

# Surface Mount WLAN / Bluetooth Chip Antenna (2450MHz)

AMCA31-2R450G-S1F-T



RoHS / RoHS II Compliant



3.2 x 1.6 x 1.2mm

Moisture Sensitivity Level (MSL) – MSL = 1

## FEATURES:

- 2450MHz, Bandwidth  $\geq 90$ MHz
- Suitable for RoHS compliant reflow
- Gain 0.5dBi (Peak) / -1dBi (Average)
- VSWR  $< 2:1$
- Small size – 3.2 x 1.6 x 1.2mm (0.125 x 0.62 x 0.047 inch)
- Non Ground Mounting type.
- Power Handling 3W Max
- Matched to 50 Ohm.

## APPLICATIONS:

- Wireless application - Bluetooth / WiFi (2.445GHz)
- High density applications
- Bluetooth headsets or ear pieces
- Computer mouse and keyboards
- PROFINET – Industrial automation
- Video Game systems
- Alternative to larger PCB solution

## STANDARD SPECIFICATIONS

### Maximum Ratings

Item	Value
Operating Temperature Range	-40°C to + 85°C
Storage Temperature Range	-10°C ~ +40 and RH °C 70% (Max.)

### Electrical Characteristics

Item	Spec
Frequency	2450MHz
Bandwidth	$\geq 90$ MHz
Peak Gain	0.5 dBi typ.
Average Gain	-1 dBi typ
VSWR	$< 2:1$
Impedance	50 Ohm
Power Capability	3W max

## PART IDENTIFICATION:

AMCA31-2R450G-S1F-**T3**

### Packaging

Blank: Bulk or Cut Tape

T3 : T/R 3000pcs per reel

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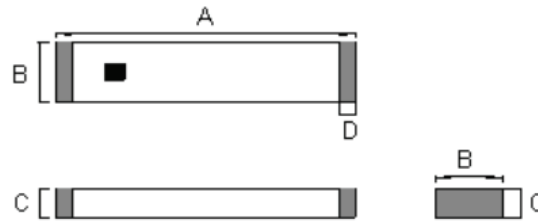
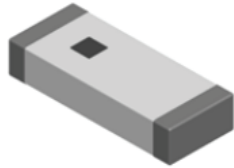


RoHS / RoHS II Compliant

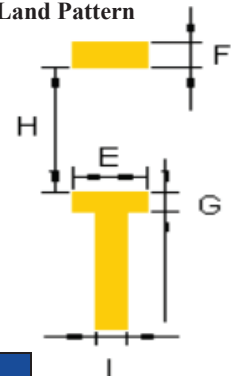


3.2 x 1.6 x 1.2mm

## OUTLINE DIMENSIONS:



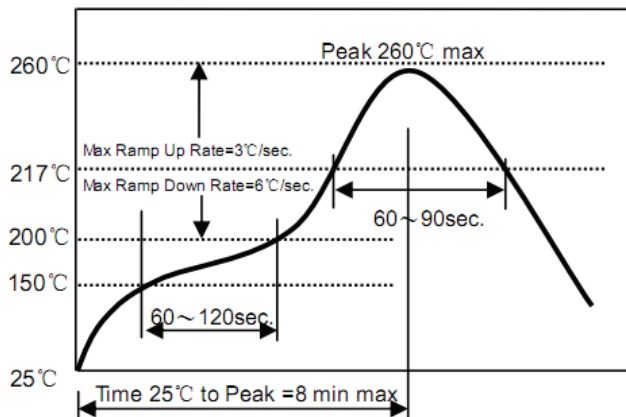
### Recommended Land Pattern



Series	A	B	C	D	E	F	G	H	I
AMCA31	3.2±0.2	1.6±0.2	1.2±0.2	0.5±0.2	1.6±0.2	0.8±0.2	0.8±0.2	2.6±0.2	3.5±0.2

(Dimensions: mm)

## REFLOW PROFILE:

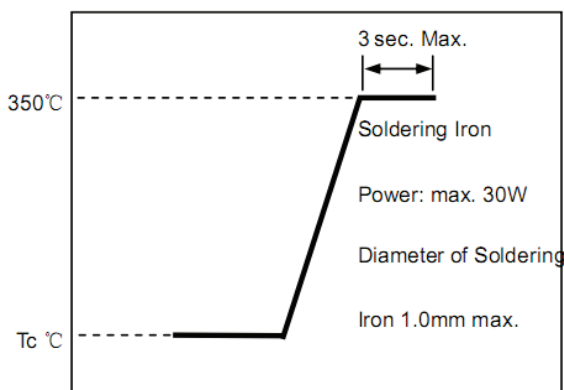


- Preheat condition: 150 ~200 /60~120°C sec.
- Allowed time above 217°C: 60~90sec.
- Max temp: 260°C
- Max time at max temp: 10sec.
- Solder paste: Sn/3.0Ag/0.5Cu
- Allowed Reflow time: 2x max

[Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.]

## MANUAL SOLDERING

Pre-heating Temperature: 120°C, 60°C ~ 300 sec.



- Iron soldering power: Max.30W.
- Pre-heating: 150 / 60 sec. °C.
- Soldering Tip temperature: 350 Max. °C.
- Soldering time: 3 sec Max.
- Solder paste: Sn/3.0Ag/0.5Cu.
- Max 1 times for iron soldering.
- Soldering Temperature: 340°C±5°C, 5sec max per each terminal.

[Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.]

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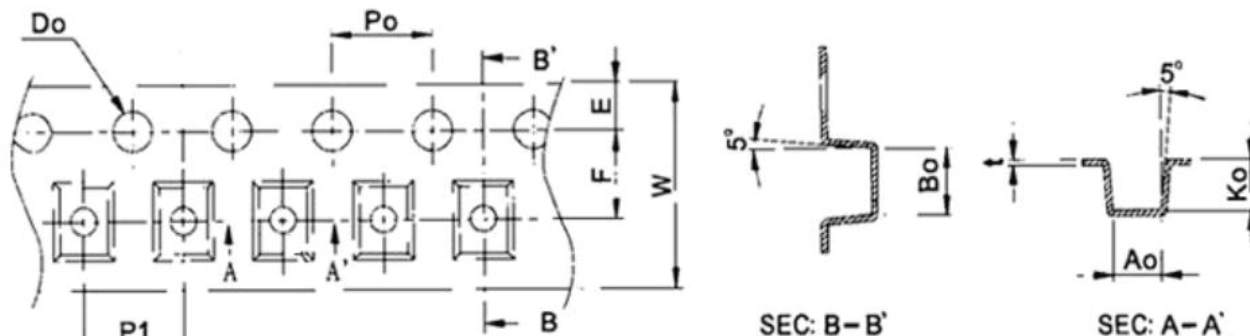
RoHS / RoHS II Compliant



3.2 x 1.6 x 1.2mm

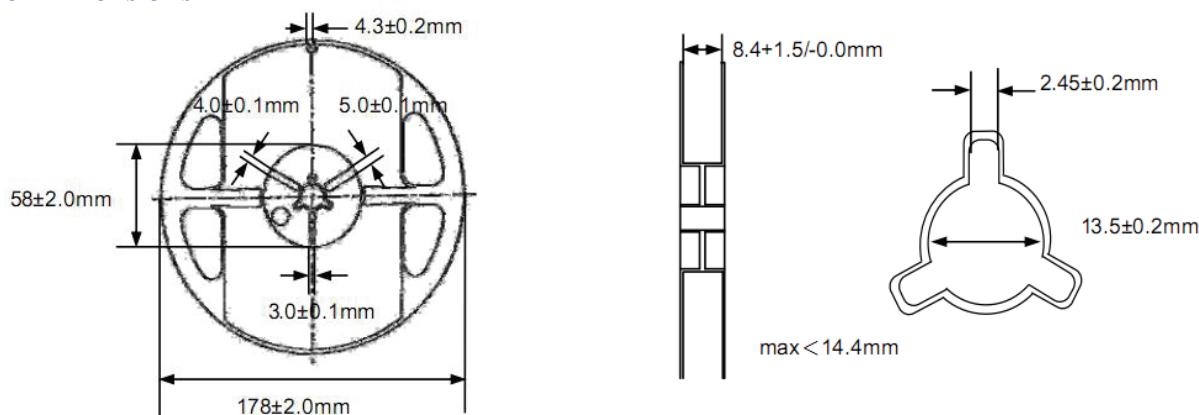
## TAPE & REEL:

**Packaging:** 3000 Units per reel

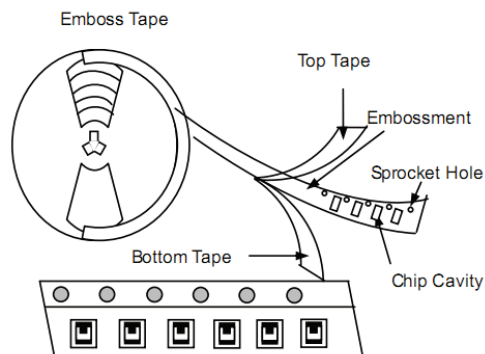


W	8.0±0.10	D0	1.50 +0.10 / -0.0
P1	4.0±0.10	P0	4.0±0.10
E	1.75±0.10	K0	1.50±0.10
F	3.50±0.15	A0	1.80±0.10
B0	3.50±0.10	t	0.22±0.10

## Reel Dimensions



## Mounting Direction of Tape on Reel



Note: The sprocket holes are to the right as the tape is pulled toward the user.

(Dimensions: mm)

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