



FCC RADIO TEST REPORT

FCC ID : MSQ-RTAXI600
Equipment : Wireless-AX5700 Dual-band Gigabit Router
Brand Name : ASUS
Model Name : RT-AX86U/RT-AX5700
Applicant : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112,
Taiwan
Manufacturer (1) : Compal Networking(KunShan) CO., LTD.
No.520,Nan Bang RD., Economic & Technical
Development Zone, KunShan,JiangSu,China
Manufacturer (2) : ARCADYAN TECHNOLOGY (VIETNAM) CO., LTD.
Ba Thien Industrial Park, Ba Hien commune, Binh
Xuyen district, Vinh Phuc Province
Standard : 47 CFR FCC Part 15.407

The product was received on Mar. 18, 2020, and testing was started from Mar. 18, 2020 and completed on Sep.08, 2020. 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 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: Sam Chen

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



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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	15.407(b)	Unwanted Emissions	PASS	-

Reference to Sporton Project No.: 9D0510-01.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

1. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.
2. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: **Sam Chen**

Report Producer: **Cindy Peng**



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20), ax (HEW20)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5720	100-144 [12]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40), ax (HEW40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5710	102-132 [6]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80), ax (HEW80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5690	106-138 [3]
5725-5850		5775	155 [1]
5150-5350	ac (VHT160), ax (HEW160)	5250	50 [1]
5470-5725		5570	114 [1]



Band	Mode	BWch (MHz)	Nant
5.15-5.25GHz	802.11a	20	4TX
5.15-5.25GHz	802.11n HT20	20	4TX
5.15-5.25GHz	802.11n HT20-BF	20	4TX
5.15-5.25GHz	802.11ac VHT20	20	4TX
5.15-5.25GHz	802.11ac VHT20-BF	20	4TX
5.15-5.25GHz	802.11ax HEW20	20	4TX
5.15-5.25GHz	802.11ax HEW20-BF	20	4TX
5.15-5.25GHz	802.11n HT40	40	4TX
5.15-5.25GHz	802.11n HT40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT40	40	4TX
5.15-5.25GHz	802.11ac VHT40-BF	40	4TX
5.15-5.25GHz	802.11ax HEW40	40	4TX
5.15-5.25GHz	802.11ax HEW40-BF	40	4TX
5.15-5.25GHz	802.11ac VHT80	80	4TX
5.15-5.25GHz	802.11ac VHT80-BF	80	4TX
5.15-5.25GHz	802.11ax HEW80	80	4TX
5.15-5.25GHz	802.11ax HEW80-BF	80	4TX
5.15-5.25GHz	802.11ac VHT160	160	4TX
5.15-5.25GHz	802.11ac VHT160-BF	160	4TX
5.15-5.25GHz	802.11ax HEW160	160	4TX
5.15-5.25GHz	802.11ax HEW160-BF	160	4TX
5.25-5.35GHz	802.11a	20	4TX
5.25-5.35GHz	802.11n HT20	20	4TX
5.25-5.35GHz	802.11n HT20-BF	20	4TX
5.25-5.35GHz	802.11ac VHT20	20	4TX
5.25-5.35GHz	802.11ac VHT20-BF	20	4TX
5.25-5.35GHz	802.11ax HEW20	20	4TX
5.25-5.35GHz	802.11ax HEW20-BF	20	4TX
5.25-5.35GHz	802.11n HT40	40	4TX
5.25-5.35GHz	802.11n HT40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT40	40	4TX
5.25-5.35GHz	802.11ac VHT40-BF	40	4TX
5.25-5.35GHz	802.11ax HEW40	40	4TX
5.25-5.35GHz	802.11ax HEW40-BF	40	4TX
5.25-5.35GHz	802.11ac VHT80	80	4TX
5.25-5.35GHz	802.11ac VHT80-BF	80	4TX
5.25-5.35GHz	802.11ax HEW80	80	4TX
5.25-5.35GHz	802.11ax HEW80-BF	80	4TX



Band	Mode	BWch (MHz)	Nant
5.25-5.35GHz	802.11ac VHT160	160	4TX
5.25-5.35GHz	802.11ac VHT160-BF	160	4TX
5.25-5.35GHz	802.11ax HEW160	160	4TX
5.25-5.35GHz	802.11ax HEW160-BF	160	4TX
5.47-5.725GHz	802.11a	20	4TX
5.47-5.725GHz	802.11n HT20	20	4TX
5.47-5.725GHz	802.11n HT20-BF	20	4TX
5.47-5.725GHz	802.11ac VHT20	20	4TX
5.47-5.725GHz	802.11ac VHT20-BF	20	4TX
5.47-5.725GHz	802.11ax HEW20	20	4TX
5.47-5.725GHz	802.11ax HEW20-BF	20	4TX
5.47-5.725GHz	802.11n HT40	40	4TX
5.47-5.725GHz	802.11n HT40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT40	40	4TX
5.47-5.725GHz	802.11ac VHT40-BF	40	4TX
5.47-5.725GHz	802.11ax HEW40	40	4TX
5.47-5.725GHz	802.11ax HEW40-BF	40	4TX
5.47-5.725GHz	802.11ac VHT80	80	4TX
5.47-5.725GHz	802.11ac VHT80-BF	80	4TX
5.47-5.725GHz	802.11ax HEW80	80	4TX
5.47-5.725GHz	802.11ax HEW80-BF	80	4TX
5.47-5.725GHz	802.11ac VHT160	160	4TX
5.47-5.725GHz	802.11ac VHT160-BF	160	4TX
5.47-5.725GHz	802.11ax HEW160	160	4TX
5.47-5.725GHz	802.11ax HEW160-BF	160	4TX
5.725-5.85GHz	802.11a	20	4TX
5.725-5.85GHz	802.11n HT20	20	4TX
5.725-5.85GHz	802.11n HT20-BF	20	4TX
5.725-5.85GHz	802.11ac VHT20	20	4TX
5.725-5.85GHz	802.11ac VHT20-BF	20	4TX
5.725-5.85GHz	802.11ax HEW20	20	4TX
5.725-5.85GHz	802.11ax HEW20-BF	20	4TX
5.725-5.85GHz	802.11n HT40	40	4TX
5.725-5.85GHz	802.11n HT40-BF	40	4TX
5.725-5.85GHz	802.11ac VHT40	40	4TX
5.725-5.85GHz	802.11ac VHT40-BF	40	4TX
5.725-5.85GHz	802.11ax HEW40	40	4TX
5.725-5.85GHz	802.11ax HEW40-BF	40	4TX



Band	Mode	BWch (MHz)	Nant
5.725-5.85GHz	802.11ac VHT80	80	4TX
5.725-5.85GHz	802.11ac VHT80-BF	80	4TX
5.725-5.85GHz	802.11ax HEW80	80	4TX
5.725-5.85GHz	802.11ax HEW80-BF	80	4TX

Note:

- ♦ 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ♦ VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ♦ BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

Set	Ant.	Port		Brand	P/N	Type	Connector	Antenna Gain (dBi)				
		2.4 GHz	5 GHz					2.4GHz	5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4
1	1	1	1	WHA YU	C660-510490-A	Dipole	Reversed-SMA	1.66	1.86	1.86	1.90	1.84
	2	2	3									
	3	3	4									
	4	-	2	WHA YU	C660-510390-A	PCB	I-PEX	-	2.90	2.90	3.00	2.52
2	1	-	-	WHA YU	C660-510492-A	Dipole	Reversed-SMA	1.52	1.41	1.45	1.72	1.74
	2	-	-									
	3	-	-									
	4	-	-	WHA YU	C660-510390-A	PCB	I-PEX	-	2.90	2.90	3.00	2.52
3	1	-	-	WHLSIN	RFDPA141500 SBLB802	Dipole	Reversed-SMA	1.52	1.66	1.76	1.82	1.65
	2	-	-									
	3	-	-									
	4	-	-	WHLSIN	RFPCA302603I M5B301	PCB	I-PEX	-	2.17	2.30	2.20	2.49

Set	Directional Gain (dBi)					
	2.4GHz	5GHz Band 1	5GHz Band 2	5GHz Band 3	5GHz Band 4	
	Nss1	Nss1	Nss1	Nss1	Nss1	Nss2
1	6.43	6.63	6.63	6.67	6.61	4.85

Note1: The above information was declared by manufacturer.

Note2: The EUT has three sets of antenna, and each set contains four antennas.

For 2.4GHz function (3TX/3RX):

Only the higher gain antenna "Set 1" was tested.

Port 1, Port 2 and Port 3 could transmit/receive simultaneously.

For 5GHz function (4TX/4RX):

Only the higher gain antenna "Set 1" was tested.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

Note3: 5GHz Band with four antennas and device designed the three dipole antennas are used in the vertical position, the other one PCB antenna is used in the horizontal position.

So array gain only calculation $10\log(3)$.



1.1.3 EUT Operational Condition

EUT Power Type	From power adapter		
Beamforming Function	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming	
Weather Band	<input checked="" type="checkbox"/> With 5600~5650MHz	<input type="checkbox"/> Without 5600~5650MHz	
Function	<input type="checkbox"/> Outdoor P2M	<input checked="" type="checkbox"/> Indoor P2M	
	<input type="checkbox"/> Fixed P2P	<input type="checkbox"/> Client	
TPC Function	<input checked="" type="checkbox"/> With TPC	<input type="checkbox"/> Without TPC	
Test Software Version	Mtool V3.2.0.0		

Note: The above information was declared by manufacturer.

1.1.4 Table for EUT Supports Functions

Function	Support Type
AP Router	Master
Bridge	Client without radar detection
Repeater	Master
Mesh	Master

After evaluating, for “AP Router” and “Mesh” were performed for AC power-line conducted emissions test and recorded in this report.

1.1.5 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description
RT-AX86U	There is nothing different of two model names, just for different marketing use.
RT-AX5700	

From the above models, model: RT-AX86U was selected as representative model for the test and its data was recorded in this report.

1.1.6 Table for SKU Information

EUT	2.4G FEM	
	Brand Name	Model Name
SKU 1	Qorvo	QPF4216B
SKU 2	SKYWORKS	SKY85331-11

Note: The SKU 2 is same as SKU 1 except for the 2.4G FEM.



1.1.7 Table for Class II Change

This product is an extension of original one reported under Sporton project number: FR9D0510AB

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

Modifications	Performance Checking
1. Adding LED Light PCB Board for the SKU 1. 2. Adding SKU 2 (The SKU 2 is same as SKU 1 except for the 2.4G FEM).	Unwanted Emissions Below 1GHz.
3. Changing the applicant address to "1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan" from "4F, No. 150, Li-Te Rd., Peitou, Taipei 112, Taiwan". 4. Updating adapter 3 label (Adding BSMI Labeling information)	Do not affect the test results.



1.2 Applicable 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 789033 D02 v02r01

The following reference test guidance is not within the scope of accreditation of TAF.

- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01r01
- ♦ FCC KDB 414788 D01 v01r01

1.3 Testing Location Information

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
<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 Below 1GHz for mode 1	03CH04-CB	Eason Chen	21.1~22.5°C / 46~49%	Mar. 18, 2020
Radiated Below 1GHz for mode 2	03CH05-CB	Stim Sung	24.7~25.7°C / 55~58%	Aug. 26, 2020~Sep.08, 2020

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
Radiated Emission (30MHz ~ 1,000MHz) for mode 1	4.3 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz) for mode 2	5.6 dB	Confidence levels of 95%



2 Test Configuration of EUT

2.1 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
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 Adapter 1 ~ Adapter 3, the worst case was found at Adapter 3. So the measurement will follow this same test configuration. The EUT has two operate mode as below: a. WLAN 2.4GHz b. WLAN 5GHz And, from above the worst case was found at WLAN 2.4GHz. So the measurement will follow this same test configuration.	
1	SKU 1 - WLAN 2.4GHz + Adapter 3 + Antenna Set 1
2	SKU 2 - WLAN 2.4GHz + Adapter 3 + Antenna Set 1
For operating mode 1 is the worst case and it was record in this test report.	

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	WLAN 2.4GHz + WLAN 5GHz + Antenna Set 1
Refer to Sporton Test Report No.: FA9D0510-02 for Co-location RF Exposure Evaluation.	

Note: The EUT can only be used at Y axis position.



2.2 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

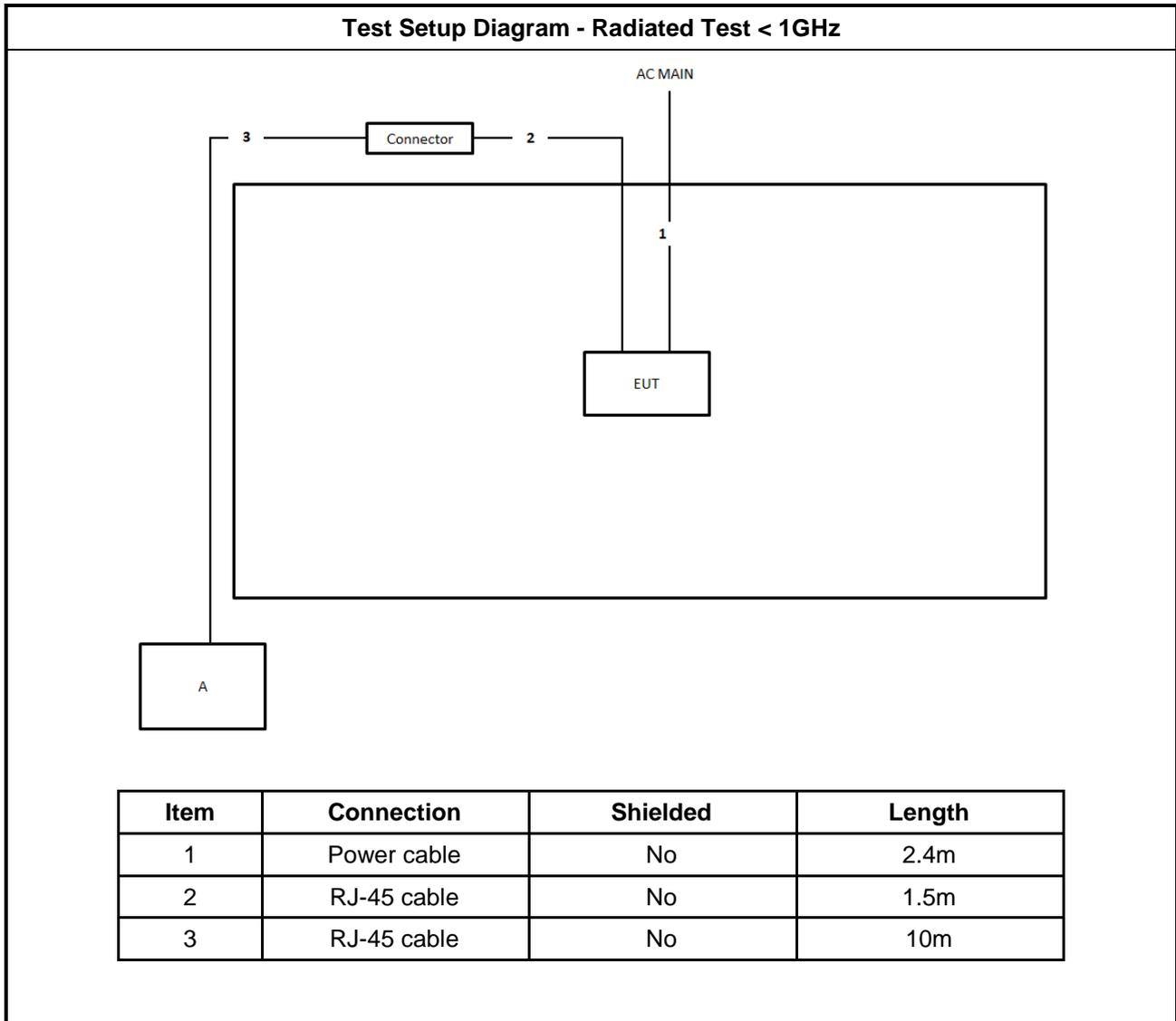
2.3 Accessories

Accessories					
No.	Equipment Name	Brand Name	Model Name	Rating	Remark
1	Adapter 1	DELTA	ADP-45ZE B	INPUT: 100-240V ~ 50-60Hz, 1.2A OUTPUT: 19V, 2.37A	With the DC cable: Non-shielded, 1.8m
2	Adapter 2	DELTA	ADP-45FE F	INPUT: 100-240V ~1.2A, 50-60Hz OUTPUT: 19V, 2.37A	With the DC cable: Non-shielded, 1.5m
3	Adapter 3	AcBel	ADH011	INPUT: 100-240V ~1.4A, 50-60Hz OUTPUT: 19.5V, 2.31A, 45W MAX	With the DC cable: Non-shielded, 1.5m
No.	Others				
4	Power cable*1: Non-shielded, 0.9m				
5	RJ-45 cable*1: Non-shielded, 1.5m				

2.4 Support Equipment

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

2.5 Test Setup Diagram





3 Transmitter Test Result

3.1 Unwanted Emissions

3.1.1 Transmitter Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz 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.

Un-restricted band emissions above 1GHz Limit	
Operating Band	Limit
<input checked="" type="checkbox"/> 5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
<input checked="" type="checkbox"/> 5.725 - 5.85 GHz	all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note 1: 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).

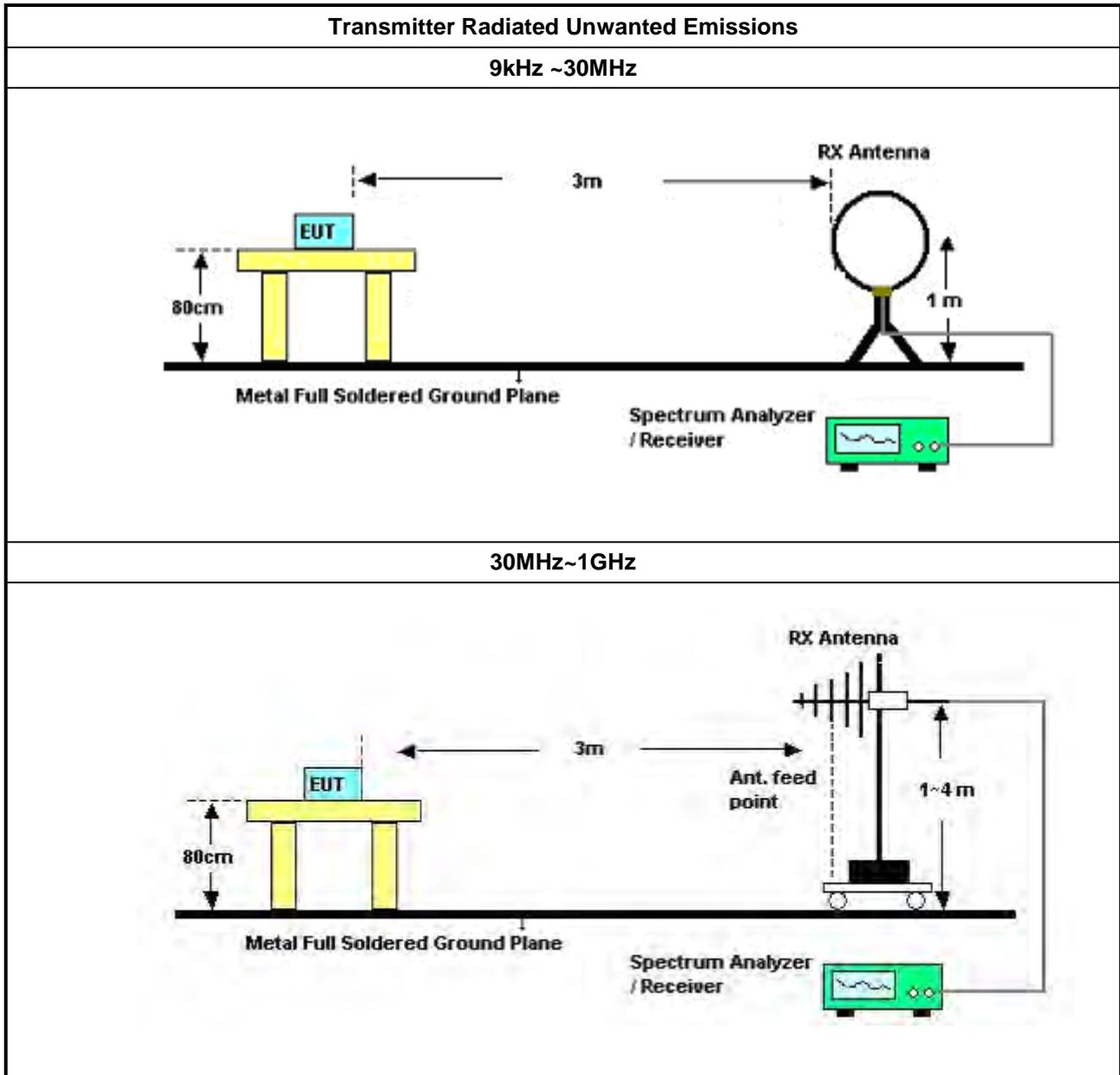
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> ▪ 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. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. 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).
	<ul style="list-style-type: none"> ▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
	<ul style="list-style-type: none"> ▪ For the transmitter unwanted emissions shall be measured using following options below: <ul style="list-style-type: none"> ▪ Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands. ▪ Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands. <ul style="list-style-type: none"> <input type="checkbox"/> Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging). <input checked="" type="checkbox"/> Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW). <input type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time. <input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions. <input checked="" type="checkbox"/> Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit. <input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
	<ul style="list-style-type: none"> ▪ For radiated measurement. <ul style="list-style-type: none"> ▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m. ▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m. ▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
	<ul style="list-style-type: none"> ▪ The any unwanted emissions level shall not exceed the fundamental emission level.
	<ul style="list-style-type: none"> ▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: $\text{Antenna factor (AF)} + \text{Cable loss (CL)} + \text{Read level (Raw)} - \text{Preamp factor (PA)} (\text{if applicable}) = \text{Level}$.



3.1.6 Transmitter Unwanted Emissions (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

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.

3.1.7 Test Result of Transmitter Unwanted Emissions

Refer as Appendix A



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 29, 2019	Mar. 28, 2020	Radiation (03CH04-CB)
BILOG ANTENNA with 6 dB attenuator	SCHAFFNER / EMCI	22021 / AT-N0607	CBL 6112B / N-6-06	30MHz~1GHz	Oct. 12, 2019	Oct. 11, 2020	Radiation (03CH04-CB)
Pre-Amplifier	Agilent	310N	187291	30MHz~1GHz	Mar. 20, 2019	Mar. 19, 2020	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Dec. 18, 2019	Dec. 17, 2020	Radiation (03CH04-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 15, 2019	May 14, 2020	Radiation (03CH04-CB)
Low Cable	WOKEN	RG402	Low Cable-03+22	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH04-CB)
Test Software	Audix	E3	6.120210d	-	N.C.R.	N.C.R.	Radiation (03CH04-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Apr. 13, 2020	Apr. 12, 2021	Radiation (03CH05-CB)
BILOG ANTENNA with 6 dB attenuator	Teseq / EMCI	CBL 6112D / N-6-06	35236 / AT-N0610	30MHz~1GHz	Mar. 27, 2020	Mar. 26, 2021	Radiation (03CH05-CB)
Pre-Amplifier	EMCI	EMC330N	980331	30MHz~1GHz	Apr. 28, 2020	Apr. 27, 2021	Radiation (03CH05-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	May 12, 2020	May 11, 2021	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESCS	826547/017	9kHz ~ 2.75GHz	May 13, 2020	May 12, 2021	Radiation (03CH05-CB)
Low Cable	WOKEN	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 07, 2019	Oct. 06, 2020	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	Radiation (03CH05-CB)

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

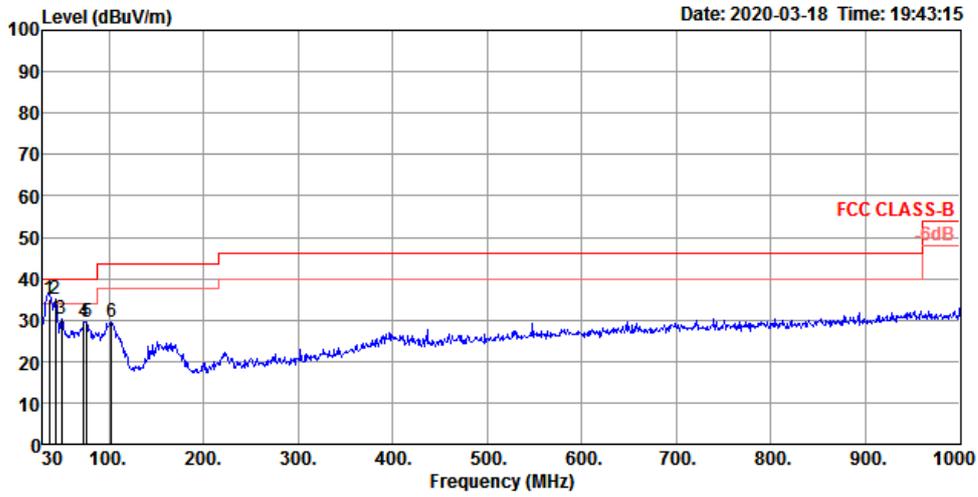


Radiated Emission below 1GHz Result

Appendix A

Test Mode	Mode 1	Frequency Range	30 MHz to 1,000 MHz
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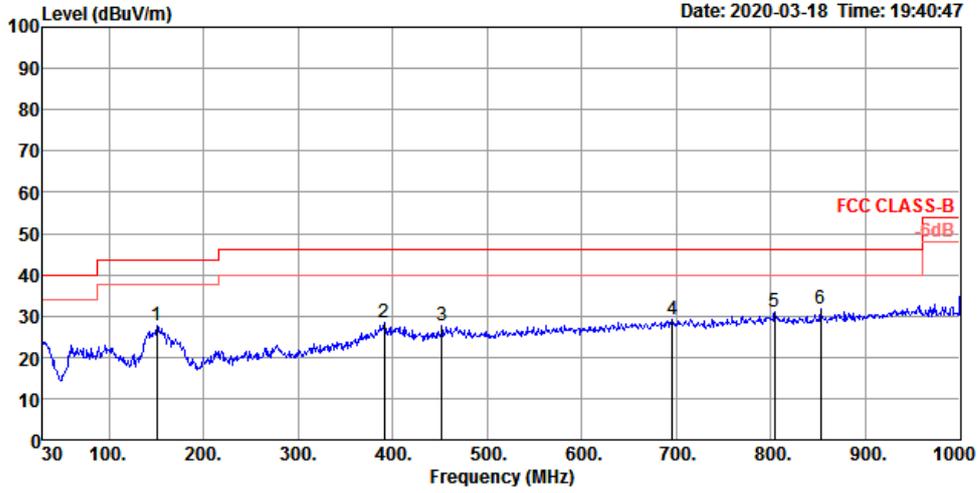
Vertical 30 MHz to 1,000 MHz



	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	35.04	40.00	-4.96	46.20	0.74	20.31	32.21	100	113 QP	VERTICAL
2	43.58	35.09	40.00	-4.91	49.96	0.80	16.54	32.21	125	291 Peak	VERTICAL
3	49.40	30.21	40.00	-9.79	47.54	0.89	13.96	32.18	100	180 Peak	VERTICAL
4	73.65	29.61	40.00	-10.39	48.52	1.00	12.22	32.13	150	175 Peak	VERTICAL
5	76.56	29.45	40.00	-10.55	48.22	1.00	12.36	32.13	150	64 Peak	VERTICAL
6	102.75	29.66	43.50	-13.84	43.53	1.22	16.98	32.07	300	204 Peak	VERTICAL



Horizontal 30 MHz to 1,000 MHz



	Freq	Level	Limit	Over	Read	CableAntenna	Preamp	A/Pos	T/Pos	Remark	PoI/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg	
1	150.28	27.57	43.50	-15.93	41.71	1.46	16.54	32.14	200	253 Peak	HORIZONTAL
2	390.84	28.34	46.00	-17.66	36.48	2.36	21.55	32.05	125	150 Peak	HORIZONTAL
3	451.95	27.69	46.00	-18.31	34.16	2.51	22.87	31.85	100	14 Peak	HORIZONTAL
4	695.42	29.07	46.00	-16.93	32.30	3.18	25.50	31.91	200	181 Peak	HORIZONTAL
5	804.06	31.12	46.00	-14.88	33.43	3.32	26.02	31.65	150	51 Peak	HORIZONTAL
6	852.56	31.63	46.00	-14.37	33.40	3.51	26.32	31.60	300	232 Peak	HORIZONTAL