

FEATURES

- Low cost crystal for mass market applications
- Surface mount version of HC49-4H crystal
- · Comprehensive stockholding of standard frequencies
- Customized parts readily available
- · Industry-standard package
- · Low-profile versions available

DESCRIPTION

49USMX crystals are low profile surface mount crystals that have the same footprint as standard HC49 or HC49-4H crystals. 49USMD crystals are ideal for use in low cost, mass-market applications. The crystal may also be specified with close tolerances when required.

SPECIFICATION

F D	0.01411 1. 701411	
Frequency Range:	3.2MHz to 70MHz	
Calibration Tolerance:	±30ppm at 25°C standard ±10ppm available	
Frequency Stability over Temp. AT-Cut:	±30ppm over -10° ~ +60°*	
BT-Cut:	±100ppm over -10° ~ +60°C*	
Operating Temperature Range:	-10° ~ +60°C to -40° ~ +85°C	
Shunt Capacitance (C0):	4pf typical, 7pF maximum	
Load Capacitance (CL):	Series or from 8pF to 32pF (Customer specified)	
Ageing:	±3ppm maximum in first year ±1ppm per year thereafter (Ta = 25°C, drive 100 W)	
Drive Level:	100μW typical, 500μW maximum	
Reflow Soldering:	260°C, 10s maximum	
Holder:	Hermetic seal, resistance weld	
Packaging:	EIA 24mm tape and reel 1000 pieces per reel	
RoHS Status:	Compliant	

^{*} Closer tolerances may be specified

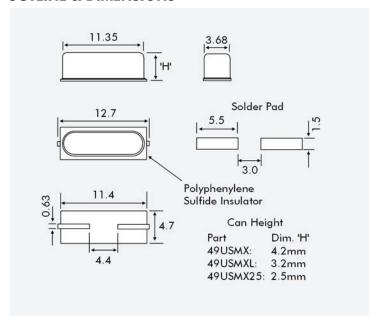
ESR & OSCILLATION MODE

Frequency Range (MHz)	Crystal Cut & Oscillation Mode	Max. ESR (Ohms)
3.2~3.4	AT Fund.	300
3.5~4.0	AT Fund.	150
4.1~4.9	AT Fund.	120
5.0~5.9	AT Fund.	100
6.0~8.9	AT Fund.	80
9.0~9.9	AT Fund.	60
10.0~12.9	AT Fund.	50
13.0~24.0	AT Fund.	45
24.1~30.0	AT Fund.	40
24.0~48.0	BT Fund.	40
27.0~30.0	AT 3rd OT	150
30.0~50.0	AT 3rd OT	100
50.1~70.0	AT 3rd OT	80

49SMD Standard and Low Profile

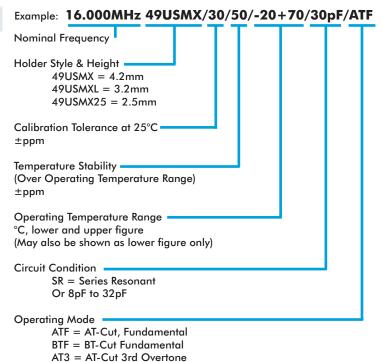


OUTLINE & DIMENSIONS



PART NUMBERING

49USMX part numbers are derived as follows:



^{*} If required the maximum ESR may be specified, in which case use the suffix '/R40' where for instance a maximum ESR of 40Ω is required.