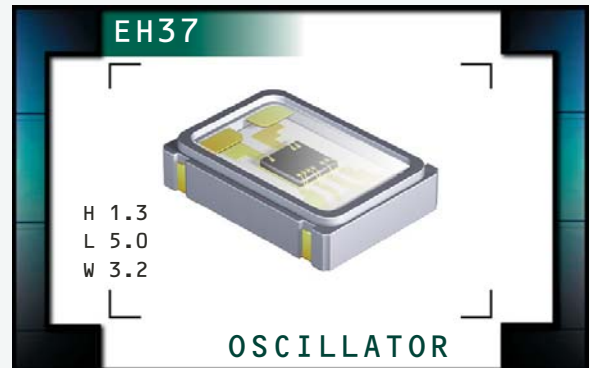


EH37 Series



ECLIPTEK[®]
CORPORATION

- Crystal Clock Oscillators
- LVCMOS Output
- +2.5V Supply Voltage
- Tri-State Output Function
- 4 Pad Ceramic SMD Package
- Low Stand-by Current
- RoHS Compliant (Pb-Free)



NOTES

ELECTRICAL SPECIFICATIONS

| | | |
|---|--|---|
| Frequency Range | | 2.500MHz to 166.000MHz |
| Operating Temperature Range | | 0°C to 70°C or -40°C to 85°C |
| Storage Temperature Range | | -55°C to 125°C |
| Supply Voltage (V_{DD}) | | 2.5V _{DC} ±5% |
| Input Current (No Load) | 2.500MHz to 25.000MHz | 6mA Maximum |
| | 25.001MHz to 75.000MHz | 7mA Maximum |
| | 75.001MHz to 100.000MHz | 8mA Maximum |
| | 100.001MHz to 166.000MHz | 9mA 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, 260°C Reflow, Shock, and Vibration | ±100ppm Maximum ±50ppm Maximum ±25ppm Maximum ±20ppm Maximum |
| Output Voltage Logic High (V_{OH}) | | 90% of V _{DD} Minimum I _{OH} = -8mA |
| Output Voltage Logic Low (V_{OL}) | | 10% of V _{DD} Maximum I _{OL} = +8mA |
| Rise Time / Fall Time | 2.500MHz to 50.000MHz 20% to 80% of Waveform | 6 nSeconds Maximum |
| | 50.001MHz to 75.000MHz 20% to 80% of Waveform | 4 nSeconds Maximum |
| | 75.001MHz to 166.000MHz 20% to 80% of Waveform | 2 nSeconds Maximum |
| Load Drive Capability | | 15pF Maximum |
| Duty Cycle | at 50% of Waveform | 50 ±10(%) (Standard) or 50 ±5(%) (Optional) |
| Tri-State Input Voltage | V _{IH} : ≥90% of V _{DD} or No Connection V _{IH} : ≤10% of V _{DD} | Enables Output Disables Output: High Impedance |
| Standby Current | Pin 1 = Ground | 10µA Maximum |
| Aging (at 25°C) | | ±5ppm / year Maximum |
| Start Up Time | | 10mSeconds Maximum |
| Period Jitter: Absolute | | ±100pSec Maximum |

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH37

PACKAGE
CERAMIC

VOLTAGE
2.5V

CLASS
057A

REV. DATE
05/09

PART NUMBERING GUIDE

EH37 00 ETTTS - 24.000M TR

FREQUENCY TOLERANCE / STABILITY

00 = ±100ppm Maximum
 45 = ±50ppm Maximum
 25 = ±25ppm Maximum
 20 = ±20ppm Maximum

OPERATING TEMP. RANGE

Blank = 0°C to 70°C
 ET = -40°C to 85°C

DUTY CYCLE

Blank = 50 ±10(%)
 T = 50 ±5(%)

AVAILABLE OPTIONS

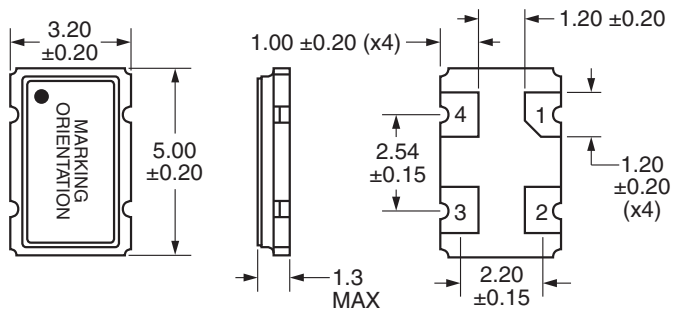
Blank = Bulk
 TR = Tape & Reel

FREQUENCY

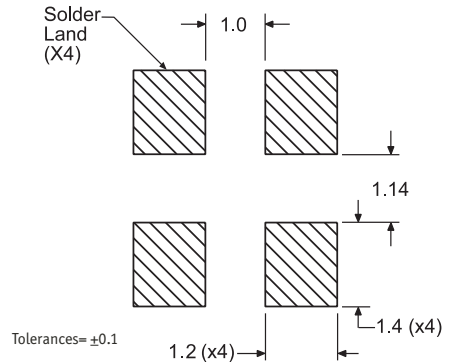
OUTPUT CONTROL FUNCTION

TS = Tri-State (High Impedance)

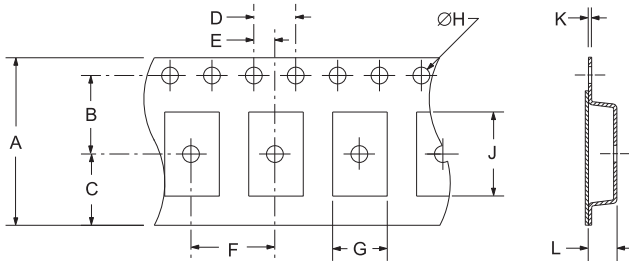
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



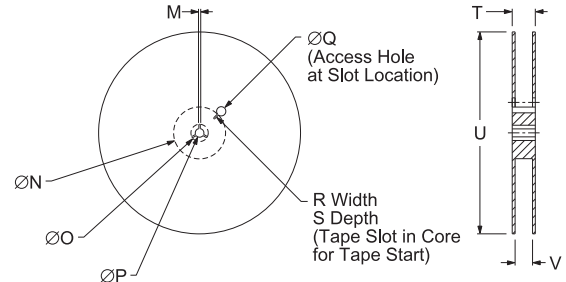
SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



| REEL | A | B | C | D | E |
|----------|---------|---------------|-----------|-----------|----------|
| | 12 ±0.2 | 5.5 ±0.1 | 6.75 ±0.1 | 4.0 ±0.1 | 2.0 ±0.1 |
| F | G | H | J | K | L |
| 8.0 ±0.1 | B0* | 1.5 +0.1 -0.0 | A0* | 0.3 ±0.05 | K0* |



| REEL | M | N | O | P | Q |
|---------|---------|----------|----------|------------|----------|
| | 1.5 MIN | 50 MIN | 20.2 MIN | 13.0 ±0.2 | 40 MIN |
| R | S | T | U | V | QTY/REEL |
| 2.5 MIN | 10 MIN | 18.4 MAX | 180 MAX | 12.4 +2 -0 | 1,000 |

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

| Characteristic | Specification |
|------------------------------|---|
| ESD Susceptibility | MIL-STD-883, Method 3015, Class 1, HBM: 1500V |
| Fine Leak Test | MIL-STD-883, Method 1014, Condition A |
| Flammability | UL94-V0 |
| Gross Leak Test | MIL-STD-883, Method 1014, Condition C |
| Mechanical Shock | MIL-STD-883, Method 2002, Condition B |
| Moisture Resistance | MIL-STD-883, Method 1004 |
| Moisture Sensitivity | J-STD-020, MSL 1 |
| Resistance to Soldering Heat | MIL-STD-202, Method 210, Condition K |
| Resistance to Solvents | MIL-STD-202, Method 215 |
| Solderability | MIL-STD-883, Method 2003 |
| Temperature Cycling | MIL-STD-883, Method 1010, Condition B |
| Vibration | MIL-STD-883, Method 2007, Condition A |

MARKING SPECIFICATIONS

Line 1: EPO
 Line 2: XXXXX
 Ecliptek Manufacturing Identifier

| MANUFACTURER | CATEGORY | SERIES | PACKAGE | VOLTAGE | CLASS | REV. DATE |
|----------------|------------|--------|---------|---------|-------|-----------|
| ECLIPTEK CORP. | OSCILLATOR | EH37 | CERAMIC | 2.5V | 057A | 05/09 |