

SPECIFICATION FOR SMT CRYSTAL
MtronPTI P/N 520-210-R
(Standard ATSM-49-R Part)
Effective Date: August 14, 2006



I. GENERAL & ELECTRICAL REQUIREMENTS:

1. MODE OF OSCILLATION: Fundamental AT-Cut Crystal
2. FREQUENCY: 3.579545 to 40.000000 MHz
3. FREQUENCY TOLERANCE @ +25°C: ± 30 ppm
4. FREQUENCY STABILITY OVER TEMPERATURE: ± 50 ppm
5. OPERATING TEMPERATURE RANGE: -10°C to +70°C
6. EFFECTIVE SERIES RESISTANCE (ESR): See Table 1.
7. LOAD CAPACITANCE: 18 pF
8. SHUNT CAPACITANCE: 7.0 pF max.
9. AGING: ± 5 ppm/yr. max.
10. DRIVE LEVEL: 500µW max. 100 µW typical, 50 µW min.

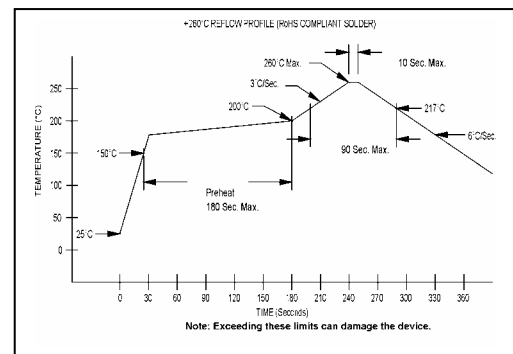
TABLE 1

Frequency Range	Max. ESR
3.579 to 3.999 MHz	200 Ω
4.000 to 4.999 MHz	150 Ω
5.000 to 5.999 MHz	120 Ω
6.000 to 9.999 MHz	100 Ω
10.000 to 13.999 MHz	80 Ω
14.000 to 40.000 MHz	50 Ω

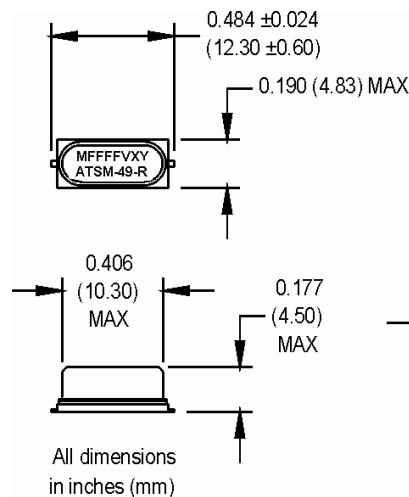
II. ENVIRONMENTAL/MECHANICAL REQUIREMENTS:

1. SHOCK: Per MIL-STD-202, Method 213, Condition C
2. VIBRATION: Per MIL-STD-202, Method 201 & 204
3. HERMETICITY: 1 X 10⁻⁸ atm cc/sec min.
4. MAXIMUM SOLDERING CONDITIONS: See Figure 1.
5. SOLDERABILITY: Per EIAJ-STD-002
6. PACKAGE: HC-49U/S-SMD. RoHS compliant.

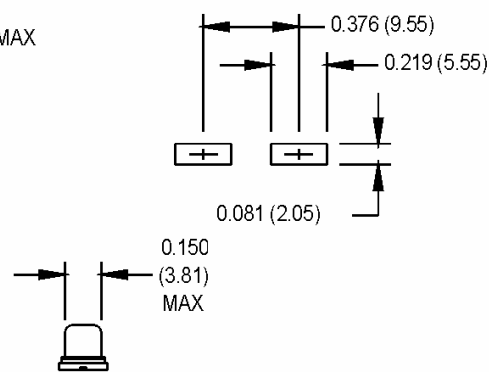
Figure 1



DIMENSIONS



SUGGESTED SOLDER PAD LAYOUT



MARKING LEGEND

MFFFFVXY
M= MtronPTI
F= Frequency (4 digits max.)
V= Factory Code
X= Month
Y= Year

