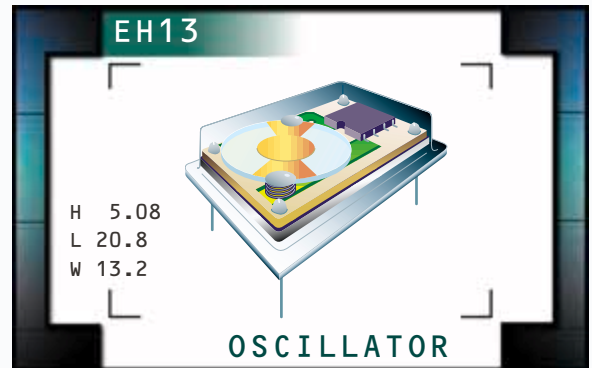


EH13 Series

- HCMOS output
- 3.3V supply voltage
- 14 pin DIP package
- Stability to 20ppm
- Custom lead length, gull wing options available



NOTES

ELECTRICAL SPECIFICATIONS

| | | |
|---|--|--|
| Frequency Range | 1.000MHz to 155.520MHz | |
| 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}) | 3.3V _{DC} ±0.3V _{DC} | |
| Input Current | 35mA Maximum (Unloaded) | |
| Frequency Tolerance / Stability | Inclusive of Operating Temperature Range, Supply Voltage, and Load | ±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum (0°C to 70°C) |
| Output Voltage Logic High (V_{OH}) | 2.7V _{DC} Minimum I _{OH} = -8mA | |
| Output Voltage Logic Low (V_{OL}) | 0.5V _{DC} Maximum I _{OL} = +8mA | |
| Rise Time / Fall Time | ≤70.000MHz 20% to 80% of Waveform w/HCMOS Load | 6 nSeconds Maximum |
| | >70.000MHz 20% to 80% of Waveform w/HCMOS Load | 4 nSeconds Maximum |
| Load Drive Capability | ≤70.000MHz | 30pF HCMOS Load Maximum |
| | >70.000MHz | 15pF HCMOS Load Maximum |
| Duty Cycle (at V_{DD}=3.3V_{DC}) | at 50% of Waveform | 50 ±10(%) (Standard) or 50 ±5(%) (Optional) |
| Pin 1 Tri-State Input Voltage | V _{IH} : No Connection or ≥2.2V _{DC} | Enables Output |
| | V _{IL} : ≤0.8V _{DC} | Disables Output: High Impedance |
| Aging (at 25°C) | ±5ppm / year Maximum | |
| Start Up Time | 10mSeconds Maximum | |
| Period Jitter: Absolute | ±250pSec Maximum, ±100pSec Typical | |
| Period Jitter: One Sigma | ±50pSec Maximum, ±40pSec Typical | |

| | | | | | | |
|--------------------------------|------------------------|----------------|-----------------------|-----------------|---------------|--------------------|
| MANUFACTURER ECLIPTEK CORP. | CATEGORY OSCILLATOR | SERIES EH13 | PACKAGE 14 pin DIP | VOLTAGE 3.3V | CLASS OS44 | REV. DATE 06/00 |
|--------------------------------|------------------------|----------------|-----------------------|-----------------|---------------|--------------------|

PART NUMBERING GUIDE

EH13 00 ET TS - 70.000M - G

FREQUENCY TOLERANCE / STABILITY

00= ± 100 ppm Maximum (Standard)
 45= ± 50 ppm Maximum, 25= ± 25 ppm Maximum
 20= ± 20 ppm Maximum

OPERATING TEMP. RANGE

Blank=0°C to 70°C (Standard), ET=-40°C to 85°C

DUTY CYCLE

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

AVAILABLE OPTIONS

Blank=None (Standard)
 CLXXX=Custom Lead Length (See Page 123)
 G=Full Size Gull Wing (See Page 122)

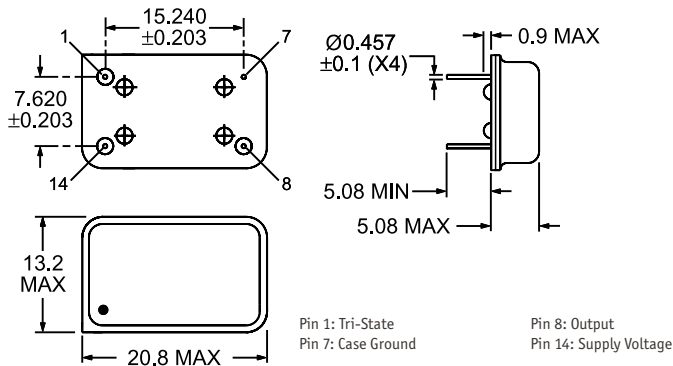
FREQUENCY

PIN 1 CONNECTION

TS=Tri-State Enable High

NOTES

MECHANICAL DIMENSIONS
 ALL DIMENSIONS IN MILLIMETERS



ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

| Characteristic | Specification |
|--------------------|--|
| Seal Integrity | Bubble test in Perfluorocarbon at +125°C ± 5 °C for 60 seconds minimum. |
| Solderability | Sn63 Solder dip at +230°C ± 5 °C for 5 seconds/95% coverage. |
| Marking Permanency | 10 Strokes with brush after 1 minute soak in solvent, 3 times. |
| Shock | Random drop on hard wooden plate 3 times from a height of 20cm. |
| Vibration | Frequency with an amplitude of 1.5mm sweeping between 10Hz to 55Hz within 1 minute (approximately) for 2 hours minimum on each axis (X, Y and Z) for a total of 6 hours. |

MARKING SPECIFICATIONS

Line 1: ECLIPTEK
 Line 2: EH13 TS
 Series Designator
 Line 3: XX.XXX M
 Frequency in MHz (5 Digits Maximum + Decimal)
 Line 4: XX Y ZZ
 Week of Year
 Last Digit of Year
 Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

| MANUFACTURER | CATEGORY | SERIES | PACKAGE | VOLTAGE | CLASS | REV. DATE |
|----------------|------------|--------|------------|---------|-------|-----------|
| ECLIPTEK CORP. | OSCILLATOR | EH13 | 14 pin DIP | 3.3V | OS44 | 06/00 |