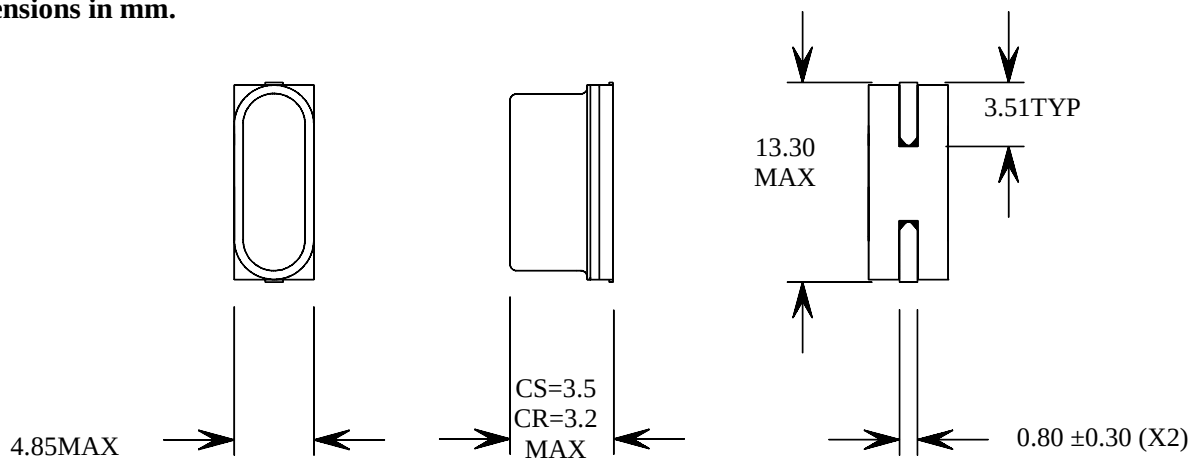
All Dimensions in mm.



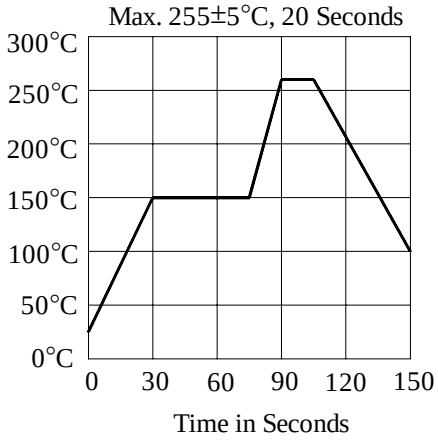
Marking Guide

50.00	=	50.000MHz
C	=	Caliber Electronics Inc.
8M	=	Mfg. Date Code (Year / Month)

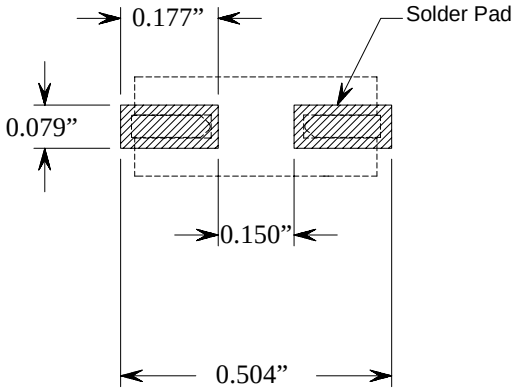
Electrical Specifications	
Frequency Range	3.000MHz to 50.000MHz
Frequency Tolerance/Stability "A" Option "B" Option "C" Option	Other Combinations Available. Contact Factory for Custom Specifications. ±50/50ppm Max. ±30/50ppm Max. ±15/30ppm Max.
Operating Temperature Range "C" Option "E" Option "F" Option	 -10°C to 60°C -20°C to 70°C -40°C to 85°C
Storage Temperature Range	-55°C to 125°C
Load Capacitance "S" Option "XX" Option	 Series 12pF to 32pF
Mode of Operation Fundamental "1" Option	 3.000MHz to 50.000MHz (3.000MHz to 23.999MHz = AT Strip Cut) (24.000MHz to 50.000MHz = BT Strip Cut)
Drive Level	1 mWatt Maximum, 100 uWatts Correlation

CALIBER ELECTRONICS

Solder Reflow Guide



Suggested Solder Pad Layout



Part Numbering Guide

C S A 32 C 1 - 30.000MHz

HC-49/USMD

Frequency Tolerance/Stability
A = +/-50/100ppm
B = +/-30/50ppm
C = +/-15/30ppm

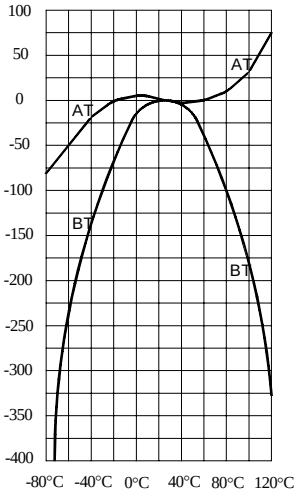
Height
S = 3.5mm
R = 3.2mm

Load Capacitance
S = Series
XX = XXpF (pico Farads)

Operating Temperature Range
C = -10°C to 60°C
E = -20°C to 70°C
F = -40°C to 85°C

Mode of Operation
1 = Fundamental
3 = Third OT

Theoretical Frequency vs. Temperature Curves of AT and BT Cut Crystals



Equivalent Series Resistance Versus Frequency

Frequency in MHZ	Maximum ESR	Frequency in MHZ	Maximum ESR
3000 to 3.8000	150	8.0100 to 10.0000	60
3.8100 to 4.1000	120	10.0100 to 12.0000	50
4.1100 to 5.0000	100	12.0100 to 26.0000	40
5.0100 to 6.0000	80	28.0000 to 75.0000 Third Overtone	60
6.0100 to 8.0000	70	60.0000 to 125.000 Fifth Overtone	80

Environmental and Mechanical Specifications

Shock:	MIL-STD-883C, Method 2002, Condition B
Solderability:	MIL-STD-883C, Method 2003.3
Vibration:	MIL-STD-883C, Method 2007, Condition A
Fine Leak:	MIL-STD-883C, Method 1014.5, Condition A2, $<5x10^{-8}$ ATM cc/sec
Gross Leak:	MIL-STD-883C, Method 1014.5, Condition C
Resistance to Solvents:	MIL-STD-202F, Method 215B