

10.5 Spurious RF conducted emissions

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
5. The level displayed must comply with the limit specified in this Section. Submit these plots.
6. Repeat above procedures until all frequencies measured were complete.

Limit

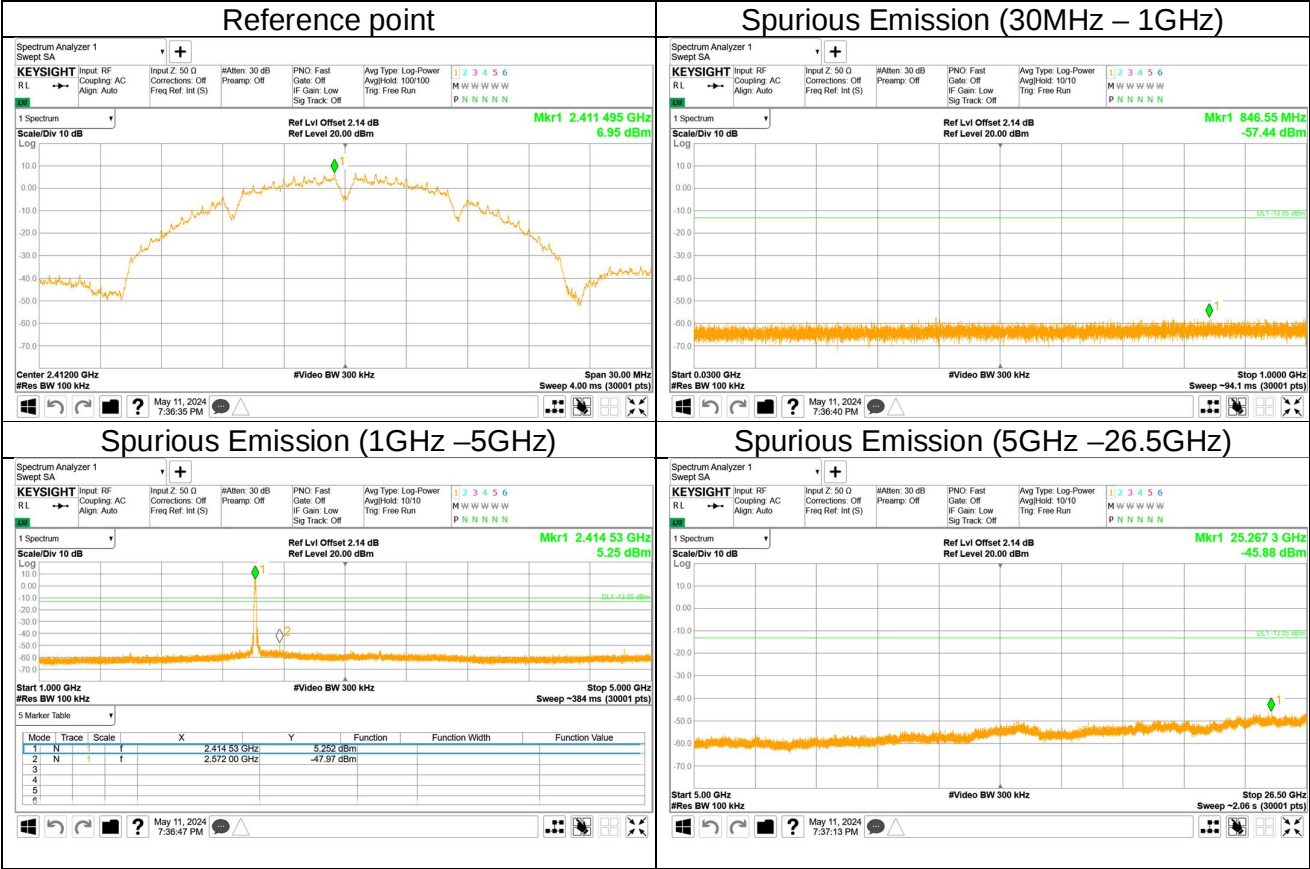
Frequency Range MHz	Limit (dBc)
30-25000	-20



Spurious RF conducted emissions

802.11 B

Out-of-Band Emissions
Channel 1 (2412MHz)





Out-of-Band Emissions
Channel 6 (2437MHz)

Reference point



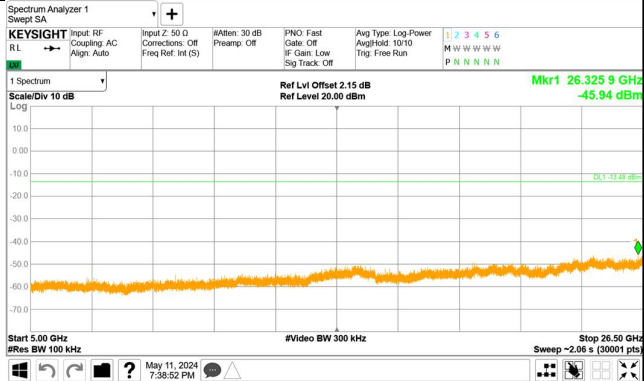
Spurious Emission (30MHz – 1GHz)

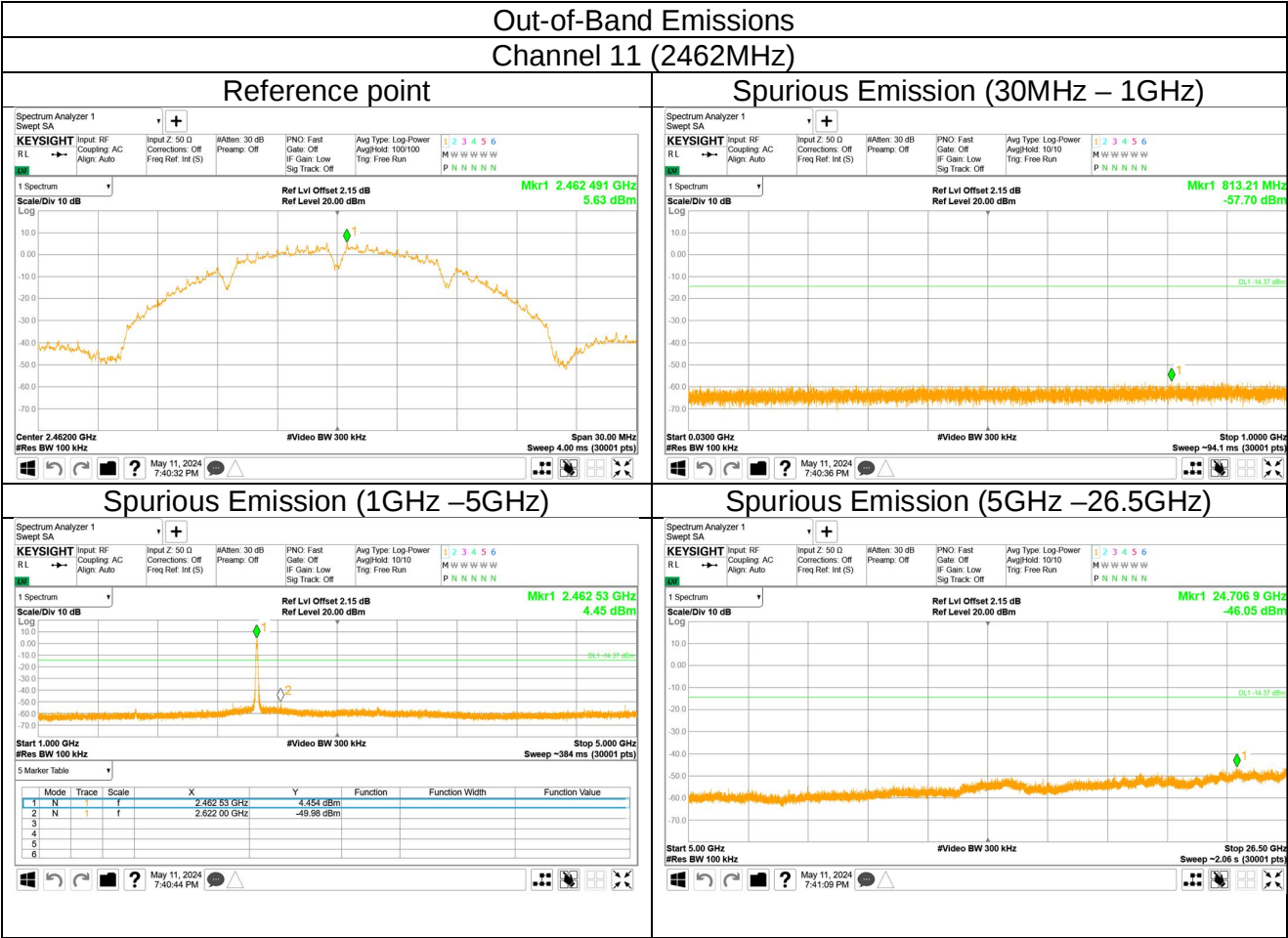


Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)



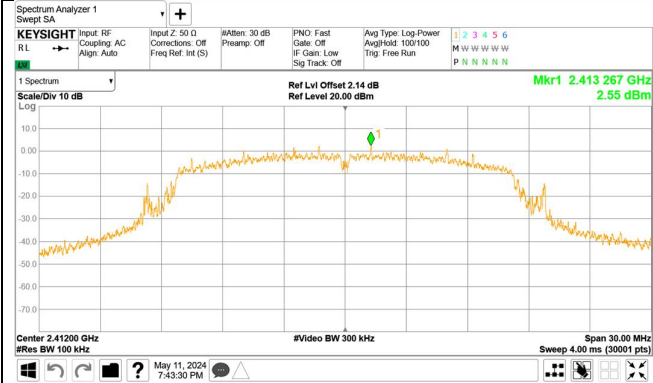




802.11 G

Out-of-Band Emissions
Channel 1 (2412MHz)

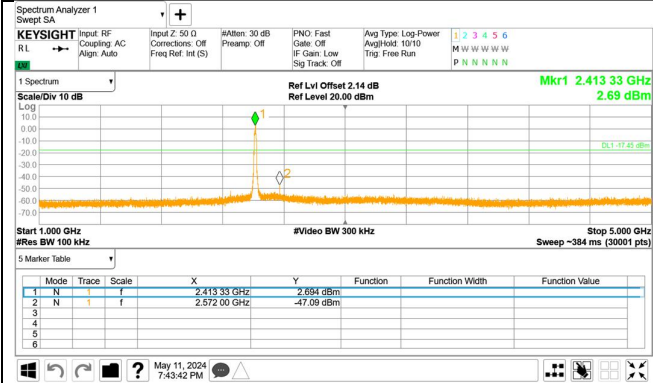
Reference point



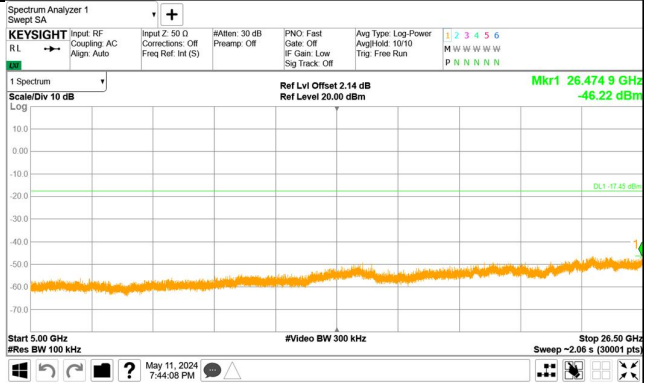
Spurious Emission (30MHz – 1GHz)

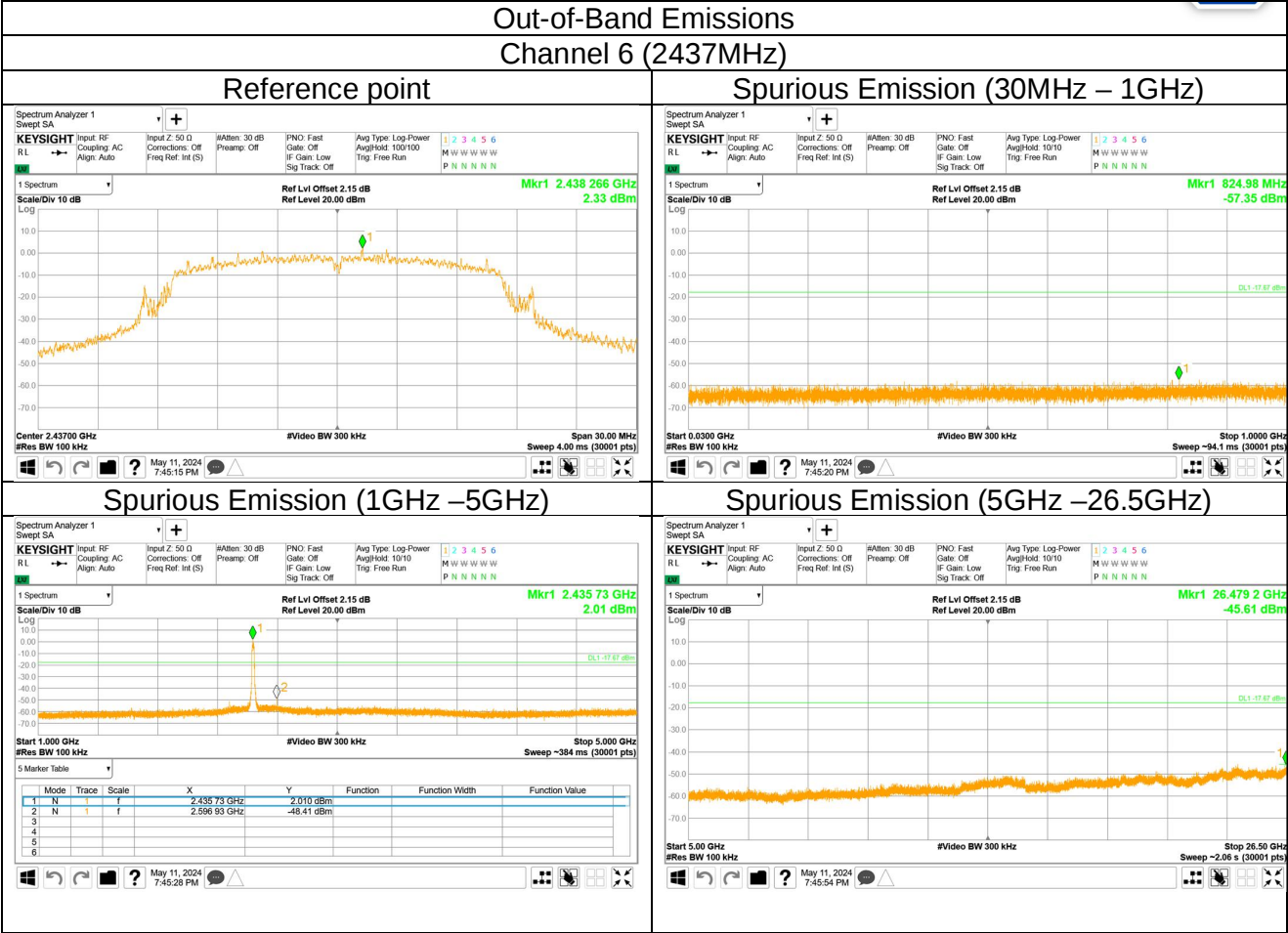


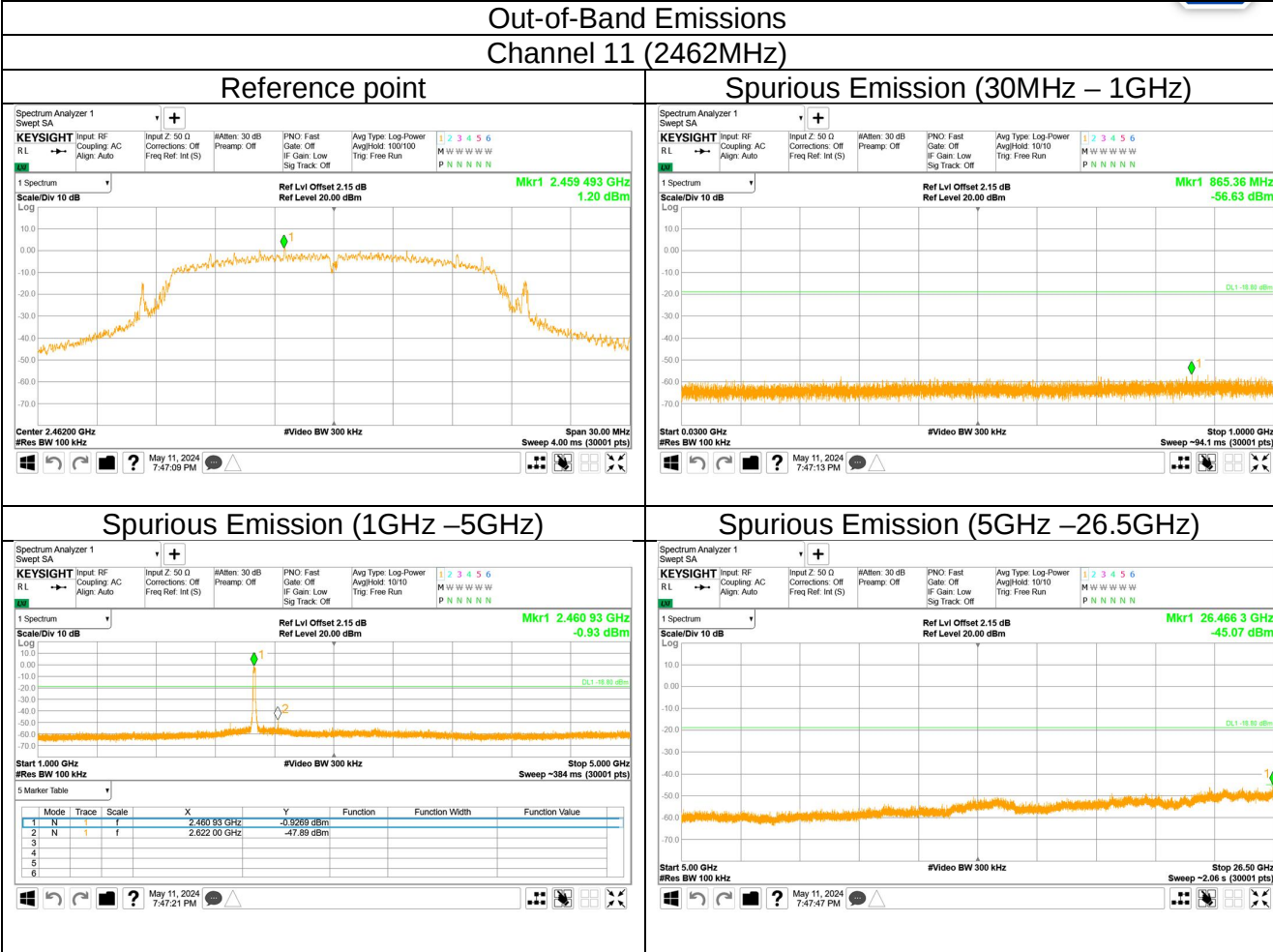
Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)

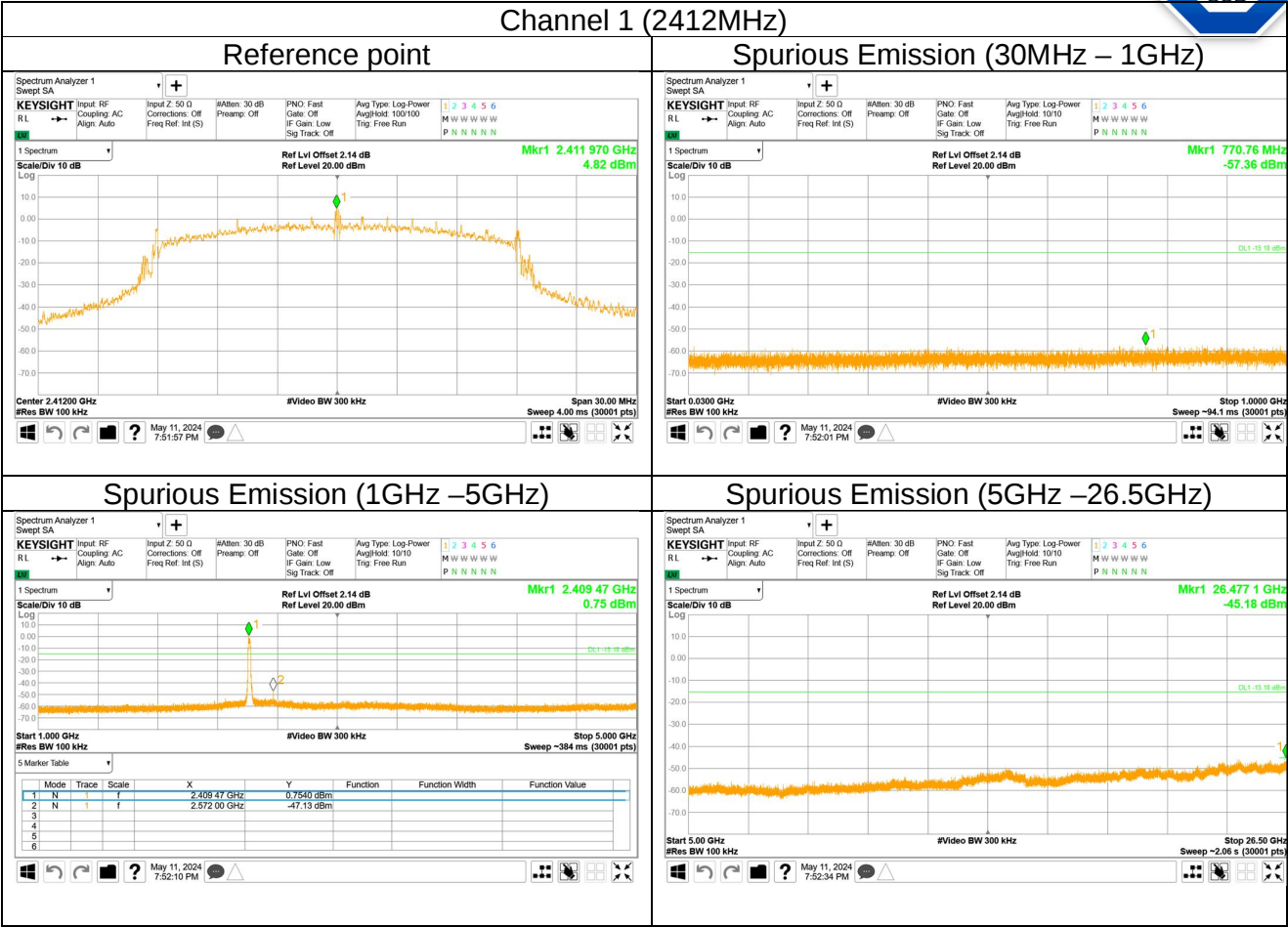




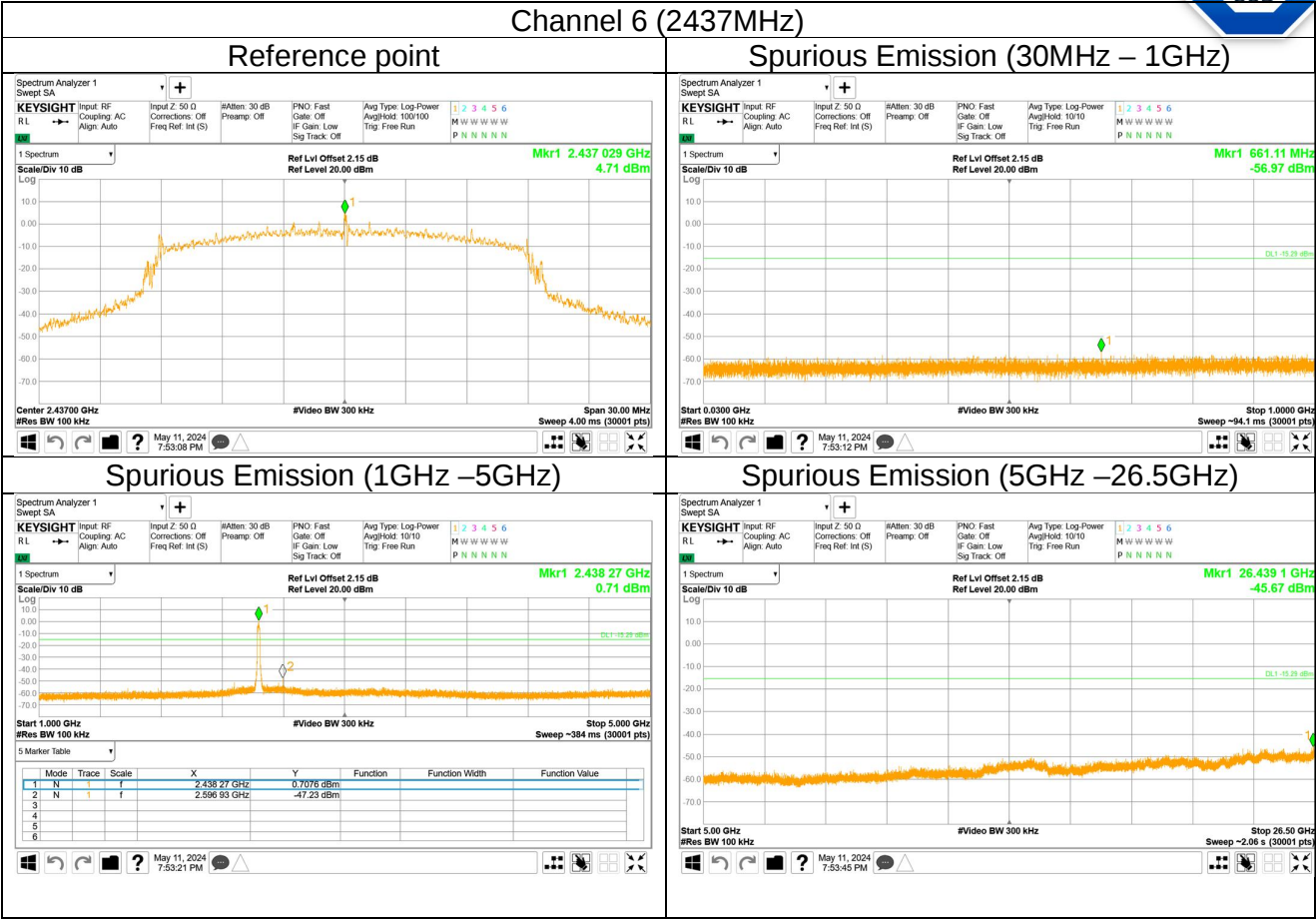


802.11 N HT20

Out-of-Band Emissions



Out-of-Band Emissions



Spurious Emission (1GHz –5GHz)

Spectrum Analyzer 1
Sweep SA

KEYSIGHT Input RF
Coupling AC
Align Auto

Input Z: 50 Ω
Corrections Off
Freq Ref: Int (S)

#Attenu: 30 dB
Preamp: Off

PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

Avg Type: Log-Power
AveHold: 10/10
Trig: Free Run

1 2 3 4 5 6
M W W W W W
P N N N N N

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 2.15 dB
Ref Level 20.00 dBm

Mkr1 2.438 27 GHz
0.71 dBm

Start 1.000 GHz
#Res BW 100 kHz
#Video BW 300 kHz

Stop 5.000 GHz
Sweep -384 ms (30001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	f	2.438 27 GHz	0.7076 dBm			
2	N	f	2.596 93 GHz	-47.23 dBm			
3							
4							
5							
6							

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Spurious Emission (5GHz –26.5GHz)

Spectrum Analyzer 1
Sweep SA

KEYSIGHT Input RF
Coupling AC
Align Auto

Input Z: 50 Ω
Corrections Off
Freq Ref: Int (S)

#Attenu: 30 dB
Preamp: Off

PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

Avg Type: Log-Power
AveHold: 10/10
Trig: Free Run

1 2 3 4 5 6
M W W W W W
P N N N N N

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 2.15 dB
Ref Level 20.00 dBm

Mkr1 26.439 1 GHz
-45.67 dBm

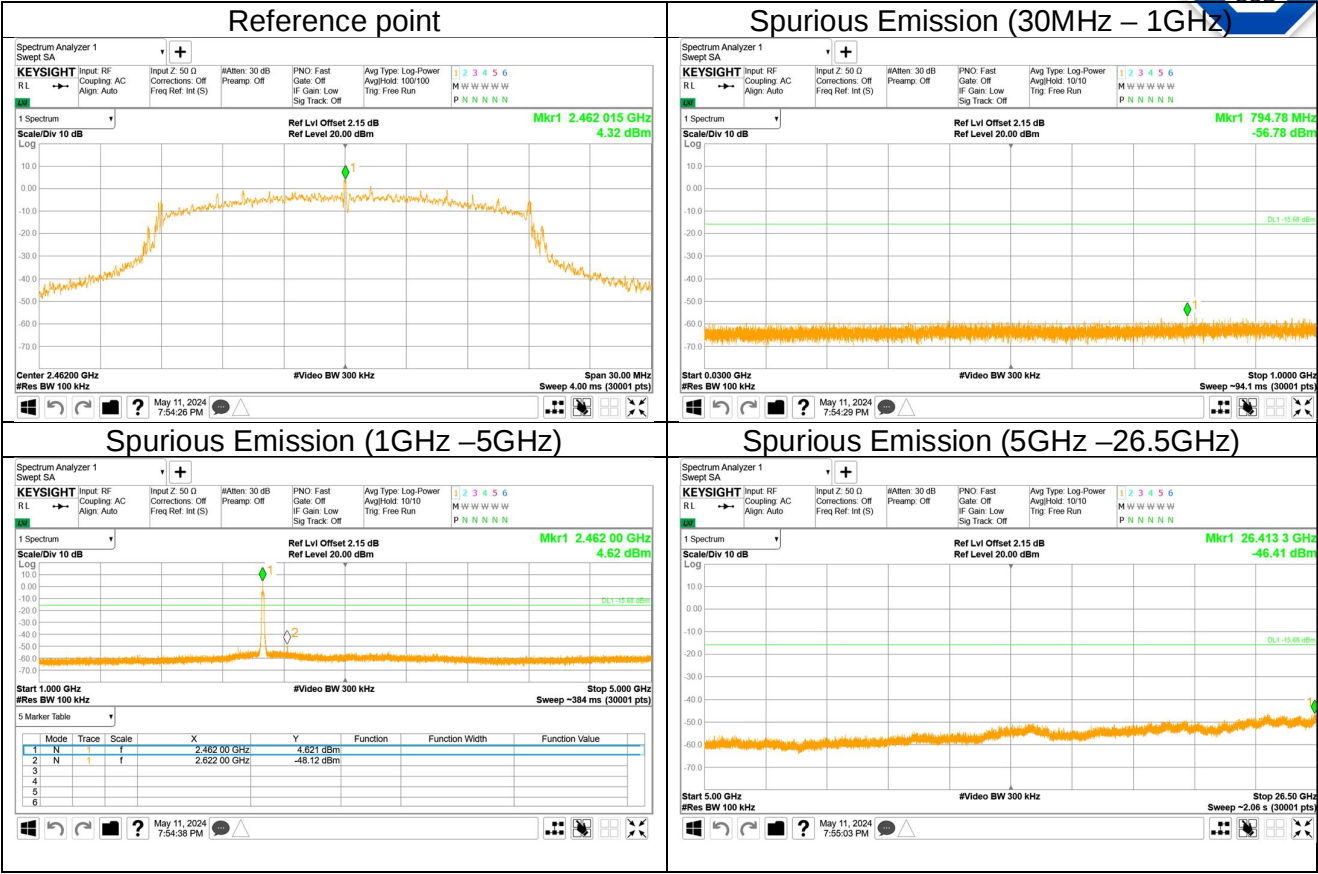
Start 5.000 GHz
#Res BW 100 kHz
#Video BW 300 kHz

Stop 26.50 GHz
Sweep -2.06 s (30001 pts)

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Out-of-Band Emissions

Channel 11 (2462MHz)

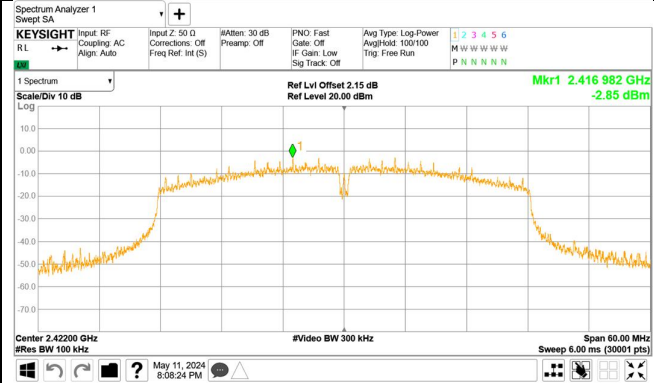




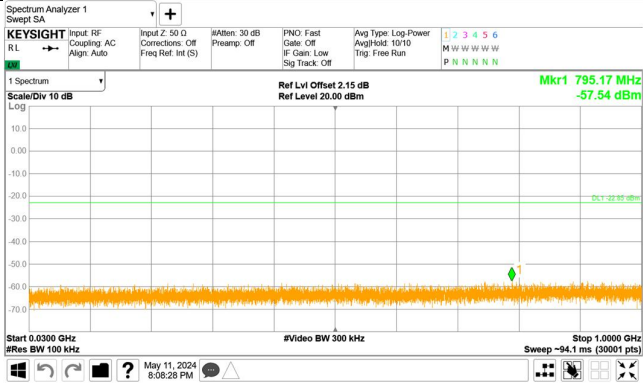
802.11 N HT40

Out-of-Band Emissions
Channel 3 (2422MHz)

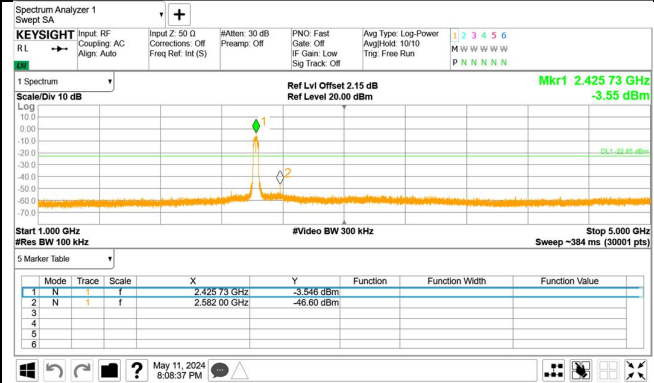
Reference point



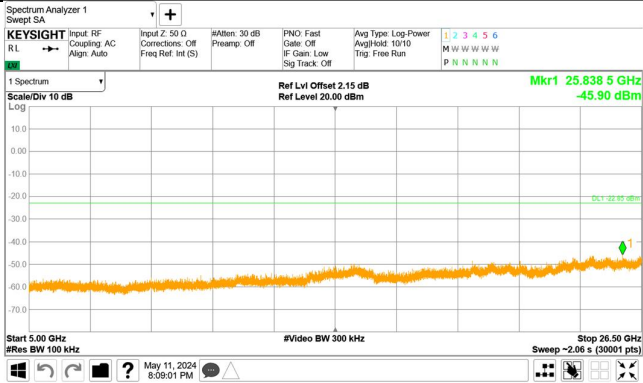
Spurious Emission (30MHz – 1GHz)

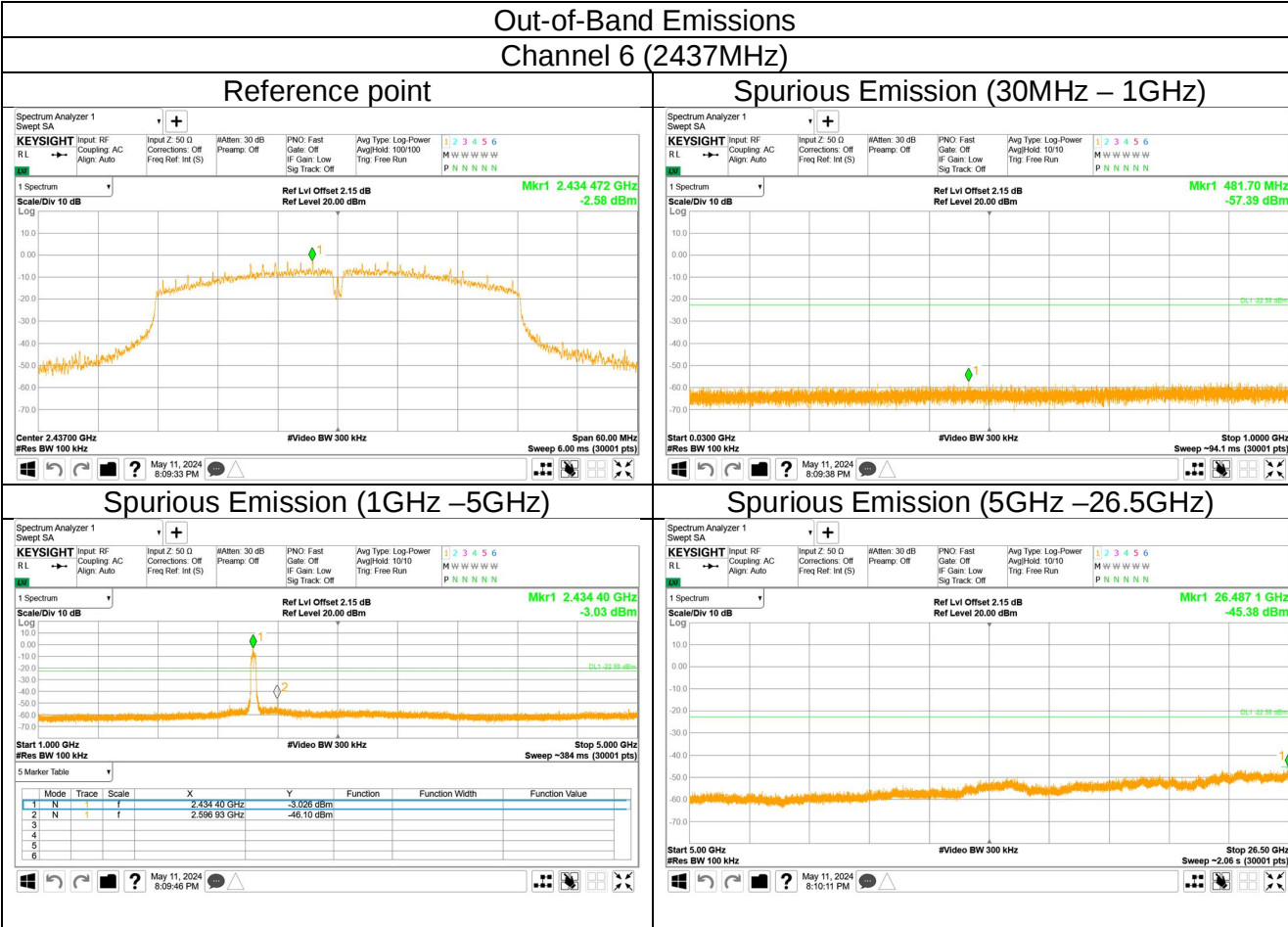


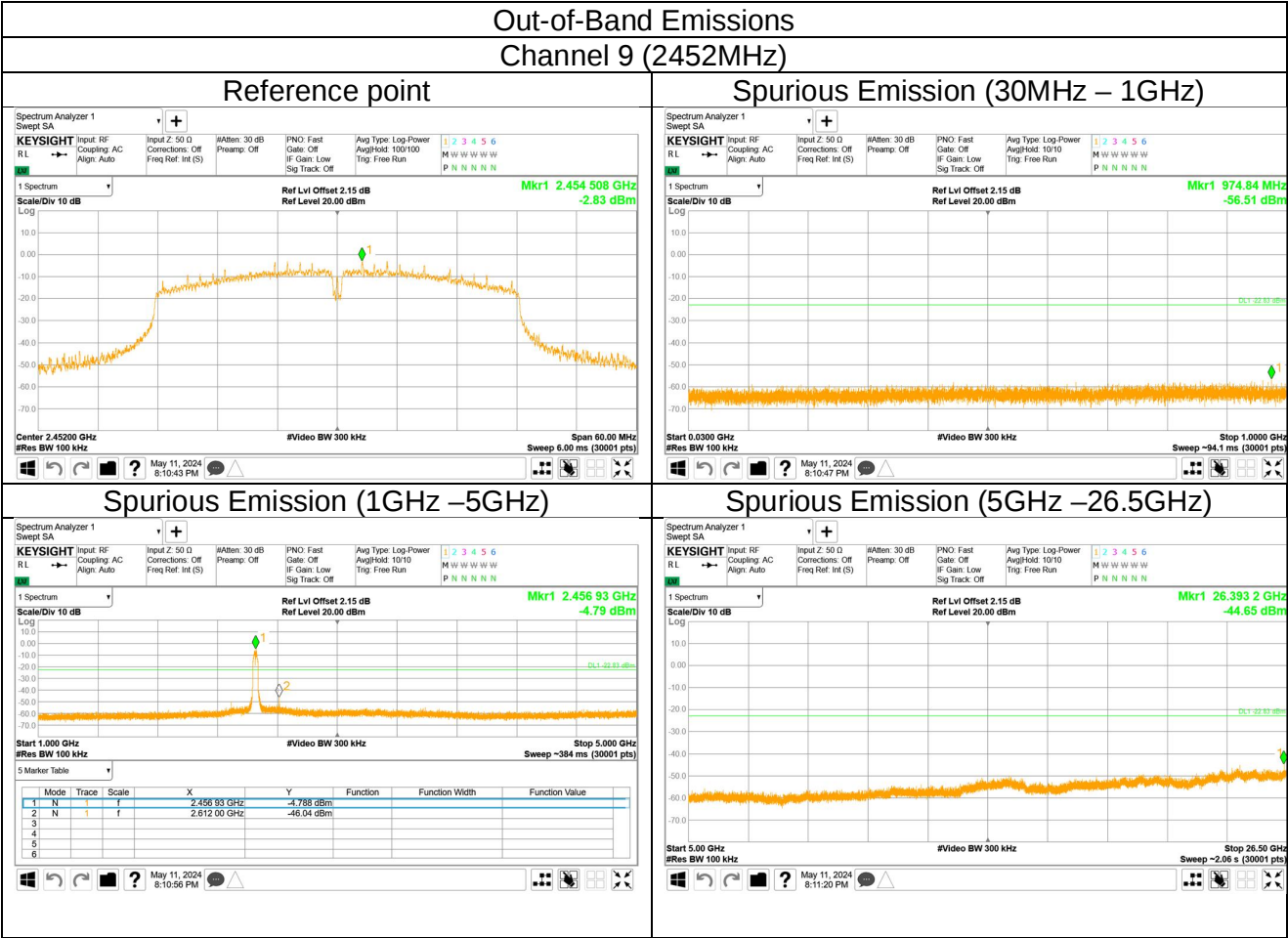
Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)

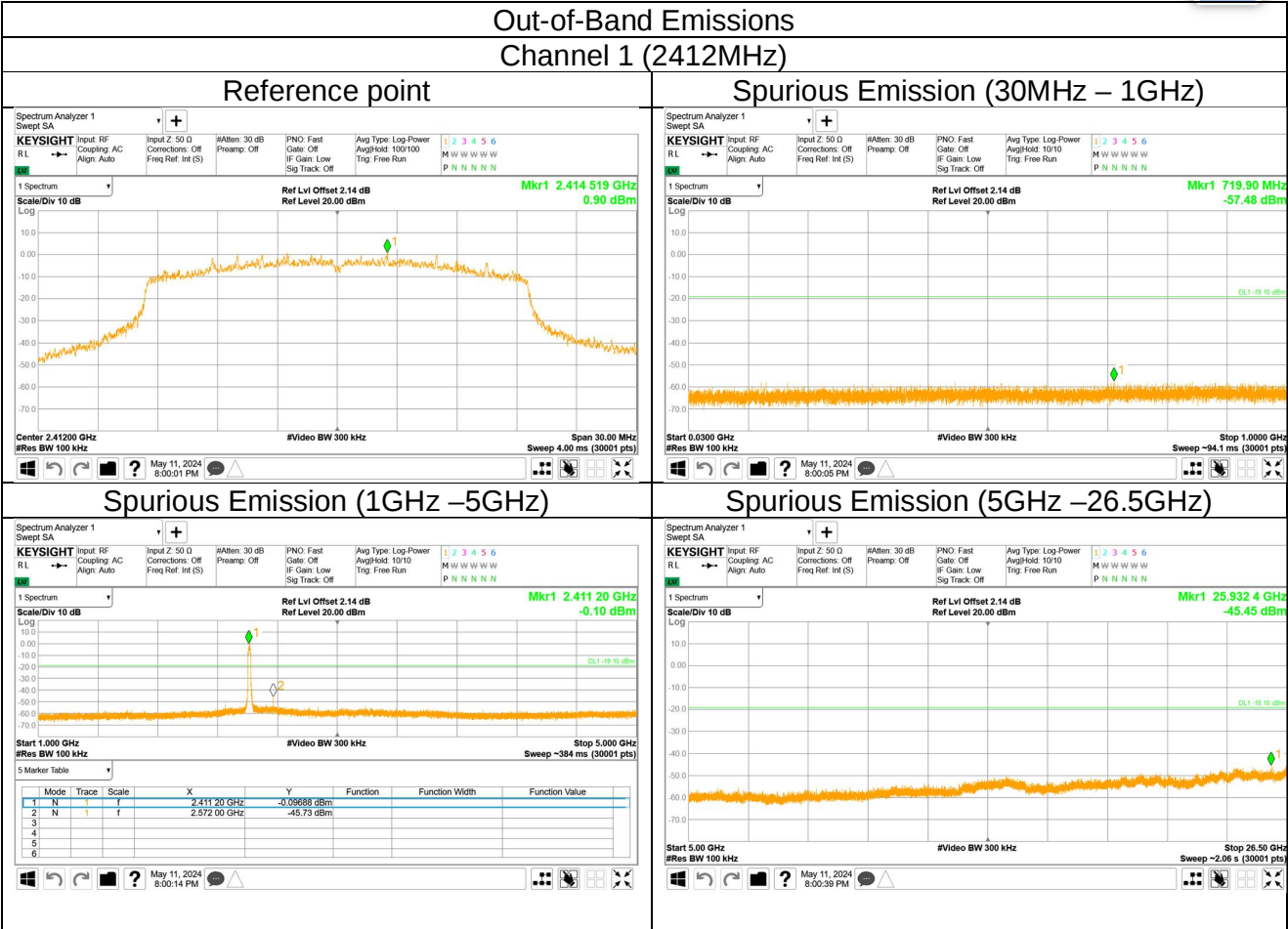






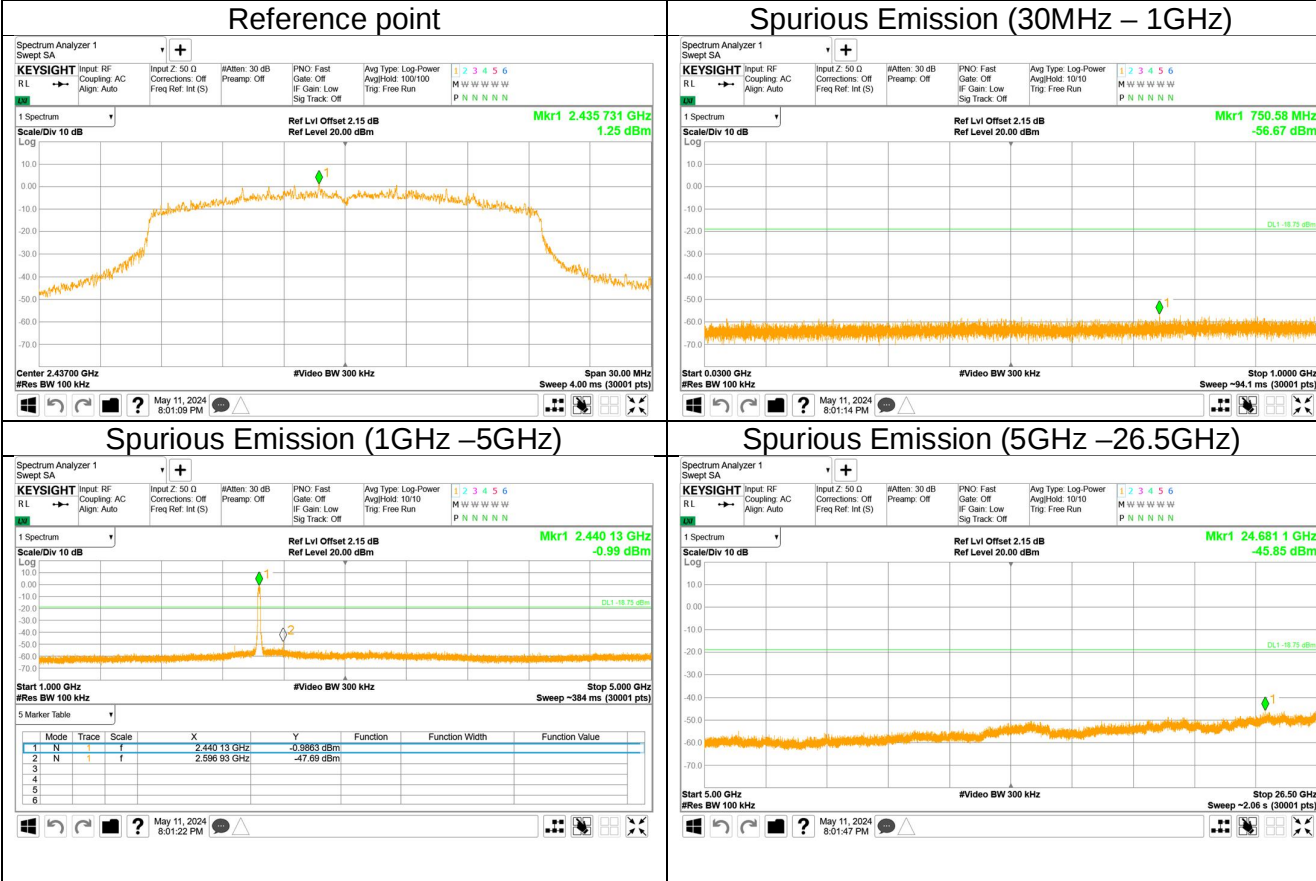


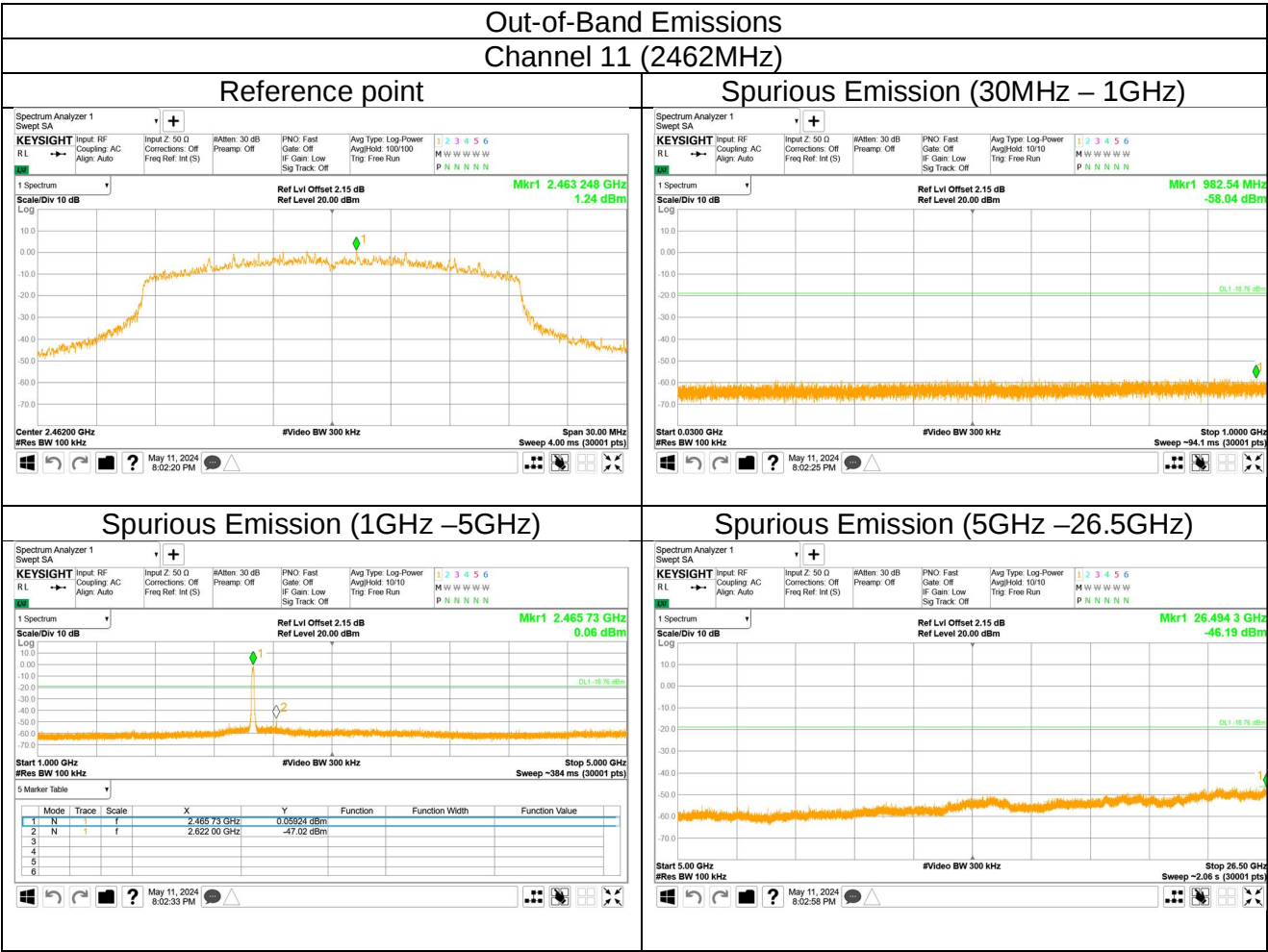
802.11 ax HE20
Out-of-Band Emissions
Channel 1 (2412MHz)





Out-of-Band Emissions
Channel 6 (2437MHz)







802.11 ax HE20
Out-of-Band Emissions
RU 26_0 Channel 1 (2412MHz)

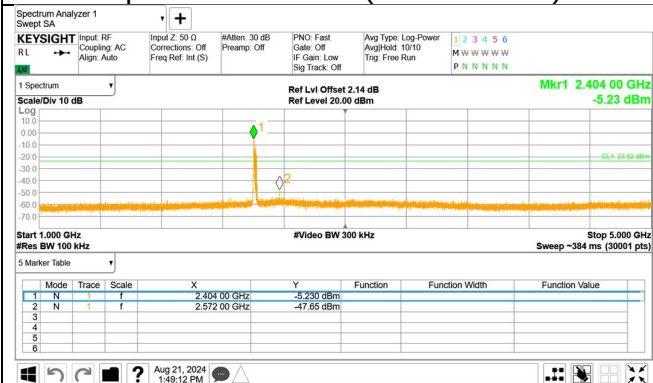
Reference point



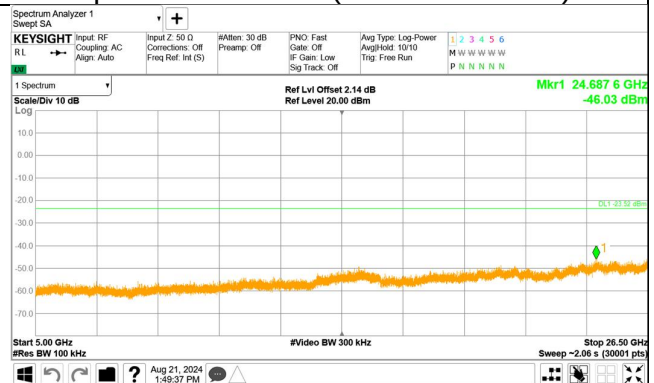
Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



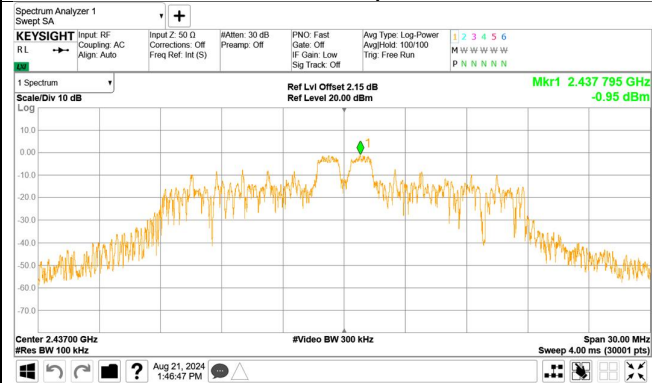
Spurious Emission (5GHz –26.5GHz)





Out-of-Band Emissions
RU 26 4 Channel 6 (2437MHz)

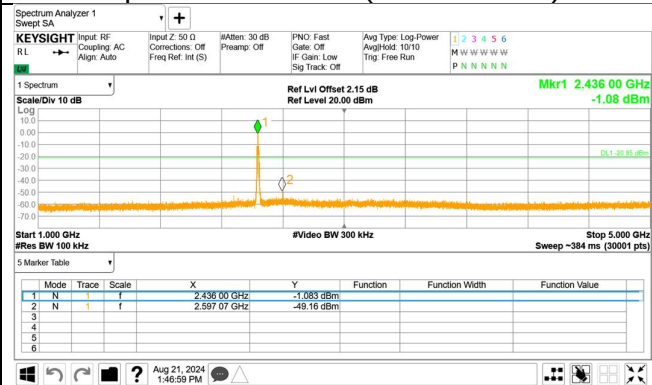
Reference point



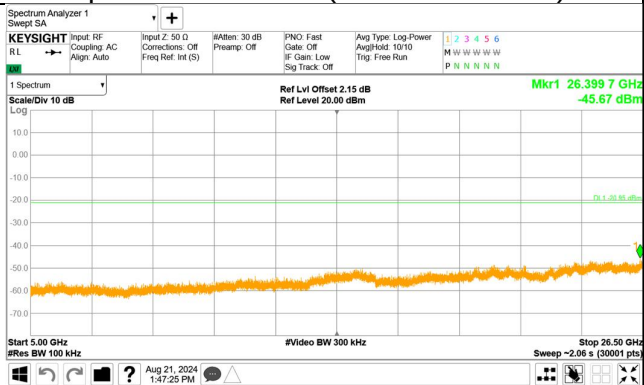
Spurious Emission (30MHz – 1GHz)

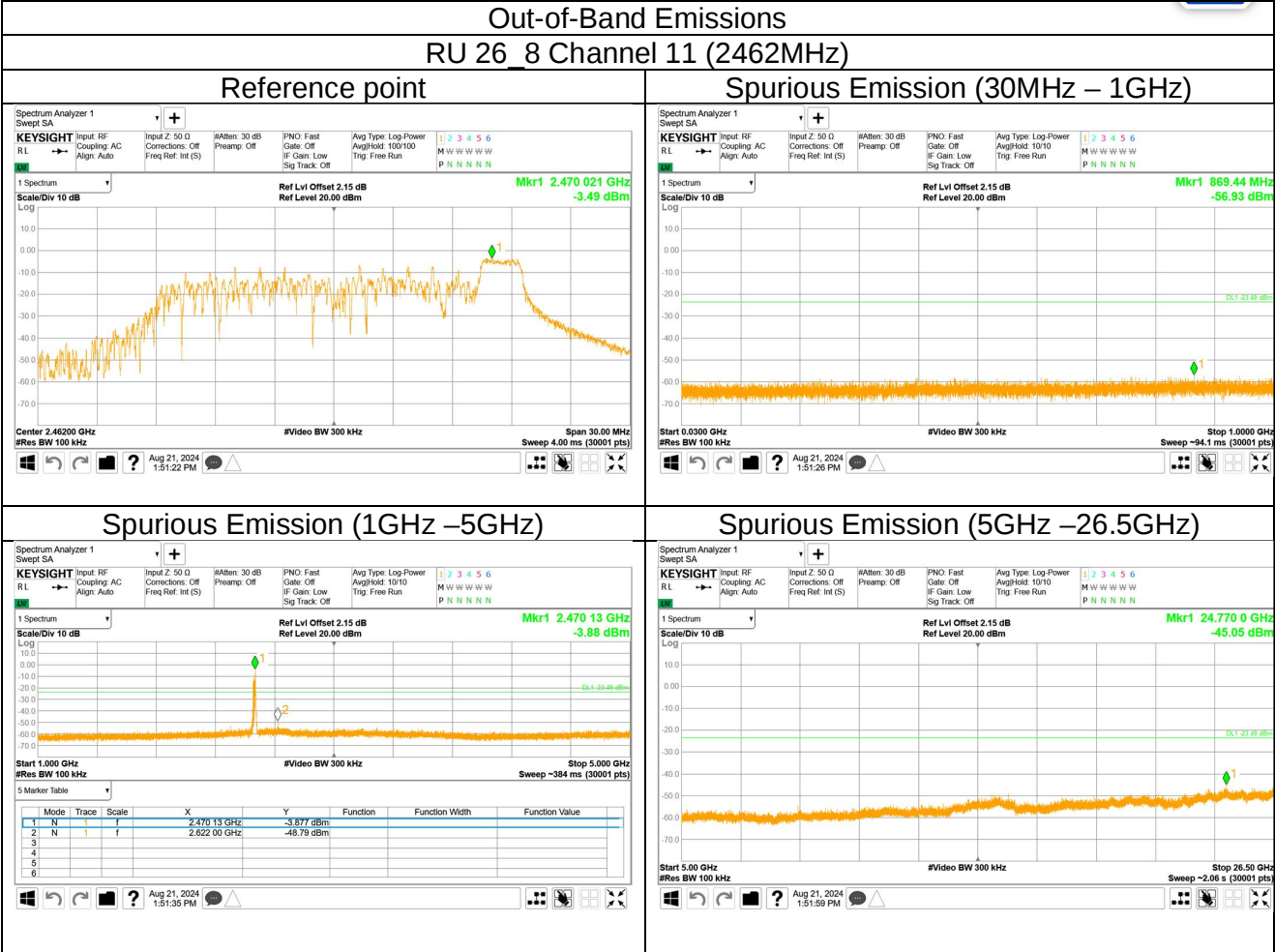


Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)







802.11 ax HE20

Out-of-Band Emissions

RU 52_37 Channel 1 (2412MHz)

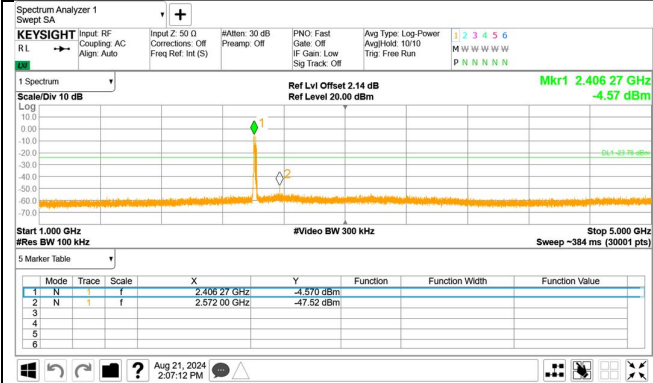
Reference point



Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)

