

- Model **M49** is the surface mount version of the HC-49/US low profile crystal.
- Lowest cost. The most economic solution for automatic assembly.



SPECIFICATIONS

Crystal Holder Prefix:		M49: 4.2 mm seated height.				
Mode of Oscillation:		3.2~30.0 MHz AT-cut Fundamental mode 27.0~70.0 MHz AT-cut 3 rd Overtone mode 24.0~48.0 MHz BT-cut Fundamental mode				
Calibration Tolerance:		±30 ppm (±0.003 %) at 25°C				
Frequency Stability:		AT-cut: ±30 ppm (±0.003 %) over -10 to +60°C BT-cut: ±100 ppm (±0.01 %) over -10 to +60°C				
Shunt Capacitance (Co):		7pF maximum				
Equivalent Series Resistance (E.S.R.)	Frequency	Osc. Mode	ESR max.	Frequency	Osc. mode	ESR max.
	3.2 ~ 3.4	AT funda.	300 Ω	13.0 ~ 24.0	AT funda.	45 Ω
	3.5 ~ 4.0	AT funda.	150 Ω	24.1 ~ 30.0	AT funda.	40 Ω
	4.1 ~ 4.9	AT funda.	120 Ω	24.0 ~ 48.0	BT funda.	40 Ω
	5.0 ~ 5.9	AT funda.	100 Ω	27.0 ~ 30.0	AT 3 rd O/T	150 Ω
	6.0 ~ 8.9	AT funda.	80 Ω	30.0 ~ 50.0	AT 3 rd O/T	100 Ω
	9.0 ~ 9.9	AT funda.	60 Ω	50.1 ~ 70.0	AT 3 rd O/T	80 Ω
	10.0 ~ 12.9	AT funda.	50 Ω			
Load Capacitance (CL):		Series (spec. code is “S”) or Parallel (If parallel, please specify CL value, typical CL ranges from 8 to 32 pF)				
Drive Level:		500 μW maximum				
Aging:		Less than ±3 ppm per year. At +25°C				
Reflow Soldering:		10 seconds maximum at +260°C				
Storage Temperature:		-40 to +85°C				

Note: Tighter tolerance, tighter stability and lower ESR are available.

MERCURY www.mercury-crystal.com

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STANDARD FREQUENCIES AND PART NUMBERS (partial frequency list only. Frequency tolerance, frequency stability and ESR can be specified per your requirements).

<u>MEC Part Number</u>	<u>MEC Specification Code</u>	<u>MEC Part Number</u>	<u>MEC Specification Code</u>
M49-3.579545-18P	30/30/-10+60/150R	M49-14.7456-S	30/30/-10+60/45R
M49-3.6864-20P	30/30/-10+60/150R	M49-16.000312-32P	30/30/-10+60/45R
M49-4.000-20P	30/30/-10+60/150R	M49-16.384-S	30/30/-10+60/45R
M49-4.433619-18P	30/30/-10+60/120R	M49-18.432-S	30/30/-10+60/45R
M49-4.9152-18P	30/30/-10+60/120R	M49-19.6608-S	30/30/-10+60/45R
M49-5.120-18P	30/30/-10+60/100R	M49-20.000-20P	30/30/-10+60/45R
M49-6.000-18P	30/30/-10+60/80R	M49-24.000-S	30/30/-10+60/45R
M49-6.144-18P	30/30/-10+60/80R	M49-24.576-S	30/30/-10+60/40R
M49-7.3728-18P	30/30/-10+60/80R	M49-29.4912BF-S	30/100/-10+60/40R (BT-cut Fund.)
M49-8.000-18P	30/30/-10+60/80R	M49-30.000BF-S	30/100/-10+60/40R (BT-cut Fund.)
M49-9.8304-20P	30/30/-10+60/60R	M49-32.000BF-S	30/100/-10+60/40R (BT-cut Fund.)
M49-10.000-18P	30/30/-10+60/50R	M49-36.000BF-S	30/100/-10+60/40R (BT-cut Fund.)
M49-11.0592-20P	30/30/-10+60/50R	M49-40.000BF-S	30/100/-10+60/40R (BT-cut Fund.)
M49-12.000-18P	30/30/-10+60/50R	M49-32.000A3-20P	30/30/-10+60/100R (AT-cut 3 rd)
M49-14.31818-18P	30/30/-10+60/45R	M49-64.000A3-S	30/30/-10+60/80R (AT-cut 3 rd)

PACKAGE DIMENSIONS AND SUGGESTED PAD LAYOUT

Unit: mm [inches]

