

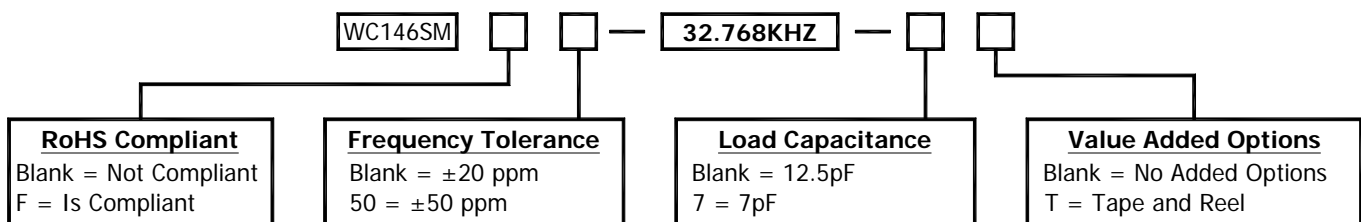
# WC146SM Series Crystal



- Ultra Low Profile with 1.4mm Height max
- 32.768KHZ
- RoHS Compliant Available
- Ideal for use in space confined applications
- Tape and Reel Packaging

Frequency	32.768KHZ
Frequency Tolerance	±20ppm or ±50ppm
Turnover Temperature	+25°C ±5°C
Temperature Coefficient	-0.04 x 10 <sup>-6</sup> /°C <sup>2</sup> Maximum
Load Capacitance	7.0pF or 12.5pF
Series Resistance	65K Ohms max
Maximum Drive Level	1.0 uWatt
Recommended Drive Level	0.1 uWatt
Shunt Capacitance	1.8pF typ
Aging	±3ppm for the first year
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C
Moisture Sensitivity Level	1

## Part Number Guide



Please consult with MMD sales department for any other parameters or options.

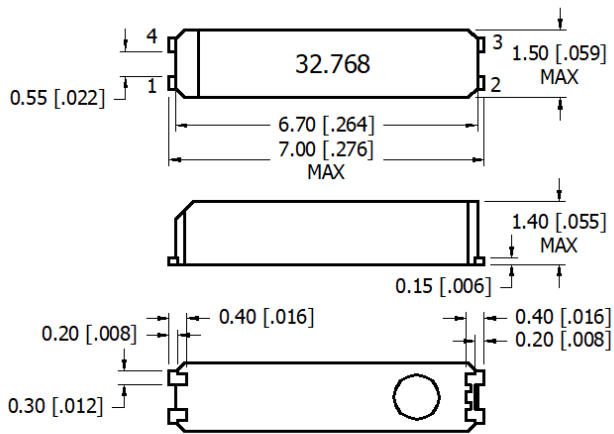
**QUALITY SYSTEM  
CERTIFIED  
= ISO 9001 =**

**ILSI America LLC – MMD Inc.**  
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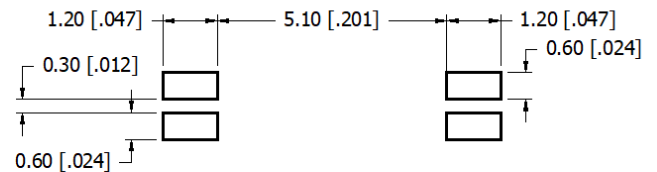
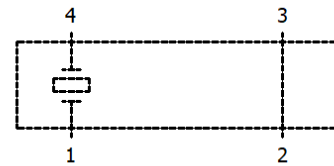
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## Mechanical Details



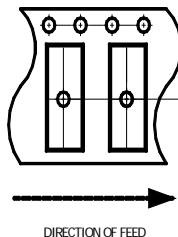
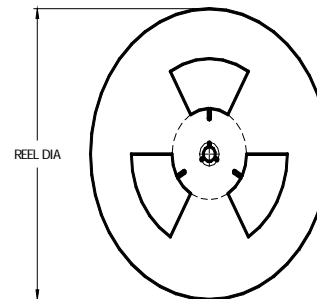
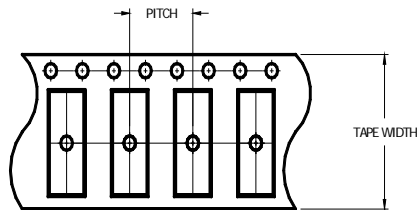
Marking:  
Line 1 = 32.768

DIMENSIONS IN BRACKETS ARE IN INCHES.



RECOMMENDED  
LAND PATTERN

## Tape & Reel



PITCH	4.00 [.157]
TAPE WIDTH	16.00 [.630]
REEL DIA	330[13.14]
QTY PER REEL	9000
PIN 1 ORIENT.	Q1

NOTES: UNLESS OTHERWISE SPECIFIED

1. Applicable Standards / Specifications  
ANSI Y14.5M, Dimensions and Tolerances  
EIA-481-B, 8 mm through 200mm Embossed Carrier Taping and 8 mm and 12 mm Punched Carrier Taping of Surface Mount Components for Automatic Handling.
2. Dimensions are in millimeters.
3. Tolerances are  $\pm 0.10$  [.004] mm unless otherwise specified.
4. Do not scale drawing.

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