



SETUP PHOTOS

Report Number. : R12480294-EP1

Applicant : Honeywell International, Inc.
2 Corporate Center Drive
Melville, NY 11747, USA

Model : RCHT9610WFW2004

FCC ID : HS9-THX321WF01

IC : 573R-THX321WF01

EUT Description : Wireless Thermostat

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E
ISED RSS-247 ISSUE 2
ISED RSS-GEN ISSUE 5

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REVISION HISTORY

Ver.	Issue Date	Revisions	Revised By
1	11/30/2018	Initial Issue	Brian T. Kiewra
1	12/05/2018	Revised model number on cover page and section 1.	Lariah Ijames
2	01/10/2019	Added DFS photos	Niklas Haydon

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1. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Drive, Research Triangle Park, NC 27709, USA and 2800 Perimeter Park Dr., Suite B, Morrisville, NC 27560, USA. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

12 Laboratory Dr.		2800 Perimeter Park Dr.	
☐	Chamber A (ISED:2180C-1)	☒	Chamber North (ISED:2180C-3)
☐	Chamber C (ISED:2180C-2)	☒	Chamber South (ISED:2180C-4)

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0

2. EQUIPMENT UNDER TEST

2.1. EUT DESCRIPTION

The EUT is a wireless thermostat with 802.11a/n (HT20 and HT40). Only 802.11nHT40 supports straddle channels.

2.2. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power and PSD as worst-case scenario.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that the Y axis was worst-case orientation for antenna 1 and the X axis was worst-case orientation for antenna 2. Therefore, all final radiated testing was performed with the EUT in Y orientation for antenna 1 and in X orientation for antenna 2.

Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0

2.3. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Power Supply	CUI, INC.	48A-24-500	NA	NA

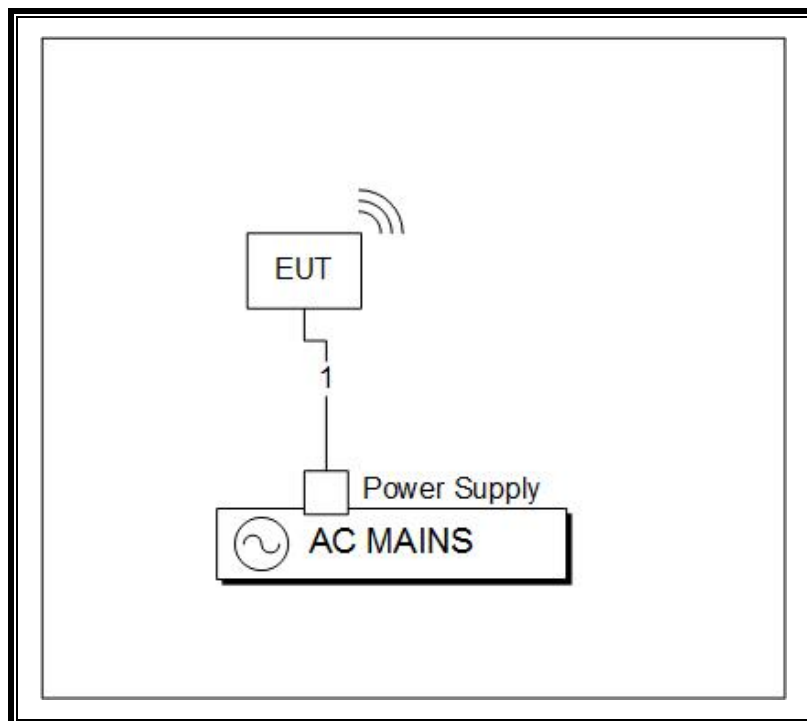
I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	1	1	Barrel	Mains	<3m	Provided DC power

TEST SETUP

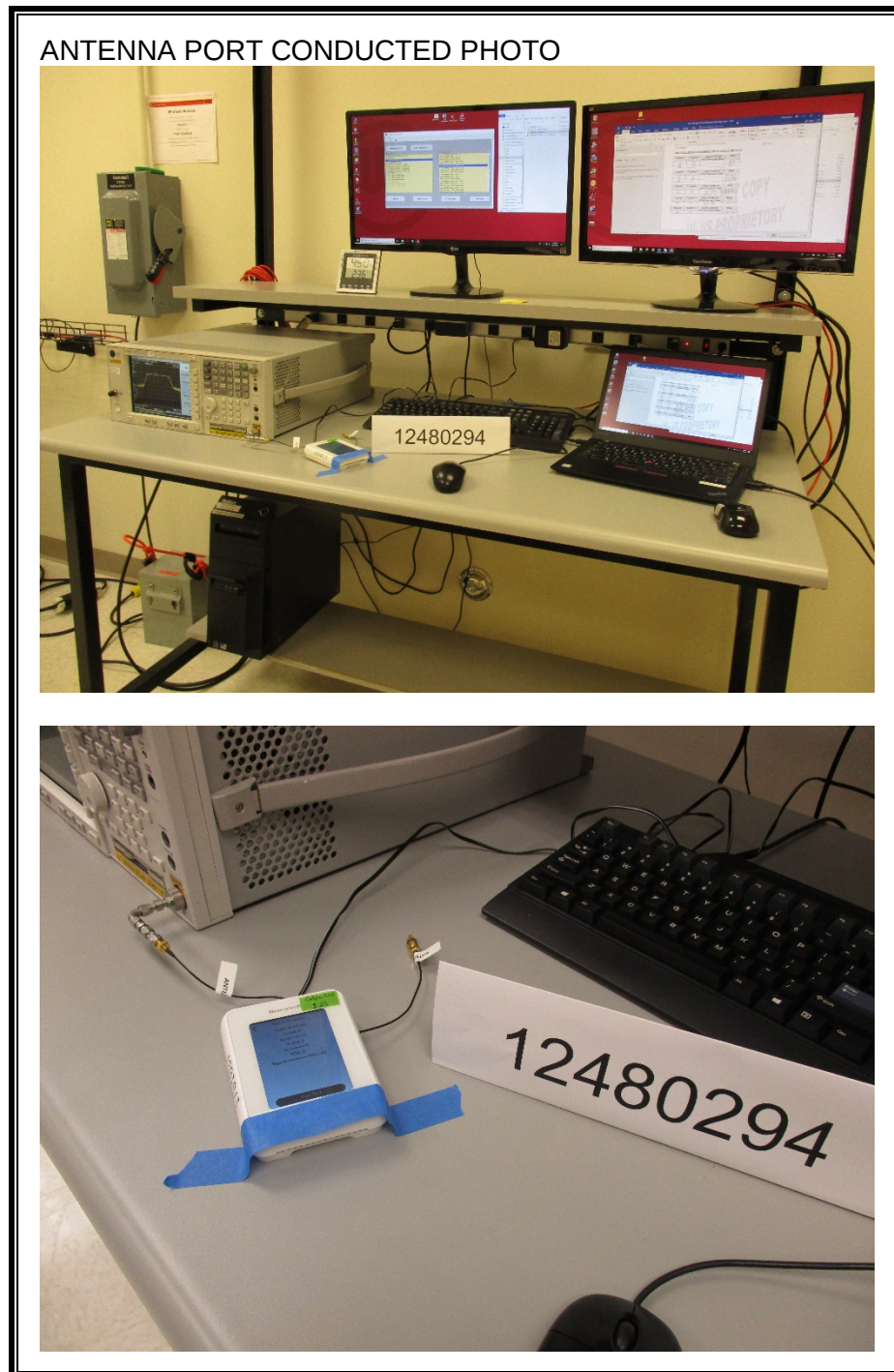
The EUT is configured as a standalone unit.

SETUP DIAGRAMS



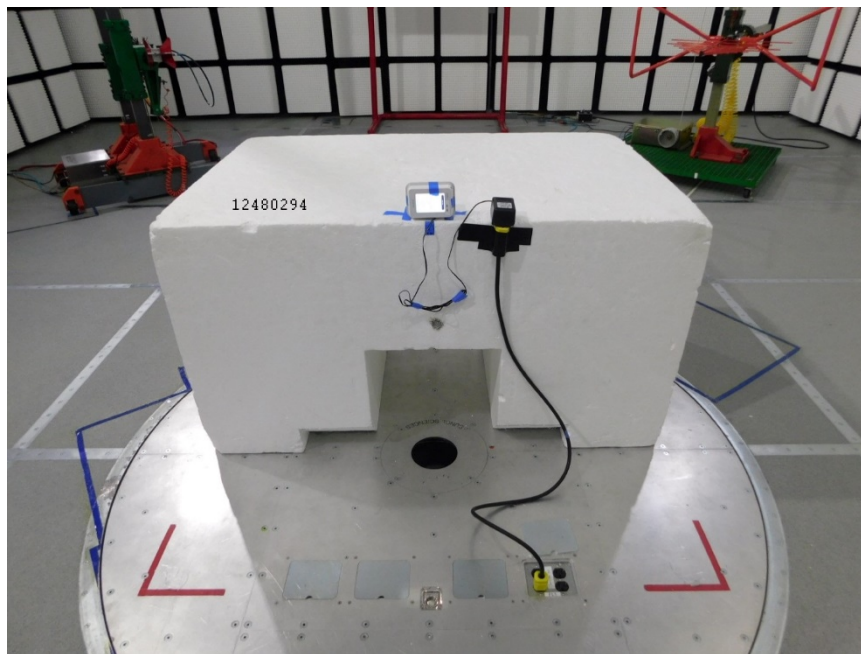
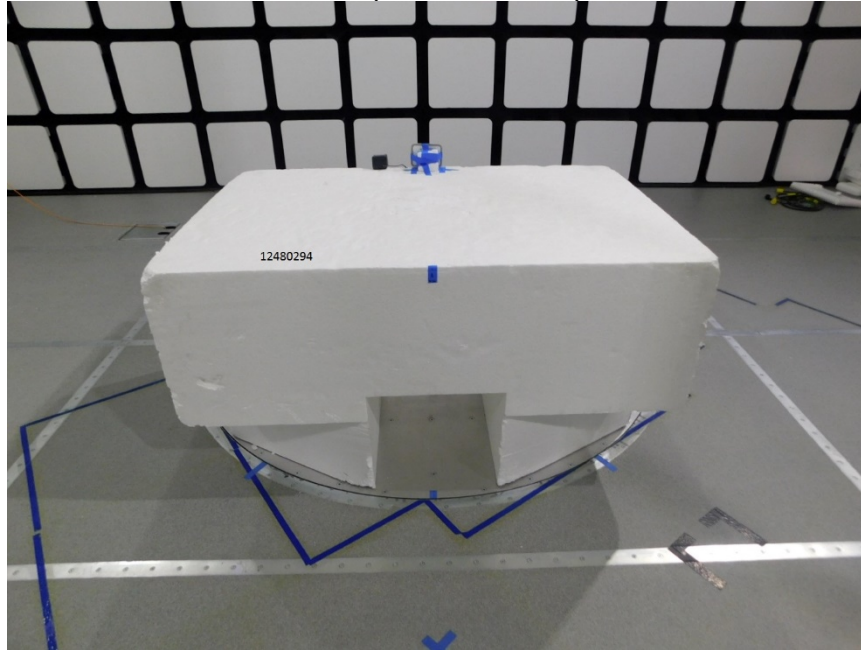
3. SETUP PHOTOS

ANTENNA PORT CONDUCTED RF MEASUREMENT SETUP

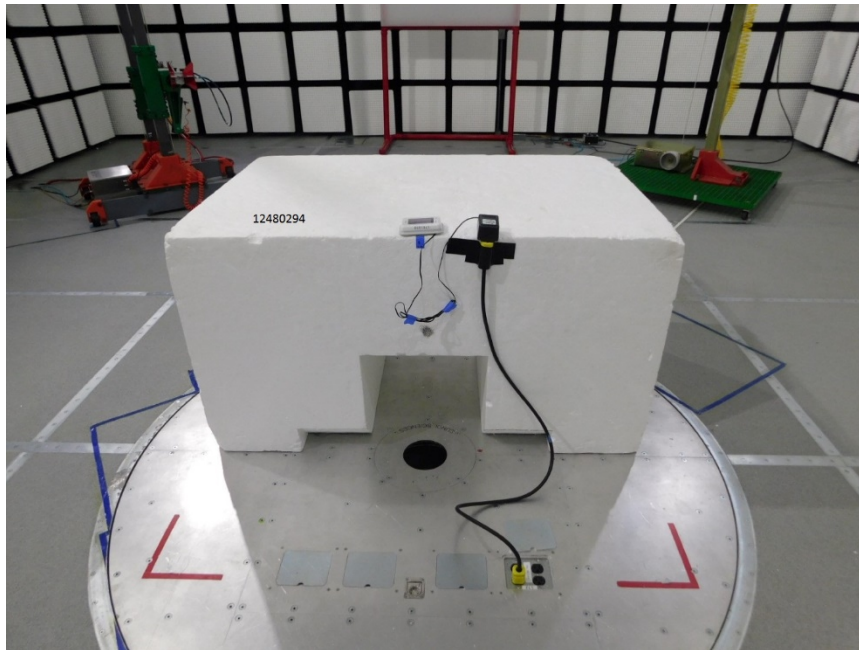
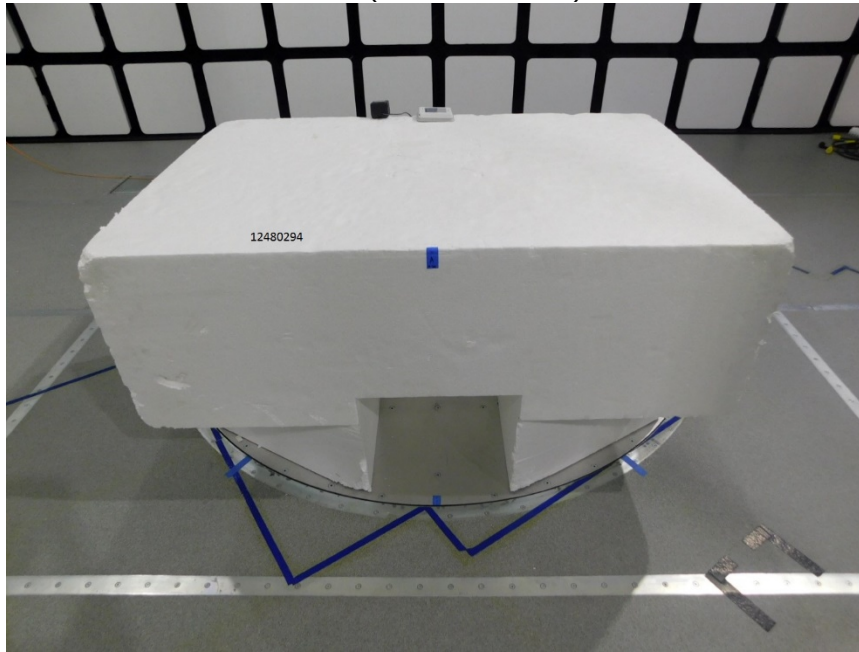


RADIATED RF MEASUREMENT SETUP (BELOW 1 GHz)

RADIATED PHOTO ANT 1 (BELOW 1 GHz)

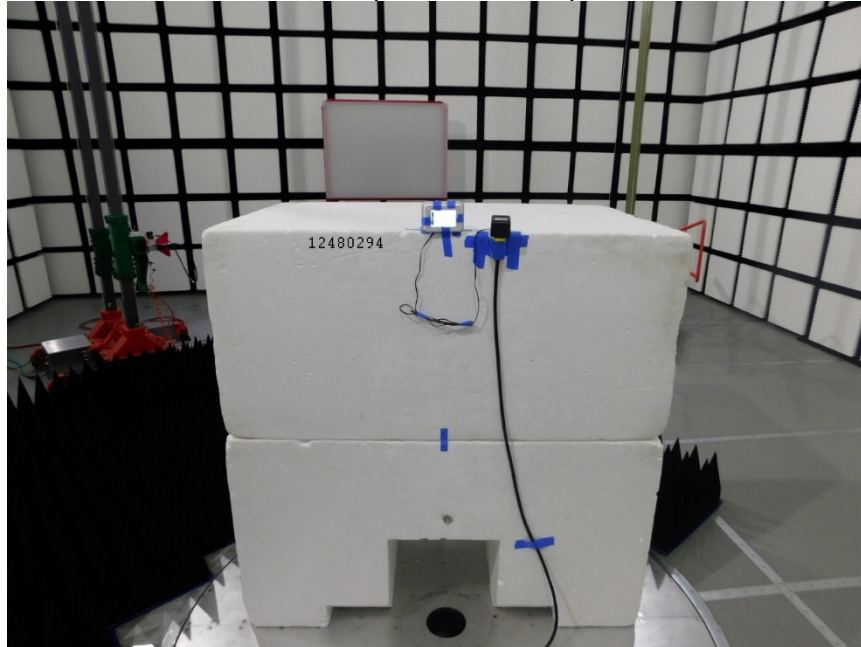


RADIATED PHOTO ANT 2 (BELOW 1 GHz)

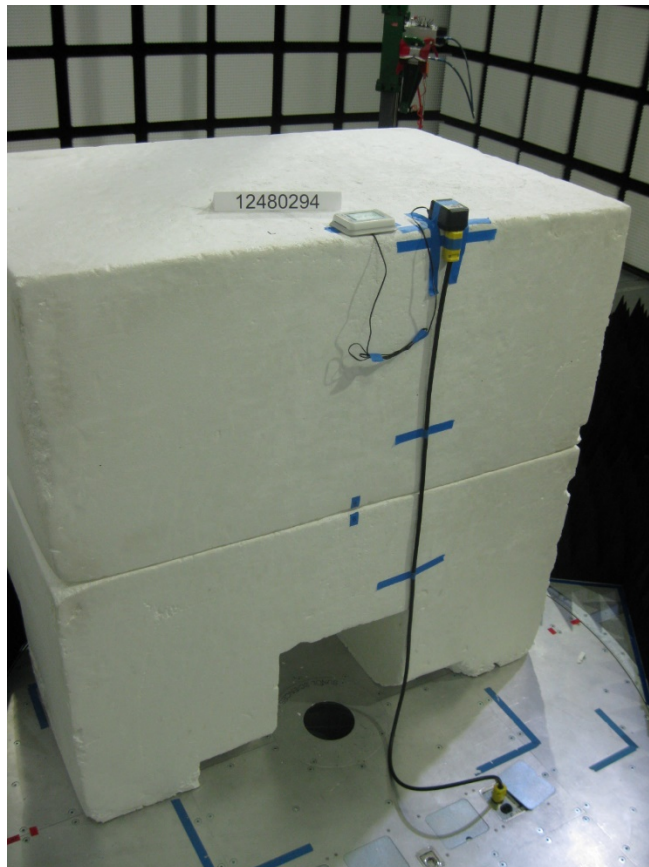


RADIATED RF MEASUREMENT SETUP (ABOVE 1 GHz)

RADIATED ANT 1 PHOTO (ABOVE 1 GHz)



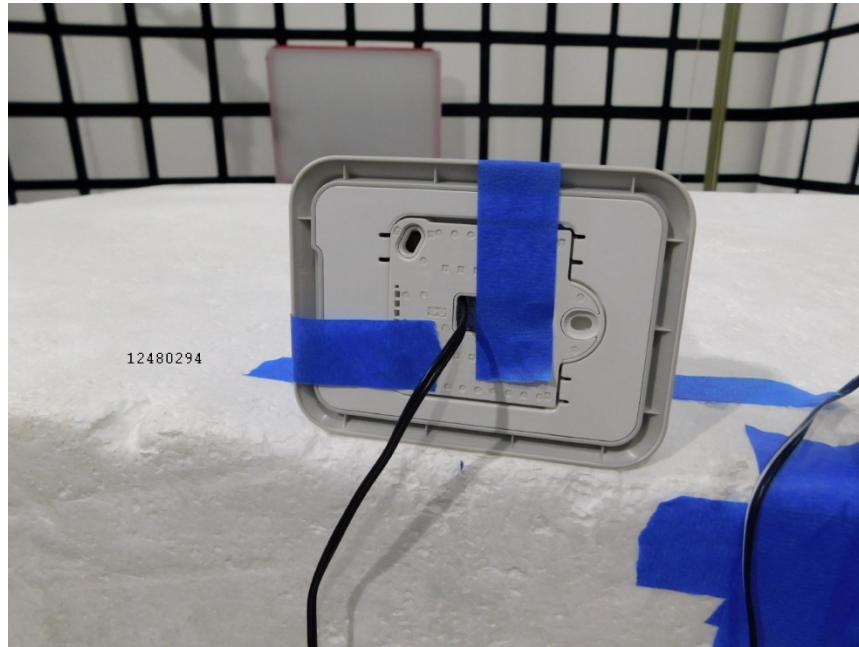
RADIATED ANT 2 PHOTO (ABOVE 1 GHz)

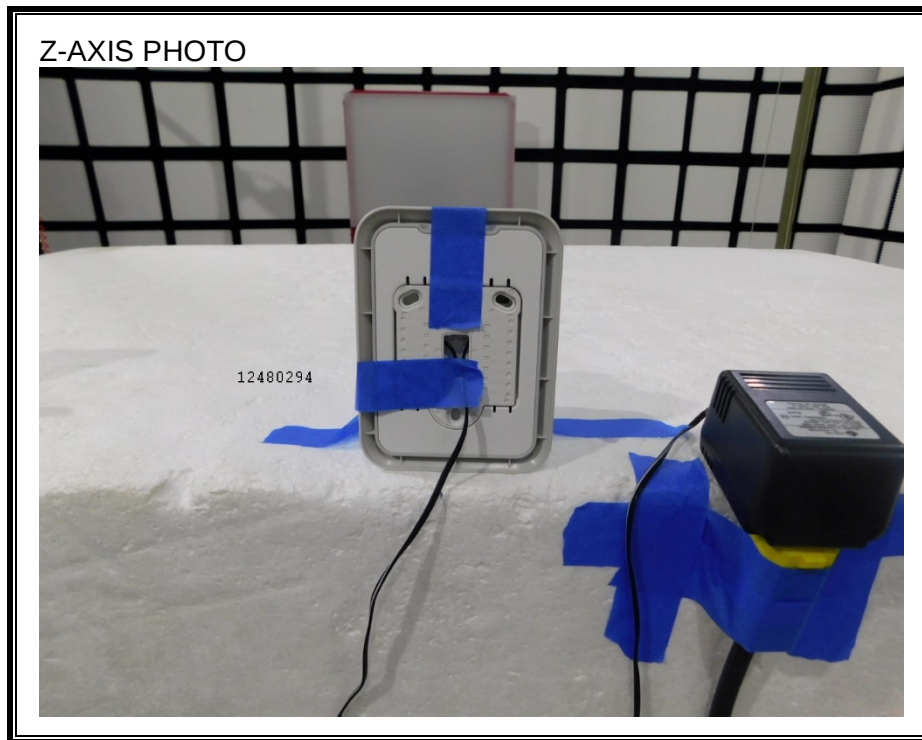


X-AXIS PHOTO



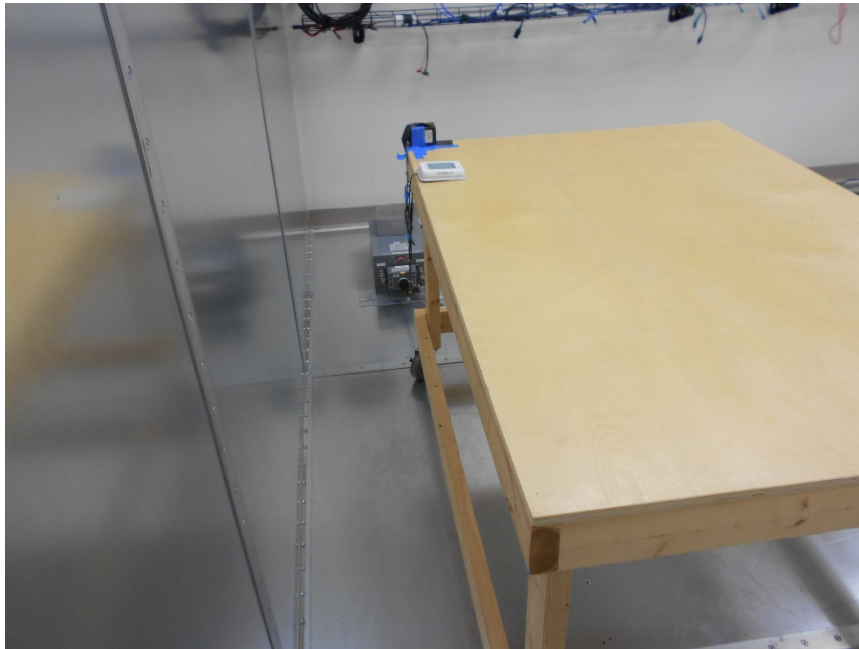
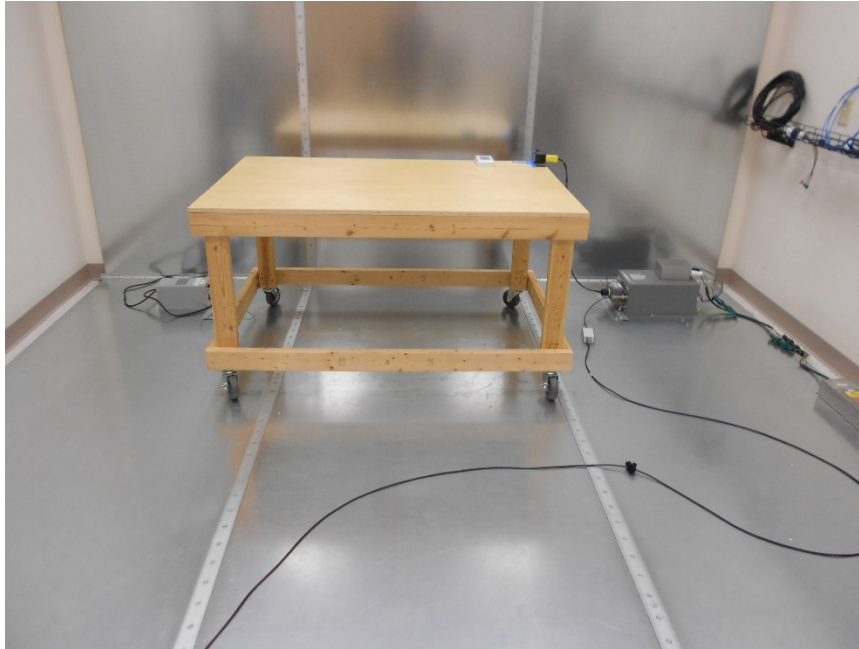
Y-AXIS PHOTO



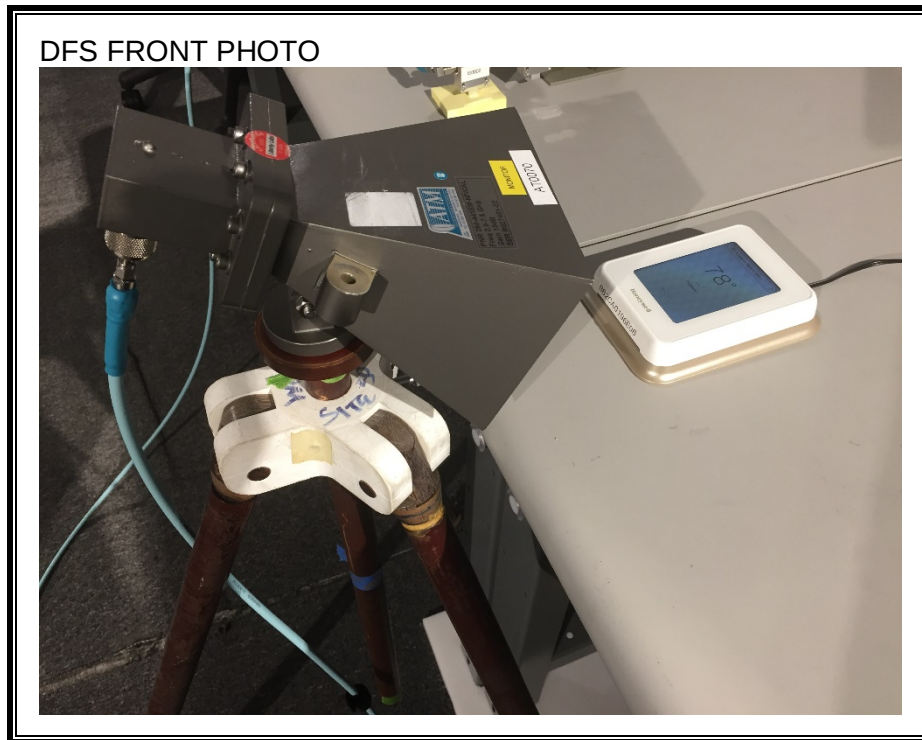


POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP

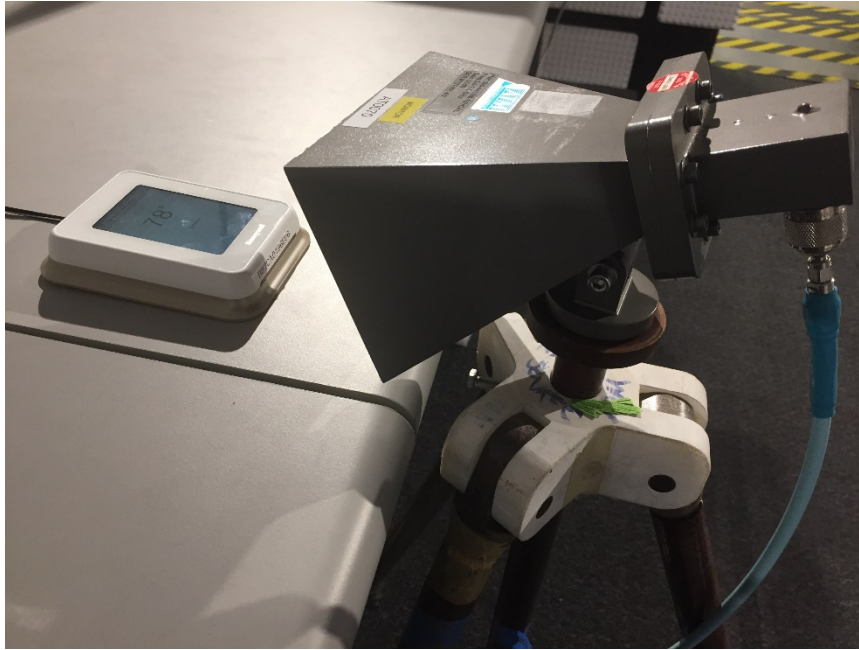
LINE CONDUCTED PHOTO



DYNAMIC FREQUENCY SELECTION MEASUREMENT SETUP



DFS BACK PHOTO



END OF TEST REPORT