



# RADIO EXPOSURE TEST REPORT

**FCC ID** : LDK-9160S2579

**Equipment** : Catalyst Wireless 9166D1 Series Wi-Fi 6E Access Point

**Brand Name** : CISCO

**Model Name** : CW9166D1-B, CW9166D1-MR

**Applicant** : Cisco Systems Inc  
125 West Tasman Drive San Jose California United States 95134-1706

**Manufacturer** : Cisco Systems Inc  
125 West Tasman Drive San Jose California United States 95134-1706

**Standard** : 47 CFR Part 2.1091

The product was received on Jan. 17, 2023, and testing was started from Feb. 21, 2023 and completed on May 18, 2023. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR Part 2.1091 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

**Sporton International Inc. Hsinchu Laboratory**

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## History of this test report

Report No.	Version	Description	Issued Date
FA313002	01	Initial issue of report	Jun. 14, 2023



## Summary of Test Result

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

**Conformity Assessment Condition:**

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

**Disclaimer:**

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

**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	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) VHT: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
5GHz WLAN	5150-5250 5250-5350 5470-5725 5725-5850	5180-5250 5250-5320 5500-5720 5745-5825	802.11a/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
6GHz WLAN	5925-7125	5955-7115	802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Bluetooth	2400-2483.5	2402-2480	LE: GFSK
Zigbee	2400-2483.5	2405-2480	O-QPSK



## 1.2 Antenna Information

Ant.	Brand	Model Name	Ant. Type	Connector	Gain (dBi)
1	CISCO	95XEAM15.G04 WIFI 2/5G_4	Dipole	I-PEX	Note2
2	CISCO	95XEAM15.G03 WIFI 2/5G_3	Dipole	I-PEX	
3	CISCO	95XEAM15.G02 WIFI 2/5G_2	Dipole	I-PEX	
4	CISCO	95XEAM15.G01 WIFI 2/5G_1	Dipole	I-PEX	
5	CISCO	95XEAM15.G05 WIFI 5/6G_1	Dipole	I-PEX	
6	CISCO	95XEAM15.G06 WIFI 5/6G_2	Dipole	I-PEX	
7	CISCO	95XEAM15.G07 WIFI 5/6G_3	Dipole	I-PEX	
8	CISCO	95XEAM15.G08 WIFI 5/6G_4	Dipole	I-PEX	
9	CISCO	95XEAM15.G10 AUX_2	Dipole	I-PEX	
10	CISCO	95XEAM15.G09 AUX_1	Dipole	I-PEX	
11	CISCO	95XEAM15.G11 IOT	Loop	I-PEX	

Ant.	Port											
	R1: WLAN 2.4GHz			R1: WLAN 5GHz UNII 1~3			R2: WLAN 5GHz UNII 2C~3/ WLAN 6GHz			R3: WLAN 2.4GHz / 5GHz UNII 1~3/ WLAN 6GHz		R4: Bluetooth/ Zigbee
	1TX	2TX	4TX	1TX	2TX	4TX	1TX	2TX	4TX	1TX/2RX		1TX
1	-	-	3	-	-	3	-	-	-	-	-	-
2	-	2	2	-	2	2	-	-	-	-	-	-
3	1	1	1	1	1	1	-	-	-	-	-	-
4	-	-	4	-	-	4	-	-	-	-	-	-
5	-	-	-	-	-	-	-	2	2	-	-	-
6	-	-	-	-	-	-	1	1	1	-	-	-
7	-	-	-	-	-	-	-	-	3	-	-	-
8	-	-	-	-	-	-	-	-	4	-	-	-
9	-	-	-	-	-	-	-	-	-	1	-	-
10	-	-	-	-	-	-	-	-	-	2	-	-
11	-	-	-	-	-	-	-	-	-	-	-	1

Note1: R means Radio.

Note2:

Ant.	Antenna Gain (dBi)					
	R1: WLAN 2.4GHz		R1: WLAN 5GHz UNII 1~3			
			5.2G	5.3G	5.6G	5.785G
1	6.57		5.21	4.46	4.78	5.2
2	4.11		4.59	4.32	4.02	4.45
3	5.46		4.55	3.8	3.49	3.89
4	6.55		4.84	4.48	3.62	5.02
Ant.	R2: WLAN 5GHz UNII 2C~3/WLAN 6GHz					
	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G
5	7.48	6.28	6.49	5.9	7.49	7.42
6	7.11	8.01	6	4.87	7.65	8.32
7	7.24	6.68	5.88	4.86	7.37	7.26
8	6.57	7.32	6.34	7.31	6.46	6.82
Ant.	R3: WLAN 2.4GHz/5GHz UNII 1~3/WLAN 6GHz					
	WLAN 2.4GHz		WLAN 5GHz UNII 1~3		WLAN 6GHz	
9						
10	6.9		6.6		6.8	
Ant.	R4: Bluetooth/Zigbee					
	8.8					
11						



Note3:

Item	Directional Gain (dBi)						
	R1: WLAN 2.4GHz	R1: WLAN 5GHz UNII 1~3					
		5.2G	5.3G	5.6G	5.785G		
2T1S	5.49	5.02	4.37	4.05	4.48		
2T2S	5.46	4.59	4.32	4.02	4.45		
4T1S	8.71	8.02	7.47	6.91	7.51		
4T2S	6.57	5.21	4.48	4.78	5.2		
4T4S	6.57	5.21	4.48	4.78	5.2		
Item	R2: WLAN 5GHz UNII 2C~3/WLAN 6GHz						
	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G	
2T1S	7.66	8.11	6.51	6.24	7.67	8.38	
2T2S	7.48	8.01	6.49	5.9	7.65	8.32	
4T1S	9.91	10.4	9.21	9.03	10.32	10.71	
4T2S	7.48	8.01	6.49	7.31	7.65	8.32	
4T4S	7.48	8.01	6.49	7.31	7.65	8.32	

Note4: 80+80MHz Directional gain information

Type	Maximum Output Power	Power Spectral Density
Non-BF	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4	$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left( \sum_{k=1}^{N_{ANT}} S_{j,k} \right)^2}{N_{ANT}} \right]$
BF	$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left( \sum_{k=1}^{N_{ANT}} S_{j,k} \right)^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left( \sum_{k=1}^{N_{ANT}} S_{j,k} \right)^2}{N_{ANT}} \right]$

Ex.

Directional Gain (NSS1) formula:

$$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{ANT}} \left( \sum_{k=1}^{N_{ANT}} S_{j,k} \right)^2}{N_{ANT}} \right]$$

$NSS1(g1,1) = 10^{G1/20}$  ;  $NSS1(g1,2) = 10^{G2/20}$  ;  $NSS1(g1,3) = 10^{G3/20}$  ;  $NSS1(g1,4) = 10^{G4/20}$

$g_{j,k} = (NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2$

$DG = 10 \log[(NSS1(g1,1) + NSS1(g1,2) + NSS1(g1,3) + NSS1(g1,4))^2 / N_{ANT}] => 10$

$\log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20} + 10^{G4/20})^2 / N_{ANT}]$

Where ;

For 80+80

5G Band1 G1 = 5.21 dBi; G2 = 4.59 dBi; G3 = 4.55 dBi; G4 = 4.84 dB

5G Band2 G1 = 4.46 dBi; G2 = 4.32 dBi; G3 = 3.80 dBi; G4 = 4.48 dBi

5G Band3 G1 = 4.78 dBi; G2 = 4.02 dBi; G3 = 3.49 dBi; G4 = 3.62 dBi

For 2T1S

5G Band1 DG = 4.55 dBi

5G Band2 DG = 4.48 dBi

For 4T1S

5G Band1 DG = 7.58 dBi

5G Band2 DG = 7.48 dBi

For 2T2S

5G Band3 DG = 3.62 dBi

For 4T2S

5G Band3 DG = 7.01 dBi



Note5: The above information (except gain of Radio 1 and Radio 2) was declared by manufacturer.  
Note6: Radio 1 (WLAN 2.4/5GHz UNII 1~3(except 80+80MHz)), Radio 2 (5GHz UNII 2C~3/6GHz UNII 5~8): The directional gain is measured which follows the procedure of KDB 662911 D03.  
Radio 1 (5GHz UNII 1~2C(80+80MHz)): Maximum Directional Gain following KDB662911 D01

Note7: The EUT has eleven antennas.

**For WLAN 2.4GHz function (Radio 1):**

**For IEEE 802.11b/g/n/VHT/ax mode (1TX,2TX,4TX/4RX):**

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

Only Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4TX

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.

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

For 4RX

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

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

**For WLAN 5GHz function (Radio 1 and Radio 2):**

**For IEEE 802.11a/n/ac/ax mode (1TX,2TX,4TX/4RX):**

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

Only Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4TX

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.

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

For Radio 1 80+80MHz 2TX

Only Port 1 and Port 4 can be use as transmitting antenna.

Port 1 and Port 4 could transmit simultaneously.

For 4RX

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

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

**For WLAN 6GHz UNII 5~8 (Radio 2):**

**For IEEE 802.11ax mode (1TX,2TX,4TX/4RX):**

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2TX

Only Port 1 and Port 2 can be use as transmitting antenna.

Port 1 and Port 2 could transmit simultaneously.

For 4TX

Port 1, Port 2, Port 3 and Port 4 can be use as transmitting antenna.

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

For 4RX

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antennas.

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

**For Scanning Radio 3:**

**For WLAN 2.4GHz function**

**For 802.11b/g/n/VHT/ax mode (1TX/2RX):**

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2RX

Port 1 and Port 2 can be used as receiving antennas.

Port 1 and Port 2 could receive simultaneously.





**For WLAN 5GHz function**

**For IEEE 802.11a/n/ac/ax mode (1TX/2RX):**

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2RX

Port 1 and Port 2 can be used as receiving antennas.

Port 1 and Port 2 could receive simultaneously.

**For WLAN 6GHz UNII 5~8:**

**For IEEE 802.11ax mode (1TX/2RX):**

For 1TX

Only Port 1 can be use as transmitting antenna.

For 2RX

Port 1 and Port 2 can be used as receiving antennas.

Port 1 and Port 2 could receive simultaneously.

**For Bluetooth/Zigbee function (Radio 4):**

**For Bluetooth/Zigbee mode (1TX/1RX):**

Only Port 1 can be used as transmitting/receiving antenna.

### 1.3 Table for Multiple Listing

Model Name	SW	R1: 2.4GHz	R1: 5GHz Low Band or R1: 5GHz Full Band	R2: 5GHz High Band or 6GHz	R3: 2.4GHz/ 5GHz/6GHz	R4: Bluetooth or Zigbee
CW9166D1-B	Cisco	V	V (With 80+80MHz)	V	V	V (Disable Zigbee function by SW)
CW9166D1-MR	Meraki	V	V (Without 80+80MHz)	V	V	V

Note1: From the above models, model: CW9166D1-MR was selected as representative model for the test and its data was recorded in this report.

Note2: The above information was declared by manufacturer.

### 1.4 Table for Radio function

Function Radio	WLAN 2.4GHz	WLAN 5GHz UNII 1~2A	WLAN 5GHz UNII 2C~3	WLAN 6GHz	Bluetooth	Zigbee
1 (Iron Radio)	V	V	V	-	-	-
2 (Pine Radio)	-	-	V	V	-	-
3 (Scanning Radio)	V	V	V	V	-	-
4	-	-	-	-	V	V

Note1: The above information was declared by manufacturer.

Note2: For WLAN 2.4GHz: The Radio 1 and Radio 3 can't operate at the same frequency.

For WLAN 5GHz: The Radio 1 ~ 3 can't operate at the same frequency.

For WLAN 6GHz: The Radio 2 ~ 3 can't operate at the same frequency simultaneously.



### 1.5 Table for EUT Operation Function

Mode	Operation Function
1	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+R4: Bluetooth
2	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 5GHz+R4: Bluetooth
3	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 6GHz+R4: Bluetooth
4	R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 2.4GHz+R4: Bluetooth
5	R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 5GHz+R4: Bluetooth
6	R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 6GHz+R4: Bluetooth
7	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+R4: Zigbee
8	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 5GHz+R4: Zigbee
9	R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 6GHz+R4: Zigbee
10	R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 2.4GHz+R4: Zigbee
11	R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 5GHz+R4: Zigbee
12	R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 6GHz+R4: Zigbee

Note: The above information was declared by manufacturer.

### 1.6 Accessories

Wall-mounted rack\*1

### 1.7 Applicable Standards

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

- ♦ 47 CFR Part 2.1091
  - ♦ KDB 447498 D04 Interim General RF Exposure Guidance v01
- The following reference test guidance is not within the scope of accreditation of TAF.
- ♦ 47 CFR Part 1.1307
  - ♦ 47 CFR Part 1.1310

### 1.8 Testing Location

Testing Location Information	
Test Lab. : Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065      FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.



## 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 <sup>2</sup> )	<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 <sup>2</sup> )	<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 51 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 Exemption

Option (A): 1.1307(b)(3)(i)(A): Available maximum time-averaged power is < 1 mW

Option (B): 1.1307(b)(3)(i)(B): Device operates between 300 MHz and 6 GHz and the maximum time-averaged power or effective radiated power (ERP), whichever is greater, <= Pth.

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

Option (C): 1.1307(b)(3)(i)(C): ERP is below a threshold calculated based on the distance R between the person and the antenna / radiating structure, where  $R > \lambda / 2 \pi$ .

Single RF Sources Subject to Routine Environmental Evaluation	
RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R <sup>2</sup> .
1.34-30	3,450 R <sup>2</sup> /f <sup>2</sup> .
30-300	3.83 R <sup>2</sup> .
300-1,500	0.0128 R <sup>2</sup> f.
1,500-100,000	19.2R <sup>2</sup> .

Note: R is in meters, f is in MHz.



## 2.4 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

### For Radio 1

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Option
2.4G;D1D	8.71	23.25	31.96	0.50	32.46	51	0.05391	1.00000	C
5.2G;D1D	8.02	23.98	32.00	0.50	32.50	51	0.05441	1.00000	C
5.3G;D1D	7.47	22.43	29.90	0.09	29.99	51	0.03052	1.00000	C
5.6G;D1D	6.91	23.06	29.97	0.02	29.99	51	0.03052	1.00000	C
5.8G;D1D	7.51	24.09	31.60	0.50	32.10	51	0.04962	1.00000	C

### For Radio 2

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Option
5.6G;D1D	9.91	20.06	29.97	0.02	29.99	51	0.03052	1.00000	C
5.8G;D1D	10.40	23.82	34.22	0.50	34.72	51	0.09071	1.00000	C
6.2G;D1D	9.21	18.19	27.40	0.50	27.90	51	0.01886	1.00000	C
6.4G;D1D	9.03	18.53	27.56	0.50	28.06	51	0.01957	1.00000	C
6.7G;D1D	10.32	17.29	27.61	0.50	28.11	51	0.01980	1.00000	C
7.0G;D1D	10.71	16.55	27.26	0.50	27.76	51	0.01827	1.00000	C

### For Scanning Radio 3

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Option
2.4G;G1D	6.90	21.30	28.20	0.50	28.70	51	0.02268	1.00000	C
5.2G;D1D	6.60	19.58	26.18	0.50	26.68	51	0.01424	1.00000	C
5.3G;D1D	6.60	19.81	26.41	0.50	26.91	51	0.01502	1.00000	C
5.6G;D1D	6.60	20.03	26.63	0.50	27.13	51	0.01580	1.00000	C
5.8G;D1D	6.60	20.62	27.22	0.50	27.72	51	0.01810	1.00000	C
6.2G;D1D	6.80	11.67	18.47	0.50	18.97	51	0.00241	1.00000	C
6.4G;D1D	6.80	11.73	18.53	0.50	19.03	51	0.00245	1.00000	C
6.7G;D1D	6.80	11.88	18.68	0.50	19.18	51	0.00253	1.00000	C
7.0G;D1D	6.80	11.89	18.69	0.50	19.19	51	0.00254	1.00000	C

### For Radio 4

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm <sup>2</sup> )	S Limit (mW/cm <sup>2</sup> )	Option
2.4G;BT-LE	8.80	19.50	28.30	0.50	28.80	51	0.02321	1.00000	C
2.4G;G1D	8.80	20.00	28.80	0.50	29.30	51	0.02604	1.00000	C



Simultaneous Transmission Analysis Mode:

Mode 1: R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+R4: Bluetooth

Table with 12 columns: Mode, DG (dBi), Power (dBm), EIRP (dBm), Tolerance (dB), Tune-up EIRP (dBm), Distance (cm), S (mW/cm2), Limit (mW/cm2), Option, TL EIRP (dBm), TL Ratio. Rows include 2.4G:D1D, 5.2G:D1D, 5.8G:D1D, 2.4G:BT-LE, 2.4G:G1D, Sum TL Ratio C, and Ratio Limit.

Mode 2: R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 5GHz+R4: Bluetooth

Table with 12 columns: Mode, DG (dBi), Power (dBm), EIRP (dBm), Tolerance (dB), Tune-up EIRP (dBm), Distance (cm), S (mW/cm2), Limit (mW/cm2), Option, TL EIRP (dBm), TL Ratio. Rows include 2.4G:D1D, 5.2G:D1D, 5.8G:D1D, 2.4G:BT-LE, 5.8G:D1D, Sum TL Ratio C, and Ratio Limit.

Mode 3: R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 6GHz+R4: Bluetooth

Table with 12 columns: Mode, DG (dBi), Power (dBm), EIRP (dBm), Tolerance (dB), Tune-up EIRP (dBm), Distance (cm), S (mW/cm2), Limit (mW/cm2), Option, TL EIRP (dBm), TL Ratio. Rows include 2.4G:D1D, 5.2G:D1D, 5.8G:D1D, 2.4G:BT-LE, 7.0G:D1D, Sum TL Ratio C, and Ratio Limit.

Mode 4: R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 2.4GHz+R4: Bluetooth

Table with 12 columns: Mode, DG (dBi), Power (dBm), EIRP (dBm), Tolerance (dB), Tune-up EIRP (dBm), Distance (cm), S (mW/cm2), Limit (mW/cm2), Option, TL EIRP (dBm), TL Ratio. Rows include 2.4G:D1D, 5.2G:D1D, 6.7G:D1D, 2.4G:BT-LE, 2.4G:G1D, Sum TL Ratio C, and Ratio Limit.



Mode 5: R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 5GHz+R4: Bluetooth

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm2)	Limit (mW/cm2)	Option	TL EIRP (dBm)	TL Ratio
2.4G;D1D	8.71	23.25	31.96	0.50	32.46	51	0.05391	1.00000	C	39.133	0.2151
5.2G;D1D	8.02	23.98	32.00	0.50	32.50	51	0.05441	1.00000	C	39.133	0.2171
6.7G;D1D	10.32	17.29	27.61	0.50	28.11	51	0.01980	1.00000	C	39.133	0.0790
2.4G;BT-LE	8.80	19.50	28.30	0.50	28.80	51	0.02321	1.00000	C	39.133	0.0926
5.8G;D1D	6.60	20.62	27.22	0.50	27.72	51	0.01810	1.00000	C	39.133	0.0722
Sum TL Ratio C	0.676										
Ratio Limit	1										

Mode 6: R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 6GHz+R4: Bluetooth

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm2)	Limit (mW/cm2)	Option	TL EIRP (dBm)	TL Ratio
2.4G;D1D	8.71	23.25	31.96	0.50	32.46	51	0.05391	1.00000	C	39.133	0.2151
5.2G;D1D	8.02	23.98	32.00	0.50	32.50	51	0.05441	1.00000	C	39.133	0.2171
6.7G;D1D	10.32	17.29	27.61	0.50	28.11	51	0.01980	1.00000	C	39.133	0.0790
2.4G;BT-LE	8.80	19.50	28.30	0.50	28.80	51	0.02321	1.00000	C	39.133	0.0926
7.0G;D1D	6.80	11.89	18.69	0.50	19.19	51	0.00254	1.00000	C	39.133	0.0101
Sum TL Ratio C	0.6139										
Ratio Limit	1										

Mode 7: R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 2.4GHz+R4: Zigbee

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm2)	Limit (mW/cm2)	Option	TL EIRP (dBm)	TL Ratio
2.4G;D1D	8.71	23.25	31.96	0.50	32.46	51	0.05391	1.00000	C	39.133	0.2151
5.2G;D1D	8.02	23.98	32.00	0.50	32.50	51	0.05441	1.00000	C	39.133	0.2171
5.8G;D1D	10.40	23.82	34.22	0.50	34.72	51	0.09071	1.00000	C	39.133	0.3620
2.4G;G1D	8.80	20.00	28.80	0.50	29.30	51	0.02604	1.00000	C	39.133	0.1039
2.4G;G1D	6.90	21.30	28.20	0.50	28.70	51	0.02268	1.00000	C	39.133	0.0905
Sum TL Ratio C	0.9886										
Ratio Limit	1										

Mode 8: R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 5GHz+R4: Zigbee

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Distance (cm)	S (mW/cm2)	Limit (mW/cm2)	Option	TL EIRP (dBm)	TL Ratio
2.4G;D1D	8.71	23.25	31.96	0.50	32.46	51	0.05391	1.00000	C	39.133	0.2151
5.2G;D1D	8.02	23.98	32.00	0.50	32.50	51	0.05441	1.00000	C	39.133	0.2171
5.8G;D1D	10.40	23.82	34.22	0.50	34.72	51	0.09071	1.00000	C	39.133	0.3620
2.4G;G1D	8.80	20.00	28.80	0.50	29.30	51	0.02604	1.00000	C	39.133	0.1039
5.8G;D1D	6.60	20.62	27.22	0.50	27.72	51	0.01810	1.00000	C	39.133	0.0722
Sum TL Ratio C	0.9703										
Ratio Limit	1										



Mode 9: R1: 2.4GHz/5GHz Low Band+R2: 5GHz High band+R3: 6GHz+R4: Zigbee

Table with 12 columns: Mode, DG (dBi), Power (dBm), EIRP (dBm), Tolerance (dB), Tune-up EIRP (dBm), Distance (cm), S (mW/cm2), Limit (mW/cm2), Option, TL EIRP (dBm), TL Ratio. Rows include 2.4G:D1D, 5.2G:D1D, 5.8G:D1D, 2.4G;G1D, 7.0G:D1D, Sum TL Ratio C, and Ratio Limit.

Mode 10: R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 2.4GHz+R4: Zigbee

Table with 12 columns: Mode, DG (dBi), Power (dBm), EIRP (dBm), Tolerance (dB), Tune-up EIRP (dBm), Distance (cm), S (mW/cm2), Limit (mW/cm2), Option, TL EIRP (dBm), TL Ratio. Rows include 2.4G:D1D, 5.2G:D1D, 6.7G:D1D, 2.4G;G1D, 2.4G;G1D, Sum TL Ratio C, and Ratio Limit.

Mode 11: R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 5GHz+R4: Zigbee

Table with 12 columns: Mode, DG (dBi), Power (dBm), EIRP (dBm), Tolerance (dB), Tune-up EIRP (dBm), Distance (cm), S (mW/cm2), Limit (mW/cm2), Option, TL EIRP (dBm), TL Ratio. Rows include 2.4G:D1D, 5.2G:D1D, 6.7G:D1D, 2.4G;G1D, 5.8G:D1D, Sum TL Ratio C, and Ratio Limit.

Mode 12: R1: 2.4GHz/5GHz Full Band+R2: 6GHz+R3: 6GHz+R4: Zigbee

Table with 12 columns: Mode, DG (dBi), Power (dBm), EIRP (dBm), Tolerance (dB), Tune-up EIRP (dBm), Distance (cm), S (mW/cm2), Limit (mW/cm2), Option, TL EIRP (dBm), TL Ratio. Rows include 2.4G:D1D, 5.2G:D1D, 6.7G:D1D, 2.4G;G1D, 7.0G:D1D, Sum TL Ratio C, and Ratio Limit.

Note: The above antenna gain was declared by manufacturer.

—————THE END—————