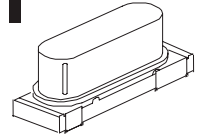




Pletronics, Inc.

19013 36th Ave. W, Suite H • Lynnwood, WA 98036 USA
Manufacturer of High Quality Frequency Control Products

SM55, SM45, SM40 Crystal



- HC-49/US Low Profile Crystal Mounted on a Surface Mount Platform
- Available in 3 heights, SM55: 5.5mm, SM45: 4.5mm, SM40: 4.0mm
- Solder Pad Compatible with our SM39S and SMD Crystals from Epson, Meiden & Citizen
- Available in Standard 4 pad or Optional 2 pad Pinout Style

3.200 MHz – 70.000 MHz

Standard Specifications

Calibration Frequency Tolerance at 25°C	± 30 PPM is standard, tighter tolerances available
Operating Temperature Range (OTR)	0 to +70°C is standard, but can be extended to -40 to +85°C
Frequency Stability (FS) over OTR	± 50 PPM is standard, tighter tolerances available
Drive Level	50 µW is standard, customer may specify
Aging at 25°C	± 5 PPM per year is standard, customer may specify ± 1 PPM
Shunt Capacitance	7 pF maximum
Pullability	

May be specified by customer in terms of frequency shift required over a certain range of load capacitance (e.g. +100 PPM from CL=12 to CL=18 pF) or as motional capacitance (fF)

Part Numbering Guide

Portions of the part number that appear after the frequency may not be marked on part (C of C provided)

SM45 B E - xx - 70.0M - XXX (Internal Code or blank)

Model (Height/Pinout)

- SM55: 5.5mm/Std
- SM45: 4.5mm/Std
- SM40: 4.0mm/Std
- SMP55: 5.5mm/2 pad
- SMP45: 4.5mm/2 pad
- SMP40: 4.0mm/2pad

Frequency in MHz

Load Capacitance

Parallel Resonance in pF (≥ 10 pF)
SR = Series Resonance

Temperature Range

- Blank: 0 to +70°C
- E: - 40 to +85°C
- H: - 20 to +70°C

Cal Tol / Freq Stability

- Blank = 30/50
- B = 30/30
- C = 15/30
- D = 10/20 (consult factory)

Consult factory for available frequencies and specs.

Not all options available for all frequencies. A special part number may be assigned.

ESR Values

Oscillation Mode	Frequency Range (MHz)	Maximum ESR (Ohms)
Fundamental AT Cut	3.200 – 4.999	300
	5.000 – 7.999	120
	8.000 – 11.999	70
3rd Overtone AT Cut	12.000 – 30.000	50
	25.000 – 70.000	100

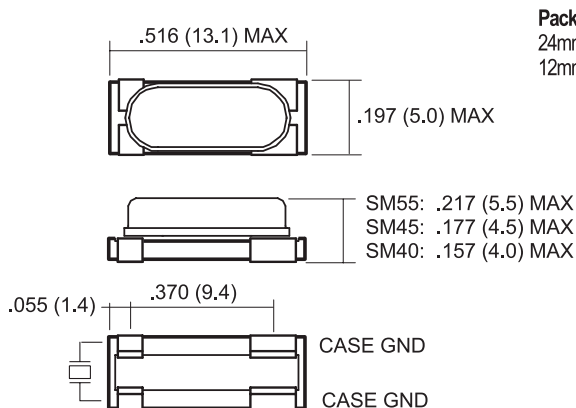
Consult factory for lower ESR

Mechanical: inches (mm)

not to scale

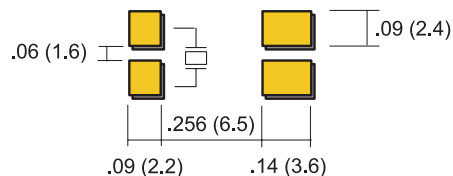
Solder Pads

Due to part size and factory abilities, part marking may vary from lot to lot and may contain our part number or an internal code.

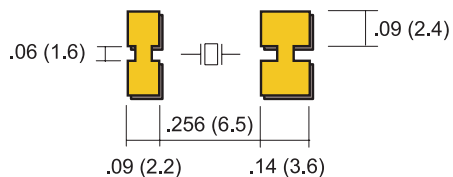


Packaging
24mm tape
12mm pitch

Standard Pinout (SM)



Optional 2 Pad Pinout (SMP)



Nov 2003