Wi-Fi 6

ST0211-10-N01-C

Amphenol

Datasheet

2.4-2.5GHz & 5.15-5.85GHz

Embedded

22.0 x 6.32 x 3.8 mm

Stamping Antenna

Features:

This dual Wi-Fi antenna is Metal Stampped with high efficiency and provide SMT method, easy-to use.

Applications:

CPE – Router, Set-top boxes, Gateway
IoT devices
Wi-Fi 6 Mesh
Smart Metering
Robotics
M2M, Industrial Devices

RoHS

Electrical Specifications

Antenna Characteristics

Antenna Type	Radiation Pattern	Polarization	Max. Input Power	Impedance
Stamping Antenna	Omni	Linear	1W	50Ω

Frequency (GHz)	2.4~2.5	5.15~5.825
Return Loss (dB) @90mmx80mm GND	< -8	< -8
Peak Gain (dBi)	3.5	3.8
Average Gain (dB)	-2.2	-3.2
Efficiency (%)	61	47

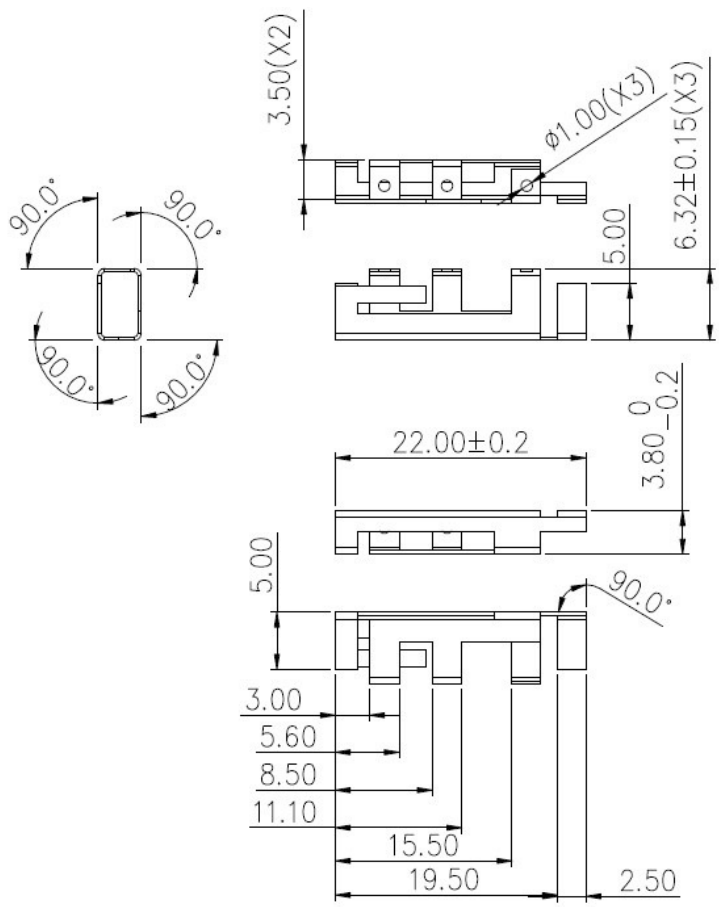
Mechanical Specifications

Mechanical	
Dimension (mm)	22.0 x 6.32 x 3.8
Material	SUS 304 1/2H
Weight (g)	0.46

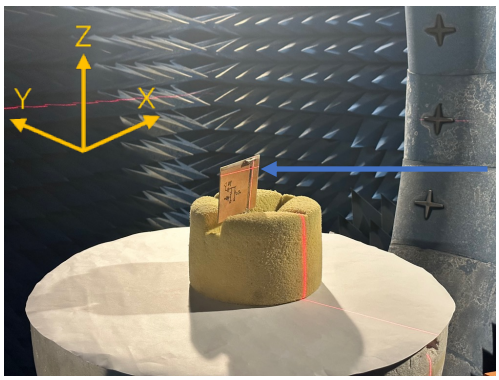
Environmental	
Temperature Range (˚C)	-40 to 85
Humidity	Non-condensing 65˚C 95% RH
RoHS Compliant	

Mechanical Drawing

Unit : mm



Charts In Free Space



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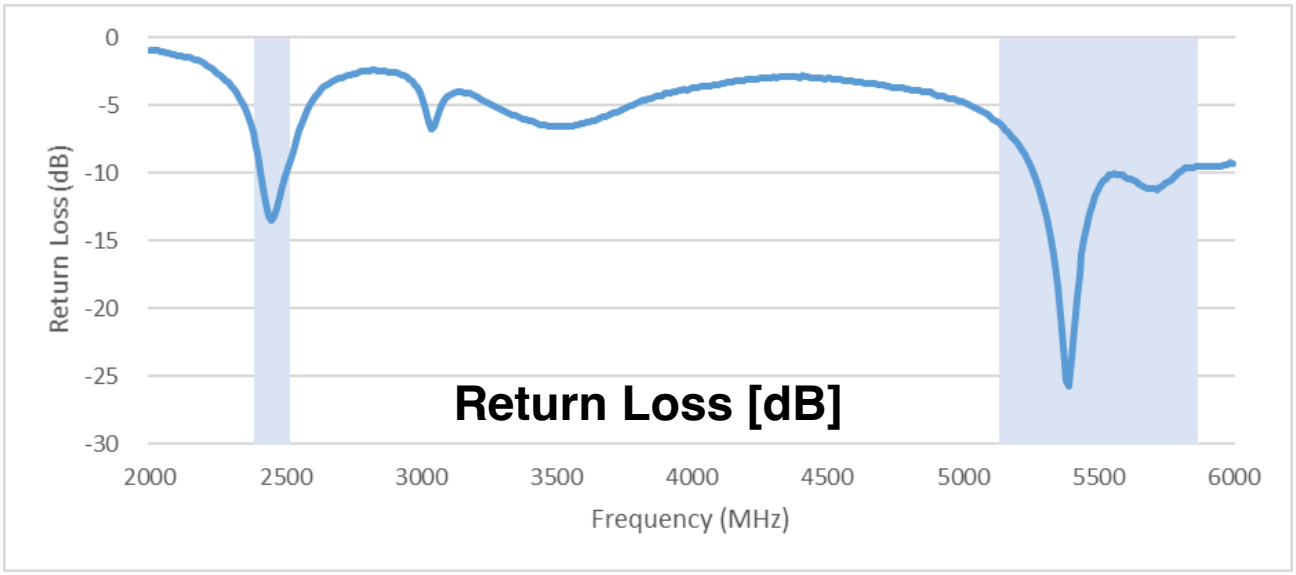
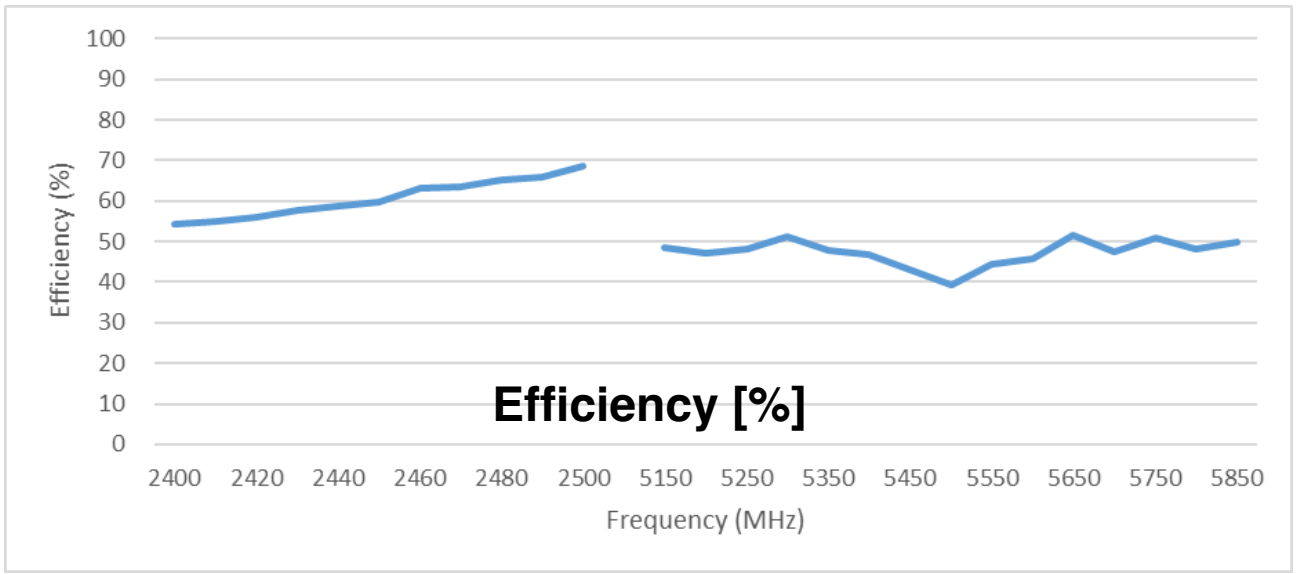
Test setup, measurement performed in 3D anechoic chamber.

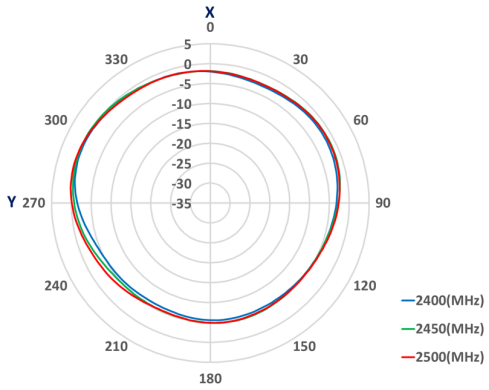


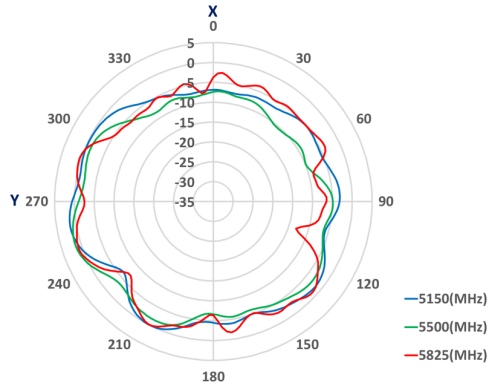
Blue background represents frequency response.



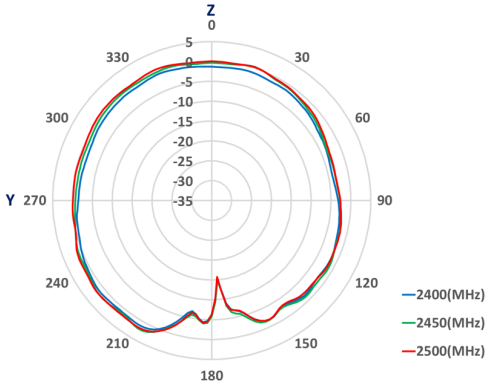
Radiation Pattern - Free Space

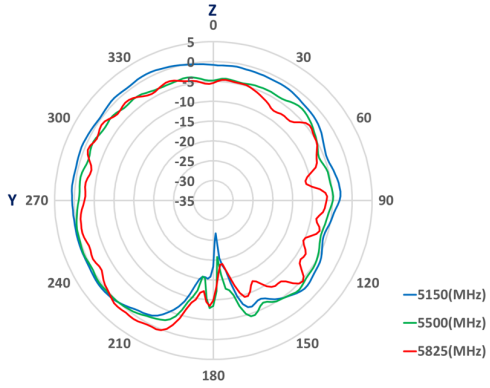
XY - Plane



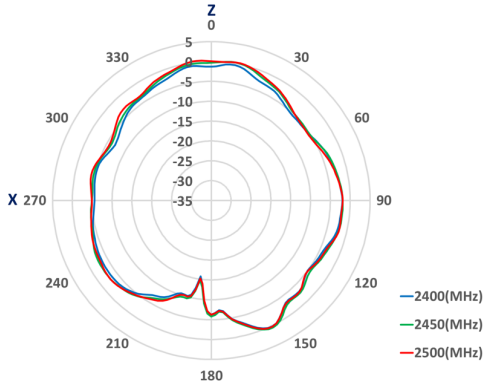


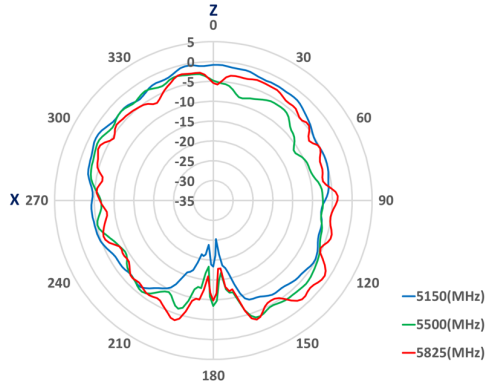
YZ - Plane



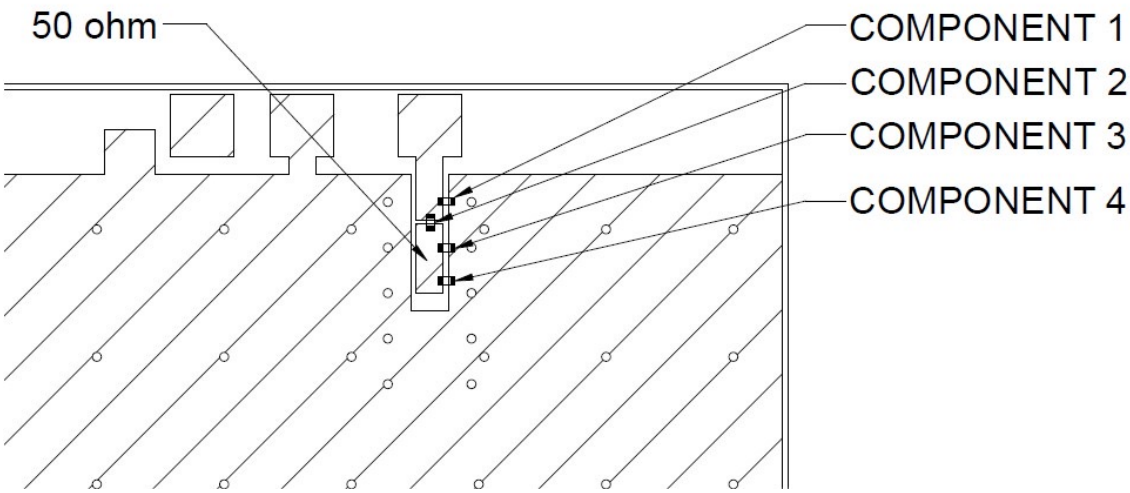


XZ - Plane





Matching Circuit Design

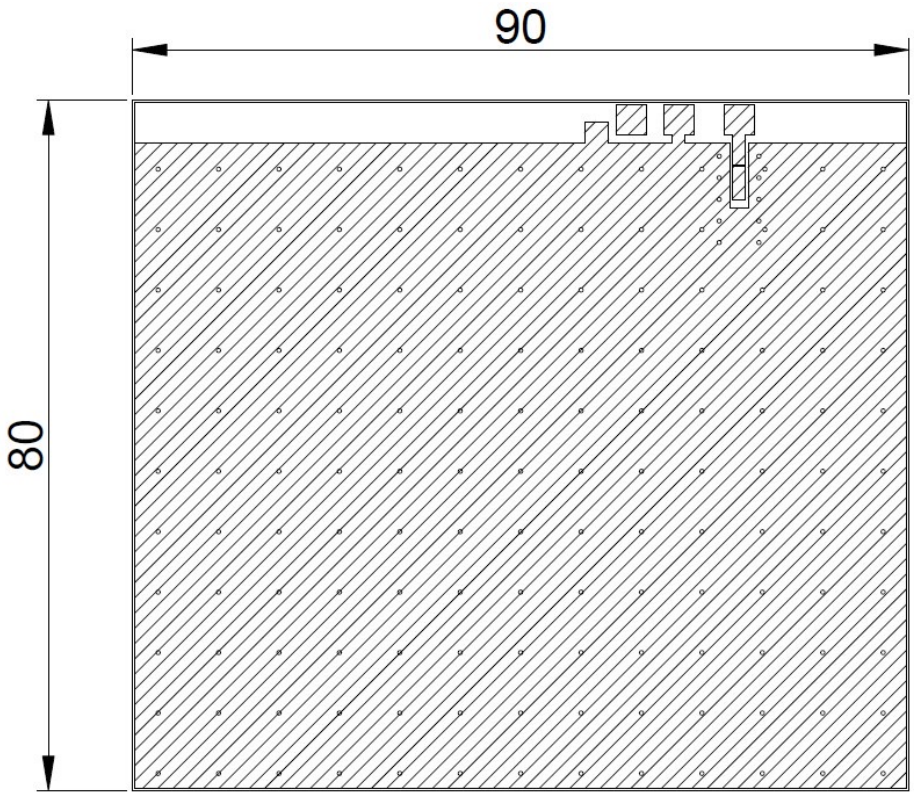


* To make the antenna have this resonance must be matched with the matching circuit.
* The matching component may be slightly different than that shown depending on the distance to the ground plane, the dielectric constant of the PCB, and PCB material thickness.

Circuit Matching Components		
Circuit Symbol	**Size**	**Description**
COMPONENT 1	0402	None
COMPONENT 2	0402	8 pF Capacitor
COMPONENT 3	0402	0.8 pF Capacitor
COMPONENT 4	0402	2.7 pF Capacitor

Evaluation Board

Unit : mm



Base Material : FR-4, T=1.6

Revisions				
Rev.	Description	Date	ECN	Approval
A	Initial Release	2023-09-28	ST0211-10-N01-C-RA00	ATC