

# 868 MHz Ceramic Chip Antenna



ACAG1204-868-T



12.0 x 4.0 x 1.6mm  
RoHS/RoHS II Compliant  
MSL = 1

## FEATURES

- Uses Low Temperature Co-Fired Ceramic (LTCC) Technology
- Gain of 2.63 dBi
- Omni-directional
- VSWR of  $\leq 2.0$

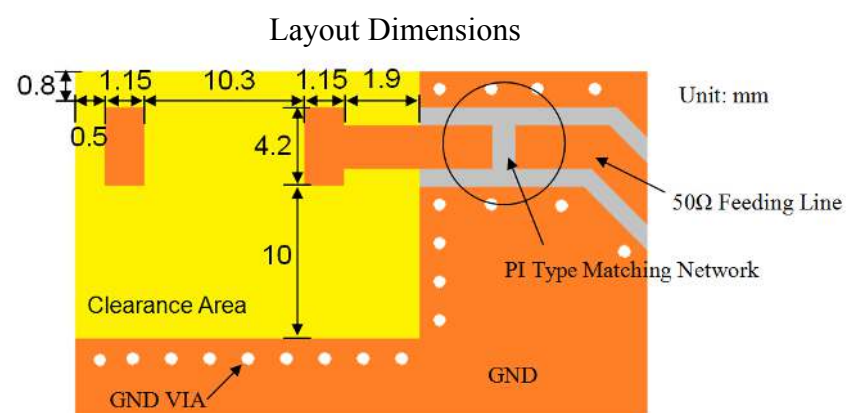
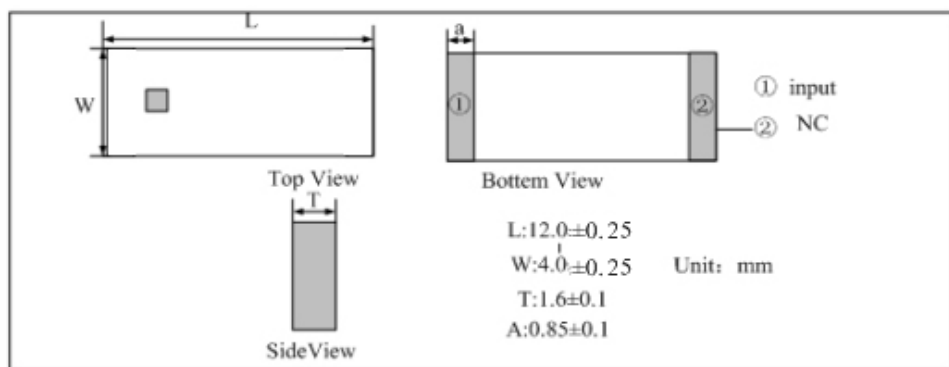
## APPLICATIONS

- ISM applications
- LORA
- Sigfox
- RFID

## ELECTRICAL SPECIFICATIONS

| Item                        | Specification    |
|-----------------------------|------------------|
| Frequency                   | 868MHz           |
| Bandwidth                   | 20MHz typ        |
| VSWR                        | $\leq 2.0$       |
| Impedance                   | 50 $\Omega$      |
| Gain                        | 2.63dBi          |
| Azimuth                     | Omni-directional |
| Polarization                | Linear           |
| Operating Temperature range | -40°C ~+ 85°C    |

## DIMENSIONS



Unit: mm

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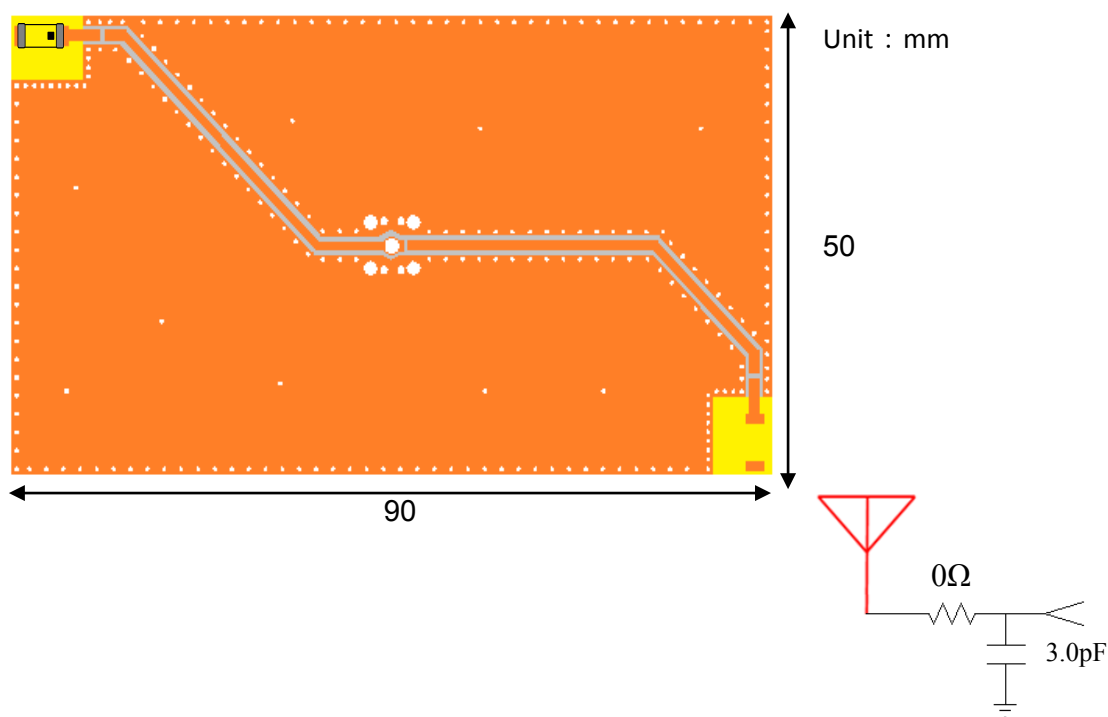


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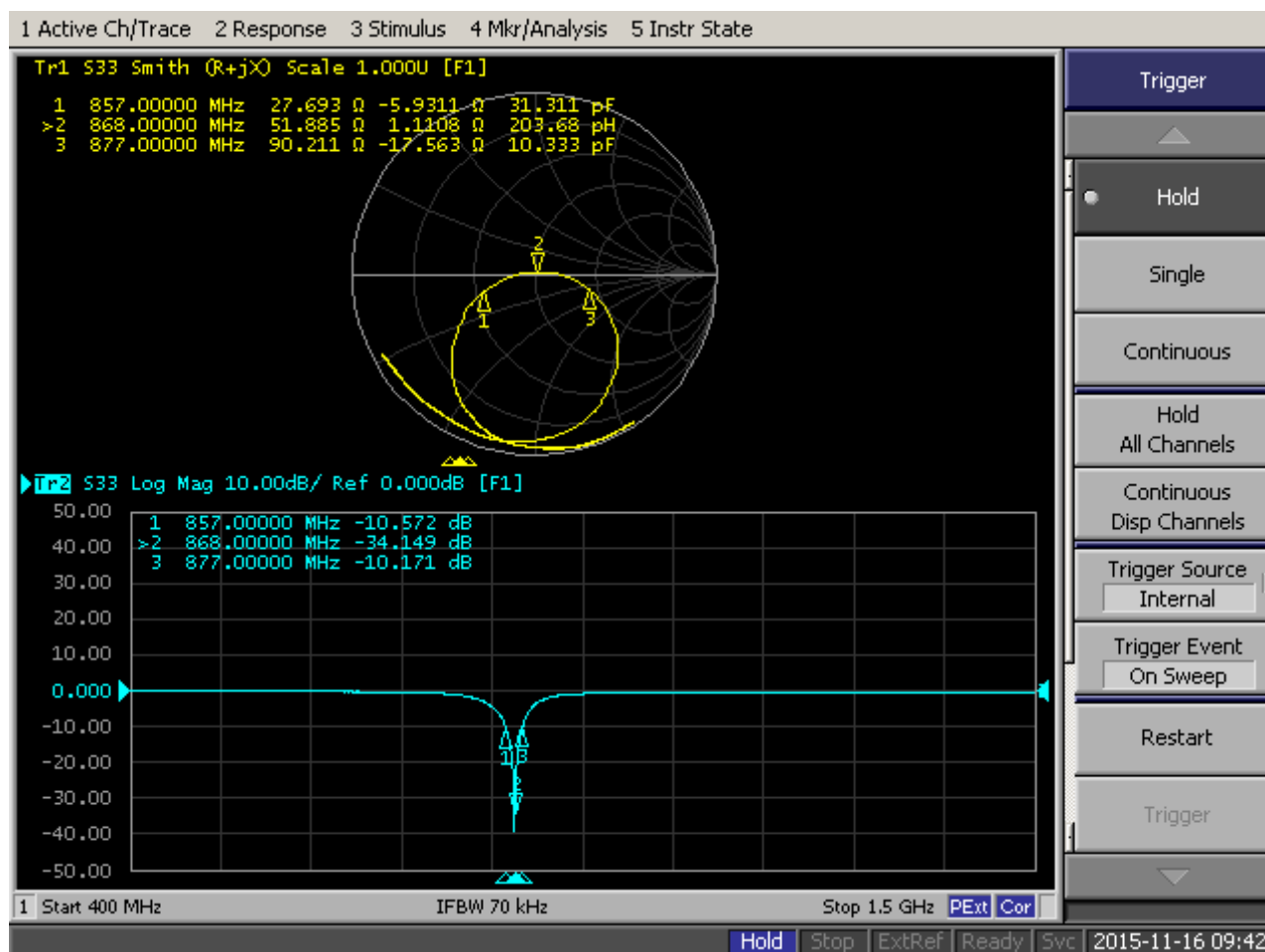


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## EVALUATION BOARD AND MATCHING CIRCUITS



## ANTENNA RESPONSE – SMITH CHART AND RETURN LOSS S11



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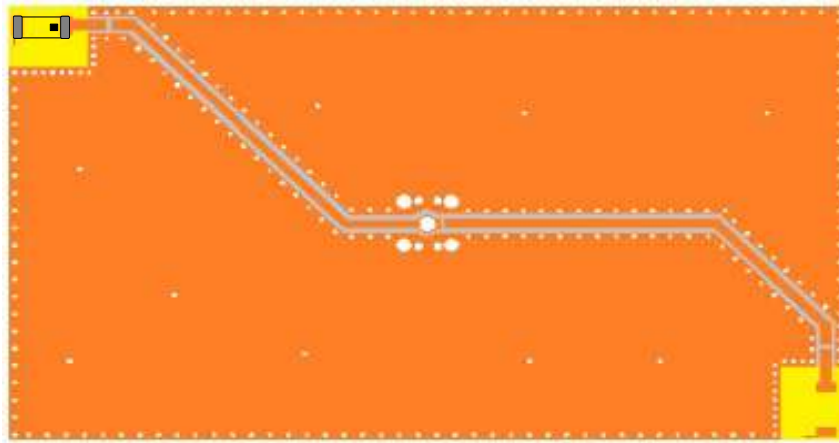
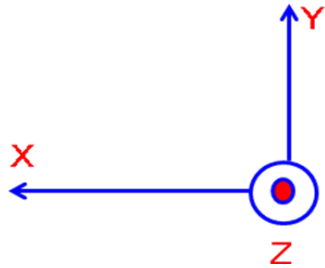


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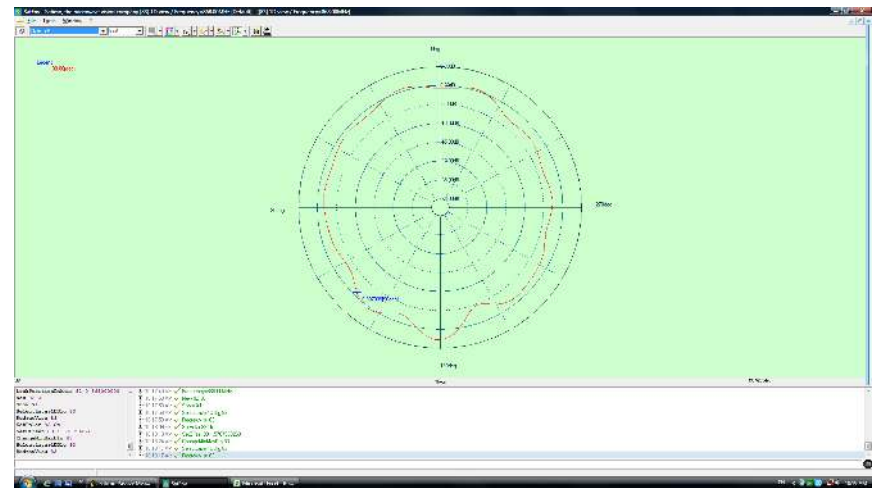
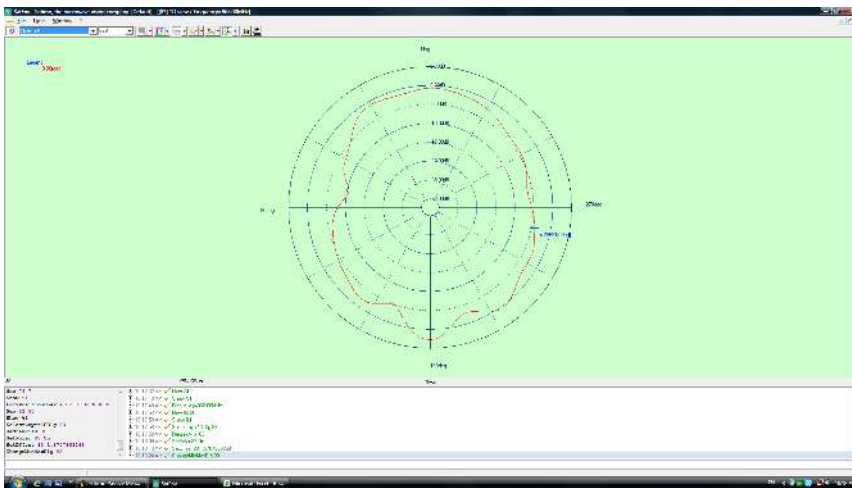
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## RADIATION PATTERNS

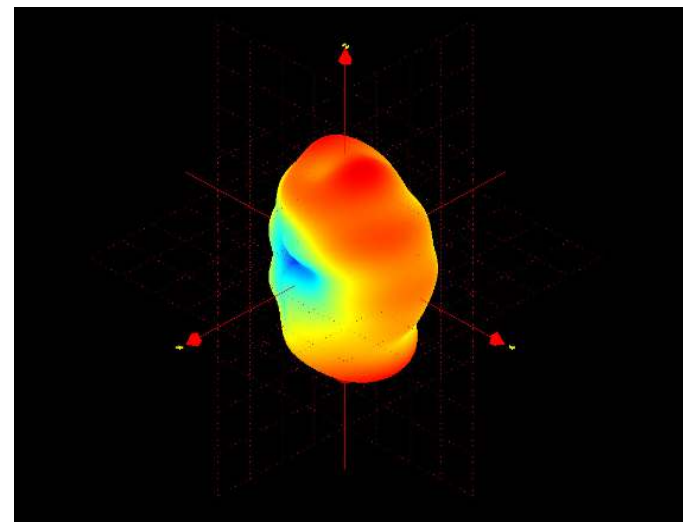
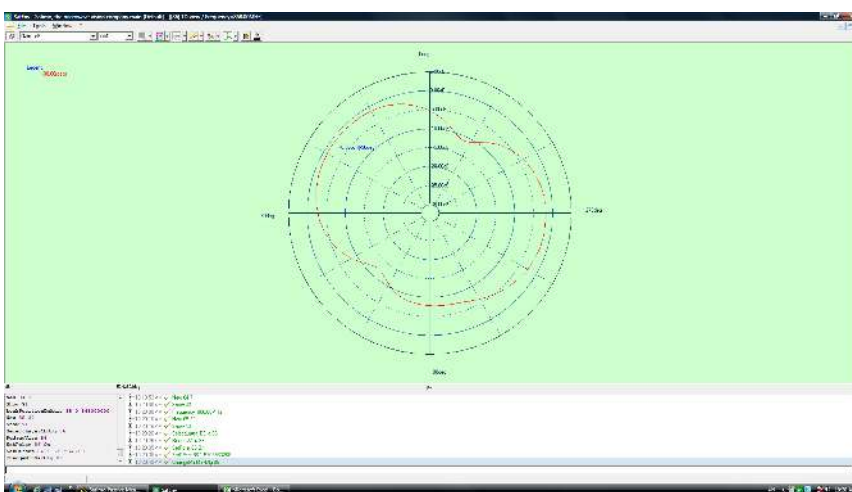


X-Z Plane

Y-Z Plane



X-Y Plane



|                 |       |       |       |
|-----------------|-------|-------|-------|
| Frequency (MHz) | 858   | 868   | 878   |
| Avg. Gain (dBi) | -2.68 | -2.05 | -2.72 |
| Peak Gain (dBi) | 2.35  | 2.63  | 2.26  |
| Efficiency (%)  | 48    | 52    | 50    |

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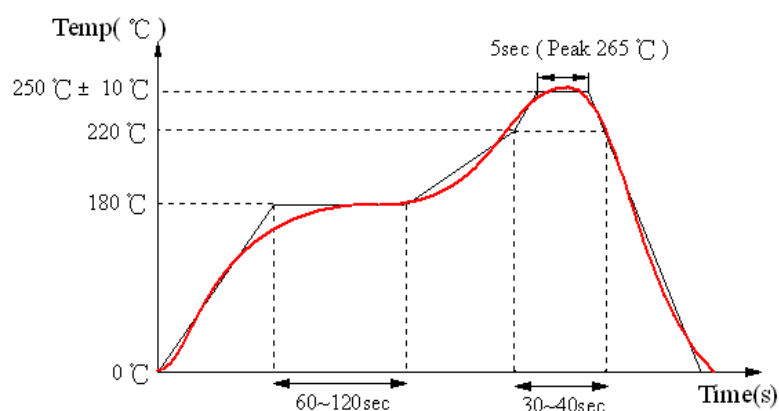


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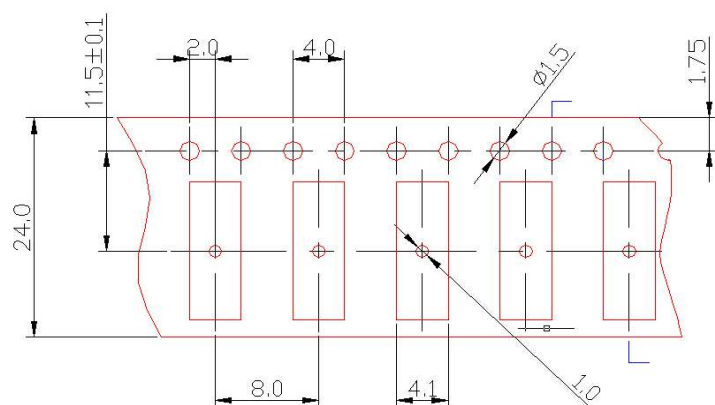
## REFLOW PROFILE



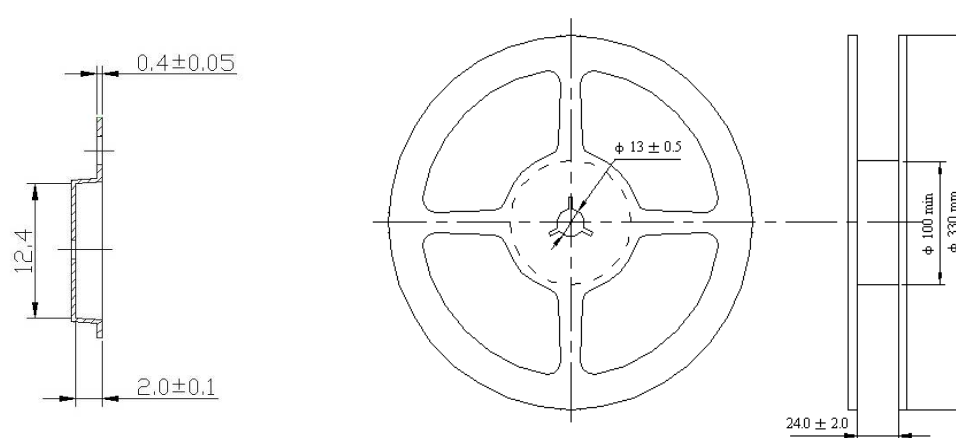
## PACKAGING

| Package Type       | Quantity/Size     |
|--------------------|-------------------|
| Inner Box          | 3000 pcs/reel     |
| Carton             | 15000 pcs/carton  |
| Size of the carton | 345 x 250 x360 mm |

Tape Dimensions (mm)



Reel Dimensions (mm)



Unit: mm

## CAUTIONS

### 1. Static voltage

Static voltage between signal & ground may cause deterioration & destruction of the component. Please avoid static voltage.

### 2. Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.

### 3. Soldering

Only leads of the component may be soldered. Please avoid soldering to any other part of the component, such as on the patterns as this will change the performance of the antenna.