UTC Fire and Security

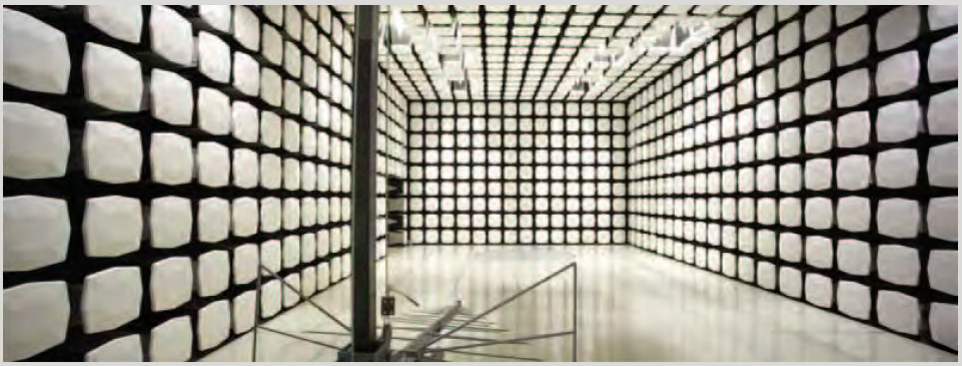
AV-3G

FCC 22H:2014

FCC 24E:2014

FCC 27:2014

Report #: UTCF0005



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: March 04, 2014
UTC Fire and Security
Model: AV-3G

Test Description	Specification	Test Method	Pass/Fail
Out of Band Emissions	FCC 22H:2014	ANSI/TIA/EIA-603-C-2004	Pass
Out of Band Emissions	FCC 24E:2014	ANSI/TIA/EIA-603-C-2004	Pass
Out of Band Emissions	FCC 27:2014	ANSI/TIA/EIA-603-C-2004	Pass
Effective Radiated Power (ERP)	FCC 22H:2014	ANSI/TIA/EIA-603-C-2004	Pass
Equivalent Isotropic Radiated Power (EIRP)	FCC 24E:2014	ANSI/TIA/EIA-603-C-2004	Pass
Equivalent Isotropic Radiated Power (EIRP)	FCC 27:2014	ANSI/TIA/EIA-603-C-2004	Pass

Deviations From Test Standards

None

Approved By:

Tim O'Shea, Operations Manager

NVLAP Lab Code: 200881-0

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.

NORTHWEST EMC
REV 2012.08.02

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

NORTHWEST EMC

REV 2012.05.24

ACCREDITATIONS AND AUTHORIZATIONS

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

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.

SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/

MEASUREMENT UNCERTAINTY

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.

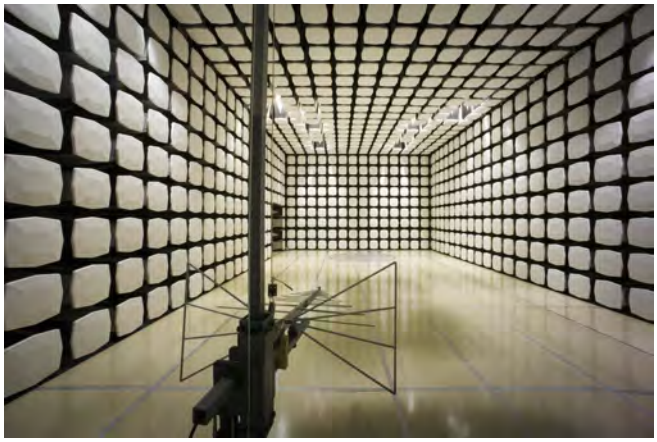
Test	+ MU	- MU
Frequency Accuracy (Hz)	0.12	-0.01
Amplitude Accuracy (dB)	0.49	-0.49
Conducted Power (dB)	0.41	-0.41
Radiated Power via Substitution (dB)	0.69	-0.68
Temperature (degrees C)	0.81	-0.81
Humidity (% RH)	2.89	-2.89
Field Strength (dB)	4.00	-4.00
AC Powerline Conducted Emissions (dB)	2.70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

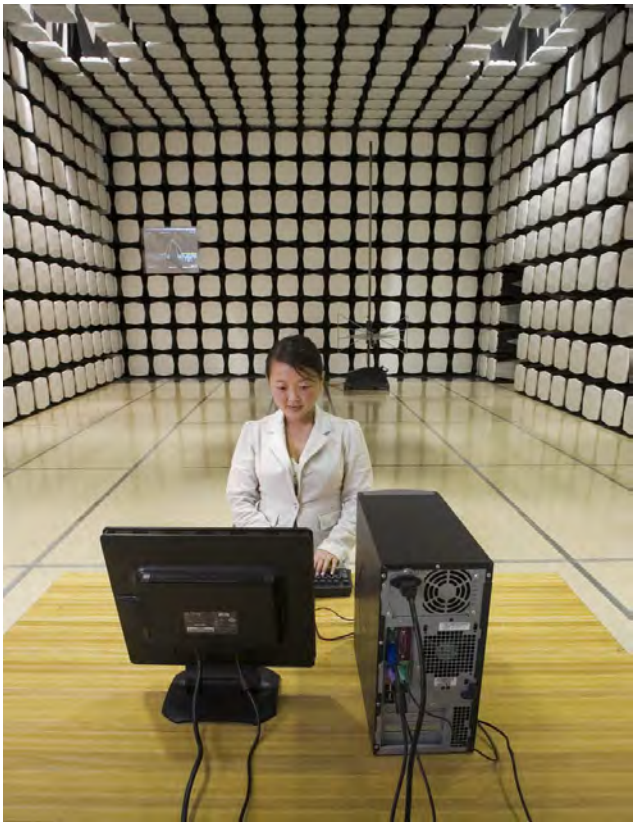
NORTHWEST EMC

REV 2013.06.28

FACILITIES

Oregon Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	**California** Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	**New York** Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	**Minnesota** Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	**Washington** Labs NC01-05,SU02,SU07 19201 120th Ave. NE Bothell, WA 98011 (425) 984-6600
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
NVLAP				
NVLAP Lab Code: 200630-0	NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200629-0





PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	UTC Fire and Security
Address:	1275 Red Fox Road
City, State, Zip:	Arden Hills, MN 55112
Test Requested By:	Kevin Flanders
Model:	AV-3G
First Date of Test:	February 17, 2014
Last Date of Test:	March 04, 2014
Receipt Date of Samples:	February 17, 2014
Equipment Design Stage:	Prototype
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
The EUT is a 3G UMTS modem contained within a Wireless Security Panel.

Testing Objective:
To demonstrate compliance of Class II Permissive Changes to FCC 22H, 24E, and 27 requirements

CONFIGURATIONS

Configuration UTCF0005- 1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Machine to Machine Communications Module	UTC Fire and Security	AV-3G	2082
Antenna	UTC Fire and Security	None	None

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
DC Brick	Unknown	15.3935	None
Ethernet Switch	Trendnet	TEW-652BRP	CA09136537363

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Power	No	2.35m	No	Wireless Security Panel	DC Brick
Ethernet	No	1.80m	No	Wireless Security Panel	Ethernet Switch
Ethernet	No	2.00m	No	Wireless Security Panel	Ethernet Switch
Control Wires (x12)	No	1.15m	No	Wireless Security Panel	Unterminated
Coax	Yes	0.60m	No	Wireless Security Panel	Antenna
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

MODIFICATIONS

WTD 12.5.23

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2/17/2014	Out of Band Emissions – Part 22	Modified from delivered configuration.	Ferrite beads on input and output of 12V-to-5V switching power supply, ETIO changes plus wall bracket changes. Modification authorized by Rene Christian.	EUT remained at Northwest EMC following the test.
2	2/19/2014	Out of Band Emissions – Part 24	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	2/19/2014	Out of Band Emissions – Part 27	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	2/21/2014	Effective Radiated Power (ERP)	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	3/4/2014	Equivalent Isotropic Radiated Power (EIRP) – Part 24	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	3/4/2014	Equivalent Isotropic Radiated Power (EIRP) – Part 27	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

OUT OF BAND EMISSIONS - PART 22H

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

See comments

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

UTCF0005 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	10000 MHz

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
Universal Radio Communication Tester	Rhode & Schwarz	CMU200	BSU	NCR	0 mo
1-2 GHz Notch Filter	K&L Microwave	3TNF-1000/2000-N/N	HGT	9/20/2012	24 mo
.5-1 GHz Notch Filter	K&L Microwave	3TNF-500/1000-N/N	HGS	9/20/2012	24 mo
Low Pass Filter	Micro-Tronics	LPM50004	HGK	5/31/2012	24 mo
Low Pass Filter 0-425 MHz	Micro-Tronics	LPM50003	HGO	5/31/2012	24 mo
High Pass Filter	Micro-Tronics	HPM50108	HGP	5/31/2012	24 mo
MN05 Cables	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	8/12/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	5/20/2013	12 mo
Antenna, Horn	ETS	3160-07	AXP	NCR	0 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	8/12/2013	12 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	36 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAD	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/20/2013	12 mo
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2013	12 mo
Spectrum Analyzer	Agilent	N9010A	AFI	1/27/2013	24 mo
Comb Generator Emitter	ARC Technical Resources, Inc.	CGE01KIT01	TUC	NCR	0 mo
Comb Generator Radiated	KJR Enterprises	Harmonics	TCT	NCR	0 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 antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization. A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is place on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

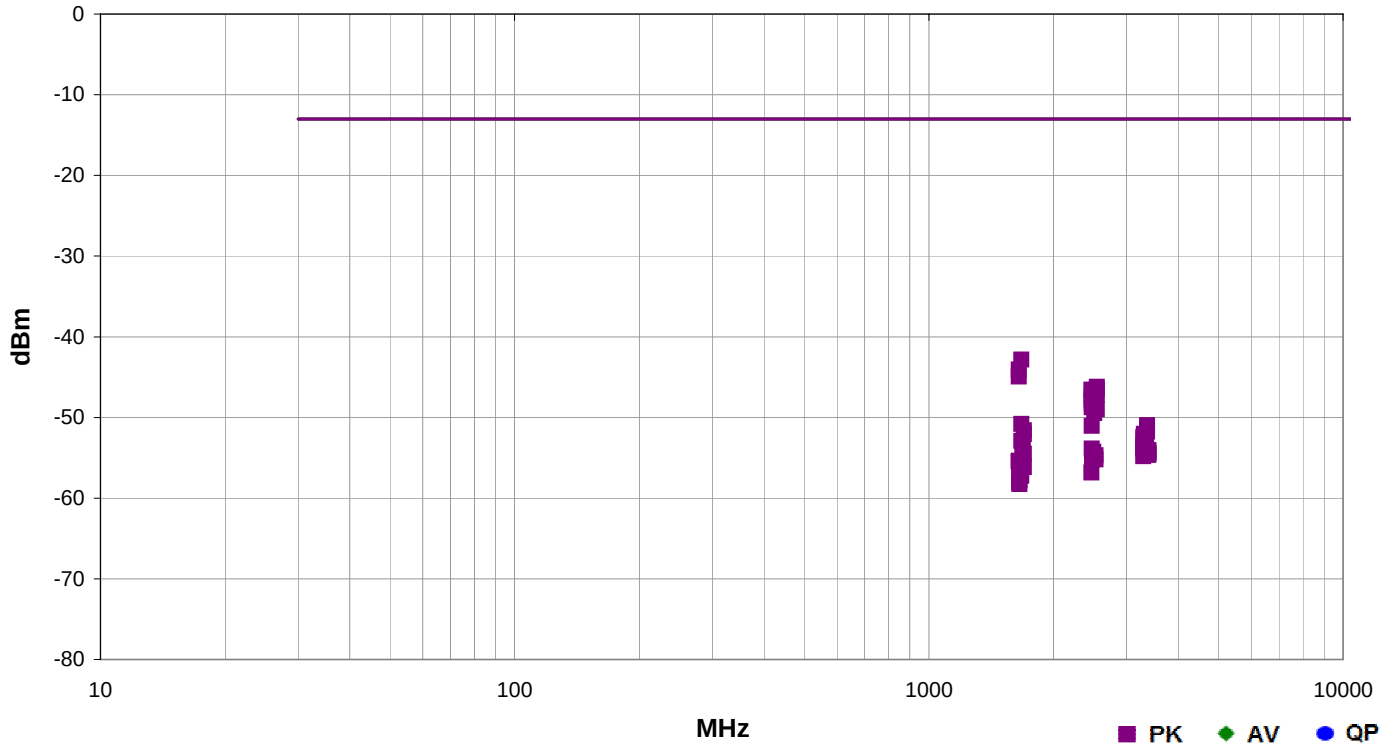
For the purposes of preliminary measurements, the field strength of the spurious emissions can be measured and compared with a 3 meter limit. The 3 meter limit was calculated to be 82.5 dBuV/m at 3 meters. The final measurements must be made utilizing the substitution method described above.

OUT OF BAND EMISSIONS - PART 22H

Work Order:	UTCF0005	**Date:**	02/17/14		
Project:	None	**Temperature:**	26.2 °C		
Job Site:	MN05	**Humidity:**	15.8% RH		
Serial Number:	2082	**Barometric Pres.:**	1010 mbar	**Tested by:**	Johnathan Lee
EUT:	AV-3G				
Configuration:	1				
Customer:	UTC Fire and Security				
Attendees:	Rene Christian				
EUT Power:	110VAC/60Hz				
Operating Mode:	See comments below				
Deviations:	None				
Comments:	Ferrite beads on input and output of 12V-to-5V switching power supply, ETIO changes plus wall bracket changes				

Test Specifications	**Test Method**
FCC 22H:2014	ANSI/TIA/EIA-603-C:2004

Run #	79	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	1673.983	1.0	79.0	Horz	PK	5.23E-08	-42.8	-13.0	-29.8	EUT Horizontal, Ch 189, EDGE
	1648.533	1.0	172.0	Horz	PK	3.93E-08	-44.1	-13.0	-31.1	EUT Horizontal, Ch 128, EDGE
	1648.500	1.0	43.0	Vert	PK	3.19E-08	-45.0	-13.0	-32.0	EUT On Side, Ch 128, EDGE
	2546.442	1.0	136.0	Vert	PK	2.40E-08	-46.2	-13.0	-33.2	EUT On Side, Ch 251, EDGE
	2546.200	1.0	177.0	Horz	PK	2.24E-08	-46.5	-13.0	-33.5	EUT Horizontal, Ch 251, GMSK
	2472.258	1.0	171.0	Horz	PK	2.21E-08	-46.6	-13.0	-33.6	EUT Horizontal, Ch 128, GMSK
	2546.408	1.0	180.0	Horz	PK	1.91E-08	-47.2	-13.0	-34.2	EUT Horizontal, Ch 251, EDGE

	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	2472.517	1.0	261.0	Vert	PK	1.80E-08	-47.4	-13.0	-34.4	EUT On Side, Ch 128, EDGE
	2510.908	1.0	133.0	Horz	PK	1.71E-08	-47.7	-13.0	-34.7	EUT Horizontal, Ch 189, EDGE
	2472.500	1.0	105.0	Horz	PK	1.64E-08	-47.8	-13.0	-34.8	EUT On Side, Ch 128, GMSK
	2472.750	1.0	254.0	Vert	PK	1.53E-08	-48.1	-13.0	-35.1	EUT On Side, Ch 128, GMSK
	2511.167	1.0	176.0	Horz	PK	1.52E-08	-48.2	-13.0	-35.2	EUT Horizontal, Ch 189, GMSK
	2510.775	1.0	250.0	Vert	PK	1.39E-08	-48.6	-13.0	-35.6	EUT On Side, Ch 189, GMSK
	2472.692	1.0	97.0	Horz	PK	1.33E-08	-48.7	-13.0	-35.7	EUT Vertical, Ch 128, GMSK
	2546.150	1.0	247.0	Vert	PK	1.26E-08	-49.0	-13.0	-36.0	EUT On Side, Ch 251, GMSK
	2510.808	1.0	140.0	Vert	PK	1.13E-08	-49.5	-13.0	-36.5	EUT On Side, Ch 189, EDGE
	1674.242	1.0	128.0	Horz	PK	8.28E-09	-50.8	-13.0	-37.8	EUT Horizontal, Ch 189, GMSK
	3366.342	3.2	86.0	Horz	PK	7.98E-09	-51.0	-13.0	-38.0	EUT On Side, Ch 4210, WCDMA R99
	2472.583	1.0	293.0	Horz	PK	7.85E-09	-51.0	-13.0	-38.0	EUT Horizontal, Ch 128, EDGE
	1697.567	1.0	318.0	Horz	PK	6.95E-09	-51.6	-13.0	-38.6	EUT Horizontal, Ch 251, EDGE
	3369.083	1.0	319.0	Vert	PK	6.66E-09	-51.8	-13.0	-38.8	EUT Vertical, Ch 4210, WCDMA R99
	3304.792	1.0	0.0	Horz	PK	6.23E-09	-52.1	-13.0	-39.1	EUT On Side, Ch 4133, WCDMA R99
	1697.567	1.0	314.0	Horz	PK	6.19E-09	-52.1	-13.0	-39.1	EUT Horizontal, Ch 251, GMSK
	3329.967	1.0	212.0	Horz	PK	6.10E-09	-52.1	-13.0	-39.1	EUT On Side, Ch 4162, WCDMA R99
	3329.317	1.0	22.0	Vert	PK	5.69E-09	-52.4	-13.0	-39.4	EUT Vertical, Ch 4162, WCDMA R99
	3297.050	1.0	32.0	Horz	PK	5.63E-09	-52.5	-13.0	-39.5	EUT Horizontal, Ch 128, GMSK
	3306.092	2.9	183.0	Vert	PK	5.19E-09	-52.9	-13.0	-39.9	EUT Vertical, Ch 4133, WCDMA R99
	1673.917	1.0	321.0	Vert	PK	5.11E-09	-52.9	-13.0	-39.9	EUT On Side, Ch 189, GMSK
	3346.833	1.0	171.0	Vert	PK	5.05E-09	-53.0	-13.0	-40.0	EUT On Side, Ch 189, EDGE
	1685.842	1.0	65.0	Vert	PK	4.57E-09	-53.4	-13.0	-40.4	EUT Vertical, Ch 4210, WCDMA R99
	3297.192	1.0	131.0	Horz	PK	4.37E-09	-53.6	-13.0	-40.6	EUT Horizontal, Ch 128, EDGE
	1685.775	1.1	207.0	Horz	PK	4.27E-09	-53.7	-13.0	-40.7	EUT On Side, Ch 4210, WCDMA R99
	2472.650	1.0	91.0	Vert	PK	4.12E-09	-53.8	-13.0	-40.8	EUT Horizontal, Ch 128, GMSK
	3295.708	1.0	131.0	Vert	PK	4.08E-09	-53.9	-13.0	-40.9	EUT On Side, Ch 128, GMSK
	3348.417	1.0	23.0	Vert	PK	4.02E-09	-54.0	-13.0	-41.0	EUT On Side, Ch 189, GMSK
	3346.250	1.0	27.0	Horz	PK	4.01E-09	-54.0	-13.0	-41.0	EUT Horizontal, Ch 189, EDGE
	3346.008	1.0	10.0	Horz	PK	4.01E-09	-54.0	-13.0	-41.0	EUT Horizontal, Ch 189, GMSK
	3392.933	1.0	312.0	Horz	PK	3.93E-09	-54.1	-13.0	-41.1	EUT Horizontal, Ch 251, EDGE
	3392.917	1.0	209.0	Horz	PK	3.84E-09	-54.2	-13.0	-41.2	EUT Horizontal, Ch 251, GMSK
	2494.817	1.0	86.0	Horz	PK	3.76E-09	-54.3	-13.0	-41.3	EUT On Side, Ch 4162, WCDMA R99
	3396.442	1.0	159.0	Vert	PK	3.59E-09	-54.4	-13.0	-41.4	EUT On Side, Ch 251, EDGE
	1697.758	1.0	149.0	Vert	PK	3.56E-09	-54.5	-13.0	-41.5	EUT On Side, Ch 251, EDGE
	3393.008	4.0	216.0	Vert	PK	3.42E-09	-54.7	-13.0	-41.7	EUT On Side, Ch 251, GMSK
	2527.333	1.0	69.0	Horz	PK	3.39E-09	-54.7	-13.0	-41.7	EUT On Side, Ch 4210, WCDMA R99
	2496.350	3.9	292.0	Vert	PK	3.35E-09	-54.7	-13.0	-41.7	EUT Vertical, Ch 4162, WCDMA R99
	3296.400	1.0	316.0	Vert	PK	3.32E-09	-54.8	-13.0	-41.8	EUT On Side, Ch 128, EDGE
	2479.000	1.0	86.0	Horz	PK	3.08E-09	-55.1	-13.0	-42.1	EUT On Side, Ch 4133, WCDMA R99
	2526.833	1.0	252.0	Vert	PK	3.02E-09	-55.2	-13.0	-42.2	EUT Vertical, Ch 4210, WCDMA R99
	2477.775	1.0	179.0	Vert	PK	3.00E-09	-55.2	-13.0	-42.2	EUT Vertical, Ch 4133, WCDMA R99
	1648.350	1.0	347.0	Horz	PK	2.91E-09	-55.4	-13.0	-42.4	EUT Horizontal, Ch 128, GMSK
	1648.575	1.0	204.0	Vert	PK	2.85E-09	-55.5	-13.0	-42.5	EUT On Side, Ch 128, GMSK
	1663.450	1.3	41.0	Vert	PK	2.67E-09	-55.7	-13.0	-42.7	EUT Vertical, Ch 4162, WCDMA R99
	1651.675	1.0	20.0	Horz	PK	2.66E-09	-55.8	-13.0	-42.8	EUT On Side, Ch 4133, WCDMA R99
	1697.933	1.0	185.0	Vert	PK	2.41E-09	-56.2	-13.0	-43.2	EUT On Side, Ch 251, GMSK
	1655.200	1.4	55.0	Vert	PK	2.22E-09	-56.5	-13.0	-43.5	EUT Vertical, Ch 4133, WCDMA R99
	1666.800	1.5	39.0	Horz	PK	2.08E-09	-56.8	-13.0	-43.8	EUT On Side, Ch 4162, WCDMA R99
	2471.800	1.0	348.0	Vert	PK	2.06E-09	-56.9	-13.0	-43.9	EUT Vertical, Ch 128, GMSK
	1673.917	1.0	300.0	Vert	PK	1.90E-09	-57.2	-13.0	-44.2	EUT On Side, Ch 189, EDGE
	1654.633	1.0	55.0	Vert	PK	1.68E-09	-57.7	-13.0	-44.7	EUT On Side, Ch 4133, WCDMA R99
	1655.283	1.0	42.0	Horz	PK	1.64E-09	-57.8	-13.0	-44.8	EUT Horizontal, Ch 4133, WCDMA R99
	1653.600	1.0	42.0	Vert	PK	1.57E-09	-58.0	-13.0	-45.0	EUT Horizontal, Ch 4133, WCDMA R99
	1654.558	1.0	300.0	Horz	PK	1.50E-09	-58.2	-13.0	-45.2	EUT Vertical, Ch 4133, WCDMA R99

OUT OF BAND EMISSIONS - PART 24E

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

Transmitting in modes indicated in comments

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

UTCF0005 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26000 MHz

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
Universal Radio Communication Tester	Rhode & Schwarz	CMU200	BSU	NCR	0 mo
1-2 GHz Notch Filter	K&L Microwave	3TNF-1000/2000-N/N	HGT	9/20/2012	24 mo
.5-1 GHz Notch Filter	K&L Microwave	3TNF-500/1000-N/N	HGS	9/20/2012	24 mo
Low Pass Filter	Micro-Tronics	LPM50004	HGK	5/31/2012	24 mo
High Pass Filter	Micro-Tronics	HPM50111	HGQ	6/1/2012	24 mo
MN05 1m Horn Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNO	8/16/2013	12 mo
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	9/26/2013	12 mo
MN05 Cables	N/A	18-26GHz Standard Gain Horn Cable	MNP	9/26/2013	12 mo
Antenna, Horn	ETS	3160-09	AHG	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	7/25/2013	12 mo
Antenna, Horn	ETS Lindgren	3160-08	AIQ	NCR	0 mo
MN05 Cables	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	8/12/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	5/20/2013	12 mo
Antenna, Horn	ETS	3160-07	AXP	NCR	0 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	8/12/2013	12 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	36 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAD	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/20/2013	12 mo
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2013	12 mo
Spectrum Analyzer	Agilent	N9010A	AFI	1/27/2013	24 mo
Comb Generator Emitter	ARC Technical Resources, Inc.	CGE01KIT01	TUC	NCR	0 mo
Comb Generator Radiated	KJR Enterprises	Harmonics	TCT	NCR	0 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 antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.10:2009). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is place on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

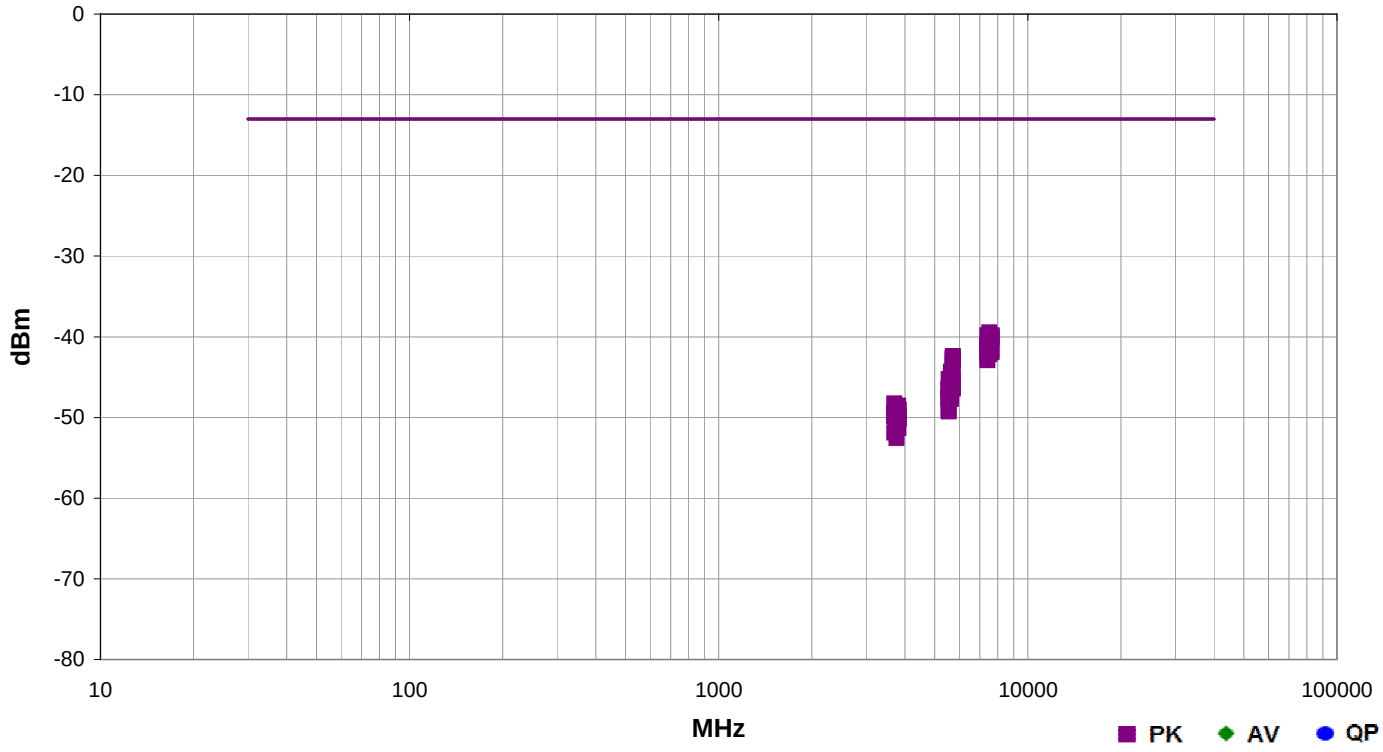
For the purposes of preliminary measurements, the field strength of the spurious emissions can be measured and compared with a 3 meter limit. The 3 meter limit was calculated to be 82.5 dBuV/m at 3 meters. The final measurements must be made utilizing the substitution method described above

OUT OF BAND EMISSIONS - PART 24E

Work Order:	UTCF0005	**Date:**	02/19/14		
Project:	None	**Temperature:**	22.8 °C		
Job Site:	MN05	**Humidity:**	17.5% RH		
Serial Number:	2082	**Barometric Pres.:**	1010.1 mbar	**Tested by:**	Johnathan Lee
EUT:	AV-3G				
Configuration:	1				
Customer:	UTC Fire and Security				
Attendees:	Rene Christian				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting in modes indicated in comments below				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 24E:2014	ANSI/TIA/EIA-603-C:2004

Run #	51	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	7520.092	1.0	326.0	Vert	PK	1.13E-07	-39.5	-13.0	-26.5	EUT Vertical, Ch 661, GMSK
	7399.858	1.0	42.0	Vert	PK	1.04E-07	-39.8	-13.0	-26.8	EUT Vertical, Ch 512, GMSK
	7641.583	1.8	236.0	Horz	PK	1.04E-07	-39.8	-13.0	-26.8	EUT Vertical, Ch 810, GMSK
	7517.633	2.3	262.0	Horz	PK	1.03E-07	-39.9	-13.0	-26.9	EUT Vertical, Ch 661, GMSK
	7630.508	1.0	182.0	Vert	PK	1.01E-07	-40.0	-13.0	-27.0	EUT On Side, Ch 9538, WCDMA R99
	7632.592	1.9	172.0	Horz	PK	1.00E-07	-40.0	-13.0	-27.0	EUT On Side, Ch 9538, WCDMA R99
	7521.550	1.0	72.0	Vert	PK	9.82E-08	-40.1	-13.0	-27.1	EUT On Side, Ch 9387, WCDMA R99

	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	7638.467	1.0	90.0	Vert	PK	9.77E-08	-40.1	-13.0	-27.1	EUT Vertical, Ch 810, GMSK
	7518.108	2.3	89.0	Horz	PK	9.61E-08	-40.2	-13.0	-27.2	EUT On Side, Ch 9387, WCDMA R99
	7400.792	1.0	238.0	Horz	PK	7.94E-08	-41.0	-13.0	-28.0	EUT Vertical, Ch 512, GMSK
	7412.058	1.0	236.0	Vert	PK	7.87E-08	-41.0	-13.0	-28.0	EUT On Side, Ch 9263, WCDMA R99
	7410.950	3.5	54.0	Horz	PK	7.86E-08	-41.0	-13.0	-28.0	EUT On Side, Ch 9263, WCDMA R99
	7640.667	1.3	290.0	Vert	PK	6.75E-08	-41.7	-13.0	-28.7	EUT Horizontal, Ch 810, EDGE
	7518.125	1.0	0.0	Horz	PK	6.50E-08	-41.9	-13.0	-28.9	EUT Horizontal, Ch 661, EDGE
	7641.225	1.0	99.0	Horz	PK	6.44E-08	-41.9	-13.0	-28.9	EUT Horizontal, Ch 810, EDGE
	7518.225	1.0	76.0	Vert	PK	6.06E-08	-42.2	-13.0	-29.2	EUT Horizontal, Ch 661, EDGE
	7398.617	1.0	185.0	Horz	PK	6.00E-08	-42.2	-13.0	-29.2	EUT Horizontal, Ch 512, EDGE
	5728.883	1.0	149.0	Horz	PK	5.75E-08	-42.4	-13.0	-29.4	EUT Vertical, Ch 810, GMSK
	5729.358	1.0	181.0	Horz	PK	5.49E-08	-42.6	-13.0	-29.6	EUT Horizontal, Ch 810, EDGE
	5729.567	1.0	144.0	Vert	PK	5.37E-08	-42.7	-13.0	-29.7	EUT On Side, Ch 810, GMSK
	5729.408	1.0	344.0	Horz	PK	5.37E-08	-42.7	-13.0	-29.7	EUT On Side, Ch 810, GMSK
	7401.033	1.0	335.0	Vert	PK	5.13E-08	-42.9	-13.0	-29.9	EUT Horizontal, Ch 512, EDGE
	5729.350	1.0	183.0	Vert	PK	5.01E-08	-43.0	-13.0	-30.0	EUT Vertical, Ch 810, GMSK
	5729.292	1.0	310.0	Horz	PK	4.67E-08	-43.3	-13.0	-30.3	EUT Horizontal, Ch 810, GMSK
	5640.308	1.0	149.0	Horz	PK	3.70E-08	-44.3	-13.0	-31.3	EUT Horizontal, Ch 661, EDGE
	5729.658	1.2	89.0	Vert	PK	3.02E-08	-45.2	-13.0	-32.2	EUT Horizontal, Ch 810, EDGE
	5550.592	1.0	289.0	Horz	PK	2.99E-08	-45.2	-13.0	-32.2	EUT Horizontal, Ch 512, EDGE
	5728.942	1.0	316.0	Vert	PK	2.88E-08	-45.4	-13.0	-32.4	EUT Horizontal, Ch 810, GMSK
	5639.450	1.0	97.0	Horz	PK	2.87E-08	-45.4	-13.0	-32.4	EUT Vertical, Ch 661, GMSK
	5639.950	1.0	356.0	Vert	PK	2.74E-08	-45.6	-13.0	-32.6	EUT Vertical, Ch 661, GMSK
	5723.458	1.0	239.0	Vert	PK	2.39E-08	-46.2	-13.0	-33.2	EUT On Side, Ch 9538, WCDMA R99
	5722.883	1.1	198.0	Horz	PK	2.28E-08	-46.4	-13.0	-33.4	EUT On Side, Ch 9538, WCDMA R99
	5551.650	1.0	172.0	Horz	PK	2.27E-08	-46.4	-13.0	-33.4	EUT Horizontal, Ch 512, EDGE
	5554.817	1.0	59.0	Vert	PK	2.22E-08	-46.5	-13.0	-33.5	EUT On Side, Ch 9263, WCDMA R99
	5550.292	2.1	77.0	Vert	PK	2.21E-08	-46.5	-13.0	-33.5	EUT Vertical, Ch 512, EDGE
	5640.083	1.0	313.0	Horz	PK	1.94E-08	-47.1	-13.0	-34.1	EUT On Side, Ch 9387, WCDMA R99
	5638.692	1.0	45.0	Vert	PK	1.89E-08	-47.2	-13.0	-34.2	EUT On Side, Ch 9387, WCDMA R99
	5550.650	1.0	110.0	Horz	PK	1.80E-08	-47.4	-13.0	-34.4	EUT Vertical, Ch 512, GMSK
	5550.775	1.0	175.0	Vert	PK	1.76E-08	-47.5	-13.0	-34.5	EUT Vertical, Ch 512, EDGE
	5549.442	1.0	278.0	Vert	PK	1.76E-08	-47.6	-13.0	-34.6	EUT Vertical, Ch 512, GMSK
	5639.667	1.0	191.0	Vert	PK	1.69E-08	-47.7	-13.0	-34.7	EUT Horizontal, Ch 661, EDGE
	5556.075	1.0	322.0	Horz	PK	1.69E-08	-47.7	-13.0	-34.7	EUT On Side, Ch 9263, WCDMA R99
	3702.417	1.0	149.0	Horz	PK	1.48E-08	-48.3	-13.0	-35.3	EUT On Side, Ch 9263, WCDMA R99
	3812.942	1.0	130.0	Horz	PK	1.39E-08	-48.6	-13.0	-35.6	EUT On Side, Ch 9538, WCDMA R99
	5551.400	1.3	199.0	Vert	PK	1.28E-08	-48.9	-13.0	-35.9	EUT On Side, Ch 512, EDGE
	3817.333	1.0	42.0	Vert	PK	1.25E-08	-49.0	-13.0	-36.0	EUT On Side, Ch 9538, WCDMA R99
	3819.492	1.0	109.0	Horz	PK	1.22E-08	-49.1	-13.0	-36.1	EUT Vertical, Ch 810, GMSK
	3813.808	1.0	146.0	Vert	PK	1.21E-08	-49.2	-13.0	-36.2	EUT Vertical, Ch 9538, WCDMA R99
	5549.017	1.0	145.0	Horz	PK	1.19E-08	-49.3	-13.0	-36.3	EUT On Side, Ch 512, EDGE
	3758.075	2.3	163.0	Vert	PK	1.16E-08	-49.4	-13.0	-36.4	EUT On Side, Ch 9387, WCDMA R99
	3700.658	1.0	334.0	Vert	PK	1.12E-08	-49.5	-13.0	-36.5	EUT Vertical, Ch 512, GMSK
	3700.300	1.0	97.0	Horz	PK	1.12E-08	-49.5	-13.0	-36.5	EUT Vertical, Ch 512, GMSK
	3700.333	1.3	3.0	Horz	PK	1.05E-08	-49.8	-13.0	-36.8	EUT Horizontal, Ch 512, EDGE
	3818.525	1.0	164.0	Vert	PK	1.04E-08	-49.8	-13.0	-36.8	EUT Vertical, Ch 810, GMSK
	3702.500	1.0	161.0	Vert	PK	1.03E-08	-49.9	-13.0	-36.9	EUT On Side, Ch 9263, WCDMA R99
	3814.083	1.0	114.0	Vert	PK	1.01E-08	-50.0	-13.0	-37.0	EUT Horizontal, Ch 9538, WCDMA R99
	3816.433	1.0	306.0	Horz	PK	9.67E-09	-50.1	-13.0	-37.1	EUT Vertical, Ch 9538, WCDMA R99
	3818.583	1.0	351.0	Horz	PK	9.47E-09	-50.2	-13.0	-37.2	EUT Horizontal, Ch 810, EDGE
	3813.483	1.0	92.0	Horz	PK	9.43E-09	-50.3	-13.0	-37.3	EUT Horizontal, Ch 9538, WCDMA R99
	3762.400	2.2	140.0	Horz	PK	8.85E-09	-50.5	-13.0	-37.5	EUT On Side, Ch 9387, WCDMA R99
	3759.817	1.0	301.0	Vert	PK	8.82E-09	-50.5	-13.0	-37.5	EUT Vertical, Ch 661, GMSK
	3762.000	1.0	174.0	Horz	PK	8.45E-09	-50.7	-13.0	-37.7	EUT Vertical, Ch 661, GMSK
	3820.275	3.9	235.0	Vert	PK	7.36E-09	-51.3	-13.0	-38.3	EUT Horizontal, Ch 810, EDGE
	3758.200	1.0	237.0	Vert	PK	6.52E-09	-51.9	-13.0	-38.9	EUT Horizontal, Ch 661, EDGE
	3700.300	1.0	211.0	Vert	PK	6.46E-09	-51.9	-13.0	-38.9	EUT Horizontal, Ch 512, EDGE
	3759.850	1.0	169.0	Horz	PK	5.56E-09	-52.5	-13.0	-39.5	EUT Horizontal, Ch 661, EDGE

OUT OF BAND EMISSIONS - PART 27

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

Transmitting in modes indicated in comments

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

UTCF0005 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26000 MHz

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
Universal Radio Communication Tester	Rhode & Schwarz	CMU200	BSU	NCR	0 mo
1-2 GHz Notch Filter	K&L Microwave	3TNF-1000/2000-N/N	HGT	9/20/2012	24 mo
.5-1 GHz Notch Filter	K&L Microwave	3TNF-500/1000-N/N	HGS	9/20/2012	24 mo
Low Pass Filter	Micro-Tronics	LPM50004	HGK	5/31/2012	24 mo
High Pass Filter	Micro-Tronics	HPM50111	HGQ	6/1/2012	24 mo
MN05 1m Horn Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNO	8/16/2013	12 mo
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	9/26/2013	12 mo
MN05 Cables	N/A	18-26GHz Standard Gain Horn Cable	MNP	9/26/2013	12 mo
Antenna, Horn	ETS	3160-09	AHG	NCR	0 mo
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	7/25/2013	12 mo
Antenna, Horn	ETS Lindgren	3160-08	AIQ	NCR	0 mo
MN05 Cables	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	8/12/2013	12 mo
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	5/20/2013	12 mo
Antenna, Horn	ETS	3160-07	AXP	NCR	0 mo
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	8/12/2013	12 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	36 mo
Pre-Amplifier	Miteq	AM-1616-1000	PAD	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/20/2013	12 mo
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2013	12 mo
Spectrum Analyzer	Agilent	N9010A	AFI	1/27/2013	24 mo
Comb Generator Emitter	ARC Technical Resources, Inc.	CGE01KIT01	TUC	NCR	0 mo
Comb Generator Radiated	KJR Enterprises	Harmonics	TCT	NCR	0 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 antenna to be used with the EUT was tested for final measurements. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. For each configuration, the spectrum was scanned throughout the specified range. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.10:2009). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

For licensed transmitters, the FCC references TIA/EIA-603 as the measurement procedure standard. TIA/EIA-603 Section 2.2.12 describes a method for measuring radiated spurious emissions that utilizes an antenna substitution method:

At an approved test site, the transmitter is place on a remotely controlled turntable, and the measurement antenna is placed 3 meters from the transmitter. The turntable azimuth is varied to maximize the level of spurious emissions. The height of the measurement antenna is also varied from 1 to 4 meters. The amplitude and frequency of the highest emissions are noted. The transmitter is then replaced with a ½ wave dipole that is successively tuned to each of the highest spurious emissions for emissions below 1 GHz, and a horn antenna for emissions above 1 GHz. A signal generator is connected to the dipole (horn antenna for frequencies above 1 GHz), and its output is adjusted to match the level previously noted for each frequency. The output of the signal generator is recorded, and by factoring in the cable loss to the antenna and its gain; the power (dBm) into an ideal ½ wave dipole antenna is determined for each radiated spurious emission.

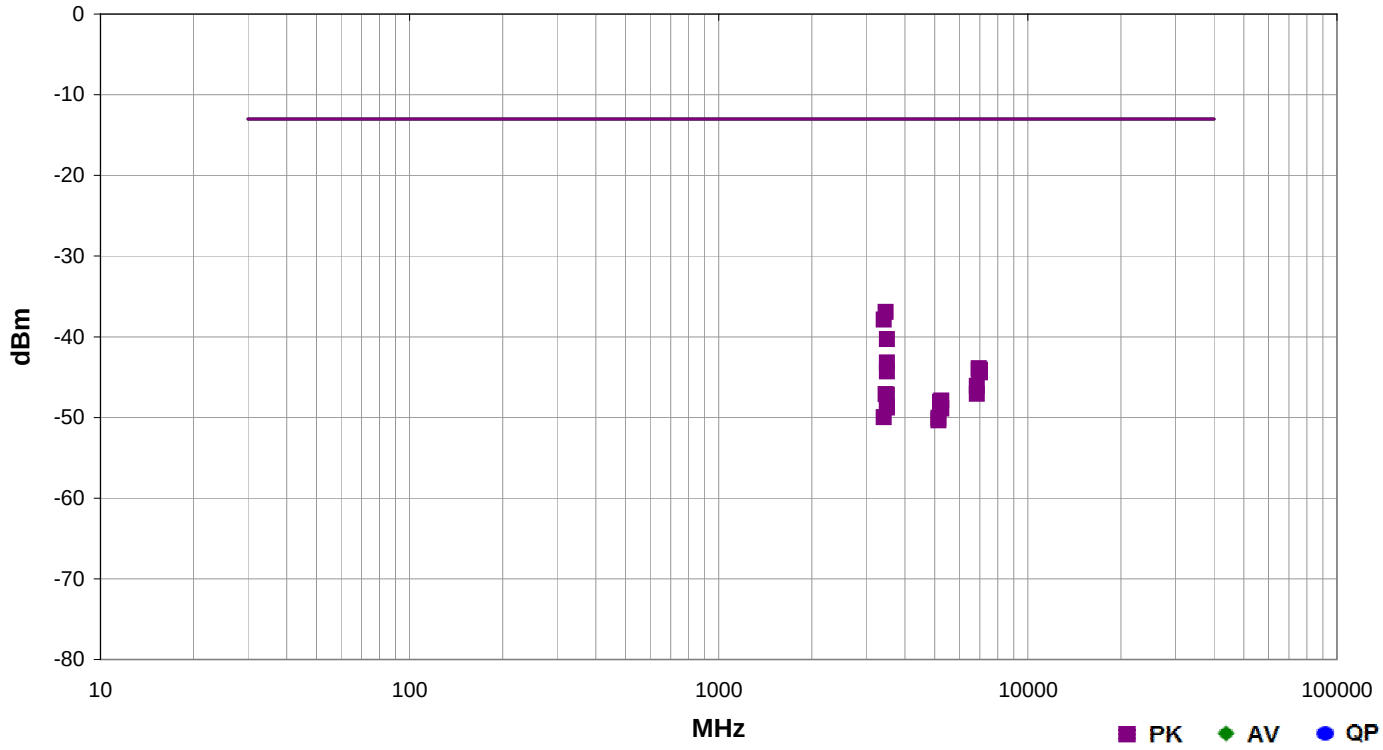
For the purposes of preliminary measurements, the field strength of the spurious emissions can be measured and compared with a 3 meter limit. The 3 meter limit was calculated to be 82.5 dBuV/m at 3 meters. The final measurements must be made utilizing the substitution method described above

OUT OF BAND EMISSIONS - PART 27

Work Order:	UTCF0005	**Date:**	02/19/14		
Project:	None	**Temperature:**	22.8 °C		
Job Site:	MN05	**Humidity:**	17.5% RH		
Serial Number:	2082	**Barometric Pres.:**	1010.1 mbar	**Tested by:**	Johnathan Lee
EUT:	AV-3G				
Configuration:	1				
Customer:	UTC Fire and Security				
Attendees:	Rene Christian				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting in modes indicated in comments below				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 27:2014	ANSI/TIA/EIA-603-C:2004

Run #	51	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	3423.258	1.0	112.0	Horz	PK	1.64E-07	-37.9	-13.0	-24.9	EUT Horizontal, Ch 1313, WCDMA R99
	6849.717	1.0	338.0	Horz	PK	1.95E-08	-47.1	-13.0	-34.1	EUT Horizontal, Ch 1313, WCDMA R99
	5138.758	1.0	79.0	Horz	PK	9.86E-09	-50.1	-13.0	-37.1	EUT Horizontal, Ch 1313, WCDMA R99
	3469.092	1.0	111.0	Horz	PK	2.03E-07	-36.9	-13.0	-23.9	EUT Horizontal, Ch 1412, WCDMA R99
	6940.092	1.0	343.0	Horz	PK	3.90E-08	-44.1	-13.0	-31.1	EUT Horizontal, Ch 1412, WCDMA R99
	5203.008	3.1	84.0	Horz	PK	1.39E-08	-48.6	-13.0	-35.6	EUT Horizontal, Ch 1412, WCDMA R99
	3507.558	1.0	110.0	Horz	PK	9.33E-08	-40.3	-13.0	-27.3	EUT Horizontal, Ch 1512, WCDMA R99

	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	7012.900	1.0	72.0	Horz	PK	3.89E-08	-44.1	-13.0	-31.1	EUT Horizontal, Ch 1512, WCDMA R99
	5255.958	1.0	138.0	Horz	PK	1.61E-08	-47.9	-13.0	-34.9	EUT Horizontal, Ch 1512, WCDMA R99
	3507.567	1.0	146.0	Vert	PK	1.32E-08	-48.8	-13.0	-35.8	EUT Horizontal, Ch 1512, WCDMA R99
	6939.425	1.0	111.0	Vert	PK	4.08E-08	-43.9	-13.0	-30.9	EUT On Side, Ch 1412, WCDMA R99
	3469.208	1.0	117.0	Vert	PK	1.94E-08	-47.1	-13.0	-34.1	EUT On Side, Ch 1412, WCDMA R99
	5205.575	1.0	133.0	Vert	PK	1.56E-08	-48.1	-13.0	-35.1	EUT On Side, Ch 1412, WCDMA R99
	3506.758	1.0	33.0	Vert	PK	4.78E-08	-43.2	-13.0	-30.2	EUT On Side, Ch 1512, WCDMA R99
	3506.675	1.0	29.0	Horz	PK	3.71E-08	-44.3	-13.0	-31.3	EUT On Side, Ch 1512, WCDMA R99
	7010.017	1.0	141.0	Vert	PK	3.61E-08	-44.4	-13.0	-31.4	EUT On Side, Ch 1512, WCDMA R99
	5257.117	1.0	77.0	Vert	PK	1.28E-08	-48.9	-13.0	-35.9	EUT On Side, Ch 1512, WCDMA R99
	6849.108	1.6	294.0	Vert	PK	2.46E-08	-46.1	-13.0	-33.1	EUT Vertical, Ch 1313, WCDMA R99
	3422.692	1.1	145.0	Vert	PK	1.01E-08	-50.0	-13.0	-37.0	EUT Vertical, Ch 1313, WCDMA R99
	5139.117	1.0	30.0	Vert	PK	9.20E-09	-50.4	-13.0	-37.4	EUT Vertical, Ch 1313, WCDMA R99
	3507.433	1.0	109.0	Vert	PK	1.90E-08	-47.2	-13.0	-34.2	EUT Vertical, Ch 1512, WCDMA R99
	3502.733	1.0	69.0	Horz	PK	1.37E-08	-48.6	-13.0	-35.6	EUT Vertical, Ch 1512, WCDMA R99

EFFECTIVE RADIATED POWER (ERP) - PART 22H

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

Transmitting in modes indicated in comments

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

UTCF0005 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	1000 MHz

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
Antenna, Horn	ETS	3115	AJA	5/13/2011	36 mo
Universal Radio Communication Tester	Rhode & Schwarz	CMU200	BSU	NCR	0 mo
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36 mo
Power Sensor	Agilent	N8481A	SQN	8/27/2012	24 mo
Power Meter	Agilent	N1913A	SQL	8/27/2012	24 mo
Antenna, Dipole	EMCO	3121C-DB4	ADI	12/21/2012	36 mo
Attenuator, 20 dB, 'SMA'	SM Electronics	SA6-20	REO	5/20/2013	12 mo
MN05 Cables	ESM Cable Corp.	Bilog Cables	MNH	5/20/2013	12 mo
Antenna, Bilog	Teseq	CBL 6141B	AYD	12/17/2013	12 mo
Spectrum Analyzer	Agilent	N9010A	AFI	1/27/2013	24 mo
Comb Generator Emitter	ARC Technical Resources, Inc.	CGE01KIT01	TUC	NCR	0 mo
Comb Generator Radiated	KJR Enterprises	Harmonics	TCT	NCR	0 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

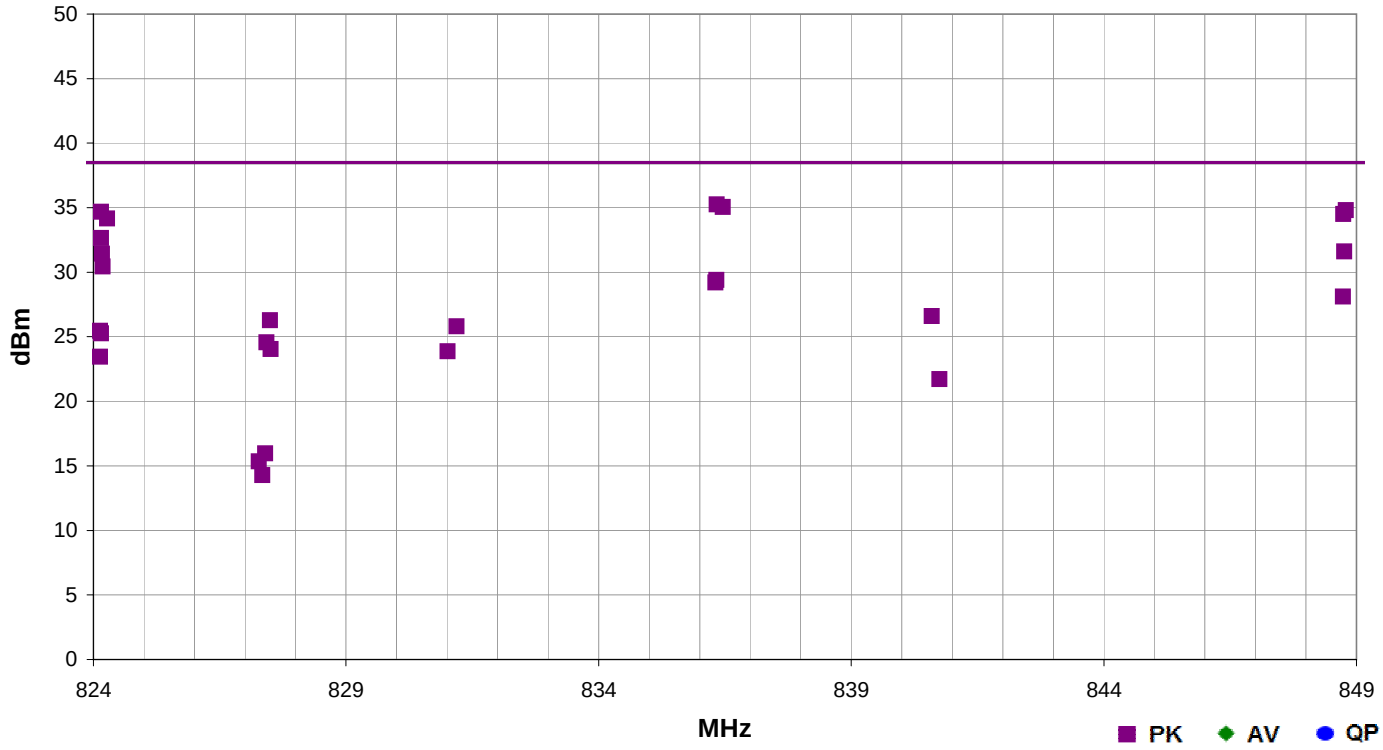
The fundamental emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height (1-4 meters) and polarizationThe amplitude and frequency of the highest emission were noted. The EUT was then replaced with a ½ wave dipole that was successively tuned to the highest emission. A signal generator was connected to the dipole, and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded. The signal generator, amplifier, and cable were then connected to an analyzer and the power output was recorded. By factoring in the dipole antenna gain (dBi), the effective radiated power for the maximum fundamental emission was determined. The ERP value was obtained from taking the value in EIRP – 2.15.

EFFECTIVE RADIATED POWER (ERP) - PART 22H

Work Order:	UTCF0005	**Date:**	02/21/14		
Project:	None	**Temperature:**	24.1 °C		
Job Site:	MN05	**Humidity:**	20.6% RH		
Serial Number:	2082	**Barometric Pres.:**	982 mbar	**Tested by:**	Johnathan Lee
EUT:	AV-3G				
Configuration:	1				
Customer:	UTC Fire and Security				
Attendees:	Rene Christian				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting in modes indicated in comments below				
Deviations:	None				
Comments:	None				

Test Specifications	**Test Method**
FCC 22H:2014	ANSI/TIA/EIA-603-C:2004

Run #	131	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	836.340	1.1	187.0	Vert	PK	3.34E+00	35.2	38.5	-3.3	EUT Vertical, Ch 189, GMSK
	836.460	1.2	189.0	Vert	PK	3.19E+00	35.0	38.5	-3.5	EUT Vertical, Ch 189, EDGE
	848.790	1.1	186.0	Vert	PK	3.02E+00	34.8	38.5	-3.7	EUT Vertical, Ch 251, GMSK
	824.155	1.2	190.0	Vert	PK	2.93E+00	34.7	38.5	-3.8	EUT Vertical, Ch 128, GMSK
	848.740	1.1	187.0	Vert	PK	2.82E+00	34.5	38.5	-4.0	EUT Vertical, Ch 251. EDGE
	824.275	1.1	193.0	Vert	PK	2.61E+00	34.2	38.5	-4.3	EUT Vertical, Ch 128. EDGE
	824.150	1.0	228.0	Horz	PK	1.84E+00	32.6	38.5	-5.9	EUT Horizontal, Ch 128, GMSK

	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	848.760	1.5	218.0	Horz	PK	1.45E+00	31.6	38.5	-6.9	EUT Horizontal, Ch 251, GMSK
	824.170	1.0	305.0	Horz	PK	1.39E+00	31.4	38.5	-7.1	EUT On Side, Ch 128, GMSK
	824.185	1.0	174.0	Horz	PK	1.11E+00	30.4	38.5	-8.1	EUT Horizontal, Ch 128. EDGE
	836.335	1.0	178.0	Horz	PK	8.69E-01	29.4	38.5	-9.1	EUT Horizontal, Ch 189, EDGE
	836.310	1.0	177.0	Horz	PK	8.30E-01	29.2	38.5	-9.3	EUT Horizontal, Ch 189, GMSK
	848.735	1.0	175.0	Horz	PK	6.47E-01	28.1	38.5	-10.4	EUT Horizontal, Ch 251. EDGE
	840.595	1.2	185.0	Vert	PK	4.58E-01	26.6	38.5	-11.9	EUT Vertical, Ch 4210, WCDMA R99
	827.495	1.1	187.0	Vert	PK	4.24E-01	26.3	38.5	-12.2	EUT Vertical, Ch 4133, WCDMA R99
	831.190	1.2	188.0	Vert	PK	3.80E-01	25.8	38.5	-12.7	EUT Vertical, Ch 4162, WCDMA R99
	824.130	1.0	248.0	Vert	PK	3.52E-01	25.5	38.5	-13.0	EUT Horizontal, Ch 128, GMSK
	824.150	1.0	58.0	Vert	PK	3.37E-01	25.3	38.5	-13.2	EUT On Side, Ch 128, GMSK
	827.425	1.0	155.0	Horz	PK	2.86E-01	24.6	38.5	-13.9	EUT On Side, Ch 4133, WCDMA R99
	827.510	1.5	223.0	Horz	PK	2.54E-01	24.0	38.5	-14.5	EUT Horizontal, Ch 4133, WCDMA R99
	831.010	1.0	156.0	Horz	PK	2.43E-01	23.9	38.5	-14.6	EUT On Side, Ch 4162, WCDMA R99
	824.130	1.0	105.0	Horz	PK	2.21E-01	23.4	38.5	-15.1	EUT Vertical, Ch 128, GMSK
	840.750	1.0	274.0	Horz	PK	1.49E-01	21.7	38.5	-16.8	EUT On Side, Ch 4210, WCDMA R99
	827.400	1.0	331.0	Vert	PK	3.95E-02	16.0	38.5	-22.5	EUT Horizontal, Ch 4133, WCDMA R99
	827.275	1.0	106.0	Horz	PK	3.42E-02	15.3	38.5	-23.2	EUT Vertical, Ch 4133, WCDMA R99
	827.345	1.0	166.0	Vert	PK	2.67E-02	14.3	38.5	-24.2	EUT On Side, Ch 4133, WCDMA R99

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - PART 24E

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

Transmitting in modes indicated in comments

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

UTCF0005 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	1200 MHz	Stop Frequency	8200 MHz

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
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36 mo
Power Sensor	Agilent	N8481A	SQN	8/27/2012	24 mo
Power Meter	Agilent	N1913A	SQL	8/27/2012	24 mo
Antenna, Horn	ETS	3115	AJA	5/13/2011	36 mo
Universal Radio Communication Tester	Rhode & Schwarz	CMU200	BSU	NCR	0 mo
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	8/12/2013	12 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	36 mo
Spectrum Analyzer	Agilent	N9010A	AFI	1/27/2013	24 mo
Comb Generator Emitter	ARC Technical Resources, Inc.	CGE01KIT01	TUC	NCR	0 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

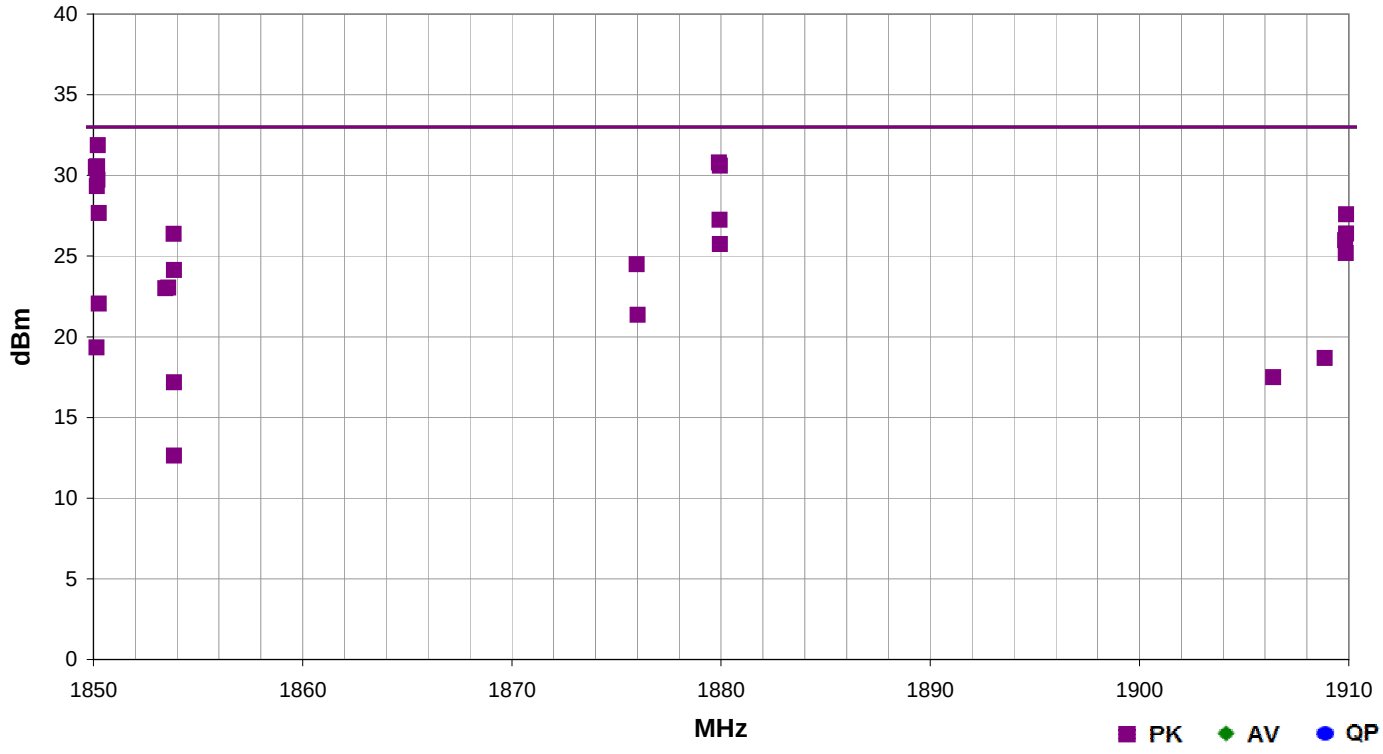
The fundamental emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height (1-4 meters) and polarization and manipulating the EUT antenna in 3 orthogonal planes The antennas to be used with the EUT were tested. The EUT was transmitting while set at the lowest channel, a middle channel, and the highest channel available. The amplitude and frequency were noted. The EUT was then replaced with a horn antenna. A signal generator was connected to the horn antenna and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the gain (dBi) of the horn antenna the effective radiated power for each emission was determined.

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - PART 24E

Work Order:	UTCF0005	**Date:**	03/04/14		
Project:	None	**Temperature:**	24.1 °C		
Job Site:	MN05	**Humidity:**	6.3% RH		
Serial Number:	2082	**Barometric Pres.:**	1035.7 mbar	**Tested by:**	Johnathan Lee
EUT:	AV-3G				
Configuration:	1				
Customer:	UTC Fire and Security				
Attendees:	Rene Christian				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting in modes indicated in comments below				
Deviations:	None				
Comments:	Ferrite beads on input and output of 12V-to-5V switching power supply, ETIO changes plus wall bracket changes				

Test Specifications	**Test Method**
FCC 24E:2014	ANSI/TIA/EIA-603-C:2004

Run #	166	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	1850.217	1.0	0.0	Vert	PK	1.53E+00	31.9	33.0	-1.1	EUT Vertical, Ch 512, EDGE
	1879.908	1.0	11.0	Vert	PK	1.20E+00	30.8	33.0	-2.2	EUT Vertical, Ch 661, EDGE
	1879.942	1.0	325.0	Vert	PK	1.15E+00	30.6	33.0	-2.4	EUT Vertical, Ch 661, GMSK
	1850.183	1.0	356.0	Vert	PK	1.14E+00	30.6	33.0	-2.4	EUT Vertical, Ch 512, GMSK
	1850.125	1.0	214.0	Horz	PK	1.13E+00	30.5	33.0	-2.5	EUT Horizontal, Ch 512, EDGE
	1850.192	1.0	27.0	Horz	PK	9.40E-01	29.7	33.0	-3.3	EUT On Side, Ch 512, EDGE
	1850.167	1.0	288.0	Horz	PK	8.57E-01	29.3	33.0	-3.7	EUT Horizontal, Ch 512, GMSK

	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	1850.267	1.1	96.0	Vert	PK	5.83E-01	27.7	33.0	-5.3	EUT Horizontal, Ch 512, EDGE
	1909.875	1.0	269.0	Horz	PK	5.74E-01	27.6	33.0	-5.4	EUT Horizontal, Ch 810, GMSK
	1879.933	1.0	273.0	Horz	PK	5.31E-01	27.3	33.0	-5.8	EUT Horizontal, Ch 661, GMSK
	1909.883	1.0	308.0	Horz	PK	4.36E-01	26.4	33.0	-6.6	EUT Horizontal, Ch 810, EDGE
	1853.833	1.0	308.0	Vert	PK	4.34E-01	26.4	33.0	-6.6	EUT Vertical, Ch 9263, WCDMA R99
	1909.825	1.0	17.0	Vert	PK	3.96E-01	26.0	33.0	-7.0	EUT Vertical, Ch 810, GMSK
	1879.950	1.0	305.0	Horz	PK	3.76E-01	25.8	33.0	-7.2	EUT Horizontal, Ch 661, EDGE
	1909.858	1.0	39.0	Vert	PK	3.30E-01	25.2	33.0	-7.8	EUT Vertical, Ch 810, EDGE
	1875.967	1.0	294.0	Vert	PK	2.81E-01	24.5	33.0	-8.5	EUT Vertical, Ch 9387, WCDMA R99
	1853.850	1.0	20.0	Horz	PK	2.59E-01	24.1	33.0	-8.9	EUT On Side, Ch 9263, WCDMA R99
	1853.575	1.0	341.0	Horz	PK	2.01E-01	23.0	33.0	-10.0	EUT Horizontal, Ch 9263, WCDMA R99
	1853.442	1.1	339.0	Vert	PK	2.00E-01	23.0	33.0	-10.0	EUT On Side, Ch 9263, WCDMA R99
	1850.267	1.0	38.0	Vert	PK	1.61E-01	22.1	33.0	-10.9	EUT On Side, Ch 512, EDGE
	1876.017	1.0	219.0	Horz	PK	1.36E-01	21.4	33.0	-11.6	EUT On Side, Ch 9387, WCDMA R99
	1850.158	1.0	314.0	Horz	PK	8.57E-02	19.3	33.0	-13.7	EUT Vertical, Ch 512, EDGE
	1908.858	1.0	262.0	Vert	PK	7.38E-02	18.7	33.0	-14.3	EUT Vertical, Ch 9538, WCDMA R99
	1906.392	1.0	231.0	Horz	PK	5.61E-02	17.5	33.0	-15.5	EUT On SIde, Ch 9538, WCDMA R99
	1853.858	2.1	312.0	Vert	PK	5.21E-02	17.2	33.0	-15.8	EUT Horizontal, Ch 9263, WCDMA R99
	1853.850	1.1	16.0	Horz	PK	1.84E-02	12.6	33.0	-20.4	EUT Vertical, Ch 9263, WCDMA R99

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - PART 27

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

Transmitting in modes indicated in comments

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

UTCF0005 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	1200 MHz	Stop Frequency	8200 MHz

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
Signal Generator MXG	Agilent	N5183A	TIK	6/7/2012	36 mo
Power Sensor	Agilent	N8481A	SQN	8/27/2012	24 mo
Power Meter	Agilent	N1913A	SQL	8/27/2012	24 mo
Antenna, Horn	ETS	3115	AJA	5/13/2011	36 mo
Universal Radio Communication Tester	Rhode & Schwarz	CMU200	BSU	NCR	0 mo
MN05 Cables	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	8/12/2013	12 mo
Antenna, Horn (DRG)	ETS Lindgren	3115	AIP	6/29/2011	36 mo
Spectrum Analyzer	Agilent	N9010A	AFI	1/27/2013	24 mo
Comb Generator Emitter	ARC Technical Resources, Inc.	CGE01KIT01	TUC	NCR	0 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

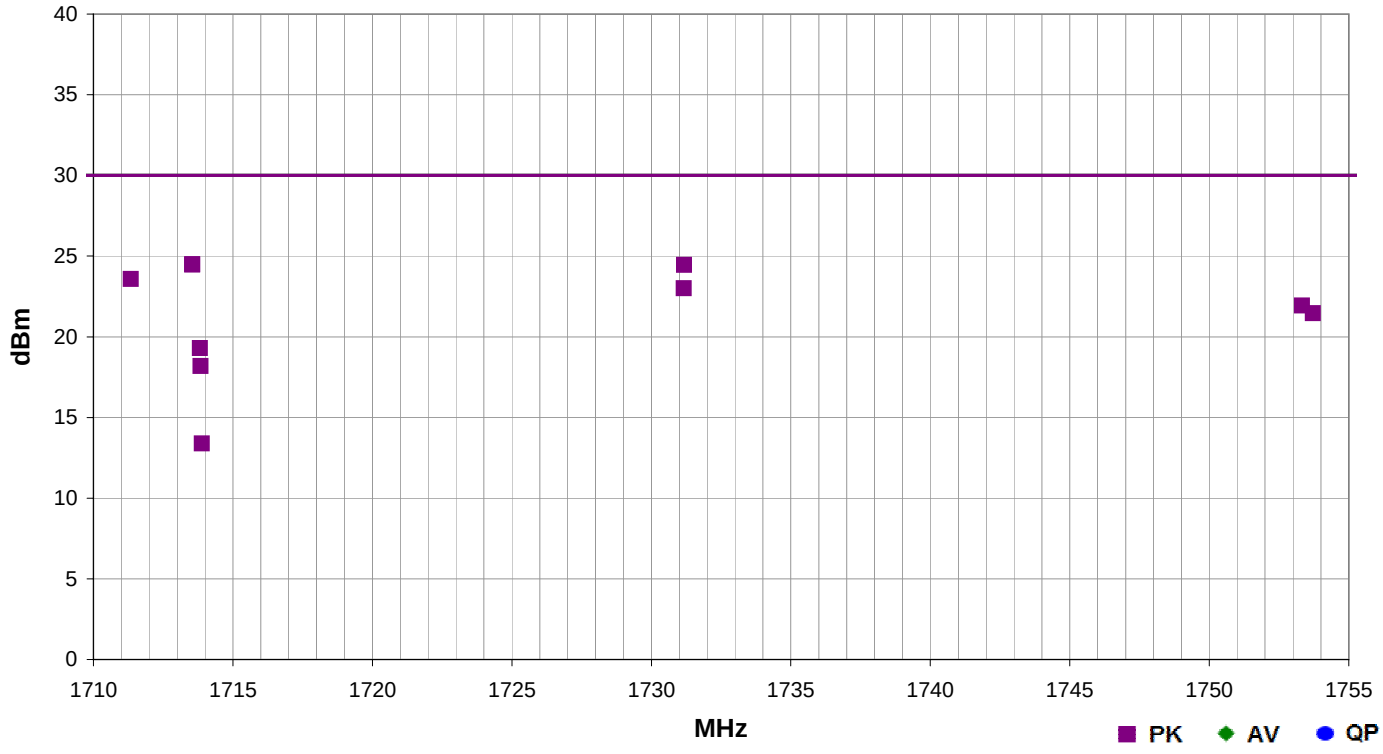
The fundamental emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height (1-4 meters) and polarization and manipulating the EUT antenna in 3 orthogonal planes The antennas to be used with the EUT were tested. The EUT was transmitting while set at the lowest channel, a middle channel, and the highest channel available. The amplitude and frequency were noted. The EUT was then replaced with a horn antenna. A signal generator was connected to the horn antenna and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the gain (dBi) of the horn antenna the effective radiated power for each emission was determined.

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP) - PART 27

Work Order:	UTCF0005	**Date:**	03/04/14		
Project:	None	**Temperature:**	24.1 °C		
Job Site:	MN05	**Humidity:**	6.3% RH		
Serial Number:	2082	**Barometric Pres.:**	1035.7 mbar	**Tested by:**	Johnathan Lee
EUT:	AV-3G				
Configuration:	1				
Customer:	UTC Fire and Security				
Attendees:	Rene Christian				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting in modes indicated in comments below				
Deviations:	None				
Comments:	Ferrite beads on input and output of 12V-to-5V switching power supply, ETIO changes plus wall bracket changes				

Test Specifications	**Test Method**
FCC 27:2014	ANSI/TIA/EIA-603-C:2004

Run #	166	**Test Distance (m)**	3	**Antenna Height(s)**	1-4m	**Results**	Pass



	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	1713.542	1.0	20.0	Horz	PK	2.81E-01	24.5	30.0	-5.5	EUT On Side,Ch 1313, WCDMA R99
	1713.542	1.0	20.0	Vert	PK	2.81E-01	24.5	30.0	-5.5	EUT Vertical, Ch 1313, WCDMA R99
	1731.175	1.0	337.0	Vert	PK	2.79E-01	24.5	30.0	-5.5	EUT Vertical, Ch 1412, WCDMA R99
	1711.342	1.0	225.0	Horz	PK	2.28E-01	23.6	30.0	-6.4	EUT Horizontal, Ch 1313, WCDMA R99
	1731.158	1.0	218.0	Horz	PK	2.00E-01	23.0	30.0	-7.0	EUT Horizontal, Ch 1412, WCDMA R99
	1753.325	1.0	246.0	Vert	PK	1.56E-01	21.9	30.0	-8.1	EUT Vertical, Ch 1512, WCDMA R99
	1753.717	1.0	222.0	Horz	PK	1.40E-01	21.5	30.0	-8.6	EUT Horizontal, Ch 1512, WCDMA R99

	Freq (MHz)	Antenna Height (meters)	Azimuth (degrees)	Polarity/ Transducer Type	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
	1713.825	2.1	316.0	Vert	PK	8.49E-02	19.3	30.0	-10.7	EUT On Side,Ch 1313, WCDMA R99
	1713.842	2.5	254.0	Vert	PK	6.59E-02	18.2	30.0	-11.8	EUT Horizontal, Ch 1313, WCDMA R99
	1713.883	1.0	298.0	Horz	PK	2.18E-02	13.4	30.0	-16.6	EUT Vertical, Ch 1313, WCDMA R99