

RF Test Report

Project Number: 4724254 **Proposal:** SUW-202101000320
Report Number: 4724254EMC16 **Revision Level:** 0
Client: Deere & Company

Equipment Under Test: JDLINK R Modem - 4G

Model Number: MA4R

FCC ID: OV5-MA4R

IC ID: 11137A-MA4R

Applicable Standards: ANSI C63.26:2014

Part 2, Part 22(H), Part 24(E), Part 27, Part 90

RSS-130, Issue 2; RSS-132 Issue 3

RSS-133 Issue 6; RSS-139, Issue 3

RSS-199, Issue 3, RSS-GEN, Issue 5

Report issued on: 20 April 2022

Test Result: Compliant



FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the Federal Government.

Prepared by:


Jeremy Pickens, RF Lab Manager

Reviewed by:


Martin Taylor, Project Engineer

Remarks: This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. And for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/terms-e-document.aspx>.

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for a maximum of 30 days only.

TABLE OF CONTENTS

1	SUMMARY OF TEST RESULTS.....	4
1.1	MODIFICATIONS REQUIRED TO COMPLIANCE	4
2	GENERAL INFORMATION.....	5
2.1	CLIENT INFORMATION.....	5
2.2	TEST LABORATORY	5
2.3	GENERAL INFORMATION OF EUT	5
2.4	DESCRIPTION OF TEST MODES.....	5
3	RF OUTPUT POWER / EFFECTIVE RADIATED POWER	6
3.1	TEST RESULT.....	6
3.2	TEST METHOD.....	6
3.3	TEST SITE	6
3.4	TEST EQUIPMENT	6
3.5	TEST DATA - LTE BAND 2.....	7
3.6	TEST DATA - LTE BAND 4.....	10
3.7	TEST DATA - LTE BAND 5.....	13
3.8	TEST DATA - LTE BAND 7.....	15
3.9	TEST DATA - LTE BAND 12.....	17
3.10	TEST DATA - LTE BAND 13.....	19
3.11	TEST DATA - LTE BAND 26A	20
3.12	TEST DATA - LTE BAND 38.....	22
3.13	TEST DATA - LTE BAND 41.....	24
3.14	TEST DATA - LTE BAND 66.....	26
4	PEAK TO AVERAGE RATIO	29
4.1	TEST RESULT.....	29
4.2	TEST METHOD.....	29
4.3	TEST SITE	29
4.4	TEST EQUIPMENT	29
4.5	TEST DATA - LTE BAND 2.....	30
4.6	TEST DATA - LTE BAND 4.....	31
4.7	TEST DATA - LTE BAND 5.....	31
4.8	TEST DATA - LTE BAND 7.....	32
4.9	TEST DATA - LTE BAND 12.....	32
4.10	TEST DATA - LTE BAND 13.....	32
4.11	TEST DATA - LTE BAND 26A.....	33
4.12	TEST DATA - LTE BAND 38.....	33
4.13	TEST DATA - LTE BAND 41.....	34
4.14	TEST DATA - LTE BAND 66.....	34
5	OCCUPIED BANDWIDTH	35
5.1	TEST RESULT.....	35
5.2	TEST METHOD.....	35
5.3	TEST SITE	35
5.4	TEST EQUIPMENT	35
5.5	TEST DATA - LTE BAND 2.....	36
5.6	TEST DATA - LTE BAND 4.....	37
5.7	TEST DATA - LTE BAND 5.....	37
5.8	TEST DATA - LTE BAND 7.....	38
5.9	TEST DATA - LTE BAND 12.....	38
5.10	TEST DATA - LTE BAND 13.....	38
5.11	TEST DATA - LTE BAND 26A.....	39
5.12	TEST DATA - LTE BAND 38.....	39

5.13	TEST DATA – LTE BAND 41	39
5.14	TEST DATA – LTE BAND 66	40
6	BAND EDGE AND CONDUCTED SPURIOUS EMISSIONS	41
6.1	TEST RESULT	41
6.2	TEST METHOD	41
6.3	TEST SITE	41
6.4	TEST EQUIPMENT	41
6.5	TEST DATA - BAND EDGE – LTE BAND 2	42
6.6	TEST DATA - BAND EDGE – LTE BAND 4	46
6.7	TEST DATA - BAND EDGE – LTE BAND 5	50
6.8	TEST DATA - BAND EDGE – LTE BAND 7	53
6.9	TEST DATA - BAND EDGE – LTE BAND 12	55
6.10	TEST DATA - BAND EDGE – LTE BAND 13	58
6.11	TEST DATA - BAND EDGE – LTE BAND 26A	59
6.12	TEST DATA - BAND EDGE – LTE BAND 38	61
6.13	TEST DATA - BAND EDGE – LTE BAND 41	64
6.14	TEST DATA - BAND EDGE – LTE BAND 66	67
6.15	TEST DATA – SPURIOUS EMISSION - LTE BAND 2	71
6.16	TEST DATA – SPURIOUS EMISSION - LTE BAND 4	72
6.17	TEST DATA – SPURIOUS EMISSION - LTE BAND 5	73
6.18	TEST DATA – SPURIOUS EMISSION - LTE BAND 7	74
6.19	TEST DATA – SPURIOUS EMISSION - LTE BAND 12	75
6.20	TEST DATA – SPURIOUS EMISSION - LTE BAND 13	76
6.21	TEST DATA – SPURIOUS EMISSION - LTE BAND 26A	77
6.22	TEST DATA – SPURIOUS EMISSION - LTE BAND 38	78
6.23	TEST DATA – SPURIOUS EMISSION - LTE BAND 41	79
6.24	TEST DATA – SPURIOUS EMISSION - LTE BAND 66	80
8	RADIATED SPURIOUS EMISSIONS	81
8.1	TEST RESULT	81
8.2	TEST METHOD	81
8.3	TEST SITE	81
8.4	TEST EQUIPMENT	82
8.5	TEST DATA – LTE BAND 2	83
8.6	TEST DATA – LTE BAND 4	89
8.7	TEST DATA – LTE BAND 5	95
8.8	TEST DATA – LTE BAND 7	101
8.9	TEST DATA – LTE BAND 12	107
8.10	TEST DATA – LTE BAND 13	113
8.11	TEST DATA – LTE BAND 26A	119
8.12	TEST DATA – LTE BAND 38	125
8.13	TEST DATA – LTE BAND 41	131
8.14	TEST DATA – LTE BAND 66	137
9	FREQUENCY STABILITY	143
9.1	TEST RESULT	143
9.2	TEST METHOD	143
9.3	TEST SITE	143
9.4	TEST EQUIPMENT	143
9.5	TEST DATA	144
10	MEASUREMENT UNCERTAINTY	154
11	REVISION HISTORY	155

1 Summary of Test Results

Reference Sections		Test Description	Test Condition	Test Result
FCC	ISED			
2.1046	RSS-GEN (6.12)	Conducted Output Power	Conducted	Compliant
22.913(a) 24.232(d) 27.50(d)(5)	RSS-130 (4.6) RSS-132 (5.4) RSS-133 (6.4) RSS-139 (6.5) RSS-199 (4.4)	Peak-to-Average Ratio		Compliant
2.1049(h) 22.917(a) 24.238(b) 27.53(g) / (h)	RSS-GEN (6.7) RSS-199 (4.2)	Occupied Bandwidth		Reported
2.1051 22.917(a) / (b) 24.238(a) / (b) 27.53(c)(2) 27.53(g) / (h) 27.53(m)(4) 90.691	RSS-130 (4.7) RSS-132 (5.5) RSS-133 (6.5) RSS-139 (6.6) RSS-199 (4.5)	Band Edge / Conducted Spurious Emissions		Compliant
22.913(a) 27.50(b)(10) 27.50(c)(10) 90.635	--	Effective Radiated Power	Radiated	Compliant
2.1046(a) 24.232(c) 27.50(d)(4) 27.50(h)(2)	RSS-130 (4.6) RSS-132 (5.4) RSS-133 (6.4) RSS-139 (6.5) RSS-199 (4.4)	Equivalent Isotropically Radiated Power		Compliant
2.1053 22.917(a)(b) 24.238(a)(b) 27.53 27.53(g) / (h) 27.53(m)(4) 90.691	RSS-GEN (6.13) RSS-130 (4.7) RSS-132 (5.5) RSS-133 (6.5.1) RSS-139 (6.6) RSS-199 (4.5)	Radiated Spurious Emissions		Compliant
2.1055 22.355 24.235 27.54 90.213	RSS-GEN (6.11) RSS-130 (4.5) RSS-132 (5.3) RSS-133 (6.3) RSS-139 (6.4) RSS-199 (4.3)	Frequency Stability		Compliant

1.1 Modifications Required to Compliance

None

2 General Information

2.1 Client Information

Name: Deere & Company
Address: One John Deere Place
City, State, Zip, Country: Moline, IL 61265, USA

2.2 Test Laboratory

Name: SGS North America, Inc.
Address: 620 Old Peachtree Road NW, Suite 100
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
Type of lab: Testing Laboratory
Certificate Number: 3212.01
Designation Number: US1126
CAB Identifier: US0186

2.3 General Information of EUT

Product Description: JDLINK R Modem - 4G
Model Number: MA4R
Serial Number: PCMA4MA200091

Modes of Operation: LTE Bands 2/4/5/7/12/13/26a/38/41/66

Antenna Type: External Proprietary
IMEI: 004401083921102

Sample Received Date: 10 April 2021
Dates of testing: 23 February – 30 March 2022

2.4 Description of Test Modes

The EUT was tested under normal operating conditions with a base station simulator directly connect to port C2. The base station simulator was set to control the EUT to output maximum power and operate in LTE Bands 2, 4, 5, 7, 12, 13, 26, 38, 41, and 66 on low, middle, and high channels.

3 RF Output Power / Effective Radiated Power

3.1 Test Result

Test Description	Specification		Test Result
	FCC	ISED	
RF Output Power	2.1046	RSS-GEN (6.12)	Compliant
Effective Radiated Power	22.913(a) 27.50(b)(10) 27.50(c)(10) 90.635	--	Compliant
Effective Isotropic Radiated Power	2.1046(a) 24.232(c) 27.50(d)(4) 27.50(h)(2)	RSS-130 (4.6) RSS-132 (5.4) RSS-133 (6.4) RSS-139 (6.5) RSS-199 (4.4)	Compliant

3.2 Test Method

A radio link was established between EUT and Radio Communication Tester. The output power of the EUT was set to maximum value by using the maximum power setting on the Radio Communications Tester. The CMW500 was used to measure the output power.

The measurements were conducted at the low, middle, and high channel.

For ERP/EIRP calculations, the antenna gain was added to the conducted measurements.

3.3 Test Site

SGS EMC Laboratory, Suwanee, GA

Environmental Conditions

Temperature: 23.2 °C

Relative Humidity: 32.1 %

Atmospheric Pressure: 97.9 kPa

3.4 Test Equipment

Test End Date: 2/24/2022

Tester: JOP

Equipment	Model	Manufacturer	Asset Number	Cal Date	Cal Due Date
RF CABLE SMA TO SMA, 0.01-40GHZ	084-0505-059	TELEDYNE STORM	20107	16-Mar-2022	16-Mar-2023
POWER SPLITTER	ZFRSC-123-S+	MINI-CIRCUITS	B101739	8-Jul-2021	8-Jul-2022
WIDEBAND RADIO COMMUNICATION	CMW500	ROHDE & SCHWARZ	B094874	13-Jan-2021	13-Jan-2023

3.5 Test Data - LTE Band 2

Max Power: 23.65dBm

Test Band: 2 _ 1.4MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.18	23.16	23.3	/	-0.1	23.08	23.06	23.2	33.01	PASS
		2	23.18	23.46	23.46	/	-0.1	23.08	23.36	23.36	33.01	PASS
		5	23.11	23.32	23.65	/	-0.1	23.01	23.22	23.55	33.01	PASS
	3	0	23.11	22.93	23.12	/	-0.1	23.01	22.83	23.02	33.01	PASS
		2	22.97	23.07	23.32	/	-0.1	22.87	22.97	23.22	33.01	PASS
		3	23	23.04	23.24	/	-0.1	22.9	22.94	23.14	33.01	PASS
	6	0	22.09	21.93	22.22	/	-0.1	21.99	21.83	22.12	33.01	PASS
21.92	22.27		22.59	/	-0.1	21.82	22.17	22.49	33.01	PASS		
16QAM	1	2	22.38	22.47	22.55	/	-0.1	22.28	22.37	22.45	33.01	PASS
		5	22.33	22.34	22.38	/	-0.1	22.23	22.24	22.28	33.01	PASS
		0	22.31	21.79	22.38	/	-0.1	22.21	21.69	22.28	33.01	PASS
	3	2	22.31	22	22.28	/	-0.1	22.21	21.9	22.18	33.01	PASS
		3	22.04	21.88	22.35	/	-0.1	21.94	21.78	22.25	33.01	PASS
		6	0	21	20.98	21.31	/	-0.1	20.9	20.88	21.21	33.01
	Note:											
1) dBd = dBi - 2.15												
2) EIRP = Conducted output power + Antenna gain (dBi)												

Test Band: 2_ 3MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.99	23.07	23.15	/	-0.1	22.89	22.97	23.05	33.01	PASS
		7	22.94	23.36	23.38	/	-0.1	22.84	23.26	23.28	33.01	PASS
		14	22.87	23.14	23.19	/	-0.1	22.77	23.04	23.09	33.01	PASS
	8	0	21.96	21.96	22.22	/	-0.1	21.86	21.86	22.12	33.01	PASS
		4	21.87	21.95	22.28	/	-0.1	21.77	21.85	22.18	33.01	PASS
		7	21.87	21.97	22.25	/	-0.1	21.77	21.87	22.15	33.01	PASS
	15	0	21.95	21.97	22.25	/	-0.1	21.85	21.87	22.15	33.01	PASS
22.44	22.28		21.94	/	-0.1	22.34	22.18	21.84	33.01	PASS		
16QAM	1	7	22.24	22.41	22.16	/	-0.1	22.14	22.31	22.06	33.01	PASS
		14	22.13	22.03	22.12	/	-0.1	22.03	21.93	22.02	33.01	PASS
		0	20.92	20.83	20.96	/	-0.1	20.82	20.73	20.86	33.01	PASS
	8	4	20.79	20.97	21.01	/	-0.1	20.69	20.87	20.91	33.01	PASS
		7	20.86	20.99	21	/	-0.1	20.76	20.89	20.9	33.01	PASS
		15	0	21.01	20.79	20.93	/	-0.1	20.91	20.69	20.83	33.01
	Note:											
1) dBd = dBi - 2.15												
2) EIRP = Conducted output power + Antenna gain (dBi)												

Test Band: 2 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.69	22.62	22.88	/	-0.1	22.59	22.52	22.78	33.01	PASS
		13	22.95	23.03	23.04	/	-0.1	22.85	22.93	22.94	33.01	PASS
		24	22.87	23.03	22.91	/	-0.1	22.77	22.93	22.81	33.01	PASS
	12	0	21.96	21.94	22.09	/	-0.1	21.86	21.84	21.99	33.01	PASS
		6	21.92	22.06	22.17	/	-0.1	21.82	21.96	22.07	33.01	PASS
		13	21.88	22.02	22.2	/	-0.1	21.78	21.92	22.1	33.01	PASS
16QAM	25	0	21.97	21.94	22.28	/	-0.1	21.87	21.84	22.18	33.01	PASS
			21.74	22.53	21.91	/	-0.1	21.64	22.43	21.81	33.01	PASS
			21.67	22.58	22.15	/	-0.1	21.57	22.48	22.05	33.01	PASS
	1	13	21.67	22.58	22.15	/	-0.1	21.57	22.48	22.05	33.01	PASS
		24	21.56	22.44	22	/	-0.1	21.46	22.34	21.9	33.01	PASS
		0	20.96	20.85	20.93	/	-0.1	20.86	20.75	20.83	33.01	PASS
	12	6	20.91	20.87	21.04	/	-0.1	20.81	20.77	20.94	33.01	PASS
		13	20.87	20.95	21.11	/	-0.1	20.77	20.85	21.01	33.01	PASS
		25	21.09	21.04	21.1	/	-0.1	20.99	20.94	21	33.01	PASS

23.04

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 2 10MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.07	22.91	23.14	/	-0.1	22.97	22.81	23.04	33.01	PASS
		25	23.34	23.27	23.48	/	-0.1	23.24	23.17	23.38	33.01	PASS
		49	22.69	22.84	23.16	/	-0.1	22.59	22.74	23.06	33.01	PASS
	25	0	22.07	22.01	22.05	/	-0.1	21.97	21.91	21.95	33.01	PASS
		13	22.05	22.11	22.15	/	-0.1	21.95	22.01	22.05	33.01	PASS
		25	21.94	22.08	22.23	/	-0.1	21.84	21.98	22.13	33.01	PASS
16QAM	50	0	21.95	22.01	22.24	/	-0.1	21.85	21.91	22.14	33.01	PASS
			22.1	22.28	21.98	/	-0.1	22	22.18	21.88	33.01	PASS
		25	22.29	22.99	22.07	/	-0.1	22.19	22.89	21.97	33.01	PASS
	1	49	21.86	22.31	21.71	/	-0.1	21.76	22.21	21.61	33.01	PASS
		0	21.12	20.79	21.06	/	-0.1	21.02	20.69	20.96	33.01	PASS
		13	21.09	21.03	20.95	/	-0.1	20.99	20.93	20.85	33.01	PASS
	25	25	20.97	21.01	21.14	/	-0.1	20.87	20.91	21.04	33.01	PASS
		0	20.78	20.92	21.11	/	-0.1	20.68	20.82	21.01	33.01	PASS

23.48

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 2 15MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23	22.82	23.19	/	-0.1	22.9	22.72	23.09	33.01	PASS
		38	23.14	23.1	23.07	/	-0.1	23.04	23	22.97	33.01	PASS
		74	22.79	23	23.15	/	-0.1	22.69	22.9	23.05	33.01	PASS
	36	0	21.95	21.93	22.19	/	-0.1	21.85	21.83	22.09	33.01	PASS
		18	22.01	22.01	22.07	/	-0.1	21.91	21.91	21.97	33.01	PASS
		39	21.79	22.02	22.05	/	-0.1	21.69	21.92	21.95	33.01	PASS
16QAM	1	0	21.92	22	22.12	/	-0.1	21.82	21.9	22.02	33.01	PASS
		38	21.71	22.17	22.22	/	-0.1	21.61	22.07	22.12	33.01	PASS
		74	21.91	22.91	22.65	/	-0.1	21.81	22.81	22.55	33.01	PASS
	36	0	20.5	22.22	22.06	/	-0.1	20.4	22.12	21.96	33.01	PASS
		18	20.92	20.86	20.99	/	-0.1	20.82	20.76	20.89	33.01	PASS
		39	20.97	20.93	21	/	-0.1	20.87	20.83	20.9	33.01	PASS
16QAM	36	0	20.63	20.97	21.06	/	-0.1	20.53	20.87	20.96	33.01	PASS
		18	20.74	20.87	21.15	/	-0.1	20.64	20.77	21.05	33.01	PASS
		39	20.74	20.87	21.15	/	-0.1	20.64	20.77	21.05	33.01	PASS
	75	0	20.74	20.87	21.15	/	-0.1	20.64	20.77	21.05	33.01	PASS
		18	20.74	20.87	21.15	/	-0.1	20.64	20.77	21.05	33.01	PASS
		39	20.74	20.87	21.15	/	-0.1	20.64	20.77	21.05	33.01	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.19

Test Band: 2 20MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.82	23	22.87	/	-0.1	22.72	22.9	22.77	33.01	PASS
		50	23.22	23.27	23.42	/	-0.1	23.12	23.17	23.32	33.01	PASS
		99	22.66	23.1	23.05	/	-0.1	22.56	23	22.95	33.01	PASS
	50	0	21.99	21.99	22.2	/	-0.1	21.89	21.89	22.1	33.01	PASS
		25	21.83	22.09	22.23	/	-0.1	21.73	21.99	22.13	33.01	PASS
		50	21.82	22.05	22.21	/	-0.1	21.72	21.95	22.11	33.01	PASS
16QAM	100	0	22	21.99	22.2	/	-0.1	21.9	21.89	22.1	33.01	PASS
		25	21.66	21.62	22.79	/	-0.1	21.56	21.52	22.69	33.01	PASS
		50	22.72	21.88	22.96	/	-0.1	22.62	21.78	22.86	33.01	PASS
	1	0	22.38	21.66	22.94	/	-0.1	22.28	21.56	22.84	33.01	PASS
		50	20.78	20.88	21.31	/	-0.1	20.68	20.78	21.21	33.01	PASS
		99	20.81	21.09	21.23	/	-0.1	20.71	20.99	21.13	33.01	PASS
16QAM	50	0	20.75	21.06	21.17	/	-0.1	20.65	20.96	21.07	33.01	PASS
		25	20.75	21.06	21.17	/	-0.1	20.65	20.96	21.07	33.01	PASS
		50	20.75	21.06	21.17	/	-0.1	20.65	20.96	21.07	33.01	PASS
	100	0	20.92	21.03	21.1	/	-0.1	20.82	20.93	21	33.01	PASS
		25	20.92	21.03	21.1	/	-0.1	20.82	20.93	21	33.01	PASS
		50	20.92	21.03	21.1	/	-0.1	20.82	20.93	21	33.01	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.42

3.6 Test Data - LTE Band 4

Max Power: 23.57dBm

Test Band: 4 _ 1.4MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.1	23	23.42	/	0.7	23.8	23.7	24.12	30	PASS
		2	23.04	23.16	23.57	/	0.7	23.74	23.86	24.27	30	PASS
		5	23.07	23.06	23.34	/	0.7	23.77	23.76	24.04	30	PASS
	3	0	22.98	22.94	23.1	/	0.7	23.68	23.64	23.8	30	PASS
		2	23.03	22.96	23.16	/	0.7	23.73	23.66	23.86	30	PASS
		3	22.98	22.91	23.21	/	0.7	23.68	23.61	23.91	30	PASS
	6	0	22.09	22.12	22.08	/	0.7	22.79	22.82	22.78	30	PASS
		2	22.32	22.07	22.79	/	0.7	23.02	22.77	23.49	30	PASS
		5	22.47	22.62	22.9	/	0.7	23.17	23.32	23.6	30	PASS
16QAM	1	2	22.54	22.17	22.83	/	0.7	23.24	22.87	23.53	30	PASS
		0	22.19	21.82	22.11	/	0.7	22.89	22.52	22.81	30	PASS
		2	22.24	21.88	22.15	/	0.7	22.94	22.58	22.85	30	PASS
	3	3	22.19	21.84	22.09	/	0.7	22.89	22.54	22.79	30	PASS
		0	21	20.81	21.09	/	0.7	21.7	21.51	21.79	30	PASS
		6										
	6	0										
		2										
		5										

23.57

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 4 _ 3MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.12	22.97	23.2	/	0.7	23.82	23.67	23.9	30	PASS
		7	23.43	23.18	23.36	/	0.7	24.13	23.88	24.06	30	PASS
		14	23.33	23.17	23.34	/	0.7	24.03	23.87	24.04	30	PASS
	8	0	22.16	22.02	22.16	/	0.7	22.86	22.72	22.86	30	PASS
		4	22.16	22.07	22.19	/	0.7	22.86	22.77	22.89	30	PASS
		7	22.12	22.03	22.15	/	0.7	22.82	22.73	22.85	30	PASS
	15	0	22.12	22.09	22.17	/	0.7	22.82	22.79	22.87	30	PASS
		7	22.38	22.2	21.78	/	0.7	23.08	22.9	22.48	30	PASS
		14	22.44	22.27	22.06	/	0.7	23.14	22.97	22.76	30	PASS
16QAM	1	0	22.32	22.18	21.94	/	0.7	23.02	22.88	22.64	30	PASS
		7	21.07	20.93	20.9	/	0.7	21.77	21.63	21.6	30	PASS
		14	21.08	20.98	20.93	/	0.7	21.78	21.68	21.63	30	PASS
	8	4	21.01	20.94	20.89	/	0.7	21.71	21.64	21.59	30	PASS
		7	21.01	20.94	20.89	/	0.7	21.71	21.64	21.59	30	PASS
		15	21.24	21.02	21.02	/	0.7	21.94	21.72	21.72	30	PASS
	15	0										
		7										
		14										

23.43

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 4 _ 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.13	22.95	23.01	/	0.7	23.83	23.65	23.71	30	PASS
		13	23.18	22.99	23.16	/	0.7	23.88	23.69	23.86	30	PASS
		24	23.05	22.91	23.14	/	0.7	23.75	23.61	23.84	30	PASS
	12	0	22.06	21.95	22.22	/	0.7	22.76	22.65	22.92	30	PASS
		6	22.05	22.1	22.22	/	0.7	22.75	22.8	22.92	30	PASS
		13	21.98	22.15	22.29	/	0.7	22.68	22.85	22.99	30	PASS
16QAM	25	0	22.11	22.07	22.31	/	0.7	22.81	22.77	23.01	30	PASS
			21.97	22.22	21.93	/	0.7	22.67	22.92	22.63	30	PASS
			22.09	22.32	22.08	/	0.7	22.79	23.02	22.78	30	PASS
	1	13	22.09	22.32	22.08	/	0.7	22.79	23.02	22.78	30	PASS
		24	22.1	22.59	21.96	/	0.7	22.8	23.29	22.66	30	PASS
		0	21.33	20.75	21.13	/	0.7	22.03	21.45	21.83	30	PASS
	12	6	21.37	20.8	21.14	/	0.7	22.07	21.5	21.84	30	PASS
		13	21.18	20.88	21.18	/	0.7	21.88	21.58	21.88	30	PASS
	25	0	21.15	20.84	21.16	/	0.7	21.85	21.54	21.86	30	PASS

Note: 23.18

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 4 _ 10MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.12	22.8	23.08	/	0.7	23.82	23.5	23.78	30	PASS
		25	23.55	23.24	23.41	/	0.7	24.25	23.94	24.11	30	PASS
		49	23.06	23.04	22.98	/	0.7	23.76	23.74	23.68	30	PASS
	25	0	22.14	21.99	22.11	/	0.7	22.84	22.69	22.81	30	PASS
		13	22.11	22.04	22.24	/	0.7	22.81	22.74	22.94	30	PASS
		25	22.07	22.09	22.21	/	0.7	22.77	22.79	22.91	30	PASS
16QAM	50	0	22.1	22.02	22.2	/	0.7	22.8	22.72	22.9	30	PASS
			22.51	22.26	21.94	/	0.7	23.21	22.96	22.64	30	PASS
			23.22	23.04	22.79	/	0.7	23.92	23.74	23.49	30	PASS
	1	25	23.22	23.04	22.79	/	0.7	23.92	23.74	23.49	30	PASS
		49	22.22	22.33	21.7	/	0.7	22.92	23.03	22.4	30	PASS
	25	0	21.2	21.02	21.05	/	0.7	21.9	21.72	21.75	30	PASS
		13	21.15	21.08	21.18	/	0.7	21.85	21.78	21.88	30	PASS
		25	21.09	20.9	21.25	/	0.7	21.79	21.6	21.95	30	PASS
	50	0	21.13	20.99	21.12	/	0.7	21.83	21.69	21.82	30	PASS

Note: 23.55

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 4 15MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.1	22.88	23.16	/	0.7	23.8	23.58	23.86	30	PASS
		38	23.12	23.32	23.05	/	0.7	23.82	24.02	23.75	30	PASS
		74	22.67	23.15	23.07	/	0.7	23.37	23.85	23.77	30	PASS
	36	0	22.12	21.9	22.26	/	0.7	22.82	22.6	22.96	30	PASS
		18	22.07	21.97	22.13	/	0.7	22.77	22.67	22.83	30	PASS
		39	22	21.97	22.09	/	0.7	22.7	22.67	22.79	30	PASS
16QAM	1	0	22.09	21.9	22.14	/	0.7	22.79	22.6	22.84	30	PASS
			21.93	22.48	21.78	/	0.7	22.63	23.18	22.48	30	PASS
		38	21.96	22.99	22.6	/	0.7	22.66	23.69	23.3	30	PASS
	36	74	21.26	22.21	21.64	/	0.7	21.96	22.91	22.34	30	PASS
		0	21.1	20.89	21.16	/	0.7	21.8	21.59	21.86	30	PASS
		18	21.03	21.02	21.05	/	0.7	21.73	21.72	21.75	30	PASS
	75	39	20.83	20.9	21.04	/	0.7	21.53	21.6	21.74	30	PASS
		0	20.91	20.75	21.15	/	0.7	21.61	21.45	21.85	30	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.32

Test Band: 4 20MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.84	22.97	23.1	/	1.7	24.54	24.67	24.8	30	PASS
		50	23.36	23.43	23.42	/	1.7	25.06	25.13	25.12	30	PASS
		99	22.81	23.26	23.25	/	1.7	24.51	24.96	24.95	30	PASS
	50	0	22.07	21.92	22.25	/	1.7	23.77	23.62	23.95	30	PASS
		25	22.13	22.05	22.33	/	1.7	23.83	23.75	24.03	30	PASS
		50	22.02	22.12	22.06	/	1.7	23.72	23.82	23.76	30	PASS
16QAM	100	0	22.01	22.03	22.21	/	1.7	23.71	23.73	23.91	30	PASS
			22.28	21.75	22.82	/	1.7	23.98	23.45	24.52	30	PASS
		50	22.87	21.93	23.1	/	1.7	24.57	23.63	24.8	30	PASS
	50	99	22.25	21.93	22.2	/	1.7	23.95	23.63	23.9	30	PASS
		0	21.09	20.81	21.26	/	1.7	22.79	22.51	22.96	30	PASS
		25	21.14	20.96	21.36	/	1.7	22.84	22.66	23.06	30	PASS
	100	50	20.9	21.03	21.09	/	1.7	22.6	22.73	22.79	30	PASS
		0	20.93	20.95	21.24	/	1.7	22.63	22.65	22.94	30	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.43

3.7 Test Data - LTE Band 5

Max Power: 23.79dBm

Test Band: 5 _ 1.4MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.2	23.03	23.09	-2.45	-0.3	20.75	20.58	20.64	40.61	PASS
		2	23.43	23.05	22.87	-2.45	-0.3	20.98	20.6	20.42	40.61	PASS
		5	23.2	23.23	22.92	-2.45	-0.3	20.75	20.78	20.47	40.61	PASS
	3	0	22.96	23.03	23.11	-2.45	-0.3	20.51	20.58	20.66	40.61	PASS
		2	22.94	23.06	23.05	-2.45	-0.3	20.49	20.61	20.6	40.61	PASS
		3	22.97	22.97	22.95	-2.45	-0.3	20.52	20.52	20.5	40.61	PASS
16QAM	6	0	22.01	22.05	22.13	-2.45	-0.3	19.56	19.6	19.68	40.61	PASS
			22.57	21.92	22.24	-2.45	-0.3	20.12	19.47	19.79	40.61	PASS
		2	22.63	21.93	22.19	-2.45	-0.3	20.18	19.48	19.74	40.61	PASS
	1	5	22.68	21.84	21.88	-2.45	-0.3	20.23	19.39	19.43	40.61	PASS
		0	21.84	21.87	22.11	-2.45	-0.3	19.39	19.42	19.66	40.61	PASS
		2	21.92	21.98	21.89	-2.45	-0.3	19.47	19.53	19.44	40.61	PASS
	3	3	21.97	21.86	22.12	-2.45	-0.3	19.52	19.41	19.67	40.61	PASS
		6	20.88	20.91	21.11	-2.45	-0.3	18.43	18.46	18.66	40.61	PASS
	6	0	20.88	20.91	21.11	-2.45	-0.3	18.43	18.46	18.66	40.61	PASS

Note:
1) dBd = dBi - 2.15
2) EIRP = Conducted output power + Antenna gain (dBi)
3) ERP = Conducted output power + Antenna gain (dBd)

Test Band: 5 _ 3MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.12	23.01	23.18	-2.45	-0.3	20.67	20.56	20.73	40.61	PASS
		7	23.12	23	22.93	-2.45	-0.3	20.67	20.55	20.48	40.61	PASS
		14	23.04	22.96	22.88	-2.45	-0.3	20.59	20.51	20.43	40.61	PASS
	8	0	22	22.09	22.17	-2.45	-0.3	19.55	19.64	19.72	40.61	PASS
		4	22.09	22.05	22.03	-2.45	-0.3	19.64	19.6	19.58	40.61	PASS
		7	22.1	21.96	21.94	-2.45	-0.3	19.65	19.51	19.49	40.61	PASS
16QAM	15	0	22.03	22.06	22.08	-2.45	-0.3	19.58	19.61	19.63	40.61	PASS
			22.35	22.31	21.85	-2.45	-0.3	19.9	19.86	19.4	40.61	PASS
		7	22.61	22.3	22.03	-2.45	-0.3	20.16	19.85	19.58	40.61	PASS
	1	14	22.72	22.23	21.3	-2.45	-0.3	20.27	19.78	18.85	40.61	PASS
		0	20.97	21.14	21.08	-2.45	-0.3	18.52	18.69	18.63	40.61	PASS
		4	21.06	21.1	20.92	-2.45	-0.3	18.61	18.65	18.47	40.61	PASS
	8	7	21.01	20.83	20.97	-2.45	-0.3	18.56	18.38	18.52	40.61	PASS
		15	20.91	20.87	20.92	-2.45	-0.3	18.46	18.42	18.47	40.61	PASS
	15	0	20.91	20.87	20.92	-2.45	-0.3	18.46	18.42	18.47	40.61	PASS

Note:
1) dBd = dBi - 2.15
2) EIRP = Conducted output power + Antenna gain (dBi)
3) ERP = Conducted output power + Antenna gain (dBd)

Test Band: 5 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.71	22.92	23.07	-2.45	-0.3	20.26	20.47	20.62	40.61	PASS
		13	23.02	22.82	23.19	-2.45	-0.3	20.57	20.37	20.74	40.61	PASS
		24	23.01	22.67	22.84	-2.45	-0.3	20.56	20.22	20.39	40.61	PASS
	12	0	21.97	22.04	22.17	-2.45	-0.3	19.52	19.59	19.72	40.61	PASS
		6	22.15	22.09	22.14	-2.45	-0.3	19.7	19.64	19.69	40.61	PASS
		13	22.09	21.97	21.97	-2.45	-0.3	19.64	19.52	19.52	40.61	PASS
16QAM	1	0	22.01	22.08	22.06	-2.45	-0.3	19.56	19.63	19.61	40.61	PASS
			21.59	22.47	21.83	-2.45	-0.3	19.14	20.02	19.38	40.61	PASS
		13	22.1	22.7	21.92	-2.45	-0.3	19.65	20.25	19.47	40.61	PASS
	12	24	21.95	22.41	21.48	-2.45	-0.3	19.5	19.96	19.03	40.61	PASS
		0	20.93	20.91	21.08	-2.45	-0.3	18.48	18.46	18.63	40.61	PASS
		6	21.12	20.97	21.08	-2.45	-0.3	18.67	18.52	18.63	40.61	PASS
	25	13	21.17	20.87	20.98	-2.45	-0.3	18.72	18.42	18.53	40.61	PASS
		0	21.13	21.02	20.88	-2.45	-0.3	18.68	18.57	18.43	40.61	PASS

Note:

- 1) dBd = dBi - 2.15
- 2) EIRP = Conducted output power + Antenna gain (dBi)
- 3) ERP = Conducted output power + Antenna gain (dBd)

Test Band: 5 10MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.11	22.97	22.93	-2.45	-0.3	20.66	20.52	20.48	40.61	PASS
		25	23.79	23.25	23.29	-2.45	-0.3	21.34	20.8	20.84	40.61	PASS
		49	23.12	23.04	22.87	-2.45	-0.3	20.67	20.59	20.42	40.61	PASS
	25	0	22	22.18	21.9	-2.45	-0.3	19.55	19.73	19.45	40.61	PASS
		13	22.25	22.05	22.13	-2.45	-0.3	19.8	19.6	19.68	40.61	PASS
		25	22.13	21.96	22.02	-2.45	-0.3	19.68	19.51	19.57	40.61	PASS
16QAM	1	0	22.06	22.15	21.99	-2.45	-0.3	19.61	19.7	19.54	40.61	PASS
			22.23	22.27	21.21	-2.45	-0.3	19.78	19.82	18.76	40.61	PASS
		25	22.84	22.44	22.34	-2.45	-0.3	20.39	19.99	19.89	40.61	PASS
	25	49	22.08	22.39	21.44	-2.45	-0.3	19.63	19.94	18.99	40.61	PASS
		0	20.9	20.97	20.84	-2.45	-0.3	18.45	18.52	18.39	40.61	PASS
		13	21.08	20.98	21.02	-2.45	-0.3	18.63	18.53	18.57	40.61	PASS
	50	25	21.07	20.79	21.01	-2.45	-0.3	18.62	18.34	18.56	40.61	PASS
		0	21	20.93	20.93	-2.45	-0.3	18.55	18.48	18.48	40.61	PASS

Note:

- 1) dBd = dBi - 2.15
- 2) EIRP = Conducted output power + Antenna gain (dBi)
- 3) ERP = Conducted output power + Antenna gain (dBd)

3.8 Test Data - LTE Band 7

Max Power: 23.03dBm

Test Band: 7 _ 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.4	22.24	22.22	/	2.4	24.8	24.64	24.62	33.01	PASS
		13	22.45	22.53	22.33	/	2.4	24.85	24.93	24.73	33.01	PASS
		24	22.45	22.44	22.43	/	2.4	24.85	24.84	24.83	33.01	PASS
	12	0	21.59	21.68	21.59	/	2.4	23.99	24.08	23.99	33.01	PASS
		6	21.7	21.76	21.64	/	2.4	24.1	24.16	24.04	33.01	PASS
		13	21.64	21.7	21.55	/	2.4	24.04	24.1	23.95	33.01	PASS
	25	0	21.64	21.69	21.56	/	2.4	24.04	24.09	23.96	33.01	PASS
			21.52	21.73	21.05	/	2.4	23.92	24.13	23.45	33.01	PASS
			21.73	22.42	21.37	/	2.4	24.13	24.82	23.77	33.01	PASS
16QAM	1	13	21.39	22.1	20.94	/	2.4	23.79	24.5	23.34	33.01	PASS
			20.72	20.8	20.61	/	2.4	23.12	23.2	23.01	33.01	PASS
			20.85	20.69	20.67	/	2.4	23.25	23.09	23.07	33.01	PASS
	12	13	20.73	20.63	20.57	/	2.4	23.13	23.03	22.97	33.01	PASS
			20.8	20.78	20.55	/	2.4	23.2	23.18	22.95	33.01	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 7 _ 10MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.71	22.59	22.61	/	2.4	25.11	24.99	25.01	33.01	PASS
		25	23.03	22.98	22.74	/	2.4	25.43	25.38	25.14	33.01	PASS
		49	22.56	22.52	22.45	/	2.4	24.96	24.92	24.85	33.01	PASS
	25	0	21.73	21.64	21.69	/	2.4	24.13	24.04	24.09	33.01	PASS
		13	21.73	21.64	21.59	/	2.4	24.13	24.04	23.99	33.01	PASS
		25	21.53	21.64	21.63	/	2.4	23.93	24.04	24.03	33.01	PASS
	50	0	21.67	21.68	21.56	/	2.4	24.07	24.08	23.96	33.01	PASS
			21.84	21.93	21.59	/	2.4	24.24	24.33	23.99	33.01	PASS
			22.02	22.78	21.7	/	2.4	24.42	25.18	24.1	33.01	PASS
16QAM	1	49	21.54	22.21	21	/	2.4	23.94	24.61	23.4	33.01	PASS
			20.93	20.82	20.81	/	2.4	23.33	23.22	23.21	33.01	PASS
			20.73	20.98	20.86	/	2.4	23.13	23.38	23.26	33.01	PASS
	25	25	20.63	20.84	20.68	/	2.4	23.03	23.24	23.08	33.01	PASS
			20.67	20.78	20.58	/	2.4	23.07	23.18	22.98	33.01	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 7 15MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.56	22.58	22.77	/	2.4	24.96	24.98	25.17	33.01	PASS
		38	22.68	22.8	22.51	/	2.4	25.08	25.2	24.91	33.01	PASS
		74	22.53	22.59	22.39	/	2.4	24.93	24.99	24.79	33.01	PASS
	36	0	21.6	21.6	21.6	/	2.4	24	24	24	33.01	PASS
		18	21.68	21.83	21.77	/	2.4	24.08	24.23	24.17	33.01	PASS
		39	21.67	21.61	21.68	/	2.4	24.07	24.01	24.08	33.01	PASS
	75	0	21.76	21.61	21.66	/	2.4	24.16	24.01	24.06	33.01	PASS
16QAM	1	0	21.4	21.85	21.51	/	2.4	23.8	24.25	23.91	33.01	PASS
		38	21.54	22.52	22.21	/	2.4	23.94	24.92	24.61	33.01	PASS
		74	20.78	21.94	21.57	/	2.4	23.18	24.34	23.97	33.01	PASS
	36	0	20.83	20.64	20.72	/	2.4	23.23	23.04	23.12	33.01	PASS
		18	20.81	20.77	20.78	/	2.4	23.21	23.17	23.18	33.01	PASS
		39	20.6	20.65	20.7	/	2.4	23	23.05	23.1	33.01	PASS
	75	0	20.67	20.78	20.69	/	2.4	23.07	23.18	23.09	33.01	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 7 20MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.32	22.69	22.55	/	2.4	24.72	25.09	24.95	33.01	PASS
		50	22.94	22.9	22.89	/	2.4	25.34	25.3	25.29	33.01	PASS
		99	22.29	22.57	22.41	/	2.4	24.69	24.97	24.81	33.01	PASS
	50	0	21.61	21.47	21.61	/	2.4	24.01	23.87	24.01	33.01	PASS
		25	21.81	21.67	21.62	/	2.4	24.21	24.07	24.02	33.01	PASS
		50	21.68	21.51	21.49	/	2.4	24.08	23.91	23.89	33.01	PASS
	100	0	21.71	21.5	21.56	/	2.4	24.11	23.9	23.96	33.01	PASS
16QAM	1	0	21.91	21.28	21.9	/	2.4	24.31	23.68	24.3	33.01	PASS
		50	22.43	21.36	22.6	/	2.4	24.83	23.76	25	33.01	PASS
		99	21.94	20.57	22.11	/	2.4	24.34	22.97	24.51	33.01	PASS
	50	0	20.59	20.61	20.72	/	2.4	22.99	23.01	23.12	33.01	PASS
		25	20.79	20.77	20.76	/	2.4	23.19	23.17	23.16	33.01	PASS
		50	20.67	20.63	20.75	/	2.4	23.07	23.03	23.15	33.01	PASS
	100	0	20.83	20.66	20.68	/	2.4	23.23	23.06	23.08	33.01	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

3.9 Test Data - LTE Band 12

Max Power: 23.64dBm

Test Band: 12 _ 1.4MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.44	22.99	22.79	-2.35	-0.2	21.09	20.64	20.44	34.77	PASS
		2	23.15	22.97	22.84	-2.35	-0.2	20.8	20.62	20.49	34.77	PASS
		5	22.91	22.96	22.76	-2.35	-0.2	20.56	20.61	20.41	34.77	PASS
	3	0	22.92	22.99	22.76	-2.35	-0.2	20.57	20.64	20.41	34.77	PASS
		2	22.98	23.12	22.91	-2.35	-0.2	20.63	20.77	20.56	34.77	PASS
		3	22.85	23	22.82	-2.35	-0.2	20.5	20.65	20.47	34.77	PASS
	6	0	22.04	22	22.01	-2.35	-0.2	19.69	19.65	19.66	34.77	PASS
		2	22.72	22.17	22.08	-2.35	-0.2	20.37	19.82	19.73	34.77	PASS
		5	22.89	22.25	22.07	-2.35	-0.2	20.54	19.9	19.72	34.77	PASS
16QAM	1	0	22.85	22.14	22.18	-2.35	-0.2	20.5	19.79	19.83	34.77	PASS
		2	22.16	21.94	22.06	-2.35	-0.2	19.81	19.59	19.71	34.77	PASS
		5	22.25	21.94	22.06	-2.35	-0.2	19.9	19.59	19.71	34.77	PASS
	3	0	22.07	21.82	22.03	-2.35	-0.2	19.72	19.47	19.68	34.77	PASS
		2	21.17	20.97	20.76	-2.35	-0.2	18.82	18.62	18.41	34.77	PASS
		5										
	6	0										
		2										
		5										

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.44

Test Band: 12 _ 3MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.22	22.86	23.03	-2.35	-0.2	20.87	20.51	20.68	34.77	PASS
		7	23.23	22.99	23.29	-2.35	-0.2	20.88	20.64	20.94	34.77	PASS
		14	23.07	23.09	22.85	-2.35	-0.2	20.72	20.74	20.5	34.77	PASS
	8	0	22.19	21.96	22.07	-2.35	-0.2	19.84	19.61	19.72	34.77	PASS
		4	22.11	21.99	22.15	-2.35	-0.2	19.76	19.64	19.8	34.77	PASS
		7	22	21.89	21.99	-2.35	-0.2	19.65	19.54	19.64	34.77	PASS
	15	0	22.14	21.98	22.08	-2.35	-0.2	19.79	19.63	19.73	34.77	PASS
		7	22.38	21.51	21.67	-2.35	-0.2	20.03	19.16	19.32	34.77	PASS
		14	22.23	21.93	21.67	-2.35	-0.2	19.88	19.58	19.32	34.77	PASS
16QAM	1	0	20.88	20.89	21.01	-2.35	-0.2	18.53	18.54	18.66	34.77	PASS
		4	20.91	20.9	21.02	-2.35	-0.2	18.56	18.55	18.67	34.77	PASS
		7	20.81	20.92	20.97	-2.35	-0.2	18.46	18.57	18.62	34.77	PASS
	8	0	21.03	20.95	20.79	-2.35	-0.2	18.68	18.6	18.44	34.77	PASS
		4										
		7										
	15	0										
		4										
		7										

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.29

Test Band: 12 _ 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.84	22.64	22.82	-2.35	-0.2	20.49	20.29	20.47	34.77	PASS
		13	22.9	22.86	22.88	-2.35	-0.2	20.55	20.51	20.53	34.77	PASS
		24	22.79	22.56	22.57	-2.35	-0.2	20.44	20.21	20.22	34.77	PASS
	12	0	22.1	21.99	22.03	-2.35	-0.2	19.75	19.64	19.68	34.77	PASS
		6	22.01	22.08	22.07	-2.35	-0.2	19.66	19.73	19.72	34.77	PASS
		13	21.98	22.03	21.98	-2.35	-0.2	19.63	19.68	19.63	34.77	PASS
	25	0	22.15	22.01	22	-2.35	-0.2	19.8	19.66	19.65	34.77	PASS
16QAM	1	0	21.82	22.55	21.55	-2.35	-0.2	19.47	20.2	19.2	34.77	PASS
		13	21.87	22.79	21.57	-2.35	-0.2	19.52	20.44	19.22	34.77	PASS
		24	21.81	22.67	21.23	-2.35	-0.2	19.46	20.32	18.88	34.77	PASS
	12	0	20.88	20.92	20.78	-2.35	-0.2	18.53	18.57	18.43	34.77	PASS
		6	20.84	20.92	20.84	-2.35	-0.2	18.49	18.57	18.49	34.77	PASS
		13	20.69	20.89	20.74	-2.35	-0.2	18.34	18.54	18.39	34.77	PASS
	25	0	20.99	20.83	20.92	-2.35	-0.2	18.64	18.48	18.57	34.77	PASS

Note: 22.9

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 12 _ 10MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.16	23.11	22.94	-2.35	-0.2	20.81	20.76	20.59	34.77	PASS
		25	23.43	23.64	23.24	-2.35	-0.2	21.08	21.29	20.89	34.77	PASS
		49	22.97	22.9	22.76	-2.35	-0.2	20.62	20.55	20.41	34.77	PASS
	25	0	21.97	22	22.08	-2.35	-0.2	19.62	19.65	19.73	34.77	PASS
		13	22.08	22.03	22.04	-2.35	-0.2	19.73	19.68	19.69	34.77	PASS
		25	21.97	21.91	21.94	-2.35	-0.2	19.62	19.56	19.59	34.77	PASS
	50	0	22.03	21.97	22.07	-2.35	-0.2	19.68	19.62	19.72	34.77	PASS
16QAM	1	0	22.57	22.25	21.8	-2.35	-0.2	20.22	19.9	19.45	34.77	PASS
		25	22.4	22.29	21.97	-2.35	-0.2	20.05	19.94	19.62	34.77	PASS
		49	22.11	22.05	21.3	-2.35	-0.2	19.76	19.7	18.95	34.77	PASS
	25	0	20.94	21.2	20.74	-2.35	-0.2	18.59	18.85	18.39	34.77	PASS
		13	20.95	21.21	20.74	-2.35	-0.2	18.6	18.86	18.39	34.77	PASS
		25	20.93	20.79	20.93	-2.35	-0.2	18.58	18.44	18.58	34.77	PASS
	50	0	20.88	20.9	20.9	-2.35	-0.2	18.53	18.55	18.55	34.77	PASS

Note: 23.64

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

3) ERP = Conducted output power + Antenna gain (dBd)

3.10 Test Data - LTE Band 13

Max Power: 23.31dBm

Test Band: 13 _ 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.84	22.8	22.91	-2.35	-0.2	20.49	20.45	20.56	34.77	PASS
		13	23.24	23.07	22.86	-2.35	-0.2	20.89	20.72	20.51	34.77	PASS
		24	23.16	22.96	22.83	-2.35	-0.2	20.81	20.61	20.48	34.77	PASS
	12	0	22.08	22.03	22.11	-2.35	-0.2	19.73	19.68	19.76	34.77	PASS
		6	22.14	22.14	22.16	-2.35	-0.2	19.79	19.79	19.81	34.77	PASS
		13	21.94	22.21	22.01	-2.35	-0.2	19.59	19.86	19.66	34.77	PASS
	25	0	21.95	22.06	22.08	-2.35	-0.2	19.6	19.71	19.73	34.77	PASS
			21.88	21.97	22.04	-2.35	-0.2	19.53	19.62	19.69	34.77	PASS
			21.89	22.98	22.01	-2.35	-0.2	19.54	20.63	19.66	34.77	PASS
16QAM	1	13	22.05	22.69	21.42	-2.35	-0.2	19.7	20.34	19.07	34.77	PASS
			21.09	20.88	20.98	-2.35	-0.2	18.74	18.53	18.63	34.77	PASS
			21.12	20.97	21.04	-2.35	-0.2	18.77	18.62	18.69	34.77	PASS
	12	6	21.12	20.97	21.04	-2.35	-0.2	18.77	18.62	18.69	34.77	PASS
		13	21.13	21.07	20.87	-2.35	-0.2	18.78	18.72	18.52	34.77	PASS
			20.98	20.99	21.08	-2.35	-0.2	18.63	18.64	18.73	34.77	PASS
	25	0	20.98	20.99	21.08	-2.35	-0.2	18.63	18.64	18.73	34.77	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.24

Test Band: 13 _ 10MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	/	23.19	/	-2.35	-0.2	/	20.84	/	34.77	PASS
		25	/	23.31	/	-2.35	-0.2	/	20.96	/	34.77	PASS
		49	/	22.93	/	-2.35	-0.2	/	20.58	/	34.77	PASS
	25	0	/	22.1	/	-2.35	-0.2	/	19.75	/	34.77	PASS
		13	/	22.11	/	-2.35	-0.2	/	19.76	/	34.77	PASS
		25	/	22.02	/	-2.35	-0.2	/	19.67	/	34.77	PASS
	50	0	/	22.03	/	-2.35	-0.2	/	19.68	/	34.77	PASS
			/	22.07	/	-2.35	-0.2	/	19.72	/	34.77	PASS
			/	22.13	/	-2.35	-0.2	/	19.78	/	34.77	PASS
16QAM	1	49	/	21.4	/	-2.35	-0.2	/	19.05	/	34.77	PASS
			/	20.87	/	-2.35	-0.2	/	18.52	/	34.77	PASS
			/	20.99	/	-2.35	-0.2	/	18.64	/	34.77	PASS
	25	0	/	20.87	/	-2.35	-0.2	/	18.52	/	34.77	PASS
		13	/	20.99	/	-2.35	-0.2	/	18.64	/	34.77	PASS
		25	/	21.01	/	-2.35	-0.2	/	18.66	/	34.77	PASS
	50	0	/	20.8	/	-2.35	-0.2	/	18.45	/	34.77	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

3) ERP = Conducted output power + Antenna gain (dBd)

23.31

3.11 Test Data - LTE Band 26a

Max Power: 23.83dBm

Test Band: 26a 1.4MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.53	23.14	23.32	-2.45	-0.3	21.08	20.69	20.87	50	PASS
		2	23.81	23.12	23.37	-2.45	-0.3	21.36	20.67	20.92	50	PASS
		5	23.66	23.06	23.3	-2.45	-0.3	21.21	20.61	20.85	50	PASS
	3	0	23.28	23.26	23.28	-2.45	-0.3	20.83	20.81	20.83	50	PASS
		2	23.33	23.16	23.25	-2.45	-0.3	20.88	20.71	20.8	50	PASS
		3	23.33	23.06	23.2	-2.45	-0.3	20.88	20.61	20.75	50	PASS
	6	0	22.33	22.31	22.28	-2.45	-0.3	19.88	19.86	19.83	50	PASS
		2	22.34	22.45	22.43	-2.45	-0.3	19.89	20	19.98	50	PASS
		5	22.48	22.57	22.58	-2.45	-0.3	20.03	20.12	20.13	50	PASS
16QAM	1	0	22.42	22.15	22.27	-2.45	-0.3	19.97	19.7	19.82	50	PASS
		2	22.38	22.13	22.32	-2.45	-0.3	19.93	19.68	19.87	50	PASS
		3	22.3	21.98	22.28	-2.45	-0.3	19.85	19.53	19.83	50	PASS
	3	0	21.16	21.3	21.1	-2.45	-0.3	18.71	18.85	18.65	50	PASS
		2	22.48	22.57	22.58	-2.45	-0.3	20.03	20.12	20.13	50	PASS
		5	22.5	22.66	22.45	-2.45	-0.3	20.05	20.21	20	50	PASS
	6	0	22.33	22.31	22.28	-2.45	-0.3	19.88	19.86	19.83	50	PASS
		2	22.34	22.45	22.43	-2.45	-0.3	19.89	20	19.98	50	PASS
		5	22.48	22.57	22.58	-2.45	-0.3	20.03	20.12	20.13	50	PASS

Note:
1) dBd = dBi - 2.15
2) EIRP = Conducted output power + Antenna gain (dBi)
3) ERP = Conducted output power + Antenna gain (dBd)

Test Band: 26a 3MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.27	23.29	23.1	-2.45	-0.3	20.82	20.84	20.65	50	PASS
		7	23.83	23.31	23.06	-2.45	-0.3	21.38	20.86	20.61	50	PASS
		14	23.51	22.94	23.14	-2.45	-0.3	21.06	20.49	20.69	50	PASS
	8	0	22.33	22.31	22.32	-2.45	-0.3	19.88	19.86	19.87	50	PASS
		4	22.42	22.24	22.16	-2.45	-0.3	19.97	19.79	19.71	50	PASS
		7	22.33	22.19	22.22	-2.45	-0.3	19.88	19.74	19.77	50	PASS
	15	0	22.31	22.34	22.25	-2.45	-0.3	19.86	19.89	19.8	50	PASS
		7	22.48	22.65	21.6	-2.45	-0.3	20.03	20.2	19.15	50	PASS
		14	22.73	22.64	21.51	-2.45	-0.3	20.28	20.19	19.06	50	PASS
16QAM	1	0	21.11	21.45	21.29	-2.45	-0.3	18.66	19	18.84	50	PASS
		4	21.33	21.37	21.22	-2.45	-0.3	18.88	18.92	18.77	50	PASS
		7	21.33	21.34	21.22	-2.45	-0.3	18.88	18.89	18.77	50	PASS
	8	0	21.11	21.45	21.29	-2.45	-0.3	18.66	19	18.84	50	PASS
		4	21.33	21.37	21.22	-2.45	-0.3	18.88	18.92	18.77	50	PASS
		7	21.33	21.34	21.22	-2.45	-0.3	18.88	18.89	18.77	50	PASS
	15	0	21.21	21.52	21.08	-2.45	-0.3	18.76	19.07	18.63	50	PASS
		4	21.33	21.37	21.22	-2.45	-0.3	18.88	18.92	18.77	50	PASS
		7	21.33	21.34	21.22	-2.45	-0.3	18.88	18.89	18.77	50	PASS

Note:
1) dBd = dBi - 2.15
2) EIRP = Conducted output power + Antenna gain (dBi)
3) ERP = Conducted output power + Antenna gain (dBd)

Test Band: 26a 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.91	23.12	22.94	-2.45	-0.3	20.46	20.67	20.49	50	PASS
		13	23.4	23.2	22.87	-2.45	-0.3	20.95	20.75	20.42	50	PASS
		24	23.17	22.8	23.06	-2.45	-0.3	20.72	20.35	20.61	50	PASS
	12	0	22.3	22.3	22.22	-2.45	-0.3	19.85	19.85	19.77	50	PASS
		6	22.32	22.29	22.2	-2.45	-0.3	19.87	19.84	19.75	50	PASS
		13	22.27	22.11	22.1	-2.45	-0.3	19.82	19.66	19.65	50	PASS
	25	0	22.27	22.27	22.21	-2.45	-0.3	19.82	19.82	19.76	50	PASS
16QAM	1		21.98	22.66	22.03	-2.45	-0.3	19.53	20.21	19.58	50	PASS
		13	22.34	22.81	21.85	-2.45	-0.3	19.89	20.36	19.4	50	PASS
		24	22.2	22.65	21.58	-2.45	-0.3	19.75	20.2	19.13	50	PASS
	12	0	21.49	21.21	21.14	-2.45	-0.3	19.04	18.76	18.69	50	PASS
		6	21.54	21.12	21.02	-2.45	-0.3	19.09	18.67	18.57	50	PASS
		13	21.4	21.02	21.07	-2.45	-0.3	18.95	18.57	18.62	50	PASS
	25	0	21.39	21.31	21.25	-2.45	-0.3	18.94	18.86	18.8	50	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

3) ERP = Conducted output power + Antenna gain (dBd)

Test Band: 26a 10MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		ERP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	/	23.3	/	-2.45	-0.3	/	20.85	/	50	PASS
		25	/	23.45	/	-2.45	-0.3	/	21	/	50	PASS
		49	/	23.18	/	-2.45	-0.3	/	20.73	/	50	PASS
	25	0	/	22.39	/	-2.45	-0.3	/	19.94	/	50	PASS
		13	/	22.26	/	-2.45	-0.3	/	19.81	/	50	PASS
		25	/	22.12	/	-2.45	-0.3	/	19.67	/	50	PASS
	50	0	/	22.3	/	-2.45	-0.3	/	19.85	/	50	PASS
16QAM	1	0	/	22.22	/	-2.45	-0.3	/	19.77	/	50	PASS
		25	/	22.29	/	-2.45	-0.3	/	19.84	/	50	PASS
		49	/	21.98	/	-2.45	-0.3	/	19.53	/	50	PASS
	25	0	/	21.47	/	-2.45	-0.3	/	19.02	/	50	PASS
		13	/	21.36	/	-2.45	-0.3	/	18.91	/	50	PASS
		25	/	21.13	/	-2.45	-0.3	/	18.68	/	50	PASS
	50	0	/	21.16	/	-2.45	-0.3	/	18.71	/	50	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

3) ERP = Conducted output power + Antenna gain (dBd)

3.12 Test Data - LTE Band 38

Max Power: 23.24dBm

Test Band: 38 _ 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	22.83	22.79	22.95	/	3.5	26.33	26.29	26.45	33.01	PASS
		13	22.97	22.63	22.86	/	3.5	26.47	26.13	26.36	33.01	PASS
		24	22.57	22.5	22.67	/	3.5	26.07	26	26.17	33.01	PASS
	12	0	22.13	21.91	21.9	/	3.5	25.63	25.41	25.4	33.01	PASS
		6	22.14	21.9	22.05	/	3.5	25.64	25.4	25.55	33.01	PASS
		13	21.99	21.94	21.98	/	3.5	25.49	25.44	25.48	33.01	PASS
	25	0	22.07	21.9	21.97	/	3.5	25.57	25.4	25.47	33.01	PASS
		13	22.2	21.98	21.89	/	3.5	25.7	25.48	25.39	33.01	PASS
		24	21.94	22.19	21.79	/	3.5	25.44	25.69	25.29	33.01	PASS
16QAM	1	0	20.8	20.61	20.86	/	3.5	24.3	24.11	24.36	33.01	PASS
		6	20.85	20.61	20.86	/	3.5	24.35	24.11	24.36	33.01	PASS
		13	20.78	20.77	20.77	/	3.5	24.28	24.27	24.27	33.01	PASS
	12	0	20.85	20.84	20.87	/	3.5	24.35	24.34	24.37	33.01	PASS
		13	20.85	20.84	20.87	/	3.5	24.35	24.34	24.37	33.01	PASS
		24	20.85	20.84	20.87	/	3.5	24.35	24.34	24.37	33.01	PASS
	25	0	20.85	20.84	20.87	/	3.5	24.35	24.34	24.37	33.01	PASS
		13	20.85	20.84	20.87	/	3.5	24.35	24.34	24.37	33.01	PASS
		24	20.85	20.84	20.87	/	3.5	24.35	24.34	24.37	33.01	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

22.97

Test Band: 38 _ 10MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.14	23	22.83	/	3.5	26.64	26.5	26.33	33.01	PASS
		25	22.97	23.06	23.07	/	3.5	26.47	26.56	26.57	33.01	PASS
		49	22.85	22.82	22.74	/	3.5	26.35	26.32	26.24	33.01	PASS
	25	0	22.1	21.86	22	/	3.5	25.6	25.36	25.5	33.01	PASS
		13	22.05	21.87	22.06	/	3.5	25.55	25.37	25.56	33.01	PASS
		25	22	21.95	21.94	/	3.5	25.5	25.45	25.44	33.01	PASS
	50	0	21.99	21.99	21.96	/	3.5	25.49	25.49	25.46	33.01	PASS
		25	22.55	22.32	21.69	/	3.5	26.05	25.82	25.19	33.01	PASS
		49	22.29	22.4	21.56	/	3.5	25.79	25.9	25.06	33.01	PASS
16QAM	1	0	21.01	20.78	20.93	/	3.5	24.51	24.28	24.43	33.01	PASS
		13	20.83	20.82	20.9	/	3.5	24.33	24.32	24.4	33.01	PASS
		25	20.96	20.82	20.76	/	3.5	24.46	24.32	24.26	33.01	PASS
	25	0	20.96	20.81	20.99	/	3.5	24.46	24.31	24.49	33.01	PASS
		13	20.96	20.81	20.99	/	3.5	24.46	24.31	24.49	33.01	PASS
		25	20.96	20.81	20.99	/	3.5	24.46	24.31	24.49	33.01	PASS
	50	0	20.96	20.81	20.99	/	3.5	24.46	24.31	24.49	33.01	PASS
		13	20.96	20.81	20.99	/	3.5	24.46	24.31	24.49	33.01	PASS
		25	20.96	20.81	20.99	/	3.5	24.46	24.31	24.49	33.01	PASS

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.14

Test Band: 38 15MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.24	22.94	22.96	/	3.5	26.74	26.44	26.46	33.01	PASS
		38	22.83	22.94	22.97	/	3.5	26.33	26.44	26.47	33.01	PASS
		74	22.66	22.76	22.82	/	3.5	26.16	26.26	26.32	33.01	PASS
	36	0	22	21.84	21.84	/	3.5	25.5	25.34	25.34	33.01	PASS
		18	21.97	21.94	22.08	/	3.5	25.47	25.44	25.58	33.01	PASS
		39	21.89	21.79	21.85	/	3.5	25.39	25.29	25.35	33.01	PASS
16QAM	75	0	22	21.84	21.89	/	3.5	25.5	25.34	25.39	33.01	PASS
			22.2	22.18	21.66	/	3.5	25.7	25.68	25.16	33.01	PASS
			21.85	22.66	21.6	/	3.5	25.35	26.16	25.1	33.01	PASS
	1	38	21.86	22.2	21.64	/	3.5	25.36	25.7	25.14	33.01	PASS
		74	20.72	20.85	21	/	3.5	24.22	24.35	24.5	33.01	PASS
		0	20.84	20.94	20.98	/	3.5	24.34	24.44	24.48	33.01	PASS
	36	18	20.61	20.88	20.86	/	3.5	24.11	24.38	24.36	33.01	PASS
		39	20.98	20.82	20.94	/	3.5	24.48	24.32	24.44	33.01	PASS
		0										

Note: 23.24

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 38 20MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.18	22.83	22.51	/	3.5	26.68	26.33	26.01	33.01	PASS
		50	23.16	23.2	23.16	/	3.5	26.66	26.7	26.66	33.01	PASS
		99	22.92	22.84	22.7	/	3.5	26.42	26.34	26.2	33.01	PASS
	50	0	22.13	21.86	21.9	/	3.5	25.63	25.36	25.4	33.01	PASS
		25	22.02	21.96	22	/	3.5	25.52	25.46	25.5	33.01	PASS
		50	21.84	21.78	21.86	/	3.5	25.34	25.28	25.36	33.01	PASS
16QAM	100	0	22	21.79	21.93	/	3.5	25.5	25.29	25.43	33.01	PASS
			22.04	21.8	22.34	/	3.5	25.54	25.3	25.84	33.01	PASS
			22.27	22.45	23.1	/	3.5	25.77	25.95	26.6	33.01	PASS
	1	50	22.34	21.73	22.07	/	3.5	25.84	25.23	25.57	33.01	PASS
		99	20.89	20.78	20.93	/	3.5	24.39	24.28	24.43	33.01	PASS
		0	20.83	20.99	21.09	/	3.5	24.33	24.49	24.59	33.01	PASS
	50	25	20.92	20.76	20.87	/	3.5	24.42	24.26	24.37	33.01	PASS
		50	20.98	20.77	20.9	/	3.5	24.48	24.27	24.4	33.01	PASS
		0										

Note: 23.2

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

3.13 Test Data - LTE Band 41

Max Power: 23.99dBm

Test Band: 41 _ 5MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.28	22.72	22.43	/	3.5	26.78	26.22	25.93	33.01	PASS
		13	23.16	22.73	22.52	/	3.5	26.66	26.23	26.02	33.01	PASS
		24	22.92	22.58	22.33	/	3.5	26.42	26.08	25.83	33.01	PASS
	12	0	22.37	21.8	21.67	/	3.5	25.87	25.3	25.17	33.01	PASS
		6	22.3	21.77	21.66	/	3.5	25.8	25.27	25.16	33.01	PASS
		13	22.43	21.87	21.49	/	3.5	25.93	25.37	24.99	33.01	PASS
	25	0	22.3	21.88	21.55	/	3.5	25.8	25.38	25.05	33.01	PASS
	23.04		21.55	21.88	/	3.5	26.54	25.05	25.38	33.01	PASS	
	16QAM	1	13	22.61	21.81	21.82	/	3.5	26.11	25.31	25.32	33.01
24			22.51	21.59	21.53	/	3.5	26.01	25.09	25.03	33.01	PASS
0			21.24	20.81	20.26	/	3.5	24.74	24.31	23.76	33.01	PASS
12		6	21.09	20.72	20.3	/	3.5	24.59	24.22	23.8	33.01	PASS
		13	21.13	20.81	20.36	/	3.5	24.63	24.31	23.86	33.01	PASS
		25	0	21.29	20.79	20.41	/	3.5	24.79	24.29	23.91	33.01

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.28

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.28

Test Band: 41 10MHz Bandwidth													
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict	
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH			
QPSK	1	0	23.41	22.63	22.57	/	3.5	26.91	26.13	26.07	33.01	PASS	
		25	23.72	22.89	22.52	/	3.5	27.22	26.39	26.02	33.01	PASS	
		49	23.19	22.69	22.56	/	3.5	26.69	26.19	26.06	33.01	PASS	
	25	0	22.39	21.76	21.68	/	3.5	25.89	25.26	25.18	33.01	PASS	
		13	22.38	21.89	21.7	/	3.5	25.88	25.39	25.2	33.01	PASS	
		25	22.3	21.94	21.64	/	3.5	25.8	25.44	25.14	33.01	PASS	
	50	0	22.35	21.88	21.61	/	3.5	25.85	25.38	25.11	33.01	PASS	
	22.03		22.14	21.4	/	3.5	25.53	25.64	24.9	33.01	PASS		
	25		23.99	22.47	21.57	/	3.5	27.49	25.97	25.07	33.01	PASS	
16QAM	1	49	22.28	22.23	21.23	/	3.5	25.78	25.73	24.73	33.01	PASS	
		25	0	21.53	20.83	20.59	/	3.5	25.03	24.33	24.09	33.01	PASS
			13	21.26	20.74	20.66	/	3.5	24.76	24.24	24.16	33.01	PASS
	25		21.35	20.76	20.49	/	3.5	24.85	24.26	23.99	33.01	PASS	
	50	0	21.21	20.71	20.46	/	3.5	24.71	24.21	23.96	33.01	PASS	
	Note: 23.99												
	1) dBd = dBi - 2.15												
2) EIRP = Conducted output power + Antenna gain (dBi)													

Note:

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

23.99

Test Band: 41 15MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.36	22.78	22.82	/	3.5	26.86	26.28	26.32	33.01	PASS
		38	22.94	22.85	22.64	/	3.5	26.44	26.35	26.14	33.01	PASS
		74	22.93	22.77	22.45	/	3.5	26.43	26.27	25.95	33.01	PASS
	36	0	22.22	21.79	21.62	/	3.5	25.72	25.29	25.12	33.01	PASS
		18	22.05	21.89	21.66	/	3.5	25.55	25.39	25.16	33.01	PASS
		39	22.01	21.89	21.54	/	3.5	25.51	25.39	25.04	33.01	PASS
16QAM	75	0	22.01	21.86	21.64	/	3.5	25.51	25.36	25.14	33.01	PASS
			22.52	22.22	21.31	/	3.5	26.02	25.72	24.81	33.01	PASS
			22.07	22.12	21.64	/	3.5	25.57	25.62	25.14	33.01	PASS
	1	38	22.11	22.34	21.28	/	3.5	25.61	25.84	24.78	33.01	PASS
		74	22.11	22.34	21.28	/	3.5	25.61	25.84	24.78	33.01	PASS
		0	21.12	20.94	20.59	/	3.5	24.62	24.44	24.09	33.01	PASS
	36	18	21.04	20.94	20.66	/	3.5	24.54	24.44	24.16	33.01	PASS
		39	21.08	20.93	20.4	/	3.5	24.58	24.43	23.9	33.01	PASS
		75	21.17	20.81	20.48	/	3.5	24.67	24.31	23.98	33.01	PASS

Note: 23.36

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)

Test Band: 41 20MHz Bandwidth												
Modulation	RB Allocation		Conducted Power (dBm)			Antenna gain		EIRP(dBm)			Limit (dBm)	Verdict
	Size	Offset	LCH	MCH	HCH	(dBd)	(dBi)	LCH	MCH	HCH		
QPSK	1	0	23.3	22.97	22.41	/	3.5	26.8	26.47	25.91	33.01	PASS
		50	23.49	23.17	22.63	/	3.5	26.99	26.67	26.13	33.01	PASS
		99	23.06	22.71	22.27	/	3.5	26.56	26.21	25.77	33.01	PASS
	50	0	22.23	21.7	21.63	/	3.5	25.73	25.2	25.13	33.01	PASS
		25	22	21.83	21.6	/	3.5	25.5	25.33	25.1	33.01	PASS
		50	22.15	21.61	21.6	/	3.5	25.65	25.11	25.1	33.01	PASS
16QAM	100	0	22.07	21.72	21.64	/	3.5	25.57	25.22	25.14	33.01	PASS
			22.3	21.73	22.09	/	3.5	25.8	25.23	25.59	33.01	PASS
			23.11	22.26	22.2	/	3.5	26.61	25.76	25.7	33.01	PASS
	1	99	22.45	21.68	21.86	/	3.5	25.95	25.18	25.36	33.01	PASS
		0	21.2	20.77	20.86	/	3.5	24.7	24.27	24.36	33.01	PASS
		25	21.22	20.92	20.78	/	3.5	24.72	24.42	24.28	33.01	PASS
	50	50	20.95	20.77	20.49	/	3.5	24.45	24.27	23.99	33.01	PASS
		100	21.08	20.72	20.69	/	3.5	24.58	24.22	24.19	33.01	PASS
		0	21.08	20.72	20.69	/	3.5	24.58	24.22	24.19	33.01	PASS

Note: 23.49

1) dBd = dBi - 2.15

2) EIRP = Conducted output power + Antenna gain (dBi)