

Datasheet

2.4-2.5GHz & 5.15-5.85GHz  
Internal Antenna



30 × 10 × 0.2mm

FPC Antenna

Features:

- Adhesive backing on the FPC simplifies mounting within the device
- Global frequency coverage
- FPC antenna assembly

Applications:

- Smart metering and utilities
- Industrial IoT
- Quick service restaurants
- Medical devices



Electrical Specifications

Antenna Characteristics

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

Frequency (GHz)	2.4~2.5	5.15~5.825
Return Loss (dB)	< -10	< -10
Peak Gain (dBi)	2.1	3.1
Average Gain (dB)	-1.2	-1.5
Efficiency (%)	77	71

Mechanical Specifications

Environmental

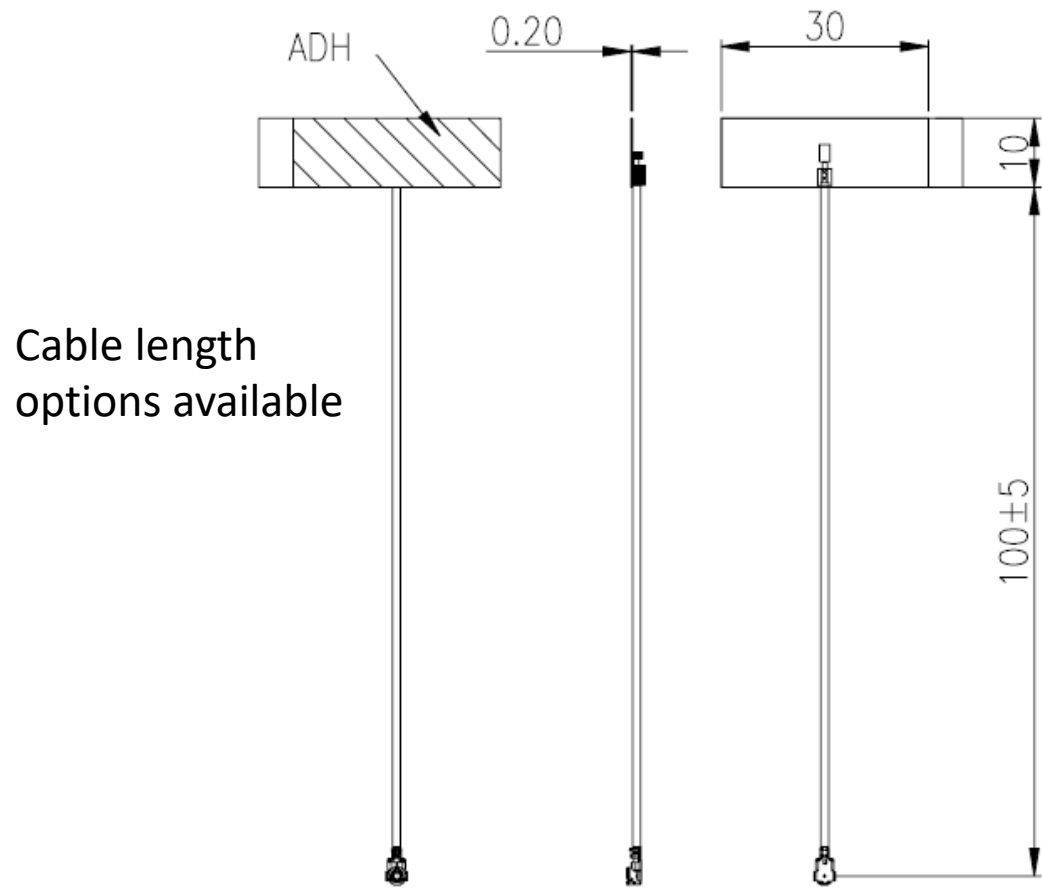
Temperature Range (°C)	-40 to 85
Humidity	Non-condensing 65°C 95% RH

RoHS Compliant

Part Number	Dim. (mm)	Weight (g)	Conn. Type	Cable Type	Material	Adhesive
ST0224-10-401-A	30 × 10 × 0.2	0.67	I-PEX MHF 1	Ø 1.37	PI	3M 467

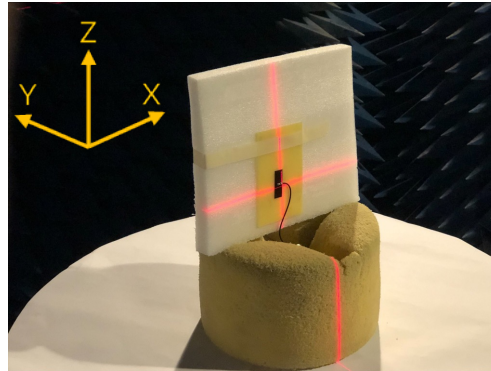
Mechanical Drawing

Unit : mm

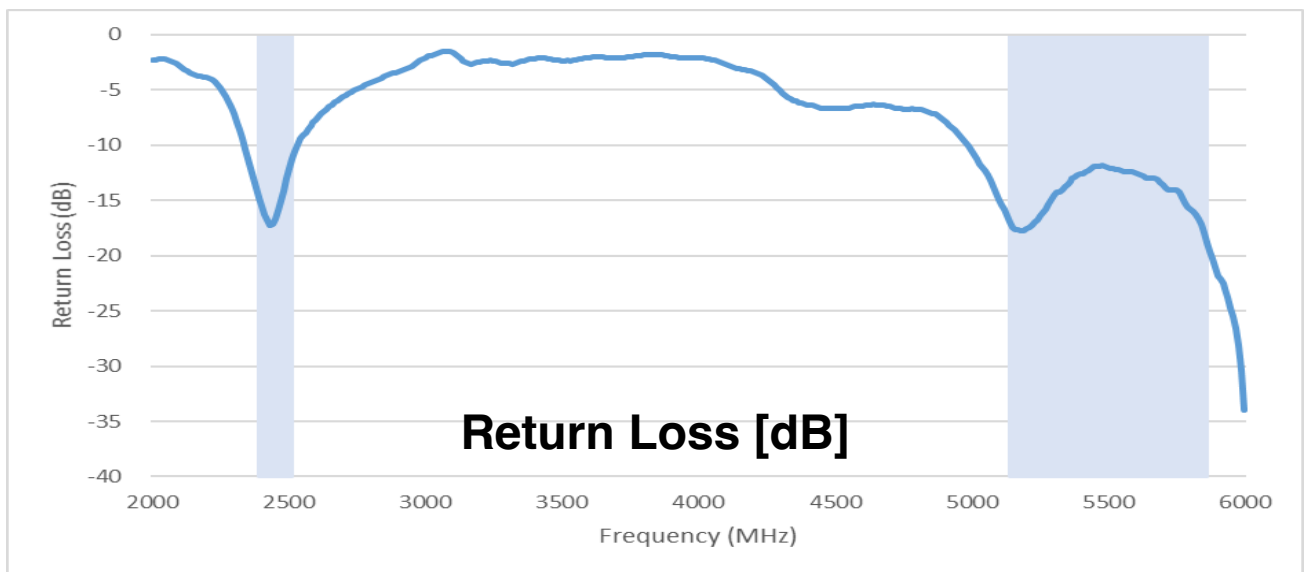


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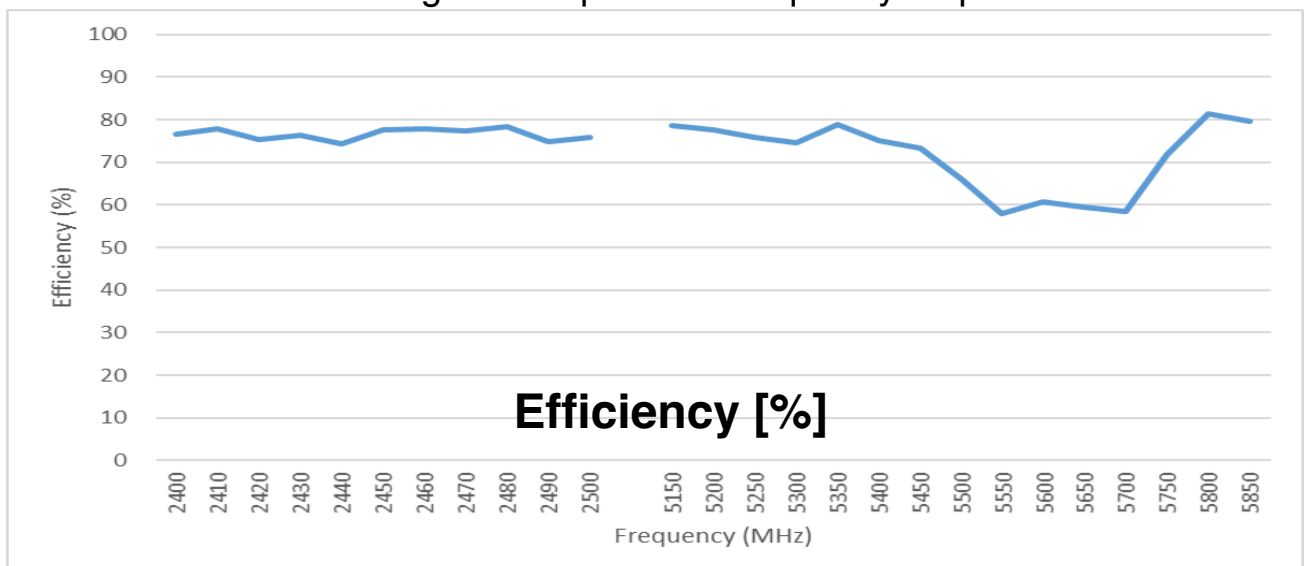
## Charts In Free Space



Test setup, measurement performed in 3D anechoic chamber.

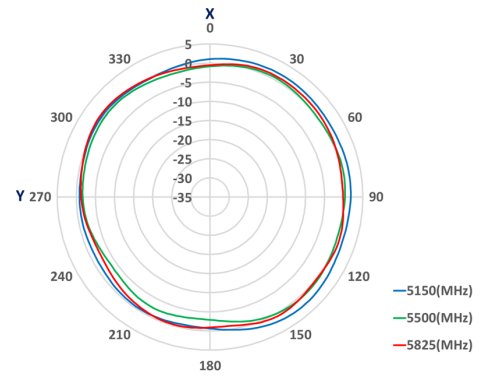
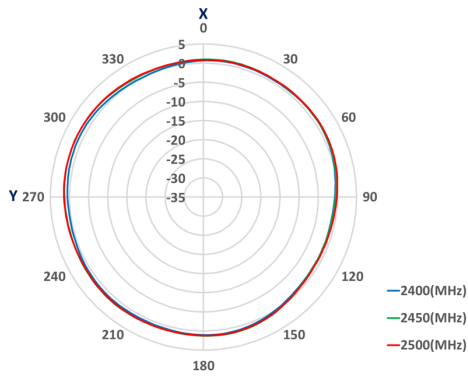


Blue background represents frequency response.

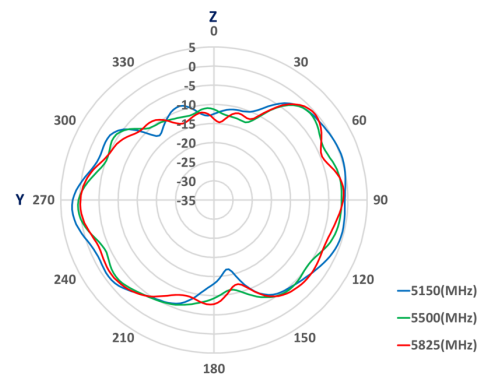
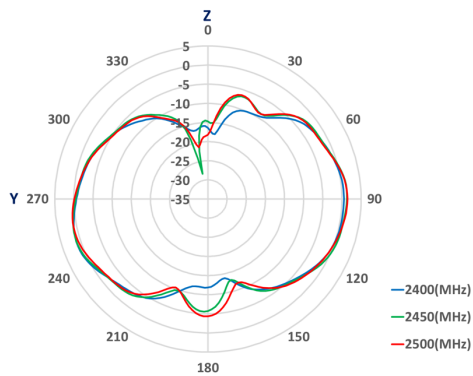


## Radiation Pattern - Free Space

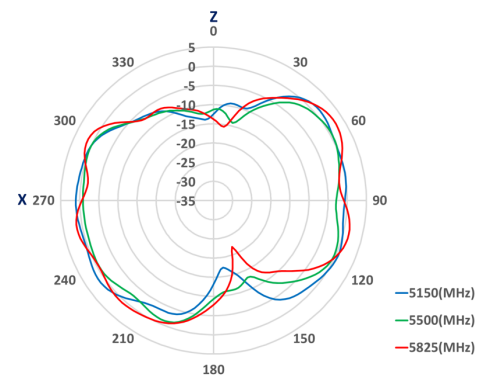
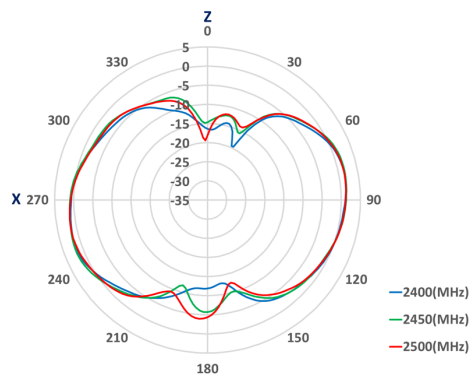
### XY - Plane



### YZ - Plane



### XZ - Plane



Revisions				
Rev	Description	Date	ECN	Approval
A	Initial Release	2022-10-25	ST0224-10-401-A-RA00	ATC
B	Additional info added. RF Performance update.	2023-01-02	ST0224-10-401-A-RB00	ATC

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