



# Ceramic Resonator - CRACC and CRTCC

## SMD Version - 7.4 x 3.4 x 1.8

### • Features

- Low cost & wide applications
- Industrial standard
- RoHS compliant

### • General Specification

Type	CRACC / MG	CRTCC / MG
	2pins, no built-in capacitor	3pins, with built-in capacitor
Frequency Range	2.00 to 7.99MHz	2.00 to 7.99MHz
Frequency Stability at 25°C	±0.5%	±0.5%
Frequency Stability vs Temperature Range	±0.3% (-20°C to +80°C)	
Operating Temperature Range	-20°C to +80°C	-20°C to +80°C
Storage Temperature Range	-35°C to +85°C	-35°C to +85°C
Series Resistance ESR	200Ω (2.00MHz to 2.90MHz)	
	100Ω (3.00MHz to 3.57MHz)	
	300Ω (3.58MHz to 7.99MHz)	
Operating Voltage	5V	5V
Aging for 10 years	±0.3%	±0.3%
Built-in Capacitor (C1, C2)	No	Yes

### • Holder and Type Codes

CR = Ceramic Resonator	A = 2pins, no built-in capacitor	T = 3pins, with built-in capacitor
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### • Lead Type Code

CC = SMD, 7.4 x 3.4 x 1.8
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### • Vibration Mode Codes

G = Thickness Shear	T = Thickness Expander	X = Thickness Expander (3rd OT)
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### • Frequency Stability vs Temperature Codes

1 = ±0.1%	2 = ±0.2%	3 = ±0.3%	5 = ±0.5%
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### • Loading Capacitance Codes (pF)

1 = 5	2 = 6	3 = 15	4 = 22
5 = 30	6 = 47	8 = 100	

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## • Marking

Frequency + M (MHz)

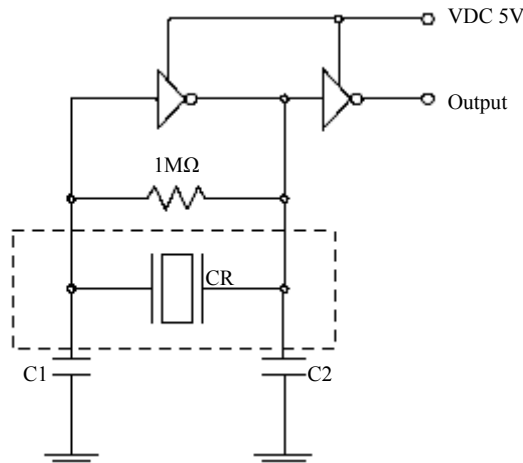
## • Ordering Information

Holder	Type	Lead Type	Frequency	Vibration Mode	Frequency Stability vs Temp	Load Capacitance	Packing
			(MHz)			(pF)	
See Tables			xx.xxxM	See Tables			TR=tape & reel
	A=2pins, no built-in				+0.3%	30	
<b>CR</b>	<b>A</b>	<b>CC</b>		<b>G</b>	<b>3</b>	<b>5</b>	<b>TR</b>

For Example: CRACC3.58MG35/TR

## • Test Circuit

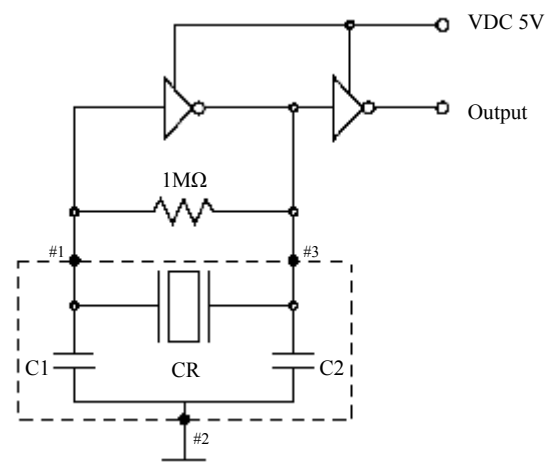
### 1. CRACC



no built-in capacitance

C1/C2: 30pF

### 2. CRTCC

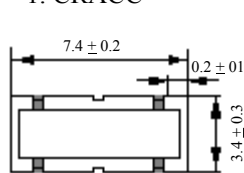


with built-in capacitor

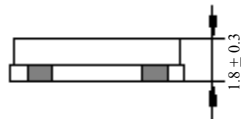
C1/C2: 30pF

## • Dimensions

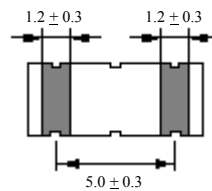
### 1. CRACC



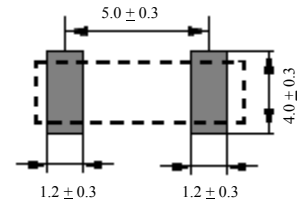
Top view



Side view

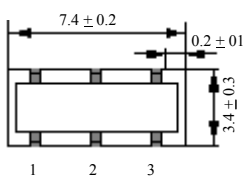


Bottom view

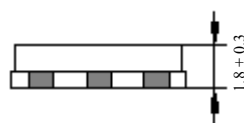


Pad layout

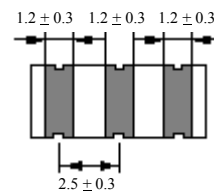
### 2. CRTCC



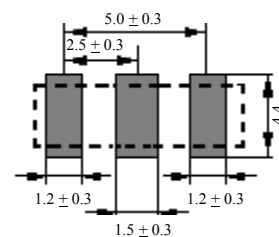
Top view



Side view



Bottom view

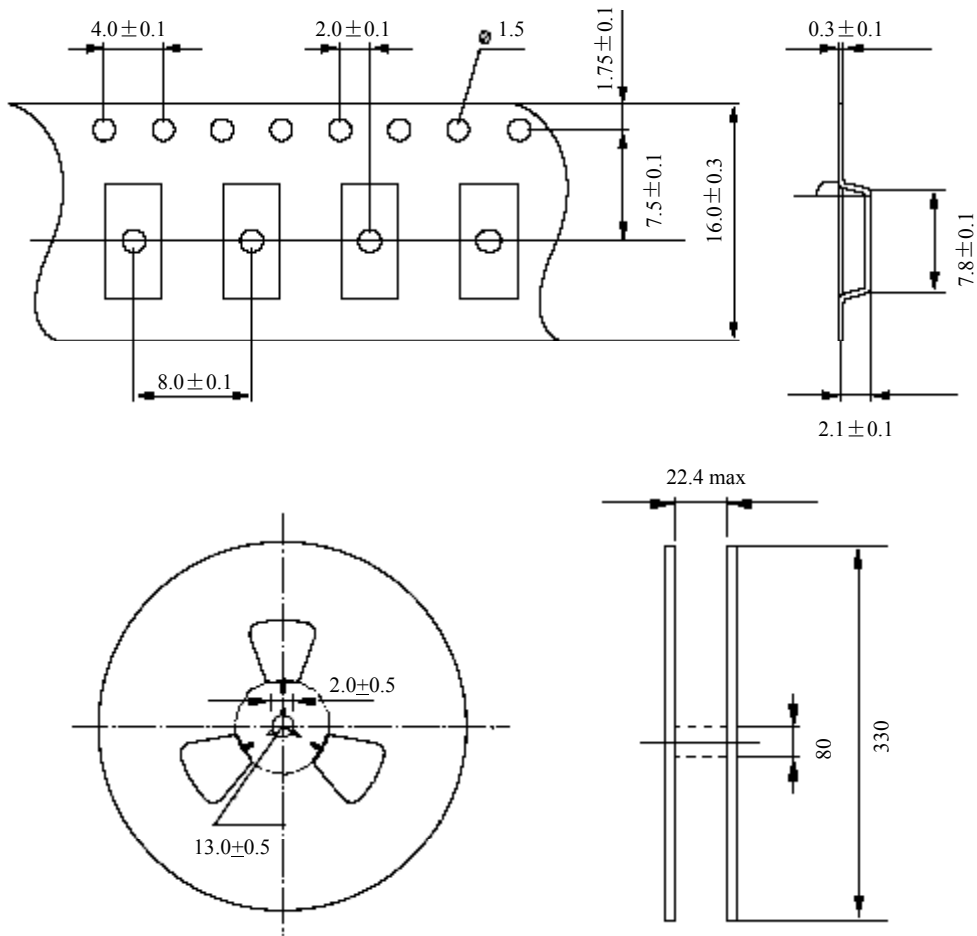


Pad layout

in mm

# Ceramic Resonator - CRACC and CRTCC

## Tape & Reel Specification



in mm

\* Reel Quantity: 1,000pcs to 4,000pcs

## Reflow Soldering Profile

