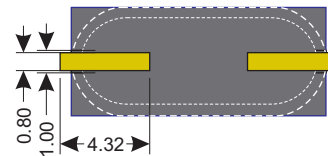
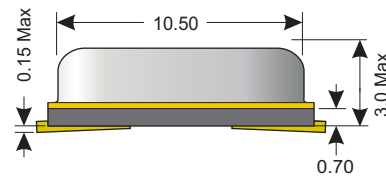
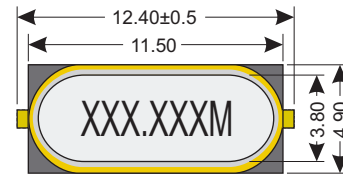




### Specifications

Part Number		49SM3R
Frequency		3.000MHz ~ 100.000MHz
Mode of Operation		(See Mode and E.S.R. Chart Below)
Frequency Stability	Calib. Tol. @ 25°C	±50ppm
	Temp. Range	±50ppm
	Aging/Year (fa)	±5ppm
Temp. Range	Operating (TOPR)	-20°C ~ +70°C
	Storage (TSTG)	-55°C ~ +125°C
Drive Level (DL)		Correlation 2mW Max
Capacitance	Load (CL)	18pF
	Shunt (CO)	7pF Max

### Dimensions (mm)



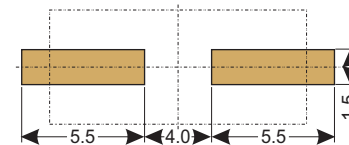
### Equivalent Series Resistance

Frequency Range	Mode	ESR
3.000MHz ~ 5.999MHz	AT-Fund	150Ω Max
6.000MHz ~ 7.999MHz	AT-Fund	60Ω Max
8.000MHz ~ 15.999MHz	AT-Fund	50Ω Max
*16.000MHz ~ 29.999MHz	AT-Fund	40Ω Max
*30.000MHz ~ 40.320MHz	AT-Fund	30Ω Max
*24.000MHz ~ 29.999MHz	AT-3rd O/T	100Ω Max
30.000MHz ~ 49.999MHz	AT-3rd O/T	80Ω Max
50.000MHz ~ 100.000MHz	AT-3rd O/T	60Ω Max

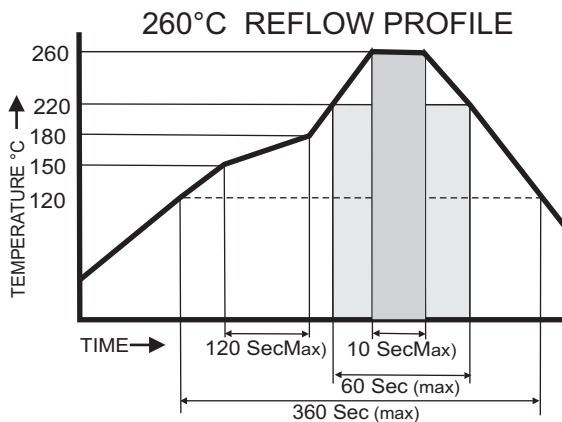
24.000MHz  
40.320MHz

\* Where frequencies and mode overlap (24.000MHz ~ 40.320MHz), Default mode is AT-Fund. For 3rd O.T. at these frequencies, Use the "03" option (see Page 2). Operating mode is only optional within this frequency range.

### Recommended Pad (mm)

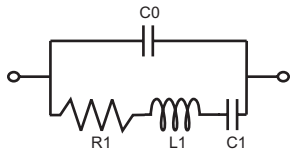


### Connections





### Equivalent Circuit



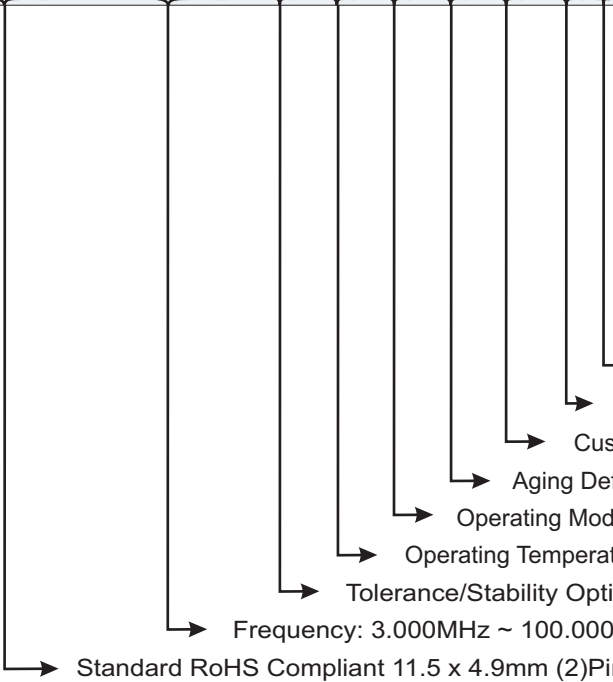
- C0 Shunt Capacitance
- R1 Equivalent Series Resistance
- L1 Motion Inductance
- C1 Motion Capacitance

### Environmental And Mechanical

Temperature	10 Cycles of -30°C (30Mins), Normal (1Hr), 85°C (30Mins), Normal (1Hr)
Shock	Accelerated at 1000G for 1mS in each perpendicular axis.
Vibration	4 Cycles of 20G acceleration at 20 - 2,000Hz within 4 Minutes in each perpendicular axis.
Solder	Peak Temperature of 260°C Max for 10 Seconds with preheat of 160°C for 90±10% for 10 Seconds for a Maximum of 2 Cycles.

### Part Number

49SM3R- XX.XXX M-CX RX OX AX ZX- XX T



Tolerance Stability		Temp Range		Load Cap	
C1	10ppm/10ppm	R1	0°C ~ +50°C	##	Custom Load
C2	10ppm/20ppm	R2	-10°C ~ +60°C	S	Series
C3	10ppm/30ppm	R3	-10°C ~ +70°C	Aging	
C4	10ppm/50ppm	R4	-20°C ~ +70°C		
C5	15ppm/20ppm	R5	-30°C ~ +80°C		
C6	20ppm/20ppm	R6	-40°C ~ +85°C		
C7	20ppm/30ppm	R7	-5°C ~ +55°C	A1	1ppm/year Max
C8	20ppm/50ppm	RC	Custom Temp.	A3	3ppm/year Max
C9	30ppm/30ppm	Mode		A4	4ppm/year Max
C10	30ppm/50ppm			O3	AT-Cut 3rd O/T
C11	40ppm/45ppm	E.S.R		Options	
C12	50ppm/100ppm				
SC	Cust. Stability				

T: Tape & Reel Option  
 ##: Load Capacitance: Default: 18pF; XXpF or "S" for Series  
 Custom Maximum ESR Value

Aging Default: ±5ppm  
 Operating Mode Default: ESR Chart on Page 1  
 Operating Temperature Range: Options Default: -20°C ~ +70°C  
 Tolerance/Stability Options Default: ±50/50ppm

Frequency: 3.000MHz ~ 100.000MHz; must be specified

Standard RoHS Compliant 11.5 x 4.9mm (2)Pin SMD Crystal

Example: 49SM3R-27.000M-T 27.000MHz, ±50/50ppm, fundamental Xtal with ESR of 40Ω, operating at -20°C ~ +70°C, and delivered on Tape & Reel  
 Example: 49SM3R-27.000M-C10R6O3-T 27.000MHz, ±30/50ppm 3rd O.T. Xtal with ESR of 100Ω, operating at -40°C ~ +85°C and delivered on Tape & Reel  
 Example: 49SM3R-27.000M-C10R6-20T 27.000MHz, ±30/50ppm AT Fundamental Xtal with 20pF Load, ESR of 40Ω, operating at -40°C ~ +85°C, and delivered on Tape & Reel

### Tape & Reel

