



RADIO EXPOSURE TEST REPORT

FCC ID : UDX-600216020
Equipment : Cisco Wireless 9179F Series Wi-Fi 7 Access Point
Brand Name : CISCO
Model Name : CW9179F
Applicant : Cisco Systems, Inc.
170 West Tasman Drive, San Jose, CA 95134 USA
Manufacturer : Cisco Systems, Inc.
170 West Tasman Drive, San Jose, CA 95134 USA
Standard : 47 CFR Part 2.1091

The product was received on Nov. 29, 2024, and testing was started from Dec. 12, 2024 and completed on Jun. 24, 2025. 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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Photographs of EUT v01



History of this test report

TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-A1_1 Ver1.1

Page Number : 3 of 27
Issued Date : Jul. 14, 2025
Report Version : 01



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:

1. 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.
2. The test configuration, test mode and test software were written in this test report are declared by the manufacturer.

Reviewed by: Sam Chen**Report Producer: Sophia Shiung**



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, 1024QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
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, 1024QAM) 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
6GHz WLAN	5925-6425 6525-6875	5955-6415 6535-6855	802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM) 802.11be: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM)
Bluetooth	2400-2483.5	2402-2480	LE: GFSK
Zigbee	2400-2483.5	2405-2480	O-QPSK



1.2 Antenna Information

<Internal Antenna>

Ant.	Brand	Model Name	Antenna Type	Connector	Support
1	WNC	57XPAD15.LAU	Dipole	U.FL	Radio 1
2	WNC	57XPAD15.MAU	Dipole	U.FL	
3	WNC	57XPAD15.AAU	Dipole	U.FL	Radio 2
4	WNC	57XPAD15.BAU	Dipole	U.FL	
5	WNC	57XPAD15.CAU	Dipole	U.FL	
6	WNC	57XPAD15.DAU	Dipole	U.FL	
7	WNC	57XPAD15.HAU	Dipole	U.FL	Radio 3
8	WNC	57XPAD15.HAU	Dipole	U.FL	
9	WNC	57XPAD15.IAU	Dipole	U.FL	
10	WNC	57XPAD15.IAU	Dipole	U.FL	Radio 4
11	WNC	57XPAD15.JAU	Dipole	U.FL	
12	WNC	57XPAD15.JAU	Dipole	U.FL	
13	WNC	57XPAD15.KAU	Dipole	U.FL	
14	WNC	57XPAD15.KAU	Dipole	U.FL	Radio 5
15	WNC	57XPAD15.EAU	Dipole	U.FL	
16	WNC	57XPAD15.EAU	Dipole	U.FL	
17	WNC	57XPAD15.FAU	Dipole	U.FL	
18	WNC	57XPAD15.FAU	Dipole	U.FL	Radio 6
19	WNC	57XPAD15.NAU	Loop	U.FL	
20	WNC	57XPAD15.PAU	PIFA	U.FL	Radio 7
21	WNC	57XPAD15.0DG	PIFA	U.FL	
22	WNC	57XPAD15.OAU	Patch	U.FL	Radio 8
23	WNC	57XPAD15.OAU	Patch	U.FL	

Ant.	Port	Gain (dBi)					Support
		WLAN 2.4GHz	WLAN 5GHz		WLAN 6GHz		
			UNII 1~2A	UNII 2C~3	UNII 5	UNII 7	
1	1	3.7	4.9	6.1	5.0	5.8	Radio 1
2	2	5.1	4.5	5.2	5.5	6.4	
3	1	5.0	-	-	-	-	Radio 2
4	2	4.3	-	-	-	-	
5	3	5.1	-	-	-	-	
6	4	5.3	-	-	-	-	



Ant.	Port	Gain (dBi)					Support
		WLAN 5GHz					
		Mode	UNII 1	UNII 2A	UNII 2C	UNII 3	
7	3	Boresight	9.3	9.4	9.7	9.8	Radio 3
		Steering	9.4	9.4	10.0	10.0	
8	4	Boresight	10.3	10.3	10.6	10.2	
		Steering	10.2	10.2	10.6	10.3	
9	2	Boresight	9.6	9.9	10.3	9.9	
		Steering	9.9	9.8	10.3	10.1	
10	1	Boresight	10.4	10.6	10.7	10.4	
		Steering	10.3	10.7	10.6	10.4	

Ant.	Port	Gain (dBi)			Support
		WLAN 6GHz			
		Mode	UNII 5	UNII 7	
11	3	Narrow Beam	9.2	9.0	Radio 4
		Wide Beam	5.4	5.3	
12	4	Narrow Beam	9.2	8.7	
		Wide Beam	5.1	5.2	
13	2	Narrow Beam	10.0	9.8	
		Wide Beam	6.4	6.5	
14	1	Narrow Beam	9.8	10.1	
		Wide Beam	5.6	6.2	

Ant.	Port	Gain (dBi)						Support
		WLAN 5GHz			Bluetooth / Zigbee	UWB	GPS	
		Mode	UNII 1	UNII 2A				
15	2	Boresight	8.6	8.8	-	-	-	Radio 5
		Steering	8.5	9.0	-	-	-	
16	1	Boresight	9.4	9.4	-	-	-	
		Steering	9.4	9.4	-	-	-	
17	4	Boresight	8.7	9.3	-	-	-	
		Steering	8.8	9.2	-	-	-	
18	3	Boresight	8.5	9.0	-	-	-	
		Steering	8.5	9.0	-	-	-	
19	1	-	-	-	6.1	-	-	Radio 6
20	1	-	-	-	-	-	3.8	Radio 7
21	1	-	-	-	-	-	3.5	
22	2	-	-	-	-	8.2	-	Radio 8
23	1	-	-	-	-	8.6	-	


<External Antenna>

Ant.	Port	Brand	Model Name	Antenna Type	Connector	Support
1	1~4	CISCO	AIR-ANT2588P4M-NS	(Panel) Dual-polarized directional	N-Female Bulkhead	Radio 2, Radio 5
2	1~4	CISCO	AIR-ANT2566D4M-R	(Patch) Dual-Band Polarization-Diverse Directional Array	RP-TNC (with coupling ring)	
3	1~4	CISCO	AIR-ANT2566D4M-RS	(Patch) Dual-Band Polarization-Diverse Directional Array	RP-TNC (with coupling ring)	
4	1~4	CISCO	AIR-ANT2566P4W-R	(Patch) 4-element dual-band MIMO	RP-TNC	
5	1~4	CISCO	AIR-ANT2566P4W-RS	(Patch) 4-element dual-band MIMO	RP-TNC	
6	1~4	CISCO	CW-ANT-T-D3-N	Dipole	RP-TNC	Radio 7
7	1	CISCO	CW-ANT-GPS1-M-00	OMNI	MMCX	

Ant.	Gain (dBi)					Support
	Pol	WLAN 2.4GHz				
		Peak Gain	Internal Cable Loss	External Cable Loss	Net Gain	
1	V-Pol*2	9.1	0.83	0.5	7.77	Radio 2
	H-Pol*2	7.1	0.83		5.77	
2~3	V-Pol*2	6	0.83	-	5.17	
	H-Pol*2	6	0.83	-	5.17	
4~5	V-Pol*4	6	0.83	-	5.17	
6	-	6	0.83	-	5.17	

Ant.	Gain (dBi)					Support
	Pol	WLAN 5GHz				
		Peak Gain	Internal Cable Loss	External Cable Loss	Net Gain	
1	V-Pol*2	9.6	1.29	0.8	7.51	Radio 5
	H-Pol*2	7.8	1.29		5.71	
2~3	V-Pol*2	6	1.29	-	4.71	
	H-Pol*2	6	1.29	-	4.71	
4~5	V-Pol*4	6	1.29	-	4.71	
6	-	7.5	1.29	-	6.21	

Ant.	Gain (dBi)	Support
	GPS	
7	5	Radio 7

Note 1: The Manufacturer declared that the internal Ant. 22~23 (Radio 8) will not function when the EUT is used.

Note 2: The above information was declared by manufacturer.

Note 3: For external Ant. 1~6:

For radiated measurement: The external Ant. 1, 5 and 6 with the highest antenna gain for each type were selected for testing.

For conducted measurement:

NonTXBF power: The external Ant. 1 with the highest antenna gain was selected for testing.

NonTXBF PSD / TXBF power & PSD:

2.4GHz: The external Ant. 4 with the highest antenna array gain was selected for testing.

5GHz: The external Ant. 6 with the highest antenna array gain was selected for testing.

Note 4: 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	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$
BF	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$

Ex.

Directional Gain (NSS1) formula :

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

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

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

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

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

Where;

For nonTXBF power:

Radio	Mode		Max Gain (dBi)				DG (dBi)	Remark
			G1	G2	G3	G4		
2	2.4G External	2TX	7.77	5.77	-	-	7.77	Cross-Polarized Antenna
		4TX	7.77	5.77	7.77	5.77	7.77	
	2.4G Internal	2TX	5	4.3	-	-	5	
		4TX	5	4.3	5.1	5.3	5.3	
3	5G UNII 1 (Note 5)	2TX	10.4	9.9	-	-	10.4	
		4TX	10.4	9.9	9.4	10.3	10.4	
	5G UNII 1 (Boresight)	2TX	10.4	9.6	-	-	10.4	
		4TX	10.4	9.6	9.3	10.3	10.4	
	5G UNII 2A (Note 5)	2TX	10.7	9.9	-	-	10.7	
		4TX	10.7	9.9	9.4	10.3	10.7	
	5G UNII 2A (Boresight)	2TX	10.6	9.9	-	-	10.6	
		4TX	10.6	9.9	9.4	10.3	10.6	
	5G UNII 2C (Note 5)	2TX	10.7	10.3	-	-	10.7	
		4TX	10.7	10.3	10	10.6	10.7	
	5G UNII 2C (Boresight)	2TX	10.7	10.3	-	-	10.7	
		4TX	10.7	10.3	9.7	10.6	10.7	
	5G UNII 2C (Steering)	2TX	10.6	10.3	-	-	10.6	
		4TX	10.6	10.3	10	10.6	10.6	



Radio	Mode		Max Gain (dBi)				DG (dBi)	Remark
			G1	G2	G3	G4		
3	5G UNII 3 (Note 5)	2TX	10.4	10.1	-	-	10.4	Cross-Polarized Antenna
		4TX	10.4	10.1	10	10.3	10.4	
	5G UNII 3 (Boresight)	2TX	10.4	9.9	-	-	10.4	
		4TX	10.4	9.9	9.8	10.2	10.4	
	5G UNII 3 (Steering)	2TX	10.4	10.1	-	-	10.4	
		4TX	10.4	10.1	10	10.3	10.4	
4	6G UNII 5 (Narrow Beam)	2TX	9.8	10	-	-	10	
		4TX	9.8	10	9.2	9.2	10	
	6G UNII 5 (Wide Beam)	2TX	5.6	6.4	-	-	6.4	
		4TX	5.6	6.4	5.4	5.1	6.4	
	6G UNII 7 (Narrow Beam)	2TX	10.1	9.8	-	-	10.1	
		4TX	10.1	9.8	9	8.7	10.1	
	6G UNII 7 (Wide Beam)	2TX	6.2	6.5	-	-	6.5	
		4TX	6.2	6.5	5.3	5.2	6.5	
5	5G UNII 1~2A External	2TX	7.51	5.71	-	-	7.51	
		4TX	7.51	5.71	7.51	5.71	7.51	
	5G UNII 1 Internal (Note 5)	2TX	9.4	8.6	-	-	9.4	
		4TX	9.4	8.6	8.5	8.8	9.4	
	5G UNII 1 Internal (Boresight)	2TX	9.4	8.6	-	-	9.4	
		4TX	9.4	8.6	8.5	8.7	9.4	
	5G UNII 1 Internal (Steering)	2TX	9.4	8.5	-	-	9.4	
		4TX	9.4	8.5	8.5	8.8	9.4	
	5G UNII 2A Internal (Note 5)	2TX	9.4	9	-	-	9.4	
		4TX	9.4	9	9	9.3	9.4	
	5G UNII 2A Internal (Boresight)	2TX	9.4	8.8	-	-	9.4	
		4TX	9.4	8.8	9	9.3	9.4	
	5G UNII 2A Internal (Steering)	2TX	9.4	9	-	-	9.4	
		4TX	9.4	9	9	9.2	9.4	

**For nonTXBF PSD / TXBF power & PSD:**

Radio	Mode		Max Gain (dBi)				DG (dBi)	Remark
			G1	G2	G3	G4		
2	2.4G External	2TX	5.17	5.17	-	-	8.18	-
		4TX	5.17	5.17	5.17	5.17	11.19	
	2.4G Internal	2TX	5	4.3	-	-	5	Cross-Polarized Antenna
		4TX	5	4.3	5.1	5.3	7.95	
3	5G UNII 1 (Note 5)	2TX	10.4	9.9	-	-	10.4	
		4TX	10.4	9.9	9.4	10.3	13.02	
	5G UNII 1 (Boresight)	2TX	10.4	9.6	-	-	10.4	
		4TX	10.4	9.6	9.3	10.3	12.93	
	5G UNII 2A (Note 5)	2TX	10.7	9.9	-	-	10.7	
		4TX	10.7	9.9	9.4	10.3	13.11	
	5G UNII 2A (Boresight)	2TX	10.6	9.9	-	-	10.6	
		4TX	10.6	9.9	9.4	10.3	13.08	
	5G UNII 2C (Note 5)	2TX	10.7	10.3	-	-	10.7	
		4TX	10.7	10.3	10	10.6	13.42	
	5G UNII 2C (Boresight)	2TX	10.7	10.3	-	-	10.7	
		4TX	10.7	10.3	9.7	10.6	13.35	
	5G UNII 2C (Steering)	2TX	10.6	10.3	-	-	10.6	
		4TX	10.6	10.3	10	10.6	13.31	
	5G UNII 3 (Note 5)	2TX	10.4	10.1	-	-	10.4	
		4TX	10.4	10.1	10	10.3	13.21	
4	6G UNII 5 (Narrow Beam)	2TX	9.8	10	-	-	10	Cross-Polarized Antenna
		4TX	9.8	10	9.2	9.2	12.57	
	6G UNII 5 (Wide Beam)	2TX	5.6	6.4	-	-	6.4	
		4TX	5.6	6.4	5.4	5.1	8.66	
	6G UNII 7 (Narrow Beam)	2TX	10.1	9.8	-	-	10.1	
		4TX	10.1	9.8	9	8.7	12.45	
	6G UNII 7 (Wide Beam)	2TX	6.2	6.5	-	-	6.5	
		4TX	6.2	6.5	5.3	5.2	8.85	
5	5G UNII 1~2A External	2TX	6.21	6.21	-	-	9.22	-
		4TX	6.21	6.21	6.21	6.21	12.23	
	5G UNII 1 Internal (Note 5)	2TX	9.4	8.6	-	-	9.4	Cross-Polarized Antenna
		4TX	9.4	8.6	8.5	8.8	12.19	
	5G UNII 1 Internal (Boresight)	2TX	9.4	8.6	-	-	9.4	
		4TX	9.4	8.6	8.5	8.7	11.82	
	5G UNII 1 Internal (Steering)	2TX	9.4	8.5	-	-	9.4	
		4TX	9.4	8.5	8.5	8.8	11.82	



Radio	Mode		Max Gain (dBi)				DG (dBi)	Remark
			G1	G2	G3	G4		
5	5G UNII 2A Internal (Note 5)	2TX	9.4	9	-	-	9.4	Cross- Polarized Antenna
		4TX	9.4	9	9	9.3	12.19	
	5G UNII 2A Internal (Boresight)	2TX	9.4	8.8	-	-	9.4	
		4TX	9.4	8.8	9	9.3	12.14	
	5G UNII 2A Internal (Steering)	2TX	9.4	9	-	-	9.4	
		4TX	9.4	9	9	9.2	12.16	

Note 5: For RF Conducted: For internal Ant. 7~10 and Ant. 15~18, only the mode with higher antenna gain between Boresight mode and Steering mode was selected to record in this column and to perform all the test items, except for RF exposure tests.

Note 6: **<Radio 1>**

For 2.4GHz function:

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

Only Port 1 can be used as transmitting antenna.

Both Port 1 and 2 can be used as receiving antenna.

Port 1~2 could receive simultaneously.

For 5GHz function:

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

Only Port 1 can be used as transmitting antenna.

Both Port 1 and 2 can be used as receiving antenna.

Port 1~2 could receive simultaneously.

For 6GHz function:

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

Only Port 1 can be used as transmitting antenna.

Both Port 1 and 2 can be used as receiving antenna.

Port 1~2 could receive simultaneously.

<Radio 2>

For 2.4GHz function:

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

1TX:

Only Port 1 can be used as transmitting antenna.

2TX:

Both Port 1 and 2 can be used as transmitting antenna.

Port 1~2 could transmit simultaneously.

4TX:

Port 1~4 can be used as transmitting antenna.

Port 1~4 could transmit simultaneously.

4RX:

Port 1~4 can be used as receiving antenna.

Port 1~4 could receive simultaneously.

**<Radio 3>****For 5GHz function:****For IEEE 802.11 a/n/ac/ax/be (1TX, 2TX, 4TX/4RX):****1TX:**

Only Port 1 can be used as transmitting antenna.

2TX:

Both Port 1 and 2 can be used as transmitting antenna.

Port 1~2 could transmit simultaneously.

4TX:

Port 1~4 can be used as transmitting antenna.

Port 1~4 could transmit simultaneously.

4RX:

Port 1~4 can be used as receiving antenna.

Port 1~4 could receive simultaneously.

<Radio 4>**For 6GHz function:****For IEEE 802.11 ax/be (1TX, 2TX, 4TX/4RX):****1TX:**

Only Port 1 can be used as transmitting antenna.

2TX:

Both Port 1 and 2 can be used as transmitting antenna.

Port 1~2 could transmit simultaneously.

4TX:

Port 1~4 can be used as transmitting antenna.

Port 1~4 could transmit simultaneously.

4RX:

Port 1~4 can be used as receiving antenna.

Port 1~4 could receive simultaneously.

<Radio 5>**For 5GHz function:****For IEEE 802.11 a/n/ac/ax/be (1TX, 2TX, 4TX/4RX):****1TX:**

Only Port 1 can be used as transmitting antenna.

2TX:

Both Port 1 and 2 can be used as transmitting antenna.

Port 1~2 could transmit simultaneously.

4TX:

Port 1~4 can be used as transmitting antenna.

Port 1~4 could transmit simultaneously.

4RX:

Port 1~4 can be used as receiving antenna.

Port 1~4 could receive simultaneously.

<Radio 6>**For Bluetooth function (1TX/1RX):**

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

For Zigbee function (1TX/1RX):

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

**<Radio 7>****For GPS function (1RX):**

The EUT supports the antenna with RX diversity functions.

Internal Ant. 20~21 and external Ant. 7 can be used as receiving antenna, but only one of them will be used at one time.

1.3 Table for Multiple Listing

Equipment Name	Model Name	BW of 5G Mode (MHz)	Radio 3	SW	Frequencies supported by 320MHz (MHz)
Cisco Wireless 9179F Series Wi-Fi 7 Access Point	CW9179F	20/40/80/160	UNII 1~3/ UNII 2C~3	Cisco	Not Support
		20/40/80	UNII 2C~3	Meraki	6105

Note: The above information was declared by manufacturer.

1.4 Table for EUT Support Function

Function	Supports Band
AP	2.4GHz, 5GHz UNII 1~3, 6GHz UNII 5&7, Bluetooth, Zigbee and GPS
Mesh	6GHz UNII 5&7

Note 1: Form above table list, only AP mode was tested and recorded in this report.

Note 2: The above information was declared by manufacturer.

1.5 Table for Radio Function

Function Radio (R)	WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Bluetooth	Zigbee	UWB	GPS
R1 (Scanning Radio)	✓	✓ (UNII 1~3)	✓	-	-	-	-
R2	✓	-	-	-	-	-	-
R3	-	✓ (Note 1) (Full band: UNII 1~3) (High band: UNII 2C~3)	-	-	-	-	-
R4	-	-	✓	-	-	-	-
R5	-	✓ (Low band: UNII 1~2A)	-	-	-	-	-
R6	-	-	-	✓	✓	-	-
R7	-	-	-	-	-	-	✓
R8	-	-	-	-	-	Unable to use	-

Note 1: For R3, the full band mode supports Boresight mode only, and the high band mode supports both Boresight mode and Steering mode.

Note 2: For WLAN 2.4GHz, R1 and R2 can't operate at the same frequency simultaneously.

For WLAN 5GHz, R1, R3 and R5 can't operate at the same frequency simultaneously.

For WLAN 6GHz, R1 and R4 can't operate at the same frequency simultaneously.

Note 3: The above information was declared by manufacturer.



1.6 Accessories

Solar shield*1 (Optional)

Bracket*1 (Optional)

Bay cover*1

Rubber gland*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 ISCED.

Note: The tested sample for WLAN 5GHz UNII 1 and WLAN 6GHz tests was received on Dec. 18, 2024.



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 ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f ²)	<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 ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<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 65 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

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, <= P_{th}.

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

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	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.
Note: R is in meters, f is in MHz.	



2.4 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

<Radio 1>

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
5.2G;D1D	4.90	18.47	21.22	0.50	148.594	65	C	8112.1	0.0183
5.3G;D1D	4.90	21.74	24.49	0.50	315.500	65	C	8112.1	0.0389
5.6G;D1D	6.10	22.29	26.24	0.50	472.063	65	C	8112.1	0.0582
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
6.2G;D1D	5.00	16.56	19.41	0.50	97.949	65	C	8112.1	0.0121
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168

<Radio 2>

For Internal Antenna:

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986

For External Antenna:

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	11.19	24.78	33.82	0.02	2421.029	65	C	8112.1	0.2986

<Radio 3>

For Boresight mode:

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	10.40	18.71	26.96	0.50	557.186	65	C	8112.1	0.0687
5.3G;D1D	13.08	16.76	27.69	0.15	608.135	65	C	8112.1	0.0750
5.6G;D1D	10.70	19.21	27.76	0.08	608.135	65	C	8112.1	0.0750
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986

For Steering mode:

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.6G;D1D	13.31	16.51	27.67	0.17	608.135	65	C	8112.1	0.0750
5.8G;D1D	13.21	22.72	33.78	0.06	2421.029	65	C	8112.1	0.2986

**<Radio 4>****For Narrow Beam mode:**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.2G;D1D	10.00	-	27.90	0.50	691.831	65	C	8112.1	0.0853
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109

For Wide Beam mode:

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.2G;D1D	6.40	-	29.01	0.50	893.305	65	C	8112.1	0.1102
6.7G;D1D	6.50	-	30.37	0.50	1221.800	65	C	8112.1	0.1507

<Radio 5>**For Internal Antenna - Boresight mode:**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	9.40	19.64	26.89	0.50	548.277	65	C	8112.1	0.0676
5.3G;D1D	9.40	20.46	27.71	0.50	662.217	65	C	8112.1	0.0817

For Internal Antenna - Steering mode:

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	9.40	19.64	26.89	0.50	548.277	65	C	8112.1	0.0676
5.3G;D1D	12.16	17.71	27.72	0.50	663.743	65	C	8112.1	0.0819

For External Antenna:

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	7.51	17.27	22.63	0.50	205.589	65	C	8112.1	0.0254
5.3G;D1D	12.23	17.6	27.68	0.14	605.341	65	C	8112.1	0.0746

<Radio 6>

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304

**Simultaneous Transmission Analysis Mode:****Mode 1: R1: 2.4GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 1~3 (Boresight) + R4: 6GHz (Narrow Beam)
+ R5: N/A + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.8828								
Ratio Limit	1								

**Mode 2: R1: 5GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 1~3 (Boresight) + R4: 6GHz (Narrow Beam)
+ R5: N/A + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.9059								
Ratio Limit	1								

**Mode 3: R1: 6GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 1~3 (Boresight) + R4: 6GHz (Narrow Beam)
+ R5: N/A + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.8543								
Ratio Limit	1								



**Mode 4: R1: 2.4GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 1~3 (Boresight) + R4: 6GHz (Narrow Beam)
+ R5: N/A + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.8838								
Ratio Limit	1								

**Mode 5: R1: 5GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 1~3 (Boresight) + R4: 6GHz (Narrow Beam)
+ R5: N/A + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.9069								
Ratio Limit	1								

**Mode 6: R1: 6GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 1~3 (Boresight) + R4: 6GHz (Narrow Beam)
+ R5: N/A + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.8553								
Ratio Limit	1								



**Mode 7: R1: 2.4GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Steering) + R4: 6GHz (Wide Beam)
+ R5: 5GHz (Internal Ant. - Steering) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	13.21	22.72	33.78	0.06	2421.029	65	C	8112.1	0.2986
6.7G;D1D	6.50	-	30.37	0.50	1221.800	65	C	8112.1	0.1507
5.3G;D1D	12.16	17.71	27.72	0.5	663.743	65	C	8112.1	0.0819
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.9045								
Ratio Limit	1								

**Mode 8: R1: 5GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Steering) + R4: 6GHz (Wide Beam) +
R5: 5GHz (Internal Ant. - Steering) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	13.21	22.72	33.78	0.06	2421.029	65	C	8112.1	0.2986
6.7G;D1D	6.50	-	30.37	0.50	1221.800	65	C	8112.1	0.1507
5.3G;D1D	12.16	17.71	27.72	0.5	663.743	65	C	8112.1	0.0819
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.9276								
Ratio Limit	1								

**Mode 9: R1: 6GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Steering) + R4: 6GHz (Wide Beam) +
R5: 5GHz (Internal Ant. - Steering) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	13.21	22.72	33.78	0.06	2421.029	65	C	8112.1	0.2986
6.7G;D1D	6.50	-	30.37	0.50	1221.800	65	C	8112.1	0.1507
5.3G;D1D	12.16	17.71	27.72	0.5	663.743	65	C	8112.1	0.0819
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.8760								
Ratio Limit	1								



**Mode 10: R1: 2.4GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Steering) + R4: 6GHz (Wide Beam)
+ R5: 5GHz (Internal Ant. - Steering) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	13.21	22.72	33.78	0.06	2421.029	65	C	8112.1	0.2986
6.7G;D1D	6.50	-	30.37	0.50	1221.800	65	C	8112.1	0.1507
5.3G;D1D	12.16	17.71	27.72	0.5	663.743	65	C	8112.1	0.0819
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.9055								
Ratio Limit	1								

**Mode 11: R1: 5GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Steering) + R4: 6GHz (Wide Beam) +
R5: 5GHz (Internal Ant. - Steering) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	13.21	22.72	33.78	0.06	2421.029	65	C	8112.1	0.2986
6.7G;D1D	6.50	-	30.37	0.50	1221.800	65	C	8112.1	0.1507
5.3G;D1D	12.16	17.71	27.72	0.5	663.743	65	C	8112.1	0.0819
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.9286								
Ratio Limit	1								

**Mode 12: R1: 6GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Steering) + R4: 6GHz (Wide Beam) +
R5: 5GHz (Internal Ant. - Steering) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	13.21	22.72	33.78	0.06	2421.029	65	C	8112.1	0.2986
6.7G;D1D	6.50	-	30.37	0.50	1221.800	65	C	8112.1	0.1507
5.3G;D1D	12.16	17.71	27.72	0.5	663.743	65	C	8112.1	0.0819
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.8770								
Ratio Limit	1								

**Mode 13: R1: 2.4GHz + R2: 2.4GHz (External Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (External Ant.) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
2.4G;D1D	11.19	24.78	33.82	0.02	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	12.23	17.6	27.68	0.14	605.341	65	C	8112.1	0.0746
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.9574								
Ratio Limit	1								

**Mode 14: R1: 5GHz + R2: 2.4GHz (External Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz External Ant.) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
2.4G;D1D	11.19	24.78	33.82	0.02	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	12.23	17.6	27.68	0.14	605.341	65	C	8112.1	0.0746
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.9805								
Ratio Limit	1								

**Mode 15: R1: 6GHz + R2: 2.4GHz (External Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (External Ant.) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168
2.4G;D1D	11.19	24.78	33.82	0.02	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	12.23	17.6	27.68	0.14	605.341	65	C	8112.1	0.0746
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.9289								
Ratio Limit	1								

**Mode 16: R1: 2.4GHz + R2: 2.4GHz (External Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (External Ant.) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
2.4G;D1D	11.19	24.78	33.82	0.02	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	12.23	17.6	27.68	0.14	605.341	65	C	8112.1	0.0746
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.9584								
Ratio Limit	1								

**Mode 17: R1: 5GHz + R2: 2.4GHz (External Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (External Ant.) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
2.4G;D1D	11.19	24.78	33.82	0.02	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	12.23	17.6	27.68	0.14	605.341	65	C	8112.1	0.0746
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.9815								
Ratio Limit	1								

**Mode 18: R1: 6GHz + R2: 2.4GHz (External Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (External Ant.) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168
2.4G;D1D	11.19	24.78	33.82	0.02	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	12.23	17.6	27.68	0.14	605.341	65	C	8112.1	0.0746
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.9299								
Ratio Limit	1								

**Mode 19: R1: 2.4GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (Internal Ant. - Boresight) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	9.40	20.46	27.71	0.50	662.217	65	C	8112.1	0.0817
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.9645								
Ratio Limit	1								

**Mode 20: R1: 5GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (Internal Ant. - Boresight) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	9.40	20.46	27.71	0.50	662.217	65	C	8112.1	0.0817
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.9876								
Ratio Limit	1								

**Mode 21: R1: 6GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (Internal Ant. - Boresight) + R6: BT**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	9.40	20.46	27.71	0.50	662.217	65	C	8112.1	0.0817
2.4G;BT-LE	6.10	19.33	23.28	0.50	238.781	65	C	8112.1	0.0294
Sum TL Ratio_C	0.936								
Ratio Limit	1								



**Mode 22: R1: 2.4GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (Internal Ant. - Boresight) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	3.70	23.6	25.15	0.50	367.282	65	C	8112.1	0.0453
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	9.40	20.46	27.71	0.50	662.217	65	C	8112.1	0.0817
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.9655								
Ratio Limit	1								

**Mode 23: R1: 5GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (Internal Ant. - Boresight) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.8G;D1D	6.10	22.99	26.94	0.50	554.626	65	C	8112.1	0.0684
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	9.40	20.46	27.71	0.50	662.217	65	C	8112.1	0.0817
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.9886								
Ratio Limit	1								

**Mode 24: R1: 6GHz + R2: 2.4GHz (Internal Ant.) + R3: 5GHz UNII 2C~3 (Boresight) +
R4: 6GHz (Narrow Beam) + R5: 5GHz (Internal Ant. - Boresight) + R6: Zigbee**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.7G;D1D	5.80	17.18	20.83	0.50	135.831	65	C	8112.1	0.0168
2.4G;D1D	7.95	27.91	33.71	0.13	2421.029	65	C	8112.1	0.2986
5.8G;D1D	10.40	25.5	33.75	0.09	2421.029	65	C	8112.1	0.2986
6.7G;D1D	10.10	-	31.83	0.50	1710.015	65	C	8112.1	0.2109
5.3G;D1D	9.40	20.46	27.71	0.50	662.217	65	C	8112.1	0.0817
Zigbee	6.10	19.47	23.42	0.50	246.604	65	C	8112.1	0.0304
Sum TL Ratio_C	0.937								
Ratio Limit	1								

Note: The above antenna gain was declared by manufacturer.

—THE END—