

Measurement Data:	Re	eading lis	ted by ma	argin.		Τe	Test Distance: 3 Meters			
# Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
		T5	T6	T7	T8					
		T9								
MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1 2748.047M	55.2	+0.0	+0.0	+0.0	+0.0	+0.0	50.5	54.0	-3.5	Vert
Ave		+3.4	-38.5	+0.5	+0.2					
		+29.7								
^ 2748.047M	62.2	+0.0	+0.0	+0.0	+0.0	+0.0	57.5	54.0	+3.5	Vert
		+3.4	-38.5	+0.5	+0.2					
		+29.7								
3 2723.857M	55.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.3	54.0	-3.7	Vert
Ave		+3.4	-38.5	+0.5	+0.2					
		+29.6								
^ 2723.857M	62.1	+0.0	+0.0	+0.0	+0.0	+0.0	57.3	54.0	+3.3	Vert
		+3.4	-38.5	+0.5	+0.2					
		+29.6								
5 109.173M	20.9	+0.0	+1.8	+5.9	+10.6	+0.0	39.2	43.5	-4.3	Vert
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
6 111.123M	20.0	+0.0	+1.9	+5.9	+10.7	+0.0	38.5	43.5	-5.0	Vert
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
7 7263.477M	43.0	+0.0	+0.0	+0.0	+0.0	+0.0	48.9	54.0	-5.1	Vert
		+6.1	-37.2	+0.8	+0.2					
		+36.0								
8 7391.383M	42.5	+0.0	+0.0	+0.0	+0.0	+0.0	48.6	54.0	-5.4	Vert
		+6.1	-37.3	+0.8	+0.2					
		+36.3								
9 2771.353M	52.7	+0.0	+0.0	+0.0	+0.0	+0.0	48.1	54.0	-5.9	Vert
Ave		+3.5	-38.5	+0.5	+0.2					
		+29.7								
^ 2771.353M	59.7	+0.0	+0.0	+0.0	+0.0	+0.0	55.1	54.0	+1.1	Vert
		+3.5	-38.5	+0.5	+0.2					
		+29.7								
11 7328.590M	41.8	+0.0	+0.0	+0.0	+0.0	+0.0	47.8	54.0	-6.2	Vert
		+6.1	-37.3	+0.8	+0.2					
		+36.2								
12 113.423M	18.2	+0.0	+1.9	+5.9	+10.8	+0.0	36.8	43.5	-6.7	Vert
		+0.0	+0.0	+0.0	+0.0					
		+0.0	0.0	0.0				- 4 0		
13 2/47.72/M	51.1	+0.0	+0.0	+0.0	+0.0	+0.0	46.4	54.0	-7.6	Horiz
		+3.4	-38.5	+0.5	+0.2					
		+29.7	0.0	0.0			16.0			
14 2771.687M	50.9	+0.0	+0.0	+0.0	+0.0	+0.0	46.3	54.0	-7.7	Horiz
		+3.5	-38.5	+0.5	+0.2					
15 0500 0503 5	<b>F</b> O O	+29.7			0.0	0.0	1 - 1	= 1 0		
15 2723.950M	50.9	+0.0	+0.0	+0.0	+0.0	+0.0	46.1	54.0	-7.9	Horiz
		+3.4	-38.5	+0.5	+0.2					
		+29.6								



16	4520 600M	15 2						45.0	54.0	0 1	Vort
10	4339.090M	43.5	+0.0	+0.0	+0.0	+0.0	+0.0	43.9	54.0	-8.1	ven
			+4.5	-37.4	+0.7	+0.2					
			+32.6								
17	278.220M	15.9	+0.0	+3.1	+5.9	+12.9	+0.0	37.8	46.0	-8.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
18	4619.720M	45.0	+0.0	+0.0	+0.0	+0.0	+0.0	45.7	54.0	-8.3	Vert
			+4.5	-37.4	+0.7	+0.2					
			+32.7								
19	4579.967M	44.0	+0.0	+0.0	+0.0	+0.0	+0.0	44.6	54.0	-9.4	Vert
			+4.5	-37.4	+0.7	+0.2					
			+32.6								
20	270.000M	14.6	+0.0	+3.0	+5.9	+12.7	+0.0	36.2	46.0	-9.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
21	75.423M	20.9	+0.0	+1.6	+5.9	+7.0	+0.0	35.4	105.5	-70.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
22	60.323M	20.7	+0.0	+1.4	+5.9	+6.2	+0.0	34.2	105.5	-71.3	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
23	214.323M	15.0	+0.0	+2.7	+5.9	+10.0	+0.0	33.6	105.5	-71.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
24	61.023M	19.3	+0.0	+1.4	+5.9	+6.2	+0.0	32.8	105.5	-72.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
25	195.000M	13.4	+0.0	+2.6	+5.9	+8.9	+0.0	30.8	105.5	-74.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
26	183.000M	12.8	+0.0	+2.4	+5.9	+9.1	+0.0	30.2	105.5	-75.3	Horiz
_			+0.0	+0.0	+0.0	+0.0					
			+0.0								



Test Location:	CKC Laboratories	100 North Olinda Place	• Brea CA 92823	• 714 993-6112
Customer:	Itron, Inc.			
Specification:	15.247(d) / 15.20	9 Radiated Spurious En	nissions	
Work Order #:	103955		Date:	6/25/2020
Test Type:	Maximized Emis	sions	Time:	09:50:27
Tested By:	Don Nguyen		Sequence#:	5
Software:	EMITest 5.03.12			

Device	Manufacturer	Model #	S/N	
Configuration 7	Munufacturer	110uci //	0/11	
Support Equipment:				
Device	Manufacturer	Model #	S/N	

 Device
 Manufacturer
 Model #
 S/N

 Configuration 7

Test Conditions / Notes:

The EUT is placed on Styrofoam platform and connected to DC power supply. USB port is connected to a touchscreen tablet. The computer is sending command to the EUT using software MC3 SuperRaptor Test ver.4.0.3.5.

The EUT is set to continuously transmit.

Operating frequency: 908MHz, 916MHz, 924MHz Frequency of measurement: 9kHz-9.28GHz 9kHz to 150kHz RBW=0.2kHz, VBW=0.6kHz. 150kHz to 30MHz RBW=9kHz, VBW=27kHz. 30-1000MHz, RBW=120kHz, VBW=360kHz 1000-9280MHz, RBW=1MHz, VBW=3MHz RBW=100kHz, VBW=300kHz (-20dB limit)

Duty cycle correction is 20Log(.0445/.1)=-7.0dB



Itron, Inc. WO#: 103955 Sequence#: 5 Date: 6/25/2020 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Horiz



ID	Asset #	Description	Model	Cal Date	Cal Due Date
	AN00314	Loop Antenna	6502	4/13/2020	4/13/2022
T1	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/4/2018	12/4/2020
T2	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T3	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
	AN00309	Preamp	8447D	12/24/2019	12/24/2021
	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T4	AN02869	Spectrum Analyzer	E4440A	7/25/2019	7/25/2020
T5	AN00786	Preamp	83017A	5/20/2020	5/20/2022
T6	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
T7	ANP06360	Cable	L1-PNMNM-48	8/8/2019	8/8/2021
T8	ANP07243	Cable	32022-29094K-29094K-	5/29/2020	5/29/2022
			24TC		
Т9	AN03169	High Pass Filter	HM1155-11SS	5/8/2019	5/8/2021



Measu	rement Data:	Re	Reading listed by margin.				Те	Test Distance: 3 Meters			
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9								
	MHz	dBµV	dB	dB	dB	dB	Table	$dB\mu V/m$	$dB\mu V/m$	dB	Ant
1	74.500M	21.6	+1.5	+5.9	+6.9	+0.0	+0.0	35.9	40.0	-4.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
2	74.800M	21.0	+1.5	+5.9	+6.9	+0.0	+0.0	35.3	40.0	-4.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
3	74.350M	20.8	+1.5	+5.9	+6.9	+0.0	+0.0	35.1	40.0	-4.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
4	2724.000M	53.5	+0.0	+0.0	+0.0	+0.0	+0.0	48.7	54.0	-5.3	Vert
			-38.5	+29.6	+3.4	+0.5					
			+0.2								
5	2772.000M	52.6	+0.0	+0.0	+0.0	+0.0	+0.0	48.0	54.0	-6.0	Vert
			-38.5	+29.7	+3.5	+0.5					
			+0.2								
6	7264.000M	42.1	+0.0	+0.0	+0.0	+0.0	+0.0	48.0	54.0	-6.0	Horiz
			-37.2	+36.0	+6.1	+0.8					
			+0.2								
7	74.050M	18.8	+1.5	+5.9	+6.9	+0.0	+0.0	33.1	40.0	-6.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
8	7264.000M	41.1	+0.0	+0.0	+0.0	+0.0	+0.0	47.0	54.0	-7.0	Vert
			-37.2	+36.0	+6.1	+0.8					
			+0.2								
9	109.100M	18.1	+1.8	+5.9	+10.6	+0.0	+0.0	36.4	43.5	-7.1	Vert
			+0.0	+0.0	+0.0	+0.0					
1.0			+0.0								
10	111.400M	17.8	+1.9	+5.9	+10.7	+0.0	+0.0	36.3	43.5	-7.2	Vert
			+0.0	+0.0	+0.0	+0.0					
	1510 0003 5	44.0	+0.0		0.0	0.0			= 4 0		
11	4540.000M	46.0	+0.0	+0.0	+0.0	+0.0	+0.0	46.6	54.0	-7.4	Vert
			-37.4	+32.6	+4.5	+0.7					
10	244.00034	17.5	+0.2	5.0	12.0	0.0	0.0	20.2	16.0		
12	244.800M	17.5	+2.9	+5.9	+12.0	+0.0	+0.0	38.3	46.0	-7.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
12	4500.00014	45 4	+0.0	.0.0	.0.0	.0.0	.0.0	16.0	540	0.0	II
13	4580.000M	45.4	+0.0	+0.0	+0.0	+0.0	+0.0	46.0	54.0	-8.0	Horiz
			-37.4	+32.0	+4.5	+0.7					
1.4	2740 00014	50.2	+0.2	10.0				15 5	54.0	0 5	V+
14	2/48.000M	50.2	+0.0	+0.0	+0.0	+0.0	+0.0	45.5	54.0	-8.5	vert
	Ave		-38.5	+29.7	+3.4	+0.5					
	2740.00014	57.0	+0.2	.00		.0.0		50 F	510	1 5	<b>V</b>
	2/48.000M	57.2	+0.0	+0.0	+0.0	+0.0	+0.0	52.5	54.0	-1.5	vert
			-38.5	+29.7	+3.4	+0.5					
			+0.2								



16	111.200M	15.5	+1.9 +0.0	+5.9 +0.0	+10.7 +0.0	+0.0 +0.0	+0.0	34.0	43.5	-9.5	Horiz
			+0.0								
17	4540.000M	43.7	+0.0	+0.0	+0.0	+0.0	+0.0	44.3	54.0	-9.7	Horiz
			-37.4	+32.6	+4.5	+0.7					
			+0.2								
18	112.600M	14.8	+1.9	+5.9	+10.8	+0.0	+0.0	33.4	43.5	-10.1	Horiz
			+0.0	+0.0	+0.0	+0.0					
10	2540.00034	40.4	+0.0					10.1		10.6	
19	2748.000M	48.1	+0.0	+0.0	+0.0	+0.0	+0.0	43.4	54.0	-10.6	Horiz
			-38.5	+29.7	+3.4	+0.5					
20	100.00014	145	+0.2	.5.0	10.0	.0.0	.0.0	22.0	12.5	10.0	TT
20	109.900M	14.5	+1.9	+5.9	+10.6	+0.0	+0.0	32.9	43.5	-10.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
21	2772 000M	47.1	+0.0	+0.0	+0.0	+0.0		12.5	54.0	11.5	Homin
21	2772.000M	4/.1	+0.0	+0.0	+0.0	+0.0	+0.0	42.3	54.0	-11.3	HOLIZ
			-38.5	+29.1	+3.5	$\pm 0.5$					
22	2724 000M	16.1	+0.2					41.6	54.0	12.4	Uoriz
22	2724.000101	40.4	-38.5	+0.0 +29.6	+0.0 +3.4	+0.0	$\pm 0.0$	41.0	54.0	-12.4	TIOTIZ
			+0.2	127.0	13.4	10.5					
23	6468.000M	52.6	+0.0	+0.0	+0.0	+0.0	+0.0	56.6	106.3	_19.7	Horiz
25	0400.000101	52.0	-37.2	+34.4	+5.8	+0.8	10.0	50.0	100.5	-47.7	HOHZ
			+0.2	131.1	15.0	10.0					
24	6412 000M	47.6	+0.0	+0.0	+0.0	+0.0	+0.0	517	106.3	-54.6	Horiz
21	0112.00000	17.0	-37.1	+34.4	+5.8	+0.8	10.0	51.7	100.5	51.0	TIONE
			+0.2								
25	6412.000M	43.3	+0.0	+0.0	+0.0	+0.0	+0.0	47.4	106.3	-58.9	Vert
_			-37.1	+34.4	+5.8	+0.8					
			+0.2								
26	75.400M	24.3	+1.6	+5.9	+7.0	+0.0	+0.0	38.8	106.3	-67.5	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
27	75.300M	21.5	+1.6	+5.9	+7.0	+0.0	+0.0	36.0	106.3	-70.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
28	200.000M	18.0	+2.6	+5.9	+8.9	+0.0	+0.0	35.4	106.3	-70.9	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
29	231.100M	15.3	+2.8	+5.9	+11.1	+0.0	+0.0	35.1	106.3	-71.2	Horiz
			+0.0	+0.0	+0.0	+0.0					
	222 2003 4		+0.0		10.6	0.0		24.6	1063		
30	223.500M	15.4	+2.7	+5.9	+10.6	+0.0	+0.0	34.6	106.3	-/1./	Vert
			+0.0	+0.0	+0.0	+0.0					
21	57 100M	10.1	+0.0	.5.0	.7.0	.0.0	.0.0	22.2	1062	72.0	N
31	57.100M	19.1	+1.3	+5.9	+/.0	+0.0	+0.0	33.3	106.3	-/3.0	vert
			+0.0	$\pm 0.0$	+0.0	+0.0					
20	160 400M	12.6	+0.0	±5 0	±10.6	±0.0	+0.0	32.4	106.3	72.0	Vort
32	100.400101	13.0	+2.3 ±0.0	+J.9 ±0.0	±10.0	+0.0 ±0.0	$\pm 0.0$	52.4	100.5	-13.9	ven
			+0.0 +0.0	$\pm 0.0$	$\pm 0.0$	$\pm 0.0$					
L			10.0								



Test Location:	CKC Laboratories	100 North Olinda Place	• Brea CA 92823	• 714 993-6112
Customer:	Itron, Inc.			
Specification:	15.247(d) / 15.209	9 Radiated Spurious En	nissions	
Work Order #:	103955		Date:	6/24/2020
Test Type:	Maximized Emis	sions	Time:	13:43:08
Tested By:	Don Nguyen		Sequence#:	4
Software:	EMITest 5.03.12			

Device	Manufacturer	Model #	S/N	
Configuration 8				
Support Equipment:				
Device	Manufacturer	Model #	S/N	

Configuration 8

Test Conditions / Notes:

The EUT is placed on Styrofoam platform and connected to DC power supply. USB port is connected to a touchscreen tablet. The computer is sending command to the EUT using software MC3 SuperRaptor Test ver.4.0.3.5.

The EUT is set to continuously transmit.

Operating frequency: 908MHz, 916MHz, 924MHz Frequency of measurement: 9kHz-9.28GHz 9kHz to 150kHz RBW=0.2kHz, VBW=0.6kHz. 150kHz to 30MHz RBW=9kHz, VBW=27kHz. 30-1000MHz, RBW=120kHz, VBW=360kHz 1000-9280MHz, RBW=1MHz, VBW=3MHz RBW=100kHz, VBW=300kHz (-20dB limit) Duty cycle correction is 20Log(.0445/.1)=-7.0dB

The worst case emission were verified with power supply on and off the table. No change in emission level was observed.



Itron, Inc. WO#: 103955 Sequence#: 4 Date: 6/24/2020 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Horiz



ID	Asset #	Description	Model	Cal Date	Cal Due Date
	AN00314	Loop Antenna	6502	4/13/2020	4/13/2022
T1	AN02869	Spectrum Analyzer	E4440A	7/25/2019	7/25/2020
T2	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/4/2018	12/4/2020
T3	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T4	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
T5	AN00309	Preamp	8447D	12/24/2019	12/24/2021
T6	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T7	ANP06360	Cable	L1-PNMNM-48	8/8/2019	8/8/2021
Т8	AN00786	Preamp	83017A	5/20/2020	5/20/2022
Т9	ANP07243	Cable	32022-29094K-	5/29/2020	5/29/2022
			29094K-24TC		
T10	AN03169	High Pass Filter	HM1155-11SS	5/8/2019	5/8/2021
T11	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022



Measu	urement Data:	Re	Reading listed by margin.				Те	est Distance	e: 3 Meters	5	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9	T10	T11						
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	$dB\mu V/m$	dB	Ant
1	9160.363M	41.6	+0.0	+0.0	+0.0	+0.0	+0.0	50.9	54.0	-3.1	Vert
	Ave		+0.0	+0.0	+6.9	-36.6					
			+0.9	+0.2	+37.9						
^	9160.363M	48.6	+0.0	+0.0	+0.0	+0.0	+0.0	57.9	54.0	+3.9	Vert
			+0.0	+0.0	+6.9	-36.6					
			+0.9	+0.2	+37.9						
3	9080.453M	41.7	+0.0	+0.0	+0.0	+0.0	+0.0	50.8	54.0	-3.2	Vert
	Ave		+0.0	+0.0	+6.8	-36.7					
			+1.0	+0.1	+37.9						
^	9080.453M	48.7	+0.0	+0.0	+0.0	+0.0	+0.0	57.8	54.0	+3.8	Vert
			+0.0	+0.0	+6.8	-36.7					
			+1.0	+0.1	+37.9						
5	7389.723M	43.4	+0.0	+0.0	+0.0	+0.0	+0.0	49.5	54.0	-4.5	Horiz
			+0.0	+0.0	+6.1	-37.3					
			+0.8	+0.2	+36.3						
6	7327.223M	43.2	+0.0	+0.0	+0.0	+0.0	+0.0	49.2	54.0	-4.8	Horiz
			+0.0	+0.0	+6.1	-37.3					
			+0.8	+0.2	+36.2						
7	2724.027M	53.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.5	54.0	-5.5	Horiz
			+0.0	+0.0	+3.4	-38.5					
			+0.5	+0.2	+29.6						
8	4618.657M	47.5	+0.0	+0.0	+0.0	+0.0	+0.0	48.2	54.0	-5.8	Vert
			+0.0	+0.0	+4.5	-37.4					
			+0.7	+0.2	+32.7						
9	4618.983M	47.5	+0.0	+0.0	+0.0	+0.0	+0.0	48.2	54.0	-5.8	Horiz
			+0.0	+0.0	+4.5	-37.4					
			+0.7	+0.2	+32.7						
10	2747.887M	52.8	+0.0	+0.0	+0.0	+0.0	+0.0	48.1	54.0	-5.9	Vert
			+0.0	+0.0	+3.4	-38.5					
			+0.5	+0.2	+29.7						
11	4540.337M	47.2	+0.0	+0.0	+0.0	+0.0	+0.0	47.8	54.0	-6.2	Horiz
			+0.0	+0.0	+4.5	-37.4					
			+0.7	+0.2	+32.6						
12	2748.137M	52.4	+0.0	+0.0	+0.0	+0.0	+0.0	47.7	54.0	-6.3	Horiz
			+0.0	+0.0	+3.4	-38.5					
			+0.5	+0.2	+29.7						
13	4539.923M	47.1	+0.0	+0.0	+0.0	+0.0	+0.0	47.7	54.0	-6.3	Vert
			+0.0	+0.0	+4.5	-37.4					
L			+0.7	+0.2	+32.6			4			
14	7263.410M	41.5	+0.0	+0.0	+0.0	+0.0	+0.0	47.4	54.0	-6.6	Vert
	Ave		+0.0	+0.0	+6.1	-37.2					
			+0.8	+0.2	+36.0				_ · · -		
^	7263.410M	48.5	+0.0	+0.0	+0.0	+0.0	+0.0	54.4	54.0	+0.4	Vert
			+0.0	+0.0	+6.1	-37.2					
			+0.8	+0.2	+36.0						



16 7390.223M	41.1	+0.0	+0.0	+0.0	+0.0	+0.0	47.2	54.0	-6.8	Vert
Ave		+0.0	+0.0	+6.1	-37.3					
		+0.8	+0.2	+36.3						
^ 7390.223M	48.1	+0.0	+0.0	+0.0	+0.0	+0.0	54.2	54.0	+0.2	Vert
		+0.0	+0.0	+6.1	-37.3					
		+0.8	+0.2	+36.3						
18 2771.417M	51.0	+0.0	+0.0	+0.0	+0.0	+0.0	46.4	54.0	-7.6	Horiz
		+0.0	+0.0	+3.5	-38.5					
		+0.5	+0.2	+29.7						
19 7328.097M	39.4	+0.0	+0.0	+0.0	+0.0	+0.0	45.4	54.0	-8.6	Vert
Ave		+0.0	+0.0	+6.1	-37.3					
		+0.8	+0.2	+36.2						
^ 7328.097M	46.4	+0.0	+0.0	+0.0	+0.0	+0.0	52.4	54.0	-1.6	Vert
		+0.0	+0.0	+6.1	-37.3					
		+0.8	+0.2	+36.2						
21 7264.457M	39.3	+0.0	+0.0	+0.0	+0.0	+0.0	45.2	54.0	-8.8	Horiz
Ave		+0.0	+0.0	+6.1	-37.2					
		+0.8	+0.2	+36.0						
^ 7264.457M	46.3	+0.0	+0.0	+0.0	+0.0	+0.0	52.2	54.0	-1.8	Horiz
		+0.0	+0.0	+6.1	-37.2					
		+0.8	+0.2	+36.0						
23 4579.493M	44.3	+0.0	+0.0	+0.0	+0.0	+0.0	44.9	54.0	-9.1	Vert
		+0.0	+0.0	+4.5	-37.4					
		+0.7	+0.2	+32.6						
24 2771.070M	48.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.7	54.0	-10.3	Vert
Ave		+0.0	+0.0	+3.5	-38.5					
		+0.5	+0.2	+29.7						
^ 2771.070M	55.3	+0.0	+0.0	+0.0	+0.0	+0.0	50.7	54.0	-3.3	Vert
		+0.0	+0.0	+3.5	-38.5					
		+0.5	+0.2	+29.7						
26 2723.807M	48.1	+0.0	+0.0	+0.0	+0.0	+0.0	43.3	54.0	-10.7	Vert
Ave		+0.0	+0.0	+3.4	-38.5					
		+0.5	+0.2	+29.6						
^ 2723.807M	55.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.3	54.0	-3.7	Vert
		+0.0	+0.0	+3.4	-38.5					
		+0.5	+0.2	+29.6						
28 171.700M	36.5	+0.0	+2.4	+5.9	+9.7	+0.0	26.7	43.5	-16.8	Vert
		-28.0	+0.2	+0.0	+0.0					
		+0.0	+0.0	+0.0						
29 168.200M	31.7	+0.0	+2.4	+5.9	+9.9	+0.0	22.1	43.5	-21.4	Horiz
		-28.0	+0.2	+0.0	+0.0					
		+0.0	+0.0	+0.0						



Test Location:	CKC Laboratories • 100 Nor	th Olinda Place	• Brea CA 92823	• 714 993-6112
Customer:	Itron, Inc.			
Specification:	15.247(d) / 15.209 Radiate	d Spurious Em	issions	
Work Order #:	103955	_	Date:	6/24/2020
Test Type:	Maximized Emissions		Time:	17:51:57
Tested By:	Don Nguyen		Sequence#:	3
Software:	EMITest 5.03.12			

Device	Manufacturer	Model #	S/N	
Configuration 9				
Support Equipment:				
Desta	M	Mr. J.14	C/NI	

Device	Manufacturer	Model #	S/N
Configuration 9			

### Test Conditions / Notes:

The EUT is placed on Styrofoam platform and connected to DC power supply. USB port is connected to a touchscreen tablet. The computer is sending command to the EUT using software MC3 SuperRaptor Test ver.4.0.3.5.

The EUT is set to continuously transmit.

Operating frequency: 908MHz, 916MHz, 924MHz Frequency of measurement: 9kHz-9.28GHz 9kHz to 150kHz RBW=0.2kHz, VBW=0.6kHz. 150kHz to 30MHz RBW=9kHz, VBW=27kHz. 30-1000MHz, RBW=120kHz, VBW=360kHz 1000-9280MHz, RBW=1MHz, VBW=3MHz RBW=100kHz, VBW=300kHz (-20dB limit) Duty cycle correction is 20Log(.0445/.1)=-7.0dB



Itron, Inc. WO#: 103955 Sequence#: 3 Date: 6/24/2020 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Vert



ID	Asset #	Description	Model	Cal Date	Cal Due Date
T1	AN02672	Spectrum Analyzer	E4446A	3/13/2019	3/13/2021
T2	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/4/2018	12/4/2020
Т3	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T4	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
	AN00309	Preamp	8447D	12/24/2019	12/24/2021
	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T5	ANP06360	Cable	L1-PNMNM-48	8/8/2019	8/8/2021
T6	AN00786	Preamp	83017A	5/20/2020	5/20/2022
T7	ANP07243	Cable	32022-29094K-	5/29/2020	5/29/2022
			29094K-24TC		
Т8	AN03169	High Pass Filter	HM1155-11SS	5/8/2019	5/8/2021
Т9	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022



Measurement Data:	Re	eading lis	ted by ma	argin.		Τe	est Distance	e: 3 Meters		
# Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
		T5	T6	T7	T8					
		T9								
MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1 2748.217M	55.8	+0.0	+0.0	+0.0	+0.0	+0.0	51.1	54.0	-2.9	Vert
Ave		+3.4	-38.5	+0.5	+0.2					
		+29.7								
^ 2748.217M	62.8	+0.0	+0.0	+0.0	+0.0	+0.0	58.1	54.0	+4.1	Vert
		+3.4	-38.5	+0.5	+0.2					
		+29.7								
3 2724.163M	55.1	+0.0	+0.0	+0.0	+0.0	+0.0	50.3	54.0	-3.7	Vert
Ave		+3.4	-38.5	+0.5	+0.2					
		+29.6								
^ 2724.163M	62.1	+0.0	+0.0	+0.0	+0.0	+0.0	57.3	54.0	+3.3	Vert
		+3.4	-38.5	+0.5	+0.2					
		+29.6								
5 7263.780M	43.3	+0.0	+0.0	+0.0	+0.0	+0.0	49.2	54.0	-4.8	Vert
		+6.1	-37.2	+0.8	+0.2					
		+36.0								
6 110.458M	19.9	+0.0	+1.9	+5.9	+10.7	+0.0	38.4	43.5	-5.1	Vert
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
7 7391.917M	42.4	+0.0	+0.0	+0.0	+0.0	+0.0	48.5	54.0	-5.5	Vert
		+6.1	-37.3	+0.8	+0.2					
		+36.3								
8 7327.807M	42.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.3	54.0	-5.7	Vert
		+6.1	-37.3	+0.8	+0.2					
		+36.2								
9 2772.057M	52.3	+0.0	+0.0	+0.0	+0.0	+0.0	47.7	54.0	-6.3	Vert
Ave		+3.5	-38.5	+0.5	+0.2					
		+29.7								
^ 2772.057M	59.3	+0.0	+0.0	+0.0	+0.0	+0.0	54.7	54.0	+0.7	Vert
		+3.5	-38.5	+0.5	+0.2					
		+29.7								
11 112.428M	18.2	+0.0	+1.9	+5.9	+10.8	+0.0	36.8	43.5	-6.7	Vert
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
12 2748.257M	51.7	+0.0	+0.0	+0.0	+0.0	+0.0	47.0	54.0	-7.0	Horiz
		+3.4	-38.5	+0.5	+0.2					
		+29.7								
13 109.171M	18.1	+0.0	+1.8	+5.9	+10.6	+0.0	36.4	43.5	-7.1	Vert
		+0.0	+0.0	+0.0	+0.0					
		+0.0								
14 2771.990M	51.3	+0.0	+0.0	+0.0	+0.0	+0.0	46.7	54.0	-7.3	Horiz
		+3.5	-38.5	+0.5	+0.2					
		+29.7								
15 2724.307M	51.0	+0.0	+0.0	+0.0	+0.0	+0.0	46.2	54.0	-7.8	Horiz
		+3.4	-38.5	+0.5	+0.2					
		+29.6								



16	115.041M	16.6	+0.0 +0.0	+1.9 +0.0	+5.9 +0.0	+10.9 +0.0	+0.0	35.3	43.5	-8.2	Vert
			+0.0								
17	4539.180M	45.0	+0.0	+0.0	+0.0	+0.0	+0.0	45.6	54.0	-8.4	Vert
			+4.5	-37.4	+0.7	+0.2					
10	4 6 4 0 0 0 0 0 0		+32.6			0.0			= 4.0	0.7	**
18	4619.950M	44.8	+0.0	+0.0	+0.0	+0.0	+0.0	45.5	54.0	-8.5	Vert
			+4.5	-37.4	+0.7	+0.2					
10	4500 102M	4.4.4	+32.7	.0.0	.0.0	.0.0	.0.0	45.0	540	0.0	V
19	4580.183M	44.4	+0.0	+0.0	+0.0	+0.0	+0.0	45.0	54.0	-9.0	Vert
			+4.5	-37.4	+0.7	+0.2					
20	166 5001	16.0	+52.0	10.2	5.0	+ 10.1		24.2	12 5	0.2	Hania
20	100.500M	10.0	+0.0	+2.3	+5.9	+10.1	+0.0	54.5	43.5	-9.2	HOLIZ
			+0.0	+0.0	+0.0	+0.0					
21	280.400M	14.6	+0.0	+2.1	15.0	+12.0		36.5	46.0	0.5	Vort
21	200.490101	14.0	+0.0	+3.1	+3.9	$\pm 12.9$	$\pm 0.0$	50.5	40.0	-9.5	Vert
			+0.0	10.0	10.0	10.0					
22	165 540M	14.1	+0.0	±2.3	<b>⊥</b> 5 9	±10.1	+0.0	32.4	13.5	_11.1	Vert
22	105.540101	14.1	+0.0	+0.0	+0.0	+0.0	10.0	52.7	чэ.э	-11.1	ven
			+0.0	10.0	10.0	10.0					
23	111 100M	13.6	+0.0	+1 9	+5 9	+10.7	+0.0	32.1	43 5	-114	Horiz
23	11110000	15.0	+0.0	+0.0	+0.0	+0.0	10.0	52.1	15.5	11.1	HOLL
			+0.0								
24	304.490M	16.9	+0.0	+3.2	+5.9	+13.4	+0.0	39.4	105.5	-66.1	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
25	75.390M	22.8	+0.0	+1.6	+5.9	+7.0	+0.0	37.3	105.5	-68.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
26	60.015M	22.5	+0.0	+1.4	+5.9	+6.2	+0.0	36.0	105.5	-69.5	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
27	224.200M	15.4	+0.0	+2.8	+5.9	+10.6	+0.0	34.7	105.5	-70.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
28	74.790M	20.3	+0.0	+1.5	+5.9	+6.9	+0.0	34.6	105.5	-70.9	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
29	75.790M	19.6	+0.0	+1.6	+5.9	+7.0	+0.0	34.1	105.5	-71.4	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0								
30	61.015M	18.7	+0.0	+1.4	+5.9	+6.2	+0.0	32.2	105.5	-73.3	Vert
			+0.0	+0.0	+0.0	+0.0					
21	106 7003 4	14.0	+0.0	.0.6			.0.0	22.2	105 5	72.2	II. '
31	196./00M	14.8	+0.0	+2.6	+5.9	+8.9	+0.0	32.2	105.5	-13.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
20	50 240M	17.0	+0.0	+ 1 <i>A</i>	15.0	161		21 6	105.5	72.0	Vort
52	37.340IVI	17.9	+0.0	+1.4 +0.0	+3.9 +0.0	+0.4	+0.0	51.0	103.3	-13.9	ven
			+0.0	$\pm 0.0$	$\pm 0.0$	$\pm 0.0$					
			10.0								



Test Location:	CKC Laboratories	100 North Olinda Place	• Brea CA 92823	• 714 993-6112
Customer:	Itron, Inc.			
Specification:	15.247(d) / 15.20	9 Radiated Spurious En	nissions	
Work Order #:	103955		Date:	6/25/2020
Test Type:	Maximized Emis	sions	Time:	09:58:17
Tested By:	Don Nguyen		Sequence#:	6
Software:	EMITest 5.03.12			

I I				
Device	Manufacturer	Model #	S/N	
Configuration 10				
Support Equipment:				
Device	Manufacturer	Model #	S/N	

Configuration 10

Test Conditions / Notes:

The EUT is placed on Styrofoam platform and connected to DC power supply. USB port is connected to a touchscreen tablet. The computer is sending command to the EUT using software MC3 SuperRaptor Test ver.4.0.3.5.

The EUT is set to continuously transmit.

Operating frequency: 908MHz, 916MHz, 924MHz Frequency of measurement: 9kHz-9.28GHz 9kHz to 150kHz RBW=0.2kHz, VBW=0.6kHz. 150kHz to 30MHz RBW=9kHz, VBW=27kHz. 30-1000MHz, RBW=120kHz, VBW=360kHz 1000-9280MHz, RBW=1MHz, VBW=3MHz RBW=100kHz, VBW=300kHz (-20dB limit)



Itron, Inc. WO#: 103955 Sequence#: 6 Date: 6/25/2020 15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Vert



ID	Asset #	Description	Model	Cal Date	Cal Due Date
	AN00314	Loop Antenna	6502	4/13/2020	4/13/2022
T1	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/4/2018	12/4/2020
T2	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T3	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
	AN00309	Preamp	8447D	12/24/2019	12/24/2021
T4	AN02672	Spectrum Analyzer	E4446A	3/13/2019	3/13/2021
T5	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T6	AN00786	Preamp	83017A	5/20/2020	5/20/2022
T7	AN00849	Horn Antenna	3115	3/17/2020	3/17/2022
Т8	ANP06360	Cable	L1-PNMNM-48	8/8/2019	8/8/2021
Т9	ANP07243	Cable	32022-29094K-	5/29/2020	5/29/2022
			29094K-24TC		
T10	AN03169	High Pass Filter	HM1155-11SS	5/8/2019	5/8/2021



Measu	rement Data:	Re	eading lis	ted by ma	argin.		Τe	est Distance	e: 3 Meters	<b>i</b>	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9	T10							
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	$dB\mu V/m$	dB	Ant
1	7264.000M	43.8	+0.0	+0.0	+0.0	+0.0	+0.0	49.7	54.0	-4.3	Horiz
			+0.0	-37.2	+36.0	+6.1					
			+0.8	+0.2							
2	74.800M	21.2	+1.5	+5.9	+6.9	+0.0	+0.0	35.5	40.0	-4.5	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
3	74.800M	21.0	+1.5	+5.9	+6.9	+0.0	+0.0	35.3	40.0	-4.7	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
4	74.300M	20.7	+1.5	+5.9	+6.9	+0.0	+0.0	35.0	40.0	-5.0	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
5	2724.000M	53.1	+0.0	+0.0	+0.0	+0.0	+0.0	48.3	54.0	-5.7	Vert
			+0.0	-38.5	+29.6	+3.4					
			+0.5	+0.2							
6	7264.000M	41.7	+0.0	+0.0	+0.0	+0.0	+0.0	47.6	54.0	-6.4	Vert
			+0.0	-37.2	+36.0	+6.1					
			+0.8	+0.2							
7	2772.000M	52.2	+0.0	+0.0	+0.0	+0.0	+0.0	47.6	54.0	-6.4	Vert
			+0.0	-38.5	+29.7	+3.5					
			+0.5	+0.2							
8	74.000M	19.0	+1.5	+5.9	+6.9	+0.0	+0.0	33.3	40.0	-6.7	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
9	4540.000M	46.5	+0.0	+0.0	+0.0	+0.0	+0.0	47.1	54.0	-6.9	Vert
			+0.0	-37.4	+32.6	+4.5					
			+0.7	+0.2							
10	111.500M	18.0	+1.9	+5.9	+10.7	+0.0	+0.0	36.5	43.5	-7.0	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
11	109.000M	18.0	+1.8	+5.9	+10.6	+0.0	+0.0	36.3	43.5	-7.2	Vert
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
12	244.900M	17.4	+2.9	+5.9	+12.0	+0.0	+0.0	38.2	46.0	-7.8	Horiz
			+0.0	+0.0	+0.0	+0.0					
10	1500 0003 5	15.0	+0.0	+0.0	0.0	0.0		4.5.0	= 4 0		
13	4580.000M	45.2	+0.0	+0.0	+0.0	+0.0	+0.0	45.8	54.0	-8.2	Horiz
			+0.0	-37.4	+32.6	+4.5					
	0740.00015	50.0	+0.7	+0.2	.0.0	. 0. 0	.0.0	45.0	<b>540</b>	0.7	<b>X</b> 7 ·
14	2748.000M	50.0	+0.0	+0.0	+0.0	+0.0	+0.0	45.3	54.0	-8.7	Vert
	Ave		+0.0	-38.5	+29.7	+3.4					
			+0.5	+0.2							
^	2748.000M	57.0	+0.0	+0.0	+0.0	+0.0	+0.0	52.3	54.0	-1.7	Vert
			+0.0	-38.5	+29.7	+3.4					
			+0.5	+0.2							



16	4540.000M	43.9	+0.0	+0.0	+0.0	+0.0	+0.0	44.5	54.0	-9.5	Horiz
			+0.0	-37.4	+32.6	+4.5					
			+0.7	+0.2							
17	111.100M	15.4	+1.9	+5.9	+10.7	+0.0	+0.0	33.9	43.5	-9.6	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
18	2748.000M	48.5	+0.0	+0.0	+0.0	+0.0	+0.0	43.8	54.0	-10.2	Horiz
			+0.0	-38.5	+29.7	+3.4					
			+0.5	+0.2							
19	112.800M	14.5	+1.9	+5.9	+10.8	+0.0	+0.0	33.1	43.5	-10.4	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
20	110.000M	14.6	+1.9	+5.9	+10.6	+0.0	+0.0	33.0	43.5	-10.5	Horiz
			+0.0	+0.0	+0.0	+0.0					
			+0.0	+0.0							
21	2772.000M	47.5	+0.0	+0.0	+0.0	+0.0	+0.0	42.9	54.0	-11.1	Horiz
			+0.0	-38.5	+29.7	+3.5					
			+0.5	+0.2							
22	2724.000M	46.1	+0.0	+0.0	+0.0	+0.0	+0.0	41.3	54.0	-12.7	Horiz
			+0.0	-38.5	+29.6	+3.4					
			+0.5	+0.2							
23	6468.000M	52.2	+0.0	+0.0	+0.0	+0.0	+0.0	56.2	106.3	-50.1	Horiz
			+0.0	-37.2	+34.4	+5.8					
			+0.8	+0.2							
24	6412.000M	47.9	+0.0	+0.0	+0.0	+0.0	+0.0	52.0	106.3	-54.3	Horiz
			+0.0	-37.1	+34.4	+5.8					
			+0.8	+0.2		-					
25	6412.000M	43.1	+0.0	+0.0	+0.0	+0.0	+0.0	47.2	106.3	-59.1	Vert
=0			+0.0	-37.1	+34.4	+5.8		=			
			+0.8	+0.2							
1											



# Band Edge

	Band Edge Summary										
Operating Mode: Single Channel (Low and High)											
Configuration 5 (Internal Antenna)											
Frequency (MHz)	Modulation	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results						
614	FSK	Internal directional	22.1	<46	Pass						
902	FSK	Internal directional	54.2	<108.5	Pass						
928	FSK	Internal directional	55.4	<108.5	Pass						
960	FSK	Internal directional	27.3	<54	Pass						

Band Edge Summary								
Operating Mo	Operating Mode: Hopping							
Configuration	n 5 (Internal An	tenna)						
Frequency (MHz)	Modulation	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results			
614	FSK	Internal directional	22.7	<46	Pass			
902	FSK	Internal directional	58.5	<108.5	Pass			
928	FSK	Internal directional	56.3	<108.5	Pass			
960	FSK	Internal directional	28.0	<54	Pass			

	Band Edge Summary								
Operating Mode: Single Channel (Low and High)									
Frequency (MHz)	Modulation	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results				
614	FSK	External 3dBi Rubber Duck	23.9	<46	Pass				
902	FSK	External 3dBi Rubber Duck	56.6	<105.5	Pass				
928	FSK	External 3dBi Rubber Duck	57.5	<105.5	Pass				
960	FSK	External 3dBi Rubber Duck	27.6	<54	Pass				

Band Edge Summary								
Operating Mode: Hopping Configuration 6 (3dBi Antenna)								
Frequency (MHz)	Modulation	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results			
614	FSK	External 3dBi Rubber Duck	23.8	<46	Pass			
902	FSK	External 3dBi Rubber Duck	55.3	<105.5	Pass			
928	FSK	External 3dBi Rubber Duck	57.1	<105.5	Pass			
960	FSK	External 3dBi Rubber Duck	29.7	<54	Pass			



	Band Edge Summary								
Operating Mode: Single Channel (Low and High) Configuration 7 (5dBi Antenna)									
Frequency (MHz)	Modulation	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results				
614	FSK	External 5dBi Monopole	27.5	<46	Pass				
902	FSK	External 5dBi Monopole	56.4	<106.3	Pass				
928	FSK	External 5dBi Monopole	57.0	<106.3	Pass				
960	FSK	External 5dBi Monopole	27.7	<54	Pass				

Band Edge Summary								
Operating Mode: Hopping Configuration 7 (5dBi Antenna)								
Frequency (MHz)	Modulation	Ant. Type	Field Strength (dBuV/m @3m)	Limit (dBuV/m @3m)	Results			
614	FSK	External 5dBi Monopole	27.1	<46	Pass			
902	FSK	External 5dBi Monopole	55.0	<106.3	Pass			
928	FSK	External 5dBi Monopole	56.3	<106.3	Pass			
960	FSK	External 5dBi Monopole	28.0	<54	Pass			



### **Band Edge Plots**









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Frequency [MHz]

15.247(d) / 15.209 Radiated Band Edge



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## Test Setup / Conditions / Data

Test Location:	CKC Laboratories • 100 North Olinda Place	• Brea CA 92823	• 714 993-6112
Customer:	Itron, Inc.		
Specification:	15.247(d) / 15.209 Radiated Band Edge		
Work Order #:	103955	Date:	6/17/2020
Test Type:	Radiated Scan	Time:	16:52:27
Tested By:	S. Yamamoto	Sequence#:	3
Software:	EMITest 5.03.12		

### Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 5			
Support Equipment:			
Device	Manufacturer	Model #	S/N
Configuration 5			

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02869	Spectrum Analyzer	E4440A	7/25/2019	7/25/2020
T2	ANP05198	Cable-Amplitude	8268	12/4/2018	12/4/2020
		+15C to +45C (dB)			
Т3	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T4	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
T5	AN00309	Preamp	8447D	12/24/2019	12/24/2021
T6	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020

Measu	Measurement Data:		Reading listed by margin.		Test Distance: 3 Meters						
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	614.000M	19.3	+0.0	+4.7	+5.9	+19.8	+0.0	22.7	46.0	-23.3	Vert
			-27.4	+0.4					Internal, Lo	ow HOP	
2	614.000M	18.7	+0.0	+4.7	+5.9	+19.8	+0.0	22.1	46.0	-23.9	Vert
			-27.4	+0.4					Internal, Lo	ow CH	
3	960.000M	18.3	+0.0	+6.1	+6.0	+24.4	+0.0	28.0	54.0	-26.0	Vert
			-27.2	+0.4					Internal, H	igh HOP	
4	960.000M	17.6	+0.0	+6.1	+6.0	+24.4	+0.0	27.3	54.0	-26.7	Vert
			-27.2	+0.4					Internal, H	igh CH	
5	902.000M	23.1	+0.0	+5.9	+6.0	+23.5	+0.0	58.5	108.5	-50.0	Vert
			+0.0	+0.0					Internal Lo	w HOP	
6	928.000M	20.4	+0.0	+6.0	+6.0	+23.9	+0.0	56.3	108.5	-52.2	Vert
			+0.0	+0.0					Internal, H	igh HOP	
7	928.000M	19.5	+0.0	+6.0	+6.0	+23.9	+0.0	55.4	108.5	-53.1	Vert
			+0.0	+0.0					Internal, H	igh CH	
8	902.000M	18.8	+0.0	+5.9	+6.0	+23.5	+0.0	54.2	108.5	-54.3	Vert
			+0.0	+0.0					Internal, Lo	ow CH	



Test Location:	CKC Laboratories • 100 North Olinda Place	• Brea CA 92823•	• 714 993-6112
Customer:	Itron, Inc.		
Specification:	15.247(d) / 15.209 Radiated Band Edge		
Work Order #:	103955	Date:	6/17/2020
Test Type:	Radiated Scan	Time:	14:30:03
Tested By:	S. Yamamoto	Sequence#:	2
Software:	EMITest 5.03.12		

Device	Manufacturer	Model #	S/N	
Configuration 6				
Support Equipment:				
Device	Manufacturer	Model #	S/N	

# Device Manufacturer Model # S/N Configuration 6

ID	Asset #/Serial #	Description	Model	<b>Calibration Date</b>	Cal Due Date
T1	AN02869	Spectrum Analyzer	E4440A	7/25/2019	7/25/2020
T2	ANP05198	Cable-Amplitude	8268	12/4/2018	12/4/2020
		+15C to +45C (dB)			
Т3	ANP05281	Attenuator	1B	4/7/2020	4/7/2022
T4	AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
T5	AN00309	Preamp	8447D	12/24/2019	12/24/2021
T6	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
T6	ANP05050	Cable	RG223/U	12/24/2018	12/24/2020

Measurement Data:		Re	eading list	ted by ma	argin.		Te	est Distanc	e: 3 Meters	5	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	614.000M	20.5	+0.0	+4.7	+5.9	+19.8	+0.0	23.9	46.0	-22.1	Vert
			-27.4	+0.4					Ext 3dBi, 1	Low CH	
2	614.000M	20.4	+0.0	+4.7	+5.9	+19.8	+0.0	23.8	46.0	-22.2	Vert
			-27.4	+0.4					Ext 3dBi, 1	Low HOP	
3	960.000M	20.0	+0.0	+6.1	+6.0	+24.4	+0.0	29.7	54.0	-24.3	Vert
			-27.2	+0.4					Ext 3dBi, 1	High	
									HOP		
4	960.000M	17.9	+0.0	+6.1	+6.0	+24.4	+0.0	27.6	54.0	-26.4	Vert
			-27.2	+0.4					Ext 3dBi, 1	High CH	
5	928.000M	21.6	+0.0	+6.0	+6.0	+23.9	+0.0	57.5	105.5	-48.0	Vert
			+0.0	+0.0					Ext 3dBi, 1	High CH	
6	928.000M	21.2	+0.0	+6.0	+6.0	+23.9	+0.0	57.1	105.5	-48.4	Vert
			+0.0	+0.0					Ext 3dBi, 1	High	
									HOP		
7	902.000M	21.2	+0.0	+5.9	+6.0	+23.5	+0.0	56.6	105.5	-48.9	Vert
			+0.0	+0.0					Ext 3dBi, 1	Low CH	
8	902.000M	19.9	+0.0	+5.9	+6.0	+23.5	+0.0	55.3	105.5	-50.2	Vert
			+0.0	+0.0					Ext 3dBi, 1	Low HOP	



Test Location:	CKC Laboratories • 100 North Olinda Place	• Brea CA 92823•	714 993-6112
Customer:	Itron, Inc.		
Specification:	15.247(d) / 15.209 Radiated Band Edge		
Work Order #:	103955	Date:	6/17/2020
Test Type:	Radiated Scan	Time:	12:13:34
Tested By:	S. Yamamoto	Sequence#:	1
Software:	EMITest 5.03.12		

aquip mem a concern				
Device	Manufacturer	Model #	S/N	
Configuration 7				
Support Equipment:				

Биррон Едигрінені.				
Device	Manufacturer	Model #	S/N	
Configuration 7				

Asset #/Serial #	Description	Model	<b>Calibration Date</b>	Cal Due Date
AN02869	Spectrum Analyzer	E4440A	7/25/2019	7/25/2020
ANP05198	Cable-Amplitude	8268	12/4/2018	12/4/2020
	+15C to +45C (dB)			
ANP05281	Attenuator	1B	4/7/2020	4/7/2022
AN01993	Biconilog Antenna	CBL6111C	6/11/2019	6/11/2021
AN00309	Preamp	8447D	12/24/2019	12/24/2021
ANP05050	Cable	RG223/U	12/24/2018	12/24/2020
	Asset #/Serial # AN02869 ANP05198 ANP05281 AN01993 AN00309 ANP05050	Asset #/Serial #DescriptionAN02869Spectrum AnalyzerANP05198Cable-Amplitude +15C to +45C (dB)ANP05281AttenuatorAN01993Biconilog AntennaAN00309PreampANP05050Cable	Asset #/Serial #DescriptionModelAN02869Spectrum AnalyzerE4440AANP05198Cable-Amplitude +15C to +45C (dB)8268ANP05281Attenuator1BAN01993Biconilog AntennaCBL6111CAN00309Preamp8447DANP05050CableRG223/U	Asset #/Serial #         Description         Model         Calibration Date           AN02869         Spectrum Analyzer         E4440A         7/25/2019           ANP05198         Cable-Amplitude         8268         12/4/2018           +15C to +45C (dB)          4/7/2020           AN01993         Biconilog Antenna         CBL6111C         6/11/2019           AN00309         Preamp         8447D         12/24/2019           ANP05050         Cable         RG223/U         12/24/2018

Measurement Data:		Re	eading lis	ted by ma	argin.		Te	est Distanc	e: 3 Meters	5	
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	614.000M	24.1	+0.0	+4.7	+5.9	+19.8	+0.0	27.5	46.0	-18.5	Vert
			-27.4	+0.4					Ext 5dBi, I	Low CH	
2	614.000M	23.7	+0.0	+4.7	+5.9	+19.8	+0.0	27.1	46.0	-18.9	Vert
			-27.4	+0.4					Ext 5dBi, I	Low HOP	
3	960.000M	18.3	+0.0	+6.1	+6.0	+24.4	+0.0	28.0	54.0	-26.0	Vert
			+0.0	+0.0					Ext 5dBi, l	High	
									HOP	•	
4	960.000M	18.0	+0.0	+6.1	+6.0	+24.4	+0.0	27.7	54.0	-26.3	Vert
			+0.0	+0.0					Ext 5dBi, l	High CH	
5	928.000M	21.1	+0.0	+6.0	+6.0	+23.9	+0.0	57.0	106.3	-49.3	Vert
			+0.0	+0.0					Ext 5dBi, I	High CH	
6	902.000M	21.0	+0.0	+5.9	+6.0	+23.5	+0.0	56.4	106.3	-49.9	Vert
			+0.0	+0.0					Ext 5dBi, l	Low CH	
7	928.000M	20.4	+0.0	+6.0	+6.0	+23.9	+0.0	56.3	106.3	-50.0	Vert
			+0.0	+0.0					Ext 5dBi, l	High	
									HOP	-	
8	902.000M	19.6	+0.0	+5.9	+6.0	+23.5	+0.0	55.0	106.3	-51.3	Vert
			+0.0	+0.0					Ext 5dBi, I	Low HOP	



## 15.35(c) Duty Cycle Correction Factor

Test Data Summary							
Antenna	Operational Mode	Measured On Time (mS / P <sub>obs</sub> )	Calculated DCCF (dB)				
1	Normal hopping	44.5	-7dB				

Observation Period, Pobs is the duration of the pulse train or maximum 100mS

Measured results are calculated as follows:

$$On Time = \left(\sum_{Bursts} RF Burst On Time + \sum_{Control} Control Signal On time\right)\Big|_{P_{obs} (\max 100ms)}$$

Measured Values:

Parameter	Value
Observation Period (Pobs):	100ms
Number of RF Bursts / Pobs::	1
On time of RF Burst:	44.5ms
Number of Control or other signals / Pobs:	0
On time of Control or other Signals:	0
Total Measured On Time:	44.5ms

Duty Cycle Correction Factor (DCCF) is calculated in accordance with ANSI C63.10:

$$DCCF = 20 \cdot Log\left(\frac{On Time}{P_{obs}}\right)$$



### Plot



# Test Setup Photo(s)



7" Tablet



X Axis, IMRC-INT





X Axis, IMRC-INT



Y Axis, IMRC-INT





Z Axis, IMRC-INT



Above 1GHz, IMRC-INT





X Axis, IMRC-EXT 3dBi



X Axis, IMRC-EXT 3dBi





Y Axis, IMRC-EXT 3dBi



Z Axis, IMRC-EXT 3dBi





Above 1GHz, IMRC-EXT 3dBi



IMRC-EXT 5dBi





IMRC-EXT 5dBi



X Axis, IMRC-EXT 5dBi





Y Axis, IMRC-EXT 5dBi



Z Axis, IMRC-EXT 5dBi





Above 1GHz, IMRC-EXT 5dBi



# **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:	Itron, Inc.		
Specification:	15.207 AC Mains - Average		
Work Order #:	103955	Date:	6/12/2020
Test Type:	Conducted Emissions	Time:	09:14:16
Tested By:	Don Nguyen	Sequence#:	3
Software:	EMITest 5.03.12		120V 60Hz

#### **Equipment** Tested:

1 1			
Device	Manufacturer	Model #	S/N
Configuration 3			

Support Equipment:			
Device	Manufacturer	Model #	S/N
Configuration 3			

### Test Conditions / Notes:

The EUT is placed on test bench. USB port is connected to a touchscreen tablet. The EUT is connected to 5Vdc charger. The computer is sending command to the EUT using software MC3 SuperRaptor Test ver.4.0.3.5. The EUT is set into transmitting mode.

Operating frequency: 908MHz (worst case with highest power) Frequency of measurement: 150kHz-30MHz RBW=9kHz, VBW=30kHz

Site A Temperature: 25°C Relative Humidity: 46% Test Method: ANSI C63.10:2013



Itron, Inc. WO#: 103955 Sequence#: 3 Date: 6/12/2020 15.207 AC Mains - Average Test Lead: 120V 60Hz L1-Line



ID	Asset #	Description	Model	<b>Calibration Date</b>	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
	AN02869	Spectrum Analyzer	E4440A	7/25/2019	7/25/2020
Т3	AN02610	High Pass Filter	HE9615-150K-	10/22/2019	10/22/2021
			50-720B		
T4	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
T5	ANP06986	Cable-Line L1(dB)	90cm-extcord	3/31/2020	3/31/2022
	ANP06986	Cable-Neutral L2(dB)	90cm-extcord	3/31/2020	3/31/2022



Measu	rement Data:	Re	eading list	ted by ma	rgin.			Test Lea	d: L1-Line		
#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	472.879k	11.3	+5.8	+0.0	+0.3	+0.0	+0.0	17.4	46.5	-29.1	L1-Li
	Ave		+0.0								
^	472.879k	39.6	+5.8	+0.0	+0.3	+0.0	+0.0	45.7	46.5	-0.8	L1-Li
			+0.0								
3	216.903k	17.3	+5.8	+0.0	+0.2	+0.0	+0.0	23.3	52.9	-29.6	L1-Li
	Ave		+0.0								
^	216.902k	48.6	+5.8	+0.0	+0.2	+0.0	+0.0	54.6	52.9	+1.7	L1-Li
	201.2501		+0.0	0.0	0.1	0.0	0.0	20.2		• • •	* 4 * *
5	301.259k	14.4	+5.8	+0.0	+0.1	+0.0	+0.0	20.3	50.2	-29.9	LI-L1
	Ave 201 2591	44.0	+0.0	+0.0	+0.1	+0.0		40.0	50.2	0.2	III:
	501.238K	44.0	+3.8	+0.0	+0.1	+0.0	+0.0	49.9	50.2	-0.5	LI-LI
7	560 871k	9.0	+5.8	±0.1	+0.3	+0.0	+0.0	15.2	46.0	-30.8	I 1_I i
,	Ave	7.0	+0.0	10.1	10.5	10.0	10.0	15.2	40.0	50.0	
^	560.871k	39.5	+5.8	+0.1	+0.3	+0.0	+0.0	45.7	46.0	-0.3	L1-Li
			+0.0								
9	478.697k	9.5	+5.8	+0.0	+0.3	+0.0	+0.0	15.6	46.4	-30.8	L1-Li
	Ave		+0.0								
^	478.697k	39.3	+5.8	+0.0	+0.3	+0.0	+0.0	45.4	46.4	-1.0	L1-Li
			+0.0								
11	170.362k	17.3	+5.8	+0.0	+0.3	+0.0	+0.0	23.4	54.9	-31.5	L1-Li
	Ave	40.1	+0.0	.0.0	.0.2	.0.0	.0.0	54.0	54.0	07	T 1 T 1
~	1/0.361K	48.1	+5.8	+0.0	+0.3	+0.0	+0.0	54.2	54.9	-0.7	LI-Li
13	196 877k	8.1	+0.0	+0.0	+0.3	+0.0	+0.0	14.2	/6.1	-31.9	I 1_I i
15	Ave	0.1	+0.0	10.0	10.5	10.0	10.0	17.2	<del>-</del> 0.1	-51.7	LILI
^	496.877k	39.1	+5.8	+0.0	+0.3	+0.0	+0.0	45.2	46.1	-0.9	L1-Li
			+0.0								
15	491.060k	8.1	+5.8	+0.0	+0.3	+0.0	+0.0	14.2	46.1	-31.9	L1-Li
	Ave		+0.0								
^	491.059k	39.0	+5.8	+0.0	+0.3	+0.0	+0.0	45.1	46.1	-1.0	L1-Li
			+0.0								
17	485.242k	8.1	+5.8	+0.0	+0.3	+0.0	+0.0	14.2	46.2	-32.0	L1-Li
	Ave 485 2411	40.0	+0.0	+0.0	+0.2	+0.0		16 1	16.2	0.1	III:
~	485.241K	40.0	+5.8	+0.0	+0.3	+0.0	+0.0	40.1	40.2	-0.1	L1-L1
19	151 699k	8.6	+0.0	+0.0	+0.3	+0.0	+0.0	147	/6.8	-32.1	I 1_I i
17	Ave	0.0	+0.0	10.0	10.5	10.0	10.0	14.7	40.0	52.1	
^	454.699k	40.8	+5.8	+0.0	+0.3	+0.0	+0.0	46.9	46.8	+0.1	L1-Li
			+0.0								
21	434.338k	8.9	+5.8	+0.0	+0.2	+0.0	+0.0	14.9	47.2	-32.3	L1-Li
	Ave		+0.0								
^	434.337k	40.4	+5.8	+0.0	+0.2	+0.0	+0.0	46.4	47.2	-0.8	L1-Li
	<u> </u>		+0.0					<b>.</b>			* - * -
23	226.357k	14.3	+5.8	+0.0	+0.2	+0.0	+0.0	20.3	52.6	-32.3	L1-Li
^	AVe	47.0	+0.0		10.2			52.0	50 6	106	TIT:
	220.330K	41.2	+3.8 +0.0	+0.0	+0.2	+0.0	+0.0	33.2	32.0	+0.0	LI-LI
L			$\pm 0.0$								



25 416.885k	9.1	+5.8	+0.0	+0.2	+0.0	+0.0	15.1	47.5	-32.4	L1-Li
Ave		+0.0								
^ 416.884k	41.1	+5.8	+0.0	+0.2	+0.0	+0.0	47.1	47.5	-0.4	L1-Li
		+0.0								
27 536.146k	7.5	+5.8	+0.0	+0.3	+0.0	+0.0	13.6	46.0	-32.4	L1-Li
Ave		+0.0								
^ 536.146k	38.2	+5.8	+0.0	+0.3	+0.0	+0.0	44.3	46.0	-1.7	L1-Li
		+0.0								
29 530.329k	7.4	+5.8	+0.0	+0.3	+0.0	+0.0	13.5	46.0	-32.5	L1-Li
Ave		+0.0								
^ 530.328k	40.2	+5.8	+0.0	+0.3	+0.0	+0.0	46.3	46.0	+0.3	L1-Li
		+0.0								
31 605.958k	7.2	+5.8	+0.1	+0.3	+0.0	+0.0	13.4	46.0	-32.6	L1-Li
Ave		+0.0								
^ 605.958k	37.9	+5.8	+0.1	+0.3	+0.0	+0.0	44.1	46.0	-1.9	L1-Li
		+0.0								
33 343.437k	10.6	+5.8	+0.0	+0.1	+0.0	+0.0	16.5	49.1	-32.6	L1-Li
Ave		+0.0								
^ 343.436k	45.1	+5.8	+0.0	+0.1	+0.0	+0.0	51.0	49.1	+1.9	L1-Li
		+0.0								
35 318.712k	11.1	+5.8	+0.0	+0.1	+0.0	+0.0	17.0	49.7	-32.7	L1-Li
Ave	10.5	+0.0		0.1			40.4	10 -	0.0	
^ 318.711k	43.5	+5.8	+0.0	+0.1	+0.0	+0.0	49.4	49.7	-0.3	LI-L1
	0.0	+0.0		0.0	0.0	0.0	1.5.0	40.7		
37 368.162k	9.8	+5.8	+0.0	+0.2	+0.0	+0.0	15.8	48.5	-32.7	LI-L1
Ave	40.1	+0.0	.0.0	.0.2	.0.0	.0.0	40.1	40 5	0.4	T 1 T '
^ 368.161k	42.1	+5.8	+0.0	+0.2	+0.0	+0.0	48.1	48.5	-0.4	LI-L1
20 262 4441-	10.2	+0.0		+0.1	.0.0		10.0	51.2	22.1	T1T:
39 203.444K	12.5	+5.8	+0.0	+0.1	+0.0	+0.0	18.2	51.5	-33.1	LI-LI
	16.0	+0.0		+0.1			52.0	51.2	15	III:
~ 205.444K	40.9	+3.8	+0.0	+0.1	+0.0	+0.0	32.8	51.5	+1.3	LI-LI
41 282 3511c	117	+0.0		+0.1			17.6	50.7	22.1	I I I I
41 202.331K	11./	+0.0	$\pm 0.0$	$\pm 0.1$	$\pm 0.0$	$\pm 0.0$	17.0	50.7	-55.1	LI-LI
A 282 3511	447	+0.0		+0.1			50.6	50.7	0.1	I I I I
202.331K	44.7	+5.8	$\pm 0.0$	$\pm 0.1$	$\pm 0.0$	$\pm 0.0$	50.0	50.7	-0.1	LI-LI
13 270 716k	11.9	+5.8	+0.0	±0.1	+0.0	+0.0	17.8	51.1	_33.3	I 1-I i
Ave	11.7	+0.0	10.0	10.1	10.0	10.0	17.0	51.1	-55.5	LI-LI
^ 270.716k	45.2	+5.8	+0.0	+0.1	+0.0	+0.0	51.1	51.1	+0.0	L1-Li
2/0./108	13.2	+0.0	10.0	10.1	10.0	10.0	51.1	51.1	10.0	
45 238 719k	12.7	+5.8	+0.0	+0.2	+0.0	+0.0	187	52.1	-33.4	L1-Li
Ave		+0.0					10.7	02.1	22.1	
^ 238.719k	46.8	+5.8	+0.0	+0.2	+0.0	+0.0	52.8	52.1	+0.7	L1-Li
200.1178	. 5.0	+0.0						02.1		
L										



47	183.451k	14.7	+5.8	+0.0	+0.3	+0.0	+0.0	20.8	54.3	-33.5	L1-Li
	Ave		+0.0								
^	183.451k	48.9	+5.8	+0.0	+0.3	+0.0	+0.0	55.0	54.3	+0.7	L1-Li
			+0.0								
۸	179.088k	48.8	+5.8	+0.0	+0.3	+0.0	+0.0	54.9	54.5	+0.4	L1-Li
			+0.0								
50	164.544k	15.4	+5.8	+0.0	+0.4	+0.0	+0.0	21.6	55.2	-33.6	L1-Li
	Ave		+0.0								
^	164.544k	48.9	+5.8	+0.0	+0.4	+0.0	+0.0	55.1	55.2	-0.1	L1-Li
			+0.0								
52	197.268k	13.9	+5.8	+0.0	+0.2	+0.0	+0.0	19.9	53.7	-33.8	L1-Li
	Ave		+0.0								
^	197.268k	48.4	+5.8	+0.0	+0.2	+0.0	+0.0	54.4	53.7	+0.7	L1-Li
			+0.0								



Test Location:	CKC Laboratories Inc. • 110 N. Olinda Pl. • E	Brea, CA 92823	• 714-993-6112
Customer:	Itron, Inc.		
Specification:	15.207 AC Mains - Average		
Work Order #:	103955	Date:	6/12/2020
Test Type:	Conducted Emissions	Time:	09:22:39
Tested By:	Don Nguyen	Sequence#:	4
Software:	EMITest 5.03.12		120V 60Hz

Device	Manufacturer	Model #	S/N					
Configuration 3								
Support Equipment:								
Device	Manufacturer	Model #	S/N					
Configuration 3								

Test Conditions / Notes:

The EUT is placed on test bench. USB port is connected to a touchscreen tablet. The EUT is connected to 5Vdc charger. The computer is sending command to the EUT using software MC3 SuperRaptor Test ver.4.0.3.5. The EUT is set into transmitting mode.

Operating frequency: 908MHz (worst case with highest power) Frequency of measurement: 150kHz-30MHz RBW=9kHz, VBW=30kHz

Site A Temperature: 25°C Relative Humidity: 46% Test Method: ANSI C63.10:2013



Itron, Inc. WO#: 103955 Sequence#: 4 Date: 6/12/2020 15.207 AC Mains - Average Test Lead: 120V 60Hz L2-Neutral



ID	Asset #	Description	Model	<b>Calibration Date</b>	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
	AN02869	Spectrum Analyzer	E4440A	7/25/2019	7/25/2020
Т3	AN02610	High Pass Filter	HE9615-150K-	10/22/2019	10/22/2021
			50-720B		
	AN00847.1	50uH LISN-(L) Line 1	3816/2NM	3/10/2020	3/10/2021
T4	AN00847.1	50uH LISN-(N) Line 2	3816/2NM	3/10/2020	3/10/2021
	ANP06986	Cable-Line L1(dB)	90cm-extcord	3/31/2020	3/31/2022
T5	ANP06986	Cable-Neutral L2(dB)	90cm-extcord	3/31/2020	3/31/2022



Meas	urement Data:	r Re	eading lis	ted by ma	argin.			Test Lead	d: L2-Neut	tral	
#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	475.061k Ave	11.3	+5.8 +0.0	+0.0	+0.3	+0.0	+0.0	17.4	46.4	-29.0	L2-Ne
/	475.061k	40.1	+5.8 +0.0	+0.0	+0.3	+0.0	+0.0	46.2	46.4	-0.2	L2-Ne
3	300.532k Ave	13.7	+5.8 +0.0	+0.0	+0.1	+0.0	+0.0	19.6	50.2	-30.6	L2-Ne
/	300.531k	44.3	+5.8 +0.0	+0.0	+0.1	+0.0	+0.0	50.2	50.2	+0.0	L2-Ne
/	304.894k	44.2	+5.8 +0.0	+0.0	+0.1	+0.0	+0.0	50.1	50.1	+0.0	L2-Ne
6	5 392.160k Ave	10.7	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	16.7	48.0	-31.3	L2-Ne
/	392.159k	41.6	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	47.6	48.0	-0.4	L2-Ne
8	3 517.239k Ave	8.4	+5.8 +0.0	+0.0	+0.3	+0.0	+0.0	14.5	46.0	-31.5	L2-Ne
/	517.239k	41.1	+5.8 +0.0	+0.0	+0.3	+0.0	+0.0	47.2	46.0	+1.2	L2-Ne
10	211.085k Ave	15.1	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	21.1	53.2	-32.1	L2-Ne
/	211.085k	49.0	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	55.0	53.2	+1.8	L2-Ne
12	2 467.062k Ave	8.4	+5.8 +0.0	+0.0	+0.3	+0.0	+0.0	14.5	46.6	-32.1	L2-Ne
/	467.061k	40.0	+5.8 +0.0	+0.0	+0.3	+0.0	+0.0	46.1	46.6	-0.5	L2-Ne
14	408.158k Ave	9.4	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	15.4	47.7	-32.3	L2-Ne
/	408.158k	41.2	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	47.2	47.7	-0.5	L2-Ne
16	5 381.979k Ave	9.8	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	15.8	48.2	-32.4	L2-Ne
/	381.978k	40.6	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	46.6	48.2	-1.6	L2-Ne
18	3 442.337k Ave	8.5	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	14.5	47.0	-32.5	L2-Ne
/	442.336k	40.6	+5.8 +0.0	+0.0	+0.2	+0.0	+0.0	46.6	47.0	-0.4	L2-Ne
20	) 526.693k Ave	7.4	+5.8 +0.0	+0.0	+0.3	+0.0	+0.0	13.5	46.0	-32.5	L2-Ne
/	526.692k	40.7	+5.8 +0.0	+0.0	+0.3	+0.0	+0.0	46.8	46.0	+0.8	L2-Ne



22	546.327k	7.1	+5.8	+0.0	+0.3	+0.0	+0.0	13.2	46.0	-32.8	L2-Ne
Av	ve		+0.0								
^	546.327k	40.1	+5.8	+0.0	+0.3	+0.0	+0.0	46.2	46.0	+0.2	L2-Ne
			+0.0								
24	352.163k	9.9	+5.8	+0.0	+0.2	+0.0	+0.0	15.9	48.9	-33.0	L2-Ne
Av	ve		+0.0								
۸	352.163k	44.6	+5.8	+0.0	+0.2	+0.0	+0.0	50.6	48.9	+1.7	L2-Ne
			+0.0								
26	373.252k	9.4	+5.8	+0.0	+0.2	+0.0	+0.0	15.4	48.4	-33.0	L2-Ne
Av	ve		+0.0								
۸	373.252k	44.0	+5.8	+0.0	+0.2	+0.0	+0.0	50.0	48.4	+1.6	L2-Ne
			+0.0								
28	339.074k	10.1	+5.8	+0.0	+0.1	+0.0	+0.0	16.0	49.2	-33.2	L2-Ne
Av	ve		+0.0								
۸	339.073k	45.1	+5.8	+0.0	+0.1	+0.0	+0.0	51.0	49.2	+1.8	L2-Ne
			+0.0								
30	176.907k	15.3	+5.8	+0.0	+0.3	+0.0	+0.0	21.4	54.6	-33.2	L2-Ne
Av	ve		+0.0								
۸	176.906k	50.4	+5.8	+0.0	+0.3	+0.0	+0.0	56.5	54.6	+1.9	L2-Ne
			+0.0								
32	358.708k	9.6	+5.8	+0.0	+0.2	+0.0	+0.0	15.6	48.8	-33.2	L2-Ne
Av	ve		+0.0								
۸	358.708k	42.5	+5.8	+0.0	+0.2	+0.0	+0.0	48.5	48.8	-0.3	L2-Ne
			+0.0								
34	237.992k	12.8	+5.8	+0.0	+0.2	+0.0	+0.0	18.8	52.2	-33.4	L2-Ne
Av	ve		+0.0								
۸	237.991k	49.0	+5.8	+0.0	+0.2	+0.0	+0.0	55.0	52.2	+2.8	L2-Ne
			+0.0								
36	313.621k	10.5	+5.8	+0.0	+0.1	+0.0	+0.0	16.4	49.9	-33.5	L2-Ne
Av	ve		+0.0								
۸	313.621k	44.9	+5.8	+0.0	+0.1	+0.0	+0.0	50.8	49.9	+0.9	L2-Ne
			+0.0								
38	325.257k	10.2	+5.8	+0.0	+0.1	+0.0	+0.0	16.1	49.6	-33.5	L2-Ne
Av	ve		+0.0								
٨	325.256k	43.3	+5.8	+0.0	+0.1	+0.0	+0.0	49.2	49.6	-0.4	L2-Ne
			+0.0								
40	244.537k	12.3	+5.8	+0.0	+0.2	+0.0	+0.0	18.3	51.9	-33.6	L2-Ne
Av	ve		+0.0								
Λ	244.536k	45.3	+5.8	+0.0	+0.2	+0.0	+0.0	51.3	51.9	-0.6	L2-Ne
			+0.0								
42	253.263k	12.0	+5.8	+0.0	+0.1	+0.0	+0.0	17.9	51.6	-33.7	L2-Ne
Av	ve		+0.0								
43	253.263k	11.9	+5.8	+0.0	+0.1	+0.0	+0.0	17.8	51.6	-33.8	L2-Ne
Av	ve	/	+0.0								1.0
^	253.263k	45.0	+5.8	+0.0	+0.1	+0.0	+0.0	50.9	51.6	-0.7	L2-Ne
			+0.0	. 5.0		. 0.0		2 3 . 7	21.0	0.7	1,0
L											



Test Location:	CKC Laboratories Inc. • 110 N. Olinda Pl. • E	Brea, CA 92823	• 714-993-6112
Customer:	Itron, Inc.		
Specification:	15.207 AC Mains - Average		
Work Order #:	103955	Date:	6/12/2020
Test Type:	Conducted Emissions	Time:	10:26:42 AM
Tested By:	Don Nguyen	Sequence#:	11
Software:	EMITest 5.03.12		120V 60Hz

Device	Manufacturer	Model #	S/N
Configuration 4			
Support Equipment:			
Device	Manufacturer	Model #	S/N
Configuration 4			
Test Conditions / Notes:			

The EUT is placed on test bench. USB port is connected to a touchscreen tablet. The EUT is connected to 12Vdc charger. The computer is sending command to the EUT using software MC3 SuperRaptor Test ver.4.0.3.5. The EUT is set into transmitting mode.

Operating frequency: 908MHz (worst case) Frequency of measurement: 150kHz-30MHz RBW=9kHz, VBW=30kHz

Site A Temperature: 25°C Relative Humidity: 46% Test Method: ANSI C63.10:2013