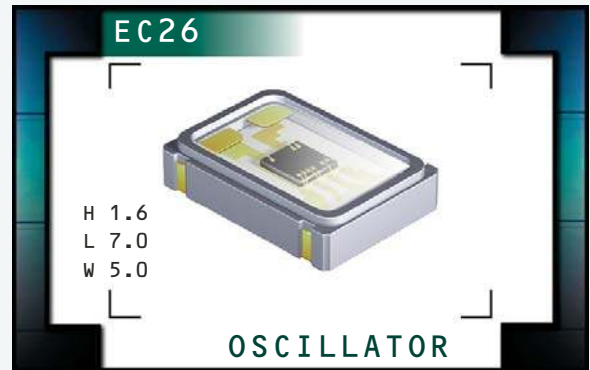


EC26 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 3.3V supply voltage
- LVCMOS Output
- Stability to ± 20 ppm
- Standby Function
- Available in tube or tape and reel



ELECTRICAL SPECIFICATIONS

| | | |
|---|--|---|
| Frequency Range | 1.544MHz to 125MHz, 125.00093MHz, 125.00312MHz, 125.009MHz, 125.00937MHz, 125.01MHz, 126MHz, 127MHz, 128MHz, 130MHz, 131.072MHz, 131.25MHz, 132MHz, 133MHz, 133.33MHz, 133.333MHz, 133.3333MHz, 135MHz, 136MHz, 137.472MHz, 140MHz, 142MHz, 142.85MHz, 143MHz, 145MHz, 148.351MHz, 148.3516MHz, 148.5MHz, 150MHz, 155MHz, 155.52MHz, 156.25MHz, 159.375MHz, 159.38MHz, 161.1328MHz, 162.5MHz, 166MHz, 175MHz, 187.5MHz, and 200MHz | |
| Operating Temperature Range | | -10°C to 70°C -40°C to 85°C |
| Storage Temperature Range | | -55°C to 125°C |
| Supply Voltage (V_{DD}) | | 3.3V _{DC} $\pm 10\%$ |
| Input Current | 1.544MHz to 32.000MHz 32.000001MHz to 50.000MHz 50.000001MHz to 70.000MHz 70.000001MHz to 125.000MHz 125.009MHz to 200.000MHz | 10mA Maximum 18mA Maximum 20mA Maximum 40mA Maximum 60mA Maximum |
| Frequency Tolerance / Stability | Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration | ± 100 ppm Maximum ± 50 ppm Maximum ± 25 ppm Maximum ± 20 ppm Maximum |
| Output Voltage Logic High (V_{OH}) | I _{OH} = -8mA | 90% of V _{DD} Minimum |
| Output Voltage Logic Low (V_{OL}) | I _{OL} = +8mA | 10% of V _{DD} Maximum |
| Rise / Fall Time | Measured at 20% to 80% of Waveform ≤ 35.000 MHz (30pF Load) ≤ 35.000 MHz (15pF Load) 35.001MHz to 165.000MHz > 165.000MHz | 7nSeconds Maximum 5nSeconds Maximum 3nSeconds Maximum 2nSeconds Maximum |
| Duty Cycle | at 50% of Waveform | 50 ± 10 (%) (Standard) 50 ± 5 (%) (Optional) |
| Load Drive Capability | ≤ 35.000 MHz > 35.000MHz | 30pF Maximum 15pF Maximum |
| Tri-State Input Voltage | No Connection V _{IH} : $\geq 70\%$ of V _{DD} V _{IL} : $\leq 30\%$ of V _{DD} | Enables Output Enables Output Disables Output: High Impedance |
| Standby Current | Disabled Output: High Impedance | 10 μ A Maximum |
| Start Up Time | | 10 mSeconds Maximum |
| RMS Phase Jitter | 12kHz to 20MHz offset frequency | 1pSeconds Maximum |

| | | | | | | |
|--------------------------------|------------------------|----------------|--------------------|-----------------|---------------|--------------------|
| MANUFACTURER ECLIPTEK CORP. | CATEGORY OSCILLATOR | SERIES EC26 | PACKAGE CERAMIC | VOLTAGE 3.3V | CLASS OS30 | REV. DATE 03/09 |
|--------------------------------|------------------------|----------------|--------------------|-----------------|---------------|--------------------|

PART NUMBERING GUIDE

EC26 00 ET 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

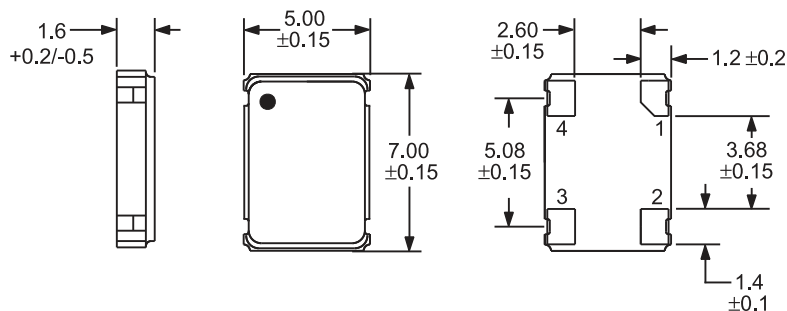
TS=Tri-State

DUTY CYCLE

Blank=50±10% (Standard), T=50±5%

MECHANICAL DIMENSIONS

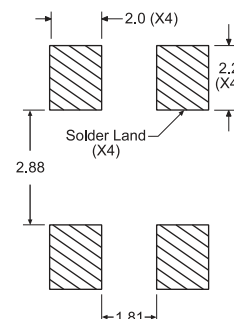
ALL DIMENSIONS IN MILLIMETERS



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

SUGGESTED SOLDER PAD LAYOUT

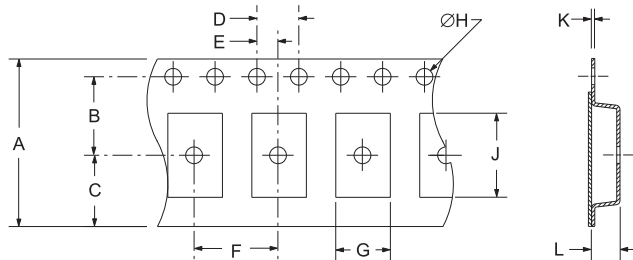
ALL DIMENSIONS IN MILLIMETERS



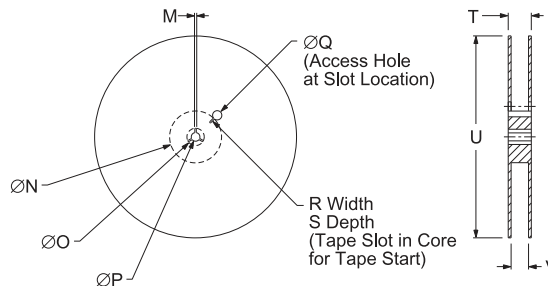
Tolerances = ±0.1

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 |
| | G | H | J | K | L |
| | 8±.1 | B0* | 1.5+1-0 | A0* | .3±.05 |



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

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test
 Gross Leak Test
 Mechanical Shock
 Vibration
 Solderability
 Temperature Cycling
 Resistance to Soldering Heat
 Resistance to Solvents

Specification

MIL-STD-883, Method 1014, Condition A
 MIL-STD-883, Method 1014, Condition C
 MIL-STD-202, Method 213, Condition C
 MIL-STD-883, Method 2007, Condition A
 MIL-STD-883, Method 2002
 MIL-STD-883, Method 1010
 MIL-STD-202, Method 210
 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 |
|----------------|------------|--------|---------|---------|-------|-----------|
| ECLIPTEK CORP. | OSCILLATOR | EC26 | CERAMIC | 3.3V | OS30 | 03/09 |