

XTAL

CLK OSC

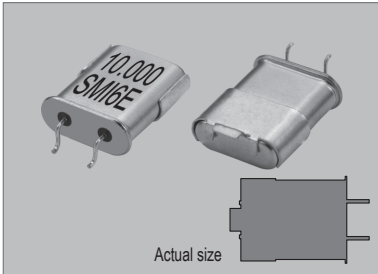
VCXO

TCXO

OCXO

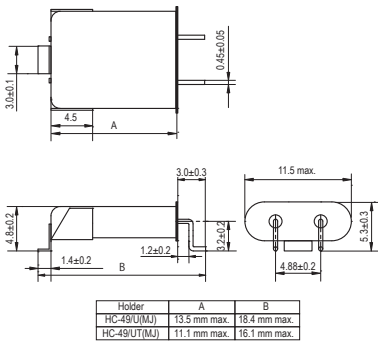
MCF

HC-49/U(MJ) & HC-49/UT(MJ)

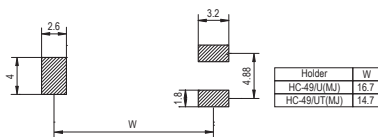


1.275 gm (wt.)...HC-49/U(MJ)
1.13 gm (wt.)...HC-49/UT(MJ)

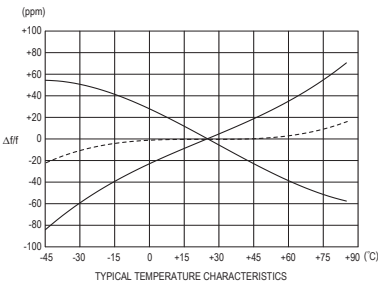
HC-49/U(MJ) & HC-49/UT(MJ)



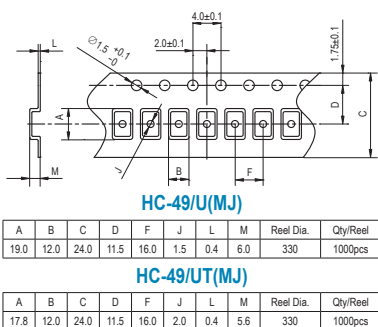
SOLDERING PATTERN



AT-CUT



TAPE SPECIFICATIONS

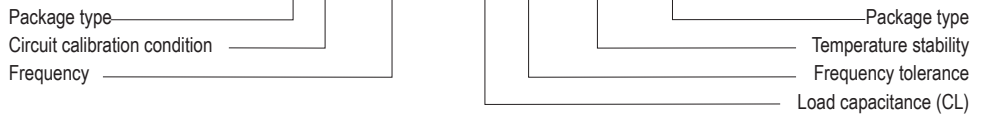


STANDARD SPECIFICATIONS

Item	Symbol	Specifications	
Package type		HC-49 / U(MJ) & HC-49 / UT(MJ)	
Frequency range	F	1.8432 MHz to 200.000 MHz	
Frequency tolerance (at +25°C ±3°C)	Δf/F	J : ±5 ppm O : ±10 ppm Q : ±15 ppm R : ±20 ppm T : ±30 ppm X : ±50 ppm	
Temperature stability (referred to +25°C)		XXggg : ±50 ppm over -10°C to +60°C TTiii : ±30 ppm over -20°C to +70°C RRiii : ±20 ppm over -20°C to +70°C QQiii : ±15 ppm over -20°C to +70°C OOiii : ±10 ppm over -20°C to +70°C	
Note : Contact for other temperature stabilities and operating temperature ranges.			
Load capacitance	CL	20 pF, Typical	
Shunt capacitance (Typical)	C0	7.0 pF max.	
Drive level	P	3 mW max.	
Aging	Δf/F	±5 ppm max. at +25°C ±3°C per year	
Cut		AT-Cut	
Equivalent Series Resistance	Fundamental	ESR	1.8432 MHz+ : 500 Ω max.
			2.000 MHz+ : 400 Ω max.
			2.500 MHz+ : 250 Ω max.
			3.000 MHz+ : 180 Ω max.
			3.500 MHz+ : 100 Ω max.
			4.000 MHz+ : 80 Ω max.
			4.500 MHz+ : 60 Ω max.
			5.000 MHz+ : 50 Ω max.
			6.000 MHz+ : 40 Ω max.
			7.000 MHz+ : 30 Ω max.
			9.000 MHz+ : 25 Ω max.
			13.000 MHz+ : 20 Ω max.
	3rd overtone		20.000 to 120.000 MHz : 60 Ω max.
	5th overtone		80.000 to 200.000 MHz : 80 Ω max.

PART NUMBERING GUIDE

49 M 1.8432M - 13 / X / XXggg (MJ)



Example

SMI Part No.	Package	Circuit Calibration Condition	Frequency	Frequency Tolerance	Temperature Stability
49M1.8432M-13/X/XXggg(MJ)	49(MJ) = HC-49/U(MJ)	M = Parallel resonance CL = 13 pF	1.8432 MHz	X = ±50 ppm	XXggg = ±50 ppm
49M4.000M-20/T/XXggg(MJ)	49(MJ) = HC-49/U(MJ)	M = Parallel resonance CL = 20 pF	4.000 MHz	T = ±30 ppm	XXggg = ±50 ppm
49S15.000M/O/QQiii(MJ)	49(MJ) = HC-49/U(MJ)	S = Series resonance	15.000 MHz	O = ±10 ppm	QQiii = ±15 ppm

PACKAGE DATA

Item	Package	HC-49/U(MJ) & HC-49/UT(MJ)
Cover		Metal
Base		Metal
Sealing		Resistance
Metal clamp		C7521R-0
Metal clamp plating		Tin / Copper (surface) / (under)
Terminal lead		Alloy (FeNiCo)
Terminal lead plating		SnCu
RoHS		Compliant (Pb-free)