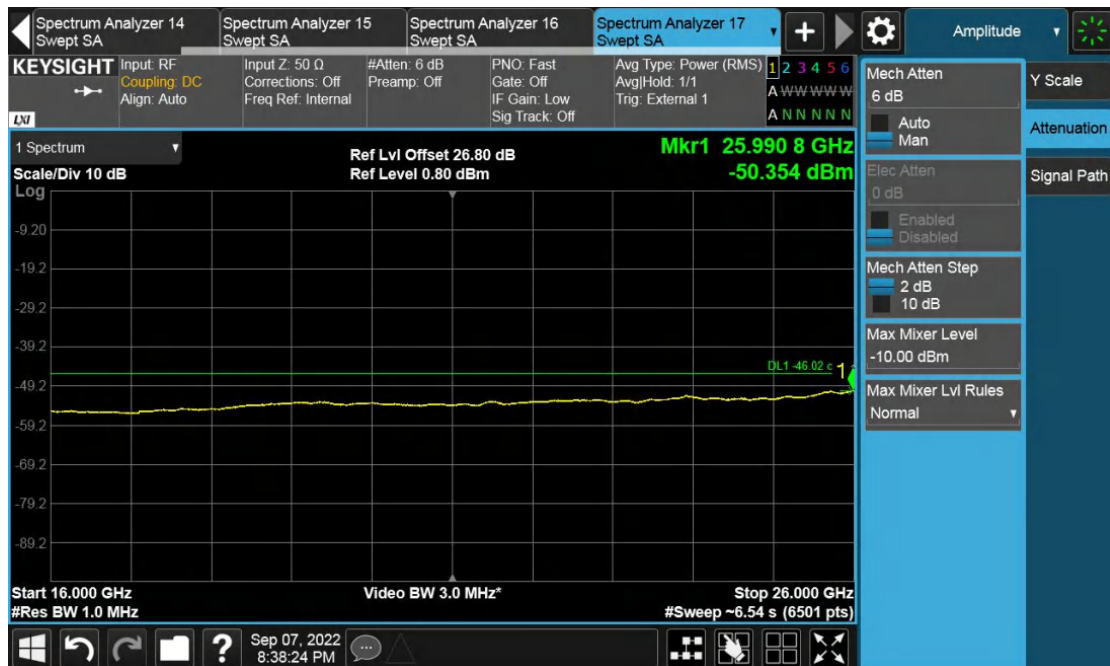
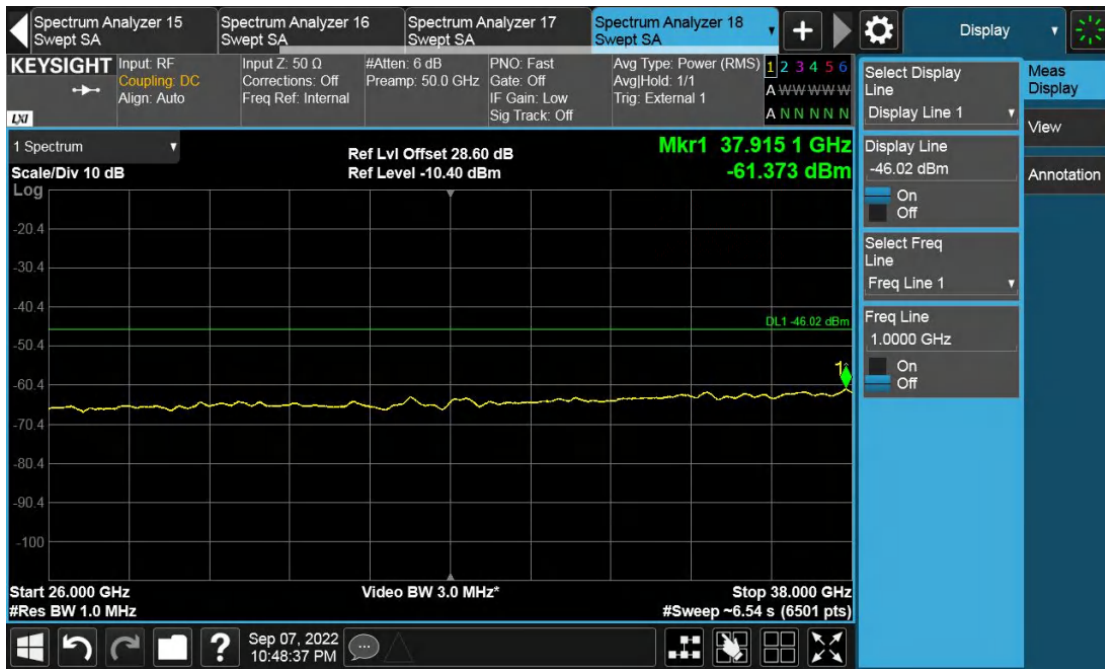


Channel Position T, 12.75GHz to 16GHz



Channel Position T, 16GHz to 26GHz



Channel Position T, 26GHz to 38GHz

9.5 Radiated Unwanted Emissions

Specification:	FCC Part 27.53(n)
Test Results:	Pass

9.5.1 Definitions and Limit

According to Part 27.53 (n):

The field strength of the carrier has been calculated assuming that the power is to be fed to a half-wave tuned dipoles as per 2.1053 (a).

$$E(V/m) = (30 \times G_i \times P_o)^{0.5} / d$$

Where

G_i is the antenna gain of ideal half-wave dipoles,

P_o is the power out of the transceiver in W,

d is the measurement distance in meter.

As per FCC Part 27.53(n) notwithstanding the channel edge requirement of -13 dBm per megahertz, for base station operations in the 3450-3550 MHz band, the conducted power of any emission below 3440 MHz or above 3560 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3430 MHz or above 3570 MHz shall not exceed -40 dBm/MHz.

Therefore, the limit at 3m measurement distance is:

$E(V/m) = 72.4$ dB μ V/m for the emissions of frequencies greater than 10 megahertz above the 3430 MHz channel edge and less than 10 MHz below the 3570 MHz channel edge.

$E(V/m) = 57.4$ dB μ V/m for the emissions below 3430 MHz or above 3570 MHz.

9.5.2 Method of Measurements:

This measurement is carried out in semi-anechoic chamber.

A preliminary profile of the Spurious Radiated Emissions was obtained by operating the EUT on a remotely controlled turntable within the chamber. Measurements of Emissions from the EUT were obtained with the measurement antenna in both horizontal and vertical polarizations.

The EUT was measured with the antenna height varied between 1 and 4 m with the turntable rotated between 0 and 360 degrees.



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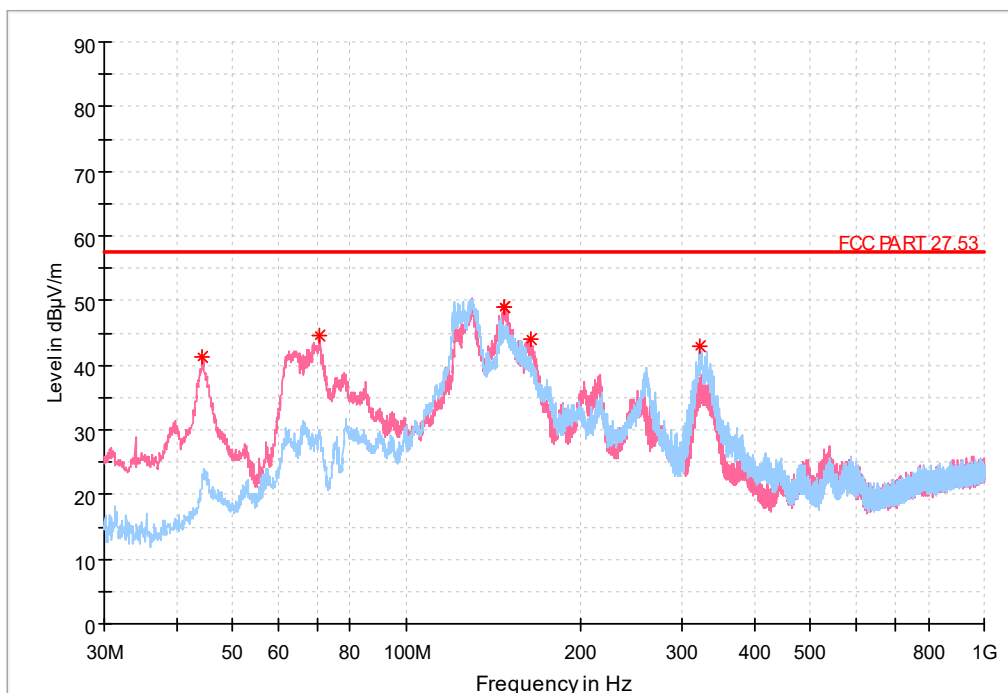
The Emissions of any outside a licensee's frequencies within 20dB of the limit were measured with the substitution method used according to the standard.

The measurements were performed at a 3m distance unless otherwise stated.

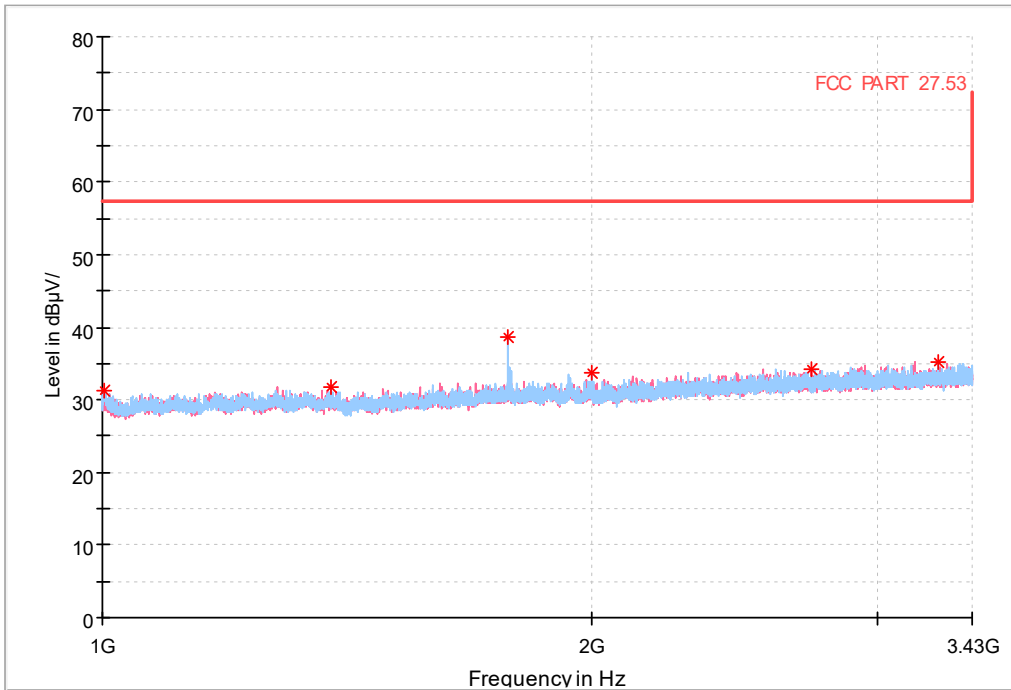
9.5.3 Measurement result

Configuration	Channel Position	Carrier	Carrier Bandwidth (MHz)	Modulation
NR-MIMO-1C-UE	B	1	20	QPSK
NR-MIMO-1C-UE	M	1	20	QPSK
NR-MIMO-1C-UE	T	1	20	QPSK

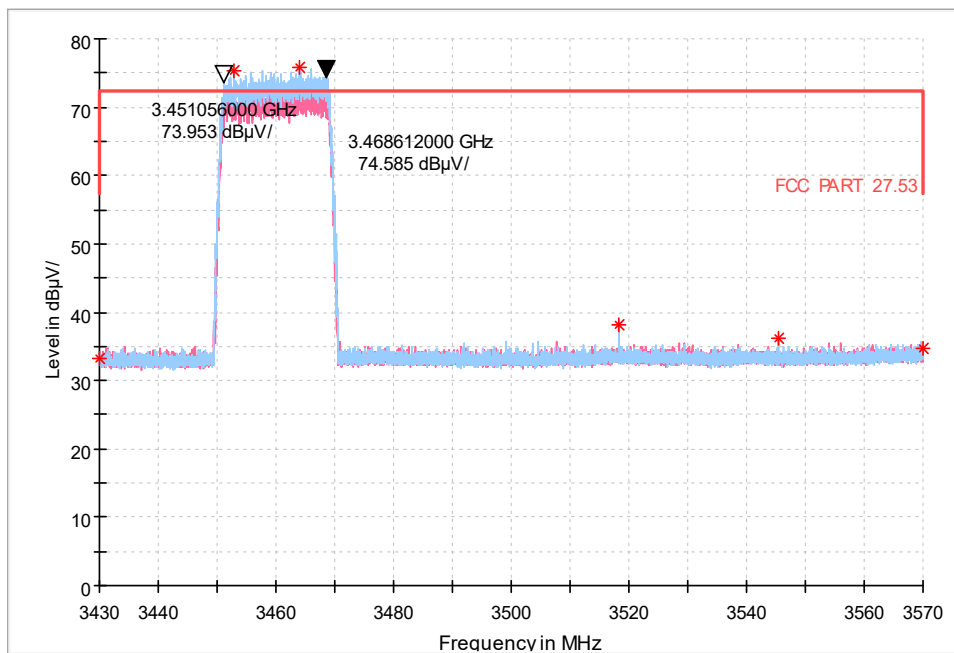
Test figure as below:



30MHz-1GHz-B77-NR-1C-B-QPSK

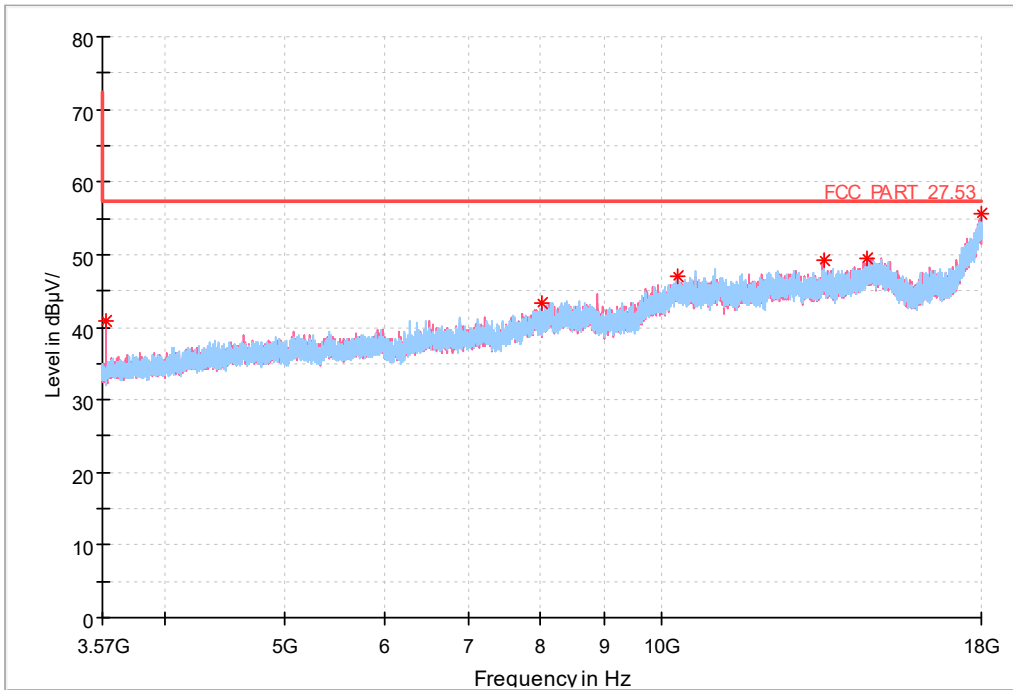


1GHz-3.43GHz-B77-NR-1C-B-QPSK

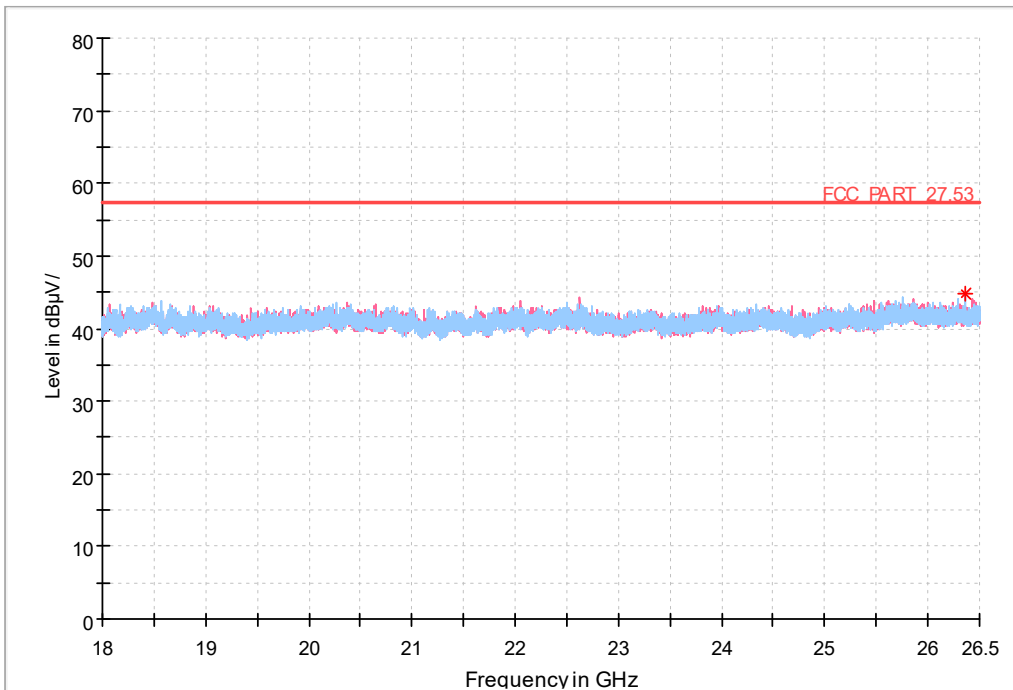


3.43GHz-3.57GHz-B77-NR-1C-B-QPSK

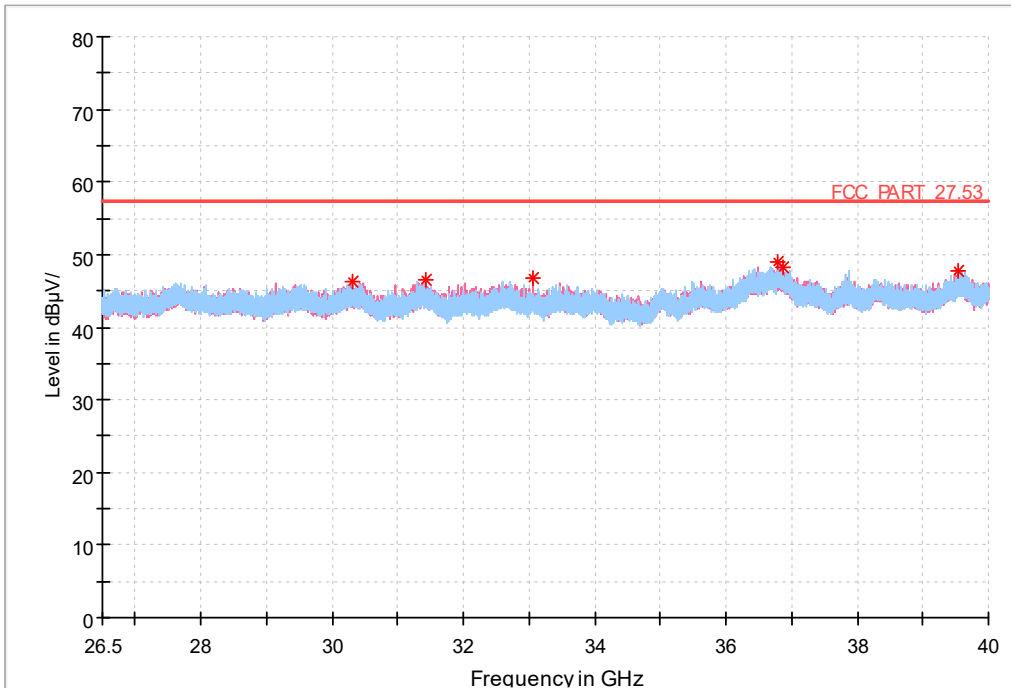
Note:3.451GHz-3.468GHzis the sample working frequency band



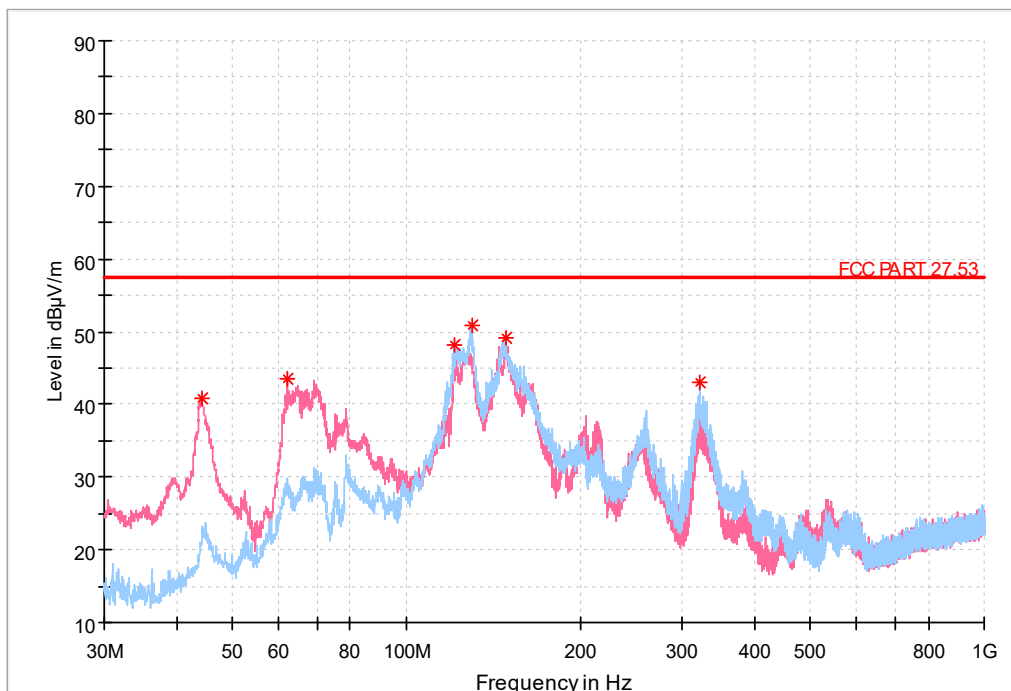
3.57GHz-18GHz-B77-NR-1C-B-QPSK



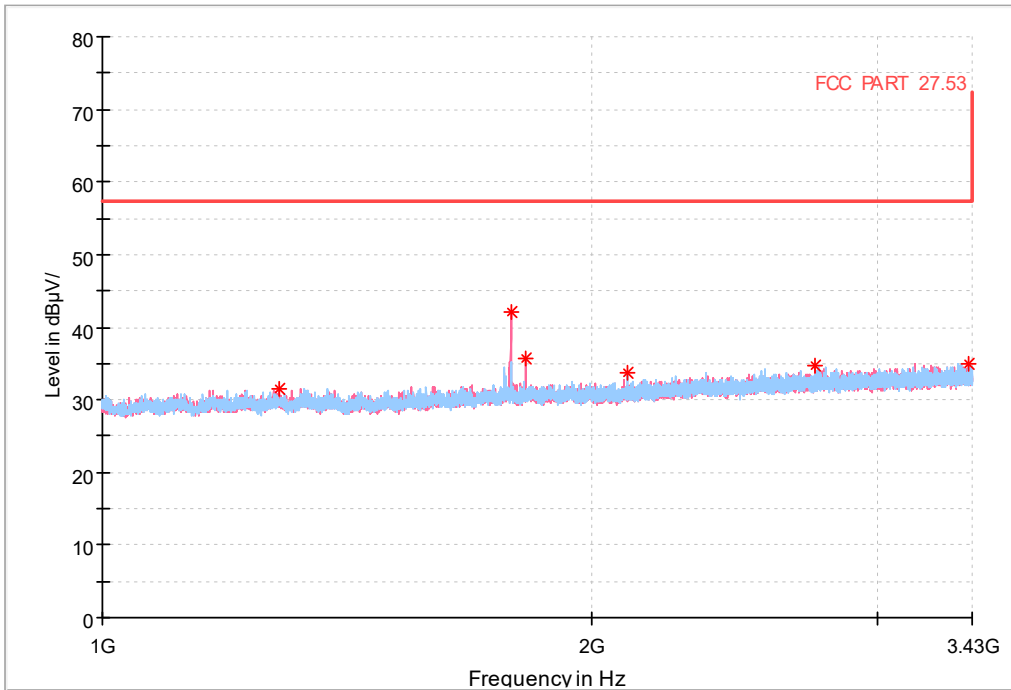
18GHz-26.5GHz-B77-NR-1C-B-QPSK



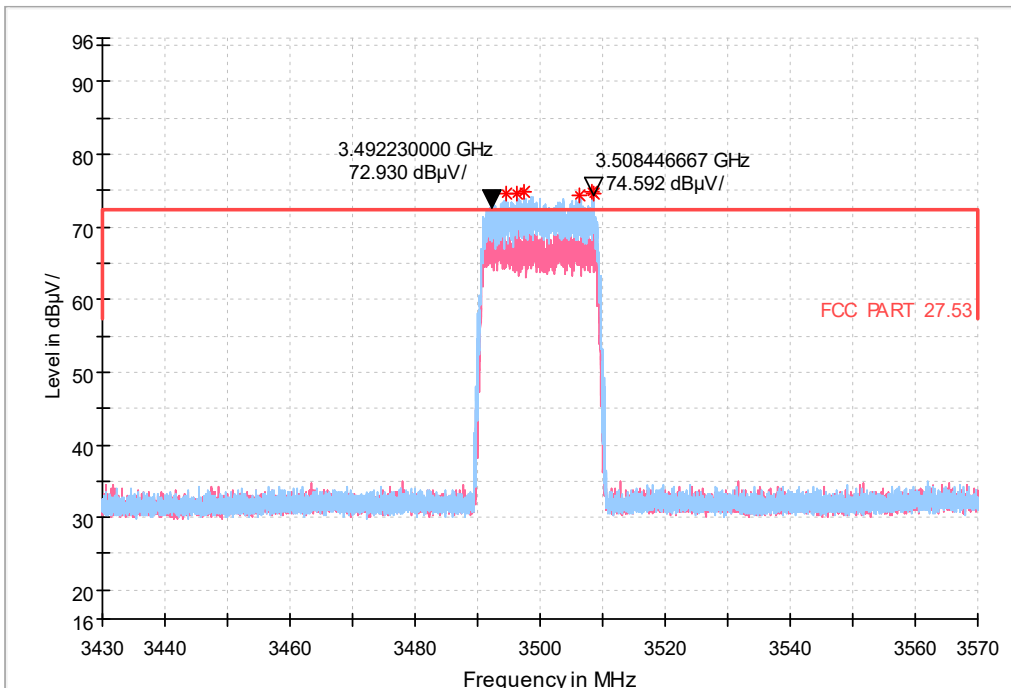
26.5GHz-40GHz-B77-NR-1C-B-QPSK



30MHz-1GHz-B77-NR-1C-M-QPSK

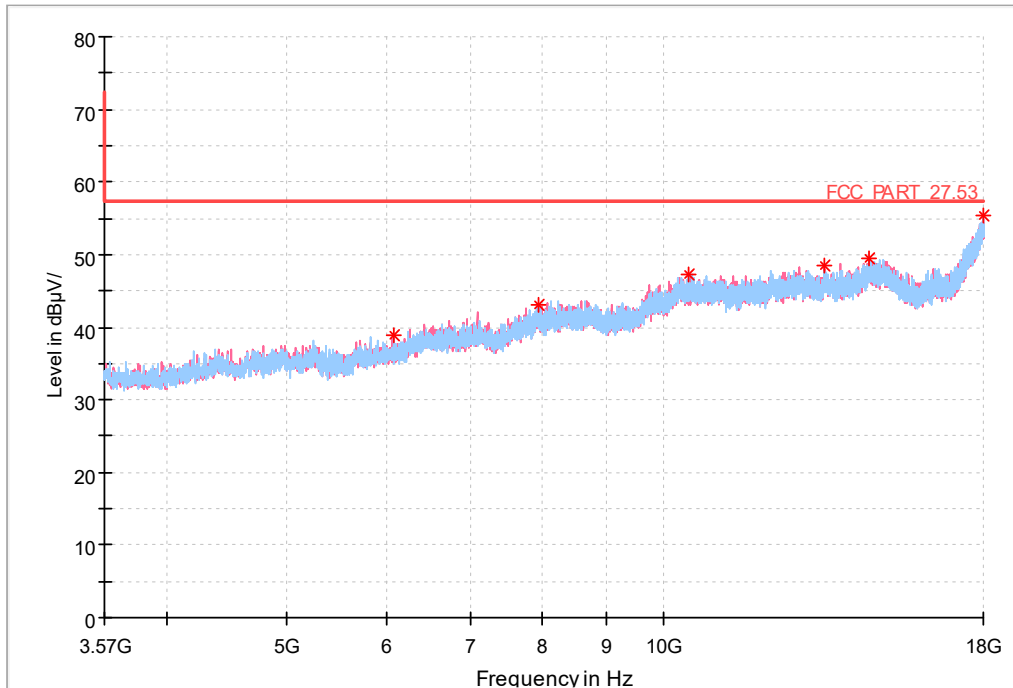


1GHz-3.43GHz-B77-NR-1C-M-QPSK

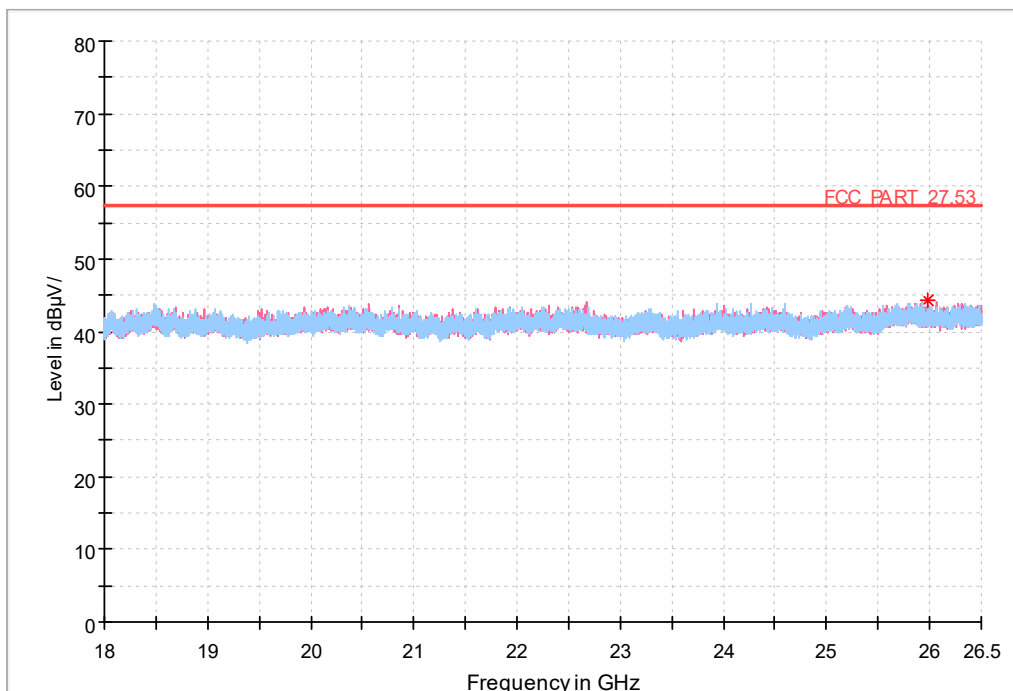


3.43GHz-3.57GHz-B77-NR-1C-M-QPSK

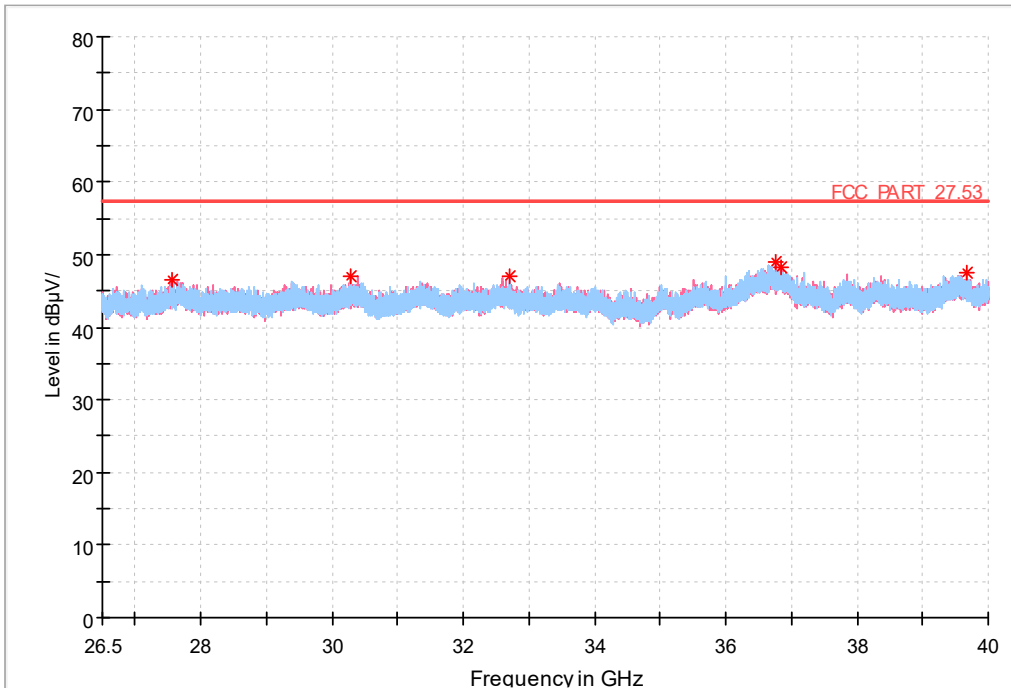
Note:3.492GHz - 3.508GHz is the sample working frequency band



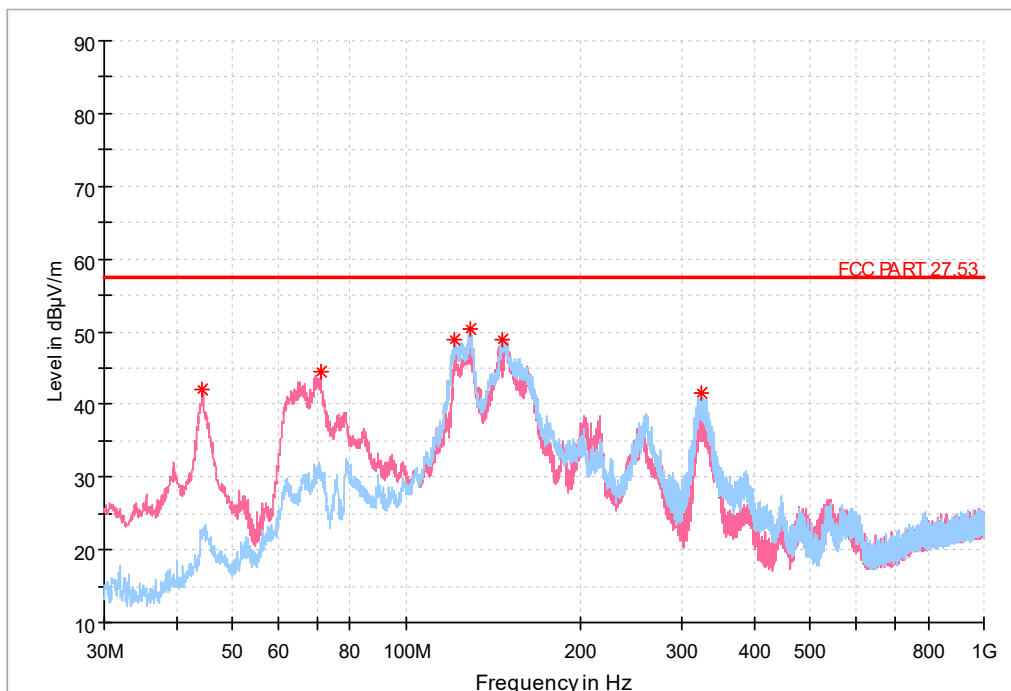
3.57GHz-18GHz-B77-NR-1C-M-QPSK



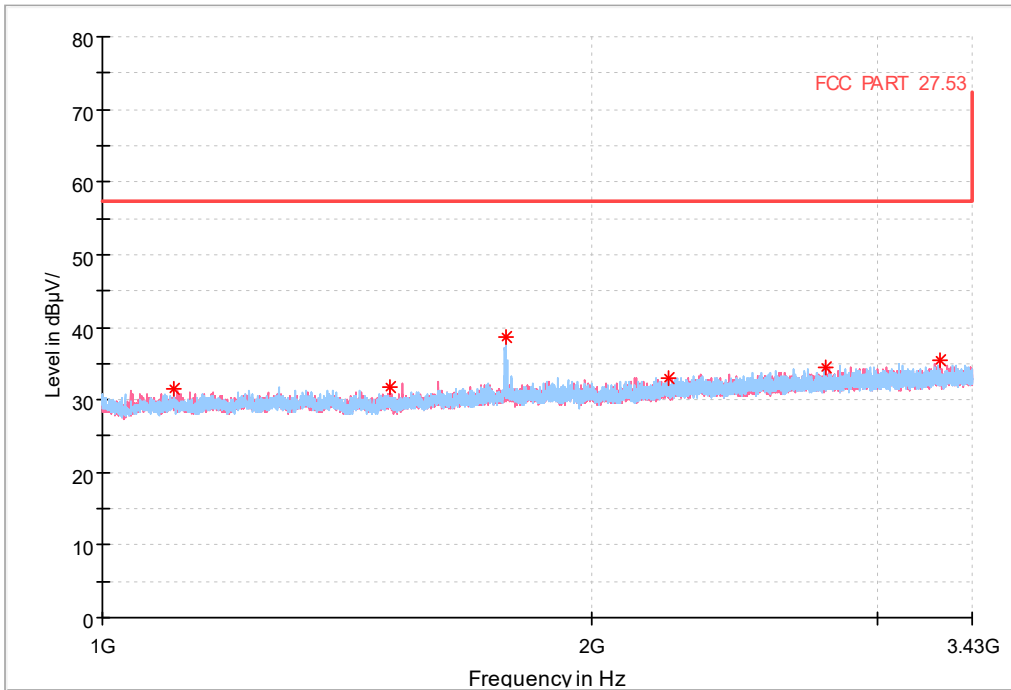
18GHz-26.5GHz-B77-NR-1C-M-QPSK



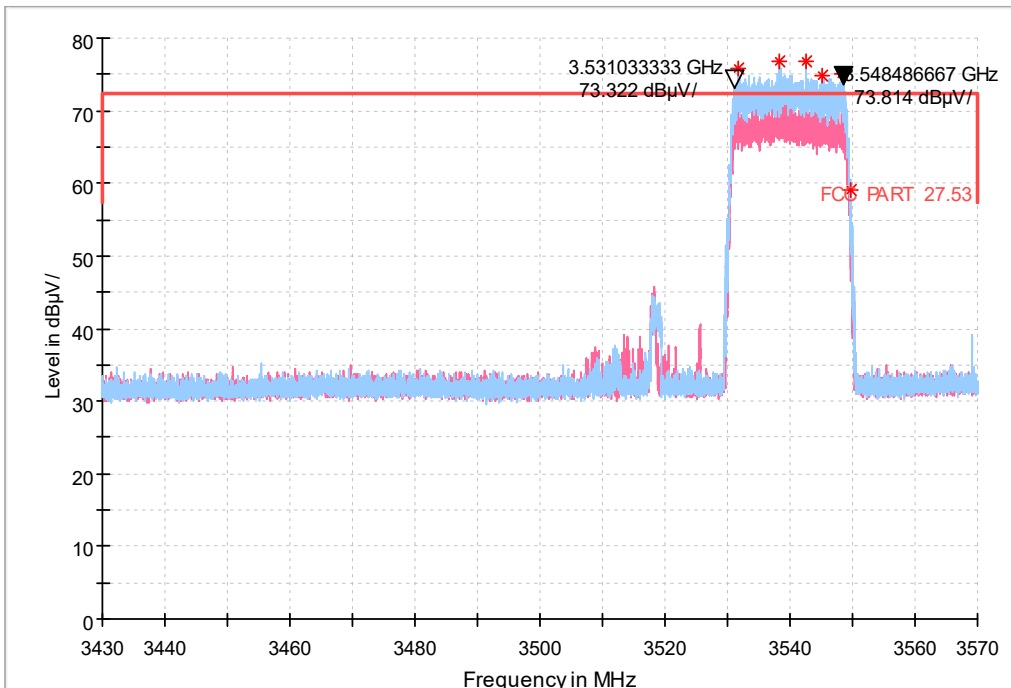
26.5GHz-40GHz-B77-NR-1C-M-QPSK



30MHz-1GHz-B77-NR-1C-T-QPSK

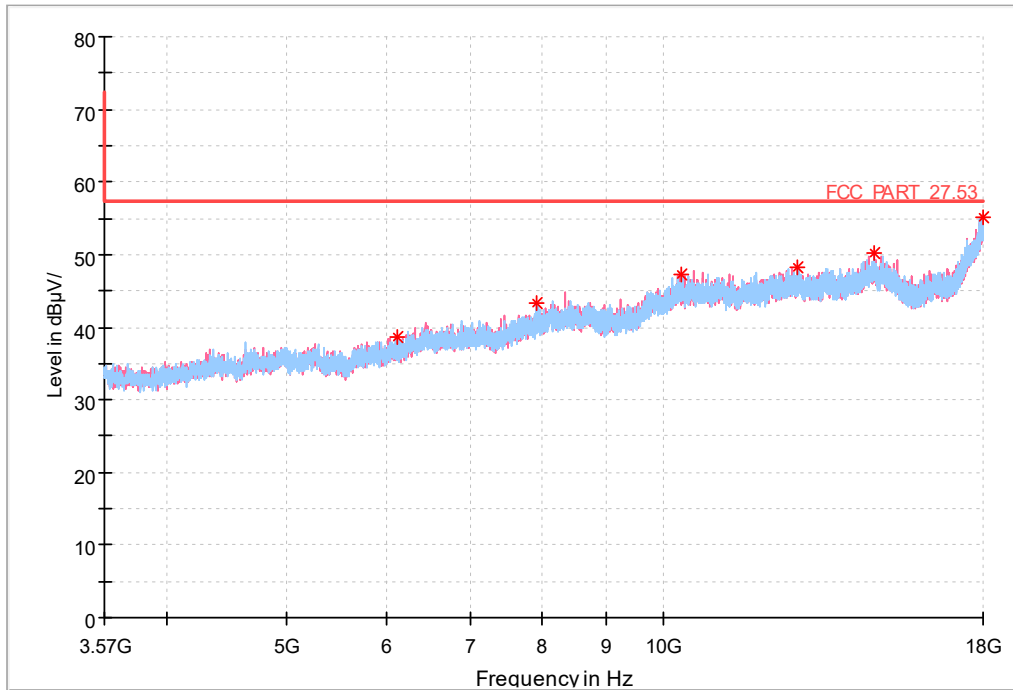


1GHz-3.43GHz-B77-NR-1C-T-QPSK

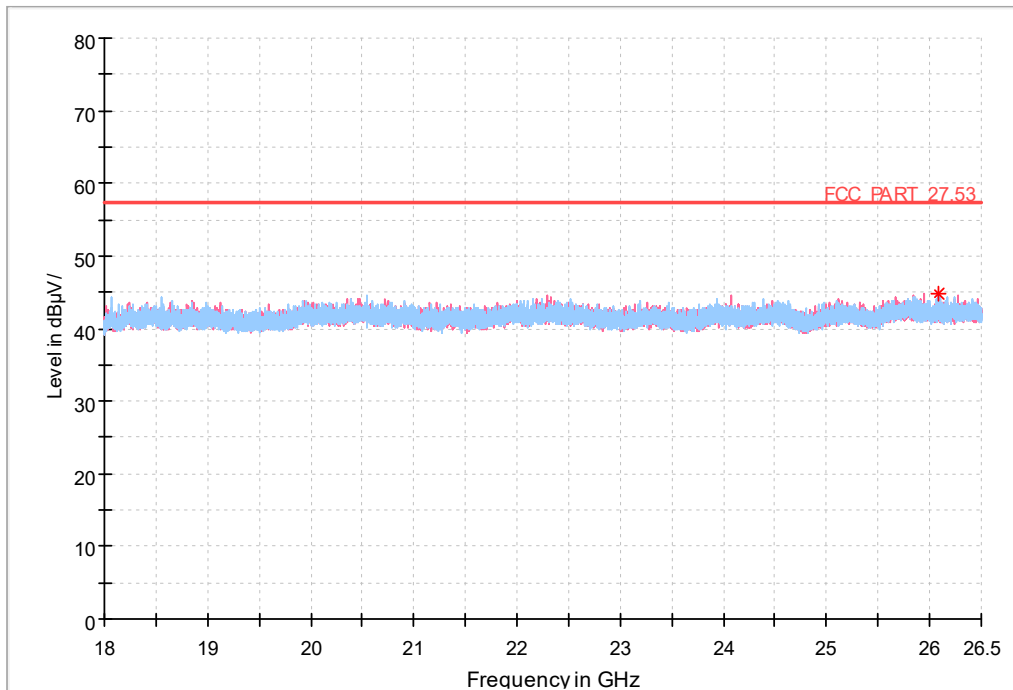


3.43GHz-3.57GHz-B77-NR-1C-T-QPSK

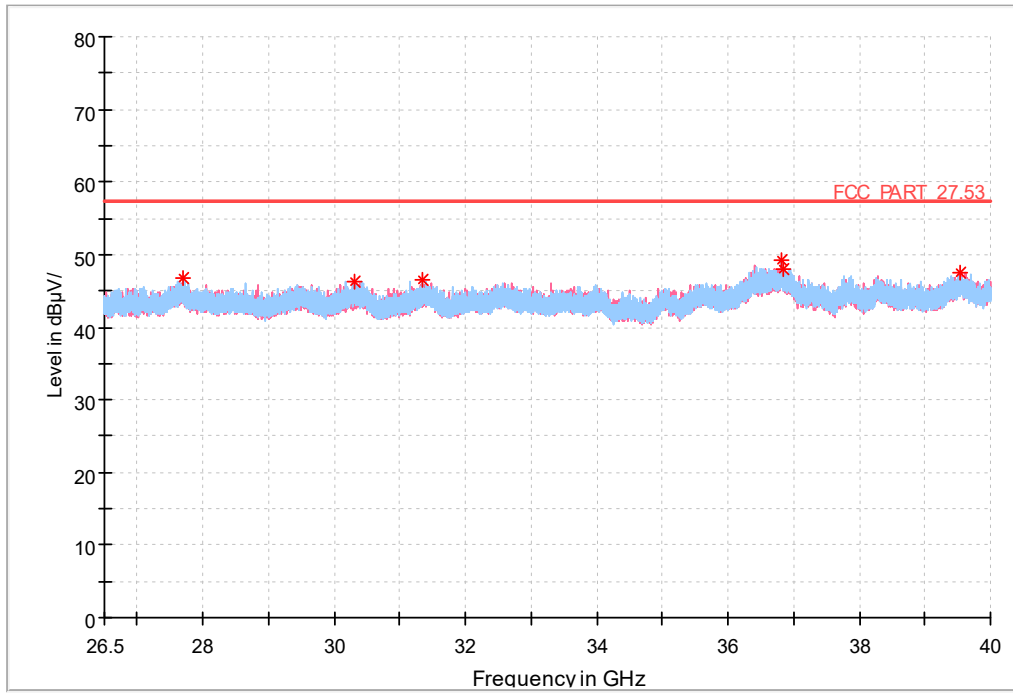
Note:3.531GHz - 3.548GHz is the sample working frequency band



3.57GHz-18GHz-B77-NR-1C-T-QPSK



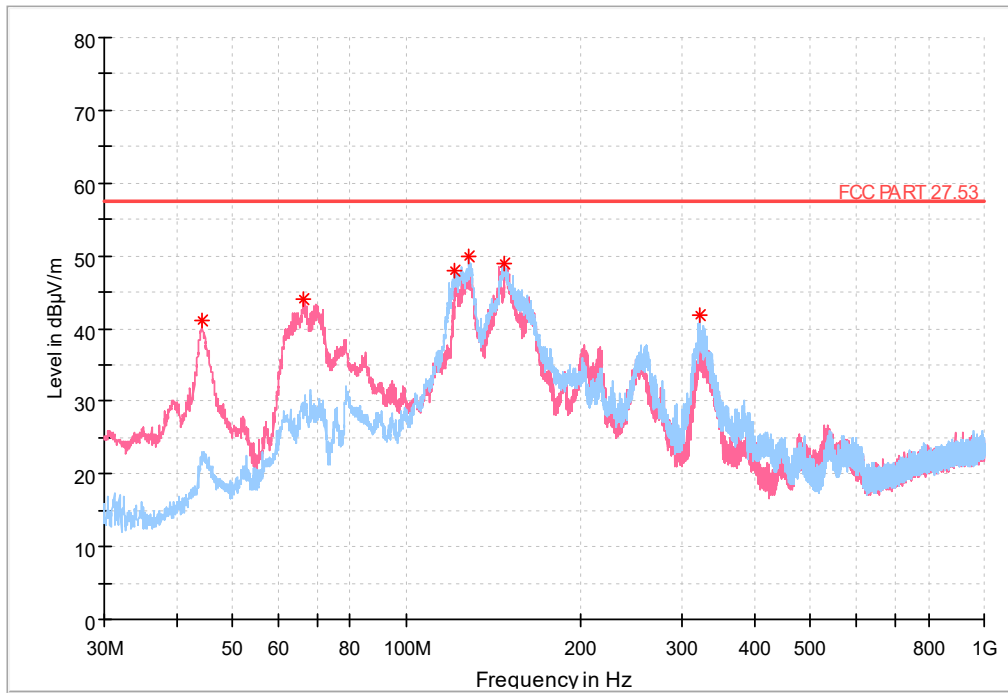
18GHz-26.5GHz-B77-NR-1C-T-QPSK



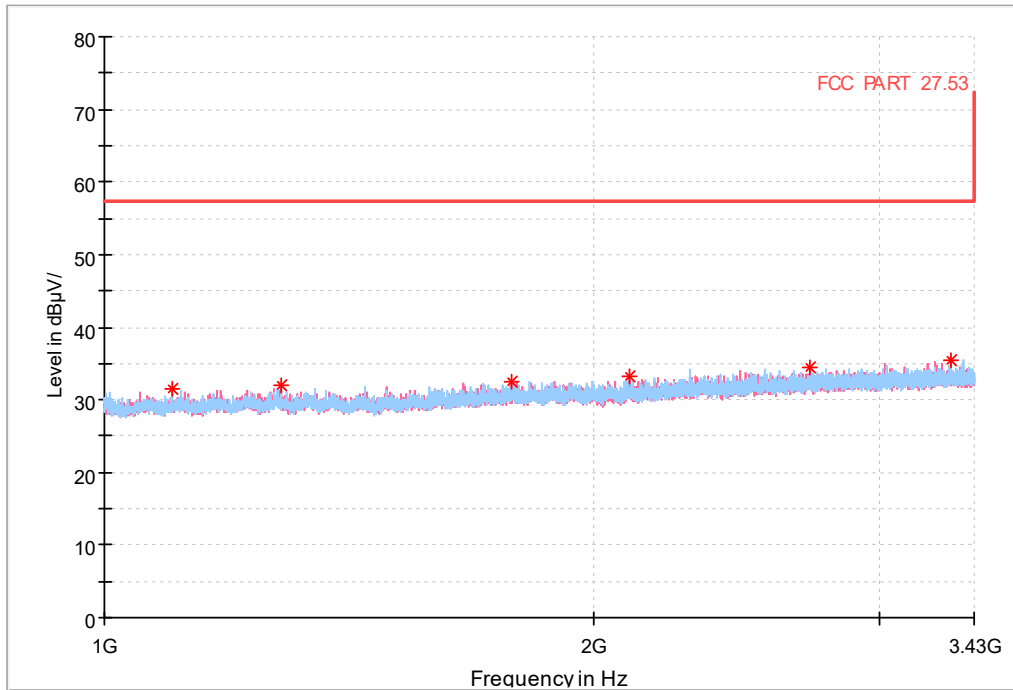
26.5GHz-40GHz-B77-NR-1C-T-QPSK

Configuration	Channel Position	Carrier	Carrier Bandwidth (MHz)	Modulation
NR-MIMO-1C-UE	M	1	100	QPSK

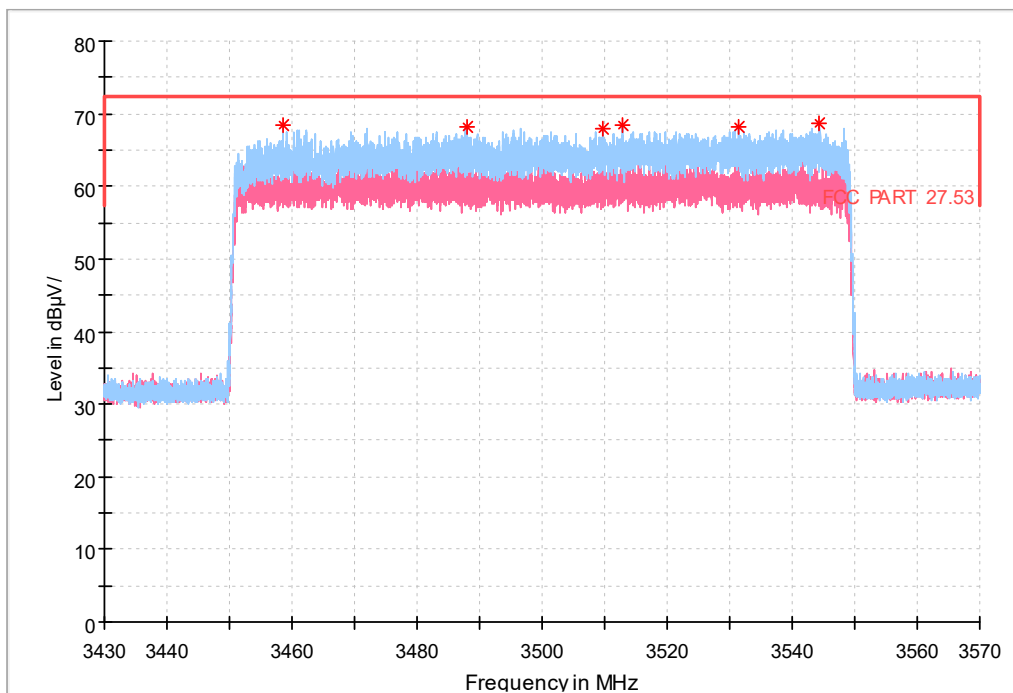
Test figure as below:



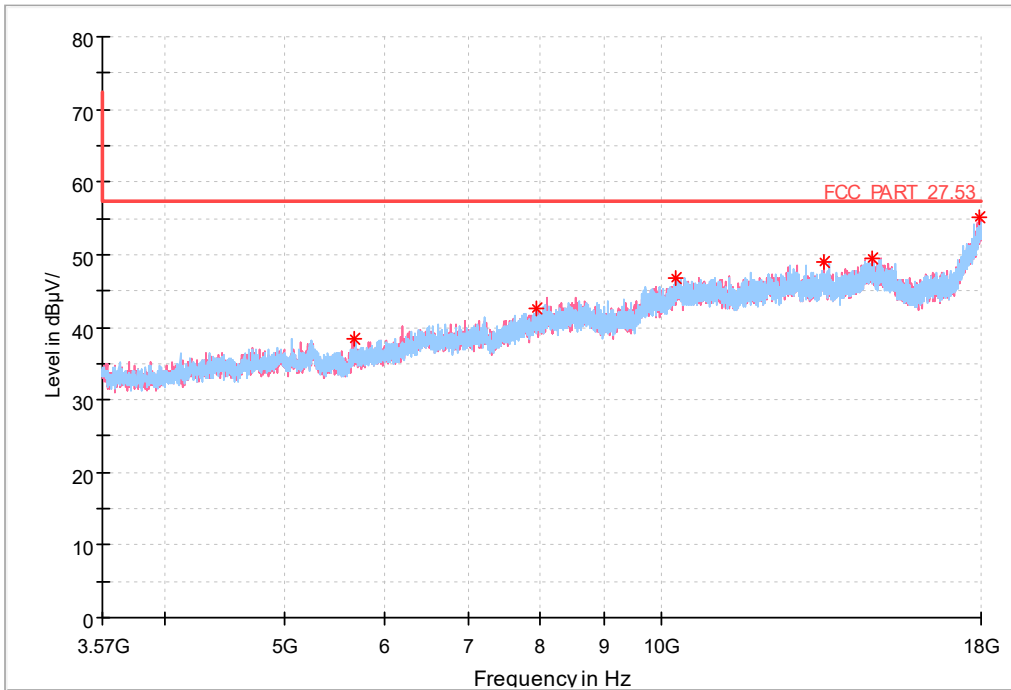
30MHz-1GHz-B77-NR-1C-M-QPSK



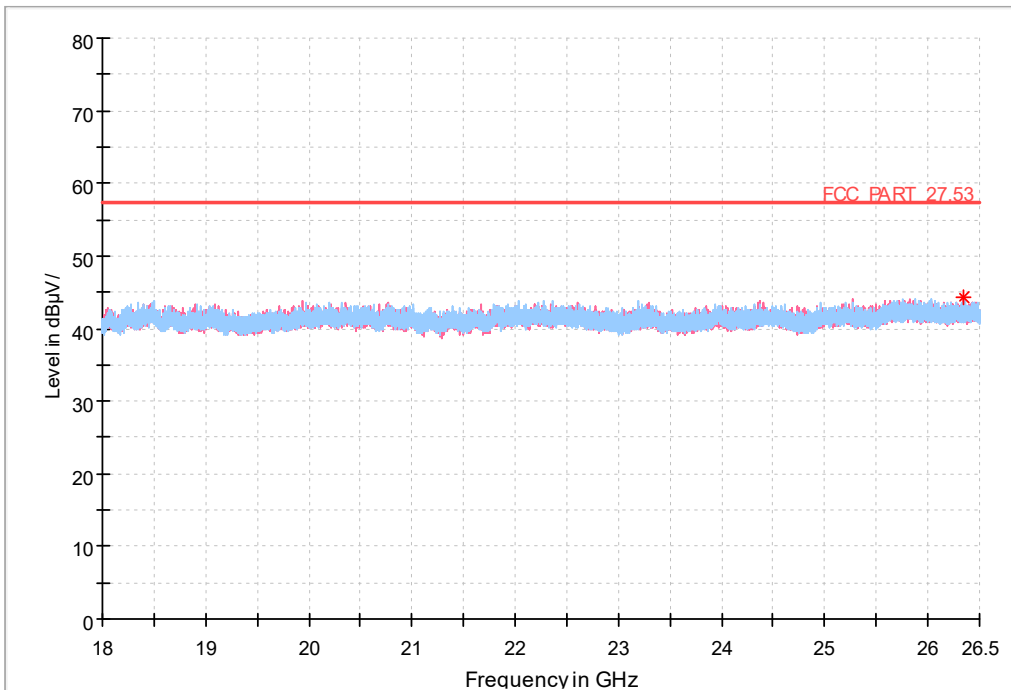
1GHz-3.43GHz-B77-NR-1C-M-QPSK



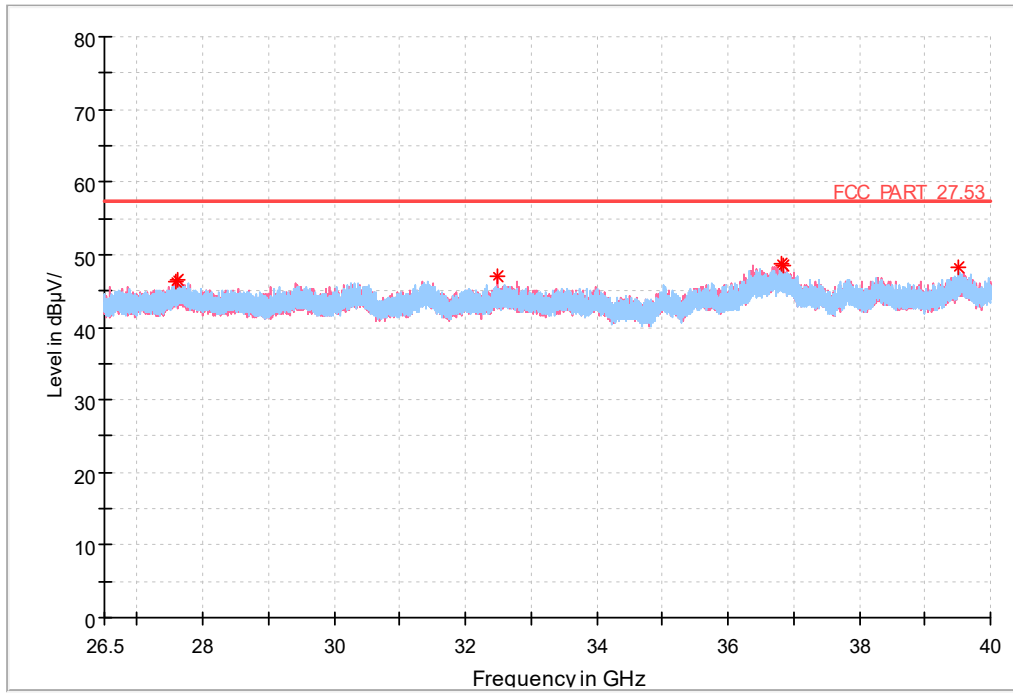
3.43GHz-3.57GHz-B77-NR-1C-M-QPSK



3.57GHz-18GHz-B77-NR-1C-M-QPSK



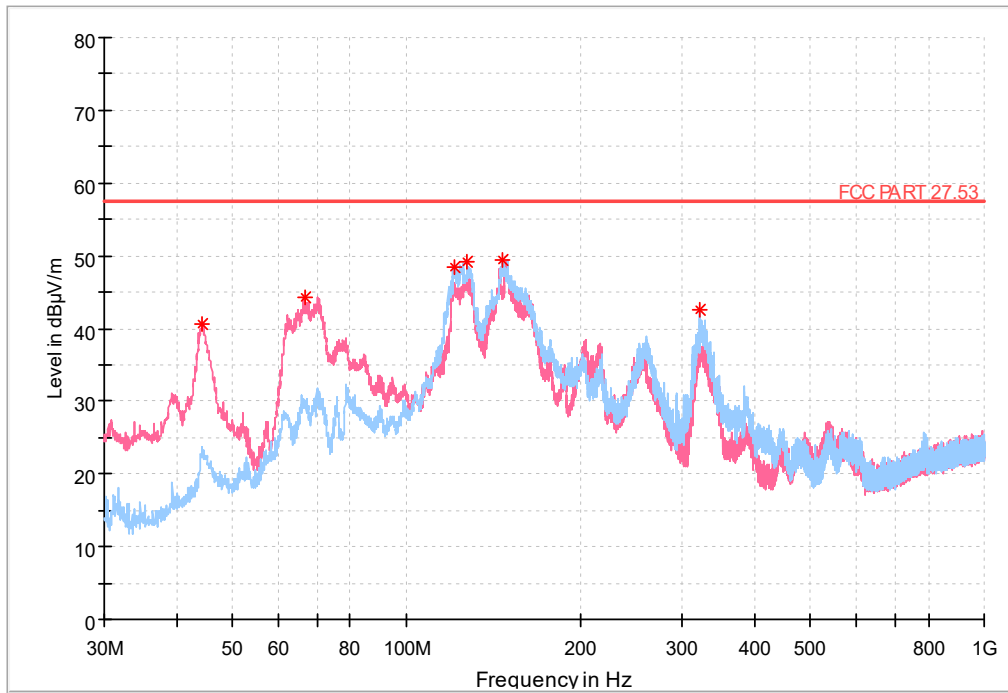
18GHz-26.5GHz-B77-NR-1C-M-QPSK



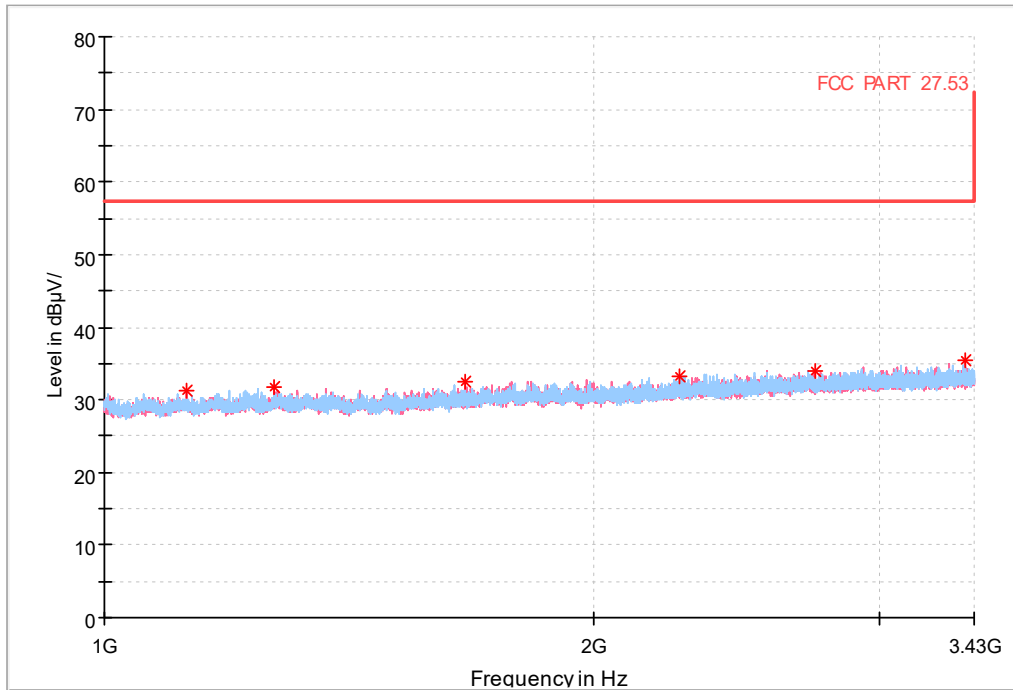
26.5GHz-40GHz-B77-NR-1C-M-QPSK

Configuration	Channel Position	Carrier	Carrier Bandwidth (MHz)	Modulation
NR-MIMO-2C-UE	M	2	20	QPSK

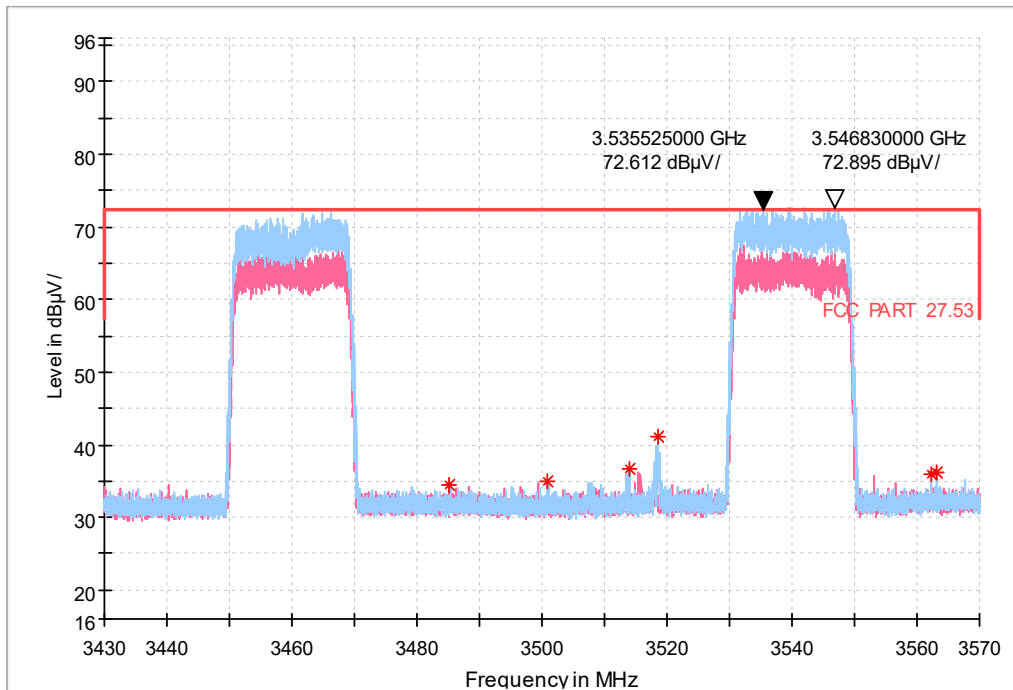
Test figure as below:



30MHz-1GHz-B77-NR-2C-M-QPSK

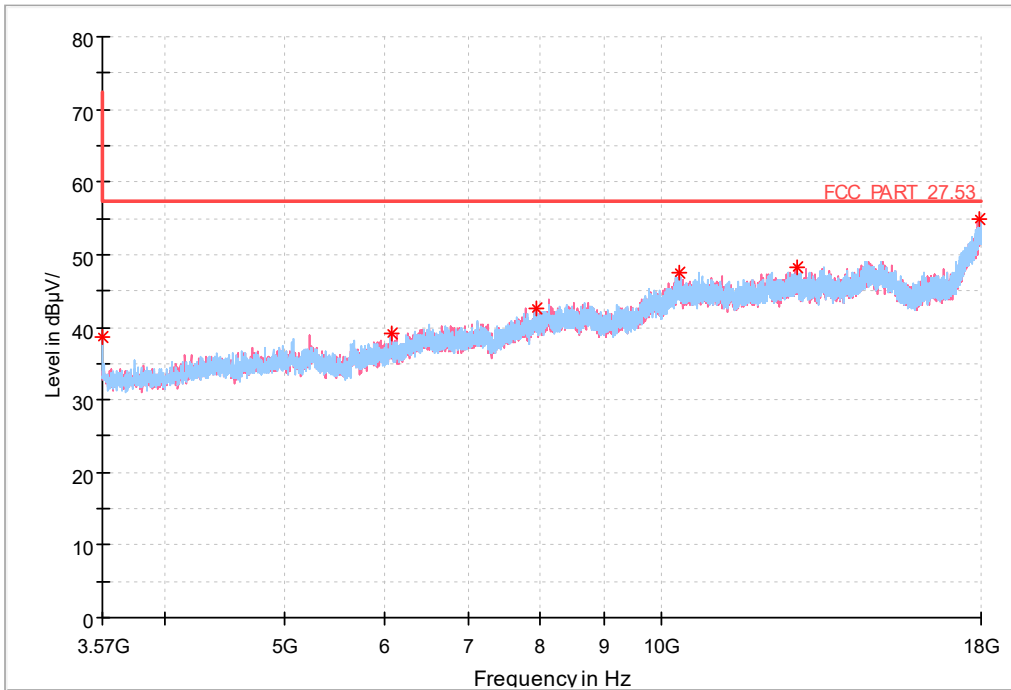


1GHz-3.43GHz-B77-NR-2C-M-QPSK

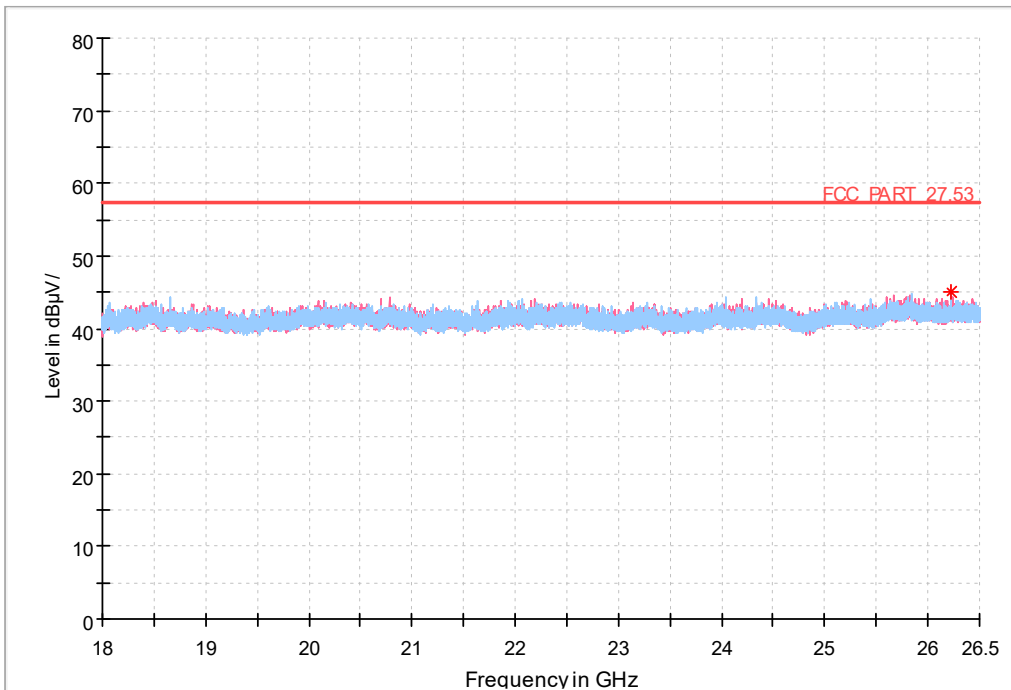


3.43GHz-3.57GHz-B77-NR-2C-M-QPSK

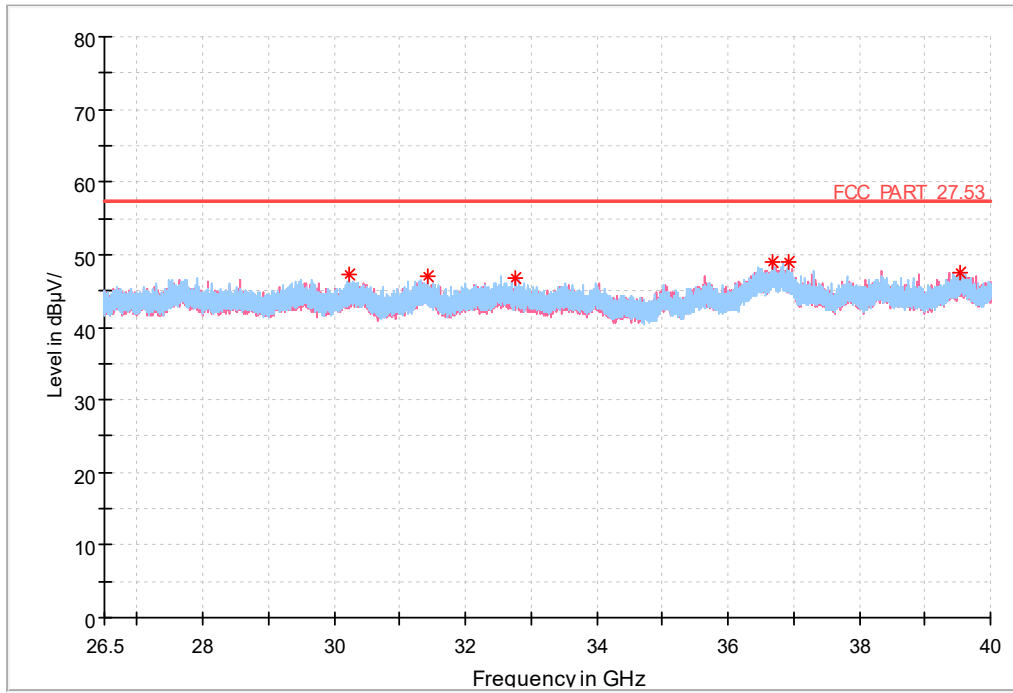
Note:3.535GHz - 3.548GHz is the sample working frequency band



3.57GHz-18GHz-B77-NR-2C-M-QPSK



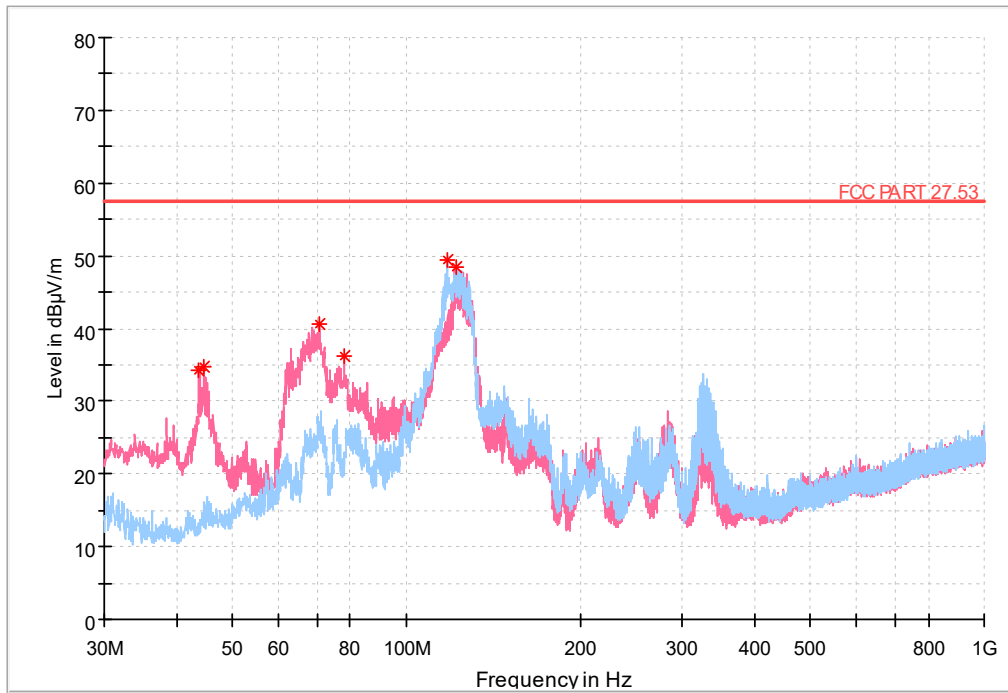
18GHz-26.5GHz-B77-NR-2C-M-QPSK



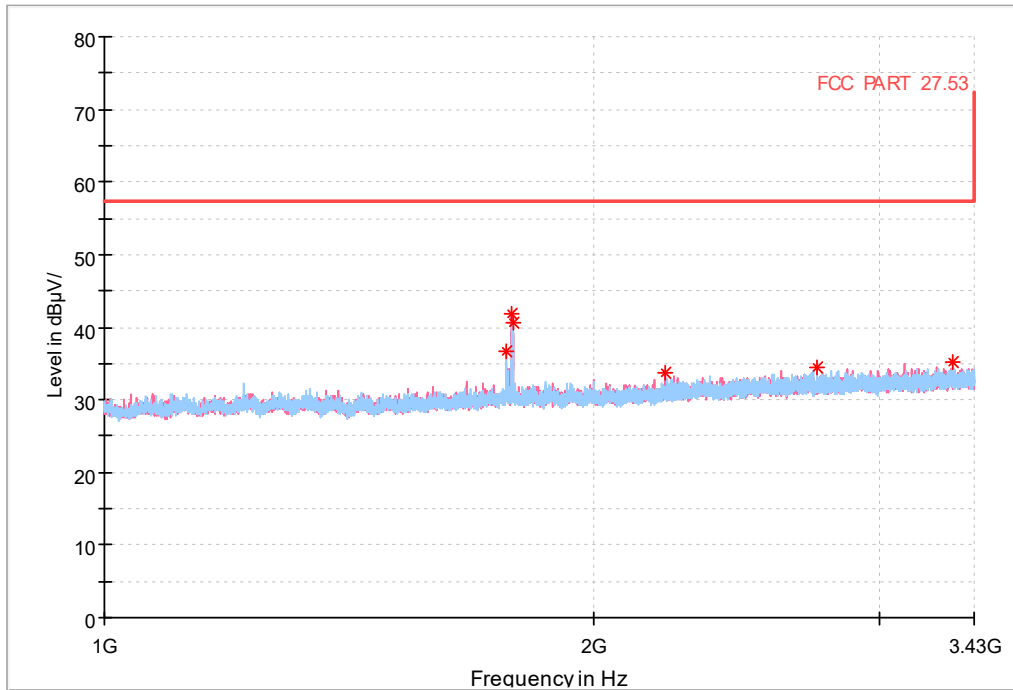
26.5GHz-40GHz-B77-NR-2C-M-QPSK

Configuration	Channel Position	Carrier	Carrier Bandwidth (MHz)	Modulation
NR-MIMO-3C-UE	M	3	20	QPSK

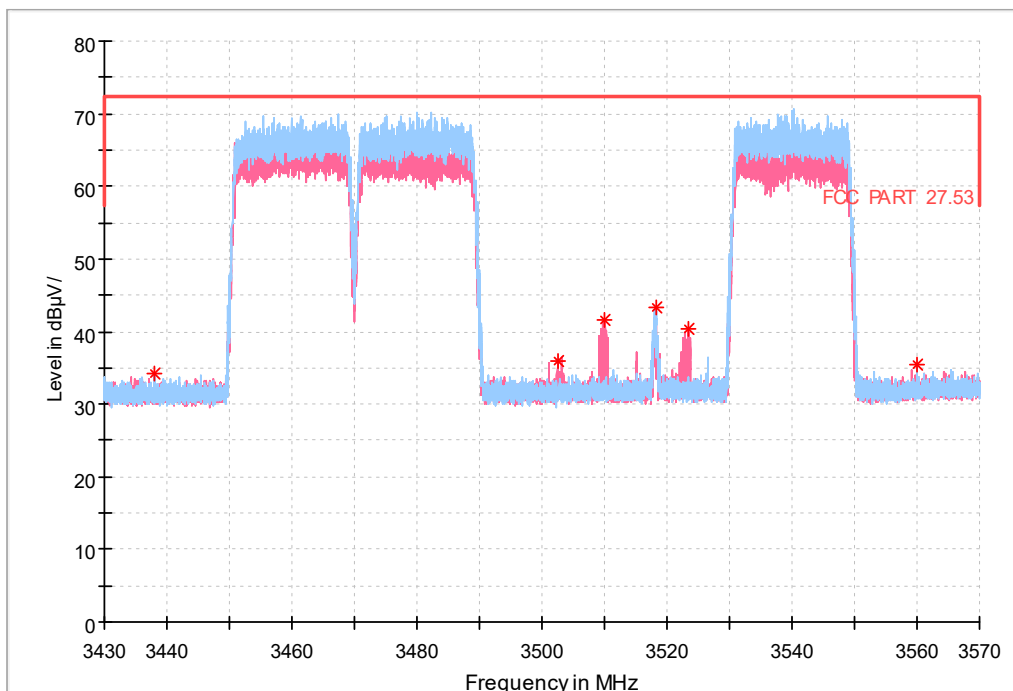
Test figure as below:



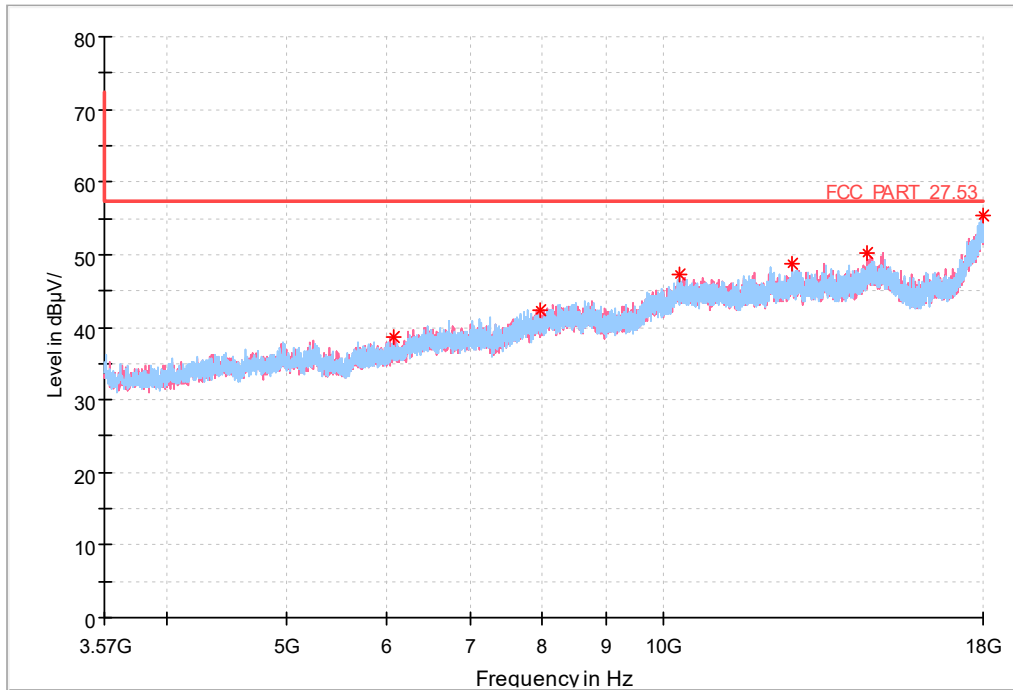
30MHz-1GHz-B77-NR-3C-M-QPSK



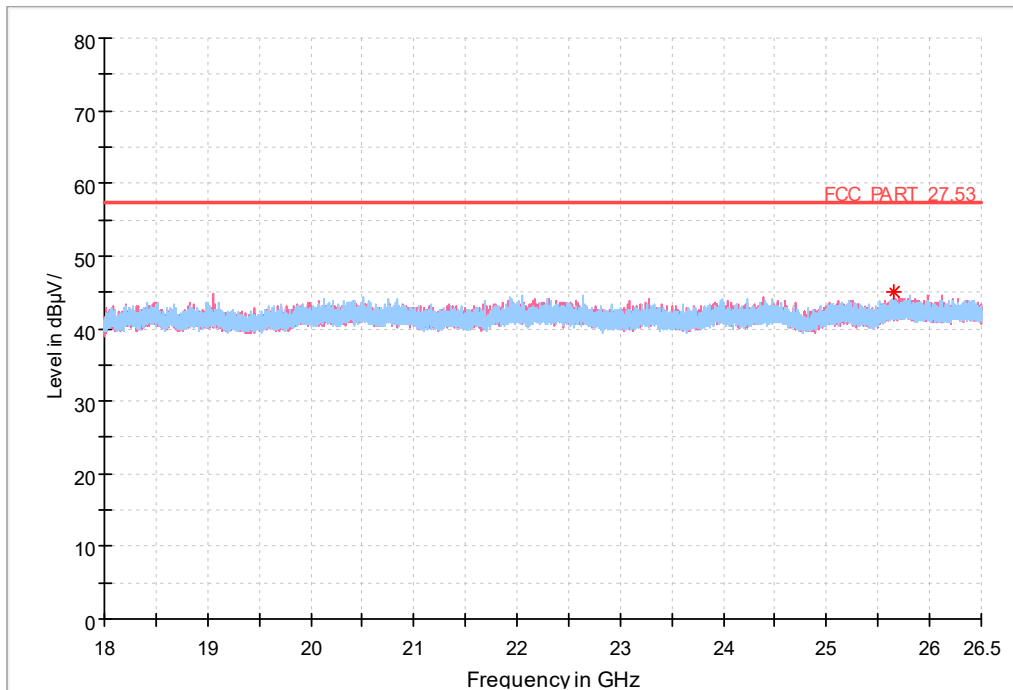
1GHz-3.43G-B77-NR-3C-M-QPSK



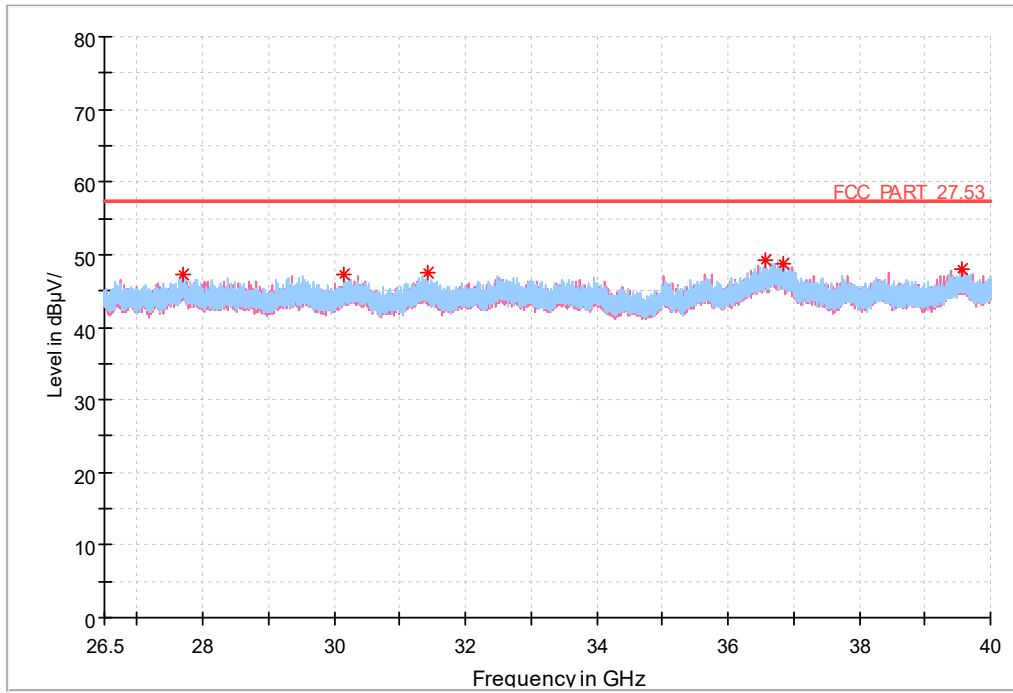
3.43GHz-3.57G-B77-NR-3C-M-QPSK



3.57GHz-18G-B77-NR-3C-M-QPSK



18GHz-26.5G-B77-NR-3C-M-QPSK



26.5GHz-40G-B77-NR-3C-M-QPSK



9.6 Frequency Stability

Specification:	FCC Part 27.54
Test Results:	Pass

9.6.1 Definitions and Limit

According to Part 27.54:

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

9.6.2 Method of Measurements:

Temperature Variation:

The EUT was tested over the temperature range -30°C to +50°C in 10°C steps with -48 VDC Power Supply. At each temperature step, the Base Station was configured to transmit at maximum power on the middle channel of the operating band.

Voltage Variation:

The EUT was tested at the supplied voltages varied from 85 to 115 percent of the nominal values of -48 VDC. At +20°C, the Base Station was configured to transmit at maximum power on the middle channel of the frequency block.

9.6.3 Measurement result

Frequency Error – Temperature Variation

Configuration NR-MIMO-1C, Channel Bandwidth: 100MHz

Antenna Port	Modulation	Temperature (°C)	Frequency Stability (Hz)
			Channel position M
C	QPSK	50	-0.19
C	QPSK	40	-0.33
C	QPSK	30	-0.23
C	QPSK	20	-0.46
C	QPSK	10	-0.23
C	QPSK	0	-0.30
C	QPSK	-10	-0.39
C	QPSK	-20	-0.33
C	QPSK	-30	-0.04
C	QPSK	-40	-0.94

Frequency Error – Voltage Variation

Configuration NR-MIMO-1C, Channel Bandwidth: 100MHz

Antenna Port	Modulation	Temperature (°C)	Supply Voltage (V)	Frequency Stability (Hz)
				Channel position M
C	QPSK	20	-40.8	1.28
C	QPSK	20	-48.0	-0.19
C	QPSK	20	-55.2	0.58

Annex A EUT Photos



External photo

*****END OF REPORT*****