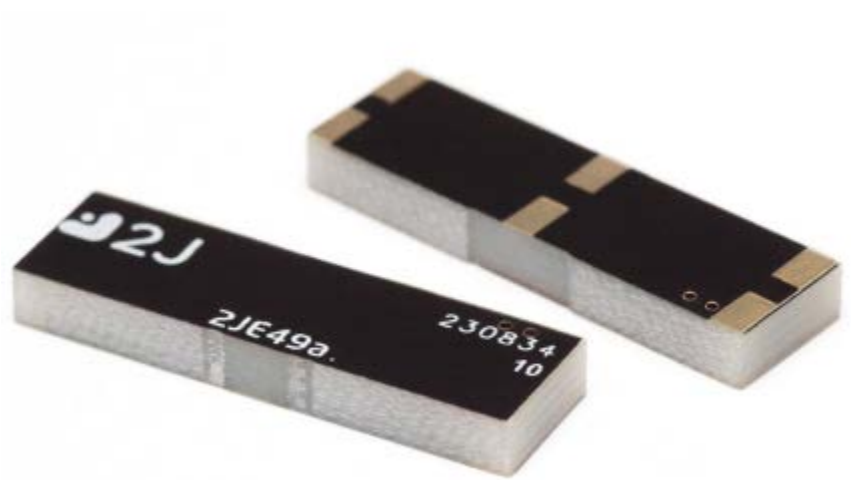


2JE49a_CU017570

868/915 MHz ISM Surface Mount



FEATURES

- Surface Mount
- High Performance
- Fiberglass Material
- Ground Plane Dependent
- ISM (863-870 and 902-928 MHz)
- 26 x 7.6 x 3 mm

ANTENNA AND ELECTRICAL SPECIFICATIONS

Parameters	868/915 MHz ISM Antenna	
Standards	ZigBee, ISM, SigFox, LoRa	
Band (MHz)	868	915
Frequency(MHz)	863-870	902-928
Return Loss (dB)	~-14.4	~-13.0
VSWR	~1.5:1	~1.6:1
Efficiency (%)	~58.3	~43.4
Peak Gain (dBi)	~4.8	~3.7
Average Gain (dB)	~-2.3	~-3.6
Impedance (Ohm)	50	
Polarization	Linear	
Radiation Pattern	Omni-Directional	
Max Input Power (W)	25	
Connector Type	Most RF Connectors (U.FL Standard)	
Cable Length	Any Cable Length (100 mm Standard)	
Cable Type	Other Cables Available (1.37 mm Micro Coax Standard)	

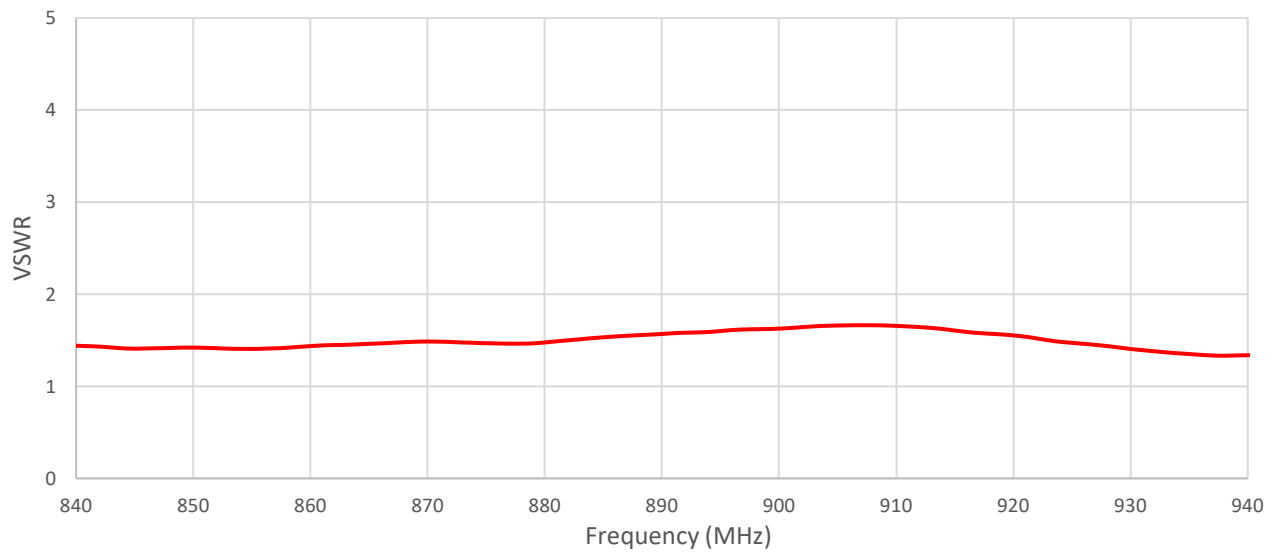
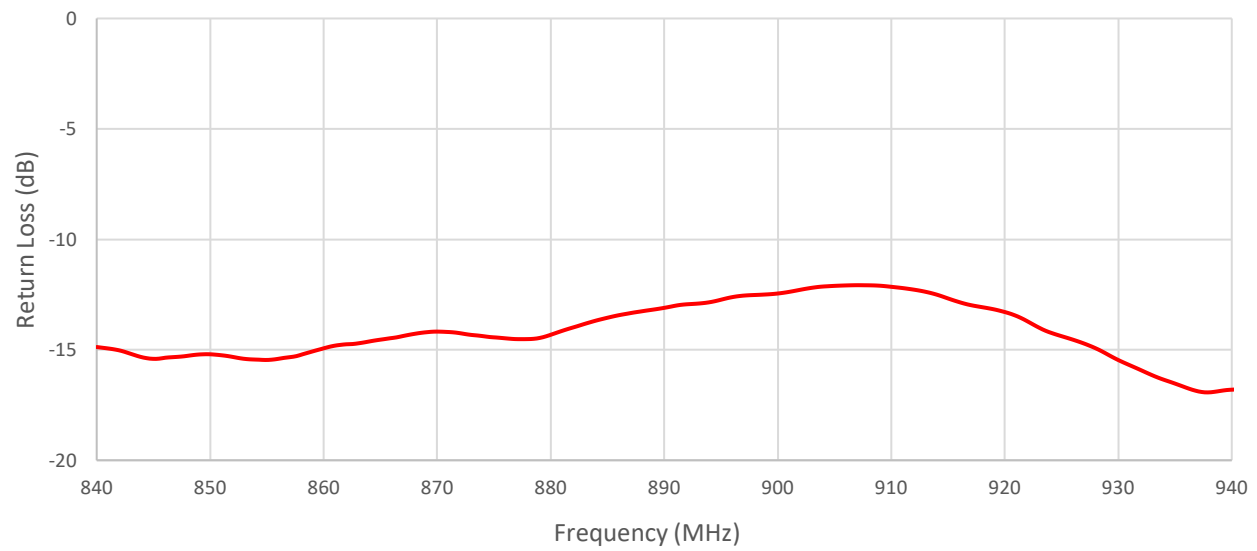
Antenna Measurement Conditions

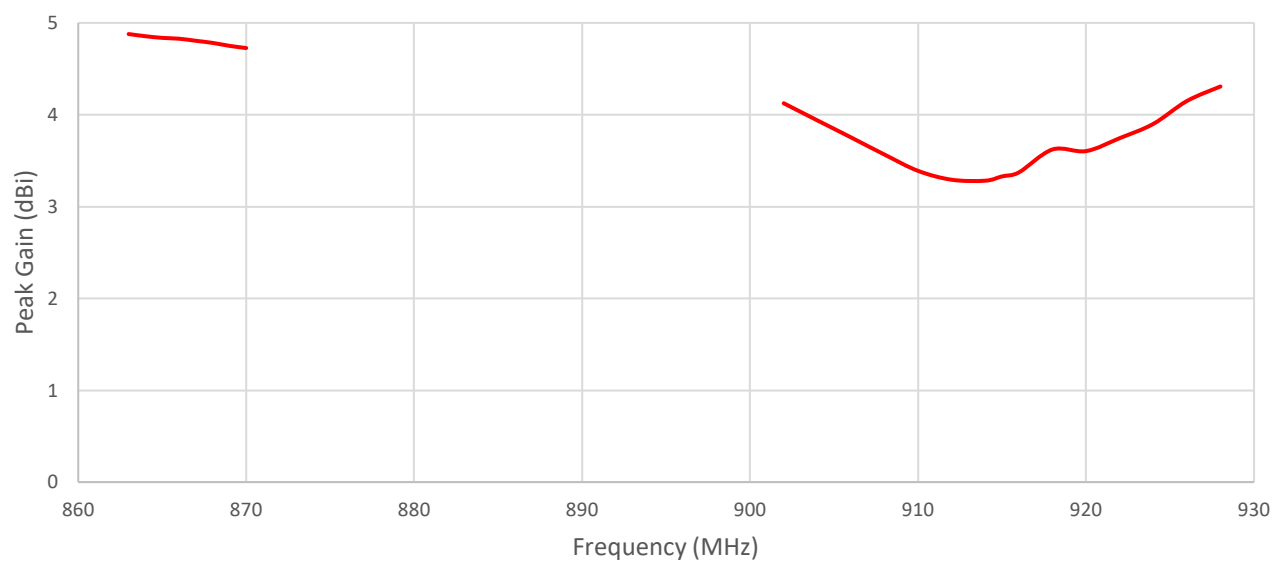
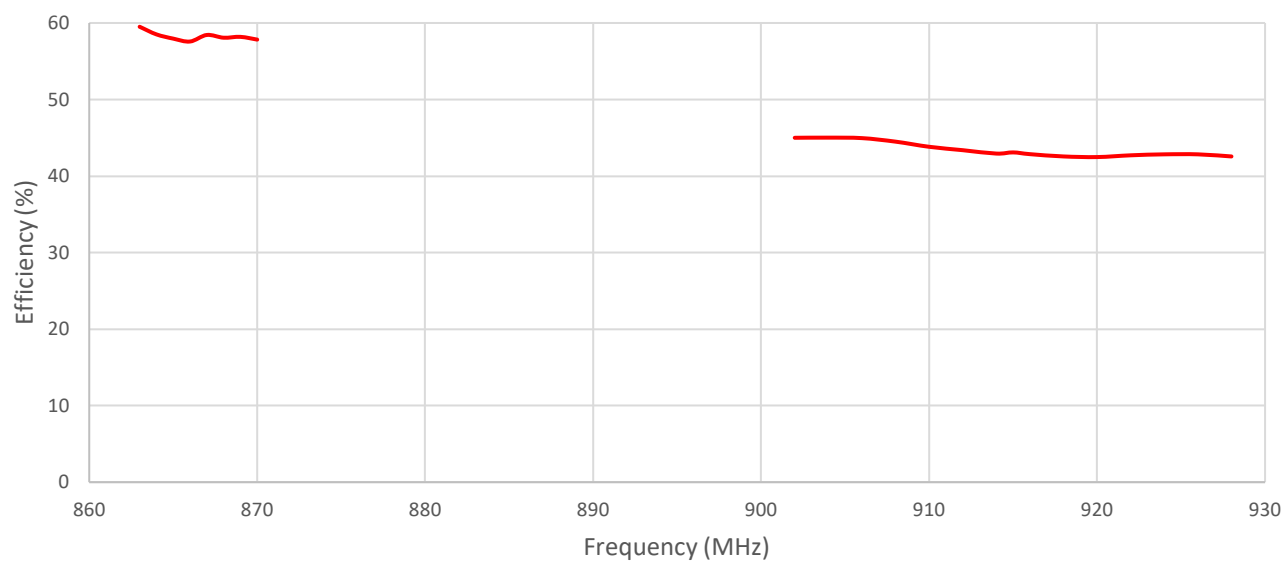
Mounted on Node Device from Somewear[®]
Measured in Certified CTIA 3D Anechoic Chamber

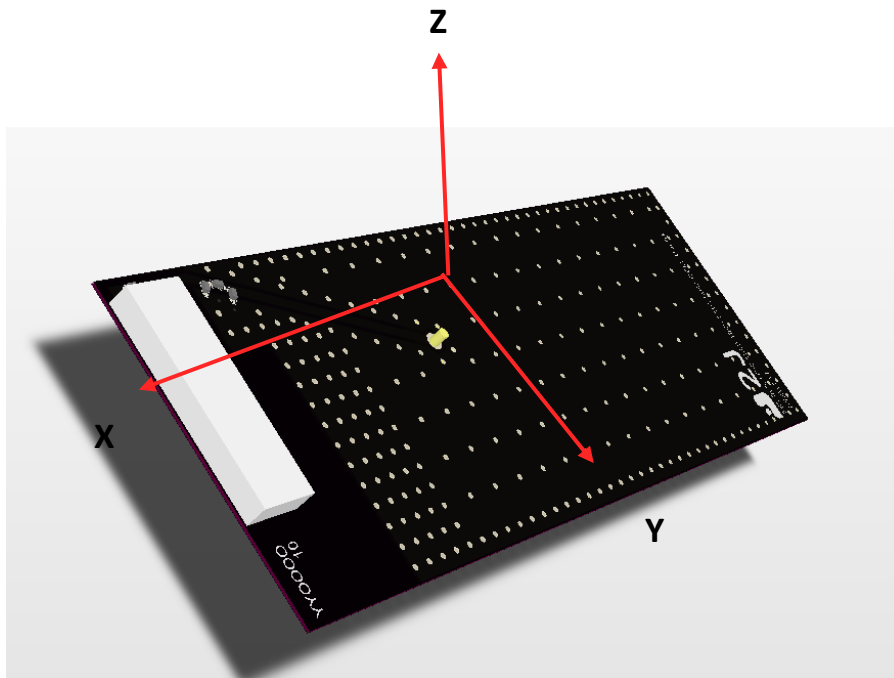
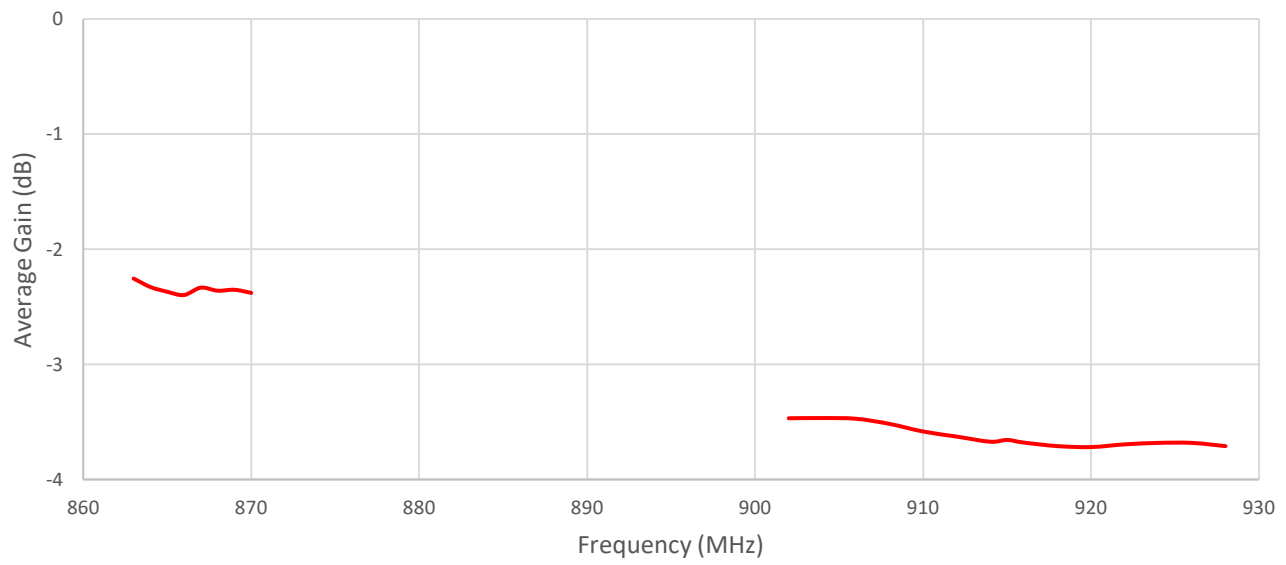
MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

Specifications	2JE49a_CU017570
Mounting Type	Surface Mount
Dimensions (mm)	26 x 7.6 x 3
Material	Fiberglass
Operating Temperature (C)	-40 to +85
Storage Temperature (C)	-40 to +85
Storage Relative Humidity (%)	Up to 93 at 30 C
Substance Compliance	RoHS
Typical Shear Force Test	50Kgf according to IEC62137-1-2:2007 Test Report No.: TRSF-2JSI113100002-01

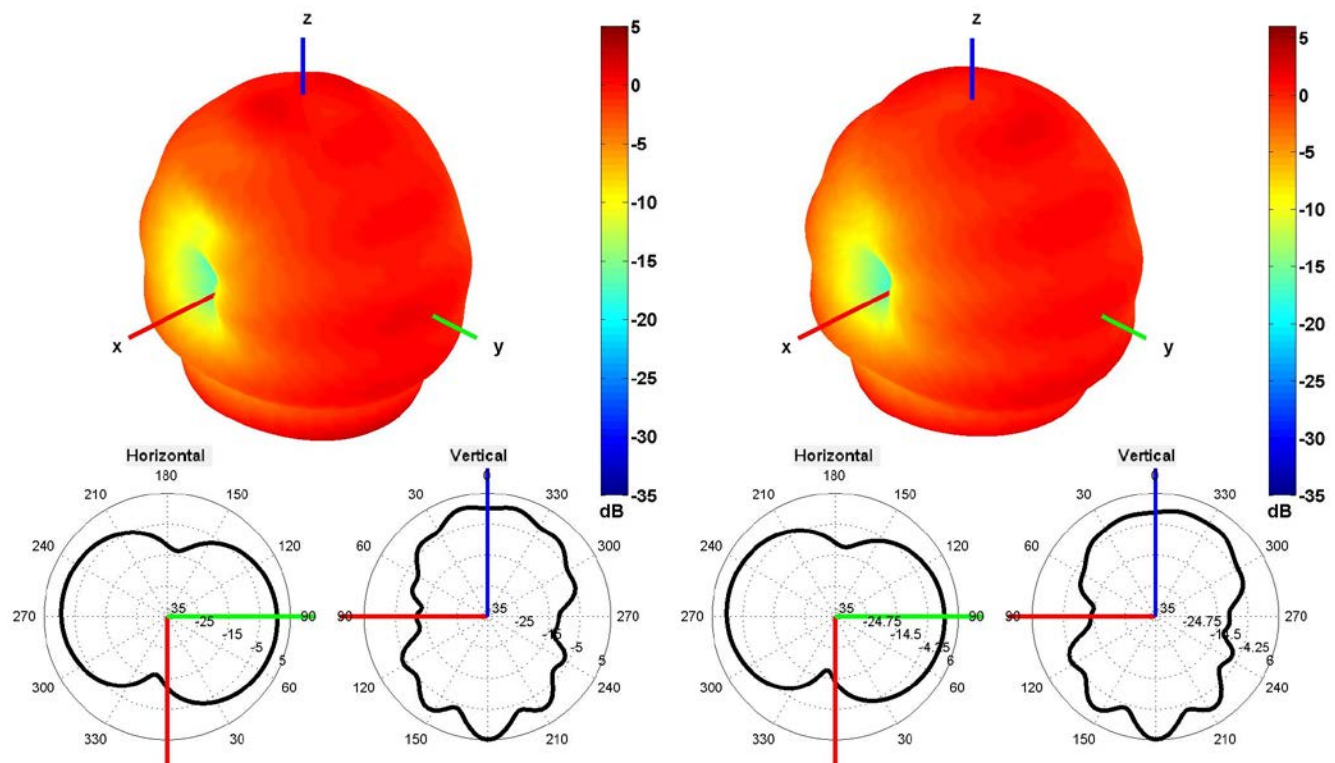
ANTENNA PARAMETERS





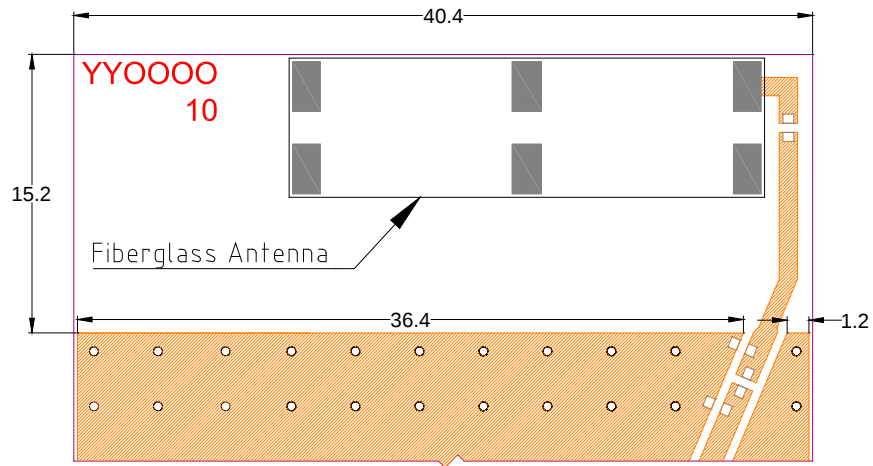


RADIATION PATTERN REFERENCE



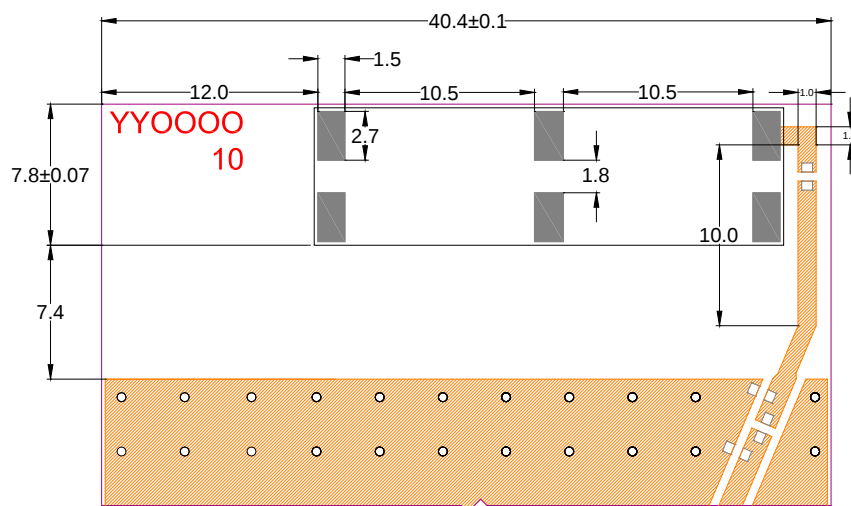
868 and 915 MHz RADIATION PATTERN

PCB LAYOUT



- Solder Region
- Copper Region
- Copper-Free Region

Minimum area required for antenna integration 40.4 x 15.2mm



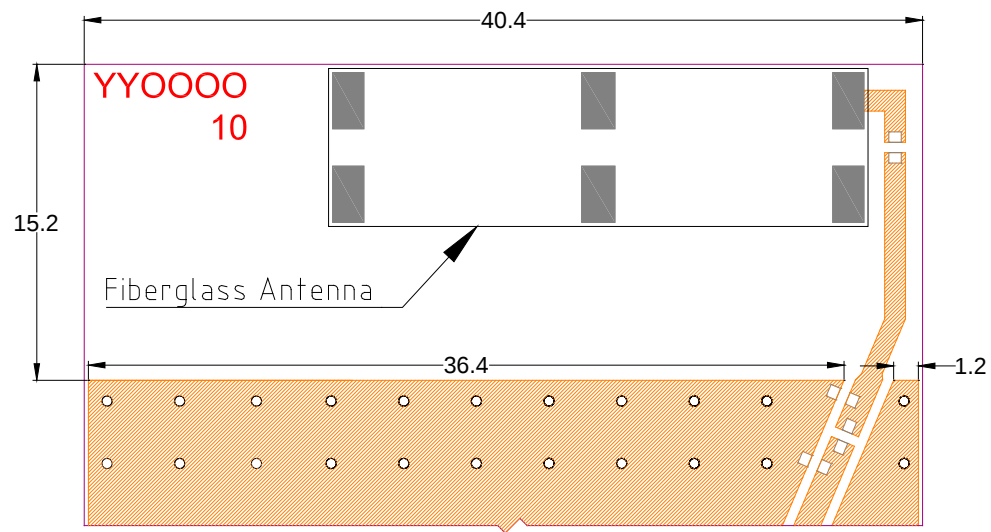
Tolerance of Linear Dimensions
(unless otherwise indicated):

Dimension (mm)	Tolerance
0.5-6	+/-0.05
6-30	+/-0.07
30-50	+/-0.1

- Solder Region
- Copper Region
- Copper-Free Region

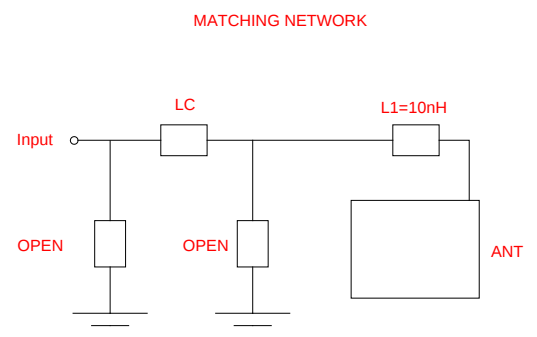
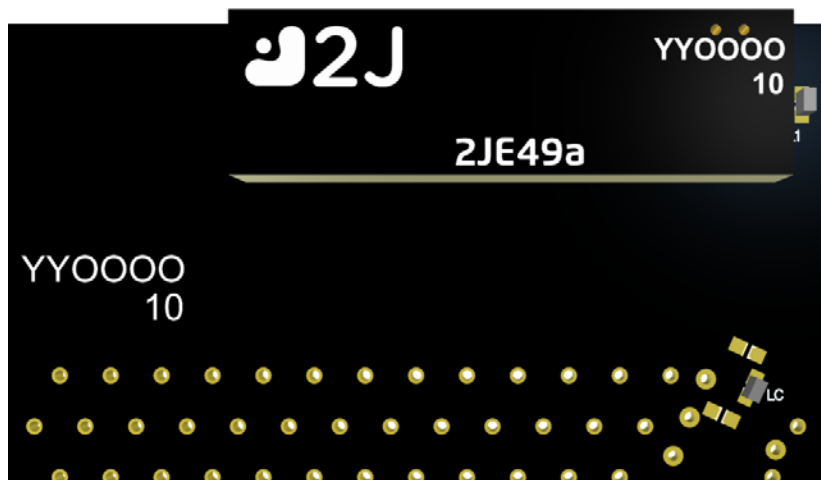
Layout dimensions for antenna integration (mm)

MATCHING NETWORK



- Solder Region
- Copper Region
- Copper-Free Region

Matching network drawing



3D View of matching components and recommended values (LC = 00ohm resistor)

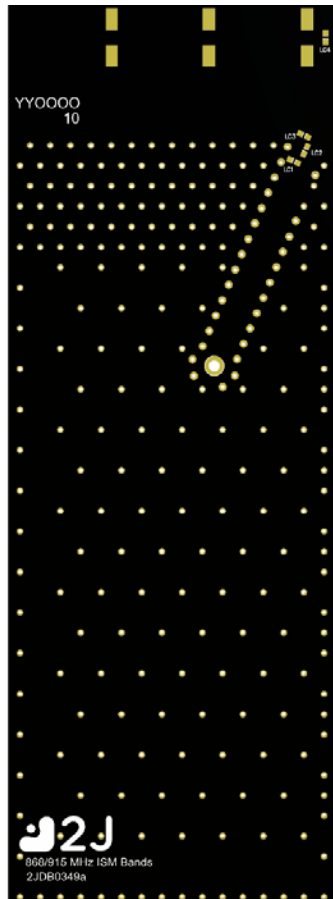
EVALUATION BOARD

110.4mm x 40.4mm

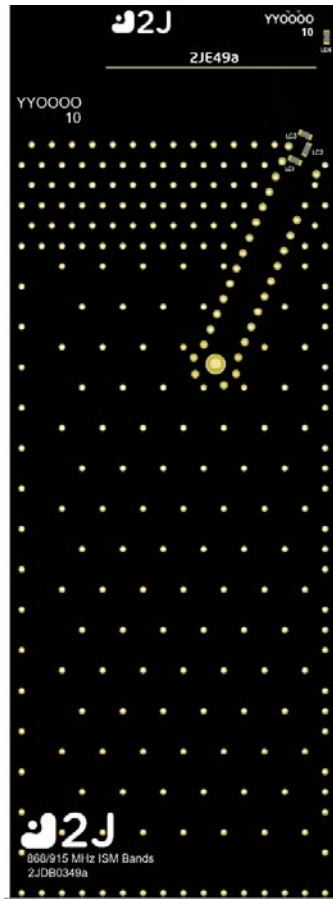
110.7mm x 40.4mm

110.4mm x 40.4mm

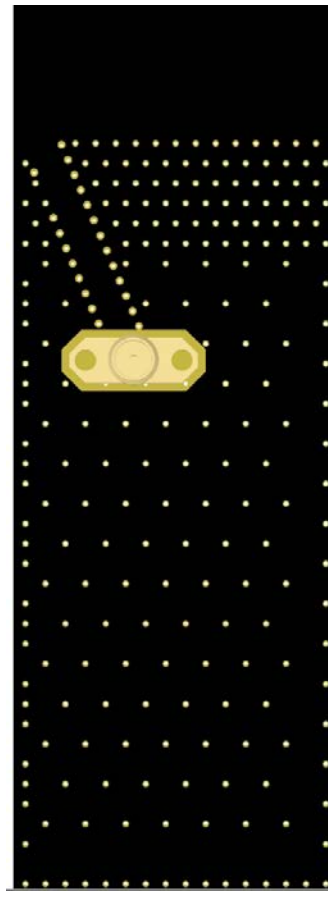
110.4mm x 40.4mm (PCB: 0.8mm,
Antenna: 3mm,
Connector: 9.5mm)



Front View without Antenna



Front View with Antenna



Back View

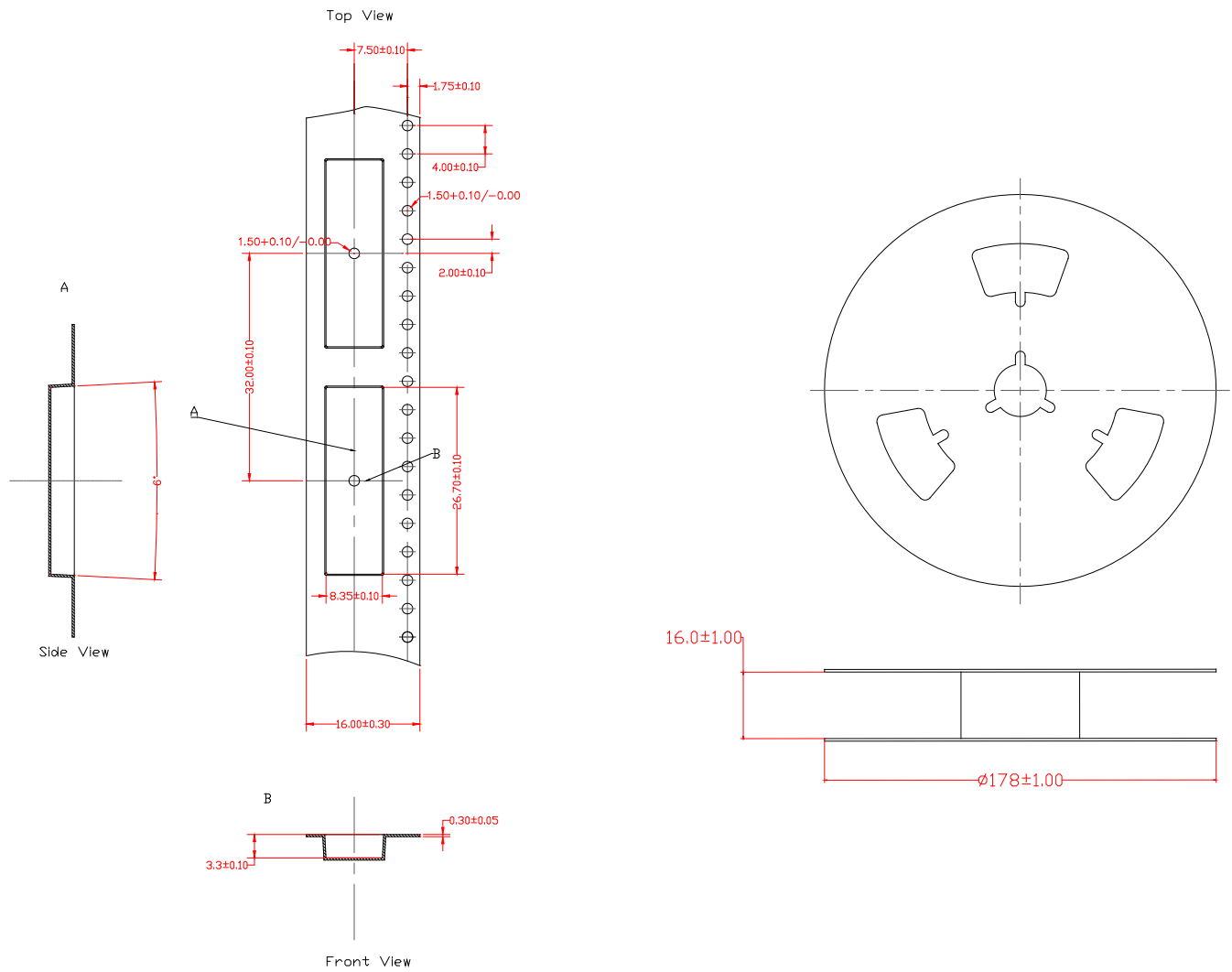


Side View

PACKAGING

PACKAGING SPECIFICATION	
Antenna	2JE49a
REEL	
Max Quantity per Reel	140
CARTON	
Reels per Carton	10
Max Quantity per Carton	1,400
Carton Dimensions (cm)	40.5 x 23 x 16.5
Carton Weight (Kg)	3.3
PALLET	
Max Cartons per Pallet	70
Cartons per Layer	10
Number of Layers	7
Max Quantities per Pallet	98,000
Total Cartons Dimensions (cm)	115 x 81 x 115.5
Total Cartons Weight (Kg)	231
Pallet size and weight not included above.	
Typical Pallet Size (cm)	120 x 100 x 14.4
Typical Pallet Weight (Kg)	5-25

TAPE AND REEL INFORMATION



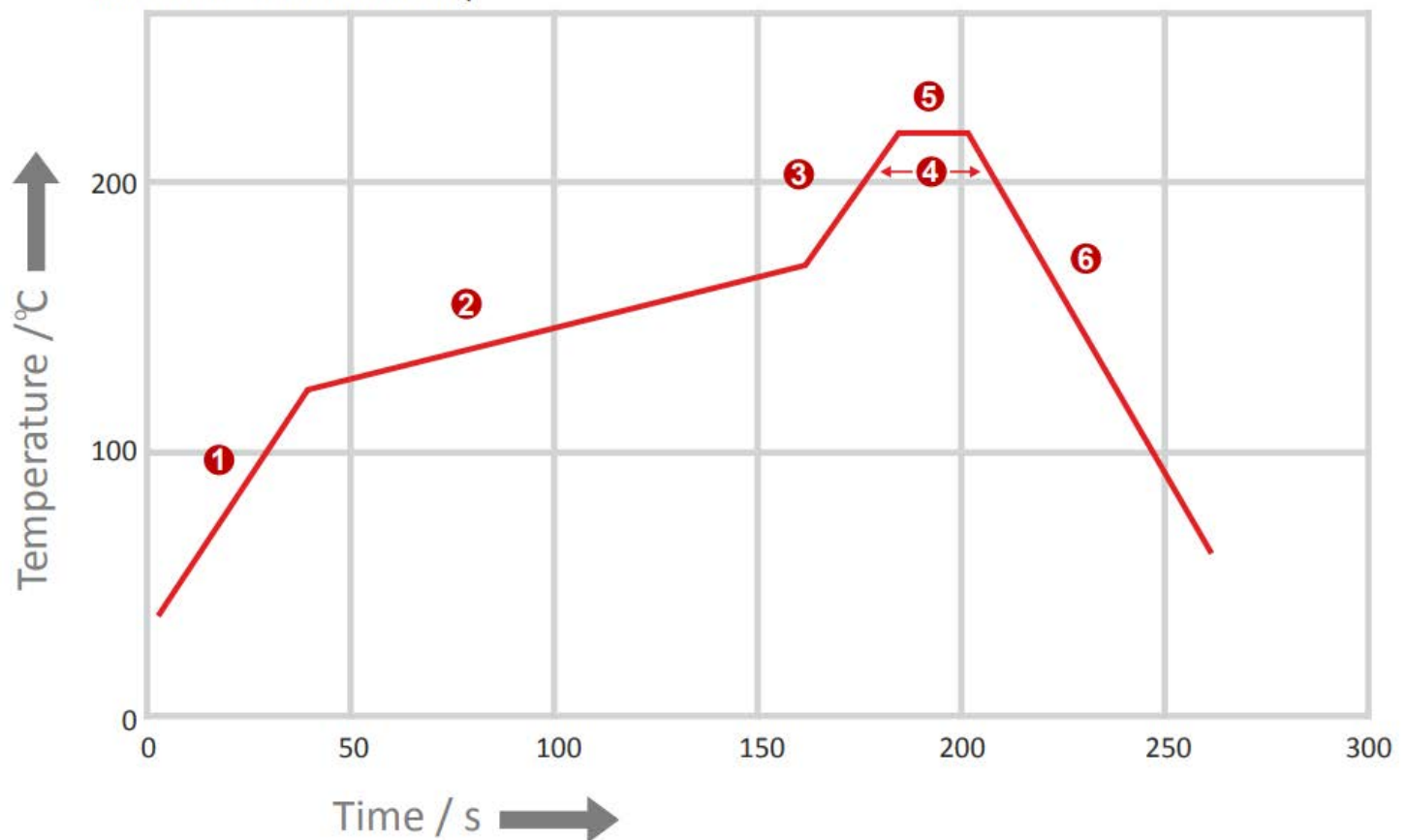
Tape and Reel Specifications

REFLOW TEMPERATURE PROFILE

Minimum Recommended Reflow Profile

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 30 sec
5	Peak temperature in reflow	230 °C for 10 seconds
6	Temperature gradient in cooling	Max -5 °C/s

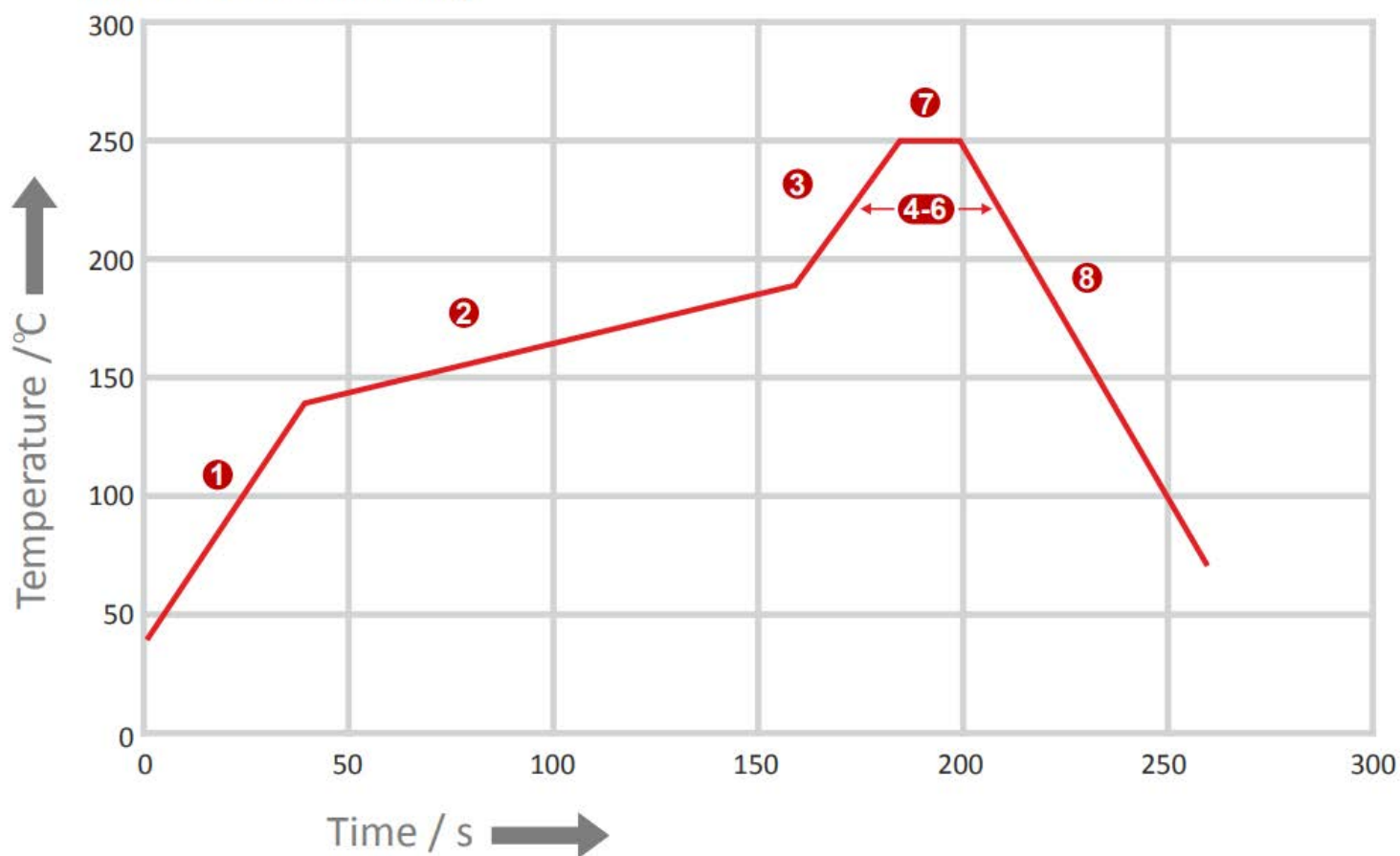
Not to scale. For reference only.



Maximum Recommended Reflow Profile

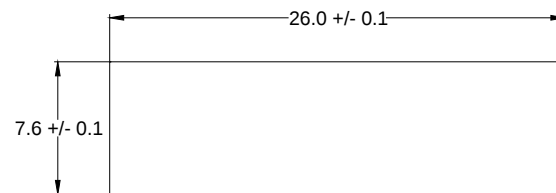
	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 60 sec
5	Time above 230 °C	Max 50 sec
6	Time above 250 °C	Max 10 sec
7	Peak temperature in reflow	260 °C for 5 seconds
8	Temperature gradient in cooling	Max -5 °C/s

Not to scale. For reference only.



ANTENNA DRAWINGS

Top View



Front View



Bottom View



Back View



Dimensions for fiberglass antenna 26 x 7.6 x 3 mm ± 0.2 mm

ANTENNA IMAGES

