9.4. VLP SPURIOUS EMISSIONS 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.

RSS-248 4.6.2
b. the e.i.r.p. spectral density of unwanted emissions falling into the 5925-7125 MHz frequency band shall be attenuated below the reference power spectral density by:

i. 20 dB at 1 MHz away from the channel edges

ii. a value, linearly interpolated in a dB scale, between 20 dB and 28 dB at frequencies between 1 MHz outside of channel edges and 1 channel bandwidth away from the operating channel centre, respectively

iii. 28 dB at 1 channel bandwidth away from the operating channel centre

iv. a value, linearly interpolated in a dB scale, between 28 dB and 40 dB at frequencies between 1 channel bandwidth away from the operating channel centre and 1.5 times the channel bandwidth away from the operating channel centre, respectively

v. 40 dB at one- and one-half (1.5) times the channel bandwidth away from the channel centre; and

vi. a minimum of 40 dB at frequencies that are further away than one and one-half (1.5) times the channel bandwidth from the channel centre.

TEST PROCEDURE

Follow KDB 987594 D02, Section II-J, RBW & VBW settings were based on 26dB bandwidth test settings.

Worst-Case Mode	RBW (kHz)	VBW (kHz)
BDR	30	91
LE1M	30	91
LE2M	43	150
HDT4	43	150
HDR4	30	91
XHDRPS2	30	91
HDRPM8	100	300
XHDRPL16	200	620

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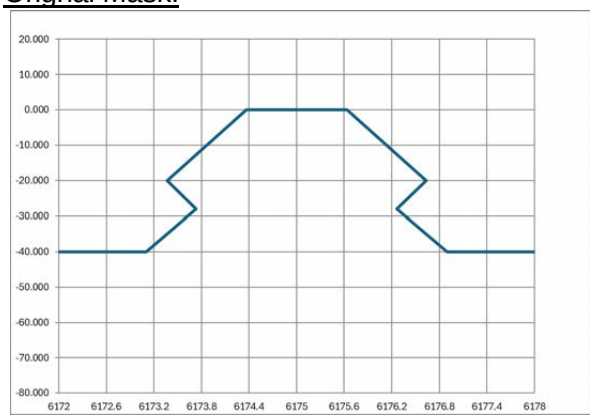
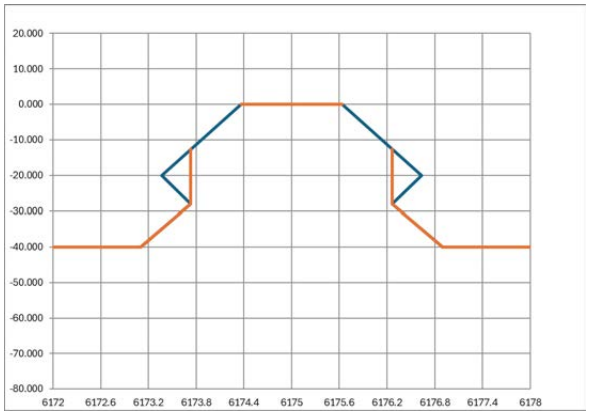
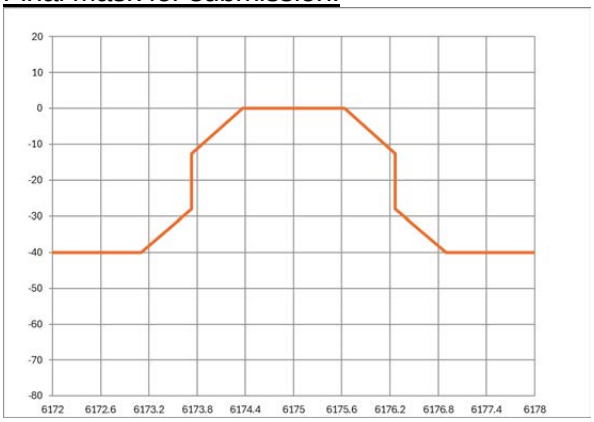
For the emission mask of EBW < 2MHz, we have created and used real limits (using the FCC formula) and removed the 'bulge', as shown in the images below.

Orignal Mask:





Final Mask for submission:



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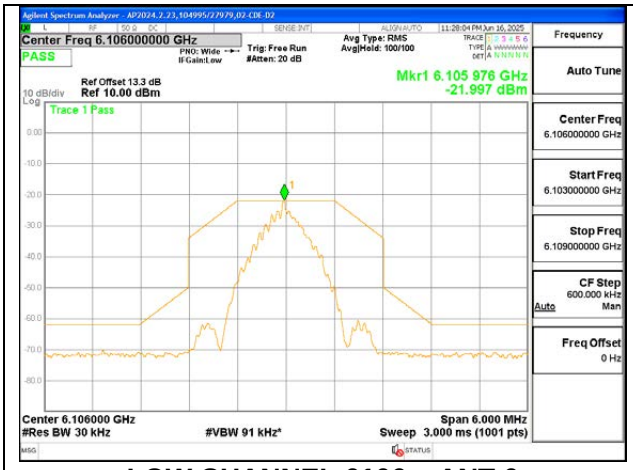
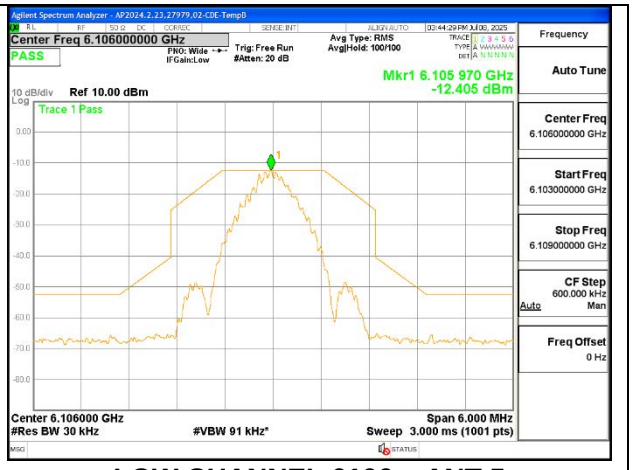
RESULTS

9.4.1. HIGH POWER UNII-5 BAND SISO MODE

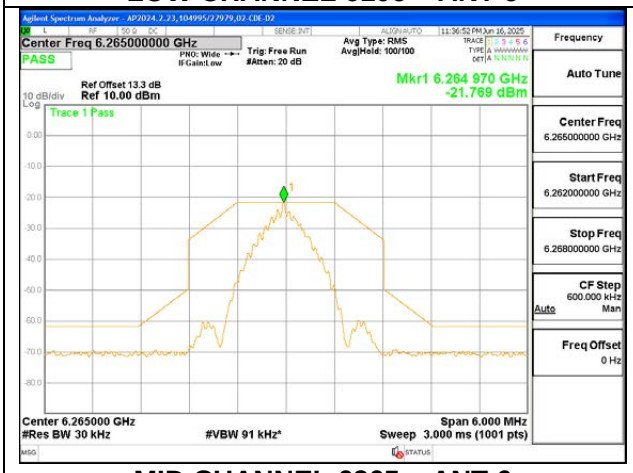
BDR



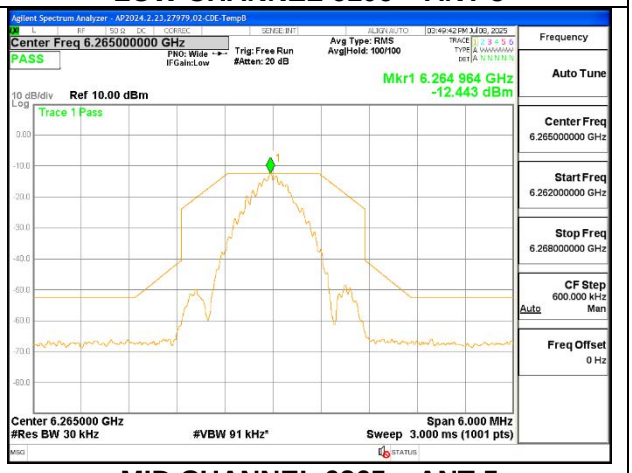
LOW CHANNEL 6106 – ANT 6



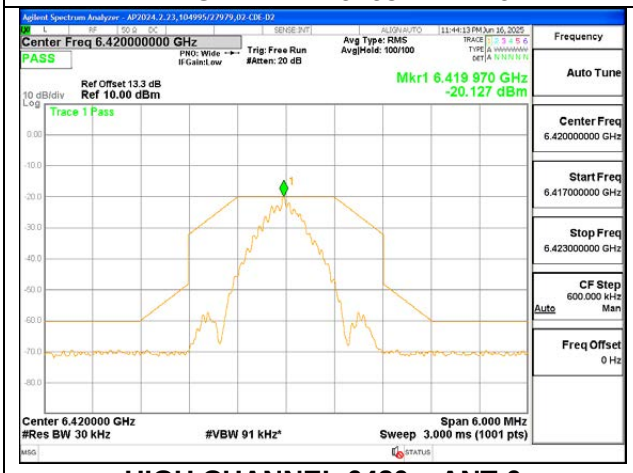
LOW CHANNEL 6106 – ANT 5



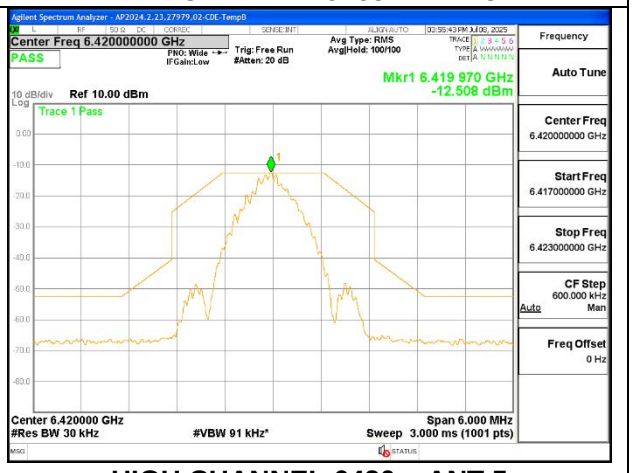
MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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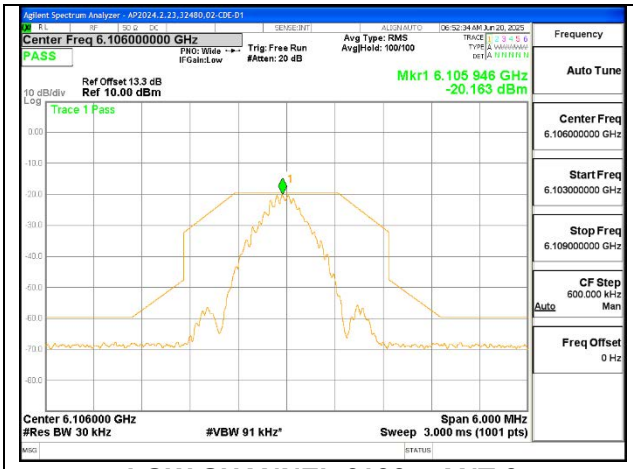
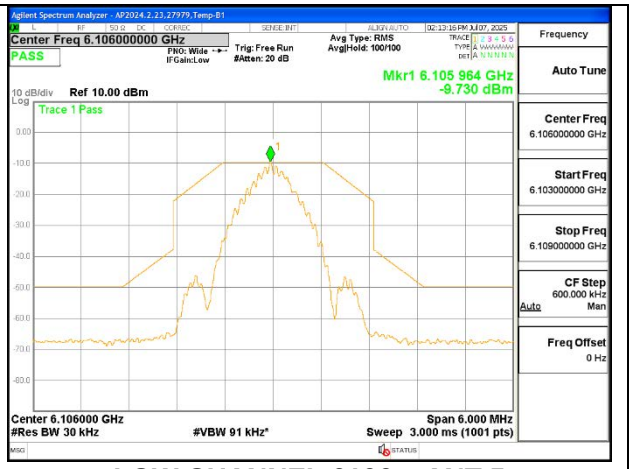
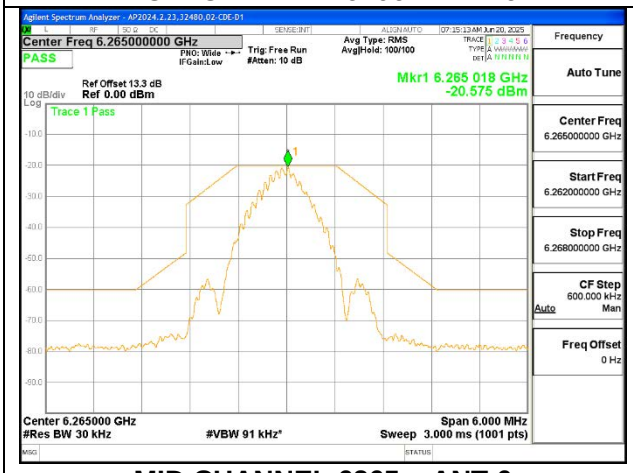
LE1M



LOW CHANNEL 6106 – ANT 6

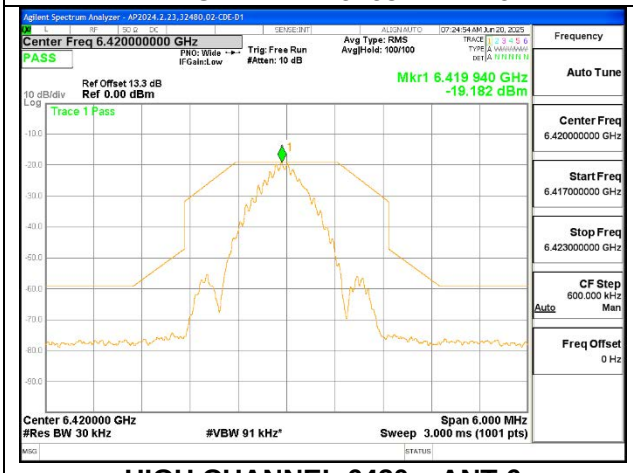


LOW CHANNEL 6106 – ANT 5



MID CHANNEL 6265 – ANT 6

MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6

HIGH CHANNEL 6420 – ANT 5

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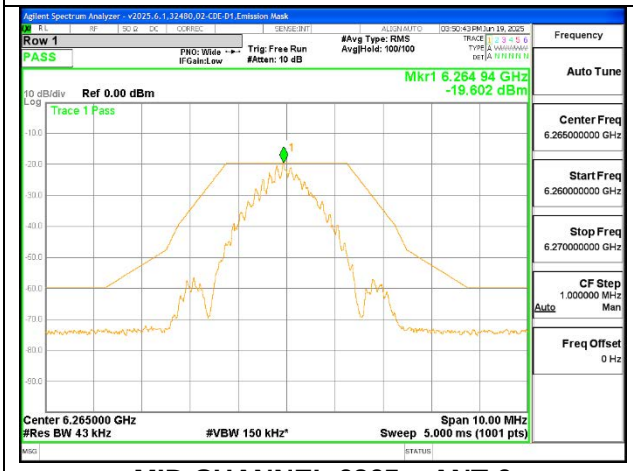
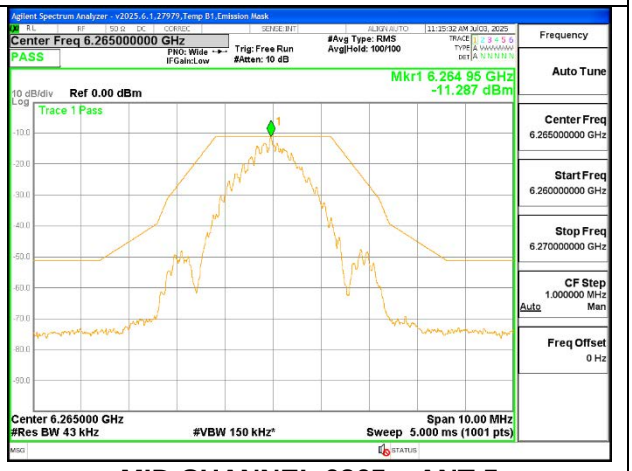
LE2M

LOW CHANNEL 6106 – ANT 6

LOW CHANNEL 6106 – ANT 5

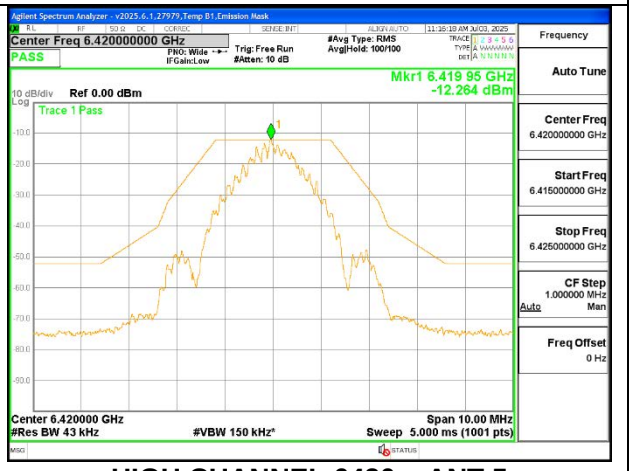


MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5

HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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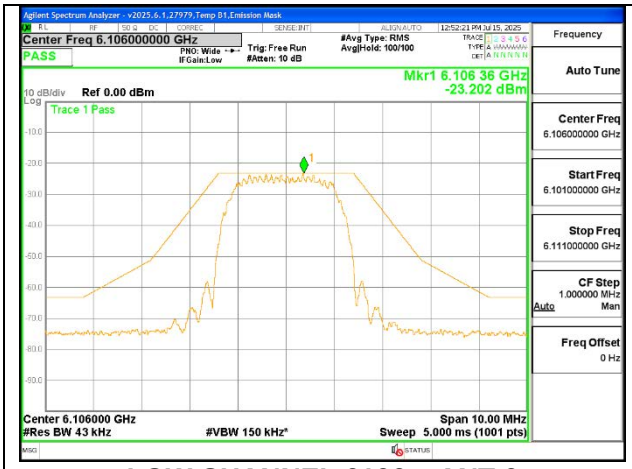
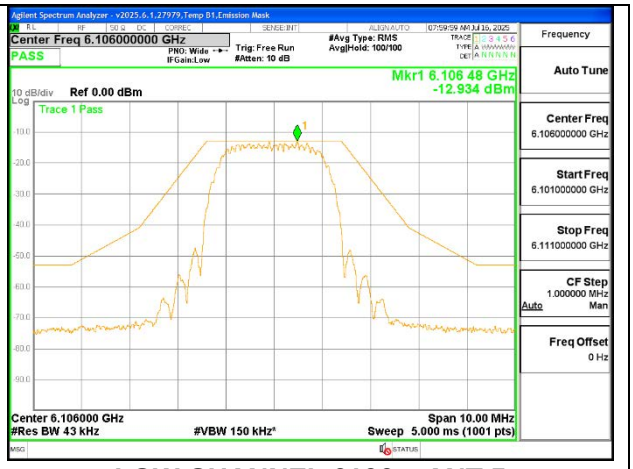
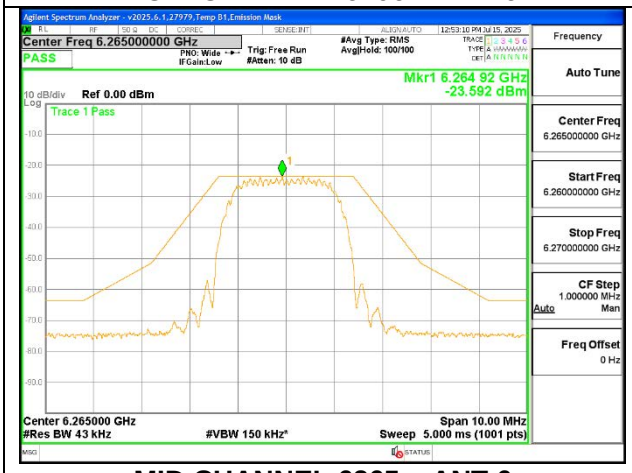
HDT4



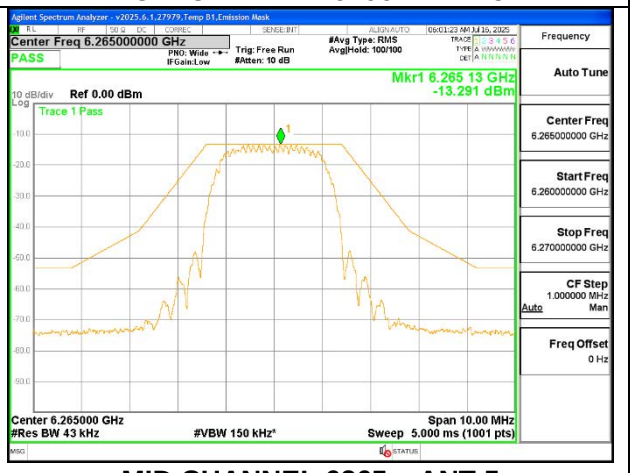
LOW CHANNEL 6106 – ANT 6



LOW CHANNEL 6106 – ANT 5



MID CHANNEL 6265 – ANT 6



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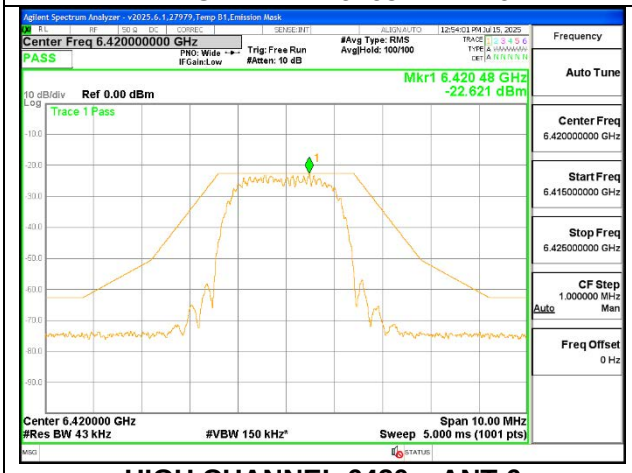
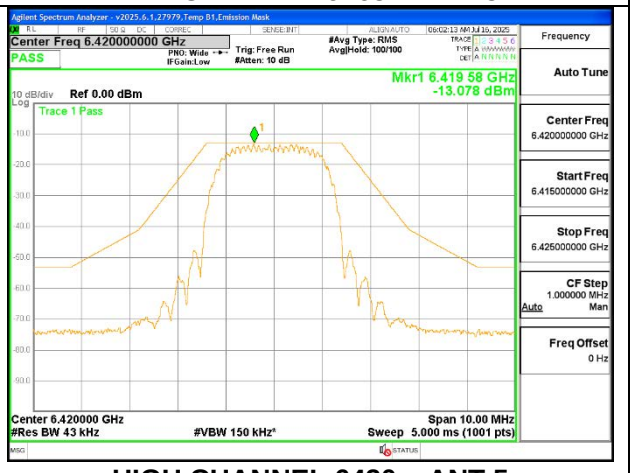


HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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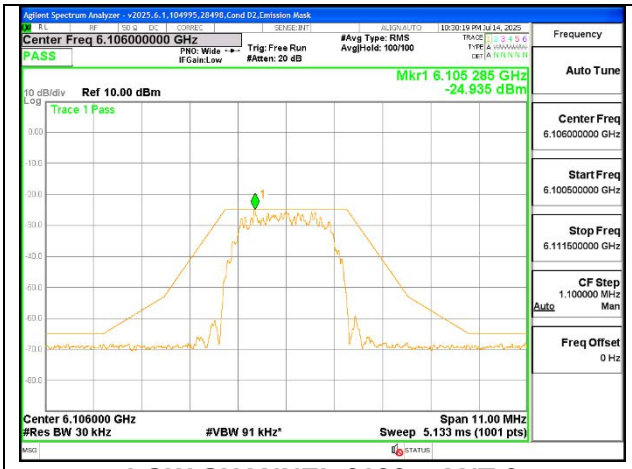
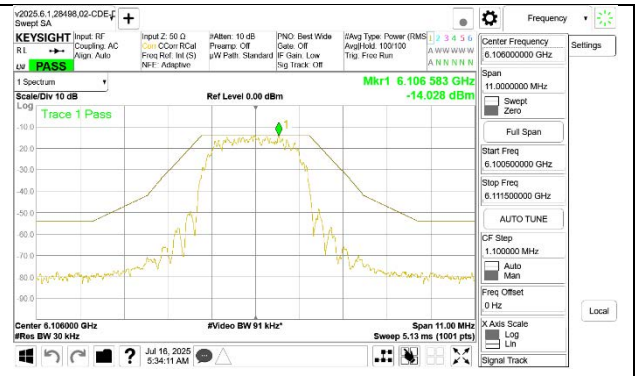
HDR4

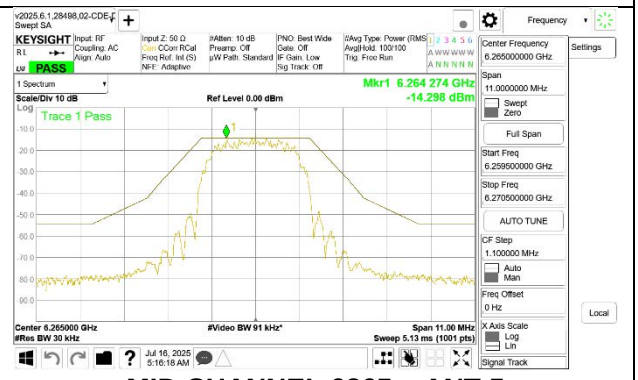


LOW CHANNEL 6106 – ANT 6



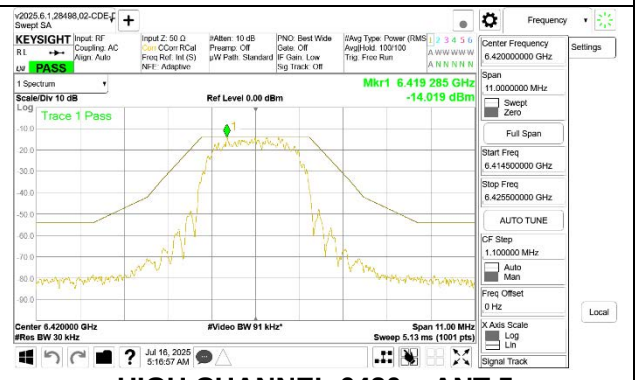
LOW CHANNEL 6106 – ANT 5

MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5

HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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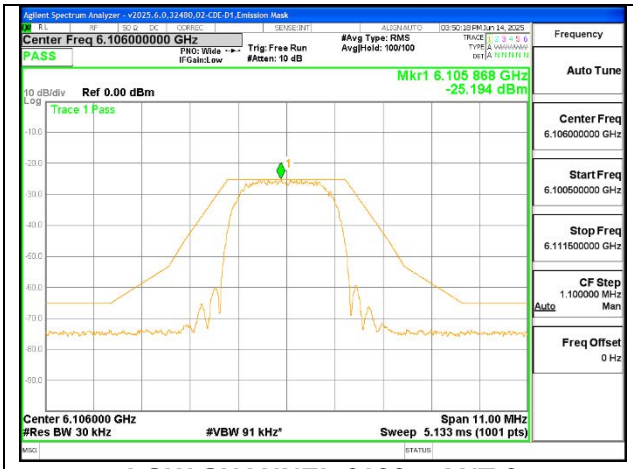
XHDRPS2

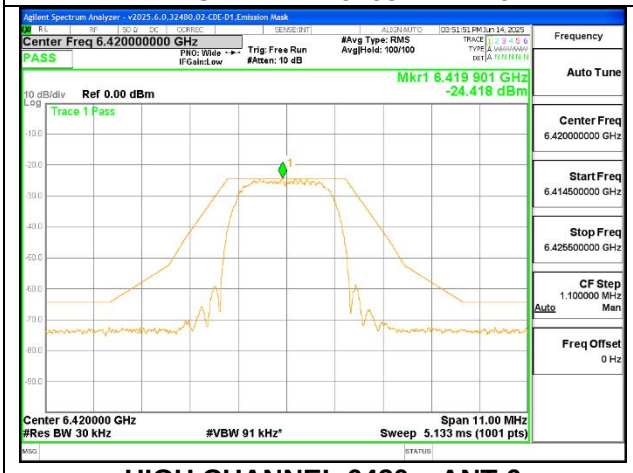


LOW CHANNEL 6106 – ANT 6

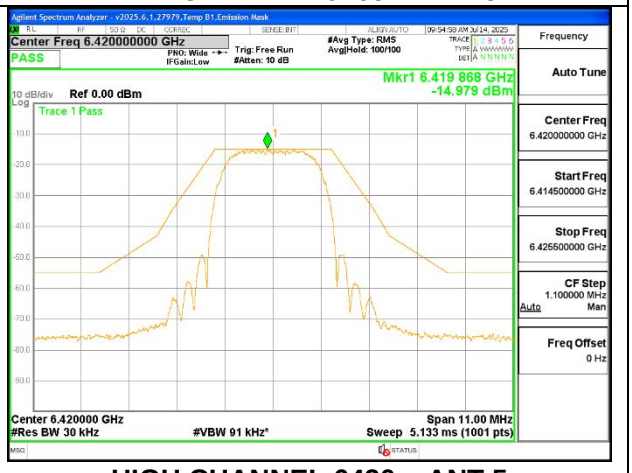
LOW CHANNEL 6106 – ANT 5

MID CHANNEL 6265 – ANT 6

MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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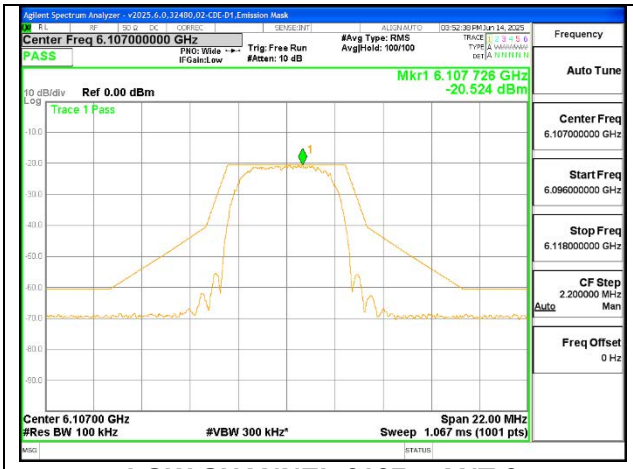
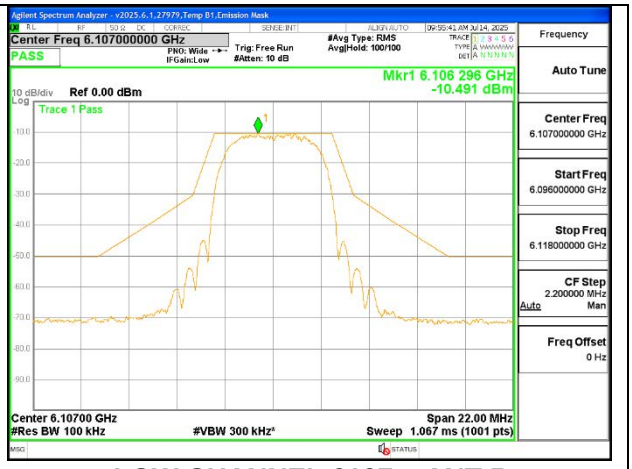
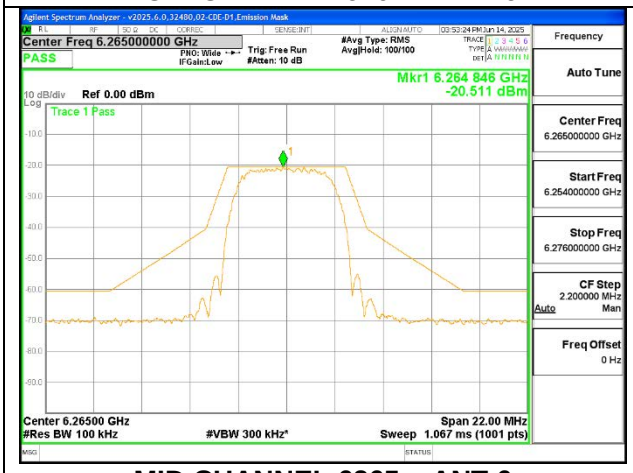
HDRPM8



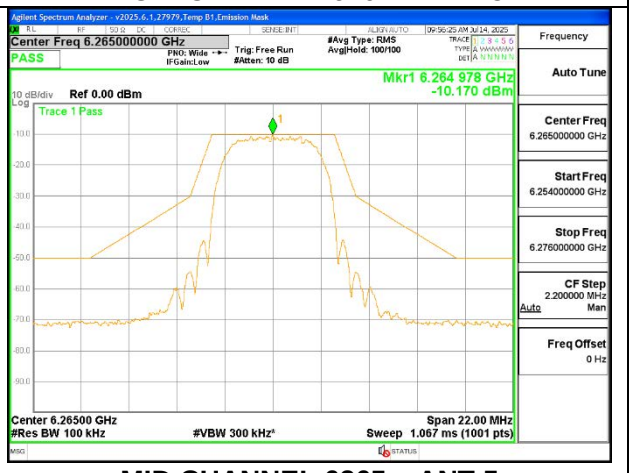
LOW CHANNEL 6107 – ANT 6



LOW CHANNEL 6107 – ANT 5



MID CHANNEL 6265 – ANT 6



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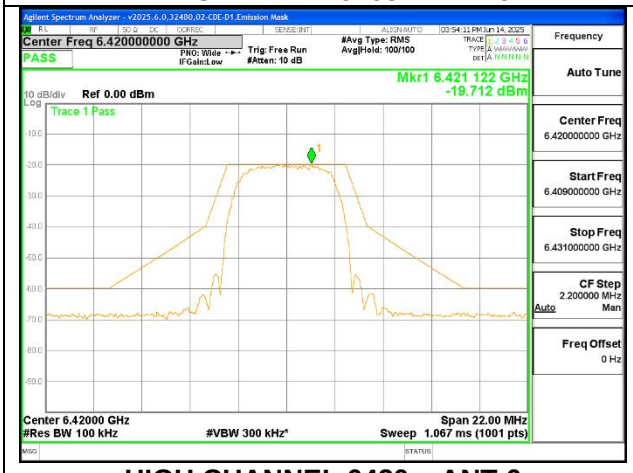
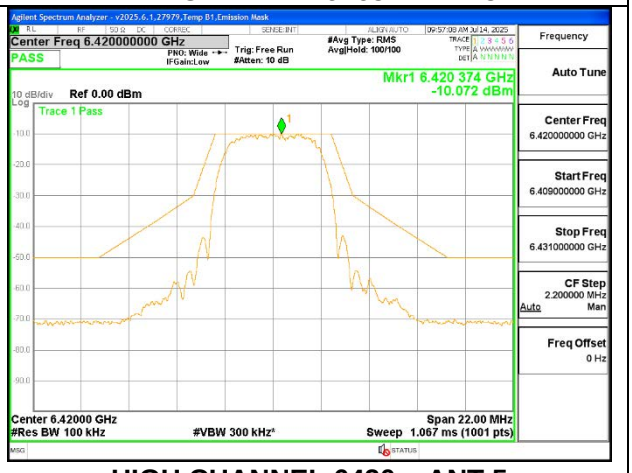


HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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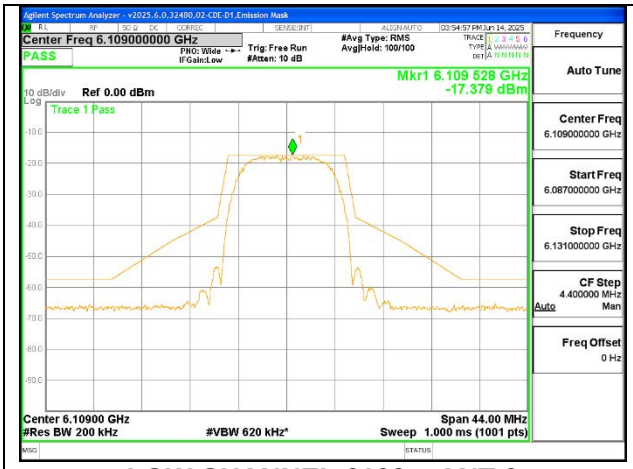
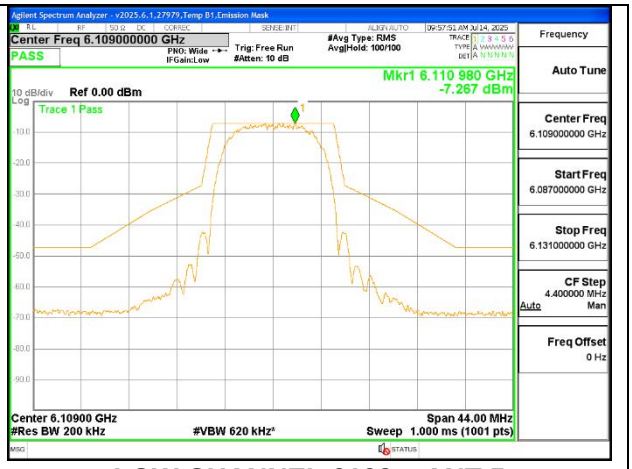
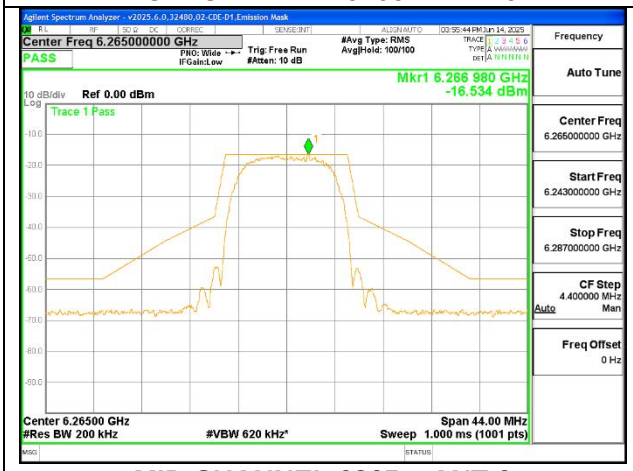
XHDRPL16



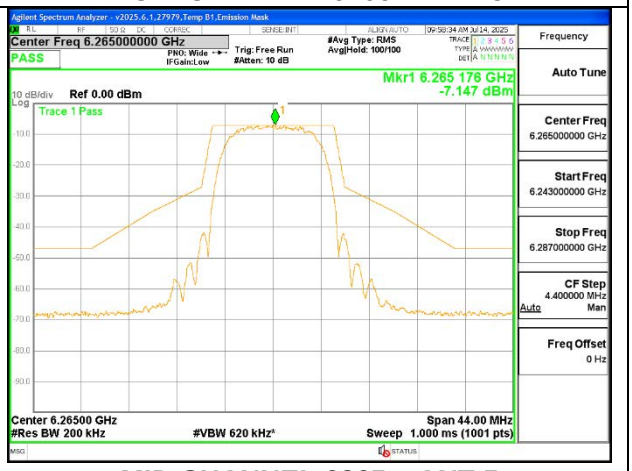
LOW CHANNEL 6109 – ANT 6



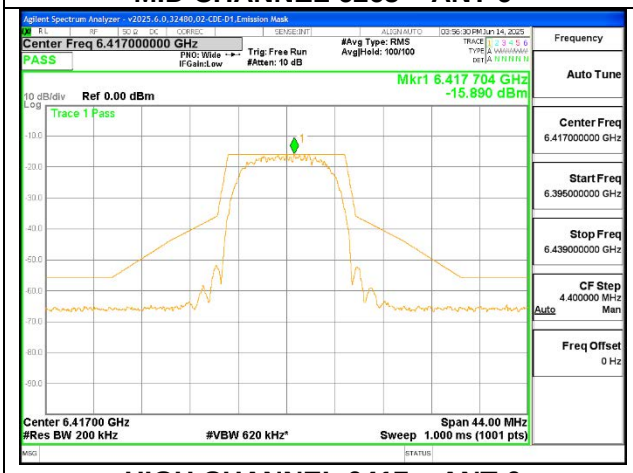
LOW CHANNEL 6109 – ANT 5



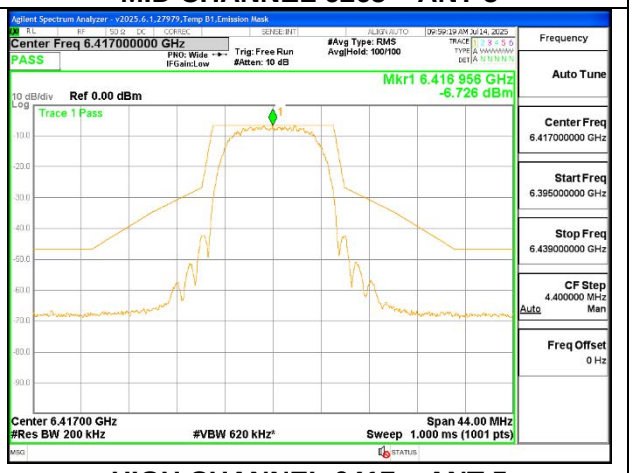
MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6417 – ANT 6



HIGH CHANNEL 6417 – ANT 5

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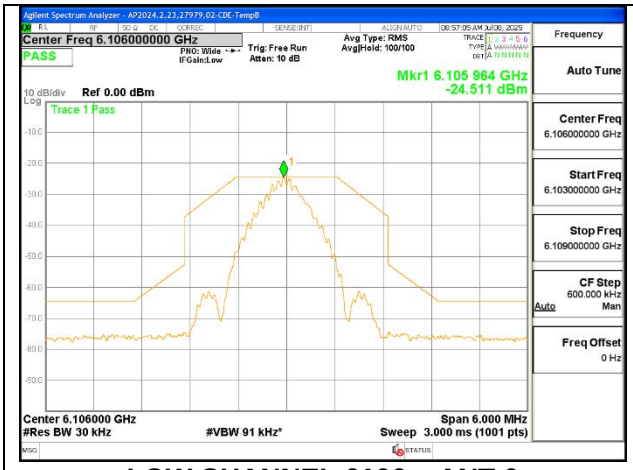
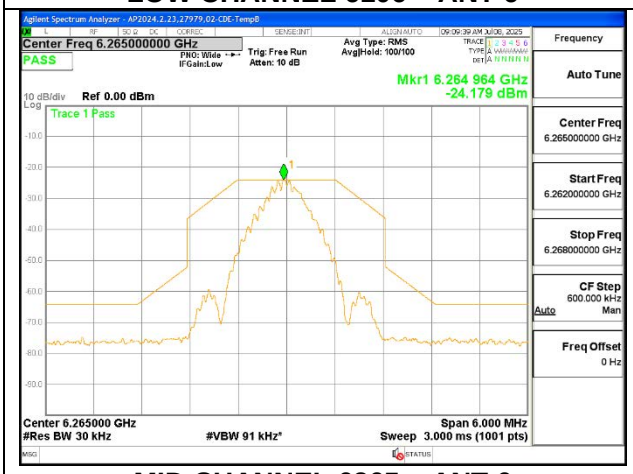
9.4.2. HIGH POWER UNII-5 BAND MIMO TXBF MODE

BDR

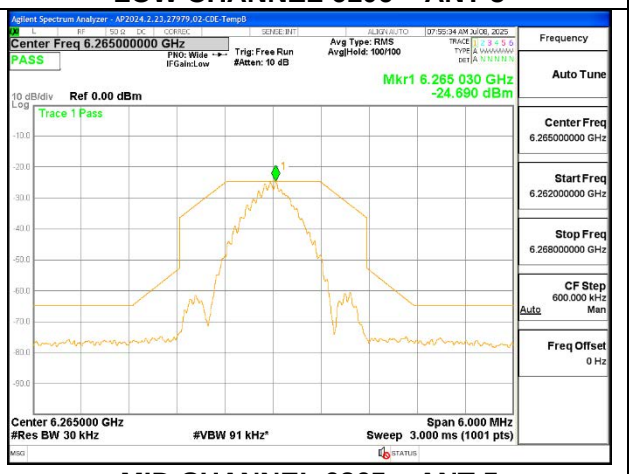


LOW CHANNEL 6106 – ANT 6

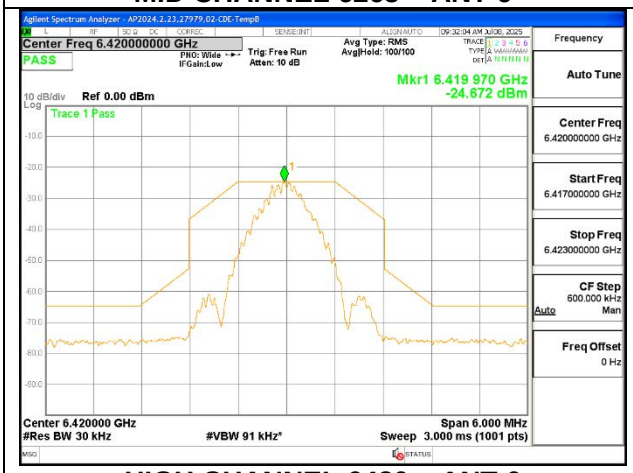
LOW CHANNEL 6106 – ANT 5



MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6

HIGH CHANNEL 6420 – ANT 5

UL VERIFICATION SERVICES INC.
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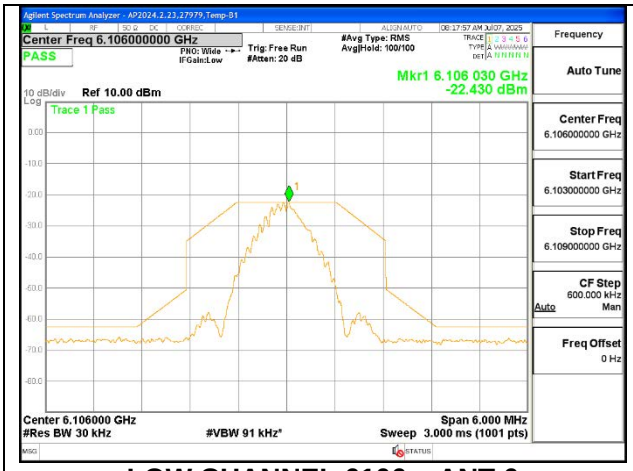
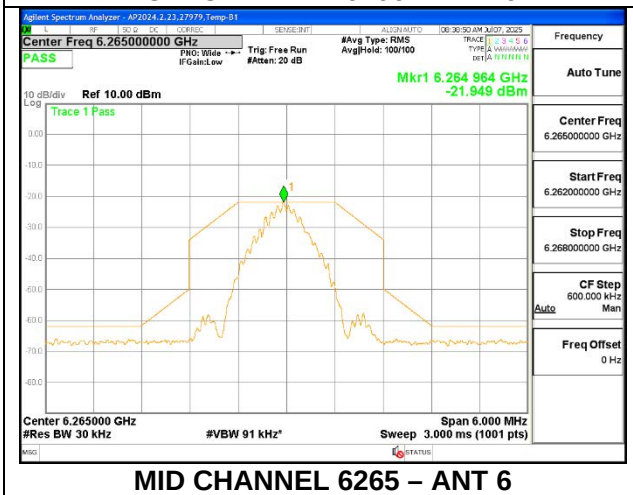
LE1M

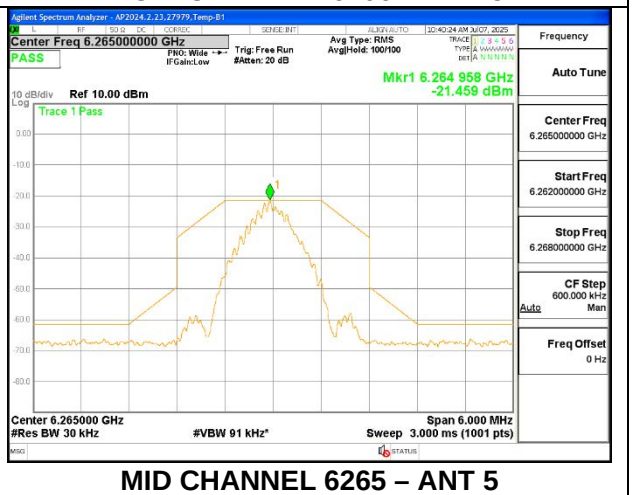


LOW CHANNEL 6106 – ANT 6

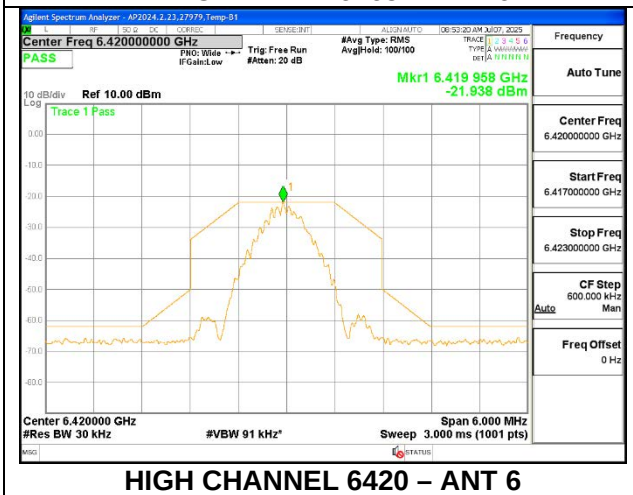
LOW CHANNEL 6106 – ANT 5



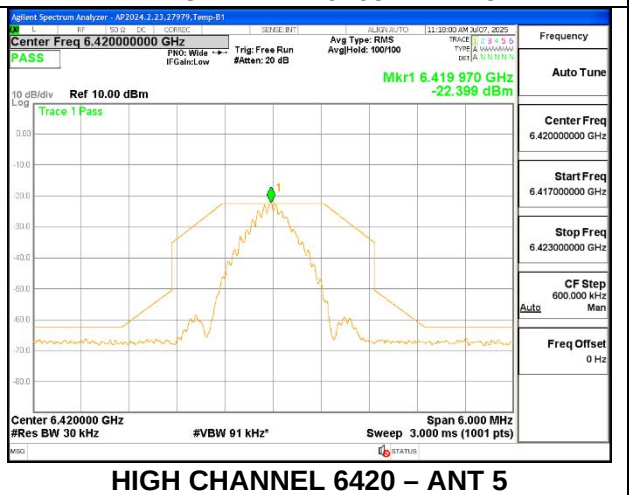
MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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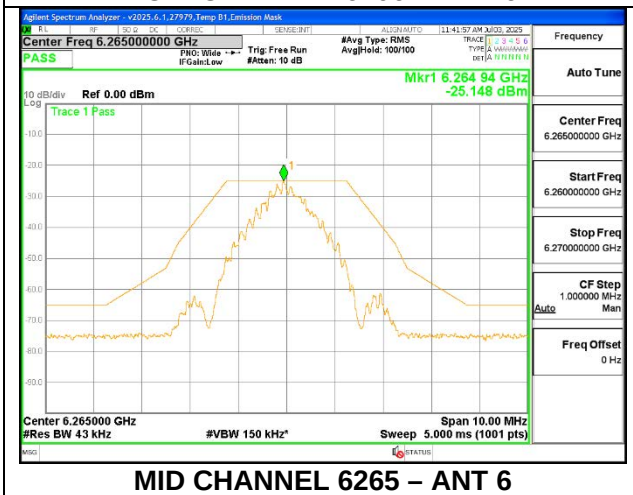
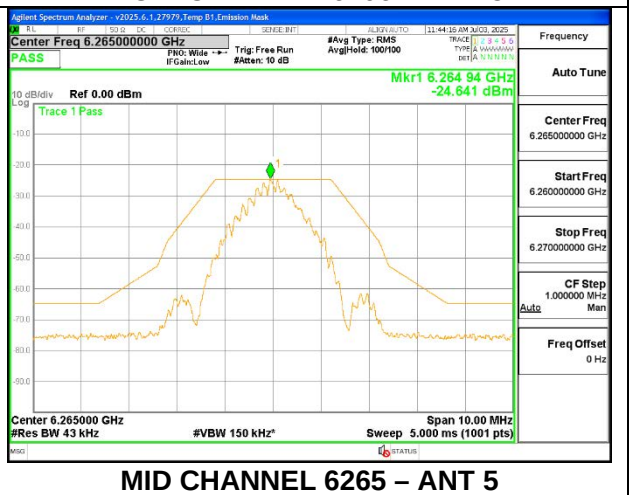
LE2M

LOW CHANNEL 6106 – ANT 6

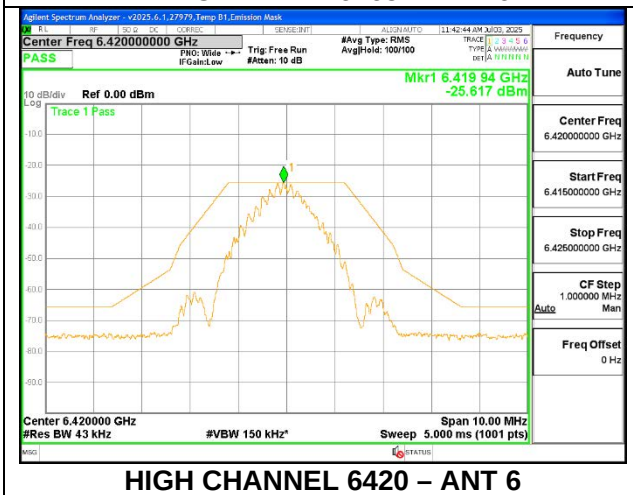
LOW CHANNEL 6106 – ANT 5



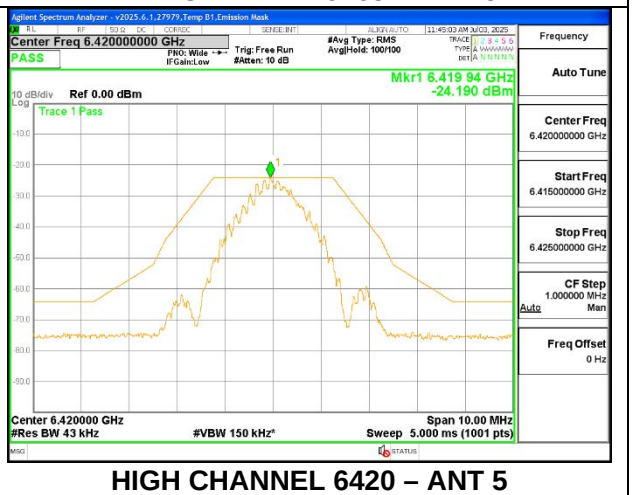
MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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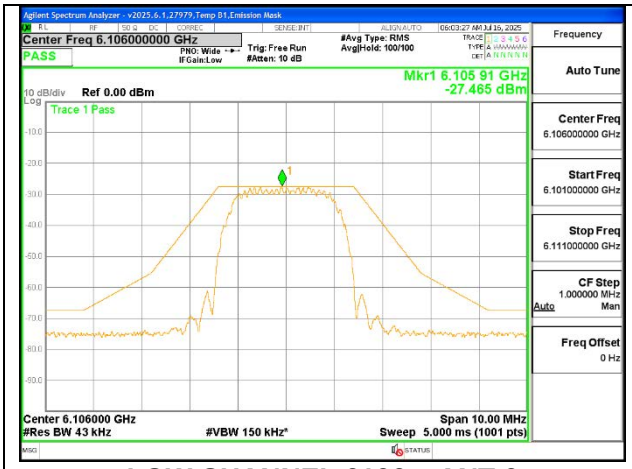
HDT4

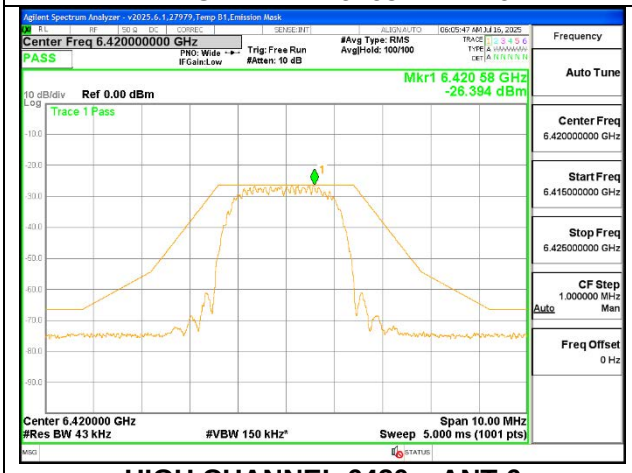


LOW CHANNEL 6106 – ANT 6

LOW CHANNEL 6106 – ANT 5

MID CHANNEL 6265 – ANT 6

MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6

HIGH CHANNEL 6420 – ANT 5

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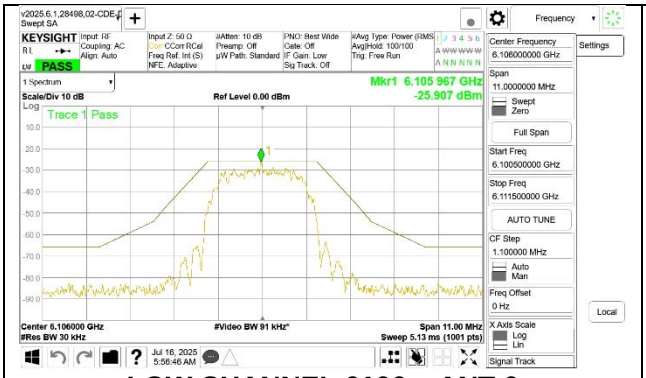
HDR4

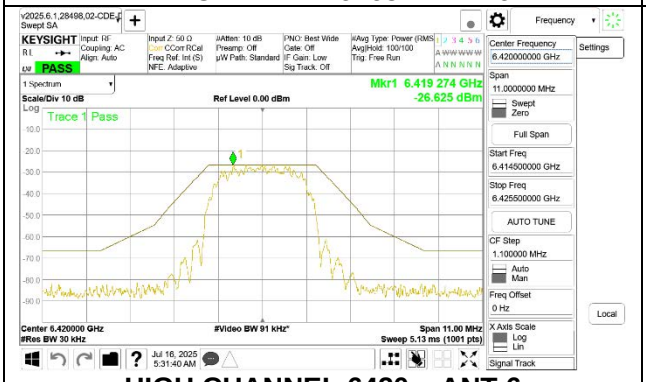


LOW CHANNEL 6106 – ANT 6

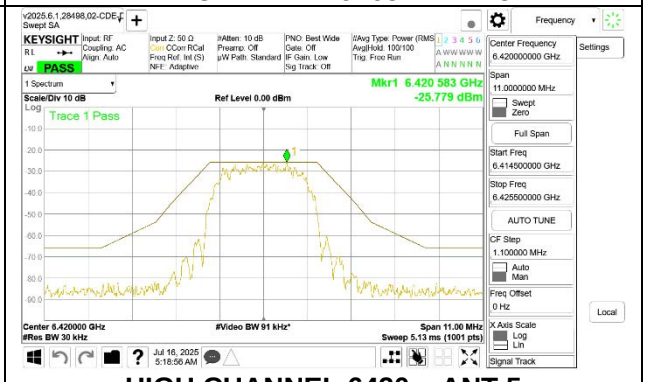
LOW CHANNEL 6106 – ANT 5

MID CHANNEL 6265 – ANT 6

MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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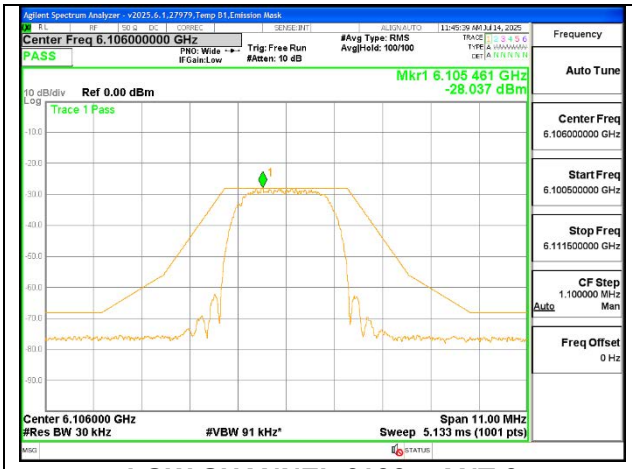
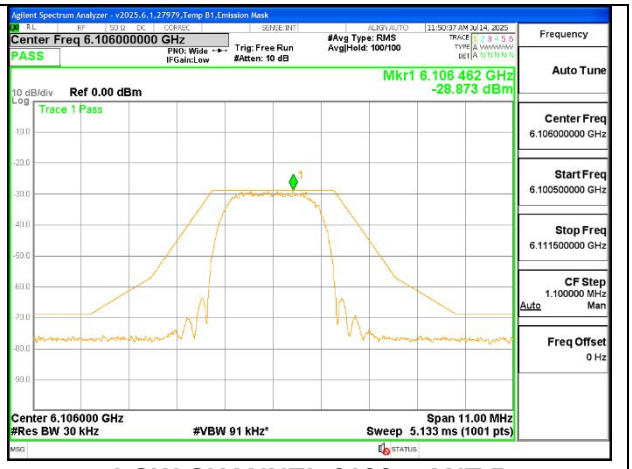
XHDRPS2



LOW CHANNEL 6106 – ANT 6

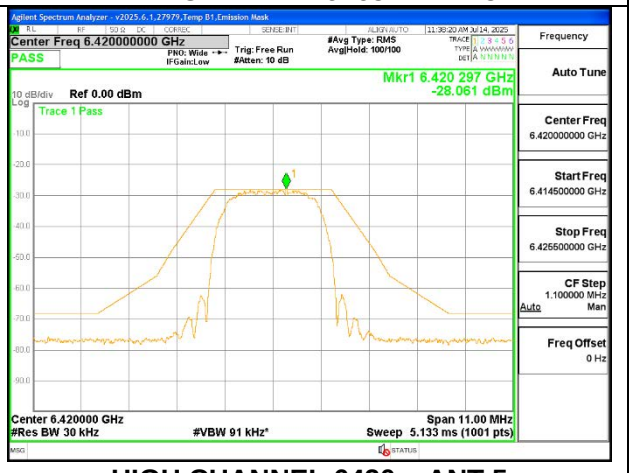


LOW CHANNEL 6106 – ANT 5

MID CHANNEL 6265 – ANT 6

MID CHANNEL 6265 – ANT 5

HIGH CHANNEL 6420 – ANT 6



HIGH CHANNEL 6420 – ANT 5

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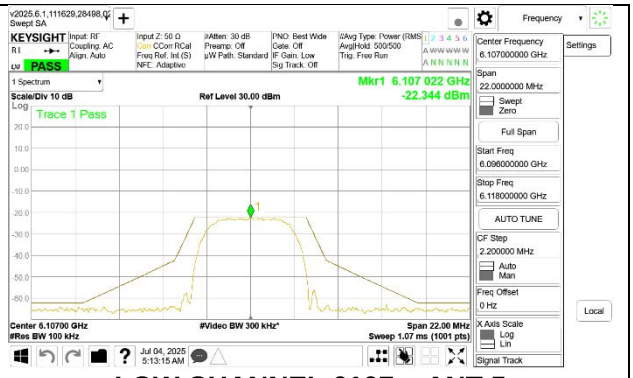
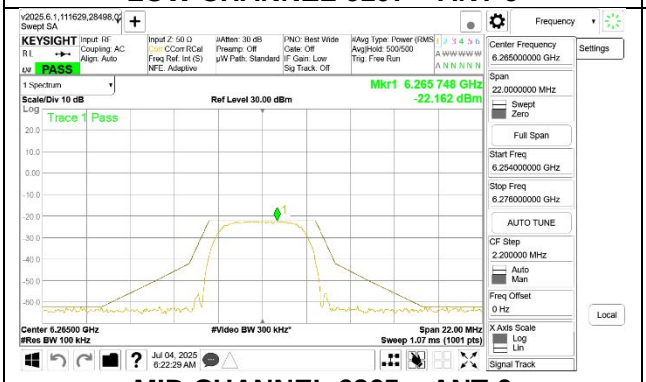
HDRPM8

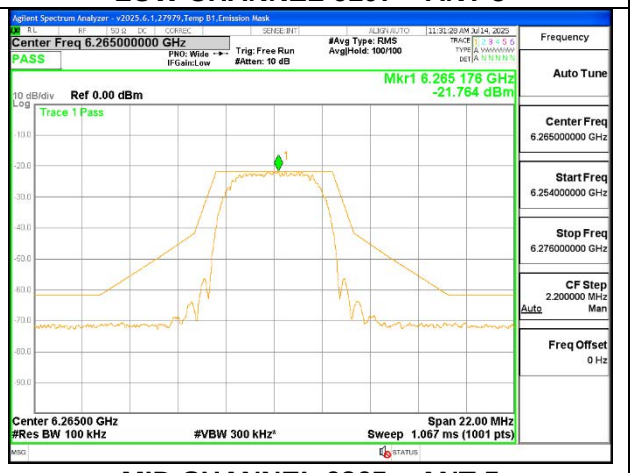
LOW CHANNEL 6107 – ANT 6



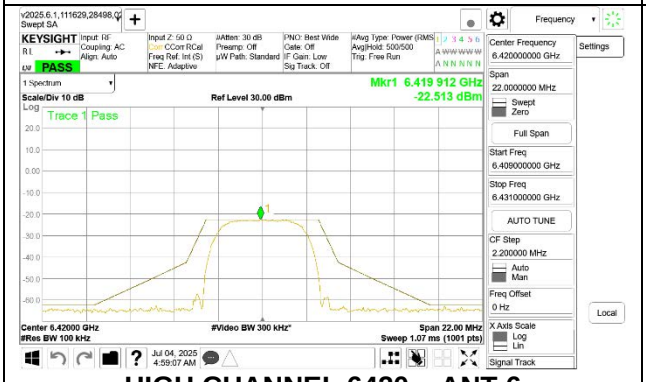
LOW CHANNEL 6107 – ANT 5



MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6420 – ANT 6

HIGH CHANNEL 6420 – ANT 5

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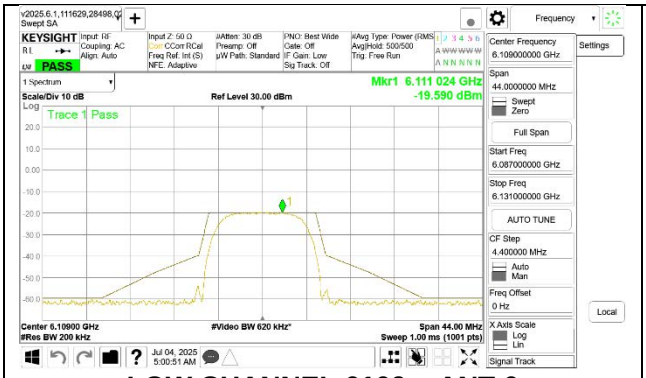
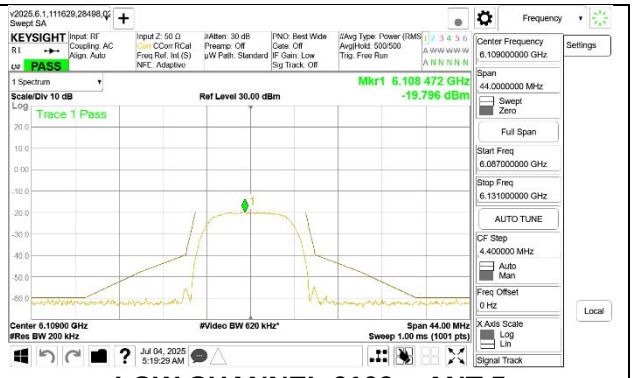
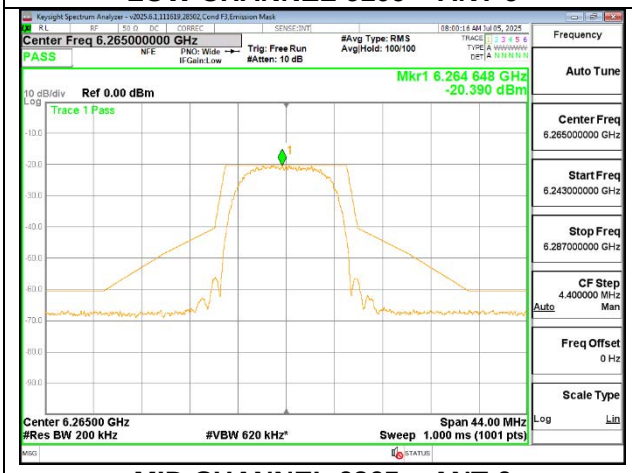
XHDRPL16



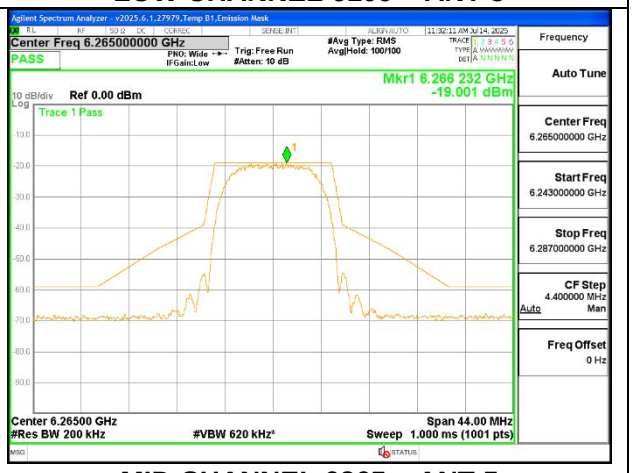
LOW CHANNEL 6109 – ANT 6



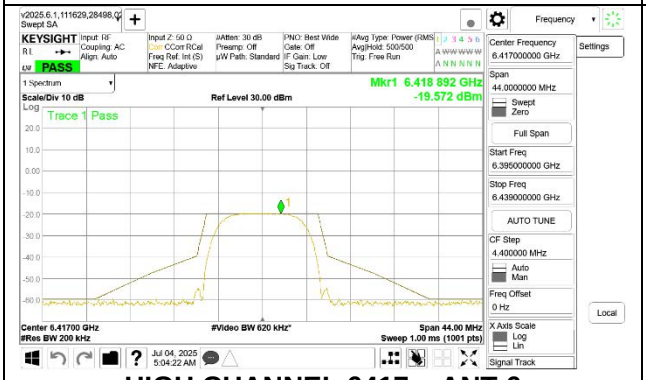
LOW CHANNEL 6109 – ANT 5



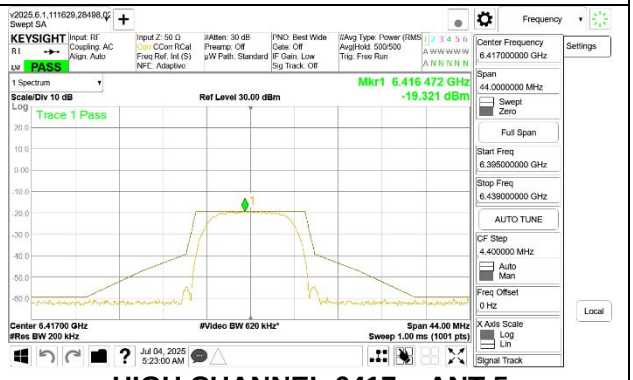
MID CHANNEL 6265 – ANT 6



MID CHANNEL 6265 – ANT 5



HIGH CHANNEL 6417 – ANT 6



HIGH CHANNEL 6417 – ANT 5

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