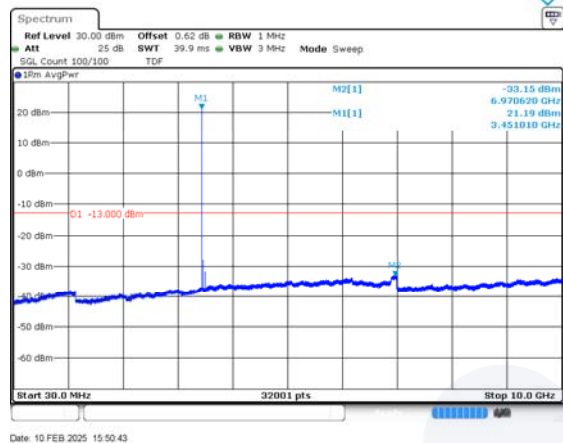


High channel (30 GHz ~ 40 GHz)

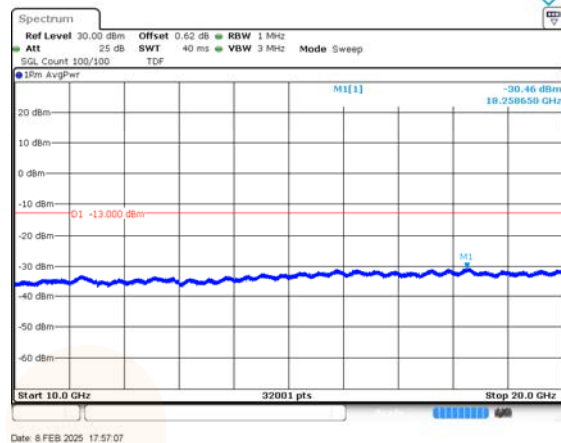


60M BW QPSK

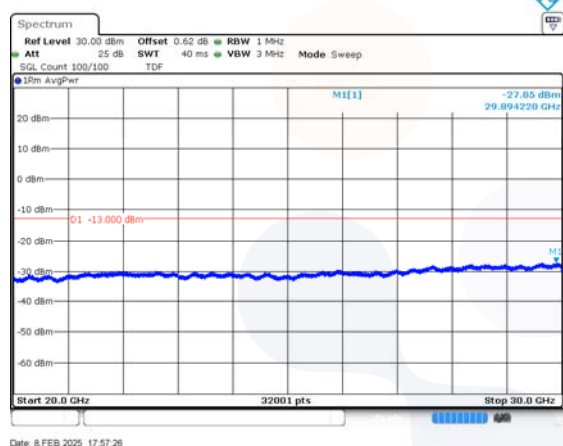
Low channel (30 MHz ~ 10 GHz)



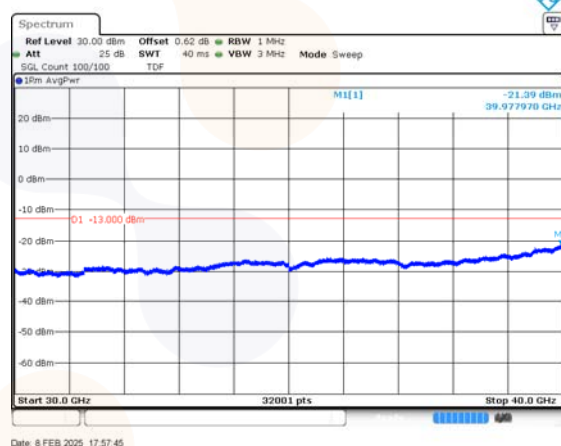
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

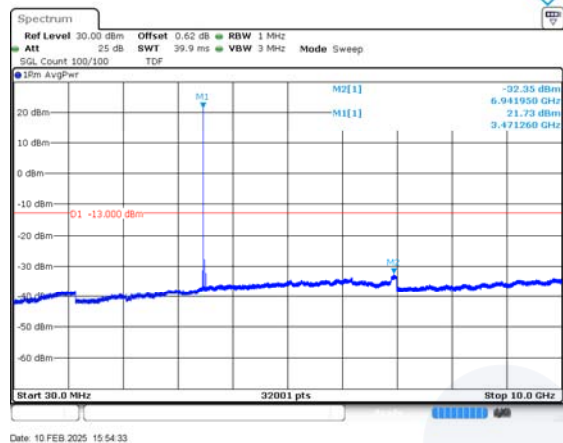


Low channel (30 GHz ~ 40 GHz)

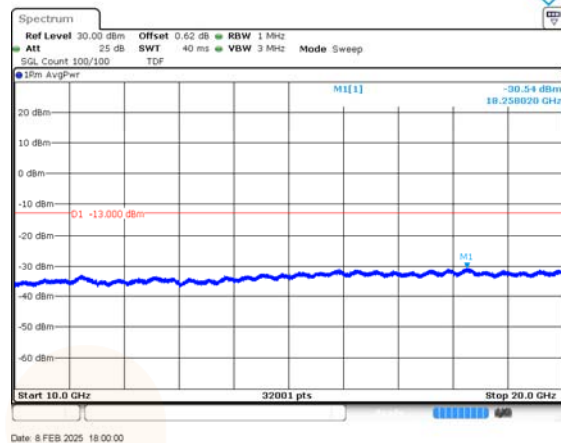


60M BW QPSK

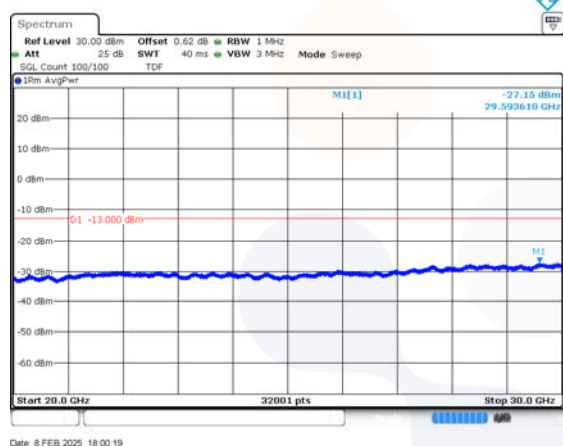
Middle channel (30 MHz ~ 10 GHz)



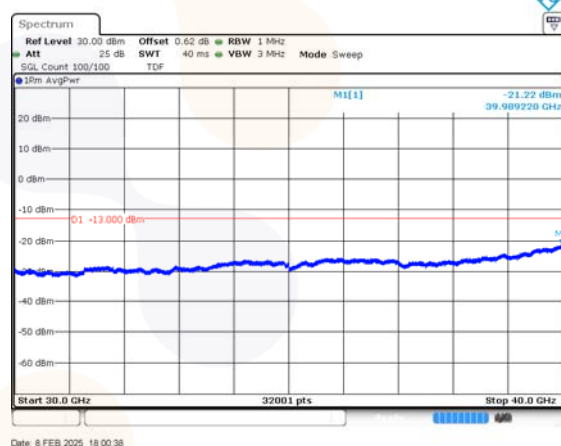
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

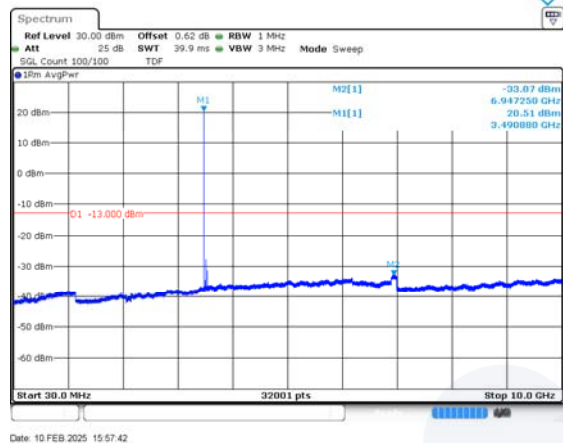


Middle channel (30 GHz ~ 40 GHz)

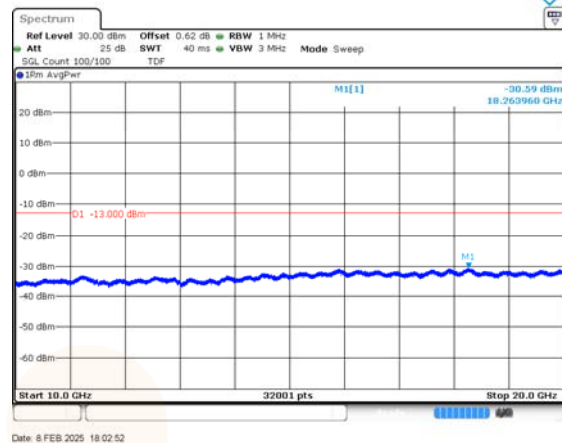


60M BW QPSK

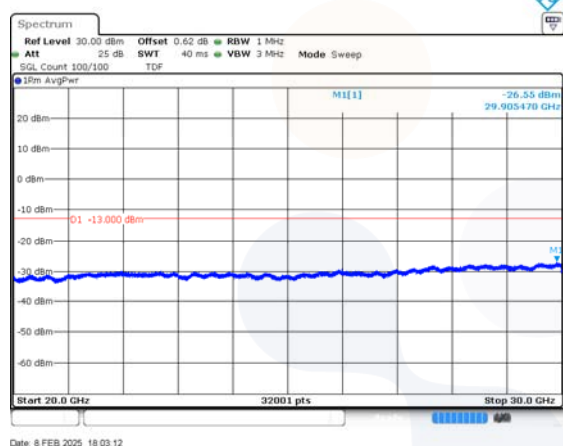
High channel (30 MHz ~ 10 GHz)



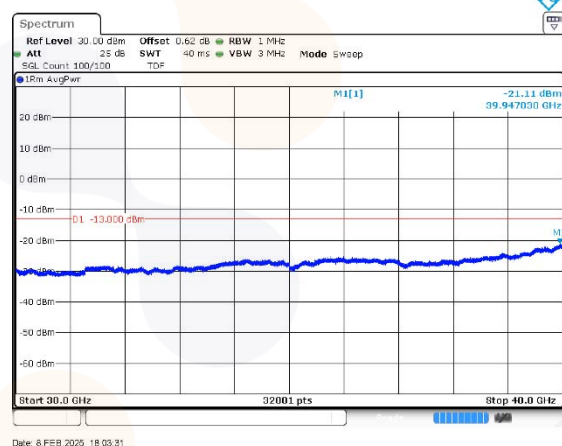
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

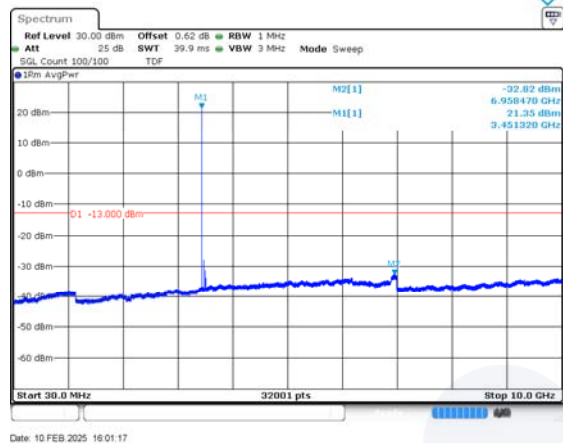


High channel (30 GHz ~ 40 GHz)

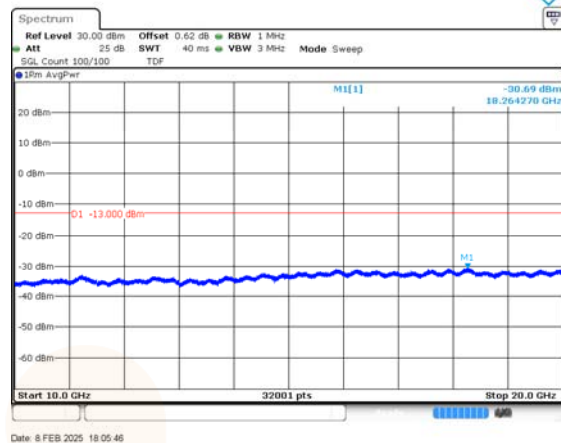


70M BW QPSK

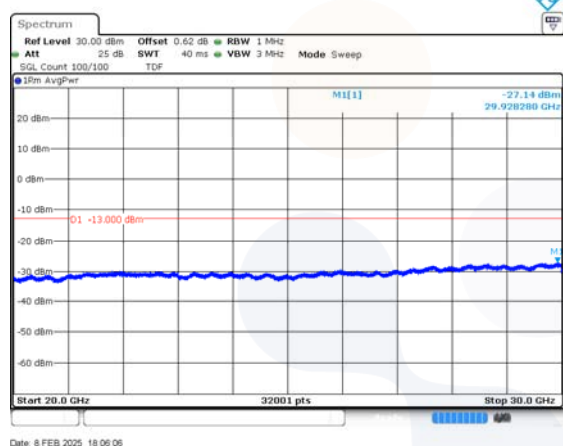
Low channel (30 MHz ~ 10 GHz)



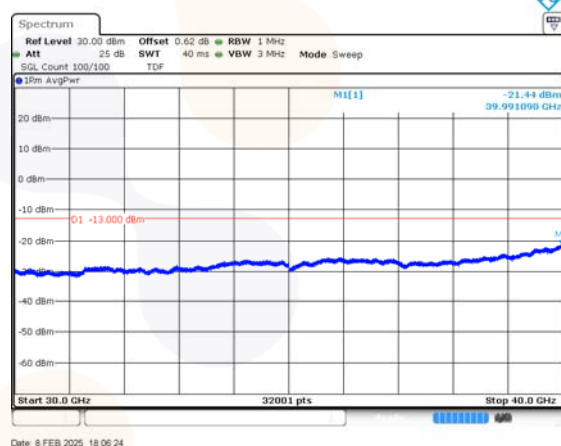
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

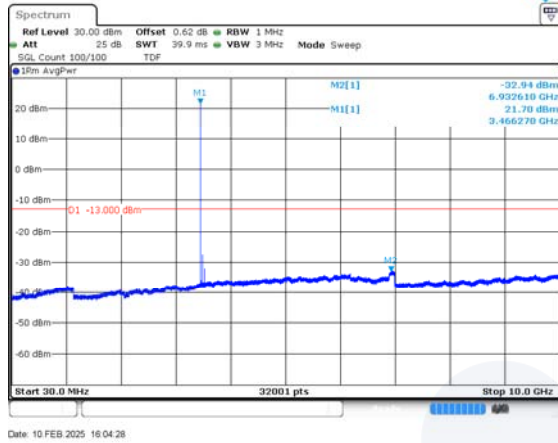


Low channel (30 GHz ~ 40 GHz)

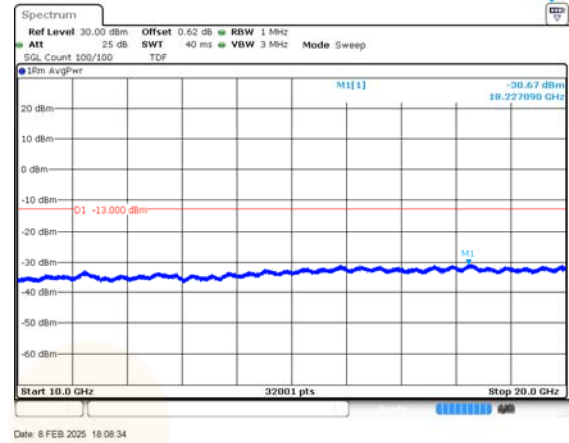


70M BW QPSK

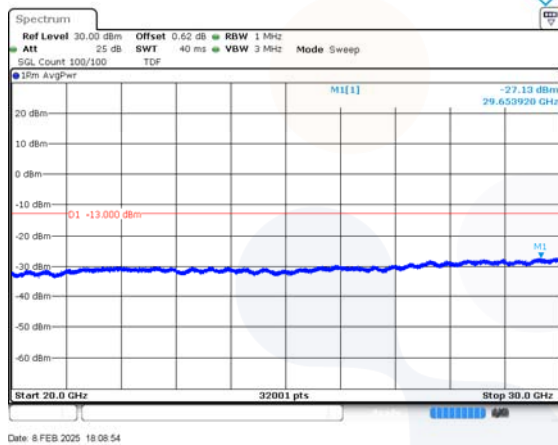
Middle channel (30 MHz ~ 10 GHz)



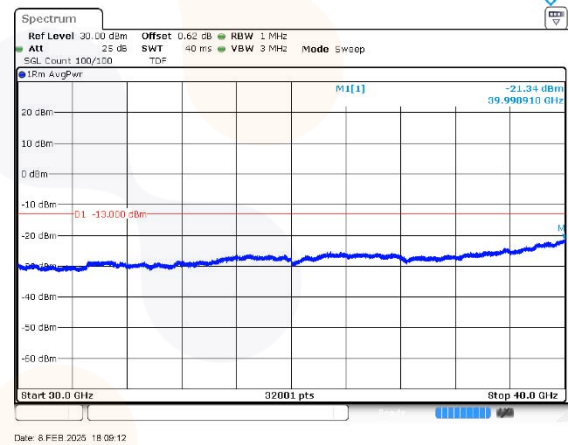
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

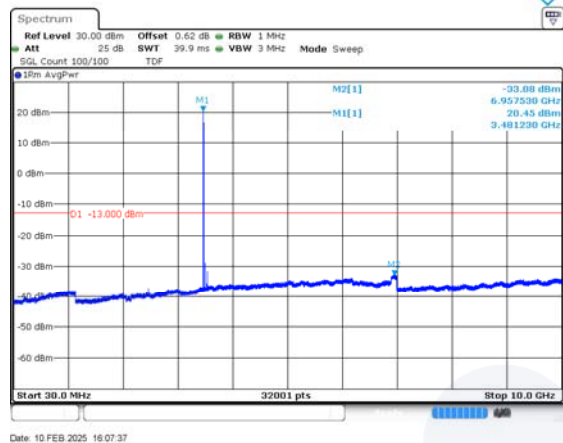


Middle channel (30 GHz ~ 40 GHz)

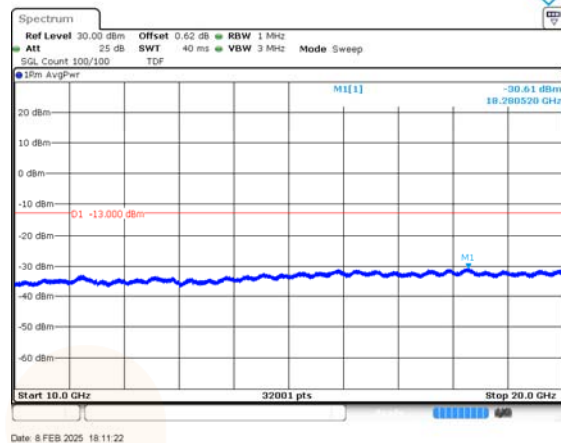


70M BW QPSK

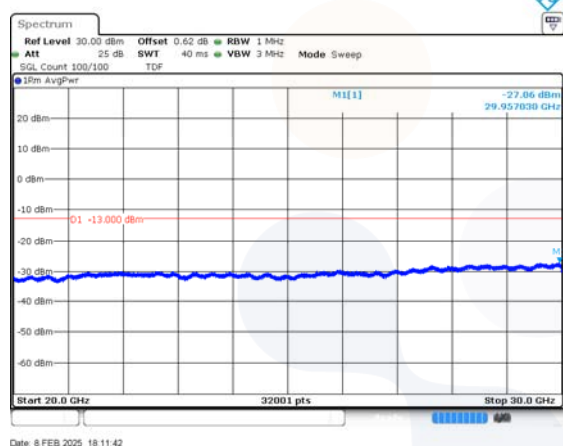
High channel (30 MHz ~ 10 GHz)



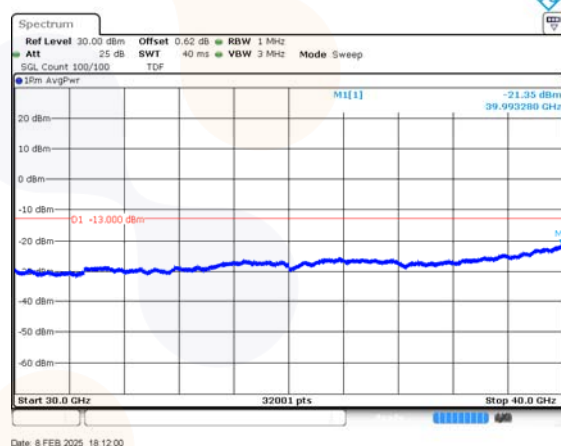
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

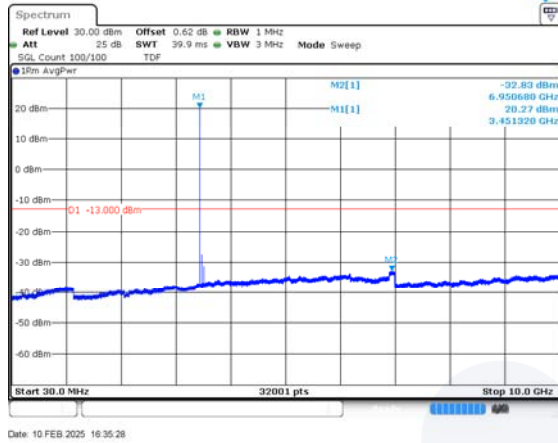


High channel (30 GHz ~ 40 GHz)

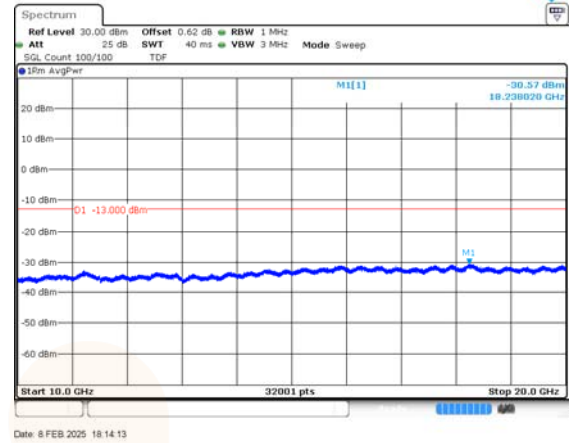


80M BW QPSK

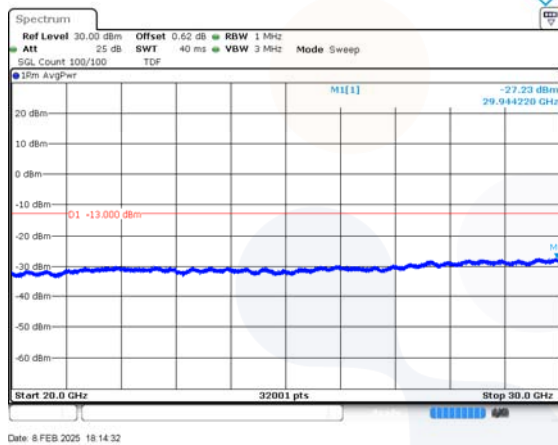
Low channel (30 MHz ~ 10 GHz)



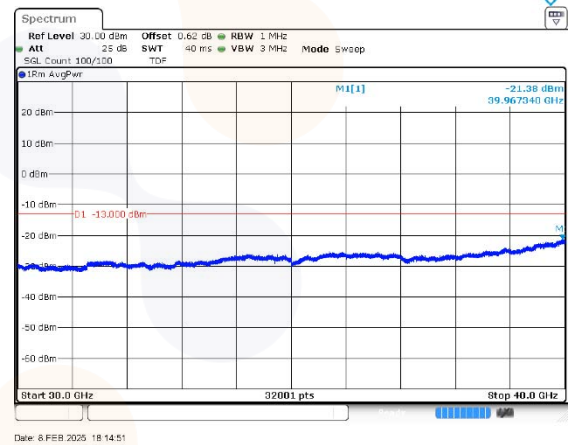
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

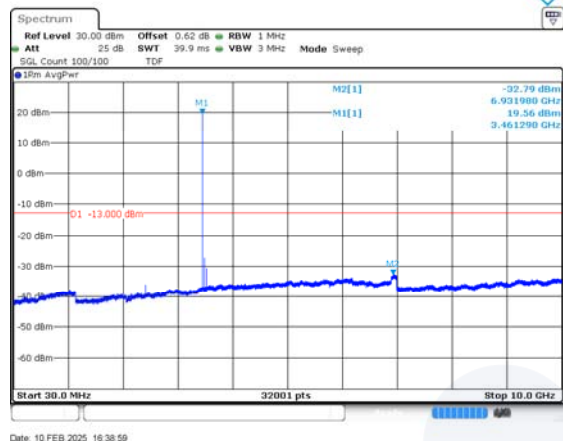


Low channel (30 GHz ~ 40 GHz)

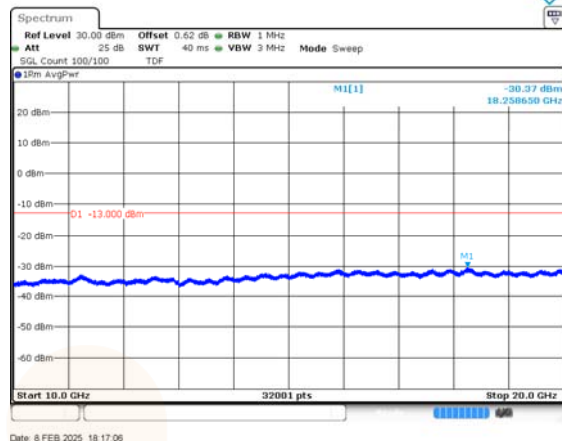


80M BW QPSK

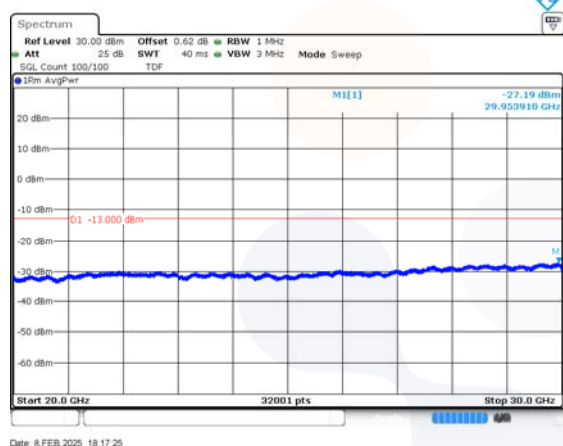
Middle channel (30 MHz ~ 10 GHz)



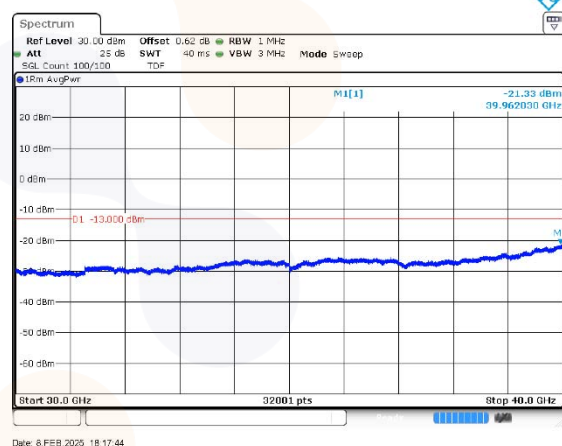
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

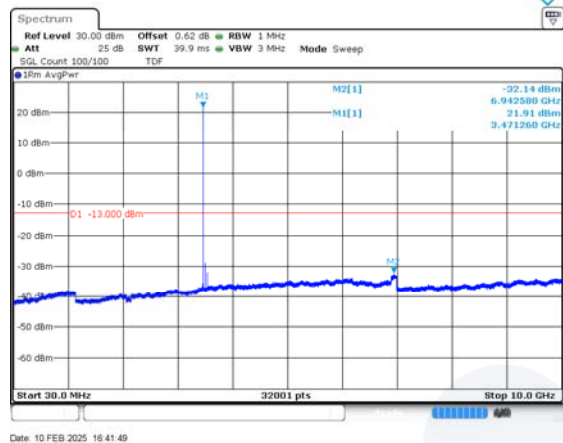


Middle channel (30 GHz ~ 40 GHz)

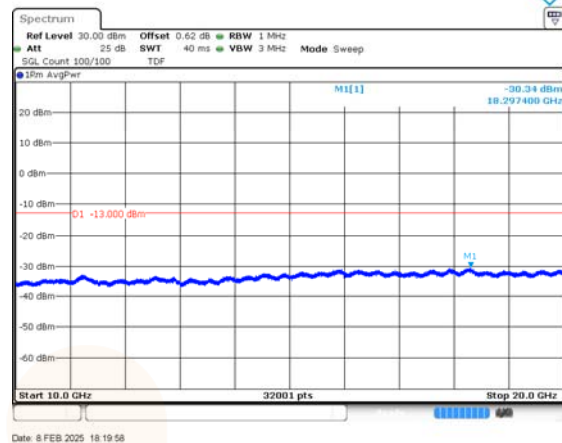


80M BW QPSK

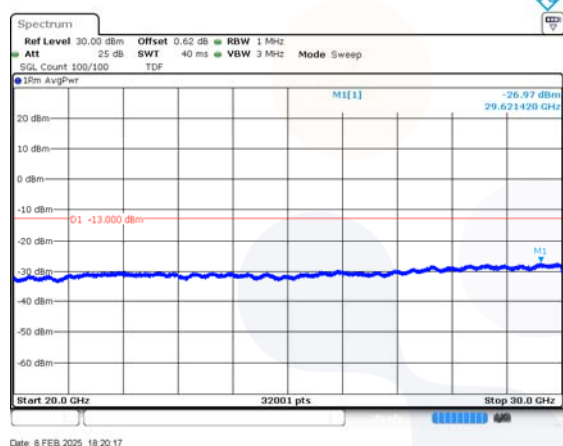
High channel (30 MHz ~ 10 GHz)



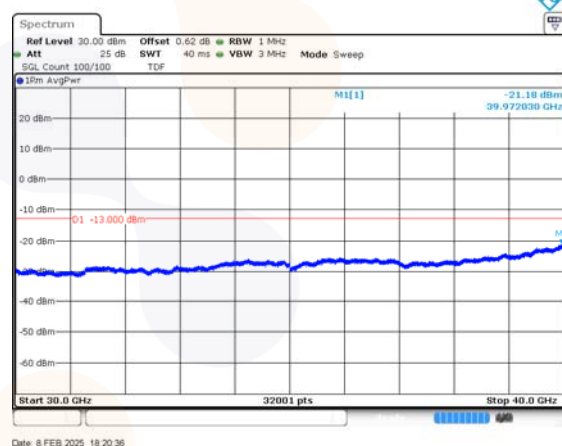
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

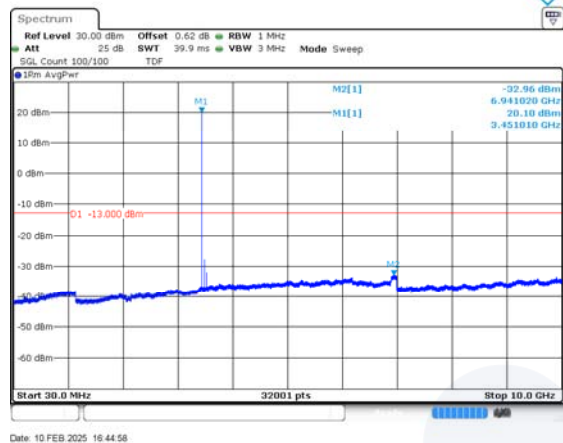


High channel (30 GHz ~ 40 GHz)

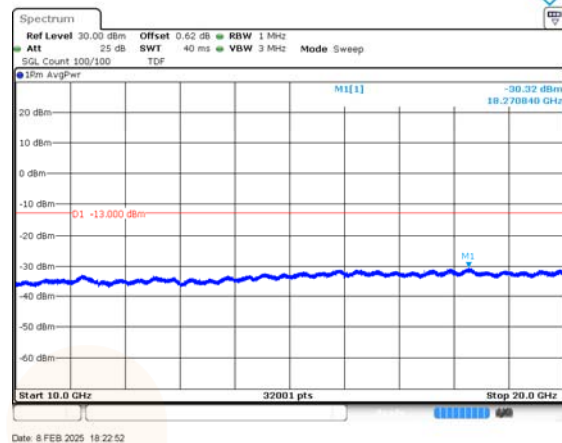


90M BW QPSK

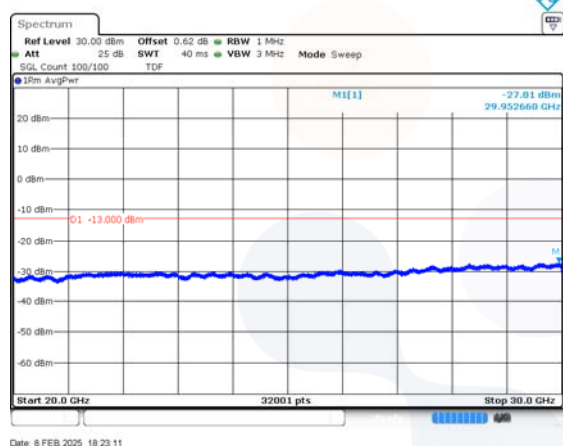
Low channel (30 MHz ~ 10 GHz)



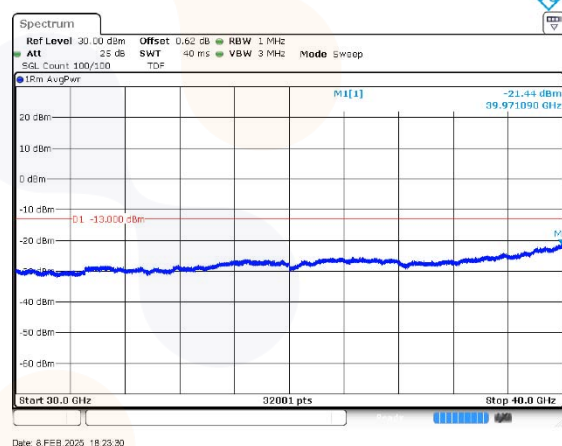
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

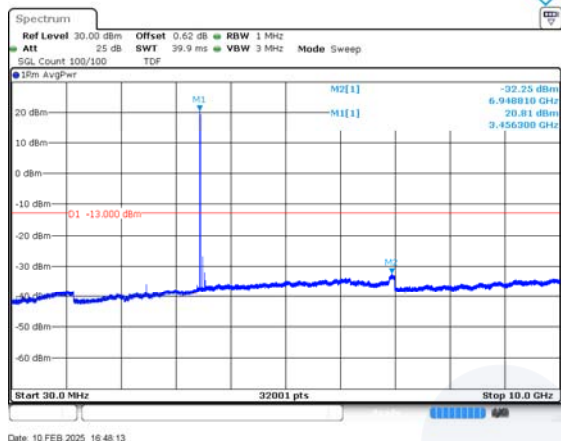


Low channel (30 GHz ~ 40 GHz)

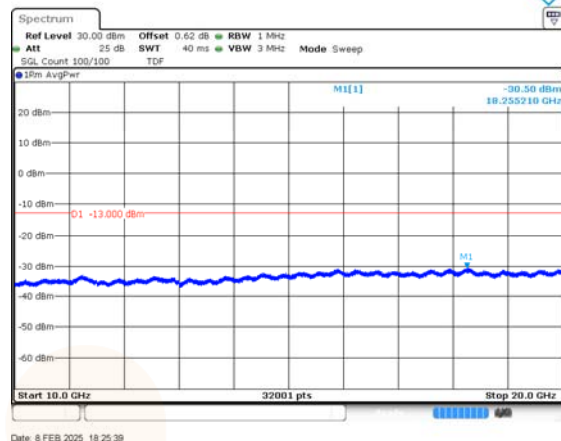


90M BW QPSK

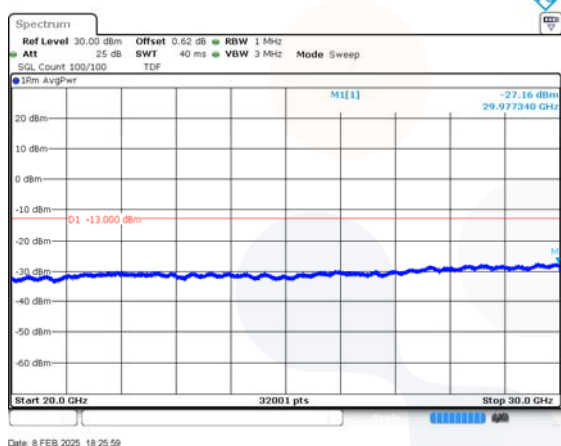
Middle channel (30 MHz ~ 10 GHz)



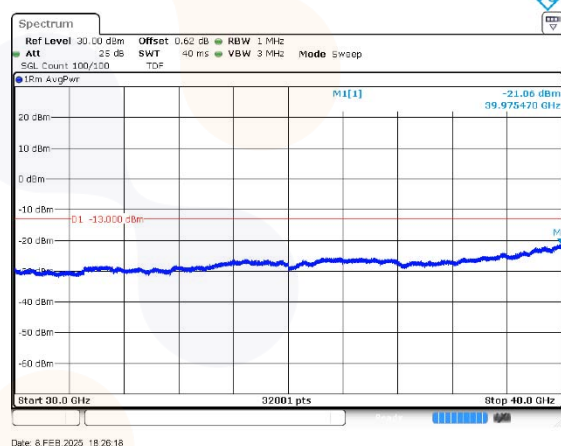
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

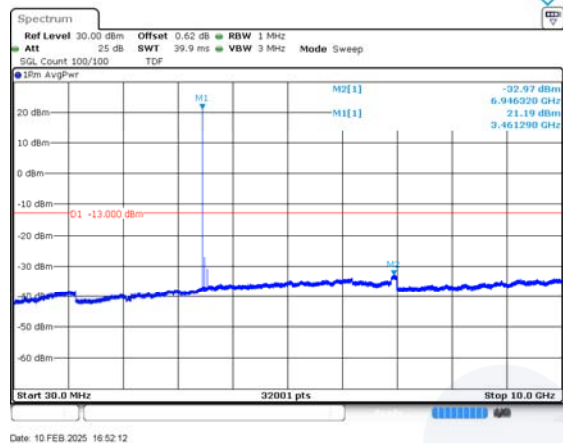


Middle channel (30 GHz ~ 40 GHz)

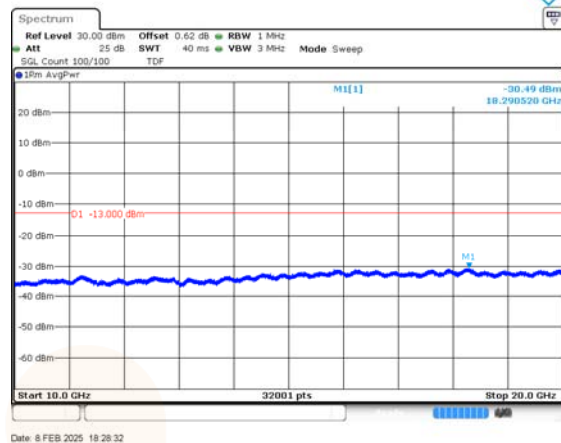


90M BW QPSK

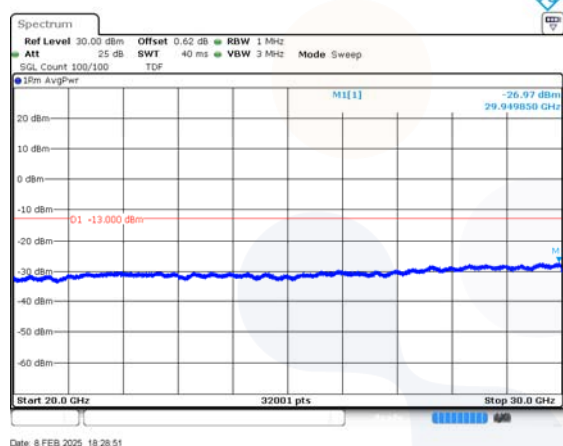
High channel (30 MHz ~ 10 GHz)



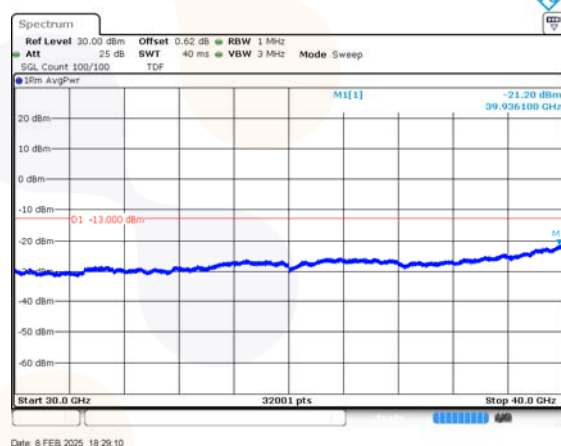
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

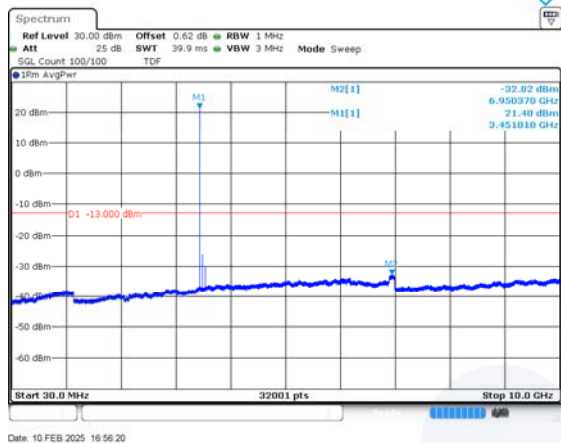


High channel (30 GHz ~ 40 GHz)

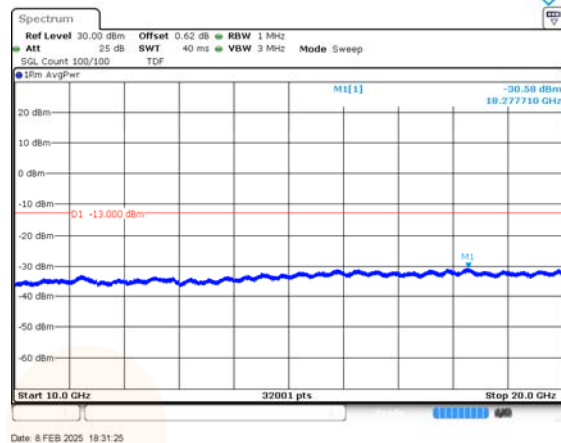


100M BW QPSK

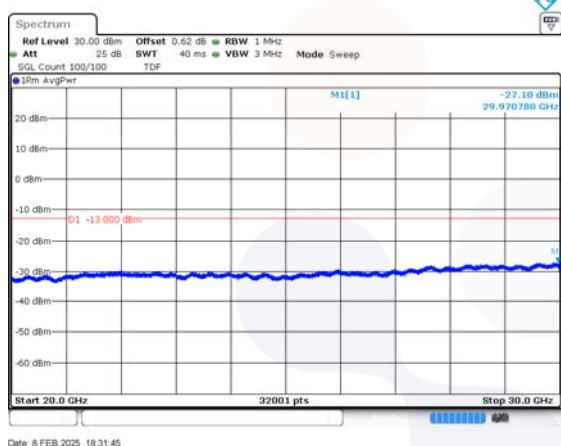
Middle channel (30 MHz ~ 10 GHz)



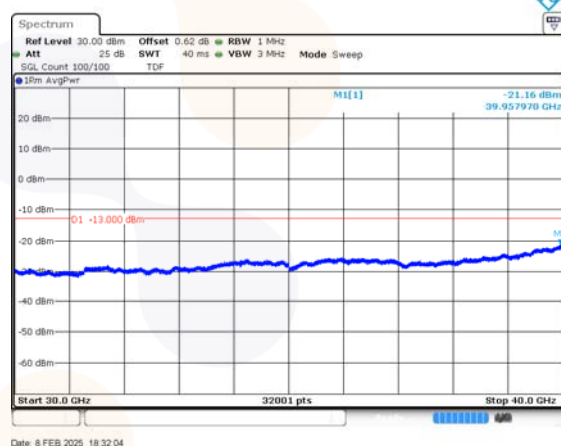
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)



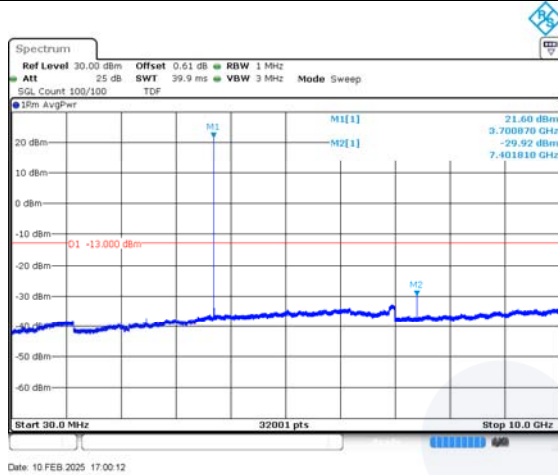
Middle channel (30 GHz ~ 40 GHz)



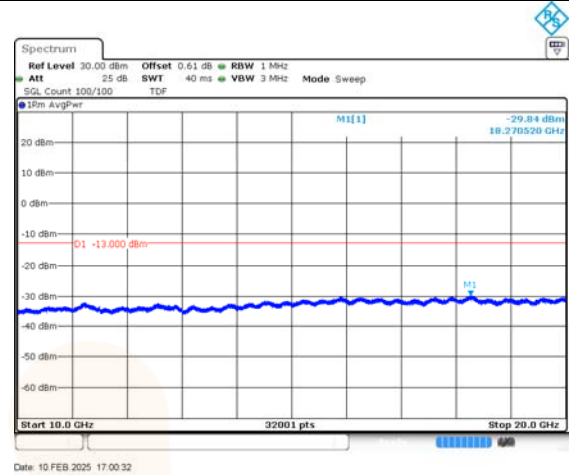
Test mode: 5G NR n77 (Upper)(PC2) DFT-s OFDM

10M BW QPSK

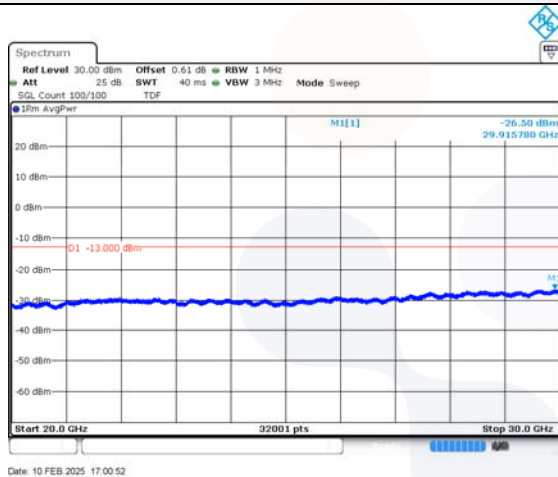
Low channel (30 MHz ~ 10 GHz)



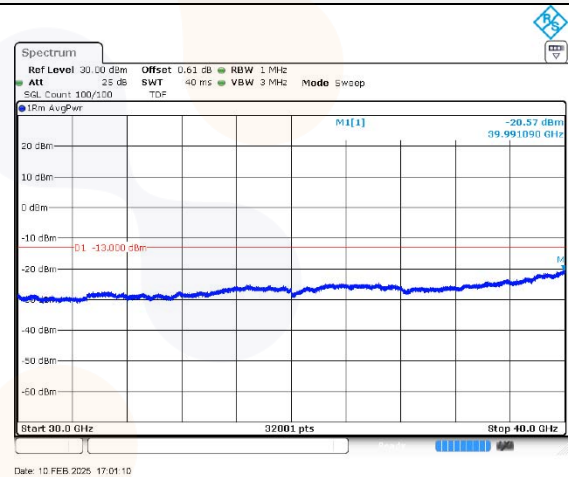
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

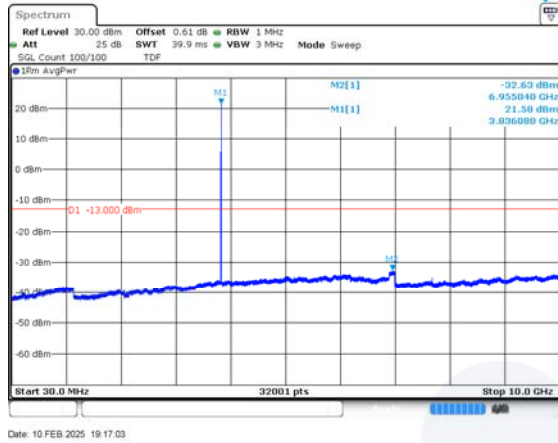


Low channel (30 GHz ~ 40 GHz)

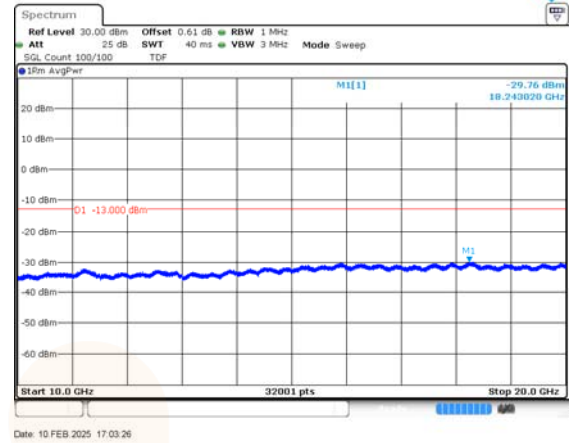


10M BW QPSK

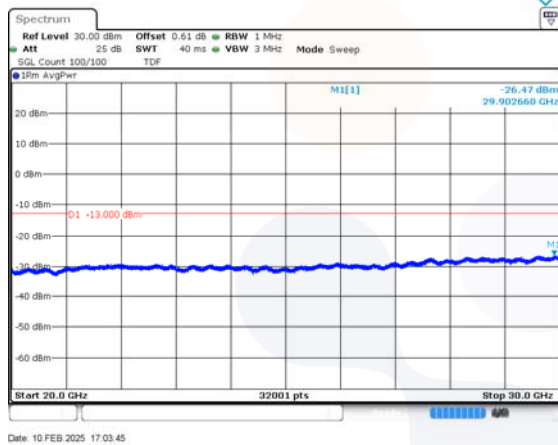
Middle channel (30 MHz ~ 10 GHz)



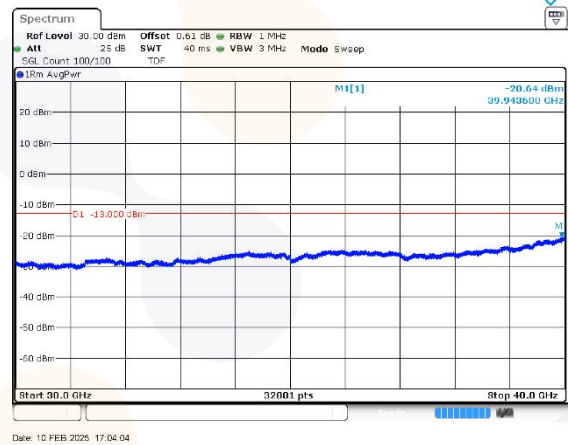
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

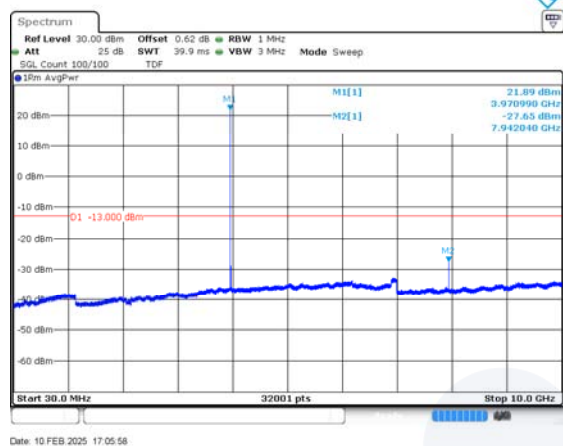


Middle channel (30 GHz ~ 40 GHz)

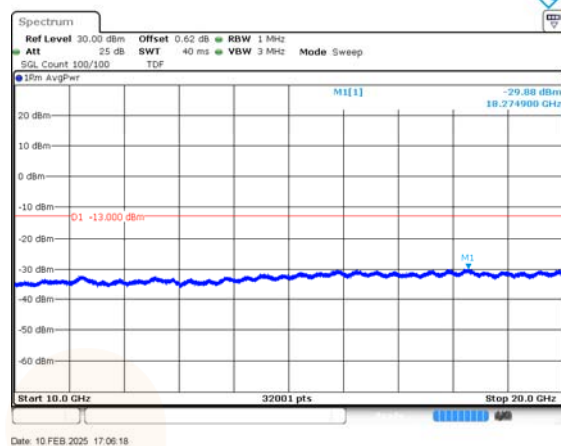


10M BW QPSK

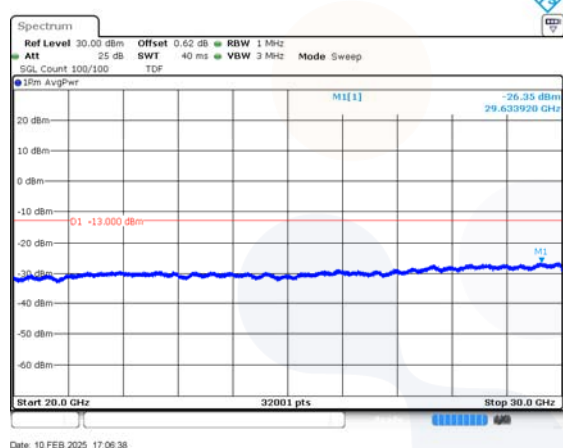
High channel (30 MHz ~ 10 GHz)



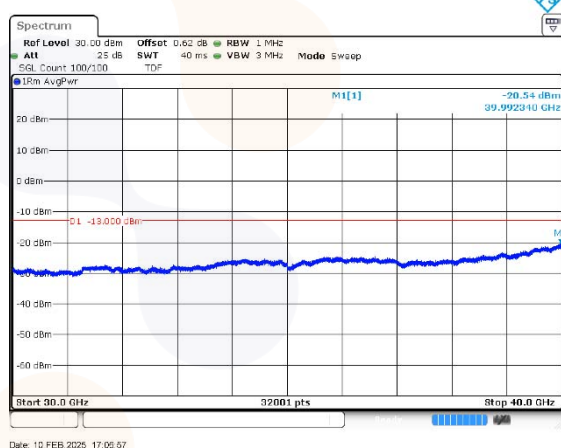
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

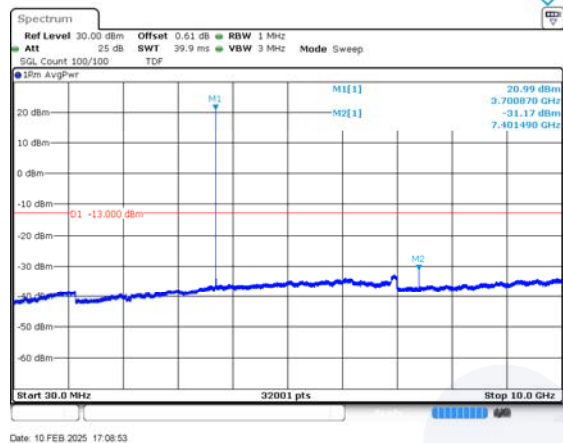


High channel (30 GHz ~ 40 GHz)

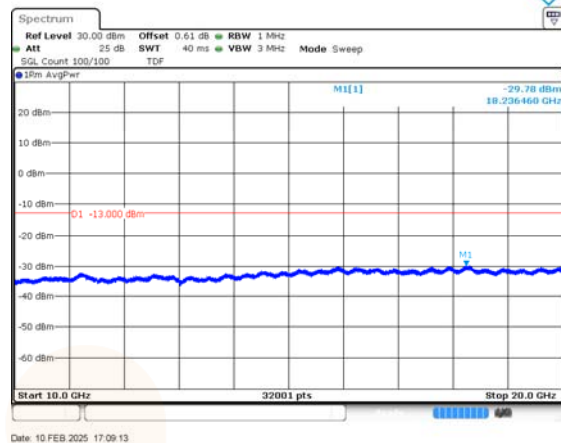


15M BW QPSK

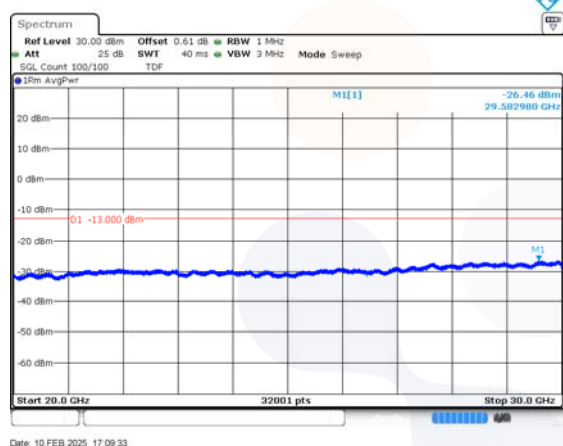
Low channel (30 MHz ~ 10 GHz)



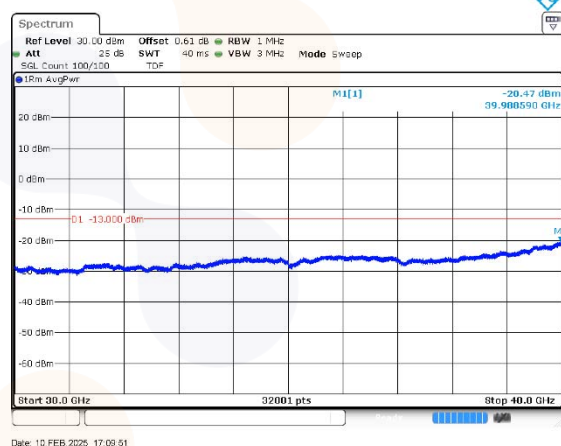
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

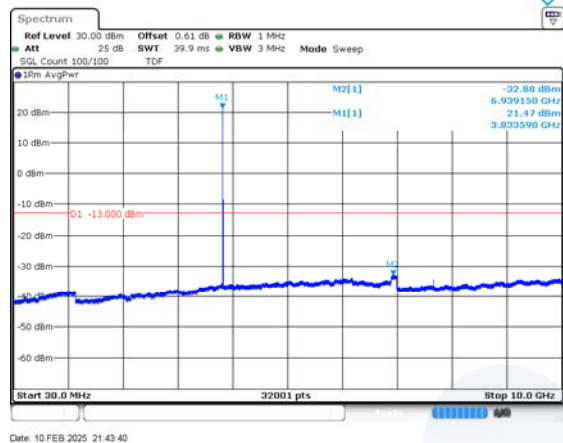


Low channel (30 GHz ~ 40 GHz)

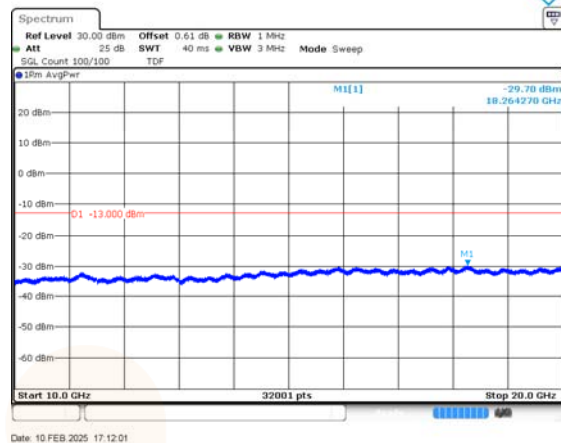


15M BW QPSK

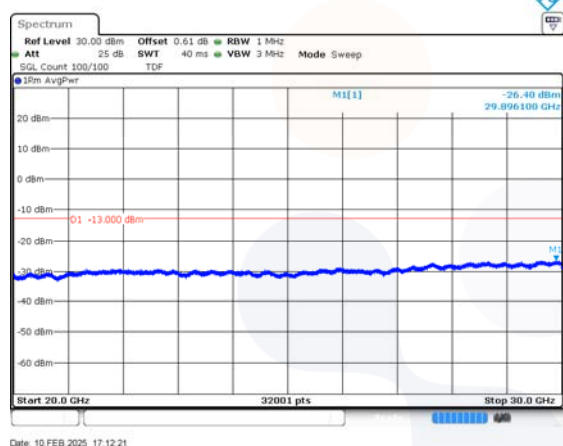
Middle channel (30 MHz ~ 10 GHz)



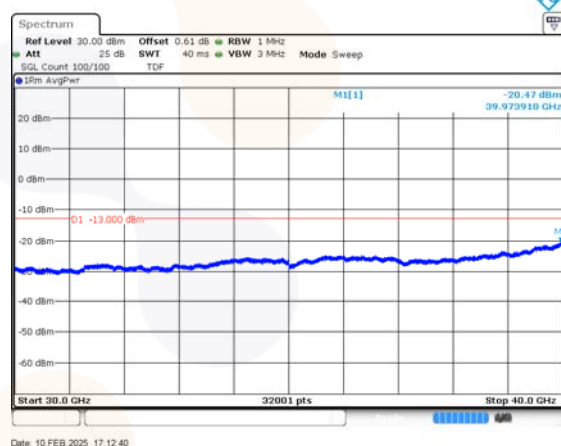
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

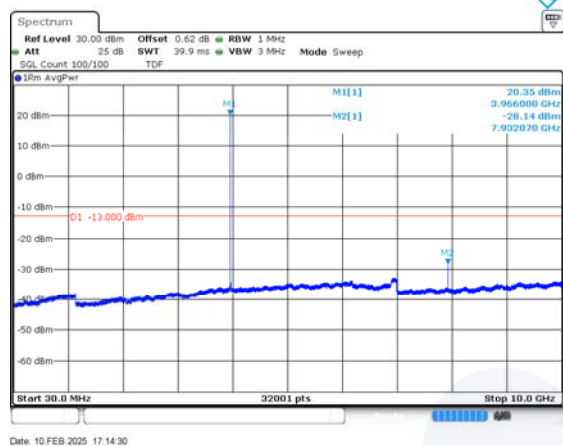


Middle channel (30 GHz ~ 40 GHz)

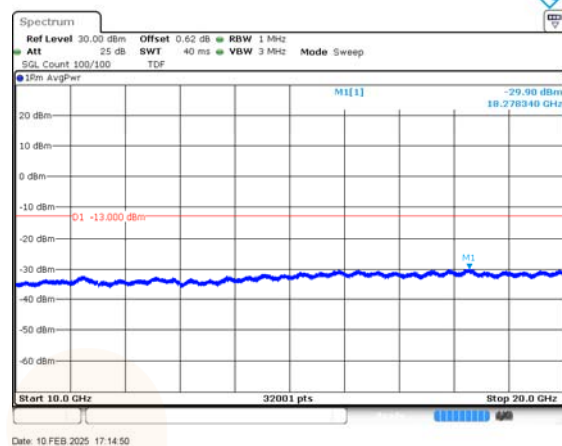


15M BW QPSK

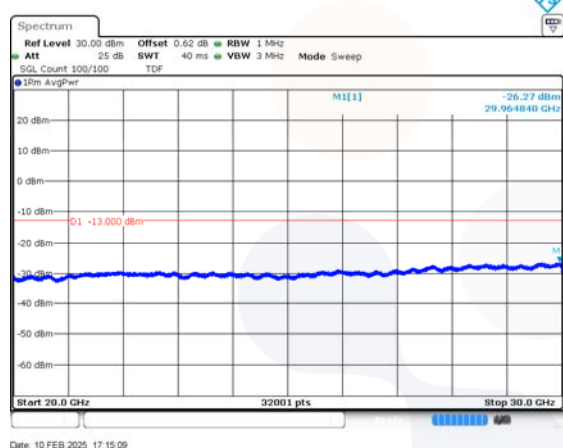
High channel (30 MHz ~ 10 GHz)



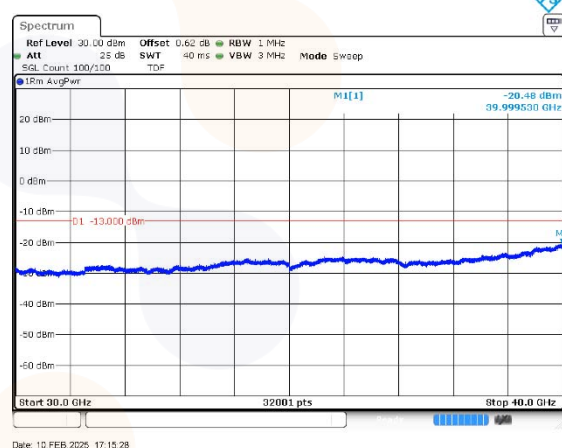
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

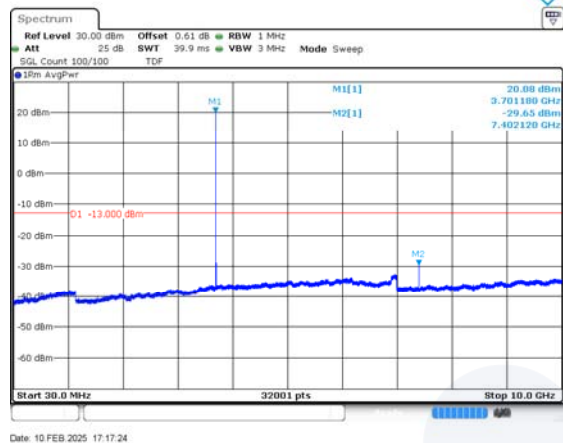


High channel (30 GHz ~ 40 GHz)

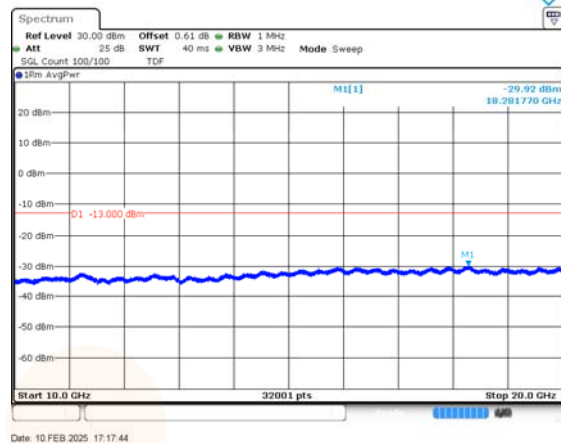


20M BW QPSK

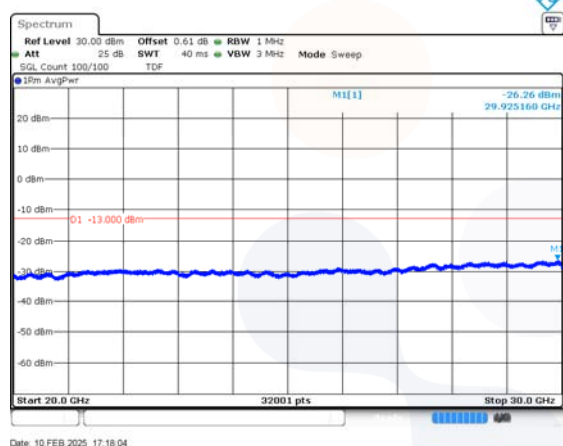
Low channel (30 MHz ~ 10 GHz)



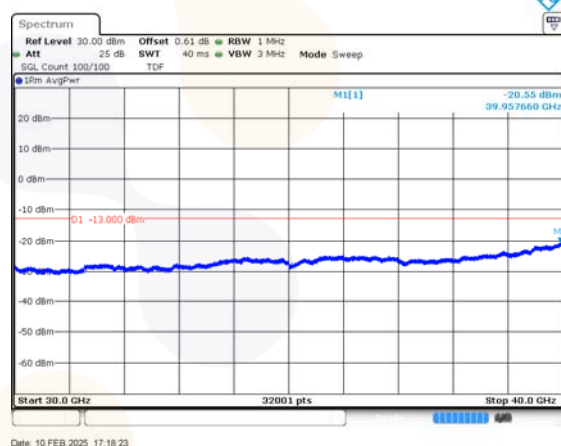
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

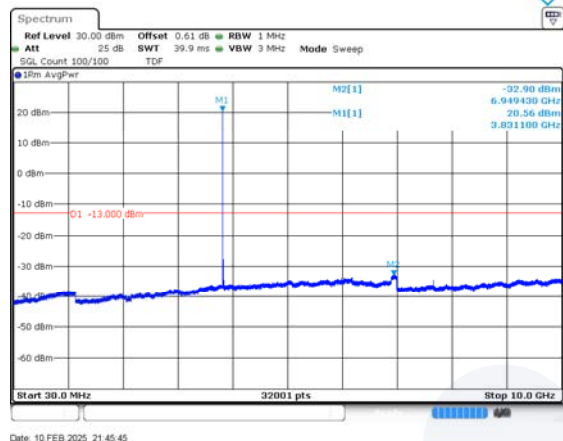


Low channel (30 GHz ~ 40 GHz)

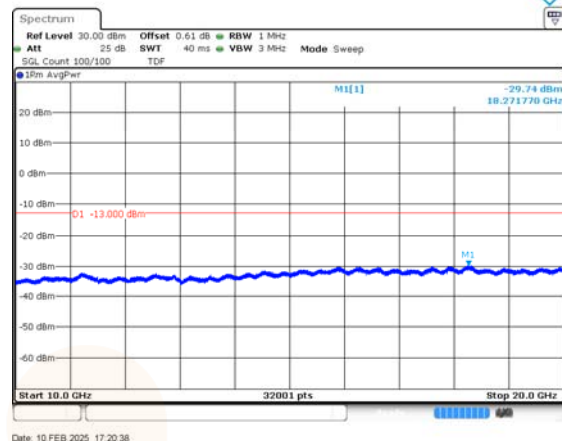


20M BW QPSK

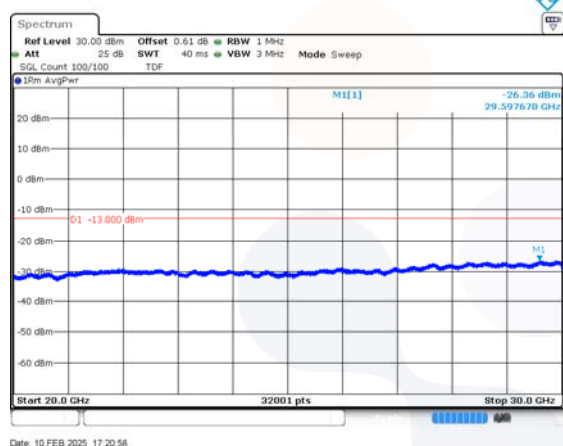
Middle channel (30 MHz ~ 10 GHz)



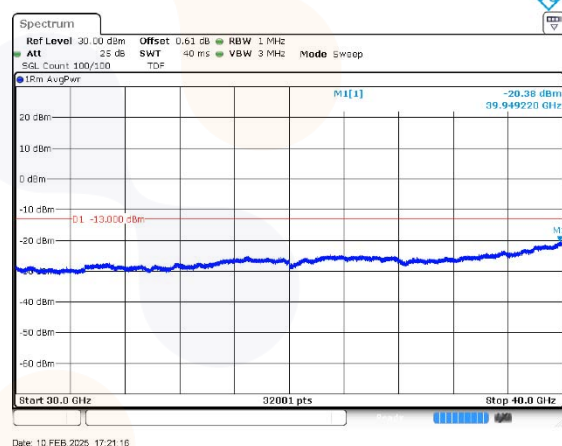
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

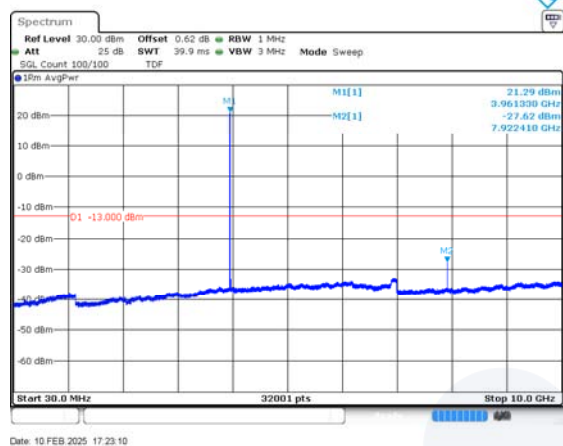


Middle channel (30 GHz ~ 40 GHz)

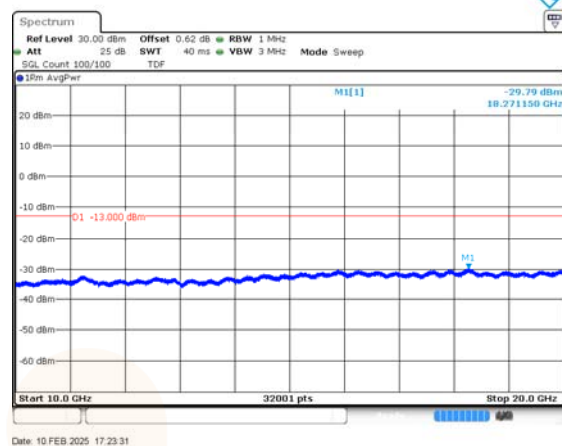


20M BW QPSK

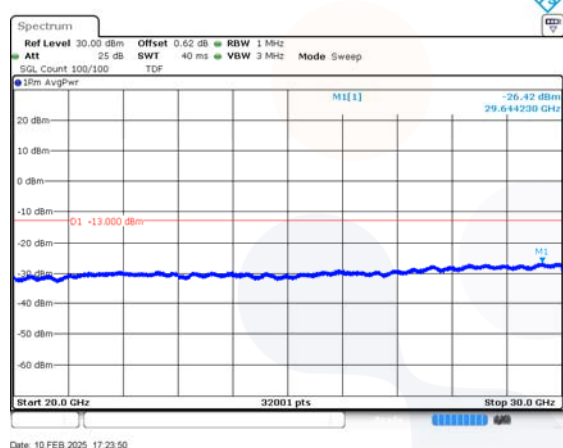
High channel (30 MHz ~ 10 GHz)



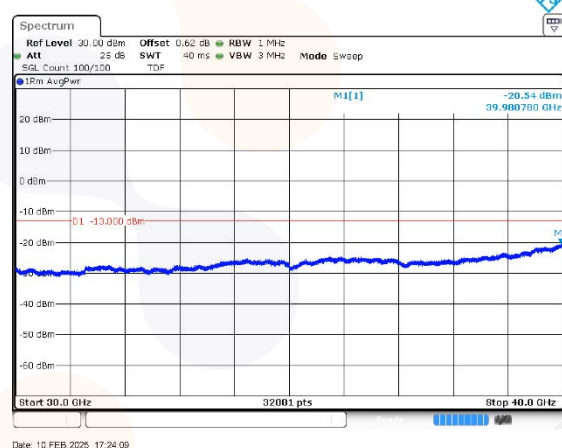
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

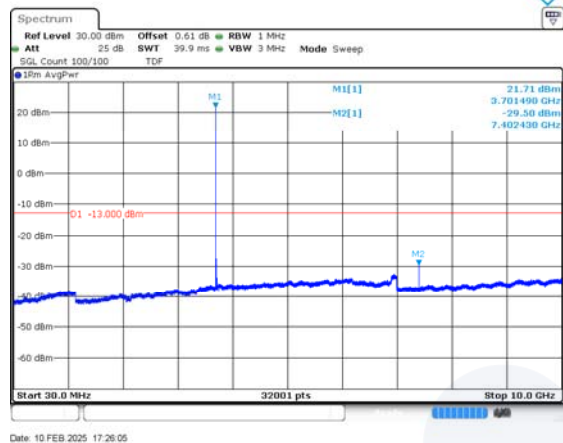


High channel (30 GHz ~ 40 GHz)

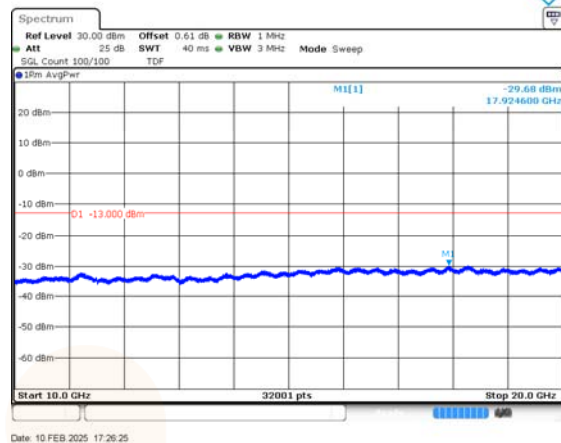


30M BW QPSK

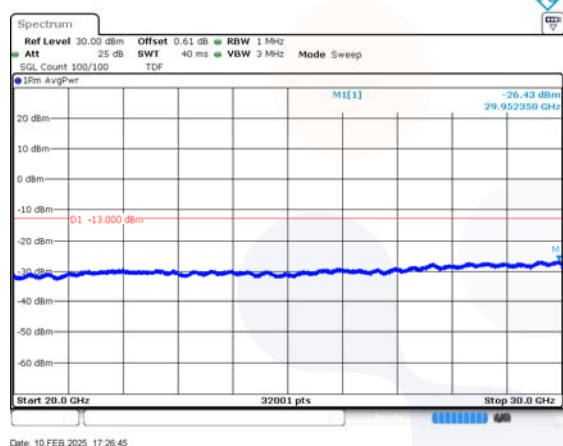
Low channel (30 MHz ~ 10 GHz)



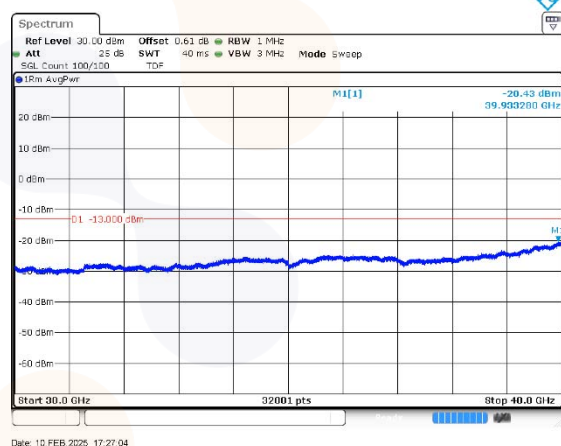
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

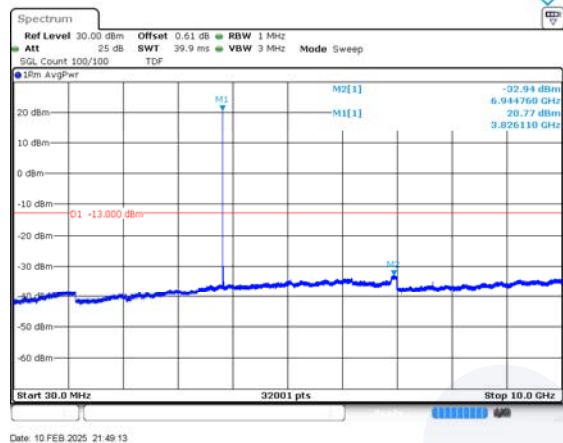


Low channel (30 GHz ~ 40 GHz)

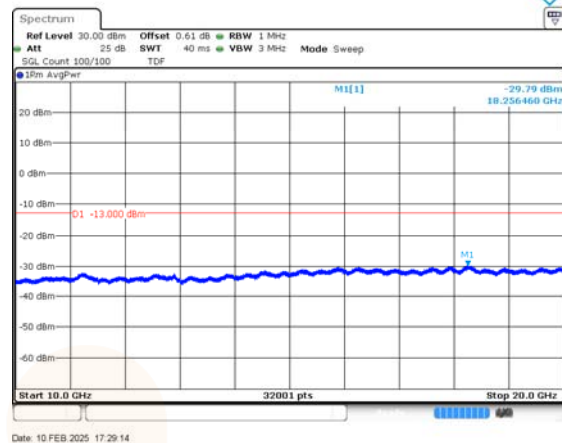


30M BW QPSK

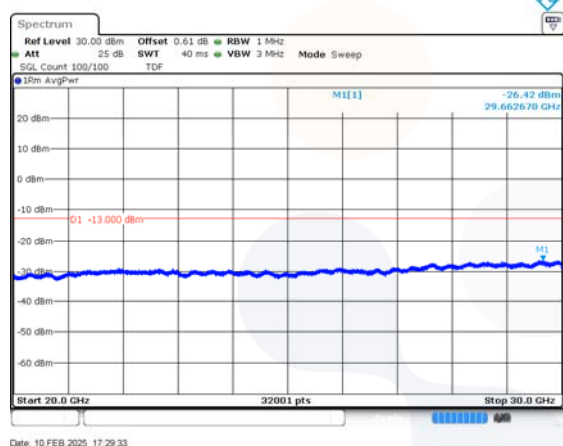
Middle channel (30 MHz ~ 10 GHz)



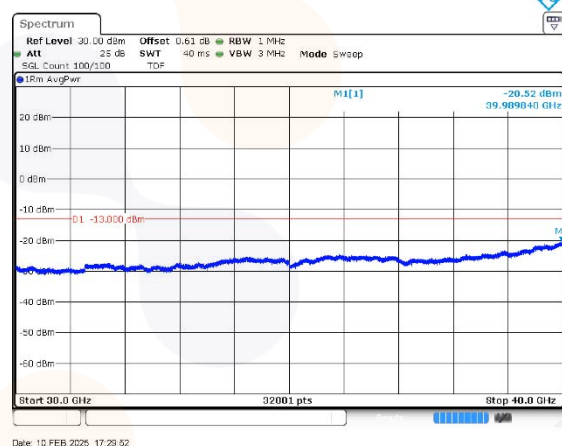
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

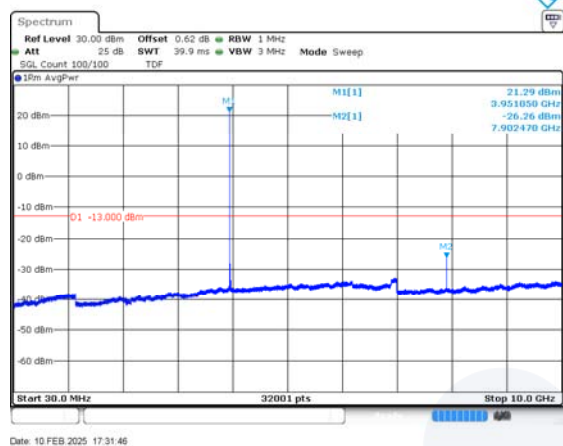


Middle channel (30 GHz ~ 40 GHz)

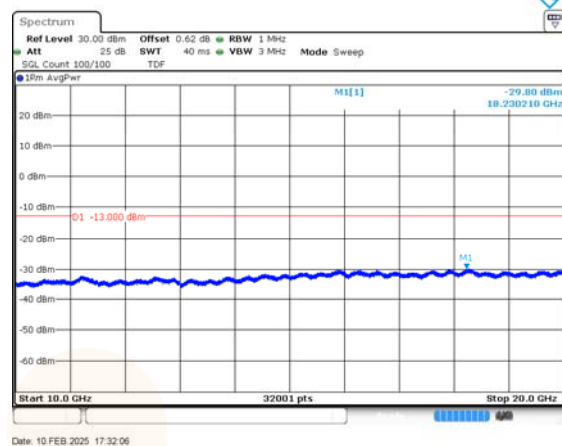


30M BW QPSK

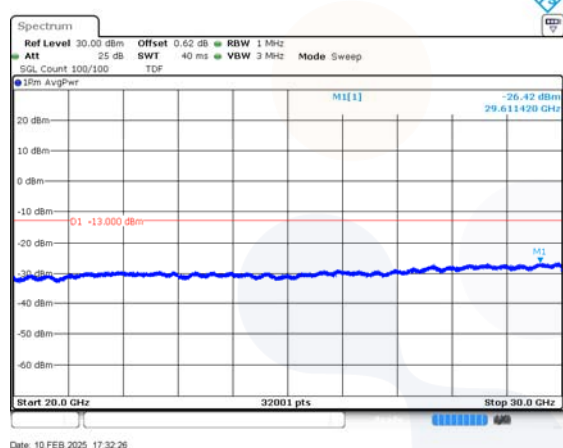
High channel (30 MHz ~ 10 GHz)



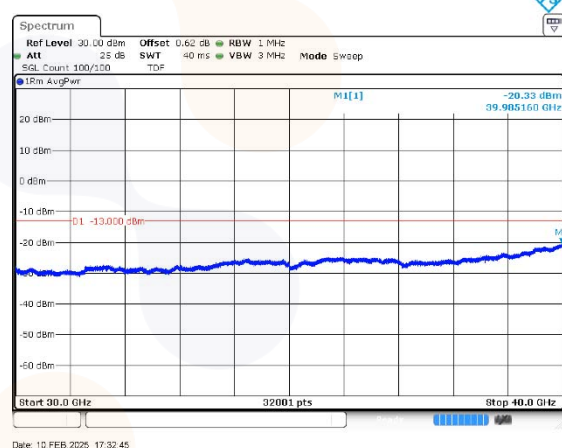
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

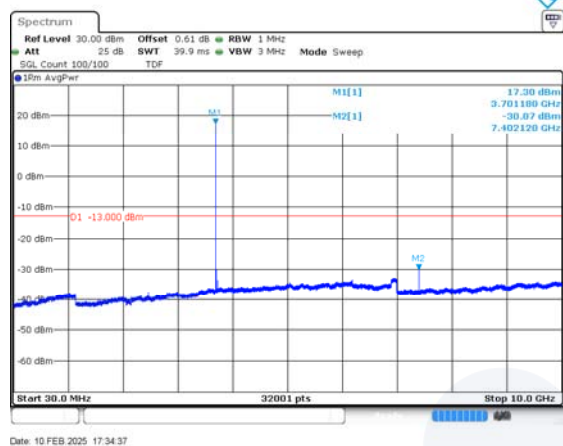


High channel (30 GHz ~ 40 GHz)

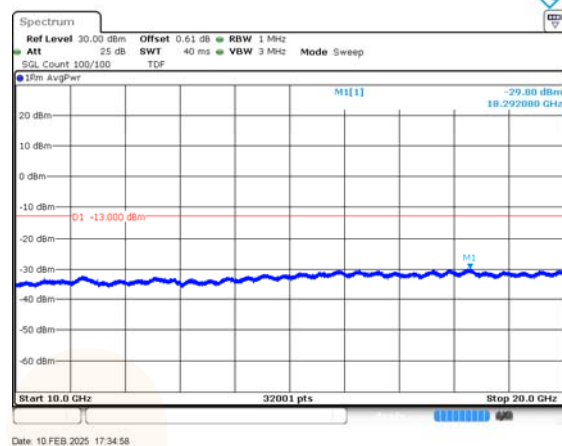


40M BW QPSK

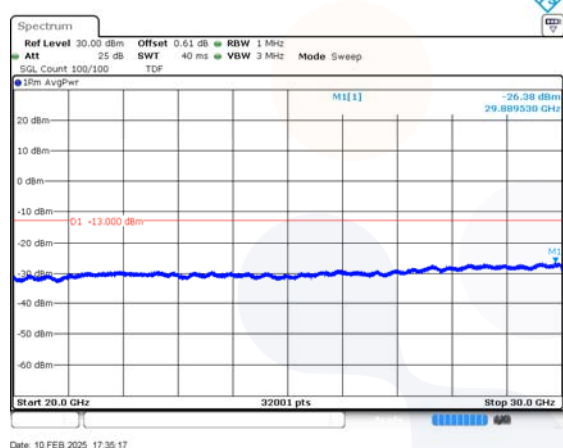
Low channel (30 MHz ~ 10 GHz)



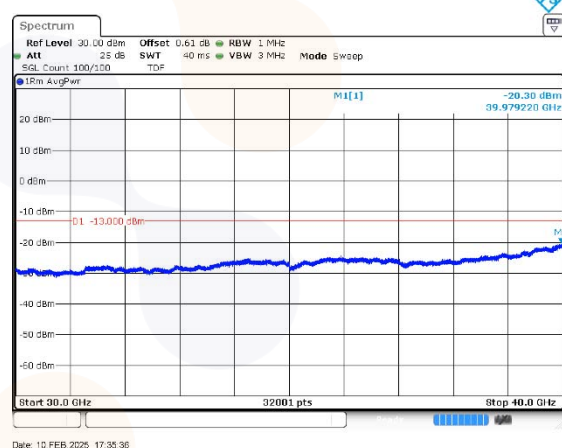
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

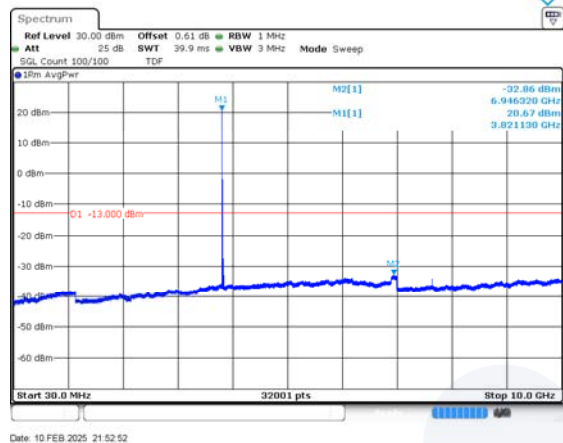


Low channel (30 GHz ~ 40 GHz)

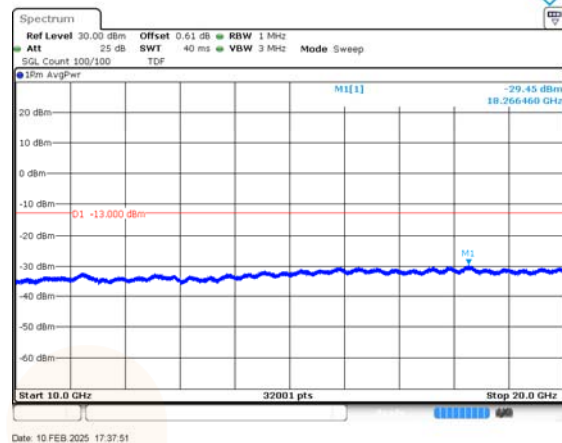


40M BW QPSK

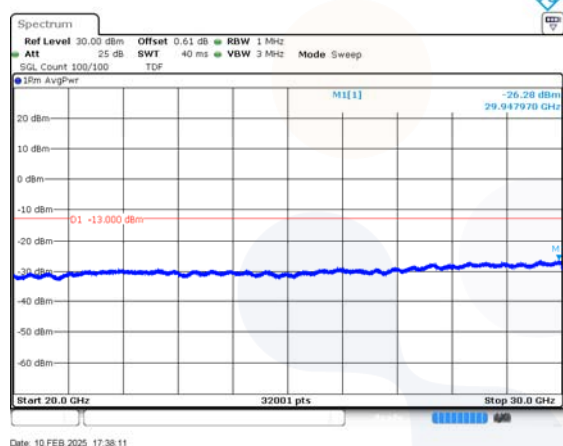
Middle channel (30 MHz ~ 10 GHz)



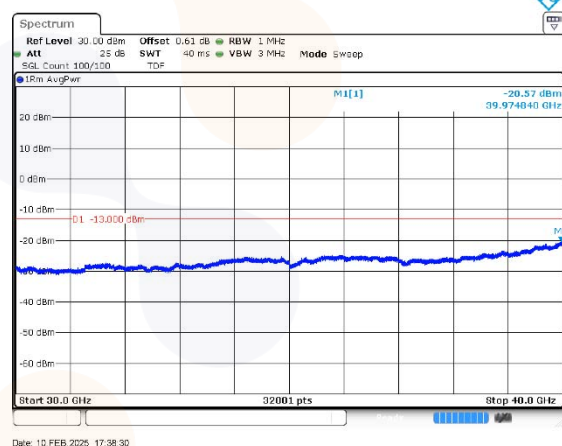
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

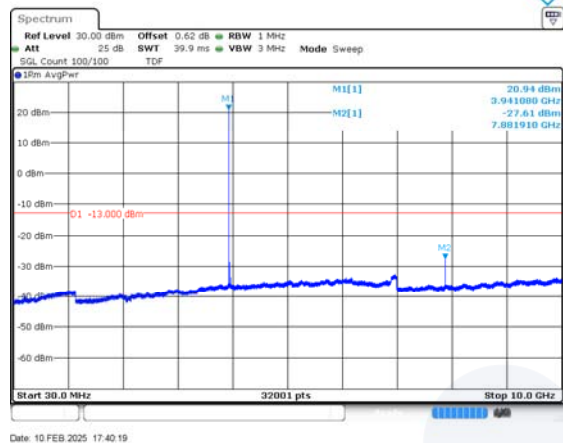


Middle channel (30 GHz ~ 40 GHz)

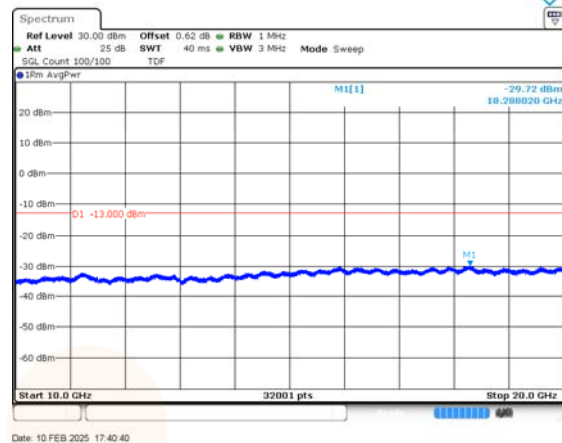


40M BW QPSK

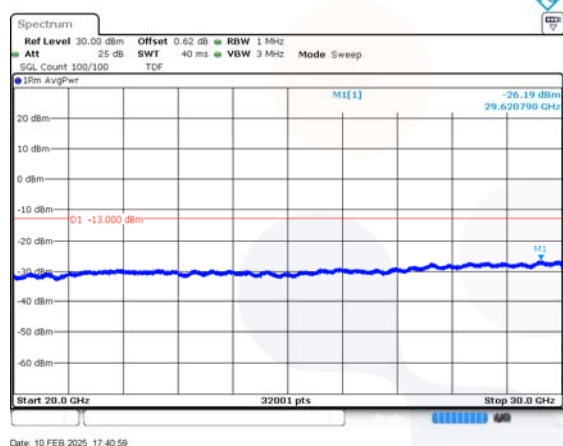
High channel (30 MHz ~ 10 GHz)



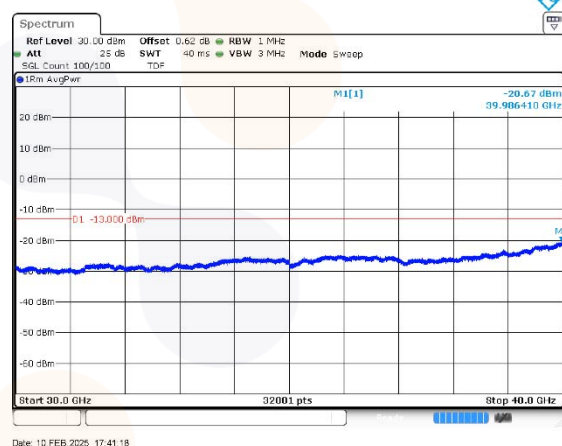
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

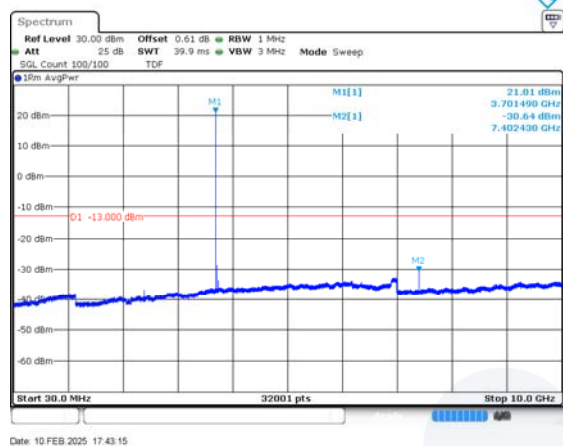


High channel (30 GHz ~ 40 GHz)

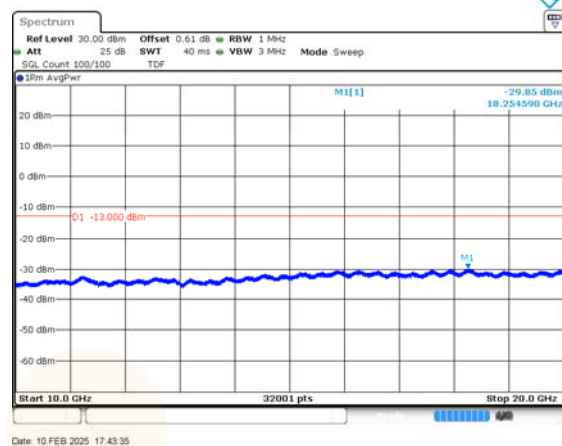


50M BW QPSK

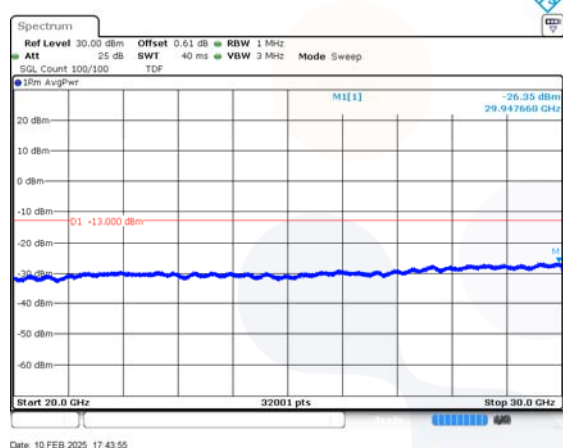
Low channel (30 MHz ~ 10 GHz)



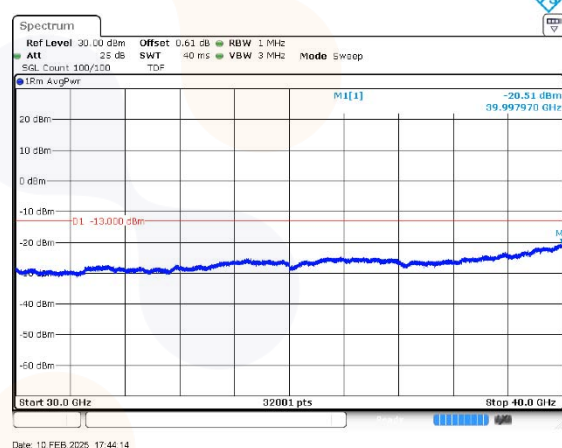
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

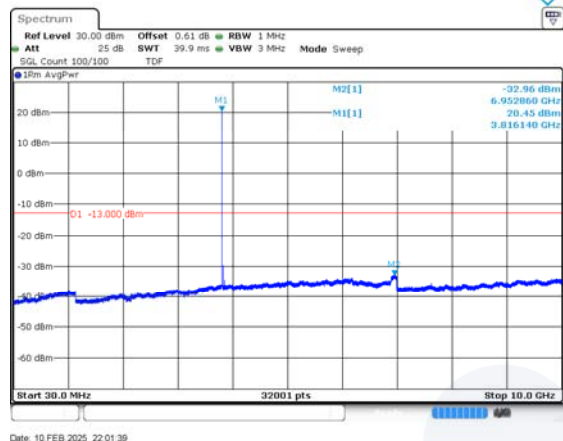


Low channel (30 GHz ~ 40 GHz)

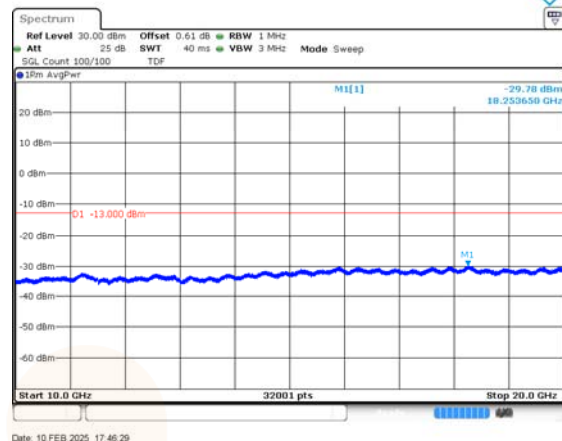


50M BW QPSK

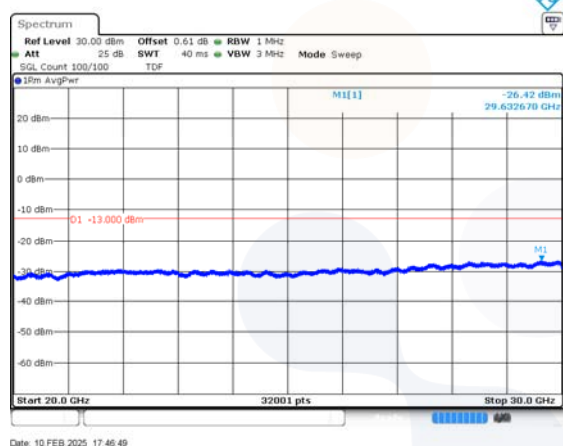
Middle channel (30 MHz ~ 10 GHz)



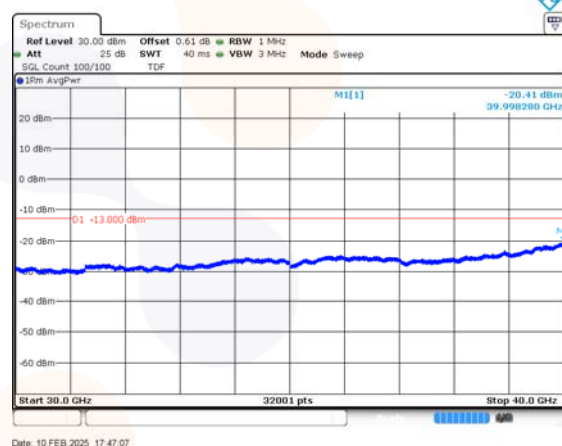
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

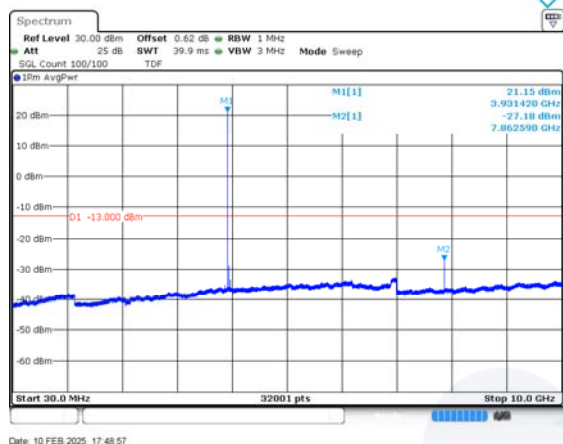


Middle channel (30 GHz ~ 40 GHz)

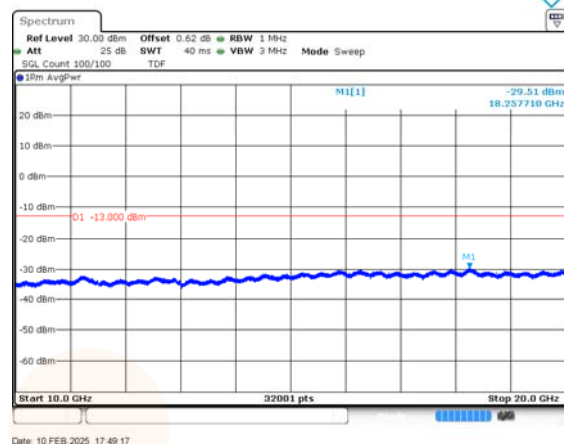


50M BW QPSK

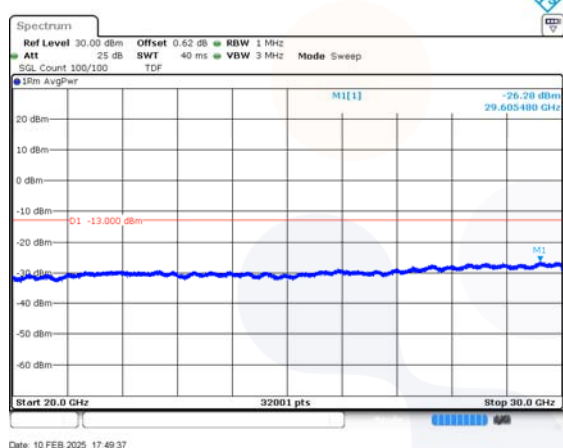
High channel (30 MHz ~ 10 GHz)



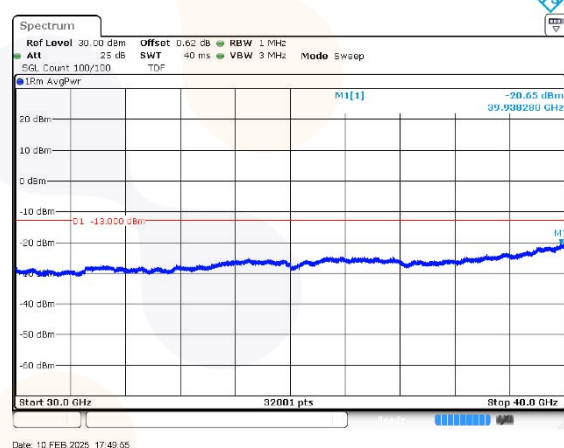
High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)

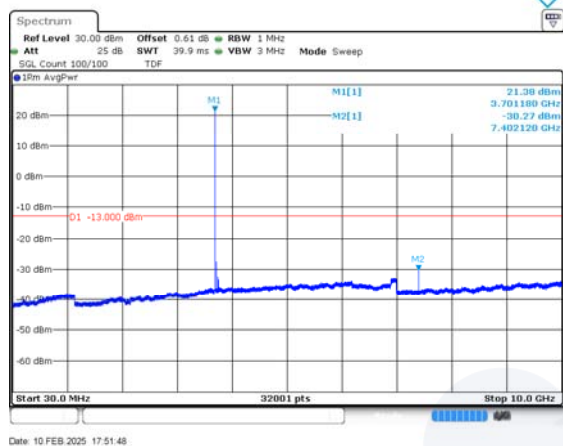


High channel (30 GHz ~ 40 GHz)

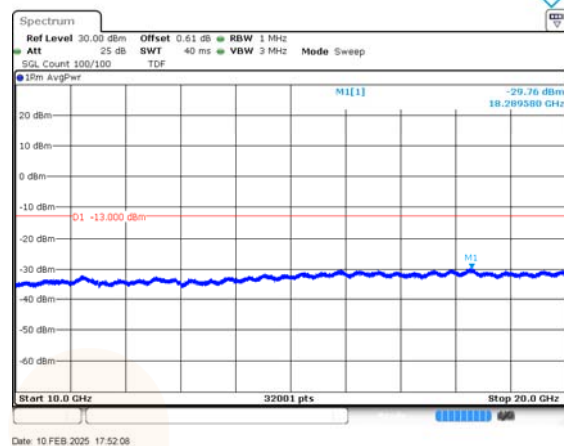


60M BW QPSK

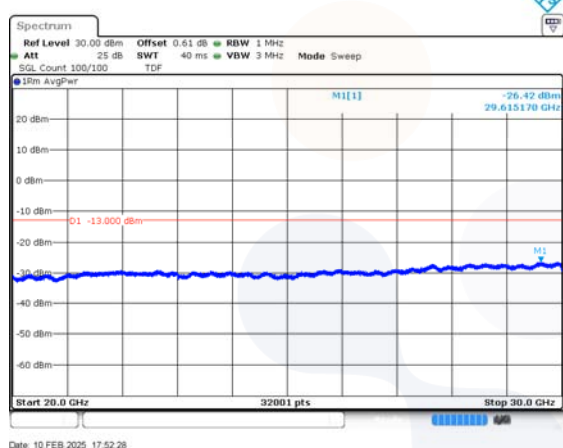
Low channel (30 MHz ~ 10 GHz)



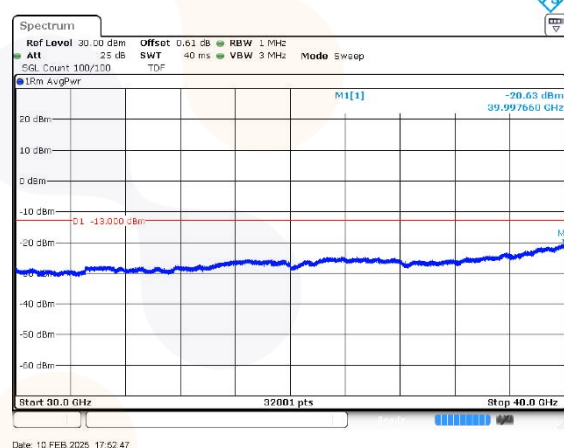
Low channel (10 GHz ~ 20 GHz)



Low channel (20 GHz ~ 30 GHz)

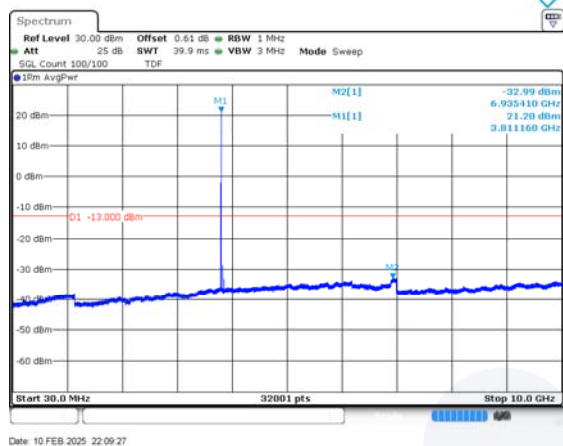


Low channel (30 GHz ~ 40 GHz)

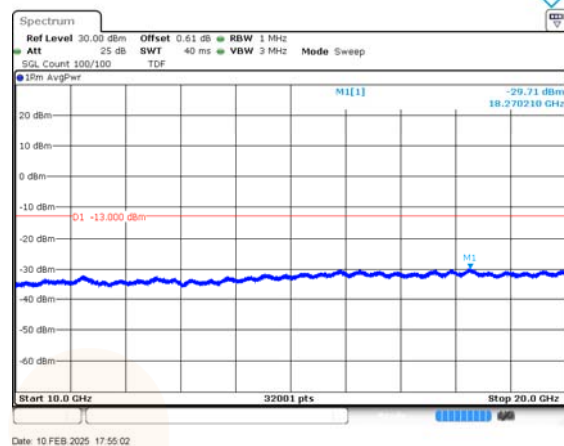


60M BW QPSK

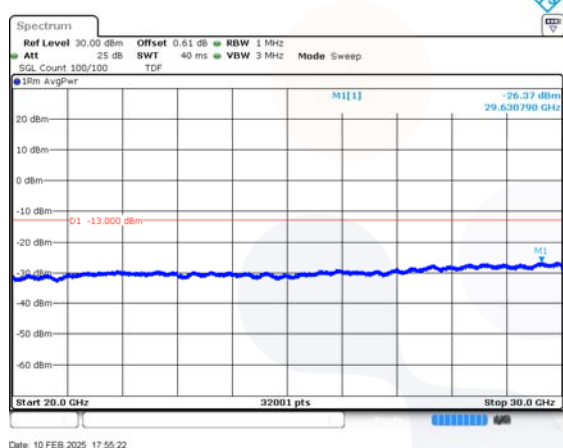
Middle channel (30 MHz ~ 10 GHz)



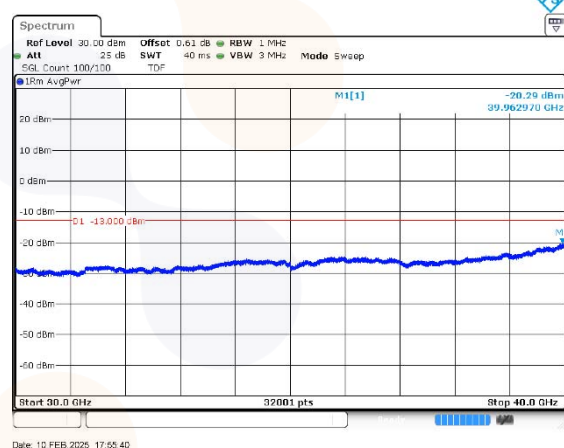
Middle channel (10 GHz ~ 20 GHz)



Middle channel (20 GHz ~ 30 GHz)

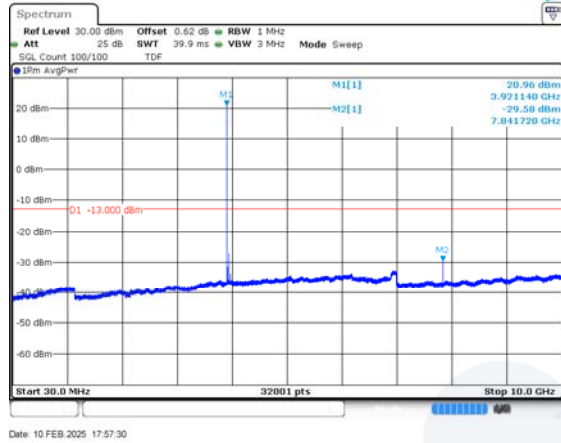


Middle channel (30 GHz ~ 40 GHz)

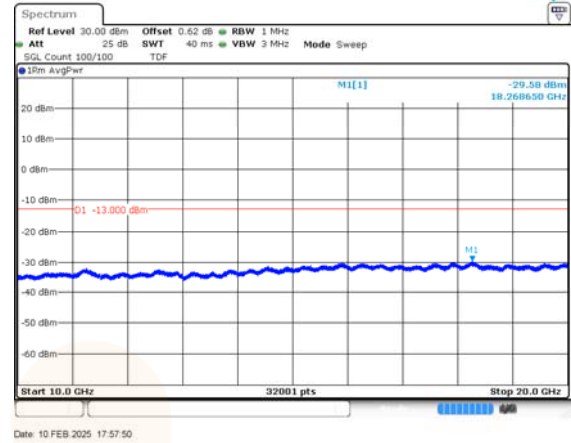


60M BW QPSK

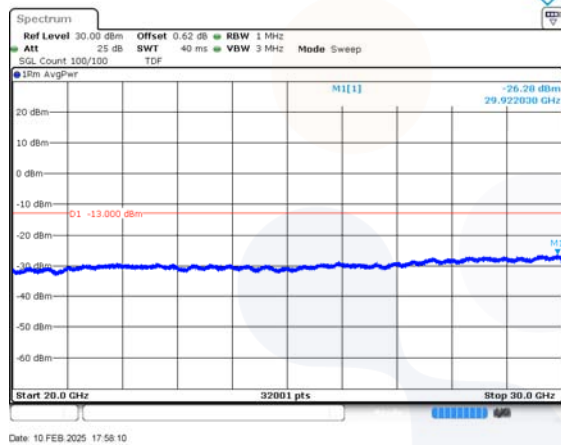
High channel (30 MHz ~ 10 GHz)



High channel (10 GHz ~ 20 GHz)



High channel (20 GHz ~ 30 GHz)



High channel (30 GHz ~ 40 GHz)

