

TEST REPORT

Reference No...... : WTX25X06167072W002
FCC ID..... : 2A2P9-EFHDP24GS1
Applicant..... : EcoFlow Inc.
Address..... : RM 401, Plant #1, Runheng Industrial Zone, Fuhai Street, Bao'an District,
Shenzhen, 518000 China
Manufacturer..... : The same as Applicant
Address..... : The same as Applicant
Product Name..... : EcoFlow 4G Dongle SEP
Model No...... : EF-WM-001
Standards..... : FCC Part 90
Date of Receipt sample..... : 2025-06-25
Date of Test..... : 2025-06-25 to 2025-07-09
Date of Issue..... : 2025-07-09
Test Report Form No...... : WTX_Part 90W
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

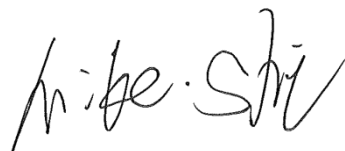
Prepared By:

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Tested by:



Mike Shi/Project Engineer

Approved by:



Jason Su/Manager

TABLE OF CONTENTS

1. GENERAL INFORMATION	4
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
1.2 TEST STANDARDS	5
1.3 TEST METHODOLOGY	5
1.4 TEST FACILITY	5
1.5 EUT SETUP AND TEST MODE	6
1.6 MEASUREMENT UNCERTAINTY	7
1.7 TEST EQUIPMENT LIST AND DETAILS	8
2. SUMMARY OF TEST RESULTS	12
3. RF EXPOSURE	13
3.1 STANDARD APPLICABLE	13
3.2 TEST RESULT	13
4. RF OUTPUT POWER	14
4.1 STANDARD APPLICABLE	14
4.2 TEST PROCEDURE	14
4.3 SUMMARY OF TEST RESULTS/PLOTS	14
5. SPURIOUS RADIATED EMISSIONS	17
5.1 STANDARD APPLICABLE	17
5.2 TEST PROCEDURE	17
5.3 SUMMARY OF TEST RESULTS/PLOTS	17
APPENDIX PHOTOGRAPHS	24

Report version

Version No.	Date of issue	Description
Rev.00	2025-07-09	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT:	
Product Name:	EcoFlow 4G Dongle SEP
Trade Name:	ECOFLOW; EF ECOFLOW
Model No.:	EF-WM-001
Adding Model(s):	/
Rated Voltage:	DC 5V
Battery:	/
Adapter Model:	/
<i>Note: The test data is gathered from a production sample provided by the manufacturer.</i>	

Technical Characteristics of EUT:	
4G	
Support Networks:	FDD-LTE
Support Band:	FDD-LTE Band 26
Uplink Frequency:	FDD-LTE Band 26: Tx: 814-824MHz,
Downlink Frequency:	FDD-LTE Band 26: Rx: 859-869MHz,
RF Output Power:	FDD-LTE Band 26: 24.06dBm,
Type of Emission:	FDD-LTE Band 26: 13M4G7D, 4M69W7D
Type of Modulation:	QPSK, 16QAM
Antenna Type:	PCB Antenna
Antenna Gain:	RE305: FDD-LTE Band 26: 0.99dBi, RE306: FDD-LTE Band 26: -0.81dBi,
<i>Note The Antenna Gain is provided by the customer and can affect the validity of results.</i>	

1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 2: Frequency Allocations and Radio Treaty Matters; General Rules and Regulations.

FCC Rules Part 90: Private Land Mobile Radio Services.

TIA/EIA 603 E March 2016: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services.

KDB 971168 D01 Power Measurement License Digital Systems v03r01: Measurement Guidance for Certification of Licensed Digital Transmitters.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with TIA/EIA 603 E/ KDB 971168/ ANSI C63.26. The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Test Facility

FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. Laboratory has been recognized to perform compliance testing on equipment subject to the Commission's Declaration Of Conformity (DOC). The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A and the CAB identifier is CN0057.

1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	FDD-LTE Band 26	Low, Middle, High Channels

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	45~75 %
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB extension cable	1.0	Shielded	Without Ferrite

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Computer	Lenovo	L13 Yoga	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	0.57dB
Occupied Bandwidth	Conducted	0.015MHz
Frequency Stability	Conducted	2.3%
Transmitter Spurious Emissions	Conducted	0.42dB
Transmitter Spurious Emissions	Radiated	30-200MHz, 4.52dB
		0.2-1GHz 5.56dB
		1-6GHz, 3.84dB
		6-18GHz, 3.92dB

1.7 Test Equipment List and Details

Fixed asset Number	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
WTXE1041 A1001	Communication Tester	Rohde & Schwarz	CMW500	148650	2025-02-23	2026-02-22
WTXE1104 A1001	MXG Vector Signal Generator	Agilent	N5182A	MY47420108	2025-02-23	2026-02-22
WTXE1104 A1002	DC Power Supply	Agilent	E3634A	MY40009294	2025-02-23	2026-02-22
WTXE1104 A1003	EXG Analog Signal Generator	KEYSIGHT	N5173B	MY61252892	2025-02-23	2026-02-22
WTXE1104 A1004	Spectrum Analyzer	Rohde&Schwarz	FSV40-N	101559	2025-02-23	2026-02-22
WTXE1104 A1005-2	Band Reject Filter Group	Tonscend	JS0806-F	23A806F0658	2025-02-23	2026-02-22
WTXE1103 A1003	Attenuator	Pasternack	PE4007-4	/	2025-02-23	2026-02-22
WTXE1003 A1-005	Coaxial Cable	/	0M4RFC	/	2025-02-23	2026-02-22
☐ Chamber A: Below 1GHz						
WTXE1005 A1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2025-02-23	2026-02-22
WTXE1001 A1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2025-02-23	2026-02-22
WTXE1007 A1001	Amplifier	HP	8447F	2805A03475	2025-02-23	2026-02-22
WTXE1010 A1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2026-02-25
WTXE1010 A1006	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2025-02-23	2026-02-22
WTXE1104 A1032-1	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104 A1032-2	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104 A1032-3	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
☐ Chamber A: Above 1GHz						
WTXE1005 A1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2025-02-23	2026-02-22
WTXE1001	EMI Test	Rohde &	ESPI	101611	2025-02-23	2026-02-22

A1001	Receiver	Schwarz				
WTXE1065 A1001	Amplifier	C&D	PAP-1G18	2002	2025-02-23	2026-02-22
WTXE1010 A1005	Horn Antenna	ETS	3117	00086197	2025-02-23	2026-02-22
WTXE1010 A1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2026-03-16
WTXE1003 A1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2025-02-23	2026-02-22
WTXE1004 A1-001	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2025-02-23	2026-02-22
WTXE1104 A1033-1	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
WTXE1104 A1033-2	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
WTXE1104 A1033-3	Coaxial Cable	/	C16-07-07	/	2025-02-23	2026-02-22
☐ Chamber B:Below 1GHz						
WTXE1010 A1006	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2024-03-17	2027-03-16
WTXE1038 A1001	Amplifier	Agilent	8447D	2944A104 57	2025-02-23	2026-02-22
WTXE1001 A1002	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2025-02-23	2026-02-22
WTXE1104 A1031-1	Coaxial Cable	/	1.5MRFC-LWB 3	/	2025-02-23	2026-02-22
WTXE1104 A1031-2	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22
WTXE1104 A1031-3	Coaxial Cable	/	RG 316	/	2025-02-23	2026-02-22
☒ Chamber C:Below 1GHz						
WTXE1093 A1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2025-02-23	2026-02-22
WTXE1010 A1013-1	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2024-04-18	2027-04-17
WTXE1007 A1002	Amplifier	HP	8447F	2944A038 69	2025-02-23	2026-02-22
WTXE1010 A1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2026-02-25
WTXE1104	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22

A1034-1						
WTXE1104 A1034-2	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
WTXE1104 A1034-3	Coaxial Cable	/	RC_6G-N-M	/	2025-02-23	2026-02-22
☒ Chamber C: Above 1GHz						
WTXE1093 A1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2025-02-23	2026-02-22
WTXE1103 A1005	Horn Antenna	POAM	RTF-118A	1820	2025-06-13	2027-06-12
WTXE1103 A1006	Amplifier	Tonscend	TAP01018050	AP22E806 235	2025-02-23	2026-02-22
WTXE1010 A1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2026-03-16
WTXE1003 A1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2025-02-23	2026-02-22
WTXE1104 A1035-1	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22
WTXE1104 A1035-2	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22
WTXE1104 A1035-3	Coaxial Cable	/	RC-18G-N-M	/	2025-02-23	2026-02-22

Software List			
Description	Manufacturer	Model	Version
EMI Test Software (Radiated Emission A)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)
EMI Test Software (Radiated Emission B)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)
EMI Test Software (Radiated Emission C)	Farad	EZ-EMC	RA-03A1-2 (1.1.4.2)
LTE Test System*	Tonscend	JS1120-1	V2.5

*Remark: indicates software version used in the compliance certification testing.

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§1.1307, §2.1093	RF Exposure	Compliant
§90.635	RF Output Power	Compliant
-	Peak-to-average Ratio (PAR) of Transmitter	N/A
§90.691	Emission Bandwidth	N/A
§90.691	Spurious Emissions at Antenna Terminal	N/A
§90.691	Spurious Radiation Emissions	Compliant
§2.917(a), §90.691	Out of Band Emissions	N/A
§90.213	Frequency Stability	N/A

Class II Permissive Change: The original equipment PCB board antenna has been removed, and the antenna type has been changed from onboard antenna to antenna interface, which can accommodate two types of antennas (onboard antenna and patch antenna);

Note: Report is for Class II Permissive Change only. Updated test data include RF Exposure, RF Output Power and Spurious Radiation Emissions. The test data refer to Original equipment (FCC ID: 2A2P9-EFHDP24GS1), the original FCC ID issue date: 11/21/2023.

3. RF Exposure

3.1 Standard Applicable

According to §1.1307 and §2.1093, the portable transmitter must comply the RF exposure requirements.

3.2 Test Result

This product complied with the requirement of the RF exposure, please see the SAR report.

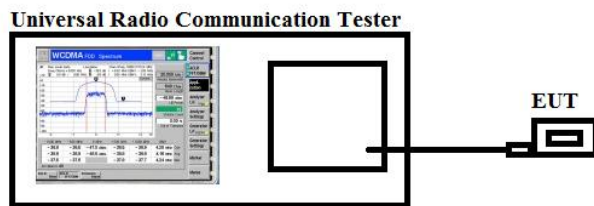
4. RF Output Power

4.1 Standard Applicable

According to §90.635, Limitations on power and antenna height.

4.2 Test Procedure

- Conducted output power test method:



- Radiated power test method:

1. The setup of EUT is according with per ANSI/TIA Standard 603E and ANSI C63.26 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

4.3 Summary of Test Results/Plots

Max. Radiated Power:**Antenna Model: RE305**

FDD-LTE Band 26 (814-824MHz)

Channel Bandwidth: 1.4 MHz			
Modulation	Channel	E.i.r.p [dBm]	Verdict
QPSK	LCH	23.56	PASS
	MCH	23.95	PASS
	HCH	24.06	PASS
16QAM	LCH	23.49	PASS
	MCH	23.98	PASS
	HCH	23.14	PASS
Channel Bandwidth: 3 MHz			
Modulation	Channel	E.i.r.p [dBm]	Verdict
QPSK	LCH	23.59	PASS
	MCH	23.24	PASS
	HCH	23.56	PASS
16QAM	LCH	23.72	PASS
	MCH	23.38	PASS
	HCH	23.46	PASS
Channel Bandwidth: 5 MHz			
Modulation	Channel	E.i.r.p [dBm]	Verdict
QPSK	LCH	23.61	PASS
	MCH	23.72	PASS
	HCH	23.92	PASS
16QAM	LCH	23.94	PASS
	MCH	23.56	PASS
	HCH	23.42	PASS
Channel Bandwidth: 10 MHz			
Modulation	Channel	E.i.r.p [dBm]	Verdict
QPSK	LCH	23.29	PASS
	MCH	23.71	PASS
	HCH	23.79	PASS
16QAM	LCH	23.53	PASS
	MCH	24.01	PASS
	HCH	23.61	PASS

Antenna Model: RE306 SHP40

FDD-LTE Band 26 (814-824MHz)

Channel Bandwidth: 1.4 MHz			
Modulation	Channel	E.i.r.p [dBm]	Verdict
QPSK	LCH	22.26	PASS
	MCH	22.17	PASS
	HCH	22.20	PASS
16QAM	LCH	21.41	PASS
	MCH	21.44	PASS
	HCH	21.74	PASS
Channel Bandwidth: 3 MHz			
Modulation	Channel	E.i.r.p [dBm]	Verdict
QPSK	LCH	21.72	PASS
	MCH	22.02	PASS
	HCH	21.50	PASS
16QAM	LCH	21.64	PASS
	MCH	21.65	PASS
	HCH	21.66	PASS
Channel Bandwidth: 5 MHz			
Modulation	Channel	E.i.r.p [dBm]	Verdict
QPSK	LCH	21.78	PASS
	MCH	21.36	PASS
	HCH	21.61	PASS
16QAM	LCH	21.73	PASS
	MCH	22.04	PASS
	HCH	21.77	PASS
Channel Bandwidth: 10 MHz			
Modulation	Channel	E.i.r.p [dBm]	Verdict
QPSK	LCH	21.71	PASS
	MCH	21.31	PASS
	HCH	21.75	PASS
16QAM	LCH	21.88	PASS
	MCH	21.61	PASS
	HCH	21.71	PASS

5. Spurious Radiated Emissions

5.1 Standard Applicable

According to §90.691, Emission mask requirements for EA-based systems.

5.2 Test Procedure

1. The setup of EUT is according with per ANSI/TIA-603-E and ANSI C63.4-2014 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

$\text{Spurious attenuation limit in dB} = 43 + 10 \log_{10}(\text{power out in Watts})$

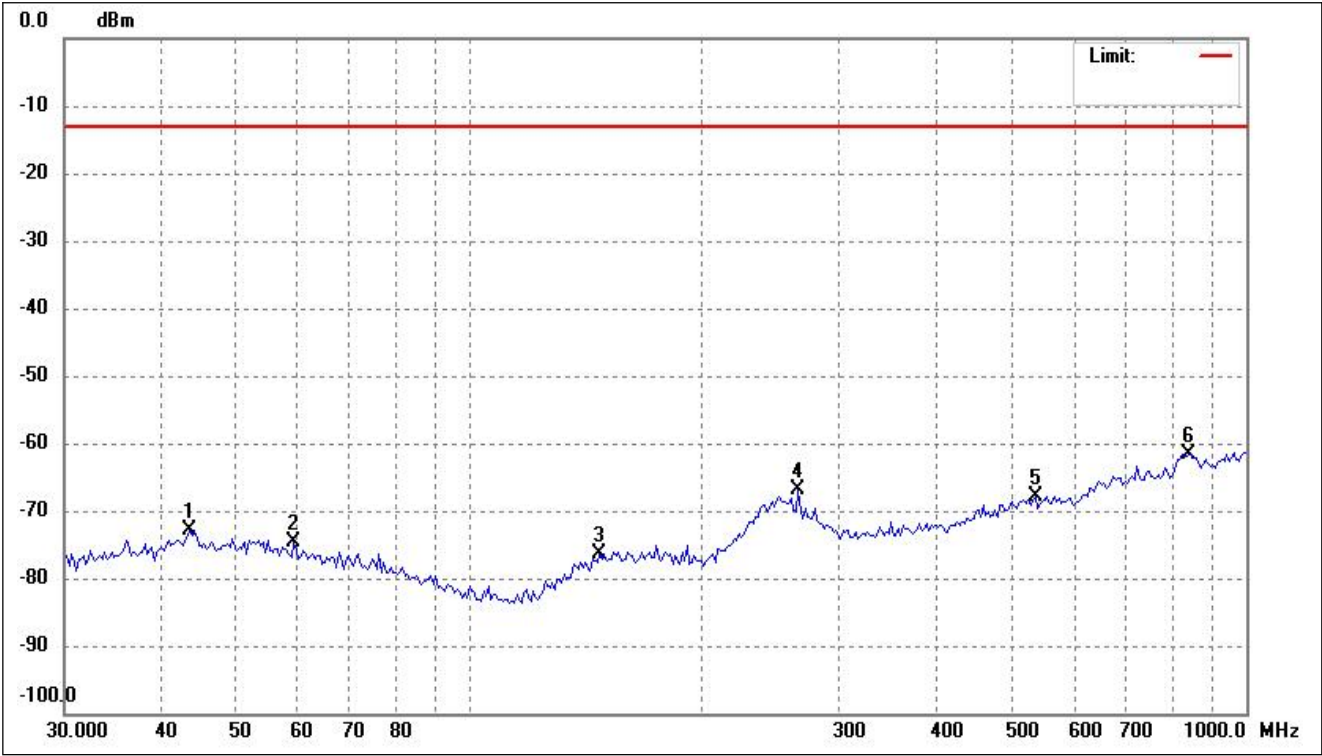
5.3 Summary of Test Results/Plots

Note: 1. this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

2. All test modes (different bandwidth and different modulation) are performed, but only the worst case is recorded in this report.

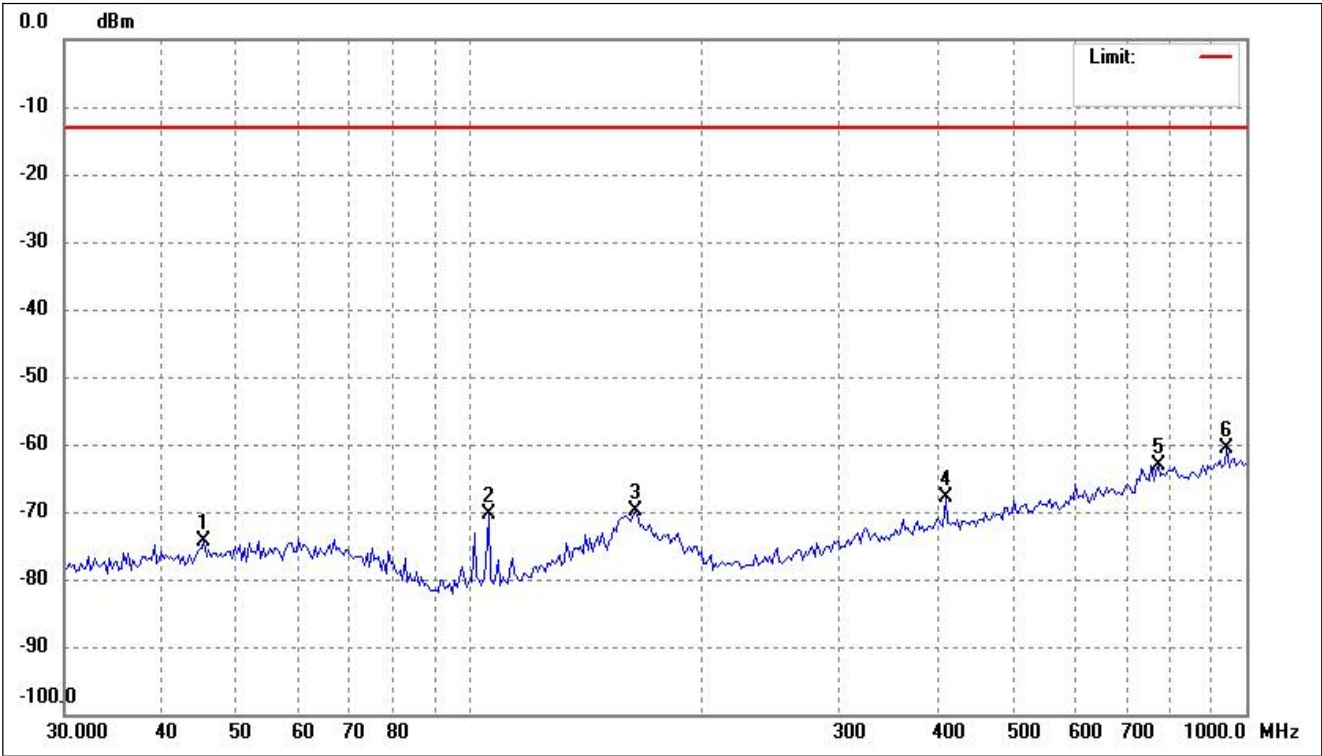
- Spurious Emissions Below 1GHz
- Antenna Model: RE305(worst case)

Test Mode	FDD_LTE Band 26	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBm)	Correct (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	43.5381	-75.70	2.89	-72.81	-13.00	-59.81	ERP
2	59.3133	-76.99	2.37	-74.62	-13.00	-61.62	ERP
3	146.8392	-76.89	0.50	-76.39	-13.00	-63.39	ERP
4	264.9709	-74.19	7.30	-66.89	-13.00	-53.89	ERP
5	535.0377	-75.57	7.61	-67.96	-13.00	-54.96	ERP
6	844.8028	-75.32	13.63	-61.69	-13.00	-48.69	ERP

Test Mode	FDD_LTE Band 26	Polarity:	Vertical
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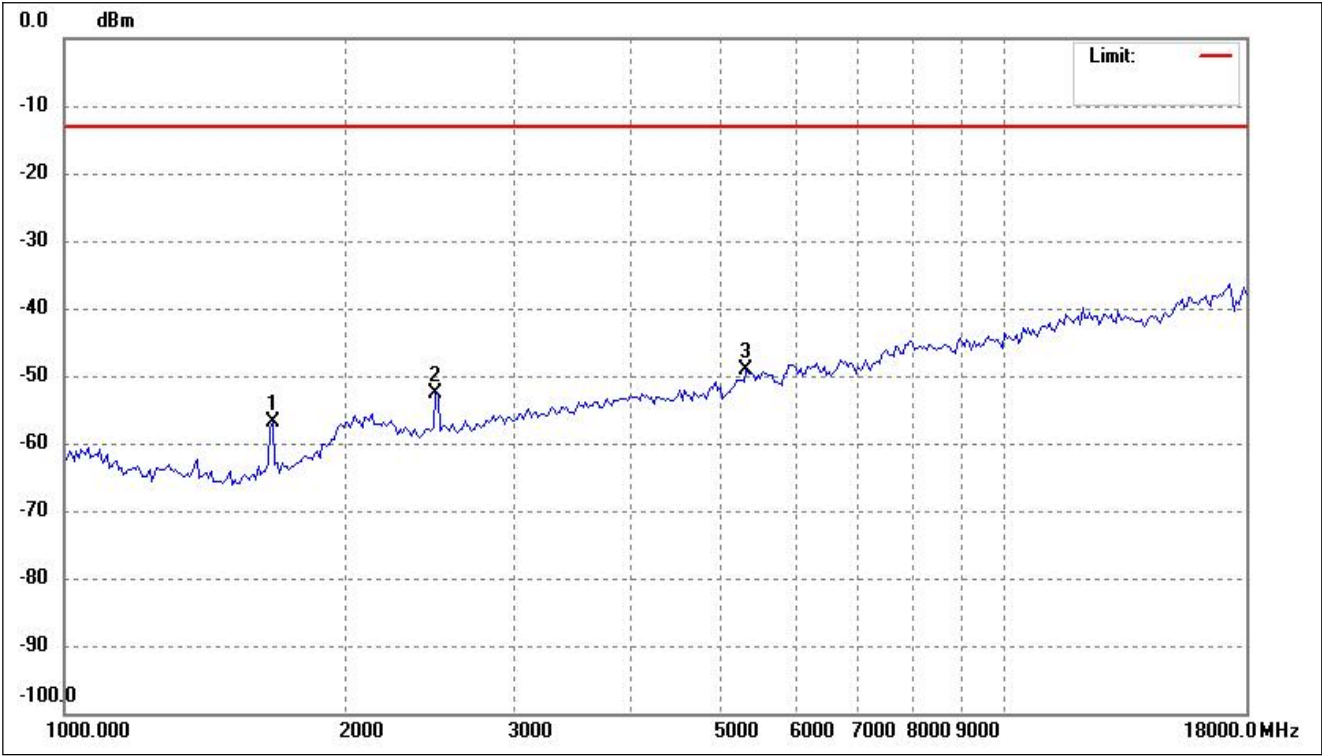
No.	Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	45.4131	-77.35	3.06	-74.29	-13.00	-61.29	ERP
2	105.5369	-69.03	-1.30	-70.33	-13.00	-57.33	ERP
3	163.1623	-77.24	7.37	-69.87	-13.00	-56.87	ERP
4	409.6506	-73.49	5.54	-67.95	-13.00	-54.95	ERP
5	771.0475	-75.05	11.92	-63.13	-13.00	-50.13	ERP
6	945.3336	-73.29	12.59	-60.70	-13.00	-47.70	ERP

Note: $\text{Margin} = (\text{Reading} + \text{Correct}) - \text{Limit}$

➤ Spurious Emissions Above 1GHz

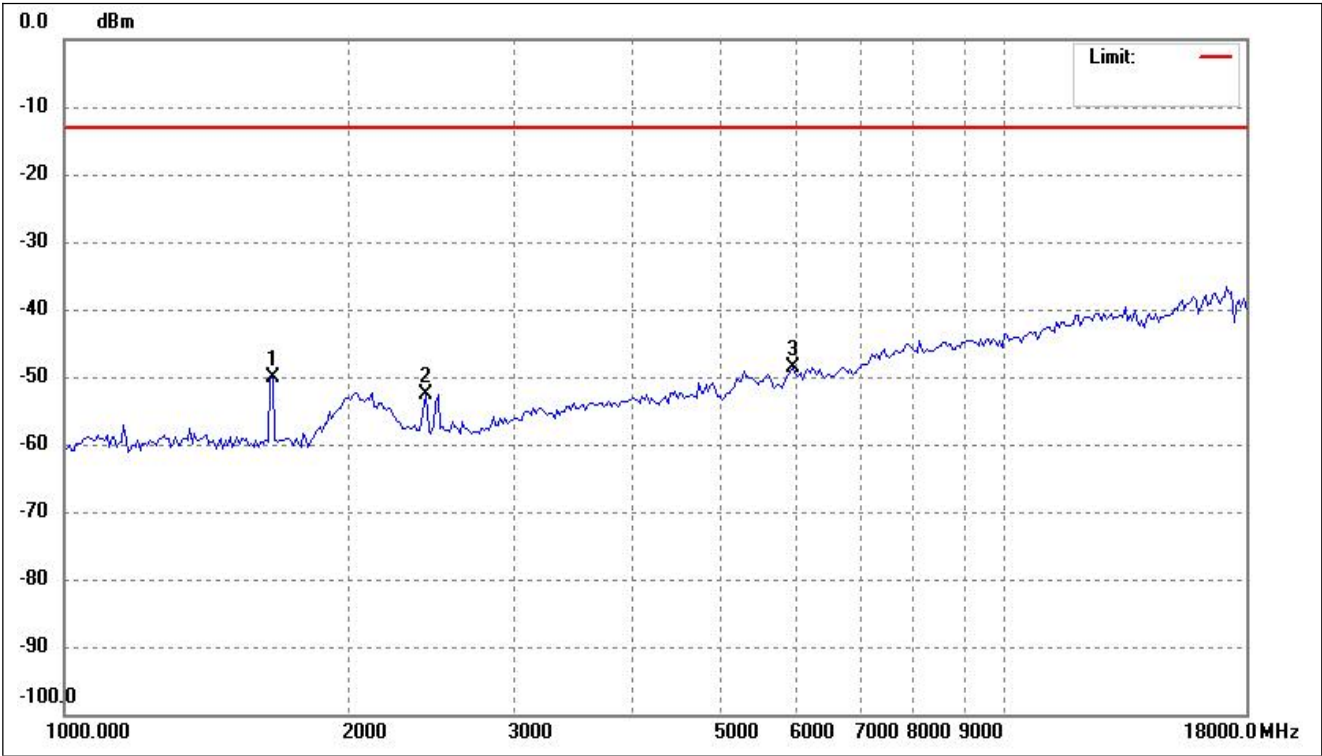
Antenna Model: RE305

Test Mode	FDD_LTE Band 26	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1664.833	-46.85	-10.13	-56.98	-13.00	-43.98	ERP
2	2482.821	-46.91	-5.80	-52.71	-13.00	-39.71	ERP
3	5302.564	-51.52	2.35	-49.17	-13.00	-36.17	ERP

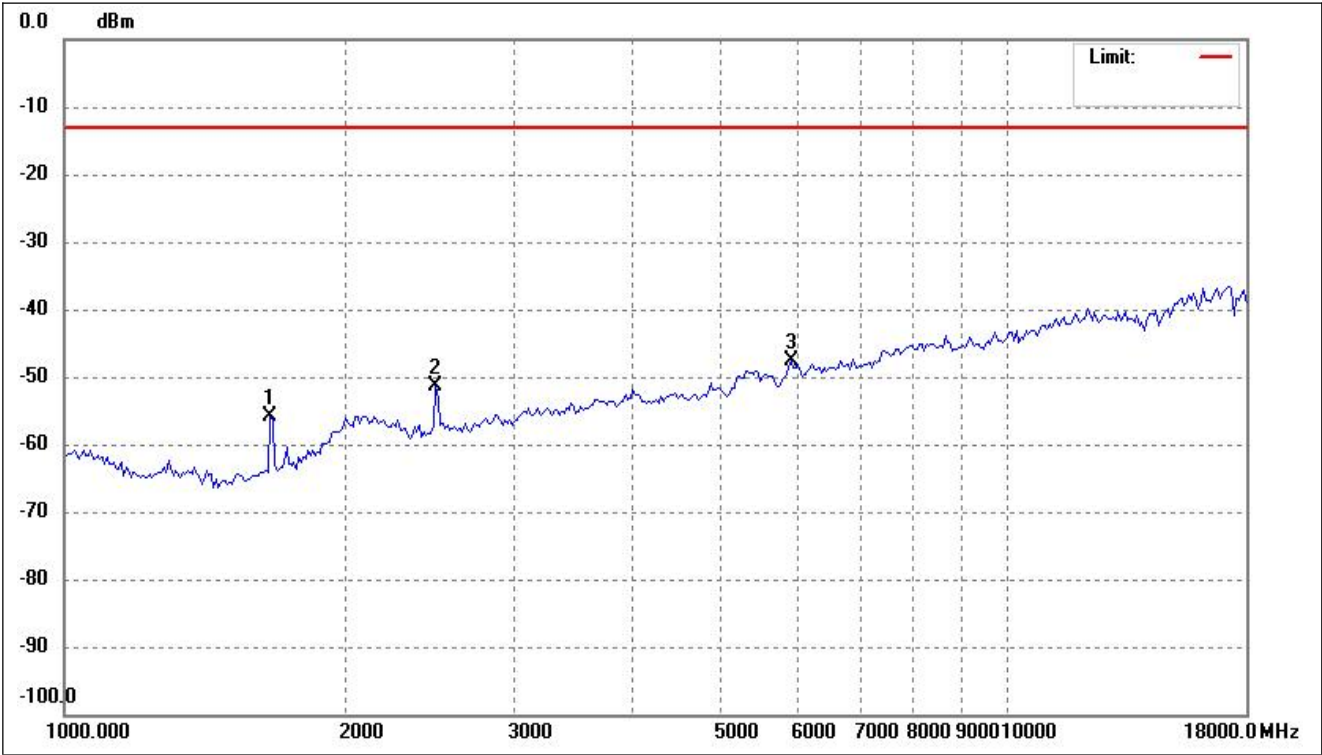
Test Mode	FDD_LTE Band 26	Polarity:	Vertical
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No.	Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1664.833	-42.14	-7.98	-50.12	-13.00	-37.12	ERP
2	2425.957	-47.05	-5.47	-52.52	-13.00	-39.52	ERP
3	5953.844	-51.59	3.03	-48.56	-13.00	-35.56	ERP

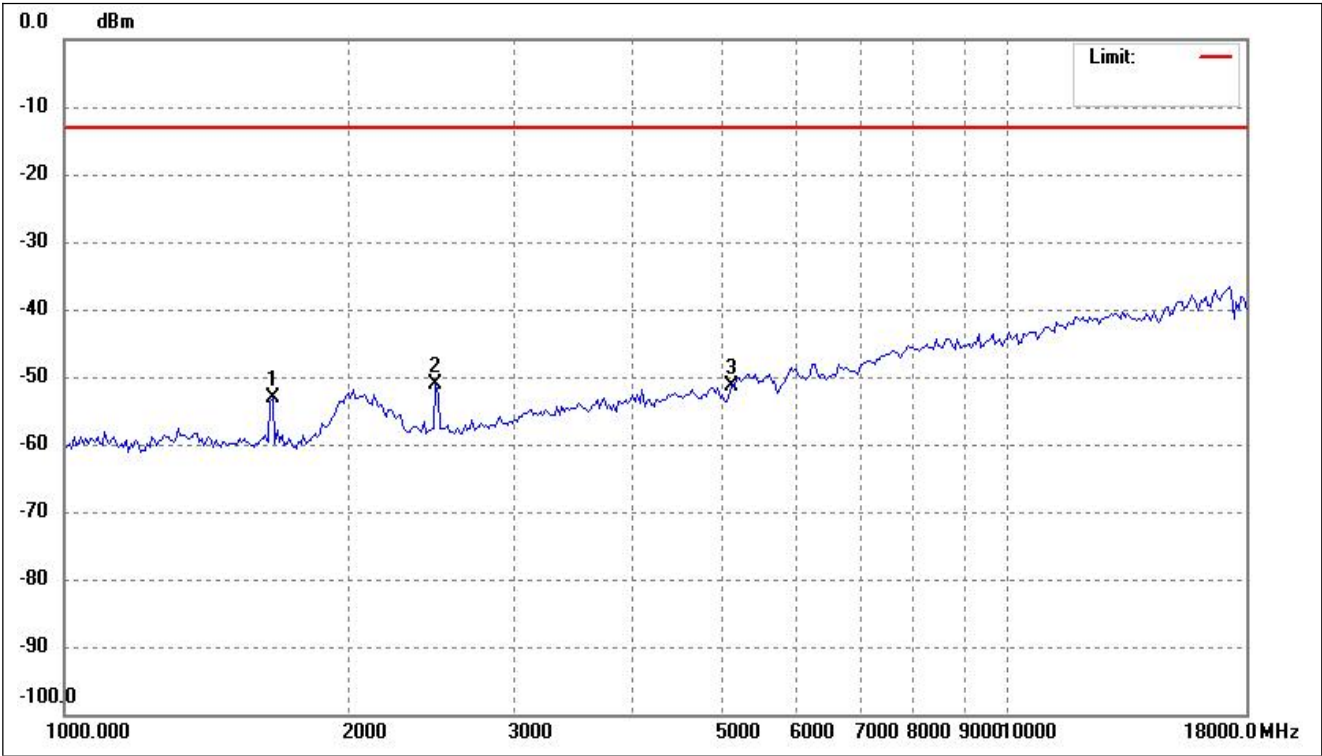
Antenna Model: RE306 SHP40

Test Mode	FDD_LTE Band 26	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1655.218	-45.82	-10.11	-55.93	-13.00	-42.93	ERP
2	2482.821	-45.59	-5.80	-51.39	-13.00	-38.39	ERP
3	5919.457	-51.08	3.51	-47.57	-13.00	-34.57	ERP

Test Mode	FDD_LTE Band 26	Polarity:	Vertical
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No.	Frequency (MHz)	Reading (dBm)	Correct dB	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1664.833	-45.26	-7.98	-53.24	-13.00	-40.24	ERP
2	2482.821	-45.26	-5.83	-51.09	-13.00	-38.09	ERP
3	5121.445	-52.58	1.21	-51.37	-13.00	-38.37	ERP

Note: $Result = Reading + Correct$, $Margin = Result - Limit$

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

***** END OF REPORT *****