

# **SMD CERAMIC ANTENNA**

## **Data Sheet**

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# **CS-2450-31-A**

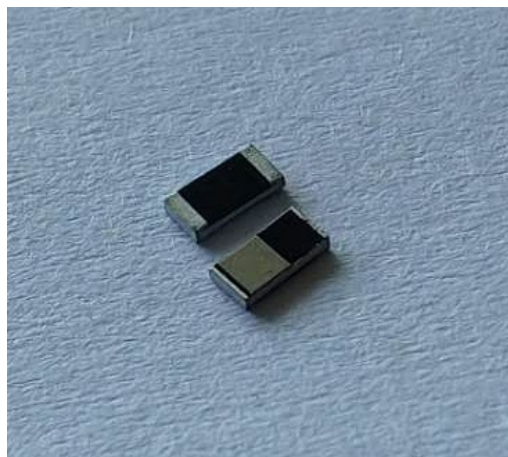
For 2400-2484MHz  
3.2x1.6mm [EIA1206]

### FEATURES

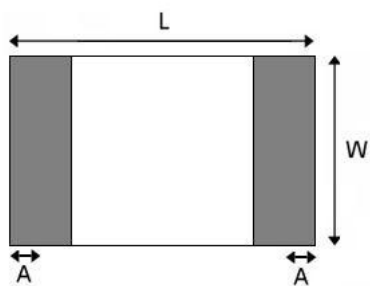
- Light weight,compact
- Wide bandwidth,lowcost
- Built-in antenna with high gain

### APPLICATIONS

- Bluetooth
- IEEE802.11g/b
- Zigbee systems,etc...



### SHAPES AND DIMENSIONS Dimensions in mm



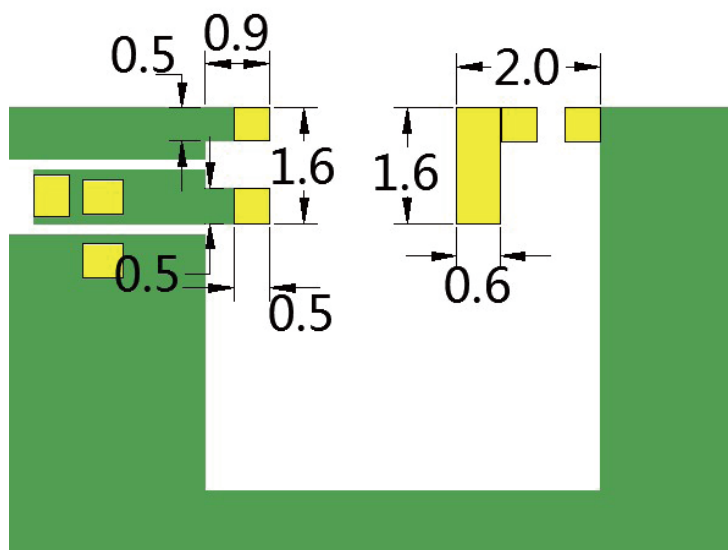
| L         | W         | A         | H         |
|-----------|-----------|-----------|-----------|
| 3.10±0.10 | 1.55±0.10 | 0.40±0.20 | 0.50±0.10 |

## Electrical Characteristics per line(TA= 25°C)

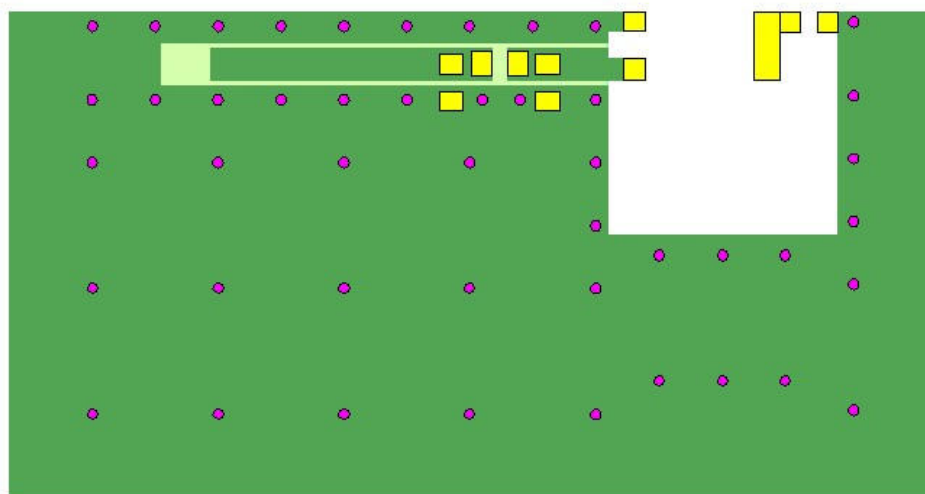
| Parameter      | Specification | Units    |
|----------------|---------------|----------|
| Frequency Band | 2400~2483     | MHz      |
| Polarization   | Line          |          |
| Peak Gain      | 2.67          | dBi      |
| Efficiency     | 72.30         | %        |
| Impedance      | 50            | $\Omega$ |

## ■ Part Numbering System

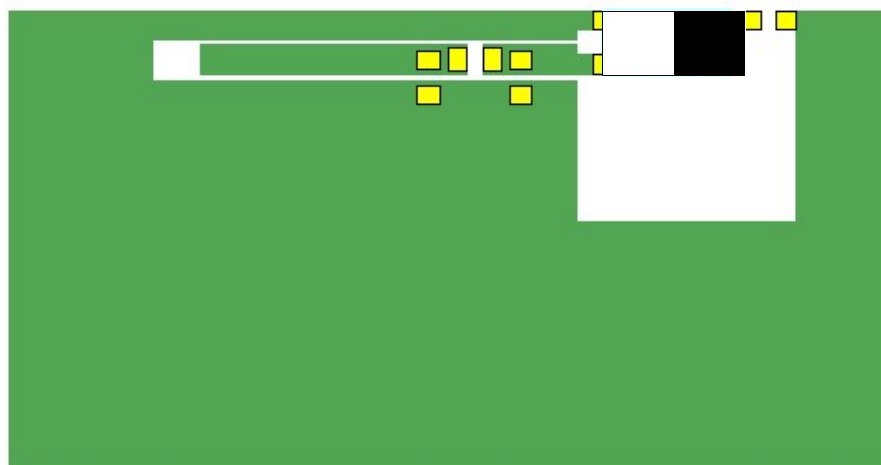
CS      -      2450      -      31      -      A  
 Material      Frequency      Size      Type



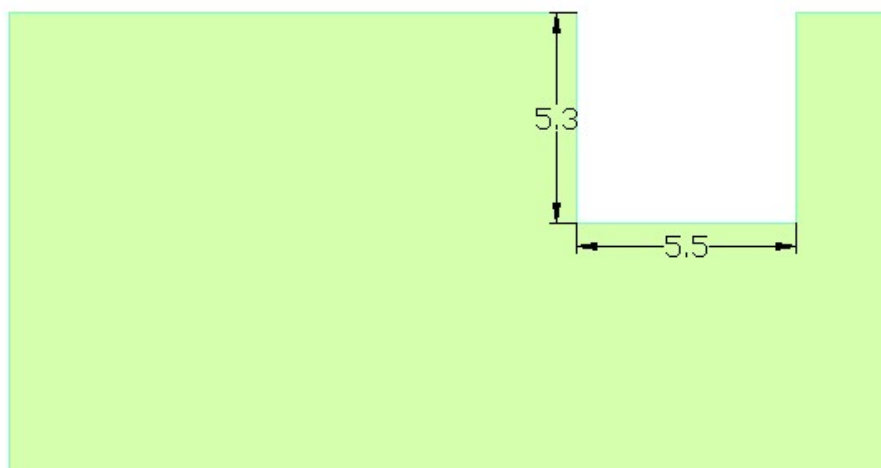
## EVALUATION BOARD



- PAD
- 底层铺铜
- 顶层铺铜
- 打孔



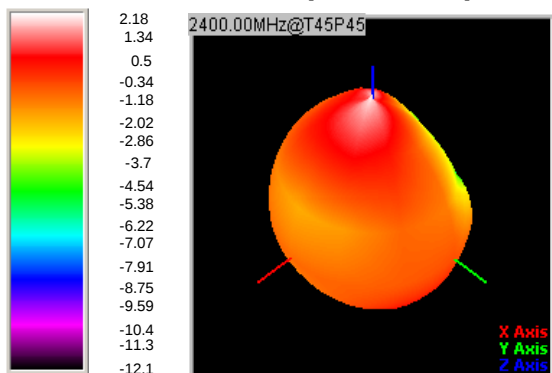
- 天线
- PAD
- 底层铺铜
- 顶层铺铜



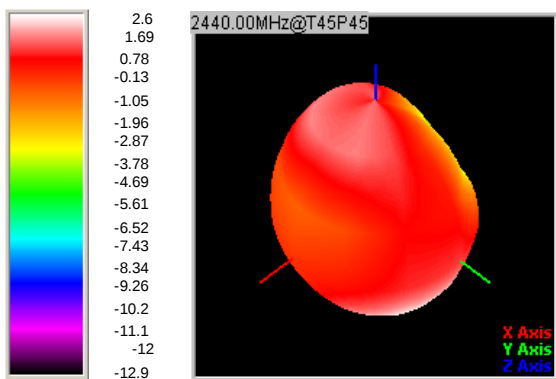
### RADIATION PATTERNS

#### 2.4GHz WLAN BAND

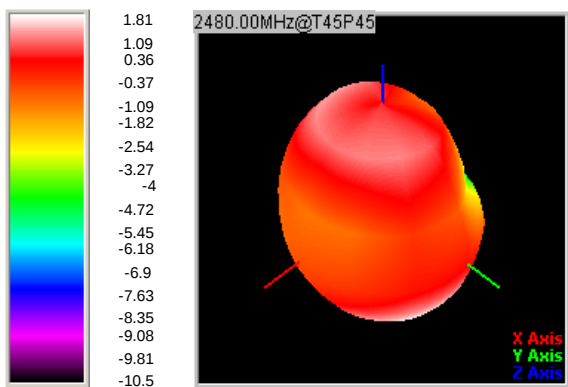
##### 3D Gain Pattern (2400 MHz)



##### 3D Gain Pattern (2440 MHz)



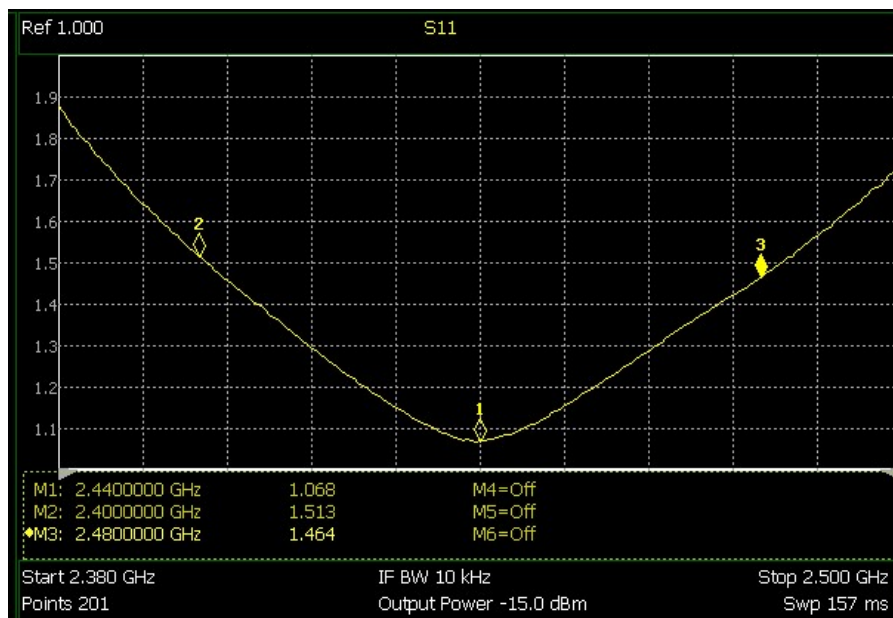
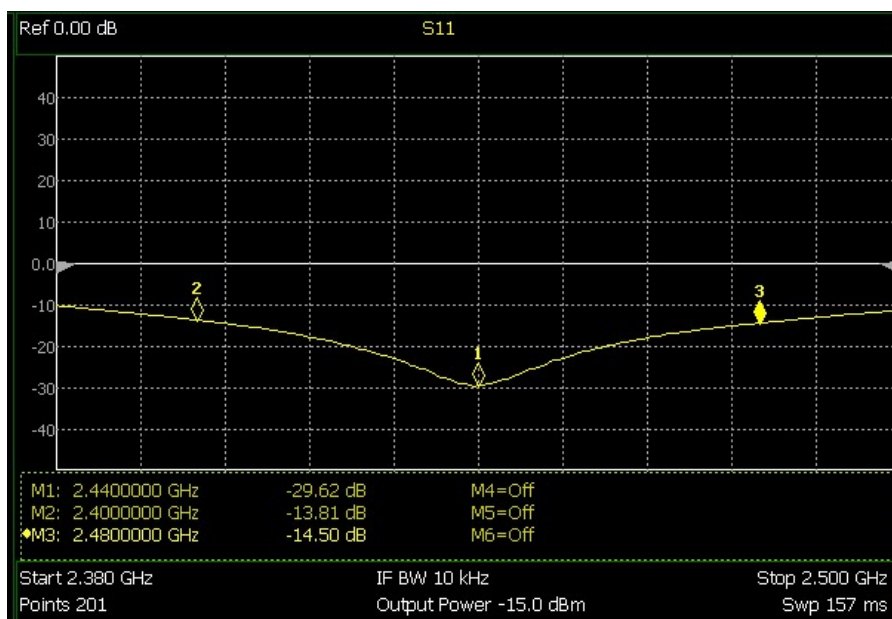
##### 3D Gain Pattern (2480 MHz)



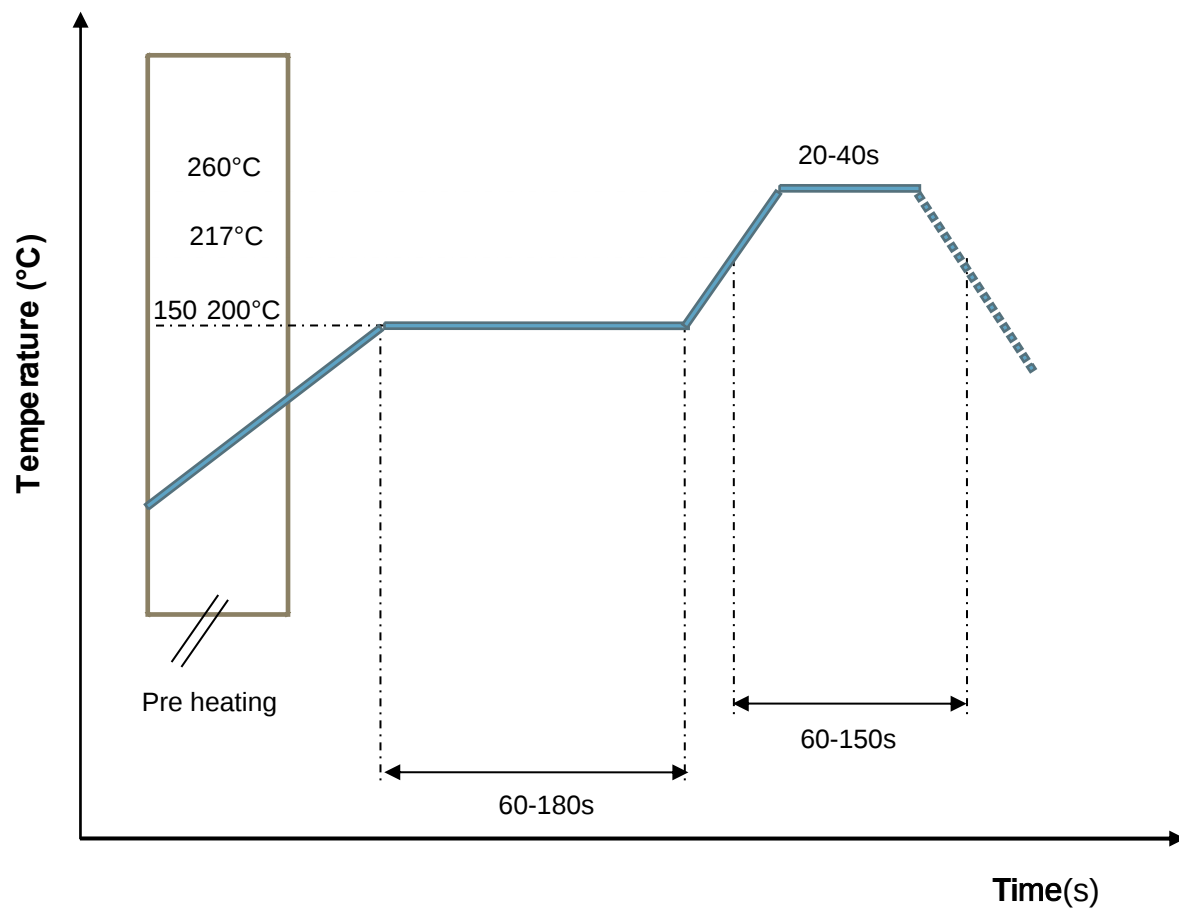
| Freq (MHz) | Effi (%) | Gain (dBi) |
|------------|----------|------------|
| 2400       | 74.8     | 2.67       |
| 2410       | 72.59    | 2.54       |
| 2420       | 71.6     | 2.25       |
| 2430       | 70.29    | 2.07       |
| 2440       | 71.23    | 2.16       |
| 2450       | 72.3     | 2.37       |
| 2460       | 71.04    | 2.52       |
| 2470       | 65.95    | 2.35       |
| 2480       | 64.42    | 2.42       |
| 2490       | 62.59    | 2.31       |
| 2500       | 60.01    | 2.07       |

### FREQUENCY CHARACTERISTICS

#### EFFICIENCY AND VSWR

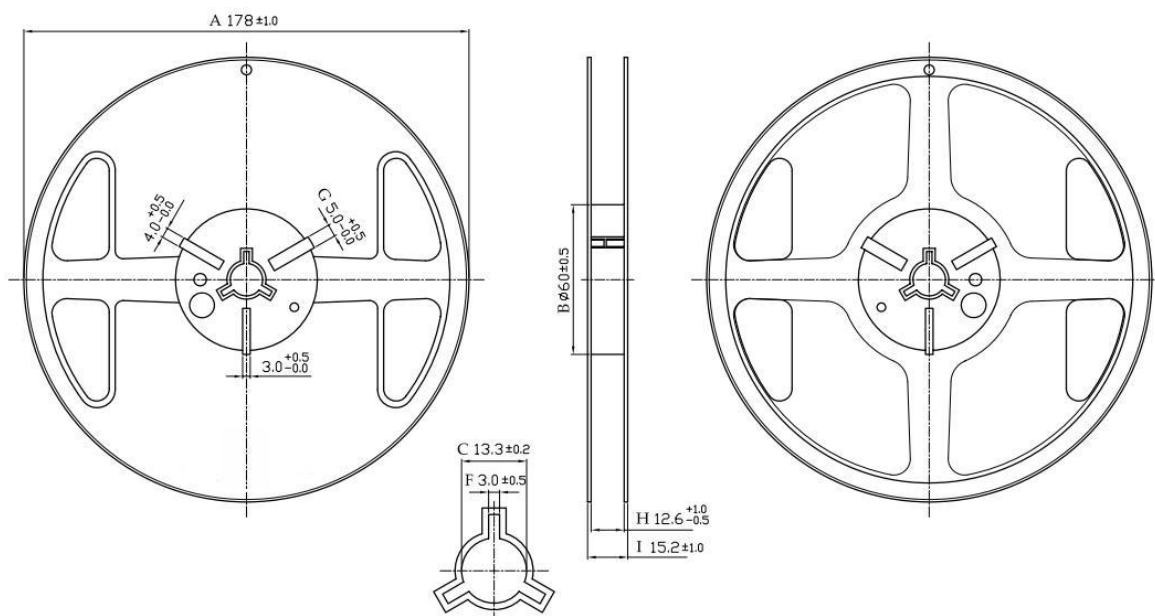


■ RECOMMENDED REFLOW PROFILE

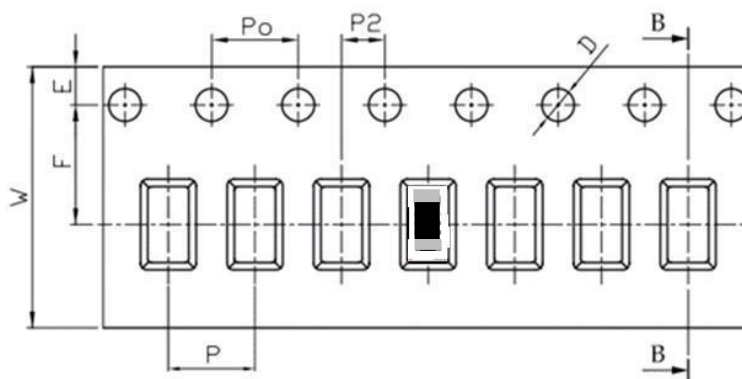


## ■ PACKAGING STYLE

### □ REEL DIMENSIONS



### □ TAPE DIMENSIONS



| Feature | Specifications | Tolerances     |
|---------|----------------|----------------|
| W       | 8.00           | ±0.30          |
| P       | 4.00           | ±0.10          |
| E       | 1.75           | ±0.10          |
| F       | 3.50           | ±0.10          |
| P2      | 2.00           | ±0.10          |
| D       | 1.50           | +0.10<br>-0.00 |
| P0      | 4.00           | ±0.10          |
| 10P0    | 40.00          | ±0.20          |

Typing Quantity: 5000 pieces per 7" reel

## Order Information

| Device       | Package | Net Weight | Carrier   | Quantity | HSF Status     |
|--------------|---------|------------|-----------|----------|----------------|
| CS-2450-31-A | 3216    | 0.0089g    | Tape&Reel | 5000pcs  | RoHS compliant |

## Revision history

| Date      | Revision | Description of changes         |
|-----------|----------|--------------------------------|
| 2018-11-5 | 1.0      | First Version                  |
| 2022- 8-5 | 1.1      | Update the package information |
|           |          |                                |

The contents of this data sheet are subject to change without notice.  
Please confirm the specifications and delivery conditions when placing your order.  
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