

TEST REPORT

Application No.: SZCR2502000714AT
Applicant: Altos Radar Inc
Address of Applicant: 2069 Crist Drive Los Altos California 94024 United States
Manufacturer: Altos Radar Inc
Address of Manufacturer: 2069 Crist Drive Los Altos California 94024 United States
Factory: Ultronix Products Ltd.
Address of Factory: No. 15 Changsha Road, Dalong Street, Panyu District, Guangzhou
Equipment Under Test (EUT):
EUT Name: 4D mmW imaging radar
Model No.: Altos V2
Trade Mark: A L T O S
FCC ID: 2BNTG-V2-2025-2
Standard(s) : 47 CFR Part 2
 47 CFR Part 95, Subpart M, 76GHz – 81 GHz
Date of Receipt: 2025-02-27
Date of Test: 2025-02-28 to 2025-03-15
Date of Issue: 2025-03-17

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (EMC) Laboratory

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SZEMC-TRF-01 Rev. A/1

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025-03-17		Original

Authorized for issue by:				
		Darren Yuan		
		Darren Yuan/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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3 Test Summary

Item	Test specification clause	Method	Result
Radiated Power	47 CFR Part 2.1046 47 CFR Part 2.1051 47 CFR Part 95.3367	ANSI C63.26 (2015) Section 5.2	Pass
Occupied Bandwidth	47 CFR Part 2.1049	ANSI C63.26 (2015) Section 5.4	Pass
Modulation characteristics	47 CFR Part 2.1047	ANSI C63.26 (2015) Section 5.3	Pass
Unwanted Radiated Emissions	47 CFR Part 95.3379 47 CFR Part 2.1053	ANSI C63.26 (2015) Section 5.5	Pass
Frequency Stability	47 CFR Part 95.3379 47 CFR Part 2.1055	ANSI C63.26 (2015) Section 5.6	Pass

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5 General Information

5.1 Details of E.U.T.

Power supply:	12V DC
Frequency band:	77.45-77.98GHz
Type of modulation:	FMCW
Antenna Type:	PCB Antenna
Antenna Gain:	16dBi

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

5.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
DC power supply	ZHAOXIN	PS-3005D	REF. No.SEA27B01

5.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Transmitter power	$\pm 4.8\text{dB}$
Occupied bandwidth	$\pm 3\%$
Radiated Spurious Emissions Below 1GHz	$\pm 6.0\text{dB}$ for 3m; $\pm 5.0\text{dB}$ for 10m
Radiated Spurious Emissions Above 1GHz	$\pm 4.6\text{dB}$ (1-18GHz); $\pm 4.8\text{dB}$ (Above 18GHz)
<p>Remark:</p> <p>The U_{lab} (lab Uncertainty) is less than $U_{\text{CISPR/ETSI}}$ (CISPR/ETSI Uncertainty), so the test results</p> <ul style="list-style-type: none"> – compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit; – non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit. 	

5.4 Test Location

All tests were performed at:

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Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

5.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

5.6 Deviation from Standards

None

5.7 Abnormalities from Standard Conditions

None



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6 Equipment List

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2024-05-11	2027-05-10
EXA Signal Analyzer(10Hz-44GHz)	Keysight	N9010A	SEM004-20	2024-03-30	2025-03-29
Horn Antenna(800MHz-18GHz)	Rohde&Schwarz	HF907	SEM003-07	2023-07-23	2025-07-22
Microwave system amplifier (0.5GHz-26.5GHz)	Agilent	83017A	SEM005-25	2024-09-14	2025-09-13
Broad-Band Horn Antenna(15GHz-40GHz)	SCHWARZBECK	BBHA 9170	SEM003-15	2024-08-10	2025-08-09
Programmable Temperature&Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2024-03-19	2025-03-18
Pre-amplifier (26GHz-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2024-03-15	2025-03-14
				2025-03-14	2026-03-13
Coaxial Cable	SGS	N/A	SEM026-01	2024-07-06	2025-07-05
Waveguide(40-60GHz)	REBES	SWG-19025-FB	06303-01	2025-02-18	2028-02-17
Waveguide(50-75GHz)	REBES	SWG-15025-FB	01525-09	2025-02-18	2028-02-17
Waveguide(75-110GHz)	REBES	SWG-10025-FB	01509-01	2025-02-18	2028-02-17
Waveguide(110-170GHz)	REBES	SWG-06025-FB	06302-01	2025-02-18	2028-02-17
Waveguide(140-220GHz)	REBES	SWG-05025-FB	SEM020-12	2025-02-18	2028-02-17
Waveguide(220-325GHz)	REBES	SWG-03025-FB	SEM020-13	2025-02-18	2028-02-17
Waveguide Harmonic Mixer(40-60GHz)	REBES	STH-19SF-S1	06937-01	2025-02-18	2028-02-17
Waveguide Harmonic Mixer(50-75GHz)	KEYSIGHT	M1970V	MY51390966	2025-02-18	2028-02-17
Waveguide Harmonic Mixer(75-110GHz)	KEYSIGHT	M1970W	MY51430883	2025-02-18	2028-02-17
Waveguide Harmonic Mixer(110-170GHz)	REBES	STH-06SF-S1	06110-01	2025-02-18	2028-02-17
Waveguide Harmonic Mixer(140-220GHz)	Rohde&Schwarz	HM140-220	SEM020-18	2025-02-18	2028-02-17
Waveguide Harmonic Mixer(140-220GHz)	Rohde&Schwarz	HM220-325	SEM020-19	2025-02-18	2028-02-17
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A



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General used equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2024-07-24	2025-07-23
Humidity/ Temperature Indicator	deli	8838	SEM002-33	2024-07-24	2025-07-23
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2024-03-18	2025-03-17



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7 Radio Spectrum Matter Test Results

7.1 Modulation characteristics

7.1.1 Test Requirement:

47 CFR Part 2.1047

7.1.2 Conclusion

EUT complies with 47 CFR Part 2.1047 requirement.

Comments from manufacturer on modulation characteristics according to KDB:

Parameter	
Duty Cycle %:	8.8
Time RF on(us):	1.5
Time RF off (us):	15.5
Power:	Constant During RF on
Steepness of Ramps(GHz/s):	31176.5
Calibration:	Yes
Antenna Beam Steering(TX):	All transmitters enabled (transmitting simultaneously)
Characteristics	
Sweep Bandwidth(GHz):	0.53
Sweep Rate(MHz/us):	31.18
Sweep Time(us):	17



7.2 Radiated Power

Test Requirement: 47 CFR Part 2.1046
47 CFR Part 2.1051
47 CFR Part 95.3367

Test Method: ANSI C63.26 (2015) Section 5.2

Limit: Peak EIRP <55dBm/MHz
Average EIRP <50dBm/MHz

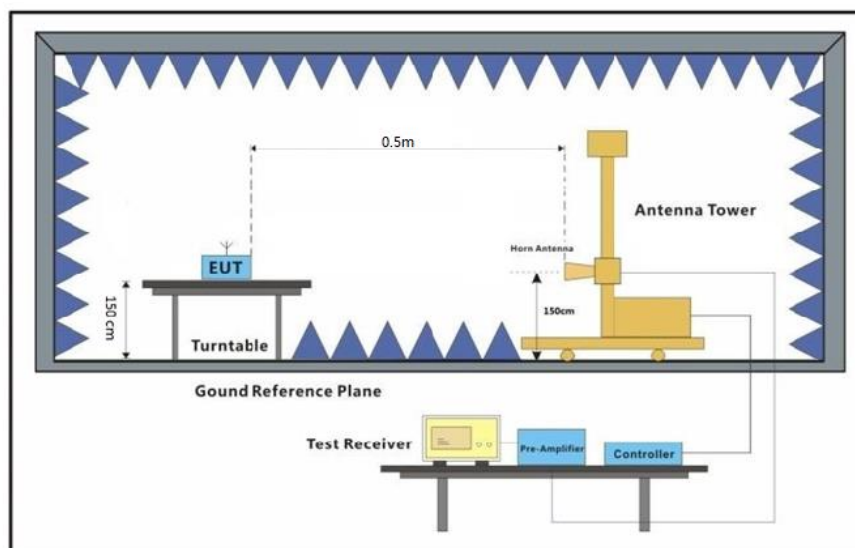
7.2.1 E.U.T. Operation

Operating Environment:
Temperature: 21.4 °C Humidity: 50.1 % RH Atmospheric Pressure: 1000 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode _ Keep the EUT in continuously transmitting mode

7.2.3 Test Setup Diagram



7.2.4 Conclusion

EUT complies with 47 CFR Part 2.1046;47 CFR Part 2.1051;47 CFR Part 95.3367 requirement

7.2.5 Measurement Data

Frequency (GHz)	Distance (m)	Polarity	dBuV/m @ 0.5m	E.I.R.P. Power (dBm)	E.I.R.P. Limit (dBm)	Result	Remark
77.45-77.98	0.5	Horizontal	96.622	38.53	55.0	Pass	Peak
	0.5	Horizontal	82.074	23.98	50.0	Pass	AVG
	0.5	Vertical	71.198	13.11	55.0	Pass	Peak
	0.5	Vertical	55.296	-2.79	50.0	Pass	AVG

Remark:

$E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] - 20 \log(d[\text{meters}]) + 104.77 + \text{factor}$, where E = field strength and d = distance at which field strength limit is specified in the rules

$\text{EIRP}[\text{dBm}] = E[\text{dB}\mu\text{V/m}] + 20 \log(d[\text{meters}]) - 104.77 + \text{factor}$

$d=0.5\text{m}$; factor=antenna factor + mixer factor + cable loss =41.2dB

Final EIRP[dBm]=Mesured EIRP[dBm]+ Desensitization Factor[dB]

The FMCW Desensitization factor

FMCW Wtdh(MHz)	$T_{\text{chirp}}(\mu\text{s})$	RBW(MHz)	Desensitization Factor(lin)	Desensitization Factor(dB)
543	17	1	0.07	11.50

FMCW desensitization factor $= -10 \cdot \log(\alpha) = -10 \cdot \log(0.07) = 11.50\text{dB}$

$$\alpha = \frac{1}{\sqrt{1 + \left(\frac{2 \ln(2)}{\pi} \right)^2 \left(\frac{BW_{\text{Chirp}}}{T_{\text{Chirp}} B^2} \right)^2}}$$

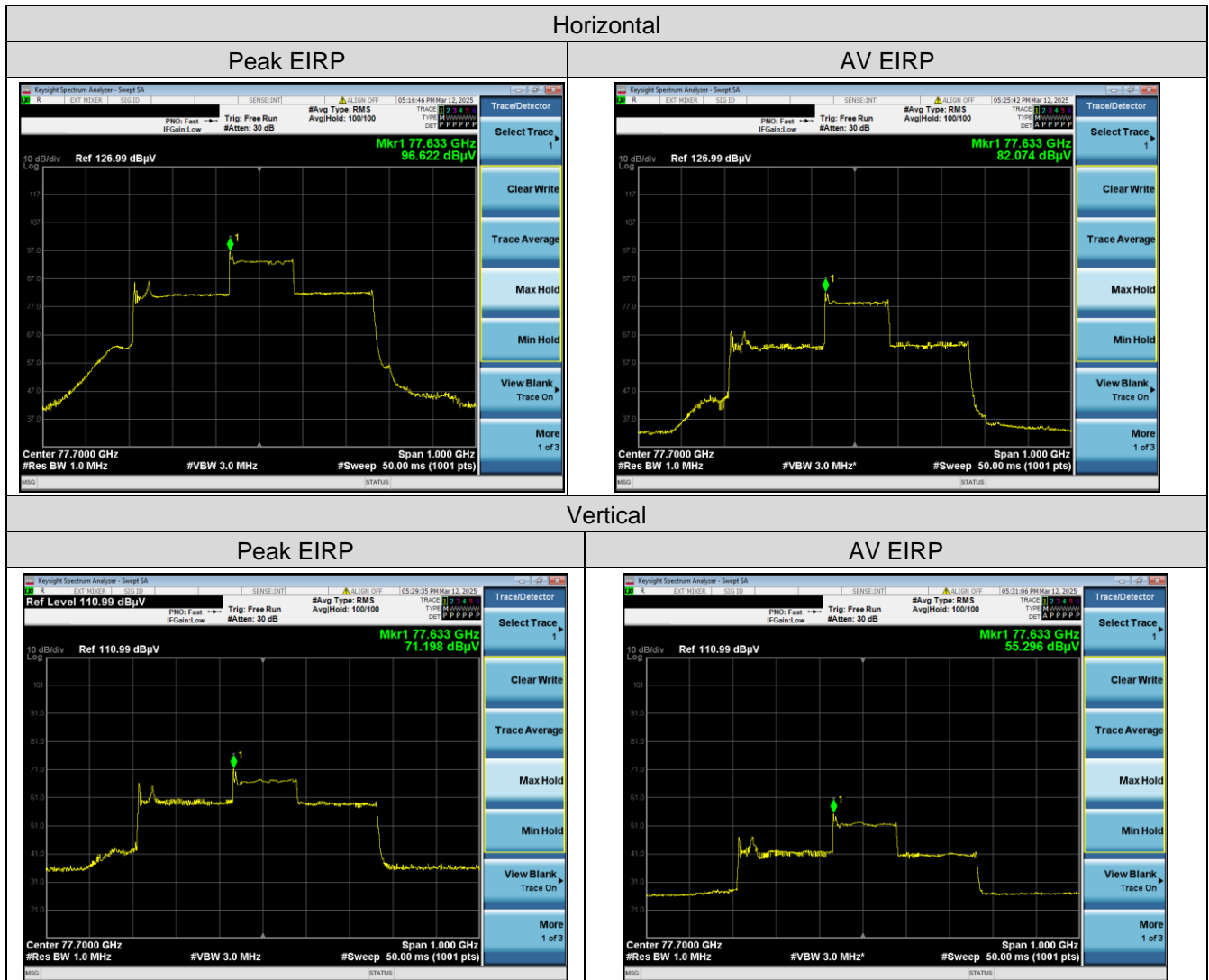
where

α is the reduction in amplitude

F_s is the FMCW Chirp Bandwidth

T_s is the FMCW Chirp Time

B is the 3 dB IF Bandwidth = RBW



7.3 Occupied Bandwidth

Test Requirement: 47 CFR Part 2.1049
 Test Method: ANSI C63.26 (2015)Section 5.4
 Limit: $\geq 76\text{GHz}, \leq 81\text{GHz}$

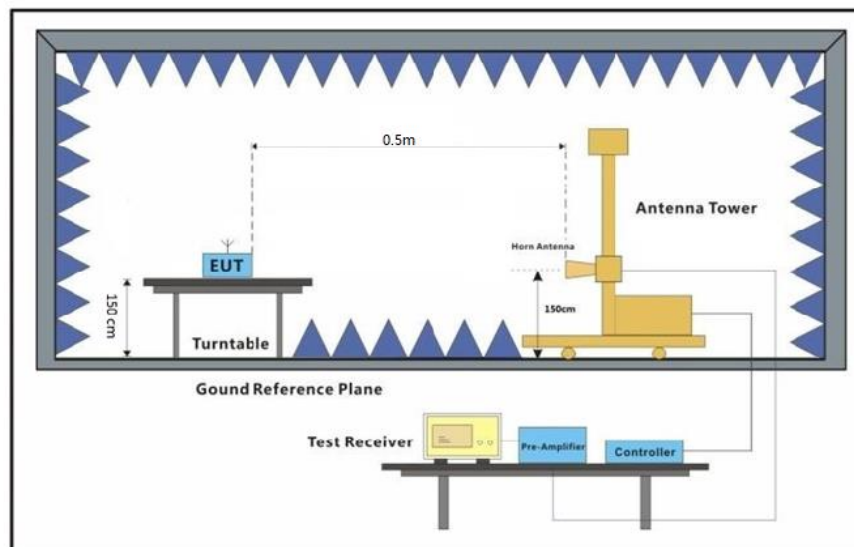
7.3.1 E.U.T. Operation

Operating Environment:
 Temperature: 21.4 °C Humidity: 50.1 % RH Atmospheric Pressure: 1000 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode _ Keep the EUT in continuously transmitting mode

7.3.3 Test Setup Diagram



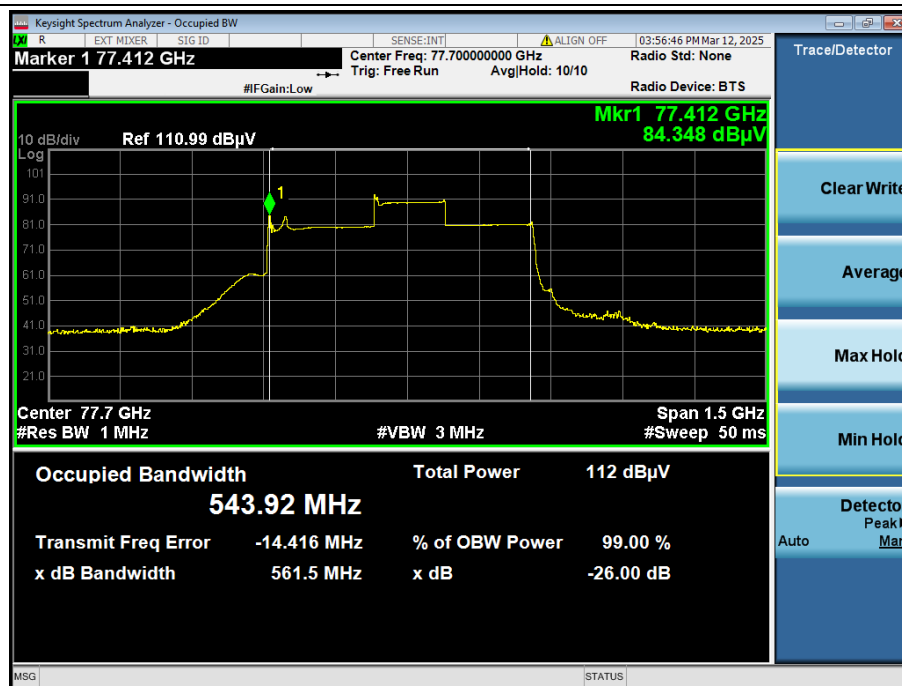
7.3.4 Conclusion

EUT complies with 47 CFR Part 2.1049 requirement

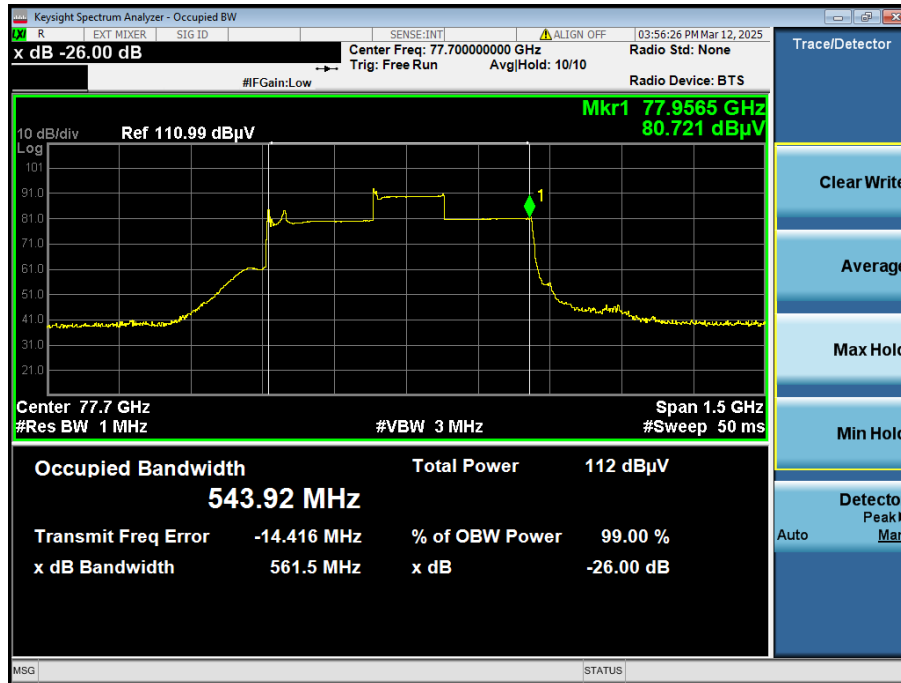
7.3.5 Measurement Data

99% Bandwidth (GHz)	Lowest Frequency (GHz)	Highest Frequency (GHz)	Limit	Result
0.543	77.412	77.9565	76-81GHz	Pass

99%OBW



99%OBW



7.4 Unwanted Emissions

Test Requirement: 47 CFR Part 95.3379
47 CFR Part 2.1053
Test Method: ANSI C63.26 (2015) Section 5.5
Limit:

The power density of any emissions outside the 76-81 GHz band shall consist solely of spurious emissions and shall not exceed the following:

FCC Limit:

(1) Radiated emissions below 40 GHz shall not exceed the field strength as shown in the following emissions table.

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

(i) The tighter limit applies at the band edges.

(ii) The limits in the table are based on the frequency of the unwanted emissions and not the fundamental frequency. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.

(iii) The emissions limits shown in the table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9.0-90.0 kHz, 110.0-490.0 kHz, and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector with a 1 MHz RBW.

(2) The power density of radiated emissions outside the 76-81 GHz band above 40.0 GHz shall not exceed the following, based on measurements employing an average detector with a 1 MHz

(i) For radiated emissions between 40 GHz and 200 GHz: 600 pW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(ii) For radiated emissions above 200 GHz: 1000 pW/cm² at a distance of 3 meters from the exterior surface of the radiating structure.

(3) For field disturbance sensors and radar systems operating in the 76-81 GHz band, the spectrum shall be investigated up to 231.0 GHz



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Frequency (GHz)	Power density at 3 m distance (pW/cm ²)	Distance (m)	Field strength (dBuV/m)*, peak	Field strength (dBuV/m)*, average
40 - 200	600	3	113.54	93.54
40 - 200	600	0.5	129.10**	109.10**
200-231	1000	3	115.76	95.76
200-231	1000	0.5	131.32**	111.32**

* - Field strength was calculated per equation (26) of ANSI C63.10-2013 section 9 as follows: $E = \sqrt{PD \times 377}$, where PD is the power density at the distance specified by the limit in W/m², E- field strength in V/m.

** - The limit for other test distance was calculated using the inverse distance extrapolation factor as follows:

$LimS2 = LimS1 + 20 \log (S1/S2)$, where S1 and S2 - standard defined and test distance respectively in meters.

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 21.4 °C

Humidity: 50.1 % RH

Atmospheric Pressure: 1000 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode _ Keep the EUT in continuously transmitting mode



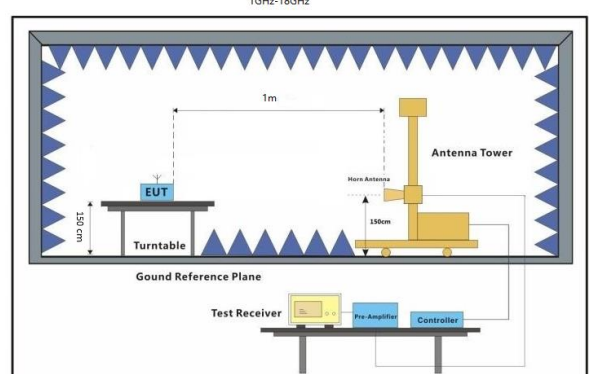
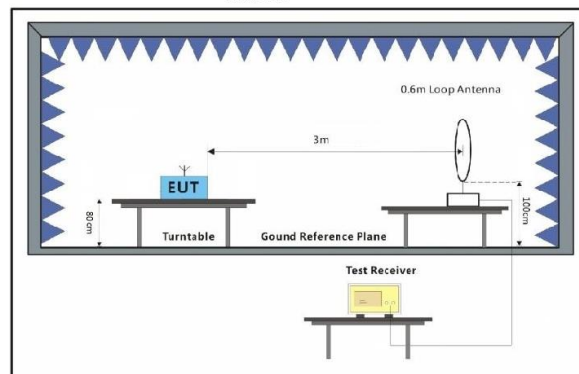
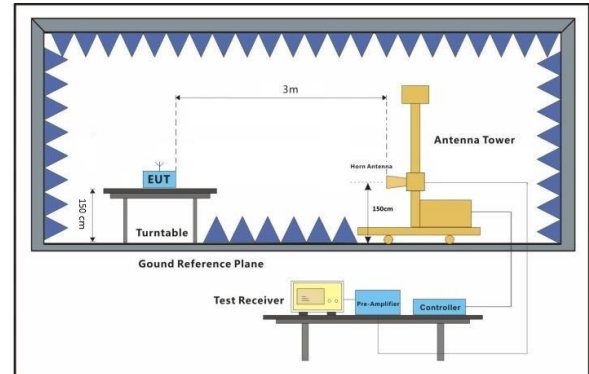
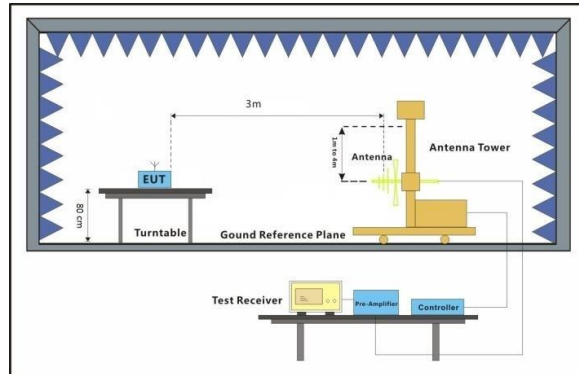
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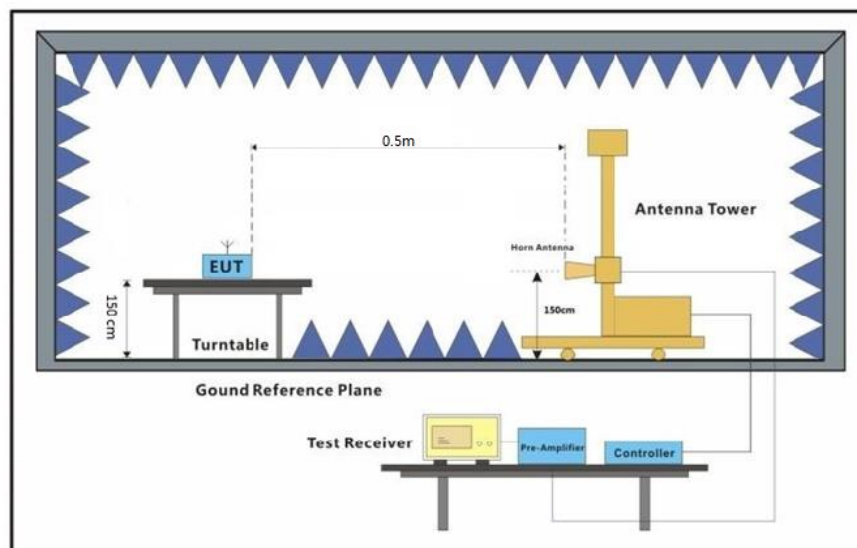
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7.4.3 Test Setup Diagram



Above 40GHz



7.4.4 Conclusion

EUT complies with 47 CFR Part 95.3379; 47 CFR Part 2.1053 requirement

7.4.5 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.

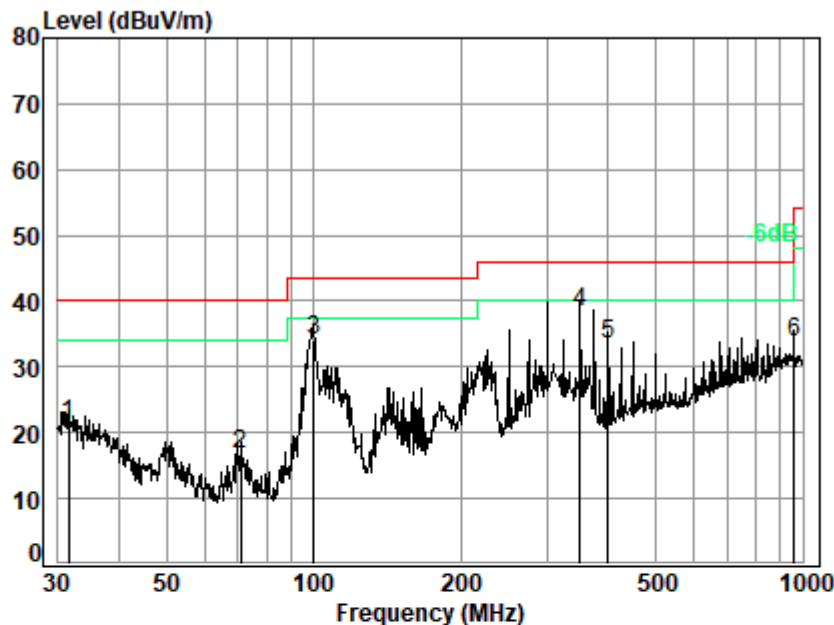
Note:

1. The amplitude of radiated emissions (frequency range from 9KHz to 30MHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not Presented in the report.

2. For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



Test Mode: 00; Polarity: Horizontal



Site : chamber
Condition: 3m HORIZONTAL
Job No. : 00714AT
Test Mode: 00

	Ant	Cable	Preamp	Read		Limit	Over	
	Freq	Factor	Loss	Factor	Level	Level	Line	Limit
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	31.510	20.50	0.69	27.79	27.91	21.31	40.00	-18.69 QP
2	71.080	10.55	1.03	27.67	32.78	16.69	40.00	-23.31 QP
3	100.229	12.31	1.22	27.59	48.20	34.14	43.50	-9.36 QP
4 q	350.477	19.94	2.41	26.96	42.88	38.27	46.00	-7.73 QP
5	400.432	20.60	2.58	27.16	37.34	33.36	46.00	-12.64 QP
6	958.794	28.10	4.28	26.34	27.61	33.65	46.00	-12.35 QP



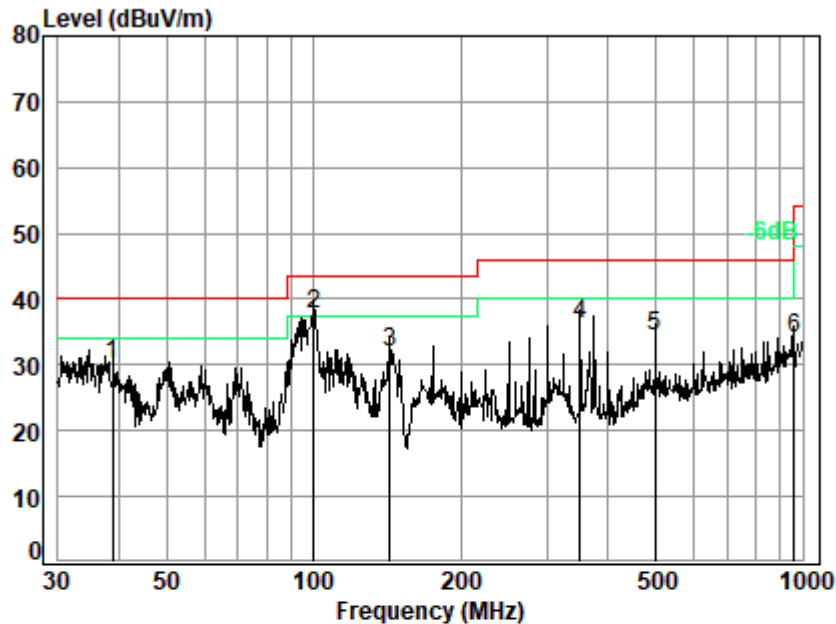
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Test Mode: 00; Polarity: Vertical



Site : chamber

Condition: 3m VERTICAL

Job No. : 00714AT

Test Mode: 00

		Ant	Cable	Preamp	Read	Limit	Over	
	Freq	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	38.888	16.89	0.77	27.77	40.25	30.14	40.00	-9.86 QP
2 q	99.878	12.29	1.22	27.59	51.88	37.80	43.50	-5.70 QP
3	143.326	12.19	1.50	27.41	45.64	31.92	43.50	-11.58 QP
4	350.477	19.94	2.41	26.96	40.79	36.18	46.00	-9.82 QP
5	499.425	22.90	2.92	27.56	36.05	34.31	46.00	-11.69 QP
6	958.794	28.10	4.28	26.34	27.95	33.99	46.00	-12.01 QP



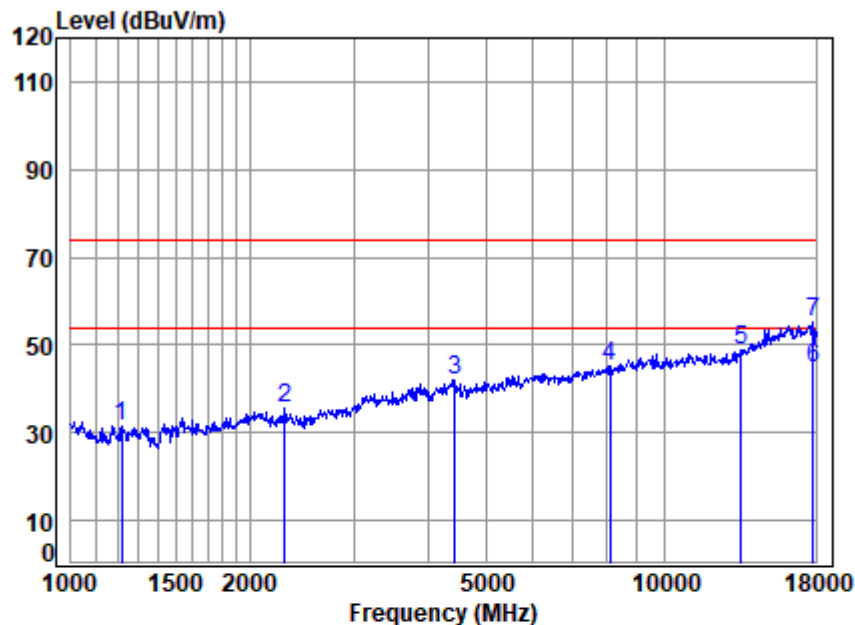
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Test Mode: 00; Polarity: Horizontal



Site : chamber
Condition: 3m HORIZONTAL
Job No : 00714AT
Mode : RSE TX

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1217.190	5.44	24.64	54.69	56.26	31.65	74.00	-42.35	Peak
2	2292.257	5.30	28.32	54.93	56.89	35.58	74.00	-38.42	Peak
3	4430.628	7.09	34.43	54.25	54.90	42.17	74.00	-31.83	Peak
4	8106.200	9.16	36.50	53.16	52.74	45.24	74.00	-28.76	Peak
5	13481.720	13.24	38.80	53.05	49.88	48.87	74.00	-25.13	Peak
6	17793.090	14.74	43.89	52.50	38.36	44.49	54.00	-9.51	Average
7	17793.090	14.74	43.89	52.50	49.19	55.32	74.00	-18.68	Peak

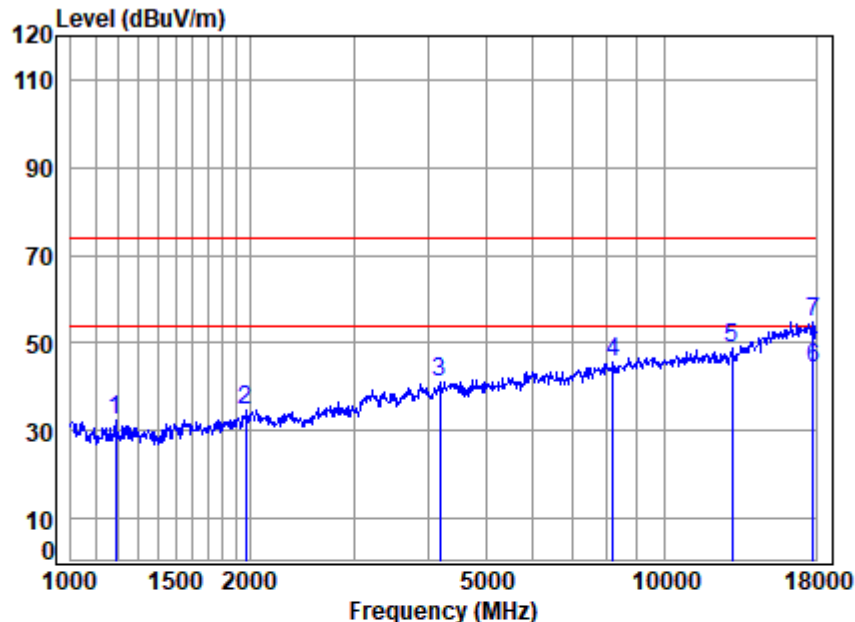


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Test Mode: 00; Polarity: Vertical

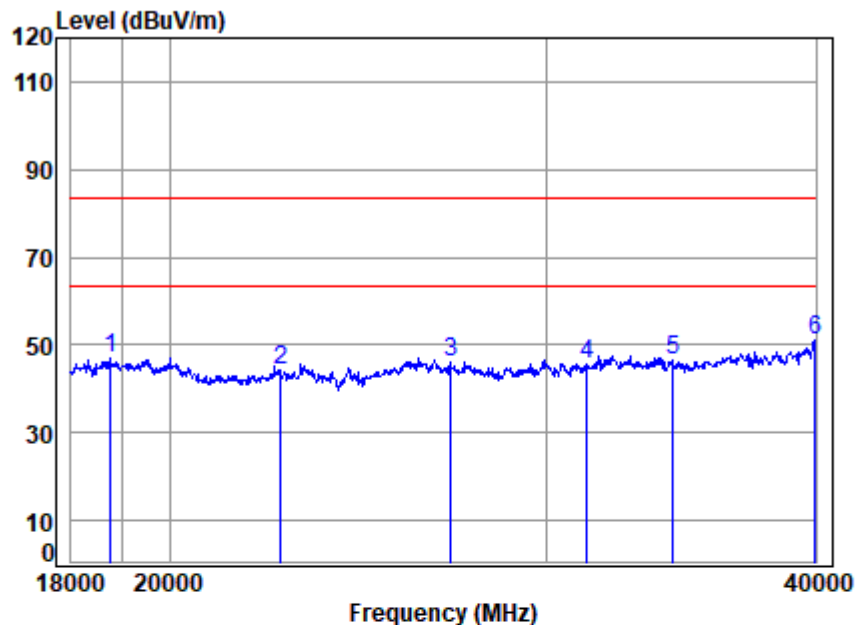


Site : chamber
Condition: 3m VERTICAL
Job No : 00714AT
Mode : RSE TX

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1189.368	5.50	24.29	54.68	57.41	32.52	74.00	-41.48	Peak
2	1972.373	5.05	28.30	54.89	56.18	34.64	74.00	-39.36	Peak
3	4181.768	6.91	33.80	54.28	54.68	41.11	74.00	-32.89	Peak
4	8200.463	9.28	36.60	53.21	52.82	45.49	74.00	-28.51	Peak
5	13022.130	12.27	38.17	53.19	51.41	48.66	74.00	-25.34	Peak
6	q17793.090	14.74	43.89	52.50	38.27	44.40	54.00	-9.60	Average
7	p17793.090	14.74	43.89	52.50	48.77	54.90	74.00	-19.10	Peak



Test Mode: 00; Polarity: Horizontal



Site : chamber
Condition: 1m HORIZONTAL
Job No : 00714AT
Mode : RSE TX
Note :

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	18778.130	5.79	36.88	54.71	59.00	46.96	83.54	-36.58	Peak
2	22527.850	6.32	36.69	52.96	54.14	44.19	83.54	-39.35	Peak
3	27026.350	7.40	38.20	52.31	52.80	46.09	83.54	-37.45	Peak
4	31253.790	7.70	39.40	52.25	50.83	45.68	83.54	-37.86	Peak
5	34341.840	7.67	40.57	51.83	50.03	46.44	83.54	-37.10	Peak
6	p39936.170	7.71	43.12	51.84	51.97	50.96	83.54	-32.58	Peak



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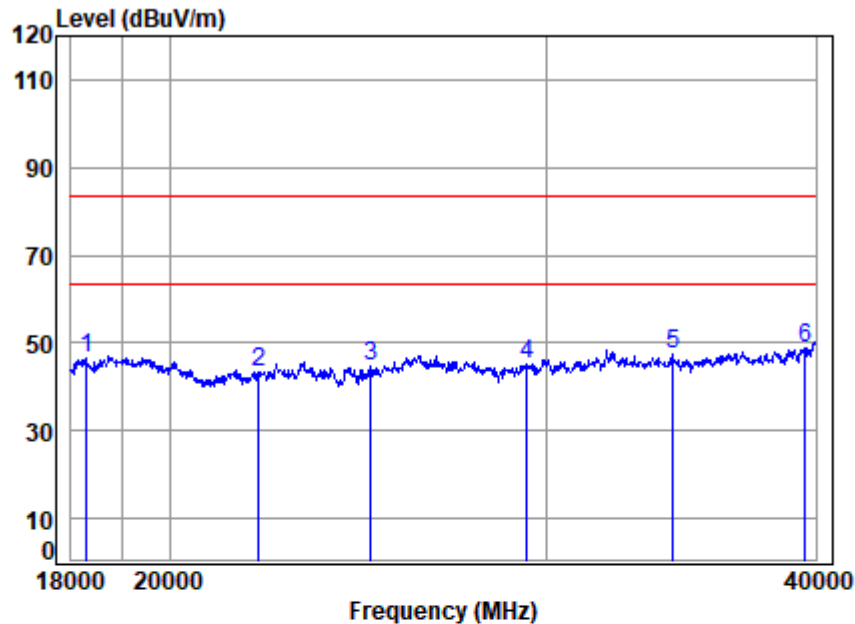
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SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250200071402

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Test Mode: 00; Polarity: Vertical



Site : chamber
Condition: 1m VERTICAL
Job No : 00714AT
Mode : RSE TX
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	18304.380	5.12	35.87	54.52	60.14	46.61	83.54	-36.93	Peak
2	21994.610	6.01	36.90	53.61	54.22	43.52	83.54	-40.02	Peak
3	24832.920	6.80	38.47	53.03	52.39	44.63	83.54	-38.91	Peak
4	29319.710	7.20	38.66	53.34	52.78	45.30	83.54	-38.24	Peak
5	34287.040	7.67	40.53	51.84	51.06	47.42	83.54	-36.12	Peak
6	39492.210	7.52	42.69	52.15	50.54	48.60	83.54	-34.94	Peak



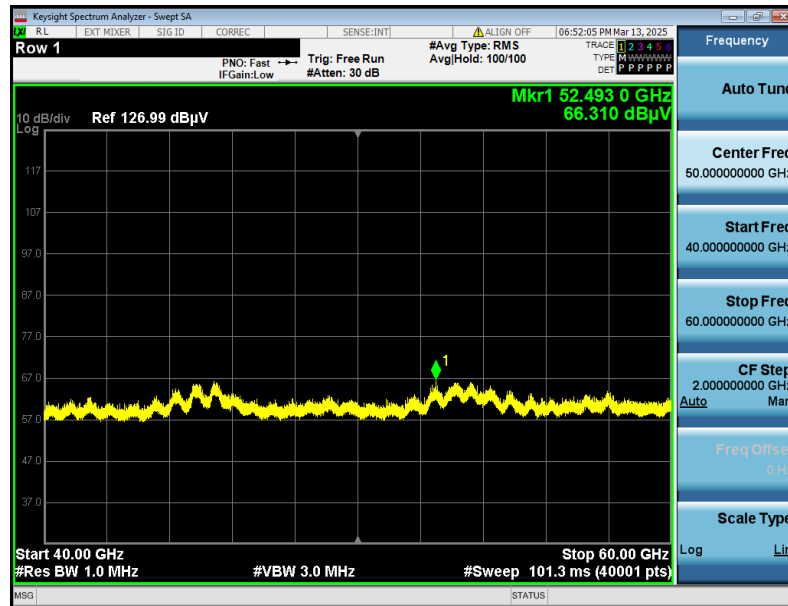
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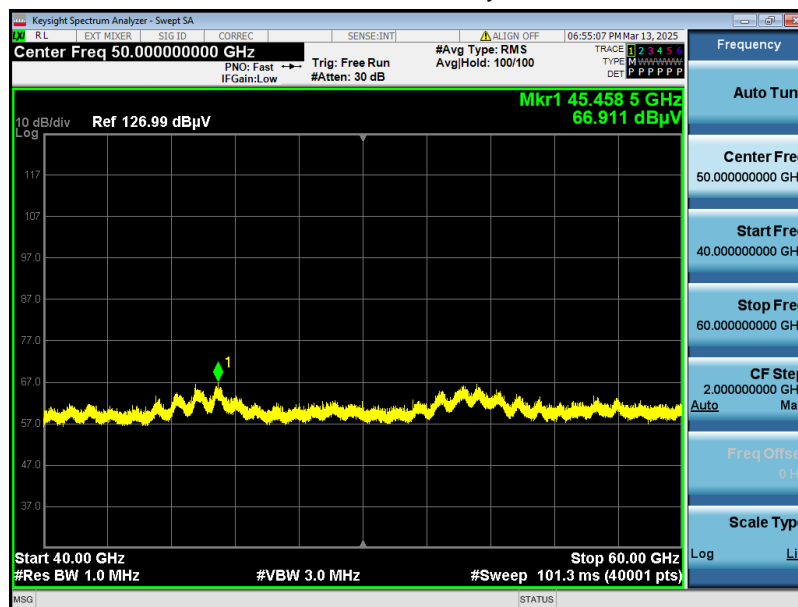
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40GHz-60GHz

Test Mode: 00; Polarity: Horizontal



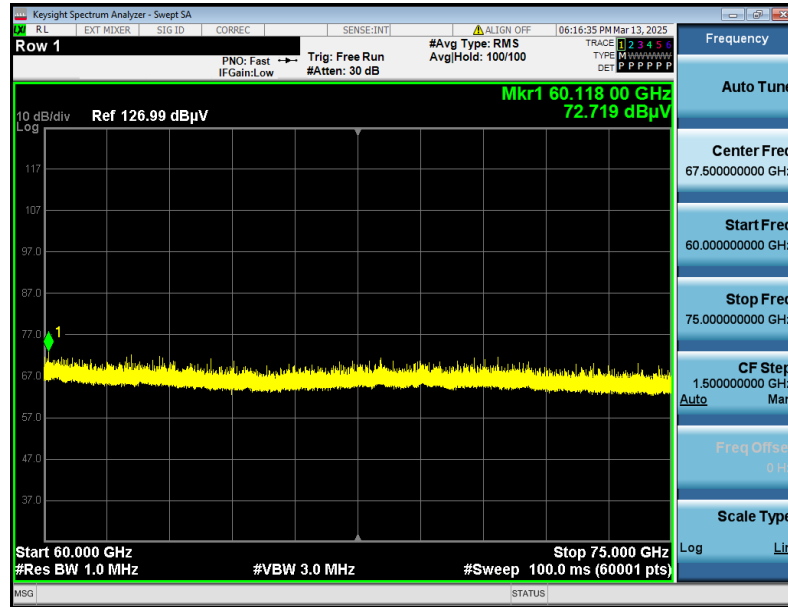
Test Mode: 00; Polarity: Vertical



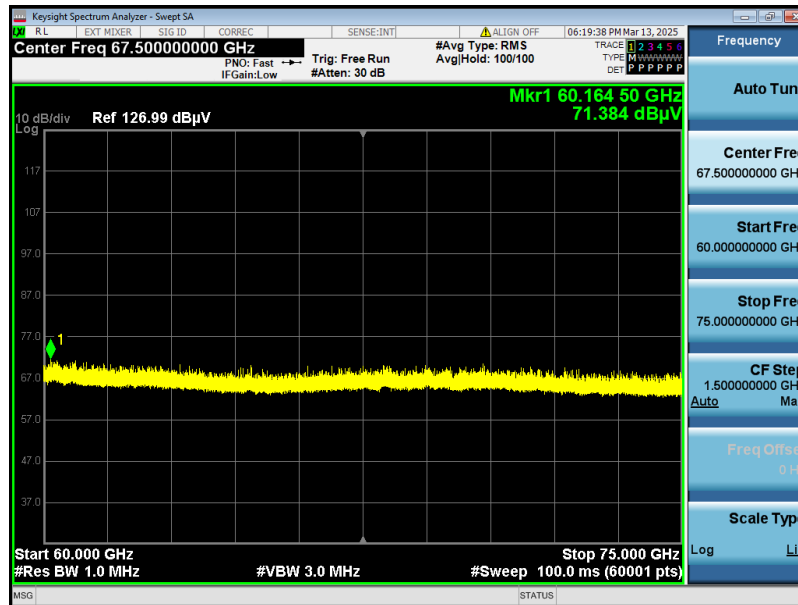
Frequency (GHz)	Distance (M)	PK Value (dBuV/m)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Polarization	Result
52.493	0.5	66.310	129.10	109.10	H	PASS
45.458	0.5	66.911	129.10	109.10	V	PASS

60GHz-75GHz

Test Mode: 00; Polarity: Horizontal



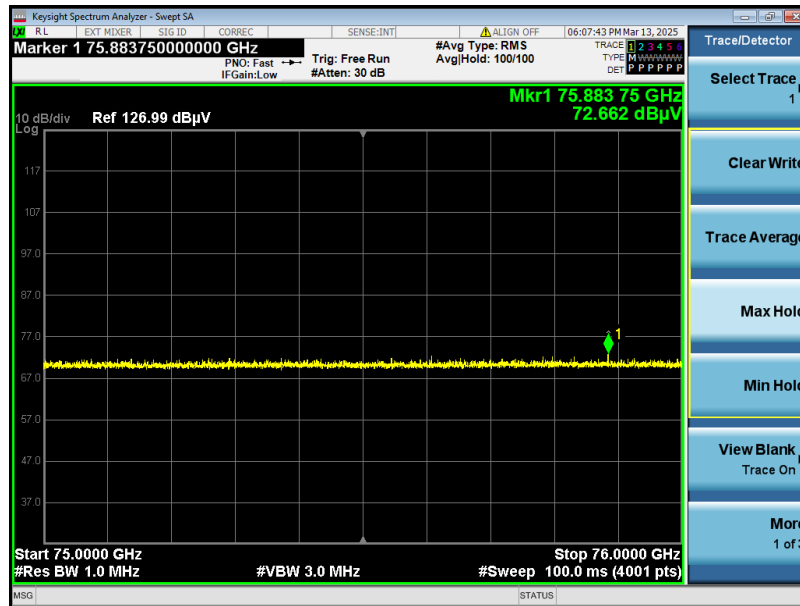
Test Mode: 00; Polarity: Vertical



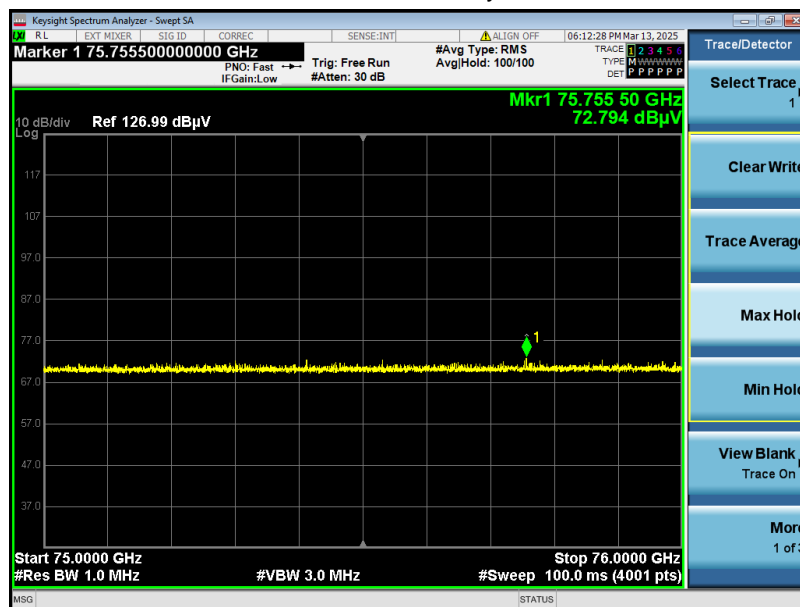
Frequency (GHz)	Distance (M)	PK Value (dBuV/m)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Polarization	Result
60.118	0.5	72.719	129.10	109.10	H	PASS
60.164	0.5	71.384	129.10	109.10	V	PASS

75GHz-76GHz

Test Mode: 00; Polarity: Horizontal



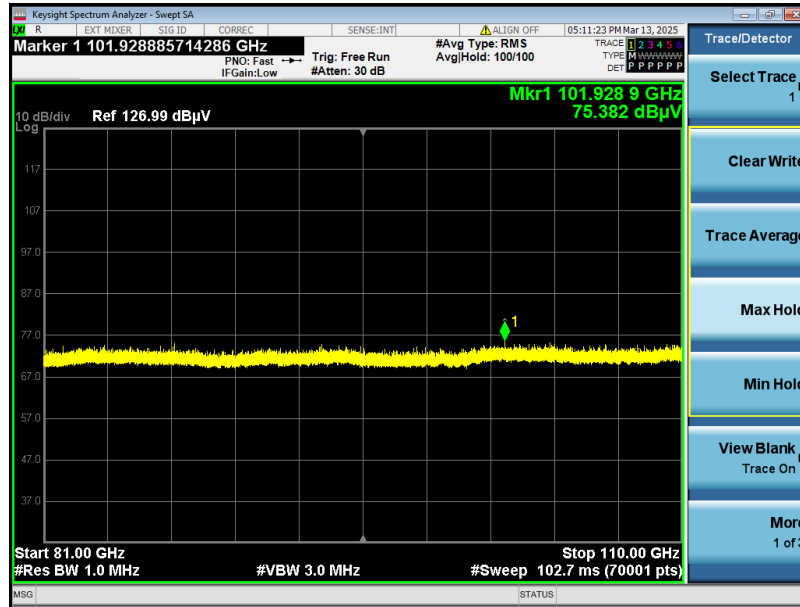
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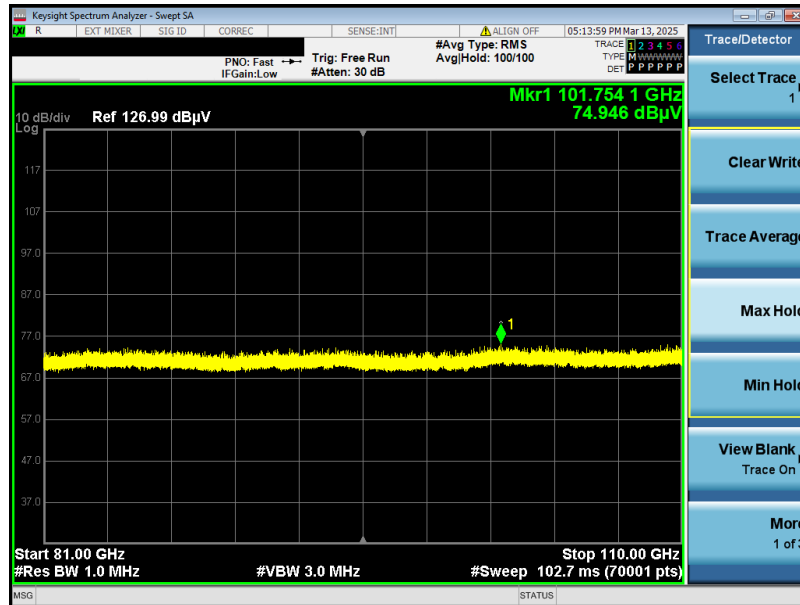
Frequency (GHz)	Distance (M)	PK Value (dBuV/m)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Polarization	Result
75.883	0.5	72.662	129.10	109.10	H	PASS
75.755	0.5	72.794	129.10	109.10	V	PASS

81GHz-110GHz

Test Mode: 00; Polarity: Horizontal



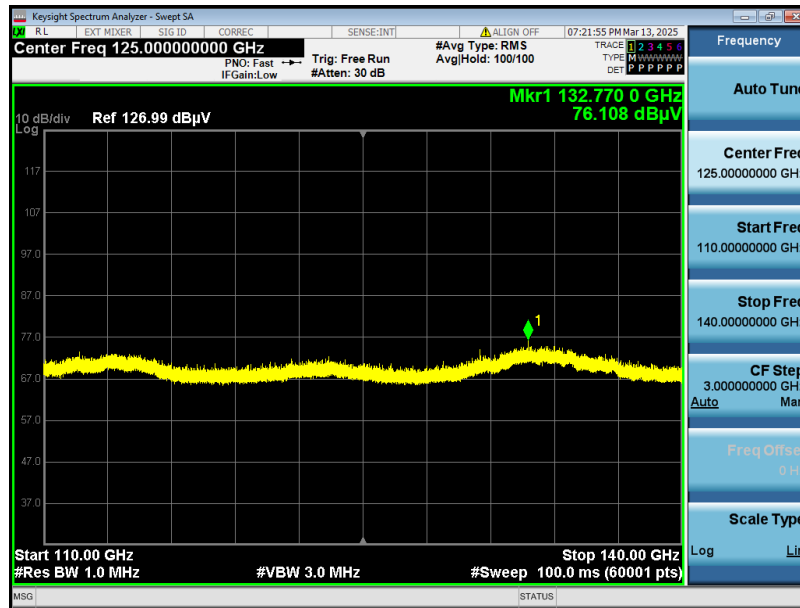
Test Mode: 00; Polarity: Vertical



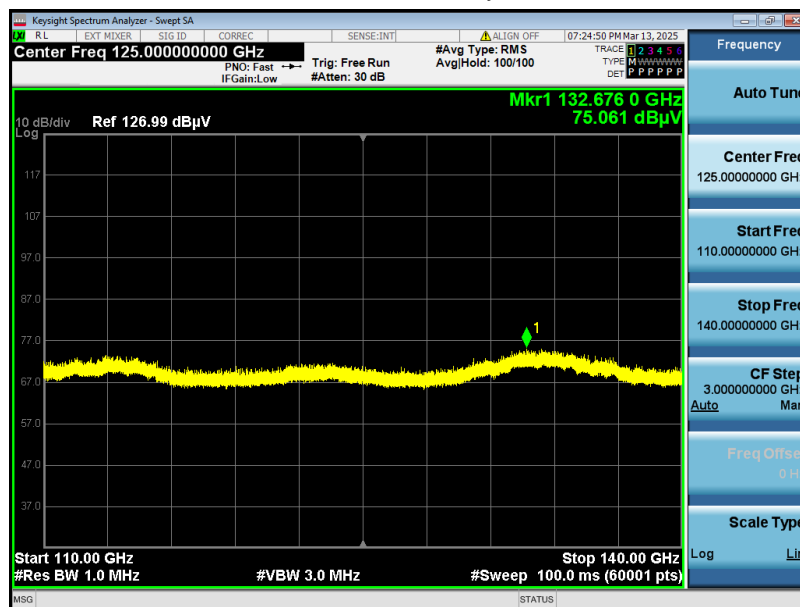
Frequency (GHz)	Distance (M)	PK Value (dBuV/m)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Polarization	Result
101.928	0.5	75.382	129.10	109.10	H	PASS
101.754	0.5	74.946	129.10	109.10	V	PASS

110GHz-140GHz

Test Mode: 00; Polarity: Horizontal



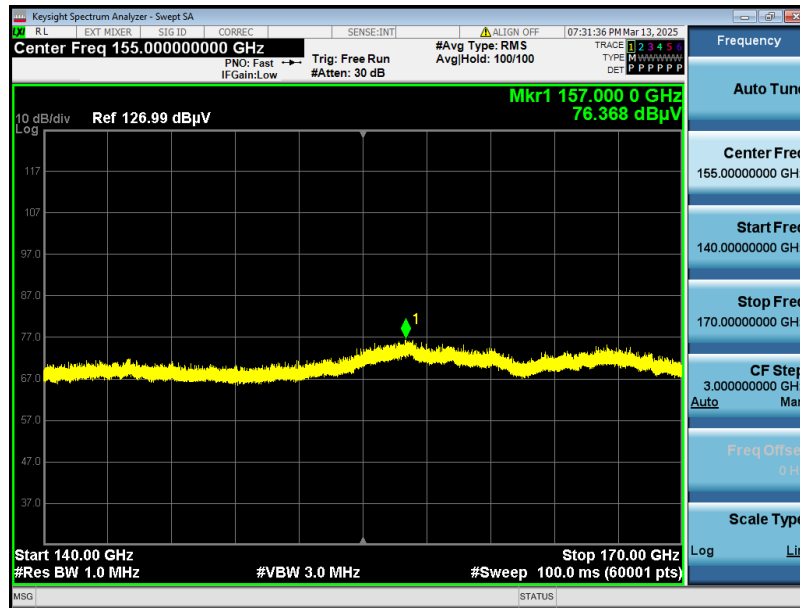
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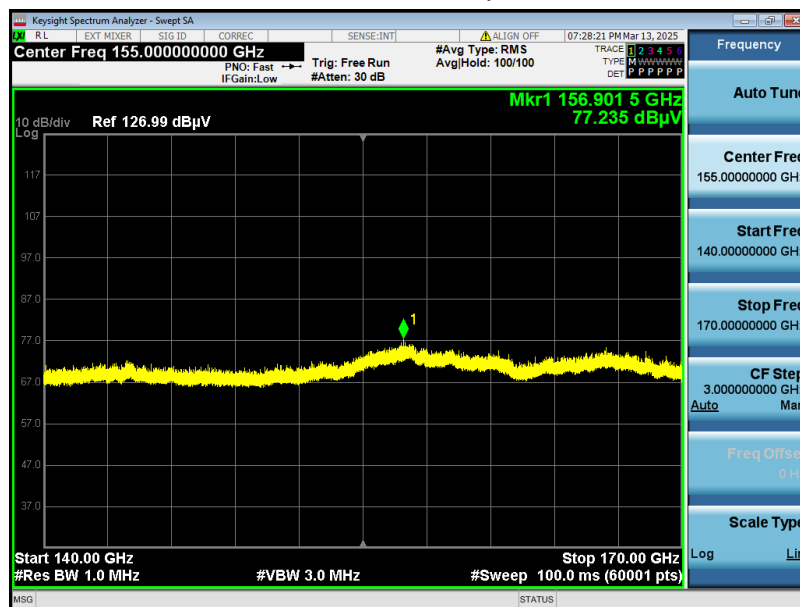
Frequency (GHz)	Distance (M)	PK Value (dBuV/m)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Polarization	Result
132.770	0.5	76.108	129.10	109.10	H	PASS
132.676	0.5	75.061	129.10	109.10	V	PASS

140GHz-170GHz

Test Mode: 00; Polarity: Horizontal



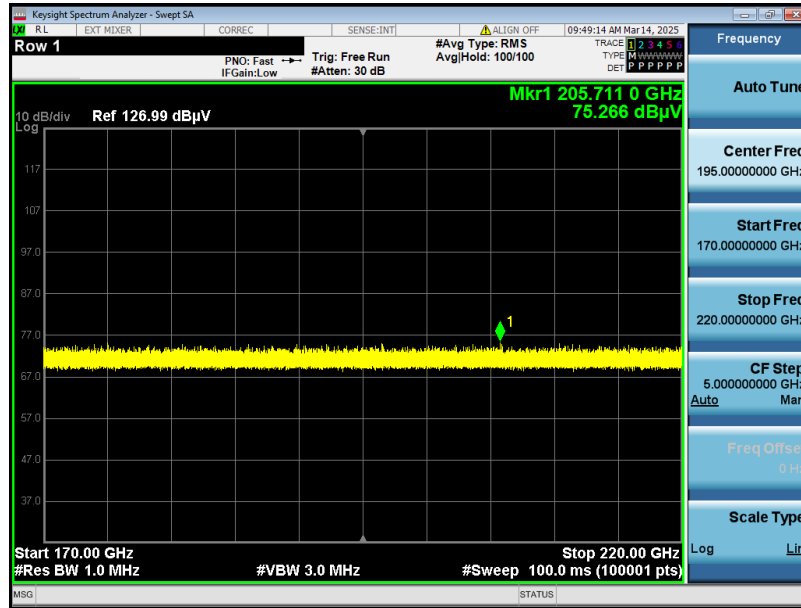
Test Mode: 00; Polarity: Vertical



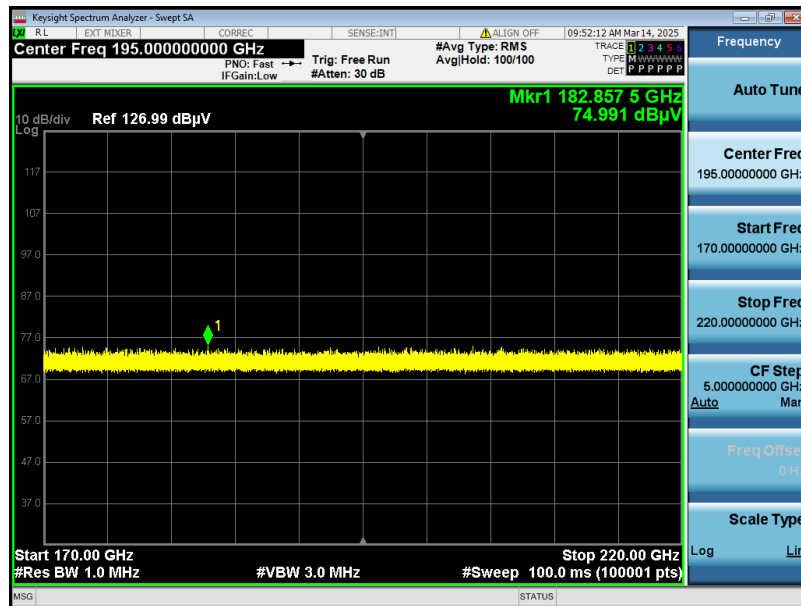
Frequency (GHz)	Distance (M)	PK Value (dBuV/m)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Polarization	Result
157.000	0.5	76.368	129.10	109.10	H	PASS
156.901	0.5	77.235	129.10	109.10	V	PASS

170GHz-220GHz

Test Mode: 00; Polarity: Horizontal



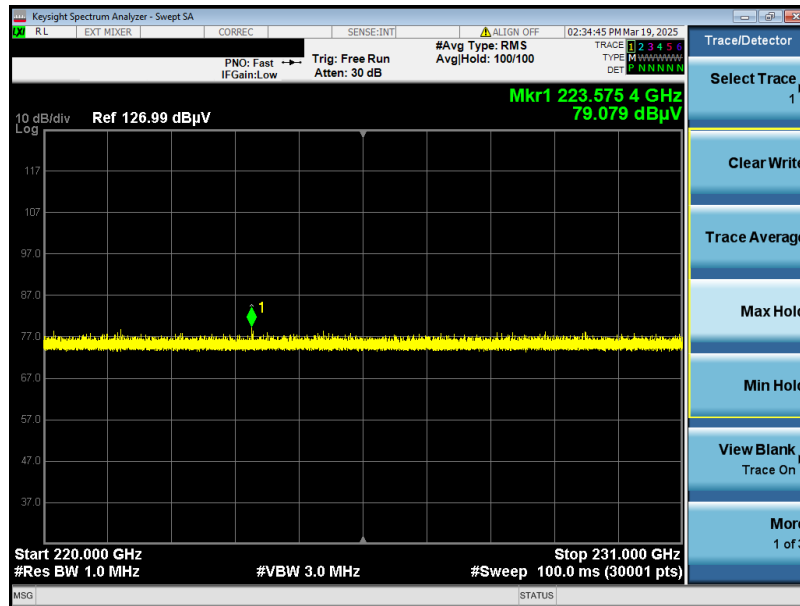
Test Mode: 00; Polarity: Vertical



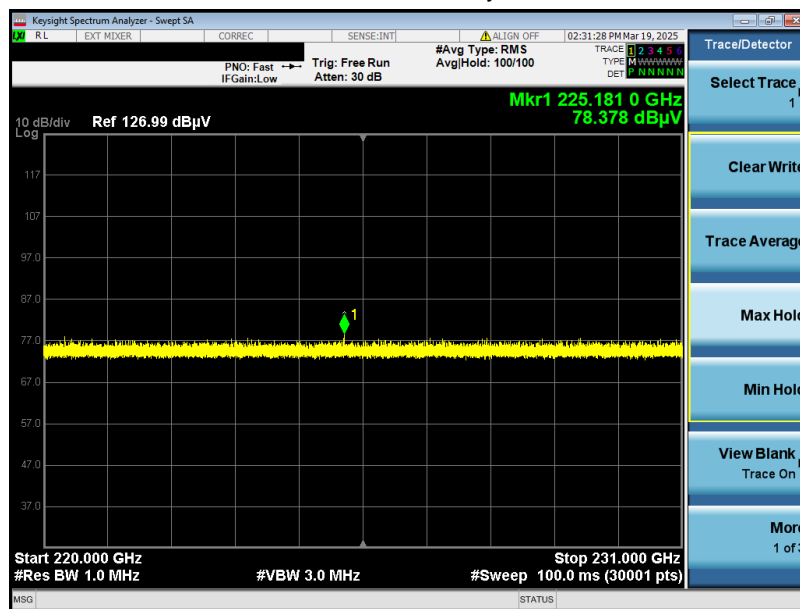
Frequency (GHz)	Distance (M)	PK Value (dBuV/m)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Polarization	Result
205.711	0.5	75.266	129.10	109.10	H	PASS
182.857	0.5	74.991	129.10	109.10	V	PASS

220GHz-231GHz

Test Mode: 00; Polarity: Horizontal



Test Mode: 00; Polarity: Vertical



Frequency (GHz)	Distance (M)	PK Value (dBuV/m)	PK Limit (dBuV/m)	AV Limit (dBuV/m)	Polarization	Result
223.575	0.5	79.079	129.10	109.10	H	PASS
225.181	0.5	78.378	129.10	109.10	V	PASS

7.5 Frequency Stability

Test Requirement: 47 CFR Part 95.3379
47 CFR Part 2.1055
Test Method: ANSI C63.26 (2015) Section 5.6
Limit: 76-81GHz

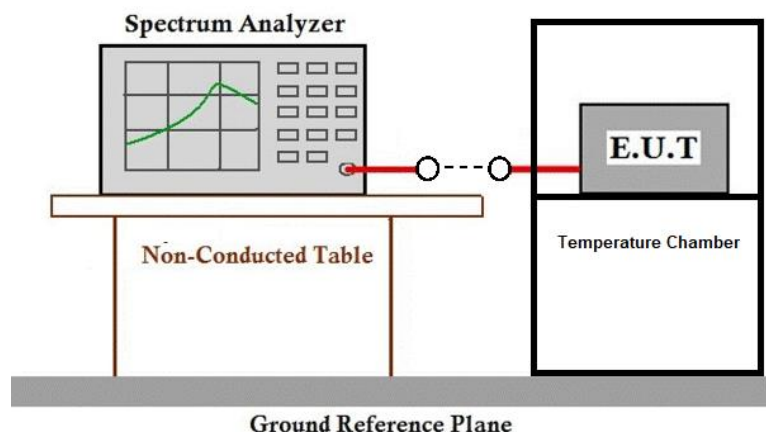
7.5.1 E.U.T. Operation

Operating Environment:
Temperature: 21.4 °C Humidity: 50.1 % RH Atmospheric Pressure: 1000 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode _ Keep the EUT in continuously transmitting mode

7.5.3 Test Setup Diagram



7.5.4 Conclusion

EUT complies with 47 CFR Part 95.3379; 47 CFR Part 2.1055 requirement

7.5.5 Measurement Data

Voltage (%)	Power (VDC)	Temp (°C)	FL (GHz)	FH (GHz)	Limit (GHz)	Result
100%	12V	-40	77.4130	77.9575	76-81GHz	Pass
		-30	77.4127	77.9568	76-81GHz	Pass
		-20	77.4118	77.9562	76-81GHz	Pass
		-10	77.4131	77.9576	76-81GHz	Pass
		0	77.4125	77.9579	76-81GHz	Pass
		+10	77.4122	77.9580	76-81GHz	Pass
		+20	77.412	77.9565	76-81GHz	Pass
		+30	77.4130	77.9566	76-81GHz	Pass
		+40	77.4118	77.9575	76-81GHz	Pass
		+50	77.4120	77.9580	76-81GHz	Pass
		+60	77.4124	77.9578	76-81GHz	Pass
		+70	77.4119	77.9580	76-81GHz	Pass
		+80	77.4120	77.9575	76-81GHz	Pass
		+85	77.4126	77.9560	76-81GHz	Pass
115%	13.8V	+20	77.4132	77.9569	76-81GHz	Pass
85%	10.2V	+20	77.4132	77.9575	76-81GHz	Pass



8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2502000714AT

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2502000714AT

- End of the Report -

