



RADIO EXPOSURE TEST REPORT

FCC ID : LDKIW9167EH

Equipment : Cisco Catalyst IW9167E Heavy Duty Access Point

Brand Name : CISCO

Model Name : IW9167EH-B

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 Sep. 26, 2023, and testing was started from Sep. 26, 2023 and completed on Apr. 20, 2024. 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 variant 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 25
Issued Date : May 24, 2024
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:

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: Cathy Chiu



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)
4.9GHz WLAN	4940-4990	4945-4985	OFDM (BPSK, QPSK, 16QAM, 64QAM)
6GHz WLAN	5925-6425 6525-6875	5955-6415 6535-6855	802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Bluetooth	2400-2483.5	2402-2480	LE: GFSK



1.2 Antenna Information

Set.	CISCO's Brand Name	CISCO's Model Name	Antenna Type	Connector	Gain (dBi)
	Manufacturer's Brand Name	Manufacturer's Model Name			
1	CISCO	AIR-ANT2480V-N=	Dipole	N Male	Note 1
	CUSHCRAFT	S2406BFCNM			
2	CISCO	AIR-ANT2413P2M-N=	Panel	N Male	
	PCTEL	07-1193-01			
3	CISCO	IW-ANT-OMM-53-N=	Monopole	N Female	
	MP Antenna	08-ANT-0985			
4	CISCO	AIR-ANT5180V-N=	Dipole	N Male	
	Laird TECHNOLOGES	S4905WBCFNM			
5	CISCO	IW-ANT-PNL-59-N=	Panel	SMA Female	
	HUBER+SUHNER	1356.17.0076			
6	CISCO	IW-ANT-H90-510-N=	Horn	N Female	
	RF ELEMENTS	HG3-CC-S90			
7	CISCO	AIR-ANT5114P2M-N=	Panel	N Male	
	PCTEL	07-1192-01			
8	CISCO	IW-ANT-SKD-513-Q=	Patch	QMA Female	
	PCTEL	74-133202-01			
9	CISCO	IW-ANT-SKS-514-Q=	Patch	QMA Female	
	PCTEL	74-133201-01			
10	CISCO	FLMESH-HW-ANT-28	Panel	N Female	
	HUBER+SUHNER	1356.17.0023			
11	CISCO	AIR-ANT2547V-N=	Dipole	N Male	
	Laird TECHNOLOGES	OC24527-CS1			
12	CISCO	AIR-ANT2547VG-N=	Dipole	N Male	
	Laird TECHNOLOGES	OC24528-CS3			
13	CISCO	AIR-ANT2547VG-NS=	Dipole	N Male	
	Laird Connectivity	OC24528-CS4			
14	CISCO	AIR-ANT2568VG-N=	Dipole	N Male	
	Laird Connectivity	OCX24529-CS1			
15	CISCO	AIR-ANT2568VG-NS=	Dipole	N Male	
	Laird Connectivity	OCX24529-CS2			
16	CISCO	AIR-ANT2588P4M-NS=	Patch	N Female	
	Laird Connectivity	PDM24499-CS1			
17	CISCO	AIR-ANT2513P4M-N=	Patch	N Female	
	Laird Connectivity	PDM245115H-CS1			
18	CISCO	AIR-ANT2513P4M-NS=	Patch	N Female	
	Laird Connectivity	PDM245115H-CS2			
19	CISCO	IW-ANT-OMV-2567-N	Dipole	N Male	
	TE connectivity	OCX24688-CS1			
20	CISCO	IW-ANT-OMH-2567-N	Dipole	N Male	
	TE connectivity	OCX24688H-CS1			
21	CISCO	ANT-GNSS-OUT-TNC=	Patch	TNC Male	
	Pulse	W4053T4572			
22	CISCO	IW-ANT-PNL-515-N=	Panel	N Female	
	Amphenol SAA	IW-ANT-PNL-515-N			
23	CISCO	IW-ANT-OMV-55-N	Dipole	N Female	
24	CISCO	IW-ANT-OMH-55-N	Dipole	N Female	
25	PCTEL	IW-ANT-PNL25610-R=	Sector	RP-TNC female	



RADIO EXPOSURE TEST REPORT

Report No. : FA281101-11

Set.	Port								
	WLAN 2.4GHz (Radio 1)	4.9GHz / 5GHz (Radio 1)	4.9GHz / 5GHz (Radio 2)	WLAN 6GHz (Radio 2)	WLAN 2.4GHz (Scanning Radio 3)	WLAN 5GHz (Scanning Radio 3)	WLAN 6GHz (Scanning Radio 3)	BT (Radio 4)	GPS (Radio 5)
1	-	-	-	-	-	-	-	-	-
2	1	-	-	-	1	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	1	-
3	-	4	1	-	-	2	-	-	-
	-	3	2	-	-	1	-	-	-
	-	2	3	-	-	-	-	-	-
	-	1	4	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-
9	-	4	1	-	-	-	-	-	-
	-	3	2	-	-	-	-	-	-
	-	2	3	-	-	-	-	-	-
	-	1	4	-	-	-	-	-	-
10	-	4	1	-	-	2	-	-	-
	-	3	2	-	-	1	-	-	-
	-	2	3	-	-	-	-	-	-
	-	1	4	-	-	-	-	-	-
11	1	-	-	-	1	-	-	-	-
	2	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	1	-
12	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
20	-	-	-	1	-	-	-	-	-
	-	-	-	2	-	-	1	-	-
	-	-	-	3	-	-	-	-	-
	-	-	-	4	-	-	-	-	-
21	-	-	-	-	-	-	-	-	1
22	-	-	-	1	-	-	-	-	-
	-	-	-	2	-	-	1	-	-
	-	-	-	3	-	-	-	-	-
	-	-	-	4	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-
25	-	-	-	-	1	-	-	-	-
	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-



Note 1:

Set	Antenna Gain (dBi)					Cable loss (dB)					Net Gain (dBi)				
	WLAN 2.4GHz (Radio 1) (Scanning Radio 3) BT (Radio 4)	5GHz (Radio 1) (Radio 2) (Scanning Radio 3)	6GHz (Radio 2) (Scanning Radio 3)	GPS (Radio 5)		WLAN 2.4GHz (Radio 1) (Scanning Radio 3) BT (Radio 4)	5GHz (Radio 1) (Radio 2) (Scanning Radio 3)	6GHz (Radio 2) (Scanning Radio 3)	GPS (Radio 5)		WLAN 2.4GHz (Radio 1) (Scanning Radio 3) BT (Radio 4)	5GHz (Radio 1) (Radio 2) (Scanning Radio 3)	6GHz (Radio 2) (Scanning Radio 3)	GPS (Radio 5)	
	2.4G / Bluetooth	UNII 1-3	4.9G	UNII 5, UNII 7	-	2.4G / Bluetooth	UNII 1-3	4.9G	UNII 5, UNII 7	-	2.4G / Bluetooth	UNII 1-3	4.9G	UNII 5, UNII 7	-
1	8	-	-	-	-	-	-	-	-	-	8	-	-	-	-
2	13	-	-	-	-	-	-	-	-	-	13	-	-	-	-
3	-	3	3	-	-	-	-	-	-	-	-	3	3	-	-
4	-	8	7	-	-	-	-	-	-	-	-	8	7	-	-
5	-	9	-	-	-	-	0.97	-	-	-	-	8.03	-	-	-
6	-	10	-	-	-	-	0.97	-	-	-	-	9.03	-	-	-
7	-	13	-	-	-	-	-	-	-	-	-	13	-	-	-
8	-	13	13	-	-	-	0.97	0.97	-	-	-	12.09	12.03	-	-
9	-	14	14	-	-	-	0.97	0.97	-	-	-	13.03	13.03	-	-
10	-	19.5	-	-	-	-	0.97	-	-	-	-	18.53	-	-	-
11	4	7	-	-	-	-	-	-	-	-	4	7	-	-	-
12	4	7	-	-	-	-	-	-	-	-	4	7	-	-	-
13	4	7	-	-	-	-	-	-	-	-	4	7	-	-	-
14	6	8	-	-	-	-	-	-	-	-	6	8	-	-	-
15	6	8	-	-	-	-	-	-	-	-	6	8	-	-	-
16	Vertical: 9.1 Horizontal: 7.1	Vertical: 9.6 Horizontal: 7.8	-	-	-	0.62	0.97	-	-	-	Vertical: 8.48 Horizontal: 6.48	Vertical: 8.63 Horizontal: 6.83	-	-	-
17	13	13	-	-	-	0.62	0.97	-	-	-	12.38	12.03	-	-	-
18	13	13	-	-	-	0.62	0.97	-	-	-	12.38	12.03	-	-	-
19	4	7	7	7	-	-	-	-	-	-	4	7	7	7	-
20	4	7	7	7	-	-	-	-	-	-	4	7	7	7	-
21	-	-	-	-	2.5	-	-	-	-	-	-	-	-	-	2.5
22	-	15	15	15	-	-	2.05	2	2.12	-	-	12.95	13	12.88	-
23	-	5	-	-	-	-	-	-	-	-	-	5	-	-	-
24	-	5	-	-	-	-	-	-	-	-	-	5	-	-	-
25	9	9	-	10	-	0.35	0.65	-	0.75	-	8.65	8.35	-	9.25	-



Set.	Point-to-Multipoint	Point-to-Point
1	Yes	No
2	Yes	Yes
3	Yes	No
4	Yes	No
5	Yes	Yes
6	Yes	Yes
7	Yes	Yes
8	Yes	Yes
9	Yes	Yes
10	Yes	Yes
11	Yes	No
12	Yes	No
13	Yes	No
14	Yes	No
15	Yes	No
16	Yes	No
17	Yes	Yes
18	Yes	Yes
19	Yes	No
20	Yes	No
21	-	-
22	No	Yes
23	Yes	No
24	Yes	No
25	Yes	No

Note 2: The above information was declared by manufacturer.

Note 3: There are 25 set antennas in the antenna table list.

The lowest and highest antenna gain was selected for the test and recorded in this report.

The antennas were selected as below:

For WLAN 2.4GHz/BT: Set 2, 11.

For WLAN 5GHz: Set 3, 10.

For 4.9GHz: Set 3, 9.

For WLAN 6GHz: Set 20, 22.

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

Ex.

Directional Gain (NSS1) formula :

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

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

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

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

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

Where ;

2.4G G1 = 4 dBi; G2 = 4 dBi; G3 = 4 dBi; G4 = 4 dBi;

2TDG = 7.01 dBi 4TDG = 10.02 dBi

2.4G G1 = 13 dBi; G2 = 13 dBi; G3 = 13 dBi; G4 = 13 dBi;

2TDG = 16.01 dBi 4TDG = 19.02 dBi

5G G1 = 3 dBi; G2 = 3 dBi; G3 = 3 dBi; G4 = 3 dBi;

2TDG = 6.01 dBi 4TDG = 9.02 dBi

5G G1 = 18.53 dBi; G2 = 18.53 dBi; G3 = 18.53 dBi; G4 = 18.53 dBi;

2TDG = 18.53 dBi 4TDG = 21.54 dBi

4.9G G1 = 3 dBi; G2 = 3 dBi; G3 = 3 dBi; G4 = 3 dBi;

2TDG = 6.01 dBi 4TDG = 9.02 dBi

4.9G G1 = 13.03 dBi; G2 = 13.03 dBi; G3 = 13.03 dBi; G4 = 13.03 dBi;

2TDG = 16.04 dBi 4TDG = 19.05 dBi

6E G1 = 7.0 dBi; G2 = 7.0 dBi; G3 = 7.0 dBi; G4 = 7.0 dBi;

2TDG = 10.01 dBi 4TDG = 13.02 dBi

6E G1 = 12.88 dBi; G2 = 12.88 dBi; G3 = 12.88 dBi; G4 = 12.88 dBi;

2TDG = 15.89 dBi 4TDG = 18.90 dBi

**For Iron Radio 1****For 2.4GHz:****For IEEE 802.11b/g/n/VHT/ax mode (1TX, 2TX, 4TX/4RX):****1TX**

Only Port 1 can be use as transmitting antenna.

2TX

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

4TX

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

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

4RX

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

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

For Iron 5GHz UNII 1~UNII 3 and 4.9GHz:**For IEEE 802.11a/n/ac/ax mode (1TX, 2TX, 4TX/4RX):****1TX**

Only Port 1 can be use as transmitting antenna.

2TX

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

4TX

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

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

4RX

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

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

For Pine Radio 2**For 5GHz UNII 1~UNII 3 and 4.9GHz:****For IEEE 802.11a/n/ac/ax mode (1TX, 2TX, 4TX/4RX):****1TX**

Only Port 1 can be use as transmitting antenna.

2TX

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.

4TX

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

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

4RX

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

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

For 6GHz UNII 5, UNII 7:**For IEEE 802.11ax mode (1TX, 2TX, 4TX/4RX):****1TX**

Only Port 1 can be use as transmitting antenna.

2TX

Port 1, Port 2 can be use as transmitting antenna.

Port 1, Port 2 could transmitting simultaneously.



4TX

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

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

4RX

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

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

For Scanning Radio 3

For 2.4GHz:

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

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

For 5GHz UNII 1~UNII 3:

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

The EUT supports the antenna with TX and RX diversity functions.

Both port 1 and port 2 support transmit and receive functions, but only one of them will be used at one time.

The port 1 generated the worst case, so it was selected to test and record in the report.

For 6GHz UNII 5, UNII 7:

For IEEE 802.11ax mode (1RX):

1RX

Only Port 1 can be use as receiving antenna.

For Radio 4

Bluetooth (1TX/1RX):

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

For Radio 5

GPS (1RX):

Only Port 1 can be used as receiving antenna.



1.3 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FA281101

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

Modifications	Performance Checking
- Adding 6GHz (UNII 5, UNII 7) Standard Power Access Point function for the device under Master mode for WNBU image at WLAN 6GHz. - Adding Set 22~25 antenna (Adding antenna with lower gain at WLAN 2.4GHz, 5GHz, 4.9GHz and Bluetooth than the original report.)	After evaluating, it was selected to test RF Exposure of 6GHz for set 20 and set 22 antenna.
- Adding Slave with Radar Detection mode for CURUWB image in P2MP function. - Adding mesh mode and bridge mode for WNBU image in AP function at WLAN 2.4GHz, 5GHz and Bluetooth. - Removing Master mode for WNBU image in AP function at WLAN 4.9GHz. - Removing Master mode for CURUWB image in P2P function at WLAN 2.4GHz/Bluetooth. - Removing Master/Slave with radar detection mode for CURUWB image in P2MP function at WLAN 2.4GHz /Bluetooth.	After evaluating, it does not affect the test in this report.

Note: Other test results were based on original report.

1.4 Table for EUT support function

Operate Mode	Function	Firmware	Support Band
Master/Mesh/Bridge	AP	WNBU image	Bluetooth, WLAN 2.4GHz, 5GHz
Master	P2P	CURUWB image	WLAN 5GHz, 4.9GHz
Master/Slave with radar detection	P2MP	CURUWB image	WLAN 5GHz, 4.9GHz
Master	AP	WNBU image	WLAN 6GHz

Note: The above information was declared by manufacturer.



1.5 Table for Radio function

Radio (R)	WLAN 2.4GHz	5GHz UNII 1~UNII 3	4.9 GHz	6GHz UNII 5, UNII 7	Scanning radio (WLAN 2.4GHz / 5GHz UNII 1~UNII 3 / 6GHz UNII 5, UNII 7)	Bluetooth	GPS
R1 (Iron Radio)	V (AP: 20)	V (AP: 20/40/80) (P2P/P2MP: 20/40/80)	V	-	-	-	-
R2 (Pine Radio)	-	V (AP: 20/40/80/160) (P2P/P2MP: 20/40/80/160)	V	V (AP: 20/40/80/160)	-	-	-
R3 (Scanning Radio)	-	-	-	-	V (For 2.4GHz/5GHz-AP: 20/40/80/160) (For 5GHz-P2P/P2MP: 20/40/80/160) (For 6GHz-AP: 160-RX only)	-	-
R4	-	-	-	-	-	V	-
R5	-	-	-	-	-	-	V

Note: The above information was declared by manufacturer.

1.6 Accessories

Accessories
Sealing collar*3
Wall-mounted rack*2
Grounding wire*1, Non shielded, 0.8m
DC cable*1, Non shielded, 2.6m
DC cable connect*1
Ethernet cable*2, Shielded, 3m
Ethernet cable connect*2

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.

Note: The tested sample for WLAN 6GHz tests was received on Sep. 26, 2023.



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 102 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

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	$1,920 R^2$.
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

For Iron Radio 1

For Antenna set 11

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	4	25.58	27.43	0.5	620.869	102	C	19975.68	0.0311
2.4G;D1D-BF	10.02	23.44	31.31	0.5	1517.050	102	C	19975.68	0.0759

For Antenna set 2

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	13	20.84	31.69	0.5	1655.770	102	C	19975.68	0.0829
2.4G;D1D-BF	16.01	19.49	33.35	0.49	2421.029	102	C	19975.68	0.1212

For Antenna set 3

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3	20.97	21.82	0.49	170.216	102	C	19975.68	0.0085
5.2G;D1D-BF 2T1S	6.01	17.8	21.66	0.5	164.437	102	C	19975.68	0.0082
5.2G;D1D-BF 4T1S	9.02	14.95	21.82	0.5	170.608	102	C	19975.68	0.0085
5.3G;D1D	3	23.97	24.82	0.5	340.408	102	C	19975.68	0.0170
5.3G;D1D-BF 2T1S	6.01	23.79	27.65	0.5	653.131	102	C	19975.68	0.0327
5.3G;D1D-BF 4T1S	9.02	20.93	27.8	0.5	676.083	102	C	19975.68	0.0338
5.6G;D1D	3	23.97	24.82	0.5	340.408	102	C	19975.68	0.0170
5.6G;D1D-BF 2T1S	6.01	23.95	27.81	0.5	677.642	102	C	19975.68	0.0339
5.6G;D1D-BF 4T1S	9.02	20.83	27.7	0.5	660.693	102	C	19975.68	0.0331
5.8G;D1D	3	28.17	29.02	0.5	895.365	102	C	19975.68	0.0448
5.8G;D1D-BF 2T1S	6.01	24.66	28.52	0.5	797.995	102	C	19975.68	0.0399
5.8G;D1D-BF 4T1S	9.02	26.89	33.76	0.5	2666.859	102	C	19975.68	0.1335
4.9G	9.02	22.16	29.03	0.5	897.429	102	C	19975.68	0.0449

**For Antenna set 9**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
4.9G	19.05	22.13	39.03	0.5	8974.288	102	C	19975.68	0.4493

For Antenna set 10 P to M

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	18.53	15.84	32.22	0.5	1870.682	102	C	19975.68	0.0936
5.2G;D1D-BF 2T1S	18.53	15.84	32.22	0.5	1870.682	102	C	19975.68	0.0936
5.2G;D1D-BF 4T1S	21.54	4.92	24.31	0.5	302.691	102	C	19975.68	0.0152
5.3G;D1D	18.53	11.33	27.71	0.5	662.217	102	C	19975.68	0.0332
5.3G;D1D-BF 2T1S	18.53	11.08	27.46	0.5	625.173	102	C	19975.68	0.0313
5.3G;D1D-BF 4T1S	21.54	4.2	23.59	0.5	256.448	102	C	19975.68	0.0128
5.6G;D1D	18.53	11.44	27.82	0.5	679.204	102	C	19975.68	0.0340
5.6G;D1D-BF 2T1S	18.53	11.44	27.82	0.5	679.204	102	C	19975.68	0.0340
5.6G;D1D-BF 4T1S	21.54	5.5	24.89	0.5	345.939	102	C	19975.68	0.0173
5.8G;D1D	18.53	16.46	32.84	0.5	2157.744	102	C	19975.68	0.1080
5.8G;D1D-BF 2T1S	18.53	16.46	32.84	0.5	2157.744	102	C	19975.68	0.1080
5.8G;D1D-BF 4T1S	21.54	4.87	24.26	0.5	299.226	102	C	19975.68	0.0150

For Antenna set 10 P to P

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	18.53	15.84	32.22	0.5	1870.682	102	C	19975.68	0.0936
5.2G;D1D-BF	18.53	15.84	32.22	0.5	1870.682	102	C	19975.68	0.0936
5.3G;D1D	18.53	11.33	27.71	0.5	662.217	102	C	19975.68	0.0332
5.3G;D1D-BF	18.53	11.08	27.46	0.5	625.173	102	C	19975.68	0.0313
5.6G;D1D	18.53	11.44	27.82	0.5	679.204	102	C	19975.68	0.0340
5.6G;D1D-BF	18.53	11.44	27.82	0.5	679.204	102	C	19975.68	0.0340
5.8G;D1D	18.53	16.46	32.84	0.5	2157.744	102	C	19975.68	0.1080
5.8G;D1D-BF	18.53	16.46	32.84	0.5	2157.744	102	C	19975.68	0.1080

**For Pine Radio 2****For Antenna set 3**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3	20.91	21.76	0.5	168.267	102	C	19975.68	0.0084
5.2G;D1D-BF 2T1S	6.01	17.96	21.82	0.5	170.608	102	C	19975.68	0.0085
5.2G;D1D-BF 4T1S	9.02	14.89	21.76	0.5	168.267	102	C	19975.68	0.0084
5.3G;D1D	3	21.77	22.62	0.5	205.116	102	C	19975.68	0.0103
5.3G;D1D-BF 2T1S	6.01	18.89	22.75	0.5	211.349	102	C	19975.68	0.0106
5.3G;D1D-BF 4T1S	9.02	20.87	27.74	0.5	666.807	102	C	19975.68	0.0334
5.6G;D1D	3	22.48	23.33	0.5	241.546	102	C	19975.68	0.0121
5.6G;D1D-BF 2T1S	6.01	18.48	22.34	0.5	192.309	102	C	19975.68	0.0096
5.6G;D1D-BF 4T1S	9.02	20.78	27.65	0.5	653.131	102	C	19975.68	0.0327
5.8G;D1D	3	23.33	24.18	0.5	293.765	102	C	19975.68	0.0147
5.8G;D1D-BF 2T1S	6.01	19.44	23.3	0.5	239.883	102	C	19975.68	0.0120
5.8G;D1D-BF 4T1S	9.02	23.33	30.2	0.5	1174.898	102	C	19975.68	0.0588
4.9G	9.02	19.48	26.35	0.5	484.172	102	C	19975.68	0.0242

For Antenna set 9

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
4.9G	19.05	19.45	36.35	0.5	4841.724	102	C	19975.68	0.2424

**For Antenna set 10 P to M**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	18.53	17.17	33.55	0.5	2540.973	102	C	19975.68	0.1272
5.2G;D1D-BF 2T1S	18.53	17.17	33.55	0.5	2540.973	102	C	19975.68	0.1272
5.2G;D1D-BF 4T1S	21.54	14.25	33.64	0.5	2594.179	102	C	19975.68	0.1299
5.3G;D1D	18.53	11.39	27.77	0.5	671.429	102	C	19975.68	0.0336
5.3G;D1D-BF 2T1S	18.53	11.39	27.77	0.5	671.429	102	C	19975.68	0.0336
5.3G;D1D-BF 4T1S	21.54	8.15	27.54	0.5	636.796	102	C	19975.68	0.0319
5.6G;D1D	18.53	11.43	27.81	0.5	677.642	102	C	19975.68	0.0339
5.6G;D1D-BF 2T1S	18.53	11.43	27.81	0.5	677.642	102	C	19975.68	0.0339
5.6G;D1D-BF 4T1S	21.54	8.43	27.82	0.5	679.204	102	C	19975.68	0.0340
5.8G;D1D	18.53	17.45	33.83	0.01	2421.029	102	C	19975.68	0.1212
5.8G;D1D-BF 2T1S	18.53	17.42	33.8	0.5	2691.535	102	C	19975.68	0.1347
5.8G;D1D-BF 4T1S	21.54	14.38	33.77	0.5	2673.006	102	C	19975.68	0.1338

For Antenna set 10 P to P

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	18.53	18.1	34.48	0.5	3147.748	102	C	19975.68	0.1576
5.2G;D1D-BF	18.53	18.1	34.48	0.5	3147.748	102	C	19975.68	0.1576
5.3G;D1D	18.53	11.39	27.77	0.5	671.429	102	C	19975.68	0.0336
5.3G;D1D-BF	18.53	11.39	27.77	0.5	671.429	102	C	19975.68	0.0336
5.6G;D1D	18.53	11.43	27.81	0.5	677.642	102	C	19975.68	0.0339
5.6G;D1D-BF	18.53	11.43	27.81	0.5	677.642	102	C	19975.68	0.0339
5.8G;D1D	18.53	18.37	34.75	0.5	3349.654	102	C	19975.68	0.1677
5.8G;D1D-BF	21.54	17.44	36.83	0.5	5407.543	102	C	19975.68	0.2707

**For Antenna set 20**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.2G;D1D	7	22.62	27.47	0.5	626.614	102	C	19975.68	0.0314
6.2G;D1D-BF 2T1S	10.01	18.74	26.6	0.5	512.861	102	C	19975.68	0.0257
6.2G;D1D-BF 4T1S	13.02	19.19	30.06	0.5	1137.627	102	C	19975.68	0.0570
6.7G;D1D	7	22.4	27.25	0.5	595.662	102	C	19975.68	0.0298
6.7G;D1D-BF 2T1S	10.01	18.58	26.44	0.5	494.311	102	C	19975.68	0.0247
6.7G;D1D-BF 4T1S	13.02	19.22	30.09	0.5	1145.513	102	C	19975.68	0.0573

For Antenna set 22

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
6.2G;D1D	12.88	20.09	30.82	0.5	1355.189	102	C	19975.68	0.0678
6.2G;D1D-BF 2T1S	15.89	17.08	30.82	0.5	1355.189	102	C	19975.68	0.0678
6.2G;D1D-BF 4T1S	18.9	14.08	30.83	0.5	1358.313	102	C	19975.68	0.0680
6.7G;D1D	12.88	19.93	30.66	0.5	1306.171	102	C	19975.68	0.0654
6.7G;D1D-BF 2T1S	15.89	17.09	30.83	0.5	1358.313	102	C	19975.68	0.0680
6.7G;D1D-BF 4T1S	18.9	14.08	30.83	0.5	1358.313	102	C	19975.68	0.0680

For Scanning Radio 3**For Antenna set 11**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	4	21.16	23.01	0.5	224.388	102	C	19975.68	0.0112

For Antenna set 2

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;G1D	13	20.93	31.78	0.5	1690.441	102	C	19975.68	0.0846

**For Antenna set 3**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	3	16.48	17.33	0.5	60.674	102	C	19975.68	0.0030
5.3G;D1D	3	15.81	16.66	0.5	52.000	102	C	19975.68	0.0026
5.6G;D1D	3	16.86	17.71	0.5	66.222	102	C	19975.68	0.0033
5.8G;D1D	3	17.36	18.21	0.5	74.302	102	C	19975.68	0.0037

For Antenna set 10 P to M

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	18.53	15.33	31.71	0.5	1663.413	102	C	19975.68	0.0833
5.3G;D1D	18.53	11.29	27.67	0.5	656.145	102	C	19975.68	0.0328
5.6G;D1D	18.53	11.43	27.81	0.5	677.642	102	C	19975.68	0.0339
5.8G;D1D	18.53	16.92	33.3	0.5	2398.833	102	C	19975.68	0.1201

For Antenna set 10 P to P

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
5.2G;D1D	18.53	15.33	31.71	0.5	1663.413	102	C	19975.68	0.0833
5.3G;D1D	18.53	11.29	27.67	0.5	656.145	102	C	19975.68	0.0328
5.6G;D1D	18.53	11.43	27.81	0.5	677.642	102	C	19975.68	0.0339
5.8G;D1D	18.53	16.92	33.3	0.5	2398.833	102	C	19975.68	0.1201

For Radio 4**For Antenna set 11**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;F1D	4	14.89	16.74	0.5	52.966	102	C	19975.68	0.0027

For Antenna set 2

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;F1D	13	14.81	25.66	0.5	413.048	102	C	19975.68	0.0207

**Simultaneous Transmission Analysis Mode:****Mode 1: Iron R1 (2.4GHz) + Iron R1 (4.9GHz / 5GHz) + Pine R2 (4.9GHz / 5GHz) + Scanning R3 (2.4GHz) + R4 (Bluetooth)**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	16.01	19.49	33.35	0.49	2421.029	102	C	19975.68	0.1212
4.9G	19.05	22.13	39.03	0.5	8974.288	102	C	19975.68	0.4493
5.8G;D1D	21.54	17.44	36.83	0.5	5407.543	102	C	19975.68	0.2707
2.4G;F1D	13	14.81	25.66	0.5	413.048	102	C	19975.68	0.0207
2.4G;G1D	13	20.93	31.78	0.5	1690.441	102	C	19975.68	0.0846
Sum TL Ratio_C	0.9465								
Ratio Limit	1								

Mode 2: Iron R1 (2.4GHz) + Iron R1 (4.9GHz / 5GHz) + Pine R2 (4.9GHz / 5GHz) + Scanning R3 (5GHz port 2 set 10) + R4 (Bluetooth)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	16.01	19.49	33.35	0.49	2421.029	102	C	19975.68	0.1212
4.9G	19.05	22.13	39.03	0.5	8974.288	102	C	19975.68	0.4493
5.8G;D1D	21.54	17.44	36.83	0.5	5407.543	102	C	19975.68	0.2707
2.4G;F1D	13	14.81	25.66	0.5	413.048	102	C	19975.68	0.0207
5.8G;D1D	18.53	16.92	33.3	0.5	2398.833	102	C	19975.68	0.1201
Sum TL Ratio_C	0.9819								
Ratio Limit	1								

Mode 3: Iron R1 (2.4GHz) + Iron R1 (4.9GHz / 5GHz) + Pine R2 (4.9GHz / 5GHz) + Scanning R3 (5GHz port 1 set 10) + R4 (Bluetooth)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	16.01	19.49	33.35	0.49	2421.029	102	C	19975.68	0.1212
4.9G	19.05	22.13	39.03	0.5	8974.288	102	C	19975.68	0.4493
5.8G;D1D	21.54	17.44	36.83	0.5	5407.543	102	C	19975.68	0.2707
2.4G;F1D	13	14.81	25.66	0.5	413.048	102	C	19975.68	0.0207
5.8G;D1D	18.53	16.92	33.3	0.5	2398.833	102	C	19975.68	0.1201
Sum TL Ratio_C	0.9819								
Ratio Limit	1								

**Mode 4: Iron R1 (2.4GHz) + Iron R1 (4.9GHz / 5GHz) + Pine R2 (6GHz) + Scanning R3 (2.4GHz) + R4 (Bluetooth)**

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	16.01	19.49	33.35	0.49	2421.029	102	C	19975.68	0.1212
4.9G	19.05	22.13	39.03	0.5	8974.288	102	C	19975.68	0.4493
6.7G;D1D	18.9	14.08	30.83	0.5	1358.313	102	C	19975.68	0.0680
2.4G;F1D	13	14.81	25.66	0.5	413.048	102	C	19975.68	0.0207
2.4G;G1D	13	20.93	31.78	0.5	1690.441	102	C	19975.68	0.0846
Sum TL Ratio_C	0.7438								
Ratio Limit	1								

Mode 5: Iron R1 (2.4GHz) + Iron R1 (4.9GHz / 5GHz) + Pine R2 (6GHz) + Scanning R3 (5GHz port 2 set 10) + R4 (Bluetooth)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	16.01	19.49	33.35	0.49	2421.029	102	C	19975.68	0.1212
4.9G	19.05	22.13	39.03	0.5	8974.288	102	C	19975.68	0.4493
6.7G;D1D	18.9	14.08	30.83	0.5	1358.313	102	C	19975.68	0.0680
2.4G;F1D	13	14.81	25.66	0.5	413.048	102	C	19975.68	0.0207
5.8G;D1D	18.53	16.92	33.3	0.5	2398.833	102	C	19975.68	0.1201
Sum TL Ratio_C	0.7792								
Ratio Limit	1								

Mode 6: Iron R1 (2.4GHz) + Iron R1 (4.9GHz / 5GHz) + Pine R2 (6GHz) + Scanning R3 (5GHz port 1 set 10) + R4 (Bluetooth)

Mode	DG (dBi)	Power (dBm)	ERP (dBm)	Tolerance (dB)	Tune-up ERP (mW)	Distance (cm)	Option	TL ERP (mW)	TL Ratio
2.4G;D1D	16.01	19.49	33.35	0.49	2421.029	102	C	19975.68	0.1212
4.9G	19.05	22.13	39.03	0.5	8974.288	102	C	19975.68	0.4493
6.7G;D1D	18.9	14.08	30.83	0.5	1358.313	102	C	19975.68	0.0680
2.4G;F1D	13	14.81	25.66	0.5	413.048	102	C	19975.68	0.0207
5.8G;D1D	18.53	16.92	33.3	0.5	2398.833	102	C	19975.68	0.1201
Sum TL Ratio_C	0.7792								
Ratio Limit	1								

————THE END————