



# M1002S350 HC-49U Crystal Resonator

## FEATURES

Resistance Weld (HC49U)  
AT-Cut Fundamental  
RoHS compliant.  
Rugged Design to support harsh environments

## APPLICATIONS

Avionics and Aerospace  
Communication and Navigation  
Military Radios  
Instrumentation and Industrial  
Test and Measurement Equipment

## ELECTRICAL SPECIFICATIONS

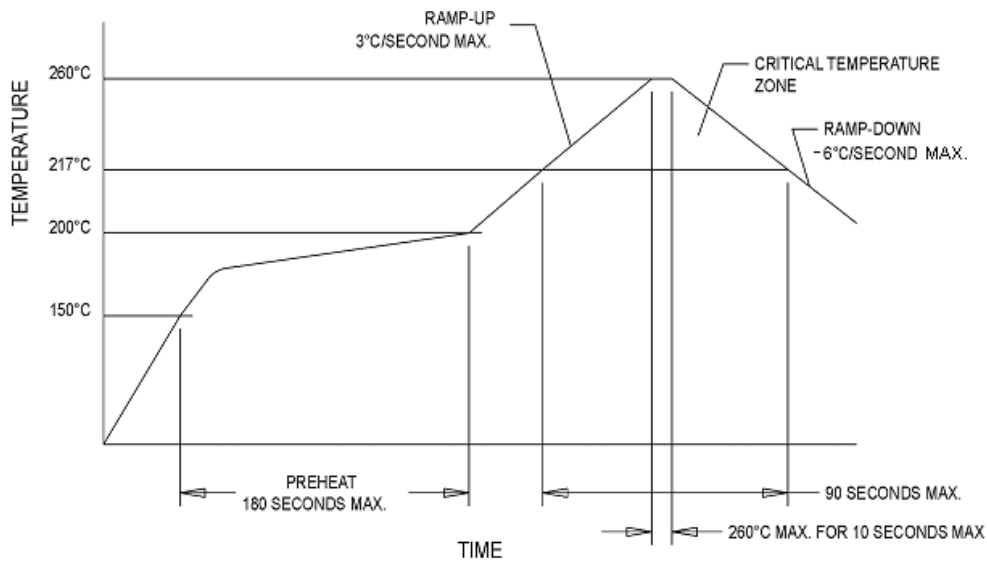
| Parameter             | Symbol         | Min.                 | Typ.     | Max. | Units | Conditions                           |
|-----------------------|----------------|----------------------|----------|------|-------|--------------------------------------|
| Mode of Oscillation   |                | Fundamental (AT-cut) |          |      |       |                                      |
| Frequency Range       | F <sub>0</sub> |                      | 3.686400 |      | MHz   |                                      |
| Frequency Tolerance   | F/F            | -30                  |          | +30  | ppm   | @ +25°C                              |
| Frequency Stability   | ΔF/F           | -100                 |          | +100 | ppm   | Over the operating temperature range |
| Aging                 |                | -5                   |          | +5   | ppm   |                                      |
| Load Capacitance      |                |                      | 30       |      | pF    |                                      |
| Shunt Capacitance     |                |                      |          | 7    | pF    |                                      |
| ESR                   |                |                      |          | 150  | Ω     | @ +25°C                              |
| Insulation Resistance | I <sub>R</sub> | 500                  |          |      | MΩ    | 100 VDC                              |
| Drive Level           | D <sub>L</sub> | 50                   | 100      | 1000 | μW    |                                      |

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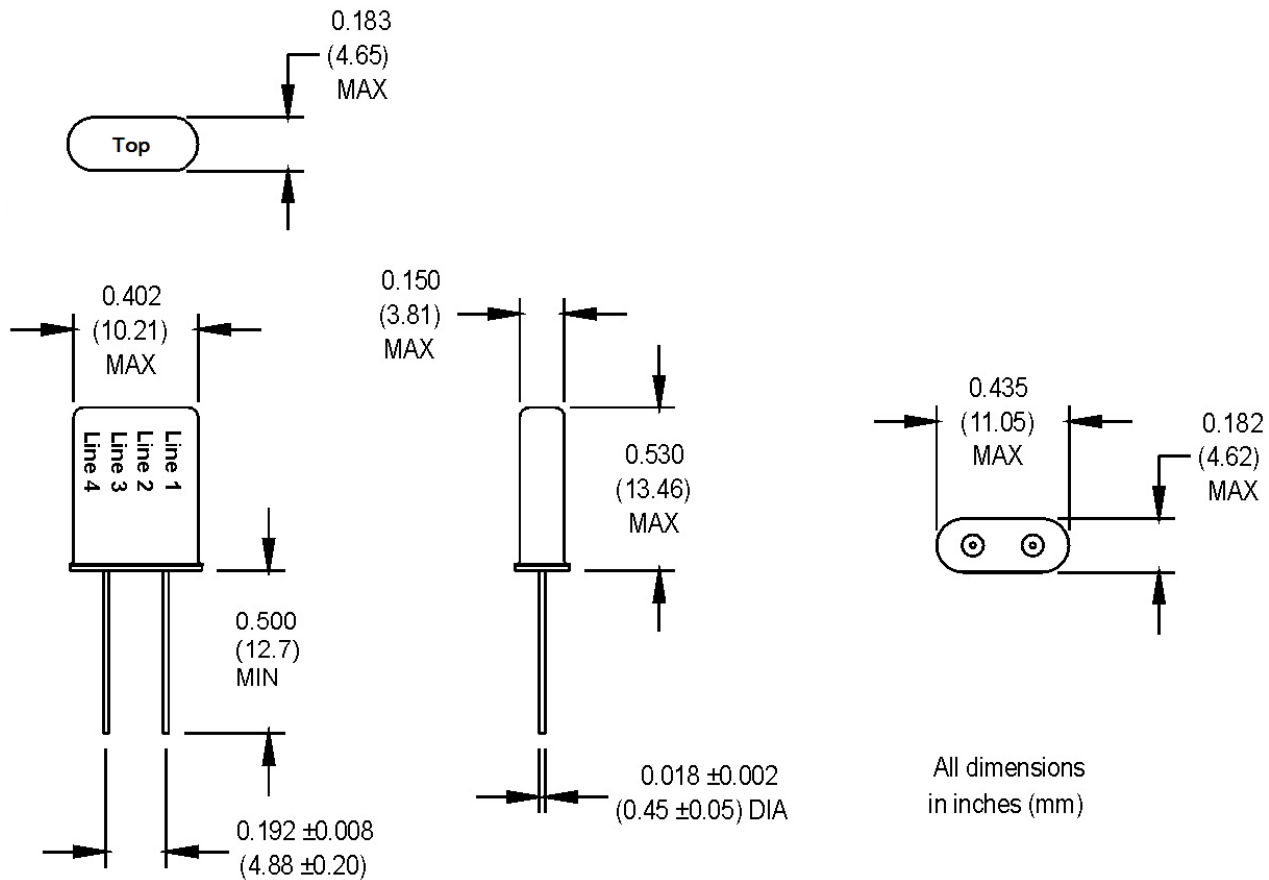
**ENVIRONMENTAL CONDITIONS**

|                                   |   |      |  |      |    |  |
|-----------------------------------|---|------|--|------|----|--|
| Operating Temperature             | T <sub>A</sub>  | --20 |  | +70  | °C |  |
| Storage Temperature               | T <sub>s</sub>  | -55  |  | +125 | °C |  |
| Mechanical Shock                  | Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave) |      |  |      |    |  |
| Mechanical Vibration              | Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)                    |      |  |      |    |  |
| Hermeticity                       | MIL-STD-202, Method 112 (1 x 10 <sup>-8</sup> atm cc/sec min)                 |      |  |      |    |  |
| Solderability                     | Per MIL-STD-202, Method 208C  |      |  |      |    |  |
| Package                           | HC-49U resistance weld RoHS compliant   |      |  |      |    |  |
| Maximum Wave Soldering Conditions | +260°C for 10 seconds   |      |  |      |    |  |

**LEAD FREE SOLDER PROFILE**



**MECHANICAL AND PIN OUT INFORMATION**



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