

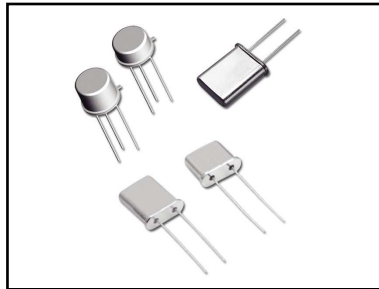
EXTREME ENVIRONMENT

HIGH-TEMPERATURE THRU-HOLE PACKAGED CRYSTALS

FMXTHT SERIES

Extreme Temperature

Crystal



- 1.8 MHz to 125 MHz
- Optimized Support Structure for High Shock and Vibration
- 0°C to +200°C Standard
- -100°C to +300°C Available

SPECIFICATIONS



Parameter	Specification
Frequency Range	1.8 MHz (HC-49 only) to 125.000 MHz
Operation Mode	See Operation Mode and ESR Table
Load Capacitance (CL)	18pf Std, 8 - 60pF and Series available
Frequency Tolerance	±50ppm @ 25°C, Custom Options available
Temperature Tolerance	±250ppm Std, Custom Options available
Operating Temperature	0 to 200°C Std, Custom Options available
Storage Temperature	-55°C to +270°C
Equivalent Series Resistance (ESR)	See Operation Mode and ESR Table
Shunt Capacitance (CO)	7pF max
Drive Level	50µW typical, 1mW max
Aging @ 25°C	±5ppm per year
Screened and Tested to MIL 3098	Available
Package Options (thru-hole)	TO-5, TO-5 Low Profile, HC-49/U, UM-1, UM-5

All specifications subject to change without notice.

Operation Mode and ESR Table

Freq (MHz)	Mode	MAX ESR
2.5 - 3.9	Fundamental	80
4.0 - 6.9	Fundamental	50
7.0 - 9.9	Fundamental	30
10.0 - 14.9	Fundamental	25
15.0 - 35.0	Fundamental	20
24.0 - 67.9	3rd Overtone	40
68.0 - 85.0	3rd Overtone	60
60.0 - 89.9	5th Overtone	50
90.0 - 125.0	5th Overtone	60

ESR Values are based on the HC-49/U Package with AT-Cut crystal orientation; please consult the factory for ESR values for crystals in other package styles.

Note, consult us on ESR values for frequencies <2.5 MHz.

Package Vs Frequency

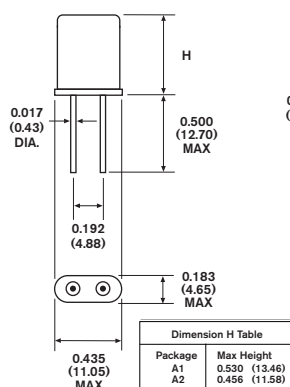
Package	Frequency Range
TO-5 (.260)	3.6 - 125 MHz
TO-5 (.175)	3.6 - 125 MHz
HC-49/UA1	1.8 - 125 MHz
A2	1.8 - 125 MHz
UM-1	6 - 125 MHz
UM-5	8 - 125 MHz

note: fundamental frequency range for UM-1, UM-5, & TO-5 are available beyond 35 MHz. Please consult the factory

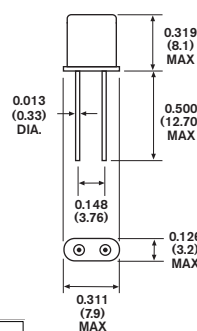
Package Options

LT - Lead Trimming
LF - Lead Forming

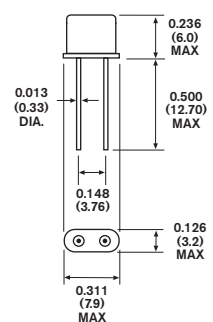
HC-49/U



UM-1

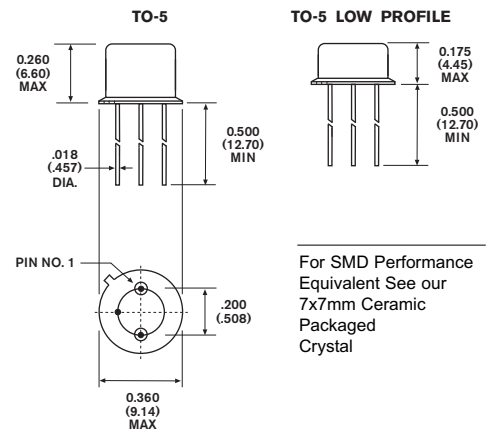


UM-5



Dimensions: $\frac{\text{Inches}}{\text{(mm)}}$

5x7 & 7x7 SMD XTAL now available! please consult the factory



For SMD Performance Equivalent See our 7x7mm Ceramic Packaged Crystal

Available with all 8 leads upon request

PLEASE CONTACT US FOR PART NUMBERS, HOW TO ORDER,
ADDITIONAL PRODUCT SPECIFICATIONS & OR WITH YOUR CUSTOM REQUIREMENTS

Issue 11 | 03122012