Pletronics, Inc.
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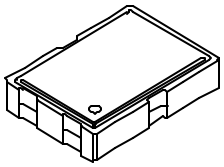
SM13T



- SURFACE MOUNT CRYSTALS IN CERAMIC PACKAGE
- METAL COVER SEAM SEALED TO CERAMIC BASE, 1.3 mm HIGH MAX, 7 x 5 mm, 4 PADS
- LAND PATTERN COMPATIBLE WITH OUR SM13H

STANDARD SPECIFICATIONS:

Frequency Range	8.000 MHz - 72.000 MHz (Consult factory for specific available frequencies)		
Oscillation Modes	fundamental 8.000 - 25.000 MHz	fundamental or 3rd overtone 25.001 - 40.000 MHz	3rd overtone 40.001 - 72.000 MHz
Calibration Frequency Tolerance at 25•C	±50 PPM is standard, but tighter tolerances also available for certain frequencies.		
Frequency Stability over Operating Temperature Range	±50 PPM is standard, but tighter tolerances also available for certain operating temperature ranges.		
Operating Temperature Range	0 - 70 °C is standard, but can be extended to -40 - +85°C for certain frequencies (just add 'E' after model number).		
Load Capacitance	10 pF - ∞ pF (∞ pF means Series Resonance). To be specified by customer.		
Equivalent Series Resistance (ESR)	See table on the next page.		
Drive Level	100 μW		
Aging at 25•C	±3 PPM maximum		
Packaging (see page R1, Figure 4)	16 mm tape, 178 mm reel: 1000 parts per reel		

PART NUMBERING GUIDE:

- **The Pletronics part number for an SM13T crystal consists of the following 3 elements:**

  1. **Model Number:** SM13T
  2. **Load Capacitance:**
     When the load required is ∞ pF, that is, the calibration is at **series resonance**: SM13T-SR;
     When the load required is XX pF: SM13T-XX.
  3. **Frequency of Operation in MHz**

  EXAMPLES: SM13T-SR-10.000 MHz; SM13T-18-10.000 MHz

- When customer's requirements are non-standard, a special engineering part number will be assigned.

(continued)

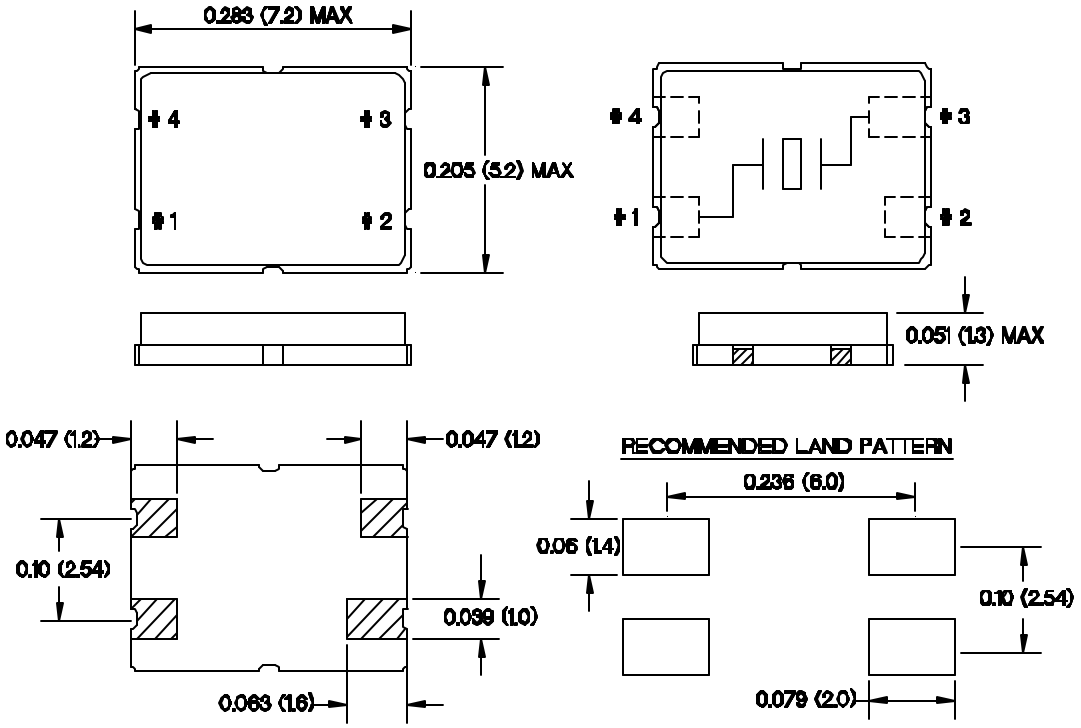
SM13T

STANDARD EQUIVALENT SERIES RESISTANCE VALUES

Oscillation Mode	Frequency Range	ESR **
Fundamental Mode	8.000 - 10.000 MHz	60 ohms maximum
	10.001 - 11.999 MHz	50 ohms maximum
	12.001- 15.999 MHz	40 ohms maximum
	16.000 - 40.000 MHz	30 ohms maximum
3rd overtone Mode	24.000 - 40.000 MHz	80 ohms maximum
	40.001- 72.000 MHz	70 ohms maximum

** ESR values lower than indicated may be available. Please contact factory for lower ESR values.

PACKAGE OUTLINE (NOT TO SCALE):



INCHES (MILLIMETERS)

January 2000