Indyme Solutions, LLC

REVISED TEST REPORT FOR 101176-6

Body Detection Sensor and Transmitter
Model: DM9032

Tested to The Following Standards:

FCC Part 15 Subpart C Section(s)

15.207 & 15.247
(FHSS 902-928 MHz)

Report No.: 101176-6A

Date of issue: May 18, 2018

ACCREDITED
Test Certificate # 803.02

This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Indyme Solutions, LLC
8295 Aero Place
San Diego, CA 92123

Representative: Carl Lozada
Customer Reference Number: 5916-00

REPORT PREPARED BY:

Dianne Dudley
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 101176

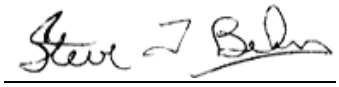
DATE OF EQUIPMENT RECEIPT: May 9, 2018
DATE(S) OF TESTING: May 9-11, 2018

Revision History

Original: Testing of Body Detection Sensor and Transmitter, Model: DM9032 to FCC 15.207 & 15.247.
Revision A: To delete W units from Conducted Output Power tables in Section 15.247 (b)(2).

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the equipment provided by the client, tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.



Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information

Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
110 Olinda Place
Brea, CA 92823

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.03.11

Site Registration & Accreditation Information

Location	NIST CB #	TAIWAN	CANADA	FCC	JAPAN
Brea A, CA	US0060	SL2-IN-E-1146R	3082D-1	US1025	A-0147

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C - 15.247 (FHSS 902-928MHz)

Test Procedure	Description	Modifications	Results
15.247(a)(1)(i)	Occupied Bandwidth	NA	Pass
15.247(a)(1)	Carrier Separation	NA	Pass
15.247(a)(1)(i)	Number of Hopping Channels	NA	Pass
15.247(a)(1)(i)	Average Time of Occupancy	NA	Pass
15.247(b)(2)	Output Power	NA	Pass
15.247(d)	RF Conducted Emissions & Band Edge	NA	Pass
15.247(d)	Radiated Emissions & Band Edge	NA	Pass
15.207	AC Conducted Emissions	NA	Pass

NA = Not Applicable

Modifications During Testing

This list is a summary of the modifications made to the equipment during testing.

Summary of Conditions
No modifications were made during testing.

Modifications listed above must be incorporated into all production units.

Conditions During Testing

This list is a summary of the conditions noted to the equipment during testing.

Summary of Conditions
None

EQUIPMENT UNDER TEST (EUT)

The following model has been tested by CKC Laboratories**: DM9032**

The manufacturer states that the above model tested - DM9032, is a fully configured model representing the best sample having the most hardware and firmware for the worst case EMI performance amongst all the models listed under the family Model DM903x-yy, all of which are identical to the model electrically, and/or any differences between them do not affect their EMC characteristics, therefore they meet the level of testing equivalent to the tested model.

During testing, numerous configurations may have been utilized. The configurations listed below support compliance to the standard(s) listed in the Summary of Results section.

Configuration 1

Equipment Tested:

Device	Manufacturer	Model #	S/N
POE Power Supply	HDE	LZD103-24W-48	NA
Body Detection Sensor and Transmitter	Indyme Solutions, LLC	DM9032	NA

Support Equipment:

Device	Manufacturer	Model #	S/N
None			

General Product Information:

Product Information	Manufacturer-Provided Details
Equipment Type:	Stand-Alone Equipment
Type of Wideband System:	FHSS
Operating Frequency Range:	918.1-923
Number of Hopping Channels:	52
Modulation Type(s):	FSK
Maximum Duty Cycle:	98% (test mode)
Number of TX Chains:	1
Antenna Type(s) and Gain:	0 dBi
Beamforming Type:	NA
Antenna Connection Type:	Integral (External connector provided to facilitate testing)
Nominal Input Voltage:	48V (POE 115Vac,) Battery powered model 3 V
Firmware / Software used for Test:	FCC Test.

FCC Part 15 Subpart C

15.247(a) Transmitter Characteristics

Test Setup/Conditions			
Test Location:	Brea Lab A	Test Engineer:	E. Wong
Test Method:	ANSI C63.10 (2013)	Test Date(s):	5/9/2018
Configuration:	1		
Test Setup:	The EUT is placed on the test bench, RF characteristic is evaluated at the temporary antenna port. The EUT under evaluation is POE variant. Frequency: 902-928MHz TX frequency:918.1MHz, 920.6MHz, 923MHz		

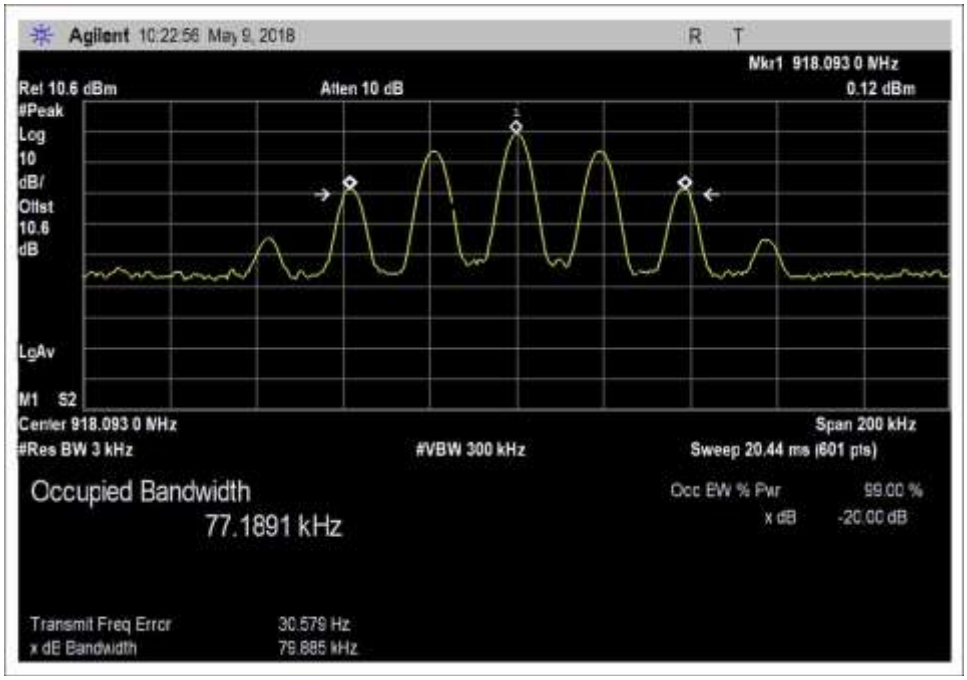
Environmental Conditions			
Temperature (ºC)	22	Relative Humidity (%):	54.8

Test Equipment					
Asset#	**Description**	**Manufacturer**	**Model**	**Cal Date**	**Cal Due**
02672	Spectrum Analyzer	Agilent	E4446A	3/2/2017	3/2/2019
03430	Attenuator	Aeroflex/Weinschel	75A-10-12	12/19/2017	12/19/2019
P06544	Cable	Astro Steel	32026-29094K-29094K-36TC	12/21/2017	12/21/2019

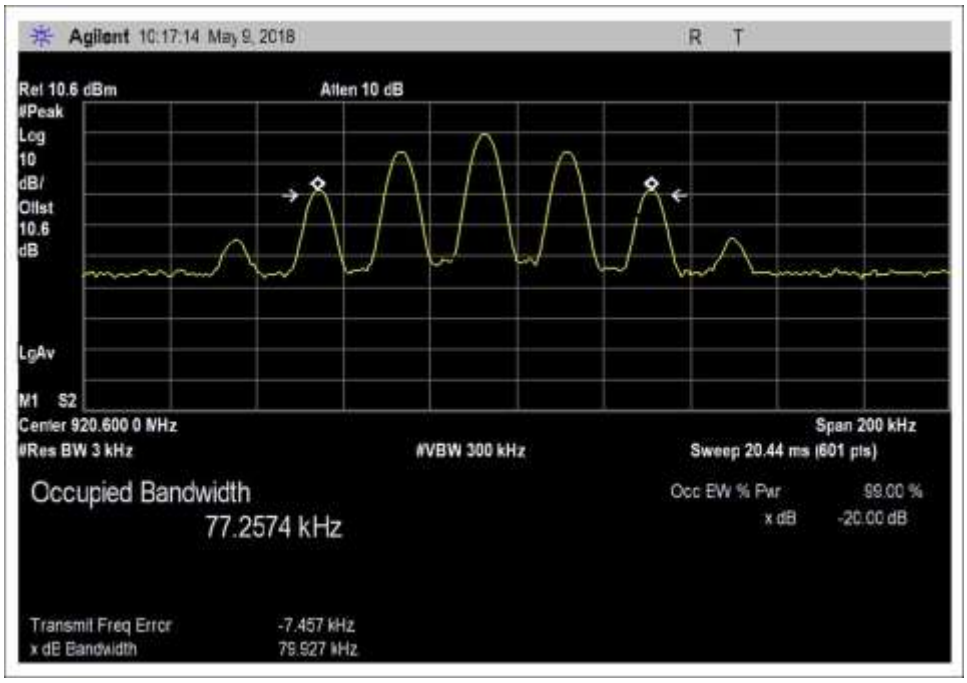
15.247(a)(1) 20 dB Bandwidth

Test Data Summary					
Frequency (MHz)	**Antenna Port**	**Modulation**	**Measured (kHz)**	**Limit (kHz)**	**Results**
918.1	1	FSK	79.8	≤500	Pass
920.6	1	FSK	79.9	≤500	Pass
923.0	1	FSK	80.0	≤500	Pass

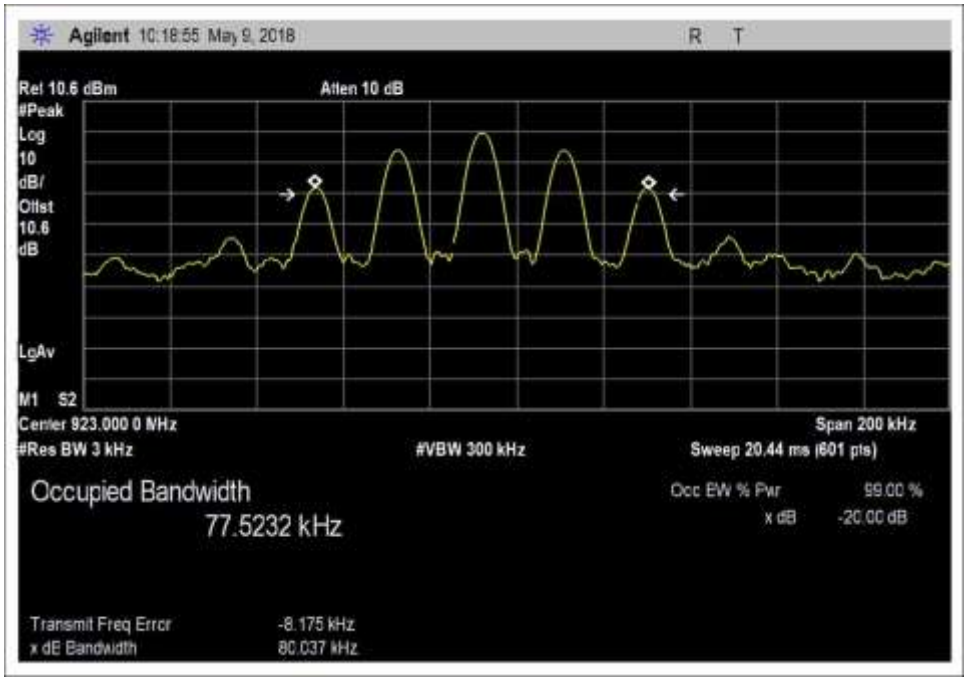
Plots



918MHz



920MHz

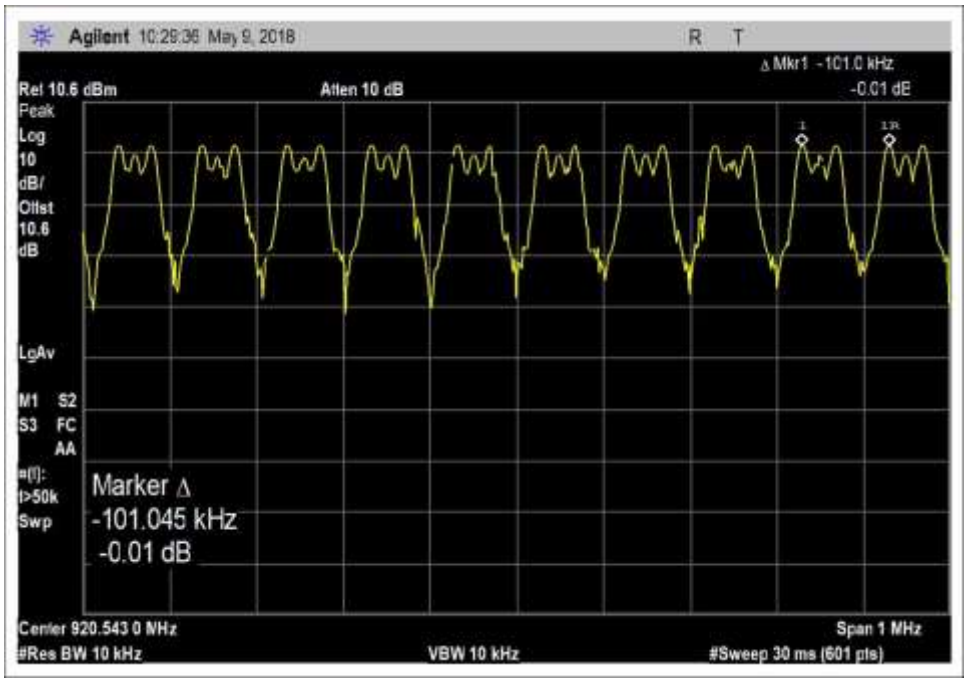


923MHz

15.247(a)(1) Carrier Separation

Test Data Summary				
Limit applied: 20dB bandwidth of the hopping channel.				
Antenna Port	**Operational Mode**	**Measured (kHz)**	**Limit (kHz)**	**Results**
1	Hopping	101	> 80	Pass

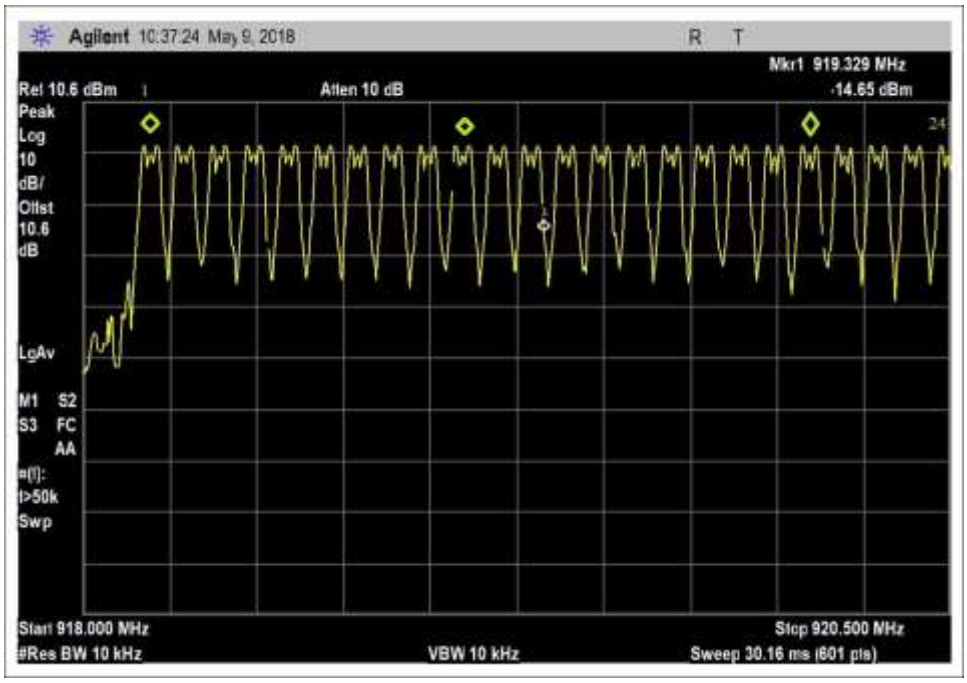
Plot

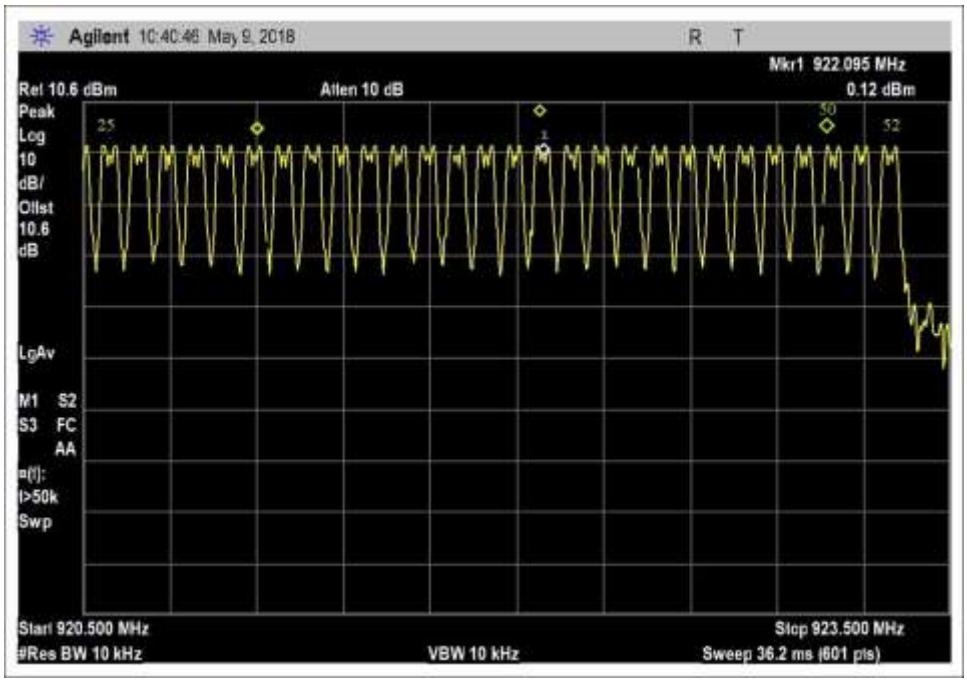


15.247(a)(1)(iii) Number of Hopping Channels

Test Data Summary				
$Limit = \begin{cases} 50\ Channels \mid 20\ dB\ BW < 250kHz \\ 25\ Channels \mid 20\ dB\ BW \geq 250kHz \end{cases}$				
Antenna Port	**Operational Mode**	**Measured (Channels)**	**Limit (Channels)**	**Results**
1	Hopping	52	≥ 50	Pass

Plots




Agilent 10:40:46 May 9, 2018
R T
Mkr1 922.095 MHz
0.12 dBm
Ref 10.6 dBm
Atten 10 dB
Peak
Log
10
dB/
Offst
10.6
dB
LgAv
M1 S2
S3 FC
AA
n(t):
t>50k
Swp
Start 920.500 MHz
#Res BW 10 kHz
VBW 10 kHz
Stop 923.500 MHz
Sweep 36.2 ms (601 pts)

15.247(a)(1)(iii) Time of Occupancy

Test Data Summary				
Observation Period, P_{obs} is derived from the following: $P_{Obs} = \begin{cases} 20\ Seconds & 20\ dB\ BW < 250kHz \\ 10\ Seconds & 20\ dB\ BW \geq 250kHz \end{cases}$				
Antenna Port	**Operational Mode**	**Measured (ms)**	**Limit (ms/P_{obs})**	**Results**
1	Hopping	69.6	≤400	Pass

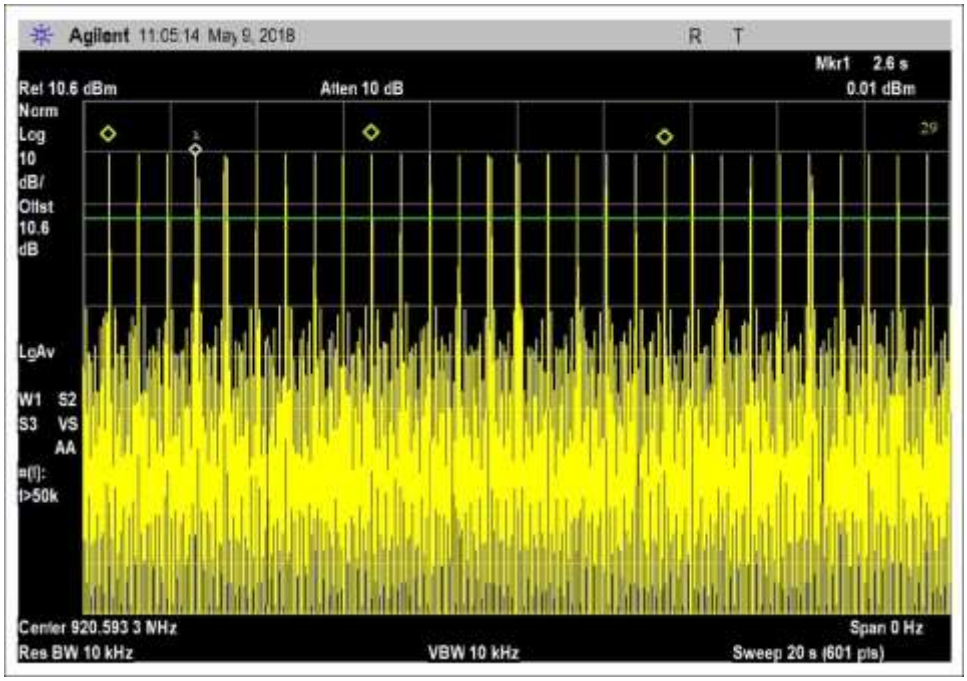
Measured results are calculated as follows:

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

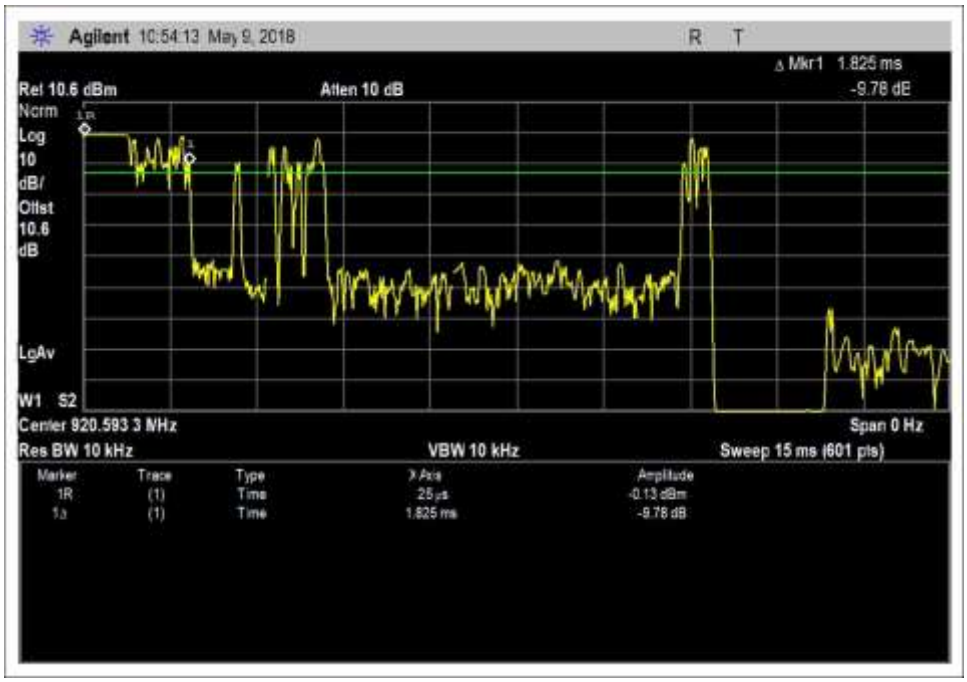
Actual Calculated Values:

Parameter	Value
Observation Period (P_{obs}):	20 sec
Number of RF Bursts / P_{obs}:	29
On time of RF Burst:	1.825ms
Number of Control or other signals / P_{obs}:	3
On time of Control or other Signals:	0.1+0.975+0.5 = 1.575ms
Total Measured On Time:	2.4ms /burst 69.6ms/20sec (ie 29burst)

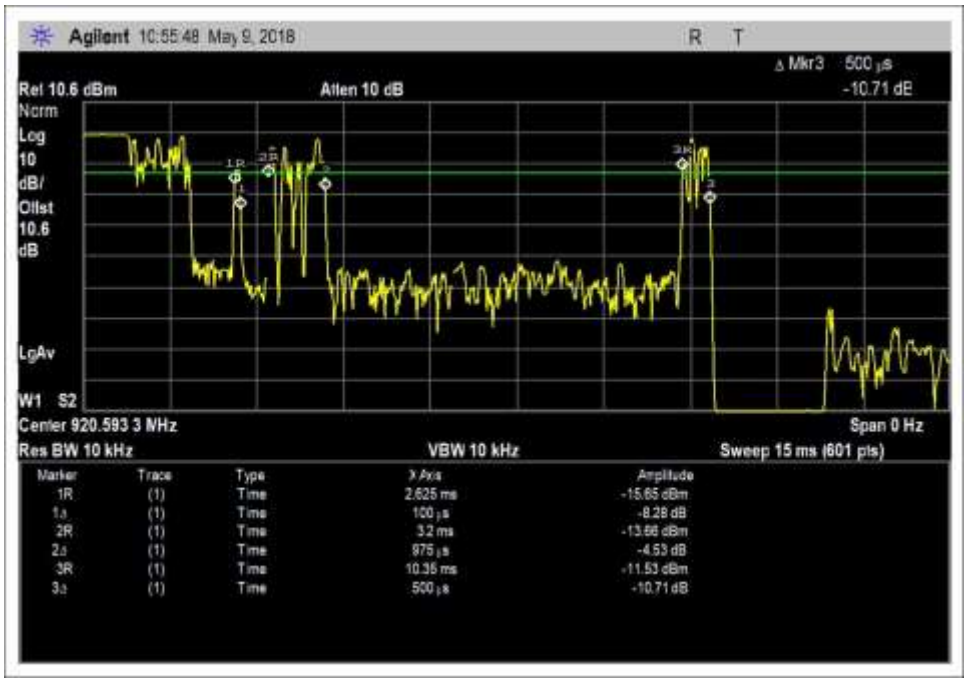
Plots



Number of Burst_20sec

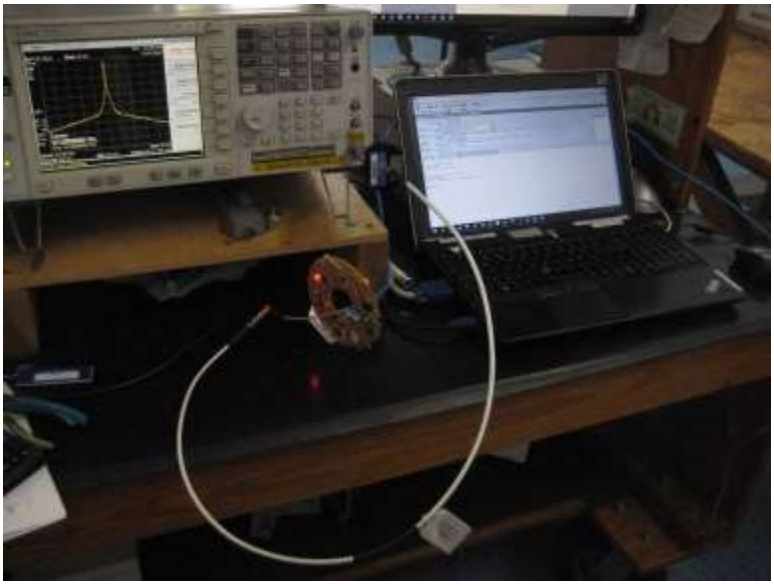


Time_Burst time



Time_Control Signal

Test Setup Photo



15.247(b)(2) Output Power

Test Data Summary - Voltage Variations					
Frequency (MHz)	**Modulation / Ant Port**	**$V_{Minimum}$ (dBm)**	**$V_{Nominal}$ (dBm)**	**$V_{Maximum}$ (dBm)**	**Max Deviation from $V_{Nominal}$ (dB)**
918.1	FSK (temp ant port)	1.97/ 0.016	1.97/ 0.016	1.97/ 0.016	0
920.6	FSK (temp ant port)	1.98/0.016	1.98/0.016	1.98/0.016	0
923.0	FSK (temp ant port)	2.00/0.016	2.00/0.016	2.00/0.016	0

Test performed using operational mode with the highest output power, representing worst case.

Parameter Definitions:

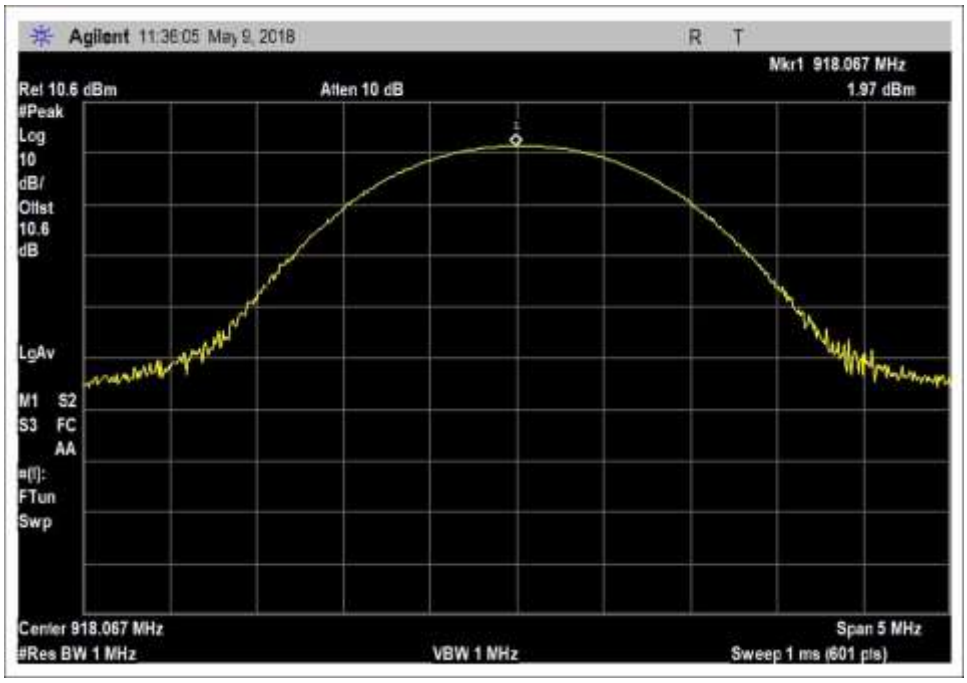
Measurements performed at input voltage Vnominal ± 15%.

Parameter	Value
$V_{Nominal}$:	138
$V_{Minimum}$:	120
$V_{Maximum}$:	102

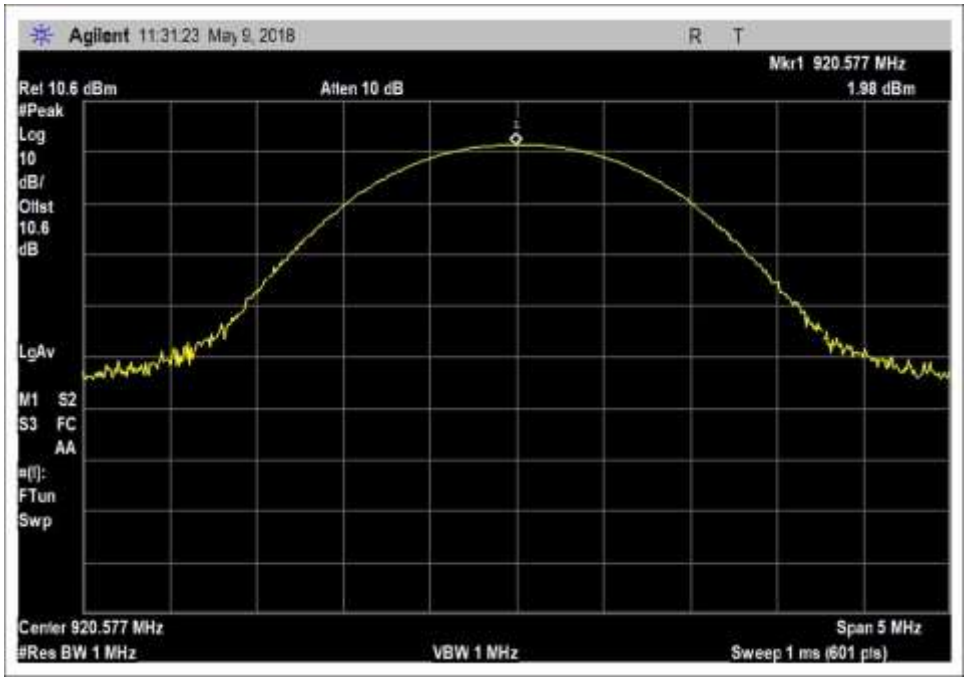
Note: Voltage variation performed at AC main of the POE power supply to be provided at the user at time of sale.

Test Data Summary - RF Conducted Measurement					
$Limit = \begin{cases} 30dBm\ Conducted/36dBm\ EIRP \mid \geq 50\ Channels \\ 24dBm\ Conducted/30dBm\ EIRP \mid < 50\ Channels\ (\min 25) \end{cases}$					
Frequency (MHz)	**Modulation**	**Ant. Type / Gain (dBi)**	**Measured (dBm)**	**Limit (dBm)**	**Results**
918.1	FSK	Trace, 0dBi	1.97/ 0.016	≤ 30 / 1	Pass
920.6	FSK	Trace, 0dBi	1.98/0.016	≤ 30/ 1	Pass
923.0	FSK	Trace, 0dBi	2.00/0.016	≤ 30/ 1	Pass

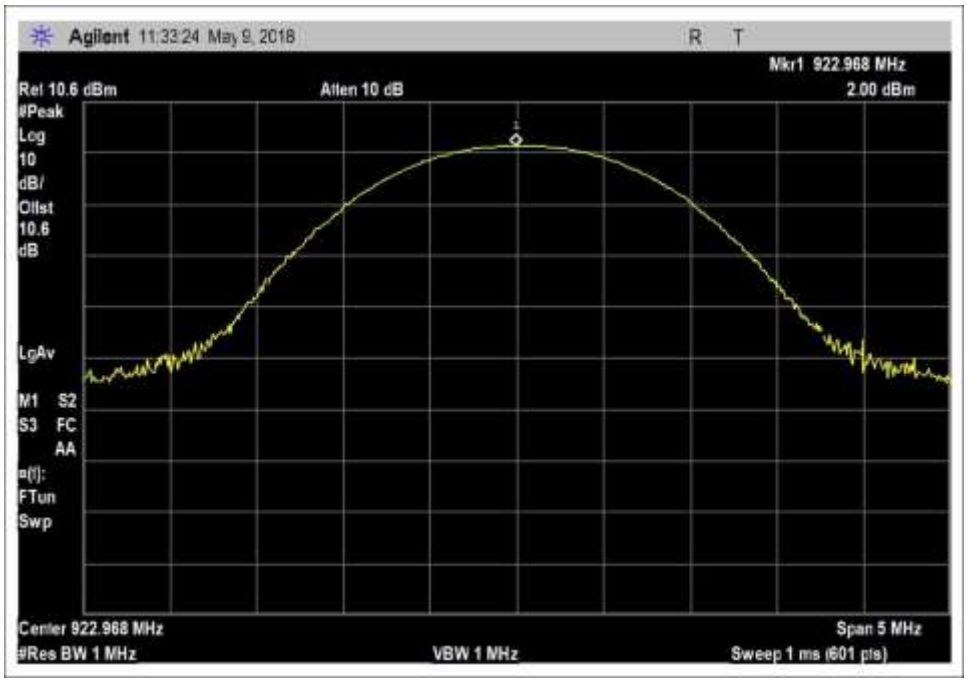
Plots



918MHz



920.6MHz


Agilent 11:33:24 May 9, 2018
R T
Mkr1 922.968 MHz
Ref 10.6 dBm
Atten 10 dB
2.00 dBm
#Peak
Log
10
dB/
Offst
10.6
dB
LgAv
M1 S2
S3 FC
AA
n(t):
FTun
Swp
Center 922.968 MHz
Span 5 MHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 1 ms (601 pts)

923MHz

Test Setup / Conditions / Data

Test Location:	CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92821 • 714 993 6112		
Customer:	**Indyme Solutions, LLC**		
Specification:	**15.247(b) Power Output (902-928 MHz DTS)**		
Work Order #:	**101176**	Date:	5/11/2018
Test Type:	**Conducted Emissions**	Time:	09:07:27
Tested By:	E. Wong	Sequence#:	2
Software:	EMITest 5.03.11		120/60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The EUT is placed on the test bench, RF characteristic is evaluated at the temporary antenna port.

The EUT under evaluation is POE variant.
Frequency: 902-928MHz
TX frequency:918.1MHz, 920.6MHz, 923MHz

Frequency range of measurement = Fundamental
RBW=VBW=1MHz

Test environment conditions:
Temperature: 22°C
Relative Humidity: 55 %
Pressure: 100kPa

Site A
ANSI C63.10-2013

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02672	Spectrum Analyzer	E4446A	3/2/2017	3/2/2019
T2	ANP06544	Cable	32026-29094K-29094K-36TC	12/21/2017	12/21/2019
T3	AN03430	Attenuator	75A-10-12	12/19/2017	12/19/2019

Measurement Data: Reading listed by margin. Test Lead: Antenna port

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	918.067M	98.4	+0.0	+0.5	+10.1		+0.0	109.0	137.0	-28.0	Anten
2	920.577M	98.4	+0.0	+0.5	+10.1		+0.0	109.0	137.0	-28.0	Anten
3	922.968M	98.4	+0.0	+0.5	+10.1		+0.0	109.0	137.0	-28.0	Anten

15.35(c) Duty Cycle Correction Factor

Test Data Summary			
Antenna Port	**Operational Mode**	**Measured On Time (mS / P_{obs})**	**Calculated DCCF (dB)**
1	Hopping	10.5ms	-19.5

Observation Period, P_{obs} is the duration of the pulse train or maximum 100mS

Measured results are calculated as follows:

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

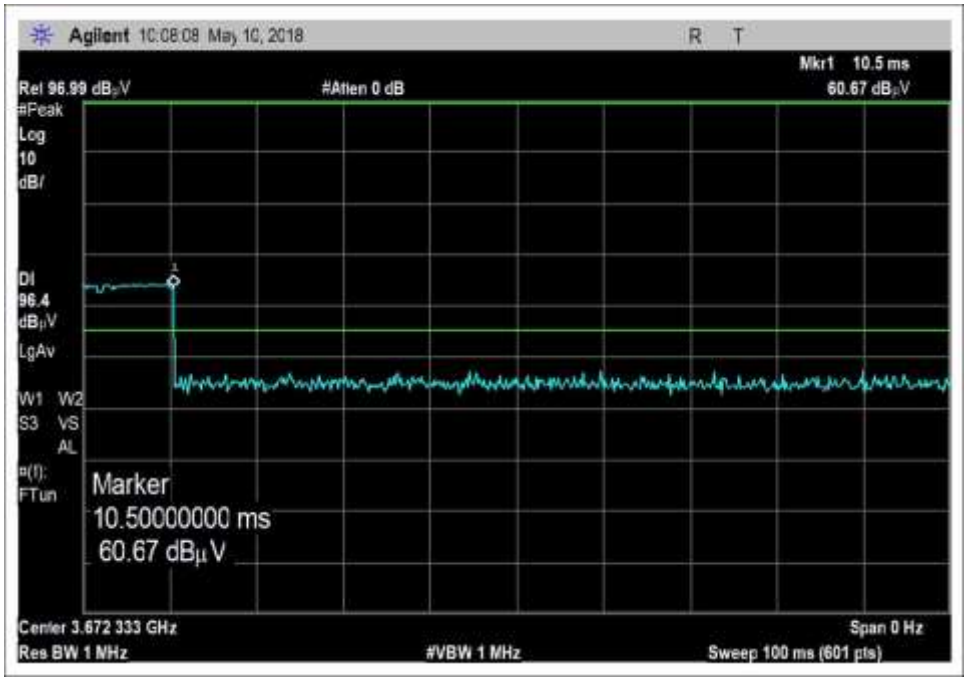
Measured Values:

Parameter	**Value**
Observation Period (P_{obs}):	100ms
Number of RF Bursts / P_{obs}:	1
On time of RF Burst:	10.5ms
Number of Control or other signals / P_{obs}:	0
On time of Control or other Signals:	0
Total Measured On Time:	10.5ms

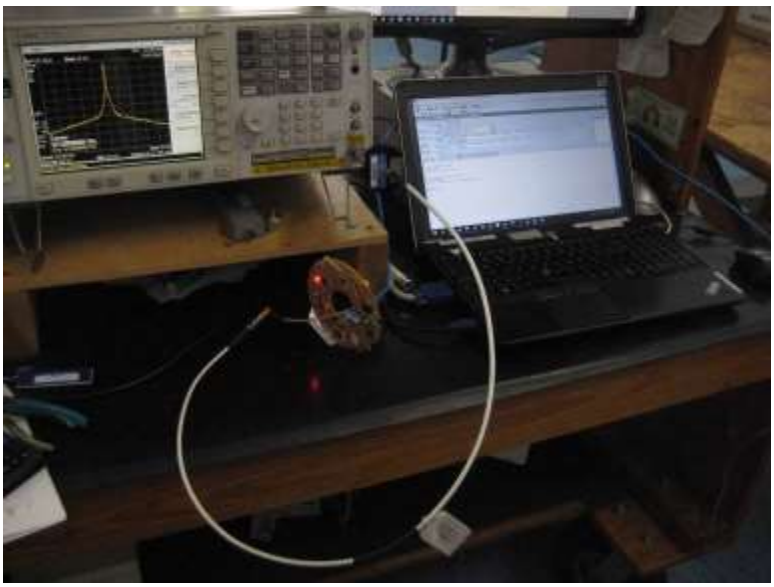
Duty Cycle Correction Factor (DCCF) is calculated in accordance with ANSI C63.10:

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

Duty Cycle Correction Factor Test Data



Test Setup Photo



15.247(d) RF Conducted Emissions & Band Edge

Test Setup / Conditions / Data

Test Location:	CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92821 • 714 993 6112		
Customer:	**Indyme Solutions, LLC**		
Specification:	**15.247(d) Conducted Spurious Emissions**		
Work Order #:	**101176**	Date:	5/9/2018
Test Type:	**Conducted Emissions**	Time:	11:22:42
Tested By:	E. Wong	Sequence#:	1
Software:	EMITest 5.03.11		120/60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

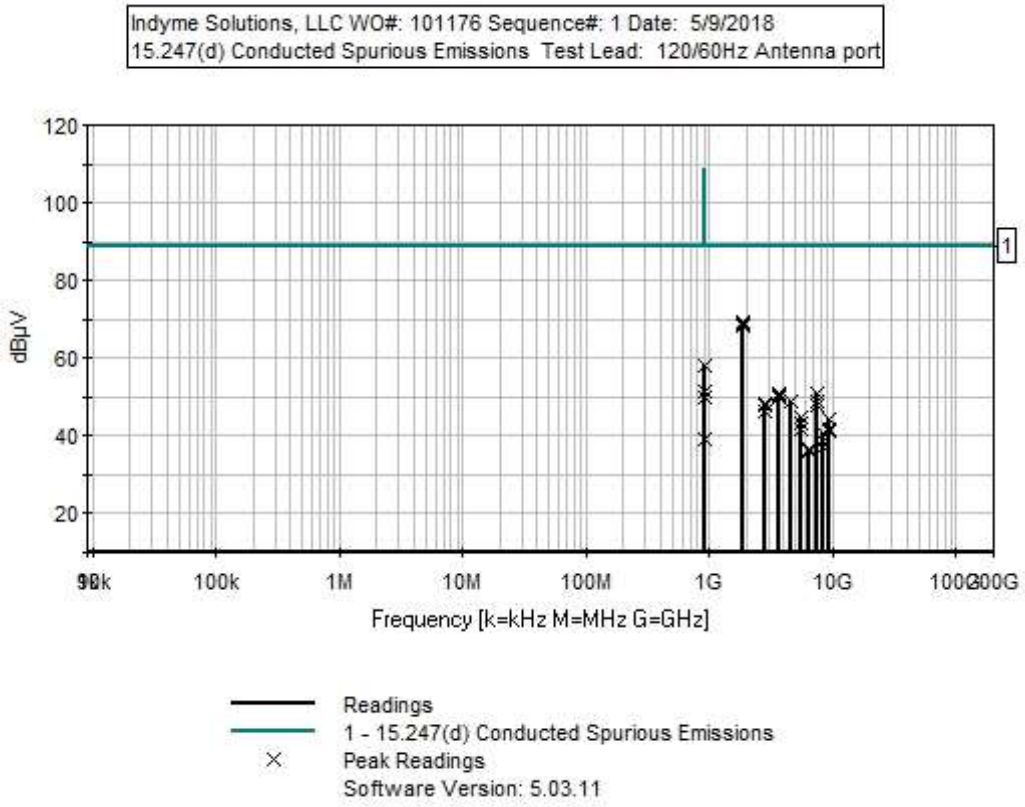
The EUT is placed on the test bench, RF characteristic is evaluated at the temporary antenna port.

The EUT under evaluation is POE variant.
Frequency: 902-928MHz
TX frequency:918.1MHz, 920.6MHz, 923MHz

Frequency range of measurement = 9 kHz- 10GHz.
RBW=VBW=100kHz

Test environment conditions:
Temperature: 22°C
Relative Humidity: 55 %
Pressure: 100kPa

Site A
ANSI C63.10-2013


Indyme Solutions, LLC WO#: 101176 Sequence#: 1 Date: 5/9/2018
15.247(d) Conducted Spurious Emissions Test Lead: 120/60Hz Antenna port
120
100
80
60
40
20
dBµV
1
100k
1M
10M
100M
1G
10G
Frequency [k=kHz M=MHz G=GHz]
Readings
1 - 15.247(d) Conducted Spurious Emissions
Peak Readings
Software Version: 5.03.11

Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	AN02672	Spectrum Analyzer	E4446A	3/2/2017	3/2/2019
T2	ANP06544	Cable	32026-29094K-29094K-36TC	12/21/2017	12/21/2019
T3	AN03430	Attenuator	75A-10-12	12/19/2017	12/19/2019

Measurement Data: Reading listed by margin. Test Lead: Antenna port

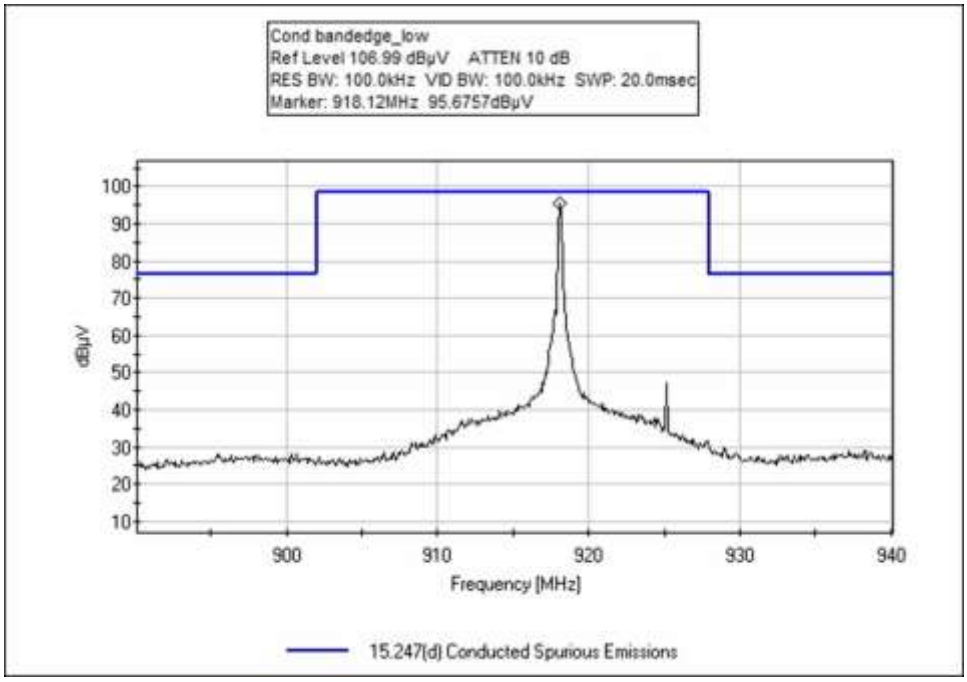
#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	1846.000M	58.6	+0.0	+0.7	+10.1		+0.0	69.4	89.0 H	-19.6	Anten
2	1841.167M	58.0	+0.0	+0.7	+10.1		+0.0	68.8	89.0 M	-20.2	Anten
3	1836.233M	57.5	+0.0	+0.7	+10.1		+0.0	68.3	89.0 L	-20.7	Anten
4	928.000M	47.5	+0.0	+0.5	+10.1		+0.0	58.1	89.0 bandedge H_hopping	-30.9	Anten
5	902.000M	40.9	+0.0	+0.5	+10.1		+0.0	51.5	89.0 bandedge L hopping	-37.5	Anten
6	7344.600M	39.0	+0.0	+1.9	+10.1		+0.0	51.0	89.0 L	-38.0	Anten
7	3682.333M	39.4	+0.0	+1.2	+10.1		+0.0	50.7	89.0 M	-38.3	Anten
8	3672.400M	39.3	+0.0	+1.2	+10.1		+0.0	50.6	89.0 L	-38.4	Anten
9	3692.000M	38.6	+0.0	+1.2	+10.2		+0.0	50.0	89.0 H	-39.0	Anten
10	928.000M	39.3	+0.0	+0.5	+10.1		+0.0	49.9	89.0 bandedge h	-39.1	Anten
11	4602.917M	37.5	+0.0	+1.6	+10.0		+0.0	49.1	89.0 M	-39.9	Anten
12	4590.550M	37.3	+0.0	+1.6	+10.0		+0.0	48.9	89.0 L	-40.1	Anten
13	4615.000M	37.3	+0.0	+1.6	+10.0		+0.0	48.9	89.0 H	-40.1	Anten
14	7364.667M	36.9	+0.0	+1.9	+10.1		+0.0	48.9	89.0 M	-40.1	Anten
15	2761.750M	37.5	+0.0	+0.9	+10.0		+0.0	48.4	89.0 M	-40.6	Anten
16	7384.000M	35.7	+0.0	+1.9	+10.1		+0.0	47.7	89.0 H	-41.3	Anten
17	2769.000M	36.8	+0.0	+0.9	+10.0		+0.0	47.7	89.0 H	-41.3	Anten
18	2754.283M	35.4	+0.0	+0.9	+10.0		+0.0	46.3	89.0 L	-42.7	Anten
19	5508.533M	32.9	+0.0	+1.6	+10.2		+0.0	44.7	89.0 L	-44.3	Anten

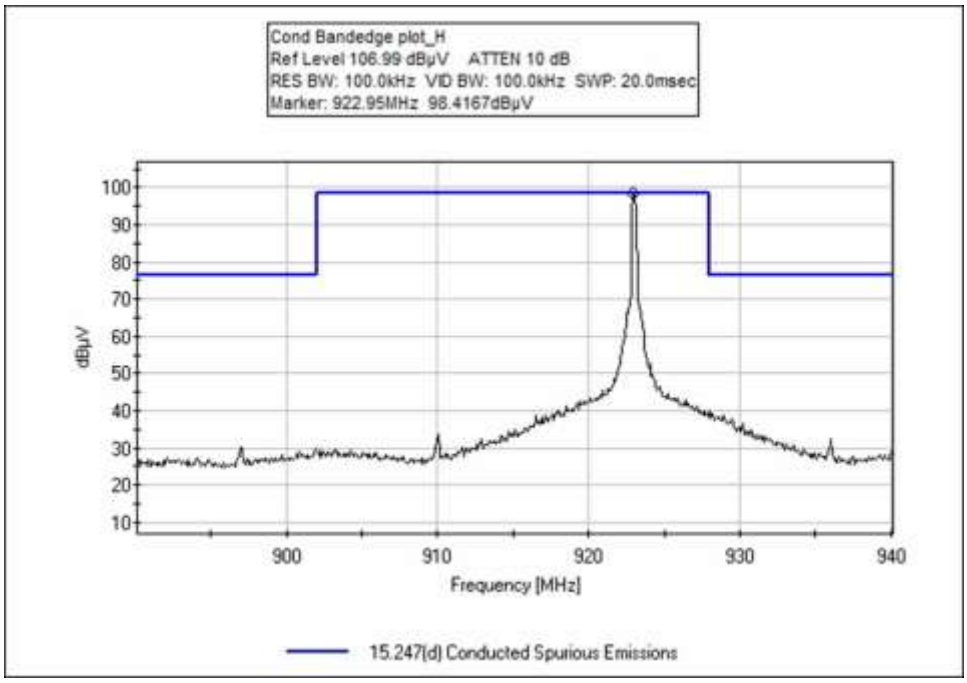
20	9180.767M	32.6	+0.0	+1.7	+10.1	+0.0	44.4	89.0	-44.6	Anten L
21	5523.500M	31.4	+0.0	+1.6	+10.2	+0.0	43.2	89.0	-45.8	Anten M
22	9230.000M	30.0	+0.0	+1.6	+10.2	+0.0	41.8	89.0	-47.2	Anten H
23	5538.000M	29.9	+0.0	+1.6	+10.2	+0.0	41.7	89.0	-47.3	Anten H
24	9205.833M	29.2	+0.0	+1.7	+10.2	+0.0	41.1	89.0	-47.9	Anten M
25	8262.717M	29.2	+0.0	+1.7	+10.0	+0.0	40.9	89.0	-48.1	Anten L
26	902.000M	28.4	+0.0	+0.5	+10.1	+0.0	39.0	89.0	-50.0	Anten bandedge L
27	8285.250M	27.1	+0.0	+1.7	+10.0	+0.0	38.8	89.0	-50.2	Anten M
28	8307.000M	25.4	+0.0	+1.6	+10.0	+0.0	37.0	89.0	-52.0	Anten H
29	6426.650M	24.7	+0.0	+1.7	+10.1	+0.0	36.5	89.0	-52.5	Anten L
30	6444.083M	24.4	+0.0	+1.7	+10.0	+0.0	36.1	89.0	-52.9	Anten M
31	6461.000M	24.2	+0.0	+1.7	+10.0	+0.0	35.9	89.0	-53.1	Anten H

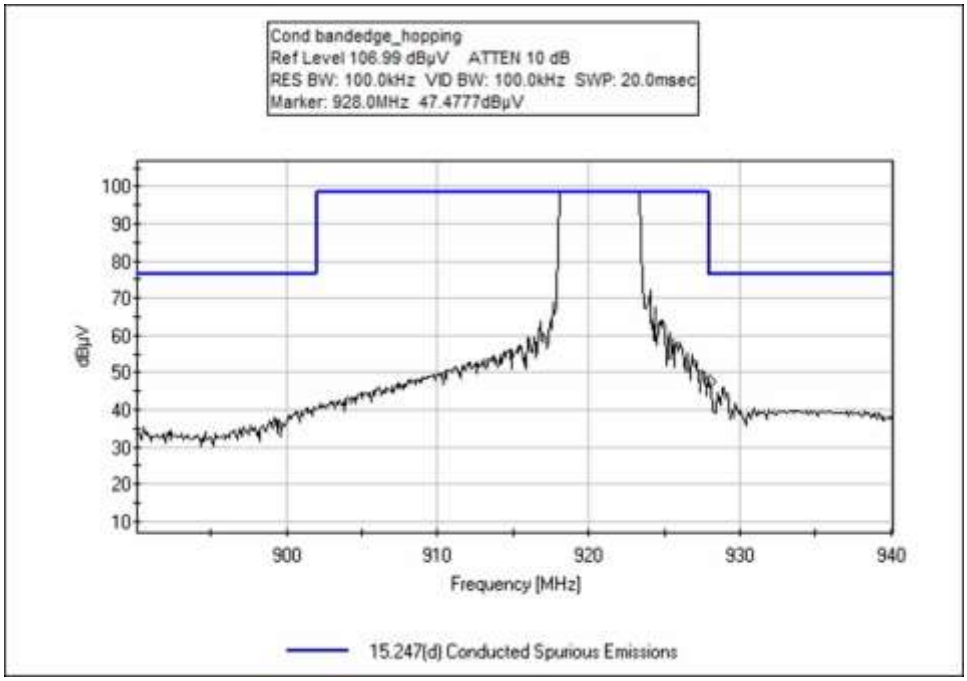
Band Edge

Band Edge Summary				
Limit applied: Max Power/100kHz - 20dB.				
Frequency (MHz)	**Modulation**	**Measured (dBm)**	**Limit (dBm)**	**Results**
902	FSK	-68.0	<-18	Pass
928	FSK	-57.1	<-18	Pass
902	FSK (hopping)	-55.5	<-18	Pass
928	FSK (hopping)	-48.9	<-18	Pass

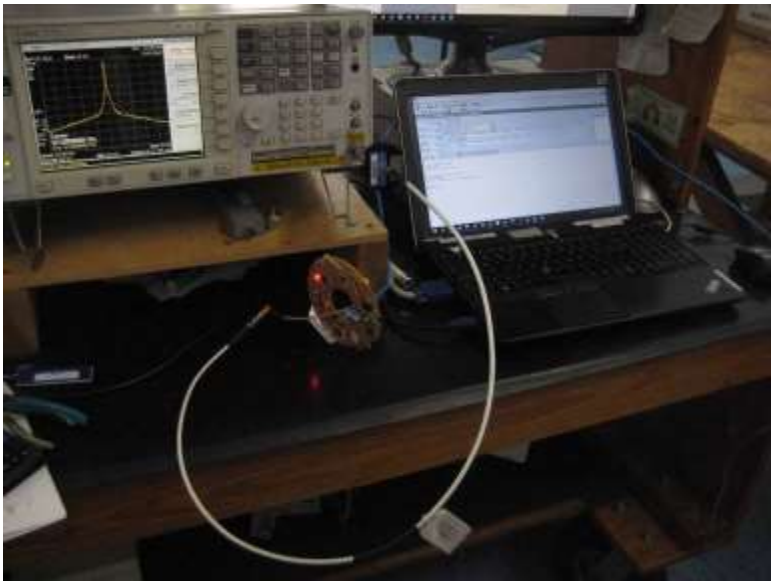
Band Edge Plots




Cond Bandedge plot_H
Ref Level 106.99 dBµV ATTEN 10 dB
RES BW: 100.0kHz VID BW: 100.0kHz SWP: 20.0msec
Marker: 922.95MHz 98.4167dBµV
dBµV
Frequency [MHz]
15.247(d) Conducted Spurious Emissions


Cond bandedge_hopping
Ref Level 106.99 dBµV ATTEN 10 dB
RES BW: 100.0kHz VID BW: 100.0kHz SWP: 20.0msec
Marker: 928.0MHz 47.4777dBµV
dBµV
Frequency [MHz]
15.247(d) Conducted Spurious Emissions

Test Setup Photo



15.247(d) Radiated Emissions & Band Edge

Test Setup / Conditions / Data

Test Location:	CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92821 • 714 993 6112		
Customer:	**Indyme Solutions, LLC**		
Specification:	**15.247(d) / 15.209 Radiated Spurious Emissions**		
Work Order #:	**101176**	Date:	5/10/2018
Test Type:	**Radiated Scan**	Time:	13:51:17
Tested By:	E. Wong	Sequence#:	1
Software:	EMITest 5.03.11		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

The ceiling mount EUT is placed on the Styrofoam platform. The Ethernet port of the EUT is connected to a POE power supply. An unterminated Ethernet cable is connected to the network port of the POE power supply.

Frequency: 902-928MHz
TX frequency:918.1MHz, 920.6MHz, 923MHz

Frequency range of measurement = 9 kHz- 10GHz.
9 kHz -150 kHz;RBW=200 Hz,VBW=200 Hz;150 kHz-30 MHz;RBW=9 kHz,VBW=9 kHz;30 MHz-1000 MHz;RBW=120 kHz,VBW=120 kHz,1000 MHz-26000 MHz;RBW=1 MHz,VBW=1 MHz

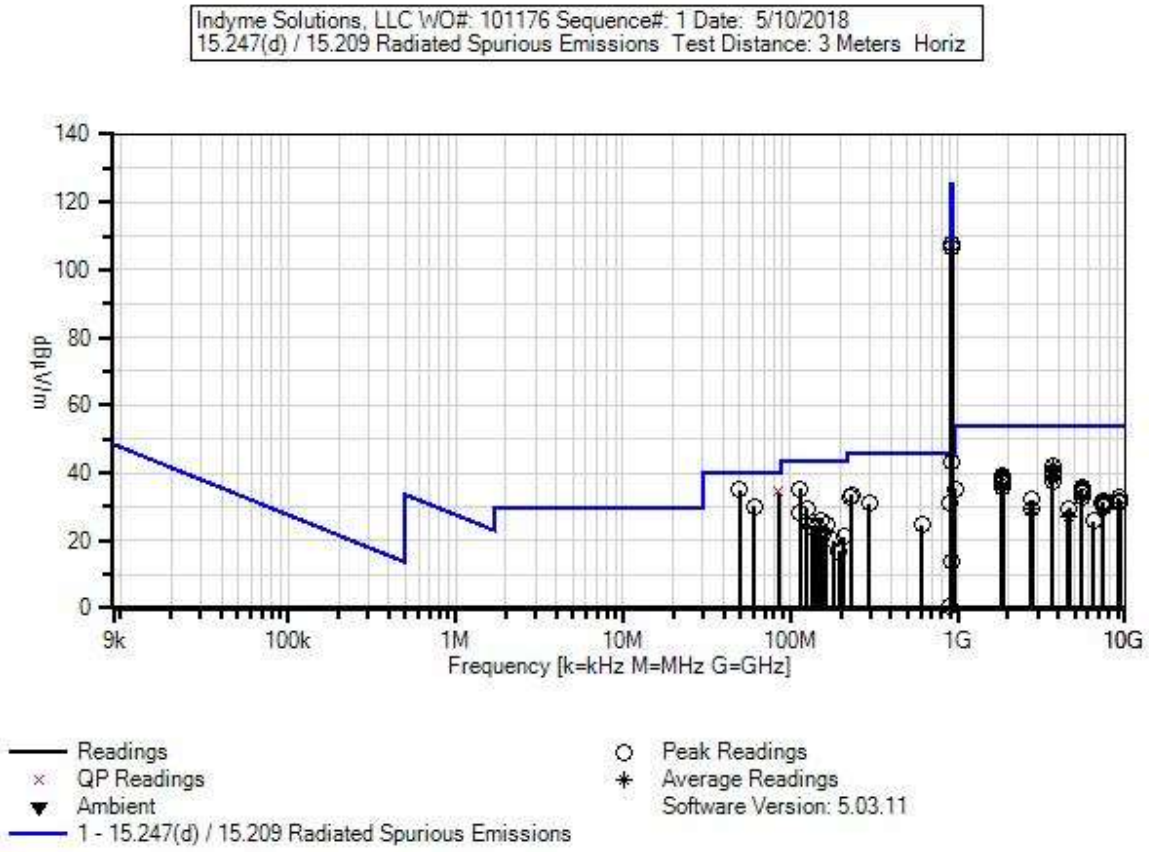
Test environment conditions:
Temperature: 22°C
Relative Humidity: 55 %
Pressure: 100kPa

Site A
ANSI C63.10-2013

Emission profile of the EUT rotated along tow orthogonal axis was investigated. Recorded data represent worse case emission.

Worst case emission profile of battery operated, standalone variant was verified. Fresh battery was used.

Duty cycle correction factor of 19.5dB applied above 1000MHz. 20 Log 10.5ms/100ms


Indyme Solutions, LLC WO#: 101176 Sequence#: 1 Date: 5/10/2018
15.247(d) / 15.209 Radiated Spurious Emissions Test Distance: 3 Meters Horiz
140
120
100
80
60
40
20
0
dBµV/m
9k
100k
1M
10M
100M
1G
10G
Frequency [k=kHz M=MHz G=GHz]
Readings
QP Readings
Ambient
1 - 15.247(d) / 15.209 Radiated Spurious Emissions
Peak Readings
Average Readings
Software Version: 5.03.11

Test Equipment:

ID	Asset #/Serial #	Description	Model	Calibration Date	Cal Due Date
T1	AN02672	Spectrum Analyzer	E4446A	3/2/2017	3/2/2019
T2	AN01995	Biconilog Antenna	CBL6111C	4/23/2018	4/23/2020
T3	ANP05275	Attenuator	1W	4/5/2018	4/5/2020
T4	ANP05198	Cable-Amplitude +15C to +45C (dB)	8268	12/7/2016	12/7/2018
T5	AN00309	Preamp	8447D	2/19/2018	2/19/2020
T6	ANP05050	Cable	RG223/U	1/20/2017	1/20/2019
	AN00314	Loop Antenna	6502	5/20/2016	5/20/2018
T7	AN00787	Preamp	83017A	6/9/2017	6/9/2019
T8	AN01646	Horn Antenna	3115	3/14/2018	3/14/2020
T9	AN02946	Cable	32022-2-2909K-36TC	12/12/2017	12/12/2019
T10	ANP07139	Cable	ANDL1-PNMNM-48	3/1/2017	3/1/2019
T11	AN02749	High Pass Filter	9SH10-1000/T10000-O/O	9/11/2017	9/11/2019
T12	ANC.1.3	Test Data Adjustment		No Cal Required	No Cal Required

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

#	Freq	Rdng	T1 T5 T9	T2 T6 T10	T3 T7 T11	T4 T8 T12	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	49.880M	47.6	+0.0 -28.1 +0.0	+8.4 +0.1 +0.0	+6.0 +0.0 +0.0	+1.1 +0.0 +0.0	+0.0	35.1	40.0	-4.9	Vert
2	84.467M QP	46.7	+0.0 -28.1 +0.0	+8.2 +0.1 +0.0	+6.0 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0	34.3	40.0	-5.7	Vert
^	84.467M	44.7	+0.0 -28.1 +0.0	+8.2 +0.1 +0.0	+6.0 +0.0 +0.0	+1.4 +0.0 +0.0	+0.0	32.3	40.0	-7.7	Vert
4	114.313M	44.1	+0.0 -28.0 +0.0	+11.3 +0.1 +0.0	+6.0 +0.0 +0.0	+1.7 +0.0 +0.0	+0.0	35.2	43.5	-8.3	Vert
5	61.150M	45.2	+0.0 -28.1 +0.0	+5.7 +0.1 +0.0	+6.0 +0.0 +0.0	+1.2 +0.0 +0.0	+0.0	30.1	40.0	-9.9	Vert
6	960.000M	26.3	+0.0 -27.3 +0.0	+23.7 +0.5 +0.0	+6.1 +0.0 +0.0	+6.1 +0.0 +0.0	+0.0	35.4	46.0	-10.6	Vert
7	3672.300M	63.9	+0.0 +0.0 +1.8	+0.0 +0.0 +3.8	+0.0 -40.3 +0.5	+0.0 +31.8 -19.5	+0.0	42.0	54.0	-12.0	Horiz

8	3682.400M	63.7	+0.0	+0.0	+0.0	+0.0	+0.0	41.9	54.0	-12.1	Horiz
	Ave		+0.0	+0.0	-40.3	+31.9					
			+1.8	+3.8	+0.5	-19.5					
^	3682.400M	65.2	+0.0	+0.0	+0.0	+0.0	+0.0	43.4	54.0	-10.6	Horiz
			+0.0	+0.0	-40.3	+31.9					
			+1.8	+3.8	+0.5	-19.5					
^	3682.400M	61.4	+0.0	+0.0	+0.0	+0.0	+0.0	39.6	54.0	-14.4	Horiz
			+0.0	+0.0	-40.3	+31.9			battery unit		
			+1.8	+3.8	+0.5	-19.5					
11	231.770M	41.0	+0.0	+11.6	+6.0	+2.7	+0.0	33.5	46.0	-12.5	Horiz
			-28.0	+0.2	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
12	3692.000M	62.5	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Horiz
	Ave		+0.0	+0.0	-40.2	+32.0					
			+1.8	+3.8	+0.5	-19.5					
13	3692.000M	62.4	+0.0	+0.0	+0.0	+0.0	+0.0	40.8	54.0	-13.2	Horiz
	Ave		+0.0	+0.0	-40.2	+32.0			Y		
			+1.8	+3.8	+0.5	-19.5					
^	3692.000M	64.4	+0.0	+0.0	+0.0	+0.0	+0.0	42.8	54.0	-11.2	Horiz
			+0.0	+0.0	-40.2	+32.0					
			+1.8	+3.8	+0.5	-19.5					
^	3692.000M	63.4	+0.0	+0.0	+0.0	+0.0	+0.0	41.8	54.0	-12.2	Horiz
			+0.0	+0.0	-40.2	+32.0			Y		
			+1.8	+3.8	+0.5	-19.5					
^	3691.967M	61.2	+0.0	+0.0	+0.0	+0.0	+0.0	39.6	54.0	-14.4	Horiz
			+0.0	+0.0	-40.2	+32.0			battery unit		
			+1.8	+3.8	+0.5	-19.5					
17	229.420M	40.4	+0.0	+11.4	+6.0	+2.6	+0.0	32.6	46.0	-13.4	Vert
			-28.0	+0.2	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
18	3672.450M	62.4	+0.0	+0.0	+0.0	+0.0	+0.0	40.5	54.0	-13.5	Horiz
	Ave		+0.0	+0.0	-40.3	+31.8					
			+1.8	+3.8	+0.5	-19.5					
19	124.900M	37.6	+0.0	+11.9	+6.0	+1.9	+0.0	29.5	43.5	-14.0	Horiz
			-28.0	+0.1	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
20	3672.283M	61.8	+0.0	+0.0	+0.0	+0.0	+0.0	39.9	54.0	-14.1	Horiz
			+0.0	+0.0	-40.3	+31.8			battery unit		
			+1.8	+3.8	+0.5	-19.5					
21	1841.200M	67.5	+0.0	+0.0	+0.0	+0.0	+0.0	39.1	54.0	-14.9	Vert
			+0.0	+0.0	-39.9	+27.0			battery unit		
			+1.1	+2.5	+0.4	-19.5					
22	294.270M	36.4	+0.0	+13.3	+6.0	+3.1	+0.0	31.0	46.0	-15.0	Horiz
			-28.0	+0.2	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
23	113.900M	37.5	+0.0	+11.2	+6.0	+1.7	+0.0	28.5	43.5	-15.0	Horiz
			-28.0	+0.1	+0.0	+0.0					
			+0.0	+0.0	+0.0	+0.0					
24	1836.250M	67.1	+0.0	+0.0	+0.0	+0.0	+0.0	38.7	54.0	-15.3	Vert
			+0.0	+0.0	-39.9	+27.0			battery unit		
			+1.1	+2.5	+0.4	-19.5					

25	1836.235M	67.0	+0.0	+0.0	+0.0	+0.0	+0.0	38.6	54.0	-15.4	Vert
			+0.0	+0.0	-39.9	+27.0					
			+1.1	+2.5	+0.4	-19.5					
26	3692.000M	60.1	+0.0	+0.0	+0.0	+0.0	+0.0	38.5	54.0	-15.5	Vert
	Ave		+0.0	+0.0	-40.2	+32.0					
			+1.8	+3.8	+0.5	-19.5					
^	3692.000M	61.3	+0.0	+0.0	+0.0	+0.0	+0.0	39.7	54.0	-14.3	Vert
			+0.0	+0.0	-40.2	+32.0					
			+1.8	+3.8	+0.5	-19.5					
^	3691.917M	58.3	+0.0	+0.0	+0.0	+0.0	+0.0	36.7	54.0	-17.3	Vert
			+0.0	+0.0	-40.2	+32.0			battery unit		
			+1.8	+3.8	+0.5	-19.5					
29	3672.333M	60.4	+0.0	+0.0	+0.0	+0.0	+0.0	38.5	54.0	-15.5	Vert
	Ave		+0.0	+0.0	-40.3	+31.8					
			+1.8	+3.8	+0.5	-19.5					
^	3672.333M	62.0	+0.0	+0.0	+0.0	+0.0	+0.0	40.1	54.0	-13.9	Vert
			+0.0	+0.0	-40.3	+31.8					
			+1.8	+3.8	+0.5	-19.5					
31	3682.400M	59.9	+0.0	+0.0	+0.0	+0.0	+0.0	38.1	54.0	-15.9	Vert
	Ave		+0.0	+0.0	-40.3	+31.9					
			+1.8	+3.8	+0.5	-19.5					
^	3682.400M	61.5	+0.0	+0.0	+0.0	+0.0	+0.0	39.7	54.0	-14.3	Vert
			+0.0	+0.0	-40.3	+31.9					
			+1.8	+3.8	+0.5	-19.5					
^	3682.400M	59.9	+0.0	+0.0	+0.0	+0.0	+0.0	38.1	54.0	-15.9	Vert
			+0.0	+0.0	-40.3	+31.9			battery unit		
			+1.8	+3.8	+0.5	-19.5					
34	1841.200M	66.2	+0.0	+0.0	+0.0	+0.0	+0.0	37.8	54.0	-16.2	Horiz
			+0.0	+0.0	-39.9	+27.0			battery unit		
			+1.1	+2.5	+0.4	-19.5					
35	1836.200M	66.0	+0.0	+0.0	+0.0	+0.0	+0.0	37.6	54.0	-16.4	Horiz
			+0.0	+0.0	-39.9	+27.0					
			+1.1	+2.5	+0.4	-19.5					
36	3672.450M	59.5	+0.0	+0.0	+0.0	+0.0	+0.0	37.6	54.0	-16.4	Vert
			+0.0	+0.0	-40.3	+31.8			battery unit		
			+1.8	+3.8	+0.5	-19.5					
37	1846.000M	65.8	+0.0	+0.0	+0.0	+0.0	+0.0	37.4	54.0	-16.6	Horiz
			+0.0	+0.0	-39.9	+27.0					
			+1.1	+2.5	+0.4	-19.5					
38	1845.983M	65.7	+0.0	+0.0	+0.0	+0.0	+0.0	37.3	54.0	-16.7	Horiz
			+0.0	+0.0	-39.9	+27.0			battery unit		
			+1.1	+2.5	+0.4	-19.5					
39	1836.131M	65.2	+0.0	+0.0	+0.0	+0.0	+0.0	36.8	54.0	-17.2	Horiz
			+0.0	+0.0	-39.9	+27.0					
			+1.1	+2.5	+0.4	-19.5					
40	1836.267M	65.1	+0.0	+0.0	+0.0	+0.0	+0.0	36.7	54.0	-17.3	Horiz
			+0.0	+0.0	-39.9	+27.0			battery unit		
			+1.1	+2.5	+0.4	-19.5					
41	1846.017M	65.0	+0.0	+0.0	+0.0	+0.0	+0.0	36.6	54.0	-17.4	Vert
			+0.0	+0.0	-39.9	+27.0			battery unit		
			+1.1	+2.5	+0.4	-19.5					

42	151.170M	34.7	+0.0 -28.0 +0.0	+11.2 +0.1 +0.0	+6.0 +0.0 +0.0	+2.1 +0.0 +0.0	+0.0	26.1	43.5	-17.4	Vert
43	1841.200M	65.0	+0.0 +0.0 +1.1	+0.0 +0.0 +2.5	+0.0 -39.9 +0.4	+0.0 +27.0 -19.5	+0.0	36.6	54.0	-17.4	Horiz
44	918.100M	99.0	+0.0 -27.2 +0.0	+23.1 +0.5 +0.0	+6.1 +0.0 +0.0	+6.0 +0.0 +0.0	+0.0	107.5	125.2 Fundamental _L	-17.7	Vert
45	1841.200M	64.3	+0.0 +0.0 +1.1	+0.0 +0.0 +2.5	+0.0 -39.9 +0.4	+0.0 +27.0 -19.5	+0.0	35.9	54.0	-18.1	Vert
46	1845.950M	64.3	+0.0 +0.0 +1.1	+0.0 +0.0 +2.5	+0.0 -39.9 +0.4	+0.0 +27.0 -19.5	+0.0	35.9	54.0	-18.1	Vert
47	5508.685M	53.4	+0.0 +0.0 +2.2	+0.0 +0.0 +4.6	+0.0 -39.6 +0.5	+0.0 +34.1 -19.5	+0.0	35.7	54.0	-18.3	Horiz
48	922.997M	98.0	+0.0 -27.2 +0.0	+23.2 +0.5 +0.0	+6.1 +0.0 +0.0	+6.0 +0.0 +0.0	+0.0	106.6	125.2 Fundamental H	-18.6	Vert
49	163.730M	34.0	+0.0 -28.0 +0.0	+10.4 +0.1 +0.0	+6.0 +0.0 +0.0	+2.2 +0.0 +0.0	+0.0	24.7	43.5	-18.8	Horiz
50	5523.600M	52.9	+0.0 +0.0 +2.2	+0.0 +0.0 +4.6	+0.0 -39.6 +0.5	+0.0 +34.0 -19.5	+0.0	35.1	54.0	-18.9	Horiz
51	133.930M	32.6	+0.0 -28.0 +0.0	+11.8 +0.1 +0.0	+6.0 +0.0 +0.0	+1.9 +0.0 +0.0	+0.0	24.4	43.5	-19.1	Horiz
52	144.300M	32.7	+0.0 -28.0 +0.0	+11.5 +0.1 +0.0	+6.0 +0.0 +0.0	+2.0 +0.0 +0.0	+0.0	24.3	43.5	-19.2	Horiz
53	5508.570M	52.2	+0.0 +0.0 +2.2	+0.0 +0.0 +4.6	+0.0 -39.6 +0.5	+0.0 +34.1 -19.5	+0.0	34.5	54.0	-19.5	Vert
54	5523.600M	51.7	+0.0 +0.0 +2.2	+0.0 +0.0 +4.6	+0.0 -39.6 +0.5	+0.0 +34.0 -19.5	+0.0	33.9	54.0	-20.1	Vert
55	614.000M	21.1	+0.0 -27.5 +0.0	+20.0 +0.4 +0.0	+6.0 +0.0 +0.0	+4.7 +0.0 +0.0	+0.0	24.7	46.0	-21.3	Vert
56	5538.000M	50.6	+0.0 +0.0 +2.2	+0.0 +0.0 +4.6	+0.0 -39.6 +0.5	+0.0 +33.9 -19.5	+0.0	32.7	54.0	-21.3	Horiz
57	9206.000M	43.3	+0.0 +0.0 +3.2	+0.0 +0.0 +6.3	+0.0 -39.4 +0.4	+0.0 +38.3 -19.5	+0.0	32.6	54.0	-21.4	Horiz
58	9181.160M	43.4	+0.0 +0.0 +3.1	+0.0 +0.0 +6.3	+0.0 -39.4 +0.4	+0.0 +38.3 -19.5	+0.0	32.6	54.0	-21.4	Horiz

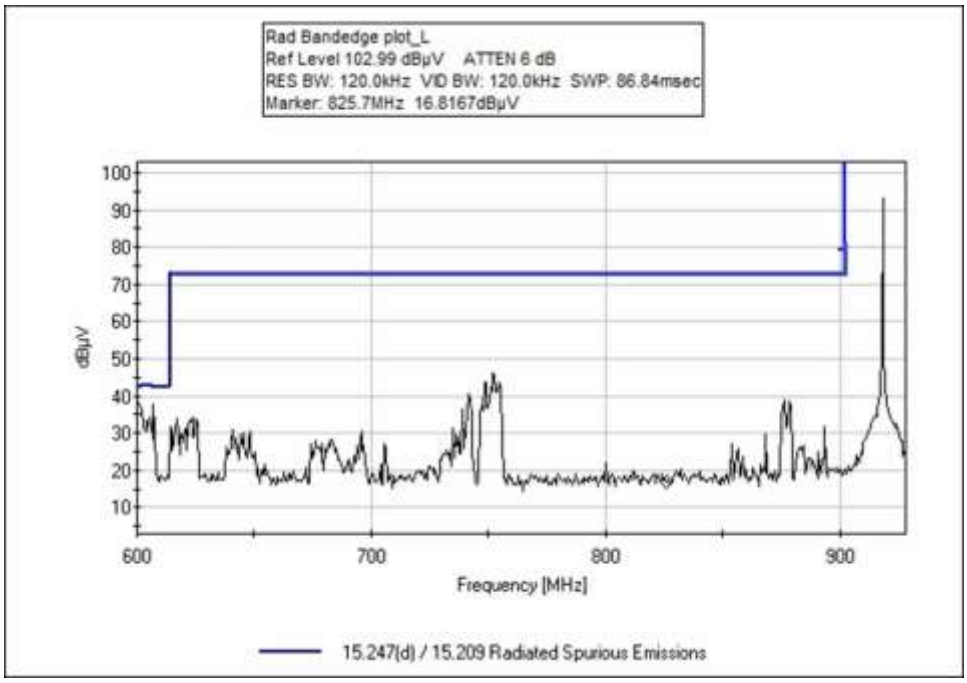
59	155.930M	30.7	+0.0 -28.0 +0.0	+10.9 +0.1 +0.0	+6.0 +0.0 +0.0	+2.1 +0.0 +0.0	+0.0	21.8	43.5	-21.7	Horiz
60	158.000M	30.8	+0.0 -28.0 +0.0	+10.8 +0.1 +0.0	+6.0 +0.0 +0.0	+2.1 +0.0 +0.0	+0.0	21.8	43.5	-21.7	Vert
61	2761.800M	57.1	+0.0 +0.0 +1.4	+0.0 +0.0 +3.3	+0.0 -40.3 +1.1	+0.0 +29.0 -19.5	+0.0	32.1	54.0	-21.9	Vert
62	2754.182M	57.1	+0.0 +0.0 +1.4	+0.0 +0.0 +3.3	+0.0 -40.3 +1.1	+0.0 +29.0 -19.5	+0.0	32.1	54.0	-21.9	Horiz
63	208.375M	30.8	+0.0 -28.0 +0.0	+9.8 +0.2 +0.0	+6.0 +0.0 +0.0	+2.5 +0.0 +0.0	+0.0	21.3	43.5	-22.2	Vert
64	9230.000M	42.5	+0.0 +0.0 +3.2	+0.0 +0.0 +6.3	+0.0 -39.4 +0.4	+0.0 +38.3 -19.5	+0.0	31.8	54.0	-22.2	Vert
65	7384.000M	45.7	+0.0 +0.0 +2.7	+0.0 +0.0 +5.6	+0.0 -39.8 +0.4	+0.0 +36.4 -19.5	+0.0	31.5	54.0	-22.5	Vert
66	7384.000M	45.4	+0.0 +0.0 +2.7	+0.0 +0.0 +5.6	+0.0 -39.8 +0.4	+0.0 +36.4 -19.5	+0.0	31.2	54.0	-22.8	Horiz
67	9206.000M	41.8	+0.0 +0.0 +3.2	+0.0 +0.0 +6.3	+0.0 -39.4 +0.4	+0.0 +38.3 -19.5	+0.0	31.1	54.0	-22.9	Vert
68	7344.920M	45.5	+0.0 +0.0 +2.7	+0.0 +0.0 +5.6	+0.0 -39.9 +0.3	+0.0 +36.4 -19.5	+0.0	31.1	54.0	-22.9	Horiz
69	181.180M	30.6	+0.0 -28.0 +0.0	+9.1 +0.1 +0.0	+6.0 +0.0 +0.0	+2.3 +0.0 +0.0	+0.0	20.1	43.5	-23.4	Horiz
70	7364.800M	44.6	+0.0 +0.0 +2.7	+0.0 +0.0 +5.6	+0.0 -39.8 +0.4	+0.0 +36.4 -19.5	+0.0	30.4	54.0	-23.6	Horiz
71	7364.800M	44.1	+0.0 +0.0 +2.7	+0.0 +0.0 +5.6	+0.0 -39.8 +0.4	+0.0 +36.4 -19.5	+0.0	29.9	54.0	-24.1	Vert
72	4603.000M	50.3	+0.0 +0.0 +1.8	+0.0 +0.0 +4.1	+0.0 -40.6 +0.6	+0.0 +32.7 -19.5	+0.0	29.4	54.0	-24.6	Horiz
73	4603.000M	50.3	+0.0 +0.0 +1.8	+0.0 +0.0 +4.1	+0.0 -40.6 +0.6	+0.0 +32.7 -19.5	+0.0	29.4	54.0	-24.6	Vert
74	2761.800M	54.3	+0.0 +0.0 +1.4	+0.0 +0.0 +3.3	+0.0 -40.3 +1.1	+0.0 +29.0 -19.5	+0.0	29.3	54.0	-24.7	Horiz
75	2754.417M Ave	54.3	+0.0 +0.0 +1.4	+0.0 +0.0 +3.3	+0.0 -40.3 +1.1	+0.0 +29.0 -19.5	+0.0	29.3	54.0	-24.7	Vert

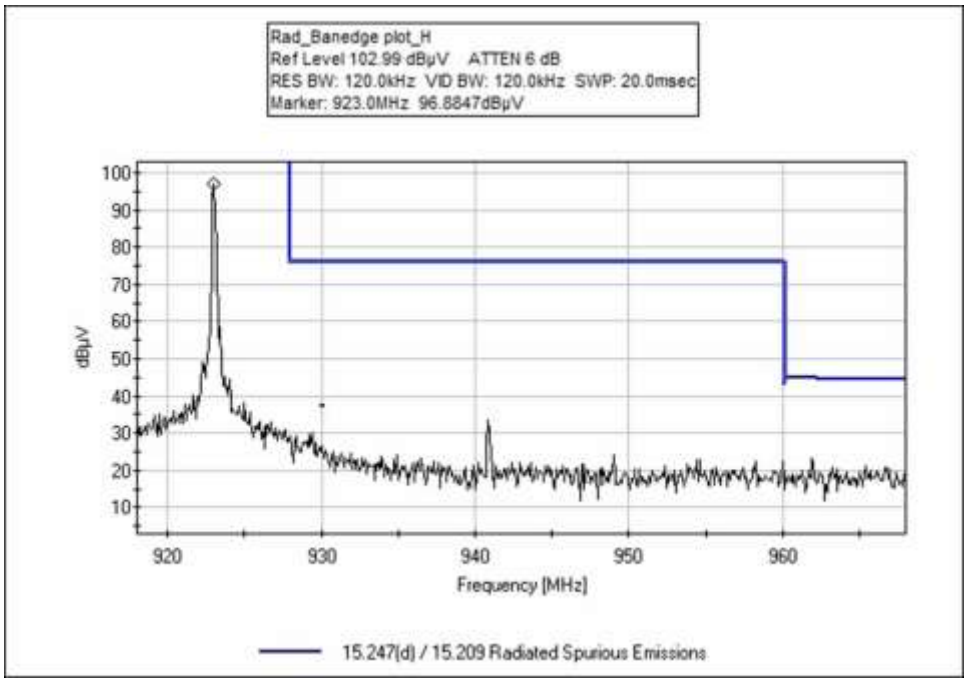
^	2754.417M	56.6	+0.0 +0.0 +1.4	+0.0 +0.0 +3.3	+0.0 -40.3 +1.1	+0.0 +29.0 -19.5	+0.0	31.6	54.0	-22.4	Vert
77	4590.567M	49.9	+0.0 +0.0 +1.8	+0.0 +0.0 +4.1	+0.0 -40.5 +0.6	+0.0 +32.7 -19.5	+0.0	29.1	54.0	-24.9	Horiz
78	195.975M	27.2	+0.0 -28.0 +0.0	+9.1 +0.2 +0.0	+6.0 +0.0 +0.0	+2.4 +0.0 +0.0	+0.0	16.9	43.5	-26.6	Vert
79	4590.667M Ave	48.1	+0.0 +0.0 +1.8	+0.0 +0.0 +4.1	+0.0 -40.5 +0.6	+0.0 +32.7 -19.5	+0.0	27.3	54.0	-26.7	Vert
^	4590.725M	52.5	+0.0 +0.0 +1.8	+0.0 +0.0 +4.1	+0.0 -40.5 +0.6	+0.0 +32.7 -19.5	+0.0	31.7	54.0	-22.3	Vert
81	6426.800M	43.4	+0.0 +0.0 +2.3	+0.0 +0.0 +5.0	+0.0 -39.9 +0.4	+0.0 +34.0 -19.5	+0.0	25.7	54.0	-28.3	Horiz
82	928.000M	45.2	+0.0 +0.0 +0.7	+0.0 +0.0 +1.7	+0.0 -42.5 +8.9	+0.0 +0.0 +0.0	+0.0	14.0	46.0 bandedge_H_- 20dBc_hopping	-32.0	Vert
83	928.000M	34.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	43.4	87.5 Bandedge_H - 20dBc	-44.1	Vert
84	902.000M	26.3	+0.0 +0.0 +0.6	+0.0 +0.0 +1.7	+0.0 -42.7 +14.7	+0.0 +0.0 +0.0	+0.0	0.6	46.0 bandedge_L_- 20dBc_hopping	-45.4	Vert
85	902.000M	22.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	31.0	87.5 bandedge_L_- 20dBc	-56.5	Vert

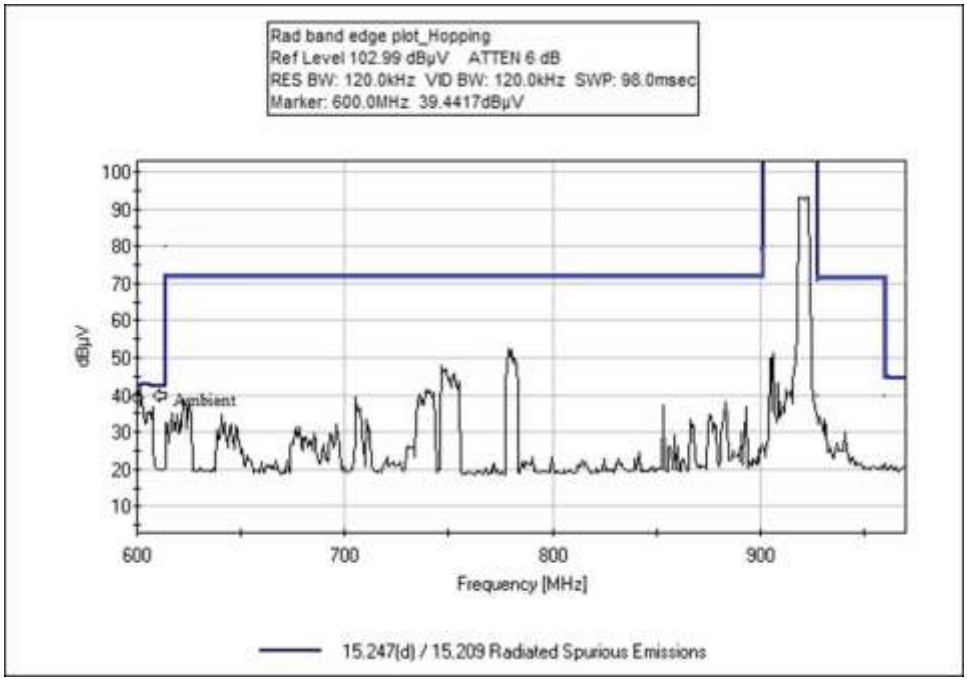
Band Edge

Band Edge Summary					
Frequency (MHz)	**Modulation**	**Ant. Type**	**Field Strength (dBuV/m @3m)**	**Limit (dBuV/m @3m)**	**Results**
614	FSK	Trace	24.7	<54	Pass
902	FSK	Trace	31.0	<87.5	Pass
928	FSK	Trace	43.4	< 87.5	Pass
960	FSK	Trace	35.4	<54	Pass
Hopping					
614	FSK	Trace	24.7	<54	Pass
902	FSK	Trace	34.4	<87.5	Pass
928	FSK	Trace	53.7	< 87.5	Pass
960	FSK	Trace	35.4	<54	Pass

Band Edge Plots




Rad_Banedge plot_H
Ref Level 102.99 dBµV ATTEN 6 dB
RES BW: 120.0kHz VID BW: 120.0kHz SWP: 20.0msec
Marker: 923.0MHz 96.8847dBµV
dBµV
Frequency [MHz]
15.247(d) / 15.209 Radiated Spurious Emissions


Rad band edge plot_Hopping
Ref Level 102.99 dBµV ATTEN 6 dB
RES BW: 120.0kHz VID BW: 120.0kHz SWP: 98.0msec
Marker: 600.0MHz 39.4417dBµV
Ambient
dBµV
Frequency [MHz]
15.247(d) / 15.209 Radiated Spurious Emissions

Test Setup Photos

9kHz – 1GHz

9kHz – 1GHz

1 - 26GHz

1 - 26GHz

1 - 26GHz, Cone placement

1 - 26GHz, Cone placement

Y Axis

Y Axis

Battery

Battery

15.207 AC Conducted Emissions

Test Setup / Conditions / Data

Test Location:	CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92821 • 714 993 6112		
Customer:	**Indyme Solutions, LLC**		
Specification:	**15.207 AC Mains - Quasi-peak**		
Work Order #:	**101176**	Date:	5/10/2018
Test Type:	**Conducted Emissions**	Time:	15:33:45
Tested By:	E. Wong	Sequence#:	2
Software:	EMITest 5.03.11		120/60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

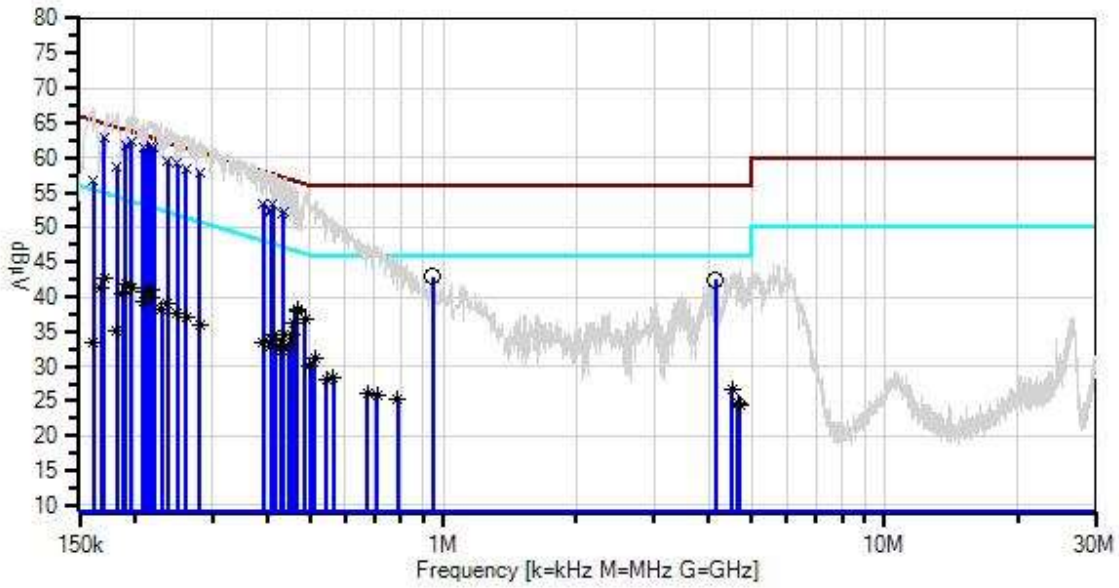
The ceiling mount EUT is placed on the Styrofoam platform. The Ethernet port of the EUT is connected to a POE power supply. An unterminated Ethernet cable is connected to the network port of the POE power supply.

Frequency: 902-928MHz
TX frequency: 920.6MHz
Frequency range of measurement = 150kHz- 30MHz.
150 kHz-30 MHz;RBW=9 kHz,VBW=9kHz

Test environment conditions:
Temperature: 22°C
Relative Humidity: 55 %
Pressure: 100kPa

Site A
ANSI C63.10-2013

Indyme Solutions, LLC WO#: 101176 Sequence#: 2 Date: 5/10/2018
15.207 AC Mains - Quasi-peak Test Lead: 120/60Hz L1-Line



Sweep Data
× QP Readings
Software Version: 5.03.11
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
	AN02672	Spectrum Analyzer	E4446A	3/2/2017	3/2/2019
T1	ANC00079	Attenuator		2/3/2017	2/3/2019
T2	ANP07338	Cable	2249-Y-240	2/19/2018	2/19/2020
T3	AN02610	High Pass Filter	HE9615-150K-50-720B	10/25/2017	10/25/2019
T4	AN00969A	50uH LISN-Line 1 (L1)	3816/2NM	3/14/2017	3/14/2019
	AN00969A	50uH LISN-Line2 (L2)	3816/2NM	3/14/2017	3/14/2019
T5	ANP06986	Cable-Line L1(dB)	90cm-extcord	3/31/2018	3/31/2020
	ANP06986	Cable-Neutral L2(dB)	90cm-extcord	3/31/2018	3/31/2020

Measurement Data: Reading listed by margin. Test Lead: 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	217.630k QP	51.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	61.8	62.9	-1.1	L1-Li
2	220.990k QP	51.5	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	61.5	62.8	-1.3	L1-Li
3	196.541k QP	52.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	62.3	63.8	-1.5	L1-Li
4	217.630k QP	51.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	61.3	62.9	-1.6	L1-Li
5	212.540k QP	51.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	61.3	63.1	-1.8	L1-Li
6	208.904k QP	51.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	61.4	63.2	-1.8	L1-Li
7	171.089k QP	53.0	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	63.0	64.9	-1.9	L1-Li
8	191.451k QP	51.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	61.8	64.0	-2.2	L1-Li
9	237.992k QP	49.6	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	59.6	62.2	-2.6	L1-Li
10	250.354k QP	49.2	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	59.1	61.7	-2.6	L1-Li
11	281.624k QP	48.0	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	57.9	60.8	-2.9	L1-Li
12	261.990k QP	48.5	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	58.4	61.4	-3.0	L1-Li
13	945.248k	32.8	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	42.9	46.0	-3.1	L1-Li
14	4.148M	32.1	+9.8 +0.1	+0.2	+0.1	+0.1	+0.0	42.4	46.0	-3.6	L1-Li
15	412.521k QP	43.2	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	53.2	57.6	-4.4	L1-Li
16	391.432k QP	43.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	53.4	58.0	-4.6	L1-Li
17	435.792k QP	42.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	52.3	57.1	-4.8	L1-Li

18	432.883k QP	41.9	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	51.9	57.2	-5.3	L1-Li
19	408.158k QP	42.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	52.4	57.7	-5.3	L1-Li
20	408.158k QP	42.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	52.3	57.7	-5.4	L1-Li
21	181.997k QP	48.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	58.8	64.4	-5.6	L1-Li
22	466.335k Ave	28.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	38.1	46.6	-8.5	L1-Li
23	466.335k Ave	27.7	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	37.8	46.6	-8.8	L1-Li
^	466.334k	45.1	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	55.2	46.6	+8.6	L1-Li
^	469.970k	43.8	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	53.9	46.5	+7.4	L1-Li
26	161.635k QP	46.4	+9.8 +0.0	+0.0	+0.4	+0.0	+0.0	56.6	65.4	-8.8	L1-Li
27	487.424k Ave	26.8	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	36.9	46.2	-9.3	L1-Li
^	487.423k	45.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	55.1	46.2	+8.9	L1-Li
29	459.790k Ave	26.2	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	36.3	46.7	-10.4	L1-Li
30	217.630k Ave	31.1	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	41.1	52.9	-11.8	L1-Li
31	191.451k Ave	31.9	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	41.9	54.0	-12.1	L1-Li
32	171.089k Ave	32.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	42.8	54.9	-12.1	L1-Li
33	212.540k Ave	30.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	40.8	53.1	-12.3	L1-Li
34	456.154k Ave	24.4	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	34.5	46.8	-12.3	L1-Li
35	456.154k Ave	24.3	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	34.4	46.8	-12.4	L1-Li
^	459.789k	45.8	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	55.9	46.7	+9.2	L1-Li
^	456.153k	45.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	55.7	46.8	+8.9	L1-Li
38	196.541k Ave	31.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	41.3	53.8	-12.5	L1-Li
^	196.541k	56.0	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	66.0	63.8	+2.2	L1-Li
40	435.792k Ave	24.5	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	34.5	47.1	-12.6	L1-Li
^	439.427k	47.1	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	57.1	57.1	+0.0	L1-Li
42	416.157k Ave	24.6	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	34.6	47.5	-12.9	L1-Li
43	217.630k Ave	29.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	39.8	52.9	-13.1	L1-Li

^	217.630k	55.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	65.3	62.9	+2.4	L1-Li
45 Ave	237.992k	28.9	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	38.9	52.2	-13.3	L1-Li
^	237.991k	54.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	64.3	62.2	+2.1	L1-Li
47 Ave	188.542k	30.5	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	40.5	54.1	-13.6	L1-Li
^	188.541k	52.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	62.8	54.1	+8.7	L1-Li
^	191.450k	55.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	65.3	64.0	+1.3	L1-Li
50 Ave	168.180k	31.2	+9.8 +0.0	+0.0	+0.3	+0.0	+0.0	41.3	55.0	-13.7	L1-Li
^	168.180k	50.9	+9.8 +0.0	+0.0	+0.3	+0.0	+0.0	61.0	55.0	+6.0	L1-Li
^	171.088k	55.2	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	65.2	64.9	+0.3	L1-Li
53 Ave	448.882k	23.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	33.1	46.9	-13.8	L1-Li
^	448.881k	45.7	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	55.8	46.9	+8.9	L1-Li
55 Ave	208.904k	29.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	39.3	53.2	-13.9	L1-Li
^	208.903k	55.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	65.3	63.2	+2.1	L1-Li
^	212.539k	54.5	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	64.5	63.1	+1.4	L1-Li
58 Ave	250.354k	27.8	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	37.7	51.7	-14.0	L1-Li
^	250.354k	53.4	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	63.3	61.7	+1.6	L1-Li
60 Ave	412.521k	23.6	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	33.6	47.6	-14.0	L1-Li
^	416.157k	47.7	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	57.7	57.5	+0.2	L1-Li
^	416.157k	44.0	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	54.0	57.5	-3.5	L1-Li
63 Ave	432.883k	23.1	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	33.1	47.2	-14.1	L1-Li
^	435.791k	46.9	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	56.9	57.1	-0.2	L1-Li
65 Ave	229.993k	28.1	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	38.1	52.4	-14.3	L1-Li
^	229.992k	54.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	64.8	62.4	+2.4	L1-Li
67 Ave	261.990k	27.1	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	37.0	51.4	-14.4	L1-Li
^	261.989k	53.3	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	63.2	61.4	+1.8	L1-Li
69 Ave	391.432k	23.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	33.4	48.0	-14.6	L1-Li

^	391.432k	48.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	58.4	58.0	+0.4	L1-Li
71 Ave	281.624k	26.1	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	36.0	50.8	-14.8	L1-Li
^	281.624k	52.3	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	62.2	60.8	+1.4	L1-Li
73 Ave	430.702k	22.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	32.4	47.2	-14.8	L1-Li
^	430.701k	46.6	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	56.6	47.2	+9.4	L1-Li
^	432.883k	46.8	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	56.8	57.2	-0.4	L1-Li
76 Ave	512.876k	21.1	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	31.2	46.0	-14.8	L1-Li
^	512.875k	43.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	53.7	46.0	+7.7	L1-Li
78 Ave	408.158k	22.9	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	32.9	47.7	-14.8	L1-Li
^	408.158k	48.1	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	58.1	57.7	+0.4	L1-Li
^	412.521k	47.7	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	57.7	57.6	+0.1	L1-Li
81 Ave	498.332k	19.9	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	30.0	46.0	-16.0	L1-Li
^	498.331k	43.5	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	53.6	46.0	+7.6	L1-Li
83 Ave	563.780k	18.2	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	28.3	46.0	-17.7	L1-Li
^	563.780k	41.2	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	51.3	46.0	+5.3	L1-Li
^	565.234k	41.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	51.1	46.0	+5.1	L1-Li
86 Ave	544.873k	17.9	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	28.0	46.0	-18.0	L1-Li
^	544.872k	41.7	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	51.8	46.0	+5.8	L1-Li
88 Ave	4.513M	16.2	+9.8 +0.2	+0.2	+0.1	+0.1	+0.0	26.6	46.0	-19.4	L1-Li
^	4.513M	33.0	+9.8 +0.2	+0.2	+0.1	+0.1	+0.0	43.4	46.0	-2.6	L1-Li
90 Ave	181.997k	25.0	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	35.0	54.4	-19.4	L1-Li
^	181.997k	56.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	66.4	64.4	+2.0	L1-Li
92 Ave	674.316k	16.1	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	26.2	46.0	-19.8	L1-Li
^	674.315k	37.8	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	47.9	46.0	+1.9	L1-Li
94 Ave	710.676k	15.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	25.7	46.0	-20.3	L1-Li
^	710.675k	37.2	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	47.3	46.0	+1.3	L1-Li

96 Ave	790.668k	15.3	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	25.4	46.0	-20.6	L1-Li
^	790.668k	35.4	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	45.5	46.0	-0.5	L1-Li
98 Ave	4.658M	14.3	+9.8 +0.2	+0.2	+0.1	+0.1	+0.0	24.7	46.0	-21.3	L1-Li
^	4.658M	32.8	+9.8 +0.2	+0.2	+0.1	+0.1	+0.0	43.2	46.0	-2.8	L1-Li
100 Ave	4.696M	14.1	+9.8 +0.2	+0.2	+0.1	+0.1	+0.0	24.5	46.0	-21.5	L1-Li
^	4.696M	33.4	+9.8 +0.2	+0.2	+0.1	+0.1	+0.0	43.8	46.0	-2.2	L1-Li
102 Ave	161.635k	23.2	+9.8 +0.0	+0.0	+0.4	+0.0	+0.0	33.4	55.4	-22.0	L1-Li
^	161.635k	56.9	+9.8 +0.0	+0.0	+0.4	+0.0	+0.0	67.1	65.4	+1.7	L1-Li

Test Location:	CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92821 • 714 993 6112		
Customer:	**Indyme Solutions, LLC**		
Specification:	**15.207 AC Mains - Quasi-peak**		
Work Order #:	**101176**	Date:	5/10/2018
Test Type:	**Conducted Emissions**	Time:	16:05:32
Tested By:	E. Wong	Sequence#:	3
Software:	EMITest 5.03.11		120/60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

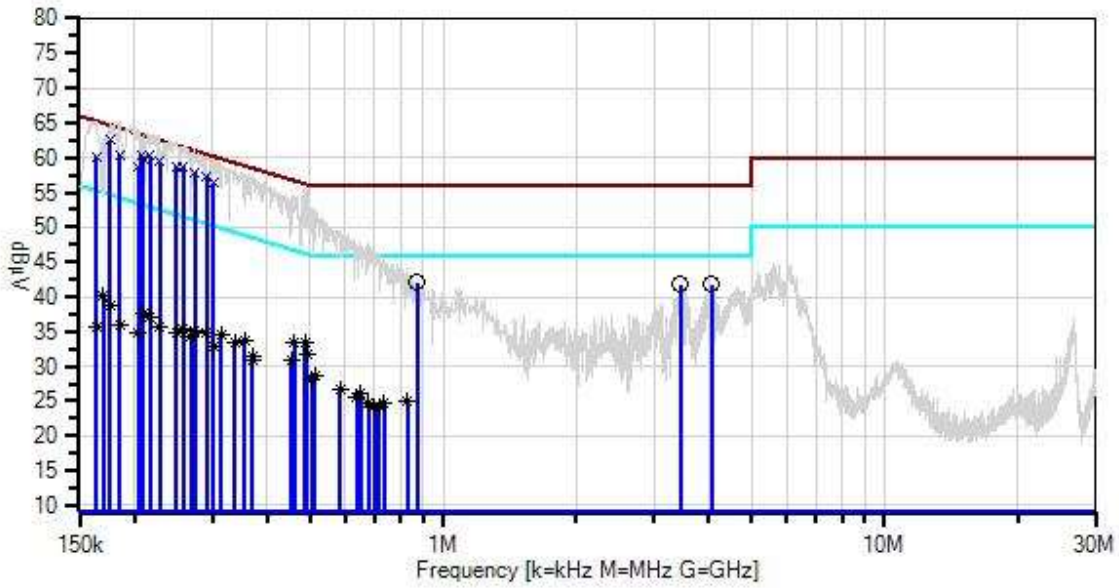
The ceiling mount EUT is placed on the Styrofoam platform. The Ethernet port of the EUT is connected to a POE power supply. An unterminated Ethernet cable is connected to the network port of the POE power supply.

Frequency: 902-928MHz
TX frequency: 920.6MHz
Frequency range of measurement = 150kHz- 30MHz.
150 kHz-30 MHz;RBW=9 kHz,VBW=9kHz

Test environment conditions:
Temperature: 22°C
Relative Humidity: 55 %
Pressure: 100kPa

Site A
ANSI C63.10-2013

Indyme Solutions, LLC WO#: 101176 Sequence#: 3 Date: 5/10/2018
15.207 AC Mains - Quasi-peak Test Lead: 120/60Hz L2-Neutral



Sweep Data
× QP Readings
Software Version: 5.03.11
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
	AN02672	Spectrum Analyzer	E4446A	3/2/2017	3/2/2019
T1	ANC00079	Attenuator		2/3/2017	2/3/2019
T2	ANP07338	Cable	2249-Y-240	2/19/2018	2/19/2020
T3	AN02610	High Pass Filter	HE9615-150K-50-720B	10/25/2017	10/25/2019
	AN00969A	50uH LISN-Line 1 (L1)	3816/2NM	3/14/2017	3/14/2019
T4	AN00969A	50uH LISN-Line2 (L2)	3816/2NM	3/14/2017	3/14/2019
	ANP06986	Cable-Line L1(dB)	90cm-extcord	3/31/2018	3/31/2020
T5	ANP06986	Cable-Neutral L2(dB)	90cm-extcord	3/31/2018	3/31/2020

Measurement Data: Reading listed by margin. Test Lead: L2-Neutral

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV	dBµV	dB	Ant
1	176.178k QP	52.5	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	62.5	64.7	-2.2	L2-Ne
2	216.902k QP	50.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	60.3	62.9	-2.6	L2-Ne
3	257.625k QP	48.9	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	58.8	61.5	-2.7	L2-Ne
4	207.448k QP	50.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	60.4	63.3	-2.9	L2-Ne
5	248.899k QP	48.9	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	58.8	61.8	-3.0	L2-Ne
6	273.624k QP	48.0	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	57.9	61.0	-3.1	L2-Ne
7	227.810k QP	49.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	59.4	62.5	-3.1	L2-Ne
8	291.804k QP	47.4	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	57.3	60.5	-3.2	L2-Ne
9	209.630k QP	49.9	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	59.9	63.2	-3.3	L2-Ne
10	185.632k QP	50.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	60.4	64.2	-3.8	L2-Ne
11	301.985k QP	46.4	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	56.3	60.2	-3.9	L2-Ne
12	873.568k	31.9	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	42.0	46.0	-4.0	L2-Ne
13	4.062M	31.4	+9.8 +0.1	+0.2	+0.1	+0.1	+0.0	41.7	46.0	-4.3	L2-Ne
14	3.442M	31.5	+9.8 +0.1	+0.1	+0.1	+0.1	+0.0	41.7	46.0	-4.3	L2-Ne

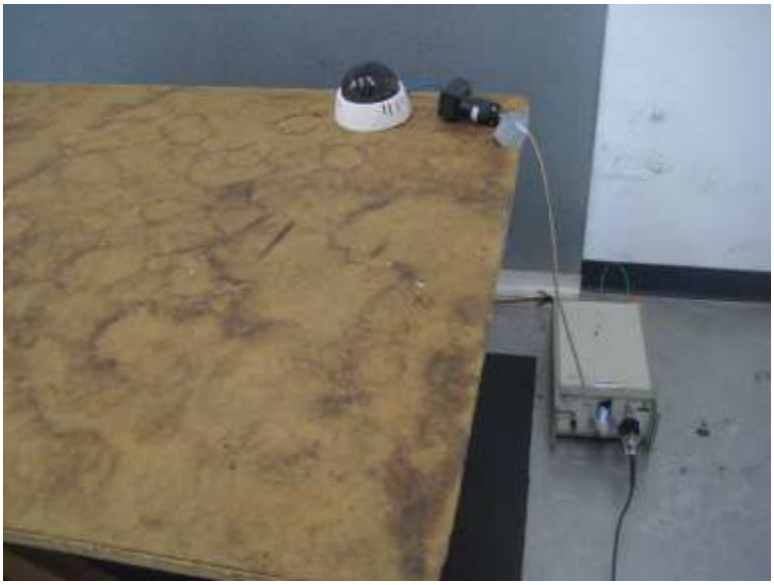
15	203.812k	48.8	+9.8	+0.0	+0.2	+0.0	+0.0	58.8	63.5	-4.7	L2-Ne
	QP		+0.0								
16	163.816k	49.9	+9.8	+0.0	+0.4	+0.0	+0.0	60.1	65.3	-5.2	L2-Ne
	QP		+0.0								
17	485.968k	23.2	+9.8	+0.1	+0.2	+0.0	+0.0	33.3	46.2	-12.9	L2-Ne
	Ave		+0.0								
^	485.968k	45.6	+9.8	+0.1	+0.2	+0.0	+0.0	55.7	46.2	+9.5	L2-Ne
			+0.0								
^	484.513k	45.3	+9.8	+0.1	+0.2	+0.0	+0.0	55.4	46.3	+9.1	L2-Ne
			+0.0								
20	459.789k	23.2	+9.8	+0.1	+0.2	+0.0	+0.0	33.3	46.7	-13.4	L2-Ne
	Ave		+0.0								
^	459.788k	44.5	+9.8	+0.1	+0.2	+0.0	+0.0	54.6	46.7	+7.9	L2-Ne
			+0.0								
22	491.786k	21.6	+9.8	+0.1	+0.2	+0.0	+0.0	31.7	46.1	-14.4	L2-Ne
	Ave		+0.0								
^	491.785k	45.2	+9.8	+0.1	+0.2	+0.0	+0.0	55.3	46.1	+9.2	L2-Ne
			+0.0								
^	495.421k	43.3	+9.8	+0.1	+0.2	+0.0	+0.0	53.4	46.1	+7.3	L2-Ne
			+0.0								
25	169.634k	30.1	+9.8	+0.0	+0.2	+0.0	+0.0	40.1	55.0	-14.9	L2-Ne
	Ave		+0.0								
^	169.633k	52.6	+9.8	+0.0	+0.2	+0.0	+0.0	62.6	55.0	+7.6	L2-Ne
			+0.0								
27	355.798k	23.8	+9.8	+0.0	+0.2	+0.0	+0.0	33.8	48.8	-15.0	L2-Ne
	Ave		+0.0								
^	355.798k	47.7	+9.8	+0.0	+0.2	+0.0	+0.0	57.7	48.8	+8.9	L2-Ne
			+0.0								
29	314.348k	24.5	+9.8	+0.0	+0.1	+0.0	+0.0	34.4	49.9	-15.5	L2-Ne
	Ave		+0.0								
^	314.347k	49.3	+9.8	+0.0	+0.1	+0.0	+0.0	59.2	49.9	+9.3	L2-Ne
			+0.0								
^	316.529k	49.0	+9.8	+0.0	+0.1	+0.0	+0.0	58.9	49.8	+9.1	L2-Ne
			+0.0								
32	216.902k	27.2	+9.8	+0.0	+0.2	+0.0	+0.0	37.2	52.9	-15.7	L2-Ne
	Ave		+0.0								
^	216.901k	53.4	+9.8	+0.0	+0.2	+0.0	+0.0	63.4	52.9	+10.5	L2-Ne
			+0.0								
34	291.804k	24.9	+9.8	+0.0	+0.1	+0.0	+0.0	34.8	50.5	-15.7	L2-Ne
	Ave		+0.0								
^	291.804k	50.3	+9.8	+0.0	+0.1	+0.0	+0.0	60.2	50.5	+9.7	L2-Ne
			+0.0								
36	209.630k	27.5	+9.8	+0.0	+0.2	+0.0	+0.0	37.5	53.2	-15.7	L2-Ne
	Ave		+0.0								
^	209.629k	53.1	+9.8	+0.0	+0.2	+0.0	+0.0	63.1	53.2	+9.9	L2-Ne
			+0.0								

38 Ave	338.345k	23.5	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	33.4	49.2	-15.8	L2-Ne
^	338.345k	48.7	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	58.6	49.2	+9.4	L2-Ne
40 Ave	273.624k	25.3	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	35.2	51.0	-15.8	L2-Ne
^	273.624k	51.6	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	61.5	51.0	+10.5	L2-Ne
42 Ave	452.517k	20.8	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	30.9	46.8	-15.9	L2-Ne
^	452.516k	44.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	54.1	46.8	+7.3	L2-Ne
44 Ave	176.178k	28.7	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	38.7	54.7	-16.0	L2-Ne
^	176.178k	55.0	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	65.0	54.7	+10.3	L2-Ne
^	173.269k	53.5	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	63.5	54.8	+8.7	L2-Ne
47 Ave	257.625k	25.6	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	35.5	51.5	-16.0	L2-Ne
^	257.625k	51.7	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	61.6	51.5	+10.1	L2-Ne
49 Ave	227.810k	25.6	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	35.6	52.5	-16.9	L2-Ne
^	227.810k	53.2	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	63.2	52.5	+10.7	L2-Ne
51 Ave	268.534k	24.3	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	34.2	51.2	-17.0	L2-Ne
^	268.533k	50.9	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	60.8	51.2	+9.6	L2-Ne
53 Ave	248.899k	24.9	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	34.8	51.8	-17.0	L2-Ne
^	248.899k	52.5	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	62.4	51.8	+10.6	L2-Ne
55 Ave	369.615k	21.4	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	31.4	48.5	-17.1	L2-Ne
56 Ave	511.420k	18.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	28.7	46.0	-17.3	L2-Ne
^	511.420k	42.4	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	52.5	46.0	+6.5	L2-Ne
^	515.056k	42.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	52.1	46.0	+6.1	L2-Ne
59 Ave	301.985k	23.0	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	32.9	50.2	-17.3	L2-Ne
^	301.985k	49.9	+9.8 +0.0	+0.0	+0.1	+0.0	+0.0	59.8	50.2	+9.6	L2-Ne

61 Ave	369.615k	20.9	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	30.9	48.5	-17.6	L2-Ne
^	369.615k	47.3	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	57.3	48.5	+8.8	L2-Ne
63 Ave	505.603k	18.1	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	28.2	46.0	-17.8	L2-Ne
^	505.602k	42.8	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	52.9	46.0	+6.9	L2-Ne
^	507.057k	42.5	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	52.6	46.0	+6.6	L2-Ne
66 Ave	185.632k	25.9	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	35.9	54.2	-18.3	L2-Ne
^	185.632k	55.1	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	65.1	54.2	+10.9	L2-Ne
68 Ave	203.812k	24.7	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	34.7	53.5	-18.8	L2-Ne
^	203.812k	54.1	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	64.1	53.5	+10.6	L2-Ne
^	207.448k	53.0	+9.8 +0.0	+0.0	+0.2	+0.0	+0.0	63.0	53.3	+9.7	L2-Ne
71 Ave	583.414k	16.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	26.7	46.0	-19.3	L2-Ne
^	583.413k	39.5	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	49.6	46.0	+3.6	L2-Ne
73 Ave	163.816k	25.4	+9.8 +0.0	+0.0	+0.4	+0.0	+0.0	35.6	55.3	-19.7	L2-Ne
^	163.815k	55.1	+9.8 +0.0	+0.0	+0.4	+0.0	+0.0	65.3	55.3	+10.0	L2-Ne
75 Ave	648.862k	16.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	26.1	46.0	-19.9	L2-Ne
^	648.862k	37.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	47.7	46.0	+1.7	L2-Ne
77 Ave	637.954k	15.5	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	25.6	46.0	-20.4	L2-Ne
^	637.954k	37.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	47.7	46.0	+1.7	L2-Ne
79 Ave	828.482k	14.9	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	25.0	46.0	-21.0	L2-Ne
^	828.482k	34.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	44.1	46.0	-1.9	L2-Ne
81 Ave	677.223k	14.7	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	24.8	46.0	-21.2	L2-Ne
^	677.223k	37.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	47.7	46.0	+1.7	L2-Ne

83 Ave	734.673k	14.6	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	24.7	46.0	-21.3	L2-Ne
^	734.672k	35.5	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	45.6	46.0	-0.4	L2-Ne
85 Ave	717.220k	14.1	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	24.2	46.0	-21.8	L2-Ne
^	717.219k	36.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	46.1	46.0	+0.1	L2-Ne
^	720.855k	35.8	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	45.9	46.0	-0.1	L2-Ne
88 Ave	699.767k	14.0	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	24.1	46.0	-21.9	L2-Ne
^	699.766k	36.3	+9.8 +0.0	+0.1	+0.2	+0.0	+0.0	46.4	46.0	+0.4	L2-Ne

Test Setup Photos



SUPPLEMENTAL INFORMATION

Measurement Uncertainty

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

Uncertainties reported are worst case for all CKC Laboratories' sites and represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Compliance is deemed to occur provided measurements are below the specified limits.

Emissions Test Details

TESTING PARAMETERS

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula. This reading was then compared to the applicable specification limit. Individual measurements were compared with the displayed limit value in the margin column. The margin was calculated based on subtracting the limit value from the corrected measurement value; a positive margin represents a measurement exceeding the limit, while a negative margin represents a measurement less than the limit.

SAMPLE CALCULATIONS		
	Meter reading	(dBµV)
+	Antenna Factor	(dB/m)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or caret (“^”) was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point, the measuring device is set into the linear mode and the scan time is reduced.