



**STANDARD RESISTANCE WELD HC49/U SMD PACKAGE - HC49USMD Series**

**FEATURES**

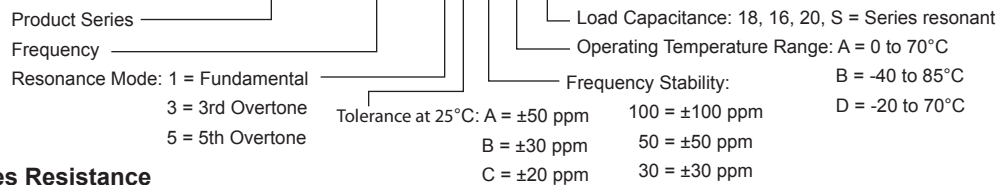
- RoHS Compliant (Pb-Free), Wide Frequency Range Available
- AT-cut Crystal, Excellent Aging, Extended Temperature Range
- Industry Standard Package, Low Cost, Popular Microprocessor Crystals
- Formed Leads SMT with Tape & Reel Packing

**SPECIFICATIONS**

<b>Frequency Range</b>	1.8432 MHz to 200.000 MHz
<b>Resonance Mode</b>	1 = Fundamental (1 to 40 MHz); 3 = 3rd Overtone (20 to 100 MHz) 5 = 5th Overtone (80 to 150 MHz); 7 = 7th Overtone (110 to 200 MHz)
<b>Calibration Tolerance @25°C</b>	A = ±50 ppm; B = ±30 ppm; C = ±20 ppm; D = ±15 ppm; E = ±10 ppm
<b>Frequency Stability Ref @25°C</b>	100 = ±100 ppm; 50 = ±50 ppm; 25 = ±25 ppm; 10 = ±10 ppm
<b>Temperature Range</b>	A = 0°C to 70°C; B = -40°C to 85°C; C = -10°C to 60°C; D = -20°C to 70°C
<b>Crystal Aging</b>	±5 ppm / year Maximum
<b>Storage Temperature</b>	-55°C to 125°C
<b>Load Capacitance (CL)</b>	CL = 18 pF (Standard), 16 pF, 20 pF, others, or S = Series resonant
<b>Shunt Capacitance</b>	7 pF Maximum
<b>Drive Level</b>	0.1 mW Typical, 1 mW Maximum
<b>Pullability (option)</b>	May be specified in terms of frequency shift over a certain range of CL

**Creating a Part Number**

**HC49USMD-10M000-1 A 50 D 18 -options**



**Equivalent Series Resistance**

Frequency (MHz)	Mode	Max ESR (Ohms)
1.800 - 1.999	Fund	750
2.000 - 2.399	Fund	500
2.400 - 2.999	Fund	250
3.000 - 3.199	Fund	150
3.200 - 3.699	Fund	120
3.700 - 4.199	Fund	100
4.200 - 5.999	Fund	70

Frequency (MHz)	Mode	Max ESR (Ohms)
6.000 - 7.999	Fund	40
8.000 - 12.499	Fund	35
12.500 - 15.999	Fund	25
16.000 - 40.000	Fund	20
23.000 - 100.00	3rd O/T	40
80.000 - 150.00	5th O/T	80
110.00 - 200.00	7th O/T	120

**OUTLINE DRAWING**

