

15	4104.750M Ave	41.7	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	41.6	54.0	-12.4	Vert
^	4104.750M	52.2	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	52.1	54.0	-1.9	Vert
17	266.190M	39.5	-27.9 +12.6 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+3.0 +0.0	+0.0	33.3	46.0	-12.7	Horiz
18	7384.700M Ave	34.5	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0	40.7	54.0	-13.3	Vert
^	7384.700M	47.1	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0	53.3	54.0	-0.7	Vert
20	109.090M	39.5	-28.0 +10.6 +0.0	+5.9 +0.0 +0.0	+0.1 +0.0 +0.0	+1.8 +0.0	+0.0	29.9	43.5	-13.6	Horiz
21	7385.180M Ave	34.2	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0	40.4	54.0	-13.6	Horiz
^	7385.180M	45.4	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0	51.6	54.0	-2.4	Horiz
23	4874.000M Ave	38.4	+0.0 +0.0 +4.5	+0.0 +0.0 +0.6	+0.0 -37.6 +0.3	+0.0 +33.2	+0.0	39.4	54.0	-14.6	Vert
^	4874.000M	49.7	+0.0 +0.0 +4.5	+0.0 +0.0 +0.6	+0.0 -37.6 +0.3	+0.0 +33.2	+0.0	50.7	54.0	-3.3	Vert
25	7311.000M Ave	32.2	+0.0 +0.0 +6.1	+0.0 +0.0 +0.8	+0.0 -37.2 +0.2	+0.0 +36.2	+0.0	38.3	54.0	-15.7	Vert
^	7311.000M	47.7	+0.0 +0.0 +6.1	+0.0 +0.0 +0.8	+0.0 -37.2 +0.2	+0.0 +36.2	+0.0	53.8	54.0	-0.2	Vert
27	4063.000M Ave	37.8	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	37.7	54.0	-16.3	Vert
^	4063.000M	50.5	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	50.4	54.0	-3.6	Vert
29	9848.030M	41.4	+0.0 +0.0 +7.4	+0.0 +0.0 +1.0	+0.0 -36.1 +0.4	+0.0 +38.3	+0.0	52.4	71.2	-18.8	Horiz
30	9848.080M	39.9	+0.0 +0.0 +7.4	+0.0 +0.0 +1.0	+0.0 -36.1 +0.4	+0.0 +38.3	+0.0	50.9	71.2	-20.3	Vert
31	189.090M	58.7	-28.0 +9.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.5 +0.0	+0.0	48.3	71.2	-22.9	Horiz

32	214.590M	55.2	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	46.1	71.2	-25.1	Horiz
33	203.590M	55.4	-28.0 +9.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.6 +0.0 +0.0	45.3	71.2	-25.9	Horiz
34	553.450M	42.1	-27.6 +18.8 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	44.1	71.2	-27.1	Vert
35	304.140M	48.6	-27.9 +13.4 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0 +0.0	43.5	71.2	-27.7	Horiz
36	308.890M	47.9	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0 +0.0	43.1	71.2	-28.1	Horiz
37	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	43.1	71.2	-28.1	Vert
38	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	43.1	71.2	-28.1	Vert
39	546.350M	39.1	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	41.0	71.2	-30.2	Vert
40	503.550M	38.2	-27.7 +18.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.2 +0.0 +0.0	38.9	71.2	-32.3	Vert
41	218.150M	46.9	-27.9 +10.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	38.0	71.2	-33.2	Vert
42	214.550M	46.8	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	37.7	71.2	-33.5	Vert
43	396.540M	38.2	-27.9 +16.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.7 +0.0 +0.0	36.2	71.2	-35.0	Horiz
44	418.150M	36.6	-27.9 +16.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.8 +0.0 +0.0	35.2	71.2	-36.0	Vert
45	352.700M	38.5	-27.9 +14.9 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.5 +0.0 +0.0	35.2	71.2	-36.0	Vert

46	306.450M	40.0	-27.9 +13.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0 +0.0	+0.0	35.0	71.2	-36.2	Vert
47	308.950M	39.8	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0 +0.0	+0.0	35.0	71.2	-36.2	Vert
48	458.550M	34.7	-27.8 +17.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.0 +0.0 +0.0	+0.0	34.3	71.2	-36.9	Vert
49	363.600M	36.4	-27.9 +15.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.6 +0.0 +0.0	+0.0	33.5	71.2	-37.7	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/24/2020
 Test Type: **Maximized Emissions** Time: 10:51:00
 Tested By: Don Nguyen Sequence#: 9
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.

Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11g: 6Mbps
 Modulation: OFDM
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

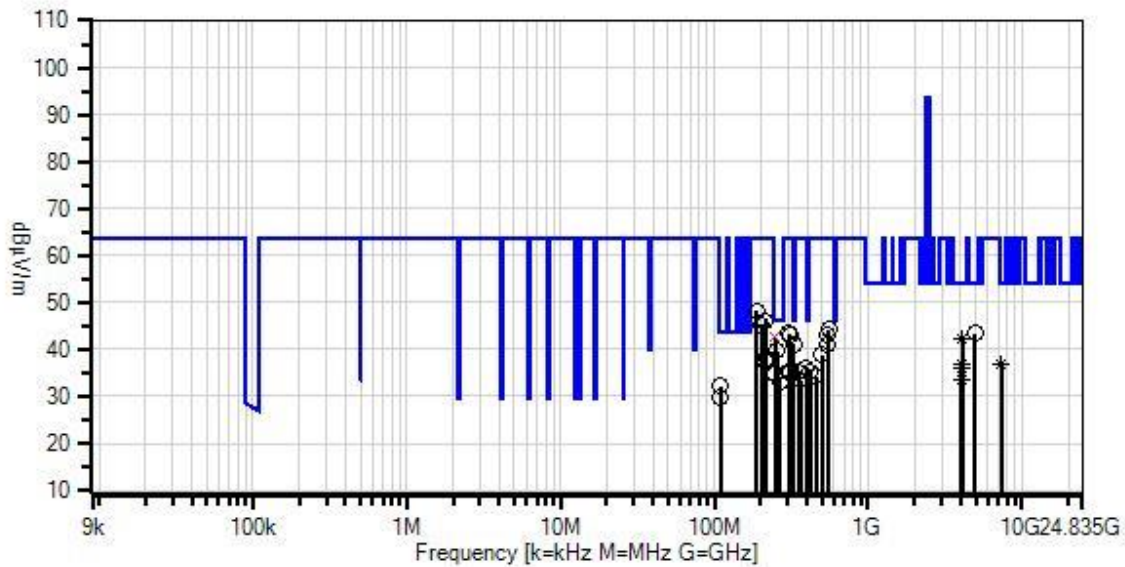
Frequency of Measurement: 9kHz-25000MHz
 9kHz to 150kHz RBW=0.2kHz, VBW=0.6kHz.
 150kHz to 30MHz RBW=9kHz, VBW=27kHz.
 30-1000MHz, RBW=120kHz, VBW=360kHz
 1000-25000MHz, RBW=1MHz, VBW=3MHz
 -30dBc limit, RBW=100kHz, VBW=300kHz

Test Environment Conditions:
 Temperature:20°C
 Relative Humidity: 48%

Site A

Test Methods: ANSI C63.10 (2013)
 KDB 558074 D01 15.247 Meas Guidance v05r02

Venstar, Inc. WO#: 104728 Sequence#: 9 Date: 11/24/2020
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Vert



— Readings
 × QP Readings
 ▼ Ambient
 — 1 - 15.247(d) / 15.209 Radiated Spurious Emissions
 ○ Peak Readings
 * Average Readings
 Software Version: 5.03.19

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN00314	Loop Antenna	6502	4/13/2020	4/13/2022
T1	AN00309	Preamp	8447D	12/24/2019	12/24/2021
T2	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T3	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T4	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/4/2018	12/4/2020
T5	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
T6	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T7	AN00786	Preamp	83017A	5/20/2020	5/20/2022
T8	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T9	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021
T10	ANP07246	Cable	32022-29094K- 29094K-24TC	5/29/2020	5/29/2022
T11	AN03385	High Pass Filter	115H10- 3000/T10000- O/O	5/13/2019	5/13/2021
	AN01413	Horn Antenna	84125-80008	10/19/2020	10/19/2022
	AN03367	Horn Antenna	62-GH-62-25.	8/1/2019	8/1/2021

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	T5	T6	T7	T8	Table	dB μ V/m	dB μ V/m	dB	Ant
			T9	T10	T11						
			dB	dB	dB	dB					
1	247.830M QP	49.3	-27.9 +12.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	42.6	46.0	-3.4	Horiz
^	247.830M	52.1	-27.9 +12.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	45.4	46.0	-0.6	Horiz
3	325.540M	45.4	-27.9 +14.1 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.4 +0.0	+0.0	41.2	46.0	-4.8	Horiz
4	256.590M	46.2	-27.9 +12.4 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	39.7	46.0	-6.3	Horiz
5	4924.000M	42.3	+0.0 +0.0 +4.5	+0.0 +0.0 +0.6	+0.0 -37.6 +0.3	+0.0 +33.3	+0.0	43.4	54.0	-10.6	Vert
6	109.100M	41.9	-28.0 +10.6 +0.0	+5.9 +0.0 +0.0	+0.1 +0.0 +0.0	+1.8 +0.0	+0.0	32.3	43.5	-11.2	Vert
7	247.150M	41.4	-27.9 +12.1 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	34.6	46.0	-11.4	Vert
8	4102.150M Ave	42.3	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	42.2	54.0	-11.8	Vert
^	4102.150M	53.0	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	52.9	54.0	-1.1	Vert
10	266.190M	39.5	-27.9 +12.6 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+3.0 +0.0	+0.0	33.3	46.0	-12.7	Horiz
11	109.090M	39.5	-28.0 +10.6 +0.0	+5.9 +0.0 +0.0	+0.1 +0.0 +0.0	+1.8 +0.0	+0.0	29.9	43.5	-13.6	Horiz
12	189.090M	58.7	-28.0 +9.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.5 +0.0	+0.0	48.3	63.7	-15.4	Horiz
13	4104.750M Ave	36.9	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	36.8	54.0	-17.2	Horiz
^	4104.750M	49.0	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	48.9	54.0	-5.1	Horiz

15	7384.700M Ave	30.5	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0 +0.0	36.7	54.0	-17.3	Vert
^	7384.700M	42.7	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0 +0.0	48.9	54.0	-5.1	Vert
17	214.590M	55.2	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0	+0.0	46.1	63.7	-17.6	Horiz
18	4018.667M Ave	36.1	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.9 +0.5	+0.0 +32.5	+0.0	36.0	54.0	-18.0	Vert
^	4018.667M	52.8	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.9 +0.5	+0.0 +32.5	+0.0	52.7	54.0	-1.3	Vert
20	203.590M	55.4	-28.0 +9.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.6 +0.0	+0.0	45.3	63.7	-18.4	Horiz
21	553.450M	42.1	-27.6 +18.8 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0	+0.0	44.1	63.7	-19.6	Vert
22	304.140M	48.6	-27.9 +13.4 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0	+0.0	43.5	63.7	-20.2	Horiz
23	308.890M	47.9	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0	+0.0	43.1	63.7	-20.6	Horiz
24	4063.267M Ave	33.5	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	33.4	54.0	-20.6	Vert
^	4063.267M	48.3	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	48.2	54.0	-5.8	Vert
26	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0	+0.0	43.1	63.7	-20.6	Vert
27	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0	+0.0	43.1	63.7	-20.6	Vert
28	546.350M	39.1	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0	+0.0	41.0	63.7	-22.7	Vert
29	503.550M	38.2	-27.7 +18.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.2 +0.0	+0.0	38.9	63.7	-24.8	Vert
30	218.150M	46.9	-27.9 +10.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0	+0.0	38.0	63.7	-25.7	Vert
31	214.550M	46.8	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0	+0.0	37.7	63.7	-26.0	Vert

32	396.540M	38.2	-27.9 +16.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.7 +0.0 +0.0	+0.0	36.2	63.7	-27.5	Horiz
33	418.150M	36.6	-27.9 +16.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.8 +0.0 +0.0	+0.0	35.2	63.7	-28.5	Vert
34	352.700M	38.5	-27.9 +14.9 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.5 +0.0 +0.0	+0.0	35.2	63.7	-28.5	Vert
35	306.450M	40.0	-27.9 +13.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0 +0.0	+0.0	35.0	63.7	-28.7	Vert
36	308.950M	39.8	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0 +0.0	+0.0	35.0	63.7	-28.7	Vert
37	458.550M	34.7	-27.8 +17.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.0 +0.0 +0.0	+0.0	34.3	63.7	-29.4	Vert
38	363.600M	36.4	-27.9 +15.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.6 +0.0 +0.0	+0.0	33.5	63.7	-30.2	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/24/2020
 Test Type: **Maximized Emissions** Time: 10:25:41
 Tested By: Don Nguyen Sequence#: 9
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.

Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11g: 54Mbps
 Modulation: OFDM
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

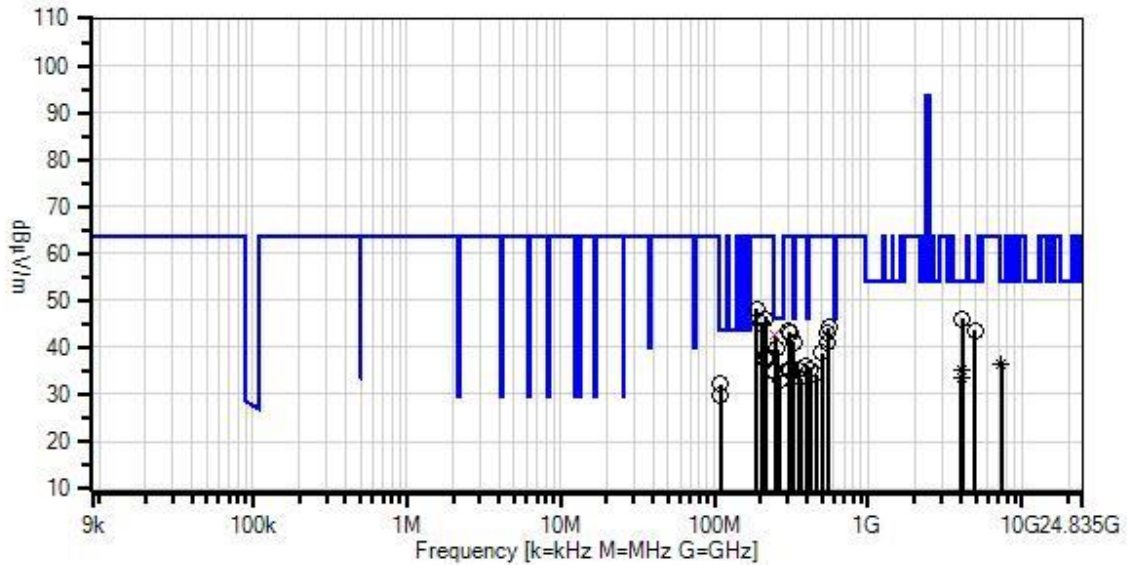
Frequency of Measurement: 9kHz-25000MHz
 9kHz to 150kHz RBW=0.2kHz, VBW=0.6kHz.
 150kHz to 30MHz RBW=9kHz, VBW=27kHz.
 30-1000MHz, RBW=120kHz, VBW=360kHz
 1000-25000MHz, RBW=1MHz, VBW=3MHz
 -30dBc limit, RBW=100kHz, VBW=300kHz

Test Environment Conditions:
 Temperature:20°C
 Relative Humidity: 48%

Site A

Test Methods: ANSI C63.10 (2013)
 KDB 558074 D01 15.247 Meas Guidance v05r02

Venstar, Inc. WO#: 104728 Sequence#: 9 Date: 11/24/2020
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Vert



— Readings
 × QP Readings
 ▼ Ambient
 ○ Peak Readings
 * Average Readings
 Software Version: 5.03.19

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN00314	Loop Antenna	6502	4/13/2020	4/13/2022
T1	AN00309	Preamp	8447D	12/24/2019	12/24/2021
T2	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T3	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T4	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/4/2018	12/4/2020
T5	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
T6	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T7	AN00786	Preamp	83017A	5/20/2020	5/20/2022
T8	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T9	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021
T10	ANP07246	Cable	32022-29094K- 29094K-24TC	5/29/2020	5/29/2022
T11	AN03385	High Pass Filter	11SH10- 3000/T10000- O/O	5/13/2019	5/13/2021
	AN01413	Horn Antenna	84125-80008	10/19/2020	10/19/2022
	AN03367	Horn Antenna	62-GH-62-25.	8/1/2019	8/1/2021

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dB μ V	T9	T10	T11		Table	dB μ V/m	dB μ V/m	dB	Ant
			dB	dB	dB	dB					
1	247.830M	49.3	-27.9	+5.9	+0.2	+2.9	+0.0	42.6	46.0	-3.4	Horiz
	QP		+12.2	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
^	247.830M	52.1	-27.9	+5.9	+0.2	+2.9	+0.0	45.4	46.0	-0.6	Horiz
			+12.2	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
3	325.540M	45.4	-27.9	+5.9	+0.3	+3.4	+0.0	41.2	46.0	-4.8	Horiz
			+14.1	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
4	256.590M	46.2	-27.9	+5.9	+0.2	+2.9	+0.0	39.7	46.0	-6.3	Horiz
			+12.4	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
5	4101.800M	46.1	+0.0	+0.0	+0.0	+0.0	+0.0	46.0	54.0	-8.0	Vert
			+0.0	+0.0	-37.8	+32.4					
			+4.2	+0.6	+0.5						
6	4924.000M	42.6	+0.0	+0.0	+0.0	+0.0	+0.0	43.7	54.0	-10.3	Vert
			+0.0	+0.0	-37.6	+33.3					
			+4.5	+0.6	+0.3						
7	4924.000M	42.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.4	54.0	-10.6	Vert
			+0.0	+0.0	-37.6	+33.3					
			+4.5	+0.6	+0.3						
8	109.100M	41.9	-28.0	+5.9	+0.1	+1.8	+0.0	32.3	43.5	-11.2	Vert
			+10.6	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
9	247.150M	41.4	-27.9	+5.9	+0.2	+2.9	+0.0	34.6	46.0	-11.4	Vert
			+12.1	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
10	266.190M	39.5	-27.9	+5.9	+0.2	+3.0	+0.0	33.3	46.0	-12.7	Horiz
			+12.6	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
11	109.090M	39.5	-28.0	+5.9	+0.1	+1.8	+0.0	29.9	43.5	-13.6	Horiz
			+10.6	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
12	189.090M	58.7	-28.0	+5.9	+0.2	+2.5	+0.0	48.3	63.5	-15.2	Horiz
			+9.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
13	214.590M	55.2	-27.9	+5.9	+0.2	+2.7	+0.0	46.1	63.5	-17.4	Horiz
			+10.0	+0.0	+0.0	+0.0					
			+0.0	+0.0	+0.0						
14	7386.000M	30.2	+0.0	+0.0	+0.0	+0.0	+0.0	36.4	54.0	-17.6	Vert
	Ave		+0.0	+0.0	-37.3	+36.3					
			+6.1	+0.9	+0.2						
^	7386.000M	41.4	+0.0	+0.0	+0.0	+0.0	+0.0	47.6	54.0	-6.4	Vert
			+0.0	+0.0	-37.3	+36.3					
			+6.1	+0.9	+0.2						

16	203.590M	55.4	-28.0 +9.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.6 +0.0 +0.0	+0.0	45.3	63.5	-18.2	Horiz
17	4102.583M Ave	35.2	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	35.1	54.0	-18.9	Horiz
^	4102.583M	51.7	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	51.6	54.0	-2.4	Horiz
19	553.450M	42.1	-27.6 +18.8 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0	+0.0	44.1	63.5	-19.4	Vert
20	304.140M	48.6	-27.9 +13.4 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0	+0.0	43.5	63.5	-20.0	Horiz
21	308.890M	47.9	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0	+0.0	43.1	63.5	-20.4	Horiz
22	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0	+0.0	43.1	63.5	-20.4	Vert
23	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0	+0.0	43.1	63.5	-20.4	Vert
24	4063.267M Ave	33.5	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	33.4	54.0	-20.6	Vert
^	4063.267M	49.2	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	49.1	54.0	-4.9	Vert
26	546.350M	39.1	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0	+0.0	41.0	63.5	-22.5	Vert
27	503.550M	38.2	-27.7 +18.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.2 +0.0	+0.0	38.9	63.5	-24.6	Vert
28	218.150M	46.9	-27.9 +10.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0	+0.0	38.0	63.5	-25.5	Vert
29	214.550M	46.8	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0	+0.0	37.7	63.5	-25.8	Vert
30	396.540M	38.2	-27.9 +16.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.7 +0.0	+0.0	36.2	63.5	-27.3	Horiz
31	418.150M	36.6	-27.9 +16.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.8 +0.0	+0.0	35.2	63.5	-28.3	Vert
32	352.700M	38.5	-27.9 +14.9 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.5 +0.0	+0.0	35.2	63.5	-28.3	Vert

33	306.450M	40.0	-27.9 +13.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0 +0.0	+0.0	35.0	63.5	-28.5	Vert
34	308.950M	39.8	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0 +0.0	+0.0	35.0	63.5	-28.5	Vert
35	458.550M	34.7	-27.8 +17.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.0 +0.0 +0.0	+0.0	34.3	63.5	-29.2	Vert
36	363.600M	36.4	-27.9 +15.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.6 +0.0 +0.0	+0.0	33.5	63.5	-30.0	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/24/2020
 Test Type: **Maximized Emissions** Time: 10:26:08
 Tested By: Don Nguyen Sequence#: 10
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.

Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11n20: MCS0
 Modulation: BPSK
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

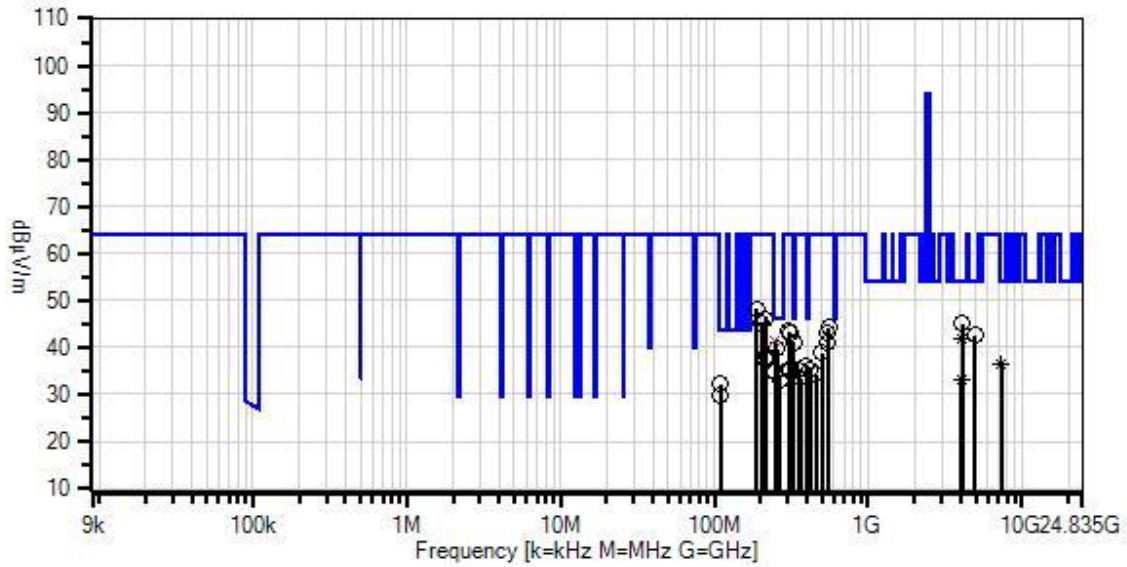
Frequency of Measurement: 9kHz-25000MHz
 9kHz to 150kHz RBW=0.2kHz, VBW=0.6kHz.
 150kHz to 30MHz RBW=9kHz, VBW=27kHz.
 30-1000MHz, RBW=120kHz, VBW=360kHz
 1000-25000MHz, RBW=1MHz, VBW=3MHz
 -30dBc limit, RBW=100kHz, VBW=300kHz

Test Environment Conditions:
 Temperature:20°C
 Relative Humidity: 48%

Site A

Test Methods: ANSI C63.10 (2013)
 KDB 558074 D01 15.247 Meas Guidance v05r02

Venstar, Inc. WO#: 104728 Sequence#: 10 Date: 11/24/2020
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Vert



— Readings
 × QP Readings
 ▼ Ambient
 ○ Peak Readings
 * Average Readings
 Software Version: 5.03.19

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN00314	Loop Antenna	6502	4/13/2020	4/13/2022
T1	AN00309	Preamp	8447D	12/24/2019	12/24/2021
T2	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T3	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T4	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/4/2018	12/4/2020
T5	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
T6	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T7	AN00786	Preamp	83017A	5/20/2020	5/20/2022
T8	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T9	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021
T10	ANP07246	Cable	32022-29094K- 29094K-24TC	5/29/2020	5/29/2022
T11	AN03385	High Pass Filter	11SH10- 3000/T10000- O/O	5/13/2019	5/13/2021
	AN01413	Horn Antenna	84125-80008	10/19/2020	10/19/2022
	AN03367	Horn Antenna	62-GH-62-25.	8/1/2019	8/1/2021

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	T5	T6	T7	T8	Table	dB μ V/m	dB μ V/m	dB	Ant
			T9	T10	T11						
			dB	dB	dB	dB					
1	247.600M QP	48.3	-27.9 +12.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	41.6	46.0	-4.4	Horiz
^	247.600M	52.1	-27.9 +12.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	45.4	46.0	-0.6	Horiz
3	325.540M	45.4	-27.9 +14.1 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.4 +0.0	+0.0	41.2	46.0	-4.8	Horiz
4	256.590M	46.2	-27.9 +12.4 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	39.7	46.0	-6.3	Horiz
5	4105.500M	45.2	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	45.1	54.0	-8.9	Vert
6	109.100M	41.9	-28.0 +10.6 +0.0	+5.9 +0.0 +0.0	+0.1 +0.0 +0.0	+1.8 +0.0	+0.0	32.3	43.5	-11.2	Vert
7	247.150M	41.4	-27.9 +12.1 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	34.6	46.0	-11.4	Vert
8	4924.000M	41.4	+0.0 +0.0 +4.5	+0.0 +0.0 +0.6	+0.0 -37.6 +0.3	+0.0 +33.3	+0.0	42.5	54.0	-11.5	Vert
9	4104.650M Ave	42.0	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	41.9	54.0	-12.1	Horiz
^	4104.650M	53.8	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	53.7	54.0	-0.3	Horiz
11	266.190M	39.5	-27.9 +12.6 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+3.0 +0.0	+0.0	33.3	46.0	-12.7	Horiz
12	109.090M	39.5	-28.0 +10.6 +0.0	+5.9 +0.0 +0.0	+0.1 +0.0 +0.0	+1.8 +0.0	+0.0	29.9	43.5	-13.6	Horiz
13	189.090M	58.7	-28.0 +9.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.5 +0.0	+0.0	48.3	64.1	-15.8	Horiz
14	7386.750M Ave	30.3	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0	36.5	54.0	-17.5	Vert
^	7386.750M	42.9	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0	49.1	54.0	-4.9	Vert

16	214.590M	55.2	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0	46.1	64.1	-18.0	Horiz
17	203.590M	55.4	-28.0 +9.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.6 +0.0 +0.0	+0.0	45.3	64.1	-18.8	Horiz
18	553.450M	42.1	-27.6 +18.8 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	+0.0	44.1	64.1	-20.0	Vert
19	304.140M	48.6	-27.9 +13.4 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0 +0.0	+0.0	43.5	64.1	-20.6	Horiz
20	4059.567M Ave	33.3	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4 +0.0	+0.0	33.2	54.0	-20.8	Vert
^	4059.567M	47.6	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4 +0.0	+0.0	47.5	54.0	-6.5	Vert
22	308.890M	47.9	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0 +0.0	+0.0	43.1	64.1	-21.0	Horiz
23	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	+0.0	43.1	64.1	-21.0	Vert
24	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	+0.0	43.1	64.1	-21.0	Vert
25	546.350M	39.1	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	+0.0	41.0	64.1	-23.1	Vert
26	503.550M	38.2	-27.7 +18.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.2 +0.0 +0.0	+0.0	38.9	64.1	-25.2	Vert
27	218.150M	46.9	-27.9 +10.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0	38.0	64.1	-26.1	Vert
28	214.550M	46.8	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0	37.7	64.1	-26.4	Vert
29	396.540M	38.2	-27.9 +16.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.7 +0.0 +0.0	+0.0	36.2	64.1	-27.9	Horiz
30	418.150M	36.6	-27.9 +16.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.8 +0.0 +0.0	+0.0	35.2	64.1	-28.9	Vert

31	352.700M	38.5	-27.9 +14.9 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.5 +0.0 +0.0	+0.0	35.2	64.1	-28.9	Vert
32	306.450M	40.0	-27.9 +13.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0 +0.0	+0.0	35.0	64.1	-29.1	Vert
33	308.950M	39.8	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0 +0.0	+0.0	35.0	64.1	-29.1	Vert
34	458.550M	34.7	-27.8 +17.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.0 +0.0 +0.0	+0.0	34.3	64.1	-29.8	Vert
35	363.600M	36.4	-27.9 +15.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.6 +0.0 +0.0	+0.0	33.5	64.1	-30.6	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/24/2020
 Test Type: **Maximized Emissions** Time: 10:26:29
 Tested By: Don Nguyen Sequence#: 11
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.

Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11n20: MCS7
 Modulation: 64-QAM
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

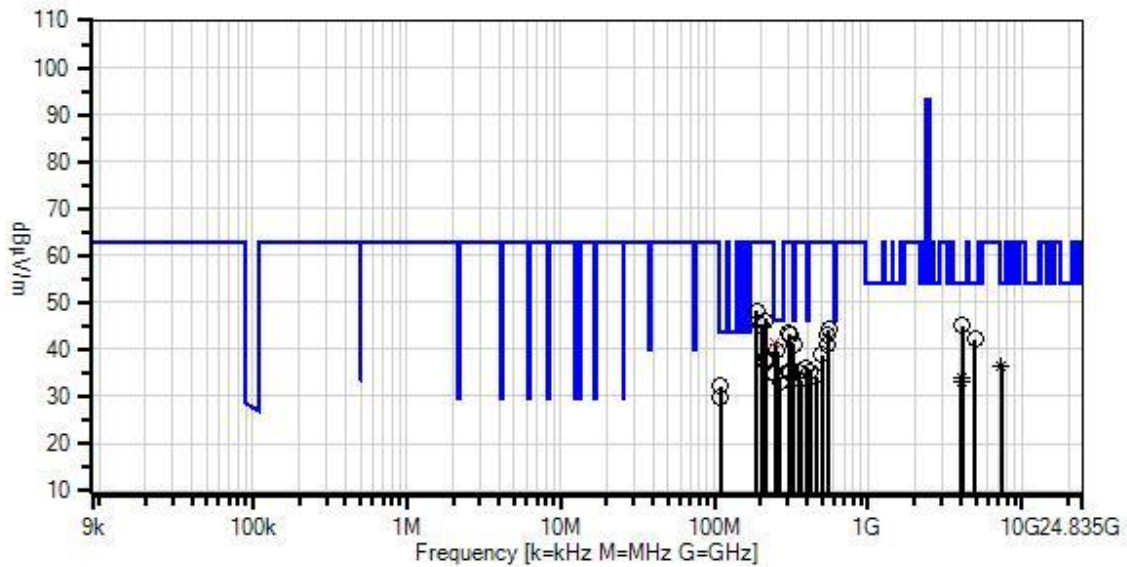
Frequency of Measurement: 9kHz-25000MHz
 9kHz to 150kHz RBW=0.2kHz, VBW=0.6kHz.
 150kHz to 30MHz RBW=9kHz, VBW=27kHz.
 30-1000MHz, RBW=120kHz, VBW=360kHz
 1000-25000MHz, RBW=1MHz, VBW=3MHz
 -30dBc limit, RBW=100kHz, VBW=300kHz

Test Environment Conditions:
 Temperature:20°C
 Relative Humidity: 48%

Site A

Test Methods: ANSI C63.10 (2013)
 KDB 558074 D01 15.247 Meas Guidance v05r02

Venstar, Inc. WO#: 104728 Sequence#: 11 Date: 11/24/2020
 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Vert



— Readings
 × QP Readings
 ▼ Ambient
 — 1 - 15.247(d) / 15.209 Radiated Spurious Emissions
 ○ Peak Readings
 * Average Readings
 Software Version: 5.03.19

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN00314	Loop Antenna	6502	4/13/2020	4/13/2022
T1	AN00309	Preamp	8447D	12/24/2019	12/24/2021
T2	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T3	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T4	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/4/2018	12/4/2020
T5	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
T6	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T7	AN00786	Preamp	83017A	5/20/2020	5/20/2022
T8	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T9	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021
T10	ANP07246	Cable	32022-29094K- 29094K-24TC	5/29/2020	5/29/2022
T11	AN03385	High Pass Filter	11SH10- 3000/T10000- O/O	5/13/2019	5/13/2021
	AN01413	Horn Antenna	84125-80008	10/19/2020	10/19/2022
	AN03367	Horn Antenna	62-GH-62-25.	8/1/2019	8/1/2021

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dB μ V	T9	T10	T11		Table	dB μ V/m	dB μ V/m	dB	Ant
			dB	dB	dB	dB					
1	247.890M QP	48.2	-27.9 +12.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	41.5	46.0	-4.5	Horiz
^	247.890M	51.4	-27.9 +12.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	44.7	46.0	-1.3	Horiz
3	325.540M	45.4	-27.9 +14.1 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.4 +0.0	+0.0	41.2	46.0	-4.8	Horiz
4	256.590M	46.2	-27.9 +12.4 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	39.7	46.0	-6.3	Horiz
5	4108.300M	45.1	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4	+0.0	45.0	54.0	-9.0	Vert
6	109.100M	41.9	-28.0 +10.6 +0.0	+5.9 +0.0 +0.0	+0.1 +0.0 +0.0	+1.8 +0.0	+0.0	32.3	43.5	-11.2	Vert
7	247.150M	41.4	-27.9 +12.1 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.9 +0.0	+0.0	34.6	46.0	-11.4	Vert
8	4924.000M	41.0	+0.0 +0.0 +4.5	+0.0 +0.0 +0.6	+0.0 -37.6 +0.3	+0.0 +33.3	+0.0	42.1	54.0	-11.9	Vert
9	266.190M	39.5	-27.9 +12.6 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+3.0 +0.0	+0.0	33.3	46.0	-12.7	Horiz
10	109.090M	39.5	-28.0 +10.6 +0.0	+5.9 +0.0 +0.0	+0.1 +0.0 +0.0	+1.8 +0.0	+0.0	29.9	43.5	-13.6	Horiz
11	189.090M	58.7	-28.0 +9.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.5 +0.0	+0.0	48.3	63.0	-14.7	Horiz
12	214.590M	55.2	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0	+0.0	46.1	63.0	-16.9	Horiz
13	7385.880M Ave	30.2	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0	36.4	54.0	-17.6	Vert
^	7385.880M	42.4	+0.0 +0.0 +6.1	+0.0 +0.0 +0.9	+0.0 -37.3 +0.2	+0.0 +36.3	+0.0	48.6	54.0	-5.4	Vert
15	203.590M	55.4	-28.0 +9.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.6 +0.0	+0.0	45.3	63.0	-17.7	Horiz

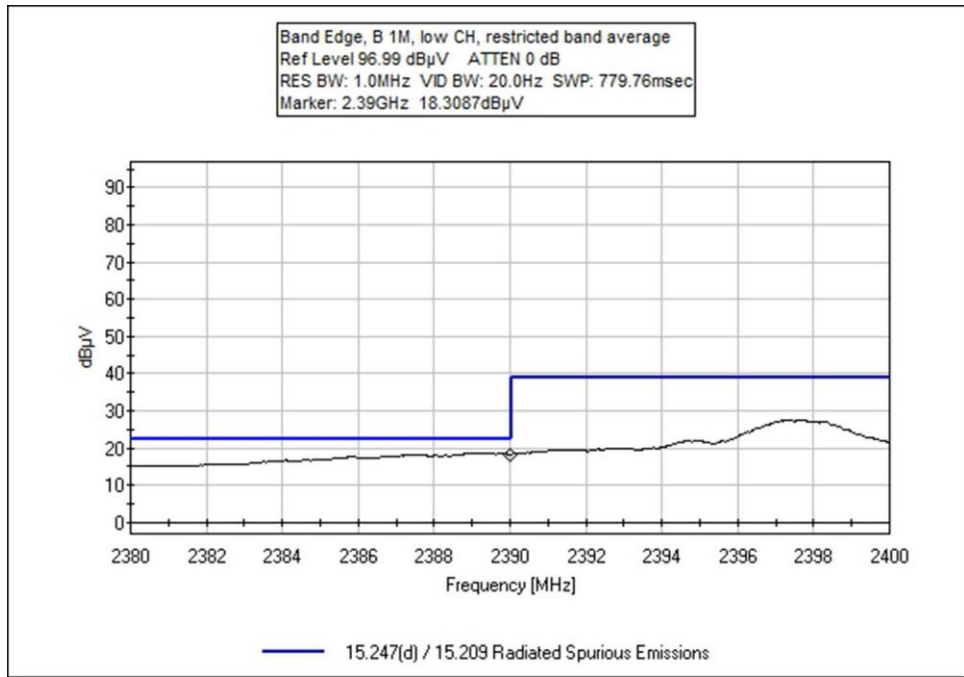
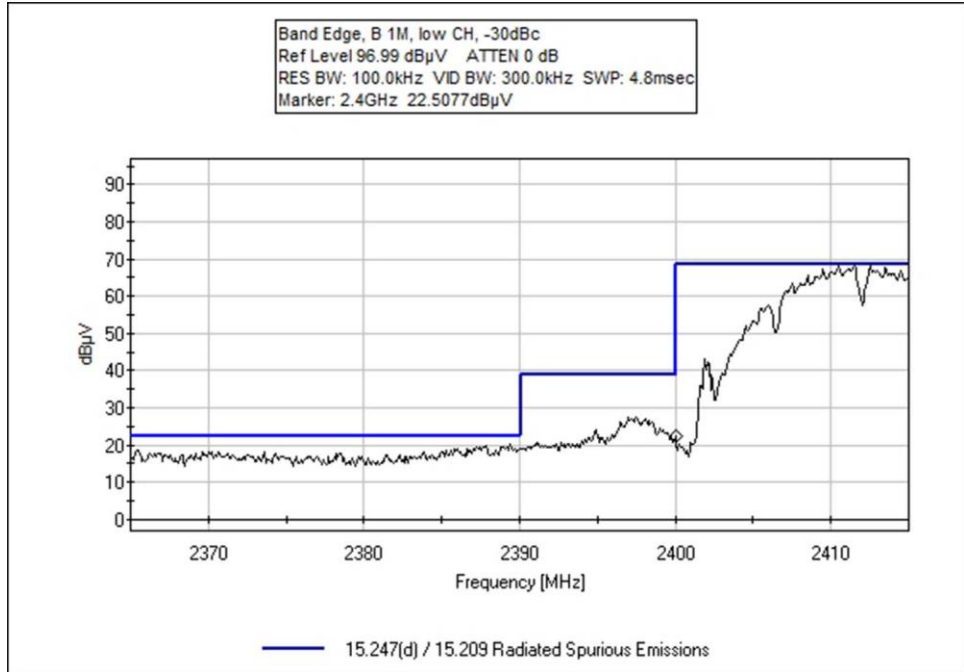
16	553.450M	42.1	-27.6 +18.8 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	+0.0	44.1	63.0	-18.9	Vert
17	304.140M	48.6	-27.9 +13.4 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0 +0.0	+0.0	43.5	63.0	-19.5	Horiz
18	308.890M	47.9	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0 +0.0	+0.0	43.1	63.0	-19.9	Horiz
19	4100.483M Ave	34.2	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4 +0.5	+0.0	34.1	54.0	-19.9	Horiz
^	4100.483M	52.2	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4 +0.5	+0.0	52.1	54.0	-1.9	Horiz
21	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	+0.0	43.1	63.0	-19.9	Vert
22	544.050M	41.2	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	+0.0	43.1	63.0	-19.9	Vert
23	4059.567M Ave	33.3	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4 +0.5	+0.0	33.2	54.0	-20.8	Vert
^	4059.567M	49.7	+0.0 +0.0 +4.2	+0.0 +0.0 +0.6	+0.0 -37.8 +0.5	+0.0 +32.4 +0.5	+0.0	49.6	54.0	-4.4	Vert
25	546.350M	39.1	-27.6 +18.7 +0.0	+5.9 +0.0 +0.0	+0.4 +0.0 +0.0	+4.5 +0.0 +0.0	+0.0	41.0	63.0	-22.0	Vert
26	503.550M	38.2	-27.7 +18.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.2 +0.0 +0.0	+0.0	38.9	63.0	-24.1	Vert
27	218.150M	46.9	-27.9 +10.2 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0	38.0	63.0	-25.0	Vert
28	214.550M	46.8	-27.9 +10.0 +0.0	+5.9 +0.0 +0.0	+0.2 +0.0 +0.0	+2.7 +0.0 +0.0	+0.0	37.7	63.0	-25.3	Vert
29	396.540M	38.2	-27.9 +16.0 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.7 +0.0 +0.0	+0.0	36.2	63.0	-26.8	Horiz
30	418.150M	36.6	-27.9 +16.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.8 +0.0 +0.0	+0.0	35.2	63.0	-27.8	Vert

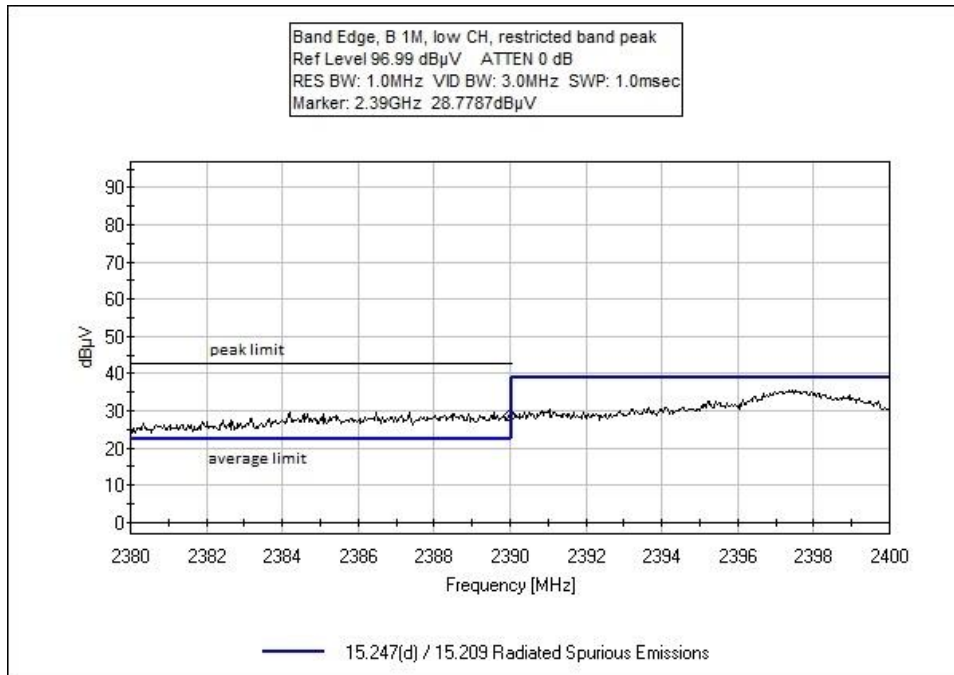
31	352.700M	38.5	-27.9 +14.9 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.5 +0.0 +0.0	+0.0	35.2	63.0	-27.8	Vert
32	306.450M	40.0	-27.9 +13.5 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.2 +0.0 +0.0	+0.0	35.0	63.0	-28.0	Vert
33	308.950M	39.8	-27.9 +13.6 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.3 +0.0 +0.0	+0.0	35.0	63.0	-28.0	Vert
34	458.550M	34.7	-27.8 +17.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+4.0 +0.0 +0.0	+0.0	34.3	63.0	-28.7	Vert
35	363.600M	36.4	-27.9 +15.2 +0.0	+5.9 +0.0 +0.0	+0.3 +0.0 +0.0	+3.6 +0.0 +0.0	+0.0	33.5	63.0	-29.5	Vert

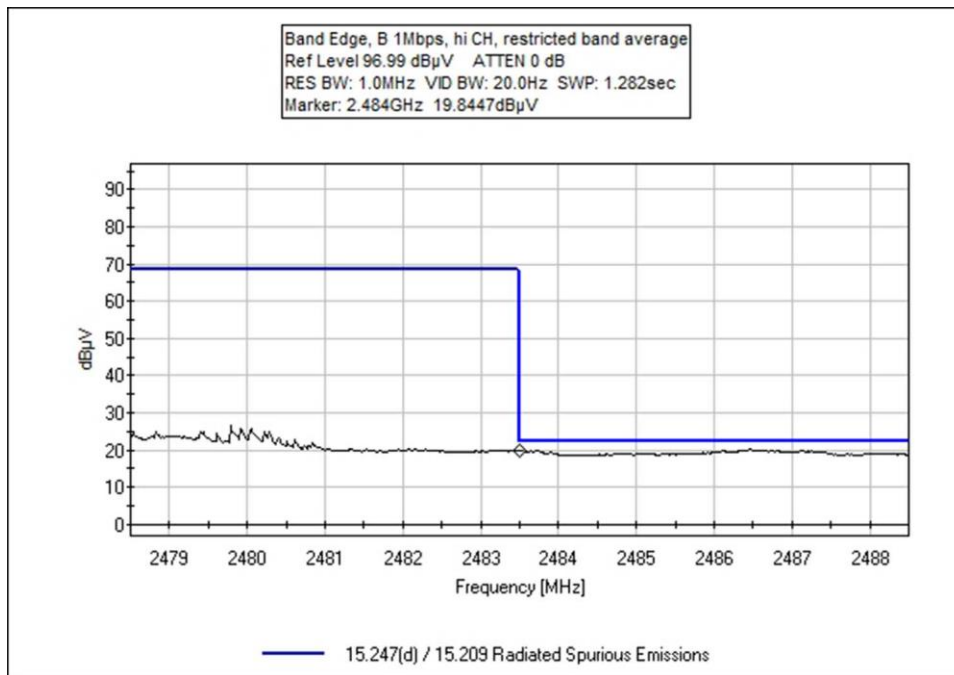
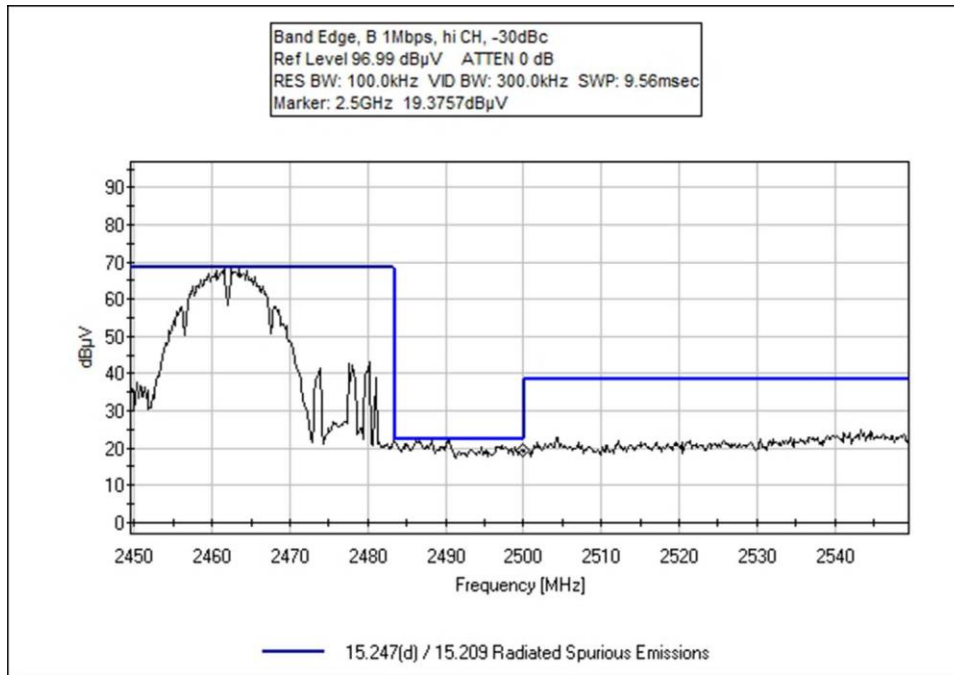
Band Edge

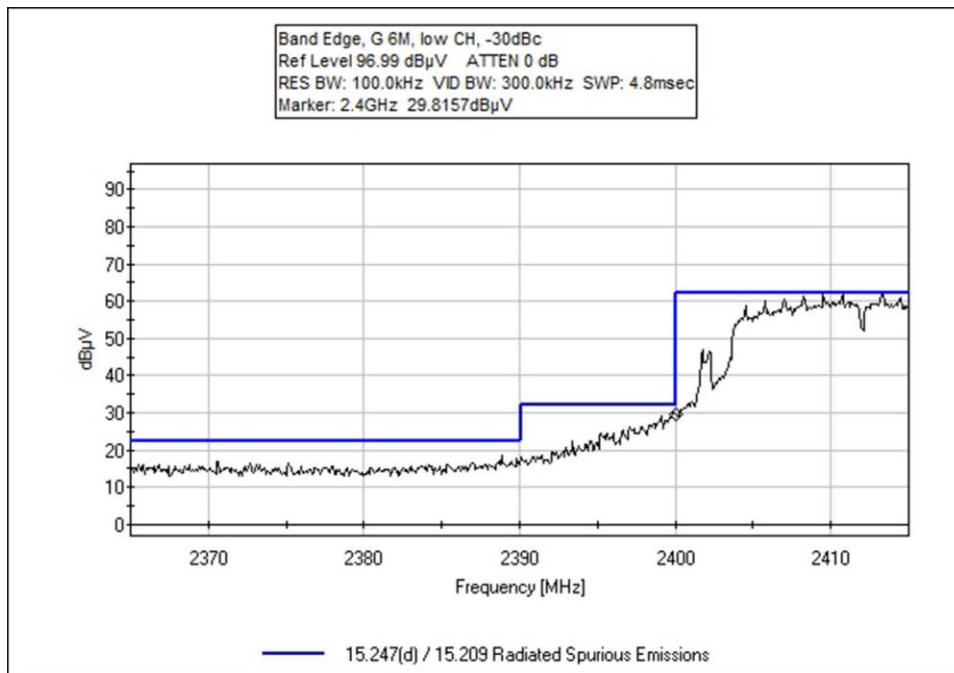
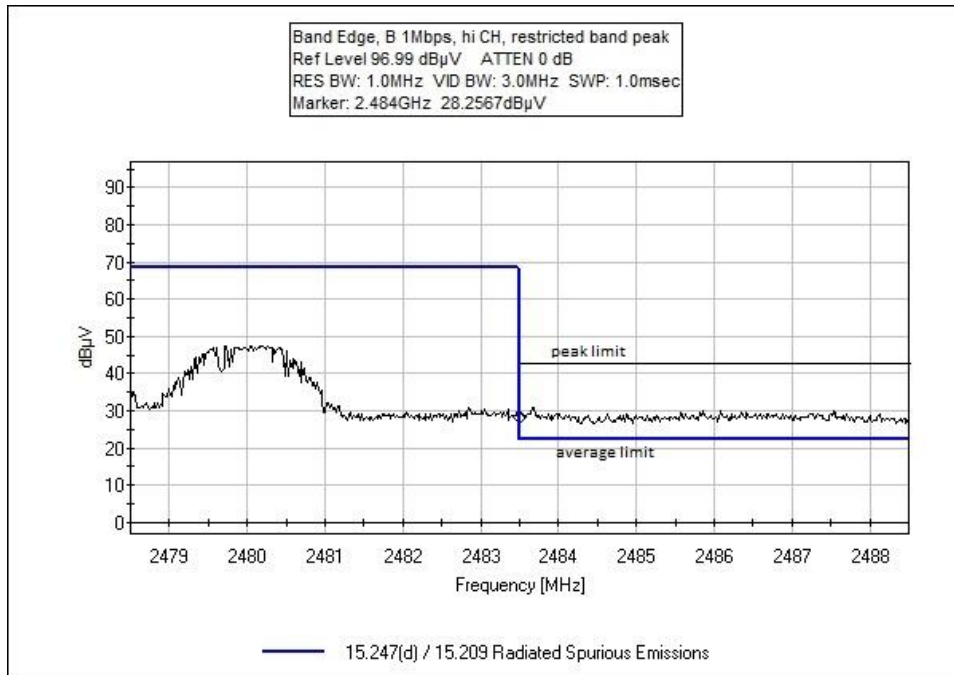
Band Edge Summary					
Frequency (MHz)	Mode/Data Rate	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results
2390.0	802.11b/1Mbps	Chip	49.8	<54	Pass
2400.0	802.11b/1Mbps	Chip	54.0	<70.3	Pass
2483.5	802.11b/1Mbps	Chip	51.5	<54	Pass
2390.0	802.11b/11Mbps	Chip	49.5	<54	Pass
2400.0	802.11b/11Mbps	Chip	59.6	<71.2	Pass
2483.5	802.11b/11Mbps	Chip	50.4	<54	Pass
2390.0	802.11g/6Mbps	Chip	46.8	<54	Pass
2400.0	802.11g/6Mbps	Chip	61.3	<63.7	Pass
2483.5	802.11g/6Mbps	Chip	46.9	<54	Pass
2390.0	802.11g/54Mbps	Chip	44.7	<54	Pass
2400.0	802.11g/54Mbps	Chip	61.6	<63.5	Pass
2483.5	802.11g/54Mbps	Chip	45.0	<54	Pass
2390.0	802.11n/MCS0	Chip	46.7	<54	Pass
2400.0	802.11n/MCS0	Chip	60.4	<64.1	Pass
2483.5	802.11n/MCS0	Chip	46.9	<54	Pass
2390.0	802.11n/MCS7	Chip	44.5	<54	Pass
2400.0	802.11n/MCS7	Chip	60.9	<63.0	Pass
2483.5	802.11n/MCS7	Chip	44.8	<54	Pass

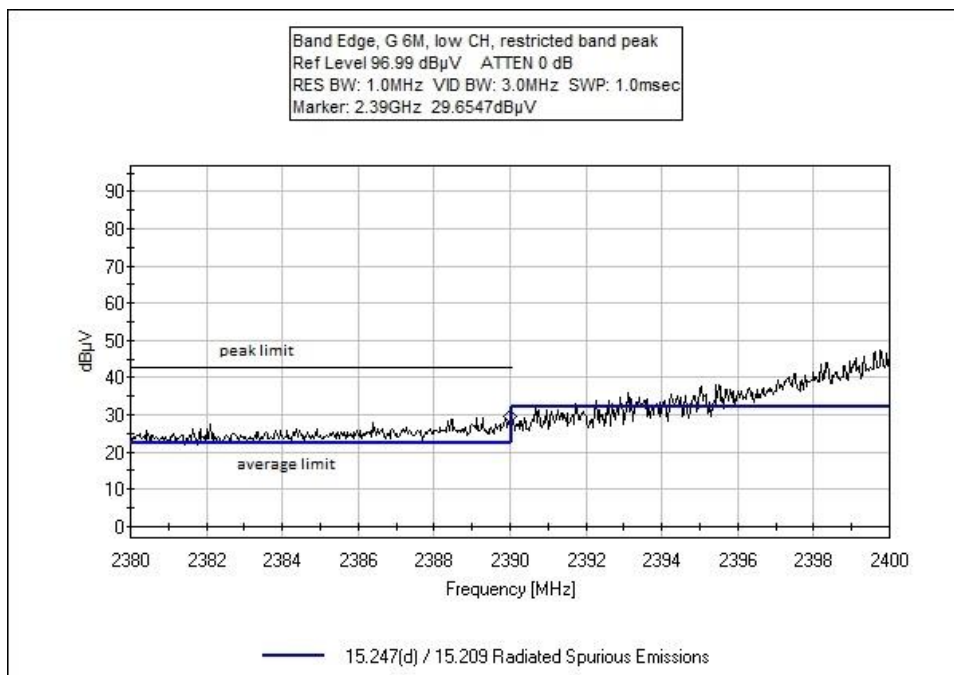
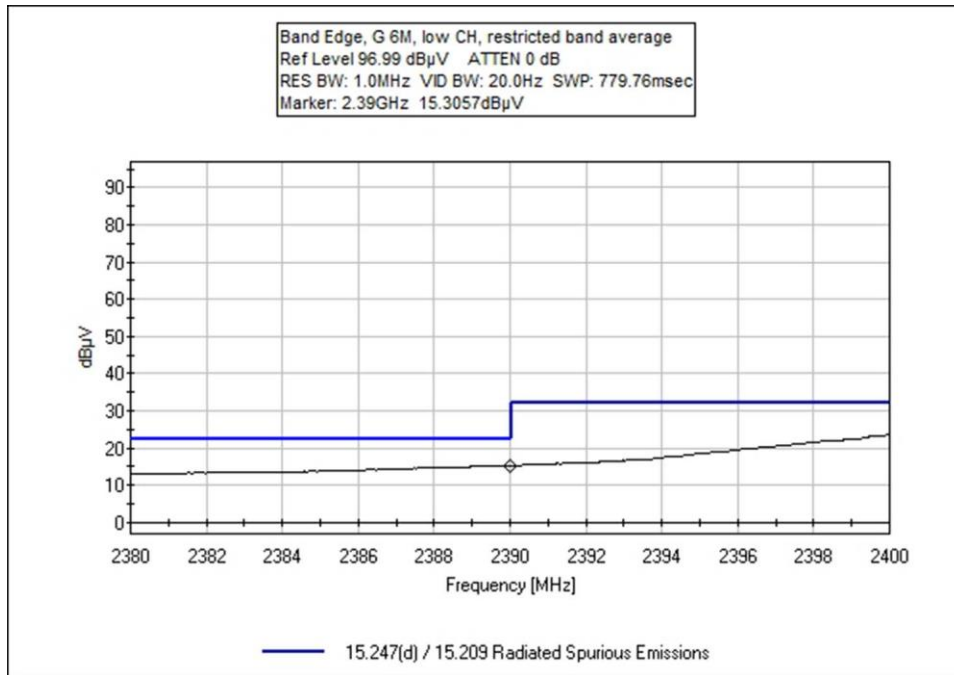
Band Edge Plots

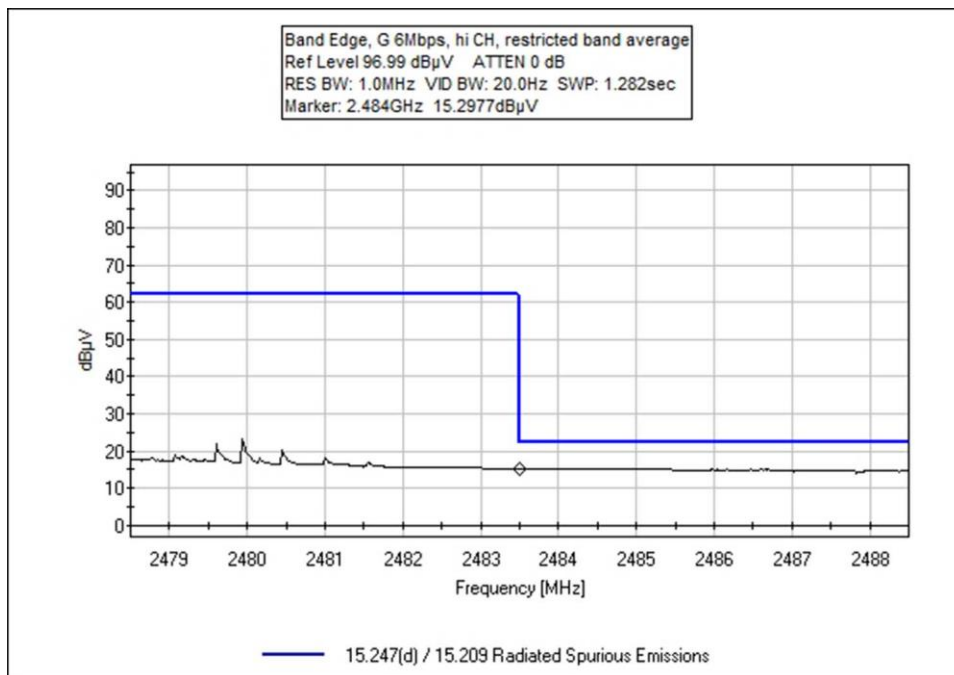
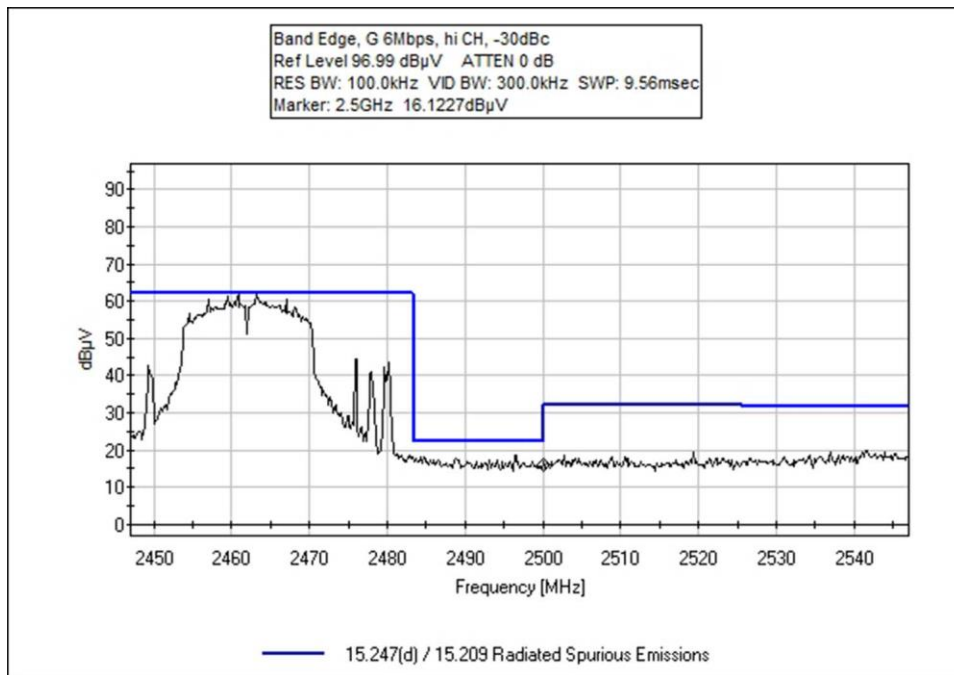


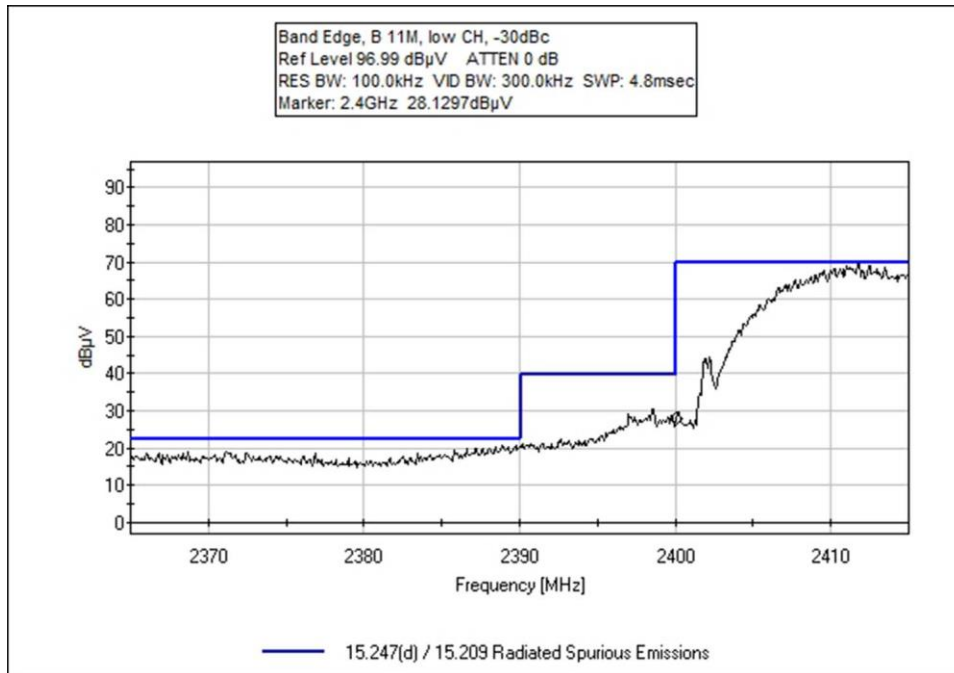
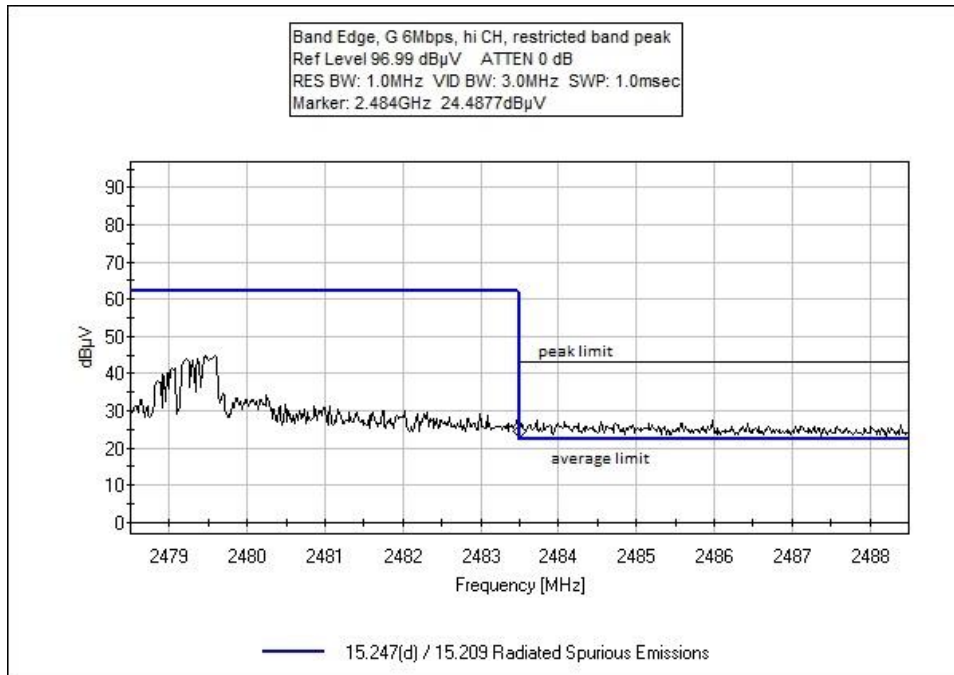


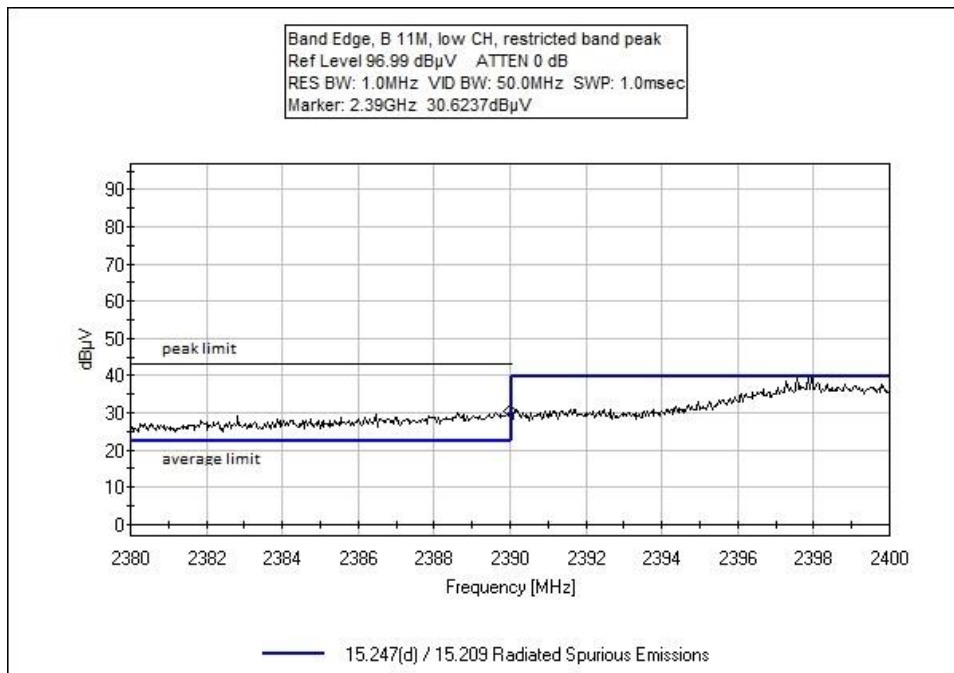
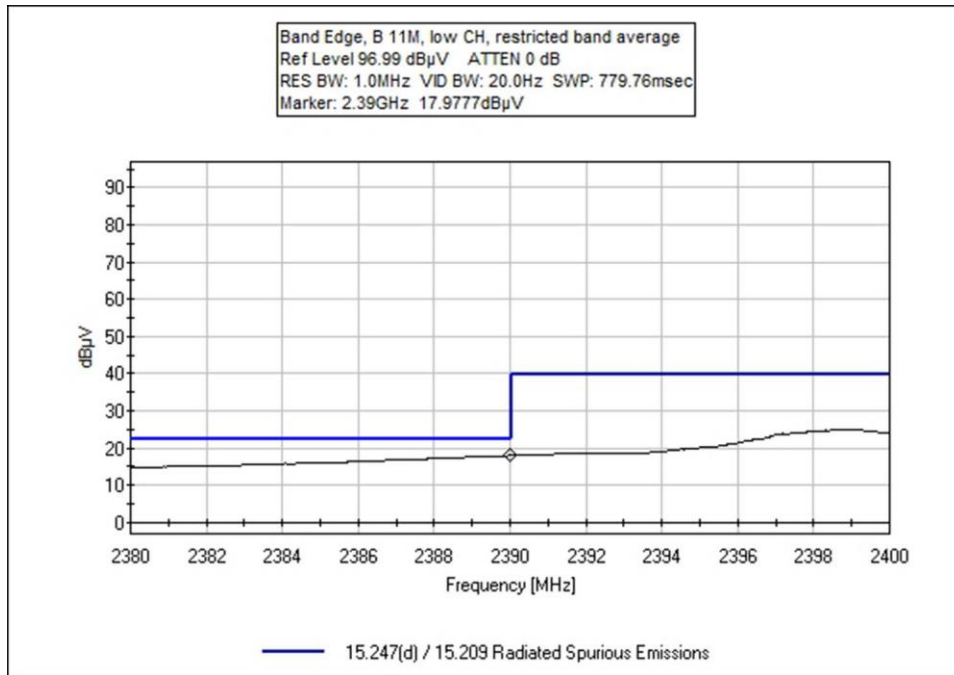


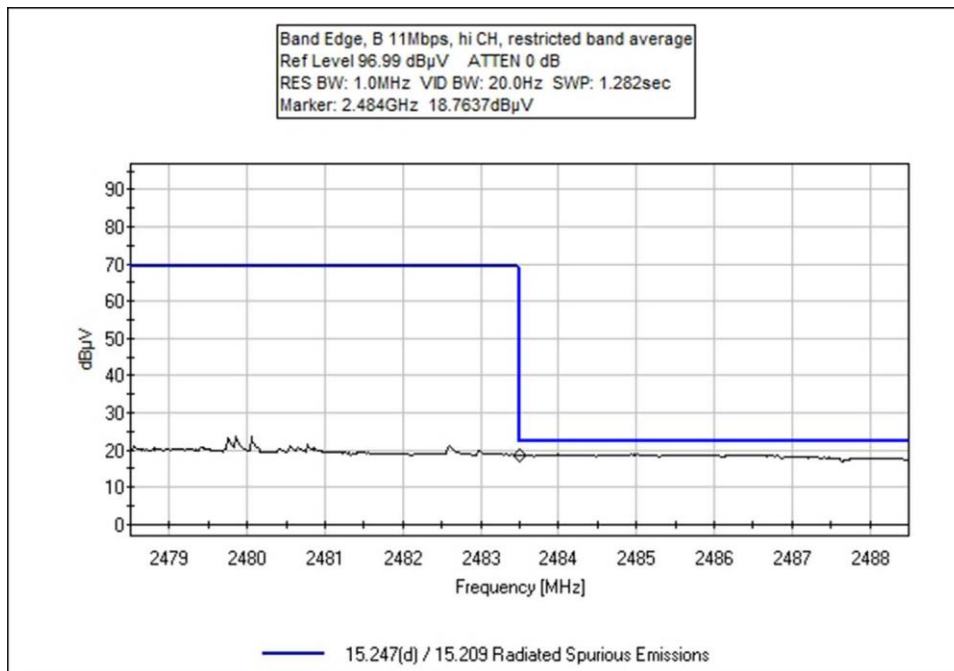
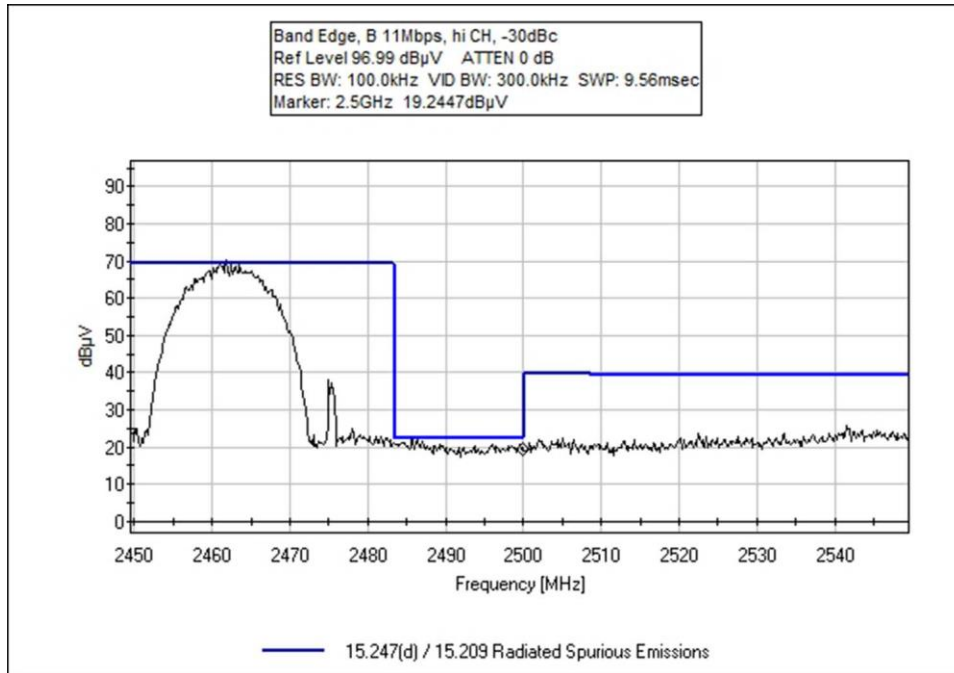


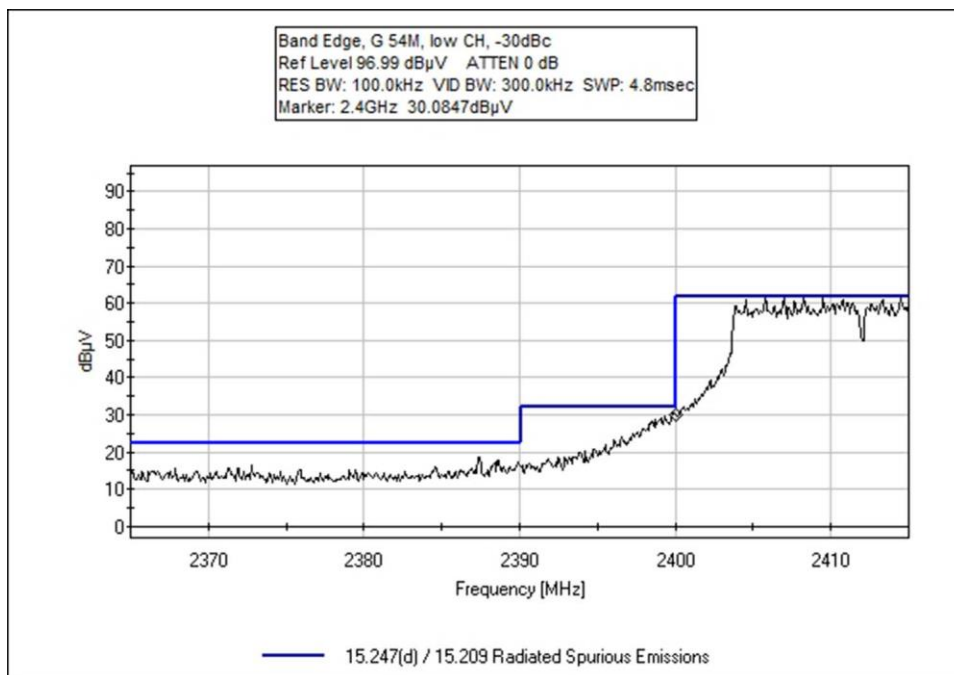
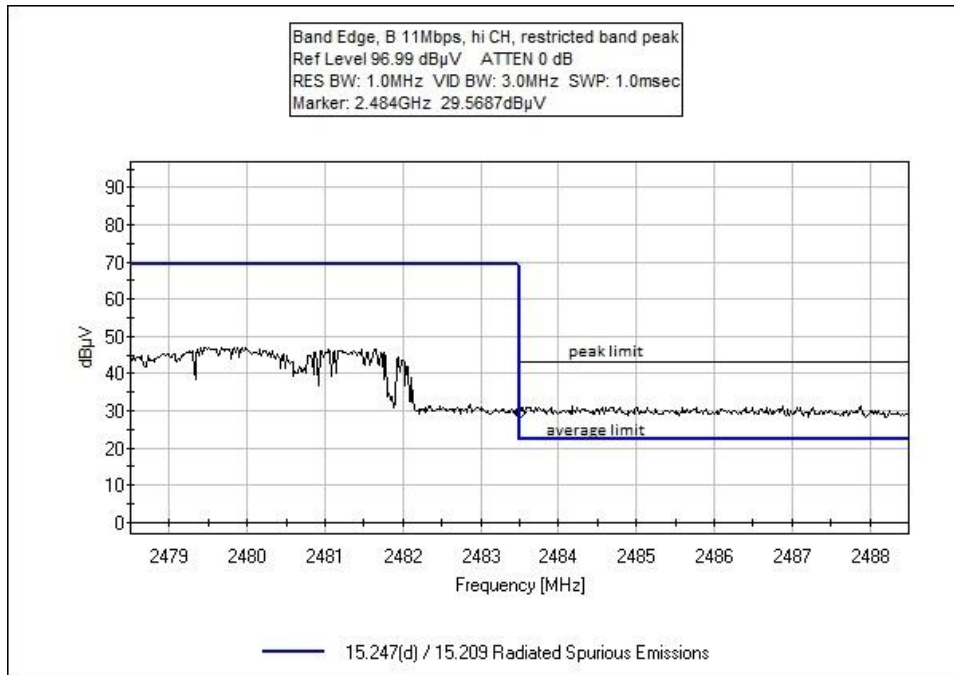


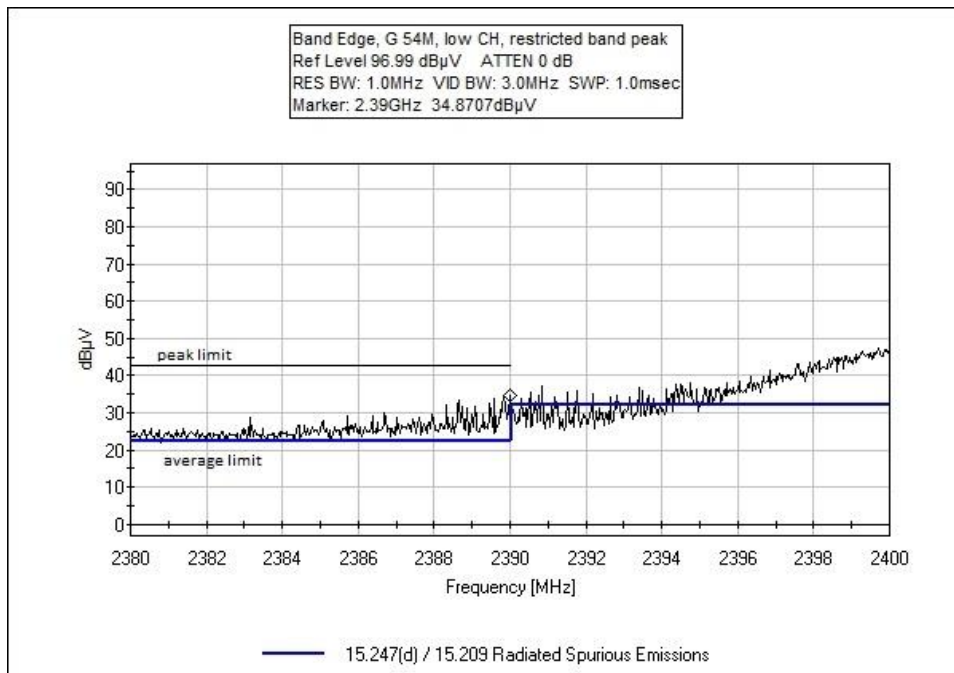
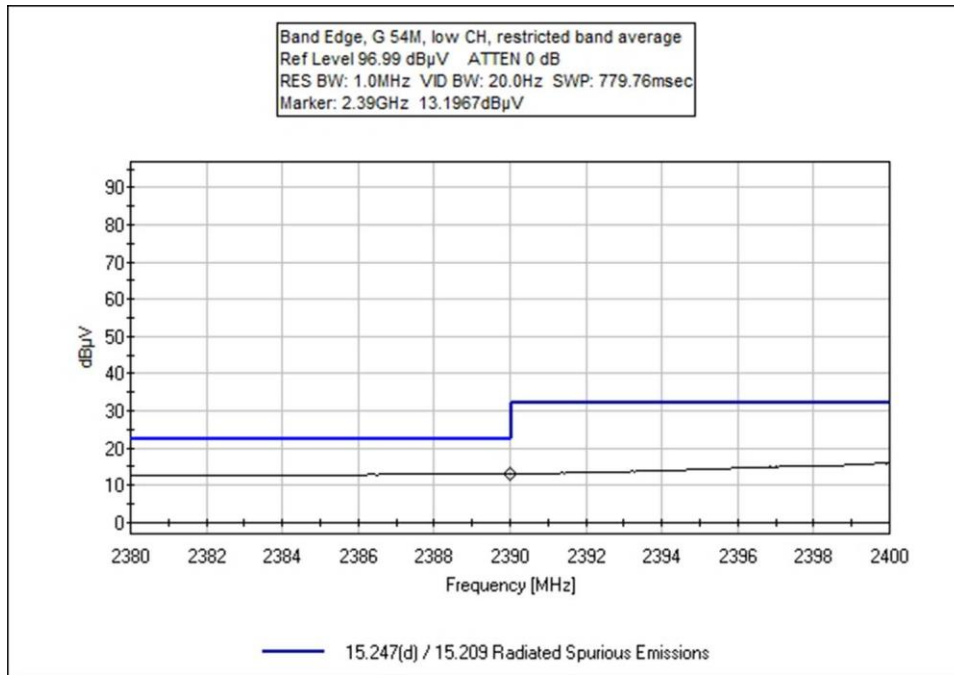


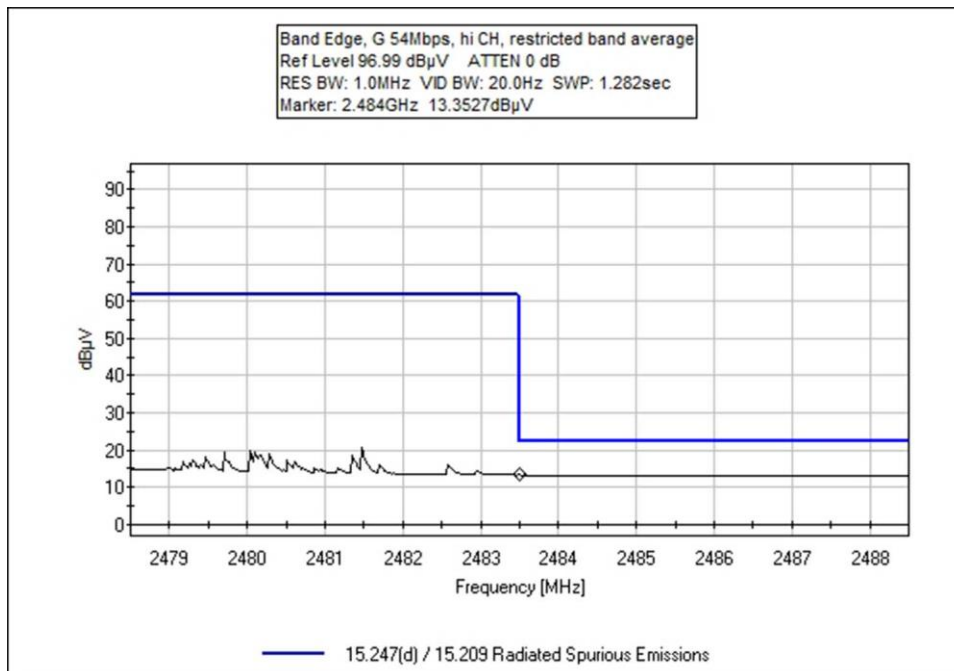
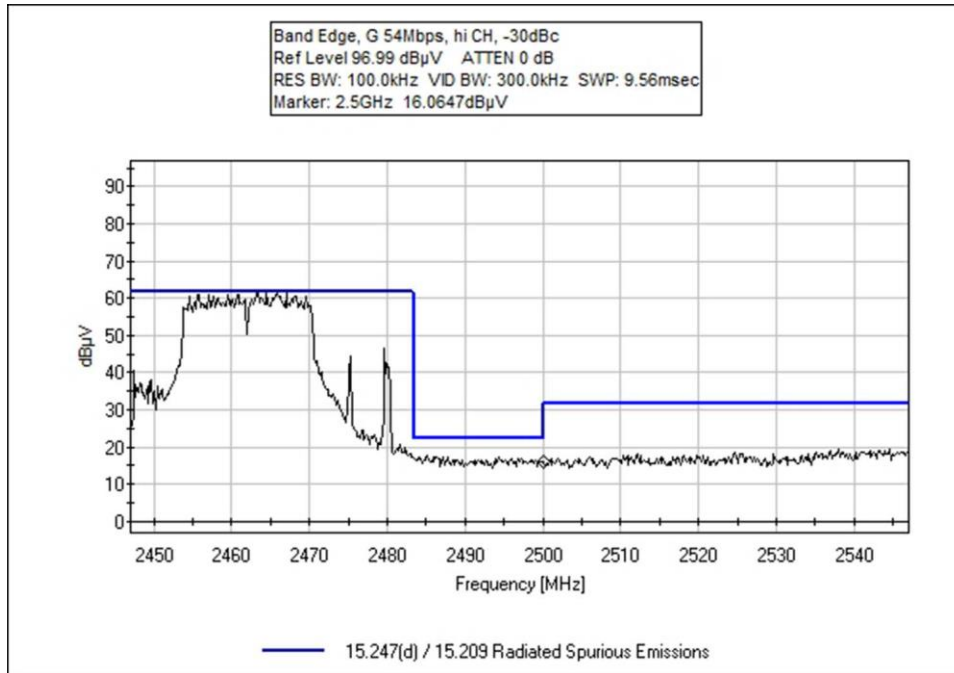


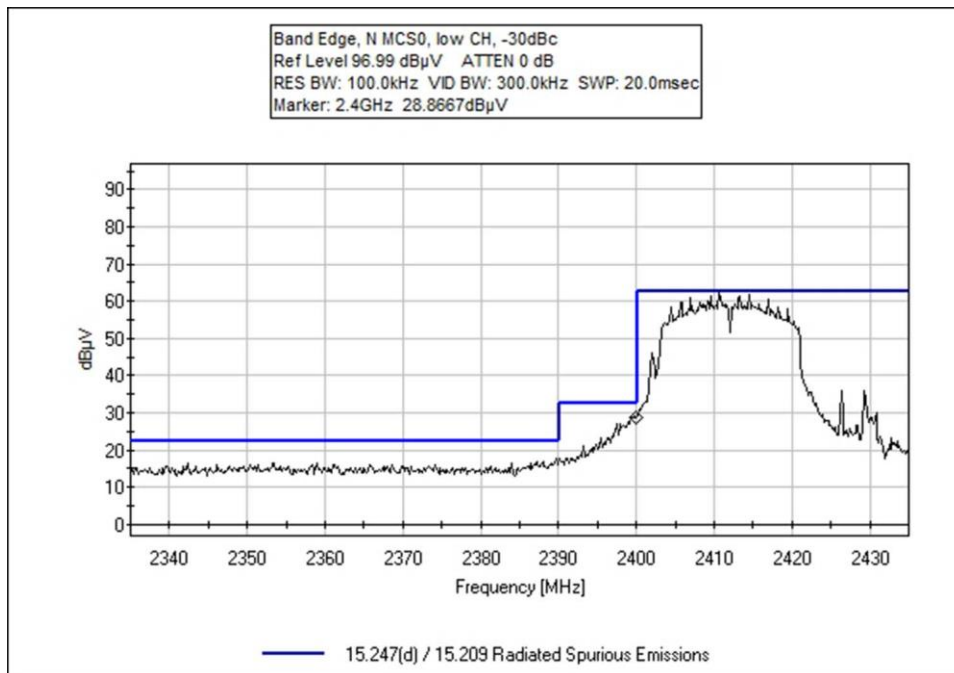
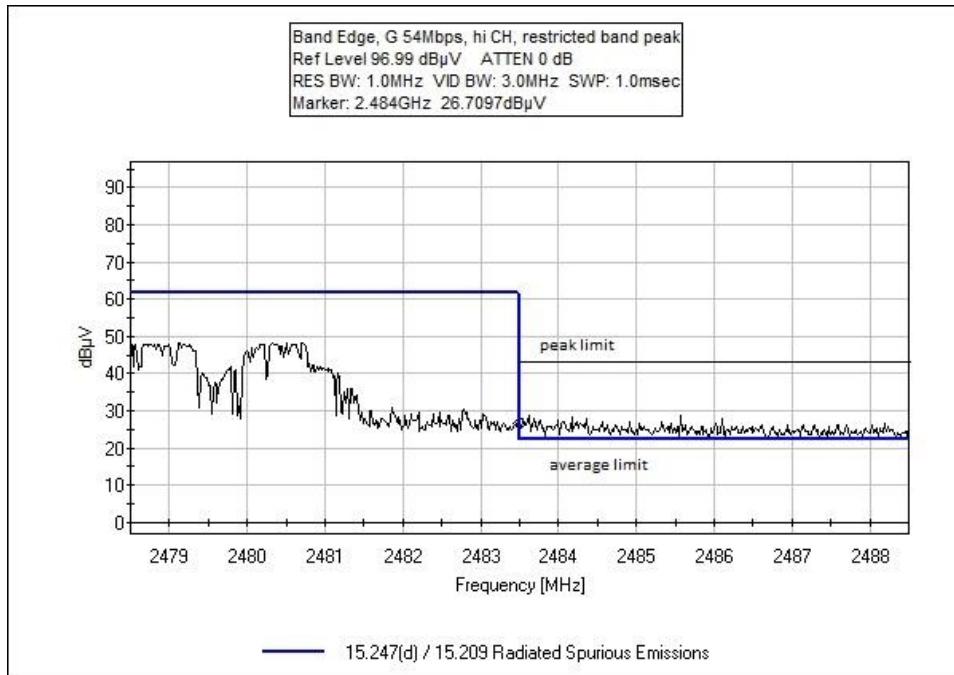


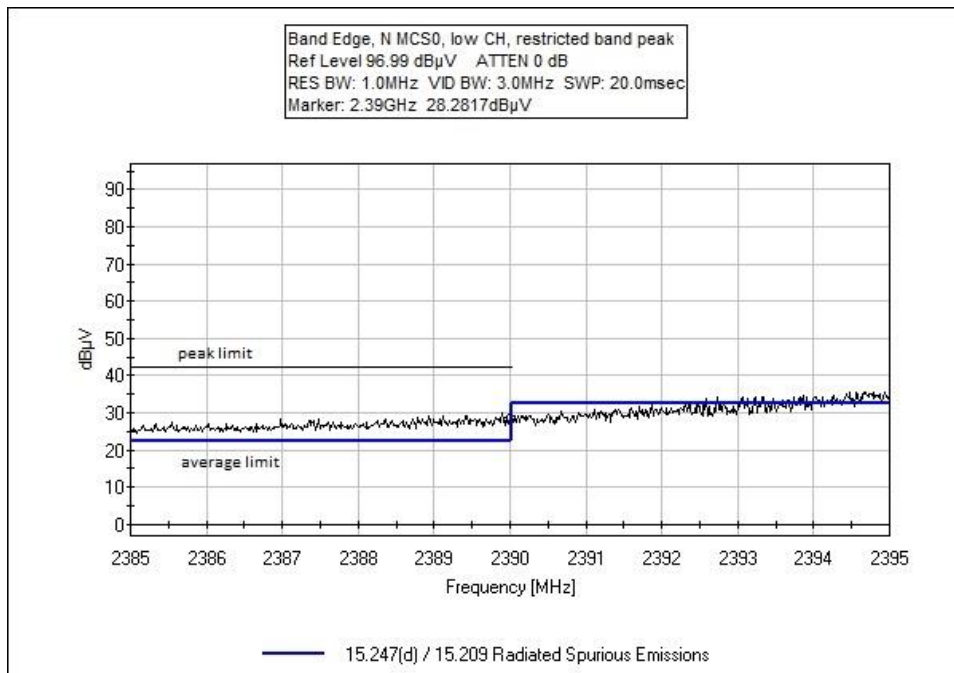
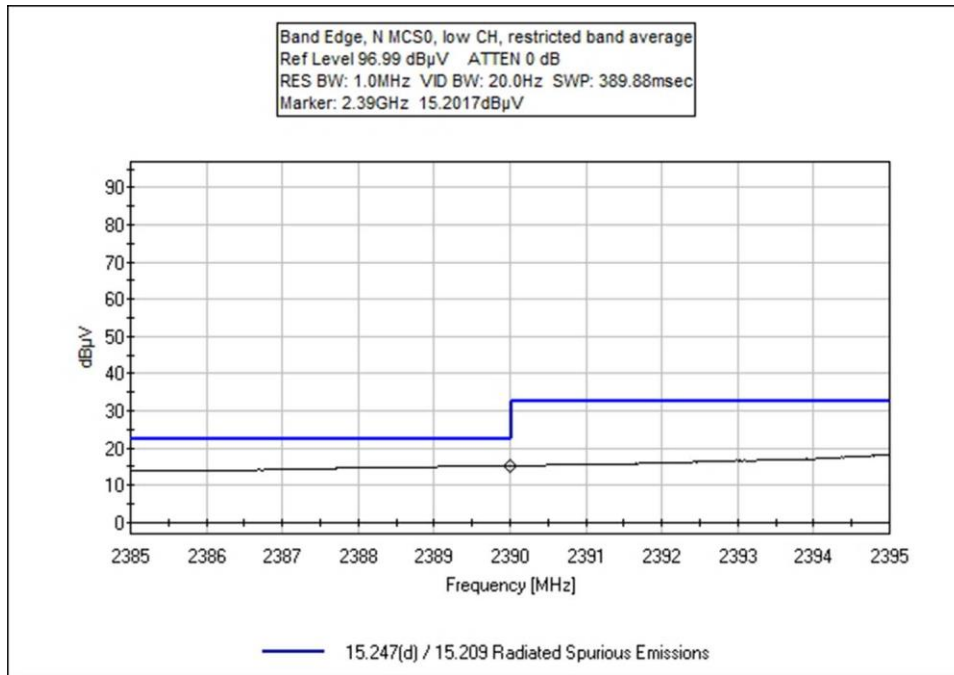


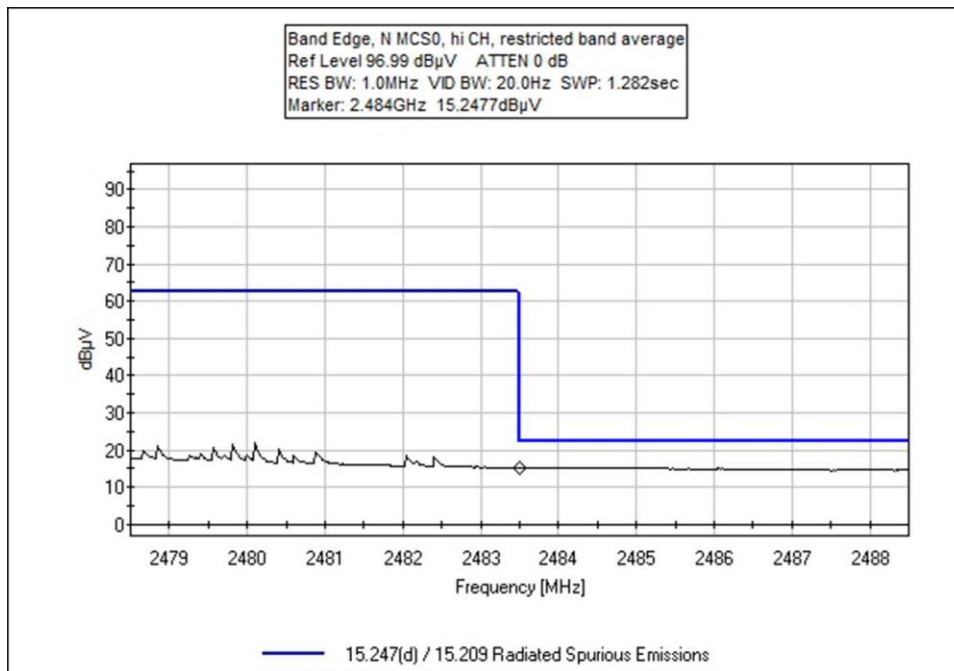
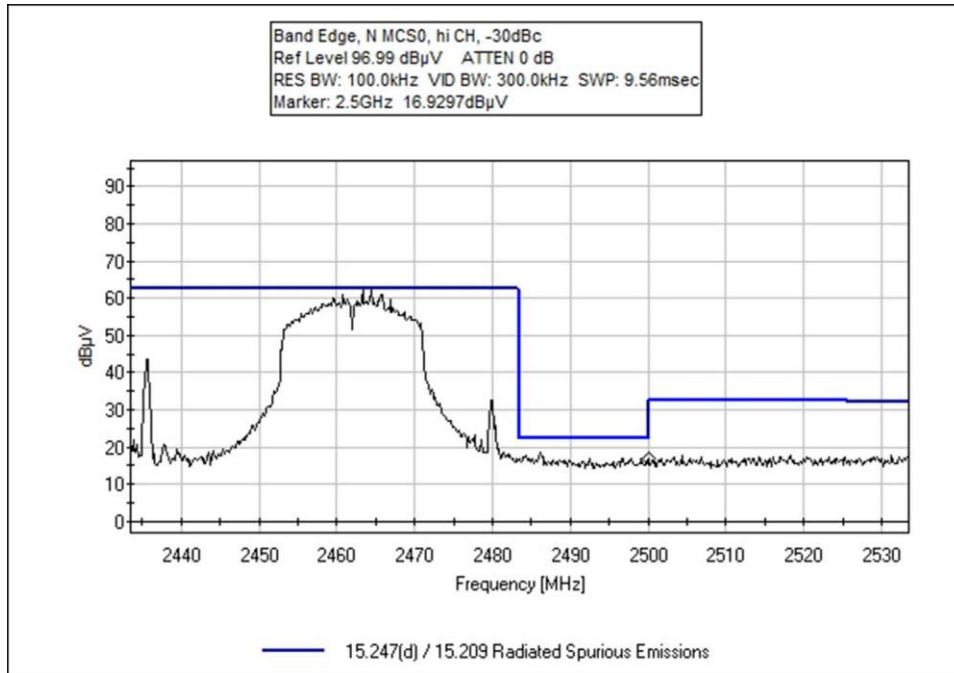


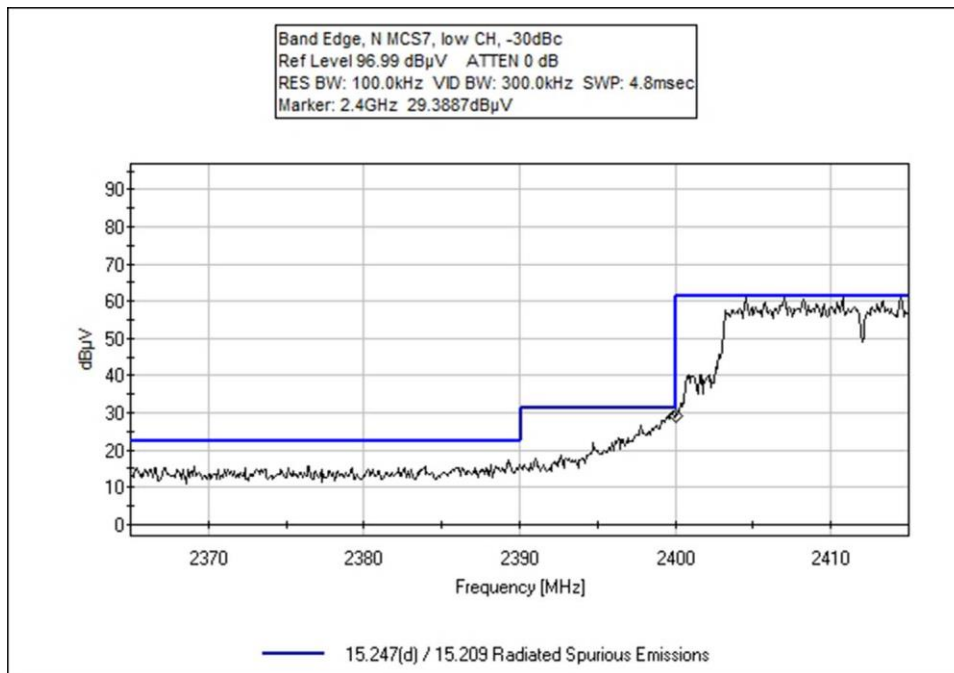
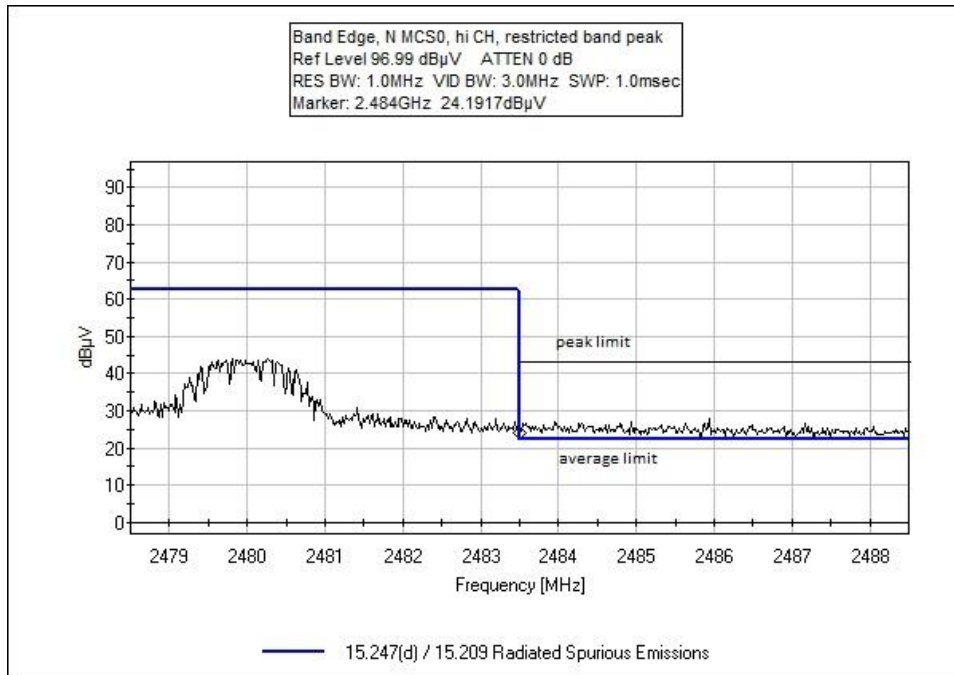


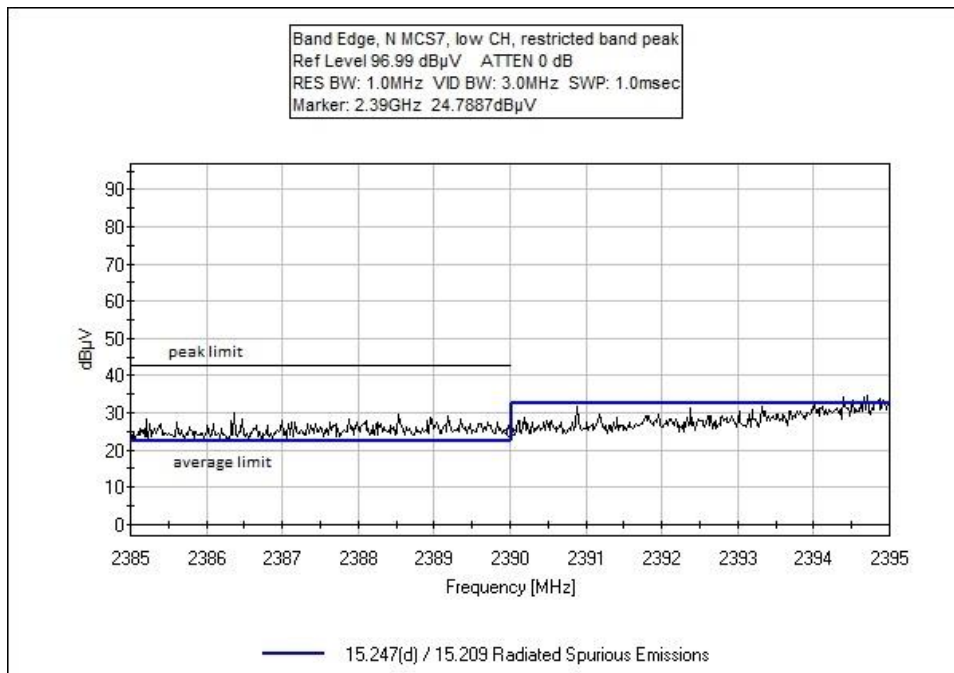
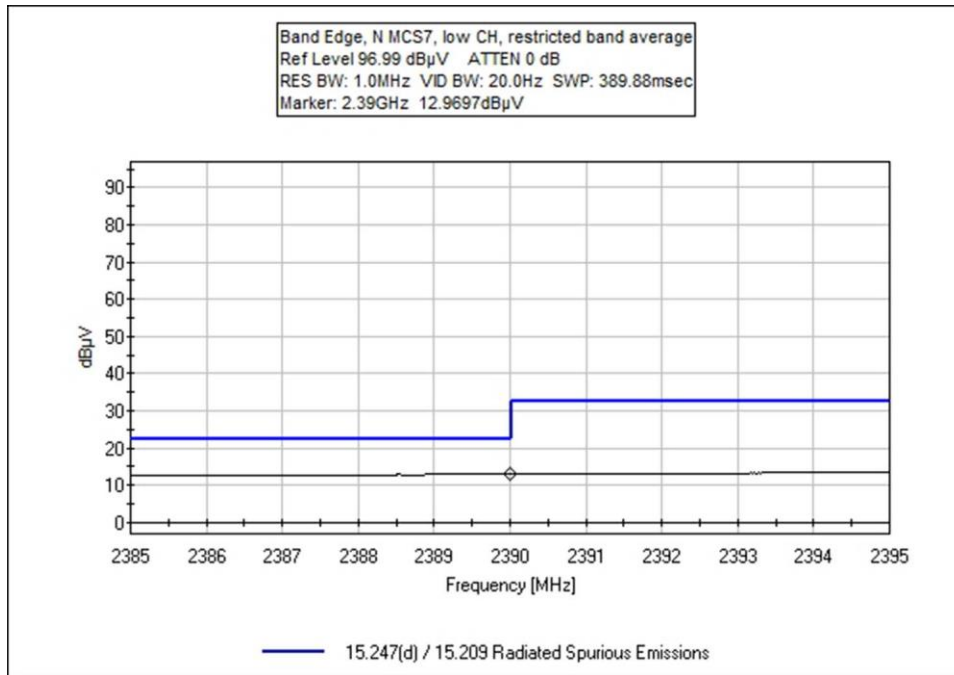


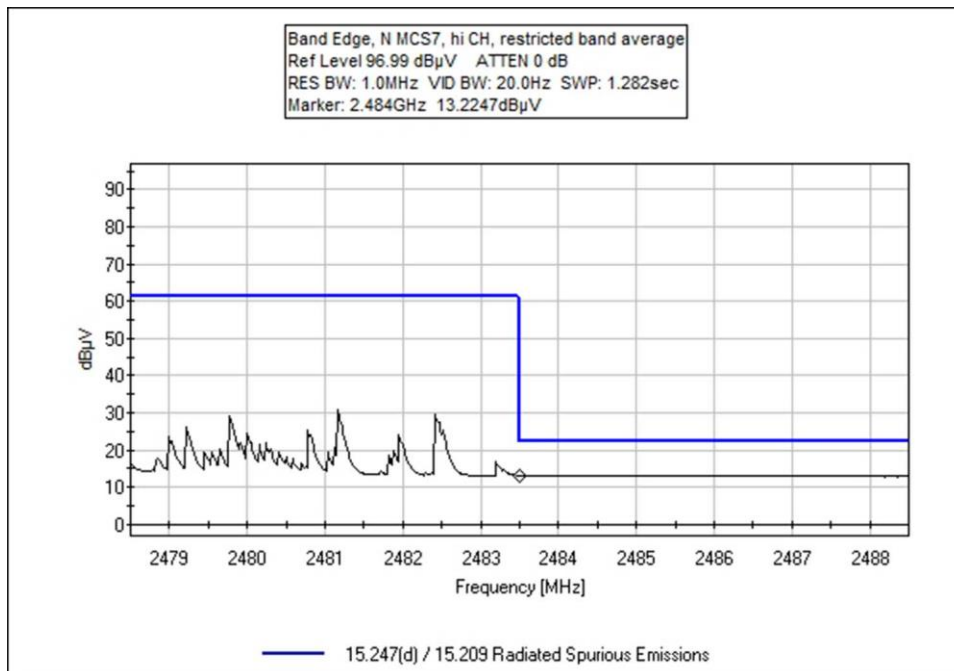
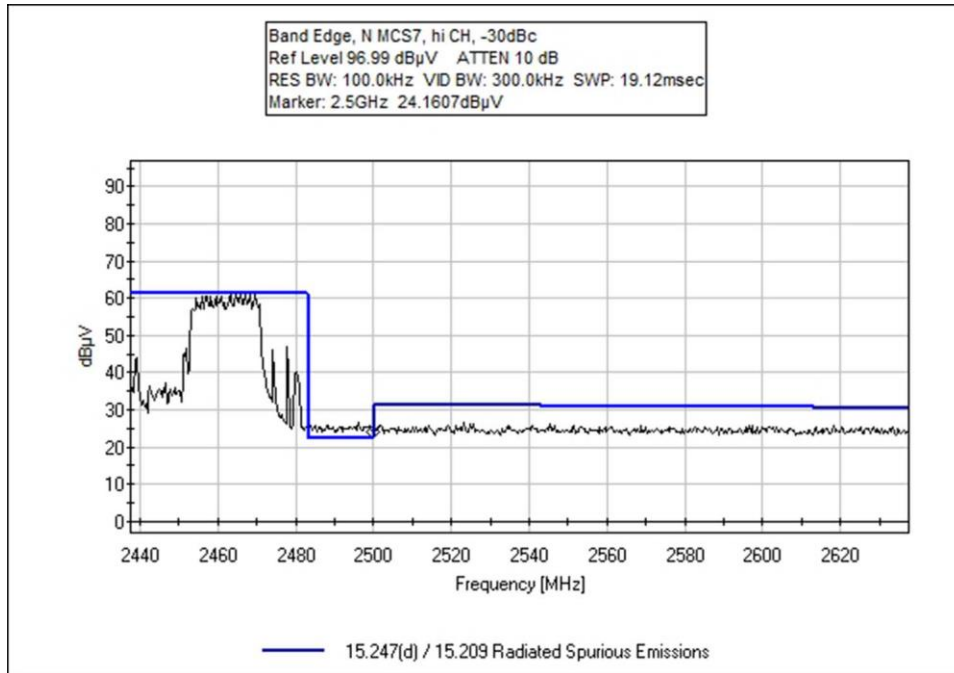


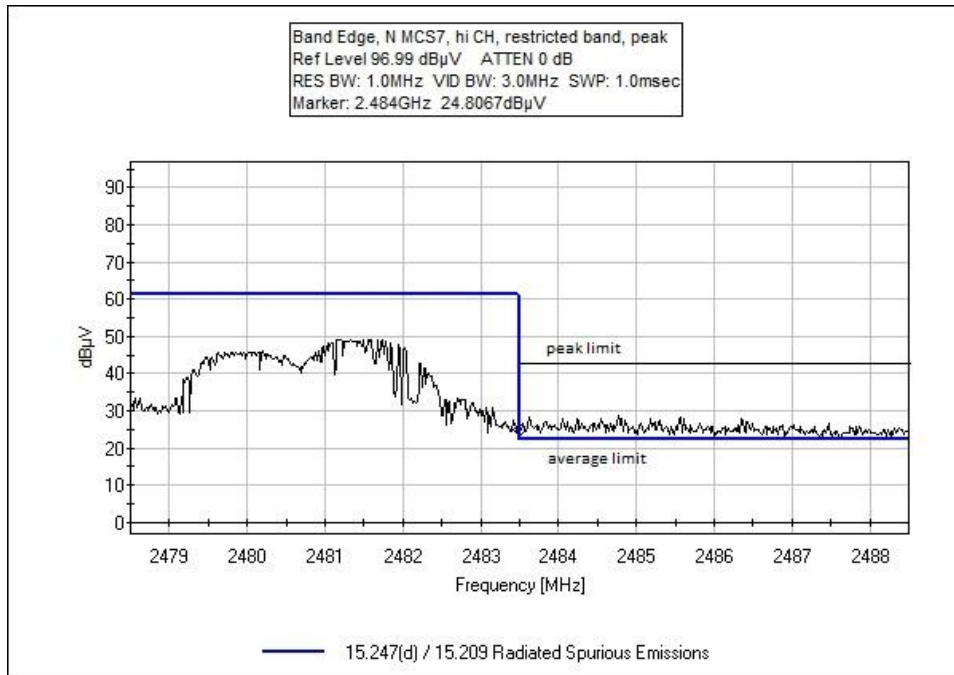












Test Setup / Conditions / Data

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/20/2020
 Test Type: **Maximized Emissions** Time: 11:28:03
 Tested By: Don Nguyen Sequence#: 4
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.

Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11b: 1Mbps (DSSS)

Modulation: DSSS
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

Frequency of Measurement: 2390.0-2483.5MHz
 RBW=1MHz, VBW=3MHz (restricted band)
 RBW=100kHz, VBW=300kHz (-30dBc)

Test Environment Conditions:
 Temperature: 20.5°C
 Relative Humidity: 47%

Test Method: ANSI C63.10 (2013) KDB 558074 D01 15.247 Meas Guidance v05r02

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T2	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T3	ANP06360	Cable	L1-PNMMN-48	8/8/2019	8/8/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	2483.500M	19.9	+0.0	+28.3	+3.3	+0.0	51.5	54.0	-2.5	Vert
	Ave									
^	2483.500M	28.3	+0.0	+28.3	+3.3	+0.0	59.9	54.0	+5.9	Vert
3	2390.000M	18.3	+0.0	+28.3	+3.2	+0.0	49.8	54.0	-4.2	Vert
	Ave									
^	2390.000M	28.8	+0.0	+28.3	+3.2	+0.0	60.3	54.0	+6.3	Vert
5	2400.000M	22.5	+0.0	+28.3	+3.2	+0.0	54.0	70.3	-16.3	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/20/2020
 Test Type: **Maximized Emissions** Time: 13:54:33
 Tested By: Don Nguyen Sequence#: 5
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.
 Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

 Data Rate
 802.11b: 11Mbps

 Modulation: CCK
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

 Frequency of Measurement: 2390.0-2483.5MHz
 RBW=1MHz, VBW=3MHz (restricted band)
 RBW=100kHz, VBW=300kHz (-30dBc)

 Test Environment Conditions:
 Temperature: 20.5°C
 Relative Humidity: 47%

 Test Method: ANSI C63.10 (2013) KDB 558074 D01 15.247 Meas Guidance v05r02

Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T2	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T3	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	2483.500M	18.8	+0.0	+28.3	+3.3		+0.0	50.4	54.0	-3.6	Vert
	Ave										
^	2483.500M	29.6	+0.0	+28.3	+3.3		+0.0	61.2	54.0	+7.2	Vert
3	2390.000M	18.0	+0.0	+28.3	+3.2		+0.0	49.5	54.0	-4.5	Vert
	Ave										
^	2390.000M	30.6	+0.0	+28.3	+3.2		+0.0	62.1	54.0	+8.1	Vert
5	2400.000M	28.1	+0.0	+28.3	+3.2		+0.0	59.6	71.2	-11.6	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/20/2020
 Test Type: **Maximized Emissions** Time: 13:57:38
 Tested By: Don Nguyen Sequence#: 6
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.
 Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11g: 6Mbps

Modulation: OFDM
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

Frequency of Measurement: 2390.0-2483.5MHz
 RBW=1MHz, VBW=3MHz (restricted band)
 RBW=100kHz, VBW=300kHz (-30dBc)

Test Environment Conditions:
 Temperature: 20.5°C
 Relative Humidity: 47%

Test Method: ANSI C63.10 (2013) KDB 558074 D01 15.247 Meas Guidance v05r02

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T2	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T3	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	2400.000M	29.8	+0.0	+28.3	+3.2		+0.0	61.3	63.7	-2.4	Vert
2	2483.500M Ave	15.3	+0.0	+28.3	+3.3		+0.0	46.9	54.0	-7.1	Vert
^	2483.500M	24.5	+0.0	+28.3	+3.3		+0.0	56.1	54.0	+2.1	Vert
4	2390.000M Ave	15.3	+0.0	+28.3	+3.2		+0.0	46.8	54.0	-7.2	Vert
^	2390.000M	29.7	+0.0	+28.3	+3.2		+0.0	61.2	54.0	+7.2	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/20/2020
 Test Type: **Maximized Emissions** Time: 11:19:19
 Tested By: Don Nguyen Sequence#: 7
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.
 Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11g: 54Mbps

Modulation: OFDM
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

Frequency of Measurement: 2390.0-2483.5MHz
 RBW=1MHz, VBW=3MHz (restricted band)
 RBW=100kHz, VBW=300kHz (-30dBc)

Test Environment Conditions:
 Temperature: 20.5°C
 Relative Humidity: 47%

Test Method: ANSI C63.10 (2013) KDB 558074 D01 15.247 Meas Guidance v05r02

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T2	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T3	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	2400.000M	30.1	+0.0	+28.3	+3.2		+0.0	61.6	63.5	-1.9	Vert
2	2483.500M Ave	13.4	+0.0	+28.3	+3.3		+0.0	45.0	54.0	-9.0	Vert
^	2483.500M	26.7	+0.0	+28.3	+3.3		+0.0	58.3	54.0	+4.3	Vert
4	2390.000M Ave	13.2	+0.0	+28.3	+3.2		+0.0	44.7	54.0	-9.3	Vert
^	2390.000M	34.9	+0.0	+28.3	+3.2		+0.0	66.4	54.0	+12.4	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/20/2020
 Test Type: **Maximized Emissions** Time: 13:59:34
 Tested By: Don Nguyen Sequence#: 8
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.
 Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11n: MCS0

Modulation: BPSK
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

Frequency of Measurement: 2390.0-2483.5MHz
 RBW=1MHz, VBW=3MHz (restricted band)
 RBW=100kHz, VBW=300kHz (-30dBc)

Test Environment Conditions:
 Temperature: 20.5°C
 Relative Humidity: 47%

Test Method: ANSI C63.10 (2013) KDB 558074 D01 15.247 Meas Guidance v05r02

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T2	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T3	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	2400.000M	28.9	+0.0	+28.3	+3.2		+0.0	60.4	64.1	-3.7	Vert
2	2483.500M Ave	15.3	+0.0	+28.3	+3.3		+0.0	46.9	54.0	-7.1	Vert
^	2483.500M	24.2	+0.0	+28.3	+3.3		+0.0	55.8	54.0	+1.8	Vert
4	2390.000M Ave	15.2	+0.0	+28.3	+3.2		+0.0	46.7	54.0	-7.3	Vert
^	2390.000M	28.3	+0.0	+28.3	+3.2		+0.0	59.8	54.0	+5.8	Vert

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.247(d) / 15.209 Radiated Spurious Emissions**
 Work Order #: **104728** Date: 11/20/2020
 Test Type: **Maximized Emissions** Time: 14:03:48
 Tested By: Don Nguyen Sequence#: 5
 Software: EMITest 5.03.19

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmit continuously. All IO ports are populated with unterminated cables.
 Software setting:
 Testing Frequency: 2412, 2437, 2462MHz

Data Rate
 802.11n: MCS7

Modulation: 64-QAM
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

Frequency of Measurement: 2390.0-2483.5MHz
 RBW=1MHz, VBW=3MHz (restricted band)
 RBW=100kHz, VBW=300kHz (-30dBc)

Test Environment Conditions:
 Temperature: 20.5°C
 Relative Humidity: 47%

Test Method: ANSI C63.10 (2013) KDB 558074 D01 15.247 Meas Guidance v05r02

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T2	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T3	ANP06360	Cable	L1-PNMM-48	8/8/2019	8/8/2021

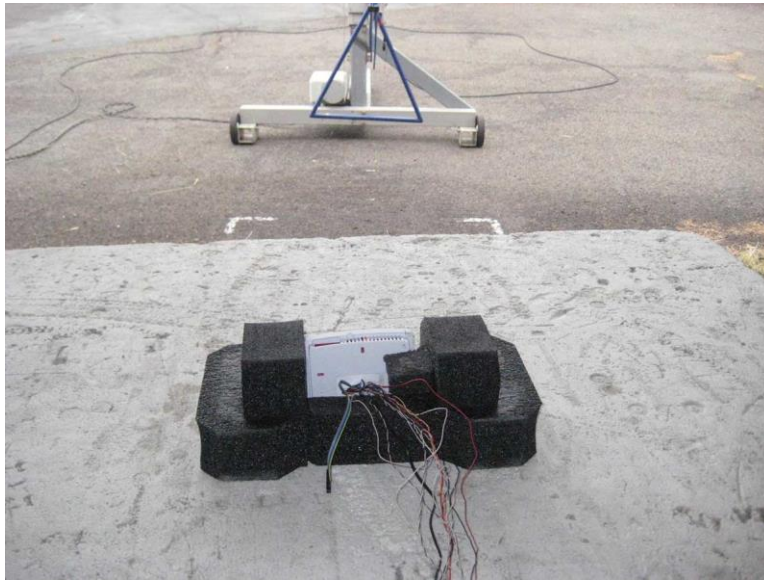
Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	2400.000M	29.4	+0.0	+28.3	+3.2		+0.0	60.9	63.0	-2.1	Vert
2	2483.500M Ave	13.2	+0.0	+28.3	+3.3		+0.0	44.8	54.0	-9.2	Vert
^	2483.500M	24.8	+0.0	+28.3	+3.3		+0.0	56.4	54.0	+2.4	Vert
4	2390.000M Ave	13.0	+0.0	+28.3	+3.2		+0.0	44.5	54.0	-9.5	Vert
^	2390.000M	24.8	+0.0	+28.3	+3.2		+0.0	56.3	54.0	+2.3	Vert

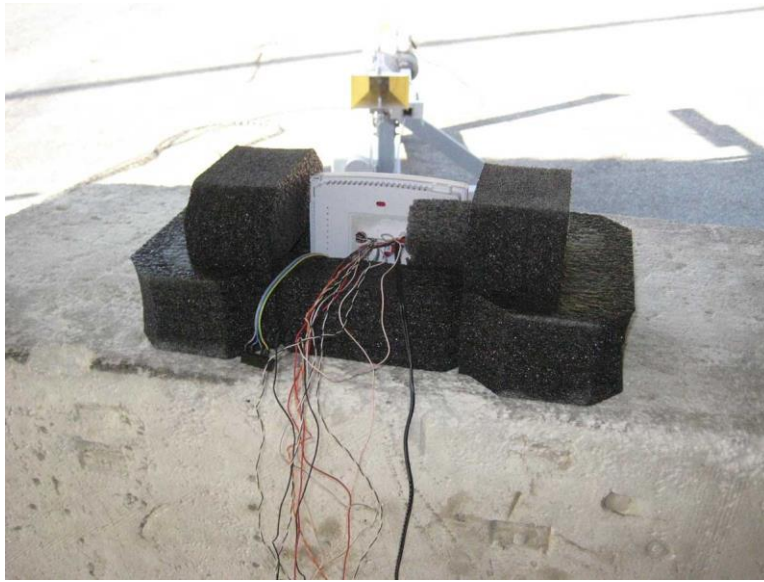
Test Setup Photo(s)



Below 1GHz



Below 1GHz



Above 1GHz



Above 1GHz

15.207 AC Conducted Emissions

Test Setup / Conditions / Data

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **104728** Date: 11/24/2020
 Test Type: **Conducted Emissions** Time: 11:21:48 AM
 Tested By: Don Nguyen Sequence#: 8
 Software: EMITest 5.03.19 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmitting mode. Only the worst case (highest output power) mode is investigated.
 Software setting:
 Testing Frequency: 2437MHz
 Data Rate
 802.11b: 1Mbps
 Modulation: DSSS
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

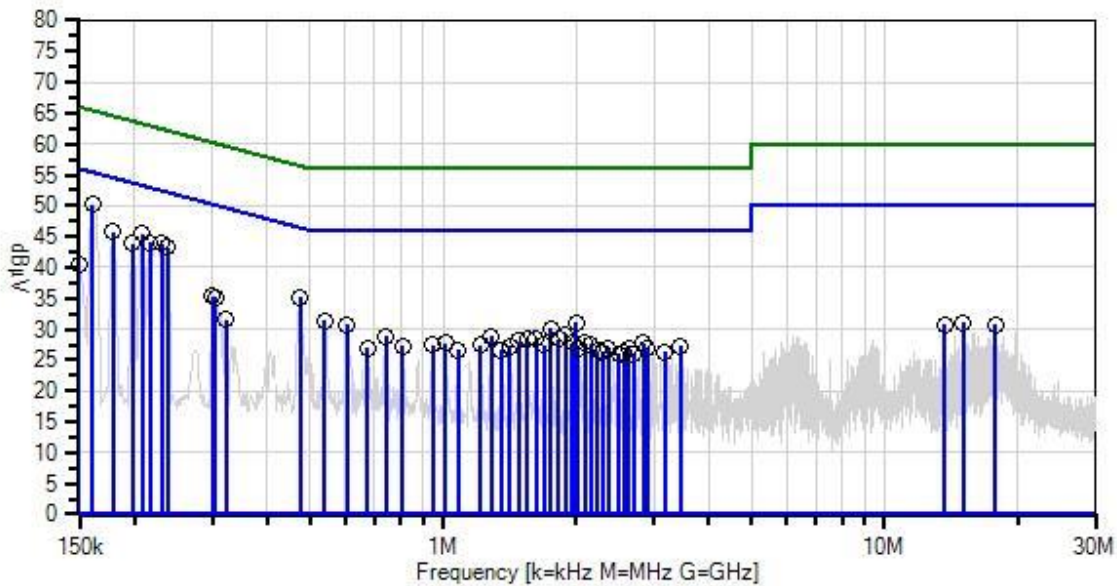
 Frequency of Measurement: 150kHz-30MHz
 RBW=9kHz, VBW=30kHz

 Test Environment Conditions:
 Temperature: 23°C
 Relative Humidity: 43%
 Pressure: 99.3kPa

 Site A

 Test Method: ANSI C63.10 (2013)

Venstar, Inc. WO#: 104728 Sequence#: 8 Date: 11/24/2020
 15.207 AC Mains - Average Test Lead: 120V 60Hz L1-Line



— Sweep Data
 × QP Readings
 Software Version: 5.03.19
 — Readings
 * Average Readings
 — 1 - 15.207 AC Mains - Average
 ○ Peak Readings
 ▼ Ambient
 — 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP07545	Attenuator	SA18N10W-06	1/18/2019	1/18/2021
T2	ANP07338	Cable	2249-Y-240	12/24/2019	12/24/2021
T3	AN00847.1	50uH LISN-(L) Line 1	3816/2NM	3/10/2020	3/10/2021
	AN00847.1	50uH LISN-(N) Line 2	3816/2NM	3/10/2020	3/10/2021
T4	AN02610	High Pass Filter	HE9615-150K- 50-720B	10/22/2019	10/22/2021
	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
T5	ANP07738	Cable-Line L1(dB)	90cm-extcord	11/18/2020	11/18/2022
	ANP07738	Cable-Neutral L2(dB)	90cm-extcord	11/18/2020	11/18/2022

Measurement Data:

Reading listed by margin.

Test Lead: L1-Line

#	Freq MHz	Rdng dB μ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	160.908k	43.9	+5.8 +0.0	+0.0	+0.0	+0.5	+0.0	50.2	55.4	-5.2	L1-Li
2	208.176k	39.5	+5.8 +0.0	+0.0	+0.0	+0.2	+0.0	45.5	53.3	-7.8	L1-Li
3	229.992k	37.9	+5.8 +0.0	+0.0	+0.0	+0.2	+0.0	43.9	52.4	-8.5	L1-Li
4	179.088k	39.6	+5.8 +0.0	+0.0	+0.0	+0.3	+0.0	45.7	54.5	-8.8	L1-Li
5	216.902k	38.0	+5.8 +0.0	+0.0	+0.0	+0.2	+0.0	44.0	52.9	-8.9	L1-Li
6	237.264k	37.3	+5.8 +0.0	+0.0	+0.0	+0.2	+0.0	43.3	52.2	-8.9	L1-Li
7	197.995k	37.9	+5.8 +0.0	+0.0	+0.0	+0.2	+0.0	43.9	53.7	-9.8	L1-Li
8	474.333k	29.1	+5.8 +0.0	+0.0	+0.0	+0.3	+0.0	35.2	46.4	-11.2	L1-Li
9	539.782k	25.3	+5.8 +0.0	+0.0	+0.0	+0.3	+0.0	31.4	46.0	-14.6	L1-Li
10	300.531k	29.5	+5.8 +0.0	+0.0	+0.0	+0.1	+0.0	35.4	50.2	-14.8	L1-Li
11	2.000M	25.0	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	31.1	46.0	-14.9	L1-Li
12	305.622k	29.2	+5.8 +0.0	+0.0	+0.0	+0.1	+0.0	35.1	50.1	-15.0	L1-Li
13	606.685k	24.5	+5.8 +0.0	+0.1	+0.0	+0.3	+0.0	30.7	46.0	-15.3	L1-Li
14	150.000k	32.6	+5.8 +0.0	+0.0	+0.0	+2.1	+0.0	40.5	56.0	-15.5	L1-Li
15	1.758M	24.0	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	30.1	46.0	-15.9	L1-Li
16	1.894M	23.0	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	29.1	46.0	-16.9	L1-Li
17	743.400k	22.7	+5.8 +0.0	+0.1	+0.0	+0.3	+0.0	28.9	46.0	-17.1	L1-Li
18	1.285M	22.7	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	28.8	46.0	-17.2	L1-Li
19	1.553M	22.5	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	28.6	46.0	-17.4	L1-Li
20	1.621M	22.3	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	28.4	46.0	-17.6	L1-Li
21	1.826M	22.3	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	28.4	46.0	-17.6	L1-Li
22	1.485M	22.0	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	28.1	46.0	-17.9	L1-Li
23	321.620k	25.7	+5.8 +0.0	+0.0	+0.0	+0.1	+0.0	31.6	49.7	-18.1	L1-Li
24	1.013M	21.7	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.8	46.0	-18.2	L1-Li

25	2.093M	21.7	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.8	46.0	-18.2	L1-Li
26	1.957M	21.6	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.7	46.0	-18.3	L1-Li
27	2.838M	21.4	+5.8 +0.2	+0.1	+0.0	+0.2	+0.0	27.7	46.0	-18.3	L1-Li
28	2.162M	21.5	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.6	46.0	-18.4	L1-Li
29	1.217M	21.4	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.5	46.0	-18.5	L1-Li
30	1.689M	21.4	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.5	46.0	-18.5	L1-Li
31	945.248k	21.3	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.4	46.0	-18.6	L1-Li
32	809.575k	21.1	+5.8 +0.0	+0.1	+0.0	+0.3	+0.0	27.3	46.0	-18.7	L1-Li
33	1.417M	21.2	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.3	46.0	-18.7	L1-Li
34	3.446M	21.0	+5.8 +0.2	+0.1	+0.1	+0.1	+0.0	27.3	46.0	-18.7	L1-Li
35	2.025M	20.9	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	27.0	46.0	-19.0	L1-Li
36	2.906M	20.7	+5.8 +0.2	+0.1	+0.0	+0.2	+0.0	27.0	46.0	-19.0	L1-Li
37	15.067M	23.5	+5.8 +1.1	+0.3	+0.1	+0.2	+0.0	31.0	50.0	-19.0	L1-Li
38	674.315k	20.7	+5.8 +0.0	+0.1	+0.0	+0.3	+0.0	26.9	46.0	-19.1	L1-Li
39	2.366M	20.7	+5.8 +0.1	+0.1	+0.0	+0.2	+0.0	26.9	46.0	-19.1	L1-Li
40	2.634M	20.7	+5.8 +0.1	+0.1	+0.0	+0.2	+0.0	26.9	46.0	-19.1	L1-Li
41	13.697M	23.3	+5.8 +1.0	+0.3	+0.1	+0.2	+0.0	30.7	50.0	-19.3	L1-Li
42	17.806M	23.0	+5.8 +1.1	+0.4	+0.2	+0.2	+0.0	30.7	50.0	-19.3	L1-Li
43	1.081M	20.5	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	26.6	46.0	-19.4	L1-Li
44	1.354M	20.5	+5.8 +0.0	+0.1	+0.0	+0.2	+0.0	26.6	46.0	-19.4	L1-Li
45	2.238M	20.3	+5.8 +0.1	+0.1	+0.0	+0.2	+0.0	26.5	46.0	-19.5	L1-Li
46	2.298M	20.1	+5.8 +0.1	+0.1	+0.0	+0.2	+0.0	26.3	46.0	-19.7	L1-Li
47	2.570M	20.1	+5.8 +0.1	+0.1	+0.0	+0.2	+0.0	26.3	46.0	-19.7	L1-Li
48	3.174M	20.0	+5.8 +0.2	+0.1	+0.1	+0.1	+0.0	26.3	46.0	-19.7	L1-Li
49	2.506M	19.8	+5.8 +0.1	+0.1	+0.0	+0.2	+0.0	26.0	46.0	-20.0	L1-Li
50	2.706M	19.6	+5.8 +0.1	+0.1	+0.0	+0.2	+0.0	25.8	46.0	-20.2	L1-Li

Test Location: CKC Laboratories Inc. • 110 N. Olinda Pl. • Brea, CA 92823 • 714-993-6112
 Customer: **Venstar, Inc.**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **104728** Date: 11/24/2020
 Test Type: **Conducted Emissions** Time: 11:20:26 AM
 Tested By: Don Nguyen Sequence#: 7
 Software: EMITest 5.03.19 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

EUT is powered from 24Vac AC Adapter and set to transmitting mode. Only the worst case (highest output power) mode is investigated.
 Software setting:
 Testing Frequency: 2437MHz
 Data Rate
 802.11b: 1Mbps
 Modulation: DSSS
 Mode: Continuous TX/ Modulated
 Packet Size: 1400 Bytes
 TX Power Level: 0

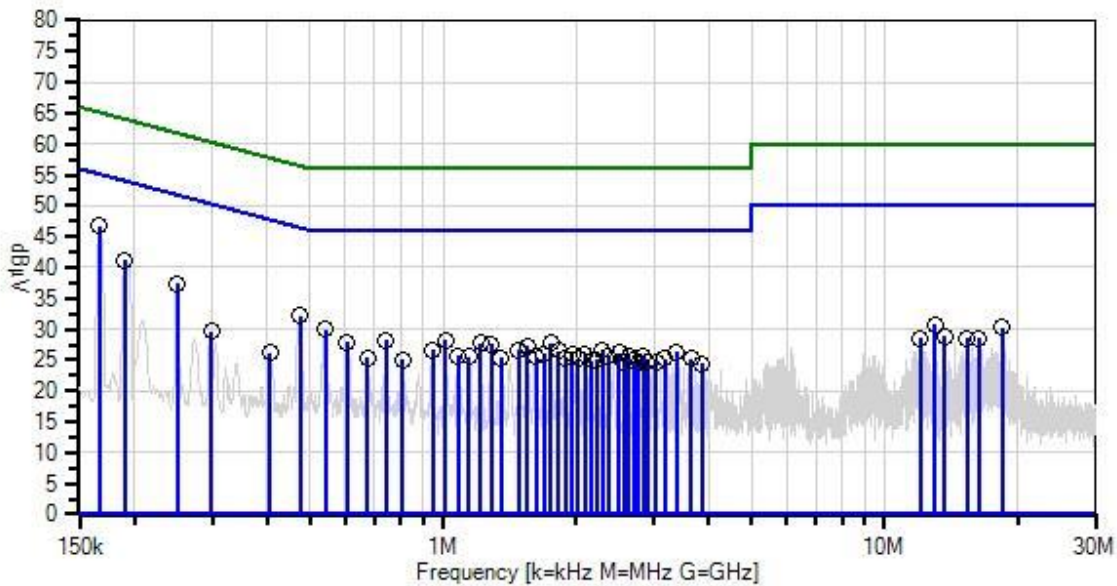
Frequency of Measurement: 150kHz-30MHz
 RBW=9kHz, VBW=30kHz

Test Environment Conditions:
 Temperature: 23°C
 Relative Humidity: 43%
 Pressure: 99.3kPa

Site A

Test Method: ANSI C63.10 (2013)

Venstar, Inc. WD#: 104728 Sequence#: 7 Date: 11/24/2020
 15.207 AC Mains - Average Test Lead: 120V 60Hz L2-Neutral



— Sweep Data
 × QP Readings
 Software Version: 5.03.19
 — Readings
 * Average Readings
 — 1 - 15.207 AC Mains - Average
 ○ Peak Readings
 ▼ Ambient
 — 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP07545	Attenuator	SA18N10W-06	1/18/2019	1/18/2021
T2	ANP07338	Cable	2249-Y-240	12/24/2019	12/24/2021
	AN00847.1	50uH LISN-(L) Line 1	3816/2NM	3/10/2020	3/10/2021
T3	AN00847.1	50uH LISN-(N) Line 2	3816/2NM	3/10/2020	3/10/2021
T4	AN02610	High Pass Filter	HE9615-150K- 50-720B	10/22/2019	10/22/2021
	AN03643	Spectrum Analyzer	E4440A	5/20/2020	5/20/2022
	ANP07738	Cable-Line L1(dB)	90cm-extcord	11/18/2020	11/18/2022
T5	ANP07738	Cable-Neutral L2(dB)	90cm-extcord	11/18/2020	11/18/2022