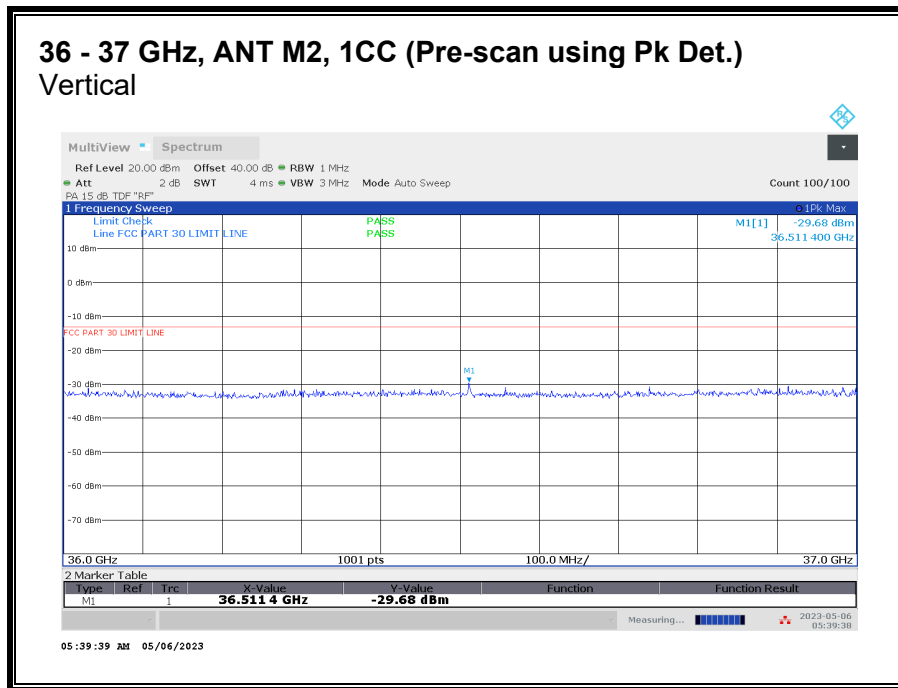
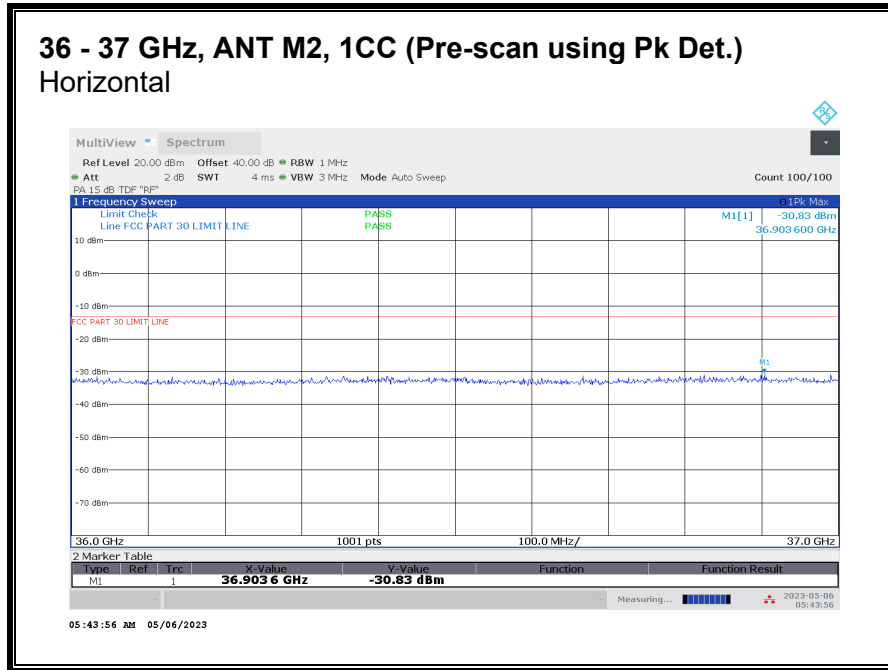
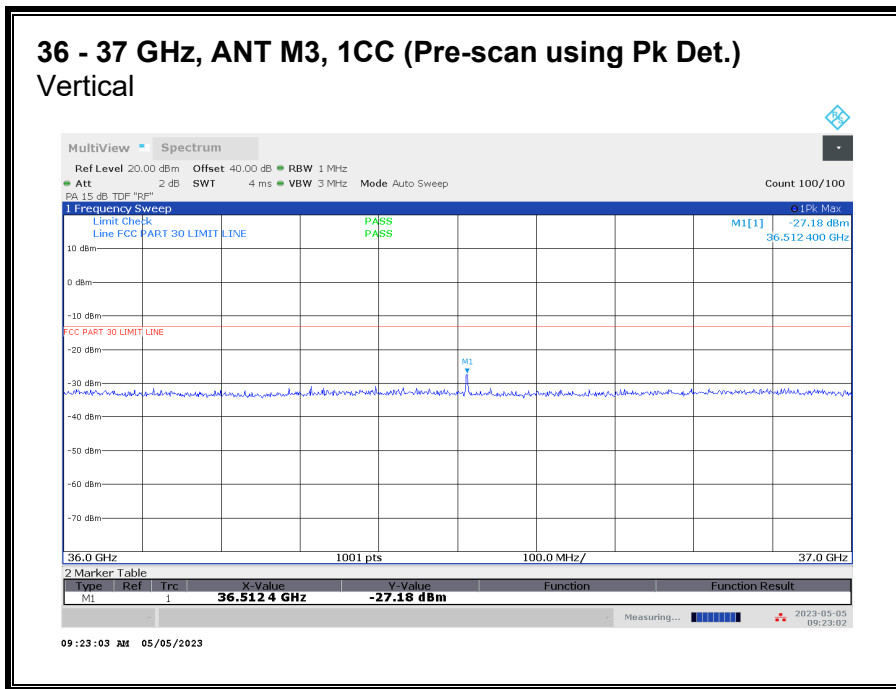
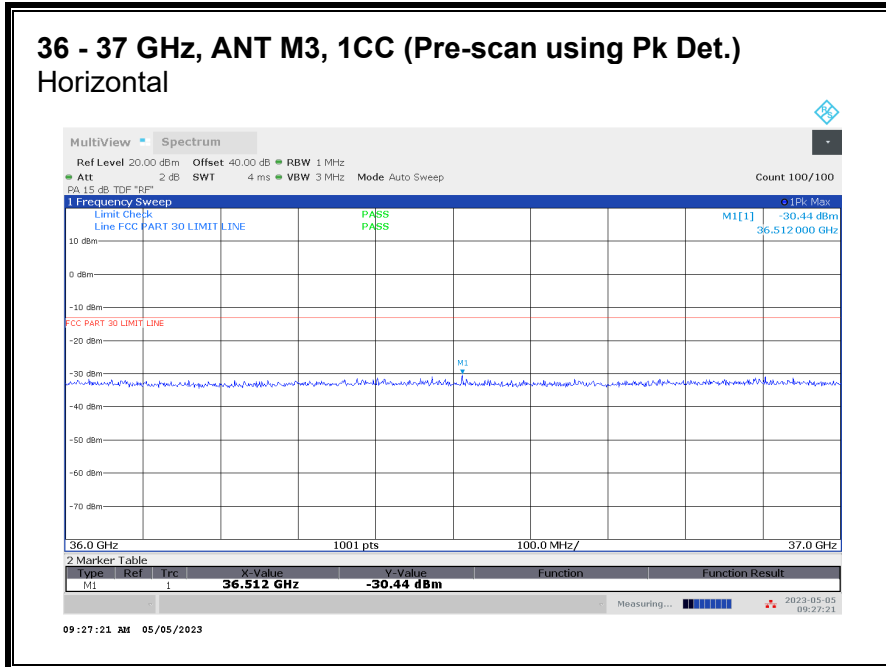


8.4.33. RSE n260 36 – 37 GHz



Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

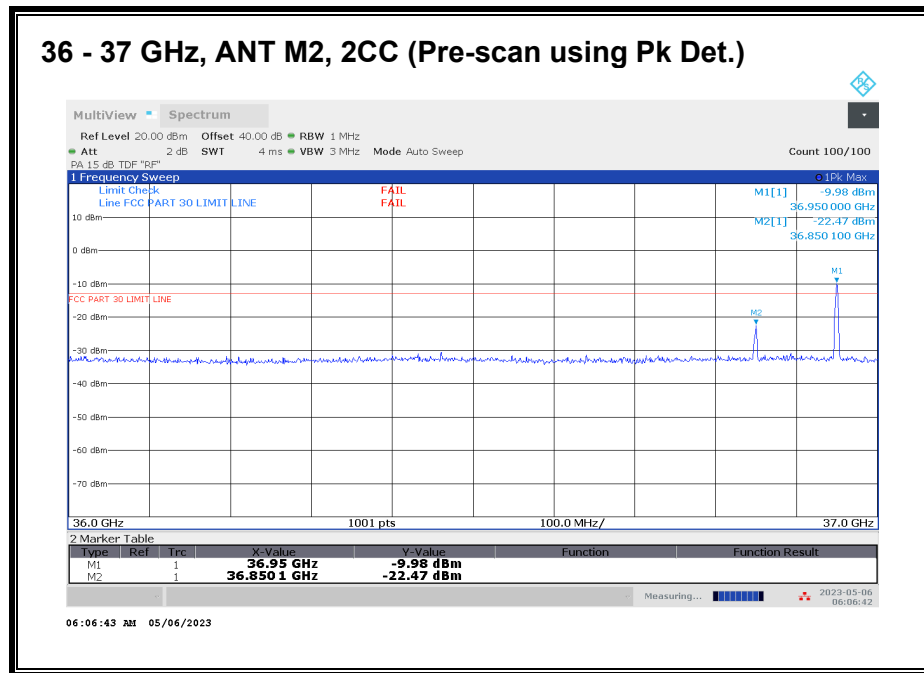


Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

36 - 37 GHz n260, 1CC

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M2	36.512	3	H	-39.76	-13	-26.76
M2	36.512	3	V	-35.34	-13	-22.34
M3	36.512	3	H	-35.63	-13	-22.63
M3	36.512	3	V	-27.05	-13	-14.05

36 - 37 GHz n260, 2CC



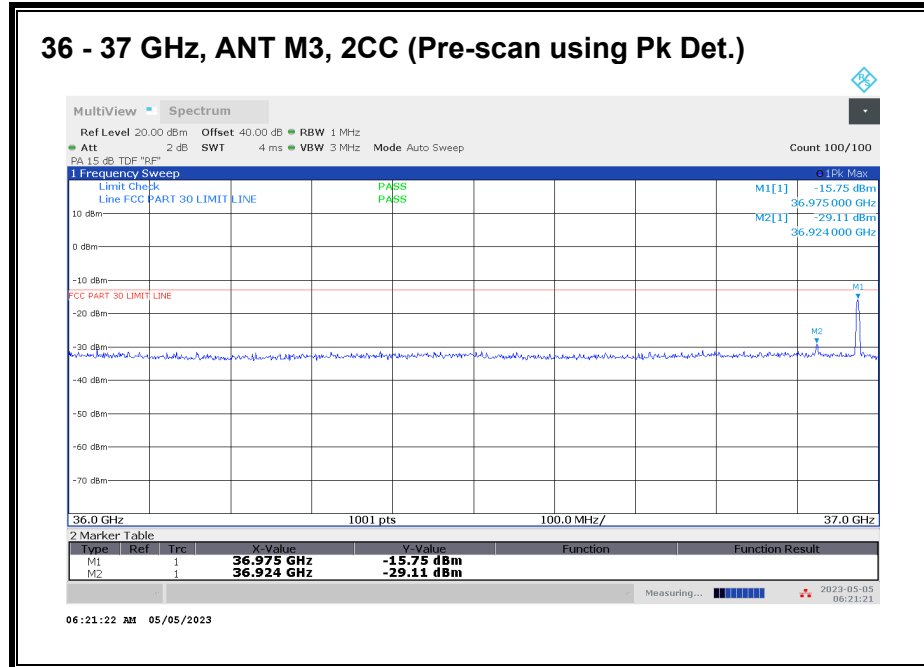
Worst case configuration:

SISO-DUAL_QPSK_(100 MHz + 100 MHz)_Low CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas.	Rx Ant.	Corrected	TRP Limit	Margin
	(GHz)	Distance	Polarity	Avg EIRP	(dBm)	(dB)
		(m)	H/V	(dBm)		
M2	36.949	3	--	-19.85	-13	-6.85



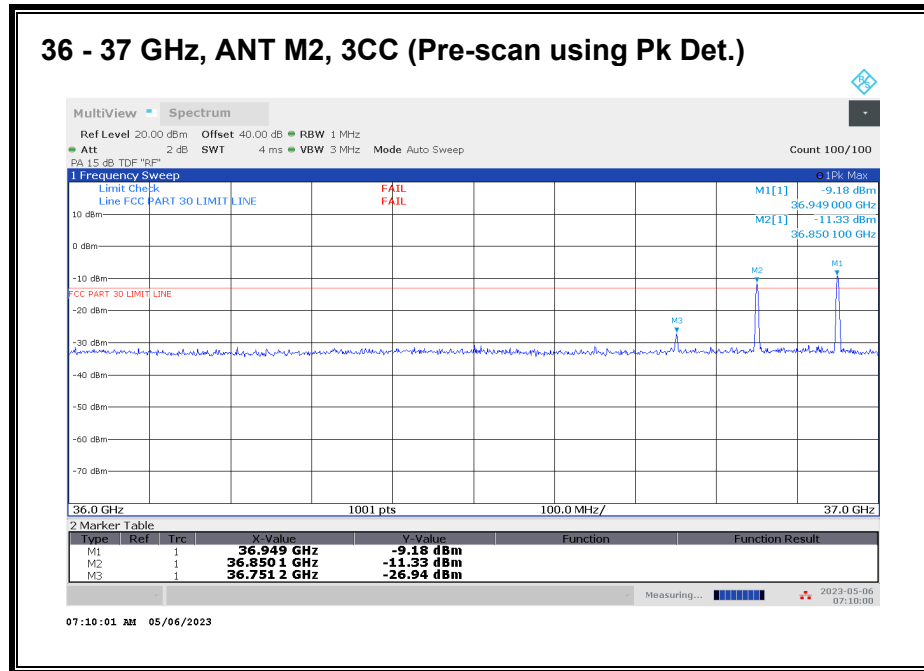
Worst case configuration:
 SISO-DUAL_QPSK_(50 MHz + 50 MHz)_Low CH_RB Offset 1/15 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M3	36.974	3	--	-21.81	-13	-8.81

36 - 37 GHz n260, 3CC



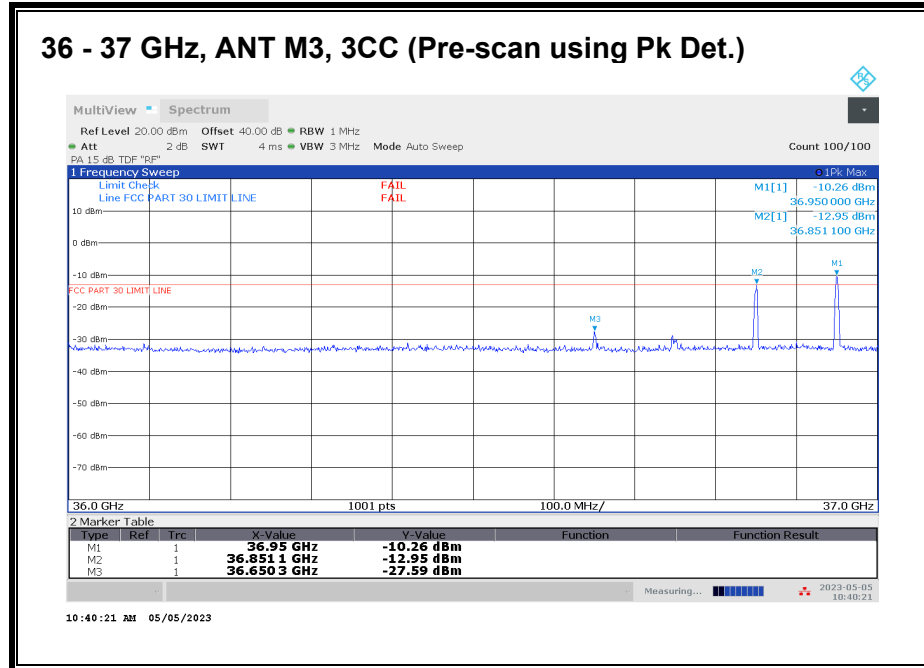
Worst case configuration:

SISO-DUAL_QPSK_(100 MHz + 100 MHz + 100 MHz)_Low CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M2	36.949	3	--	-20.26	-13	-7.26



Worst case configuration:

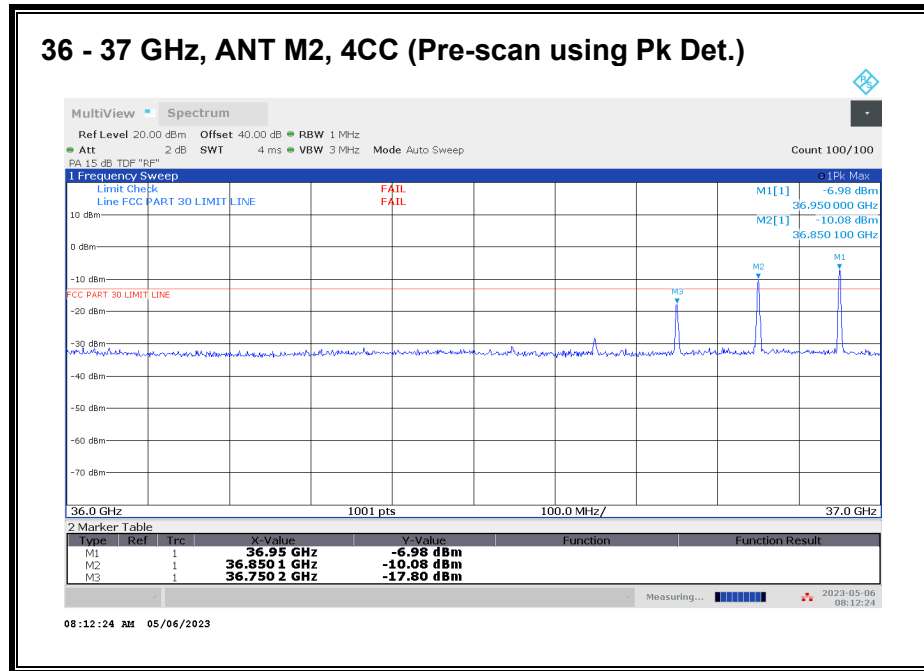
SISO-DUAL_QPSK_(100 MHz + 100 MHz + 100 MHz)_Low CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M3	36.949	3	--	-19.68	-13	-6.68

36 - 37 GHz n260, 4CC



Worst case configuration:

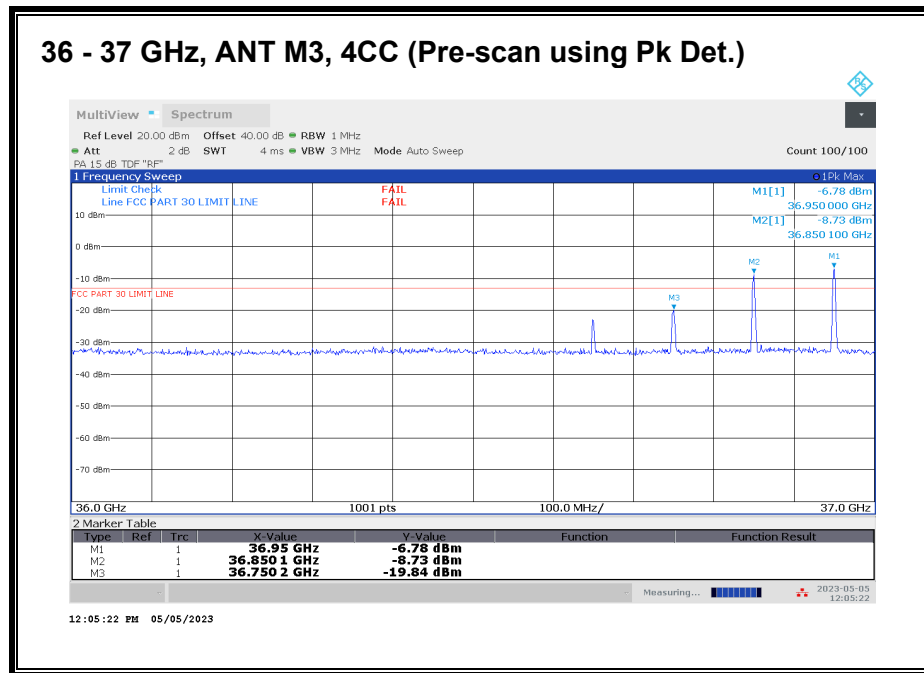
SISO-DUAL_QPSK_(100 MHz + 100 MHz + 100 MHz + 100 MHz)_Low CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M2	36.949	3	--	-18.40	-13	-5.40

36 - 37 GHz n260, 4CC



Worst case configuration:

SISO-DUAL_QPSK_(100 MHz + 100 MHz + 100 MHz + 100 MHz)_Low CH_RB Offset 1/32 (1RB-M)

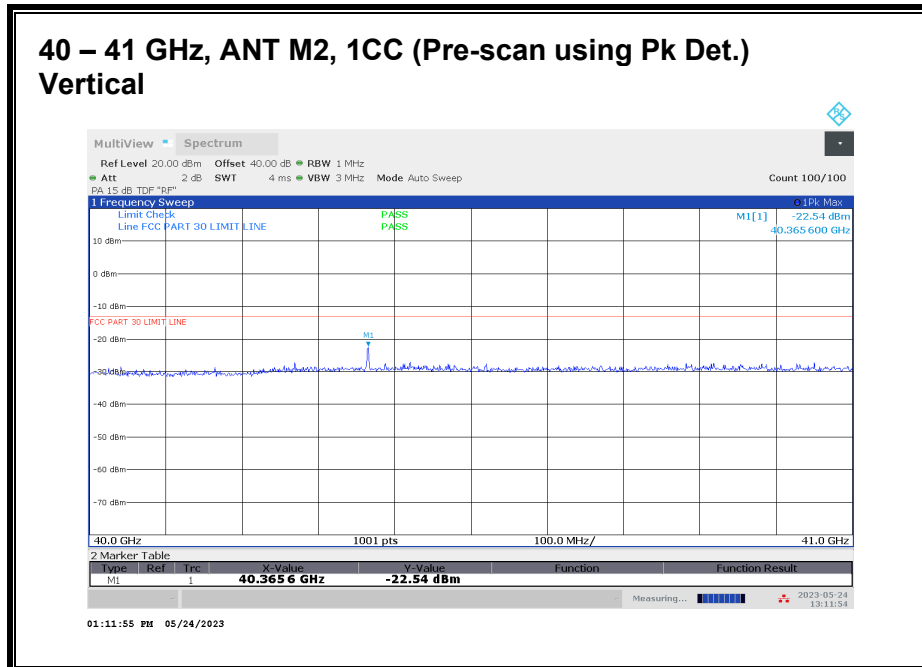
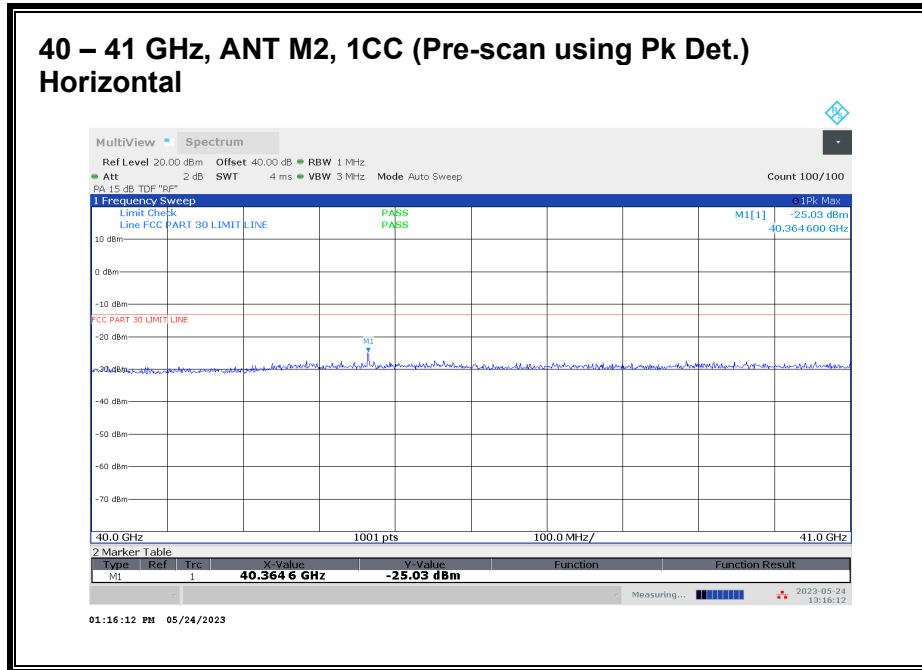
Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

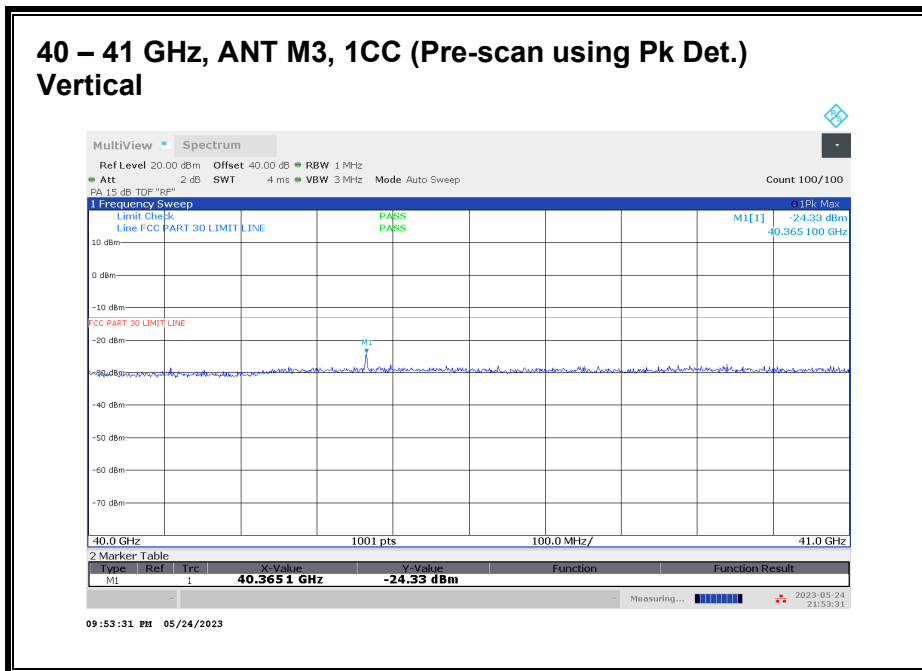
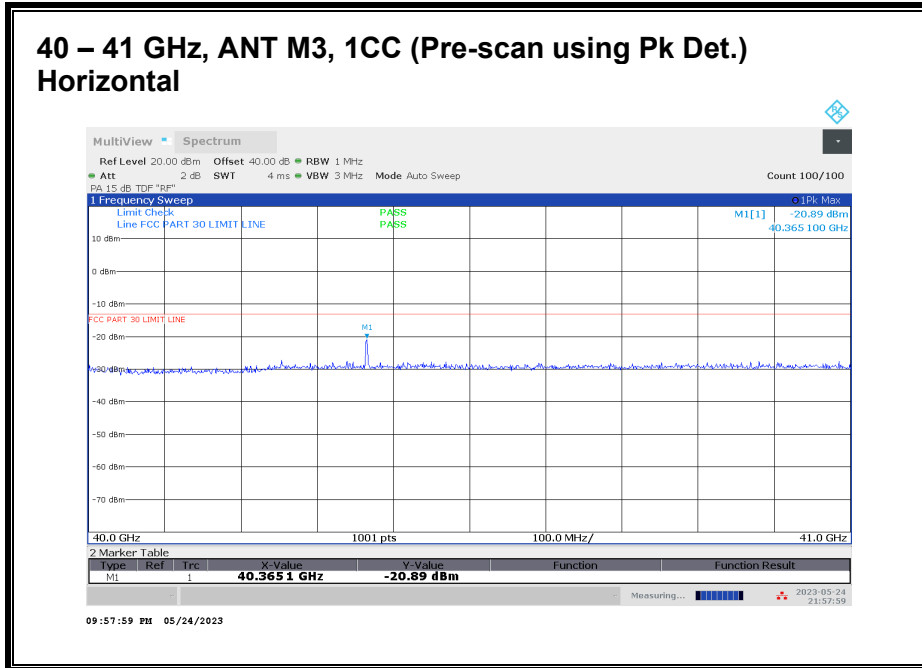
Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M3	36.949	3	--	-19.16	-13	-6.16

8.4.34. RSE n260 40 – 41 GHz

Note: 37 - 40 GHz covered by Fundamental and BE measurements.



Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

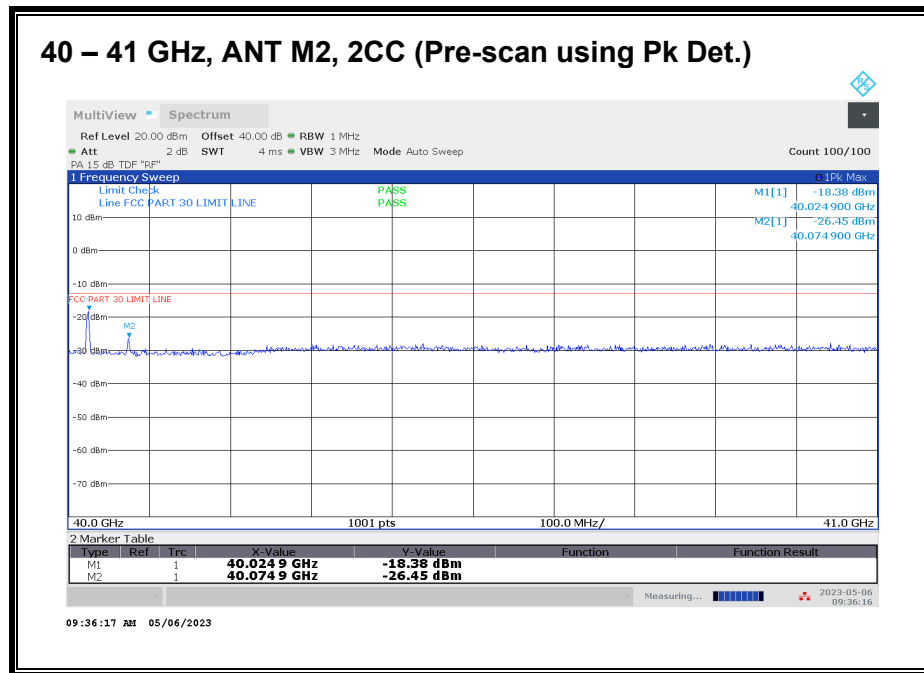


Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

40 – 41 GHz n260, 1CC

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M2	40.365	3	H	-30.57	-13	-17.57
M2	40.365	3	V	-22.86	-13	-9.86
M3	40.365	3	H	-22.10	-13	-9.10
M3	40.365	3	V	-22.78	-13	-9.78

40 – 41 GHz n260, 2CC



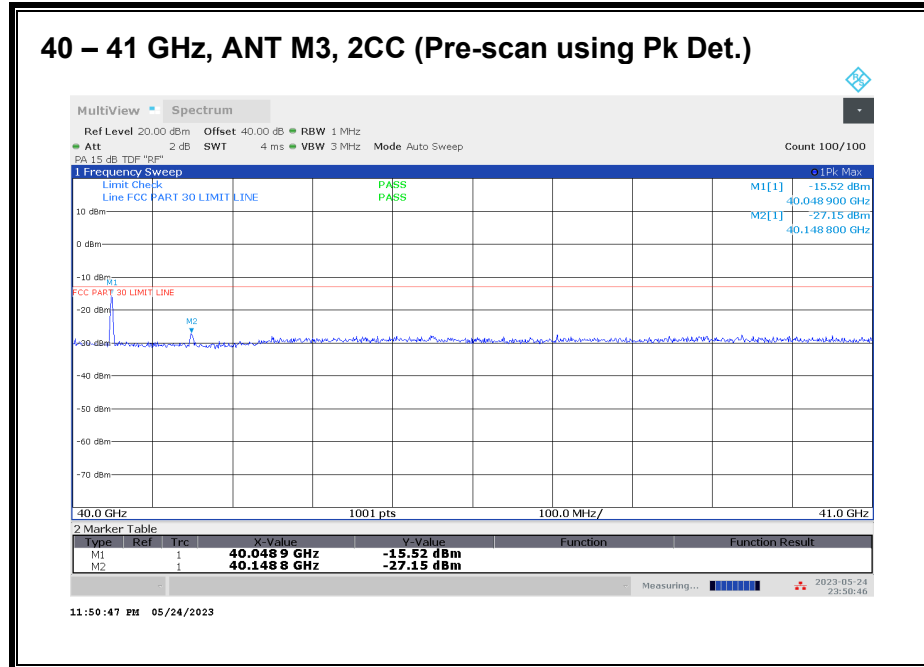
Worst case configuration:

SISO-DUAL_QPSK_(50 MHz + 50 MHz)_High CH_RB Offset 1/15 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M2	40.024	3	--	-28.95	-13	-15.95



Worst case configuration:

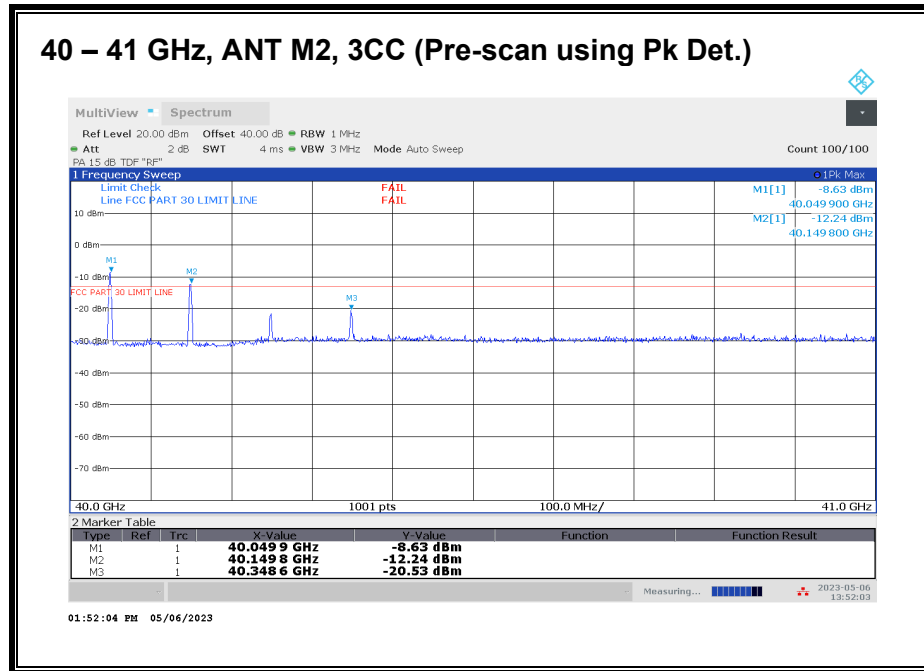
SISO-DUAL_QPSK_(100 MHz + 100 MHz)_High CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M3	40.049	3	--	-29.91	-13	-16.91

40 – 41 GHz n260, 3CC



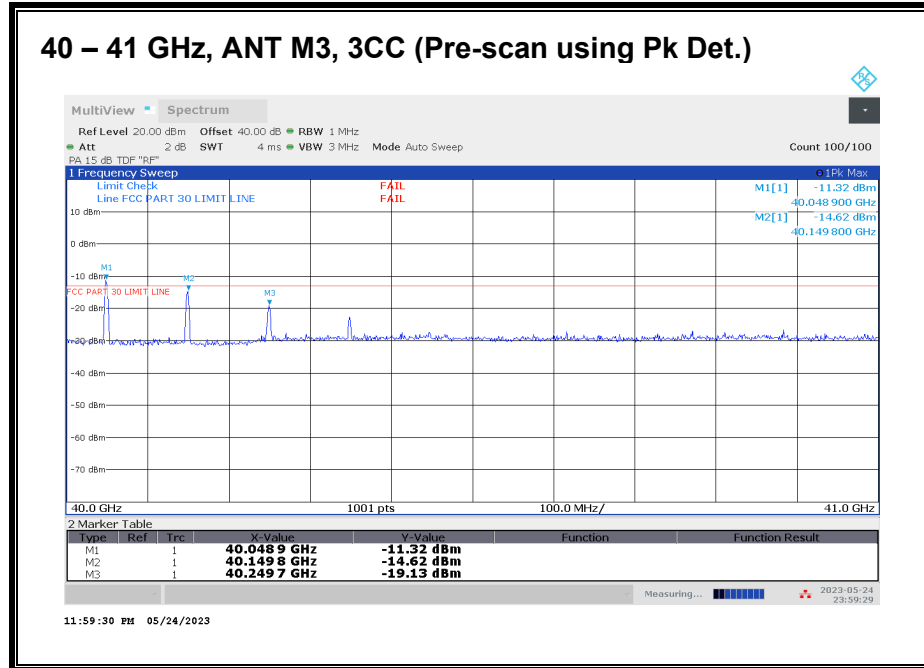
Worst case configuration:

SISO-DUAL_QPSK_(100 MHz + 100 MHz + 100 MHz)_High CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas.	Rx Ant.	Corrected	TRP Limit	Margin
	(GHz)	Distance	Polarity	Avg EIRP	(dBm)	(dB)
		(m)	H/V	(dBm)		
M2	40.049	3	--	-21.16	-13	-8.16



Worst case configuration:

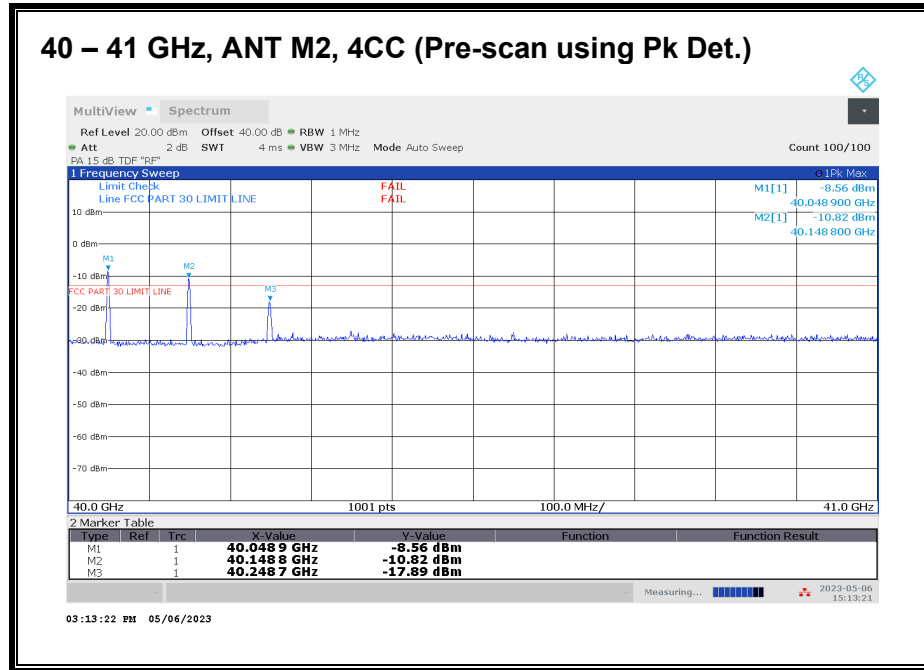
SISO-DUAL_QPSK_(100 MHz + 100 MHz + 100 MHz)_High CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M3	40.049	3	--	-24.41	-13	-11.41

40 – 41 GHz n260, 4CC



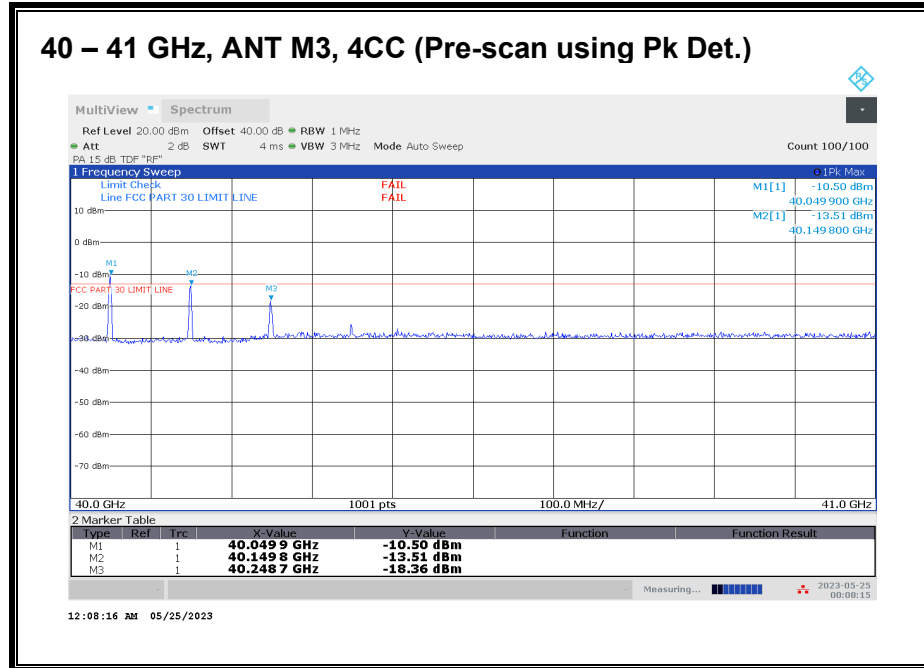
Worst case configuration:

SISO-DUAL_QPSK_(100 MHz + 100 MHz + 100 MHz + 100 MHz)_High CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

All emissions were investigated and the highest emission was reported.

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M2	40.049	3	--	-21.07	-13	-8.07



Worst case configuration:

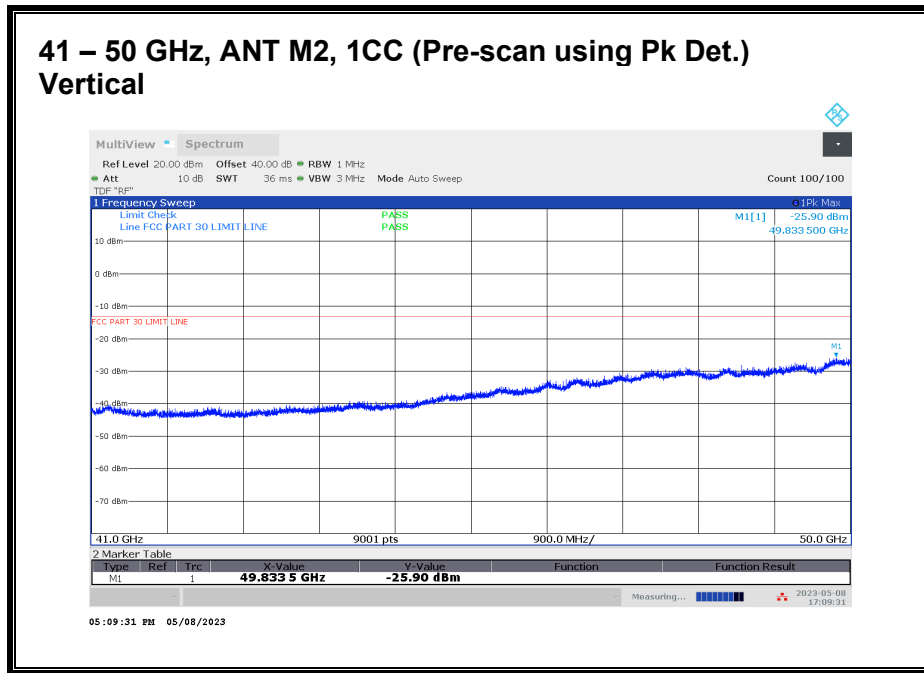
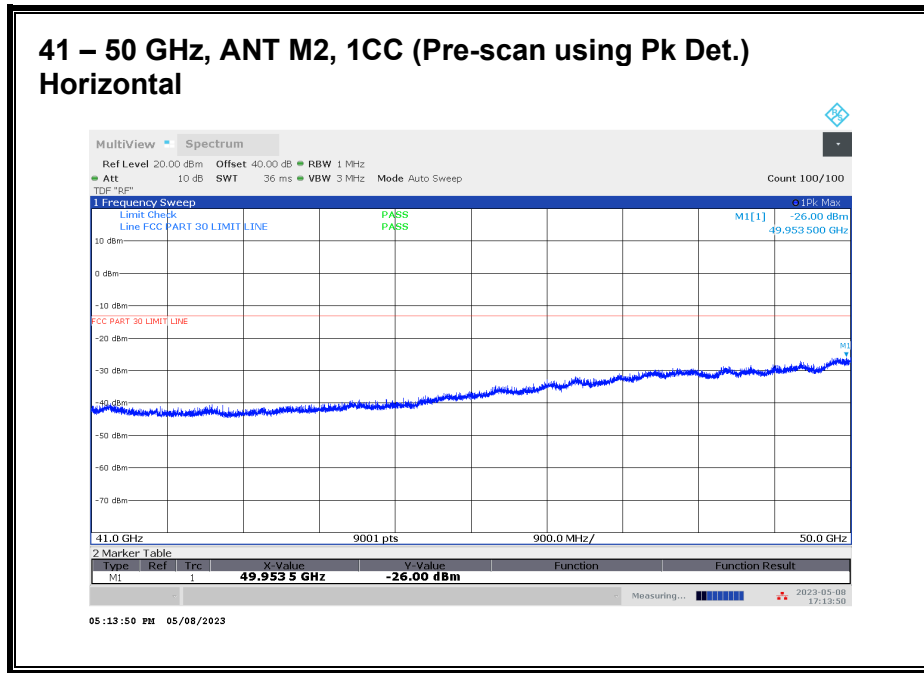
SISO-DUAL_QPSK_(100 MHz + 100 MHz + 100 MHz + 100 MHz)_High CH_RB Offset 1/32 (1RB-M)

Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

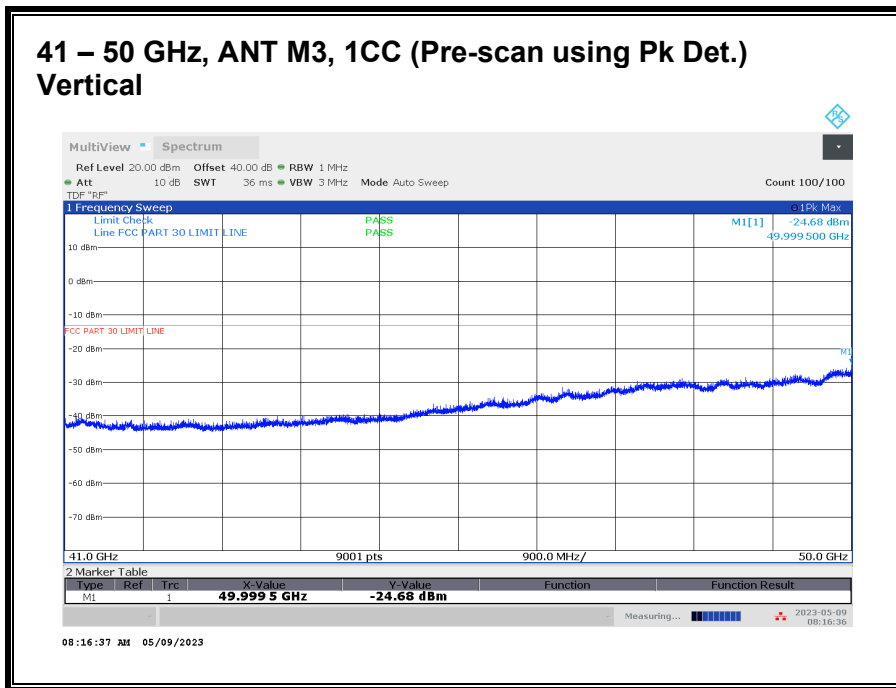
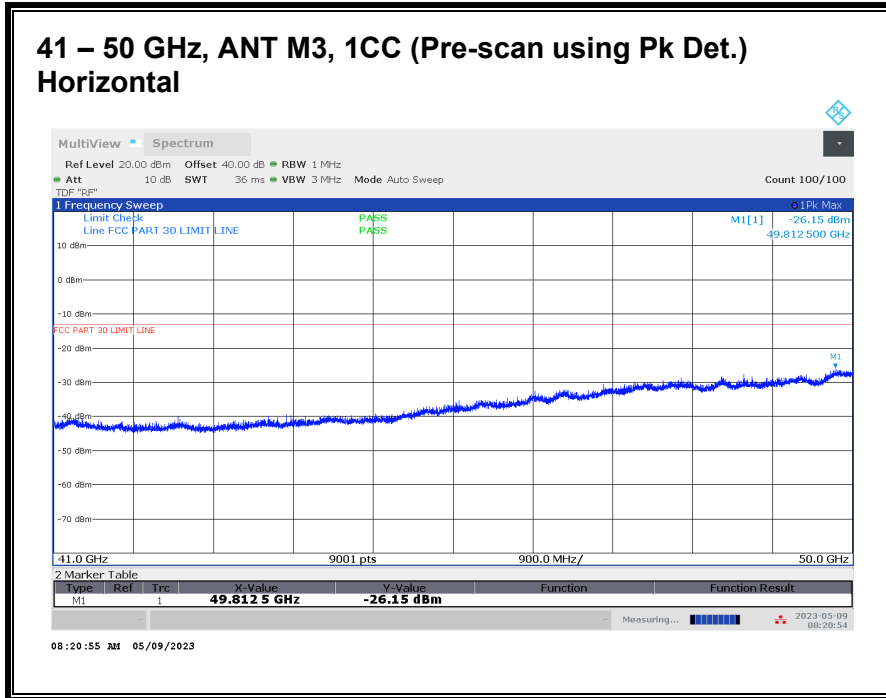
All emissions were investigated and 2 highest emissions were reported.

Antenna	Freq. (GHz)	Meas. Distance (m)	Rx Ant. Polarity H/V	Corrected Avg EIRP (dBm)	TRP Limit (dBm)	Margin (dB)
M3	40.049	3	--	-22.67	-13	-9.67
M3	40.149	3	--	-21.88	-13	-8.88

8.4.35. RSE n260 41 – 50 GHz

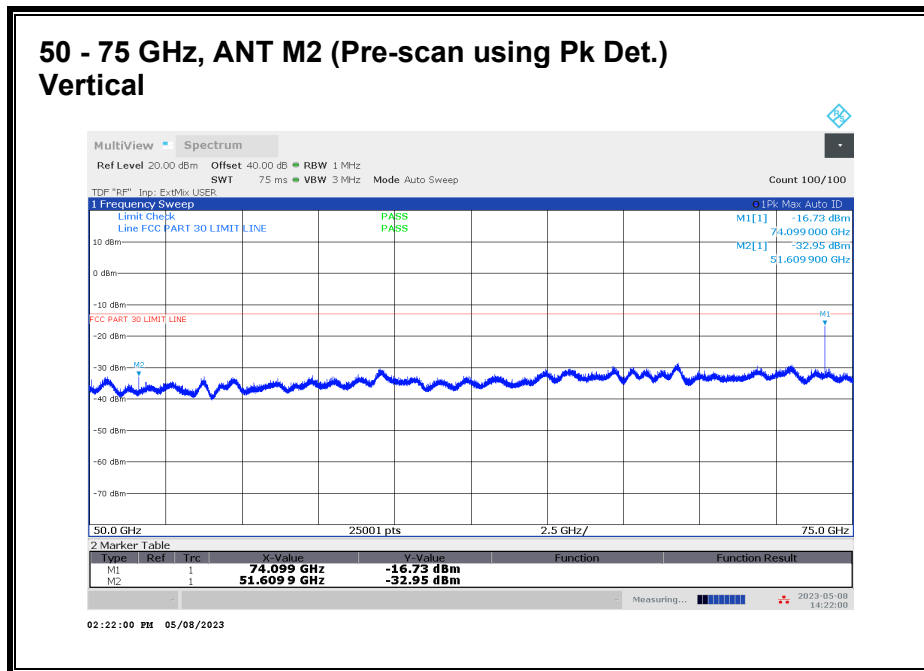
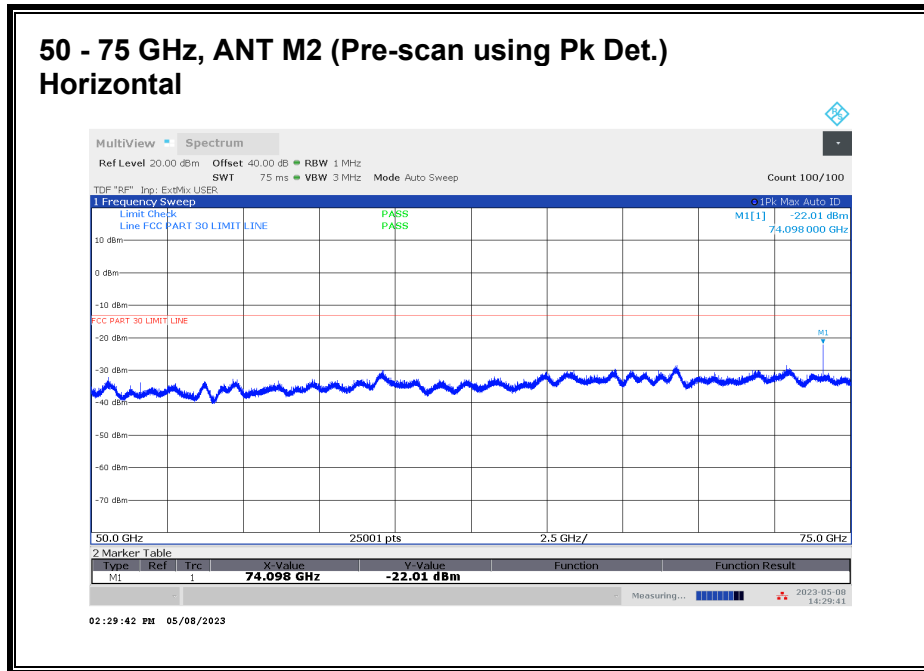


No emission detected using Peak Detection.

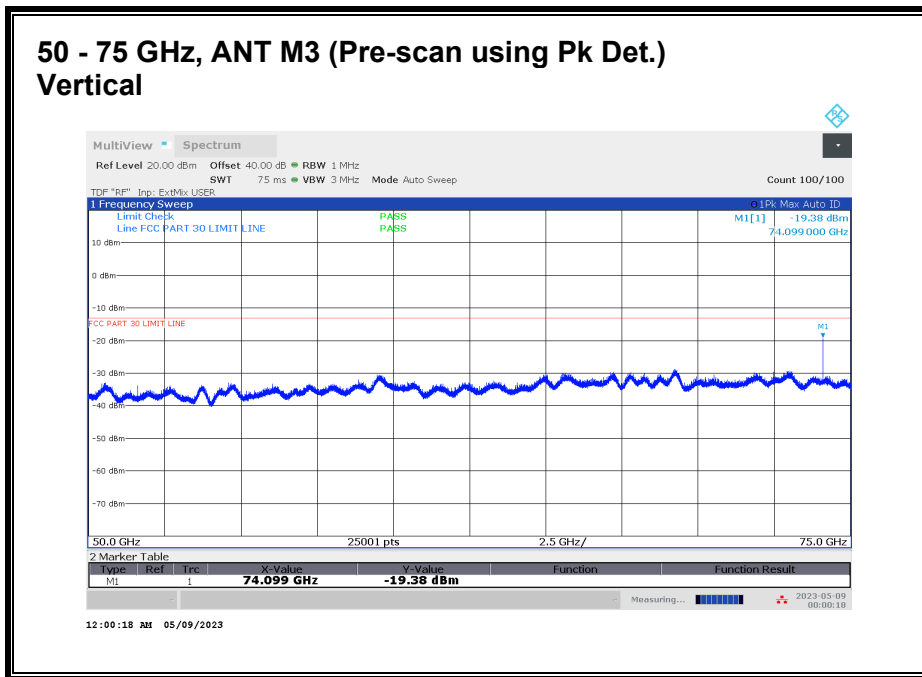
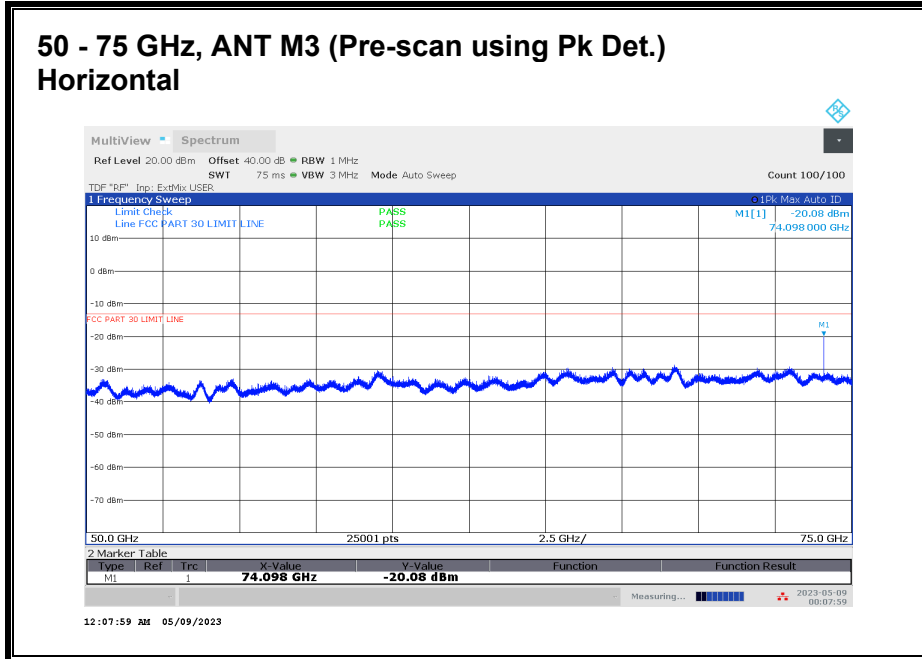


No emission detected using Peak Detection.

8.4.36. RSE n260 50 - 75 GHz



Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

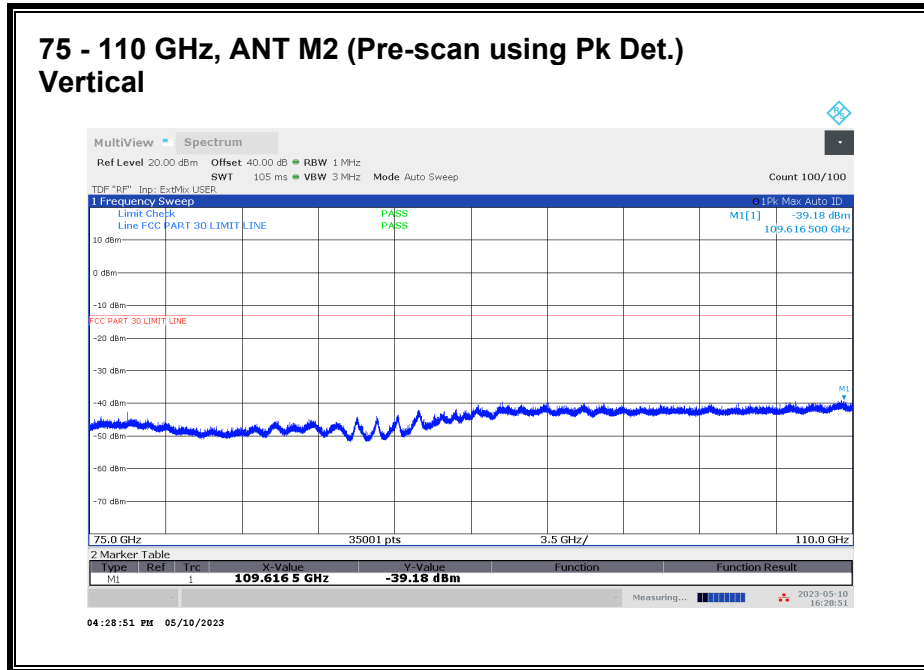
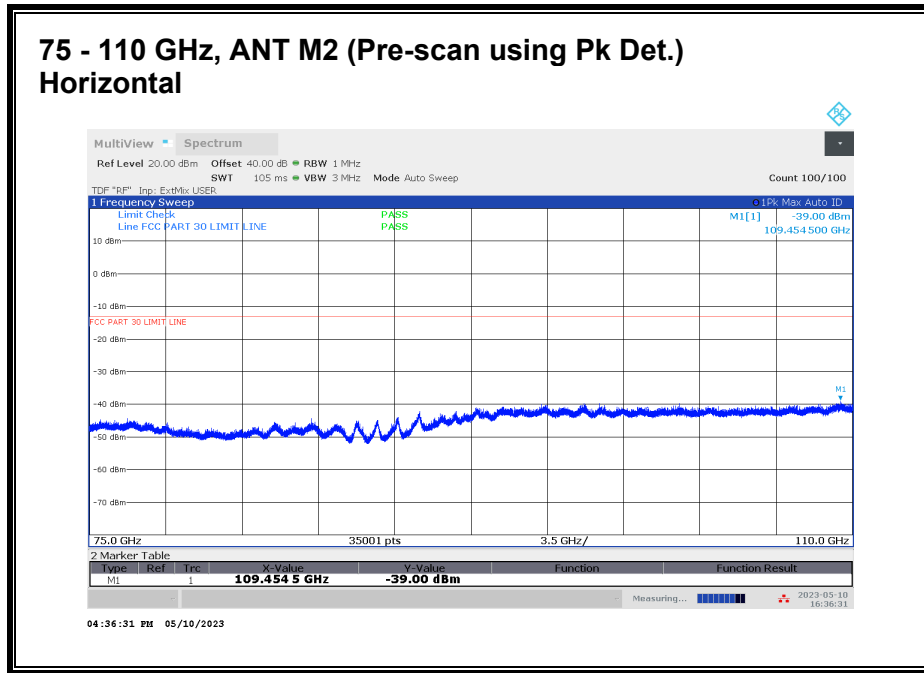


Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

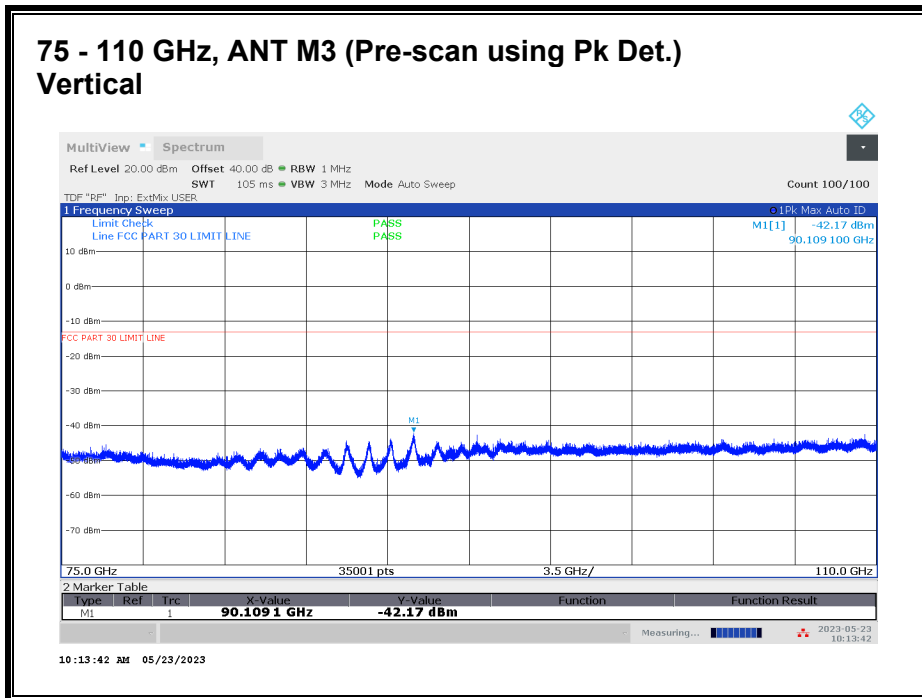
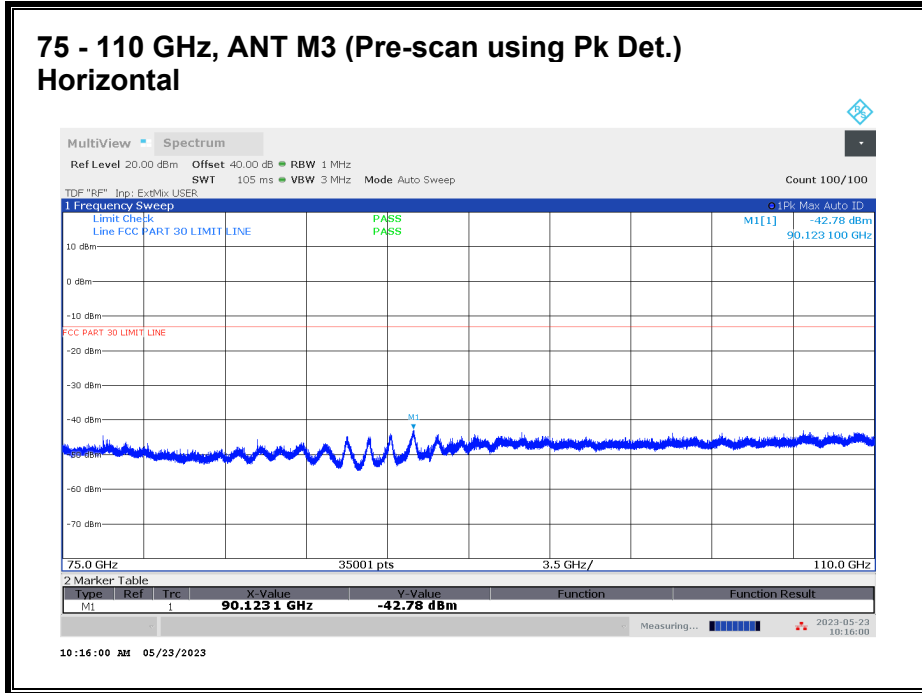
50 - 75 GHz n260, 1CC

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M2	74.099	1.5	H	-38.61	-13	-25.61
M2	74.099	1.5	V	-19.78	-13	-6.78
M3	74.099	1.5	H	-19.06	-13	-6.06
M3	74.099	1.5	V	-28.19	-13	-15.19

8.4.37. RSE n260 75 - 110 GHz

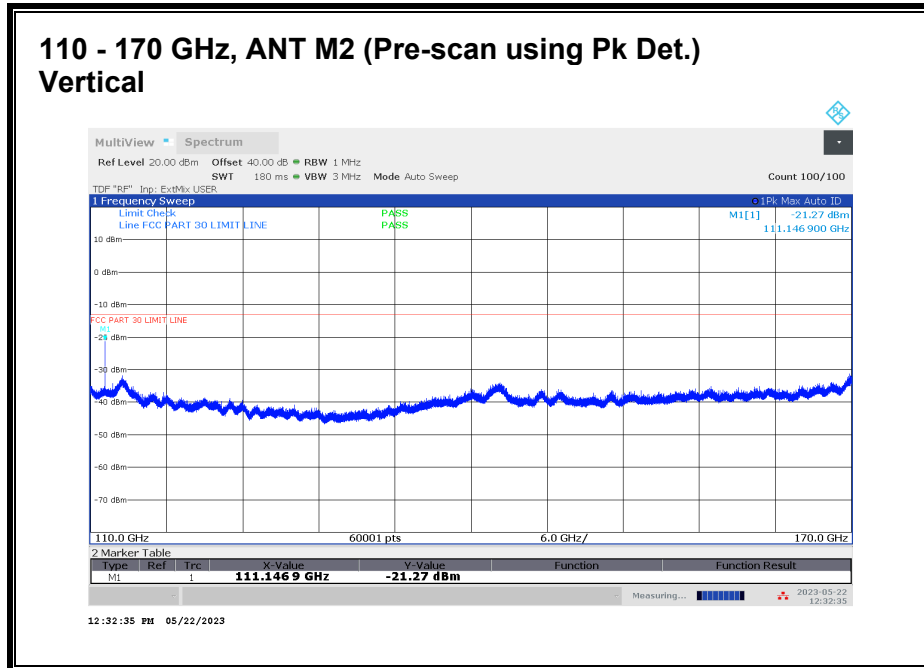
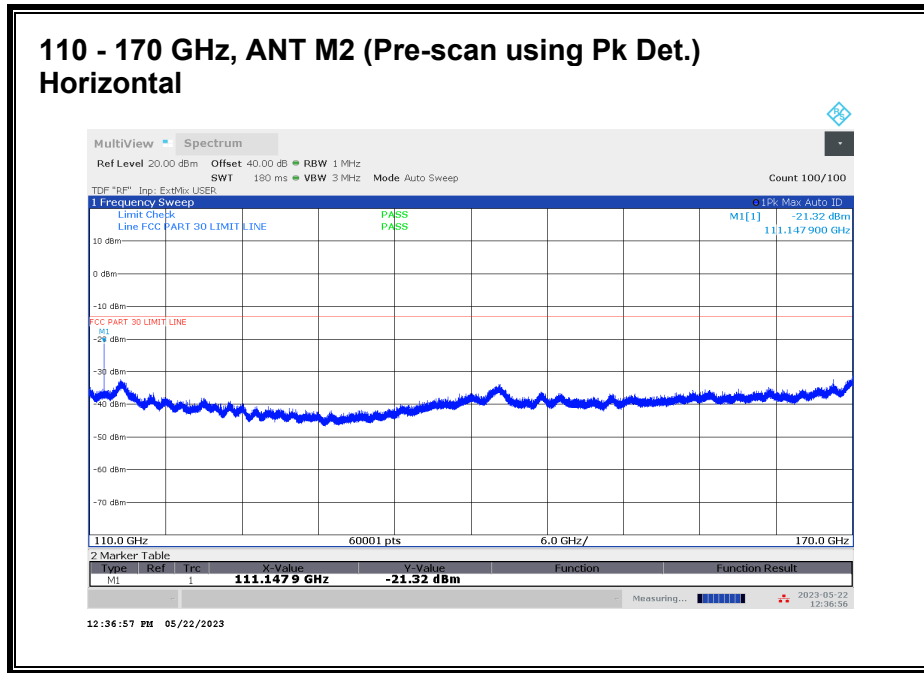


No emission detected using Peak Detection.

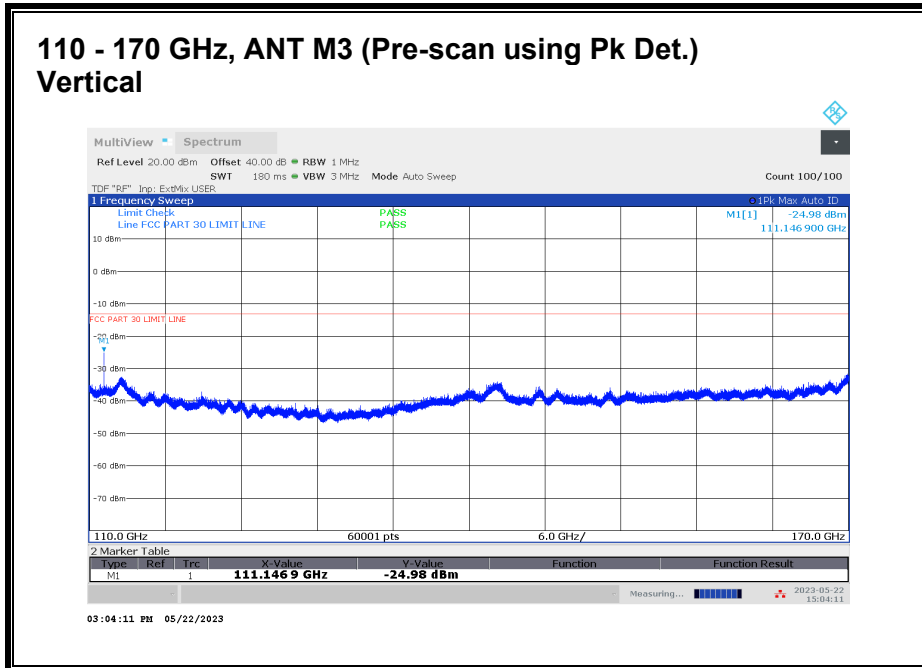
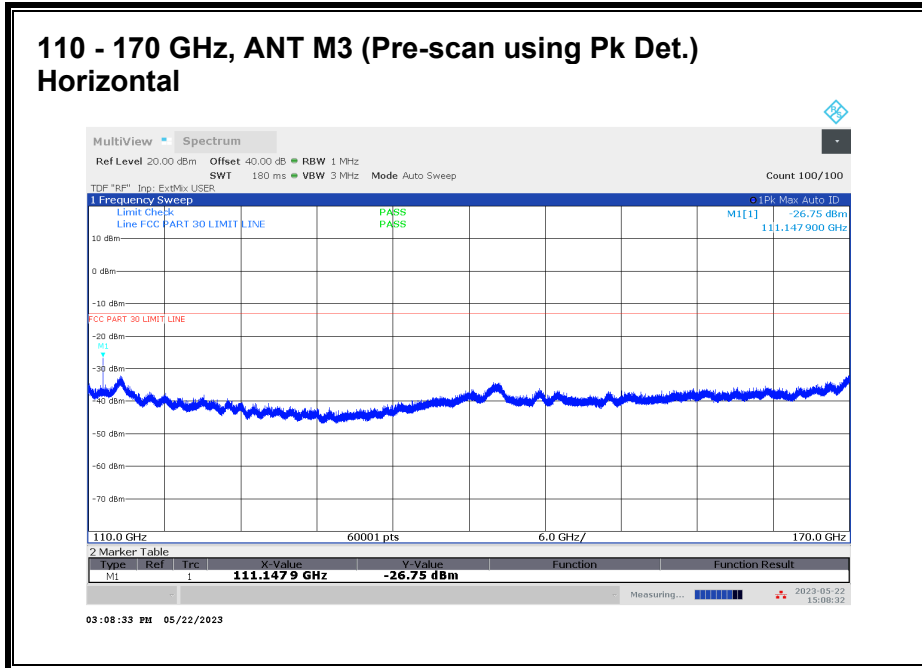


No emission detected using Peak Detection.

8.4.38. RSE n260 110 - 170 GHz



Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

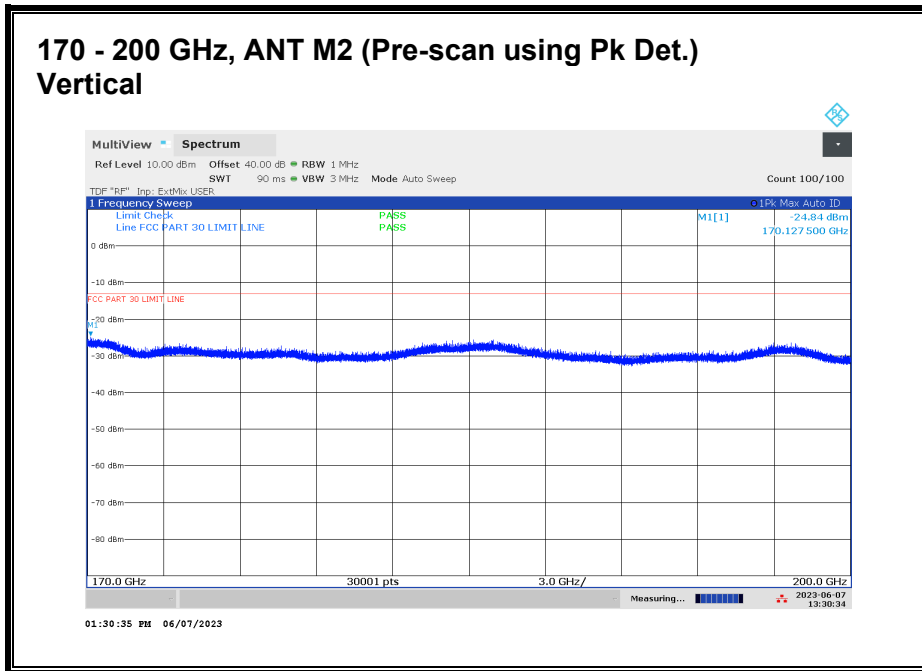
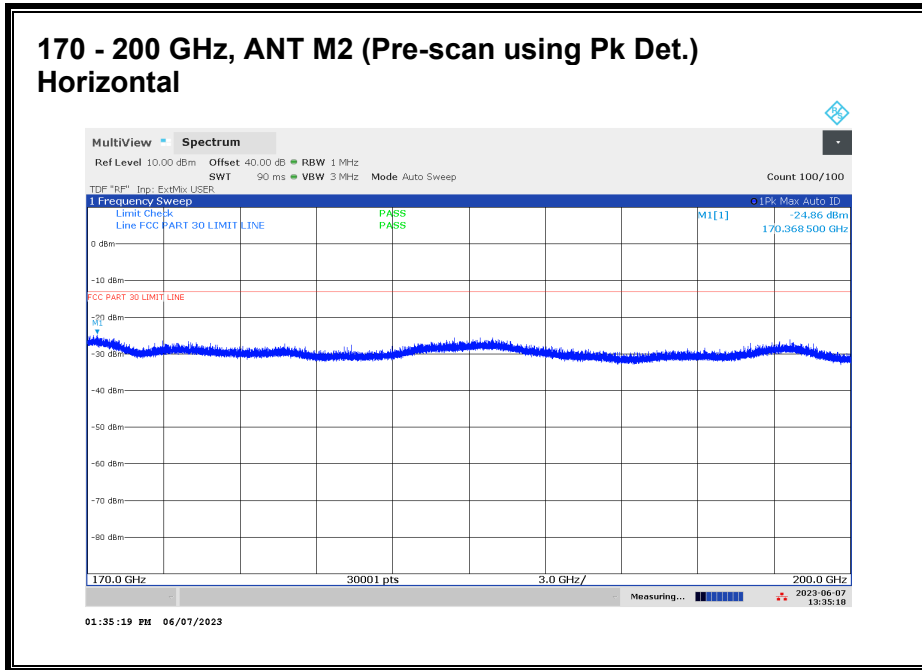


Emissions detected using Peak Detection at pre-scan. Avg EIRP was measured.

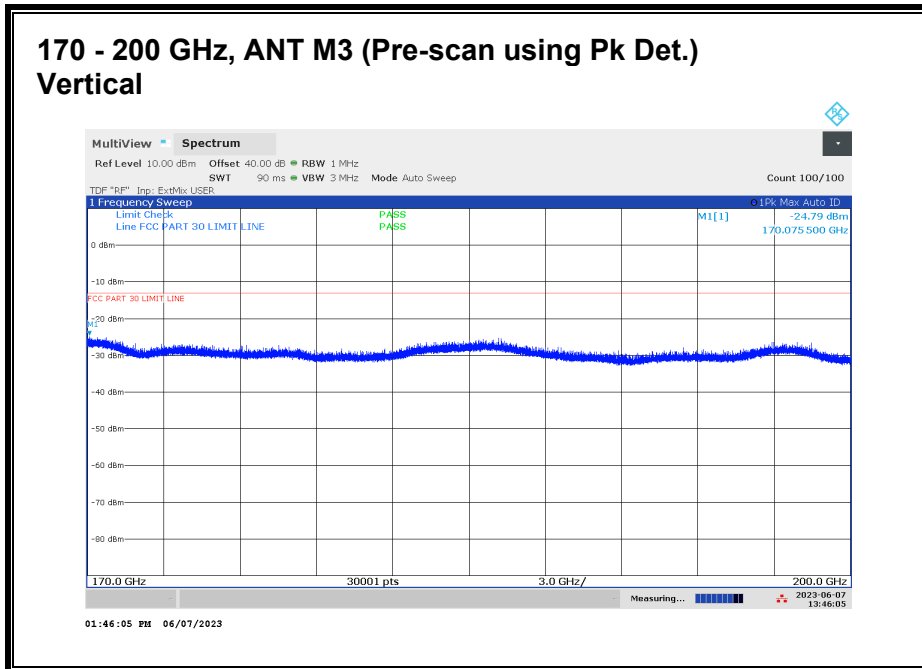
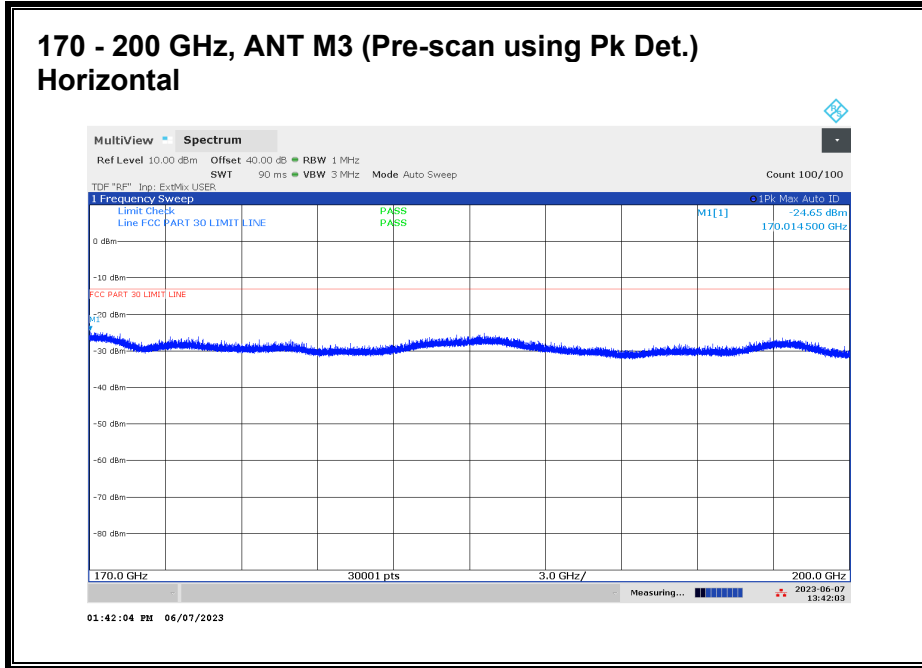
110 - 170 GHz n260, 1CC

Antenna	Freq.	Meas. Distance	Rx Ant. Polarity	Corrected Avg EIRP	TRP Limit	Margin
	(GHz)	(m)	H/V	(dBm)	(dBm)	(dB)
M2	111.148	1	H	-41.65	-13	-28.65
M2	111.148	1	V	-28.42	-13	-15.42
M3	111.148	1	H	-29.02	-13	-16.02
M3	111.148	1	V	-34.37	-13	-21.37

8.4.39. RSE n260 170 - 200 GHz



No emission detected using Peak Detection.



No emission detected using Peak Detection.

8.5. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055

LIMIT

For reporting purposes only

TEST PROCEDURES

KDB 842590 D01 Upper Microwave Flexible Use Service v01r02 Section 4.5
ANSI C63.26-2015 Section 5.6

Test procedures for temperature variation:

- a. Position the EUT in temperature/humidity chamber with power off.
 - b. Set chamber temperature to -30°C and stabilize the EUT for at least 30 minutes.
 - c. Record maximum change in frequency within one minute after powering the EUT.
 - d. Increase chamber temperature at 10°C intervals from -30°C to 50°C. Record maximum change in frequency at each temperature.
 - e. A period of at least 30 minutes is provided to allow stabilization of the equipment at each temperature level.
- Temp. = -30°C to +50°C

Test procedures for voltage variation:

- a. Position the EUT in temperature/humidity chamber with power off.
 - b. Set chamber temperature to 20°C.
 - c. Record maximum frequency change within one minute after powering the EUT.
 - d. The primary supply voltage is varied from 85% to 115% of the nominal value for hand-carried, battery-powered equipment. primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.
- Voltage = (85% - 115%)
 - Nominal: 3.8 VDC; Low: 3.32 VDC; High: 4.37 VDC

The measurements were performed with the CW signal of center frequency of each frequency band. Testing of n258 SB1 and n261 bands on Ant M2 represent the performance of Chipset 1. Likewise, testing of n258 SB2 and n260 bands on Ant M3, represent the performance of Chipset 2.

RESULTS

See the following pages.

Employee IDs: 24303, 25368 & 31925
Test Date: 06/11/2023
Test Location: Temperature Chamber B

8.5.1. FREQUENCY STABILITY n258 SB1

		Antenna M2 n258 SB1	
Input Voltage	Environment	Frequency	Delta
	Temperature (°C)	(GHz)	(kHz)
Normal	50	24.3550198	74.900
Normal	40	24.3550018	56.900
Normal	30	24.3549749	30.000
Normal	20	24.3549449	Reference
Normal	10	24.3549749	30.000
Normal	0	24.3549539	9.000
Normal	-10	24.3550857	140.800
Normal	-20	24.3551097	164.800
Normal	-30	24.3551667	221.800
115%	20	24.3549209	-24.000
85%	20	24.3549239	-21.000

8.5.2. FREQUENCY STABILITY n258 SB2

		Antenna M3 n258 SB2	
Input Voltage	Environment	Frequency	Delta
	Temperature (°C)	(GHz)	(kHz)
Normal	50	25.0049269	17.900
Normal	40	25.0049239	14.900
Normal	30	25.0049269	17.900
Normal	20	25.0049090	Reference
Normal	10	25.0049449	35.900
Normal	0	25.0049659	56.900
Normal	-10	25.0050108	101.800
Normal	-20	25.0050348	125.800
Normal	-30	25.0050678	158.800
115%	20	25.0049030	-6.000
85%	20	25.0048940	-15.000

8.5.3. FREQUENCY STABILITY n261

		Antenna M2 n261	
Input Voltage	Environment	Frequency	Delta
	Temperature (°C)	(GHz)	(kHz)
Normal	50	27.9299810	35.900
Normal	40	27.9299810	35.900
Normal	30	27.9299660	20.900
Normal	20	27.9299451	Reference
Normal	10	27.9299870	41.900
Normal	0	27.9300170	71.900
Normal	-10	27.9300649	119.800
Normal	-20	27.9301039	158.800
Normal	-30	27.9301429	197.800
115%	20	27.9299061	-39.000
85%	20	27.9299031	-42.000

8.5.4. FREQUENCY STABILITY n260

		Antenna M3 n260	
Input Voltage	Environment	Frequency	Delta
	Temperature (°C)	(GHz)	(kHz)
Normal	50	38.5049498	71.900
Normal	40	38.5048749	-3.000
Normal	30	38.5049528	74.900
Normal	20	38.5048779	Reference
Normal	10	38.5049858	107.900
Normal	0	38.5049498	71.900
Normal	-10	38.5051027	224.800
Normal	-20	38.5049948	116.900
Normal	-30	38.5049528	74.900
115%	20	38.5048629	-15.000
85%	20	38.5047910	-86.900

The occupied bandwidths (Section 8.1) are smaller than the channel bandwidths by at least 2 MHz for all modes of operation, the signal is at least 1 MHz from either edge of the channel. As the channels are fully contained within the FCC-allocated bands, and the frequency stability is less than 1 MHz, with maximum frequency shift of 224.8 kHz over the test conditions (Ant M3 n260 at -10°C). The signal is always contained within the allocated channel, therefore, always contained within the allocated band.

9. SETUP PHOTOS

Please refer to 14523758-EP24V1 for setup photos.

END OF REPORT

APPENDIX A

1. 50 - 75 GHz VDI WR15SAX-F

Serial No.: SAX 621

2. 75 - 110 GHz VDI WR10SAX-F

Serial No.: SAX 860

3. 110 - 170 GHz VDI WR6.5SAX-F

Serial No.: SAX 624

4. 170 - 260 GHz VDI WR4.3SAX-F

Serial No.: SAX 651



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979 2nd St. SE
Suite 309
Charlottesville, VA 22902
Phone: 434-297-3257
Fax: 434-297-3258

Certificate of Conformance

To: UL LLC
47173 Benicia Street
Fremont, CA 94538
United States

From: Virginia Diodes, Inc
979 2nd St. SE
Suite 309
Charlottesville, VA 22902

Packing List No: 224251	Today's Date: 10/18/22
Shipping Date: 10/18/22	PO Number: 7862024311

<u>Quantity Shipped</u>	<u>Unit</u>	<u>Description</u>	<u>Order-Job Number</u>
1	EA	RETEST-WR15SAX-F Retest of WR15SAX-F / SN: SAX 621	220523A-01
1	EA	RETEST-WR10SAX-F Retest of WR10SAX-F / SN: SAX 860	220523A-02
1	EA	RETEST-WR6.5SAX-F Retest of WR6.5SAX-F / SN: SAX 624	220523A-03
1	EA	RETEST-WR4.3SAX-F Retest of WR4.3SAX-F / SN: SAX 651	220523A-04

The VDI product(s) in this shipment meet(s) the guidelines for performance specifications established in accordance with the corresponding Purchase Order. Data presented in the User Guide, where applicable, has been obtained in accordance with VDI's Quality Management System. All instruments, used to obtain data, which require calibration have been calibrated with equipment traceable to the National Institute of Standards and Technology (NIST) and through NIST to the International System of Units (SI).

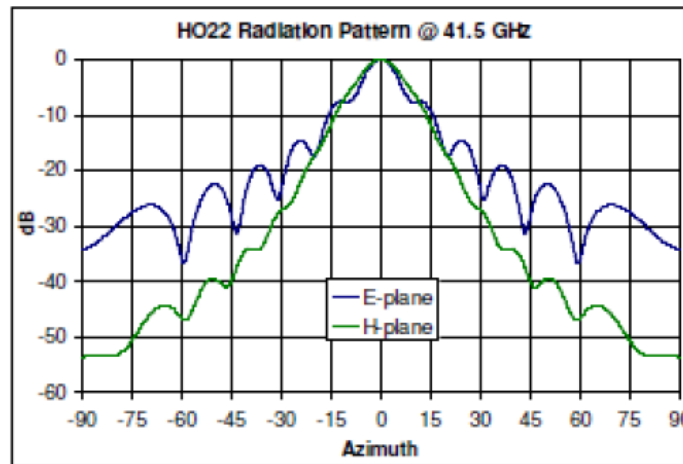
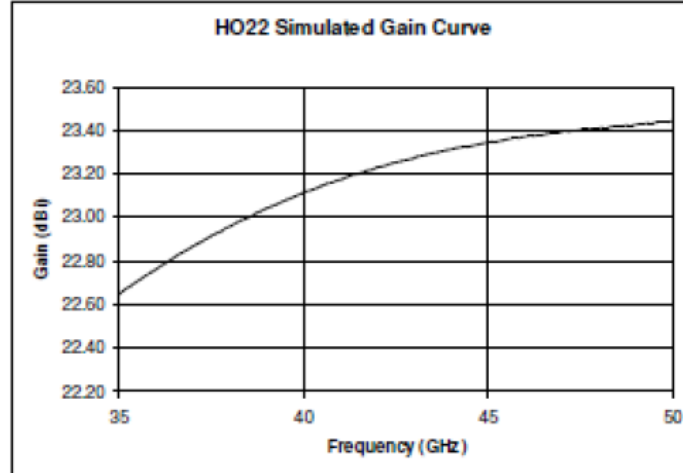


Authorized Signature
Virginia Diodes, Inc

5. 35 - 50 GHz CMI HO22R HORN ANTENNA



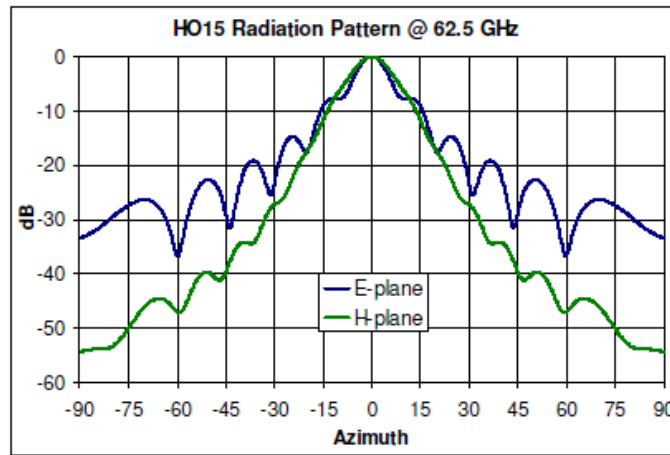
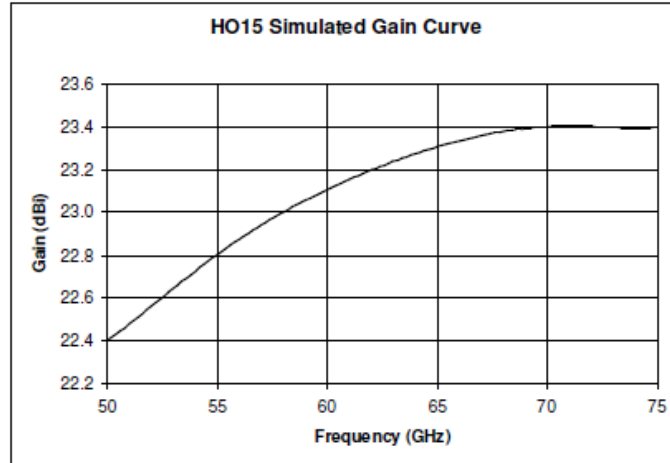
24 Boston Court
Longmont, CO 80501
303 651-0700 (P)
303 651-0706 (F)
www.custommicrowave.com



6. 50 - 75 GHz CMI HO15R HORN ANTENNA



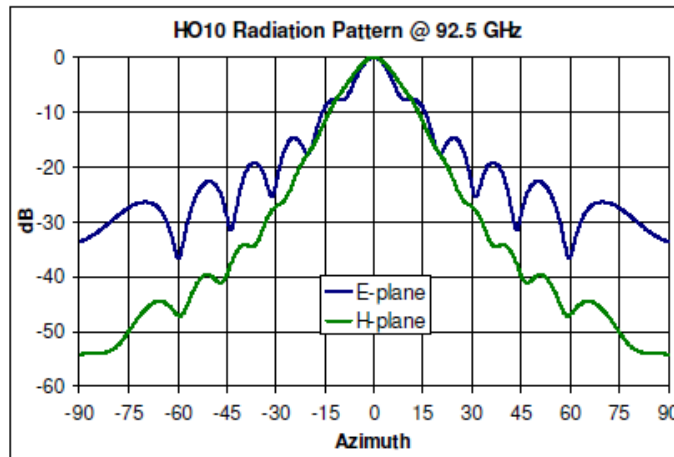
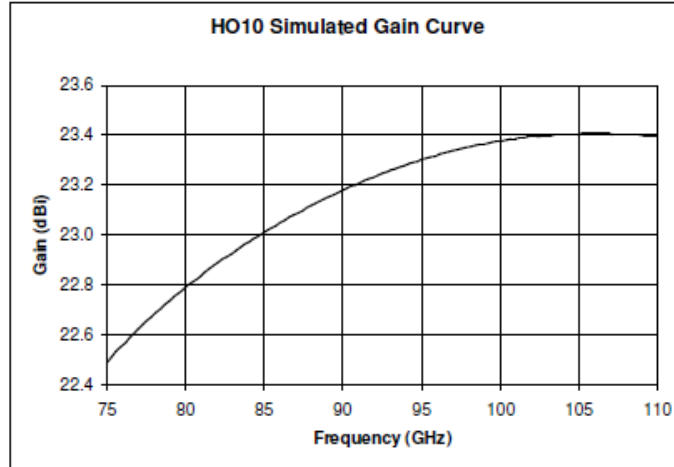
24 Boston Court
Longmont, CO 80501
303 651-0707(P)
303 651-0706(F)
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7. 75 - 110 GHz CMI HO10R HORN ANTENNA



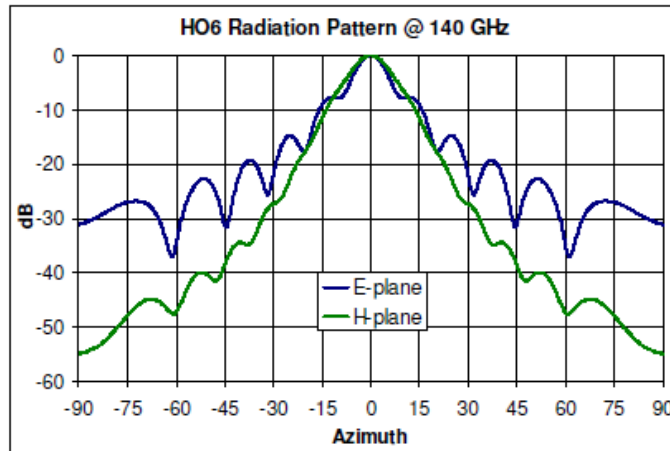
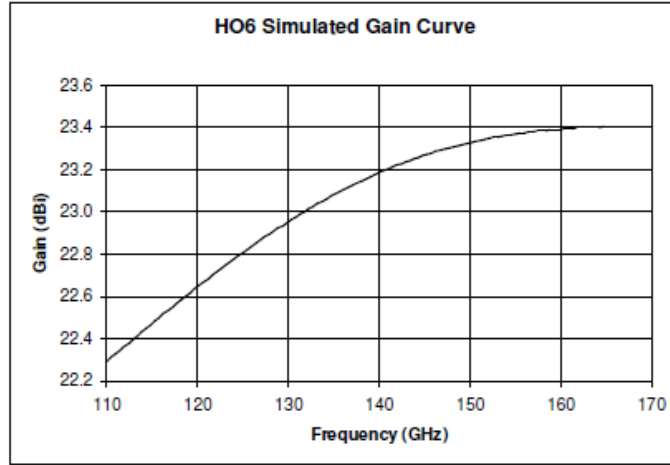
24 Boston Court
Longmont, CO 80501
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303 651-0706(F)
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8. 110 - 170 GHz CMI HO6R HORN ANTENNA



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303 651-0706(F)
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9. 170 - 260 GHz CMI HO4R HORN ANTENNA



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