

Huawei Technologies Co.,Ltd

Application
For
Certification

FCC ID: QISY600-U151

WCDMA Digital Mobile Phone

Model: HUAWEI Y600-U151

WiFi Transceiver

Report No.: 131112042SZN-001

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-12]

Prepared and Checked by:

Approved by:

Sign on file

Eason He
Engineer

 Digitally signed
by Billy Li
Location:
Intertek Testing
Services

Billy Li
Supervisor
Date: January 14, 2014

- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
- This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
- For Terms And Conditions of the services, it can be provided upon request.
- The evaluation data of the report will be kept for 3 years from the date of issuance.

TRF no.: FCC 15C_Tx_b

Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch

6F, D Block, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China
Tel: (86 755) 8601 6288 Fax: (86 755) 8601 6751 Website: www.china.intertek-etlsemko.com

LIST OF EXHIBITS

INTRODUCTION

<i>EXHIBIT 1:</i>	Summary of Tests
<i>EXHIBIT 2:</i>	General Description
<i>EXHIBIT 3:</i>	System Test Configuration
<i>EXHIBIT 4:</i>	Measurement Results
<i>EXHIBIT 5:</i>	Equipment Photographs
<i>EXHIBIT 6:</i>	Product Labeling
<i>EXHIBIT 7:</i>	Technical Specifications
<i>EXHIBIT 8:</i>	Instruction Manual
<i>EXHIBIT 9:</i>	Miscellaneous Information
<i>EXHIBIT 10:</i>	Test Equipment List

INTERTEK TESTING SERVICES

MEASUREMENT/TECHNICAL REPORT

Huawei Technologies Co.,Ltd - MODEL: HUAWEI Y600-U151

FCC ID: QISY600-U151

This report concerns (check one) Original Grant ☒ Class II Change ☐

Equipment Type: DTS - Part 15 Digital Transmission Systems (WiFi transmitter portion)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes ☐ No ☒

If yes, defer until :
date

Company Name agrees to notify the Commission by:
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? Yes ☐ No ☒

If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR [10-01-12 Edition] provision.

Report prepared by:

Eason He
Intertek Testing Services Shenzhen Ltd.
Kejiyuan Branch
6F, Block D, Huahan Building, Langshan Road,
Nanshan District, Shenzhen, P. R. China
Phone: (86 755) 8614 0714
Fax: (86 755) 8614 6751

INTERTEK TESTING SERVICES

Table of Contents

1.0 <u>Summary of test results</u>	2
2.0 <u>General Description</u>	4
2.1 Product Description	4
2.2 Related Submittal(s) Grants	4
2.3 Test Methodology	5
2.4 Test Facility	5
3.0 <u>System Test Configuration</u>	7
3.1 Justification	7
3.2 EUT Exercising Software	7
3.3 Details of EUT and Description of Peripherals	8
3.4 Measurement Uncertainty	8
3.5 Equipment Modification	8
3.6 Support Equipment List and Description	8
4.0 <u>Measurement Results</u>	10
4.1 Maximum Conducted Output Power at Antenna Terminals	10
4.2 Minimum 6dB RF Bandwidth	16
4.3 Maximum Power Density	26
4.4 Out of Band Conducted Emissions	36
4.5 Out of Band Radiated Emissions	61
4.6 Transmitter Radiated Emissions in Restricted Bands	62
4.7 Field Strength Calculation	63
4.8 Radiated Spurious Emission	64
4.9 Conducted Emission	78
4.10 Radiated Emission from Digital Section of Transceiver	81
4.11 Transmitter Duty Cycle Calculation and Measurements	82
5.0 <u>Equipment Photographs</u>	84
6.0 <u>Product Labelling</u>	86
7.0 <u>Technical Specifications</u>	88
8.0 <u>Instruction Manual</u>	90
9.0 <u>Miscellaneous Information</u>	92
10.0 <u>Test Equipment List</u>	94

INTERTEK TESTING SERVICES

List of attached file

Exhibit Type	File Description	Filename
Cover Letter	Letter of Agency	agency.pdf
Test Report	Test Report	report.pdf
Test Setup Photo	Radiated Emission	radiated photos.pdf
Test Setup Photo	Conducted Emission	conducted photos.pdf
External Photo	External Photo	external photos.pdf
Internal Photo	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
Operation Description	Technical Description	descri.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf
Cover Letter	Confidentiality Letter	request.pdf

INTERTEK TESTING SERVICES

EXHIBIT 1

SUMMARY OF TEST RESULTS

INTERTEK TESTING SERVICES

1.0 Summary of Test

Huawei Technologies Co.,Ltd - MODEL: HUAWEI Y600-U151

FCC ID: QISY600-U151

TEST	REFERENCE	RESULTS
Max. Output power	15.247(b)	Pass
6 dB Bandwidth	15.247(a)(2)	Pass
Max. Power Density	15.247(e)	Pass
Out of Band Antenna Conducted Emission	15.247(d)	Pass
Radiated Emission in Restricted Bands	15.247(d)	Pass
AC Conducted Emission	15.207	Pass
Antenna Requirement	15.203	Pass (See Notes)

Notes: The EUT uses Integral Antenna which in accordance to Section 15.203 is considered sufficient to comply with the provisions of this section.

EXHIBIT 2

GENERAL DESCRIPTION

INTERTEK TESTING SERVICES

2.0 General Description

2.1 Product Description

The Equipment Under Test (EUT) is a WCDMA Digital Mobile Phone with internal WiFi function operating at 2412-2462MHz for 802.11b/g/n-HT20, 11 channels with 5MHz channel spacing and 2422-2452MHz for 802.11n-HT40, 7 channels with 5MHz channel spacing. It is powered by AC/DC Adapter (model: HW-050100U2W) with input of 100-240VAC, 50/60Hz and output of DC5V, 1A. For more detailed features description, please refer to the user's manual.

Type of Modulation: DBPSK,DQPSK, BPSK,QPSK, 16QAM and 64QAM.
Antenna Type: Integral Antenna.

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

2.2 Related Submittal(s) Grants

This is an application for certification of:
DTS- Part 15 Digital Transmission Systems (WiFi transmitter portion)

Remaining portions are subject to the following procedures:

1. Receiver portion of WiFi: exempt from technical requirement of this Part.
2. Bluetooth Transceiver (2.4G band): 130403024SZN-002.
3. WCDMA Digital Mobile Phone (2G&3G): 130403024SZN-003.
4. PC downloads (Class B personal computer and peripherals): TS13120032-EME
5. Other function: 130403024SZN-004.

INTERTEK TESTING SERVICES

2.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2009) and KDB 558074. Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the “**Justification Section**” of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

2.4 Test Facility

The Semi-Anechoic chamber and shield room used to collect the radiated data and conducted data are **Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, Block D, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: 242492).

EXHIBIT 3
SYSTEM TEST CONFIGURATION

INTERTEK TESTING SERVICES

3.0 System Test Configuration

3.1 Justification

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. The EUT was powered by the AC/DC adapter (model: HW-050100U2W) which is supplied by 120VAC, 60Hz of AC mains during the test. Only the worst case data was reported.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000 MHz. The resolution is 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

3.2 EUT Exercising Software

The EUT exercise program (provided by client) used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The worst case configuration is used in all specified testing.

The parameters of test software setting:

During the test, Channel and power controlling software provided by the applicant was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the application and is going to be fixed on the firmware of the end product.

Power Parameters of IEEE 802.11b/g/n

Test software setting of IEEE 802.11b/g/n			
Channel No.	Power Level	Data rate	Modulation type
1,6,11	16.0	802.11b: 1-11Mbps	DBPSK,DQPSK, BPSK,QPSK
	14.0	802.11g: 6-54Mbps	BPSK, QPSK, 16QAM, 64QAM
1,6,11	14.0	802.11n-20M: 6.5-65Mbps	BPSK, QPSK, 16QAM, 64QAM

TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

3,6,9	14.0	802.11n-40M: 13.5-135Mbps	BPSK, QPSK, 16QAM, 64QAM
-------	------	---------------------------	--------------------------

On 802.11n (20MHz & 40MHz) mode, only one antenna is used for transmission.

3.3 Special Accessories

N/A

3.4 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Uncertainty and Compliance – Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

3.5 Equipment Modification

Any modifications installed previous to testing by Huawei Technologies Co.,Ltd will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch.

3.6 Support Equipment List and Description

This product was tested in the following configuration:

Refer List:

Description	Manufacturer	Model No.
Earphone	Lianchuang	NA
	Quancheng	
	Goertek	
	Merry	
Battery	BYD	HB505076RBC
	COSLIGHT	
	LISHEN	
AC/DC Adapter (Huawei)	HuntKey	HW-050100U2W Input: 100-240Vac, 50/60Hz; Output: 5Vdc, 1A
	BYD	

Note: The Model: HUAWEI Y600-U151 have two different AC/DC Adapter power suppliers, which have already arranged the test accordingly, and the worst case data was recorded in this report.

TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

Report No.: 131112042SZN-001

EXHIBIT 4

MEASUREMENT RESULTS

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

4.0 **Measurement Results**

4.1 Maximum Conducted Output Power at Antenna Terminals, FCC Rules 15.247(b)(3):

- ☐ The antenna power of the EUT was connected to the input of a spectrum analyzer. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.
- ☒ The antenna port of the EUT was connected to the input of a spectrum analyzer. The analyzer was set according to the FCC KDB 558074 spectrum analyzer's integrated band power measurement function with band limits set equal to the EBW band edges and power was read directly in dBm. External attenuation and cable loss were compensated from the measured value.

For antennas with gains of 6 dBi or less, maximum allowed Transmitter output is 1 watt (+30 dBm).

IEEE 802.11b (Antenna Gain = -3 dBi) (BPSK, 1Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	16.45	44.15
Middle Channel: 2437	16.94	49.43
High Channel: 2462	16.89	48.87

IEEE 802.11g (Antenna Gain = -3 dBi) (DBPSK, 6Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	19.52	89.53
Middle Channel: 2437	19.78	95.06
High Channel: 2462	19.94	98.63

IEEE 802.11n 20M (Antenna Gain = -3 dBi) (BPSK, 6.5Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	19.44	87.90
Middle Channel: 2437	19.61	91.41

TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

High Channel: 2462	19.96	99.08
--------------------	-------	-------

IEEE 802.11n 40M (Antenna Gain = -3 dBi) (BPSK, 13.5Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2422	18.53	71.29
Middle Channel: 2437	19.88	97.27
High Channel: 2452	18.69	73.96

Cable loss: 0.5 dB External Attenuation: 0 dB

Cable loss, external attenuation has been included in OFFSET function

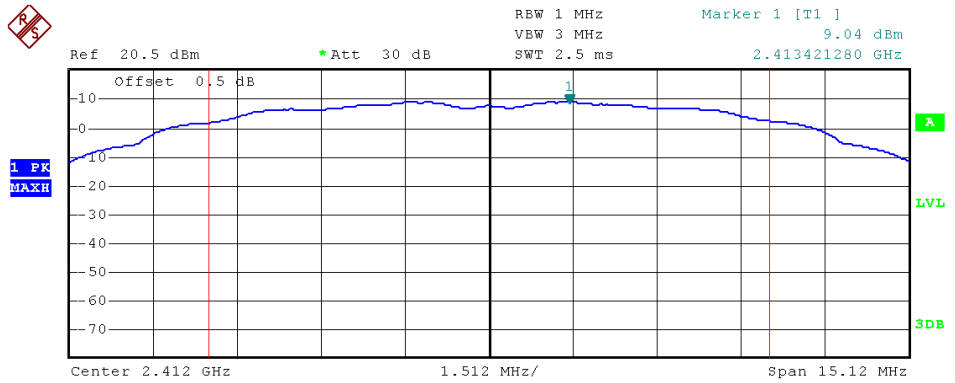
EUT dBm max. output level = 19.96 dBm

For RF Exposure, the information is saved with filename: RF exposure.pdf.

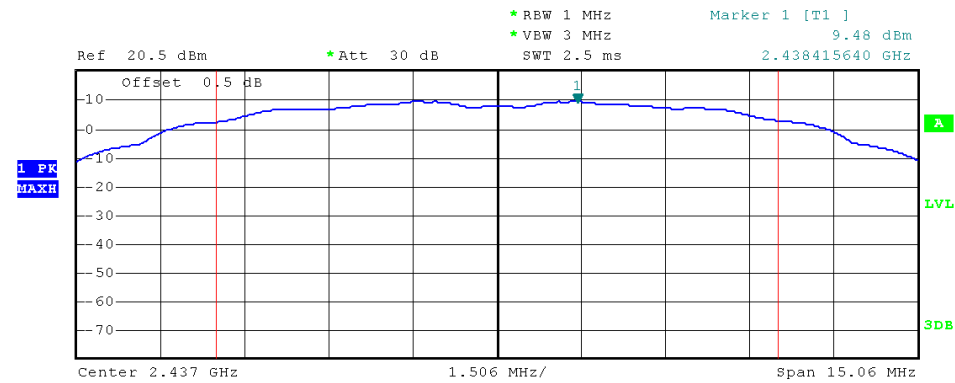
The test plots are attached as below.

INTERTEK TESTING SERVICES

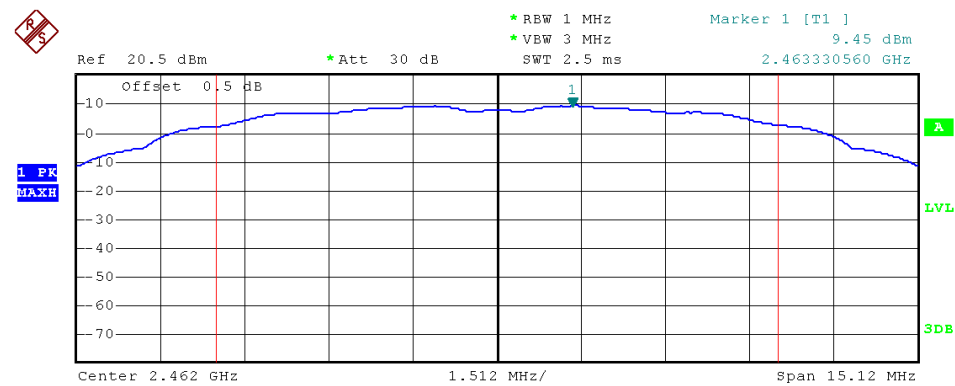
802.11b



Tx Channel
Bandwidth 10.08 MHz Power 16.45 dBm



Tx Channel
Bandwidth 10.04 MHz Power 16.94 dBm

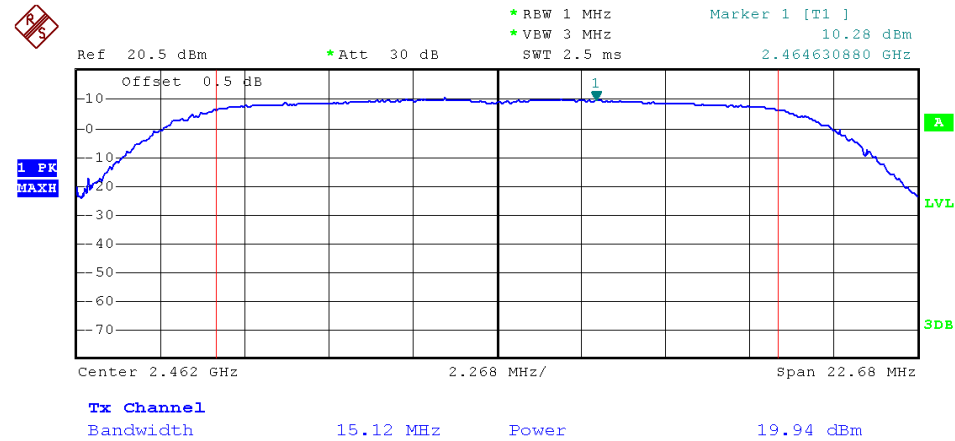
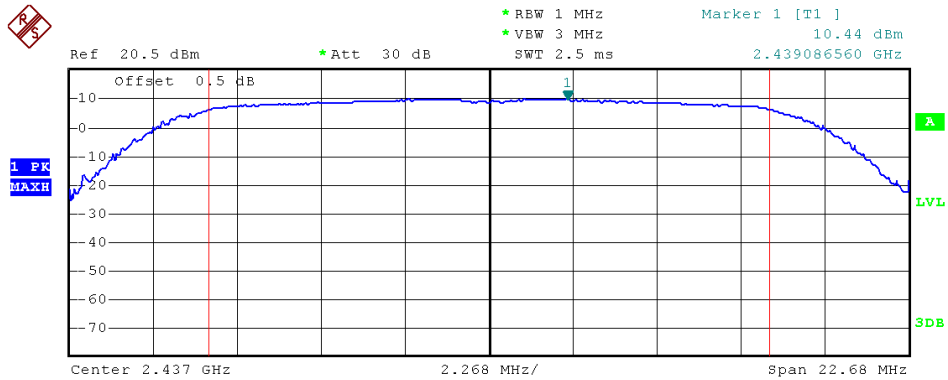
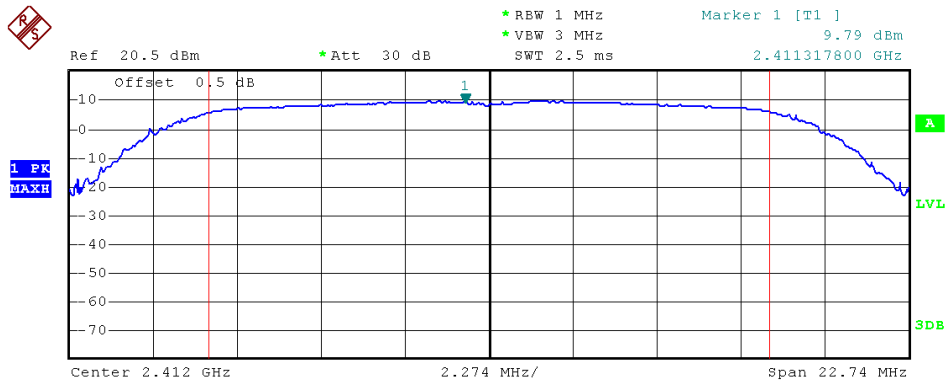


Tx Channel
Bandwidth 10.08 MHz Power 16.89 dBm

TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

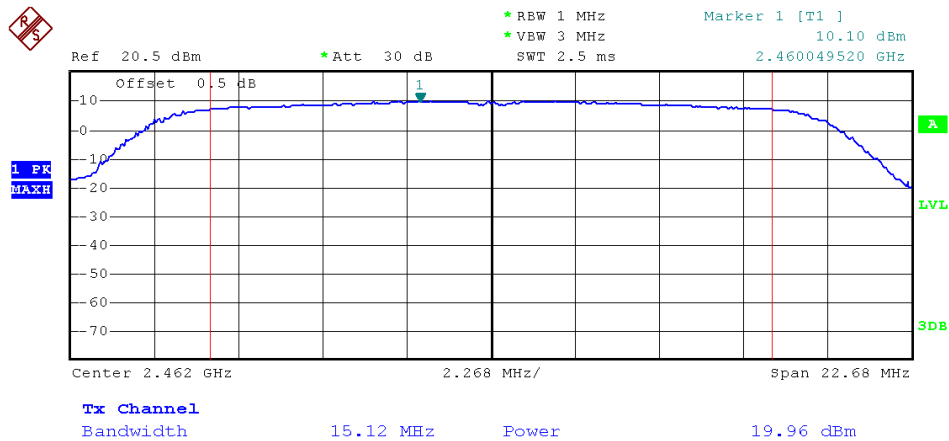
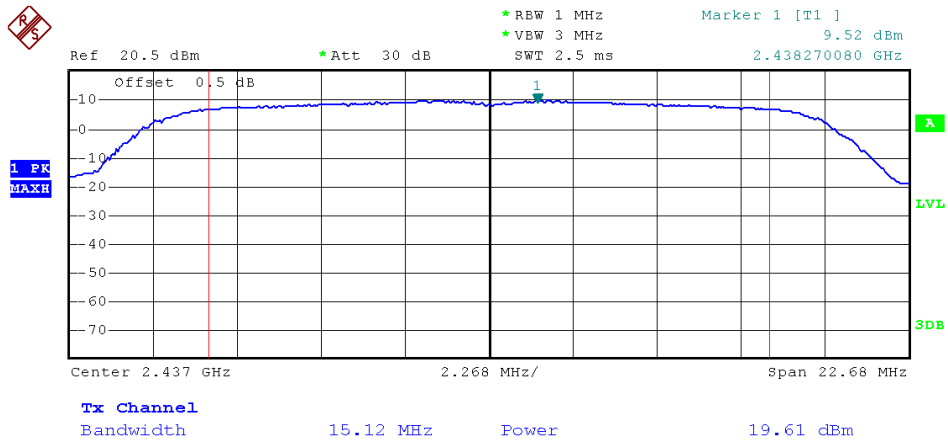
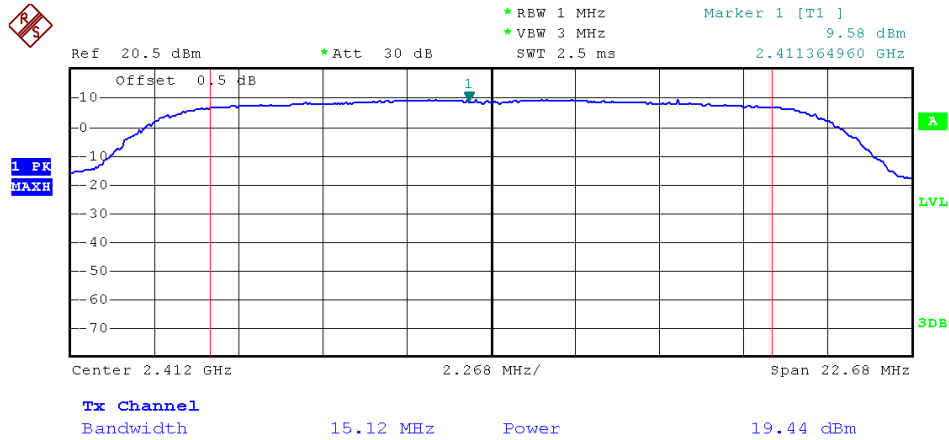
802.11g



TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

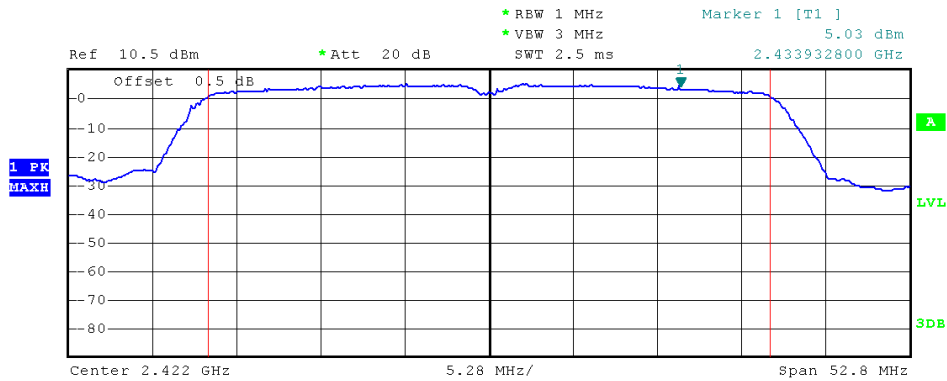
INTERTEK TESTING SERVICES

802.11n (HT-20)

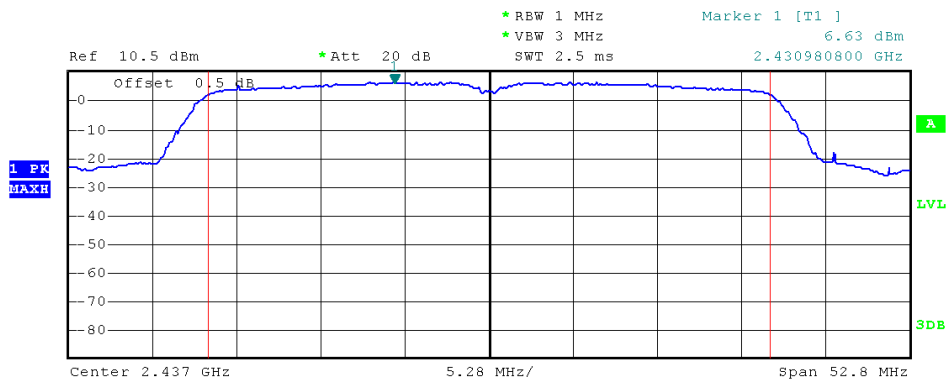


INTERTEK TESTING SERVICES

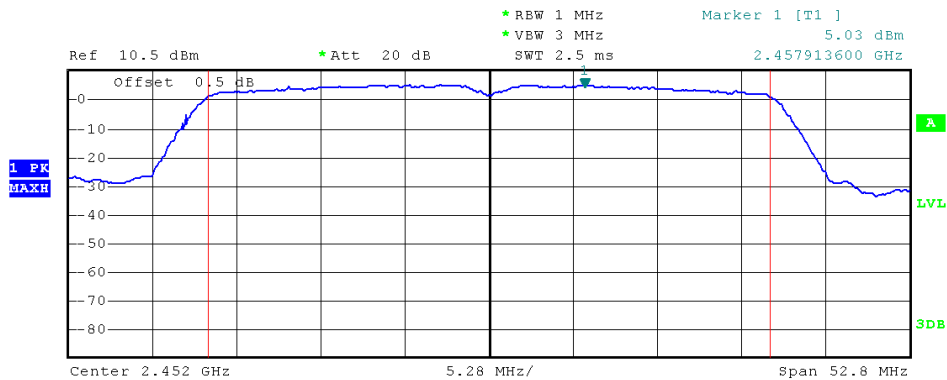
802.11n (HT-40)



Tx Channel
Bandwidth 35.2 MHz Power 18.53 dBm



Tx Channel
Bandwidth 35.2 MHz Power 19.88 dBm



Tx Channel
Bandwidth 35.2 MHz Power 18.69 dBm

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

4.2 Minimum 6 dB RF Bandwidth, FCC Rule 15.247(a)(2):

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW was set to 100 KHz according to FCC KDB 558074. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level. The 6dB bandwidth was determined from where the channel output spectrum intersected the display line.

Limit: The 6 dB Bandwidth is at least 500 kHz.

IEEE 802.11b (BPSK, 1Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	10.08
2437	10.04
2462	10.08

IEEE 802.11g (DBPSK, 6Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	15.16
2437	15.12
2462	15.12

IEEE 802.11n 20M (BPSK, 6.5Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	15.12
2437	15.12
2462	15.12

TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

Report No.: 131112042SZN-001

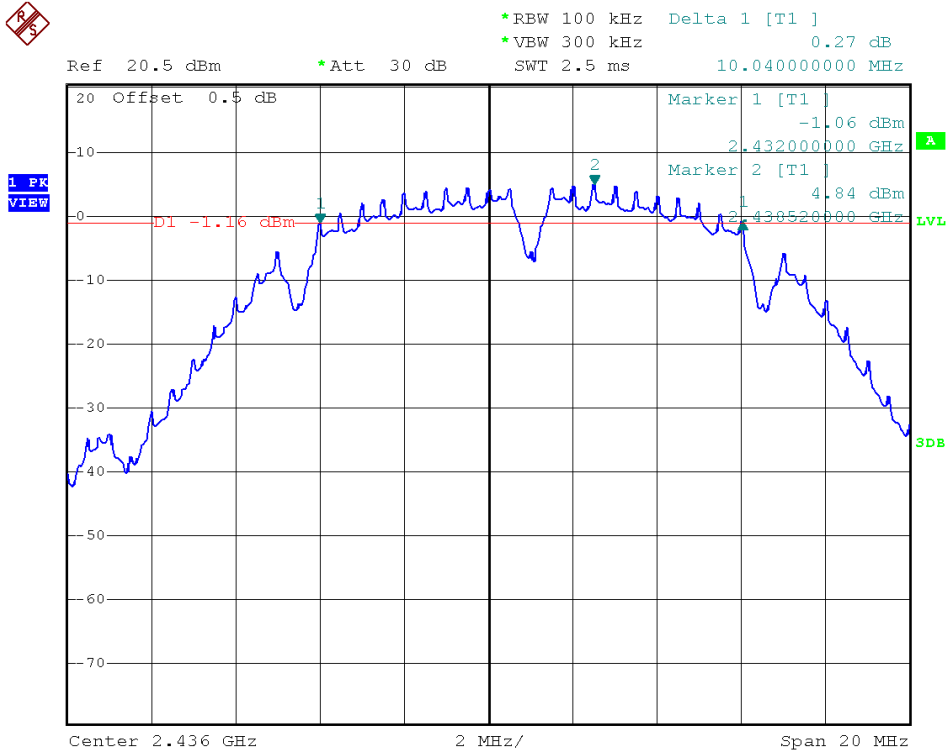
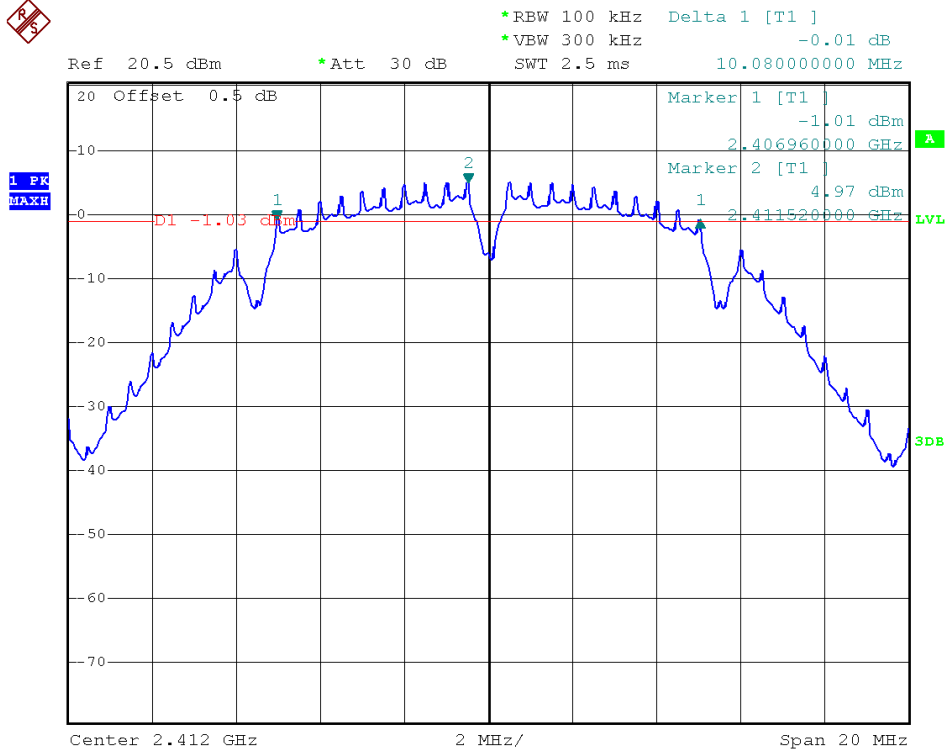
INTERTEK TESTING SERVICES

IEEE 802.11n 40M (BPSK, 13.5Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2422	35.2
2437	35.2
2452	35.2

The test plots are attached as below.

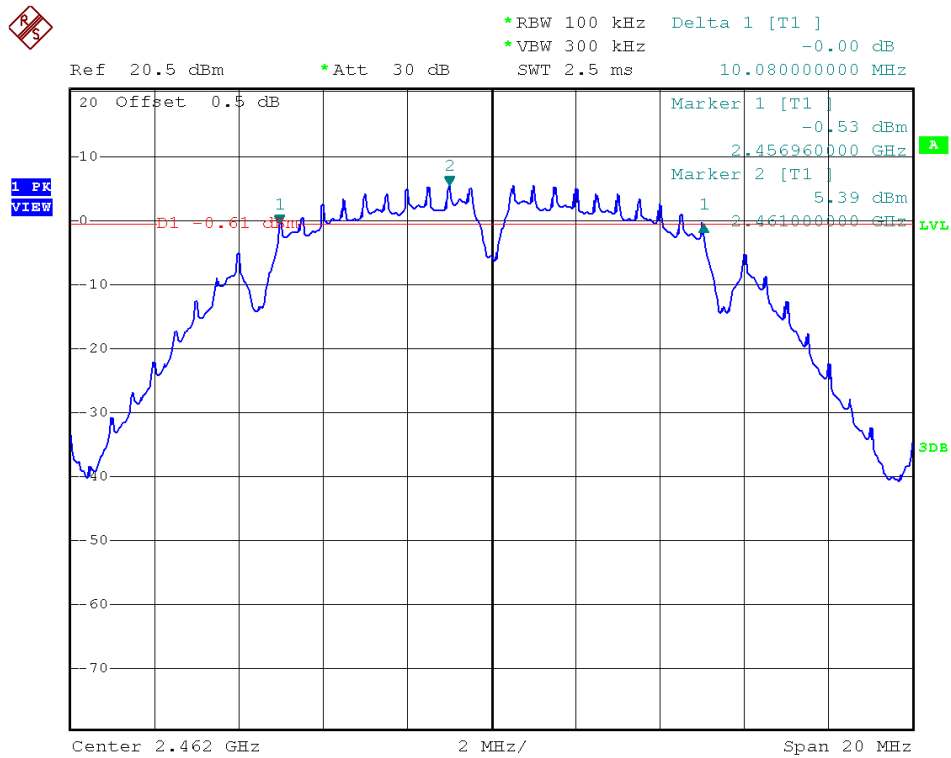
INTERTEK TESTING SERVICES

802.11b



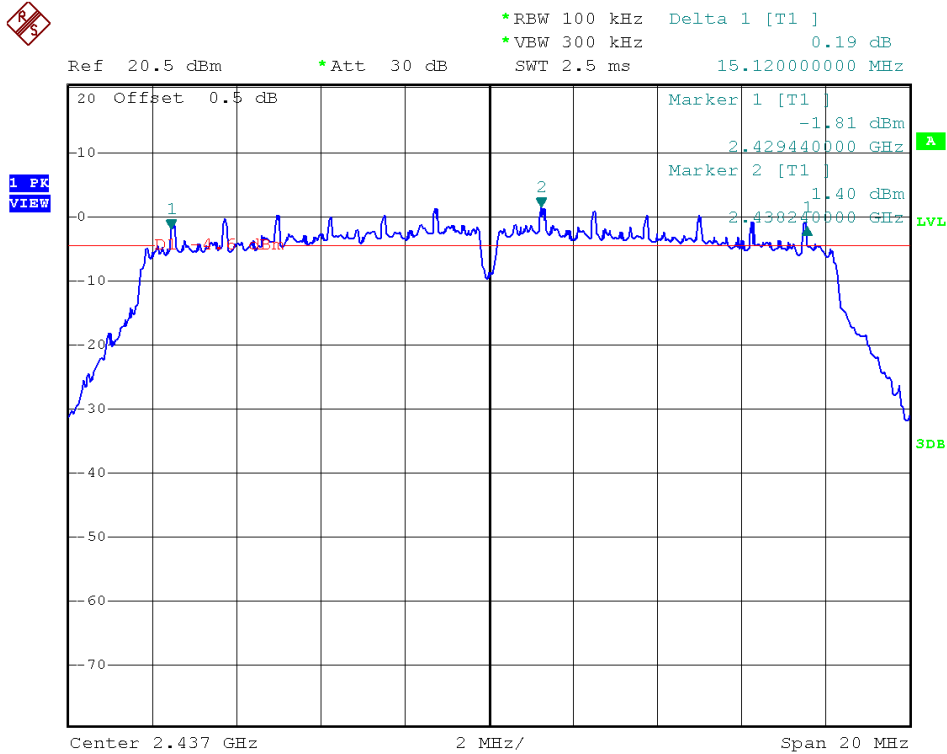
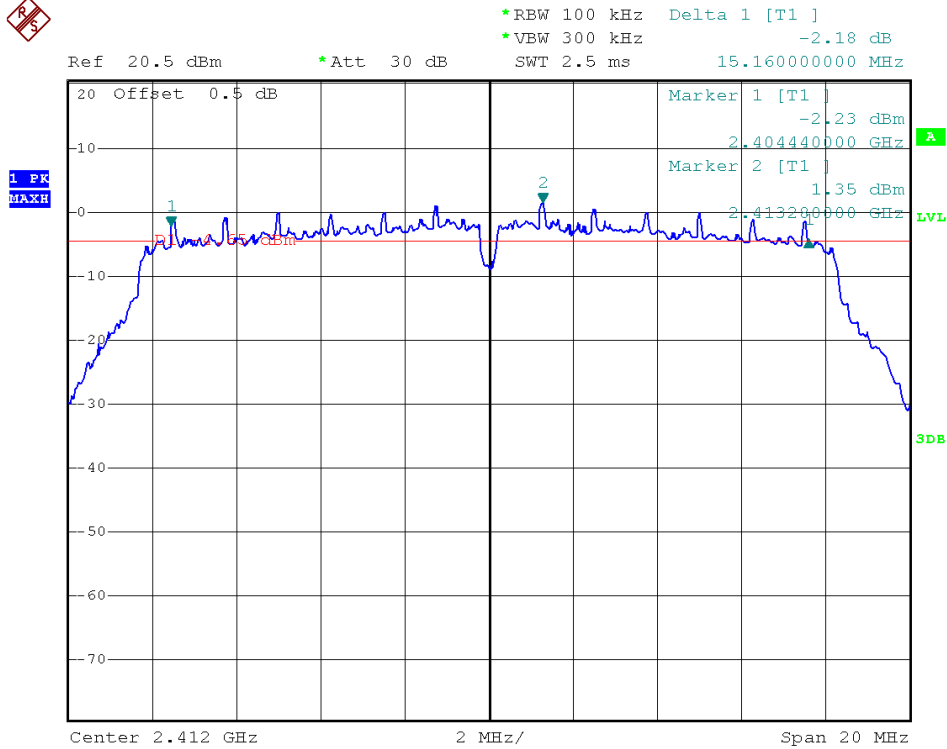
TRF no.: FCC 15C_TX_b
 FCC ID: QISY600-U151
 Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



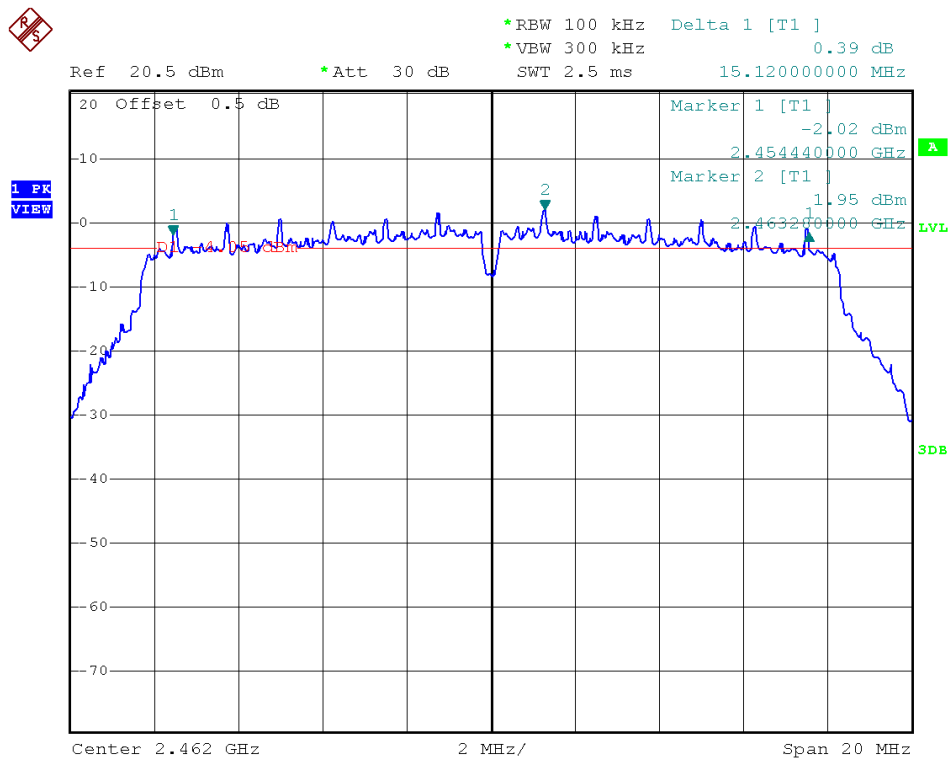
INTERTEK TESTING SERVICES

802.11g



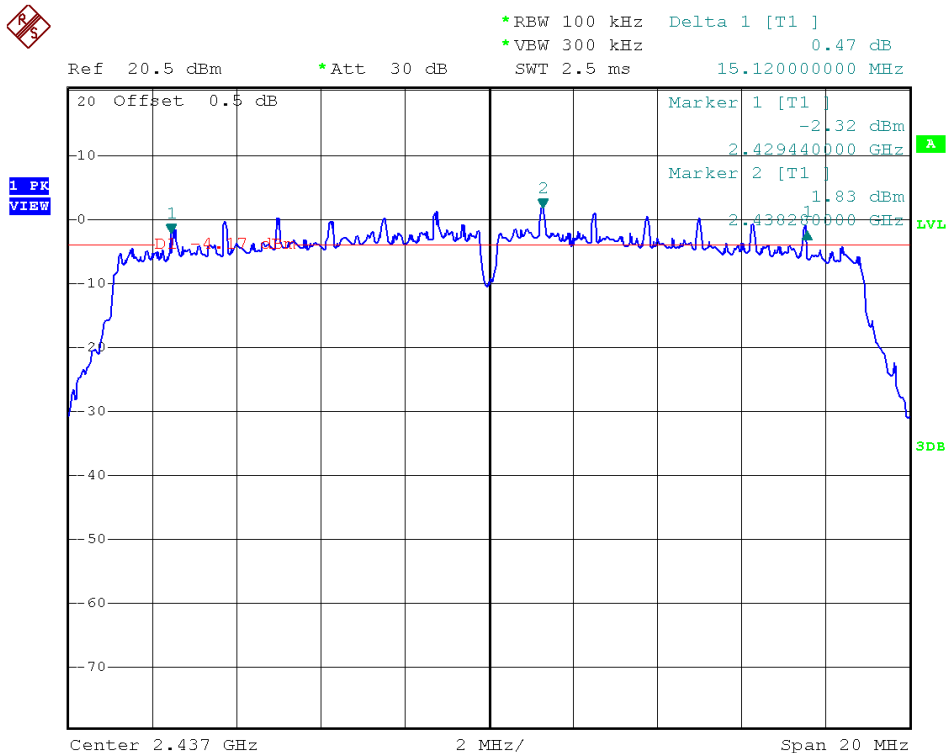
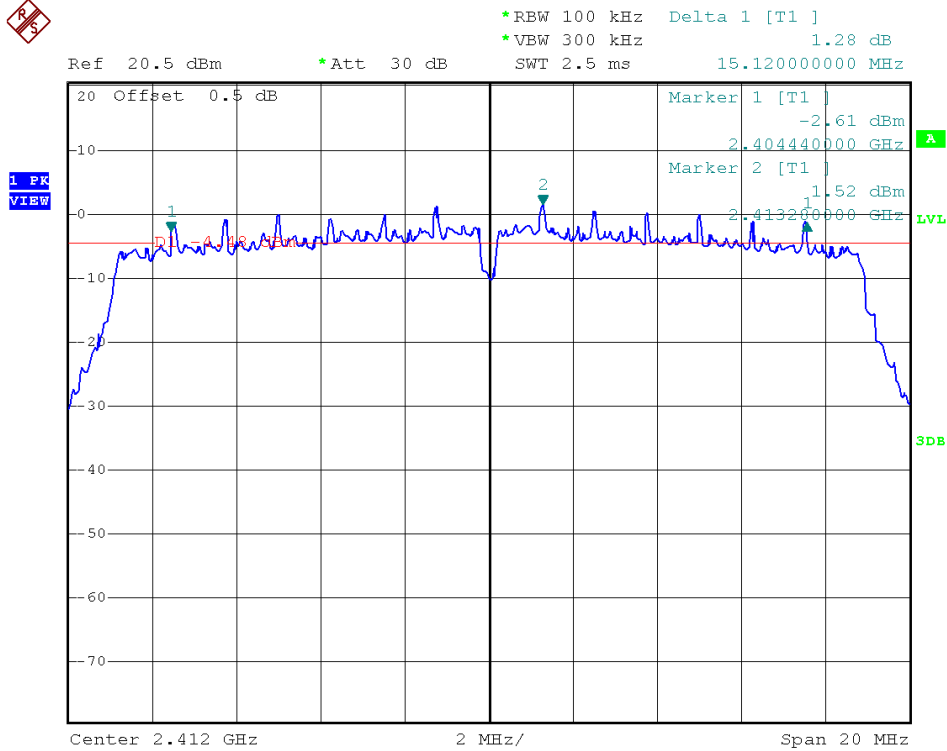
TRF no.: FCC 15C_TX_b
 FCC ID: QISY600-U151
 Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



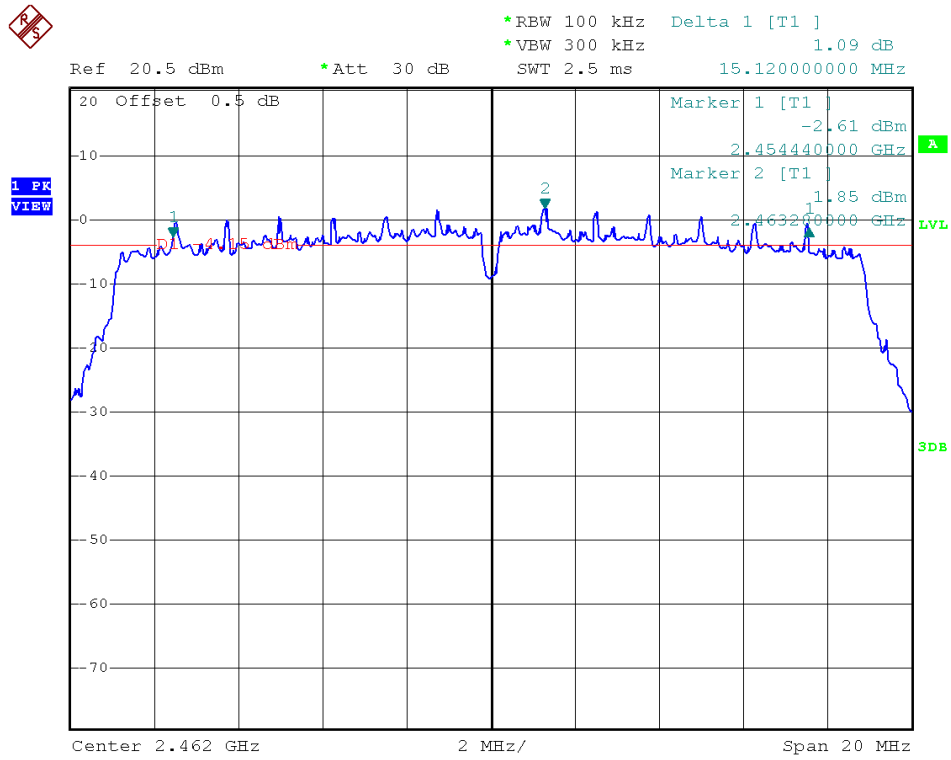
INTERTEK TESTING SERVICES

802.11n (HT-20)



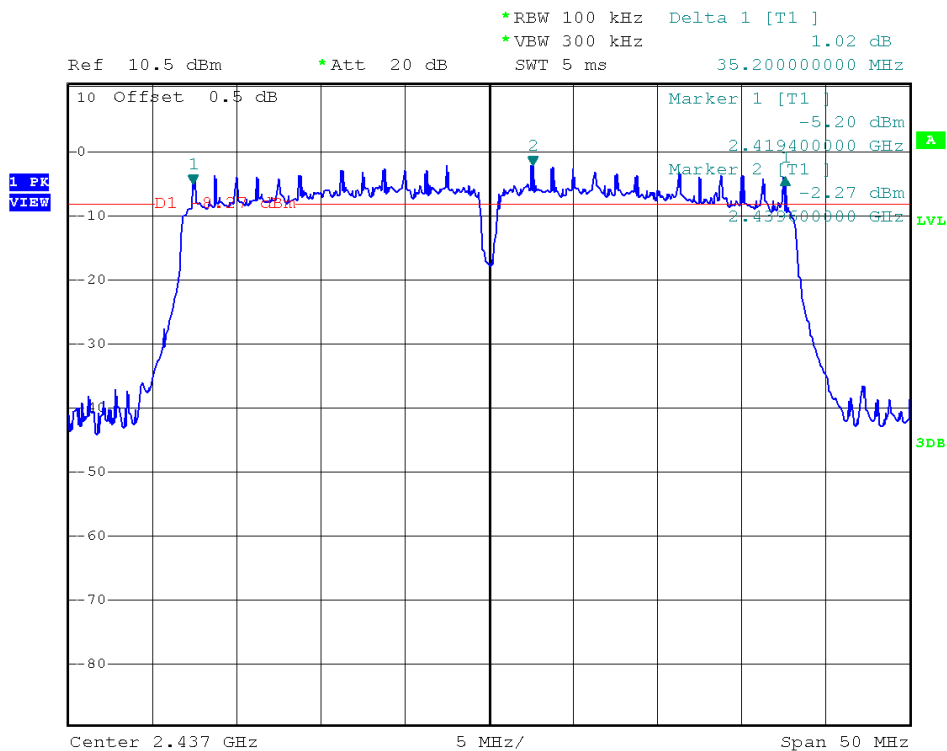
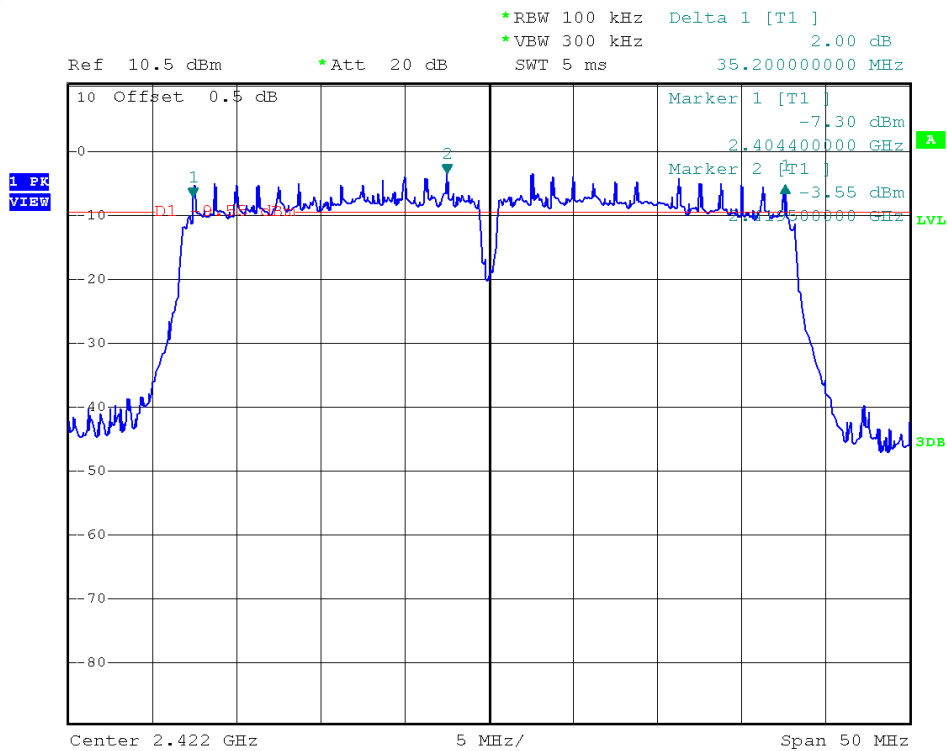
TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



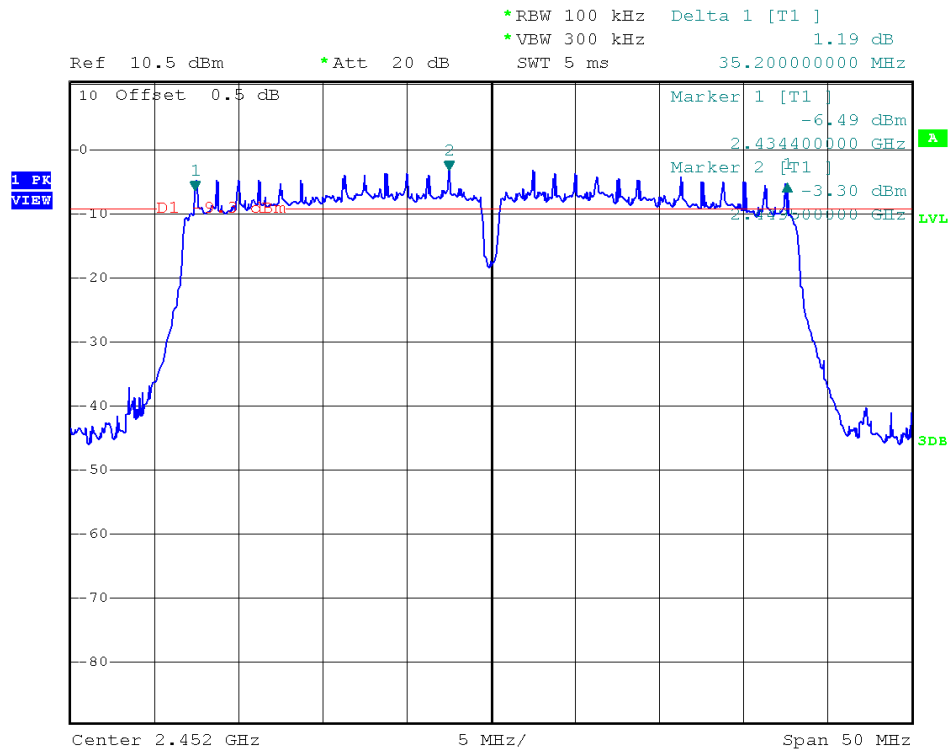
INTERTEK TESTING SERVICES

802.11n (HT-40)



TRF no.: FCC 15C_TX_b
 FCC ID: QISY600-U151
 Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

4.3 Maximum Power Density Reading, FCC Rule 15.247(e):

The Measurement Procedure PKPSD was set according to the FCC KDB 558074.

Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

Limit: The Power Density does not exceed 8dBm/ 3 kHz.

IEEE 802.11b (BPSK, 1Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	4.97
2437	5.15
2462	5.48

IEEE 802.11g (DBPSK, 6Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	1.58
2437	1.79
2462	1.94

IEEE 802.11n 20M (BPSK, 6.5Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	1.68
2437	1.88
2462	2.10

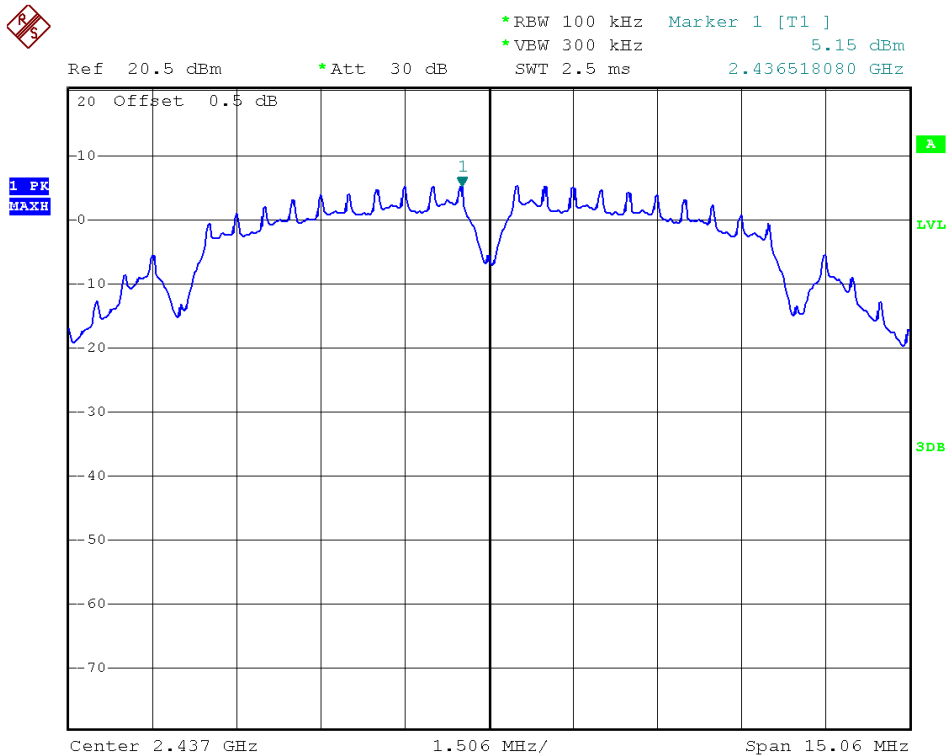
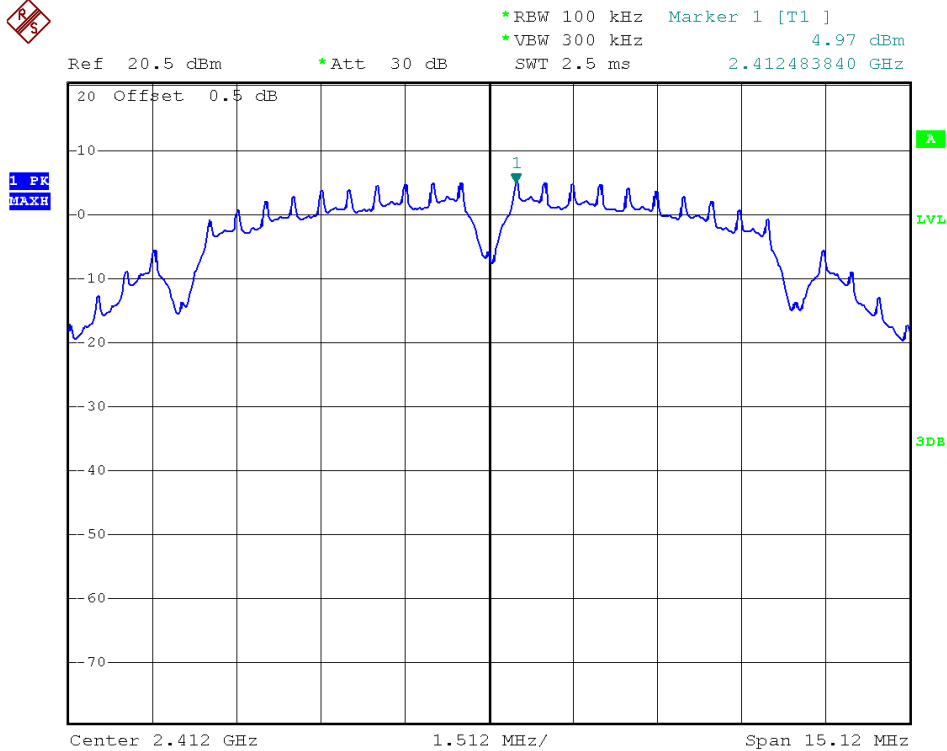
INTERTEK TESTING SERVICES

IEEE 802.11n 40M (BPSK, 13.5Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2422	-3.32
2437	-2.34
2452	-3.15

The test plots are attached as below.

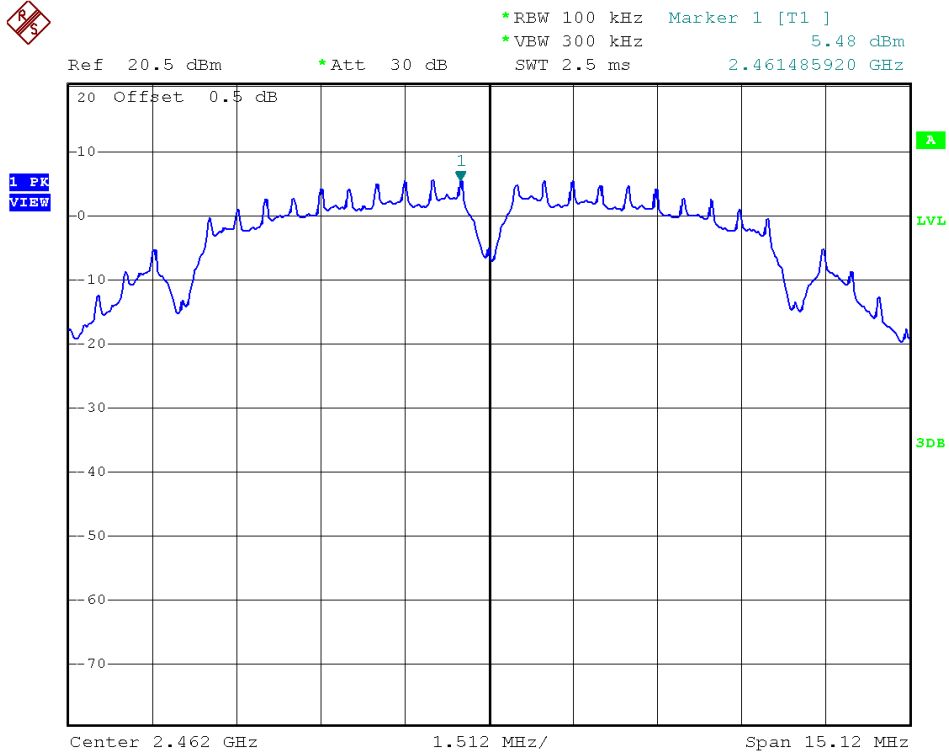
INTERTEK TESTING SERVICES

802.11b



TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

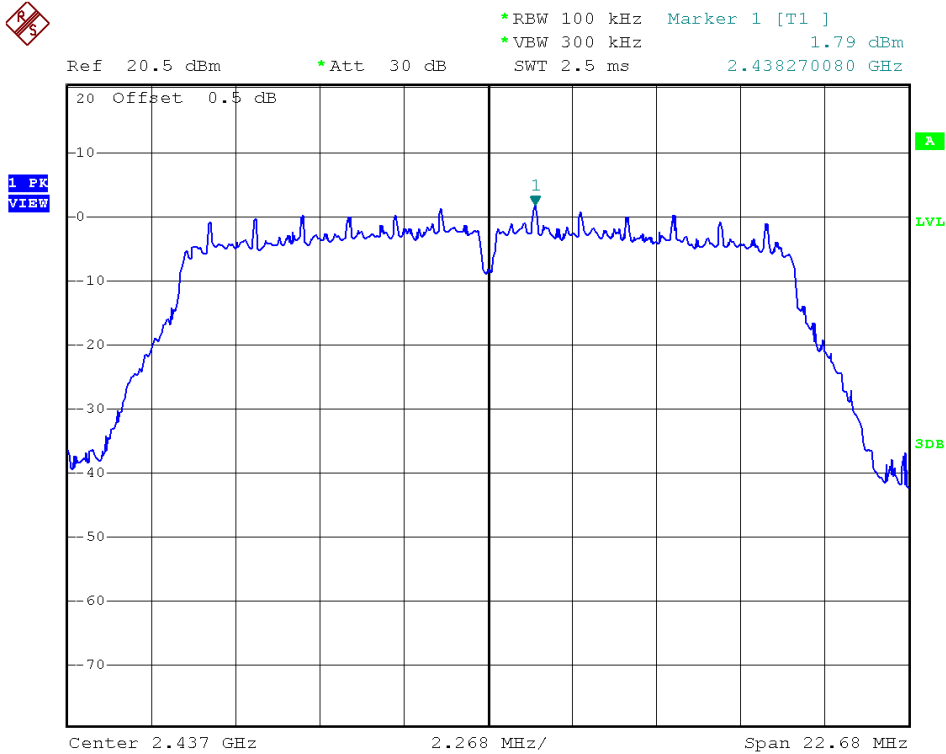
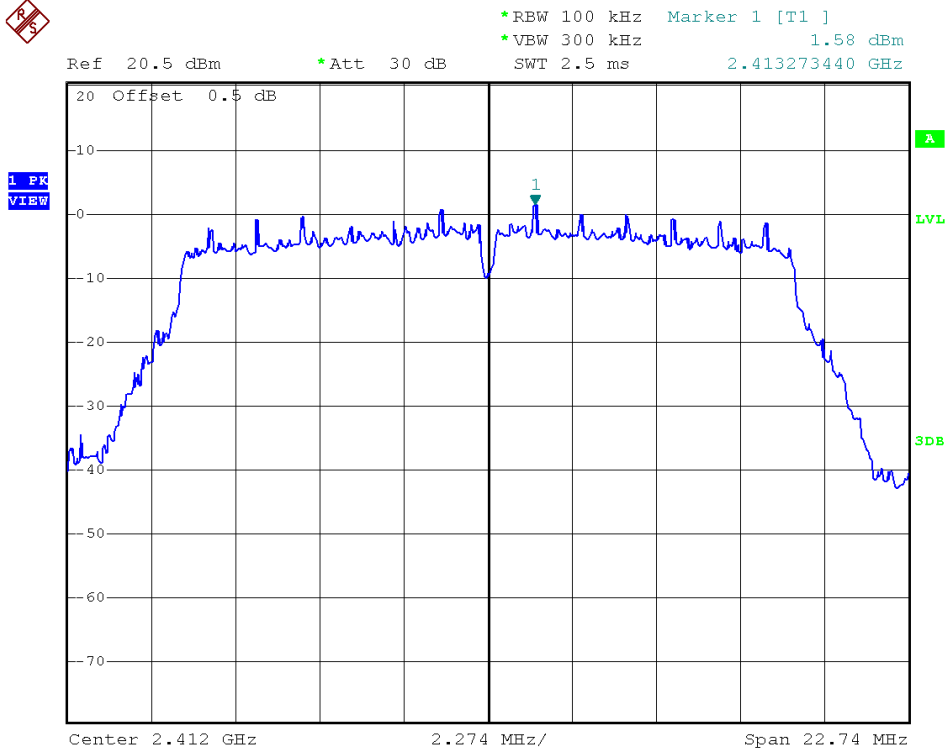
INTERTEK TESTING SERVICES



TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

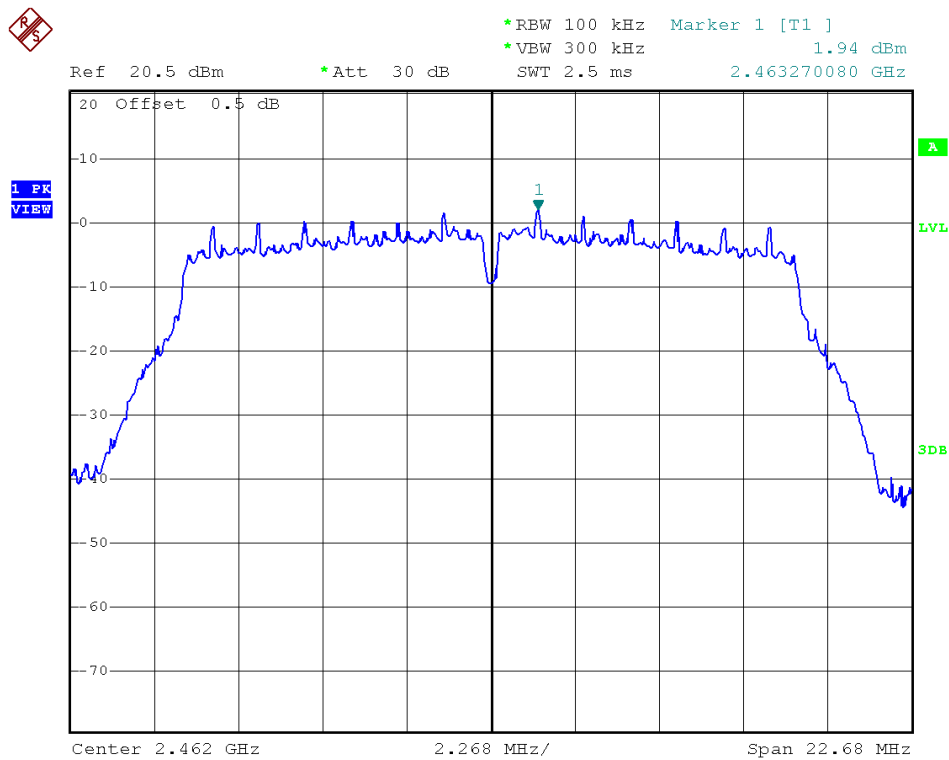
INTERTEK TESTING SERVICES

802.11g



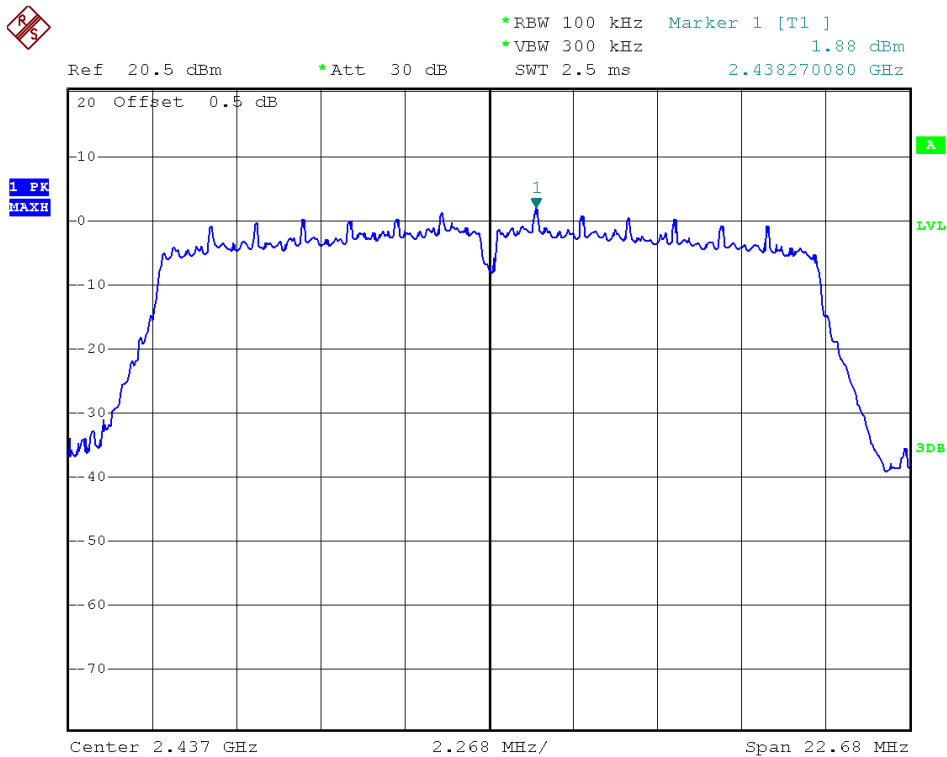
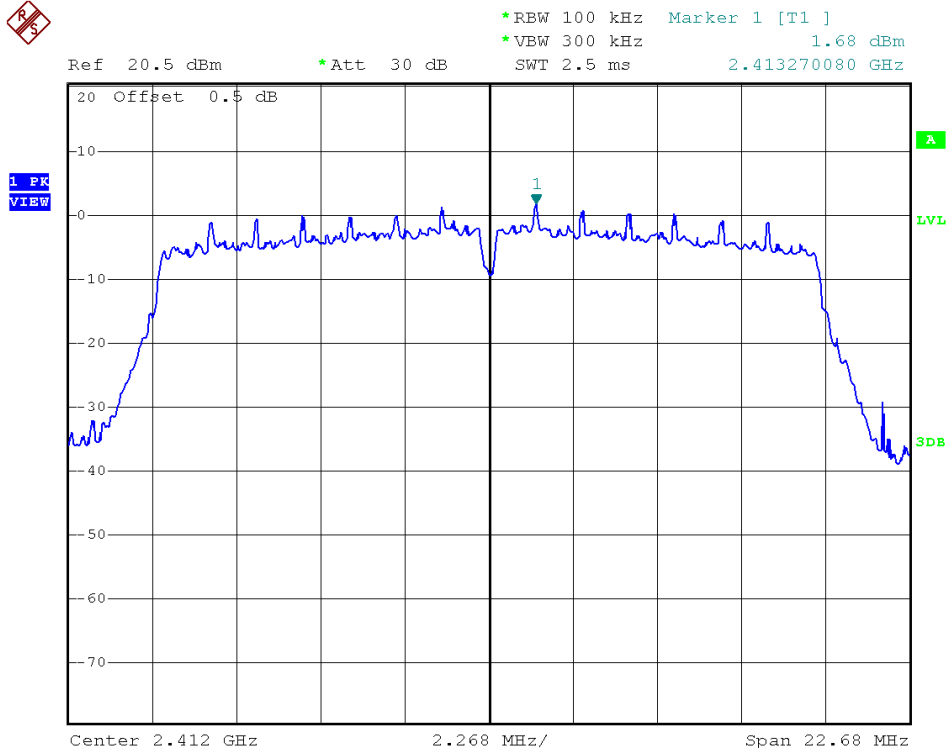
TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



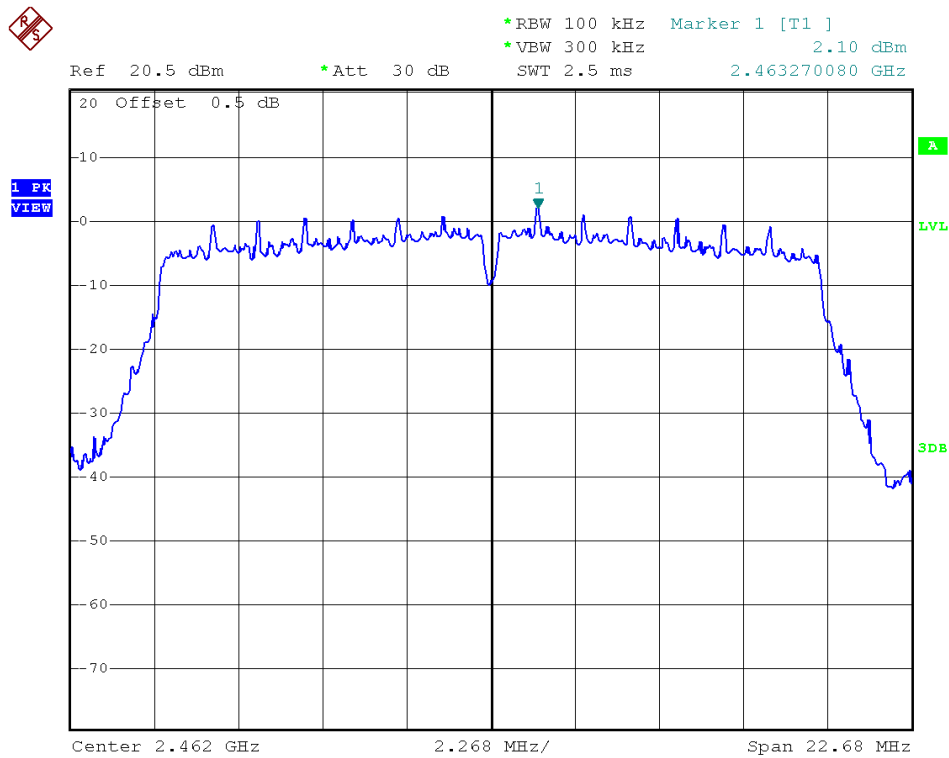
INTERTEK TESTING SERVICES

802.11n (HT-20)



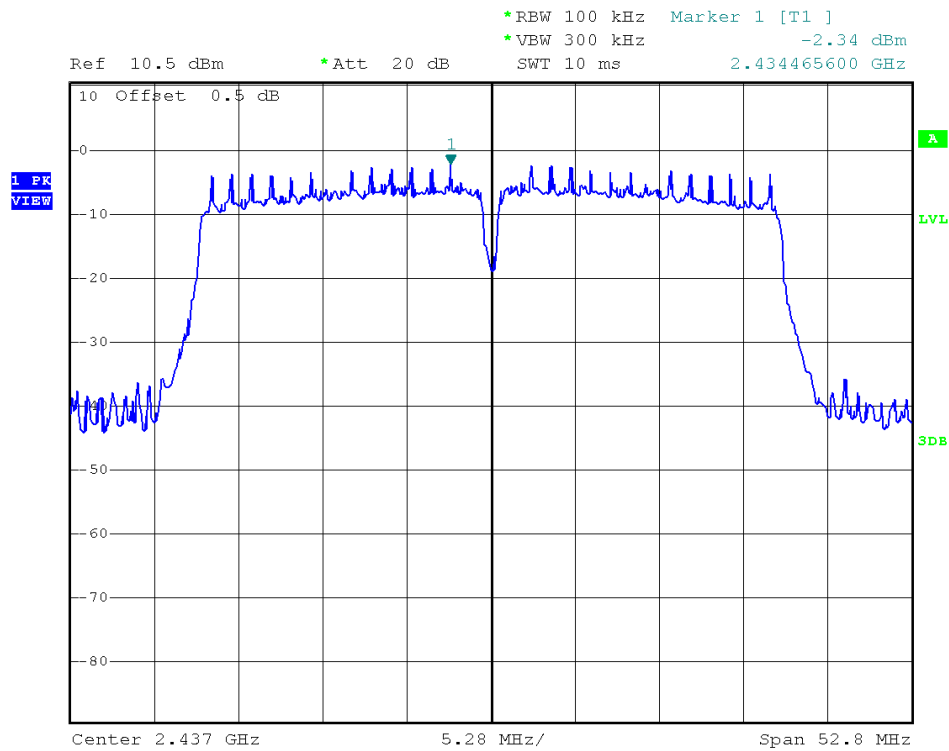
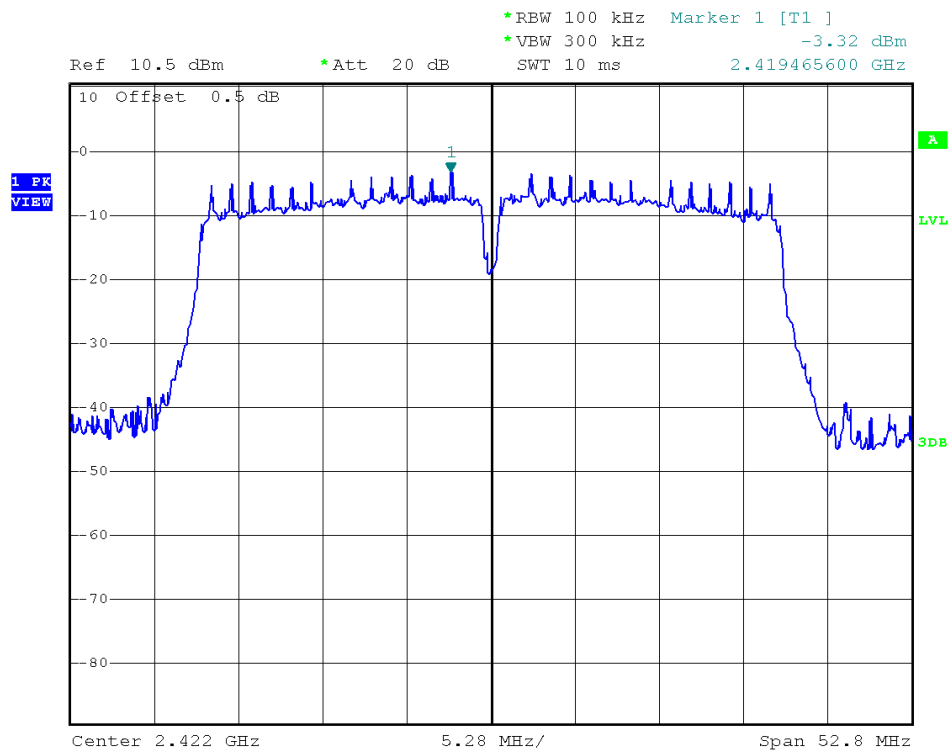
TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



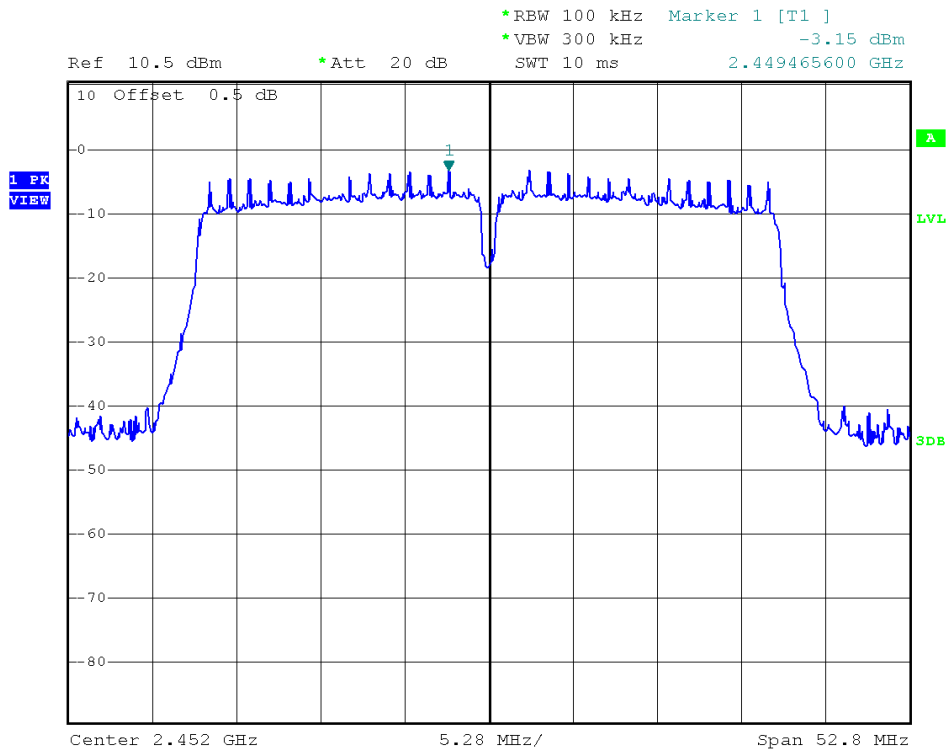
INTERTEK TESTING SERVICES

802.11n (HT-40)



TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Date of Test: December 16, 2013
Model: HUAWEI Y600-U151

4.4 Out of Band Conducted Emissions, FCC Rule 15.247(d)

In any 100 kHz bandwidth outside the EUT passband, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20dB below that of the maximum in-band 100 kHz emission, or else shall meet the general limits for radiated emissions at frequencies outside the passband, whichever results in lower attenuation. The Measurement Procedure was set according to the FCC KDB 558074.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the passband.

Refer to the attached test plot for out of band conducted emissions data with rate of 1Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n HT20 and 13.5Mbps for 802.11n HT40.

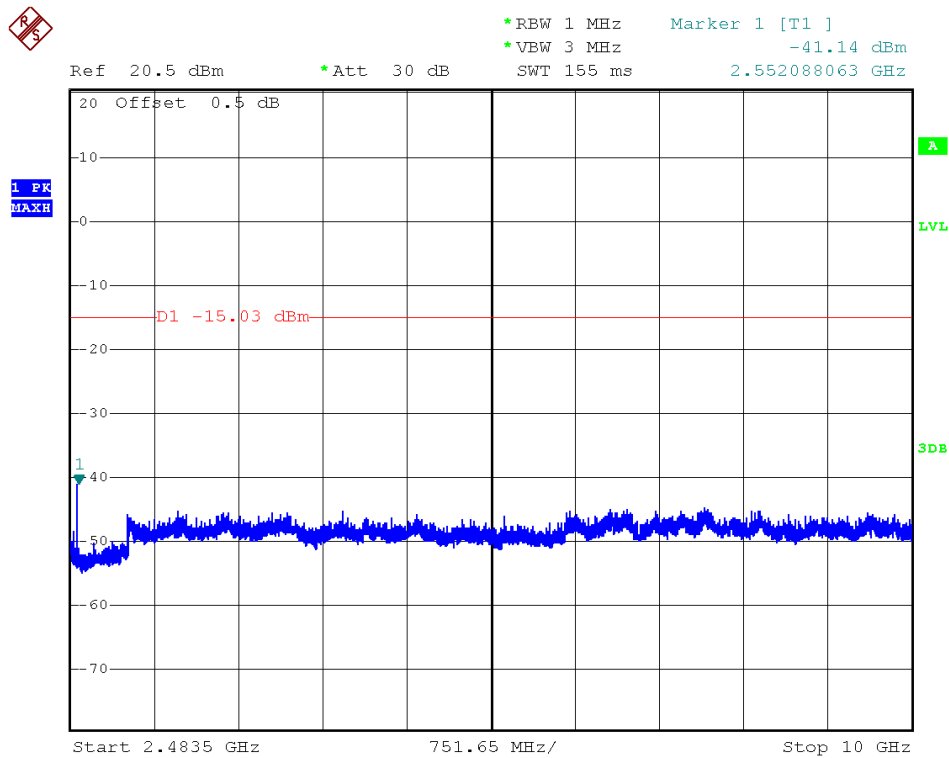
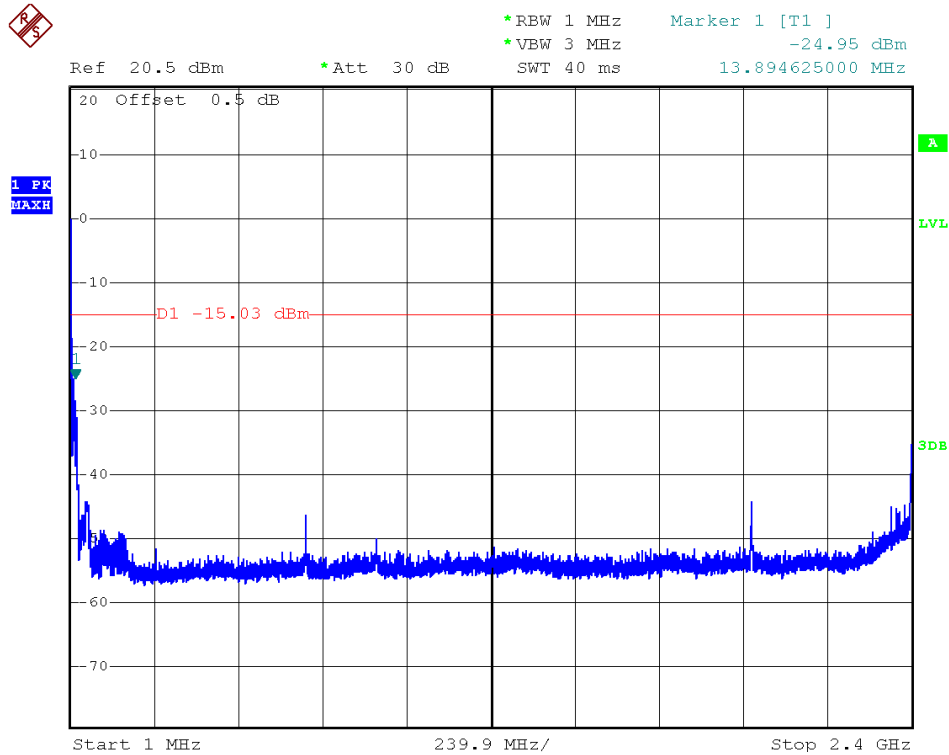
The test plots showed all spurious emission and up to the tenth harmonic were measured and they were found to be at least 20 dB below the highest level of the desired power in the passband.

The test plots are attached as below.

INTERTEK TESTING SERVICES

802.11b

Channel 1 (2412MHz) Reference Level: 4.97dBm

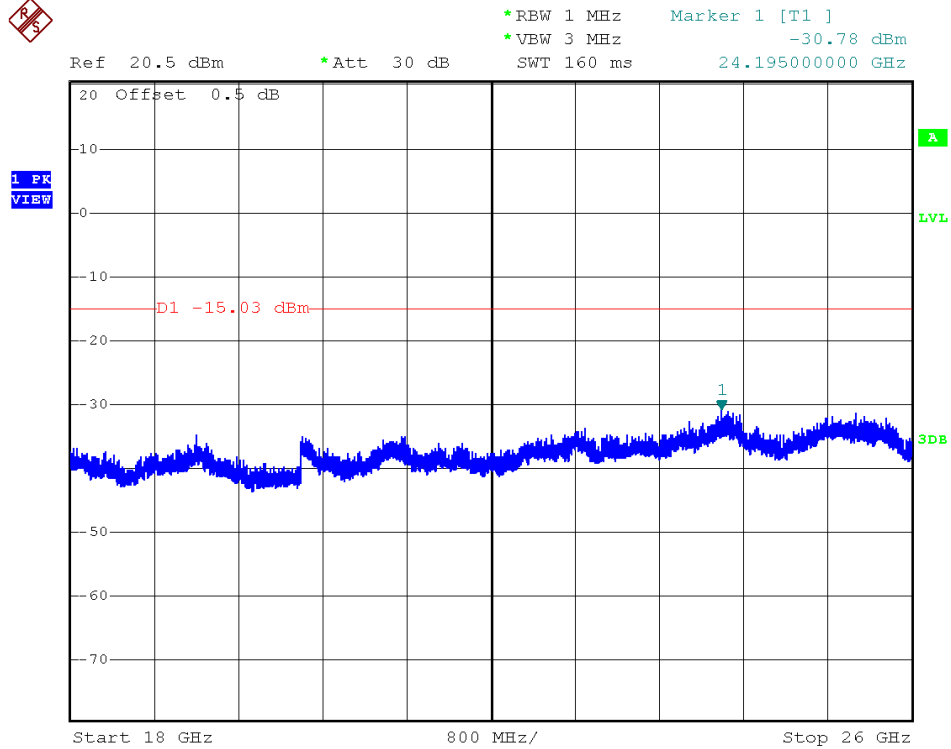
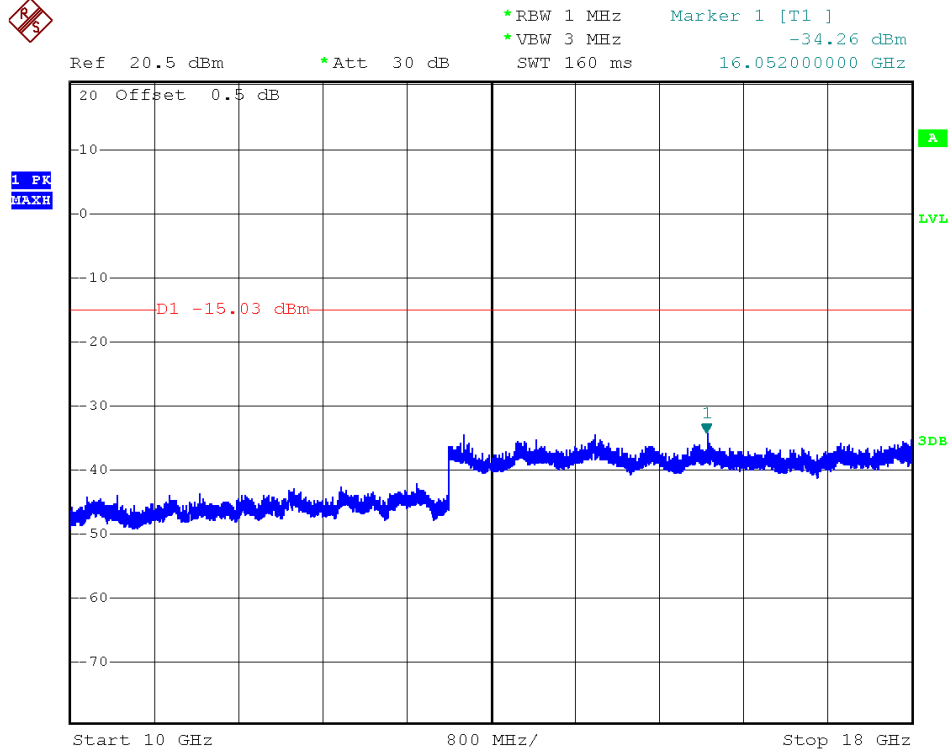


TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

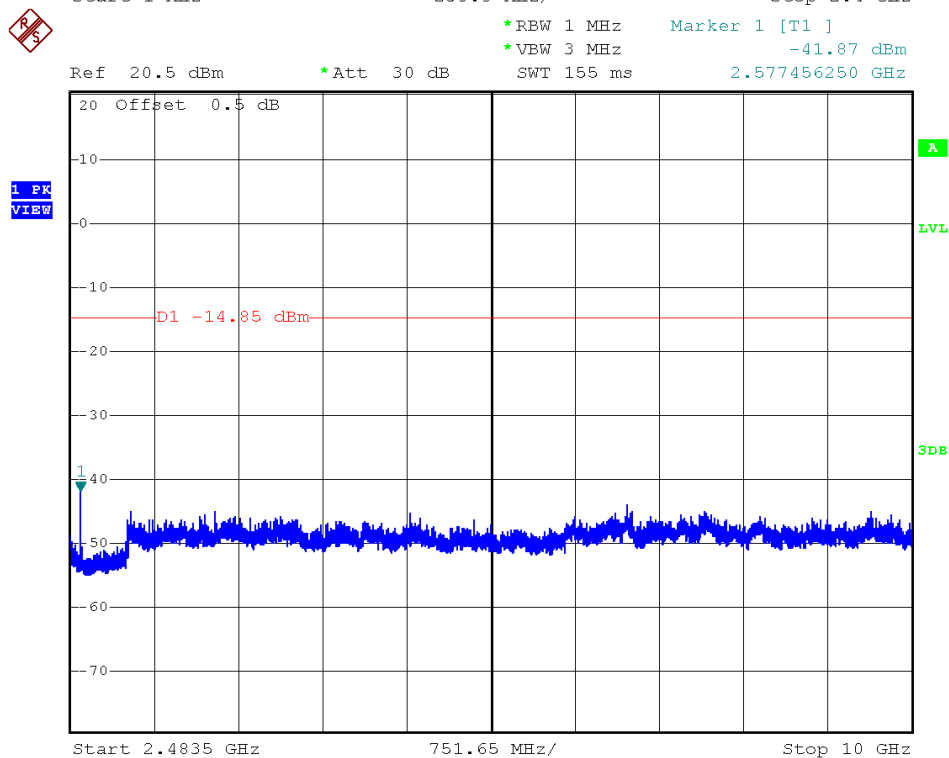
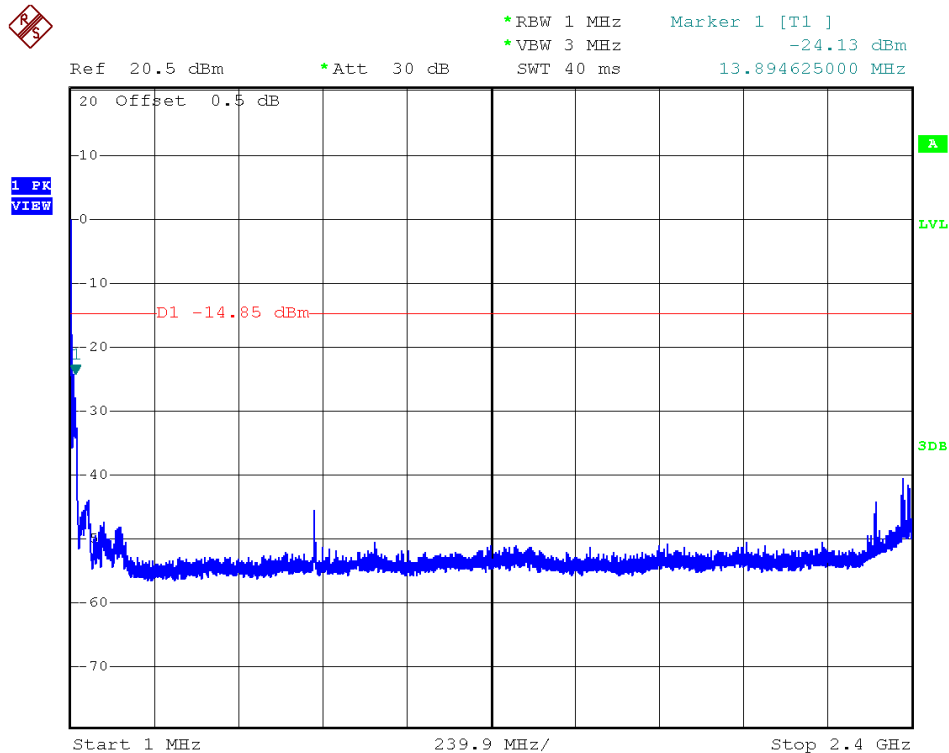
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



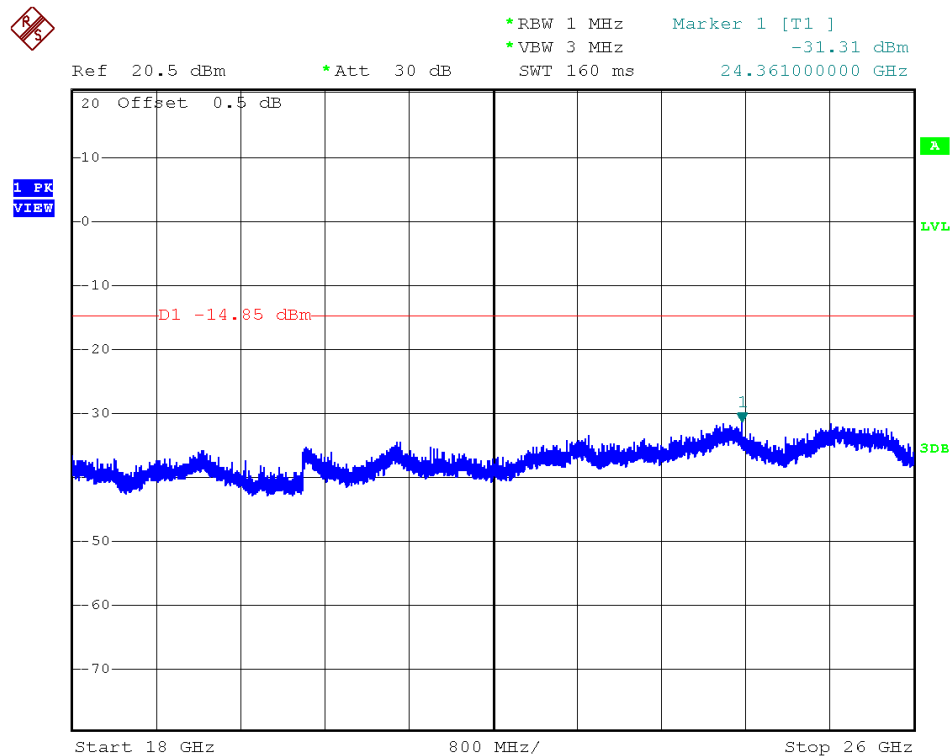
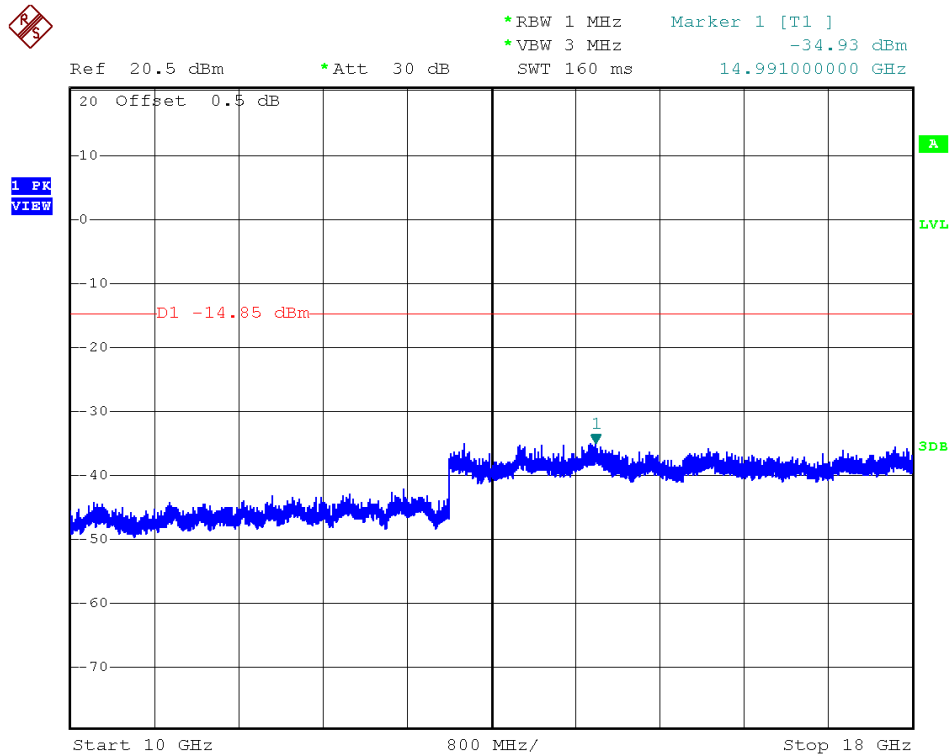
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 5.15dBm



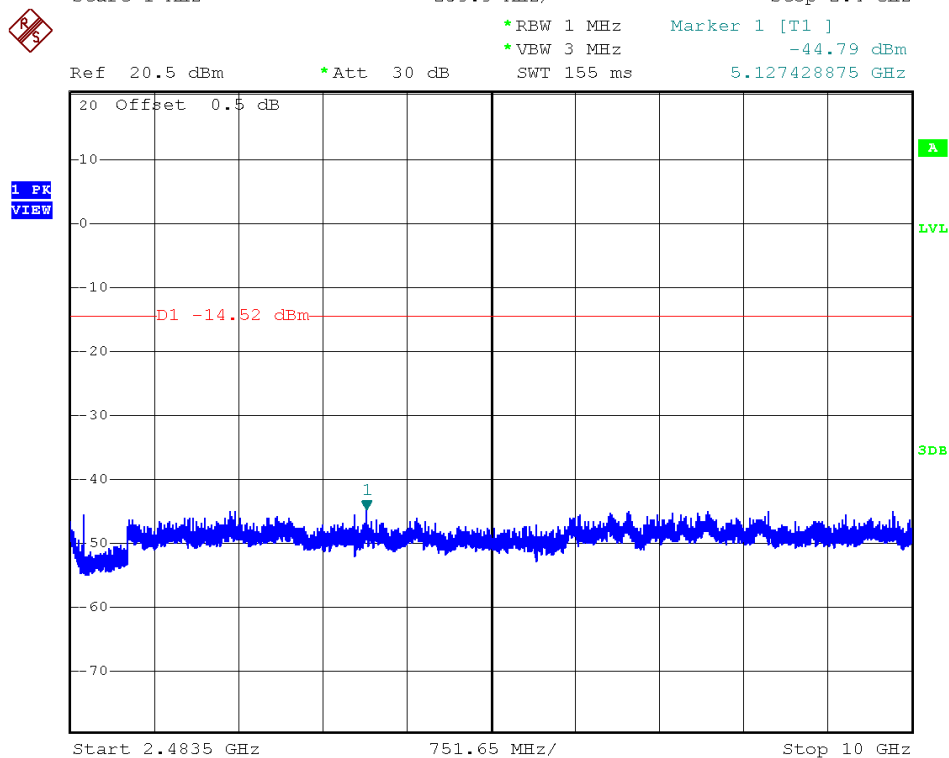
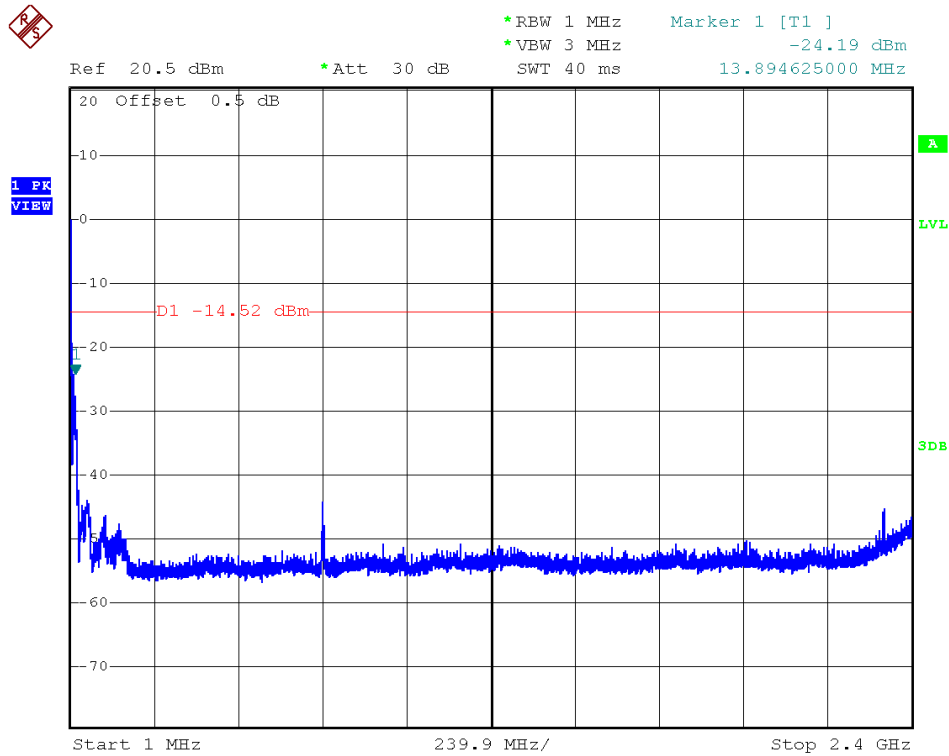
TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



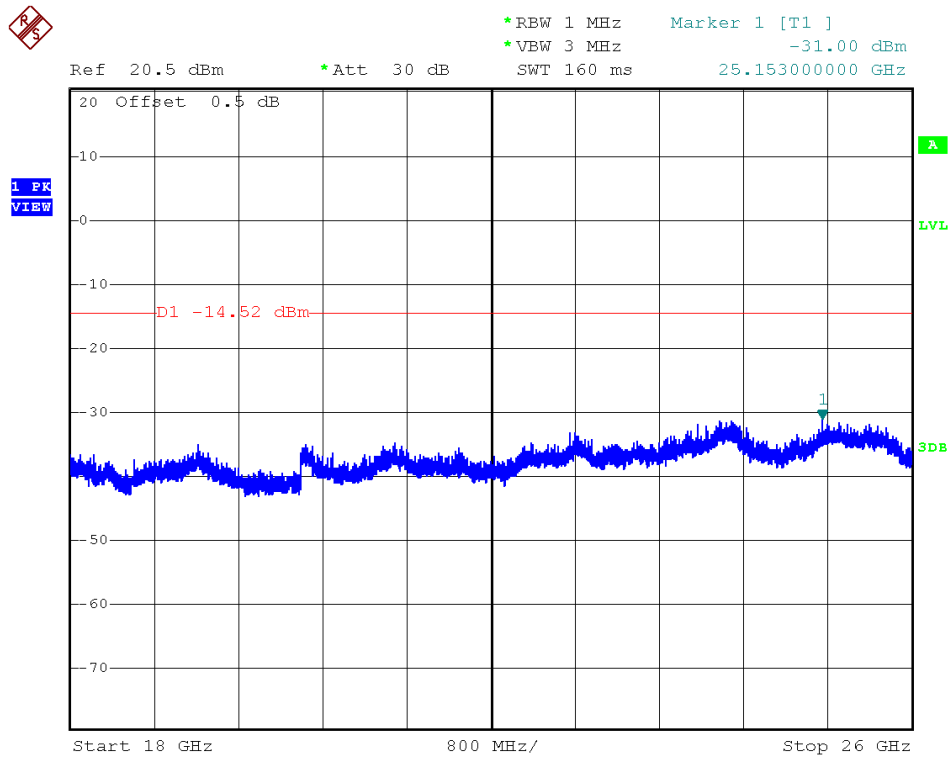
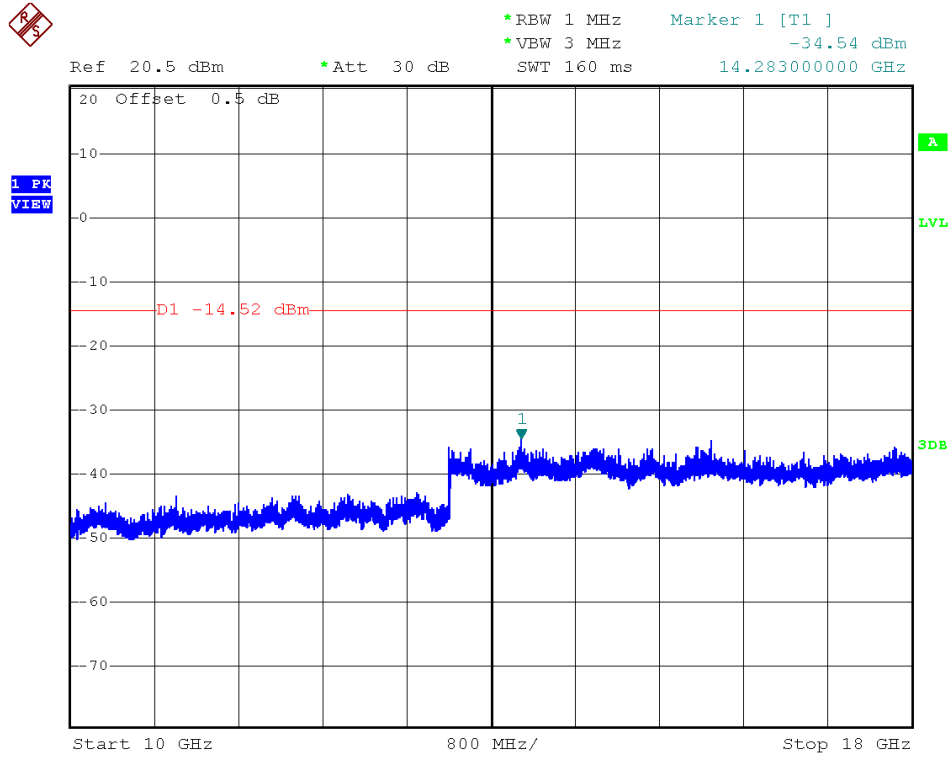
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: 5.48dBm



TRF no.: FCC 15C_TX_b
 FCC ID: QISY600-U151
 Report No.: 131112042SZN-001

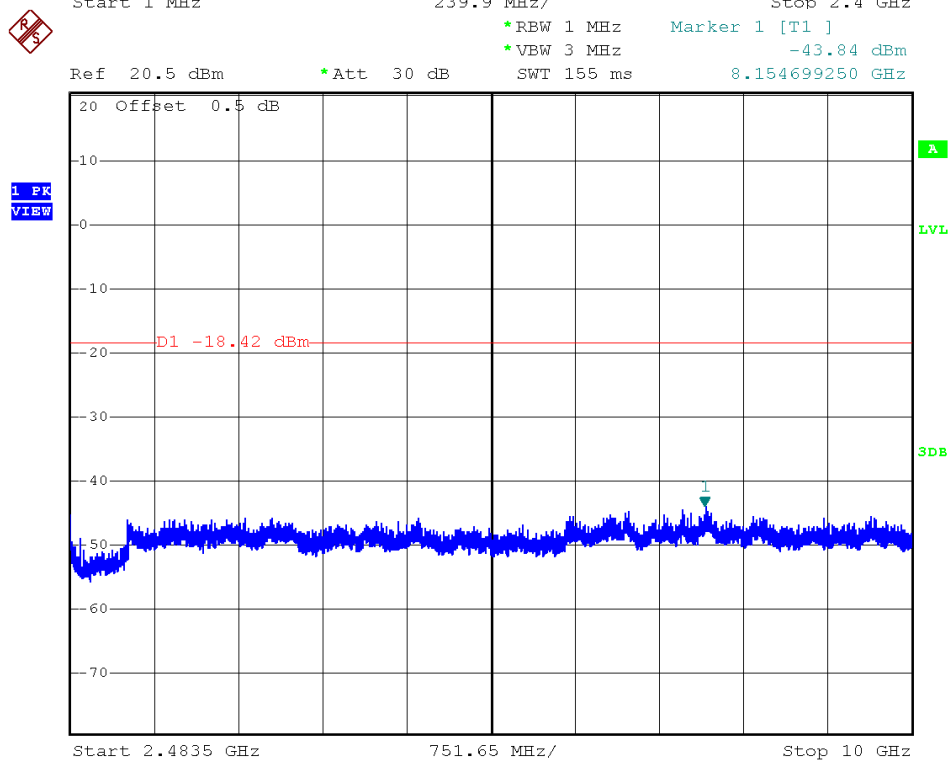
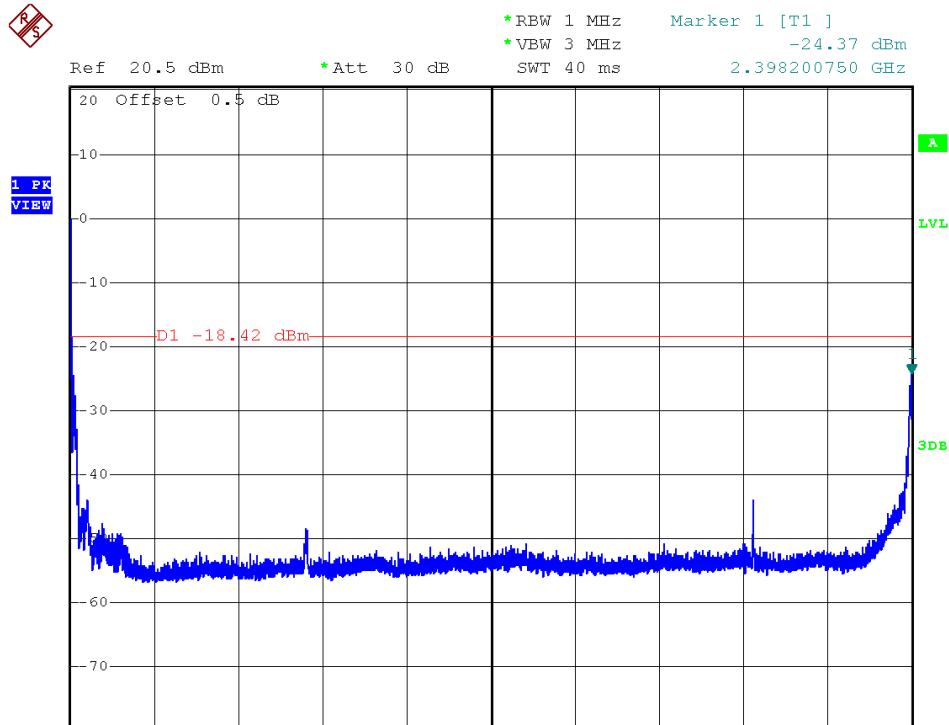
INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

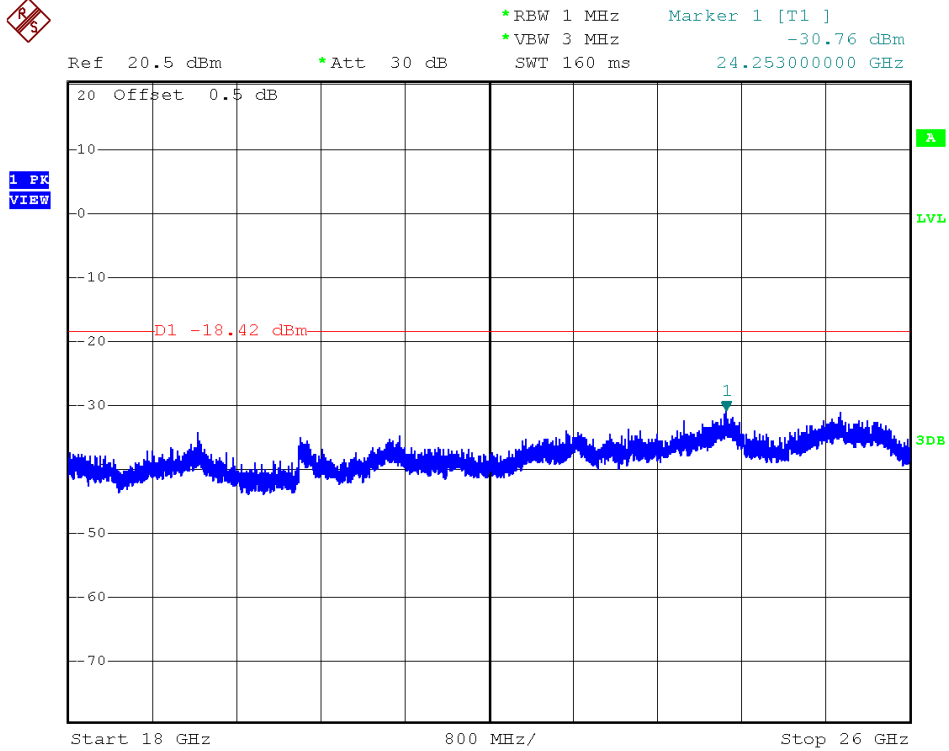
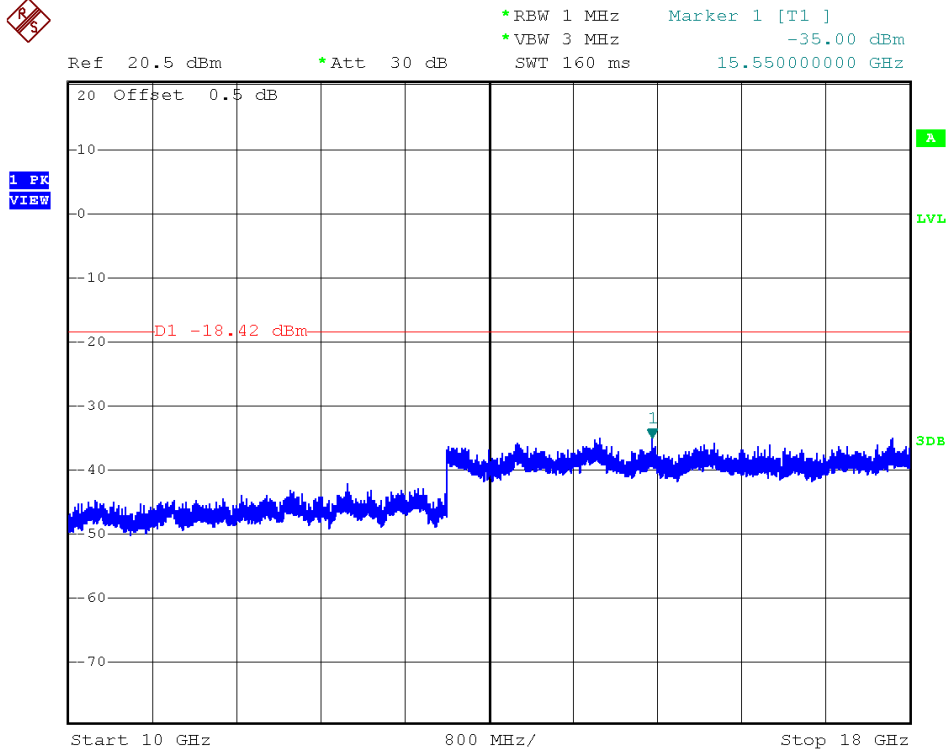
802.11g

Channel 1 (2412MHz) Reference Level: 1.58dBm



TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

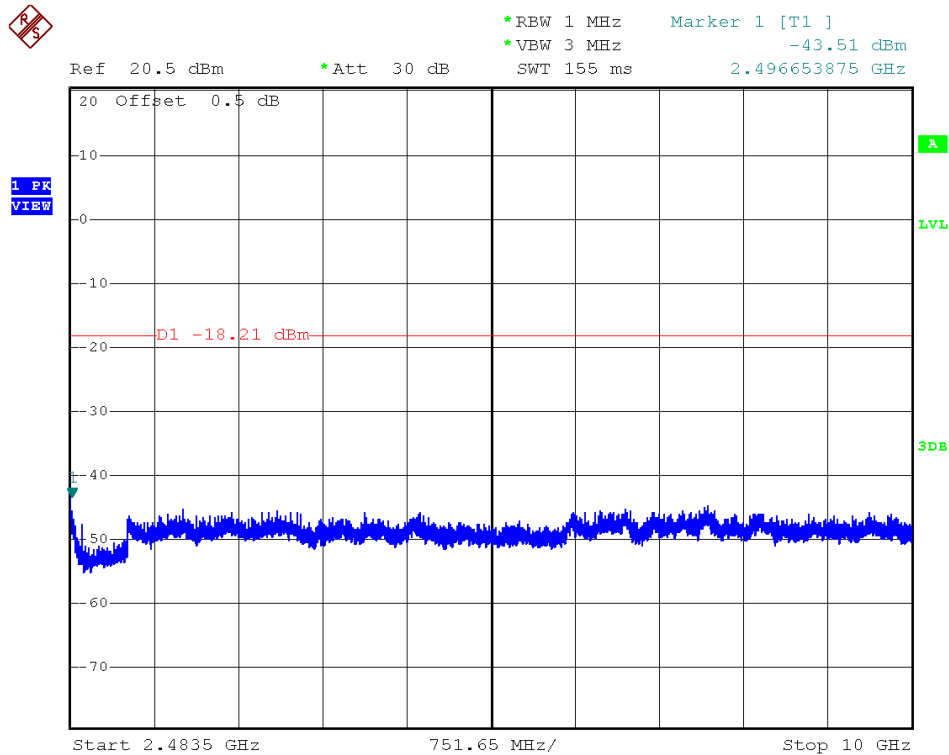
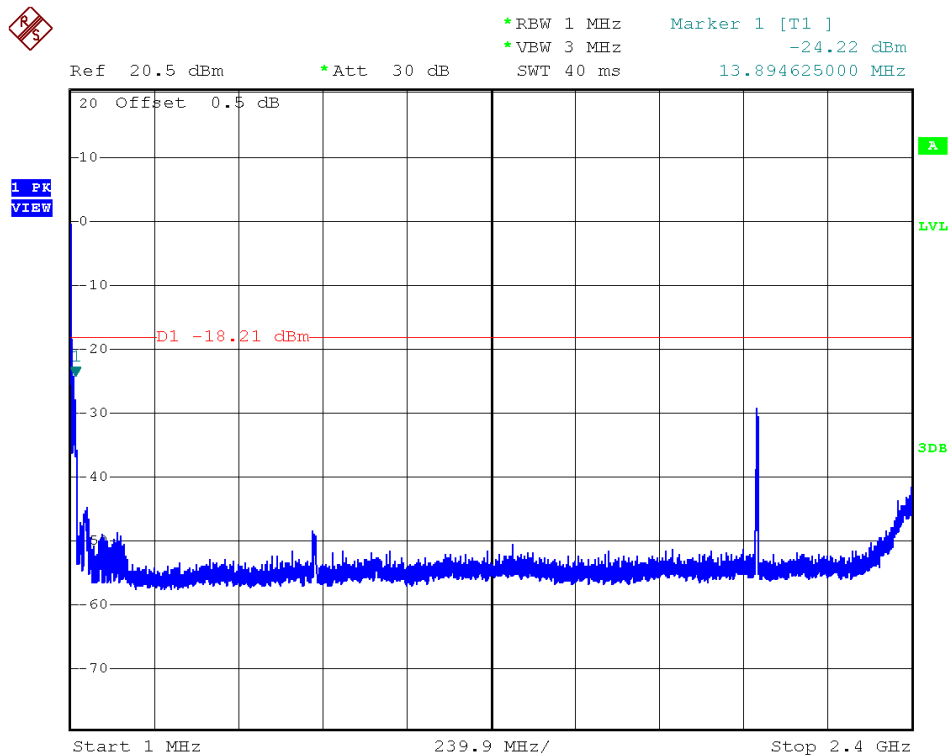
INTERTEK TESTING SERVICES



TRF no.: FCC 15C_TX_b
 FCC ID: QISY600-U151
 Report No.: 131112042SZN-001

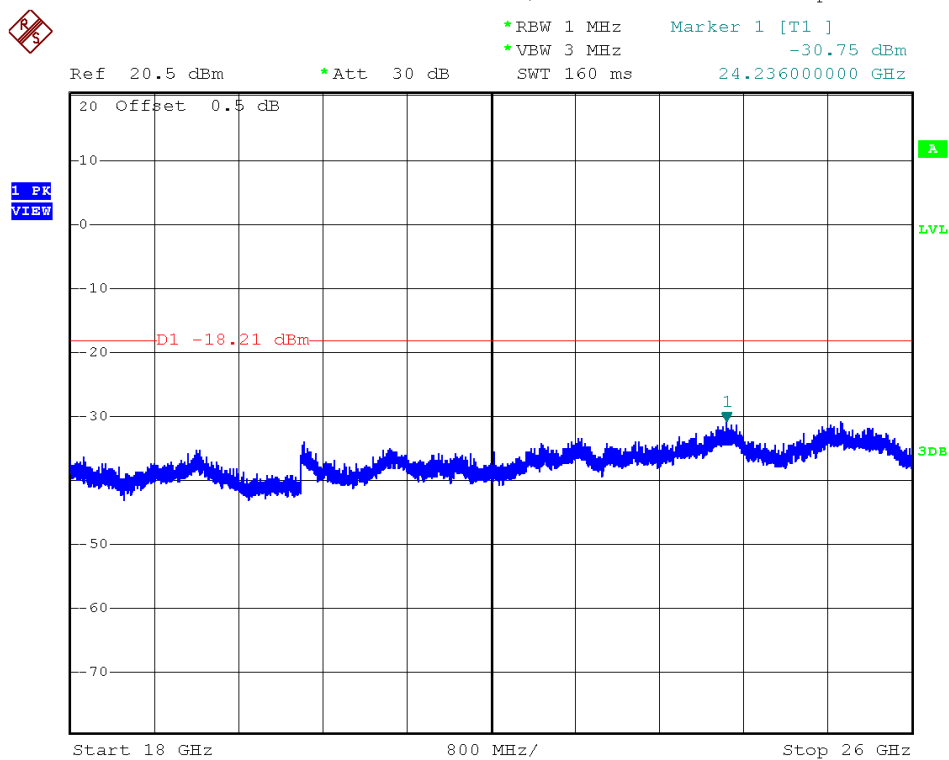
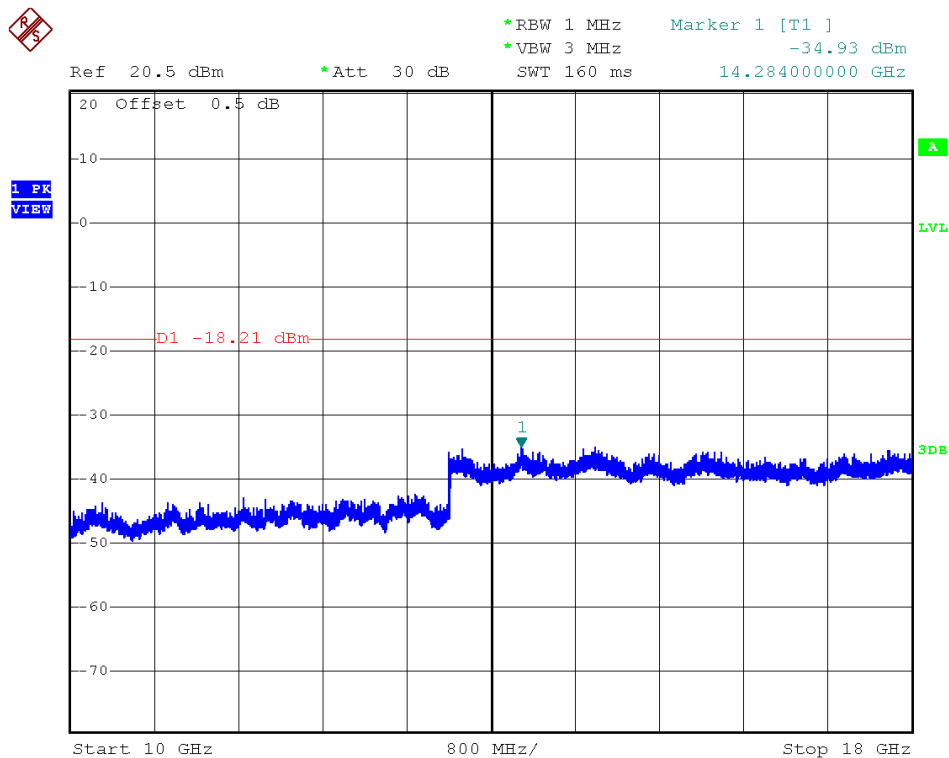
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 1.79dBm



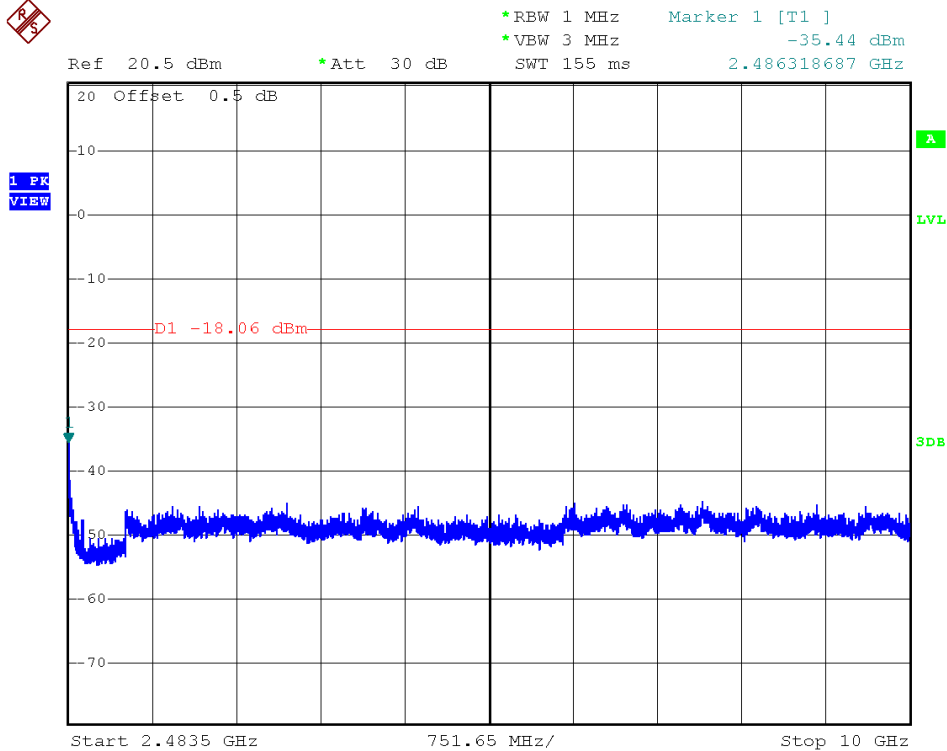
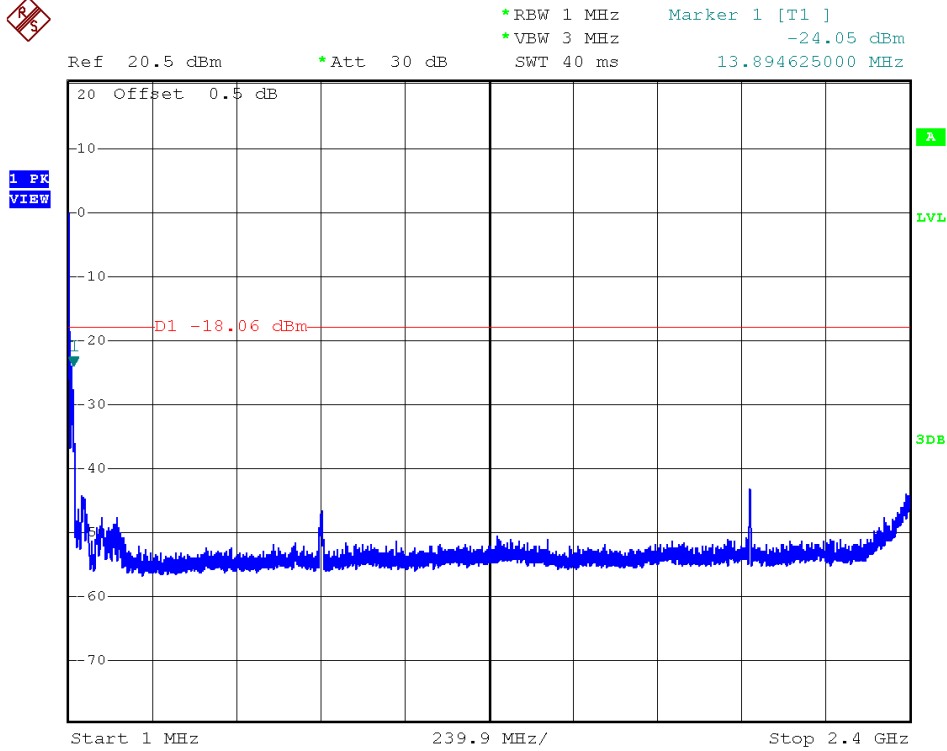
TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: 1.94dBm

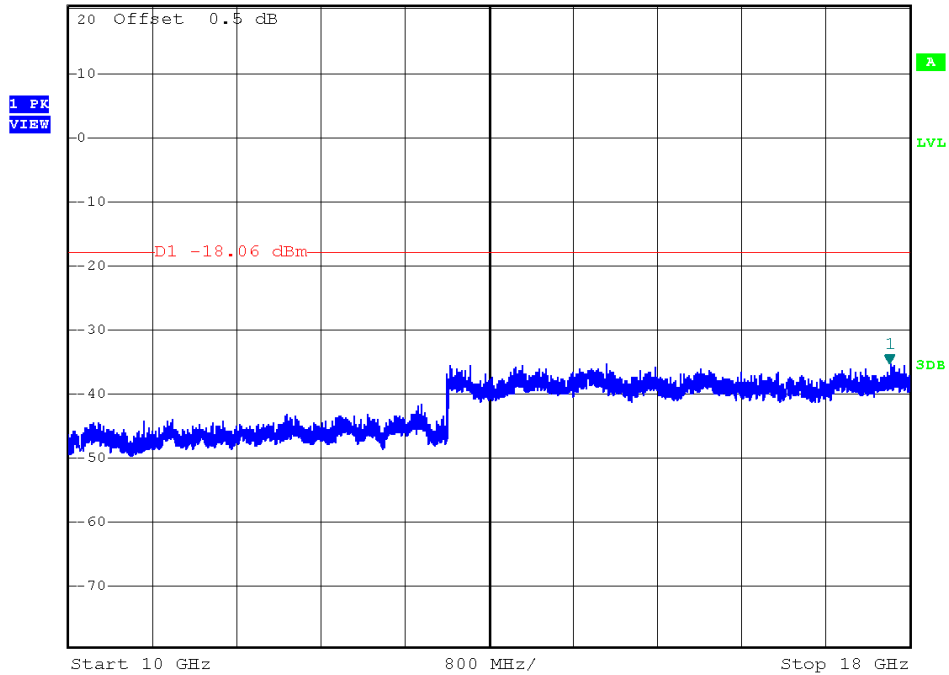


TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

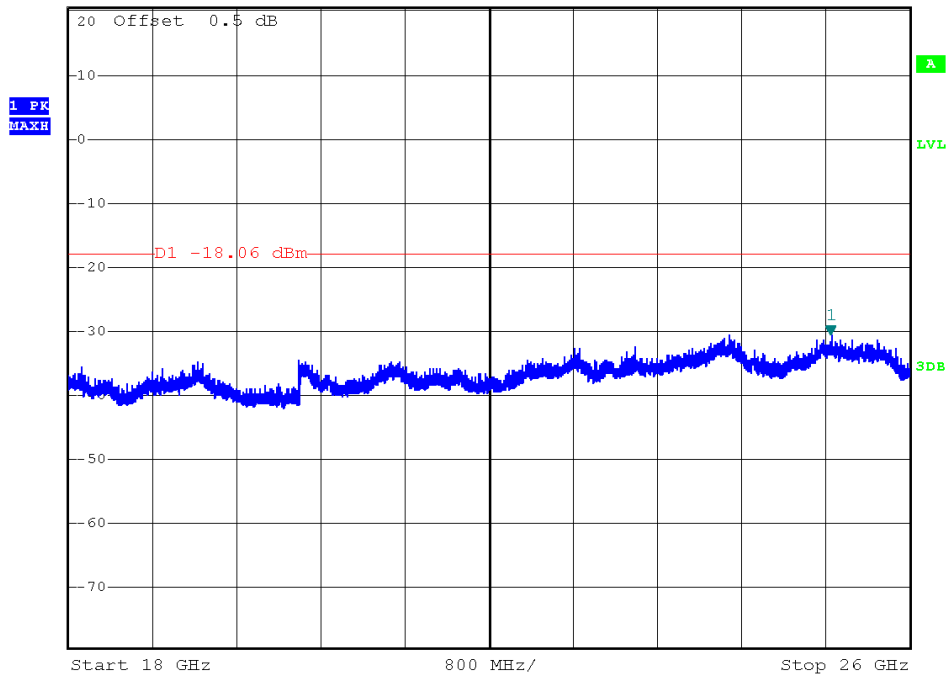
INTERTEK TESTING SERVICES



Ref 20.5 dBm *Att 30 dB SWT 160 ms
 *RBW 1 MHz Marker 1 [T1]
 *VBW 3 MHz -35.31 dBm
 17.815000000 GHz



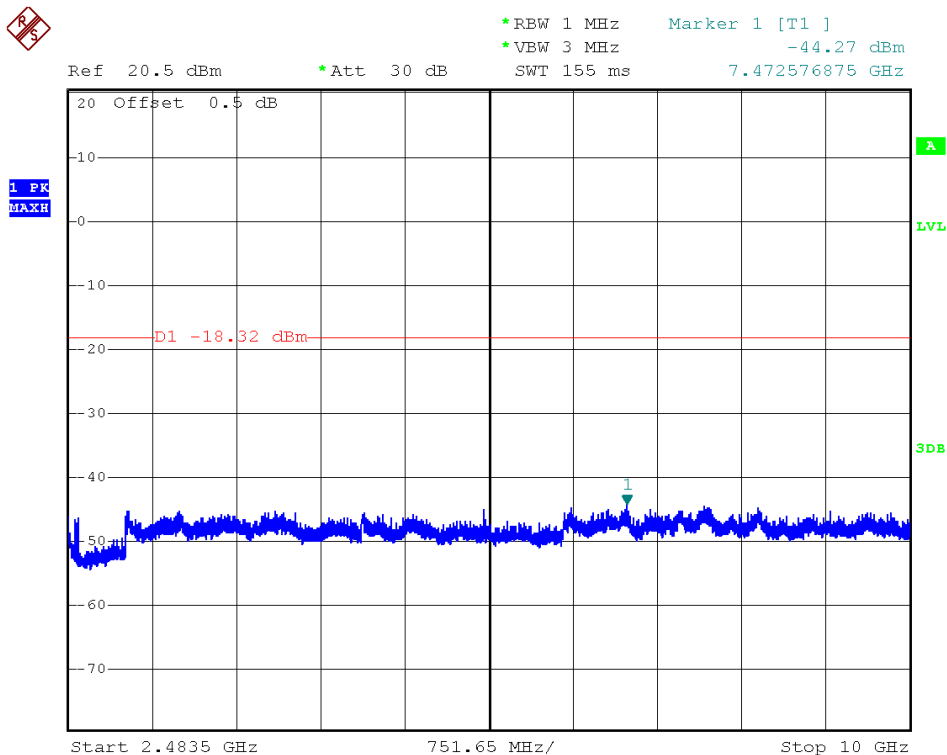
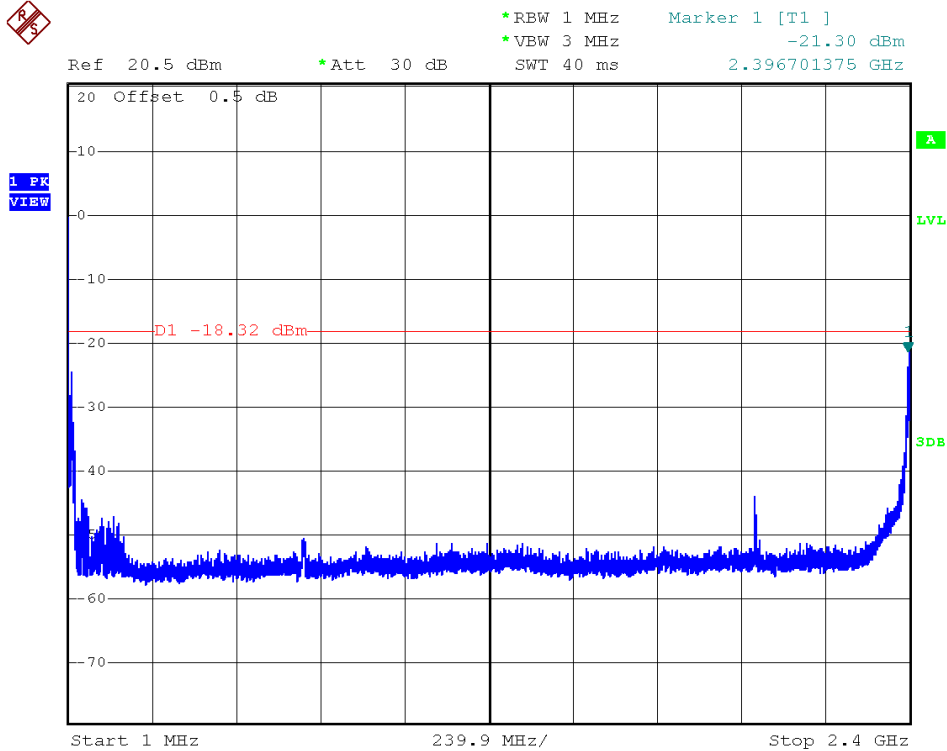
Ref 20.5 dBm *Att 30 dB SWT 160 ms
 *RBW 1 MHz Marker 1 [T1]
 *VBW 3 MHz -30.54 dBm
 25.250000000 GHz



INTERTEK TESTING SERVICES

802.11n (HT-20)

Channel 1 (2412MHz) Reference Level: 1.68dBm



TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

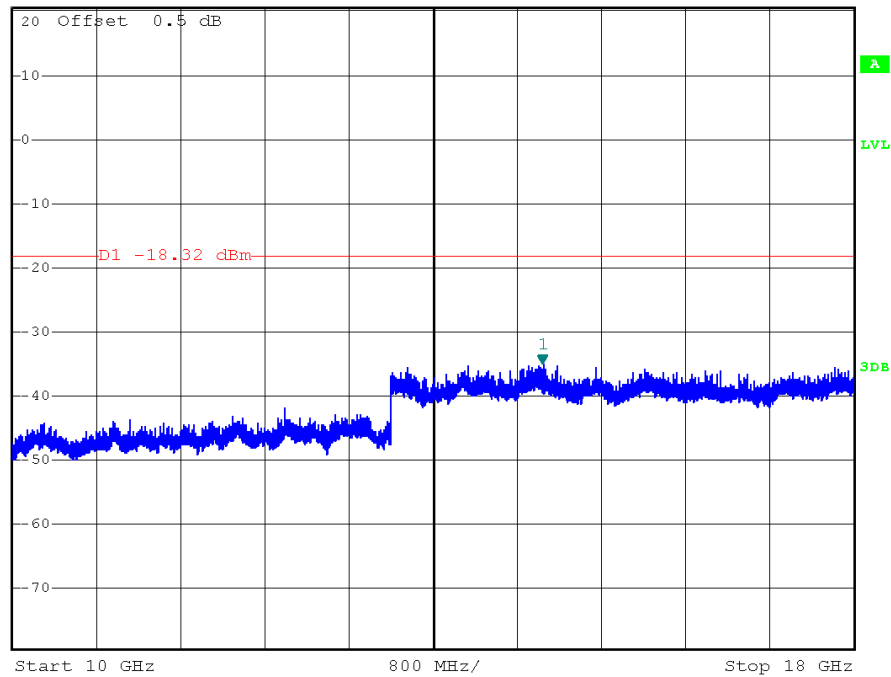
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



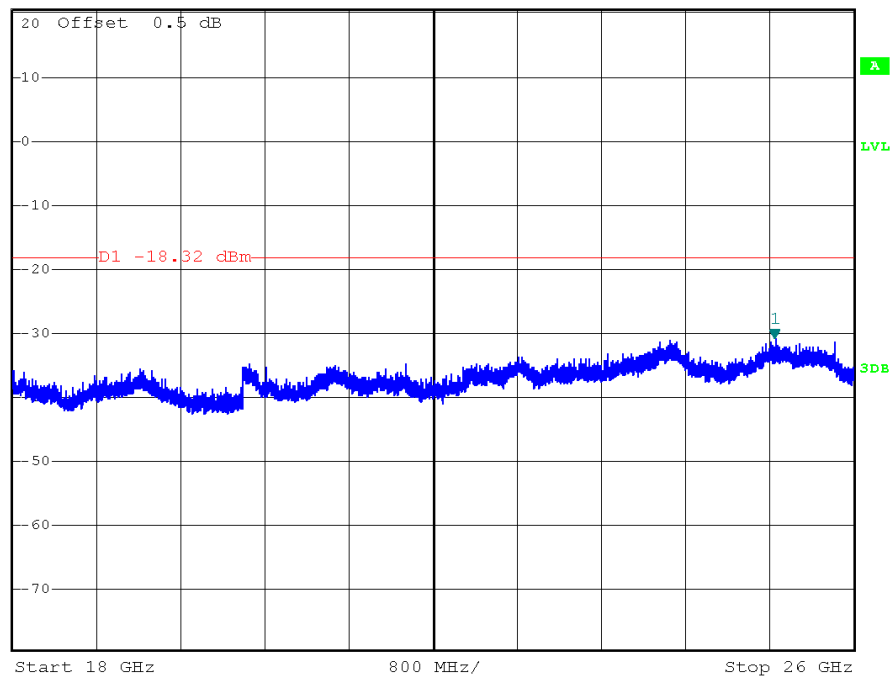
Ref 20.5 dBm *Att 30 dB SWT 160 ms
 *RBW 1 MHz Marker 1 [T1]
 *VBW 3 MHz -35.04 dBm
 15.047000000 GHz

1 PK
VIEW



Ref 20.5 dBm *Att 30 dB SWT 160 ms
 *RBW 1 MHz Marker 1 [T1]
 *VBW 3 MHz -30.90 dBm
 25.254000000 GHz

1 PK
MAXH



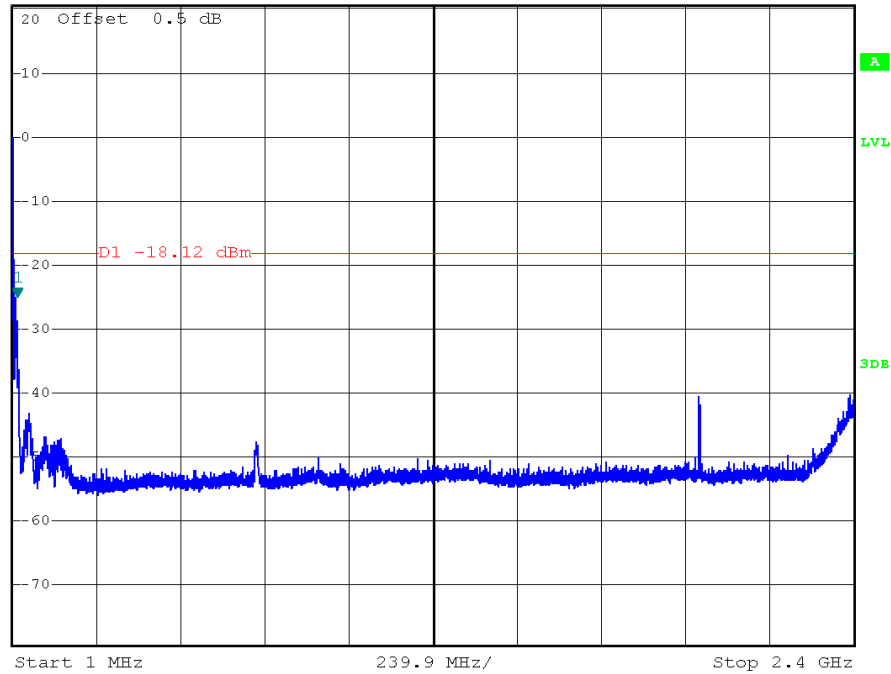
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 1.88dBm



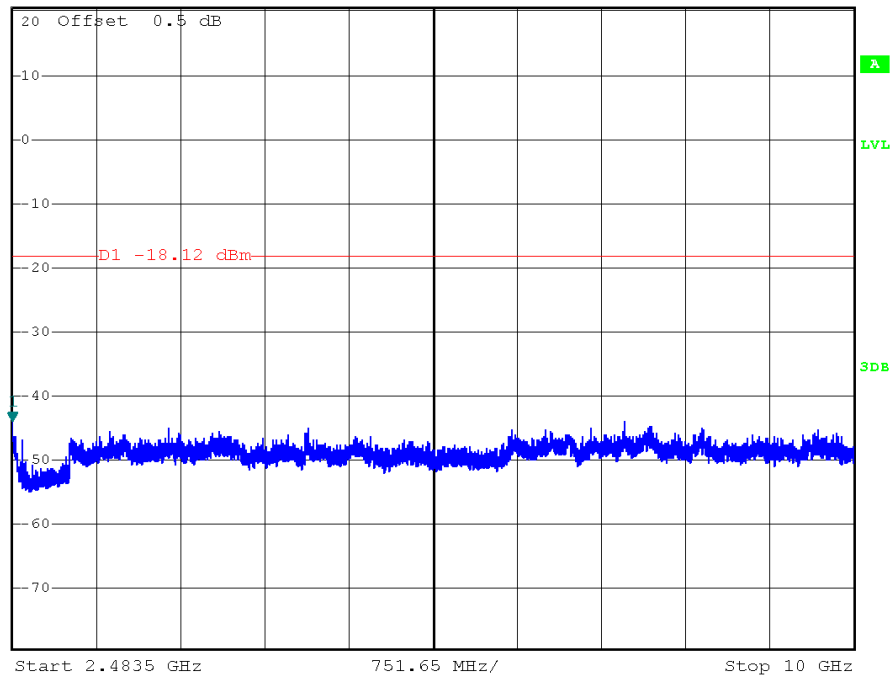
Ref 20.5 dBm *Att 30 dB SWT 40 ms 13.894625000 MHz
*REW 1 MHz Marker 1 [T1]
*VBW 3 MHz -25.04 dBm

1 PK
MAXH



Ref 20.5 dBm *Att 30 dB SWT 155 ms 2.487258250 GHz
*REW 1 MHz Marker 1 [T1]
*VBW 3 MHz -43.81 dBm

1 PK
VIEW

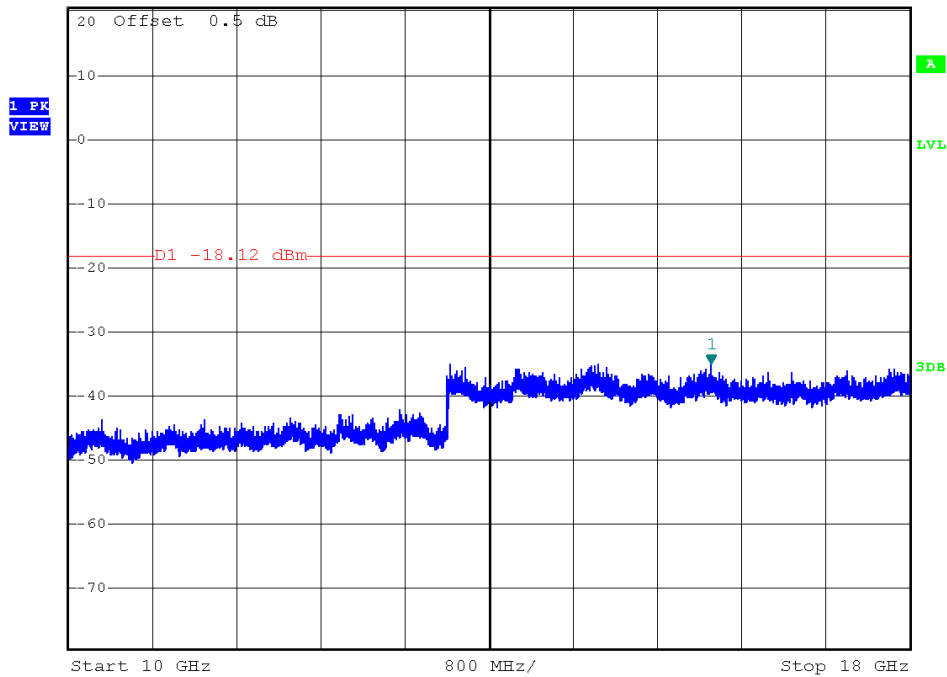


TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

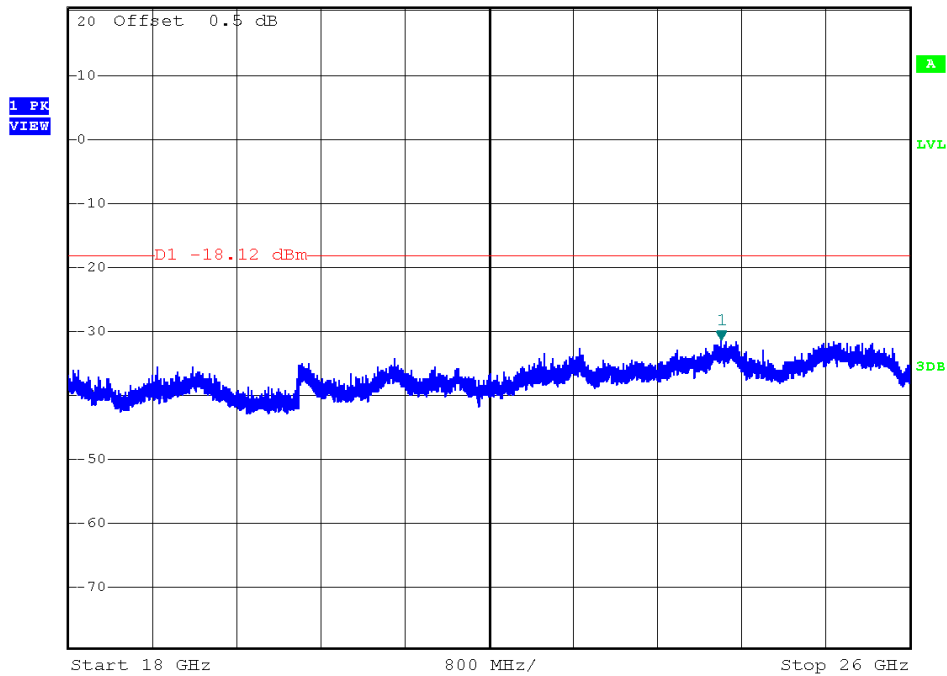
INTERTEK TESTING SERVICES



Ref 20.5 dBm *Att 30 dB SWT 160 ms
 *RBW 1 MHz Marker 1 [T1]
 *VBW 3 MHz -34.98 dBm
 16.11000000 GHz

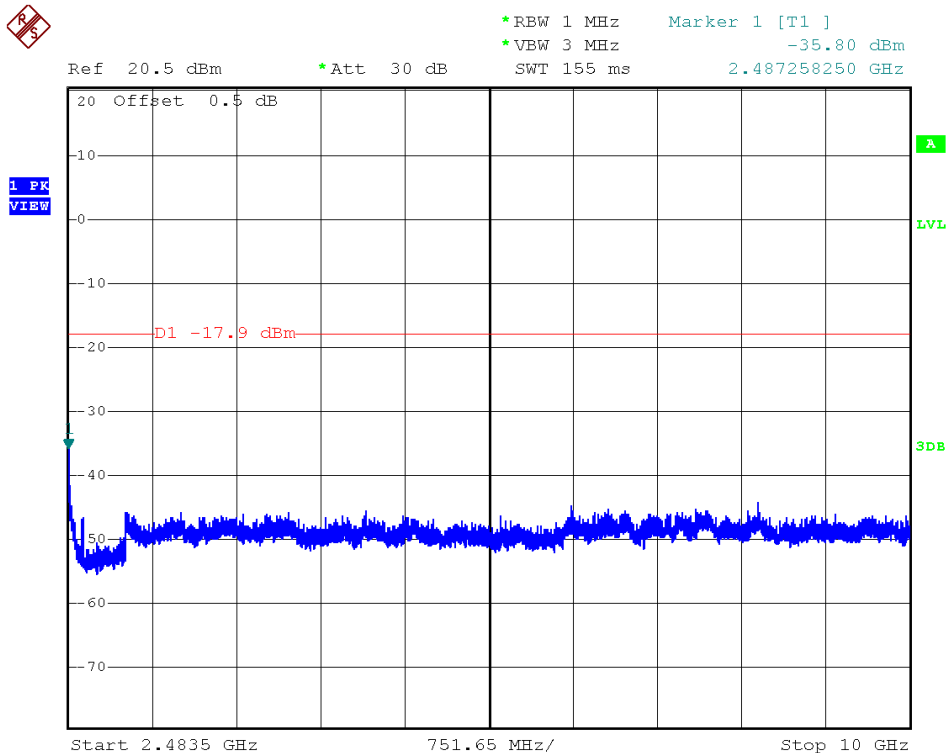
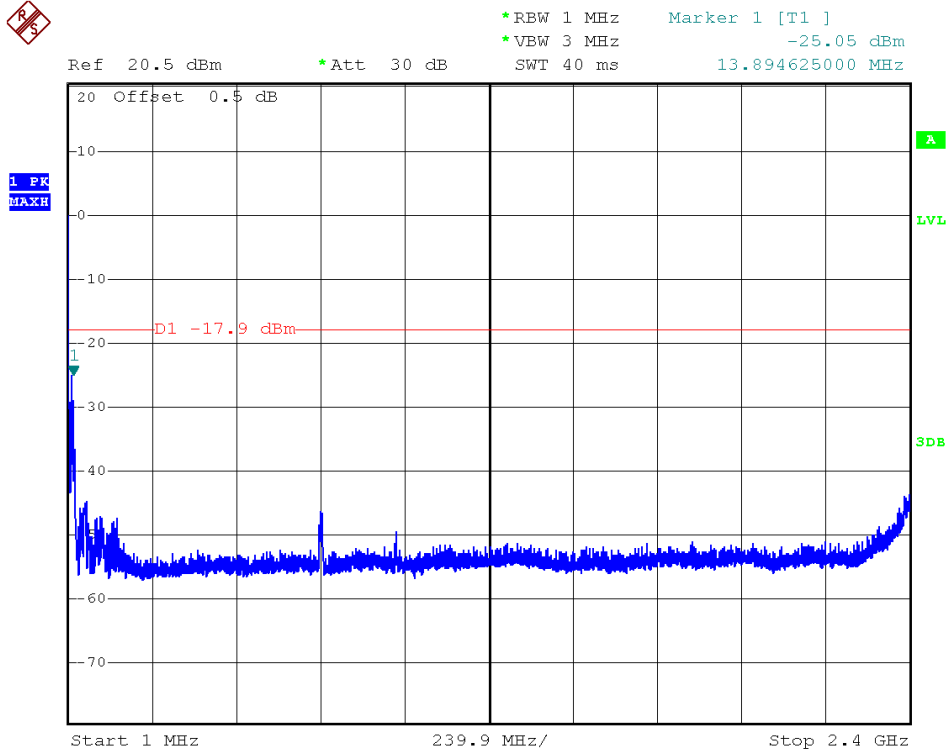


Ref 20.5 dBm *Att 30 dB SWT 160 ms
 *RBW 1 MHz Marker 1 [T1]
 *VBW 3 MHz -31.30 dBm
 24.20900000 GHz



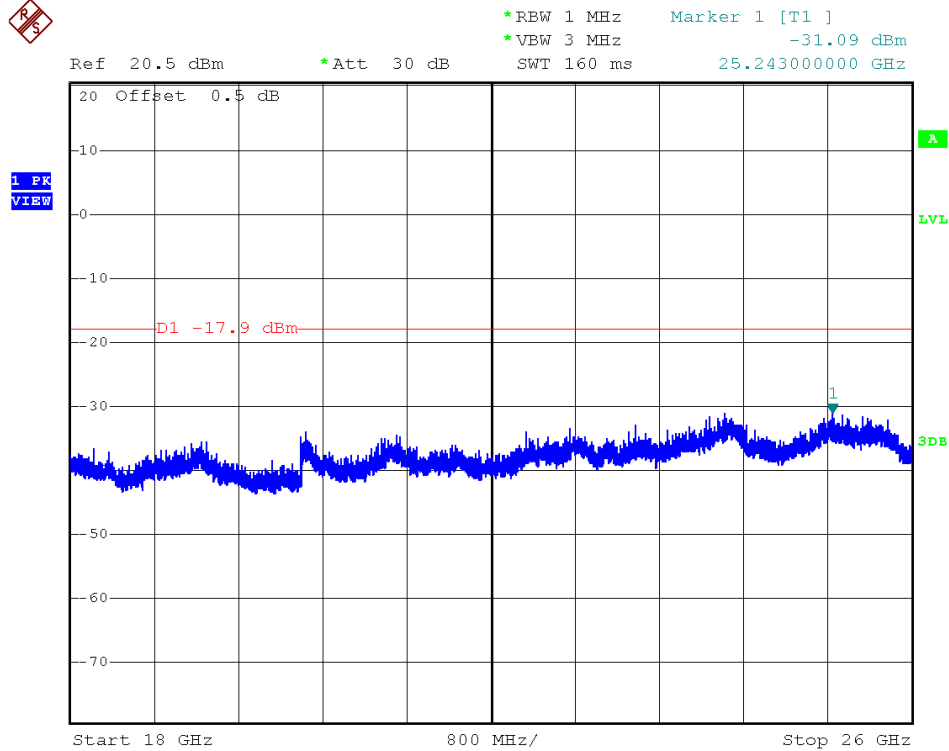
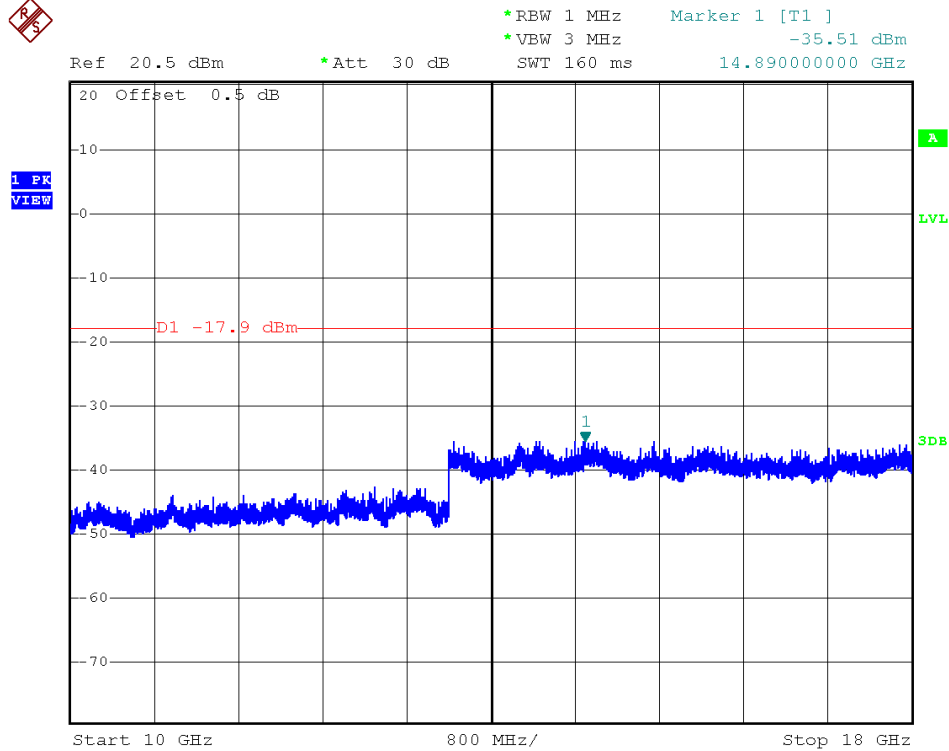
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: 2.10dBm



TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

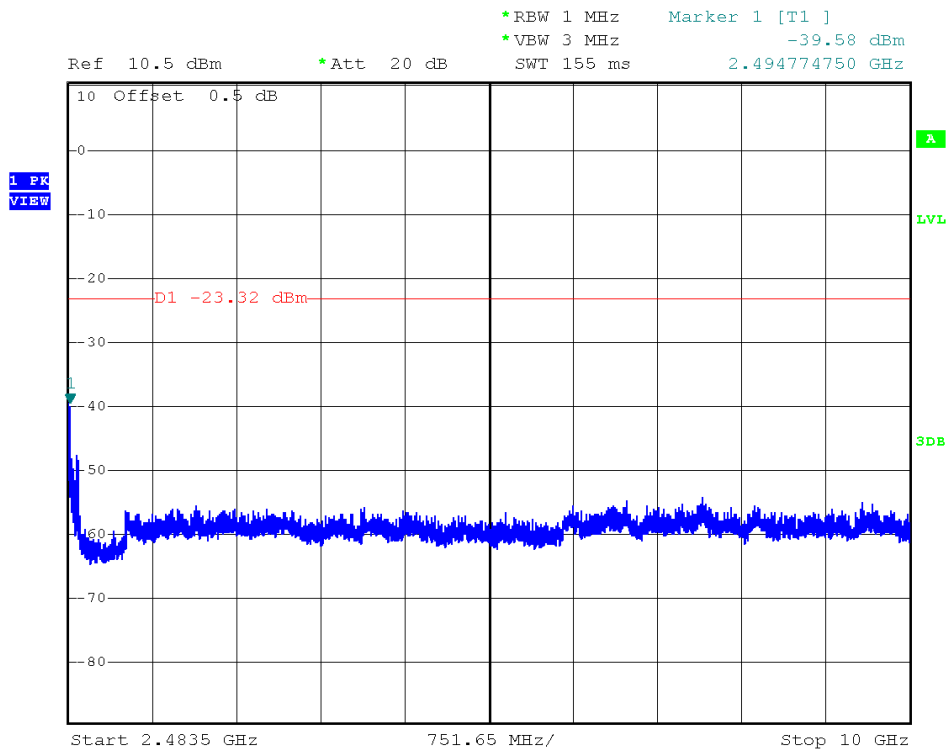
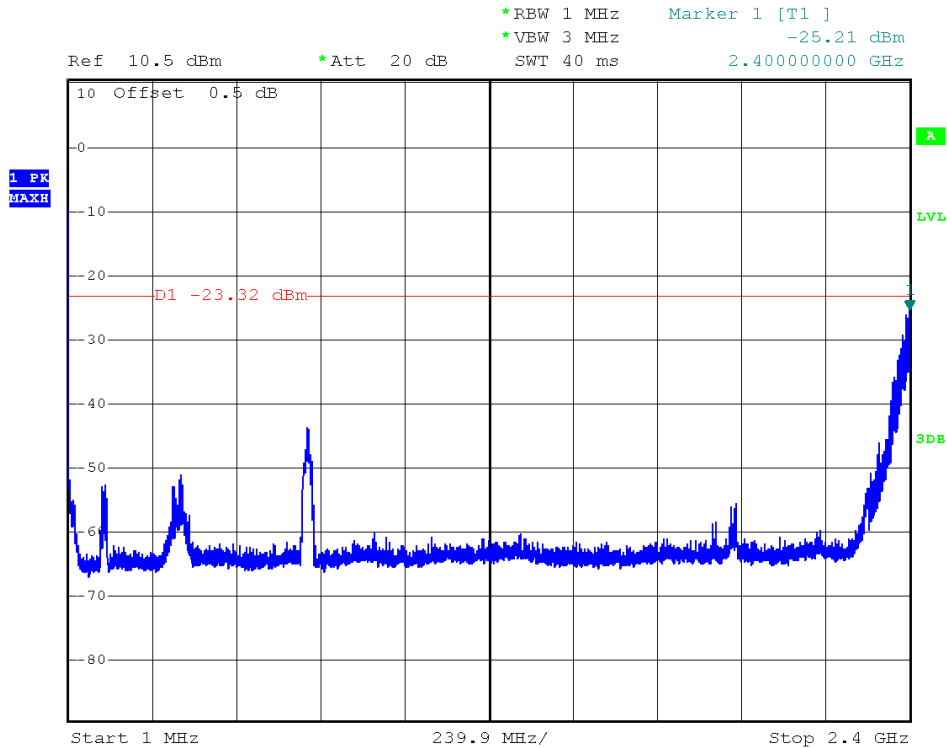


TRF no.: FCC 15C_TX_b
 FCC ID: QISY600-U151
 Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

802.11n (HT-40)

Channel 3 (2422MHz) Reference Level: -3.32dBm

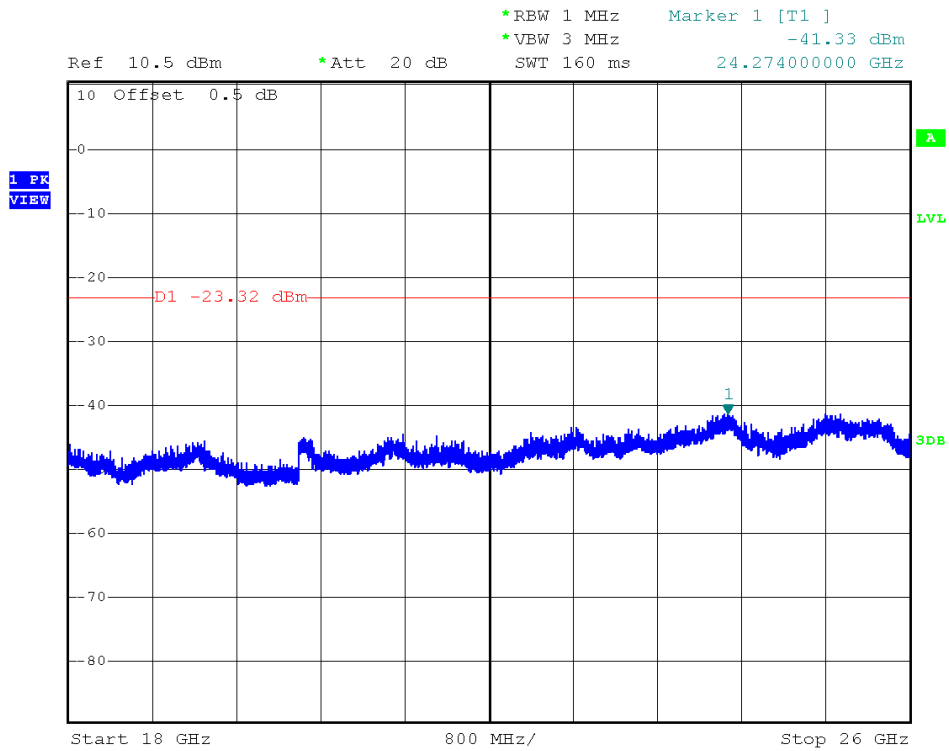
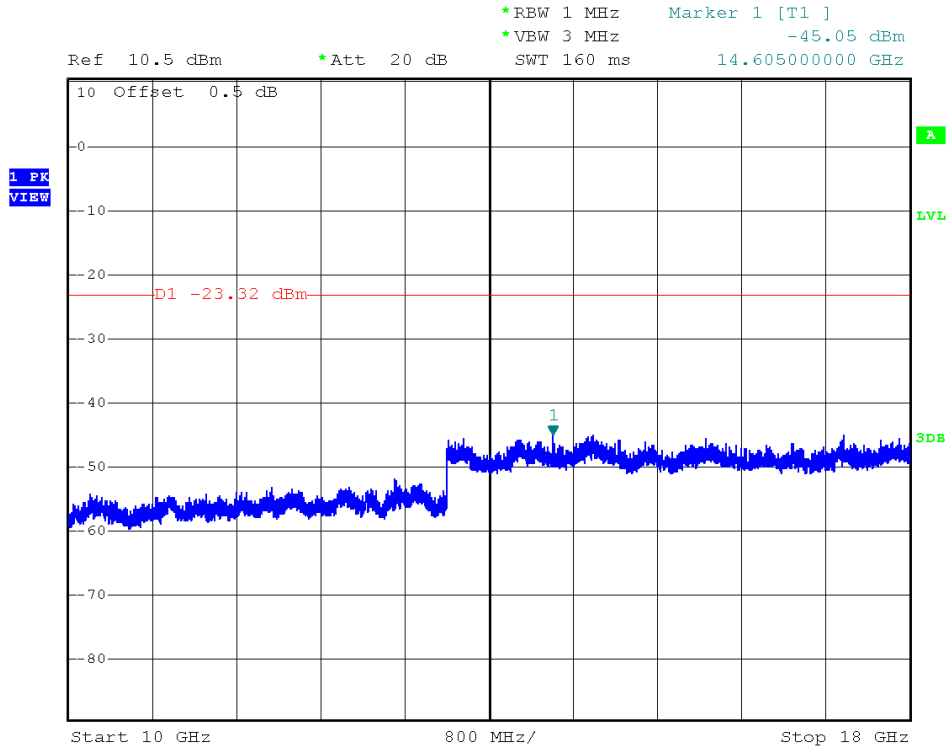


TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

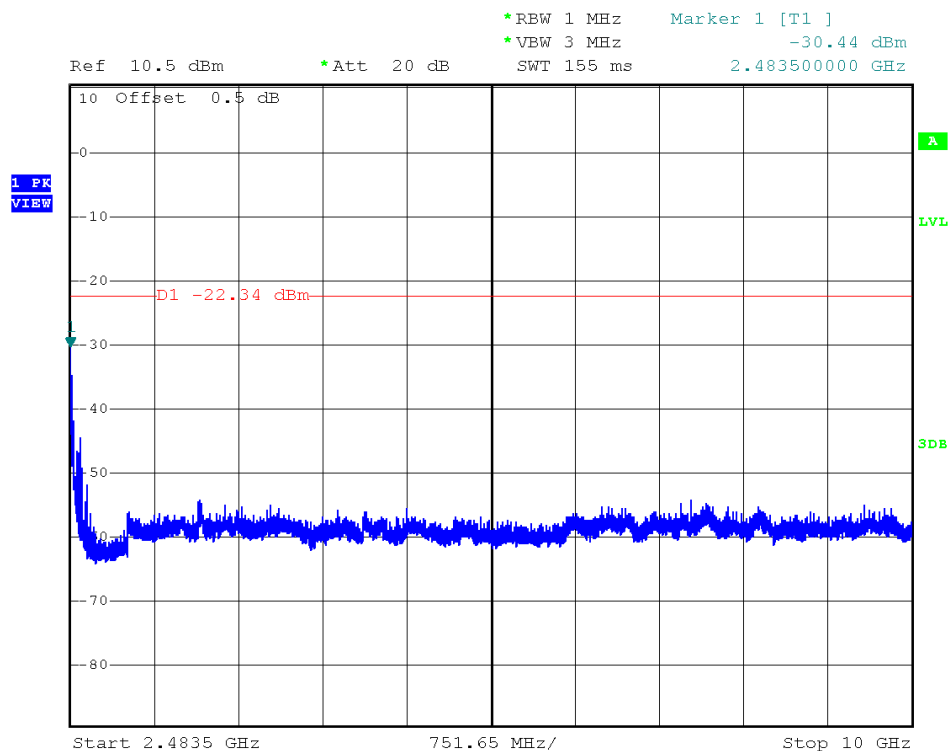
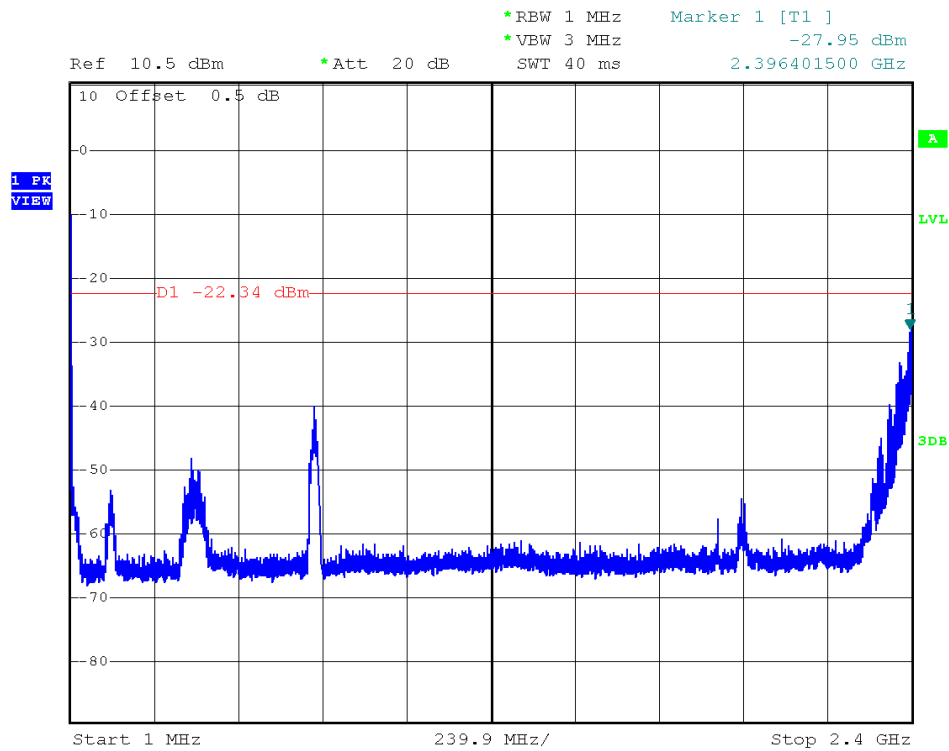
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



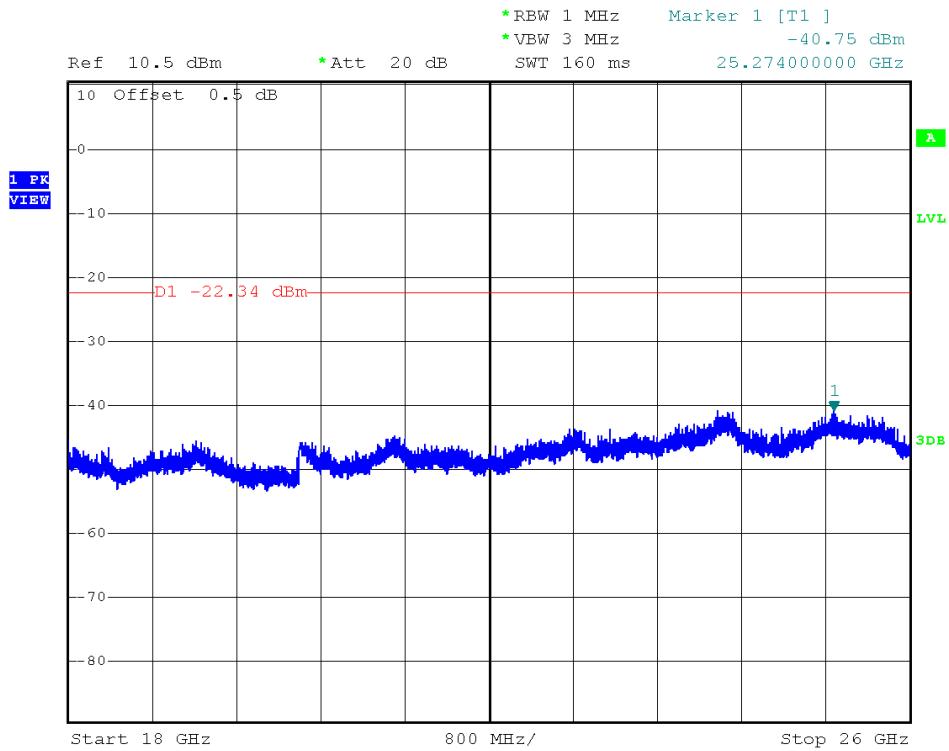
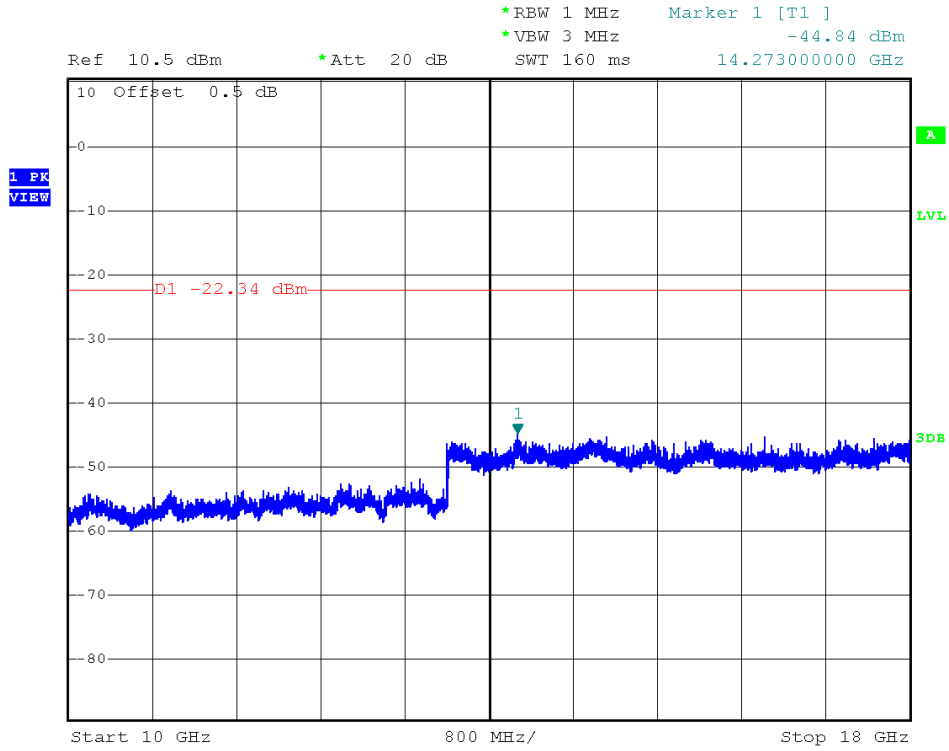
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: -2.34dBm



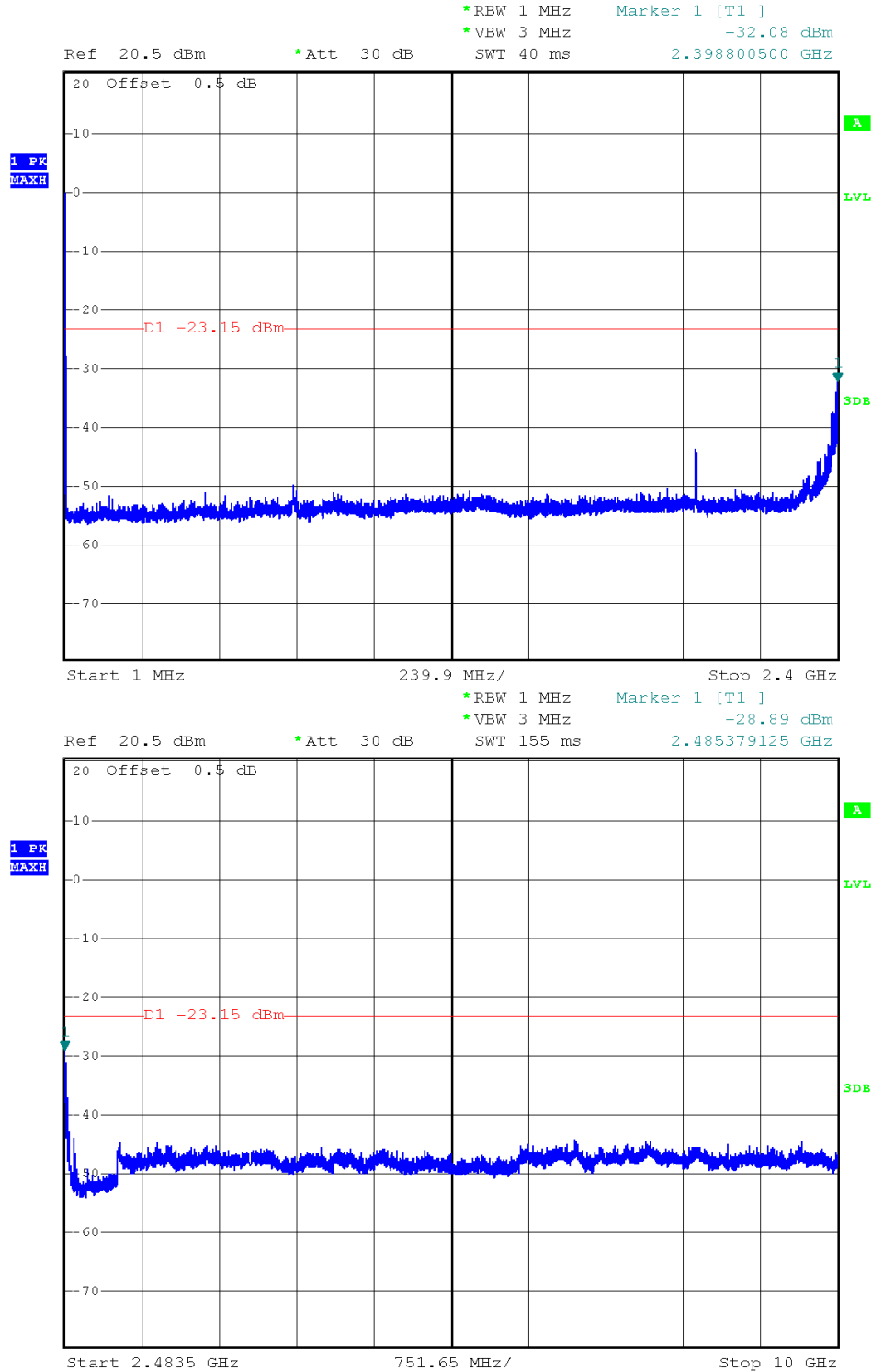
TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



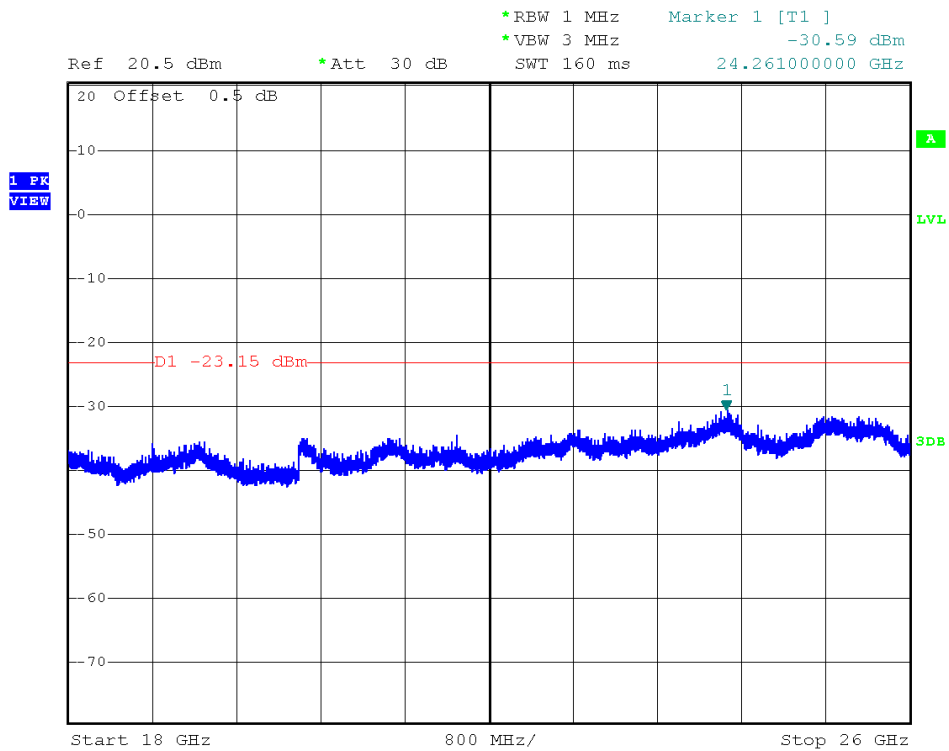
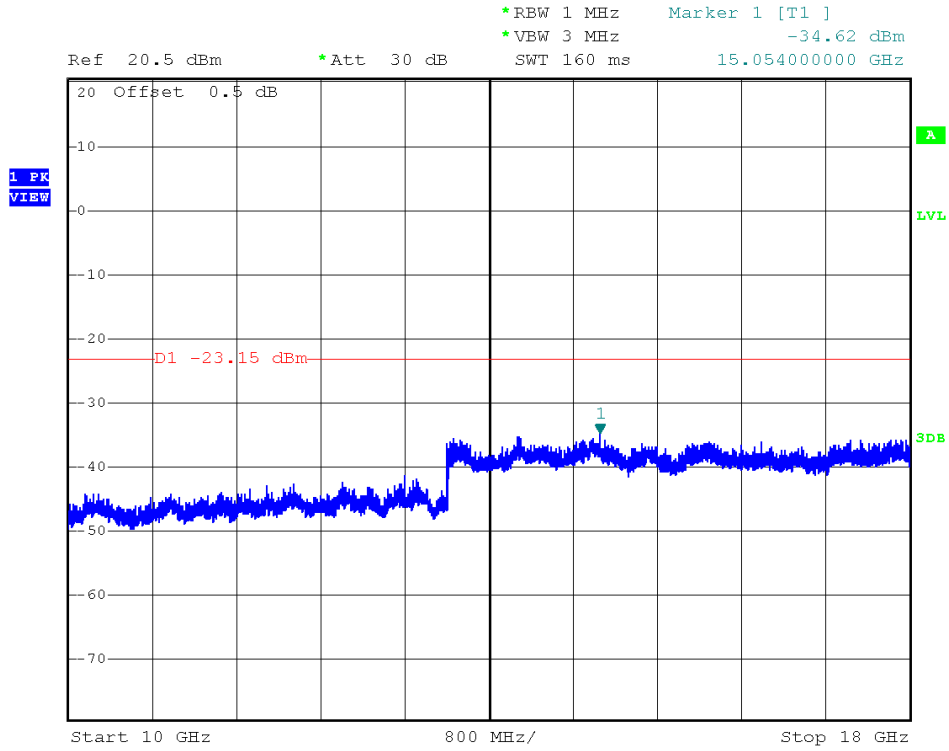
INTERTEK TESTING SERVICES

Channel 9 (2452MHz) Reference Level: -3.15dBm



TRF no.: FCC 15C_TX_b
FCC ID: QISY600-U151
Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Date of Test: December 16, 2013
Model: HUAWEI Y600-U151

4.5 Out of Band Radiated Emissions (for emissions in 4.4 above that are less than 20dB below carrier), FCC Rule 15.247(d):

For out of band emissions that are close to or that exceed the 20dB attenuation requirement described in the specification, radiated measurements were performed at a 3m separation distance to determine whether these emissions complied with the general radiated emission requirement.

- ☒ Not required, since all emissions are more than 20dB below fundamental
☐ See attached data sheet

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Date of Test: December 16, 2013
Model: HUAWEI Y600-U151

4.6 Transmitter Radiated Emissions in Restricted Bands, FCC Rule 15.35(b), (c):

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included. All measurements were performed with peak detection unless otherwise specified.

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

4.7 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$$FS = RA + AF + CF - AG + PD$$

Where FS = Field Strength in dB μ V/m
 RA = Receiver Amplitude (including preamplifier) in dB μ V
 CF = Cable Attenuation Factor in dB
 AF = Antenna Factor in dB
 AG = Amplifier Gain in dB
 PD = Pulse Desensitization in dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG + PD$$

Example

Assume a receiver reading of 62.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB. The net field strength for comparison to the appropriate emission limit is 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$$\begin{aligned} RA &= 62.0 \text{ dB}\mu\text{V} \\ AF &= 7.4 \text{ dB} \\ CF &= 1.6 \text{ dB} \\ AG &= 29.0 \text{ dB} \\ PD &= 0 \text{ dB} \\ FS &= 62 + 7.4 + 1.6 - 29 + 0 = 42 \text{ dB}\mu\text{V/m} \end{aligned}$$

$$\text{Level in mV/m} = \text{Common Antilogarithm} [(42 \text{ dB}\mu\text{V/m})/20] = 125.9 \mu\text{V/m}$$

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Date of Test: December 16, 2013
Model: HUAWEI Y600-U151

4.8 Radiated Spurious Emission

Worst Case Radiated Spurious Emission (802.11g channel 11) at 2483.520MHz is passed by 1.3 dB margin.

For the electronic filing, the worst case radiated emission configuration photographs are saved with filename: radiated photos.pdf.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

Worst Case Operating Mode: 802.11n-HT20 (TX-Channel 11)

Adapter: HuntKey

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre- Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	101.060	41.1	20.0	9.1	30.2	43.5	-13.3
Horizontal	162.250	36.7	20.0	8.3	25.0	43.5	-18.5
Horizontal	280.360	32.1	20.0	12.7	24.8	46.0	-21.2
Vertical	55.320	41.4	20.0	8.4	29.8	40.0	-10.2
Vertical	100.470	37.7	20.0	9.0	26.7	43.5	-16.8
Vertical	160.440	35.2	20.0	8.3	23.5	43.5	-20.0

NOTES: 1. Quasi-Peak detector is used except for others stated.

2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. All emissions are below the QP limit.

TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11b (TX-Channel 01)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4824.000	52.1	36.1	34.1	50.1	74.0	-23.9
Horizontal	*2389.900	64.8	36.7	27.2	55.3	74.0	-18.7

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4824.000	39.8	36.1	34.1	37.8	54.0	-16.2
Horizontal	*2389.920	58.9	36.7	27.2	49.4	54.0	-4.6

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11b (TX-Channel 06)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4874.000	50.8	36.1	34.5	49.2	74.0	-24.8
Horizontal	*7311.000	57.5	35.6	37.1	59.0	74.0	-15.0

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4874.000	41.1	36.1	34.5	39.5	54.0	-14.5
Horizontal	*7311.000	48.9	35.6	37.1	50.4	54.0	-3.6

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11b (TX-Channel 11)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4924.000	51.2	36.1	34.7	49.8	74.0	-24.2
Horizontal	*2483.550	61.3	36.7	27.7	52.3	74.0	-21.7

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4924.000	40.5	36.1	34.7	39.1	54.0	-14.9
Horizontal	*2483.550	55.5	36.7	27.7	46.5	54.0	-7.5

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Date of Test: December 16, 2013
Model: HUAWEI Y600-U151
Mode: 802.11g (TX-Channel 01)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4824.000	51.9	36.1	34.1	49.9	74.0	-24.1
Horizontal	*2389.980	72.3	36.7	27.2	62.8	74.0	-11.2

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4824.000	36.5	36.1	34.1	34.5	54.0	-19.5
Horizontal	*2389.980	58.1	36.7	27.2	48.6	54.0	-5.4

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11g (TX-Channel 06)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4874.000	50.2	36.1	34.5	48.6	74.0	-25.4
Horizontal	*7311.000	53.3	35.6	37.1	54.8	74.0	-19.2

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4874.000	35.8	36.1	34.5	34.2	54.0	-19.8
Horizontal	*7311.000	37.7	35.6	37.1	39.2	54.0	-14.8

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11g (TX-Channel 11)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4924.000	50.4	36.1	34.7	49.0	74.0	-25.0
Horizontal	*7386.000	52.4	35.6	37.2	54.0	74.0	-20.0
Horizontal	*2483.520	76.8	36.7	27.7	67.8	74.0	-6.2

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4924.000	35.0	36.1	34.7	33.6	54.0	-20.4
Horizontal	*7386.000	36.9	35.6	37.2	38.5	54.0	-15.5
Horizontal	*2483.520	61.7	36.7	27.7	52.7	54.0	-1.3

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11n-20M (TX-Channel 01)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4824.000	51.1	36.1	34.1	49.1	74.0	-24.9
Horizontal	*2389.990	73.4	36.7	27.2	63.9	74.0	-10.1

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4824.000	36.4	36.1	34.1	34.4	54.0	-19.6
Horizontal	*2389.990	59.0	36.7	27.2	49.5	54.0	-4.5

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11n-20M (TX-Channel 06)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4874.000	50.4	36.1	34.5	48.8	74.0	-25.2
Horizontal	*7311.000	51.6	35.6	37.1	53.1	74.0	-20.9

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4874.000	35.8	36.1	34.5	34.2	54.0	-19.8
Horizontal	*7311.000	35.7	35.6	37.1	37.2	54.0	-16.8

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11n-20M (TX-Channel 11)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4924.000	49.7	36.1	34.7	48.3	74.0	-25.7
Horizontal	*7386.000	51.8	35.6	37.2	53.4	74.0	-20.6
Horizontal	*2483.510	75.8	36.7	27.7	66.8	74.0	-7.2

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4924.000	35.0	36.1	34.7	33.6	54.0	-20.4
Horizontal	*7386.000	36.9	35.6	37.2	38.5	54.0	-15.5
Horizontal	*2483.510	60.9	36.7	27.7	51.9	54.0	-2.1

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11n-40M (TX-Channel 03)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4844.000	50.5	36.1	34.6	49.0	74.0	-25.0
Horizontal	*2389.975	77.3	36.7	27.2	67.8	74.0	-6.2

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4844.000	35.5	36.1	34.6	34.0	54.0	-20.0
Horizontal	*2389.975	61.1	36.7	27.2	51.6	54.0	-2.4

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Date of Test: December 16, 2013
 Model: HUAWEI Y600-U151
 Mode: 802.11n-40M (TX-Channel 06)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4874.000	49.6	36.1	34.8	48.3	74.0	-25.7
Horizontal	*7311.000	50.7	35.6	37.3	52.4	74.0	-21.6

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4874.000	35.0	36.1	34.8	33.7	54.0	-20.3
Horizontal	*7311.000	36.0	35.6	37.3	37.7	54.0	-16.3

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

Mode: 802.11n-40M (TX-Channel 9)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4904.000	49.7	36.1	34.8	48.4	74.0	-25.6
Horizontal	*7356.000	51.5	35.6	37.4	53.3	74.0	-20.7
Horizontal	*2483.510	71.5	36.7	27.7	62.5	74.0	-11.5

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
Horizontal	*4904.000	34.6	36.1	34.8	33.3	54.0	-20.7
Horizontal	*7356.000	36.4	35.6	37.4	38.2	54.0	-15.8
Horizontal	*2483.510	54.7	36.7	27.7	45.7	54.0	-8.3

- NOTES: 1. Peak detector is used for the emission measurement (RBW=1MHz, VBW=3MHz for Peak data; RBW=1MHz, VBW=10Hz for Average data).
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
- * Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

4.9 Conducted Emission

Worst Case Live-Conducted emission at 3.288MHz is Passed by 6.9 dB margin

For electronic filing, the worst case conducted emission configuration photograph is saved with filename: conducted photos.pdf.

INTERTEK TESTING SERVICES

Company: Huawei Technologies Co.,Ltd

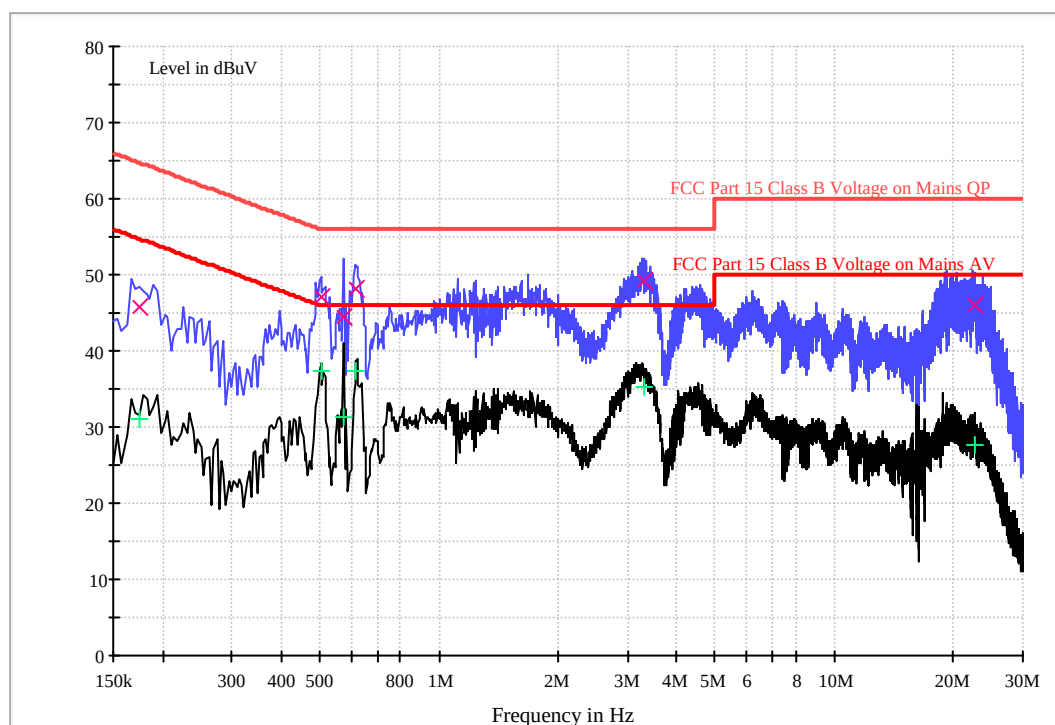
Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

Worst Case Operating Mode: 802.11n-HT20 (TX-Channel 11)

Adapter: HuntKey

Conducted Emission Test - FCC



Result Table QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.174	45.9	L1	9.7	18.9	64.8
0.502	47.2	L1	9.7	8.8	56.0
0.574	44.5	L1	9.7	11.5	56.0
0.618	48.1	L1	9.7	7.9	56.0
3.288	49.1	L1	9.8	6.9	56.0
22.562	46.0	L1	10.3	14.0	60.0

Result Table AV

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.174	31.1	L1	9.7	23.7	54.8
0.502	37.4	L1	9.7	8.6	46.0
0.574	31.3	L1	9.7	14.7	46.0
0.618	37.4	L1	9.7	8.6	46.0
3.288	35.4	L1	9.8	10.6	46.0
22.562	27.5	L1	10.3	22.5	50.0

TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

Company: Huawei Technologies Co.,Ltd

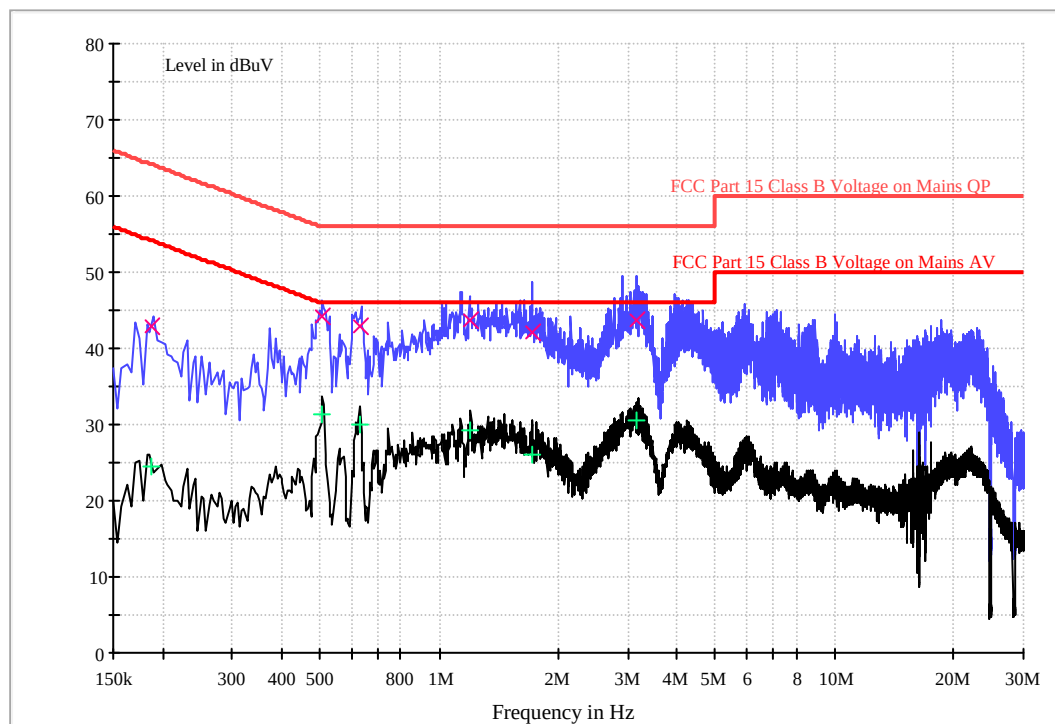
Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

Worst Case Operating Mode: 802.11n-HT20 (TX-Channel 11)

Adapter: HuntKey

Conducted Emission Test - FCC



Result Table QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.188	43.0	N	10.2	21.1	64.1
0.506	44.1	N	10.2	11.9	56.0
0.630	43.0	N	10.2	13.0	56.0
1.202	43.6	N	10.3	12.4	56.0
1.714	42.2	N	10.3	13.8	56.0
3.150	43.7	N	10.3	12.3	56.0

Result Table AV

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.188	24.5	N	10.2	29.6	54.1
0.506	31.4	N	10.2	14.6	46.0
0.630	29.9	N	10.2	16.1	46.0
1.202	29.3	N	10.3	16.7	46.0
1.714	26.0	N	10.3	20.0	46.0
3.150	30.6	N	10.3	15.4	46.0

TRF no.: FCC 15C_TX_b

FCC ID: QISY600-U151

Report No.: 131112042SZN-001

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Date of Test: December 16, 2013
Model: HUAWEI Y600-U151

4.10 Radiated Emissions from Digital Section of Transceiver, FCC Ref: 15.109

☐ Not required - No digital part

☐ Test results are attached

☒ Included in the separated report.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: December 16, 2013

Model: HUAWEI Y600-U151

4.11 Transmitter Duty Cycle Calculation and Measurements, FCC Rule 15.35(b), (c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SWEP function on the analyzer was set to ZERO SPAN. The Transmitter ON time was determined from the resultant time-amplitude display:

	See attached spectrum analyzer chart (s) for Transmitter timing
	See Transmitter timing diagram provided by manufacturer
x	Not applicable, duty cycle was not used.

EXHIBIT 5
EQUIPMENT PHOTOGRAPHS

INTERTEK TESTING SERVICES

5.0 Equipment Photographs

For electronic filing, the photographs are saved with filename: external photos.doc & internal photos.pdf.

EXHIBIT 6

PRODUCT LABELLING

INTERTEK TESTING SERVICES

6.0 Product Labelling

For electronic filing, the FCC ID label artwork and location is saved with filename: label.pdf.

EXHIBIT 7

TECHNICAL SPECIFICATIONS

INTERTEK TESTING SERVICES

7.0 Technical Specifications

For electronic filing, the block diagram and circuit diagram are saved with filename: block.pdf and circuit.pdf respectively.

EXHIBIT 8
INSTRUCTION MANUAL

INTERTEK TESTING SERVICES

8.0 Instruction Manual

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

INTERTEK TESTING SERVICES

EXHIBIT 9

MISCELLANEOUS INFORMATION

INTERTEK TESTING SERVICES

9.0 **Discussion of Pulse Desensitization**

The determination of pulse desensitivity was made in accordance with Hewlett Packard Application Note 150-2, *Spectrum Analysis ... Pulsed RF*.

Pulse desensitivity is not applicable for this device since the transmitter transmits the RF signal continuously.

EXHIBIT 10
TEST EQUIPMENT LIST

INTERTEK TESTING SERVICES

10.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	29-Jun-2013	29-Jun-2014
SZ185-01	EMI Receiver	R&S	ESCI	100547	12-Mar-2013	12-Mar-2014
SZ061-09	Horn Antenna	ETS	3115	00092346	16-Nov-2013	16-Nov-2014
SZ061-07	Pyramidal Horn Antenna	ETS	3160-09	00083067	27-Aug-2013	27-Aug-2014
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	13-May-2013	13-May-2014
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	12-Mar-2013	12-Mar-2014
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	12-Mar-2013	12-Mar-2014
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	2-Mar-2013	2-Mar-2014
SZ062-02	RF Cable	RADIALL	RG 213U	--	20-Jul-2013	20-Jan-2014
SZ062-06	RF Cable	RADIALL	0.04-26.5GHz	--	14-Jul-2013	14-Jan-2014
SZ062-12	RF Cable	RADIALL	0.04-26.5GHz	--	17-Oct-2013	17-Apr-2014
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02	--	21-May-2013	21-May-2014
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	9-Nov-2013	9-Nov-2014
SZ187-01	Two-Line V-Network	R&S	ENV216	100072	9-Nov-2013	9-Nov-2014
SZ187-02	Two-Line V-Network	R&S	ENV216	100073	9-Nov-2013	9-Nov-2014
SZ188-03	Shielding Room	ETS	RFD-100	4100	23-Aug-2013	23-Aug-2014