

### Datasheet

**0.69-0.96GHz, 1.71-5.95GHz**

External / In-building



**Stick Antenna**

### Features:

High performing full Sub-6 band antenna with SMA/RP-SMA connector for indoor applications

### Applications:

- CPE – Router, Set-top boxes, Gateway
- IoT devices
- Sub-6 Mesh
- Smart Metering
- Robotics



## Electrical Specifications

### Antenna Characteristics

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

Frequency (GHz)	0.69~0.96	1.71~2.17	2.3~2.7	3.3~3.8	5.15~5.95
Return Loss (dB)	< -7	< -10	< -7	< -10	< -8
Gain, Peak / Average (dB)	3.7 / -3.9	4.0 / -2.2	3.8 / -2.2	2.8 / -1.6	6.1 / -1.6
Efficiency / Average (%)	41	60	60	69	70

### Mechanical Specifications

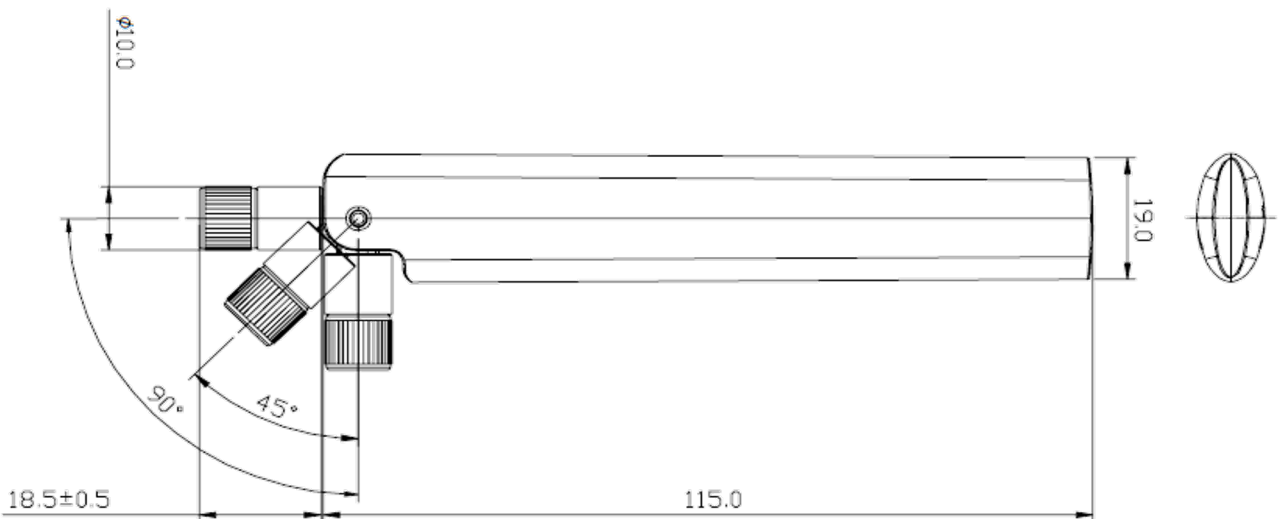
#### Environmental

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

RoHS Compliant

Part Number	Length (mm)	Weight (g)	Connector Type	Radome
ST0428-31-001-A	133.5	15.17	SMA Plug	ABS / PC+PBT
ST0428-31-501-A	133.5	15.17	RP-SMA Plug	ABS / PC+PBT

### Mechanical Drawing



SMA Plug

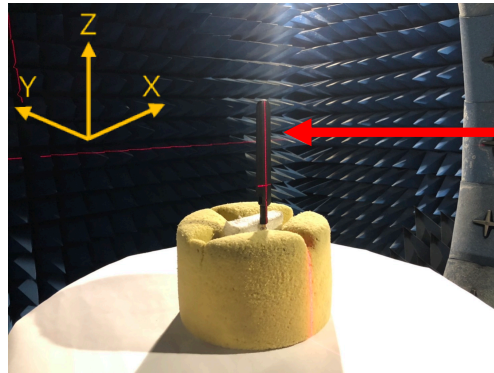
ST0428-31-001-A



RP-SMA Plug

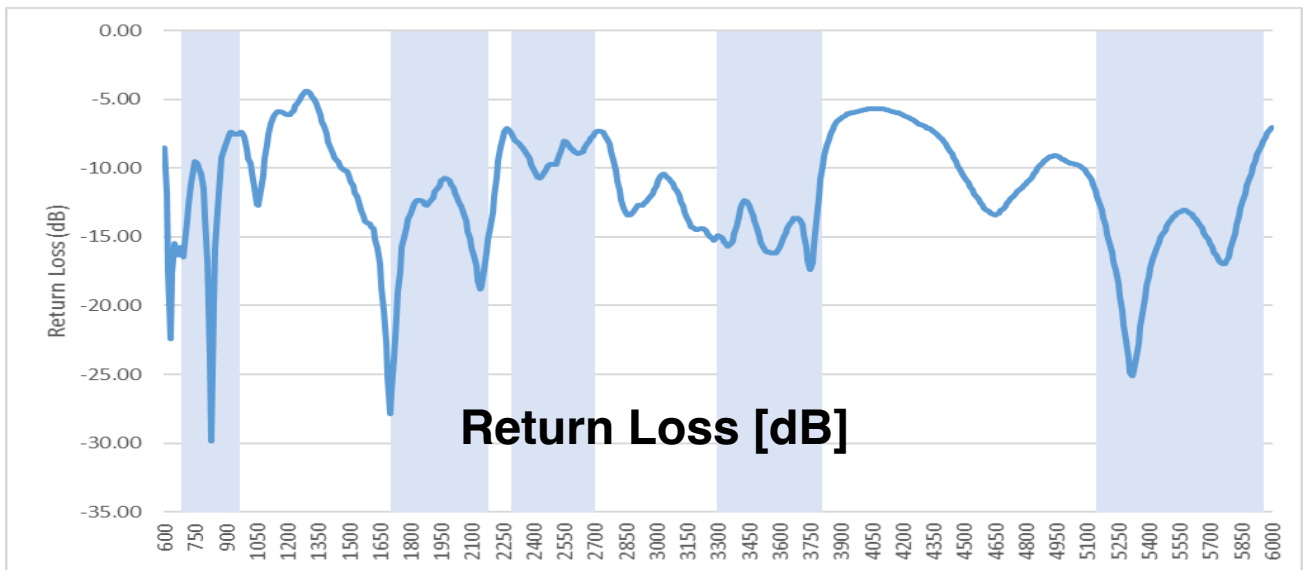
ST0428-31-501-A

## Charts in Free Space

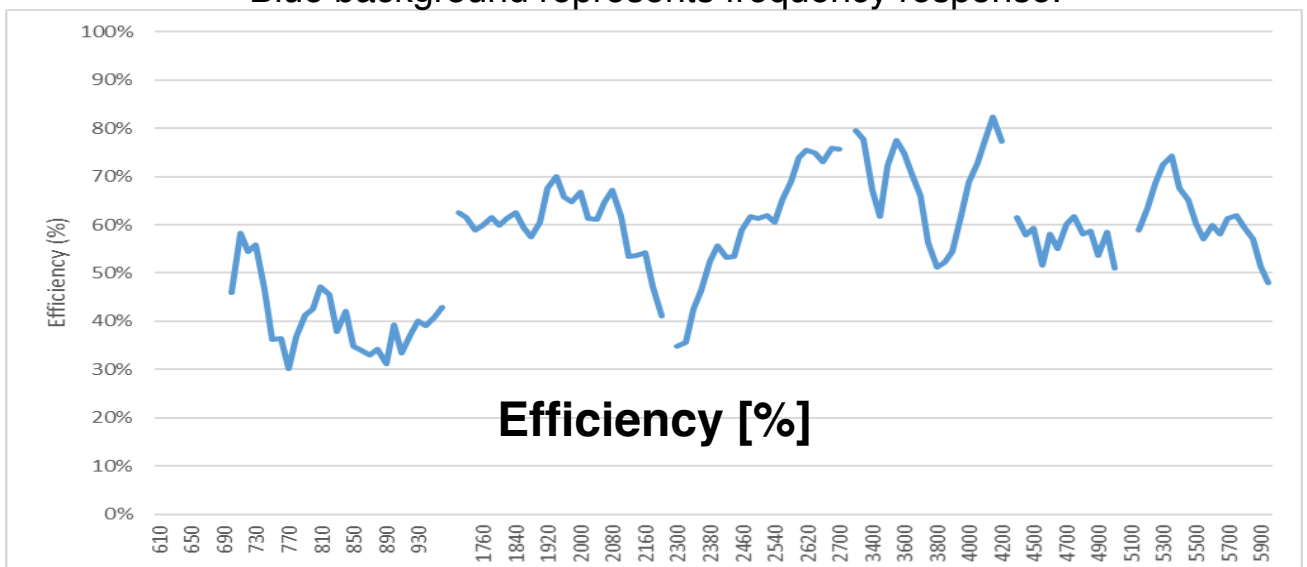


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Test setup, measurement performed in 3D Anechoic Chamber

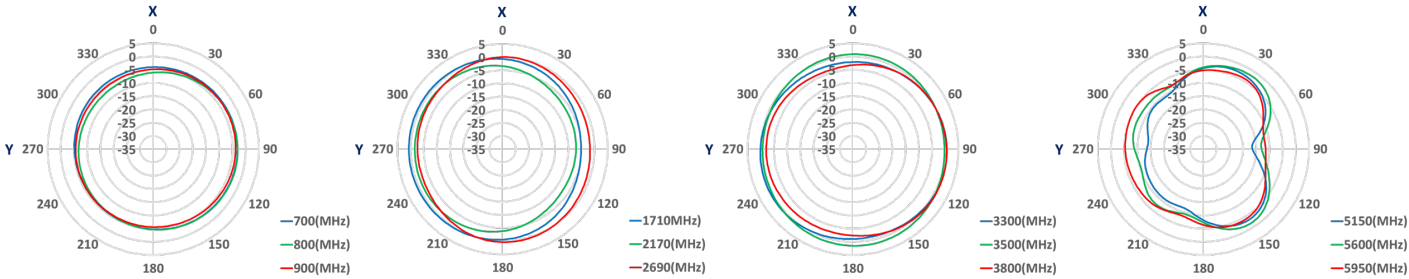


Blue background represents frequency response.

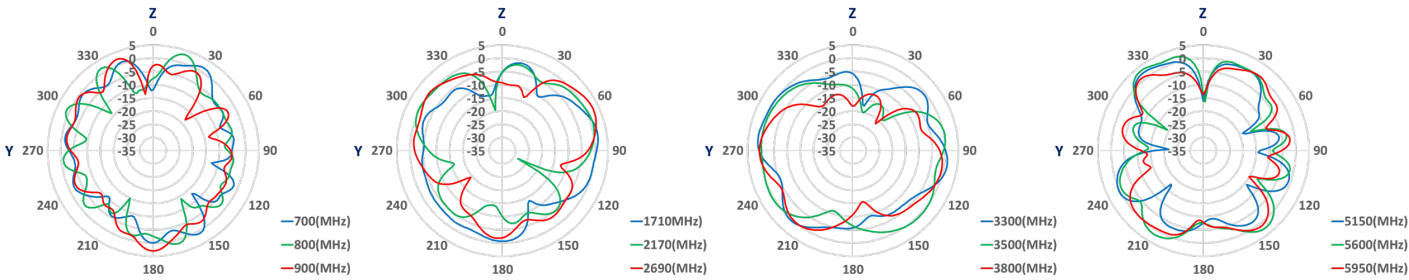


## Radiation Pattern - Free Space

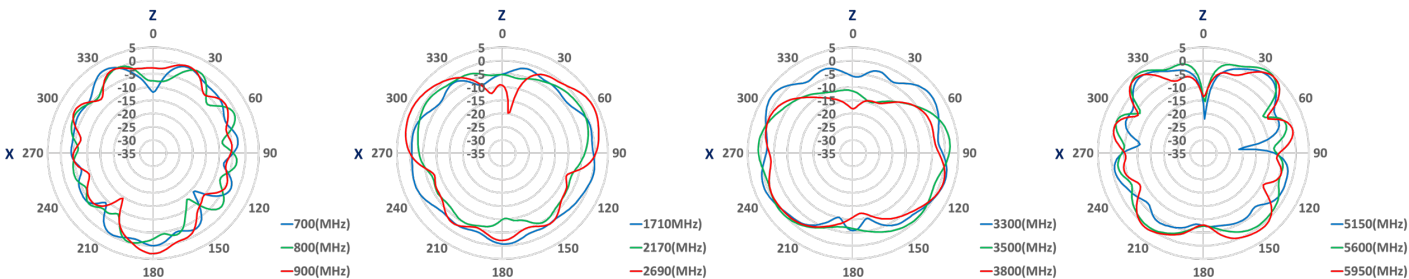
### XY - Plane



### YZ - Plane



### XZ - Plane



### Revisions

Rev	Description	Date	ECN	Approval
A	Initial Release	2022-10-25	ST0428-31-X01-A-RA00	ATC
B	RF Performance update	2023-01-02	ST0428-31-X01-A-RB00	ATC

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