



SPORTON International Inc.

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NCC RADIO TEST REPORT

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Applicant Address	台北市松山區復勢里南京東路 4 段 126 號 5 樓
Manufacturer's company	啟碁科技股份有限公司
Manufacturer Address	新竹科學工業園區新竹縣園區二路 20 號

Product Name	無線接入點
Brand Name	Extreme Networks
Model Name	AP-8533
Test Rule	NCC LP0002 Section 3.10.1
Test Freq. Range	2402 ~ 2480MHz
Received Date	Oct. 29, 2015
Final Test Date	Jul. 27, 2017
Submission Type	Original Equipment

Statement

Test result included is only for the Bluetooth LE of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2013, NCC LP0002 (Aug. 23, 2016)** and **KDB558074 D01 v04**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.



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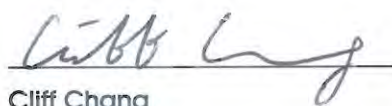
History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
TR592302-22AB	Rev. 01	Initial issue of report	Sep. 11, 2017

1. VERIFICATION OF COMPLIANCE

Product Name : 無線接入點
Brand Name : Extreme Networks
Model No. : AP-8533
Applicant : 香港商極進網路有限公司台灣分公司
Test Rule Part(s) : NCC LP0002 Section 3.10.1

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Oct. 29, 2015 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.



Cliff Chang

SPORTON INTERNATIONAL INC.

2. SUMMARY OF THE TEST RESULT

Applied Standard: NCC LP0002 (Aug. 23, 2016)			
Part	Rule Section	Description of Test	Result
4.1	2.3	AC Power Line Conducted Emissions	Complies
4.2	3.10.1.2	Maximum Conducted Output Power	Complies
4.3	3.10.1.6	Power Spectral Density	Complies
4.4	3.10.1.6	6dB Spectrum Bandwidth	Complies
4.5	3.10.1.5	Radiated Emissions	Complies
4.6	3.10.1.5	Band Edge Emissions	Complies
4.7	3.10.1.4	Antenna Requirements	Complies

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Power Type	From power adapter or PoE
Modulation	DSSS
Data Rate (Mbps)	GFSK: 1
Frequency Range	2402 ~ 2480MHz
Channel Number	40 (37 hopping + 3 advertising channel)
Channel Band Width (99%)	Mode 1 (Set 3 Dipole antenna / 4.22 dBi) 1.41 MHz Mode 2 (Set 10 Panel antenna / 9.92 dBi) 1.41 MHz Mode 3 (Set 13 Monopole antenna / 7.7 dBi) 1.41 MHz
Maximum Conducted Output Power	Mode 1 (Set 3 Dipole antenna / 4.22 dBi) 6.39 dBm Mode 2 (Set 10 Panel antenna / 9.92 dBi) 6.39 dBm Mode 3 (Set 13 Monopole antenna / 7.7 dBi) 6.39 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3
Note: This device contains three radio transmitter module, radio 1 (Model Name: CDR2G), radio 2 (Model Name: CDR5G) and radio 3 (Model Name: CDRDB).	

3.2. Accessories

N/A

3.3. Table for Filed Antenna

Set	Ant.	Brand	Model Name (Part Number)	Polarity	Antenna Type		Connector	Indoor/ Outdoor	Rmark	EUT/ R(Radio)
1	1	ZEBRA	ML-2452-HPAG4A6-01	-	External	Dipole	N-Type male	Indoor/ Outdoor	WLAN	R1, R2
2	2	ZEBRA	ML-2452-APAG2A1-01	-			RP-SMA male	Indoor	WLAN	R1, R2
3	3	ZEBRA	ML-2452-HPA6-01	-			N-TYPE male	Indoor/ Outdoor	WLAN/BT	R1, R2, R4
4	4	ZEBRA	ML-2452-APA2-01	-			RP-SMA male	Indoor	WLAN/BT	R1, R2, R4
5	5 (1A)	ZEBRA	ML-2452-HPAG4A6-01	(V)	External	Polarized Dipole	N-TYPE male	Indoor/ Outdoor	WLAN	R1
	5 (1B)	ZEBRA	ML-2499-HPA6H-01	(H)			N-TYPE male	Indoor/ Outdoor	WLAN	R1
6	6 (2A)	ZEBRA	ML-2452-HPAG4A6-01	(V)			N-TYPE male	Indoor/ Outdoor	WLAN	R2
	6 (2B)	ZEBRA	ML-5299-HPA5H-01	(H)			N-TYPE male	Indoor/ Outdoor	WLAN	R2
7	7	ZEBRA	ML-2452-PNA5-01R	-	External	Panel	N-TYPE male	Indoor/ Outdoor	WLAN	R1, R2
8	8	ZEBRA	ML-2452-PNA7-01R	-			N-TYPE male	Indoor	BT	R4
9	9	ZEBRA	ML-2452-PNL3M3-1	-			N-TYPE male	Indoor	BT	R4
10	10	ZEBRA	ML-2452-PNL9M3-N36	-			N-TYPE male	Indoor	BT	R4
11	11	ZEBRA	ML-2452-SEC5M4-N36	-	External	Polarized Panel	RP-SMA male	Indoor/ Outdoor	WLAN	R1, R2
12	12	ZEBRA	ML-2452-PTA4M4-036	-	External	Patch	RP-SMA male	Indoor	WLAN	R1, R2
13	13	ZEBRA	CEDAR-INT-ANT	-	Internal	Monopole	U.FL	Indoor	WLAN/BT	R1 (chain 4), R3, R4

Note 1:

Set	Ant.	Antenna Gain (dBi)			Cable Loss (dB)			True Gain (dBi)		
		2.4G	5G	BT	2.4G	5G	BT	2.4G	5G	BT
1	1	4	7.3	-	1.47	3.34	-	2.53	3.96	-
2	2	2.7	1.7	-	1.47	3.34	-	1.23	-1.64	-
3	3	5.3	6.1	5.3	1.47	3.34	1.08	3.83	2.76	4.22
4	4	3.17	4.85	3.17	1.47	3.34	1.08	1.70	1.51	2.09
5	5 (1A)	4	-	-	1.47	-	-	2.53	-	-
	5 (1B)	5.4	-	-	1.47	-	-	3.93	-	-
6	6 (2A)	-	7.3	-	-	3.34	-	-	3.96	-
	6 (2B)	-	5	-	-	3.34	-	-	1.66	-
7	7	5.5	6	-	1.47	3.34	-	3.93	2.66	-
8	8	-	-	8	-	-	1.08	-	-	6.92
9	9	-	-	9.7	-	-	1.08	-	-	8.62
10	10	-	-	11	-	-	1.08	-	-	9.92
11	11	6.92	7.23	-	1.47	3.34	-	5.45	3.89	-
12	12	5	6.6	-	1.47	3.34	-	3.53	3.26	-

Set	Ant.	Antenna Gain (dBi)	
		Radio 1 / 2.4G	Radio 1 / 5G
		Chain 4	Chain 4
13	13	4.5	5.3

Set	Ant.	Antenna Gain (dBi)					
		Radio 3 / 2.4G			Radio 3 / 5G		
		Chain 1	Chain 2	Chain 3	Chain 1	Chain 2	Chain 3
13	13	4.1	4.4	4.4	5.9	5.4	5.9

Set	Ant.	Antenna Gain (dBi)	
		Radio 4 / BT	
13	13	7.7	

Note2:

EUT	SKU	CPU	Antenna Type	WLAN			BT
				Radio 1	Radio 2	Radio 3	Radio 4
EUT	Cedar3E	BCM58525	External / Internal	External + Internal (only for Chain 4)	External	Internal	External or Internal

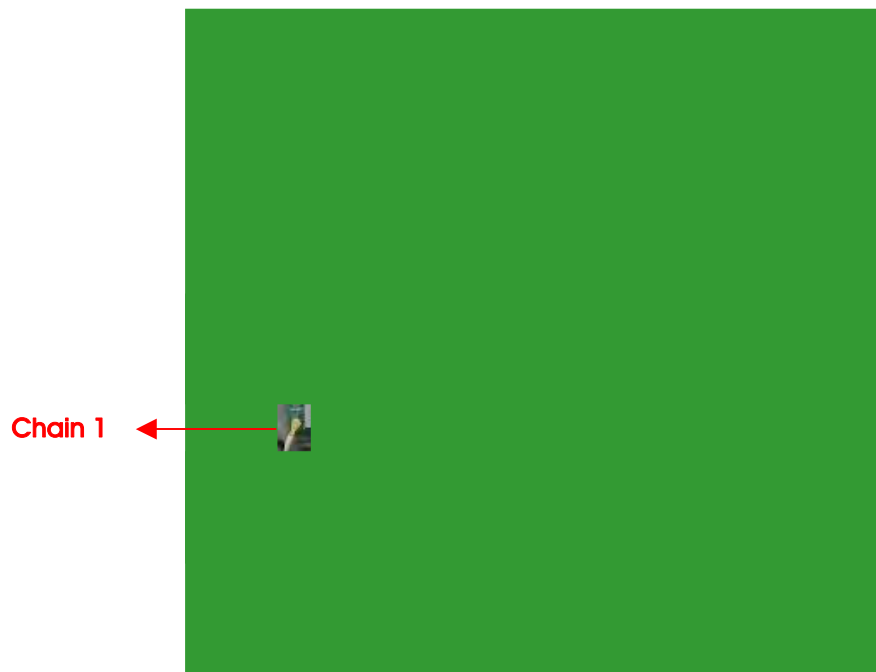
Note 3:

The EUT has four radios, Radio 1 supports WLAN 2.4GHz TX/RX + 5GHz RX only, Radio 2 supports WLAN 5GHz, Radio 3 supports WLAN 2.4GHz + 5GHz and Radio 4 supports Bluetooth functions.

Note 4:

There are 13 set antennas in the antenna table list. Besides, only set 3, 10 and 13 were selected to perform the test and written in this report due to the highest gain.

For Bluetooth Function	
Mode	Chain 1
For 1TX	TX/RX



3.4. Table for Carrier Frequencies

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400~2483.5MHz	0	2402 MHz	20	2442 MHz
	1	2404 MHz	:	:
	2	2406 MHz	37	2476 MHz
	:	:	38	2478 MHz
	18	2438 MHz	39	2480 MHz
	19	2440 MHz	-	-

3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel	Chain
AC Power Line Conducted Emissions	Unintentional-Normal Link	-	-	-
	Intentional -CTX	-	-	-
Maximum Conducted Output Power Power Spectral Density	GFSK	1 Mbps	0/20/39	1
6dB Spectrum Bandwidth	GFSK	1 Mbps	0/20/39	1
Radiated Emissions 9kHz~1GHz	Unintentional-Normal Link	-	-	-
	Intentional -CTX	-	-	-
Radiated Emissions 1GHz~5 th Harmonic	Unintentional-Normal Link			
Radiated Emissions 1GHz~10 th Harmonic	Intentional -CTX			
	GFSK	1 Mbps	0/20/39	1
Band Edge Emissions	GFSK	1 Mbps	0/20/39	1

Note1:

The adapter and PoE are for measurement only, would not be marketed.

The adapter and PoE information as below:

Power	Brand	Model
PoE 1	Symbol	PD-9001GR/AT/AC
PoE 2	Symbol	AP-PSBIAS-2P3-ATY
Adapter 1	PHIHONG	PSAC45W-480
Adapter 2	PHIHONG	PSAC45W-480(ZE)-R

Note2: The power does not affect the test result of RF tests, so only PoE was tested and recorded in this report for Radiated Emission above 1GHz (Radiated Emissions 1GHz~10th Harmonic).

Note3: All the specification of test configurations and test modes were based on customer's request

The following test modes were performed for all tests:

Unintentional – Normal Link

Conducted Emission test								
EUT Radio 1 (2.4G Set 11) + Radio 2 (5G Set 11) has been evaluated to be the worst case at Radiated Emissions test below 1GHz; thus, the measurement for Conducted Emissions will follow this same test configuration.								
Mode	Set 1	Set 10	Set 11	Set 13	LAN GE1	LAN GE2	Adapter 1	PoE 1
1	-	● Radio4/BT	● Radio1/2.4G Radio2/5G	● Radio3/2.4G	● 1000 Mbps	● 1000 Mbps	●	-
2	-	● Radio4/BT	● Radio1/2.4G Radio2/5G	● Radio3/5G	● 1000 Mbps	● 1000 Mbps	●	-
3 Note1	-	-	● Radio1/2.4G Radio2/5G	● Radio3/5G Radio4/BT	● 1000 Mbps	● 1000 Mbps	●	-
4 Note2	-	● Radio4/BT	● Radio1/2.4G Radio2/5G	● Radio3/5G	● 1000 Mbps	● 1000 Mbps	-	●
Note1: Mode 2 has been evaluated to be the worst case between Mode 1~2, thus measurement for Mode 3 will follow this same test mode. Note2: Mode 2 has been evaluated to be the worst case among Mode 1~3, thus measurement for Mode 4 will follow this same test mode. All test results were recorded in the report.								

Intentional – CTX

Conducted Emission test				
The higher gain antenna "Set 10" from external antenna and "Set 13" from internal antenna has been evaluated to be the worst case. Thus, the measurement will follow this same test configuration.				
Mode	Set 10	Set 13	Adapter 1	PoE 2
1	● Radio4/BT	-	●	-
2	● Radio4/BT	-	-	●
3	-	● Radio4/BT	●	-
4	-	● Radio4/BT	-	●

Unintentional – Normal Link

Radiated Emission below 1GHz test								
Mode	EUT in Y axis	EUT in Z axis	Set 1	Set 10	Set 11	Set 13	Adapter 2	PoE 1
1	●	-	-	● Radio4/BT	● Radio1/2.4G Radio2/5G	● Radio3/2.4G	●	-
2	-	●	-	● Radio4/BT	● Radio1/2.4G Radio2/5G	● Radio3/2.4G	●	-
3 Note1	●	-	● Radio1/2.4G Radio2/5G	● Radio4/BT	-	● Radio3/2.4G	●	-
4 Note2	-	●	-	● Radio4/BT	● Radio1/2.4G Radio2/5G	● Radio3/5G	●	-
5 Note3	-	●	-	-	● Radio1/2.4G Radio2/5G	● Radio3/2.4G Radio4/BT	●	-
6 Note4	-	●	-	● Radio4/BT	● Radio1/2.4G Radio2/5G	● Radio3/2.4G	-	●
Note1: The EUT can only be placed in Y axis for Mode 3. Note2: Mode 2 has been evaluated to be the worst case among Mode 1 ~3, thus measurement for Mode 4 will follow this same test mode. Note3: Mode 2 has been evaluated to be the worst case among Mode 1 ~4, thus measurement for Mode 5 will follow this same test mode. Note4: Mode 2 has been evaluated to be the worst case among Mode 1 ~5 thus measurement for Mode 6 will follow this same test mode. All test results were recorded in the report.								

Intentional – CTX

Radiated Emission below 1GHz test					
1. The EUT was performed at Y axis and Z axis position for Radiated emission below 1GHz test, and the worst case was found at Z axis. So the measurement will follow this same test configuration. 2. The higher gain antenna "Set 10" from external antenna and "Set 13" from internal antenna has been evaluated to be the worst case. Thus, the measurement will follow this same test configuration.					
Mode	EUT in Z axis	Set 10	Set 13	Adapter 1	PoE 1
1	●	● Radio4/BT	-	●	-
2	●	● Radio4/BT	-	-	●
3	●	-	● Radio4/BT	●	-
4	●	-	● Radio4/BT	-	●

Unintentional – Normal Link

Radiated Emission above 1GHz test / Radiated Emissions 1GHz~5 th Harmonic							
Mode 2 generated the worst test result for Radiated emission unintentional below 1GHz test, thus the measurement for Radiated emission unintentional 1GHz~5th Harmonic test will follow this same test configuration.							
Mode	EUT in Y axis	EUT in Z axis	Set 1	Set 10	Set 11	Set 13	Adapter 2
1	-	●	-	● Radio4/BT	● Radio1/2.4G Radio2/5G	● Radio3/2.4G	●

Intentional – CTX

Radiated Emission above 1GHz test								
1. The EUT can only be placed in Y axis for Mode 1. 2. The EUT was performed at Y axis and Z axis position, and the worst case was found at Z axis. So the measurement will follow this same test configuration for Mode 2 3. The EUT was performed at Y axis and Z axis position, and the worst case was found at Y axis. So the measurement will follow this same test configuration for Mode 3								
Mode	EUT in Y axis	EUT in Z axis	Set Ant. in Y axis	Set Ant. in Z axis	Set 3	Set 10	Set 13	PoE 1
1	●	-	●	-	●	-	-	●
2	-	●	●	-	-	●	-	●
3	●	-	●	-	-	-	●	●

3.6. Table for Testing Locations

Test Site Location				
Address:	No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.			
TEL:	886-3-656-9065			
FAX:	886-3-656-9085			
Test Site No.	Site Category	Location	FCC Designation No.	IC File No.
03CH01-CB	SAC	Hsin Chu	TW0006	IC 4086D
CO01-CB	Conduction	Hsin Chu	TW0006	IC 4086D
TH01-CB	OVEN Room	Hsin Chu	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC).

3.7. Table for Supporting Units

For Test Site No: CO01-CB

Unintentional – Normal Link

For Adapter mode:

Support Unit	Brand	Model	FCC ID
NB*5	DELL	E6430	DoC
Bluetooth tester	Anritsu	MT8852B	DoC
Adapter 1	PHIHONG	PSAC45W-480	N/A

For PoE mode:

Support Unit	Brand	Model	FCC ID
NB*5	DELL	E6430	DoC
Bluetooth tester	Anritsu	MT8852B	DoC
PoE 1	Symbol	PD-9001GR/AT/AC	DoC

Intentional – CTX

For Adapter mode:

Support Unit	Brand	Model	FCC ID
NB	DELL	E6430	DoC
Adapter 1	PHIHONG	PSAC45W-480	N/A

For PoE mode:

Support Unit	Brand	Model	FCC ID
NB	DELL	E6430	DoC
PoE 2	Symbol	AP-PSBIAS-2P3-ATY	DoC

For Test Site No: 03CH01-CB

For Radiated Emission below 1GHz test

Unintentional – Normal Link

For Adapter mode:

Support Unit	Brand	Model	FCC ID
NB*4	DELL	E4300	DoC
NB	Apple	Mac Book	DoC
Bluetooth tester	Anritsu	MT8852B	DoC
Adapter 2	PHIHONG	PSAC45W-480(ZE)-R	N/A

For PoE mode:

Support Unit	Brand	Model	FCC ID
NB*4	DELL	E4300	DoC
NB	Apple	Mac Book	DoC
Bluetooth tester	Anritsu	MT8852B	DoC
PoE 1	Symbol	PD-9001GR/AT/AC	DoC

Intentional – CTX

For Adapter mode:

Support Unit	Brand	Model	FCC ID
NB	DELL	E4300	DoC
Adapter 1	PHIHONG	PSAC45W-480	N/A

For PoE mode:

Support Unit	Brand	Model	FCC ID
NB	DELL	E4300	DoC
PoE 1	Symbol	PD-9001GR/AT/AC	DoC

For Radiated Emission above 1GHz test

Unintentional – Normal Link

For Adapter mode:

Support Unit	Brand	Model	FCC ID
NB*4	DELL	E4300	DoC
NB	Apple	Mac Book	DoC
Bluetooth tester	Anritsu	MT8852B	DoC
Adapter 2	PHIHONG	PSAC45W-480(ZE)-R	N/A

Intentional – CTX

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E4300	DoC
PoE 1	Symbol	PD-9001GR/AT/AC	DoC

For Test Site No: TH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E4300	DoC
PoE 1	Symbol	PD-9001GR/AT/AC	DoC

3.8. Table for Parameters of Test Software Setting

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power Parameters:

Mode 1 (Set 3 Dipole antenna / 4.22 dBi)

Test Software Version	DoS		
Frequency	2402 MHz	2442 MHz	2480 MHz
Power Parameters	Default	Default	Default

Mode 2 (Set 10 Panel antenna / 9.92 dBi)

Test Software Version	DoS		
Frequency	2402 MHz	2442 MHz	2480 MHz
Power Parameters	Default	Default	Default

Mode 3 (Set 13 Monopole antenna / 7.7 dBi)

Test Software Version	DoS		
Frequency	2402 MHz	2442 MHz	2480 MHz
Power Parameters	Default	Default	Default

3.9. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.10. Duty Cycle

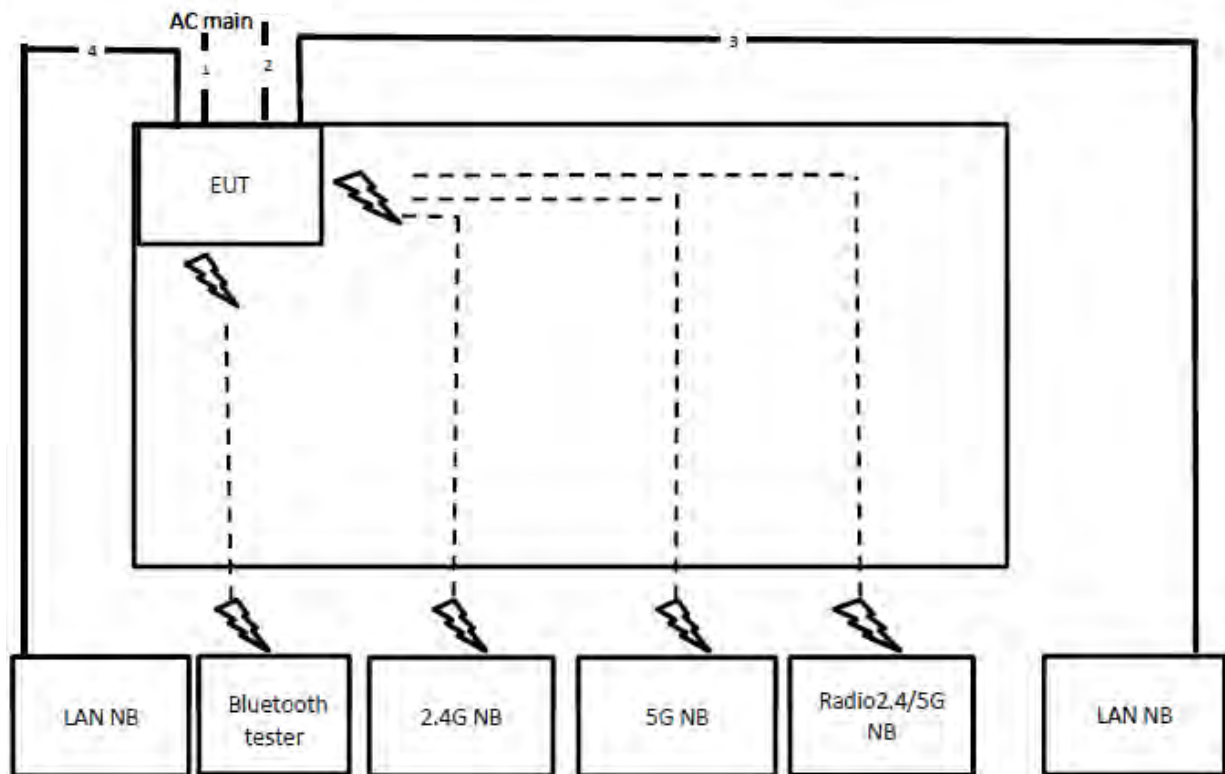
Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
GFSK	0.385	0.622	61.90%	2.08	2.60

3.11. Test Configurations

3.11.1. AC Power Line Conduction Emissions Test Configuration

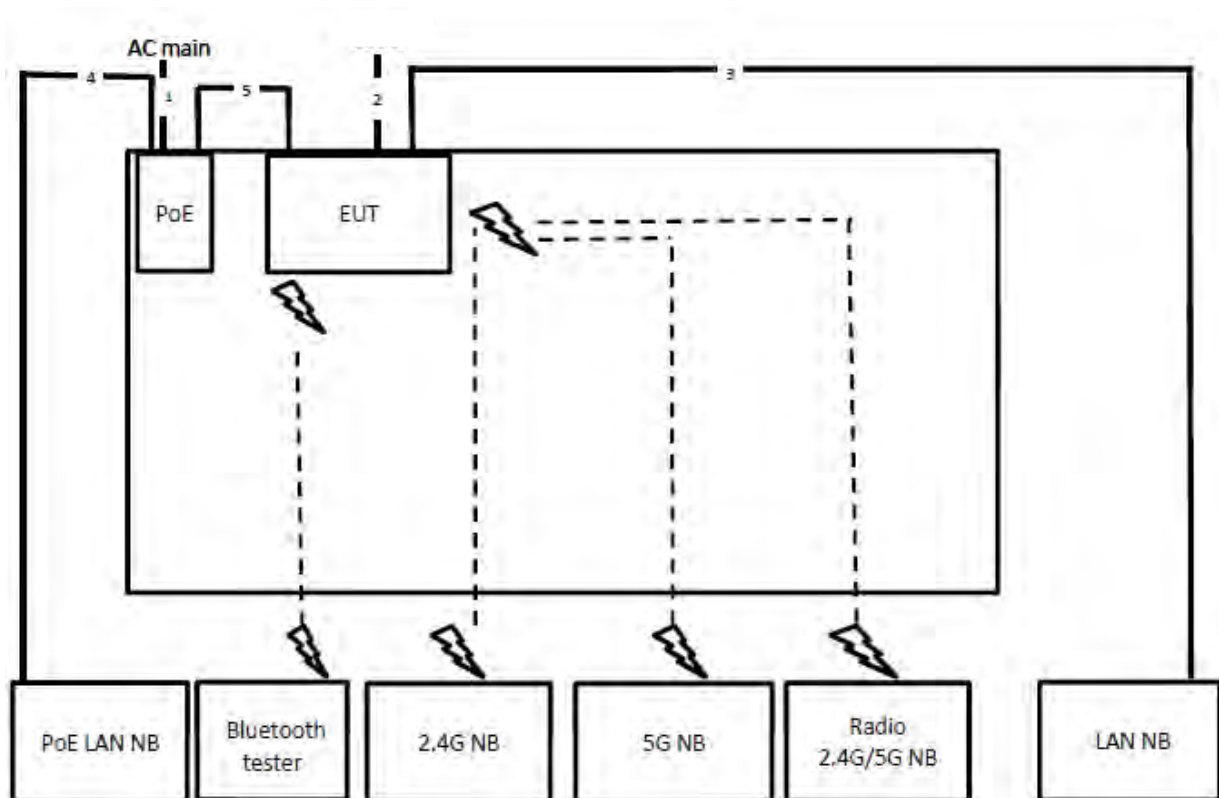
Unintentional – Normal Link

For Adapter Mode:



Item	Connection	Shielded	Length
1	Power cable	No	4.3m
2	Console cable	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m

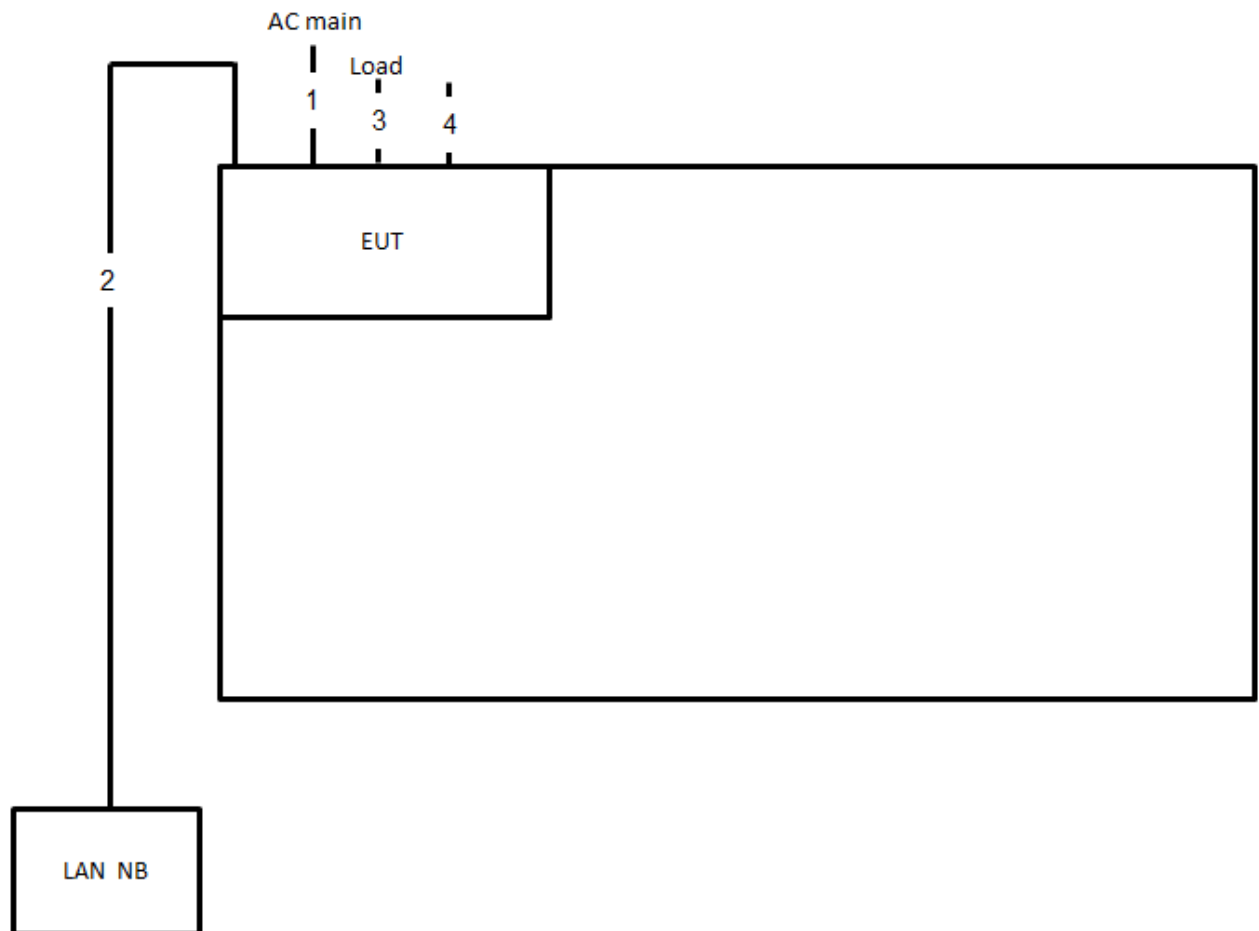
For PoE Mode:



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	Console cable	No	1.5m
3	RJ-45 cable	No	10m
4	RJ-45 cable	No	10m
5	RJ-45 cable	No	1.5m

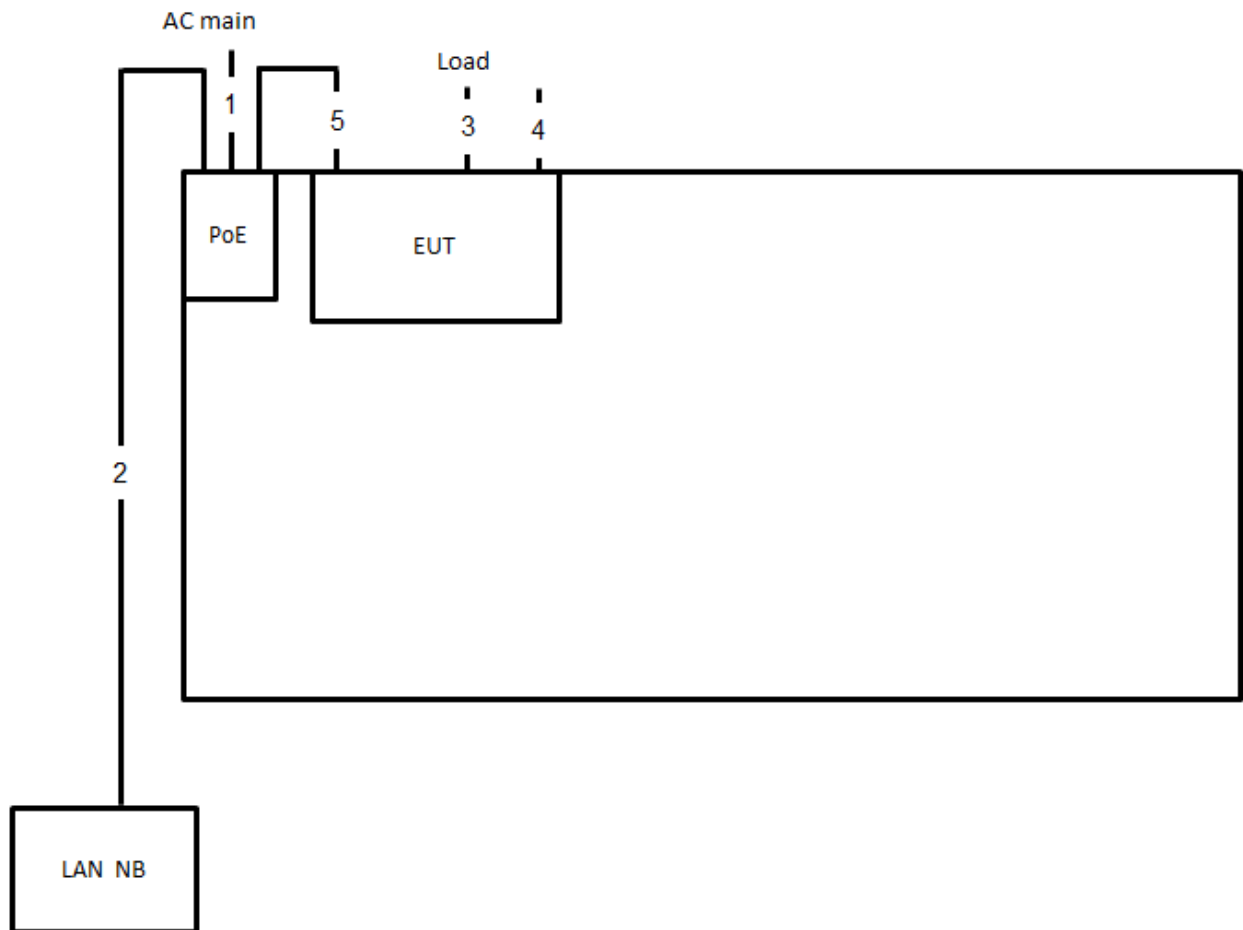
Intentional – CTX

For Adapter Mode:



Item	Connection	Shielded	Length
1	Power cable	No	4.3m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1m
4	Console cable	No	1.5m

For PoE Mode:



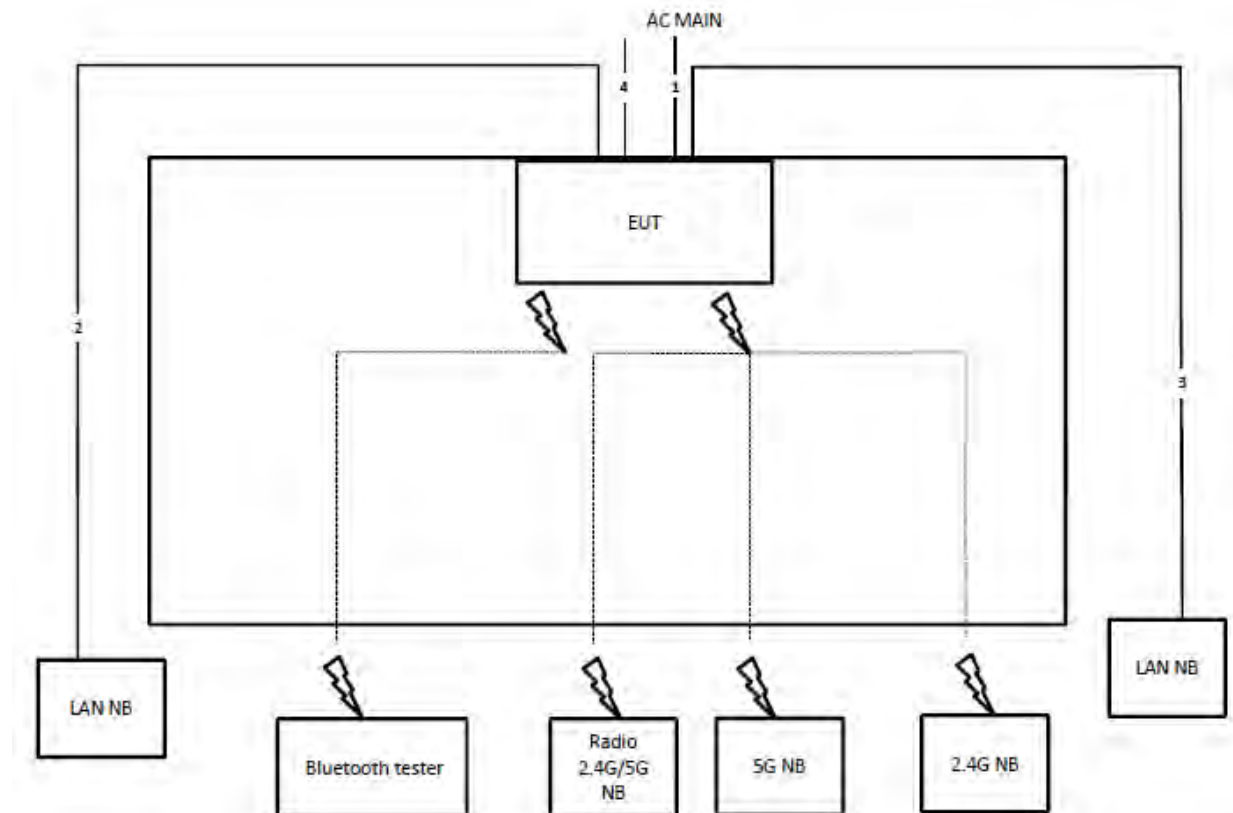
Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1m
4	Console cable	No	1.5m
5	RJ-45 cable	No	1m

3.11.2. Radiation Emissions Test Configuration

Test Configuration: 30MHz~1GHz

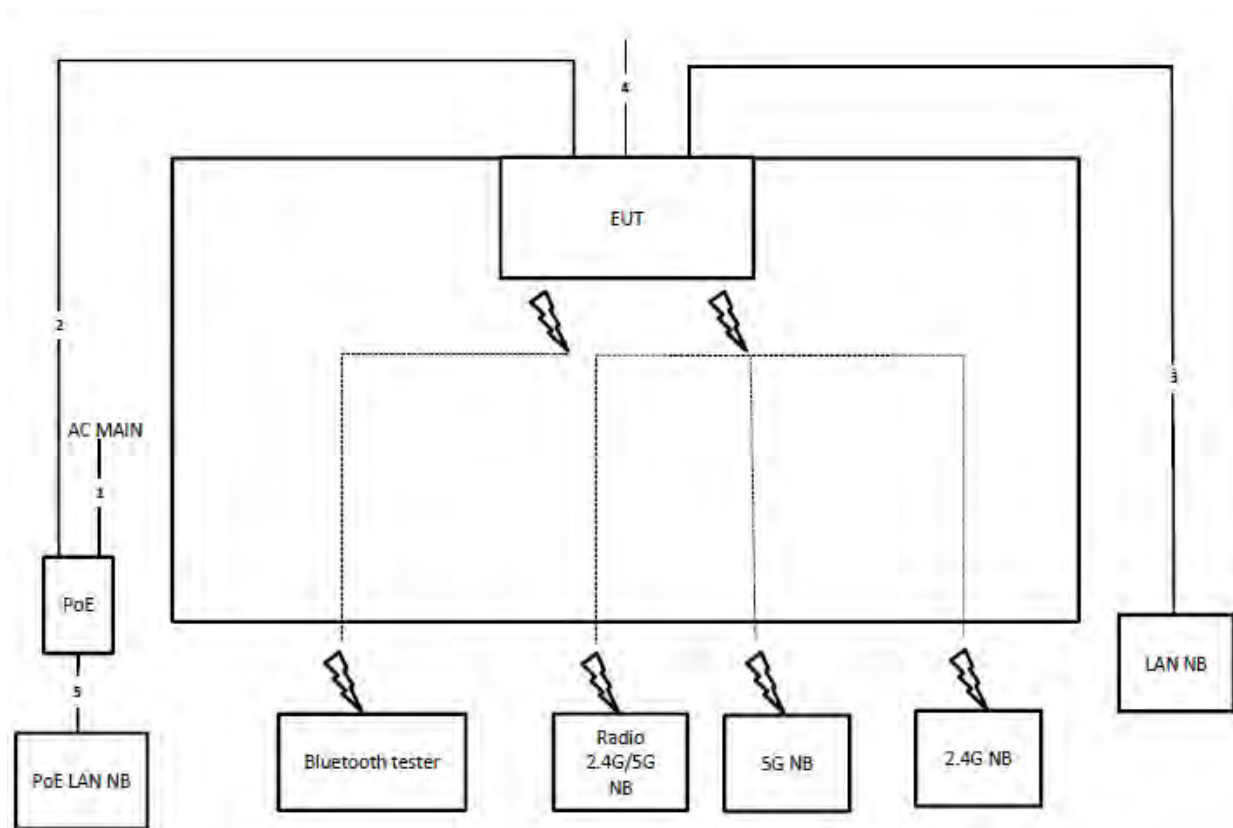
Unintentional – Normal Link

For Adapter Mode:



Item	Connection	Shielded	Length
1	Power cable	No	4.3m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	Console cable	No	1.5m

For PoE Mode:

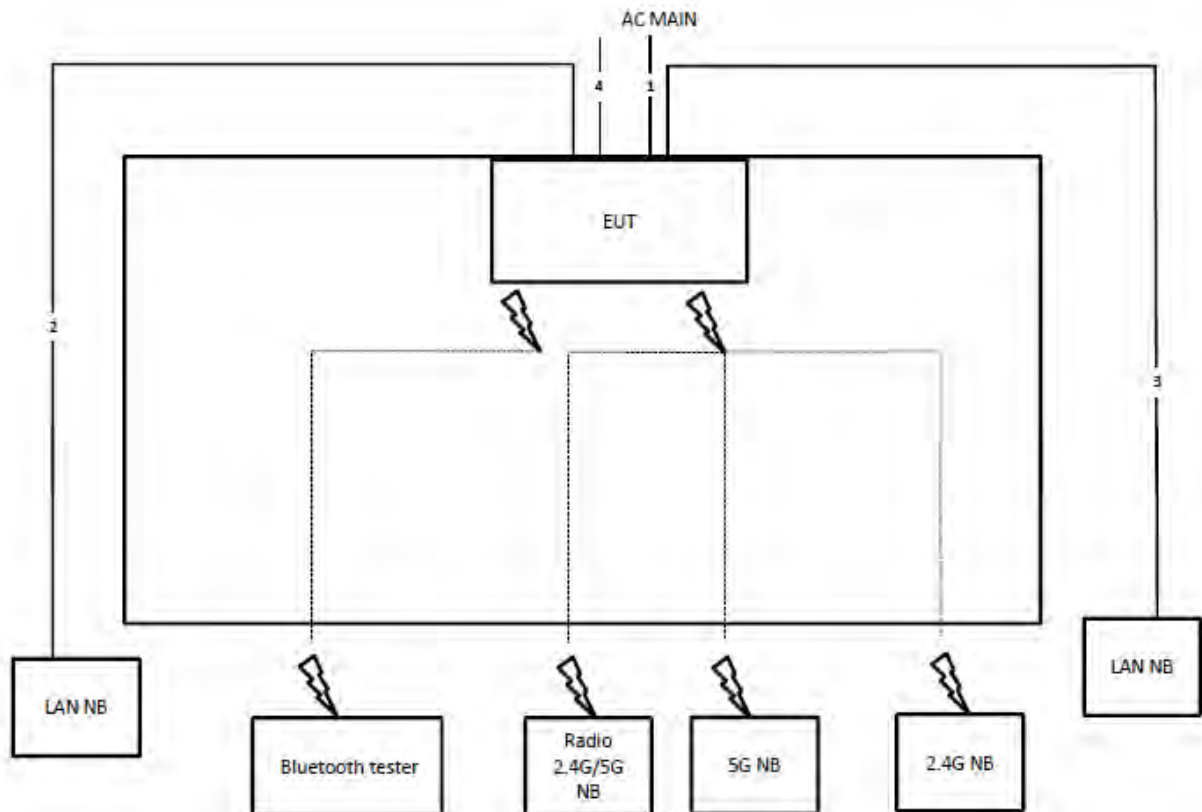


Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	Console cable	No	1.5m
5	RJ-45 cable	No	1.5m

Test Configuration: above 1GHz Unintentional 1GHz~5th Harmonic

Unintentional – Normal Link

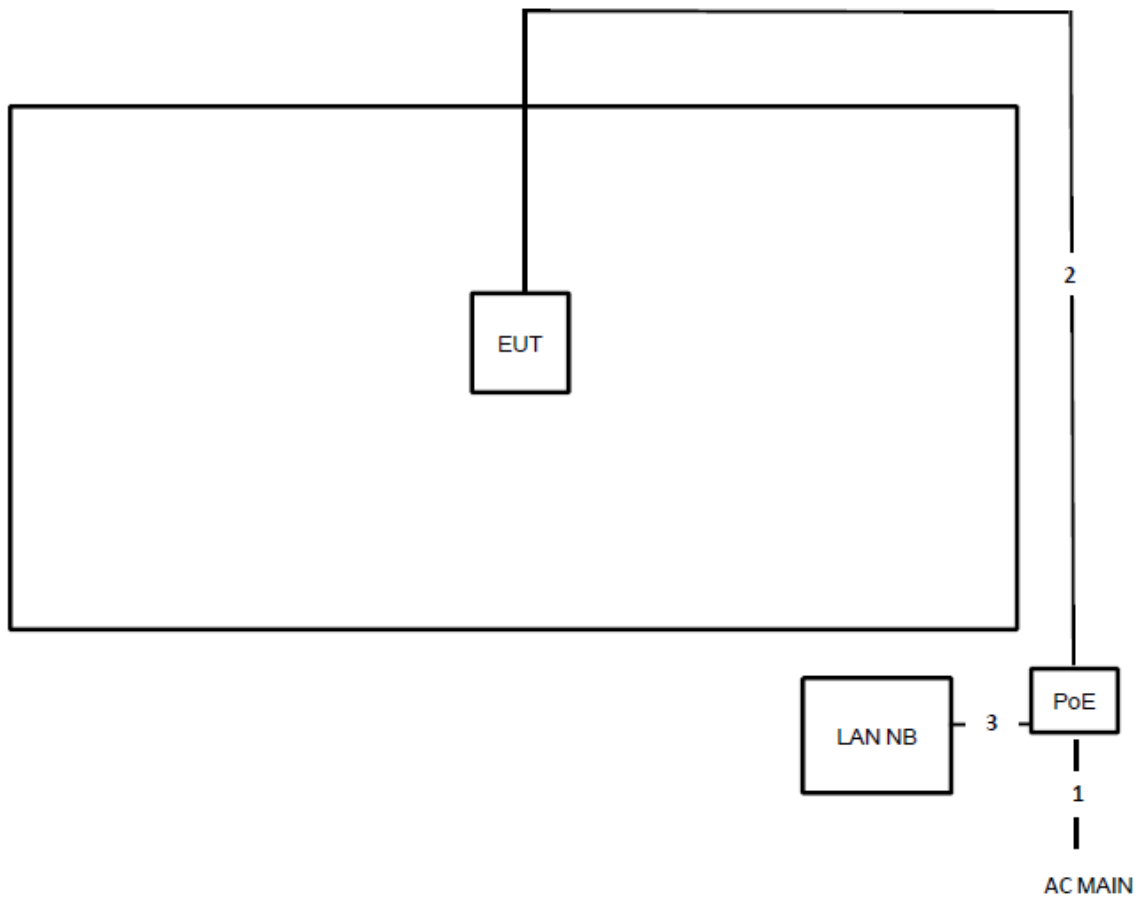
For Adapter Mode:



Item	Connection	Shielded	Length
1	Power cable	No	4.3m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	10m
4	Console cable	No	1.5m

Test Configuration: above 1GHz Intentional 1GHz~10th Harmonic

Intentional – CTX



Item	Connection	Shielded	Length
1	Power cable	No	1.8m
2	RJ-45 cable	No	10m
3	RJ-45 cable	No	1m

4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product which is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

4.1.2. Measuring Instruments and Setting

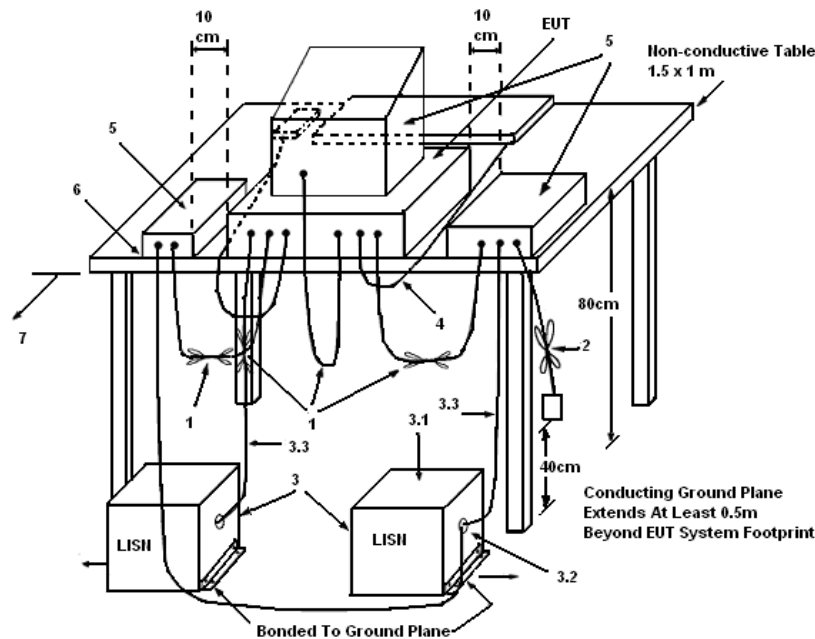
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



LEGEND:

- (1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- (2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- (3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω . LISN can be placed on top of, or immediately beneath, reference ground plane.
 - (3.1) All other equipment powered from additional LISN(s).
 - (3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
 - (3.3) LISN at least 80 cm from nearest part of EUT chassis.
- (4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
- (5) Non-EUT components of EUT system being tested.
- (6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
- (7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

4.1.5. Test Deviation

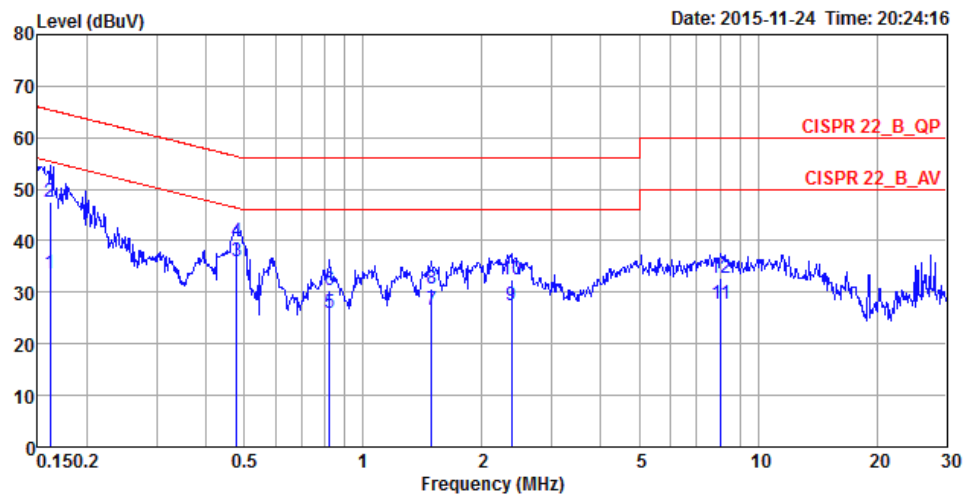
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

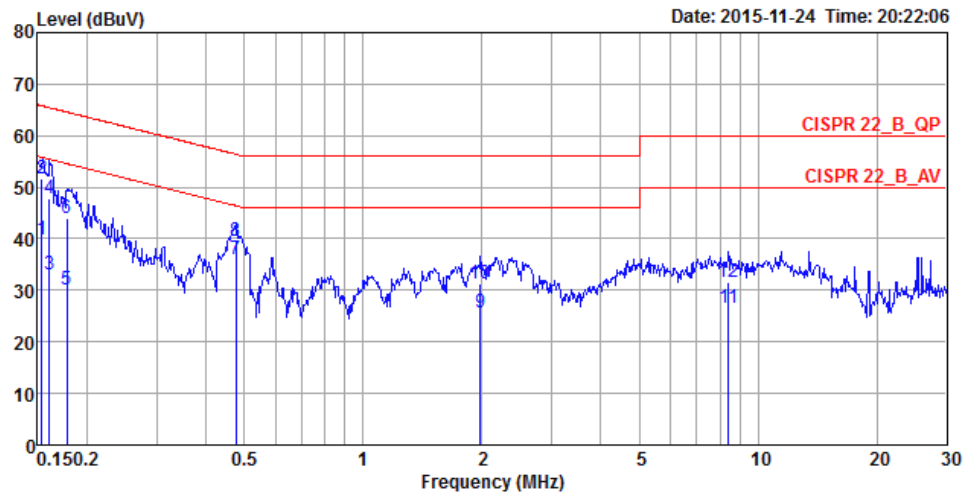
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	23°C	Humidity	59%
Test Engineer	Parody Lin & Da Deng	Phase	Line
Configuration	Unintentional-Normal Link	Test Mode	Mode 1



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1616	33.64	-21.74	55.38	23.69	9.93	0.02	LINE	Average
2	0.1616	47.43	-17.95	65.38	37.48	9.93	0.02	LINE	QP
3	0.4786	36.07	-10.29	46.36	26.09	9.94	0.04	LINE	Average
4	0.4786	39.78	-16.58	56.36	29.80	9.94	0.04	LINE	QP
5	0.8217	26.04	-19.96	46.00	16.05	9.95	0.04	LINE	Average
6	0.8217	30.49	-25.51	56.00	20.50	9.95	0.04	LINE	QP
7	1.4874	26.59	-19.41	46.00	16.55	9.98	0.06	LINE	Average
8	1.4874	30.80	-25.20	56.00	20.76	9.98	0.06	LINE	QP
9	2.3710	27.38	-18.62	46.00	17.32	10.00	0.06	LINE	Average
10	2.3710	32.59	-23.41	56.00	22.53	10.00	0.06	LINE	QP
11	8.0624	27.76	-22.24	50.00	17.45	10.14	0.17	LINE	Average
12	8.0624	32.71	-27.29	60.00	22.40	10.14	0.17	LINE	QP

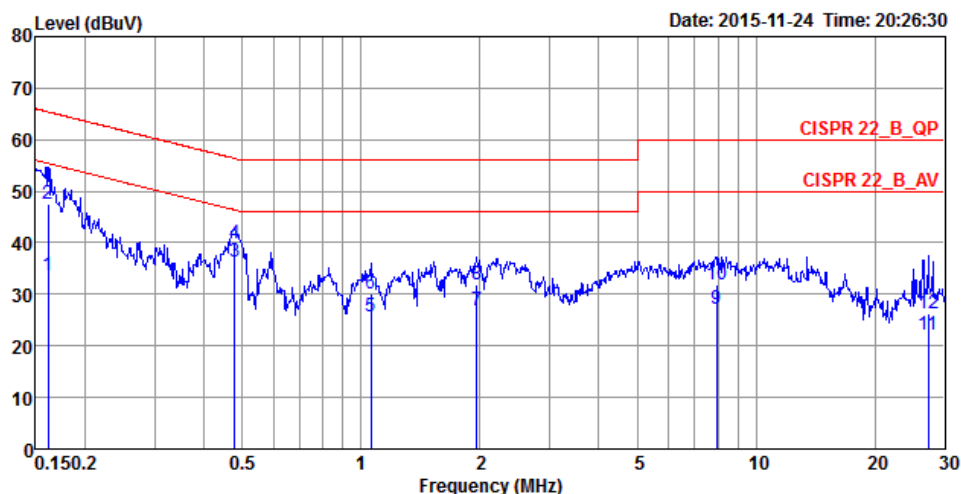
Temperature	23°C	Humidity	59%
Test Engineer	Parody Lin & Da Deng	Phase	Neutral
Configuration	Unintentional-Normal Link	Test Mode	Mode 1



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1534	39.88	-15.93	55.81	30.08	9.78	0.02	NEUTRAL	Average
2	0.1534	51.69	-14.12	65.81	41.89	9.78	0.02	NEUTRAL	QP
3	0.1607	33.00	-22.43	55.43	23.20	9.78	0.02	NEUTRAL	Average
4	0.1607	47.75	-17.68	65.43	37.95	9.78	0.02	NEUTRAL	QP
5	0.1777	30.11	-24.48	54.59	20.30	9.79	0.02	NEUTRAL	Average
6	0.1777	43.88	-20.71	64.59	34.07	9.79	0.02	NEUTRAL	QP
7	0.4761	35.99	-10.42	46.41	26.16	9.79	0.04	NEUTRAL	Average
8	0.4761	39.60	-16.81	56.41	29.77	9.79	0.04	NEUTRAL	QP
9	1.9801	25.80	-20.20	46.00	15.90	9.84	0.06	NEUTRAL	Average
10	1.9801	31.19	-24.81	56.00	21.29	9.84	0.06	NEUTRAL	QP
11	8.4115	26.62	-23.38	50.00	16.45	9.98	0.19	NEUTRAL	Average
12	8.4115	31.49	-28.51	60.00	21.32	9.98	0.19	NEUTRAL	QP

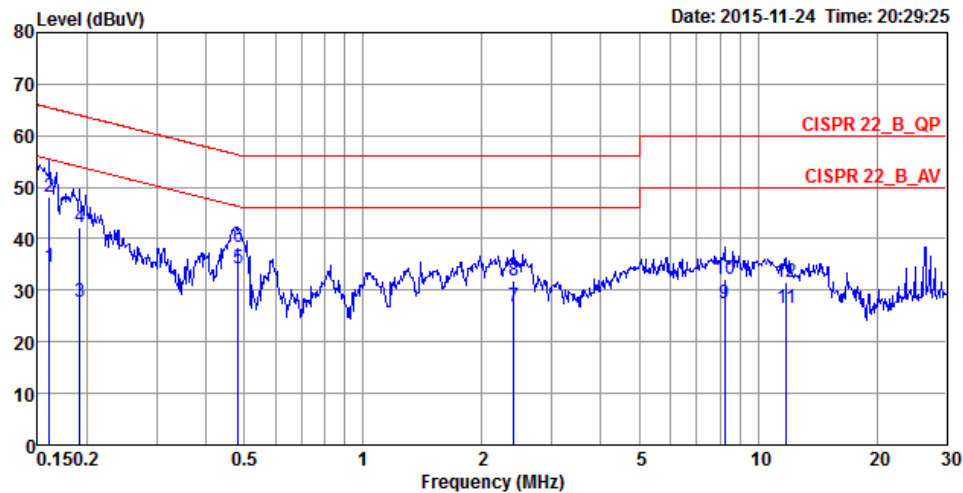
Note: Level = Read Level + LISN Factor + Cable Loss.

Temperature	23°C	Humidity	59%
Test Engineer	Parody Lin & Da Deng	Phase	Line
Configuration	Unintentional-Normal Link	Test Mode	Mode 2



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1616	33.64	-21.74	55.38	23.69	9.93	0.02	LINE	Average
2	0.1616	47.52	-17.86	65.38	37.57	9.93	0.02	LINE	QP
3	0.4786	36.30	-10.06	46.36	26.32	9.94	0.04	LINE	Average
4	0.4786	39.90	-16.46	56.36	29.92	9.94	0.04	LINE	QP
5	1.0597	25.58	-20.42	46.00	15.57	9.96	0.05	LINE	Average
6	1.0597	30.20	-25.80	56.00	20.19	9.96	0.05	LINE	QP
7	1.9593	26.87	-19.13	46.00	16.82	9.99	0.06	LINE	Average
8	1.9593	31.77	-24.23	56.00	21.72	9.99	0.06	LINE	QP
9	7.9353	27.16	-22.84	50.00	16.85	10.14	0.17	LINE	Average
10	7.9353	31.98	-28.02	60.00	21.67	10.14	0.17	LINE	QP
11	27.2711	22.26	-27.74	50.00	11.36	10.62	0.28	LINE	Average
12	27.2711	26.16	-33.84	60.00	15.26	10.62	0.28	LINE	QP

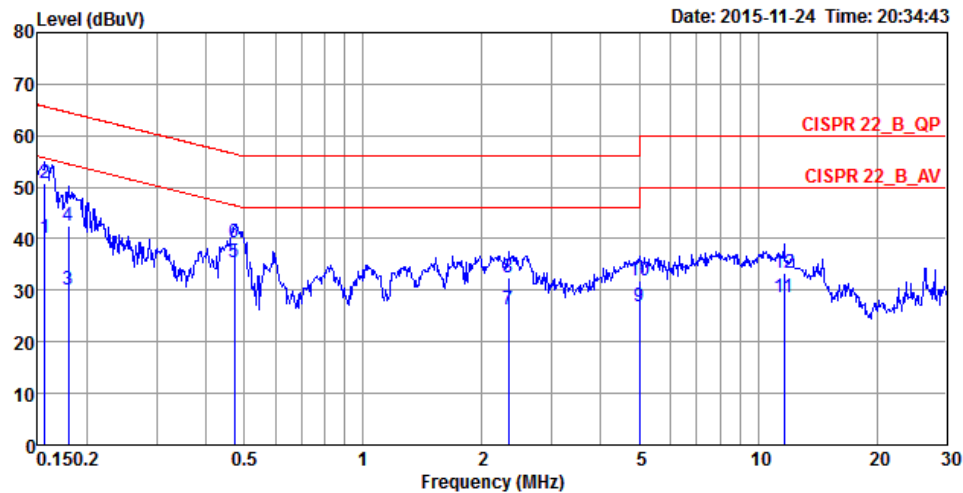
Temperature	23°C	Humidity	59%
Test Engineer	Parody Lin & Da Deng	Phase	Neutral
Configuration	Unintentional-Normal Link	Test Mode	Mode 2



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1607	34.53	-20.90	55.43	24.73	9.78	0.02	NEUTRAL	Average
2	0.1607	48.06	-17.37	65.43	38.26	9.78	0.02	NEUTRAL	QP
3	0.1914	27.73	-26.25	53.98	17.92	9.79	0.02	NEUTRAL	Average
4	0.1914	42.20	-21.78	63.98	32.39	9.79	0.02	NEUTRAL	QP
5	0.4837	34.14	-12.13	46.27	24.31	9.79	0.04	NEUTRAL	Average
6	0.4837	38.37	-17.90	56.27	28.54	9.79	0.04	NEUTRAL	QP
7	2.4090	26.89	-19.11	46.00	16.98	9.85	0.06	NEUTRAL	Average
8	2.4090	32.02	-23.98	56.00	22.11	9.85	0.06	NEUTRAL	QP
9	8.2351	27.52	-22.48	50.00	17.36	9.98	0.18	NEUTRAL	Average
10	8.2351	32.31	-27.69	60.00	22.15	9.98	0.18	NEUTRAL	QP
11	11.8070	26.56	-23.44	50.00	16.26	10.05	0.25	NEUTRAL	Average
12	11.8070	31.56	-28.44	60.00	21.26	10.05	0.25	NEUTRAL	QP

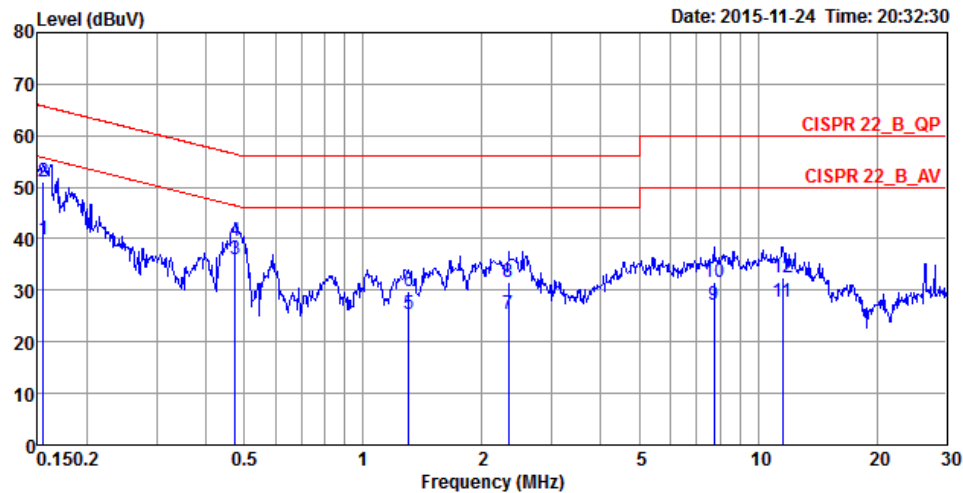
Note: Level = Read Level + LISN Factor + Cable Loss.

Temperature	23°C	Humidity	59%
Test Engineer	Parody Lin & Da Deng	Phase	Line
Configuration	Unintentional-Normal Link	Test Mode	Mode 3



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1565	40.10	-15.55	55.65	30.15	9.93	0.02	LINE	Average
2	0.1565	50.81	-14.84	65.65	40.86	9.93	0.02	LINE	QP
3	0.1796	30.01	-24.49	54.50	20.06	9.93	0.02	LINE	Average
4	0.1796	42.65	-21.85	64.50	32.70	9.93	0.02	LINE	QP
5	0.4711	35.33	-11.16	46.49	25.35	9.94	0.04	LINE	Average
6	0.4711	39.15	-17.34	56.49	29.17	9.94	0.04	LINE	QP
7	2.3336	26.18	-19.82	46.00	16.12	10.00	0.06	LINE	Average
8	2.3336	32.39	-23.61	56.00	22.33	10.00	0.06	LINE	QP
9	5.0046	26.99	-23.01	50.00	16.84	10.06	0.09	LINE	Average
10	5.0046	32.03	-27.97	60.00	21.88	10.06	0.09	LINE	QP
11	11.6208	28.56	-21.44	50.00	18.07	10.24	0.25	LINE	Average
12	11.6208	33.34	-26.66	60.00	22.85	10.24	0.25	LINE	QP

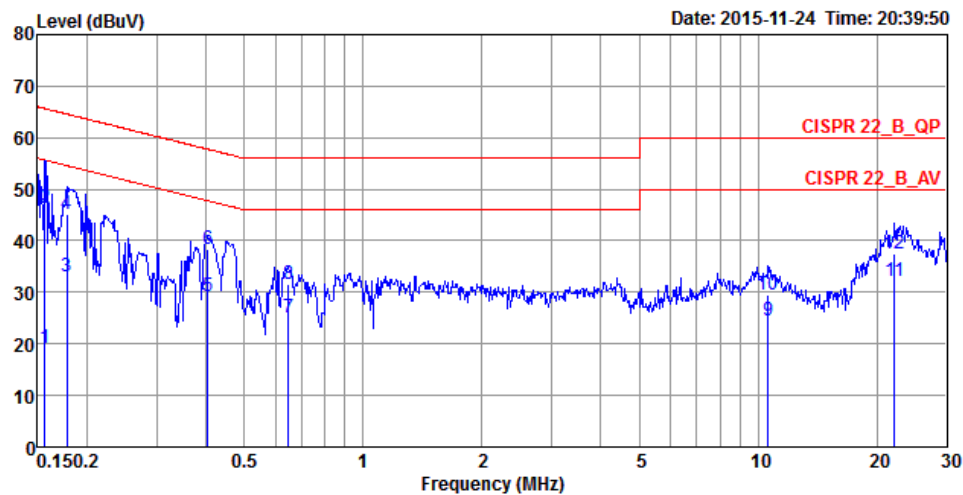
Temperature	23°C	Humidity	59%
Test Engineer	Parody Lin & Da Deng	Phase	Neutral
Configuration	Unintentional-Normal Link	Test Mode	Mode 3



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1548	39.88	-15.86	55.74	30.08	9.78	0.02	NEUTRAL	Average
2	0.1548	51.02	-14.72	65.74	41.22	9.78	0.02	NEUTRAL	QP
3	0.4736	36.11	-10.34	46.45	26.28	9.79	0.04	NEUTRAL	Average
4	0.4736	39.62	-16.83	56.45	29.79	9.79	0.04	NEUTRAL	QP
5	1.3029	25.40	-20.60	46.00	15.53	9.82	0.05	NEUTRAL	Average
6	1.3029	29.85	-26.15	56.00	19.98	9.82	0.05	NEUTRAL	QP
7	2.3336	25.35	-20.65	46.00	15.44	9.85	0.06	NEUTRAL	Average
8	2.3336	31.64	-24.36	56.00	21.73	9.85	0.06	NEUTRAL	QP
9	7.7278	27.02	-22.98	50.00	16.90	9.97	0.15	NEUTRAL	Average
10	7.7278	31.69	-28.31	60.00	21.57	9.97	0.15	NEUTRAL	QP
11	11.5594	27.66	-22.34	50.00	17.37	10.04	0.25	NEUTRAL	Average
12	11.5594	32.55	-27.45	60.00	22.26	10.04	0.25	NEUTRAL	QP

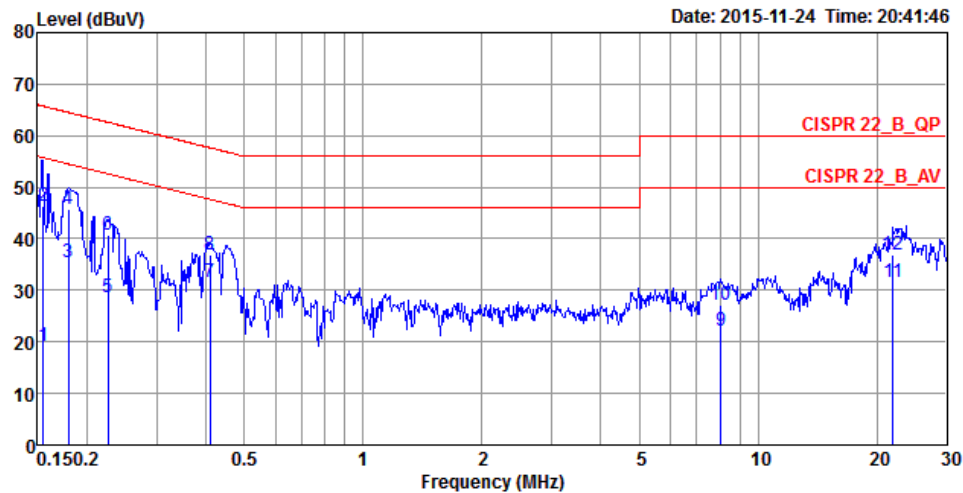
Note: Level = Read Level + LISN Factor + Cable Loss.

Temperature	23°C	Humidity	59%
Test Engineer	Parody Lin & Da Deng	Phase	Line
Configuration	Unintentional-Normal Link	Test Mode	Mode 4



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1565	19.24	-36.41	55.65	9.29	9.93	0.02	LINE	Average
2	0.1565	46.26	-19.39	65.65	36.31	9.93	0.02	LINE	QP
3	0.1777	33.14	-21.45	54.59	23.19	9.93	0.02	LINE	Average
4	0.1777	45.04	-19.55	64.59	35.09	9.93	0.02	LINE	QP
5	0.4040	29.34	-18.43	47.77	19.37	9.93	0.04	LINE	Average
6	0.4040	38.34	-19.43	57.77	28.37	9.93	0.04	LINE	QP
7	0.6474	25.24	-20.76	46.00	15.25	9.95	0.04	LINE	Average
8	0.6474	31.68	-24.32	56.00	21.69	9.95	0.04	LINE	QP
9	10.6199	24.54	-25.46	50.00	14.09	10.20	0.25	LINE	Average
10	10.6199	29.49	-30.51	60.00	19.04	10.20	0.25	LINE	QP
11	22.1801	32.29	-17.71	50.00	21.52	10.50	0.27	LINE	Average
12	22.1801	37.62	-22.38	60.00	26.85	10.50	0.27	LINE	QP

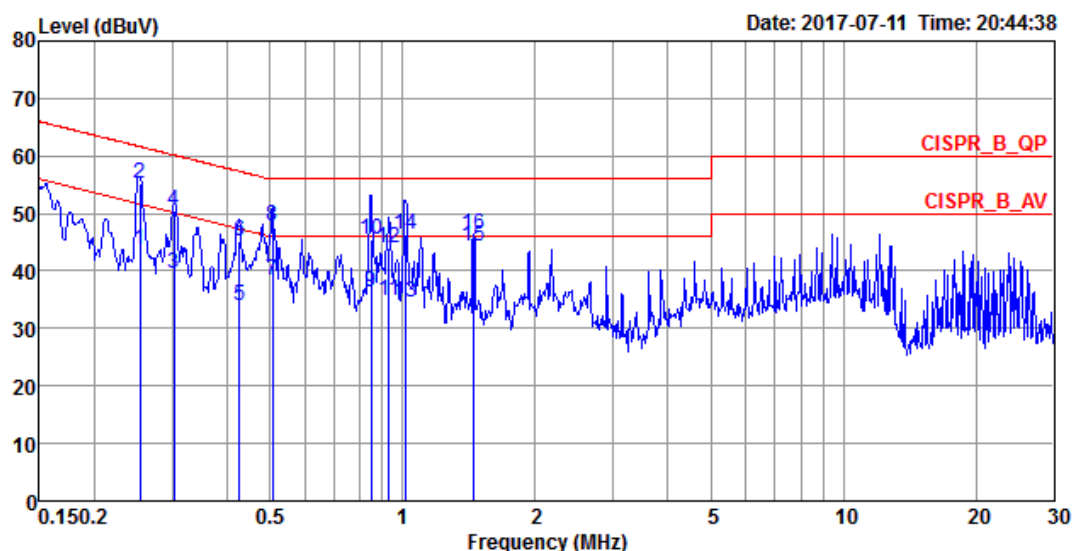
Temperature	23°C	Humidity	59%
Test Engineer	Parody Lin & Da Deng	Phase	Neutral
Configuration	Unintentional-Normal Link	Test Mode	Mode 4



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1548	19.19	-36.55	55.74	9.39	9.78	0.02	NEUTRAL	Average
2	0.1548	46.29	-19.45	65.74	36.49	9.78	0.02	NEUTRAL	QP
3	0.1796	35.37	-19.13	54.50	25.56	9.79	0.02	NEUTRAL	Average
4	0.1796	45.89	-18.61	64.50	36.08	9.79	0.02	NEUTRAL	QP
5	0.2256	28.61	-24.00	52.61	18.79	9.79	0.03	NEUTRAL	Average
6	0.2256	40.63	-21.98	62.61	30.81	9.79	0.03	NEUTRAL	QP
7	0.4105	31.57	-16.07	47.64	21.74	9.79	0.04	NEUTRAL	Average
8	0.4105	36.83	-20.81	57.64	27.00	9.79	0.04	NEUTRAL	QP
9	8.0624	22.15	-27.85	50.00	12.00	9.98	0.17	NEUTRAL	Average
10	8.0624	27.13	-32.87	60.00	16.98	9.98	0.17	NEUTRAL	QP
11	21.9463	31.66	-18.34	50.00	21.18	10.22	0.26	NEUTRAL	Average
12	21.9463	37.00	-23.00	60.00	26.52	10.22	0.26	NEUTRAL	QP

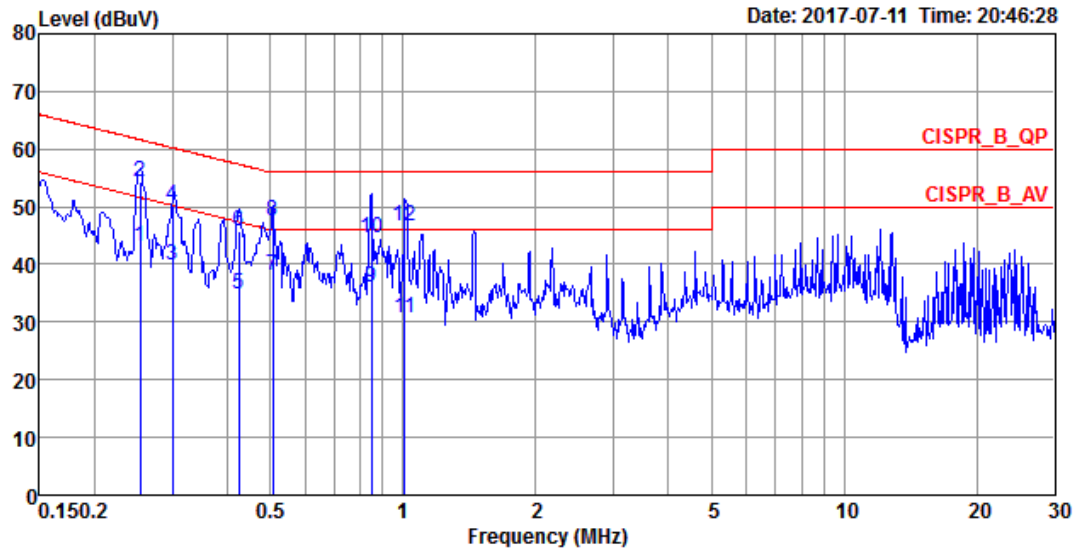
Note: Level = Read Level + LISN Factor + Cable Loss.

Temperature	22°C	Humidity	52%
Test Engineer	Howard Liu	Phase	Line
Configuration	Intentional-CTX	Test Mode	Mode 1



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2535	43.75	-7.89	51.64	33.74	9.92	0.09	Average	LINE
2	0.2535	55.17	-6.47	61.64	45.16	9.92	0.09	QP	LINE
3	0.3035	39.48	-10.67	50.15	29.49	9.93	0.06	Average	LINE
4	0.3035	50.44	-9.71	60.15	40.45	9.93	0.06	QP	LINE
5	0.4260	34.05	-13.28	47.33	24.08	9.95	0.02	Average	LINE
6	0.4260	45.09	-12.24	57.33	35.12	9.95	0.02	QP	LINE
7	0.5074	38.39	-7.61	46.00	28.38	9.95	0.06	Average	LINE
8	0.5074	47.76	-8.24	56.00	37.75	9.95	0.06	QP	LINE
9	0.8483	36.36	-9.64	46.00	26.24	9.96	0.16	Average	LINE
10	0.8483	45.38	-10.62	56.00	35.26	9.96	0.16	QP	LINE
11	0.9331	34.71	-11.29	46.00	24.57	9.96	0.18	Average	LINE
12	0.9331	43.91	-12.09	56.00	33.77	9.96	0.18	QP	LINE
13	1.0157	34.60	-11.40	46.00	24.45	9.96	0.19	Average	LINE
14	1.0157	46.45	-9.55	56.00	36.30	9.96	0.19	QP	LINE
15	1.4485	44.32	-1.68	46.00	34.16	9.96	0.20	Average	LINE
16	1.4485	46.22	-9.78	56.00	36.06	9.96	0.20	QP	LINE

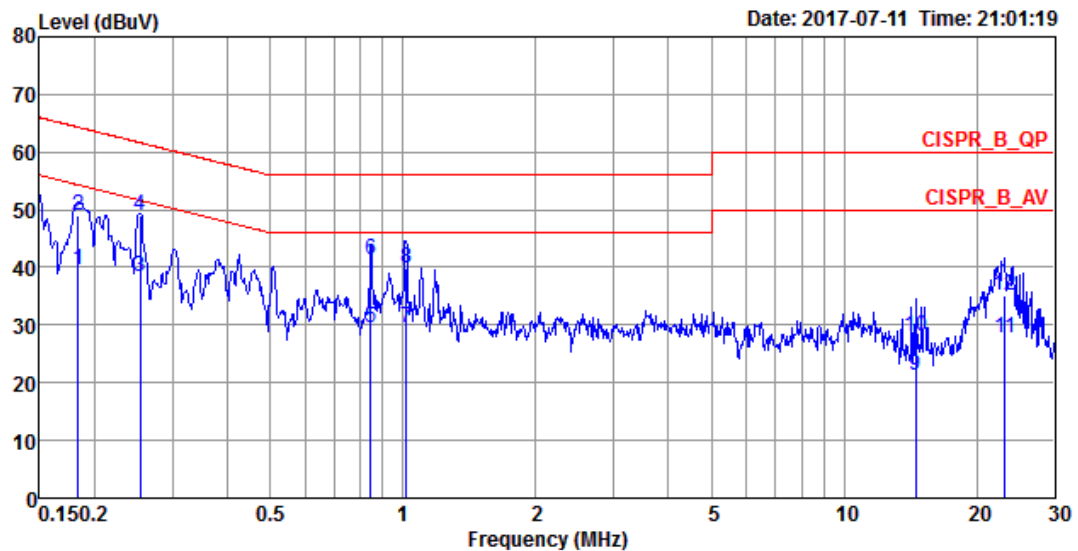
Temperature	22°C	Humidity	52%
Test Engineer	Howard Liu	Phase	Neutral
Configuration	Intentional-CTX	Test Mode	Mode 1



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2535	43.14	-8.50	51.64	32.97	10.08	0.09	Average	NEUTRAL
2	0.2535	54.26	-7.38	61.64	44.09	10.08	0.09	QP	NEUTRAL
3	0.3003	39.84	-10.40	50.24	29.63	10.15	0.06	Average	NEUTRAL
4	0.3003	50.13	-10.11	60.24	39.92	10.15	0.06	QP	NEUTRAL
5	0.4237	34.86	-12.51	47.37	24.59	10.25	0.02	Average	NEUTRAL
6	0.4237	45.79	-11.58	57.37	35.52	10.25	0.02	QP	NEUTRAL
7	0.5074	38.21	-7.79	46.00	27.93	10.22	0.06	Average	NEUTRAL
8	0.5074	47.51	-8.49	56.00	37.23	10.22	0.06	QP	NEUTRAL
9	0.8483	35.94	-10.06	46.00	25.68	10.10	0.16	Average	NEUTRAL
10	0.8483	44.62	-11.38	56.00	34.36	10.10	0.16	QP	NEUTRAL
11	1.0103	30.62	-15.38	46.00	20.38	10.05	0.19	Average	NEUTRAL
12	1.0103	46.59	-9.41	56.00	36.35	10.05	0.19	QP	NEUTRAL

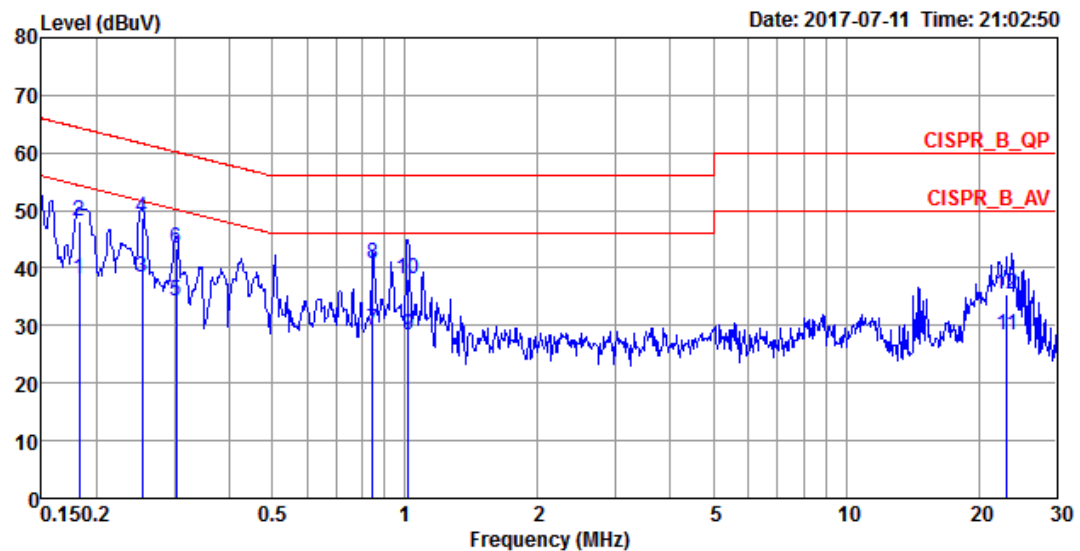
Note: Level = Read Level + LISN Factor + Cable Loss.

Temperature	22°C	Humidity	52%
Test Engineer	Howard Liu	Phase	Line
Configuration	Intentional-CTX	Test Mode	Mode 2



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1835	39.67	-14.66	54.33	29.62	9.91	0.14	Average	LINE
2	0.1835	49.07	-15.26	64.33	39.02	9.91	0.14	QP	LINE
3	0.2535	38.27	-13.37	51.64	28.26	9.92	0.09	Average	LINE
4	0.2535	48.94	-12.70	61.64	38.93	9.92	0.09	QP	LINE
5	0.8438	29.46	-16.54	46.00	19.34	9.96	0.16	Average	LINE
6	0.8438	41.37	-14.63	56.00	31.25	9.96	0.16	QP	LINE
7	1.0157	29.61	-16.39	46.00	19.46	9.96	0.19	Average	LINE
8	1.0157	39.88	-16.12	56.00	29.73	9.96	0.19	QP	LINE
9	14.5171	21.13	-28.87	50.00	10.72	10.22	0.19	Average	LINE
10	14.5171	27.94	-32.06	60.00	17.53	10.22	0.19	QP	LINE
11	23.1404	27.76	-22.24	50.00	17.13	10.40	0.23	Average	LINE
12	23.1404	34.98	-25.02	60.00	24.35	10.40	0.23	QP	LINE

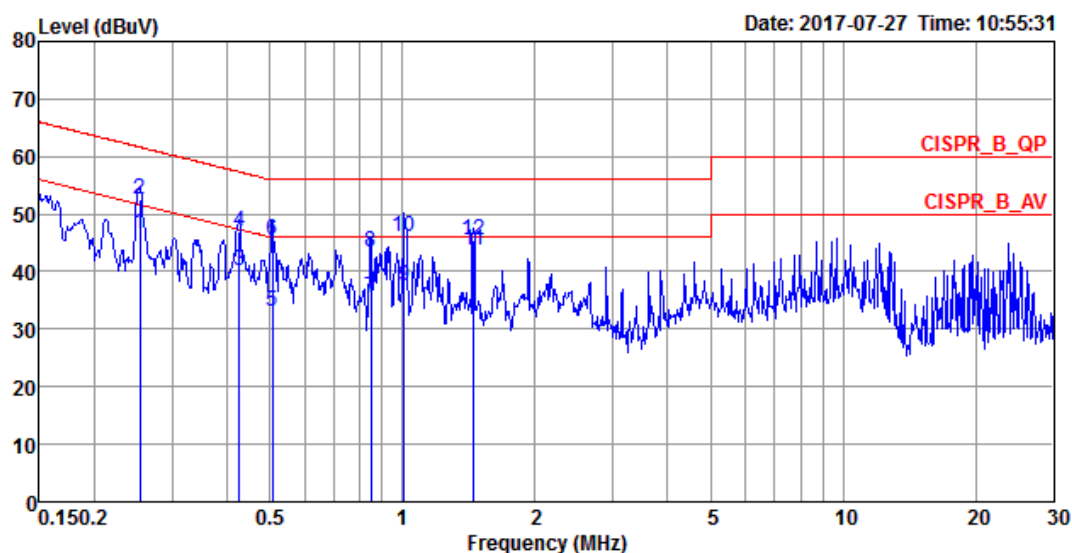
Temperature	22°C	Humidity	52%
Test Engineer	Howard Liu	Phase	Neutral
Configuration	Intentional-CTX	Test Mode	Mode 2



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1825	38.19	-16.18	54.37	28.04	10.01	0.14	Average	NEUTRAL
2	0.1825	48.23	-16.14	64.37	38.08	10.01	0.14	QP	NEUTRAL
3	0.2535	38.50	-13.14	51.64	28.33	10.08	0.09	Average	NEUTRAL
4	0.2535	48.77	-12.87	61.64	38.60	10.08	0.09	QP	NEUTRAL
5	0.3035	34.18	-15.97	50.15	23.97	10.15	0.06	Average	NEUTRAL
6	0.3035	43.46	-16.69	60.15	33.25	10.15	0.06	QP	NEUTRAL
7	0.8438	29.24	-16.76	46.00	18.98	10.10	0.16	Average	NEUTRAL
8	0.8438	40.72	-15.28	56.00	30.46	10.10	0.16	QP	NEUTRAL
9	1.0157	28.45	-17.55	46.00	18.21	10.05	0.19	Average	NEUTRAL
10	1.0157	38.09	-17.91	56.00	27.85	10.05	0.19	QP	NEUTRAL
11	23.1404	28.33	-21.67	50.00	17.69	10.41	0.23	Average	NEUTRAL
12	23.1404	35.33	-24.67	60.00	24.69	10.41	0.23	QP	NEUTRAL

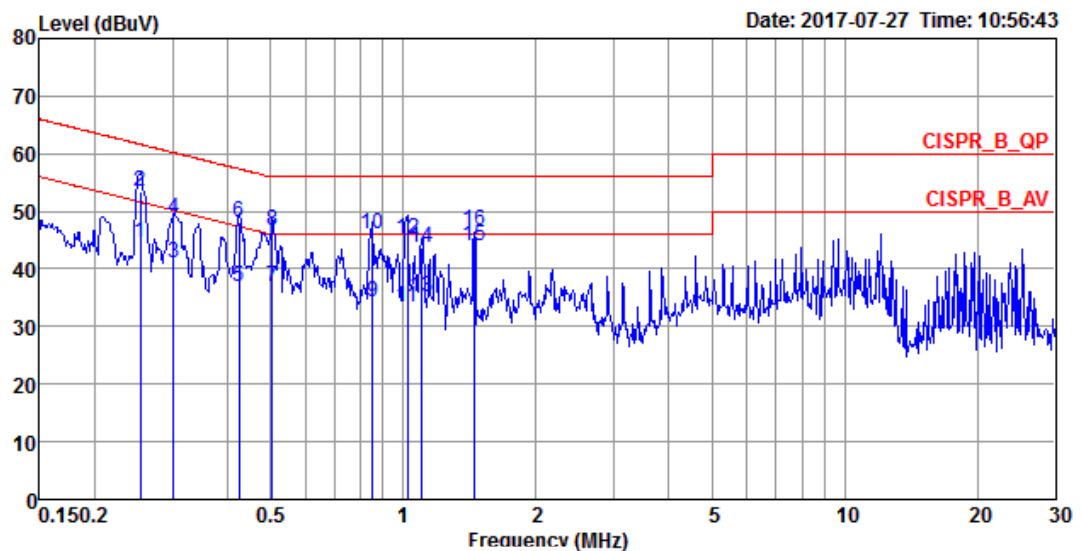
Note: Level = Read Level + LISN Factor + Cable Loss.

Temperature	22°C	Humidity	52%
Test Engineer	Howard Liu	Phase	Line
Configuration	Intentional-CTX	Test Mode	Mode 3



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.2535	46.61	-5.03	51.64	46.61	0.00	0.00	Average	LINE
2	0.2535	52.61	-9.03	61.64	52.61	0.00	0.00	QP	LINE
3	0.4260	40.24	-7.09	47.33	40.24	0.00	0.00	Average	LINE
4	0.4260	47.05	-10.28	57.33	47.05	0.00	0.00	QP	LINE
5	0.5074	33.00	-13.00	46.00	33.00	0.00	0.00	Average	LINE
6	0.5074	45.57	-10.43	56.00	45.57	0.00	0.00	QP	LINE
7	0.8483	35.47	-10.53	46.00	35.47	0.00	0.00	Average	LINE
8	0.8483	43.34	-12.66	56.00	43.34	0.00	0.00	QP	LINE
9	1.0103	37.61	-8.39	46.00	37.61	0.00	0.00	Average	LINE
10	1.0103	46.19	-9.81	56.00	46.19	0.00	0.00	QP	LINE
11	1.4485	43.81	-2.19	46.00	43.81	0.00	0.00	Average	LINE
12	1.4485	45.42	-10.58	56.00	45.42	0.00	0.00	QP	LINE

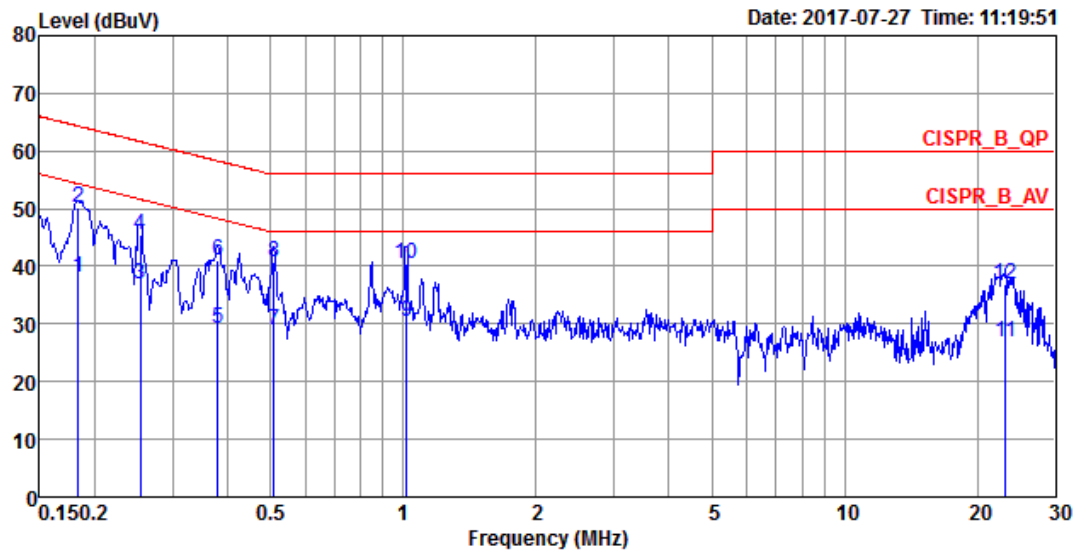
Temperature	22°C	Humidity	52%
Test Engineer	Howard Liu	Phase	Neutral
Configuration	Intentional-CTX	Test Mode	Mode 3



	Freq	Level	Over	Limit	Read	LISN	Cable	Remark	Pol/Phase
	MHz	dBuV	Limit	Line	Level	Factor	Loss		
			dB	dBuV	dBuV	dB	dB		
1	0.2535	44.67	-6.97	51.64	44.67	0.00	0.00	Average	NEUTRAL
2	0.2535	53.38	-8.26	61.64	53.38	0.00	0.00	QP	NEUTRAL
3	0.3019	41.03	-9.16	50.19	41.03	0.00	0.00	Average	NEUTRAL
4	0.3019	48.69	-11.50	60.19	48.69	0.00	0.00	QP	NEUTRAL
5	0.4237	37.05	-10.32	47.37	37.05	0.00	0.00	Average	NEUTRAL
6	0.4237	48.06	-9.31	57.37	48.06	0.00	0.00	QP	NEUTRAL
7	0.5047	36.84	-9.16	46.00	36.84	0.00	0.00	Average	NEUTRAL
8	0.5047	46.68	-9.32	56.00	46.68	0.00	0.00	QP	NEUTRAL
9	0.8528	34.13	-11.87	46.00	34.13	0.00	0.00	Average	NEUTRAL
10	0.8528	46.09	-9.91	56.00	46.09	0.00	0.00	QP	NEUTRAL
11	1.0211	33.40	-12.60	46.00	33.40	0.00	0.00	Average	NEUTRAL
12	1.0211	45.22	-10.78	56.00	45.22	0.00	0.00	QP	NEUTRAL
13	1.0997	34.99	-11.01	46.00	34.99	0.00	0.00	Average	NEUTRAL
14	1.0997	43.70	-12.30	56.00	43.70	0.00	0.00	QP	NEUTRAL
15	1.4485	43.98	-2.02	46.00	43.98	0.00	0.00	Average	NEUTRAL
16	1.4485	46.55	-9.45	56.00	46.55	0.00	0.00	QP	NEUTRAL

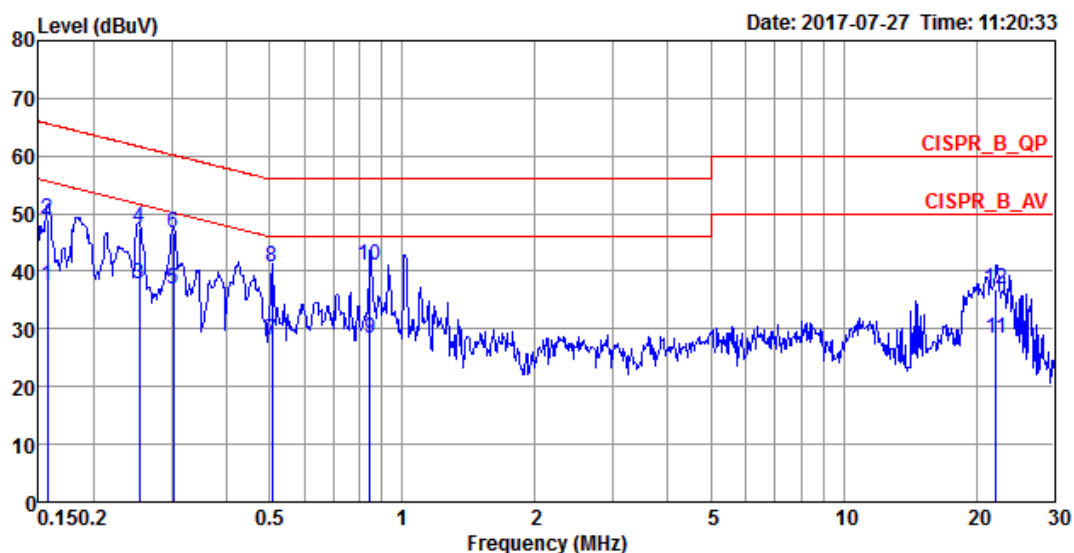
Note: Level = Read Level + LISN Factor + Cable Loss.

Temperature	22°C	Humidity	52%
Test Engineer	Howard Liu	Phase	Line
Configuration	Intentional-CTX	Test Mode	Mode 4



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1835	38.10	-16.23	54.33	38.10	0.00	0.00	Average	LINE
2	0.1835	50.04	-14.29	64.33	50.04	0.00	0.00	QP	LINE
3	0.2535	36.76	-14.88	51.64	36.76	0.00	0.00	Average	LINE
4	0.2535	45.55	-16.09	61.64	45.55	0.00	0.00	QP	LINE
5	0.3791	29.29	-19.01	48.30	29.29	0.00	0.00	Average	LINE
6	0.3791	41.15	-17.15	58.30	41.15	0.00	0.00	QP	LINE
7	0.5101	28.94	-17.06	46.00	28.94	0.00	0.00	Average	LINE
8	0.5101	40.83	-15.17	56.00	40.83	0.00	0.00	QP	LINE
9	1.0157	30.44	-15.56	46.00	30.44	0.00	0.00	Average	LINE
10	1.0157	40.35	-15.65	56.00	40.35	0.00	0.00	QP	LINE
11	23.1404	27.00	-23.00	50.00	27.00	0.00	0.00	Average	LINE
12	23.1404	36.93	-23.07	60.00	36.93	0.00	0.00	QP	LINE

Temperature	22°C	Humidity	52%
Test Engineer	Howard Liu	Phase	Neutral
Configuration	Intentional-CTX	Test Mode	Mode 4



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1573	37.39	-18.21	55.60	37.39	0.00	0.00	Average	NEUTRAL
2	0.1573	49.11	-16.49	65.60	49.11	0.00	0.00	QP	NEUTRAL
3	0.2535	37.85	-13.79	51.64	37.85	0.00	0.00	Average	NEUTRAL
4	0.2535	47.43	-14.21	61.64	47.43	0.00	0.00	QP	NEUTRAL
5	0.3035	36.95	-13.20	50.15	36.95	0.00	0.00	Average	NEUTRAL
6	0.3035	46.52	-13.63	60.15	46.52	0.00	0.00	QP	NEUTRAL
7	0.5074	28.00	-18.00	46.00	28.00	0.00	0.00	Average	NEUTRAL
8	0.5074	40.76	-15.24	56.00	40.76	0.00	0.00	QP	NEUTRAL
9	0.8438	28.42	-17.58	46.00	28.42	0.00	0.00	Average	NEUTRAL
10	0.8438	41.14	-14.86	56.00	41.14	0.00	0.00	QP	NEUTRAL
11	22.1801	28.24	-21.76	50.00	28.24	0.00	0.00	Average	NEUTRAL
12	22.1801	36.86	-23.14	60.00	36.86	0.00	0.00	QP	NEUTRAL

Note: Level = Read Level + LISN Factor + Cable Loss.

4.2. Maximum Conducted Output Power Measurement

4.2.1. Limit

The limit for output power is 30dBm.

4.2.2. Measuring Instruments and Setting

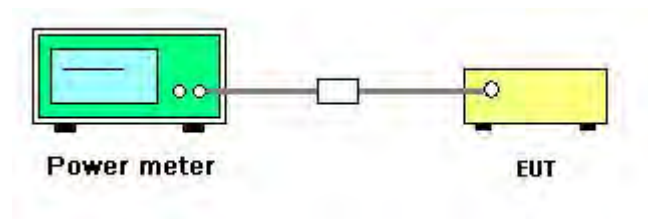
Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

Power Meter Parameter	Setting
Bandwidth	50MHz bandwidth is greater than the EUT emission bandwidth
Detector	Average

4.2.3. Test Procedures

1. Test procedures refer KDB558074 D01 v04 section 9.2.3.2.
2. This procedure provides an alternative for determining the RMS output power using a broadband RF average power meter with a thermocouple detector.

4.2.4. Test Setup Layout



4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Test Result of Maximum Conducted Output Power

Temperature	25°C	Humidity	46%
Test Date	Oct. 29, 2015 ~ Nov. 02, 2015	Configurations	GFSK
Test Engineer	Clemens Fang		
Test Mode	Mode 1 (Set 3 Dipole antenna / 4.22 dBi)		

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
0	2402 MHz	5.38	30.00	Complies
20	2442 MHz	6.15	30.00	Complies
39	2480 MHz	6.39	30.00	Complies

Note: Gain=5.98dBi < 6dBi, so the limit doesn't reduce.

Temperature	25°C	Humidity	46%
Test Date	Oct. 29, 2015 ~ Nov. 02, 2015	Configurations	GFSK
Test Engineer	Clemens Fang		
Test Mode	Mode 2 (Set 10 Panel antenna / 9.92 dBi)		

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
0	2402 MHz	5.38	26.08	Complies
20	2442 MHz	6.15	26.08	Complies
39	2480 MHz	6.39	26.08	Complies

Note: Gain=9.92dBi > 6dBi, so limit = 30-(9.92-6)=26.08 dBm

Temperature	25°C	Humidity	46%
Test Date	Oct. 29, 2015 ~ Nov. 02, 2015	Configurations	GFSK
Test Engineer	Clemens Fang		
Test Mode	Mode 3 (Set 13 Monopole antenna / 7.7 dBi)		

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
0	2402 MHz	5.38	28.30	Complies
20	2442 MHz	6.15	28.30	Complies
39	2480 MHz	6.39	28.30	Complies

Note: Gain=7.70dBi > 6dBi, so limit = 30-(7.70-6)=28.30 dBm

4.3. Power Spectral Density Measurement

4.3.1. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

4.3.2. Measuring Instruments and Setting

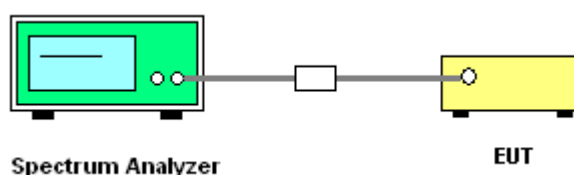
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	5-30 % greater than the DTS channel bandwidth.
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100\text{kHz}$
VBW	$\geq 3 \times \text{RBW}$
Detector	Peak
Trace	Max Hold
Sweep Time	Auto couple

4.3.3. Test Procedures

1. Test was performed in accordance with KDB558074 D01 v04 for Performing Compliance Measurements on Digital Transmission Systems (DTS) - section 10.2 Method PKPSD (peak PSD).
2. Use this procedure when the maximum conducted output power in the fundamental emission is used to demonstrate compliance. The EUT must be configured to transmit continuously at full power over the measurement duration.
3. Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span/RBW}$ (use of a greater number of measurement points than this minimum requirement is recommended).
4. Use the peak marker function to determine the maximum level in any 3 kHz band segment within the fundamental EBW.
5. The resulting PSD level must be $\leq 8 \text{ dBm}$.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Power Spectral Density

Temperature	25°C	Humidity	46%
Test Date	Oct. 29, 2015 ~ Nov. 02, 2015	Configurations	GFSK
Test Engineer	Clemens Fang		
Test Mode	Mode 1 (Set 3 Dipole antenna / 4.22 dBi)		

Channel	Frequency	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)	Result
0	2402 MHz	-8.64	8.00	Complies
20	2442 MHz	-8.38	8.00	Complies
39	2480 MHz	-8.13	8.00	Complies

Note: Gain=4.22dBi < 6dBi, so the limit doesn't reduce.

Temperature	25°C	Humidity	46%
Test Date	Oct. 29, 2015 ~ Nov. 02, 2015	Configurations	GFSK
Test Engineer	Clemens Fang		
Test Mode	Mode 2 (Set 10 Panel antenna / 9.92 dBi)		

Channel	Frequency	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)	Result
0	2402 MHz	-8.64	4.08	Complies
20	2442 MHz	-8.38	4.08	Complies
39	2480 MHz	-8.13	4.08	Complies

Note: Gain=9.92dBi, so limit=8-(9.92-6)=4.08 dBm/3kHz

Temperature	25°C	Humidity	46%
Test Date	Oct. 29, 2015 ~ Nov. 02, 2015	Configurations	GFSK
Test Engineer	Clemens Fang		
Test Mode	Mode 3 (Set 13 Monopole antenna / 7.7 dBi)		

Channel	Frequency	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)	Result
0	2402 MHz	-8.64	6.30	Complies
20	2442 MHz	-8.38	6.30	Complies
39	2480 MHz	-8.13	6.30	Complies

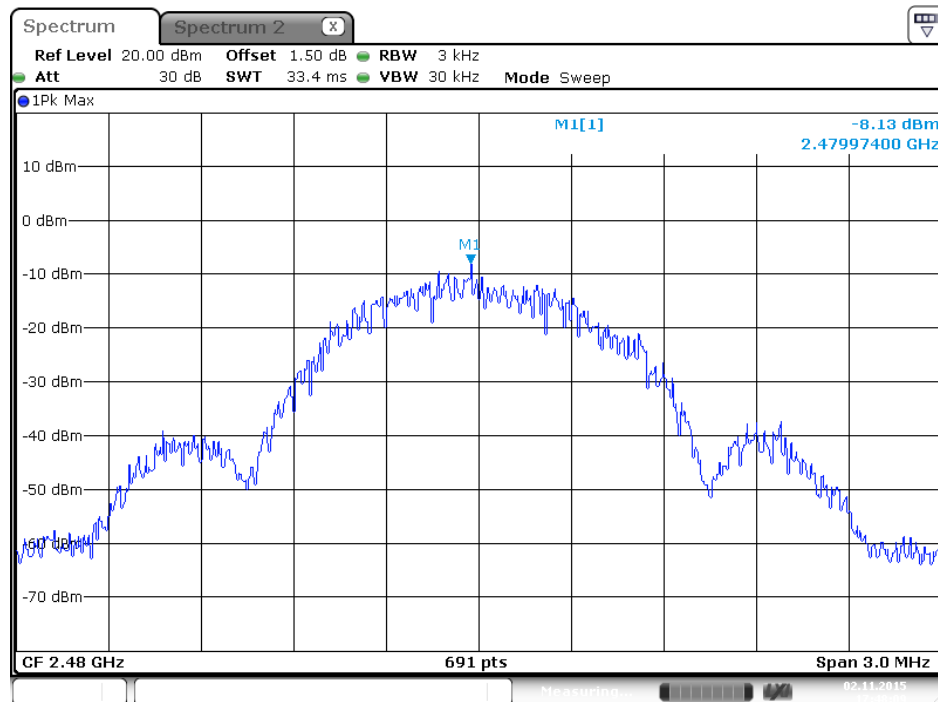
Note: Gain=7.70dBi, so limit=8-(7.70-6)=6.30 dBm/3kHz

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

Mode 1 (Set 3 Dipole antenna / 4.22 dBi)

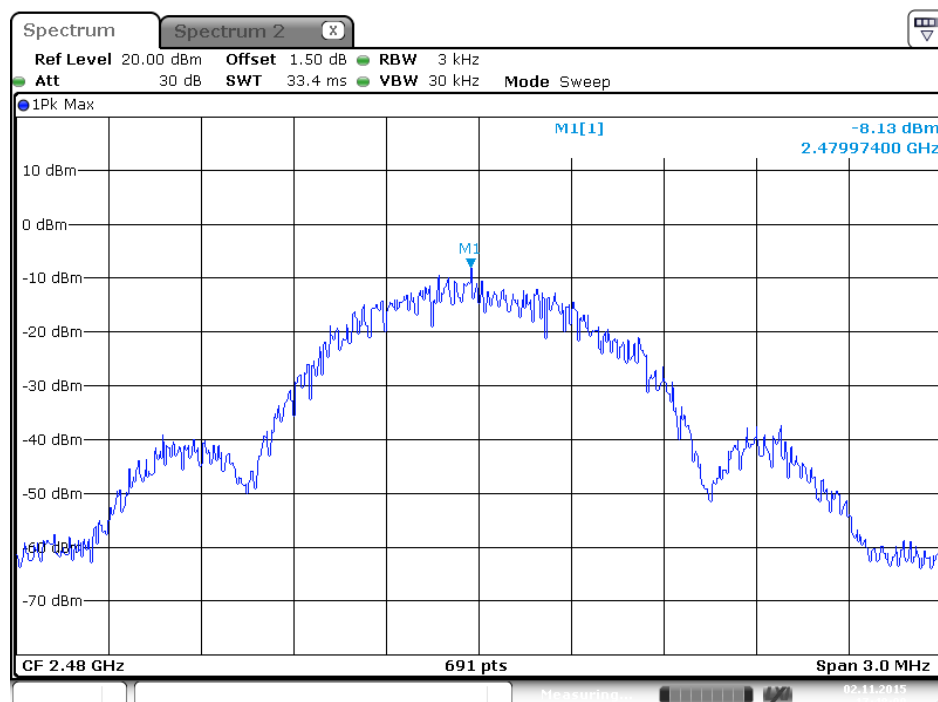
Power Density Plot on Configuration Bluetooth / 2480 MHz



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Mode 2 (Set 10 Panel antenna / 9.92 dBi)

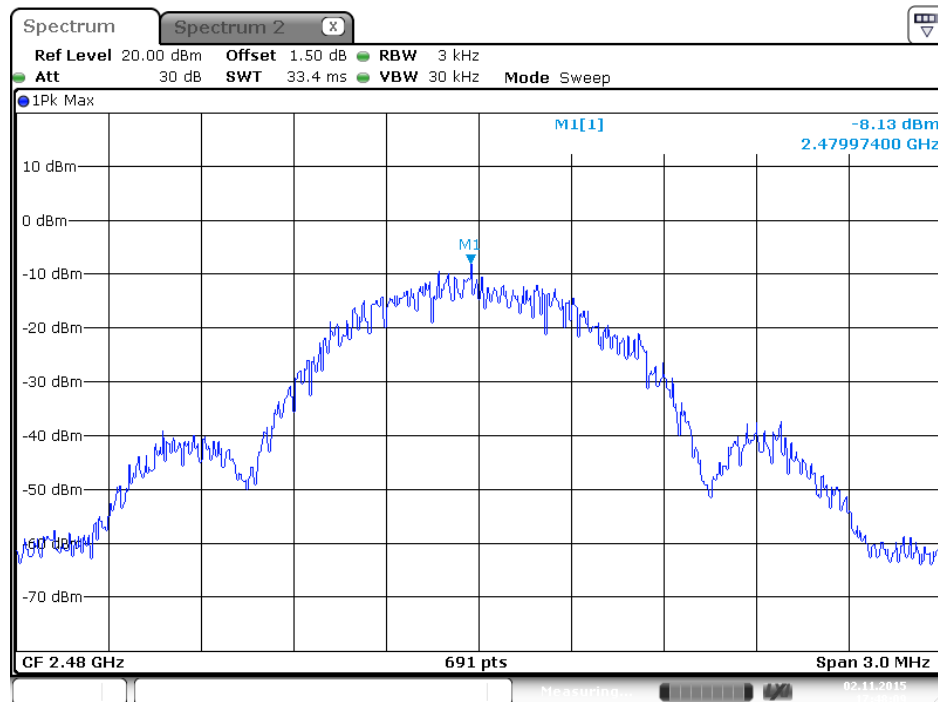
Power Density Plot on Configuration Bluetooth / 2480 MHz



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Mode 3 (Set 13 Monopole antenna / 7.7 dBi)

Power Density Plot on Configuration Bluetooth / 2480 MHz



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4.4. 6dB Spectrum Bandwidth Measurement

4.4.1. Limit

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.

4.4.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

6dB Spectrum Bandwidth	
Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RBW	100kHz
VBW	$\geq 3 \times \text{RBW}$
Detector	Peak
Trace	Max Hold
Sweep Time	Auto
99% Occupied Bandwidth	
Spectrum Parameters	Setting
Span	1.5 times to 5.0 times the OBW
RBW	1 % to 5 % of the OBW
VBW	$\geq 3 \times \text{RBW}$
Detector	Peak
Trace	Max Hold

4.4.3. Test Procedures

For Radiated 6dB Bandwidth Measurement:

1. The transmitter was radiated to the spectrum analyzer in peak hold mode.
2. Test was performed in accordance with KDB558074 D01 v04 for Performing Compliance Measurements on Digital Transmission Systems (DTS) - section 8.0 DTS bandwidth= > 8.1 Option 1.
3. Measured the spectrum width with power higher than 6dB below carrier.

4.4.4. Test Setup Layout

For Radiated 6dB Bandwidth Measurement:

This test setup layout is the same as that shown in section 4.5.4.

4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of 6dB Spectrum Bandwidth

Temperature	25°C	Humidity	46%
Test Engineer	Clemens Fang	Configurations	GFSK
Test Mode	Mode 1 (Set 3 Dipole antenna / 4.22 dBi)		

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
0	2402 MHz	0.72	1.38	500	Complies
20	2442 MHz	0.72	1.38	500	Complies
39	2480 MHz	0.73	1.41	500	Complies

Temperature	25°C	Humidity	46%
Test Engineer	Clemens Fang	Configurations	GFSK
Test Mode	Mode 2 (Set 10 Panel antenna / 9.92 dBi)		

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
0	2402 MHz	0.72	1.38	500	Complies
20	2442 MHz	0.72	1.38	500	Complies
39	2480 MHz	0.73	1.41	500	Complies

Temperature	25°C	Humidity	46%
Test Engineer	Clemens Fang	Configurations	GFSK
Test Mode	Mode 3 (Set 13 Monopole antenna / 7.7 dBi)		

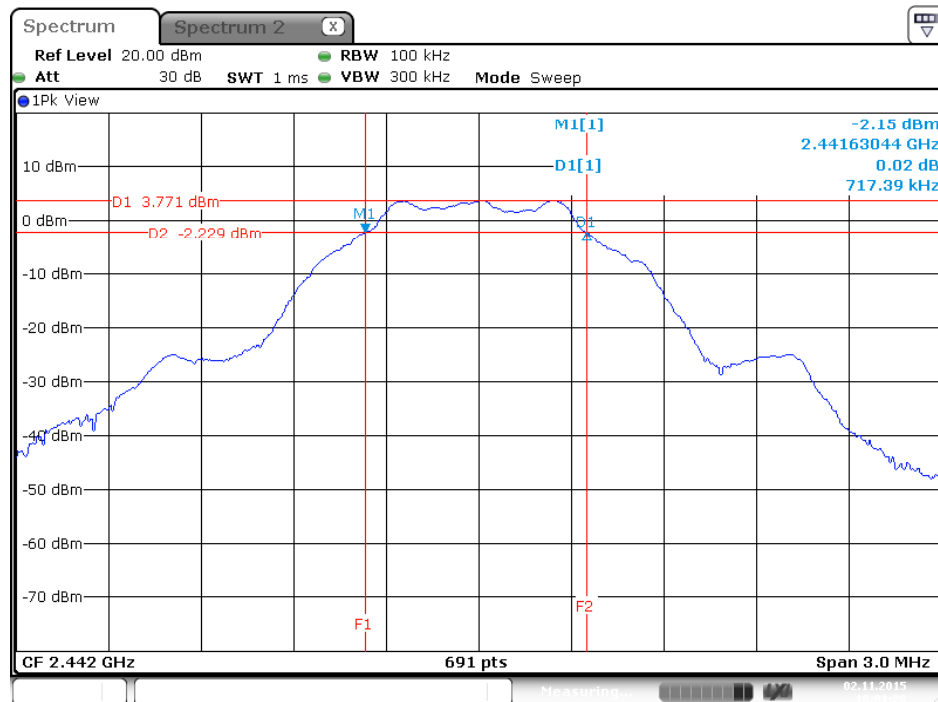
Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
0	2402 MHz	0.72	1.38	500	Complies
20	2442 MHz	0.72	1.38	500	Complies
39	2480 MHz	0.73	1.41	500	Complies

Note: All the test values were listed in the report.

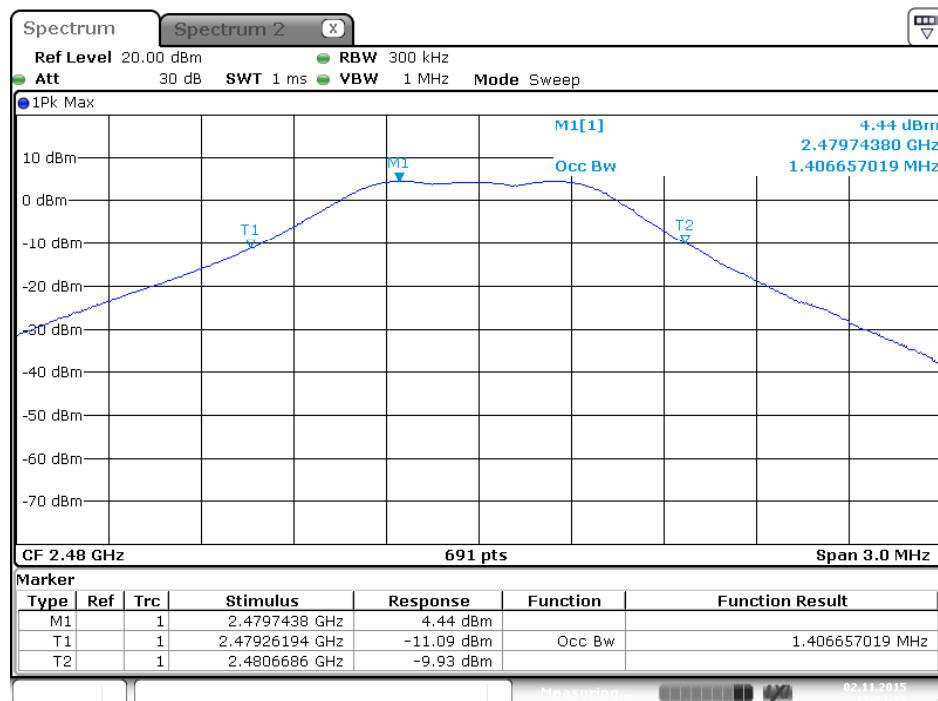
For plots, only the channel with worse result was shown.

Mode 1 (Set 3 Dipole antenna / 4.22 dBi)

6 dB Bandwidth Plot on Configuration Bluetooth / 2442 MHz

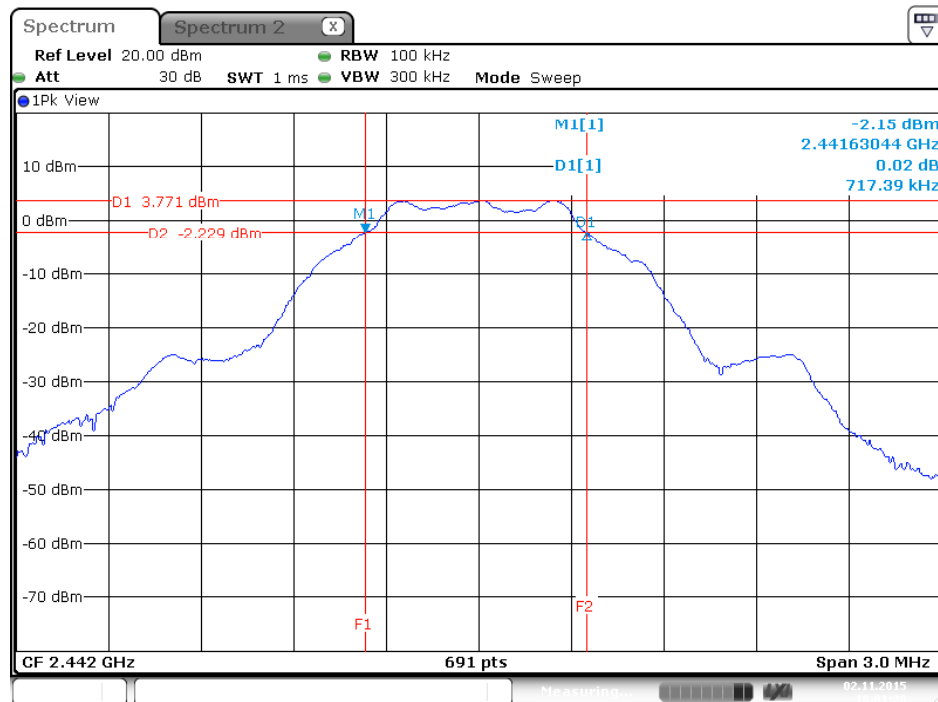


99% Occupied Bandwidth Plot on Configuration Bluetooth / 2480 MHz

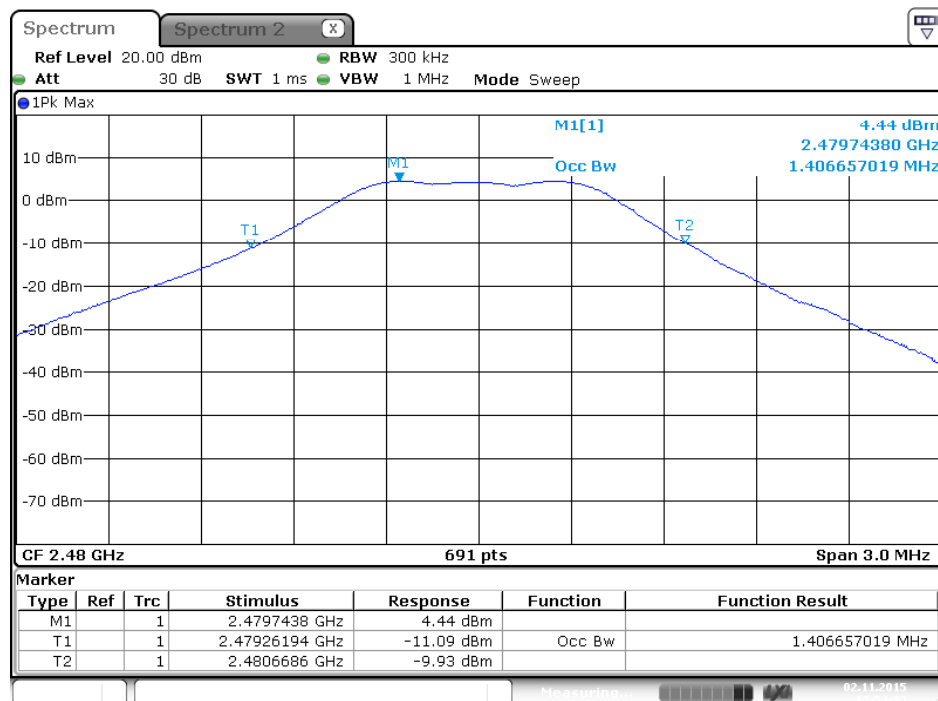


Mode 2 (Set 10 Panel antenna / 9.92 dBi)

6 dB Bandwidth Plot on Configuration Bluetooth / 2442 MHz

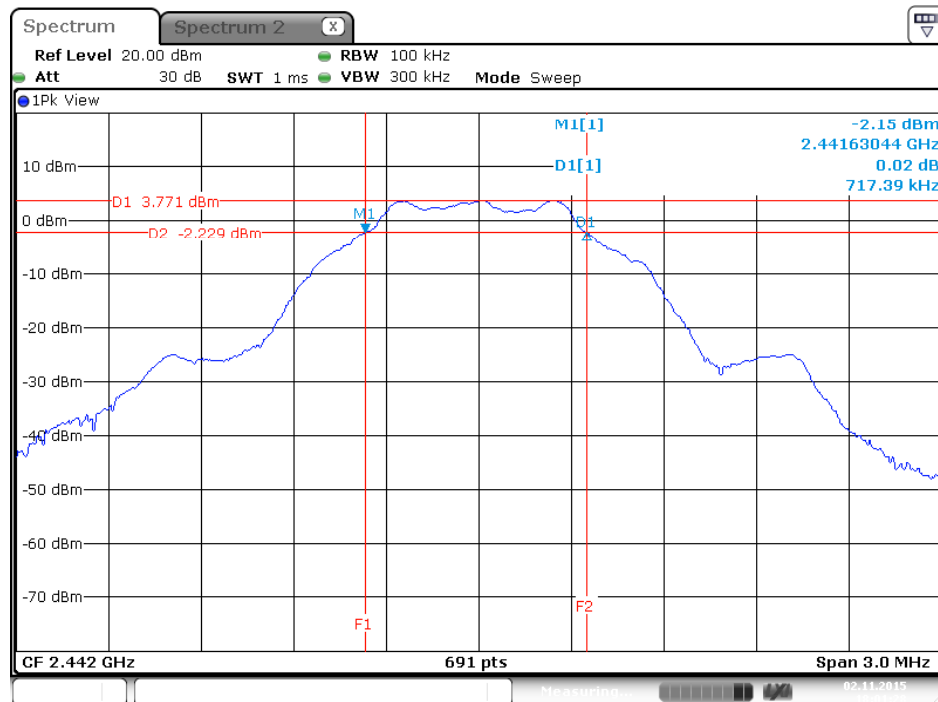


99% Occupied Bandwidth Plot on Configuration Bluetooth / 2480 MHz



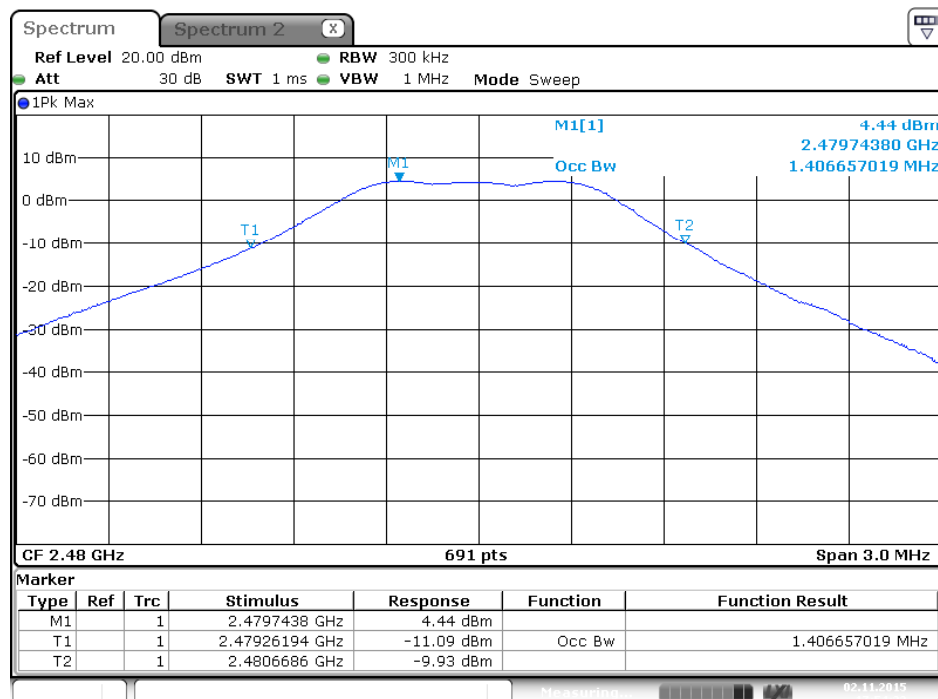
Mode 3 (Set 13 Monopole antenna / 7.7 dBi)

6 dB Bandwidth Plot on Configuration Bluetooth / 2442 MHz



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99% Occupied Bandwidth Plot on Configuration Bluetooth / 2480 MHz



Date: 2.NOV.2015 17:54:33

4.5. Radiated Emissions Measurement

4.5.1. Limit

30dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 2.7, then the 2.8 limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.5.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	100kHz / 300kHz for peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP

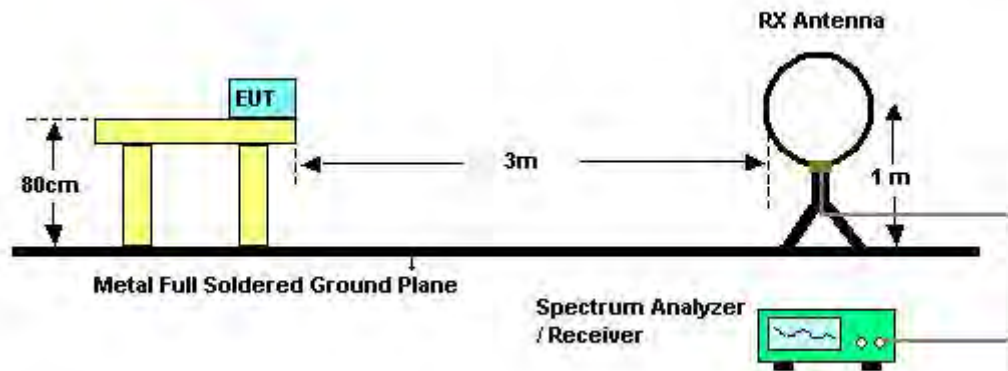
4.5.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and 3MHz RBW for peak reading. Then 1MHz RBW and 1/T VBW for average reading in spectrum analyzer.
7. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
8. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
9. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

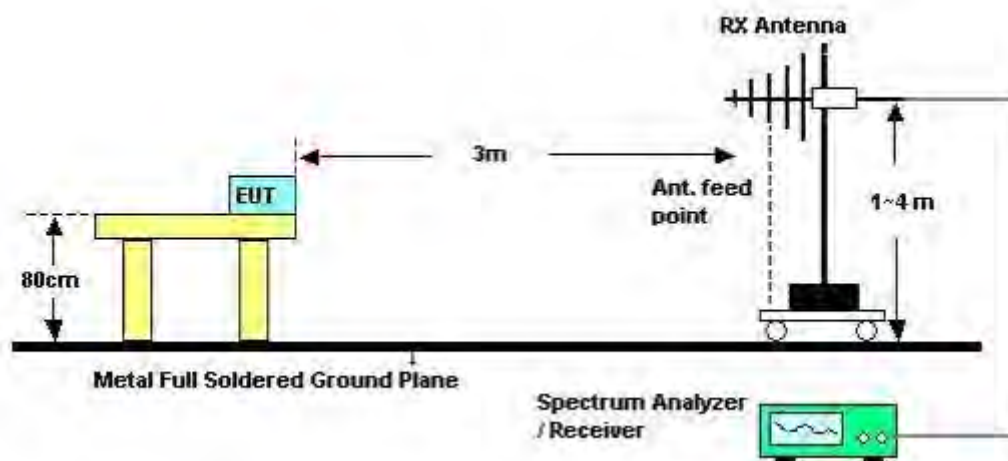
4.5.4. Test Setup Layout

Intentional – CTX and Unintentional – Normal Link

For Radiated Emissions: 9kHz ~30MHz



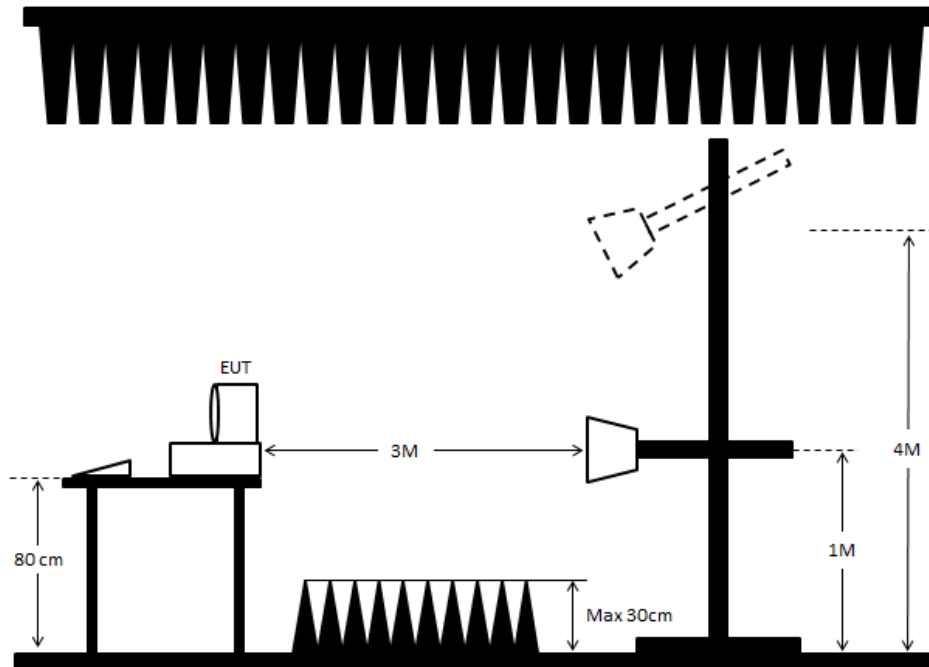
For Radiated Emissions: 30MHz~1GHz



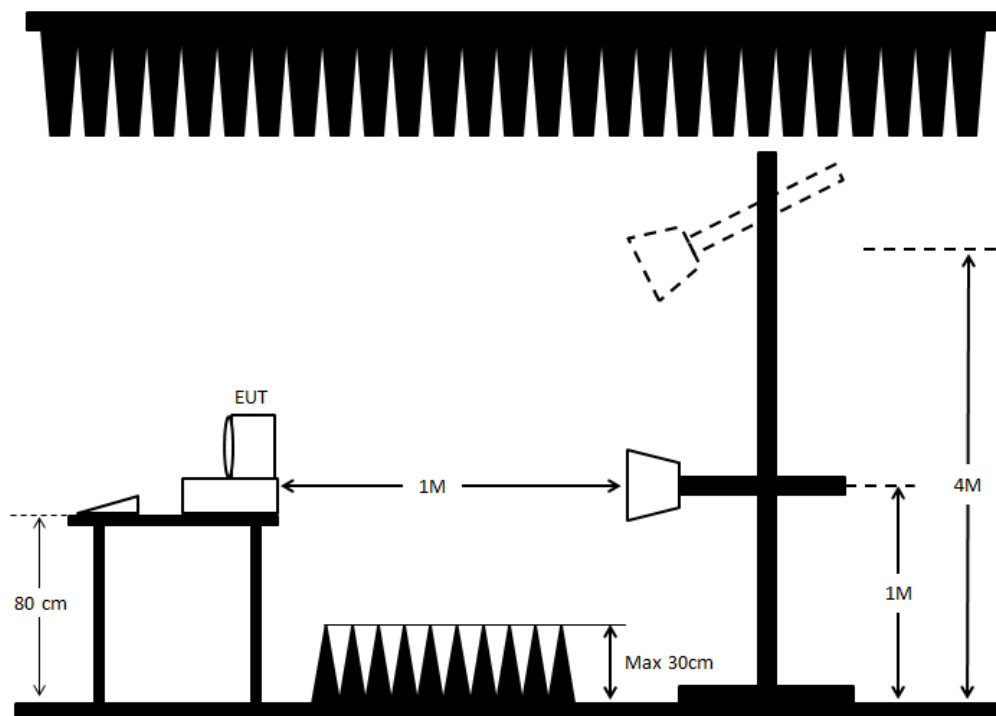
For Radiated Emissions: Above 1GHz

Unintentional 1GHz~5th Harmonic

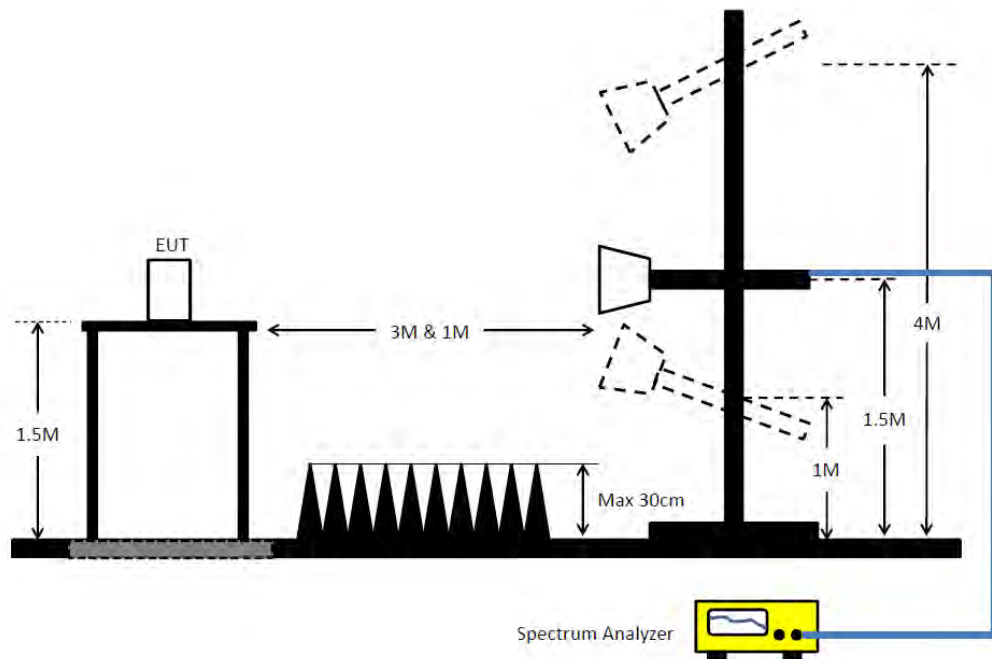
1,000~18,000 MHz



18,000~30,000 MHz



Intentional 1GHz~10th Harmonic



4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	22°C	Humidity	54%
Test Engineer	Eason Chen	Test Date	Jun. 01, 2016
Configurations	Unintentional-Normal Link		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

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

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

Temperature	22°C	Humidity	54%
Test Engineer	Mars Lin & Welson Chen	Test Date	Jul. 07, 2017 ~ Jul. 27, 2017
Configurations	Intentional-CTX		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

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

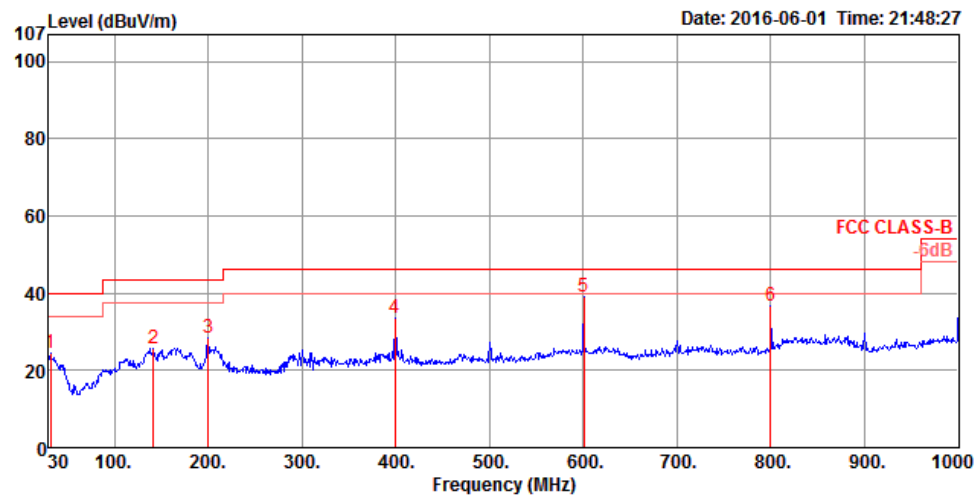
Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.5.8. Results of Radiated Emissions (30MHz~1GHz)

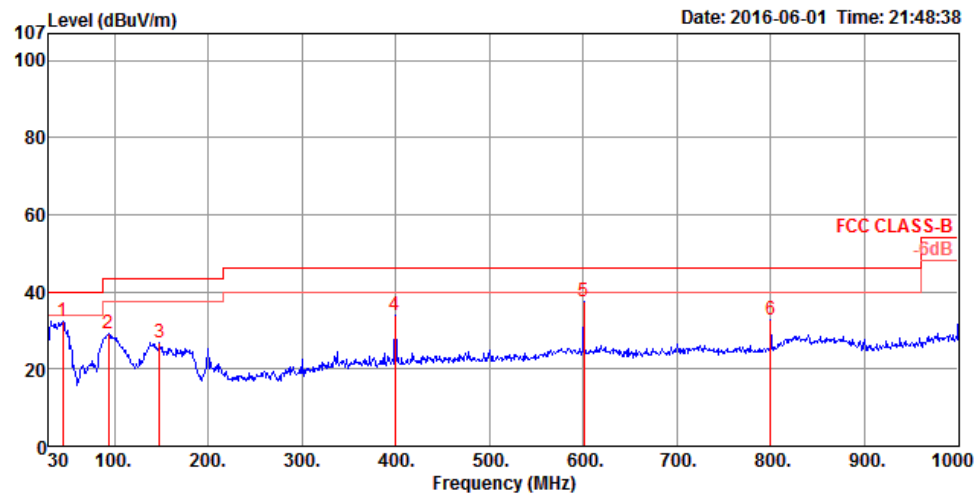
Temperature	22°C	Humidity	54%
Test Engineer	Eason Chen	Configurations	Unintentional-Normal Link
Test Mode	Mode 1		

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	31.94	24.39	40.00	-15.61	31.01	0.53	24.37	31.52	200	148	Peak	HORIZONTAL
2	141.55	25.77	43.50	-17.73	39.13	0.94	17.58	31.88	200	212	Peak	HORIZONTAL
3	199.75	28.27	43.50	-15.23	42.92	1.13	16.20	31.98	125	63	Peak	HORIZONTAL
4	399.57	33.71	46.00	-12.29	42.07	1.54	22.27	32.17	100	27	Peak	HORIZONTAL
5	600.36	39.24	46.00	-6.76	44.82	1.93	24.90	32.41	200	356	Peak	HORIZONTAL
6	800.18	36.67	46.00	-9.33	40.36	2.29	26.50	32.48	100	290	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	44.55	32.40	40.00	-7.60	46.35	0.60	17.15	31.70	100	246	Peak
2	94.02	29.33	43.50	-14.17	44.41	0.85	15.92	31.85	125	211	Peak
3	148.34	27.00	43.50	-16.50	40.90	0.97	17.02	31.89	100	0	Peak
4	399.57	33.91	46.00	-12.09	42.27	1.54	22.27	32.17	125	214	Peak
5	600.36	37.44	46.00	-8.56	43.02	1.93	24.90	32.41	100	143	Peak
6	800.18	32.67	46.00	-13.33	36.36	2.29	26.50	32.48	100	100	Peak

Note:

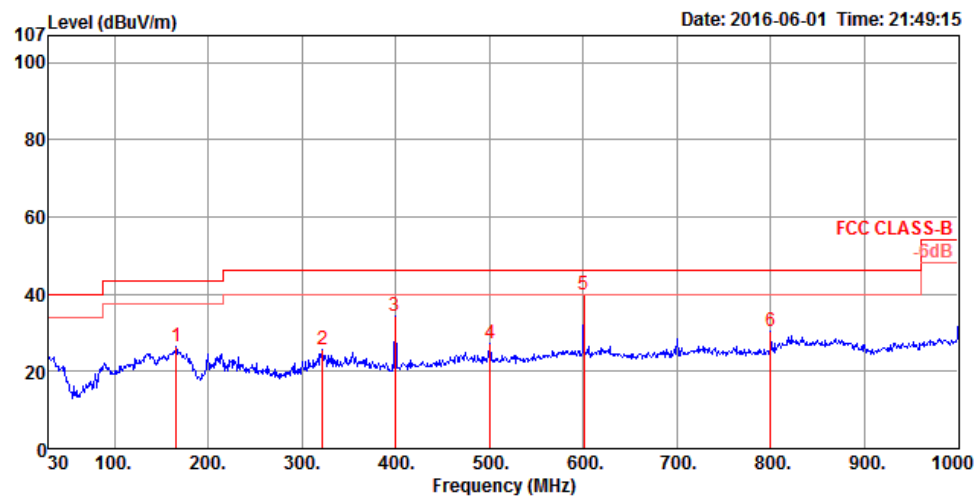
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

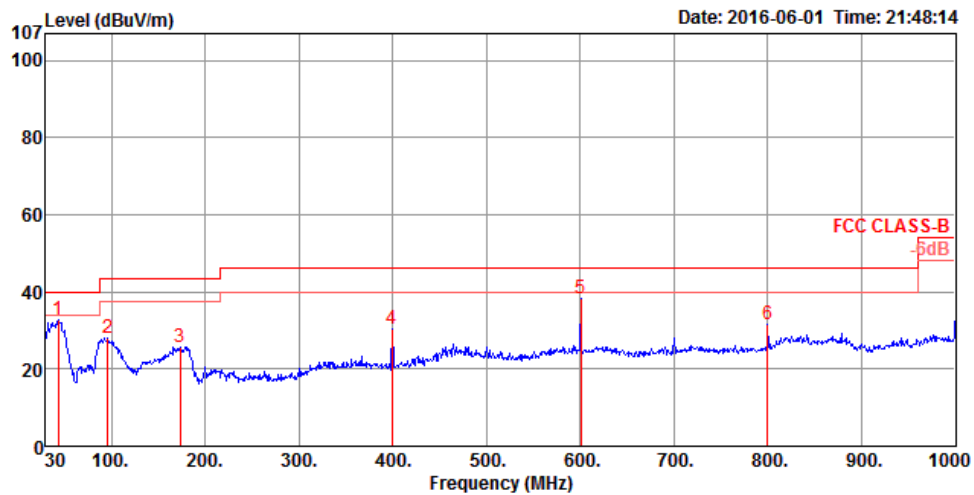
Temperature	22°C	Humidity	54%
Test Engineer	Eason Chen	Configurations	Unintentional-Normal Link
Test Mode	Mode 2		

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	165.80	26.33	43.50	-17.17	41.25	1.03	15.97	31.92	150	147	Peak
2	321.97	25.82	46.00	-20.18	36.16	1.41	20.28	32.03	100	280	Peak
3	399.57	34.42	46.00	-11.58	42.78	1.54	22.27	32.17	100	272	Peak
4	500.45	27.11	46.00	-18.89	33.94	1.76	23.73	32.32	100	145	Peak
5	600.36	39.78	46.00	-6.22	45.36	1.93	24.90	32.41	100	360	Peak
6	800.18	30.26	46.00	-15.74	33.95	2.29	26.50	32.48	125	162	Peak

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	43.58	32.61	40.00	-7.39	45.99	0.59	17.72	31.69	100	268 Peak	VERTICAL
2	95.96	28.22	43.50	-15.28	42.90	0.87	16.30	31.85	100	195 Peak	VERTICAL
3	173.56	25.83	43.50	-17.67	41.09	1.05	15.62	31.93	100	308 Peak	VERTICAL
4	399.57	30.58	46.00	-15.42	38.94	1.54	22.27	32.17	125	256 Peak	VERTICAL
5	600.36	38.34	46.00	-7.66	43.92	1.93	24.90	32.41	100	360 Peak	VERTICAL
6	800.18	31.53	46.00	-14.47	35.22	2.29	26.50	32.48	150	159 Peak	VERTICAL

Note:

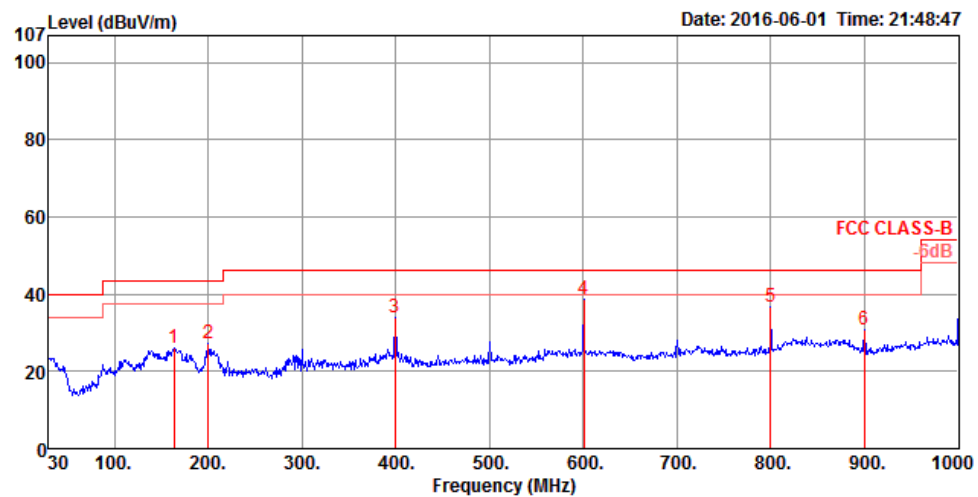
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

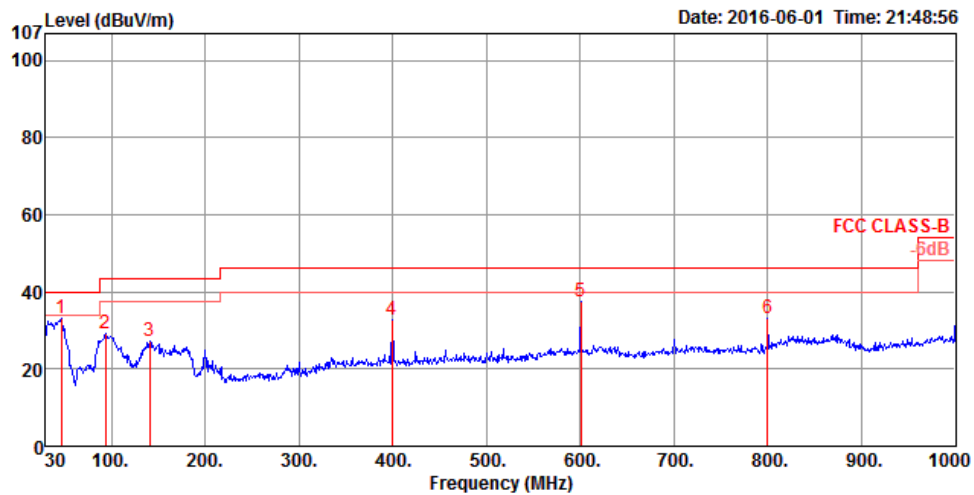
Temperature	22°C	Humidity	54%
Test Engineer	Eason Chen	Configurations	Unintentional-Normal Link
Test Mode	Mode 3		

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	163.86	26.23	43.50	-17.27	40.99	1.02	16.13	31.91	200	200	Peak	HORIZONTAL
2	199.75	27.29	43.50	-16.21	41.94	1.13	16.20	31.98	150	57	Peak	HORIZONTAL
3	399.57	33.97	46.00	-12.03	42.33	1.54	22.27	32.17	100	178	Peak	HORIZONTAL
4	600.36	38.68	46.00	-7.32	44.26	1.93	24.90	32.41	200	8	Peak	HORIZONTAL
5	800.18	36.75	46.00	-9.25	40.44	2.29	26.50	32.48	100	284	Peak	HORIZONTAL
6	900.09	30.77	46.00	-15.23	33.52	2.40	27.30	32.45	100	284	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	46.49	33.15	40.00	-6.85	47.99	0.61	16.27	31.72	100	238 Peak	VERTICAL
2	94.02	29.03	43.50	-14.47	44.11	0.85	15.92	31.85	100	223 Peak	VERTICAL
3	140.58	27.24	43.50	-16.26	40.53	0.93	17.66	31.88	100	0 Peak	VERTICAL
4	399.57	32.78	46.00	-13.22	41.14	1.54	22.27	32.17	150	193 Peak	VERTICAL
5	600.36	37.55	46.00	-8.45	43.13	1.93	24.90	32.41	100	163 Peak	VERTICAL
6	800.18	33.00	46.00	-13.00	36.69	2.29	26.50	32.48	100	117 Peak	VERTICAL

Note:

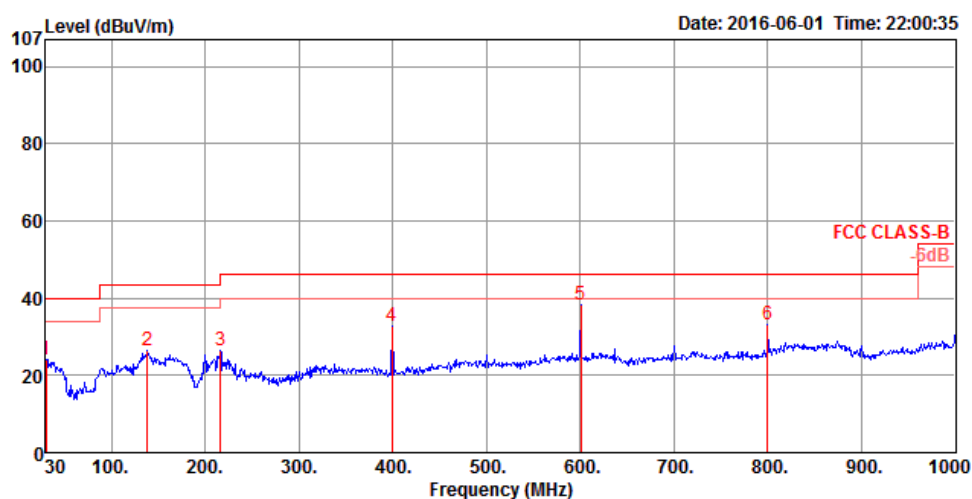
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

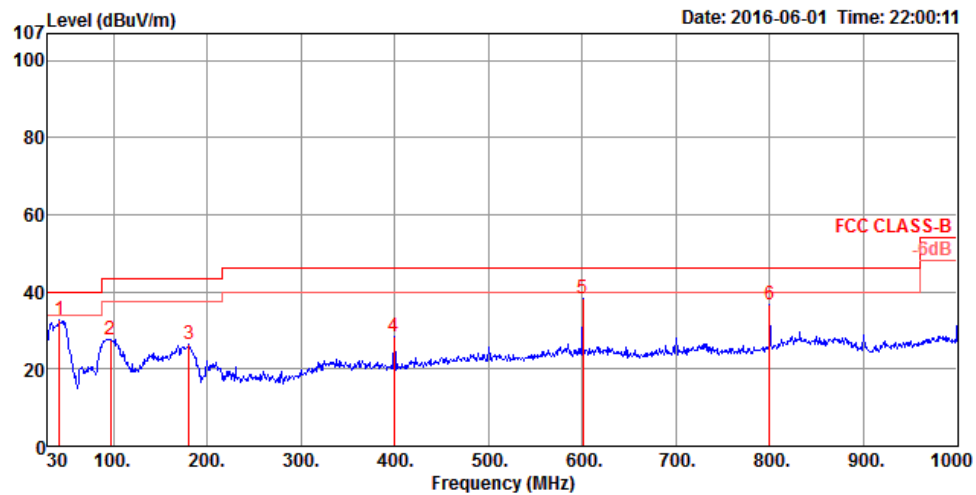
Temperature	22°C	Humidity	54%
Test Engineer	Eason Chen	Configurations	Unintentional-Normal Link
Test Mode	Mode 4		

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	30.00	23.98	40.00	-16.02	29.32	0.53	25.60	31.47	150	291 Peak	HORIZONTAL
2	138.64	26.37	43.50	-17.13	39.55	0.93	17.77	31.88	200	188 Peak	HORIZONTAL
3	216.24	26.39	46.00	-19.61	40.85	1.17	16.34	31.97	150	214 Peak	HORIZONTAL
4	399.57	32.63	46.00	-13.37	40.99	1.54	22.27	32.17	100	285 Peak	HORIZONTAL
5	600.36	38.28	46.00	-7.72	43.86	1.93	24.90	32.41	100	343 Peak	HORIZONTAL
6	800.18	33.28	46.00	-12.72	36.97	2.29	26.50	32.48	200	142 Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	42.61	32.73	40.00	-7.27	45.62	0.57	18.22	31.68	100	263 Peak	VERTICAL
2	96.93	27.79	43.50	-15.71	42.34	0.87	16.43	31.85	100	177 Peak	VERTICAL
3	180.35	26.44	43.50	-17.06	41.83	1.06	15.49	31.94	100	290 Peak	VERTICAL
4	399.57	28.44	46.00	-17.56	36.80	1.54	22.27	32.17	150	122 Peak	VERTICAL
5	600.36	38.25	46.00	-7.75	43.83	1.93	24.90	32.41	100	357 Peak	VERTICAL
6	800.18	36.81	46.00	-9.19	40.50	2.29	26.50	32.48	100	165 Peak	VERTICAL

Note:

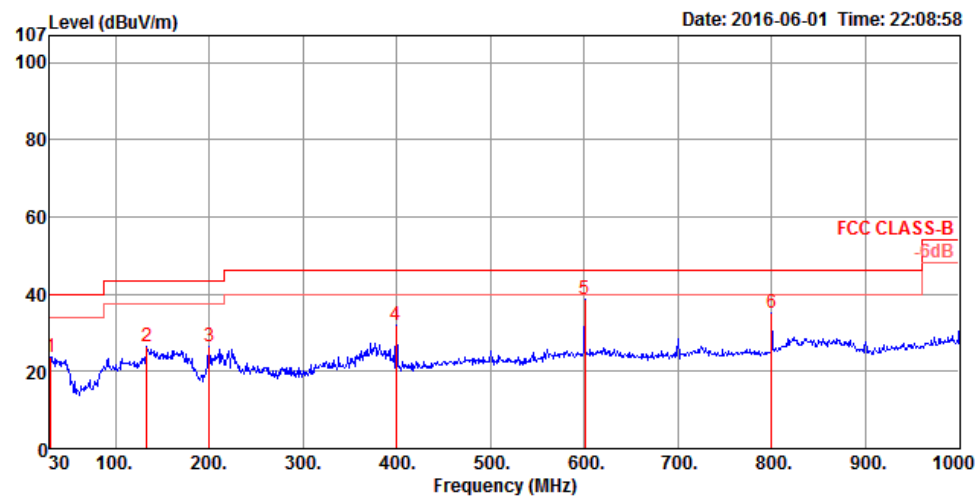
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

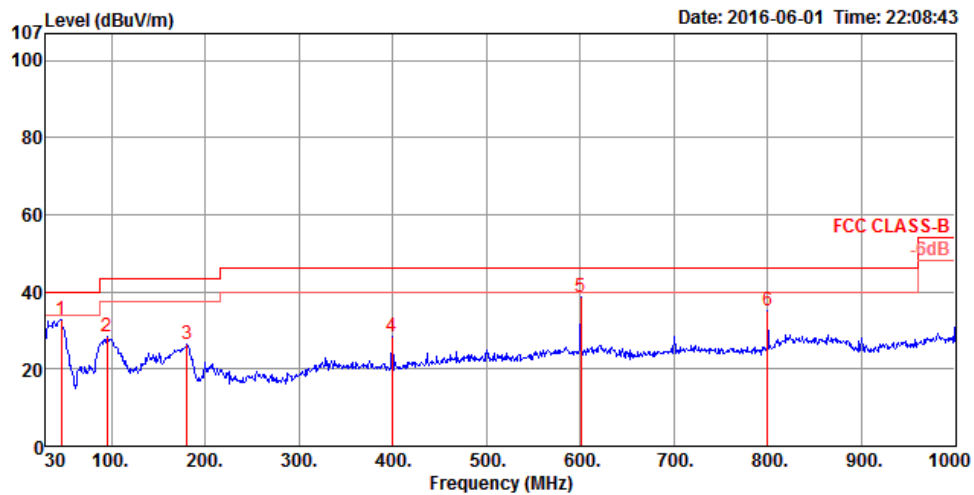
Temperature	22°C	Humidity	54%
Test Engineer	Eason Chen	Configurations	Unintentional-Normal Link
Test Mode	Mode 5		

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	30.97	23.87	40.00	-16.13	29.85	0.53	24.99	31.50	100	345 Peak	HORIZONTAL
2	133.79	26.28	43.50	-17.22	39.12	0.91	18.13	31.88	200	172 Peak	HORIZONTAL
3	199.75	26.65	43.50	-16.85	41.30	1.13	16.20	31.98	200	63 Peak	HORIZONTAL
4	399.57	31.91	46.00	-14.09	40.27	1.54	22.27	32.17	100	231 Peak	HORIZONTAL
5	600.36	38.83	46.00	-7.17	44.41	1.93	24.90	32.41	200	44 Peak	HORIZONTAL
6	800.18	35.04	46.00	-10.96	38.73	2.29	26.50	32.48	100	144 Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	46.49	32.82	40.00	-7.18	47.66	0.61	16.27	31.72	100	226 Peak	VERTICAL
2	94.99	28.34	43.50	-15.16	43.21	0.87	16.11	31.85	100	164 Peak	VERTICAL
3	180.35	26.49	43.50	-17.01	41.88	1.06	15.49	31.94	100	318 Peak	VERTICAL
4	399.57	28.61	46.00	-17.39	36.97	1.54	22.27	32.17	150	122 Peak	VERTICAL
5	600.36	38.77	46.00	-7.23	44.35	1.93	24.90	32.41	100	6 Peak	VERTICAL
6	800.18	35.06	46.00	-10.94	38.75	2.29	26.50	32.48	100	170 Peak	VERTICAL

Note:

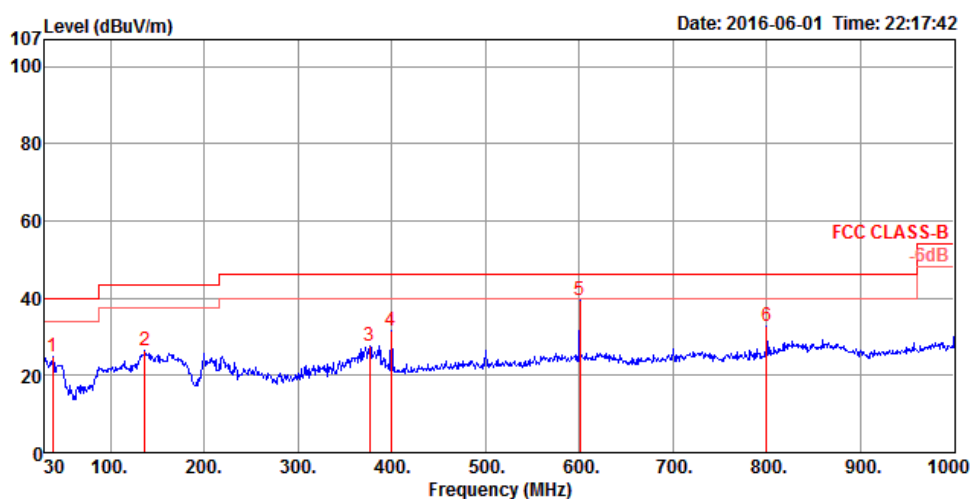
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

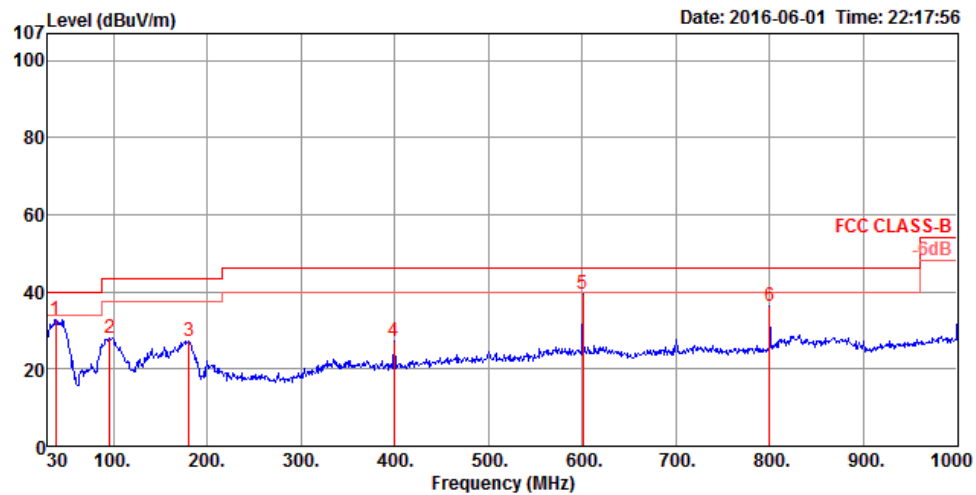
Temperature	22°C	Humidity	54%
Test Engineer	Eason Chen	Configurations	Unintentional-Normal Link
Test Mode	Mode 6		

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	38.73	24.88	40.00	-15.12	35.61	0.53	20.39	31.65	150	9 Peak	HORIZONTAL
2	136.70	26.33	43.50	-17.17	39.39	0.92	17.90	31.88	200	174 Peak	HORIZONTAL
3	376.29	27.58	46.00	-18.42	36.47	1.50	21.73	32.12	100	288 Peak	HORIZONTAL
4	399.57	31.47	46.00	-14.53	39.83	1.54	22.27	32.17	100	279 Peak	HORIZONTAL
5	600.36	39.36	46.00	-6.64	44.94	1.93	24.90	32.41	150	54 Peak	HORIZONTAL
6	800.18	32.84	46.00	-13.16	36.53	2.29	26.50	32.48	200	146 Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	38.73	32.87	40.00	-7.13	43.60	0.53	20.39	31.65	100	210 Peak	VERTICAL
2	95.96	28.23	43.50	-15.27	42.91	0.87	16.30	31.85	100	236 Peak	VERTICAL
3	180.35	27.30	43.50	-16.20	42.69	1.06	15.49	31.94	100	293 Peak	VERTICAL
4	399.57	27.15	46.00	-18.85	35.51	1.54	22.27	32.17	150	137 Peak	VERTICAL
5	600.36	39.37	46.00	-6.63	44.95	1.93	24.90	32.41	100	360 Peak	VERTICAL
6	800.18	36.38	46.00	-9.62	40.07	2.29	26.50	32.48	100	168 Peak	VERTICAL

Note:

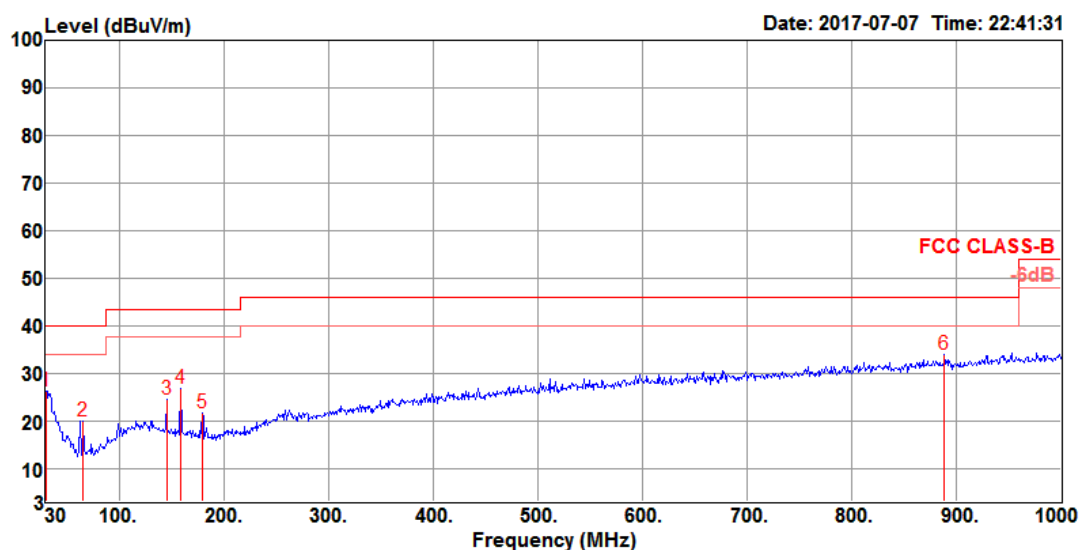
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

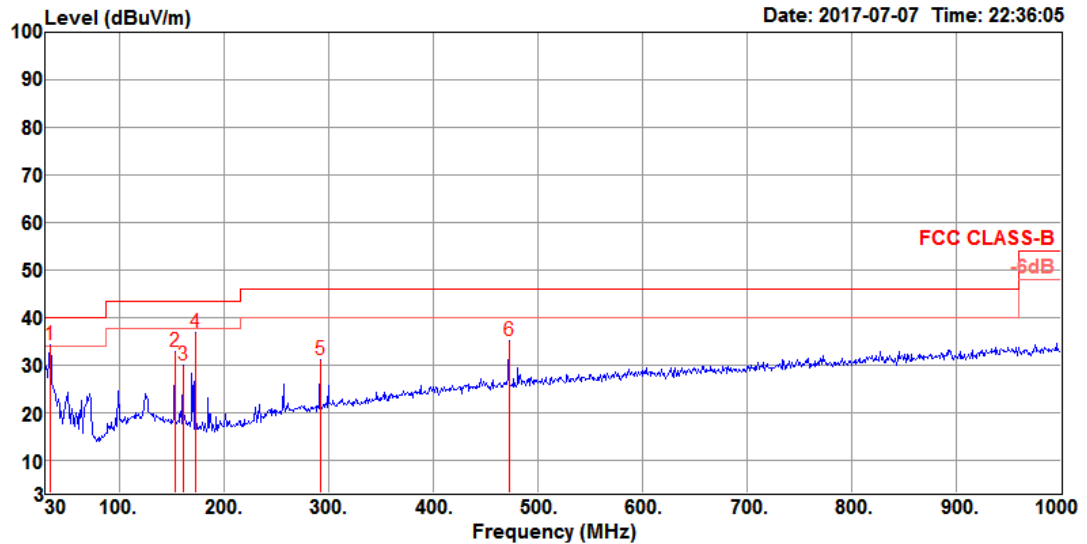
Temperature	22°C	Humidity	54%
Test Engineer	Mars Lin & Welson Chen	Configurations	Intentional-CTX
Test Mode	Mode 1		

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	Loss	Factor	Factor	cm	deg	
1	30.00	26.14	40.00	-13.86	32.00	0.87	25.80	32.53	100	356	Peak
2	65.89	20.01	40.00	-19.99	38.62	1.35	12.56	32.52	200	226	Peak
3	145.43	24.60	43.50	-18.90	37.60	2.06	17.46	32.52	100	359	Peak
4	159.01	26.69	43.50	-16.81	40.41	2.16	16.63	32.51	200	240	Peak
5	179.38	21.57	43.50	-21.93	36.13	2.31	15.63	32.50	125	360	Peak
6	888.45	33.79	46.00	-12.21	33.02	5.36	27.30	31.89	100	226	Peak

Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	33.88	34.06	40.00	-5.94	42.24	0.94	23.41	32.53	100	198	Peak	VERTICAL
2	153.19	32.73	43.50	-10.77	46.20	2.12	16.93	32.52	150	253	Peak	VERTICAL
3	160.95	29.97	43.50	-13.53	43.77	2.17	16.54	32.51	200	360	Peak	VERTICAL
4	172.59	36.68	43.50	-6.82	50.94	2.26	15.98	32.50	150	274	Peak	VERTICAL
5	291.90	31.12	46.00	-14.88	41.05	2.97	19.54	32.44	150	28	Peak	VERTICAL
6	472.32	35.03	46.00	-10.97	40.31	3.83	23.37	32.48	150	31	Peak	VERTICAL

Note:

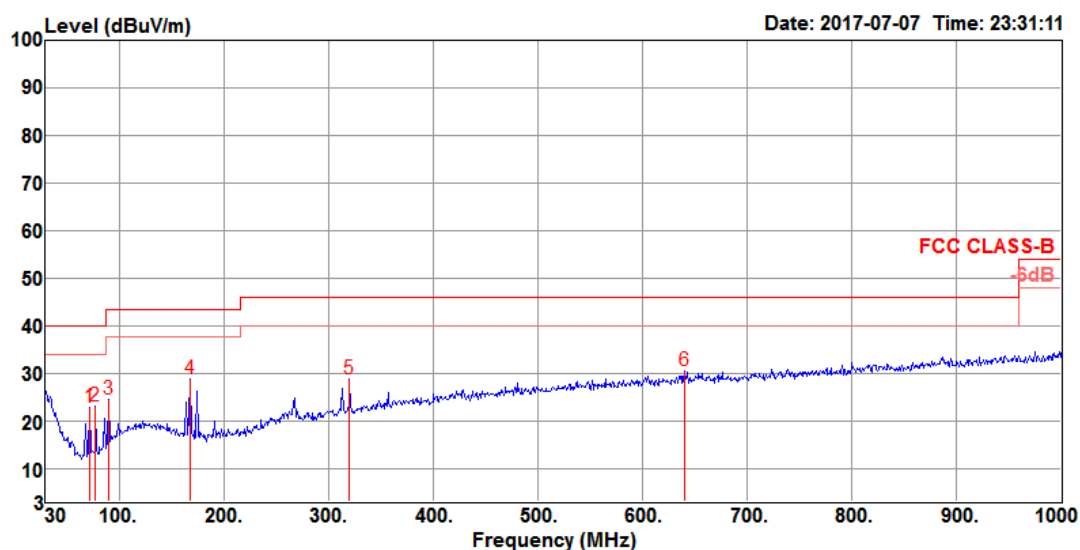
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

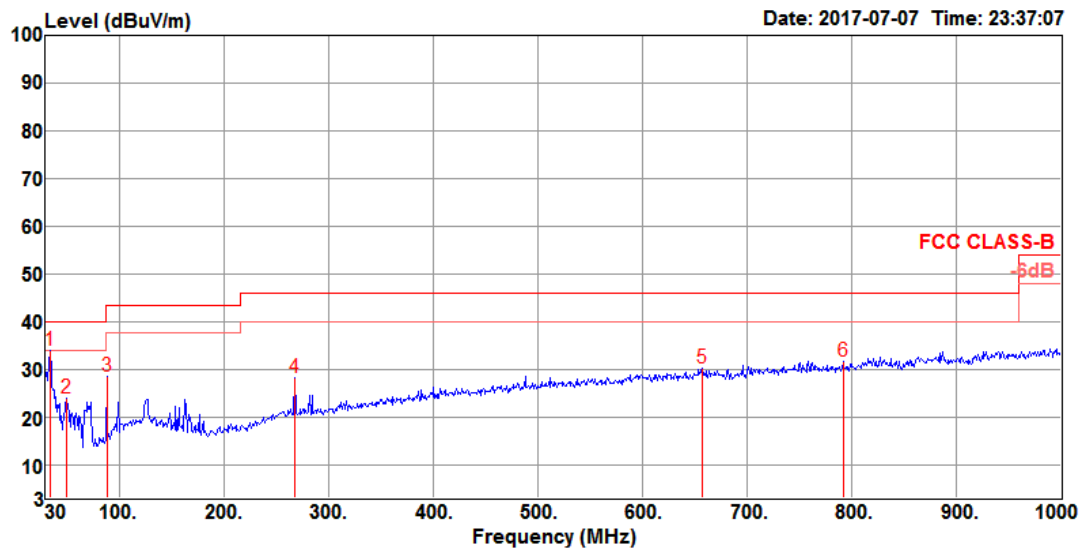
Temperature	22°C	Humidity	54%
Test Engineer	Mars Lin & Welson Chen	Configurations	Intentional-CTX
Test Mode	Mode 2		

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	Line	Limit	Level	Loss	Factor	Factor	cm	deg	
1	71.71	22.87	40.00	-17.13	41.24	1.41	12.75	32.53	125	23	Peak
2	77.53	23.12	40.00	-16.88	40.98	1.47	13.21	32.54	125	42	Peak
3	90.14	24.51	43.50	-18.99	40.30	1.60	15.16	32.55	125	42	Peak
4	167.74	28.68	43.50	-14.82	42.76	2.22	16.21	32.51	200	186	Peak
5	320.03	28.84	46.00	-17.16	37.85	3.12	20.31	32.44	200	192	Peak
6	640.13	30.62	46.00	-15.38	33.37	4.49	25.31	32.55	125	315	Peak

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	Limit	Level	Loss	Factor	Factor			
				dB	dBuV	dB	dB/m	dB	cm	deg	
1	33.88	33.84	40.00	-6.16	42.02	0.94	23.41	32.53	100	0 Peak	VERTICAL
2	49.40	23.89	40.00	-16.11	40.16	1.14	15.09	32.50	100	29 Peak	VERTICAL
3	88.20	28.51	43.50	-14.99	44.64	1.58	14.84	32.55	200	50 Peak	VERTICAL
4	267.65	28.32	46.00	-17.68	38.48	2.84	19.45	32.45	100	222 Peak	VERTICAL
5	657.59	30.13	46.00	-15.87	32.68	4.55	25.43	32.53	125	349 Peak	VERTICAL
6	791.45	31.66	46.00	-14.34	32.46	5.02	26.52	32.34	125	12 Peak	VERTICAL

Note:

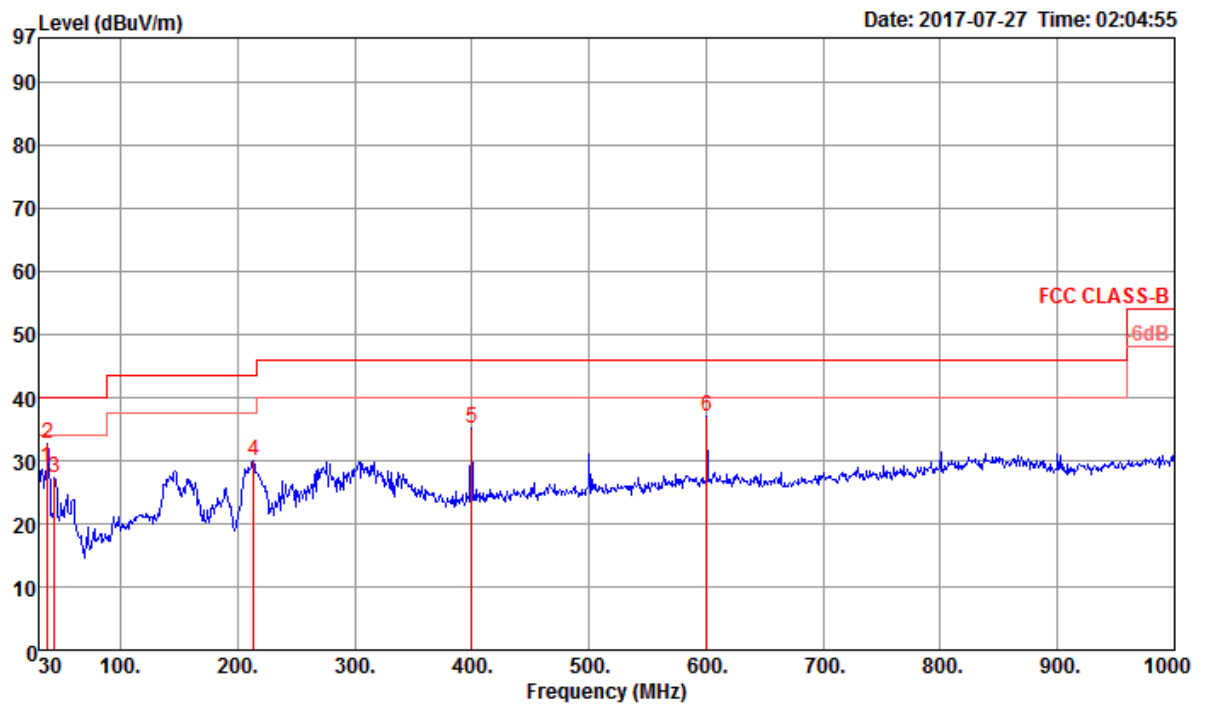
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

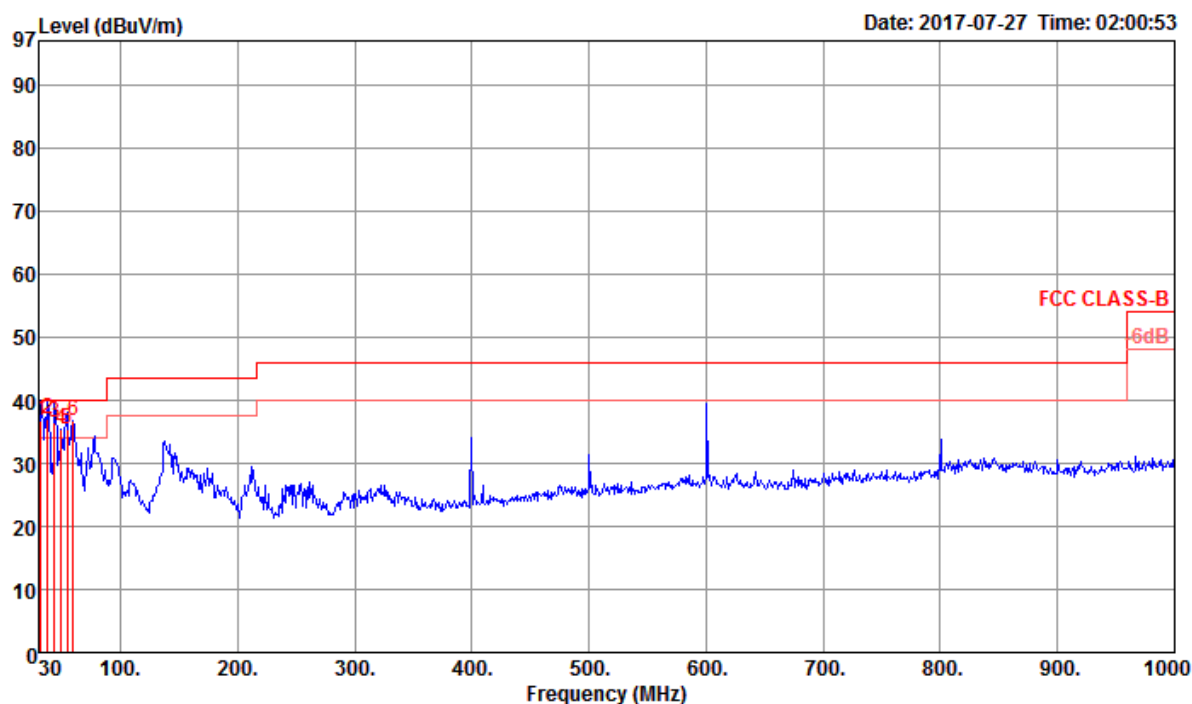
Temperature	22°C	Humidity	54%
Test Engineer	Mars Lin & Welson Chen	Configurations	Intentional-CTX
Test Mode	Mode 3		

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	36.79	28.83	40.00	-11.17	38.54	0.25	21.59	31.55	100	0 Peak	HORIZONTAL
2	37.76	32.80	40.00	-7.20	43.15	0.26	20.96	31.57	100	0 Peak	HORIZONTAL
3	43.58	27.22	40.00	-12.78	40.84	0.31	17.72	31.65	100	0 Peak	HORIZONTAL
4	213.33	29.97	43.50	-13.53	44.22	1.18	16.44	31.87	100	0 Peak	HORIZONTAL
5	399.57	35.14	46.00	-10.86	43.03	1.79	22.37	32.05	100	0 Peak	HORIZONTAL
6	600.36	36.91	46.00	-9.09	42.02	2.28	24.90	32.29	100	0 Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	31.94	36.72	40.00	-3.28	43.55	0.21	24.41	31.45	100	222 QP	VERTICAL
2	37.76	36.94	40.00	-3.06	47.29	0.26	20.96	31.57	100	25 QP	VERTICAL
3	43.58	36.45	40.00	-3.55	50.07	0.31	17.72	31.65	100	231 QP	VERTICAL
4	49.40	35.31	40.00	-4.69	51.55	0.37	15.08	31.69	400	0 Peak	VERTICAL
5	54.25	35.42	40.00	-4.58	52.94	0.41	13.78	31.71	101	325 QP	VERTICAL
6	59.10	36.71	40.00	-3.29	55.29	0.44	12.72	31.74	400	0 Peak	VERTICAL

Note:

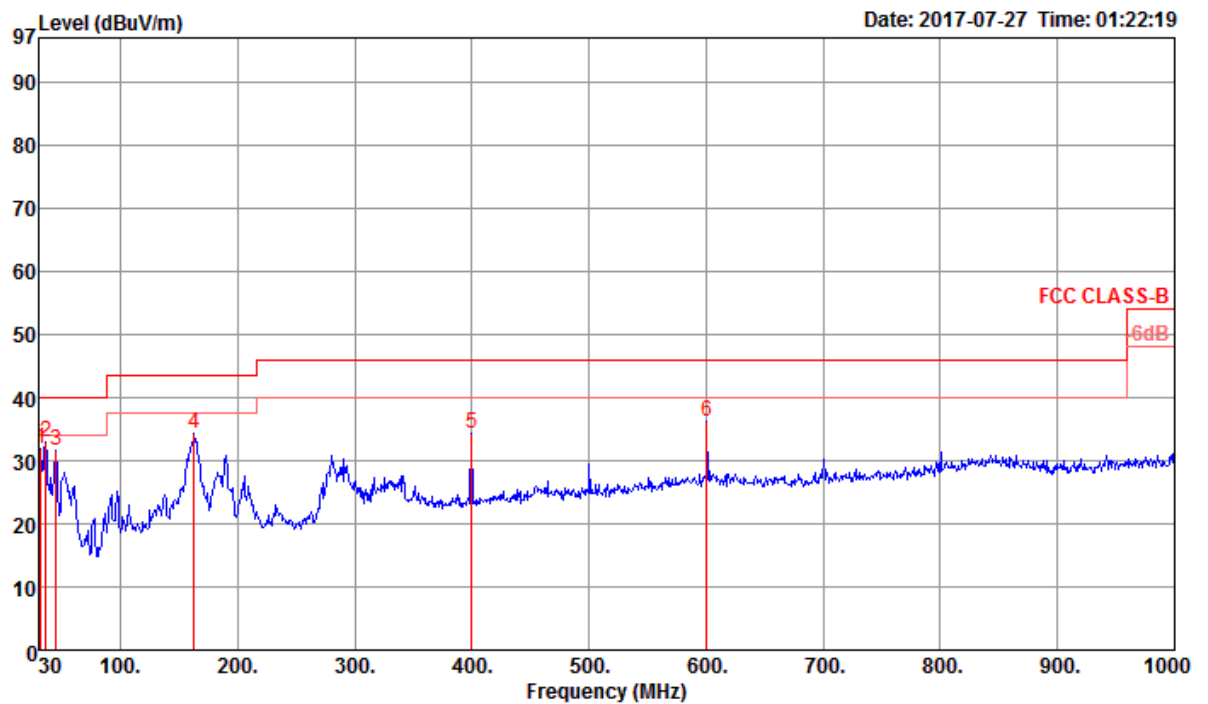
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

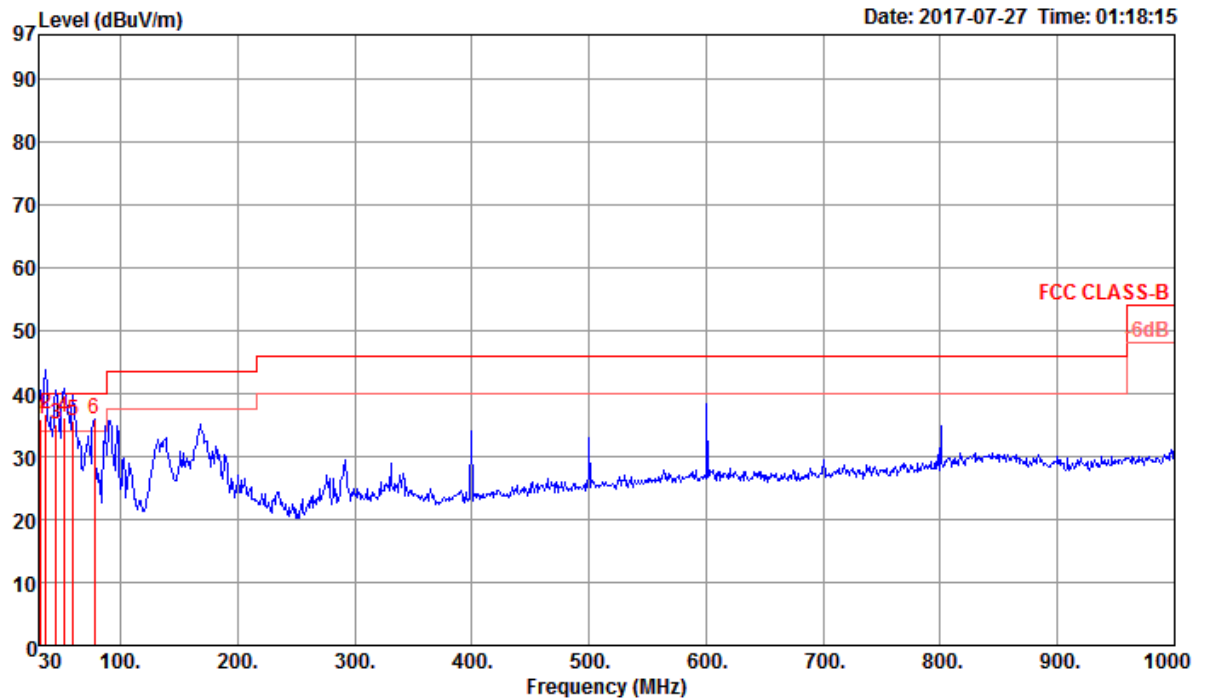
Temperature	22°C	Humidity	54%
Test Engineer	Mars Lin & Welson Chen	Configurations	Intentional-CTX
Test Mode	Mode 4		

Horizontal



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	31.94	31.94	40.00	-8.06	38.77	0.21	24.41	31.45	100	0 Peak	HORIZONTAL
2	35.82	32.98	40.00	-7.02	42.14	0.23	22.15	31.54	100	0 Peak	HORIZONTAL
3	44.55	31.61	40.00	-8.39	45.80	0.32	17.15	31.66	100	0 Peak	HORIZONTAL
4	162.89	34.29	43.50	-9.21	48.71	0.97	16.46	31.85	100	0 Peak	HORIZONTAL
5	399.57	34.21	46.00	-11.79	42.10	1.79	22.37	32.05	100	0 Peak	HORIZONTAL
6	600.36	36.29	46.00	-9.71	41.40	2.28	24.90	32.29	100	0 Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	31.94	35.96	40.00	-4.04	42.79	0.21	24.41	31.45	100	141	QP	VERTICAL
2	35.82	36.87	40.00	-3.13	46.03	0.23	22.15	31.54	100	94	QP	VERTICAL
3	44.55	35.04	40.00	-4.96	49.23	0.32	17.15	31.66	100	159	QP	VERTICAL
4	51.34	36.29	40.00	-3.71	53.11	0.39	14.49	31.70	100	298	QP	VERTICAL
5	59.10	35.76	40.00	-4.24	54.34	0.44	12.72	31.74	100	31	QP	VERTICAL
6	77.53	35.89	40.00	-4.11	54.02	0.58	13.09	31.80	400	0	Peak	VERTICAL

Note:

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

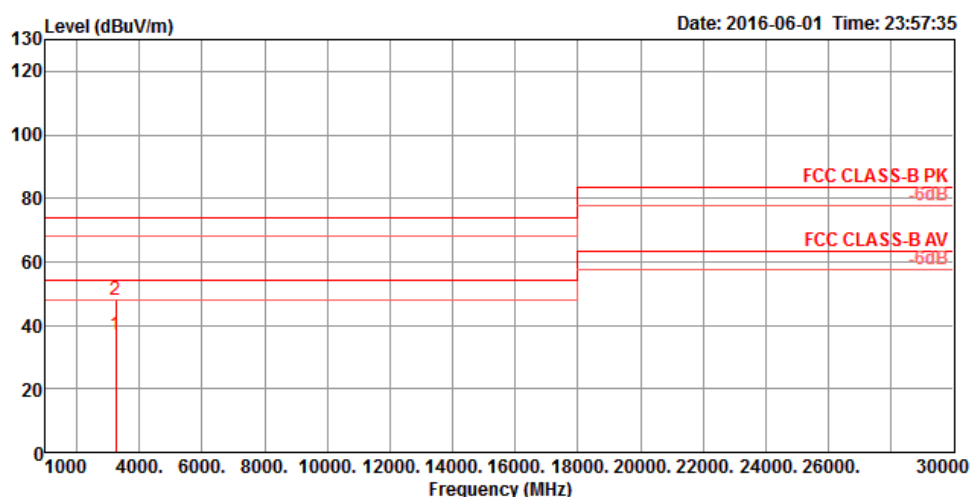
Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.5.9. Results for Radiated Emissions (1GHz~5th Harmonic)

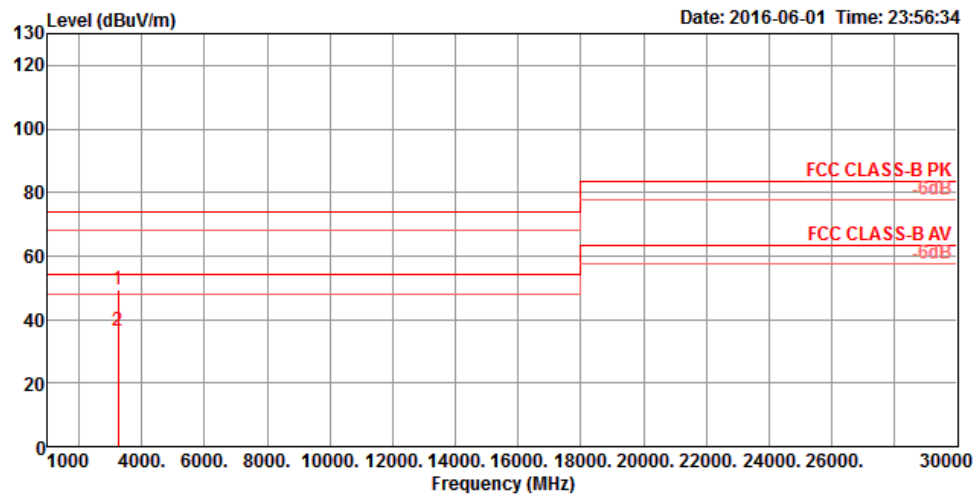
Temperature	22°C	Humidity	54%
Test Engineer	Eason Chen	Configurations	Unintentional-Normal Link
Test Mode	Mode 1		

Horizontal



	Freq	Level	Limit	Over	Read	Cable	Antenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	3234.76	36.77	54.00	-17.23	36.56	7.05	29.84	36.68	120	120	Average	HORIZONTAL
2	3235.09	48.05	74.00	-25.95	47.84	7.05	29.84	36.68	120	120	Peak	HORIZONTAL

Vertical



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	3234.42	49.63	74.00	-24.37	49.42	7.05	29.84	36.68	122	141	Peak
2	3234.80	36.49	54.00	-17.51	36.28	7.05	29.84	36.68	122	141	Average

Note:

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

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.5.10. Results for Radiated Emissions (1GHz~10th Harmonic)

Temperature	24°C	Humidity	65%
Test Date	Oct. 29, 2015	Configurations	Channel 0
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 1 (Set 3 Dipole antenna / 4.22 dBi)		

Horizontal

	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	4804.07	46.73	74.00	-27.27	40.61	6.13	33.08	33.09	209	179	Peak	HORIZONTAL
2	4804.33	33.58	54.00	-20.42	27.46	6.13	33.08	33.09	209	179	Average	HORIZONTAL

Vertical

	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	4804.10	47.24	74.00	-26.76	41.12	6.13	33.08	33.09	212	187	Peak	VERTICAL
2	4804.51	33.50	54.00	-20.50	27.38	6.13	33.08	33.09	212	187	Average	VERTICAL

Temperature	24°C	Humidity	65%
Test Date	Oct. 29, 2015	Configurations	Channel 20
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 1 (Set 3 Dipole antenna / 4.22 dBi)		

Horizontal

	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	4883.75	33.33	54.00	-20.67	27.10	6.08	33.23	33.08	202	169	Average	HORIZONTAL
2	4884.50	46.45	74.00	-27.55	40.18	6.08	33.27	33.08	202	169	Peak	HORIZONTAL

Vertical

	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	4884.28	33.37	54.00	-20.63	27.14	6.08	33.23	33.08	206	171	Average	VERTICAL
2	4884.96	46.20	74.00	-27.80	39.93	6.08	33.27	33.08	206	171	Peak	VERTICAL

Temperature	24°C	Humidity	65%
Test Date	Oct. 29, 2015	Configurations	Channel 39
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 1 (Set 3 Dipole antenna / 4.22 dBi)		

Horizontal

	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	4960.62	33.48	54.00	-20.52	27.08	6.04	33.42	33.06	198	157	Average	HORIZONTAL
2	4960.63	46.83	74.00	-27.17	40.43	6.04	33.42	33.06	198	157	Peak	HORIZONTAL

Vertical

	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	4959.12	33.51	54.00	-20.49	27.11	6.04	33.42	33.06	200	160	Average	VERTICAL
2	4960.64	46.73	74.00	-27.27	40.33	6.04	33.42	33.06	200	160	Peak	VERTICAL

Temperature	24°C	Humidity	65%
Test Date	Oct. 29, 2015	Configurations	Channel 0
Test Engineer	Gino Huang		
Test Mode	Mode 2 (Set 10 Panel antenna / 9.92 dBi)		

Horizontal

	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	4801.75	33.67	54.00	-20.33	27.55	6.13	33.08	33.09	160	47	Average	HORIZONTAL
2	4805.90	46.02	74.00	-27.98	39.90	6.13	33.08	33.09	160	47	Peak	HORIZONTAL

Vertical

	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	4804.37	47.07	74.00	-26.93	40.95	6.13	33.08	33.09	167	101	Peak	VERTICAL
2	4805.86	33.57	54.00	-20.43	27.45	6.13	33.08	33.09	167	101	Average	VERTICAL

Temperature	24°C	Humidity	65%
Test Date	Oct. 29, 2015	Configurations	Channel 20
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 2 (Set 10 Panel antenna / 9.92 dBi)		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4961.35	33.58	54.00	-20.42	27.18	6.04	33.42	33.06	137	87 Average	HORIZONTAL
2	4961.58	46.61	74.00	-27.39	40.21	6.04	33.42	33.06	137	87 Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	4959.52	46.92	74.00	-27.08	40.52	6.04	33.42	33.06	166	59 Peak	VERTICAL
2	4960.93	33.56	54.00	-20.44	27.16	6.04	33.42	33.06	166	59 Average	VERTICAL

Temperature	24°C	Humidity	65%
Test Date	Oct. 29, 2015	Configurations	Channel 39
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 2 (Set 10 Panel antenna / 9.92 dBi)		

Horizontal

	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	4881.97	46.12	74.00	-27.88	39.89	6.08	33.23	33.08	181	72	Peak	HORIZONTAL
2	4882.89	33.29	54.00	-20.71	27.06	6.08	33.23	33.08	181	72	Average	HORIZONTAL

Vertical

	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	4882.34	33.30	54.00	-20.70	27.07	6.08	33.23	33.08	174	64	Average	VERTICAL
2	4886.05	45.76	74.00	-28.24	39.49	6.08	33.27	33.08	174	64	Peak	VERTICAL

Temperature	24°C	Humidity	65%
Test Date	Oct. 30, 2015	Configurations	Channel 0
Test Engineer	Gino Huang		
Test Mode	Mode 3 (Set 13 Monopole antenna / 7.7 dBi)		

Horizontal

	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	4803.82	33.94	54.00	-20.06	27.82	6.13	33.08	33.09	166	253	Average	HORIZONTAL
2	4804.99	46.53	74.00	-27.47	40.41	6.13	33.08	33.09	166	253	Peak	HORIZONTAL

Vertical

	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	4803.66	46.87	74.00	-27.13	40.75	6.13	33.08	33.09	168	266	Peak	VERTICAL
2	4803.90	33.66	54.00	-20.34	27.54	6.13	33.08	33.09	168	266	Average	VERTICAL

Temperature	24°C	Humidity	65%
Test Date	Oct. 30, 2015	Configurations	Channel 20
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 3 (Set 13 Monopole antenna / 7.7 dBi)		

Horizontal

	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	4883.08	33.37	54.00	-20.63	27.14	6.08	33.23	33.08	175	274	Average	HORIZONTAL
2	4884.51	46.96	74.00	-27.04	40.69	6.08	33.27	33.08	175	274	Peak	HORIZONTAL

Vertical

	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	4884.76	46.68	74.00	-27.32	40.41	6.08	33.27	33.08	172	287	Peak	VERTICAL
2	4884.86	33.26	54.00	-20.74	26.99	6.08	33.27	33.08	172	287	Average	VERTICAL

Temperature	24°C	Humidity	65%
Test Date	Oct. 30, 2015	Configurations	Channel 39
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 3 (Set 13 Monopole antenna / 7.7 dBi)		

Horizontal

	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	4959.85	33.62	54.00	-20.38	27.22	6.04	33.42	33.06	174	265	Average	HORIZONTAL
2	4960.22	46.65	74.00	-27.35	40.25	6.04	33.42	33.06	174	265	Peak	HORIZONTAL

Vertical

	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	4959.13	47.01	74.00	-26.99	40.61	6.04	33.42	33.06	178	258	Peak	VERTICAL
2	4960.58	33.40	54.00	-20.60	27.00	6.04	33.42	33.06	178	258	Average	VERTICAL

Note:

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

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.6. Emissions Measurement

4.6.1. Limit

30dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 2.7, then the 2.8 limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (30dBc in any 100 kHz bandwidth emission)	100 kHz / 300 kHz for Peak

4.6.3. Test Procedures

For Radiated band edges Measurement:

- The test procedure is the same as section 4.5.3.

For Radiated Out of Band Emission Measurement:

- Test was performed in accordance with KDB558074 D01 v04 for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 section 10.1 Unwanted Emissions into Non-Restricted Frequency Bands Measurement Procedure.

4.6.4. Test Setup Layout

For Radiated band edges Measurement:

This test setup layout is the same as that shown in section 4.5.4.

For Radiated Out of Band Emission Measurement:

This test setup layout is the same as that shown in section 4.5.4.

4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Test Result of Band Edge and Fundamental Emissions

Temperature	24°C	Humidity	65%
Test Date	Oct. 29, 2015 ~ Nov. 30, 2015	Configurations	Channel 0, 20, 39
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 1 (Set 3 Dipole antenna / 4.22 dBi)		

Channel 0

	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	2382.00	47.43	54.00	-6.57	14.78	4.37	28.28	0.00	241	246	Average	VERTICAL
2	2382.40	57.06	74.00	-16.94	24.41	4.37	28.28	0.00	241	246	Peak	VERTICAL
3	2401.80	101.80			69.08	4.41	28.31	0.00	241	246	Peak	VERTICAL
4	2402.00	96.75			64.03	4.41	28.31	0.00	241	246	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 2402 MHz.

Channel 20

	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	2378.40	55.83	74.00	-18.17	23.18	4.37	28.28	0.00	247	25	Peak	VERTICAL
2	2389.20	44.90	54.00	-9.10	12.22	4.37	28.31	0.00	247	25	Average	VERTICAL
3	2442.00	98.40			65.51	4.48	28.41	0.00	247	25	Average	VERTICAL
4	2442.40	103.58			70.69	4.48	28.41	0.00	247	25	Peak	VERTICAL
5	2483.90	45.53	54.00	-8.47	12.55	4.51	28.47	0.00	247	25	Average	VERTICAL
6	2491.50	56.59	74.00	-17.41	23.58	4.51	28.50	0.00	247	25	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2442 MHz.

Channel 39

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2479.84	105.82			73.99	3.91	27.92	0.00	205	300	Peak	VERTICAL
2	2480.00	104.32			72.49	3.91	27.92	0.00	205	300	Average	VERTICAL
3	2483.50	48.29	54.00	-5.71	16.45	3.92	27.92	0.00	205	300	Average	VERTICAL
4	2488.79	59.30	74.00	-14.70	27.46	3.92	27.92	0.00	205	300	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 2480 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	24°C	Humidity	65%
Test Date	Oct. 29, 2015 ~ Nov. 30, 2015	Configurations	Channel 0, 20, 39
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 2 (Set 10 Panel antenna / 9.92 dBi)		

Channel 0

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2382.00	49.35	54.00	-4.65	16.70	4.37	28.28	0.00	153	360	Average	VERTICAL
2	2382.40	56.72	74.00	-17.28	24.07	4.37	28.28	0.00	153	360	Peak	VERTICAL
3	2402.00	98.61			65.89	4.41	28.31	0.00	153	360	Average	VERTICAL
4	2402.00	102.49			69.77	4.41	28.31	0.00	153	360	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2402 MHz.

Channel 20

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2367.60	56.16	74.00	-17.84	23.54	4.37	28.25	0.00	182	300	Peak	HORIZONTAL
2	2387.20	45.36	54.00	-8.64	12.68	4.37	28.31	0.00	182	300	Average	HORIZONTAL
3	2442.00	89.06			56.17	4.48	28.41	0.00	182	300	Average	HORIZONTAL
4	2442.40	90.63			57.74	4.48	28.41	0.00	182	300	Peak	HORIZONTAL
5	2499.60	45.91	54.00	-8.09	12.86	4.55	28.50	0.00	182	300	Average	HORIZONTAL
6	2522.80	57.18	74.00	-16.82	23.99	4.58	28.61	0.00	182	300	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2442 MHz.

Channel 39

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	T/Pos	A/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	deg	cm		
1	2479.84	107.46			75.63	3.91	27.92	0.00	10	148	Peak	VERTICAL
2	2480.00	106.04			74.21	3.91	27.92	0.00	10	148	Average	VERTICAL
3	2500.03	59.43	74.00	-14.57	27.61	3.92	27.90	0.00	10	148	Peak	VERTICAL
4	2500.03	49.34	54.00	-4.66	17.52	3.92	27.90	0.00	10	148	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 2480 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	24°C	Humidity	65%
Test Date	Oct. 30, 2015 ~ Dec. 31, 2015	Configurations	Channel 0, 20, 39
Test Engineer	Charlie Cheng & Gino Huang & Peter Wu		
Test Mode	Mode 3 (Set 13 Monopole antenna / 7.7 dBi)		

Channel 0

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2382.00	50.95	54.00	-3.05	18.30	4.37	28.28	0.00	237	360	Average	HORIZONTAL
2	2382.20	58.35	74.00	-15.65	25.70	4.37	28.28	0.00	237	360	Peak	HORIZONTAL
3	2402.00	99.22			66.50	4.41	28.31	0.00	237	360	Average	HORIZONTAL
4	2402.40	104.41			71.69	4.41	28.31	0.00	237	360	Peak	HORIZONTAL

Item 3, 4 are the fundamental frequency at 2402 MHz.

Channel 20

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2385.20	55.92	74.00	-18.08	23.27	4.37	28.28	0.00	222	0	Peak	VERTICAL
2	2390.00	44.93	54.00	-9.07	12.21	4.41	28.31	0.00	222	0	Average	VERTICAL
3	2442.00	100.28			67.39	4.48	28.41	0.00	222	0	Average	VERTICAL
4	2442.40	105.54			72.65	4.48	28.41	0.00	222	0	Peak	VERTICAL
5	2485.80	45.41	54.00	-8.59	12.43	4.51	28.47	0.00	222	0	Average	VERTICAL
6	2498.40	56.64	74.00	-17.36	23.59	4.55	28.50	0.00	222	0	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 2442 MHz.

Channel 39

	Freq	Level	Limit Line	Over Limit	Read Level	CableAntenna Loss Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	2479.80	104.21			70.64	5.11	28.46	0.00	250	359	Peak	HORIZONTAL
2	2480.00	102.71			69.14	5.11	28.46	0.00	250	359	Average	HORIZONTAL
3	2483.50	57.71	74.00	-16.29	24.11	5.12	28.48	0.00	250	359	Peak	HORIZONTAL
4	2483.50	49.80	54.00	-4.20	16.20	5.12	28.48	0.00	250	359	Average	HORIZONTAL

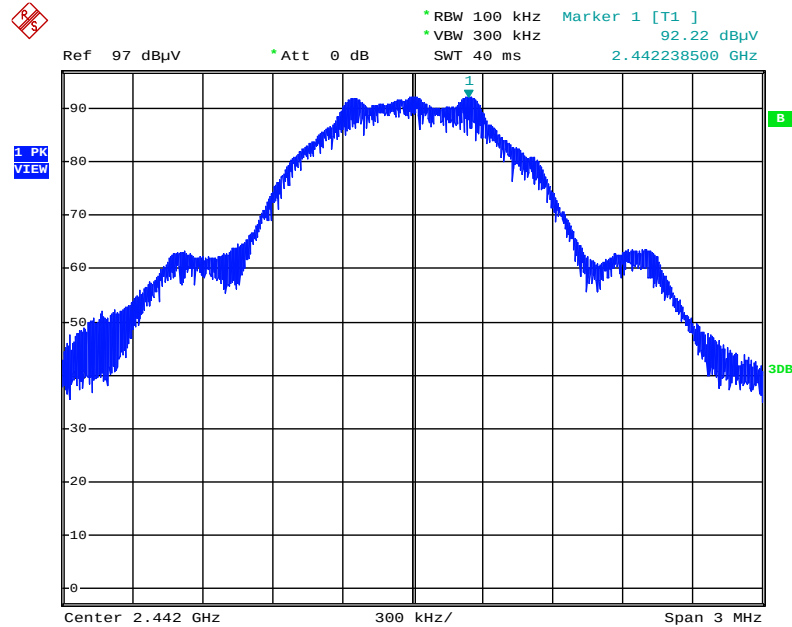
Item 1, 2 are the fundamental frequency at 2480 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

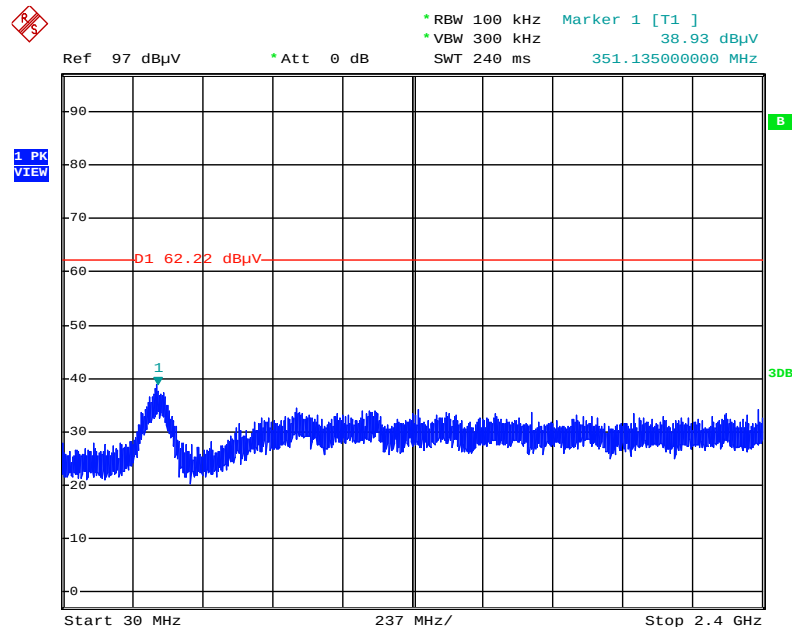
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

For Emission not in Restricted Band
Mode 1 (Set 3 Dipole antenna / 4.22 dBi)
Plot on Configuration / Reference Level



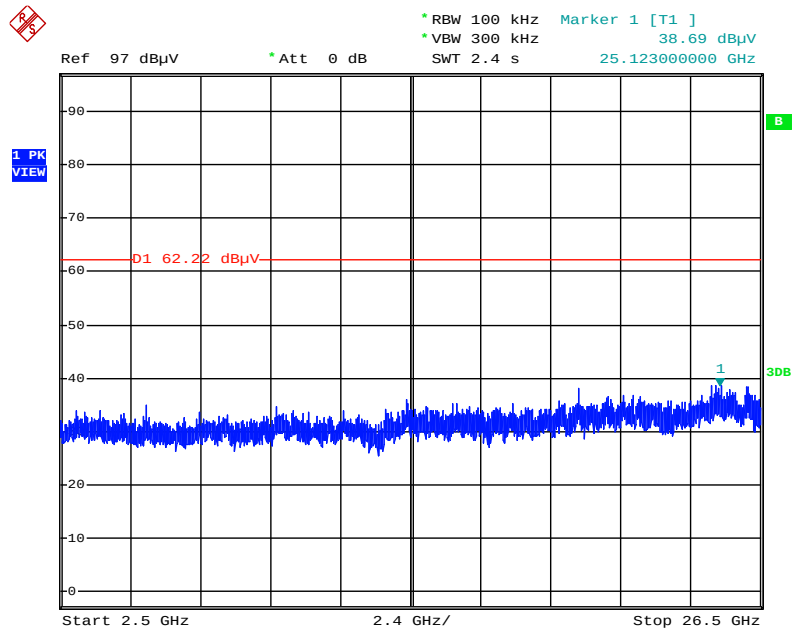
Date: 29.OCT.2015 21:20:02

Plot on Configuration For Bluetooth 4.0 / Channel 0 / 30MHz~2400MHz (down 30dBc)



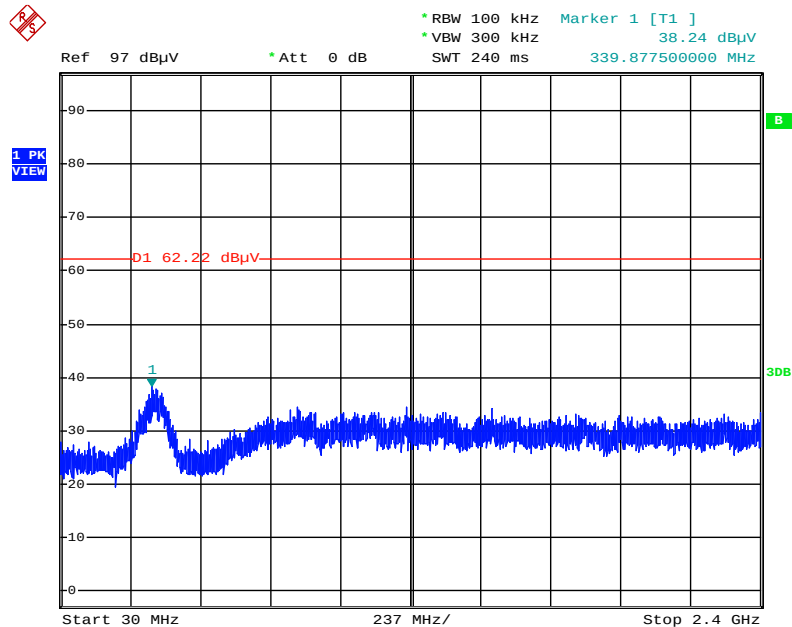
Date: 29.OCT.2015 21:21:04

Plot on Configuration For Bluetooth 4.0 / Channel 0 / 2500MHz~26500MHz (down 30dBc)



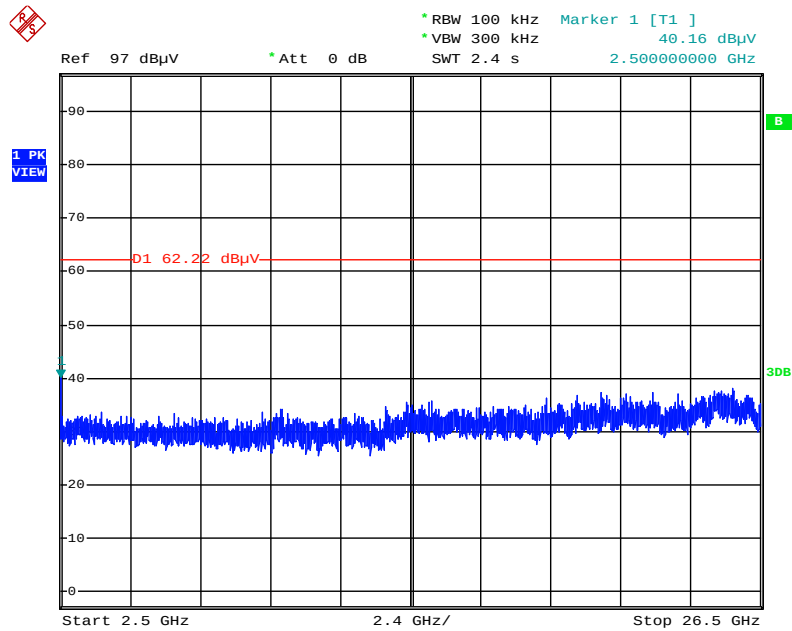
Date: 29.OCT.2015 21:21:55

Plot on Configuration For Bluetooth 4.0 / Channel 39 / 30MHz~2400MHz (down 30dBc)



Date: 29.OCT.2015 21:23:15

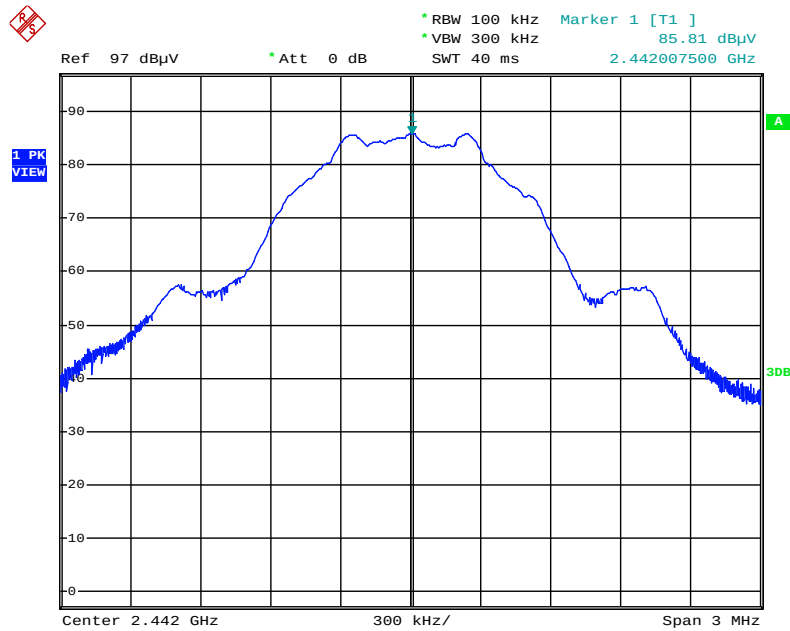
Plot on Configuration For Bluetooth 4.0 / Channel 39 / 2500MHz~26500MHz (down 30dBc)



Date: 29.OCT.2015 21:22:51

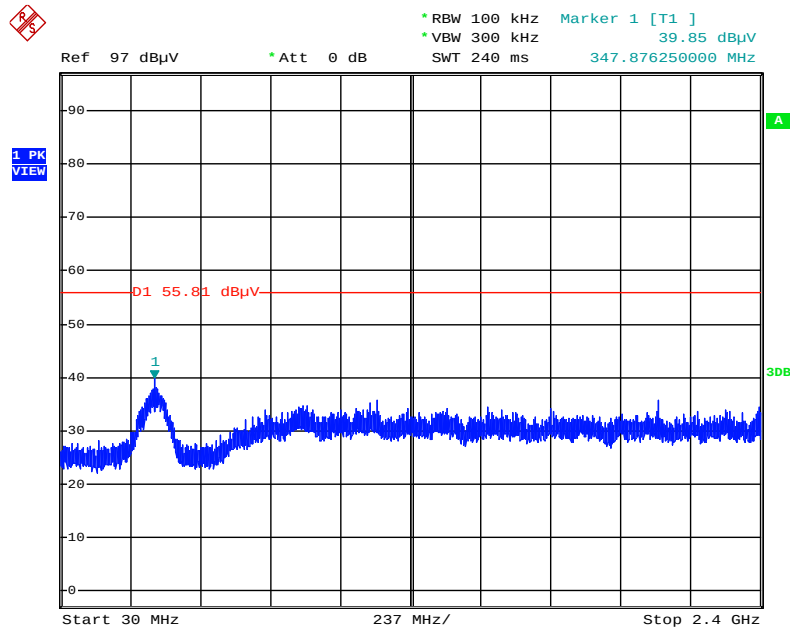
Mode 2 (Set 10 Panel antenna / 9.92 dBi)

Plot on Configuration / Reference Level



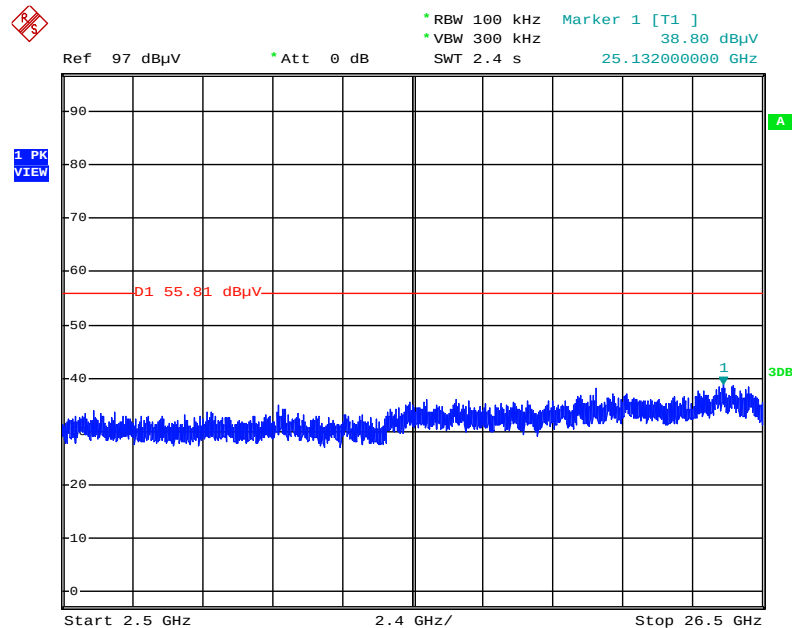
Date: 29.OCT.2015 17:09:19

Plot on Configuration For Bluetooth 4.0 / Channel 0 / 30MHz~2400MHz (down 30dBc)



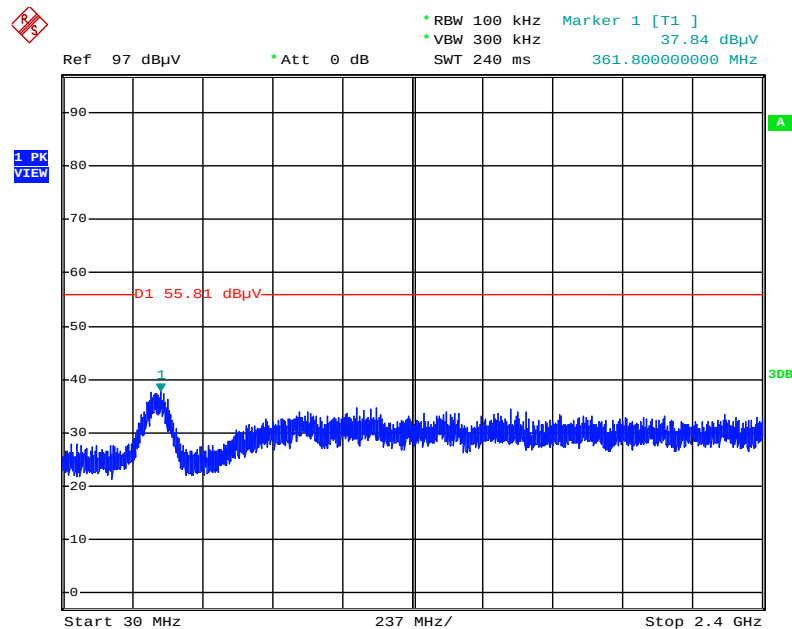
Date: 29.OCT.2015 17:12:26

Plot on Configuration For Bluetooth 4.0 / Channel 0 / 2500MHz~26500MHz (down 30dBc)



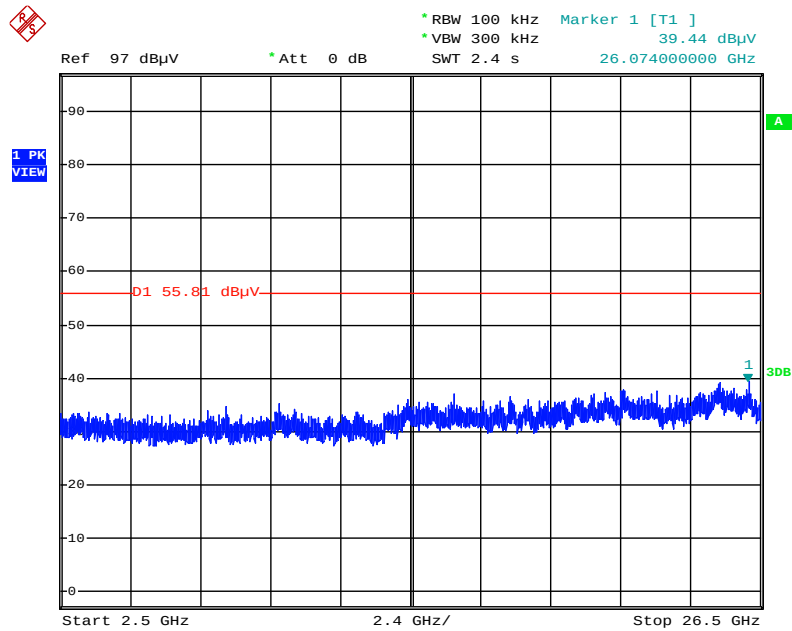
Date: 29.OCT.2015 17:13:20

Plot on Configuration For Bluetooth 4.0 / Channel 39 / 30MHz~2400MHz (down 30dBc)



Date: 29.OCT.2015 17:14:36

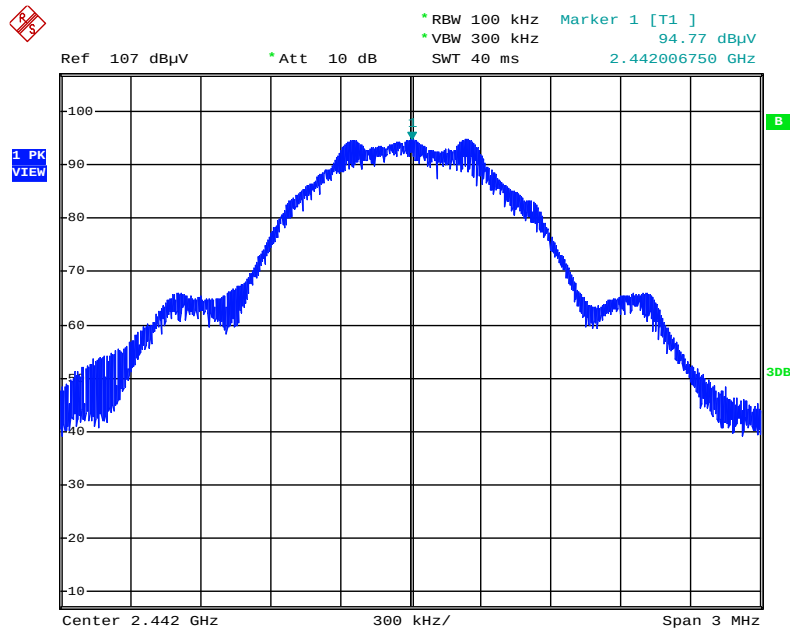
Plot on Configuration For Bluetooth 4.0 / Channel 39 / 2500MHz~26500MHz (down 30dBc)



Date: 29.OCT.2015 17:14:07

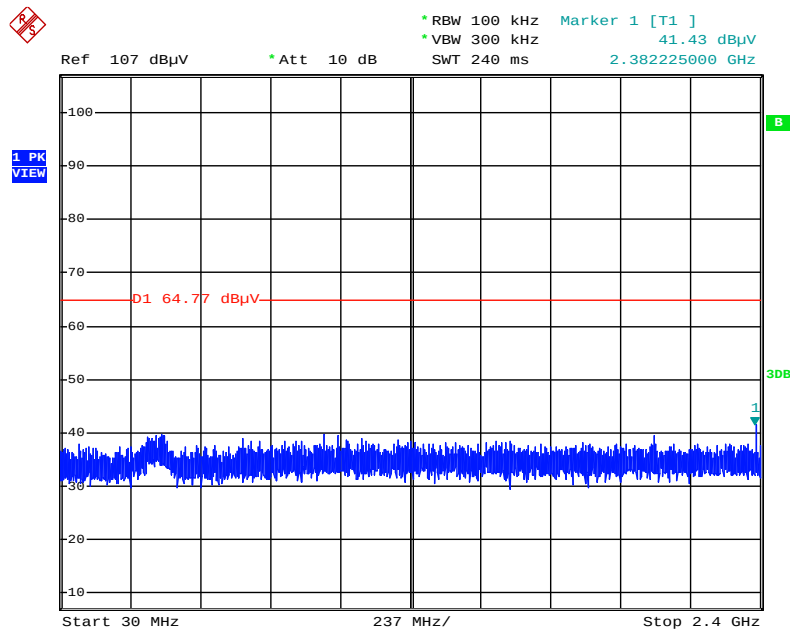
Mode 3 (Set 13 Monopole antenna / 7.7 dBi)

Plot on Configuration / Reference Level



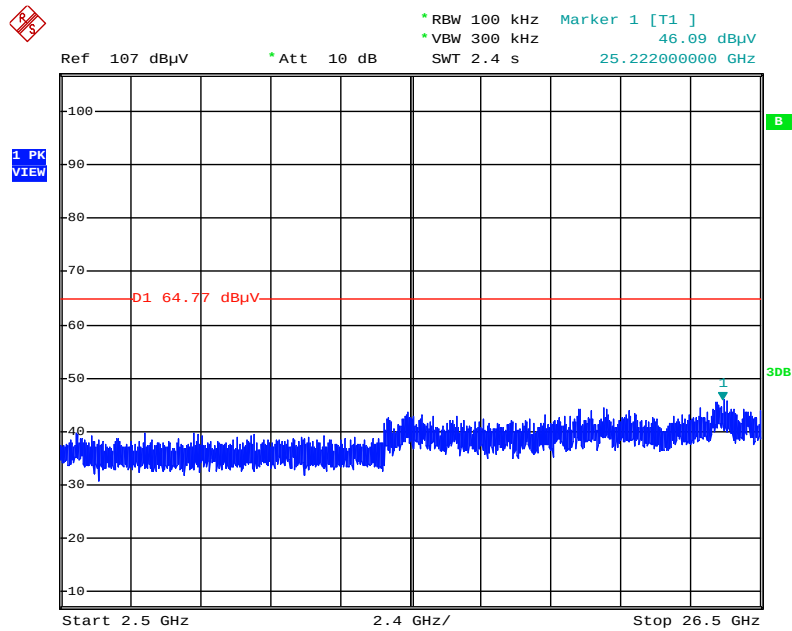
Date: 30.OCT.2015 00:50:15

Plot on Configuration For Bluetooth 4.0 / Channel 0 / 30MHz~2400MHz (down 30dBc)



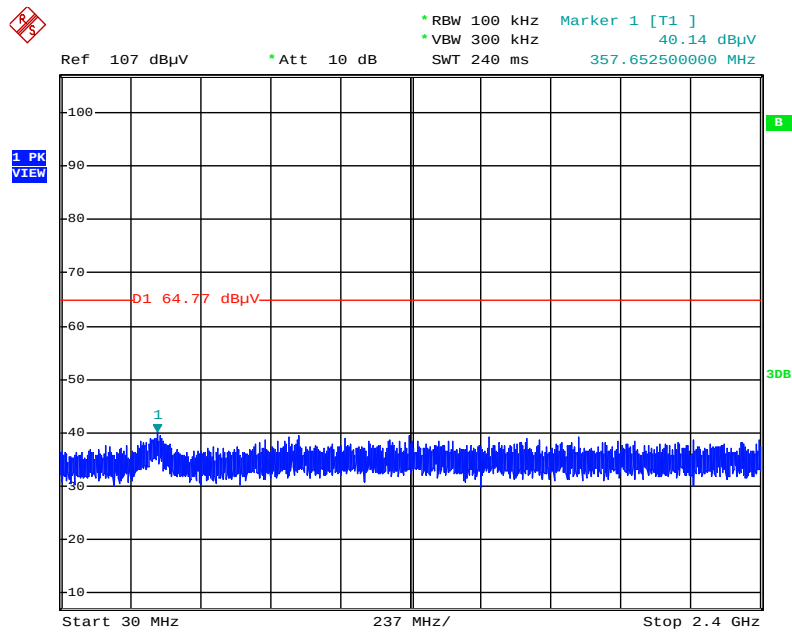
Date: 30.OCT.2015 00:51:30

Plot on Configuration For Bluetooth 4.0 / Channel 0 / 2500MHz~26500MHz (down 30dBc)



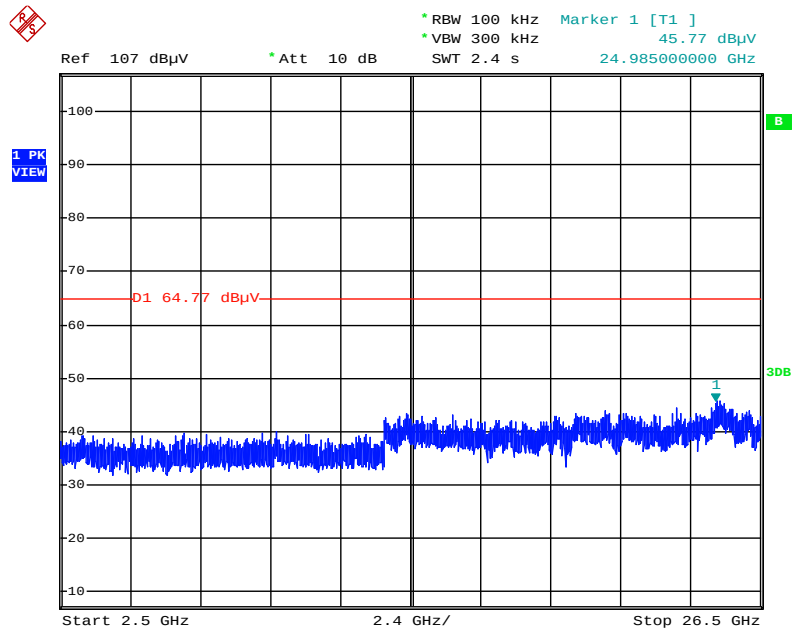
Date: 30.OCT.2015 00:51:51

Plot on Configuration For Bluetooth 4.0 / Channel 39 / 30MHz~2400MHz (down 30dBc)



Date: 30.OCT.2015 00:52:46

Plot on Configuration For Bluetooth 4.0 / Channel 39 / 2500MHz~26500MHz (down 30dBc)



Date: 30.OCT.2015 00:52:28

4.7. Antenna Requirements

4.7.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

4.7.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100355	9kHz ~ 2.75GHz	Apr. 22, 2015	Conduction (CO01-CB)
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 23, 2017	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 02, 2014	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 14, 2016	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 02, 2014	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 21, 2016	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	Dec. 03, 2014	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	May 23, 2017	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	37880	20MHz ~ 2GHz	Sep. 03, 2015	Radiation (03CH01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2016	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 10, 2016	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2017	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 16, 2017	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Feb.10, 2015	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 13, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 22, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 06, 2017	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 24, 2016	Radiation (03CH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 24, 2016	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	1 GHz ~ 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 12, 2015*	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	1 GHz ~ 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-I0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	Dec. 12, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz ~ 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz ~ 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz ~ 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~ 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz ~ 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 03, 2014	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

* Calibration Interval of instruments listed above is two years.

N.C.R. means Non-Calibration required.

6. MEASUREMENT UNCERTAINTY

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)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%

Appendix A. Test Photos

1. Photographs of Conducted Emissions Test Configuration

Unintentional – Normal Link / Test Mode: Mode 2

FRONT VIEW



REAR VIEW



Intentional – CTX / Test Mode: Mode 1

FRONT VIEW



REAR VIEW



2. Photographs of Radiated Emissions Test Configuration

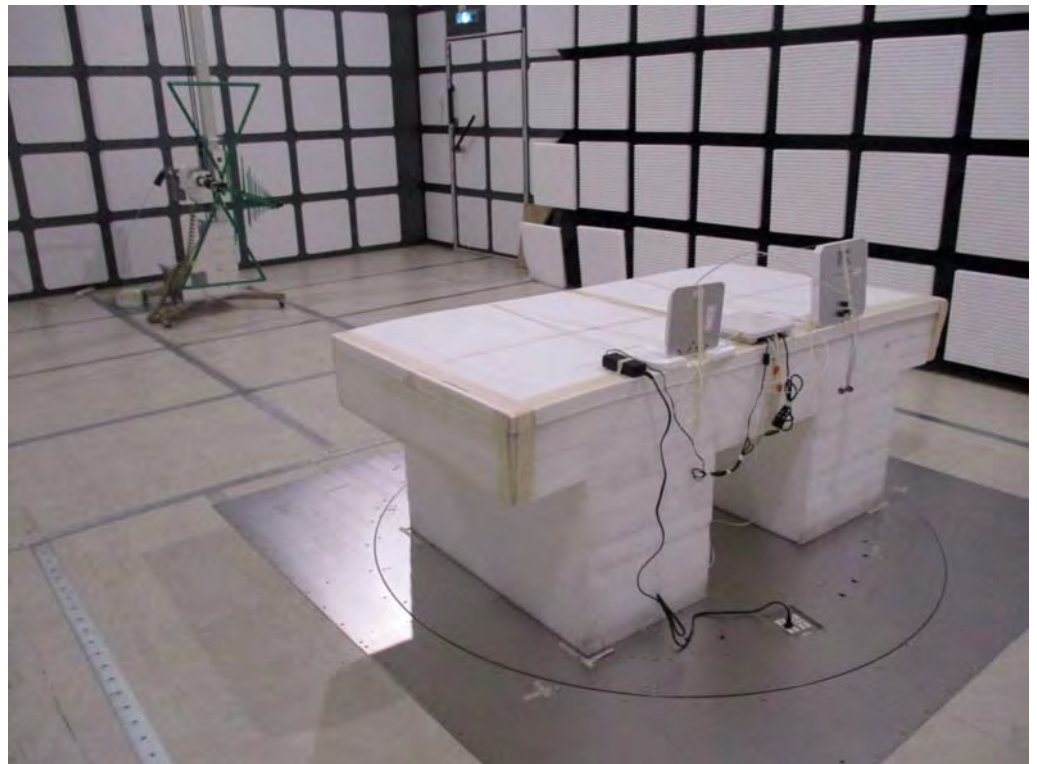
Test Configuration: 30MHz~1GHz

Unintentional – Normal Link / Test Mode: Mode 2

FRONT VIEW

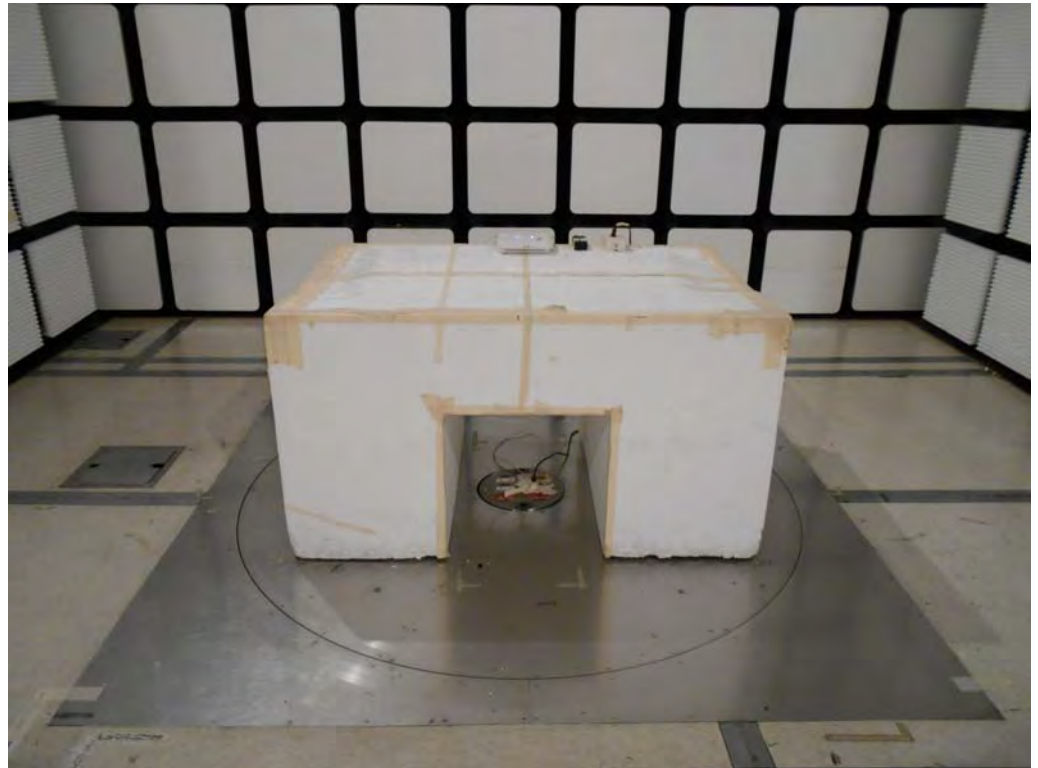


REAR VIEW



Intentional – CTX / Test Mode: Mode 3

FRONT VIEW



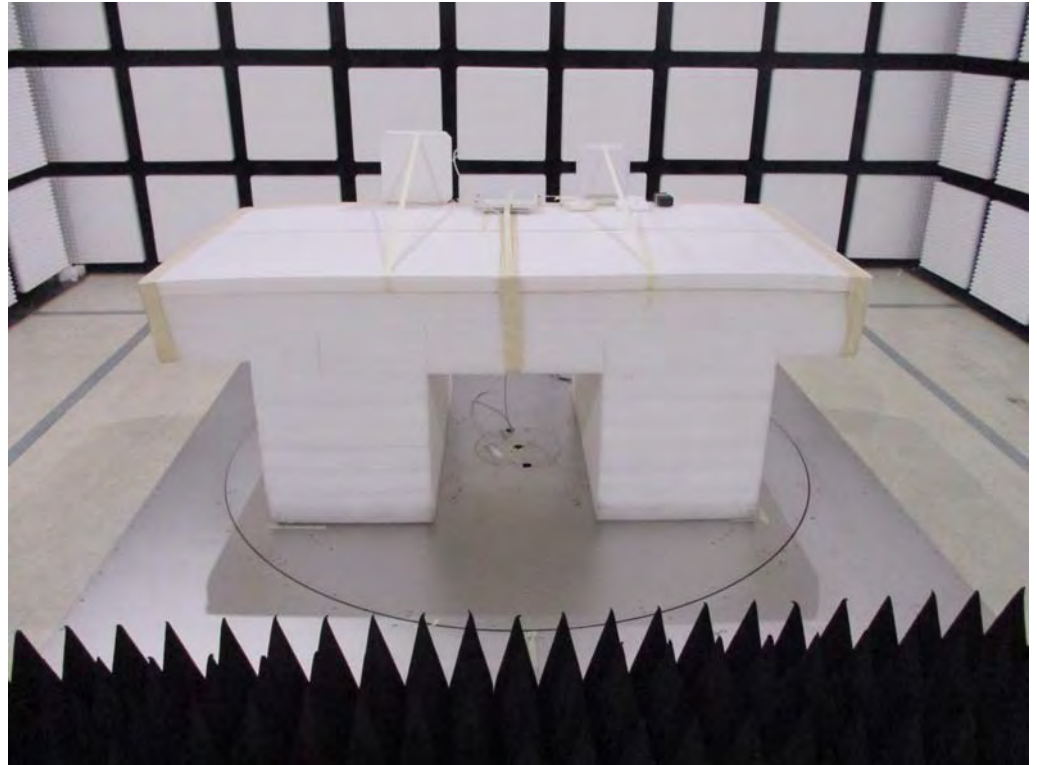
REAR VIEW



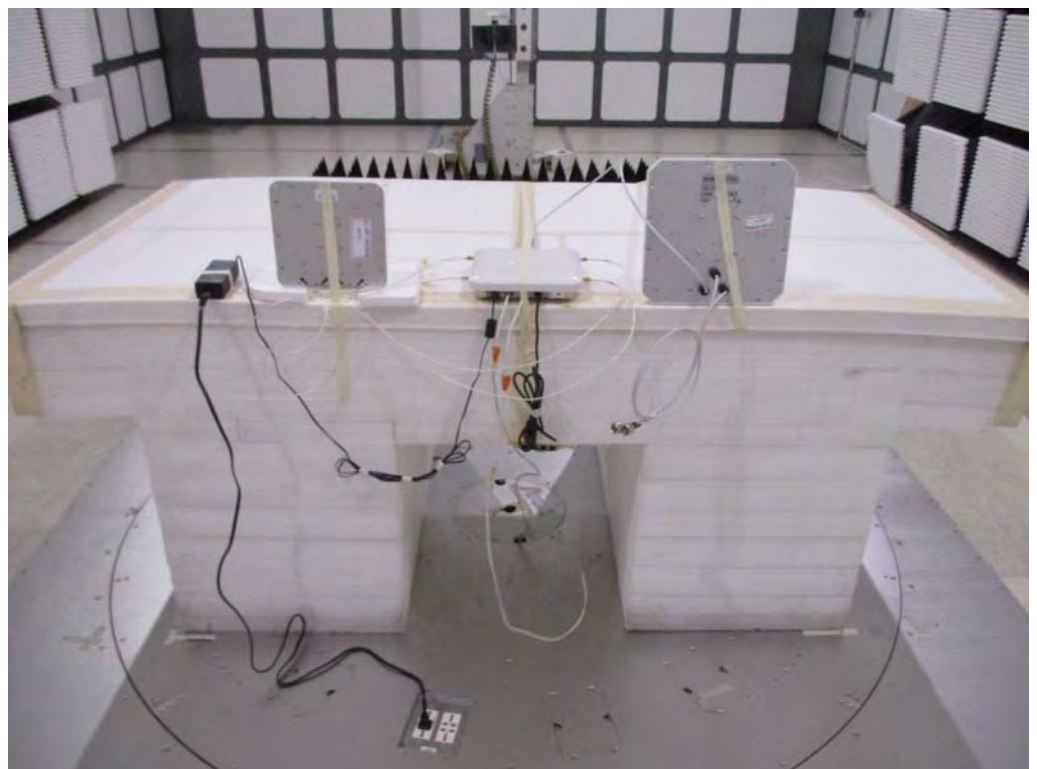
Test Configuration: Above 1GHz

Radiated Emissions 1GHz~5th Harmonic / Test Mode: Mode 1

FRONT VIEW

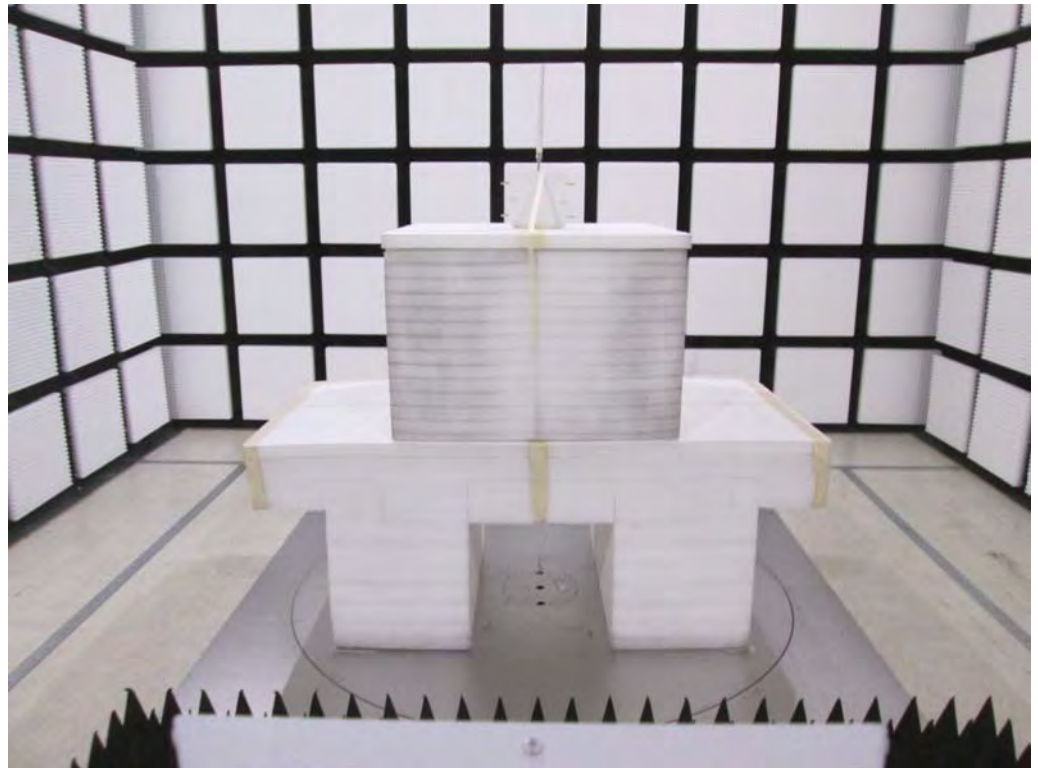


REAR VIEW



Radiated Emissions 1GHz~10th Harmonic / Test Mode: Mode 1

FRONT VIEW

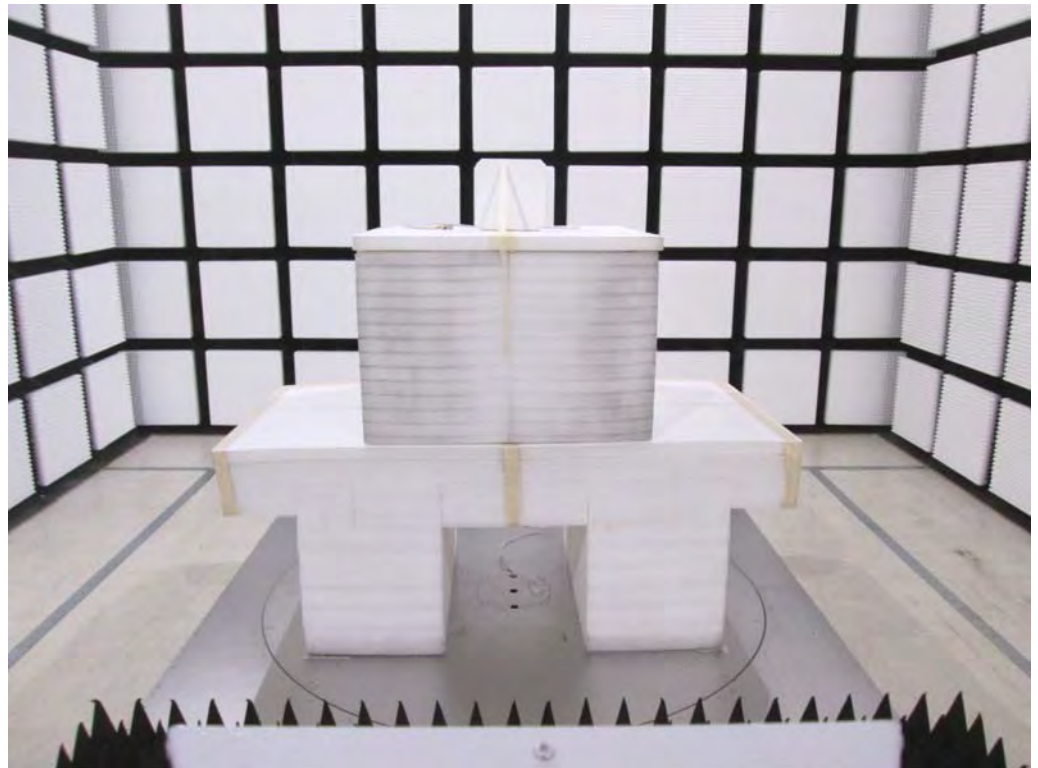


REAR VIEW



Test Mode: Mode 2

FRONT VIEW

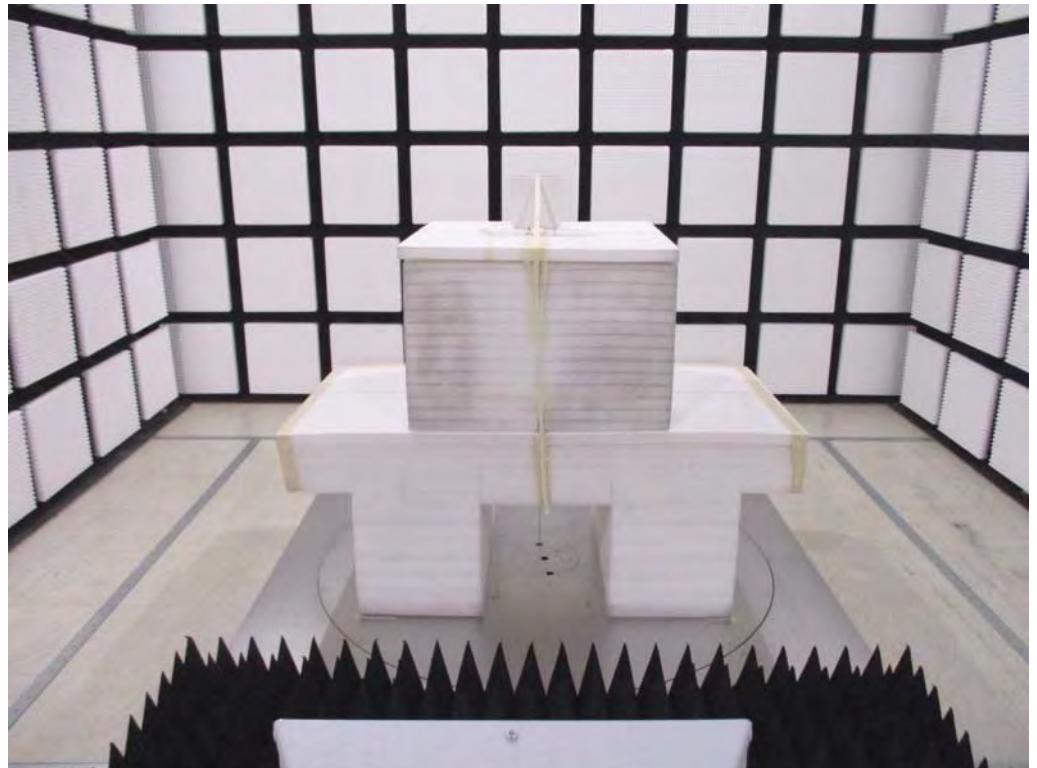


REAR VIEW



Test Mode: Mode 3

FRONT VIEW



REAR VIEW

