



RF MEASUREMENT REPORT

FCC ID: 2A3Y9STA792S019A
Applicant: WHST CO., LTD.
Product: High Resolution Short Range Corner Radar
Model No.: STA79-2S
Brand Name WHST
FCC Classification: Part 95 Vehicular Radar Systems (VRD)
FCC Rule(s): FCC Part 95, Subpart M
Test Procedure(s): ANSI C63.10-2013
Test Date: February 24 ~ March 16, 2022

Reviewed By:

Kevin Guo

Approved By:

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2201RSU062-U1	Rev. 01	Initial Report	03-17-2022	Valid

CONTENTS

Description	Page
1. General Information	5
1.1. Applicant	5
1.2. Manufacturer.....	5
1.3. Testing Facility	5
1.4. Product Information	6
1.5. Radio Specification	6
2. Test Configuration.....	7
2.1. Test Mode	7
2.2. Test System Connection Diagram	7
2.3. Test System Details	7
2.4. Test Software	7
2.5. Applied Standards	8
2.6. Test Environment Condition.....	8
3. Measuring Instrument.....	9
4. Measurement Uncertainty	11
5. Test Result	12
5.1. Summary	12
5.2. Equivalent Isotropically Radiated Power (EIRP)	13
5.2.1. Test Limit.....	13
5.2.2. Test Procedure used.....	13
5.2.3. Test Setting	13
5.2.4. Test Setup.....	14
5.2.5. Test Result	15
5.3. Occupied bandwidth	16
5.3.1. Test Limit.....	16
5.3.2. Test Procedure used.....	16
5.3.3. Test Setting	16
5.3.4. Test Setup.....	16
5.3.5. Test Result	17
5.4. Unwanted Emissions	18
5.4.1. Test Limit.....	18
5.4.2. Test Procedure used.....	18
5.4.3. Test Procedure.....	19
5.4.4. Test Setup.....	20
5.4.5. Test Results	22

5.5.	Frequency Stability	25
5.5.1.	Test Limit.....	25
5.5.2.	Test Procedure used.....	25
5.5.3.	Test Procedure.....	25
5.5.4.	Test Setup.....	26
5.5.5.	Test Result	27
6.	Conclusion	28
	Appendix A - Test Setup Photograph	29
	Appendix B - EUT Photograph.....	30

1. General Information

1.1. Applicant

WHST CO., LTD.

Factory 1, Wanchun High-tech Innovation Park, East District of Economic & Technological Development Zone,
Wuhu, Anhui

1.2. Manufacturer

WHST CO., LTD.

Factory 1,Wanchun High-tech Innovation Park,East District of Economic & Technological Development Zone,
Wuhu, Anhui

1.3. Testing Facility

<input checked="" type="checkbox"/>	Test Site – MRT Suzhou Laboratory
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian’edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 FCC: CN1166 VCCI:
	CNAS: L10551 ISED: CN0001 <div> <input type="checkbox"/>R-20025 <input type="checkbox"/>G-20034 <input type="checkbox"/>C-20020 <input type="checkbox"/>T-20020 </div> <div> <input type="checkbox"/>R-20141 <input type="checkbox"/>G-20134 <input type="checkbox"/>C-20103 <input type="checkbox"/>T-20104 </div>
<input type="checkbox"/>	Test Site – MRT Shenzhen Laboratory
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 FCC: CN1284
	CNAS: L10551 ISED: CN0105
<input type="checkbox"/>	Test Site – MRT Taiwan Laboratory
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: L3261-190725 FCC: 291082, TW3261
	ISED: TW3261

1.4. Product Information

Product Name	High Resolution Short Range Corner Radar
Model No.	STA79-2S
Product Voltage	DC 9V-16V
Working Temperature Range	-40°C ~ 85°C
Test Devices No.	77#
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

Working Frequency Range	76 ~ 77GHz
Modulation	FMCW
Antenna Gain Tx	16.5dBi
Antenna Gain Rx	18dBi
Bandwidth	650MHz
Cycle time	50ms
Radar Type	Fixed Beam, Non-pulsed Radar

2. Test Configuration

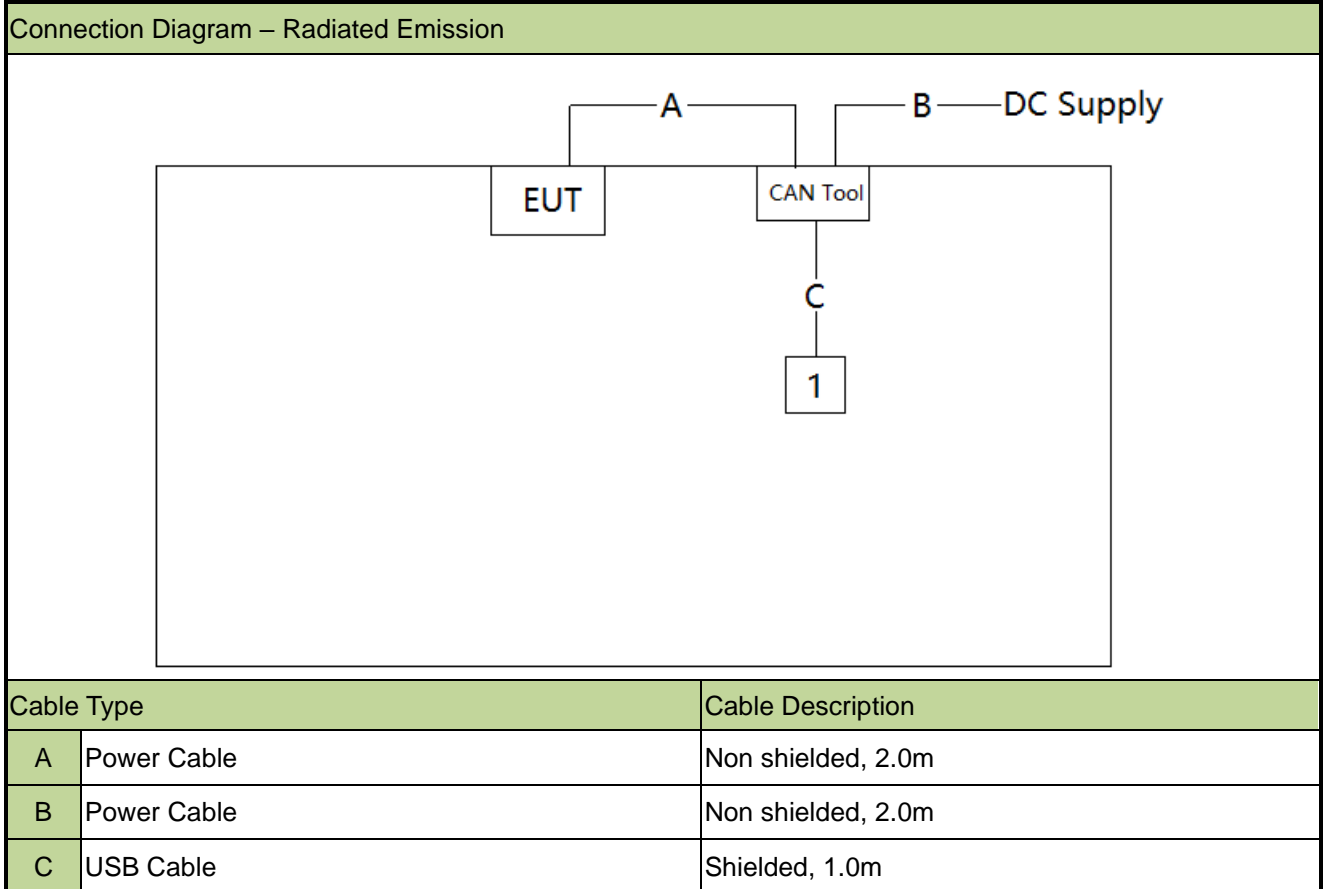
2.1. Test Mode

Mode 1: Collocated Tx/Rx mode

Note: The test sample was provided by the manufacturer, which was configured into Collocated Tx/Rx mode after power on.

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing and AC line conducted testing.



2.3. Test System Details

Product	Manufacturer	Model No.
1 Notebook	Lenovo	E495

2.4. Test Software

The test utility software used during testing was “STA79_2S_SOD Lotus lambda DV_EMC.exe”, and the version was 1.0.4.

2.5. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 95, Subpart M
- KDB 653005 D01v01r01
- ANSI C63.10-2013

2.6. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20% ~ 75%RH

3. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2022/12/29	SIP-AC1
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2022/12/23	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2022/6/24	SIP-AC1
Preamplifier	EMCI	EMC051845SE	MRTSUE06600	1 year	2022/11/8	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE06603	1 year	2022/10/31	SIP-AC1
Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2022/9/7	SIP-AC1
Horn Antenna	R&S	HF907	MRTSUE06610	1 year	2022/8/5	SIP-AC1
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2022/6/24	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06616	1 year	2022/11/2	SIP-AC1
Thermohygrometer	testo	608-H1	MRTSUE06620	1 year	2022/11/28	SIP-AC1
Preamplifier	EMCI	EMC001330	MRTSUE06643	1 year	2023/1/13	SIP-AC1
TRILOG Antenna	Schwarzbeck	VULB 9168	MRTSUE06645	1 year	2022/8/26	SIP-AC1
Loop Antenna	Schwarzbeck	FMZB 1519 B	MRTSUE06937	1 year	2023/3/14	SIP-AC1
Signal Analyzer	Keysight	N9010B	MRTSUE07028	1 year	2022/12/9	SIP-AC1
Waveguide Harmonic Mixer	Keysight	M1970V	MRTSUE06271	/	/	SIP-TR2
Waveguide Harmonic Mixer	Keysight	M1970W	MRTSUE06272	/	/	SIP-TR2
mmWave Antenna	MI-WWAVE	261U-25/383	MRTSUE06273	/	/	SIP-TR2
mmWave Antenna	MI-WWAVE	261G/387	MRTSUE06274	/	/	SIP-TR2
mmWave Antenna	MI-WWAVE	261F/387	MRTSUE06275	/	/	SIP-TR2
mmWave Antenna	MI-WWAVE	261E-25/387	MRTSUE06276	/	/	SIP-TR2
mmWave Antenna	VDI	WR3/4	MRTSUE06277	/	/	SIP-TR2
mmWave Antenna	VDI	WR2/2	MRTSUE06278	/	/	SIP-TR2
mmWave Extension Module	Keysight	N9029AV03	MRTSUE06366	/	/	SIP-TR2
mmWave Extension Module	Keysight	N9029AV05	MRTSUE06367	/	/	SIP-TR2
mmWave Extension Module	Keysight	N9029AV06	MRTSUE06368	/	/	SIP-TR2
mmWave Extension Module	Keysight	N9029AV02	MRTSUE06369	/	/	SIP-TR2
mmWave Antenna	A-INFO	LB-15-25-A	MRTSUE06409	/	/	SIP-TR2
mmWave Antenna	A-INFO	LB-10-25-A	MRTSUE06410	/	/	SIP-TR2
USB Power Sensor	Keysight	U8489A	MRTSUE06448	/	/	SIP-TR2

Instrument Name	Manufacturer	Model No.	Asset No.	Cali. Interval	Cal. Due Date	Test Site
mmWave Extension Module	Keysight	E8257DV15	MRTSUE06456	/	/	SIP-TR2
mmWave Extension Module	Keysight	E8257DV10	MRTSUE06458	/	/	SIP-TR2
Thermohygrometer	testo	622	MRTSUE06628	1 year	2023/1/6	SIP-TR2
Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2022/8/8	SIP-TR2

Software	Version	Function
EMI Test Software	V3	EMI Test Software

4. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Radiated Emission Measurement

Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$):

Horizontal:

30MHz~300MHz: 5.04dB

300MHz~1GHz: 4.95dB

1GHz~40GHz: 6.40dB

Vertical:

30MHz~300MHz: 5.24dB

300MHz~1GHz: 6.03dB

1GHz~40GHz: 6.40dB

5. Test Result

5.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Verdict
95.3367	EIRP	Radiated	Pass
2.1049	Occupied bandwidth		Pass
95.3379(a)	Unwanted Emissions		Pass
95.3379(b)	Frequency stability		Pass

Notes: The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case data are shown in the report.

5.2. Equivalent Isotropically Radiated Power (EIRP)

5.2.1. Test Limit

The fundamental radiated emission limits within the 76-81 GHz band are expressed in terms of Equivalent Isotropically Radiated Power (EIRP) and are as follows:

- (a) The maximum power (EIRP) within the 76-81 GHz band shall not exceed 50 dBm based on measurements employing a power averaging detector with a 1 MHz Resolution Bandwidth (RBW).
- (b) The maximum peak power (EIRP) within the 76-81 GHz band shall not exceed 55 dBm based on measurements employing a peak detector with a 1 MHz RBW.

5.2.2. Test Procedure used

ANSI C63.10 Section 9.10

Note: Far-field boundary calculation as below.

According to ANSI C63.10-2013, Clause 9, for mm-wave measurements, $L \gg \lambda$ and a more suitable formula for the far-field boundary distance: $R_{(\text{Far Field})} = 2L^2/\lambda$

- L is the largest antenna dimension of the transmit antenna in m
- λ is the wavelength in m

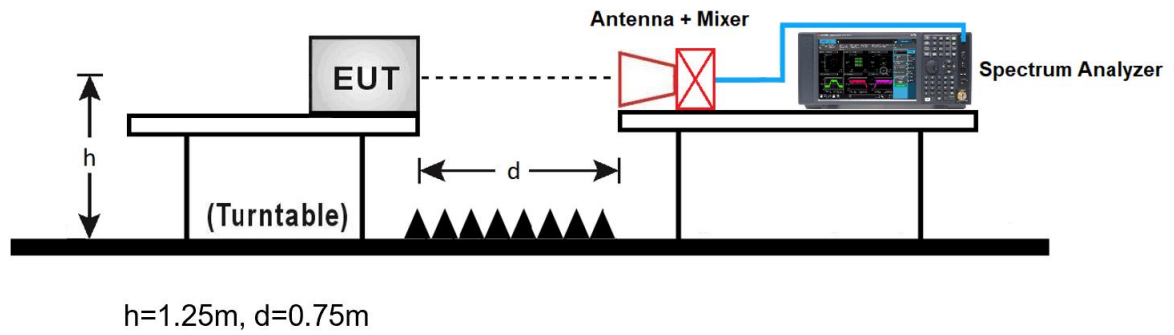
Far-field boundary calculation			
Frequency Range (GHz)	λ (m)	L (m)	$R_{(\text{Far Field})}$ (m)
76 ~ 77	0.0039	0.0267	0.366

Our measurement is performed at a minimum distance of 0.75m $> R_{(\text{Far Field})}$

5.2.3. Test Setting

1. Span = approximately two times to three times the EBW, centered on the carrier frequency
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector function = Peak for peak EIRP, Average for average EIRP.
5. Sweep time = auto
6. Trace mode = max hold.
7. Allow the trace to stabilize.
8. Use the peak search function to mark the max of the emission.

5.2.4. Test Setup



5.2.5. Test Result

Test Engineer	Chase Zhu	Temperature	25.6°C
Test Site	SIP-TR2	Relative Humidity	42.2%
Test Date	2022/2/28		

EIRP (dBm)		EIRP Limit (dBm)		Result
Peak	Average	Peak	Average	
16.57	10.87	≤ 55	≤ 50	Pass

Note: Average EIRP measurement was not performed when the Peak EIRP level lower than average limit.



5.3. Occupied bandwidth

5.3.1. Test Limit

N/A

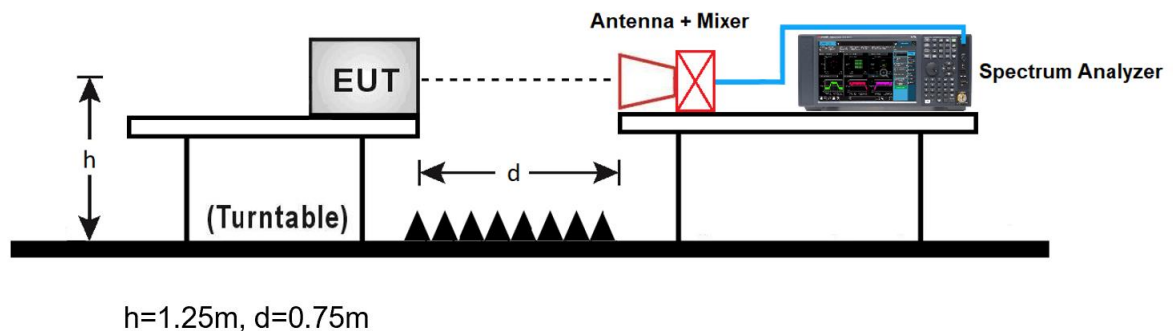
5.3.2. Test Procedure used

ANSI C63.10 Section 6.9.3

5.3.3. Test Setting

1. Span = approximately 1.5 times to 5 times the OBW, centered on the carrier frequency
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector function = Peak
5. Sweep time = auto
6. Trace mode = max hold.
7. The EUT shall be transmitting at its maximum data rate. Allow the trace to stabilize.

5.3.4. Test Setup



5.3.5. Test Result

Test Engineer	Chase Zhu	Temperature	25.6°C
Test Site	SIP-TR2	Relative Humidity	42.2%
Test Date	2022/2/24 ~ 2022/3/16		

26dB Bandwidth (MHz)	f_L (MHz)	f_L Limit (MHz)	f_H (MHz)	f_H Limit (MHz)	Result
746.25	76096.75	≥ 76000	76843.00	≤ 77000	Pass

99% Bandwidth (MHz)	f_L (MHz)	f_L Limit (MHz)	f_H (MHz)	f_H Limit (MHz)	Result
717.00	76114.75	≥ 76000	76831.75	≤ 77000	Pass



Note: For 99% Occupied Bandwidth:

width of a frequency band such that, below the lower and above the upper frequency limits the mean powers emitted are each equal to 0,5 % of the total mean power of a given emission. Therefore, we need to calculate the upper and lower limits of the frequency.

For example, f_H is the frequency of the upper marker resulting from the OBW.

f_L is the frequency of the lower marker resulting from the OBW.

99% Occupied Bandwidth = $f_H - f_L$.

5.4. Unwanted Emissions

5.4.1. Test 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:

- (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 RBW:
 - (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.

5.4.2. Test Procedure used

ANSI C63.10 Section 9.12 and Section 9.13

5.4.3. Test Procedure

Measurement of harmonic and spurious emissions above 40 GHz

1. Connect the test antenna covering the appropriate frequency range to a spectrum analyzer via an external mixer.
2. Set spectrum analyzer RBW = 1MHz, VBW = 3MHz, average detector.
3. Maximize all observed emissions. Note the maximum power indicated on the spectrum analyzer. Adjust this reading, if necessary, by the conversion loss of the external mixer used at the frequency under investigation and the external mixer IF cable loss.
4. Calculate the maximum field strength of the emission at the measurement distance.
5. Calculate the power density at the distance specified by the limit from the field strength at the distance specified by the limit.
6. Repeat the preceding sequence for every emission observed in the frequency band under investigation.

Measurement of harmonic and spurious emissions below 40 GHz

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 x RBW
4. Detector = Peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Table 1 – RBW

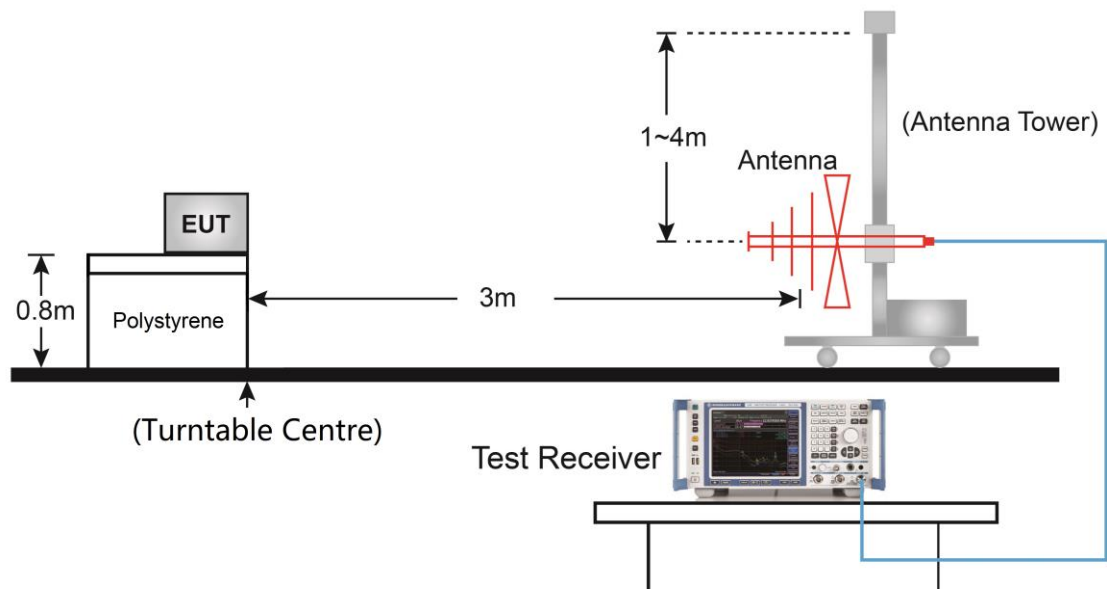
Frequency	RBW
9 ~ 90 kHz	1 MHz
90 ~ 110 kHz	200 Hz
110 ~ 490 kHz	1 MHz
0.49 ~ 30 MHz	9 kHz
30 ~ 1000 MHz	120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

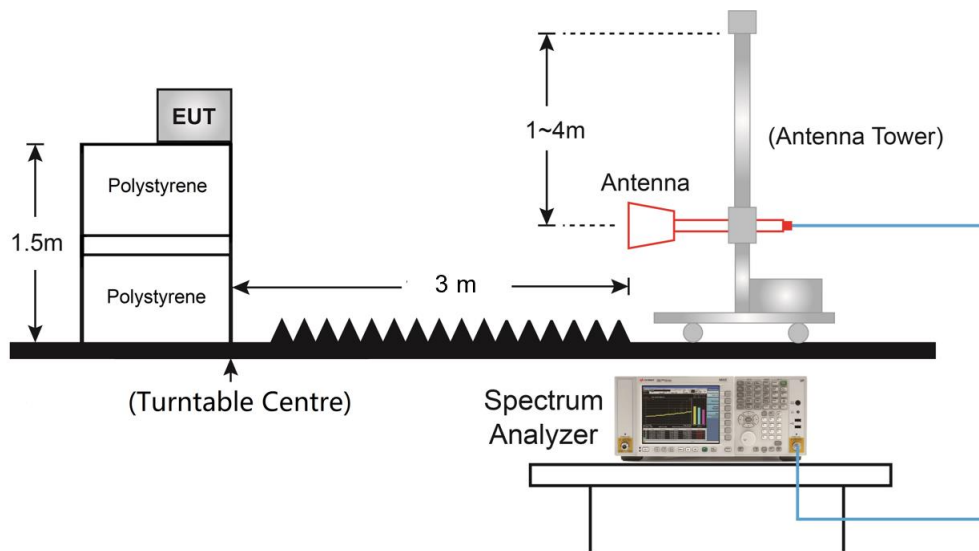
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Allow max hold to run for at least 50 times (1/duty cycle) traces

5.4.4. Test Setup

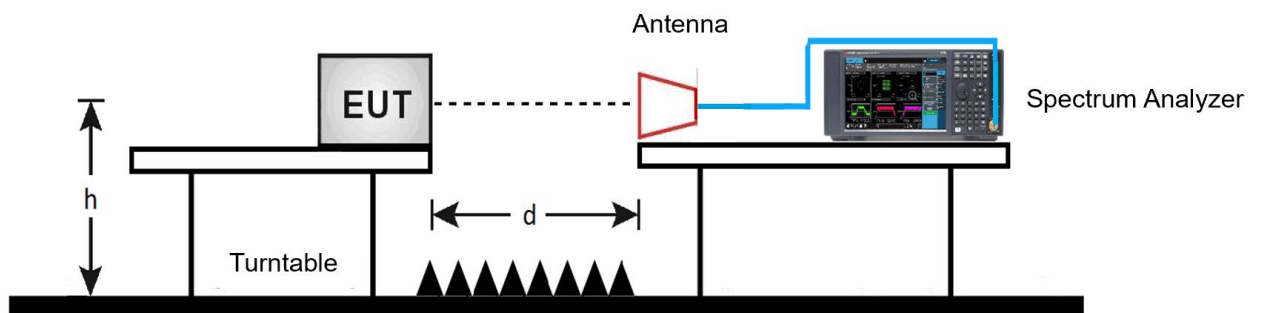
Below 1GHz Test Setup:



1GHz ~ 40GHz Test Setup:

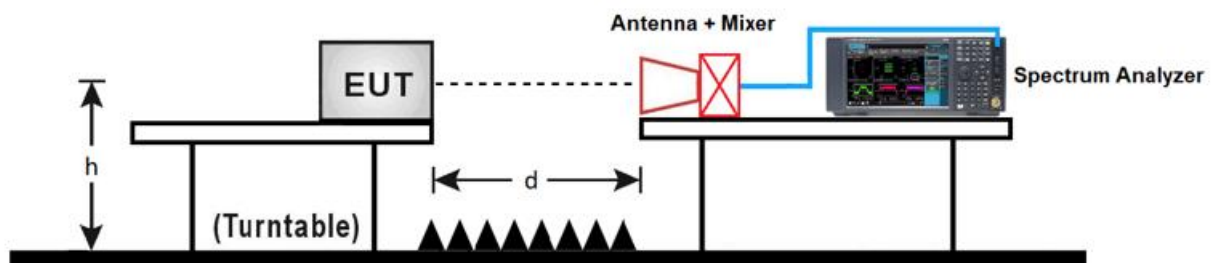


Above 40GHz Test Setup:



$$h = 1.25\text{m}, d = 0.75\text{m}$$

Above 50GHz Test Setup:



$$h=1.25\text{m}, d=0.75\text{m}$$

5.4.5. Test Results

Test Engineer	Kyrie Xie	Temperature	16°C
Test Site	SIP-AC1	Relative Humidity	62.1%
Test Date	2022/3/1	Test Mode	Mode 1

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Below 1GHz							
39.7	-0.7	17.3	16.6	40.0	-23.4	Peak	Horizontal
67.8	2.6	16.2	18.8	40.0	-21.2	Peak	Horizontal
135.7	6.2	17.1	23.3	43.5	-20.2	Peak	Horizontal
608.1	1.0	25.8	26.8	46.0	-19.2	Peak	Horizontal
845.3	1.4	28.9	30.3	46.0	-15.7	Peak	Horizontal
956.4	1.4	29.9	31.3	46.0	-14.7	Peak	Horizontal
53.3	-0.3	17.9	17.6	40.0	-22.4	Peak	Vertical
152.7	-0.1	18.3	18.2	43.5	-25.3	Peak	Vertical
249.7	1.8	16.4	18.2	46.0	-27.8	Peak	Vertical
350.1	4.8	19.3	24.1	46.0	-21.9	Peak	Vertical
839.0	1.4	28.9	30.3	46.0	-15.7	Peak	Vertical
963.6	1.2	30.1	31.3	54.0	-22.7	Peak	Vertical

Notes:

- Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)
Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)
- 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.

Test Engineer	Kyrie Xie	Temperature	16.3°C
Test Site	SIP-AC2	Relative Humidity	52.1%
Test Date	2022/3/1	Test Mode	Mode 1

Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
1 ~ 40 GHz							
11140.5	41.5	7.5	49.0	54.0	-5.0	Peak	Horizontal
12033.0	40.7	7.8	48.5	54.0	-5.5	Peak	Horizontal
13971.0	40.0	10.3	50.3	54.0	-3.7	Peak	Horizontal
22246.0	55.1	-9.3	45.8	54.0	-8.2	Peak	Horizontal
26030.0	55.2	-8.3	46.9	54.0	-7.1	Peak	Horizontal
11574.0	40.5	8.7	49.2	54.0	-4.8	Peak	Vertical
12092.5	40.4	8.2	48.6	54.0	-5.4	Peak	Vertical
15008.0	38.9	11.6	50.5	54.0	-3.5	Peak	Vertical
22565.0	54.9	-9.1	45.8	54.0	-8.2	Peak	Vertical
25634.0	55.8	-8.2	47.6	54.0	-6.4	Peak	Vertical

Notes:

1. Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

2. Average measurement was not performed when the peak level lower than average limit

Test Engineer	Chase Zhu	Temperature	25.6°C
Test Site	SIP-TR2	Relative Humidity	42.2%
Test Date	2022/2/24	Test Mode	Mode 1

Frequency (GHz)	Reading Level @0.75m (dBμV)	Factor (dB/m)	Measure Level @0.75m (dBμV/m)	Measure Level @3m (dBμV/m)	Power Density (pW/cm ²)	Limit (pW/cm ²)	Result
40GHz ~ 231GHz							
42.9	2.6	46.3	48.9	36.9	0.001	600.0	Pass
60.9	26.5	42.7	69.2	57.2	0.138	600.0	Pass
85.8	29.7	44.8	74.5	62.5	0.467	600.0	Pass
110.4	4.5	57.4	61.9	49.9	0.026	600.0	Pass
141.6	5.4	62.1	67.5	55.5	0.093	600.0	Pass
228.9	5.0	60.4	65.4	53.4	0.057	1000.0	Pass

Notes:

- Measure Level @0.75m = Reading Level @0.75m + Factor
Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) + Mixer Conversion Loss (dB)
- Measure Level @3m = Measure Level @0.75m + 20 * log(0.75m / 3m)
- Power Density = $(10^8 / 377) * \{10^{[(\text{Measure Level @3m} - 120) / 20]}\}^2$

Note: The Vertical and Horizontal polarization were evaluated, only the worst case test results are shown in the table.

5.5. Frequency Stability

5.5.1. Test Limit

Fundamental emissions must be contained within the frequency bands 76 - 81GHz during all conditions of operation. Equipment is presumed to operate over the temperature range -20 to +50 degrees Celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

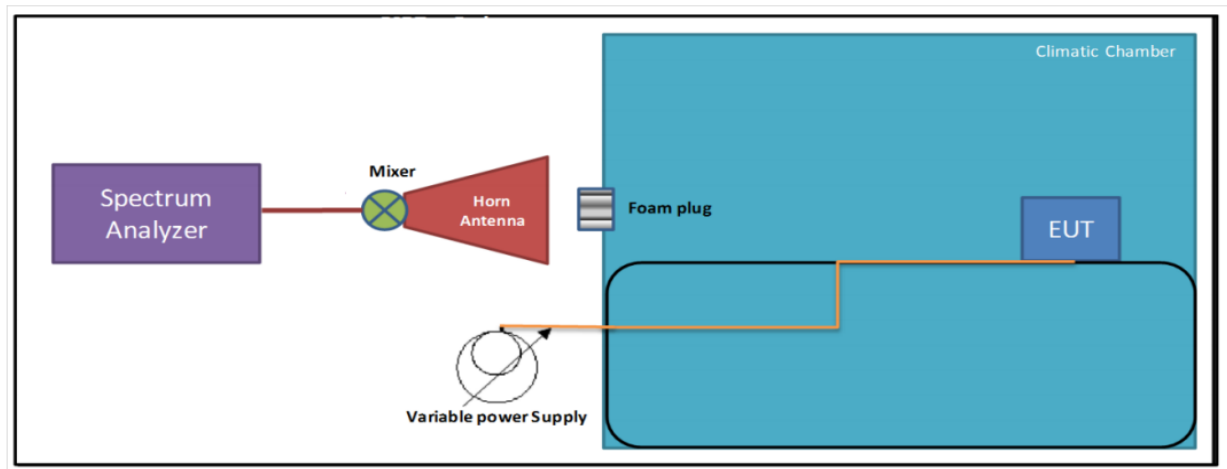
5.5.2. Test Procedure used

ANSI C63.10 Section 9.14

5.5.3. Test Procedure

1. Arrange EUT and test equipment according Section 6.5.4.
2. With the EUT at ambient temperature (20 °C) and voltage source set to the EUT nominal operating voltage (12VDC, 100%)
3. RBW = 1MHz, VBW = 3MHz
4. Detector = Peak
5. Trace Mode = Max Hold
6. Record the Low and high frequencies (f_L and f_H) of the fundamental frequency emission. The applicable spurious emissions limit 600pW/cm² (-1.61dBm) was used to define f_L and f_H .
7. Vary EUT power supply between 85% (10.2VDC) and 115% (13.8VDC) of nominal, record the f_L and f_H .
8. Set the power supply to 100% nominal setting, and raise EUT operating temperature to 85 °C.
9. Record the f_L and f_H of the fundamental frequency emission.
10. Repeat step 9 at each 10°C increment down to -40 °C.

5.5.4. Test Setup



5.5.5. Test Result

Test Engineer	Nandy Zhang	Temperature	19.8°C
Test Site	SIP-TR1	Relative Humidity	59.3%
Test Date	2022/02/26 ~ 2022/03/07	Test Mode	Mode 1

Voltage (%)	Power (VDC)	Temp (°C)	f _L (GHz)	f _H (GHz)	Limit (GHz)	Result
100%	12.0	- 40	76.110	76.842	76 ~ 81	Pass
		- 30	76.110	76.840	76 ~ 81	Pass
		- 20	76.102	76.850	76 ~ 81	Pass
		- 10	76.102	76.848	76 ~ 81	Pass
		0	76.098	76.850	76 ~ 81	Pass
		+ 10	76.100	76.846	76 ~ 81	Pass
		+ 20 (Ref)	76.100	76.848	76 ~ 81	Pass
		+ 30	76.100	76.846	76 ~ 81	Pass
		+ 40	76.104	76.844	76 ~ 81	Pass
		+ 50	76.102	76.844	76 ~ 81	Pass
		+ 60	76.108	76.838	76 ~ 81	Pass
		+ 70	76.106	76.840	76 ~ 81	Pass
		+ 80	76.106	76.840	76 ~ 81	Pass
		+ 85	76.106	76.840	76 ~ 81	Pass
115%	13.8	+ 20	76.102	76.848	76 ~ 81	Pass
85%	10.2	+ 20	76.098	76.848	76 ~ 81	Pass

6. Conclusion

The data collected relate only the item(s) tested and show that this device is in compliance with Part 95M of the FCC Rules.

Appendix A - Test Setup Photograph

Refer to “2201RSU062-UT” file.

Appendix B - EUT Photograph

Refer to "2201RSU062-EE" file.