

TTE Technology, Inc.

Application
For
Certification

FCC ID: W8UGE65F6EA

LCD Multimedia Player

Model: GE65F6EA

Additional Models: GE65F1EA, GE65F2EA, GE65F3EA, GE65F4EA, GE65F5EA, GE65F7EA, GE65F8EA, GE65F9EA, GE65F1ED, GE65F1EP, GE65F1EDTH, GE65F1EPth, GE65F2ED, GE65F2EP, GE65F2EDTH, GE65F2EPth, GE65F3ED, GE65F3EP, GE65F3EDTH, GE65F3EPth, GE65F4ED, GE65F4EP, GE65F4EDTH, GE65F4EPth, GE65F5ED, GE65F5EP, GE65F5EDTH, GE65F5EPth, GE65F6ED, GE65F6EP, GE65F6EDTH, GE65F6EPth, GE65F7ED, GE65F7EP, GE65F7EDTH, GE65F7EPth, GE65F8ED, GE65F8EP, GE65F8EDTH, GE65F8EPth, GE65F9ED, GE65F9EP, GE65F9EDTH, GE65F9EPth

Trademark: TCL

WiFi Transceiver

Report No.: 130619024SZN-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
Robert Li
Project Engineer

Andy Yan
Project Engineer
Date: July 05, 2013

- 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

TTE Technology, Inc.

MODEL: GE65F6EA

Additional Models: GE65F1EA, GE65F2EA, GE65F3EA, GE65F4EA, GE65F5EA, GE65F7EA, GE65F8EA, GE65F9EA, GE65F1ED, GE65F1EP, GE65F1EDTH, GE65F1EPth, GE65F2ED, GE65F2EP, GE65F2EDTH, GE65F2EPth, GE65F3ED, GE65F3EP, GE65F3EDTH, GE65F3EPth, GE65F4ED, GE65F4EP, GE65F4EDTH, GE65F4EPth, GE65F5ED, GE65F5EP, GE65F5EDTH, GE65F5EPth, GE65F6ED, GE65F6EP, GE65F6EDTH, GE65F6EPth, GE65F7ED, GE65F7EP, GE65F7EDTH, GE65F7EPth, GE65F8ED, GE65F8EP, GE65F8EDTH, GE65F8EPth, GE65F9ED, GE65F9EP, GE65F9EDTH, GE65F9EPth

FCC ID: W8UGE65F6EA

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:

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INTERTEK TESTING SERVICES

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List of attached file

Exhibit type	File Description	Filename
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
Cover Letter	Letter of Agency	agency.pdf

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EXHIBIT 1

SUMMARY OF TEST RESULTS

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1.0 Summary of Test

TTE Technology, Inc.

MODEL: GE65F6EA

Additional Models: GE65F1EA, GE65F2EA, GE65F3EA, GE65F4EA, GE65F5EA, GE65F7EA, GE65F8EA, GE65F9EA, GE65F1ED, GE65F1EP, GE65F1EDTH, GE65F1EPth, GE65F2ED, GE65F2EP, GE65F2EDTH, GE65F2EPth, GE65F1EA, GE65F2EA, GE65F3EA, GE65F4EA, GE65F5EA, GE65F7EA, GE65F8EA, GE65F9EA, GE65F1ED, GE65F1EP, GE65F1EDTH, GE65F1EPth, GE65F2ED, GE65F2EP, GE65F2EDTH, GE65F2EPth,

FCC ID: W8UGE65F6EA

TEST	REFERENCE	RESULTS
Max. Output power	15.247(b)(3)	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 a detachable Antenna with inverse SMA connector 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 LCD Multimedia Player 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. The EUT can be powered by AC 120V, 60Hz. For more detailed features description, please refer to the user's manual.

Type of Modulation: BPSK, QPSK, 16QAM, 64QAM, CCK.

Antenna Type: Detachable Antenna with inverse SMA connector.

The Models: GE65F1EA, GE65F2EA, GE65F3EA, GE65F4EA, GE65F5EA, GE65F7EA, GE65F8EA, GE65F9EA, GE65F1ED, GE65F1EP, GE65F1EDTH, GE65F1EPth, GE65F2ED, GE65F2EP, GE65F2EDTH, GE65F2EPth, GE65F3ED, GE65F3EP, GE65F3EDTH, GE65F3EPth, GE65F4ED, GE65F4EP, GE65F4EDTH, GE65F4EPth, GE65F5ED, GE65F5EP, GE65F5EDTH, GE65F5EPth, GE65F6ED, GE65F6EP, GE65F6EDTH, GE65F6EPth, GE65F7ED, GE65F7EP, GE65F7EDTH, GE65F7EPth, GE65F8ED, GE65F8EP, GE65F8EDTH, GE65F8EPth, GE65F9ED, GE65F9EP, GE65F9EDTH, GE65F9EPth are the same as the Model: GE65F6EA in hardware aspect (electrically identical). The difference in model number serves as marketing strategy.

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. Other Digital Function: Report No.: 130516017SZN-001

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 Anechoic chamber to collect the radiated data is Shenzhen Centre Testing International Corporation. and located at Building C, Hongwei Industrial Zone, Baoan 70, Shenzhen, P.R. China. This test facility and site measurement data have been fully placed on file with the FCC (Registration Number: 756231).

The shield room used to collect the conducted data is 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).

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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 and accessories were manipulated to produce worst case emissions. The EUT was powered by AC 120V, 60Hz during the test. Only the worst case data was reported.

The signal is maximized through rotation and placement on the ground. 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.	Output Power Level	Data rate	Modulation type
1,6,11	15.0	802.11b: 1-11Mbps	802.11b: CCK
	15.0	802.11g: 6-54Mbps	802.11g: BPSK, QPSK, 16QAM
1,6,11	15.0	802.11n-HT20: 6.5-65Mbps	802.11n: BPSK, QPSK, 16QAM,
3,6,9	15.0	802.11n-HT40: 13.5-135Mbps	802.11n: BPSK, QPSK, 16QAM, 64QAM

We test all data rate and only the worst – case data is shown in the report.

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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 TTE Technology, Inc. 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.
USB Disk	TOSHIBA	UHYBS-004G-BL
SD Card	Transcend	4G SDHC
Router	TP-Link	S535D24
RJ 45 Cable	N/A	Unshielded 4m
RJ 45 Terminal	N/A	N/A

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EXHIBIT 4

MEASUREMENT RESULTS

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Applicant: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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.

- [x] The antenna power of the EUT was connected to the input of a broadband peak RF power meter. The power meter have a video bandwidth that is greater than DTS bandwidth and utilize a fast-responding diode detector. Power was read directly at the EUT antenna terminals with cable loss added.

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

IEEE 802.11b (Antenna Gain = 5dBi) (CCK, 1Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	15.37	34.43
Middle Channel: 2437	12.93	19.63
High Channel: 2462	13.29	21.33

IEEE 802.11g (Antenna Gain = 5dBi) (16QAM, 6Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	14.58	28.71
Middle Channel: 2437	14.50	28.18
High Channel: 2462	14.01	25.18

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IEEE 802.11n-HT20 (Antenna Gain = 5dBi) (16QAM, 6.5Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	11.45	13.96
Middle Channel: 2437	11.19	13.15
High Channel: 2462	11.23	13.27

IEEE 802.11n-HT40 (Antenna Gain = 5dBi) (64QAM, 13.5Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2422	11.43	13.90
Middle Channel: 2437	11.58	14.39
High Channel: 2452	11.43	13.90

Cable loss: 1.1 dB External Attenuation: 0 dB

EUT max. output level (dBm)= 15.37dBm

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Applicant: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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 (CCK, 1Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	10.08
2437	10.00
2462	10.08

IEEE 802.11g (16QAM, 6Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	16.52
2437	16.52
2462	16.52

IEEE 802.11n-HT20 (16QAM, 6.5Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	17.80
2437	17.80
2462	17.80

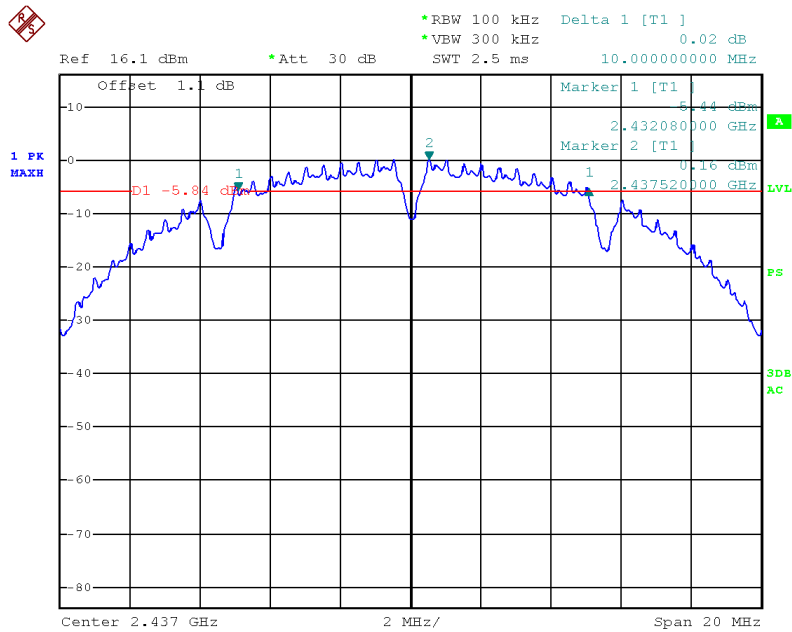
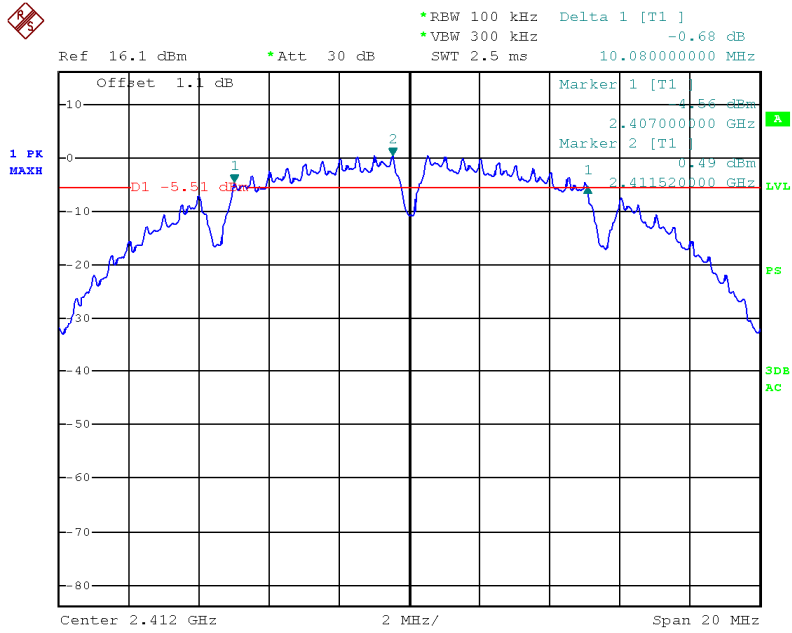
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IEEE 802.11n-HT40 (64QAM, 13.5Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2422	36.50
2437	36.30
2452	36.40

The test plots are attached as below.

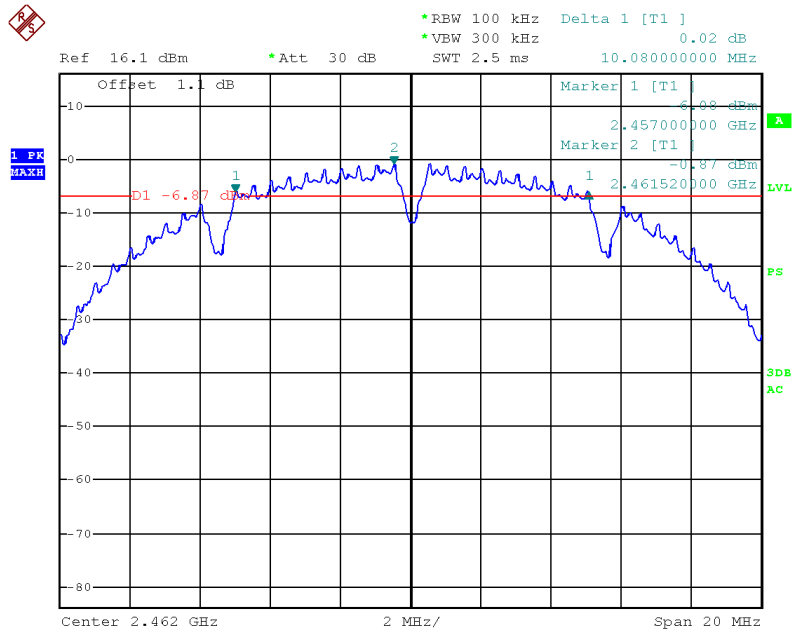
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802.11b

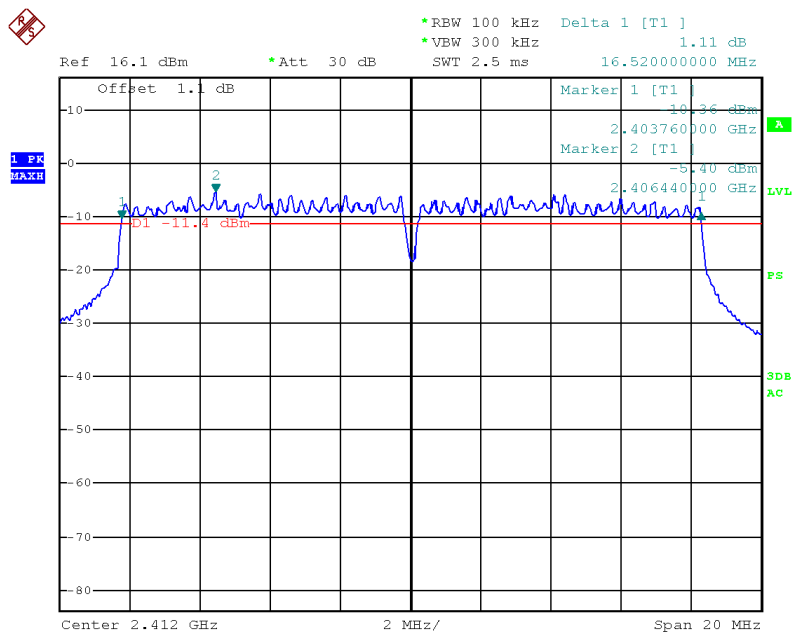


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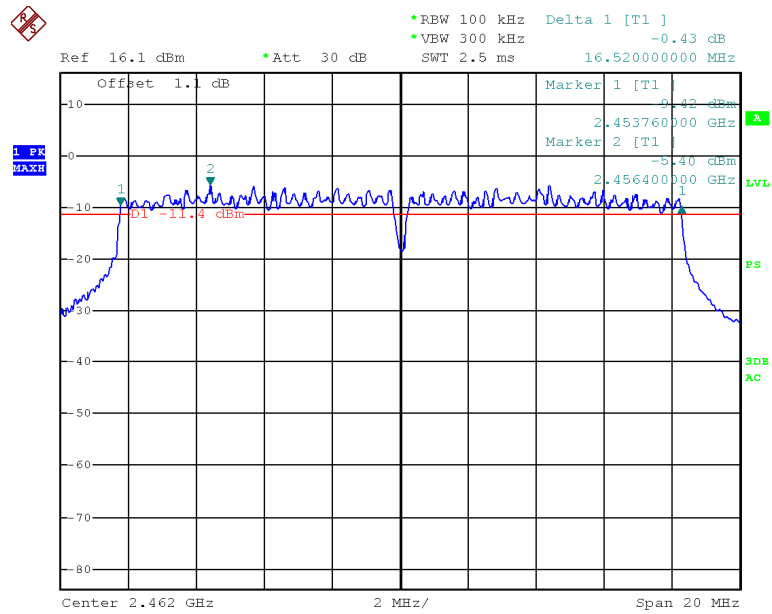
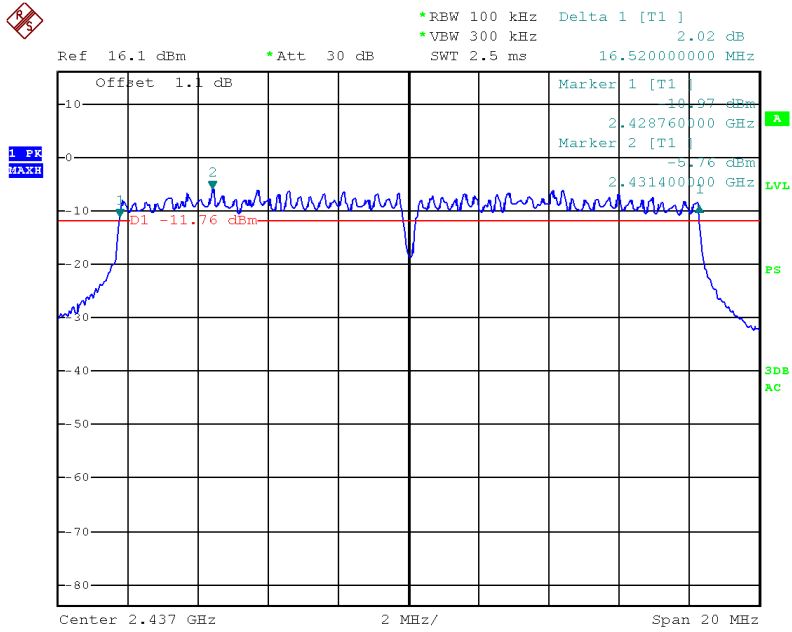
INTERTEK TESTING SERVICES



802.11g

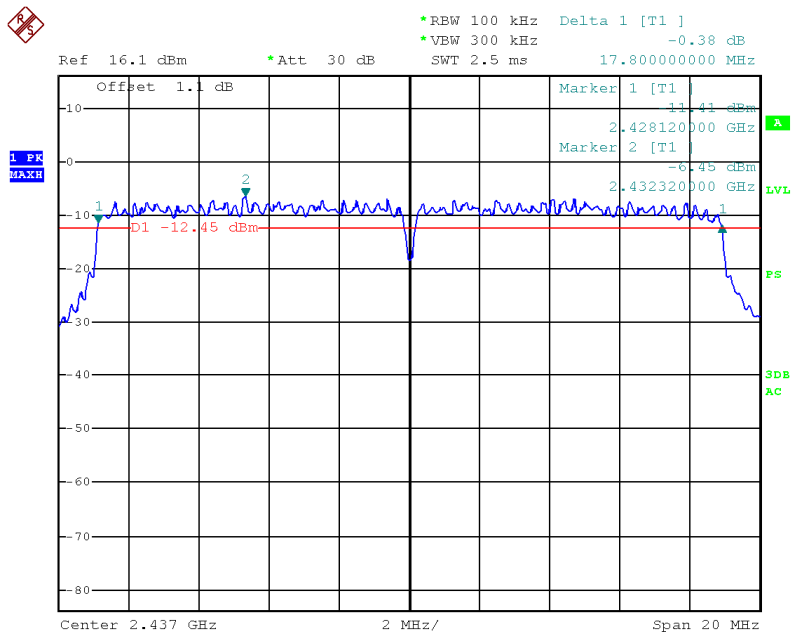
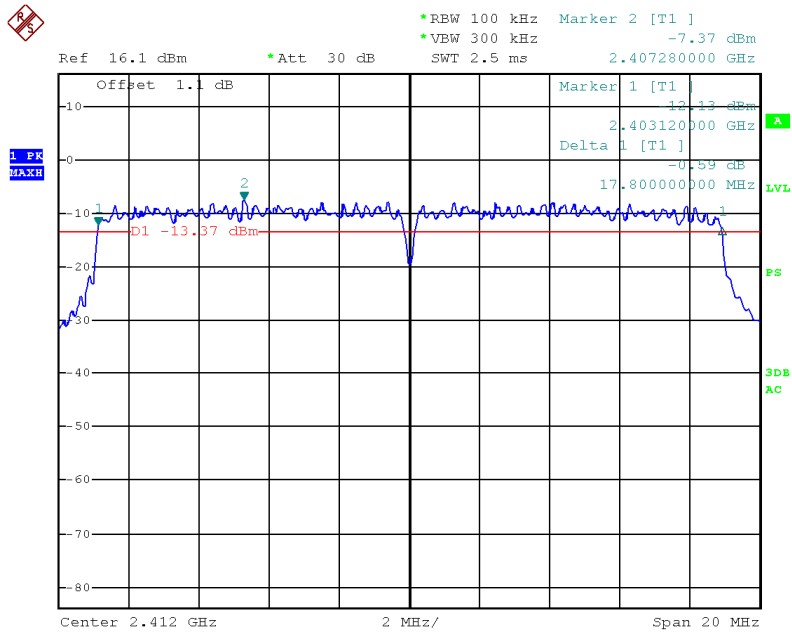


INTERTEK TESTING SERVICES



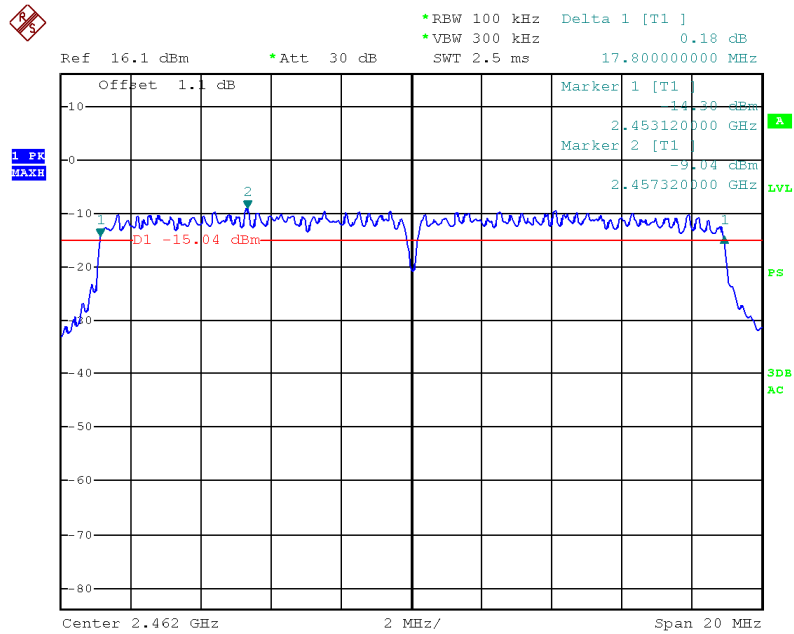
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802.11 n-HT20

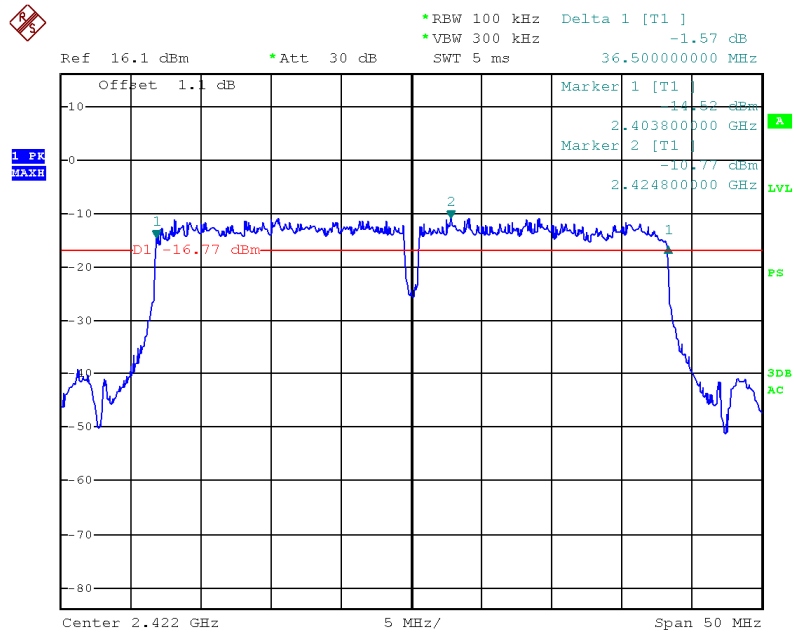


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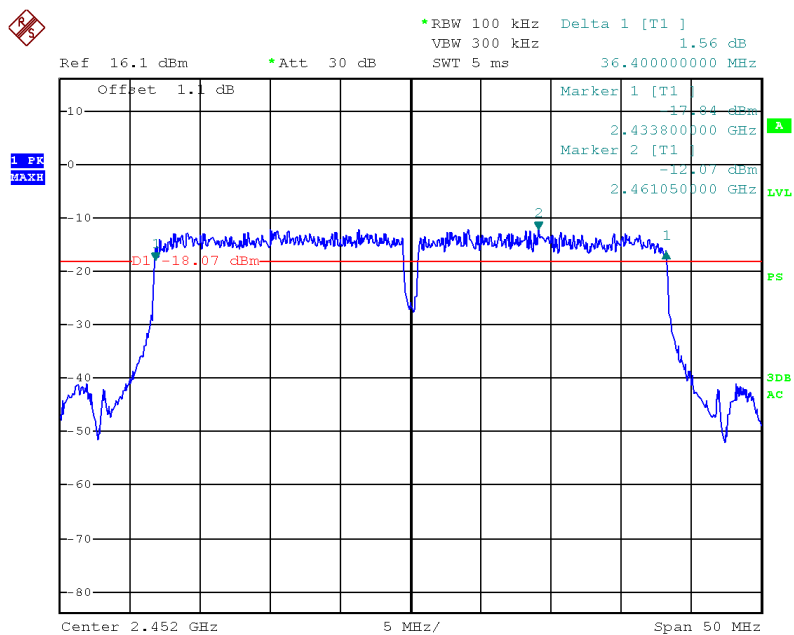
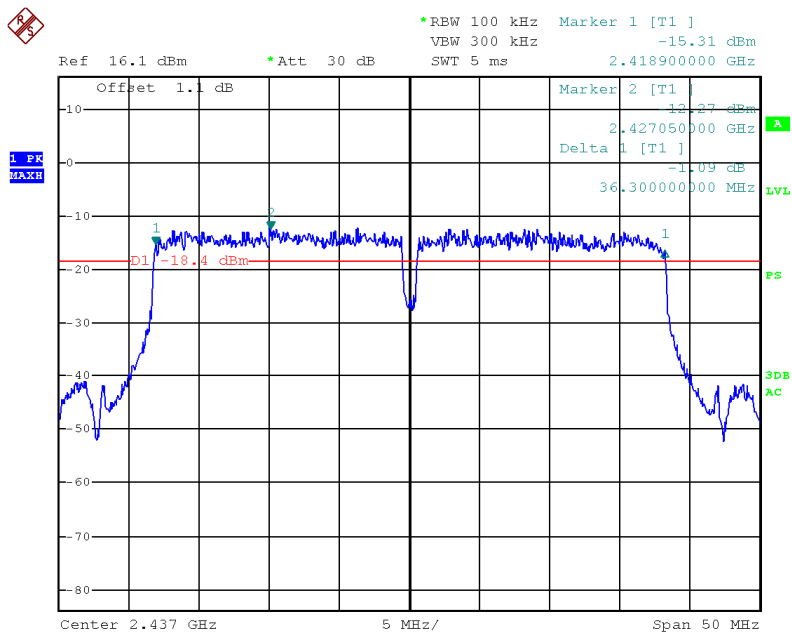


802.11 n-HT40



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Applicant: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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

The Measurement Procedure PKPSD was set according to the FCC KDB 558074. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW. If the measured value exceed limit, reduce the RBW (no less than 3KHz) to retest.

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 (CCK, 1Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	-0.04
2437	-0.83
2462	-1.27

IEEE 802.11g (16QAM, 6Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	-5.08
2437	-5.73
2462	-6.40

IEEE 802.11n-HT20 (16QAM, 6.5Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2412	-8.45
2437	-8.42
2462	-9.18

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IEEE 802.11n-HT40 (64QAM, 13.5Mbps)	
Frequency (MHz)	Power Density with RBW 100KHz
2422	-12.00
2437	-12.50
2452	-13.16

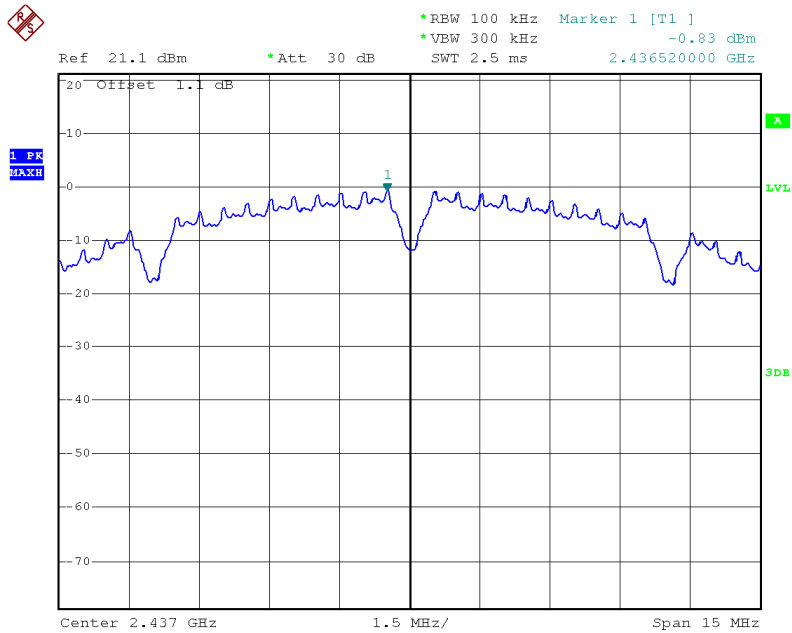
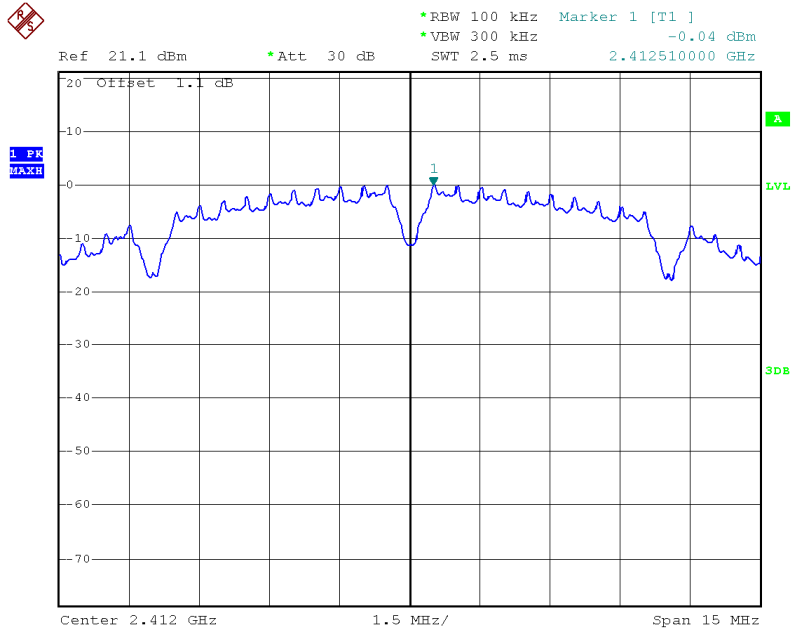
Cable loss: 1.1 dB External Attenuation: 0 dB

Cable loss, external attenuation has been included in OFFSET function

The test plots are attached as below.

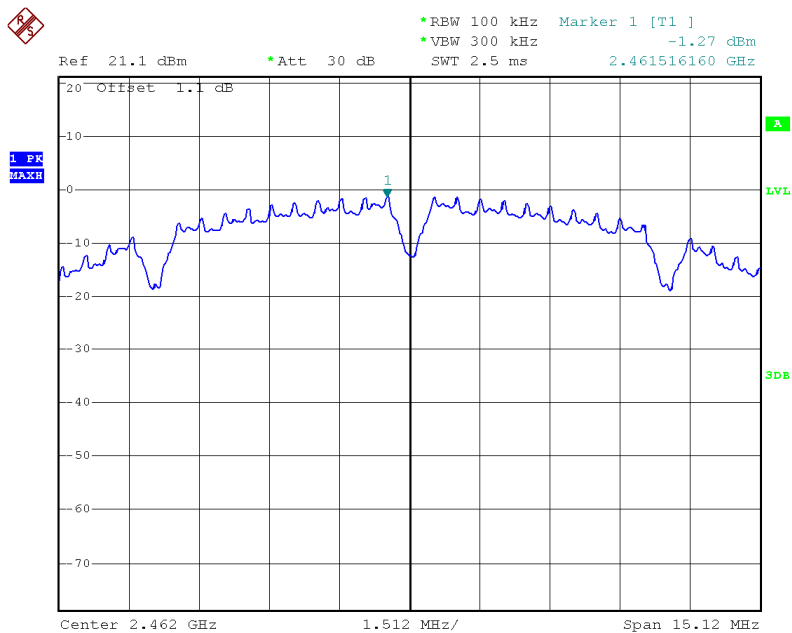
INTERTEK TESTING SERVICES

802.11b

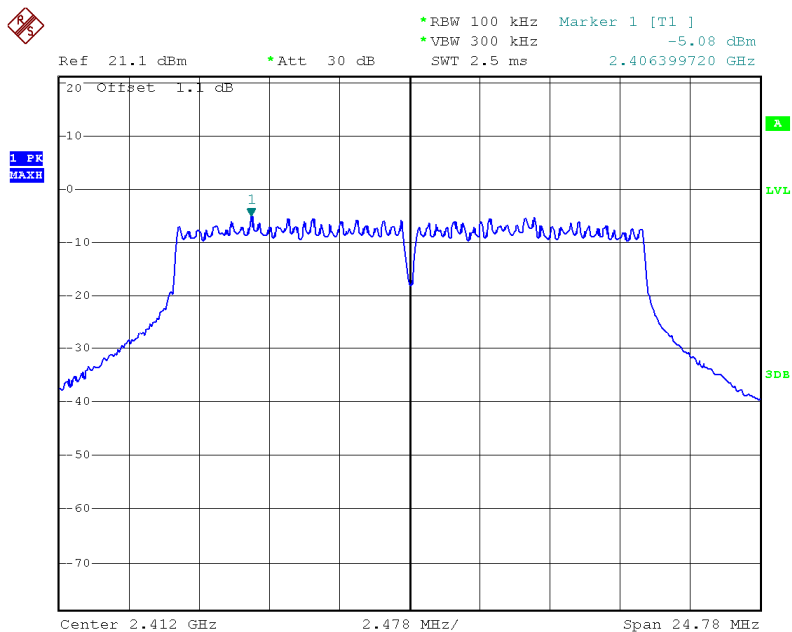


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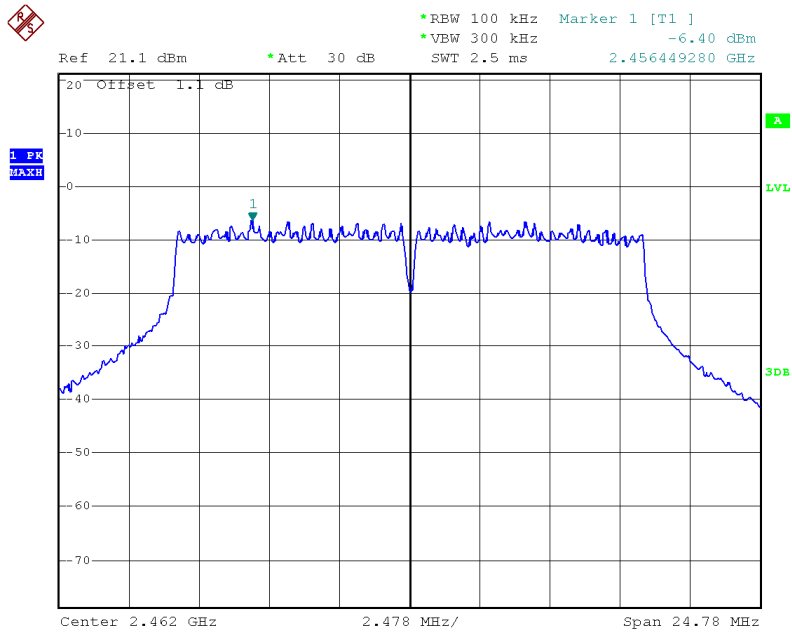
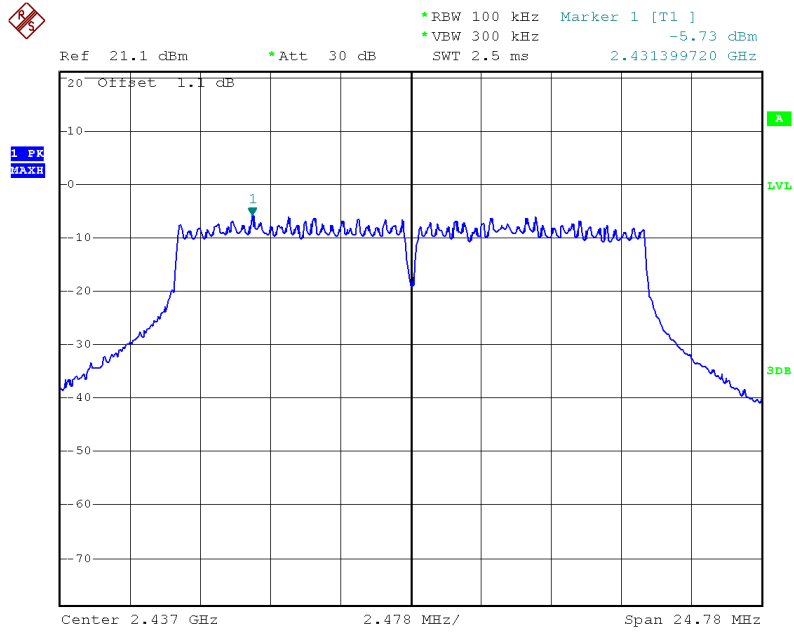
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802.11g

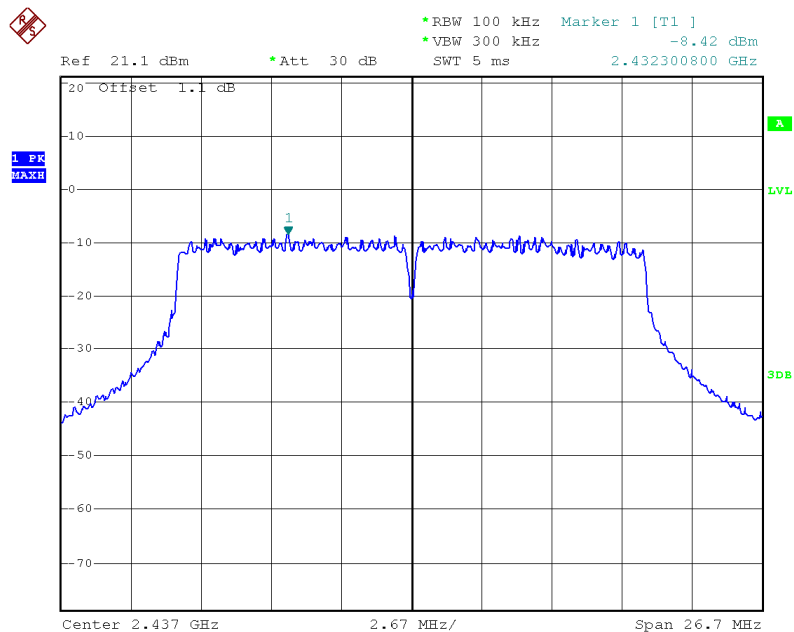
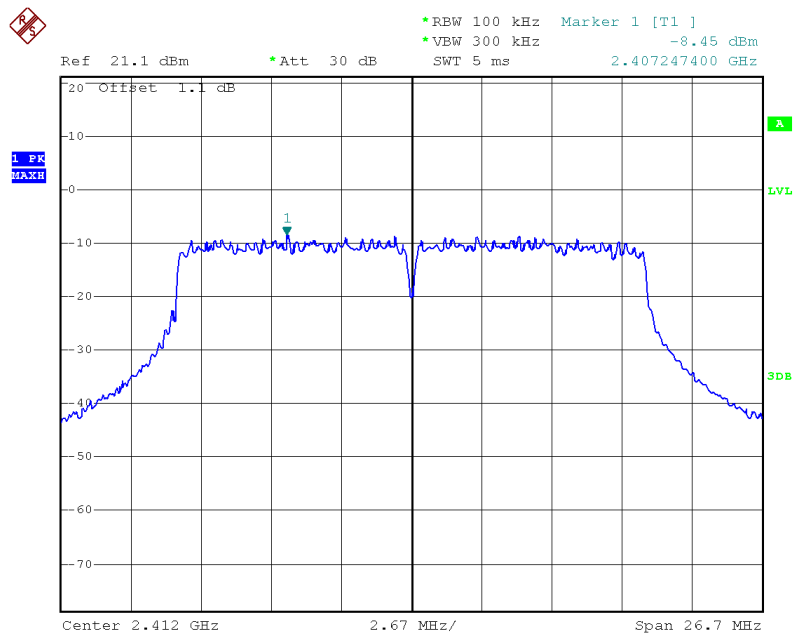


INTERTEK TESTING SERVICES



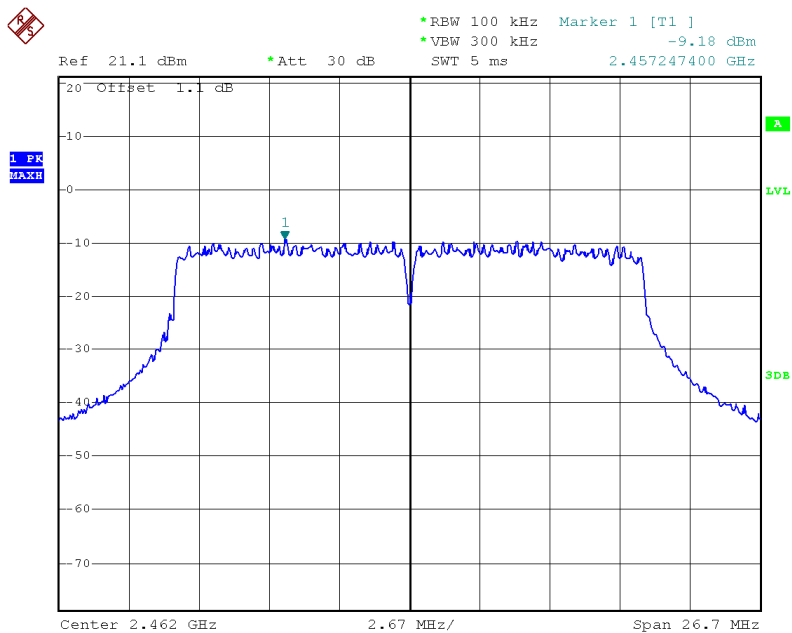
INTERTEK TESTING SERVICES

802.11 n-HT20

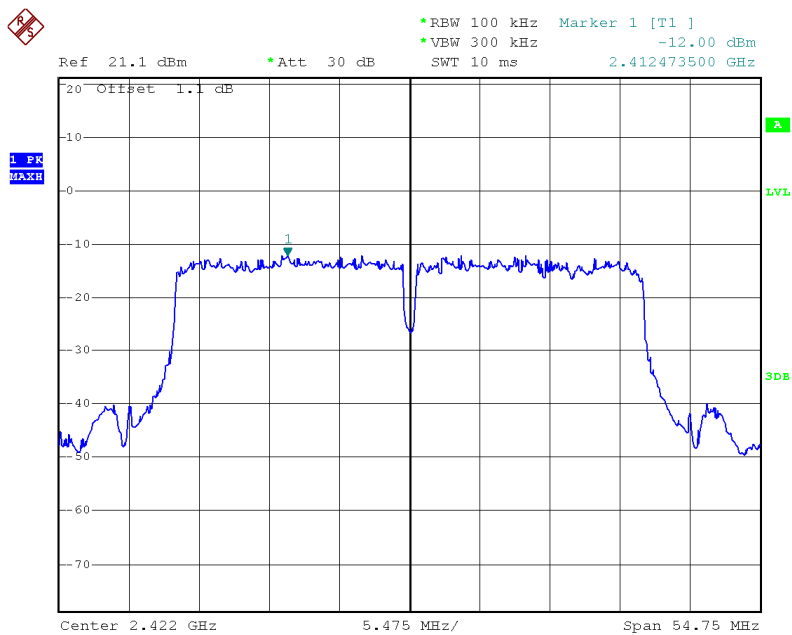


TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

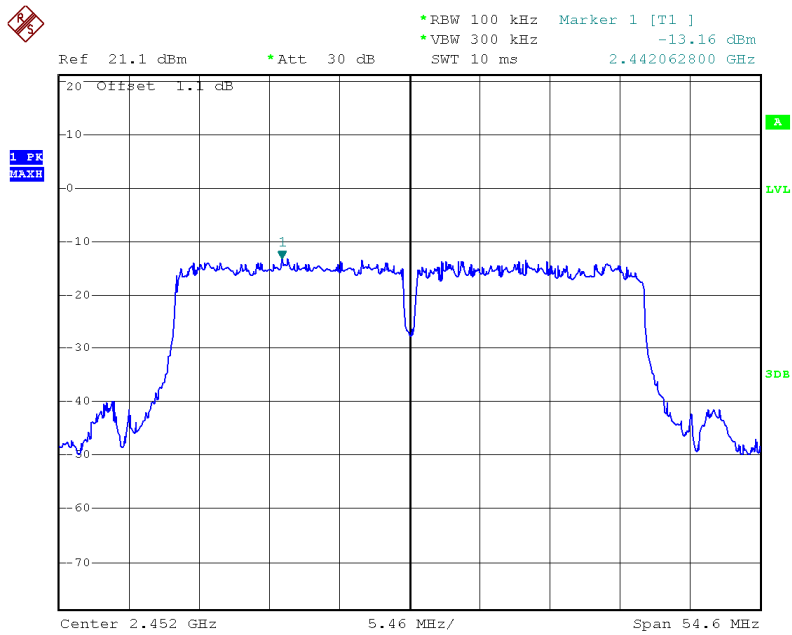
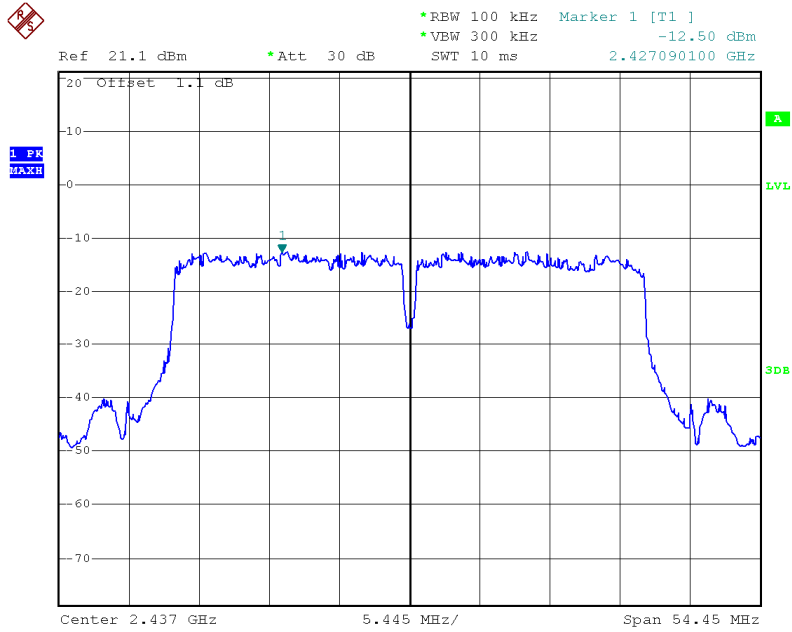


802.11 n-HT40



TRF no.: FCC 15C_TX_b
FCC ID: W8UG65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. The Measurement Procedure was set according to the FCC KDB 558074.

Refer to the attached test plots 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.

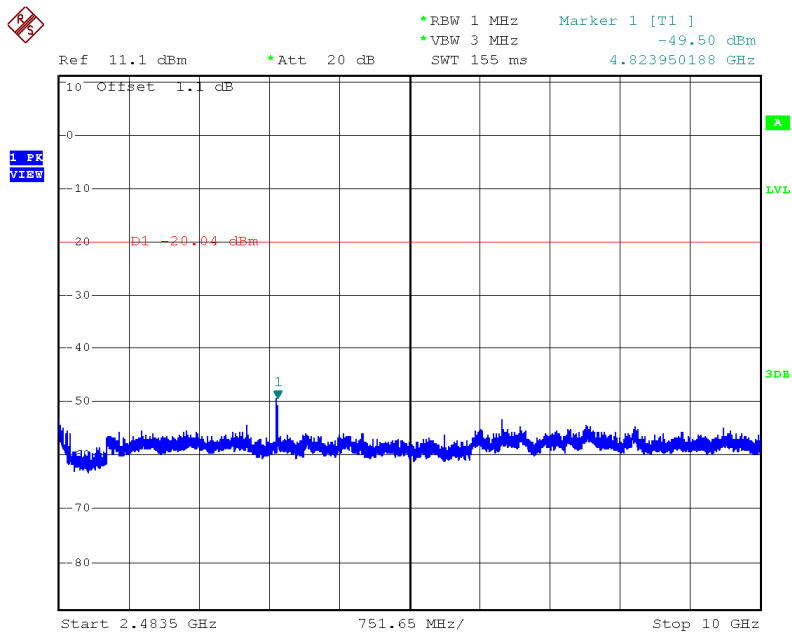
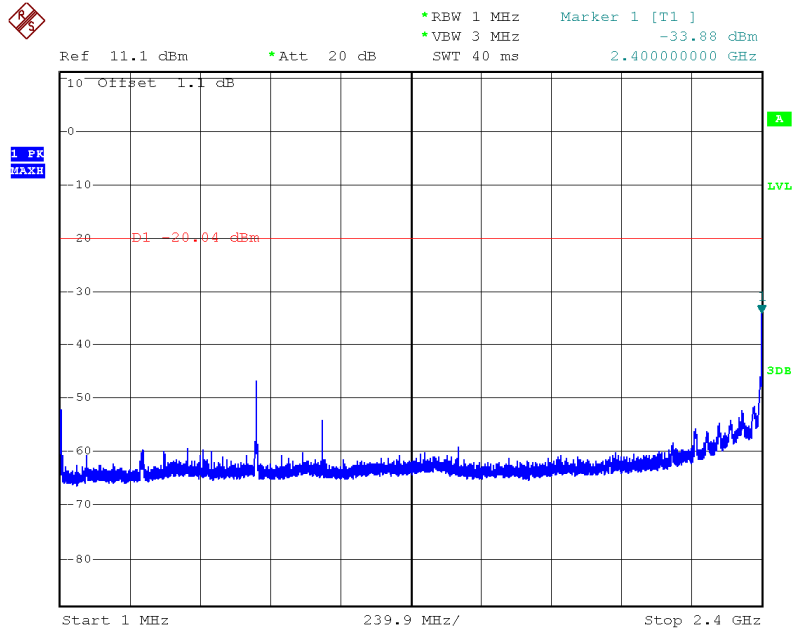
The test plots showed all spurious emission up to the tenth harmonic was measured and they were found to be at least 20 dB below the highest level of the desired power in the passband.

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, the RBW will be reduced to 100KHz to determine the final result.

The test plots are attached as below.

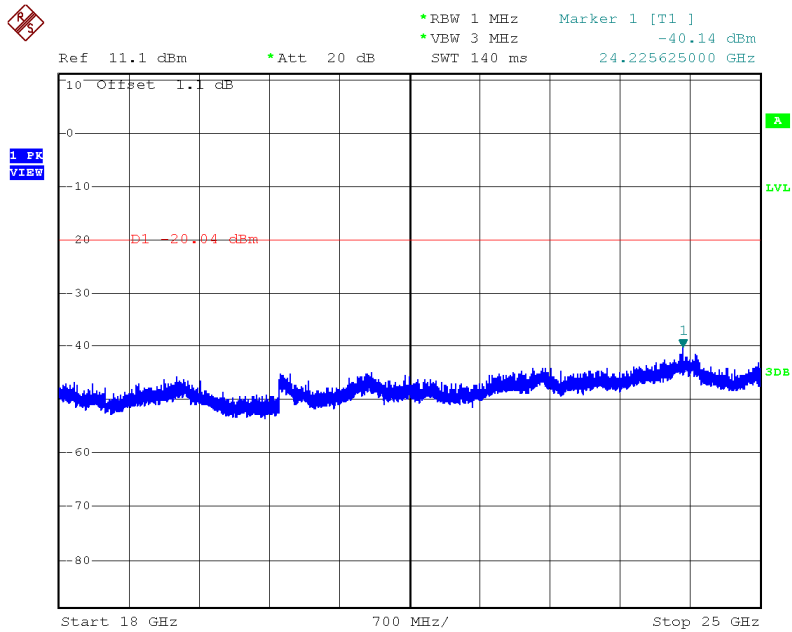
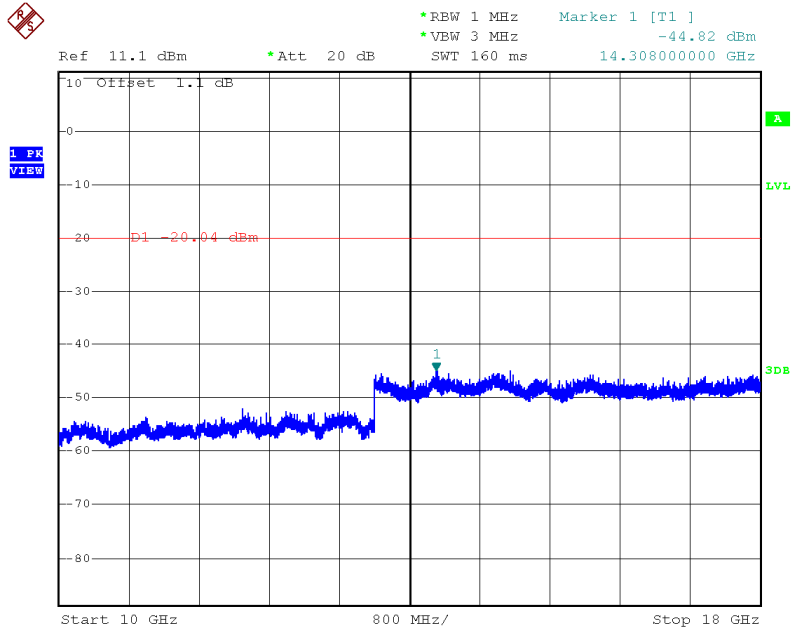
INTERTEK TESTING SERVICES

802.11b
Channel 01 (2412MHz) Reference Level: -0.04dBm



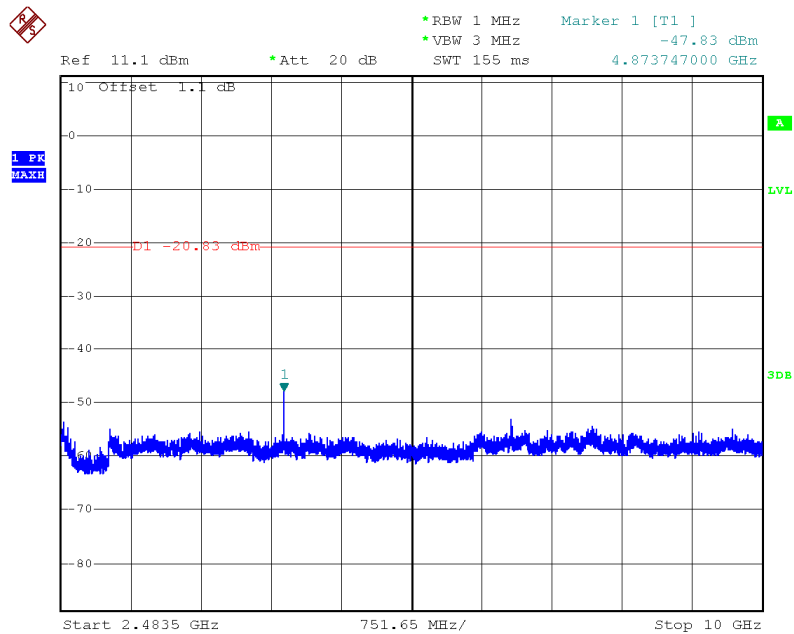
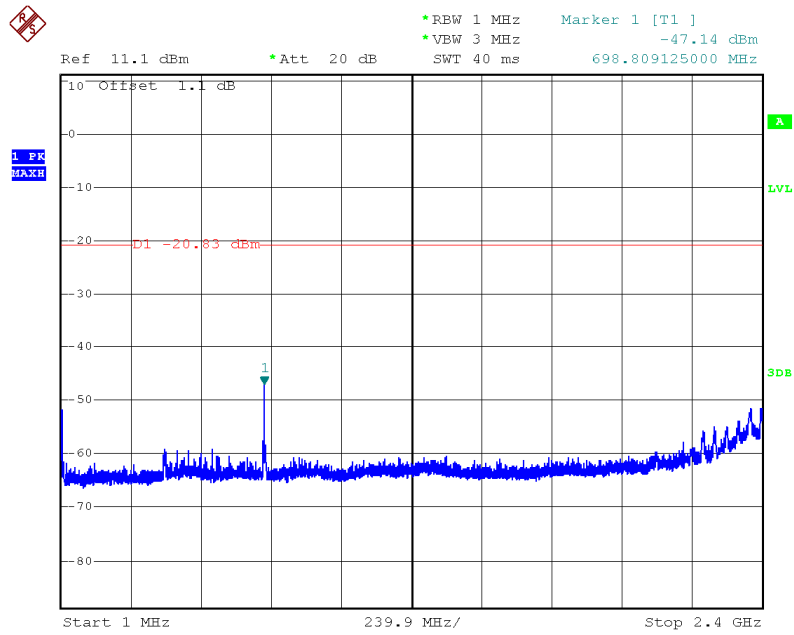
TRF no.: FCC 15C_TX_b
FCC ID: W8UG65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES



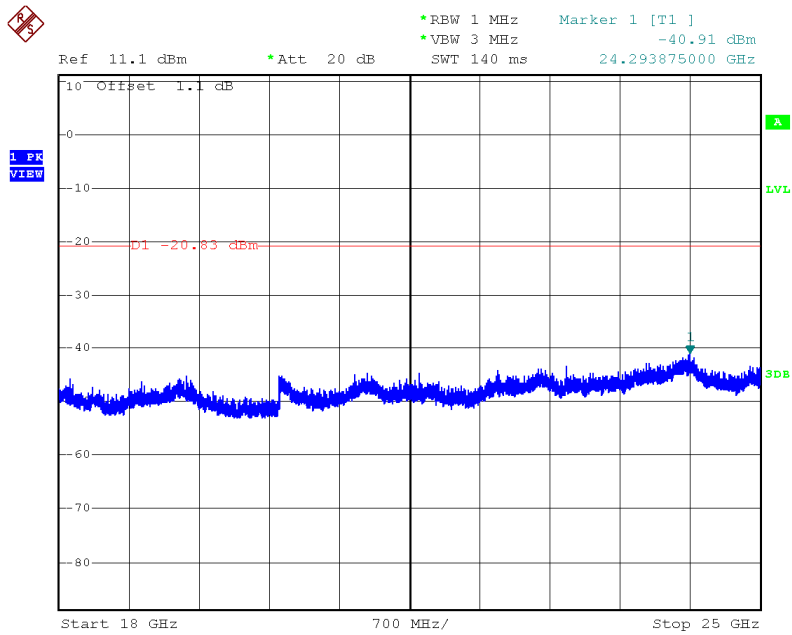
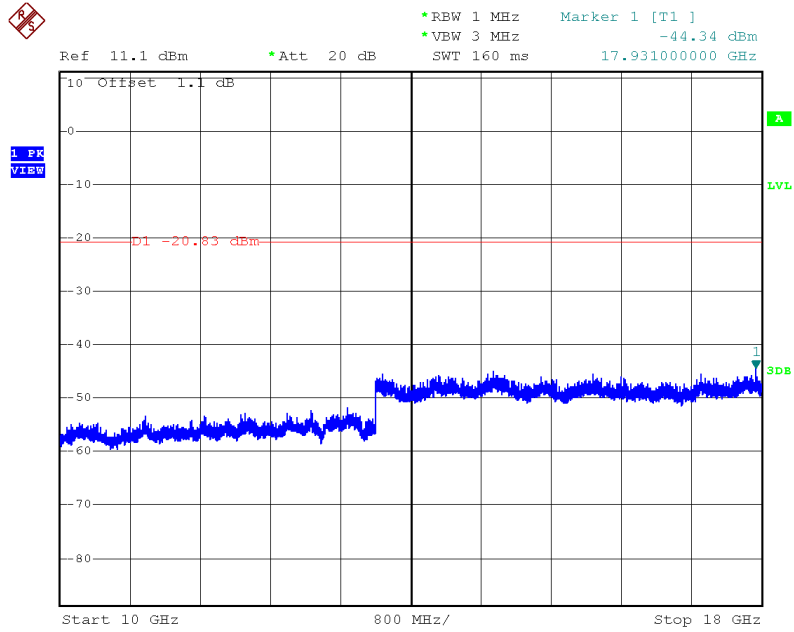
INTERTEK TESTING SERVICES

Channel 06 (2437MHz) Reference Level: -0.83dBm



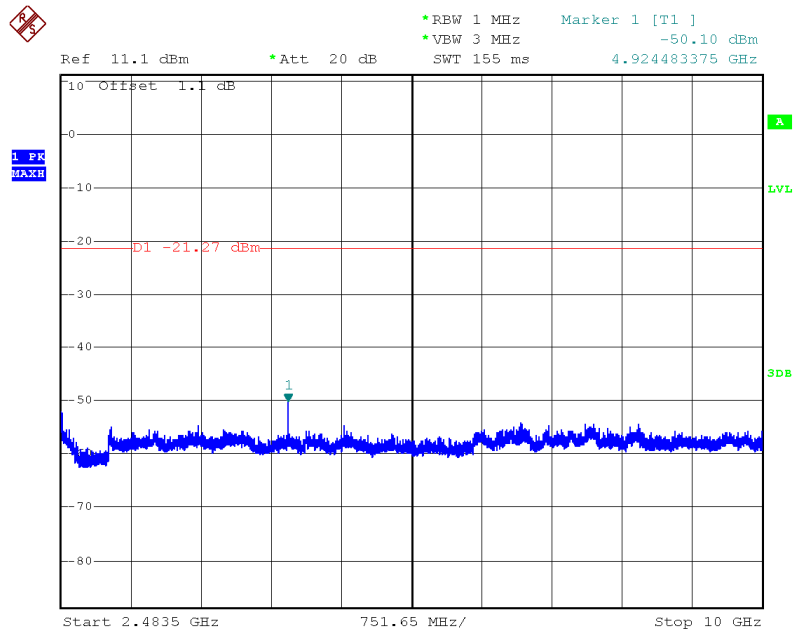
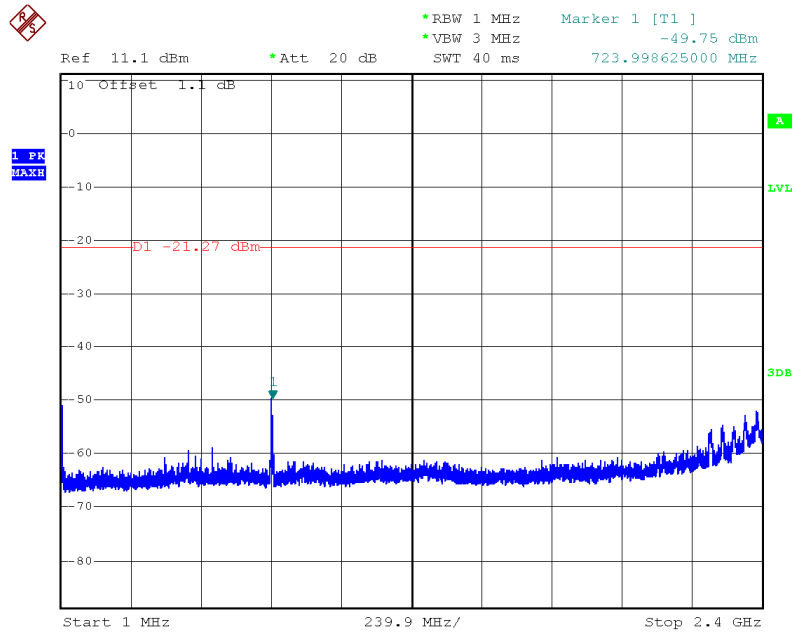
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES



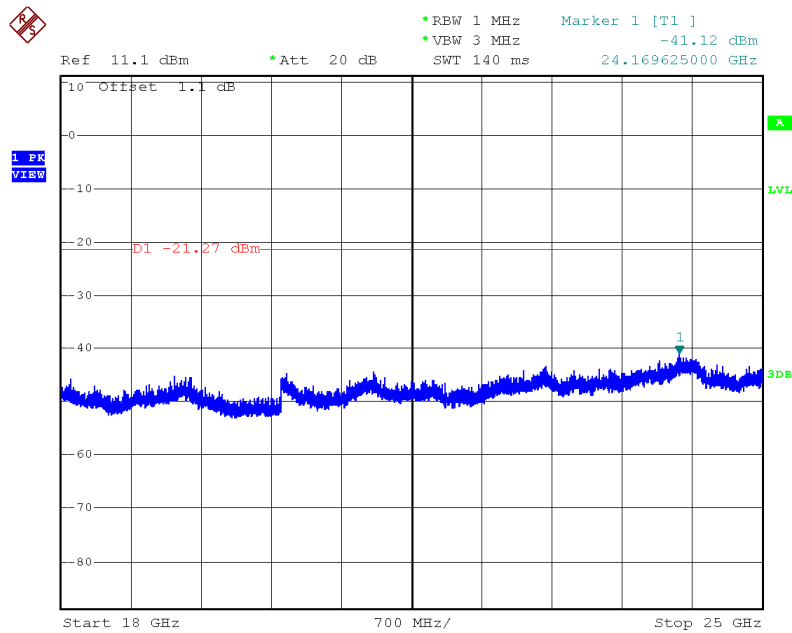
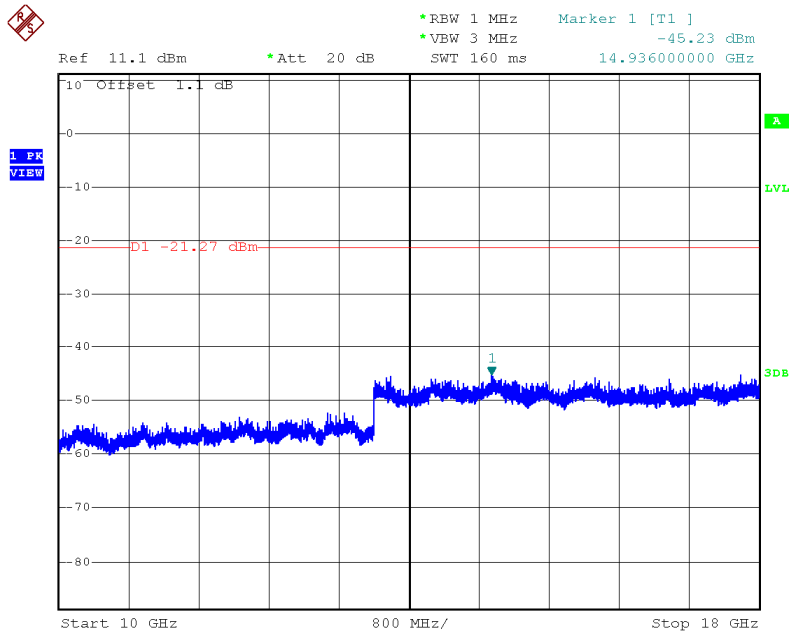
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: -1.27dBm



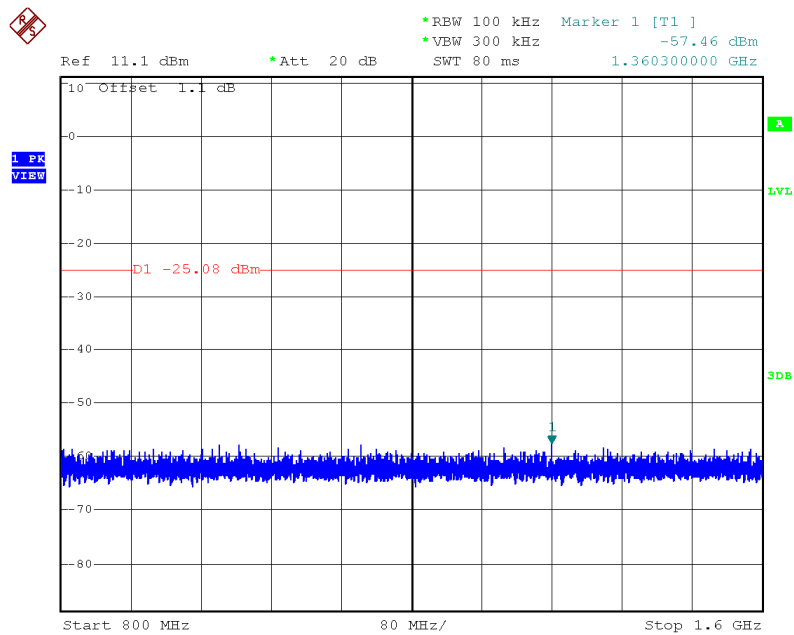
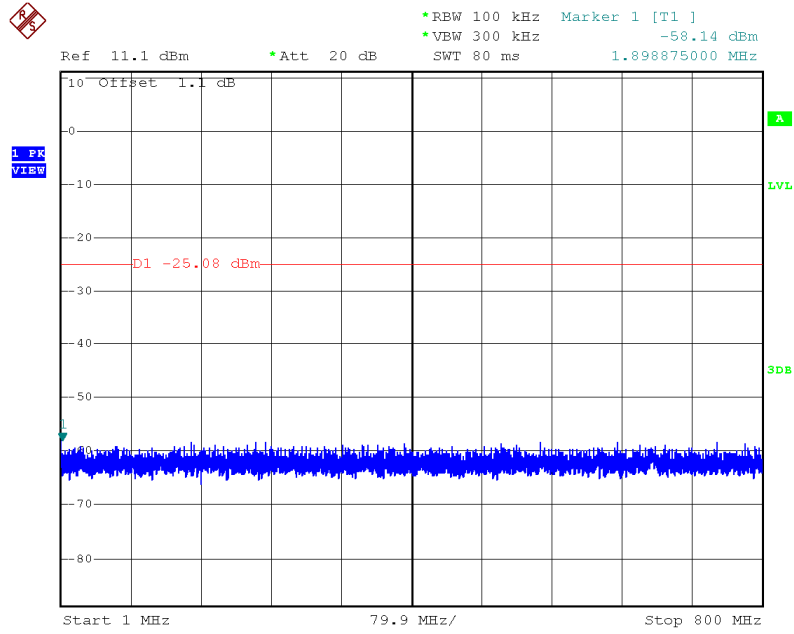
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES



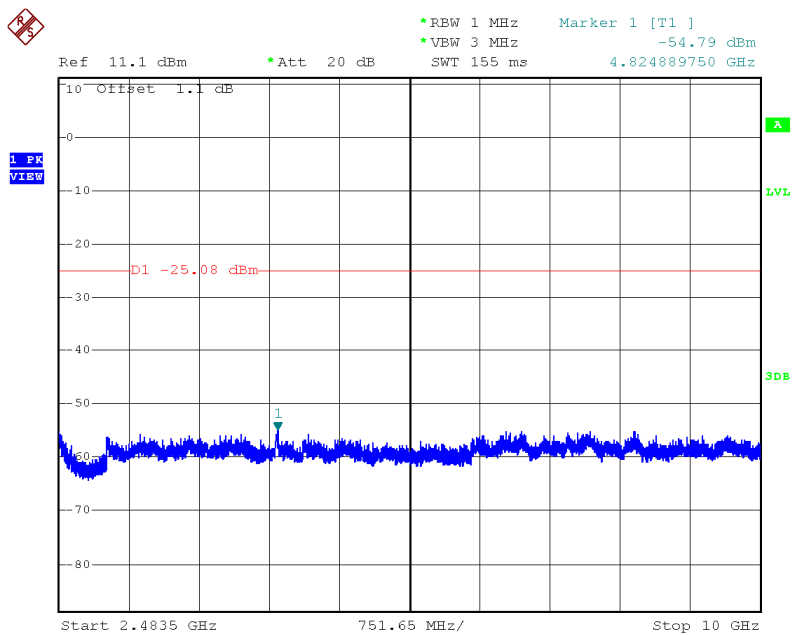
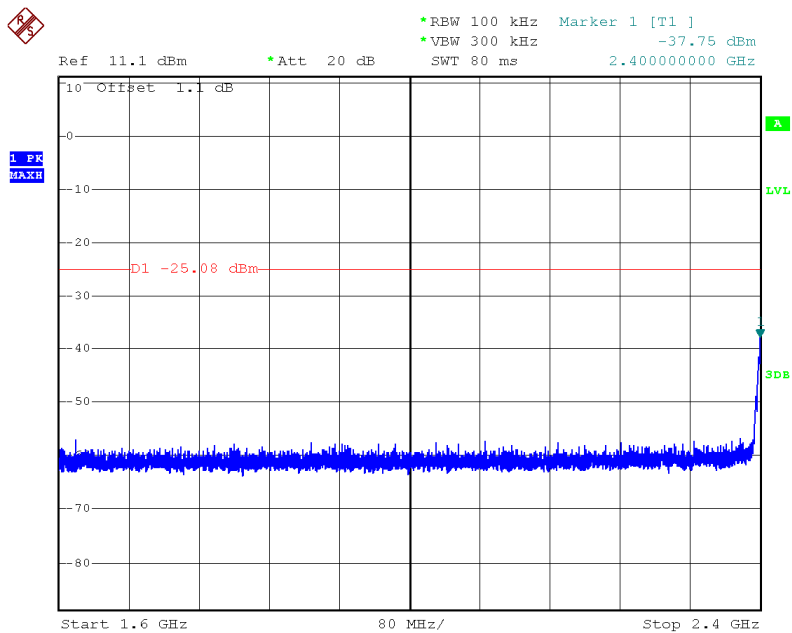
INTERTEK TESTING SERVICES

802.11g
Channel 01 (2412MHz) Reference Level: -5.08dBm

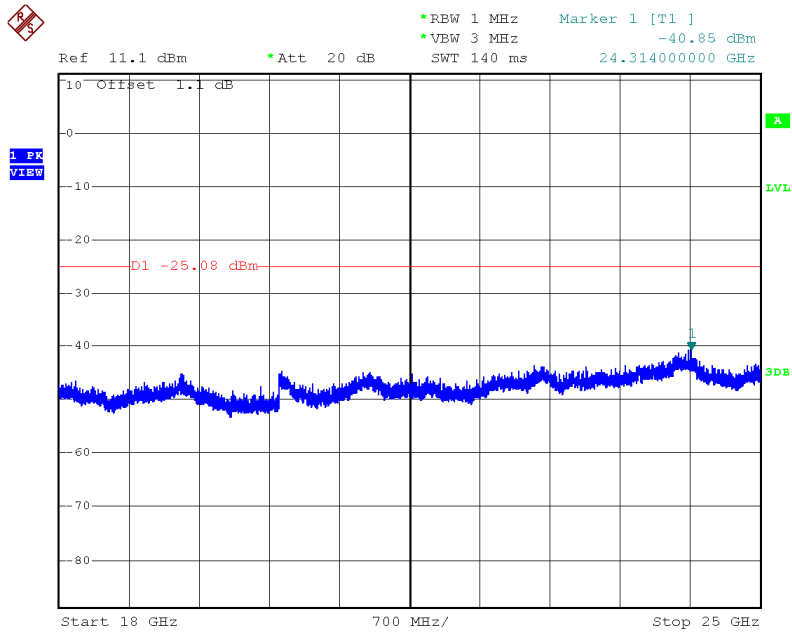
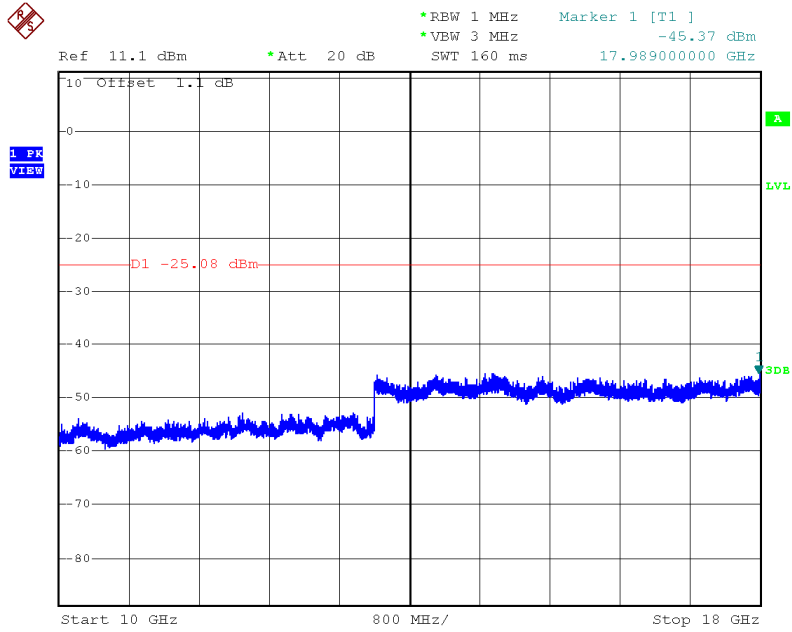


TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

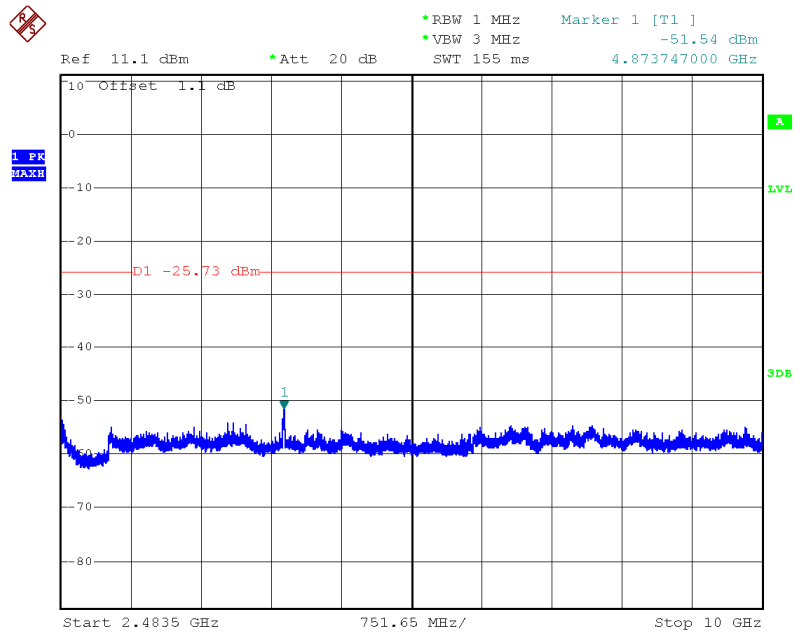
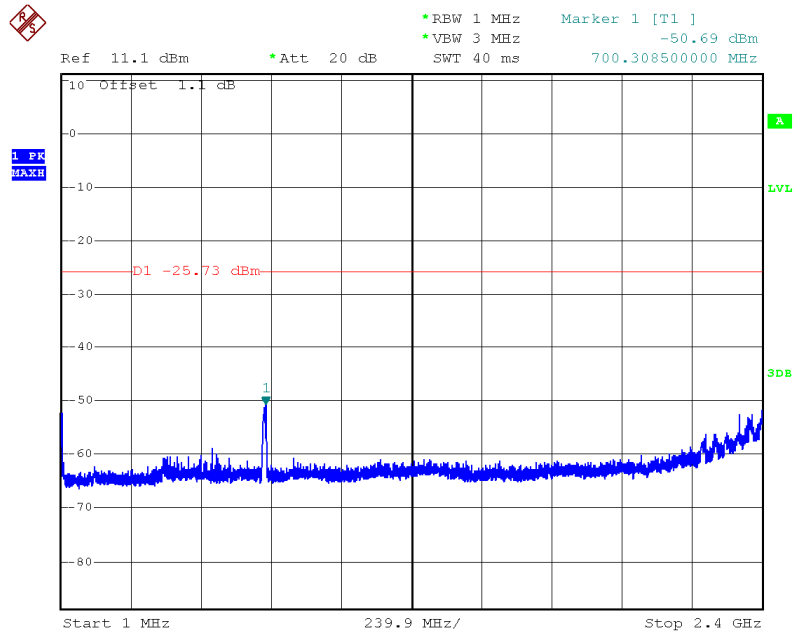


INTERTEK TESTING SERVICES



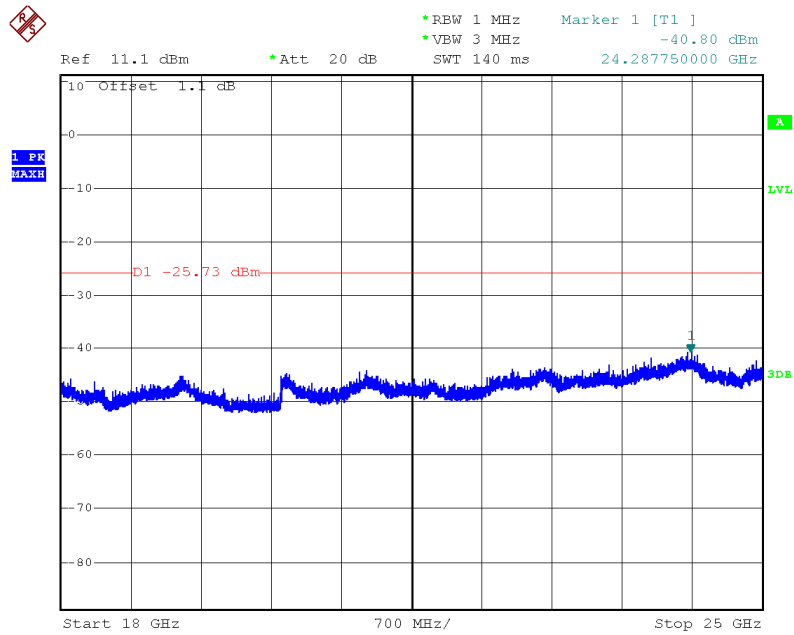
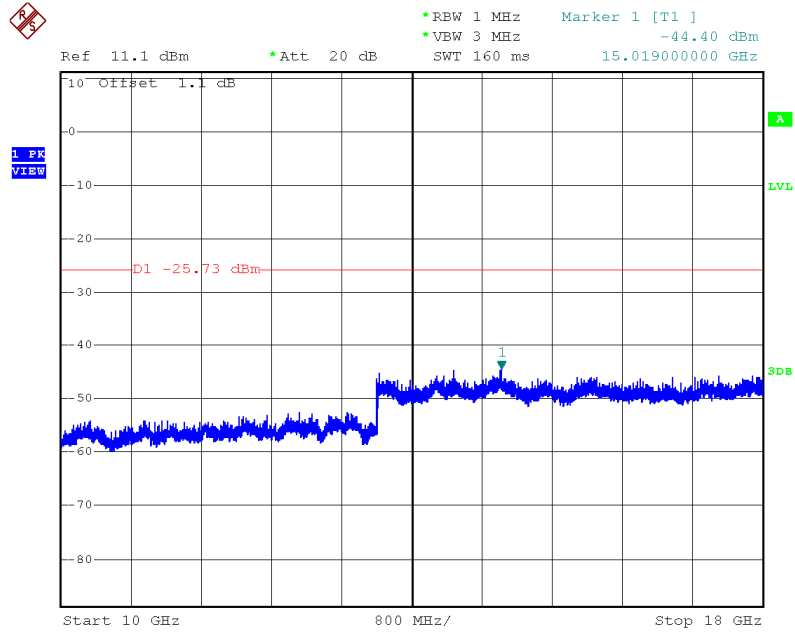
INTERTEK TESTING SERVICES

Channel 06 (2437MHz) Reference Level: -5.37dBm



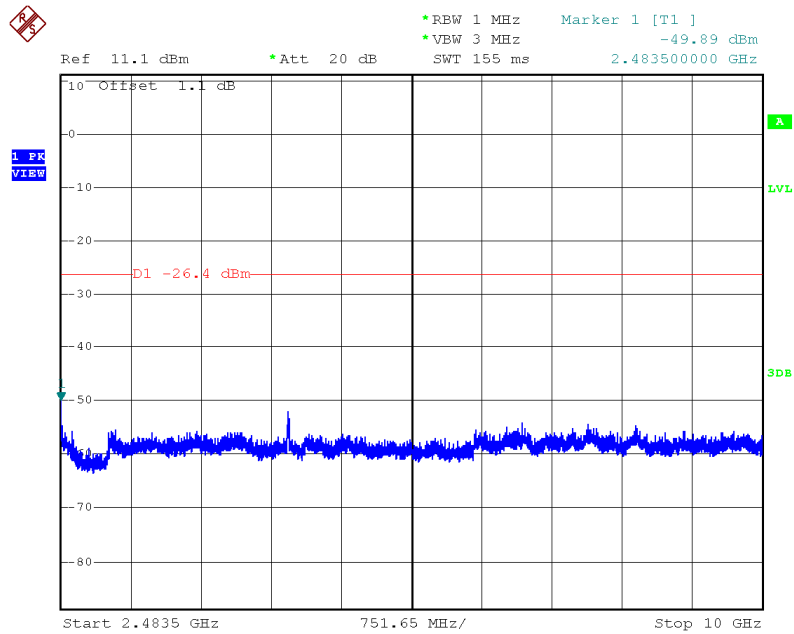
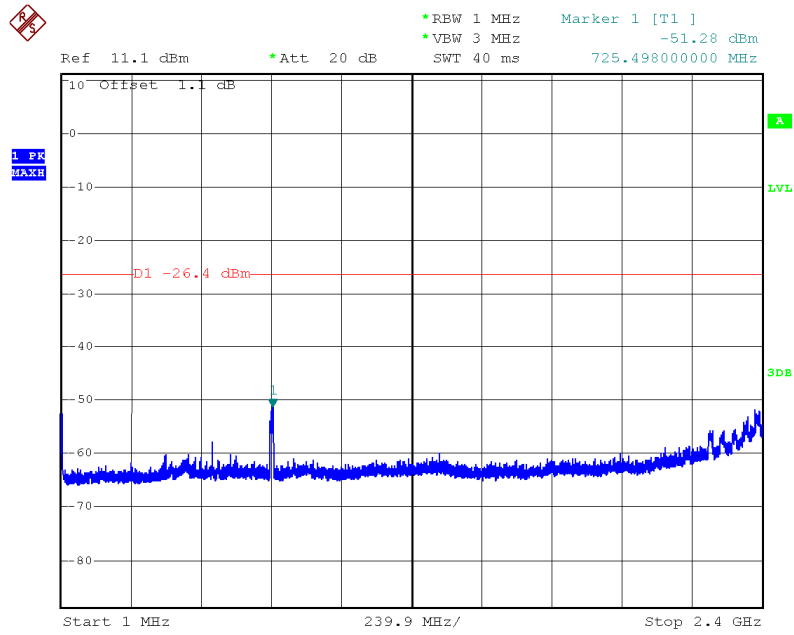
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES



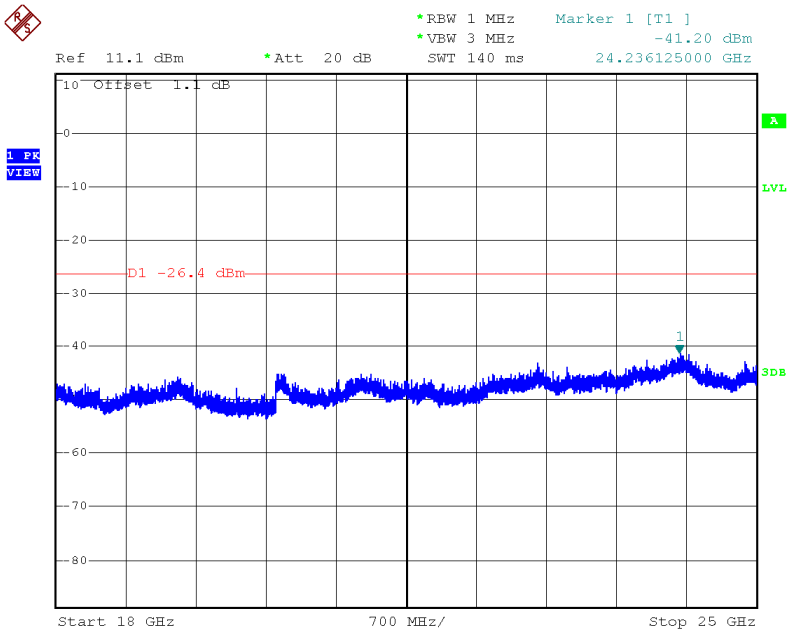
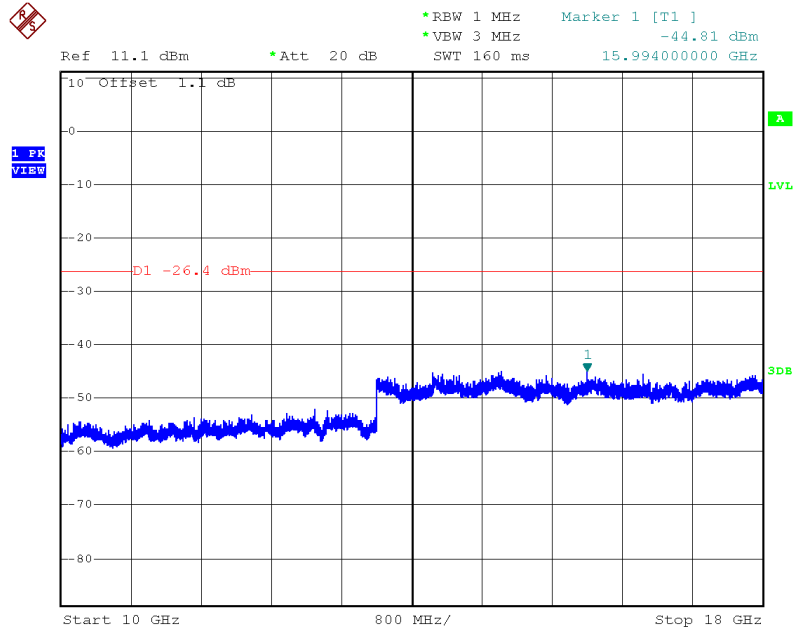
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: -6.40dBm



TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

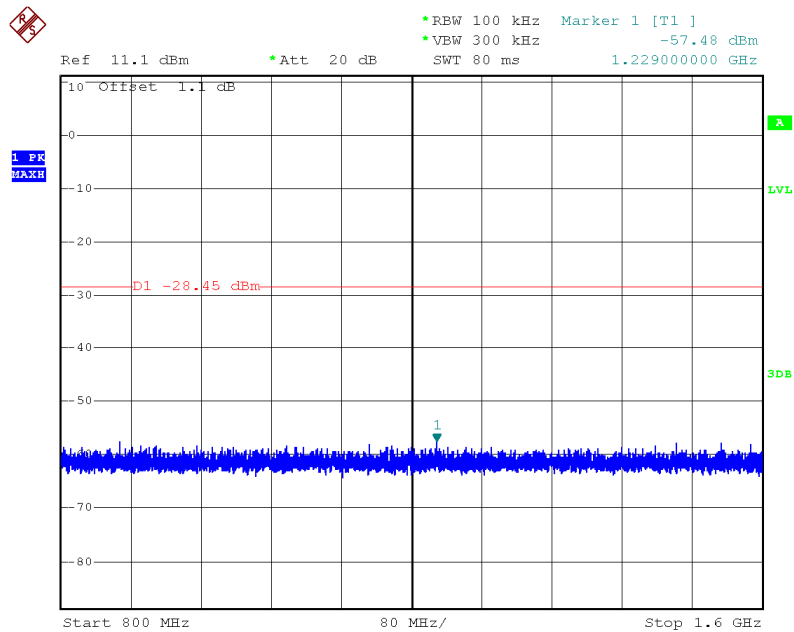
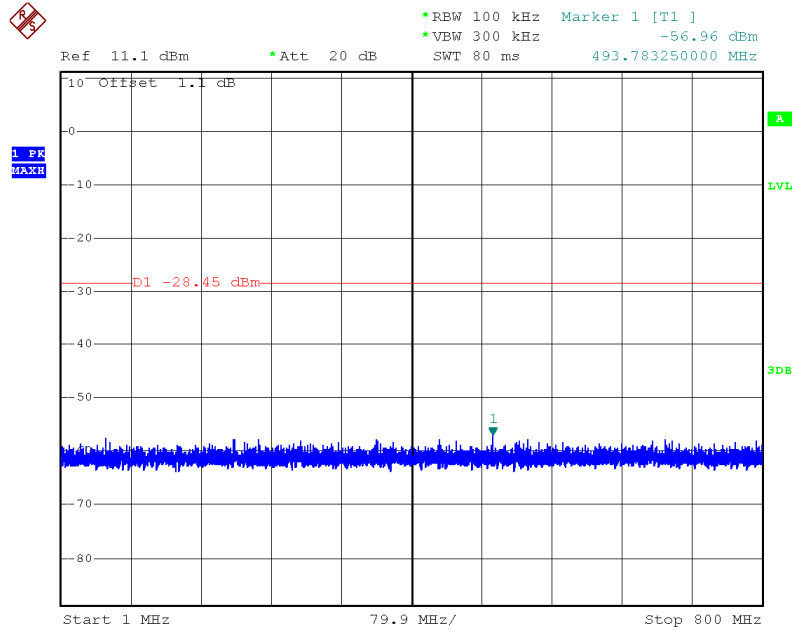
INTERTEK TESTING SERVICES



INTERTEK TESTING SERVICES

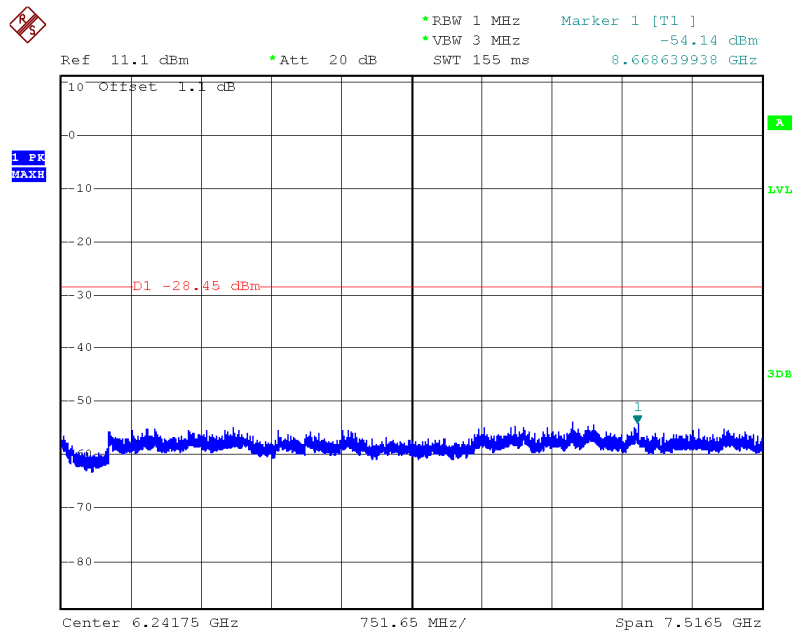
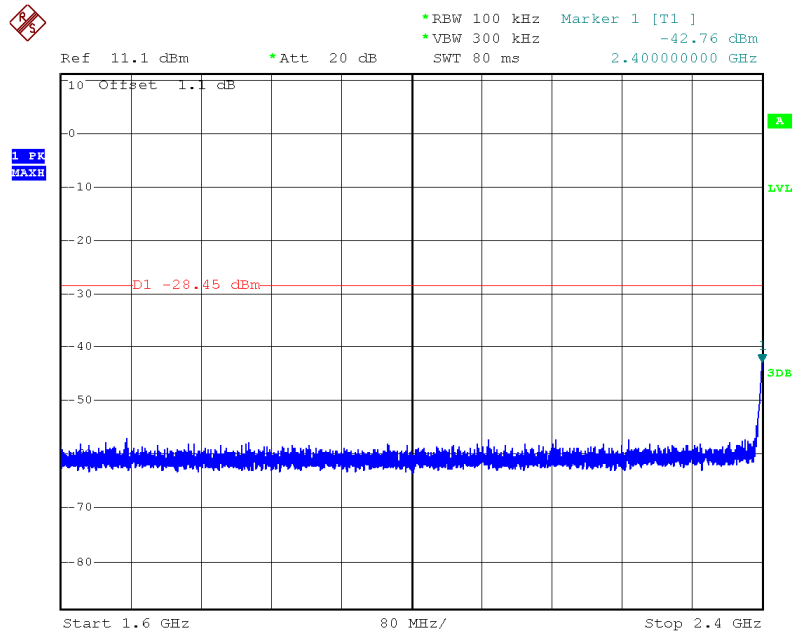
802.11 n-HT20

Channel 01 (2412MHz) Reference Level: -8.45dBm

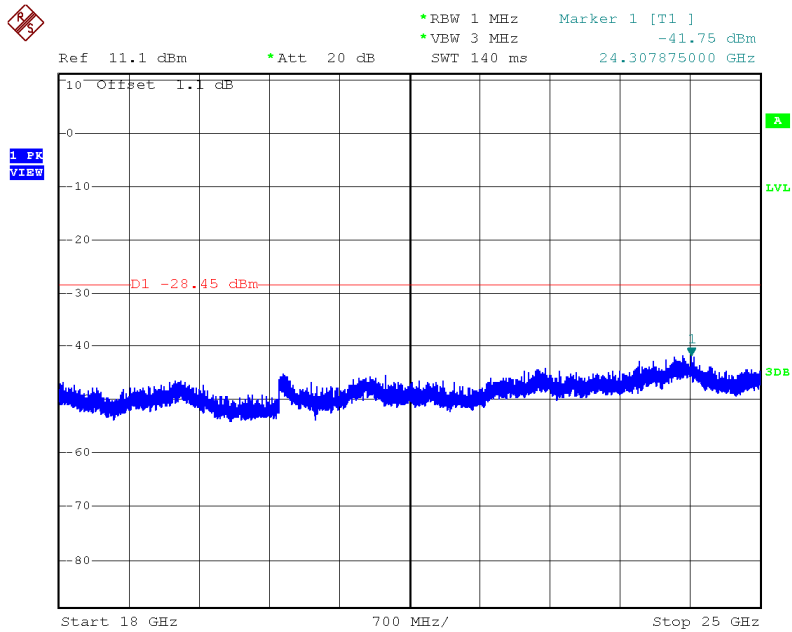
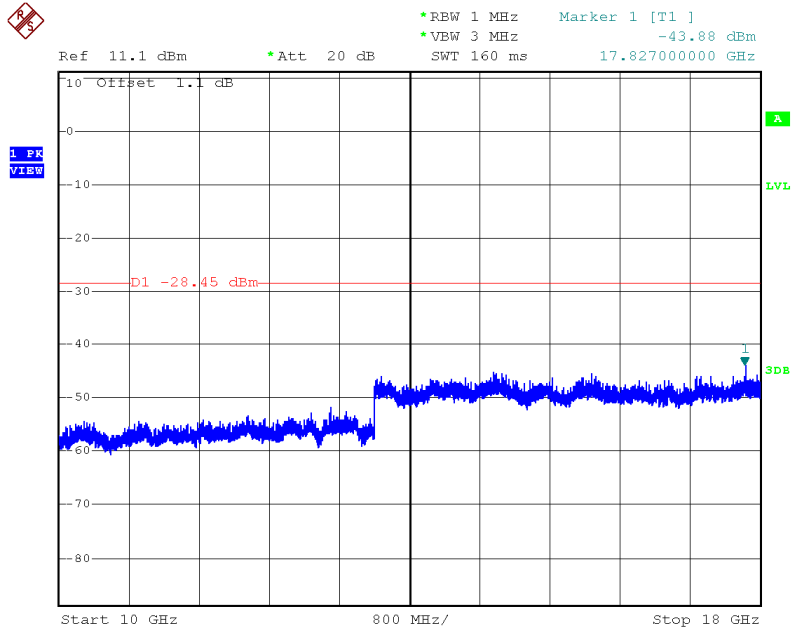


TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

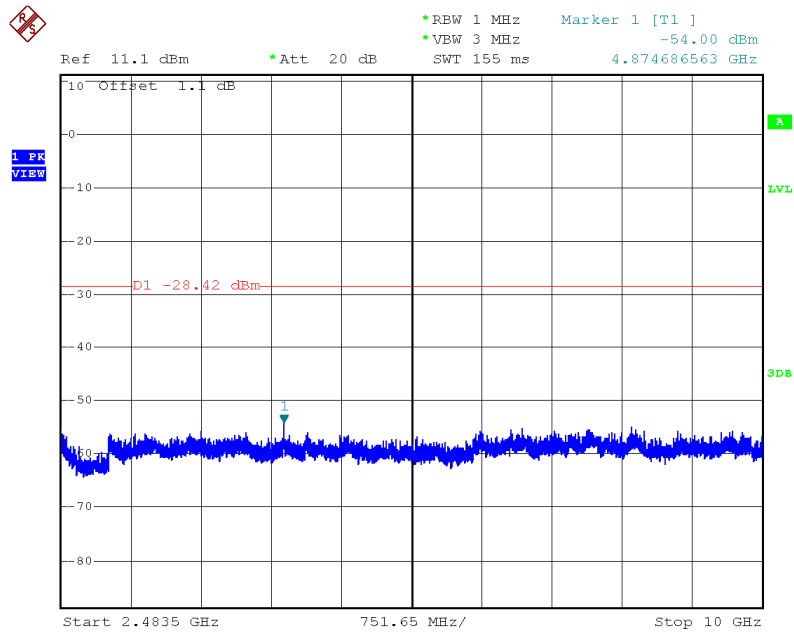
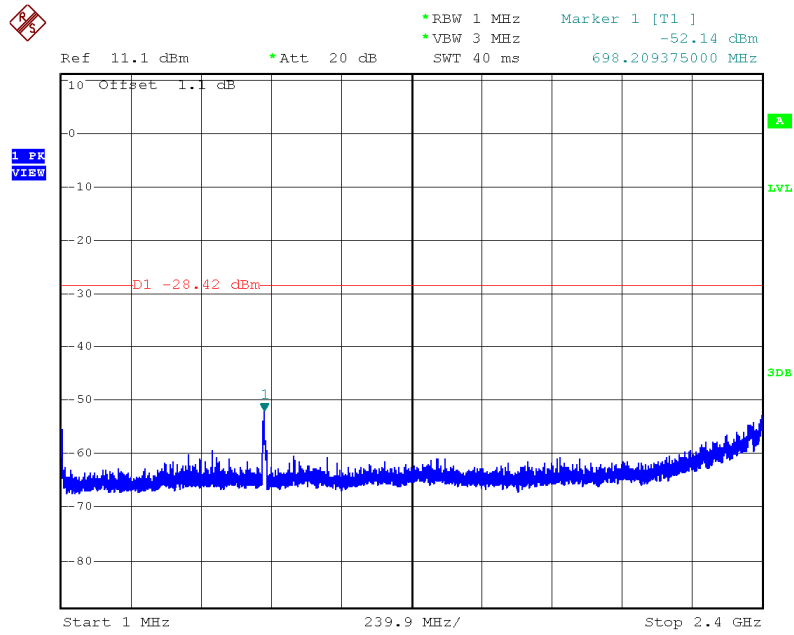


INTERTEK TESTING SERVICES



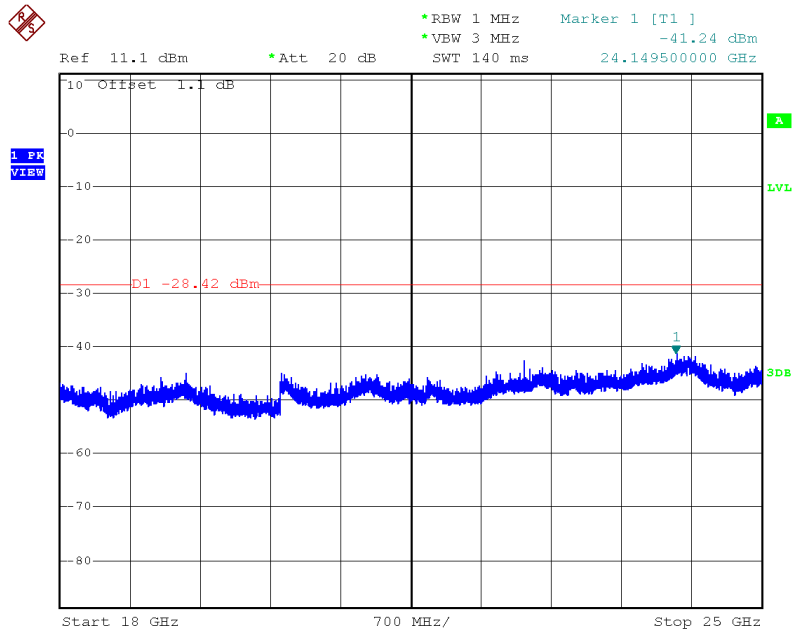
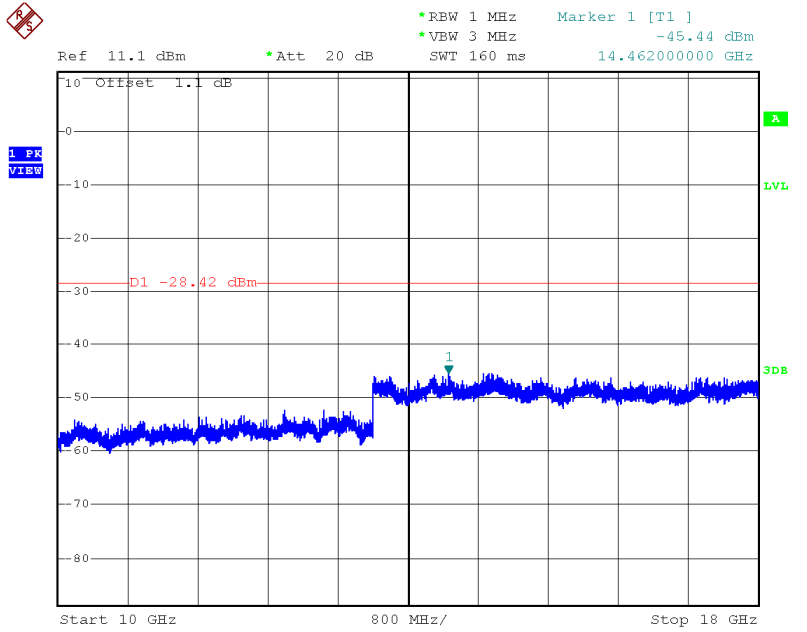
INTERTEK TESTING SERVICES

Channel 06 (2437MHz) Reference Level: -8.42dBm



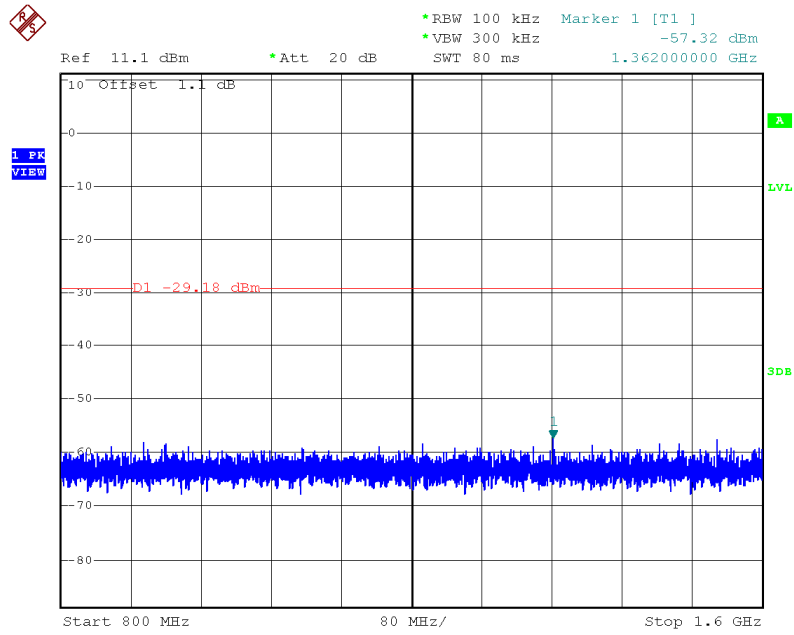
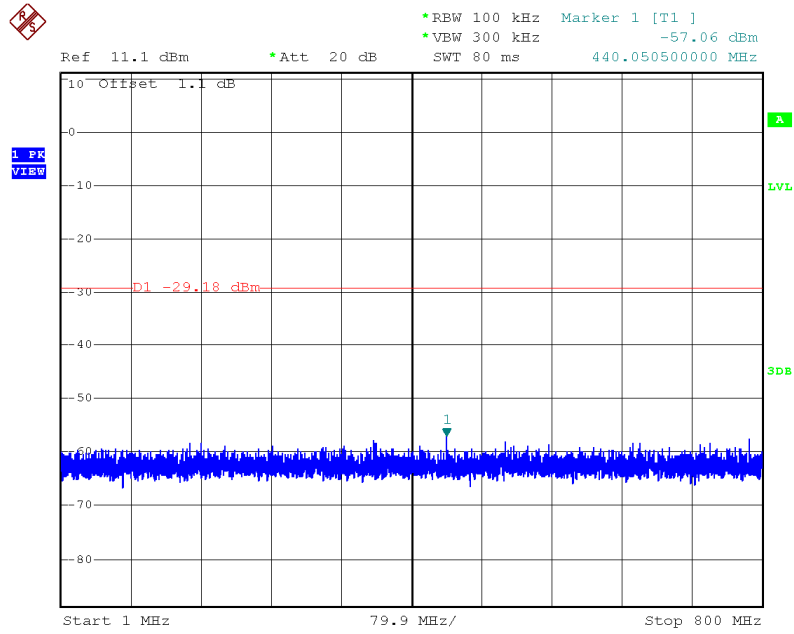
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES



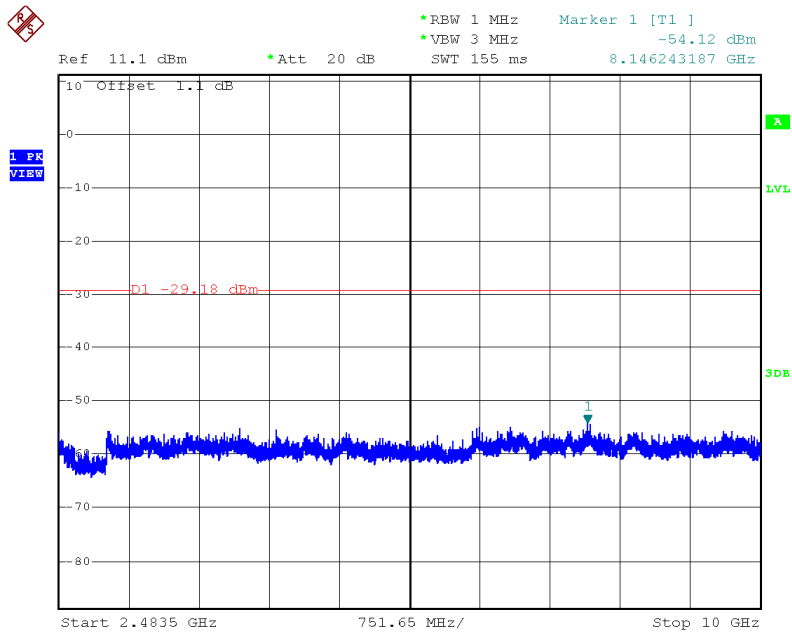
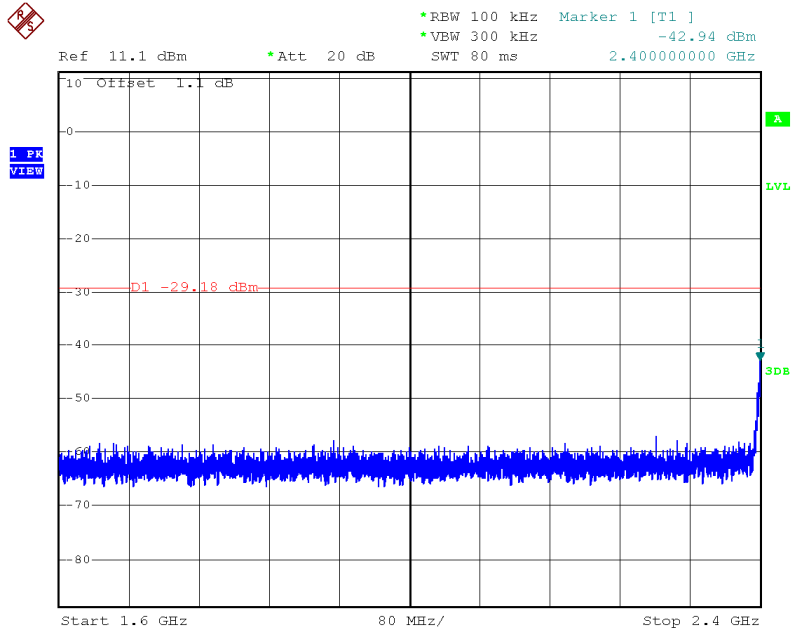
INTERTEK TESTING SERVICES

Channel 11 (2462MHz) Reference Level: -9.18dBm

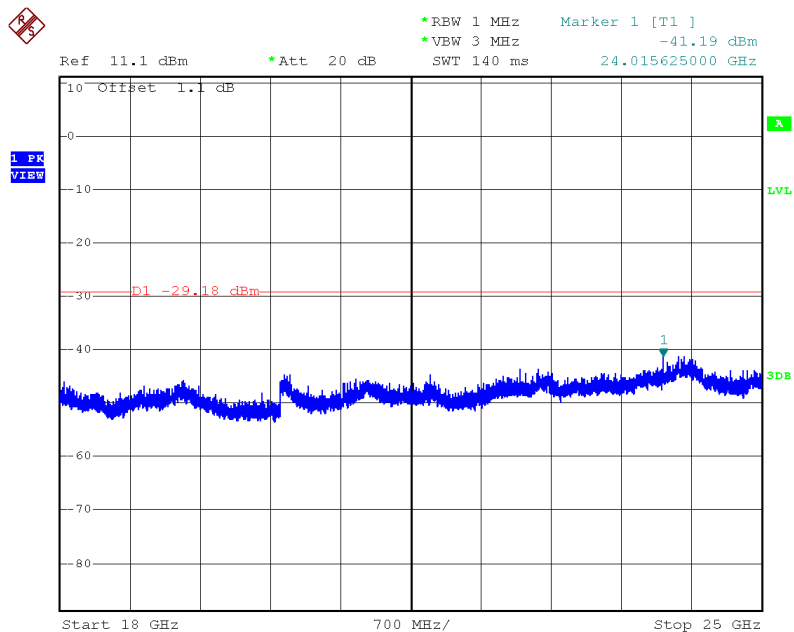
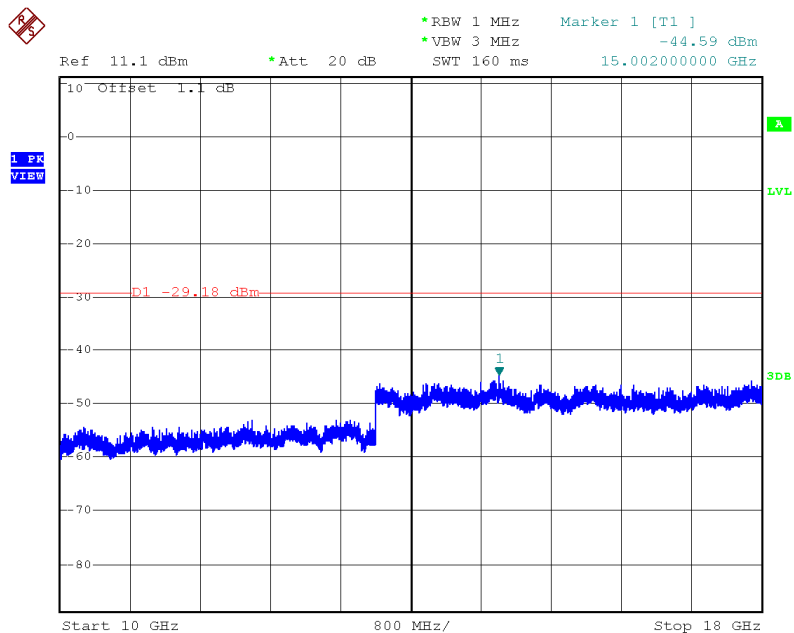


TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

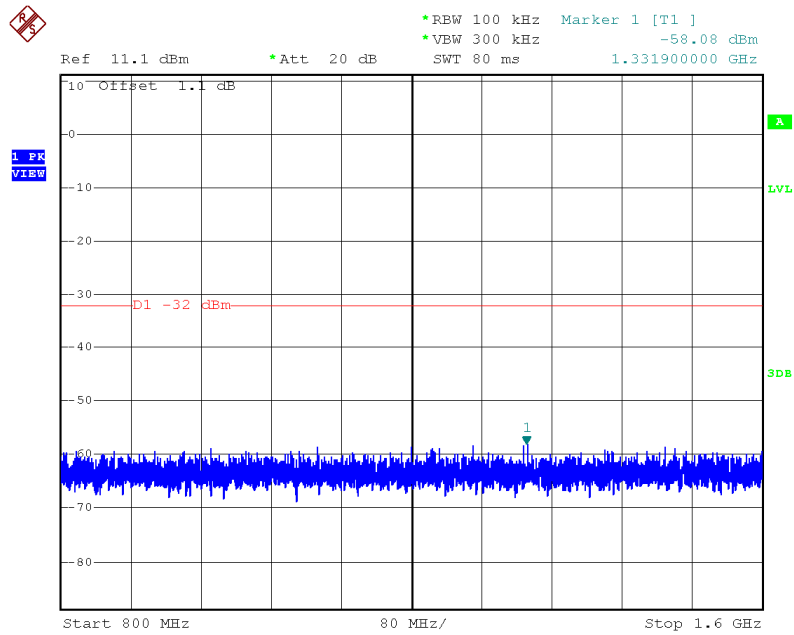
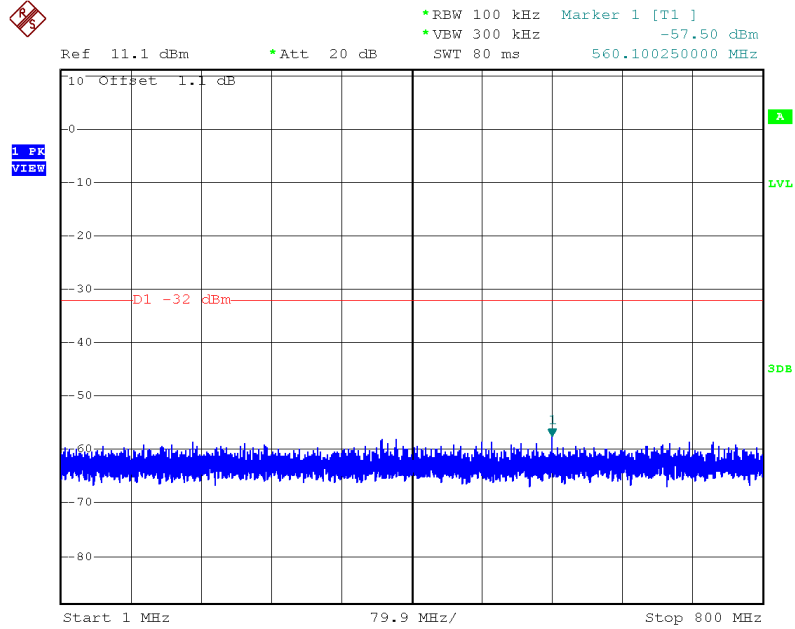


INTERTEK TESTING SERVICES



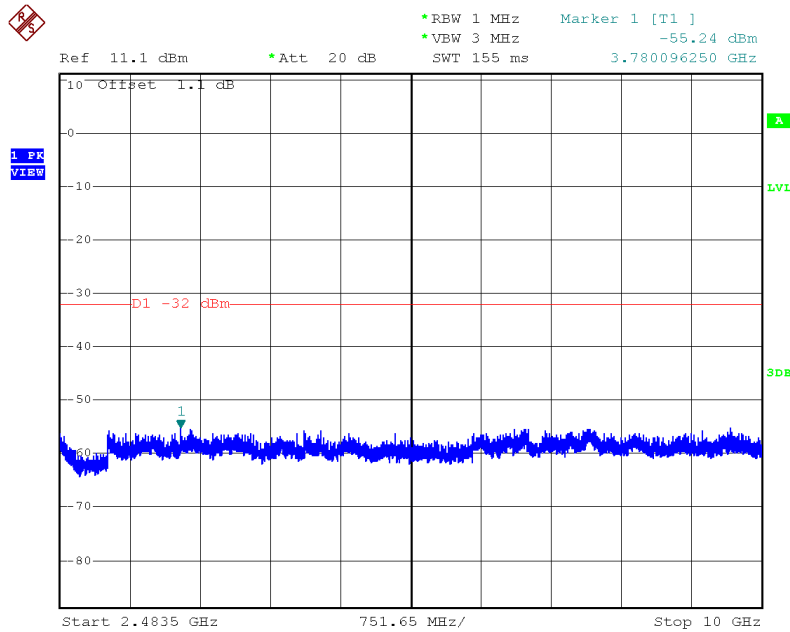
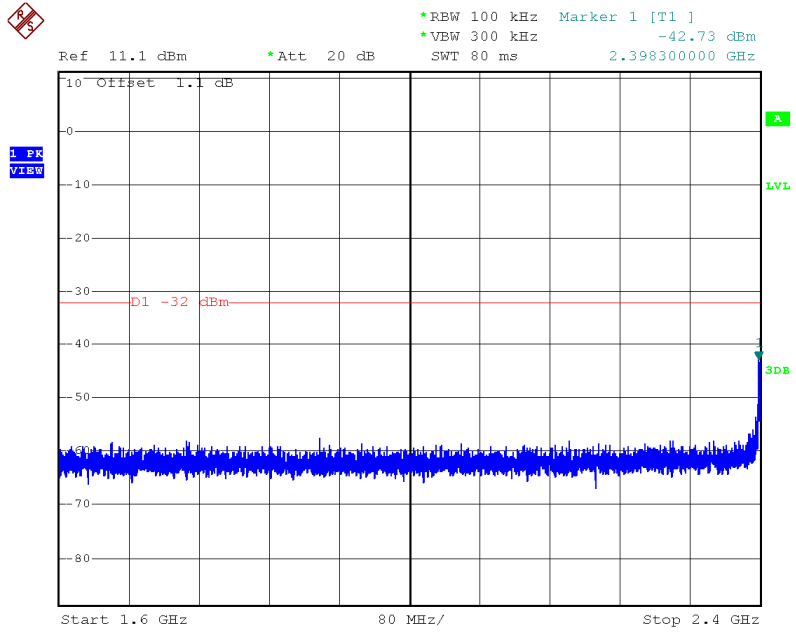
INTERTEK TESTING SERVICES

802.11 n-HT40 Channel 03 (2422MHz) Reference Level: -12.00dBm

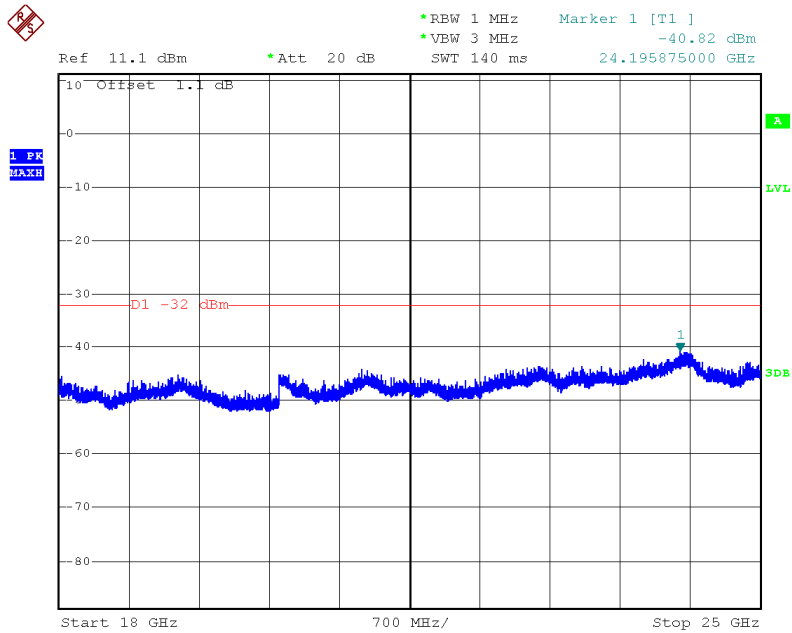
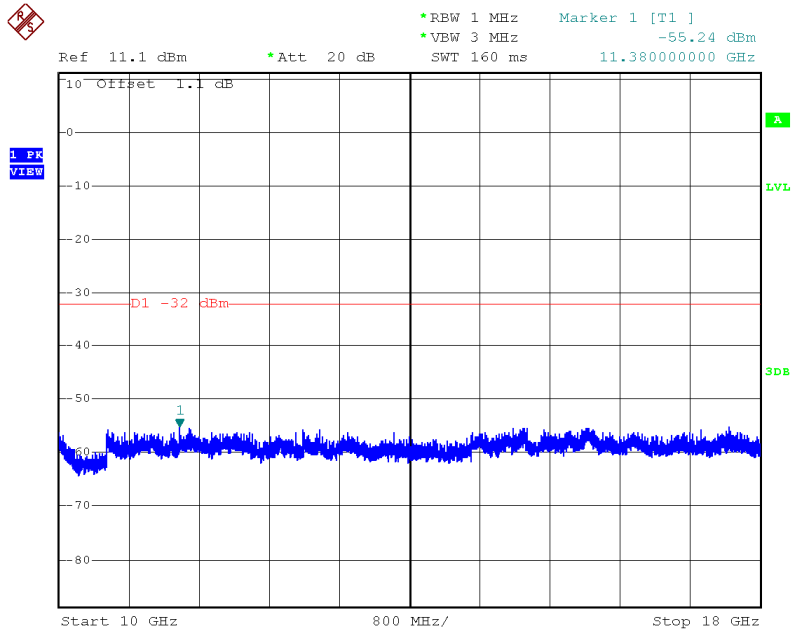


TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

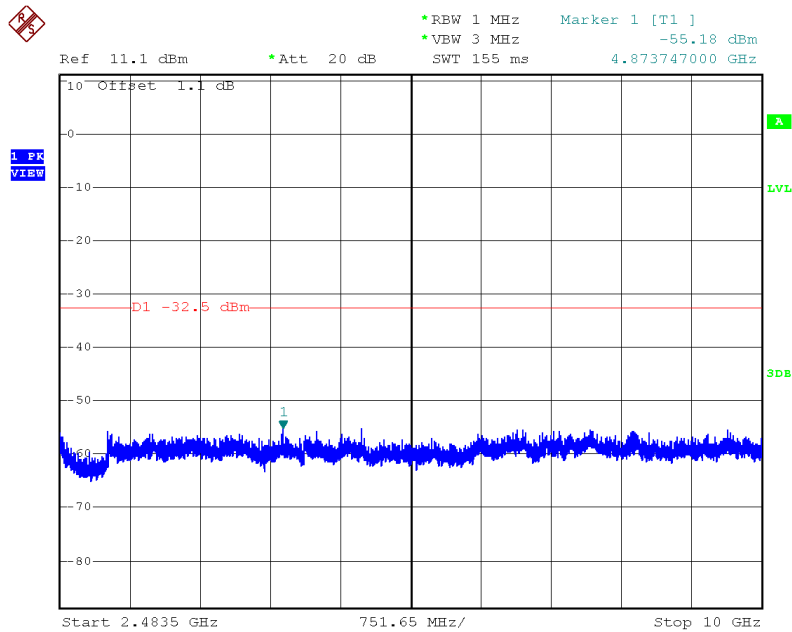
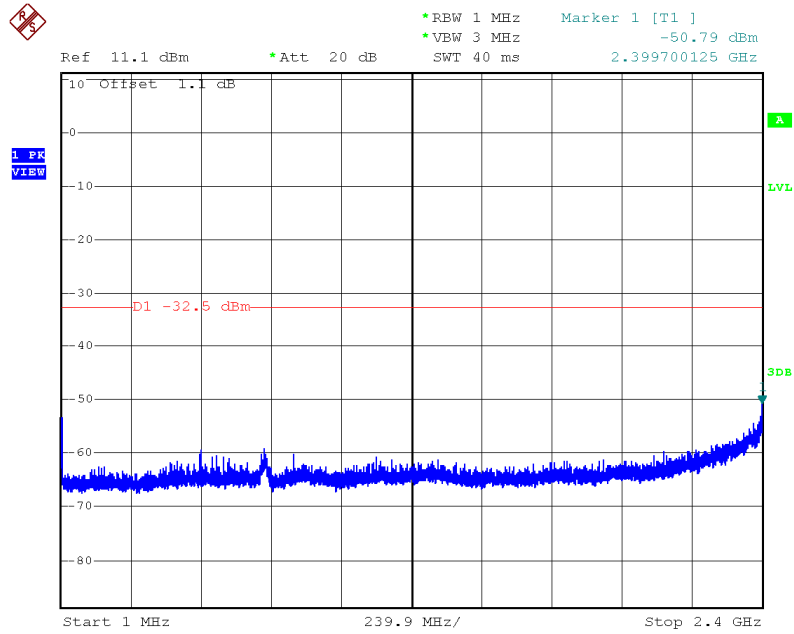


INTERTEK TESTING SERVICES



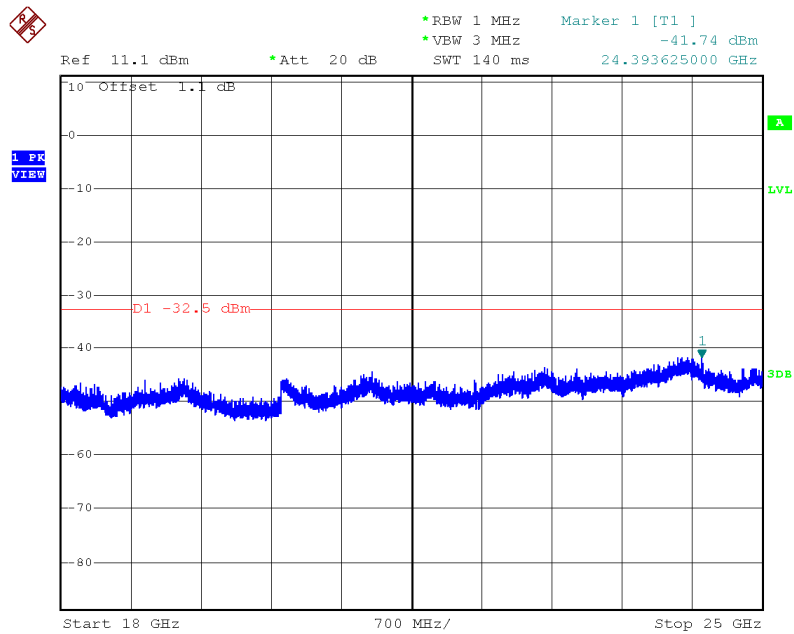
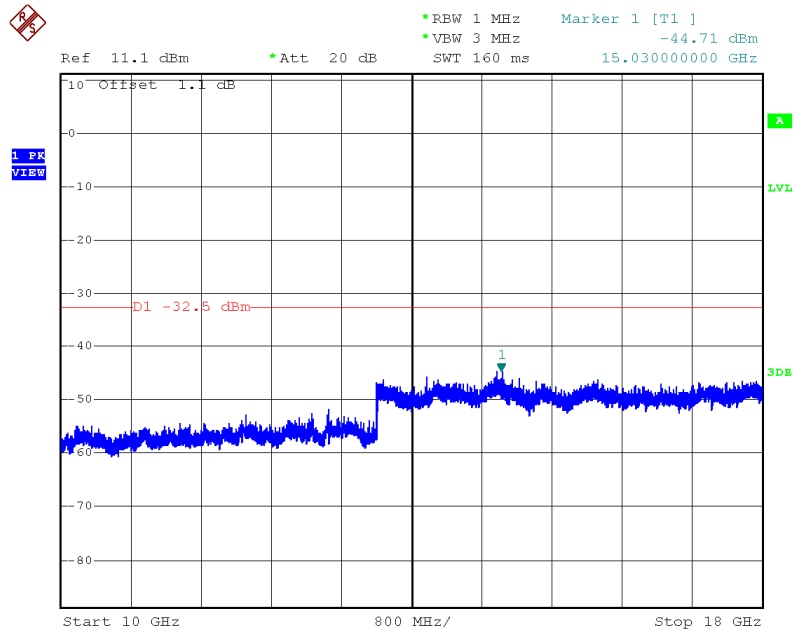
INTERTEK TESTING SERVICES

Channel 06 (2437MHz) Reference Level: -12.50dBm



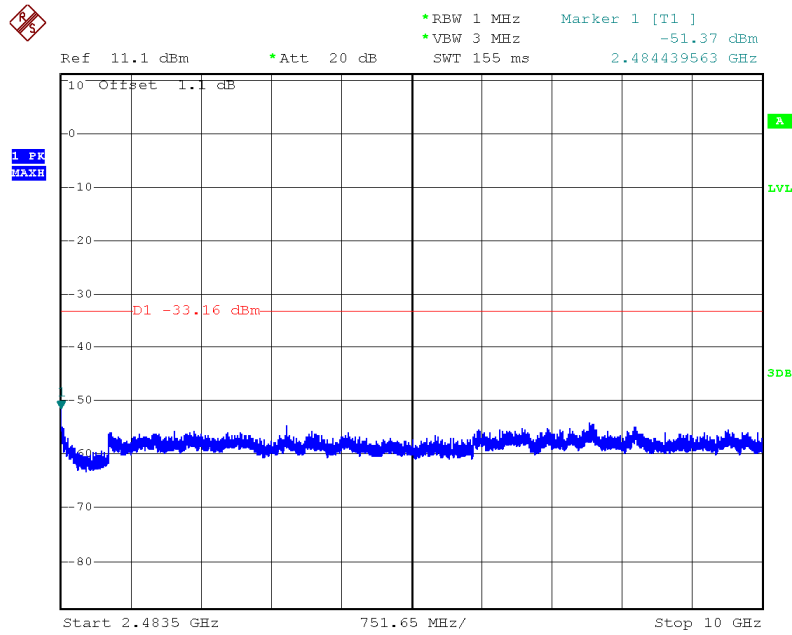
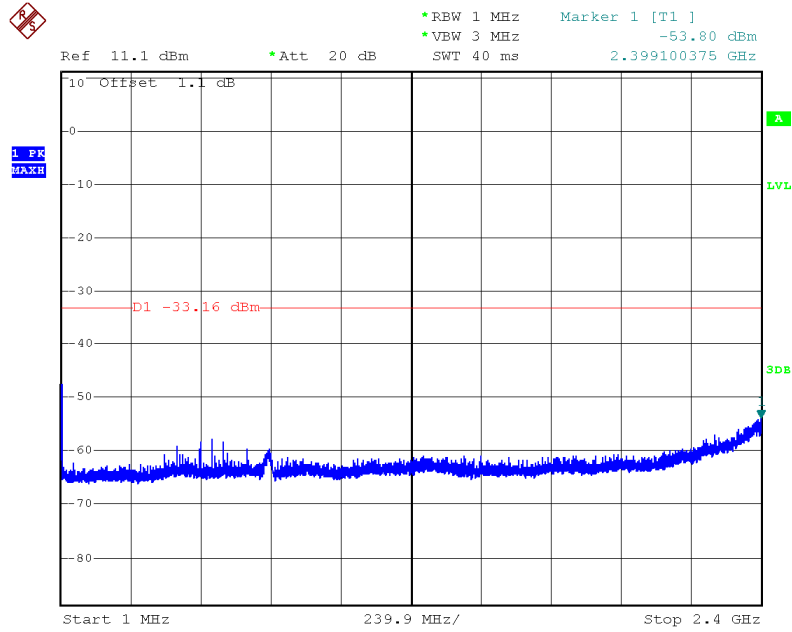
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES



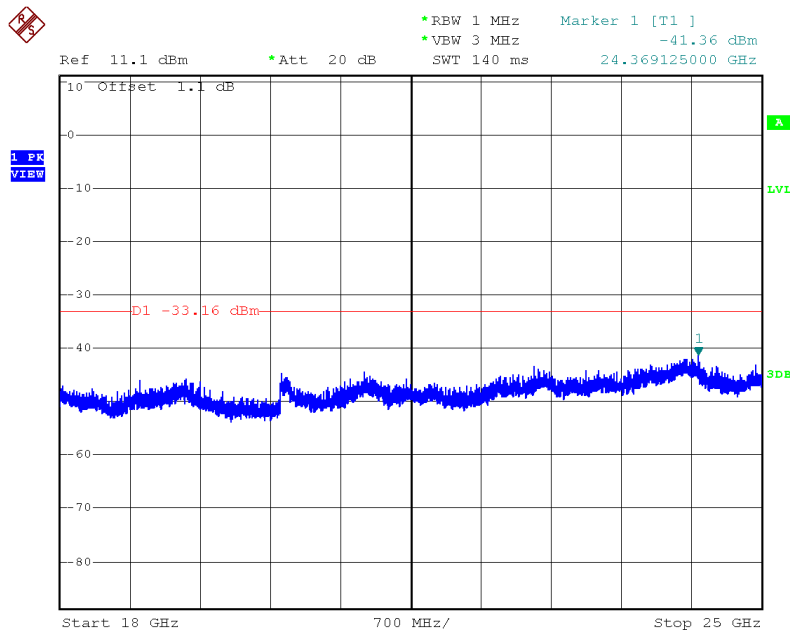
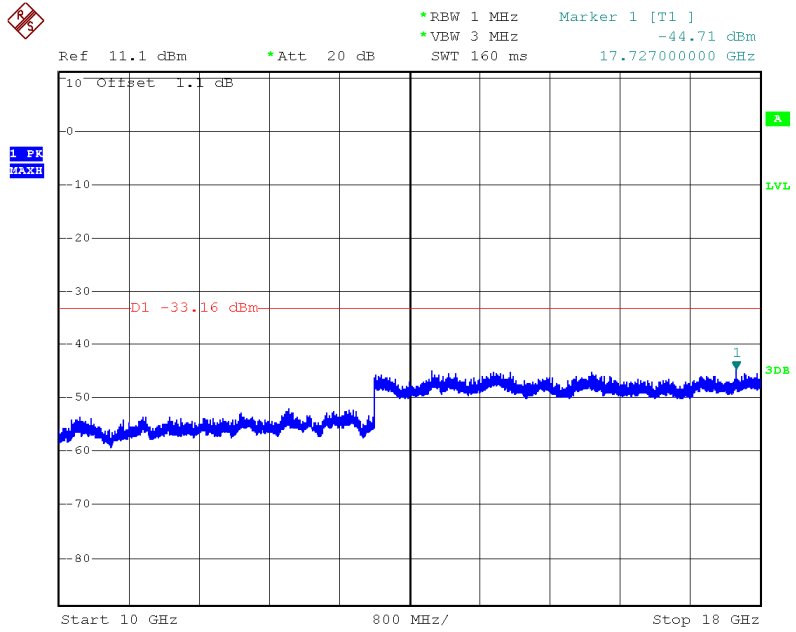
INTERTEK TESTING SERVICES

Channel 09 (2452MHz) Reference Level: -13.16dBm



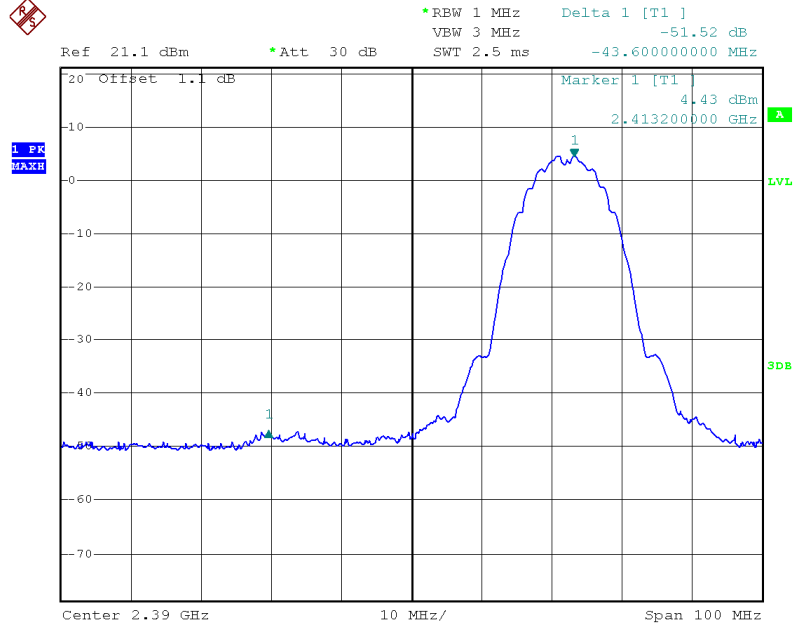
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

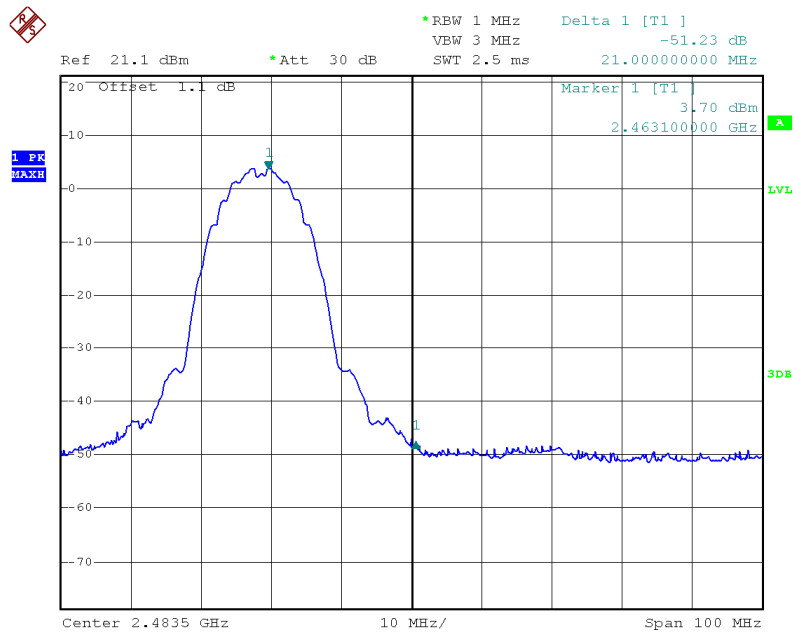


INTERTEK TESTING SERVICES

Band edge plot
802.11b
Channel 01 (2412MHz)



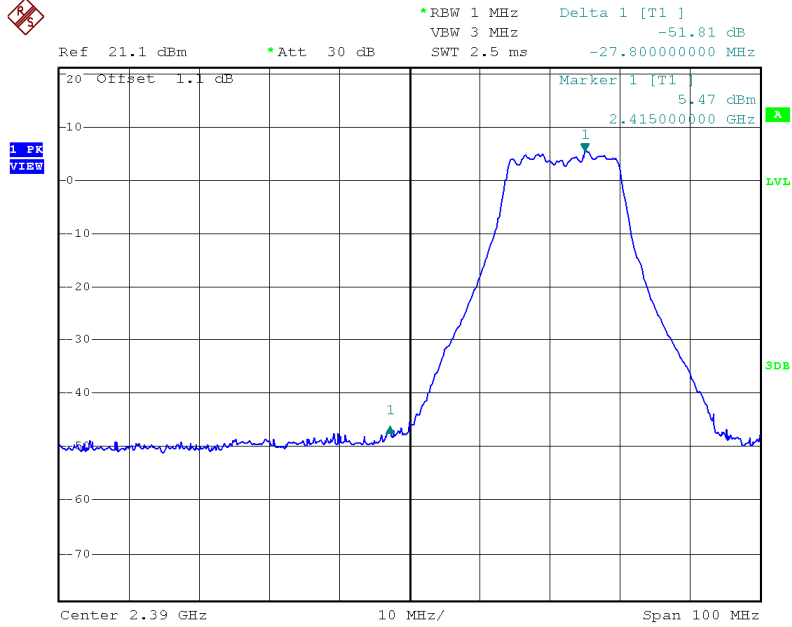
Channel 11 (2462MHz)



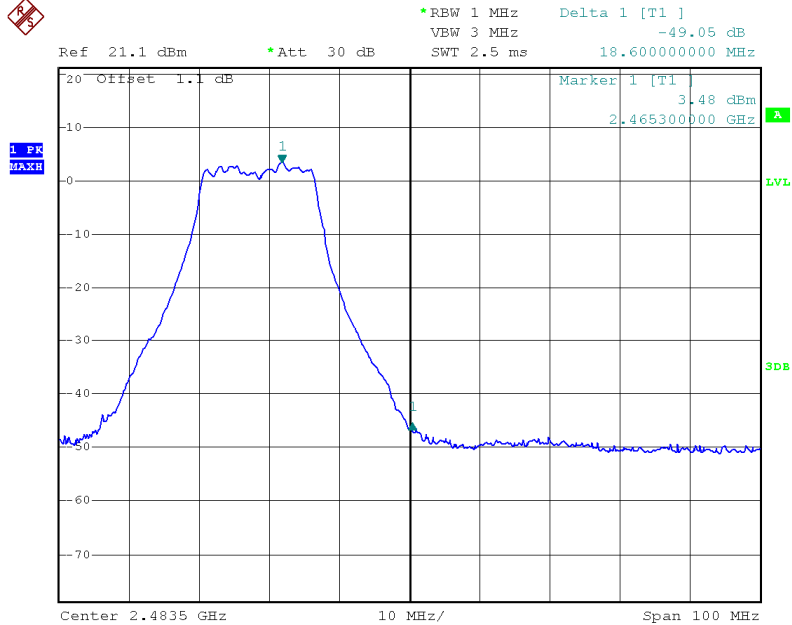
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Band edge plot
802.11g
Channel 01 (2412MHz)



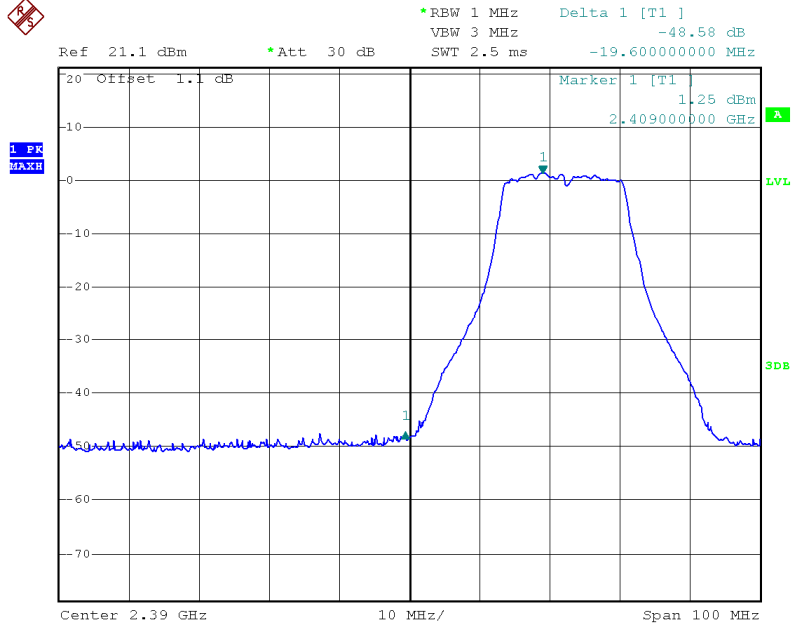
Channel 11 (2462MHz)



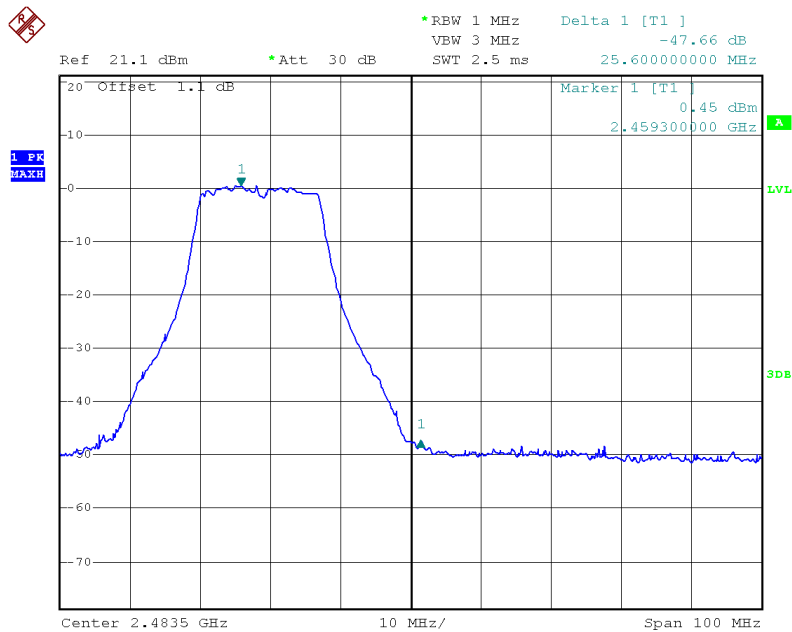
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Band edge plot
802.11n-HT20
Channel 01 (2412MHz)



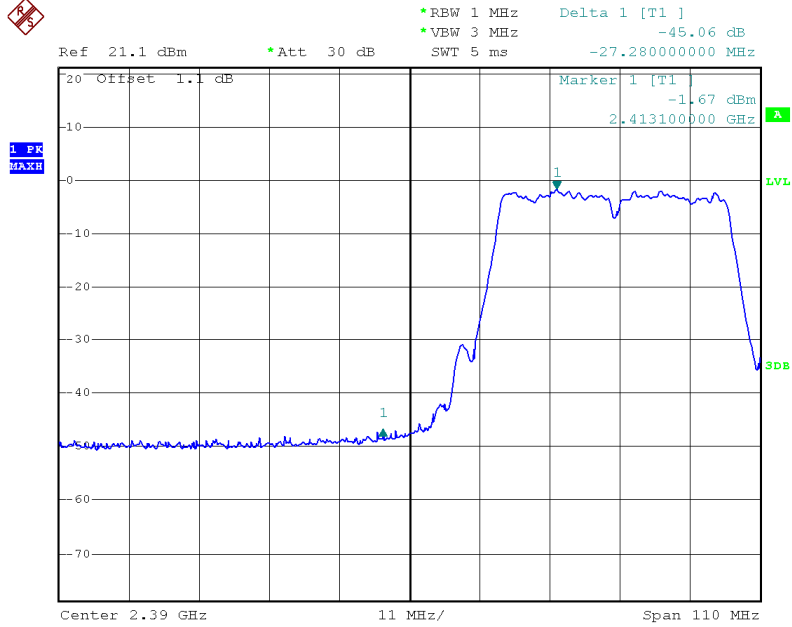
Channel 11 (2462MHz)



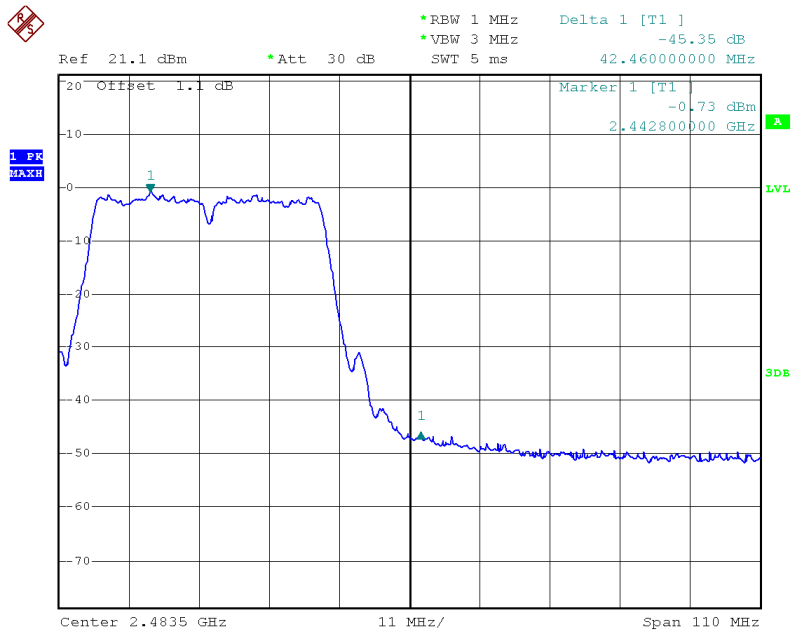
TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Band edge plot
802.11n-HT40
Channel 3 (2422MHz)



Channel 09 (2452MHz)



TRF no.: FCC 15C_TX_b
FCC ID: W8UGE65F6EA
Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

4.8 Radiated Spurious Emission

Worst Case Radiated Spurious Emission (802.11g) at 242.88MHz is passed by 1.3dB margin.

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

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Worst Case Operating Mode: Transmit (802.11g Channel 01)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Limit at 3m (dB μ V/m)	Margin (dB)
Horizontal	242.880	55.6	20.0	9.1	44.7	46.0	-1.3
Horizontal	298.620	37.5	20.0	20.8	38.3	46.0	-7.7
Horizontal	886.860	38.1	20.0	24.0	42.1	46.0	-3.9
Vertical	211.800	45.8	20.0	9.4	35.2	43.5	-8.3
Vertical	816.360	36.0	20.0	24.0	40.0	46.0	-6.0
Vertical	960.060	43.3	20.0	24.4	47.7	54.0	-6.3

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: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Mode: 802.11b (TX-Channel 01)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2412.000	111.4	36.7	28.5	103.2	-	-
Vertical	*4824.000	54.6	36.7	34.2	52.1	74.0	-21.9
Vertical	*2369.600	59.7	36.2	28.2	51.7	74.0	-22.3

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2412.000	108.7	36.7	28.5	100.5	-	-
Vertical	*4824.000	37.6	36.7	34.2	35.1	54.0	-18.9
Vertical	*2369.600	57.0	36.2	28.2	49.0	54.0	-5.0

NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.

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.

** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique per KDB Publication Number: 913591 and KDB 558074 in the restricted band 2310-2390MHz and only the worst data was reported.

TRF no.: FCC 15C_TX_b

FCC ID: W8UGE65F6EA

Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
 Model: GE65F6EA
 Mode: 802.11b (TX-Channel 06)

Date of Test: July 05, 2013

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	*4874.000	51.9	36.7	34.6	49.8	74.0	-24.2
Vertical	*7311.000	53.0	36.7	37.1	53.4	74.0	-20.6

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	*4874.000	36.9	36.7	34.6	34.8	54.0	-19.2
Vertical	*7311.000	38.8	36.7	37.1	39.2	54.0	-14.8

- NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.
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: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Mode: 802.11b (TX-Channel 11)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2462.000	107.1	36.7	28.5	98.9	-	-
Vertical	*4924.000	53.0	36.7	34.6	50.9	74.0	-23.1
Vertical	*7386.000	54.3	36.7	37.2	54.8	74.0	-19.2
Vertical	*2484.100	55.9	36.2	28.0	47.7	74.0	-26.3

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2462.000	102.4	36.7	28.5	94.2	-	-
Vertical	*4924.000	37.0	36.7	34.6	34.9	54.0	-19.1
Vertical	*7386.000	39.3	36.7	37.2	39.8	54.0	-14.2
Vertical	*2484.100	51.2	36.2	28.0	43.0	54.0	-11.0

NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.

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.

** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique per KDB Publication Number: 913591 and KDB 558074 in the restricted band 2483.5-2500MHz and only the worst data was reported.

TRF no.: FCC 15C_TX_b

FCC ID: W8UGE65F6EA

Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
 Model: GE65F6EA
 Mode: 802.11g (TX-Channel 01)

Date of Test: July 05, 2013

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	**2412.000	112.5	36.7	28.5	104.3	-	-
Vertical	*4824.000	52.0	36.7	34.2	49.5	74.0	-24.5
Vertical	2387.200	60.5	36.2	28.2	52.5	74.0	-21.5

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	**2412.000	102.7	36.7	28.5	94.5	-	-
Vertical	*4824.000	37.1	36.7	34.2	34.6	54.0	-19.4
Vertical	*2387.200	51.1	36.2	27.8	42.7	54.0	-11.3

- NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.
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.
- ** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique per KDB Publication Number: 913591 and KDB 558074 in the restricted band 2483.5-2500MHz and only the worst data was reported.

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
 Model: GE65F6EA
 Mode: 802.11g (TX-Channel 06)

Date of Test: July 05, 2013

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	*4874.000	51.5	36.7	34.6	49.4	74.0	-24.6
Vertical	*7311.000	53.3	36.7	37.1	53.7	74.0	-20.3

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	*4874.000	36.8	36.7	34.6	34.7	54.0	-19.3
Vertical	*7311.000	38.7	36.7	37.1	39.1	54.0	-14.9

- NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.
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: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Mode: 802.11g (TX-Channel 11)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2462.000	109.7	36.7	28.5	101.5	-	-
Vertical	*4924.000	51.3	36.7	34.6	49.2	74.0	-24.8
Vertical	*7386.000	53.0	36.7	37.2	53.5	74.0	-20.5
Vertical	*2483.900	60.7	36.2	28.0	52.5	74.0	-21.5

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2462.000	99.5	36.7	28.5	91.3	-	-
Vertical	*4924.000	36.8	36.7	34.6	34.7	54.0	-19.3
Vertical	*7386.000	39.1	36.7	37.2	39.6	54.0	-14.4
Vertical	*2483.900	50.5	36.2	28.0	42.3	54.0	-11.7

NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.

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.

** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique per KDB Publication Number: 913591 and KDB 558074 in the restricted band 2483.5-2500MHz and only the worst data was reported.

TRF no.: FCC 15C_TX_b

FCC ID: W8UGE65F6EA

Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Mode: 802.11 n-HT20 (TX-Channel 01)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2412.000	106.6	36.7	28.5	98.4	-	-
Vertical	*4824.000	52.4	36.7	34.2	49.9	74.0	-24.1
Vertical	*2389.400	58.2	36.2	27.8	49.8	74.0	-24.2

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2412.000	98.6	36.7	28.5	90.4	-	-
Vertical	*4824.000	36.7	36.7	34.2	34.2	54.0	-19.8
Vertical	*2389.400	50.2	36.2	27.8	41.8	54.0	-12.2

NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.

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.

** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique per KDB Publication Number: 913591 and KDB 558074 in the restricted band 2483.5-2500MHz and only the worst data was reported.

TRF no.: FCC 15C_TX_b

FCC ID: W8UGE65F6EA

Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Mode: 802.11 n-HT20 (TX-Channel 06)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	*4874.000	51.7	36.7	34.2	49.2	74.0	-24.8
Vertical	*7311.000	51.9	36.7	37.1	52.3	74.0	-21.7

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	*4874.000	36.7	36.7	34.2	34.2	54.0	-19.8
Vertical	*7311.000	38.5	36.7	37.1	38.9	54.0	-15.1

- NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.
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: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Mode: 802.11 n-HT20 (TX-Channel 11)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2462.000	106.9	36.7	28.5	98.7	-	-
Vertical	*4924.000	51.6	36.7	34.6	49.5	74.0	-24.5
Vertical	*7386.000	52.7	36.7	37.2	53.2	74.0	-20.8
Vertical	*2484.900	59.4	36.2	27.8	51.0	74.0	-23.0

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2462.000	97.5	36.7	28.5	89.3	-	-
Vertical	*4924.000	36.5	36.7	34.6	34.4	54.0	-19.6
Vertical	*7386.000	39.0	36.7	37.2	39.5	54.0	-14.5
Vertical	*2484.900	50.1	36.2	27.8	41.6	54.0	-12.4

NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.

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.

** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique per KDB Publication Number: 913591 and KDB 558074 in the restricted band 2483.5-2500MHz and only the worst data was reported.

TRF no.: FCC 15C_TX_b

FCC ID: W8UGE65F6EA

Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Mode: 802.11 n-HT40 (TX-Channel 03)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2422.000	106.5	36.7	28.5	98.3	-	-
Vertical	*4844.000	53.1	36.7	34.2	50.6	74.0	-23.4
Vertical	*2385.820	61.7	36.2	27.7	53.2	74.0	-20.8

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2422.000	93.9	36.7	28.5	85.7	-	-
Vertical	*4844.000	37.2	36.7	34.2	34.7	54.0	-19.3
Vertical	*2385.820	49.1	36.2	27.7	40.6	54.0	-13.4

NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.

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.

** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique per KDB Publication Number: 913591 and KDB 558074 in the restricted band 2483.5-2500MHz and only the worst data was reported.

TRF no.: FCC 15C_TX_b

FCC ID: W8UG65F6EA

Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
 Model: GE65F6EA
 Mode: 802.11 n-HT40 (TX-Channel 06)

Date of Test: July 05, 2013

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	*4874.000	52.3	36.7	34.2	49.8	74.0	-24.2
Vertical	*7311.000	52.7	36.7	37.1	53.1	74.0	-20.9

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	*4874.000	37.2	36.7	34.2	34.7	54.0	-19.3
Vertical	*7311.000	38.5	36.7	37.1	38.9	54.0	-15.1

- NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.
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: TTE Technology, Inc.

Date of Test: July 05, 2013

Model: GE65F6EA

Mode: 802.11 n-HT40 (TX-Channel 09)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Peak Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2452.000	105.5	36.7	28.5	97.3	-	-
Vertical	*4904.000	52.2	36.7	34.6	50.1	74.0	-23.9
Vertical	*7356.000	51.6	36.7	37.0	51.9	74.0	-22.1
Vertical	*2485.260	60.2	36.2	28.0	52.0	74.0	-22.0

Polarization	Frequency (MHz)	Reading (dB μ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB μ V/m)	Average Limit at 3m (dB μ V/m)	Margin (dB)
Vertical	**2452.000	94.8	36.7	28.5	86.6	-	-
Vertical	*4904.000	36.5	36.7	34.6	34.4	54.0	-19.6
Vertical	*7356.000	38.7	36.7	37.0	39.0	54.0	-15.0
Vertical	*2485.260	49.5	36.2	28.0	41.3	54.0	-12.7

NOTES: 1. Peak detector Data unless otherwise stated. Above 1000 MHz, RBW=1MHz, VBW=3MHz is used for Peak measurement, RBW=1MHz, VBW=10Hz is used for Average measurement.

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.

** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique per KDB Publication Number: 913591 and KDB 558074 in the restricted band 2483.5-2500MHz and only the worst data was reported.

TRF no.: FCC 15C_TX_b

FCC ID: W8UG65F6EA

Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

4.9 Conducted Emission

Worst Case Conducted Configuration
At

3.046 MHz

Judgement: Passed by 4.8 dB margin

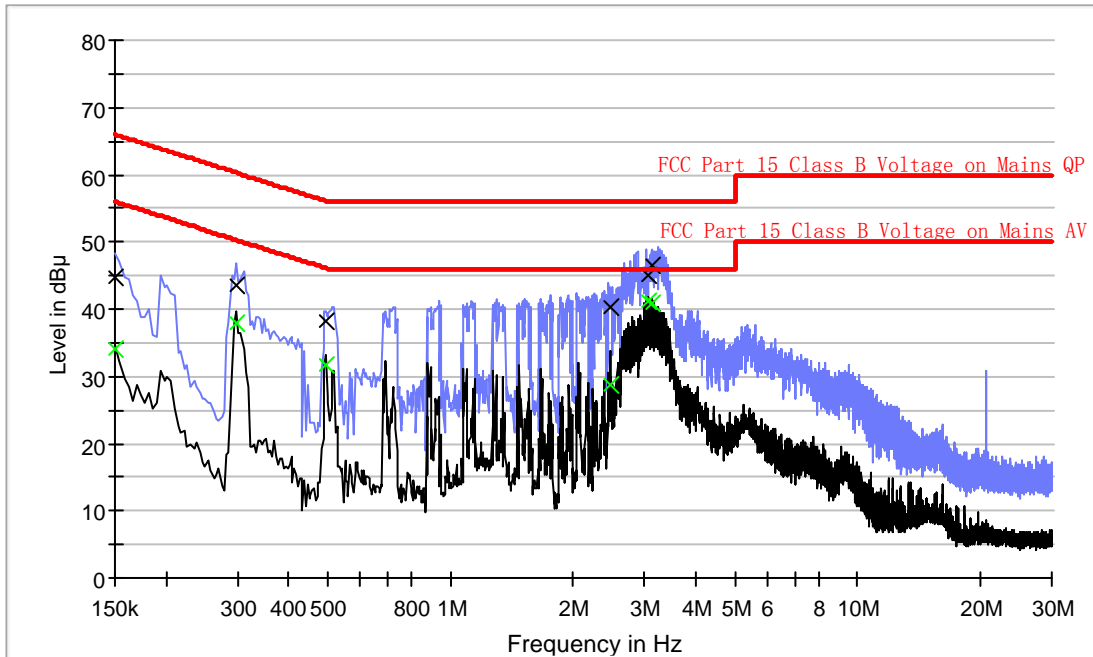
For electronic filing, the worst case conducted emission configuration photograph is saved with filename: conducted photos.pdf.

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
 Model: GE65F6EA
 Worst Case Operating Mode: WiFi link
 Line: Live

Date of Test: July 05, 2013

Conducted Emission Test - FCC



Result Table QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.150000	44.7	L1	9.7	21.3	66.0
0.298000	43.5	L1	9.6	16.8	60.3
0.494000	38.3	L1	9.6	17.8	56.1
2.474000	40.4	L1	9.7	15.6	56.0
3.046000	45.1	L1	9.7	10.9	56.0
3.138000	46.5	L1	9.7	9.5	56.0

Result Table AV

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.150000	34.0	L1	9.7	22.0	56.0
0.298000	38.0	L1	9.6	12.3	50.3
0.494000	31.8	L1	9.6	14.3	46.1
2.474000	28.7	L1	9.7	17.3	46.0
3.046000	41.3	L1	9.7	4.8	46.0
3.138000	41.0	L1	9.7	5.0	46.0

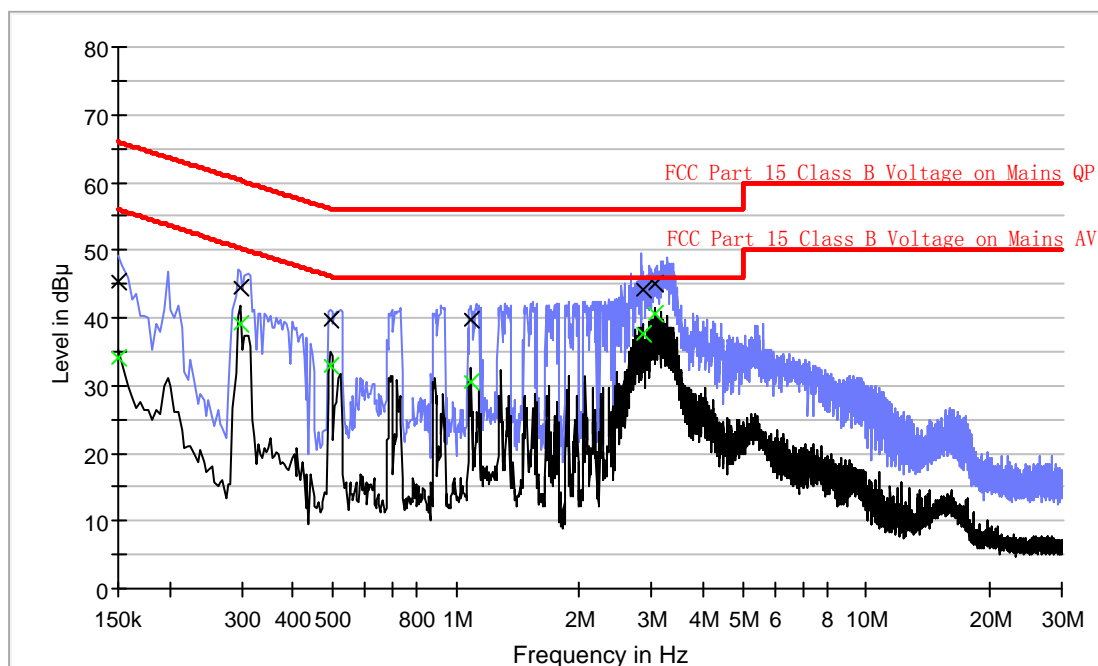
TRF no.: FCC 15C_TX_b
 FCC ID: W8UGE65F6EA
 Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
 Model: GE65F6EA
 Worst Case Operating Mode: WiFi link
 Line: Neutral

Date of Test: July 05, 2013

Conducted Emission Test - FCC



Result Table QP

Frequency (MHz)	QuasiPeak (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.150000	45.5	N	9.7	20.5	66.0
0.297000	44.4	N	9.7	15.9	60.3
0.494000	39.6	N	9.6	16.5	56.1
1.090000	39.6	N	9.9	16.4	56.0
2.846000	44.2	N	9.7	11.8	56.0
3.062000	44.9	N	9.7	11.1	56.0

Result Table AV

Frequency (MHz)	Average (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.150000	34.0	N	9.7	22.0	56.0
0.297000	39.2	N	9.7	11.1	50.3
0.494000	33.0	N	9.6	13.1	46.1
1.090000	30.5	N	9.9	15.5	46.0
2.846000	37.5	N	9.7	8.5	46.0
3.062000	40.7	N	9.7	5.3	46.0

TRF no.: FCC 15C_TX_b
 FCC ID: W8UGE65F6EA
 Report No.: 130619024SZN-001

INTERTEK TESTING SERVICES

Applicant: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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: TTE Technology, Inc.
Model: GE65F6EA

Date of Test: July 05, 2013

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.

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.

INTERTEK TESTING SERVICES

EXHIBIT 6

PRODUCT LABELLING

INTERTEK TESTING SERVICES

6.0 Product Labeling

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

INTERTEK TESTING SERVICES

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.

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

INTERTEK TESTING SERVICES

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.

INTERTEK TESTING SERVICES

EXHIBIT 11 TEST EQUIPMENT LIST

INTERTEK TESTING SERVICES

11.0 Test Equipment List

Shenzhen Intertek equipment list

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	12-Mar-13	12-Mar-14
SZ182-02	RF Power Meter	Anritsu	ML2496A	1302005	28-Feb-13	28-Feb-14
SZ182-02-01	Pulse Power Sensor	Anritsu	MA2411B	1207429	28-Feb-13	28-Feb-14
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02	--	21-May-13	21-May-14
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	05-Nov-12	05-Nov-13
SZ187-01	Two-Line V-Network	R&S	ENV216	100072	05-Nov-12	05-Nov-13
SZ187-02	Two-Line V-Network	R&S	ENV216	100073	05-Nov-12	05-Nov-13
SZ188-03	Shielding Room	ETS	RFD-100	4100	10-Sep-12	10-Sep-13

Shenzhen Centre Testing International Corporation equipment list.

Equipment	Manufacturer	Model	Serial No.	Cal. Date	Due Date
10M Chamber & Accessory Equipment	Rainford	--	--	31 Aug 2012	30 Aug 2015
Spectrum Analyzer	R&S	FSP40	100416	07 Jul 2012	06 Jul 2013
Receiver	R&S	ESCI	100435	19 Jul 2012	18 Jul 2013
TRILOG Broadband Antenna	schwarzbeck	VULB9136	484	24 Jul 2012	23 Jul 2013
EMI test receiver	R&S	ESIB40	2023282915	24 Jul 2012	24 Jul 2013
Horn Antenna	ETS-LINGREN	3117	00044562	07 Jul 2012	06 Jul 2013
Double ridge horn antenna	A.H.SYSTEMS	SAS-574	6042	19 Jul 2012	18 Jul 2013
Microwave Preamplifier	Agilent	11909A	186871	07 Jul 2012	06 Jul 2013
Microwave Preamplifier	HP	HP 8447F	2805A03379	07 Jul 2012	06 Jul 2013
Microwave Preamplifier	CD	PAP-1G18G	2001	07 May 2013	07 May 2014
Active Loop Antenna	Electro-Metrics	EM-6876	247	16 April 2013	16 April 2014