



\* 0.95mm high version available on request.

## Features

- ▶ **High shock & vibration resistance**
- ▶ **Military temperature range option**
- ▶ **Low power consumption**
- ▶ **Miniature ceramic package**

## Standard Calibration Tolerances

32.0 ~ 200kHz	201 ~ 560kHz	561kHz ~ 1.0MHz
±20ppm	±100ppm	±100ppm
±100ppm	±250ppm	±500ppm

## Standard Frequencies

Frequencies in kHz (unless stated)			
32.0000	40.0000	100.0000	307.2000
32.7680	60.0000	128.0000	1.00000MHz
36.409	75.0000	153.6000	1.00800MHz
38.4000	76.8000	240.0000	

## Specifications

Parameters	Product	Option
	CC4V	Code
<b>Terminations:</b> Gold plated pads	■	T1A
<b>Frequency range:</b> 32.768kHz 32.0kHz ~ 1.0MHz	■ □	
<b>Calibration tolerance:</b> see table Other	■ □	specify
<b>Operating temperature range:</b> -40 to +85°C -55 to +125°C	■ □	M
<b>Storage temperature range:</b> -55 to +125°C	■	
<b>Circuit condition:</b> 9pF (32.0 ~ 200kHz) 7pF (32.768kHz) 12.5pF (32.768kHz) 4pF (201 ~ 560kHz) 10pF (560kHz ~ 1.0MHz)	■ □ □ ■ ■	specify specify
<b>Static capacitance (C<sub>0</sub>):</b> 1.2pF typ @ 32.768kHz 1.2pF typ @ 307.2kHz 1.0pF typ @ 1.0MHz	■ ■ ■	
<b>Motional capacitance (C<sub>1</sub>):</b> 2.1fF typ @ 32.768kHz 1.1fF typ @ 307.2kHz 1.1fF typ @ 1.0MHz	■ ■ ■	
<b>Equivalent series resistance:</b> 50kΩ typ, 65kΩ max @ 32.768kHz 3.5kΩ typ, 5kΩ max @ 307.2kHz 500Ω typ, 1.2kΩ max @ 1.0MHz	■ ■ ■	
<b>Ageing:</b> ±3ppm max first year	■	
<b>Drive level:</b> 1.0μW max	■	
<b>Turnover temperature (T<sub>0</sub>):</b> +25°C ±5°C @ 32.768kHz +33°C ±5°C @ 307.2kHz +39°C ±5°C @ 1.0MHz	■ ■ ■	
<b>Frequency / temp coefficient:</b> -0.035ppm/°C <sup>2</sup> ±10%	■	
<b>Shock resistance:</b> ±5ppm, 5,000g, 0.3ms, ½ sine	■	
<b>Vibration resistance:</b> ±5ppm, 20g, 10.0 ~ 2,000Hz	■	
<b>Soldering condition:</b> Reflow, 260°C, 20 sec max	■	

■ Standard. □ Optional - Please specify required code(s) when ordering

## Ordering Information

Product name + termination + option codes (if any) + frequency + calibration tolerance

eg: **CC4V-T1A 32.768kHz ±30ppm** -40+85°C

**CC4V-T1A/M 76.80kHz ±100ppm** -55+125°C

Option code X (eg CC4V-T1A/X) denotes a custom spec.

- ◆ Available on T&R 2k or 10k pcs/reel
- ◆ Refer to our website for T&R and soldering details.
- ◆ Ask about higher shock & vibration specifications.