

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
EC13	3.3V 8 Pin or 14 Pin DIP Metal Thru-Hole LVCMOS/TTL Oscillator

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
20-April-2010	1-September-2010	1-December-2010

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
EH13	3.3V 8 Pin or 14 Pin DIP Metal Thru-Hole CMOS High Frequency Oscillator

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.

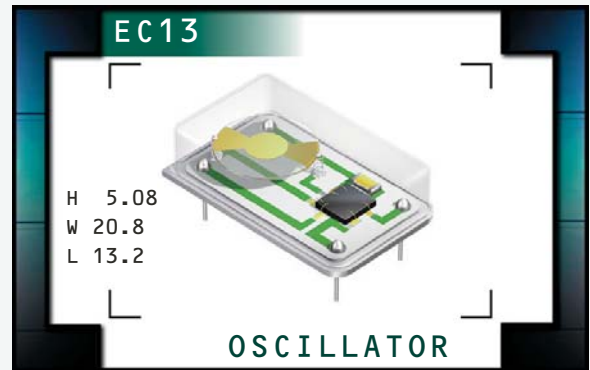
Ecliptek Global Customer Support Team
(800) 433-1280 x300
customersupport@ecliptek.com

EC13 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-free)
- LVCMOS/TTL output
- 3.3V supply voltage
- 14 pin DIP package
- Stability to ± 20 ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)	0.250MHz to 125.000MHz	
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} ± 0.3 V _{DC}	
Input Current	0.250MHz to 24.000MHz	10mA Maximum
	24.001MHz to 70.000MHz	25mA Maximum
	70.001MHz to 125.000MHz	45mA Maximum
Frequency Tolerance / Stability	Inclusive of all conditions: Calibration Tolerance at 25°C, ± 100 ppm, ± 50 ppm, ± 25 ppm, or Frequency Stability over the Operating Temperature Range, ± 20 ppm Maximum (0°C to 70°C Only) Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration	
Output Voltage Logic High (V_{OH})	w/ TTL Load	2.4V _{DC} Minimum
	w/ LVCMOS Load	2.7V _{DC} Minimum
Output Voltage Logic Low (V_{OL})	w/ TTL Load	0.4V _{DC} Maximum
	w/ LVCMOS Load	0.5V _{DC} Maximum
Rise Time / Fall Time	10% to 90% of Waveform w/LVCMOS Load or 0.4V _{DC} to 2.4V _{DC} w/TTL Load	10 nSeconds Max. ≤ 24.000 MHz 10 nSeconds Max. ≤ 24.000 MHz
	10% to 90% of Waveform w/LVCMOS Load	6 nSeconds Max. 24.000MHz to 70.000MHz
	10% to 90% of Waveform w/LVCMOS Load	4 nSeconds Max. 70.001MHz to 125.000MHz
Duty Cycle	at 50% of Waveform	50 ± 10 (%) (Standard) or 50 ± 5 (%) (Optional)
Load Drive Capability	≤ 24.000 MHz	2TTL or 15pF LVCMOS Load
	> 24.000 MHz	15pF LVCMOS Load
Tri-State Input Voltage	V _{IH} : No Connection	Enables Output
	V _{IH} : ≥ 2.2 V _{DC}	Enables Output
	V _{IL} : ≤ 0.8 V _{DC}	Disables Output: High Impedance
Aging (at 25°C)	± 5 ppm / year Maximum	
Start Up Time	10 mSeconds Maximum	
Period Jitter: Absolute	± 100 pSeconds Maximum	
Period Jitter: One Sigma	± 25 pSeconds Maximum	

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EC13

PACKAGE
14 pin DIP

VOLTAGE
3.3V

CLASS
OS20

REV. DATE
08/06

PART NUMBERING GUIDE

EC13 00 ET T TS - 50.000M - G

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)
 45=±50ppm Maximum, 25=±25ppm Maximum
 20=±20ppm 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
 G=Full Size Gull Wing

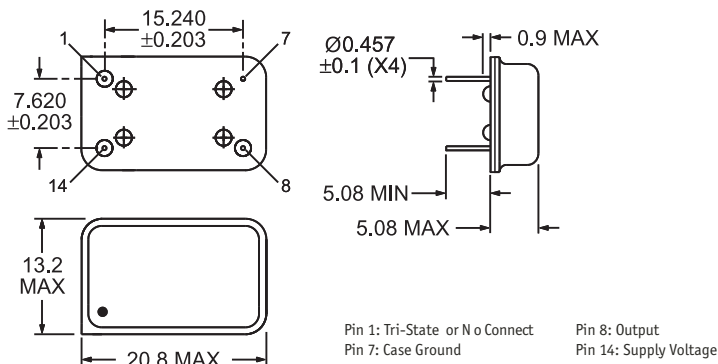
FREQUENCY

OUTPUT CONTROL FUNCTION

Blank = No Connect
 TS=Tri-State Enable High

NOTES

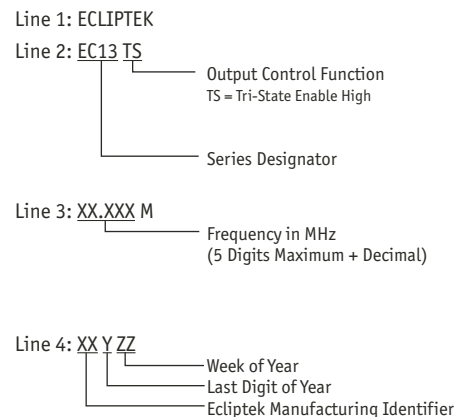
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



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

MARKING SPECIFICATIONS



Note: Pin 1 shall be designated with a dot

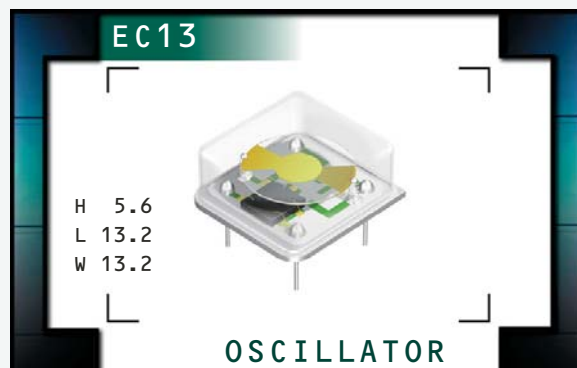
MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EC13	PACKAGE 14 pin DIP	VOLTAGE 3.3V	CLASS OS20	REV. DATE 08/06
--------------------------------	------------------------	----------------	-----------------------	-----------------	---------------	--------------------

EC13 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-free)
- LVCMOS/TTL output
- 3.3V supply voltage
- 8 pin DIP package
- Stability to ± 20 ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)	0.250MHz to 125.000MHz	
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} \pm 0.3V _{DC}	
Input Current	0.250MHz to 24.000MHz	10mA Maximum
	24.001MHz to 70.000MHz	25mA Maximum
	70.001MHz to 125.000MHz	45mA 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, ± 50 ppm, ± 25 ppm, or ± 20 ppm Maximum (0°C to 70°C Only)
Output Voltage Logic High (V_{OH})	w/ TTL Load	2.4V _{DC} Minimum
	w/ HCMOS Load	2.7V _{DC} Minimum
Output Voltage Logic Low (V_{OL})	w/ TTL Load	0.4V _{DC} Maximum
	w/ LVCMOS Load	0.5V _{DC} Maximum
Rise Time / Fall Time	10% to 90% of Waveform w/LVCMOS Load or 0.4V _{DC} to 2.4V _{DC} w/TTL Load	10 nSeconds Max. \leq 24.000MHz 10 nSeconds Max. \leq 24.000MHz
	10% to 90% of Waveform w/LVCMOS Load	6 nSeconds Max. 24.000MHz to 70.000MHz
	10% to 90% of Waveform w/LVCMOS Load	4 nSeconds Max. 70.001MHz to 125.000MHz
Duty Cycle	at 50% of Waveform	50 \pm 10(%) (Standard) or 50 \pm 5(%) (Optional)
Load Drive Capability	\leq 24.000MHz	2TTL or 15pF LVCMOS Load
	$>$ 24.000MHz	15pF LVCMOS Load
Tri-State Input Voltage	V _{IH} : No Connection	Enables Output
	V _{IH} : ≥ 2.2 V _{DC}	Enables Output
	V _{IL} : ≤ 0.8 V _{DC}	Disables Output: High Impedance
Aging (at 25°C)	± 5 ppm / year Maximum	
Start Up Time	10 mSeconds Maximum	
Period Jitter: Absolute	± 100 pSeconds Maximum	
Period Jitter: One Sigma	± 25 pSeconds Maximum	

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EC13

PACKAGE
8 pin DIP

VOLTAGE
3.3V

CLASS
OS21

REV. DATE
08/06

PART NUMBERING GUIDE

EC13 00 HS ET TTS - 50.000M - G TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)
 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 (Standard), ET=-40°C to 85°C

DUTY CYCLE

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

PACKAGING OPTIONS

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

AVAILABLE OPTIONS

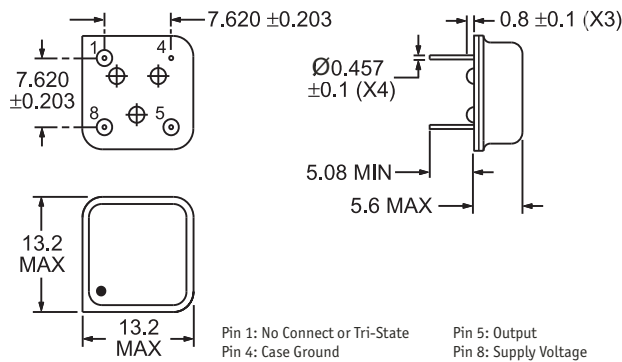
Blank=None (Standard)
 CLXX=Custom Lead Length
 G=Half Size Gull Wing
 G2=Half Size Gull Wing

FREQUENCY

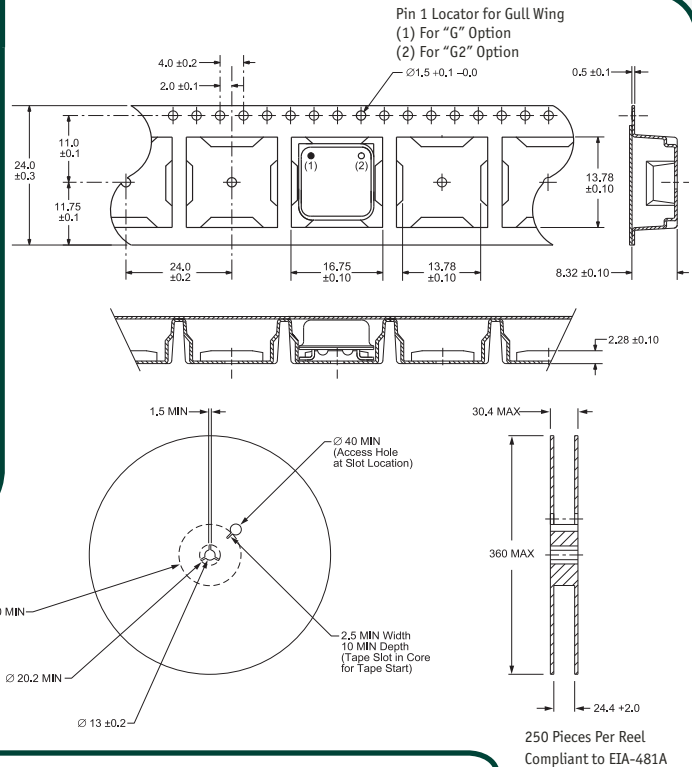
OUTPUT CONTROL FUNCTION

Blank=None (No Connection on Pin 1)
 TS=Tri-State Enable High

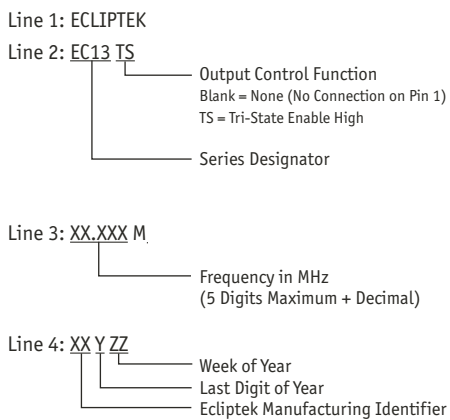
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS



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	EC13	8 pin DIP	3.3V	OS21	08/06