5 Radiated Emissions – Intentional Radiators: Output Power - Fundamental & Harmonics of the Fundamental – FCC 15.247(b)(2)

5.1 Method

The test methods used comply with ANSI C63.10. Unless otherwise stated no deviations were made from FCC CFR47 15.247.

This testing was performed at Intertek Denver, located at 1795 Dogwood St. Suite 200, Louisville, CO 80027.

5.2 Test Equipment Used:

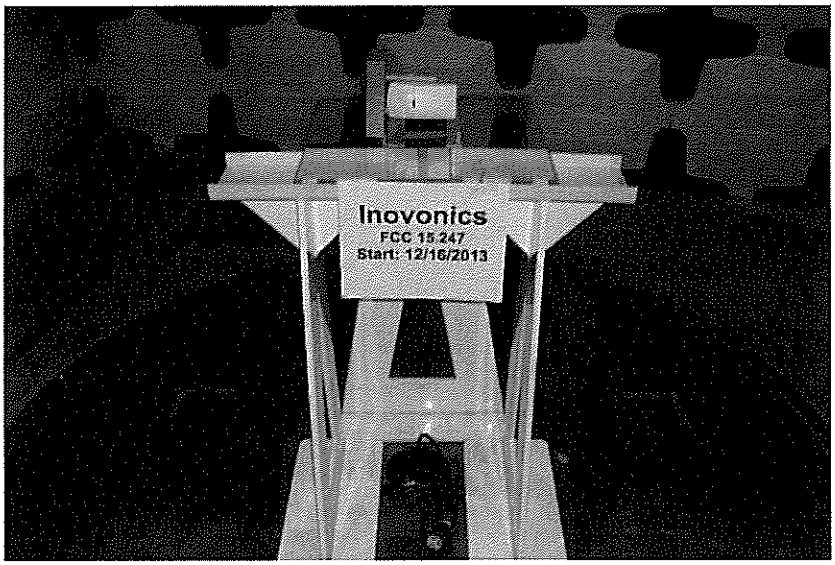
Asset ID	Description	Manufacture	Model	Serial	Cal Date	Cal Due
DEN-073	EMI Receiver	ROHDE & SCHWARZ	ESU 26	100265	01/23/2013	01/23/2014
18912	9 kHz- 1.3GHz Pre Amp	Hewlett-Packard	8447F	3113A05545	06/07/2013	06/07/2014
19937	Bilog Antenna 30MHz - 6GHz	Sunol Sciences	JB6	A050707-2	03/20/2013	03/20/2014
18906	RF Pre-Amp (1-4GHz)	Mini-Circuits Lab	ZHL-42	N052792-2	06/10/2013	06/10/2014
DEN-032	4-18 GHz LNA	NARDA	DBL-0618N615	031	03/07/2013	03/07/2014
18887	Horn Antenna 1-18GHz	EMCO	3115	9205-3886	03/19/2013	03/19/2014
DEN-060	1GHz low Pass Filter	Mini-Circuits	VHF-1300+	3 1022	12/19/2013	12/19/2014
SW-6	Software for Radiated and Conducted emissions.	Intertek	OATS vba	V. 1.0	VBU	VBU

5.3 Results:

The sample tested was found to Comply.

5.4 Setup Photographs:

Test Setup – Tx Fundamental Output & Harmonics of Fundamental (Front View)



(Rear View)

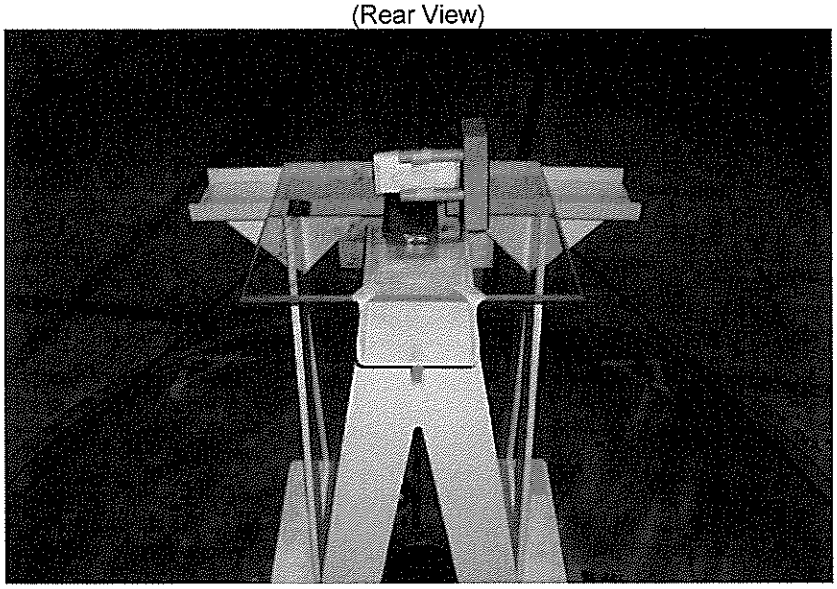
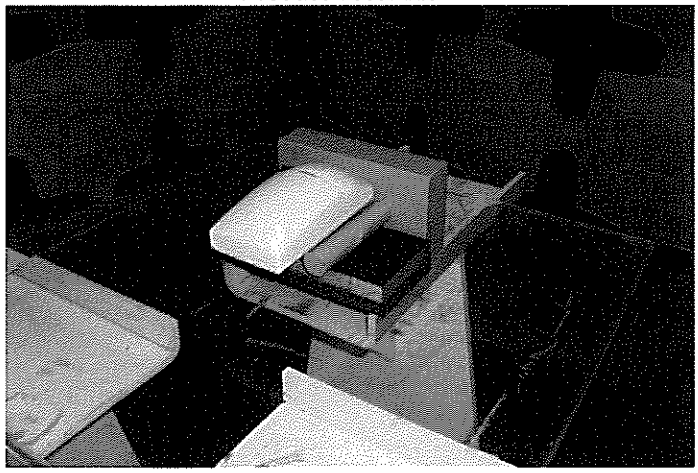
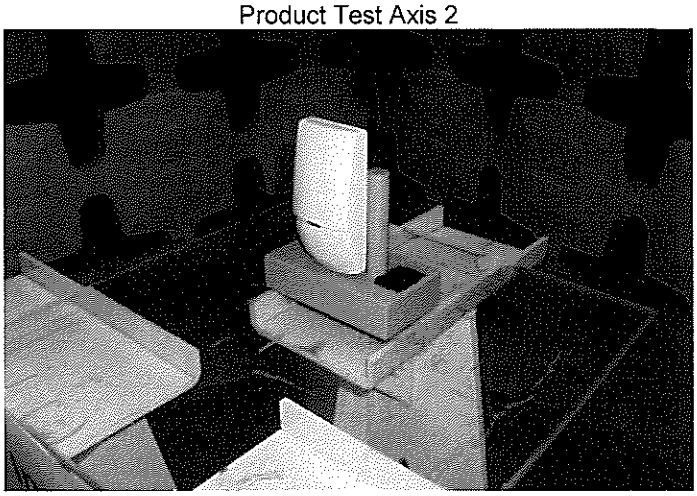


Photo:

Product Test Axis 1



Product Test Axis 2



Product Test Axis 3

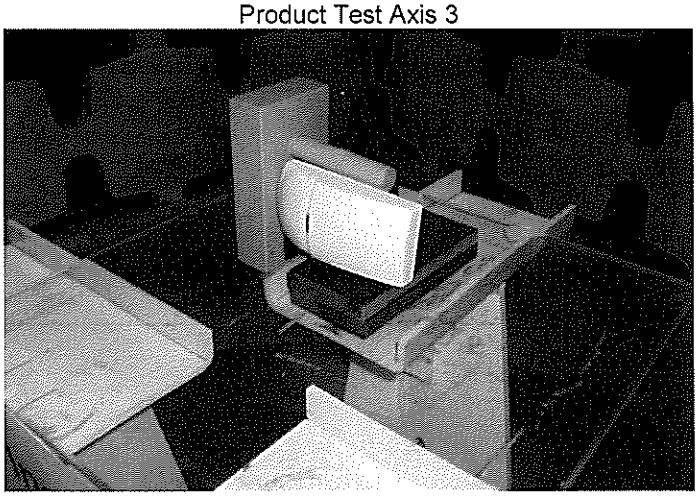
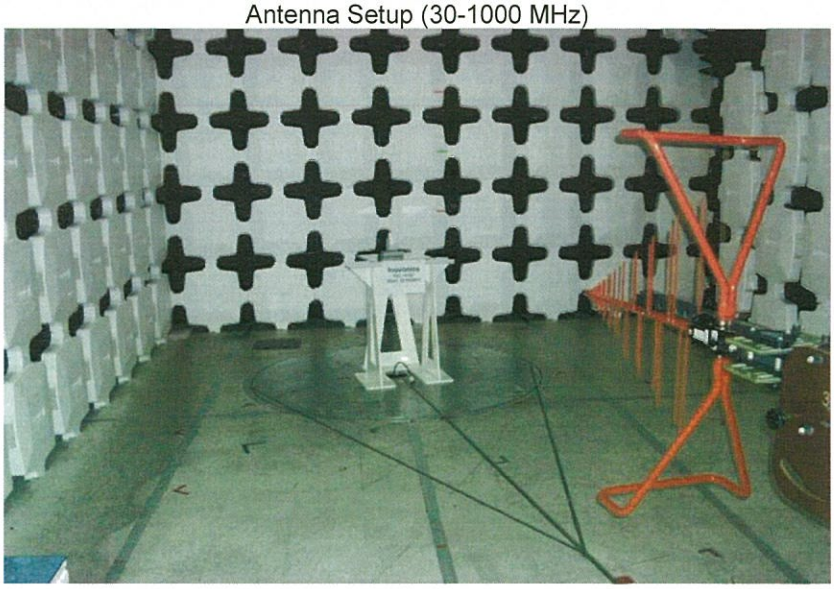
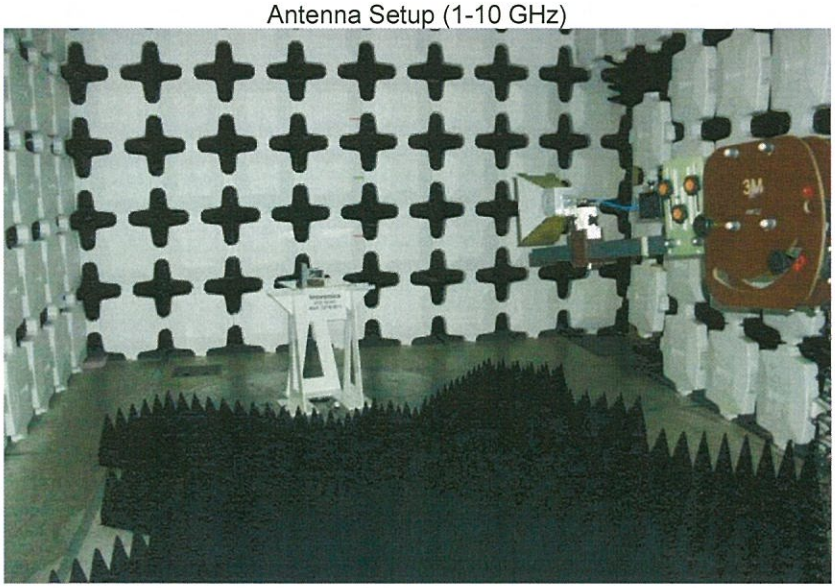


Photo:

Antenna Setup (30-1000 MHz)



Antenna Setup (1-10 GHz)



7 Radiated Emissions Tx Spurious (Non Harmonics)

7.1 Method

Unless otherwise stated no deviations were made from ANSI C63.10 and FCC public notice DA 00-705.

This testing was performed at Intertek Denver, located at 1795 Dogwood St., Suite 200, Louisville, CO 80027.

7.2 Test Equipment Used:

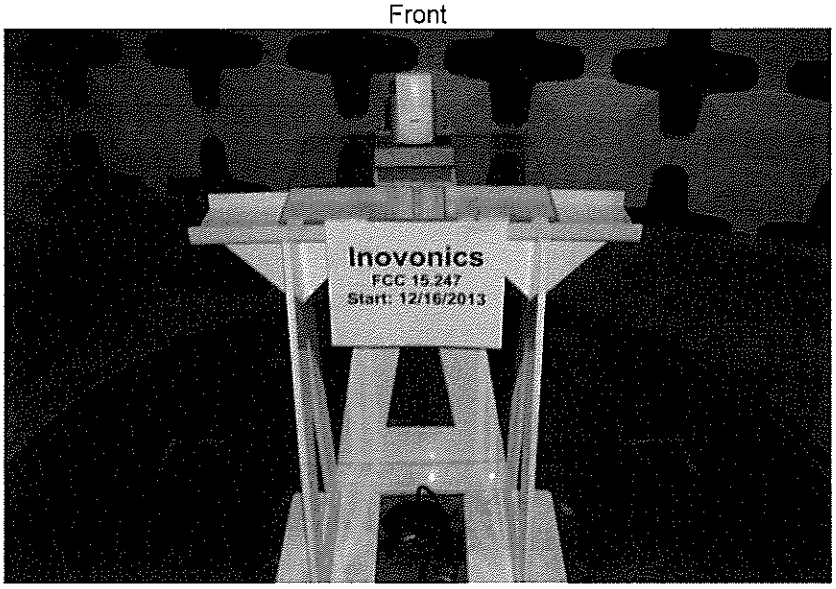
Asset ID	Description	Manufacture	Model	Serial	Cal Date	Cal Due
DEN-073	EMI Receiver	ROHDE & SCHWARZ	ESU 26	100265	01/23/2013	01/23/2014
18912	9 kHz- 1.3GHz Pre Amp	Hewlett-Packard	8447F	3113A05545	06/07/2013	06/07/2014
19937	Bilog Antenna 30MHz - 6GHz	Sunol Sciences	JB6	A050707-2	03/20/2013	03/20/2014
18906	RF Pre-Amp (1-4GHz)	Mini-Circuits Lab	ZHL-42	N052792-2	06/10/2013	06/10/2014
DEN-032	4-18 GHz LNA	NARDA	DBL-0618N615	031	03/07/2013	03/07/2014
18887	Horn Antenna 1-18GHz	EMCO	3115	9205-3886	03/19/2013	03/19/2014
SW-6	Software for Radiated and Conducted emissions.	Intertek	OATS vba	V. 1.0	VBU	VBU

7.3 Results:

The sample tested was found to Comply.

7.4 Setup Photographs:

Front



Rear

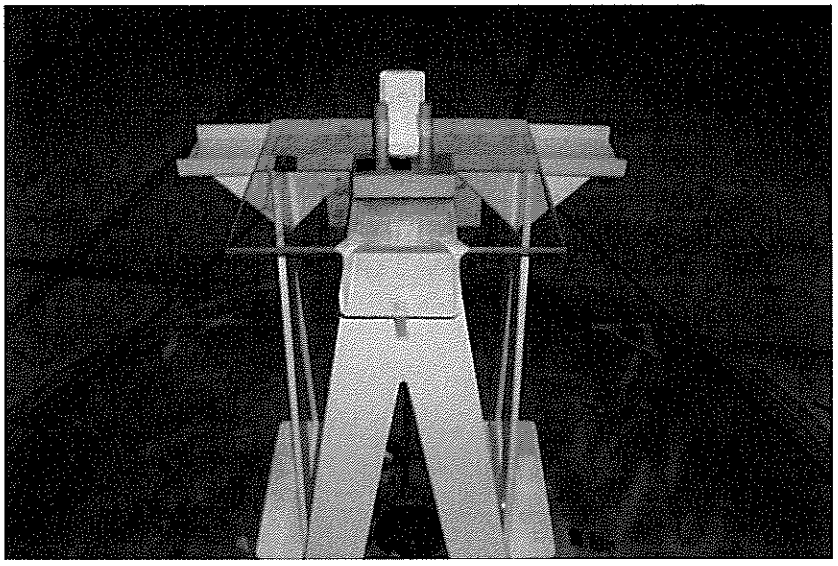
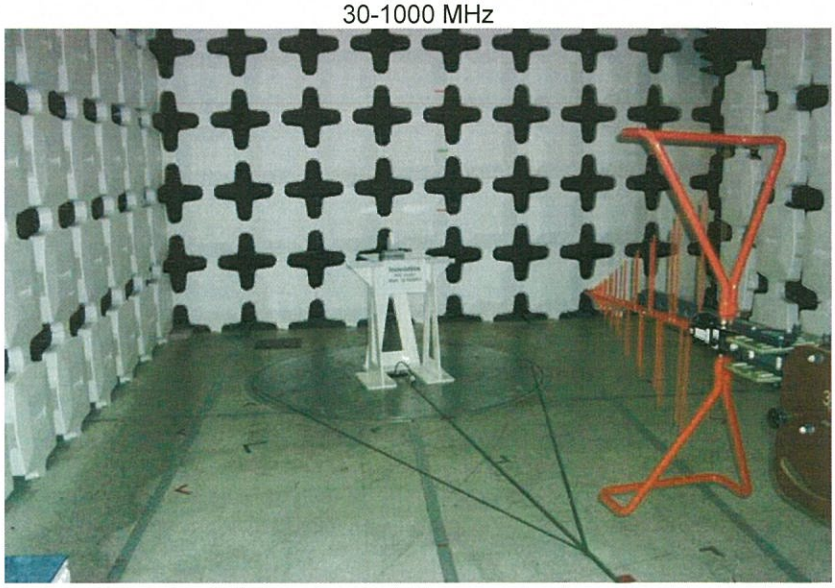
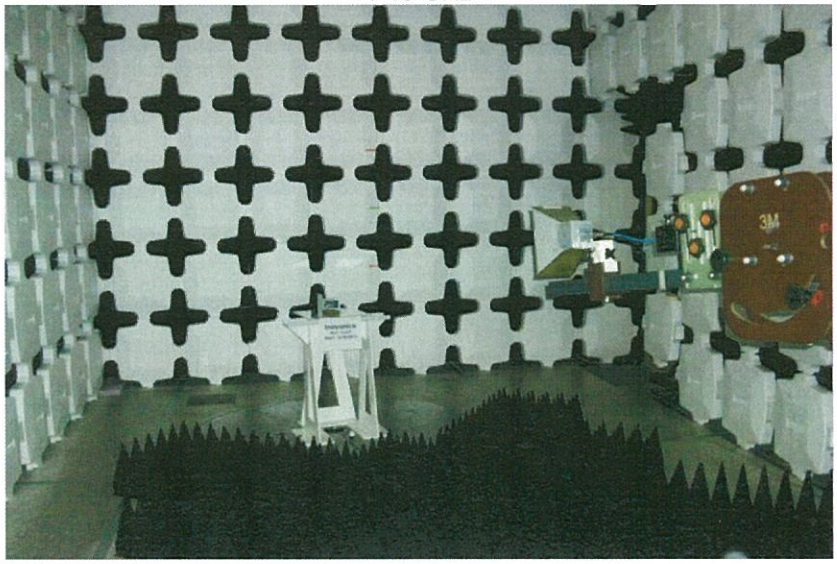


Photo:

30-1000 MHz



1-10 GHz



8 Radiated Unintentional Emissions - Idle/Standby Mode of Operation

8.1 Method

Unless otherwise stated no deviations were made from ANSI C63.10 and FCC public notice DA 00-705.

This testing was performed at Intertek Denver, located at 1795 Dogwood St., Suite 200, Louisville, CO 80027.

8.2 Test Equipment Used:

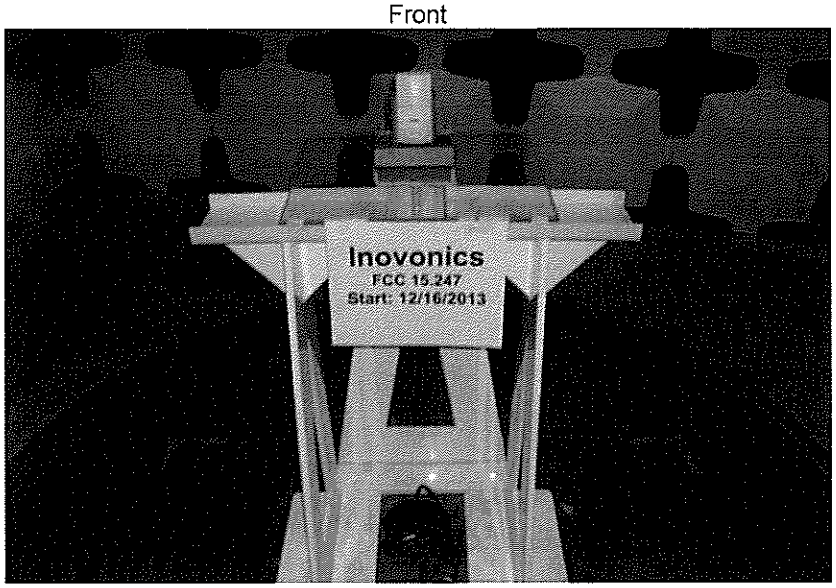
Asset ID	Description	Manufacture	Model	Serial	Cal Date	Cal Due
DEN-073	EMI Receiver	ROHDE & SCHWARZ	ESU 26	100265	01/23/2013	01/23/2014
18912	9 kHz- 1.3GHz Pre Amp	Hewlett-Packard	8447F	3113A05545	06/07/2013	06/07/2014
19937	Bilog Antenna 30MHz - 6GHz	Sunol Sciences	JB6	A050707-2	03/20/2013	03/20/2014
18906	RF Pre-Amp (1-4GHz)	Mini-Circuits Lab	ZHL-42	N052792-2	06/10/2013	06/10/2014
DEN-032	4-18 GHz LNA	NARDA	DBL-0618N615	031	03/07/2013	03/07/2014
18887	Horn Antenna 1-18GHz	EMCO	3115	9205-3886	03/19/2013	03/19/2014
SW-6	Software for Radiated and Conducted emissions.	Intertek	OATS vba	V. 1.0	VBU	VBU

8.3 Results:

The sample tested was found to Comply.

8.4 Setup Photographs:

Front



Rear

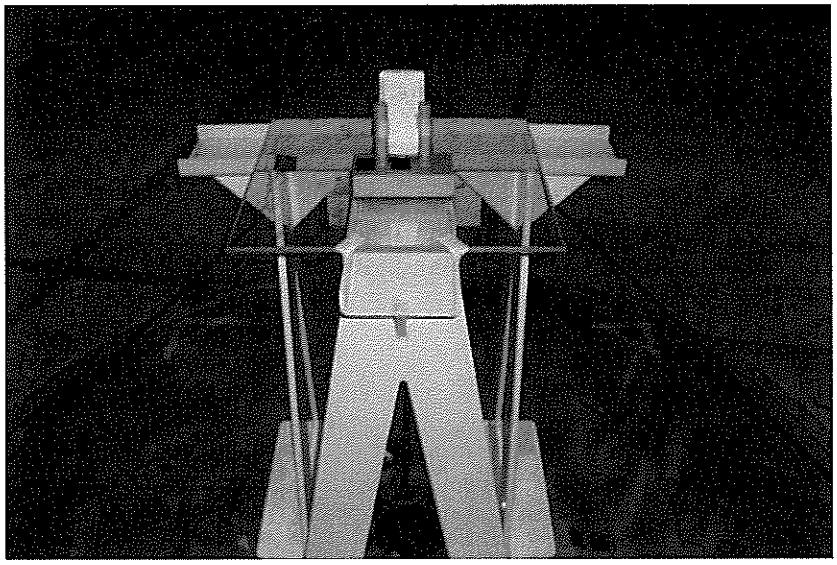
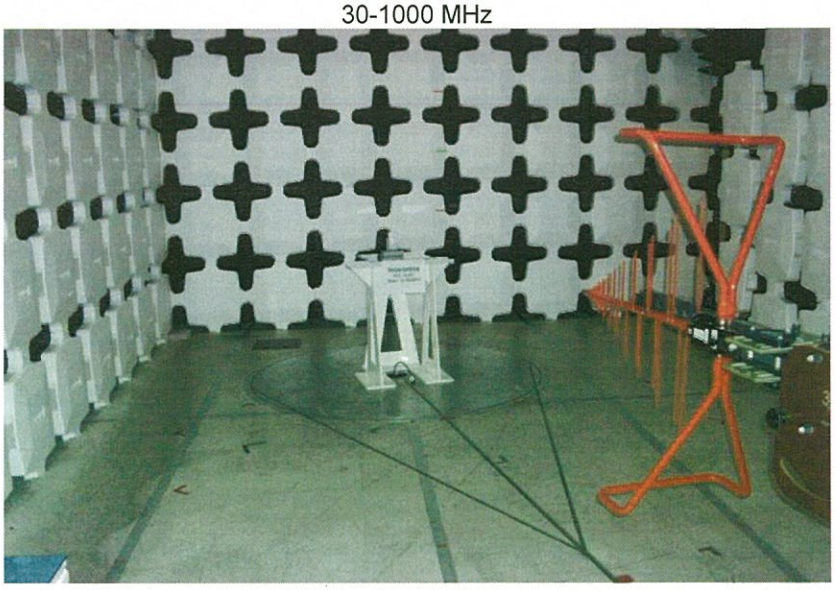
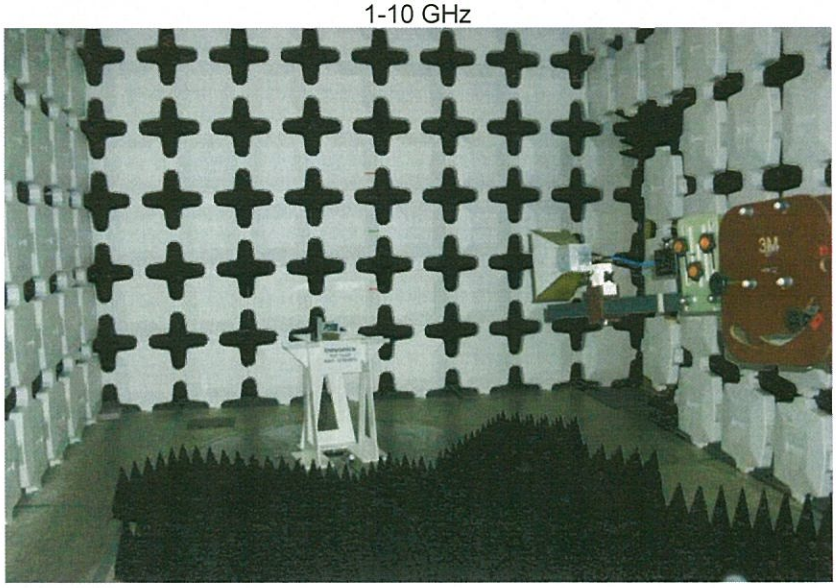


Photo:

30-1000 MHz



1-10 GHz



9 20 dB Bandwidth – FCC 15.247 (a)(1)(i)

9.1 Method

Unless otherwise stated no deviations were made from ANSI C63.10 and FCC public notice DA 00-705.

This testing was performed at Intertek Denver, located at 1795 Dogwood St., Suite 200, Louisville, CO 80027.

9.2 Test Equipment Used:

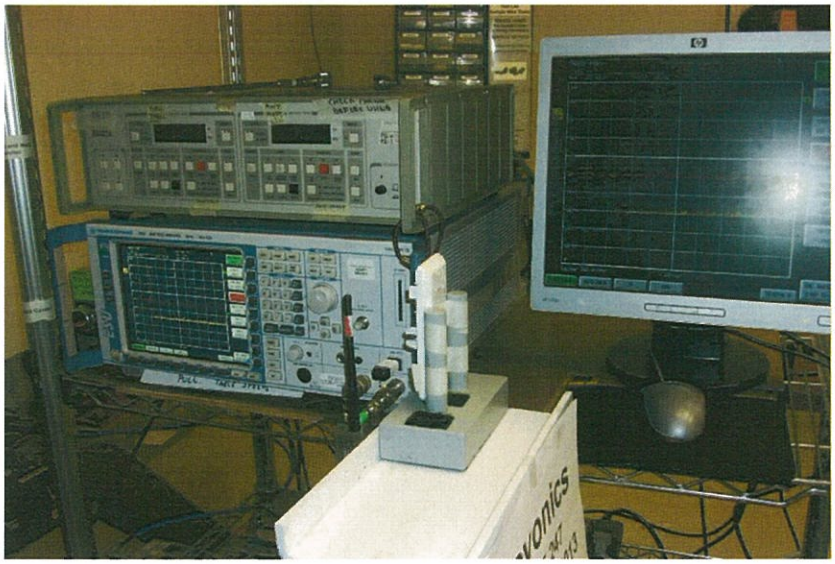
Asset ID:	Description:	Manufacturer:	Model:	Serial:	Cal Date	Cal Due
DEN-073	EMI Receiver	ROHDE & SCHWARZ	ESU 26	100265	01/23/2013	01/23/2014
EMC-xx	Whip antenna	xxx	xxx	xxx	VBU	VBU

9.3 Results:

The sample tested was found to Comply.

9.4 Setup Photographs:

Test Setup – 20dB Bandwidth



10 Carrier Frequency Separation – FCC 15.247 (a)(1)

10.1 Method

Unless otherwise stated no deviations were made from ANSI C63.10 and FCC public notice DA 00-705.

This testing was performed at Intertek Denver, located at 1795 Dogwood St., Suite 200, Louisville, CO 80027.

10.2 Test Equipment Used:

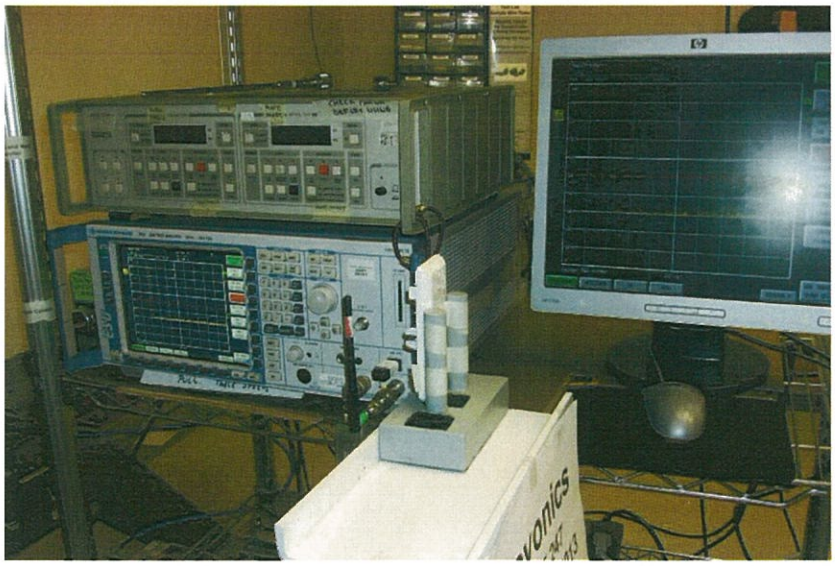
Asset ID:	Description:	Manufacturer:	Model:	Serial:	Cal Date	Cal Due
DEN-073	EMI Receiver	ROHDE & SCHWARZ	ESU 26	100265	01/23/2013	01/23/2014
EMC-xx	Whip antenna	xxx	xxx	xxx	VBU	VBU

10.3 Results:

The sample tested was found to Comply.

10.4 Setup Photographs:

Test Setup – Carrier Frequency Separation



11 Number of Hopping Frequencies – FCC 15.247 (a)(1)(i)

11.1 Method

Unless otherwise stated no deviations were made from ANSI C63.10 and FCC public notice DA 00-705.

This testing was performed at Intertek Denver, located at 1795 Dogwood St., Suite 200, Louisville, CO 80027.

11.2 Test Equipment Used:

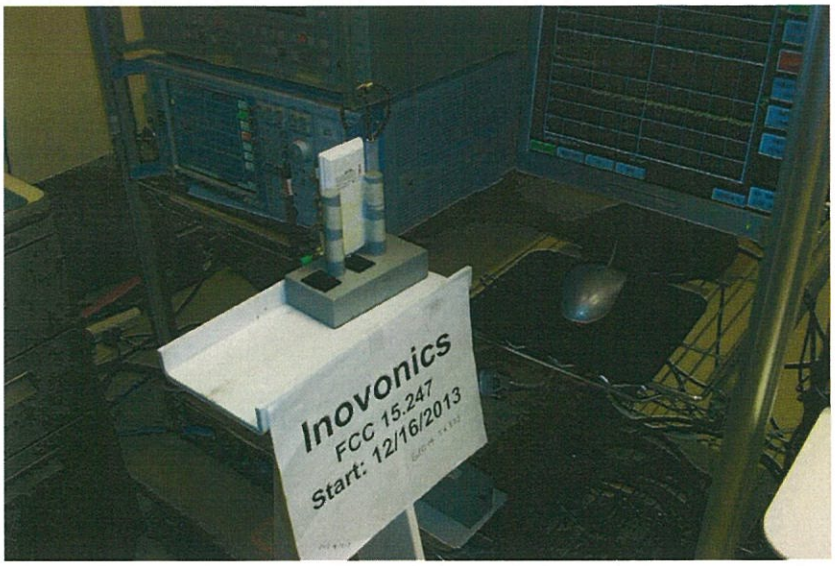
Asset ID:	Description:	Manufacturer:	Model:	Serial:	Cal Date	Cal Due
DEN-073	EMI Receiver	ROHDE & SCHWARZ	ESU 26	100265	01/23/2013	01/23/2014
EMC-xx	Whip antenna	xxx	xxx	xxx	VBU	VBU

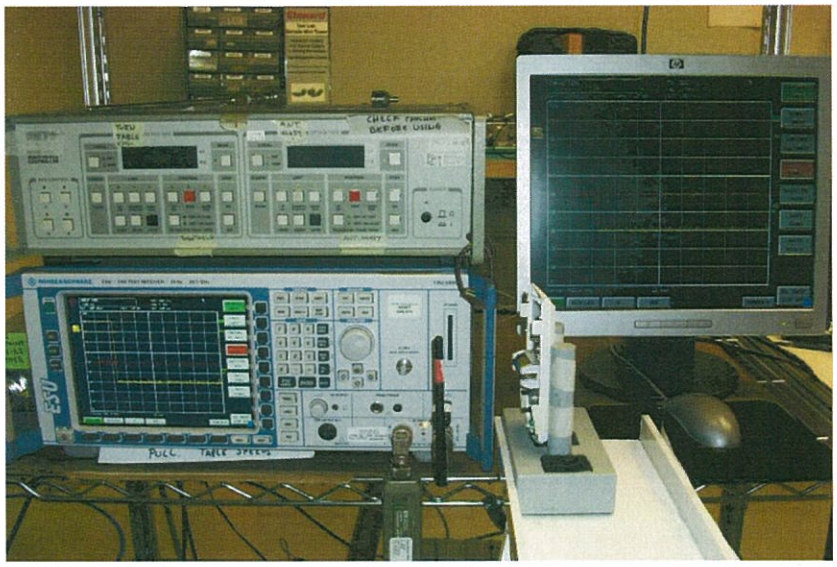
11.3 Results:

The sample tested was found to Comply.

11.4 Setup Photographs:

Test Setup – Tx Number of Hopping Frequencies





12 Time of Occupancy (Dwell Time) – FCC 15.247 (a)(1)(i)

12.1 Method

Unless otherwise stated no deviations were made from ANSI C63.10 and FCC public notice DA 00-705.

This testing was performed at Intertek Denver, located at 1795 Dogwood St., Suite 200, Louisville, CO 80027.

12.2 Test Equipment Used:

Asset ID:	Description:	Manufacturer:	Model:	Serial:	Cal Date	Cal Due
DEN-073	EMI Receiver	ROHDE & SCHWARZ	ESU 26	100265	01/23/2013	01/23/2014
EMC-xx	Whip antenna	xxx	xxx	xxx	VBU	VBU

12.3 Results:

The sample tested was found to Comply.

12.4 Setup Photographs:

Test Setup – Time of Occupancy (Dwell Time)