

- **HC-49/S SMD Crystal**
- **3rd Lead Ground Option Available**
- **Wide Frequency Range**
- **Fundamental or 3rd OT AT Cut**

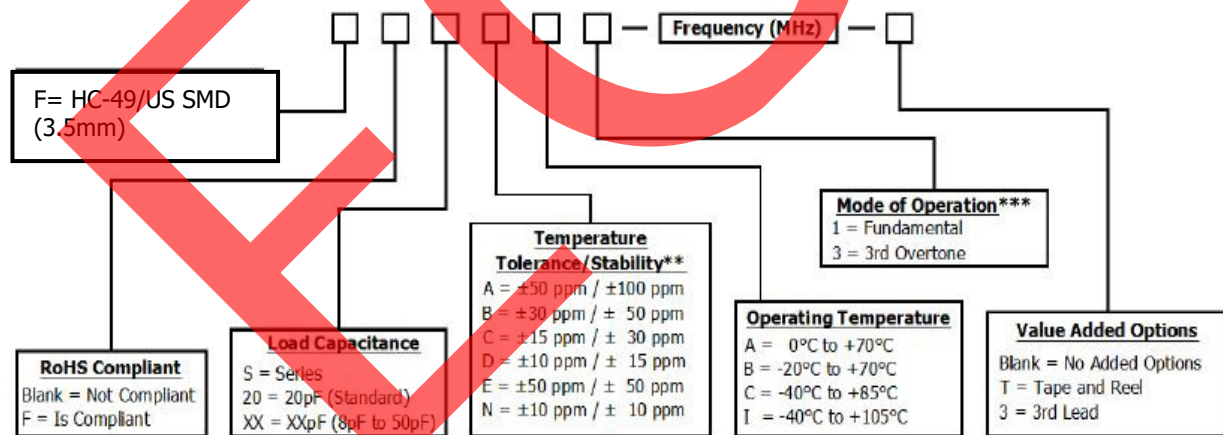


|                                 |  |
|---------------------------------|--|
| Frequency Range                 | 3.200MHz to 80.000MHz                                |
| Frequency Tolerance / Stability | (See Part Number Guide for Options)                  |
| Operating Temperature Range     | (See Part Number Guide for Options)                  |
| Storage Temperature             | -55°C to +125°C                                      |
| Aging                           | ±5ppm / first year Max                               |
| Shunt Capacitance               | 7pF Max  |
| Load Capacitance                | 20pF Standard<br>(See Part Number Guide for Options) |
| Equivalent Series Resistance    | See ESR Chart  |
| Mode of Operation               | See ESR Chart  |
| Drive Level                     | 1mW Max  |

## ESR Chart

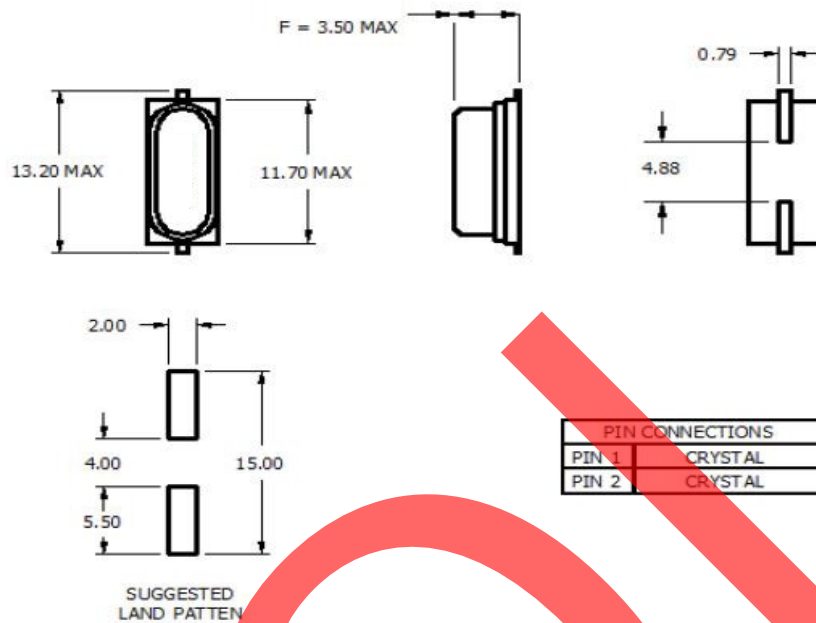
| Frequency Range        | ESR (Ohms) | Mode / Cut              |
|------------------------|------------|-------------------------|
| 3.200MHz to 3.999MHz   | 150 Max    | Fund / AT               |
| 4.000MHz to 4.999MHz   | 120 Max    | Fund / AT               |
| 5.000MHz to 5.999MHz   | 100 Max    | Fund / AT               |
| 6.000MHz to 7.999MHz   | 90 Max     | Fund / AT               |
| 8.000MHz to 9.999MHz   | 70 Max     | Fund / AT               |
| 10.000MHz to 11.999MHz | 50 Max     | Fund / AT               |
| 12.000MHz to 14.999MHz | 50 Max     | Fund / AT               |
| 15.000MHz to 19.999MHz | 40 Max     | Fund / AT               |
| 20.000MHz to 33.000MHz | 30 Max     | Fund / AT               |
| 24.576MHz to 29.999MHz | 100 Max    | 3 <sup>rd</sup> OT / AT |
| 30.000MHz to 80.000MHz | 80 Max     | 3 <sup>rd</sup> OT / AT |

## Part Number

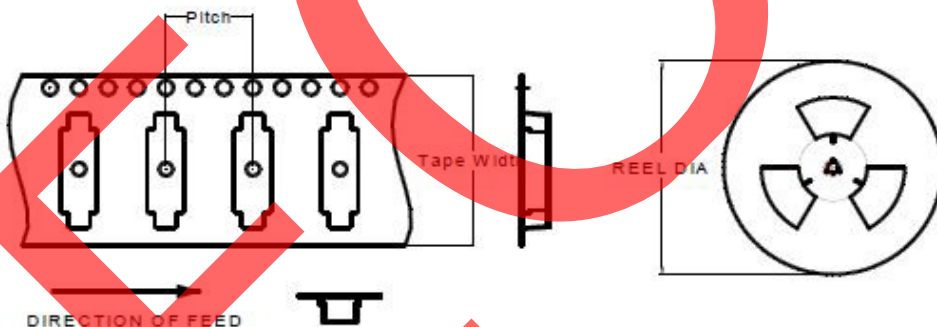


\*\*\*Mode is dependant upon Frequency. See ESR Chart

## Mechanical Details



## Tape & Reel

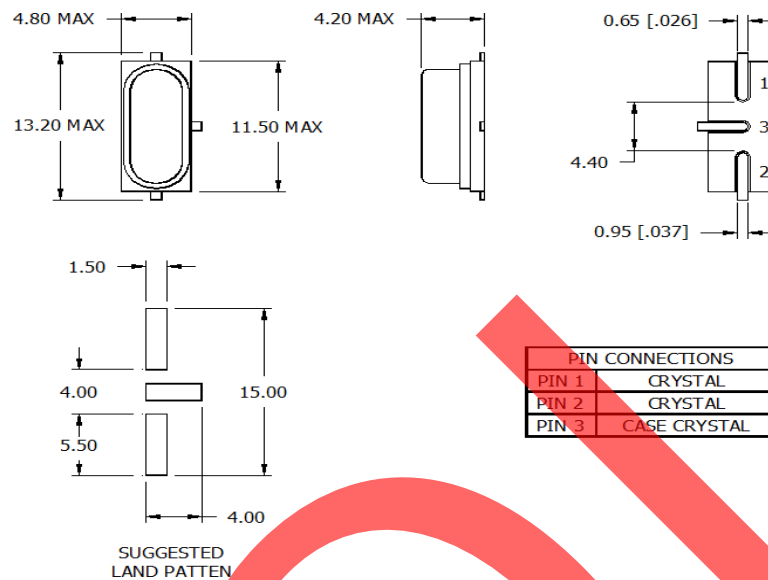


|            |               |
|------------|---------------|
| PITCH      | 12.00 [0.628] |
| TAPE WIDTH | 24.00 [0.945] |
| REEL DIA   | 330 [13]      |
| COUNT.     | 1000          |

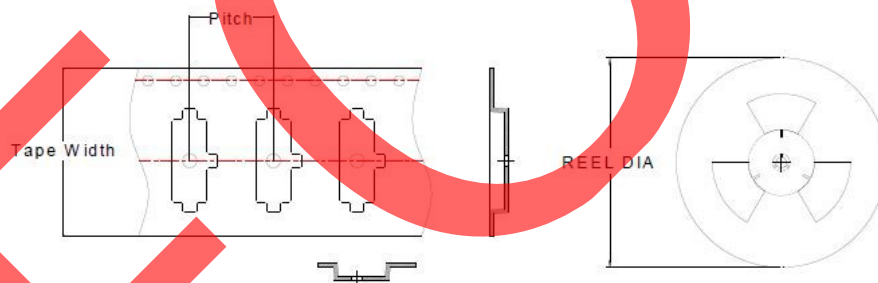
### Notes: UNLESS OTHERWISE SPECIFIED

1. Applicable Standards / Specifications  
ANSI Y14.5M, Dimensions and Tolerances  
EIA-481-B, 8mm through 200mm Embossed Carrier Tapping and 8mm and 12mm Punched Carrier Tapping of Surface Mount Components for Automatic Handling.
2. Dimensions are in millimetres.
3. Tolerances are  $\pm 0.1$  [0.004] mm unless otherwise specified.
4. Do not scale drawing.

### 3rd Lead Mechanical Details



### 3rd Lead Tape & Reel Dimensions



|            |               |
|------------|---------------|
| PITCH      | 12.00 [0.471] |
| TAPE WIDTH | 24.00 [0.942] |
| REEL DIA   | 330 [13.0]    |
| COUNT.     | 1000 pcs      |

#### NOTES: UNLESS OTHERWISE SPECIFIED

5. Applicable Standards / Specifications  
ANSI Y14.5M, Dimensions and Tolerances  
EIA-481-B, 8mm through 200mm Embossed Carrier Tapping and 8mm and 12mm Punched Carrier Tapping of Surface Mount Components for Automatic Handling.
6. Dimensions are in millimetres.
7. Tolerances are  $\pm 0.10$  [0.004] mm unless otherwise specified.
8. Do not scale drawing.