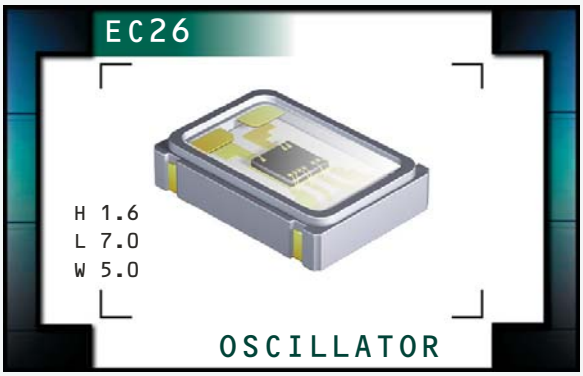
# EC26 Series

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 3.3V supply voltage
- LVHCMOS/TTL output
- Stability to 20ppm
- Standby Function
- Available in tube or tape and reel




## ELECTRICAL SPECIFICATIONS

| | | |
|---|---|---|
| **Frequency Range** | 1.544MHz to 125.000MHz and 125.009MHz, 125.009375MHz, 125.010MHz, 127MHz, 128MHz, 130MHz, 132MHz, 133MHz, 133.333MHz, 137.472MHz, 142.850MHz, 150MHz, 155.520MHz and 156.250MHz | |
| **Operating Temperature Range** | Frequency Tolerance/Stability options of ±100ppm, ±50ppm, ±25ppm, ±20ppm available | -10°C to 70°C |
| | Frequency Tolerance/Stability options of ±100ppm, ±50ppm, ±25ppm available | -40°C to 85°C |
| | Frequency Tolerance/Stability option of ±20ppm available from 1.544MHz to 106.250MHz | -40°C to 85°C |
| **Storage Temperature Range** | | -55°C to 125°C |
| **Supply Voltage ($V_{DD}$)** | | 3.3$V_{DC}$ ±10% |
| **Input Current** | 1.544MHz to 32.000MHz | 10mA Maximum |
| | 32.000001MHz to 50.000MHz | 18mA Maximum |
| | 50.000001MHz to 70.000MHz | 20mA Maximum |
| | 70.000001MHz to 125.000MHz | 40mA Maximum |
| | 125.009MHz to 156.250MHz | 60mA Maximum |
| **Frequency Tolerance / Stability** | Inclusive of all conditions: Calibration Tolerance at 25°C, | ±100ppm Maximum |
| | Frequency Stability over the Operating Temperature Range, | ±50ppm Maximum |
| | Supply Voltage Change, Output Load Change, First Year Aging | ±25ppm Maximum |
| | at 25°C, Shock, and Vibration | ±20ppm Maximum |
| **Output Voltage Logic High ($V_{OH}$)** | w/HCMOS or TTL Load , $I_{OH}$= -8mA | 90% of $V_{DD}$ Minimum |
| **Output Voltage Logic Low ($V_{OL}$)** | w/HCMOS or TTL Load, $I_{OL}$= +8mA | 10% of $V_{DD}$ Maximum |
| **Rise / Fall Time** | 10% to 90% of Waveform w/15pF HCMOS Load or 0.4$V_{DC}$ to 2.4$V_{DC}$ w/10LSTTL Load ≤ 35.000MHz | 5 nSeconds Maximum |
| | 10% to 90% of Waveform w/30pF HCMOS Load or 0.4$V_{DC}$ to 2.4$V_{DC}$ w/10TTL Load ≤ 35.000MHz | 7 nSeconds Maximum |
| | 10% to 90% of Waveform w/HCMOS Load or 0.4$V_{DC}$ to 2.4$V_{DC}$ w/TTL Load 35.001MHz to 125.000MHz | 5 nSeconds Maximum |
| | 10% to 90% of Waveform w/HCMOS Load > 125.009MHz | 3 nSeconds Maximum |
| **Duty Cycle** | at 50% of Waveform w/HCMOS Load or 1.4$V_{DC}$ w/TTL Load ≤ 70.000MHz | 50 ±10(%) (Standard) |
| | at 50% of Waveform w/HCMOS Load > 70.000MHz | 50 ±10(%) (Standard) |
| | at 50% of waveform w/HCMOS Load or w/TTL Load ≤ 125.000MHz | 50 ±5(%) (Optional) |
| | at 50% of waveform w/HCMOS Load, at 25°C, at 3.3Vdc > 125.000MHz | 50 ±5(%) (Optional) |
| **Load Drive Capability** | ≤35.000MHz | 10TTL or 30pF HCMOS Load Max. |
| | 35.000001MHz to 70.000MHz | 10TTL or 15pF HCMOS Load Max. |
| | >70.000001MHz | 15pF HCMOS Load Maximum |
| **Tri-State Input Voltage** | No Connection | Enables Output |
| | $V_{IH}$ :≥70% of $V_{DD}$ | Enables Output |
| | $V_{IL}$ :≤30% of $V_{DD}$ | Disables Output: High Impedance |
| **Standby Current** | Disabled Output: High Impedance | 10µA Maximum |
| **Start Up Time** | | 10 mSeconds Maximum |
| **RMS Phase Jitter** | 12kHz to 20MHz offset frequency | 1pSeconds Maximum |

| MANUFACTURER | CATEGORY | SERIES | PACKAGE | VOLTAGE | CLASS | REV. DATE |
|---|---|---|---|---|---|---|
| ECLIPTEK CORP. | OSCILLATOR | EC26 | CERAMIC | 3.3V | OS30 | 01/06 |

# PART NUMBERING GUIDE

**EC26 00 ET T TS - 40.000M TR**

**FREQUENCY TOLERANCE / STABILITY**
00=±100ppm Maximum (Standard)
45=±50ppm Maximum, 25=±25ppm Maximum
20=±20ppm Maximum

**OPERATING TEMPERATURE RANGE**
Blank=-10°C to 70°C (Standard)
ET=-40°C to 85°C

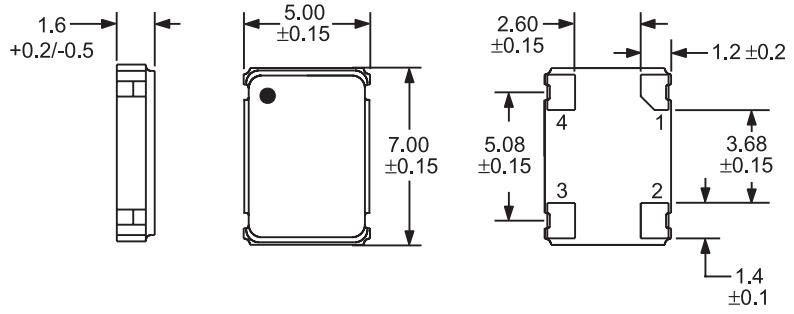
**PACKAGING OPTIONS**
Blank=Bulk, TR=Tape and Reel (Standard)

**FREQUENCY**

**OUTPUT CONTROL FUNCTION**
TS=Tri-State

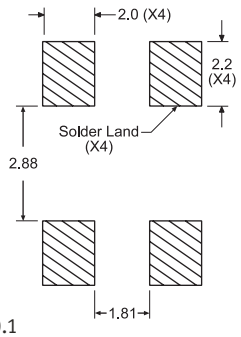
**DUTY CYCLE**
Blank=50 ±10(%) (Standard), T=50 ±5(%)

## MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



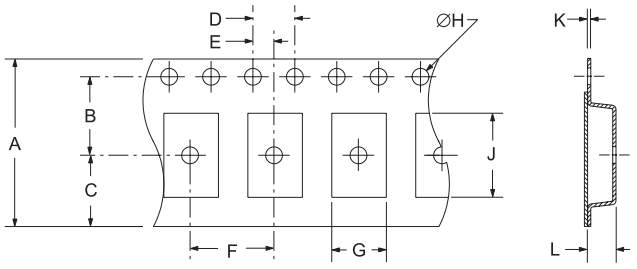

Pin 1: Tri-State
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

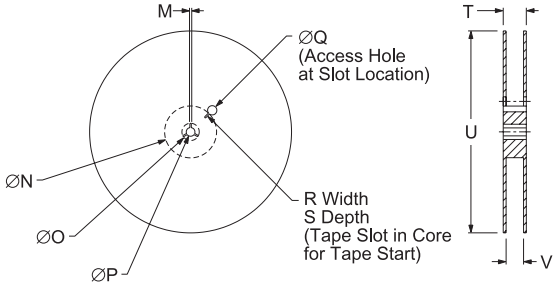
## SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS




Tolerances = ±0.1

## TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS




| TAPE | A | B | C | D | E |
|---|---|---|---|---|---|
| | 16+.3-.1 | 7.5±.1 | 6.75±.1 | 4±.1 | 2±.1 |
| F | G | H | J | K | L |
| 8±.1 | B0* | 1.5 +.1-0 | A0* | .3 ±.05 | K0* |

| REEL | M | N | O | P | Q |
|---|---|---|---|---|---|
| | 1.5 MIN | 50 MIN | 20.2 MIN | 13±.2 | 40 MIN |
| R | S | T | U | V | QTY/REEL |
| 2.5 MIN | 10 MIN | 22.4 MAX | 360 MAX | 16.4+2-0 | 1,000 |

*Compliant to EIA 481A

## ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

| Characteristic | Specification |
|---|---|
| Fine Leak Test | MIL-STD-883, Method 1014, Condition A |
| Gross Leak Test | MIL-STD-883, Method 1014, Condition C |
| Mechanical Shock | MIL-STD-202, Method 213, Condition C |
| Vibration | MIL-STD-883, Method 2007, Condition A |
| Solderability | MIL-STD-883, Method 2002 |
| Temperature Cycling | MIL-STD-883, Method 1010 |
| Resistance to Soldering Heat | MIL-STD-202, Method 210 |
| Resistance to Solvents | MIL-STD-202, Method 215 |

## MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M
- Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ
- Week of Year
- Last Digit of Year
- Ecliptek Manufacturing Identifier

| MANUFACTURER | CATEGORY | SERIES | PACKAGE | VOLTAGE | CLASS | REV. DATE |
|---|---|---|---|---|---|---|
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