



# RADIO TEST REPORT

Report No: STS1912245W01

Issued for

Telit Communications S.p.A.

Viale Stazione di Prosecco 5/b, 34010, Trieste, Italy

<b>Product Name:</b>	Data Terminal Module
<b>Brand Name:</b>	Telit
<b>Model Name:</b>	ME910G1-WW
<b>Series Model:</b>	N/A
<b>FCC ID:</b>	RI7ME910G1WW
<b>IC:</b>	5131A-ME910G1WW
<b>Test Standard:</b>	47 CFR FCC Part 22    RSS-132 Issue 3 47 CFR FCC Part 24    RSS-133 Issue 6 47 CFR FCC Part 27    RSS-130 Issue 2 47 CFR FCC Part 90    RSS-139 Issue 3 47 CFR FCC Part 2     RSS-Gen Issue 5

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TEST RESULT CERTIFICATION

Applicant's Name .....: Telit Communications S.p.A.
Address.....: Viale Stazione di Prosecco 5/b, 34010, Trieste, Italy
Manufacture's Name .....: Telit Communications S.p.A.
Address.....: Viale Stazione di Prosecco 5/b, 34010, Trieste, Italy

Product Description

Product Name .....: Data Terminal Module
Brand Name .....: Telit
Model Name.....: ME910G1-WW
Series Model.....: NA

Test Standards.....: 47 CFR FCC Part 22 RSS-132 Issue 3
47 CFR FCC Part 24 RSS-133 Issue 6
47 CFR FCC Part 27 RSS-130 Issue 2
47 CFR FCC Part 90 RSS-139 Issue 3
47 CFR FCC Part 2 RSS-Gen Issue 5

Test Procedure .....: KDB 971168 D01 v03r01, ANSI C63.26 2015

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC/IC requirements. And it is applicable only to the tested sample identified in the report.
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Date of Test.....:
Date of receipt of test item .....: 16 Dec. 2019
Date (s) of performance of tests : 16 Dec. 2019 ~ 5 Mar. 2020
Date of Issue .....: 5 Mar. 2020
Test Result .....: Pass

Testing Engineer : [Signature]
(Chris Chen)

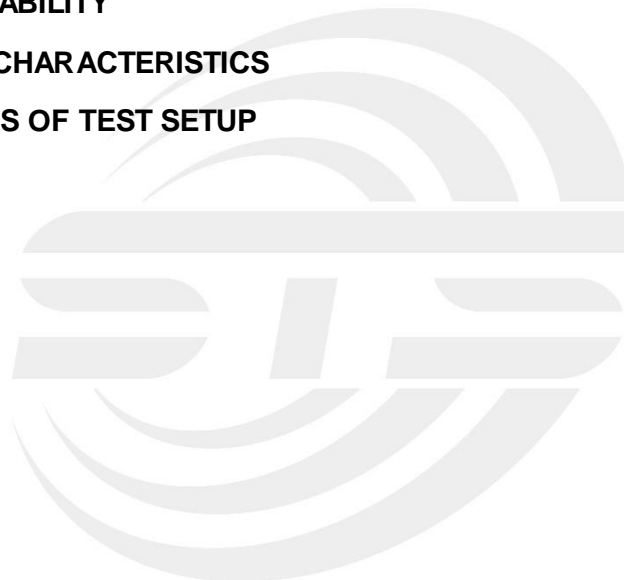
Technical Manager : [Signature]
(Sean she)

Authorized Signatory: [Signature]
(Vita Li)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	5 Mar. 2020	STS1912245W01	ALL	Initial Issue





## 1. TEST FACTORY & MEASUREMENT UNCERTAINTY

### 1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

### 1.2 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 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	All emissions, radiated 30-1GHz	$\pm 6.7\text{dB}$
4	All emissions, radiated 1G-6GHz	$\pm 5.5\text{dB}$
5	All emissions, radiated >6G	$\pm 5.8\text{dB}$
6	Conducted Emission (9KHz-150KHz)	$\pm 4.43\text{dB}$
7	Conducted Emission (150KHz-30MHz)	$\pm 5\text{dB}$



## 2. GENERAL INFORMATION

### 2.1 TECHNICAL SPECIFICATIONS AND REGULATIONS

#### 2.1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Name:	Data Terminal Module
Trade Name	Telit
Model Name	ME910G1-WW
Series Model	N/A
Model Difference	N/A
Frequency Bands:	CAT-M FDD Band 2      CAT-M FDD Band 4 CAT-M FDD Band 5      CAT-M FDD Band 12 CAT-M FDD Band 13     CAT-M FDD Band 25 CAT-M FDD Band 26     CAT-M FDD Band 66 CAT-M FDD Band 85
SIM CARD:	Only support single SIM Card.
Antenna:	External Antenna The EUT doesn't have antenna, The adapter and antenna used for testing in this report is the after-market accessory.
Antenna gain:	2.14 dBi for CAT-M FDD Band 2/4/5/12/13/25/26/66/85
Operating Voltage:	DC 3.8V
Extreme Voltage:	3.2V to 4.5V
Extreme Temperature:	-40°C to +85°C
Hardware version number:	N/A
Software version number:	N/A



2.1.2 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Product Specification Subjective To This Standard	
Tx Frequency	CAT-M Band 2:1850~1910MHz CAT-M Band 4:1710~1755MHz CAT-M Band 5:824~849MHz CAT-M Band 12:699~716MHz CAT-M Band 13:777~787MHz CAT-M Band 25:1850~1915MHz CAT-M Band 26:814~849MHz CAT-M Band 66:1710~1780MHz CAT-M Band 85:698~716MHz
Rx Frequency	CAT-M Band 2:1930 ~1990MHz CAT-M Band 4:2110~2155MHz CAT-M Band 5:869~894MHz CAT-M Band 12:729~746MHz CAT-M Band 13:746~756MHz CAT-M Band 25:1930~1995MHz CAT-M Band 26:859~894MHz CAT-M Band 66:2110~2200MHz CAT-M Band 85:728~746MHz
Bandwidth	CAT-M Band 2: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz CAT-M Band 4: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz CAT-M Band 5: 1.4MHz / 3MHz / 5MHz / 10MHz CAT-M Band 12: 1.4MHz / 3MHz / 5MHz / 10MHz CAT-M Band 13: 5MHz / 10MHz CAT-M Band 25: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz CAT-M Band 26: 1.4MHz / 3MHz / 5MHz / 10MHz/15MHz CAT-M Band 66: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz CAT-M Band 85: 5MHz / 10MHz
Maximum Conducted Output power	CAT-M Band 2: 23.69 dBm CAT-M Band 4: 23.86 dBm CAT-M Band 5: 23.51 dBm CAT-M Band 12: 23.46 dBm CAT-M Band 13: 23.04 dBm CAT-M Band 25: 23.75 dBm CAT-M Band 26(L): 23.38 dBm CAT-M Band 26(U): 23.87 dBm CAT-M Band 66: 23.81 dBm CAT-M Band 85: 23.24 dBm
Type of Modulation	QPSK /16QAM

List of Frequencies under Test

Operation bands	Mode	Channel Bandwidth (MHz)	Frequencies under Test					
			EARFCN	CH <sub>Low</sub> (MHz)	EARFCN	CH <sub>Mid</sub> (MHz)	EARFCN	CH <sub>High</sub> (MHz)
2	TX	1.4	18607	1850.7	18900	1880	19193	1909.3
		3	18615	1851.5	18900	1880	19185	1908.5
		5	18625	1852.5	18900	1880	19175	1907.5
		10	18650	1855	18900	1880	19150	1905
		15	18675	1857.5	18900	1880	19125	1902.5
		20	18700	1860	18900	1880	19100	1900
	RX	1.4	607	1930.7	900	1960	1193	1989.3



		3	615	1931.5	900	1960	1185	1988.5		
		5	625	1932.5	900	1960	1175	1987.5		
		10	650	1935	900	1960	1150	1985		
		15	675	1937.5	900	1960	1125	1982.5		
		20	700	1940	900	1960	1100	1980		
4	TX	1.4	19957	1710.7	20175	1732.5	20393	1754.3		
		3	19965	1711.5	20175	1732.5	20385	1753.5		
		5	19975	1712.5	20175	1732.5	20375	1752.5		
		10	20000	1715	20175	1732.5	20350	1750		
		15	20025	1717.5	20175	1732.5	20325	1747.5		
	RX	1.4	1957	2110.7	2175	2132.5	2393	2154.3		
		3	1965	2111.5	2175	2132.5	2385	2153.5		
		5	1975	2112.5	2175	2132.5	2375	2152.5		
		10	2000	2115	2175	2132.5	2350	2150		
		15	2025	2117.5	2175	2132.5	2325	2147.5		
5	TX	1.4	20407	824.7	20525	836.5	20643	848.3		
		3	20415	825.5	20525	836.5	20635	847.5		
		5	20425	826.5	20525	836.5	20625	846.5		
		10	20450	829	20525	836.5	20600	844		
	RX	1.4	2407	869.7	2525	881.5	2643	893.3		
		3	2415	870.5	2525	881.5	2635	892.5		
		5	2425	871.5	2525	881.5	2625	891.5		
		10	2450	874	2525	881.5	2600	889		
		12	TX	1.4	23017	699.7	23095	707.5	23173	715.3
				3	23025	700.5	23095	707.5	23165	714.5
5	23035			701.5	23095	707.5	23155	713.5		
10	23060			704	23095	707.5	23130	711		
RX	1.4		5017	729.7	5095	737.5	5173	745.3		
	3		5025	730.5	5095	737.5	5165	744.5		
	5	5035	731.5	5095	737.5	5155	743.5			
	10	5060	734	5095	737.5	5130	741			
13	TX	5	23205	779.5	23230	782	23255	784.5		
		10	23230	782	23230	782	23230	782		
	RX	5	5205	748.5	5230	751	5255	753.5		
		10	5230	751	5230	751	5230	751		
25	TX	1.4	26047	1850.7	26365	1882.5	26683	1914.3		
		3	26055	1851.5	26365	1882.5	26675	1913.5		
		5	26065	1852.5	26365	1882.5	26665	1912.5		
		10	26090	1855	26365	1882.5	26640	1910		
		15	26115	1857.5	26365	1882.5	26615	1907.5		
		20	26140	1860	26365	1882.5	26590	1905		





	RX	1.4	8047	1930.7	8365	1962.5	8683	1994.3
		3	8055	1931.5	8365	1962.5	8675	1993.5
		5	8065	1932.5	8365	1962.5	8665	1992.5
		10	8090	1935	8365	1962.5	8640	1990
		15	8115	1937.5	8365	1962.5	8615	1987.5
		20	8140	1940	8365	1962.5	8590	1985
26_Lower Band (814 – 824 MHz)	TX	1.4	26697	814.7	26740	819	26783	823.3
		3	26705	815.5	26740	819	26775	822.5
		5	26715	816.5	26740	819	26765	821.5
		10	26740	819	26740	819	26740	819
	RX	1.4	8697	859.7	8740	864	8783	868.3
		3	8705	860.5	8740	864	8775	867.5
		5	8715	861.5	8740	864	8765	866.5
		10	8740	864	8740	864	8740	864
26_Upper Band (824-849 MHz)	TX	1.4	26797	824.7	26915	836.5	27033	848.3
		3	26805	825.5	26915	836.5	27025	847.5
		5	26815	826.5	26915	836.5	27015	846.5
		10	26840	829	26915	836.5	26990	844
		15	26865	831.5	26915	836.5	26965	841.5
	RX	1.4	8797	869.7	8915	881.5	9033	893.3
		3	8805	870.5	8915	881.5	9025	892.5
		5	8815	871.5	8915	881.5	9015	891.5
		10	8840	874	8915	881.5	8990	889
		15	8865	876.5	8915	881.5	8965	886.5
66	TX	1.4	131979	1710.7	132322	1745	132665	1779.3
		3	131987	1711.5	132322	1745	132657	1778.5
		5	131997	1712.5	132322	1745	132647	1777.5
		10	132022	1715	132322	1745	132622	1775
		15	132047	1717.5	132322	1745	132597	1772.5
		20	132047	1717.5	132322	1745	132572	1770
	RX	1.4	66443	2110.7	66786	2145	67129	2179.3
		3	66451	2111.5	66786	2145	67121	2178.5
		5	66461	2112.5	66786	2145	67111	2177.5
		10	66486	2115	66786	2145	67086	2175
		15	66511	2117.5	66786	2145	67061	2172.5
20	66536	2120	66786	2145	67036	2170		
85	TX	5	134027	700.5	134092	707	134157	713.5
		10	134052	703	134092	707	134132	711
	RX	5	70391	730.5	70456	737	70521	743.5
		10	70416	733	70456	737	70496	741



2.1.3 EMISSION DESIGNATOR

<b>CAT-M Band 2</b>	<b>Emission Designator</b>	<b>Emission Designator</b>
<b>BW(MHz)</b>	<b>(26dBc)QPSK</b>	<b>(26dBc)16QAM</b>
1.4	1M29G7D	1M27W7D
3	1M27G7D	1M23W7D
5	1M31G7D	1M12W7D
10	1M30G7D	1M12W7D
15	1M30G7D	1M12W7D
20	1M30G7D	1M11W7D
<b>CAT-M LTE Band 4</b>	<b>Emission Designator</b>	<b>Emission Designator</b>
<b>BW(MHz)</b>	<b>(26dBc)QPSK</b>	<b>(26dBc)16QAM</b>
1.4	1M26G7D	1M12W7D
3	1M28G7D	1M14W7D
5	1M28G7D	1M14W7D
10	1M27G7D	1M14W7D
15	1M29G7D	1M11W7D
20	1M31G7D	1M10W7D
<b>CAT-M LTE Band 5</b>	<b>Emission Designator</b>	<b>Emission Designator</b>
<b>BW(MHz)</b>	<b>(26dBc)QPSK</b>	<b>(26dBc)16QAM</b>
1.4	1M27G7D	1M12W7D
3	1M28G7D	1M26W7D
5	1M57G7D	1M51W7D
10	1M60G7D	1M54W7D
<b>CAT-M LTE Band 12</b>	<b>Emission Designator</b>	<b>Emission Designator</b>
<b>BW(MHz)</b>	<b>(26dBc)QPSK</b>	<b>(26dBc)16QAM</b>
1.4	1M28G7D	1M13W7D
3	1M28G7D	1M13W7D
5	1M31G7D	1M17W7D
10	1M31G7D	1M14W7D
<b>CAT-M LTE Band 13</b>	<b>Emission Designator</b>	<b>Emission Designator</b>
<b>BW(MHz)</b>	<b>(26dBc)QPSK</b>	<b>(26dBc)16QAM</b>
5	1M29G7D	1M14W7D
10	1M26G7D	1M14W7D
<b>CAT-M LTE Band 25</b>	<b>Emission Designator</b>	<b>Emission Designator</b>
<b>BW(MHz)</b>	<b>(26dBc)QPSK</b>	<b>(26dBc)16QAM</b>
1.4	1M28G7D	1M13W7D
3	1M29G7D	1M26W7D
5	1M28G7D	1M13W7D
10	1M29G7D	1M12W7D
15	1M31G7D	1M14W7D
20	1M29G7D	1M13W7D
<b>CAT-M LTE Band 26 (Part 22)</b>	<b>Emission Designator</b>	<b>Emission Designator</b>
<b>BW(MHz)</b>	<b>(26dBc)QPSK</b>	<b>(26dBc)16QAM</b>
1.4	1M28G7D	1M13W7D
3	1M28G7D	1M12W7D
5	1M28G7D	1M12W7D
10	1M29G7D	1M14W7D
15	1M28G7D	1M11W7D



CAT-M LTE Band 26 (Part 90)	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M29G7D	1M18W7D
3	1M29G7D	1M12W7D
5	1M28G7D	1M12W7D
10	1M28G7D	1M13W7D
CAT-M LTE Band 66	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M28G7D	1M19W7D
3	1M29G7D	1M29W7D
5	1M29G7D	1M29W7D
10	1M27G7D	1M16W7D
15	1M27G7D	1M16W7D
20	1M29G7D	1M14W7D
CAT-M LTE Band 85	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
5	1M33G7D	1M14W7D
10	1M31G7D	1M16W7D

2.1.4 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 v03r01 and ANSI C63.26 2015 Power Meas. License Digital Systems with maximum output power. Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Remark:

1. The mark 'v' means that this configuration is chosen for testing
2. The mark '-' means that this bandwidth is not supported.
3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated

ITEMS	Band	Bandwidth (MHz)						Modulation		RB #		Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Full	L	M	H
Max. Output Power; E.R.P.& E.I.R.P.	2	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v			v	v	v	v	v	v	v
	12	v	v	v	v			v	v	v	v	v	v	v
	13			v	v			v	v	v	v		v	
	25	v	v	v	v	v	v	v	v	v	v	v	v	v
	26	v	v	v	v	v		v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v	v	v	v	v	v	v
Peak-to-Average Ratio	2	v	v	v	v	v	v	v	v		v		v	
	4	v	v	v	v	v	v	v	v		v		v	
	5	v	v	v	v			v	v		v		v	
	12	v	v	v	v			v	v		v		v	
	13			v	v			v	v		v		v	
	25	v	v	v	v	v	v	v	v		v		v	
	26	v	v	v	v	v		v	v		v		v	
	66	v	v	v	v	v	v	v	v		v		v	



	85			v	v			v	v		v		v
26dB&99% Bandwidth	2	v	v	v	v	v	v	v	v		v		v
	4	v	v	v	v	v	v	v	v		v		v
	5	v	v	v	v			v	v		v		v
	12	v	v	v	v			v	v		v		v
	13			v	v			v	v		v		v
	25	v	v	v	v	v	v	v	v		v		v
	26	v	v	v	v	v		v	v		v		v
	66	v	v	v	v	v	v	v	v		v		v
	85			v	v			v	v		v		v
Conducted Band Edge	2	v						v	v	v	v	v	v
	4	v						v	v	v	v	v	v
	5	v						v	v	v	v	v	v
	12	v						v	v	v	v	v	v
	13			v				v	v	v	v	v	v
	25	v						v	v	v	v	v	v
	26	v						v	v	v	v	v	v
	66	v						v	v	v	v	v	v
	85			v				v	v	v	v	v	v
Conducted Spurious Emission	2	v						v	v	v		v	v
	4	v						v	v	v		v	v
	5	v						v	v	v		v	v
	12	v						v	v	v		v	v
	13			v				v	v	v		v	v
	25	v						v	v	v		v	v
	26	v						v	v	v		v	v
	66	v						v	v	v		v	v
	85			v				v	v	v		v	v
Frequency Stability	2	v						v	v		v		v
	4	v						v	v		v		v
	5	v						v	v		v		v
	12	v						v	v		v		v
	13			v				v	v		v		v
	25	v						v	v		v		v
	26	v						v	v		v		v
	66	v						v	v		v		v
	85			v				v	v		v		v
Radiated Spurious Emission	2	v						v	v	v		v	v
	4	v						v	v	v		v	v
	5	v						v	v	v		v	v
	12	v						v	v	v		v	v
	13			v				v	v	v		v	v



	25	v					v	v	v		v	v	v
	26	v					v	v	v		v	v	v
	66	v					v	v	v		v	v	v
	85			v			v	v	v		v	v	v

2.1.5 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for filing to comply with below standards:

- 47 CFR FCC Part 22                      RSS-132 Issue 3
- 47 CFR FCC Part 24                      RSS-133 Issue 6
- 47 CFR FCC Part 27                      RSS-130 Issue 2
- 47 CFR FCC Part 90                      RSS-139 Issue 3
- 47 CFR FCC Part 2                      RSS-Gen Issue 5

2.1.6 SPECIAL ACCESSORIES

The battery and the charger, earphone supplied by the applicant were used as accessories and being tested with eut intended for fcc grant together.

2.1.7 EUT CONFIGURATION

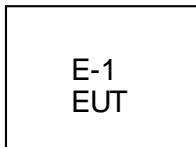
The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.1.8 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

2.1.9 CONFIGURATION OF EUT SYSTEM

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.



Equipment Used in EUT System

Item	Equipment	Model No.	Serial No.	Note
N/A	N/A	N/A	N/A	N/A

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



## 2.1.10 MEASUREMENT INSTRUMENTS

The radiated emission testing was performed according to the procedures of ANSI C63.26 2015 and FCC CFR 47 rules of 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057.

## Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2019.07.29	2020.07.28
Signal Analyzer	Agilent	N9020A	MY51110105	2019.03.02	2020.03.01
Wireless Communications Test Set	R&S	CMW 500	133884	2019.03.02	2020.03.01
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.01
Horn Antenna	SCHWARZBECK	BBHA 9120D(1201)	9120D-1343	2018.10.19	2021.10.18
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2018.03.11	2021.03.10
Pre-Amplifier(0.1M-3GHz)	EM	EM330	060665	2019.10.09	2020.10.08
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2019.10.12	2020.10.11
Turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Temperature & Humidity	HH660	Mieo	N/A	2019.10.12	2020.10.11
Test SW	BULUN	BL410-E/18.905			

## RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Universal Radio communication tester	R&S	CMU200	11764	2019.10.11	2020.10.10
Wireless Communications Test Set	R&S	CMW 500	133884	2019.03.02	2020.03.01
Signal Analyzer	R&S	FSV40	101823	2019.10.11	2020.10.10
Signal Analyzer	Agilent	N9020A	MY49100060	2019.10.09	2020.10.08
Temperature & Humidity	HH660	Mieo	N/A	2019.10.12	2020.10.11
Test SW	FARAD	LZ-RF /LzRf-3A3			



### 2.1.11 MEASUREMENT RESULTS EXPLANATION EXAMPLE

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF Cable Loss + Attenuator Factor.*



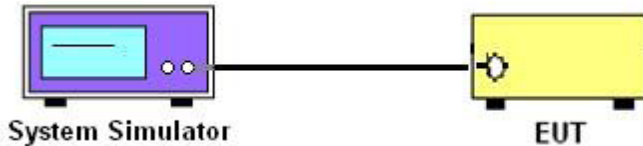
### 3. CONDUCTED OUTPUT POWER

#### 3.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

##### 3.1.1 MEASUREMENT METHOD

A system simulator was used to establish communication with the eut. Its parameters were set to force the eut transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported. Configuration follows KDB 971168 D01 v03r01.

##### 3.1.2 TEST SETUP



##### 3.1.3 TEST PROCEDURES

1. The transmitter output port was connected to system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest/middle/highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

##### 5. Limit

Operating band	FCC Limit	ISED Limit
Band 2	EIRP 2 watts	EIRP 2 watts
Band 4	EIRP 1 watts	EIRP 1 watts
Band 5	ERP 7 watts	ERP 11.5 watts
Band 12	ERP 3 watts	ERP 3 watts
Band 13	ERP 3 watts	ERP 3 watts
Band 25	EIRP 2 watts	EIRP 2 watts
Band 26 Lower Band	< 100 watts	N/A
Band 26 Upper Band	ERP 7 watts	ERP 11.5 watts
Band 66	EIRP 1 watts	EIRP 1 watts
Band 85	ERP 3 watts	ERP 3 watts

Note:  $ERP \text{ or } EIRP = P_{Meas} + G_T$

where

ERP or EIRP: effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as  $P_{Meas}$ , e.g. dBm)

$P_{Meas}$ : measured transmitter output power, in dBm

$G_T$ : gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)





3.1.4 TEST RESULTS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	EIRP (dBm)   (watts)		Limit (watts)	Verdict
Band 2	1.4	QPSK	Low	1	0	Low	23.23	25.37	0.34	2	PASS
Band 2	1.4		Low	6	0	Low	21.45	23.59	0.23	2	PASS
Band 2	3		Low	1	0	Low	23.32	25.46	0.35	2	PASS
Band 2	3		Low	6	0	Low	21.07	23.21	0.21	2	PASS
Band 2	5		Low	1	0	Low	23.48	25.62	0.36	2	PASS
Band 2	5		Low	6	0	Low	22.64	24.78	0.30	2	PASS
Band 2	10		Low	1	0	Low	23.36	25.50	0.35	2	PASS
Band 2	10		Low	6	0	Low	22.23	24.37	0.27	2	PASS
Band 2	15		Low	1	0	Low	23.23	25.37	0.34	2	PASS
Band 2	15		Low	6	0	Low	23.28	25.42	0.35	2	PASS
Band 2	20		Low	1	0	Low	23.41	25.55	0.36	2	PASS
Band 2	20		Low	6	0	Low	23.63	25.77	0.38	2	PASS
Band 2	1.4	16-QAM	Low	1	0	Low	22.28	24.42	0.28	2	PASS
Band 2	1.4		Low	5	0	Low	21.29	23.43	0.22	2	PASS
Band 2	3		Low	1	0	Low	22.53	24.67	0.29	2	PASS
Band 2	3		Low	5	0	Low	21.12	23.26	0.21	2	PASS
Band 2	5		Low	1	0	Low	23.36	25.50	0.35	2	PASS
Band 2	5		Low	5	0	Low	21.36	23.50	0.22	2	PASS
Band 2	10		Low	1	0	Low	23.24	25.38	0.35	2	PASS
Band 2	10		Low	5	0	Low	22.49	24.63	0.29	2	PASS
Band 2	15		Low	1	0	Low	22.96	25.10	0.32	2	PASS
Band 2	15		Low	5	0	Low	23.69	25.83	0.38	2	PASS
Band 2	20		Low	1	0	Low	23.45	25.59	0.36	2	PASS
Band 2	20		Low	5	0	Low	23.34	25.48	0.35	2	PASS
Band 2	1.4	QPSK	Middle	1	0	Low	23.21	25.35	0.34	2	PASS
Band 2	1.4		Middle	6	0	Low	21.30	23.44	0.22	2	PASS
Band 2	3		Middle	1	0	Low	23.52	25.66	0.37	2	PASS



Band 2	3		Middle	6	0	Low	21.29	23.43	0.22	2	PASS	
Band 2	5		Middle	1	0	Low	23.53	25.67	0.37	2	PASS	
Band 2	5		Middle	6	0	Low	22.40	24.54	0.28	2	PASS	
Band 2	10		Middle	1	0	Low	23.41	25.55	0.36	2	PASS	
Band 2	10		Middle	6	0	Low	22.35	24.49	0.28	2	PASS	
Band 2	15		Middle	1	0	Low	23.32	25.46	0.35	2	PASS	
Band 2	15		Middle	6	0	Low	23.35	25.49	0.35	2	PASS	
Band 2	20		Middle	1	0	Low	23.30	25.44	0.35	2	PASS	
Band 2	20		Middle	6	0	Low	23.34	25.48	0.35	2	PASS	
Band 2	1.4	16-QAM	Middle	1	0	Low	22.32	24.46	0.28	2	PASS	
Band 2	1.4		Middle	5	0	Low	21.23	23.37	0.22	2	PASS	
Band 2	3		Middle	1	0	Low	22.35	24.49	0.28	2	PASS	
Band 2	3		Middle	5	0	Low	21.23	23.37	0.22	2	PASS	
Band 2	5		Middle	1	0	Low	23.47	25.61	0.36	2	PASS	
Band 2	5		Middle	5	0	Low	21.55	23.69	0.23	2	PASS	
Band 2	10		Middle	1	0	Low	23.33	25.47	0.35	2	PASS	
Band 2	10		Middle	5	0	Low	22.55	24.69	0.29	2	PASS	
Band 2	15		Middle	1	0	Low	23.21	25.35	0.34	2	PASS	
Band 2	15		Middle	5	0	Low	23.58	25.72	0.37	2	PASS	
Band 2	20		Middle	1	0	Low	23.40	25.54	0.36	2	PASS	
Band 2	20		Middle	5	0	Low	23.51	25.65	0.37	2	PASS	
Band 2	1.4		QPSK	High	1	5	High	23.17	25.31	0.34	2	PASS
Band 2	1.4			High	6	0	High	21.50	23.64	0.23	2	PASS
Band 2	3	High		1	5	High	23.40	25.54	0.36	2	PASS	
Band 2	3	High		6	0	High	21.06	23.20	0.21	2	PASS	
Band 2	5	High		1	5	High	23.31	25.45	0.35	2	PASS	
Band 2	5	High		3	3	High	22.53	24.67	0.29	2	PASS	
Band 2	10	High		1	5	High	23.42	25.56	0.36	2	PASS	
Band 2	10	High		6	0	High	22.27	24.41	0.28	2	PASS	
Band 2	15	High		1	5	High	23.24	25.38	0.35	2	PASS	



Band 2	15	16-QAM	High	6	0	High	23.44	25.58	0.36	2	PASS
Band 2	20		High	1	5	High	23.27	25.41	0.35	2	PASS
Band 2	20		High	6	0	High	23.33	25.47	0.35	2	PASS
Band 2	1.4		High	1	5	High	22.34	24.48	0.28	2	PASS
Band 2	1.4		High	5	1	High	21.00	23.14	0.21	2	PASS
Band 2	3		High	1	5	High	22.31	24.45	0.28	2	PASS
Band 2	3		High	5	1	High	21.68	23.82	0.24	2	PASS
Band 2	5		High	1	5	High	23.16	25.30	0.34	2	PASS
Band 2	5		High	3	3	High	21.09	23.23	0.21	2	PASS
Band 2	10		High	1	5	High	23.29	25.43	0.35	2	PASS
Band 2	10		High	5	1	High	22.50	24.64	0.29	2	PASS
Band 2	15		High	1	5	High	23.46	25.60	0.36	2	PASS
Band 2	15		High	5	1	High	23.44	25.58	0.36	2	PASS
Band 2	20		High	1	5	High	23.37	25.51	0.36	2	PASS
Band 2	20		High	5	1	High	23.45	25.59	0.36	2	PASS



Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	EIRP (dBm)   (watts)		Limit (watts)	Verdict
Band 4	1.4	QPSK	Low	1	0	Low	23.47	25.61	0.36	1	PASS
Band 4	1.4		Low	6	0	Low	21.48	23.62	0.23	1	PASS
Band 4	3		Low	1	0	Low	23.86	26.00	0.40	1	PASS
Band 4	3		Low	6	0	Low	21.26	23.40	0.22	1	PASS
Band 4	5		Low	1	0	Low	23.31	25.45	0.35	1	PASS
Band 4	5		Low	6	0	Low	22.51	24.65	0.29	1	PASS
Band 4	10		Low	1	0	Low	23.19	25.33	0.34	1	PASS
Band 4	10		Low	6	0	Low	22.47	24.61	0.29	1	PASS
Band 4	15		Low	1	0	Low	23.52	25.66	0.37	1	PASS
Band 4	15		Low	6	0	Low	23.12	25.26	0.34	1	PASS
Band 4	20		Low	1	0	Low	23.48	25.62	0.36	1	PASS
Band 4	20		Low	6	0	Low	23.19	25.33	0.34	1	PASS
Band 4	1.4	16-QAM	Low	1	0	Low	22.25	24.39	0.27	1	PASS
Band 4	1.4		Low	5	0	Low	21.38	23.52	0.22	1	PASS
Band 4	3		Low	1	0	Low	22.69	24.83	0.30	1	PASS
Band 4	3		Low	5	0	Low	21.34	23.48	0.22	1	PASS
Band 4	5		Low	1	0	Low	23.03	25.17	0.33	1	PASS
Band 4	5		Low	5	0	Low	21.84	23.98	0.25	1	PASS
Band 4	10		Low	1	0	Low	23.27	25.41	0.35	1	PASS
Band 4	10		Low	5	0	Low	22.45	24.59	0.29	1	PASS
Band 4	15		Low	1	0	Low	23.53	25.67	0.37	1	PASS
Band 4	15		Low	5	0	Low	23.41	25.55	0.36	1	PASS
Band 4	20		Low	1	0	Low	23.30	25.44	0.35	1	PASS
Band 4	20		Low	5	0	Low	23.59	25.73	0.37	1	PASS
Band 4	1.4	QPSK	Middle	1	0	Low	23.49	25.63	0.37	1	PASS
Band 4	1.4		Middle	6	0	Low	21.37	23.51	0.22	1	PASS
Band 4	3		Middle	1	0	Low	23.48	25.62	0.36	1	PASS
Band 4	3		Middle	6	0	Low	21.36	23.50	0.22	1	PASS
Band 4	5		Middle	1	0	Low	23.33	25.47	0.35	1	PASS



4												
Band 4	5		Middle	6	0	Low	22.44	24.58	0.29	1	PASS	
Band 4	10		Middle	1	0	Low	23.43	25.57	0.36	1	PASS	
Band 4	10		Middle	6	0	Low	22.46	24.60	0.29	1	PASS	
Band 4	15		Middle	1	0	Low	23.46	25.60	0.36	1	PASS	
Band 4	15		Middle	6	0	Low	23.38	25.52	0.36	1	PASS	
Band 4	20		Middle	1	0	Low	23.52	25.66	0.37	1	PASS	
Band 4	20		Middle	6	0	Low	23.43	25.57	0.36	1	PASS	
Band 4	1.4	16-QAM	Middle	1	0	Low	22.42	24.56	0.29	1	PASS	
Band 4	1.4		Middle	5	0	Low	21.35	23.49	0.22	1	PASS	
Band 4	3		Middle	1	0	Low	22.42	24.56	0.29	1	PASS	
Band 4	3		Middle	5	0	Low	21.39	23.53	0.23	1	PASS	
Band 4	5		Middle	1	0	Low	23.38	25.52	0.36	1	PASS	
Band 4	5		Middle	5	0	Low	21.49	23.63	0.23	1	PASS	
Band 4	10		Middle	1	0	Low	23.41	25.55	0.36	1	PASS	
Band 4	10		Middle	5	0	Low	22.53	24.67	0.29	1	PASS	
Band 4	15		Middle	1	0	Low	23.49	25.63	0.37	1	PASS	
Band 4	15		Middle	5	0	Low	23.51	25.65	0.37	1	PASS	
Band 4	20		Middle	1	0	Low	23.33	25.47	0.35	1	PASS	
Band 4	20		Middle	5	0	Low	23.32	25.46	0.35	1	PASS	
Band 4	1.4		QPSK	High	1	5	High	23.51	25.65	0.37	1	PASS
Band 4	1.4			High	6	0	High	21.73	23.87	0.24	1	PASS
Band 4	3	High		1	5	High	23.63	25.77	0.38	1	PASS	
Band 4	3	High		6	0	High	21.42	23.56	0.23	1	PASS	
Band 4	5	High		1	5	High	23.58	25.72	0.37	1	PASS	
Band 4	5	High		3	3	High	22.50	24.64	0.29	1	PASS	
Band 4	10	High		1	5	High	23.36	25.50	0.35	1	PASS	
Band 4	10	High		6	0	High	22.88	25.02	0.32	1	PASS	
Band 4	15	High		1	5	High	23.69	25.83	0.38	1	PASS	
Band 4	15	High		6	0	High	23.40	25.54	0.36	1	PASS	
Band 4	20	High		1	5	High	23.13	25.27	0.34	1	PASS	



4											
Band 4	20	16-QAM	High	6	0	High	23.16	25.30	0.34	1	PASS
Band 4	1.4		High	1	5	High	22.25	24.39	0.27	1	PASS
Band 4	1.4		High	5	1	High	21.26	23.40	0.22	1	PASS
Band 4	3		High	1	5	High	22.17	24.31	0.27	1	PASS
Band 4	3		High	5	1	High	21.83	23.97	0.25	1	PASS
Band 4	5		High	1	5	High	23.30	25.44	0.35	1	PASS
Band 4	5		High	3	3	High	21.77	23.91	0.25	1	PASS
Band 4	10		High	1	5	High	23.17	25.31	0.34	1	PASS
Band 4	10		High	5	1	High	22.68	24.82	0.30	1	PASS
Band 4	15		High	1	5	High	23.48	25.62	0.36	1	PASS
Band 4	15		High	5	1	High	23.47	25.61	0.36	1	PASS
Band 4	20		High	1	5	High	23.46	25.60	0.36	1	PASS
Band 4	20		High	5	1	High	23.32	25.46	0.35	1	PASS





Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	ERP (dBm)   (watts)		Limit (watts) FCC   IC		Verdict
Band 5	1.4	QPSK	Low	1	0	Low	23.24	25.38	0.35	7	11.5	PASS
Band 5	1.4		Low	6	0	Low	21.15	23.29	0.21	7	11.5	PASS
Band 5	3		Low	1	0	Low	23.50	25.64	0.37	7	11.5	PASS
Band 5	3		Low	6	0	Low	21.34	23.48	0.22	7	11.5	PASS
Band 5	5		Low	1	0	Low	23.10	25.24	0.33	7	11.5	PASS
Band 5	5		Low	6	0	Low	22.37	24.51	0.28	7	11.5	PASS
Band 5	10		Low	1	0	Low	22.96	25.10	0.32	7	11.5	PASS
Band 5	10		Low	6	0	Low	22.06	24.20	0.26	7	11.5	PASS
Band 5	1.4	16-QAM	Low	1	0	Low	22.67	24.81	0.30	7	11.5	PASS
Band 5	1.4		Low	5	0	Low	21.44	23.58	0.23	7	11.5	PASS
Band 5	3		Low	1	0	Low	21.79	23.93	0.25	7	11.5	PASS
Band 5	3		Low	5	0	Low	21.01	23.15	0.21	7	11.5	PASS
Band 5	5		Low	1	0	Low	23.39	25.53	0.36	7	11.5	PASS
Band 5	5		Low	5	0	Low	21.31	23.45	0.22	7	11.5	PASS
Band 5	10		Low	1	0	Low	23.25	25.39	0.35	7	11.5	PASS
Band 5	10		Low	5	0	Low	22.28	24.42	0.28	7	11.5	PASS
Band 5	1.4	QPSK	Middle	1	0	Low	23.44	25.58	0.36	7	11.5	PASS
Band 5	1.4		Middle	6	0	Low	21.27	23.41	0.22	7	11.5	PASS
Band 5	3		Middle	1	0	Low	23.21	25.35	0.34	7	11.5	PASS
Band 5	3		Middle	6	0	Low	21.06	23.20	0.21	7	11.5	PASS
Band 5	5		Middle	1	0	Low	23.11	25.25	0.33	7	11.5	PASS
Band 5	5		Middle	6	0	Low	22.03	24.17	0.26	7	11.5	PASS
Band 5	10		Middle	1	0	Low	23.11	25.25	0.33	7	11.5	PASS
Band 5	10		Middle	6	0	Low	22.06	24.20	0.26	7	11.5	PASS
Band 5	1.4	16-QAM	Middle	1	0	Low	22.32	24.46	0.28	7	11.5	PASS
Band 5	1.4		Middle	5	0	Low	21.34	23.48	0.22	7	11.5	PASS
Band 5	3		Middle	1	0	Low	22.07	24.21	0.26	7	11.5	PASS
Band 5	3		Middle	5	0	Low	21.10	23.24	0.21	7	11.5	PASS
Band 5	5		Middle	1	0	Low	23.31	25.45	0.35	7	11.5	PASS



5													
Band 5	5		Middle	5	0	Low	21.18	23.32	0.21	7	11.5	PASS	
Band 5	10		Middle	1	0	Low	23.34	25.48	0.35	7	11.5	PASS	
Band 5	10		Middle	5	0	Low	22.30	24.44	0.28	7	11.5	PASS	
Band 5	1.4	QPSK	High	1	5	High	23.39	25.53	0.36	7	11.5	PASS	
Band 5	1.4		High	6	0	High	21.52	23.66	0.23	7	11.5	PASS	
Band 5	3		High	1	5	High	23.12	25.26	0.34	7	11.5	PASS	
Band 5	3		High	6	0	High	21.29	23.43	0.22	7	11.5	PASS	
Band 5	5		High	1	5	High	23.39	25.53	0.36	7	11.5	PASS	
Band 5	5		High	3	3	High	21.89	24.03	0.25	7	11.5	PASS	
Band 5	10		High	1	5	High	23.46	25.60	0.36	7	11.5	PASS	
Band 5	10		High	6	0	High	22.52	24.66	0.29	7	11.5	PASS	
Band 5	1.4		16-QAM	High	1	5	High	21.87	24.01	0.25	7	11.5	PASS
Band 5	1.4			High	5	1	High	21.14	23.28	0.21	7	11.5	PASS
Band 5	3	High		1	5	High	22.42	24.56	0.29	7	11.5	PASS	
Band 5	3	High		5	1	High	21.14	23.28	0.21	7	11.5	PASS	
Band 5	5	High		1	5	High	23.51	25.65	0.37	7	11.5	PASS	
Band 5	5	High		3	3	High	21.17	23.31	0.21	7	11.5	PASS	
Band 5	10	High		1	5	High	23.23	25.37	0.34	7	11.5	PASS	
Band 5	10	High		5	1	High	22.25	24.39	0.27	7	11.5	PASS	





Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	ERP (dBm)   (watts)		Limit (watts)	Verdict
Band 12	1.4	QPSK	Low	1	0	Low	22.68	24.82	0.30	3	PASS
Band 12	1.4		Low	6	0	Low	21.37	23.51	0.22	3	PASS
Band 12	3		Low	1	0	Low	22.79	24.93	0.31	3	PASS
Band 12	3		Low	6	0	Low	21.16	23.30	0.21	3	PASS
Band 12	5		Low	1	0	Low	23.25	25.39	0.35	3	PASS
Band 12	5		Low	6	0	Low	22.12	24.26	0.27	3	PASS
Band 12	10		Low	1	0	Low	23.46	25.60	0.36	3	PASS
Band 12	10		Low	6	0	Low	22.14	24.28	0.27	3	PASS
Band 12	1.4	16-QAM	Low	1	0	Low	22.40	24.54	0.28	3	PASS
Band 12	1.4		Low	5	0	Low	21.07	23.21	0.21	3	PASS
Band 12	3		Low	1	0	Low	22.08	24.22	0.26	3	PASS
Band 12	3		Low	5	0	Low	21.26	23.40	0.22	3	PASS
Band 12	5		Low	1	0	Low	22.44	24.58	0.29	3	PASS
Band 12	5		Low	5	0	Low	21.61	23.75	0.24	3	PASS
Band 12	10		Low	1	0	Low	22.81	24.95	0.31	3	PASS
Band 12	10		Low	5	0	Low	22.41	24.55	0.29	3	PASS
Band 12	1.4	QPSK	Middle	1	0	Low	22.92	25.06	0.32	3	PASS
Band 12	1.4		Middle	6	0	Low	21.04	23.18	0.21	3	PASS
Band 12	3		Middle	1	0	Low	23.06	25.20	0.33	3	PASS
Band 12	3		Middle	6	0	Low	21.38	23.52	0.22	3	PASS
Band 12	5		Middle	1	0	Low	23.11	25.25	0.33	3	PASS
Band 12	5		Middle	6	0	Low	22.01	24.15	0.26	3	PASS
Band 12	10		Middle	1	0	Low	23.24	25.38	0.35	3	PASS
Band 12	10		Middle	6	0	Low	22.17	24.31	0.27	3	PASS
Band 12	1.4	16-QAM	Middle	1	0	Low	22.00	24.14	0.26	3	PASS
Band 12	1.4		Middle	5	0	Low	21.03	23.17	0.21	3	PASS
Band 12	3		Middle	1	0	Low	22.05	24.19	0.26	3	PASS
Band 12	3		Middle	5	0	Low	21.04	23.18	0.21	3	PASS
Band 12	5		Middle	1	0	Low	22.86	25.00	0.32	3	PASS



12												
Band 12	5		Middle	5	0	Low	21.25	23.39	0.22	3	PASS	
Band 12	10		Middle	1	0	Low	22.98	25.12	0.33	3	PASS	
Band 12	10		Middle	5	0	Low	22.08	24.22	0.26	3	PASS	
Band 12	1.4	QPSK	High	1	5	High	22.65	24.79	0.30	3	PASS	
Band 12	1.4		High	6	0	High	21.07	23.21	0.21	3	PASS	
Band 12	3		High	1	5	High	23.38	25.52	0.36	3	PASS	
Band 12	3		High	6	0	High	21.03	23.17	0.21	3	PASS	
Band 12	5		High	1	5	High	23.35	25.49	0.35	3	PASS	
Band 12	5		High	3	3	High	21.68	23.82	0.24	3	PASS	
Band 12	10		High	1	5	High	22.98	25.12	0.33	3	PASS	
Band 12	10		High	6	0	High	21.95	24.09	0.26	3	PASS	
Band 12	1.4		16-QAM	High	1	5	High	22.20	24.34	0.27	3	PASS
Band 12	1.4			High	5	1	High	21.26	23.40	0.22	3	PASS
Band 12	3	High		1	5	High	22.48	24.62	0.29	3	PASS	
Band 12	3	High		5	1	High	21.20	23.34	0.22	3	PASS	
Band 12	5	High		1	5	High	22.38	24.52	0.28	3	PASS	
Band 12	5	High		3	3	High	21.38	23.52	0.22	3	PASS	
Band 12	10	High		1	5	High	22.94	25.08	0.32	3	PASS	
Band 12	10	High		5	1	High	21.91	24.05	0.25	3	PASS	



Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	ERP (dBm)   (watts)		Limit (watts)	Verdict
Band 13	5	QPSK	Low	1	0	Low	22.82	24.96	0.31	3	PASS
Band 13	5		Low	6	0	Low	22.03	24.17	0.26	3	PASS
Band 13	10		Low	1	0	Low	22.99	25.13	0.33	3	PASS
Band 13	10		Low	6	0	Low	22.28	24.42	0.28	3	PASS
Band 13	5	16-QAM	Low	1	0	Low	22.29	24.43	0.28	3	PASS
Band 13	5		Low	5	0	Low	21.21	23.35	0.22	3	PASS
Band 13	10		Low	1	0	Low	22.94	25.08	0.32	3	PASS
Band 13	10		Low	5	0	Low	22.30	24.44	0.28	3	PASS
Band 13	5	QPSK	Middle	1	0	Low	22.91	25.05	0.32	3	PASS
Band 13	5		Middle	6	0	Low	22.01	24.15	0.26	3	PASS
Band 13	10		Middle	1	0	Low	22.79	24.93	0.31	3	PASS
Band 13	10		Middle	6	0	Low	22.04	24.18	0.26	3	PASS
Band 13	5	16-QAM	Middle	1	0	Low	22.60	24.74	0.30	3	PASS
Band 13	5		Middle	5	0	Low	20.93	23.07	0.20	3	PASS
Band 13	10		Middle	1	0	Low	22.62	24.76	0.30	3	PASS
Band 13	10		Middle	5	0	Low	22.16	24.30	0.27	3	PASS
Band 13	5	QPSK	High	1	5	High	23.04	25.18	0.33	3	PASS
Band 13	5		High	3	3	High	21.88	24.02	0.25	3	PASS
Band 13	10		High	1	5	High	22.69	24.83	0.30	3	PASS
Band 13	10		High	6	0	High	22.36	24.50	0.28	3	PASS
Band 13	5	16-QAM	High	1	5	High	22.48	24.62	0.29	3	PASS
Band 13	5		High	3	3	High	21.27	23.41	0.22	3	PASS
Band 13	10		High	1	5	High	22.45	24.59	0.29	3	PASS
Band 13	10		High	5	1	High	22.17	24.31	0.27	3	PASS



Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	EIRP (dBm)   (watts)		Limit (watts)	Verdict
Band 25	1.4	QPSK	Low	1	0	Low	23.38	25.52	0.36	2	PASS
Band 25	1.4		Low	6	0	Low	21.22	23.36	0.22	2	PASS
Band 25	3		Low	1	0	Low	23.19	25.33	0.34	2	PASS
Band 25	3		Low	6	0	Low	21.36	23.50	0.22	2	PASS
Band 25	5		Low	1	0	Low	23.50	25.64	0.37	2	PASS
Band 25	5		Low	6	0	Low	22.42	24.56	0.29	2	PASS
Band 25	10		Low	1	0	Low	23.45	25.59	0.36	2	PASS
Band 25	10		Low	6	0	Low	22.30	24.44	0.28	2	PASS
Band 25	15		Low	1	0	Low	23.57	25.71	0.37	2	PASS
Band 25	15		Low	6	0	Low	23.37	25.51	0.36	2	PASS
Band 25	20		Low	1	0	Low	23.42	25.56	0.36	2	PASS
Band 25	20		Low	6	0	Low	23.46	25.60	0.36	2	PASS
Band 25	1.4	16-QAM	Low	1	0	Low	22.29	24.43	0.28	2	PASS
Band 25	1.4		Low	5	0	Low	21.27	23.41	0.22	2	PASS
Band 25	3		Low	1	0	Low	22.46	24.60	0.29	2	PASS
Band 25	3		Low	5	0	Low	21.38	23.52	0.22	2	PASS
Band 25	5		Low	1	0	Low	23.33	25.47	0.35	2	PASS
Band 25	5		Low	5	0	Low	21.49	23.63	0.23	2	PASS
Band 25	10		Low	1	0	Low	23.58	25.72	0.37	2	PASS
Band 25	10		Low	5	0	Low	22.22	24.36	0.27	2	PASS
Band 25	15		Low	1	0	Low	23.51	25.65	0.37	2	PASS
Band 25	15		Low	5	0	Low	23.74	25.88	0.39	2	PASS
Band 25	20		Low	1	0	Low	23.08	25.22	0.33	2	PASS
Band 25	20		Low	5	0	Low	23.75	25.89	0.39	2	PASS
Band 25	1.4	QPSK	Middle	1	0	Low	23.38	25.52	0.36	2	PASS
Band 25	1.4		Middle	6	0	Low	21.42	23.56	0.23	2	PASS
Band 25	3		Middle	1	0	Low	23.52	25.66	0.37	2	PASS
Band 25	3		Middle	6	0	Low	21.29	23.43	0.22	2	PASS
Band 25	5		Middle	1	0	Low	23.45	25.59	0.36	2	PASS



25												
Band 25	5		Middle	6	0	Low	22.40	24.54	0.28	2	PASS	
Band 25	10		Middle	1	0	Low	23.54	25.68	0.37	2	PASS	
Band 25	10		Middle	6	0	Low	22.48	24.62	0.29	2	PASS	
Band 25	15		Middle	1	0	Low	23.54	25.68	0.37	2	PASS	
Band 25	15		Middle	6	0	Low	23.47	25.61	0.36	2	PASS	
Band 25	20		Middle	1	0	Low	23.49	25.63	0.37	2	PASS	
Band 25	20		Middle	6	0	Low	23.46	25.60	0.36	2	PASS	
Band 25	1.4	16-QAM	Middle	1	0	Low	22.32	24.46	0.28	2	PASS	
Band 25	1.4		Middle	5	0	Low	21.40	23.54	0.23	2	PASS	
Band 25	3		Middle	1	0	Low	22.39	24.53	0.28	2	PASS	
Band 25	3		Middle	5	0	Low	21.34	23.48	0.22	2	PASS	
Band 25	5		Middle	1	0	Low	23.36	25.50	0.35	2	PASS	
Band 25	5		Middle	5	0	Low	21.55	23.69	0.23	2	PASS	
Band 25	10		Middle	1	0	Low	23.46	25.60	0.36	2	PASS	
Band 25	10		Middle	5	0	Low	22.36	24.50	0.28	2	PASS	
Band 25	15		Middle	1	0	Low	23.41	25.55	0.36	2	PASS	
Band 25	15		Middle	5	0	Low	23.68	25.82	0.38	2	PASS	
Band 25	20		Middle	1	0	Low	23.32	25.46	0.35	2	PASS	
Band 25	20		Middle	5	0	Low	23.48	25.62	0.36	2	PASS	
Band 25	1.4		QPSK	High	1	5	High	23.50	25.64	0.37	2	PASS
Band 25	1.4			High	6	0	High	21.50	23.64	0.23	2	PASS
Band 25	3	High		1	5	High	23.52	25.66	0.37	2	PASS	
Band 25	3	High		6	0	High	21.54	23.68	0.23	2	PASS	
Band 25	5	High		1	5	High	23.40	25.54	0.36	2	PASS	
Band 25	5	High		3	3	High	22.39	24.53	0.28	2	PASS	
Band 25	10	High		1	5	High	23.48	25.62	0.36	2	PASS	
Band 25	10	High		6	0	High	22.23	24.37	0.27	2	PASS	
Band 25	15	High		1	5	High	23.49	25.63	0.37	2	PASS	
Band 25	15	High		6	0	High	23.43	25.57	0.36	2	PASS	
Band 25	20	High		1	5	High	23.53	25.67	0.37	2	PASS	



25											
Band 25	20	16-QAM	High	6	0	High	23.48	25.62	0.36	2	PASS
Band 25	1.4		High	1	5	High	22.19	24.33	0.27	2	PASS
Band 25	1.4		High	5	1	High	21.59	23.73	0.24	2	PASS
Band 25	3		High	1	5	High	22.14	24.28	0.27	2	PASS
Band 25	3		High	5	1	High	21.18	23.32	0.21	2	PASS
Band 25	5		High	1	5	High	23.25	25.39	0.35	2	PASS
Band 25	5		High	3	3	High	21.58	23.72	0.24	2	PASS
Band 25	10		High	1	5	High	23.53	25.67	0.37	2	PASS
Band 25	10		High	5	1	High	22.42	24.56	0.29	2	PASS
Band 25	15		High	1	5	High	23.50	25.64	0.37	2	PASS
Band 25	15		High	5	1	High	23.63	25.77	0.38	2	PASS
Band 25	20		High	1	5	High	23.32	25.46	0.35	2	PASS
Band 25	20		High	5	1	High	23.49	25.63	0.37	2	PASS





Band 26 (Part 22)

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	ERP (dBm)   (watts)		Limit (watts) FCC   IC		Verdict	
Band 26	1.4	QPSK	Low	1	0	Low	23.32	25.46	0.35	7	11.5	PASS	
Band 26	1.4		Low	6	0	Low	21.24	23.38	0.22	7	11.5	PASS	
Band 26	3		Low	1	0	Low	23.12	25.26	0.34	7	11.5	PASS	
Band 26	3		Low	6	0	Low	21.29	23.43	0.22	7	11.5	PASS	
Band 26	5		Low	1	0	Low	23.61	25.75	0.38	7	11.5	PASS	
Band 26	5		Low	6	0	Low	22.94	25.08	0.32	7	11.5	PASS	
Band 26	10		Low	1	0	Low	23.03	25.17	0.33	7	11.5	PASS	
Band 26	10		Low	6	0	Low	22.37	24.51	0.28	7	11.5	PASS	
Band 26	15		Low	1	0	Low	23.36	25.50	0.35	7	11.5	PASS	
Band 26	15		Low	6	0	Low	23.33	25.47	0.35	7	11.5	PASS	
Band 26	1.4		16-QAM	Low	1	0	Low	22.27	24.41	0.28	7	11.5	PASS
Band 26	1.4			Low	5	0	Low	21.38	23.52	0.22	7	11.5	PASS
Band 26	3	Low		1	0	Low	22.74	24.88	0.31	7	11.5	PASS	
Band 26	3	Low		5	0	Low	21.40	23.54	0.23	7	11.5	PASS	
Band 26	5	Low		1	0	Low	23.55	25.69	0.37	7	11.5	PASS	
Band 26	5	Low		5	0	Low	21.47	23.61	0.23	7	11.5	PASS	
Band 26	10	Low		1	0	Low	23.41	25.55	0.36	7	11.5	PASS	
Band 26	10	Low		5	0	Low	22.30	24.44	0.28	7	11.5	PASS	
Band 26	15	Low		1	0	Low	23.19	25.33	0.34	7	11.5	PASS	
Band 26	15	Low		5	0	Low	23.87	26.01	0.40	7	11.5	PASS	
Band 26	1.4	QPSK		Middle	1	0	Low	23.36	25.50	0.35	7	11.5	PASS
Band 26	1.4			Middle	6	0	Low	21.33	23.47	0.22	7	11.5	PASS
Band 26	3		Middle	1	0	Low	23.44	25.58	0.36	7	11.5	PASS	
Band 26	3		Middle	6	0	Low	21.30	23.44	0.22	7	11.5	PASS	
Band 26	5		Middle	1	0	Low	23.35	25.49	0.35	7	11.5	PASS	
Band 26	5		Middle	6	0	Low	22.50	24.64	0.29	7	11.5	PASS	
Band 26	10		Middle	1	0	Low	23.22	25.36	0.34	7	11.5	PASS	
Band 26	10		Middle	6	0	Low	22.37	24.51	0.28	7	11.5	PASS	



Band 26	15	16-QAM	Middle	1	0	Low	23.16	25.30	0.34	7	11.5	PASS	
Band 26	15		Middle	6	0	Low	23.32	25.46	0.35	7	11.5	PASS	
Band 26	1.4		Middle	1	0	Low	22.39	24.53	0.28	7	11.5	PASS	
Band 26	1.4		Middle	5	0	Low	21.23	23.37	0.22	7	11.5	PASS	
Band 26	3		Middle	1	0	Low	22.57	24.71	0.30	7	11.5	PASS	
Band 26	3		Middle	5	0	Low	21.42	23.56	0.23	7	11.5	PASS	
Band 26	5		Middle	1	0	Low	23.38	25.52	0.36	7	11.5	PASS	
Band 26	5		Middle	5	0	Low	21.31	23.45	0.22	7	11.5	PASS	
Band 26	10		Middle	1	0	Low	23.34	25.48	0.35	7	11.5	PASS	
Band 26	10		Middle	5	0	Low	22.40	24.54	0.28	7	11.5	PASS	
Band 26	15		Middle	1	0	Low	23.31	25.45	0.35	7	11.5	PASS	
Band 26	15		Middle	5	0	Low	23.79	25.93	0.39	7	11.5	PASS	
Band 26	1.4		QPSK	High	1	5	High	23.35	25.49	0.35	7	11.5	PASS
Band 26	1.4			High	6	0	High	21.18	23.32	0.21	7	11.5	PASS
Band 26	3	High		1	5	High	23.35	25.49	0.35	7	11.5	PASS	
Band 26	3	High		6	0	High	21.12	23.26	0.21	7	11.5	PASS	
Band 26	5	High		1	5	High	23.44	25.58	0.36	7	11.5	PASS	
Band 26	5	High		3	3	High	22.62	24.76	0.30	7	11.5	PASS	
Band 26	10	High		1	5	High	23.51	25.65	0.37	7	11.5	PASS	
Band 26	10	High		6	0	High	22.72	24.86	0.31	7	11.5	PASS	
Band 26	15	High		1	5	High	23.33	25.47	0.35	7	11.5	PASS	
Band 26	15	High		6	0	High	23.38	25.52	0.36	7	11.5	PASS	
Band 26	1.4	16-QAM	High	1	5	High	22.57	24.71	0.30	7	11.5	PASS	
Band 26	1.4		High	5	1	High	21.00	23.14	0.21	7	11.5	PASS	
Band 26	3		High	1	5	High	22.62	24.76	0.30	7	11.5	PASS	
Band 26	3		High	5	1	High	21.29	23.43	0.22	7	11.5	PASS	
Band 26	5		High	1	5	High	23.28	25.42	0.35	7	11.5	PASS	
Band 26	5		High	3	3	High	21.43	23.57	0.23	7	11.5	PASS	
Band 26	10		High	1	5	High	23.57	25.71	0.37	7	11.5	PASS	
Band 26	10		High	5	1	High	22.29	24.43	0.28	7	11.5	PASS	





Band 26	15		High	1	5	High	23.29	25.43	0.35	7	11.5	PASS
Band 26	15		High	5	1	High	23.75	25.89	0.39	7	11.5	PASS





Band 26 (Part 90)

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	Power (watts)	Limit (watts)	Verdict
Band 26	1.4	QPSK	Low	1	0	Low	23.06	25.20	100	PASS
Band 26	1.4		Low	6	0	Low	21.37	23.51	100	PASS
Band 26	3		Low	1	0	Low	23.04	25.18	100	PASS
Band 26	3		Low	6	0	Low	21.06	23.20	100	PASS
Band 26	5		Low	1	0	Low	23.30	25.44	100	PASS
Band 26	5		Low	6	0	Low	22.17	24.31	100	PASS
Band 26	10		Low	1	0	Low	23.29	25.43	100	PASS
Band 26	10		Low	6	0	Low	22.04	24.18	100	PASS
Band 26	1.4	16-QAM	Low	1	0	Low	22.27	24.41	100	PASS
Band 26	1.4		Low	5	0	Low	21.46	23.60	100	PASS
Band 26	3		Low	1	0	Low	22.26	24.40	100	PASS
Band 26	3		Low	5	0	Low	20.99	23.13	100	PASS
Band 26	5		Low	1	0	Low	22.80	24.94	100	PASS
Band 26	5		Low	5	0	Low	21.50	23.64	100	PASS
Band 26	10		Low	1	0	Low	22.65	24.79	100	PASS
Band 26	10		Low	5	0	Low	22.22	24.36	100	PASS
Band 26	1.4	QPSK	Middle	1	0	Low	23.15	25.29	100	PASS
Band 26	1.4		Middle	6	0	Low	21.17	23.31	100	PASS
Band 26	3		Middle	1	0	Low	23.38	25.52	100	PASS
Band 26	3		Middle	6	0	Low	21.16	23.30	100	PASS
Band 26	5		Middle	1	0	Low	23.32	25.46	100	PASS
Band 26	5		Middle	6	0	Low	22.30	24.44	100	PASS
Band 26	10		Middle	1	0	Low	23.10	25.24	100	PASS
Band 26	10		Middle	6	0	Low	22.29	24.43	100	PASS
Band 26	1.4	16-QAM	Middle	1	0	Low	22.24	24.38	100	PASS
Band 26	1.4		Middle	5	0	Low	21.08	23.22	100	PASS
Band 26	3		Middle	1	0	Low	22.37	24.51	100	PASS
Band 26	3		Middle	5	0	Low	21.16	23.30	100	PASS
Band 26	5		Middle	1	0	Low	22.88	25.02	100	PASS



26											
Band 26	5		Middle	5	0	Low	21.36	23.50	100	PASS	
Band 26	10		Middle	1	0	Low	22.97	25.11	100	PASS	
Band 26	10		Middle	5	0	Low	22.11	24.25	100	PASS	
Band 26	1.4	QPSK	High	1	5	High	23.23	25.37	100	PASS	
Band 26	1.4		High	6	0	High	21.01	23.15	100	PASS	
Band 26	3		High	1	5	High	23.24	25.38	100	PASS	
Band 26	3		High	6	0	High	21.23	23.37	100	PASS	
Band 26	5		High	1	5	High	23.26	25.40	100	PASS	
Band 26	5		High	3	3	High	22.03	24.17	100	PASS	
Band 26	10		High	1	5	High	22.84	24.98	100	PASS	
Band 26	10		High	6	0	High	22.66	24.80	100	PASS	
Band 26	1.4		16-QAM	High	1	5	High	21.98	24.12	100	PASS
Band 26	1.4			High	5	1	High	21.28	23.42	100	PASS
Band 26	3			High	1	5	High	21.95	24.09	100	PASS
Band 26	3			High	5	1	High	21.03	23.17	100	PASS
Band 26	5			High	1	5	High	22.63	24.77	100	PASS
Band 26	5			High	3	3	High	21.35	23.49	100	PASS
Band 26	10	High		1	5	High	23.22	25.36	100	PASS	
Band 26	10	High		5	1	High	22.32	24.46	100	PASS	



Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	EIRP (dBm)   (watts)		Limit (watts)	Verdict
Band 66	1.4	QPSK	Low	1	0	Low	22.90	25.04	0.32	1	PASS
Band 66	1.4		Low	6	0	Low	21.43	23.57	0.23	1	PASS
Band 66	3		Low	1	0	Low	23.81	25.95	0.39	1	PASS
Band 66	3		Low	6	0	Low	21.04	23.18	0.21	1	PASS
Band 66	5		Low	1	0	Low	23.77	25.91	0.39	1	PASS
Band 66	5		Low	6	0	Low	22.31	24.45	0.28	1	PASS
Band 66	10		Low	1	0	Low	23.75	25.89	0.39	1	PASS
Band 66	10		Low	6	0	Low	22.45	24.59	0.29	1	PASS
Band 66	15		Low	1	0	Low	23.48	25.62	0.36	1	PASS
Band 66	15		Low	6	0	Low	23.45	25.59	0.36	1	PASS
Band 66	20		Low	1	0	Low	23.72	25.86	0.39	1	PASS
Band 66	20		Low	6	0	Low	23.15	25.29	0.34	1	PASS
Band 66	1.4	16-QAM	Low	1	0	Low	22.37	24.51	0.28	1	PASS
Band 66	1.4		Low	5	0	Low	21.06	23.20	0.21	1	PASS
Band 66	3		Low	1	0	Low	22.43	24.57	0.29	1	PASS
Band 66	3		Low	5	0	Low	21.07	23.21	0.21	1	PASS
Band 66	5		Low	1	0	Low	23.24	25.38	0.35	1	PASS
Band 66	5		Low	5	0	Low	21.58	23.72	0.24	1	PASS
Band 66	10		Low	1	0	Low	23.17	25.31	0.34	1	PASS
Band 66	10		Low	5	0	Low	22.49	24.63	0.29	1	PASS
Band 66	15		Low	1	0	Low	23.33	25.47	0.35	1	PASS
Band 66	15		Low	5	0	Low	23.59	25.73	0.37	1	PASS
Band 66	20		Low	1	0	Low	23.36	25.50	0.35	1	PASS
Band 66	20		Low	5	0	Low	23.41	25.55	0.36	1	PASS
Band 66	1.4	QPSK	Middle	1	0	Low	23.36	25.50	0.35	1	PASS
Band 66	1.4		Middle	6	0	Low	21.36	23.50	0.22	1	PASS
Band 66	3		Middle	1	0	Low	23.59	25.73	0.37	1	PASS
Band 66	3		Middle	6	0	Low	21.31	23.45	0.22	1	PASS
Band 66	5		Middle	1	0	Low	23.42	25.56	0.36	1	PASS



66												
Band 66	5		Middle	6	0	Low	22.39	24.53	0.28	1	PASS	
Band 66	10		Middle	1	0	Low	23.41	25.55	0.36	1	PASS	
Band 66	10		Middle	6	0	Low	22.41	24.55	0.29	1	PASS	
Band 66	15		Middle	1	0	Low	23.44	25.58	0.36	1	PASS	
Band 66	15		Middle	6	0	Low	23.37	25.51	0.36	1	PASS	
Band 66	20		Middle	1	0	Low	23.48	25.62	0.36	1	PASS	
Band 66	20		Middle	6	0	Low	23.41	25.55	0.36	1	PASS	
Band 66	1.4	16-QAM	Middle	1	0	Low	22.38	24.52	0.28	1	PASS	
Band 66	1.4		Middle	5	0	Low	21.28	23.42	0.22	1	PASS	
Band 66	3		Middle	1	0	Low	22.37	24.51	0.28	1	PASS	
Band 66	3		Middle	5	0	Low	21.27	23.41	0.22	1	PASS	
Band 66	5		Middle	1	0	Low	23.44	25.58	0.36	1	PASS	
Band 66	5		Middle	5	0	Low	21.44	23.58	0.23	1	PASS	
Band 66	10		Middle	1	0	Low	23.20	25.34	0.34	1	PASS	
Band 66	10		Middle	5	0	Low	22.48	24.62	0.29	1	PASS	
Band 66	15		Middle	1	0	Low	23.42	25.56	0.36	1	PASS	
Band 66	15		Middle	5	0	Low	23.55	25.69	0.37	1	PASS	
Band 66	20		Middle	1	0	Low	23.39	25.53	0.36	1	PASS	
Band 66	20		Middle	5	0	Low	23.37	25.51	0.36	1	PASS	
Band 66	1.4		QPSK	High	1	5	High	23.19	25.33	0.34	1	PASS
Band 66	1.4			High	6	0	High	21.18	23.32	0.21	1	PASS
Band 66	3	High		1	5	High	23.59	25.73	0.37	1	PASS	
Band 66	3	High		6	0	High	21.60	23.74	0.24	1	PASS	
Band 66	5	High		1	5	High	23.35	25.49	0.35	1	PASS	
Band 66	5	High		3	3	High	22.83	24.97	0.31	1	PASS	
Band 66	10	High		1	5	High	23.09	25.23	0.33	1	PASS	
Band 66	10	High		6	0	High	22.11	24.25	0.27	1	PASS	
Band 66	15	High		1	5	High	23.43	25.57	0.36	1	PASS	
Band 66	15	High		6	0	High	23.44	25.58	0.36	1	PASS	
Band 66	20	High		1	5	High	23.36	25.50	0.35	1	PASS	



66											
Band 66	20	16-QAM	High	6	0	High	23.45	25.59	0.36	1	PASS
Band 66	1.4		High	1	5	High	22.31	24.45	0.28	1	PASS
Band 66	1.4		High	5	1	High	21.47	23.61	0.23	1	PASS
Band 66	3		High	1	5	High	22.38	24.52	0.28	1	PASS
Band 66	3		High	5	1	High	21.46	23.60	0.23	1	PASS
Band 66	5		High	1	5	High	23.48	25.62	0.36	1	PASS
Band 66	5		High	3	3	High	21.47	23.61	0.23	1	PASS
Band 66	10		High	1	5	High	23.20	25.34	0.34	1	PASS
Band 66	10		High	5	1	High	22.70	24.84	0.30	1	PASS
Band 66	15		High	1	5	High	23.60	25.74	0.37	1	PASS
Band 66	15		High	5	1	High	23.18	25.32	0.34	1	PASS
Band 66	20		High	1	5	High	23.62	25.76	0.38	1	PASS
Band 66	20		High	5	1	High	22.98	25.12	0.33	1	PASS





Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result (dBm)	ERP (dBm)   (watts)		Limit (watts)	Verdict
Band 85	5	QPSK	Low	1	0	Low	23.20	25.34	0.34	3	PASS
Band 85	5		Low	6	0	Low	22.23	24.37	0.27	3	PASS
Band 85	10		Low	1	0	Low	22.80	24.94	0.31	3	PASS
Band 85	10		Low	6	0	Low	21.94	24.08	0.26	3	PASS
Band 85	5	16-QAM	Low	1	0	Low	22.88	25.02	0.32	3	PASS
Band 85	5		Low	5	0	Low	21.10	23.24	0.21	3	PASS
Band 85	10		Low	1	0	Low	23.24	25.38	0.35	3	PASS
Band 85	10		Low	5	0	Low	22.59	24.73	0.30	3	PASS
Band 85	5	QPSK	Middle	1	0	Low	23.00	25.14	0.33	3	PASS
Band 85	5		Middle	6	0	Low	22.09	24.23	0.26	3	PASS
Band 85	10		Middle	1	0	Low	22.96	25.10	0.32	3	PASS
Band 85	10		Middle	6	0	Low	22.08	24.22	0.26	3	PASS
Band 85	5	16-QAM	Middle	1	0	Low	22.94	25.08	0.32	3	PASS
Band 85	5		Middle	5	0	Low	21.22	23.36	0.22	3	PASS
Band 85	10		Middle	1	0	Low	22.95	25.09	0.32	3	PASS
Band 85	10		Middle	5	0	Low	22.36	24.50	0.28	3	PASS
Band 85	5	QPSK	High	1	5	High	22.67	24.81	0.30	3	PASS
Band 85	5		High	3	3	High	21.92	24.06	0.25	3	PASS
Band 85	10		High	1	5	High	22.91	25.05	0.32	3	PASS
Band 85	10		High	6	0	High	21.75	23.89	0.24	3	PASS
Band 85	5	16-QAM	High	1	5	High	22.85	24.99	0.32	3	PASS
Band 85	5		High	3	3	High	20.94	23.08	0.20	3	PASS
Band 85	10		High	1	5	High	22.74	24.88	0.31	3	PASS
Band 85	10		High	5	1	High	21.94	24.08	0.26	3	PASS

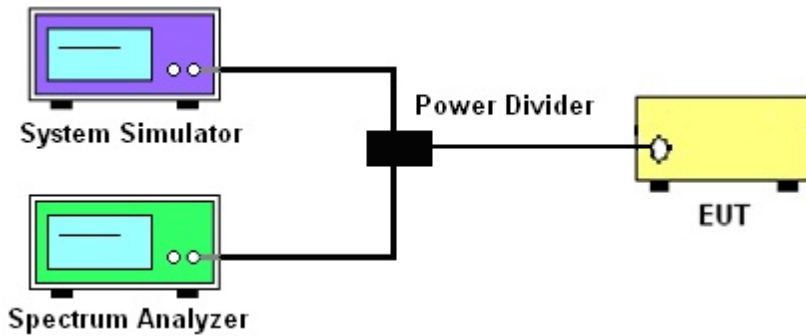
#### 4. PEAK-TO-AVERAGE RATIO

##### 4.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

###### 4.1.1 MEASUREMENT METHOD

Use one of the procedures presented in 4.1.3 to measure the total peak power and record as PPK. Use one of the applicable procedures presented 4.1.3 to measure the total average power and record as PAVg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:  
 $PAPR (dB) = PPK (dBm) - PAVg (dBm)$ .

###### 4.1.2 TEST SETUP



###### 4.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.7 and ANSI C63.26 2015 Section 5.2.6
2. The EUT was connected to spectrum and system simulator via a power divider
3. Select Middle channels for each band and different modulation.
4. Set the test probe and measure the peak and average power of the spectrum analyzer
5. Record the deviation as Peak to Average Ratio.

###### 6. Limit

Operating band	FCC Limit	ISED Limit
Band 2	PAR ≤ 13 dB	PAR ≤ 13 dB
Band 4	PAR ≤ 13 dB	PAR ≤ 13 dB
Band 5	PAR ≤ 13 dB	PAR ≤ 13 dB
Band 12	PAR ≤ 13 dB	PAR ≤ 13 dB
Band 13	PAR ≤ 13 dB	PAR ≤ 13 dB
Band 25	PAR ≤ 13 dB	PAR ≤ 13 dB
Band 26 Lower Band	N/A	N/A
Band 26 Upper Band	PAR ≤ 13 dB	PAR ≤ 13 dB
Band 66	PAR ≤ 13 dB	PAR ≤ 13 dB
Band 85	PAR ≤ 13 dB	PAR ≤ 13 dB





4.1.4 TEST RESULTS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 2	1.4	QPSK	Middle	6	0	Low	5.11	≤13	PASS
Band 2	3		Middle	6	0	Low	5.14	≤13	PASS
Band 2	5		Middle	6	0	Low	5.56	≤13	PASS
Band 2	10		Middle	6	0	Low	5.49	≤13	PASS
Band 2	15		Middle	6	0	Low	5.55	≤13	PASS
Band 2	20		Middle	6	0	Low	5.59	≤13	PASS
Band 2	1.4	16-QAM	Middle	5	0	Low	6.29	≤13	PASS
Band 2	3		Middle	5	0	Low	6.27	≤13	PASS
Band 2	5		Middle	5	0	Low	6.20	≤13	PASS
Band 2	10		Middle	5	0	Low	6.30	≤13	PASS
Band 2	15		Middle	5	0	Low	6.29	≤13	PASS
Band 2	20		Middle	5	0	Low	6.32	≤13	PASS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 4	1.4	QPSK	Middle	6	0	Low	4.98	≤13	PASS
Band 4	3		Middle	6	0	Low	4.97	≤13	PASS
Band 4	5		Middle	6	0	Low	5.27	≤13	PASS
Band 4	10		Middle	6	0	Low	5.24	≤13	PASS
Band 4	15		Middle	6	0	Low	5.17	≤13	PASS
Band 4	20		Middle	6	0	Low	5.2	≤13	PASS
Band 4	1.4	16-QAM	Middle	5	0	Low	6.03	≤13	PASS
Band 4	3		Middle	5	0	Low	6.03	≤13	PASS
Band 4	5		Middle	5	0	Low	5.99	≤13	PASS
Band 4	10		Middle	5	0	Low	5.94	≤13	PASS
Band 4	15		Middle	5	0	Low	5.87	≤13	PASS
Band 4	20		Middle	5	0	Low	5.91	≤13	PASS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 5	1.4	QPSK	Middle	6	0	Low	4.54	≤13	PASS
Band 5	3		Middle	6	0	Low	4.54	≤13	PASS
Band 5	5		Middle	6	0	Low	4.81	≤13	PASS
Band 5	10		Middle	6	0	Low	4.75	≤13	PASS
Band 5	1.4	16-QAM	Middle	5	0	Low	5.56	≤13	PASS
Band 5	3		Middle	5	0	Low	5.54	≤13	PASS
Band 5	5		Middle	5	0	Low	5.47	≤13	PASS
Band 5	10		Middle	5	0	Low	5.66	≤13	PASS



Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 12	1.4	QPSK	Middle	6	0	Low	4.46	≤13	PASS
Band 12	3		Middle	6	0	Low	4.36	≤13	PASS
Band 12	5		Middle	6	0	Low	4.63	≤13	PASS
Band 12	10		Middle	6	0	Low	4.52	≤13	PASS
Band 12	1.4	16-QAM	Middle	5	0	Low	5.30	≤13	PASS
Band 12	3		Middle	5	0	Low	5.30	≤13	PASS
Band 12	5		Middle	5	0	Low	5.24	≤13	PASS
Band 12	10		Middle	5	0	Low	5.28	≤13	PASS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 13	5	QPSK	Middle	6	0	Low	4.84	≤13	PASS
Band 13	10		Middle	6	0	Low	4.75	≤13	PASS
Band 13	5	16-QAM	Middle	5	0	Low	5.48	≤13	PASS
Band 13	10		Middle	5	0	Low	5.65	≤13	PASS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 25	1.4	QPSK	Middle	6	0	Low	5.11	≤13	PASS
Band 25	3		Middle	6	0	Low	5.19	≤13	PASS
Band 25	5		Middle	6	0	Low	5.58	≤13	PASS
Band 25	10		Middle	6	0	Low	5.50	≤13	PASS
Band 25	15		Middle	6	0	Low	5.65	≤13	PASS
Band 25	20		Middle	6	0	Low	5.63	≤13	PASS
Band 25	1.4	16-QAM	Middle	5	0	Low	6.29	≤13	PASS
Band 25	3		Middle	5	0	Low	6.29	≤13	PASS
Band 25	5		Middle	5	0	Low	6.23	≤13	PASS
Band 25	10		Middle	5	0	Low	6.34	≤13	PASS
Band 25	15		Middle	5	0	Low	6.32	≤13	PASS
Band 25	20		Middle	5	0	Low	6.39	≤13	PASS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 26 (Part 22)	1.4	QPSK	Middle	6	0	Low	4.6	≤13	PASS
Band 26 (Part 22)	3		Middle	6	0	Low	4.5	≤13	PASS
Band 26 (Part 22)	5		Middle	6	0	Low	4.7	≤13	PASS
Band 26 (Part 22)	10		Middle	6	0	Low	4.63	≤13	PASS
Band 26 (Part 22)	15		Middle	6	0	Low	4.6	≤13	PASS
Band 26 (Part 22)	1.4	16-QAM	Middle	5	0	Low	5.47	≤13	PASS
Band 26 (Part 22)	3		Middle	5	0	Low	5.49	≤13	PASS
Band 26 (Part 22)	5		Middle	5	0	Low	5.41	≤13	PASS
Band 26 (Part 22)	10		Middle	5	0	Low	5.44	≤13	PASS
Band 26	15		Middle	5	0	Low	5.33	≤13	PASS



(Part 22)									
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Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 26 (Part 90)	1.4	QPSK	Middle	6	0	Low	4.51	≤13	PASS
Band 26 (Part 90)	3		Middle	6	0	Low	4.5	≤13	PASS
Band 26 (Part 90)	5		Middle	6	0	Low	4.65	≤13	PASS
Band 26 (Part 90)	10		Middle	6	0	Low	4.66	≤13	PASS
Band 26 (Part 90)	1.4	16-QAM	Middle	5	0	Low	5.54	≤13	PASS
Band 26 (Part 90)	3		Middle	5	0	Low	5.51	≤13	PASS
Band 26 (Part 90)	5		Middle	5	0	Low	5.42	≤13	PASS
Band 26 (Part 90)	10		Middle	5	0	Low	5.7	≤13	PASS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 66	1.4	QPSK	Middle	6	0	Low	4.95	≤13	PASS
Band 66	3		Middle	6	0	Low	4.96	≤13	PASS
Band 66	5		Middle	6	0	Low	5.27	≤13	PASS
Band 66	10		Middle	6	0	Low	5.19	≤13	PASS
Band 66	15		Middle	6	0	Low	5.30	≤13	PASS
Band 66	20		Middle	6	0	Low	5.22	≤13	PASS
Band 66	1.4	16-QAM	Middle	5	0	Low	5.99	≤13	PASS
Band 66	3		Middle	5	0	Low	6.16	≤13	PASS
Band 66	5		Middle	5	0	Low	5.98	≤13	PASS
Band 66	10		Middle	5	0	Low	5.92	≤13	PASS
Band 66	15		Middle	5	0	Low	5.45	≤13	PASS
Band 66	20		Middle	5	0	Low	5.56	≤13	PASS

Band	BW [MHz]	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band 85	5	QPSK	Middle	6	0	Low	4.57	≤13	PASS
Band 85	10		Middle	6	0	Low	4.51	≤13	PASS
Band 85	5	16-QAM	Middle	5	0	Low	5.33	≤13	PASS
Band 85	10		Middle	5	0	Low	5.28	≤13	PASS

Result: PASS, Test chart See Appendix D

## 5. OCCUPIED BANDWIDTH

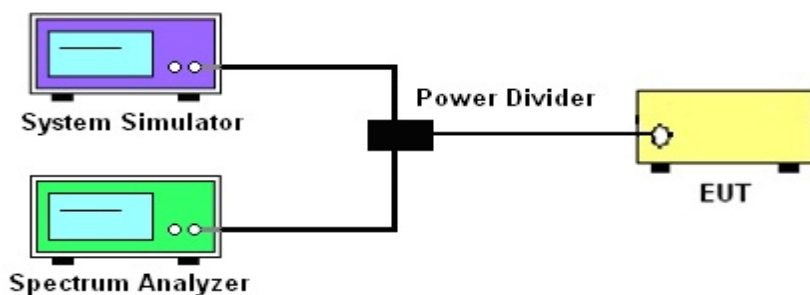
### 5.1 DESCRIPTION OF OCCUPIED BANDWIDTH MEASUREMENT

#### 5.1.1 MEASUREMENT METHOD

1. The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

2. The 26 db emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 db below the maximum in-band spectral density of the modulated signal. spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

#### 5.1.2 TEST SETUP



#### 5.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 4.2 and 4.3.
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Select Middle channels for each band and different modulation.
4. Set the test probe and measure the Occupied Bandwidth of the spectrum analyzer.
5. Measure and record the Occupied Bandwidth from the Spectrum Analyzer.
6. Limit: N/A



5.1.4 MEASUREMENT RESULT

LTE Band 2 Bandwidth [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
1.4	QPSK	6	0	Low	1.090	1.291
3	QPSK	6	0	Low	1.095	1.270
5	QPSK	6	0	Low	1.101	1.309
10	QPSK	6	0	Low	1.101	1.298
15	QPSK	6	0	Low	1.100	1.303
20	QPSK	6	0	Low	1.103	1.301
1.4	16-QAM	5	0	Low	0.923	1.272
3	16-QAM	5	0	Low	0.926	1.233
5	16-QAM	5	0	Low	0.923	1.123
10	16-QAM	5	0	Low	0.922	1.120
15	16-QAM	5	0	Low	0.934	1.123
20	16-QAM	5	0	Low	0.924	1.114
LTE Band 4 Bandwidth [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
1.4	QPSK	6	0	Low	1.090	1.264
3	QPSK	6	0	Low	1.095	1.276
5	QPSK	6	0	Low	1.101	1.281
10	QPSK	6	0	Low	1.097	1.268
15	QPSK	6	0	Low	1.098	1.290
20	QPSK	6	0	Low	1.103	1.305
1.4	16-QAM	5	0	Low	0.925	1.120
3	16-QAM	5	0	Low	0.930	1.135
5	16-QAM	5	0	Low	0.932	1.143
10	16-QAM	5	0	Low	0.940	1.142
15	16-QAM	5	0	Low	0.929	1.106
20	16-QAM	5	0	Low	0.926	1.096
LTE Band 5 Bandwidth [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
1.4	QPSK	6	0	Low	1.0905	1.271
3	QPSK	6	0	Low	1.0947	1.276
5	QPSK	6	0	Low	1.187	1.566
10	QPSK	6	0	Low	1.184	1.601
1.4	16-QAM	5	0	Low	0.92645	1.12
3	16-QAM	5	0	Low	0.929	1.261
5	16-QAM	5	0	Low	1.052	1.513
10	16-QAM	5	0	Low	1.082	1.536



LTE Band 12 Bandwidth [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
1.4	QPSK	6	0	Low	1.092	1.279
3	QPSK	6	0	Low	1.094	1.281
5	QPSK	6	0	Low	1.1	1.312
10	QPSK	6	0	Low	1.096	1.308
1.4	16-QAM	5	0	Low	0.926	1.129
3	16-QAM	5	0	Low	0.929	1.128
5	16-QAM	5	0	Low	0.932	1.173
10	16-QAM	5	0	Low	0.938	1.135
LTE Band 13 Band width [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
5	QPSK	6	0	Low	1.1	1.282
10	QPSK	6	0	Low	1.0945	1.263
5	16-QAM	5	0	Low	0.928	1.144
10	16-QAM	5	0	Low	0.938	1.143
LTE Band 25 Band width [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
1.4	QPSK	6	0	Low	1.09	1.281
3	QPSK	6	0	Low	1.0966	1.287
5	QPSK	6	0	Low	1.102	1.283
10	QPSK	6	0	Low	1.098	1.292
15	QPSK	6	0	Low	1.1048	1.305
20	QPSK	6	0	Low	1.108	1.293
1.4	16-QAM	5	0	Low	0.928	1.128
3	16-QAM	5	0	Low	0.934	1.256
5	16-QAM	5	0	Low	0.932	1.126
10	16-QAM	5	0	Low	0.936	1.123
15	16-QAM	5	0	Low	0.936	1.143
20	16-QAM	5	0	Low	0.933	1.126
LTE Band 26 (Part 22) Bandwidth [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
1.4	QPSK	6	0	Low	1.0909	1.282
3	QPSK	6	0	Low	1.095	1.278
5	QPSK	6	0	Low	1.0951	1.281
10	QPSK	6	0	Low	1.1	1.289
15	QPSK	6	0	Low	1.096	1.279
1.4	16-QAM	5	0	Low	0.927	1.133
3	16-QAM	5	0	Low	0.929	1.122
5	16-QAM	5	0	Low	0.925	1.119
10	16-QAM	5	0	Low	0.931	1.14
15	16-QAM	5	0	Low	0.926	1.107



LTE Band 26 (Part 90) Bandwidth [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
1.4	QPSK	6	0	Low	1.0906	1.286
3	QPSK	6	0	Low	1.094	1.285
5	QPSK	6	0	Low	1.094	1.282
10	QPSK	6	0	Low	1.101	1.283
1.4	16-QAM	5	0	Low	0.923	1.176
3	16-QAM	5	0	Low	0.925	1.119
5	16-QAM	5	0	Low	0.923	1.115
10	16-QAM	5	0	Low	0.925	1.134
LTE Band 66 Bandwidth [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
1.4	QPSK	6	0	Low	1.09	1.282
3	QPSK	6	0	Low	1.094	1.286
5	QPSK	6	0	Low	1.101	1.291
10	QPSK	6	0	Low	1.0951	1.268
15	QPSK	6	0	Low	1.1088	1.272
20	QPSK	6	0	Low	1.1	1.291
1.4	16-QAM	5	0	Low	0.92462	1.185
3	16-QAM	5	0	Low	0.93384	1.293
5	16-QAM	5	0	Low	1.103	1.287
10	16-QAM	5	0	Low	0.933	1.155
15	16-QAM	5	0	Low	0.927	1.161
20	16-QAM	5	0	Low	0.933	1.144
LTE Band 85 Bandwidth [MHz]						
BW [MHz]	Modulation	RB Size	RB Start	NBIndex	Middle Channel	
					99% BW	26dB BW
5	QPSK	6	0	Low	1.098	1.325
10	QPSK	6	0	Low	1.0988	1.312
5	16-QAM	5	0	Low	0.923	1.138
10	16-QAM	5	0	Low	0.94	1.157

Result: PASS, Test chart See Appendix A



## 6. CONDUCTED BAND EDGE

### 6.1 DESCRIPTION OF CONDUCTED BAND EDGE MEASUREMENT

#### 6.1.1 MEASUREMENT METHOD

##### 1. §22.917(a) & RSS – 132

For operations in the 824 – 849 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

##### 2. §24.238 (a) & RSS – 133

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed

##### 3. §27.53 (h) & RSS – 139

For operations in the 1710 – 1755 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

##### 4. §27.53(m)(4) & RSS – 199

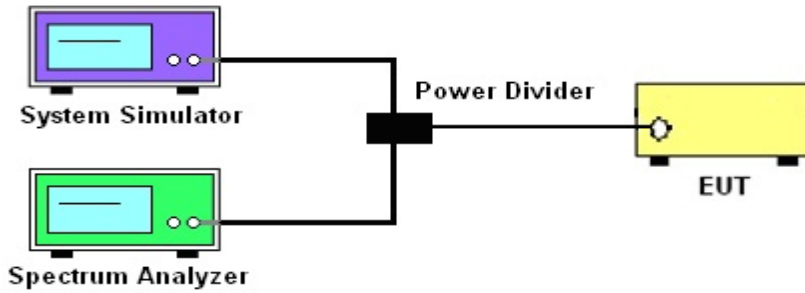
For operations in the 2500 MHz ~ 2570 MHz band this section, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

##### 5. §27.53 (g) & RSS – 130

For operations in the 698 -746 MHz band, the FCC limit is  $43 + 10\log_{10}(P[\text{Watts}])$  dB below the transmitter power  $P(\text{Watts})$  in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.



### 6.1.2 TEST SETUP



### 6.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured. Set RBW  $\geq$  1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Set spectrum analyzer with RMS/AVG detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. Limit

Operating band	FCC Limit	ISED Limit
Band 2	< - 13 dBm /1%EBW	< - 13 dBm / 1%OBW
Band 4	< - 13 dBm /1%EBW	< - 13 dBm / 1%OBW
Band 5	< - 13 dBm /1%EBW	< - 13 dBm / 1%OBW
Band 12	< - 13 dBm /30kHz	< - 13 dBm /30kHz
Band 13	< - 13 dBm /30kHz	< - 13 dBm /30kHz
Band 25	< - 13 dBm /1%EBW	< - 13 dBm / 1%OBW
Band 26 Lower Band	< - 20 dBm /1%EBW	N/A
Band 26 Upper Band	< - 13 dBm /1%EBW	< - 13 dBm / 1%OBW
Band 66	< - 13 dBm /1%EBW	< - 13 dBm / 1%OBW
Band 85	< - 13 dBm /30kHz	< - 13 dBm /30kHz

### 6.1.4 MEASUREMENT RESULT

Result: PASS, Test chart See Appendix B

## 7. CONDUCTED SPURIOUS EMISSION

### 7.1 DESCRIPTION OF CONDUCTED SPURIOUS EMISSION MEASUREMENT

#### 7.1.1 MEASUREMENT METHOD

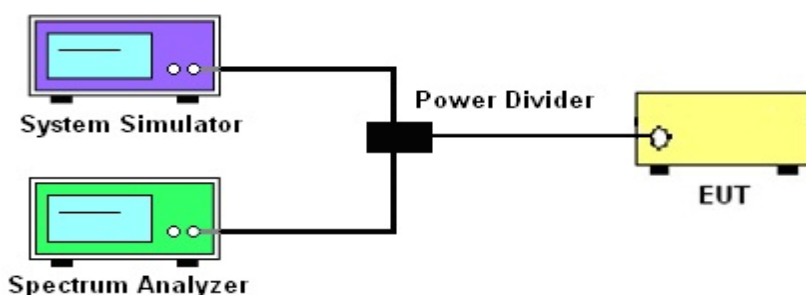
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For Band 7:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

#### 7.1.2 TEST SETUP



#### 7.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement
4. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. Limit

Operating band	FCC Limit	ISED Limit
Band 2	< - 13 dBm /1MHz	< - 13 dBm /1MHz
Band 4	< - 13 dBm /1MHz	< - 13 dBm /1MHz
Band 5	< - 13 dBm /100kHz@ < 1GHz < - 13 dBm /1MHz@ > 1GHz	< - 13 dBm / 100 kHz
Band 12	< - 13 dBm /100kHz	< - 13 dBm /100kHz
Band 13	< - 13 dBm /100kHz	< - 13 dBm /100kHz
Band 25	< - 13 dBm /1MHz	< - 13 dBm /1MHz
Band 26 Lower Band	< - 13 dBm /100kHz	N/A
Band 26 Upper Band	< - 13 dBm /100kHz@ < 1GHz < - 13 dBm /1MHz@ > 1GHz	< - 13 dBm / 100 kHz
Band 66	< - 13 dBm /1MHz	< - 13 dBm /1MHz
Band 85	< - 13 dBm /100kHz	< - 13 dBm /100kHz

#### 7.1.4 TEST RESULTS

Result: PASS, Test chart See Appendix C

## 8. RADIATED SPURIOUS EMISSION

### 8.1 DESCRIPTION OF RADIATED SPURIOUS EMISSION

#### 8.1.1 MEASUREMENT METHOD

The radiated spurious emission was measured by substitution method according to ANSI C63.26 2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB. For Band 7 The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

Note: The radiated spurious emissions which are attenuated more than 20 dB below the permissible Value for above 18GHz, so it's don't need not be reported.

#### 8.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as,  $RSE = R_x (dBuV) + CL (dB) + SA (dB) + Gain (dBi) - 107 (dBuV \text{ to } dBm)$  The SA is calibrated using following setup.

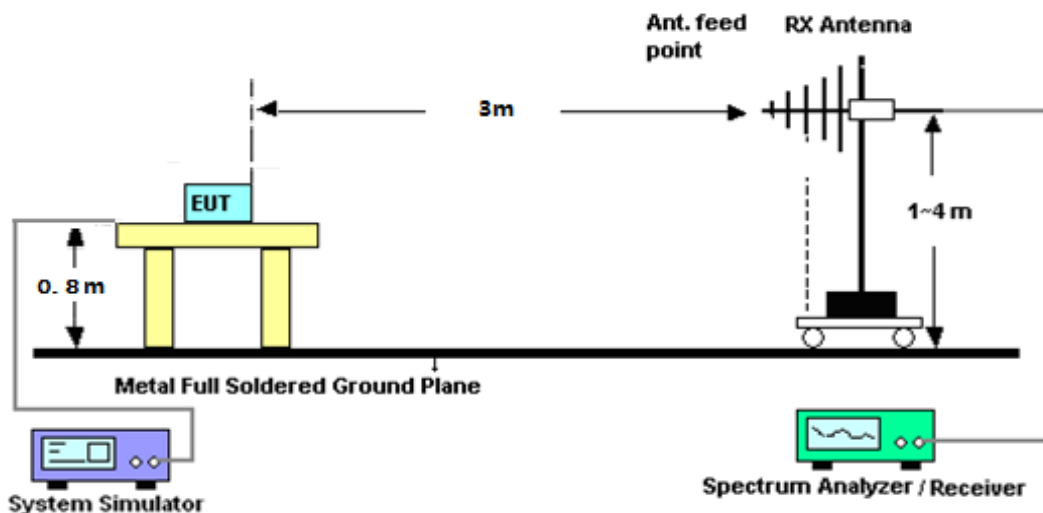
b) EUT was placed on 1.5 m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

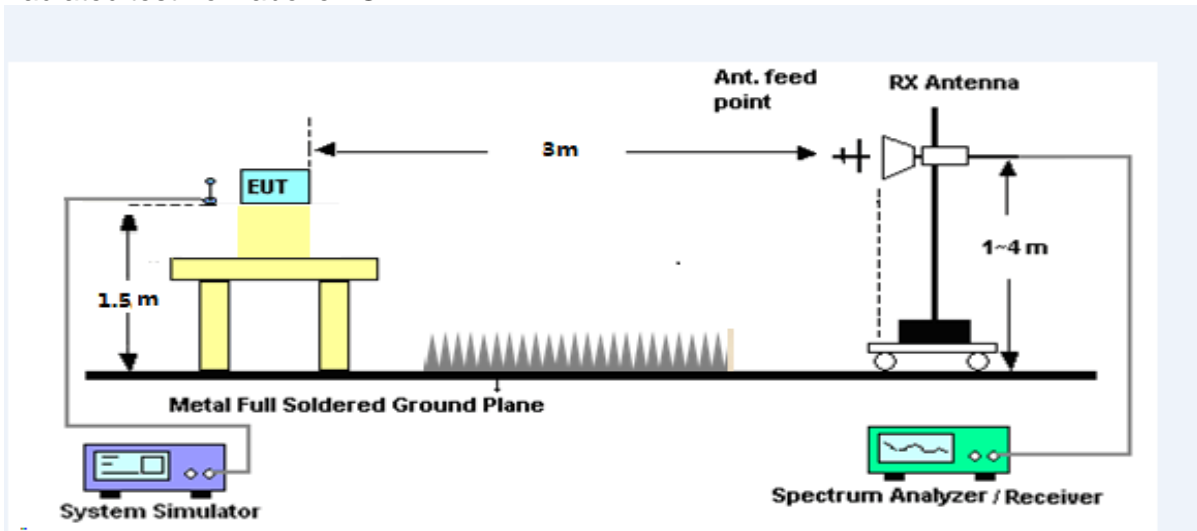
The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:

Power =  $P_{Mea} + ARpl$

For radiated test from 30MHz to 1GHz



For radiated test from above 1GHz



### 8.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 Section 7 and ANSI C63.26 2015 Section 5.5.
2. The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. Limit

Operating band	FCC Limit	ISED Limit
Band 2	< - 13 dBm /1MHz	< - 13 dBm /1MHz
Band 4	< - 13 dBm /1MHz	< - 13 dBm /1MHz
Band 5	< - 13 dBm /100kHz @ < 1GHz < - 13 dBm /1MHz @ > 1GHz	< - 13 dBm / 100 kHz
Band 12	< - 13 dBm /100kHz	< - 13 dBm /100kHz
Band 13	< - 13 dBm /100kHz	< - 13 dBm /100kHz
Band 25	< - 13 dBm /1MHz	< - 13 dBm /1MHz
Band 26 Lower Band	< - 13 dBm /100kHz	N/A
Band 26 Upper Band	< - 13 dBm /100kHz @ < 1GHz < - 13 dBm /1MHz @ > 1GHz	< - 13 dBm / 100 kHz
Band 66	< - 13 dBm /1MHz	< - 13 dBm /1MHz
Band 85	< - 13 dBm /100kHz	< - 13 dBm /100kHz

### 8.1.4 TEST RESULTS

Result: PASS, Test data See Appendix E

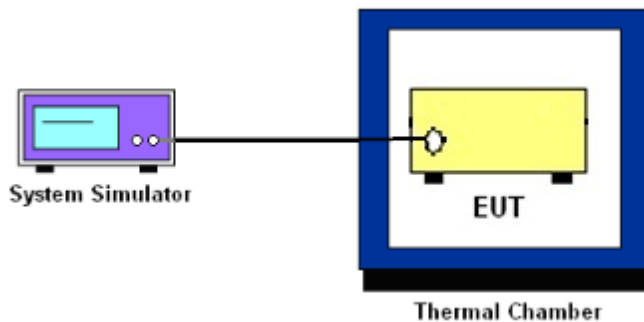
9. FREQUENCY STABILITY

9.1 DESCRIPTION OF FREQUENCY STABILITY MEASUREMENT

9.1.1 MEASUREMENT METHOD

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within  $\pm 0.00025\%$  ( $\pm 2.5\text{ppm}$ ) of the center frequency or within authorized bands.

9.1.2 TEST SETUP



9.1.3 TEST PROCEDURES FOR TEMPERATURE VARIATION

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to  $-30^{\circ}\text{C}$  and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in  $10^{\circ}\text{C}$  step up to  $50^{\circ}\text{C}$ . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

9.1.4 TEST PROCEDURES FOR VOLTAGE VARIATION

1. The testing follows FCC KDB 971168 D01v01r03 Section 9.
2. The EUT was placed in a temperature chamber at  $25 \pm 5^{\circ}\text{C}$  and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

5. Limit

Operating band	FCC Limit	ISED Limit
Band 2	Within authorized bands	2.5 ppm
Band 4	Within authorized bands	Within authorized bands
Band 5	2.5 ppm	2.5 ppm
Band 12	Within authorized bands	Within authorized bands
Band 13	Within authorized bands	Within authorized bands
Band 25	Within authorized bands	2.5 ppm
Band 26 Lower Band	2.5 ppm	N/A
Band 26 Upper Band	2.5 ppm	2.5 ppm
Band 66	Within authorized bands	Within authorized bands



Band 85

Within authorized bands

Within authorized bands

9.1.5 TEST RESULTS

Result: PASS

LTE Band 2 (QPSK) / 1880MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	9.96	0.005	±2.5ppm	PASS
80		1	0	Low	-18.21	-0.010		
70		1	0	Low	9.28	0.005		
60		1	0	Low	-12.65	-0.007		
50		1	0	Low	-14.79	-0.008		
40		1	0	Low	-20.74	-0.011		
30		1	0	Low	-17.60	-0.009		
20		1	0	Low	-9.83	-0.005		
10		1	0	Low	9.21	0.005		
0		1	0	Low	14.28	0.008		
-10		1	0	Low	14.42	0.008		
-20		1	0	Low	14.69	0.008		
-30		1	0	Low	16.42	0.009		
-40		1	0	Low	14.99	0.008		
NT		Maximum Voltage	1	0	Low	8.80		
NT	BEP	1	0	Low	8.53	0.005		

LTE Band 2 (16QAM) / 1880MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	12.36	0.007	±2.5ppm	PASS
80		1	0	Low	-17.14	-0.009		
70		1	0	Low	16.88	0.009		
60		1	0	Low	-17.32	-0.009		
50		1	0	Low	24.13	0.013		
40		1	0	Low	-27.17	-0.014		
30		1	0	Low	-23.76	-0.013		
20		1	0	Low	-7.38	-0.004		
10		1	0	Low	-9.04	-0.005		
0		1	0	Low	20.51	0.011		
-10		1	0	Low	21.56	0.011		
-20		1	0	Low	16.12	0.009		
-30		1	0	Low	18.20	0.010		
-40		1	0	Low	17.58	0.009		
NT		Maximum Voltage	1	0	Low	14.13		
NT	BEP	1	0	Low	9.42	0.005		



LTE Band 4 (QPSK) / 1732.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-13.36	-0.007	±2.5ppm	PASS
80		1	0	Low	-9.76	-0.005		
70		1	0	Low	13.38	0.007		
60		1	0	Low	14.96	0.008		
50		1	0	Low	-16.22	-0.009		
40		1	0	Low	-20.46	-0.011		
30		1	0	Low	8.65	0.005		
20		1	0	Low	10.71	0.006		
10		1	0	Low	-25.52	-0.014		
0		1	0	Low	12.70	0.007		
-10		1	0	Low	15.98	0.009		
-20		1	0	Low	15.15	0.008		
-30		1	0	Low	14.38	0.008		
-40		1	0	Low	13.28	0.007		
NT		Maximum Voltage	1	0	Low	-24.81		
NT	BEP	1	0	Low	-31.44	-0.017		

LTE Band 4 (16QAM) / 1732.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-11.20	-0.006	±2.5ppm	PASS
80		1	0	Low	-9.11	-0.005		
70		1	0	Low	-14.85	-0.008		
60		1	0	Low	7.90	0.004		
50		1	0	Low	-29.51	-0.016		
40		1	0	Low	21.10	0.011		
30		1	0	Low	-9.06	-0.005		
20		1	0	Low	10.74	0.006		
10		1	0	Low	-22.23	-0.012		
0		1	0	Low	14.63	0.008		
-10		1	0	Low	15.31	0.008		
-20		1	0	Low	17.88	0.010		
-30		1	0	Low	18.34	0.010		
-40		1	0	Low	15.19	0.008		
NT		Maximum Voltage	1	0	Low	-28.07		
NT	BEP	1	0	Low	-19.76	-0.011		



LTE Band 5 (QPSK) / 836.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-9.88	-0.005	±2.5ppm	PASS
80		1	0	Low	-10.50	-0.006		
70		1	0	Low	-12.52	-0.007		
60		1	0	Low	-17.19	-0.009		
50		1	0	Low	-16.28	-0.009		
40		1	0	Low	-15.01	-0.008		
30		1	0	Low	-15.19	-0.008		
20		1	0	Low	-9.58	-0.005		
10		1	0	Low	-8.23	-0.004		
0		1	0	Low	-5.38	-0.003		
-10		1	0	Low	-6.39	-0.003		
-20		1	0	Low	-7.95	-0.004		
-30		1	0	Low	-8.94	-0.005		
-40		1	0	Low	-10.81	-0.006		
NT		Maximum Voltage	1	0	Low	-10.03		
NT	BEP	1	0	Low	-9.03	-0.005		

LTE Band 5 (16QAM) / 836.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-10.70	-0.006	±2.5ppm	PASS
80		1	0	Low	-10.17	-0.005		
70		1	0	Low	-16.18	-0.009		
60		1	0	Low	-14.43	-0.008		
50		1	0	Low	-19.48	-0.010		
40		1	0	Low	-15.49	-0.008		
30		1	0	Low	-20.34	-0.011		
20		1	0	Low	-9.71	-0.005		
10		1	0	Low	-7.87	-0.004		
0		1	0	Low	-8.37	-0.004		
-10		1	0	Low	-8.78	-0.005		
-20		1	0	Low	-8.90	-0.005		
-30		1	0	Low	-11.39	-0.006		
-40		1	0	Low	-12.42	-0.007		
NT		Maximum Voltage	1	0	Low	-9.23		
NT	BEP	1	0	Low	-8.37	-0.004		





LTE Band 12 (QPSK) / 707.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-4.45	-0.002	±2.5ppm	PASS
80		1	0	Low	-7.60	-0.004		
70		1	0	Low	-8.40	-0.004		
60		1	0	Low	-6.14	-0.003		
50		1	0	Low	-7.54	-0.004		
40		1	0	Low	-6.24	-0.003		
30		1	0	Low	-8.64	-0.005		
20		1	0	Low	-8.58	-0.005		
10		1	0	Low	-8.93	-0.005		
0		1	0	Low	-6.51	-0.003		
-10		1	0	Low	-8.34	-0.004		
-20		1	0	Low	-5.52	-0.003		
-30		1	0	Low	-7.97	-0.004		
-40		1	0	Low	-8.61	-0.005		
NT		Maximum Voltage	1	0	Low	-9.30		
NT	BEP	1	0	Low	-8.25	-0.004		

LTE Band 12 (16QAM) / 707.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-3.96	-0.002	±2.5ppm	PASS
80		1	0	Low	-5.31	-0.003		
70		1	0	Low	-6.39	-0.003		
60		1	0	Low	-5.59	-0.003		
50		1	0	Low	-24.03	-0.013		
40		1	0	Low	-9.47	-0.005		
30		1	0	Low	-7.48	-0.004		
20		1	0	Low	-6.41	-0.003		
10		1	0	Low	-6.82	-0.004		
0		1	0	Low	-7.82	-0.004		
-10		1	0	Low	-5.82	-0.003		
-20		1	0	Low	-7.61	-0.004		
-30		1	0	Low	-5.52	-0.003		
-40		1	0	Low	-8.51	-0.005		
NT		Maximum Voltage	1	0	Low	-8.77		
NT	BEP	1	0	Low	-7.55	-0.004		



LTE Band 13 (QPSK) / 782MHz / BW 5M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-6.02	-0.003	±2.5ppm	PASS
80		1	0	Low	-12.39	-0.007		
70		1	0	Low	-11.07	-0.006		
60		1	0	Low	-9.94	-0.005		
50		1	0	Low	-8.93	-0.005		
40		1	0	Low	-13.5	-0.007		
30		1	0	Low	-10.29	-0.005		
20		1	0	Low	-17.21	-0.009		
10		1	0	Low	-10.31	-0.005		
0		1	0	Low	-5.36	-0.003		
-10		1	0	Low	-5.88	-0.003		
-20		1	0	Low	-6.32	-0.003		
-30		1	0	Low	-5.54	-0.003		
-40		1	0	Low	-5.98	-0.003		
NT		Maximum Voltage	1	0	Low	-13.36		
NT	BEP	1	0	Low	-17.52	-0.009		

LTE Band 13 (16QAM) / 782MHz / BW 5M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-8.18	-0.004	±2.5ppm	PASS
80		1	0	Low	-12.43	-0.007		
70		1	0	Low	-11.46	-0.006		
60		1	0	Low	-8.3	-0.004		
50		1	0	Low	-7.38	-0.004		
40		1	0	Low	-15.15	-0.008		
30		1	0	Low	-10.03	-0.005		
20		1	0	Low	-16.44	-0.009		
10		1	0	Low	-11.9	-0.006		
0		1	0	Low	-5.89	-0.003		
-10		1	0	Low	-5.18	-0.003		
-20		1	0	Low	-5.59	-0.003		
-30		1	0	Low	-7.35	-0.004		
-40		1	0	Low	-6.95	-0.004		
NT		Maximum Voltage	1	0	Low	-17.50		
NT	BEP	1	0	Low	-15.49	-0.008		



LTE Band 25 (QPSK) / 1882.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-21.62	-0.012	±2.5ppm	PASS
80		1	0	Low	-32.96	-0.018		
70		1	0	Low	-16.69	-0.009		
60		1	0	Low	-13.88	-0.007		
50		1	0	Low	-30.00	-0.016		
40		1	0	Low	-37.29	-0.020		
30		1	0	Low	-25.29	-0.013		
20		1	0	Low	-20.70	-0.011		
10		1	0	Low	-18.22	-0.010		
0		1	0	Low	-16.44	-0.009		
-10		1	0	Low	-13.03	-0.007		
-20		1	0	Low	-15.91	-0.008		
-30		1	0	Low	-15.18	-0.008		
-40		1	0	Low	-18.42	-0.010		
NT		Maximum Voltage	1	0	Low	-15.28		
NT	BEP	1	0	Low	-14.63	-0.008		

LTE Band 25 (16QAM) / 1882.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-23.98	-0.013	±2.5ppm	PASS
80		1	0	Low	-25.39	-0.014		
70		1	0	Low	-15.05	-0.008		
60		1	0	Low	-20.67	-0.011		
50		1	0	Low	-29.78	-0.016		
40		1	0	Low	-40.57	-0.022		
30		1	0	Low	-33.53	-0.018		
20		1	0	Low	-24.16	-0.013		
10		1	0	Low	-22.89	-0.012		
0		1	0	Low	-18.04	-0.010		
-10		1	0	Low	-15.34	-0.008		
-20		1	0	Low	-15.91	-0.008		
-30		1	0	Low	-16.16	-0.009		
-40		1	0	Low	-18.67	-0.010		
NT		Maximum Voltage	1	0	Low	-18.11		
NT	BEP	1	0	Low	-20.48	-0.011		



LTE Band 26(Part 22)/ (QPSK) / 836.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-5.23	-0.003	±2.5ppm	PASS
80		1	0	Low	-5.95	-0.003		
70		1	0	Low	-4.54	-0.002		
60		1	0	Low	-13.18	-0.007		
50		1	0	Low	5.41	0.003		
40		1	0	Low	-11.61	-0.006		
30		1	0	Low	-6.01	-0.003		
20		1	0	Low	-19.95	-0.011		
10		1	0	Low	6.04	0.003		
0		1	0	Low	6.45	0.003		
-10		1	0	Low	9.86	0.005		
-20		1	0	Low	9.47	0.005		
-30		1	0	Low	7.3	0.004		
-40		1	0	Low	9.48	0.005		
NT		Maximum Voltage	1	0	Low	-7.79		
NT	BEP	1	0	Low	-7.45	-0.004		

LTE Band 26(Part 22)/ (16QAM) / 836.5MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-5.94	-0.003	±2.5ppm	PASS
80		1	0	Low	-6.51	-0.003		
70		1	0	Low	4.65	0.002		
60		1	0	Low	-10.78	-0.006		
50		1	0	Low	2.86	0.002		
40		1	0	Low	-13.48	-0.007		
30		1	0	Low	-6.63	-0.004		
20		1	0	Low	-16.18	-0.009		
10		1	0	Low	6.06	0.003		
0		1	0	Low	8.54	0.005		
-10		1	0	Low	7.45	0.004		
-20		1	0	Low	7.37	0.004		
-30		1	0	Low	9.12	0.005		
-40		1	0	Low	9.44	0.005		
NT		Maximum Voltage	1	0	Low	-5.66		
NT	BEP	1	0	Low	-4.42	-0.002		



LTE Band 26(Part 90)/ (QPSK) / 819MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-4.59	-0.002	±2.5ppm	PASS
80		1	0	Low	-6.21	-0.003		
70		1	0	Low	-4.35	-0.002		
60		1	0	Low	-11.04	-0.006		
50		1	0	Low	5.54	0.003		
40		1	0	Low	-11.59	-0.006		
30		1	0	Low	-5.95	-0.003		
20		1	0	Low	-18.95	-0.010		
10		1	0	Low	4.98	0.003		
0		1	0	Low	5.64	0.003		
-10		1	0	Low	7.25	0.004		
-20		1	0	Low	7.62	0.004		
-30		1	0	Low	7.31	0.004		
-40		1	0	Low	9.80	0.005		
NT		Maximum Voltage	1	0	Low	-8.85		
NT	BEP	1	0	Low	-5.46	-0.003		

LTE Band 26(Part 90)/ (16QAM) / 819MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-5.95	-0.003	±2.5ppm	PASS
80		1	0	Low	-5.51	-0.003		
70		1	0	Low	5.04	0.003		
60		1	0	Low	-11.36	-0.006		
50		1	0	Low	4.45	0.002		
40		1	0	Low	-12.86	-0.007		
30		1	0	Low	-7.08	-0.004		
20		1	0	Low	-15.72	-0.008		
10		1	0	Low	6.09	0.003		
0		1	0	Low	6.52	0.003		
-10		1	0	Low	7.82	0.004		
-20		1	0	Low	7.48	0.004		
-30		1	0	Low	7.58	0.004		
-40		1	0	Low	8.30	0.004		
NT		Maximum Voltage	1	0	Low	-4.86		
NT	BEP	1	0	Low	-6.57	-0.003		



LTE Band 66 (QPSK) / 1745MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-15.74	-0.008	±2.5ppm	PASS
80		1	0	Low	-13.93	-0.007		
70		1	0	Low	-18.37	-0.010		
60		1	0	Low	-18.41	-0.010		
50		1	0	Low	-22.24	-0.012		
40		1	0	Low	-15.18	-0.008		
30		1	0	Low	-21.90	-0.012		
20		1	0	Low	-26.02	-0.014		
10		1	0	Low	-13.46	-0.007		
0		1	0	Low	-14.51	-0.008		
-10		1	0	Low	-9.23	-0.005		
-20		1	0	Low	13.65	0.007		
-30		1	0	Low	-11.52	-0.006		
-40		1	0	Low	12.39	0.007		
NT		Maximum Voltage	1	0	Low	-17.28		
NT	BEP	1	0	Low	-14.23	-0.008		

LTE Band 66 (16QAM) / 1745MHz / BW 1.4M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	-9.73	-0.005	±2.5ppm	PASS
80		1	0	Low	11.27	0.006		
70		1	0	Low	-19.51	-0.010		
60		1	0	Low	15.85	0.008		
50		1	0	Low	-26.12	-0.014		
40		1	0	Low	-12.73	-0.007		
30		1	0	Low	-25.41	-0.014		
20		1	0	Low	-15.29	-0.008		
10		1	0	Low	8.43	0.004		
0		1	0	Low	10.76	0.006		
-10		1	0	Low	-9.38	-0.005		
-20		1	0	Low	12.95	0.007		
-30		1	0	Low	-11.86	-0.006		
-40		1	0	Low	-15.16	-0.008		
NT		Maximum Voltage	1	0	Low	-23.65		
NT	BEP	1	0	Low	-12.00	-0.006		



LTE Band 85 (QPSK) / 707MHz / BW 5M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	6.68	0.004	±2.5ppm	PASS
80		1	0	Low	-10.07	-0.005		
70		1	0	Low	7.75	0.004		
60		1	0	Low	8.11	0.004		
50		1	0	Low	6.34	0.003		
40		1	0	Low	8.08	0.004		
30		1	0	Low	7.10	0.004		
20		1	0	Low	8.13	0.004		
10		1	0	Low	8.33	0.004		
0		1	0	Low	9.31	0.005		
-10		1	0	Low	9.76	0.005		
-20		1	0	Low	8.60	0.005		
-30		1	0	Low	8.67	0.005		
-40		1	0	Low	9.90	0.005		
NT		Maximum Voltage	1	0	Low	6.21		
NT	BEP	1	0	Low	-11.32	-0.006		

LTE Band 85 (16QAM) / 707MHz / BW 5M								
Temperature (°C)	Voltage	RB Size	RB Start	NBIndex	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)				(Hz)	(ppm)		
85	Normal Voltage	1	0	Low	8.37	0.004	±2.5ppm	PASS
80		1	0	Low	-10.63	-0.006		
70		1	0	Low	8.75	0.005		
60		1	0	Low	7.40	0.004		
50		1	0	Low	7.64	0.004		
40		1	0	Low	8.98	0.005		
30		1	0	Low	6.67	0.004		
20		1	0	Low	7.21	0.004		
10		1	0	Low	8.51	0.005		
0		1	0	Low	8.74	0.005		
-10		1	0	Low	8.70	0.005		
-20		1	0	Low	8.70	0.005		
-30		1	0	Low	8.73	0.005		
-40		1	0	Low	9.21	0.005		
NT		Maximum Voltage	1	0	Low	-11.76		
NT	BEP	1	0	Low	7.25	0.004		



## 10. MODULATION CHARACTERISTICS

### 10.1 Test Limit

Other types of equipment”, the use of higher order modulations such as OFDM or LTE or other modulation are acceptable for use.

Result: PASS

Note: The device implement digital modulation such as QPSK and 16QAM, hence the EUT is deemed to comply with this requirement without additional testing.







## APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※

