

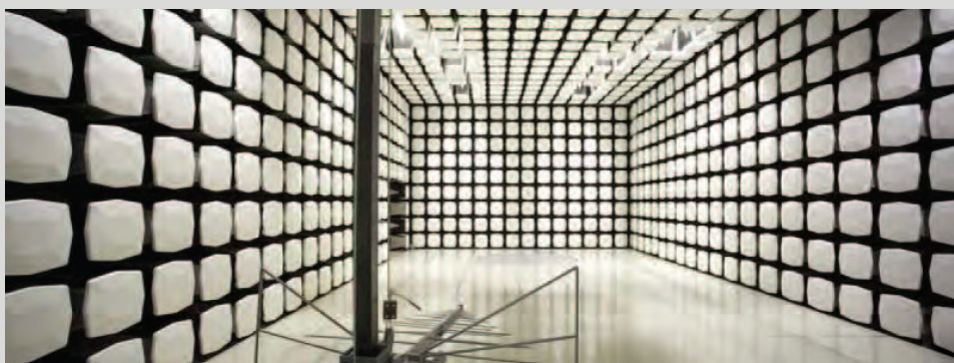


UTC Fire & Security Americas Corporation, Inc.

TRAC-Lid BT

FCC 15.247:2012

Report #: SUPR0095



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

CERTIFICATE OF TEST

Last Date of Test: August 31, 2012
UTC Fire & Security Americas Corporation, Inc.
Model: TRAC-Lid BT

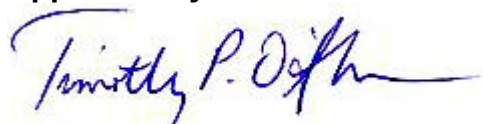
Emissions

Test Description	Specification	Test Method	Pass/Fail
Channel Spacing	FCC 15.247:2012	ANSI C63.10:2009	Pass
Dwell Time	FCC 15.247:2012	ANSI C63.10:2009	Pass
Duty Cycle	FCC 15.247:2012	ANSI C63.10:2009	Pass
Number of Hopping Frequencies	FCC 15.247:2012	ANSI C63.10:2009	Pass
Occupied Bandwidth	FCC 15.247:2012	ANSI C63.10:2009	Pass
Output Power	FCC 15.247:2012	ANSI C63.10:2009	Pass
Band Edge Compliance	FCC 15.247:2012	ANSI C63.10:2009	Pass
Spurious Conducted Emissions	FCC 15.247:2012	ANSI C63.10:2009	Pass
Spurious Radiated Emissions	FCC 15.247:2012	ANSI C63.10:2009	Pass

Deviations From Test Standards

None

Approved By:



Tim O'Shea, Operations Manager



NVLAP Lab Code: 200676-0

Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
41 Tesla Ave.
Irvine, CA 92618

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834B-1).

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025. The scope includes radio, ITE, and medical standards from around the world. See: <http://www.nwemc.com/accreditations/>

Canada

IC - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

European Union

European Commission – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

KCC / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Hong Kong

OFTA – Recognized by OFTA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

Russia

GOST – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) for each test is on each data sheet. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-1 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	4.00	-4.00
AC Powerline Conducted Emissions (dB)	2.70	-2.70

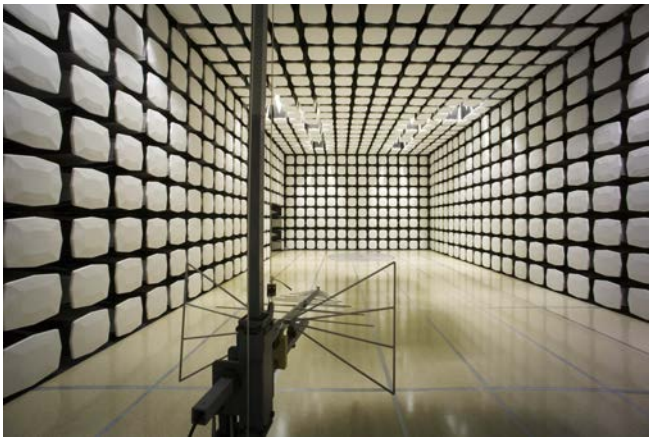


Locations

Revision 8/3/12



Oregon Labs EV01-EV12 22975 NW Evergreen Pkwy, #400 Hillsboro, OR 97124 (503) 844-4066	California Labs OC01-OC13 41 Tesla Irvine, CA 92618 (949) 861-8918	New York Labs WA01-WA04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Minnesota Labs MN01-MN08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	Washington Labs SU01-SU07 14128 339 th Ave. SE Sultan, WA 98294 (360) 793-8675
VCCI				
A-0108	A-0029		A-0109	A-0110
Industry Canada				
2834D-1, 2834D-2	2834B-1, 2834B-2, 2834B-3		2834E-1	2834C-1





PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	UTC Fire & Security Americas Corporation, Inc.
Address:	4001 Fairview Industrial Drive SE
City, State, Zip:	Salem, OR 97302-0167
Test Requested By:	Adam Purdue
Model:	TRAC-Lid BT
First Date of Test:	August 31, 2012
Last Date of Test:	August 31, 2012
Receipt Date of Samples:	August 31, 2012
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
Bluetooth radio module with 1 antenna.
Clocks and Oscillators of the EUT:
None Provided
Testing Objective:
To demonstrate compliance to FCC 15.247 requirements.

Configuration SUPR0095- 1

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
TRAC-Lid Bluetooth	UTC Fire & Security Americas Corporation, Inc.	Tx Low Channel Unit	None
TRAC-Lid Bluetooth	UTC Fire & Security Americas Corporation, Inc.	Tx Mid Channel Unit	None
TRAC-Lid Bluetooth	UTC Fire & Security Americas Corporation, Inc.	Tx High Channel Unit	None

Configuration SUPR0095- 2

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
TRAC-Lid Bluetooth Board	Amped RF Wireless Technology	PCB60031	None

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Host Laptop	Dell Corporation	Latitude D620	NR139

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
USB Cable	Yes	1.0m	No	TRAC-Lid Bluetooth Board	Host Laptop
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	8/31/2012	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	8/31/2012	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	8/31/2012	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	8/31/2012	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	8/31/2012	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	8/31/2012	Channel Spacing	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	8/31/2012	Number of Hopping Frequencies	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
8	8/31/2012	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
9	8/31/2012	Dwell Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Channel Spacing

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12
18 GHz DC Block, SMA	Pasternack	PE8210	AME	10/6/2011	13
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12

TEST DESCRIPTION

The channel carrier frequencies in the 2400-2483.5MHz band must be separated by 25 kHz or the 20dB bandwidth of the hopping channel, whichever is greater. Or, if the output power is less than 125 mW, the channel separation can be 25 kHz or 2/3 of the 20dB bandwidth. The EUT was operated in pseudorandom hopping mode. The spectrum was scanned across two adjacent peaks. The separation between the peaks of these channels was measured.



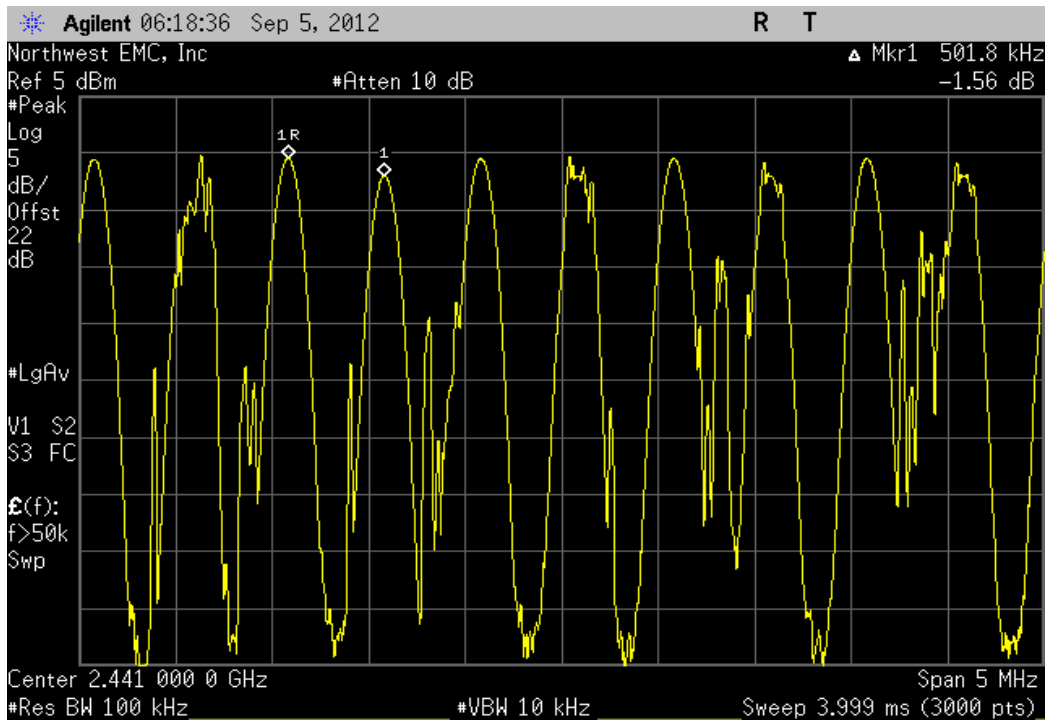
Channel Spacing

XMit 2012.08.06
PsaTx 2012.09.04

EUT: TRAC-Lid BT		Work Order: SUPR0095	
Serial Number: None		Date: 08/31/12	
Customer: UTC Fire & Security Americas Corporation, Inc.		Temperature: 24.84°C	
Attendees: None		Humidity: 53%	
Project: None		Barometric Pres.: 1014	
Tested by: Jaemi Suh		Power: Battery	
		Job Site: OC10	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2012		ANSI C63.10:2009	
COMMENTS			
DH5 Type Packets with Payload Size of 1021. Section 2.2 TX Test.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
GFSK, DH5			Result
Mid Channel, 2441 MHz		0.5 MHz	N/A

GFSK, DH5, Mid Channel, 2441 MHz

Value	Limit	Result
0.5 MHz		N/A



Dwell Time

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12
18 GHz DC Block, SMA	Pasternack	PE8210	AME	10/6/2011	13
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The average dwell time per hopping channel was measured at one hopping channel in the middle of the authorized band. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The hopping function of the EUT was enabled.

The dwell time limit is based on the Number of Hopping Channels * 400 mS. For Bluetooth this would be 79 Channels * 400mS = 31.6 Sec.

On Time During 31.6 Sec = Pulse Width * Average Number of Pulses * Scale Factor

Average Number of Pulses is based on 4 samples.

Scale Factor = 31.6 Sec / Screen Capture Sweep Time = 31.6 Sec / 6.32 Sec = 5

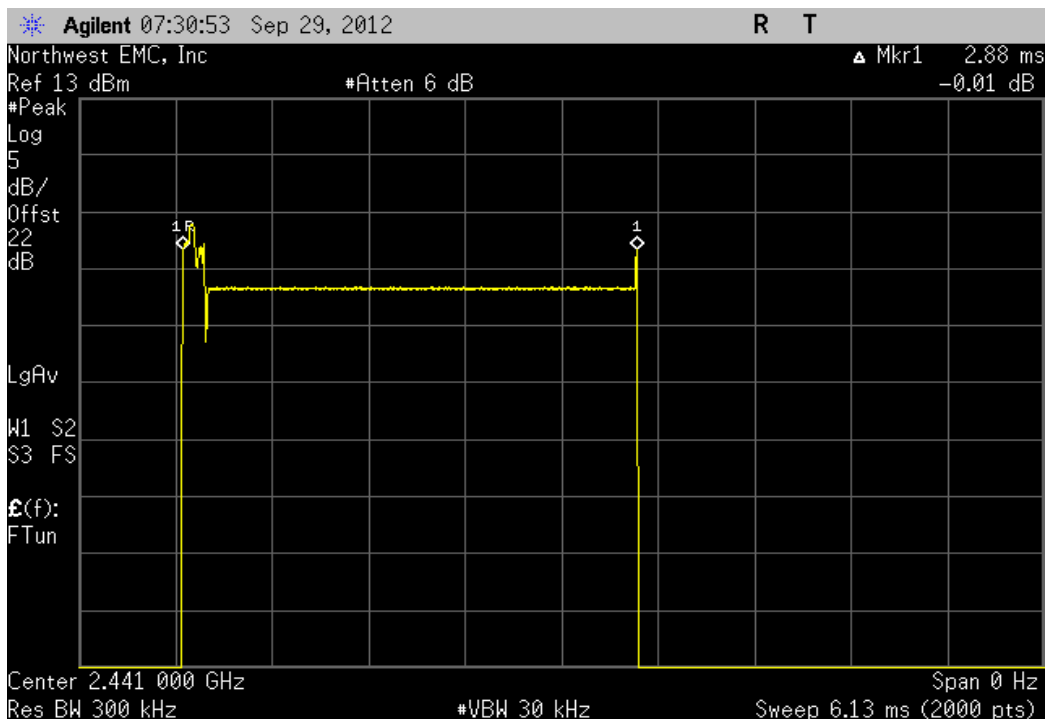


Dwell Time

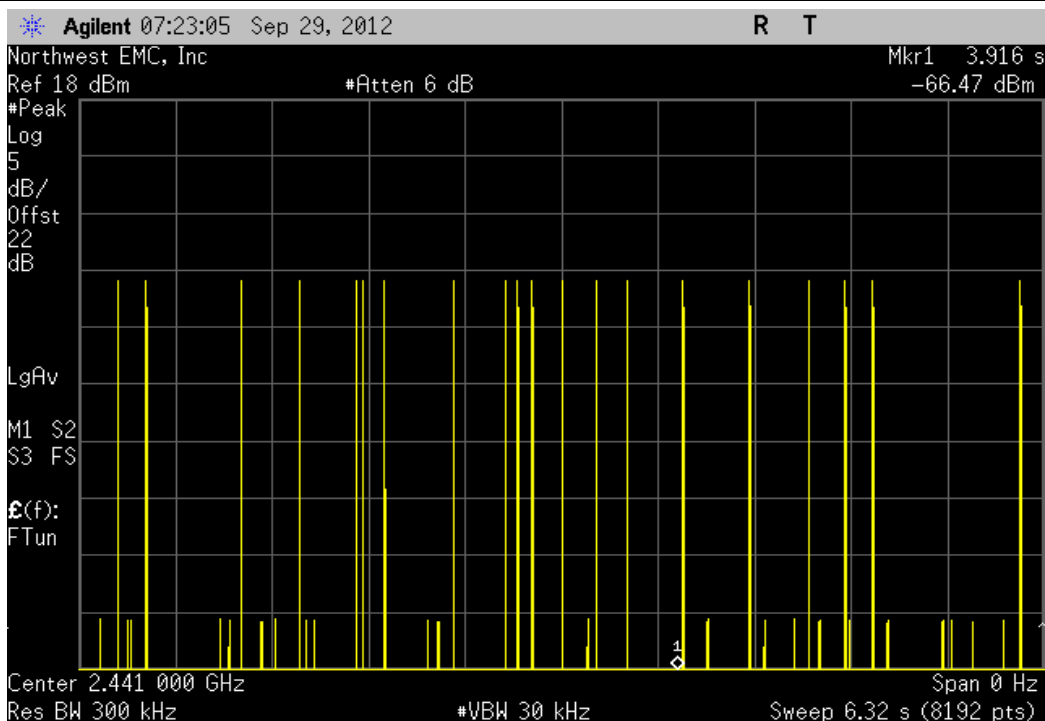
XMit 2012.08.06
PsaTx 2012.09.04

EUT: TRAC-Lid BT		Work Order: SUPR0095	
Serial Number: None		Date: 08/31/12	
Customer: UTC Fire & Security Americas Corporation, Inc.		Temperature: 24.84°C	
Attendees: None		Humidity: 53%	
Project: None		Barometric Pres.: 1014	
Tested by: Jaemi Suh		Power: Battery	
		Job Site: OC10	
TEST SPECIFICATIONS			
FCC 15.247:2012		Test Method	
		ANSI C63.10:2009	
COMMENTS			
DH5 Type Packets with Payload Size of 1021. Section 2.2 TX Test.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Pulse Width (mS)	Number of Pulses
		Average No. of Pulses	Scale Factor
		On Time (mS) During 31.6 S	Limit (mS)
			Result
GFSK, DH5			
Mid Channel, 2441 MHz		2.88	N/A
Mid Channel, 2441 MHz		N/A	20
Mid Channel, 2441 MHz		N/A	22
Mid Channel, 2441 MHz		N/A	17
Mid Channel, 2441 MHz		N/A	16
Mid Channel, 2441 MHz		2.88	N/A
			19
			5
			273.6
			400
			Pass

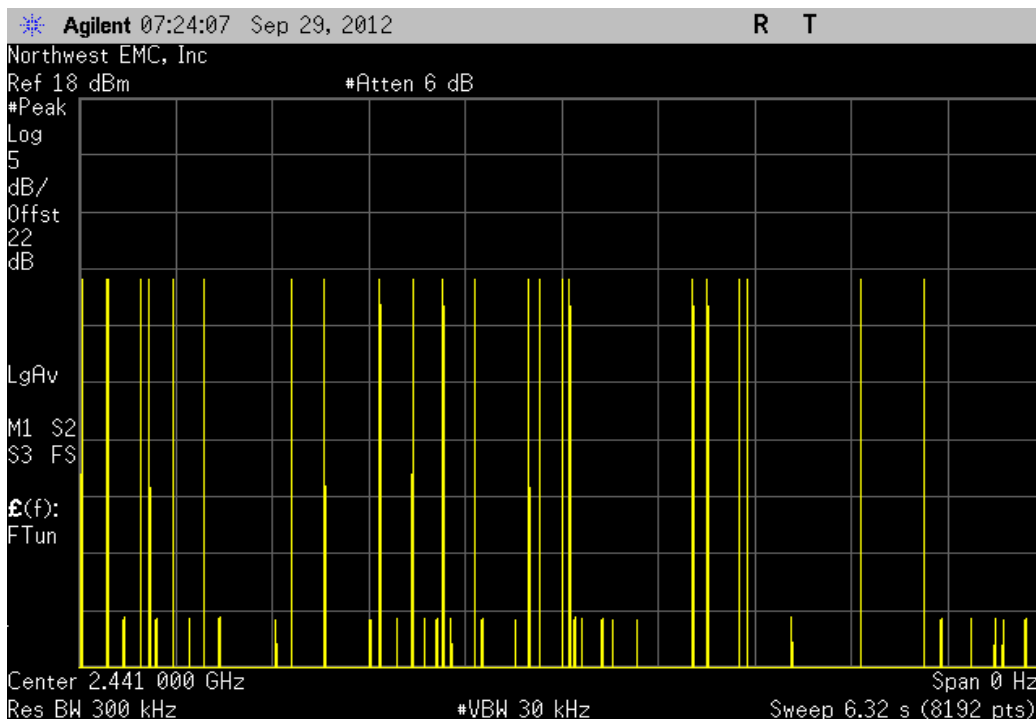
GFSK, DH5, Mid Channel, 2441 MHz						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Result
2.88	N/A	N/A	N/A	N/A	N/A	N/A



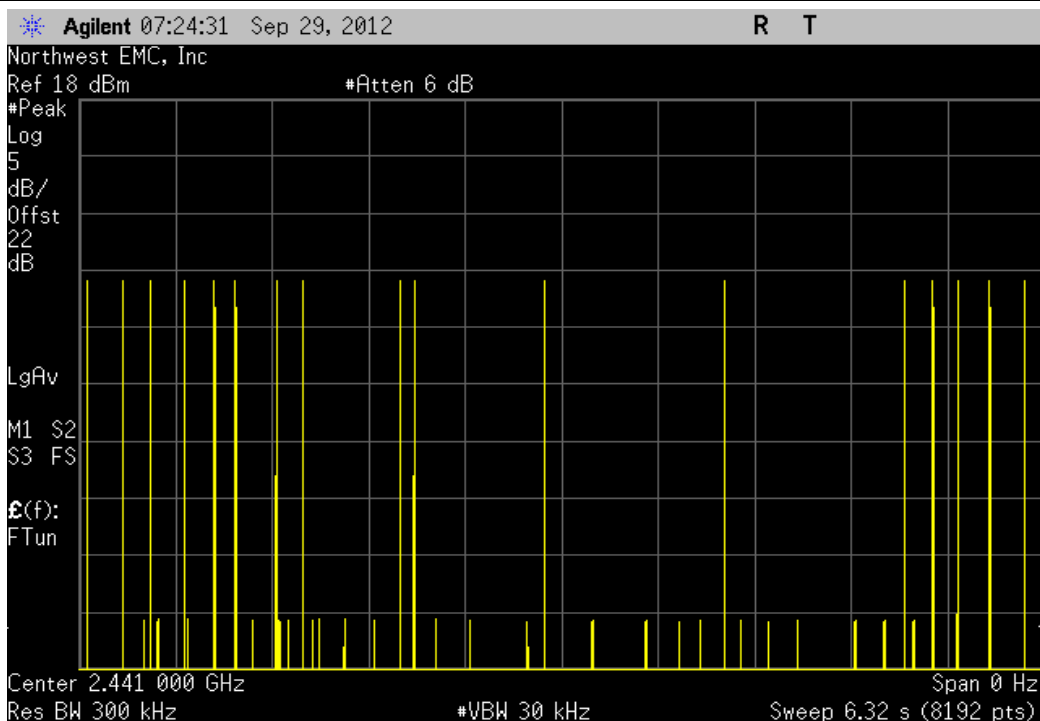
GFSK, DH5, Mid Channel, 2441 MHz						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Result
N/A	20	N/A	N/A	N/A	N/A	N/A



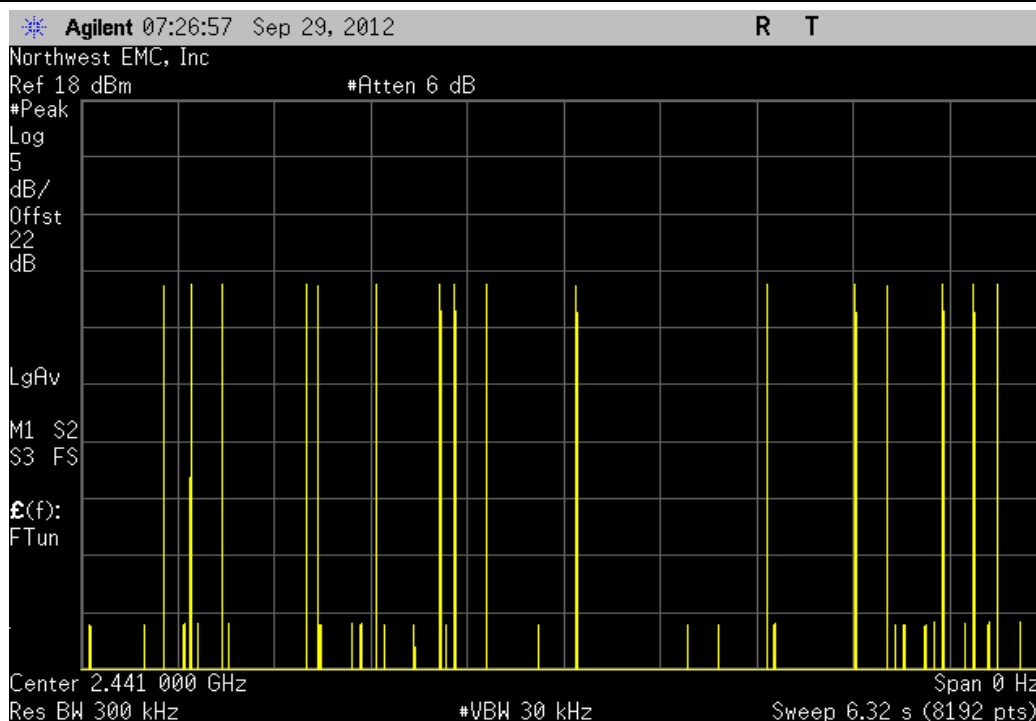
GFSK, DH5, Mid Channel, 2441 MHz						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Result
N/A	22	N/A	N/A	N/A	N/A	N/A



GFSK, DH5, Mid Channel, 2441 MHz						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Result
N/A	17	N/A	N/A	N/A	N/A	N/A



GFSK, DH5, Mid Channel, 2441 MHz						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Result
N/A	16	N/A	N/A	N/A	N/A	N/A



GFSK, DH5, Mid Channel, 2441 MHz						
Pulse Width (mS)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (mS) During 31.6 S	Limit (mS)	Result
2.696	N/A	19	5	23.0025	400	Pass

Calculation Only

No Screen Capture Required

Duty Cycle

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12
18 GHz DC Block, SMA	Pasternack	PE8210	AME	10/6/2011	13
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The Duty Cycle (x) were measured for each of the EUT operating modes. The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating was used during some of the other tests in this report to only measure during the burst duration.

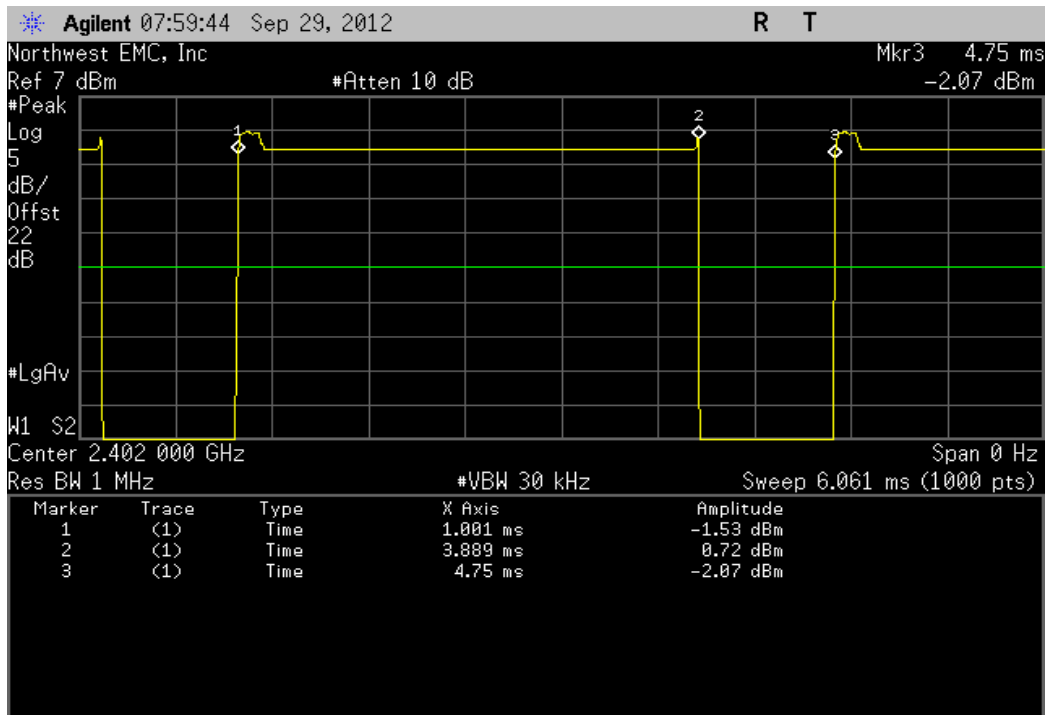


Duty Cycle

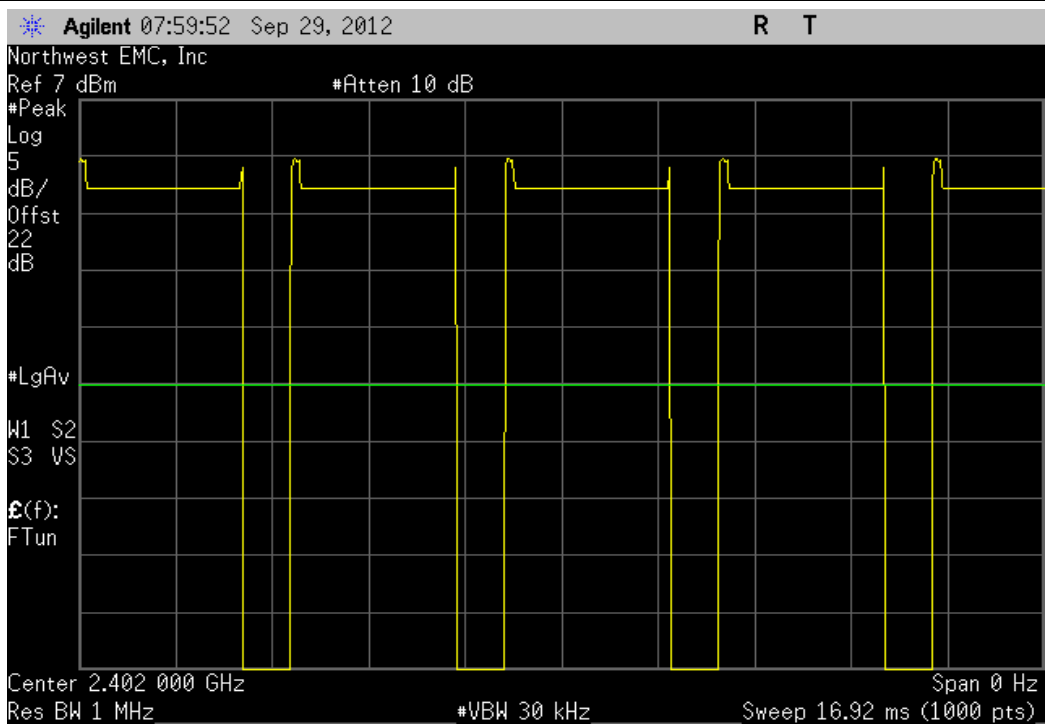
XMit 2012.09.20
PsaTx 2012.09.04

EUT: TRAC-Lid BT		Work Order: SUPR0095				
Serial Number: None		Date: 08/31/12				
Customer: UTC Fire & Security Americas Corporation, Inc.		Temperature: 24.84°C				
Attendees: None		Humidity: 53%				
Project: None		Barometric Pres.: 1014				
Tested by: Jaemi Suh		Power: Battery				
		Job Site: OC10				
TEST SPECIFICATIONS						
FCC 15.247:2012		Test Method				
		ANSI C63.10:2009				
COMMENTS						
DH5 Type Packets with Payload Size of 1021. Section 2.2 TX Test.						
DEVIATIONS FROM TEST STANDARD						
Configuration #	2	Signature 				
Channel	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
Low	2.888 mS	3.749 mS	1	77	N/A	N/A
Low	N/A	N/A	5	N/A	N/A	N/A
Mid	2.888 mS	3.749 mS	1	77	N/A	N/A
Mid	N/A	N/A	5	N/A	N/A	N/A
High	2.894 mS	3.749 mS	1	77.2	N/A	N/A
High	N/A	N/A	5	N/A	N/A	N/A

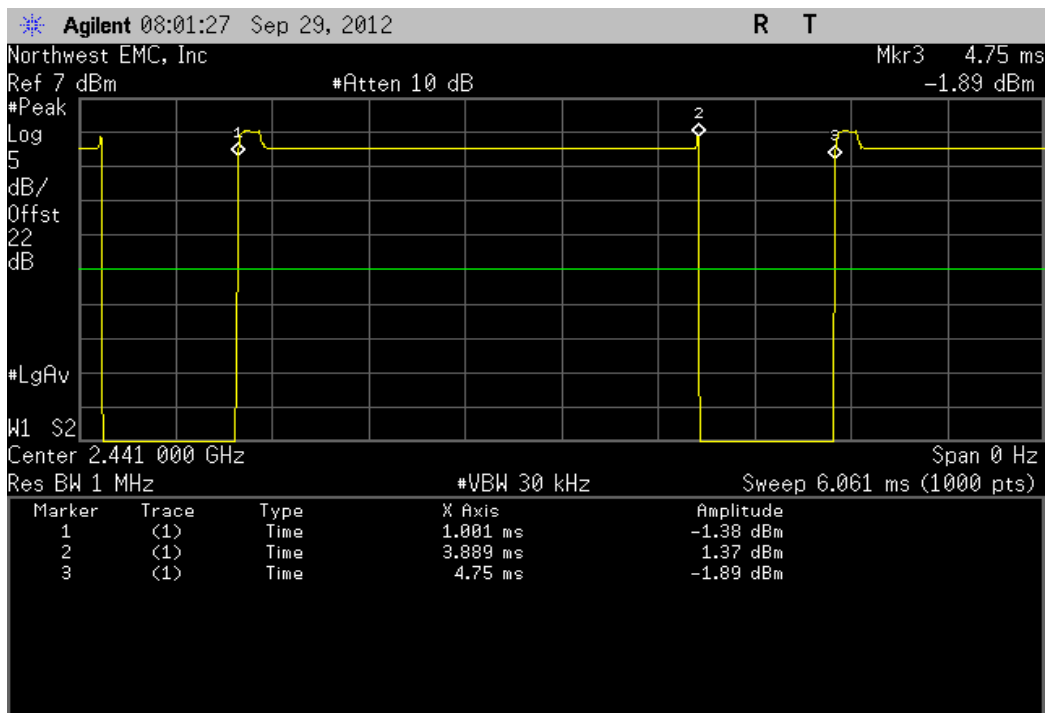
Low						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	2.888 mS	3.749 mS	1	77	N/A	N/A



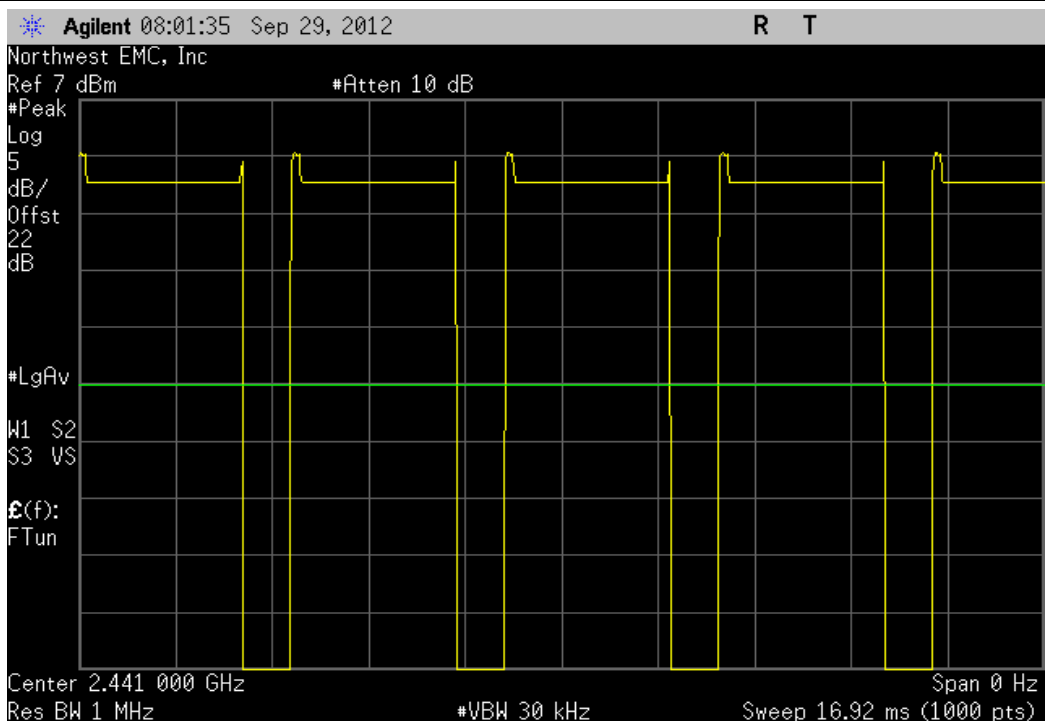
Low						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A



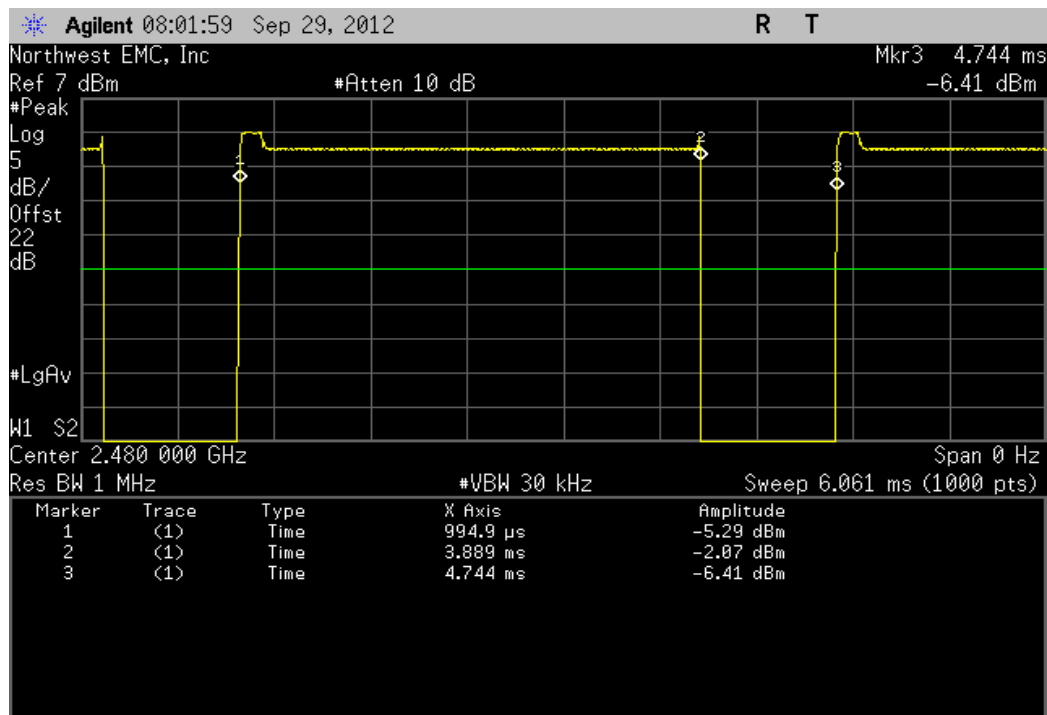
Mid						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	2.888 mS	3.749 mS	1	77	N/A	N/A



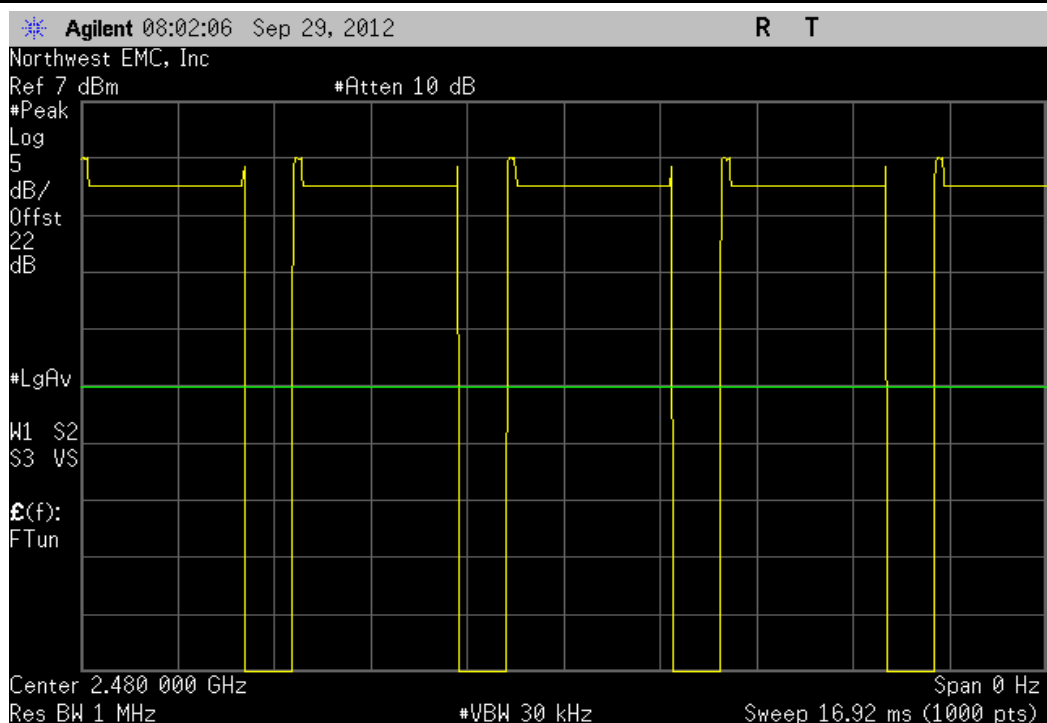
Mid						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A

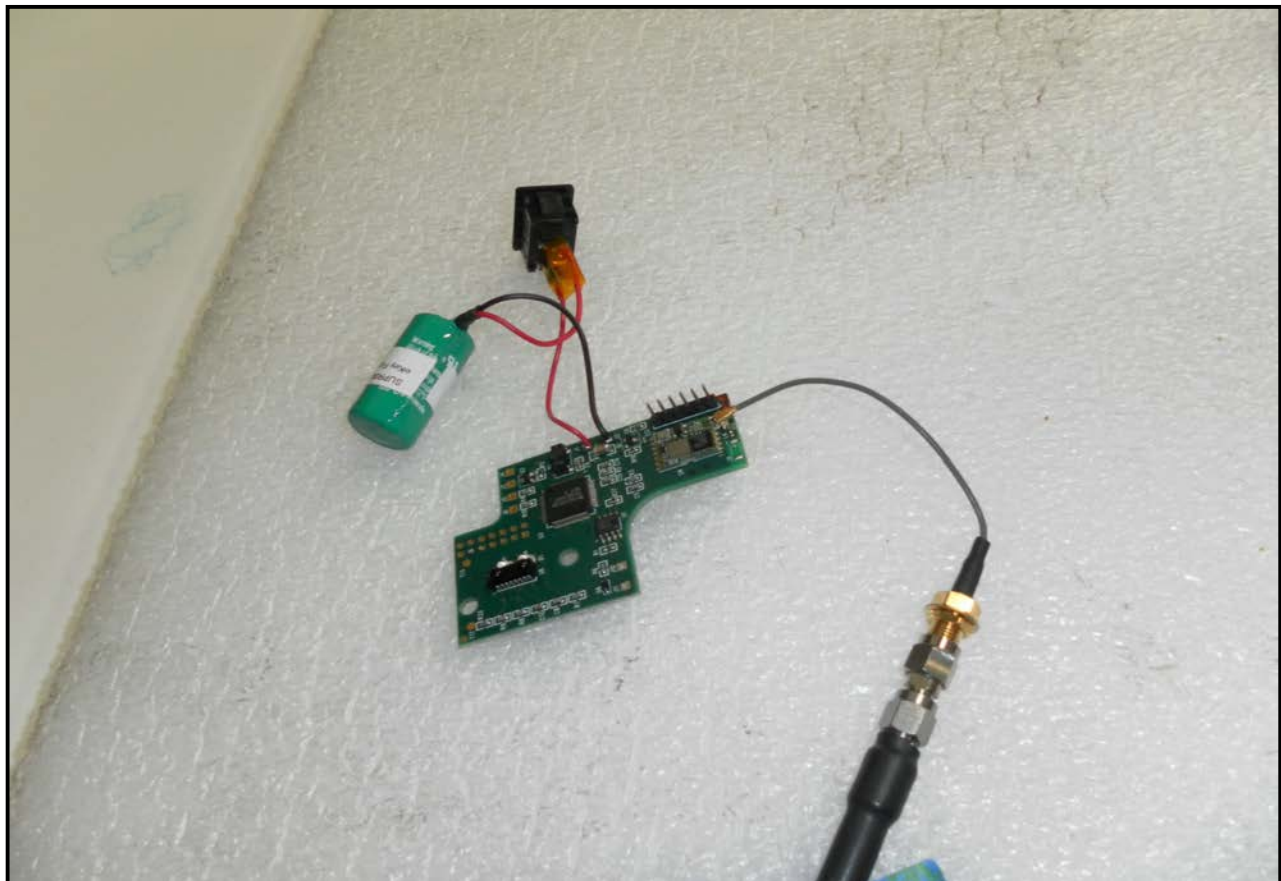
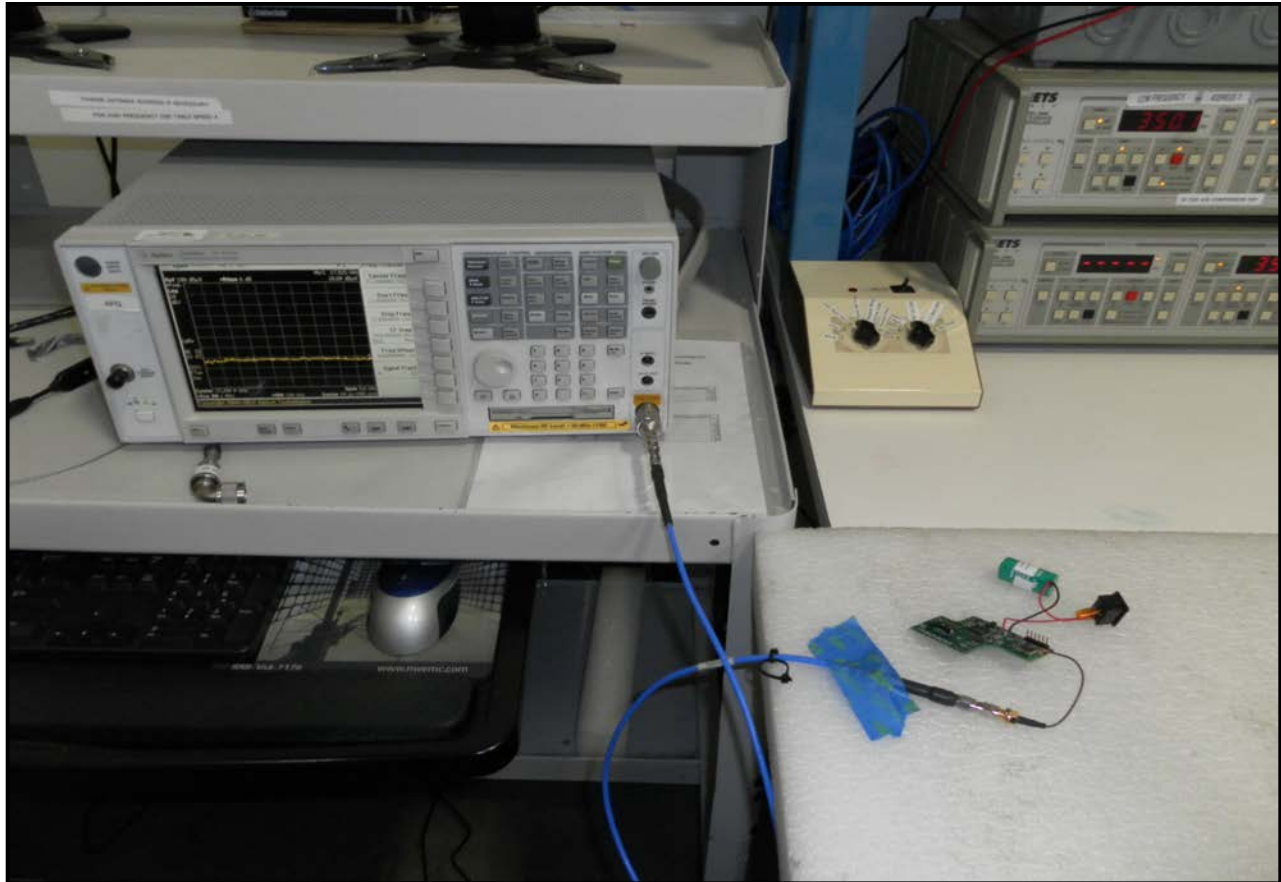


High						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	2.894 mS	3.749 mS	1	77.2	N/A	N/A



High						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit	Result
	N/A	N/A	5	N/A	N/A	N/A





Number of Hopping Frequencies

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12
18 GHz DC Block, SMA	Pasternack	PE8210	AME	10/6/2011	13
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12

TEST DESCRIPTION

The number of hopping frequencies was measured across the authorized band. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The hopping function of the EUT was enabled.

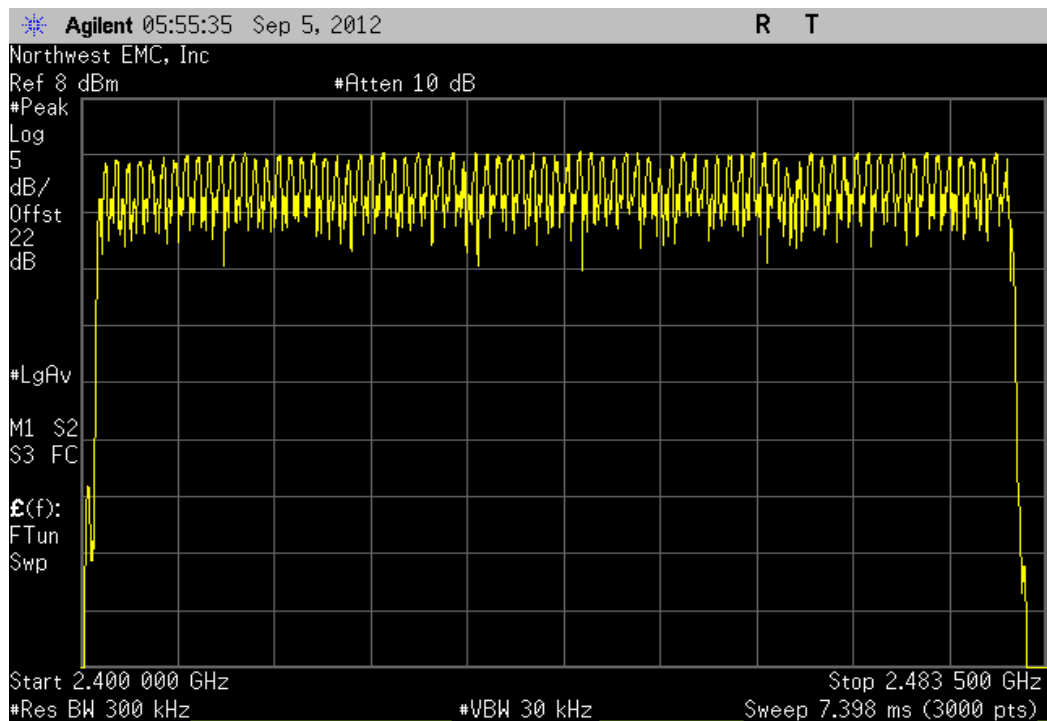


Number of Hopping Frequencies

XMit 2012.08.06
PsaTx 2012.09.04

EUT: TRAC-Lid BT		Work Order: SUPR0095	
Serial Number: None		Date: 08/31/12	
Customer: UTC Fire & Security Americas Corporation, Inc.		Temperature: 24.84°C	
Attendees: None		Humidity: 53%	
Project: None		Barometric Pres.: 1014	
Tested by: Jaemi Suh		Power: Battery	
		Job Site: OC10	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2012		ANSI C63.10:2009	
COMMENTS			
DH5 Type Packets with Payload Size of 1021. Section 2.2 TX Test.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Number of Channels	Limit
		Result	
GFSK, DH5		79	≥15
Mid Channel, 2441 MHz			N/A

GFSK, DH5, Mid Channel, 2441 MHz				Number of Channels	Limit	Result
				79	≥15	N/A



Occupied Bandwidth

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
18 GHz DC Block, SMA	Pasternack	PE8210	AME	10/6/2011	13
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The 20dB occupied bandwidth was measured. The 26 dB (99.9%) emission bandwidth (EBW) was also measured at the same time.

The EUT was set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

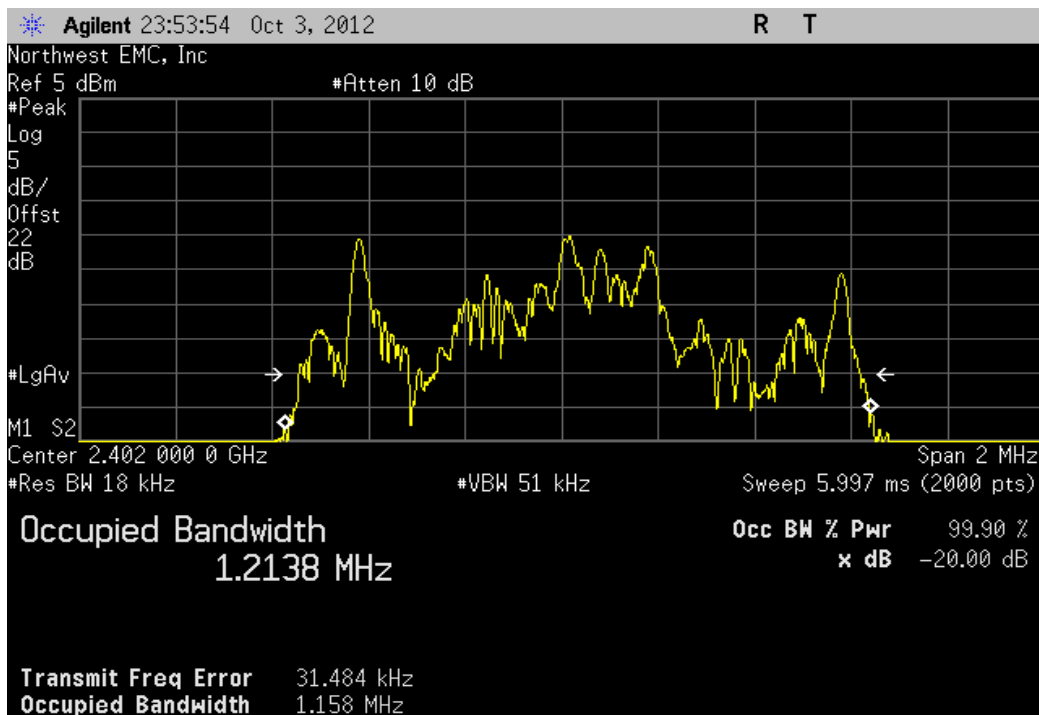


Occupied Bandwidth

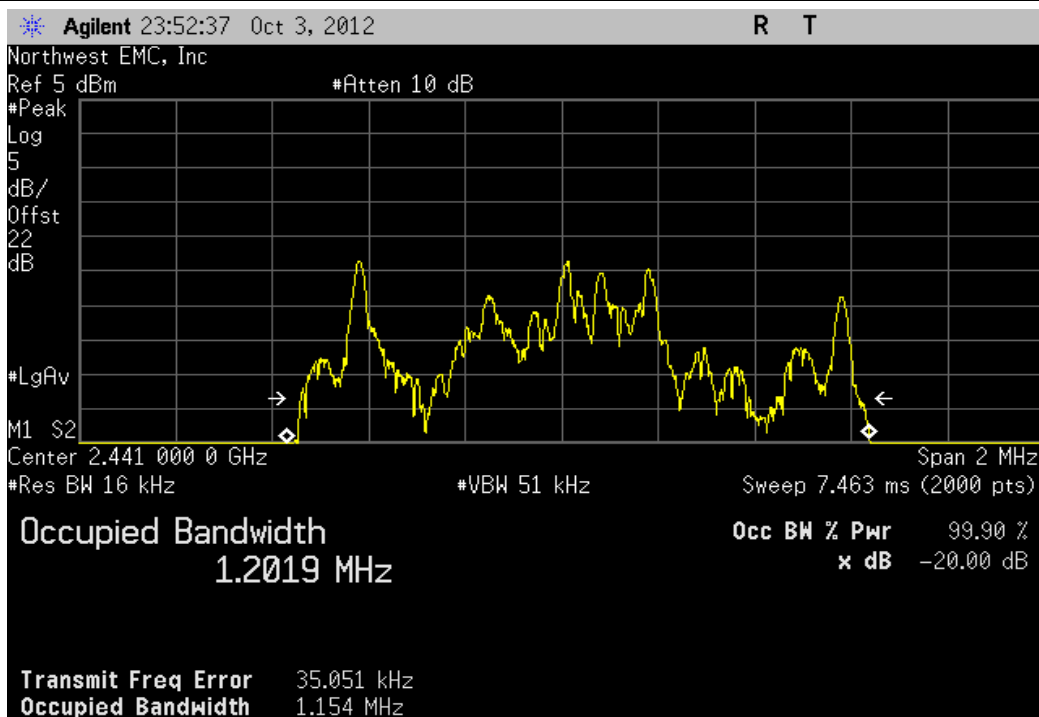
XMit 2012.08.06
PsaTx 2012.08.30

EUT: TRAC-Lid BT		Work Order: SUPR0095	
Serial Number: None		Date: 08/31/12	
Customer: Supra, A Division of UTCFS		Temperature: 24.84°C	
Attendees: None		Humidity: 53%	
Project: None		Barometric Pres.: 1014	
Tested by: Jaemi Suh		Power: Battery	
		Job Site: OC10	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2012		ANSI C63.10:2009	
COMMENTS			
DH5 Type Packets with Payload Size of 1021. Section 2.2 TX Test.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
DH5, GFSK			Result
Low Channel		1.158 MHz	< 1.5 MHz
Mid Channel		1.154 MHz	< 1.5 MHz
High Channel		1.148 MHz	< 1.5 MHz
			Pass
			Pass
			Pass

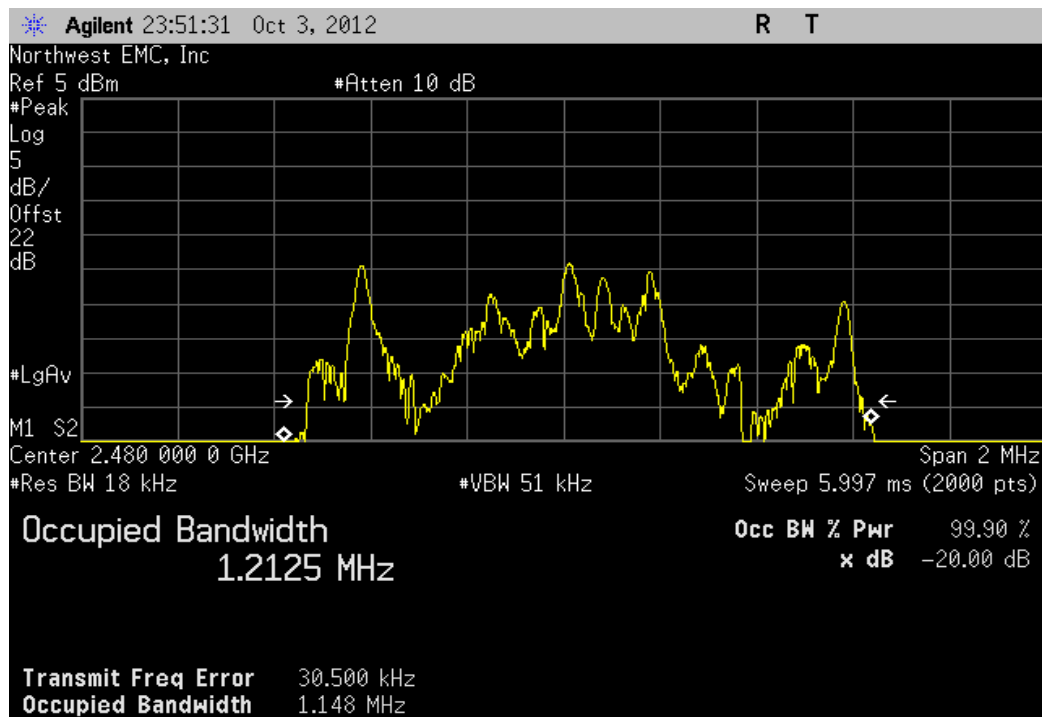
Low Channel						
				Value	Limit	Result
				1.158 MHz	< 1.5 MHz	Pass



Mid Channel						
				Value	Limit	Result
				1.154 MHz	< 1.5 MHz	Pass



High Channel						
				Value	Limit	Result
				1.148 MHz	< 1.5 MHz	Pass



Output Power

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12
40 GHz DC block	Fairview Microwave	SD3379	AMI	10/12/2011	12
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12

TEST DESCRIPTION

The peak output power was measured with the EUT set to low, medium and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was transmitting in a no hop mode at the data rate(s) listed in the datasheet.

De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +27dBm.



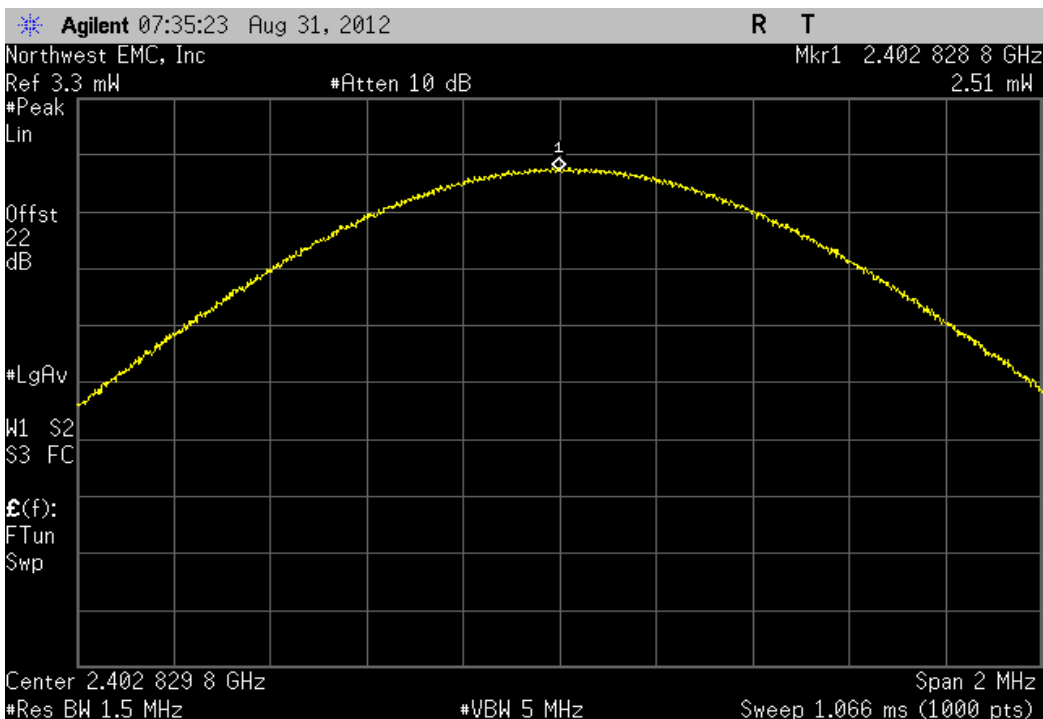
Output Power

XMit 2012.08.06
PsaTx 2012.08.30

EUT: TRAC-Lid BT		Work Order: SUPR0095	
Serial Number: None		Date: 08/31/12	
Customer: UTC Fire & Security Americas Corporation, Inc.		Temperature: 24.84°C	
Attendees: None		Humidity: 53%	
Project: None		Barometric Pres.: 1014	
Tested by: Jaemi Suh		Power: Battery	
		Job Site: OC10	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2012		ANSI C63.10:2009	
COMMENTS			
Basic Data Rate 1 Mbps.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
DH5, GFSK			Result
Low Channel		2.513 mW	< 125 mW
Mid Channel		2.919 mW	< 125 mW
High Channel		2.854 mW	< 125 mW
			Pass
			Pass
			Pass

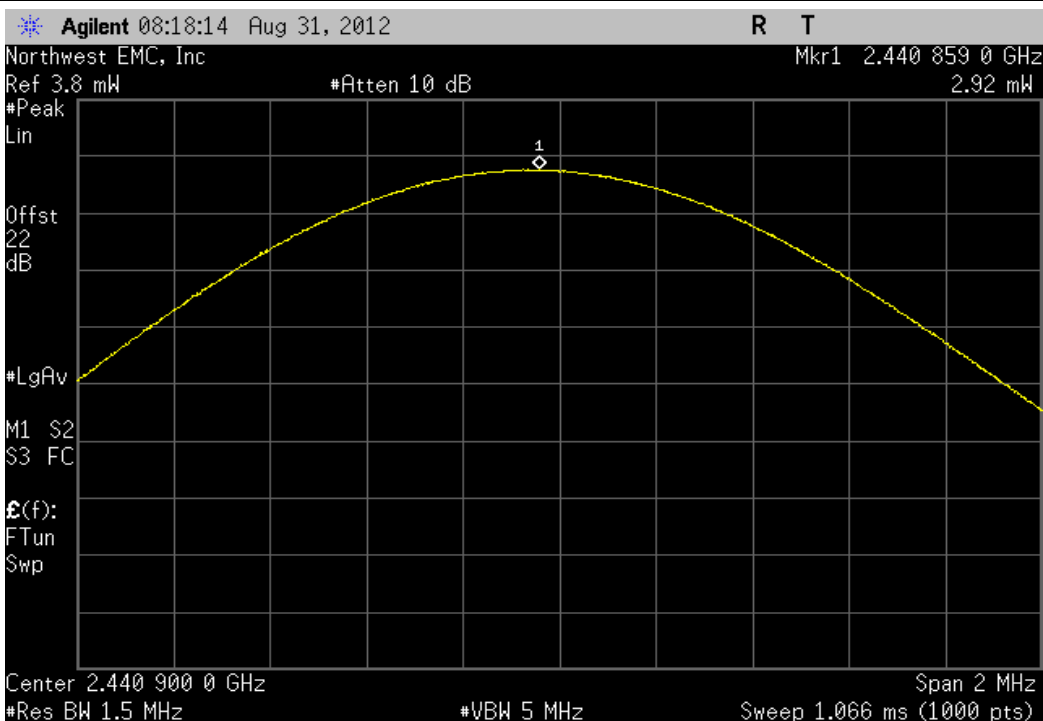
DH5, GFSK, Low Channel

				Value	Limit	Result
				2.513 mW	< 125 mW	Pass



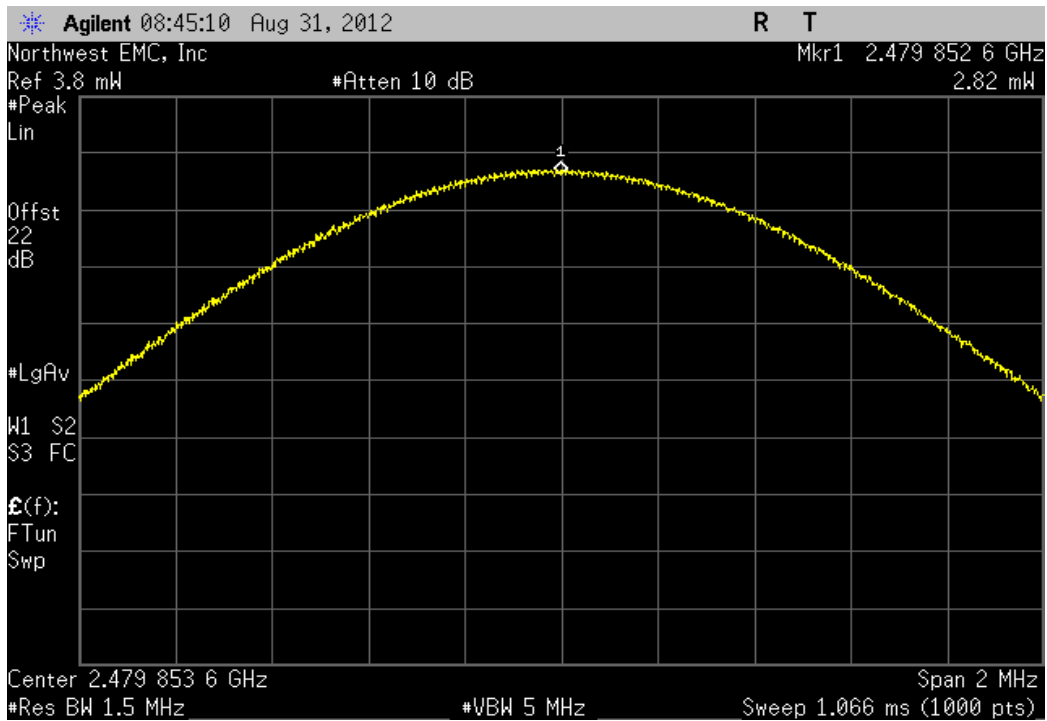
DH5, GFSK, Mid Channel

				Value	Limit	Result
				2.919 mW	< 125 mW	Pass



DH5, GFSK, High Channel

Value	Limit	Result
2.854 mW	< 125 mW	Pass



Band Edge Compliance - Hopping Mode

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12
18 GHz DC Block, SMA	Pasternack	PE8210	AME	10/6/2011	13
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to its normal pseudo-random hopping sequence. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

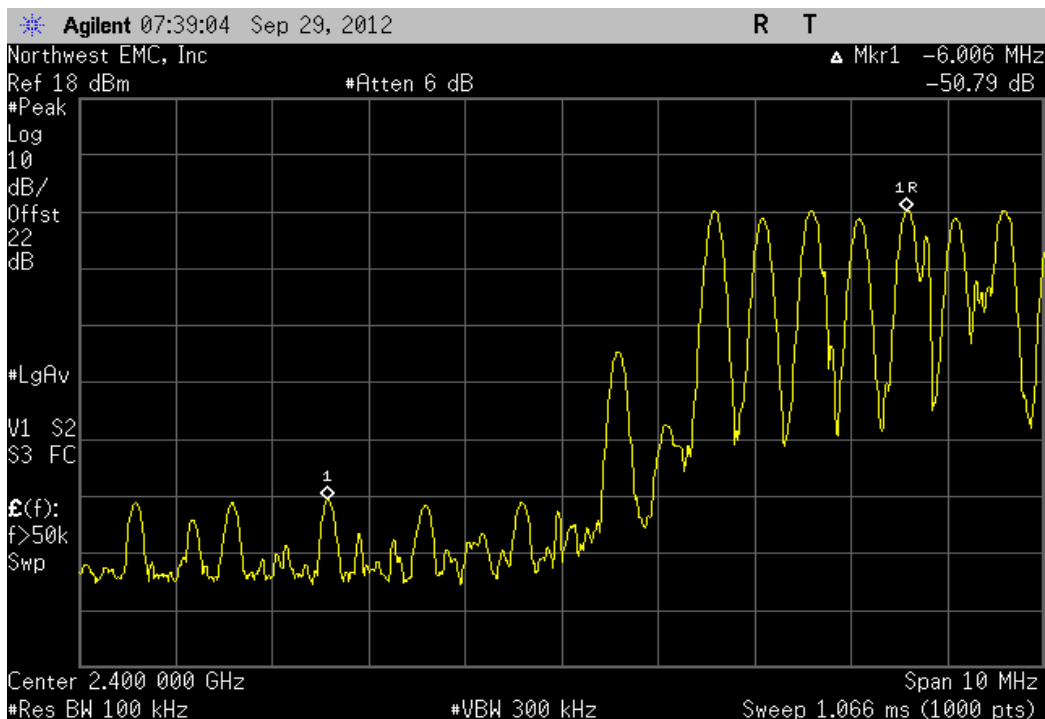


Band Edge Compliance - Hopping Mode

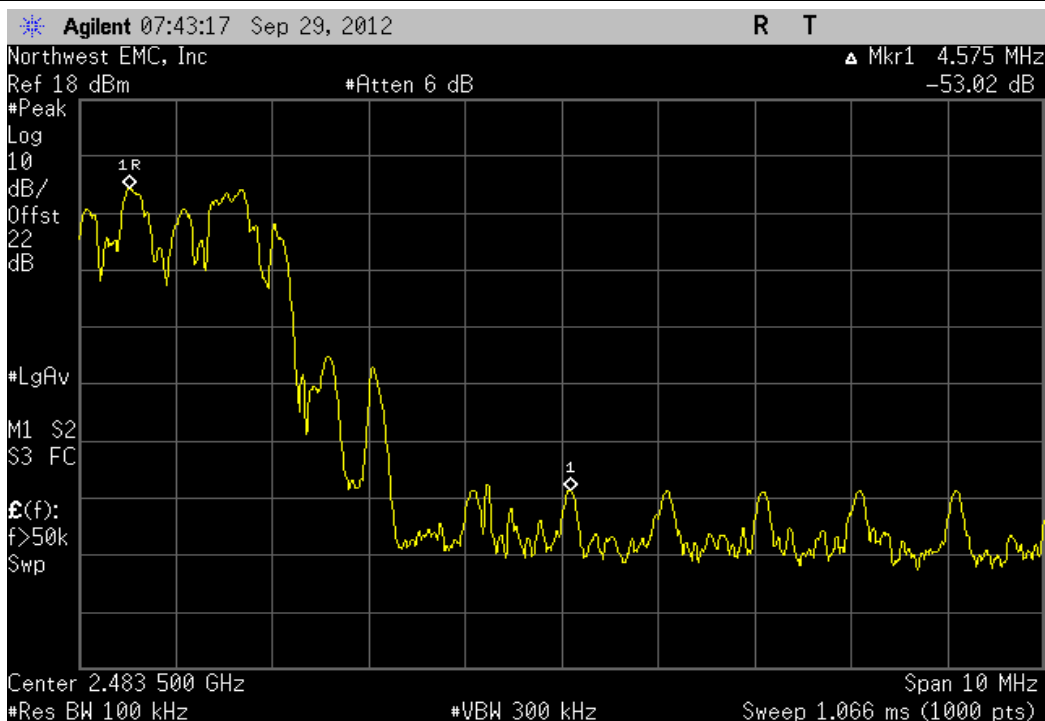
XMit 2012.08.06
PsaTx 2012.09.04

EUT: TRAC-Lid BT		Work Order: SUPR0095	
Serial Number: None		Date: 08/31/12	
Customer: UTC Fire & Security Americas Corporation, Inc.		Temperature: 24.84°C	
Attendees: None		Humidity: 53%	
Project: None		Barometric Pres.: 1014	
Tested by: Jaemi Suh		Power: Battery	
		Job Site: OC10	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2012		ANSI C63.10:2009	
COMMENTS			
DH5 Type Packets with Payload Size of 1021. Section 2.2 TX Test.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
GFSK, DH5			Result
Low Channel, 2402 MHz		-50.79 dBc	-20 dBc
High Channel, 2480 MHz		-53.02 dBc	-20 dBc
			Pass
			Pass

GFSK, DH5, Low Channel, 2402 MHz						
				Value	Limit	Result
				-50.79 dBc	-20 dBc	Pass



GFSK, DH5, High Channel, 2480 MHz						
				Value	Limit	Result
				-53.02 dBc	-20 dBc	Pass



Band Edge Compliance

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12
18 GHz DC Block, SMA	Pasternack	PE8210	AME	10/6/2011	13
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to low and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet in a no hop mode. The channels closest to the band edges were selected.

The spectrum was scanned below the lower band edge and above the higher band edge.



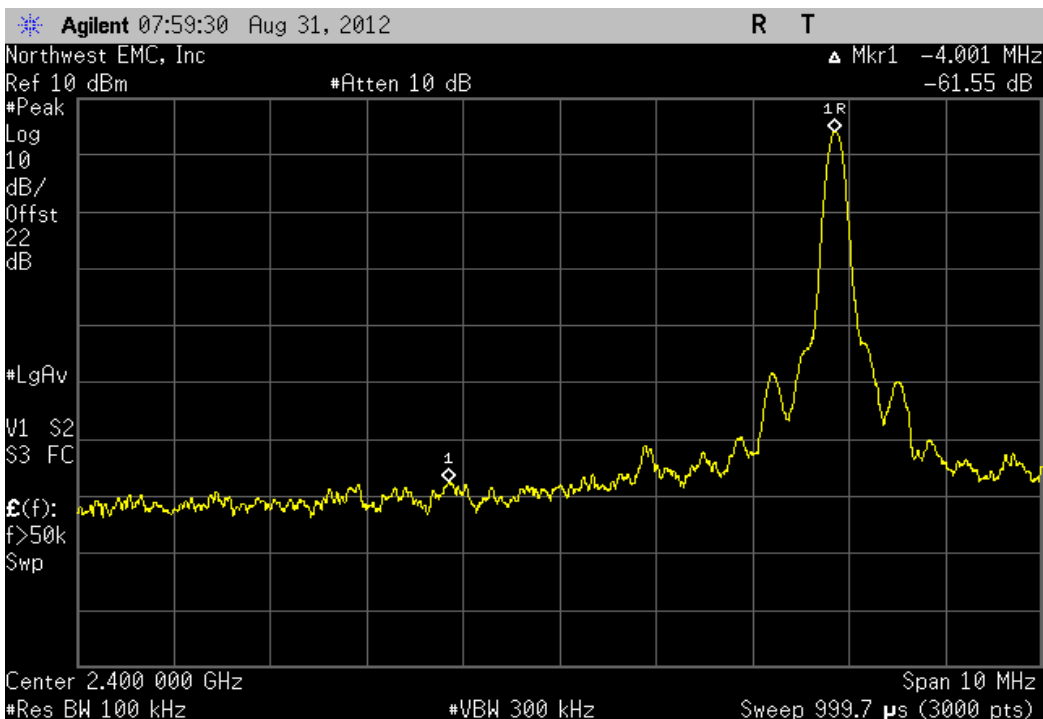
Band Edge Compliance

XMit 2012.08.06
PsaTx 2012.08.30

EUT: TRAC-Lid BT		Work Order: SUPR0095	
Serial Number: None		Date: 08/31/12	
Customer: UTC Fire & Security Americas Corporation, Inc.		Temperature: 24.84°C	
Attendees: None		Humidity: 53%	
Project: None		Barometric Pres.: 1014	
Tested by: Jaemi Suh		Power: Battery	
		Job Site: OC10	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2012		ANSI C63.10:2009	
COMMENTS			
Basic Data Rate 1 Mbps.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
DH5, GFSK			Result
Low Channel		-61.55 dBc	≤ -20 dBc
High Channel		-60.48 dBc	≤ -20 dBc
			Pass
			Pass

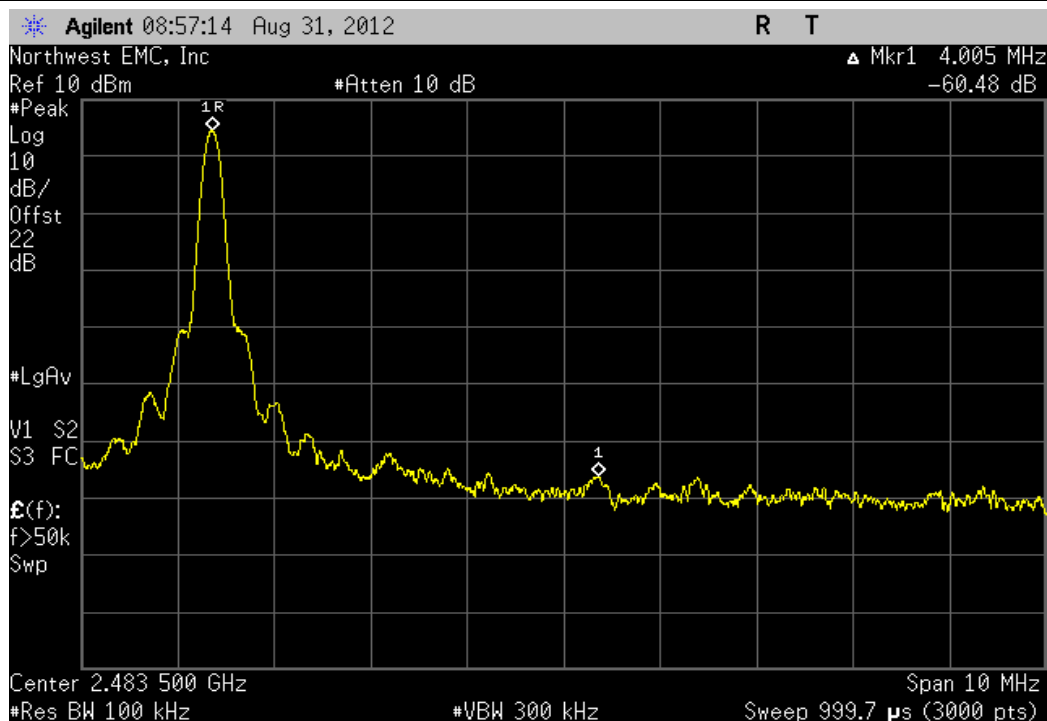
Basic Rate 1 Mbps, Low Channel

Value	Limit	Result
-61.55 dBc	≤ -20 dBc	Pass



Basic Rate 1 Mbps., High Channel

Value	Limit	Result
-60.48 dBc	≤ -20 dBc	Pass



Spurious Conducted Emissions

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
18 GHz DC Block, SMA	Pasternack	PE8210	AME	10/6/2011	13
Attenuator SMA - 20dB, 40 GHz	Fairview Microwave	SA4014-20	AQI	10/12/2011	12
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12

TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

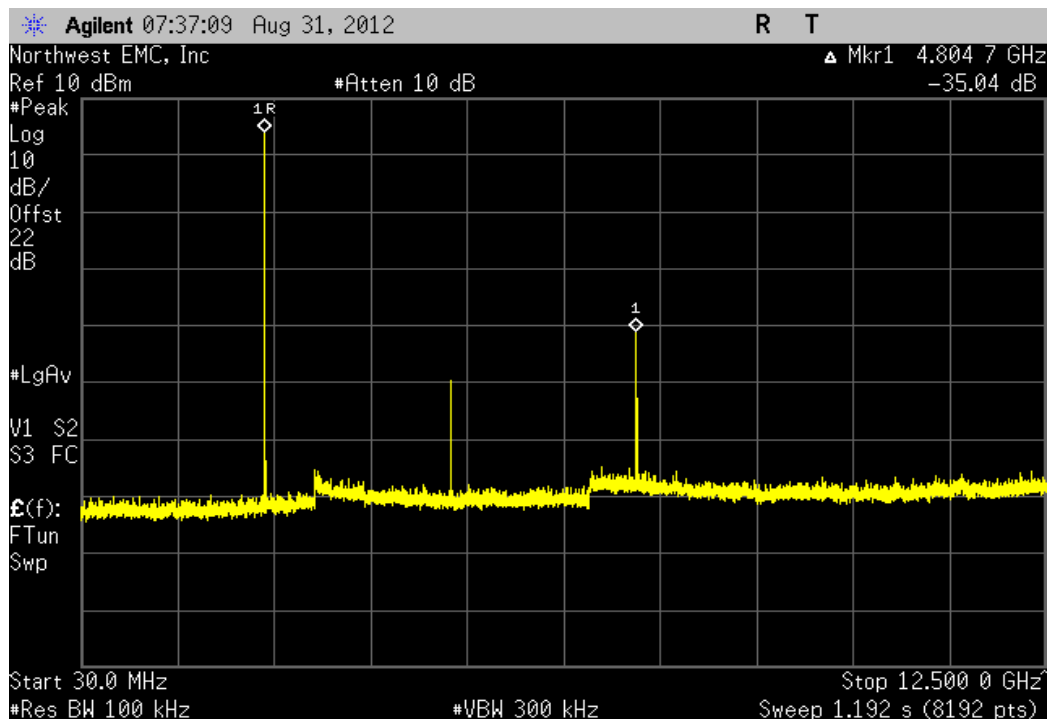


Spurious Conducted Emissions

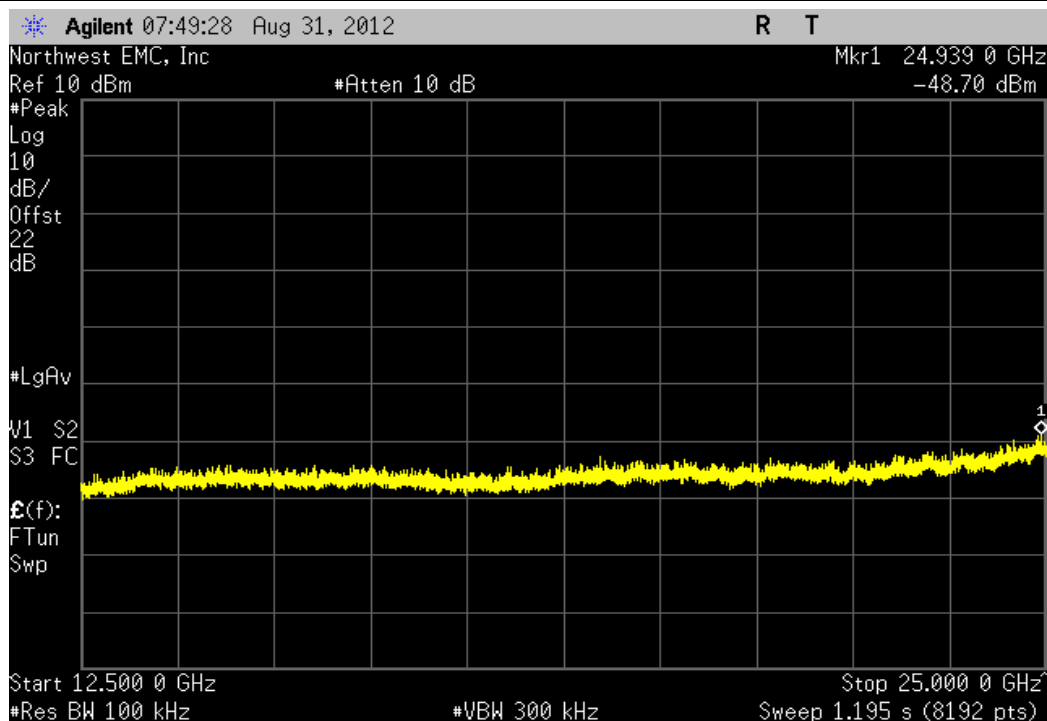
XMit 2012.08.06
PsaTx 2012.08.30

EUT: TRAC-Lid BT		Work Order: SUPR0095			
Serial Number: None		Date: 08/31/12			
Customer: UTC Fire & Security Americas Corporation, Inc.		Temperature: 24.84°C			
Attendees: None		Humidity: 53%			
Project: None		Barometric Pres.: 1014			
Tested by: Jaemi Suh		Power: Battery			
		Job Site: OC10			
TEST SPECIFICATIONS		Test Method			
FCC 15.247:2012		ANSI C63.10:2009			
COMMENTS					
Basic Data Rate 1 Mbps.					
DEVIATIONS FROM TEST STANDARD					
None					
Configuration #	2	Signature 			
		Frequency Range	Value	Limit	Result
DH5, GFSK					
Low Channel		30 MHz - 12.5 GHz	-35.04 dBc	≤ -20 dBc	Pass
Low Channel		12.5 GHz - 25 GHz	-52.76 dBc	≤ -20 dBc	Pass
Mid Channel		30 MHz - 12.5 GHz	-37.88 dBc	≤ -20 dBc	Pass
Mid Channel		12.5 GHz - 25 GHz	-53.77 dBc	≤ -20 dBc	Pass
High Channel		30 MHz - 12.5 GHz	-41.24 dBc	≤ -20 dBc	Pass
High Channel		12.5 GHz - 25 GHz	-53.86 dBc	≤ -20 dBc	Pass

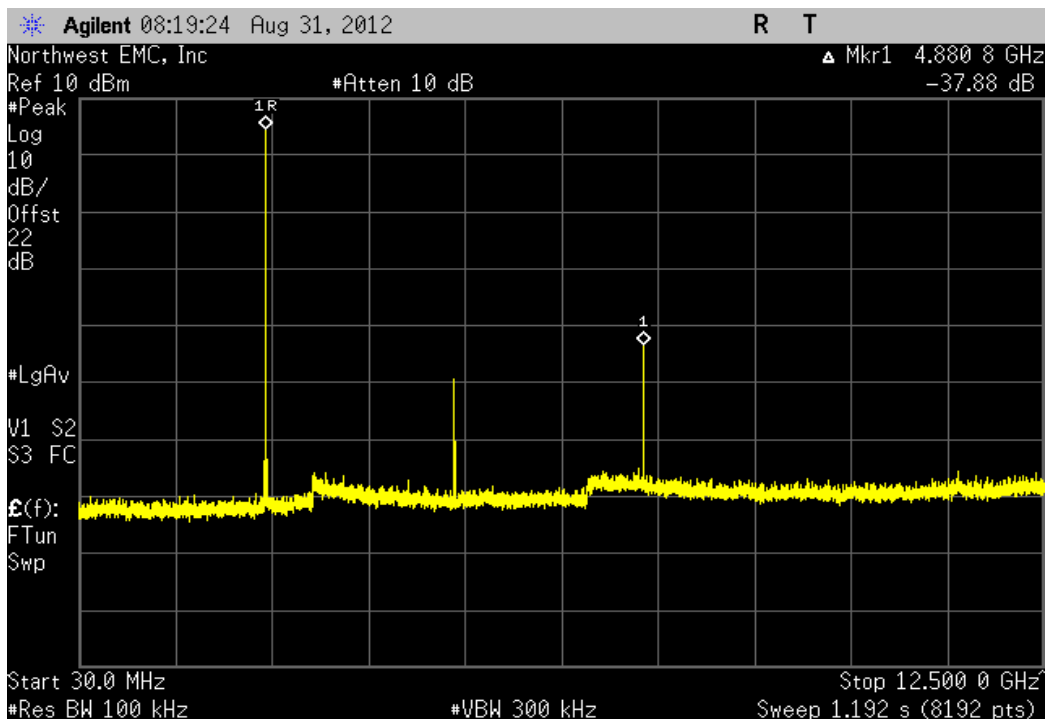
DH5, GFSK, Low Channel				
Frequency Range	Value	Limit	Result	
30 MHz - 12.5 GHz	-35.04 dBc	≤ -20 dBc	Pass	



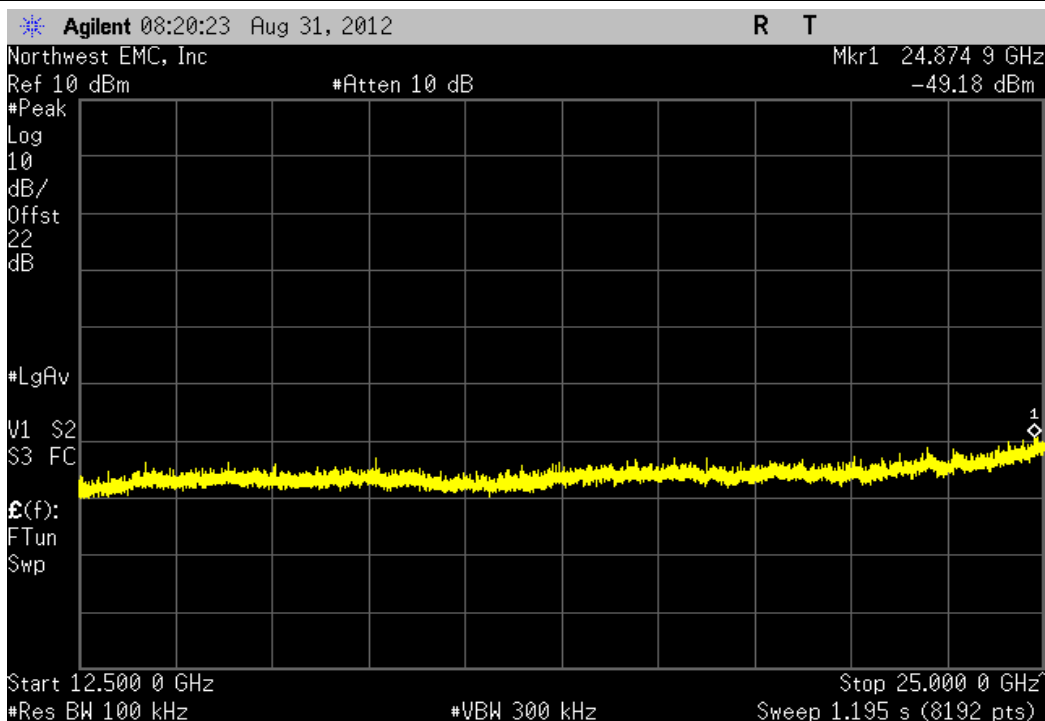
DH5, GFSK, Low Channel				
Frequency Range	Value	Limit	Result	
12.5 GHz - 25 GHz	-52.76 dBc	≤ -20 dBc	Pass	



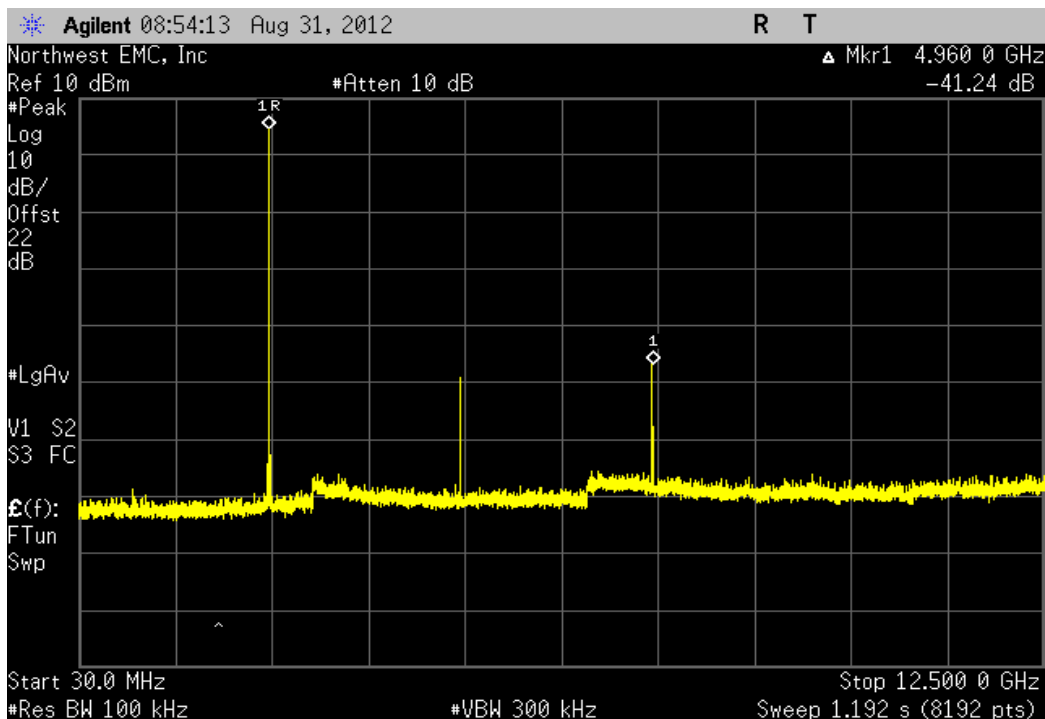
DH5, GFSK, Mid Channel				
Frequency Range	Value	Limit	Result	
30 MHz - 12.5 GHz	-37.88 dBc	≤ -20 dBc	Pass	



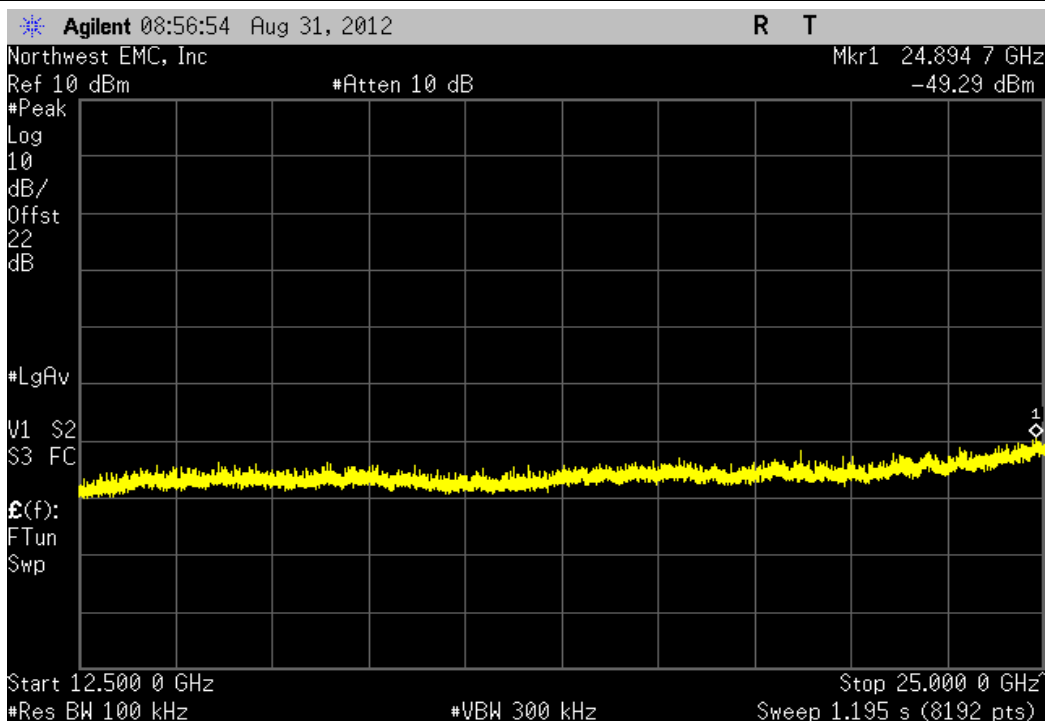
DH5, GFSK, Mid Channel				
Frequency Range	Value	Limit	Result	
12.5 GHz - 25 GHz	-53.77 dBc	≤ -20 dBc	Pass	



DH5, GFSK, High Channel				
Frequency Range	Value	Limit	Result	
30 MHz - 12.5 GHz	-41.24 dBc	≤ -20 dBc	Pass	



DH5, GFSK, High Channel				
Frequency Range	Value	Limit	Result	
12.5 GHz - 25 GHz	-53.86 dBc	≤ -20 dBc	Pass	



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Basic Data Rate 1's Modulated. Transmitting at Low (2402 MHz), Mid (2440 MHz) and High (2480 MHz) Channel.

POWER SETTINGS INVESTIGATED

Battery

CONFIGURATIONS INVESTIGATED

SUPR0095 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26 GHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

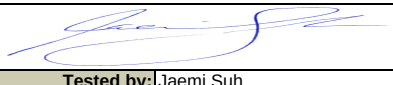
Description	Manufacturer	Model	ID	Last Cal.	Interval
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	4/27/2012	12 mo
Antenna, Horn	EMCO	3160-09	AHN	NCR	0 mo
OC floating Cable	N/A	18-26GHz RE Cables	OCK	4/27/2012	12 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	11/21/2011	12 mo
Antenna, Horn	ETS	3160-08	AHT	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	11/21/2011	12 mo
Antenna, Horn	ETS	3160-07	AHR	NCR	0 mo
OC 10 Cables	N/A	12-18GHz RE Cables	OCO	10/13/2011	12 mo
Pre-Amplifier	Miteq	AMF-4D-010120-30-10P-1	AOP	6/7/2012	12 mo
Antenna, Horn	EMCO	3115	AHB	3/8/2011	24 mo
OC10 Cables	N/A	1-8GHz RE Cables	OCJ	10/13/2011	12 mo
Antenna, Bilog	Teseq	CBL 6141A	AYE	4/26/2012	12 mo
OC10 Cables	N/A	10kHz-1GHz RE Cables	OCH	6/7/2012	12 mo
Pre-Amplifier	Miteq	AM-1064-9079	AOO	6/7/2012	12 mo
Spectrum Analyzer	Agilent	E4440A	AFG	5/16/2012	12 mo

MEASUREMENT BANDWIDTHS

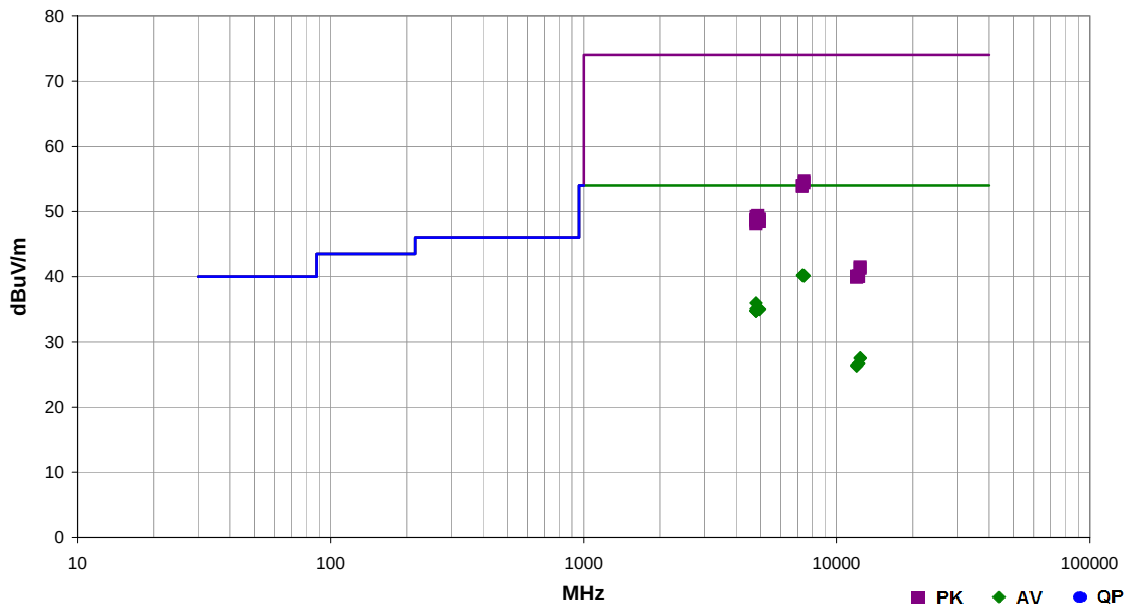
Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization. A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

Work Order:	SUPR0095	Date:	08/31/12	
Project:	None	Temperature:	28.15 °C	
Job Site:	OC10	Humidity:	48.15% RH	
Serial Number:	None	Barometric Pres.:	1019 mbar	
Tested by: Jaemi Suh				
EUT:	TRAC-Lid BT			
Configuration:	1			
Customer:	UTC Fire & Security Americas Corporation, Inc.			
Attendees:	None			
EUT Power:	Battery			
Operating Mode:	Basic Data Rate 1's Modulated. Transmitting at Low (2402 MHz), Mid (2440 MHz) and High (2480 MHz) Channel.			
Deviations:	None			
Comments:	3 Different Units, each unit transmitting at one frequency and data rate.			
Test Specifications		Test Method		
FCC 15.247:2012		ANSI C63.10:2009		

Run #	2	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (dBuV/m)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7321.900	24.3	15.9	1.0	66.0	3.0	0.0	Horz	AV	0.0	40.2	54.0	-13.8	X-Axis, Mid Channel 2440 MHz
7441.353	24.1	16.1	1.0	95.0	3.0	0.0	Vert	AV	0.0	40.2	54.0	-13.8	X-Axis, High Channel 2480 MHz
7322.000	24.2	15.9	1.0	124.0	3.0	0.0	Vert	AV	0.0	40.1	54.0	-13.9	X-Axis, Mid Channel 2440 MHz
7441.433	24.0	16.1	1.0	228.0	3.0	0.0	Horz	AV	0.0	40.1	54.0	-13.9	X-Axis, High Channel 2480 MHz
4803.740	24.8	11.2	1.0	113.0	3.0	0.0	Vert	AV	0.0	36.0	54.0	-18.0	X-Axis, Low Channel 2402 MHz
4803.807	23.9	11.2	1.0	48.0	3.0	0.0	Vert	AV	0.0	35.1	54.0	-18.9	Y-Axis, Low Channel 2402 MHz
4960.053	23.4	11.6	1.0	212.0	3.0	0.0	Horz	AV	0.0	35.0	54.0	-19.0	X-Axis, High Channel 2480 MHz
4878.053	23.6	11.4	1.0	301.0	3.0	0.0	Vert	AV	0.0	35.0	54.0	-19.0	X-Axis, Mid Channel 2440 MHz
4959.840	23.3	11.6	1.6	20.0	3.0	0.0	Vert	AV	0.0	34.9	54.0	-19.1	X-Axis, High Channel 2480 MHz
4804.000	23.6	11.2	1.0	332.0	3.0	0.0	Horz	AV	0.0	34.8	54.0	-19.2	Y-Axis, Low Channel 2402 MHz
4803.627	23.6	11.2	1.0	331.0	3.0	0.0	Horz	AV	0.0	34.8	54.0	-19.2	X-Axis, Low Channel 2402 MHz
4803.920	23.5	11.2	1.0	209.0	3.0	0.0	Horz	AV	0.0	34.7	54.0	-19.3	Z-Axis, Low Channel 2402 MHz
4803.820	23.5	11.2	1.0	41.0	3.0	0.0	Vert	AV	0.0	34.7	54.0	-19.3	Z-Axis, Low Channel 2402 MHz
7441.260	38.6	16.1	1.0	95.0	3.0	0.0	Vert	PK	0.0	54.7	74.0	-19.3	X-Axis, High Channel 2480 MHz
7441.807	38.3	16.1	1.0	228.0	3.0	0.0	Horz	PK	0.0	54.4	74.0	-19.6	X-Axis, High Channel 2480 MHz
7321.887	38.0	15.9	1.0	124.0	3.0	0.0	Vert	PK	0.0	53.9	74.0	-20.1	X-Axis, Mid Channel 2440 MHz
7320.113	37.9	15.9	1.0	66.0	3.0	0.0	Horz	PK	0.0	53.8	74.0	-20.2	X-Axis, Mid Channel 2440 MHz
4878.920	38.0	11.4	1.0	301.0	3.0	0.0	Vert	PK	0.0	49.4	74.0	-24.6	X-Axis, Low Channel 2402 MHz
4806.000	38.0	11.2	1.0	331.0	3.0	0.0	Horz	PK	0.0	49.2	74.0	-24.8	X-Axis, Low Channel 2402 MHz
4880.813	37.5	11.4	1.0	357.0	3.0	0.0	Horz	PK	0.0	48.9	74.0	-25.1	X-Axis, Mid Channel 2440 MHz
4959.747	37.2	11.6	1.6	20.0	3.0	0.0	Vert	PK	0.0	48.8	74.0	-25.2	X-Axis, High Channel 2480 MHz
4804.440	37.6	11.2	1.0	113.0	3.0	0.0	Vert	PK	0.0	48.8	74.0	-25.2	X-Axis, Low Channel 2402 MHz
4803.847	37.5	11.2	1.0	209.0	3.0	0.0	Horz	PK	0.0	48.7	74.0	-25.3	Z-Axis, Low Channel 2402 MHz
4802.413	37.5	11.2	1.0	48.0	3.0	0.0	Vert	PK	0.0	48.7	74.0	-25.3	Y-Axis, Low Channel 2402 MHz
4960.140	36.8	11.6	1.0	212.0	3.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	X-Axis, High Channel 2480 MHz
4805.000	37.2	11.2	1.0	332.0	3.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	Y-Axis, Low Channel 2402 MHz
4803.327	36.9	11.2	1.0	41.0	3.0	0.0	Vert	PK	0.0	48.1	74.0	-25.9	Z-Axis, Low Channel 2402 MHz

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (dBuV/m)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
12399.930	33.8	-6.2	1.3	2.0	3.0	0.0	Vert	AV	0.0	27.6	54.0	-26.4	X-Axis, High Channel 2480 MHz
12399.950	33.7	-6.2	1.0	272.0	3.0	0.0	Horz	AV	0.0	27.5	54.0	-26.5	X-Axis, High Channel 2480 MHz
12201.890	34.1	-7.4	1.0	225.0	3.0	0.0	Vert	AV	0.0	26.7	54.0	-27.3	X-Axis, Mid Channel 2440 MHz
12201.980	34.0	-7.4	2.3	113.0	3.0	0.0	Horz	AV	0.0	26.6	54.0	-27.4	X-Axis, Mid Channel 2440 MHz
12010.050	34.9	-8.5	1.0	200.0	3.0	0.0	Vert	AV	0.0	26.4	54.0	-27.6	X-Axis, Low Channel 2402 MHz
12011.890	34.7	-8.5	1.0	354.0	3.0	0.0	Horz	AV	0.0	26.2	54.0	-27.8	X-Axis, Low Channel 2402 MHz
12397.800	47.7	-6.2	1.3	2.0	3.0	0.0	Vert	PK	0.0	41.5	74.0	-32.5	X-Axis, High Channel 2480 MHz
12397.890	47.5	-6.2	1.0	272.0	3.0	0.0	Horz	PK	0.0	41.3	74.0	-32.7	X-Axis, High Channel 2480 MHz
12201.720	47.4	-7.4	1.0	225.0	3.0	0.0	Vert	PK	0.0	40.0	74.0	-34.0	X-Axis, Mid Channel 2440 MHz
12011.680	48.5	-8.5	1.0	354.0	3.0	0.0	Horz	PK	0.0	40.0	74.0	-34.0	X-Axis, Low Channel 2402 MHz
12200.620	47.4	-7.4	2.3	113.0	3.0	0.0	Horz	PK	0.0	40.0	74.0	-34.0	X-Axis, Mid Channel 2440 MHz
12008.410	48.4	-8.5	1.0	200.0	3.0	0.0	Vert	PK	0.0	39.9	74.0	-34.1	X-Axis, Low Channel 2402 MHz