




# FCC REPORT

## For LTE

**Report No.** ..... : **CHTEW23110073** Report Verification: 


**Project No.**..... : **SHT2306080101EW**

**FCC ID**..... : **2A8OE-F8926-GW-02**

**Applicant** ..... : **Xiamen Four-Faith Communication Technology Co., Ltd.**

**Address**..... : 11th Floor,A-06 Area,No.370,Chengyi Street,Jimei,Xiamen,Fujian,China.

**Product Name** ..... : **LoRaWAN Gateway**

**Trade Mark** ..... : 

**Model No.** ..... : F8926-GW-02

**Listed Model(s)** ..... : -

**Standard** ..... : **FCC CFR Title 47 Part 2**  
**FCC CFR Title 47 Part 22 Subpart H**  
**FCC CFR Title 47 Part 24 Subpart E**  
**FCC CFR Title 47 Part 27**

**Date of receipt of test sample**..... : Aug. 07, 2023

**Date of testing**..... : Aug. 14, 2023- Nov. 24, 2023

**Date of issue**..... : Nov. 27, 2023

**Result**..... : **Pass**

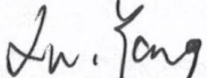
Compiled by  
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Supervised by  
 (position+printedname+signature)....: Project Engineer Caspar Chen



Approved by  
 (position+printedname+signature)....: RF Manager Xu yang



**Testing Laboratory Name** ..... : **Shenzhen Huatongwei International Inspection Co., Ltd.**

**Address**..... : 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

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*The test report merely correspond to the test sample.*

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# **1. TEST STANDARDS AND REPORT VERSION**

## **1.1. Applicable Standards**

The tests were performed according to following standards:

[FCC CFR Title 47 Part 2:](#) Frequency Allocations and Radio Treaty Matters; General Rules and Regulations

[FCC CFR Title 47 Part 22 Subpart H:](#) Cellular Radiotelephone Service

[FCC CFR Title 47 Part 24 Subpart E:](#) Broadband PCS

[FCC CFR Title 47 Part 27:](#) Miscellaneous Wireless Communications Services

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

[KDB 971168 D01 Power Meas License Digital Systems v03:](#) MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS

## **1.2. Report version information**

Revision No.	Date of issue	Description
N/A	2023-11-27	Original

## 2. TEST DESCRIPTION

Section	Test Item	Section in CFR 47	Result #1	Test Engineer
-	Conducted Output Power	Part 2.1046 Part 22.913(a) Part 24.232(c) Part 27.50	Pass*	-
-	Peak-to-Average Ratio	Part 24.232 Part 27.50	Pass*	-
-	99% Occupied Bandwidth & 26 dB Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b) Part 27.53	Pass*	-
-	Band Edge	Part 2.1051 Part 22.917 Part 24.238 Part 27.53	Pass*	-
-	Conducted Spurious Emissions	Part 2.1051 Part 22.917 Part 24.238 Part 27.53	Pass*	-
-	Frequency stability vs temperature	Part 2.1055(a)(1)(b) Part 22.355 Part 24.235 Part 27.54	Pass*	-
-	Frequency stability vs voltage	Part 2.1055(d)(1)(2) Part 22.355 Part 24.235 Part 27.54	Pass*	-
5.8	ERP and EIRP	Part 22.913(a) Part 24.232(b) Part 27.50	Pass	Caspar Chen
5.9	Radiated Spurious Emissions	Part 2.1053 Part 22.917 Part 24.238 Part 27.53	Pass	Yifan Wang

Note:


- 1) #1: The test result does not include measurement uncertainty value
- 2) \*: Refer to module FCC ID: ZMONL668LA05.

### 3. SUMMARY

#### 3.1. Client Information

Applicant:	Xiamen Four-Faith Communication Technology Co., Ltd.
Address:	11th Floor,A-06 Area,No.370,Chengyi Street,Jimei,Xiamen,Fujian,China.
Manufacturer:	Xiamen Four-Faith Communication Technology Co., Ltd.
Address:	11th Floor,A-06 Area,No.370,Chengyi Street,Jimei,Xiamen,Fujian,China.

#### 3.2. Product Description

Main unit information:	
Product Name:	LoRaWAN Gateway
Trade Mark:	
Model No.:	F8926-GW-02
Listed Model(s):	-
Power supply:	DC 12V from Adapter
Hardware version:	V 1.0.0.2
Software version:	F8926GW-V2-IOTGW-32M-STD-VPN-20230313.flash
Accessory unit information:	
Adapter information:	MODEL: KL-AD3060VA INPUT: 100-240V~50/60Hz 0.7A OUTPUT: DC 12V, 1.5A

#### 3.3. Radio Specification Description

Support Operating Band:	<input checked="" type="checkbox"/> LTE Band 2	<input checked="" type="checkbox"/> LTE Band 4	<input checked="" type="checkbox"/> LTE Band 5
	<input checked="" type="checkbox"/> LTE Band 7	<input checked="" type="checkbox"/> LTE Band 12	<input checked="" type="checkbox"/> LTE Band 17
	<input checked="" type="checkbox"/> LTE Band 38	<input checked="" type="checkbox"/> LTE Band 66	
Operating Frequency Range:	Please refer to note #2		
Channel bandwidth:	Please refer to note #3		
Uplink Modulation type:	<input checked="" type="checkbox"/> QPSK	<input checked="" type="checkbox"/> 16QAM	<input type="checkbox"/> 64QAM <input type="checkbox"/> 256QAM
Downlink Modulation type:	<input checked="" type="checkbox"/> QPSK	<input checked="" type="checkbox"/> 16QAM	<input checked="" type="checkbox"/> 64QAM <input type="checkbox"/> 256QAM
Antenna type:	Stick Antenna		
Antenna gain #4:	1.74dBi		

## Note:

- : means that this feature is supported; : means that this feature is not supported  
 #2: Operating frequency range is as follow:

LTE Band	Uplink frequency	Downlink frequency
LTE Band 2	1850.7 – 1909.3 MHz	1930.7 – 1989.3 MHz
LTE Band 4	1710.7 – 1754.3 MHz	2110.7 – 2154.3 MHz
LTE Band 5	824.7 – 848.3 MHz	869.7 – 893.3 MHz
LTE Band 7	2502.5 – 2567.5 MHz	2622.5 – 2687.5 MHz
LTE Band 12	699.7 – 715.3 MHz	729.7 – 745.3 MHz
LTE Band 17	706.5 – 713.5 MHz	736.5 – 743.5 MHz
LTE Band 38	2572.5 – 2617.5 MHz	2572.5 – 2617.5 MHz
LTE Band 66	1710.7 – 1779.3 MHz	2110.7 – 2179.3 MHz

- Supported channel bandwidth is as follow:

LTE Band	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz
LTE Band 2	√	√	√	√	√	√
LTE Band 4	√	√	√	√	√	√
LTE Band 5	√	√	√	√	-	-
LTE Band 7	-	-	√	√	√	√
LTE Band 12	√	√	√	√	-	-
LTE Band 17	-	-	√	√	-	-
LTE Band 38	-	-	√	√	√	√
LTE Band 66	√	√	√	√	√	√

√: means that this feature is supported; -: means that this feature is not supported

- #4: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, HTW lab has not verified the authenticity of its information

### 3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China	
Contact information:	Tel: 86-755-26715499 E-mail: <a href="mailto:cs@szhtw.com.cn">cs@szhtw.com.cn</a> <a href="http://www.szhtw.com.cn">http://www.szhtw.com.cn</a>	
Qualifications	Type	Accreditation Number
	FCC	762235

## 4. TEST CONFIGURATION

### 4.1. Test frequency list

<p>LTE Band 2</p>	<table border="1"> <thead> <tr> <th>Test Frequency ID</th> <th>Bandwidth [MHz]</th> <th>N<sub>UL</sub></th> <th>Frequency of Uplink [MHz]</th> <th>N<sub>DL</sub></th> <th>Frequency of Downlink [MHz]</th> </tr> </thead> <tbody> <tr> <td rowspan="6">Low Range</td> <td>1.4</td> <td>18607</td> <td>1850.7</td> <td>607</td> <td>1930.7</td> </tr> <tr> <td>3</td> <td>18615</td> <td>1851.5</td> <td>615</td> <td>1931.5</td> </tr> <tr> <td>5</td> <td>18625</td> <td>1852.5</td> <td>625</td> <td>1932.5</td> </tr> <tr> <td>10</td> <td>18650</td> <td>1855</td> <td>650</td> <td>1935</td> </tr> <tr> <td>15<sup>[1]</sup></td> <td>18675</td> <td>1857.5</td> <td>675</td> <td>1937.5</td> </tr> <tr> <td>20<sup>[1]</sup></td> <td>18700</td> <td>1860</td> <td>700</td> <td>1940</td> </tr> <tr> <td>Mid Range</td> <td>1.4/3/5/10/15<sup>[1]</sup>/20<sup>[1]</sup></td> <td>18900</td> <td>1880</td> <td>900</td> <td>1960</td> </tr> <tr> <td rowspan="6">High Range</td> <td>1.4</td> <td>19193</td> <td>1909.3</td> <td>1193</td> <td>1989.3</td> </tr> <tr> <td>3</td> <td>19185</td> <td>1908.5</td> <td>1185</td> <td>1988.5</td> </tr> <tr> <td>5</td> <td>19175</td> <td>1907.5</td> <td>1175</td> <td>1987.5</td> </tr> <tr> <td>10</td> <td>19150</td> <td>1905</td> <td>1150</td> <td>1985</td> </tr> <tr> <td>15<sup>[1]</sup></td> <td>19125</td> <td>1902.5</td> <td>1125</td> <td>1982.5</td> </tr> <tr> <td>20<sup>[1]</sup></td> <td>19100</td> <td>1900</td> <td>1100</td> <td>1980</td> </tr> </tbody> </table> <p>NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.</p>	Test Frequency ID	Bandwidth [MHz]	N <sub>UL</sub>	Frequency of Uplink [MHz]	N <sub>DL</sub>	Frequency of Downlink [MHz]	Low Range	1.4	18607	1850.7	607	1930.7	3	18615	1851.5	615	1931.5	5	18625	1852.5	625	1932.5	10	18650	1855	650	1935	15 <sup>[1]</sup>	18675	1857.5	675	1937.5	20 <sup>[1]</sup>	18700	1860	700	1940	Mid Range	1.4/3/5/10/15 <sup>[1]</sup> /20 <sup>[1]</sup>	18900	1880	900	1960	High Range	1.4	19193	1909.3	1193	1989.3	3	19185	1908.5	1185	1988.5	5	19175	1907.5	1175	1987.5	10	19150	1905	1150	1985	15 <sup>[1]</sup>	19125	1902.5	1125	1982.5	20 <sup>[1]</sup>	19100	1900	1100	1980
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<p>LTE Band 7</p>	<table border="1"> <thead> <tr> <th>Test Frequency ID</th> <th>Bandwidth [MHz]</th> <th>N<sub>UL</sub></th> <th>Frequency of Uplink [MHz]</th> <th>N<sub>DL</sub></th> <th>Frequency of Downlink [MHz]</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Low Range</td> <td>5</td> <td>20775</td> <td>2502.5</td> <td>2775</td> <td>2622.5</td> </tr> <tr> <td>10</td> <td>20800</td> <td>2505</td> <td>2800</td> <td>2625</td> </tr> <tr> <td>15</td> <td>20825</td> <td>2507.5</td> <td>2825</td> <td>2627.5</td> </tr> <tr> <td>20<sup>[1]</sup></td> <td>20850</td> <td>2510</td> <td>2850</td> <td>2630</td> </tr> <tr> <td>Mid Range</td> <td>5/10/15/20<sup>[1]</sup></td> <td>21100</td> <td>2535</td> <td>3100</td> <td>2655</td> </tr> <tr> <td rowspan="4">High Range</td> <td>5</td> <td>21425</td> <td>2567.5</td> <td>3425</td> <td>2687.5</td> </tr> <tr> <td>10</td> <td>21400</td> <td>2565</td> <td>3400</td> <td>2685</td> </tr> <tr> <td>15</td> <td>21375</td> <td>2562.5</td> <td>3375</td> <td>2682.5</td> </tr> <tr> <td>20<sup>[1]</sup></td> <td>21350</td> <td>2560</td> <td>3350</td> <td>2680</td> </tr> </tbody> </table> <p>NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.</p>	Test Frequency ID	Bandwidth [MHz]	N <sub>UL</sub>	Frequency of Uplink [MHz]	N <sub>DL</sub>	Frequency of Downlink [MHz]	Low Range	5	20775	2502.5	2775	2622.5	10	20800	2505	2800	2625	15	20825	2507.5	2825	2627.5	20 <sup>[1]</sup>	20850	2510	2850	2630	Mid Range	5/10/15/20 <sup>[1]</sup>	21100	2535	3100	2655	High Range	5	21425	2567.5	3425	2687.5	10	21400	2565	3400	2685	15	21375	2562.5	3375	2682.5	20 <sup>[1]</sup>	21350	2560	3350	2680																				
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<p>LTE Band 12</p>	<p>Table 4.3.1.1.12-1: Test frequencies for E-UTRA channel bandwidth for operating band 12</p> <table border="1"> <thead> <tr> <th>Test Frequency ID</th> <th>Bandwidth [MHz]</th> <th>N<sub>UL</sub></th> <th>Frequency of Uplink [MHz]</th> <th>N<sub>DL</sub></th> <th>Frequency of Downlink [MHz]</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Low Range</td> <td>1.4</td> <td>23017</td> <td>699.7</td> <td>5017</td> <td>729.7</td> </tr> <tr> <td>3</td> <td>23025</td> <td>700.5</td> <td>5025</td> <td>730.5</td> </tr> <tr> <td>5<sup>[1]</sup></td> <td>23035</td> <td>701.5</td> <td>5035</td> <td>731.5</td> </tr> <tr> <td>10<sup>[1]</sup></td> <td>23060</td> <td>704</td> <td>5060</td> <td>734</td> </tr> <tr> <td>Mid Range</td> <td>1.4/3/5<sup>[1]</sup>/10<sup>[1]</sup></td> <td>23095</td> <td>707.5</td> <td>5095</td> <td>737.5</td> </tr> <tr> <td rowspan="4">High Range</td> <td>1.4</td> <td>23173</td> <td>715.3</td> <td>5173</td> <td>745.3</td> </tr> <tr> <td>3</td> <td>23165</td> <td>714.5</td> <td>5165</td> <td>744.5</td> </tr> <tr> <td>5<sup>[1]</sup></td> <td>23155</td> <td>713.5</td> <td>5155</td> <td>743.5</td> </tr> <tr> <td>10<sup>[1]</sup></td> <td>23130</td> <td>711</td> <td>5130</td> <td>741</td> </tr> </tbody> </table> <p>NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.</p>	Test Frequency ID	Bandwidth [MHz]	N <sub>UL</sub>	Frequency of Uplink [MHz]	N <sub>DL</sub>	Frequency of Downlink [MHz]	Low Range	1.4	23017	699.7	5017	729.7	3	23025	700.5	5025	730.5	5 <sup>[1]</sup>	23035	701.5	5035	731.5	10 <sup>[1]</sup>	23060	704	5060	734	Mid Range	1.4/3/5 <sup>[1]</sup> /10 <sup>[1]</sup>	23095	707.5	5095	737.5	High Range	1.4	23173	715.3	5173	745.3	3	23165	714.5	5165	744.5	5 <sup>[1]</sup>	23155	713.5	5155	743.5	10 <sup>[1]</sup>	23130	711	5130	741																				
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<p>LTE Band 17</p>	<table border="1"> <thead> <tr> <th>Test Frequency ID</th> <th>Bandwidth [MHz]</th> <th>N<sub>UL</sub></th> <th>Frequency of Uplink [MHz]</th> <th>N<sub>DL</sub></th> <th>Frequency of Downlink [MHz]</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Low Range</td> <td>5<sup>[1]</sup></td> <td>23755</td> <td>706.5</td> <td>5755</td> <td>736.5</td> </tr> <tr> <td>10<sup>[1]</sup></td> <td>23780</td> <td>709</td> <td>5780</td> <td>739</td> </tr> <tr> <td>Mid Range</td> <td>5<sup>[1]</sup>/10<sup>[1]</sup></td> <td>23790</td> <td>710</td> <td>5790</td> <td>740</td> </tr> <tr> <td rowspan="2">High Range</td> <td>5<sup>[1]</sup></td> <td>23825</td> <td>713.5</td> <td>5825</td> <td>743.5</td> </tr> <tr> <td>10<sup>[1]</sup></td> <td>23800</td> <td>711</td> <td>5800</td> <td>741</td> </tr> </tbody> </table> <p>NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.</p>	Test Frequency ID	Bandwidth [MHz]	N <sub>UL</sub>	Frequency of Uplink [MHz]	N <sub>DL</sub>	Frequency of Downlink [MHz]	Low Range	5 <sup>[1]</sup>	23755	706.5	5755	736.5	10 <sup>[1]</sup>	23780	709	5780	739	Mid Range	5 <sup>[1]</sup> /10 <sup>[1]</sup>	23790	710	5790	740	High Range	5 <sup>[1]</sup>	23825	713.5	5825	743.5	10 <sup>[1]</sup>	23800	711	5800	741																																								
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LTE Band 38	<b>Test Frequency ID</b>	<b>Bandwidth [MHz]</b>	<b>EARFCN</b>	<b>Frequency (UL and DL) [MHz]</b>		
	Low Range	5	37775	2572.5		
		10	37800	2575		
		15	37825	2577.5		
		20	37850	2580		
	Mid Range	5/10/15/20	38000	2595		
	High Range	5	38225	2617.5		
		10	38200	2615		
		15	38175	2612.5		
		20	38150	2610		
LTE Band 66	<b>Table 4.3.1.1.66-1: Test frequencies for E-UTRA channel bandwidth for operating band 66</b>					
	<b>Test Frequency ID</b>	<b>Bandwidth [MHz]</b>	<b>N<sub>UL</sub></b>	<b>Frequency of Uplink [MHz]</b>	<b>N<sub>DL</sub></b>	<b>Frequency of Downlink [MHz]</b>
	Low Range	1.4	131979	1710.7	66443	2110.7
		3	131987	1711.5	66451	2111.5
		5	131997	1712.5	66461	2112.5
		10	132022	1715	66486	2115
		15	132047	1717.5	66511	2117.5
		20	132072	1720	66536	2120
	Mid Range Tx <sup>1</sup>	1.4/3/5/10/15/20	132322	1745	66786	2145
	Mid Range	1.4/3/5/10/15/20	132422	1755	66886	2155
	Paired High Range <sup>2</sup>	1.4	132665	1779.3	67129	2179.3
		3	132657	1778.5	67121	2178.5
		5	132647	1777.5	67111	2177.5
		10	132622	1775	67086	2175
		15	132597	1772.5	67061	2172.5
		20	132572	1770	67036	2170
	High Range <sup>3</sup>	1.4	NA	NA	67329	2199.3
		3	NA	NA	67321	2198.5
		5	NA	NA	67311	2197.5
		10	NA	NA	67286	2195
15		NA	NA	67261	2192.5	
20		NA	NA	67236	2190	

### 4.2. Test mode

Test mode	Link mode
-----------	-----------

- 1) Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems and ANSI C63.26 with maximum output power.
- 2) Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Test configuration is as follow:

Test Items	Bandwidth	Modulation	RB #		
			1	Half	Full
Radiated Spurious Emission	#5	#6	○	-	-

Note:

- #5: Test all kind of bandwidth in section 3.3
- #6: Test all kind of uplink modulation in section 3.3
- ○: means that this configuration is chosen for testing
- -: means that this configuration is not test.
- The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different bandwidth, modulations and RB size/offset in exploratory test. Subsequently, only the worst case emissions (highest bandwidth, QPSK, and 1RB0) are reported.

### 4.3. Test sample information

Test item	HTW sample no.
Radiated test items	YPHT23060801007

Note:

Radiated test items: Radiated Spurious Emission

### 4.4. Support unit used in test configuration and system

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?				
✓ No				
Item	Equipment	Trade Name	Model No.	Other
1				
2				

### 4.5. Testing environmental condition

Voltage	VN=Nominal Voltage	AC 120V
Temperature	TN=Normal Temperature	25 °C
Humidity	30~60 %	
Air Pressure	950-1050 hPa	

#### 4.6. Statement of the measurement uncertainty

No.	Test Items	Measurement Uncertainty
1	Radiated Spurious Emission	4.54dB for 30MHz-1GHz 5.10dB for above 1GHz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=1.96$ .

#### 4.7. Equipments Used during the Test

● Radiated Spurious Emission							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0122	SAC-3m-01	C11121	2023/4/17	2026/4/16
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2023/08/22	2024/08/21
●	Spectrum Analyzer	R&S	HTWE0385	N9020A	MY54486658	2023/08/22	2024/08/21
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0123	VULB9163	538	2021/4/6	2024/4/5
●	Horn Antenna	SCHWARZBECK	HTWE0126	BBHA 9120D	1011	2023/2/14	2026/2/13
●	Pre-Amplifier	CD	HTWE0071	PAP-0102	12004	2023/5/25	2024/5/24
●	Broadband Pre-amplifier	SCHWARZBECK	HTWE0201	BBV 9718	9718-248	2023/5/25	2024/5/24
●	Test Software	Audix	N/A	E3	N/A	N/A	N/A

● Auxiliary Equipment							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Radio communication tester	R&S	HTWE0287	CMW500	137688-Lv	2023/08/25	2024/08/24
●	High pass filter	Wainwright	HTWE0297	WHKX3.0/18G-10SS	38	2023/05/15	2024/05/14
○	Band Stop filter	-	HTWE0039	N/A	N/A	2023/01/26	2024/01/25

## **5. TEST CONDITIONS AND RESULTS**

### **5.1. ERP and EIRP**

#### **LIMIT**

LTE Band 2/7/25/38/41: 2W(33dBm) EIRP

LTE Band 4/66: 1W(30dBm) EIRP

LTE Band 5/26: 7W(38.50dBm) ERP

LTE Band 12/13/17/71: 3W(34.77dBm) ERP

#### **TEST PROCEDURE**

1. According to the power tested in section 5.1, select the maximum power in each mode, and use the following formula to calculate the corresponding ERP/EIRP.
2.  $ERP = \text{conducted power} + \text{Gain(dBd)}$
3.  $EIRP = \text{conducted power} + \text{Gain(dBi)}$   
 $ERP = EIRP - 2.15$

#### **TEST RESULTS**

**Passed**       **Not Applicable**

#### **TEST DATA**

Refer to the appendix report

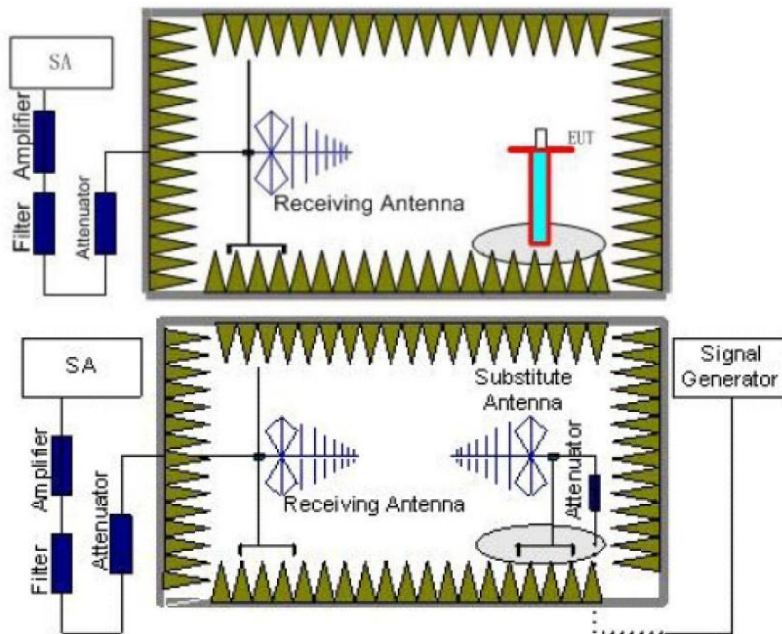
## 5.2. Radiated Spurious Emission

### LIMIT

LTE Band 2/4/5/12/13/17/25/26/66/71: -13dBm;

LTE Band 7/38/41: -25dBm

### TEST CONFIGURATION



### TEST PROCEDURE

1. Place the EUT in the center of the turntable.
  - a) For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, the EUT shall be placed on a RF-transparent table at a nominal height of 80 cm above the reference ground plane
  - b) For radiated measurements performed at frequencies above 1 GHz, the EUT shall be placed on an RF transparent table at a nominal height of 1.5 m above the ground plane.
2. Unless the EUT uses an integral antenna, the EUT shall be terminated with a non-radiating transmitter load. In cases where the EUT uses an adjustable antenna, the antenna shall be adjusted through typical positions and lengths to maximize emissions levels.
3. The EUT shall be tested while operating on the frequency per manufacturer specification. Set the transmitter to operate in continuous transmit mode.
4. Receiver or Spectrum set as follow:
 

Below 1GHz, RBW=100kHz, VBW=300kHz, Detector=Peak, Sweep time=Auto

Above 1GHz, RBW=1MHz, VBW=3MHz, Detector=Peck, Sweep time=Auto
5. Each emission under consideration shall be evaluated:
  - a) Raise and lower the measurement antenna from 1 m to 4 m, as necessary to enable detection of the maximum emission amplitude relative to measurement antenna height.
  - b) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.
  - c) Return the turntable to the azimuth where the highest emission amplitude level was observed.
  - d) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.
  - e) Record the measured emission amplitude level and frequency
6. Repeat step 5 for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.

7. Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.
8. Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.
9. Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected, and set an output power level such that the radiated signal can be detected by the measurement instrument, with sufficient dynamic range relative to the noise floor.
10. For each emission that was detected and measured in the initial test
  - a) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.
  - b) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step 5 and step 6.
  - c) Record the output power level of the signal generator when equivalence is achieved in step b).
11. Repeat step 8 through step 10 with the measurement antenna oriented in the opposite polarization.
12. Calculate the emission power in dBm referenced to a half-wave dipole using the following equation:  
$$P_e = P_s(\text{dBm}) - \text{cable loss (dB)} + \text{antenna gain (dBd)}$$
where  
 $P_e$  = equivalent emission power in dBm  
 $P_s$  = source (signal generator) power in dBm  
*NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.*
13. Correct the antenna gain of the substitution antenna if necessary to reference the emission power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from:  
$$\text{gain (dBd)} = \text{gain (dBi)} - 2.15 \text{ dB.}$$
If necessary, the antenna gain can be calculated from calibrated antenna factor information
14. Provide the complete measurement results as a part of the test report.

### **TEST MODE**

Please refer to the clause 4.2

### **TEST RESULTS**

**Passed**       **Not Applicable**

Note: only show the worse case for QPSK modulation.

LTE Band 2									
Test channel:	Low			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	44.64	-66.95	25.69	1.22	30.54	-70.58	-13.00	-57.58	Peak
2	171.04	-69.19	21.23	2.48	30.37	-75.85	-13.00	-62.85	Peak
3	1521.46	-70.25	36.41	8.28	28.83	-54.39	-13.00	-41.39	Peak
4	2141.14	-70.31	40.44	10.11	28.89	-48.65	-13.00	-35.65	Peak
5	3719.15	-55.80	42.27	5.20	36.98	-45.31	-13.00	-32.31	Peak
6	5574.67	-53.28	43.76	6.51	35.21	-38.22	-13.00	-25.22	Peak
Test channel:	Low			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	45.75	-70.61	21.68	1.24	30.55	-78.24	-13.00	-65.24	Peak
2	125.96	-68.72	21.62	2.11	30.61	-75.60	-13.00	-62.60	Peak
3	1529.84	-69.97	37.76	8.31	28.80	-52.70	-13.00	-39.70	Peak
4	2426.82	-68.69	39.30	10.87	27.83	-46.35	-13.00	-33.35	Peak
5	3719.15	-55.33	42.26	5.20	36.98	-44.85	-13.00	-31.85	Peak
6	5574.67	-51.64	43.93	6.51	35.21	-36.41	-13.00	-23.41	Peak

Test channel:	Mid			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	39.75	-69.60	27.74	1.15	30.61	-71.32	-13.00	-58.32	Peak
2	540.11	-72.79	25.31	4.63	29.88	-72.73	-13.00	-59.73	Peak
3	1385.81	-69.23	37.13	7.85	29.03	-53.28	-13.00	-40.28	Peak
4	2220.19	-70.31	40.85	10.30	28.97	-48.13	-13.00	-35.13	Peak
5	3757.21	-56.05	42.23	5.18	37.03	-45.67	-13.00	-32.67	Peak
6	5646.08	-54.74	43.79	6.55	35.20	-39.60	-13.00	-26.60	Peak
Test channel:	Mid			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	125.96	-68.55	21.62	2.11	30.61	-75.43	-13.00	-62.43	Peak
2	800.80	-76.59	29.40	5.77	29.66	-71.08	-13.00	-58.08	Peak
3	1443.31	-70.22	37.76	8.03	28.80	-53.23	-13.00	-40.23	Peak
4	2257.08	-70.13	41.02	10.43	28.58	-47.26	-13.00	-34.26	Peak
5	3757.21	-53.30	42.15	5.18	37.03	-43.00	-13.00	-30.00	Peak
6	5646.08	-52.14	43.95	6.55	35.20	-36.84	-13.00	-23.84	Peak



Test channel:		High			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	39.75	-72.09	27.74	1.15	30.61	-73.81	-13.00	-60.81	Peak	
2	632.71	-80.14	28.77	5.05	29.79	-76.11	-13.00	-63.11	Peak	
3	1398.05	-69.69	37.16	7.90	29.08	-53.71	-13.00	-40.71	Peak	
4	2129.41	-68.32	40.33	10.03	28.88	-46.84	-13.00	-33.84	Peak	
5	3795.66	-55.96	42.19	5.24	37.08	-45.61	-13.00	-32.61	Peak	
6	5703.86	-52.87	43.87	6.63	35.34	-37.71	-13.00	-24.71	Peak	
Test channel:		High			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	46.72	-70.22	21.78	1.25	30.57	-77.76	-13.00	-64.76	Peak	
2	125.96	-72.50	21.62	2.11	30.61	-79.38	-13.00	-66.38	Peak	
3	1491.67	-71.01	37.76	8.18	28.82	-53.89	-13.00	-40.89	Peak	
4	2188.71	-70.92	41.55	10.25	29.04	-48.16	-13.00	-35.16	Peak	
5	3795.66	-55.16	42.03	5.24	37.08	-44.97	-13.00	-31.97	Peak	
6	5703.86	-51.52	44.02	6.63	35.34	-36.21	-13.00	-23.21	Peak	

LTE Band 4									
Test channel:	Low			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	39.75	-79.54	27.74	1.15	30.61	-81.26	-13.00	-68.26	Peak
2	746.42	-81.20	29.38	5.54	29.51	-75.79	-13.00	-62.79	Peak
3	1391.92	-71.29	37.14	7.88	29.08	-55.35	-13.00	-42.35	Peak
4	2322.48	-70.61	40.25	10.60	28.85	-48.61	-13.00	-35.61	Peak
5	3436.94	-56.91	40.11	4.95	37.60	-49.45	-13.00	-36.45	Peak
6	5164.81	-46.89	44.02	6.32	35.30	-31.85	-13.00	-18.85	Peak
Test channel:	Low			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	80.02	-77.18	21.30	1.66	30.60	-84.82	-13.00	-71.82	Peak
2	751.69	-79.73	29.29	5.56	29.45	-74.33	-13.00	-61.33	Peak
3	1496.59	-70.95	37.76	8.20	28.83	-53.82	-13.00	-40.82	Peak
4	2220.19	-70.02	41.48	10.30	28.97	-47.21	-13.00	-34.21	Peak
5	3436.94	-60.35	40.15	4.95	37.60	-52.85	-13.00	-39.85	Peak
6	5164.81	-57.29	44.02	6.32	35.30	-42.25	-13.00	-29.25	Peak

Test channel:	Mid			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	37.84	-80.11	27.46	1.12	30.64	-82.17	-13.00	-69.17	Peak
2	829.47	-80.65	29.92	5.88	29.31	-74.16	-13.00	-61.16	Peak
3	1449.66	-70.97	36.85	8.06	28.86	-54.92	-13.00	-41.92	Peak
4	2379.30	-71.07	39.93	10.78	28.08	-48.44	-13.00	-35.44	Peak
5	3463.29	-55.38	40.49	4.97	37.52	-47.44	-13.00	-34.44	Peak
6	5191.17	-43.39	43.97	6.31	35.44	-28.55	-13.00	-15.55	Peak
Test channel:	Mid			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	58.52	-79.87	23.54	1.41	30.82	-85.74	-13.00	-72.74	Peak
2	908.88	-80.54	29.82	6.19	29.43	-73.96	-13.00	-60.96	Peak
3	1533.21	-70.37	37.76	8.32	28.79	-53.08	-13.00	-40.08	Peak
4	2234.87	-70.61	41.29	10.38	28.71	-47.65	-13.00	-34.65	Peak
5	3463.29	-58.40	40.55	4.97	37.52	-50.40	-13.00	-37.40	Peak
6	5191.17	-57.12	43.95	6.31	35.44	-42.30	-13.00	-29.30	Peak

Test channel:		High			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	41.75	-79.57	26.96	1.18	30.58	-82.01	-13.00	-69.01	Peak	
2	847.15	-80.71	29.80	5.96	29.33	-74.28	-13.00	-61.28	Peak	
3	1493.31	-70.51	36.58	8.19	28.83	-54.57	-13.00	-41.57	Peak	
4	2387.15	-70.93	39.89	10.80	27.93	-48.17	-13.00	-35.17	Peak	
5	3489.84	-59.24	40.86	5.04	37.48	-50.82	-13.00	-37.82	Peak	
6	5230.96	-43.31	43.97	6.33	35.61	-28.62	-13.00	-15.62	Peak	
Test channel:		High			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	89.87	-81.01	25.83	1.77	30.69	-84.10	-13.00	-71.10	Peak	
2	868.26	-80.68	29.82	6.05	29.27	-74.08	-13.00	-61.08	Peak	
3	1567.27	-71.27	37.76	8.43	28.83	-53.91	-13.00	-40.91	Peak	
4	2212.88	-69.97	41.57	10.30	29.05	-47.15	-13.00	-34.15	Peak	
5	3489.84	-57.92	40.96	5.04	37.48	-49.40	-13.00	-36.40	Peak	
6	5230.96	-56.32	43.95	6.33	35.61	-41.65	-13.00	-28.65	Peak	

LTE Band 5									
Test channel:	Low			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	51.56	-76.94	23.70	1.32	30.67	-82.59	-13.00	-69.59	Peak
2	593.90	-73.55	27.59	4.88	29.79	-70.87	-13.00	-57.87	Peak
3	1402.66	-70.48	37.14	7.92	29.04	-54.46	-13.00	-41.46	Peak
4	2229.97	-70.06	40.79	10.35	28.80	-47.72	-13.00	-34.72	Peak
5	6868.65	-69.03	47.06	7.34	34.20	-48.83	-13.00	-35.83	Peak
6	9809.40	-71.87	50.59	9.50	33.53	-45.31	-13.00	-32.31	Peak
Test channel:	Low			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	86.76	-79.05	24.46	1.74	30.66	-83.51	-13.00	-70.51	Peak
2	623.87	-79.72	27.93	5.02	29.90	-76.67	-13.00	-63.67	Peak
3	1440.14	-70.32	37.76	8.02	28.76	-53.30	-13.00	-40.30	Peak
4	2200.76	-71.05	41.72	10.29	29.11	-48.15	-13.00	-35.15	Peak
5	6992.14	-68.92	47.35	7.34	34.22	-48.45	-13.00	-35.45	Peak
6	10534.09	-69.83	52.35	9.77	36.04	-43.75	-13.00	-30.75	Peak

Test channel:	Mid			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	39.75	-69.67	27.74	1.15	30.61	-71.39	-13.00	-58.39	Peak
2	126.85	-69.79	16.30	2.12	30.61	-81.98	-13.00	-68.98	Peak
3	1330.61	-70.93	37.02	7.68	28.86	-55.09	-13.00	-42.09	Peak
4	2269.51	-69.23	40.56	10.48	28.63	-46.82	-13.00	-33.82	Peak
5	4299.89	-67.61	42.61	5.80	36.43	-55.63	-13.00	-42.63	Peak
6	6851.19	-67.96	46.98	7.29	34.05	-47.74	-13.00	-34.74	Peak
Test channel:	Mid			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	44.64	-69.63	21.58	1.22	30.54	-77.37	-13.00	-64.37	Peak
2	124.20	-70.78	21.75	2.10	30.61	-77.54	-13.00	-64.54	Peak
3	1432.25	-70.75	37.76	7.99	28.94	-53.94	-13.00	-40.94	Peak
4	2259.56	-69.71	40.99	10.44	28.57	-46.85	-13.00	-33.85	Peak
5	4159.93	-64.29	42.33	5.71	36.78	-53.03	-13.00	-40.03	Peak
6	6851.19	-67.77	47.39	7.29	34.05	-47.14	-13.00	-34.14	Peak

Test channel:		High			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	38.78	-80.67	27.60	1.13	30.62	-82.56	-13.00	-69.56	Peak	
2	593.90	-73.57	27.59	4.88	29.79	-70.89	-13.00	-57.89	Peak	
3	1300.27	-70.41	36.95	7.57	29.05	-54.94	-13.00	-41.94	Peak	
4	2203.18	-70.47	40.95	10.29	29.13	-48.36	-13.00	-35.36	Peak	
5	6974.36	-69.09	47.53	7.34	34.15	-48.37	-13.00	-35.37	Peak	
6	9859.47	-69.76	50.54	9.50	34.73	-44.45	-13.00	-31.45	Peak	
Test channel:		High			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	90.82	-80.42	25.88	1.78	30.69	-83.45	-13.00	-70.45	Peak	
2	593.90	-73.56	27.20	4.88	29.79	-71.27	-13.00	-58.27	Peak	
3	1480.24	-69.96	37.76	8.15	28.88	-52.93	-13.00	-39.93	Peak	
4	2186.30	-70.61	41.51	10.24	29.08	-47.94	-13.00	-34.94	Peak	
5	6974.36	-67.49	47.36	7.34	34.15	-46.94	-13.00	-33.94	Peak	
6	10560.94	-70.25	52.38	9.79	36.03	-44.11	-13.00	-31.11	Peak	

LTE Band 7									
Test channel:	Low			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	38.78	-79.25	27.60	1.13	30.62	-81.14	-25.00	-56.14	Peak
2	593.90	-76.39	27.59	4.88	29.79	-73.71	-25.00	-48.71	Peak
3	2168.08	-68.86	40.68	3.95	37.65	-61.88	-25.00	-36.88	Peak
4	4688.62	-68.21	43.55	5.88	36.06	-54.84	-25.00	-29.84	Peak
5	7527.83	-47.81	47.96	7.75	33.97	-26.07	-25.00	-1.07	Peak
6	11341.14	-71.66	52.96	10.25	36.08	-44.53	-25.00	-19.53	Peak
Test channel:	Low			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	90.82	-80.32	25.88	1.78	30.69	-83.35	-25.00	-58.35	Peak
2	593.90	-76.28	27.20	4.88	29.79	-73.99	-25.00	-48.99	Peak
3	2179.15	-68.20	41.39	3.97	37.69	-60.53	-25.00	-35.53	Peak
4	4971.32	-69.09	44.39	6.08	35.85	-54.47	-25.00	-29.47	Peak
5	7527.83	-59.89	48.37	7.75	33.97	-37.74	-25.00	-12.74	Peak
6	11283.55	-72.45	53.03	10.20	36.05	-45.27	-25.00	-20.27	Peak

Test channel:	Mid			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	59.35	-79.20	24.46	1.42	30.84	-84.16	-25.00	-59.16	Peak
2	593.90	-75.69	27.59	4.88	29.79	-73.01	-25.00	-48.01	Peak
3	1786.72	-65.07	36.67	3.55	37.90	-62.75	-25.00	-37.75	Peak
4	4332.85	-66.79	42.72	5.86	36.50	-54.71	-25.00	-29.71	Peak
5	7604.87	-49.31	47.64	7.83	34.07	-27.91	-25.00	-2.91	Peak
6	9784.47	-69.41	50.54	9.48	33.44	-42.83	-25.00	-17.83	Peak
Test channel:	Mid			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	89.87	-79.92	25.83	1.77	30.69	-83.01	-25.00	-58.01	Peak
2	593.90	-72.56	27.20	4.88	29.79	-70.27	-25.00	-45.27	Peak
3	2076.26	-67.60	39.65	3.77	37.95	-62.13	-25.00	-37.13	Peak
4	5284.50	-68.18	44.00	6.34	35.35	-53.19	-25.00	-28.19	Peak
5	7604.87	-57.73	48.26	7.83	34.07	-35.71	-25.00	-10.71	Peak
6	10534.09	-69.14	52.35	9.77	36.04	-43.06	-25.00	-18.06	Peak

Test channel:		High			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	43.71	-80.42	26.09	1.21	30.55	-83.67	-25.00	-58.67	Peak	
2	593.90	-76.10	27.59	4.88	29.79	-73.42	-25.00	-48.42	Peak	
3	2437.41	-66.95	39.61	4.22	37.62	-60.74	-25.00	-35.74	Peak	
4	4478.63	-68.79	43.14	5.94	36.13	-55.84	-25.00	-30.84	Peak	
5	7682.70	-48.15	47.73	7.78	33.74	-26.38	-25.00	-1.38	Peak	
6	11545.04	-72.34	52.94	10.39	36.18	-45.19	-25.00	-20.19	Peak	
Test channel:		High			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	87.68	-79.94	24.87	1.75	30.67	-83.99	-25.00	-58.99	Peak	
2	593.90	-75.26	27.20	4.88	29.79	-72.97	-25.00	-47.97	Peak	
3	2195.85	-69.88	41.66	4.00	37.75	-61.97	-25.00	-36.97	Peak	
4	4388.35	-69.31	42.98	5.81	36.27	-56.79	-25.00	-31.79	Peak	
5	7682.70	-56.28	48.38	7.78	33.74	-33.86	-25.00	-8.86	Peak	
6	11283.55	-71.78	53.03	10.20	36.05	-44.60	-25.00	-19.60	Peak	



LTE Band 12										
Test channel:	Low			Polarization:	Horizontal					
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	38.78	-96.86	27.60	1.13	0.00	-68.13	-13.00	-55.13	Peak	
2	410.54	-94.00	25.71	3.99	0.00	-64.30	-13.00	-51.30	Peak	
3	1399.35	-46.36	37.16	3.08	37.33	-43.45	-13.00	-30.45	Peak	
4	2102.85	-28.38	40.09	3.78	37.85	-22.36	-13.00	-9.36	Peak	
5	3507.65	-45.54	41.11	5.11	37.47	-36.79	-13.00	-23.79	Peak	
6	7009.96	-68.97	47.66	7.35	34.24	-48.20	-13.00	-35.20	Peak	
Test channel:	Low			Polarization:	Vertical					
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	93.74	-95.67	25.84	1.81	0.00	-68.02	-13.00	-55.02	Peak	
2	425.24	-94.81	25.43	4.06	0.00	-65.32	-13.00	-52.32	Peak	
3	1399.35	-47.13	37.76	3.08	37.33	-43.62	-13.00	-30.62	Peak	
4	2102.85	-32.81	40.11	3.78	37.85	-26.77	-13.00	-13.77	Peak	
5	3507.65	-47.17	41.23	5.11	37.47	-38.30	-13.00	-25.30	Peak	
6	6974.36	-68.16	47.36	7.34	34.15	-47.61	-13.00	-34.61	Peak	

Test channel:	Mid			Polarization:	Horizontal					
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	39.75	-94.50	27.74	1.15	0.00	-65.61	-13.00	-52.61	Peak	
2	434.30	-94.42	26.02	4.11	0.00	-64.29	-13.00	-51.29	Peak	
3	1406.50	-48.44	37.12	3.09	37.34	-45.57	-13.00	-32.57	Peak	
4	2108.21	-27.34	40.14	3.78	37.82	-21.24	-13.00	-8.24	Peak	
5	3516.59	-54.74	41.24	5.14	37.46	-45.82	-13.00	-32.82	Peak	
6	6974.36	-68.89	47.53	7.34	34.15	-48.17	-13.00	-35.17	Peak	
Test channel:	Mid			Polarization:	Vertical					
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	94.74	-95.40	25.82	1.82	0.00	-67.76	-13.00	-54.76	Peak	
2	438.91	-94.99	25.60	4.13	0.00	-65.26	-13.00	-52.26	Peak	
3	1406.50	-51.63	37.76	3.09	37.34	-48.12	-13.00	-35.12	Peak	
4	2108.21	-33.40	40.20	3.78	37.82	-27.24	-13.00	-14.24	Peak	
5	3516.59	-59.11	41.37	5.14	37.46	-50.06	-13.00	-37.06	Peak	
6	6921.30	-67.70	47.37	7.39	34.41	-47.35	-13.00	-34.35	Peak	



Test channel:		High			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	36.92	-94.76	27.32	1.10	0.00	-66.34	-13.00	-53.34	Peak	
2	426.73	-94.93	26.00	4.07	0.00	-64.86	-13.00	-51.86	Peak	
3	1413.67	-51.19	37.07	3.09	37.35	-48.38	-13.00	-35.38	Peak	
4	2118.97	-37.50	40.24	3.79	37.77	-31.24	-13.00	-18.24	Peak	
5	3525.56	-53.46	41.36	5.15	37.45	-44.40	-13.00	-31.40	Peak	
6	6851.19	-67.83	46.98	7.29	34.05	-47.61	-13.00	-34.61	Peak	
Test channel:		High			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	100.57	-94.87	25.67	1.88	0.00	-67.32	-13.00	-54.32	Peak	
2	419.30	-94.04	25.37	4.04	0.00	-64.63	-13.00	-51.63	Peak	
3	1413.67	-48.11	37.76	3.09	37.35	-44.61	-13.00	-31.61	Peak	
4	2118.97	-35.00	40.38	3.79	37.77	-28.60	-13.00	-15.60	Peak	
5	3525.56	-54.92	41.50	5.15	37.45	-45.72	-13.00	-32.72	Peak	
6	6730.19	-68.90	47.23	7.27	34.18	-48.58	-13.00	-35.58	Peak	

LTE Band 17									
Test channel:	Low			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	40.03	-96.03	27.77	1.15	0.00	-67.11	-13.00	-54.11	Peak
2	419.30	-95.30	25.96	4.04	0.00	-65.30	-13.00	-52.30	Peak
3	1410.08	-51.25	37.10	3.09	37.35	-48.41	-13.00	-35.41	Peak
4	2113.59	-32.07	40.19	3.79	37.80	-25.89	-13.00	-12.89	Peak
5	7009.96	-68.59	47.66	7.35	34.24	-47.82	-13.00	-34.82	Peak
6	10805.68	-69.89	52.44	9.91	35.96	-43.50	-13.00	-30.50	Peak
Test channel:	Low			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	107.52	-94.93	24.75	1.94	0.00	-68.24	-13.00	-55.24	Peak
2	417.82	-95.04	25.36	4.03	0.00	-65.65	-13.00	-52.65	Peak
3	1410.08	-54.02	37.76	3.09	37.35	-50.52	-13.00	-37.52	Peak
4	2113.59	-29.10	40.29	3.79	37.80	-22.82	-13.00	-9.82	Peak
5	6938.94	-68.14	47.37	7.37	34.30	-47.70	-13.00	-34.70	Peak
6	10860.83	-70.44	52.66	9.93	35.94	-43.79	-13.00	-30.79	Peak

Test channel:	Mid			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	41.75	-95.44	26.96	1.18	0.00	-67.30	-13.00	-54.30	Peak
2	470.89	-95.05	25.48	4.30	0.00	-65.27	-13.00	-52.27	Peak
3	1410.08	-50.49	37.10	3.09	37.35	-47.65	-13.00	-34.65	Peak
4	2113.59	-29.07	40.19	3.79	37.80	-22.89	-13.00	-9.89	Peak
5	2825.19	-59.16	40.77	4.49	37.75	-51.65	-13.00	-38.65	Peak
6	7009.96	-67.11	47.66	7.35	34.24	-46.34	-13.00	-33.34	Peak
Test channel:	Mid			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	100.57	-95.76	25.67	1.88	0.00	-68.21	-13.00	-55.21	Peak
2	406.23	-93.83	25.29	3.97	0.00	-64.57	-13.00	-51.57	Peak
3	1410.08	-50.34	37.76	3.09	37.35	-46.84	-13.00	-33.84	Peak
4	2113.59	-29.64	40.29	3.79	37.80	-23.36	-13.00	-10.36	Peak
5	3525.56	-57.03	41.50	5.15	37.45	-47.83	-13.00	-34.83	Peak
6	6799.06	-67.39	47.41	7.23	34.42	-47.17	-13.00	-34.17	Peak

Test channel:		High			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	38.78	-95.87	27.60	1.13	0.00	-67.14	-13.00	-54.14	Peak	
2	404.81	-94.26	25.55	3.96	0.00	-64.75	-13.00	-51.75	Peak	
3	1410.08	-54.59	37.10	3.09	37.35	-51.75	-13.00	-38.75	Peak	
4	2113.59	-31.11	40.19	3.79	37.80	-24.93	-13.00	-11.93	Peak	
5	6974.36	-67.90	47.53	7.34	34.15	-47.18	-13.00	-34.18	Peak	
6	9784.47	-70.78	50.54	9.48	33.44	-44.20	-13.00	-31.20	Peak	
Test channel:		High			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	112.16	-93.14	23.91	1.99	0.00	-67.24	-13.00	-54.24	Peak	
2	394.97	-93.76	25.14	3.91	0.00	-64.71	-13.00	-51.71	Peak	
3	1410.08	-54.27	37.76	3.09	37.35	-50.77	-13.00	-37.77	Peak	
4	2113.59	-29.84	40.29	3.79	37.80	-23.56	-13.00	-10.56	Peak	
5	6833.77	-68.19	47.40	7.27	34.22	-47.74	-13.00	-34.74	Peak	
6	10860.83	-71.56	52.66	9.93	35.94	-44.91	-13.00	-31.91	Peak	

LTE Band 38									
Test channel:	Low			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	170.43	-71.85	21.25	2.48	30.38	-78.50	-13.00	-65.50	Peak
2	593.90	-75.91	27.59	4.88	29.79	-73.23	-13.00	-60.23	Peak
3	1276.82	-66.72	36.90	2.90	37.31	-64.23	-13.00	-51.23	Peak
4	3662.78	-67.11	42.33	5.09	37.07	-56.76	-13.00	-43.76	Peak
5	7741.59	-50.71	47.81	7.89	33.76	-28.77	-13.00	-15.77	Peak
6	11197.71	-71.90	52.94	10.14	36.00	-44.82	-13.00	-31.82	Peak
Test channel:	Low			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	121.18	-68.36	21.97	2.07	30.61	-74.93	-13.00	-61.93	Peak
2	847.15	-80.65	29.82	5.96	29.33	-74.20	-13.00	-61.20	Peak
3	1417.28	-66.71	37.76	3.10	37.35	-63.20	-13.00	-50.20	Peak
4	3616.45	-66.52	42.57	5.07	37.26	-56.14	-13.00	-43.14	Peak
5	7741.59	-57.63	48.47	7.89	33.76	-35.03	-13.00	-22.03	Peak
6	10723.47	-71.30	52.53	9.87	35.98	-44.88	-13.00	-31.88	Peak

Test channel:	Mid			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	171.04	-72.16	21.23	2.48	30.37	-78.82	-13.00	-65.82	Peak
2	786.85	-80.05	29.81	5.73	29.61	-74.12	-13.00	-61.12	Peak
3	1350.36	-67.17	37.06	4.09	37.45	-63.47	-13.00	-50.47	Peak
4	5177.97	-62.85	43.99	6.32	35.37	-47.91	-13.00	-34.91	Peak
5	7781.10	-48.41	47.86	7.82	33.73	-26.46	-13.00	-13.46	Peak
6	11197.71	-70.08	52.94	10.14	36.00	-43.00	-13.00	-30.00	Peak
Test channel:	Mid			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	119.06	-69.32	22.27	2.05	30.61	-75.61	-13.00	-62.61	Peak
2	803.62	-78.89	29.46	5.78	29.63	-73.28	-13.00	-60.28	Peak
3	3525.56	-65.42	41.50	5.15	37.45	-56.22	-13.00	-43.22	Peak
4	4760.78	-67.33	43.60	5.92	35.95	-53.76	-13.00	-40.76	Peak
5	7781.10	-58.52	48.53	7.82	33.73	-35.90	-13.00	-22.90	Peak
6	11226.25	-70.67	52.98	10.16	36.02	-43.55	-13.00	-30.55	Peak

Test channel:		High			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	40.74	-74.58	27.43	1.16	30.59	-76.58	-13.00	-63.58	Peak	
2	179.67	-72.28	20.95	2.55	30.19	-78.97	-13.00	-65.97	Peak	
3	1402.92	-66.47	37.14	3.08	37.34	-63.59	-13.00	-50.59	Peak	
4	3844.28	-66.45	41.97	5.35	37.01	-56.14	-13.00	-43.14	Peak	
5	7820.82	-50.49	47.91	7.83	33.79	-28.54	-13.00	-15.54	Peak	
6	11341.14	-72.37	52.96	10.25	36.08	-45.24	-13.00	-32.24	Peak	
Test channel:		High			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	120.33	-67.70	22.04	2.06	30.61	-74.21	-13.00	-61.21	Peak	
2	175.30	-70.45	20.14	2.52	30.28	-78.07	-13.00	-65.07	Peak	
3	1385.18	-67.11	37.70	3.07	37.31	-63.65	-13.00	-50.65	Peak	
4	3607.26	-67.70	42.60	5.07	37.26	-57.29	-13.00	-44.29	Peak	
5	7820.82	-56.86	48.46	7.83	33.79	-34.36	-13.00	-21.36	Peak	
6	11226.25	-71.52	52.98	10.16	36.02	-44.40	-13.00	-31.40	Peak	

LTE Band 66									
Test channel:	Low			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	37.84	-76.99	27.46	1.12	30.64	-79.05	-13.00	-66.05	Peak
2	762.33	-73.31	29.22	5.62	29.45	-67.92	-13.00	-54.92	Peak
3	1809.86	-65.61	36.84	9.14	29.02	-48.65	-13.00	-35.65	Peak
4	2418.83	-69.83	39.72	10.87	27.87	-47.11	-13.00	-34.11	Peak
5	5297.97	-65.89	44.01	6.36	40.97	-56.49	-13.00	-43.49	Peak
6	11574.46	-66.77	52.92	10.41	42.30	-45.74	-13.00	-32.74	Peak
Test channel:	Low			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	97.78	-79.87	25.78	1.85	30.65	-82.89	-13.00	-69.89	Peak
2	765.02	-76.34	29.11	5.63	29.45	-71.05	-13.00	-58.05	Peak
3	1809.86	-65.26	36.57	9.14	29.02	-48.57	-13.00	-35.57	Peak
4	2410.87	-68.99	39.31	10.85	27.87	-46.70	-13.00	-33.70	Peak
5	7432.62	-65.24	48.53	7.84	41.03	-49.90	-13.00	-36.90	Peak
6	10587.85	-66.73	52.40	9.80	41.21	-45.74	-13.00	-32.74	Peak

Test channel:	Mid			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	36.92	-78.88	27.32	1.10	30.65	-81.11	-13.00	-68.11	Peak
2	770.42	-78.93	29.48	5.66	29.48	-73.27	-13.00	-60.27	Peak
3	1809.86	-67.05	36.84	9.14	29.02	-50.09	-13.00	-37.09	Peak
4	2617.93	-72.66	38.93	11.39	25.94	-48.28	-13.00	-35.28	Peak
5	7432.62	-65.53	48.40	7.84	41.03	-50.32	-13.00	-37.32	Peak
6	10374.42	-66.41	51.37	9.69	40.65	-46.00	-13.00	-33.00	Peak
Test channel:	Mid			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	90.82	-79.70	25.88	1.78	30.69	-82.73	-13.00	-69.73	Peak
2	775.86	-79.62	29.24	5.69	29.50	-74.19	-13.00	-61.19	Peak
3	1811.85	-63.82	36.58	9.15	29.05	-47.14	-13.00	-34.14	Peak
4	2673.15	-73.52	39.72	11.55	25.74	-47.99	-13.00	-34.99	Peak
5	7489.60	-66.73	48.44	7.63	41.08	-51.74	-13.00	-38.74	Peak
6	11994.38	-66.86	52.96	10.70	42.30	-45.50	-13.00	-32.50	Peak

Test channel:		High			Polarization:			Horizontal		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	59.35	-79.74	24.46	1.42	30.84	-84.70	-13.00	-71.70	Peak	
2	759.66	-77.88	29.15	5.60	29.45	-72.58	-13.00	-59.58	Peak	
3	1807.88	-65.12	36.82	9.13	28.98	-48.15	-13.00	-35.15	Peak	
4	2530.27	-71.88	39.11	11.18	26.84	-48.43	-13.00	-35.43	Peak	
5	7508.69	-65.75	48.05	7.69	41.09	-51.10	-13.00	-38.10	Peak	
6	10534.09	-67.12	51.77	9.77	41.04	-46.62	-13.00	-33.62	Peak	
Test channel:		High			Polarization:			Vertical		
Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark	
1	89.87	-79.43	25.83	1.77	30.69	-82.52	-13.00	-69.52	Peak	
2	759.66	-77.39	29.06	5.60	29.45	-72.18	-13.00	-59.18	Peak	
3	1807.88	-65.89	36.55	9.13	28.98	-49.19	-13.00	-36.19	Peak	
4	2212.88	-71.39	41.57	10.30	29.05	-48.57	-13.00	-35.57	Peak	
5	4971.32	-66.08	44.39	6.08	41.14	-56.75	-13.00	-43.75	Peak	
6	10480.59	-67.47	52.25	9.75	40.86	-46.33	-13.00	-33.33	Peak	



## **6. TEST SETUP PHOTOS OF THE EUT**

Refer to the test report No.: CHTEW23110072

## **7. EXTERNAL AND INTERNAL PHOTOS OF THE EUT**

Refer to the test report No.: CHTEW23110070

## **8. APPENDIX REPORT**



# APPENDIX REPORT

Project No.	SHT2306080101EW	Radio Specification	LTE
Test sample No.	YPHT23060801007	Model No.	F8926-GW-02
Start test date	2023-08-14	Finish date	2023-08-18
Temperature	25.4℃	Humidity	49%
Test Engineer	<i>Casper Chen</i>	Auditor	<i>Xiaodong Zhu</i>

Appendix clause	Test item	Result
A	ERP and EIRP	PASS

## 8.1 Appendix A: ERP and EIRP

### Test Result

Band	Bandwidth	Mode	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP		Limit (W)	Verdict	
					(dBm)	(W)			
Band 2	1.4MHz	QPSK	22.43	1.74	24.17	0.2612	2	PASS	
		16QAM	21.95	1.74	23.69	0.2339	2	PASS	
	3MHz	QPSK	22.53	1.74	24.27	0.2673	2	PASS	
		16QAM	22.43	1.74	24.17	0.2612	2	PASS	
	5MHz	QPSK	22.46	1.74	24.20	0.2630	2	PASS	
		16QAM	21.15	1.74	22.89	0.1945	2	PASS	
	10MHz	QPSK	23.02	1.74	24.76	0.2992	2	PASS	
		16QAM	22.18	1.74	23.92	0.2466	2	PASS	
	15MHz	QPSK	22.90	1.74	24.64	0.2911	2	PASS	
		16QAM	22.63	1.74	24.37	0.2735	2	PASS	
	20MHz	QPSK	22.53	1.74	24.27	0.2673	2	PASS	
		16QAM	21.30	1.74	23.04	0.2014	2	PASS	
	Band 4	1.4MHz	QPSK	22.12	1.74	23.86	0.2432	1	PASS
			16QAM	21.36	1.74	23.10	0.2042	1	PASS
		3MHz	QPSK	22.20	1.74	23.94	0.2477	1	PASS
			16QAM	21.44	1.74	23.18	0.2080	1	PASS
5MHz		QPSK	22.08	1.74	23.82	0.2410	1	PASS	
		16QAM	20.90	1.74	22.64	0.1837	1	PASS	
10MHz		QPSK	22.37	1.74	24.11	0.2576	1	PASS	
		16QAM	21.97	1.74	23.71	0.2350	1	PASS	
15MHz		QPSK	22.41	1.74	24.15	0.2600	1	PASS	
		16QAM	21.73	1.74	23.47	0.2223	1	PASS	
20MHz		QPSK	22.18	1.74	23.92	0.2466	1	PASS	
		16QAM	21.08	1.74	22.82	0.1914	1	PASS	

Band 7	5MHz	QPSK	22.42	1.74	24.16	0.2606	2	PASS
		16QAM	21.30	1.74	23.04	0.2014	2	PASS
	10MHz	QPSK	22.89	1.74	24.63	0.2904	2	PASS
		16QAM	22.16	1.74	23.90	0.2455	2	PASS
	15MHz	QPSK	22.89	1.74	24.63	0.2904	2	PASS
		16QAM	22.73	1.74	24.47	0.2799	2	PASS
	20MHz	QPSK	22.63	1.74	24.37	0.2735	2	PASS
		16QAM	21.58	1.74	23.32	0.2148	2	PASS
Band 38	5MHz	QPSK	21.75	1.74	23.49	0.2234	2	PASS
		16QAM	20.52	1.74	22.26	0.1683	2	PASS
	10MHz	QPSK	21.78	1.74	23.52	0.2249	2	PASS
		16QAM	21.38	1.74	23.12	0.2051	2	PASS
	15MHz	QPSK	21.65	1.74	23.39	0.2183	2	PASS
		16QAM	21.36	1.74	23.10	0.2042	2	PASS
	20MHz	QPSK	22.01	1.74	23.75	0.2371	2	PASS
		16QAM	20.87	1.74	22.61	0.1824	2	PASS
Band 66	1.4MHz	QPSK	22.55	1.74	24.29	0.2685	1	PASS
		16QAM	22.09	1.74	23.83	0.2415	1	PASS
	3MHz	QPSK	22.76	1.74	24.50	0.2818	1	PASS
		16QAM	21.66	1.74	23.40	0.2188	1	PASS
	5MHz	QPSK	22.31	1.74	24.05	0.2541	1	PASS
		16QAM	21.38	1.74	23.12	0.2051	1	PASS
	10MHz	QPSK	22.66	1.74	24.40	0.2754	1	PASS
		16QAM	21.58	1.74	23.32	0.2148	1	PASS
	15MHz	QPSK	22.95	1.74	24.69	0.2944	1	PASS
		16QAM	22.25	1.74	23.99	0.2506	1	PASS
	20MHz	QPSK	22.60	1.74	24.34	0.2716	1	PASS
		16QAM	21.84	1.74	23.58	0.2280	1	PASS

Band	Bandwidth	Mode	Conducted Power (dBm)	Antenna Gain (dBi)	ERP		Limit (W)	Verdict
					(dBm)	(W)		
Band 5	1.4MHz	QPSK	22.77	1.74	22.36	0.1722	7	PASS
		16QAM	22.09	1.74	21.68	0.1472	7	PASS
	3MHz	QPSK	22.90	1.74	22.49	0.1774	7	PASS
		16QAM	22.26	1.74	21.85	0.1531	7	PASS
	5MHz	QPSK	22.75	1.74	22.34	0.1714	7	PASS
		16QAM	22.00	1.74	21.59	0.1442	7	PASS
	10MHz	QPSK	22.81	1.74	22.40	0.1738	7	PASS
		16QAM	22.05	1.74	21.64	0.1459	7	PASS
Band 12	1.4MHz	QPSK	22.77	1.74	22.36	0.1722	3	PASS
		16QAM	22.07	1.74	21.66	0.1466	3	PASS
	3MHz	QPSK	22.91	1.74	22.50	0.1778	3	PASS
		16QAM	22.23	1.74	21.82	0.1521	3	PASS
	5MHz	QPSK	22.66	1.74	22.25	0.1679	3	PASS
		16QAM	21.97	1.74	21.56	0.1432	3	PASS
	10MHz	QPSK	22.89	1.74	22.48	0.1770	3	PASS
		16QAM	22.21	1.74	21.80	0.1514	3	PASS
Band 17	5MHz	QPSK	23.23	1.74	22.82	0.1914	3	PASS
		16QAM	22.19	1.74	21.78	0.1507	3	PASS
	10MHz	QPSK	23.35	1.74	22.94	0.1968	3	PASS
		16QAM	22.27	1.74	21.86	0.1535	3	PASS

-----End of the Report -----