FCC Test Report

Equipment	:	**DOCSIS Cable Gateway**
Brand Name	:	**Technicolor**
Model No.	:	**CGM4140COM, CGM4141COX**
FCC ID	:	**G95CGM414X**
Standard	:	**47 CFR FCC Part 15.247**
Operating Band	:	**2400 MHz – 2483.5 MHz**
Function	:	**☒ Point-to-multipoint; ☐ Point-to-point**
Applicant / Manufacturer	:	**Technicolor Connected Home USA LLC 5030 Sugarloaf Parkway,Building 6,Lawrenceville, Georgia,United States,30044**

The product sample received on Mar. 28, 2017 and completely tested on May 12, 2017. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Phoenix Chen
SPORTON INTERNATIONAL INC.

Testing Laboratory
1190

Table of Contents

Summary of Test Result

Conformance Test Specifications				
Report Clause	**Ref. Std. Clause**	**Description**	**Limit**	**Result**
1.1.2	15.203	Antenna Requirement	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	FCC 15.207	Complied
3.2	15.247(a)	DTS Bandwidth	≥500kHz	Complied
3.3	15.247(b)	Maximum Conducted Output Power	Power [dBm]:30	Complied
3.4	15.247(e)	Power Spectral Density	PSD [dBm/3kHz]:8	Complied
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	Non-Restricted Bands: > 30 dBc	Complied
3.6	15.247(d)	Emissions in Restricted Frequency Bands	Restricted Bands: FCC 15.209	Complied

Revision History

Report No.	Version	Description	Issued Date
FR732723AZ	Rev. 01	Initial issue of report	May 31, 2017

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std.	Ch. Frequency (MHz)	Channel Number
2.4-2.4835GHz	802.15.4	2405-2480	11-26 [16]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	Zigbee	5	1TX

Note:.
- Zigbee uses a O-QPSK (250kbps) modulation for DSSS.
- BWch is the nominal channel bandwidth.

1.1.2 Antenna Information

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	1	-	-	-	-	4.90

1.1.3 EUT Information

Identify EUT		
SW / HW	N/A	
Operational Condition		
EUT Power Type	From AC Adapter	
Type of EUT		
☒	Stand-alone	
☐	Combined (EUT where the radio part is fully integrated within another device)	
	Combined Equipment - Brand Name / Model No.:	…
☐	Plug-in radio (EUT intended for a variety of host systems)	
	Host System - Brand Name / Model No.:	…
☐	Other:	

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
Zigbee	1	0	n/a (DC>=0.98)	n/a (DC>=0.98)

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- KDB 558074 D01 v04
- ANSI C63.4-2014

1.3 Testing Location Information

Testing Location			
☒	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)	
		TEL : 886-3-327-3456	FAX : 886-3-327-0973
Test site Designation No. 553509 with FCC.			
☒	JHUBEI	ADD : No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County, Taiwan (R.O.C.)	
		TEL : 886-3-656-9065	FAX : 886-3-656-9085
Test site Designation No. TW0006 with FCC.			

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH01-HY	Gary	23.5°C / 65%	31/Mar/2017
Radiated <Below 1G>	03CH01-CB	Mason	22°C / 54%	12/May/2017
Radiated <Above 1G>	03CH03-HY	Jeff	25.2°C / 57%	01/Apr/2017
AC Conduction	CO01-CB	Kane	24°C / 55%	12/May/2017

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	2.6 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	2.9 dB	Confidence levels of 95%
Conducted Emission	1.3 dB	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Condition

RF Conducted	Abbreviation	Remark
TnomVnom	Tnom	20°C
-	Vnom	110V

2.2 Test Channel Mode

Test Software	DoS

Mode	Power Setting
Zigbee	-
2405MHz	20
2440MHz	20
2480MHz	20

2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	Normal link
1	Adapter mode

The Worst Case Mode for Following Conformance Tests	
Tests Item	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
Test Condition	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
Tests Item	Emissions in Restricted Frequency Bands		
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
Operating Mode < 1GHz	Normal Link		
1	Adapter mode		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
			
Worst Planes of EUT		V	

2.4 Accessories

Accessories				
Power Cable	Power Cord	1.5 meter, non-shielded cable	In/Out door	indoor

Note: Regarding to more detail and other information, please refer to user manual.

2.5 Support Equipment

Support Equipment – RF Conducted				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Notebook	DELL	E6400	Doc
2	Adapter for NB	DELL	HA65NM130	Doc

Support Equipment – Radiated Emission - Below 1G				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	PC1 (CMTS sever)	Lemel	WLI915G4D	Doc
2	D3.0 CMTS	CASA	C10G	Doc
3	IXIA	IXIA	XM2	Doc
4	MoCA2.0 Client	Entropic	MoCA2.0 ECB	Doc
5	2.4G WiFi Client	Netgear	R6300	Doc
6	5G WiFi Client	technicolor	TG234	Doc

Support Equipment – Radiated Emission - Above 1G				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	Client	-	-	Doc
2	Notebook	DELL	E5530	Doc
3	Adapter for NB	DELL	L90PM111	Doc

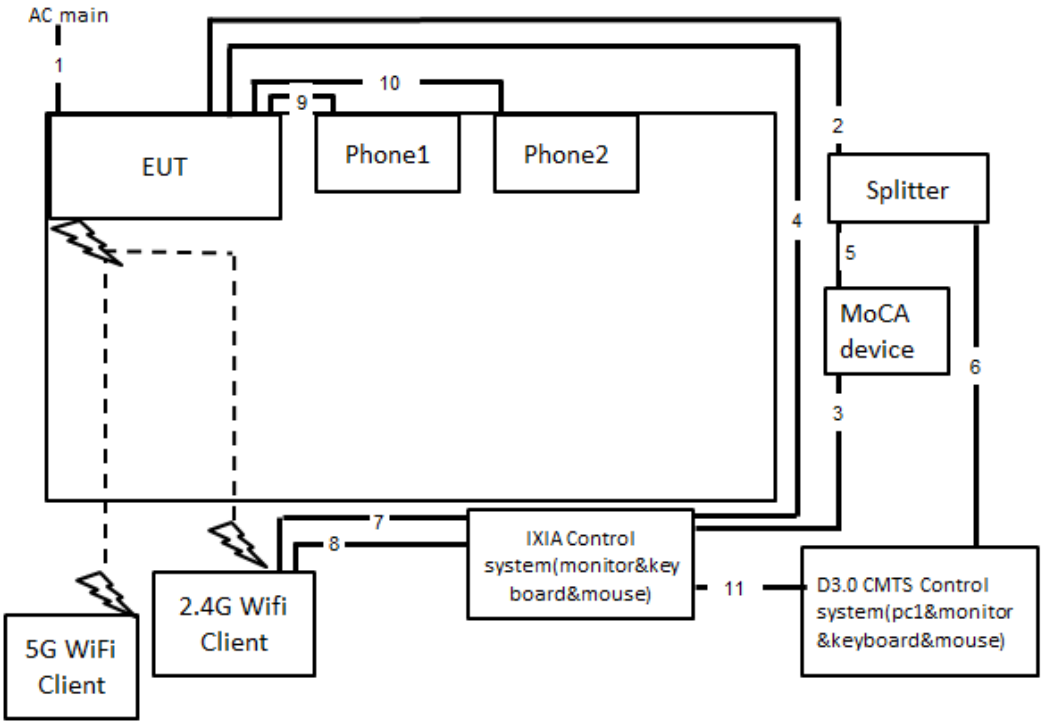
Note.Support equipment No.1 was provided by customer.

Support Equipment – AC Conduction				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
1	PC1 (CMTS sever)	Lemel	WLI915G4D	Doc
2	D3.0 CMTS	CASA	C10G	Doc
3	IXIA	IXIA	XM2	Doc
4	MoCA2.0 Client	Entropic	MoCA2.0 ECB	Doc
5	2.4G WiFi Client	Netgear	R6300	Doc
6	5G WiFi Client	technicolor	TG234	Doc
7	Phone	PHILIPS	M20	Doc
8	Phone	PHILIPS	M20	Doc

Note.Support equipment No.1~5 was provided by customer.

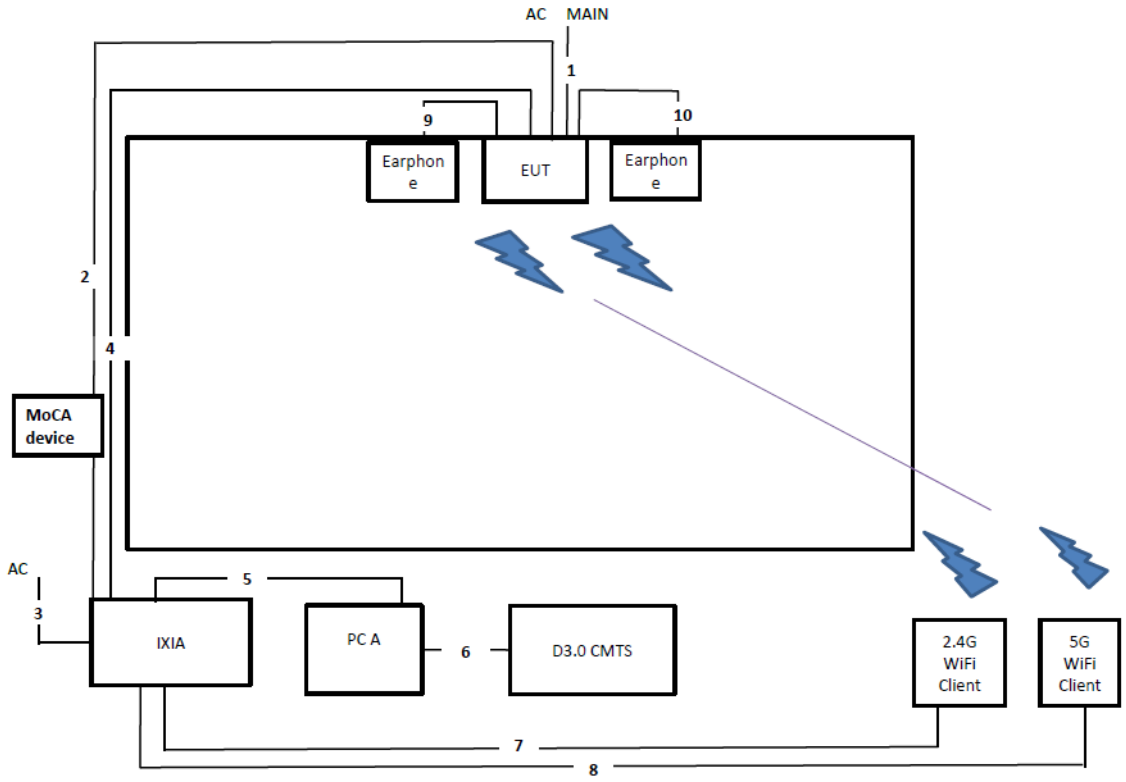
2.6 Test Setup Diagram

Test Setup Diagram – AC Line Conducted Emission Test



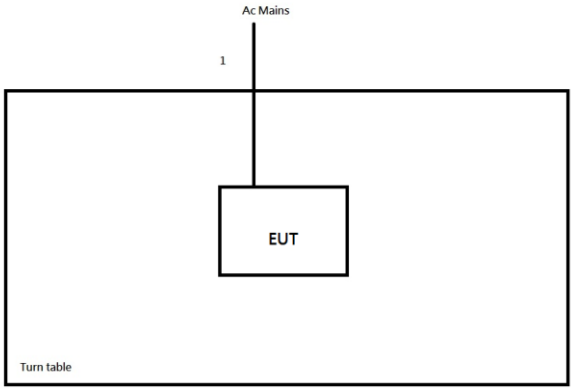
Item	Connection	Shield	Length	Remark
1	Power cable	No	1.8m	-
2	Coxial cable	No	10m	-
3	RJ-45 cable	No	2m	-
4	RJ-45 cable	No	10m	-
5	Coxial cable	Yes	2m	-
6	Coxial cable	Yes	2m	-
7	RJ-45 cable	No	5m	-
8	RJ-45 cable	No	5m	-
9	RJ-11 cable	No	1.5m	-
10	RJ-11 cable	No	1.5m	-
11	RJ-45 cable	No	1.5m	-

Test Setup Diagram - Radiated Test – Below 1G



Item	Connection	Shielded	Length(m)	Remark
1	Power cable	No	1.8m	-
2	RJ-45 cable	No	10m	-
3	Power cable	No	1.8m	-
4	RJ-45 cable	No	10m	-
5	RJ-45 cable	No	2m	-
6	RJ-45 cable	No	2m	-
7	RJ-45 cable	No	5m	-
8	RJ-45 cable	No	5m	-
9	RJ-11 cable	No	1.5m	-
10	RJ-11 cable	No	1.5m	-

Test Setup Diagram - Radiated Test – Above 1G



Item	Connection	Shielded	Length(m)	Remark
1	AC power line	No	1.7m	-

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

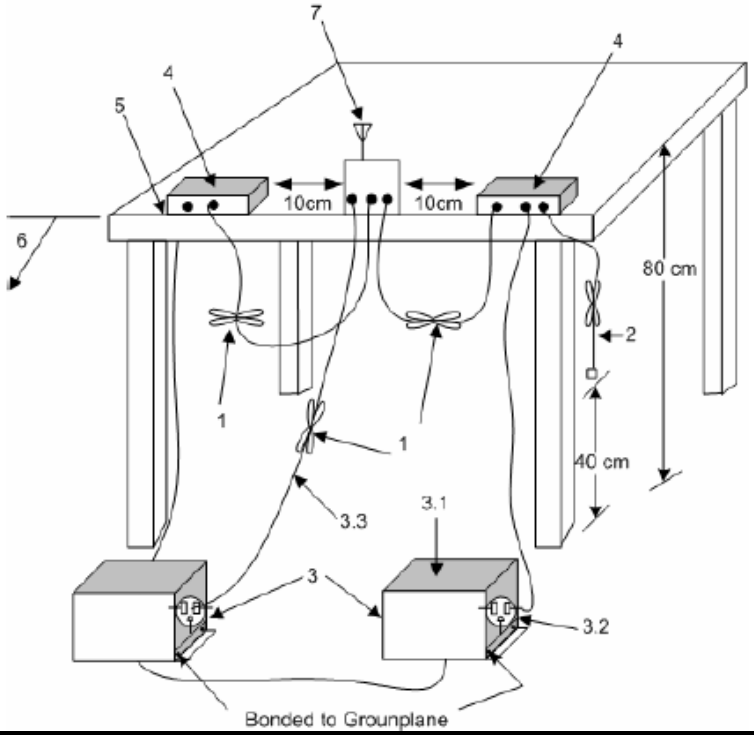
Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method
☒ Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

3.1.4 Test Setup

AC Power-line Conducted Emissions



3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit
Systems using digital modulation techniques:
▪ 6 dB bandwidth ≥ 500 kHz.

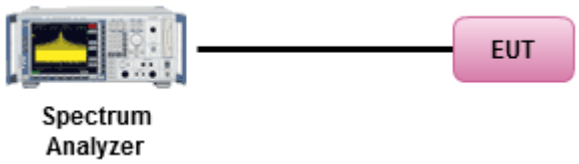
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
▪ For the emission bandwidth shall be measured using one of the options below:	
	☒ Refer as KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.
	☐ Refer as KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.
	☐ Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

3.2.4 Test Setup

Emission Bandwidth


3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit		
	▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W)	
	▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)$ dBm	
	▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm	
	▪ Smart antenna system (SAS):	
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3$ dBm
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 – (G_{TX} – 6)/3 + 8$dB dBm
e.i.r.p. Power Limit:		
▪ 2400-2483.5 MHz Band		
	▪ Point-to-multipoint systems (P2M): $P_{eirp} \leq 36$ dBm (4 W)	
	▪ Point-to-point systems (P2P): $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX}])$ dBm	
	▪ Smart antenna system (SAS)	
		- Single beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm
		- Overlap beam: $P_{eirp} \leq MAX(36, P_{Out} + G_{TX})$ dBm
		- Aggregate power on all beams: $P_{eirp} \leq MAX(36, [P_{Out} + G_{TX} + 8])$ dBm
P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.		

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

Test Method	
▪ Maximum Peak Conducted Output Power	
	☐ Refer as KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
	☐ Refer as KDB 558074, clause 9.1.2 Option 2 (integrated band power method)
	☐ Refer as KDB 558074, clause 9.1.3 Option 3 (peak power meter for VBW ≥ DTS BW)
▪ Maximum Average Conducted Output Power	
	Duty cycle ≥ 98%
	☐ Refer as KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	Duty cycle < 98%
	☐ Refer as KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	RF power meter and average over on/off periods with duty factor or gated trigger
	☒ Refer as KDB 558074, clause 9.2.3.1 Method AVGPM (using an RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.3.4 Test Setup

Maximum Conducted Output Power (Power Meter)


3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
▪ Power Spectral Density (PSD) ≤ 8 dBm/3kHz

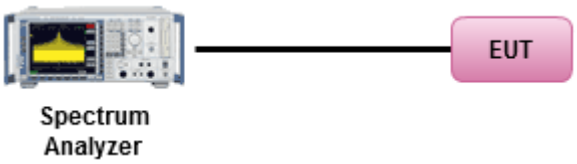
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method			
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).			
	☒		Refer as KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).
▪ For conducted measurement.			
	▪ If The EUT supports multiple transmit chains using options given below:		
		☐	Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.

3.4.4 Test Setup

Power Spectral Density


3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	**Limit (dB)**
Peak output power procedure	20
Average output power procedure	30
Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level. Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.	

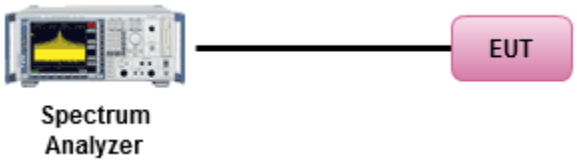
3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

Test Method
▪ Refer as KDB 558074, clause 11 for unwanted emissions into non-restricted bands.

3.5.4 Test Setup

Emissions in Non-restricted Frequency Bands


3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

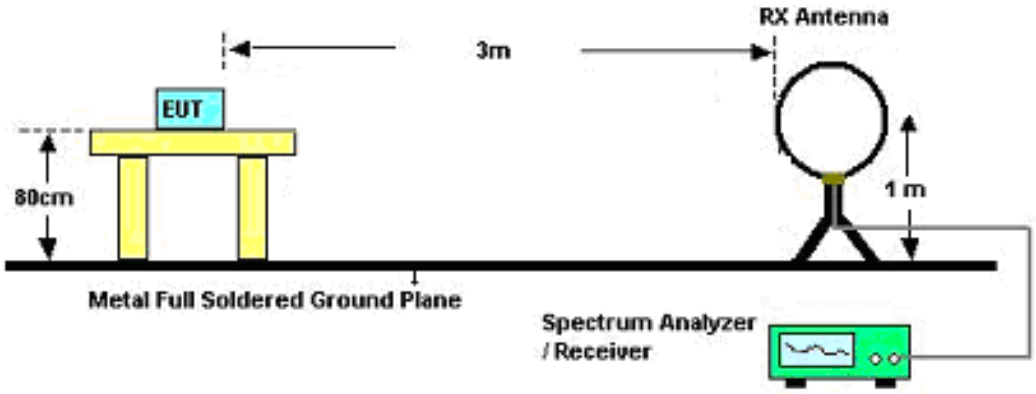
3.6.3 Test Procedures

Test Method		
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].		
▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.		
▪ For the transmitter unwanted emissions shall be measured using following options below:		
	▪ Refer as KDB 558074, clause 12 for unwanted emissions into restricted bands.	
		☒ Refer as KDB 558074, clause 12.2.5.3 (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW≥1/T.
		☒ Refer as KDB 558074, clause 12.2.4 measurement procedure peak limit.
		☒ Refer as KDB 558074, clause 12.2.5.2 for trace average by duty cycle correction
▪ For the transmitter band-edge emissions shall be measured using following options below:		
	▪ Refer as KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.	
	▪ Refer as KDB 558074, clause 13.2 (ANSI C63.10, clause 6.10.6) for marker-delta method for band-edge measurements.	
	▪ Refer as KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).	
▪ For conducted and cabinet radiation measurement, refer as KDB 558074, clause 12.2.2.		
	▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB	
	▪ For KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.	

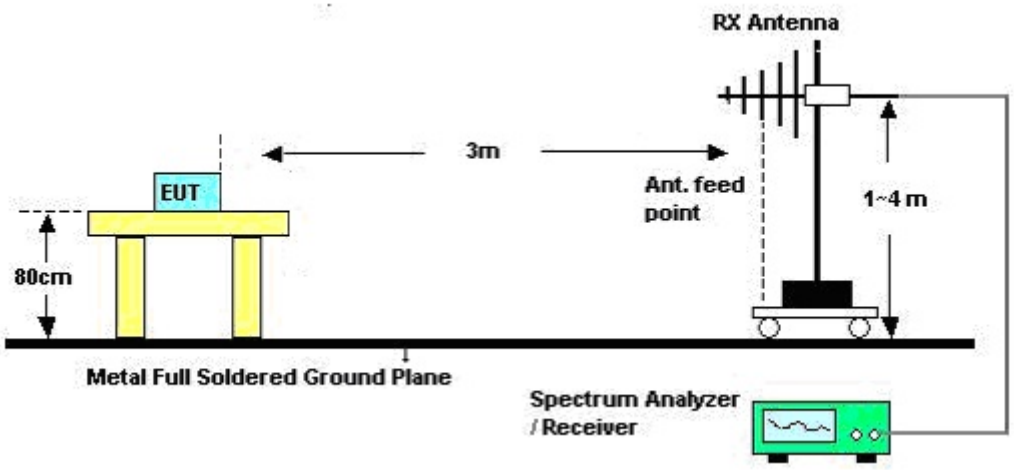
3.6.4 Test Setup

Emissions in Restricted Frequency Bands

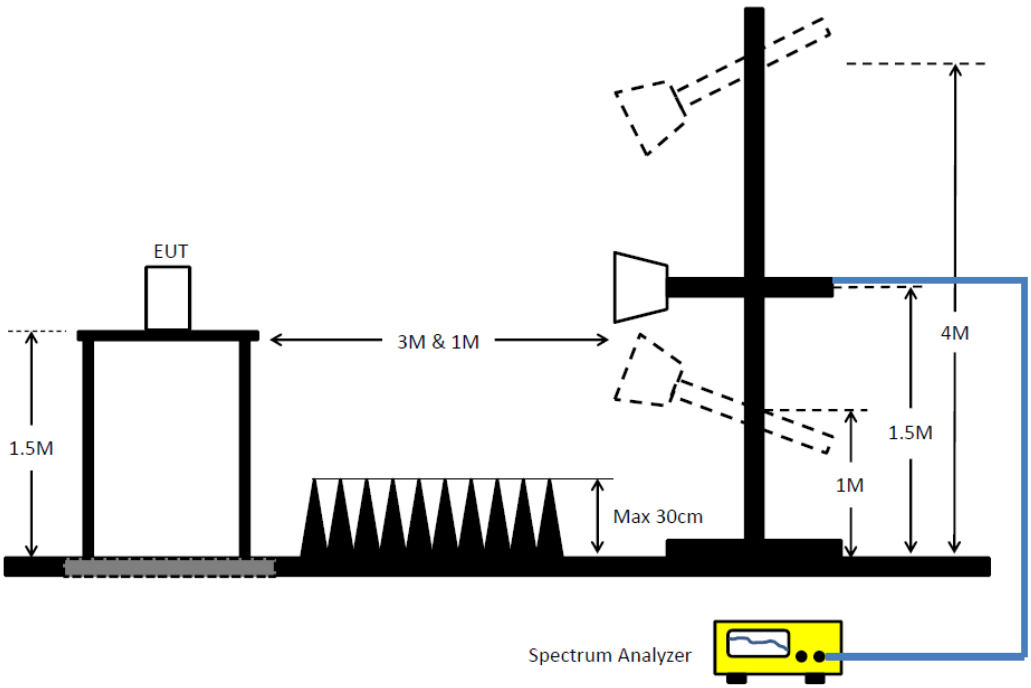
9kHz ~30MHz



30MHz~1GHz



Above 1GHz



3.6.5 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported. All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.6.6 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F.

4 Test Equipment and Calibration Data

Instrument for AC Conduction

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	23/Jan/2017	22/Jan/2018
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	14/Dec/2016	13/Dec/2017
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	21/Dec/2016	20/Dec/2017

Instrument for Radiated Test –Below 1G

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	30/Aug/2016	29/Aug/2017
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	13/Mar/2017	12/Mar/2018
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	22/Nov/2016	21/Nov/2017
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	24/Oct/2016	23/Oct/2017
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	N/A

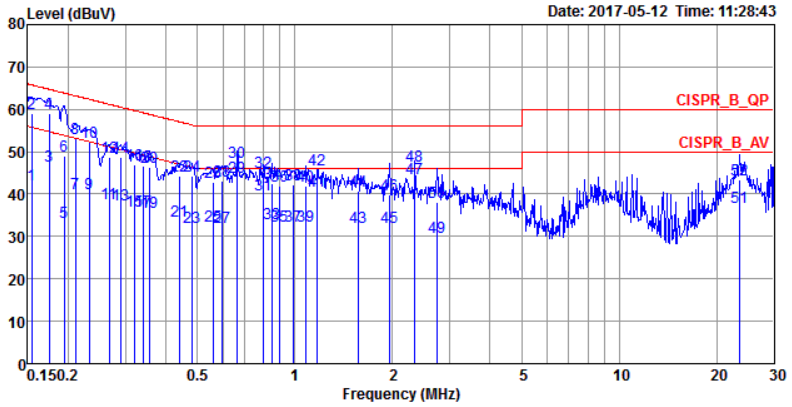
Instrument for Radiated Test –Above 1G

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz	28/Nov/2016	27/Nov/2017
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz ~ 18GHz	16/Dec/2016	15/Dec/2017
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	10/May/2016	09/May/2017
Amplifier	KEYSIGHT	83017A	MY53270197	1GHz ~ 26.5GHz	29/Aug/2016	28/Aug/2017
Spectrum	R&S	FSV40	101515	9kHz ~ 40GHz	28/Nov/2016	27/Nov/2017
Bilog Antenna	SCHAFFNER	CBL 6112D	2723	30MHz ~ 1GHz	01/Oct/2016	30/Sep/2017
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA 9120D 1531	1GHz ~ 18GHz	22/Apr/2016	21/Apr/2017
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170221	18GHz ~ 40GHz	06/Feb/2017	05/Feb/2018
Loop Antenna	TESEQ	HLA 6120	24155	9 kHz~30 MHz	02/Mar/2017	01/Mar/2018
RF-Cable-high	SUHNER	SUHNER	CB222	1GHz ~ 40GHz	28/Oct/2016	27/Oct/2017
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	27/Oct/2016	26/Oct/2017

Instrument for Conducted Test

Instrument	Manufacturer	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101500	10Hz~40GHz	12/May/2016	11/May/2017
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	24/Feb/2017	23/Feb/2018
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	24/Feb/2017	23/Feb/2018
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	21/Jul/2016	20/Jul/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY677/3	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_104	MY678/3	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_104	MY10717/4	30MHz ~ 26.5GHz	02/Oct/2016	01/Oct/2017
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	21/Jul/2016	20/Jul/2017

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Adapter mode		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1540	42.33	-13.45	55.78	32.07	10.10	0.16	Average	NEUTRAL
2	0.1540	59.04	-6.74	65.78	48.78	10.10	0.16	QP	NEUTRAL
3	0.1749	46.68	-8.04	54.72	36.49	10.01	0.18	Average	NEUTRAL
4	0.1749	59.06	-5.66	64.72	48.87	10.01	0.18	QP	NEUTRAL
5	0.1945	33.35	-20.49	53.84	23.15	10.01	0.19	Average	NEUTRAL
6	0.1945	49.09	-14.75	63.84	38.89	10.01	0.19	QP	NEUTRAL
7	0.2106	40.16	-13.02	53.18	29.93	10.05	0.18	Average	NEUTRAL
8	0.2106	53.23	-9.95	63.18	43.00	10.05	0.18	QP	NEUTRAL
9	0.2316	40.11	-12.28	52.39	29.91	10.05	0.15	Average	NEUTRAL
10	0.2316	52.16	-10.23	62.39	41.96	10.05	0.15	QP	NEUTRAL
11	0.2672	37.71	-13.49	51.20	27.48	10.12	0.11	Average	NEUTRAL
12	0.2672	48.66	-12.54	61.20	38.43	10.12	0.11	QP	NEUTRAL
13	0.2909	37.39	-13.11	50.50	27.18	10.12	0.09	Average	NEUTRAL
14	0.2909	48.60	-11.90	60.50	38.39	10.12	0.09	QP	NEUTRAL
15	0.3200	35.92	-13.79	49.71	25.70	10.15	0.07	Average	NEUTRAL
16	0.3200	46.88	-12.83	59.71	36.66	10.15	0.07	QP	NEUTRAL
17	0.3410	36.07	-13.11	49.18	25.83	10.19	0.05	Average	NEUTRAL
18	0.3410	46.74	-12.44	59.18	36.50	10.19	0.05	QP	NEUTRAL
19	0.3558	35.58	-13.25	48.83	25.32	10.22	0.04	Average	NEUTRAL
20	0.3558	46.21	-12.62	58.83	35.95	10.22	0.04	QP	NEUTRAL
21	0.4421	33.68	-13.34	47.02	23.34	10.25	0.09	Average	NEUTRAL

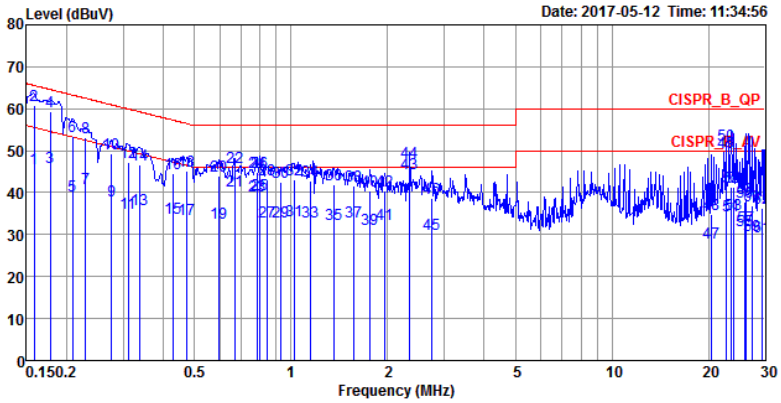
Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Neutral
Operating Function	Adapter mode		

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
22	0.4421	44.43	-12.59	57.02	34.09	10.25	0.09	QP	NEUTRAL
23	0.4837	32.09	-14.18	46.27	21.70	10.23	0.16	Average	NEUTRAL
24	0.4837	44.16	-12.11	56.27	33.77	10.23	0.16	QP	NEUTRAL
25	0.5581	32.35	-13.65	46.00	21.87	10.21	0.27	Average	NEUTRAL
26	0.5581	42.73	-13.27	56.00	32.25	10.21	0.27	QP	NEUTRAL
27	0.5979	32.32	-13.68	46.00	21.80	10.19	0.33	Average	NEUTRAL
28	0.5979	43.24	-12.76	56.00	32.72	10.19	0.33	QP	NEUTRAL
29	0.6648	43.93	-2.07	46.00	33.35	10.17	0.41	Average	NEUTRAL
30	0.6648	47.59	-8.41	56.00	37.01	10.17	0.41	QP	NEUTRAL
31	0.8002	39.75	-6.25	46.00	29.07	10.12	0.56	Average	NEUTRAL
32	0.8002	45.23	-10.77	56.00	34.55	10.12	0.56	QP	NEUTRAL
33	0.8483	33.03	-12.97	46.00	22.33	10.10	0.60	Average	NEUTRAL
34	0.8483	42.36	-13.64	56.00	31.66	10.10	0.60	QP	NEUTRAL
35	0.8992	32.36	-13.64	46.00	21.62	10.08	0.66	Average	NEUTRAL
36	0.8992	41.80	-14.20	56.00	31.06	10.08	0.66	QP	NEUTRAL
37	0.9891	32.42	-13.58	46.00	21.64	10.05	0.73	Average	NEUTRAL
38	0.9891	42.19	-13.81	56.00	31.41	10.05	0.73	QP	NEUTRAL
39	1.0767	32.39	-13.61	46.00	21.68	10.04	0.67	Average	NEUTRAL
40	1.0767	41.92	-14.08	56.00	31.21	10.04	0.67	QP	NEUTRAL
41	1.1719	40.69	-5.31	46.00	30.07	10.03	0.59	Average	NEUTRAL
42	1.1719	45.63	-10.37	56.00	35.01	10.03	0.59	QP	NEUTRAL
43	1.5684	32.10	-13.90	46.00	21.81	9.99	0.30	Average	NEUTRAL
44	1.5684	40.66	-15.34	56.00	30.37	9.99	0.30	QP	NEUTRAL
45	1.9593	32.28	-13.72	46.00	22.25	9.95	0.08	Average	NEUTRAL
46	1.9593	39.98	-16.02	56.00	29.95	9.95	0.08	QP	NEUTRAL
47	2.3460	43.78	-2.22	46.00	33.76	9.95	0.07	Average	NEUTRAL
48	2.3460	46.55	-9.45	56.00	36.53	9.95	0.07	QP	NEUTRAL
49	2.7502	29.91	-16.09	46.00	19.89	9.95	0.07	Average	NEUTRAL
50	2.7502	38.02	-17.98	56.00	28.00	9.95	0.07	QP	NEUTRAL
51	23.5112	36.79	-13.21	50.00	26.11	10.42	0.26	Average	NEUTRAL
52	23.5112	43.52	-16.48	60.00	32.84	10.42	0.26	QP	NEUTRAL

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result			
Operating Mode	1	**Power Phase**	Line
Operating Function	Adapter mode		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1582	45.83	-9.73	55.56	35.66	10.00	0.17	Average	LINE
2	0.1582	60.84	-4.72	65.56	50.67	10.00	0.17	QP	LINE
3	0.1777	45.93	-8.66	54.59	35.84	9.91	0.18	Average	LINE
4	0.1777	59.38	-5.21	64.59	49.29	9.91	0.18	QP	LINE
5	0.2083	39.18	-14.09	53.27	29.08	9.92	0.18	Average	LINE
6	0.2083	53.45	-9.82	63.27	43.35	9.92	0.18	QP	LINE
7	0.2292	41.02	-11.46	52.48	30.95	9.92	0.15	Average	LINE
8	0.2292	53.07	-9.41	62.48	43.00	9.92	0.15	QP	LINE
9	0.2759	38.05	-12.89	50.94	28.01	9.93	0.11	Average	LINE
10	0.2759	49.26	-11.68	60.94	39.22	9.93	0.11	QP	LINE
11	0.3116	35.24	-14.69	49.93	25.24	9.93	0.07	Average	LINE
12	0.3116	47.21	-12.72	59.93	37.21	9.93	0.07	QP	LINE
13	0.3374	36.04	-13.23	49.27	26.05	9.94	0.05	Average	LINE
14	0.3374	46.75	-12.52	59.27	36.76	9.94	0.05	QP	LINE
15	0.4282	34.07	-13.22	47.29	24.06	9.95	0.06	Average	LINE
16	0.4282	44.49	-12.80	57.29	34.48	9.95	0.06	QP	LINE
17	0.4736	33.59	-12.86	46.45	23.49	9.95	0.15	Average	LINE
18	0.4736	45.06	-11.39	56.45	34.96	9.95	0.15	QP	LINE
19	0.5948	32.81	-13.19	46.00	22.53	9.95	0.33	Average	LINE
20	0.5948	43.88	-12.12	56.00	33.60	9.95	0.33	QP	LINE
21	0.6683	40.42	-5.58	46.00	30.05	9.95	0.42	Average	LINE

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result - Co-location			
Operating Mode	1	**Power Phase**	Line
Operating Function	Adapter mode		

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
22	0.6683	46.09	-9.91	56.00	35.72	9.95	0.42	QP	LINE
23	0.7835	39.17	-6.83	46.00	28.66	9.96	0.55	Average	LINE
24	0.7835	44.97	-11.03	56.00	34.46	9.96	0.55	QP	LINE
25	0.8002	39.45	-6.55	46.00	28.93	9.96	0.56	Average	LINE
26	0.8002	44.99	-11.01	56.00	34.47	9.96	0.56	QP	LINE
27	0.8438	33.14	-12.86	46.00	22.58	9.96	0.60	Average	LINE
28	0.8438	43.11	-12.89	56.00	32.55	9.96	0.60	QP	LINE
29	0.9331	32.97	-13.03	46.00	22.33	9.96	0.68	Average	LINE
30	0.9331	42.39	-13.61	56.00	31.75	9.96	0.68	QP	LINE
31	1.0211	33.33	-12.67	46.00	22.65	9.96	0.72	Average	LINE
32	1.0211	43.04	-12.96	56.00	32.36	9.96	0.72	QP	LINE
33	1.1473	33.09	-12.91	46.00	22.53	9.96	0.60	Average	LINE
34	1.1473	42.66	-13.34	56.00	32.10	9.96	0.60	QP	LINE
35	1.3593	32.58	-13.42	46.00	22.18	9.96	0.44	Average	LINE
36	1.3593	42.06	-13.94	56.00	31.66	9.96	0.44	QP	LINE
37	1.5684	33.16	-12.84	46.00	22.90	9.96	0.30	Average	LINE
38	1.5684	41.69	-14.31	56.00	31.43	9.96	0.30	QP	LINE
39	1.7623	31.30	-14.70	46.00	21.16	9.96	0.18	Average	LINE
40	1.7623	40.51	-15.49	56.00	30.37	9.96	0.18	QP	LINE
41	1.9593	32.61	-13.39	46.00	22.57	9.96	0.08	Average	LINE
42	1.9593	40.32	-15.68	56.00	30.28	9.96	0.08	QP	LINE
43	2.3460	44.60	-1.40	46.00	34.57	9.96	0.07	Average	LINE
44	2.3460	47.32	-8.68	56.00	37.29	9.96	0.07	QP	LINE
45	2.7502	30.22	-15.78	46.00	20.19	9.96	0.07	Average	LINE
46	2.7502	38.56	-17.44	56.00	28.53	9.96	0.07	QP	LINE
47	20.3773	28.06	-21.94	50.00	17.47	10.35	0.24	Average	LINE
48	20.3773	34.81	-25.19	60.00	24.22	10.35	0.24	QP	LINE
49	22.6551	49.56	-0.44	50.00	38.91	10.39	0.26	Average	LINE
50	22.6551	51.39	-8.61	60.00	40.74	10.39	0.26	QP	LINE
51	23.5112	34.44	-15.56	50.00	23.78	10.40	0.26	Average	LINE
52	23.5112	41.33	-18.67	60.00	30.67	10.40	0.26	QP	LINE
53	23.8878	34.70	-15.30	50.00	24.03	10.41	0.26	Average	LINE
54	23.8878	41.43	-18.57	60.00	30.76	10.41	0.26	QP	LINE
55	25.8638	30.87	-19.13	50.00	20.14	10.45	0.28	Average	LINE
56	25.8638	37.86	-22.14	60.00	27.13	10.45	0.28	QP	LINE
57	26.2782	31.91	-18.09	50.00	21.18	10.45	0.28	Average	LINE
58	26.2782	38.79	-21.21	60.00	28.06	10.45	0.28	QP	LINE
59	27.4160	29.95	-20.05	50.00	19.18	10.47	0.30	Average	LINE
60	27.4160	36.76	-23.24	60.00	25.99	10.47	0.30	QP	LINE
61	29.3709	29.47	-20.53	50.00	18.65	10.51	0.31	Average	LINE
62	29.3709	36.27	-23.73	60.00	25.45	10.51	0.31	QP	LINE

Note 1: “>20dB” means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found emissions (No emissions were detected.)

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
Zigbee	-	-	-	-	-
2.4-2.4835GHz	1.638M	2.255M	2M26G1D	1.619M	2.224M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

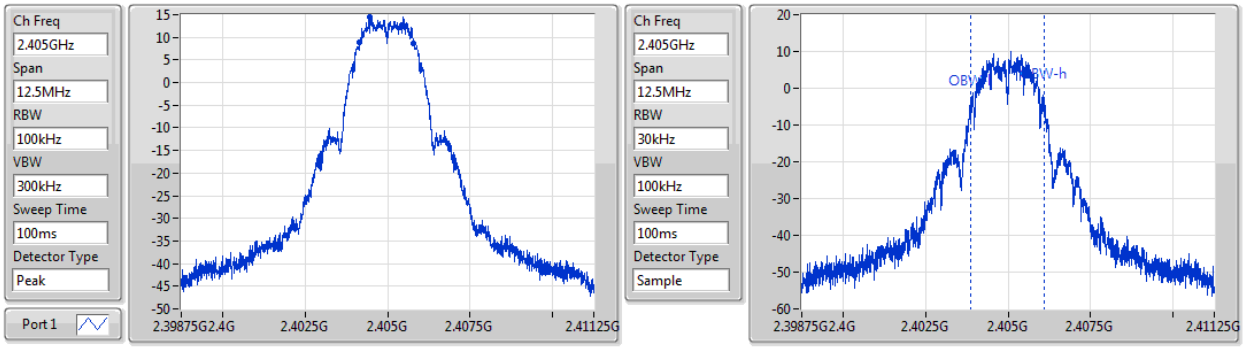
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
Zigbee	-	-	-	-
2405MHz	Pass	500k	1.638M	2.224M
2440MHz	Pass	500k	1.619M	2.255M
2480MHz	Pass	500k	1.631M	2.236M

Port X-N dB = Port **X** 6dB down bandwidth; **Port X-OBW** = Port **X** 99% occupied bandwidth;

Zigbee **EBW**

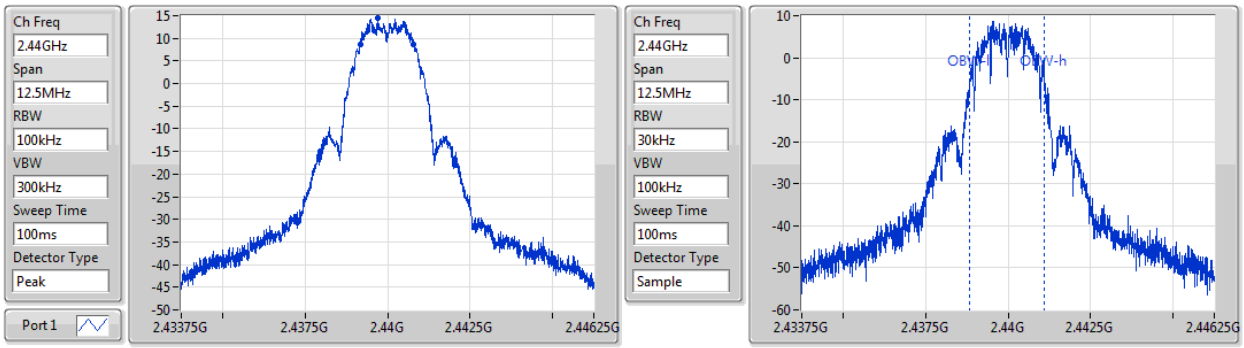
2405MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.638M	2.404163G	2.4058G	2.224M	2.403869G	2.406093G	500k	1

Zigbee **EBW**

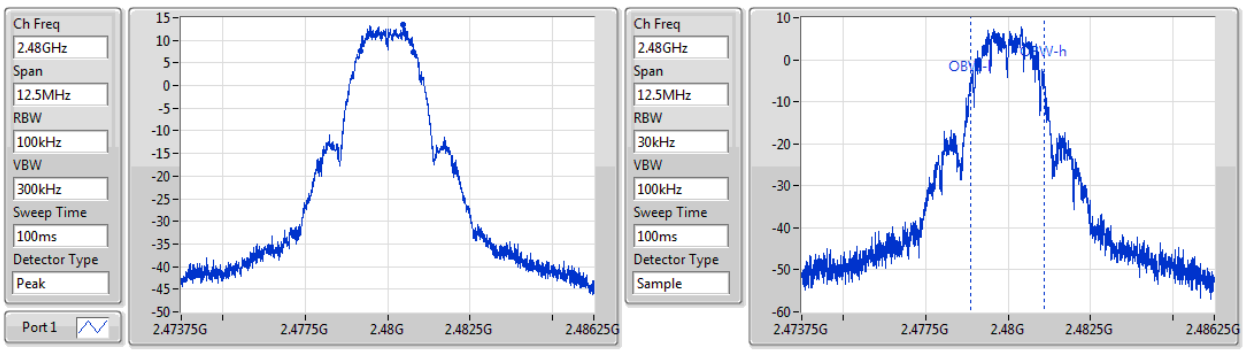
2440MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.619M	2.439175G	2.440794G	2.255M	2.438851G	2.441106G	500k	1

Zigbee **EBW**

2480MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.631M	2.479169G	2.4808G	2.236M	2.478857G	2.481093G	500k	1

Summary

Mode	Total Power (dBm)	Total Power (W)
Zigbee	-	-
2.4-2.4835GHz	19.01	0.07962

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
Zigbee	-	-	-	-	-
2405MHz	Pass	4.90	19.01	19.01	30.00
2440MHz	Pass	4.90	18.50	18.50	30.00
2480MHz	Pass	4.90	17.86	17.86	30.00

DG = Directional Gain; **Port X** = Port X output power

Summary

Mode	PD (dBm/RBW)
Zigbee	-
2.4-2.4835GHz	1.11

RBW=3kHz.

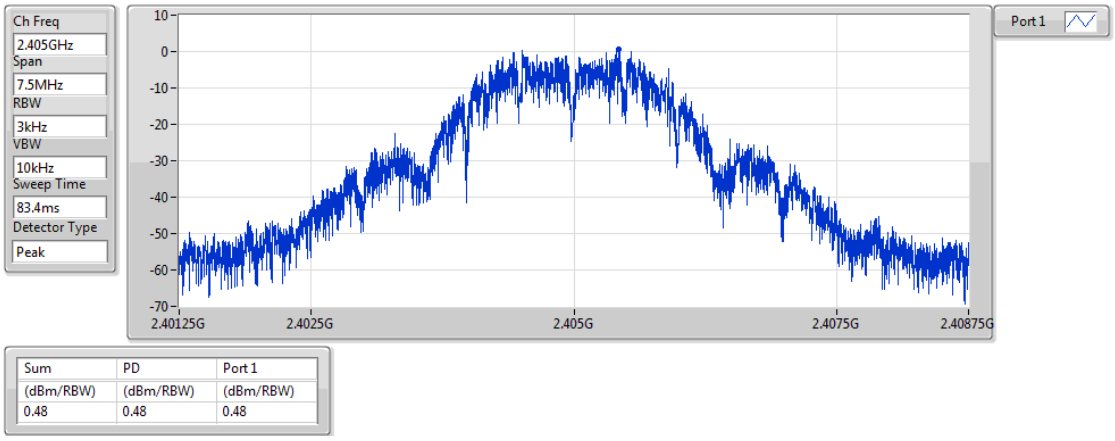
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
Zigbee	-	-	-	-	-
2405MHz	Pass	4.90	0.48	0.48	8.00
2440MHz	Pass	4.90	1.11	1.11	8.00
2480MHz	Pass	4.90	0.32	0.32	8.00

DG = Directional Gain; RBW=3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

Zigbee **PSD**

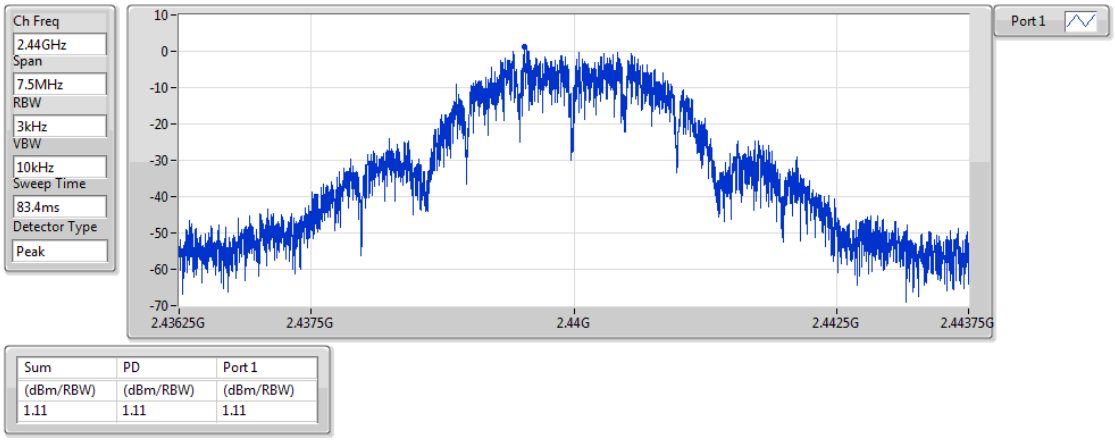
2405MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.48	0.48	0.48

Zigbee **PSD**

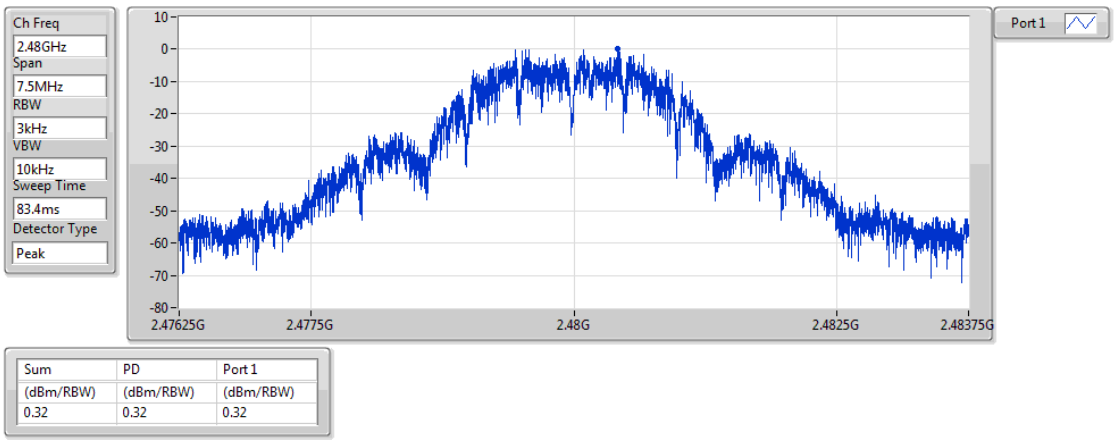
2440MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.11	1.11	1.11

Zigbee **PSD**

2480MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.32	0.32	0.32

Summary

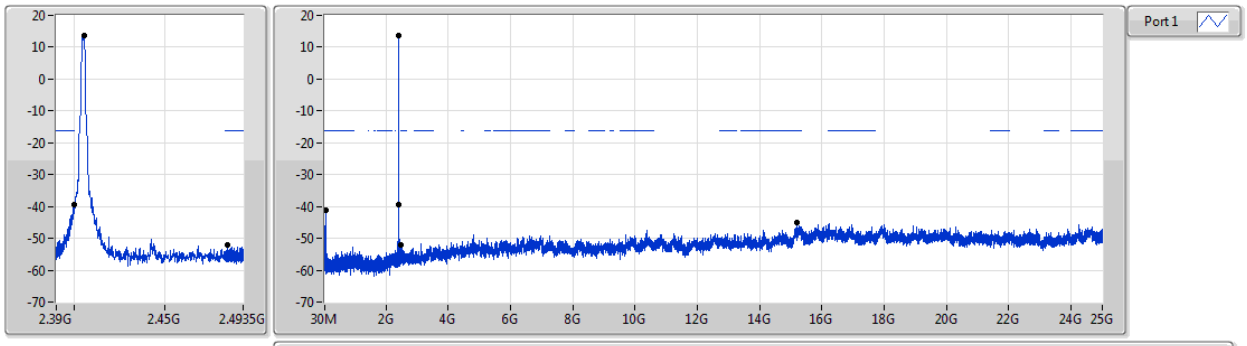
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
Zigbee	-	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	2.405344G	13.83	-16.17	48.88M	-44.48	2.39202G	-52.50	2.48362G	-35.21	16.239345G	-45.36	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
Zigbee	-	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	2.405344G	13.83	-16.17	48.88M	-41.07	2.39978G	-39.26	2.4846G	-52.20	15.206859G	-45.21	1
2440MHz	Pass	2.405344G	13.83	-16.17	48.88M	-42.75	2.3984G	-53.11	2.48532G	-52.29	15.274379G	-44.94	1
2480MHz	Pass	2.405344G	13.83	-16.17	48.88M	-44.48	2.39202G	-52.50	2.48362G	-35.21	16.239345G	-45.36	1

Zigbee **CSE NdB**

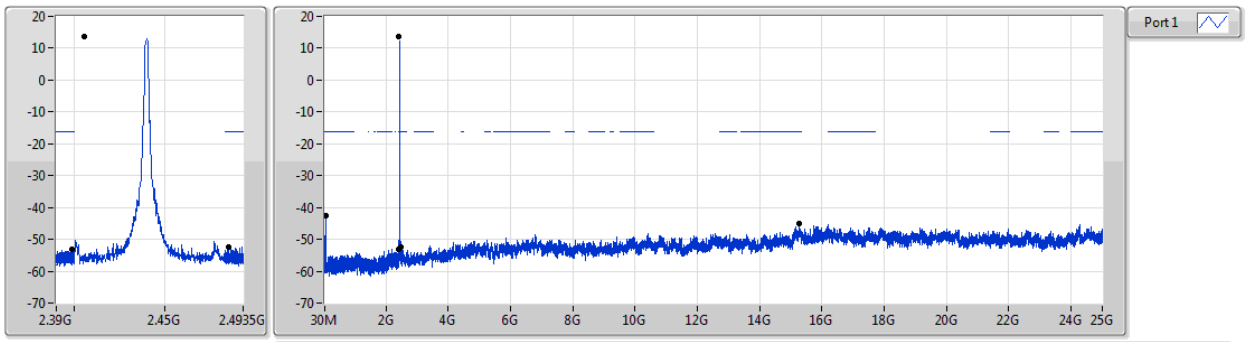
2405MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.405344G	13.83	-16.17	48.88M	-41.07	2.39978G	-39.26	2.4846G	-52.20	15.206859G	-45.21	1

Zigbee **CSE NdB**

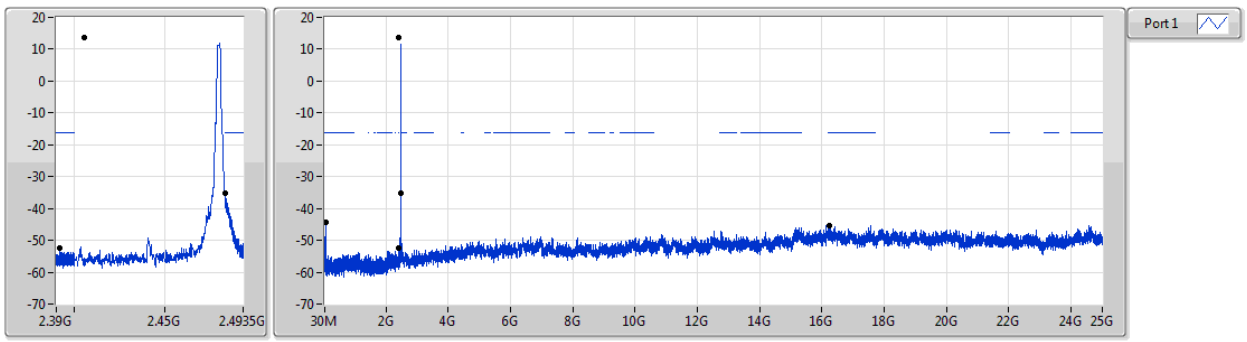
2440MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.405344G	13.83	-16.17	48.88M	-42.75	2.3984G	-53.11	2.48532G	-52.29	15.274379G	-44.94	1

Zigbee **CSE NdB**

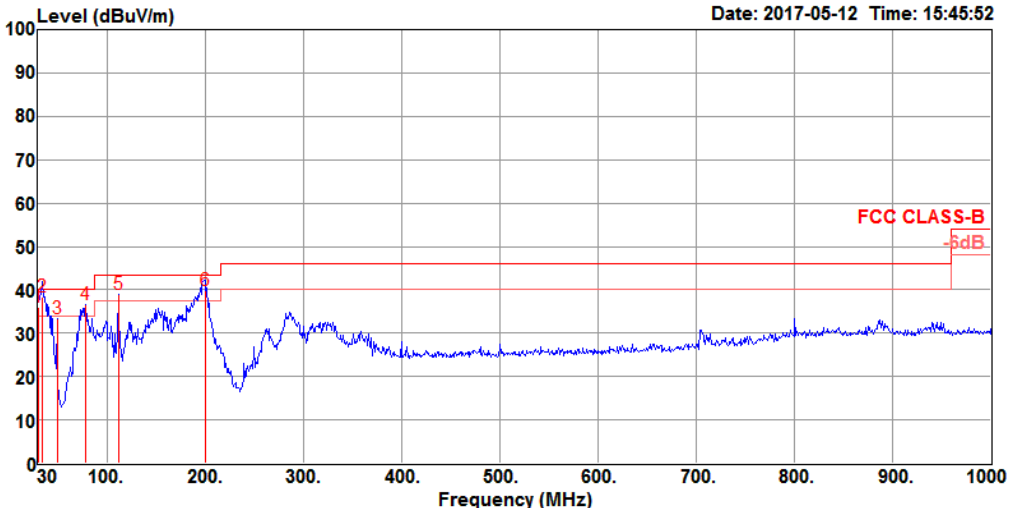
2480MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.405344G	13.83	-16.17	48.88M	-44.48	2.39202G	-52.50	2.48362G	-35.21	16.239345G	-45.36	1

Transmitter Radiated Unwanted Emissions (Below 1GHz)

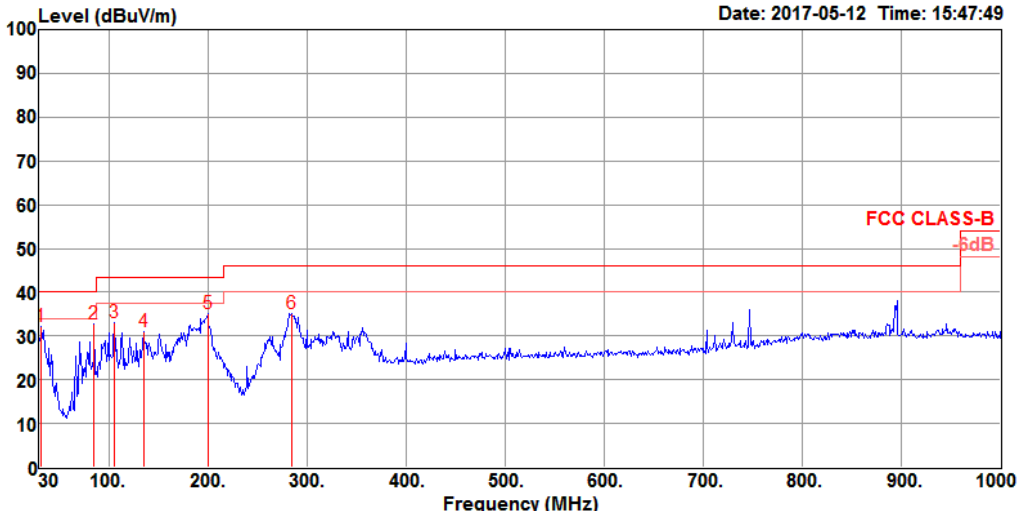
Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	1	**Polarization**	V
Operating Function	Adapter mode		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	30.00	36.12	40.00	-3.88	42.45	0.50	25.60	32.43	100	196	QP	VERTICAL
2	33.88	38.31	40.00	-1.69	46.89	0.56	23.29	32.43	100	255	QP	VERTICAL
3	49.40	33.20	40.00	-6.80	49.86	0.67	15.09	32.42	200	323	Peak	VERTICAL
4	78.50	36.54	40.00	-3.46	54.81	0.85	13.27	32.39	150	271	Peak	VERTICAL
5	111.48	38.90	43.50	-4.60	51.99	1.02	18.26	32.37	300	198	Peak	VERTICAL
6	199.75	39.72	43.50	-3.78	54.37	1.36	16.30	32.31	100	208	QP	VERTICAL

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found spurious emissions (No spurious emissions were detected.)
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	1	**Polarization**	H
Operating Function	Adapter mode		



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	31.94	32.26	40.00	-7.74	39.75	0.53	24.41	32.43	100	278	Peak	HORIZONTAL
2	85.29	32.62	40.00	-7.38	49.72	0.91	14.38	32.39	200	180	Peak	HORIZONTAL
3	105.66	32.92	43.50	-10.58	46.56	1.00	17.73	32.37	125	310	Peak	HORIZONTAL
4	134.76	30.91	43.50	-12.59	44.03	1.11	18.12	32.35	125	163	Peak	HORIZONTAL
5	199.75	35.17	43.50	-8.33	49.82	1.36	16.30	32.31	250	280	Peak	HORIZONTAL
6	284.14	35.18	46.00	-10.82	46.47	1.61	19.38	32.28	150	77	Peak	HORIZONTAL

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: “N/F” means Nothing Found spurious emissions (No spurious emissions were detected.)
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Summary

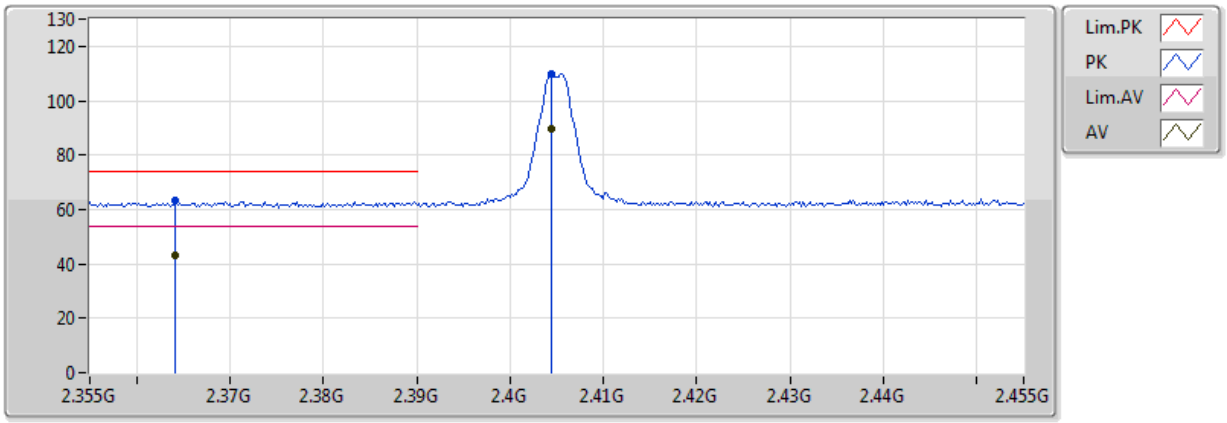
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
Zigbee	-	-	-	-	-	-	-	-	-	-	-	-
2.4-2.4835GHz	Pass	AV	2.483502G	50.86	54.00	-3.14	31.69	3	H	85	2.21	-

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Pol. (H/V)	Azimuth (°)	Height (m)	Comments
Zigbee	-	-	-	-	-	-	-	-	-	-	-	-
2405MHz	Pass	AV	2.3834G	43.47	54.00	-10.53	31.37	3	H	87	1.73	-
2405MHz	Pass	AV	2.4044G	94.64	Inf	-Inf	31.43	3	H	87	1.73	-
2405MHz	Pass	PK	2.3834G	63.47	74.00	-10.53	31.37	3	H	87	1.73	-
2405MHz	Pass	PK	2.4044G	114.64	Inf	-Inf	31.43	3	H	87	1.73	-
2405MHz	Pass	AV	2.3642G	43.14	54.00	-10.86	31.31	3	V	0	1.75	-
2405MHz	Pass	AV	2.4044G	89.62	Inf	-Inf	31.43	3	V	0	1.75	-
2405MHz	Pass	PK	2.3642G	63.14	74.00	-10.86	31.31	3	V	0	1.75	-
2405MHz	Pass	PK	2.4044G	109.62	Inf	-Inf	31.43	3	V	0	1.75	-
2405MHz	Pass	AV	4.81G	32.10	54.00	-21.90	6.38	3	H	60	1.34	-
2405MHz	Pass	PK	4.81G	52.10	74.00	-21.90	6.38	3	H	60	1.34	-
2405MHz	Pass	AV	4.81G	29.29	54.00	-24.71	6.38	3	V	264	1.02	-
2405MHz	Pass	PK	4.81G	49.29	74.00	-24.71	6.38	3	V	264	1.02	-
2440MHz	Pass	AV	2.3896G	43.34	54.00	-10.66	31.39	3	H	72	2.20	-
2440MHz	Pass	AV	2.4404G	93.76	Inf	-Inf	31.55	3	H	72	2.20	-
2440MHz	Pass	AV	2.4884G	43.47	54.00	-10.53	31.70	3	H	72	2.20	-
2440MHz	Pass	PK	2.3896G	63.34	74.00	-10.66	31.39	3	H	72	2.20	-
2440MHz	Pass	PK	2.4404G	113.76	Inf	-Inf	31.55	3	H	72	2.20	-
2440MHz	Pass	PK	2.4884G	63.47	74.00	-10.53	31.70	3	H	72	2.20	-
2440MHz	Pass	AV	2.342G	42.60	54.00	-11.40	31.24	3	V	3	1.88	-
2440MHz	Pass	AV	2.4396G	89.66	Inf	-Inf	31.55	3	V	3	1.88	-
2440MHz	Pass	AV	2.494G	43.46	54.00	-10.54	31.72	3	V	3	1.88	-
2440MHz	Pass	PK	2.342G	62.60	74.00	-11.40	31.24	3	V	3	1.88	-
2440MHz	Pass	PK	2.4396G	109.66	Inf	-Inf	31.55	3	V	3	1.88	-
2440MHz	Pass	PK	2.494G	63.46	74.00	-10.54	31.72	3	V	3	1.88	-
2440MHz	Pass	AV	4.88G	32.04	54.00	-21.96	6.54	3	H	56	1.44	-
2440MHz	Pass	PK	4.88G	52.04	74.00	-21.96	6.54	3	H	56	1.44	-
2440MHz	Pass	AV	4.88G	30.13	54.00	-23.87	6.54	3	V	218	1.42	-
2440MHz	Pass	PK	4.88G	50.13	74.00	-23.87	6.54	3	V	218	1.42	-
2480MHz	Pass	AV	2.4804G	91.88	Inf	-Inf	31.68	3	H	85	2.21	-
2480MHz	Pass	AV	2.483502G	50.86	54.00	-3.14	31.69	3	H	85	2.21	-
2480MHz	Pass	PK	2.4804G	111.88	Inf	-Inf	31.68	3	H	85	2.21	-
2480MHz	Pass	PK	2.483502G	70.86	74.00	-3.14	31.69	3	H	85	2.21	-
2480MHz	Pass	AV	2.4804G	88.57	Inf	-Inf	31.68	3	V	0	1.76	-
2480MHz	Pass	AV	2.483502G	48.67	54.00	-5.33	31.69	3	V	0	1.76	-
2480MHz	Pass	PK	2.4804G	108.57	Inf	-Inf	31.68	3	V	0	1.76	-
2480MHz	Pass	PK	2.483502G	68.67	74.00	-5.33	31.69	3	V	0	1.76	-
2480MHz	Pass	AV	4.96G	30.31	54.00	-23.69	6.73	3	H	152	1.47	-
2480MHz	Pass	PK	4.96G	50.31	74.00	-23.69	6.73	3	H	152	1.47	-
2480MHz	Pass	AV	4.96G	29.31	54.00	-24.69	6.73	3	V	0	1.64	-
2480MHz	Pass	PK	4.96G	49.31	74.00	-24.69	6.73	3	V	0	1.64	-

Zigbee

2405MHz_TX

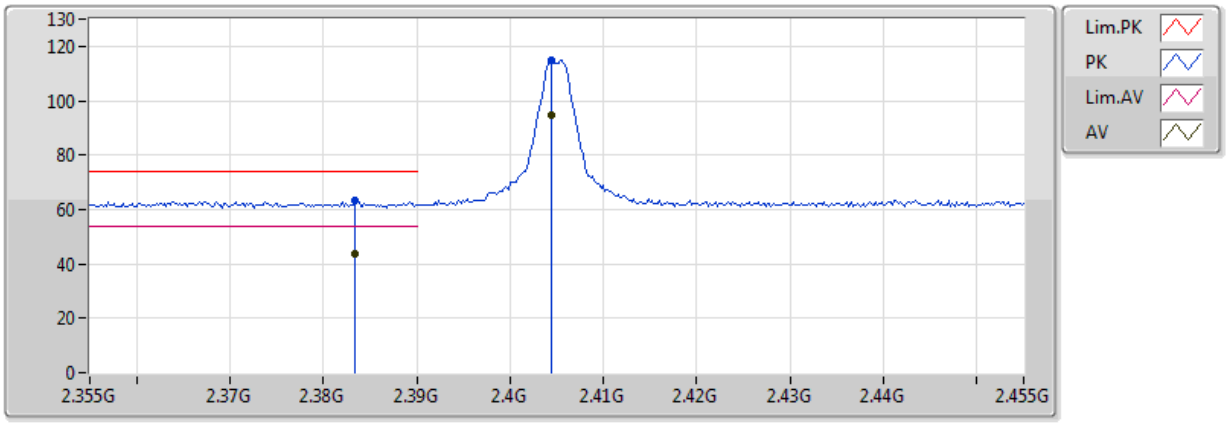


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3642G	43.14	54.00	-10.86	31.31	3	V	0	1.75	-
AV	2.4044G	89.62	Inf	-Inf	31.43	3	V	0	1.75	-
PK	2.3642G	63.14	74.00	-10.86	31.31	3	V	0	1.75	-
PK	2.4044G	109.62	Inf	-Inf	31.43	3	V	0	1.75	-

Zigbee

2405MHz_TX

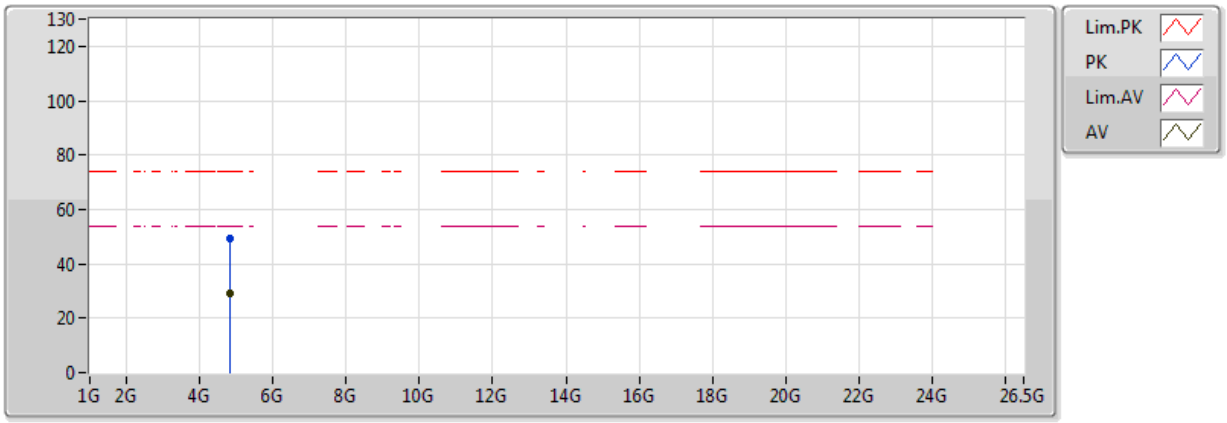


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3834G	43.47	54.00	-10.53	31.37	3	H	87	1.73	-
AV	2.4044G	94.64	Inf	-Inf	31.43	3	H	87	1.73	-
PK	2.3834G	63.47	74.00	-10.53	31.37	3	H	87	1.73	-
PK	2.4044G	114.64	Inf	-Inf	31.43	3	H	87	1.73	-

Zigbee

2405MHz_TX



Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.81G	29.29	54.00	-24.71	6.38	3	V	264	1.02	-
PK	4.81G	49.29	74.00	-24.71	6.38	3	V	264	1.02	-

Zigbee

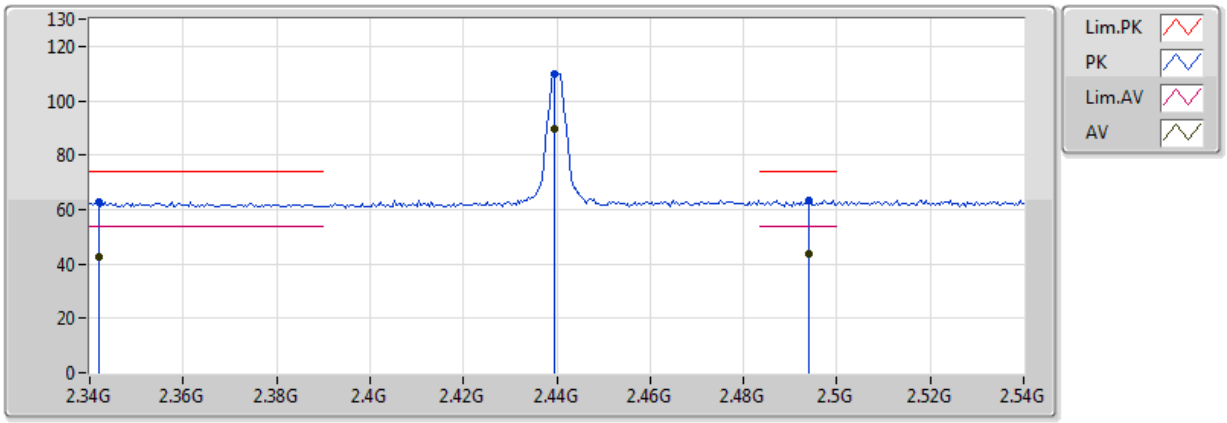
2405MHz_TX

Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.81G	32.10	54.00	-21.90	6.38	3	H	60	1.34	-
PK	4.81G	52.10	74.00	-21.90	6.38	3	H	60	1.34	-

Zigbee

2440MHz_TX

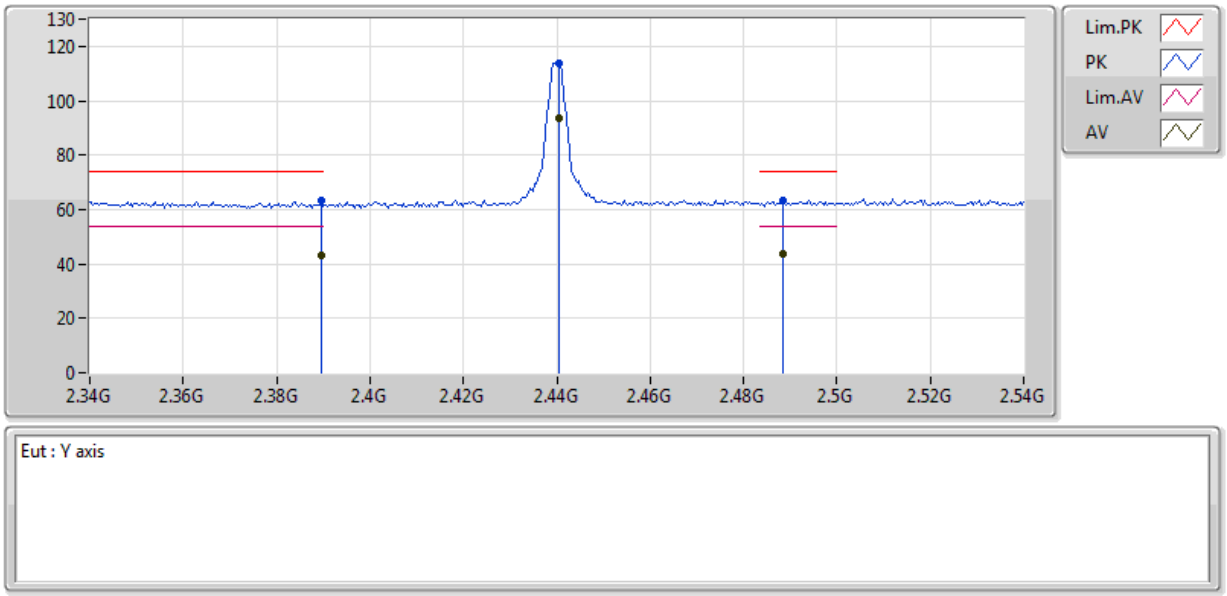


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.342G	42.60	54.00	-11.40	31.24	3	V	3	1.88	-
AV	2.4396G	89.66	Inf	-Inf	31.55	3	V	3	1.88	-
AV	2.494G	43.46	54.00	-10.54	31.72	3	V	3	1.88	-
PK	2.342G	62.60	74.00	-11.40	31.24	3	V	3	1.88	-
PK	2.4396G	109.66	Inf	-Inf	31.55	3	V	3	1.88	-
PK	2.494G	63.46	74.00	-10.54	31.72	3	V	3	1.88	-

Zigbee

2440MHz_TX

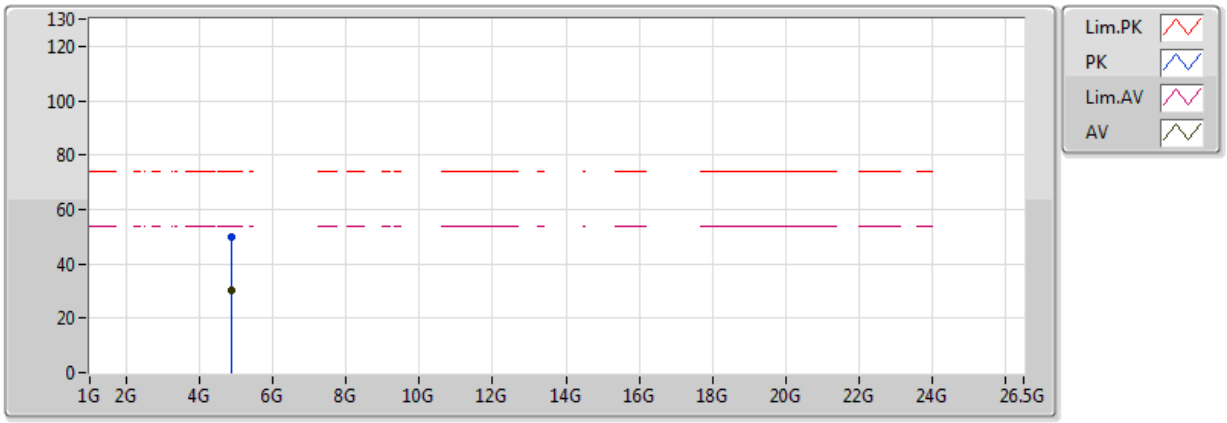


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.3896G	43.34	54.00	-10.66	31.39	3	H	72	2.20	-
AV	2.4404G	93.76	Inf	-Inf	31.55	3	H	72	2.20	-
AV	2.4884G	43.47	54.00	-10.53	31.70	3	H	72	2.20	-
PK	2.3896G	63.34	74.00	-10.66	31.39	3	H	72	2.20	-
PK	2.4404G	113.76	Inf	-Inf	31.55	3	H	72	2.20	-
PK	2.4884G	63.47	74.00	-10.53	31.70	3	H	72	2.20	-

Zigbee

2440MHz_TX

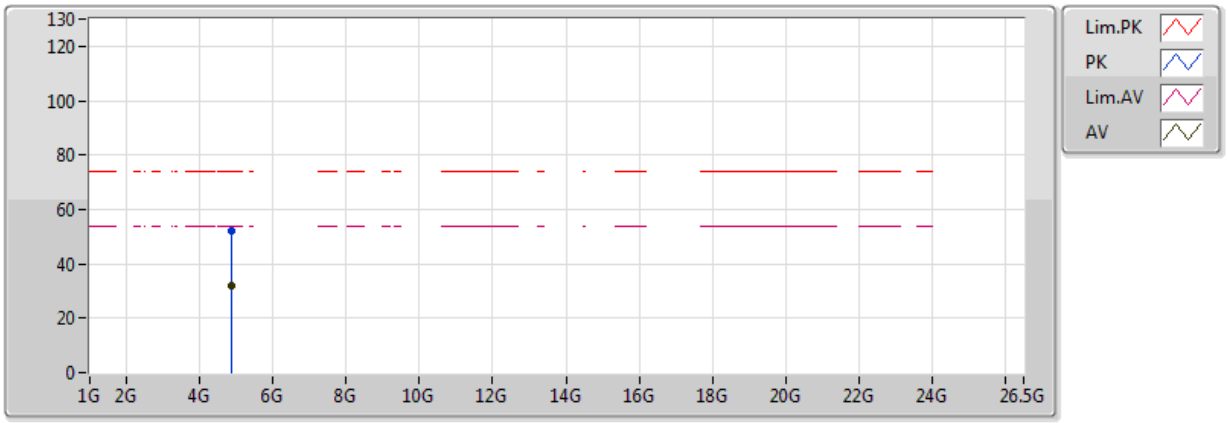


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.88G	30.13	54.00	-23.87	6.54	3	V	218	1.42	-
PK	4.88G	50.13	74.00	-23.87	6.54	3	V	218	1.42	-

Zigbee

2440MHz_TX

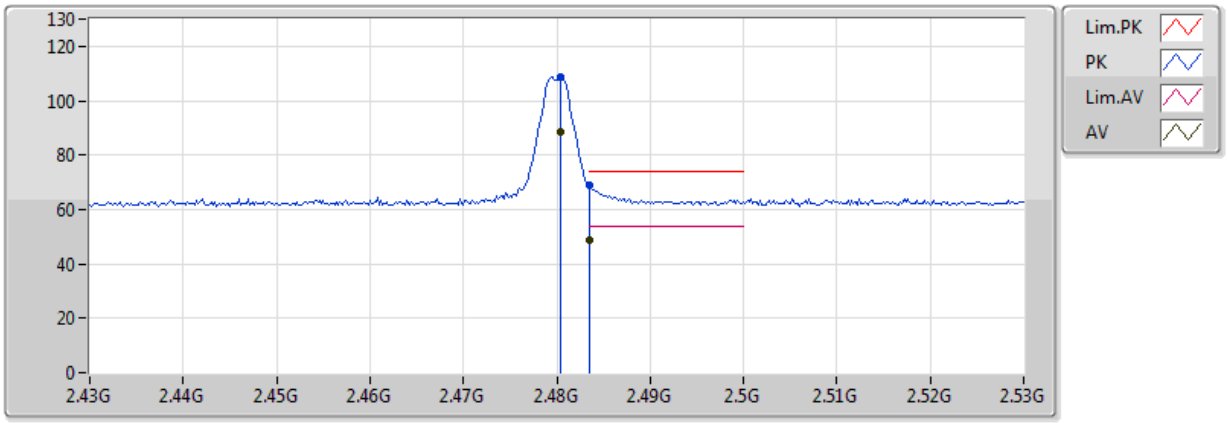


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.88G	32.04	54.00	-21.96	6.54	3	H	56	1.44	-
PK	4.88G	52.04	74.00	-21.96	6.54	3	H	56	1.44	-

Zigbee

2480MHz_TX

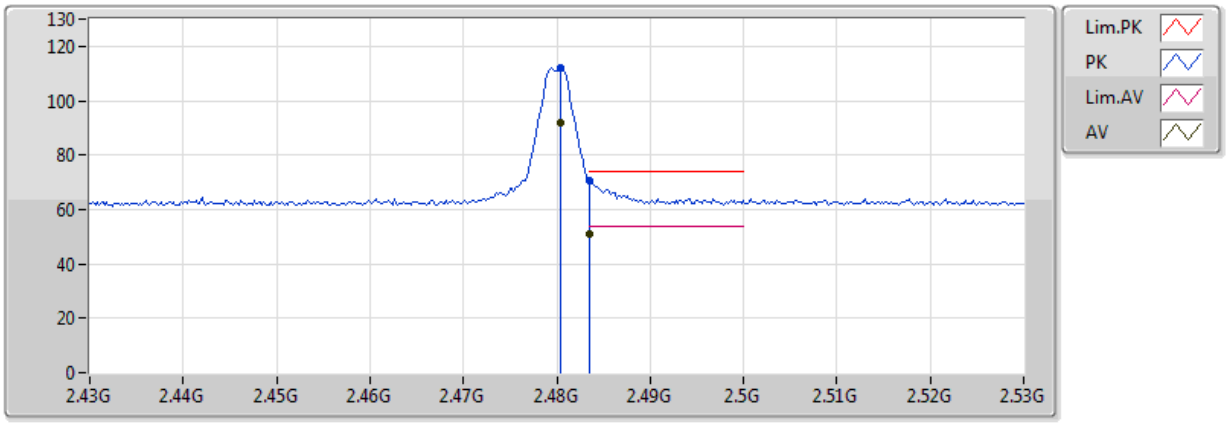


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	2.4804G	88.57	Inf	-Inf	31.68	3	V	0	1.76	-
AV	2.483502G	48.67	54.00	-5.33	31.69	3	V	0	1.76	-
PK	2.4804G	108.57	Inf	-Inf	31.68	3	V	0	1.76	-
PK	2.483502G	68.67	74.00	-5.33	31.69	3	V	0	1.76	-

Zigbee

2480MHz_TX

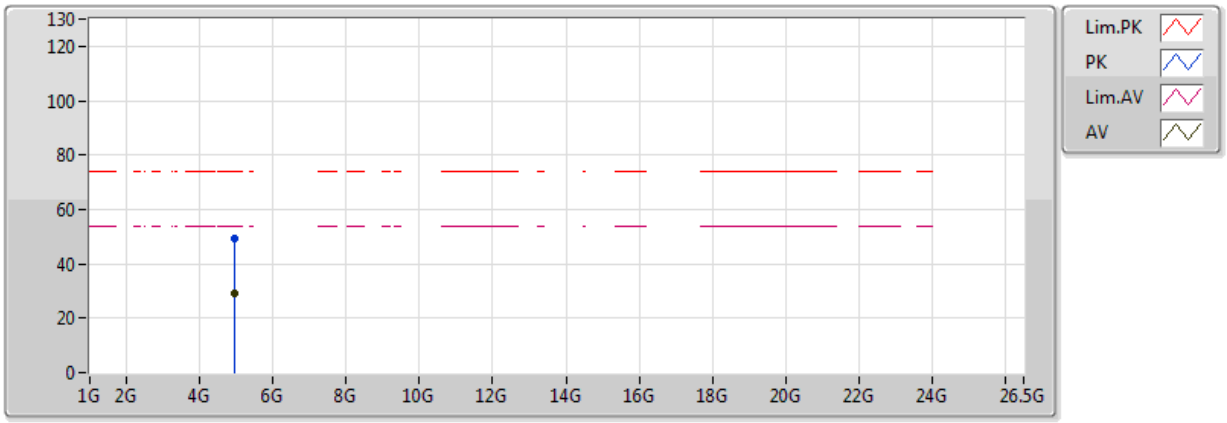


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
PK	2.4804G	111.88	Inf	-Inf	31.68	3	H	85	2.21	-
PK	2.483502G	70.86	74.00	-3.14	31.69	3	H	85	2.21	-
AV	2.4804G	91.88	Inf	-Inf	31.68	3	H	85	2.21	-
AV	2.483502G	50.86	54.00	-3.14	31.69	3	H	85	2.21	-

Zigbee

2480MHz_TX

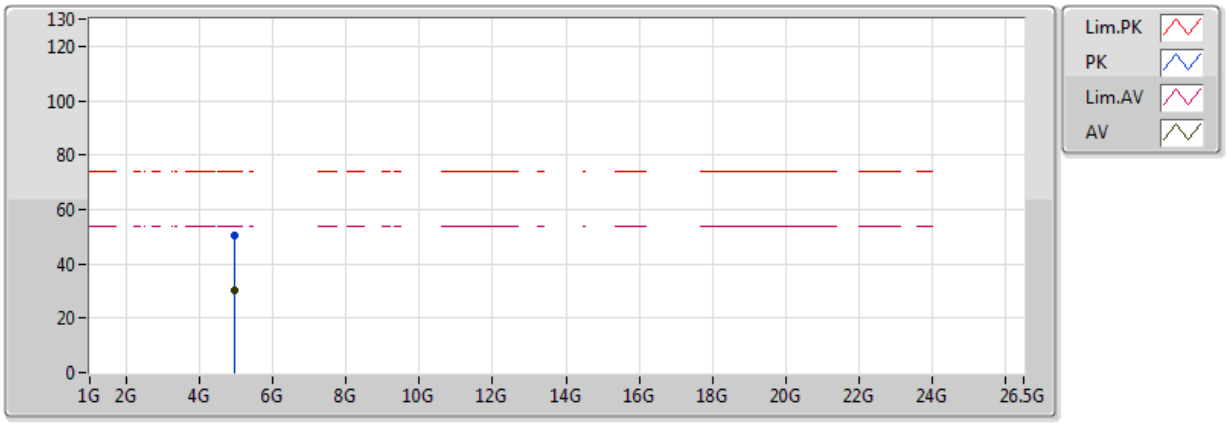


Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
PK	4.96G	49.31	74.00	-24.69	6.73	3	V	0	1.64	-
AV	4.96G	29.31	54.00	-24.69	6.73	3	V	0	1.64	-

Zigbee

2480MHz_TX



Eut : Y axis

Type	Freq(Hz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Factor(dB)	Dist(m)	Pol.(H/V)	Azimuth(°)	Height(m)	Comments
AV	4.96G	30.31	54.00	-23.69	6.73	3	H	152	1.47	-
PK	4.96G	50.31	74.00	-23.69	6.73	3	H	152	1.47	-