

## SPECIFICATION FOR HC-49/U CRYSTAL

### MtronPTI P/N 463-000-R

**Effective Date: May 5, 2006**

#### I. GENERAL & ELECTRICAL REQUIREMENTS:

1. MODE OF OSCILLATION: Fundamental AT-Cut Crystal
2. AVAILABLE FREQUENCY RANGE: 1.843200 to 34.0000 MHz
3. FREQUENCY TOLERANCE @ +25°C: ± 30 ppm max.
4. FREQUENCY STABILITY OVER TEMPERATURE: ± 50 ppm max.
5. OPERATING TEMPERATURE RANGE: -10°C to +70°C
6. EFFECTIVE SERIES RESISTANCE (ESR): See Table 1
7. LOAD CAPACITANCE: 20 pF
8. SHUNT CAPACITANCE: 7.0 pF max.
9. AGING: ± 5 ppm/yr. max.
10. DRIVE LEVEL: 1mW max. 100 µW typ. 50µW min.

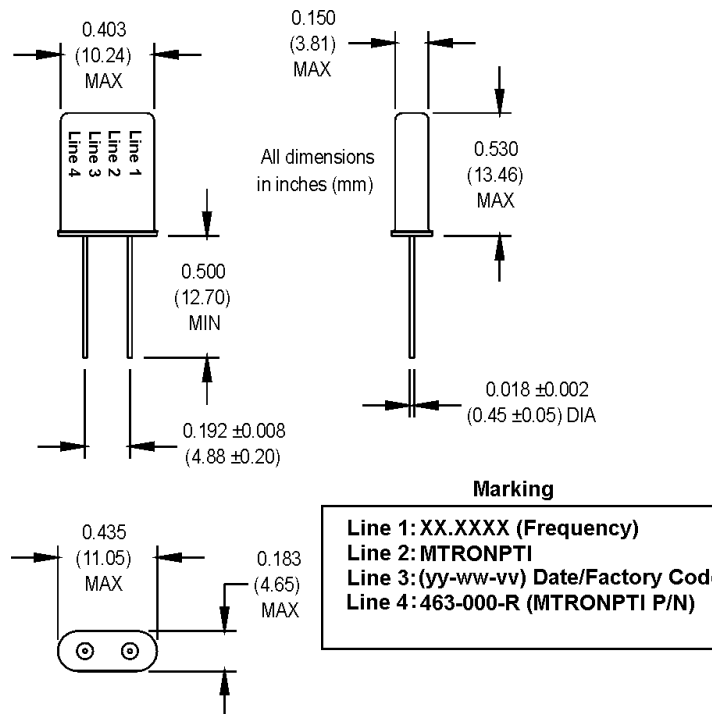
**Table 1**

Equivalent Series Resistance (ESR), Max. Fundamental (AT-cut)	
1.8432 to 1.999 MHz	700 Ω
2.000 to 2.399 MHz	600 Ω
2.400 to 3.299 MHz	400 Ω
3.300 to 3.569 MHz	140 Ω
3.570 to 3.999 MHz	100 Ω
4.000 to 5.999 MHz	75 Ω
6.000 to 7.999 MHz	50 Ω
8.000 to 10.999 MHz	40 Ω
11.000 to 14.999 MHz	30 Ω
15.000 to 19.999 MHz	25 Ω
20.000 to 34.000 MHz	25 Ω

#### II. ENVIRONMENTAL & MECHANICAL REQUIREMENTS:

1. SHOCK: Per MIL-STD-202, Method 213, Condition C
2. VIBRATION: Per MIL-STD-202, Method 201 & 204
3. HERMETICITY:  $1 \times 10^{-8}$  atm cc/sec min.
4. THERMAL CYCLE: Per MIL-STD-883, Method 1010 B.
5. MAXIMUM WAVE SOLDERING CONDITIONS: +260°C for 10 secs.
6. SOLDERABILITY: Per EIAJ-STD-002
7. PACKAGE: HC-49/U resistance weld. RoHS compliant.

#### III. DIMENSIONS:



#### IV. DATA SHEET REVISION TABLE:

Date	Rev.	Orig.	Details of Revision
5/5/06	0	WNJ	Original release.

