

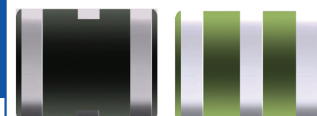


# THE DATASHEET OF AWSCR-27.00CW-T

# 2.5X2.0mm INDUSTRIAL GRADE BUILT-IN CAPACITANCE CERAMIC RESONATOR

**AWSCR-CW**

**RoHS/RoHS II compliant**  
**Pb in ceramic, exemption (7c-I)**



2.5 x 2.0 x 1.2mm

**Moisture Sensitivity Level (MSL) – This product is not Moisture Sensitive - MSL = 1**

## FEATURES:

- Low resonant impedance
- Built-in load capacitors
- IR reflow capable

## APPLICATIONS:

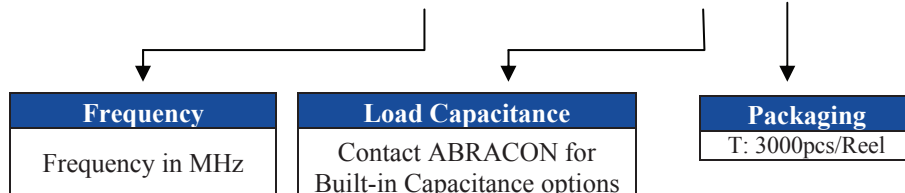
- Remote controls, Microprocessor clocks, Mobile phones, DVD & CD-Roms, Electric appliances
- Consumer electronics

## STANDARD SPECIFICATIONS:

| Parameters                           | Minimum          | Typical | Maximum  | Units      | Notes                 |
|--------------------------------------|------------------|---------|----------|------------|-----------------------|
| Frequency Range                      | 20.00            |         | 60.00    | MHz        |                       |
| Resonant Impedance (Ro)              |                  |         | 60       | $\Omega$   | 20.00 MHz – 25.99 MHz |
|                                      |                  |         | 50       |            | 26.00 MHz – 35.00 MHz |
|                                      |                  |         | 50       |            | 35.01 MHz – 60.00 MHz |
| Built-in Load Capacitance (C1=C2)    | 10 – 20%         | 10      | 10 + 20% | pF         | 20.00 MHz – 25.99 MHz |
|                                      | 5 – 20%          | 5       | 5 + 20%  |            | 26.00 MHz – 35.00 MHz |
|                                      | 5 – 20%          | 5       | 5 + 20%  |            | 35.01 MHz – 60.00 MHz |
| Frequency Tolerance @25 °C           | -0.5             |         | 0.5      | %          |                       |
| Frequency Stability @ -25°C to +85°C | -0.2             |         | 0.2      | %          |                       |
| Withstanding Voltage                 |                  | 50      |          | V          | DC , 1 min            |
| Rating Voltage                       | (1) D.C.Voltage  |         | 6        | V          |                       |
|                                      | (2) A.C. Voltage |         | 15       | Vp-p.      |                       |
| Insulation Resistance                | 100              |         |          | M $\Omega$ | 10V, 1min             |
| Operation Temperature                | -25              |         | 85       | °C         |                       |
| Storage Temperature                  | -55              |         | 85       | °C         |                       |
| Aging Rate (Fosc) (10 years)         | -0.2             |         | 0.2      | %          | From Initial Value    |

## OPTIONS AND PART IDENTIFICATION:

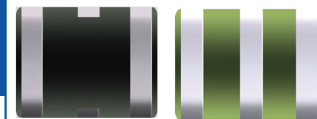
**AWSCR – XX.XX CW - C□□ - □**



# 2.5X2.0mm INDUSTRIAL GRADE BUILT-IN CAPACITANCE CERAMIC RESONATOR

AWSCR-CW

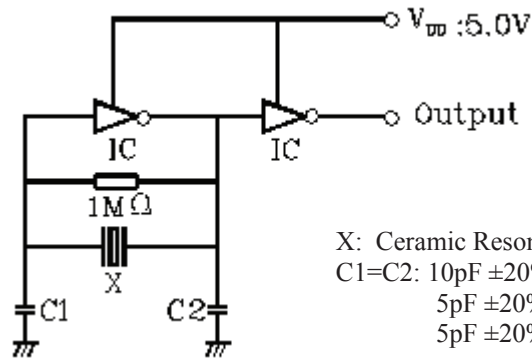
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2.5 x 2.0 x 1.2mm

## TEST CIRCUIT:

Parts shall be measured under a condition (Temp.:  $20 \pm 15^\circ\text{C}$ , Humidity:  $65 \pm 20\%$  R.H.) unless the standard condition (Temp:  $25 \pm 3^\circ\text{C}$ , Humidity:  $65 \pm 10\%$  R.H.) is regulated to measure



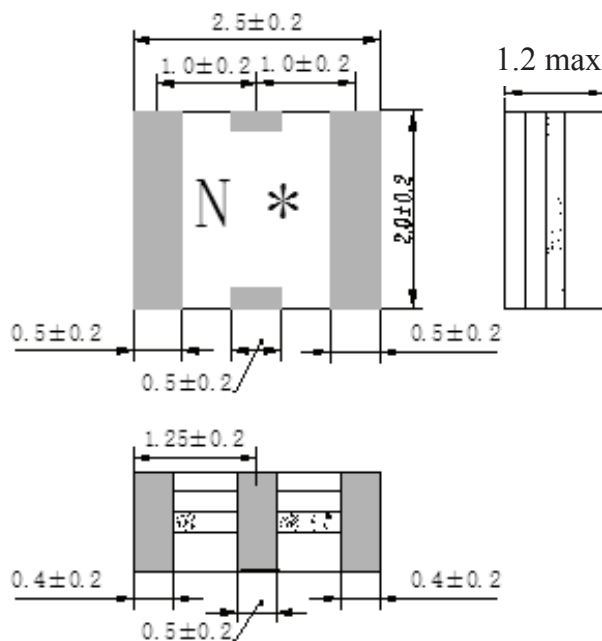
X: Ceramic Resonator

C1=C2: 10pF  $\pm 20\%$  ( 20.00MHz~25.99MHz)

5pF  $\pm 20\%$  (26.00MHz~35.00MHz)

5pF  $\pm 20\%$  (35.01MHz~60.00MHz)

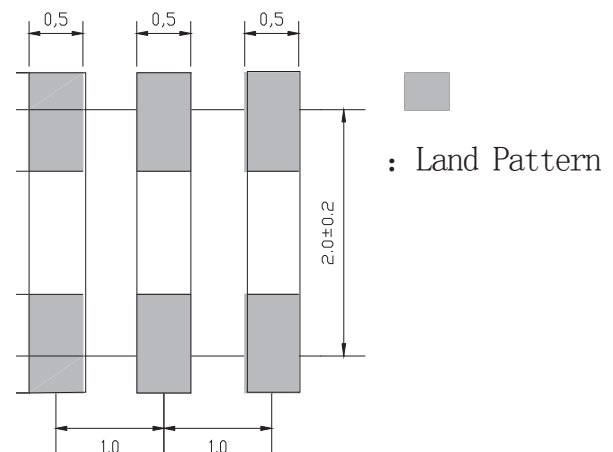
## OUTLINE DIMENSION:



N: Frequency Code

\*:EIAJ Monthly Code

## Recommended Land Pattern



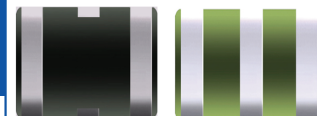
: Land Pattern

Dimension: mm

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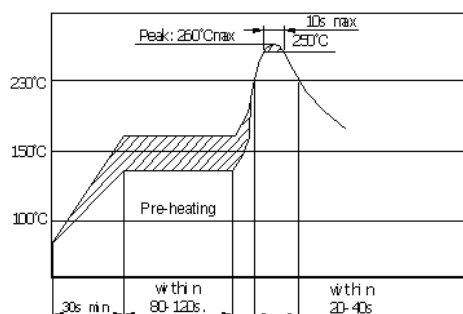
AWSCR-CW

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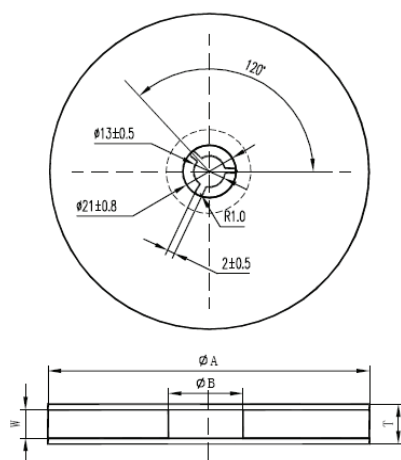
2.5 x 2.0 x 1.2mm

## SUGGESTED REFLOW PROFILE

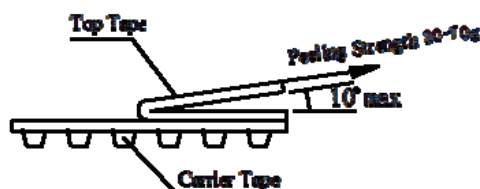
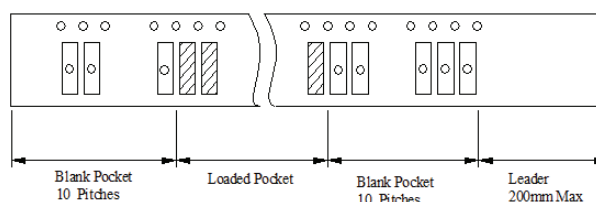


## TAPE & REEL:

**T: tape and reel (3,000pcs/reel)**



| ΦA    | ΦB      | W       | T        | Carrier tape size |
|-------|---------|---------|----------|-------------------|
| 180±3 | 60 min. | 8.4 min | 12.4 max | 8                 |



**Note:** upon opening the original packaging, it is recommended that the product be used within 1 year. If the product will not be used within 1 year, it is recommended that the product be re-sealed in airtight packaging according to MSL 1 requirements to maintain solderability.

**Dimension: mm**

## CAUTION:

- (1) Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components as this will cause damage to the component.
- (2) This component is not hermetically sealed. Do not clean or wash the component.
- (3) Reflow Soldering: Do not use strong acidity flux, such as flux with chlorine content of greater than 0.2wt% during Reflow Soldering.
- (4) Do not expose the component to open flame.
- (5) This specification applies to the functionality of the component as a single unit.
- (6) Storage Conditions: If the product is to be stored for a period greater than Six Months after the Delivery Date, it is recommended that customers confirm the solderability and characteristics for the product prior to use.
- (7) This product is not recommended for use in the following applications: Automotive, Medical, Military, Safety, or any other high-reliability, life dependant applications. Contact Abracon Corporation prior to using this product when in doubt.

**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

ABRACON IS  
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CERTIFIED



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