

### Datasheet

## 2.4-2.5GHz & 5.15-7.2GHz Internal Antenna



30 × 10 × 0.2mm

### FPC Antenna

### Features:

Wi-Fi 6E, also including Wi-Fi 6E new 6GHz band, Bluetooth, ZigBee  
Adhesive backing on the FPC simplifies mounting within the device  
Global frequency coverage

### 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	5.925~7.125	
Return Loss (dB)	< -10	< -10	< -10	
Peak Gain (dBi)	2.1	3.1	3.6	
Average Gain (dB)	-1.2	-1.5	-1.1	
Efficiency (%)	77	71	78	

### Mechanical Specifications

#### Environmental

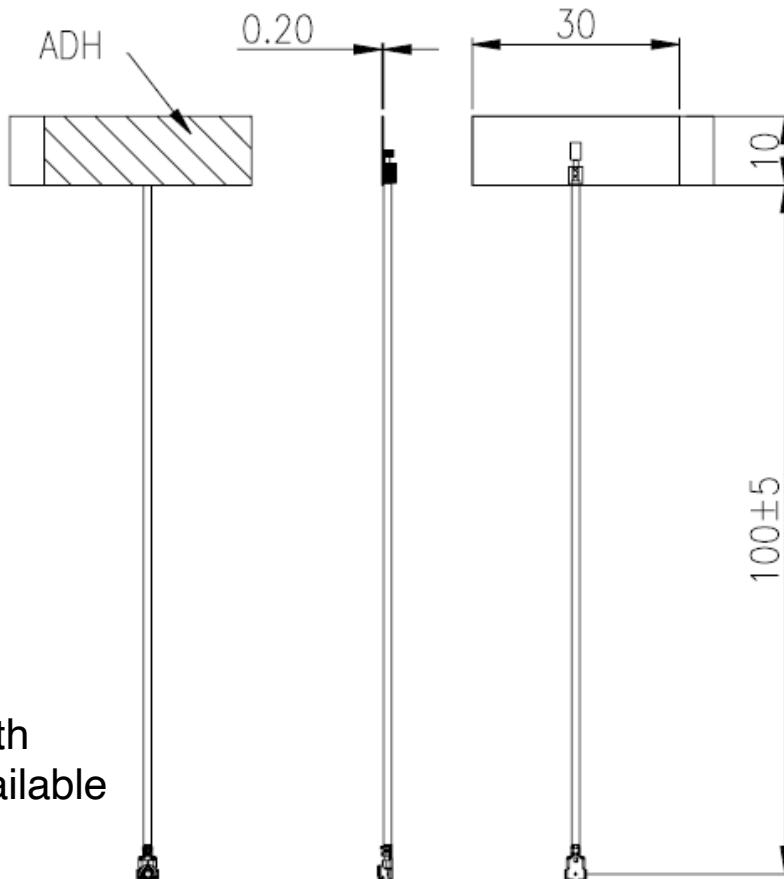
Temperature Range (°C)	-40 to 85
Humidity	Non-condensing 65°C 95% RH

RoHS Compliant

Part Number	Dim. (mm)	Weight (g)	Conn. Type	Cable Type	Material	Adhesive
ST1224-10-401-A	30 × 10 × 0.2	0.67	I-PEX MHF 1	Ø 1.37	PI	3M 467

### Mechanical Drawing

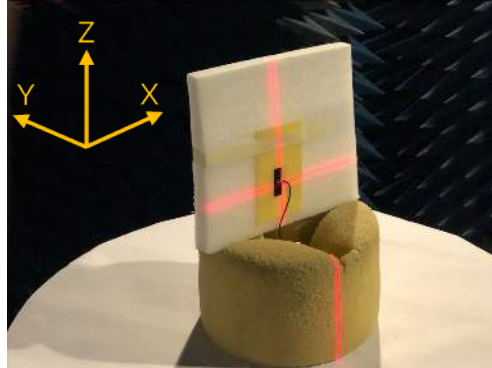
Unit : mm



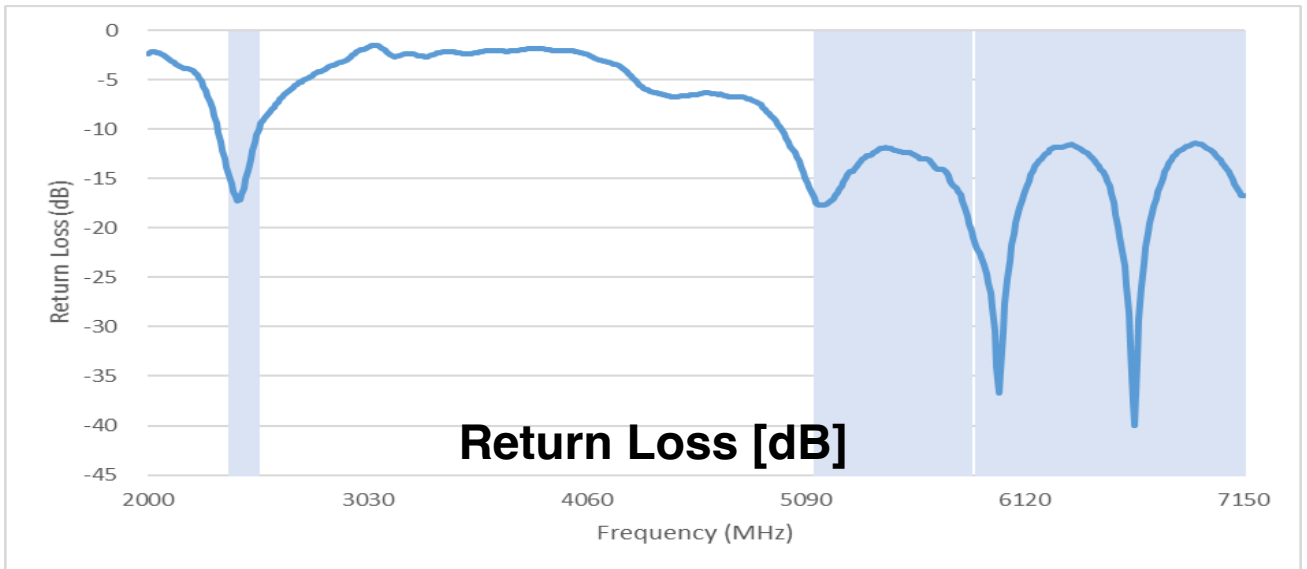
Cable length options available

ST1224-10-401-A

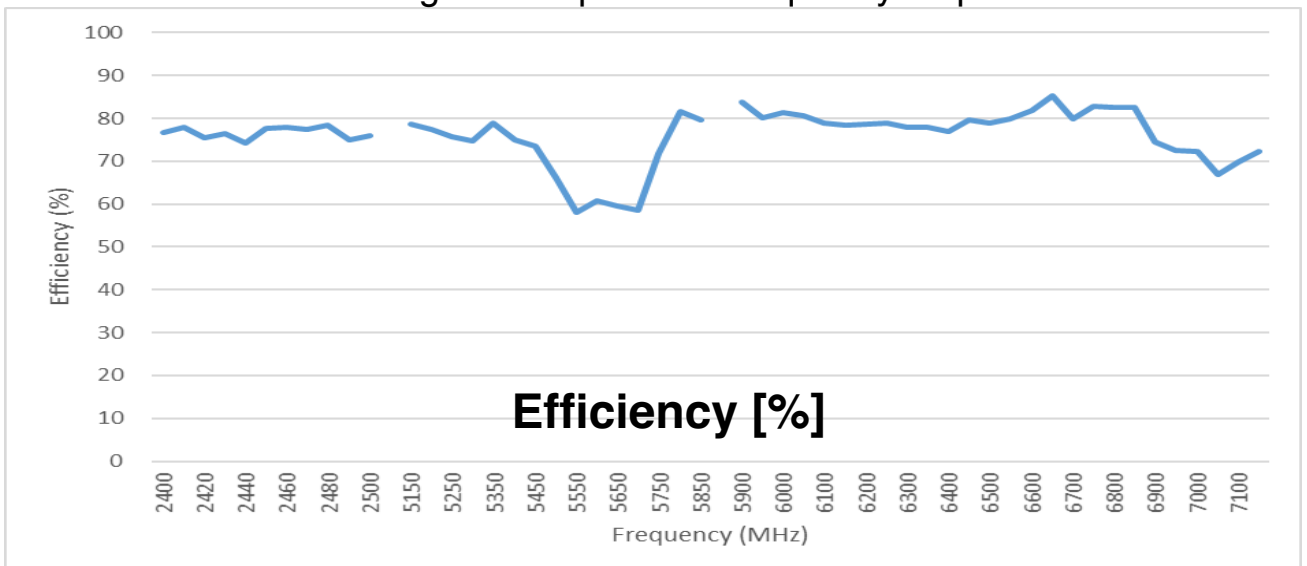
## Charts In Free Space



Test setup, measurement performed in 3D anechoic chamber.

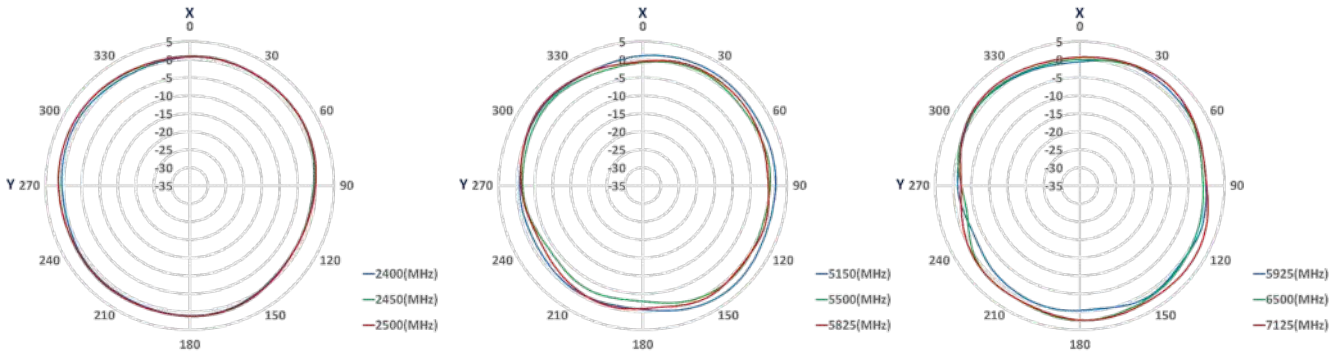


Blue background represents frequency response.

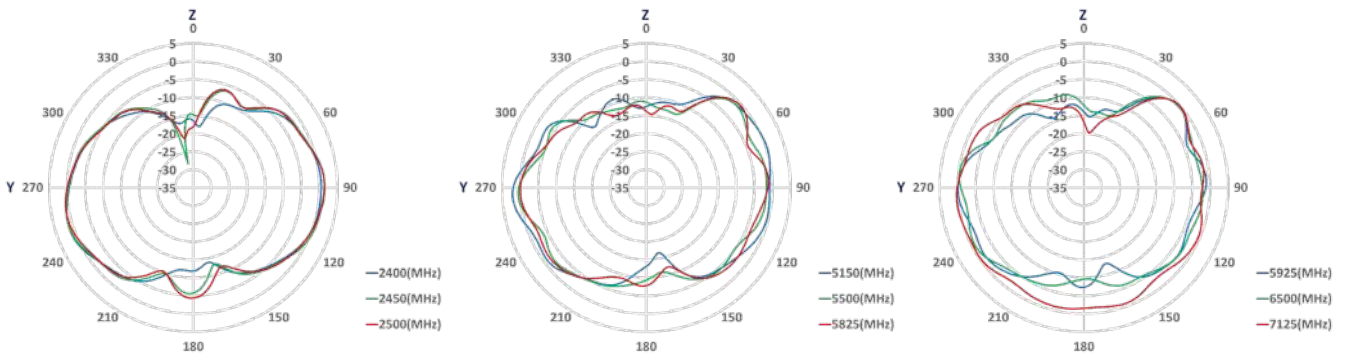


## Radiation Pattern - Free Space

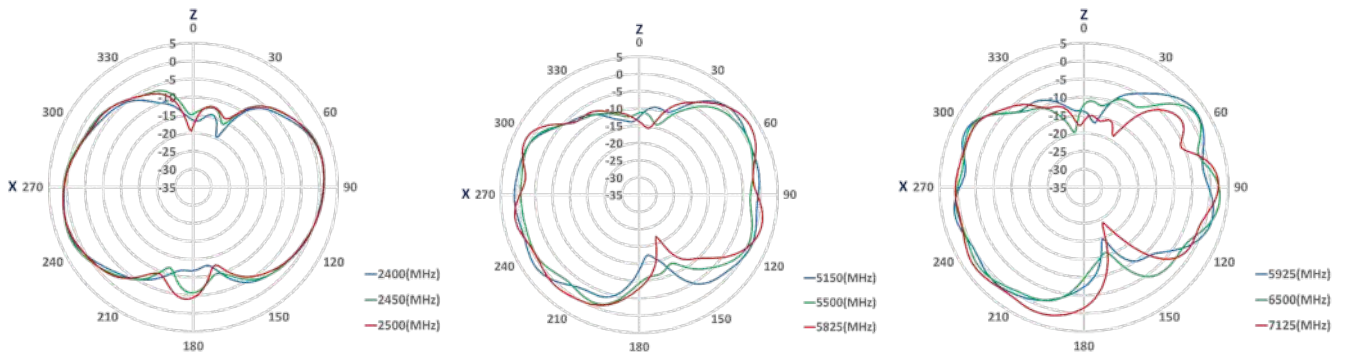
### XY - Plane



### YZ - Plane



### XZ - Plane



### Revisions

Rev	Description	Date	ECN	Approval
A	Initial Release	2022-10-25	ST1224-10-401-A-RA00	ATC
B	Additional info added. RF Performance update.	2023-01-02	ST1224-10-401-A-RB00	ATC

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