



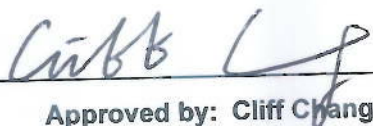
# FCC RADIO TEST REPORT

**FCC ID** : TE7WPA4220V4  
**Equipment** : 300Mbps Wi-Fi Range Extender,AV600 Powerline Edition  
**Brand Name** : tp-link  
**Model Name** : TL-WPA4220  
**Applicant** : TP-Link Technologies Co., Ltd.  
Building 24 (floors 1,3,4,5) and 28 (floors1-4),  
Central Science and Technology Park,Nanshan  
Shenzhen, 518057 China  
**Manufacturer** : TP-Link Technologies Co., Ltd.  
Building 24 (floors 1,3,4,5) and 28 (floors1-4),  
Central Science and Technology Park,Nanshan  
Shenzhen, 518057 China  
**Standard** : 47 CFR FCC Part 15.247

The product was received on Apr. 11, 2018, and testing was started from May 28, 2018 and completed on Jun. 08, 2018. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

  
Approved by: Cliff Chang

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**  
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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**Photographs of EUT v01**



### History of this test report

Report No.	Version	Description	Issued Date
FR782206-02	01	Initial issue of report	Jul. 18, 2018



### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

Reviewed by: **Sam Chen**

Report Producer: **Vicky Huang**



# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20)	2412-2462	1-11 [11]
2400-2483.5	n (HT40)	2422-2452	3-9 [7]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX

Note:

- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

### 1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	-	-	Printed Antenna	N/A	2
2	-	-	Printed Antenna	N/A	2

**For IEEE 802.11b/g/n mode (2TX, 2RX):**

Ant. 1(Port 1) and Ant. 2(Port 2) can be used as transmitting/receiving antenna.

Ant. 1(Port 1) and Ant. 2(Port 2) could transmit/receive simultaneously.

### 1.1.3 Mode Test Duty Cycle

Mode	DC	DCF(dB)	T(s)	VBW(Hz) ≥ 1/T
802.11b	0.973	0.119	8.418m	300
802.11g	0.861	0.65	1.397m	1k
802.11n HT20	0.841	0.752	1.309m	1k
802.11n HT40	0.729	1.373	617.5u	3k



1.1.4 EUT Operational Condition

EUT Power Type	From Internal Power Supply		
Beamforming Function	<input type="checkbox"/> With beamforming	<input checked="" type="checkbox"/> Without beamforming	
Function	<input checked="" type="checkbox"/> Point-to-multipoint	<input type="checkbox"/> Point-to-point	

1.1.5 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR782206-05

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Updating of EUT version to "Version 04" from "Version 03".	1. AC Power-line Conducted Emissions 2. Emissions in Restricted Frequency Bands below 1GHz
	11b 2437 MHz generated the worst case from original, thus only test 11b 2437 MHz for below items: 3. Emissions in Restricted Frequency Bands above 1GHz



### 1.2 Testing Applied Standards

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

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 558074 D01 v04
- ♦ FCC KDB 662911 D01 v02r01

### 1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	HWAYA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
<input checked="" type="checkbox"/>	JHUBEI	ADD : 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 Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated	03CH01-CB	Joy Tseng	22°C / 54%	May 28, 2018
AC Conduction	CO01-CB	Wei Li	25°C / 61%	Jun. 08, 2018

Test site Designation No. TW0006 with FCC.  
Test site registered number IC 4086D with Industry Canada.

### 1.4 Measurement Uncertainty

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

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%



## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

Mode	Power Setting
802.11b_(1Mbps)_2TX	-
2412MHz	22
2437MHz	28
2462MHz	24
802.11g_(6Mbps)_2TX	-
2412MHz	1A
2437MHz	2A
2462MHz	1B
802.11n HT20_Nss1,(MCS0)_2TX	-
2412MHz	1A
2437MHz	2A
2462MHz	1B
802.11n HT40_Nss1,(MCS0)_2TX	-
2422MHz	15
2437MHz	1D
2452MHz	16





### 2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	AC power-line conducted emissions
Condition	AC power-line conducted measurement for line and neutral
Operating Mode	CTX

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emissions in Restricted Frequency Bands
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	CTX
The EUT was performed at Y axis and Z axis position for Radiated emission above 1GHz test, and the worst case was found at Y axis. So the measurement will follow this same test configuration.	
1	EUT in Y axis
Operating Mode > 1GHz	CTX
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.	
2	EUT in Y axis

### 2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

### 2.4 Accessories

N/A

### 2.5 Support Equipment

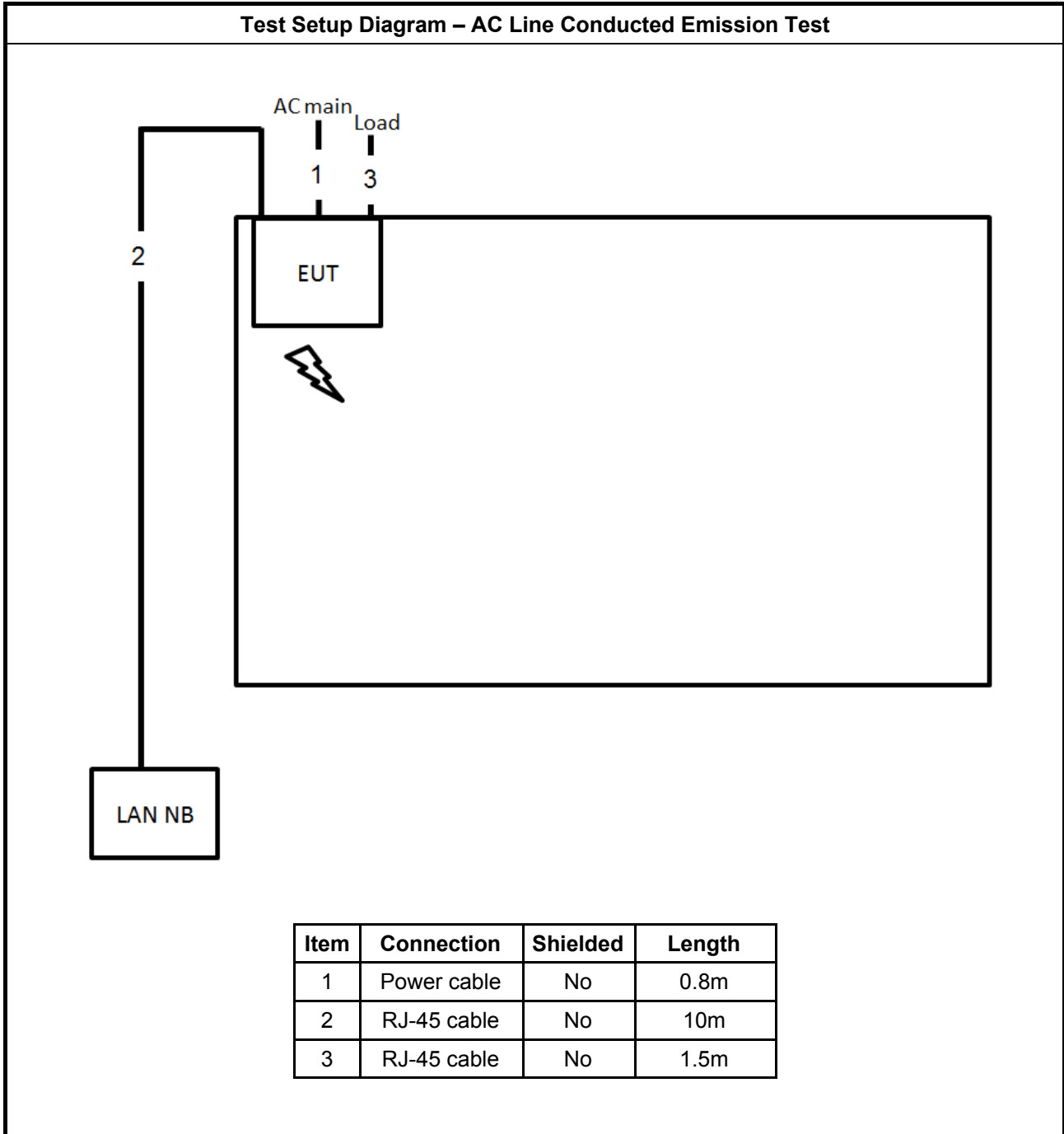
For Test Site No: CO01-CB

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E6430	N/A

For Test Site No: 03CH01-CB

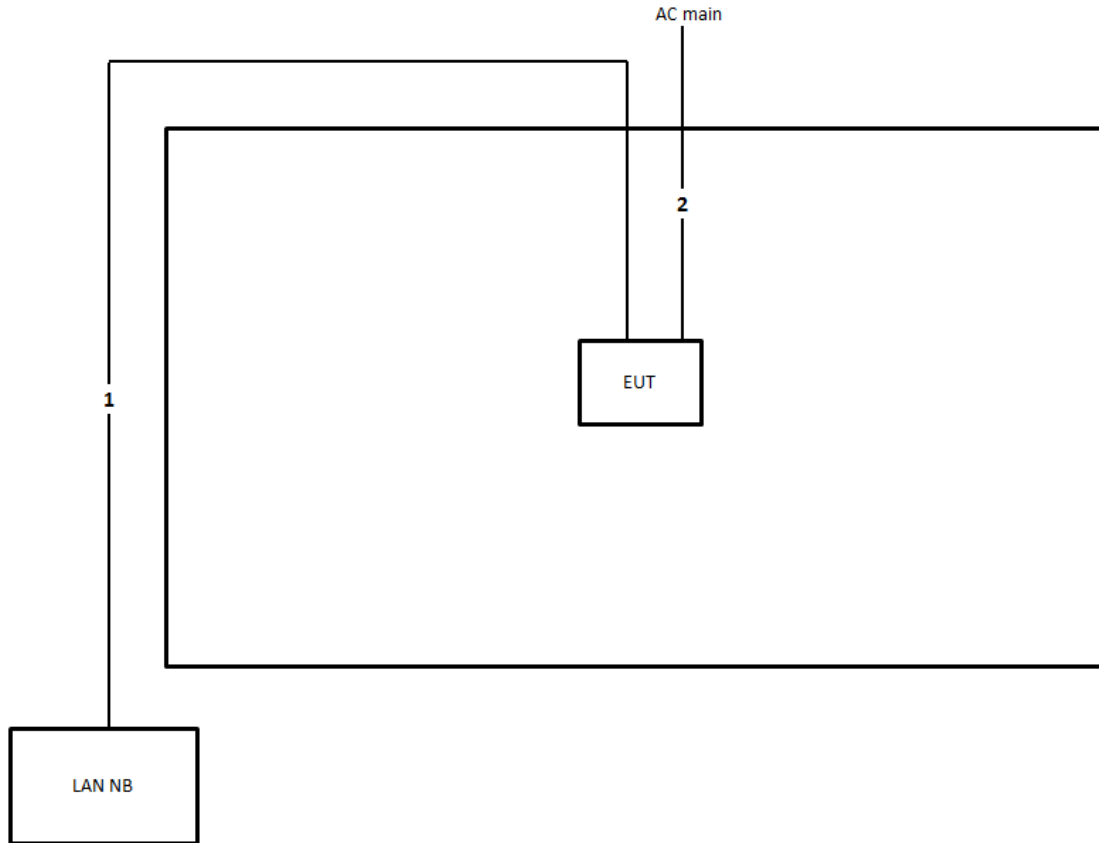
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
1	NB	DELL	E4300	N/A

## 2.6 Test Setup Diagram





Test Setup Diagram - Radiated Test



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	0.8m



### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: \* Decreases with the logarithm of the frequency.

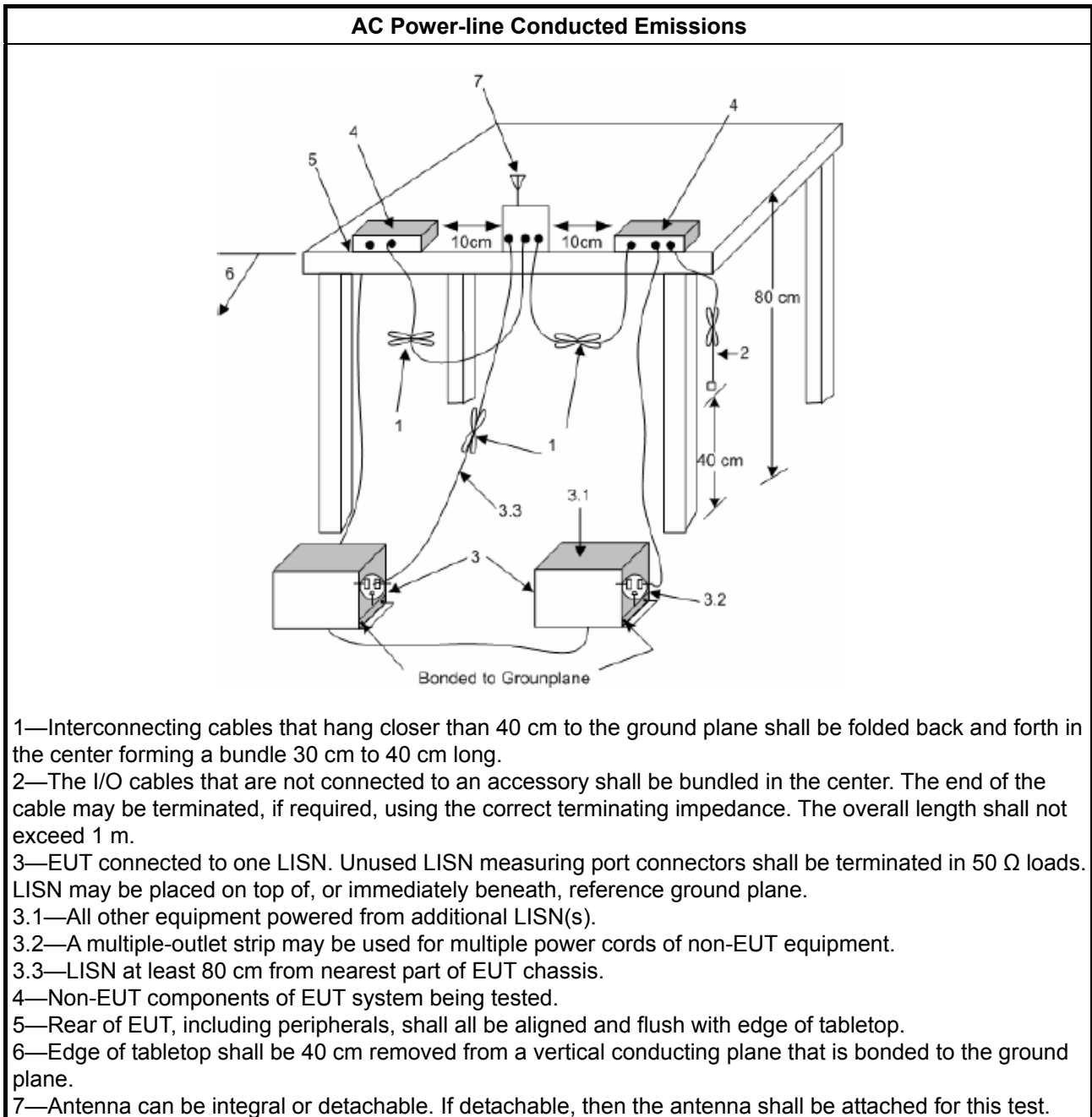
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

### 3.1.4 Test Setup



### 3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A



### 3.2 Emissions in Restricted Frequency Bands

#### 3.2.1 Emissions in Restricted Frequency Bands Limit

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

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

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

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

#### 3.2.2 Measuring Instruments

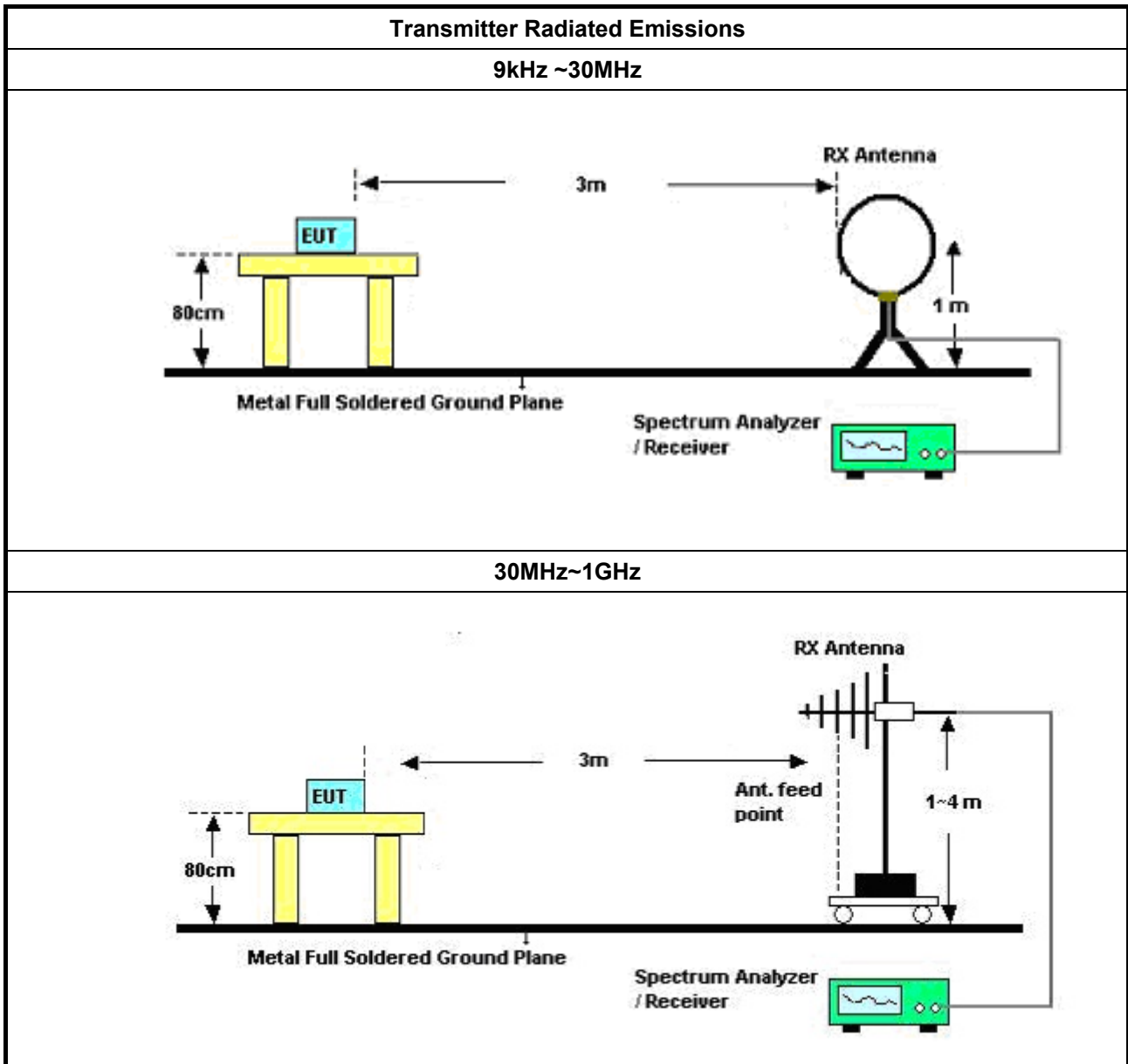
Refer a test equipment and calibration data table in this test report.



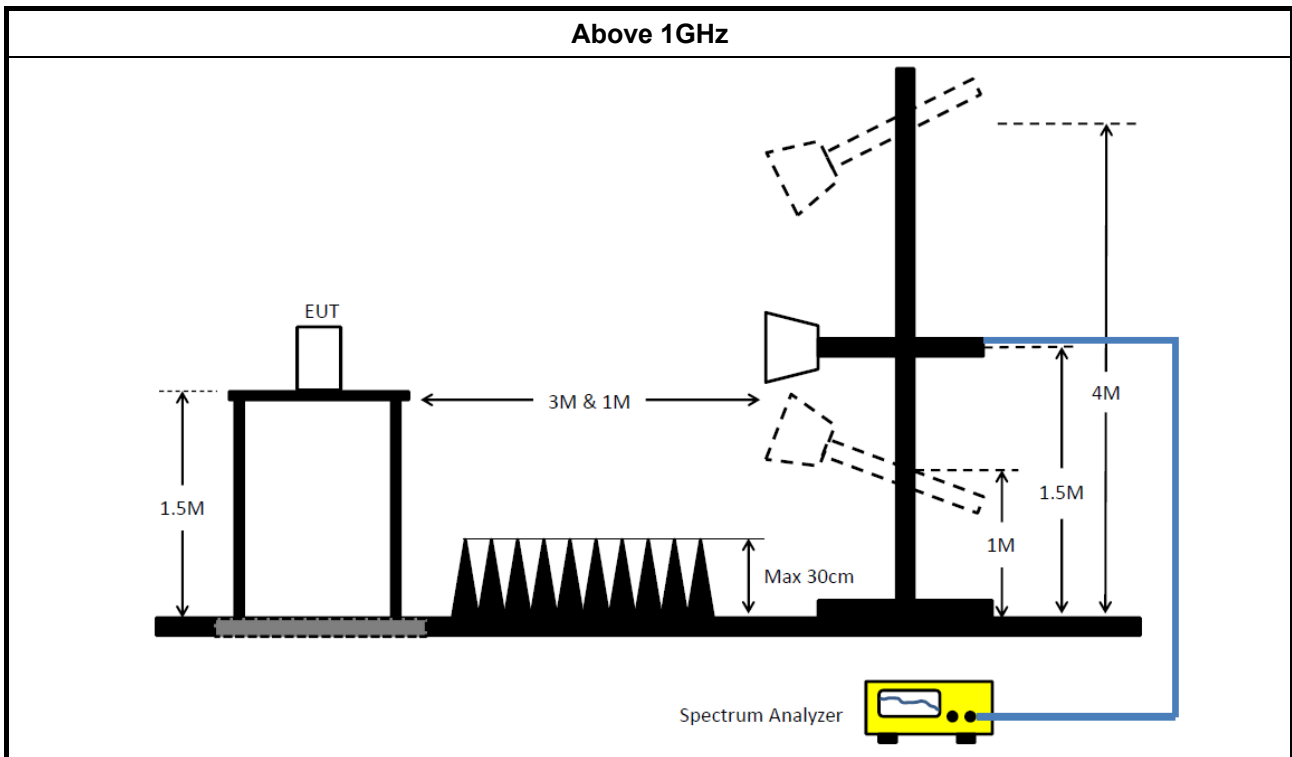
**3.2.3 Test Procedures**

<b>Test Method</b>	
<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [duty cycle <math>\geq</math> 98 or duty factor].</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ For the transmitter unwanted emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands.</li> </ul>
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq$ 98%)
	<input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq$ 1/T).
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq$ 1/T, where T is pulse time.
	<input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
	<input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit.
<ul style="list-style-type: none"> <li>▪ For the transmitter band-edge emissions shall be measured using following options below:</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).</li> </ul>
<ul style="list-style-type: none"> <li>▪ For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2.</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred.</li> </ul>

### 3.2.4 Test Setup







### 3.2.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

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

The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

### 3.2.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix B



## 4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
EMI Receiver	Agilent	N9038A	My52260123	9kHz ~ 8.45GHz	Jan. 31, 2018	Jan. 30, 2019	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 20, 2017	Dec. 19, 2018	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 29, 2017	Dec. 28, 2018	Conduction (CO01-CB)
COND Cable	Woken	Cable	Low cable-CO01	150kHz ~ 30MHz	May 22, 2018	May 21, 2019	Conduction (CO01-CB)
Software	Audix	E3	6.120210n	-	N.C.R.	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA with 6dB Attenuator	TESEQ & EMCI	CBL6112D & N-6-06	37880 & AT-N0609	20MHz ~ 2GHz	Aug. 30, 2017	Aug. 29, 2018	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 16, 2018	Mar. 15, 2019	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Nov. 20, 2017	Nov. 19, 2018	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 05, 2017	Jul. 04, 2018	Radiation (03CH01-CB)
Pre-Amplifier	EMCI	EMC330N	980332	20MHz ~ 3GHz	May 02, 2018	May 01, 2019	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 09, 2018	Jan. 08, 2019	Radiation (03CH01-CB)
Pre-Amplifier	MITEQ	TTA1840-35-H G	1864479	18GHz ~ 40GHz	Jul. 10, 2017	Jul. 09, 2018	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 23, 2017	Nov. 22, 2018	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100354	9kHz ~ 2.75GHz	Dec. 08, 2017	Dec. 07, 2018	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-16+17	N/A	30 MHz ~ 1 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16+17	N/A	1 GHz ~ 18 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G#1	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)



<b>Instrument</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Characteristics</b>	<b>Calibration Date</b>	<b>Calibration Due Date</b>	<b>Remark</b>
RF Cable-high	Woken	High Cable-40G#2	N/A	18GHz ~ 40 GHz	Oct. 11, 2017	Oct. 10, 2018	Radiation (03CH01-CB)

Note: Calibration Interval of instruments listed above is one year.  
NCR means Non-Calibration required.



# AC Power-line Conducted Emissions Result

Appendix A

AC Power-line Conducted Emissions Result									
Operating Mode	1	Power Phase	Neutral						
Operating Function	CTX								
<p>The graph displays the AC power-line conducted emissions. The y-axis represents Level in dBuV (0 to 80), and the x-axis represents Frequency in MHz (0.150.2 to 30). Two red lines indicate the CISPR limits: CISPR_B_QP (upper) and CISPR_B_AV (lower). A blue line shows the test results, which are mostly below the limits, with some peaks between 0.15 and 0.3 MHz.</p>									
	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1616	43.36	-12.02	55.38	33.28	9.92	0.16	Average	NEUTRAL
2	0.1616	57.53	-7.85	65.38	47.45	9.92	0.16	QP	NEUTRAL
3	0.1777	36.18	-18.41	54.59	26.11	9.92	0.15	Average	NEUTRAL
4	0.1777	51.37	-13.22	64.59	41.30	9.92	0.15	QP	NEUTRAL
5	0.1924	40.25	-13.68	53.93	30.19	9.92	0.14	Average	NEUTRAL
6	0.1924	54.76	-9.17	63.93	44.70	9.92	0.14	QP	NEUTRAL
7	0.2106	34.51	-18.67	53.18	24.45	9.92	0.14	Average	NEUTRAL
8	0.2106	48.18	-15.00	63.18	38.12	9.92	0.14	QP	NEUTRAL
9	0.2185	34.44	-18.44	52.88	24.38	9.92	0.14	Average	NEUTRAL
10	0.2185	46.39	-16.49	62.88	36.33	9.92	0.14	QP	NEUTRAL
11	0.2256	36.90	-15.71	52.61	26.84	9.92	0.14	Average	NEUTRAL
12	0.2256	49.80	-12.81	62.61	39.74	9.92	0.14	QP	NEUTRAL
13	0.2416	32.72	-19.32	52.04	22.67	9.92	0.13	Average	NEUTRAL
14	0.2416	43.88	-18.16	62.04	33.83	9.92	0.13	QP	NEUTRAL
15	0.2589	35.78	-15.69	51.47	25.73	9.92	0.13	Average	NEUTRAL
16	0.2589	44.85	-16.62	61.47	34.80	9.92	0.13	QP	NEUTRAL
17	0.2730	33.59	-17.44	51.03	23.54	9.92	0.13	Average	NEUTRAL
18	0.2730	40.63	-20.40	61.03	30.58	9.92	0.13	QP	NEUTRAL
19	0.3100	32.31	-17.66	49.97	22.26	9.92	0.13	Average	NEUTRAL
20	0.3100	39.08	-20.89	59.97	29.03	9.92	0.13	QP	NEUTRAL

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

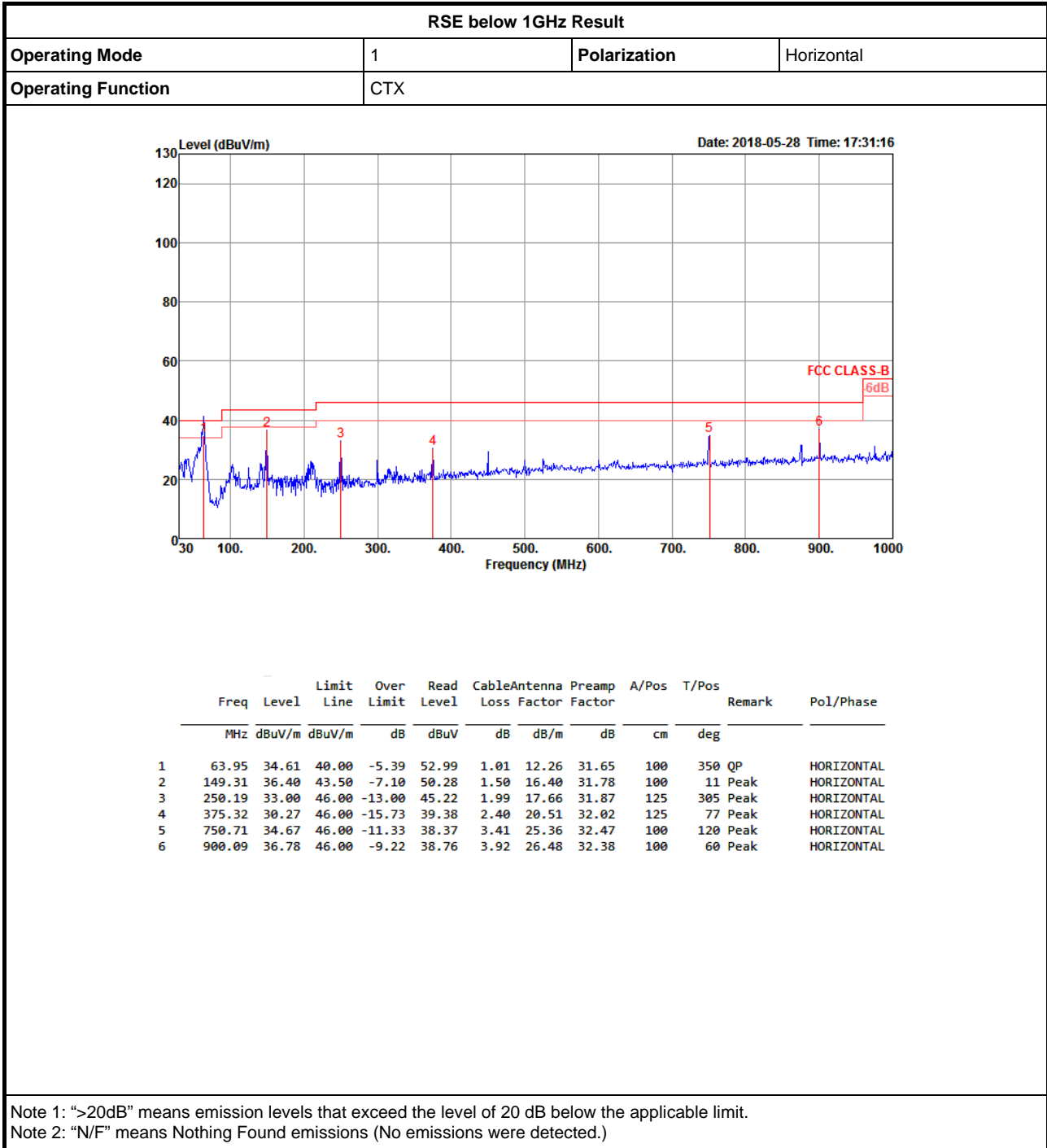


# AC Power-line Conducted Emissions Result

Appendix A

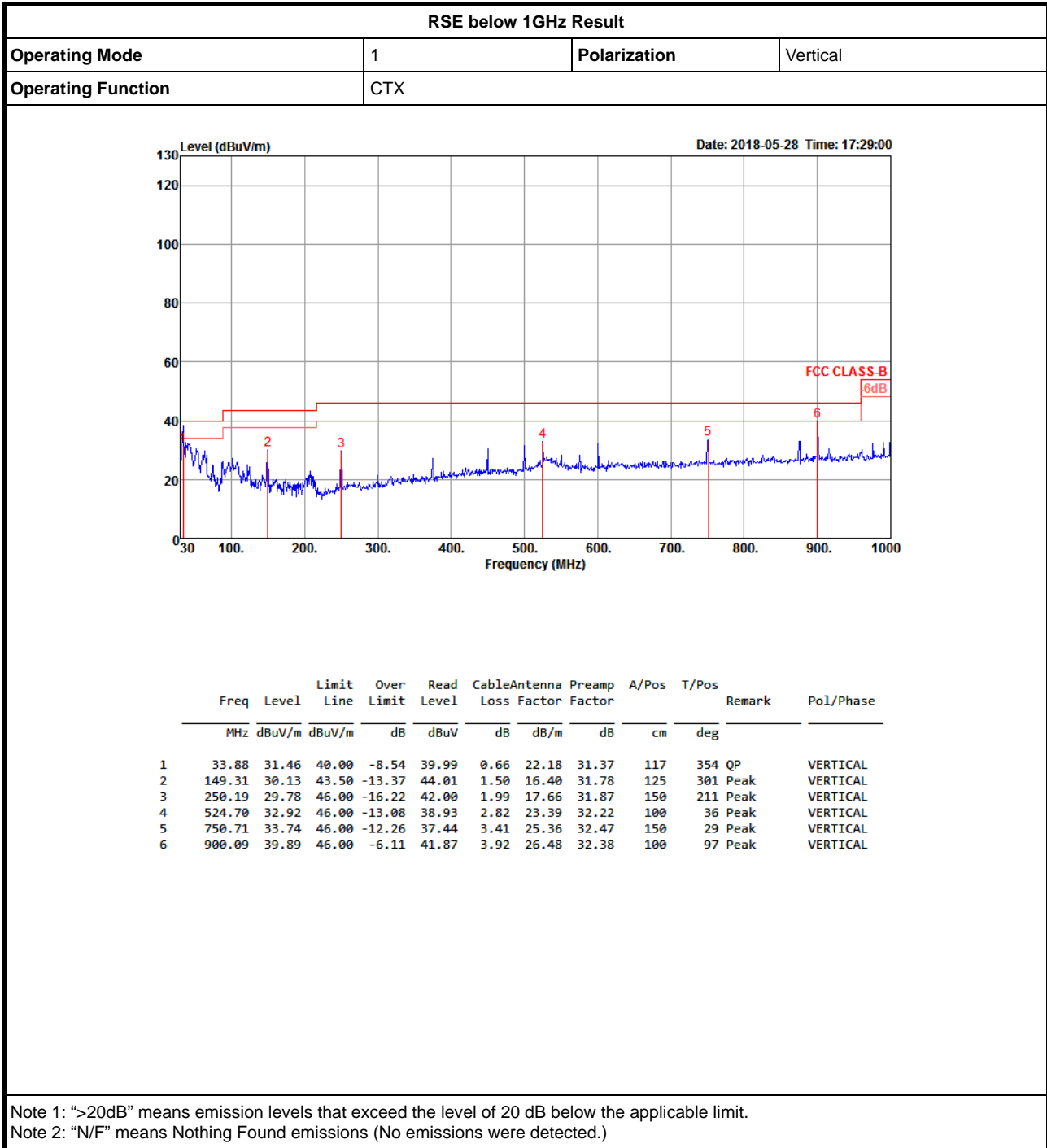
AC Power-line Conducted Emissions Result									
Operating Mode	1		Power Phase		Line				
Operating Function	CTX								
<p style="text-align: right; font-size: small;">Date: 2018-06-08 Time: 17:45:43</p>									
	Freq	Level	Over	Limit	Read	LISN	Cable	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1500	38.47	-17.53	56.00	28.40	9.91	0.16	Average	LINE
2	0.1500	56.01	-9.99	66.00	45.94	9.91	0.16	QP	LINE
3	0.1616	45.37	-10.01	55.38	35.30	9.91	0.16	Average	LINE
4	0.1616	59.87	-5.51	65.38	49.80	9.91	0.16	QP	LINE
5	0.1787	38.27	-16.28	54.55	28.21	9.91	0.15	Average	LINE
6	0.1787	54.50	-10.05	64.55	44.44	9.91	0.15	QP	LINE
7	0.1945	42.77	-11.07	53.84	32.72	9.91	0.14	Average	LINE
8	0.1945	57.61	-6.23	63.84	47.56	9.91	0.14	QP	LINE
9	0.2162	35.82	-17.14	52.96	25.77	9.91	0.14	Average	LINE
10	0.2162	48.94	-14.02	62.96	38.89	9.91	0.14	QP	LINE
11	0.2268	38.40	-14.17	52.57	28.35	9.91	0.14	Average	LINE
12	0.2268	51.59	-10.98	62.57	41.54	9.91	0.14	QP	LINE
13	0.2455	33.23	-18.68	51.91	23.19	9.91	0.13	Average	LINE
14	0.2455	46.16	-15.75	61.91	36.12	9.91	0.13	QP	LINE
15	0.2575	36.37	-15.14	51.51	26.33	9.91	0.13	Average	LINE
16	0.2575	46.28	-15.23	61.51	36.24	9.91	0.13	QP	LINE
17	0.2687	34.31	-16.85	51.16	24.27	9.91	0.13	Average	LINE
18	0.2687	42.22	-18.94	61.16	32.18	9.91	0.13	QP	LINE
19	0.2909	34.25	-16.25	50.50	24.21	9.91	0.13	Average	LINE
20	0.2909	41.77	-18.73	60.50	31.73	9.91	0.13	QP	LINE

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





# RSE below 1GHz Result





## RSE TX above 1GHz Result

Appendix B.2

### Summary

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	AV	2.367G	53.13	54.00	-0.87	33.15	3	Horizontal	36	2.49	-

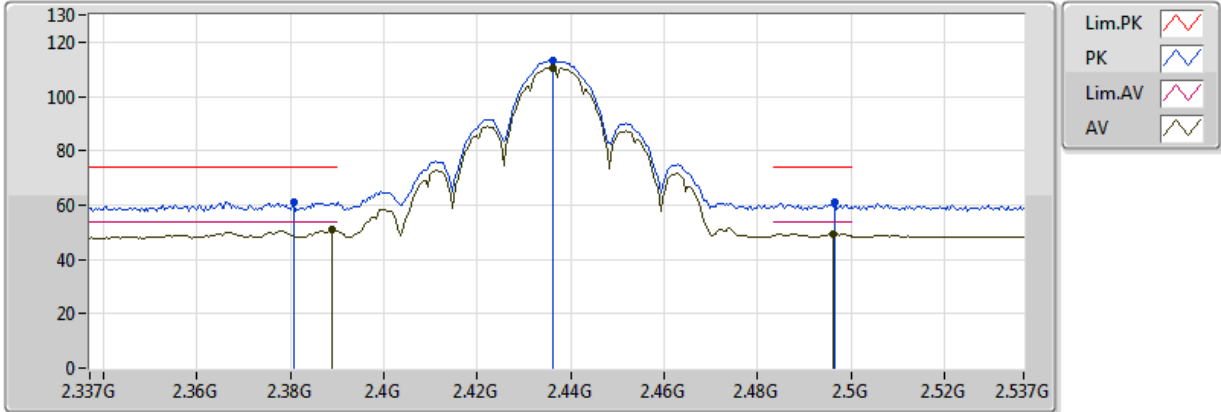




### 802.11b\_Nss1,(1Mbps)\_2TX

### 2437MHz\_TX

28/05/2018



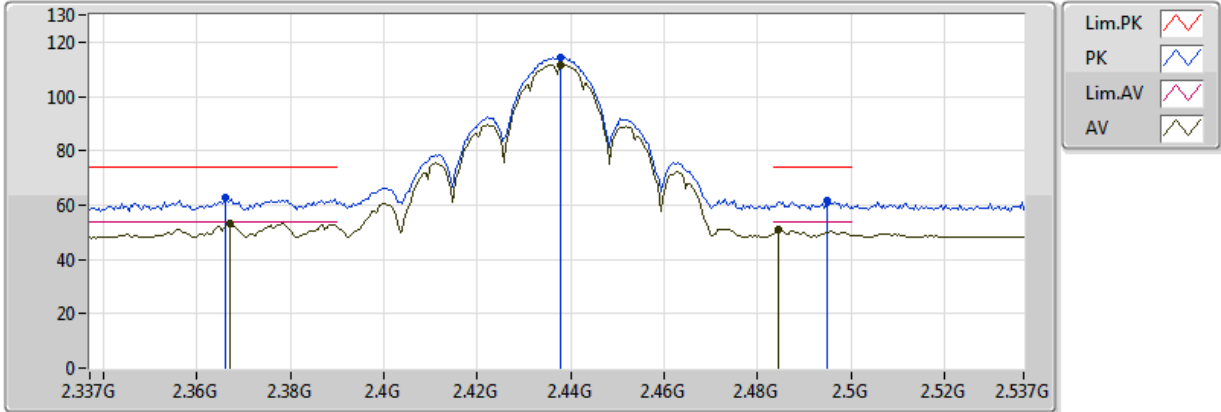
EUT Y\_2TX  
Setting 28  
04-E-4  
FSV(103948)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	2.3806G	60.88	74.00	-13.12	33.16	3	Vertical	143	2.99	-
AV	2.389G	51.06	54.00	-2.94	33.17	3	Vertical	143	2.99	-
PK	2.4362G	113.15	Inf	-Inf	33.18	3	Vertical	143	2.99	-
AV	2.4362G	110.65	Inf	-Inf	33.18	3	Vertical	143	2.99	-
PK	2.4966G	61.06	74.00	-12.94	33.19	3	Vertical	143	2.99	-
AV	2.4962G	49.37	54.00	-4.63	33.19	3	Vertical	143	2.99	-

### 802.11b\_Nss1,(1Mbps)\_2TX

### 2437MHz\_TX

28/05/2018



EUT Y\_2TX  
Setting 28  
04-E-4  
FSV(103948)

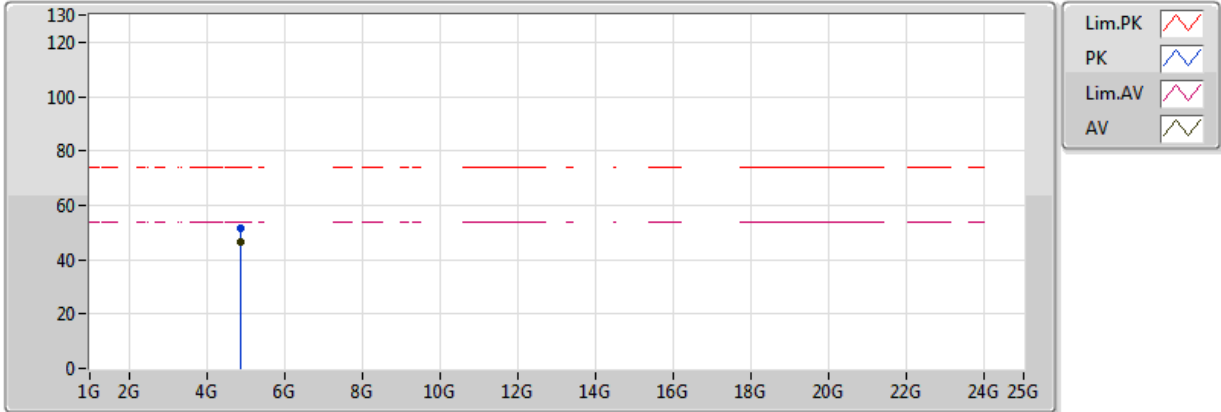
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	2.3662G	62.88	74.00	-11.12	33.15	3	Horizontal	36	2.49	-
AV	2.367G	53.13	54.00	-0.87	33.15	3	Horizontal	36	2.49	-
PK	2.4378G	114.20	Inf	-Inf	33.18	3	Horizontal	36	2.49	-
AV	2.4378G	111.73	Inf	-Inf	33.18	3	Horizontal	36	2.49	-
PK	2.495G	61.37	74.00	-12.63	33.19	3	Horizontal	36	2.49	-
AV	2.4846G	50.90	54.00	-3.10	33.18	3	Horizontal	36	2.49	-



### 802.11b\_Nss1,(1Mbps)\_2TX

### 2437MHz\_TX

28/05/2018



EUT\_Y\_2TX  
Setting 28  
04-E-4  
FSV(103948)

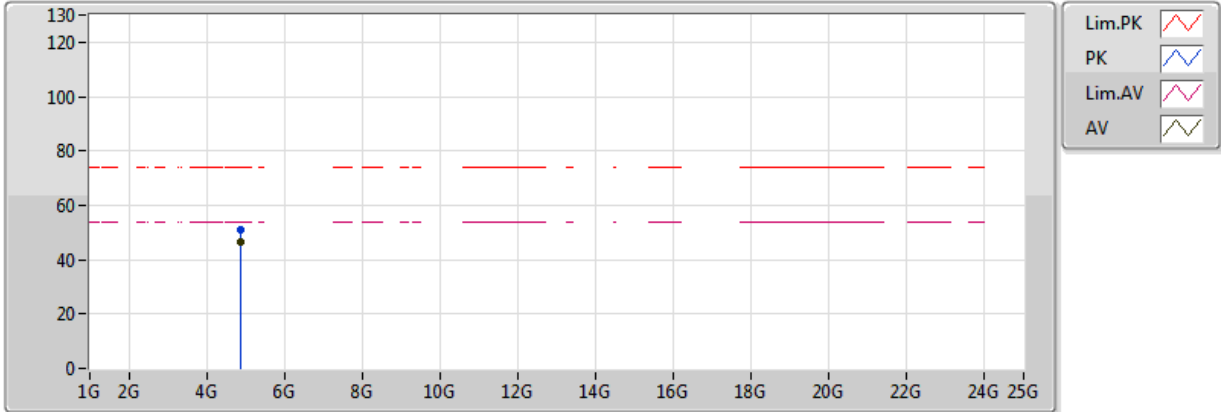
Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	4.87401G	51.36	74.00	-22.64	3.87	3	Vertical	191	1.05	-
AV	4.87404G	46.33	54.00	-7.67	3.87	3	Vertical	191	1.05	-



### 802.11b\_Nss1,(1Mbps)\_2TX

### 2437MHz\_TX

28/05/2018



EUT\_Y\_2TX  
Setting 28  
04-E-4  
FSV(103948)

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Factor (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)	Comments
PK	4.8742G	51.15	74.00	-22.85	3.87	3	Horizontal	169	1.03	-
AV	4.87404G	46.59	54.00	-7.41	3.87	3	Horizontal	169	1.03	-