

Marketing Bulletin

DATE: January 1st, 2006
TO: All Sales Personnel
FROM: Mark Stoner
RE: Product Termination

To all concerned parties,

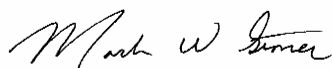
This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective January 1st, 2006:

| Series | Description | Recommended Replacement |
|---------------|-------------------------------|--------------------------------|
| EB13D1 | 3.3V 5 x 3.2mm SMD Oscillator | EC36 |

In compliance with our End of Life (EOL) policy, this will serve as advanced notice of product termination. New orders will not be accepted after April 1st, 2006, with delivery to conclude by July 1st 2006.

If there are any questions pertaining to this bulletin, please feel free to contact me. Thank you again for your cooperation.

Best Regards,



Mark W. Stoner
Director of Marketing
Ecliptek Corporation

EB13D1 Series



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



NOTES

OBSOLETE

ELECTRICAL SPECIFICATIONS

| | | |
|---|--|--|
| Frequency Range | | 19.440MHz to 100.000MHz |
| Operating Temperature Range | | 0°C to 70°C -40°C to 85°C |
| Storage Temperature Range | | -55°C to 125°C |
| Supply Voltage (V_{DD}) | | 3.3V _{DC} ±10% |
| Input Current | 19.440MHz to 34.999MHz | 10mA Maximum |
| | 35.000MHz to 49.999MHz | 25mA Maximum |
| | 50.000MHz to 100.000MHz | 35mA 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 | ±100ppm, ±50ppm, ±25ppm or ±20ppm Maximum |
| Output Voltage Logic High (V_{OH}) | | 90% of V _{DD} Min. I _{OH} = -8mA |
| Output Voltage Logic Low (V_{OL}) | | 10% of V _{DD} Max. I _{OL} = +8mA |
| Rise / Fall Time | 20% to 80% of Waveform from 19.440MHz to 35.000MHz | 6 nSec Maximum |
| | 20% to 80% of Waveform from 35.001MHz to 80.000MHz | 4 nSec Maximum |
| | 20% to 80% of Waveform from 80.001MHz to 100.000MHz | 2 nSec Maximum |
| Duty Cycle | at 50% of Waveform | 50 ±10(%) |
| | at 50% of Waveform | 50 ±5(%) |
| Load Drive Capability | ≤ 35.000MHz | 30pF HCMOS Load Maximum |
| | > 35.001MHz | 15pF HCMOS Load Maximum |
| Tri-State Input Voltage | No Connection | Enables Output |
| | V _{IH} : ≥90% of V _{DD} | Enables Output |
| | V _{IL} : ≤10% of V _{DD} | Disables Output: High Impedance |
| Standby Current | Disabled Output: High Impedance | 10µA Maximum |
| Start Up Time | | 10 mSec Maximum |
| RMS Phase Jitter | 19.440MHz to 40.000MHz, F _J = 12kHz to 20MHz | 5 pSec Maximum |
| | 40.001MHz to 70.000MHz, F _J = 12kHz to 20MHz | 3 pSec Maximum |
| | 70.001MHz to 100.000MHz, F _J = 12kHz to 20MHz | 1 pSec Maximum |

| MANUFACTURER | CATEGORY | SERIES | PACKAGE | VOLTAGE | CLASS | REV. DATE |
|----------------|------------|--------|---------|---------|-------|-----------|
| ECLIPTEK CORP. | OSCILLATOR | EB13D1 | CERAMIC | 3.3V | OS2U | 12/03 |

PART NUMBERING GUIDE

EB13D1 F 2 H - 40.000M TR

FREQUENCY TOLERANCE / STABILITY

C=±100ppm Maximum over 0°C to +70°C
 D=±50ppm Maximum over 0°C to +70°C
 E=±25ppm Maximum over 0°C to +70°C
 F=±20ppm Maximum over 0°C to +70°C
 G=±100ppm Maximum over -40°C to +85°C
 H=±50ppm Maximum over -40°C to +85°C
 J=±25ppm Maximum over -40°C to +85°C
 K=±20ppm Maximum over -40°C to +85°C

PACKAGING OPTIONS

Blank=Bulk, TR=Tape and Reel (Standard)

FREQUENCY

OUTPUT CONTROL FUNCTION

H=Tri-State

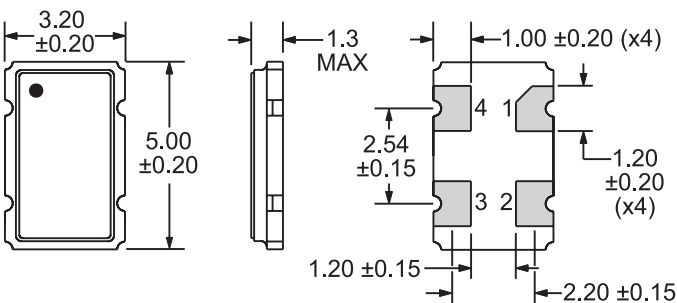
DUTY CYCLE

1=50 ±10(%)
 2=50 ±5(%)

OBSOLETE

MECHANICAL DIMENSIONS

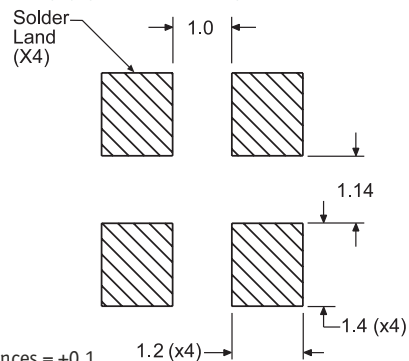
ALL DIMENSIONS IN MILLIMETERS



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

SUGGESTED SOLDER PAD LAYOUT

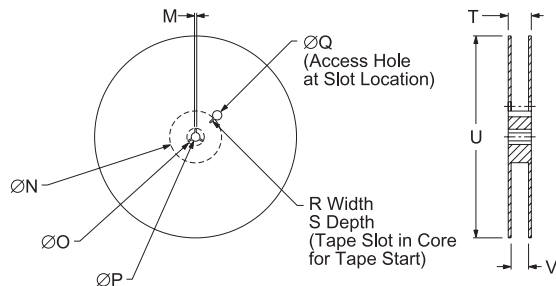
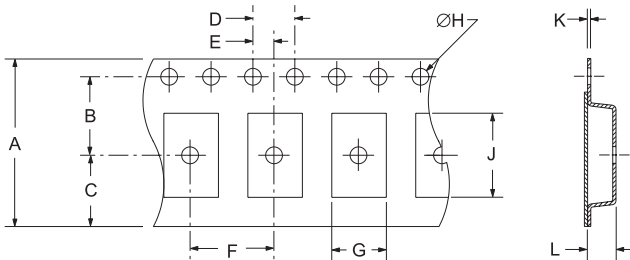
ALL DIMENSIONS IN MILLIMETERS



Tolerances = ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



| TAPE | A | B | C | D | E | |
|------|----------|---------|--------------|---------|------------|-----|
| | 12.0±0.2 | 5.5±0.1 | 6.5±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* | 0.30 ±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

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: E XX.XXX
 Frequency in MHz (5 Digits Maximum + Decimal)

Line 2: 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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