



# FCC RADIO EXPOSURE TEST REPORT

**FCC ID** : Z8H89FT0016

**Equipment** : ePMP 5GHz Force 300-16 SM Radio,cnVision Client MINI  
16 dBi

**Brand Name** : Cambium Networks

**Model Name** : ePMP 5GHz Force 300-16 SM Radio,cnVision Client MINI  
16 dBi

**Model Number** : C050910P011A

**Applicant** : Cambium Networks Inc.  
3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA

**Standard** : 47 CFR Part 2.1091

The product was received on Mar. 15, 2018, and testing was started from Mar. 15, 2018 and completed on Jan. 06, 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 47 CFR Part 2.1091, KDB447498 D01 General RF Exposure Guidance v06 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: 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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**Appendix A. Test Photos**

**Photographs of EUT v01**





### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

**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:**

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: **Vicky Huang**



# 1 General Description

## 1.1 EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5240 5260-5320 5500-5720 5745-5825	802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
4.9GHz	4940-4990	4950-4980	QPSK

Note 1: For 2.4GHz and 5GHz, while frame-based mechanism is implemented, the test procedure is the same with regular IEEE 802.11a/n/ac devices.

Note 2: For 4.9GHz, it supports 20 MHz bandwidth only.

## 1.2 Table for Multiple Listing

The difference for each equipment names/model names is shown as below:

Equipment Name	Model Name	Model Number	Description
ePMP 5GHz Force 300-16 SM Radio	ePMP 5GHz Force 300-16 SM Radio	C050910P011A	The difference served as marketing strategy.
cnVision Client MINI 16 dBi	cnVision Client MINI 16 dBi	C050910P011A	

Note 1: The above information was declared by manufacturer.

Note 2: From the above models, model: ePMP 5GHz Force 300-16 SM Radio was selected as representative model for the test and its data was recorded in this report.



### 1.3 Table for Class III Change

This product is an extension of original one reported under Sporton project number: FA7O2407-06

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

Modifications	Performance Checking
1. Adding 4.9G function for Ant. 2 and Ant. 3 “model name: ePMP force 300-16, gain:16dBi and model name: ePMP force 300-16, gain: 2dBi ”, and supports 20 MHz bandwidth only.	Maximum Permissible Exposure.
2. Change the equipment name/model name to “ePMP 5GHz Force 300-16 SM Radio” from “5GHz Force 300-16”. 3. Add a new equipment name/model name “cnVision Client MINI 16 dBi”. 4. Adding model number "C050910P011A". 5. Changing the Manufacturer and Manufacturer address to “Manufacturer: Cambium Networks, Ltd. / Manufacturer address: Ashburton, TQ13 7UP, UK” from “Manufacturer: Cambium Networks Inc. / Manufacturer address: 3800 Golf Road, Suite 360 Rolling Meadows, IL 60008, USA”.	It does not need to test.

Note: Maximum Permissible Exposure of 2.4GHz band and 5GHz band are based on original test report.

### 1.4 Testing Location

Testing Location		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, 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	Serway Li	20~22°C / 52~54%	Mar. 15, 2018~ May 08, 2019
RF Conducted	TH02-CB	Ekko Hsieh	24~25°C / 61~64%	Dec. 26, 2019~ Jan. 06, 2020

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.



## 2 Maximum Permissible Exposure

### 2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 2.2 MPE Calculation Method

The MPE was calculated at 73 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

**E** = Electric field (V/m)

**P** = RF output power (W)

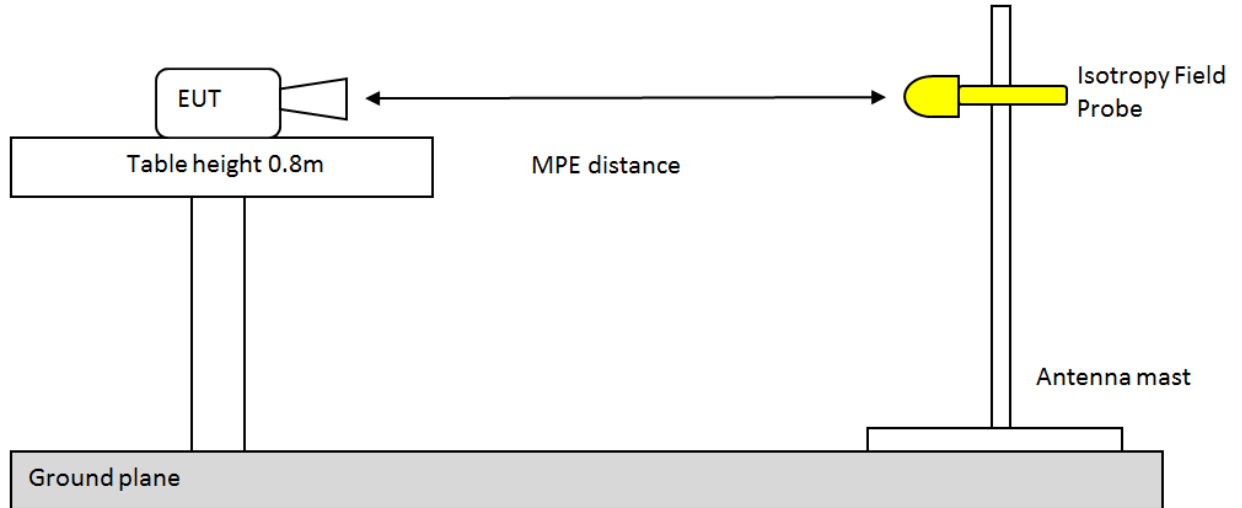
**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

### 2.3 MPE Measurement Method



#### Horizontal Plane

1. Align Probe with antenna axis. Probe should same height as Antenna axis.  
And take power density measurement with Probe.
2. Rotate table 45 degree (30 degree if MPE distance is more 60cm).  
Take power density measurement again.
3. Repeat step 2, until complete 360 degree.  
Each measured power density should be less than MPE limit.

#### Vertical Plane

1. Align Probe with antenna axis. Move probe to height of 10cm above ground plane.  
Take power density measurement.  
Then repeat measure with 10cm increment of probe height until 180 cm.
2. Rotate table 45 degree (30 degree if MPE distance is more 60cm).  
Repeat the power density measure from 10cm to 180cm
3. Repeat step 2, until complete 360 degree.  
Spatial Average of same vertical plane should be less then MPE limit.

For Probe or measurement equipment requirement, please see FCC OET Bulletin 65 97-01

Note:

Either peak or spatially averaged results may be applied to determine compliance; and with respect to plane-wave equivalent power density limits when  $\geq 300$  MHz, and electric and magnetic field strength limits when  $< 300$  MHz.





## 2.4 Measurement Result and Limit

For 5.8G;D1D (Ant.2)

Test Mode	VHT20	Test Frequency (MHz)	5745	MPE Distance (cm)	73	Power Setting	29		
<b>EUT Plane</b>	Horizontal								
<b>Probe height (cm) \ Deg</b>	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°	
	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>
187	0.87485	0.03444	0.00453	0.00109	0.00155	0.00464	0.02667	0.86476	
<b>Max PSD (mW/cm<sup>2</sup>)</b>	0.87485								
<b>MPE Limit (mW/cm<sup>2</sup>)</b>	1								
<b>EUT Plane</b>	Vertical								
<b>Probe height (cm) \ Deg</b>	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°	
	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>	<b>Max PSD (mW/cm<sup>2</sup>)</b>
10	0.00462	0.00561	0.00075	0.00194	0.00286	0.00127	0.00161	0.04389	
20	0.04849	0.00641	0.00095	0.00199	0.00171	0.00076	0.00214	0.04744	
30	0.00984	0.00564	0.00113	0.00231	0.00231	0.00142	0.00286	0.01051	
40	0.03951	0.00369	0.00136	0.00226	0.00194	0.00105	0.00198	0.03902	
50	0.08636	0.00491	0.03410	0.00124	0.00132	0.00331	0.00493	0.06441	
60	0.55698	0.00569	0.00495	0.00146	0.00145	0.00712	0.00948	0.46701	
70	0.80726	0.01024	0.00791	0.00144	0.00109	0.00477	0.01542	0.68751	
80	0.81898	0.01114	0.00768	0.00145	0.00128	0.00671	0.01643	0.77271	
90	0.42573	0.00645	0.00338	0.00171	0.00131	0.00392	0.01044	0.34165	
100	0.14579	0.00382	0.00381	0.00131	0.00128	0.00231	0.00475	0.12984	
110	0.01840	0.00184	0.00205	0.00137	0.00139	0.00902	0.00255	0.01849	
120	0.00252	0.00201	0.00072	0.00185	0.00211	0.00055	0.00117	0.00288	
130	0.00379	0.00165	0.00067	0.00195	0.00206	0.00039	0.00108	0.00261	
140	0.01388	0.00237	0.00084	0.00138	0.00135	0.00044	0.00107	0.01269	
150	0.01403	0.00214	0.00072	0.00141	0.00143	0.00054	0.00081	0.01434	
160	0.02043	0.00210	0.00210	0.00097	0.00082	0.00056	0.00110	0.01936	
170	0.01349	0.00169	0.00059	0.00087	0.00081	0.00076	0.00910	0.01304	
180	0.01434	0.00099	0.00099	0.00084	0.00065	0.00500	0.00096	0.01296	
<b>Spatial Average (mW/cm<sup>2</sup>)</b>	0.169135556	0.004355	0.00415	0.001541667	0.001509444	0.002772222	0.004882222	0.15002	
<b>Max Spatial Average (mW/cm<sup>2</sup>)</b>	0.16914								
<b>MPE Limit (mW/cm<sup>2</sup>)</b>	1								



Test Mode	VHT20	Test Frequency (MHz)	5785	MPE Distance (cm)	73	Power Setting	29	
EUT Plane	Horizontal							
Probe height (cm) \ Deg	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°
	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )
186	0.96695	0.02464	0.00351	0.00122	0.00109	0.00567	0.02826	0.96629
Max PSD (mW/cm <sup>2</sup> )	0.96695							
MPE Limit (mW/cm <sup>2</sup> )	1							
EUT Plane	Vertical							
Probe height (cm) \ Deg	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°
	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )
10	0.01918	0.00436	0.00059	0.00201	0.00259	0.00169	0.00288	0.02113
20	0.02509	0.00959	0.00092	0.00248	0.00258	0.00134	0.00367	0.02594
30	0.01262	0.00751	0.00106	0.00186	0.00118	0.00177	0.00425	0.01314
40	0.08391	0.00291	0.00171	0.00302	0.00302	0.0013	0.00232	0.07663
50	0.10151	0.00496	0.00412	0.00164	0.00174	0.00655	0.00744	0.10589
60	0.59442	0.00754	0.00559	0.0016	0.00141	0.00747	0.01207	0.6531
70	0.89654	0.01504	0.01038	0.00184	0.00858	0.00858	0.01981	0.86047
80	0.8244	0.01514	0.01021	0.0018	0.00186	0.00742	0.01963	0.80262
90	0.36411	0.00587	0.00375	0.00171	0.00128	0.00167	0.01191	0.35489
100	0.18441	0.00561	0.00572	0.00147	0.00102	0.00278	0.00762	0.1249
110	0.02404	0.00235	0.00215	0.00134	0.00139	0.00143	0.00294	0.02431
120	0.00234	0.00192	0.00101	0.00193	0.00183	0.00053	0.00101	0.00319
130	0.00426	0.00196	0.00068	0.00252	0.00249	0.00247	0.00138	0.00442
140	0.02107	0.00268	0.00054	0.00162	0.00084	0.0042	0.00134	0.02012
150	0.02078	0.00124	0.00131	0.00169	0.00168	0.00063	0.00115	0.02084
160	0.02649	0.00303	0.00067	0.00129	0.00137	0.00082	0.00319	0.002701
170	0.01441	0.00241	0.00046	0.00059	0.00063	0.00052	0.00239	0.01537
180	0.01658	0.00178	0.00107	0.00119	0.00072	0.00064	0.00141	0.01738
Spatial Average (mW/cm <sup>2</sup> )	0.179786667	0.005327778	0.002885556	0.001755556	0.002011667	0.002878333	0.005911667	0.1748355
Max Spatial Average (mW/cm <sup>2</sup> )	0.17979							
MPE Limit (mW/cm <sup>2</sup> )	1							



Test Mode	VHT20	Test Frequency (MHz)	5825	MPE Distance (cm)	73	Power Setting	29	
EUT Plane	Horizontal							
Probe height (cm) \ Deg	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°
	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )
186	0.79374	0.02509	0.00331	0.00067	0.00101	0.00406	0.02476	0.76046
Max PSD (mW/cm <sup>2</sup> )	0.79374							
MPE Limit (mW/cm <sup>2</sup> )	1							
EUT Plane	Vertical							
Probe height (cm) \ Deg	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°
	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )
10	0.03594	0.00856	0.00093	0.00244	0.00183	0.00178	0.00364	0.03681
20	0.01714	0.00181	0.00049	0.00225	0.00162	0.00132	0.00129	0.01809
30	0.01132	0.00341	0.00171	0.00209	0.00171	0.00221	0.00161	0.01033
40	0.00675	0.00258	0.00174	0.00127	0.00122	0.00217	0.00231	0.00907
50	0.12989	0.00393	0.00178	0.00282	0.00228	0.00339	0.00431	0.12068
60	0.16093	0.00674	0.00361	0.00144	0.00184	0.00561	0.01119	0.19636
70	0.41557	0.00804	0.00445	0.00159	0.00138	0.00486	0.01515	0.42427
80	0.53485	0.00799	0.00364	0.00199	0.00187	0.00461	0.01606	0.54852
90	0.44312	0.00873	0.00579	0.00129	0.00102	0.00423	0.01402	0.46448
100	0.19341	0.00389	0.00171	0.00099	0.00098	0.00168	0.00842	0.25251
110	0.10587	0.00212	0.00133	0.00124	0.00113	0.00218	0.00613	0.12041
120	0.02659	0.00192	0.00058	0.00132	0.00133	0.00094	0.00248	0.02966
130	0.00545	0.00195	0.00103	0.00138	0.00114	0.00048	0.00121	0.00505
140	0.01474	0.00191	0.00096	0.00102	0.00081	0.00058	0.00081	0.01448
150	0.01217	0.00172	0.00104	0.00258	0.00225	0.00049	0.00154	0.01102
160	0.01867	0.00161	0.00063	0.00076	0.00075	0.00064	0.00083	0.01868
170	0.01109	0.00251	0.00052	0.00093	0.00089	0.00066	0.00176	0.01178
180	0.02173	0.00173	0.00109	0.00076	0.00057	0.00063	0.00144	0.02016
Spatial Average (mW/cm <sup>2</sup> )	0.120290556	0.003952778	0.001834778	0.001564444	0.001367778	0.002136667	0.005233333	0.128464444
Max Spatial Average (mW/cm <sup>2</sup> )	0.12846							
MPE Limit (mW/cm <sup>2</sup> )	1							



Test Mode	VHT40	Test Frequency (MHz)	5755	MPE Distance (cm)	73	Power Setting	24	
EUT Plane	Horizontal							
Probe height (cm) \ Deg	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°
	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)
187	0.80923	0.02113	0.00329	0.00098	0.00073	0.00314	0.01972	0.78329
Max PSD (mW/cm²)	0.80923							
MPE Limit (mW/cm²)	1							
EUT Plane	Vertical							
Probe height (cm) \ Deg	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°
	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)	Max PSD (mW/cm²)
10	0.06044	0.00413	0.00074	0.00156	0.00165	0.00111	0.00281	0.06492
20	0.02249	0.00404	0.00103	0.00119	0.00064	0.00121	0.00213	0.02178
30	0.00793	0.00245	0.00076	0.00212	0.00129	0.00152	0.00158	0.00796
40	0.00525	0.00234	0.00231	0.00122	0.00079	0.00129	0.00192	0.00721
50	0.12521	0.00341	0.00172	0.00163	0.00094	0.00279	0.00344	0.11015
60	0.20234	0.00584	0.00404	0.00107	0.00111	0.00398	0.00771	0.17925
70	0.35205	0.00645	0.00342	0.00122	0.00107	0.00416	0.01075	0.31369
80	0.47344	0.00684	0.00469	0.00105	0.00098	0.00421	0.01073	0.47987
90	0.52326	0.00724	0.00452	0.00115	0.00086	0.00531	0.01125	0.58562
100	0.19991	0.00262	0.00132	0.00084	0.00088	0.00203	0.00701	0.17456
110	0.06172	0.00139	0.00077	0.00092	0.00092	0.00135	0.00341	0.06286
120	0.01491	0.00131	0.00061	0.00113	0.00106	0.00051	0.00169	0.01448
130	0.00369	0.00131	0.00051	0.00087	0.00088	0.00038	0.00094	0.00357
140	0.00231	0.00116	0.00045	0.00102	0.00116	0.00041	0.00081	0.00242
150	0.00991	0.00191	0.00046	0.00111	0.00074	0.00033	0.00101	0.00921
160	0.01219	0.00142	0.00058	0.00064	0.00052	0.00037	0.00065	0.01199
170	0.01575	0.00193	0.00038	0.00096	0.00067	0.00044	0.00102	0.01661
180	0.00922	0.00203	0.00042	0.00086	0.00083	0.00067	0.00103	0.00941
Spatial Average (mW/cm²)	0.116778889	0.003212222	0.001596111	0.001142222	0.000943889	0.001781667	0.003882778	0.115308889
Max Spatial Average (mW/cm²)	0.11678							
MPE Limit (mW/cm²)	1							



Test Mode	VHT40	Test Frequency (MHz)	5795	MPE Distance (cm)	73	Power Setting	24	
EUT Plane	Horizontal							
Probe height (cm) \ Deg	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°
	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )
187	0.87883	0.00201	0.00388	0.00098	0.00134	0.01034	0.02205	0.87351
Max PSD (mW/cm <sup>2</sup> )	0.87883							
MPE Limit (mW/cm <sup>2</sup> )	1							
EUT Plane	Vertical							
Probe height (cm) \ Deg	0~45°	45~90°	90~135°	135~180°	180~225°	225~270°	270~315°	315~360°
	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )	Max PSD (mW/cm <sup>2</sup> )
10	0.02851	0.00539	0.00081	0.00206	0.00259	0.00128	0.00274	0.02881
20	0.01009	0.00531	0.00112	0.00121	0.00094	0.00147	0.00263	0.01011
30	0.02068	0.00262	0.00141	0.00285	0.00235	0.00129	0.00179	0.02049
40	0.01032	0.00252	0.00206	0.00132	0.00116	0.00145	0.00365	0.01068
50	0.18807	0.00413	0.00150	0.00171	0.00162	0.00311	0.00465	0.18804
60	0.35002	0.00841	0.00443	0.00136	0.00124	0.00597	0.01274	0.30097
70	0.49222	0.00703	0.00402	0.00169	0.00186	0.00554	0.01259	0.41012
80	0.54019	0.00816	0.00444	0.00149	0.00182	0.00426	0.01151	0.52173
90	0.43811	0.00789	0.00550	0.00091	0.00117	0.00636	0.01136	0.42542
100	0.13903	0.00236	0.00199	0.00095	0.00092	0.00226	0.00496	0.13399
110	0.03494	0.00151	0.00062	0.00091	0.00072	0.00142	0.00324	0.03531
120	0.00835	0.00152	0.00061	0.00124	0.00112	0.00065	0.00125	0.00834
130	0.00505	0.00145	0.00067	0.00107	0.00105	0.00037	0.00075	0.00476
140	0.00772	0.00148	0.00046	0.00097	0.00096	0.00042	0.00052	0.00745
150	0.01452	0.00248	0.00044	0.00129	0.00131	0.00039	0.00126	0.01206
160	0.01389	0.00215	0.00052	0.00057	0.00054	0.00051	0.00066	0.01396
170	0.01407	0.00208	0.00047	0.00132	0.00127	0.00049	0.00111	0.01301
180	0.01075	0.00222	0.00044	0.00064	0.00064	0.00057	0.00081	0.01023
Spatial Average (mW/cm <sup>2</sup> )	0.129251667	0.003817222	0.001750556	0.001308889	0.001293333	0.002100556	0.004345556	0.119748889
Max Spatial Average (mW/cm <sup>2</sup> )	0.12925							
MPE Limit (mW/cm <sup>2</sup> )	1							



## 2.5 List of Measuring Equipments

For 5GHz:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Isotropic Probe	ETS-LINDGREN	HI-6105	00130664	100kHz-6GHz	Nov. 15, 2017	Nov. 14, 2018	03CH01-CB

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

## 2.6 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

For Ant. 1

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
2.4G;D1D	6.00	18.45	24.45	0.50	24.95	0.31261	73	0.00467	1.00000

For Ant. 2

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
5.2G;D1D	16.00	13.33	29.33	0.50	29.83	0.96161	73	0.01436	1.00000
5.3G;D1D	16.00	12.88	28.88	0.50	29.38	0.86696	73	0.01295	1.00000
5.6G;D1D	16.00	13.84	29.84	0.13	29.97	0.99312	73	0.01483	1.00000
5.8G;D1D	16.00	29.19	45.19	0.50	45.69	37.06807	73	0.96695	1.00000
4.9G;D1D	16.00	20.05	36.05	0.50	36.55	4.51856	73	0.06747	1.00000

For Ant. 3

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )
5.2G;D1D	2.00	28.31	30.31	0.50	30.81	1.20504	73	0.01799	1.00000
5.3G;D1D	2.00	23.80	25.80	0.50	26.30	0.42658	73	0.00637	1.00000
5.6G;D1D	2.00	23.95	25.95	0.50	26.45	0.44157	73	0.00659	1.00000
5.8G;D1D	2.00	29.19	31.19	0.50	31.69	1.47571	73	0.02204	1.00000
4.9G;D1D	2.00	20.05	22.05	0.50	22.55	0.17989	73	0.00269	1.00000



Simultaneous Transmission Analysis Mode:

WLAN 2.4GHz + WLAN 5GHz\_Ant. 2

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Ratio (S/Limit)
2.4G;D1D	6.00	18.45	24.45	0.50	24.95	0.31261	73	0.00467	1.00000	0.00467
5.8G;D1D	16.00	29.19	45.19	0.50	45.69	37.06807	73	0.96695	1.00000	0.96695
									Sum Ratio	0.97164
									Ratio Limit	1.00000

WLAN 2.4GHz + WLAN 5GHz\_Ant. 3

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Ratio (S/Limit)
2.4G;D1D	6.00	18.45	24.45	0.50	24.95	0.31261	73	0.00467	1.00000	0.00467
5.8G;D1D	2.00	29.19	31.19	0.50	31.69	1.47571	73	0.02204	1.00000	0.02204
									Sum Ratio	0.02671
									Ratio Limit	1.00000

WLAN 2.4GHz + WLAN 4.9GHz\_Ant. 2

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Ratio (S/Limit)
2.4G;D1D	6.00	18.45	24.45	0.50	24.95	0.31261	73	0.00467	1.00000	0.00467
4.9G	16.00	20.05	36.05	0.50	36.55	4.51856	73	0.06747	1.00000	0.06747
									Sum Ratio	0.07214
									Ratio Limit	1.00000

WLAN 2.4GHz + WLAN 4.9GHz\_Ant. 3

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Ratio (S/Limit)
2.4G;D1D	6.00	18.45	24.45	0.50	24.95	0.31261	73	0.00467	1.00000	0.00467
4.9G	2.00	20.05	22.05	0.50	22.55	0.17989	73	0.00269	1.00000	0.00269
									Sum Ratio	0.00736
									Ratio Limit	1.00000

Note: The above antenna gain was declared by manufacturer.