

# Miniature Ceramic Resonator



AWSCR-CVHA

3.7 x 3.1 x 1.0 mm

RoHS/RoHS II Compliant

Pb in ceramic, exemption (7c-1)

This product is not Moisture Sensitive - MSL = 1

## Features

- Industry standard footprint
- Low resonance impedance
- Built-in capacitance options
- Wide operating temperatures in extended industry range

## Applications

- Metering systems
- Remote control
- Microprocessor
- Industrial control
- Electric appliances

## Electrical Specifications

Parameters	Min	Typ.	Max	Units	Notes	
Oscillating Frequency (Fosc)	13.01		50.00	MHz		
Frequency Tolerance	-0.5		0.5	%		
Resonant Impedance (Ro)			60	Ω	13.01 – 15.99 MHz	
			40		16.00 – 50.00 MHz	
Standard Built-in Capacitance (C1=C2)		10		pF	13.01-15.99 MHz (Tol 1pF ± 20%)	
		22			16.00 MHz (Tol 1pF ± 20%)	
	Other options : 5, 10					16.01 - 25.99 MHz (Tol 1pF ± 20%)
		10				26.00 - 50.00 MHz (Tol 1pF ± 20%)
	Other options : 5, 15					
		5				
Other options : 10, 15						
Temperature Coefficient of Oscillation Frequency (%) max.	-0.2		0.2	%	Oscillator Frequency drift (-40 °C to +85 °C)	
Withstanding Voltage			50	V	DC, 1 min	
Voltage Rating	(1) D.C. Voltage		6	V		
	(2) A.C. Voltage		15	Vp-p		
Insulation Resistance (Ri)	500			MΩ	10V, 1 min	
Operation Temperature	-40		+85	°C		
Storage Temperature	-55		+85	°C		
Aging Rate max (Fosc) * For 10 years	-0.3		0.3	%	From Initial value	

\* Components shall be left in a chamber of +85 °C ±2 °C for 1000 hours, then measured after leaving in natural condition for 1 hour.

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## Options and Part Identification

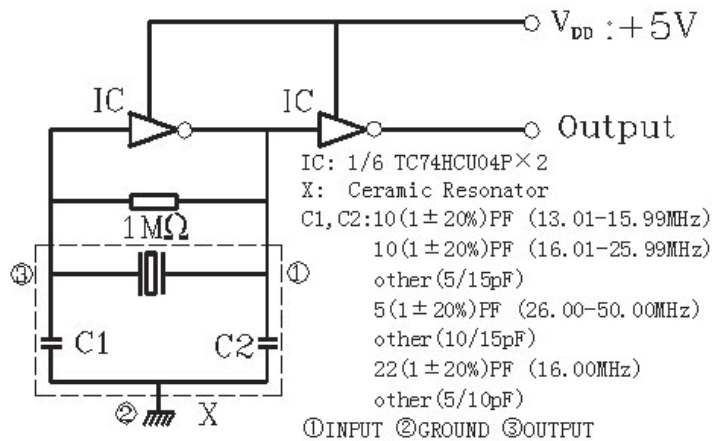
AWSCR -   .   CVHA - C   -

Frequency (MHz)	Size (mm)	Frequency Band	Operating Temperature	Built-in Cap	Packaging
13.01 - 50.00	CV = 3.7 x 3.1	H = Higher Band	A = -40 °C to 85 °C	C = XXpF *	T = 1000 pcs/reel

\* Please refer to Electrical Specifications table

## Test Circuit and Conditions

Parts shall be tested under the condition (Temp.: 20 °C ± 15 °C, Humidity: 65±20% R.H.) unless the standard condition (Temp.: 25 °C ± 3 °C, Humidity: 65±10% R.H.) is regulated to measure.



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AWSCR-CVHA

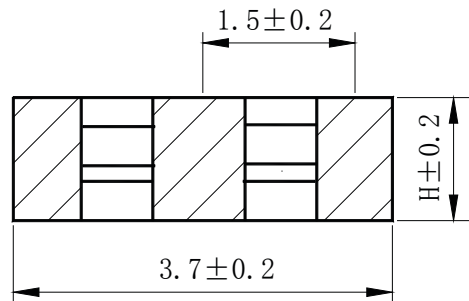
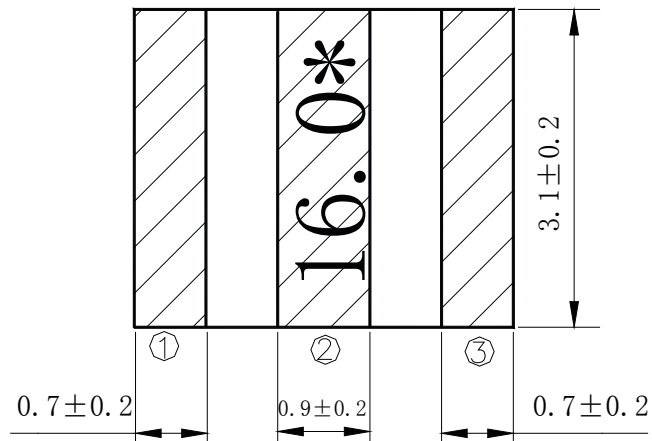
3.7 x 3.1 x 1.0 mm

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## Outline Dimensions



① Input

② Ground

③ Output

H: 1.2-1.6

\*: EIAJ MONTHLY CODE

Unit: mm

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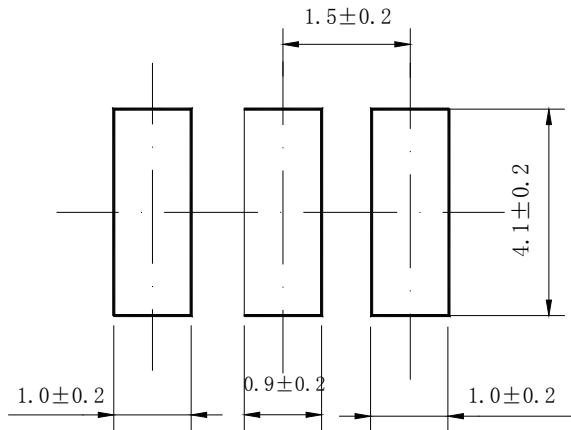
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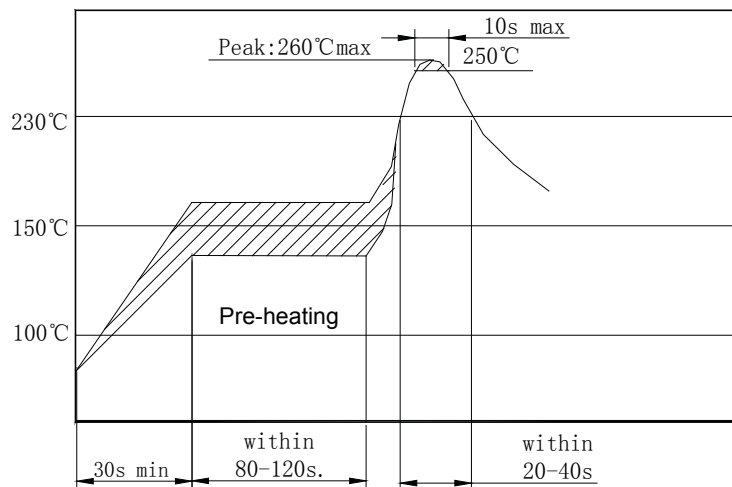
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## Recommended Land Pattern



Unit: mm

## Recommended Reflow Profile



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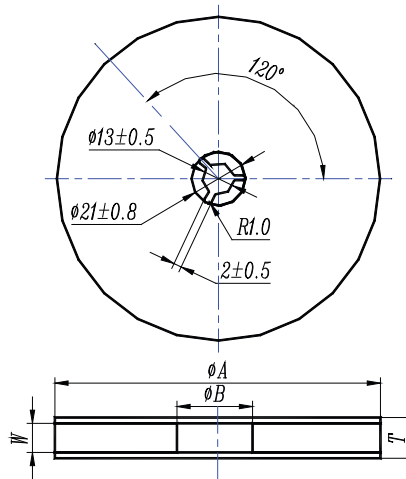
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## Packaging

T: 1000 pcs/reel

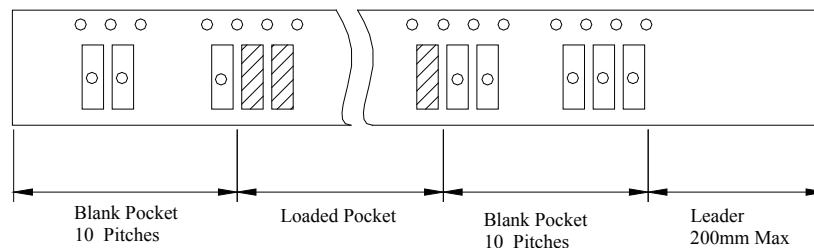
### Reel Dimensions



Unit: mm

$\phi A$	$\phi B$	W	T	Pieces per reel	Carrier tape size
180 ± 3	60 min	12.4 min	19.4 max	1000 typ.	12

### Packaging Sketch



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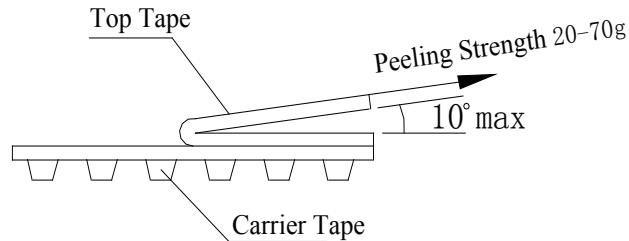
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## Packaging

### Test Condition for Peel-Off Strength



## Caution

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.

1. This component is not hermetically sealed. Do not clean or wash the component.
2. Reflow Soldering: Do not use strong acidity flux, such as flux with chlorine content of greater than 0.2wt% during Reflow Soldering.
3. Do not expose the component to open flame.
4. This specification applies to the functionality of the component as a single unit.
5. 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.
6. 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.

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REVISED: 04-17-19

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