

9.5. SPURIOUS EMISSIONS IN-BAND – EMISSION MASK

LIMITS

FCC §15.407 (b)(7)
RSS-248 4.6.2 (b)

(6) For transmitters operating within the 5.925-7.125 GHz bands: power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

TEST PROCEDURE

Per KDB 987594 D02 v01r01, Section J

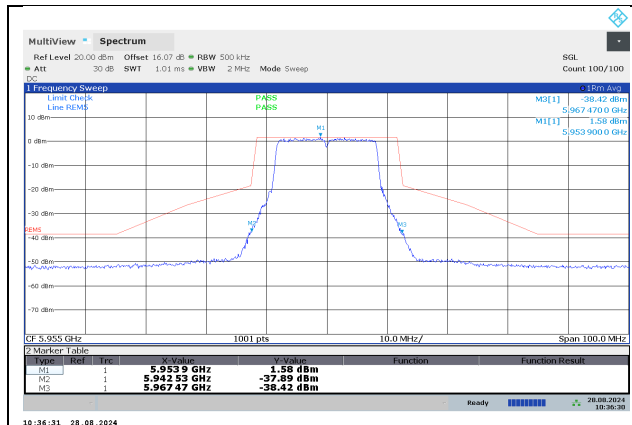
Note. In case of some of the 20 & 40 MHz bandwidth, test was performed by setting the RBW to 1MHz which is larger than that used for the 26dB bandwidth measurement.
This is a deviation from the procedures but represents a more conservative measurement.

RESULTS

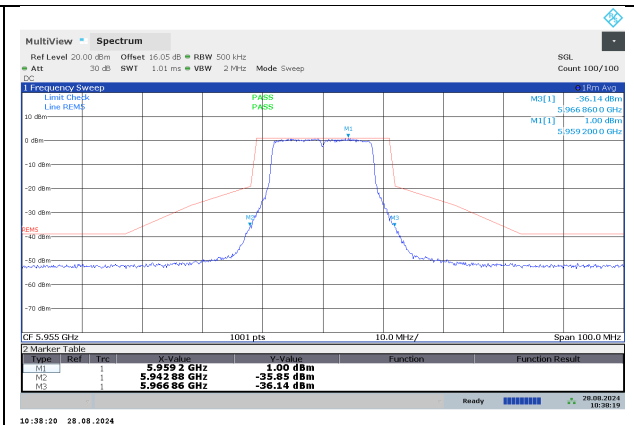
Bands UNII 5 and 7 were tested in standard power and low power indoor mode and UNII 6 and 8 were tested in Low Power Indoor mode.

9.5.1. 802.11a MODE 2TX IN THE UNII-5 BAND (LOW GAIN)

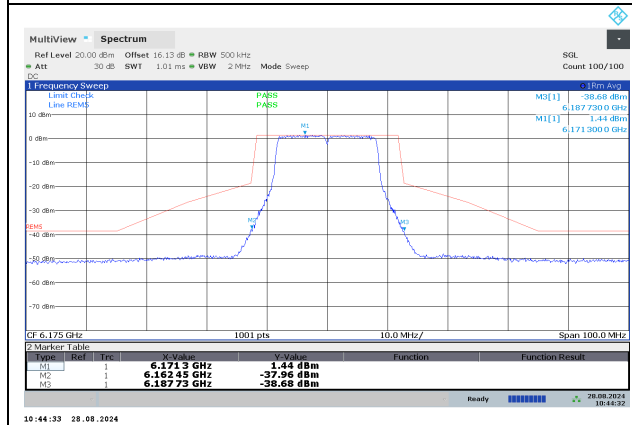
STANDARD POWER



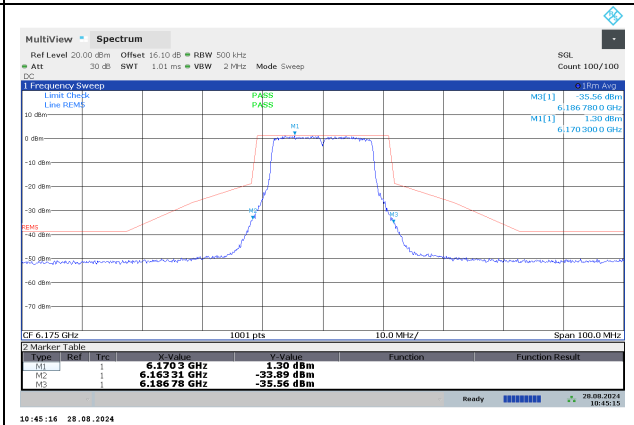
LOW CHANNEL CHAIN 0



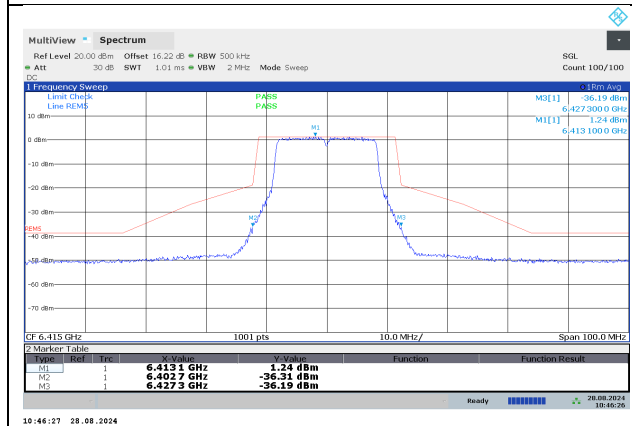
LOW CHANNEL CHAIN 1



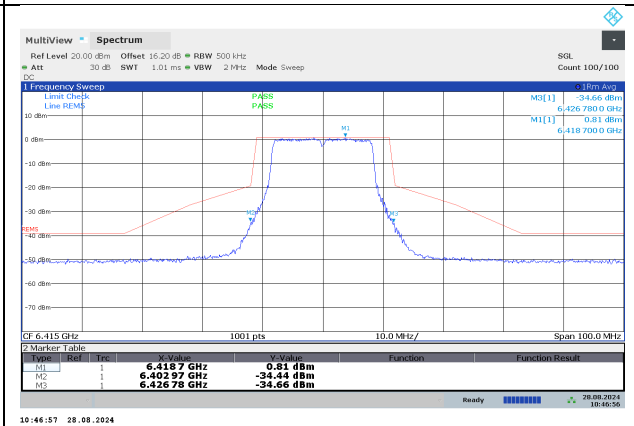
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

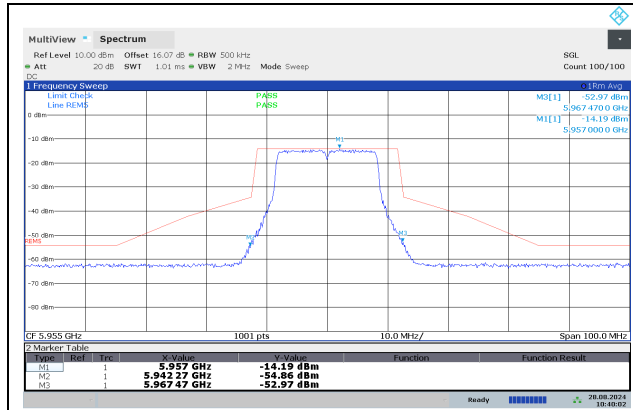


HIGH CHANNEL CHAIN 0

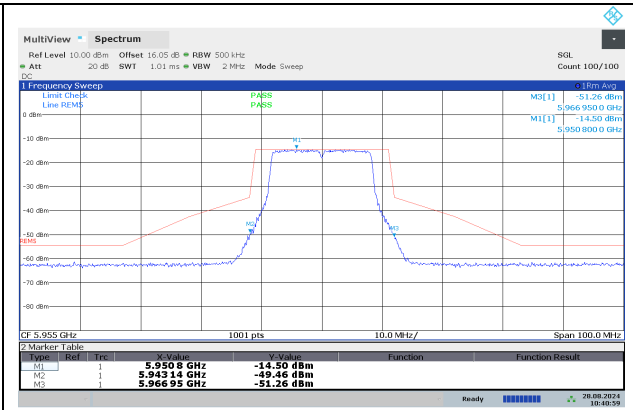


HIGH CHANNEL CHAIN 1

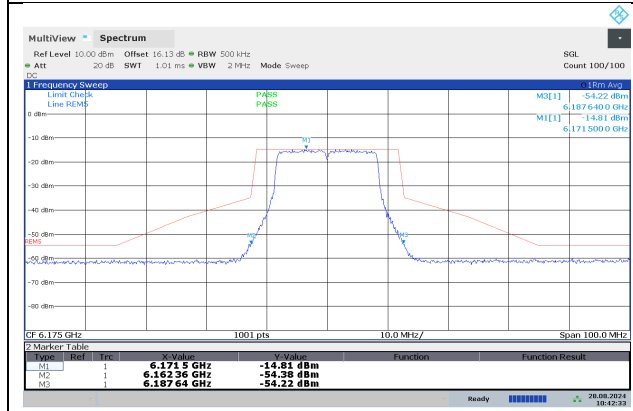
LOW POWER INDOOR



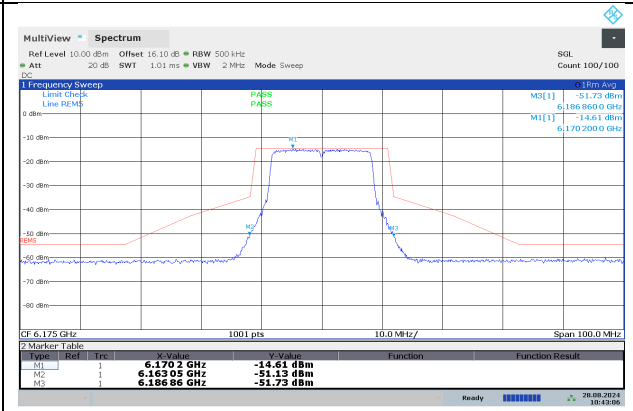
LOW CHANNEL CHAIN 0



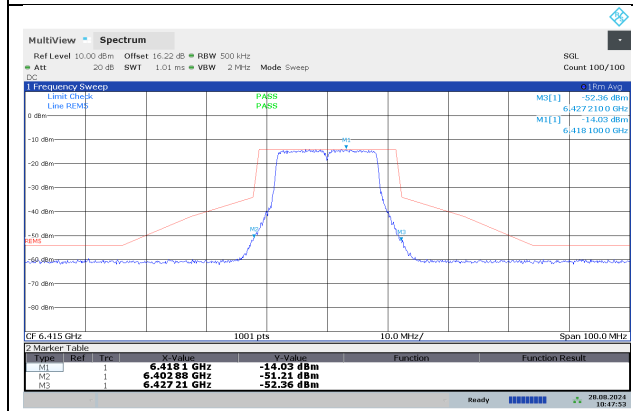
LOW CHANNEL CHAIN 1



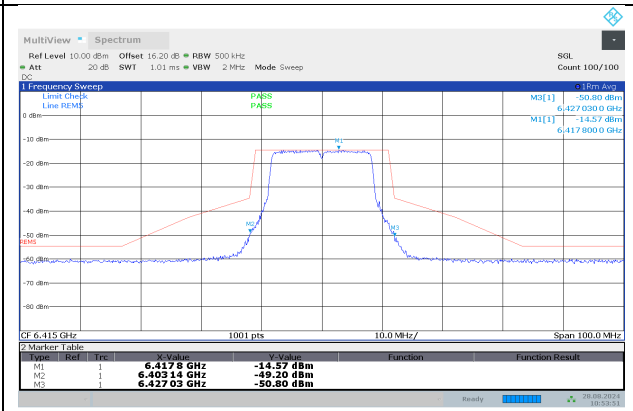
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1



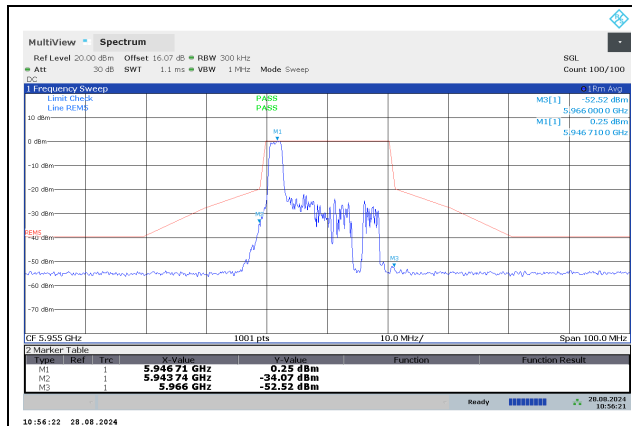
HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

9.5.2. 802.11be EHT20 MODE 2TX IN THE UNII-5 BAND (LOW GAIN)

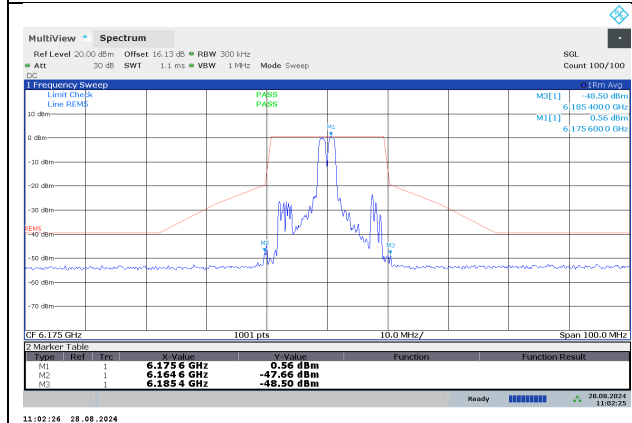
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 26T STANDARD POWER



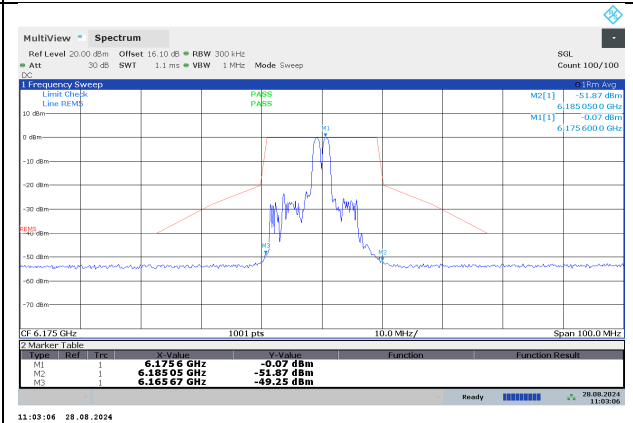
LOW CHANNEL CHAIN 0



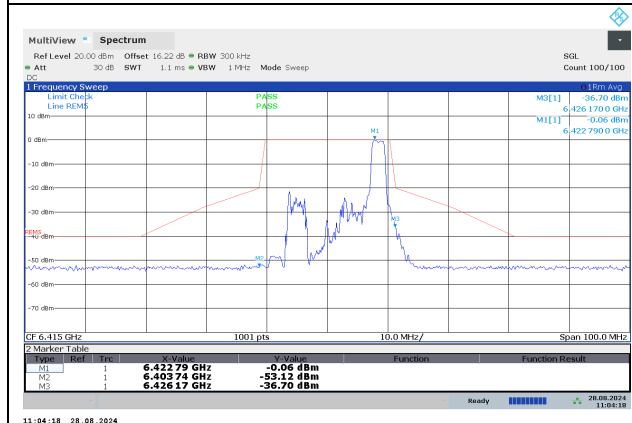
LOW CHANNEL CHAIN 1



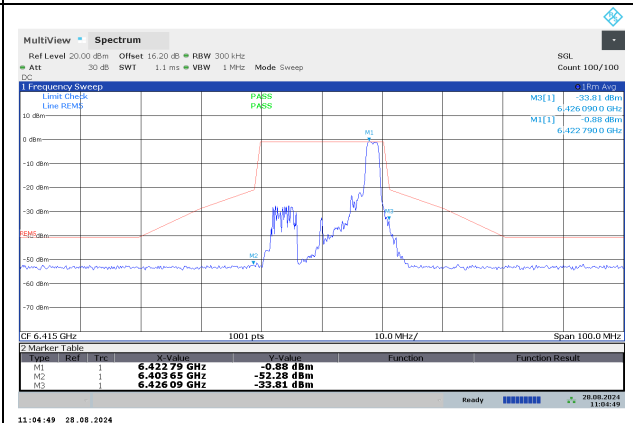
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

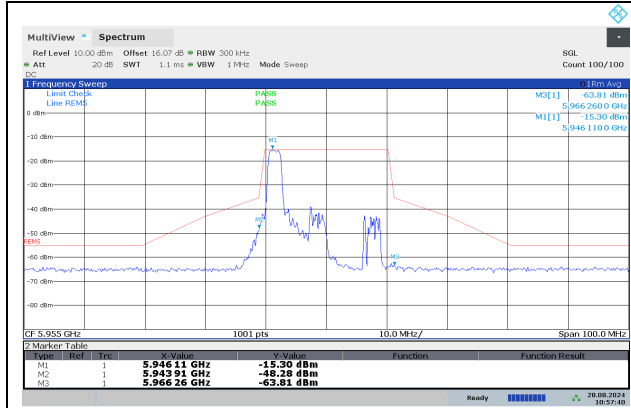


HIGH CHANNEL CHAIN 0

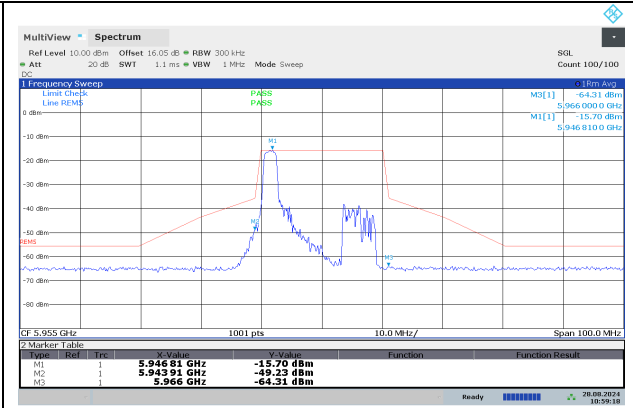


HIGH CHANNEL CHAIN 1

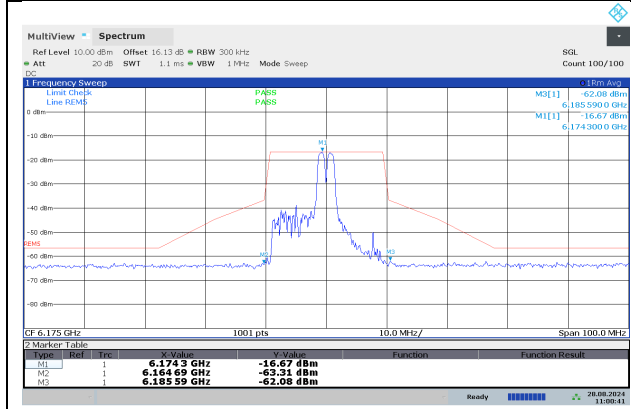
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 26T LOW POWER INDOOR



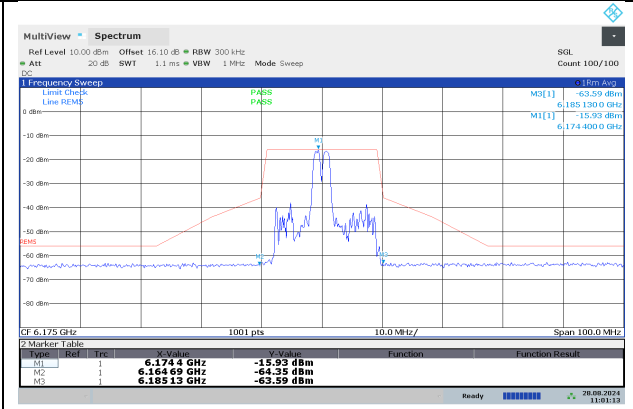
LOW CHANNEL CHAIN 0



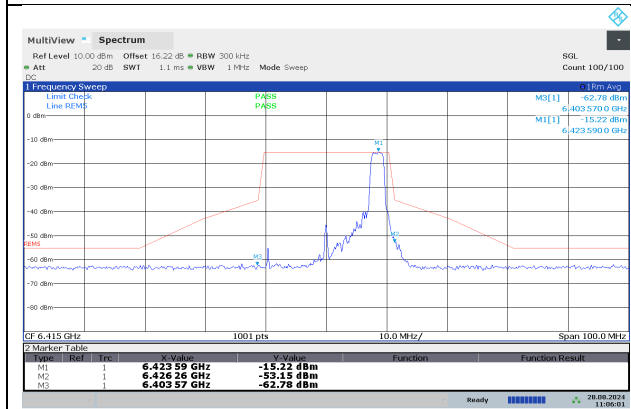
LOW CHANNEL CHAIN 1



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 0

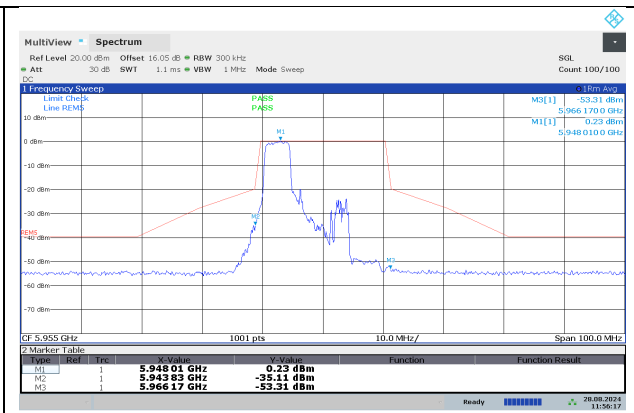


HIGH CHANNEL CHAIN 1

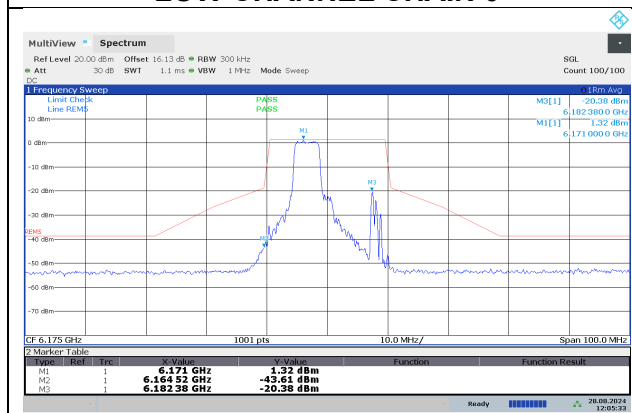
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 52T STANDARD POWER



LOW CHANNEL CHAIN 0



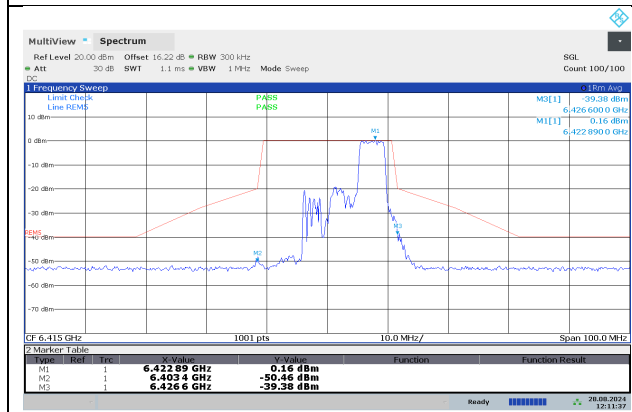
LOW CHANNEL CHAIN 1



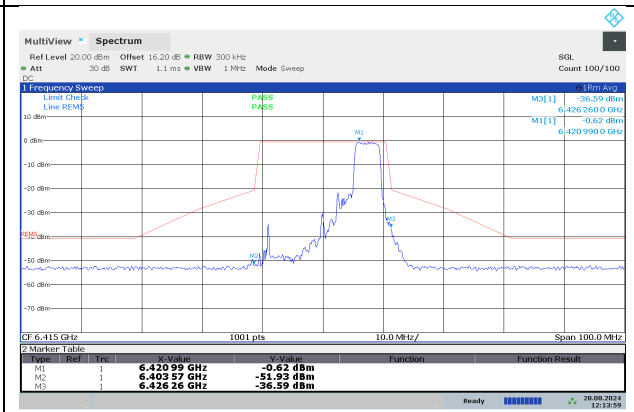
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

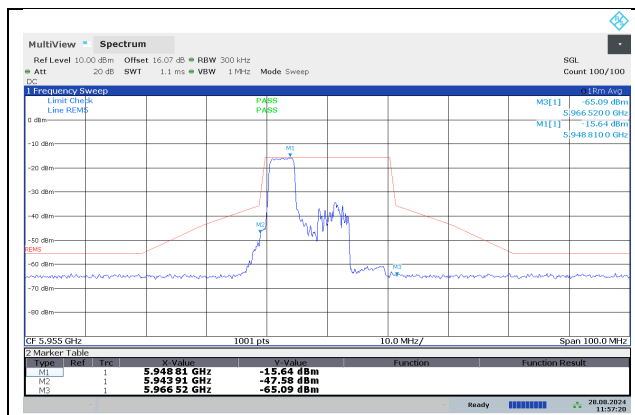


HIGH CHANNEL CHAIN 0

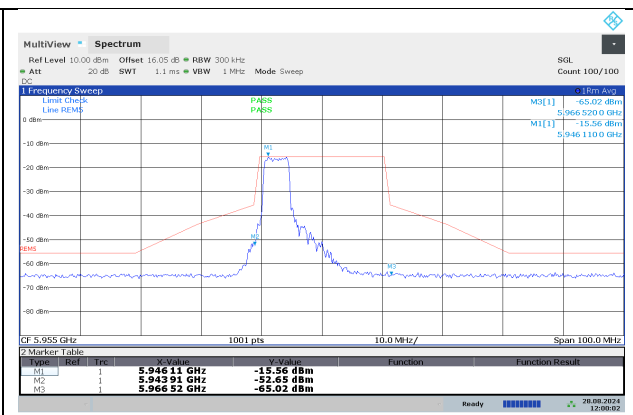


HIGH CHANNEL CHAIN 1

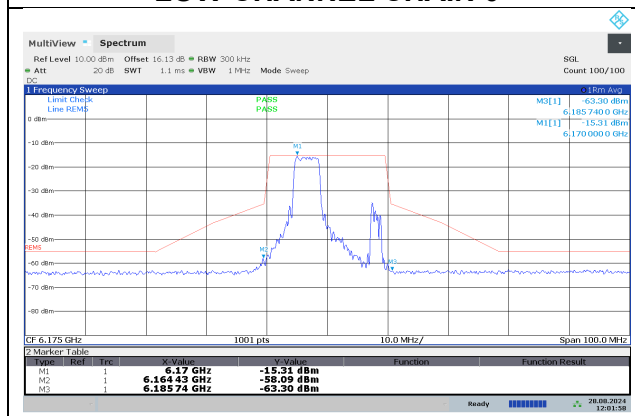
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 52T LOW POWER INDOOR



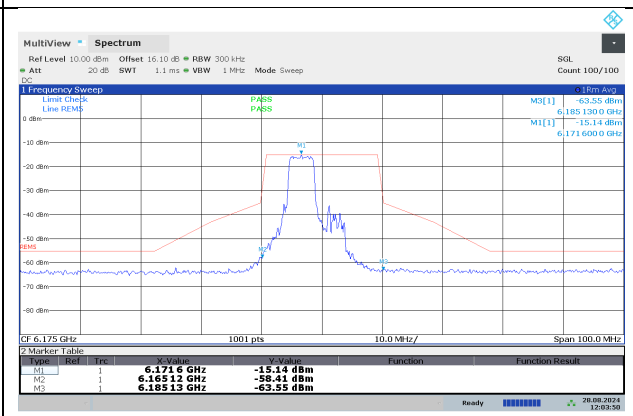
LOW CHANNEL CHAIN 0



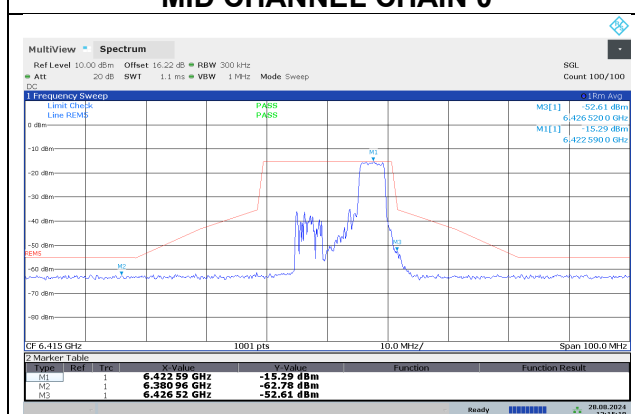
LOW CHANNEL CHAIN 1



MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

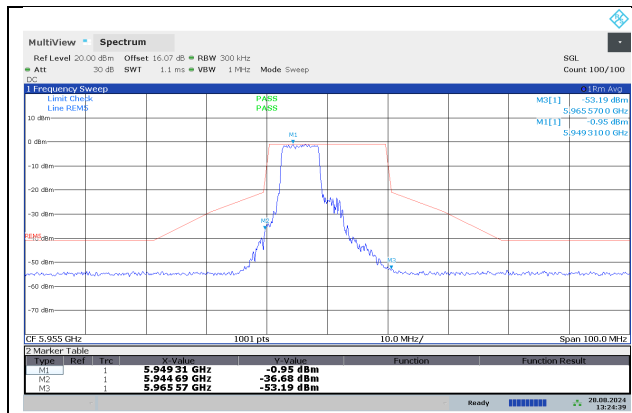


HIGH CHANNEL CHAIN 0

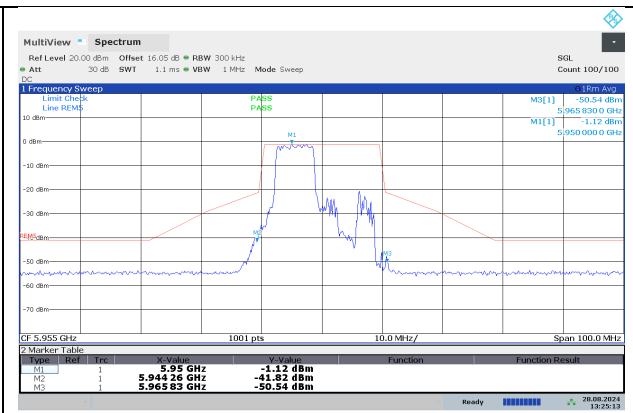


HIGH CHANNEL CHAIN 1

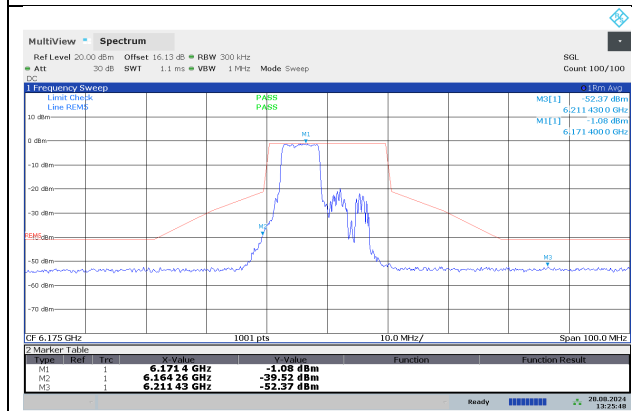
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 52T+26T STANDARD POWER



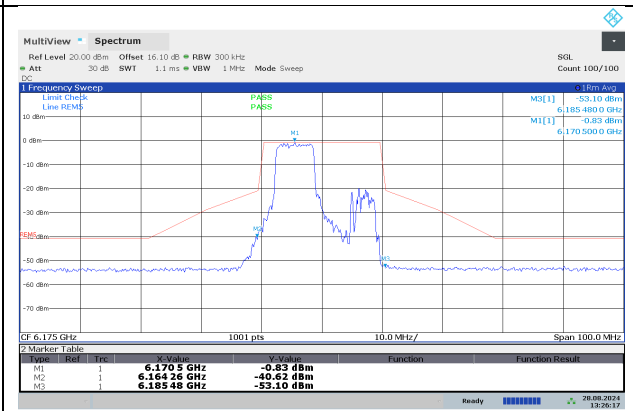
LOW CHANNEL CHAIN 0



LOW CHANNEL CHAIN 1



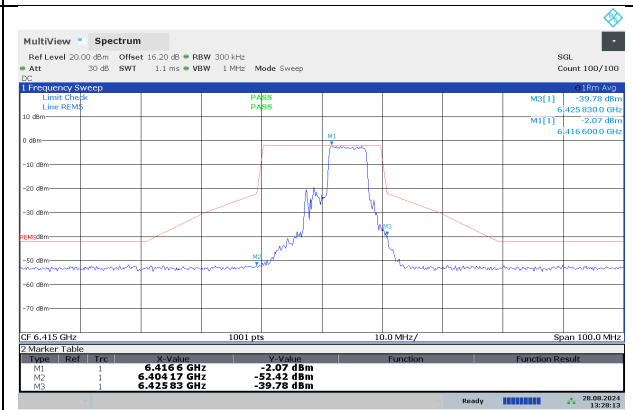
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

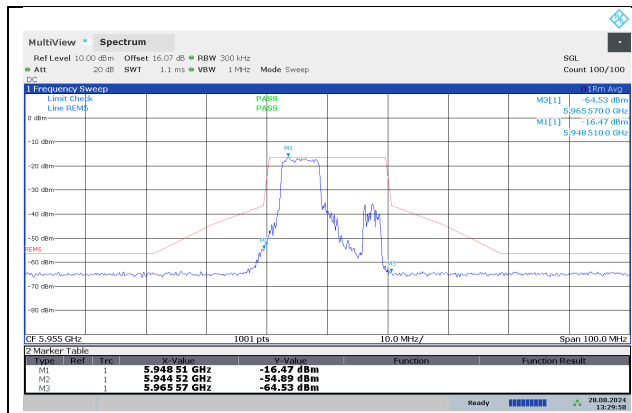


HIGH CHANNEL CHAIN 0

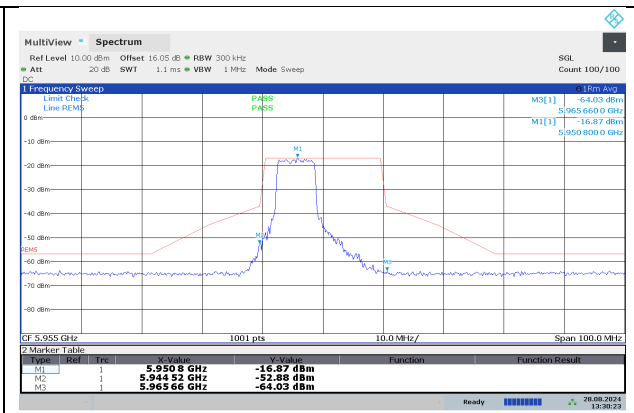


HIGH CHANNEL CHAIN 1

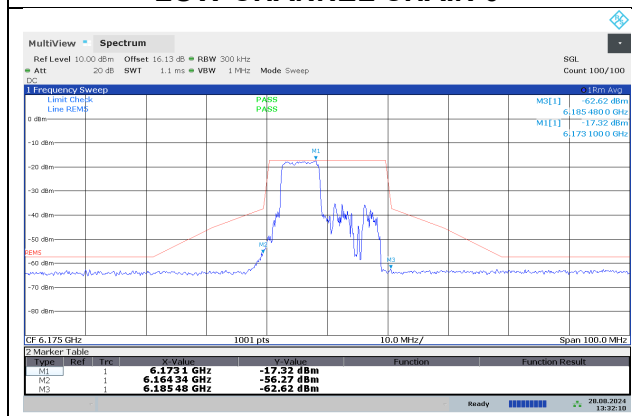
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 52T+26T LOW POWER INDOOR



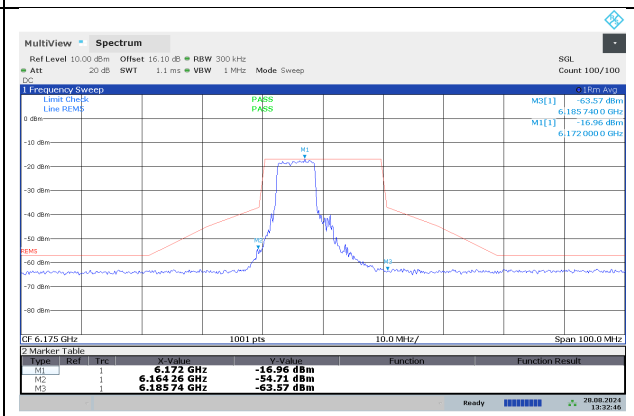
LOW CHANNEL CHAIN 0



LOW CHANNEL CHAIN 1



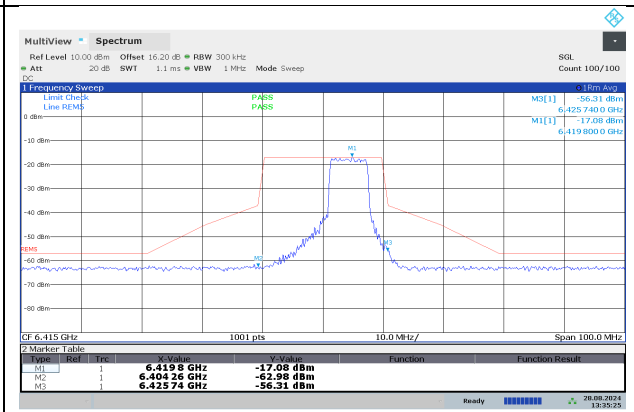
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

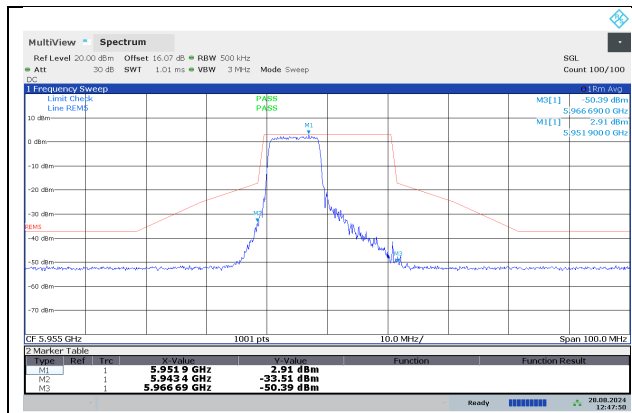


HIGH CHANNEL CHAIN 0

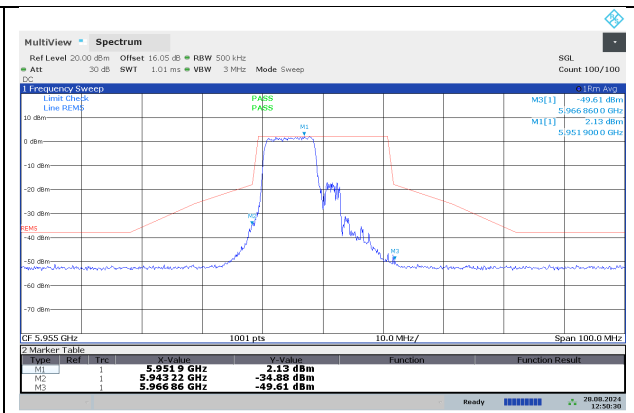


HIGH CHANNEL CHAIN 1

2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 106T STANDARD POWER



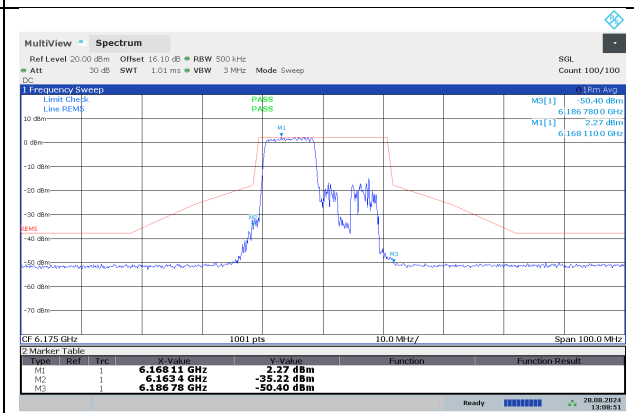
LOW CHANNEL CHAIN 0



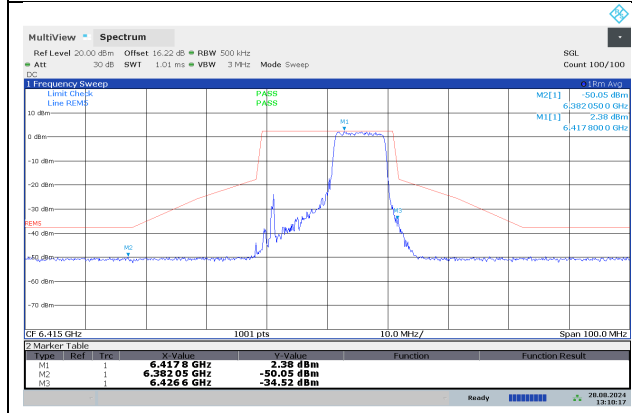
LOW CHANNEL CHAIN 1



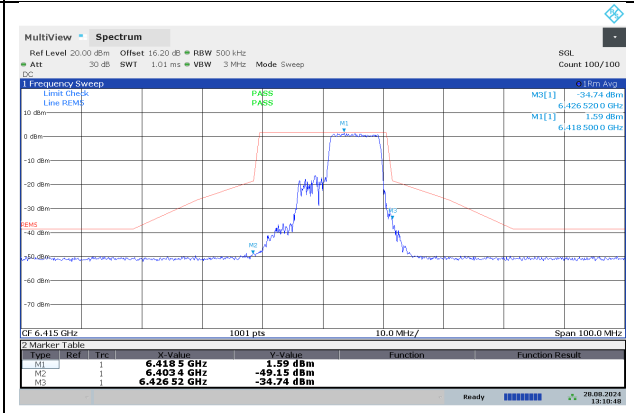
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

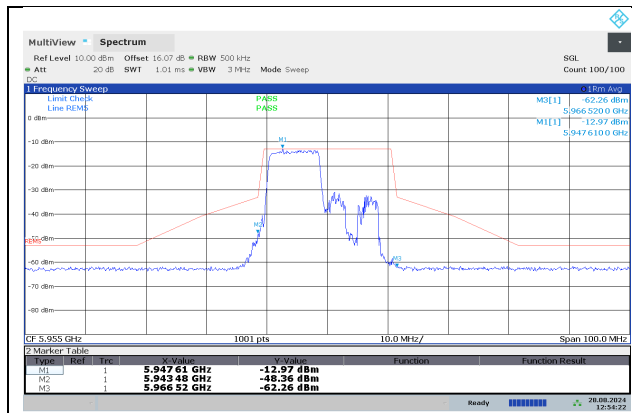


HIGH CHANNEL CHAIN 0

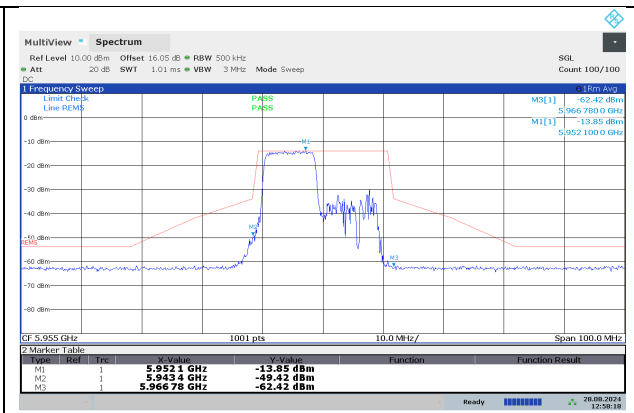


HIGH CHANNEL CHAIN 1

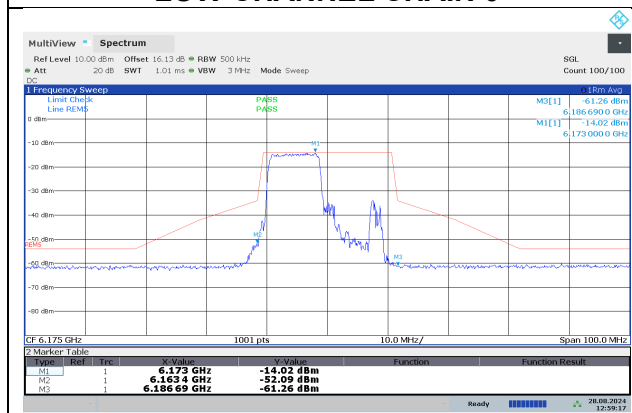
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 106T LOW POWER INDOOR



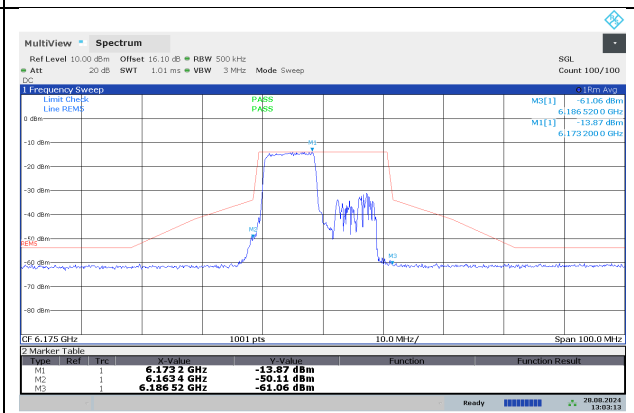
LOW CHANNEL CHAIN 0



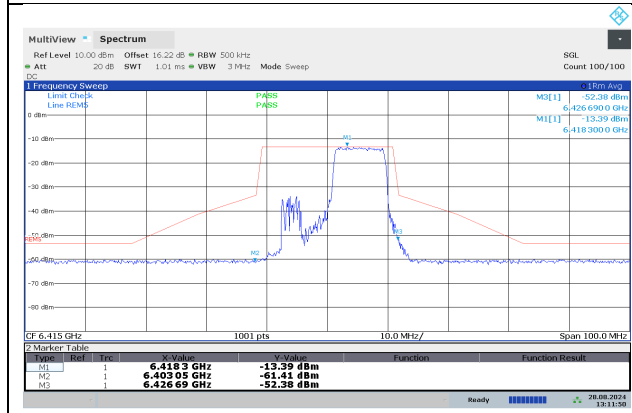
LOW CHANNEL CHAIN 1



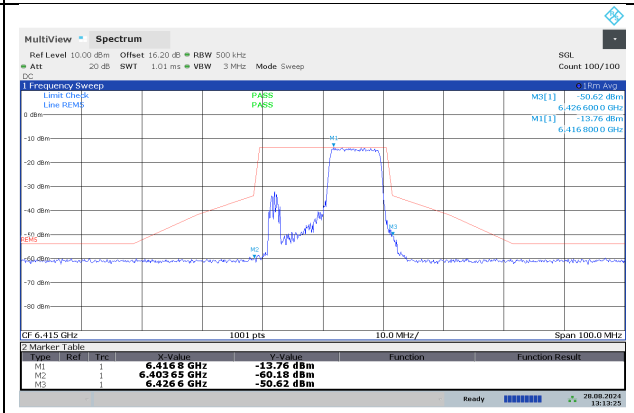
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1

The figure displays four spectral plots arranged in a 2x2 grid, showing the power spectrum for different channel chains. Each plot includes a frequency sweep graph, a marker table, and a status bar.

Top Left Plot (Low Channel Chain 0): The frequency sweep graph shows a peak at 5.955 GHz. The marker table indicates the following values:

Type	Ref	Freq	Value	Function	Function Result
M1	1	5.9523 GHz	1.59 dBm		
M2	1	5.9434 GHz	-34.67 dBm		
M3	1	5.9669 GHz	-45.59 dBm		

Top Right Plot (Low Channel Chain 1): The frequency sweep graph shows a peak at 5.955 GHz. The marker table indicates the following values:

Type	Ref	Freq	Value	Function	Function Result
M1	1	5.9504 GHz	1.03 dBm		
M2	1	5.9431 GHz	-37.44 dBm		
M3	1	5.9668 GHz	-51.00 dBm		

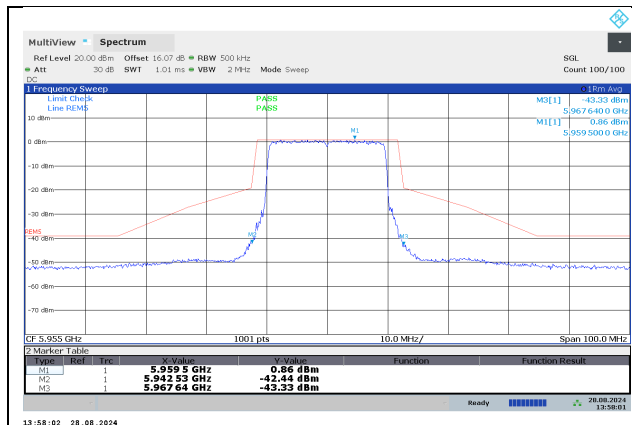
Bottom Left Plot (Mid Channel Chain 0): The frequency sweep graph shows a peak at 6.175 GHz. The marker table indicates the following values:

Type	Ref	Freq	Value	Function	Function Result
M1	1	6.1703 GHz	1.66 dBm		
M2	1	6.1631 GHz	-34.97 dBm		
M3	1	6.1864 GHz	-47.49 dBm		

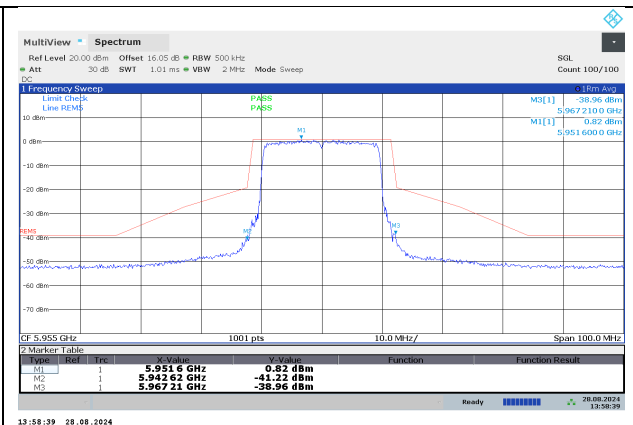
Bottom Right Plot (Mid Channel Chain 1): The frequency sweep graph shows a peak at 6.175 GHz. The marker table indicates the following values:

Type	Ref	Freq	Value	Function	Function Result
M1	1	6.1711 GHz	1.19 dBm		
M2	1	6.1634 GHz	-34.91 dBm		
M3	1	6.1866 GHz	-49.64 dBm		

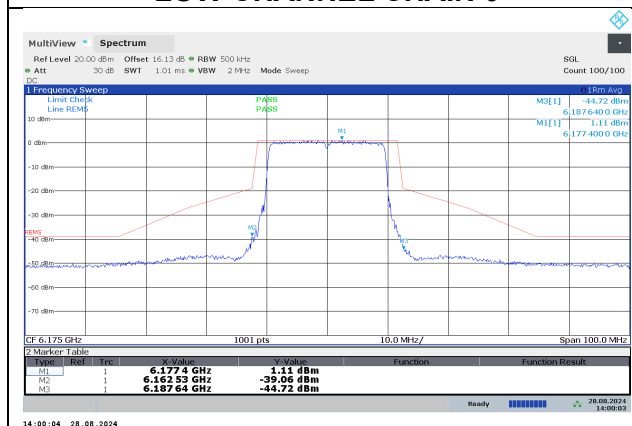
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 242T STANDARD POWER



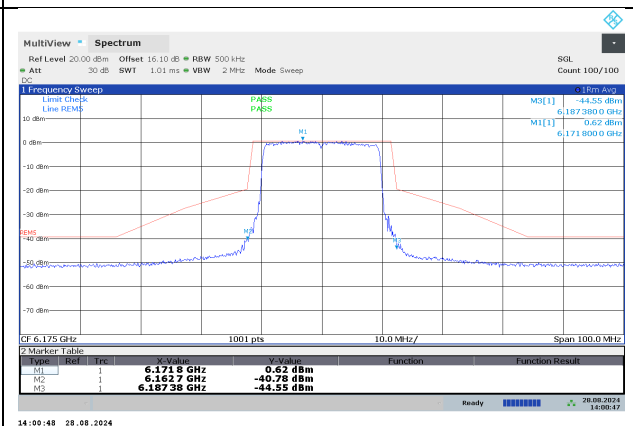
LOW CHANNEL CHAIN 0



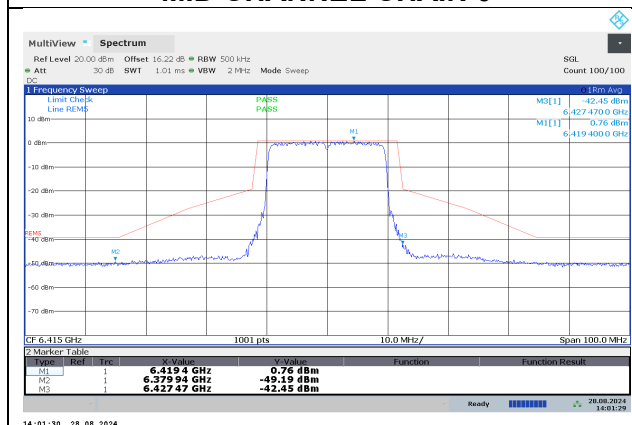
LOW CHANNEL CHAIN 1



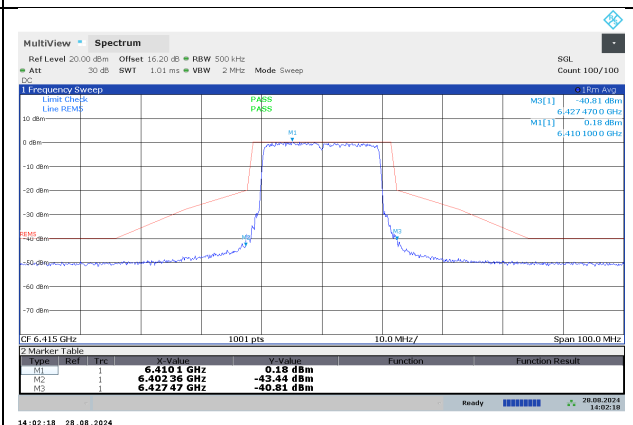
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

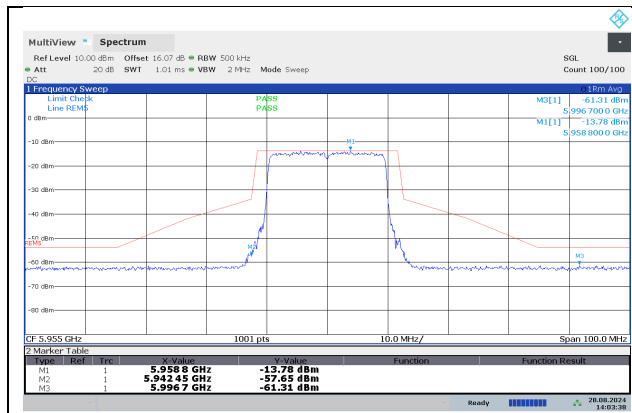


HIGH CHANNEL CHAIN 0

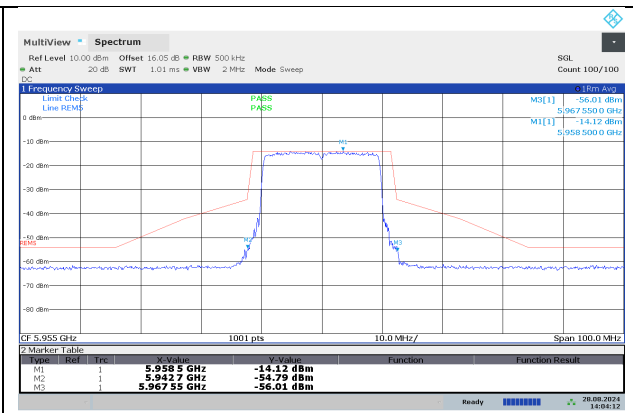


HIGH CHANNEL CHAIN 1

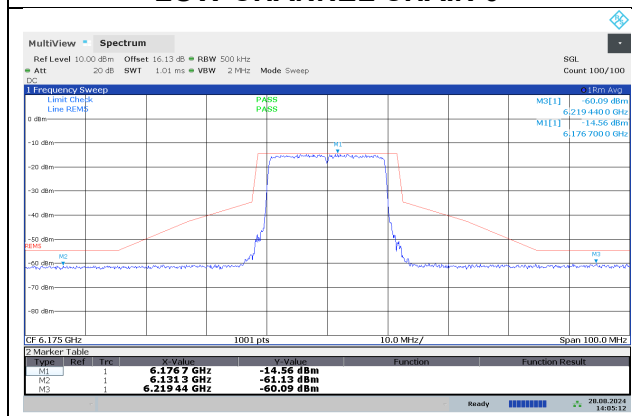
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 242T LOW POWER INDOOR



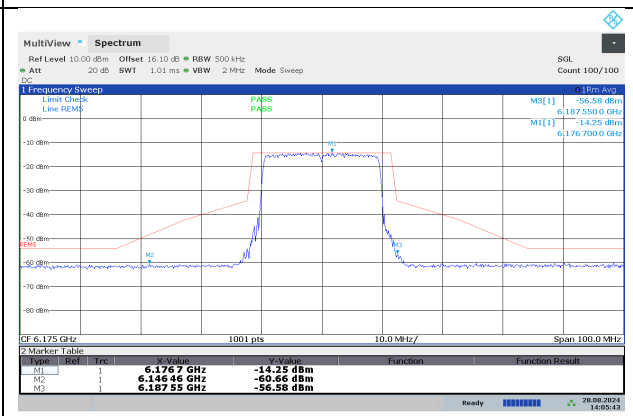
LOW CHANNEL CHAIN 0



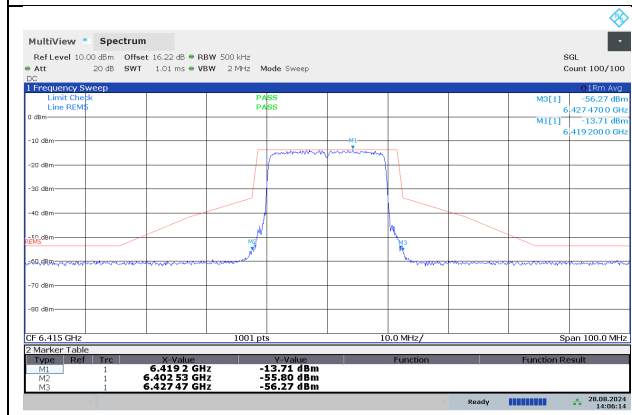
LOW CHANNEL CHAIN 1



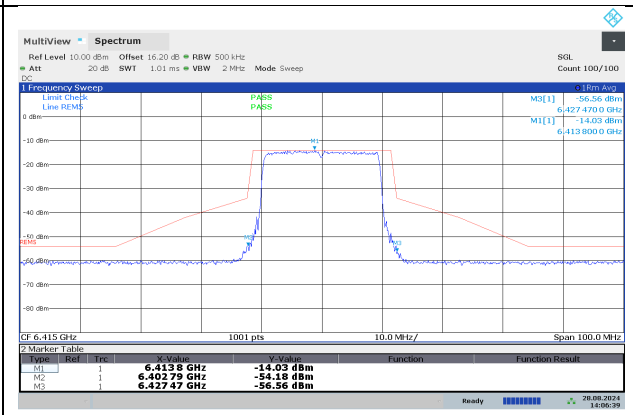
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1



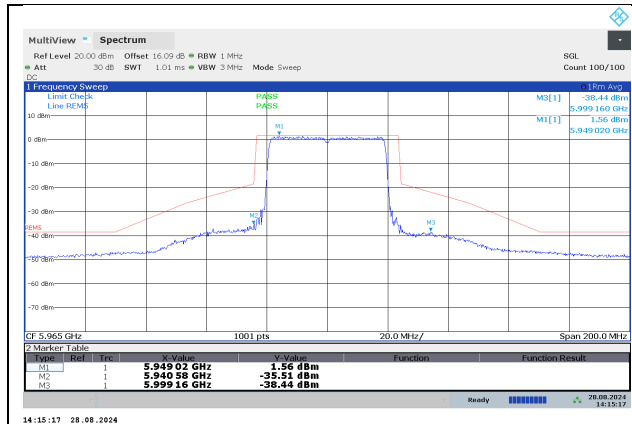
HIGH CHANNEL CHAIN 0



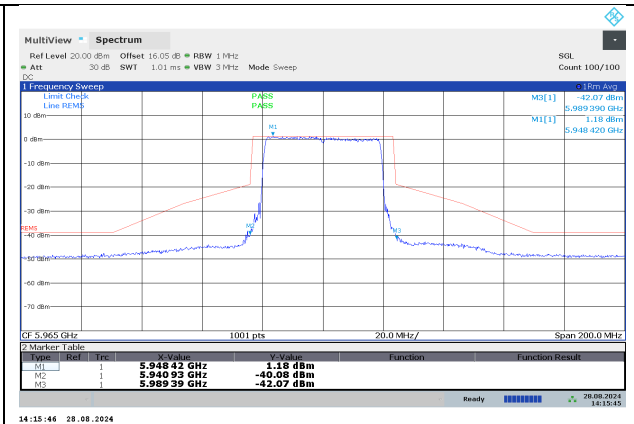
HIGH CHANNEL CHAIN 1

9.5.3. 802.11be EHT40 MODE 2TX IN THE UNII-5 BAND (LOW GAIN)

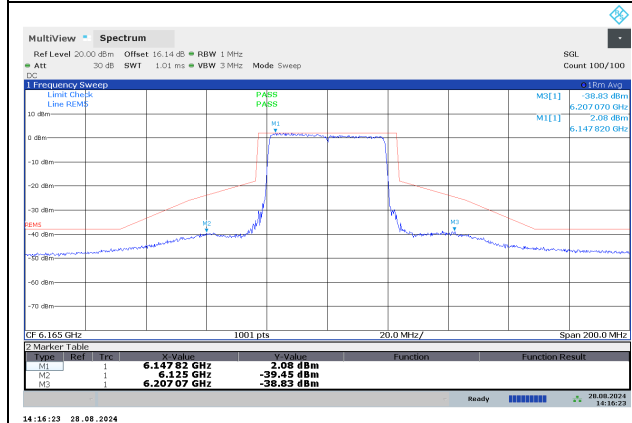
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 484T STANDARD POWER



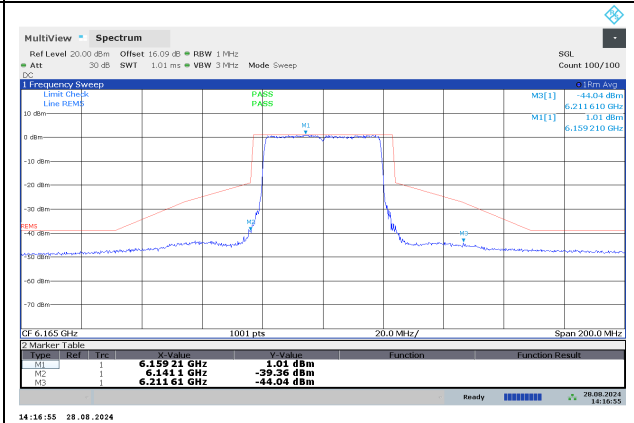
LOW CHANNEL CHAIN 0



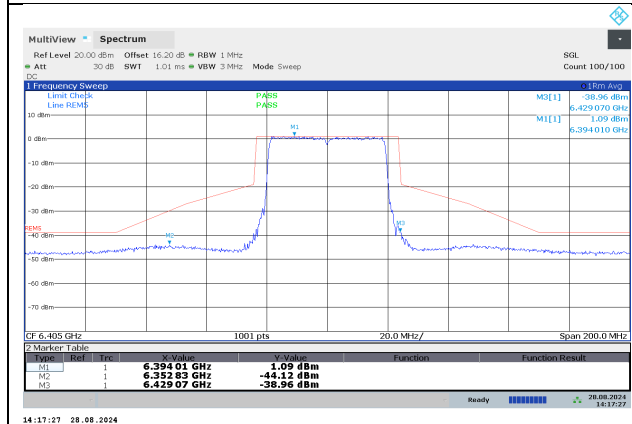
LOW CHANNEL CHAIN 1



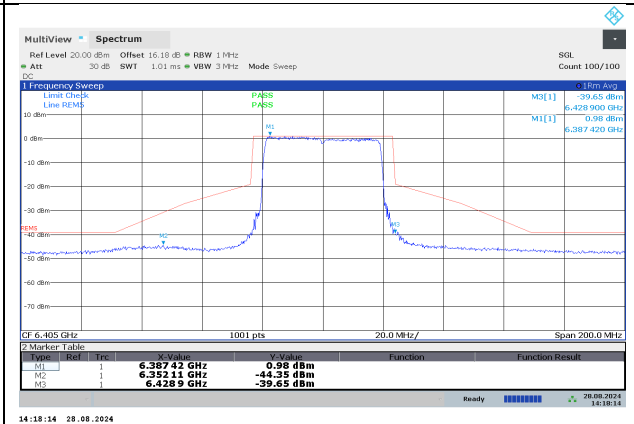
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

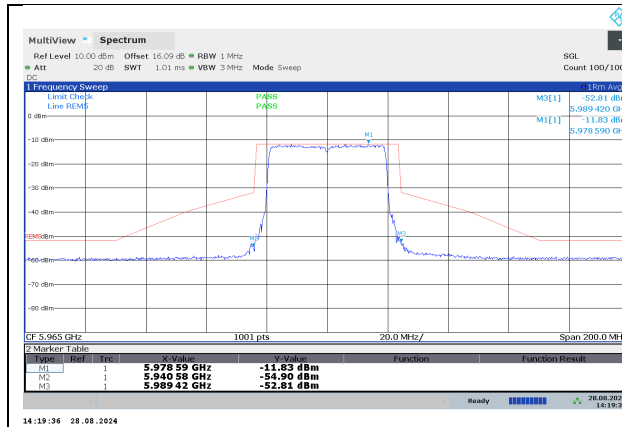


HIGH CHANNEL CHAIN 0

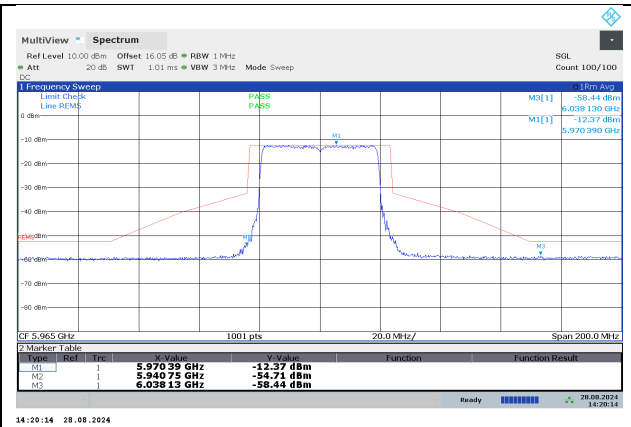


HIGH CHANNEL CHAIN 1

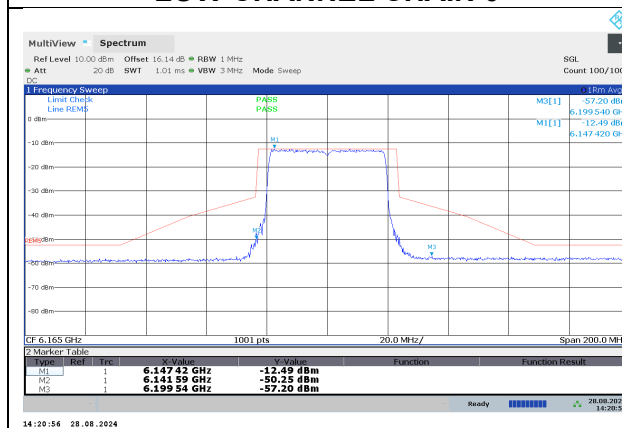
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 484T LOW POWER INDOOR



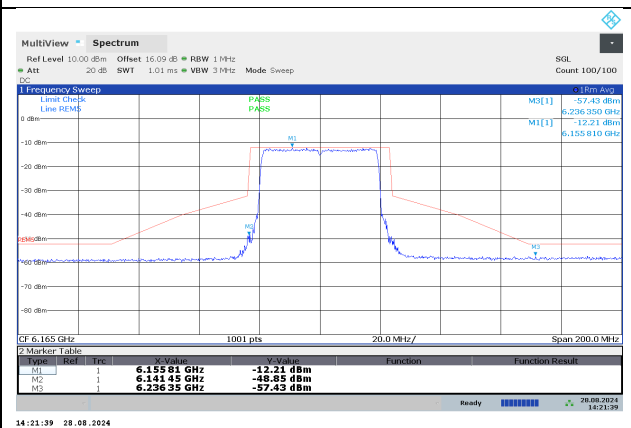
LOW CHANNEL CHAIN 0



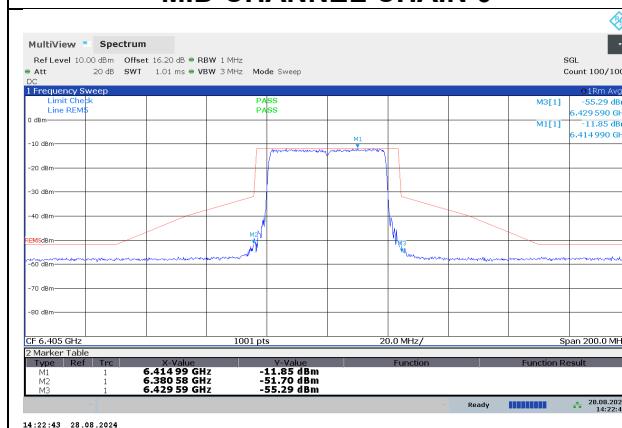
LOW CHANNEL CHAIN 1



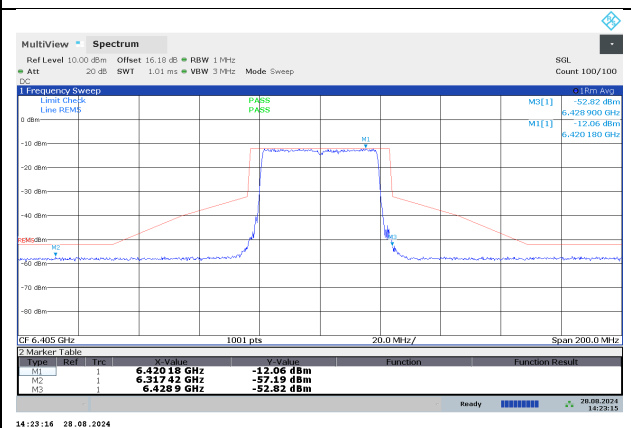
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1



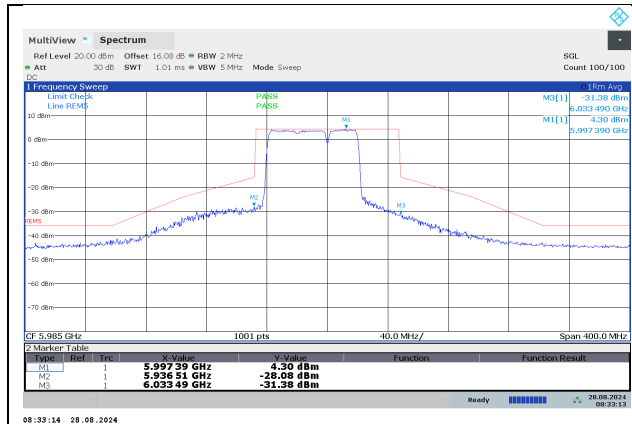
HIGH CHANNEL CHAIN 0



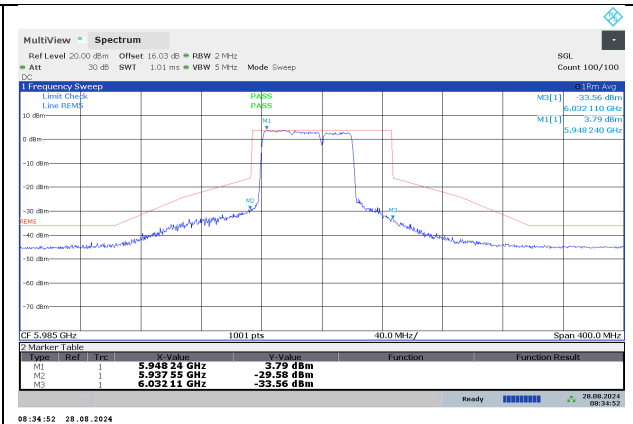
HIGH CHANNEL CHAIN 1

9.5.4. 802.11be EHT80 MODE 2TX IN THE UNII-5 BAND (LOW GAIN)

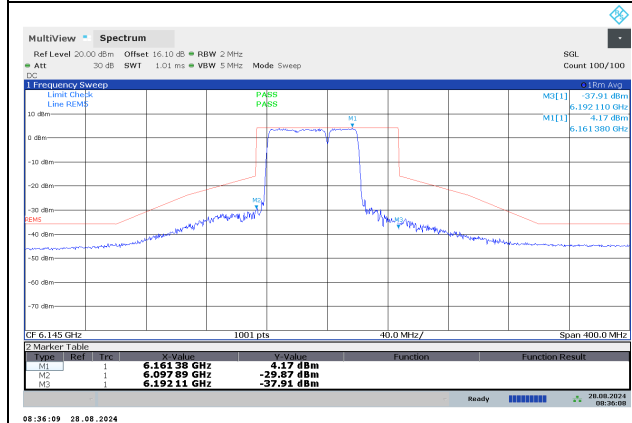
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 484T+242T (CONTIGUOUS) STANDARD POWER



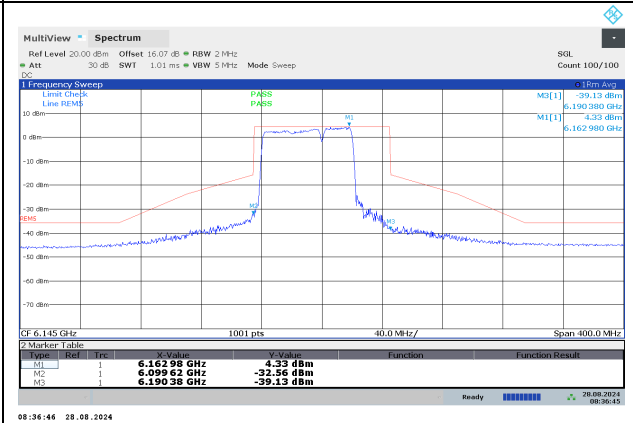
LOW CHANNEL CHAIN 0



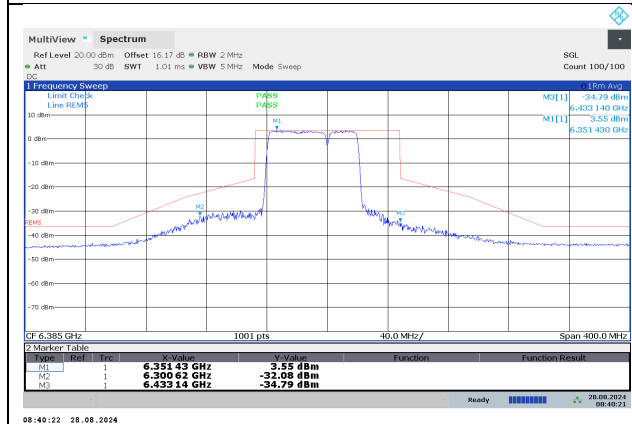
LOW CHANNEL CHAIN 1



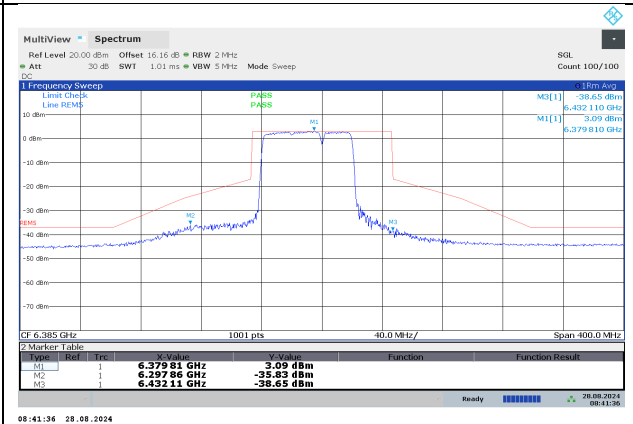
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

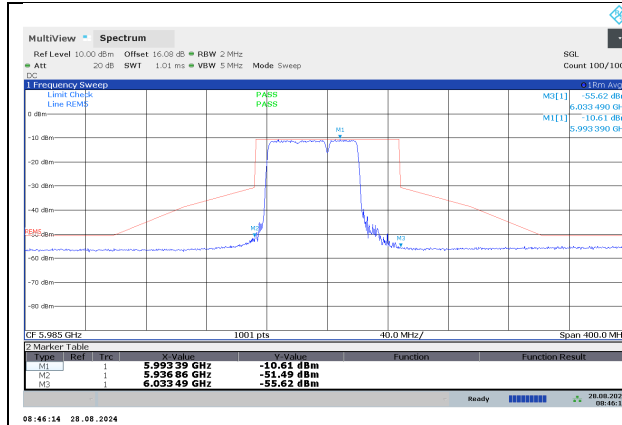


HIGH CHANNEL CHAIN 0

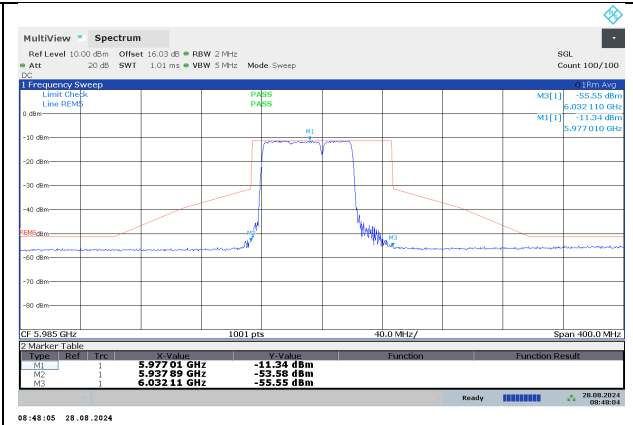


HIGH CHANNEL CHAIN 1

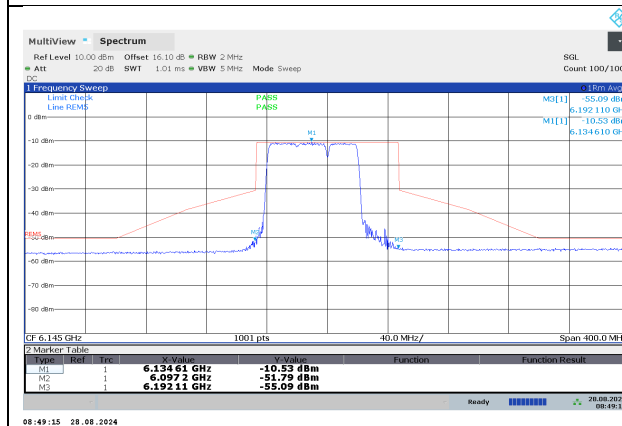
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 484T+242T (CONTIGUOUS) LOW POWER INDOOR



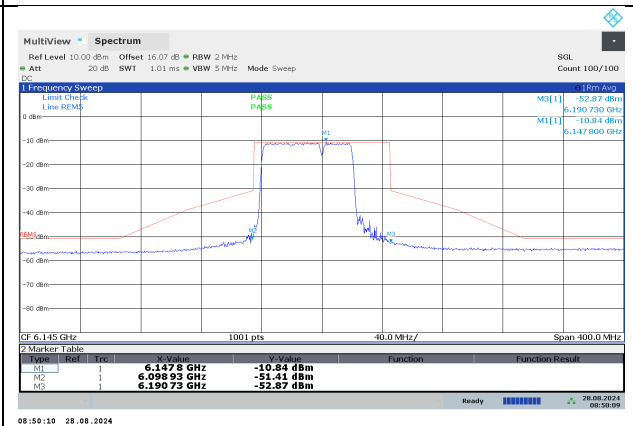
LOW CHANNEL CHAIN 0



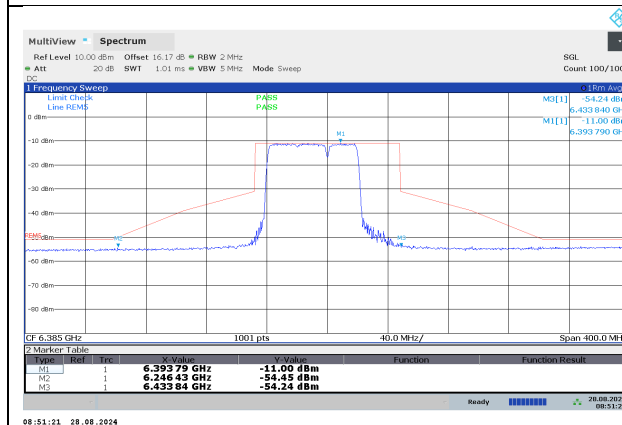
LOW CHANNEL CHAIN 1



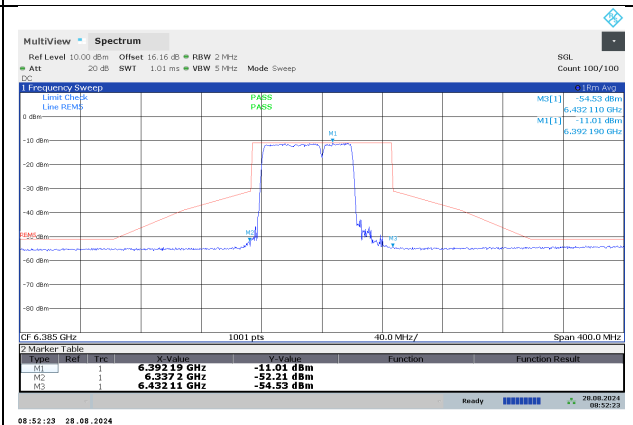
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

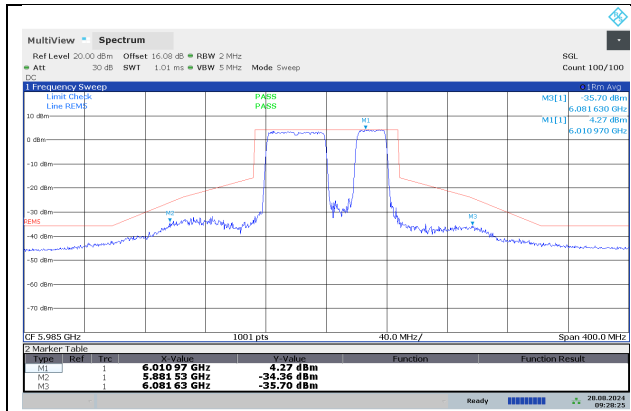


HIGH CHANNEL CHAIN 0

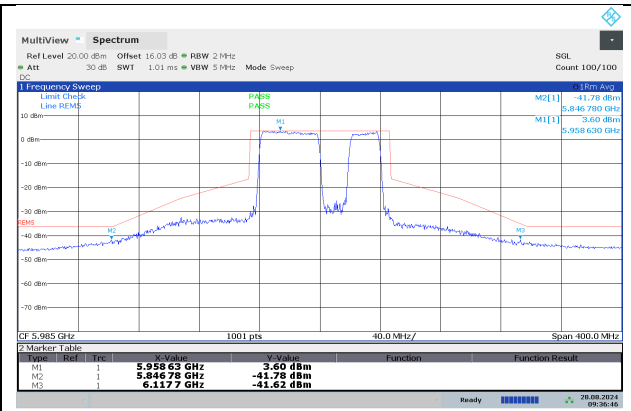


HIGH CHANNEL CHAIN 1

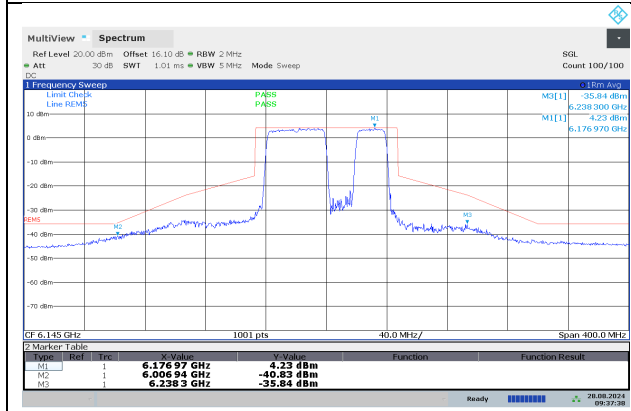
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 484T+242T (NON-CONTIGUOUS) STANDARD POWER



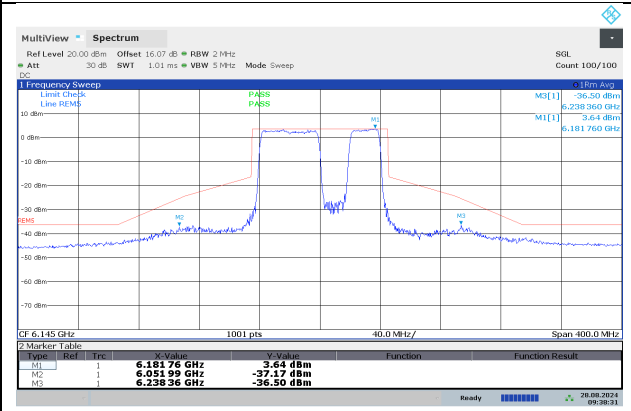
LOW CHANNEL CHAIN 0



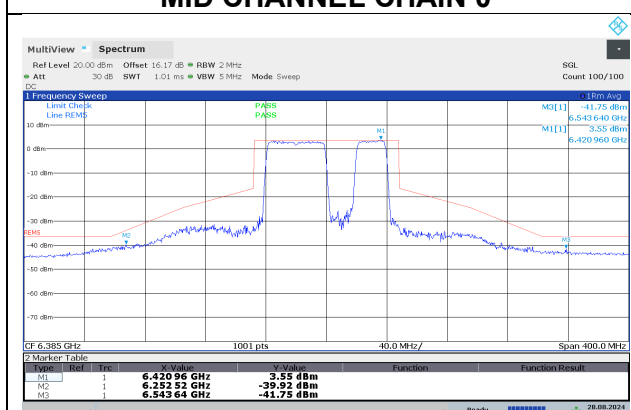
LOW CHANNEL CHAIN 1



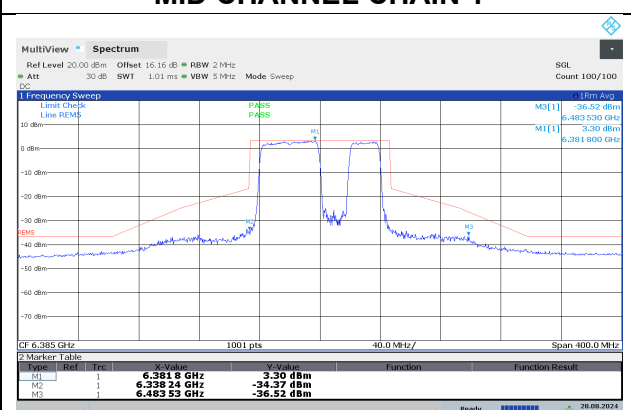
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1

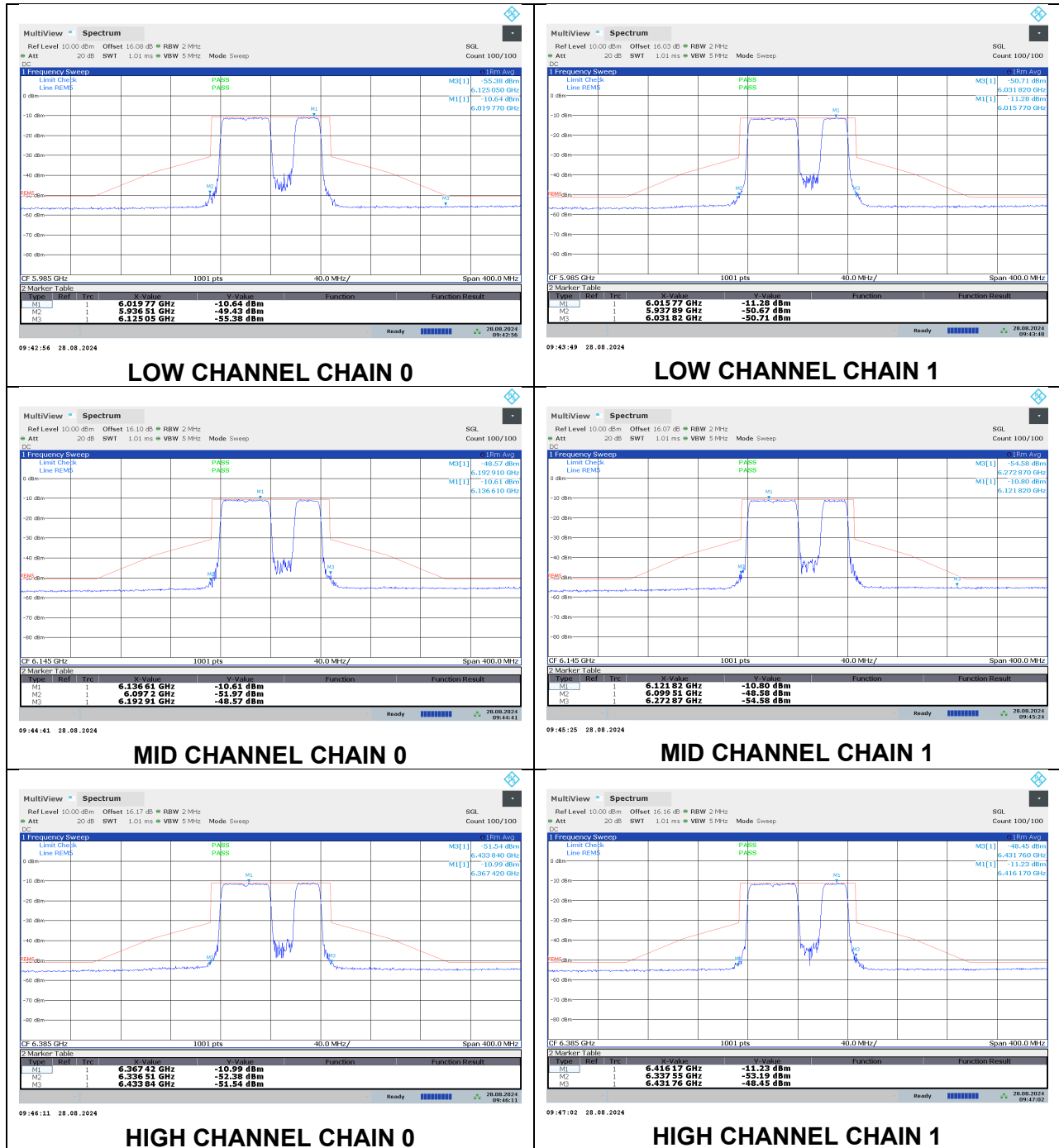


HIGH CHANNEL CHAIN 0

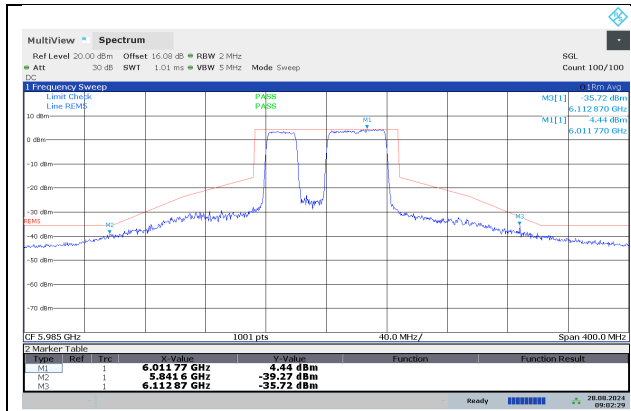


HIGH CHANNEL CHAIN 1

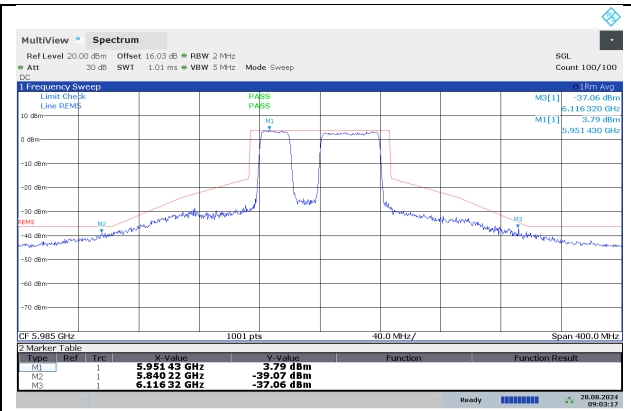
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 484T+242T (NON-CONTIGUOUS) LOW POWER INDOOR



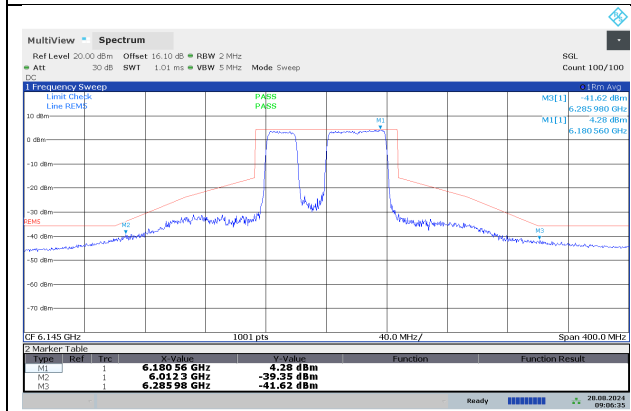
2TX CHAIN 0 + CHAIN 1 CDD OFDMA MODE: 242T+484T (NON-CONTIGUOUS) STANDARD POWER



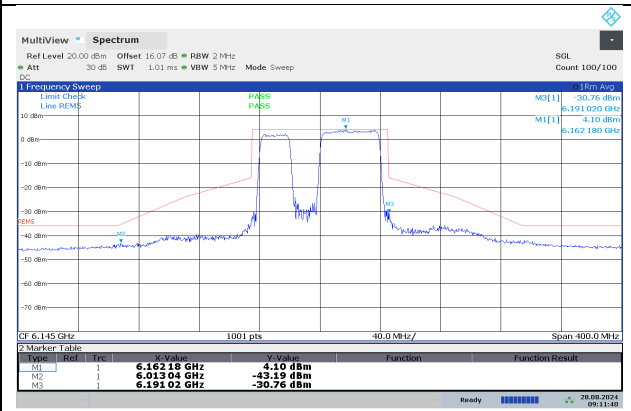
LOW CHANNEL CHAIN 0



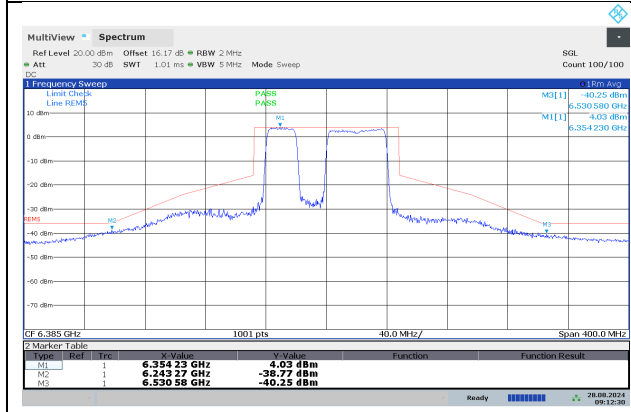
LOW CHANNEL CHAIN 1



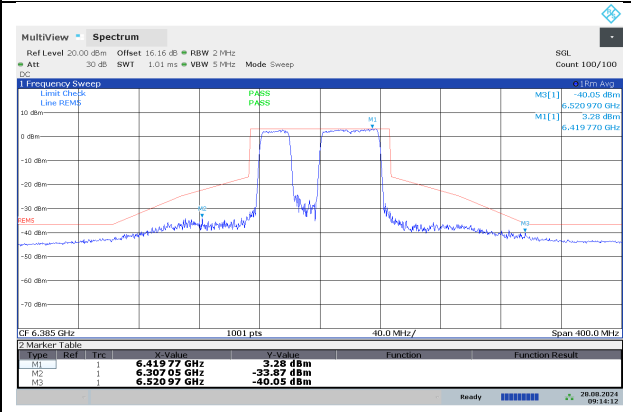
MID CHANNEL CHAIN 0



MID CHANNEL CHAIN 1



HIGH CHANNEL CHAIN 0



HIGH CHANNEL CHAIN 1