

Huawei Technologies Co.,Ltd

Application
For
Certification

FCC ID: QISHG630V2

Home Gateway

Model: HG630 V2

WiFi Transceiver

Report No.: 140717005SZN-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 [10-1-13]

Prepared and Checked by:

Approved by:

Sign on file

Lin Lin
Senior Project Engineer



Digitally signed
by Andy Yan
Location: Intertek
Testing Services

Andy Yan
Project Engineer
Date: 25 July 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.
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TRF no.: FCC 15C_Tx_b

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MEASUREMENT/TECHNICAL REPORT

Huawei Technologies Co.,Ltd - MODEL: HG630 V2

FCC ID: QISHG630V2

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 [10-01-13 Edition] provision.

Report prepared by:

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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
Cover Letter	Confidentiality Letter	request.pdf
RF Exposure report	RF exposure	RF exposure.pdf
User Manual	User Manual	manual.pdf

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EXHIBIT 1

SUMMARY OF TEST RESULTS

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1.0 Summary of Test

Huawei Technologies Co.,Ltd - MODEL: HG630 V2

FCC ID: QISHG630V2

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.

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EXHIBIT 2

GENERAL DESCRIPTION

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2.0 General Description

2.1 Product Description

The Equipment Under Test (EUT) is a Home Gateway, Model: HG630 V2 operating at 2412-2462MHz for 802.11b/g/n-HT20, 11 channels with 5MHz channel spacing. EUT operated at 2422-2452MHz for 802.11n-HT40, 7 channels with 5MHz channel spacing. It is powered by AC/DC Adapter (Input: 100-240Vac, 50/60Hz; Output: 12V, 1A). The EUT including 3 antennas, the RF IC support 2*3 and optional diversity with 3 antennas, 802.11b SISO mode work at Ant1 only, 802.11g/n SISO mode and 801.11n-HT20/HT40 MIMO mode work at Ant1\Ant2\Ant3. Ant2 is only for reception, and Ant1\ Ant3 could be used for transmission and reception. For more detailed features description, please refer to the user's manual.

Antenna distribution diagram:

Ant1 Gain: 1dBi; Ant3 Gain: 1dBi; Ant2 (only receive)

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

Antenna Type: Integral Antenna.

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

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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. Data Transfer and other function: (Report No.: 140717005SZN-002).

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

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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. It was powered by AC/DC Adapter Input: 120Vac, 60Hz 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.

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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.

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3.6 Support Equipment List and Description

This product was tested in the following configuration:

Refer List:

Description	Manufacturer	Model No.	
Laptop	Lenovo	T420	
Hard Disk	Smart.drive	HD-003	
USB Cable	Smart.drive	Unshielded, Length 155cm	
1394 Cable	Smart.drive	Unshielded, Length 180cm	
RJ45 Cable*4	N/A	Unshielded, Length: 200cm	
RJ11 Cable*1	N/A	Unshielded, Length: 600cm	
DSL simulator	Huawei	02GN	
USB storage	Kingston	2GB	
AC Adapter	Huawei	Xinqiao	HW-120050U1W Input:100-240V 50/60Hz; Output: 12Vdc, 1A
		Huntkey	
		Note: This production has two AC/DC Adapter suppliers, and had been arranged testing separately, and the worst-case test data was recorded in this report.	
Router*4	TP-LINK	TL-MR11U	

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EXHIBIT 4

MEASUREMENT RESULTS

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Applicant: Huawei Technologies Co.,Ltd
Model: HG630 V2

Date of Test: 17 July 2014

4.0 Measurement Results

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

[x] The antenna power of the EUT was connected to the power sensor and power meter. 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 = 1dBi) (DBPSK, 1Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	18.82	76.21
Middle Channel: 2437	18.52	71.12
High Channel: 2462	18.59	72.28

IEEE 802.11g (Antenna Gain = 1dBi) (BPSK, 6Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	22.23	167.11
Middle Channel: 2437	24.42	276.69
High Channel: 2462	22.54	179.47

IEEE 802.11n-HT20 (SISO) (Antenna Gain = 1dBi) (BPSK, 6.5Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	21.85	153.11
Middle Channel: 2437	24.54	284.45
High Channel: 2462	21.23	132.74

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IEEE 802.11n-HT20 (MIMO) (Antenna Gain = 4dBi, Note3) (BPSK, 13Mbps)			
Frequency (MHz)	Output in dBm		Output in mWatt Total power
	Ant1	Ant3	
Low Channel: 2412	19.84	20.12	199.18
Middle Channel: 2437	21.32	22.62	318.33
High Channel: 2462	19.65	18.76	167.42

IEEE 802.11n-HT40 (SISO) (Antenna Gain = 1dBi) (BPSK, 13.5Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2422	21.32	135.52
Middle Channel: 2437	24.64	291.07
High Channel: 2452	21.65	146.22

IEEE 802.11n-HT40 (MIMO) (Antenna Gain = 4dBi, Note3) (BPSK, 27Mbps)			
Frequency (MHz)	Output in dBm		Output in mWatt Total power
	Ant1	Ant3	
Low Channel: 2422	18.56	19.40	158.88
Middle Channel: 2437	21.65	21.43	285.21
High Channel: 2452	18.65	19.65	165.54

The test plots are attached as below.

Note 1: For MIMO system of 802.11n 20MHz and 40MHz, total power is calculated by combining the output power of each antenna according to KDB662911.

Note 2: Antenna1 Gain: 1dBi, Antenna 3 Gain: 1dBi

Note 3: In MIMO, Ant1+Ant3 Directional gain = $G_{ANT} + 10 \log(N)$ dBi = $1 + 10 \log(2) = 4$ dBi, so the Power limit is 30dBm (1000mW);

Cable loss, external attenuation has been included in OFFSET function

EUT dBm max. output level = 318.33mW (802.11n-HT20 MIMO, Ant1+Ant3, 2437MHz)

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

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Applicant: Huawei Technologies Co.,Ltd
Model: HG630 V2

Date of Test: 17 July 2014

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 RES BW 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 (DBPSK, 1Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	9.8
2437	9.8
2462	9.8

IEEE 802.11g (BPSK, 6Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	16.5
2437	16.5
2462	16.5

IEEE 802.11n-HT20 SISO(BPSK, 6.5Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	17.7
2437	17.7
2462	17.7

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IEEE 802.11n-HT20 MIMO Ant 1(BPSK, 13Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	17.8
2437	17.7
2462	17.7

IEEE 802.11n-HT20 MIMO Ant 3(BPSK, 13Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	17.8
2437	17.7
2462	17.7

IEEE 802.11n-HT40 SISO(BPSK, 13.5Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2422	36.2
2437	35.8
2452	36.2

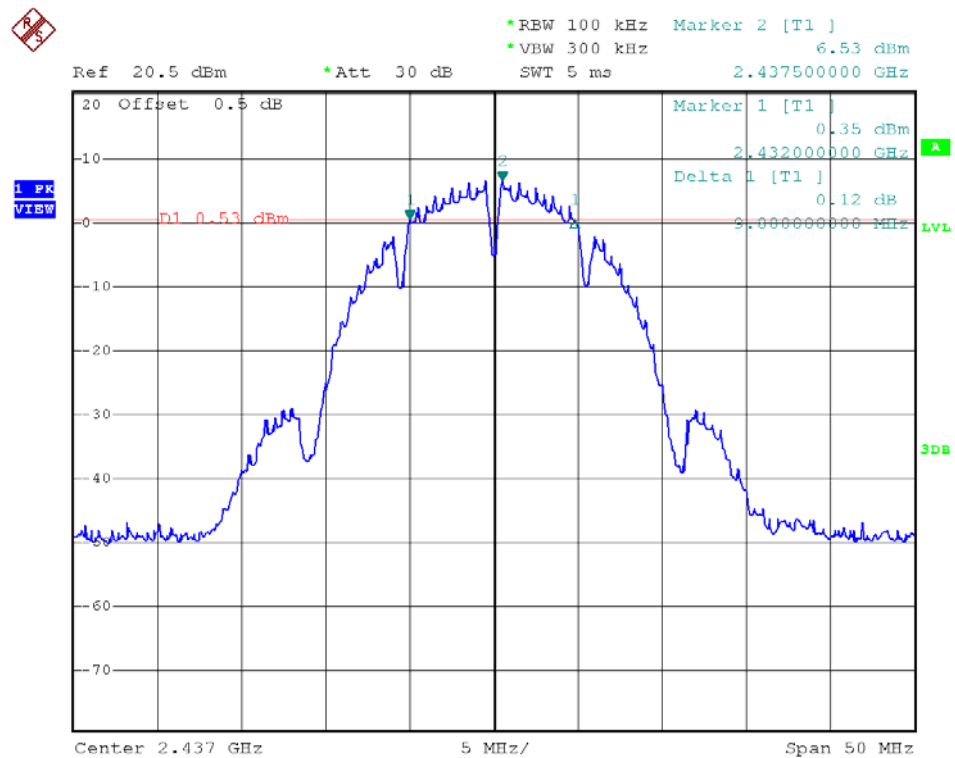
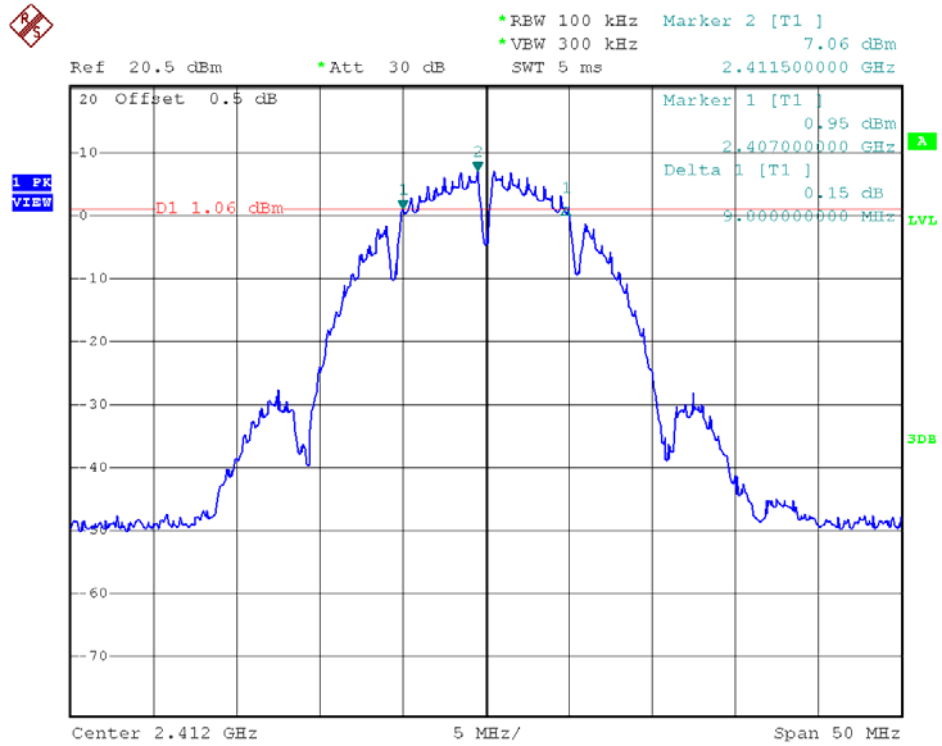
IEEE 802.11n-HT40 MIMO Ant 1(BPSK, 27Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2422	36.2
2437	36.2
2452	36.2

IEEE 802.11n-HT40 MIMO Ant 3(BPSK, 27Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2422	35.8
2437	35.8
2452	36.0

The test plots are attached as below.

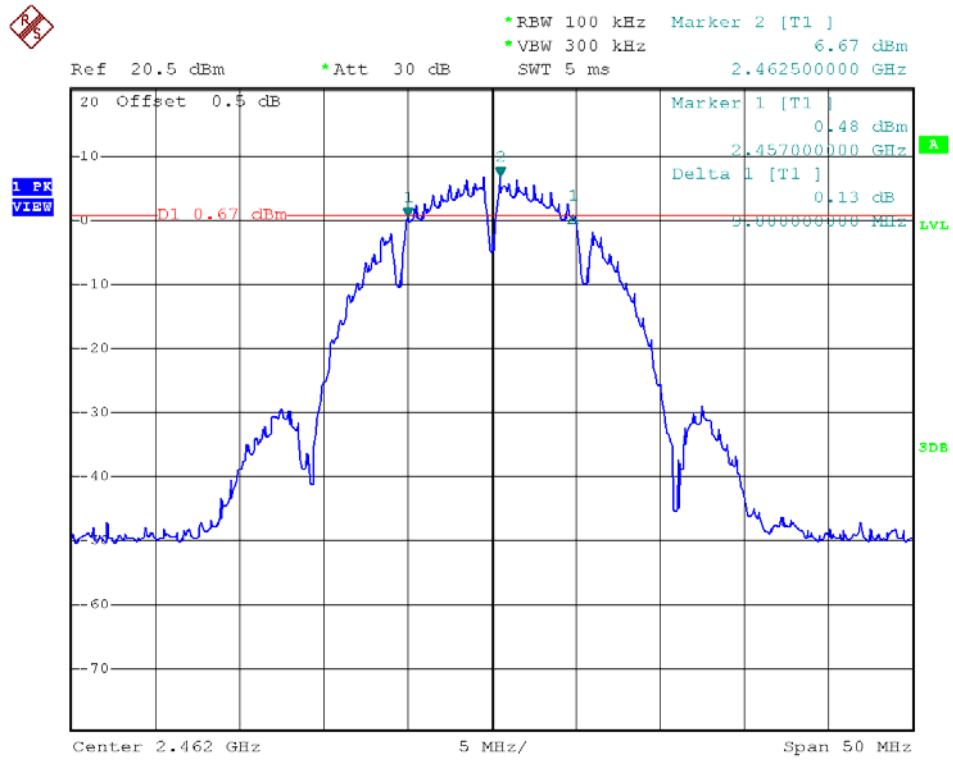
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802.11b



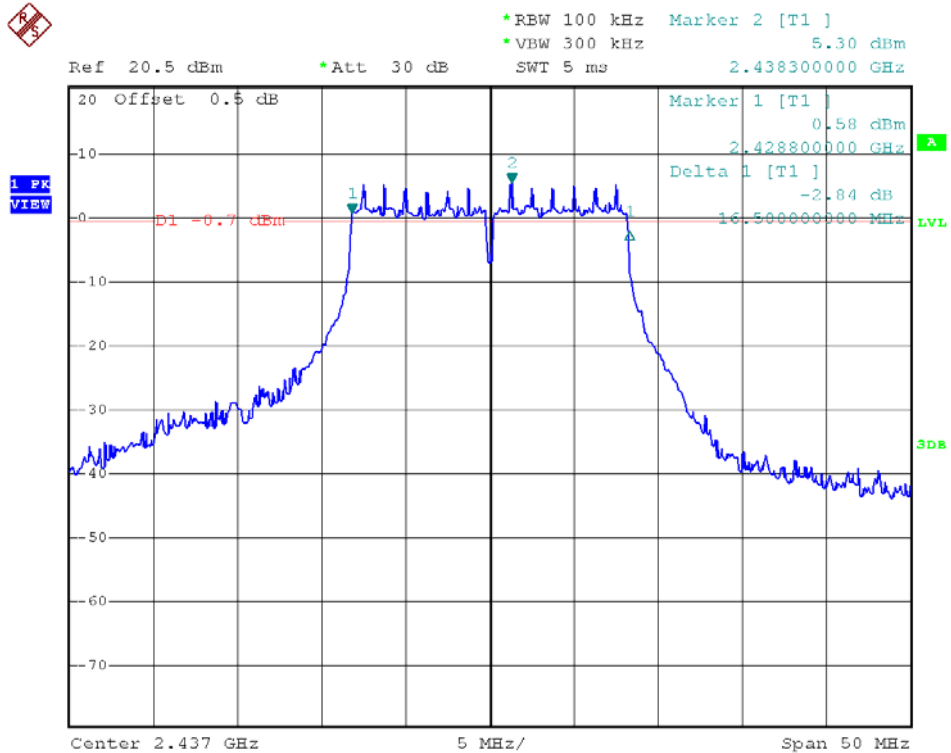
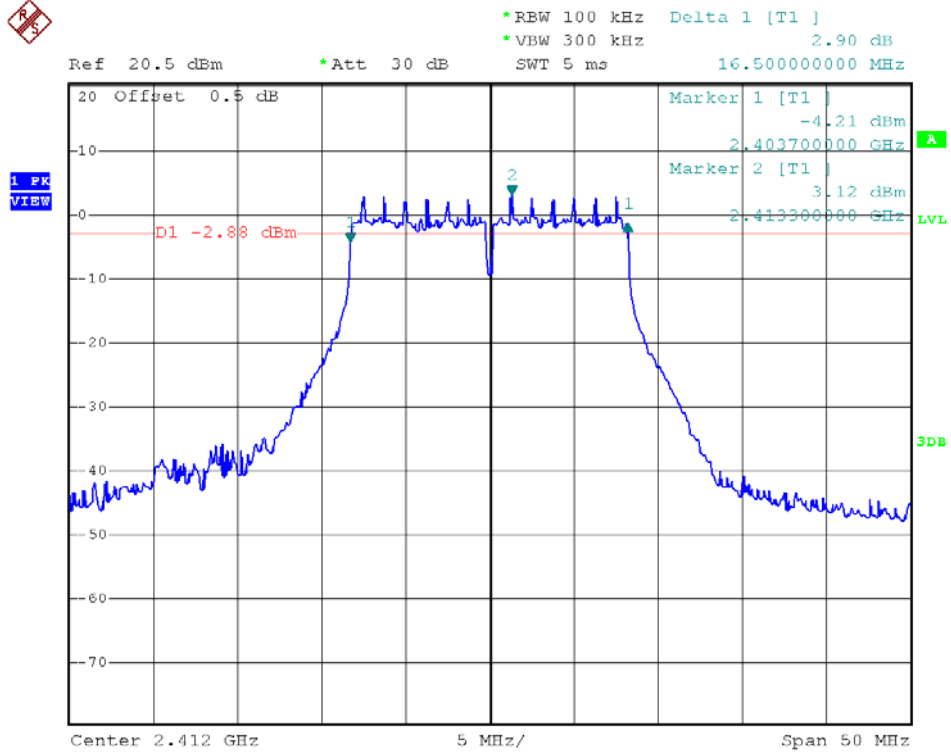
TRF no.: FCC 15C_TX_b
 FCC ID: QISHG630V2
 Report No.: 140717005SZN-001

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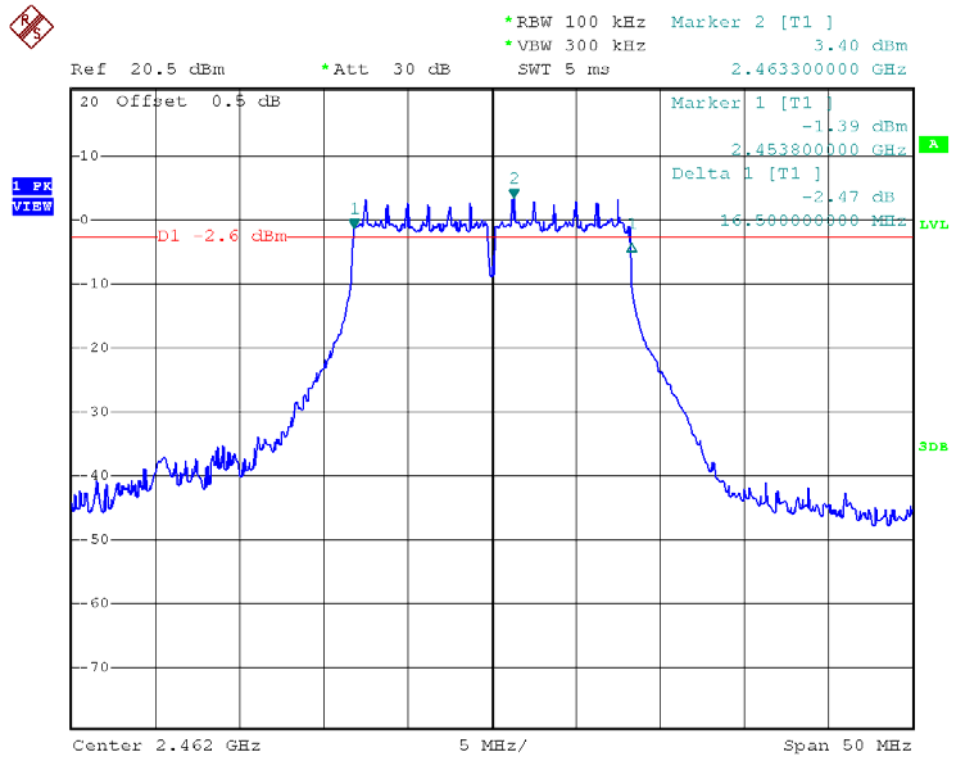
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802.11g



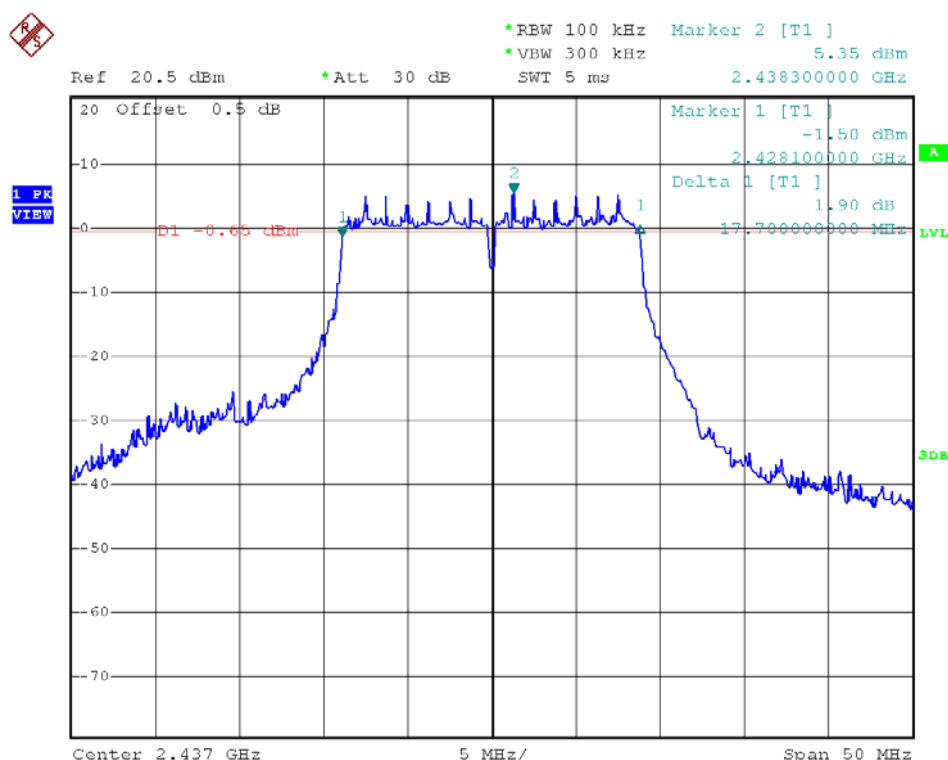
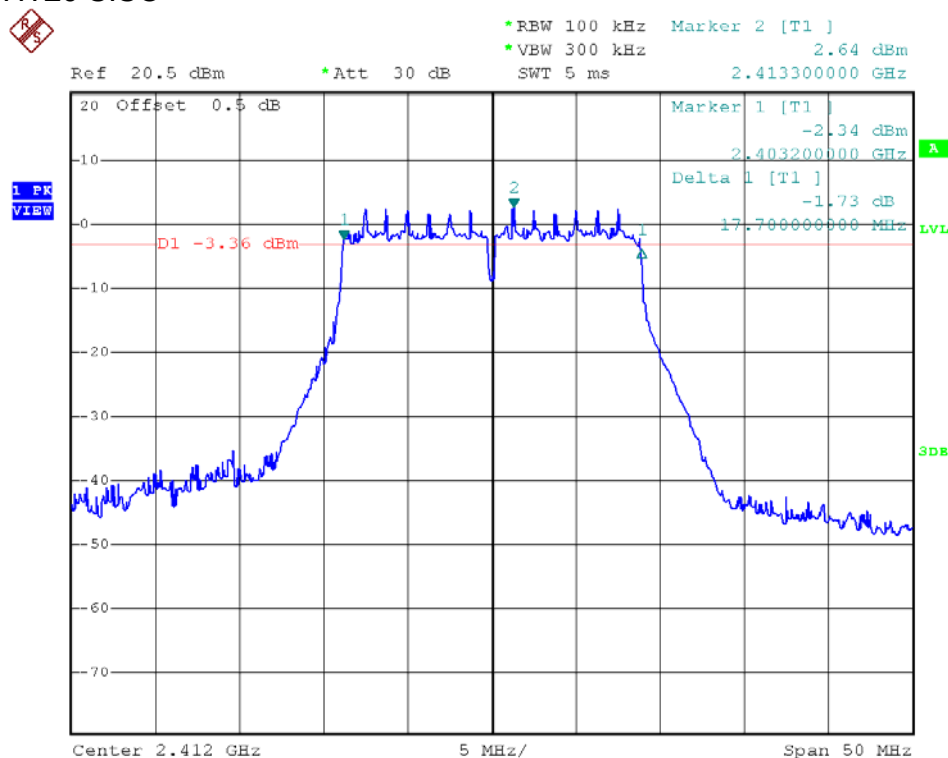
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Report No.: 140717005SZN-001

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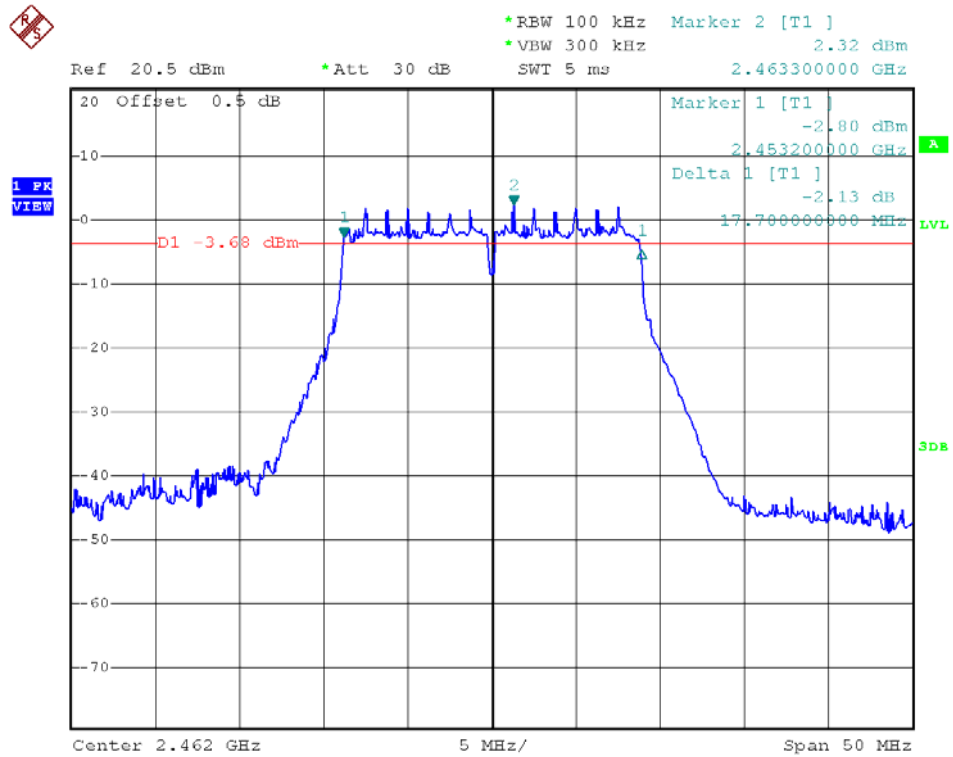
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802.11n-HT20 SISO



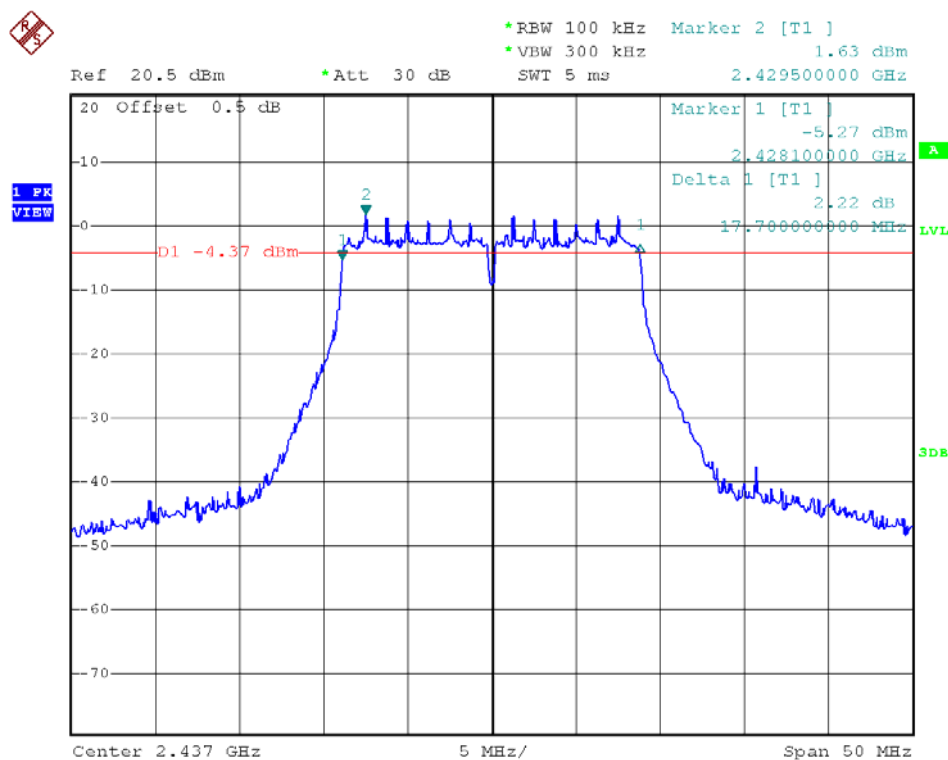
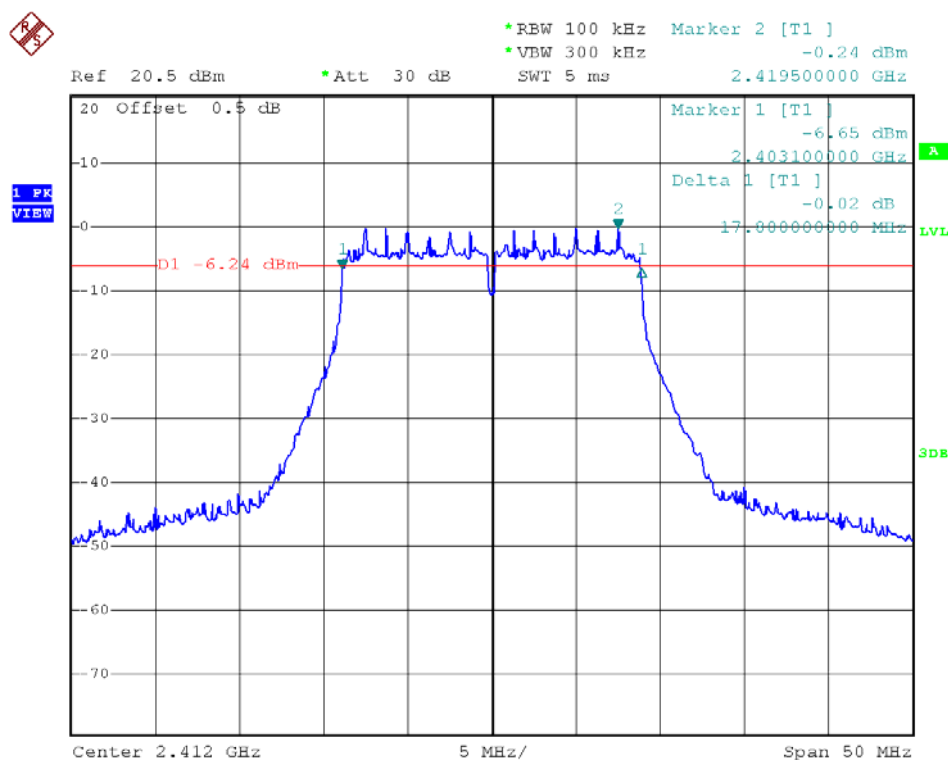
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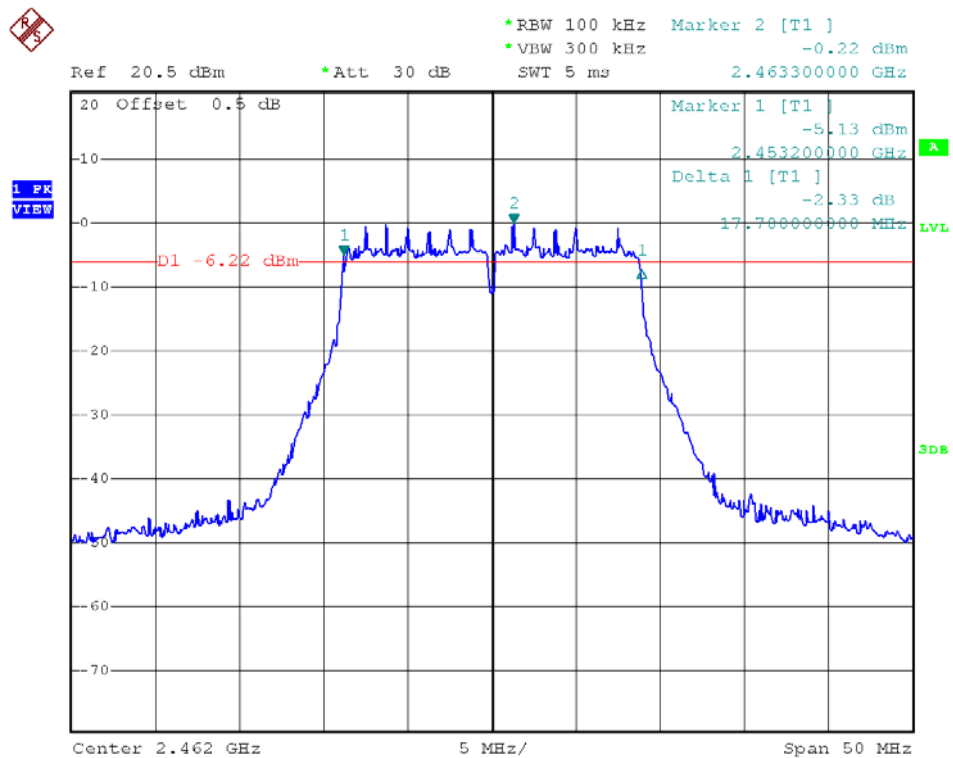
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802.11n-HT20 MIMO Ant1



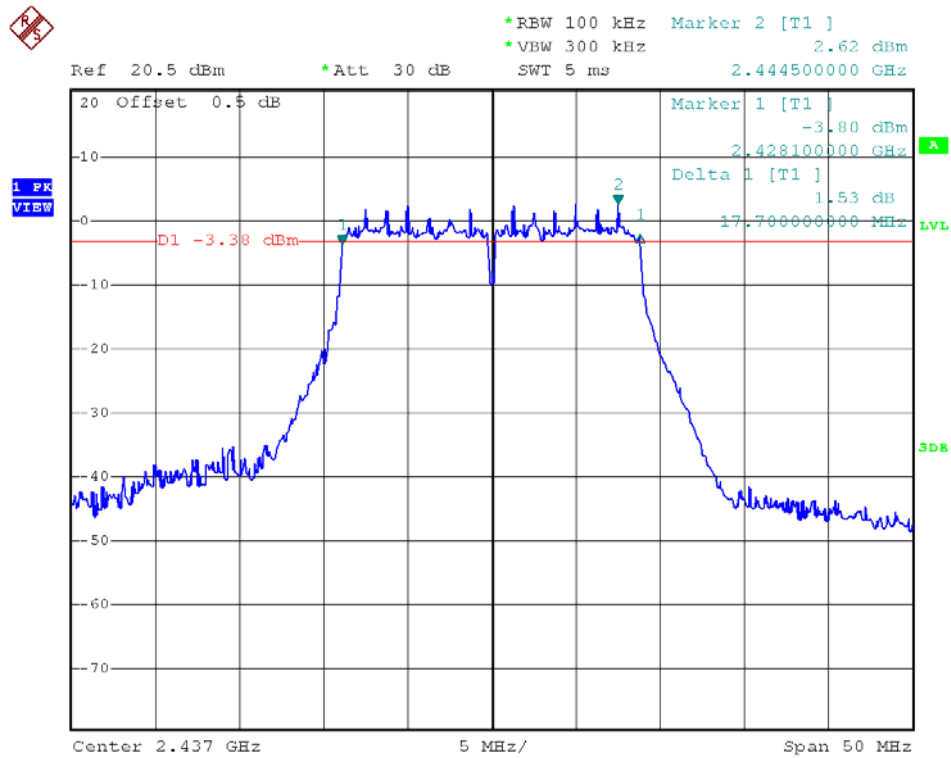
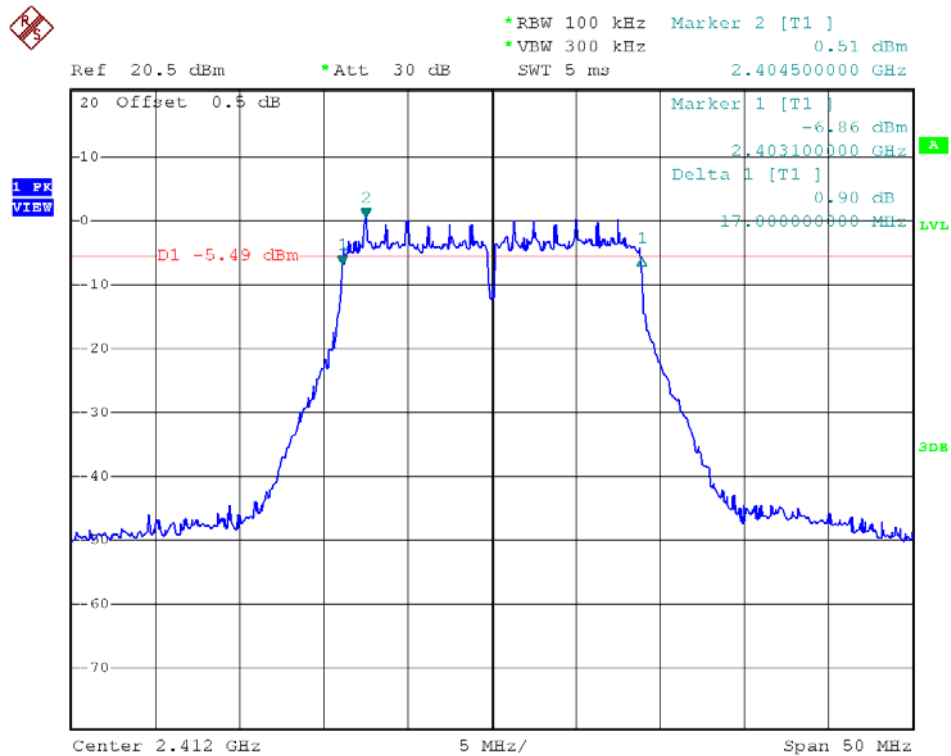
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 FCC ID: QISHG630V2
 Report No.: 140717005SZN-001

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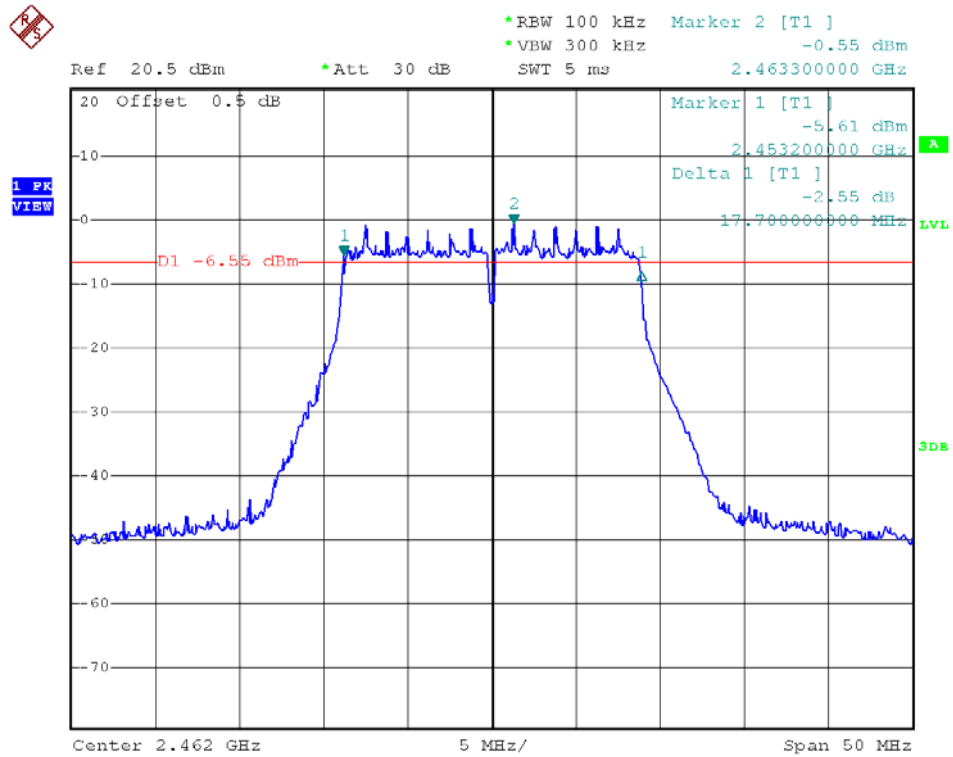
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802.11n-HT20 MIMO Ant3



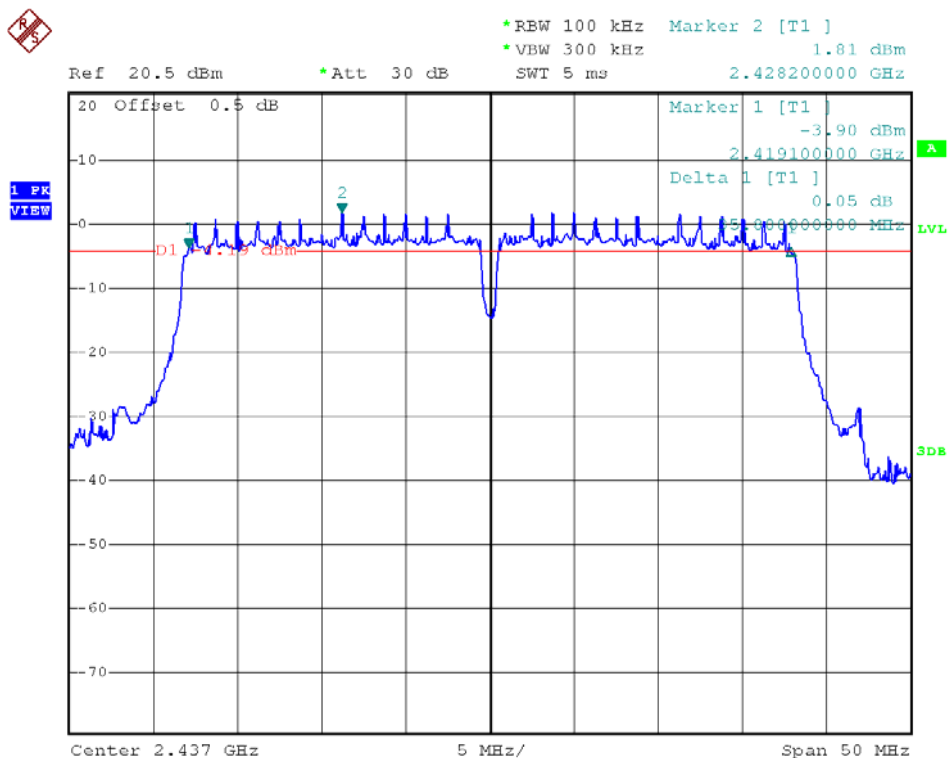
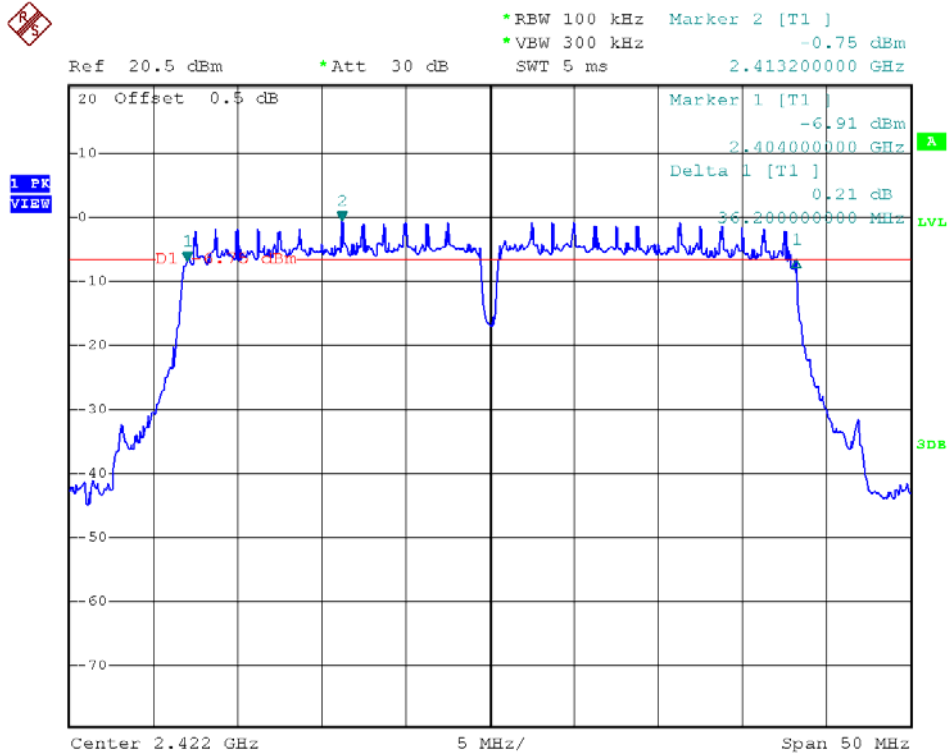
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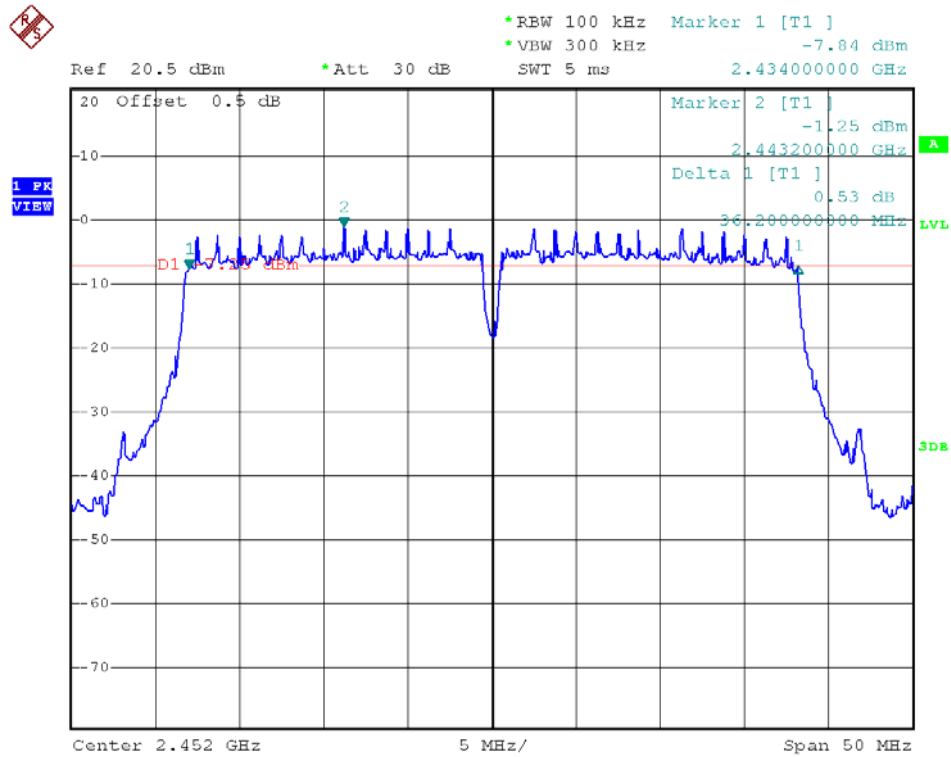
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802.11n-HT40 SISO



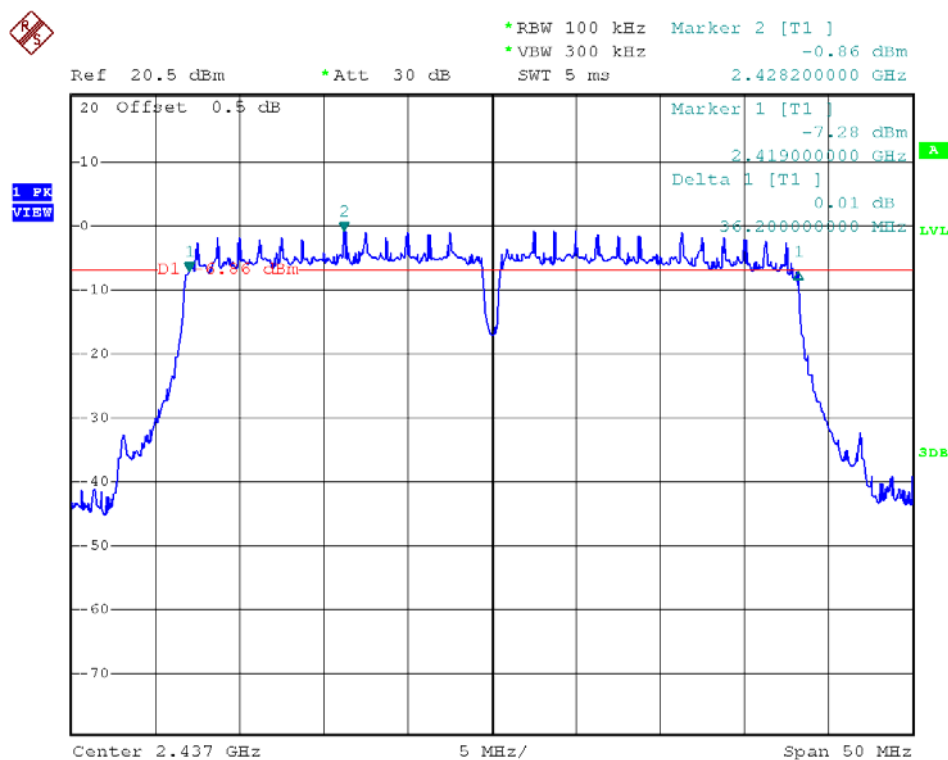
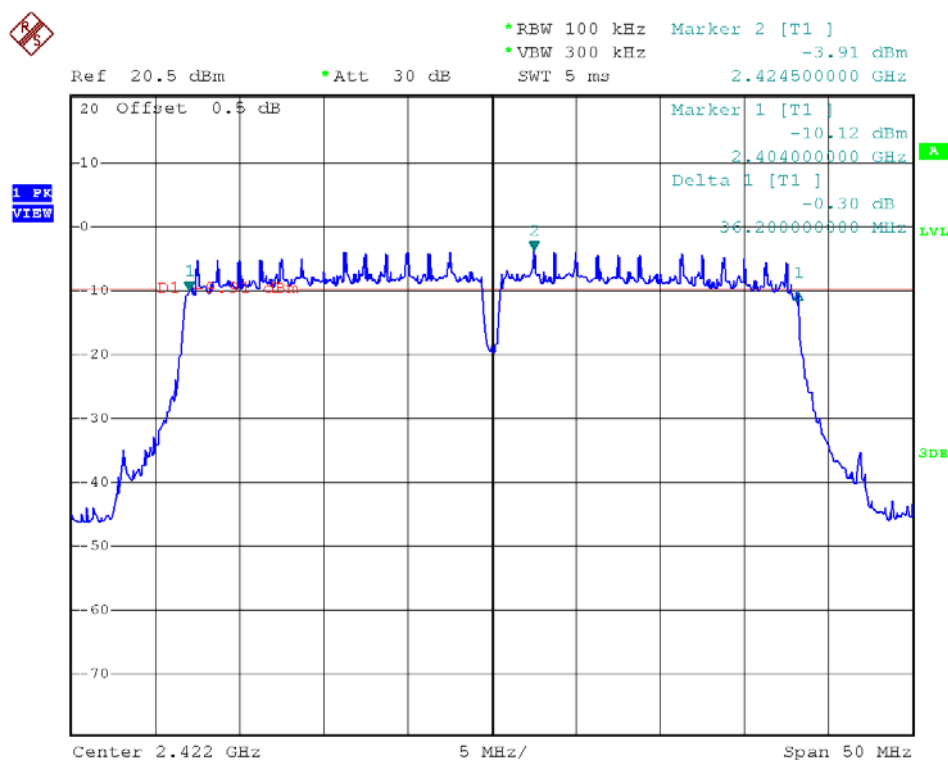
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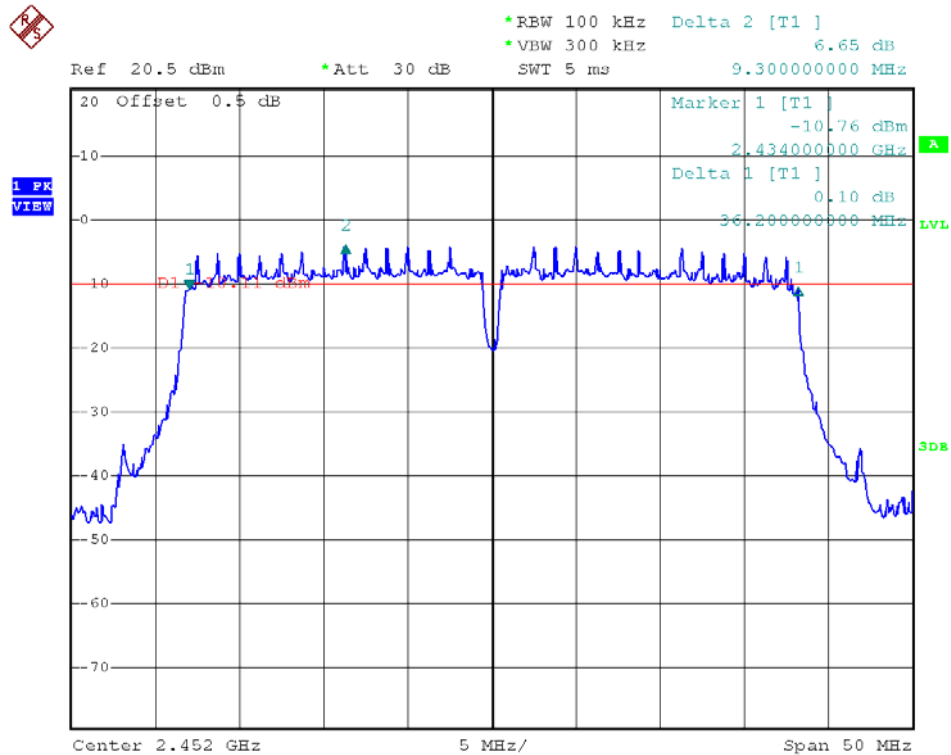
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802.11n-HT40 MIMO Ant1



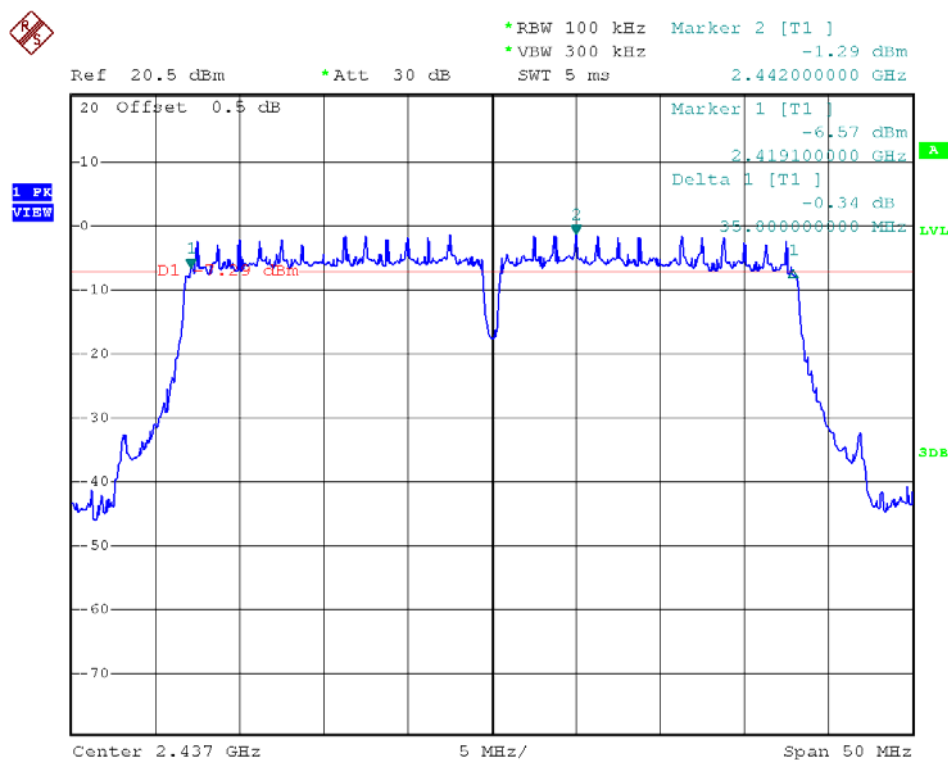
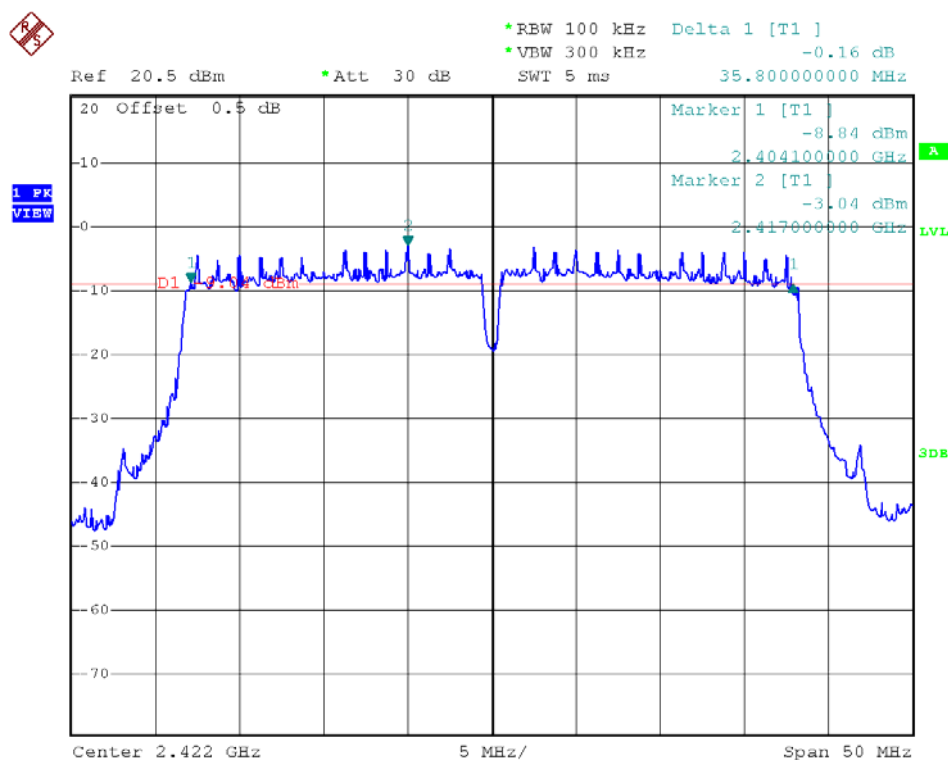
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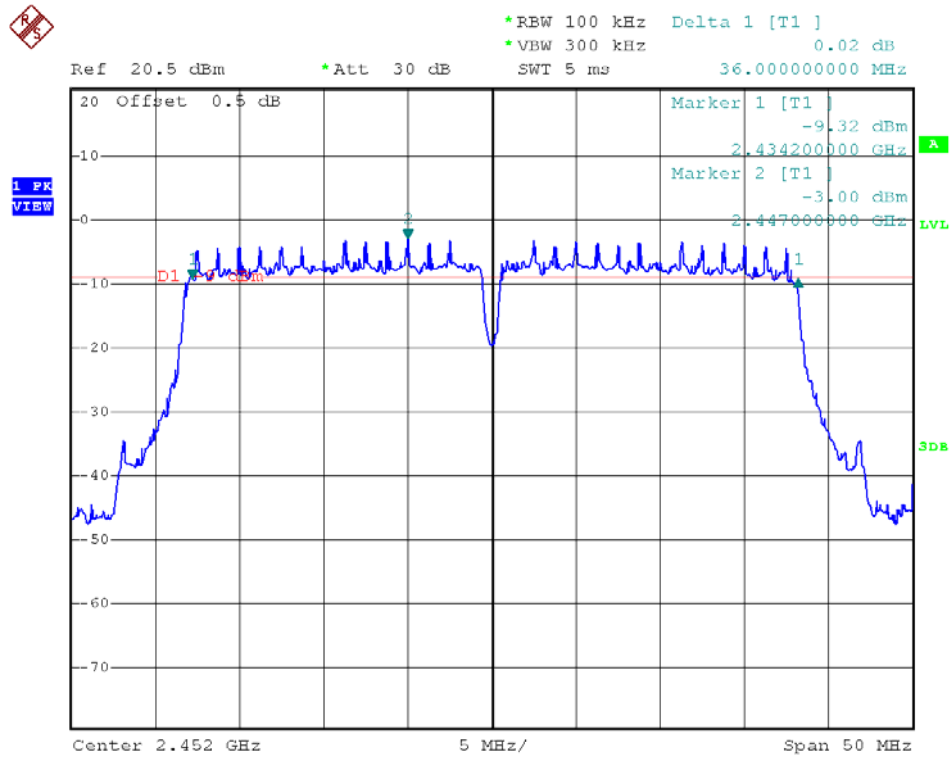
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802.11n-HT40 MIMO Ant3



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FCC ID: QISHG630V2
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Applicant: Huawei Technologies Co.,Ltd
Model: HG630 V2

Date of Test: 17 July 2014

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.

For MIMO system, both the antenna ports is checked, the worst case power density is calculated from the method of Measure by adding $10\log N$ according KDB662911.

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

Unit: dBm

IEEE 802.11b (DBPSK, 1Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	6.84
2437	6.47
2462	6.56

IEEE 802.11g (BPSK, 6Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	2.66
2437	5.15
2462	3.19

IEEE 802.11n-HT20 SISO (BPSK, 6.5Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	2.33
2437	5.12
2462	1.98

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Unit: dBm

IEEE 802.11n-HT20 MIMO(BPSK, 13Mbps)			
Frequency (MHz)	Power Density with RBW 100KHz		
	ANT 1	ANT 3	Total
2412	-0.22	0.42	3.12
2437	1.65	2.68	5.21
2462	-0.59	-0.73	2.36

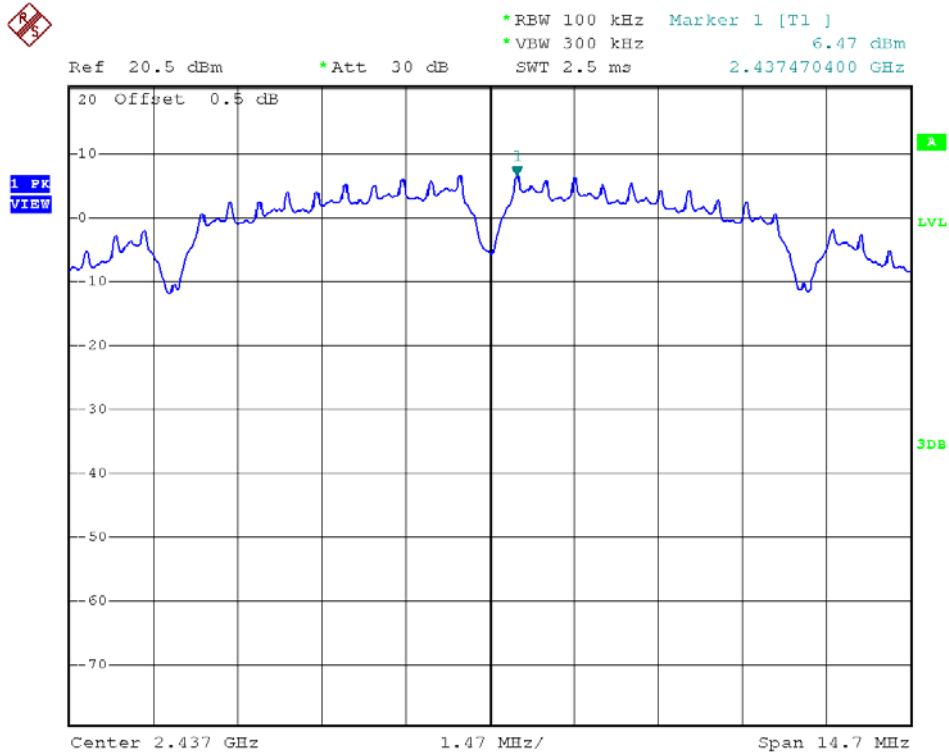
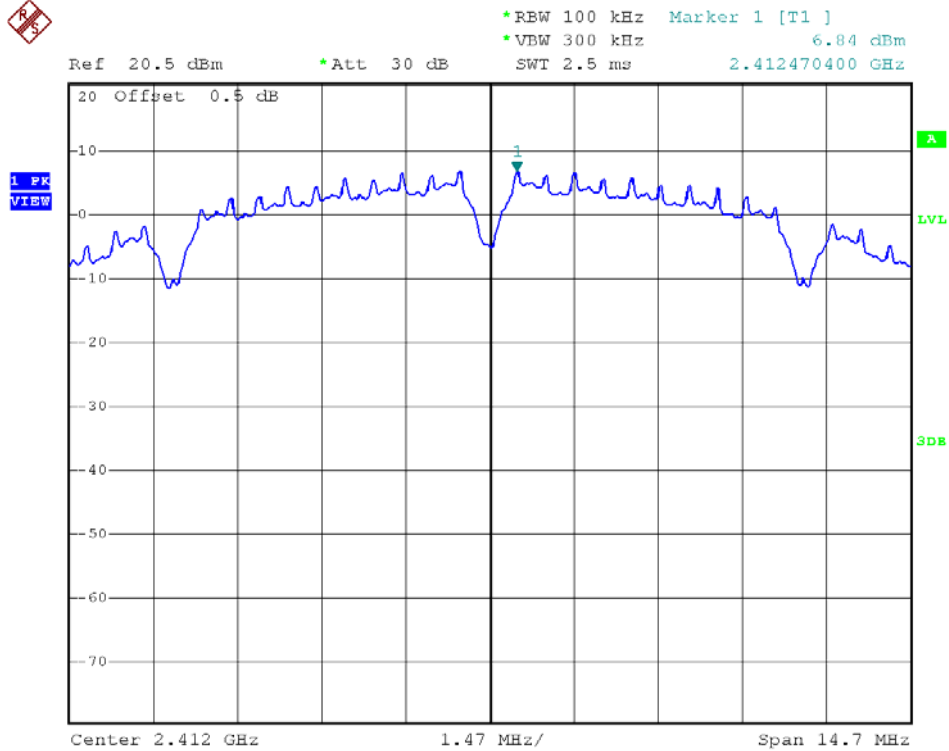
IEEE 802.11n-HT40 SISO (BPSK, 13.5Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2422	-0.92
2437	1.62
2452	-1.35

IEEE 802.11n-HT40 MIMO(BPSK, 27Mbps)			
Frequency (MHz)	Power Density with RBW 100KHz		
	ANT 1	ANT 3	Total
2422	-4.03	-3.21	-0.60
2437	-1.07	-1.20	1.88
2452	-4.27	-2.95	-0.56

The test plots are attached as below.

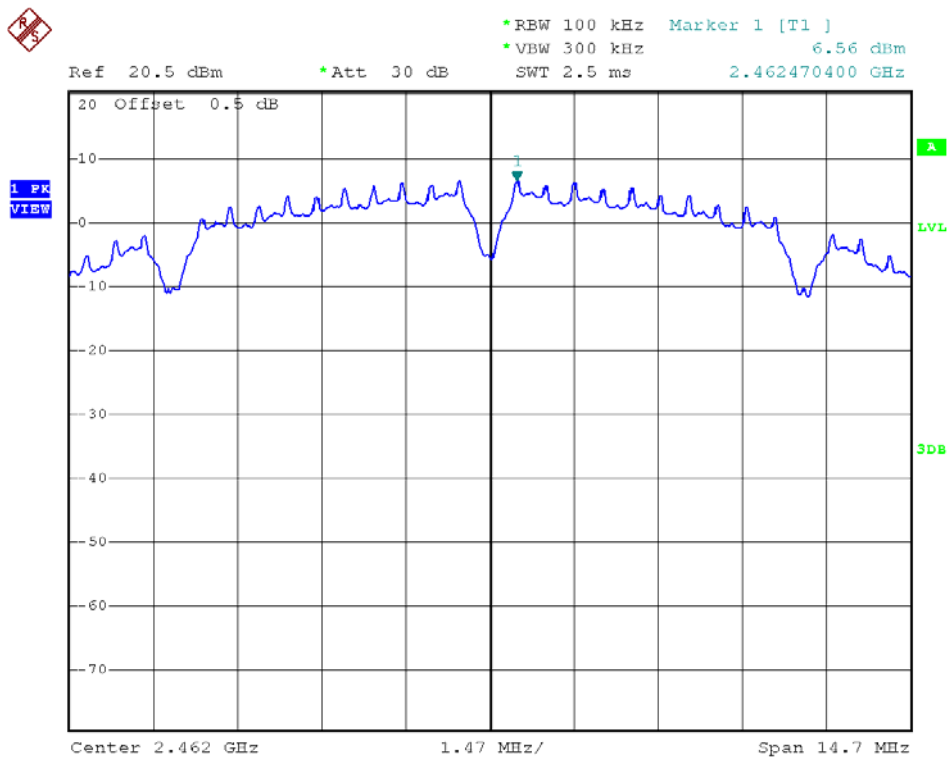
INTERTEK TESTING SERVICES

802.11b



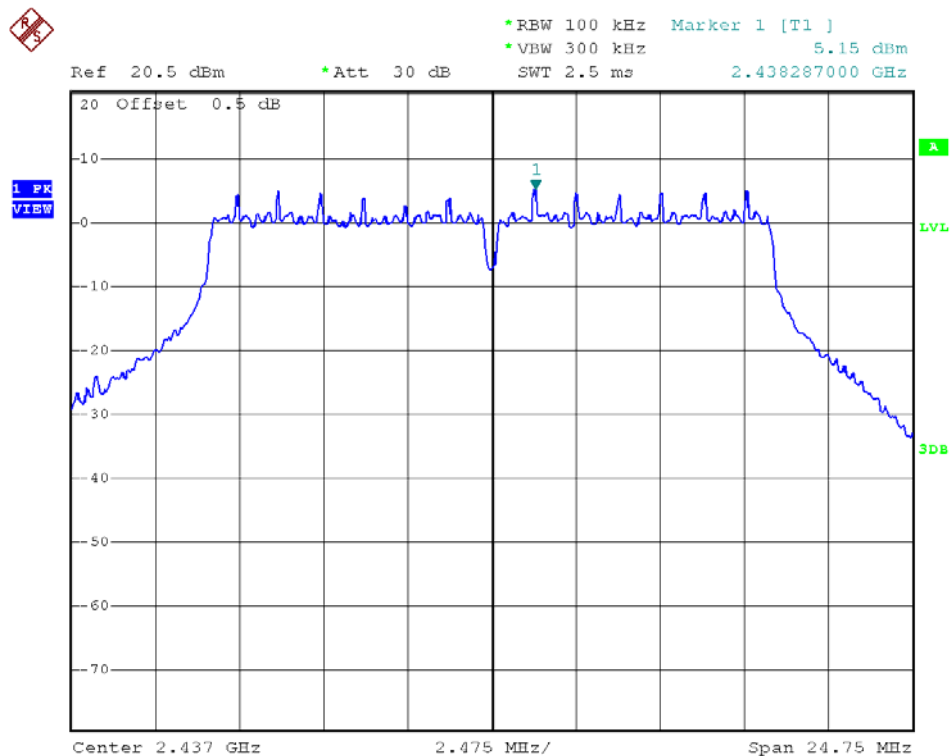
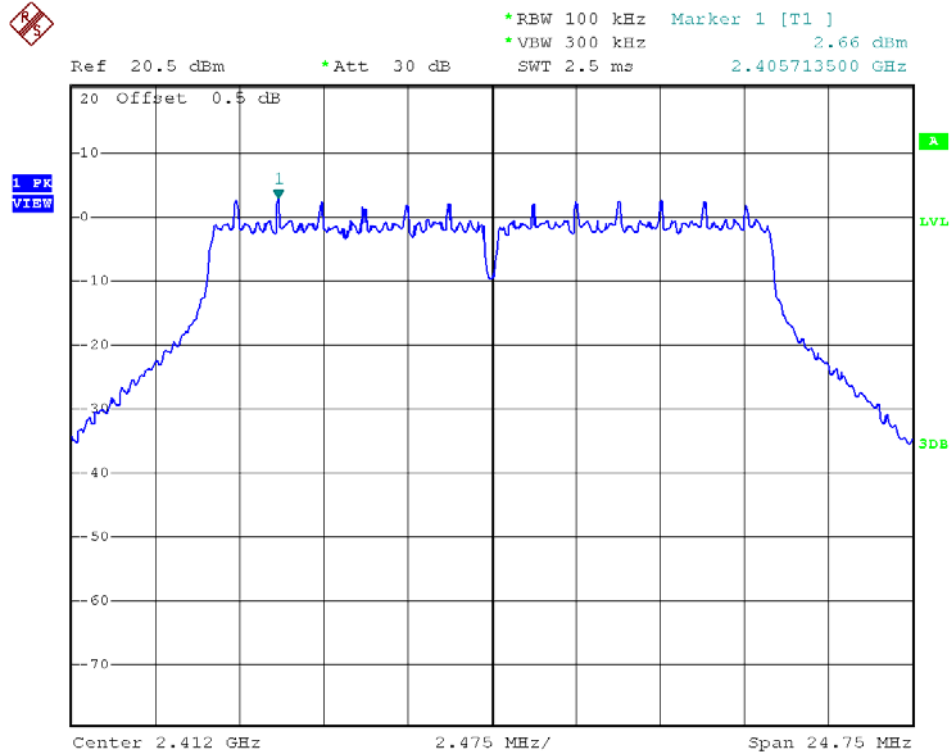
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



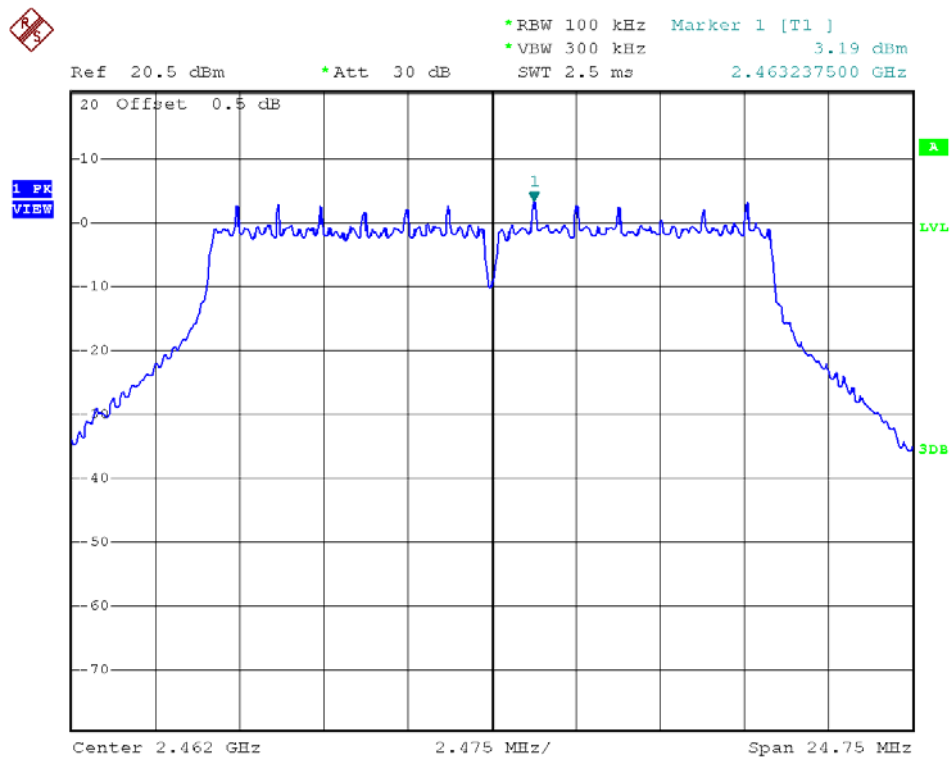
INTERTEK TESTING SERVICES

802.11g



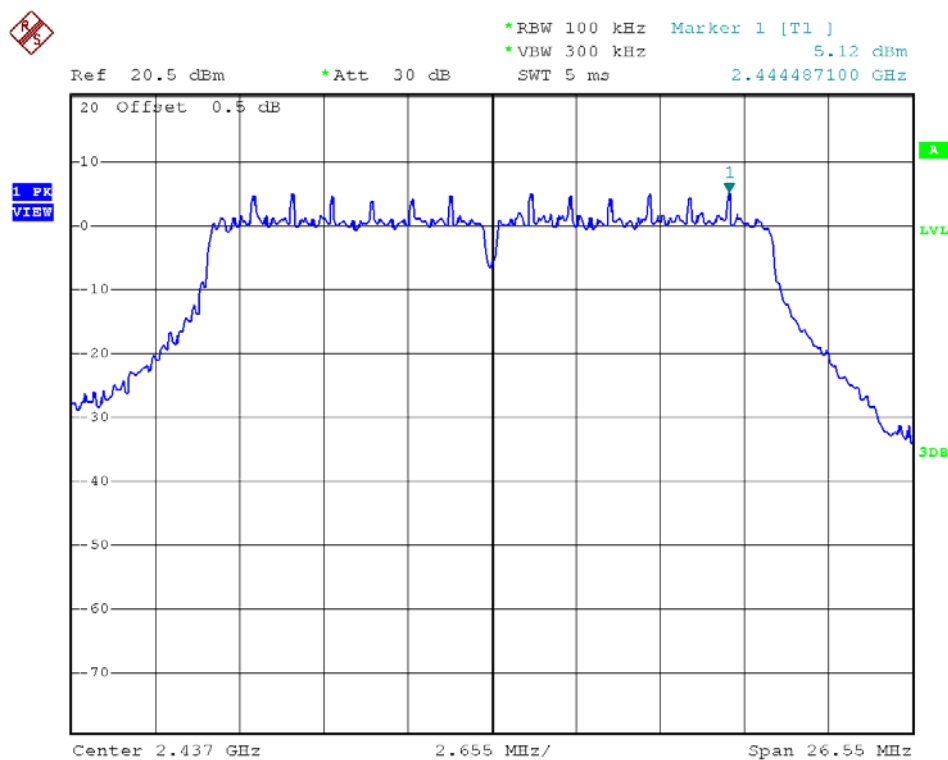
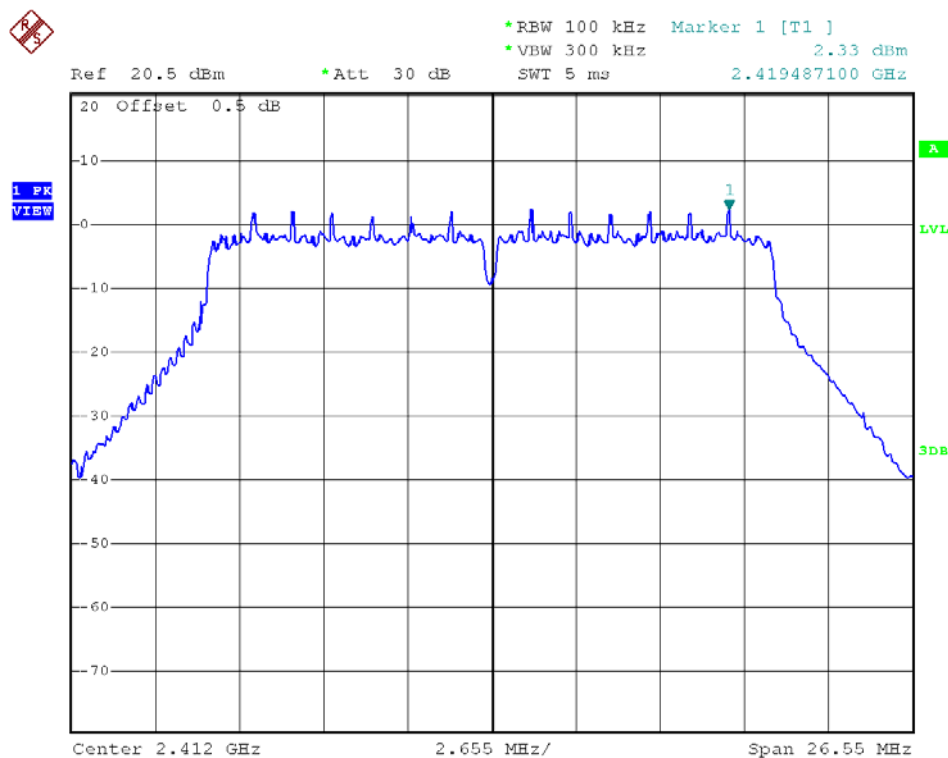
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



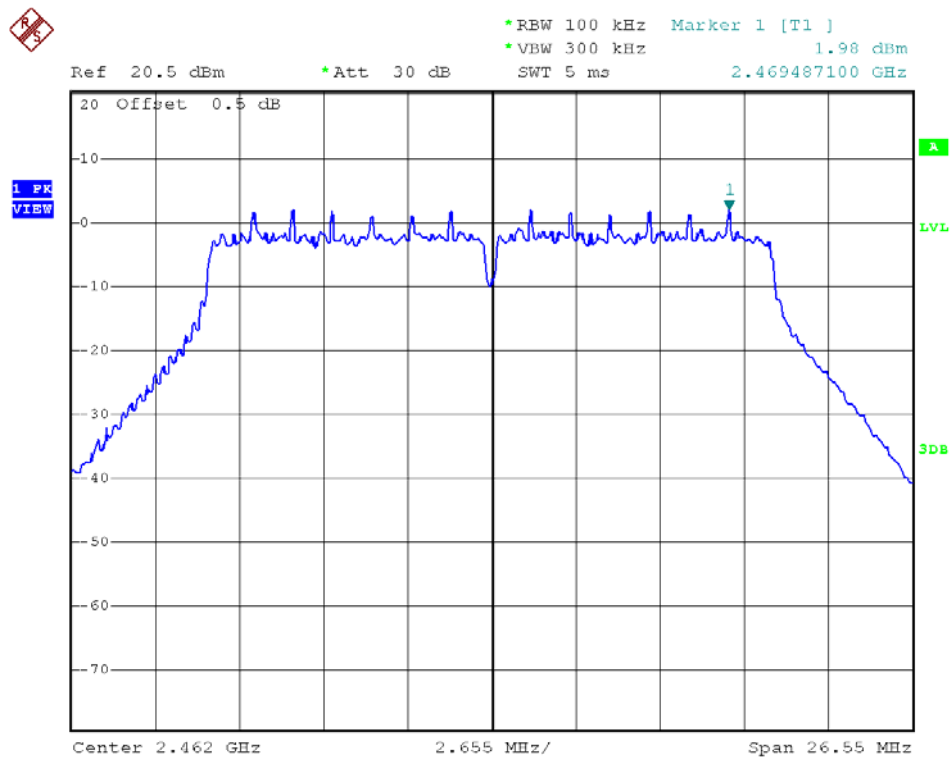
INTERTEK TESTING SERVICES

802.11n-HT20 SISO



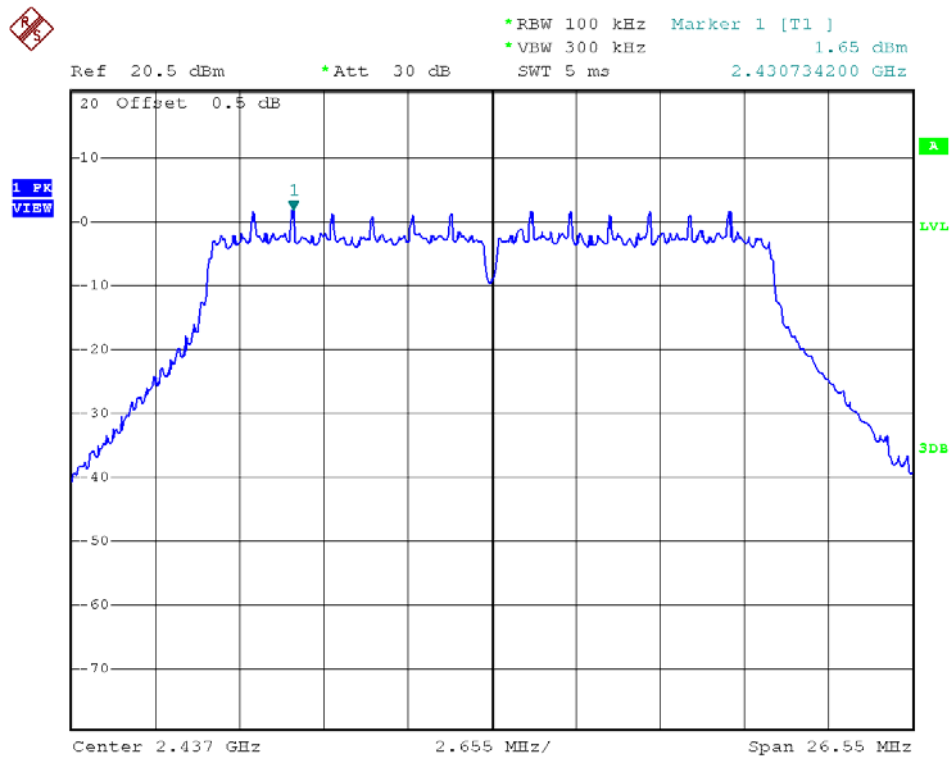
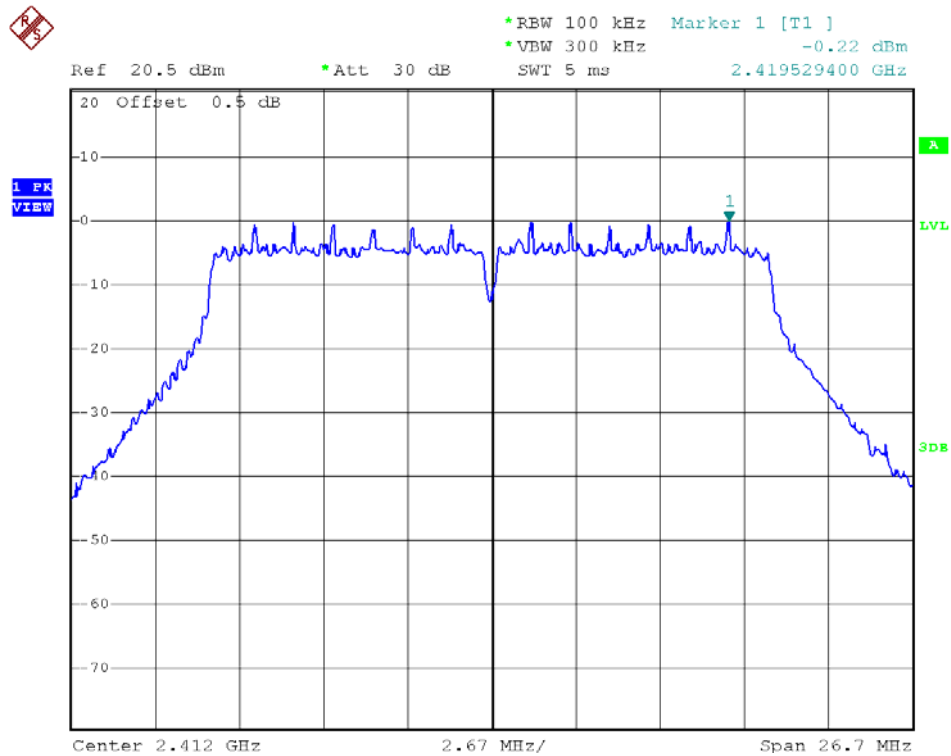
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



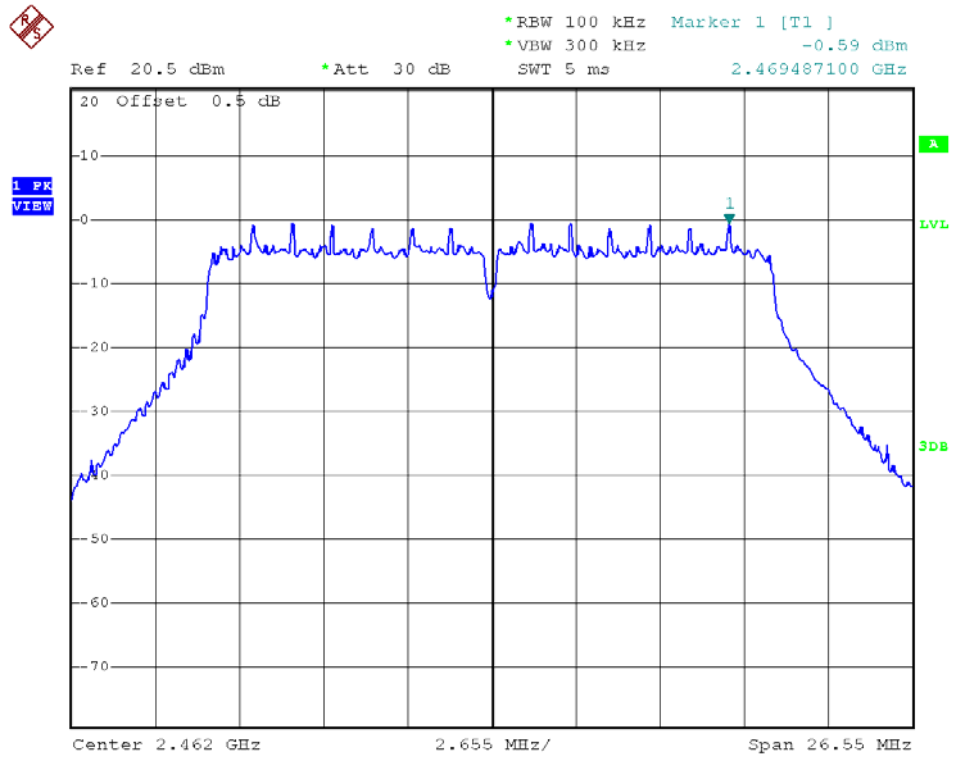
INTERTEK TESTING SERVICES

802.11n-HT20 MIMO Ant1



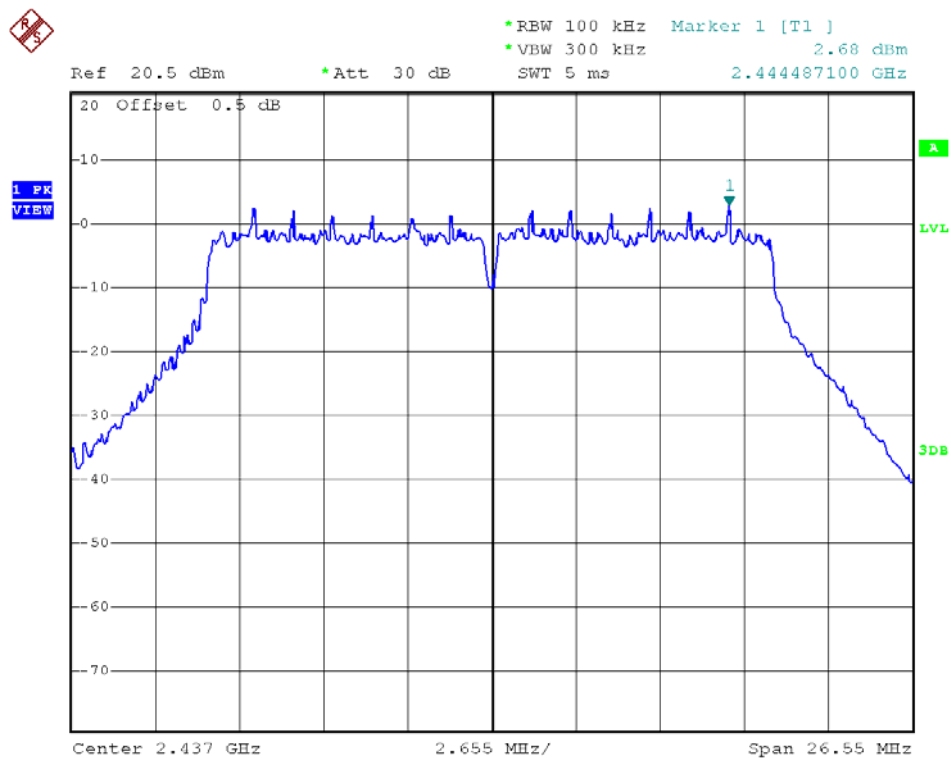
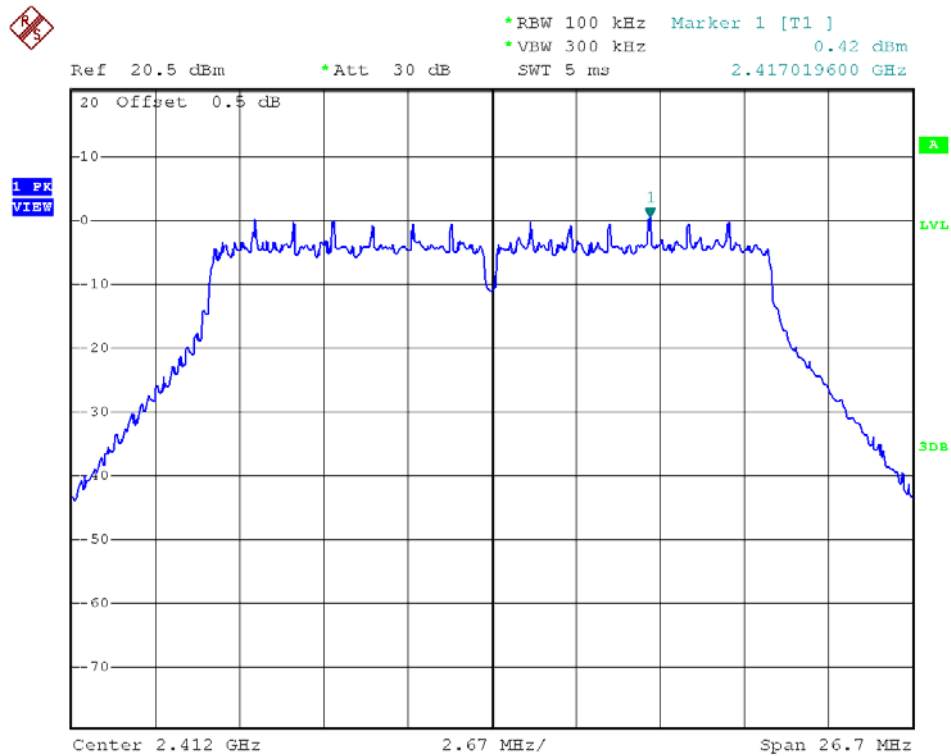
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



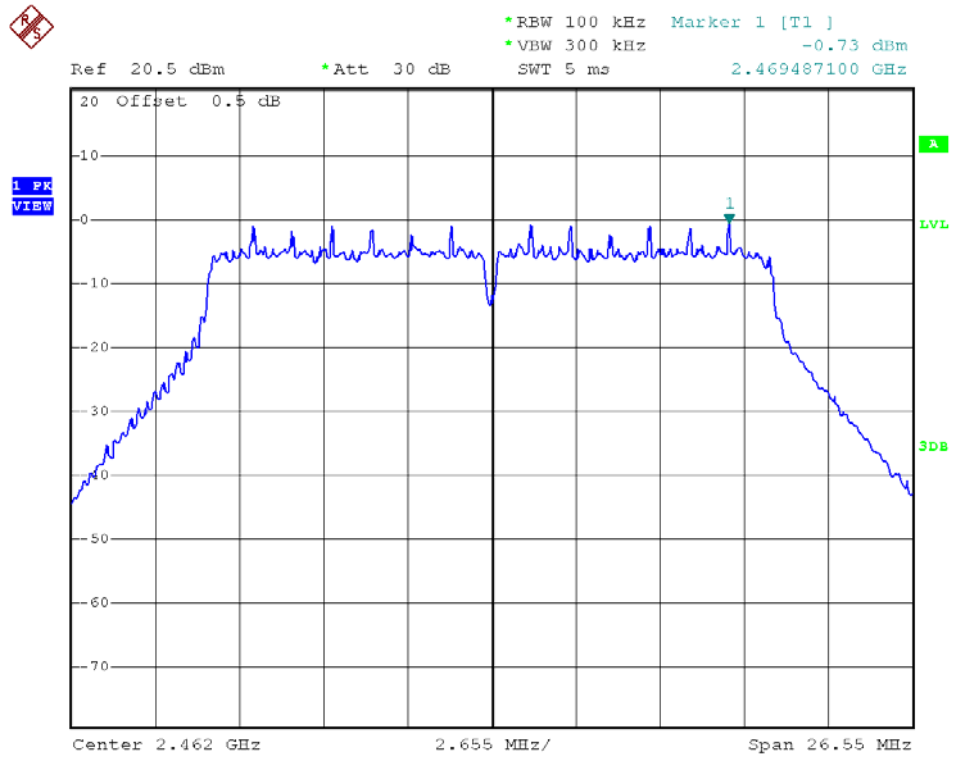
INTERTEK TESTING SERVICES

802.11n-HT20 MIMO Ant3



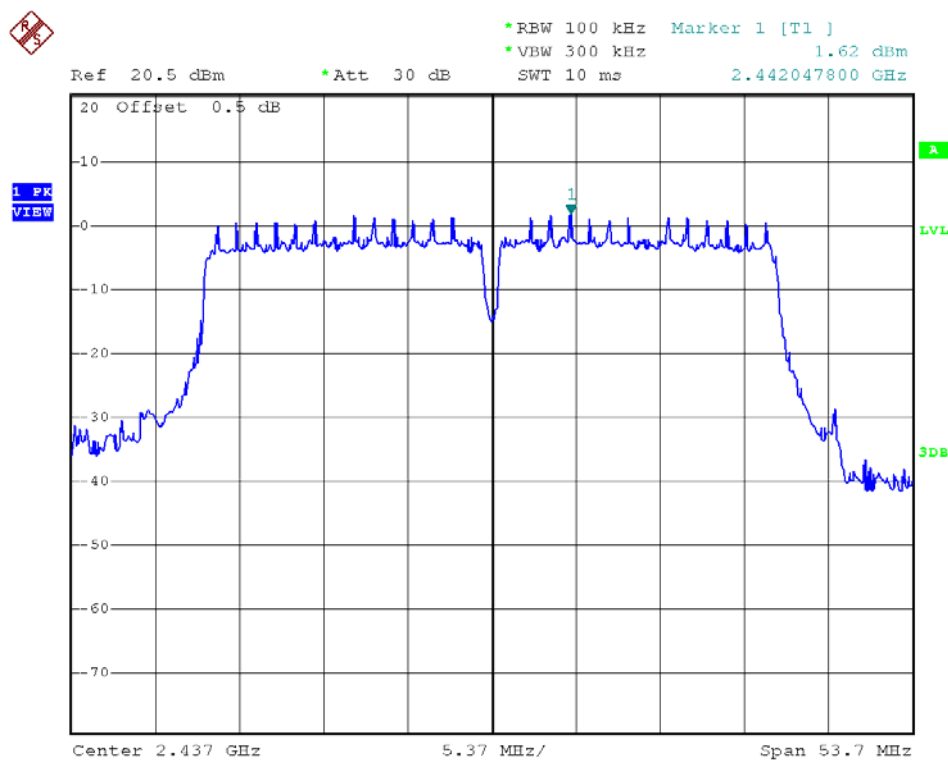
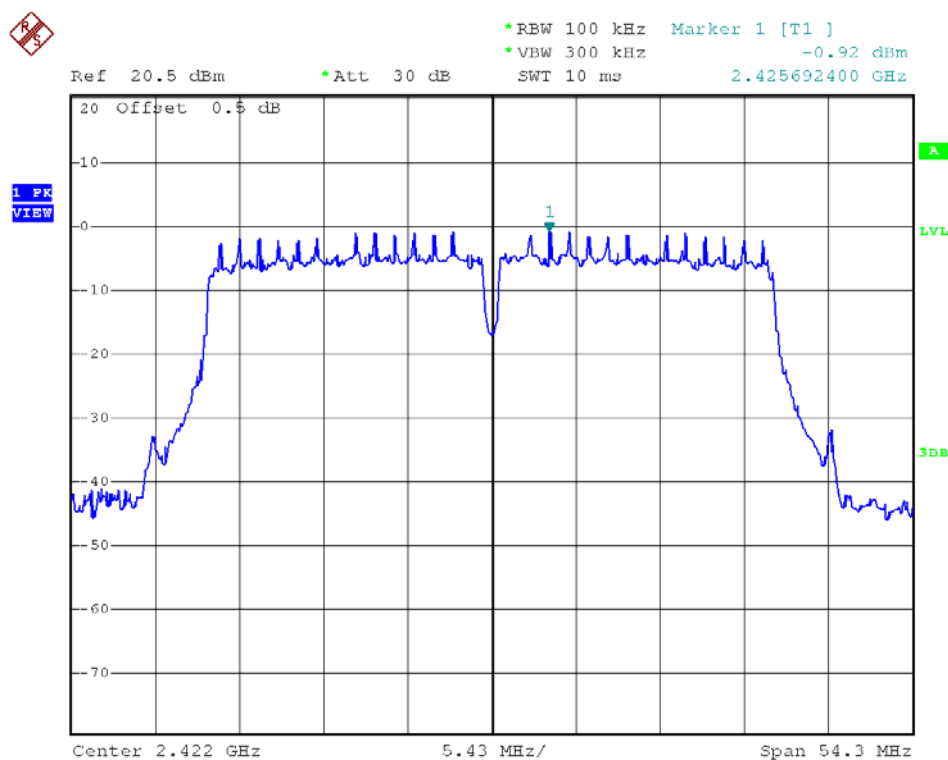
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



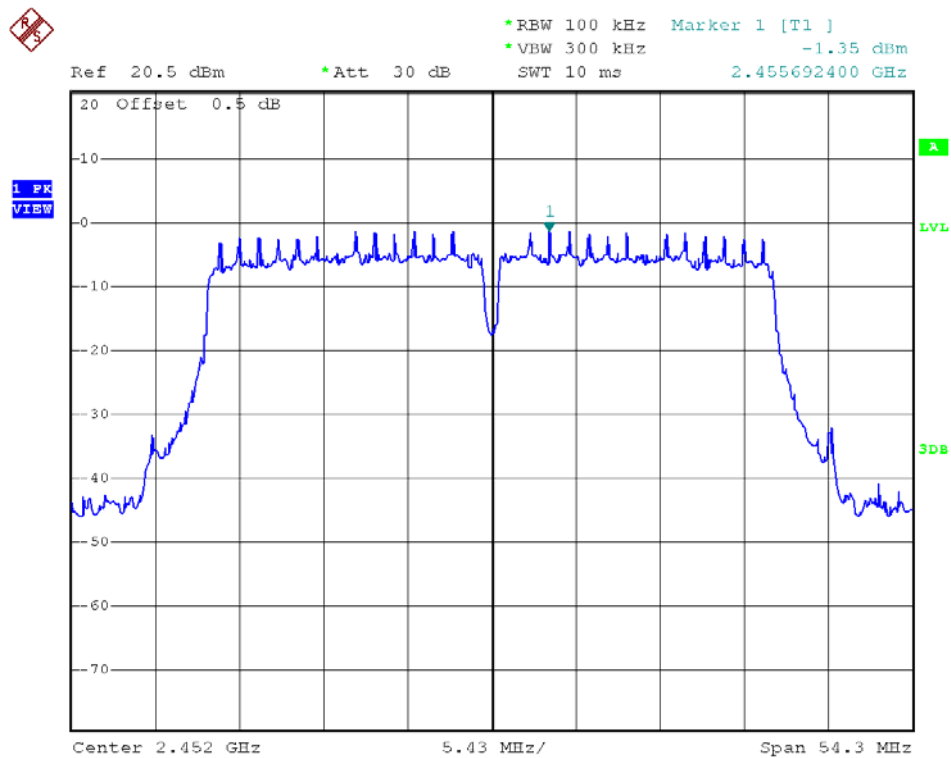
INTERTEK TESTING SERVICES

802.11n-HT40 SISO



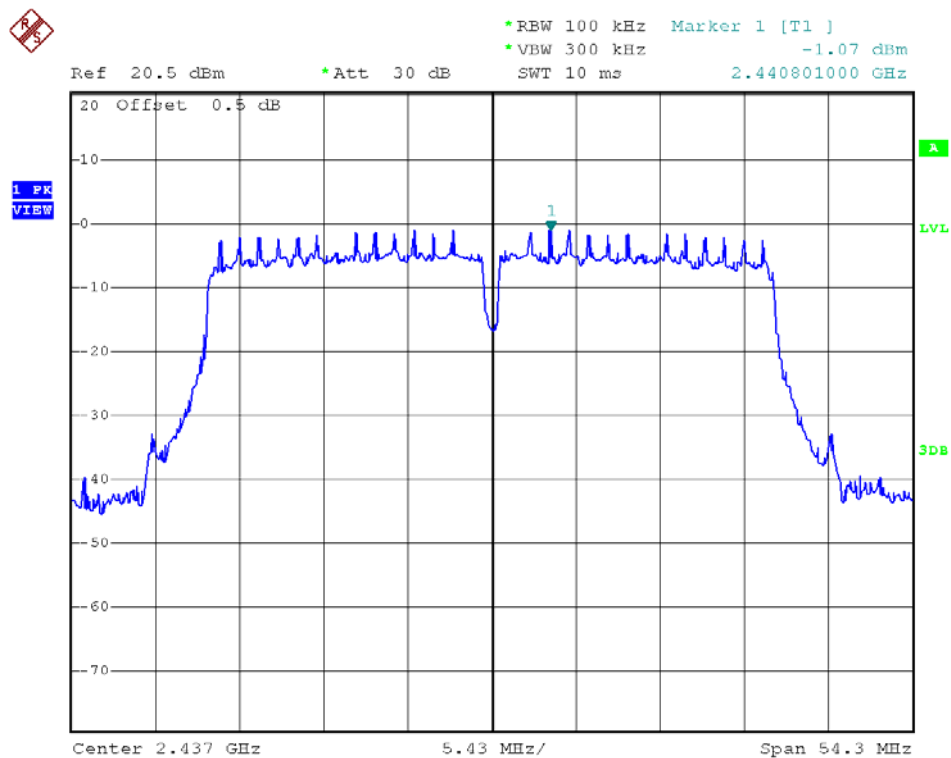
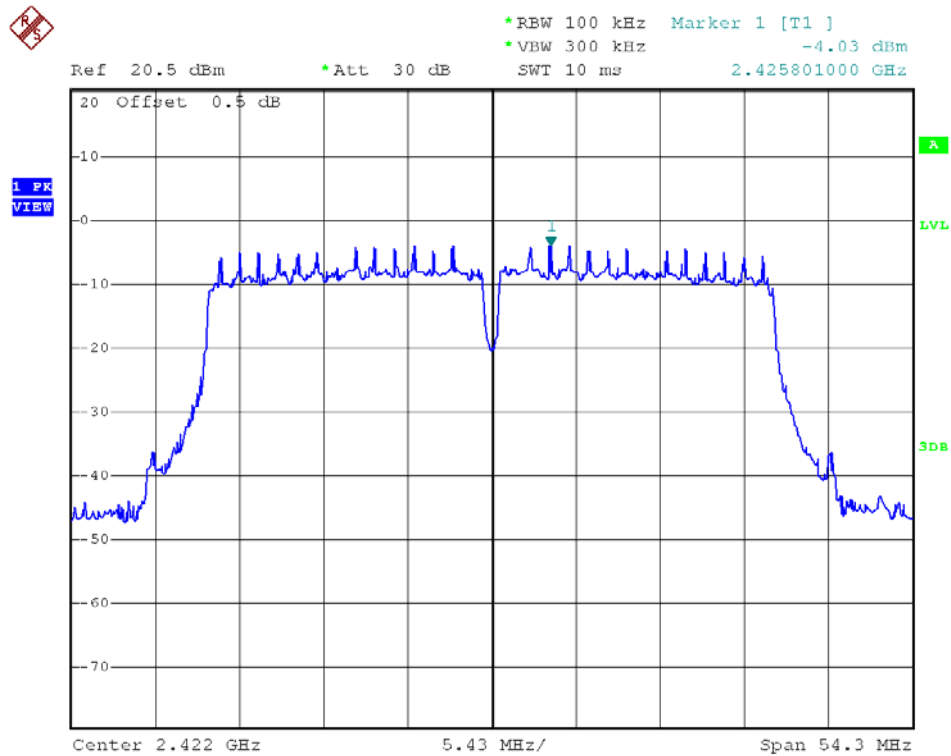
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



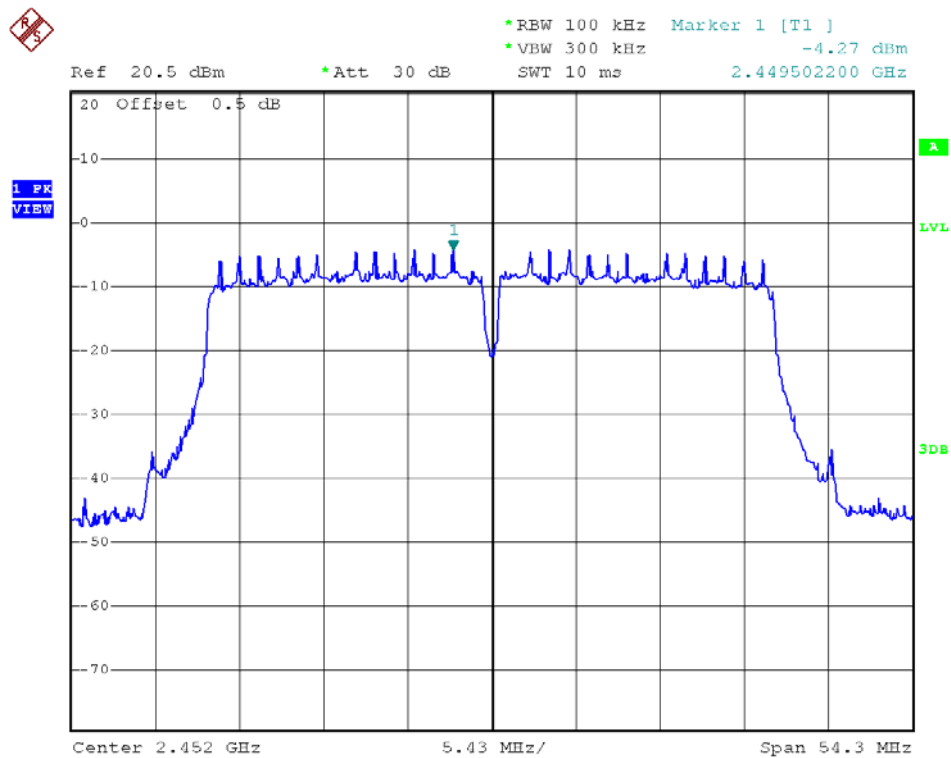
INTERTEK TESTING SERVICES

802.11n-HT40 MIMO Ant1



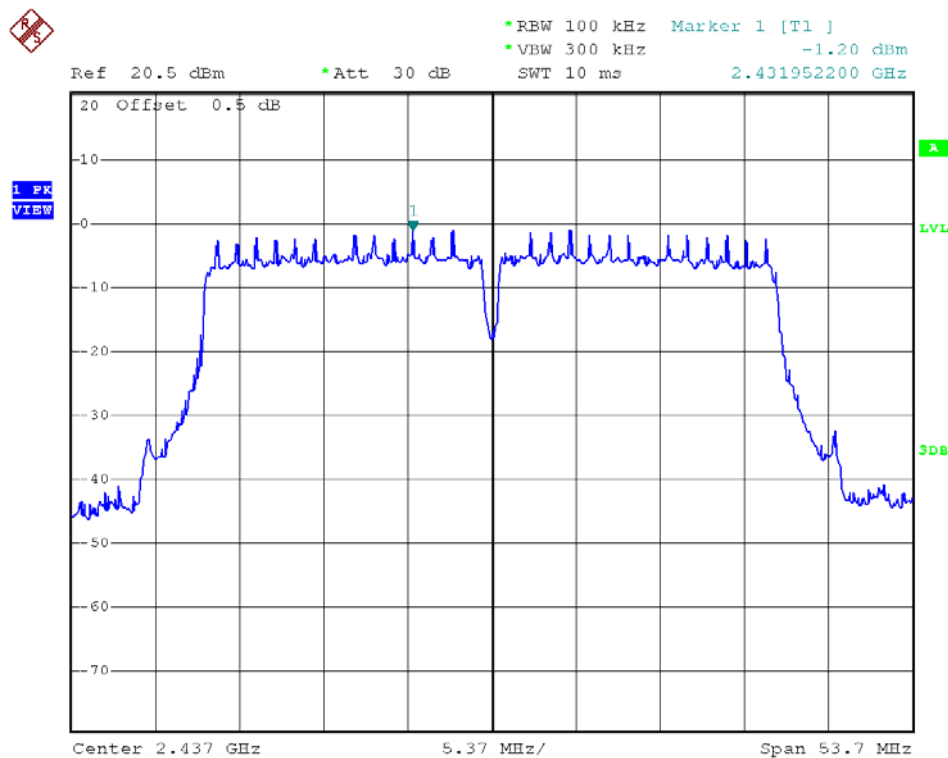
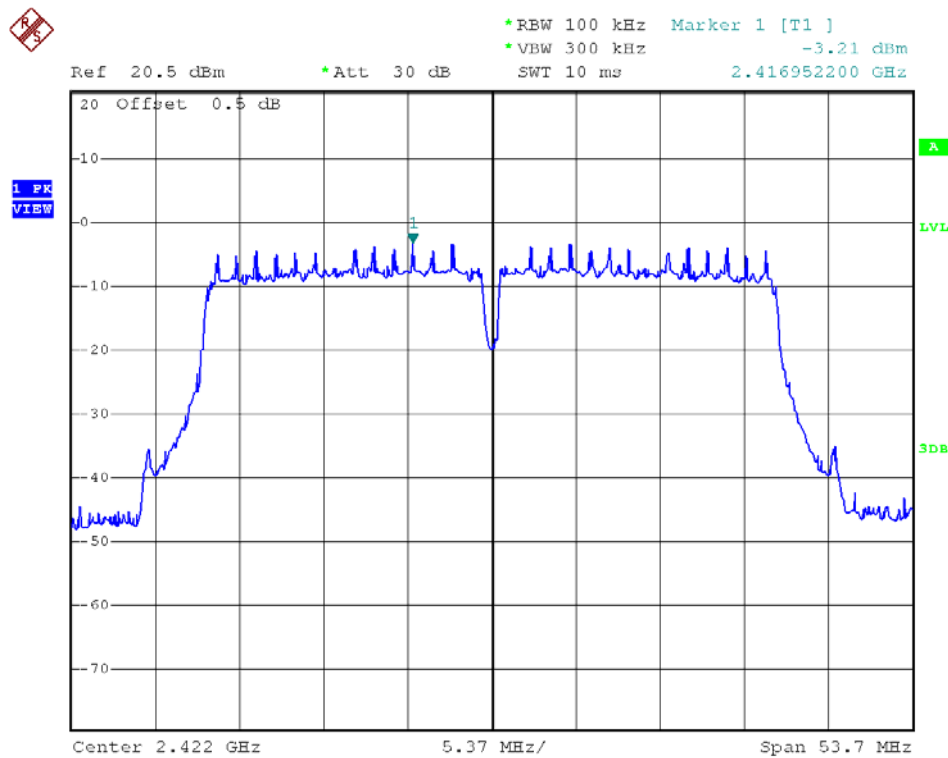
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



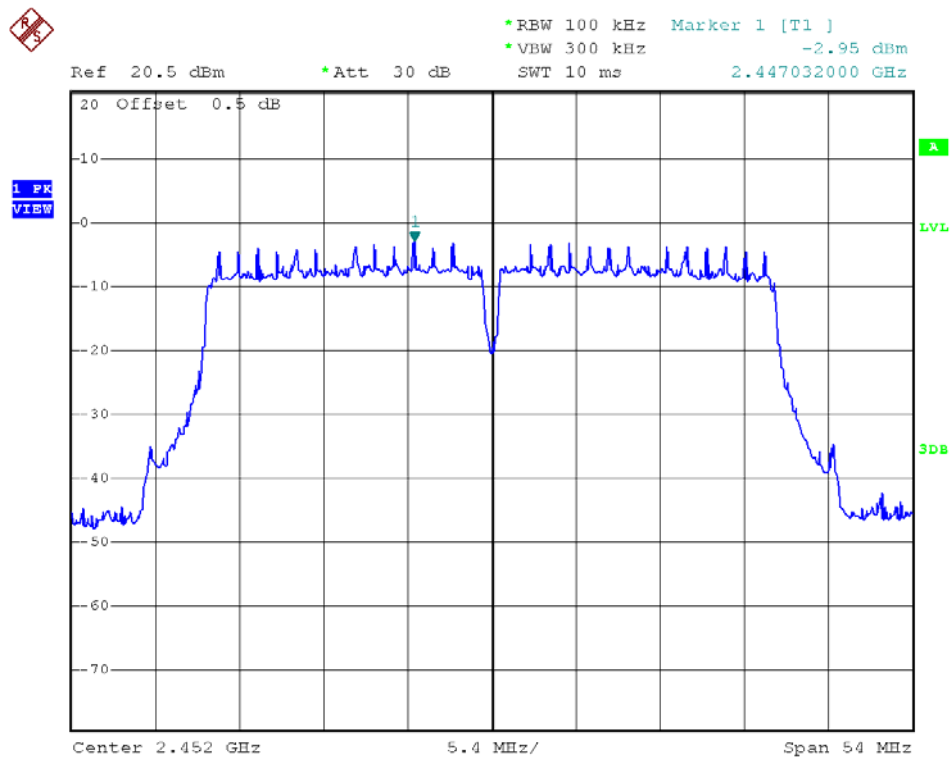
INTERTEK TESTING SERVICES

802.11n-HT40 MIMO Ant3



TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Model: HG630 V2

Date of Test: 17 July 2014

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 SISO, 13.5Mbps for 802.11n-HT40 SISO, 13Mbps for 802.11n-HT20 MIMO and 27Mbps for 802.11n-HT40 MIMO. For MIMO system, both the antenna ports was checked and the worst case are shown, The worst case Out of Band Conducted Emissions is derived from the method of Measure according KDB662911.

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

Spectrum Analyzer Setting

RBW=100KHz

VBW=>3 x RBW

Detector=Peak

Sweep point=8001

Sweep time=auto couple

Trace mode=Max hold

Note: the RBW was set to 1MHz rather than 100KHz in order to increase the measurement speed, if found out fail point at 1MHz RBW, we will use reduce the RBW to 100KHz determine the final result.

The test plots are attached as below.

TRF no.: FCC 15C_TX_b

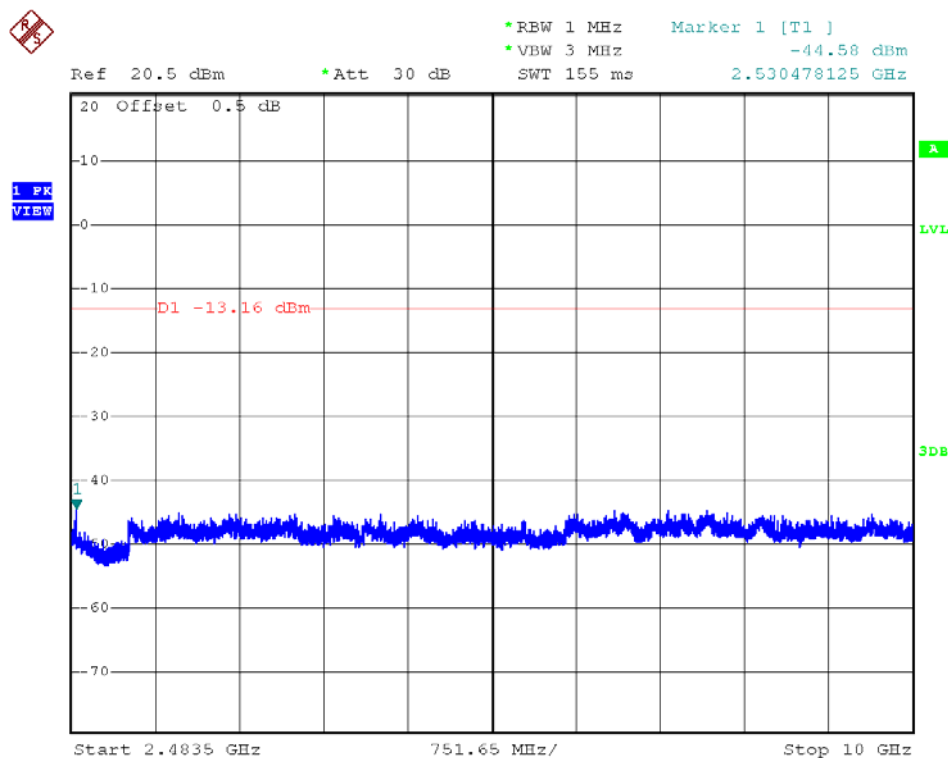
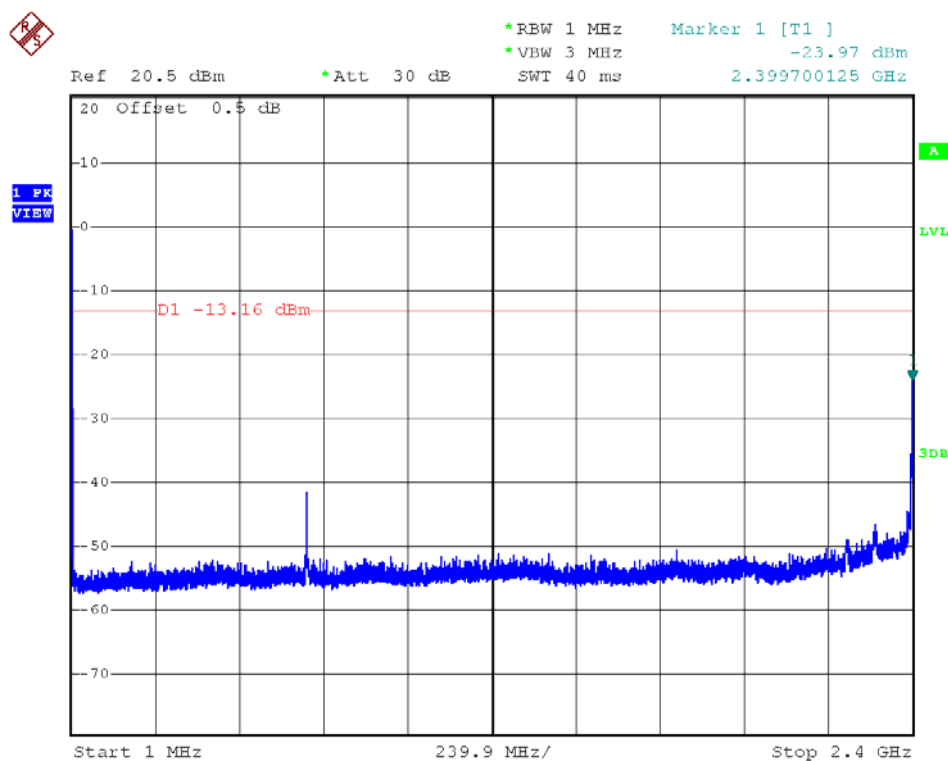
FCC ID: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

802.11b

Channel 1 (2412MHz) Reference Level: 6.84dBm

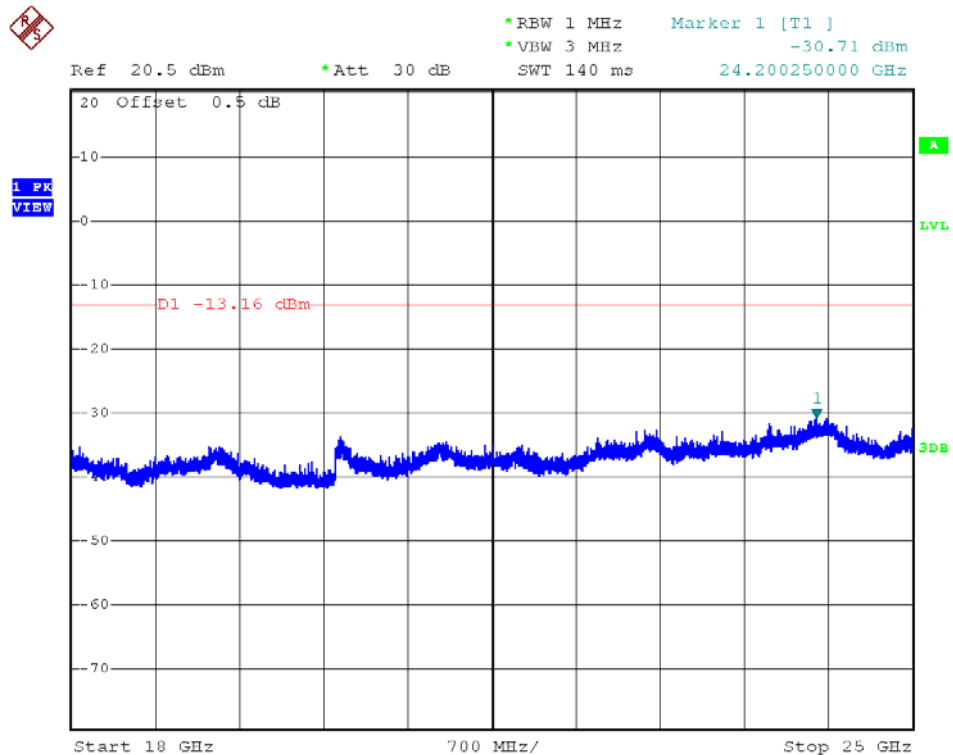
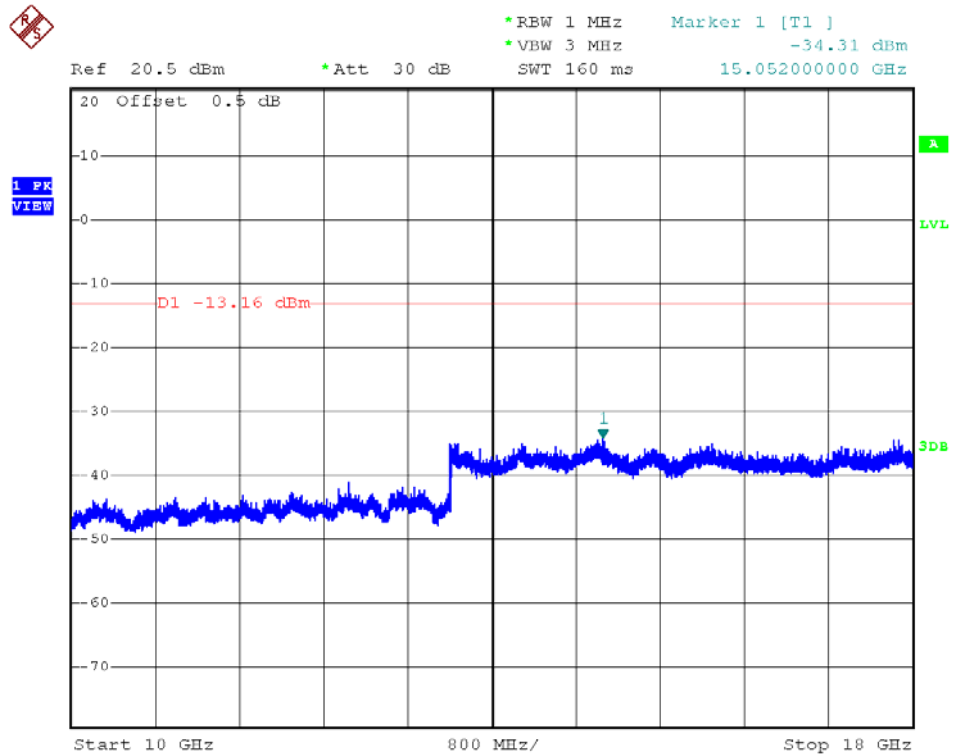


TRF no.: FCC 15C_TX_b

FCC ID: QISHG630V2

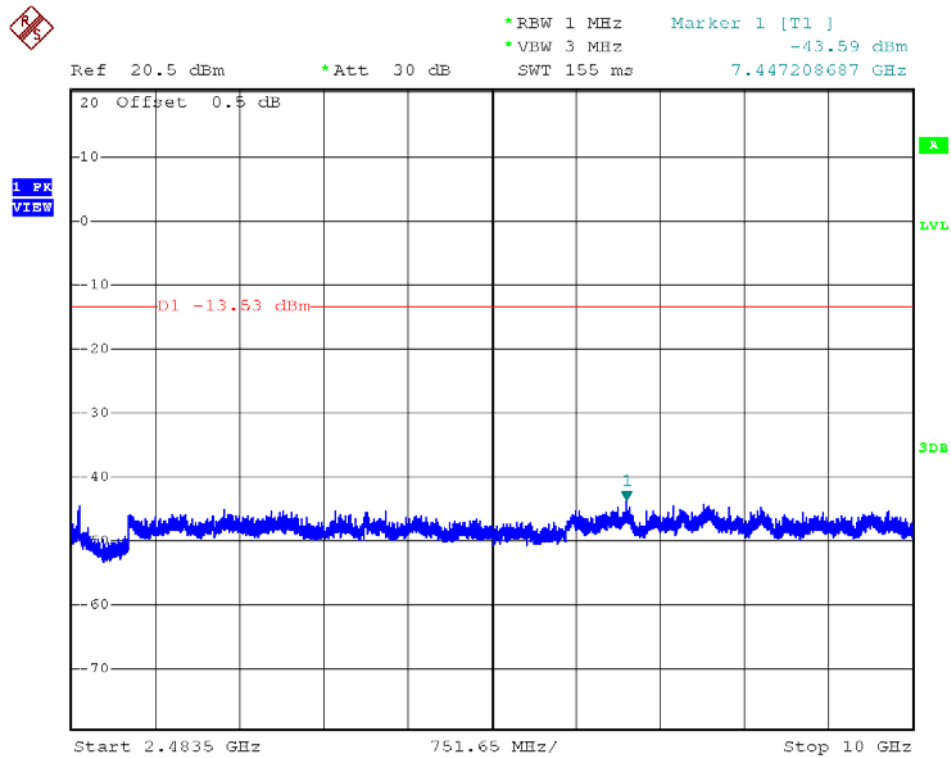
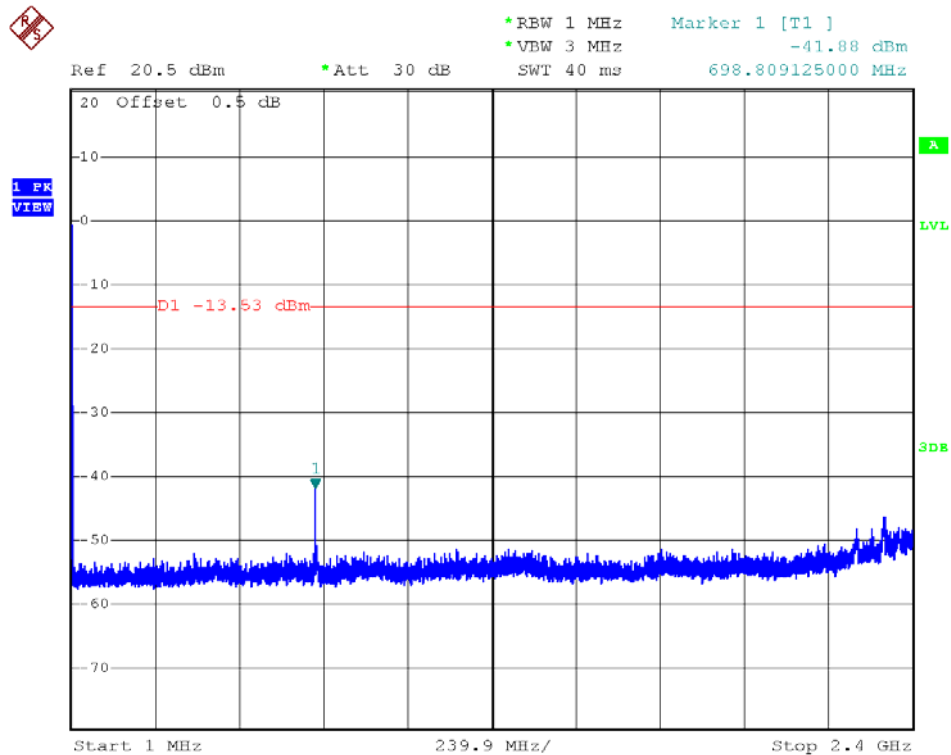
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



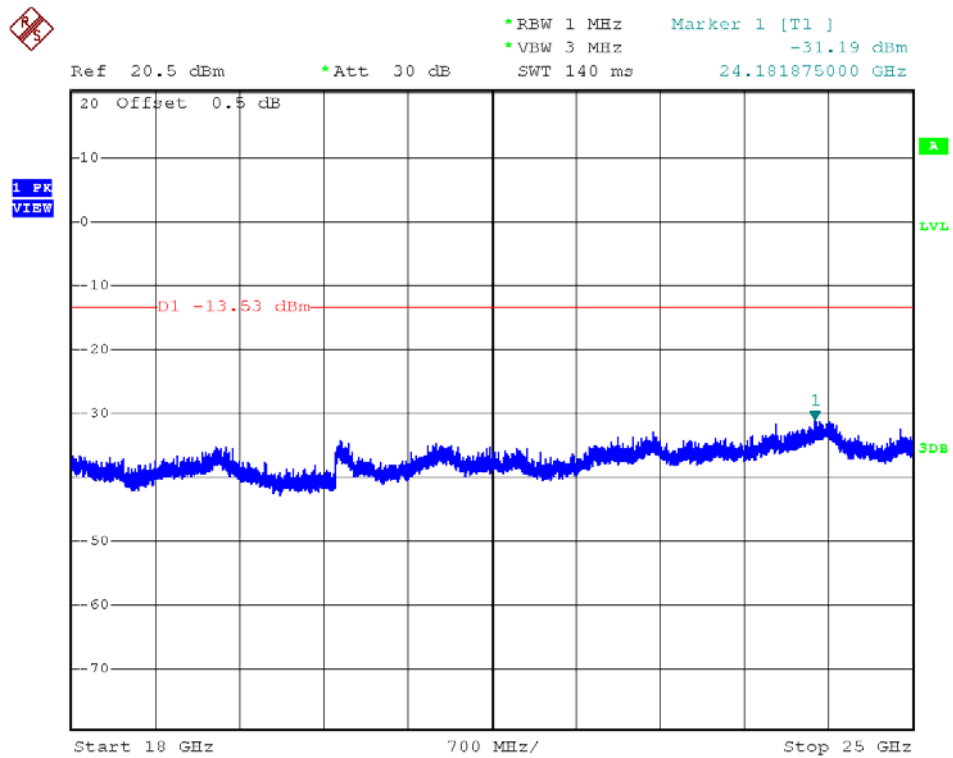
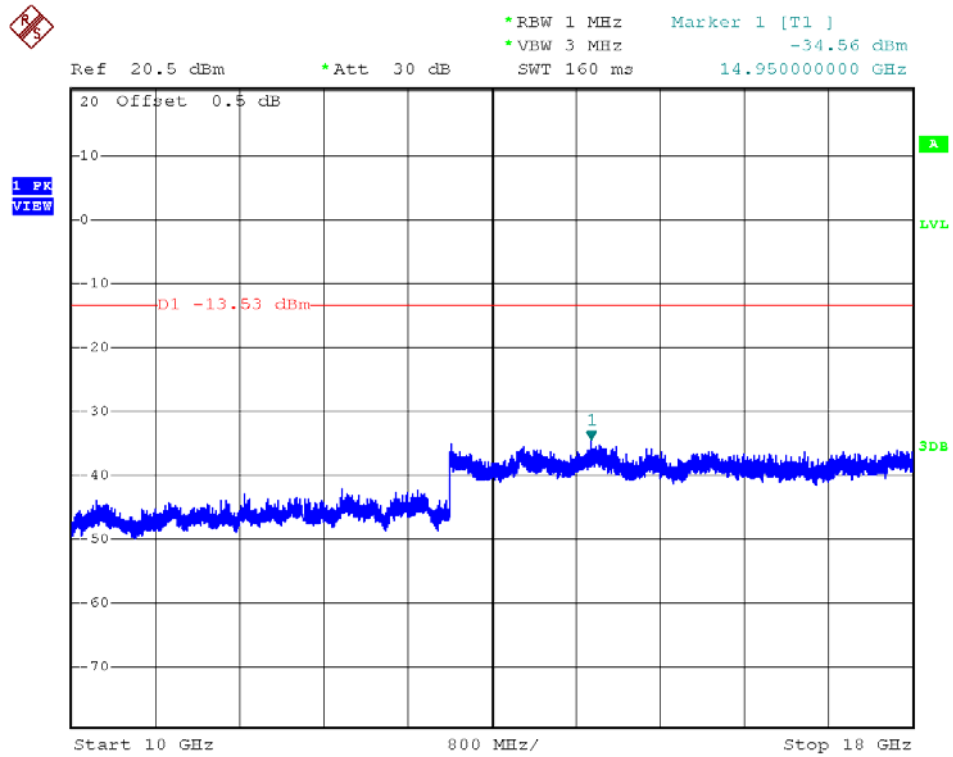
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 6.47dBm

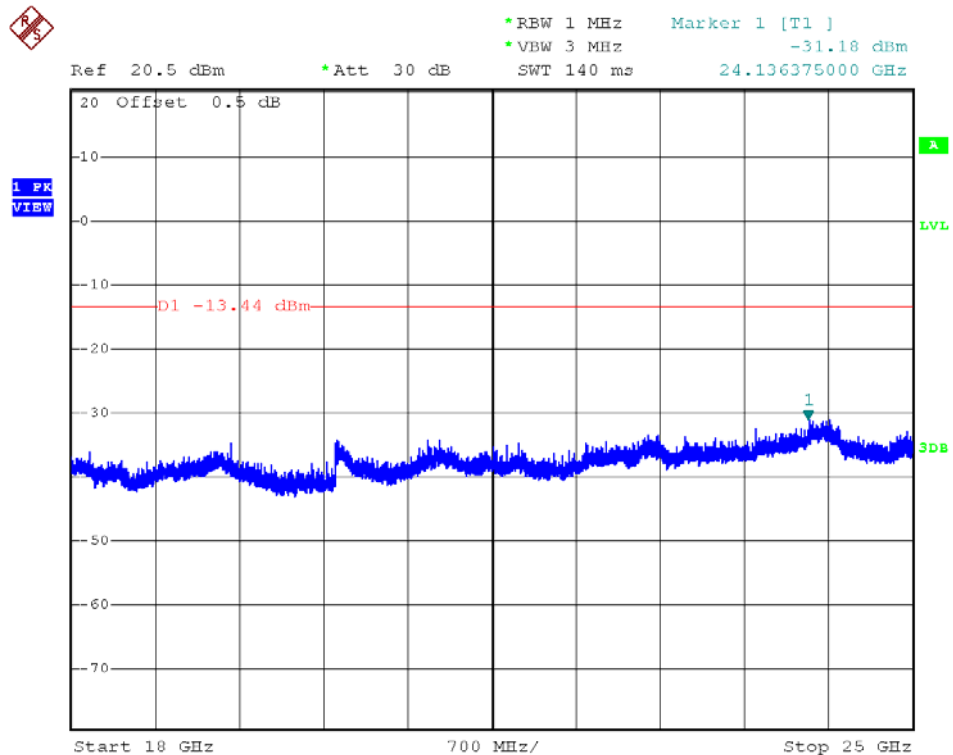
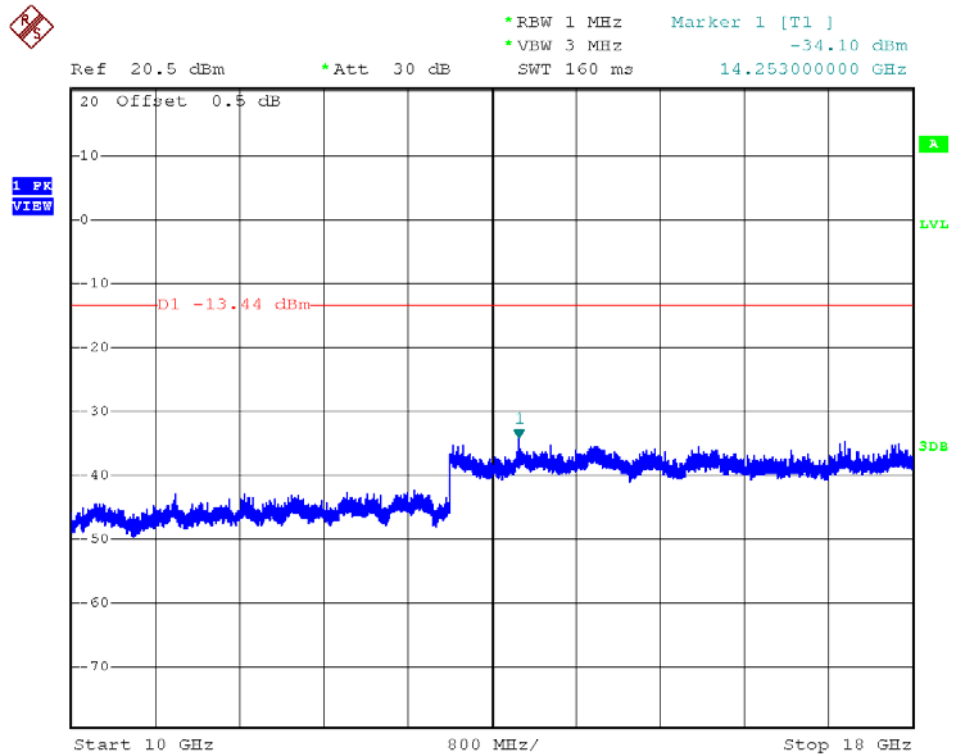


TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



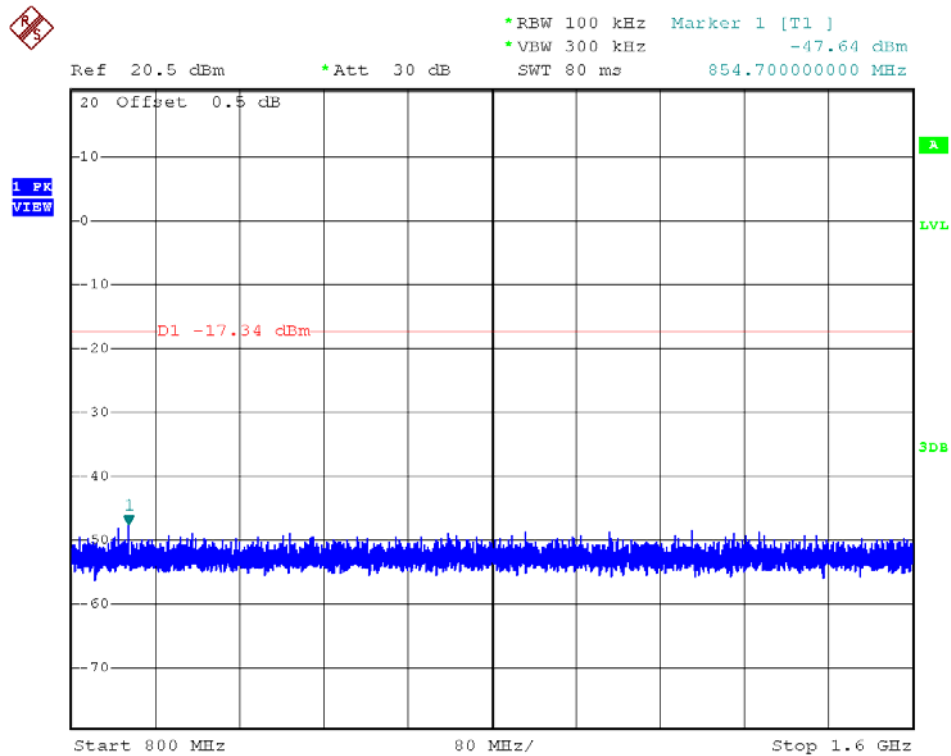
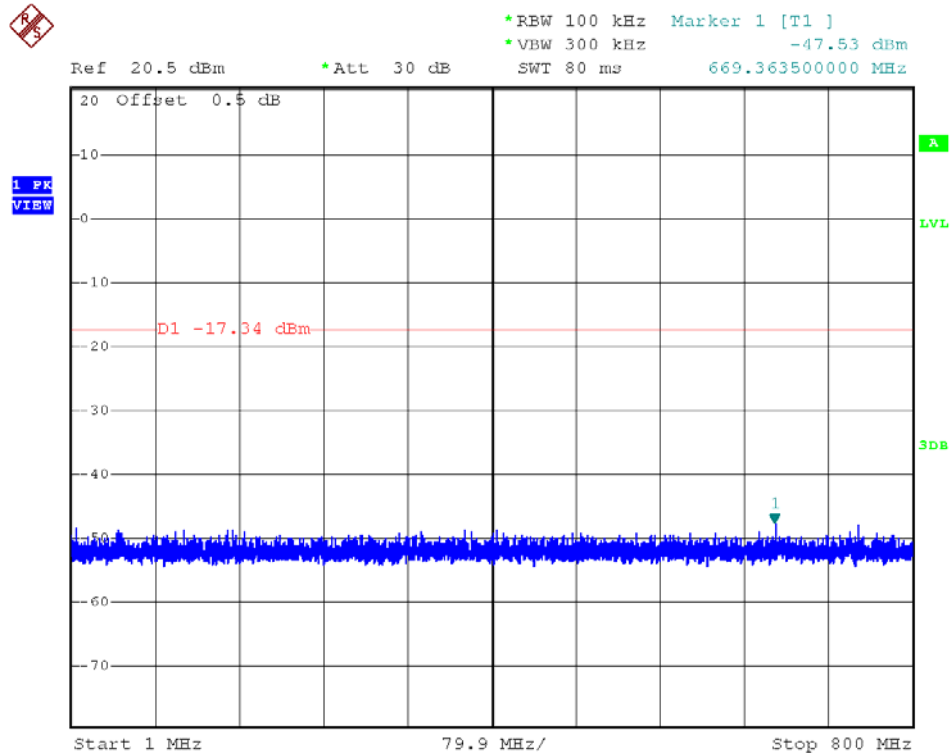
INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

802.11g

Channel 1 (2412MHz) Reference Level: 2.66dBm

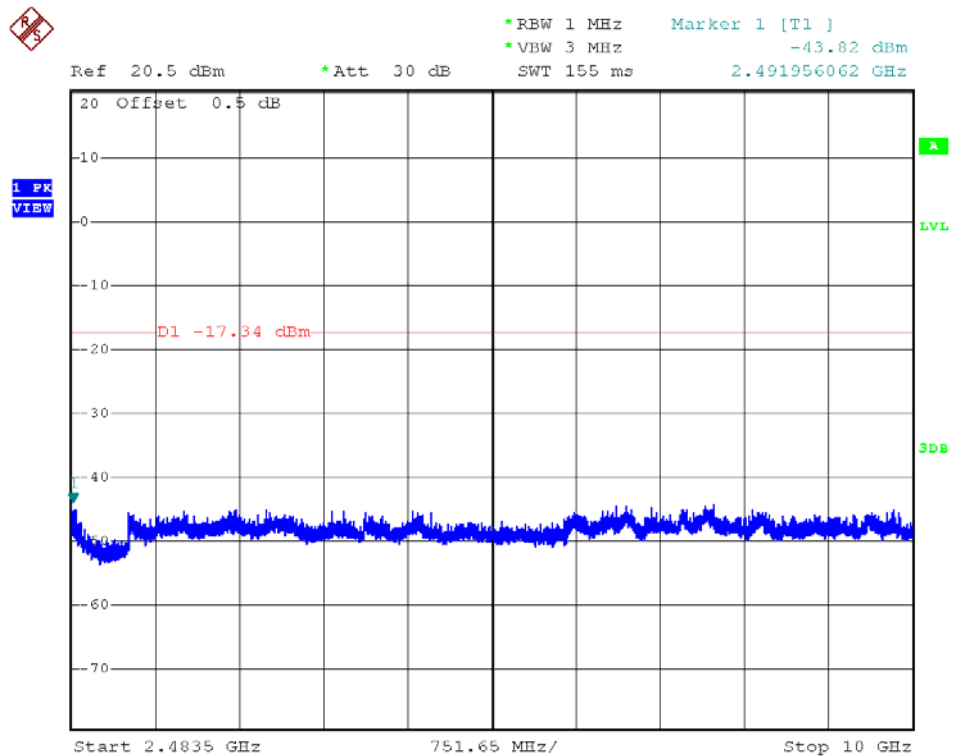
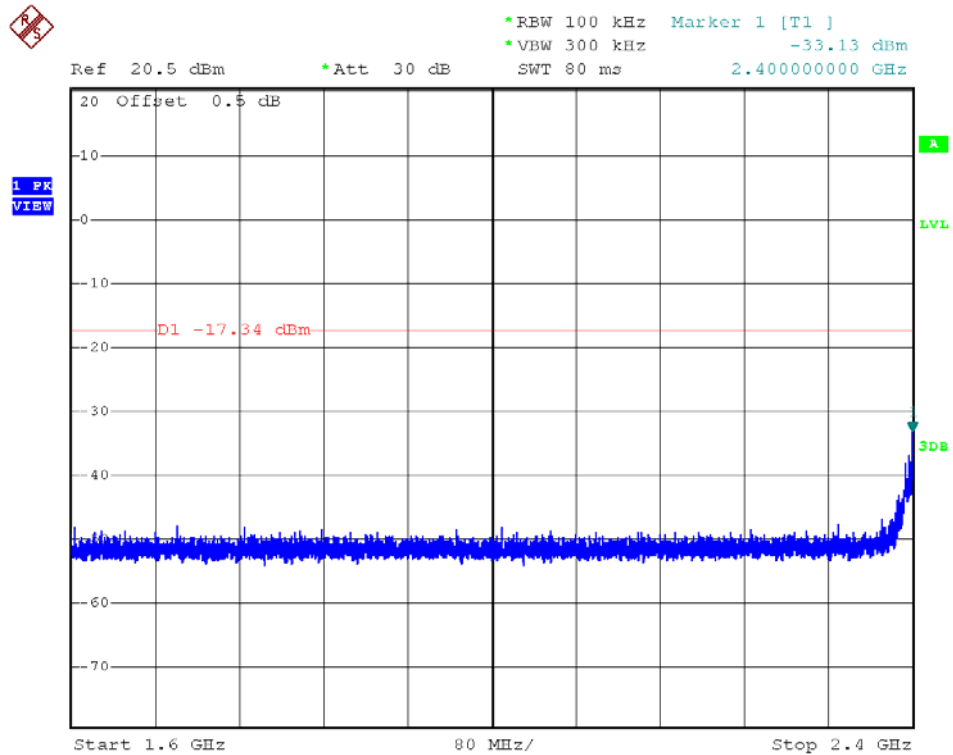


TRF no.: FCC 15C_TX_b

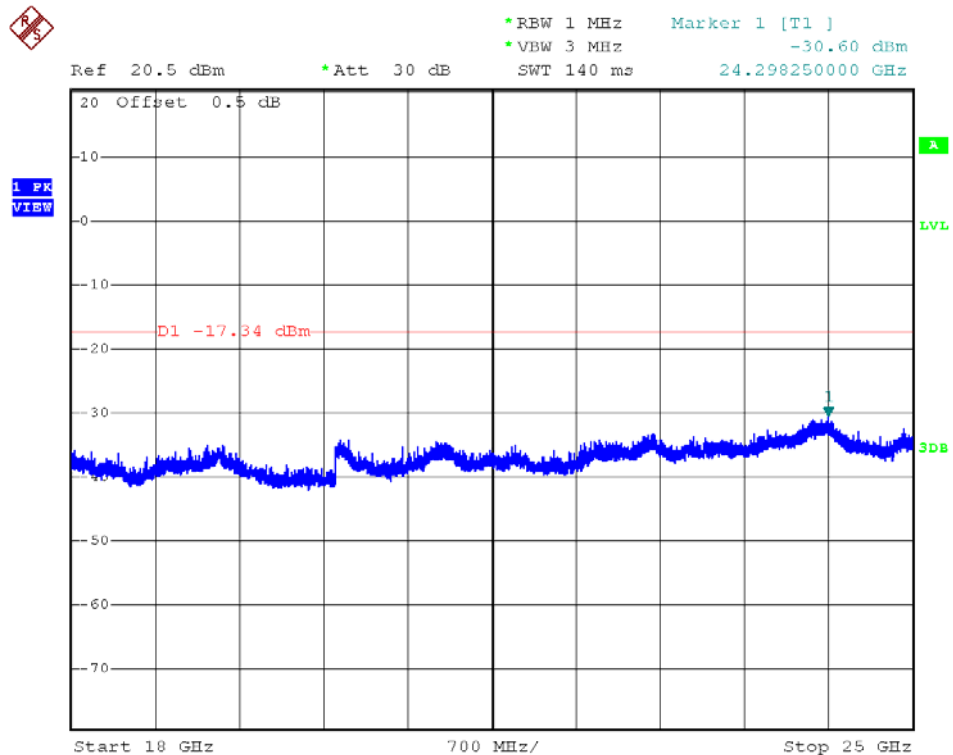
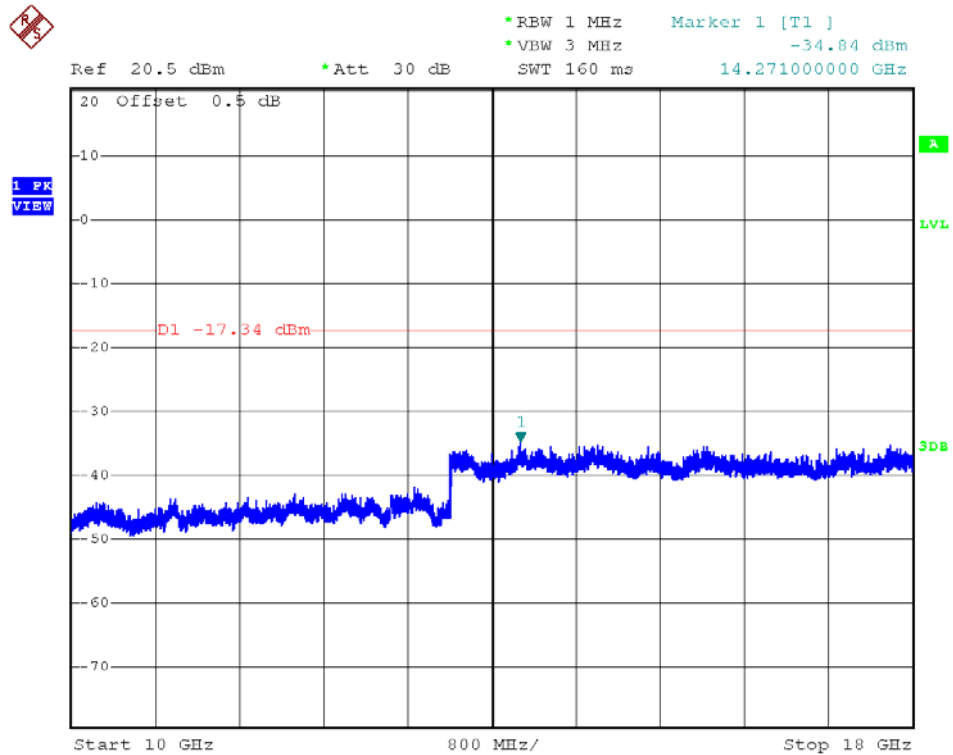
FCC ID: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

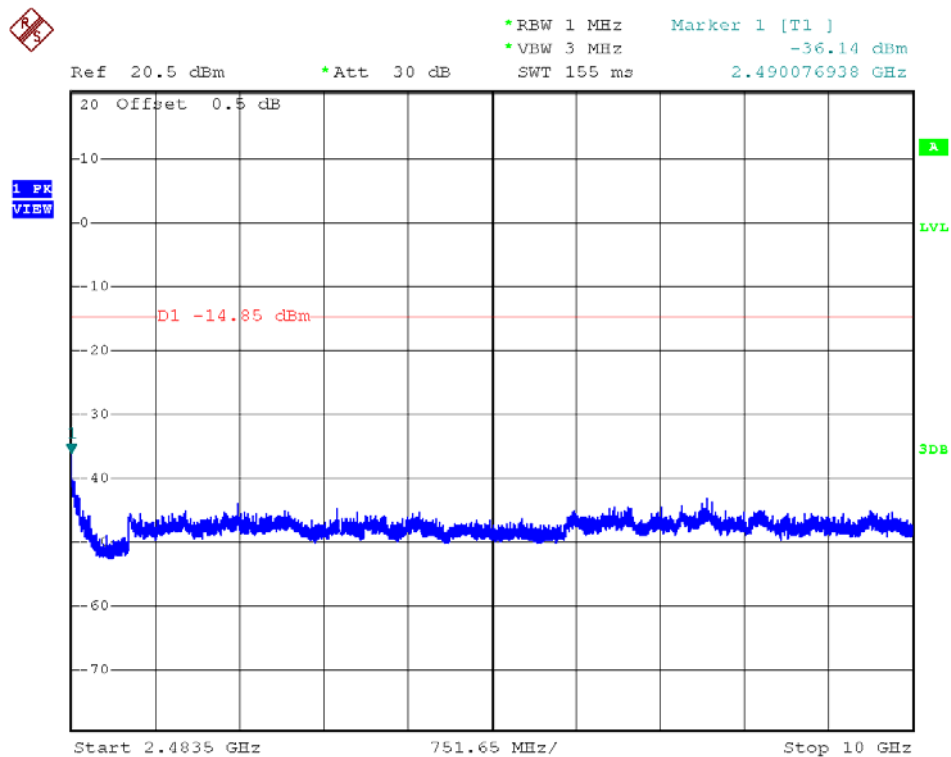
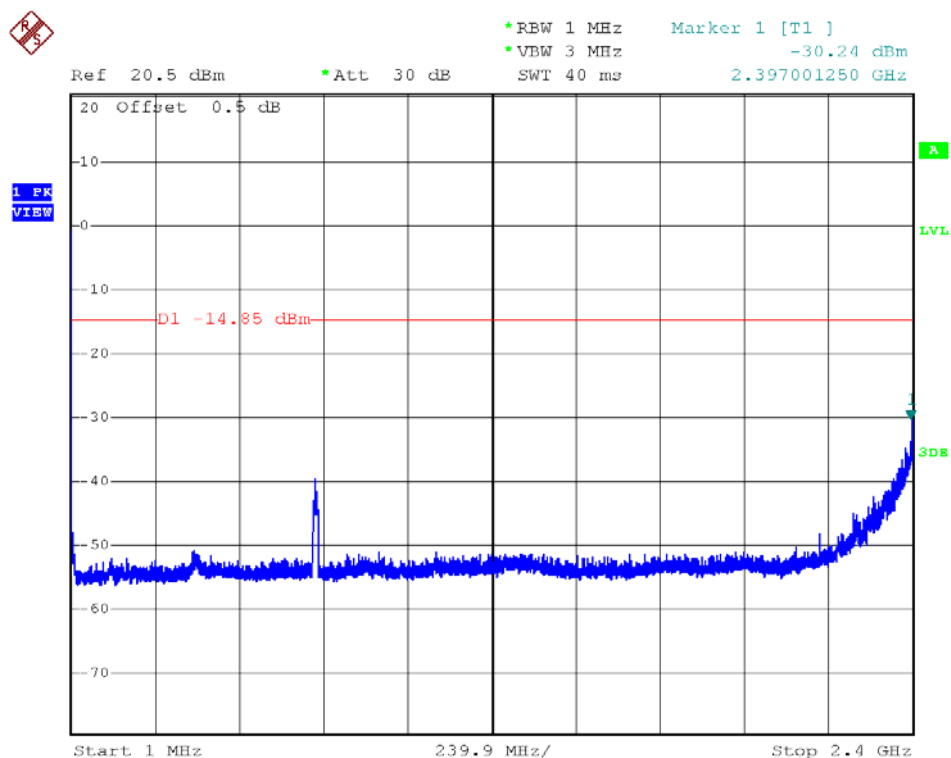


INTERTEK TESTING SERVICES



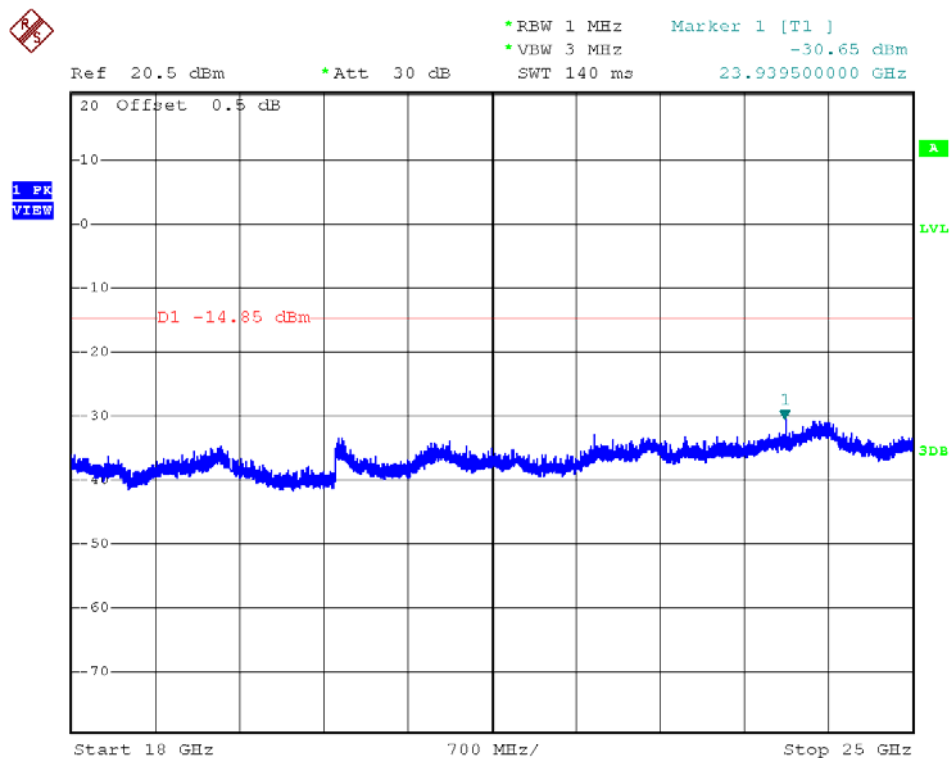
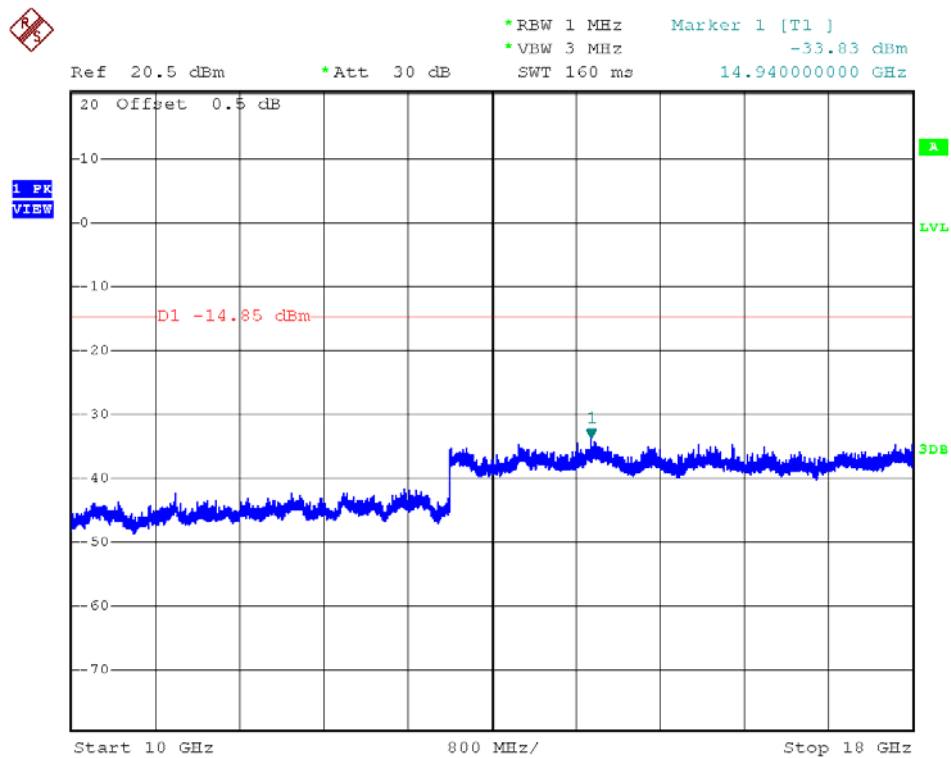
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 5.15dBm



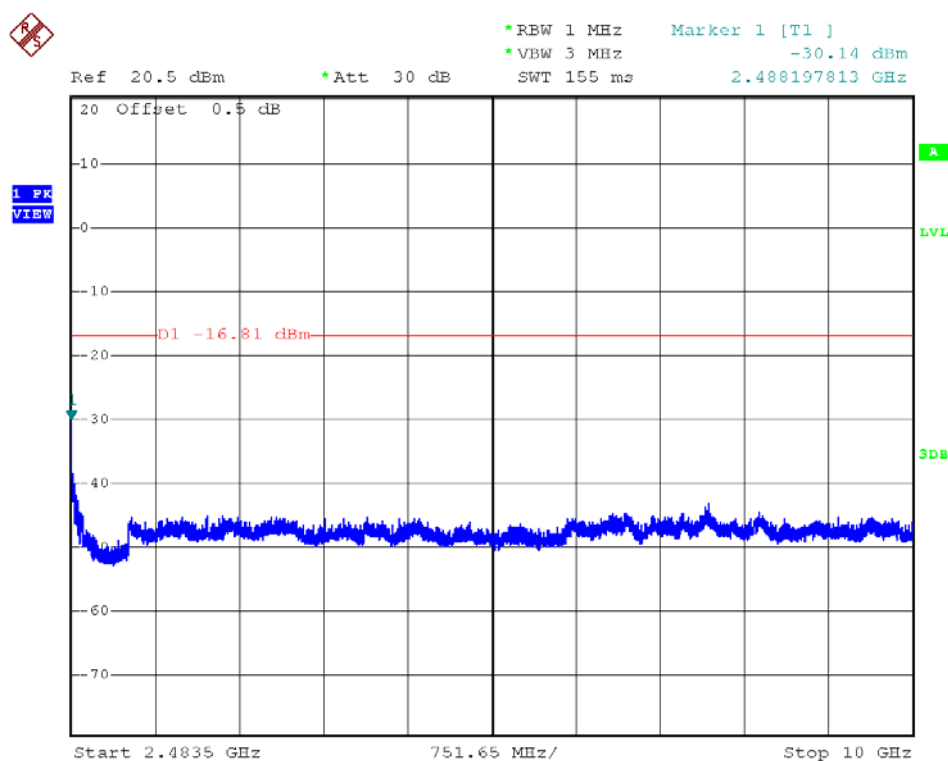
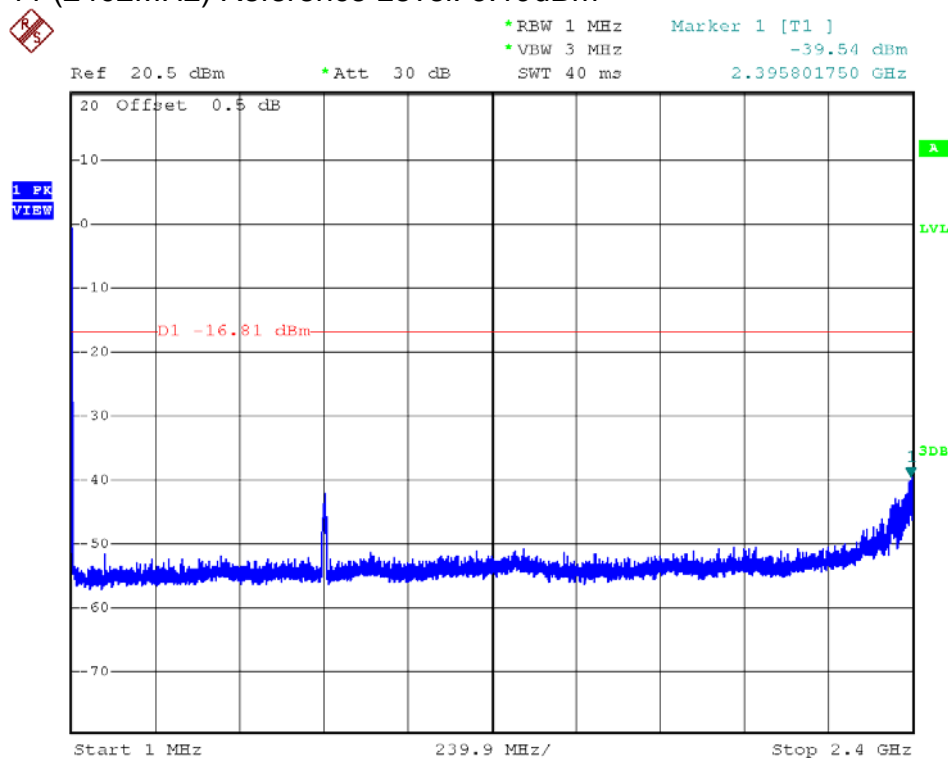
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



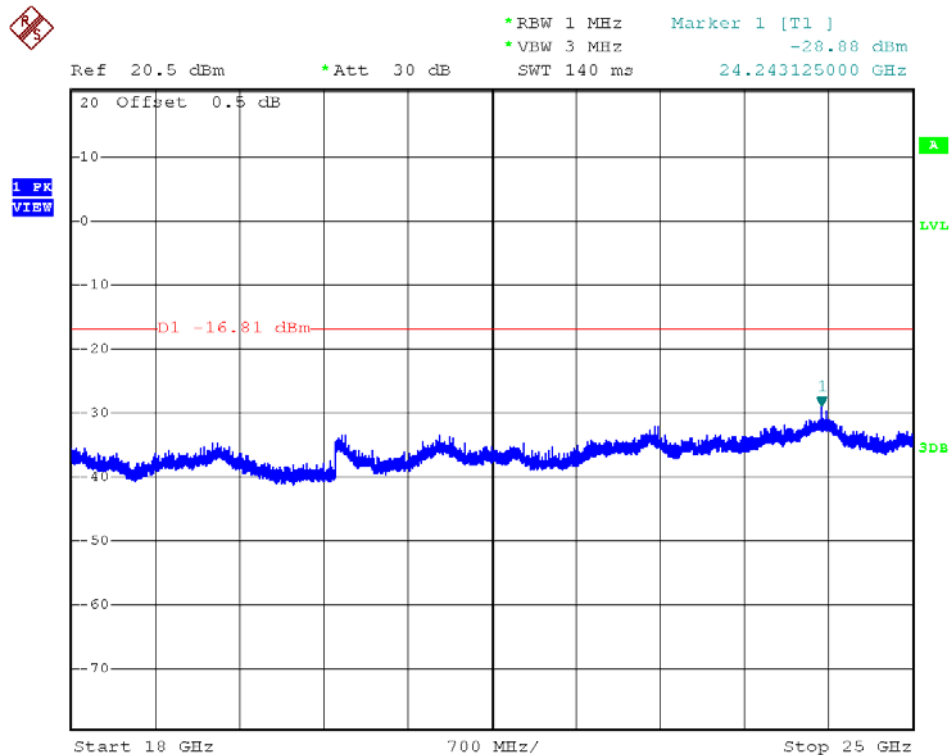
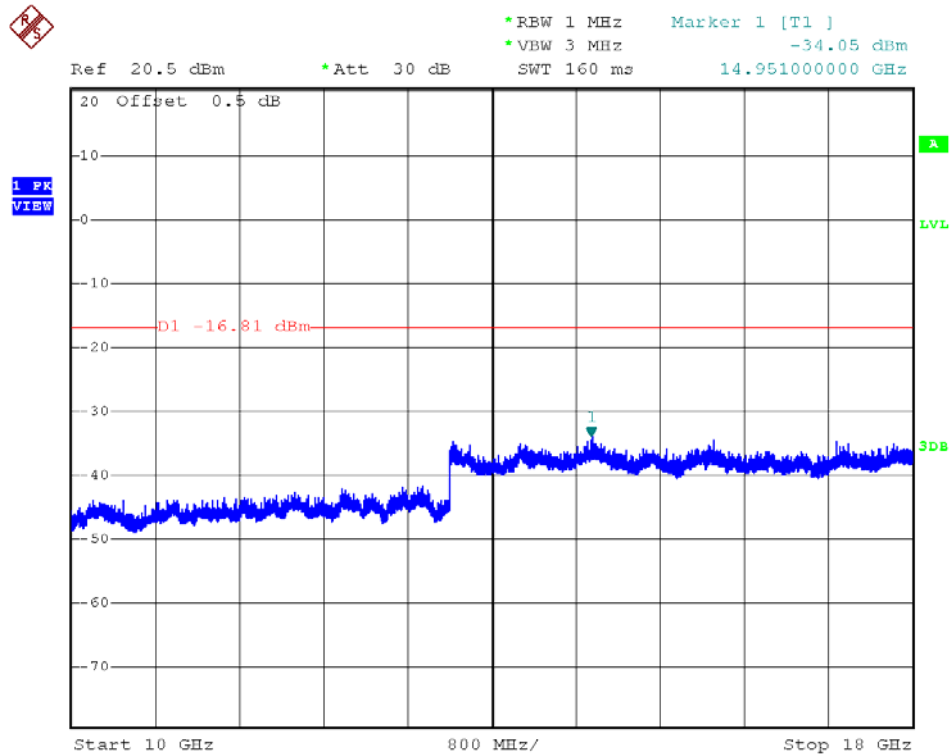
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: 3.19dBm



TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

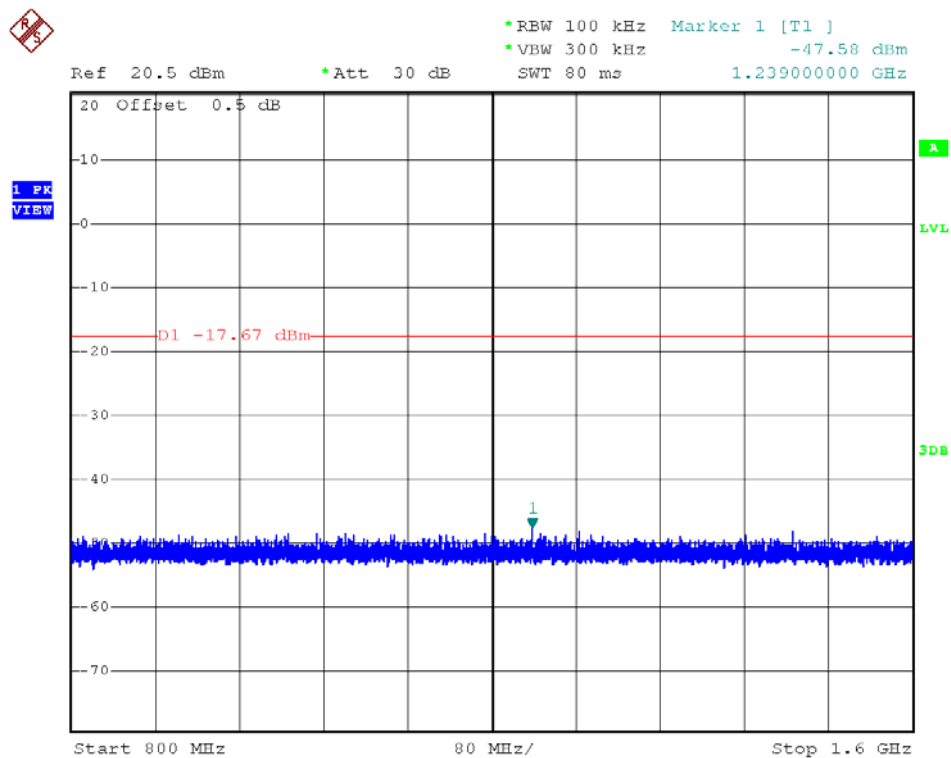
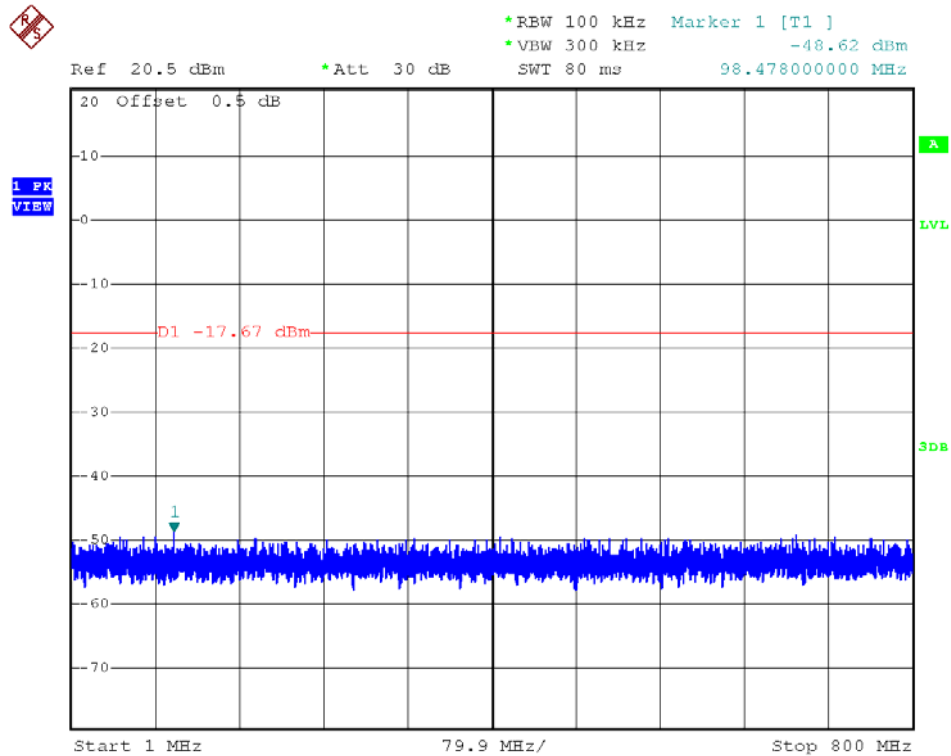
INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

802.11n-HT20 SISO

Channel 1 (2412MHz) Reference Level: 2.33dBm

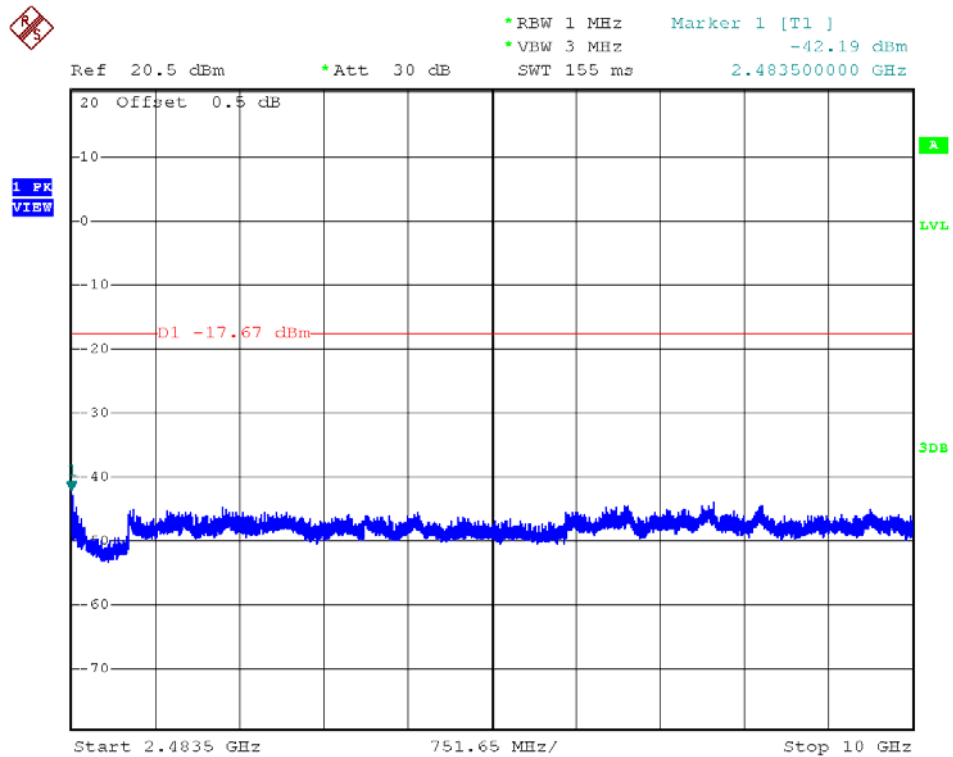
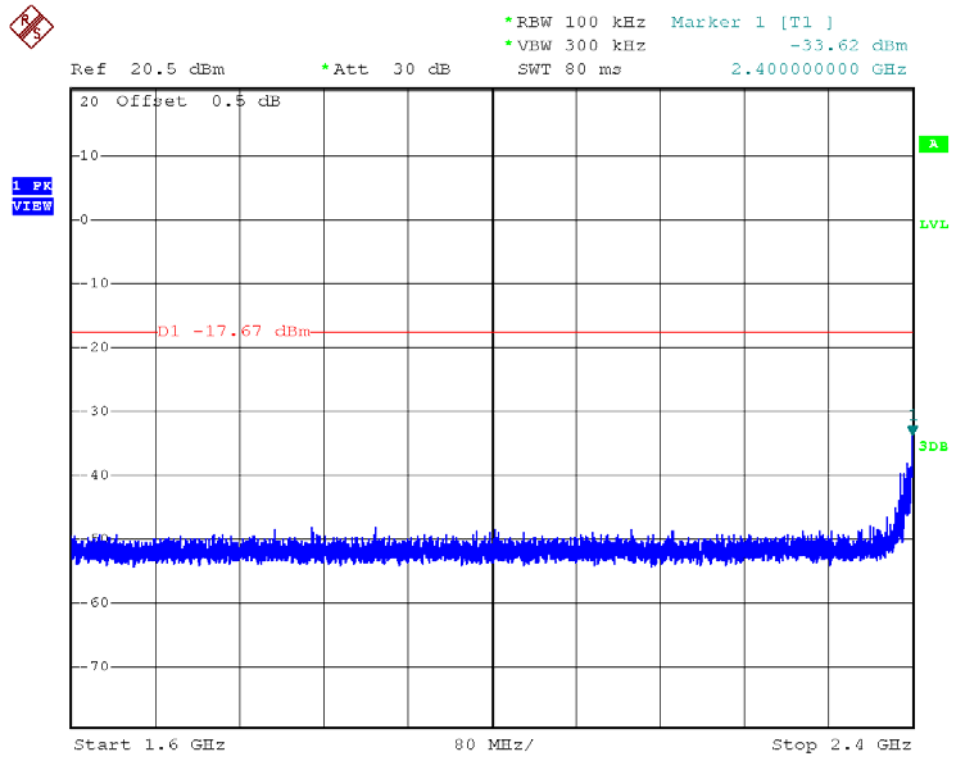


TRF no.: FCC 15C_TX_b

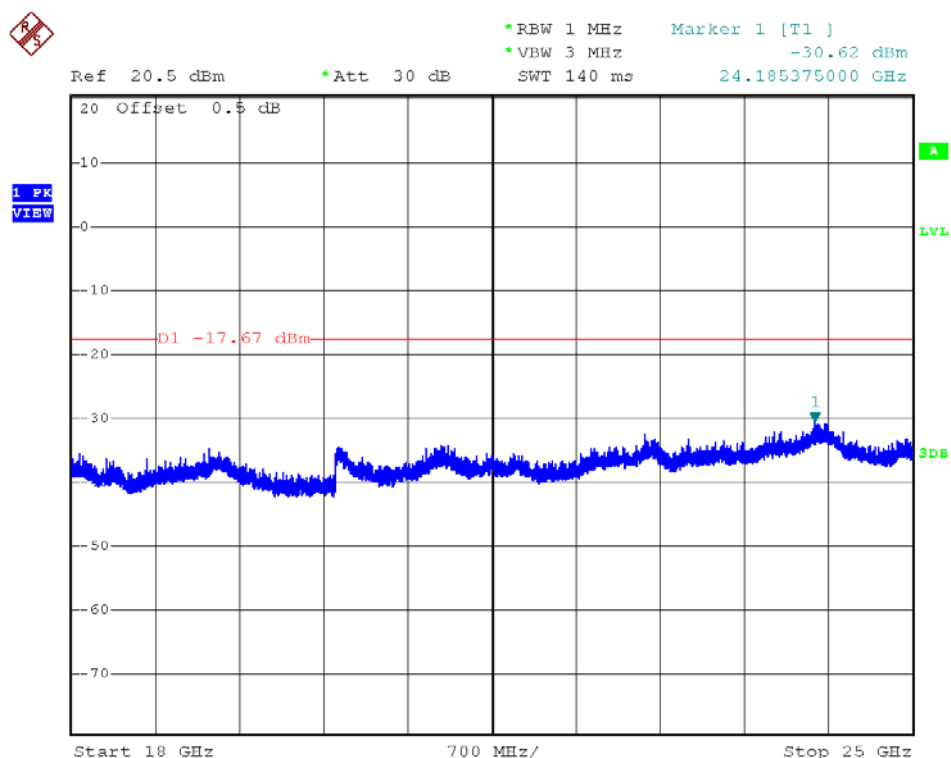
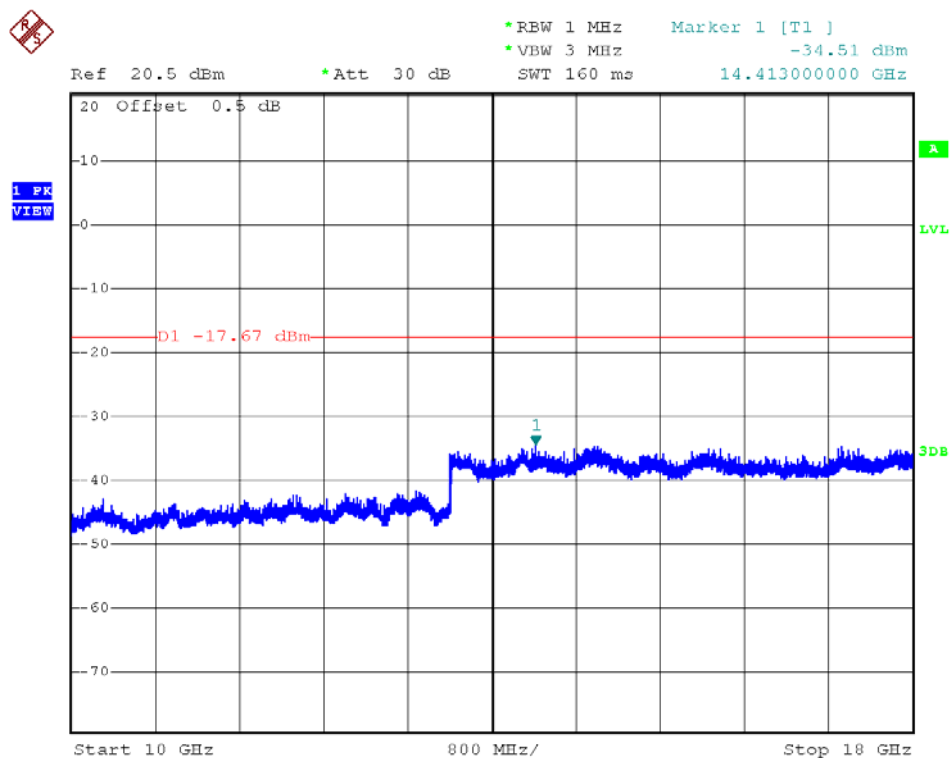
FCC ID: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

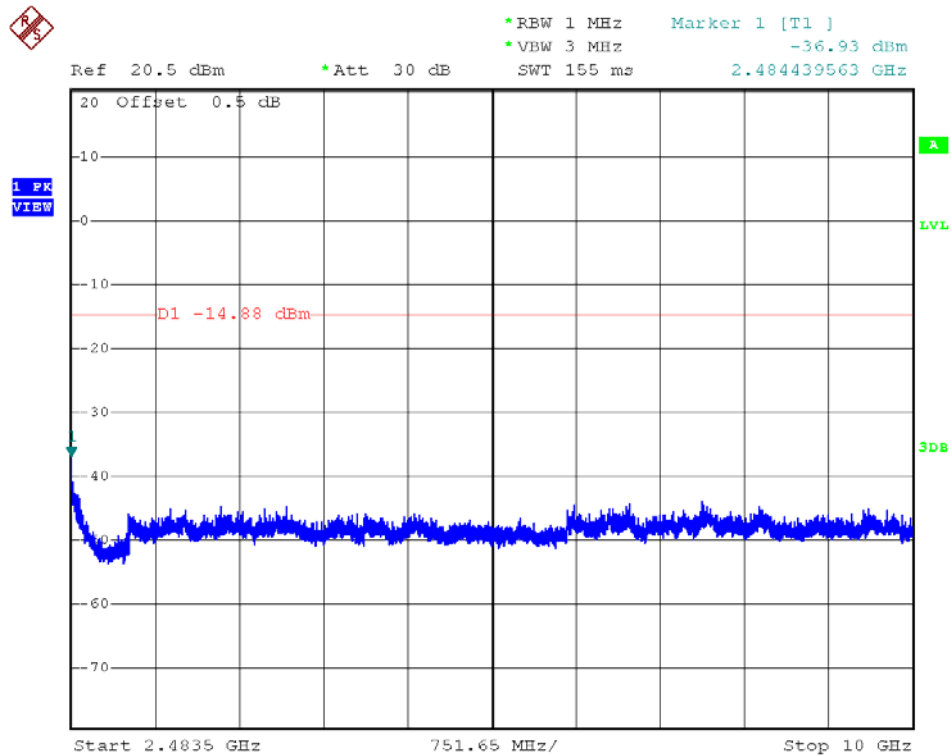
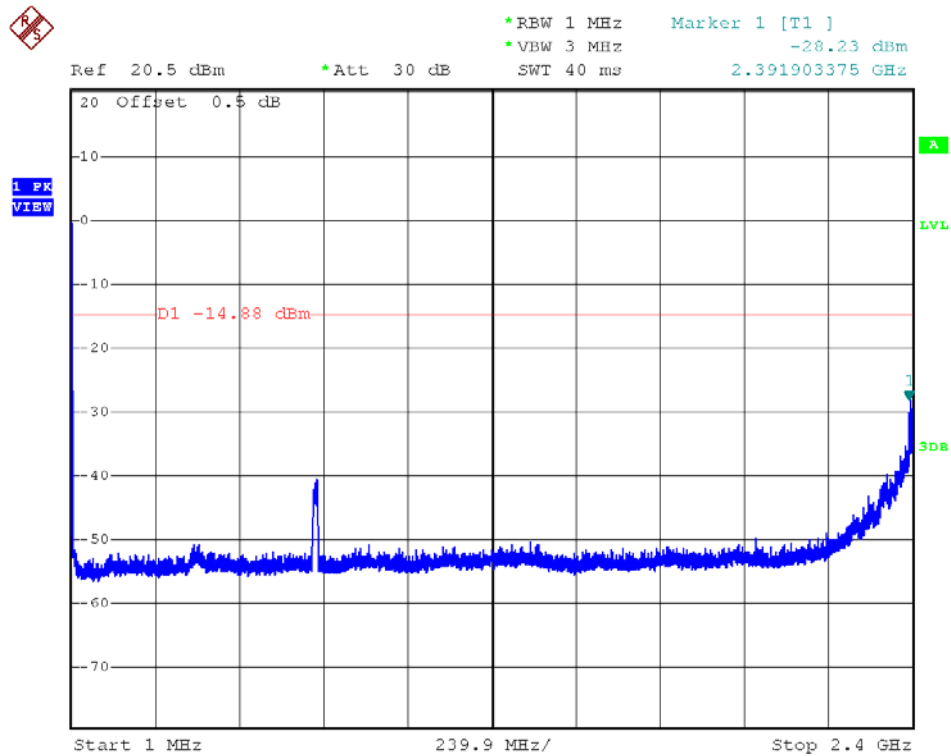


INTERTEK TESTING SERVICES



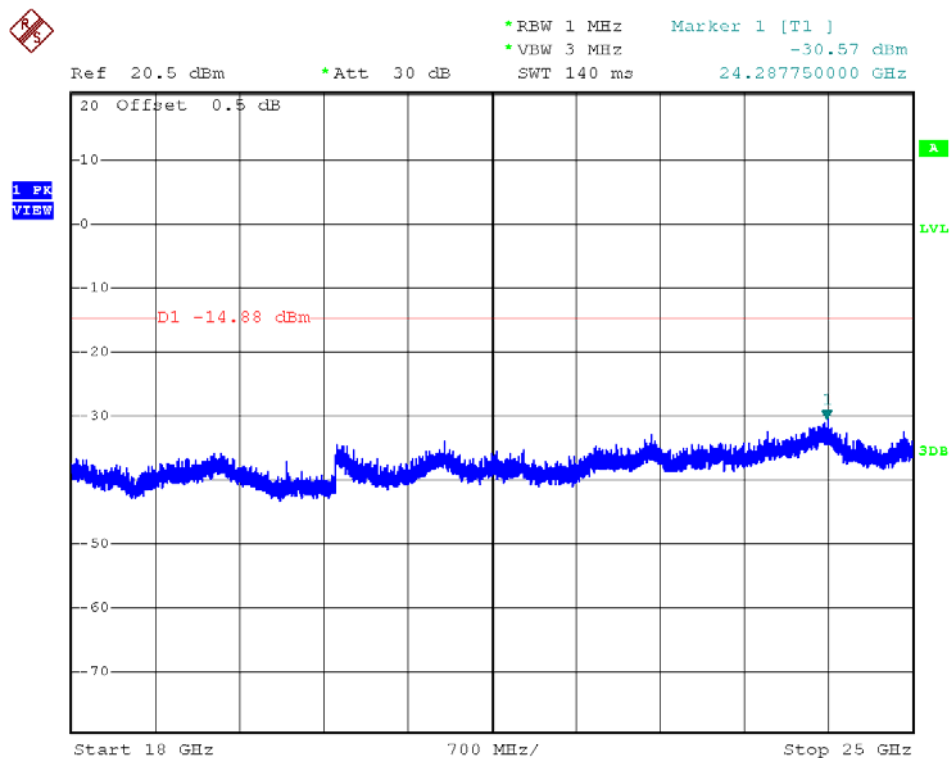
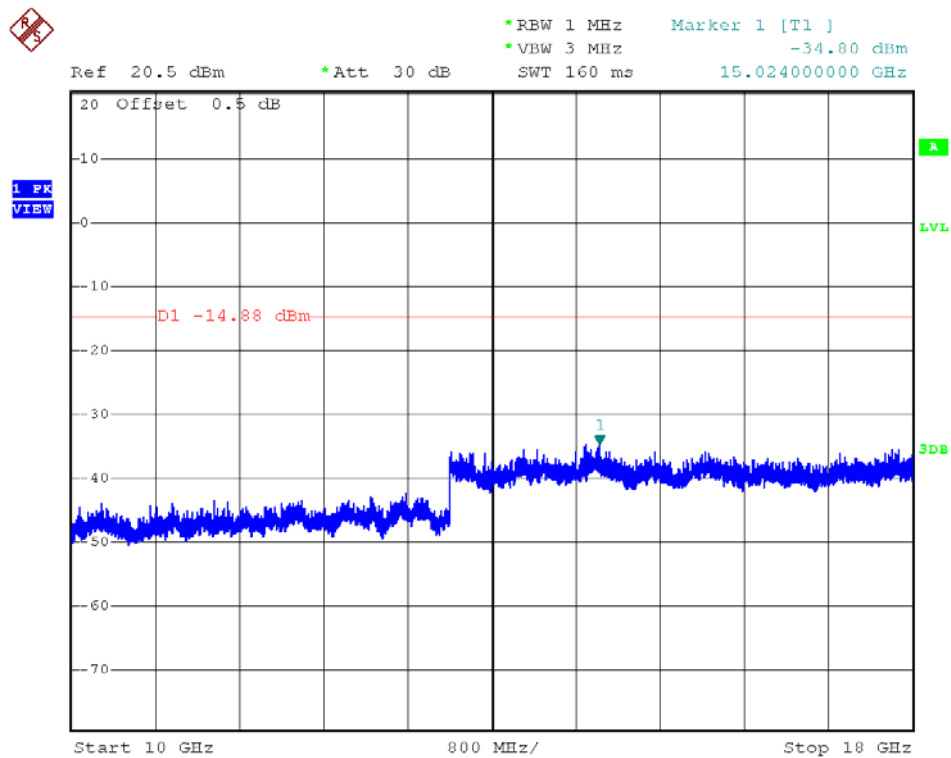
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 5.12dBm



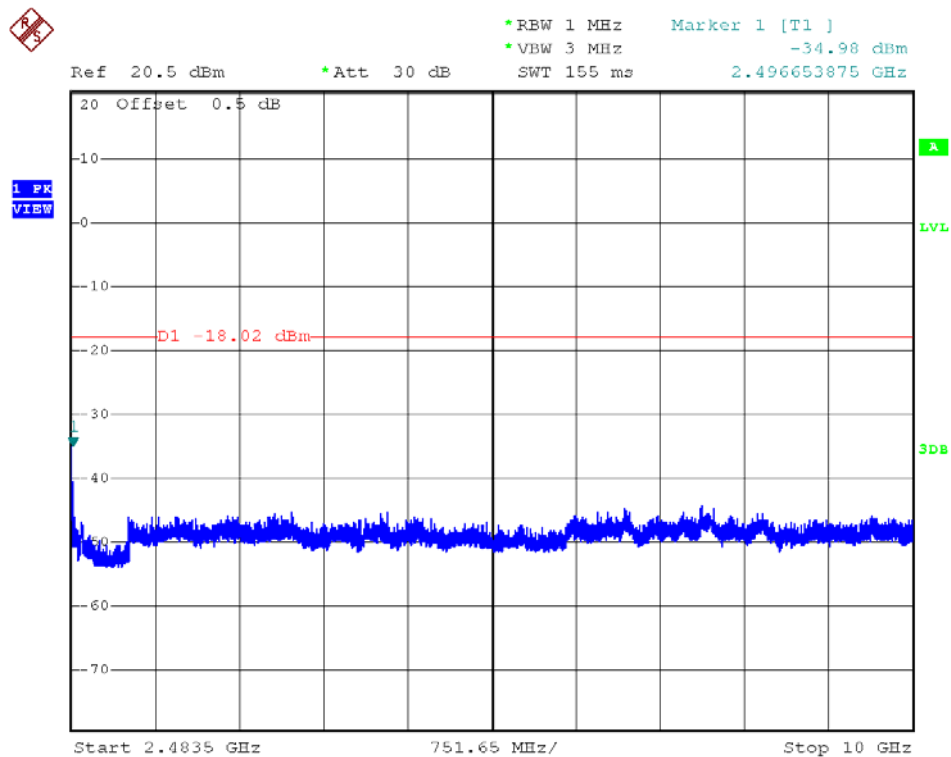
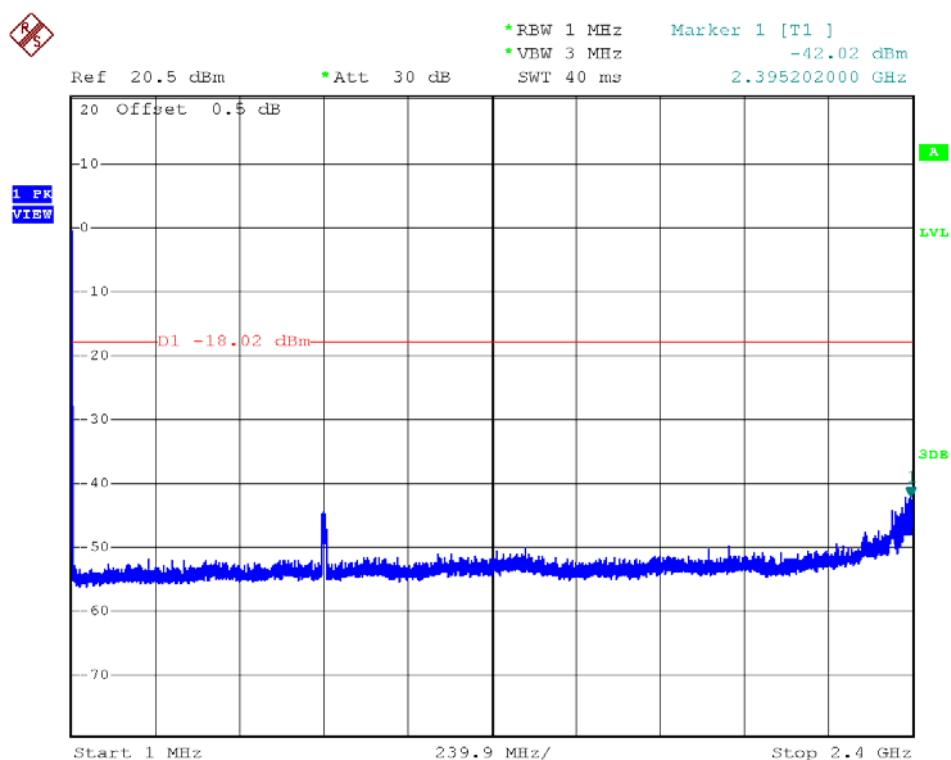
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



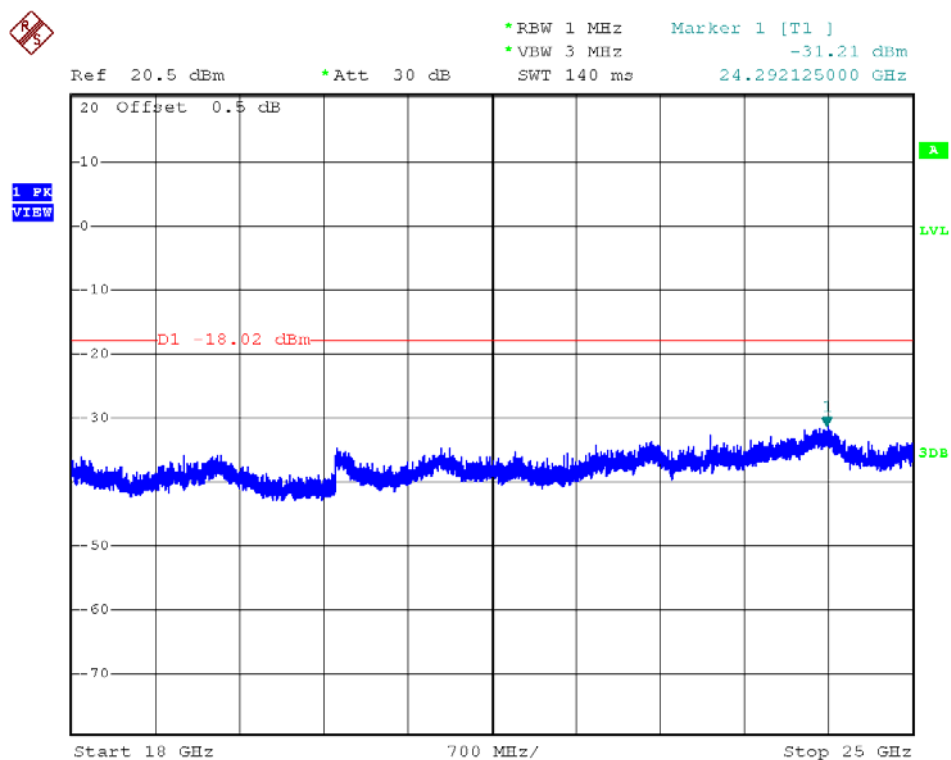
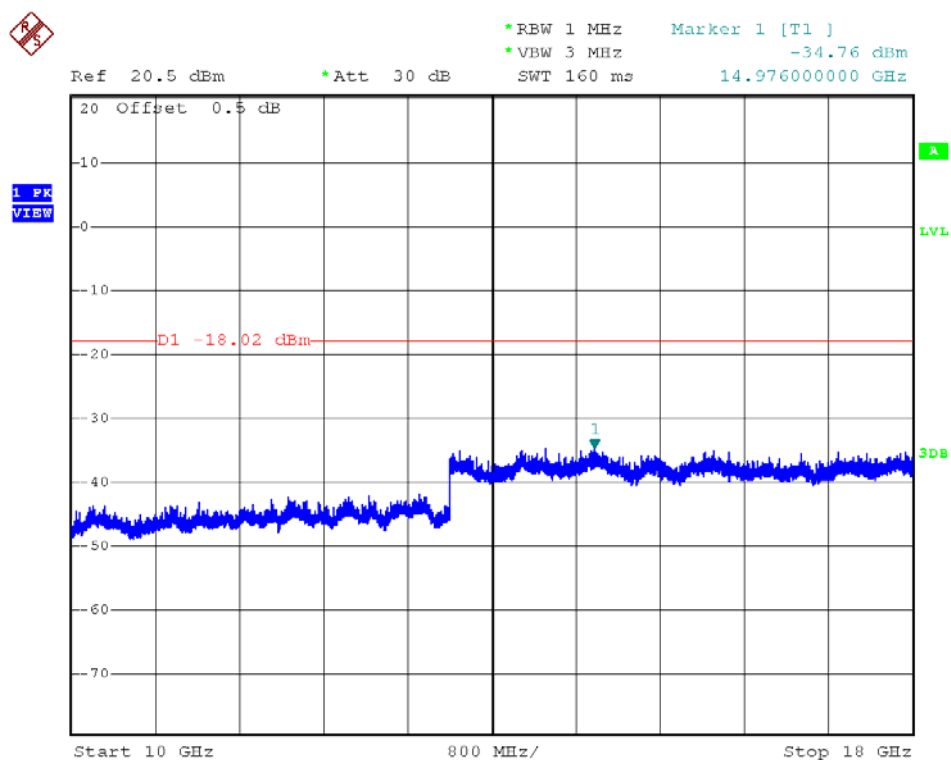
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: 1.98dBm



TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

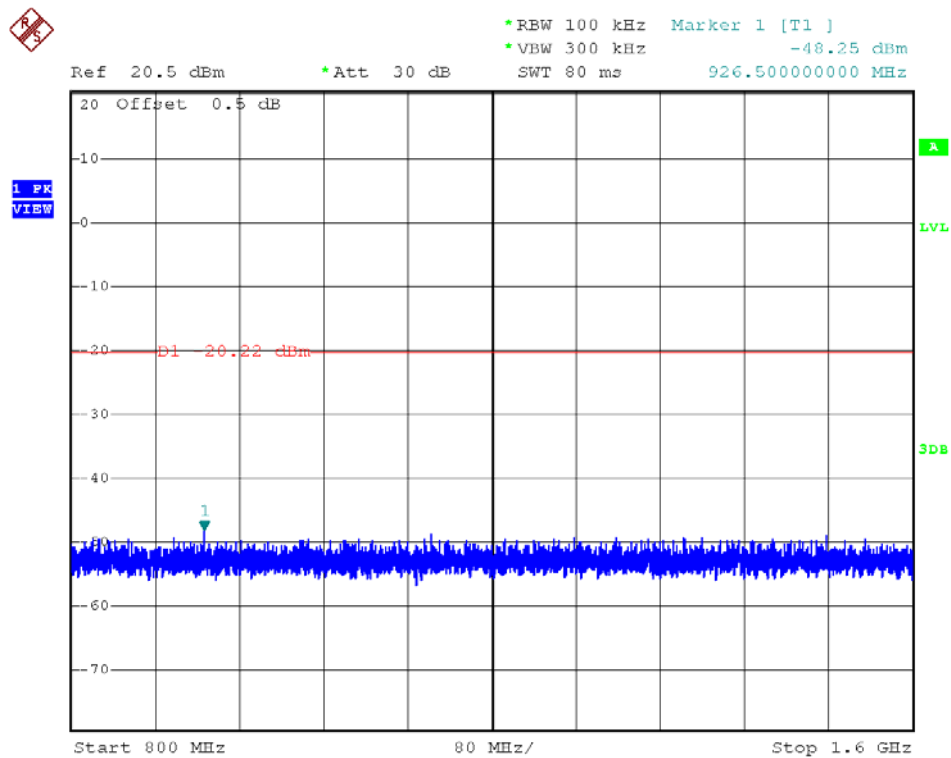
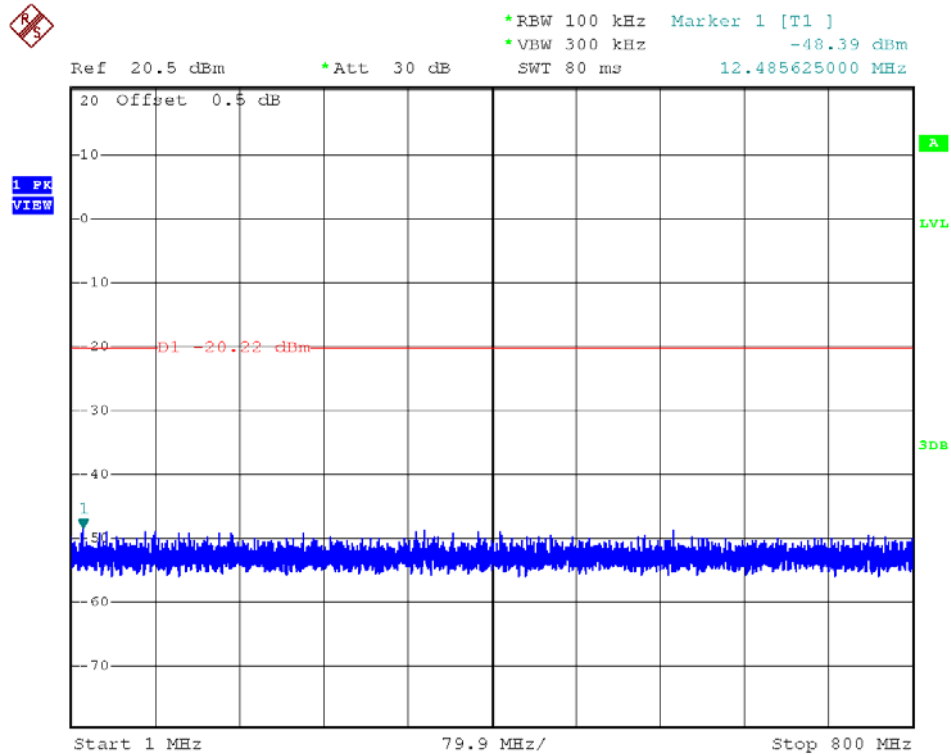
INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

802.11n-HT20 MIMO

Channel 1 (2412MHz) Reference Level: -0.22dBm ANT 1

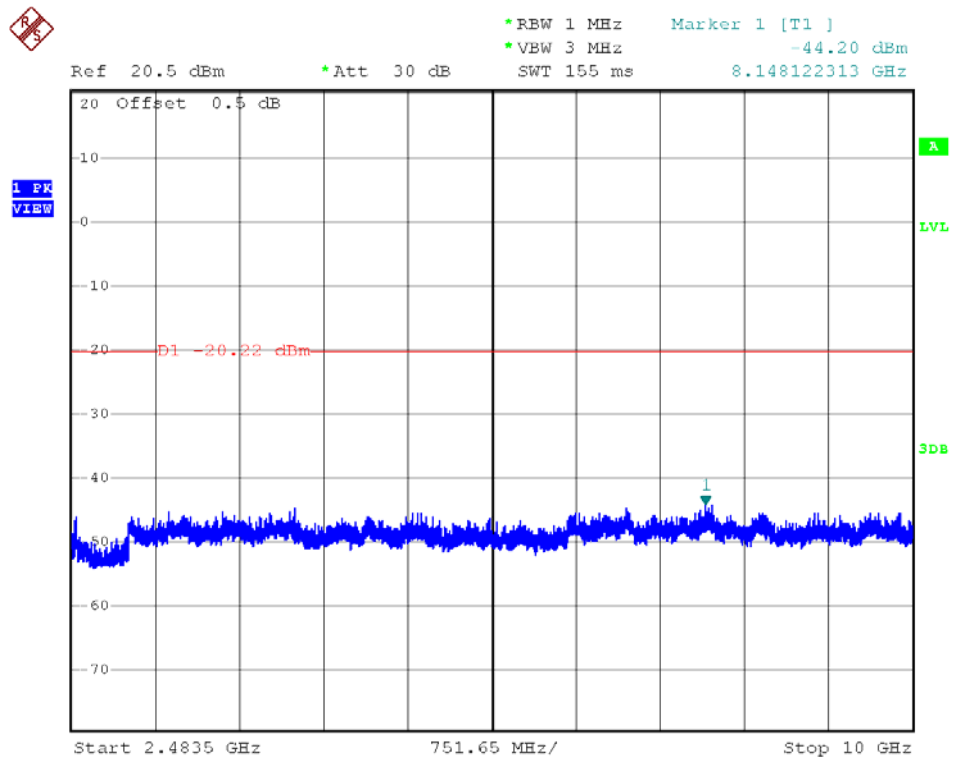
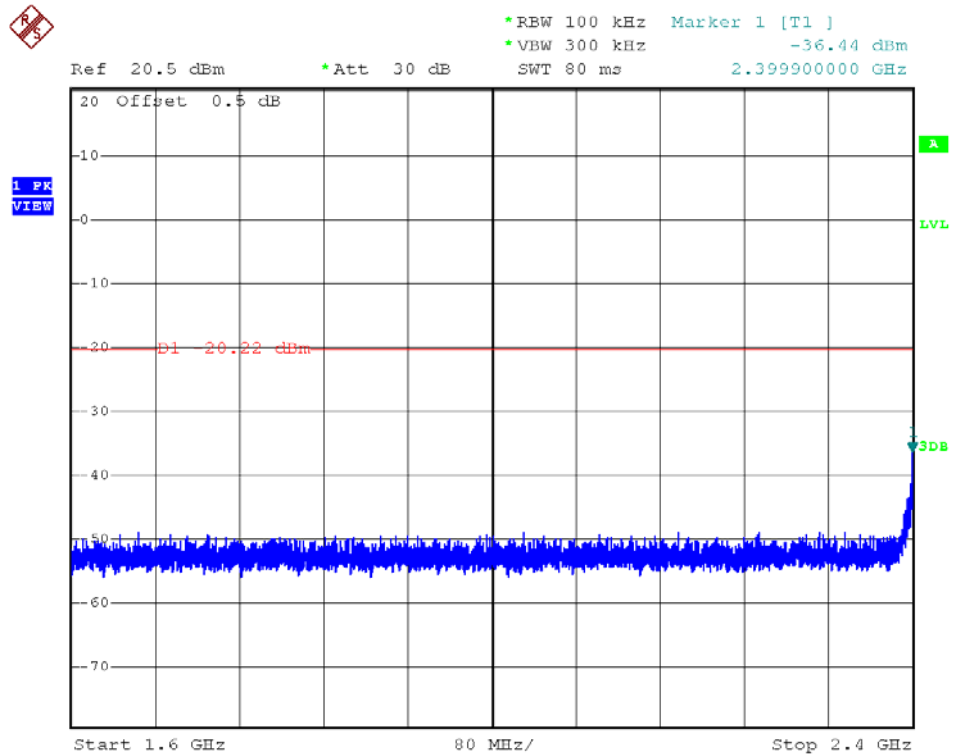


TRF no.: FCC 15C_TX_b

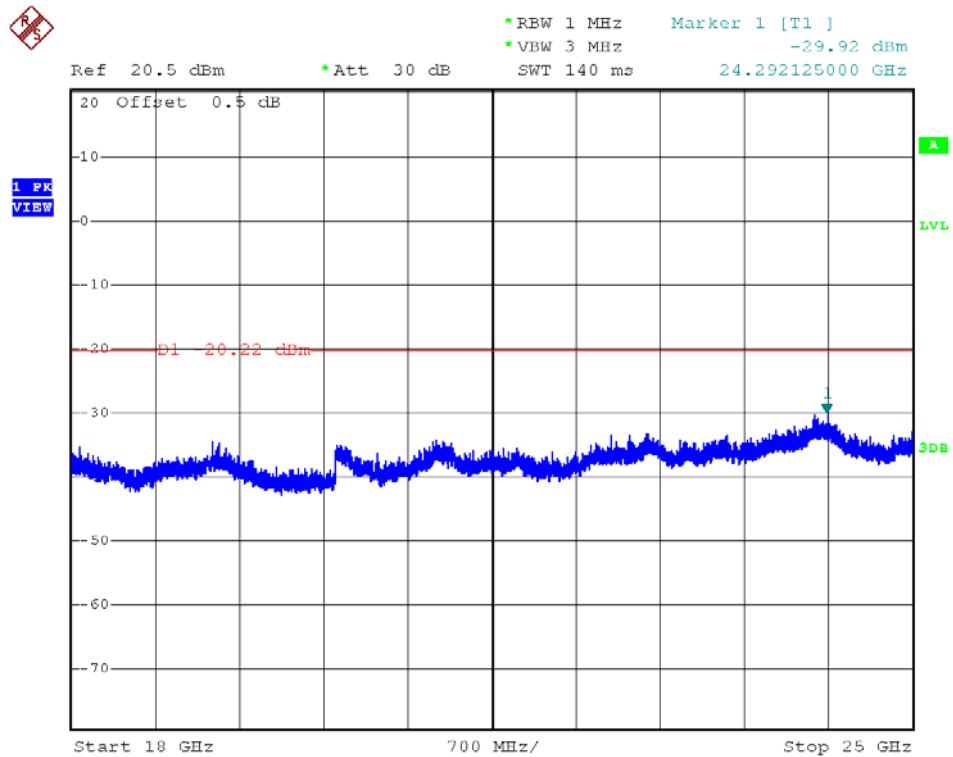
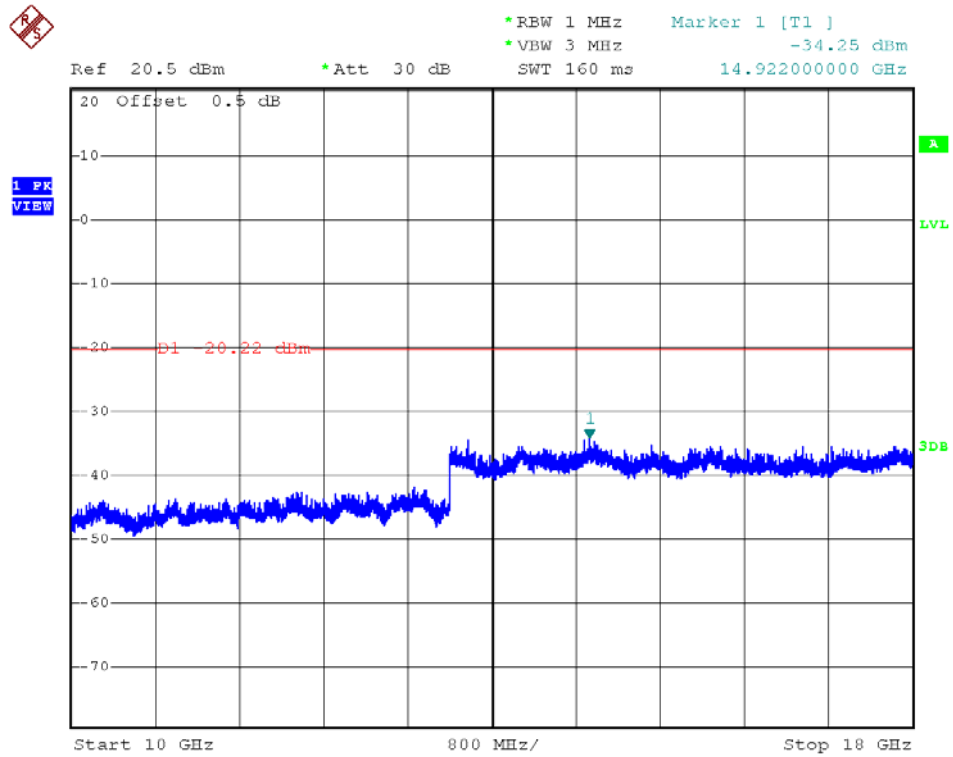
FCC ID: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

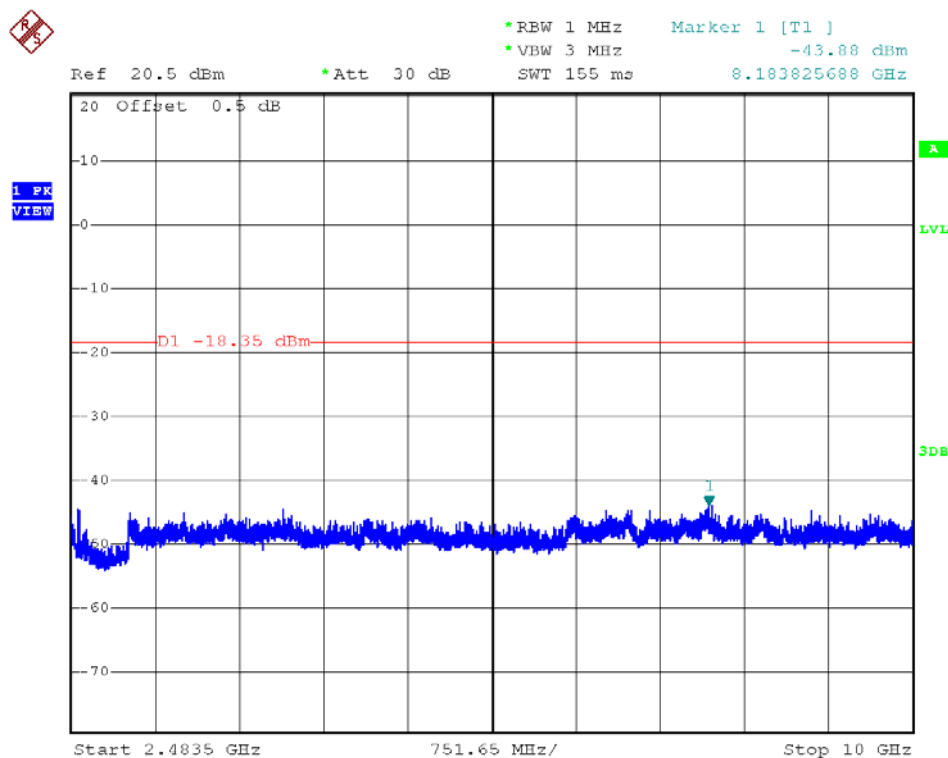
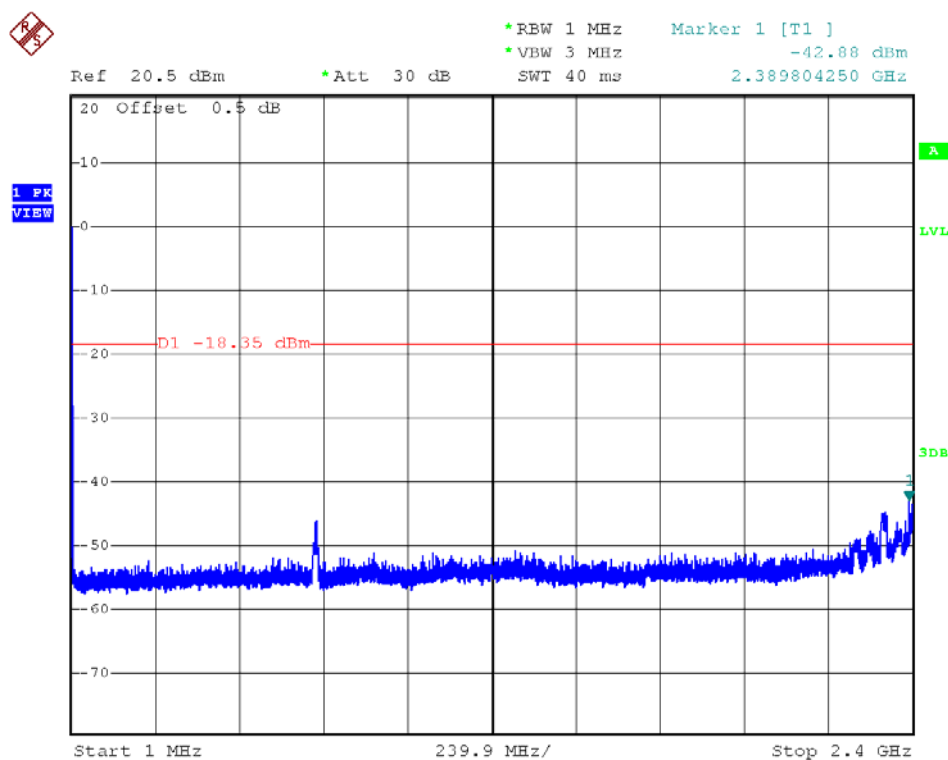


INTERTEK TESTING SERVICES



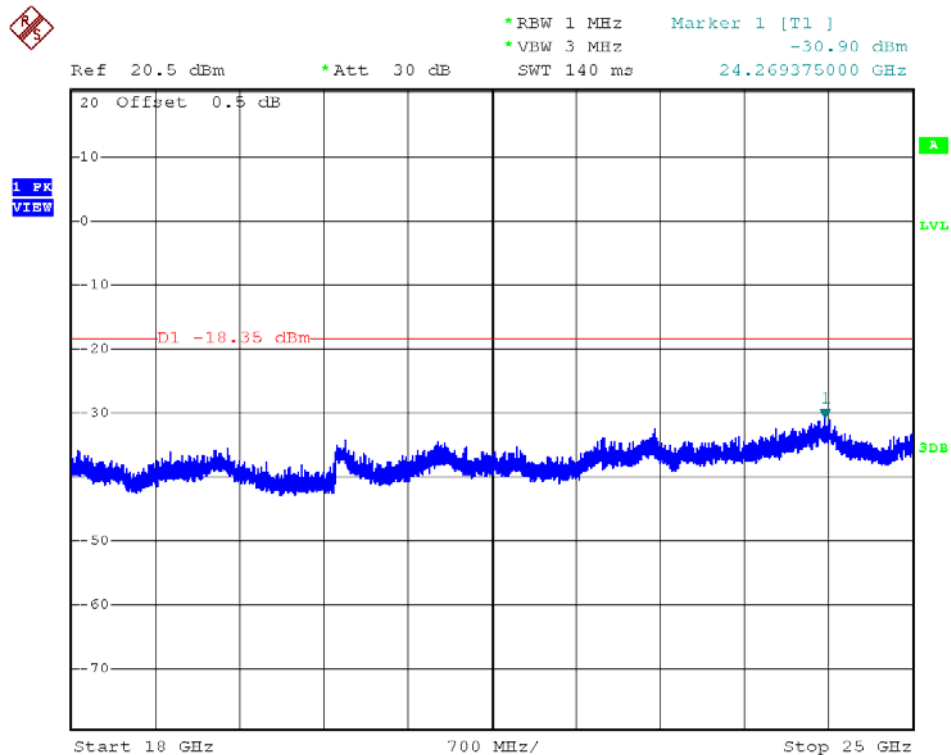
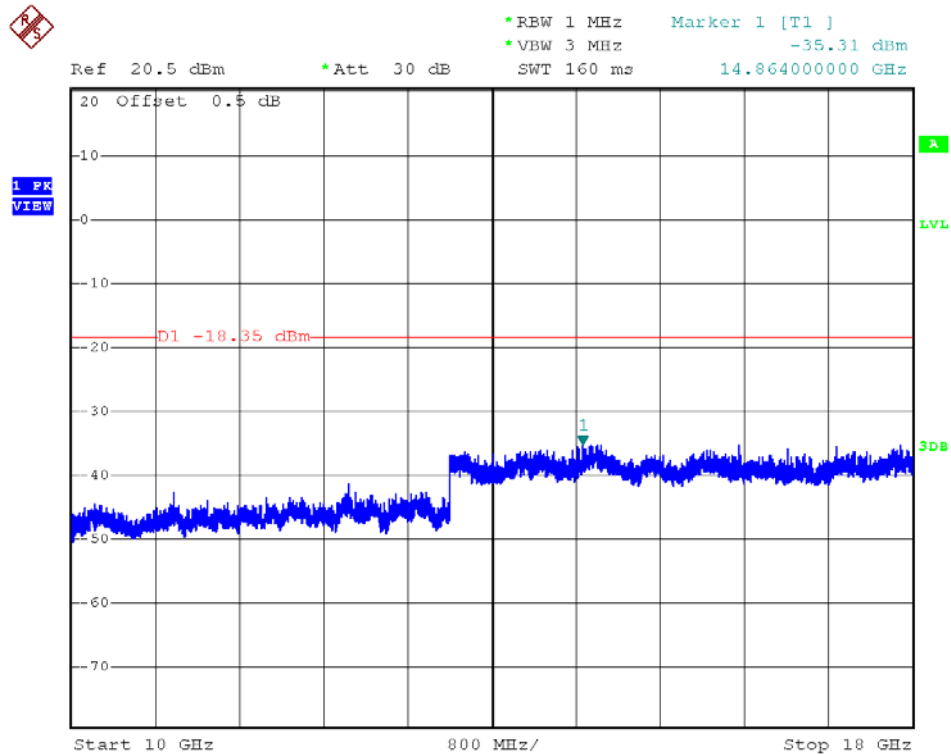
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 1.65dBm ANT 1



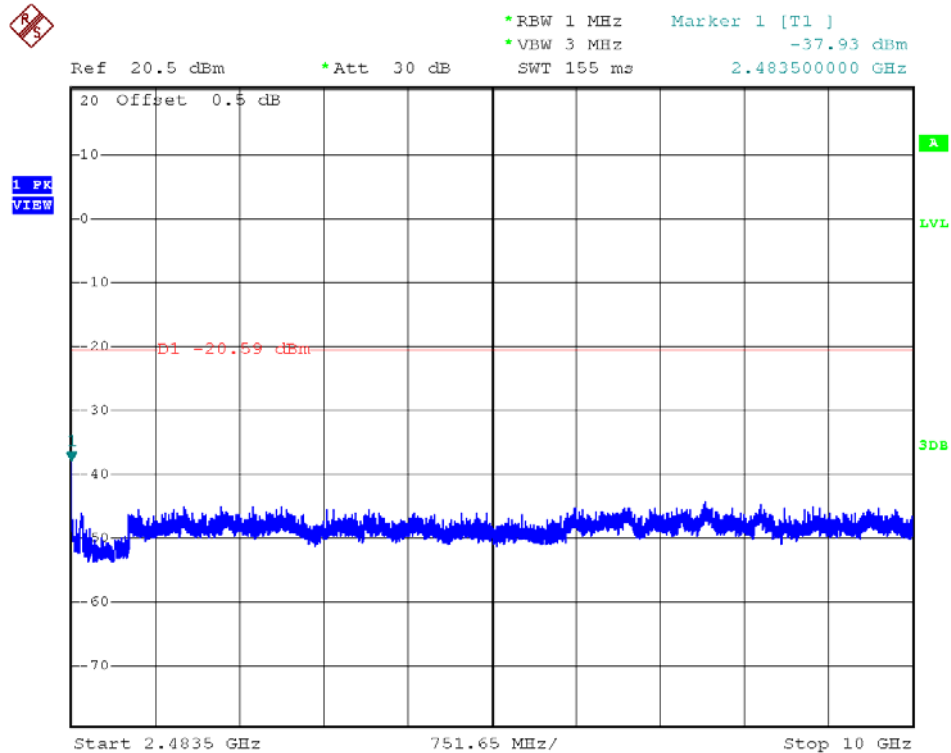
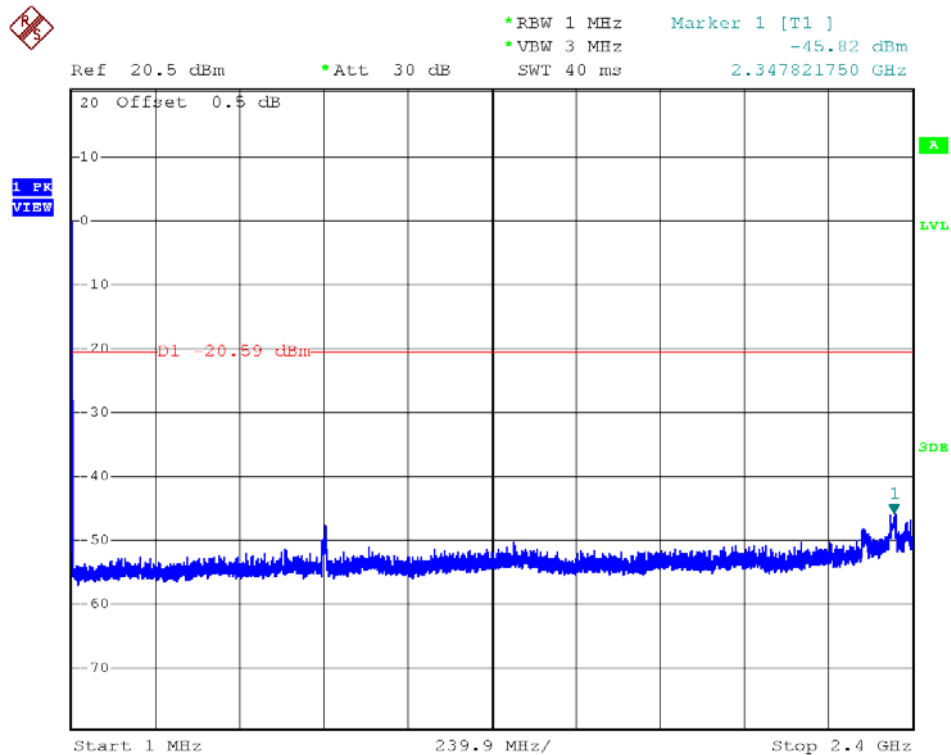
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



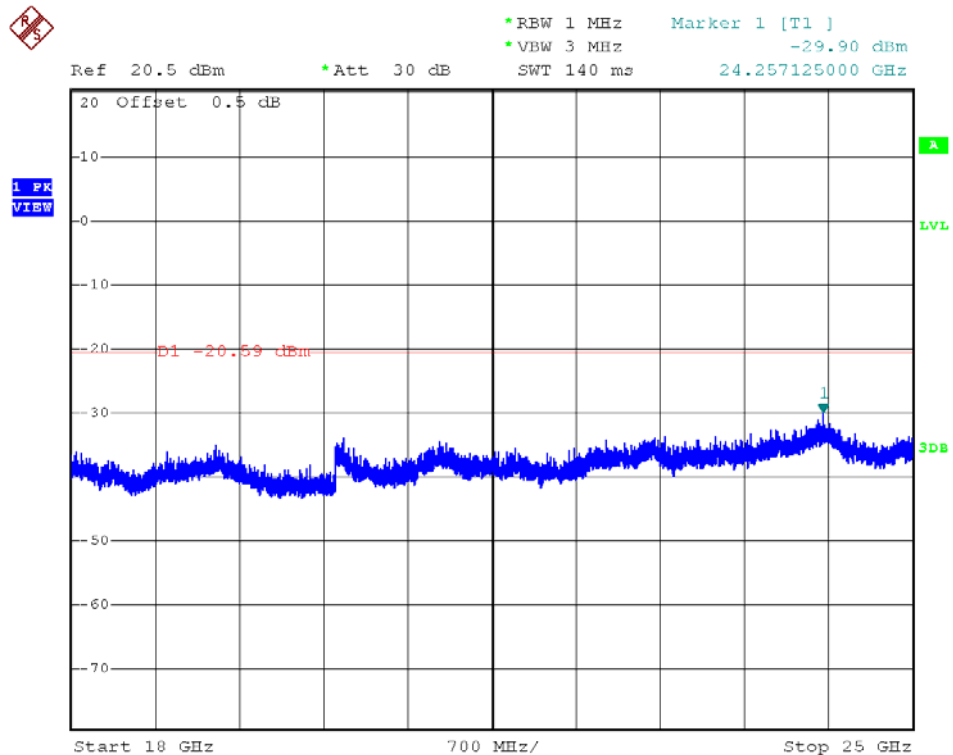
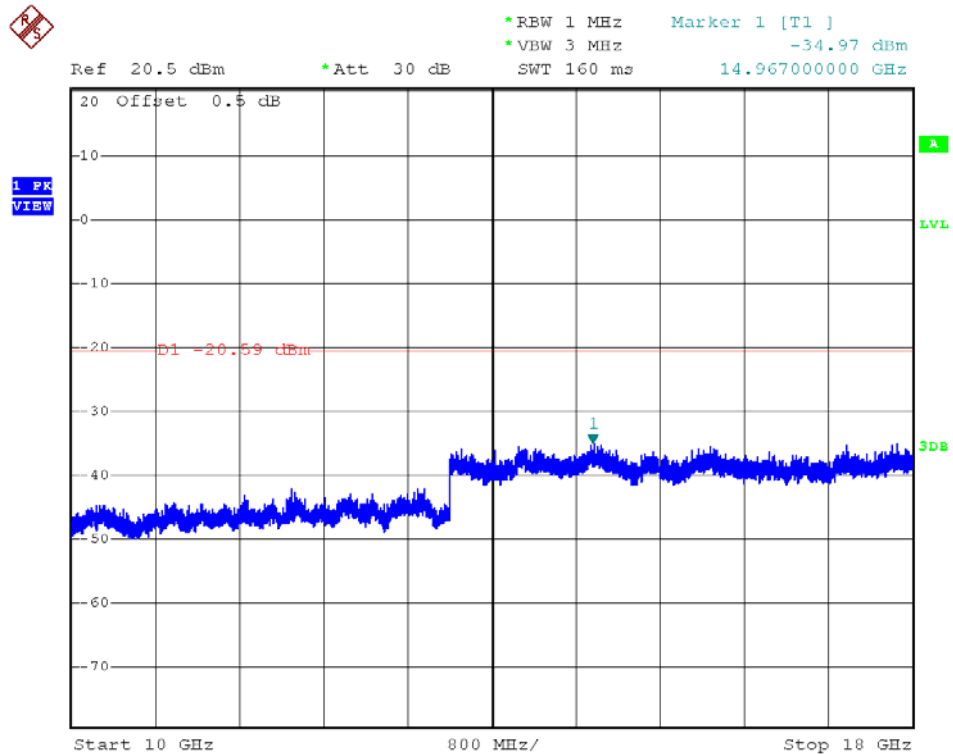
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: -0.59dBm ANT 1



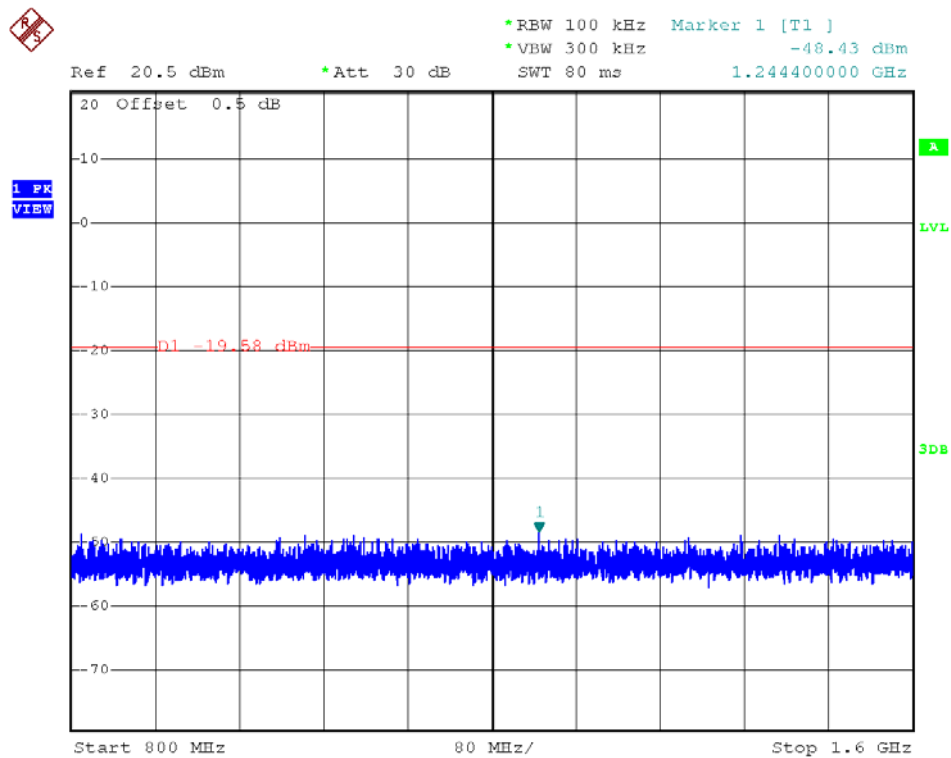
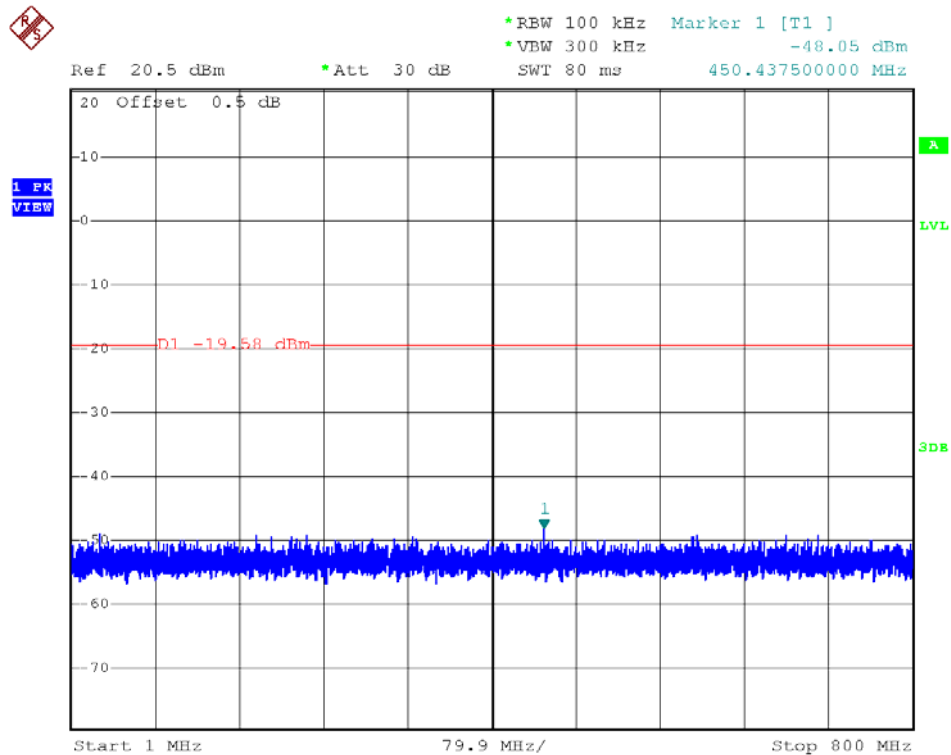
TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



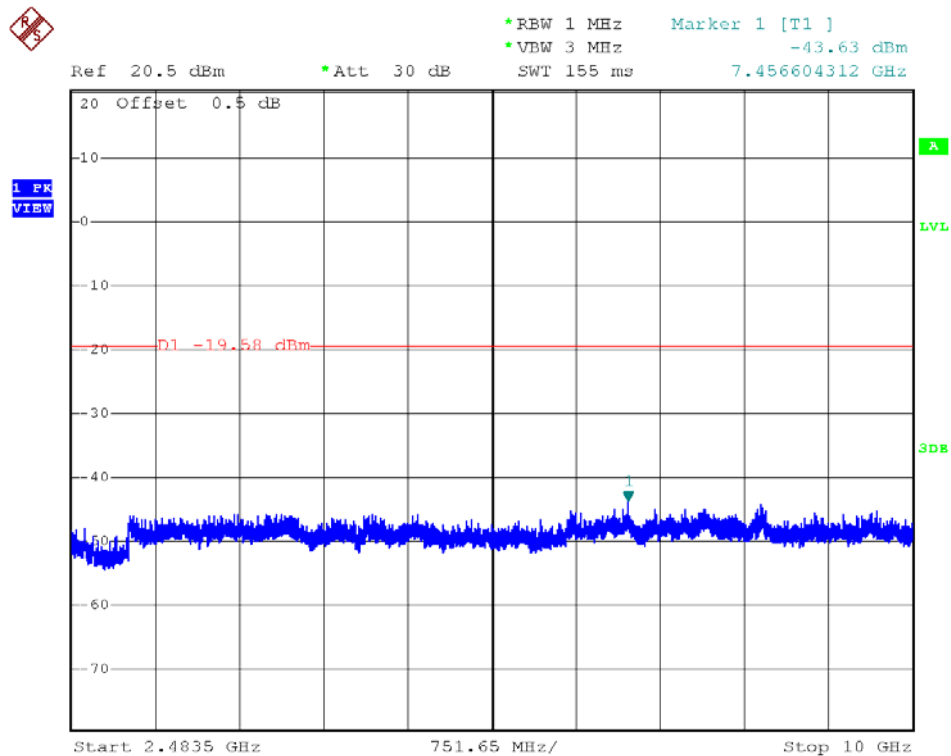
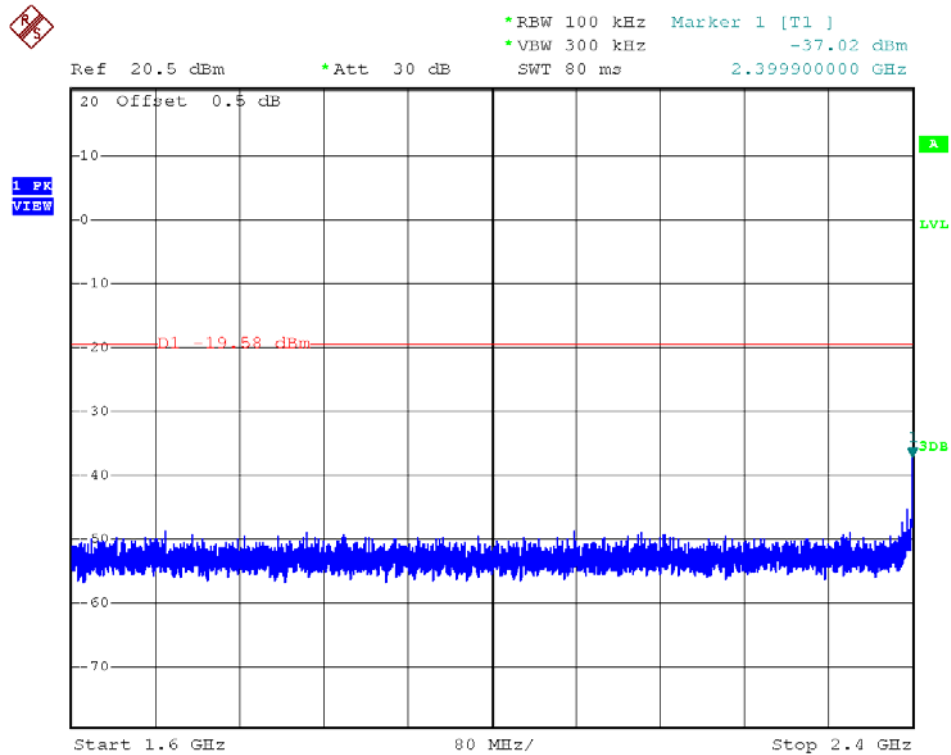
INTERTEK TESTING SERVICES

Channel 1 (2412MHz) Reference Level: 0.42dBm ANT 3

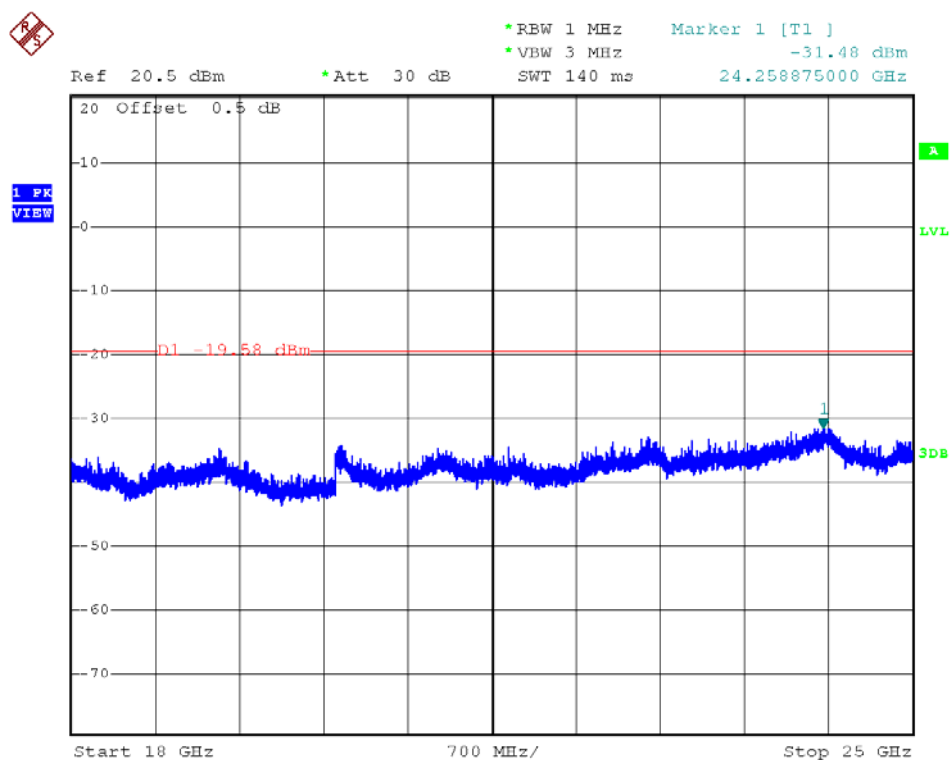
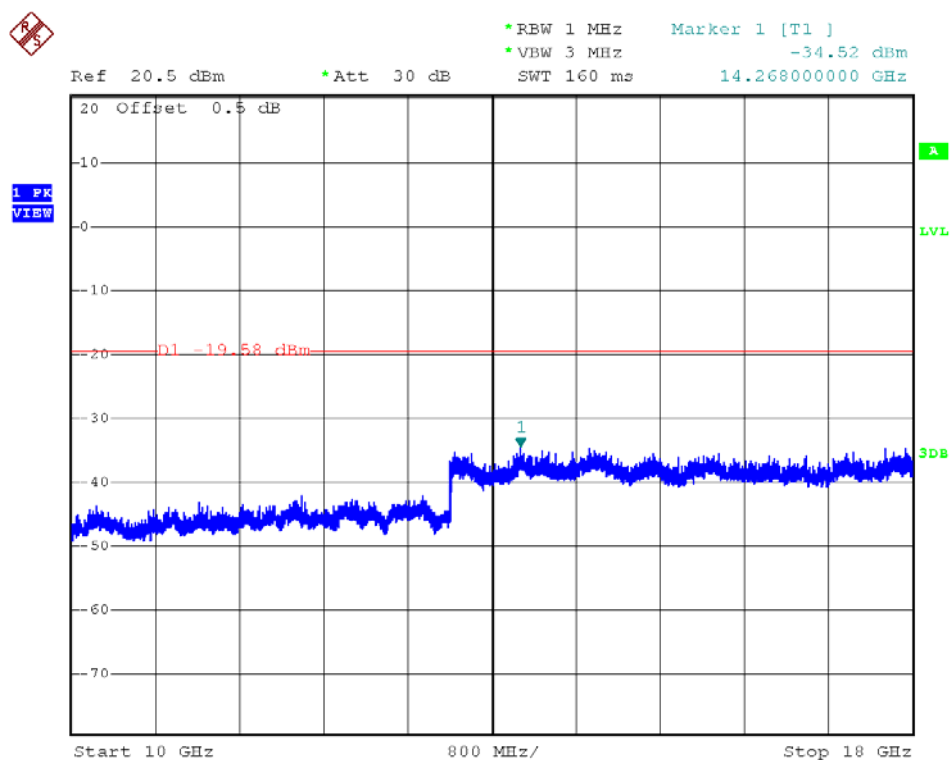


TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

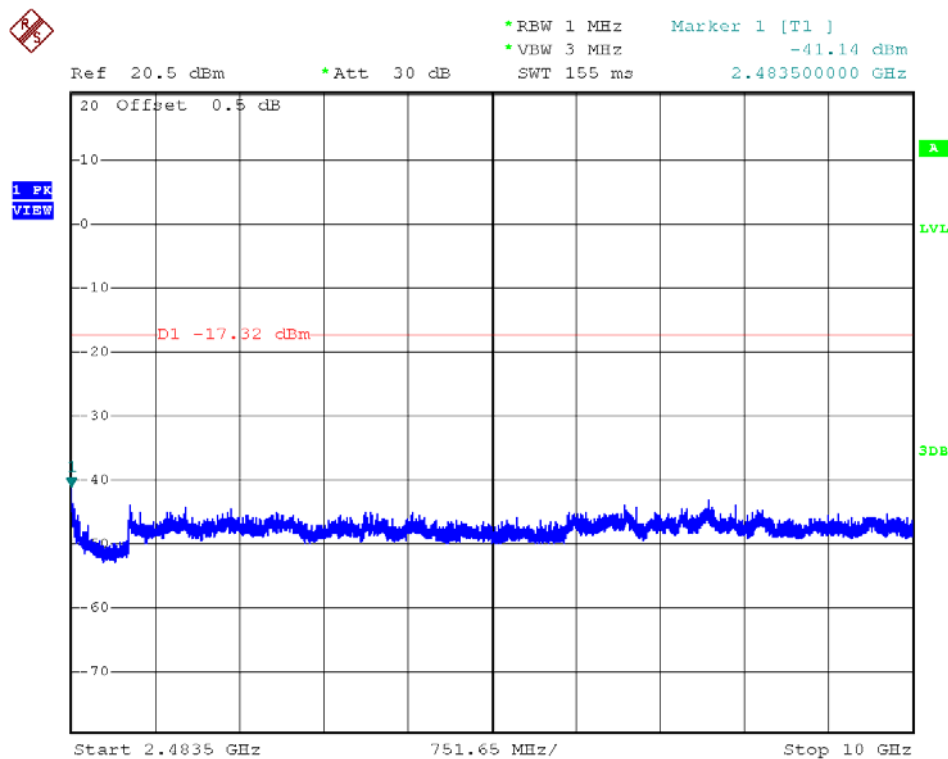
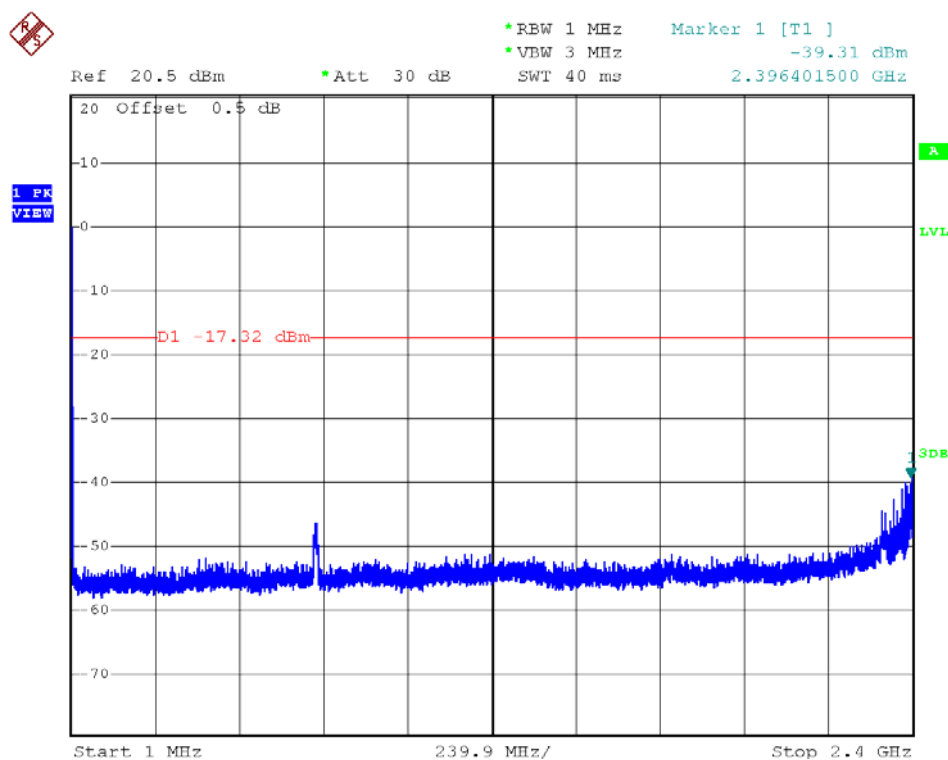


INTERTEK TESTING SERVICES



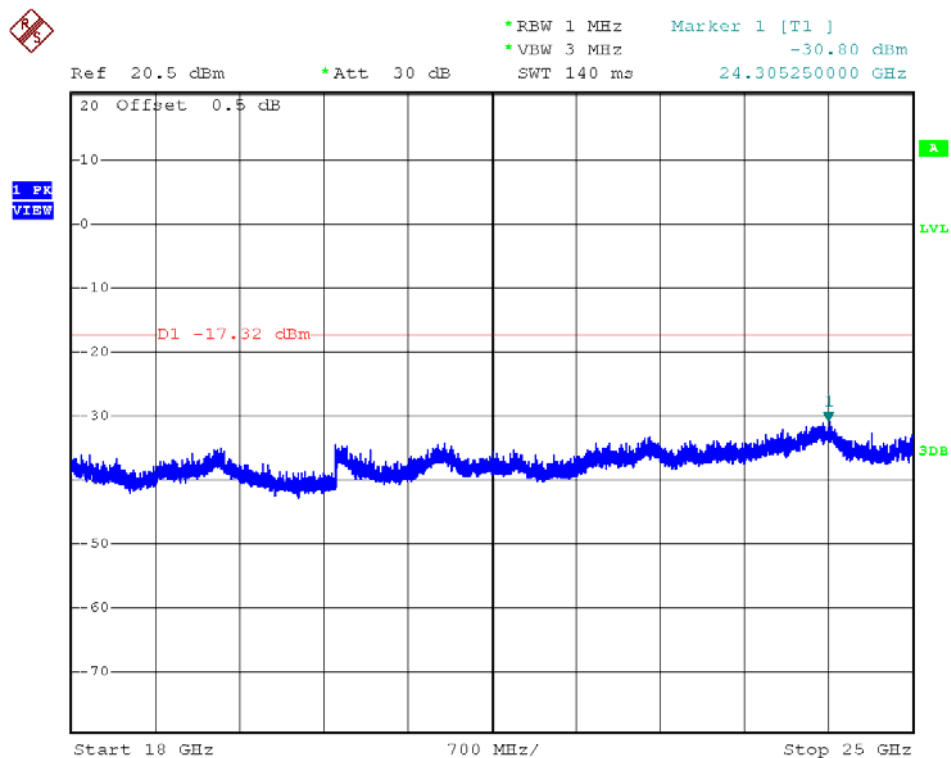
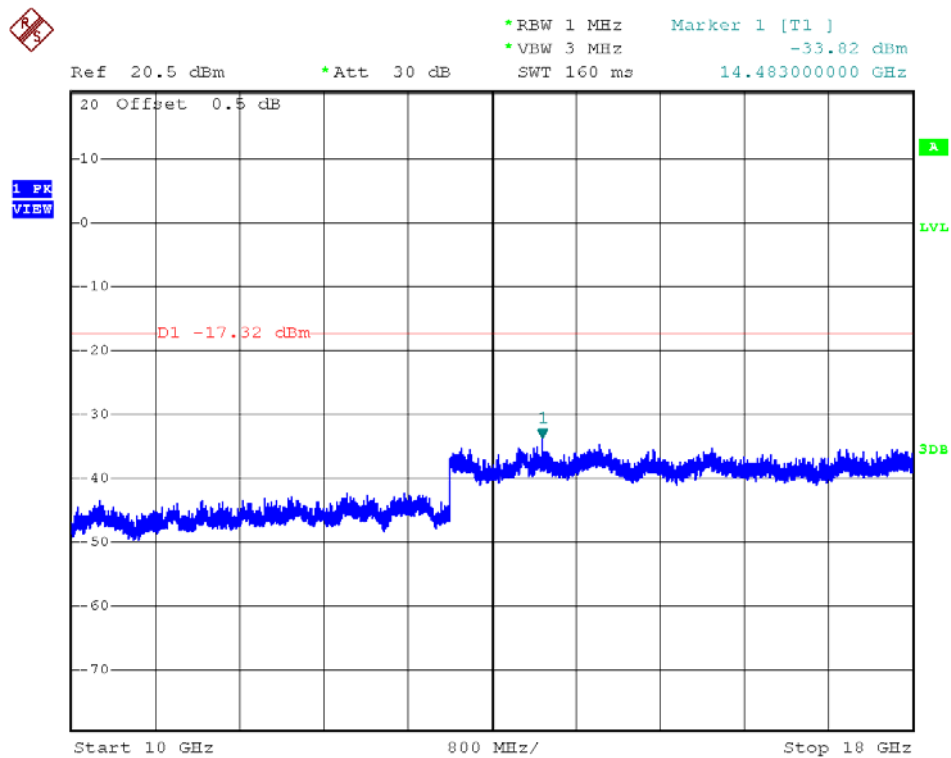
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 2.68dBm ANT 3



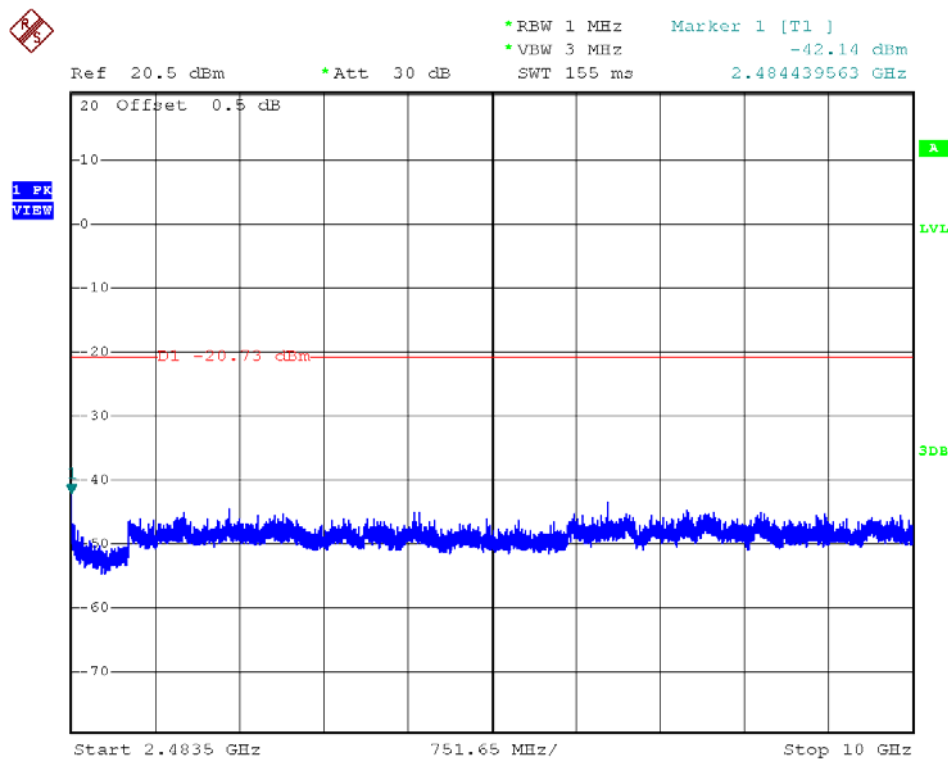
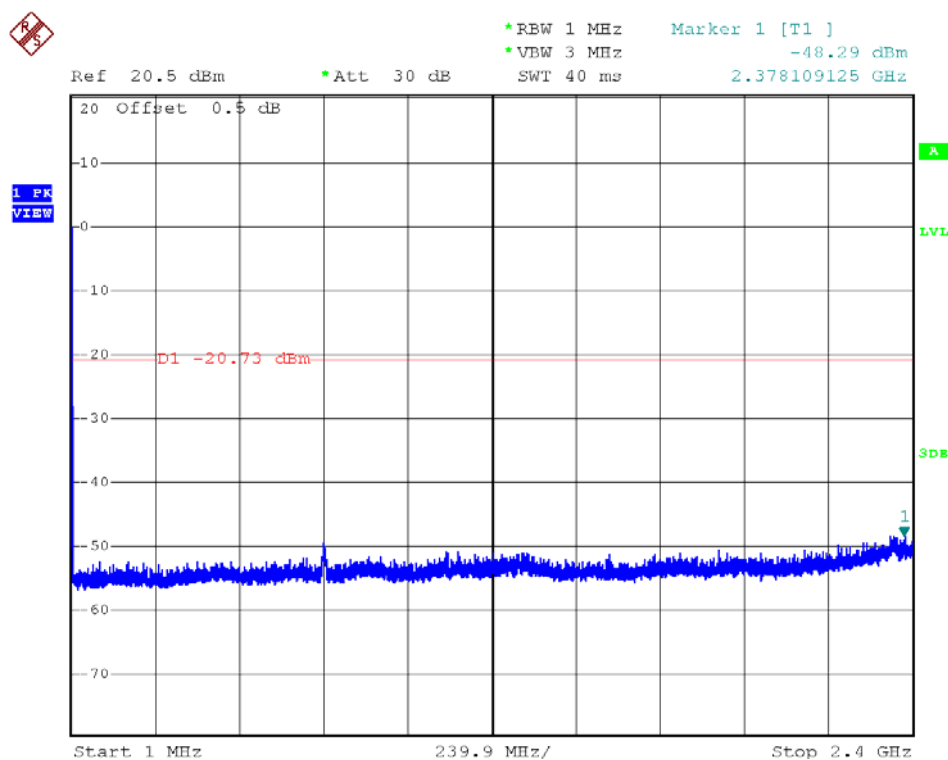
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Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



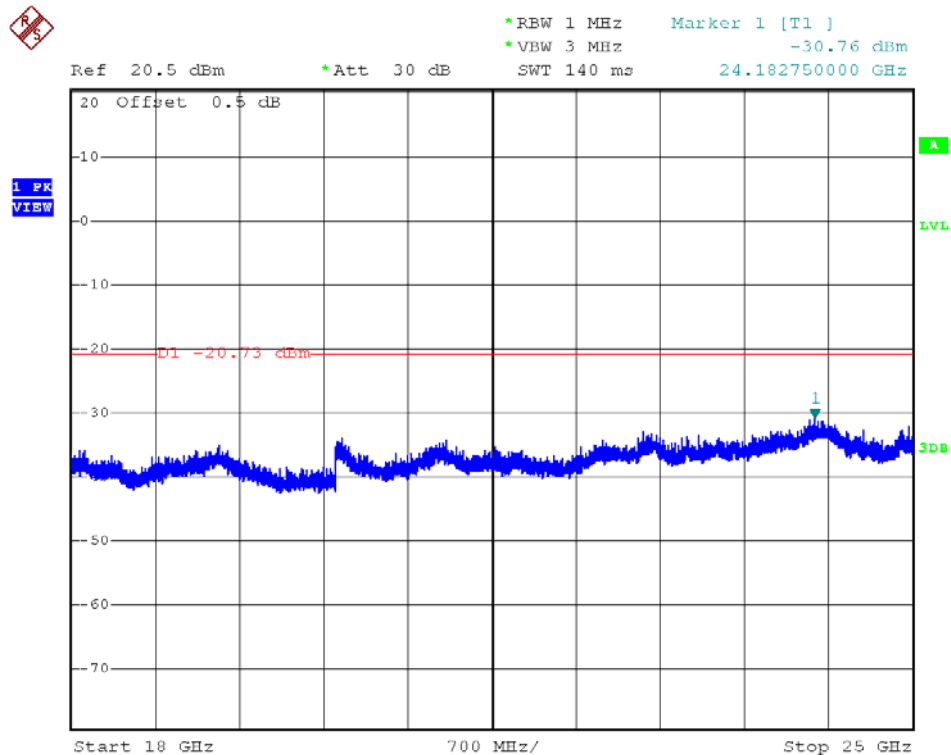
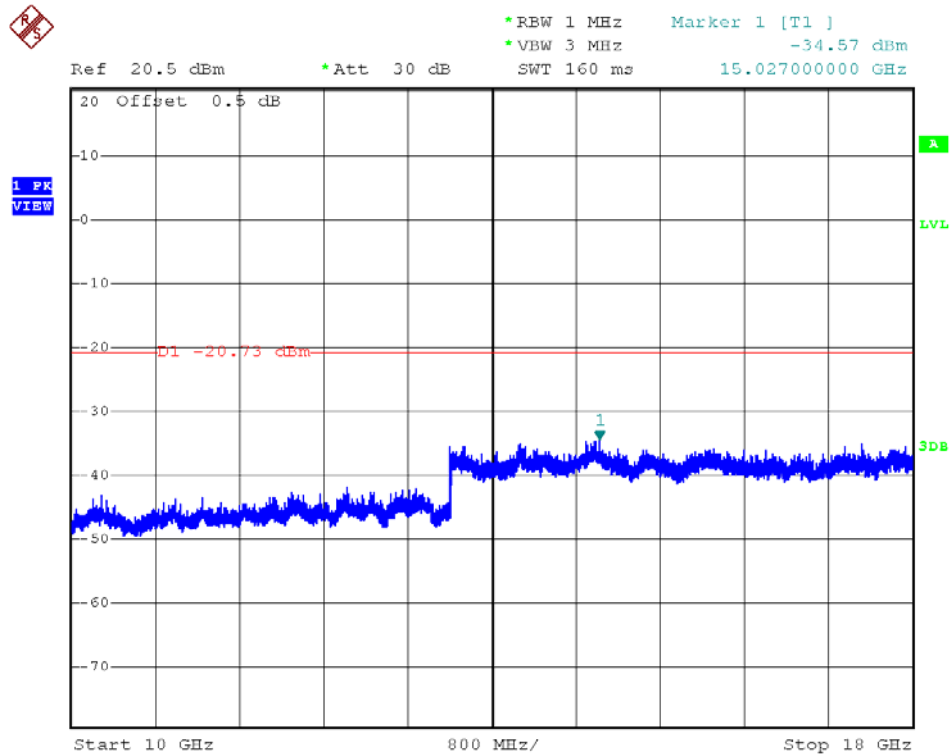
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: -0.73dBm ANT 3



TRF no.: FCC 15C_TX_b
 FCC ID: QISHG630V2
 Report No.: 140717005SZN-001

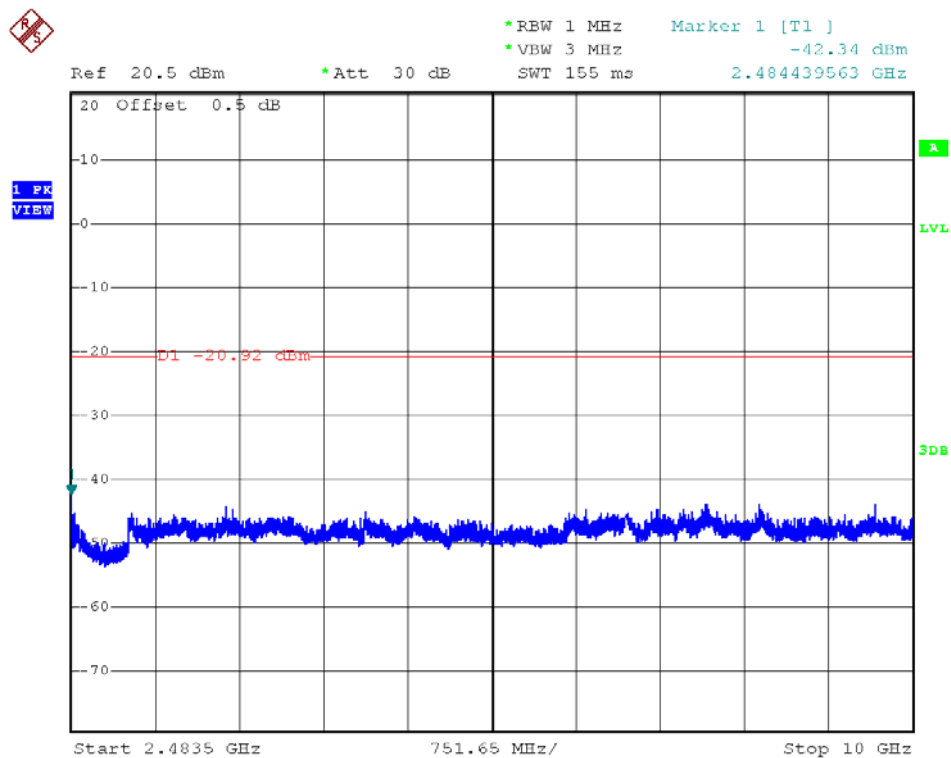
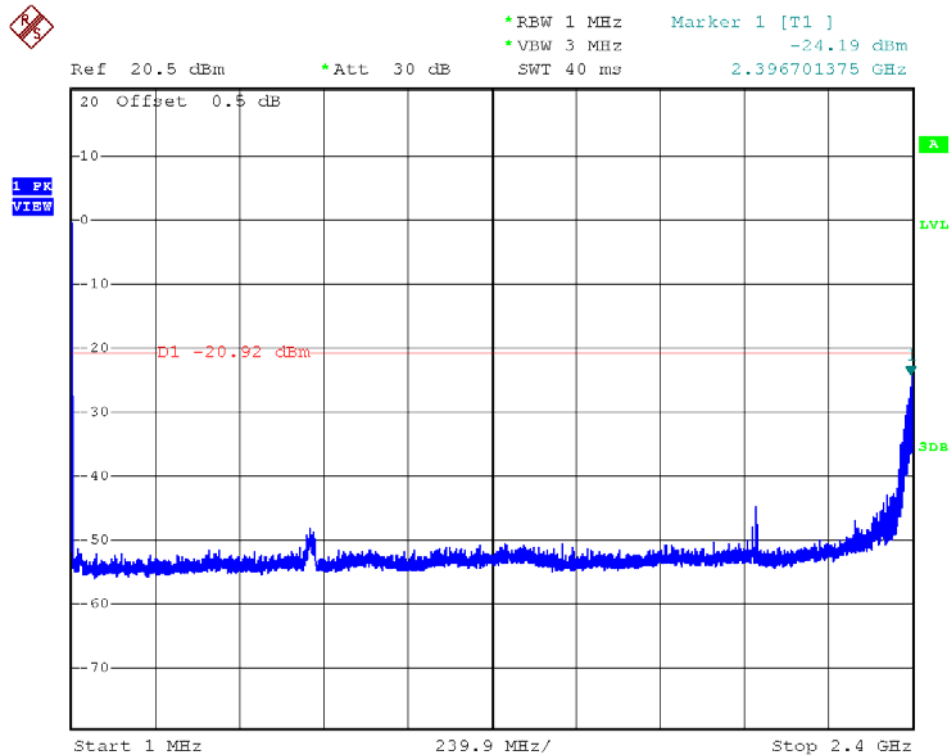
INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

802.11n-HT40 SISO

Channel 3 (2422MHz) Reference Level: -0.92dBm

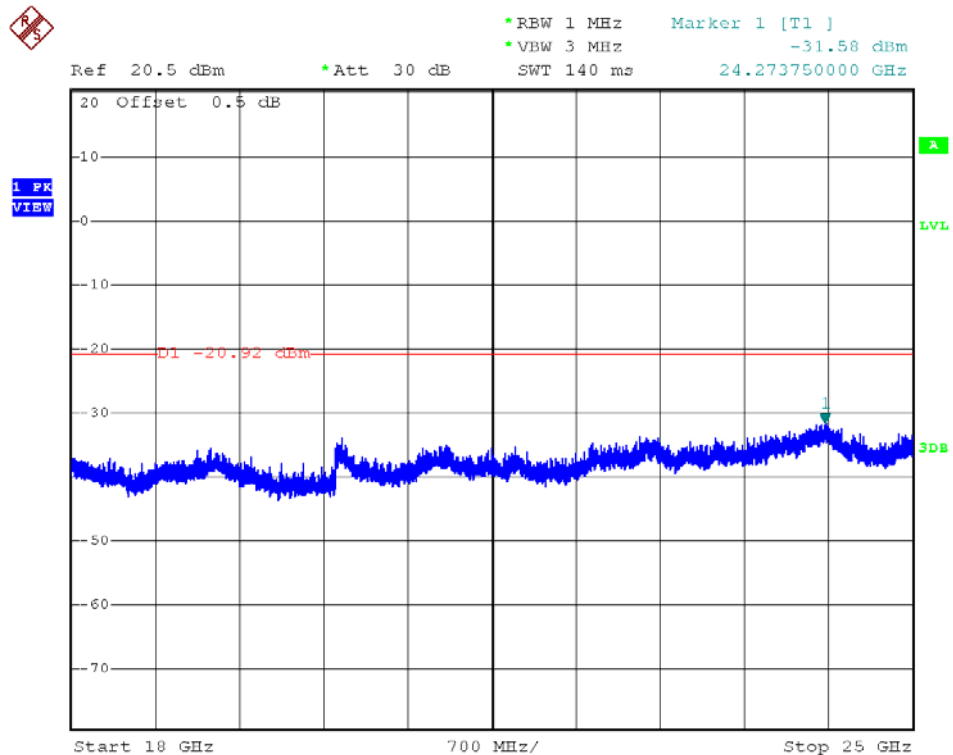
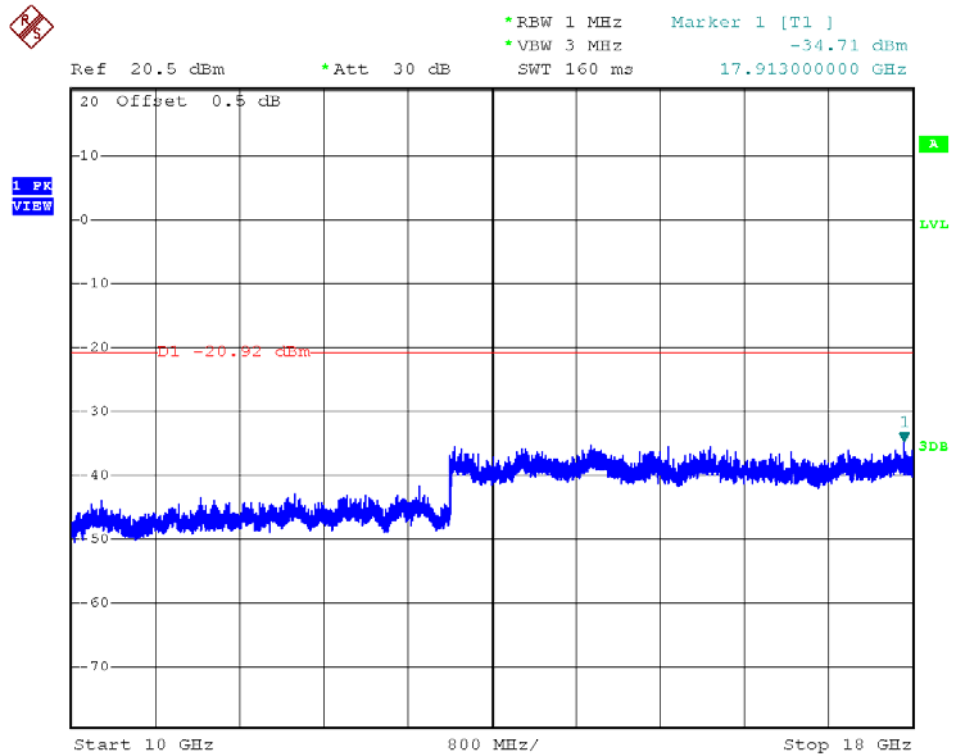


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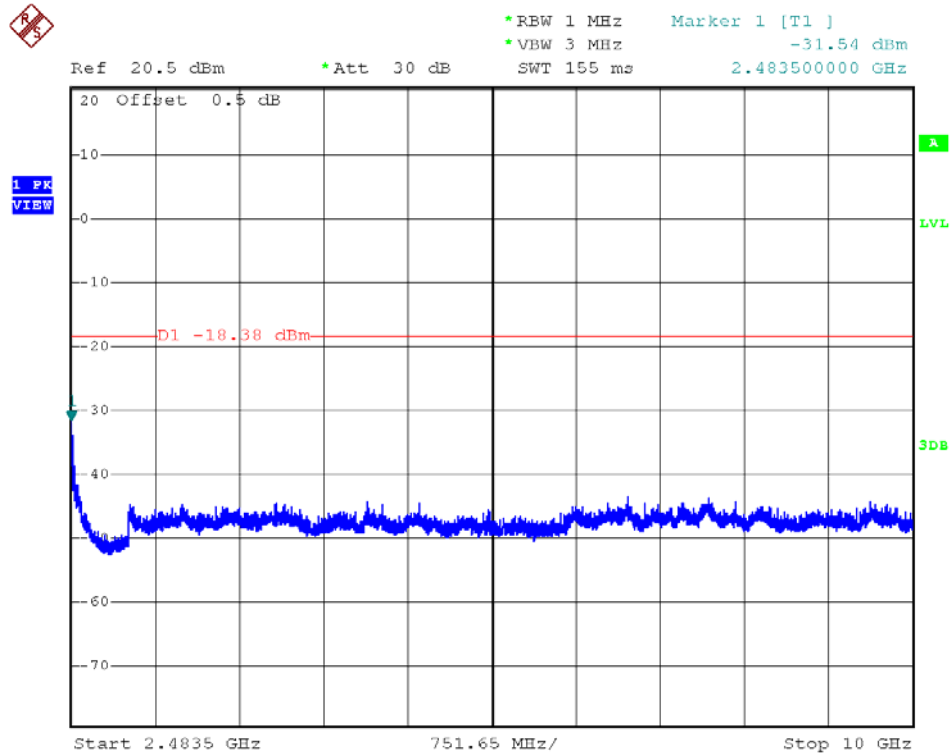
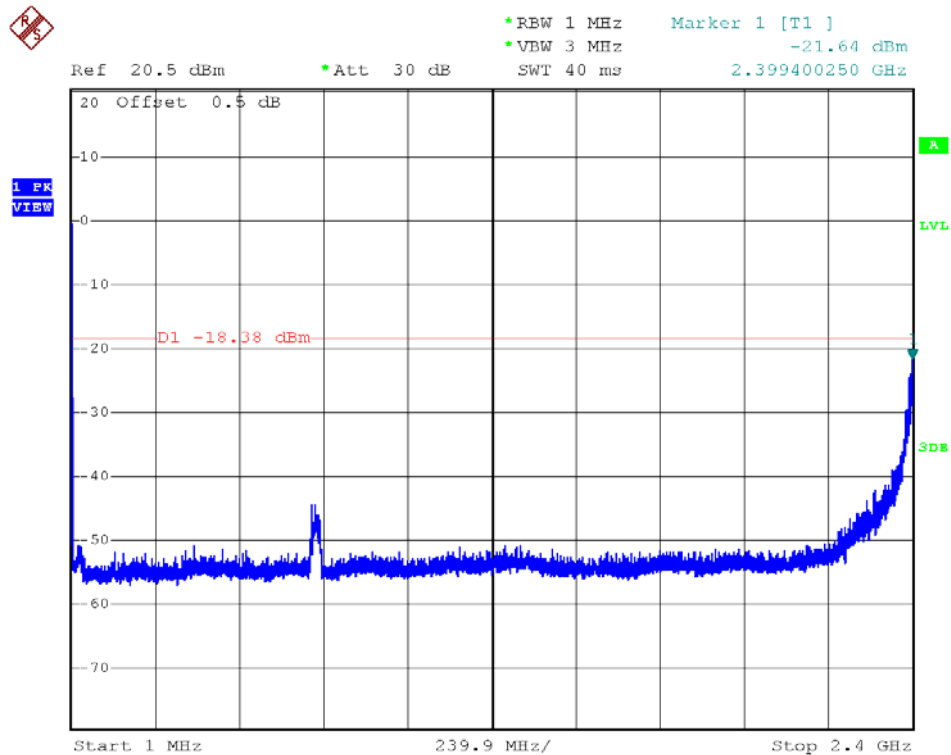
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INTERTEK TESTING SERVICES



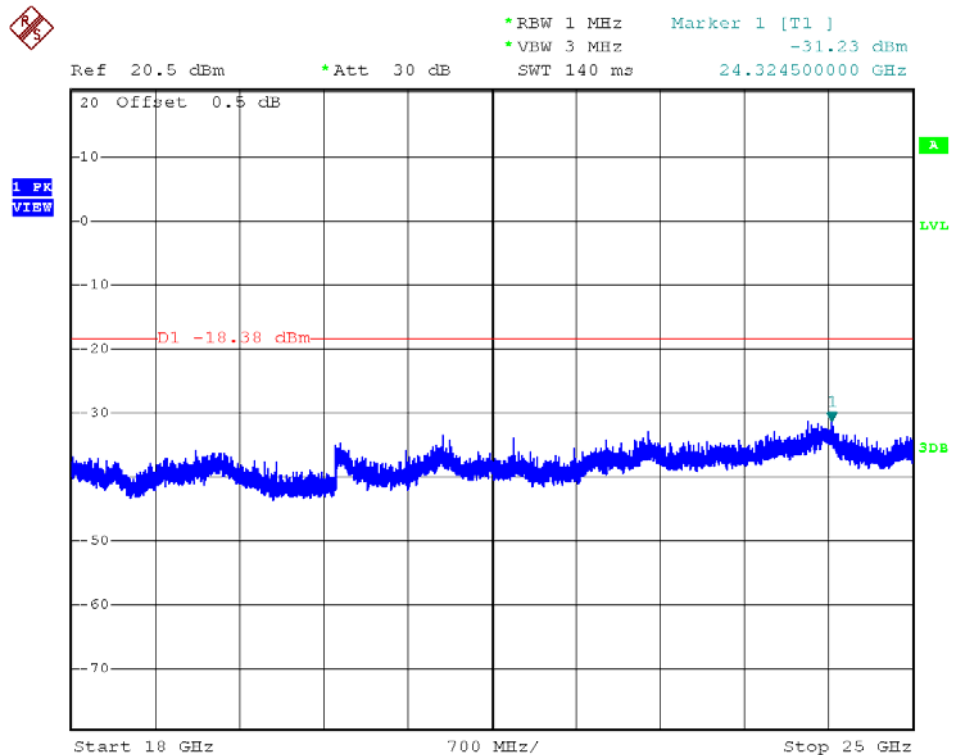
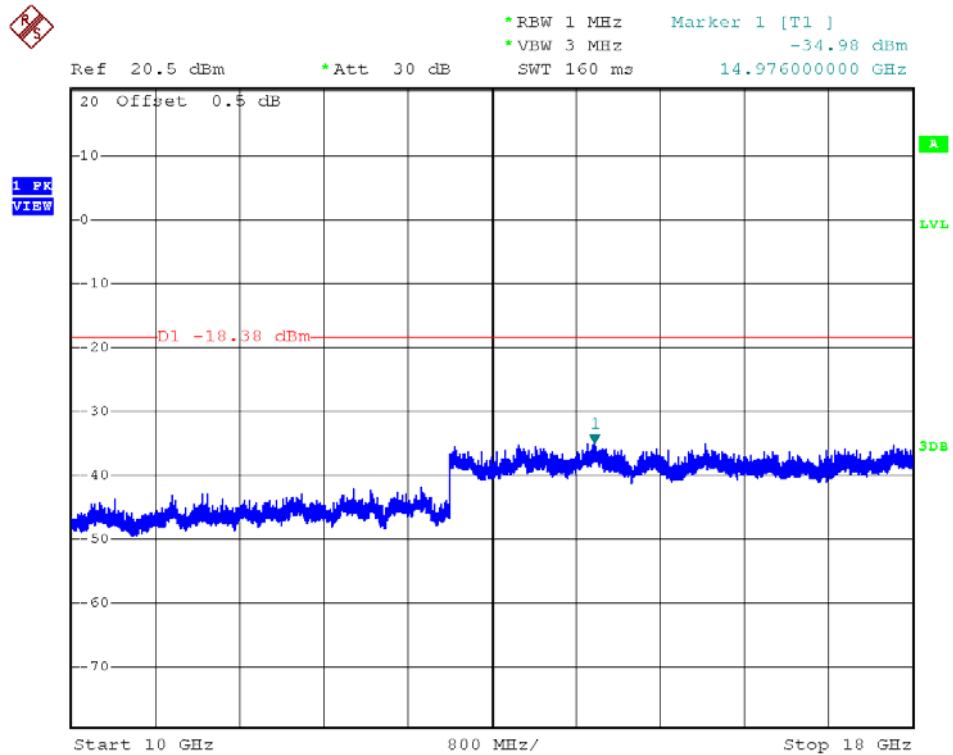
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: 1.62dBm



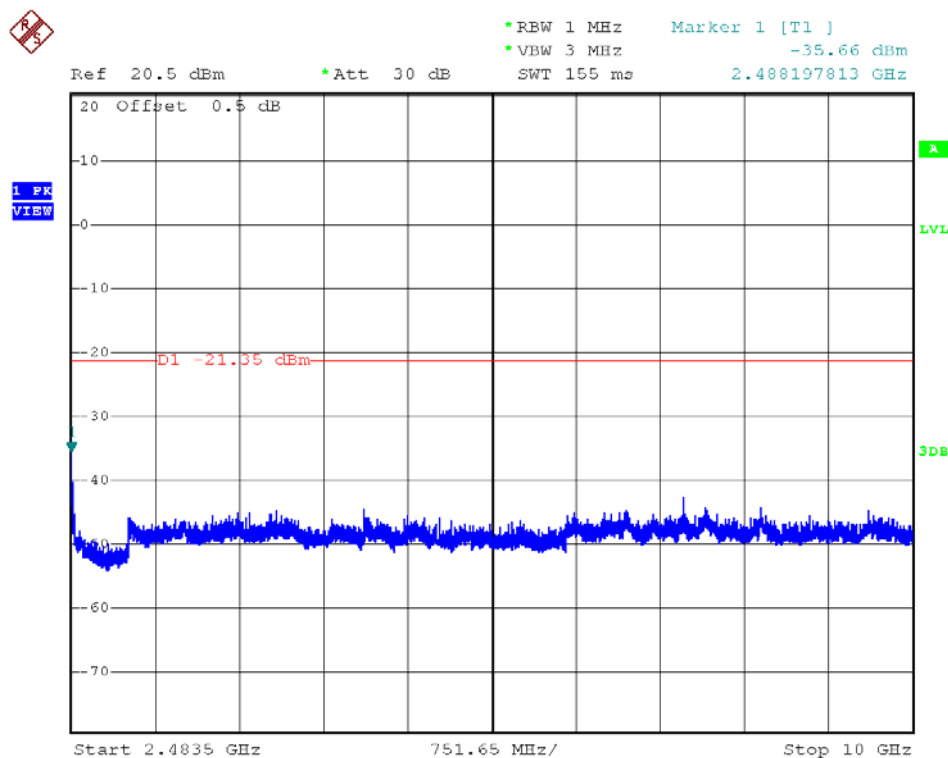
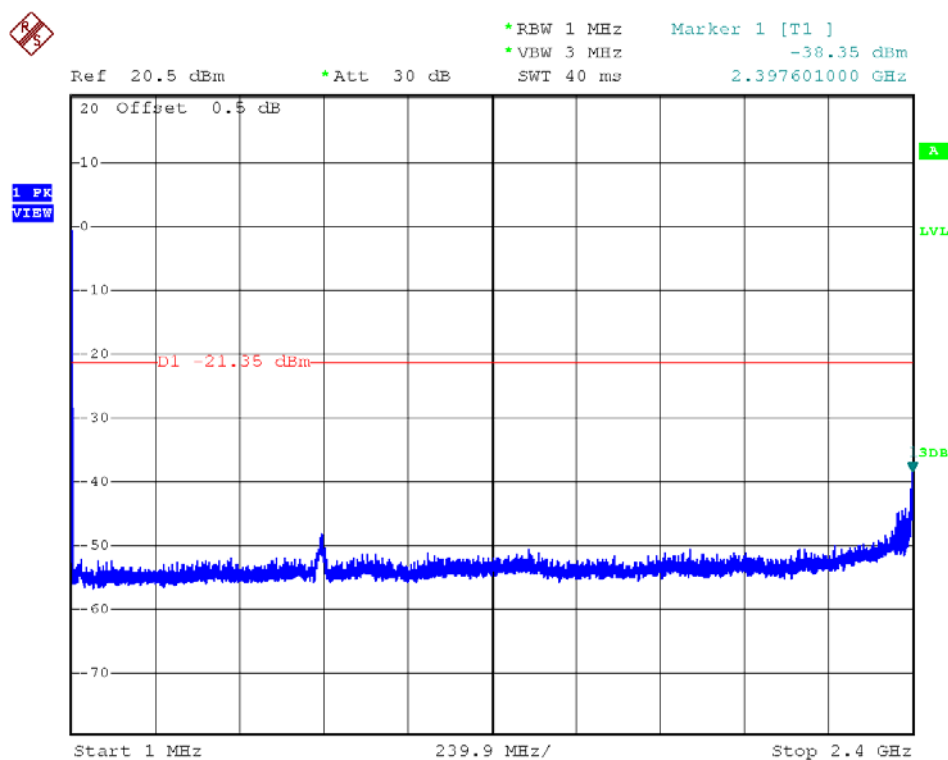
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Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



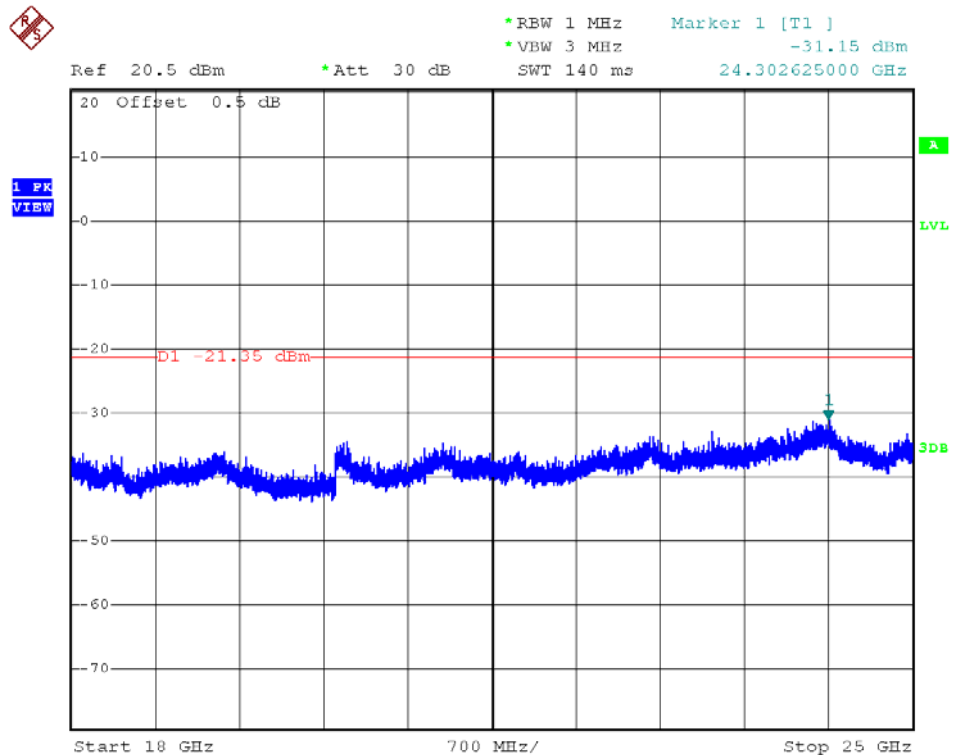
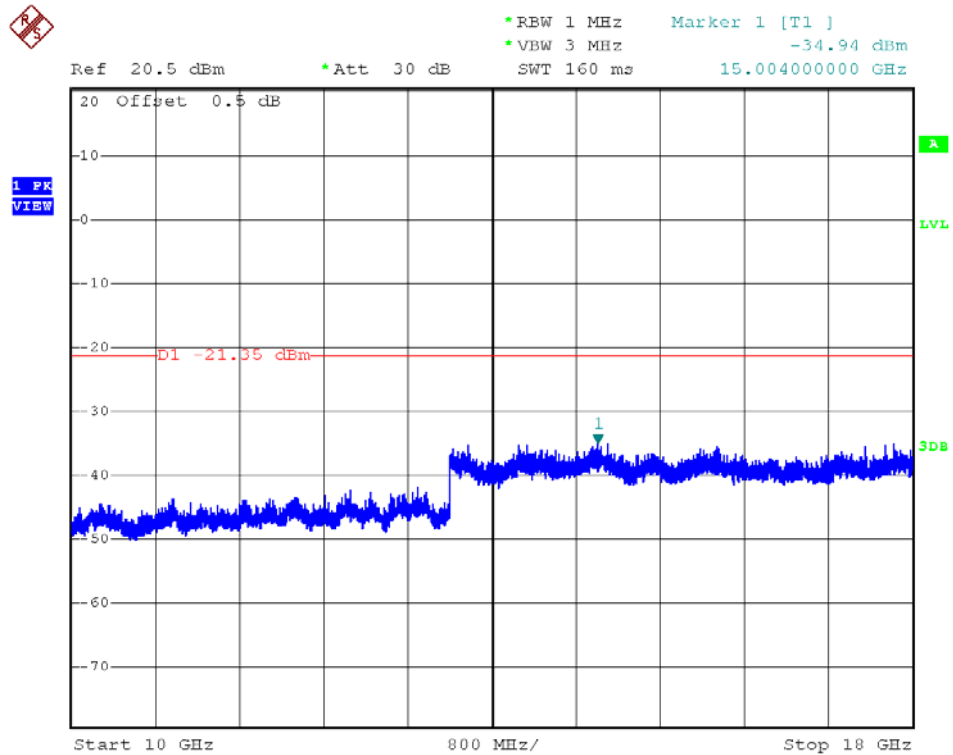
INTERTEK TESTING SERVICES

Channel 9 (2452MHz) Reference Level: -1.35dBm



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Report No.: 140717005SZN-001

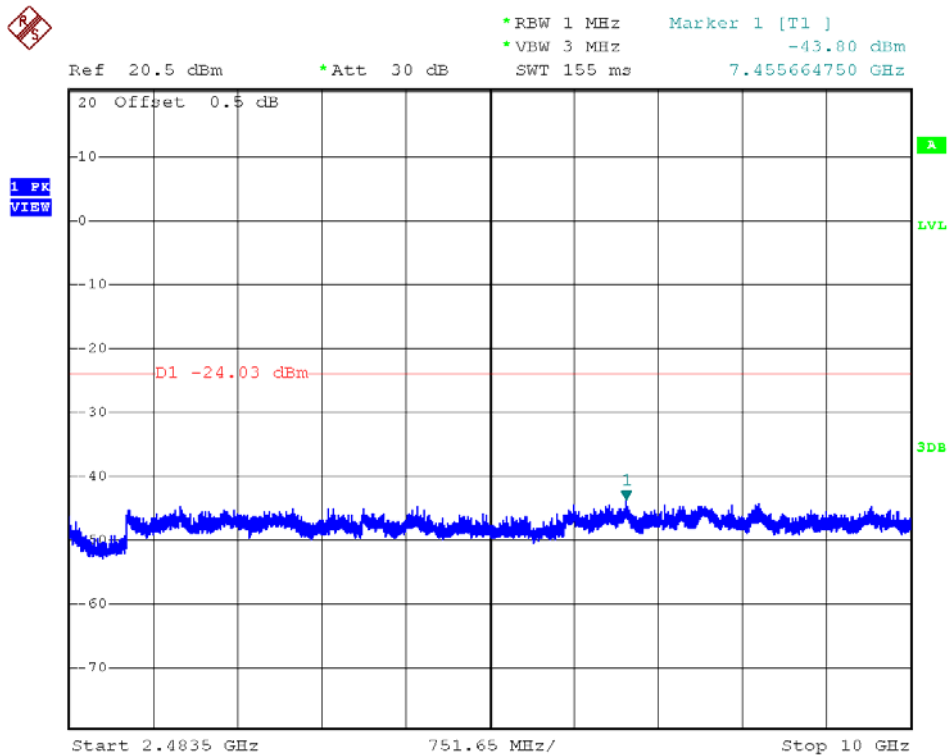
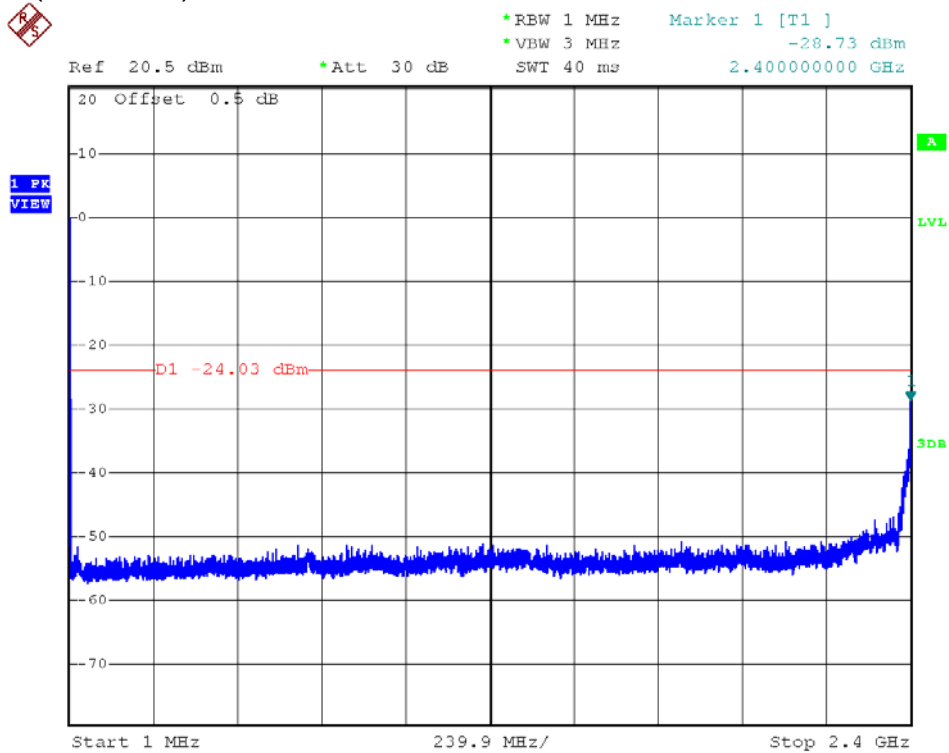
INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

802.11n-HT40 MIMO

Channel 3 (2422MHz) Reference Level: -4.03dBm ANT 1

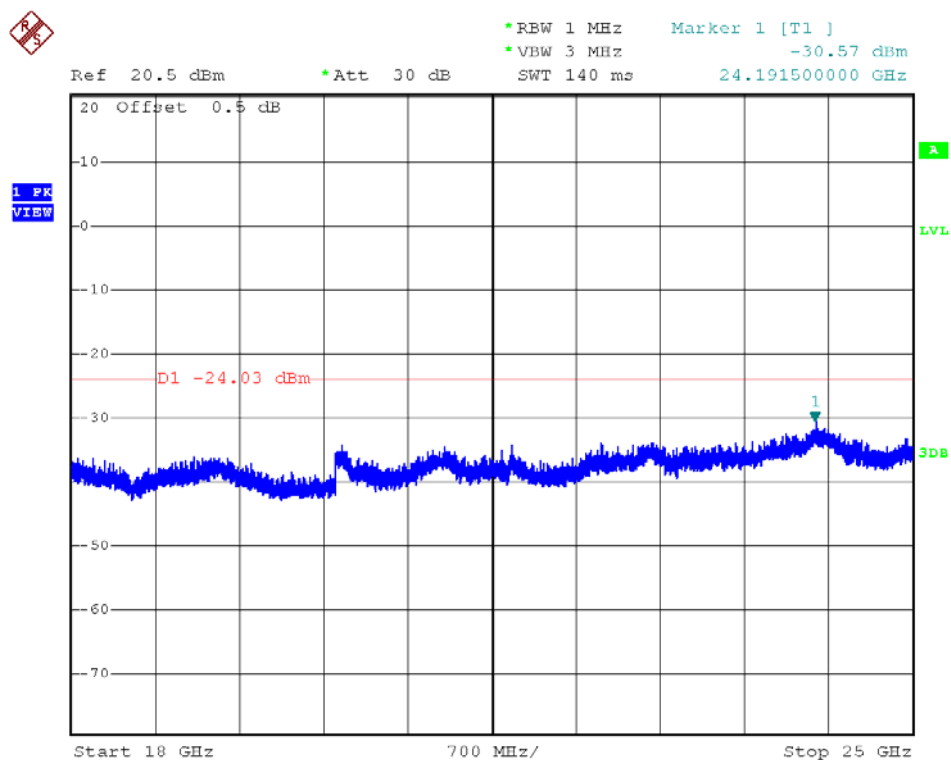
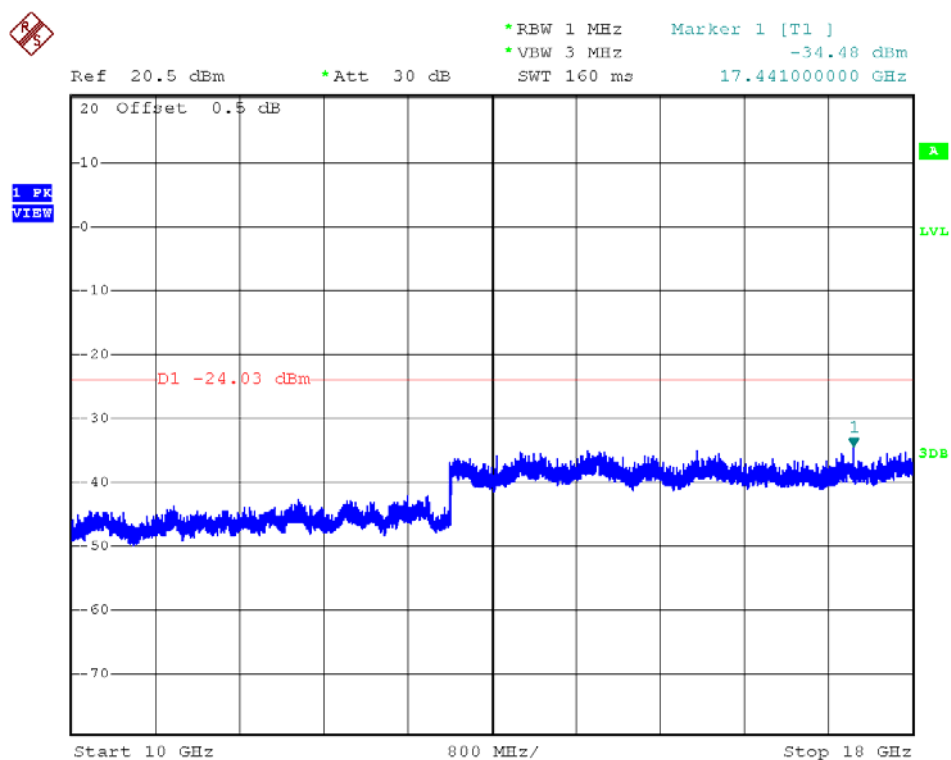


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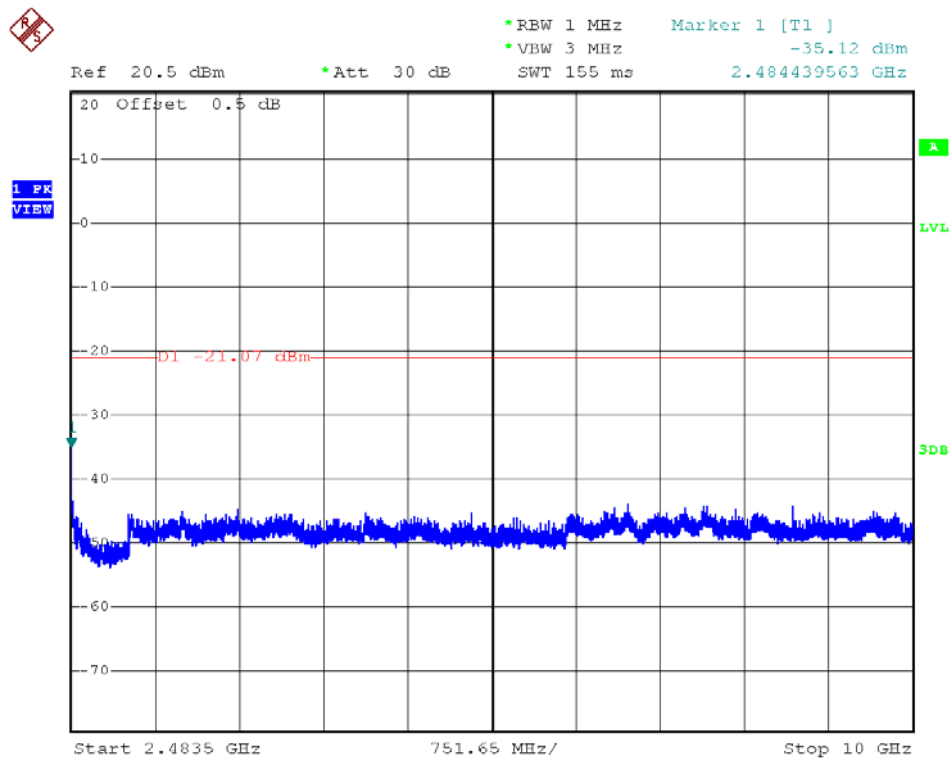
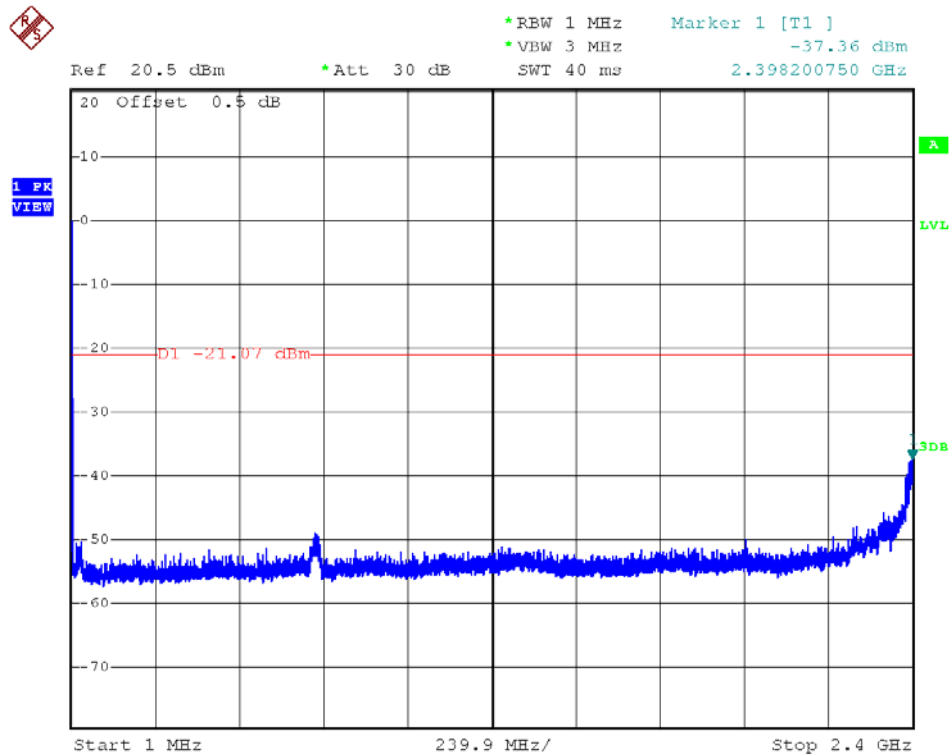
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INTERTEK TESTING SERVICES



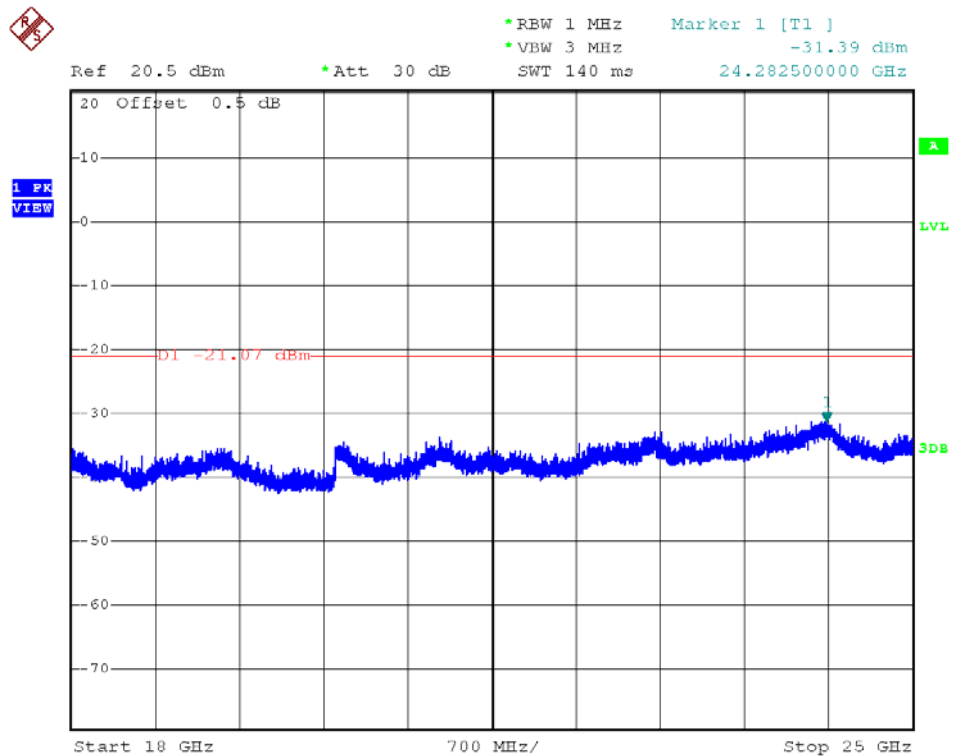
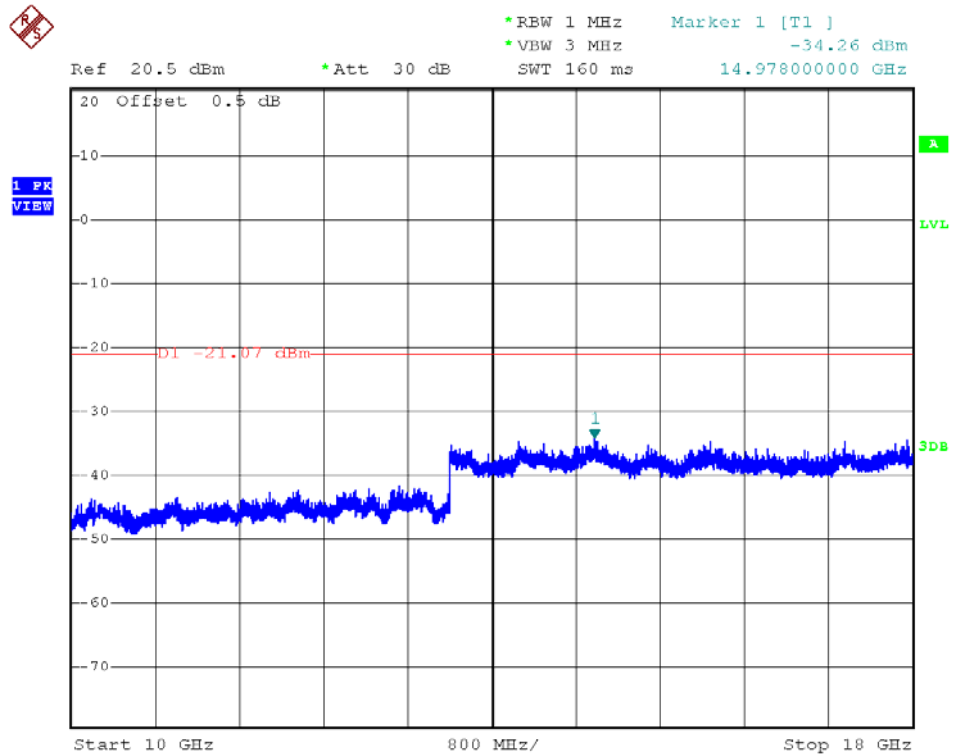
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: -1.07dBm ANT 1



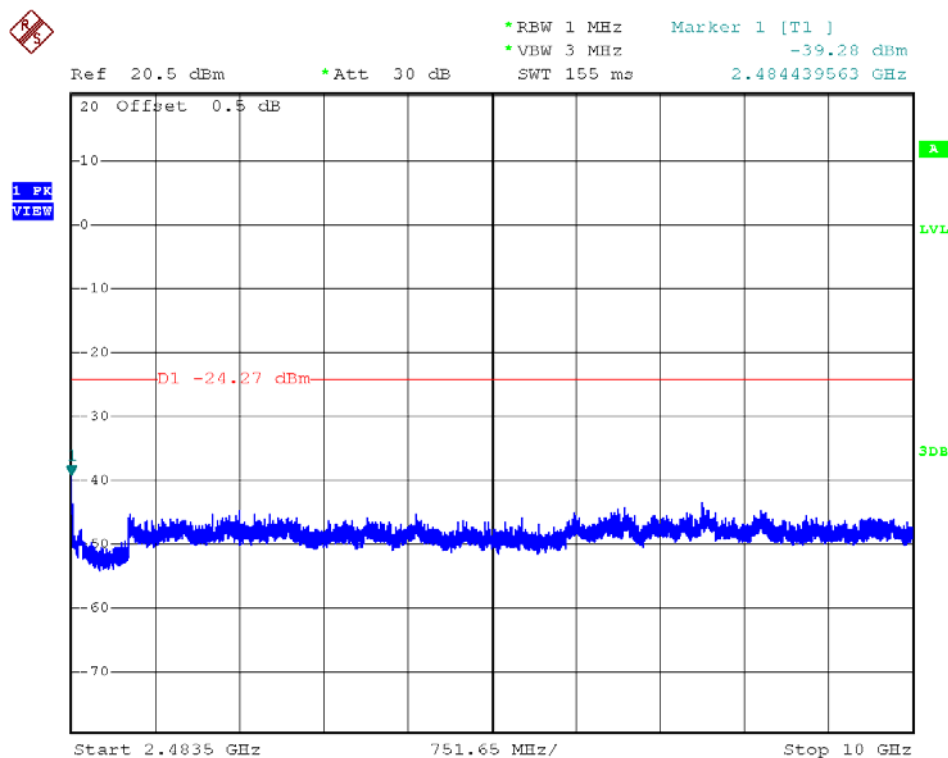
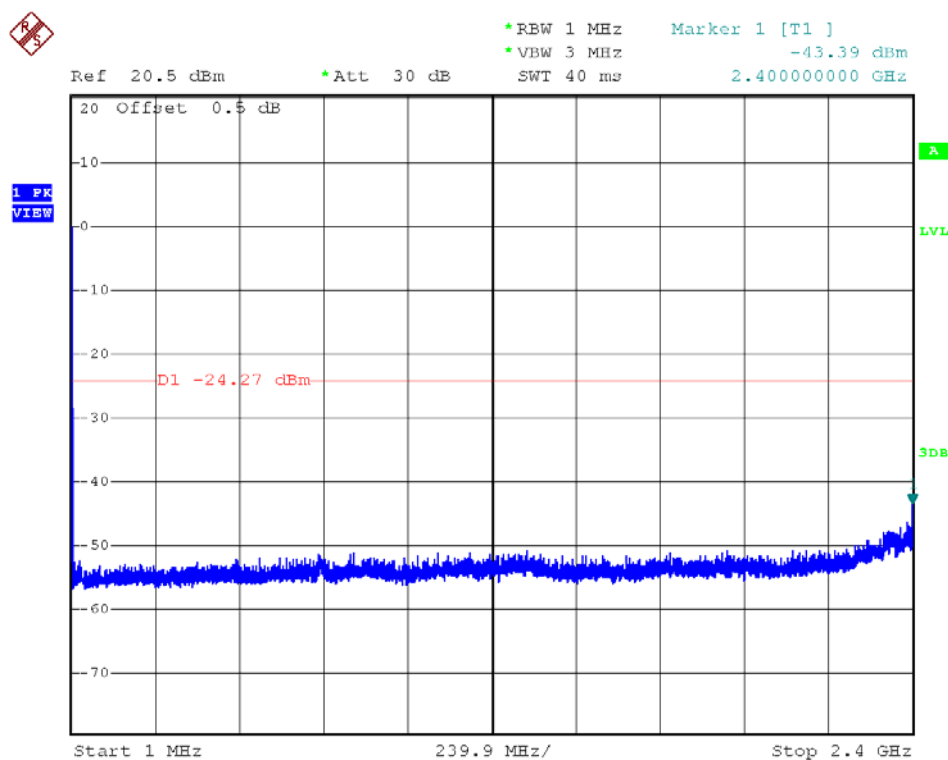
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INTERTEK TESTING SERVICES



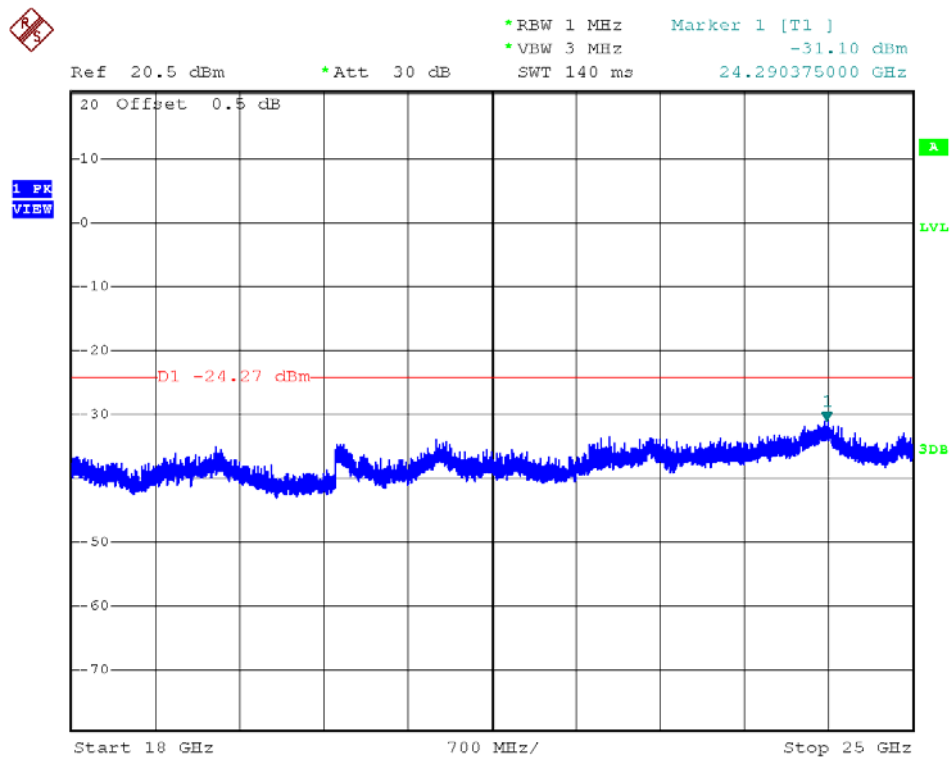
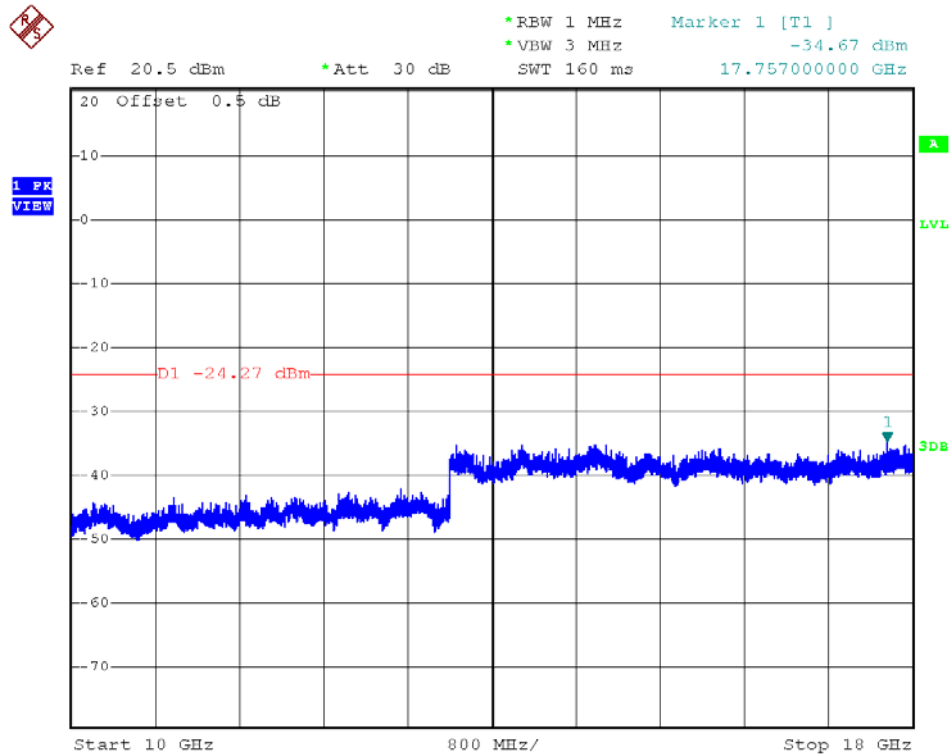
INTERTEK TESTING SERVICES

Channel 9 (2452MHz) Reference Level: -4.27dBm ANT 1



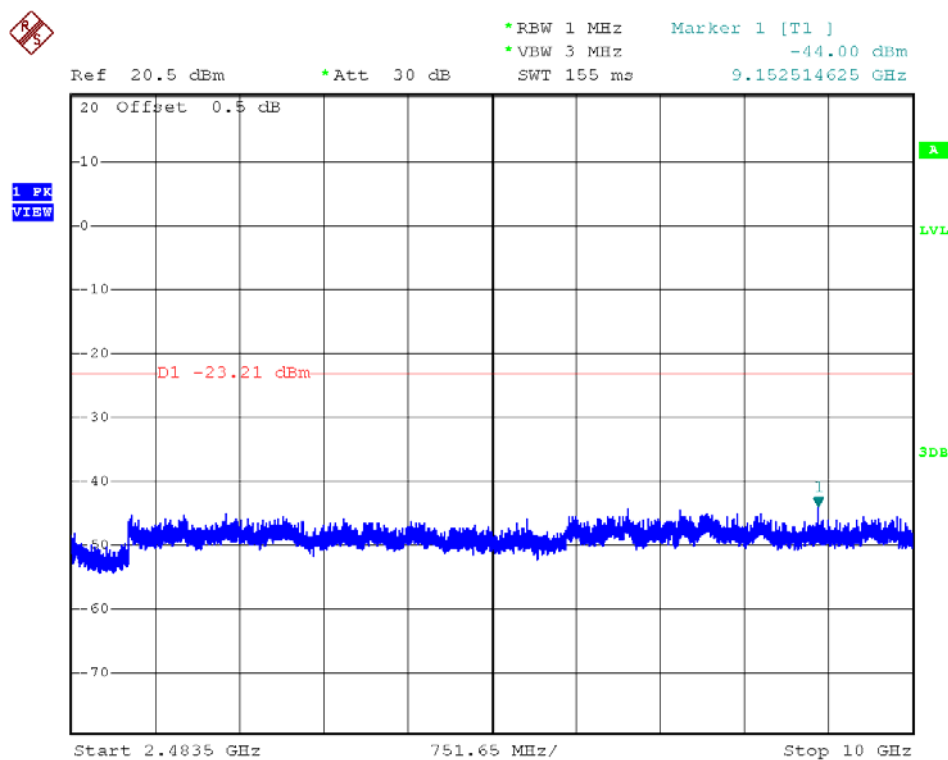
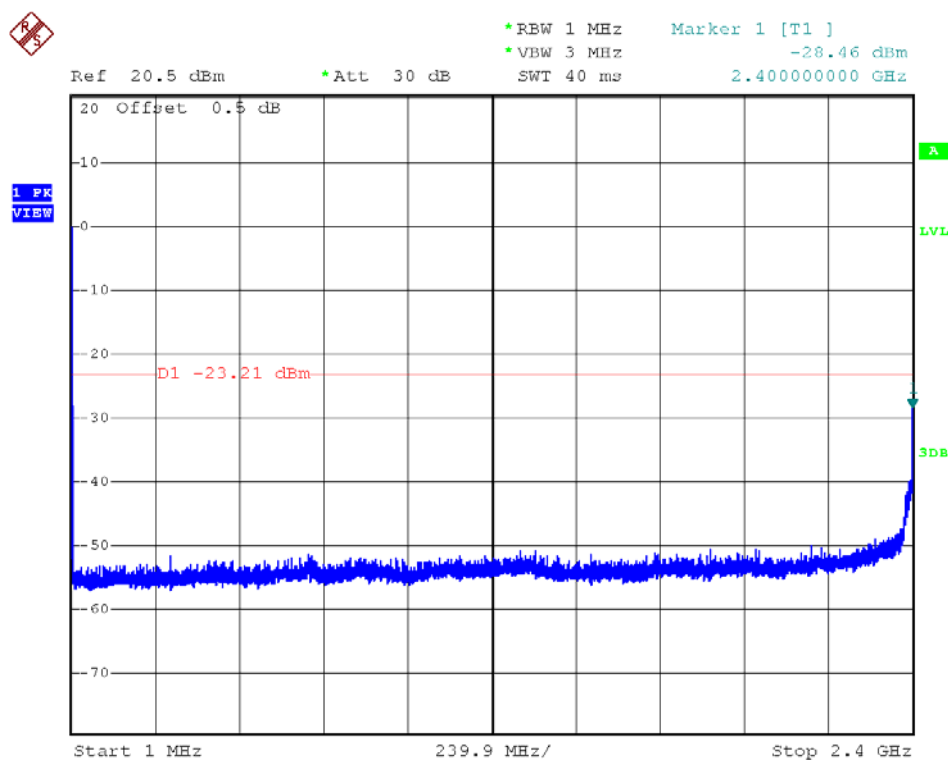
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INTERTEK TESTING SERVICES



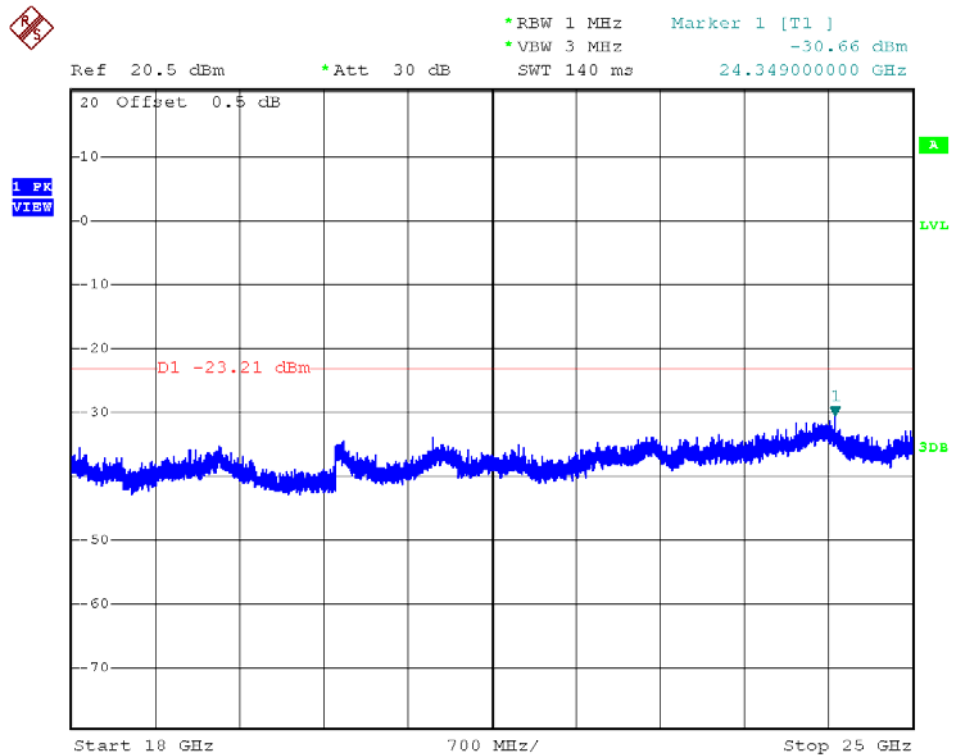
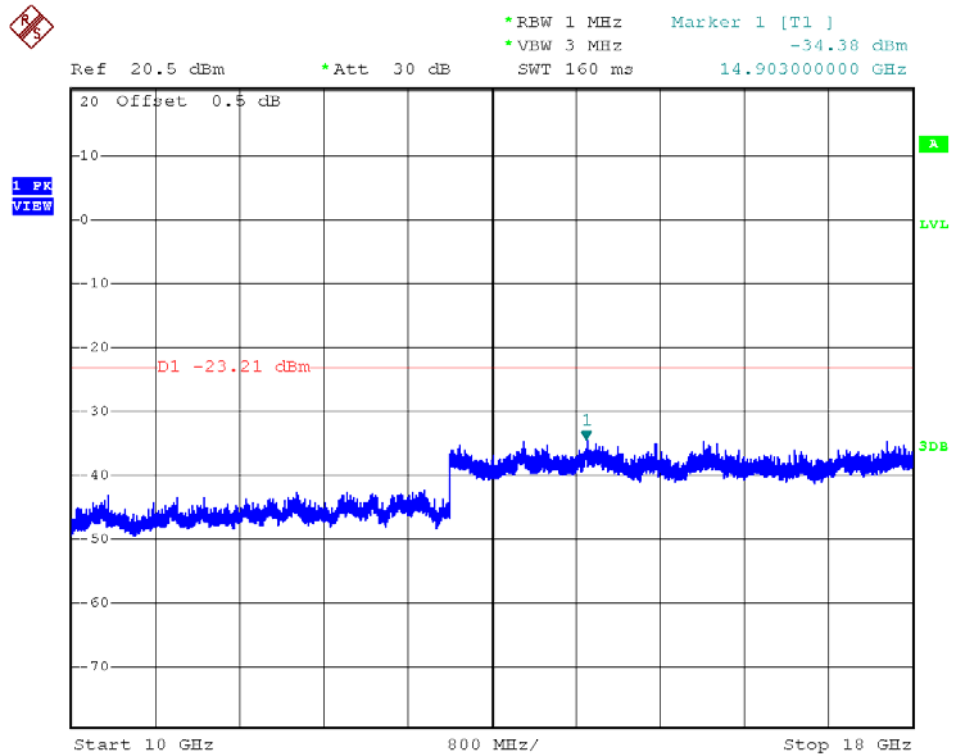
INTERTEK TESTING SERVICES

Channel 3 (2422MHz) Reference Level: -3.21dBm ANT 3



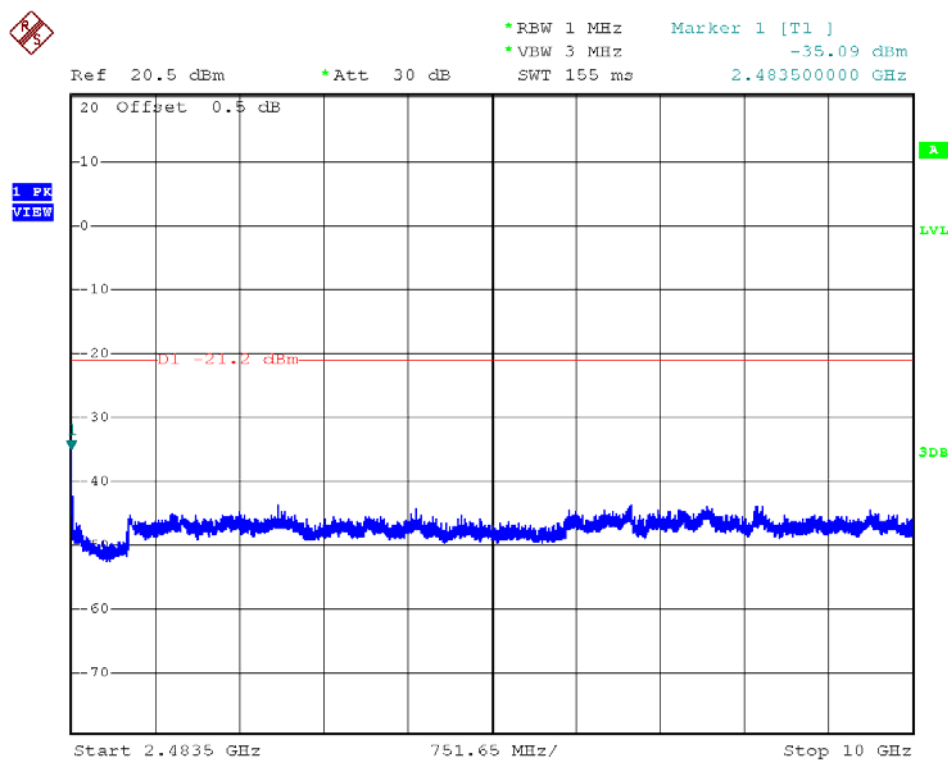
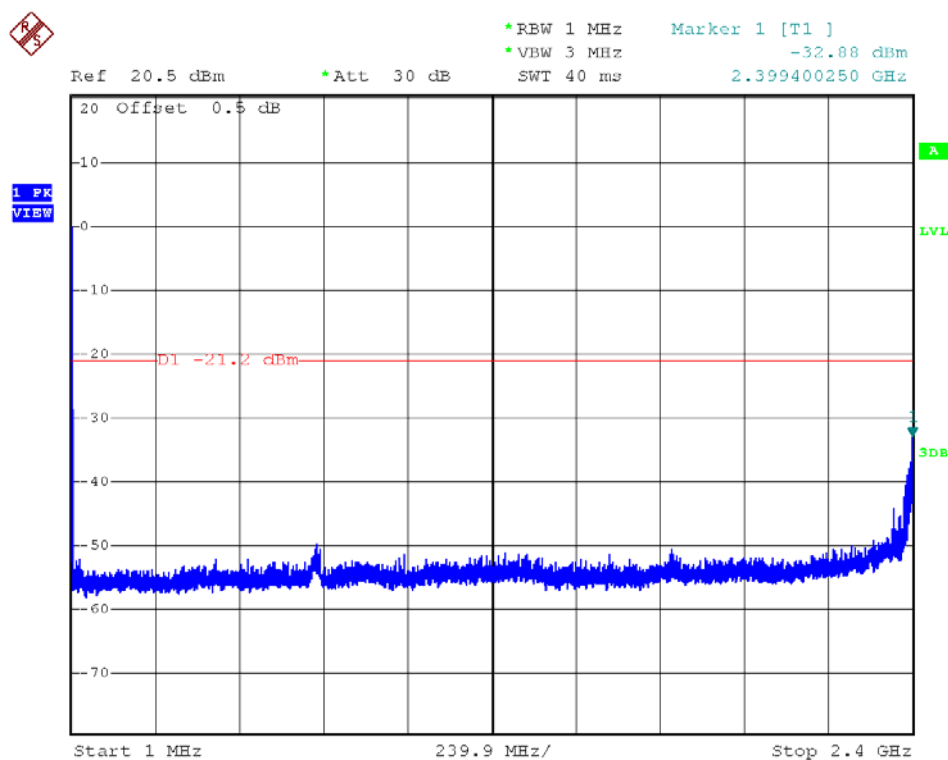
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FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



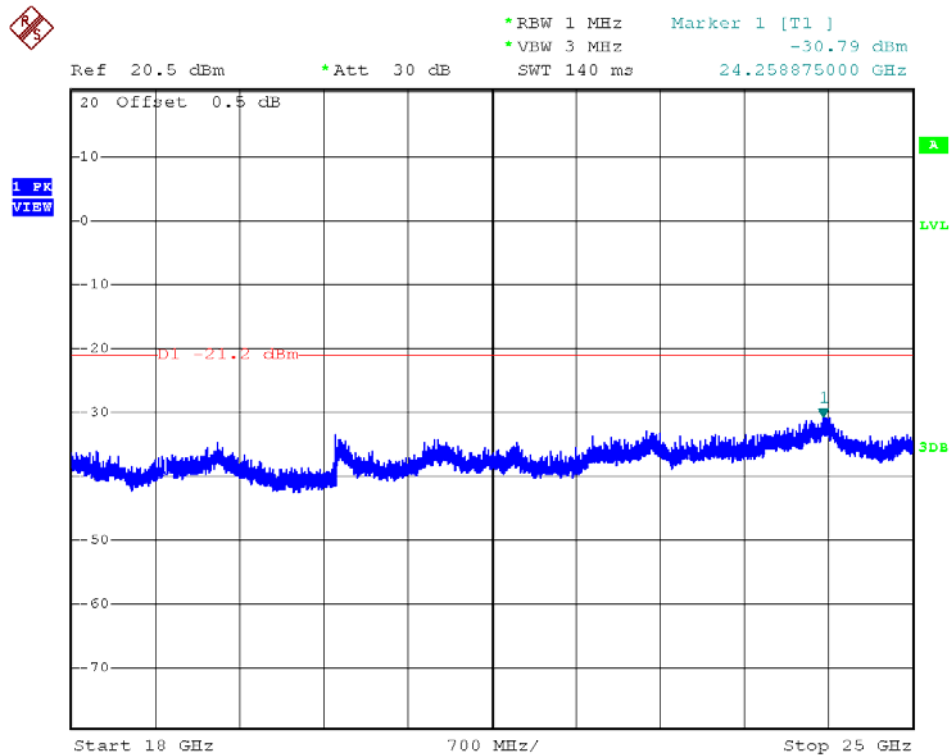
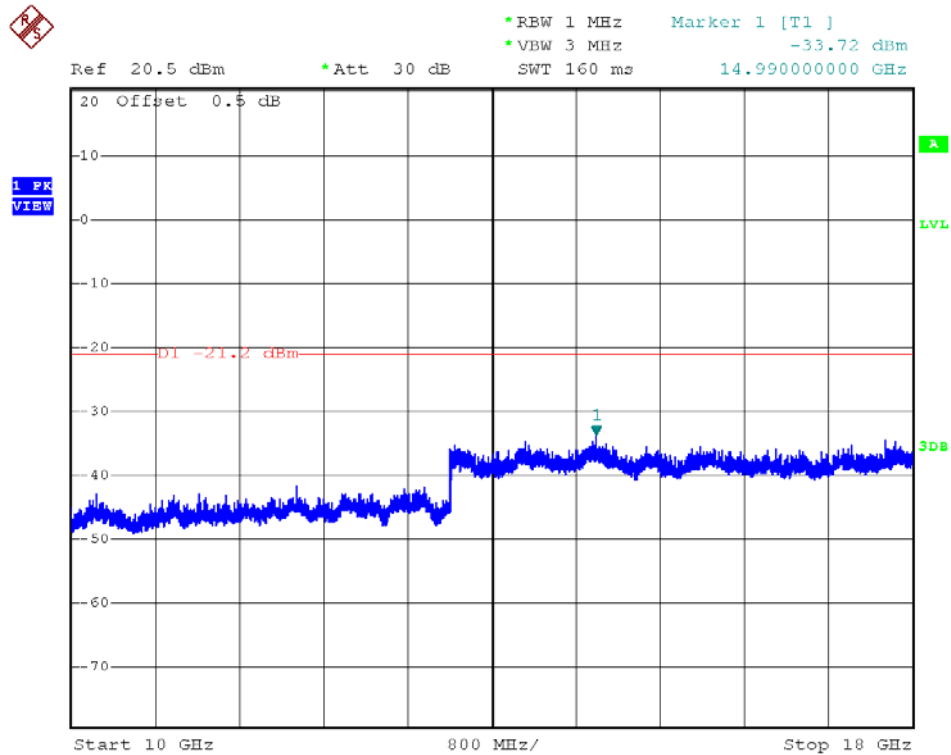
INTERTEK TESTING SERVICES

Channel 6 (2437MHz) Reference Level: -1.20dBm ANT 3



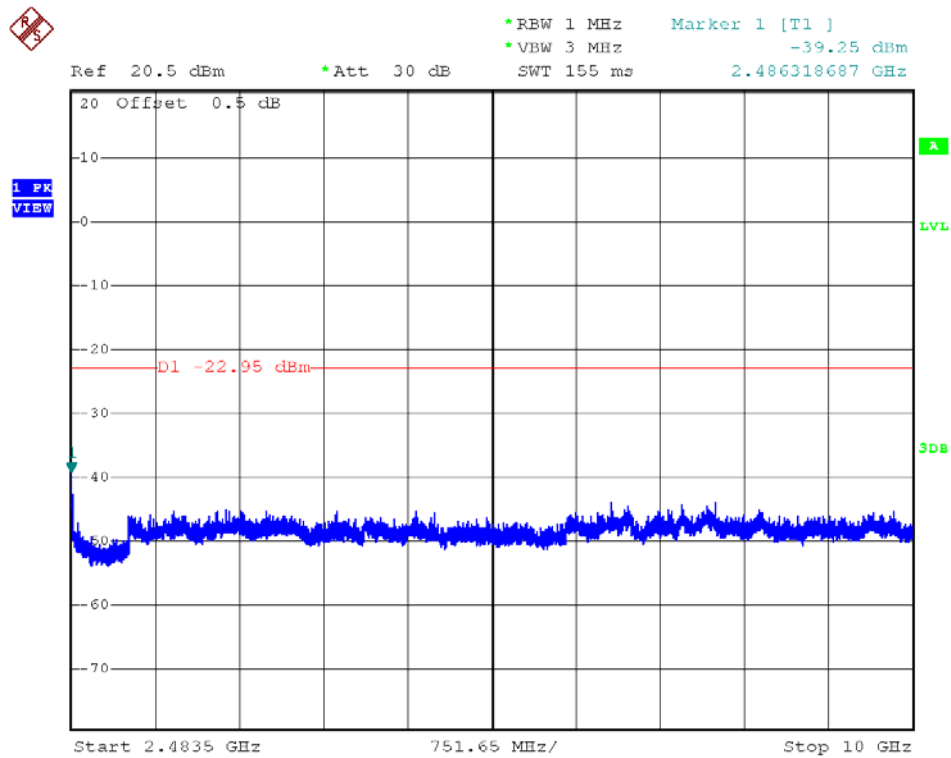
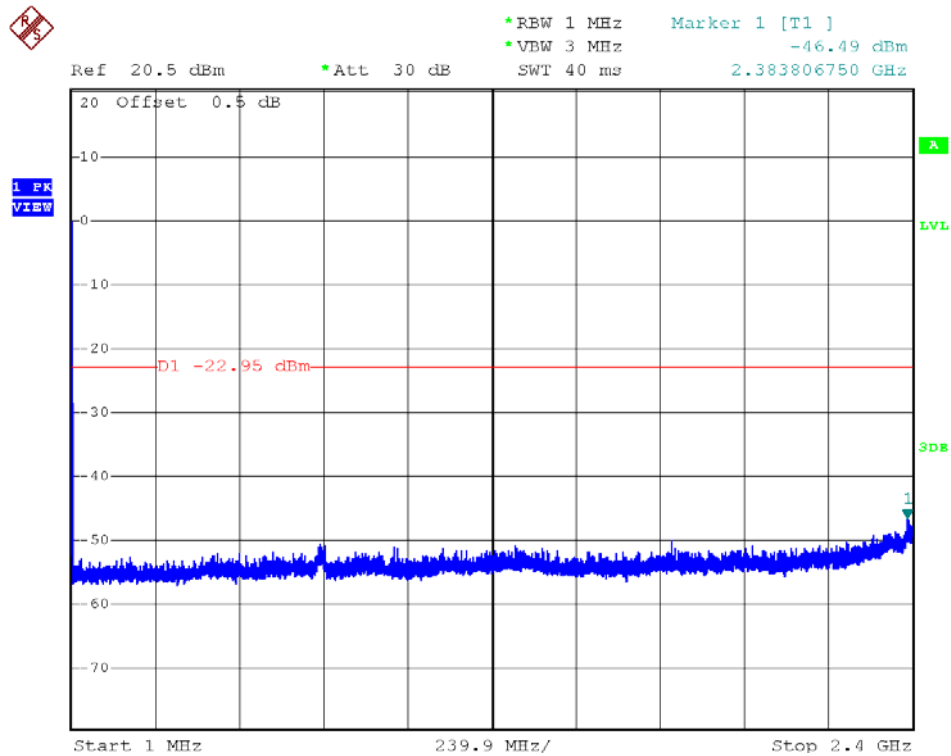
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Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



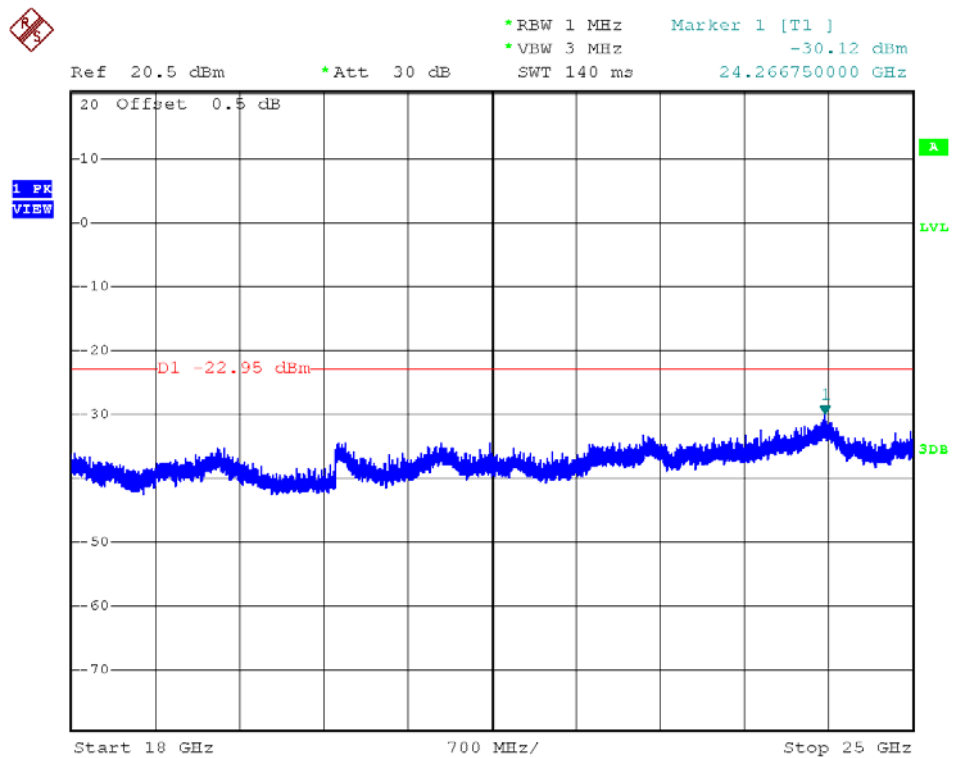
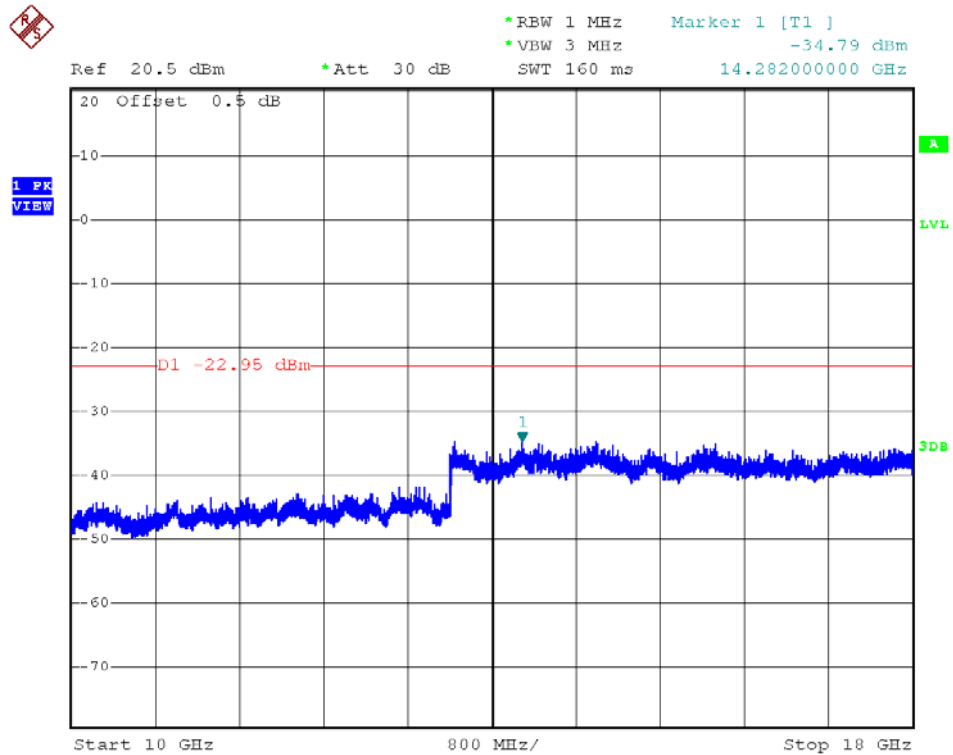
INTERTEK TESTING SERVICES

Channel 9 (2452MHz) Reference Level: -2.95dBm ANT 3



TRF no.: FCC 15C_TX_b
FCC ID: QISHG630V2
Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Model: HG630 V2

Date of Test: 17 July 2014

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
Model: HG630 V2

Date of Test: 17 July 2014

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
Model: HG630 V2

Date of Test: 17 July 2014

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

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:

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

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.

RA = 62.0 dB μ V
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB

$$FS = 62 + 7.4 + 1.6 - 29 = 42 \text{ dB}\mu\text{V/m}$$

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

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Model: HG630 V2

Date of Test: 17 July 2014

4.8 Radiated Spurious Emission

Worst Case Radiated Spurious Emission (802.11b Channel 1) at 2388.029MHz is passed by 2.4 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
Model: HG630 V2
Worst Case Operating Mode: 802.11b channel 1
AC/DC Adapter: Huntkey

Date of Test: 17 July 2014

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	45.928	35.1	20.0	10.7	25.8	40.0	-14.2
Horizontal	101.204	41.0	20.0	9.1	30.1	43.5	-13.4
Horizontal	253.029	38.8	20.0	12.1	30.9	46.0	-15.1
Vertical	40.293	34.4	20.0	12.9	27.3	40.0	-12.7
Vertical	135.059	45.2	20.0	7.6	32.8	43.5	-10.7
Vertical	640.203	39.5	20.0	20.1	36.5	46.0	-9.5

- 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.

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Model: HG630 V2
 Mode: 802.11b Channel 1

Date of Test: 17 July 2014

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)
Vertical	*4824.000	53.6	36.1	34.1	51.6	74.0	-22.4
Vertical	*7236.000	56.9	36.7	36.6	56.8	74.0	-17.2
Vertical	*9648.000	62.6	38.1	37.0	61.5	74.0	-12.5
Vertical	*2388.029	71.8	35.6	27.3	63.5	74.0	-10.5

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)
Vertical	*4824.000	36.5	36.1	34.1	34.5	54.0	-19.5
Vertical	*7236.000	42.2	36.7	36.6	42.1	54.0	-11.9
Vertical	*9648.000	51.9	38.1	37.0	50.8	54.0	-3.2
Vertical	*2388.029	59.9	35.6	27.3	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
 Model: HG630 V2
 Mode: 802.11b Channel 6

Date of Test: 17 July 2014

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)
Vertical	*4874.000	53.4	36.1	34.5	51.8	74.0	-22.2
Vertical	*7311.000	56.2	36.3	37.1	57.0	74.0	-17.0
Vertical	*9748.000	58.8	36.8	38.2	60.2	74.0	-13.8

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)
Vertical	*4874.000	37.2	36.1	34.5	35.6	54.0	-18.4
Vertical	*7311.000	42.5	36.3	37.1	43.3	54.0	-10.7
Vertical	*9748.000	47.8	36.8	38.2	49.2	54.0	-4.8

- 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
 Model: HG630 V2
 Mode: 802.11b Channel 11

Date of Test: 17 July 2014

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)
Vertical	*4924.000	52.9	36.1	34.2	51.0	74.0	-23.0
Vertical	*7386.000	57.9	36.8	36.7	57.8	74.0	-16.2
Vertical	*9848.000	63.7	38.2	37.1	62.6	74.0	-11.4
Vertical	*2483.690	71.3	35.8	27.5	63.0	74.0	-11.0

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)
vertical	*4924.000	39.1	36.1	34.2	37.2	54.0	-16.8
vertical	*7386.000	44.3	36.8	36.7	44.2	54.0	-9.8
vertical	*9848.000	50.8	38.2	37.1	49.7	54.0	-4.3
Vertical	*2483.690	59.5	35.8	27.5	51.2	54.0	-2.8

- 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
 Model: HG630 V2
 Mode: 802.11g Channel 1

Date of Test: 17 July 2014

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)
Vertical	*4824.000	55.6	36.1	34.1	53.6	74.0	-20.4
Vertical	*7236.000	58.6	36.7	36.6	58.5	74.0	-15.5
Vertical	*9648.000	63.0	38.1	37.0	61.9	74.0	-12.1
Vertical	*2389.575	73.3	35.6	27.3	65.0	74.0	-9.0

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)
Vertical	*4824.000	43.9	36.1	34.1	41.9	54.0	-12.1
Vertical	*7236.000	42.7	36.7	36.6	42.6	54.0	-11.4
Vertical	*9648.000	47.8	38.1	37.0	46.7	54.0	-7.3
Vertical	*2389.575	58.3	35.6	27.3	50.0	54.0	-4.0

- 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
 Model: HG630 V2
 Mode: 802.11g Channel 6

Date of Test: 17 July 2014

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)
Vertical	*4874.000	58.1	36.1	34.5	56.5	74.0	-17.5
Vertical	*7311.000	57.2	36.3	37.1	58.0	74.0	-16.0
Vertical	*9748.000	60.6	36.8	38.2	62.0	74.0	-12.0

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)
Vertical	*4874.000	43.2	36.1	34.5	41.6	54.0	-12.4
Vertical	*7311.000	44.2	36.3	37.1	45.0	54.0	-9.0
Vertical	*9748.000	44.8	36.8	38.2	46.2	54.0	-7.8

- 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
 Model: HG630 V2
 Mode: 802.11g Channel 11

Date of Test: 17 July 2014

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)
Vertical	*4924.000	58.8	36.1	34.2	56.9	74.0	-17.1
Vertical	*7386.000	59.1	36.8	36.7	59.0	74.0	-15.0
Vertical	*9848.000	62.9	38.2	37.1	61.8	74.0	-12.2
Vertical	*2483.753	72.2	35.8	27.5	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)
vertical	*4924.000	43.9	36.1	34.2	42.0	54.0	-12.0
vertical	*7386.000	42.3	36.8	36.7	42.2	54.0	-11.8
vertical	*9848.000	49.4	38.2	37.1	48.3	54.0	-5.7
Vertical	*2483.753	57.4	35.8	27.5	49.1	54.0	-4.9

- 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
 Model: HG630 V2
 Mode: 802.11n-HT20 SISO Channel 1

Date of Test: 17 July 2014

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)
Vertical	*4824.000	58.0	36.1	34.1	56.0	74.0	-18.0
Vertical	*7236.000	59.9	36.7	36.6	59.8	74.0	-14.2
Vertical	*9648.000	63.7	38.1	37.0	62.6	74.0	-11.4
Vertical	*2389.045	77.0	35.6	27.3	68.7	74.0	-5.3

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)
Vertical	*4824.000	44.0	36.1	34.1	42.0	54.0	-12.0
Vertical	*7236.000	45.5	36.7	36.6	45.4	54.0	-8.6
Vertical	*9648.000	49.4	38.1	37.0	48.3	54.0	-5.7
Vertical	*2389.045	57.5	35.6	27.3	49.2	54.0	-4.8

- 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
 Model: HG630 V2
 Mode: 802.11n-HT20 SISO Channel 6

Date of Test: 17 July 2014

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)
Vertical	*4874.000	58.1	36.1	34.5	56.5	74.0	-17.5
Vertical	*7311.000	57.1	36.3	37.1	57.9	74.0	-16.1
Vertical	*9748.000	64.6	36.8	38.2	66.0	74.0	-8.0

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)
Vertical	*4874.000	43.6	36.1	34.5	42.0	54.0	-12.0
Vertical	*7311.000	44.3	36.3	37.1	45.1	54.0	-8.9
Vertical	*9748.000	47.6	36.8	38.2	49.0	54.0	-5.0

- 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
 Model: HG630 V2
 Mode: 802.11n-HT20 SISO Channel 11

Date of Test: 17 July 2014

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)
Vertical	*4924.000	56.7	36.1	34.2	54.8	74.0	-19.2
Vertical	*7386.000	58.1	36.8	36.7	58.0	74.0	-16.0
Vertical	*9848.000	64.0	38.2	37.1	62.9	74.0	-11.1
Vertical	*2483.600	74.1	35.8	27.5	65.8	74.0	-8.2

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)
vertical	*4924.000	43.9	36.1	34.2	42.0	54.0	-12.0
vertical	*7386.000	44.8	36.8	36.7	44.7	54.0	-9.3
vertical	*9848.000	48.0	38.2	37.1	46.9	54.0	-7.1
Vertical	*2483.600	57.5	35.8	27.5	49.2	54.0	-4.8

- 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: 17 July 2014

Model: HG630 V2

Mode: 802.11n-HT20 MIMO Channel 1 (Ant1+Ant3)

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)
Vertical	*4824.000	53.2	36.1	34.1	51.2	74.0	-22.8
Vertical	*7236.000	55.9	36.7	36.6	55.8	74.0	-18.2
Vertical	*9648.000	60.7	38.1	37.0	59.6	74.0	-14.4
Vertical	*2389.858	72.0	35.6	27.3	63.7	74.0	-10.3

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)
Vertical	*4824.000	41.5	36.1	34.1	39.5	54.0	-14.5
Vertical	*7236.000	43.3	36.7	36.6	43.2	54.0	-10.8
Vertical	*9648.000	47.9	38.1	37.0	46.8	54.0	-7.2
Vertical	*2389.858	57.2	35.6	27.3	48.9	54.0	-5.1

- 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.

TRF no.: FCC 15C_TX_b

FCC ID: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: 17 July 2014

Model: HG630 V2

Mode: 802.11n-HT20 MIMO Channel 6 (Ant1+Ant3)

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)
Vertical	*4874.000	53.2	36.1	34.5	51.6	74.0	-22.4
Vertical	*7311.000	56.2	36.3	37.1	57.0	74.0	-17.0
Vertical	*9748.000	60.6	36.8	38.2	62.0	74.0	-12.0

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)
Vertical	*4874.000	38.7	36.1	34.5	37.1	54.0	-16.9
Vertical	*7311.000	40.8	36.3	37.1	41.6	54.0	-12.4
Vertical	*9748.000	46.8	36.8	38.2	48.2	54.0	-5.8

- 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.

TRF no.: FCC 15C_TX_b

FCC ID: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: 17 July 2014

Model: HG630 V2

Mode: 802.11n-HT20 MIMO Channel 11 (Ant1+Ant3)

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)
Vertical	*4924.000	54.5	36.1	34.2	52.6	74.0	-21.4
Vertical	*7386.000	56.6	36.8	36.7	56.5	74.0	-17.5
Vertical	*9848.000	60.9	38.2	37.1	59.8	74.0	-14.2
Vertical	*2483.682	71.2	35.8	27.5	62.9	74.0	-11.1

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)
vertical	*4924.000	40.4	36.1	34.2	38.5	54.0	-15.5
vertical	*7386.000	42.1	36.8	36.7	42.0	54.0	-12.0
vertical	*9848.000	46.7	38.2	37.1	45.6	54.0	-8.4
Vertical	*2483.682	56.5	35.8	27.5	48.2	54.0	-5.8

- 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.

TRF no.: FCC 15C_TX_b

FCC ID: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
 Model: HG630 V2
 Mode: 802.11n-HT40 SISO Channel 3

Date of Test: 17 July 2014

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)
Vertical	*4844.000	53.0	36.2	34.2	51.0	74.0	-23.0
Vertical	*7266.000	55.0	36.7	36.7	55.0	74.0	-19.0
Vertical	*9688.000	60.9	38.2	37.1	59.8	74.0	-14.2
Vertical	*2389.746	71.5	35.6	27.3	63.2	74.0	-10.8

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)
Vertical	*4844.000	38.9	36.2	34.2	36.9	54.0	-17.1
Vertical	*7266.000	42.5	36.7	36.7	42.5	54.0	-11.5
Vertical	*9688.000	48.1	38.2	37.1	47.0	54.0	-7.0
Vertical	*2389.746	57.8	35.6	27.3	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
Model: HG630 V2
Mode: 802.11n-HT40 SISO Channel 6

Date of Test: 17 July 2014

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)
Vertical	*4874.000	53.2	36.1	34.5	51.6	74.0	-22.4
Vertical	*7311.000	54.9	36.3	37.1	55.7	74.0	-18.3
Vertical	*9748.000	60.6	36.8	38.2	62.0	74.0	-12.0

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)
Vertical	*4874.000	38.1	36.1	34.5	36.5	54.0	-17.5
Vertical	*7311.000	41.4	36.3	37.1	42.2	54.0	-11.8
Vertical	*9748.000	46.9	36.8	38.2	48.3	54.0	-5.7

- 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
 Model: HG630 V2
 Mode: 802.11n-HT40 SISO Channel 9

Date of Test: 17 July 2014

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)
Vertical	*4904.000	54.0	36.0	34.0	52.0	74.0	-22.0
Vertical	*7356.000	58.5	36.4	36.5	58.6	74.0	-15.4
Vertical	*9808.000	64.5	38.0	37.0	63.5	74.0	-10.5
Vertical	*2483.701	74.2	35.8	27.5	65.9	74.0	-8.1

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)
vertical	*4904.000	38.2	36.0	34.0	36.2	54.0	-17.8
vertical	*7356.000	41.9	36.4	36.5	42.0	54.0	-12.0
vertical	*9808.000	48.4	38.0	37.0	47.4	54.0	-6.6
Vertical	*2483.701	56.6	35.8	27.5	48.3	54.0	-5.7

- 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: 17 July 2014

Model: HG630 V2

Mode: 802.11n-HT40 MIMO Channel 3 (Ant1+Ant3)

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)
Vertical	*4844.000	52.5	36.2	34.2	50.5	74.0	-23.5
Vertical	*7266.000	56.2	36.7	36.7	56.2	74.0	-17.8
Vertical	*9688.000	62.4	38.2	37.1	61.3	74.0	-12.7
Vertical	*2389.624	75.2	35.6	27.3	66.9	74.0	-7.1

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)
Vertical	*4844.000	40.7	36.2	34.2	38.7	54.0	-15.3
Vertical	*7266.000	41.6	36.7	36.7	41.6	54.0	-12.4
Vertical	*9688.000	45.0	38.2	37.1	43.9	54.0	-10.1
Vertical	*2389.624	56.3	35.6	27.3	48.0	54.0	-6.0

- 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: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

Date of Test: 17 July 2014

Model: HG630 V2

Mode: 802.11n-HT40 MIMO Channel 6 (Ant1+Ant3)

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)
Vertical	*4874.000	53.1	36.1	34.5	51.5	74.0	-22.5
Vertical	*7311.000	55.9	36.3	37.1	56.7	74.0	-17.3
Vertical	*9748.000	60.6	36.8	38.2	62.0	74.0	-12.0

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)
Vertical	*4874.000	39.6	36.1	34.5	38.0	54.0	-16.0
Vertical	*7311.000	42.2	36.3	37.1	43.0	54.0	-11.0
Vertical	*9748.000	47.6	36.8	38.2	49.0	54.0	-5.0

- 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: 17 July 2014

Model: HG630 V2

Mode: 802.11n-HT40 MIMO Channel 9 (Ant1+Ant3)

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)
Vertical	*4904.000	54.0	36.0	34.0	52.0	74.0	-22.0
Vertical	*7356.000	57.2	36.4	36.5	57.3	74.0	-16.7
Vertical	*9808.000	61.8	38.0	37.0	60.8	74.0	-13.2
Vertical	*2483.609	74.3	35.8	27.5	66.0	74.0	-8.0

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)
vertical	*4904.000	41.2	36.0	34.0	39.2	54.0	-14.8
vertical	*7356.000	42.7	36.4	36.5	42.8	54.0	-11.2
vertical	*9808.000	47.5	38.0	37.0	46.5	54.0	-7.5
Vertical	*2483.609	56.1	35.8	27.5	47.8	54.0	-6.2

- 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

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INTERTEK TESTING SERVICES

4.9 Conducted Emission

Worst Case Live-Conducted emission at 4.950MHz is Passed by 18.5 dB margin

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

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

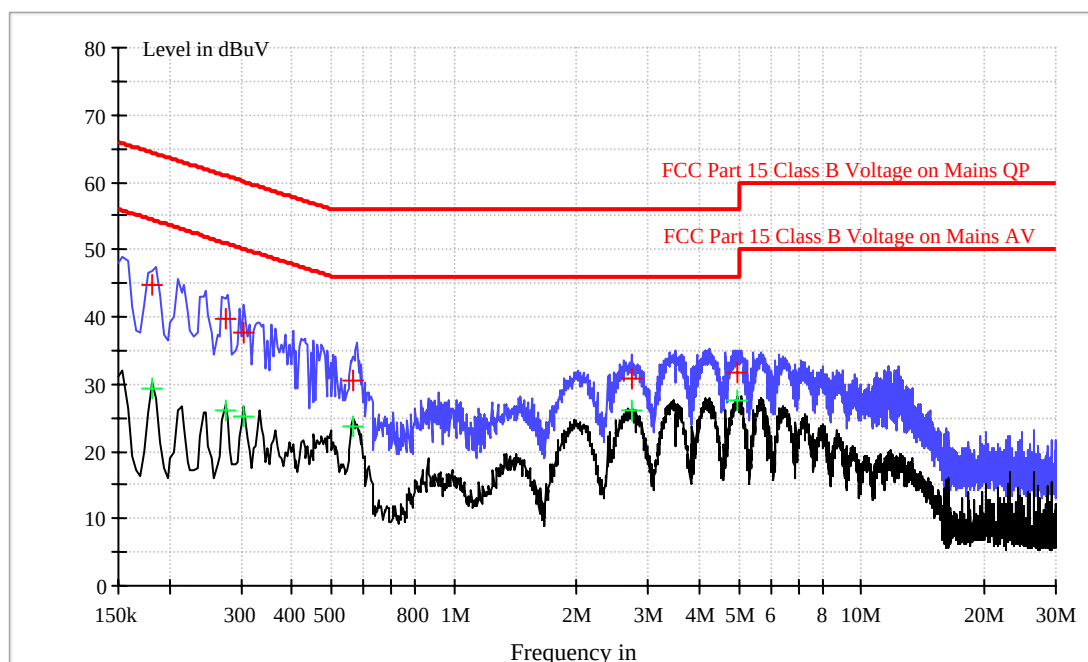
Date of Test: 17 July 2014

Model: HG630 V2

Worst Case Operating Mode: 802.11n-HT40 MIMO 2437MHz

AC/DC Adapter: Huntkey

Conducted Emission Test - FCC



Result Table QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.182000	44.6	L1	9.8	19.8	64.4
0.274000	39.8	L1	9.8	21.2	61.0
0.306000	37.7	L1	9.8	22.4	60.1
0.566000	30.4	L1	9.9	25.6	56.0
2.746000	30.7	L1	9.9	25.3	56.0
4.950000	31.8	L1	10.0	24.2	56.0

Result Table AV

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.182000	29.3	L1	9.8	25.1	54.4
0.274000	26.0	L1	9.8	25.0	51.0
0.306000	25.1	L1	9.8	25.0	50.1
0.566000	23.7	L1	9.9	22.3	46.0
2.746000	26.2	L1	9.9	19.8	46.0
4.950000	27.5	L1	10.0	18.5	46.0

TRF no.: FCC 15C_TX_b

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INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd

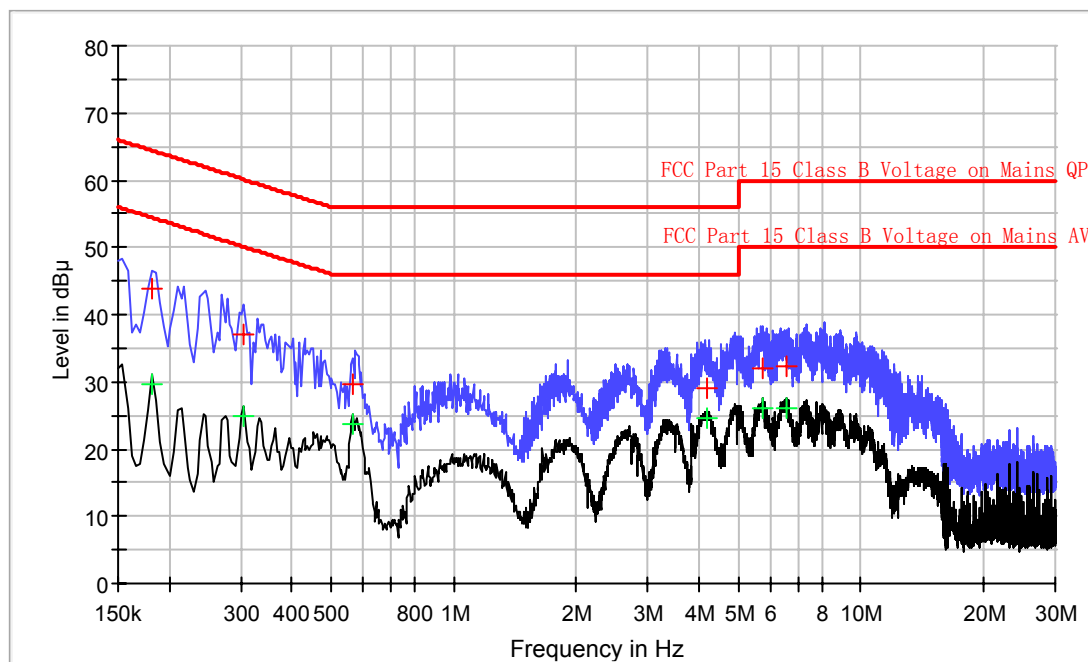
Date of Test: 17 July 2014

Model: HG630 V2

Worst Case Operating Mode: 802.11n-HT40 MIMO 2437MHz

AC/DC Adapter: Huntkey

Conducted Emission Test - FCC



Result Table QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.182000	44.0	N	10.1	20.4	64.4
0.306000	37.0	N	10.1	23.1	60.1
0.566000	29.7	N	10.2	26.3	56.0
4.186000	29.0	N	10.3	27.0	56.0
5.754000	32.1	N	10.3	27.9	60.0
6.574000	32.3	N	10.4	27.7	60.0

Result Table AV

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.182000	29.7	N	10.1	24.7	54.4
0.306000	24.8	N	10.1	25.3	50.1
0.566000	23.6	N	10.2	22.4	46.0
4.186000	24.6	N	10.3	21.4	46.0
5.754000	26.1	N	10.3	23.9	50.0
6.574000	26.2	N	10.4	23.8	50.0

TRF no.: FCC 15C_TX_b

FCC ID: QISHG630V2

Report No.: 140717005SZN-001

INTERTEK TESTING SERVICES

Applicant: Huawei Technologies Co.,Ltd
Model: HG630 V2

Date of Test: 17 July 2014

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
Model: HG630 V2

Date of Test: 17 July 2014

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 SWEPT 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.

INTERTEK TESTING SERVICES

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

6.0 **Product Labelling**

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

INTERTEK TESTING SERVICES

EXHIBIT 7

TECHNICAL SPECIFICATIONS

7.0 Technical Specifications

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

INTERTEK TESTING SERVICES

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

CONFIDENTIALITY REQUEST

INTERTEK TESTING SERVICES

9.0 Confidentiality Request

For electronic filing, the confidentiality request of the tested EUT is saved with filename: request.pdf.

INTERTEK TESTING SERVICES

EXHIBIT 10

MISCELLANEOUS INFORMATION

10.0 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 11
TEST EQUIPMENT LIST

INTERTEK TESTING SERVICES

11.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ182-02	RF Power Meter	Anritsu	ML2496A	1302005	21-May-2014	21-May-2015
SZ182-02-01	Power Sensor	Anritsu	MA2411B	1207429	21-May-2014	21-May-2015
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	28-Jun-2014	28-Jun-2015
SZ185-01	EMI Receiver	R&S	ESCI	100547	10-Mar-2014	10-Mar-2015
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	29-Apr-2014	29-Apr-2015
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	10-Mar-2014	10-Mar-2015
SZ181-04	Preamplifier	Agilent	8449B	3008A0247 4	10-Mar-2014	10-Mar-2015
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	19-Apr-2014	19-Apr-2015
SZ062-02	RF Cable	RADIAL	RG 213U	--	19-Apr-2014	19-Oct-2014
SZ062-05	RF Cable	RADIAL	0.04-26.5GHz	--	19-Apr-2014	19-Oct-2014
SZ062-12	RF Cable	RADIAL	0.04-26.5GHz	--	19-Apr-2014	19-Oct-2014
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02	--	21-May-2014	21-May-2015
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