



FCC SDoC TEST REPORT

Applicant	:	PROLECH ELECTRONICS LIMITED
Address of Applicant	:	Building 2, No.220, Niucheng Road,Niucheng village xili Town, Nanshan district shenzhen China
Manufacturer	:	PROLECH ELECTRONICS LIMITED
Address of Manufacturer	:	Building 2, No.220, Niucheng Road,Niucheng village xili Town, Nanshan district shenzhen China
Equipment under Test	:	Radar Detector
Model No.	:	Please refer to the model list in section 2.5.
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart B ANSI C63.4:2014 ANSI C63.4a-2017
Report No.	:	DDT-RE25030604-2E01
Issue Date	:	2025/03/28
Issued By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

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Test Report Declare

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Model No.	:	Please refer to the model list in section 2.5.

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart B

ANSI C63.4:2014

ANSI C63.4a-2017

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE25030604-2E01		
Date of Receipt:	2025/03/12	Date of Test:	2025/03/12-2025/03/18

Created: Zane Deng	Reviewed: David Gao	Approved: Damon Hu
		
2025/03/20	2025/03/28	2025/03/28

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Version	Revision Content	Issue Date	Approved
V0	Initial issue	2025/03/28	Damon Hu

1. Summary of Test Results

EMISSION (EMI)			
Description of Test Item	Standard	Result	Memo
Radiated Emissions Test	FCC Rules and Regulations Part 15 Subpart B,ANSI C63.4:2014,ANSI C63.4a-2017	PASS	/
AC Power Port Conducted Emission	FCC Rules and Regulations Part 15 Subpart B,ANSI C63.4:2014,ANSI C63.4a-2017	N/A	Only for AC power port
Antenna Power Conduction Measurement for Antenna port of Receivers	FCC Rules and Regulations Part 15 Subpart B,ANSI C63.4:2014,ANSI C63.4a-2017	N/A	Only for antenna port

Note 1: N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.

Note 2: For the EMI measurements have made the EUT operated in a mode producing the highest emission level, and attempted to vary the configuration of the EUT radiated the highest emission. For the EMS measurements have made the EUT operated in the most sensitive mode.

2. General Test Information

2.1. Description of EUT

EUT* Name	:	Radar Detector
Model Number	:	Please refer to the model list in section 2.5.
Difference of model number	:	Please refer to the model list in section 2.5.
EUT Function Description	:	Please reference user manual of this device
Power Supply	:	DC 12V
EUT Class (Only For EMI)	:	Class B
Maximum Work Frequency	:	<108MHz
Sample Number	:	S25030604-001

Note 1: EUT is the abbreviation of equipment under test.

Note 2: “☒” means to be chosen or applicable; “☐” means don’t to be chosen or not applicable; This note applies to entire report.

Note 3: Equipment meeting Class A requirements may not offer adequate protection to broadcast services within a residential environment; The Class B requirements for equipment are intended to offer adequate protection to broadcast services within the residential environment. Equipment compliant with the class A requirements should have a warning notice in the user manual stating that it could cause radio interference. For example, Warning: Operation of this equipment in a residential environment could cause radio interference.

Note 4: The accessories of this product are only power cables, and the length of other signal cables and control cables used during the test is less than 3 meters.

2.2. Primary function of EUT

Function	Description
☒ /	/

2.3. Port of EUT

Port	Description
☒ Enclosure port	Enclosure port

2.4. Accessories of EUT

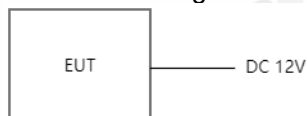
Accessories	Manufacturer	Model number	Description
Car charger power cord	/	/	Length: 193cm

2.5. Model list

Model:				
S360	S361	BS01	BS02	PRO960
PRO961	PRO980STR	PRO981STR	SG565	/
Difference of model number: Only the model name is different.				
The model under the test: S360				

2.6. Block diagram EUT configuration for test

Mode 1: Working mode



2.7. Decision of final test mode

According pre-test, the worst test modes were reported as below.

Emission	Radiated Emissions Test	Mode 1: Working mode
----------	-------------------------	----------------------

2.8. Deviations of test standard

No deviation.

2.9. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	20-25°C
Humidity range:	40-75%
Pressure range:	86-106 kPa

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

2.10. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

2.11. Measurement uncertainty

Test Item	Uncertainty
Conducted disturbance at mains terminals	1#: 3.72dB (9 kHz to 150 kHz), 3.34dB (150 kHz to 30 MHz)
	2#: 3.75dB (9 kHz to 150 kHz), 3.39dB (150 kHz to 30 MHz)
	3#: 3.78dB (9 kHz to 150 kHz), 3.37dB (150 kHz to 30 MHz)
Uncertainty for telecommunication port conduction emission test	1#: AAN with aLCL = 55 ... 40 dBc: 3.64 dB AAN with aLCL = 65 ... 50 dBc: 4.08 dB AAN with aLCL = 75 ... 60 dBc: 4.56 dB
	2#: AAN with aLCL = 55 ... 40 dBc: 3.82 dB AAN with aLCL = 65 ... 50 dBc: 3.96 dB AAN with aLCL = 75 ... 60 dBc: 4.12 dB
	3#: AAN with aLCL = 55 ... 40 dBc: 3.82 dB AAN with aLCL = 65 ... 50 dBc: 3.96 dB AAN with aLCL = 75 ... 60 dBc: 4.12 dB
Uncertainty for radiation emission test (30 MHz-1 GHz)	1#: 4.94 dB (Antenna Polarize: V) 4.68 dB (Antenna Polarize: H)
	2#: 4.94 dB (Antenna Polarize: V) 4.68 dB (Antenna Polarize: H)
	3#: 4.96 dB (Antenna Polarize: V) 4.98 dB (Antenna Polarize: H)
	10m: 4.48 dB (Antenna Polarize: V) 4.64 dB (Antenna Polarize: H)
Uncertainty for radiation disturbance test (1 GHz to 6 GHz)	1#: 4.10 dB (1-6 GHz)
	3#: 4.54 dB (1-6 GHz)
Temperature	0.4 °C
Humidity	2%
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

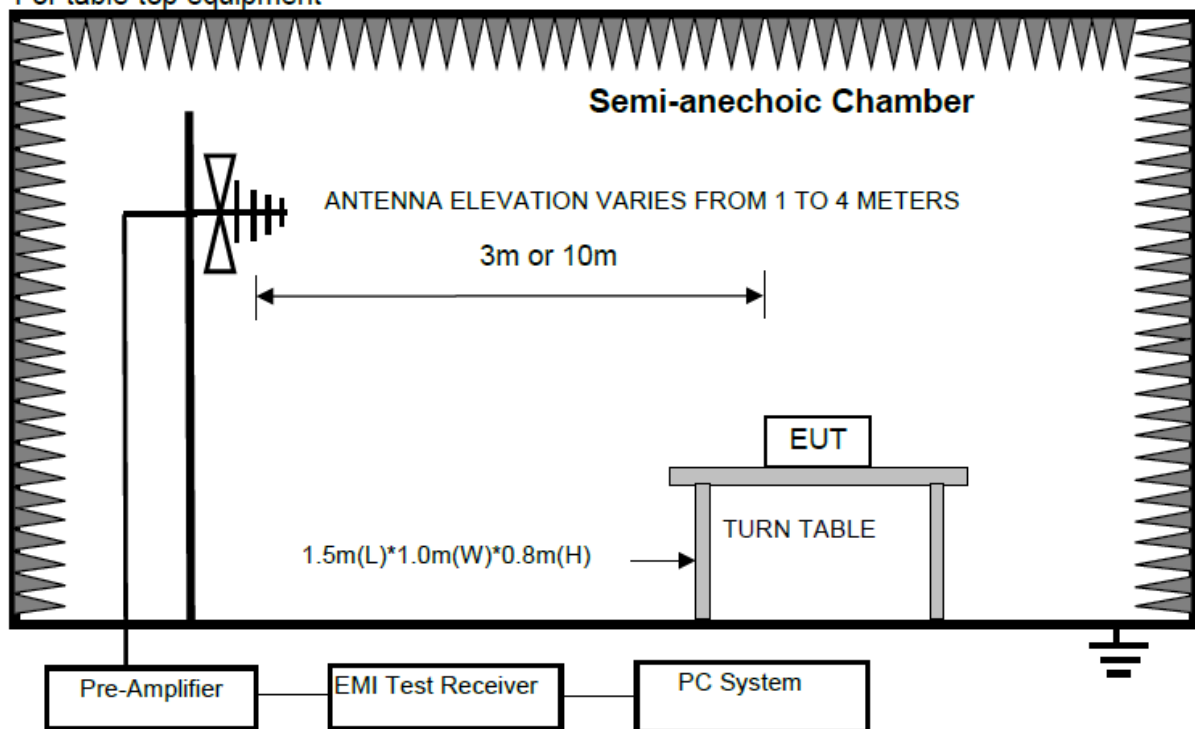
3. Radiated Emissions Test

3.1. Test equipment

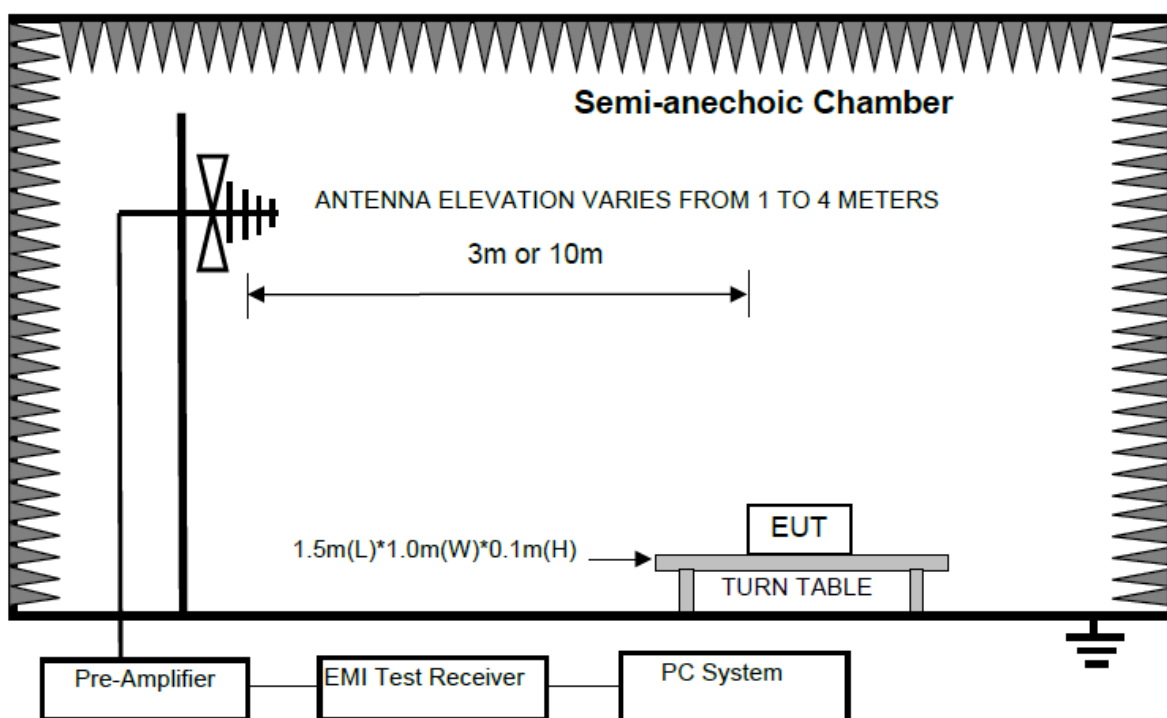
Equipment	Manufacturer	Model No.	Equipment No.	Cal Due To
EMI Test Receiver	R&S	ESCI	DDT-ZC01972	2025/03/31
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC00246	2025/07/11
RF Cable	H&S	RG214-11	DDT-ZC01497	2025/03/31
EMI Test Software	Audix/TW	e3	DDT-ZC01252	/
Horn Antenna	SCHWARZBECK	BBHA9120 D	DDT-ZC01218	2025/08/27
Preamplifier	COM-POWER	PAM-118A	DDT-ZC01489	2025/08/12
Spectrum Analyzer	Agilent	E4440A	DDT-ZC01445	2025/03/31
RF cable	Zhongke Junchuang	JCTB810-NJ-NJ-7M	DDT-ZC02759	2025/07/08

3.2. Block diagram of test setup

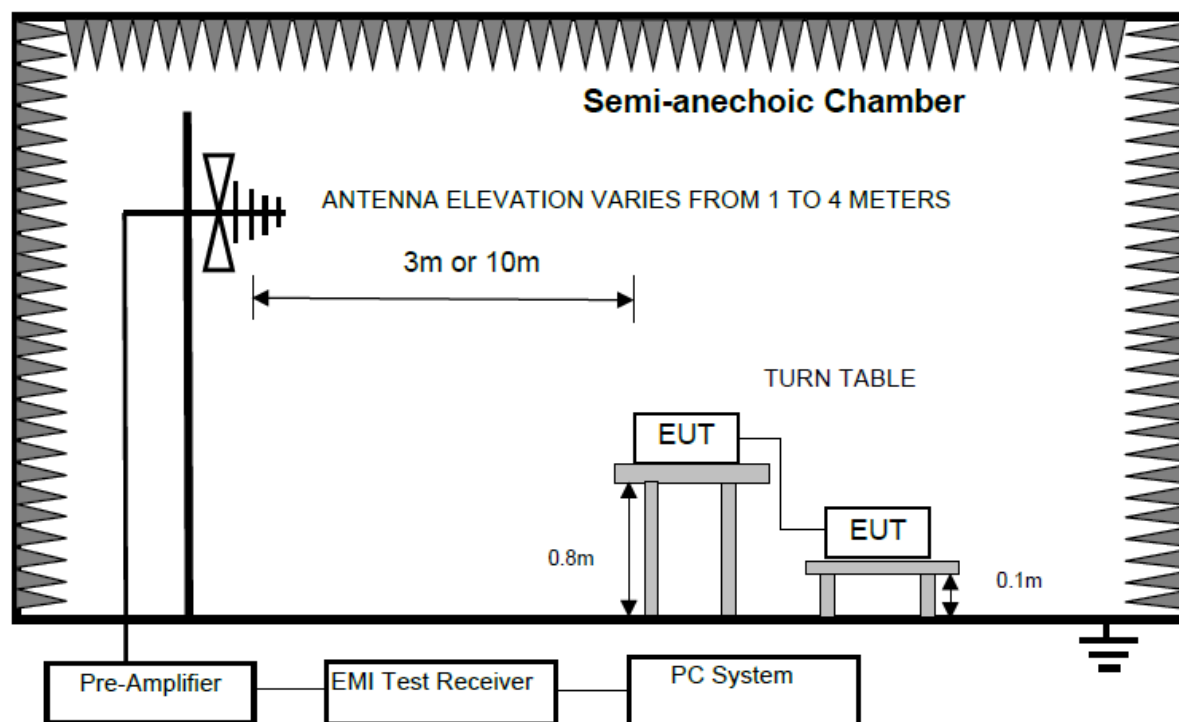
Below 1 GHz
For table-top equipment



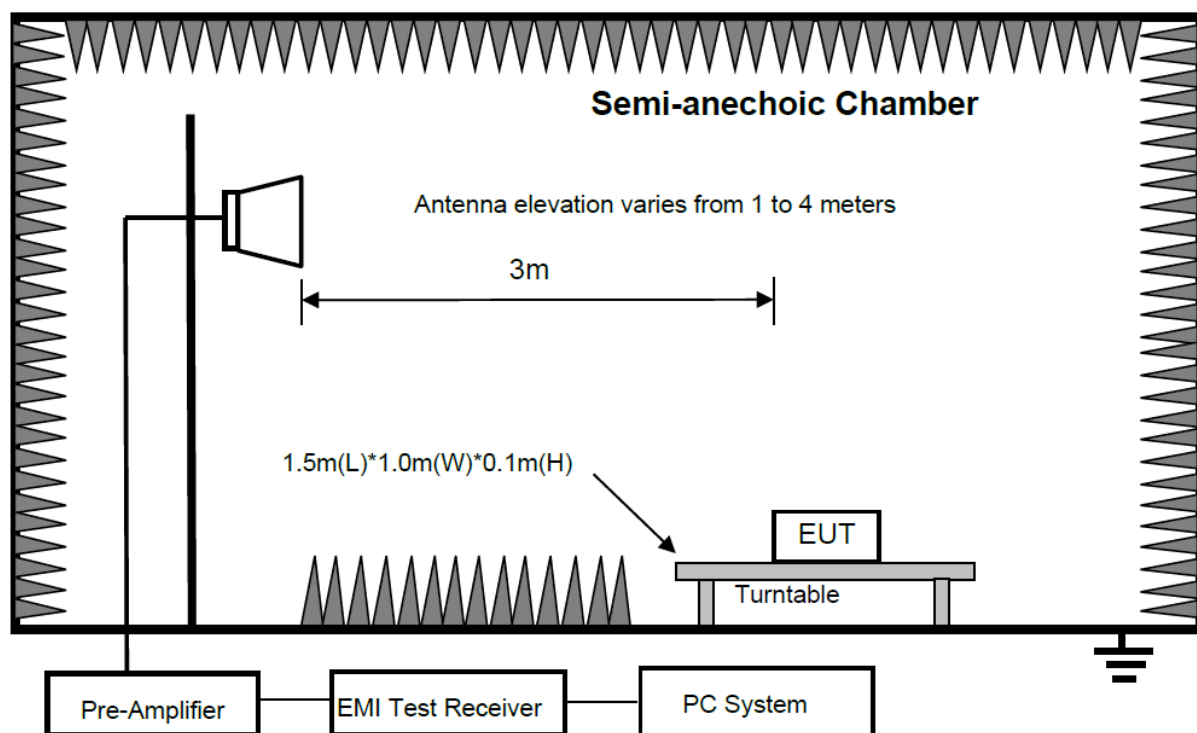
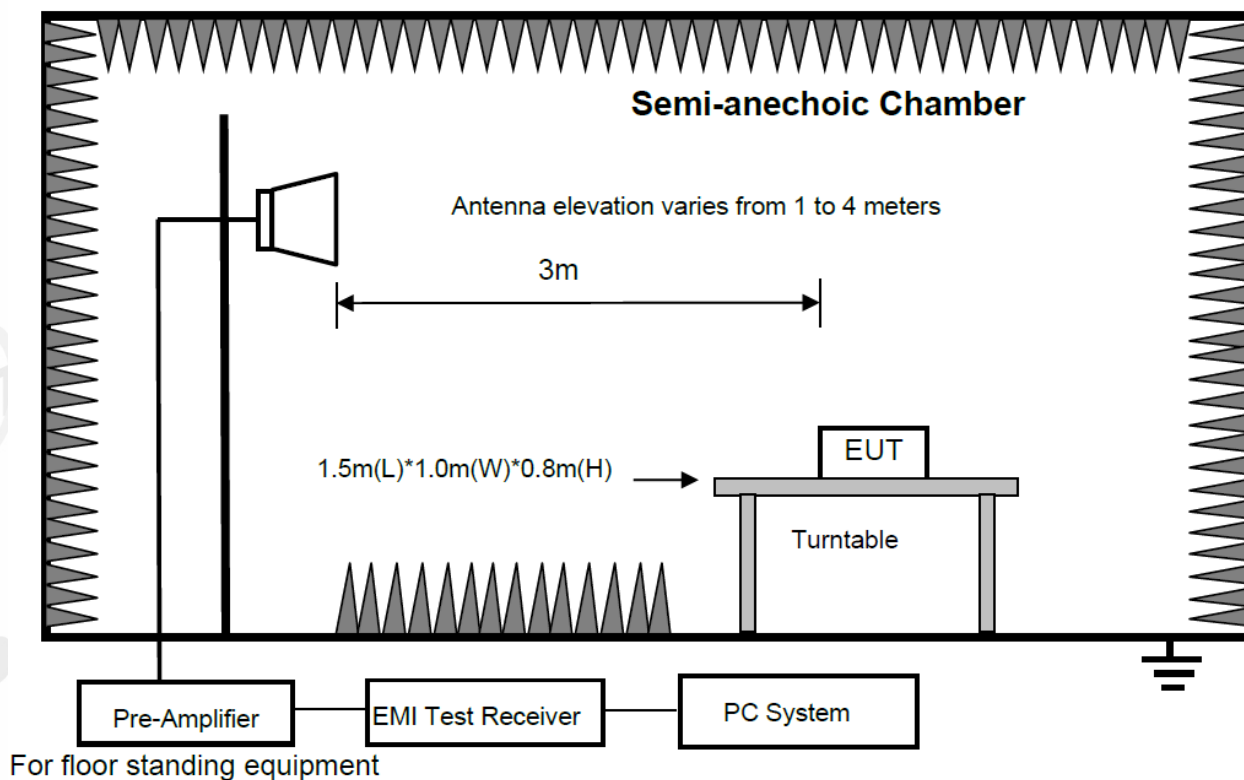
For floor standing equipment



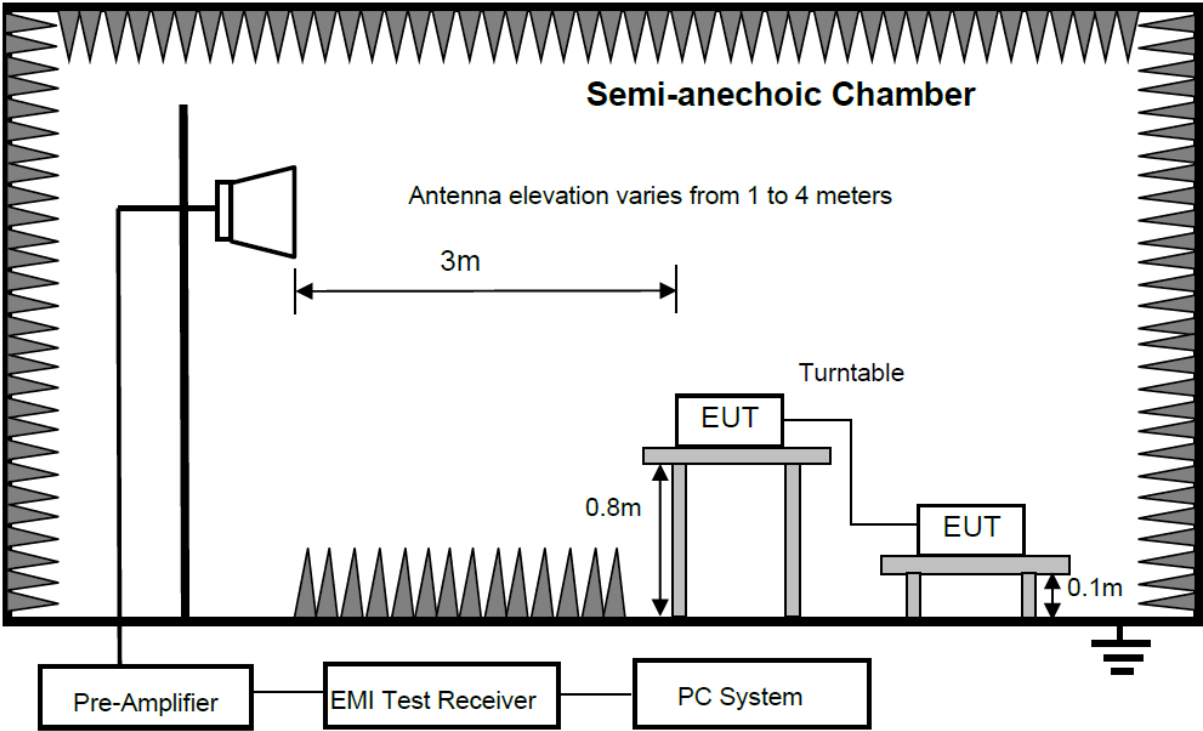
For combinations equipment



Above 1 GHz
For table-top equipment



For combinations equipment



3.3. Limits

Limits:				
Frequency (MHz)	Class A Field Strengths Limits at 10m measuring distance dB(μV)/m	Class A Field Strengths Limits at 3m measuring distance dB(μV)/m	Class B Field Strengths Limits at 10m measuring distance dB(μV)/m	Class B Field Strengths Limits at 3m measuring distance dB(μV)/m
30--88	39.0	49.5	29.5	40.0
88--216	43.5	54.0	33.0	43.5
216--960	46.4	57.0	35.5	46.0
960--1000	49.5	60.0	43.5	54.0
Above 1000	/	80.0 Peak), 60.0 (Average)	/	74.0 (Peak), 54.0 (Average)

3.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

3.5. Test procedure

Procedure of Preliminary Test

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 0.8m (table-top device)/0.1m (floor stand device) above the ground plane.

Configuration EUT to simulate typical usage as described in as shown above block diagram and equipment list of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

Mains cables, telephone lines or other connections to auxiliary equipment located outside the test are shall drape to the floor, be fitted with ferrite clamps or ferrite tubes placed on the floor at the point where the cable reaches the floor and then routed to the place where they leave the turntable. No extension cords shall be used to mains receptacle.

The antenna was placed at 3 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.

The Analyzer / Receiver quickly scanned from 30 MHz to ☒1 GHz / ☐18 GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

After the preliminary scan, we found the test mode producing the highest emission level. The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

Procedure of Final Test

EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.

The Analyzer / Receiver scanned from 30 MHz to ☒1 GHz / ☐18 GHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only Q.P. reading is presented.

For emissions from 30 MHz to 1 GHz, Quasi-Peak values were measured with EMI Receiver and the bandwidth of Receiver is 120 kHz.

For emissions above 1 GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz VBW is set at 3 MHz.

The test data of the worst-case condition(s) was recorded.

3.6. Test result

Pass. (See below detailed test result)

Note 1: All emissions not reported below are too low against the prescribed limits.

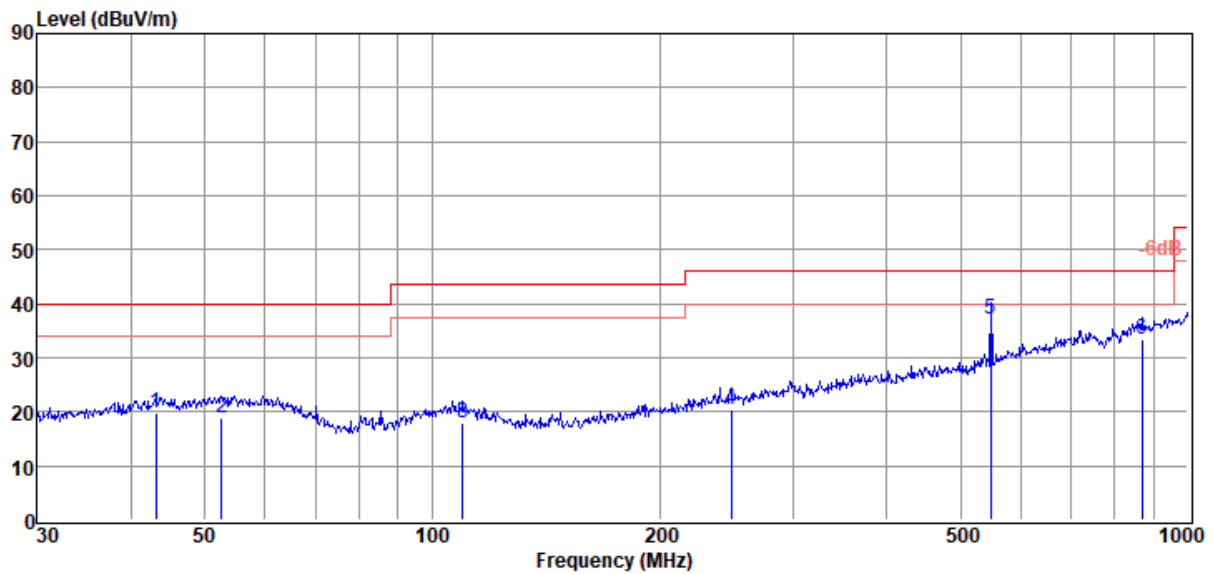
Note 2: "----" means Peak detection.

3.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 2# D:\2025 RE2# Report Data\Q25030604-1E\0317 RE.EM6
Test Date : 2025-03-17 Tested By : Nelson Peng
EUT : Radar Detector Model Number : S360
Power Supply : DC 12V Test Mode : Working mode
Condition : Temp:21.9 °C,Humi:52.8% Antenna/Distance : 2023 VULB9163 2#/3m/VERTICAL
Memo :

Data: 1



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	43.05	2.78	13.11	3.96	19.85	40.00	-20.15	QP	VERTICAL
2	52.58	1.66	13.22	4.08	18.96	40.00	-21.04	QP	VERTICAL
3	109.80	1.58	11.98	4.46	18.02	43.50	-25.48	QP	VERTICAL
4	248.55	2.92	12.03	5.57	20.52	46.00	-25.48	QP	VERTICAL
5	549.02	13.12	17.04	6.99	37.15	46.00	-8.85	QP	VERTICAL
6	869.13	3.00	21.81	8.56	33.37	46.00	-12.63	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 2#

D:\2025 RE2# Report Data\Q25030604-1E\0317 RE.EM6

Test Date : 2025-03-17

Tested By : Nelson Peng

EUT : Radar Detector

Model Number : S360

Power Supply : DC 12V

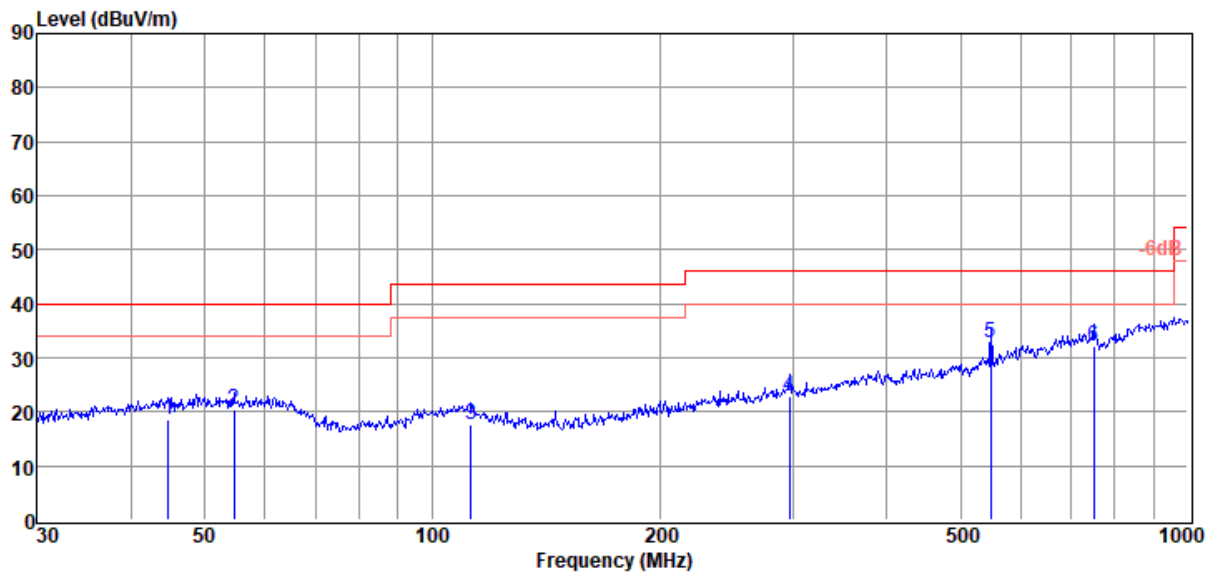
Test Mode : Working mode

Condition : Temp:21.9 °C,Humi:52.8%

Antenna/Distance : 2023 VULB9163 2#/3m/HORIZONTAL

Memo :

Data: 2



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	44.74	1.49	13.20	3.99	18.68	40.00	-21.32	QP	HORIZONTAL
2	54.64	3.26	13.05	4.10	20.41	40.00	-19.59	QP	HORIZONTAL
3	112.52	1.73	11.46	4.46	17.65	43.50	-25.85	QP	HORIZONTAL
4	297.22	3.75	13.20	5.85	22.80	46.00	-23.20	QP	HORIZONTAL
5	549.02	8.61	17.04	6.99	32.64	46.00	-13.36	QP	HORIZONTAL
6	750.11	3.73	20.39	8.09	32.21	46.00	-13.79	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

4. Photos of the EUT

Please refer to the Appendix I: DDT-Q25030604-2E.

Note:

Regulatory Statement and Label Marking Advice for the FCC SDoC

1. Marking Suggested for the label:

Trade Name and model number

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2. Statement suggested for the User Manual:

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

Notes: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note: If shielded cables or special accessories are required for compliance, a statement must be included which instructs the user to employ them, for example, shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

-----End Report-----