

## 9.9. SP SPURIOUS EMISSIONS IN-BAND

### LIMITS

#### **FCC §15.407**

(b)(7) 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

Follow KDB 987594 D02, Section II-J, RBW & VBW settings were based on 26dB bandwidth test settings. Only RU26 tone for all bandwidths, the RBW & VBW settings were used equal or greater than 26dB bandwidth test settings.

Band	Tones	20MHz (RBW/VBW)	40MHz (RBW/VBW)	*80MHz (RBW/VBW)	*160MHz (RBW/VBW)
UNII-5/7	Partial RU	26T: 300kHz/910kHz 52T: 300kHz/910kHz	26T: 510kHz/1.6MHz 52T: 510kHz/1.6MHz	26T: 510kHz/1.6MHz	26T: 510kHz/1.6MHz 52T: 510kHz/1.6MHz
	SU	300kHz/910kHz	510kHz/1.6MHz	1MHz/3MHz	2MHz/6MHz

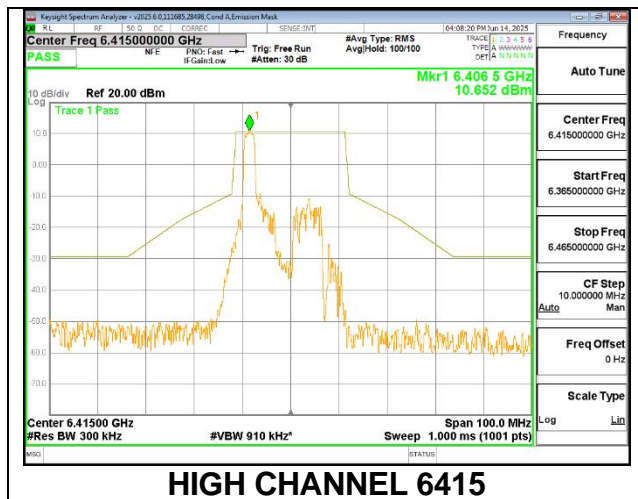
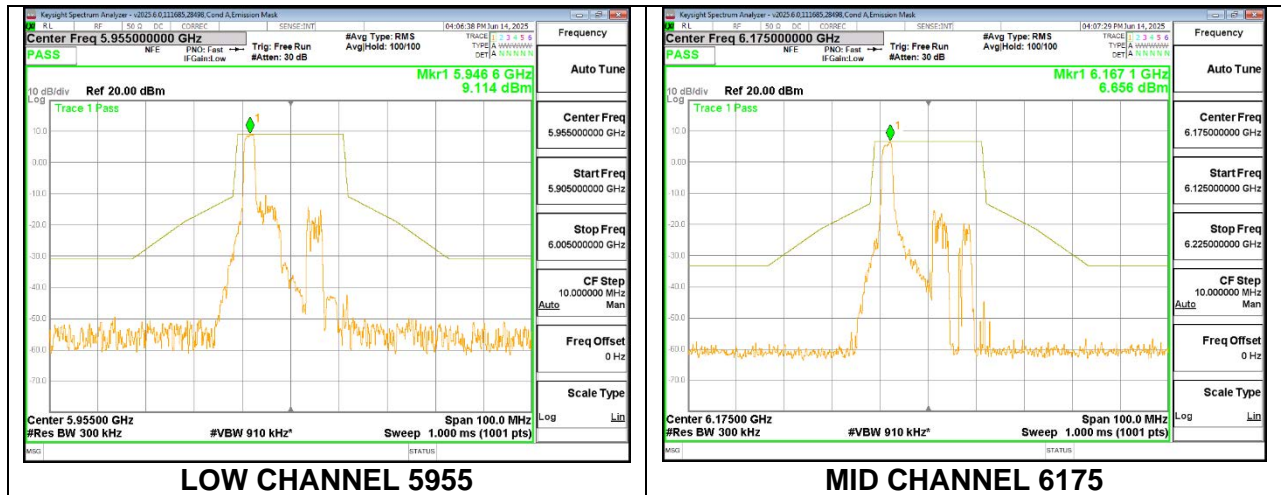
\*Different RBW/VBW due to different partial tones.

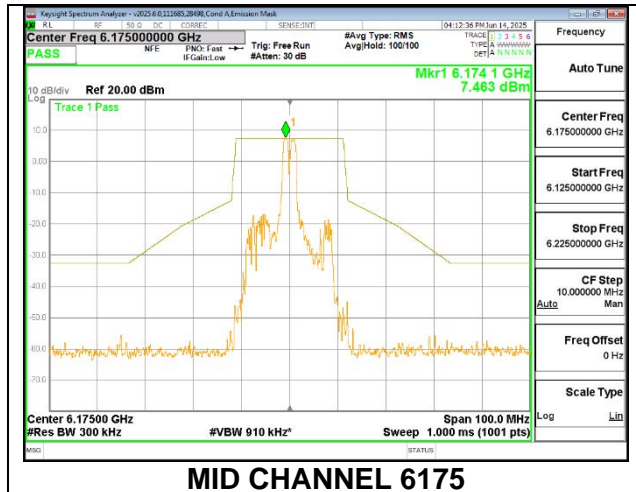
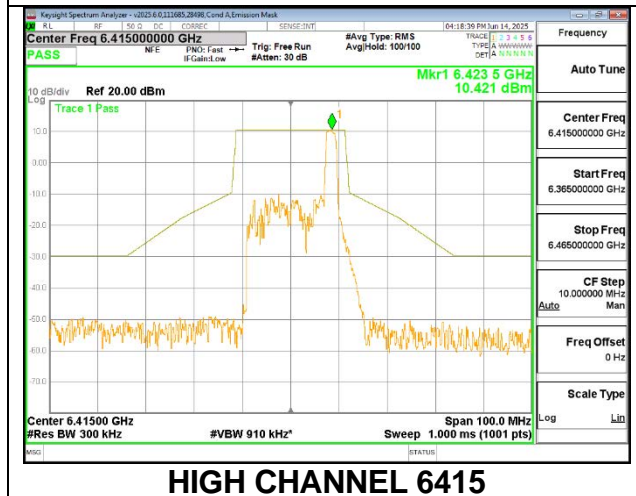
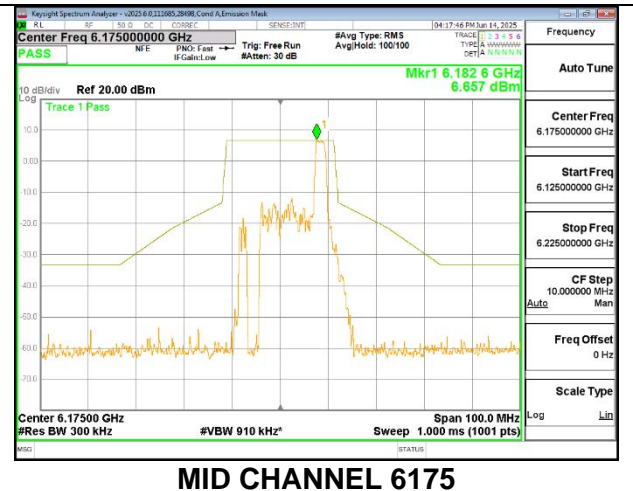
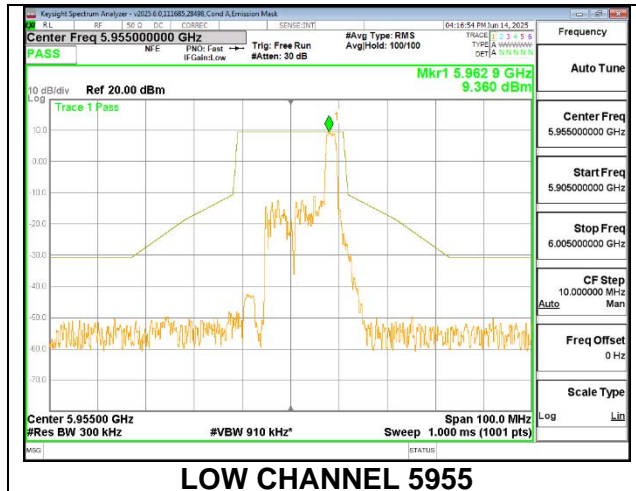
### RESULTS

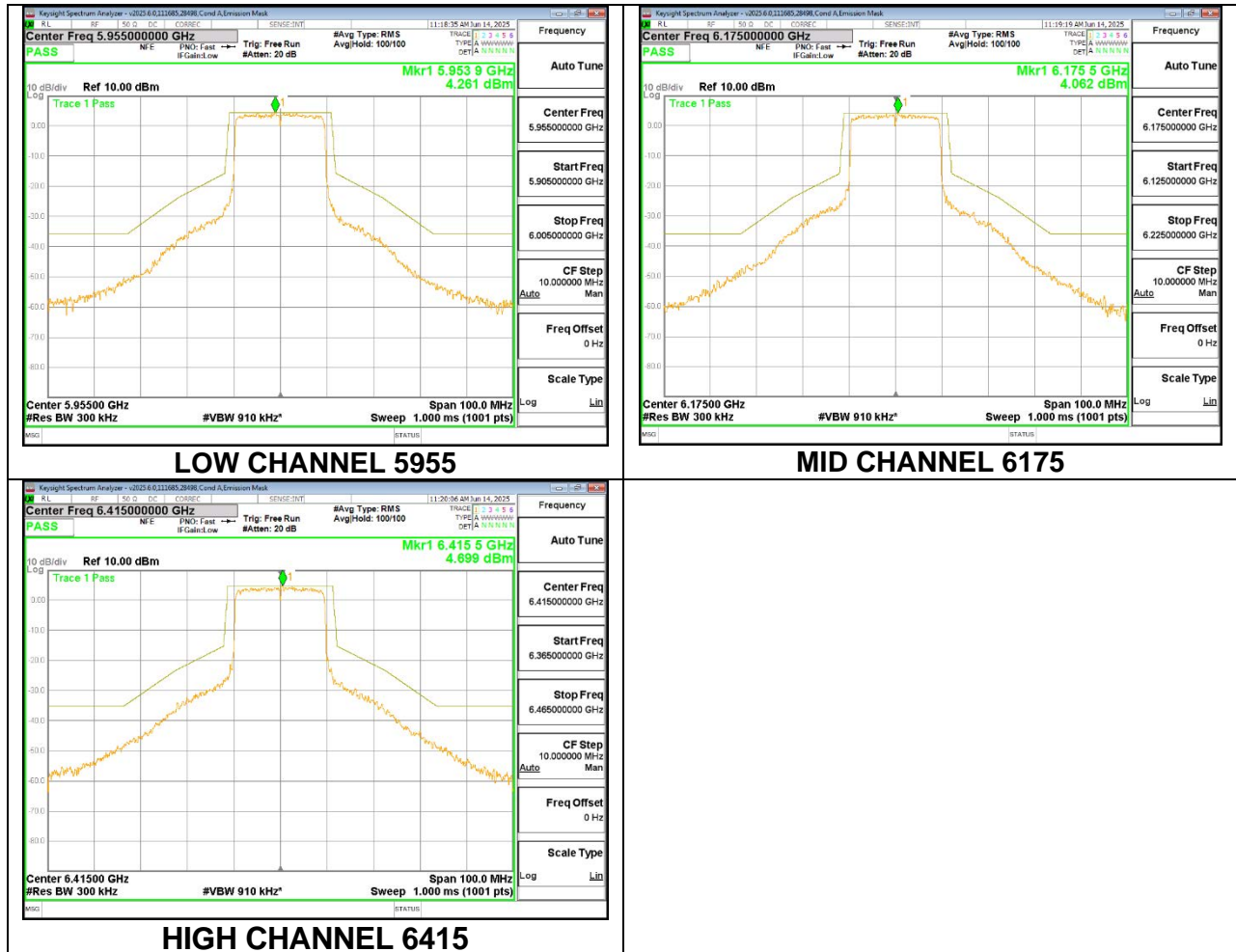
For mask and bandwidth measurements partial RU allocations are tested with the RUs allocated at the lower and upper positions within the channel for the low mid and high channels in each band. Additionally, the center channel is also tested with the RU allocated in the center of the channel to verify that the low / high RU allocations are worst case.

### 9.9.1. 802.11be EHT20 MODE IN THE UNII-5 BAND

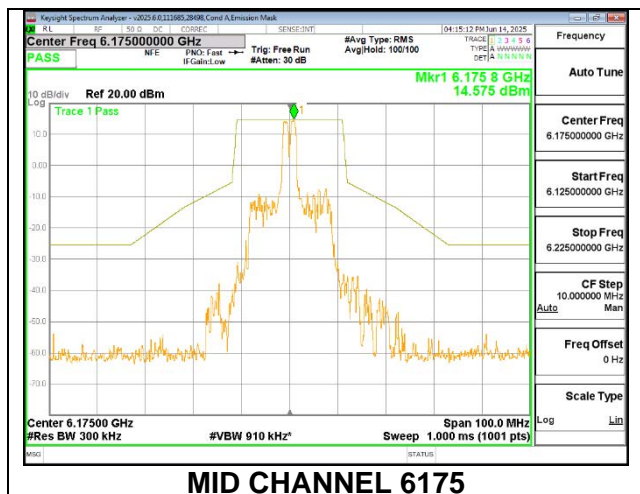
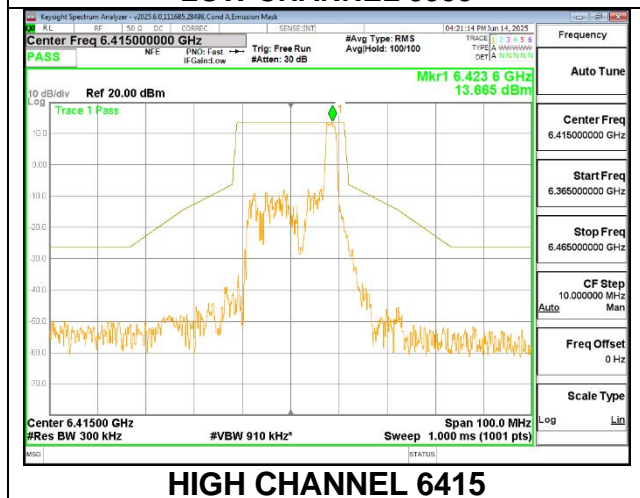
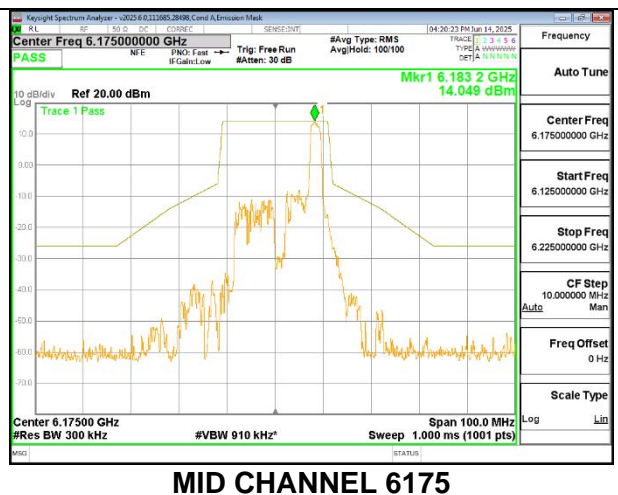
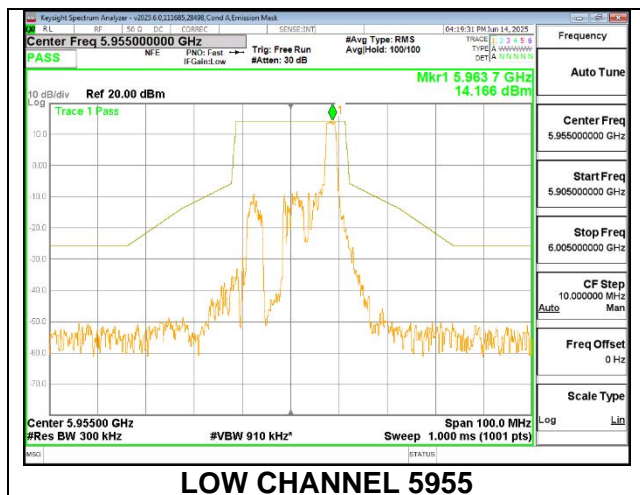
#### 1TX Antenna 6 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 0



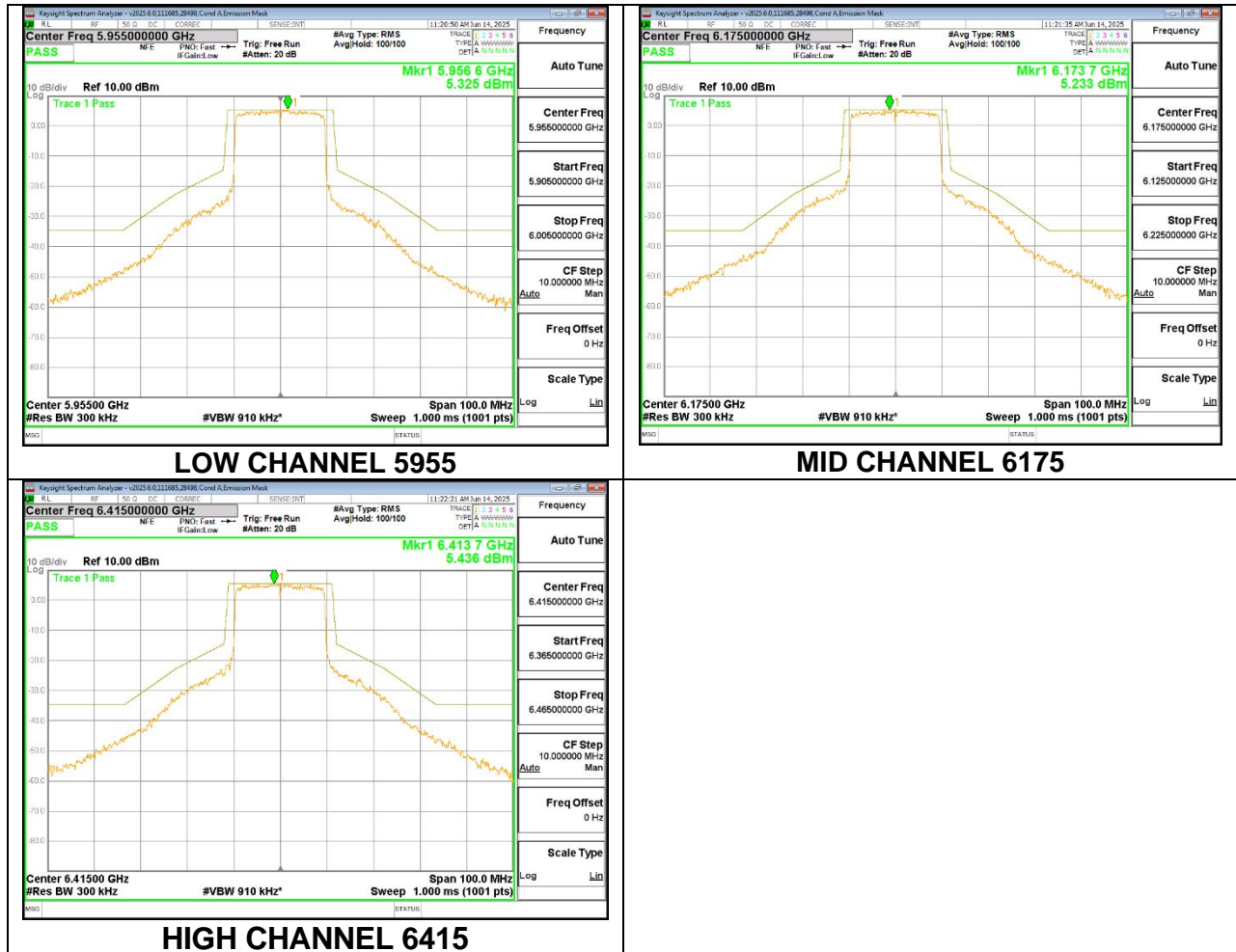
**1TX Antenna 6 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 4****1TX Antenna 6 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 8**

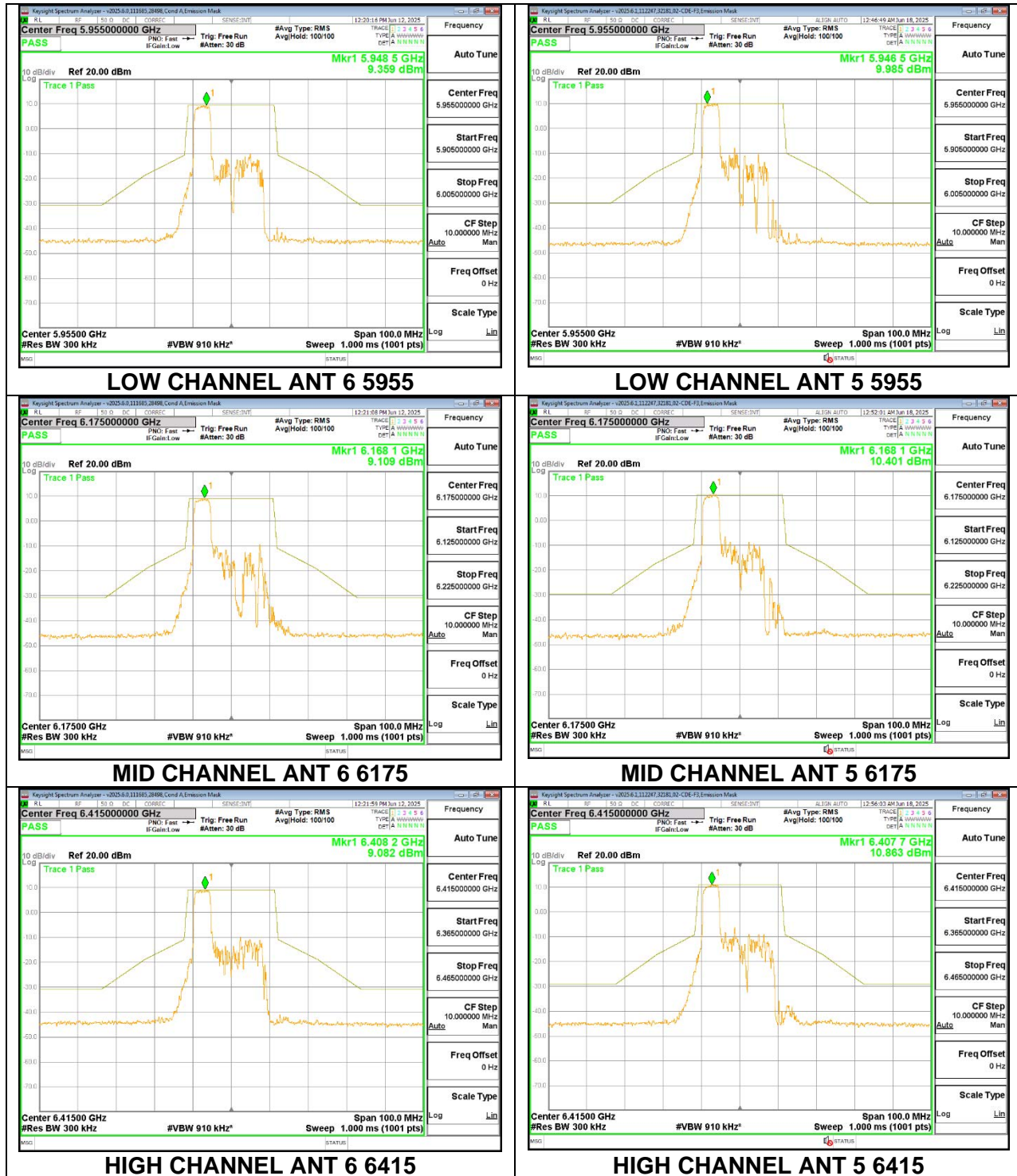
**1TX Antenna 6 MODE (FCC+IC) MOBILE – SU MODE**

**1TX Antenna 5 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 0**

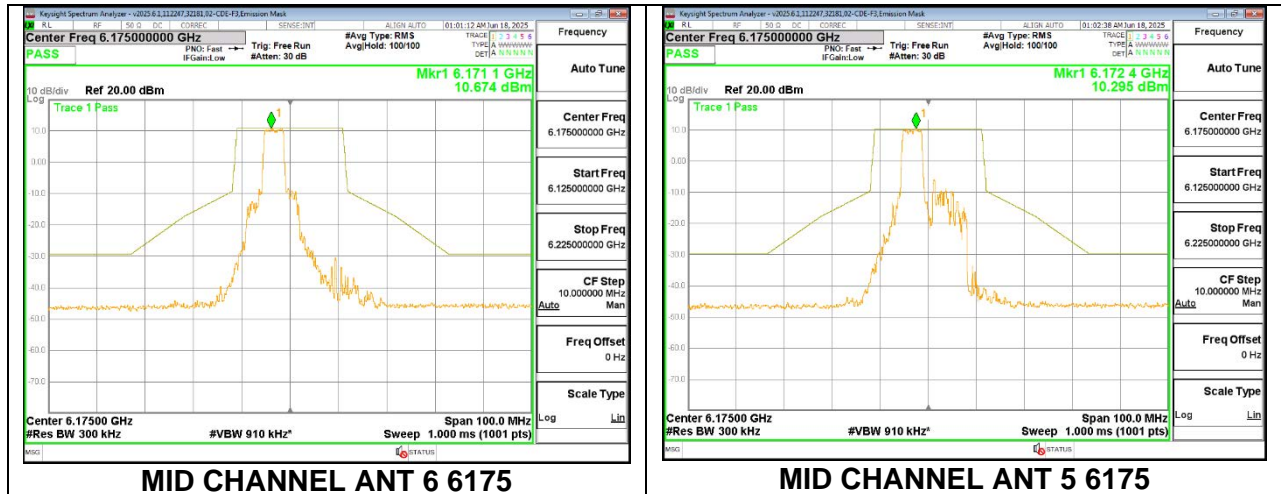
**1TX Antenna 5 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 4****1TX Antenna 5 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 8**

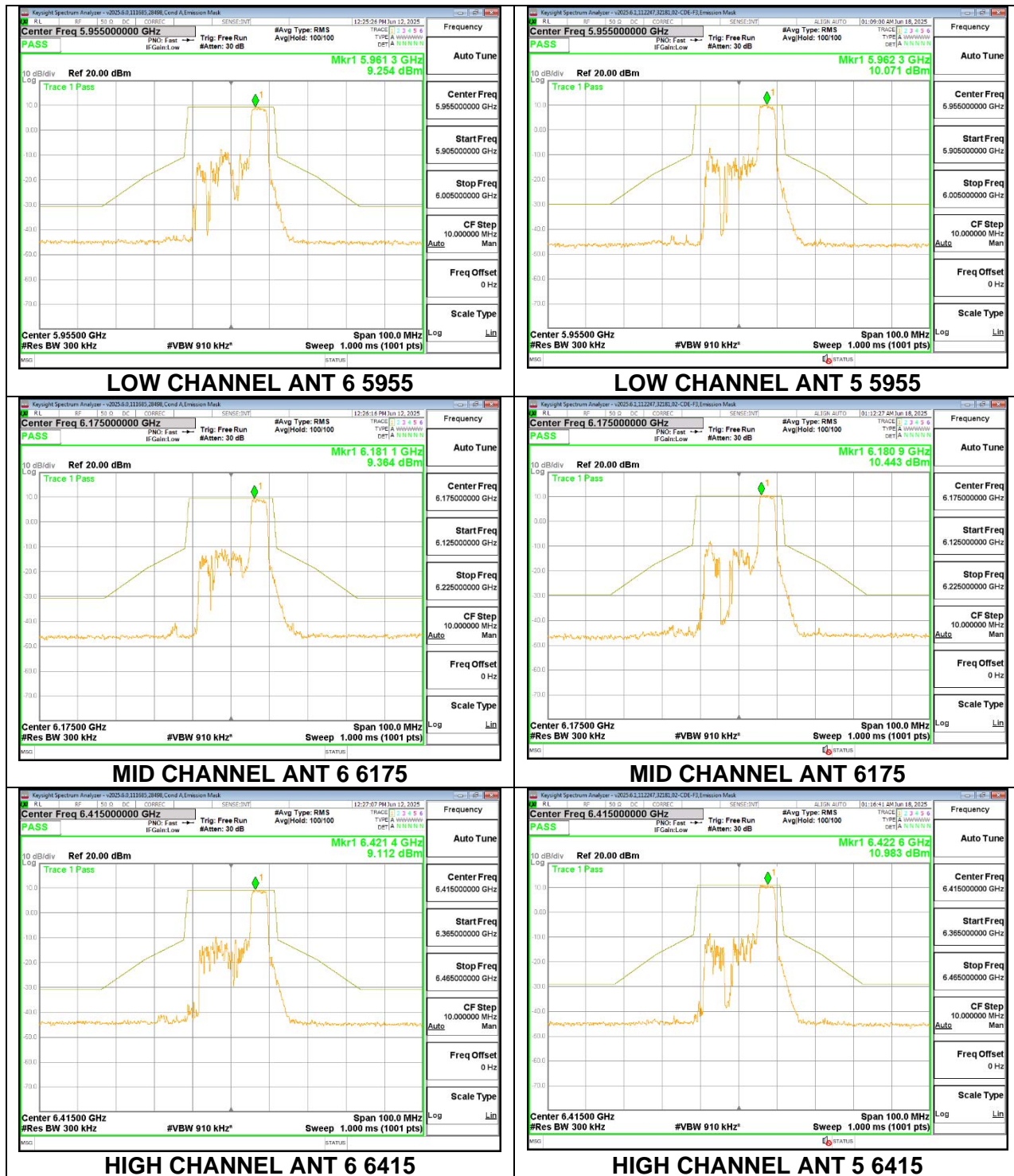


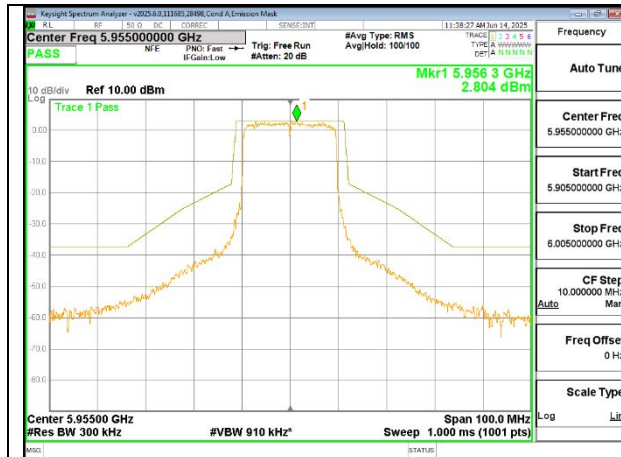
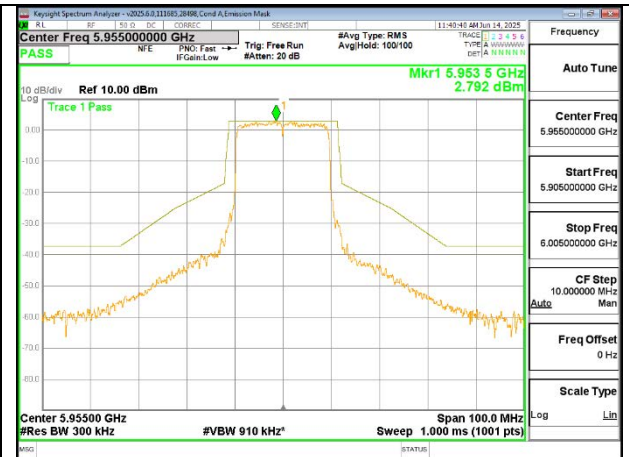
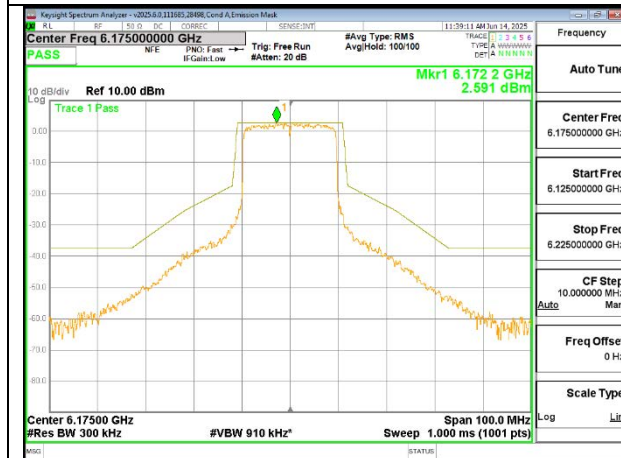
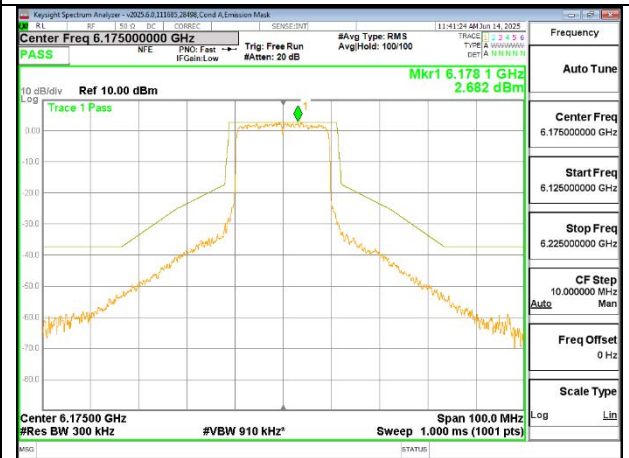
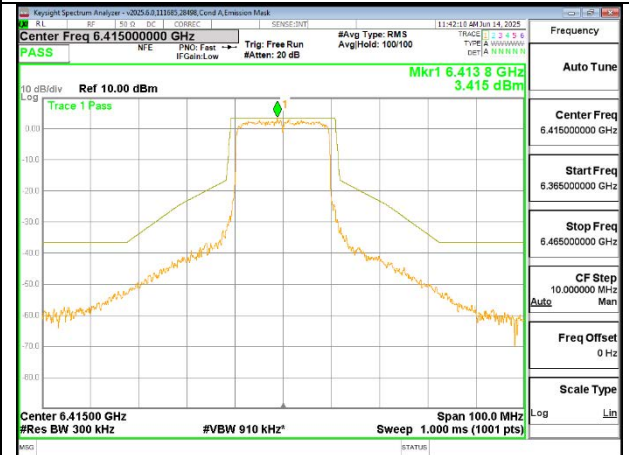
**1TX Antenna 5 MODE (FCC+IC) MOBILE – SU MODE**

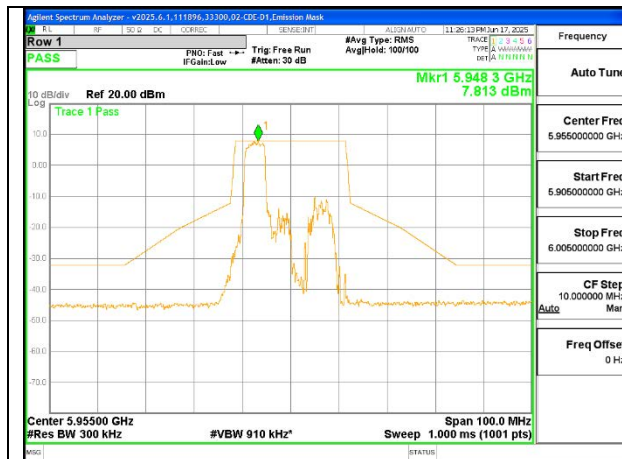
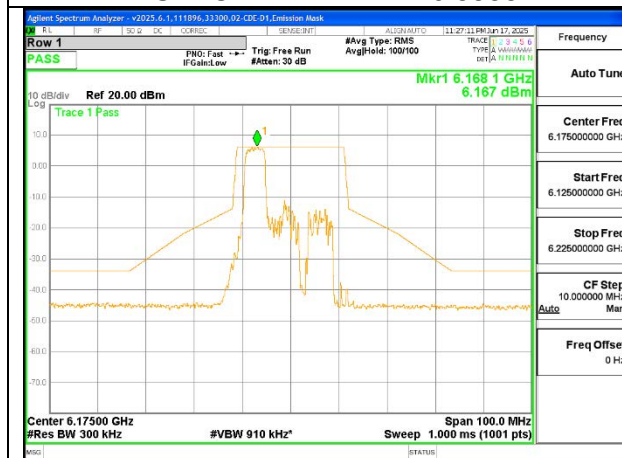
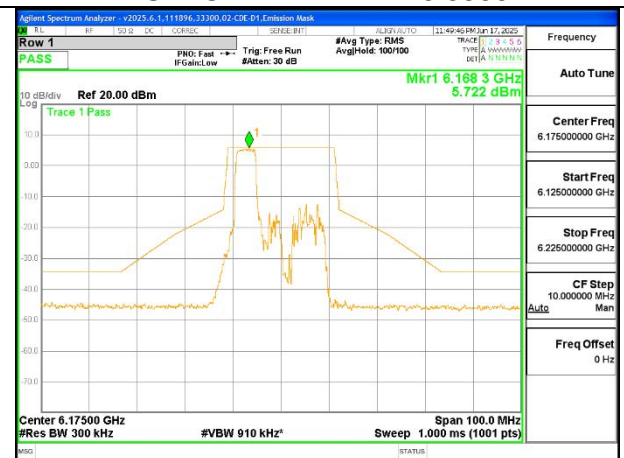
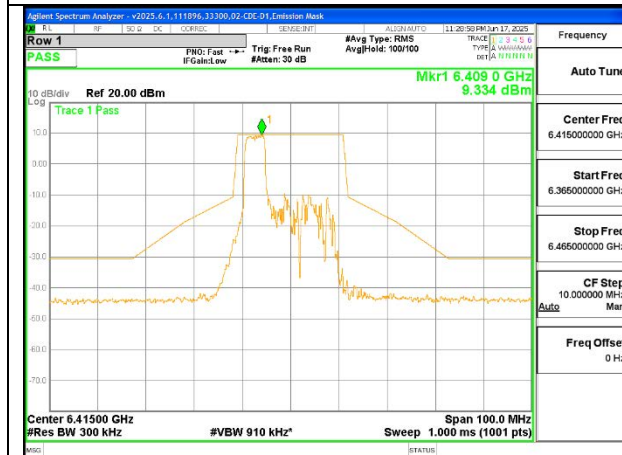
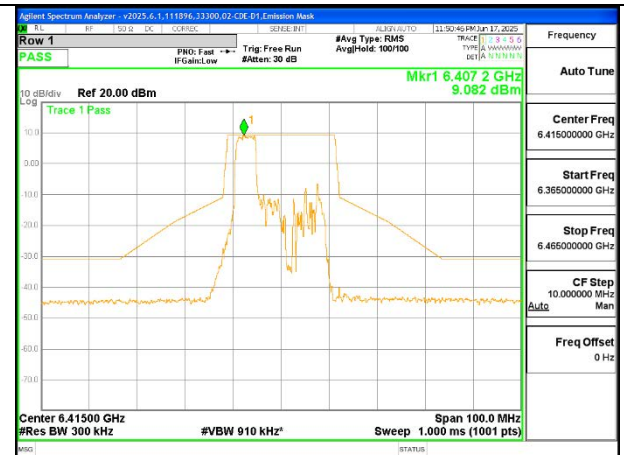
**2TX CDD MODE (FCC + IC) – 52-Tones, RU Index 37**



**2TX CDD MODE (FCC + IC) – 52-Tones, RU Index 38**

**2TX CDD MODE (FCC + IC) – 52-Tones, RU Index 40**

**2TX CDD MODE (FCC + IC) – SU MODE****LOW CHANNEL ANT 6 5955****LOW CHANNEL ANT 5 5955****MID CHANNEL ANT 6 6175****MID CHANNEL ANT 5 6175****HIGH CHANNEL ANT 6 6415****HIGH CHANNEL ANT 5 6415**

**2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – 52-Tones, RU Index 37****LOW CHANNEL ANT 6 5955****LOW CHANNEL ANT 5 5955****MID CHANNEL ANT 6 6175****MID CHANNEL ANT 5 6175****HIGH CHANNEL ANT 6 6415****HIGH CHANNEL ANT 5 6415**



The figure consists of two side-by-side screenshots of a Spectrum Analyzer interface, showing the frequency response of two different antennas.

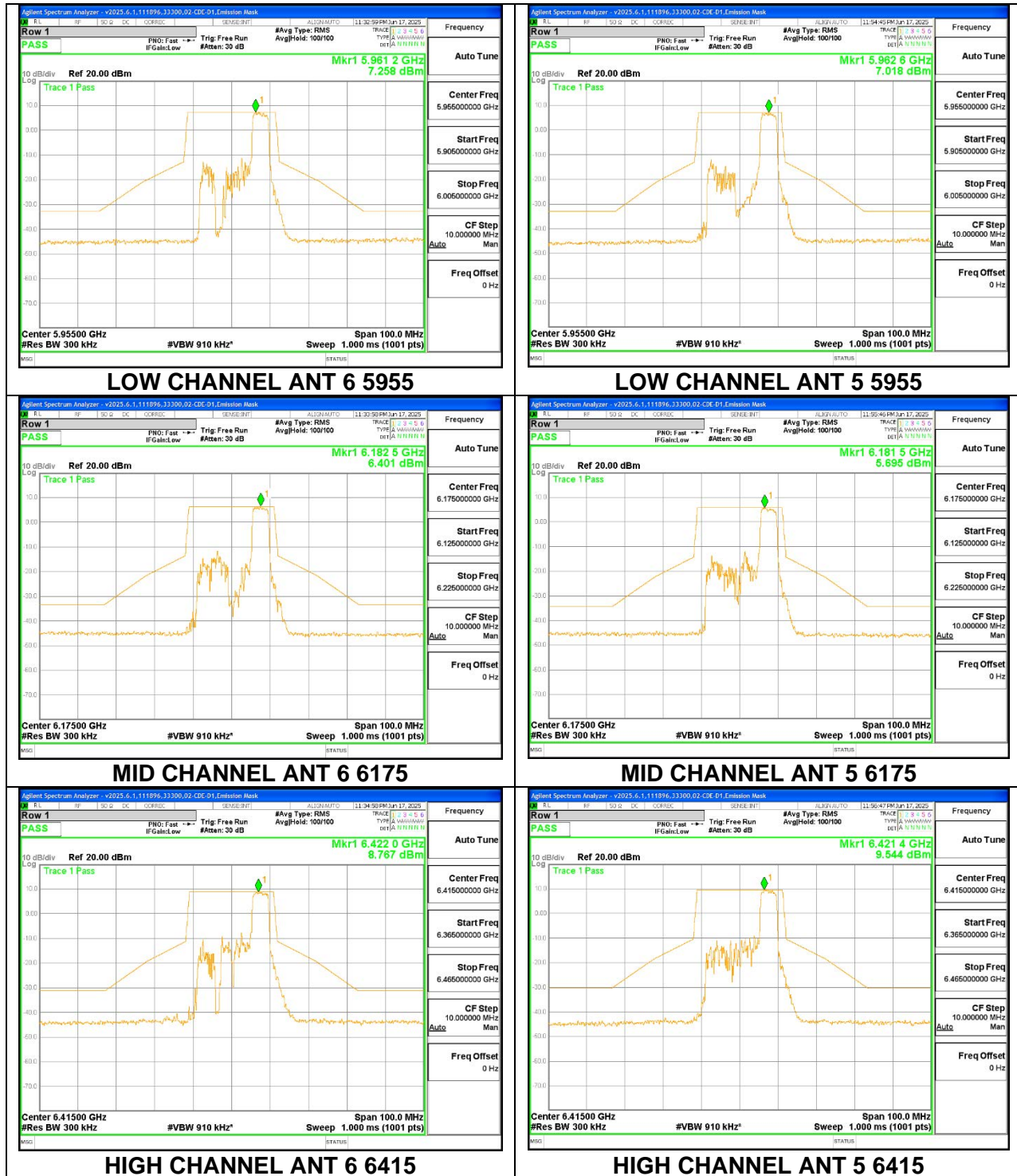
**Left Screenshot (Mid Channel Ant 6):**

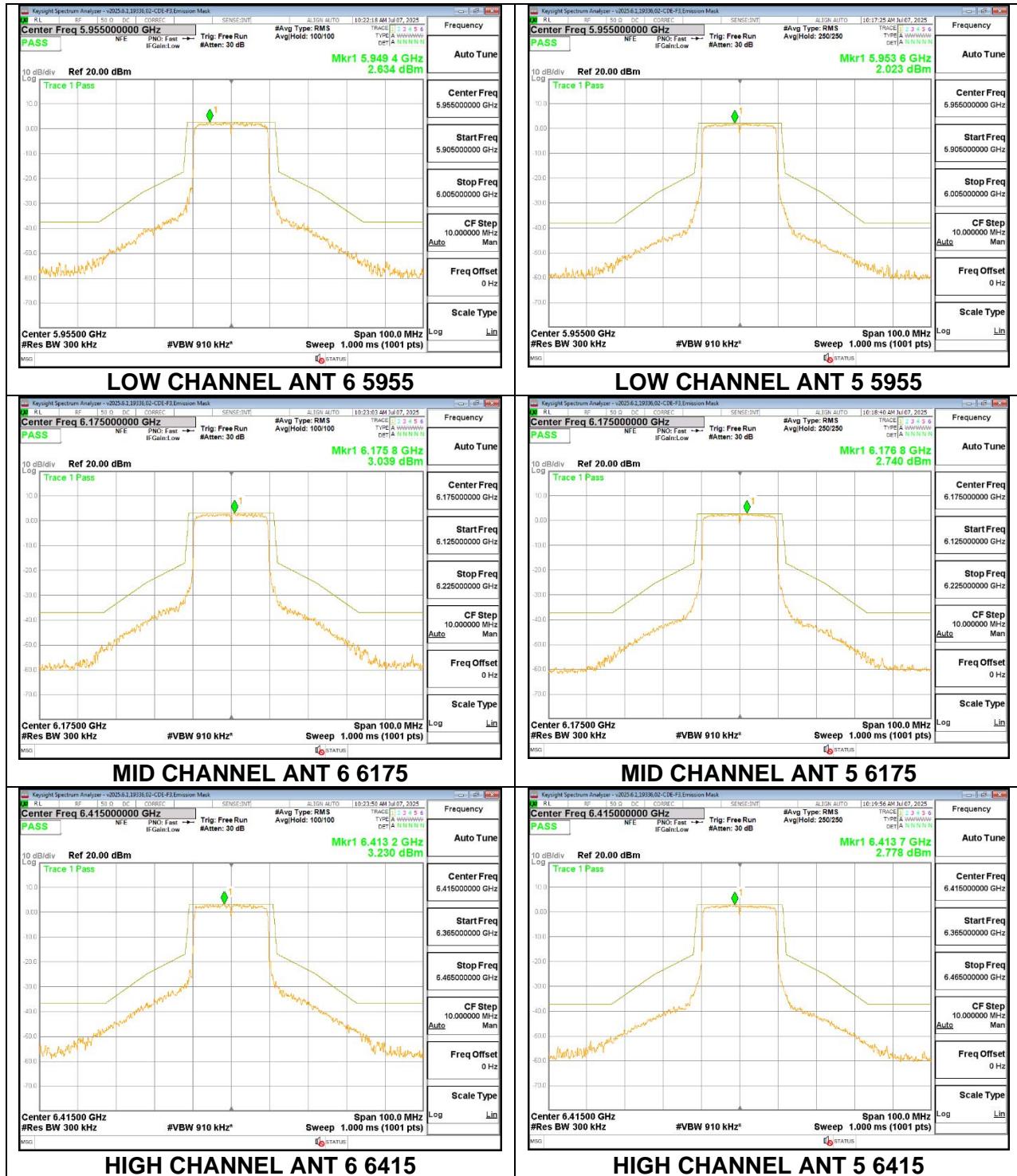
- Title:** Agilent Spectrum Analyzer - v2025-6.1.111996.33300.02 CDE-D1-Emulator Host
- Row 1:** PASS
- PRO:** Fast
- Trig:** Free Run
- #Avg Type:** RMS
- Avg/Hold:** 100/100
- Frequency:** 6.175 GHz
- Auto Tune:** OFF
- Center Freq:** 6.175000000 GHz
- Start Freq:** 6.125000000 GHz
- Stop Freq:** 6.225000000 GHz
- CF Step:** 10.000000 MHz
- CF Step:** Man
- Freq Offset:** 0 Hz
- Ref:** 20.00 dBm
- Trace 1:** Pass
- Marker 1:** 6.172 1 GHz, 6.084 dBm
- Center:** 6.17500 GHz
- Span:** 100.0 MHz
- Res:** BW 300 kHz
- Sweep:** 1.000 ms (1001 pts)
- VBW:** 910 kHz

**Right Screenshot (Mid Channel Ant 5):**

- Title:** Agilent Spectrum Analyzer - v2025-6.1.111996.33300.02 CDE-D1-Emulator Host
- Row 1:** PASS
- PRO:** Fast
- Trig:** Free Run
- #Avg Type:** RMS
- Avg/Hold:** 100/100
- Frequency:** 6.175 GHz
- Auto Tune:** OFF
- Center Freq:** 6.175000000 GHz
- Start Freq:** 6.125000000 GHz
- Stop Freq:** 6.225000000 GHz
- CF Step:** 10.000000 MHz
- CF Step:** Man
- Freq Offset:** 0 Hz
- Ref:** 20.00 dBm
- Trace 1:** Pass
- Marker 1:** 6.172 4 GHz, 6.155 dBm
- Center:** 6.17500 GHz
- Span:** 100.0 MHz
- Res:** BW 300 kHz
- Sweep:** 1.000 ms (1001 pts)
- VBW:** 910 kHz

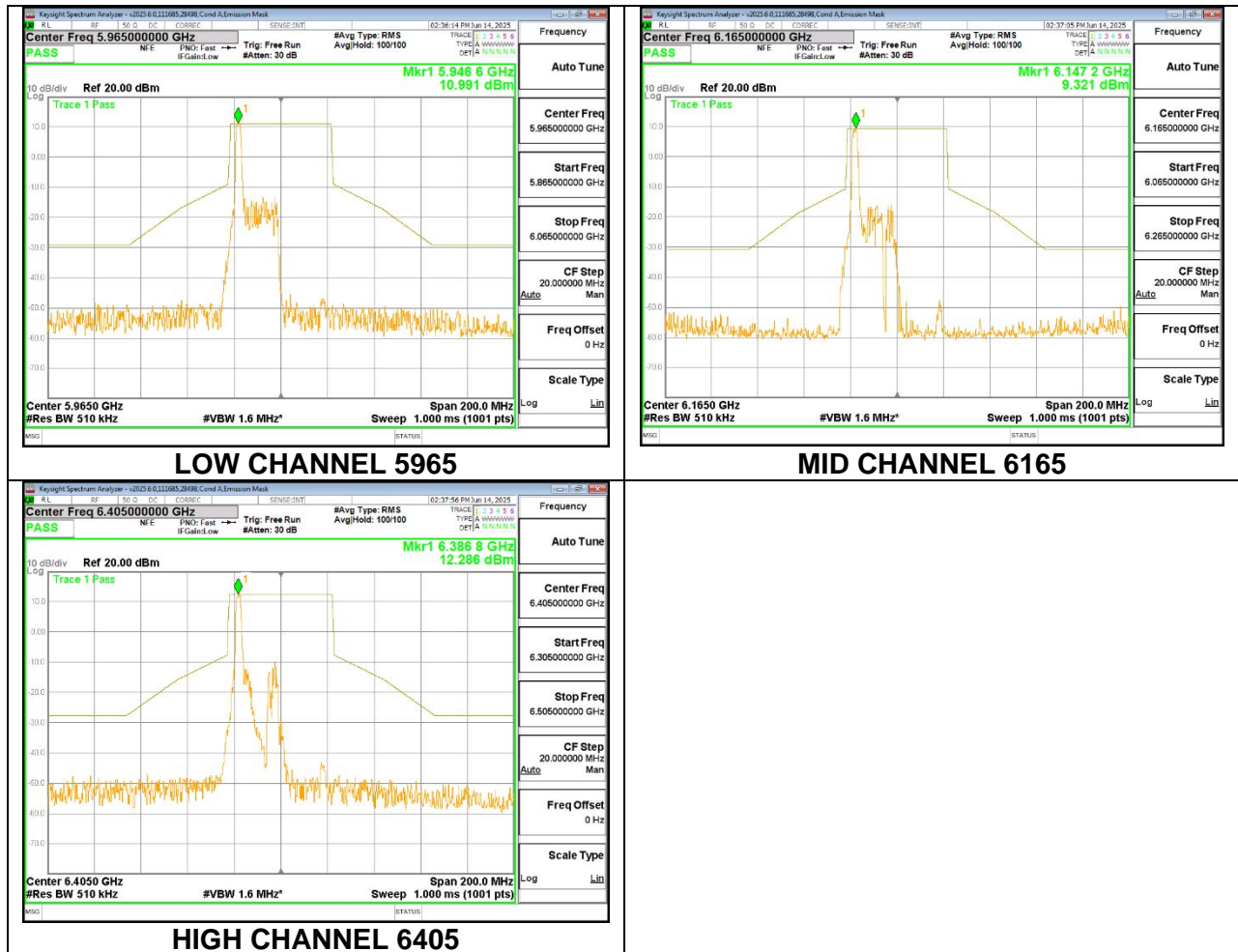


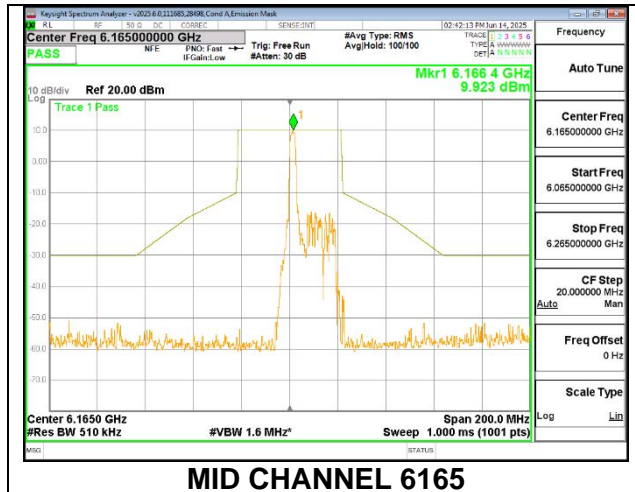
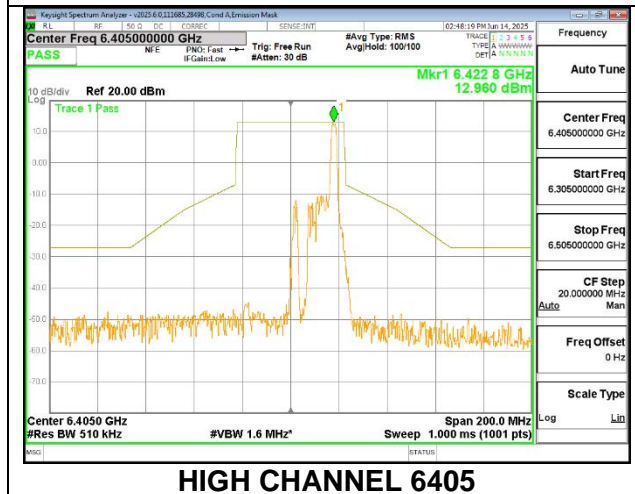
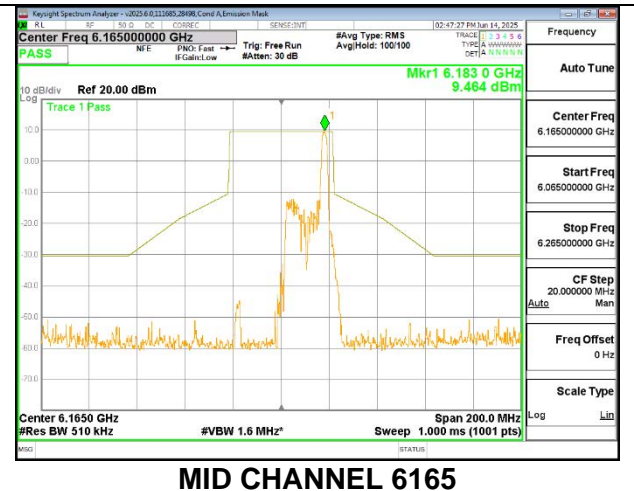
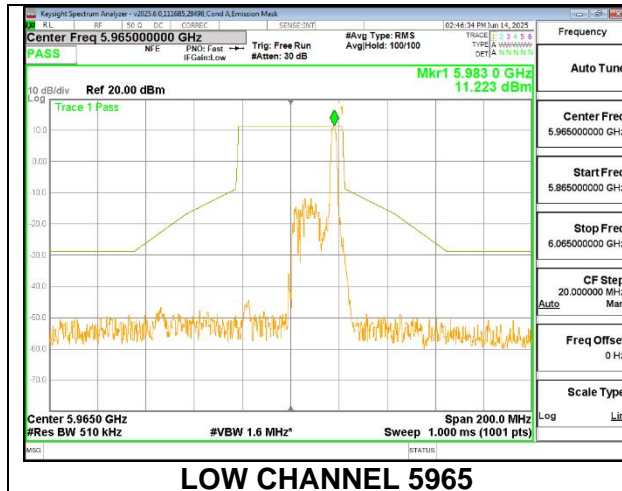
**2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – 52-Tones, RU Index 40**

**2TX Antenna 6 + Antenna 5 SDM MODE (FCC + IC) – SU MODE**

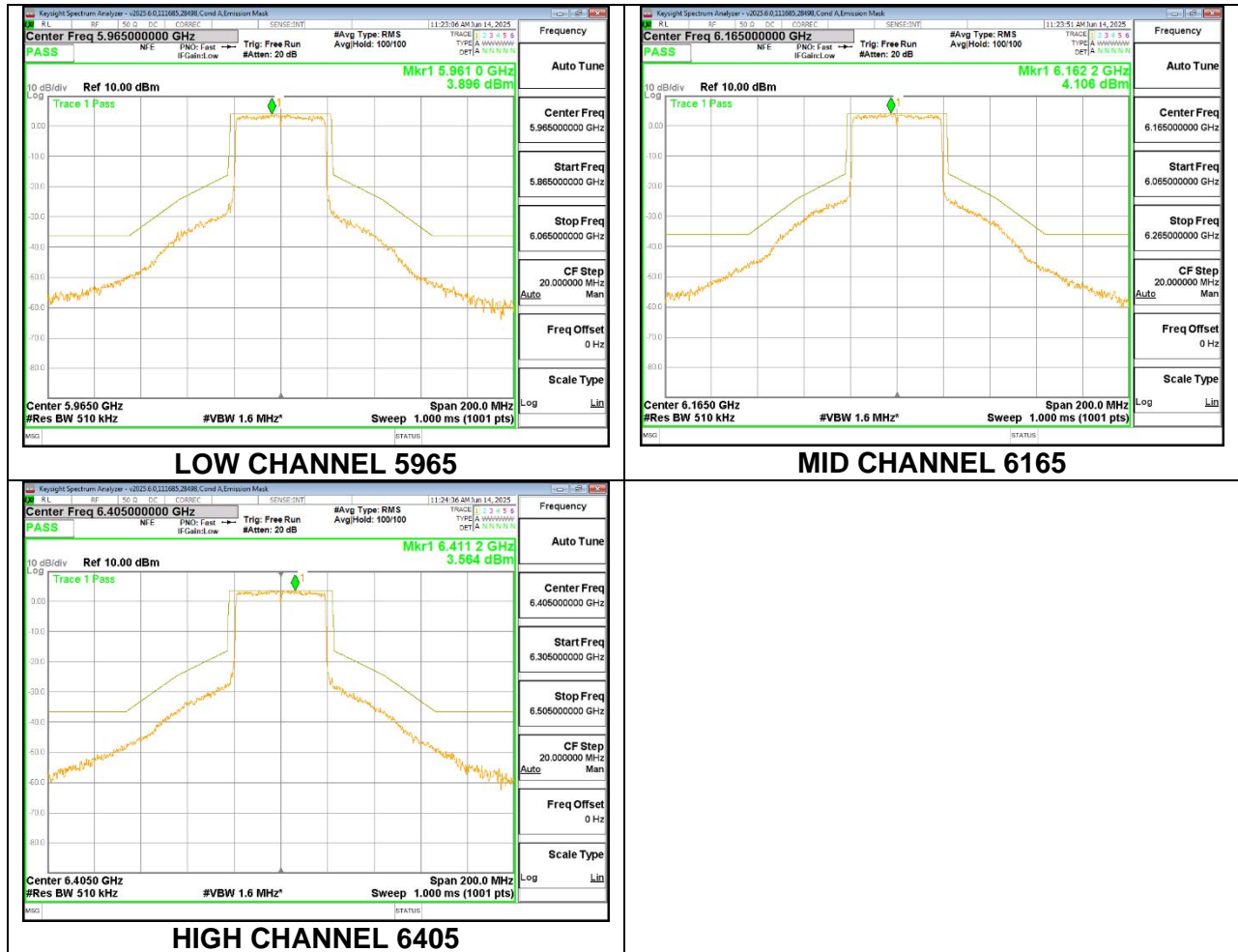
## 9.9.2. 802.11be EHT40 MODE IN THE UNII-5 BAND

### 1TX Antenna 6 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 0

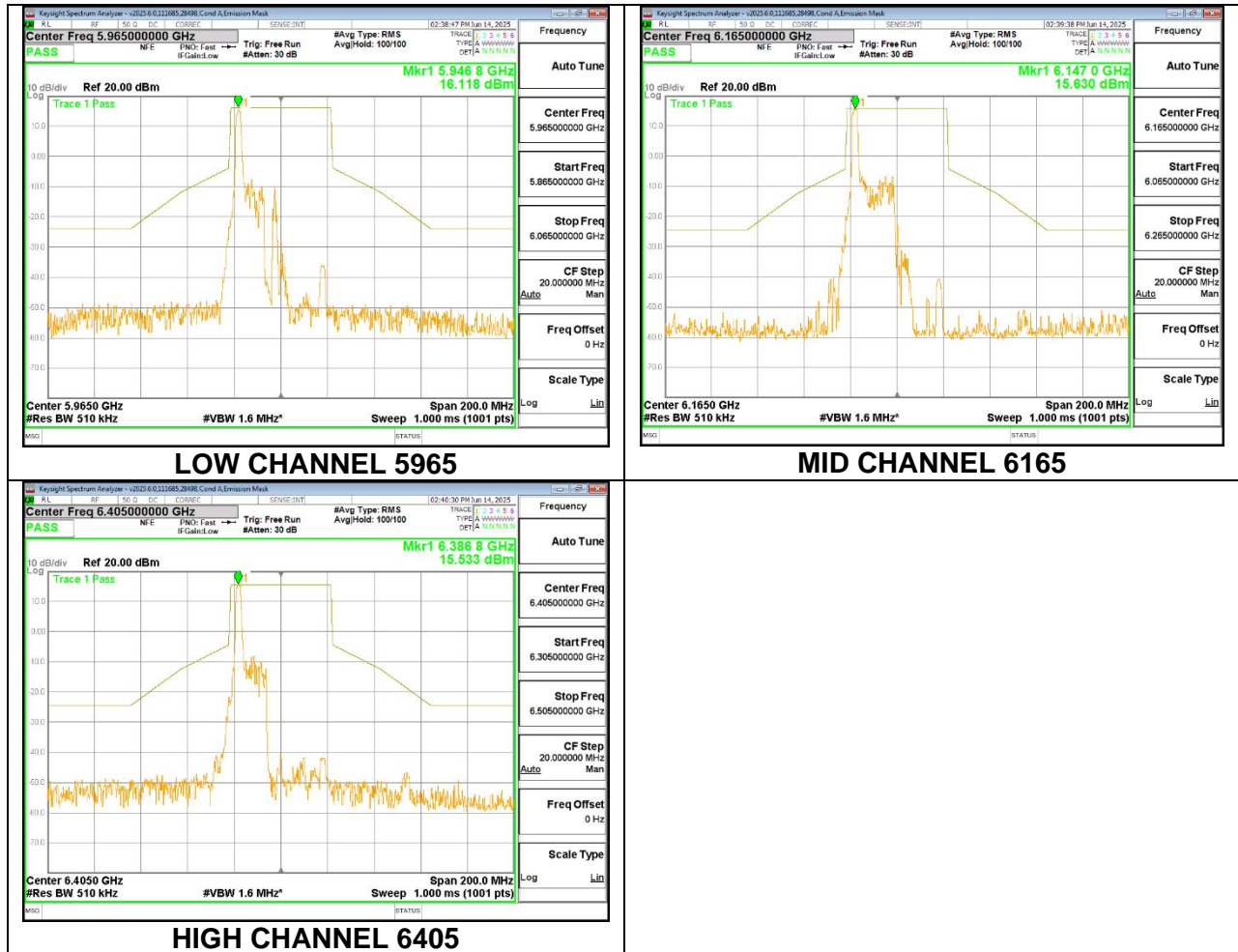


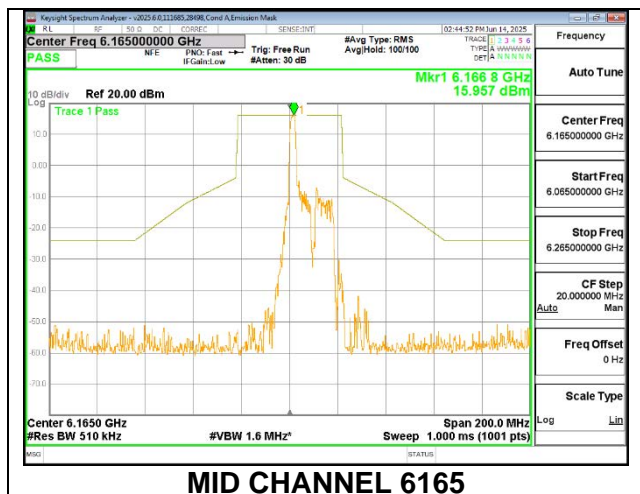
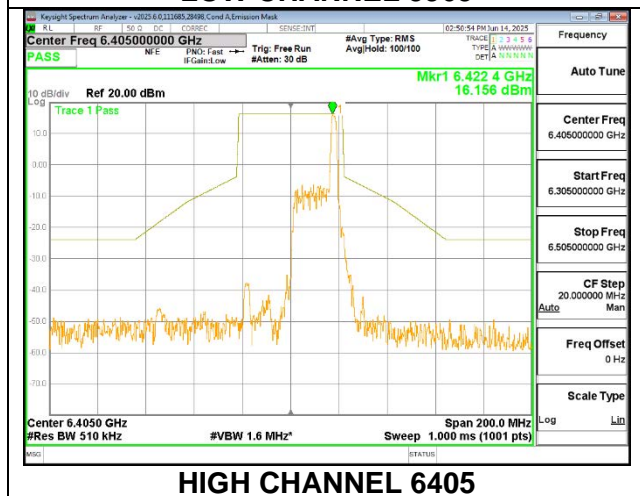
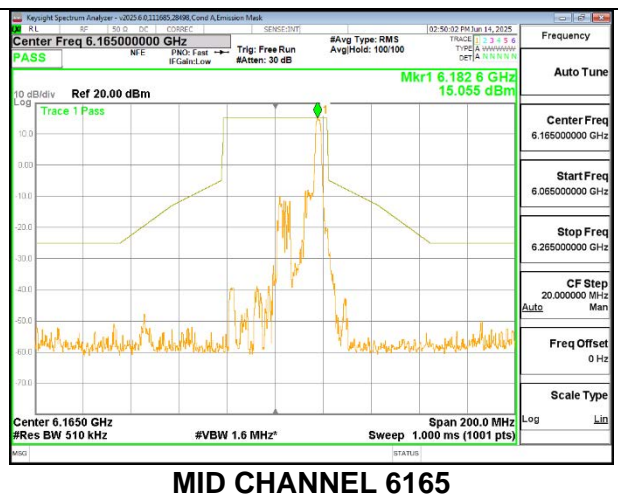
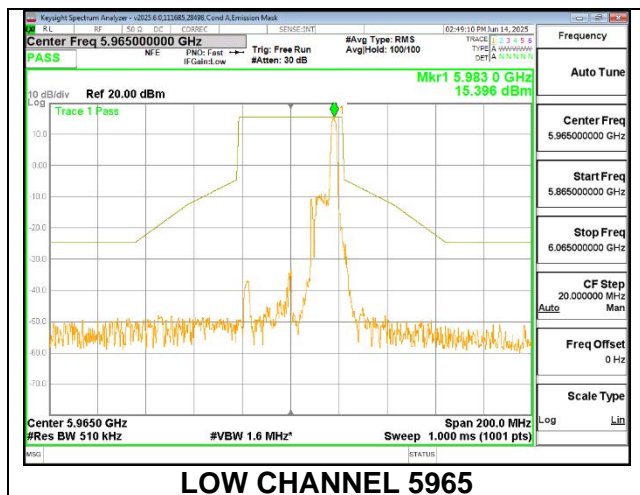
**1TX Antenna 6 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 9****1TX Antenna 6 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 17**

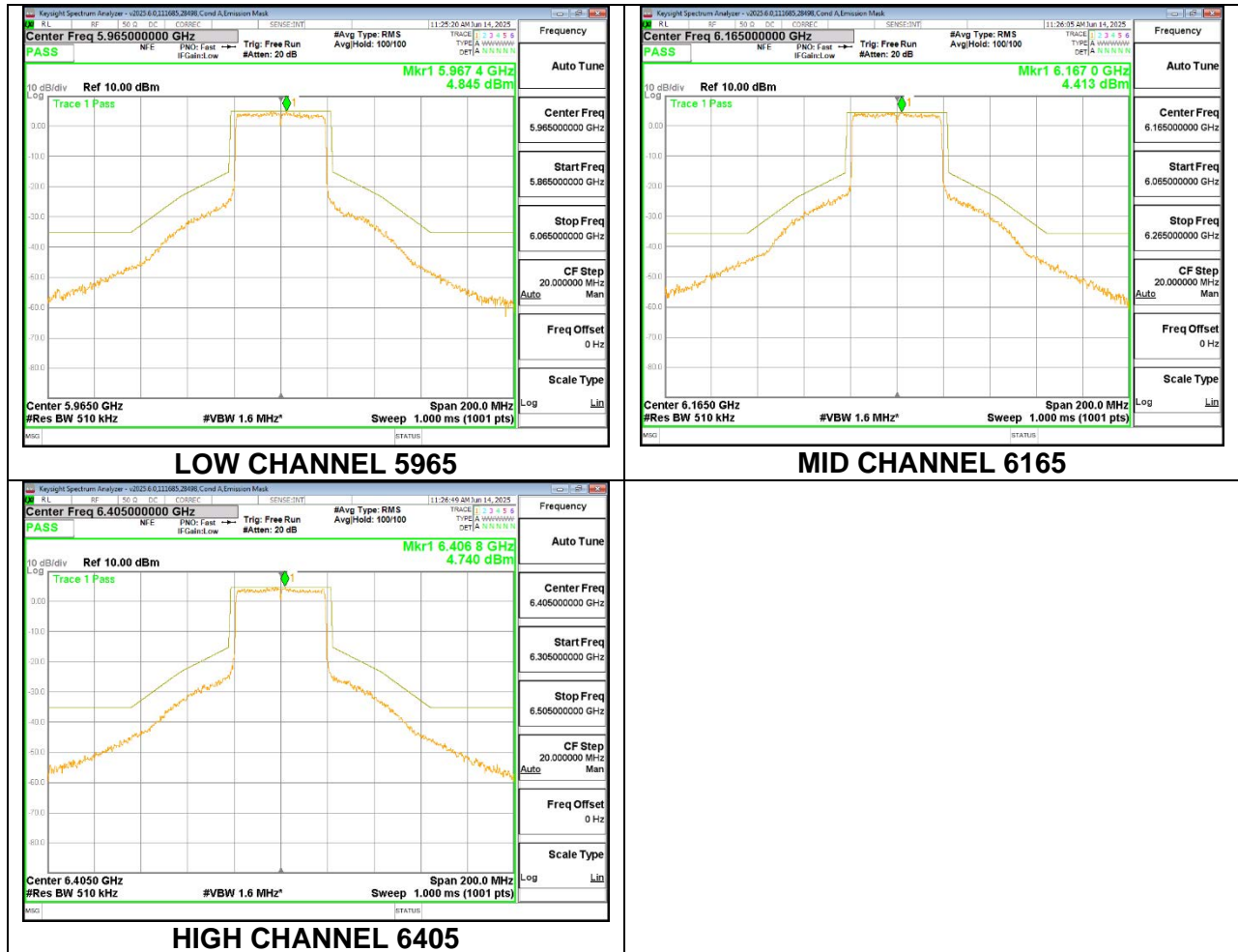


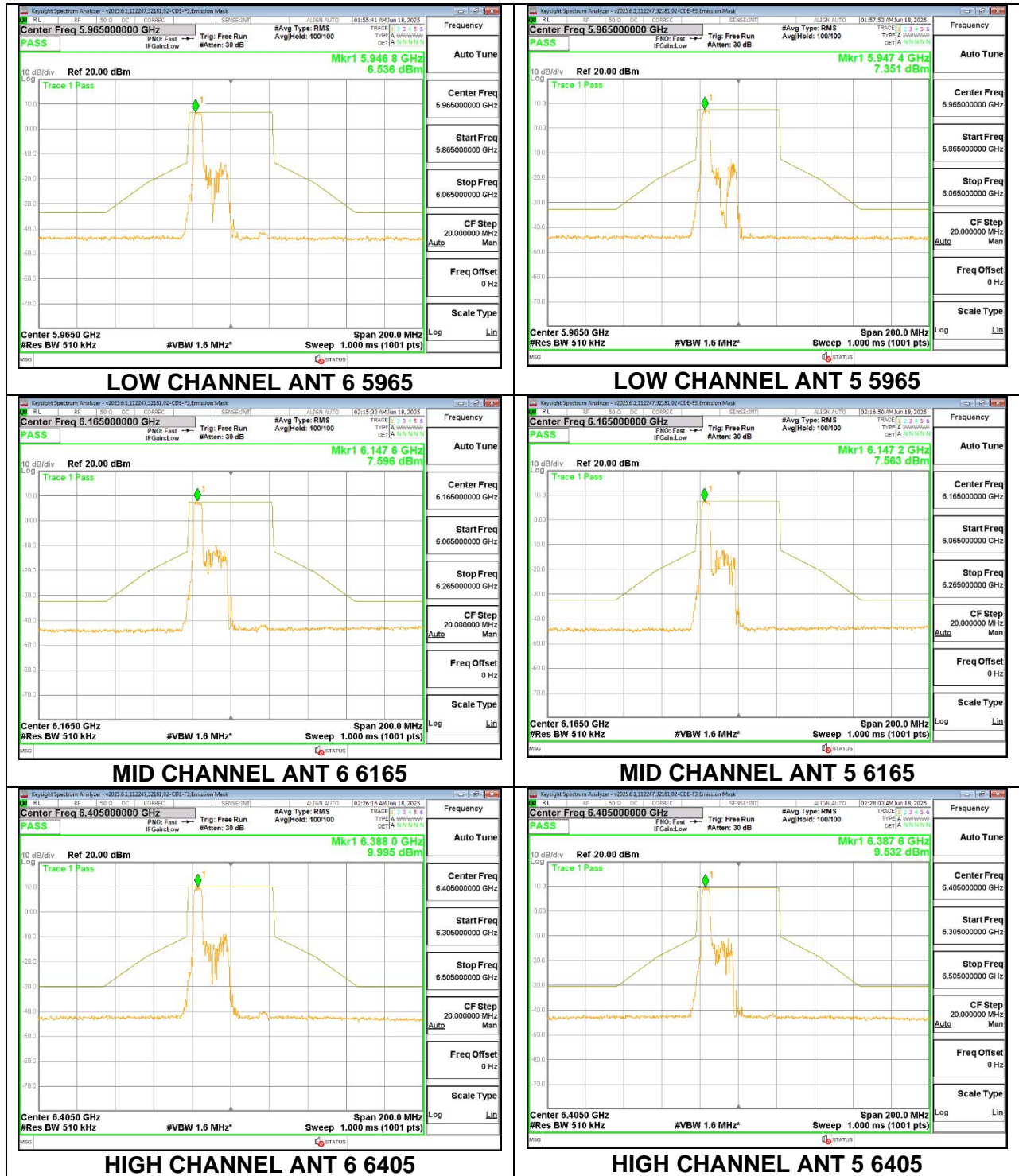
**1TX Antenna 6 MODE (FCC+IC) MOBILE – SU MODE**



**1TX Antenna 5 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 0**

**1TX Antenna 5 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 9****1TX Antenna 5 MODE (FCC+IC) MOBILE – 26-Tones, RU Index 17**

**1TX Antenna 5 MODE (FCC+IC) MOBILE – SU MODE**

**2TX CDD MODE (FCC + IC) – 52-Tones, RU Index 37**

**2TX CDD MODE (FCC + IC) – 52-Tones, RU Index 41**