



## Features

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

## Standard Frequencies

Frequencies in kHz (unless stated)			
10.0000	32.7680	100.0000	768.0000
12.8000	38.4000	153.6000	1.00000MHz
16.0000	40.0000	180.0000	1.00800MHz
16.3840	40.9600	240.0000	1.04857MHz
20.4800	60.0000	307.2000	1.22880MHz
30.7200	76.8000	455.0000	1.84320MHz
32.0000	77.5000	500.0000	2.00000MHz

## Standard Calibration Tolerances

10.0 ~ 200kHz	201 ~ 560kHz	561kHz ~ 2.1MHz
±30ppm	±100ppm	±100ppm
±100ppm	±250ppm	±500ppm

## Specifications

Parameters	Product	Option Code
	CC1V	
<b>Terminations:</b> Gold plated pads Ni+Sn plated pads	■ □	T1A T2A
<b>Frequency range:</b> 10.0kHz ~ 2.10MHz	■	
<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 (10.0 ~ 200kHz) 12.5pF (32.768kHz) 4pF (201 ~ 560kHz) 10pF (560kHz ~ 2.1MHz)	■ □ ■ ■	
<b>Static capacitance (C<sub>0</sub>):</b> 1.6pF typ @ 32.768kHz 1.6pF typ @ 307.2kHz 1.2pF typ @ 1.0MHz	■ ■ ■	
<b>Motional capacitance (C<sub>1</sub>):</b> 2.3fF typ @ 32.768kHz 1.7fF typ @ 307.2kHz 1.4fF typ @ 1.0MHz	■ ■ ■	
<b>Equivalent series resistance:</b> 37kΩ typ, 60kΩ max @ 32.768kHz 1.4kΩ typ, 3.5kΩ max @ 307.2kHz 600Ω 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 +22°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

Package type + termination + option codes (if any) + frequency + calibration tolerance

eg: **CC1V-T1A 240kHz ±100ppm** -40+85°C

**CC1V-T1A/M 307.20kHz ±250ppm** -55+125°C

Option code X (eg CC1V-T1A/X) denotes a custom spec.

- ◆ Available on T&R (1k or 2k pcs/reel) or trays (100pcs/tray).
- ◆ Refer to our website for T&R and soldering details.
- ◆ Ask about higher shock & vibration specifications.