

文書番号 (Document No.)	063020B-24501
発行日 (Issue Date)	May./27/2024

アンテナ仕様書
Antenna Specification Sheet

品名 / Product Name	WiFi/Bluetoothプリント基板アンテナ Printed Antenna for WiFi/Bluetooth
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型名 / Model	WLAN-8103 (PCB-8103)
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品名 / Product Name		型名 / Model		文書番号 / Doc. No.	
WiFi/Bluetoothプリント基板アンテナ Printed Antenna for WiFi/Bluetooth		WLAN-8103 (PCB-8103)		063020B-24501	
添付図面 / Attached drawing					
【WiFi(2.4GHz/5.0GHz)】 アンテナ寸法 / Antenna Dimensions. S11 特性 / S11 characteristics. 放射効率 / Antenna Efficiency. アンテナ放射指向性 / Antenna Radiation Pattern. 【Bluetooth】 アンテナ寸法 / Antenna Dimensions. S11 特性 / S11 characteristics. 放射効率 / Antenna Efficiency. アンテナ放射指向性 / Antenna Radiation Pattern.					
特記事項 / Remarks					
仕様の変更 / Product Change Notice					
仕様書の内容に変更が生じた場合、改定箇所に(n)(nは数値)を上付き文字で示し変更内容と対応させます。 If there is a change in the contents of the specifications, a number (n) (n, n are numbers) will be added to the revised part to correspond to the change.					
改定番号 Rev, No.	改定日 Date.	変更内容 Changes	承認 Approved	確認 Checked	作成 Charged
1	May./27/'24	Release(PCB-8103B)			Onoda May./27/'24

1. 適用範囲/Scope

本仕様書は、PCB-8103 プリント基板アンテナ(WLAN-8103)について規定する。
This specification is described for Printed Antenna PCB-8103 (WLAN-8103).

2. 製品名/Product Name

WLAN-8103 (PCB-8103)

3. 設計会社/Design Company

フクダ電子株式会社
Fukuda Denshi Co., Ltd.

4. 製造会社/Manufacturing Company

フクダ電子株式会社
Fukuda Denshi Co., Ltd.

5. 測定会社/Measurement Company

フクダ電子株式会社
Fukuda Denshi Co., Ltd.

6. 最大アンテナ絶対利得/Maximum Antenna Absolute Gain

【WiFi(2.4GHz/5.0GHz)】

2400 - 2500MHz: -0.1dBi

5150 - 5725MHz: 2.30dBi

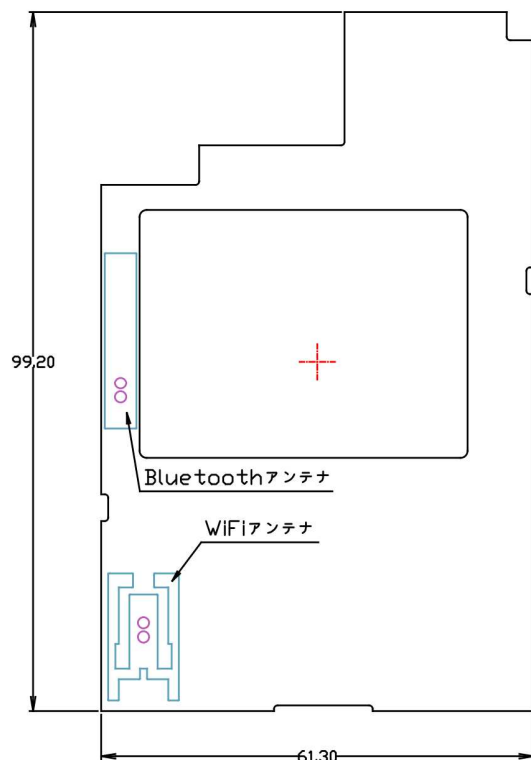
【Bluetooth】

2400 - 2500MHz: 2.0dBi

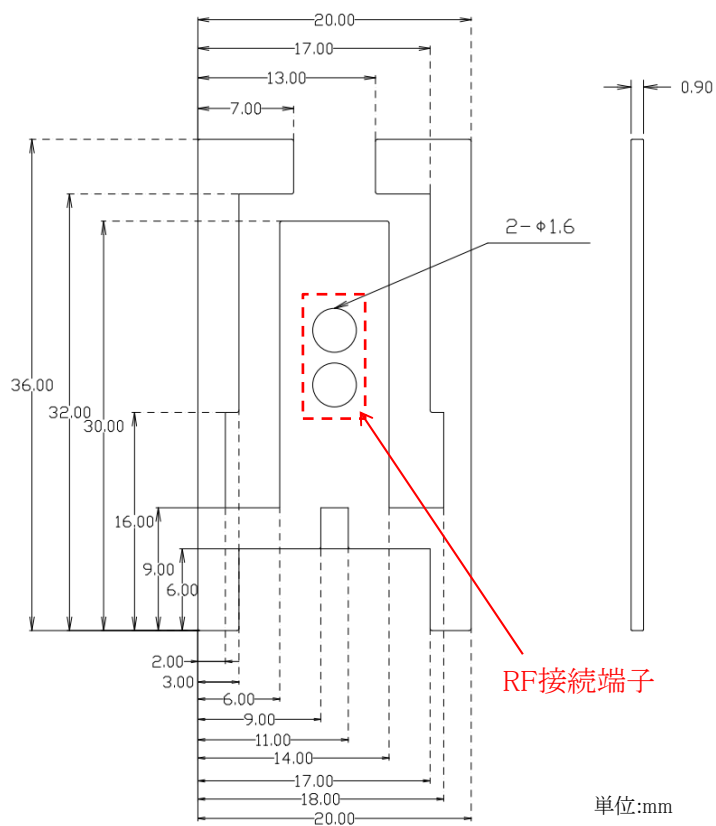
【WiFi(2.4GHz/5.0GHz)】

7. アンテナ寸法/Antenna Dimensions

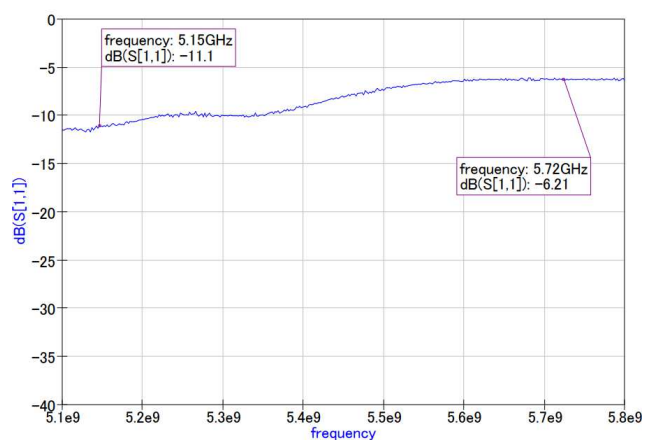
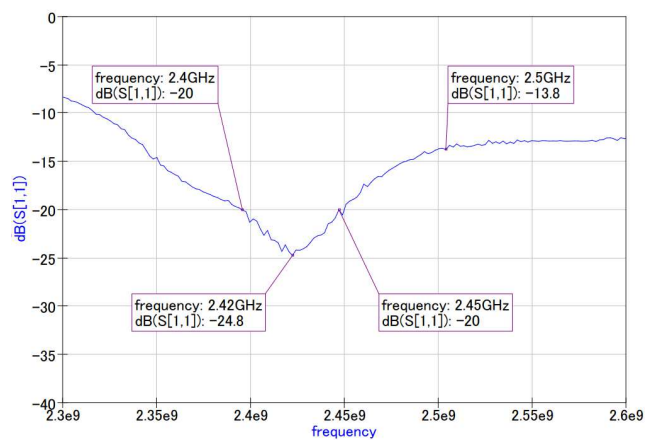
PCB-8103B: 基板外形図



〈アンテナ寸法〉

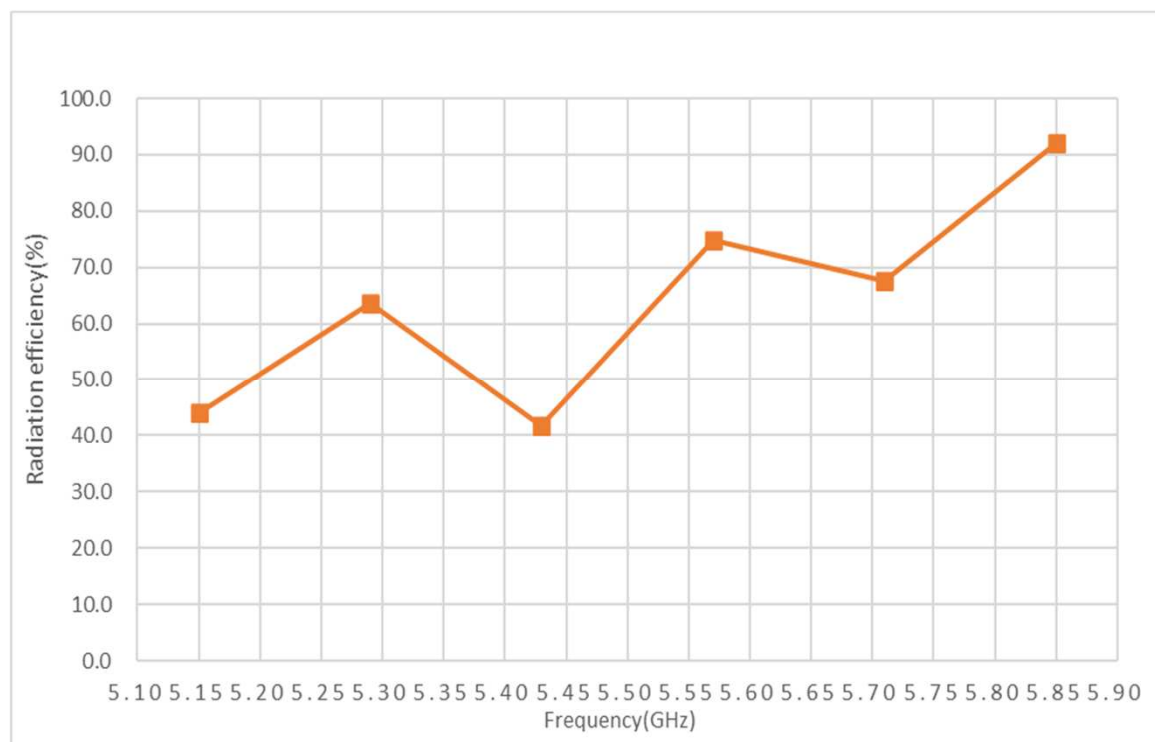
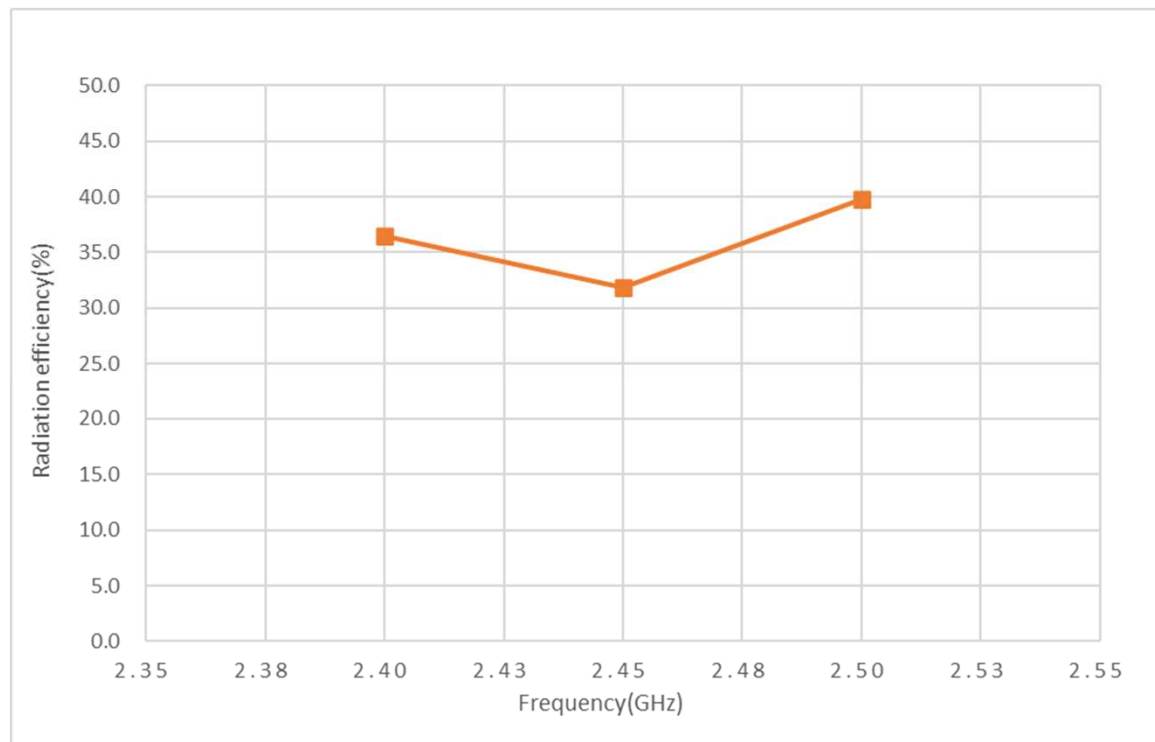


8. |S11|特性/|S11| Characteristics



【WiFi(2.4GHz/5.0GHz)】

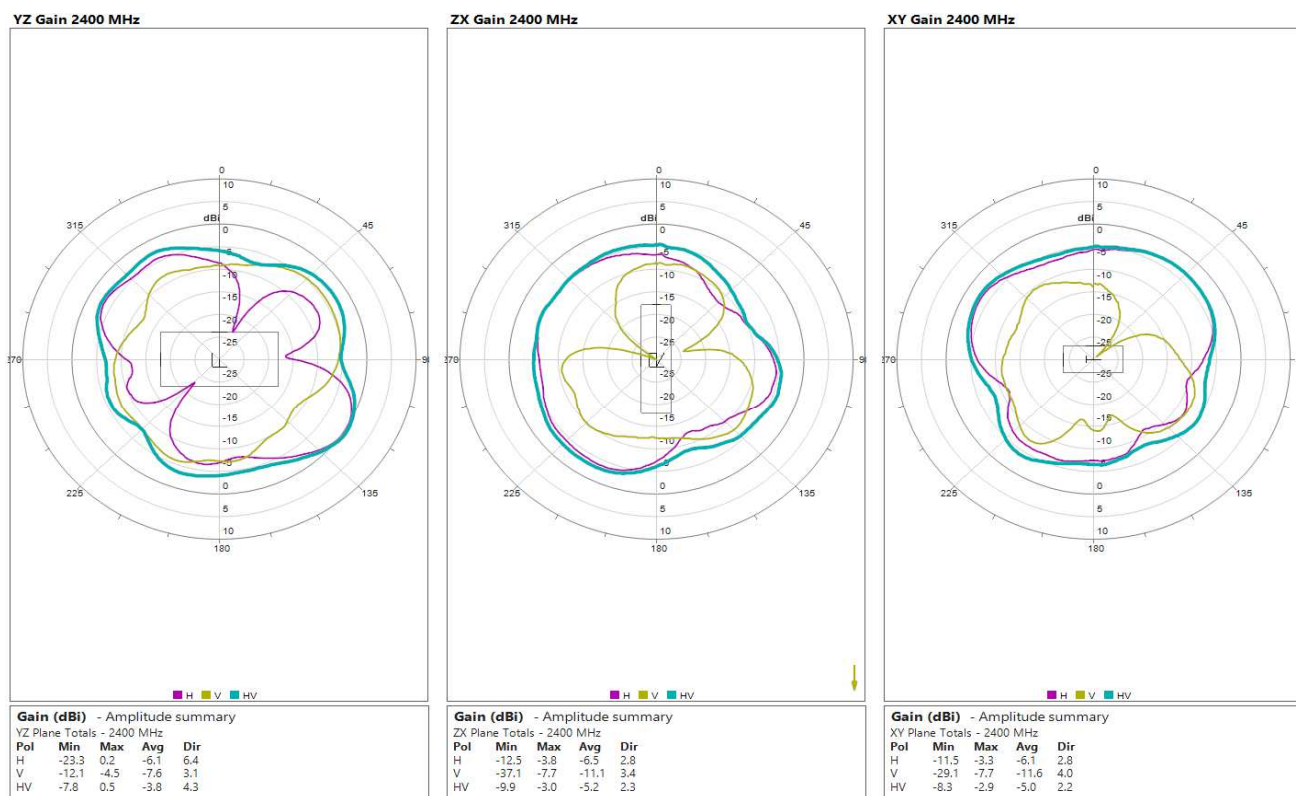
9. 放射効率 / Antenna Efficiency



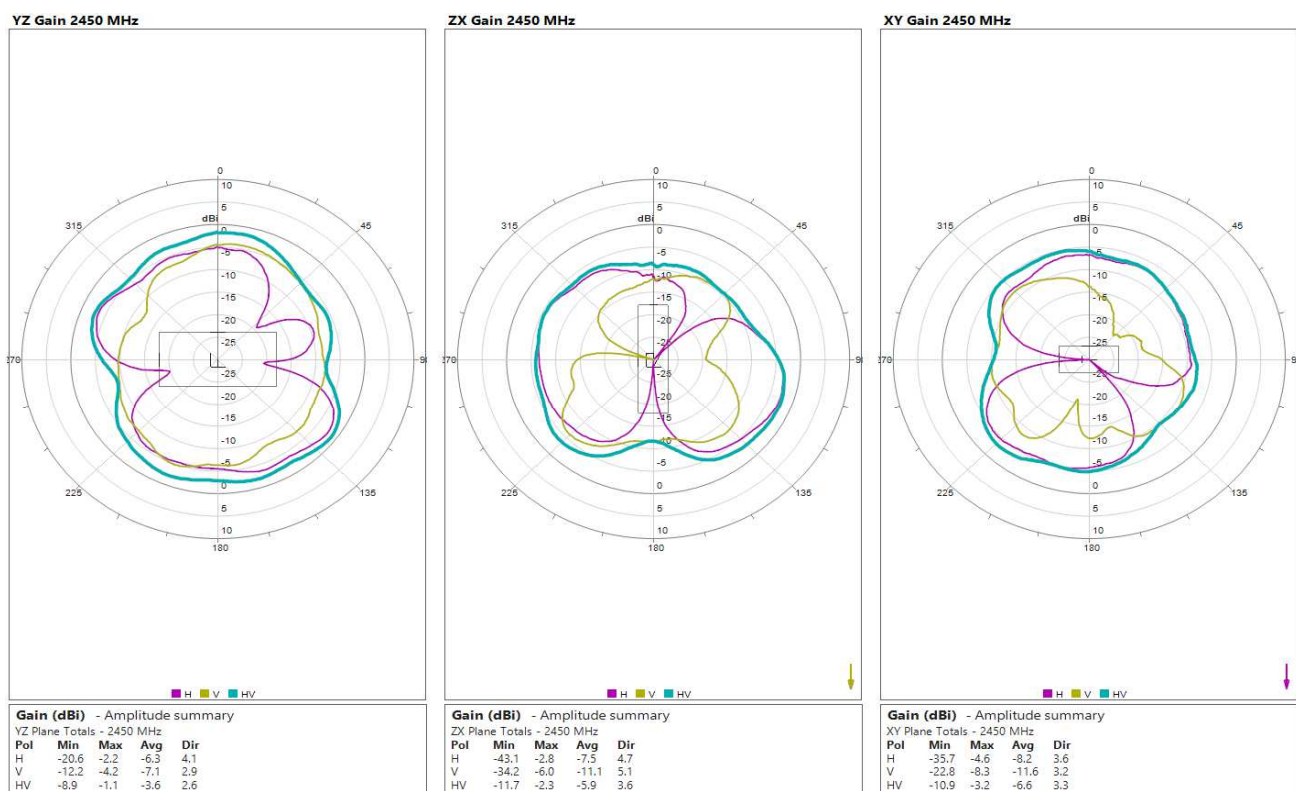
【WiFi(2.4GHz)】

10. アンテナ利得および放射指向性/Antenna Gain and Radiation Pattern

2400MHz YZ-Plane, ZX-Plane, XY-Plane (H/V)



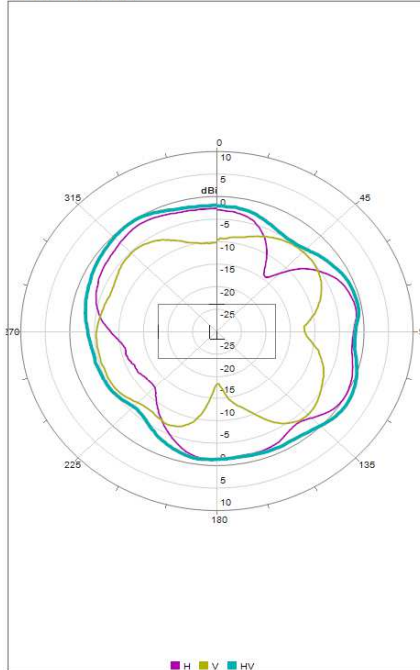
2450MHz YZ-Plane, ZX-Plane, XY-Plane(V/H)



【WiFi(2.4GHz)】

2500MHz YZ-Plane, ZX-Plane, XY-Plane (H/V)

YZ Gain 2500 MHz

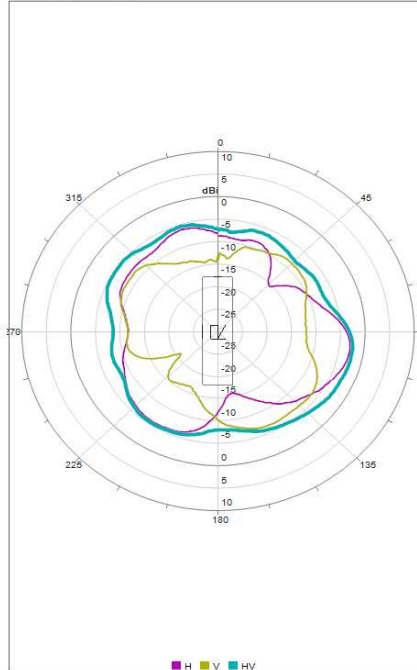


Gain (dBi) - Amplitude summary

YZ Plane Totals - 2500 MHz

Pol	Min	Max	Avg	Dir
H	-14.3	-0.1	-3.5	3.4
V	-18.3	-3.7	-6.9	3.2
HV	-6.1	1.1	-1.8	2.9

ZX Gain 2500 MHz

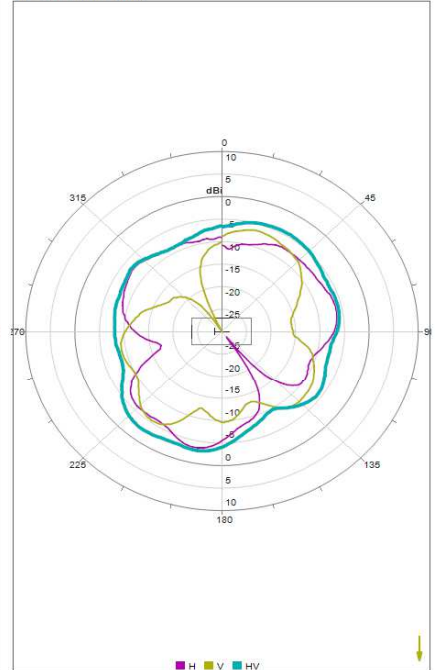


Gain (dBi) - Amplitude summary

ZX Plane Totals - 2500 MHz

Pol	Min	Max	Avg	Dir
H	-15.9	-2.8	-7.7	4.9
V	-21.0	-6.3	-10.1	3.9
HV	-8.7	-2.3	-5.7	3.5

XY Gain 2500 MHz



Gain (dBi) - Amplitude summary

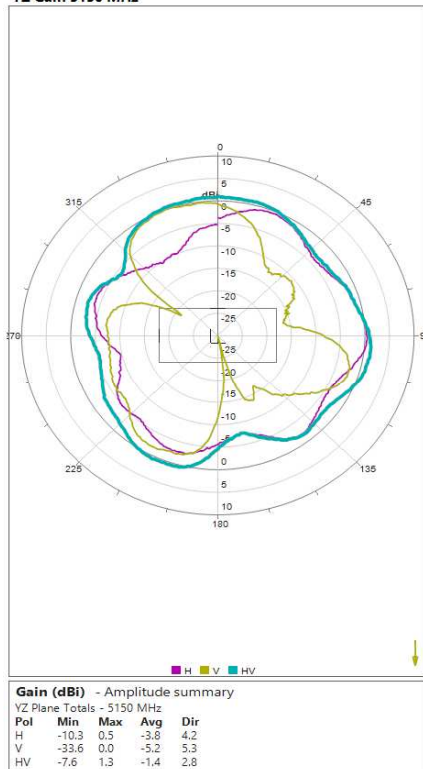
XY Plane Totals - 2500 MHz

Pol	Min	Max	Avg	Dir
H	-28.5	-3.5	-8.2	4.7
V	-43.1	-5.5	-10.0	4.5
HV	-9.6	-2.7	-6.0	3.2

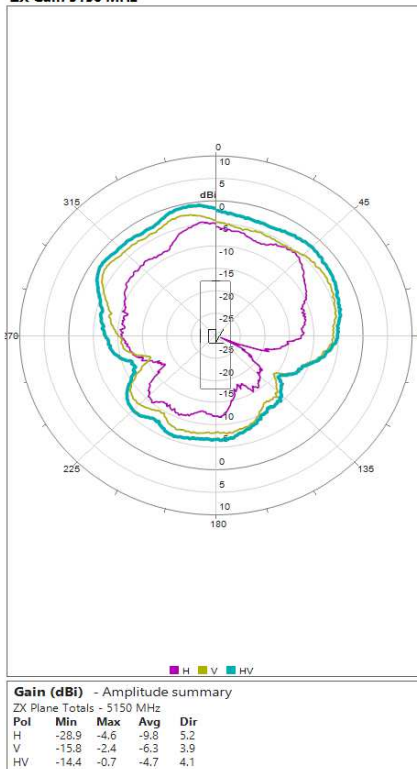
【WiFi(5.0GHz)】

5150MHz YZ-Plane, ZX-Plane, XY-Plane(V/H)

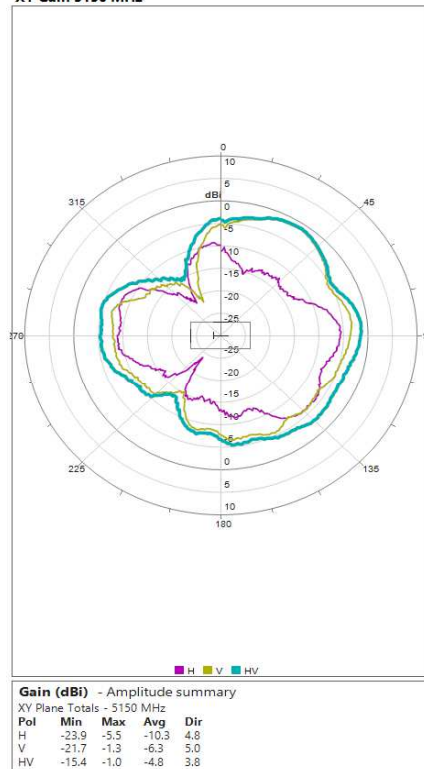
YZ Gain 5150 MHz



ZX Gain 5150 MHz

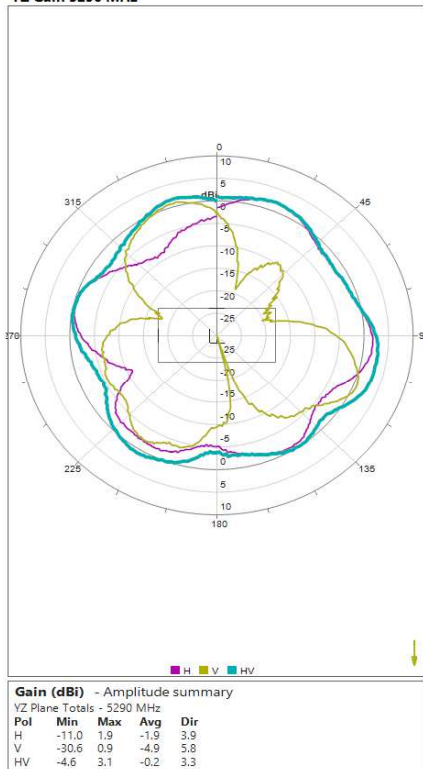


XY Gain 5150 MHz

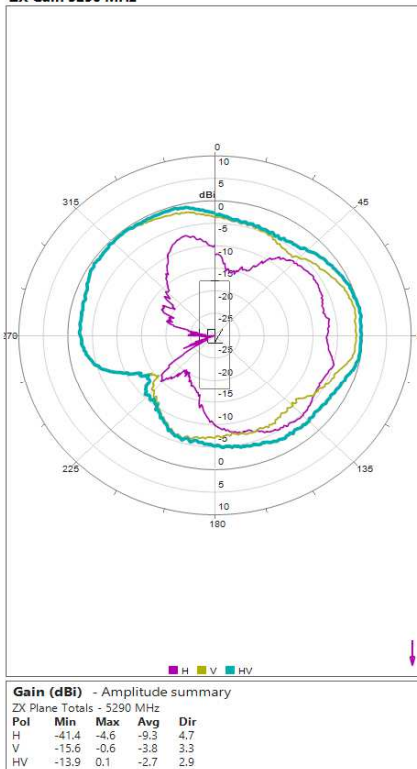


5290MHz YZ-Plane, ZX-Plane, XY-Plane(V/H)

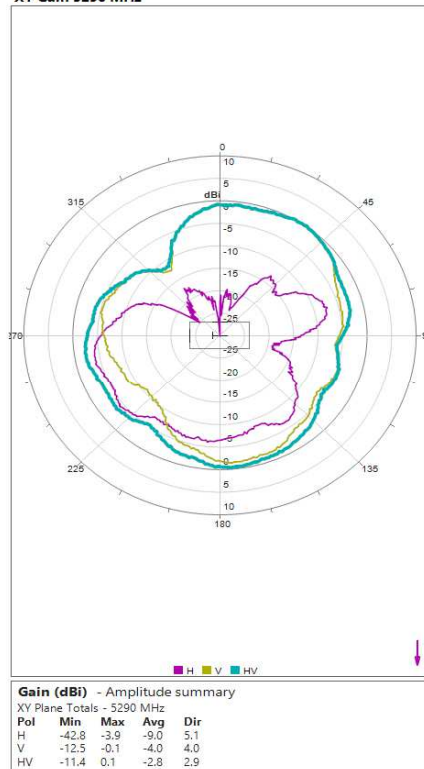
YZ Gain 5290 MHz



ZX Gain 5290 MHz



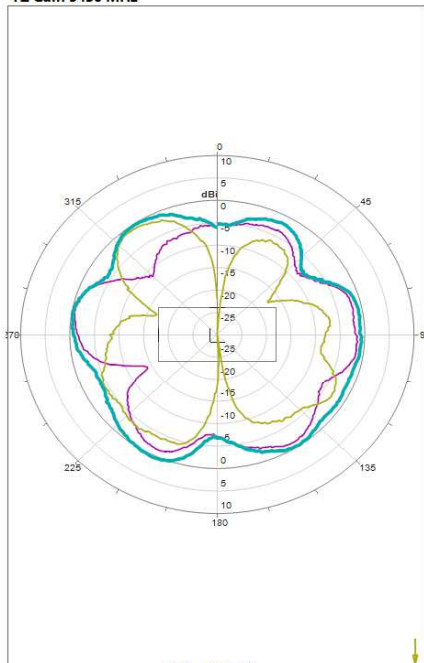
XY Gain 5290 MHz



【WiFi(5.0GHz)】

5430MHz YZ-Plane, ZX-Plane, XY-Plane(V/H)

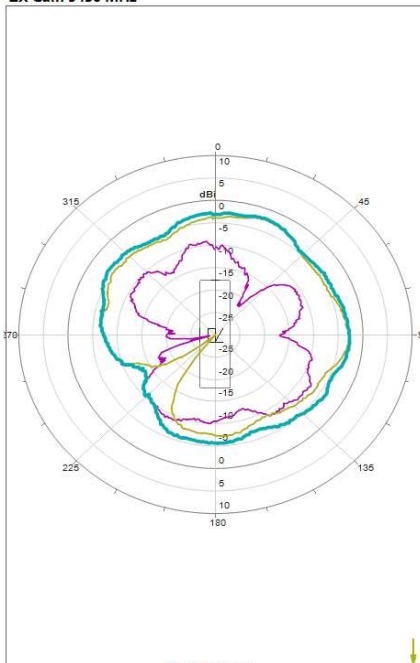
YZ Gain 5430 MHz



Gain (dBi) - Amplitude summary
YZ Plane Totals - 5430 MHz

Pol	Min	Max	Avg	Dir
H	-14.1	-0.5	-4.1	3.5
V	-38.0	-0.9	-6.2	5.3
HV	-7.9	0.5	-2.0	2.5

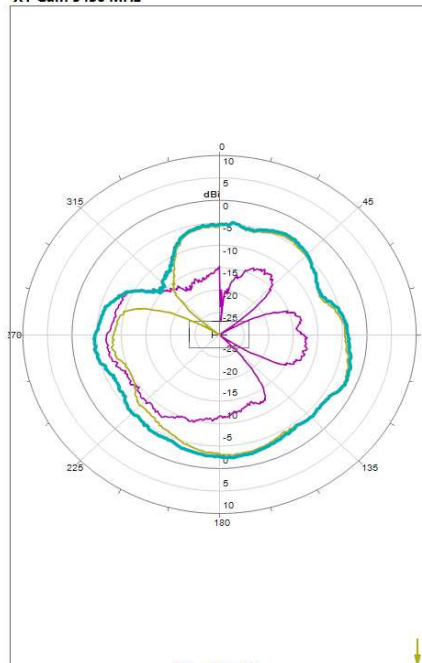
ZX Gain 5430 MHz



Gain (dBi) - Amplitude summary
ZX Plane Totals - 5430 MHz

Pol	Min	Max	Avg	Dir
H	-28.8	-7.3	-11.4	4.1
V	-33.2	-2.4	-6.0	3.5
HV	-13.6	-2.1	-4.9	2.8

XY Gain 5430 MHz

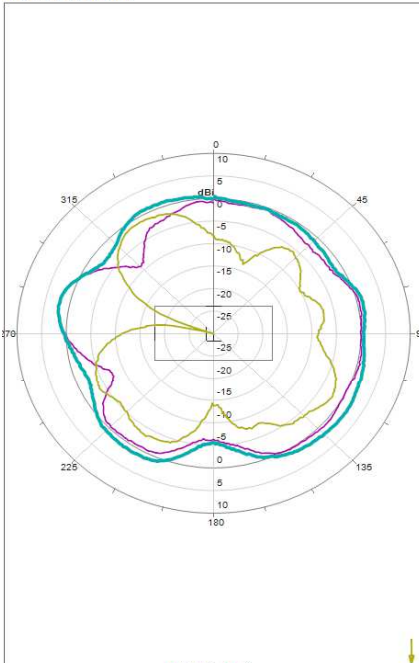


Gain (dBi) - Amplitude summary
XY Plane Totals - 5430 MHz

Pol	Min	Max	Avg	Dir
H	-40.6	-6.9	-11.8	4.9
V	-31.8	-2.3	-5.8	3.5
HV	-14.8	-2.0	-4.9	2.8

5570MHz YZ-Plane, ZX-Plane, XY-Plane(V/H)

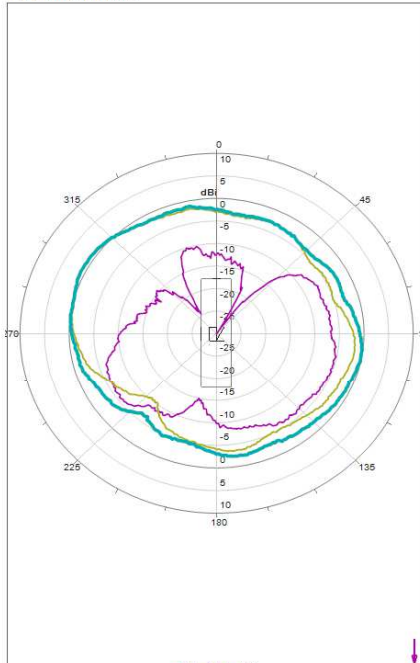
YZ Gain 5570 MHz



Gain (dBi) - Amplitude summary
YZ Plane Totals - 5570 MHz

Pol	Min	Max	Avg	Dir
H	-9.0	2.2	-1.3	3.4
V	-33.5	-1.1	-5.7	4.6
HV	-5.6	2.2	0.1	2.1

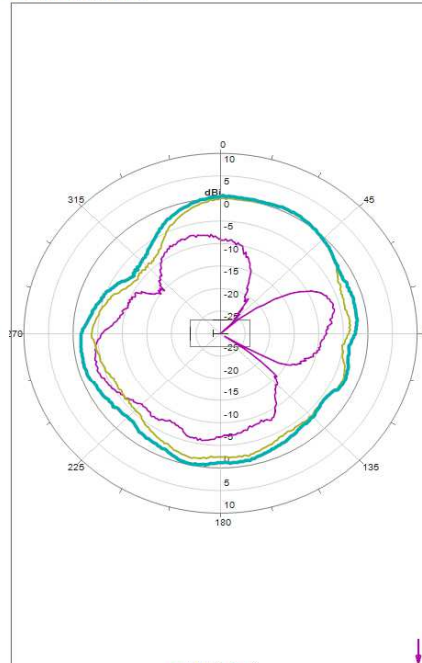
ZX Gain 5570 MHz



Gain (dBi) - Amplitude summary
ZX Plane Totals - 5570 MHz

Pol	Min	Max	Avg	Dir
H	-33.6	-5.2	-8.8	3.6
V	-10.5	0.8	-2.9	3.7
HV	-6.6	0.9	-1.9	2.8

XY Gain 5570 MHz



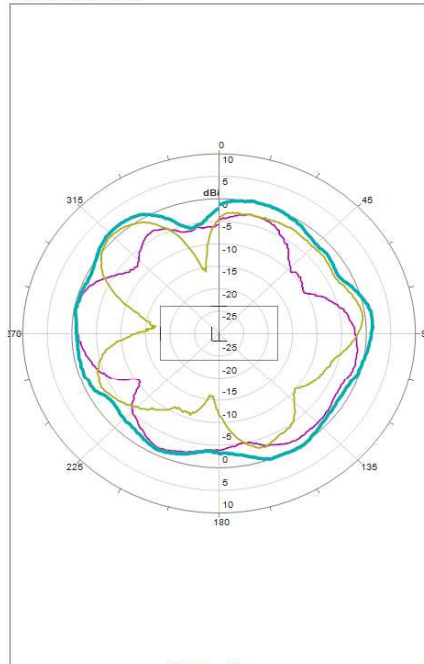
Gain (dBi) - Amplitude summary
XY Plane Totals - 5570 MHz

Pol	Min	Max	Avg	Dir
H	-32.9	-3.6	-8.4	4.8
V	-9.3	0.7	-3.1	3.8
HV	-8.3	0.8	-2.0	2.7

【WiFi(5.0GHz)】

5710MHz YZ-Plane, ZX-Plane, XY-Plane(V/H)

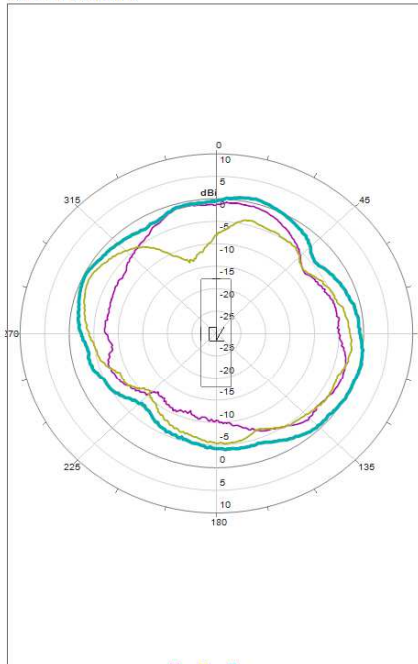
YZ Gain 5710 MHz



Gain (dBi) - Amplitude summary

YZ Plane Totals - 5710 MHz					
Pol	Min	Max	Avg	Dir	
H	-10.6	-0.4	-3.6	3.2	
V	-17.0	0.9	-4.2	5.2	
HV	-5.9	1.7	-0.9	2.6	

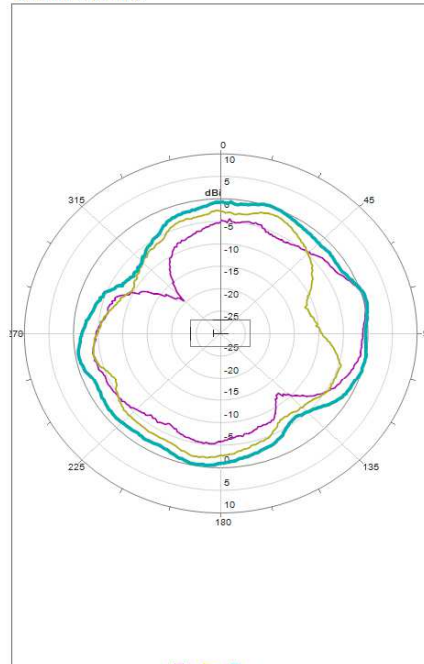
ZX Gain 5710 MHz



Gain (dBi) - Amplitude summary

ZX Plane Totals - 5710 MHz					
Pol	Min	Max	Avg	Dir	
H	-12.3	-0.7	-4.8	4.2	
V	-13.3	-1.3	-5.0	3.6	
HV	-8.2	1.0	-1.9	2.9	

XY Gain 5710 MHz

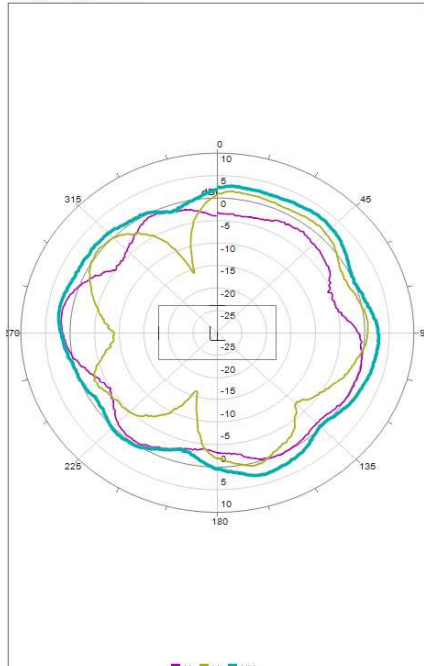


Gain (dBi) - Amplitude summary

XY Plane Totals - 5710 MHz					
Pol	Min	Max	Avg	Dir	
H	-19.5	0.3	-4.9	5.1	
V	-11.8	-1.4	-4.8	3.4	
HV	-8.2	0.6	-1.8	2.4	

5850MHz YZ-Plane, ZX-Plane, XY-Plane(V/H)

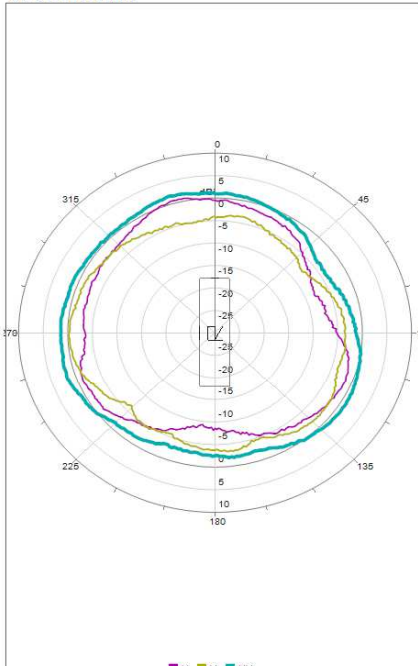
YZ Gain 5850 MHz



Gain (dBi) - Amplitude summary

YZ Plane Totals - 5850 MHz					
Pol	Min	Max	Avg	Dir	
H	-5.8	2.0	-1.6	3.6	
V	-16.2	1.7	-1.8	3.5	
HV	-2.9	3.3	1.3	2.0	

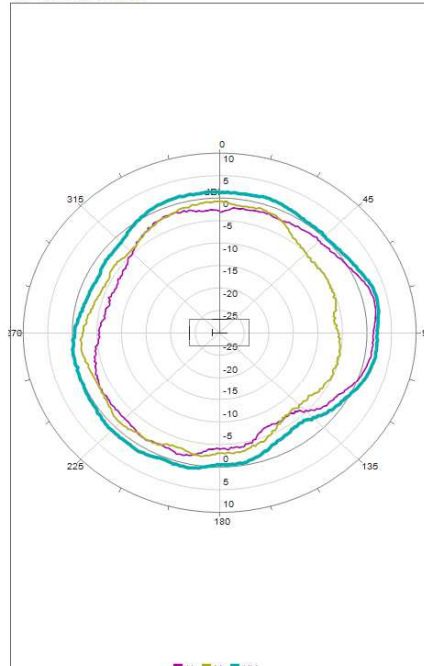
ZX Gain 5850 MHz



Gain (dBi) - Amplitude summary

ZX Plane Totals - 5850 MHz					
Pol	Min	Max	Avg	Dir	
H	-9.3	0.7	-2.9	3.6	
V	-7.6	-0.2	-3.4	3.2	
HV	-4.1	1.8	-0.1	2.0	

XY Gain 5850 MHz



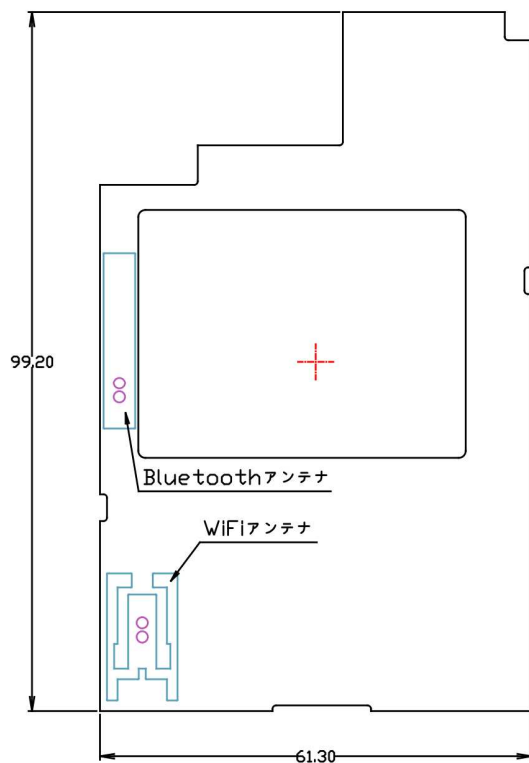
Gain (dBi) - Amplitude summary

XY Plane Totals - 5850 MHz					
Pol	Min	Max	Avg	Dir	
H	-6.9	2.3	-2.1	4.4	
V	-7.3	-0.7	-3.3	2.5	
HV	-4.0	2.9	0.4	2.6	

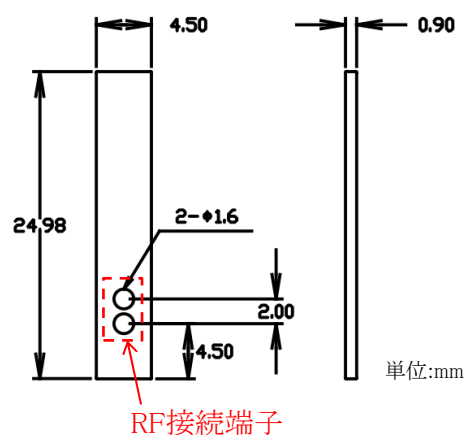
【Bluetooth】

11. アンテナ寸法/Antenna Dimensions

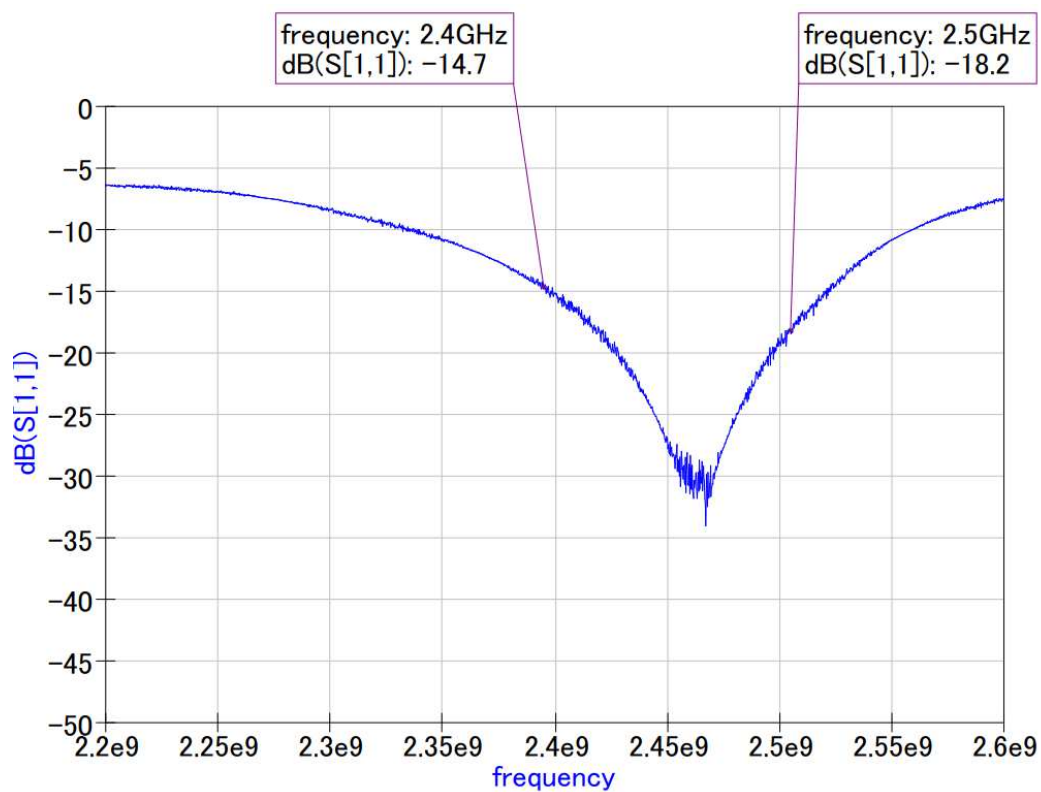
PCB-8103B:基板外形図



〈アンテナ寸法〉

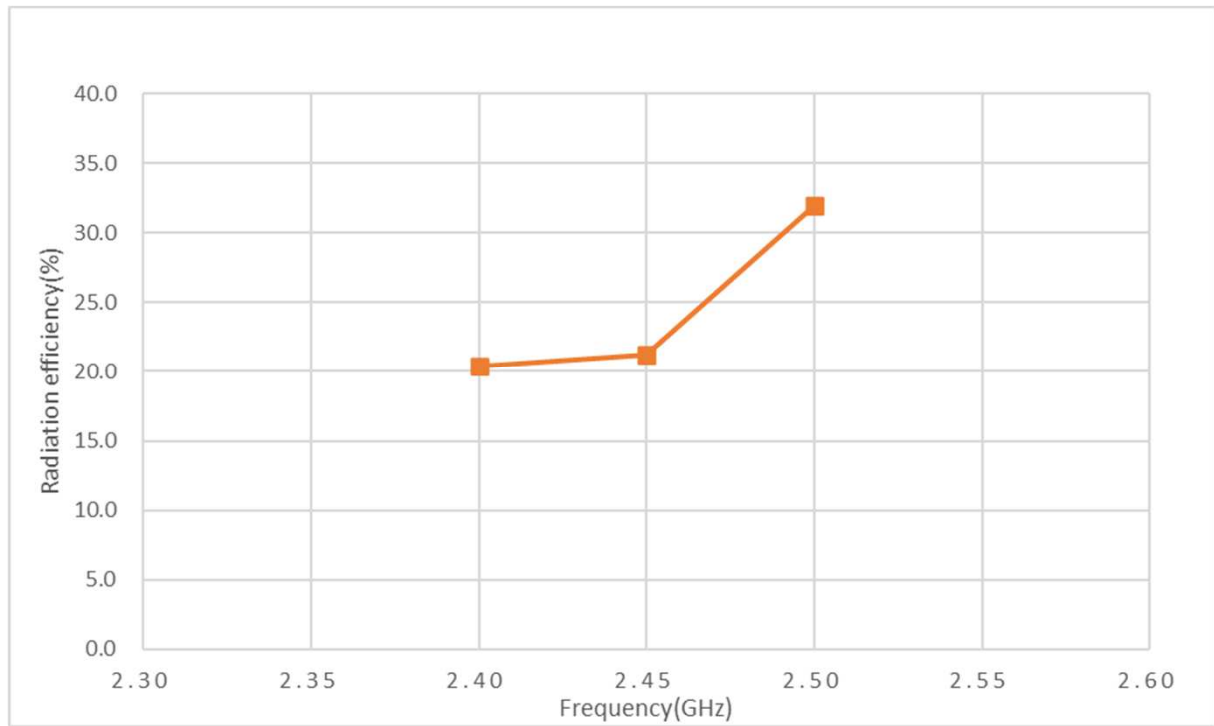


12. |S11|特性/|S11| Characteristics



【Bluetooth】

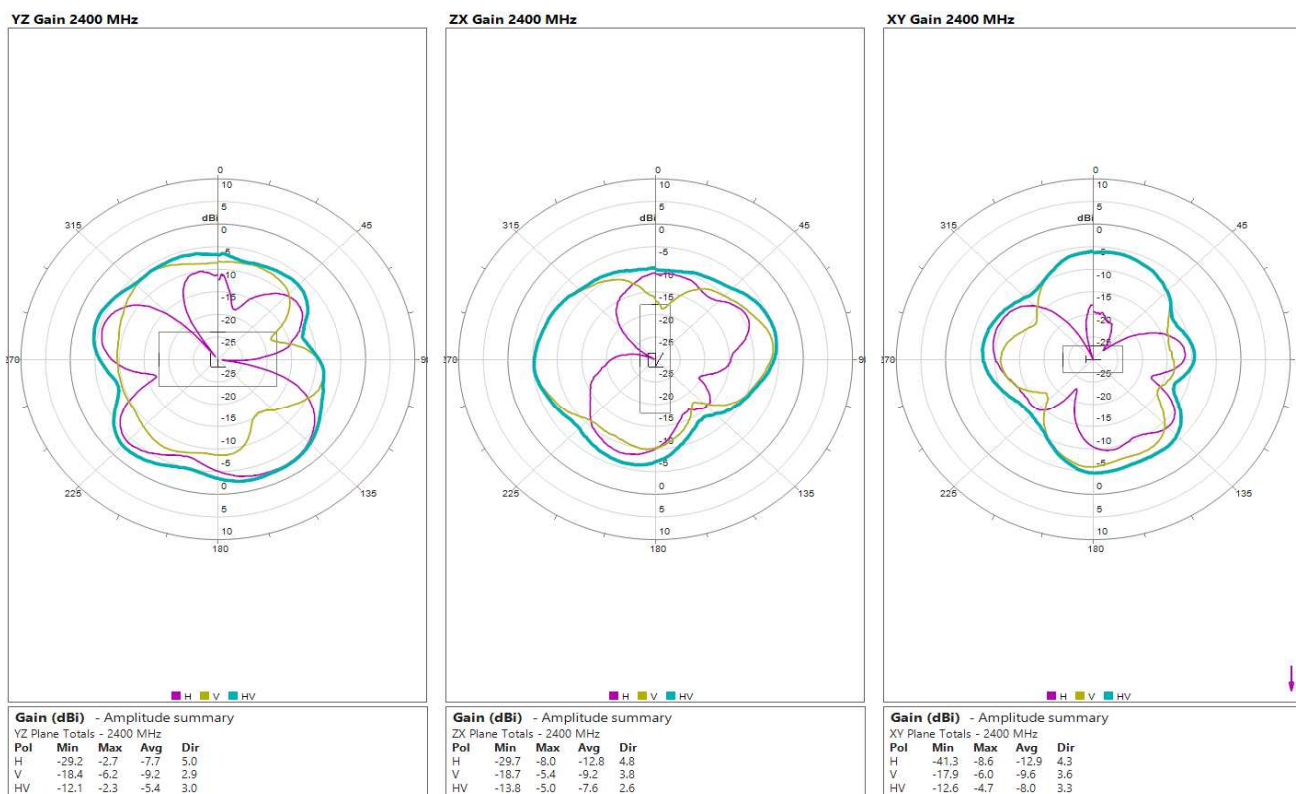
13. 放射効率 / Antenna Efficiency



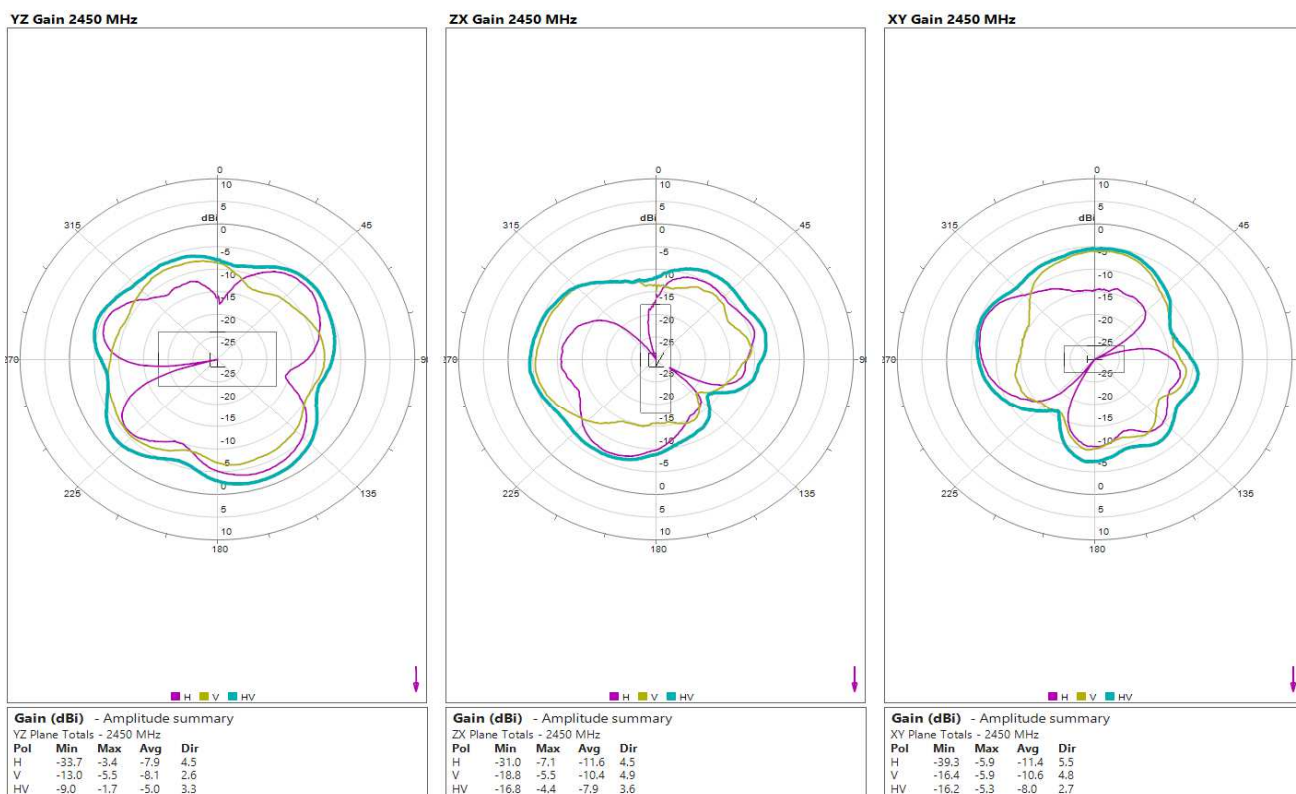
【Bluetooth】

14. アンテナ利得および放射指向性/Antenna Gain and Radiation Pattern

2400MHz YZ-Plane, ZX-Plane, XY-Plane (H/V)



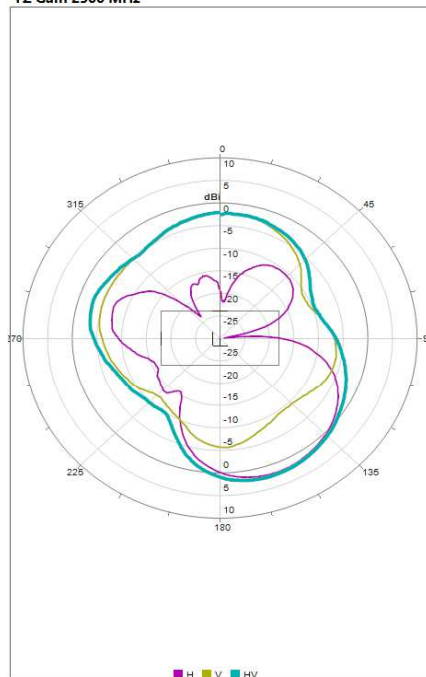
2450MHz YZ-Plane, ZX-Plane, XY-Plane(V/H)



【Bluetooth】

2500MHz YZ-Plane, ZX-Plane, XY-Plane (H/V)

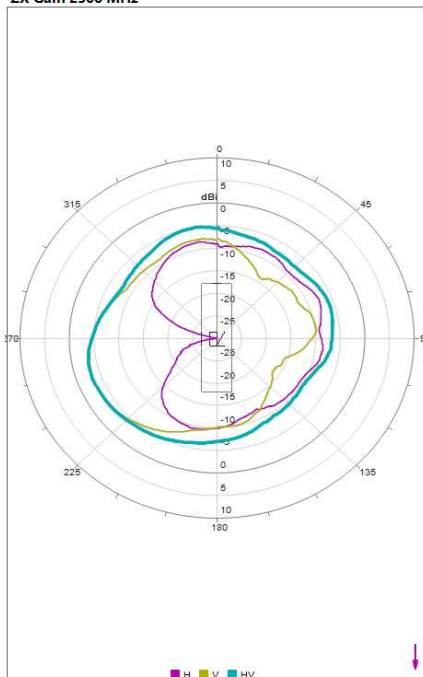
YZ Gain 2500 MHz



Gain (dBi) - Amplitude summary
YZ Plane Totals - 2500 MHz

Pol	Min	Max	Avg	Dir
H	-29.2	2.0	-5.4	7.3
V	-12.1	-2.2	-6.1	3.9
HV	-10.0	2.4	-2.7	5.1

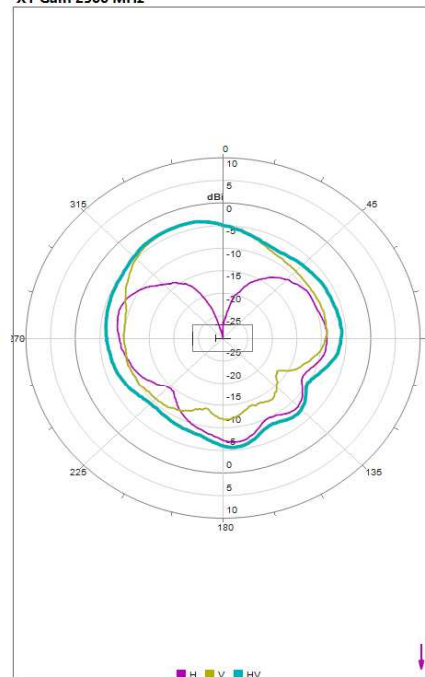
ZX Gain 2500 MHz



Gain (dBi) - Amplitude summary
ZX Plane Totals - 2500 MHz

Pol	Min	Max	Avg	Dir
H	-35.6	-7.6	-10.6	3.1
V	-16.5	-3.2	-8.1	4.9
HV	-9.7	-3.2	-6.2	3.0

XY Gain 2500 MHz



Gain (dBi) - Amplitude summary
XY Plane Totals - 2500 MHz

Pol	Min	Max	Avg	Dir
H	-44.3	-6.7	-10.6	3.9
V	-16.8	-3.5	-8.5	4.9
HV	-10.2	-3.5	-6.4	2.9