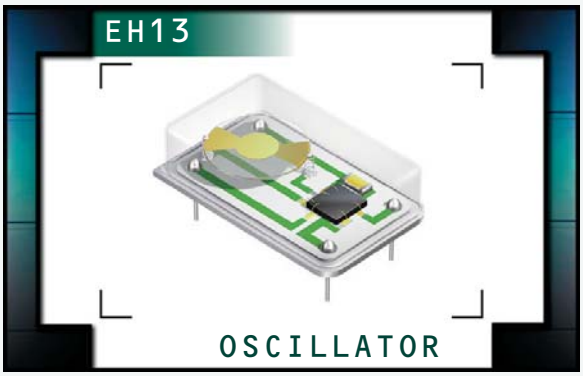
EH13 Series

- Crystal Clock Oscillators
- LVCMOS Output
- +3.3V Supply Voltage
- Tri-State Output Function
- Custom Lead Length & Gull Wing Options
- 14 pin DIP Metal Package
- RoHS Compliant (Pb-free)



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 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})		$2.7V_{DC}$ 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 >70.000MHz 20% to 80% of Waveform	6 nSeconds Maximum 4 nSeconds Maximum
Load Drive Capability	≤70.000MHz >70.000MHz	30pF Maximum 15pF Maximum
Duty Cycle (at V_{DD}=3.3V_{DC})	at 50% of Waveform	50 ±10(%) (Standard) or 50 ±5(%) (Optional)
Tri-State Input Voltage	V_{IH}:No Connection or ≥$2.2V_{DC}$ V_{IL}:≤$0.8V_{DC}$	Enables Output 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	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH13	14 pin DIP	3.3V	OS44	12/05

PART NUMBERING GUIDE

EH13 00 ET T TS - 70.000M - G

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=None
CLXXX=Custom Lead Length
G=Full Size Gull Wing

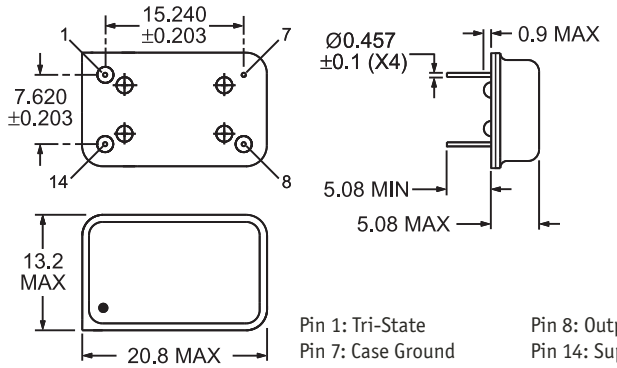
FREQUENCY

OUTPUT CONTROL FUNCTION
TS=Tri-State Enable High

NOTES

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



Pin 1: Tri-State
Pin 7: Case Ground
Pin 8: Output
Pin 14: Supply Voltage

MARKING SPECIFICATIONS

Line 1: ECLIPTEK
Line 2: EH13 TS
- EH13: Series Designator

Line 3: XX.XXX M
- XX.XXX: Frequency in MHz (5 Digits Maximum + Decimal)

Line 4: XX Y ZZ
- XX: Week of Year
- Y: Last Digit of Year
- ZZ: Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

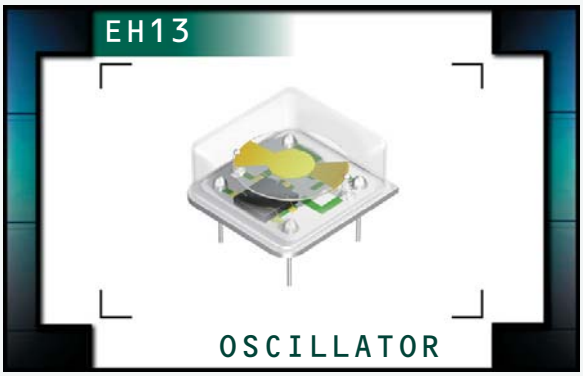
ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

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
Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH13	14 pin DIP	3.3V	OS44	12/05

EH13 Series

- Crystal Clock Oscillators
- LVCMOS Output
- +3.3V Supply Voltage
- Tri-State Output Function
- Custom Lead Length & Gull Wing Options
- 8 pin DIP Metal Package
- RoHS Compliant (Pb-free)



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 155.520MHz
Operating Temperature Range		0°C to 70°C or -40°C to 85°C
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Input Current		35mA Maximum (Unloaded)
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
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Tri-State Input Voltage	V_{IH}:No Connection or ≥$2.2V_{DC}$ V_{IL}:≤$0.8V_{DC}$	Enables Output 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	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH13	8 pin DIP	3.3V	OS45	08/05

PART NUMBERING GUIDE

EH13 00 HS ET T TS - 70.000M - G TR

FREONCY TOLERANCE / STABILITY
00=±100ppm Maximum
45=±50ppm Maximum, 25=±25ppm Maximum
20=±20ppm Maximum

PACKAGE
HS=Half Size 8 Pin DIP

OPERATING TEMP. RANGE
Blank=0°C to 70°C, ET=-40°C to 85°C

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

PACKAGING OPTIONS
Blank=Bulk
TR=Tape & Reel (only offered with Half Size G and Half Size G2 Options)

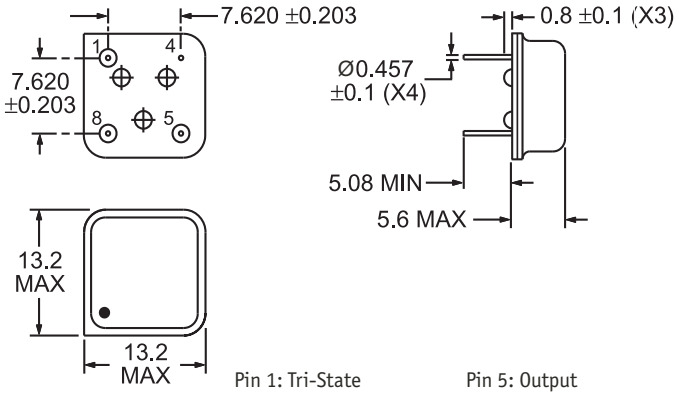
AVAILABLE OPTIONS
Blank=None
CLXXX=Custom Lead Length
G=Half Size Gull Wing
G2=Half Size Gull Wing

FREQUENCY

OUTPUT CONTROL FUNCTION
TS=Tri-State Enable High

MECHANICAL DIMENSIONS

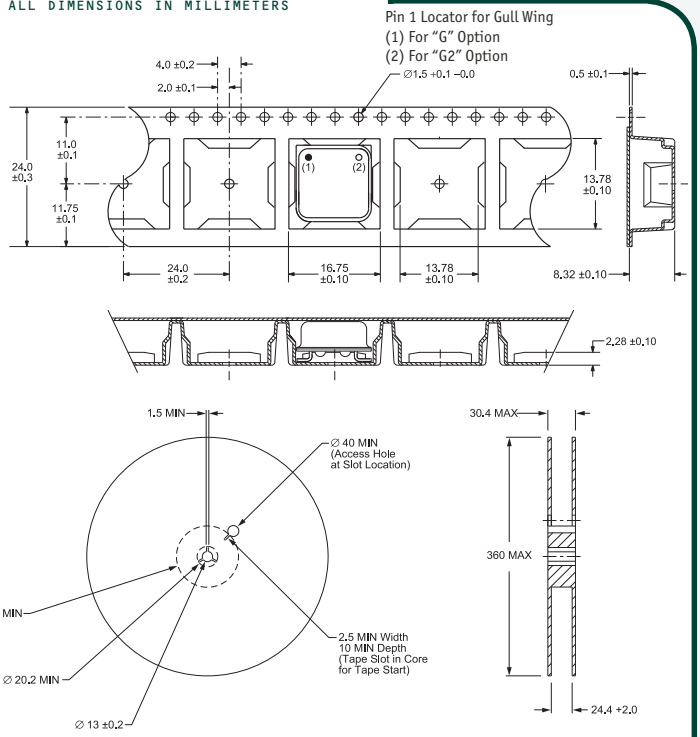
ALL DIMENSIONS IN MILLIMETERS



Pin 1: Tri-State
Pin 4: Case Ground
Pin 5: Output
Pin 8: Supply Voltage

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



250 Pieces Per Reel
Compliant to EIA-481A

MARKING SPECIFICATIONS

Line 1: ECLIPTEK
Line 2: EH13 TS
- Series Designator

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Note: Pin 1 shall be designated with a dot

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Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH13	8 pin DIP	3.3V	OS45	08/05

Product EOL Announcement

The Product EOL Announcement signifies that a product series has entered the final phase of the Ecliptek Product Life Cycle, and serves as advance notice of product termination per the Ecliptek End of Life (EOL) policy.

Ecliptek Corporation announces End of Life initiation for the following product series with the intent of discontinuing its availability.

EOL Series	Description
EH13 (8 Pin Dip)	Quartz Crystal Clock Oscillators XO (SPXO) LVCMOS (CMOS) 3.3Vdc 8 Pin DIP Metal Thru-Hole
EH13 (14 Pin Dip)	Quartz Crystal Clock Oscillators XO (SPXO) LVCMOS (CMOS) 3.3Vdc 14 Pin DIP Metal Thru-Hole

EOL Timeline

The last date Ecliptek will accept orders (Stage 2) and the last date orders may be scheduled for shipment (Stage 3) are listed in the table below.

Stage 1 EOL Announce Date	Stage 2 Last Date to Order	Stage 3 Last Date to Ship
1-July-2012	31-December-2012	31-January-2013

Alternative Products

In order to fulfill your requirements beyond this product's discontinuation, we invite you to evaluate the recommended alternative Ecliptek product series referenced below. Please click on the link to view the data sheet.

Alternative Series	Description
EHH13	Quartz Crystal Clock Oscillators XO (SPXO) LVCMOS (CMOS) 3.3Vdc 8 Pin DIP Metal Thru-Hole
EHF13	Quartz Crystal Clock Oscillators XO (SPXO) LVCMOS (CMOS) 3.3Vdc 14 Pin DIP Metal Thru-Hole

Automated EOL Notification

Ecliptek offers automated notification of Product EOL Announcements. Place part numbers for which you'd like to receive EOL Notifications into your personalized Parts List on our website and we'll email you when EOL is announced.

Please do not hesitate to contact us if you have any questions or need further assistance.

Ecliptek Global Customer Support Team
(800) 433-1280 x300
customersupport@ecliptek.com