

BT/WiFi Antenna report



原田工業株式会社

HARADA INDUSTRY CO., LTD.

〒140-0013

東京都品川区南大井6-26-2 大森ベルポートB館 4F

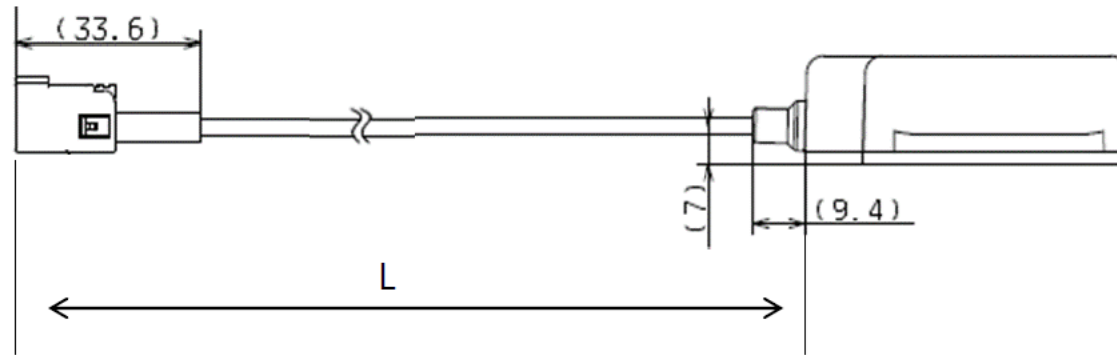
4F, Omori Bellport Building B, 6-26-2 Minamioi, Shinagawa-ku, Tokyo

TEL : 03-3765-4321

FAX : 03-3763-0130

Summary

- 39215 (FEEDER length 2000mm) • • • BT/ WLAN-1
- 39216 (FEEDER length 1700mm) • • • WLAN-2
- 39212 (FEEDER length 280mm) • • • BT2
- 39213 (FEEDER length 390mm) • • • BT1



BT/WiFi antenna specifications (FEEDER length 2000mm)

Electrical specifications (39215, FEEDER length 2000mm)

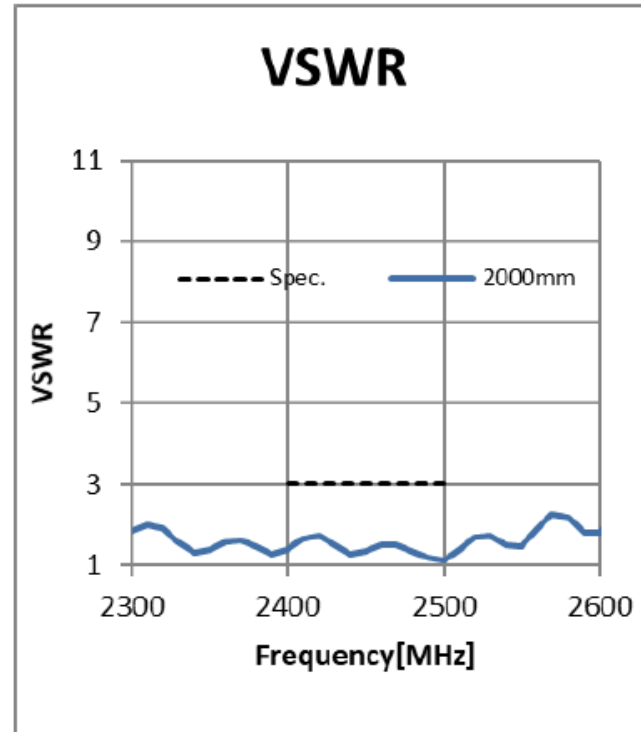
Item	specification
Frequency	2.4GHz (2400~2500MHz) 5GHz (5150~5850MHz)
Polarization	Right-handed circular polarization (RHCP)
Gain	2.4GHz: -3dBi or higher (including cable loss) 5GHz: -6dBi or more (including cable loss)
VSWR	2.4GHz: 3 or less 5 GHz: 3.5 or less
Nominal impedance	50Ω
Sense resistor	10kΩ ± 5% (voltage 12V, current 1.8mA or less)

*Cable used: 1.5DS-QEHB 2000mm

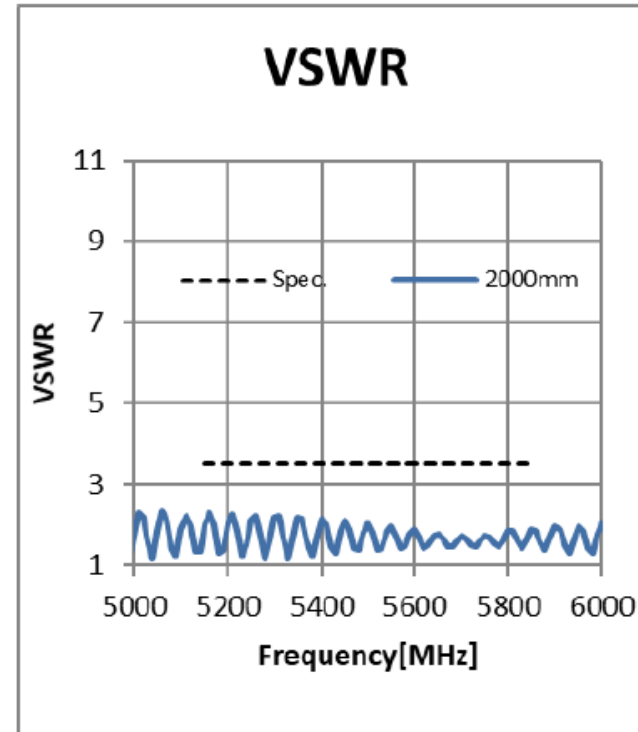
BT/ WiFi VSWR evaluation result

Evaluation result (39215, FEEDER length 2000mm)

2.4GHz (2400~2500MHz)



5GHz (5150~5850MHz)

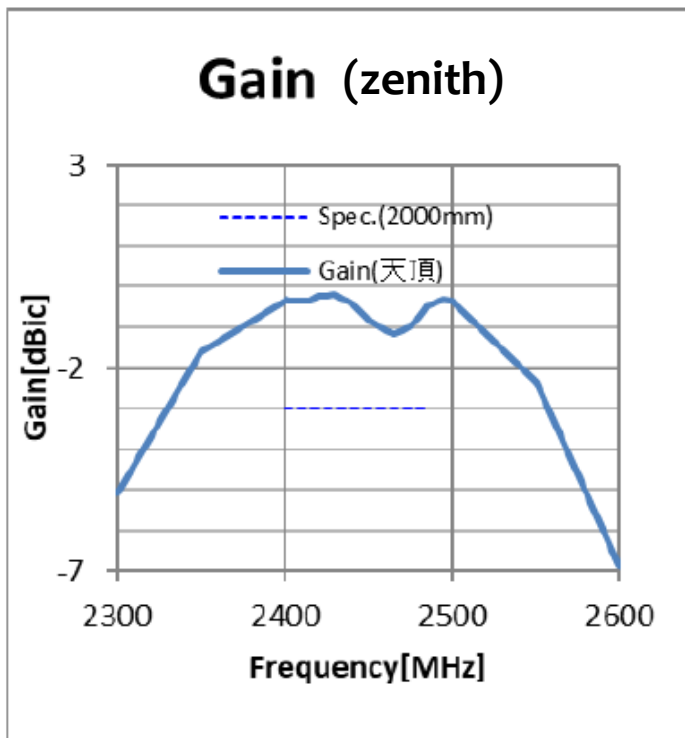


VSWR satisfies Spec. within the band.

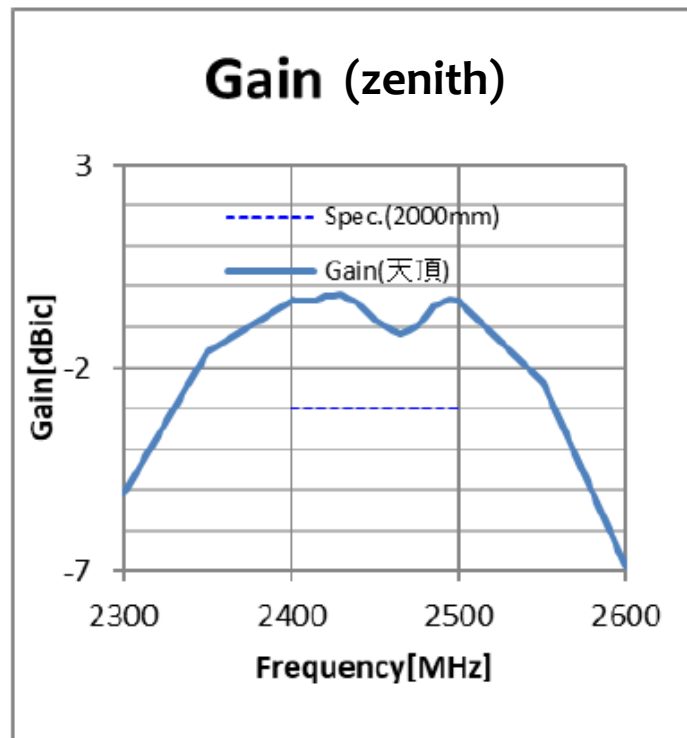
BT/ WiFi antenna gain evaluation result (zenith)

Evaluation result (39215, FEEDER length 2000mm)

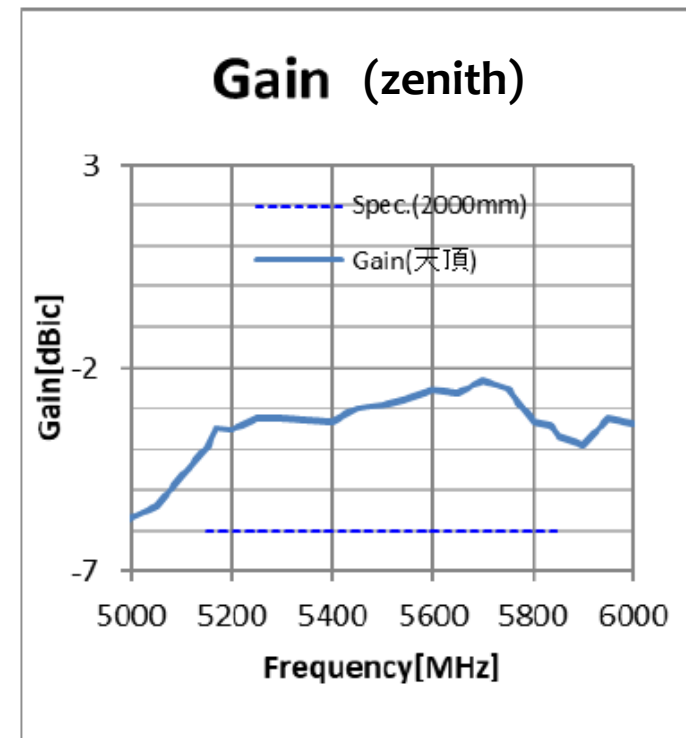
Bluetooth (2400~2485MHz)



WiFi 2.4GHz (2400~2500MHz)



WiFi 5GHz (5150~5850MHz)

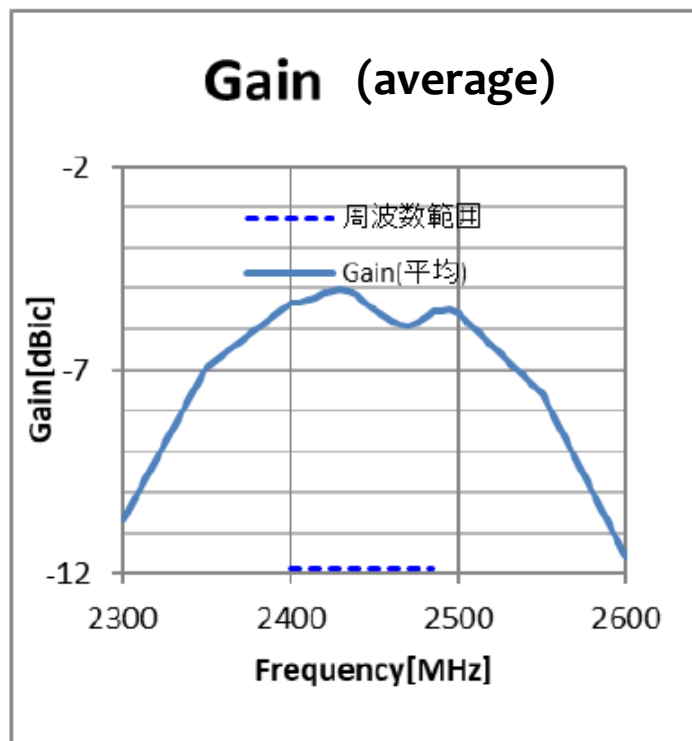


Gain (zenith) satisfies Spec. within the band.

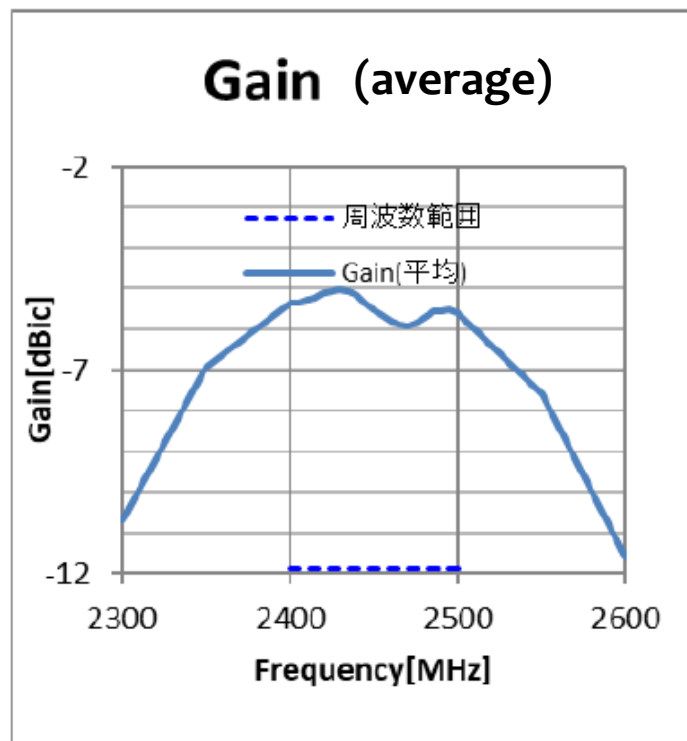
BT/ WiFi antenna gain evaluation result (average) (reference)

Evaluation result (39215, FEEDER length 2000mm)

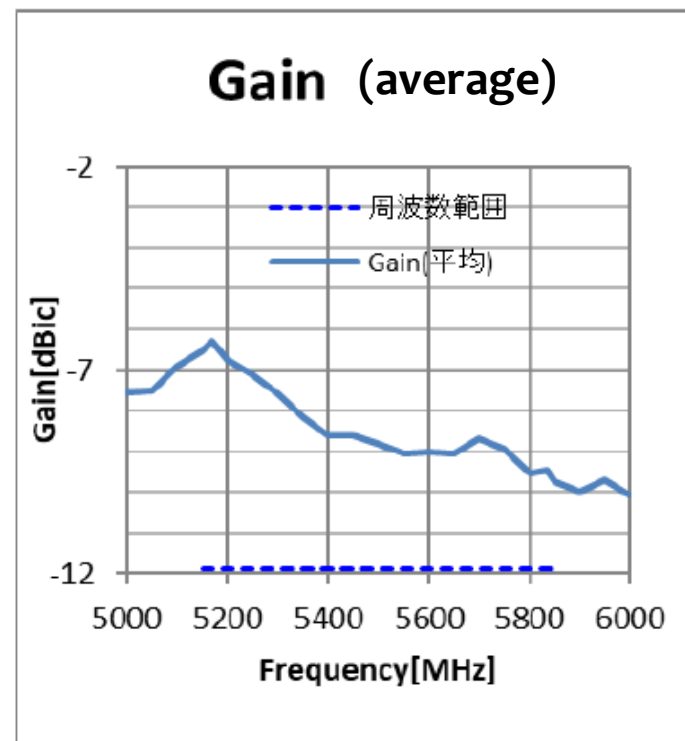
Bluetooth (2400~2485MHz)



WiFi 2.4GHz (2400~2500MHz)



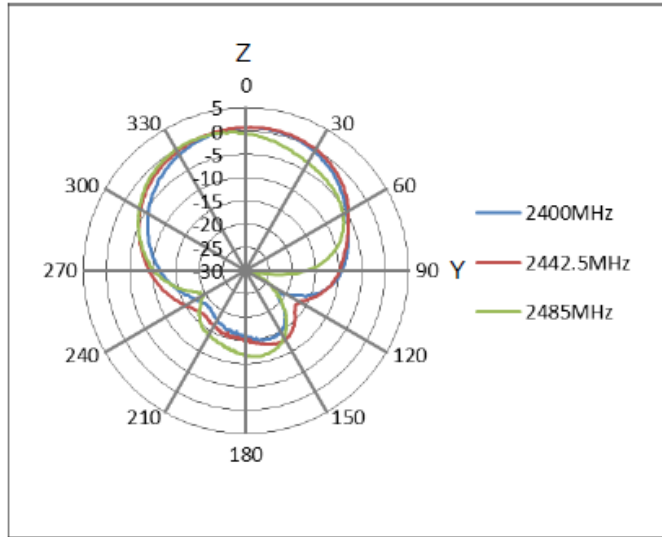
WiFi 5GHz (5150~5850MHz)



BT/ WiFi radiation pattern

Evaluation result (39215, FEEDER length 2000mm)

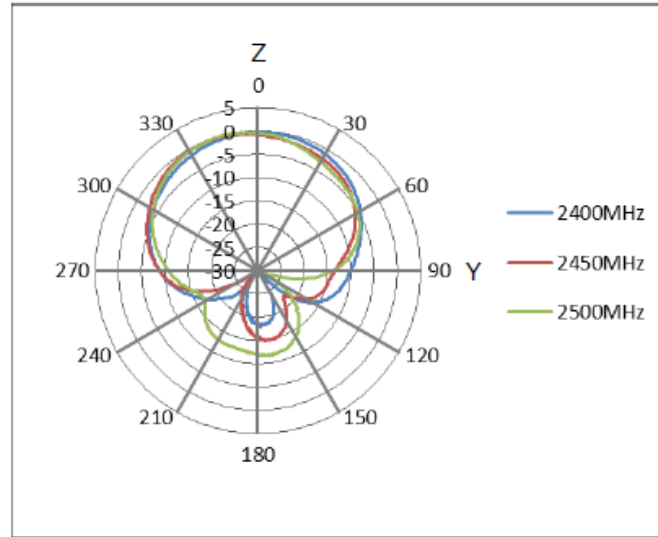
Bluetooth (2400~2485MHz)



YZ Plane

Maximum gain: 0.3 dBi

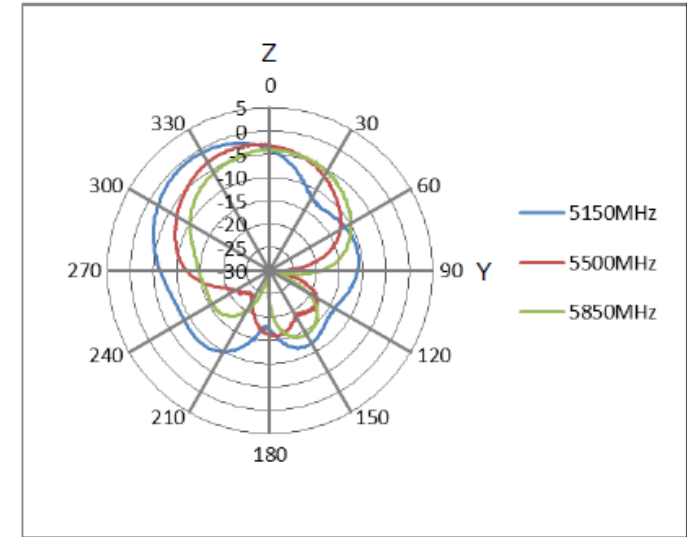
WiFi 2.4GHz (2400~2500MHz)



YZ Plane

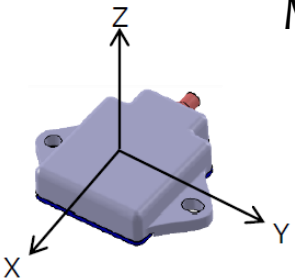
Maximum gain: 0.3 dBi

WiFi 5GHz (5150~5850MHz)



YZ Plane

Maximum gain: -0.3 dBi



BT/WiFi antenna specifications (FEEDER length 1700mm)

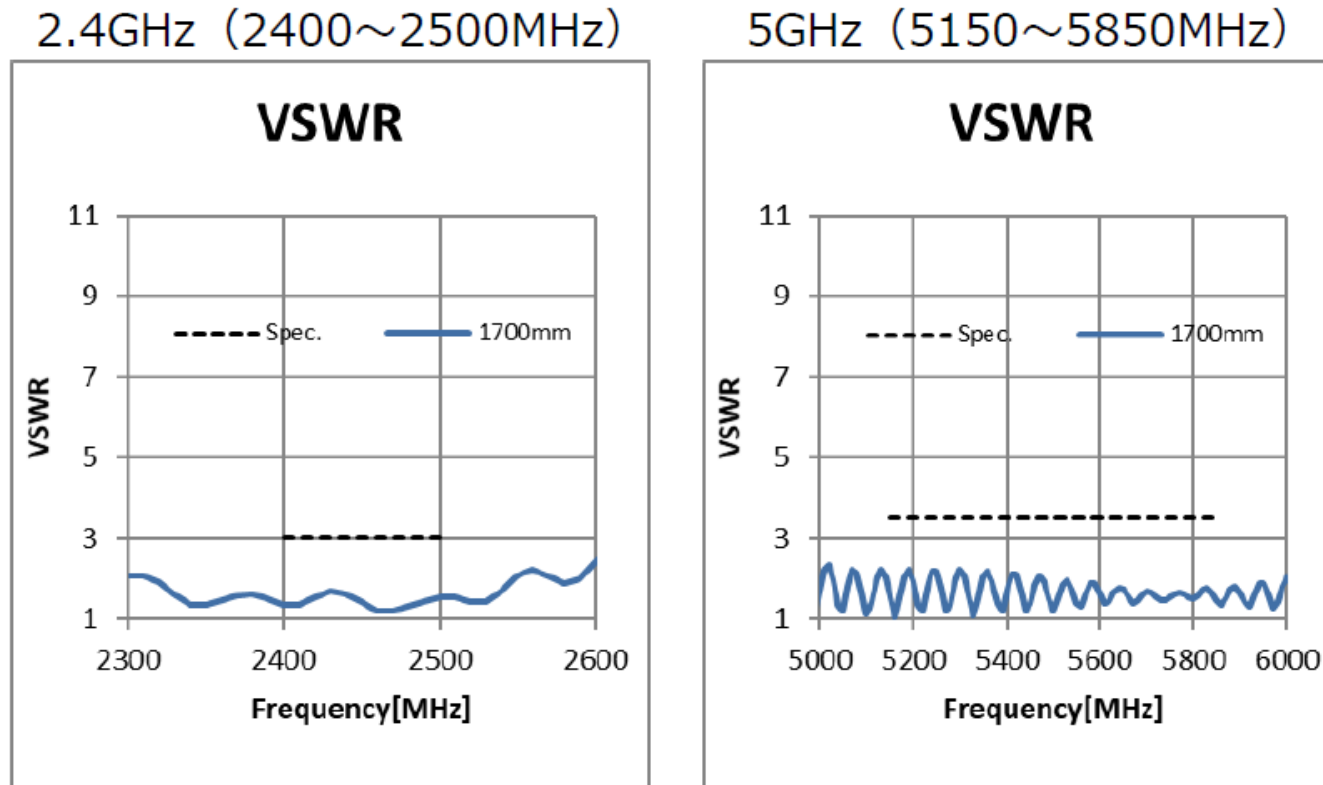
Electrical specifications (39216, FEEDER length 1700mm)

Item	specification
Frequency	2.4GHz (2400~2500MHz) 5GHz (5150~5850MHz)
Polarization	Right-handed circular polarization (RHCP)
Gain	2.4GHz: -2.4dBi or higher (including cable loss) 5GHz: -5dBic or more (including cable loss)
VSWR	2.4GHz: 3 or less 5 GHz: 3.5 or less
Nominal impedance	50Ω
Sense resistor	10kΩ ± 5% (voltage 12V, current 1.8mA or less)

*Cable used: 1.5DS-QEHB 1700mm

BT/ WiFi VSWR evaluation result

Evaluation result (39216, FEEDER length 1700mm)

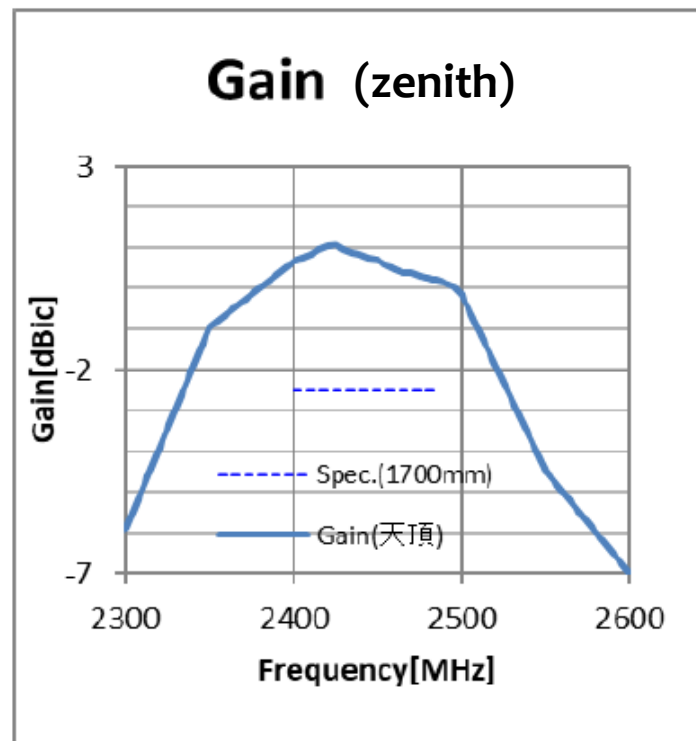


VSWR satisfies Spec. within the band.

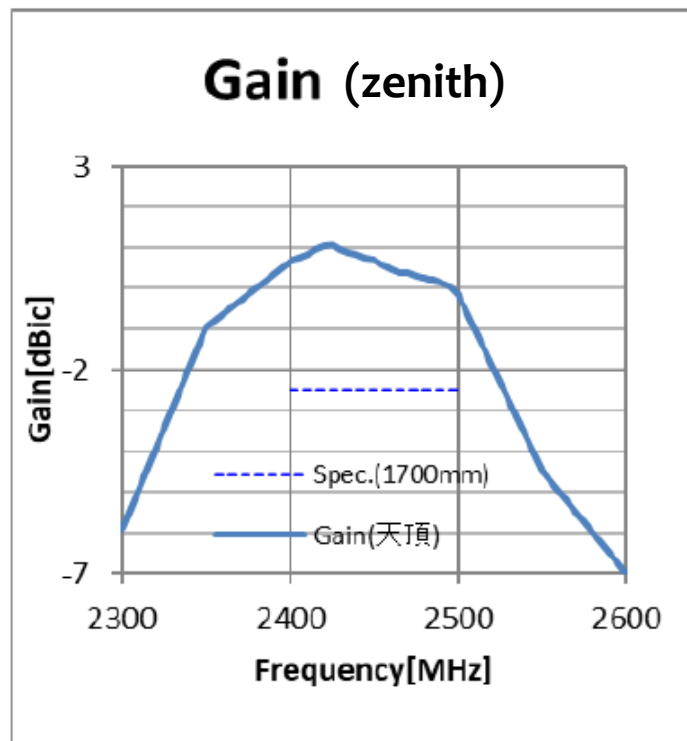
BT/ WiFi antenna gain evaluation result (zenith)

Evaluation result (39216, FEEDER length 1700mm)

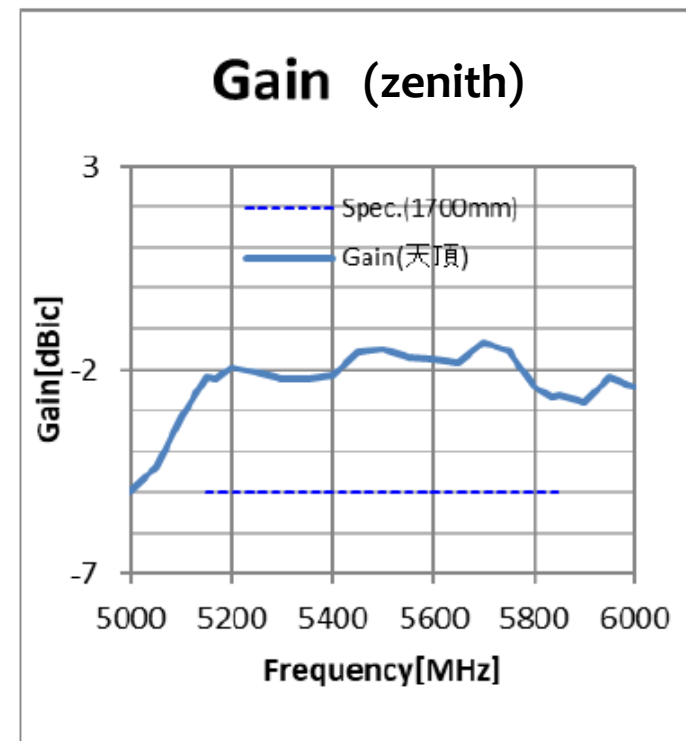
Bluetooth (2400~2485MHz)



WiFi 2.4GHz (2400~2500MHz)



WiFi 5GHz (5150~5850MHz)

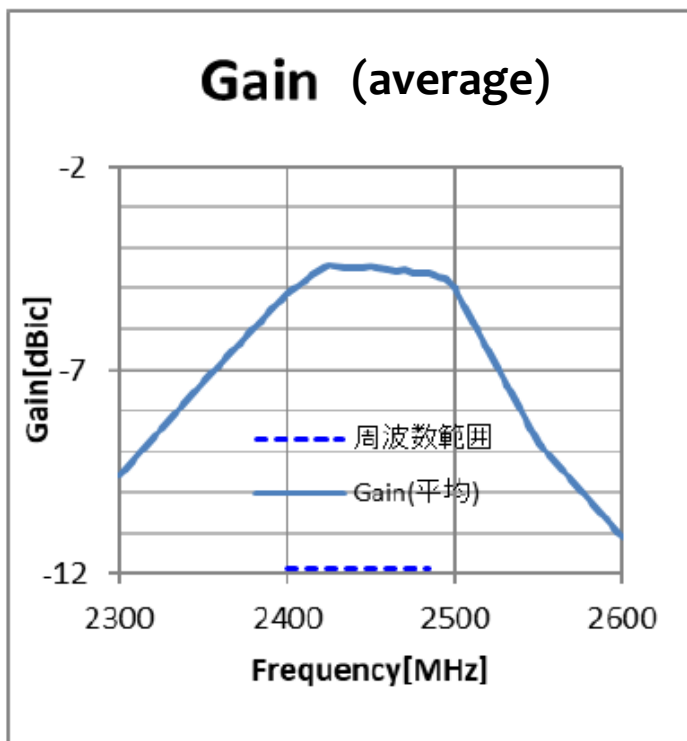


Gain (zenith) satisfies Spec. within the band.

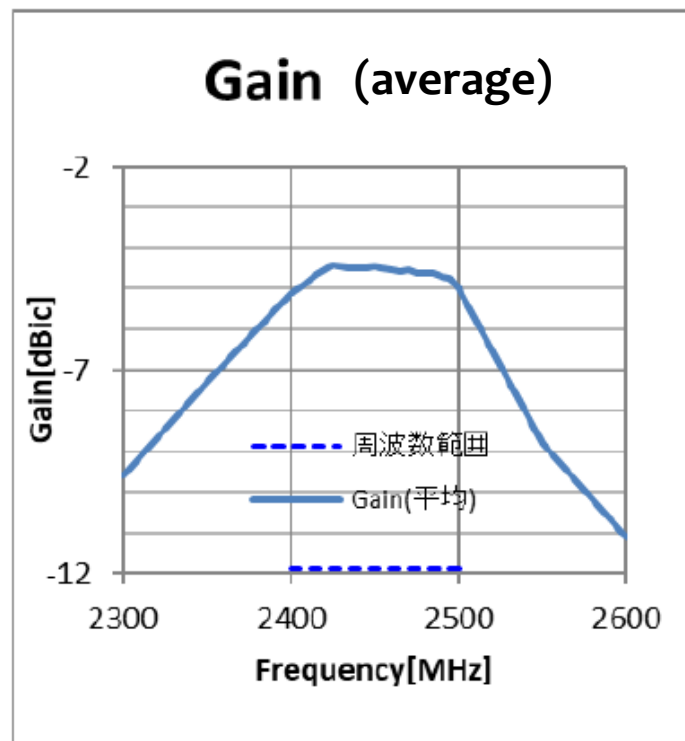
BT/ WiFi antenna gain evaluation result (average) (reference)

Evaluation result (39216, FEEDER length 1700mm)

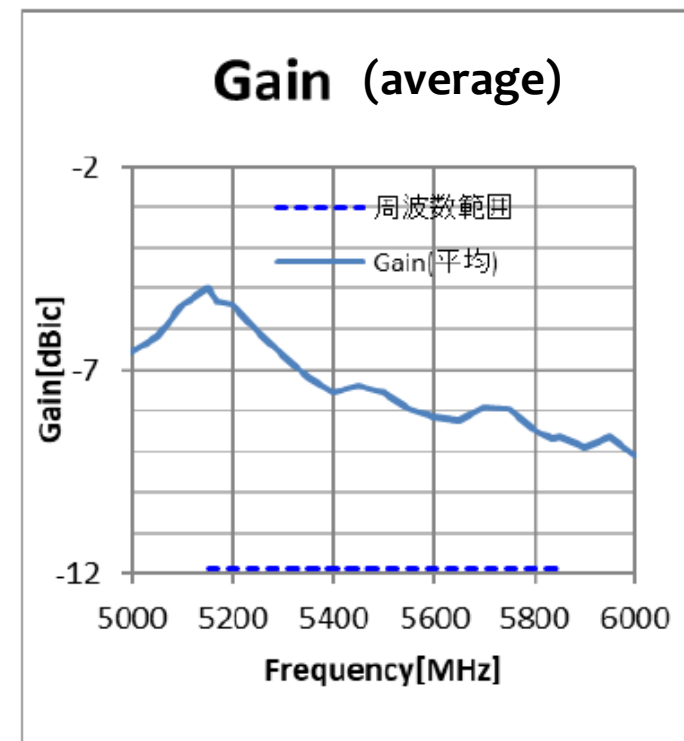
Bluetooth (2400~2485MHz)



WiFi 2.4GHz (2400~2500MHz)



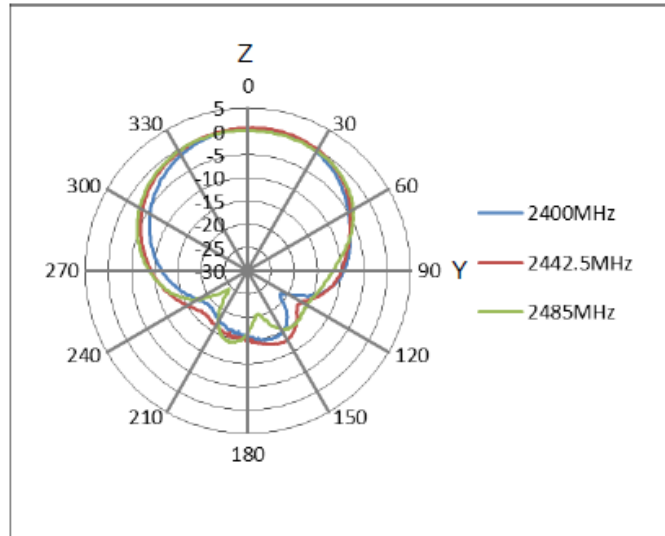
WiFi 5GHz (5150~5850MHz)



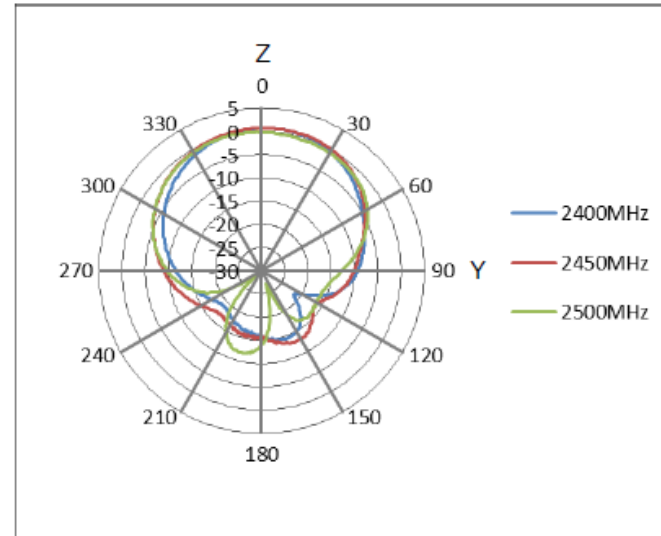
BT/ WiFi radiation pattern

Evaluation result (39216, FEEDER length 1700mm)

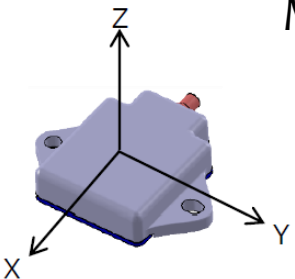
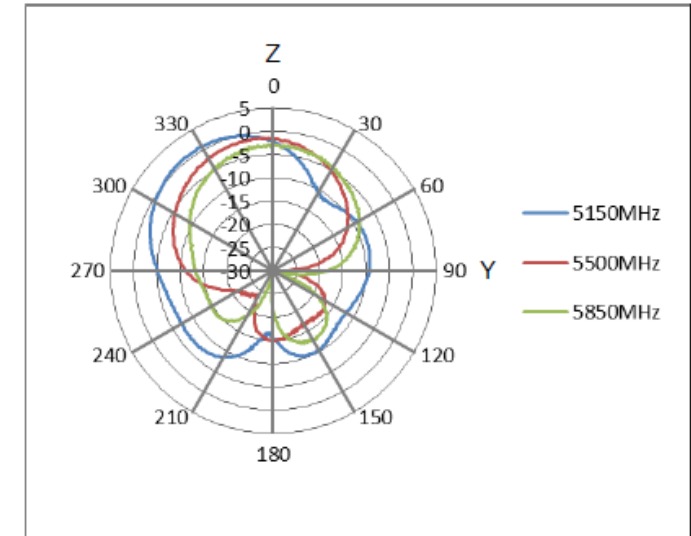
Bluetooth (2400~2485MHz)



WiFi 2.4GHz (2400~2500MHz)



WiFi 5GHz (5150~5850MHz)



BT antenna specifications (FEEDER length 280mm)

Electrical specifications (39212, FEEDER length 280mm)

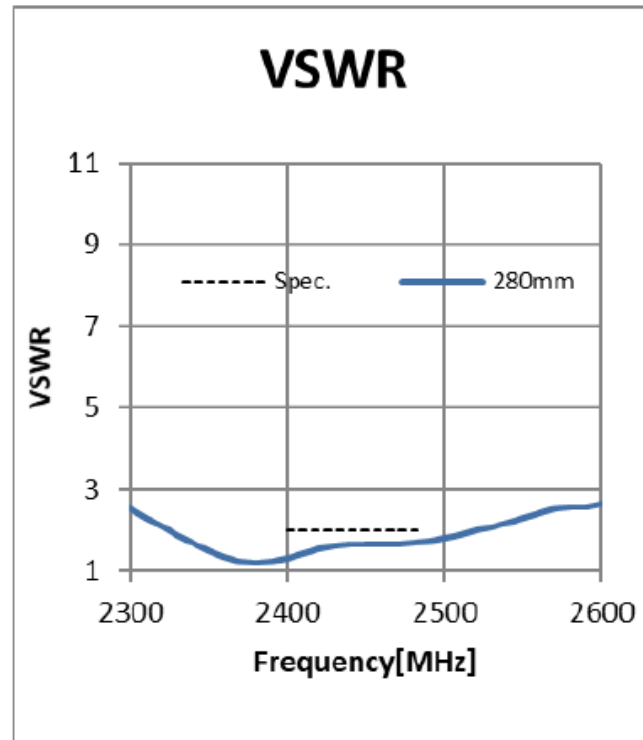
Item	specification
Frequency	2.4GHz (2400~2485MHz)
Polarization	Right-handed circular polarization (RHCP)
Gain	1dBi or higher (including cable loss)
VSWR	2 or less
Nominal impedance	50Ω
Sense resistor	10kΩ ± 5% (voltage 12V, current 1.8mA or less)

*Cable used: 1.5DS-2VH 280mm

BT antenna gain evaluation result

Evaluation result (39212, FEEDER length 280mm)

Bluetooth (2400~2485MHz)

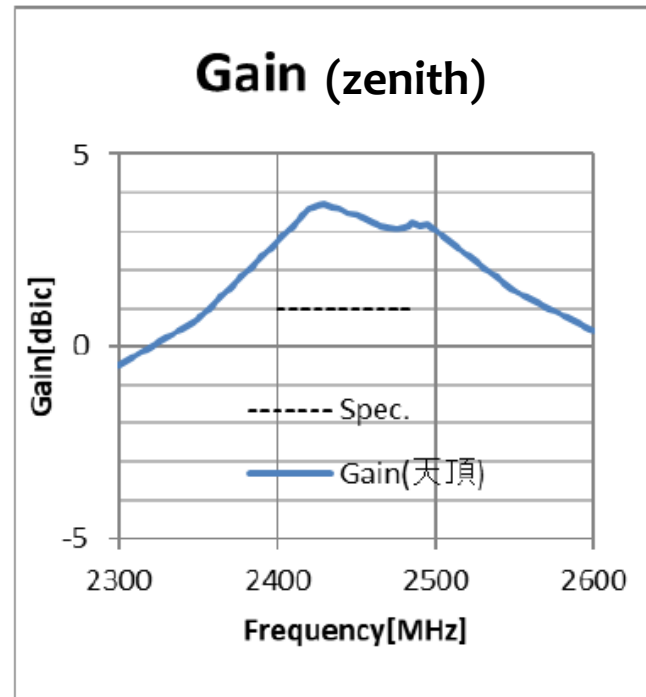


VSWR satisfies Spec. within the band.

BT/VSWR evaluation result

Evaluation result (39212, FEEDER length 280mm)

Bluetooth (2400~2485MHz)

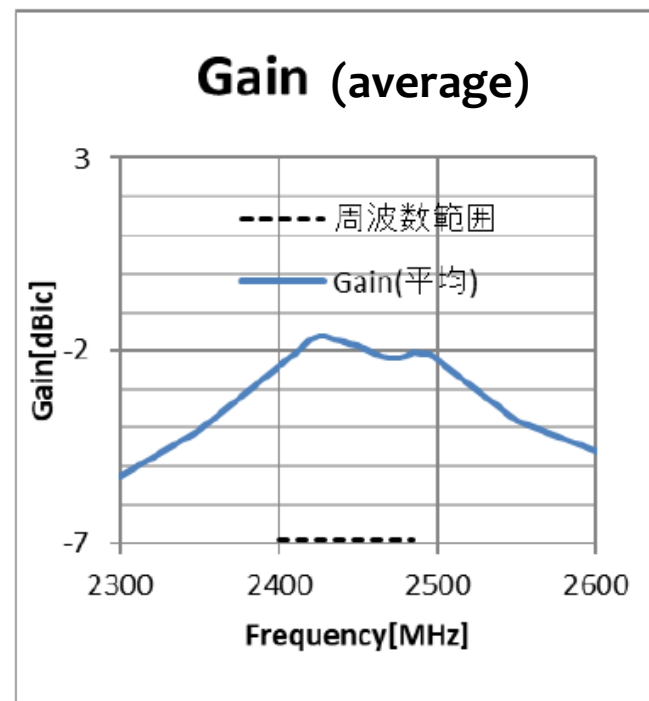


Gain (zenith) satisfies Spec. within the band.

BT antenna gain evaluation result (average) (reference)

Evaluation result (39212, FEEDER length 280mm)

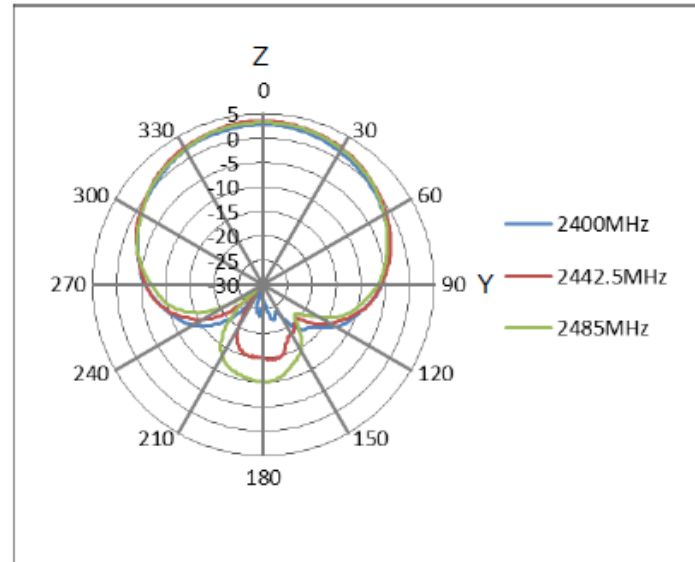
Bluetooth (2400~2485MHz)



BT radiation pattern

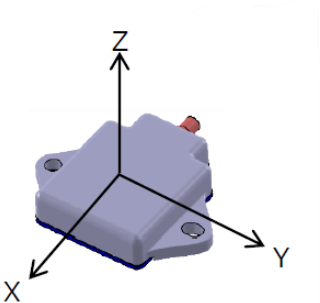
Evaluation result (39212, FEEDER length 280mm)

Bluetooth (2400~2485MHz)



YZ Plane

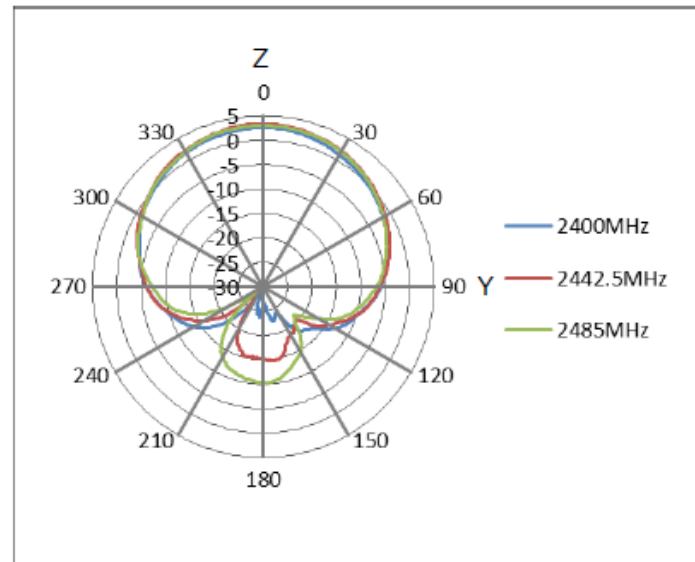
Maximum gain: 3.8 dBi



BT radiation pattern

Evaluation result (39213, FEEDER length 390mm)

Bluetooth (2400~2485MHz)



YZ Plane

Maximum gain: 3.6 dBi

