

WCSMA Series Crystal

Plastic Surface Mount Crystal

MMD
COMPONENTS



- Plastic SMD Package
- Wide Temp Range
- Tuning Fork Crystal
- Tight Tolerance and Stability
- Tape and Reel Packaging
- RoHS Compliant Available

Electrical Specifications

Frequency	32.768KHz
Frequency Tolerance	±20ppm
Turnover Temperature (To)	25°C±5°C
Frequency Stability	-0.034(±0.006)ppm/°C ² (T-To) ²
Operating Temperature Range	-40°C to 85°C
Storage Temperature Range	-55°C to 125°C
Shunt Capacitance	1.0pF typical
Motional Capacitance	2.1fF typical
Equivalent Series Resistance	50K ohms max
Load Capacitance	12.5pF, 6pF or 8pF
Drive Level	1μW max
Capacitance Ratio (C0/C1)	476 typical
Aging	±3ppm/ 1st yr max

Notes

Part Numbering Guide

WCSMA

32.768KHz

T&R

RoHS Compliance

Blank = Not Compliant
F = Is Compliant

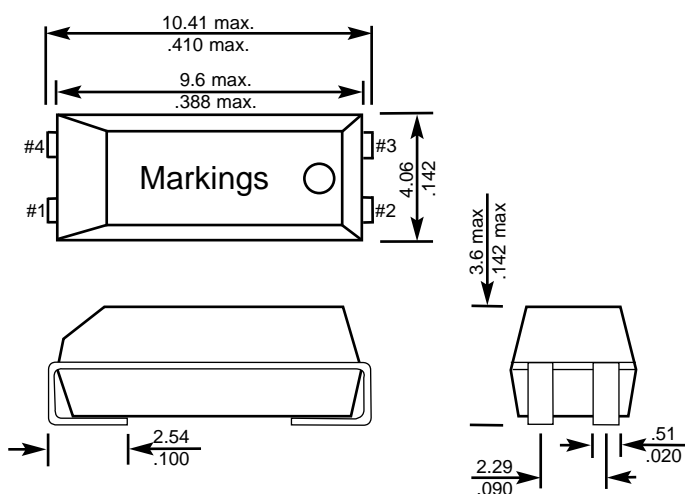
Load Capacitance

Blank = 12.5pF
- 6pF = 6pF

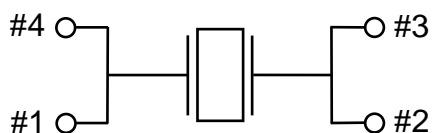
Packaging

Blank = Bulk
T&R = Tape and Reel

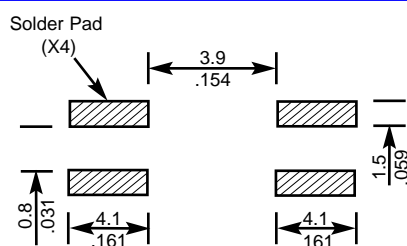
Mechanical Dimensions



Pad Connections



Suggested Solder Pad Layout



Environmental / Mechanical

Insulation Resistance: 500M ohms minimum / DC 100V± 15v

Hermeticity of Seal: 1×10^{-2} mPa (m³/s) maximum

Shock Resistance: ±5ppm max(drop test onto a hard wooden board from 75cm)

Markings

Line 1: Frequency