
FCC Test Report

Report No.: AGC02931190803FE10A

FCC ID : PODGMRS-25
PRODUCT DESIGNATION : Analog transceiver
BRAND NAME : TYT
MODEL NAME : GMR25
APPLICANT : TYT ELECTRONICS CO., LTD.
DATE OF ISSUE : Jan. 16, 2021
STANDARD(S) : FCC Part 95 Rules
REPORT VERSION : V 1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jan. 16, 2021	Valid	Class II Permissive Change

Note: The original test report Ref. No. (AGC02931190803FE10) (dated 2019-08-16), was modified on 2021-01-16 to include the following changes and additions for:

- Added a 5-Pin line and changed part of the capacitance and resistance
- Re-evaluate Spurious Radiated Emission of all powers

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1. GENERAL INFORMATION

Applicant	TYT ELECTRONICS CO., LTD.
Address	Block 39-1, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian, China.
Manufacturer	TYT ELECTRONICS CO., LTD.
Address	Block 39-1, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian, China.
Factory	TYT ELECTRONICS CO., LTD.
Address	Block 39-1, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian, China.
Product Designation	Analog transceiver
Brand Name	TYT
Test Model	GMR25
Deviation from Standard	None
Date of Receipt	Dec. 22, 2020
Date of Test	Dec. 22, 2020~Jan. 15, 2021
Test Result	Pass

WE HEREBY CERTIFY THAT:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI/TIA-603-E-2016. The sample tested as described in this report is in compliance with the FCC Rules Part 95. The test results of this report relate only to the tested sample identified in this report.

Prepared By 

 Donjon Huang
 (Project Engineer) Jan. 15, 2021

Reviewed By 

 Calvin Liu
 (Reviewer) Jan. 16, 2021

Approved By 

 Forrest Lei
 Authorized Officer Jan. 16, 2021

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2. PRODUCT INFORMATION

2.1 PRODUCT TECHNICAL DESCRIPTION

Hardware Version	TH-8600-CPU-V1.3
Software Version	V2.1
Power Supply	DC 13.8V
Communication Type	Voice / Tone only
Operation Frequency Range	462.5500MHz-462.7250MHz (GMRS 462 MHz main channels) 462.5625MHz-462.7125MHz (GMRS 462 MHz interstitial channels) 467.5500MHz-467.7250MHz (GMRS 467 MHz main channels)
Modulation Type	FM
Channel Separation	12.5 KHz
Number of Channels:	30 Channels
Rated Output Power	5W/25W (It was fixed by the manufacturer, any individual can't arbitrarily change it.)
Antenna Designation	External Antenna
Antenna Gain	0dBi

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2.2 TEST FREQUENCY LIST

According to ANSI C63.26 section 5.1.2.1:

Measurements of transmitters shall be performed and, if required, reported for each frequency band in which the EUT can be operated with the device transmitting at the number of frequencies in each band specified in Table 2.

Frequency range Over which EUT operates	Number of Frequencies	Location in frequency range of operation
1 MHz or less	1	Middle
1 MHz to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

Channel. No	CH. Freq	Rated Power	CH. No	CH. Freq	Rated Power
1	462.5625	5W	16	462.5750	25W
2	462.5875		17	462.6000	
3	462.6125		18	462.6250	
4	462.6375		19	462.6500	
5	462.6625		20	462.6750	
6	462.6875		21	462.7000	
7	462.7125		22	462.7250	
8	--	--	23	467.5500	25W
9	--		24	467.5750	
10	--		25	467.6000	
11	--		26	467.6250	
12	--		27	467.6500	
13	--		28	467.6750	
14	--		29	467.7000	
15	462.5500	25W	30	467.7250	

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2.3 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for FCC ID: **PODGMRS-25**, filing to comply with Part 2, Part 95 of the Federal Communication Commission rules.

2.4 TEST METHODOLOGY

The tests were performed according to following standards:

No.	Identity	Document Title
1	FCC 47 CFR Part 95	PERSONAL RADIO SERVICES
2	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
3	ANSI C63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
4	ANSI/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
5	KDB 888861 D01	888861 D01 Part 95 GMRS FRS v01

2.5 CALCULATION OF EMISSION INDICATORS

FCC Rules and Regulations Part 2.202: Necessary Bandwidth and Emission Bandwidth

For FM Mode (Channel Spacing: 12.5kHz)

Emission Designator 11K0F3E

In this case, the maximum modulating frequency is 3.0 kHz with a 2.5 kHz deviation.

$$BW = 2(M+D) = 2*(3.0 \text{ kHz} + 2.5 \text{ kHz}) = 11 \text{ kHz} = 11K0$$

F3E portion of the designator represents an FM voice transmission.

Therefore, the entire designator for 12.5 kHz channel spacing FM mode is 11K0F3E.

For FM Mode (Channel Spacing: 25kHz)

Emission Designator 16K0F3E

In this case, the maximum modulating frequency is 3.0 kHz with a 5.0 kHz deviation.

$$BW = 2(M+D) = 2*(3.0 \text{ kHz} + 5.0 \text{ kHz}) = 16 \text{ kHz} = 16K0$$

F3E portion of the designator represents an FM voice transmission.

Therefore, the entire designator for 25 kHz channel spacing FM mode is 16K0F3E.

2.6 SPECIAL ACCESSORIES

Not available for this EUT intended for grant.

2.7 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

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2.8 ANTENNA REQUIREMENT

Excerpt from §95.1787 of the FCC Rules/Regulations:

The antenna of each GMRs transmitter type must meet the following requirements.

- (1) The antenna must be a non-removable integral part of the GMRs transmitter type.
- (2) The non-detachable antenna is only for handheld portable GMRs equipment.

- The antenna of this device is permanently attached.
- There are no provisions for connection to an external antenna.
- This GMRs equipment is a mobile station or a fixed station, which can be connected to an external antenna

Conclusion: The unit complies with the requirement of §95.1787.

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3. TEST ENVIRONMENT

3.1 ADDRESS OF THE TEST LABORATORY

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 TEST FACILITY

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

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

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3.3 ENVIRONMENTAL CONDITIONS

	NORMAL CONDITIONS	EXTREME CONDITIONS
Temperature range (°C)	15 - 35	-20 - 50
Relative humidity range	20 % - 75 %	20 % - 75 %
Pressure range (kPa)	86 - 106	86 - 106
Power supply	--	--

Note: The Extreme Temperature and Extreme Voltages declared by the manufacturer.

3.4 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Test Items	Measurement Uncertainty
Frequency stability	$\pm 0.5\%$
Transmitter power conducted	$\pm 0.8\text{dB}$
Transmitter power Radiated	$\pm 1.3\text{dB}$
Conducted spurious emission 9kHz-40 GHz	$\pm 2.7\text{dB}$
Conducted Emission	$\pm 3.2\text{ dB}$
Radiated Emission below 1GHz	$\pm 3.9\text{ dB}$
Radiated Emission above 1GHz	$\pm 4.8\text{ dB}$
Occupied Channel Bandwidth	$\pm 2\%$
FM deviation	$\pm 2\%$
Audio level	$\pm 0.98\text{dB}$
Low Pass Filter Response	$\pm 0.65\text{dB}$
Modulation Limiting	0.42 %
Transient Frequency Behavior	6.8 %

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3.5 LIST OF EQUIPMENTS USED

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Jun. 09, 2020	Jun. 08, 2021
EXA Signal Analyzer	KEYSIGHT	N9020A	MY53300860	July 15, 2020	July 14, 2021
Horn antenna	SCHWARZBECK	BBHA9170	768	Oct. 09, 2019	Oct. 08, 2021
preamplifier	ETS	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May. 17, 2019	May. 16, 2021
Broadband Preamplifier	SCHWARZBECK	BBV9718	9718-205	Jun. 09, 2020	Jun. 08, 2021
Double-Ridged Waveguide Horn	ETS	3117	00154520	Oct. 26, 2019	Oct. 25, 2021
SIGNAL	AGILENT	E4421B	MY43351603	Jun. 09, 2020	Jun. 08, 2021
ANTENNA	SCHWARZBECK	VULB9168	VULB9168-494	Jan. 09, 2019	Jan. 08, 2021
ANTENNA	SCHWARZBECK	VULB9168	D69250	Sep.20, 2019	Sep.19, 2021
Modulation Domain Analyzer	HP	53310A	3121A02467	Aug. 26, 2020	Aug. 25, 2021
Small environmental tester	ESPEC	SH-242	93008290	Sep. 03, 2020	Sep. 02, 2022
RF Communication Test Set	HP	8920B	US35010161	Sep. 03, 2020	Sep. 02, 2021
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Jun. 11, 2020	Jun. 10, 2021
Attenuator	Schaffner	58-30-33	ML030	Oct. 26, 2020	Oct. 25, 2021
RF Cable	R&S	1#	--	Each time	N/A
Fliter-UHF	Microwave	N25155M2	498705	May. 11, 2020	May. 10, 2021

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4.SYSTEM TEST CONFIGURATION

4.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT EXERCISE

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

4.3 CONFIGURATION OF TESTED SYSTEM

Fig. 2-1 Configuration of Tested System



Table 2-1 Equipment Used in Tested System

4.4 EQUIPMENT USED IN TESTED SYSTEM

The Following Peripheral Devices And Interface Cables Were Connected During The Measurement:

- Test Accessories Come From The Laboratory
 Test Accessories Come From The Manufacturer

Item	Equipment	Model No.	Identifier	Note
1	Analog transceiver	GMR25	FCC ID: PODGMRS-25	EUT
2	Hand microphone	N/A	N/A	AE

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4.5 SUMMARY OF TEST RESULTS

Item	FCC Rules	Description Of Test	Result
1	§95.1779& 2.1053	Spurious Ratiated Emission	Pass
Note: 1) The EUT is External Antenna.			

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5. DESCRIPTION OF TEST MODES

The EUT (**Two-way radio**) has been tested under normal operating condition. (GMRS TX) are chosen for testing at each channel separation.

NO.	TEST MODE DESCRIPTION	CHANNEL SEPARATION
1	GMRS TX CHANNEL 4	12.5 kHz
2	GMRS TX CHANNEL 18	12.5 kHz
3	GMRS TX CHANNEL 26	12.5 kHz

Note:

1. Only the result of the worst case was recorded in the report, if no other cases.
2. The battery is full-charged during the test.
3. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
4. Manufacturers use computer PC programming software to switch and operate frequency points, refer to the instructions for details

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6. SPURIOUS RADIATED EMISSION

6.1 PROVISIONS APPLICABLE

Standard Applicable [FCC Part 95.1779] According to FCC section 95.1779, the unwanted emission should be attenuated below TP by at least $43+10 \log(\text{Transmit Power})$ dB

6.2 MEASUREMENT PROCEDURE

Each GMRS transmitter type must be designed to comply with the applicable unwanted emissions limits in this section.

a) Emission masks. Emission masks applicable to transmitting equipment in the GMRS are defined by the requirements in the following table. The numbers in the attenuation requirements column refer to rule paragraph numbers under paragraph (b) of this section.

Emission types filter	Attenuation requirements
A1D, A3E, F1D, G1D, F2D, F3E, G3E with audio filter	(1), (2), (7)
A1D, A3E, F1D, G1D, F3E, G3E without audio filter	(3), (4), (7)
H1D, J1D, R1D, H3E, J3E, R2E	(5), (6), (7)

- 1) Filtering noted for GMRS transmitters refers to the requirement in §95.1775(e).
- 2) Unwanted emission power may be measured as either mean power or peak envelope power, provided that the transmitter output power is measured the same way.
- b) Attenuation requirements. The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) by at least:
 - 1) 25 dB (decibels) on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 100% of the authorized bandwidth.
 - 2) 35 dB on any frequency removed from the center of the authorized bandwidth by more than 100% up to and including 250% of the authorized bandwidth.
 - 3) $83 \log(f_d \div 5)$ dB on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5 kHz up to and including 10 kHz.
 - 4) $116 \log(f_d \div 6.1)$ dB or $50 + 10 \log(P)$ dB, whichever is the lesser attenuation, on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz), of more than 10 kHz up to and including 250% of the authorized bandwidth.
 - 5) 25 dB on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 150% of the authorized bandwidth.
 - 6) 35 dB on any frequency removed from the center of the authorized bandwidth by more than 150% up to and including 250% of the authorized bandwidth.
 - 7) $43 + 10 \log(P)$ dB on any frequency removed from the center of the authorized bandwidth by more than 250%.

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DETAILED OVERVIEW OF THE TEST METHOD IS AS FOLLOWS:

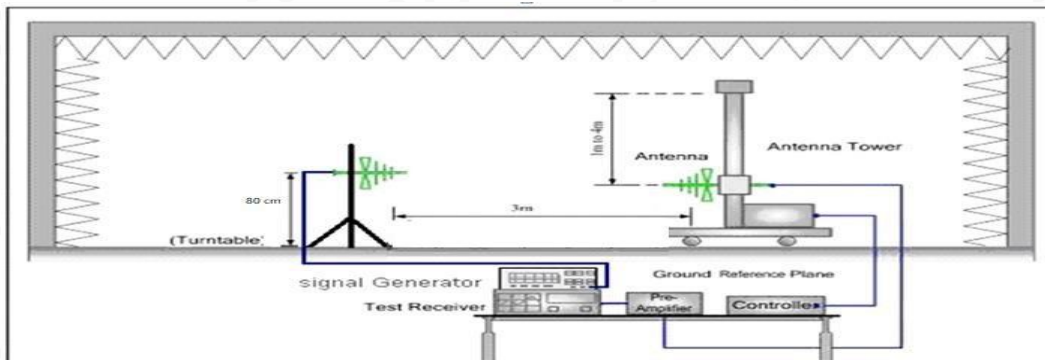
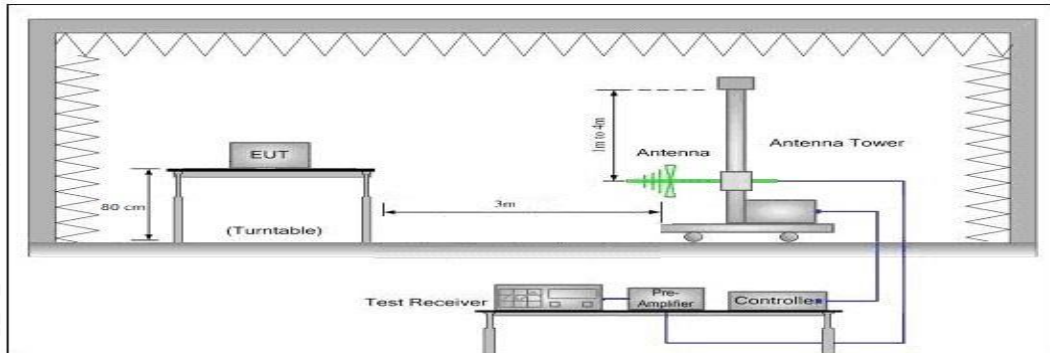
- 1) EUT was placed on a 0.8 or 1.5meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made. The radiated emission measurements of all transmit frequencies in all channels were measured with peak detector.
- 2) A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
- 3) The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz for above 1GHz and RBW=100kHz, VBW=300kHz for 30MHz to 1GHz, And the maximum value of the receiver should be recorded as (Pr).
- 4) The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
- 5) A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test
- 6) The measurement results are obtained as described below: $Power(EIRP)=PMea- PAg - Pcl - Ga$ The measurement results are amend as described below: $Power(EIRP)=PMea- Pcl - Ga$
- 7) This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power.
- 8) ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP-2.15dBi$.
- 9) Test the EUT in the lowest channel, the middle channel the Highest channel

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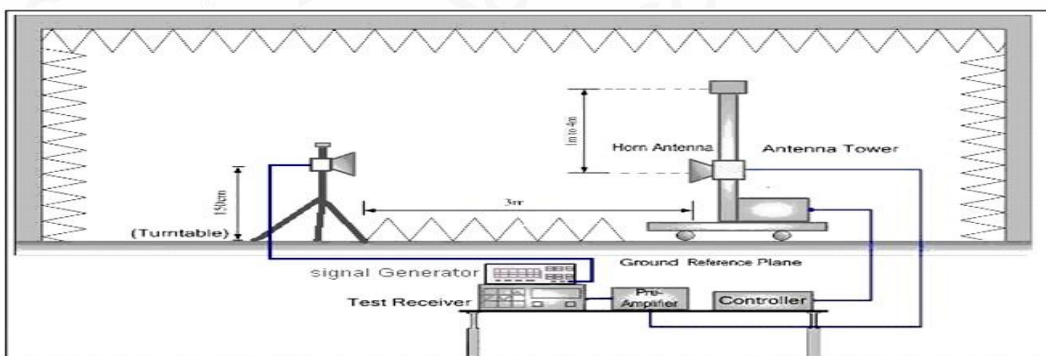
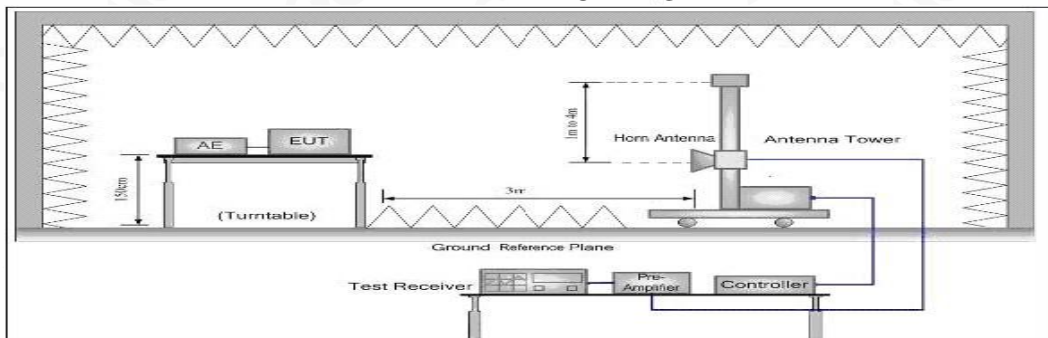


6.3 MEASUREMENT SETUP

RADIATED BELOW 1GHZ



RADIATED ABOVE 1 GHZ



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6.4 MEASUREMENT RESULTS

Preliminary calculation	Final Result
At least $43+10 \log (P) =43+10 \log (5) =49.99$ (dB)	Limit=P- Preliminary calculation= $36.99-49.99=-13$ dBm
At least $43+10 \log (P) =43+10 \log (25) =56.97$ (dB)	Limit=P- Preliminary calculation= $43.98-56.98=-13$ dBm

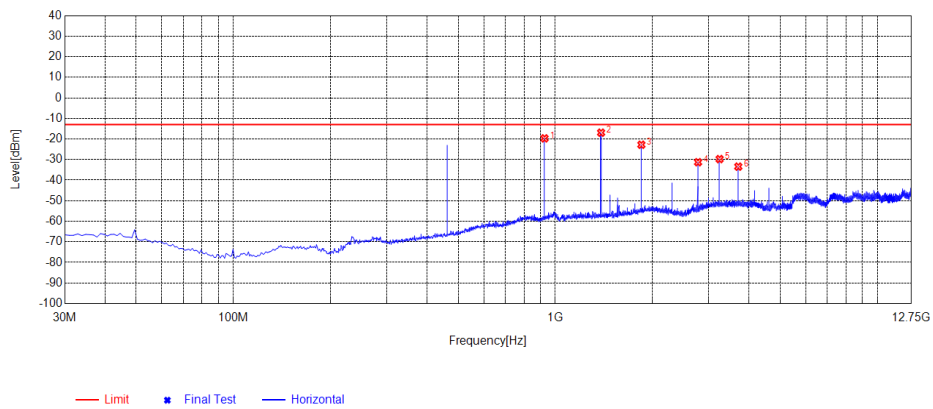
1. Factor=Antenna Factor + Cable loss. (Below 1GHz)
2. Factor=Antenna Factor+ Cable loss -Pre-amplifier. (Above 1 GHz)
3. Margin=Limit- Level

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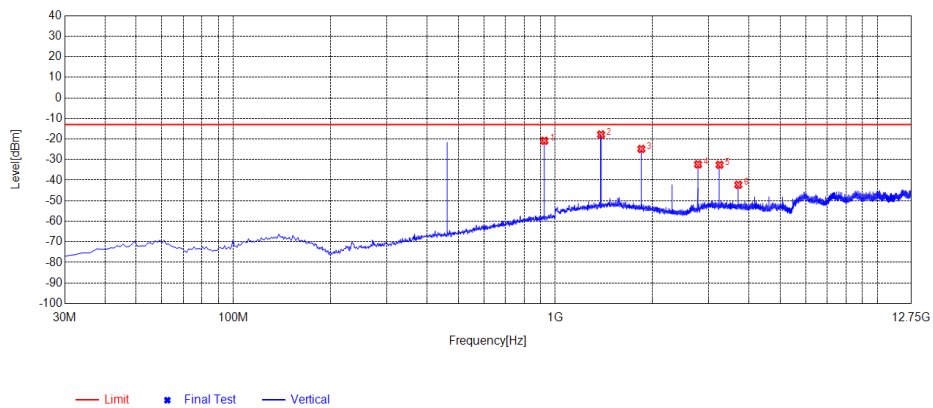


Test Mode:	462.6375MHz -5W	Polarity:	Horizontal
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NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	926.2800	-63.21	-19.70	-13.00	6.70	43.51	183	Horizontal
2	1387.7888	-13.46	-16.91	-13.00	3.91	-3.45	126	Horizontal
3	1850.7851	-22.19	-22.78	-13.00	9.78	-0.59	266	Horizontal
4	2775.6026	-32.45	-31.28	-13.00	18.28	1.17	14	Horizontal
5	3238.5989	-33.46	-29.75	-13.00	16.75	3.71	42	Horizontal
6	3701.5952	-37.84	-33.43	-13.00	20.43	4.41	183	Horizontal

Test Mode:	462.6375MHz -5W	Polarity:	Vertical
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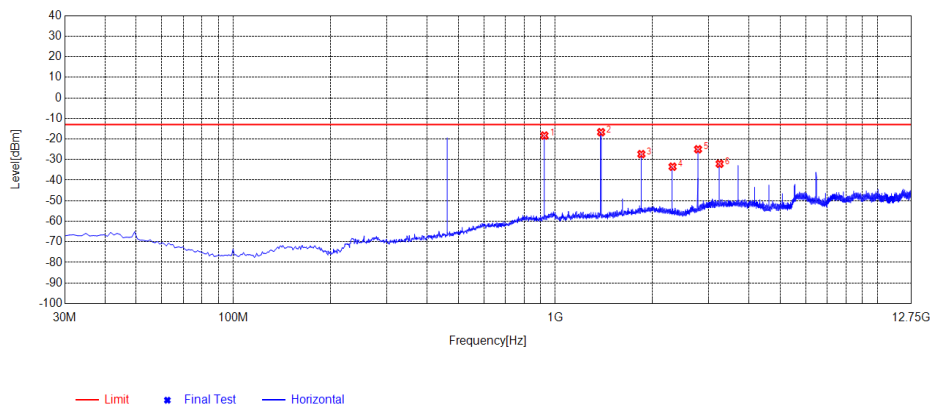


NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	925.3100	-64.43	-20.86	-13.00	7.86	43.57	344	Vertical
2	1387.7888	-19.22	-17.81	-13.00	4.81	1.41	102	Vertical
3	1850.7851	-25.78	-24.85	-13.00	11.85	0.93	56	Vertical
4	2775.6026	-33.62	-32.34	-13.00	19.34	1.28	325	Vertical
5	3238.5989	-35.68	-32.54	-13.00	19.54	3.14	352	Vertical
6	3701.5952	-45.41	-42.26	-13.00	29.26	3.15	65	Vertical

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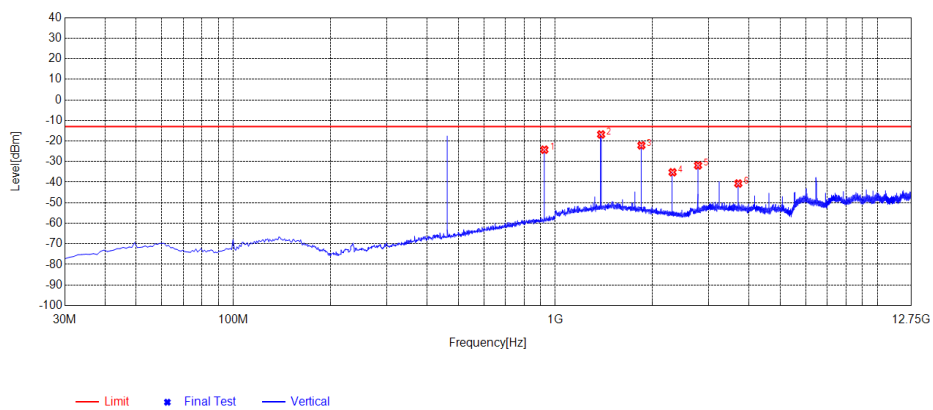


Test Mode:	462.6250-25W	Polarity:	Horizontal
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NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	925.3100	-61.82	-18.33	-13.00	5.33	43.49	213	Horizontal
2	1387.7888	-13.23	-16.68	-13.00	3.68	-3.45	119	Horizontal
3	1850.7851	-26.76	-27.35	-13.00	14.35	-0.59	231	Horizontal
4	2313.7814	-32.76	-33.47	-13.00	20.47	-0.71	7	Horizontal
5	2775.6026	-26.16	-24.99	-13.00	11.99	1.17	147	Horizontal
6	3238.5989	-35.77	-32.06	-13.00	19.06	3.71	166	Horizontal

Test Mode:	462.6250-25W	Polarity:	Vertical
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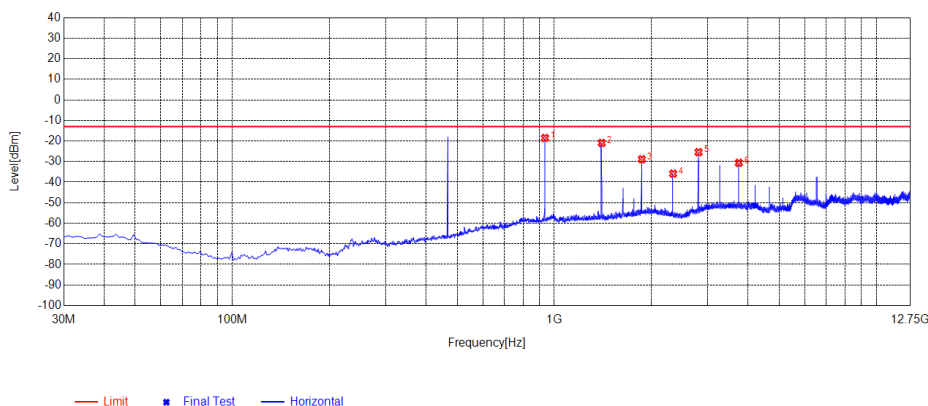


NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	925.3100	-67.79	-24.22	-13.00	11.22	43.57	1	Vertical
2	1387.7888	-18.21	-16.80	-13.00	3.80	1.41	346	Vertical
3	1850.7851	-23.08	-22.15	-13.00	9.15	0.93	1	Vertical
4	2313.7814	-34.68	-35.21	-13.00	22.21	-0.53	140	Vertical
5	2775.6026	-33.15	-31.87	-13.00	18.87	1.28	327	Vertical
6	3701.5952	-43.82	-40.67	-13.00	27.67	3.15	93	Vertical

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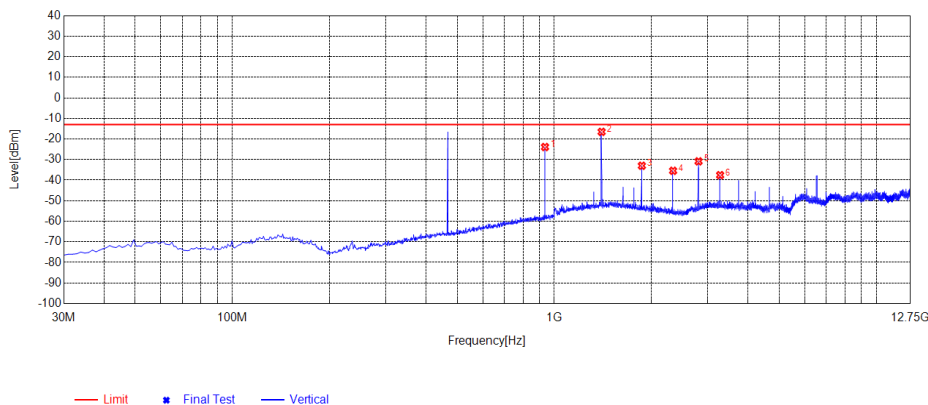


Test Mode: 467.6250-25W Polarity: Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	935.9800	-62.25	-18.53	-13.00	5.53	43.72	192	Horizontal
2	1404.2404	-17.55	-20.96	-13.00	7.96	-3.41	117	Horizontal
3	1870.7621	-28.44	-28.88	-13.00	15.88	-0.44	238	Horizontal
4	2338.4588	-35.09	-35.89	-13.00	22.89	-0.80	0	Horizontal
5	2806.1556	-26.89	-25.43	-13.00	12.43	1.46	144	Horizontal
6	3741.5492	-35.09	-30.63	-13.00	17.63	4.46	154	Horizontal

Test Mode: 467.6250-25W Polarity: Vertical

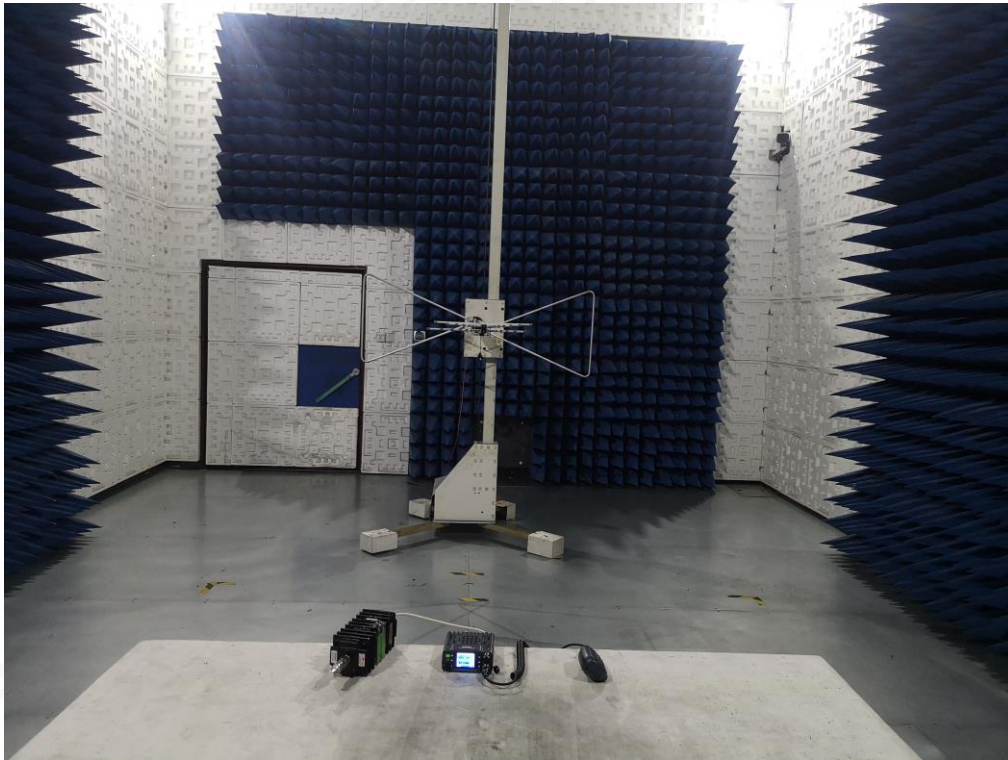


NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	935.9800	-67.58	-23.90	-13.00	10.90	43.68	346	Vertical
2	1403.0653	-18.04	-16.52	-13.00	3.52	1.52	337	Vertical
3	1870.7621	-33.87	-33.01	-13.00	20.01	0.86	46	Vertical
4	2338.4588	-34.85	-35.46	-13.00	22.46	-0.61	140	Vertical
5	2806.1556	-32.41	-30.87	-13.00	17.87	1.54	235	Vertical
6	3273.8524	-40.70	-37.57	-13.00	24.57	3.13	346	Vertical

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APPENDIX I: PHOTOGRAPHS OF TEST SETUP RADIATED EMISSION TEST SETUP



RADIATED EMISSION ABOVE 1G TEST SETUP

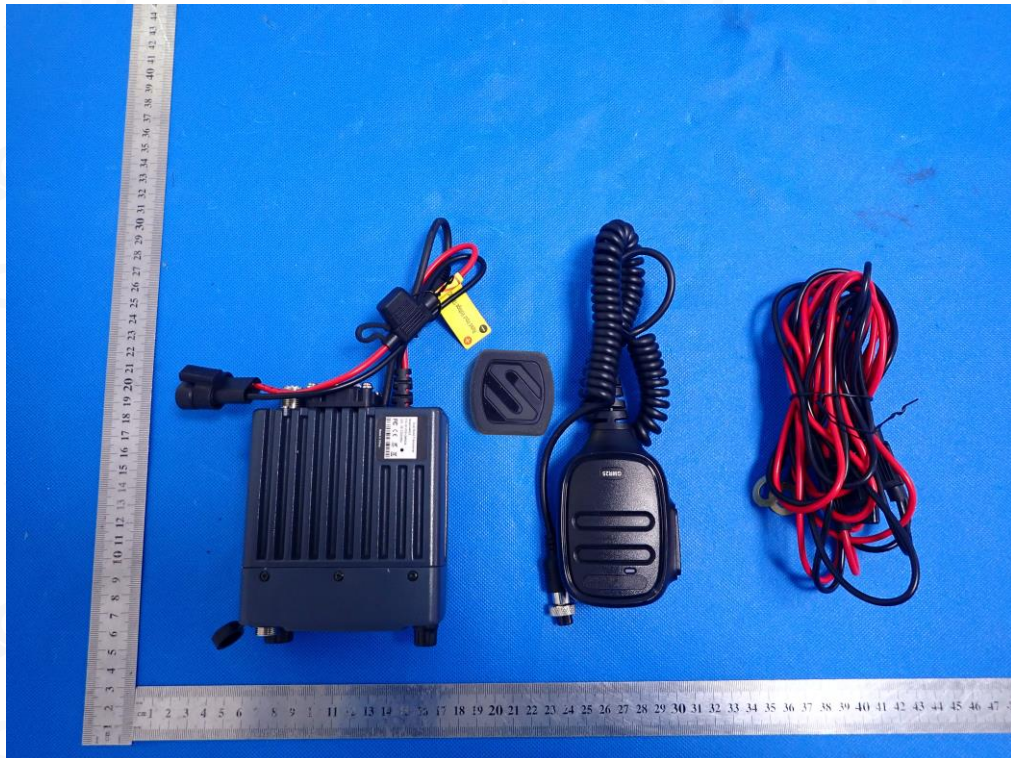


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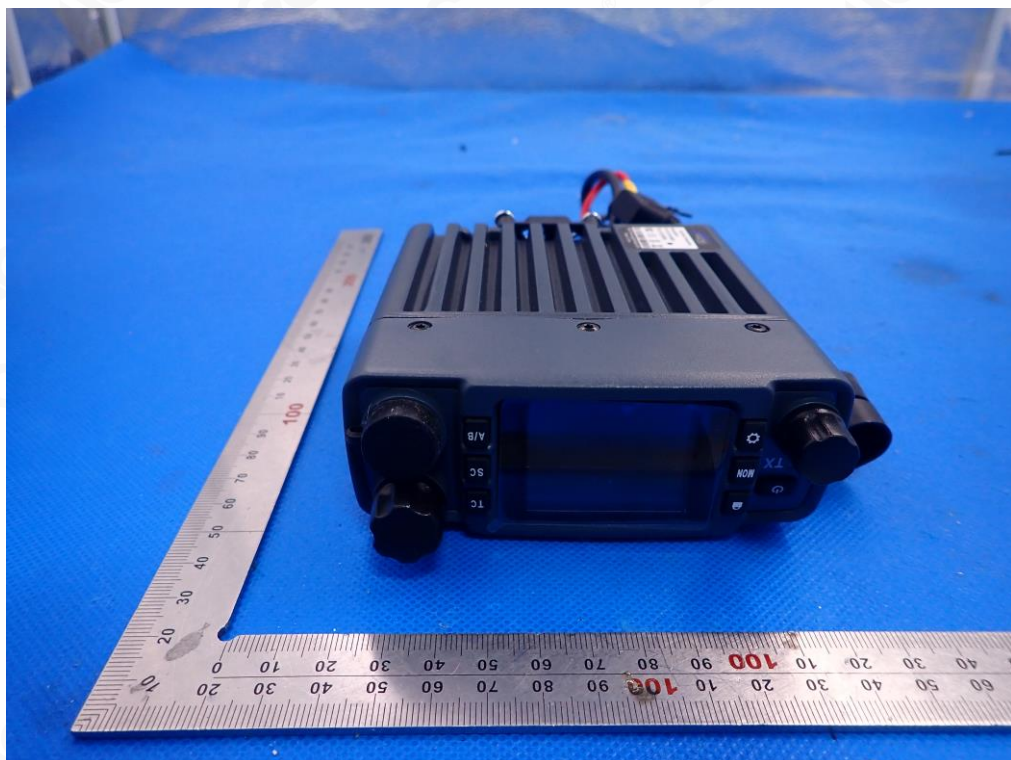
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APPENDIX II: PHOTOGRAPHS OF TEST EUT
WHOLE VIEW OF EUT



TOP VIEW OF EUT



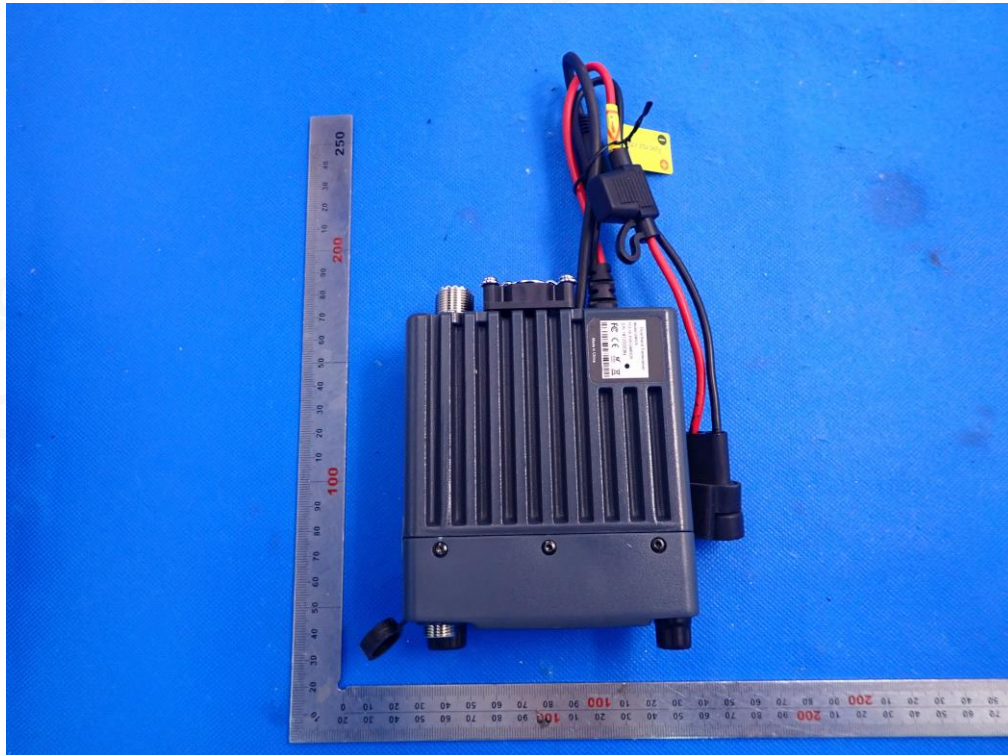
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BOTTOM VIEW OF EUT



FRONT VIEW OF EUT

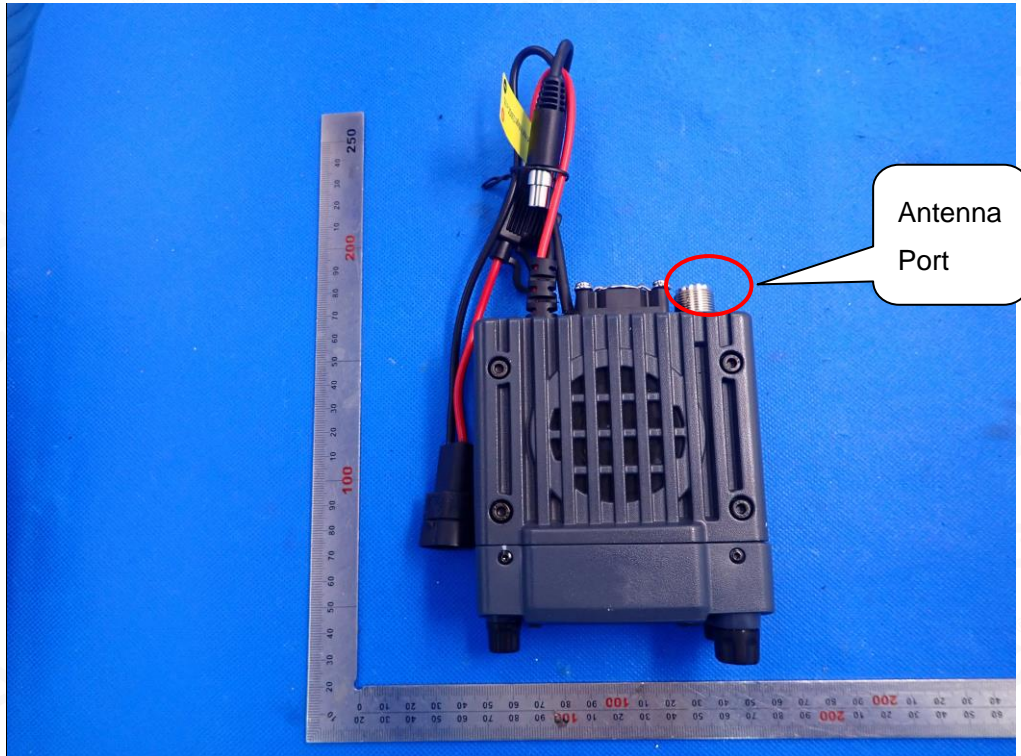


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BACK VIEW OF EUT



LEFT VIEW OF EUT

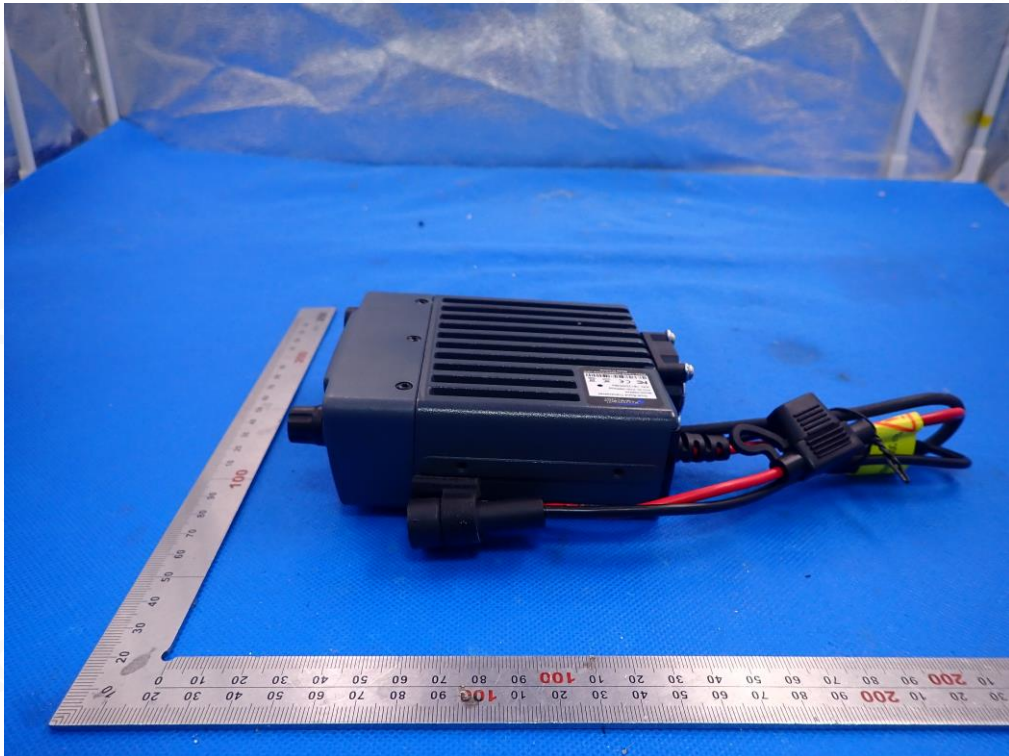


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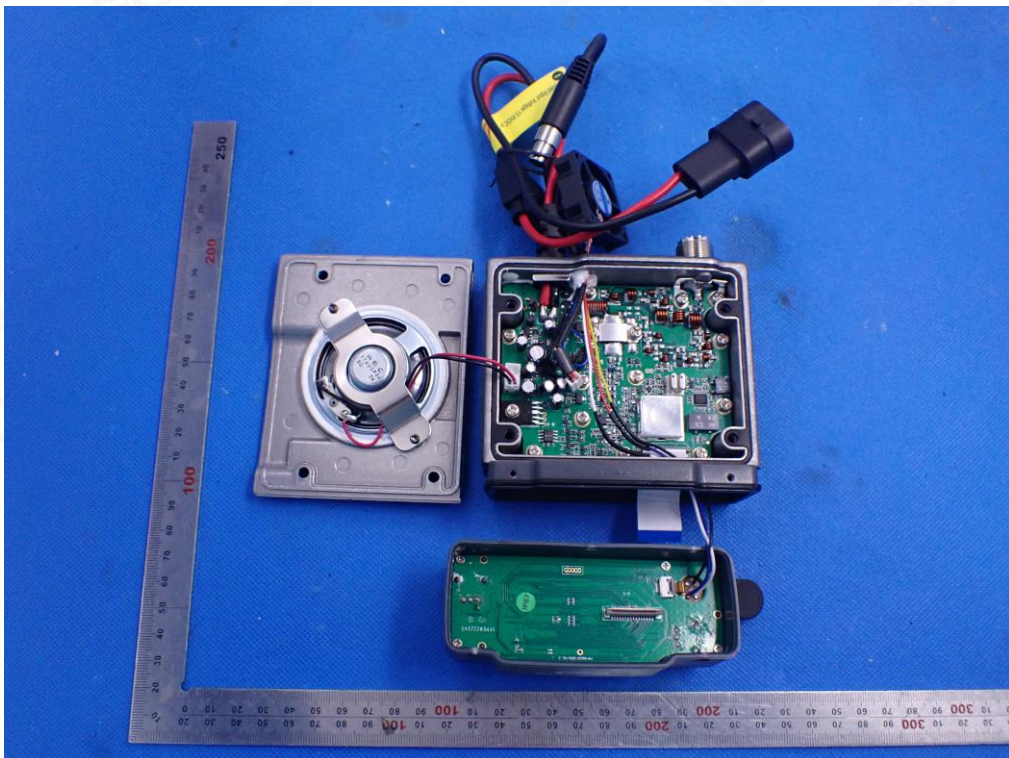
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RIGHT VIEW OF EUT



OPEN VIEW-1 OF EUT

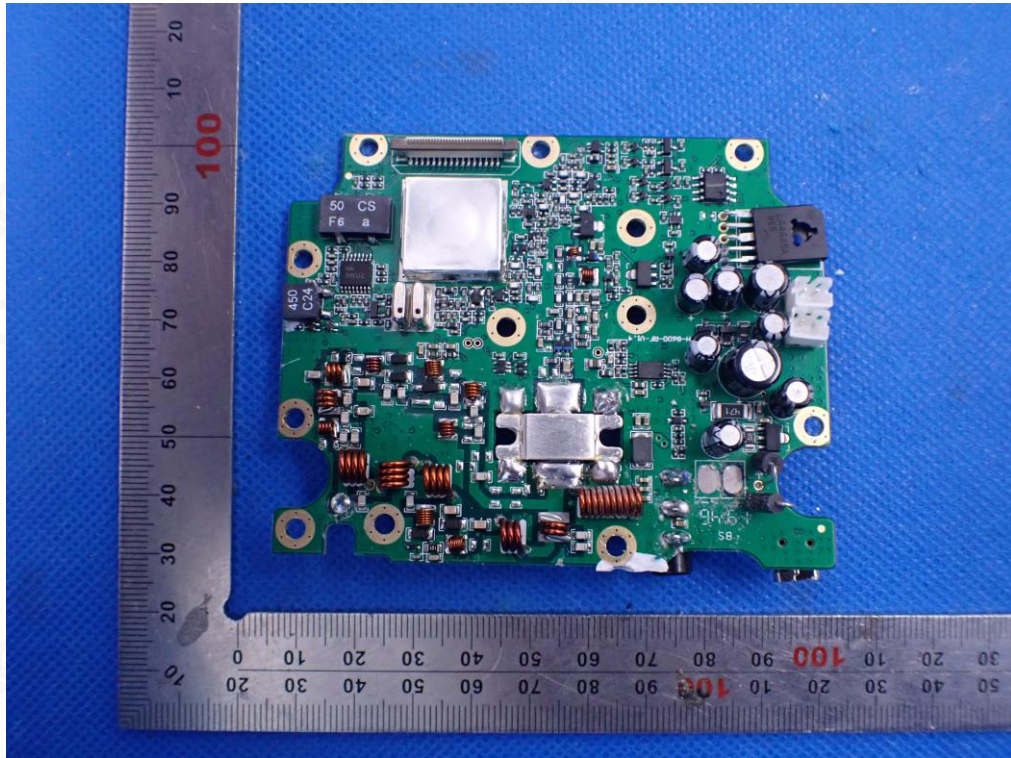


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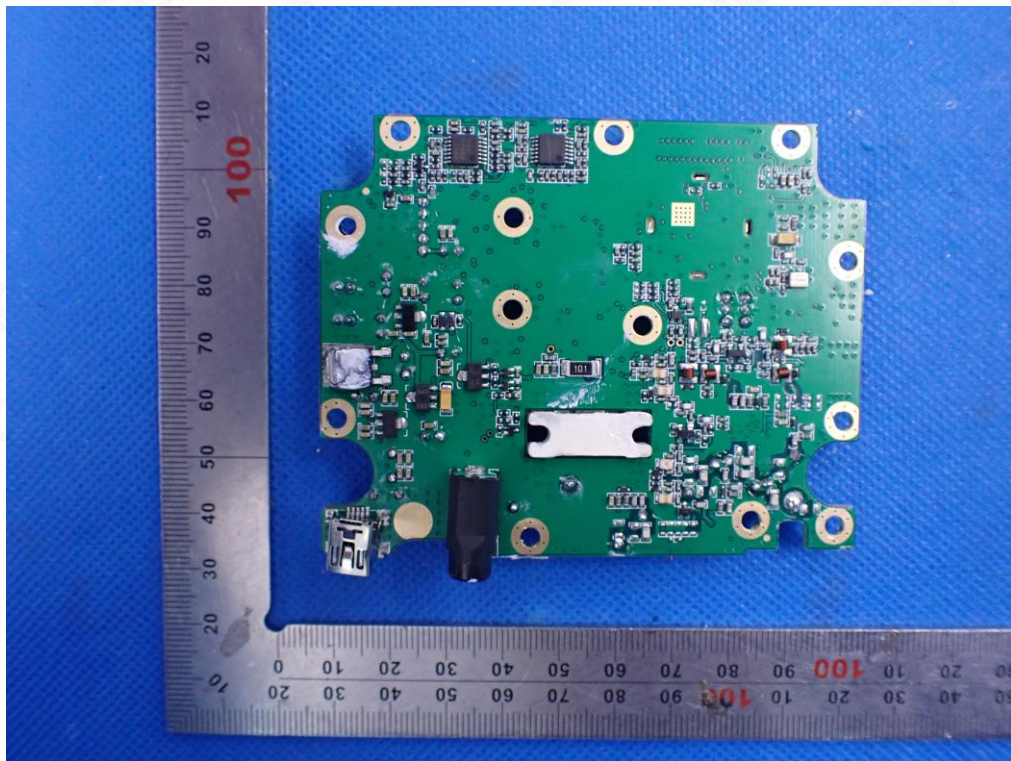
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INTERNAL VIEW-1 OF EUT



INTERNAL VIEW-2 OF EUT



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