# 9.10. VLP SPURIOUS EMMISSIONS IN-BAND– EMISSION MASK

**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 v01r01, Section II-J, RBW & VBW settings were based on 26dB bandwidth test settings. Only Partial RU 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-5/6/7/8 | Partial RU | 52+26T: 300kHz/910kHz<br>106T: 300kHz/910kHz<br>106+26T: 300kHz/910kHz | 52T: 510kHz/1.6MHz<br>106T: 510kHz/1.6MHz<br>106+26T: 510kHz/1.6MHz<br>242T: 510kHz/1.6MHz | 106T: 510kHz/1.6MHz<br>106+26T: 510kHz/1.6MHz<br>242T: 510kHz/1.6MHz<br>484T: 510kHz/1.6MHz<br>484+242T: 1MHz/3MHz | 484T: 510kHz/1.6MHz<br>996T: 1MHz/3MHz<br>996+484T: 2MHz/6MHz |
| | SU | 300kHz/910kHz | 510kHz/1.6MHz | 1MHz/3MHz | 2MHz/6MHz |

*Different RBW/VBW settings 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 the worst case.



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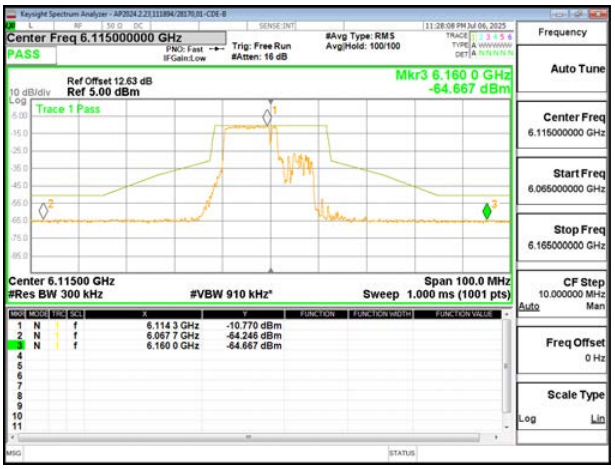
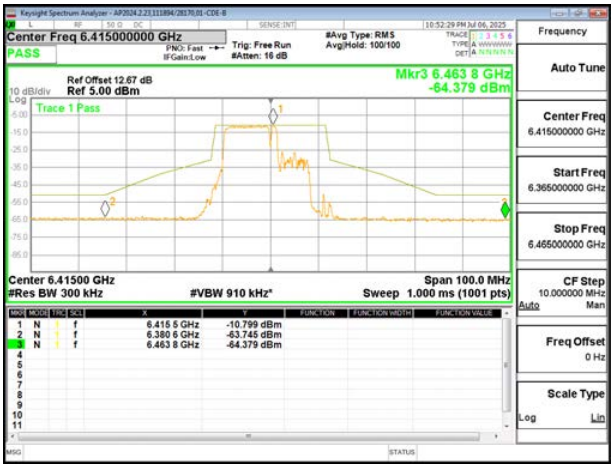
## 9.10.1. 802.11be EHT20 MODE IN THE UNII-5 BAND

**1TX Antenna 6 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 82**




**LOW CHANNEL 6115**


**MID CHANNEL 6275**




**HIGH CHANNEL 6415**



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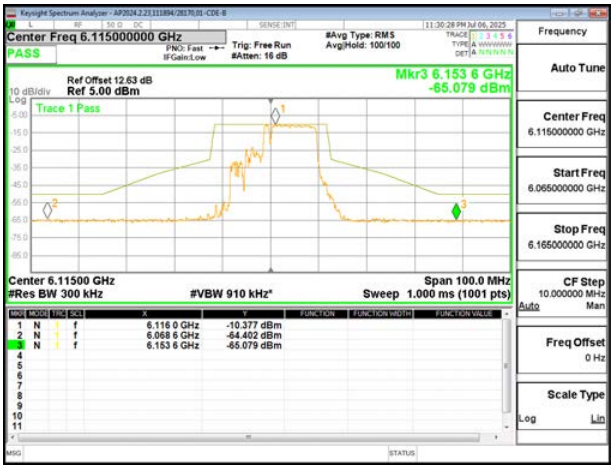
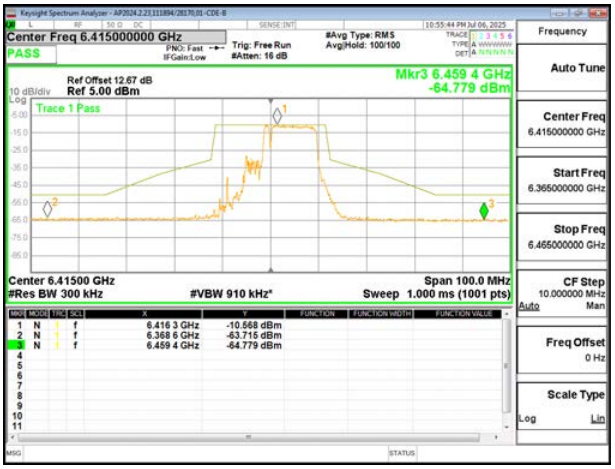
**1TX Antenna 6 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 83**




**LOW CHANNEL 6115**


**MID CHANNEL 6275**




**HIGH CHANNEL 6415**



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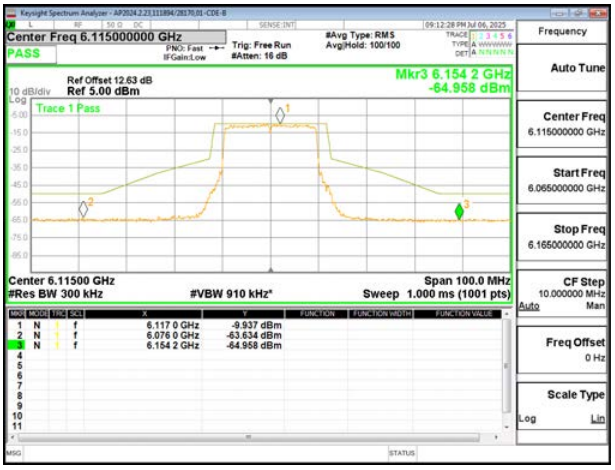
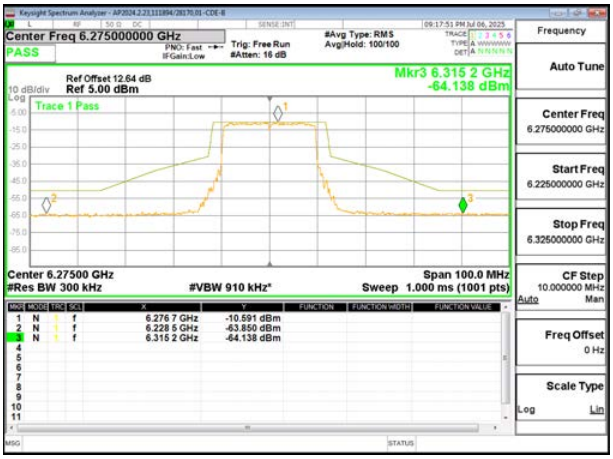
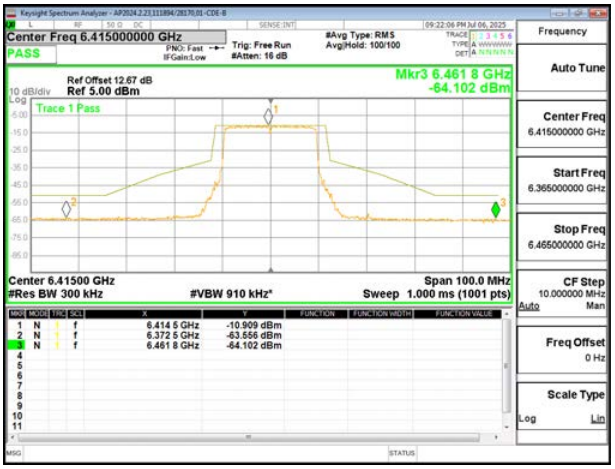
**1TX Antenna 6 MODE (FCC+IC) MOBILE – SU MODE**




**LOW CHANNEL 6115**




**MID CHANNEL 6275**




**HIGH CHANNEL 6415**



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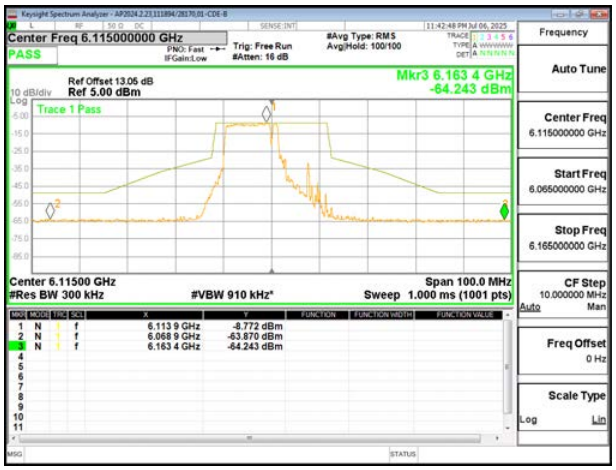
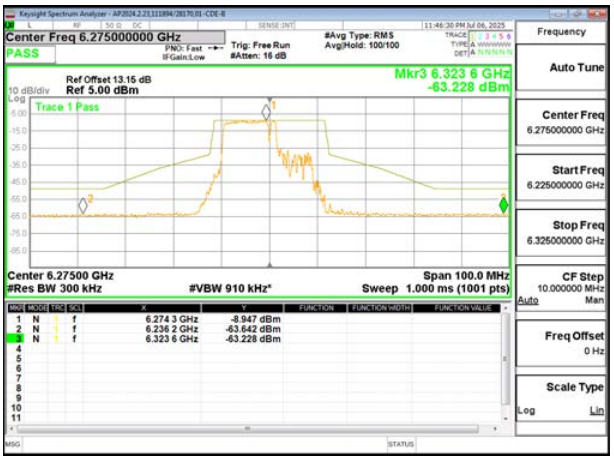
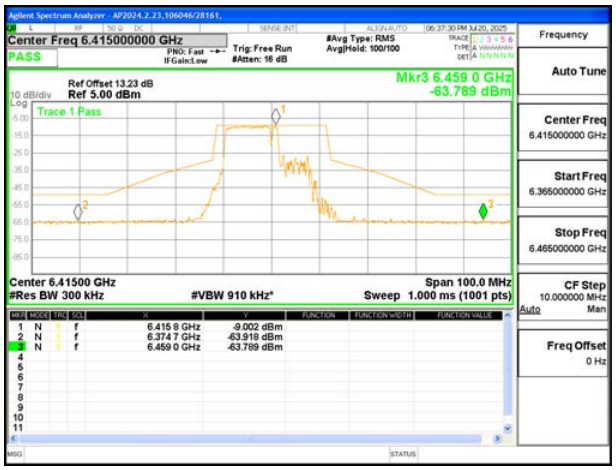
**1TX Antenna 5 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 82**




**LOW CHANNEL 6115**




**MID CHANNEL 6275**




**HIGH CHANNEL 6415**



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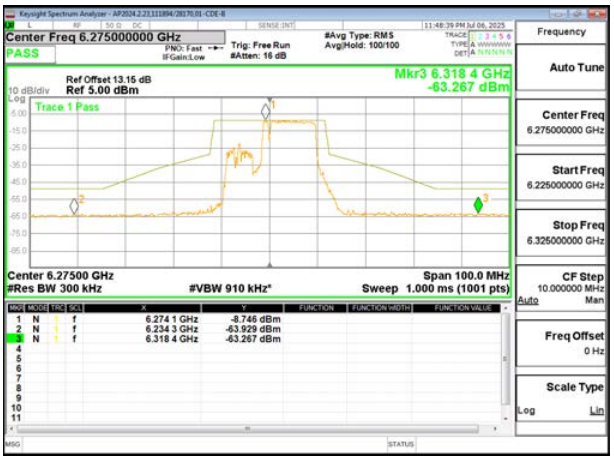
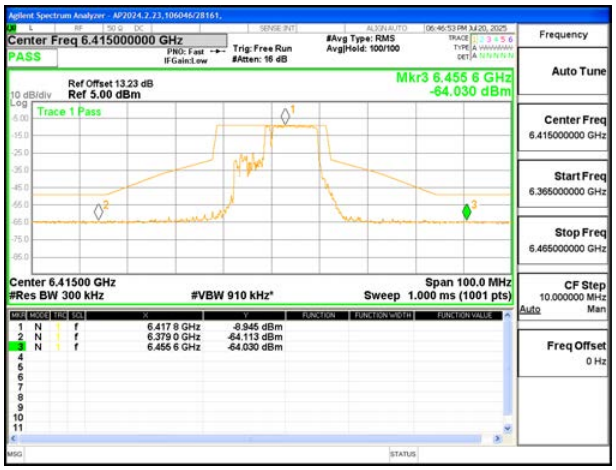
**1TX Antenna 5 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 83**


**LOW CHANNEL 6115**




**MID CHANNEL 6275**




**HIGH CHANNEL 6415**



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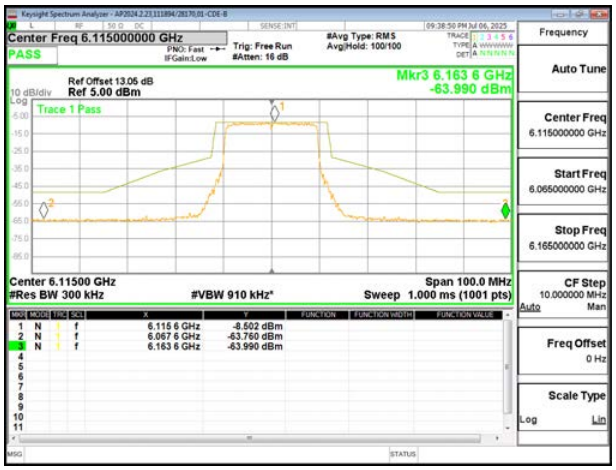
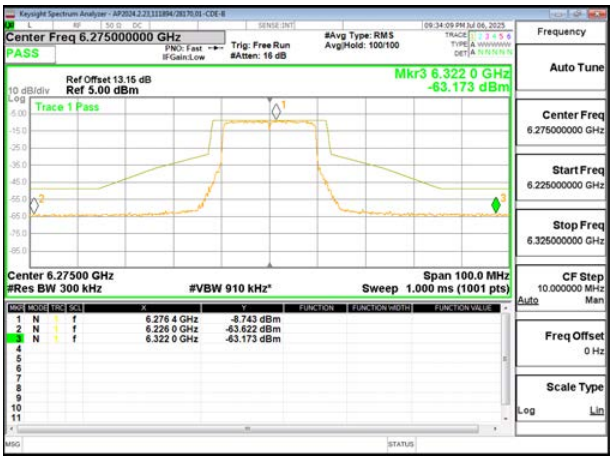
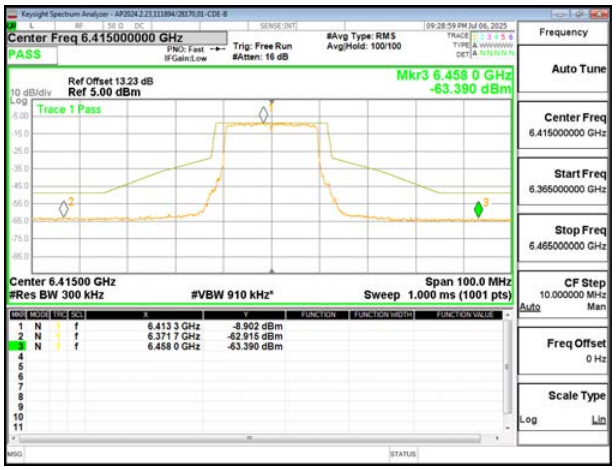
**1TX Antenna 5 MODE (FCC+IC) MOBILE – SU MODE**




**LOW CHANNEL 6115**




**MID CHANNEL 6275**




**HIGH CHANNEL 6415**



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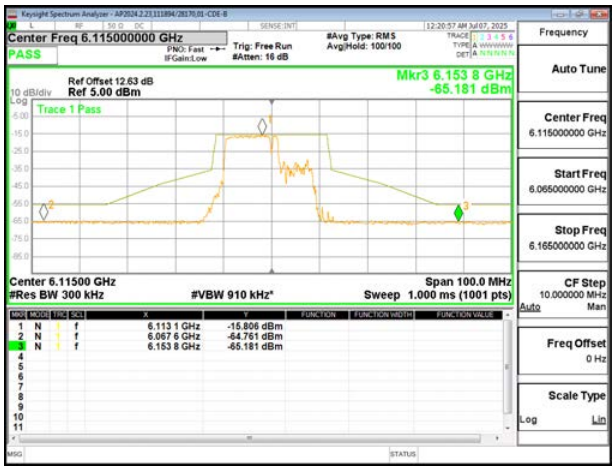
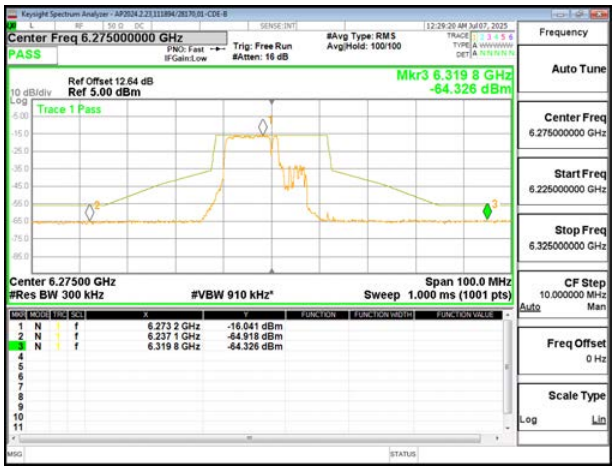
**2TX Antenna 6 + Antenna 5 CDD MODE (FCC+IC) – 106+26-Tone, RU Index 82**




**LOW CHANNEL ANT 6 6115**


**LOW CHANNEL ANT 5 6115**




**MID CHANNEL ANT 6 6275**


**MID CHANNEL ANT 5 6275**


**HIGH CHANNEL ANT 6 6415**


**HIGH CHANNEL ANT 5 6415**



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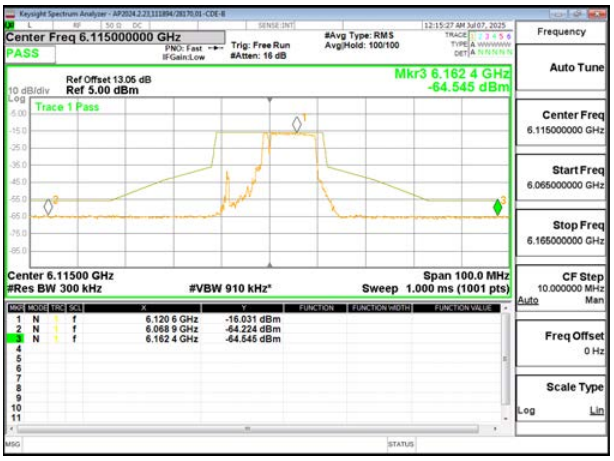
**2TX Antenna 6 + Antenna 5 CDD MODE (FCC+IC) – 106+26-Tone, RU Index 83**


**LOW CHANNEL ANT 6 6115**




**LOW CHANNEL ANT 5 6115**


**MID CHANNEL ANT 6 6275**


**MID CHANNEL ANT 5 6275**


**HIGH CHANNEL ANT 6 6415**


**HIGH CHANNEL ANT 5 6415**



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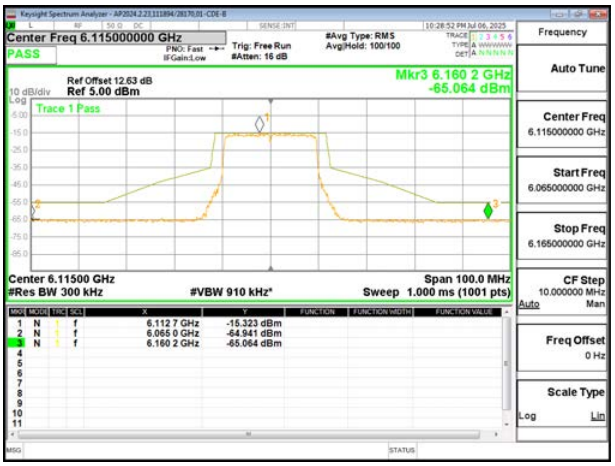
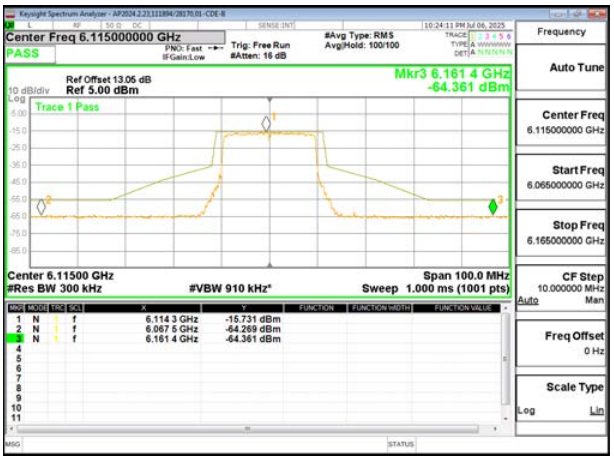
**2TX Antenna 6 + Antenna 5 CDD MODE (FCC+IC) – SU MODE**




**LOW CHANNEL ANT 6 6115**




**LOW CHANNEL ANT 5 6115**


**MID CHANNEL ANT 6 6275**


**MID CHANNEL ANT 5 6275**


**HIGH CHANNEL ANT 6 6415**


**HIGH CHANNEL ANT 5 6415**



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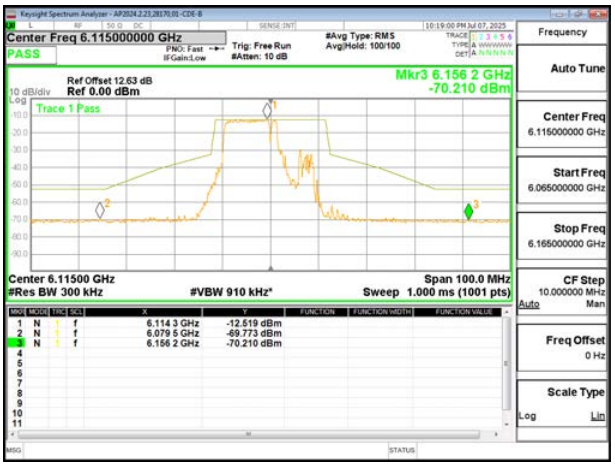
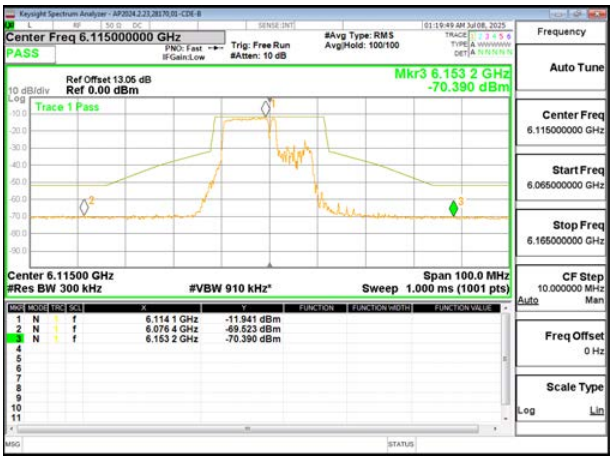
**2TX Antenna 6 + Antenna 5 SDM MODE (FCC+IC) – 106+26-Tone, RU Index 82**

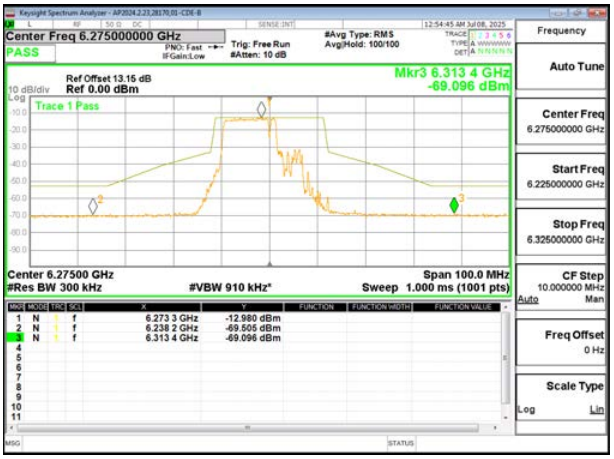



**LOW CHANNEL ANT 6 6115**

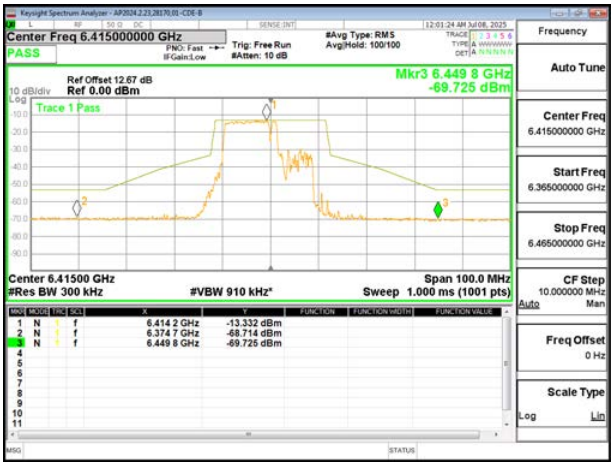



**LOW CHANNEL ANT 5 6115**


**MID CHANNEL ANT 6 6275**




**MID CHANNEL ANT 5 6275**




**HIGH CHANNEL ANT 6 6415**


**HIGH CHANNEL ANT 5 6415**



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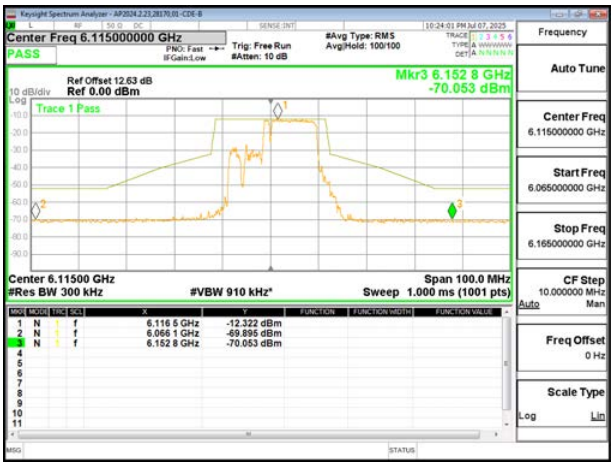
**2TX Antenna 6 + Antenna 5 SDM MODE (FCC+IC) – 106+26-Tone, RU Index 83**




**LOW CHANNEL ANT 6 6115**


**LOW CHANNEL ANT 5 6115**


**MID CHANNEL ANT 6 6275**


**MID CHANNEL ANT 5 6275**


**HIGH CHANNEL ANT 6 6415**


**HIGH CHANNEL ANT 5 6415**



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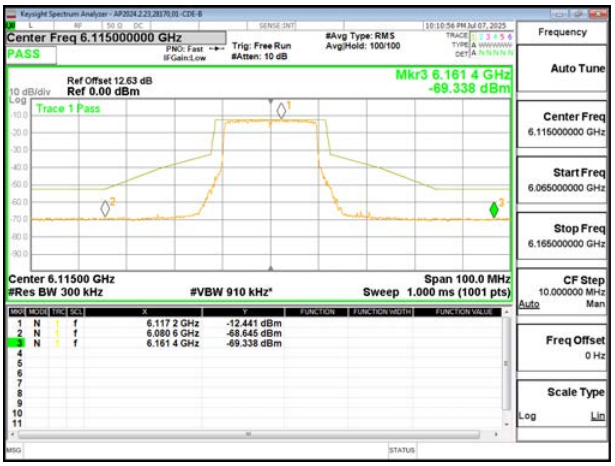
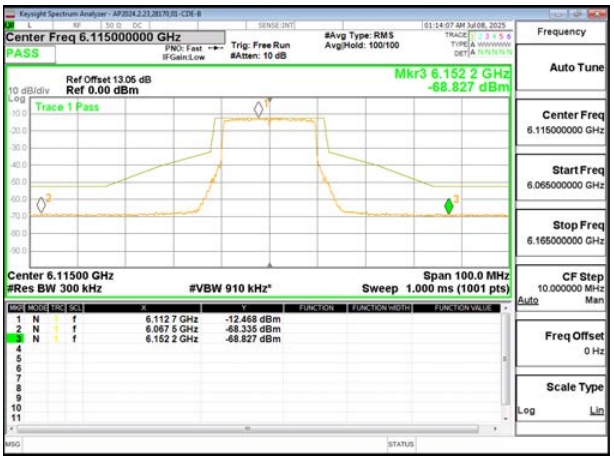
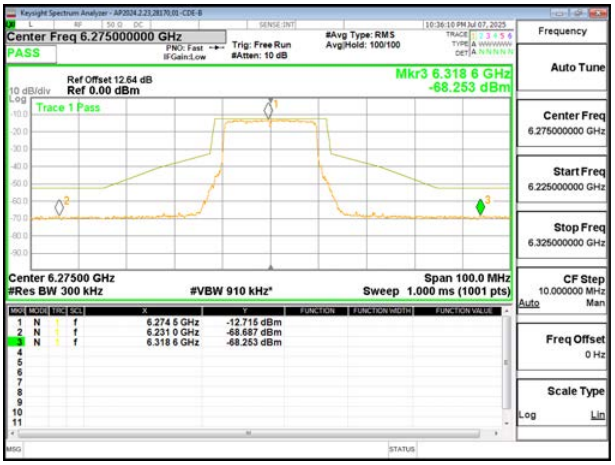
**2TX Antenna 6 + Antenna 5 SDM MODE (FCC+IC) – SU MODE**



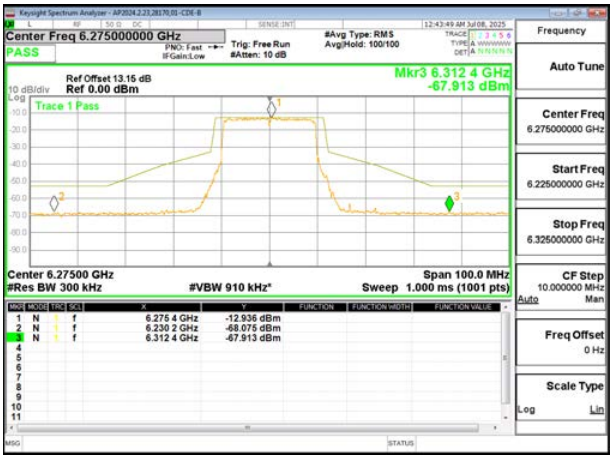

**LOW CHANNEL ANT 6 6115**



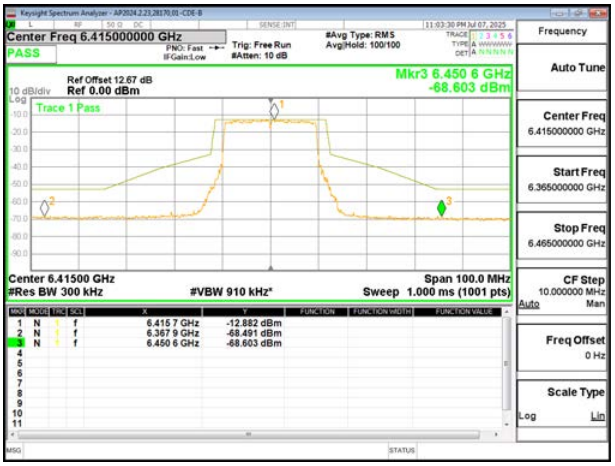

**LOW CHANNEL ANT 5 6115**



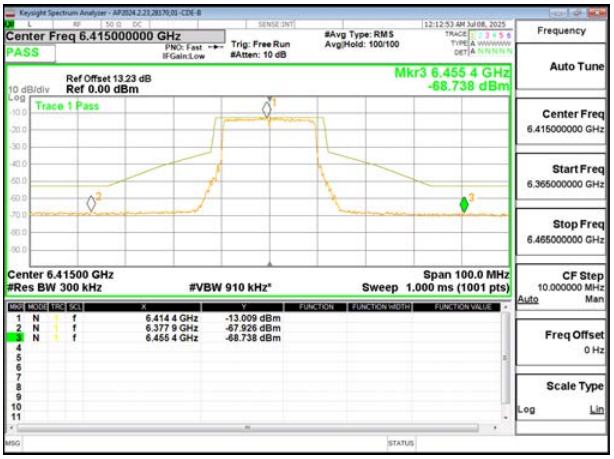

**MID CHANNEL ANT 6 6275**




**MID CHANNEL ANT 5 6275**




**HIGH CHANNEL ANT 6 6415**




**HIGH CHANNEL ANT 5 6415**



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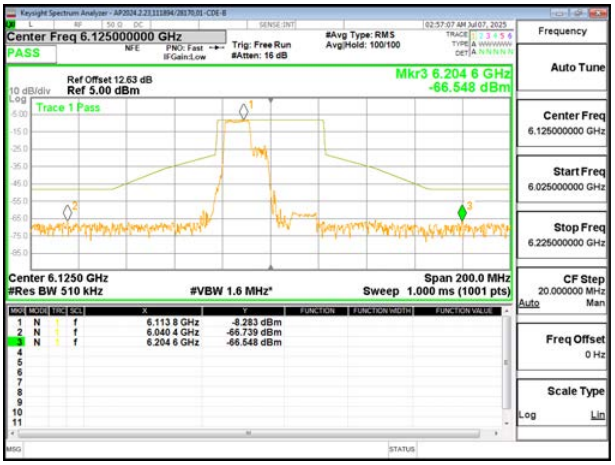
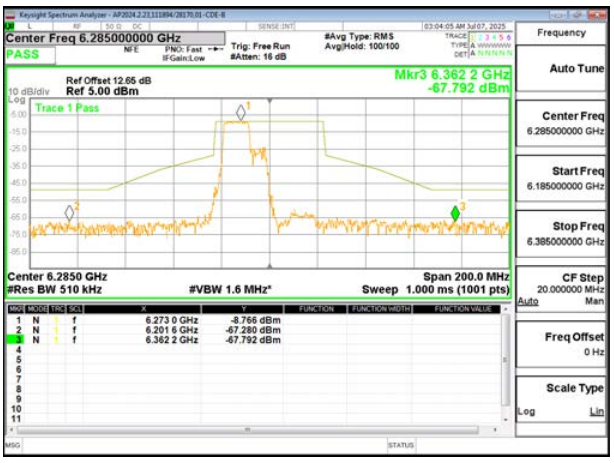
## 9.10.2. 802.11be EHT40 MODE IN THE UNII-5 BAND

**1TX Antenna 6 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 82**




**LOW CHANNEL 6125**




**MID CHANNEL 6285**


**HIGH CHANNEL 6405**



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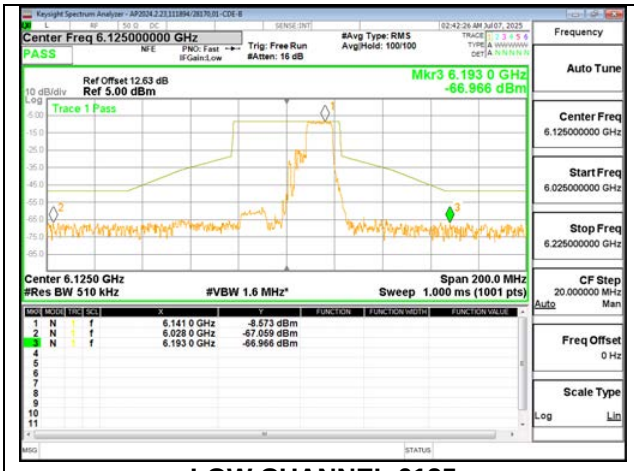
**1TX Antenna 6 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 84**


**MID CHANNEL 6285**

**1TX Antenna 6 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 85**




**LOW CHANNEL 6125**


**MID CHANNEL 6285**


**HIGH CHANNEL 6405**



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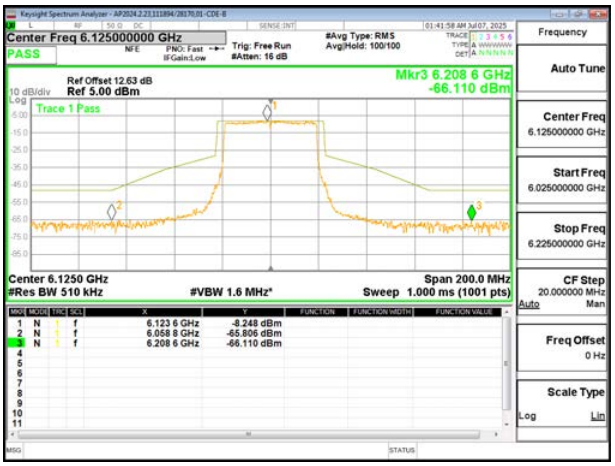
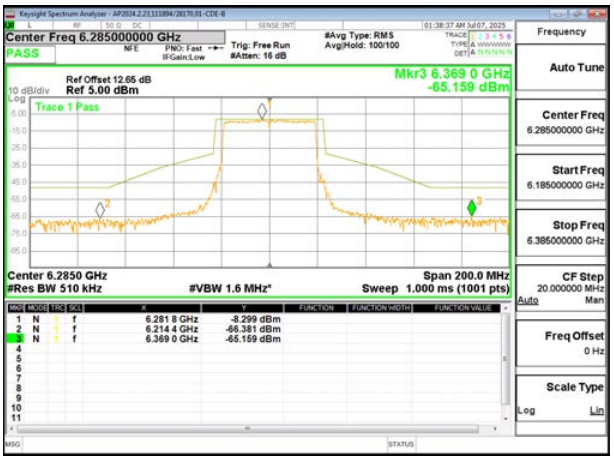
**1TX Antenna 6 MODE (FCC+IC) MOBILE – SU MODE**




**LOW CHANNEL 6125**




**MID CHANNEL 6285**


**HIGH CHANNEL 6405**



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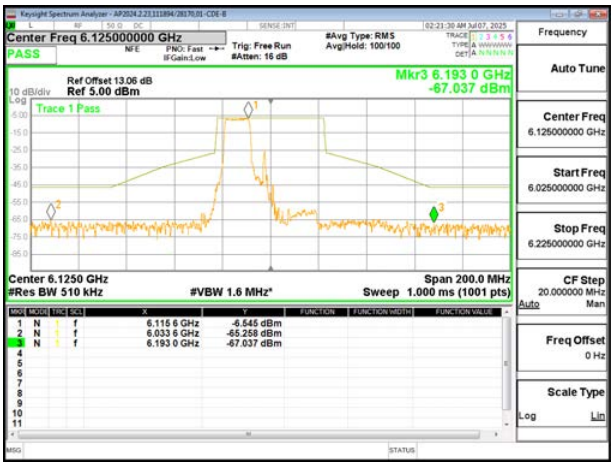
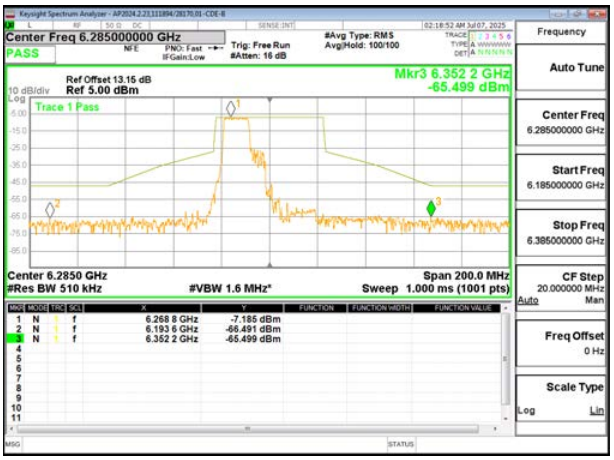
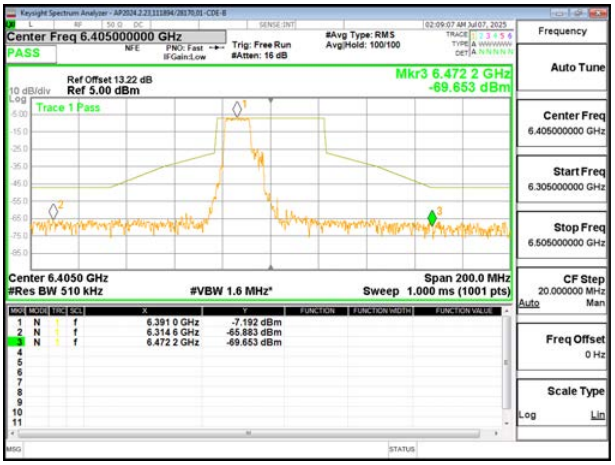
**1TX Antenna 5 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 82**




**LOW CHANNEL 6125**




**MID CHANNEL 6285**




**HIGH CHANNEL 6405**



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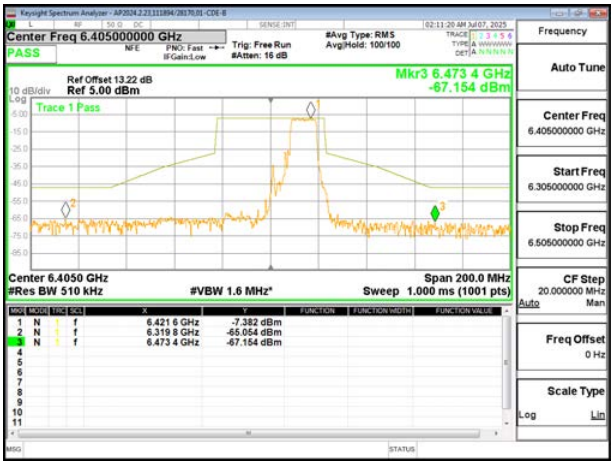
**1TX Antenna 5 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 84**


**MID CHANNEL 6285**

**1TX Antenna 5 MODE (FCC+IC) MOBILE – 106+26-Tone, RU Index 85**


**LOW CHANNEL 6125**


**MID CHANNEL 6285**




**HIGH CHANNEL 6405**



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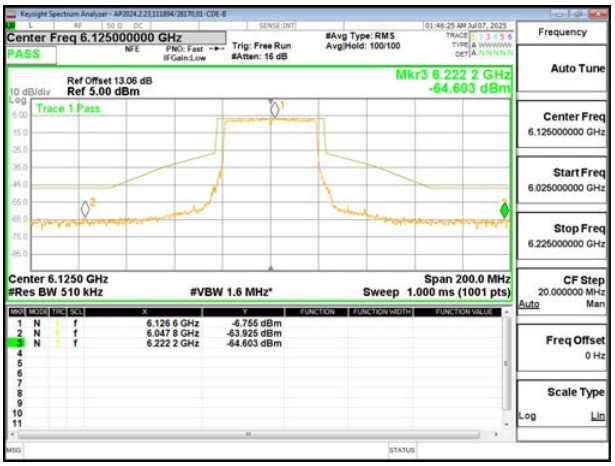
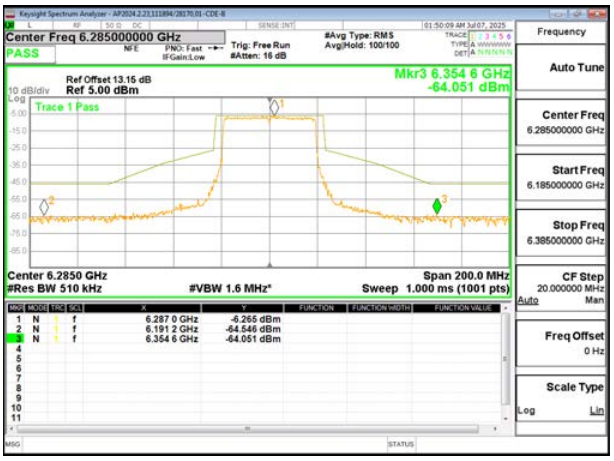
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

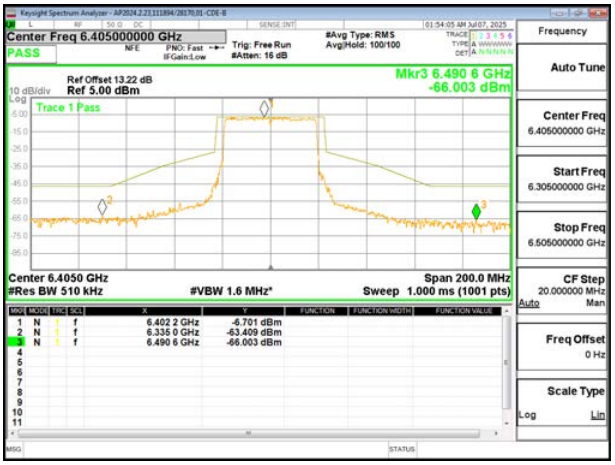
**1TX Antenna 5 MODE (FCC+IC) MOBILE – SU MODE**




**LOW CHANNEL 6125**




**MID CHANNEL 6285**




**HIGH CHANNEL 6405**



UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**2TX Antenna 6 + Antenna 5 CDD MODE (FCC+IC) – 106+26-Tone, RU Index 82**


**LOW CHANNEL ANT 6 6125**


**LOW CHANNEL ANT 5 6125**


**MID CHANNEL ANT 6 6285**


**MID CHANNEL ANT 5 6285**


**HIGH CHANNEL ANT 6 6405**


**HIGH CHANNEL ANT 5 6405**



UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**2TX Antenna 6 + Antenna 5 CDD MODE (FCC+IC) – 106+26-Tone, RU Index 84**


**MID CHANNEL ANT 6 6285**


**MID CHANNEL ANT 5 6285**



UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**2TX Antenna 6 + Antenna 5 CDD MODE (FCC+IC) – 106+26-Tone, RU Index 85**

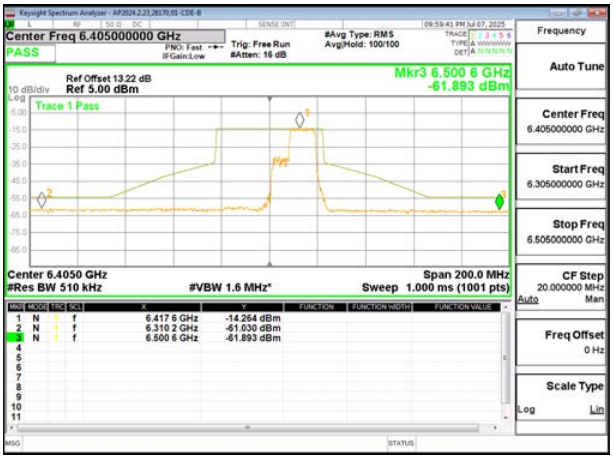

**LOW CHANNEL ANT 6 6125**


**LOW CHANNEL ANT 5 6125**


**MID CHANNEL ANT 6 6285**


**MID CHANNEL ANT 5 6285**


**HIGH CHANNEL ANT 6 6405**

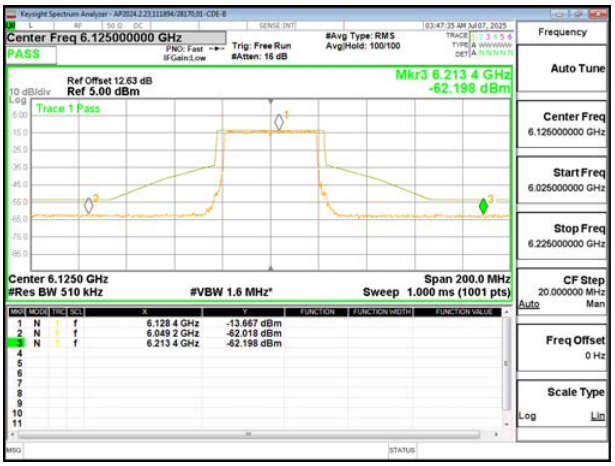



**HIGH CHANNEL ANT 5 6405**

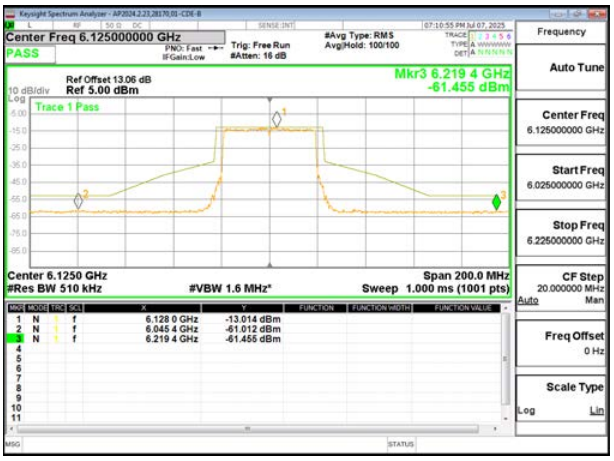


UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

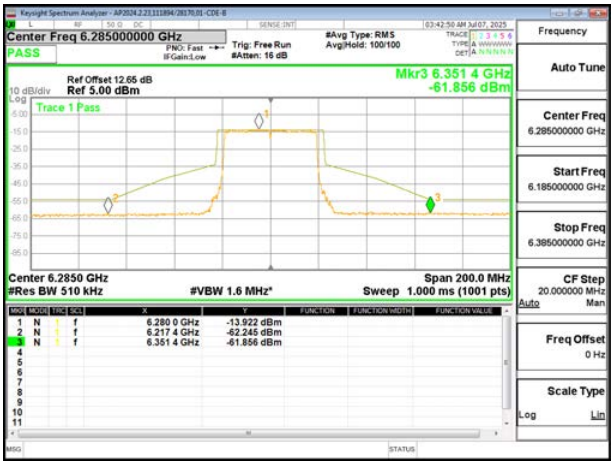
**2TX Antenna 6 + Antenna 5 CDD MODE (FCC+IC) – SU MODE**



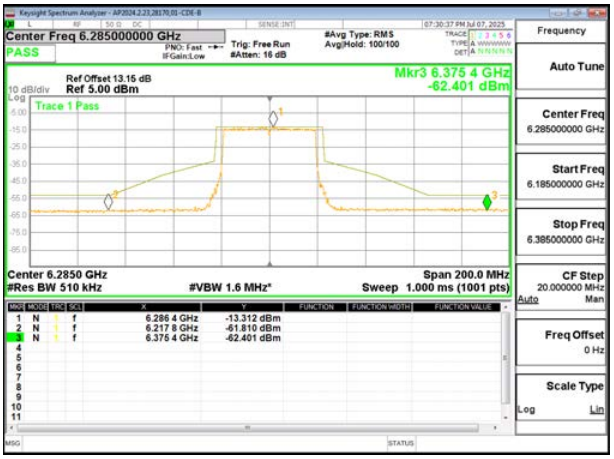

**LOW CHANNEL ANT 6 6125**



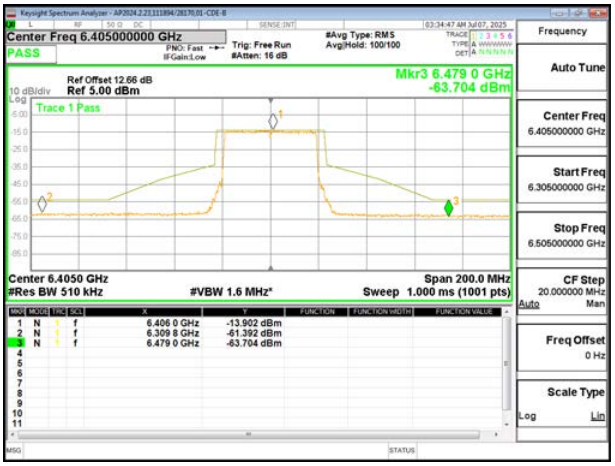

**LOW CHANNEL ANT 5 6125**



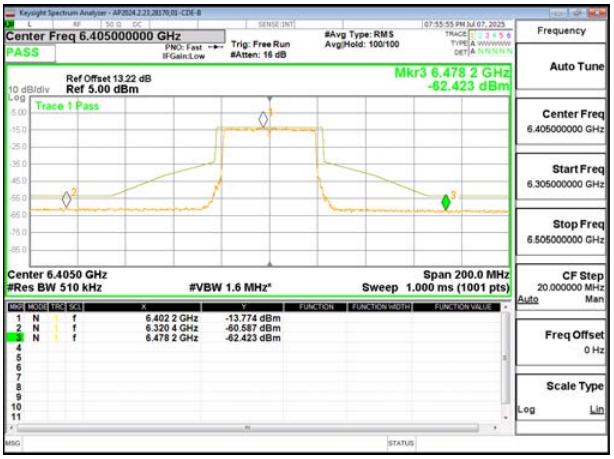

**MID CHANNEL ANT 6 6285**




**MID CHANNEL ANT 5 6285**




**HIGH CHANNEL ANT 6 6405**




**HIGH CHANNEL ANT 5 6405**

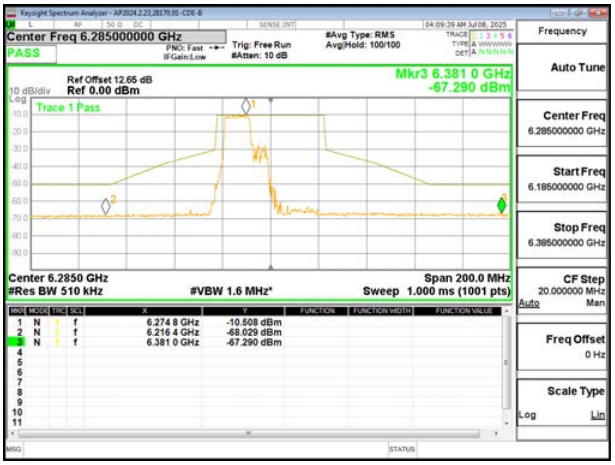


UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**2TX Antenna 6 + Antenna 5 SDM MODE (FCC+IC) – 106+26-Tone, RU Index 82**

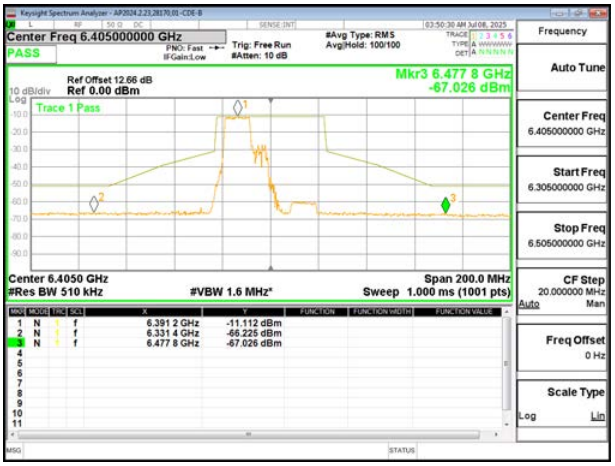

**LOW CHANNEL ANT 6 6125**


**LOW CHANNEL ANT 5 6125**




**MID CHANNEL ANT 6 6285**


**MID CHANNEL ANT 5 6285**




**HIGH CHANNEL ANT 6 6405**


**HIGH CHANNEL ANT 5 6405**



UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**2TX Antenna 6 + Antenna 5 SDM MODE (FCC+IC) – 106+26-Tone, RU Index 84**


**MID CHANNEL ANT 6 6285**


**MID CHANNEL ANT 5 6285**

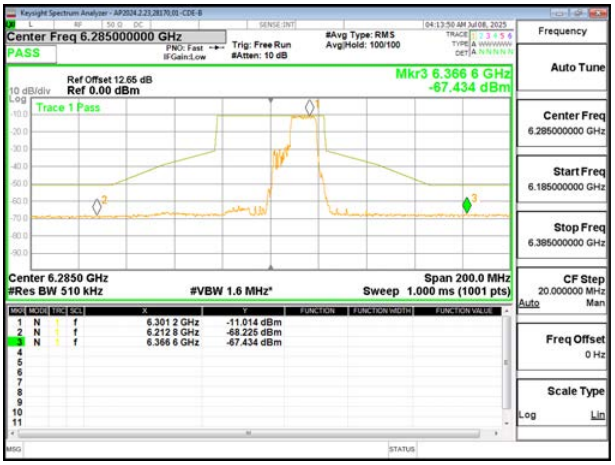


UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**2TX Antenna 6 + Antenna 5 SDM MODE (FCC+IC) – 106+26-Tone, RU Index 85**


**LOW CHANNEL ANT 6 6125**


**LOW CHANNEL ANT 5 6125**




**MID CHANNEL ANT 6 6285**


**MID CHANNEL ANT 5 6285**

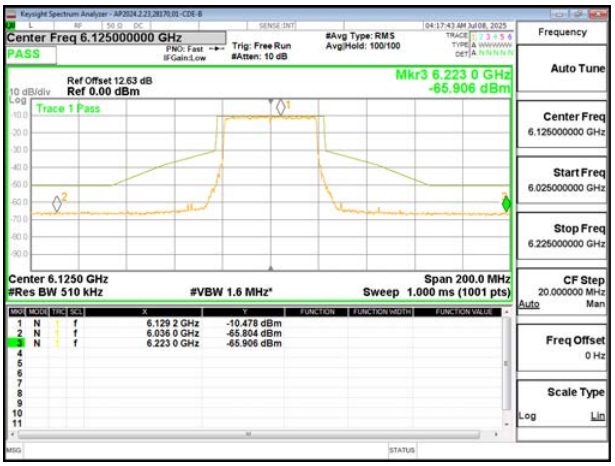

**HIGH CHANNEL ANT 6 6405**


**HIGH CHANNEL ANT 5 6405**

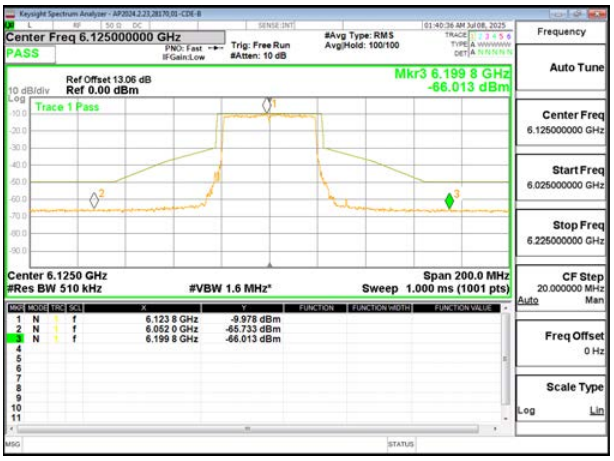


UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

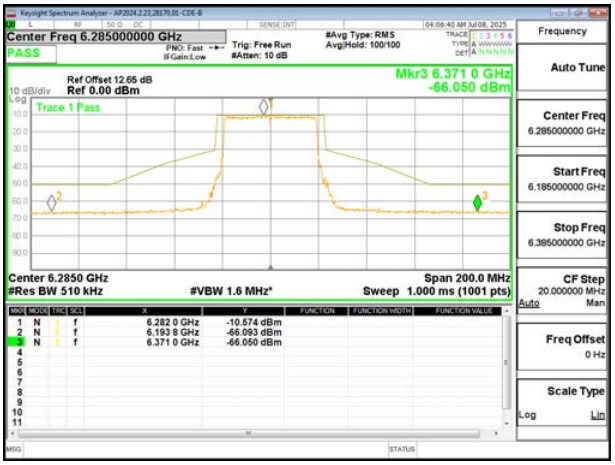
**2TX Antenna 6 + Antenna 5 SDM MODE (FCC+IC) – SU MODE**



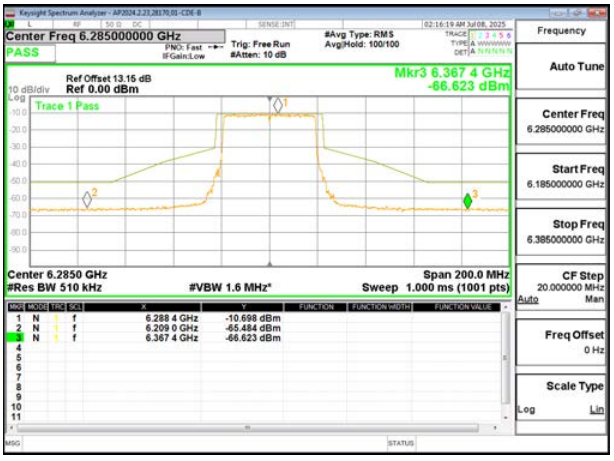

**LOW CHANNEL ANT 6 6125**



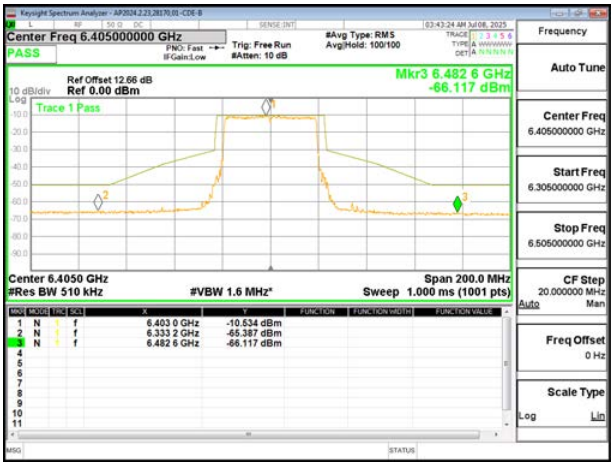

**LOW CHANNEL ANT 5 6125**



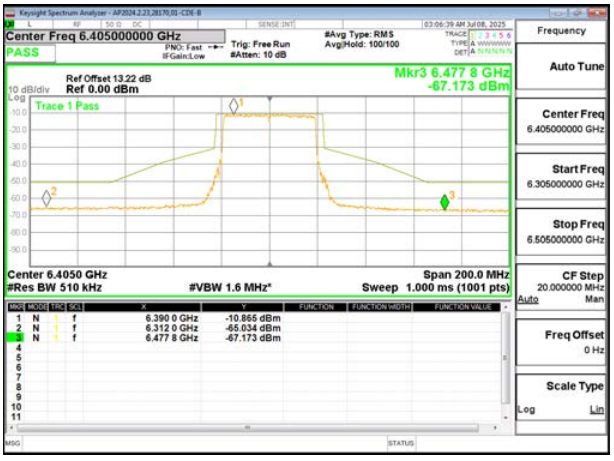

**MID CHANNEL ANT 6 6285**




**MID CHANNEL ANT 5 6285**




**HIGH CHANNEL ANT 6 6405**




**HIGH CHANNEL ANT 5 6405**



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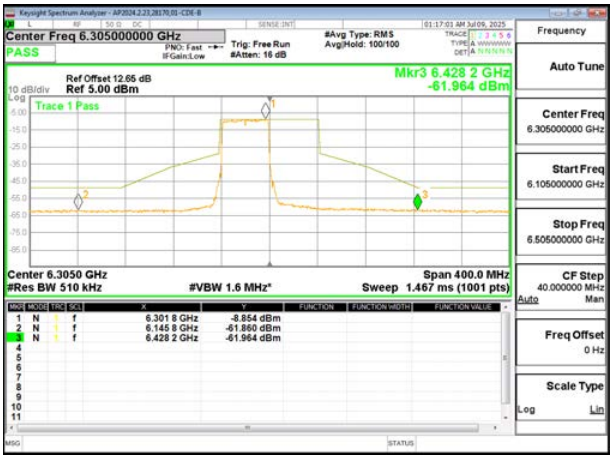
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

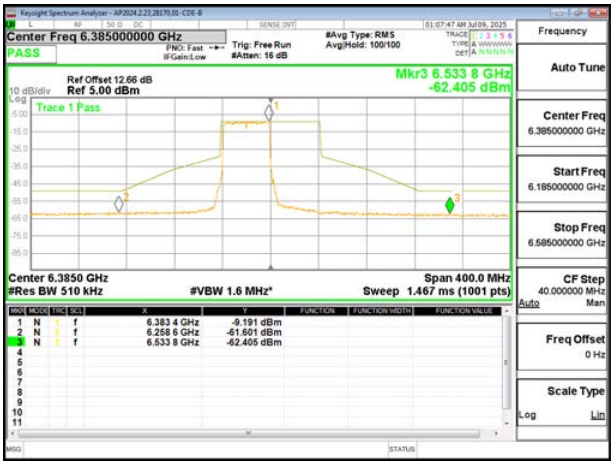
## 9.10.3. 802.11be EHT80 MODE IN THE UNII-5 BAND

**1TX Antenna 6 MODE (FCC+IC) MOBILE – 484-Tone, RU Index 65**


**LOW CHANNEL 6145**




**MID CHANNEL 6305**



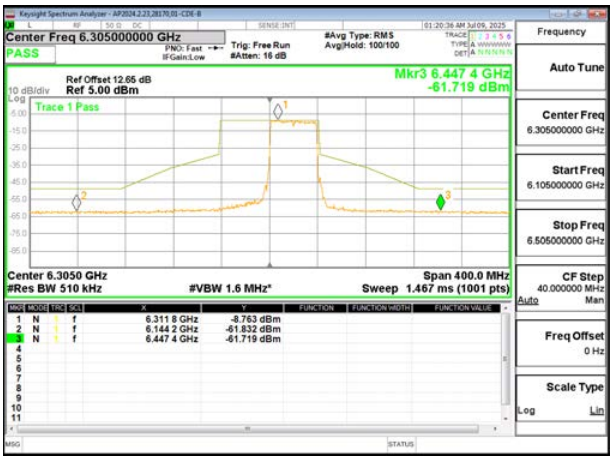

**HIGH CHANNEL 6385**



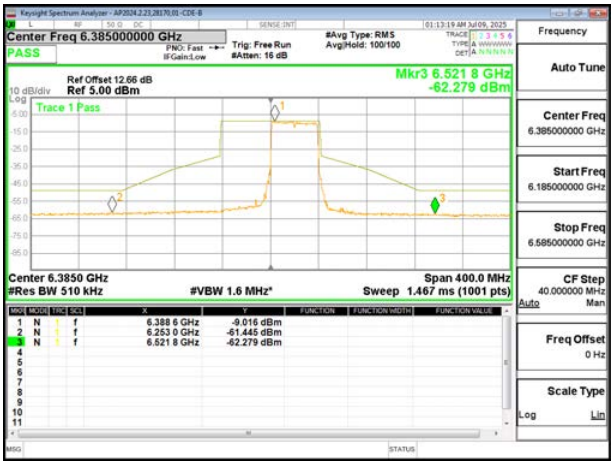
UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**1TX Antenna 6 MODE (FCC+IC) MOBILE – 484-Tone, RU Index 66**


**LOW CHANNEL 6145**




**MID CHANNEL 6305**




**HIGH CHANNEL 6385**



UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

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


**LOW CHANNEL 6145**


**MID CHANNEL 6305**

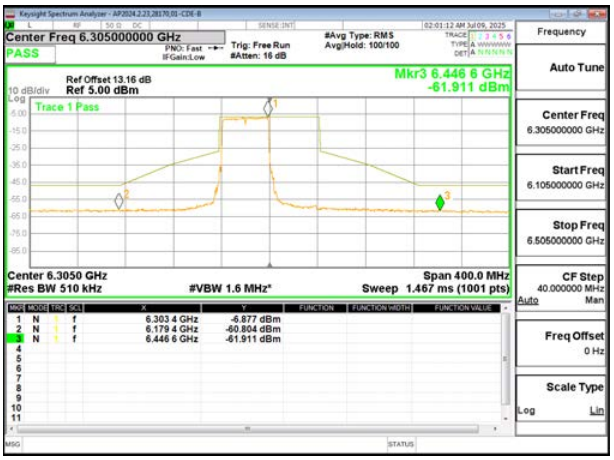

**HIGH CHANNEL 6385**



UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**1TX Antenna 5 MODE (FCC+IC) MOBILE – 484-Tone, RU Index 65**


**LOW CHANNEL 6145**



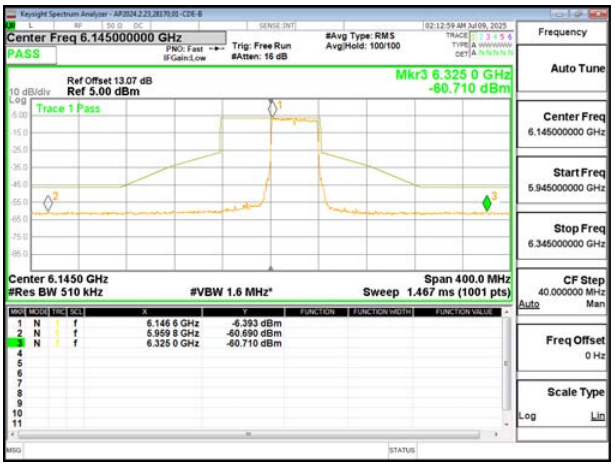

**MID CHANNEL 6305**


**HIGH CHANNEL 6385**



UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538, USA TEL:(510) 319-4000 FAX:(510) 661-0888

**1TX Antenna 5 MODE (FCC+IC) MOBILE – 484-Tone, RU Index 66**




**LOW CHANNEL 6145**


**MID CHANNEL 6305**


**HIGH CHANNEL 6385**



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