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Report On

FCC and IC Testing of the
Ericsson KRD 901 060/* (RBS6402) WCDMA (1900 MHz) Base Station
In accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 24, Industry Canada RSS-GEN and Industry Canada RSS-133

COMMERCIAL-IN-CONFIDENCE

FCC ID: TA8AKRD901060
IC: 287AB-AS901060

Document 75932339 Report 01 Issue 1 November 2015

TÜV SÜD Product Service, Octagon House, Concorde Way, Segensworth North,
Fareham, Hampshire, United Kingdom, PO15 5RL
Tel: +44 (0) 1489 558100. Website: www.tuv-sud.co.uk

REPORT ON

FCC and Industry Canada Testing of the
Ericsson AB
RBS 6402 / KRD 901 060/*

Document 75932339 Report 01 Issue 1

November 2015

PREPARED FOR

Oy L M Ericsson AB
Elektoniikkatie 10
90590 Oulu
Finland

PREPARED BY

N Forsyth
Test Engineer

APPROVED BY

S Scarfe
Authorised Signatory

DATED 30 November 2015

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate compliance with FCC CFR 47: Parts 2 & 24 and Industry Canada RSS-GEN & RSS-133. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

M Toubella

CONTENTS

SECTION 1

REPORT INFORMATION

1.1 REPORT DETAILS

Manufacturer	Oy L M Ericsson AB
Address	Elektoniikkatie 10 Oulu 90590 FINLAND
Product Name	RBS6402
Product Number	KRD 901 060/* The * in Product number KRD 901 060/* denotes 1, 2 and 7 depending on different HW configurations.
IC Model Name	287AB-AS901060
Serial Number(s)	C829930752
Software Version	wcdma_daily_build_rnd R3A
Hardware Version	R3A
Test Specification/Issue/Date	FCC CFR 47 Part 2: 2014 FCC CFR 47 Part 24: 2014 Industry Canada RSS-GEN: Issue 4: 2014 Industry Canada RSS-133: Issue 6: 2013
Start of Test	26 October 2015
Finish of Test	28 October 2015
Name of Engineer(s)	M Toubella
Related Document(s)	KDB 971168 D01

1.2 BRIEF SUMMARY OF RESULTS

A brief summary of results for each configuration, in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 24, Industry Canada RSS-GEN and Industry Canada RSS-133 is shown below.

Section	Specification Clause				Test Description	Result
	FCC CFR 47 Part 2	FCC CFR 47 Part 24	RSS-GEN	RSS-133		
2.1	2.1046	24.232 (a)	-	6.4	Maximum Peak Output Power and Peak to Average Ratio - Conducted	Pass
2.2	2.1049	24.238 (b)	6.6	-	Occupied Bandwidth	Pass
2.3	2.1051	24.238 (b)	-	6.5	Band Edge	Pass
2.4	2.1051	24.238 (a)	-	6.5	Transmitter Spurious Emissions	Pass
2.5	2.1055	24.235	-	6.3	Frequency Stability	Pass

1.3 CONFIGURATION DESCRIPTION

The RBS 6402 used in WCDMA node supports WCDMA single carrier and is capable of 2 port single carrier operation.

All RF ports were tested for RF Carrier Power and results recorded using the Measure and Sum approach to account for MIMO operation. All testing was performed with the EUT transmitting at maximum RF power unless otherwise stated.

TX Test frequencies

FDD Band 2				
Mode	Channel BW (MHz)	Frequency range (MHz)	B, M, T Frequencies	B, M, T Channels
WCDMA	5	1930 – 1990	1932.4, 1960.0, 1987.6	9662, 9800, 9938

1.4 DECLARATION OF BUILD STATUS

Manufacturer	Ericsson AB		
Model number(s)	RBS 6402		
Identification/Type(s)	KRD 901 060/*		
Cabinet type(s)	Indoor		
Cabinet identification(s)	N/A		
Number of sectors	1		
Number of carriers	1		
Base station class	Local Area		
Maximum rated output power(s)	2 x 250mW		
Duplex Mode	FDD		
Frequency Band	1900 MHz Band 2		
Modulation type(s)	QPSK		
	16 QAM		
	64 QAM		
Channel Bandwidth(s)			
	WCDMA: 5MHz		
Transmit diversity	Yes [1]		
Receive diversity	Yes [2]		
MIMO			
ITU designation or class of emission			
	4M18F9W		
Environment temperature range(s)	Minimum	Maximum	
	0 C	+50 C (+40 C without fan)	
AC Power source	Yes		
	Voltage Range(s)		
	Minimum VAC	Nominal VAC	Maximum VAC
	100	230	240
DC Power source	Yes (PoE)		
	Voltage Range(s)		
	Minimum VDC	Nominal VDC	Maximum VDC
	37	48	58
Options	Type	Model	

(The * in the model number KRD901 060/* denotes 1, 2, 7 depending on different HW and SW configurations)

[1] Each transmitter path is declared to be equivalent.

[2] Each receiver path is declared to be equivalent.

I hereby declare that I am entitled to sign on behalf of the manufacturer and that the information supplied is correct and complete.

Signature:

Name : Mika Savilaks o
Position held : Senior Developer, Regulatory Approvals
Date :25.11.2015

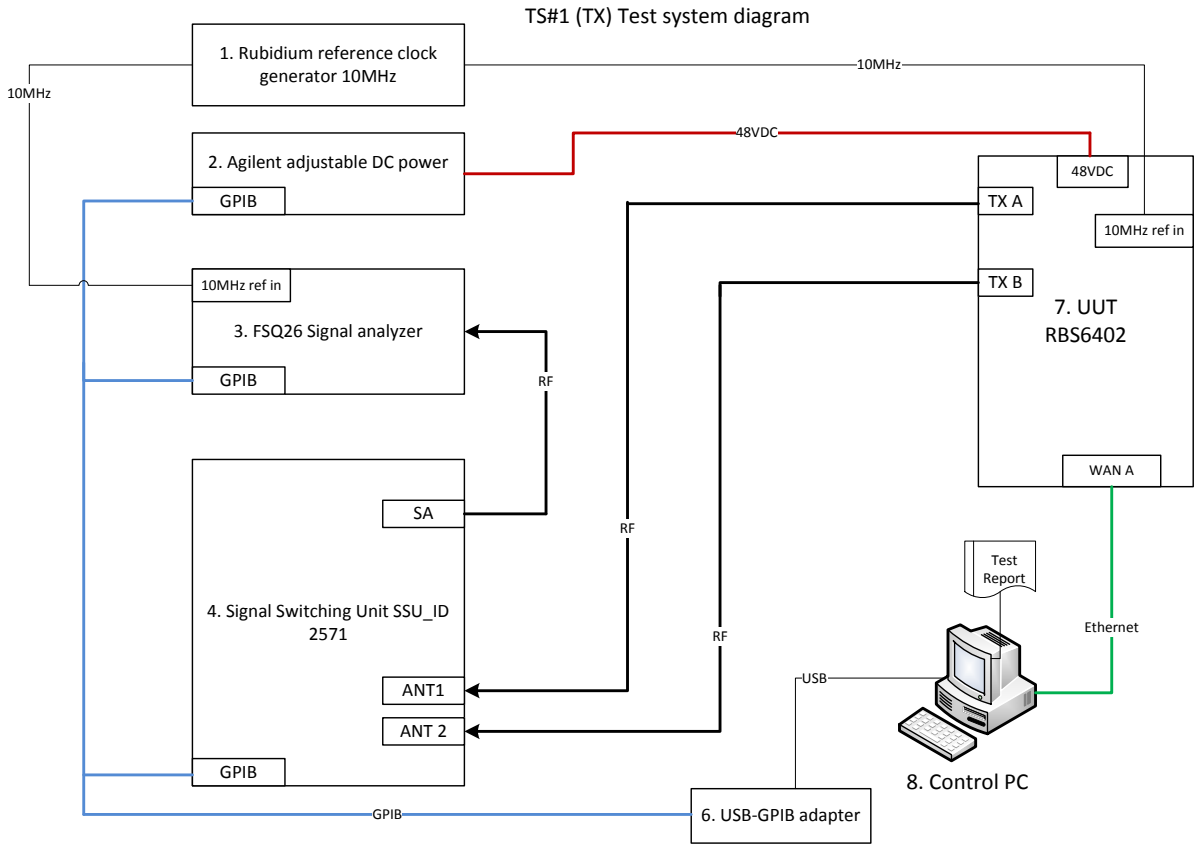
1.5 PRODUCT INFORMATION

1.5.1 Technical Description

The Equipment Under Test (EUT) RBS6402 - KRD 901 060/* is an Ericsson AB Radio Unit working in the public mobile service Band 2 which provides communication connections to Band 2 network. The RBS6402 - KRD 901 060/* operates from a -48V DC supply.

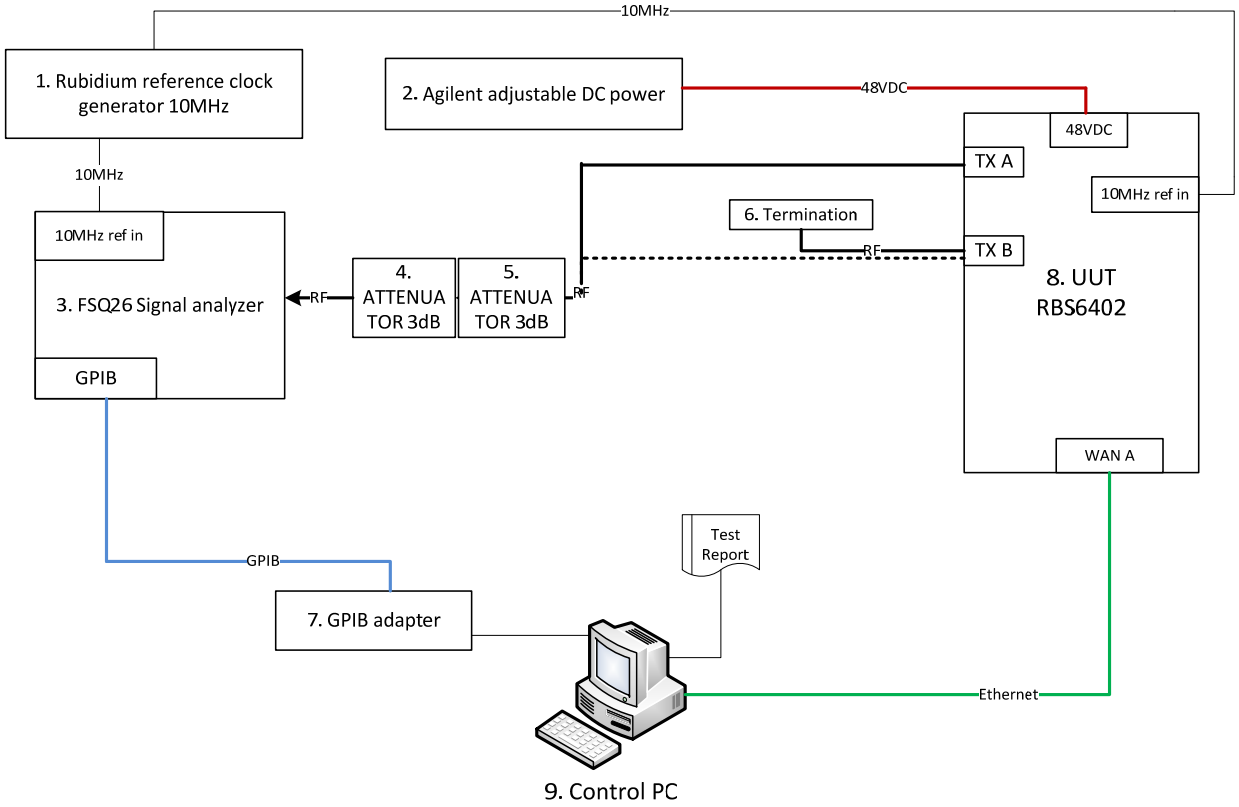
The Equipment Under Test (EUT) is shown in the photograph below. A full technical description can be found in the Manufacturer's documentation.

1.6 TEST SETUP



Unit	Description	Type / Model	Serial	Note
1	Rubidium reference oscillator	Symmetricom 8040	123630105006	-
2	Adjustable DC power supply	HP 6032A DC	US38321561	-
3	Signal Analyzer	R&S® FSQ26	101154	-
4	Signal switching unit	Sub-assembly	2571	-
5	Termination SMA	Mini Circuits ANNE-50+	-	DC – 18GHz
6	USB-GPIB adapter	NI GPIB-USB-HS	125DD85	-
7	UUT	RBS6402	C829930748	-
8	Control PC	Desktop Computer	-	Name: FID652924

TS#1 Test system diagram (Spurious Emissions)



Unit	Description	Type / Model	Serial	Note
1	Rubidium reference oscillator	Symmetricom 8040	123630105006	-
2	Adjustable DC power supply	HP 6032A DC	US38321561	-
3	Signal Analyzer	R&S® FSQ26	101154	-
4	Attenuator 3dB	Huber&Suhner 6603_SK-50-1	-	-
5	Attenuator 3dB	Wiltron 43KC-3	-	-
6	Termination SMA	Mini Circuits ANNE-50+	-	DC – 18GHz
7	GPIB adapter	NI PCI GPIB adapter	125DD85	-
8	UUT	RBS6402	C829930748	-
9	Control PC	Desktop Computer	-	Name: FID652924

1.7 TEST CONDITIONS

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated in a shielded enclosure, test laboratories or a chamber as appropriate.

The EUT was powered from a -48V DC supply.

1.8 DEVIATION FROM THE STANDARD

No deviations from the applicable test standards or test plan were made during testing.

1.9 MODIFICATION RECORD

No modifications were made to the EUT during testing.

1.10 ALTERNATIVE TEST SITE

Under our group UKAS Accreditation, TÜV SÜD Product Service conducted the following tests at Ericsson in Oulu, Finland.

1.11 ADDITIONAL INFORMATION

Testing performed in the presence of Jukka-Pekka Lepistö of Elektrobit, Finland.

SECTION 2

TEST DETAILS

2.1 MAXIMUM PEAK OUTPUT POWER AND PEAK TO AVERAGE RATIO - CONDUCTED

2.1.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1046
FCC CFR 47 Part 24, Clause 24.232 (a)
Industry Canada RSS-133, Clause 6.4

2.1.2 Date of Test and Modification State

27 October 2015 - Modification State 0

2.1.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.1.4 Environmental Conditions

Ambient Temperature	24.3°C
Relative Humidity	42.2%

2.1.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01 and summed in accordance with FCC KDB 662911 D01.

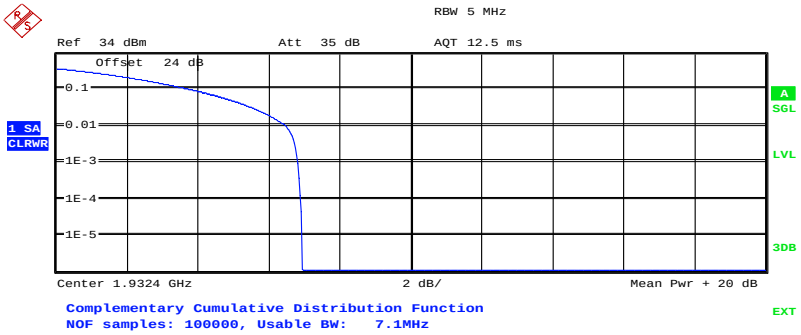
2.1.6 Test Results

Configuration A

Maximum Output Power 24 dBm

Modulation	Carrier Bandwidth (MHz)	Antenna	Output Power / Peak to Average Ratio (PAR)				
			Channel Position B				
			PAR (dB)	Average Power (dBm)	Average EIRP (dBm)	Average EIRP (dBm/MHz)	Average EIRP (W/MHz)
QPSK	5.0 MHz	A	6.93	24.35	29.35	22.36	0.17
		B	7.06	24.25	29.25	22.26	0.17
Total			-	27.31	32.31	25.32	3.18

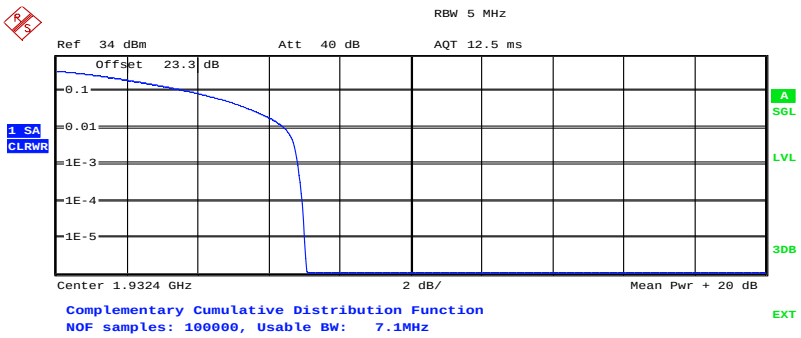
Modulation QPSK - Bandwidth 5.0 MHz - Antenna A - Channel Position B



Trace 1	
Mean	23.88 dBm
Peak	30.81 dBm
Crest	6.93 dB
10 %	3.75 dB
1 %	6.44 dB
.1 %	6.83 dB
.01 %	6.89 dB

Date: 26.OCT.2015 14:44:12

Modulation QPSK - Bandwidth 5.0 MHz - Antenna B - Channel Position B



Trace 1	
Mean	23.96 dBm
Peak	31.02 dBm
Crest	7.06 dB
10 %	3.78 dB
1 %	6.44 dB
.1 %	6.83 dB
.01 %	6.96 dB

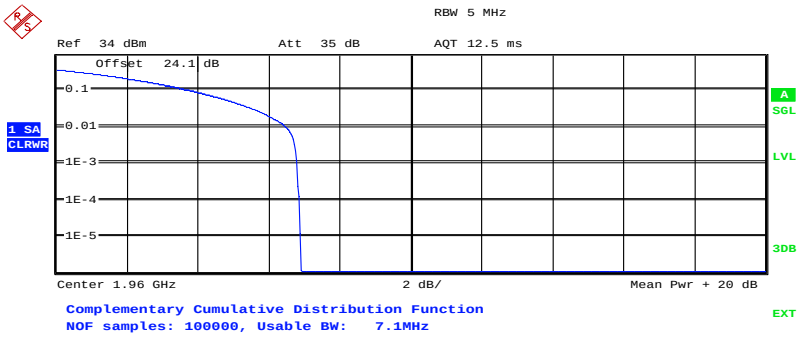
Date: 26.OCT.2015 14:47:52

Configuration A

Maximum Output Power 24 dBm

Modulation	Carrier Bandwidth (MHz)	Antenna	Output Power / Peak to Average Ratio (PAR)				
			Channel Position M				
			PAR (dB)	Average Power (dBm)	Average EIRP (dBm)	Average EIRP (dBm/MHz)	Average EIRP (W/MHz)
QPSK	5.0 MHz	A	6.88	24.20	29.20	22.21	0.17
		B	6.95	24.01	29.01	22.02	0.16
Total			-	27.12	32.12	25.13	3.17

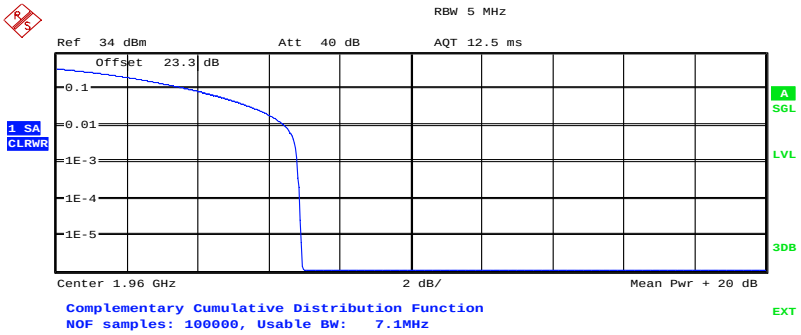
Modulation QPSK - Bandwidth 5.0 MHz - Antenna A - Channel Position B



	Trace 1
Mean	23.78 dBm
Peak	30.67 dBm
Crest	6.88 dB
10 %	3.78 dB
1 %	6.47 dB
.1 %	6.79 dB
.01 %	6.86 dB

Date: 26.OCT.2015 14:44:50

Modulation QPSK - Bandwidth 5.0 MHz - Antenna B - Channel Position B

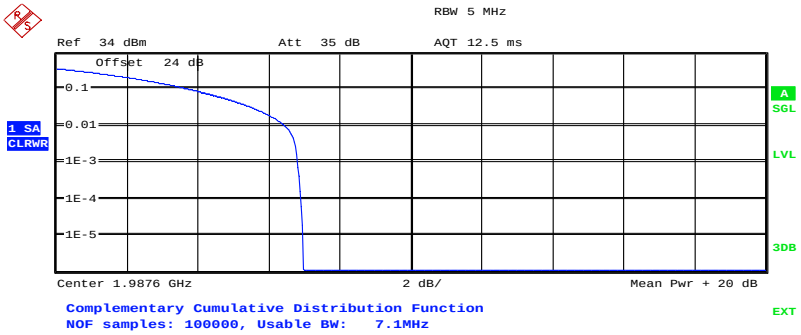


Configuration A

Maximum Output Power 24 dBm

Modulation	Carrier Bandwidth (MHz)	Antenna	Output Power / Peak to Average Ratio (PAR)				
			Channel Position T				
			PAR (dB)	Average Power (dBm)	Average EIRP (dBm)	Average EIRP (dBm/MHz)	Average EIRP (W/MHz)
QPSK	5.0 MHz	A	6.96	23.86	28.86	21.87	0.15
		B	7.04	24.06	29.06	22.07	0.16
Total			-	26.97	31.97	24.98	3.17

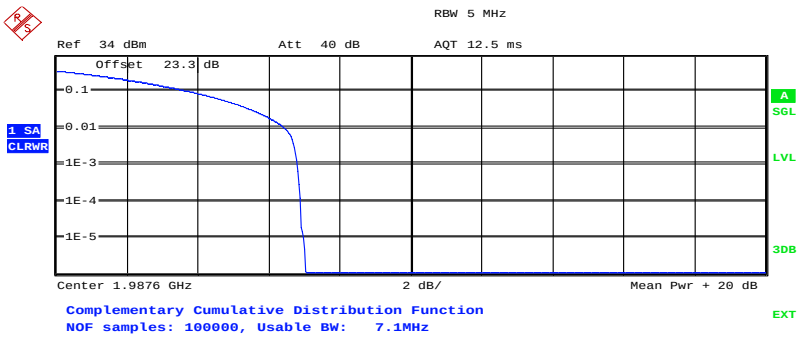
Modulation QPSK - Bandwidth 5.0 MHz - Antenna A - Channel Position B



Trace 1	
Mean	23.43 dBm
Peak	30.38 dBm
Crest	6.96 dB
10 %	3.78 dB
1 %	6.44 dB
.1 %	6.83 dB
.01 %	6.92 dB

Date: 26.OCT.2015 14:45:26

Modulation QPSK - Bandwidth 5.0 MHz - Antenna B - Channel Position B



Trace 1	
Mean	23.77 dBm
Peak	30.81 dBm
Crest	7.04 dB
10 %	3.78 dB
1 %	6.44 dB
.1 %	6.79 dB
.01 %	6.89 dB

Date: 26.OCT.2015 14:49:04

Limit	
Peak Power	≤500 W or ≤+57 dBm
Peak to Average Ratio	13 dB

2.2 OCCUPIED BANDWIDTH

2.2.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1049
FCC CFR 47 Part 24, Clause 24.238 (b)
Industry Canada RSS-GEN, Clause 6.6

2.2.2 Date of Test and Modification State

27 October 2015 - Modification State 0

2.2.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.2.4 Environmental Conditions

Ambient Temperature	24.3°C
Relative Humidity	42.2%

2.2.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01.

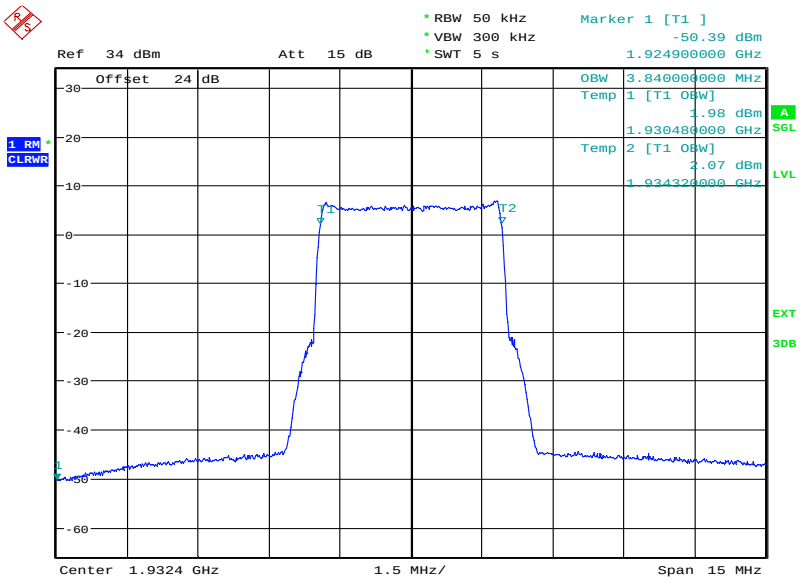
2.2.6 Test Results

Configuration A

Maximum Output Power 24 dBm

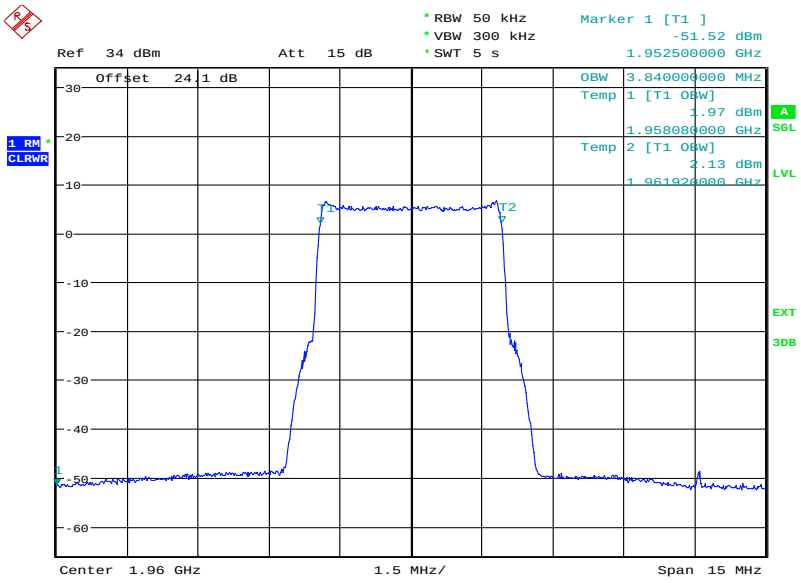
Modulation	Carrier Bandwidth	Result (MHz)					
		Channel Position B		Channel Position M		Channel Position T	
		Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth	Occupied Bandwidth	-26 dB Bandwidth
QPSK	5.0 MHz	3.84	4.18	3.84	4.20	3.84	4.13

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B – Measurement 99 % BW



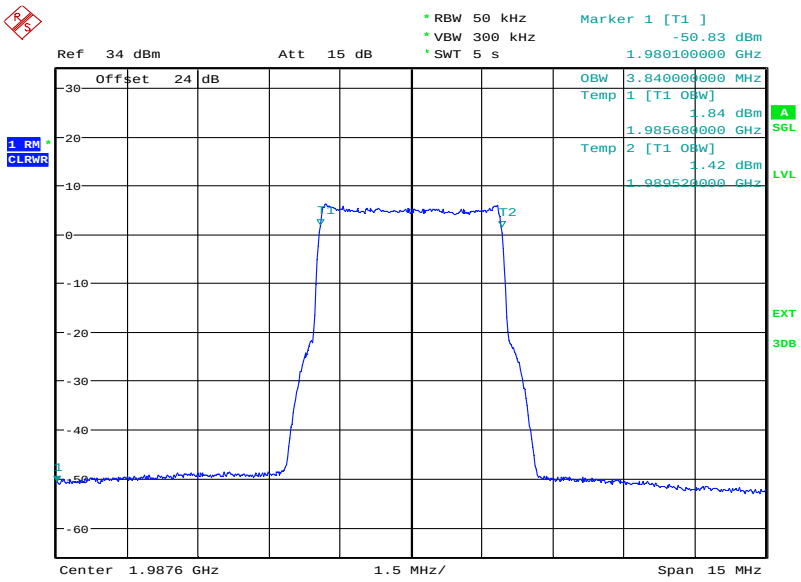
Date: 26.OCT.2015 13:24:40

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M - Measurement 99 % BW



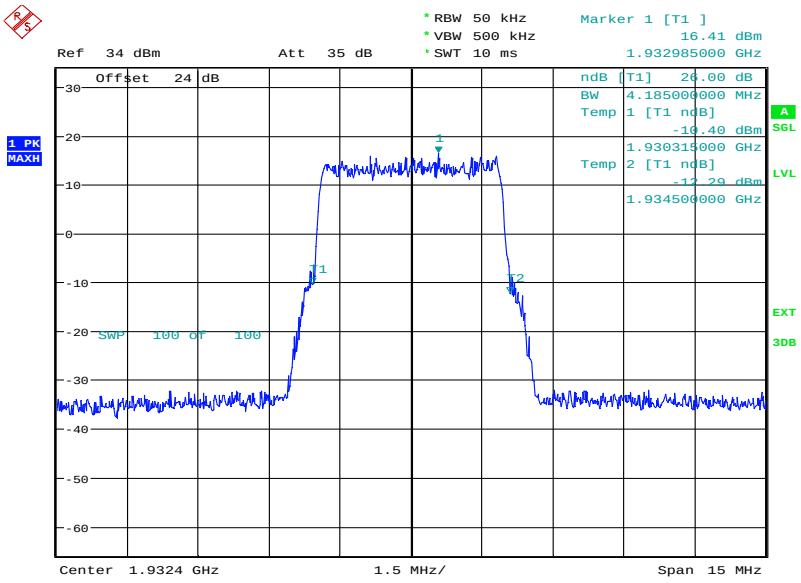
Date: 26.OCT.2015 13:25:38

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position T - Measurement 99 % BW



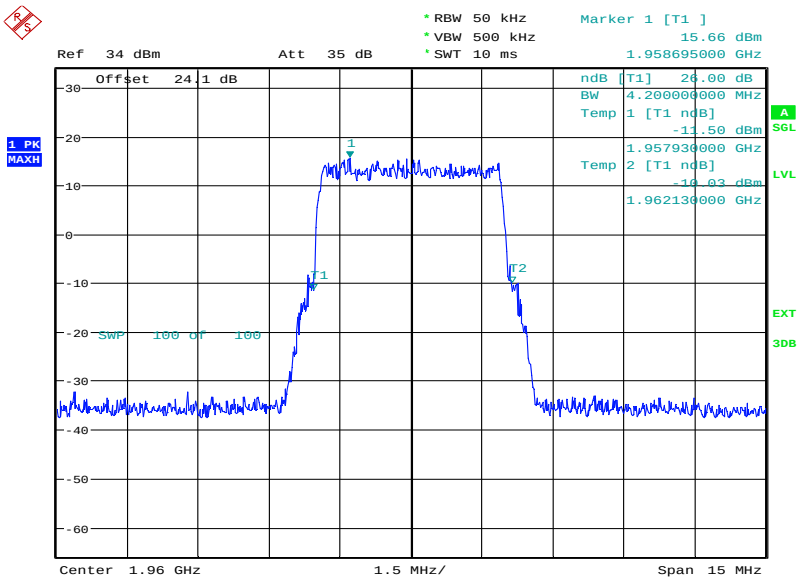
Date: 26.OCT.2015 13:26:36

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B - Measurement -26 dB BW



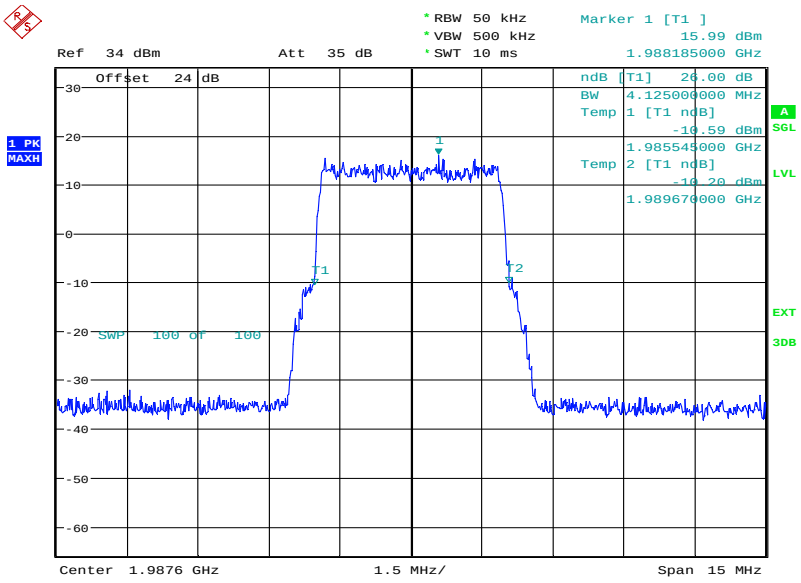
Date: 26.OCT.2015 13:24:55

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M - Measurement -26 dB BW



Date: 26.OCT.2015 13:25:53

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position T - Measurement -26 dB BW



Date: 26.OCT.2015 13:26:52

2.3 BAND EDGE

2.3.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051
FCC CFR 47 Part 24, Clause 24.238 (b)
Industry Canada RSS-133, Clause 6.5

2.3.2 Date of Test and Modification State

26 October 2015 - Modification State 0

2.3.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.4 Environmental Conditions

Ambient Temperature	24.2°C
Relative Humidity	39.3%

2.3.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01.

Each antenna port has been declared as being equivalent, therefore measurements were made on one antenna port only. To account for this, the limit was tightened by 10 * Log(N), where N is equal to the number of MIMO antenna ports.

For single carrier, the limit was calculated as being -13 dBm - 10 * Log (4) = -19 dBm.

For dual carrier, the limit was calculated as being -13 dBm - 10 * Log (2) = -16 dBm.

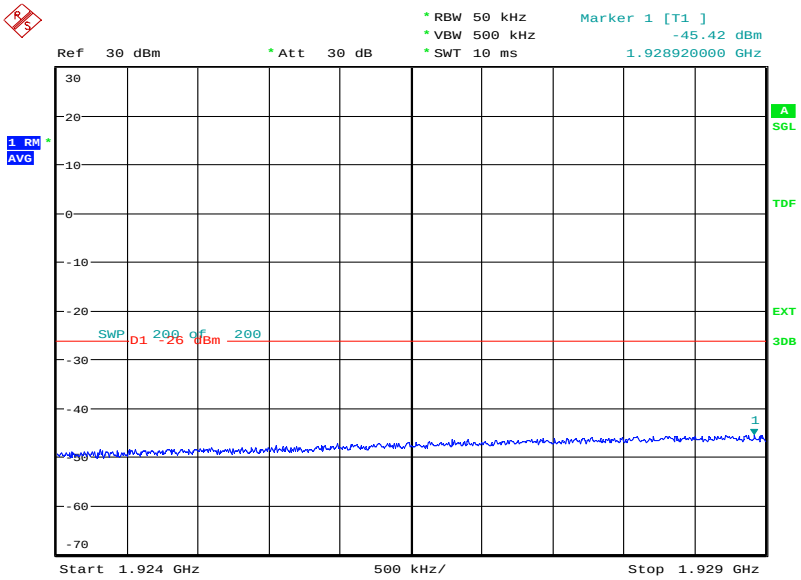
2.3.6 Test Results

Configuration A

Maximum Output Power 24 dBm

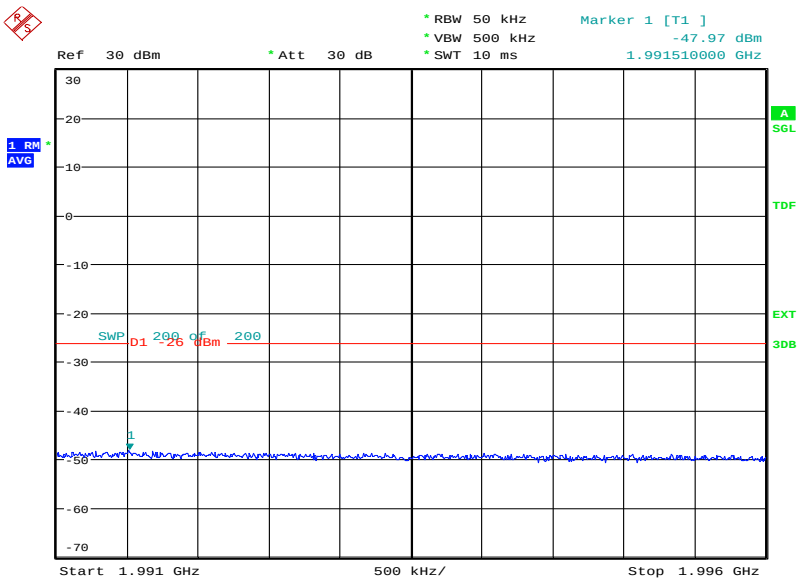
Modulation	Carrier Bandwidth	Band Edge (MHz)	
		Channel Position B	Channel Position T
QPSK	5.0 MHz	1,932.40	1,987.60

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B



Date: 26.OCT.2015 11:04:15

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position T



Date: 26.OCT.2015 11:05:13

Limit	-13 dBm

2.4 TRANSMITTER SPURIOUS EMISSIONS

2.4.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051
FCC CFR 47 Part 24, Clause 24.238 (a)
Industry Canada RSS-133, Clause 6.5

2.4.2 Date of Test and Modification State

28 October 2015 - Modification State 0

2.4.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.4 Environmental Conditions

Ambient Temperature	24.5°C
Relative Humidity	39.3%

2.4.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01.

Each antenna port has been declared as being equivalent, therefore measurements were made on one antenna port only. To account for this, the limit was tightened by 10 * Log(N), where N is equal to the number of MIMO antenna ports.

For single carrier, the limit was calculated as being -13 dBm - 10 * Log (4) = -19 dBm.

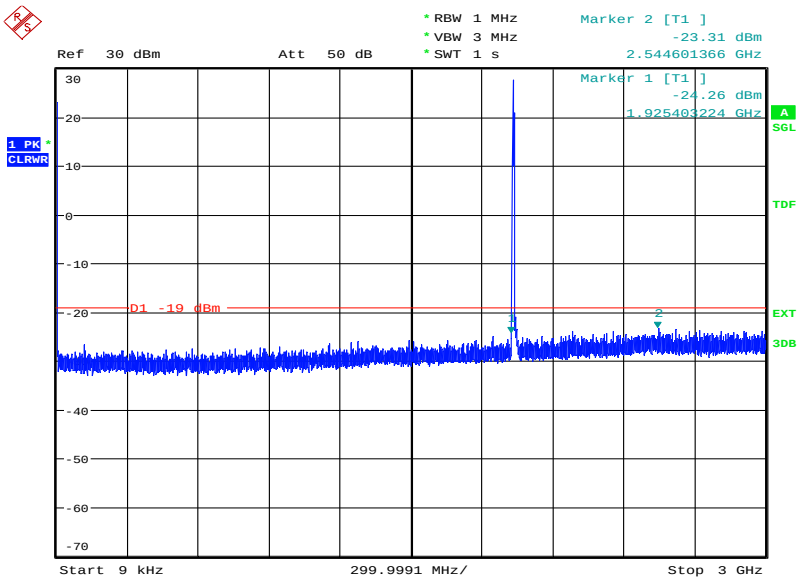
For dual carrier, the limit was calculated as being -13 dBm - 10 * Log (2) = -16 dBm.

2.4.6 Test Results

Configuration A

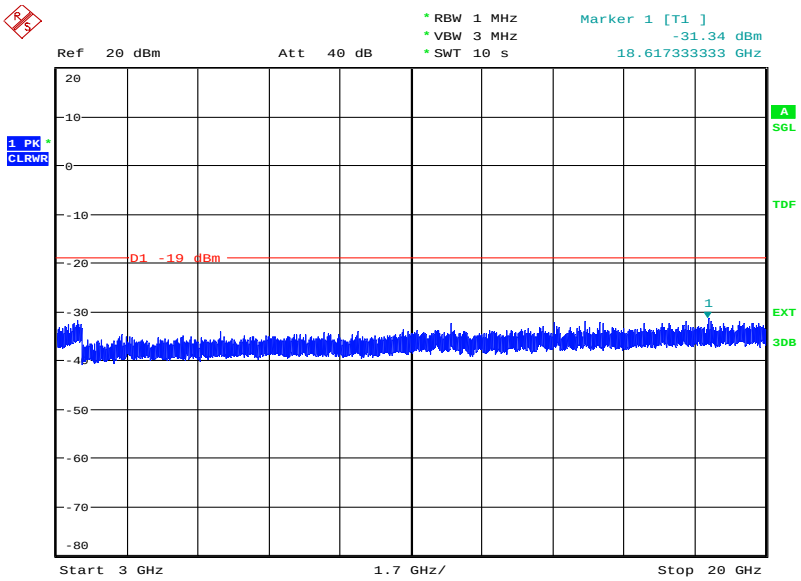
Maximum Output Power 24 dBm

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B - Band 1 - Range 0.009 to 3000 MHz



Date: 28.OCT.2015 10:13:37

Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B - Band 2 - Range 3000 to 22000 MHz



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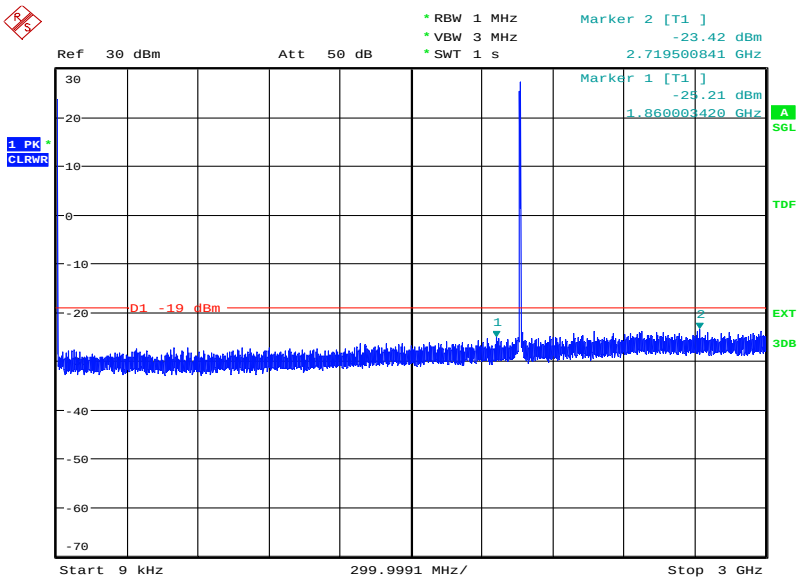
Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M - Band 1 - Range 0.009 to 3000 MHz



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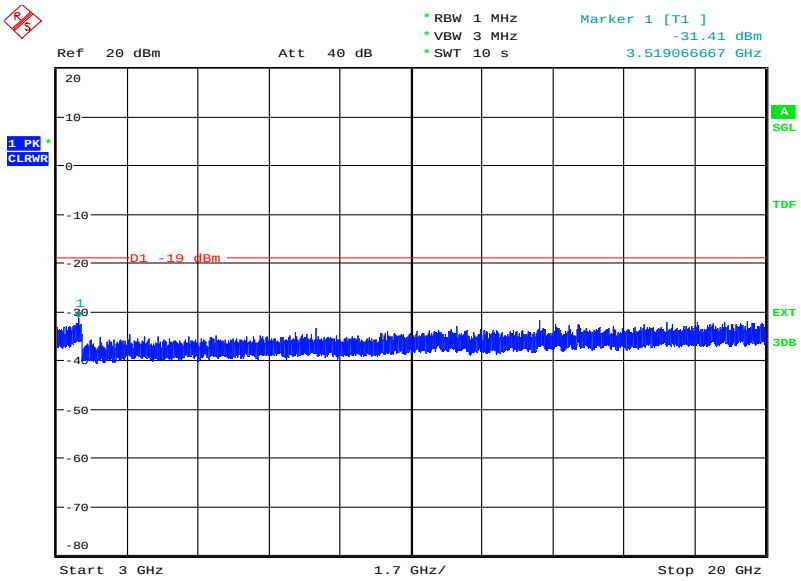
Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M - Band 2 - Range 3000 to 22000 MHz



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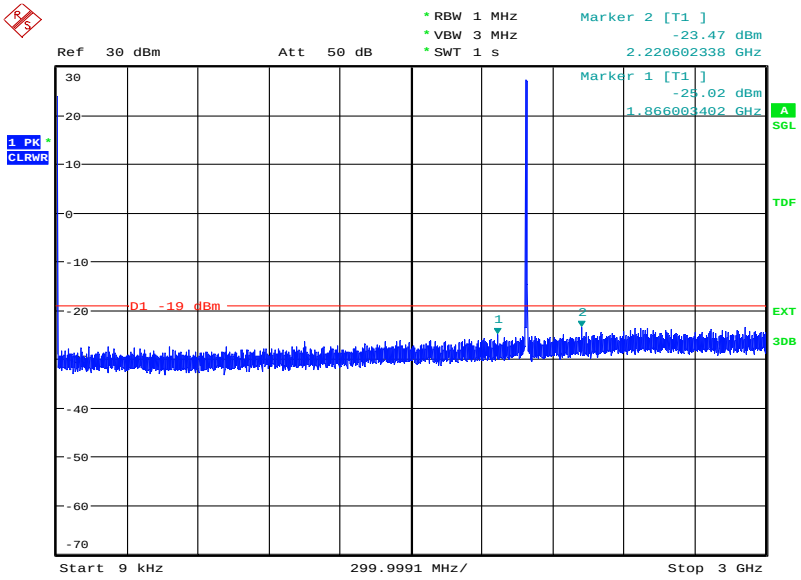
Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position T - Band 1 - Range 0.009 to 3000 MHz



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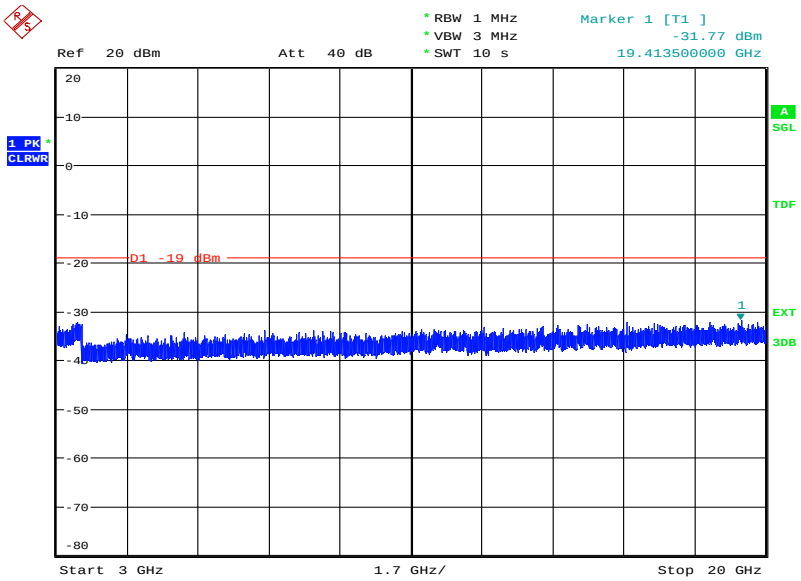
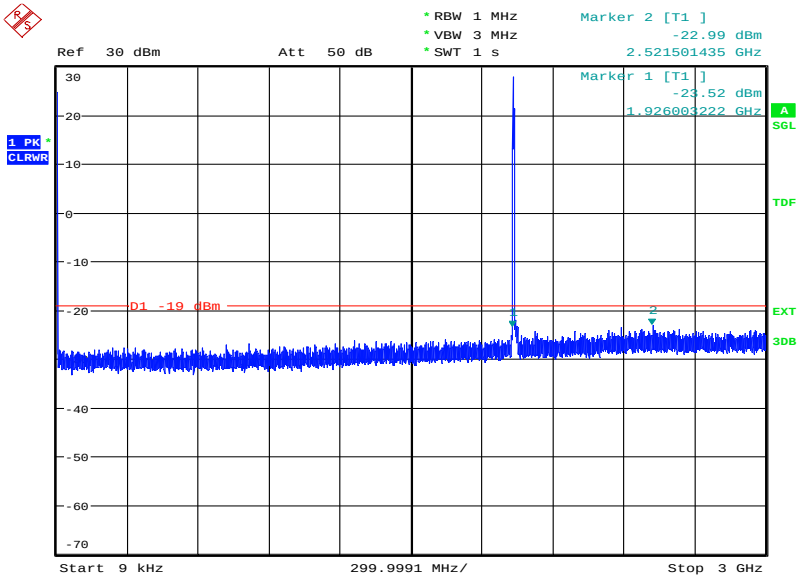
Antenna A - Modulation QPSK - Carrier Bandwidth 5.0 MHz - Channel Position T - Band 2 - Range 3000 to 22000 MHz



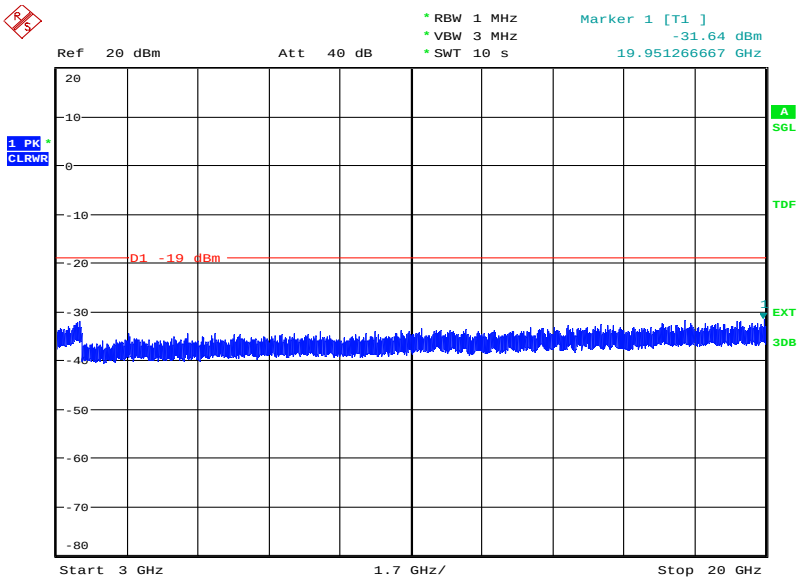
Date: 28.OCT.2015 10:20:34

Antenna A - Modulation 16QAM - Carrier Bandwidth 5.0 MHz - Channel Position B - Band 1 - Range 0.009 to 3000 MHz



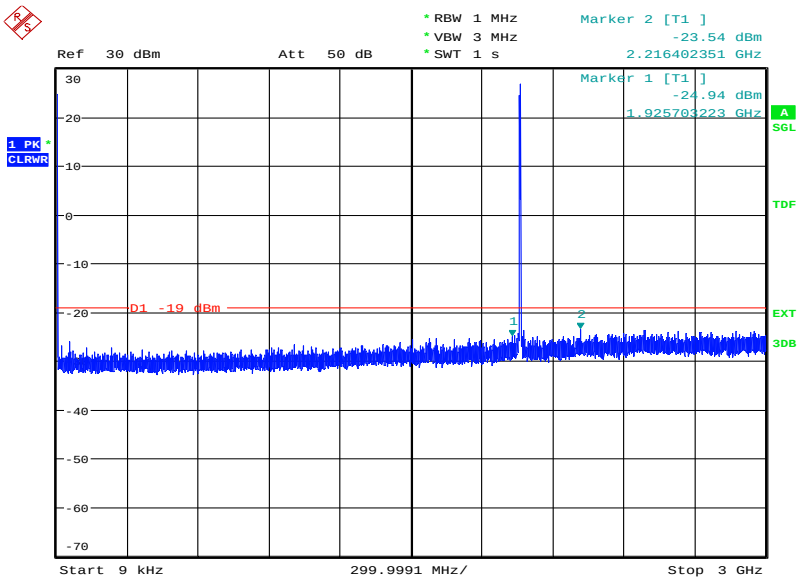
Date: 28.OCT.2015 10:33:36

Antenna A - Modulation 16QAM - Carrier Bandwidth 5.0 MHz - Channel Position B - Band 2 - Range 3000 to 22000 MHz



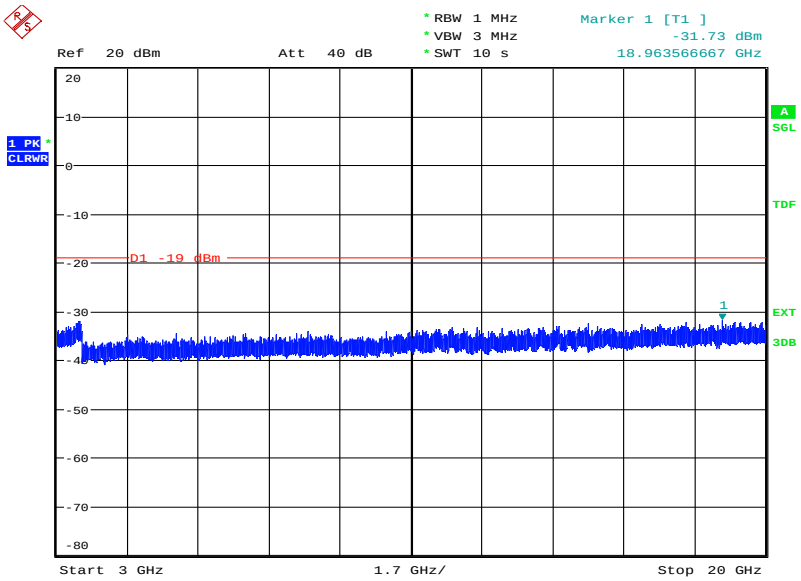
Date: 28.OCT.2015 10:34:43

Antenna A - Modulation 16QAM - Carrier Bandwidth 5.0 MHz - Channel Position M - Band 1 - Range 0.009 to 3000 MHz



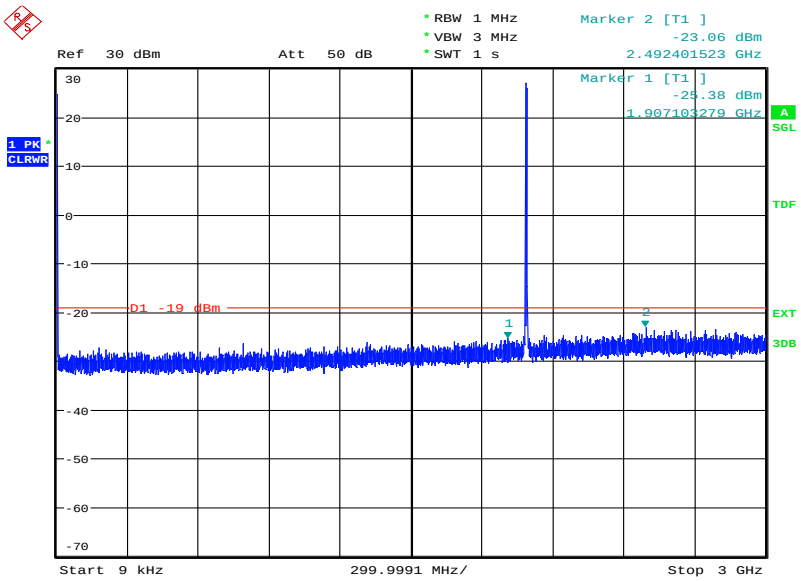
Date: 28.OCT.2015 10:36:30

Antenna A - Modulation 16QAM - Carrier Bandwidth 5.0 MHz - Channel Position M - Band 2 - Range 3000 to 22000 MHz



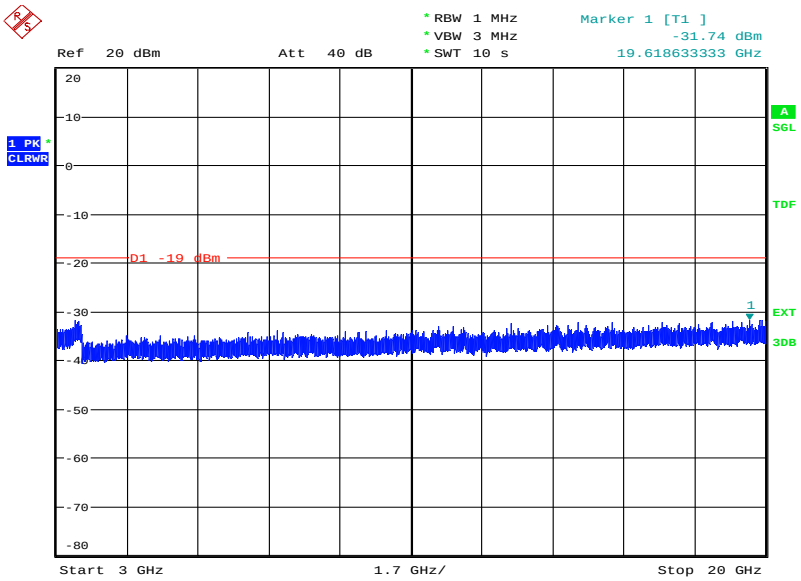
Date: 28.OCT.2015 10:37:38

Antenna A - Modulation 16QAM - Carrier Bandwidth 5.0 MHz - Channel Position T - Band 1 - Range 0.009 to 3000 MHz



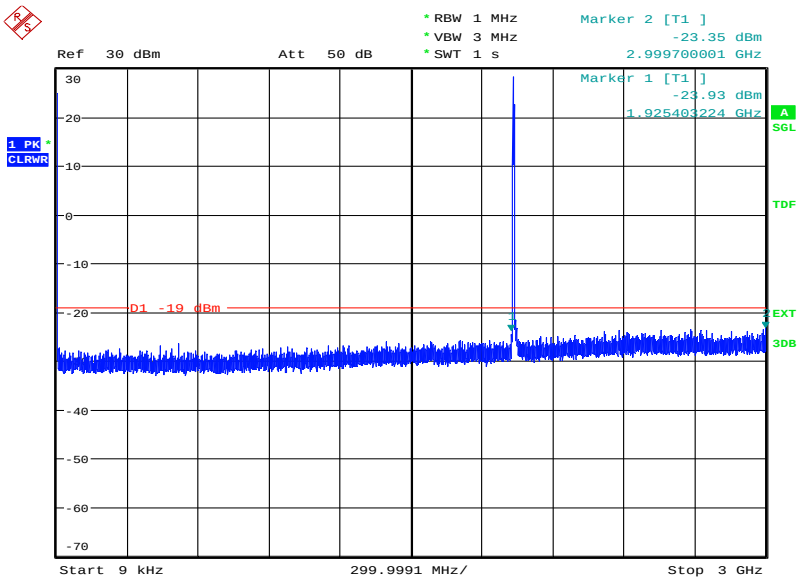
Date: 28.OCT.2015 10:39:25

Antenna A - Modulation 16QAM - Carrier Bandwidth 5.0 MHz - Channel Position T - Band 2 - Range 3000 to 22000 MHz



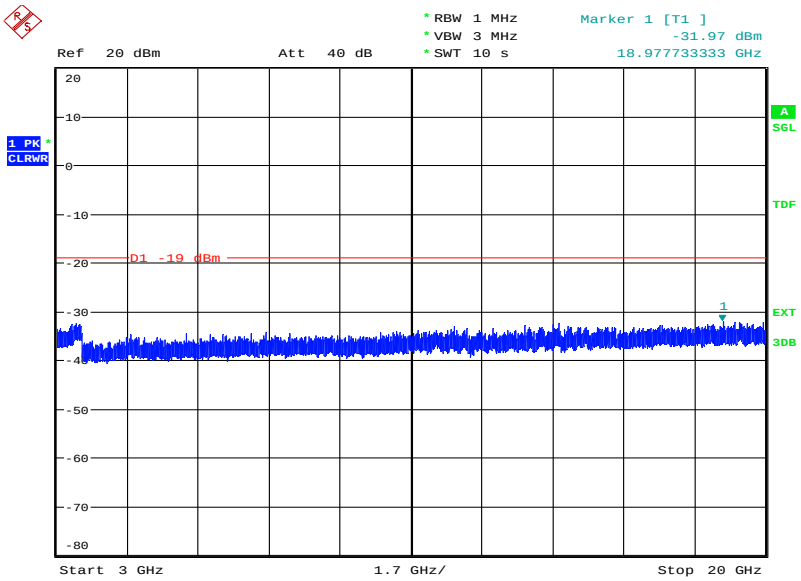
Date: 28.OCT.2015 10:40:33

Antenna A - Modulation 64QAM - Carrier Bandwidth 5.0 MHz - Channel Position B - Band 1 - Range 0.009 to 3000 MHz



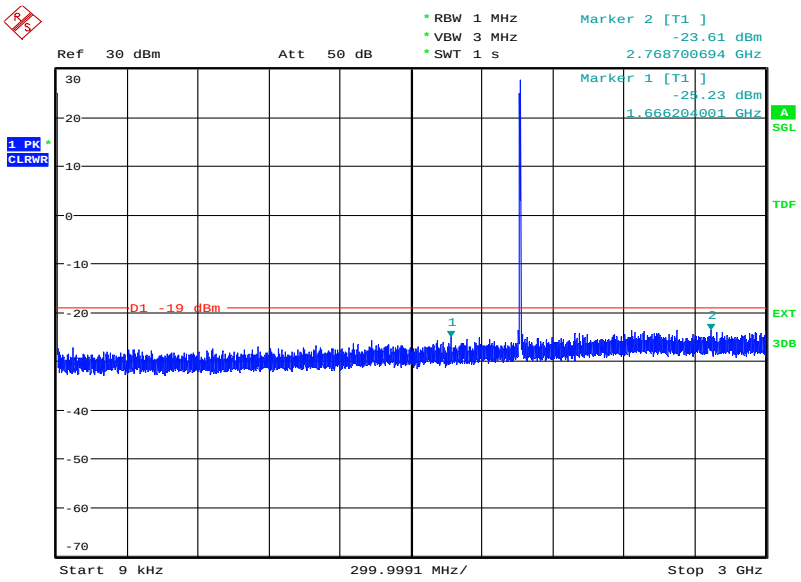
Date: 28.OCT.2015 10:53:48

Antenna A - Modulation 64QAM - Carrier Bandwidth 5.0 MHz - Channel Position B - Band 2 - Range 3000 to 22000 MHz



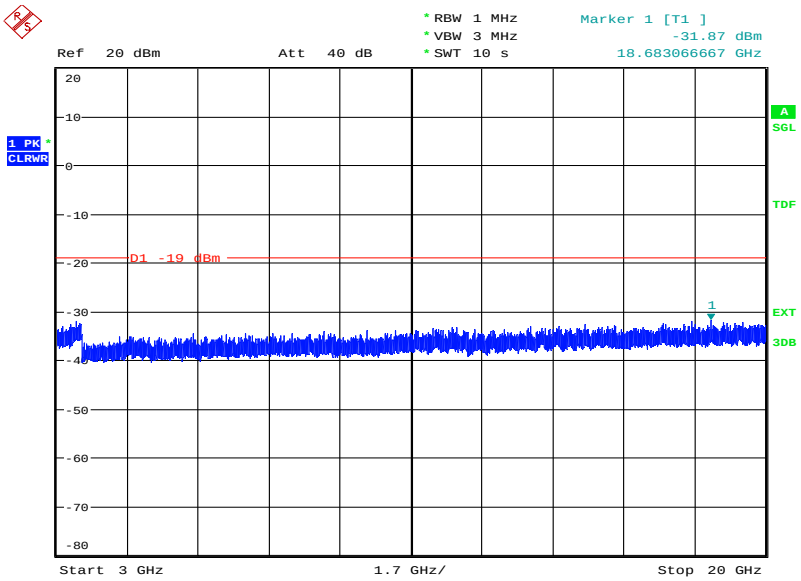
Date: 28.OCT.2015 10:54:55

Antenna A - Modulation 64QAM - Carrier Bandwidth 5.0 MHz - Channel Position M - Band 1 - Range 0.009 to 3000 MHz



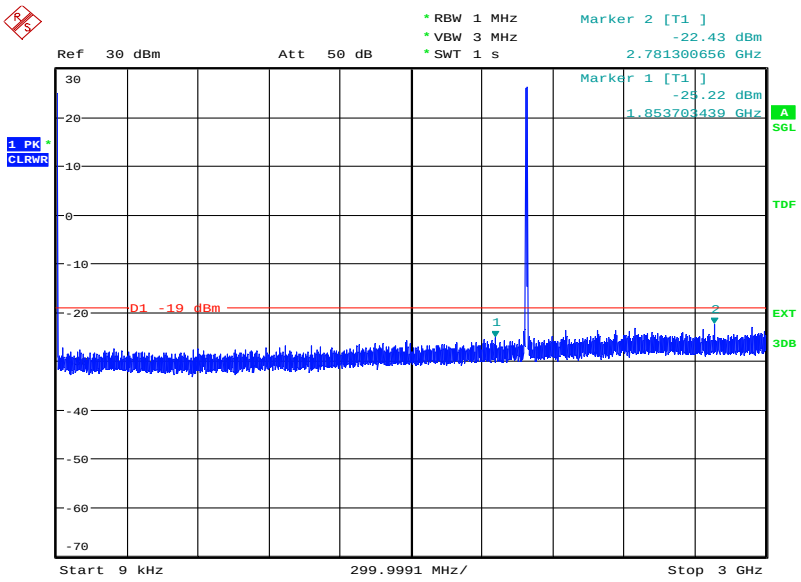
Date: 28.OCT.2015 10:56:43

Antenna A - Modulation 64QAM - Carrier Bandwidth 5.0 MHz - Channel Position M - Band 2 - Range 3000 to 22000 MHz



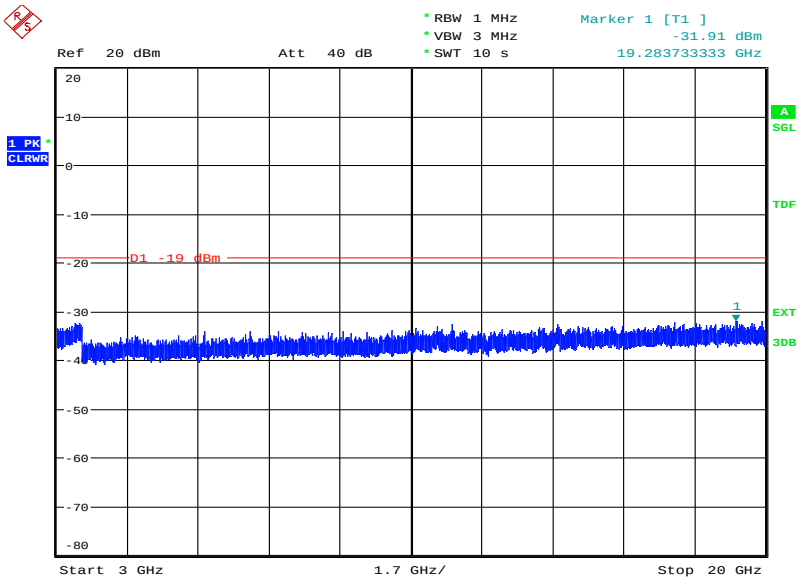
Date: 28.OCT.2015 10:57:50

Antenna A - Modulation 64QAM - Carrier Bandwidth 5.0 MHz - Channel Position T - Band 1 - Range 0.009 to 3000 MHz



Date: 28.OCT.2015 10:59:37

Antenna A - Modulation 64QAM - Carrier Bandwidth 5.0 MHz - Channel Position T - Band 2 - Range 3000 to 22000 MHz



Date: 28.OCT.2015 11:00:45

Limit	-13dBm

2.5 FREQUENCY STABILITY

2.5.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1055
FCC CFR 47 Part 24, Clause 24.235
Industry Canada RSS-133, Clause 6.3

2.5.2 Date of Test and Modification State

26 and 28 October 2015 - Modification State 0

2.5.3 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.5.4 Environmental Conditions

Ambient Temperature	24.2 - 24.5°C
Relative Humidity	39.3%

2.5.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01.

2.5.6 Test Results

Configuration A

Maximum Output Power 24 dBm

Temperature	Modulation	Frequency Stability (Hz)
		Channel Position M
-30°C	QPSK	-5.81 Hz
-20°C	QPSK	-4.39 Hz
-10°C	QPSK	-4.03 Hz
0°C	QPSK	-3.13 Hz
+10°C	QPSK	-6.16 Hz
+20°C	QPSK	-4.47 Hz
+30°C	QPSK	-11.12 Hz
+40°C	QPSK	-3.56 Hz
+50°C	QPSK	-3.93 Hz

Configuration A

Maximum Output Power 24 dBm

Temperature	Modulation	Frequency Stability (Hz)
		Channel Position M
-30°C	16QAM	4.29 Hz
-20°C	16QAM	5.87 Hz
-10°C	16QAM	-4.54 Hz
0°C	16QAM	11.05 Hz
+10°C	16QAM	11.90 Hz
+20°C	16QAM	6.34 Hz
+30°C	16QAM	12.43 Hz
+40°C	16QAM	-4.76 Hz
+50°C	16QAM	12.15 Hz

Configuration A

Maximum Output Power 24 dBm

Temperature	Modulation	Frequency Stability (Hz)
		Channel Position M
-30°C	64QAM	-13.22 Hz
-20°C	64QAM	3.52 Hz
-10°C	64QAM	3.54 Hz
0°C	64QAM	8.86 Hz
+10°C	64QAM	3.98 Hz
+20°C	64QAM	-4.48 Hz
+30°C	64QAM	-4.68 Hz
+40°C	64QAM	12.90 Hz
+50°C	64QAM	6.59 Hz

Configuration A

Maximum Output Power 24 dBm

Voltage	Modulation	Frequency Stability (Hz)
		Channel Position M
-40.8 V	QPSK	4.21
-48.0 V	QPSK	-6.48
-55.2 V	QPSK	10.71

Configuration A

Maximum Output Power 24 dBm

Voltage	Modulation	Frequency Stability (Hz)
		Channel Position M
-40.8 V	16QAM	11.20
-48.0 V	16QAM	-7.08
-55.2 V	16QAM	5.74

Configuration A

Maximum Output Power 24 dBm

Voltage	Modulation	Frequency Stability (Hz)
		Channel Position M
-40.8 V	64QAM	10.71
-48.0 V	64QAM	-5.29
-55.2 V	64QAM	14.63

Limit	±1.5 ppm or ±1.322 kHz

SECTION 3

TEST EQUIPMENT USED

3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Maximum Peak Output Power and Peak to Average Ratio - Conducted					
Hygromer	Rotronic	A1	4410	12	15-Apr-2016
Digital Multimeter	Fluke	79 Series II	0466	12	11-Sep-2016
Thermometer	Fluke	51 Series II	3173	12	04-Dec-2015
Signal Analyzer	R&S	FSQ	101154	12	28-Oct-2015
Power sensor	R&S	NRP-Z21	101290	12	01-Oct-16
Power sensor USB adapter (passive)	R&S	NRP-Z4	102947	-	NA
Signal generator SMF100A	R&S	SMF 100A	104229	12	29-Oct-2015
Signal generator SMF100A	R&S	SMF 100A	104350	12	16-Dec-2015
Signal Switch Unit	Orbis	TX SSU	EB ID 2571	-	NA
Mains unit 230AC/32A	Orbis	V303	070417A-4006-0539	-	NA
DC power supply	HP	6032A	US38321561	-	OP MON
Frequency standard	Symmetricom	8040	135130102006	12	17-Nov-2015
3 dB attenuator	Huber&Suhner	6603	N/S	-	NA
3 dB attenuator	Wiltron	43KC-3	N/S	-	NA
RF cable	R&S	ZV-Z193	100062	-	NA
RF cable	R&S	ZV-Z194	100073	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	500056 /4P	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	142079 /4	-	NA
RF cable	Huber&Suhner	Sucoflex 104PE	500959 /4PE	-	NA
Terminator (5 pcs.)	Mini-Circuits	MCL_ANNE-50+	-	-	NA
N female to SMA male adapter	-	-	-	-	NA
Occupied Bandwidth					
Hygromer	Rotronic	A1	4410	12	15-Apr-2016
Digital Multimeter	Fluke	79 Series II	0466	12	11-Sep-2016
Thermometer	Fluke	51 Series II	3173	12	04-Dec-2015
Signal Analyzer	R&S	FSQ	101154	12	28-Oct-2015
Power sensor	R&S	NRP-Z21	101290	12	01-Oct-16
Power sensor USB adapter (passive)	R&S	NRP-Z4	102947	-	NA
Signal generator SMF100A	R&S	SMF 100A	104229	12	29-Oct-2015
Signal generator SMF100A	R&S	SMF 100A	104350	12	16-Dec-2015
Signal Switch Unit	Orbis	TX SSU	EB ID 2571	-	NA
Mains unit 230AC/32A	Orbis	V303	070417A-4006-0539	-	NA
DC power supply	HP	6032A	US38321561	-	OP MON
Frequency standard	Symmetricom	8040	135130102006	12	17-Nov-2015
3 dB attenuator	Huber&Suhner	6603	N/S	-	NA
3 dB attenuator	Wiltron	43KC-3	N/S	-	NA
RF cable	R&S	ZV-Z193	100062	-	NA
RF cable	R&S	ZV-Z194	100073	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	500056 /4P	-	NA

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
RF cable	Huber&Suhner	Sucoflex 104P	142079 /4	-	NA
RF cable	Huber&Suhner	Sucoflex 104PE	500959 /4PE	-	NA
Terminator (5 pcs.)	Mini-Circuits	MCL_ANNE-50+	-	-	NA
N female to SMA male adapter	-	-	-	-	NA
Band Edge					
Hygromer	Rotronic	A1	4410	12	15-Apr-2016
Digital Multimeter	Fluke	79 Series II	0466	12	11-Sep-2016
Thermometer	Fluke	51 Series II	3173	12	04-Dec-2015
Signal Analyzer	R&S	FSQ	101154	12	28-Oct-2015
Power sensor	R&S	NRP-Z21	101290	12	01-Oct-16
Power sensor USB adapter (passive)	R&S	NRP-Z4	102947	-	NA
Signal generator SMF100A	R&S	SMF 100A	104229	12	29-Oct-2015
Signal generator SMF100A	R&S	SMF 100A	104350	12	16-Dec-2015
Signal Switch Unit	Orbis	TX SSU	EB ID 2571	-	NA
Mains unit 230AC/32A	Orbis	V303	070417A-4006-0539	-	NA
DC power supply	HP	6032A	US38321561	-	OP MON
Frequency standard	Symmetricom	8040	135130102006	12	17-Nov-2015
3 dB attenuator	Huber&Suhner	6603	N/S	-	NA
3 dB attenuator	Wiltron	43KC-3	N/S	-	NA
RF cable	R&S	ZV-Z193	100062	-	NA
RF cable	R&S	ZV-Z194	100073	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	500056 /4P	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	142079 /4	-	NA
RF cable	Huber&Suhner	Sucoflex 104PE	500959 /4PE	-	NA
Terminator (5 pcs.)	Mini-Circuits	MCL_ANNE-50+	-	-	NA
N female to SMA male adapter	-	-	-	-	NA
Transmitter Spurious Emissions					
Hygromer	Rotronic	A1	4410	12	15-Apr-2016
Digital Multimeter	Fluke	79 Series II	0466	12	11-Sep-2016
Thermometer	Fluke	51 Series II	3173	12	04-Dec-2015
Signal Analyzer	R&S	FSQ	101154	12	28-Oct-2015
Power sensor	R&S	NRP-Z21	101290	12	01-Oct-16
Power sensor USB adapter (passive)	R&S	NRP-Z4	102947	-	NA
Signal generator SMF100A	R&S	SMF 100A	104229	12	29-Oct-2015
Signal generator SMF100A	R&S	SMF 100A	104350	12	16-Dec-2015
Signal Switch Unit	Orbis	TX SSU	EB ID 2571	-	NA
Mains unit 230AC/32A	Orbis	V303	070417A-4006-0539	-	NA
DC power supply	HP	6032A	US38321561	-	OP MON
Frequency standard	Symmetricom	8040	135130102006	12	17-Nov-2015
3 dB attenuator	Huber&Suhner	6603	N/S	-	NA
3 dB attenuator	Wiltron	43KC-3	N/S	-	NA

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
RF cable	R&S	ZV-Z193	100062	-	NA
RF cable	R&S	ZV-Z194	100073	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	500056 /4P	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	142079 /4	-	NA
RF cable	Huber&Suhner	Sucoflex 104PE	500959 /4PE	-	NA
Terminator (5 pcs.)	Mini-Circuits	MCL_ANNE-50+	-	-	NA
N female to SMA male adapter	-	-	-	-	NA
Frequency Stability					
Hygromer	Rotronic	A1	4410	12	15-Apr-2016
Digital Multimeter	Fluke	79 Series II	0466	12	11-Sep-2016
Thermometer	Fluke	51 Series II	3173	12	04-Dec-2015
Signal Analyzer	R&S	FSQ	101154	12	28-Oct-2015
Power sensor	R&S	NRP-Z21	101290	12	01-Oct-16
Power sensor USB adapter (passive)	R&S	NRP-Z4	102947	-	NA
Signal generator SMF100A	R&S	SMF 100A	104229	12	29-Oct-2015
Signal generator SMF100A	R&S	SMF 100A	104350	12	16-Dec-2015
Signal Switch Unit	Orbis	TX SSU	EB ID 2571	-	NA
Mains unit 230AC/32A	Orbis	V303	070417A-4006-0539	-	NA
DC power supply	HP	6032A	US38321561	-	OP MON
Frequency standard	Symmetricom	8040	135130102006	12	17-Nov-2015
3 dB attenuator	Huber&Suhner	6603	N/S	-	NA
3 dB attenuator	Wiltron	43KC-3	N/S	-	NA
RF cable	R&S	ZV-Z193	100062	-	NA
RF cable	R&S	ZV-Z194	100073	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	500056 /4P	-	NA
RF cable	Huber&Suhner	Sucoflex 104P	142079 /4	-	NA
RF cable	Huber&Suhner	Sucoflex 104PE	500959 /4PE	-	NA
Terminator (5 pcs.)	Mini-Circuits	MCL_ANNE-50+	-	-	NA
N female to SMA male adapter	-	-	-	-	NA

N/A – Not Applicable
OP MON – Output Monitored with Calibrated Equipment

3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

Test Discipline	Frequency / Parameter	MU
Conducted Maximum Peak Output Power	30 MHz to 20 GHz Amplitude	± 0.1 dB
Conducted Emissions	30 MHz to 20 GHz Amplitude	± 2.3 dB
Frequency Stability	30 MHz to 2 GHz	± 5.0 Hz
Occupied Bandwidth	Up to 20 MHz Bandwidth	± 1.1 Hz
Band Edge	30 MHz to 20 GHz Amplitude	± 2.3 dB

SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT

4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

This report relates only to the actual item/items tested.

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation.

Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited).

ANNEX A

MODULE LIST

Configuration A			
Product	Product No	R-State	Serial No
RBS 6402	KRD 901060/1X	R3A	C829930752
Software Version:	wcdma_daily_build_rnd R3A	Revision:	R3A