



## C32xx Model

5×7 mm SMD, 5V, HCMOS/TTL

|                                      |                                                        |
|--------------------------------------|--------------------------------------------------------|
| <b>Frequency Range:</b>              | 1.544 MHz to 100.000 MHz                               |
| <b>Frequency Stability Options:</b>  | ±20*, ±25, ±50, ±100 (ppm)                             |
| <b>Temperature Range: (standard)</b> | 0°C to +70°C                                           |
| (Option "M")                         | -20°C to +70°C                                         |
| (Option "E"*)                        | -40°C to +85°C                                         |
| <b>Storage:</b>                      | -45°C to 90°C                                          |
| <b>Input Voltage:</b>                | 5.0V ±0.5V                                             |
| <b>Input Current:</b>                | 60mA Max                                               |
| <b>Output:</b>                       | HCMOS/TTL                                              |
| <b>Symmetry:</b>                     |                                                        |
| (Standard "2")                       | 40/60% Max @ 50% Vdd                                   |
| (Option "9")                         | 45/55% Max @ 50% Vdd                                   |
| <b>Rise/Fall Time:</b>               | 6ns Max @ 20% to 80% Vdd                               |
| <b>Logic:</b>                        | "0" = 10% Vdd Max                                      |
|                                      | "1" = 90% Vdd Min                                      |
| <b>Disable Time:</b>                 | 200nSec Max                                            |
| <b>Start-up Time:</b>                | 1mSec Typ., 2mSec Max                                  |
| <b>Load:</b>                         | 50pF/10TTL Max                                         |
| <b>Jitter RMS:</b> 12kHz~20MHz       | 0.5ps Typ, 1ps Max                                     |
| <b>Sub-harmonics:</b>                | None                                                   |
| <b>Aging:</b>                        | <3ppm 1 <sup>st</sup> /yr, <1ppm every year thereafter |

\*available in select frequencies -40/85

Model C32xx is a 1.544 MHz to 100.000 MHz HCMOS Clock Oscillator operating at 5.0Volts. The oscillator utilizes Fundamental or High Q Third Overtone crystal design providing very low Jitter and Phase Noise. No Sub-Harmonics are present in the Output Signal.

### Applications:

Digital Video  
SONET/SDH/DWDM  
Storage Area Networks  
Broadband Access  
Ethernet, Gigabit Ethernet

### Mechanical:

Shock: MIL-STD-883, Method 2002, Condition B  
Vibration: MIL-STD-883, Method 2007, Condition A  
Solderability: MIL-STD-883, Method 2003  
Solvent Resistance: MIL-STD-202, Method 215  
Resistance to Soldering Heat: MIL-STD-202, Method 210, Condition I or J

### Environmental:

Thermal Shock: MIL-STD-883, Method 1011, Condition A  
Moisture Resistance: MIL-STD-883, Method 1004

Rev: K

Date: 10-Jan-12

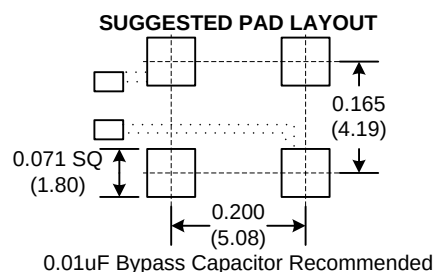
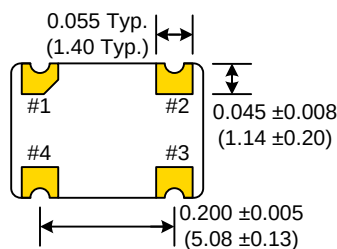
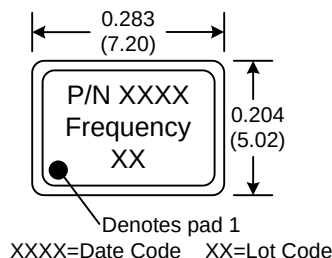
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Specifications subject to change without notice.



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Dimensions inches (mm)  
All dimensions are Max unless otherwise specified.

### Tri-State Function

| Function pin 1        | Output pin |
|-----------------------|------------|
| Open                  | Active     |
| "1" level 0.7×Vcc Min | Active     |
| "0" level 0.3×Vcc Max | High Z     |

| PIN | Function |
|-----|----------|
| 1   | E/D      |
| 2   | GND      |
| 3   | OUT      |
| 4   | Vcc      |

### Crystek Part Number Guide

C X 3 X 9 X - 44.736

#1 Temp. Range: Blank = 0/70°C, M = -20/70°C, E = -40/85°C  
#2 Symmetry: 2 = 40/60%, 9 = 45/55%  
#3 Stability: (see Table 1)  
#4 Frequency in MHz: 3 or 6 decimal places

Example:  
C3292-44.736MHz = 5.0V, 0/70°C, 40/60%, ±50ppm, 44.736MHz  
CM3991-44.736MHz = 5.0V, -20/70°C, 45/55%, ±25ppm, 44.736MHz  
CE3290-44.736MHz = 5.0V, -40/85°C, 40/60%, ±100ppm, 44.736MHz

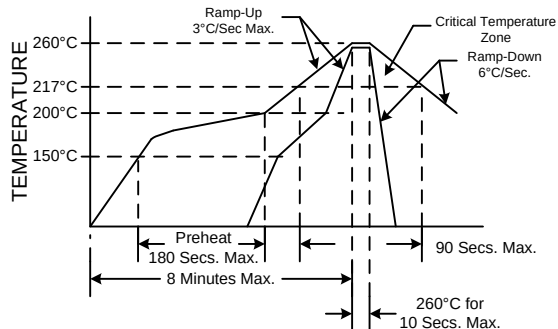
#### Stability Indicator

|    |         |
|----|---------|
| 0  | ±100ppm |
| 2  | ± 50ppm |
| 1  | ± 25ppm |
| 8* | ± 20ppm |

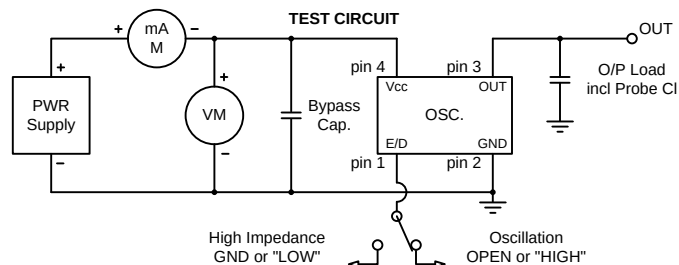
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Table 1

### RECOMMENDED REFLOW SOLDERING PROFILE



NOTE: Reflow Profile with 240°C peak also acceptable.



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