

# OC Series

5X7X1.6mm / SMD / HCMOS/TTL Oscillator

Lead-Free  
RoHS Compliant

CALIBER  
Electronics Inc.

## PART NUMBERING GUIDE

Environmental/Mechanical Specifications on page F5

|                                                                                                                                                                                                              |  |                                                                                                   |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------|--|
| <b>Package</b><br>OCH = 5X7X1.6mm / 5.0Vdc / HCMOS-TTL<br>OCC = 5X7X1.6mm / 5.0Vdc / HCMOS-TTL / Low Power<br><25.000MHz=15mA max. / >24.000MHz=20mA max.<br>OCD = 5X7X1.7mm / 5.0Vdc and 3.3Vdc / HCMOS-TTL |  | <b>Pin One Connection</b><br>T = Tri State Enable High                                            |  |
| <b>Inclusive Stability</b><br>100= +/-100ppm, 50= +/-50ppm, 30= +/-30ppm, 25= +/-25ppm,<br>20= +/-20ppm, 15= +/-15ppm, 10= +/-10ppm (25,20,15,10= 0°C-70°C Only)                                             |  | <b>Output Symmetry</b><br>Blank = 40/60%, A = 45/55%                                              |  |
|                                                                                                                                                                                                              |  | <b>Operating Temperature Range</b><br>Blank = 0°C to 70°C, 27 = -20°C to 70°C, 48 = -40°C to 85°C |  |

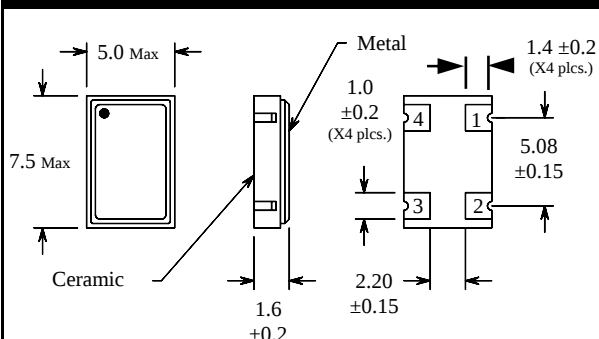
## ELECTRICAL SPECIFICATIONS

Revision: 1998-C

|                                 |  |                                                                                                                                                                                                                                                                                                 |
|---------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency Range                 |  | 1.544MHz to 156.520MHz                                                                                                                                                                                                                                                                          |
| Operating Temperature Range     |  | 0°C to 70°C / -20°C to 70°C / -40°C to 85°C                                                                                                                                                                                                                                                     |
| Storage Temperature Range       |  | -55°C to 125°C                                                                                                                                                                                                                                                                                  |
| Supply Voltage                  |  | 5.0Vdc ±10%, 3.3Vdc ±10%                                                                                                                                                                                                                                                                        |
| Input Current                   |  | 1.544MHz to 36.000MHz<br>36.001MHz to 70.000MHz<br>70.001MHz to 125.000MHz<br>18mA Maximum<br>50mA Maximum<br>65mA Maximum                                                                                                                                                                      |
| Frequency Tolerance / Stability |  | Inclusive of Operating Temperature Range, Supply Voltage and Load<br>±100ppm, ±50ppm, ±30ppm, ±25ppm, ±20ppm,<br>±15ppm or ±10ppm (25, 20, 15, 10 = 0°C to 70°C )                                                                                                                               |
| Output Voltage Logic High (Voh) |  | w/TTL Load<br>w/HCMOS Load<br>2.4Vdc Minimum<br>Vdd -0.5Vdc Minimum                                                                                                                                                                                                                             |
| Output Voltage Logic Low (Vol)  |  | w/TTL Load<br>w/HCMOS Load<br>0.4Vdc Maximum<br>0.5Vdc Maximum                                                                                                                                                                                                                                  |
| Rise / Fall Time                |  | 10% to 90% of Waveform w/30pF HCMOS Load; 0.4Vdc to 2.4V w/10LSTTL Load 10nSec Max. <= 70.000MHz<br>10% to 90% of Waveform w/15pF HCMOS Load; 0.4Vdc to 2.4V w/10LSTTL Load 5nSec Max. >70.000MHz<br>10% to 90% of Waveform w/50pF HCMOS Load; 0.4Vdc to 2.4V w/TTL Load 5nSec Max. <=70.000MHz |
| Duty Cycle                      |  | @1.4Vdc w/TTL Load; @50% w/HCMOS Load<br>@1.4Vdc w/TTL Load or w/HCMOS Load<br>@50% of Waveform w/LSTTL or HCMOS Load<br>>66.667MHz<br>50 ±10% (Standard)<br>50±5% (Optional)<br>50±5% (Optional)                                                                                               |
| Load Drive Capability           |  | <= 70.000MHz<br>>70.000MHz<br><=70.000MHz (Optional)<br>10LSTTL Load or 30pF HCMOS Load<br>10LSTTL Load or 15pF HCMOS Load<br>10TTL Load or 50pF HCMOS Load                                                                                                                                     |
| Pin 1 Tristate Input Voltage    |  | No Connection<br>VIH<br>VIL<br>Enables Output<br>+2.2Vdc Minimum to Enable Output<br>+0.8Vdc Maximum to Disable Output                                                                                                                                                                          |
| Aging (@ 25°C)                  |  | ±5ppm / year Maximum                                                                                                                                                                                                                                                                            |
| Start Up Time                   |  | 10mSeconds Maximum                                                                                                                                                                                                                                                                              |
| Absolute Clock Jitter           |  | ±100pSeconds Maximum                                                                                                                                                                                                                                                                            |
| One Sigma Clock Jitter          |  | ±25pSeconds Maximum                                                                                                                                                                                                                                                                             |

## MECHANICAL DIMENSIONS

## Marking Guide



All Dimensions in mm.

Line 1: Frequency  
Line 2: CEI YM

T = Tristate  
CEI = Caliber Electronics Inc.  
YM = Date Code (Year / Month)

Pin 1: Tri-State  
Pin 2: Case Ground

Pin 3: Output  
Pin 4: Supply Voltage

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