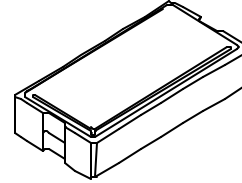




# SM12T

- SURFACE MOUNT CRYSTALS IN CERAMIC PACKAGE
- METAL COVER SEAM SEALED TO CERAMIC BASE, 6 x 3.5 mm, 4 PADS
- LAND PATTERN COMPATIBLE WITH OUR SM12H



## STANDARD SPECIFICATIONS:

|                                                      |                                                                                                                      |                                      |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Frequency Range                                      | 13.00 MHz - 100.00 MHz (Consult factory for specific available frequencies)                                          |                                      |
| Oscillation Modes                                    | fundamental<br>13.000 - 24.000 MHz                                                                                   | 3rd overtone<br>24.000 - 100.000 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                                          | 100µW                                                                                                                |                                      |
| Aging at 25°C                                        | ± 5 PPM maximum                                                                                                      |                                      |
| Packaging (see page R1, Figure 4)                    | 16 mm tape, 178 or 330 mm reel: 1000 parts per reel                                                                  |                                      |

## PART NUMBERING GUIDE:

- The Pletronics part number for an SM12T crystal consists of the following 3 elements:

1. **Model Number:** SM12T

2. **Load Capacitance:**

When the load required is ∞ pF, that is, the calibration is at **series resonance**: SM12T-SR;

When the load required is XX pF: SM12T-XX

3. **Frequency of Operation in MHz**

EXAMPLES: SM12T-SR-15.000 MHz; SM12T-18-15.000 MHz

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

(continued)

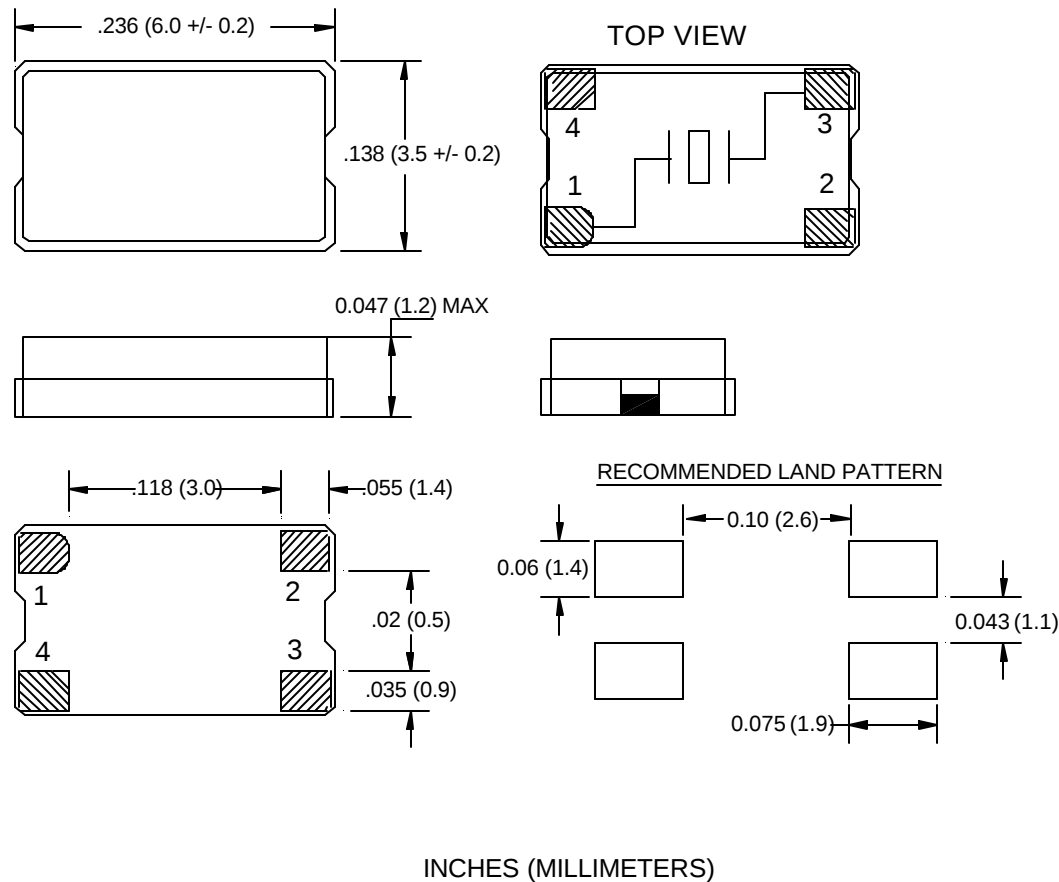
# SM12T

## STANDARD EQUIVALENT SERIES RESISTANCE VALUES

| Oscillation Mode  | Frequency Range       | ESR **           |
|-------------------|-----------------------|------------------|
| Fundamental Mode  | 13.000 – 13.999 MHz   | 50 ohms maximum  |
|                   | 14.000 - 19.999 MHz   | 40 ohms maximum  |
|                   | > 20.000 MHz (BT cut) | 40 ohms maximum  |
| 3rd overtone Mode | 24.000 - 100.000 MHz  | 120 ohms maximum |

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

## PACKAGE OUTLINE (NOT TO SCALE):



October 2000