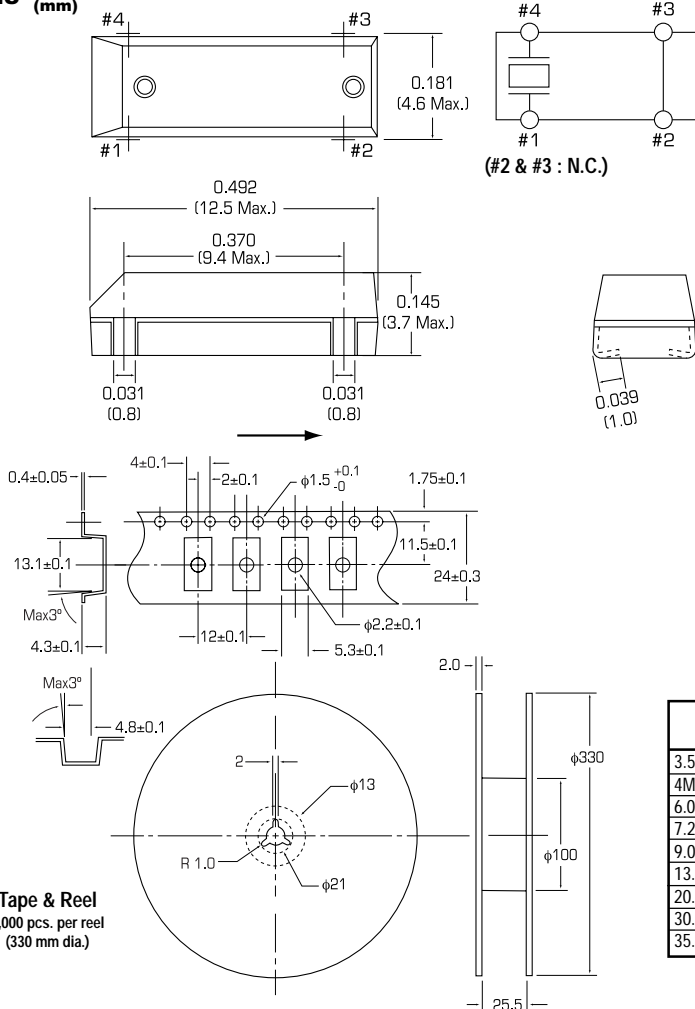


# PLASTIC PACKAGE AT-STRIP SURFACE MOUNT CRYSTALS

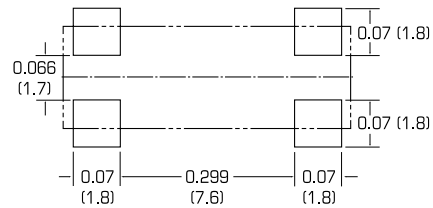
## MODEL SM1

| Model                        | SM1   |
|------------------------------|---|
| Frequency Range              | 3.5MHz ~ 70.0 MHz   |
| Oscillation Mode             | 3.5MHz ~ 30.0MHz (AT Fundamental)<br>30.00MHz ~ 70.00MHz (3rd Overtone)       |
| Frequency Tolerance@ 25°C    | ± 50ppm Optional Tolerances Available   |
| Frequency Stability          | ± 100ppm 0°C to +70°C Standard, Optional Tolerances Available                 |
| Operating Temperature Range  | -10°C ~ +60°C Standard, Optional Temperature Ranges Available                 |
| Storage Temperature Range    | -55°C ~ +125°C  |
| Equivalent Series Resistance | Resistance Specifications Below (See Chart Below)                             |
| Load Capacitance             | 16, 18, 20, 30, and 32pF, Custom C <sub>L</sub> and Series resonant available |
| Shunt Capacitance            | 7pF Max   |
| Drive Level                  | 100μ Watts Correlation  |
| Insulation Resistance        | 500 megohms Min   |
| Aging for first year         | ±5ppm Max   |
| Reflow Soldering Condition   | 10 Seconds Max at +235°C ±5°C   |

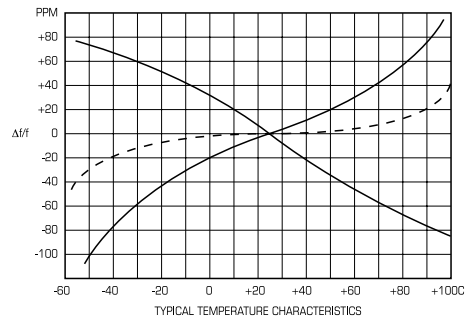
**DIMENSIONS** Inches (mm)



**Recommended Soldering Pattern**



**AT-CUT**



| Frequency                              | Equivalent Series Resistance | Oscillation Mode |
|--|------------------------------|------------------|
| 3.5MHz < f <sub>0</sub> < 4MHz         | 200Ω Max                     | Fundamental      |
| 4MHz < f <sub>0</sub> < 6.000MHz       | 150Ω Max                     | Fundamental      |
| 6.000MHz < f <sub>0</sub> < 6.50MHz    | 100Ω Max                     | Fundamental      |
| 7.25MHz < f <sub>0</sub> < 8.000MHz    | 80Ω Max                      | Fundamental      |
| 9.00MHz < f <sub>0</sub> < 13.00MHz    | 60Ω Max                      | Fundamental      |
| 13.50MHz < f <sub>0</sub> < 19.6608MHz | 50Ω Max                      | Fundamental      |
| 20.00MHz < f <sub>0</sub> < 29.491MHz  | 40Ω Max                      | Fundamental      |
| 30.00MHz < f <sub>0</sub> < 33.868MHz  | 100Ω Max                     | Fundamental      |
| 35.251MHz < f <sub>0</sub> < 80.000MHz | 100Ω Max                     | 3rd Overtone     |

