



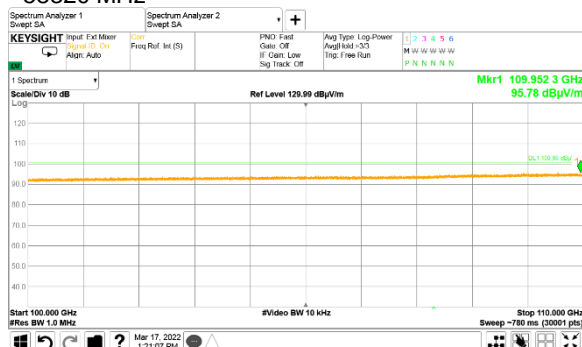
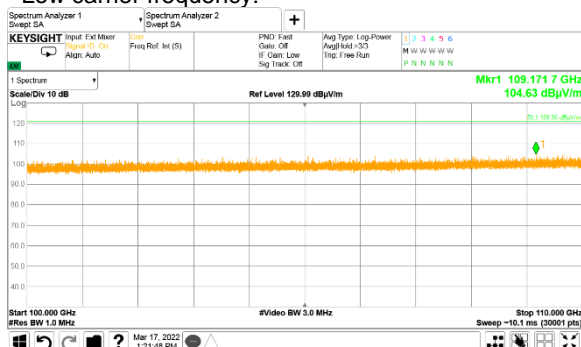
HERMON LABORATORIES

Test specification:		FCC Section 15.255(d)(3), RSS-210 section J.3, Out of band radiated emissions above 40 GHz	
Test procedure:		ANSI C63.10, Sections 9.9, 9.12	
Test mode:		Verdict: PASS	
Date(s):			
17-Mar-22			
Temperature: 10 °C	Relative Humidity: 48 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

### Plot 7.4.7 Spurious emission measurements in 100 - 110 GHz range

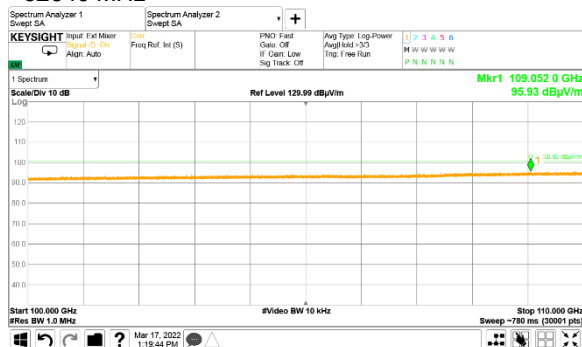
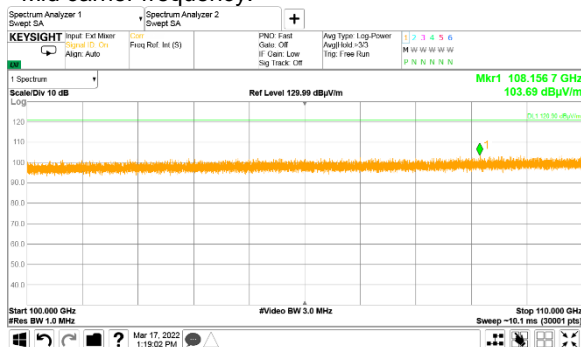
TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:

OATS  
0.5 m  
16QAM  
Vertical and Horizontal  
DETECTOR: Peak RBW = 1 MHz; VBW = 10 kHz  
58320 MHz



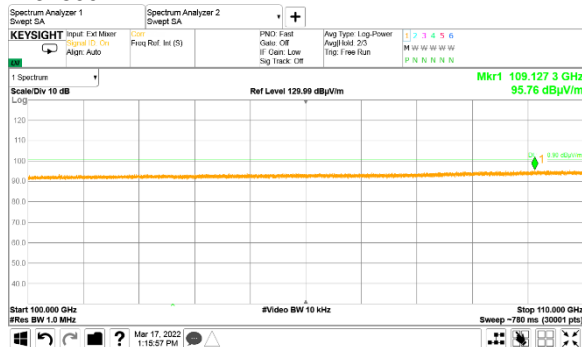
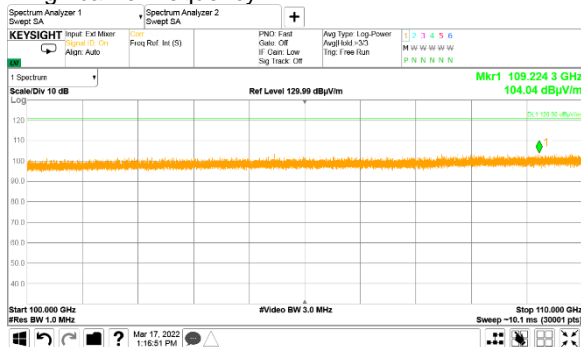
Mid carrier frequency:

62640 MHz



High carrier frequency:

64800 MHz





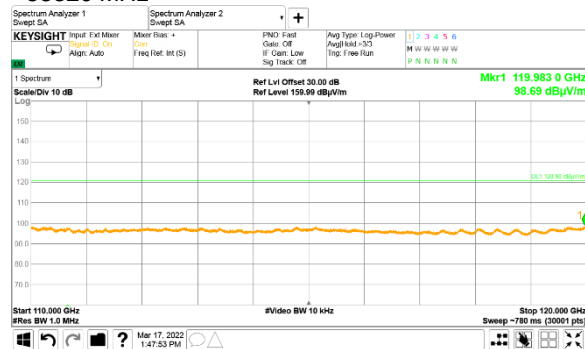
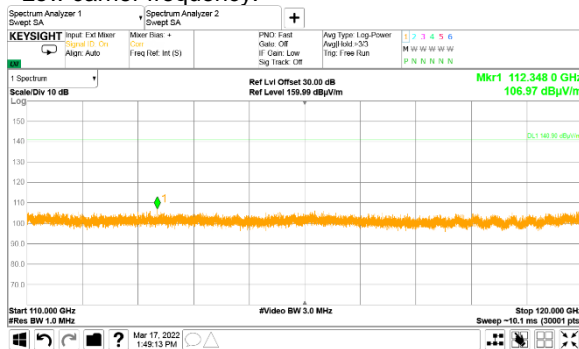
HERMON LABORATORIES

Test specification:		FCC Section 15.255(d)(3), RSS-210 section J.3, Out of band radiated emissions above 40 GHz	
Test procedure:		ANSI C63.10, Sections 9.9, 9.12	
Test mode:		Verdict: PASS	
Date(s):			
17-Mar-22			
Temperature: 10 °C	Relative Humidity: 48 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

### Plot 7.4.8 Spurious emission measurements in 110 - 120 GHz range

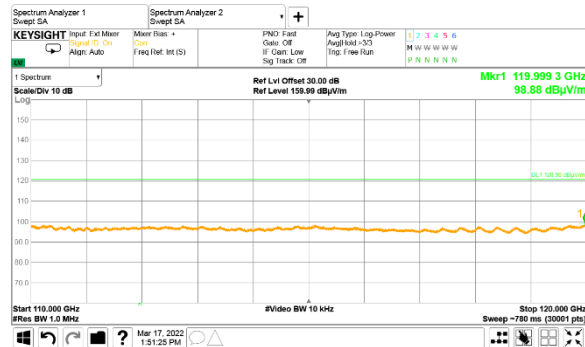
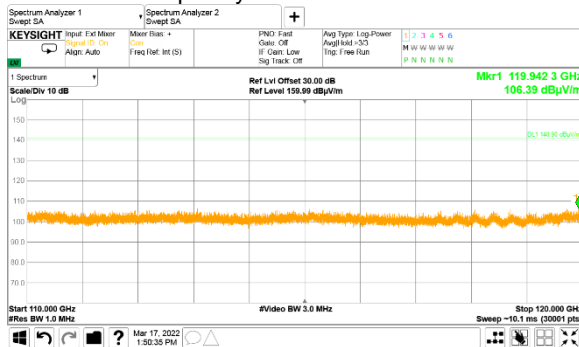
TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:

OATS  
0.05 m  
16QAM  
Vertical and Horizontal  
DETECTOR: Peak RBW = 1 MHz; VBW = 10 kHz  
58320 MHz



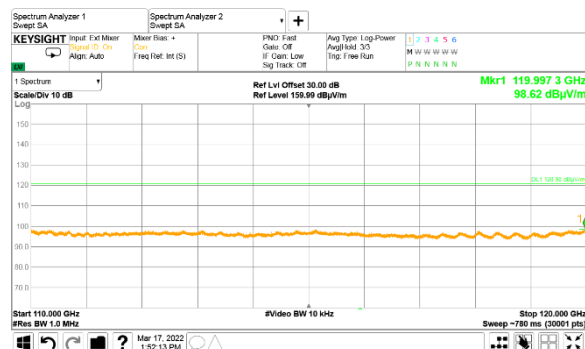
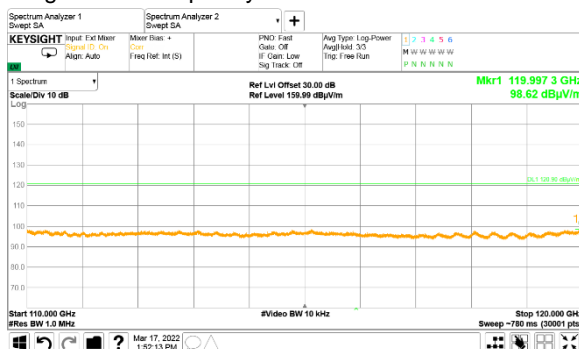
Mid carrier frequency:

62640 MHz



High carrier frequency:

64800 MHz





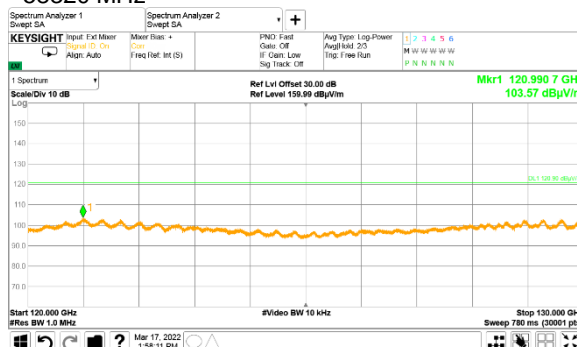
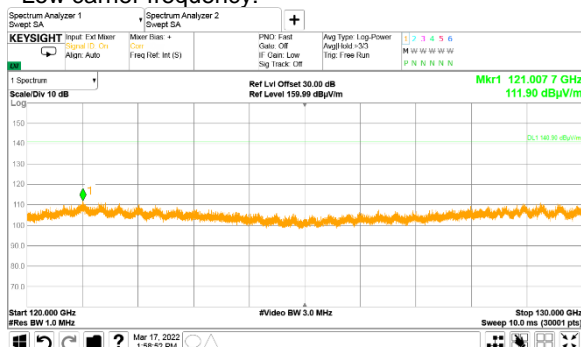
HERMON LABORATORIES

Test specification:		FCC Section 15.255(d)(3), RSS-210 section J.3, Out of band radiated emissions above 40 GHz	
Test procedure:		ANSI C63.10, Sections 9.9, 9.12	
Test mode:		Verdict: PASS	
Date(s):			
17-Mar-22			
Temperature: 10 °C	Relative Humidity: 48 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

### Plot 7.4.9 Spurious emission measurements in 120 - 130 GHz range

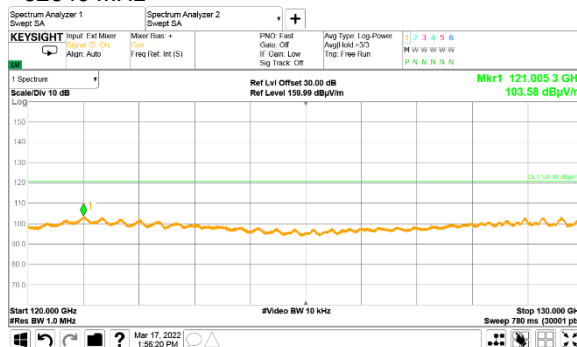
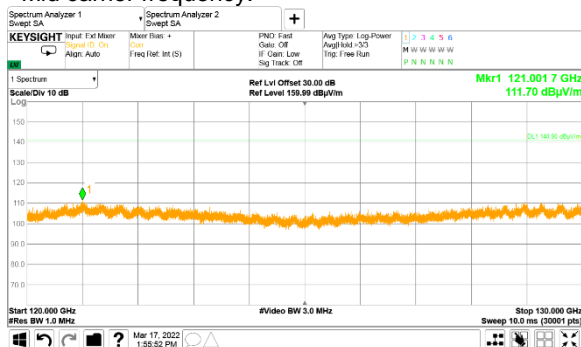
TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:

OATS  
0.05 m  
16QAM  
Vertical and Horizontal  
DETECTOR: Peak RBW = 1 MHz; VBW = 10 kHz  
58320 MHz



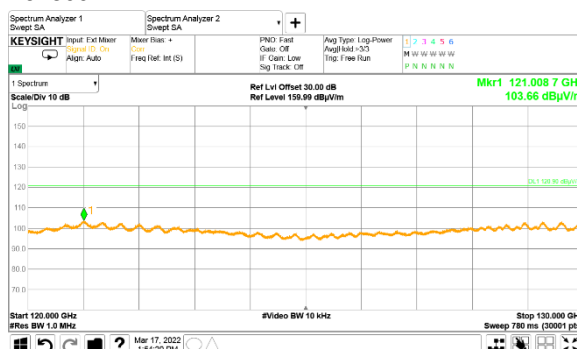
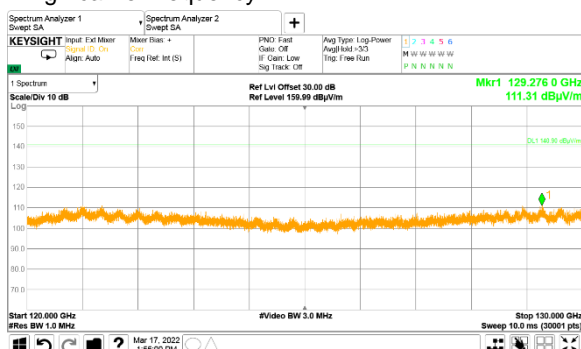
Mid carrier frequency:

62640 MHz



High carrier frequency:

64800 MHz





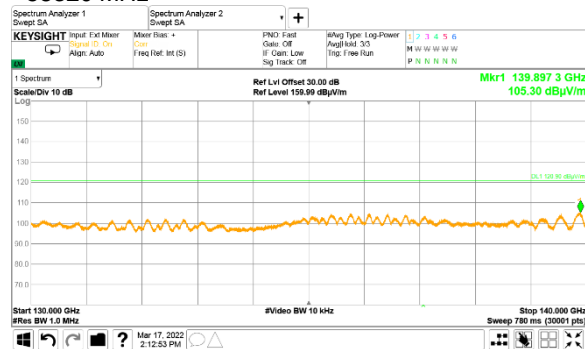
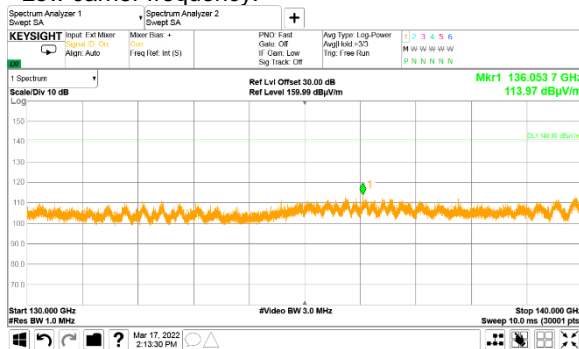
HERMON LABORATORIES

<b>Test specification:</b>		<b>FCC Section 15.255(d)(3), RSS-210 section J.3, Out of band radiated emissions above 40 GHz</b>	
<b>Test procedure:</b>		ANSI C63.10, Sections 9.9, 9.12	
<b>Test mode:</b>		<b>Verdict:</b> PASS	
<b>Date(s):</b>			
17-Mar-22			
<b>Temperature:</b> 10 °C	<b>Relative Humidity:</b> 48 %	<b>Air Pressure:</b> 1020 hPa	<b>Power:</b> 48 VDC
<b>Remarks:</b>			

Plot 7.4.10 Spurious emission measurements in 130 - 140 GHz range

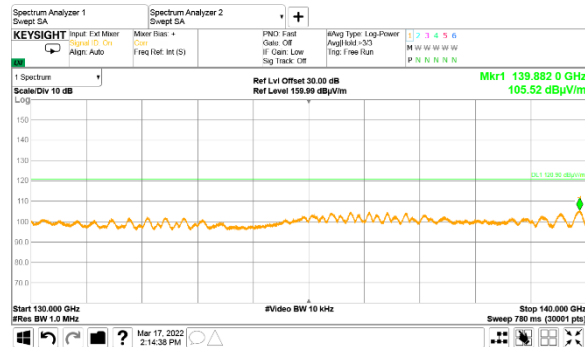
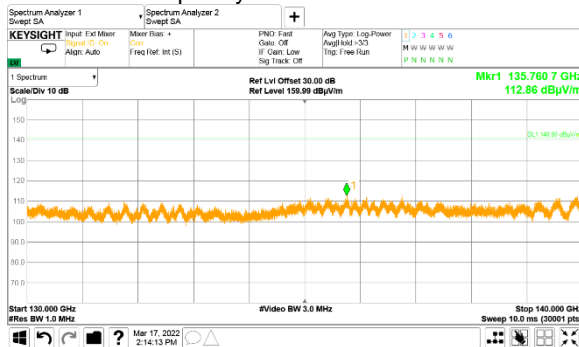
TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:

OATS  
0.05 m  
16QAM  
Vertical and Horizontal  
DETECTOR: Peak RBW = 1 MHz; VBW = 10 kHz  
58320 MHz



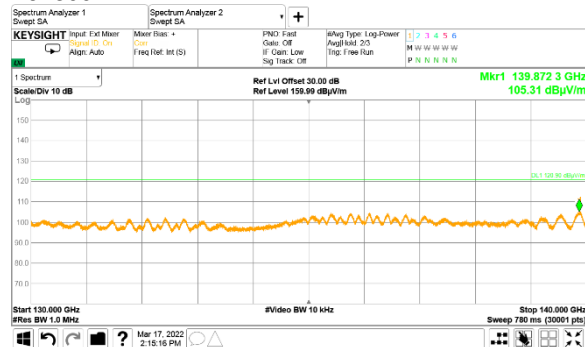
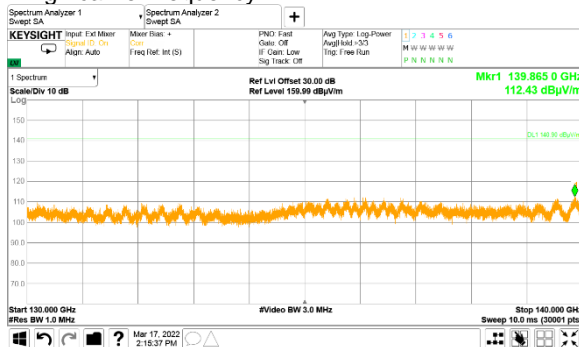
Mid carrier frequency:

62640 MHz



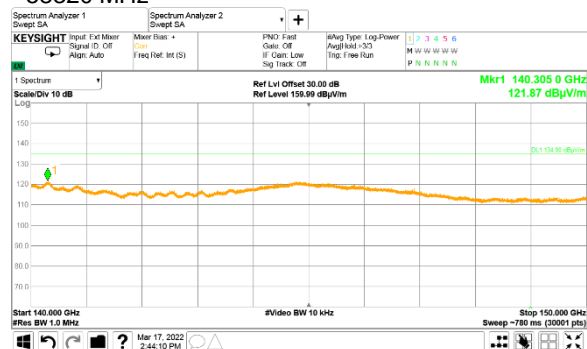
High carrier frequency:

64800 MHz





TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:

[illegible]

The screenshot displays the Spectrum Analyzer 1 interface. The top panel shows the input signal as 'Signal (D: Off)' and the output as 'Avg Type Log Power'. The frequency range is set from 140.000 GHz to 150.000 GHz. The scale is set to 10 dB. The trace shows a signal with a peak at 132.34 dBm/Vm. The peak is labeled with 'Mkr1 144.888 GHz' and '132.34 dBm/Vm'. The bottom panel shows the video bandwidth (BW) as 5.0 MHz and the resolution bandwidth (RBW) as 1.0 MHz. The interface also includes a 'Spectrum Analyzer 2' window and a 'Sweep SA' window.

**Keysight** Spectrum Analyzer 1  
Sweep SA

**Spectrum Analyzer 2**  
Sweep SA

**Input:** F1: Mixer  
Signal ID: Off  
Align: Auto

**Marker:** Marker 1:  $144.772 \text{ GHz}$   
Freq:  $144.772 \text{ GHz}$   
Int: (S)

**PRF0:** Fast  
Gate: Off  
IF Gain: Low  
Log Track: Off

**Setup Type:** Log Power  
Avg/hold: +3C  
IF Gain: Free Run

**Display:** 1 2 3 4 5 6  
M W W W W W W  
P N N N N N N

**Scale:** Div 10 dB  
Ref Lvl Offset 30.00 dBm  
Ref Level 159.99 dBm/Hz

**Mkr1:** 144.772 GHz  
121.62 dBm/Hz

**Start:** 140.000 GHz  
#Res BW 1.0 MHz

**#Video BW:** 10 MHz

**Stop:** 150.000 GHz  
Sweep: 780 ms (20001 pts)

**Windows:** #Windows BW 1.0 MHz

**System:** Mar 17, 2022 2:43:38 PM

**Spectrum Analyzer 2**  
Sweep SA

**Input:** Ext Mixer  
**Signal:** D, Off  
**Align:** Auto

**Master Unit:** +  
**Freq:** Ref, Int (S)

**PGND:** Fast  
**Gate:** Off  
**IF Gain:** Low  
**Ref Tag:** Off

**Avg Type:** Log Processor  
**Avg/Int:** hold >35  
**Trig:** Free Run

**Display:** 1 2 3 4 5 6  
**Waveform:** M W W W W W W  
**Marker:** P N N N N N

**1 Spectrum**  
**Scale/Div:** 10 dB

**Ref Lvl:** Offset 30.00 dBm  
**Ref Level:** 159.99 dBm/100 MHz

**Mkr1:** 144.862 GHz  
**132.20 dBm/100 MHz**  
**25.1 MHz BW**

**Start:** 140.000 GHz  
**#Res:** 150.0 MHz

**#Video:** BW 3.0 MHz

**Stop:** 150.000 GHz  
**Sweep:** ~10.1 ms (2000) P

**Keysight** Spectrum Analyzer 1 Sweep SA Spectrum Analyzer 2 Sweep SA

**Input:** Input: Fx1 Mixer Signal ID: Off Align: Auto **Mixer Mode:** Freq Ref: Int (S) **PGND:** Fast Gate: Off IF Gain: Low Log Track: Off **Setup Type:** Log Power Avg/Ref: +303 Stop: Free Run **1 2 3 4 5 6** **M W W W W W W W** **P N N N N N N N**

**1 Spectrum** **Ref Lvl Offset 30.00 dBm** **Mkr1 144.799 3 GHz**  
**Scale Div 10 dB** **Ref Level 159.99 dBm/Vm** **121.72 dBm/Vm**

150  
140  
130  
120  
110  
100  
90.0  
80.0  
70.0

Start 140.000 GHz #Video BW 10 kHz Stop 150.000 GHz  
 Res BW 1.0 MHz Sweep ~780 ms (30001 pts)

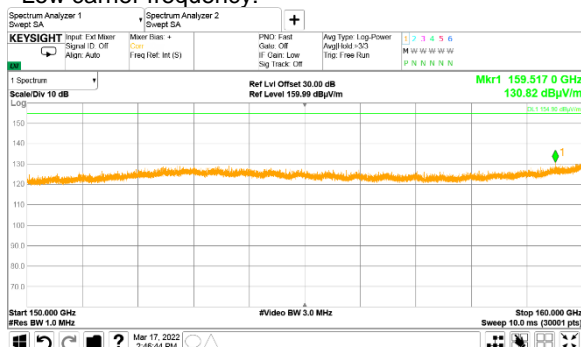


HERMON LABORATORIES

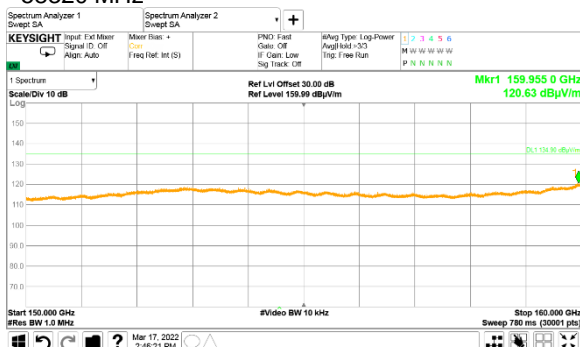
Test specification:		FCC Section 15.255(d)(3), RSS-210 section J.3, Out of band radiated emissions above 40 GHz	
Test procedure:		ANSI C63.10, Sections 9.9, 9.12	
Test mode:		Verdict: PASS	
Date(s):			
17-Mar-22			
Temperature: 10 °C	Relative Humidity: 48 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

Plot 7.4.12 Spurious emission measurements in 150 - 160 GHz range

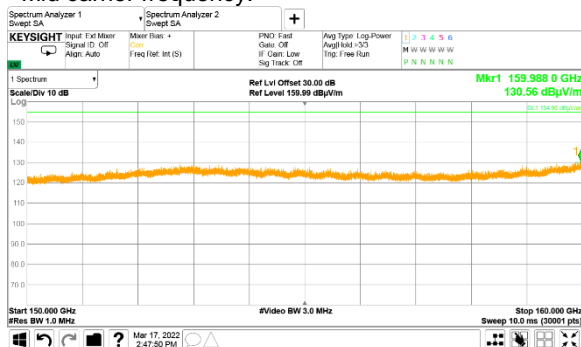
TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:



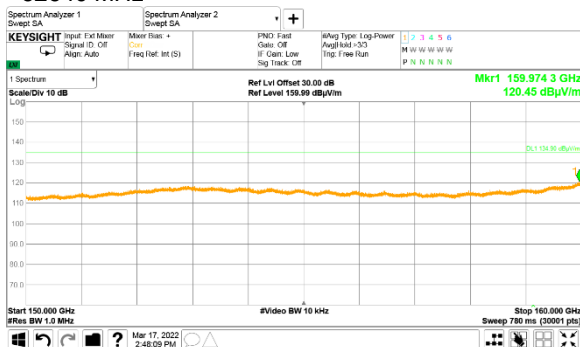
OATS  
0.01 m  
16QAM  
Vertical and Horizontal  
DETECTOR: Peak RBW = 1 MHz; VBW = 10 kHz  
58320 MHz



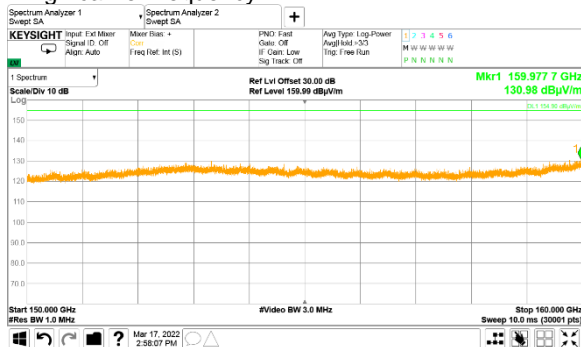
Mid carrier frequency:



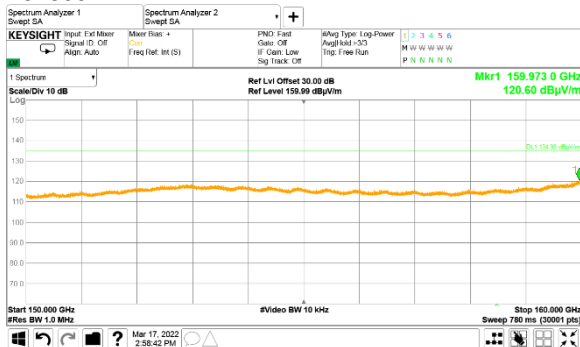
62640 MHz



High carrier frequency:



64800 MHz



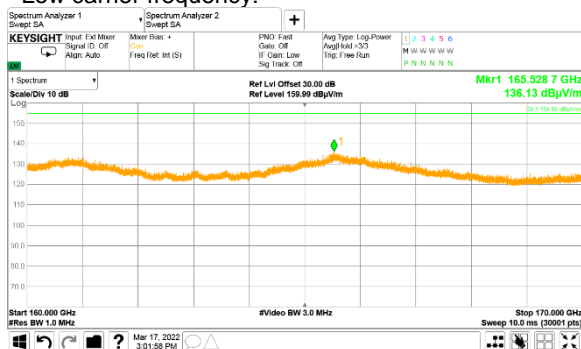


HERMON LABORATORIES

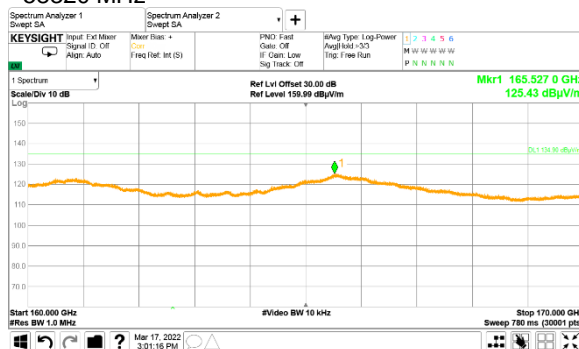
Test specification:		FCC Section 15.255(d)(3), RSS-210 section J.3, Out of band radiated emissions above 40 GHz	
Test procedure:		ANSI C63.10, Sections 9.9, 9.12	
Test mode:		Verdict: PASS	
Date(s):			
Temperature: 10 °C		Relative Humidity: 48 %	Air Pressure: 1020 hPa
		Power: 48 VDC	
Remarks:			

### Plot 7.4.13 Spurious emission measurements in 160 - 170 GHz range

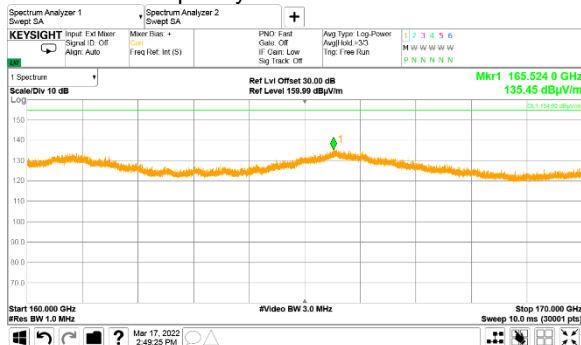
TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:



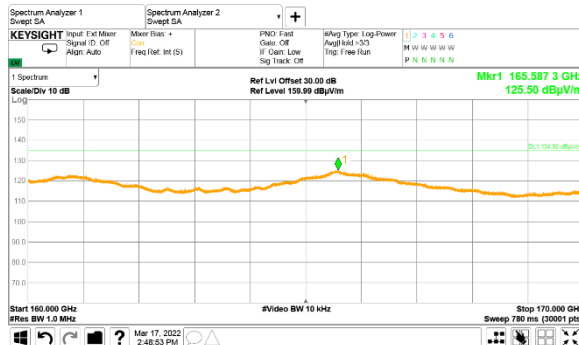
OATS  
0.01 m  
16QAM  
Vertical and Horizontal  
DETECTOR: Peak RBW = 1 MHz; VBW = 10 kHz  
58320 MHz



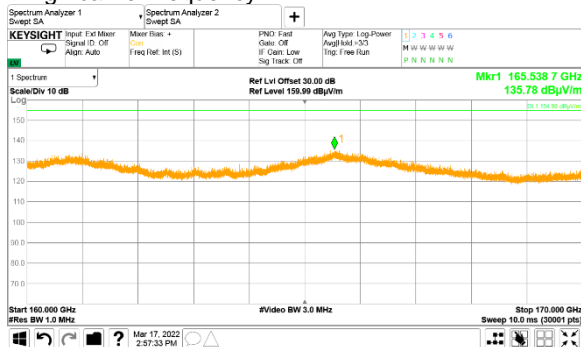
Mid carrier frequency:



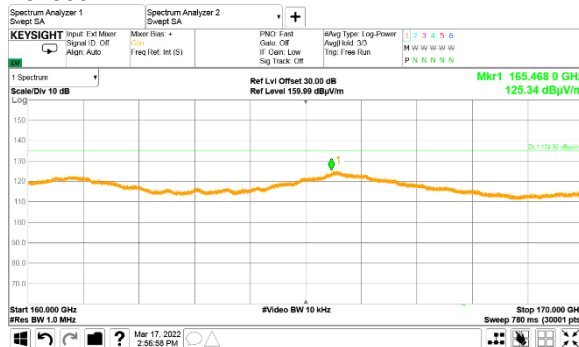
62640 MHz



High carrier frequency:



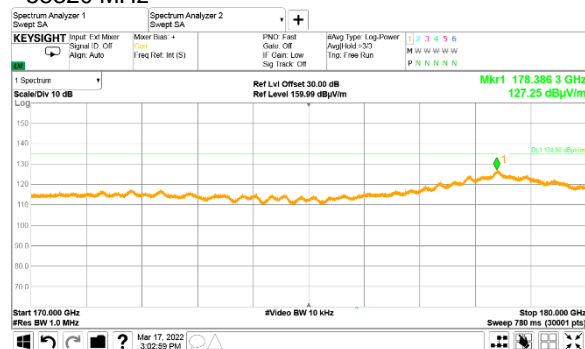
64800 MHz





TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency: \_\_\_\_\_

The screenshot displays the Keysight Spectrum Analyzer software interface. The top panel includes controls for Sweep SA, Span SA, and various measurement parameters. The main display area shows a spectrum plot with a green trace and a red marker labeled 'Mkr1' at 178.414 GHz. The bottom panel shows the start frequency (170.600 GHz) and resolution bandwidth (1.0 MHz).



Spectrum Analyzer 1  
Sweep SA

**KEYSIGHT**

Input: Ext Mixer  
Signal: Off  
Align: Auto

Spectrum Analyzer 2  
Sweep SA

Menu: Wave +  
Freq: Freq: Int (S)

Plot: Freq  
Cuts: Off  
IF: Chan. Low  
Log Track: Off

Avg Type: Log Power  
Aver/Seg: 1023  
Trig: Free Run

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

1 Spectrum  
Scale/Div 10 dB  
Mag

Ref Lvl Offset 30.00 dBm  
Ref Level 159.99 dBm/Vm

Mkr1 178.344 0 GHz  
137.22 dBm/Vm  
25.1 dBm SSB/Vm

150  
140  
130  
120  
110  
100  
90  
80  
70  
60

Start 170.660 GHz  
#Video BW 3.0 MHz

Stop 180.000 GHz  
Sweep 10.0 ms (20001 pts)

Windows taskbar: Mar 17, 2022 2:52:44 PM

The screenshot displays the Keysight Spectrum Analyzer software interface. The main window shows a spectrum plot with a yellow trace and a green horizontal line at 127.38 dBm/Hz. The plot is labeled "Ref Lvl Offset 30.00 dB" and "Ref Level 159.99 dBm/Hz". The frequency range is from 170.000 GHz to 180.000 GHz, and the resolution bandwidth (RBW) is 10 kHz. The vertical axis is labeled "Scale/Div 10 dB" and ranges from 70.0 to 150. The horizontal axis is labeled "dBm/Hz" and ranges from 70.0 to 150. The interface includes various control panels for input, output, and measurement settings.

The screenshot displays the Keysight Spectrum Analyzer 2 interface. The main plot shows a spectrum with a green trace and a yellow trace. The green trace is labeled 'Mkr1 178.432 GHz' and '137.07 dBm/Vm'. The yellow trace is labeled '1'. The plot is titled '1 Spectrum' and shows a scale of 10 dB. The plot is titled '1 Spectrum' and shows a scale of 10 dB. The plot is titled '1 Spectrum' and shows a scale of 10 dB.

[illegible]



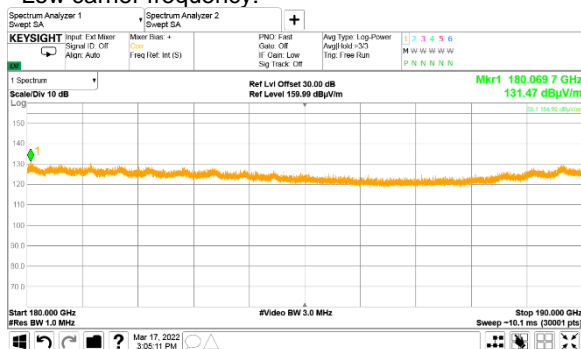


HERMON LABORATORIES

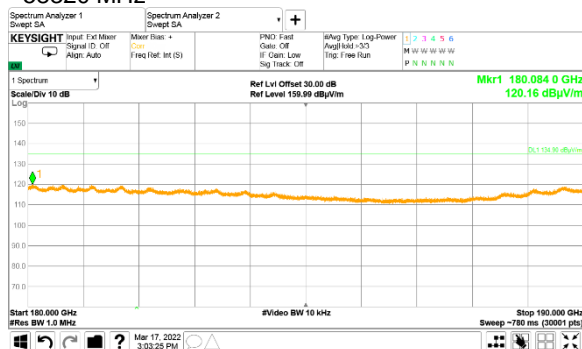
Test specification:		FCC Section 15.255(d)(3), RSS-210 section J.3, Out of band radiated emissions above 40 GHz	
Test procedure:		ANSI C63.10, Sections 9.9, 9.12	
Test mode:		Verdict: PASS	
Date(s):			
17-Mar-22			
Temperature: 10 °C	Relative Humidity: 48 %	Air Pressure: 1020 hPa	Power: 48 VDC
Remarks:			

### Plot 7.4.15 Spurious emission measurements in 180 - 190 GHz range

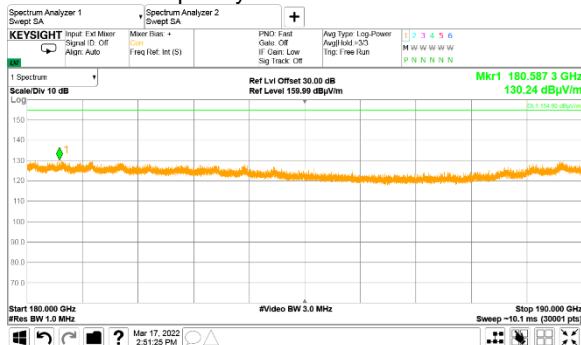
TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:



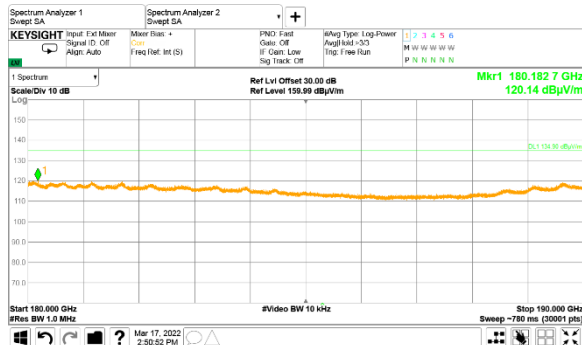
OATS  
0.01 m  
16QAM  
Vertical and Horizontal  
DETECTOR: Peak RBW = 1 MHz; VBW = 10 kHz  
58320 MHz



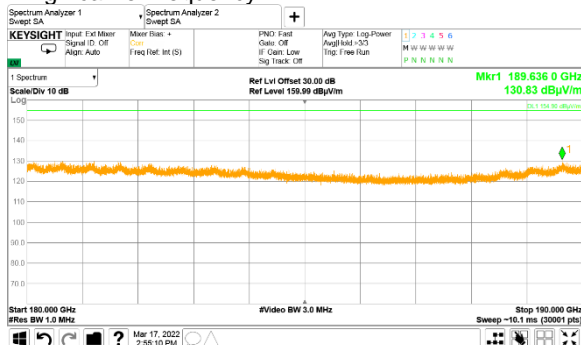
Mid carrier frequency:



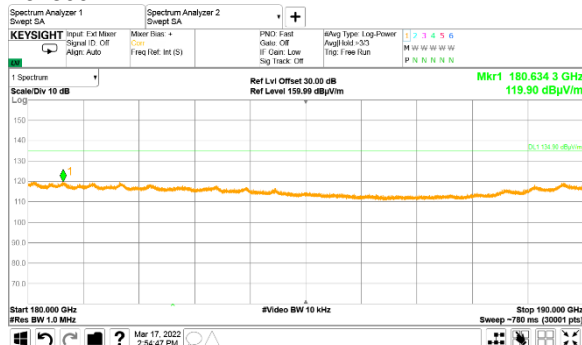
62640 MHz



High carrier frequency:



64800 MHz





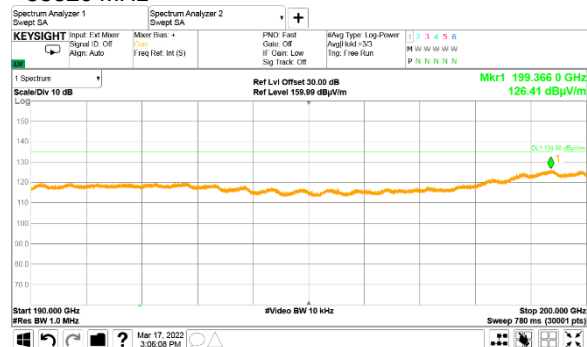
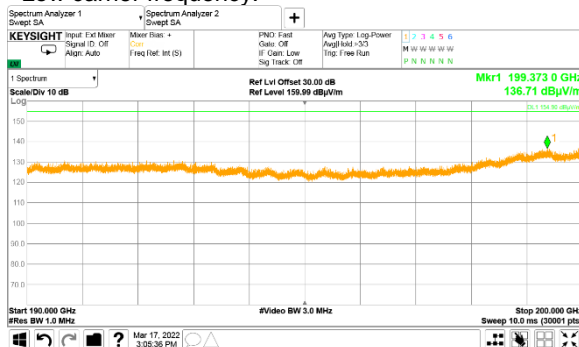
HERMON LABORATORIES

<b>Test specification:</b>		<b>FCC Section 15.255(d)(3), RSS-210 section J.3, Out of band radiated emissions above 40 GHz</b>	
<b>Test procedure:</b>		ANSI C63.10, Sections 9.9, 9.12	
<b>Test mode:</b>		<b>Verdict:</b> PASS	
<b>Date(s):</b>			
17-Mar-22			
<b>Temperature:</b> 10 °C	<b>Relative Humidity:</b> 48 %	<b>Air Pressure:</b> 1020 hPa	<b>Power:</b> 48 VDC
<b>Remarks:</b>			

Plot 7.4.16 Spurious emission measurements in 190 - 200 GHz range

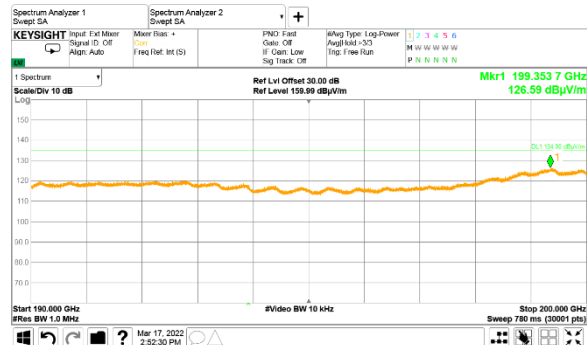
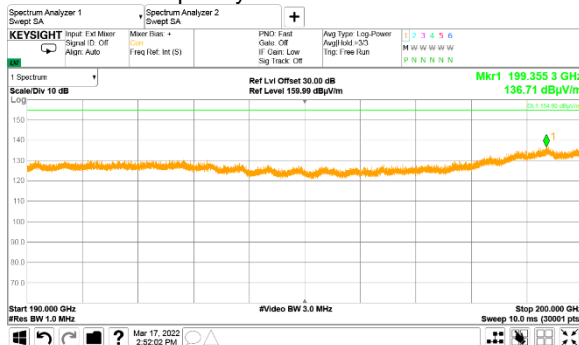
TEST SITE:  
TEST DISTANCE:  
MODULATION:  
ANTENNA POLARIZATION:  
DETECTOR: Peak RBW = 1 MHz; VBW = 3 MHz  
Low carrier frequency:

OATS  
0.01 m  
16QAM  
Vertical and Horizontal  
DETECTOR: Peak RBW = 1 MHz; VBW = 10 kHz  
58320 MHz



Mid carrier frequency:

62640 MHz



High carrier frequency:

64800 MHz

