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
EC28	RoHS Compliant (Pb-free) 2.5V 8 Pin or 14 Pin DIP Metal Thru-Hole LVCMOS 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
EH27	RoHS Compliant (Pb-free) 2.5V 4 Pad 5mm x 7mm Ceramic SMD LVCMOS Oscillator

Automated EOL Notification

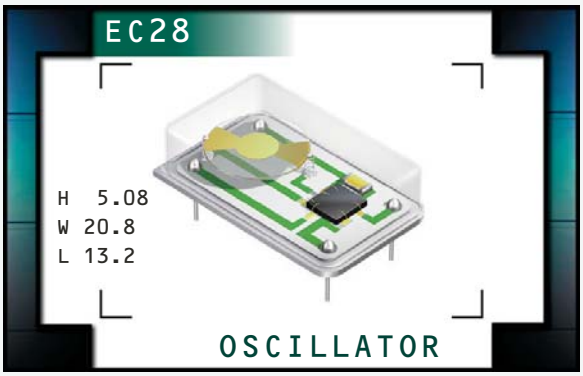
Ecliptek offers automated notification of Product EOL Announcements. Place part numbers for which you'd like to receive EOL Notifications into your personalized Parts List on our website and we'll email you when EOL is announced.

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

EC28 Series

- Crystal Clock Oscillators
- LVCMOS Output
- +2.5V Supply Voltage
- Tri-State Output Option
- Custom Lead Length & Gull Wing Options
- 14 pin DIP Metal Package
- RoHS Compliant (Pb-free)



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)		1.544MHz to 33.000MHz
Operating Temperature Range (OTR)	±100ppm, ±50ppm, or 25ppm	0°C to 70°C or -40°C to 85°C
	±20ppm	0°C to 70°C
Storage Temperature Range (STR)		-55°C to 125°C
Supply Voltage (V_{DD})		2.5V_{DC} ±5%
Input Current (I_{DD})	≤24.000MHz	10mA Maximum
	>24.000MHz	20mA Maximum
Frequency Tolerance / Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum (0°C to 70°C Only)
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum I_{OH}=-4mA
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Minimum I_{OL}=+4mA
Rise Time / Fall Time (T_R/T_F)	20% to 80% of Waveform ≤24.000MHz	6 nSeconds Maximum
	20% to 80% of Waveform >24.000MHz	4 nSeconds Maximum
Duty Cycle (SYM)	at 50% of Waveform	50 ±10(%) (Standard) or 50 ±5(%) (Optional)
Load Drive Capability (C_{LOAD})		15pF Maximum
Tri-State Input Voltage	V_{IH}:No Connection	Enables Output
	V_{IH}:≥90% of V_{DD}	Enables Output
	V_{IL}:≤10% of V_{DD}	Disables Output: High Impedance
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time (T_S)		10 mSeconds Maximum
Period Jitter: Absolute		±100pSeconds Maximum
Period Jitter: One Sigma		±25pSeconds Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC28	14 pin DIP	2.5V	OS53	08/06

PART NUMBERING GUIDE

EC28 00 ET T TS - 32.000M - 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

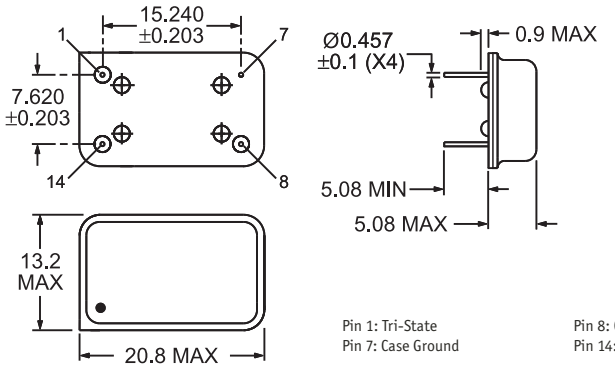
FREQUENCY

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

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

Line 1: ECLIPTEK

Line 2: EC28 TS
- TS = Output Control Function (TS = Tri-State Enable High)
- EC28 = Series Designator

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

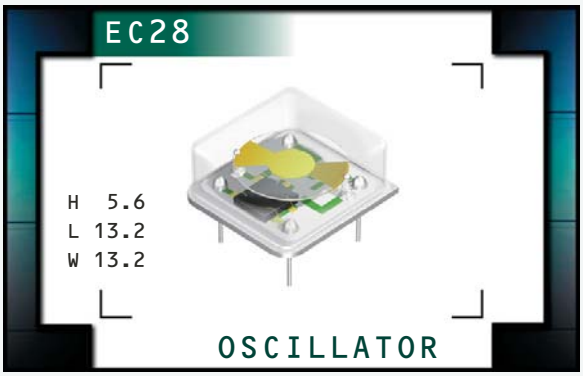
Line 4: XX Y ZZ
- ZZ = Week of Year
- Y = Last Digit of Year
- XX = Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC28	14 pin DIP	2.5V	OS53	08/06

EC28 Series

- Crystal Clock Oscillators
- LVCMOS Output
- +2.5V Supply Voltage
- Tri-State Output Option
- Custom Lead Length & Gull Wing Options
- 8 pin DIP Metal Package
- RoHS Compliant (Pb-free)



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)		1.544MHz to 33.000MHz
Operating Temperature Range (OTR)	±100ppm, ±50ppm, or ±25ppm	0°C to 70°C or -40°C to 85°C
	±20ppm	0°C to 70°C
Storage Temperature Range (STR)		-55°C to 125°C
Supply Voltage (V_{DD})		2.5V_{DC} ±5%
Input Current (I_{DD})	≤24.000MHz	10mA Maximum
	>24.000MHz	20mA Maximum
Frequency Tolerance / Stability	Inclusive of Operating Temperature	±100ppm, ±50ppm, ±25ppm, or
	Range, Supply Voltage, and Load	±20ppm Maximum (0°C to 70°C Only)
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum I_{OH}=-4mA
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Maximum I_{OL}=+4mA
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Aging (at 25°C)		±5ppm / year Maximum
Start Up Time (T_S)		10mSeconds Maximum
Period Jitter: Absolute		±100pSeconds Maximum
Period Jitter: One Sigma		±25pSeconds Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC28	8 pin DIP	2.5V	OS54	08/06

PART NUMBERING GUIDE

EC28 00 HS ET T TS - 32.000M - G TR

FREQUENCY 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(%)

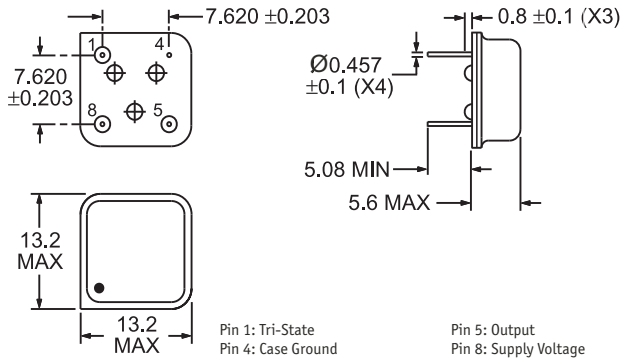
PACKAGING OPTIONS
TR= Tape & Reel (only offered with Half Size G and Half Size G2 Options)

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

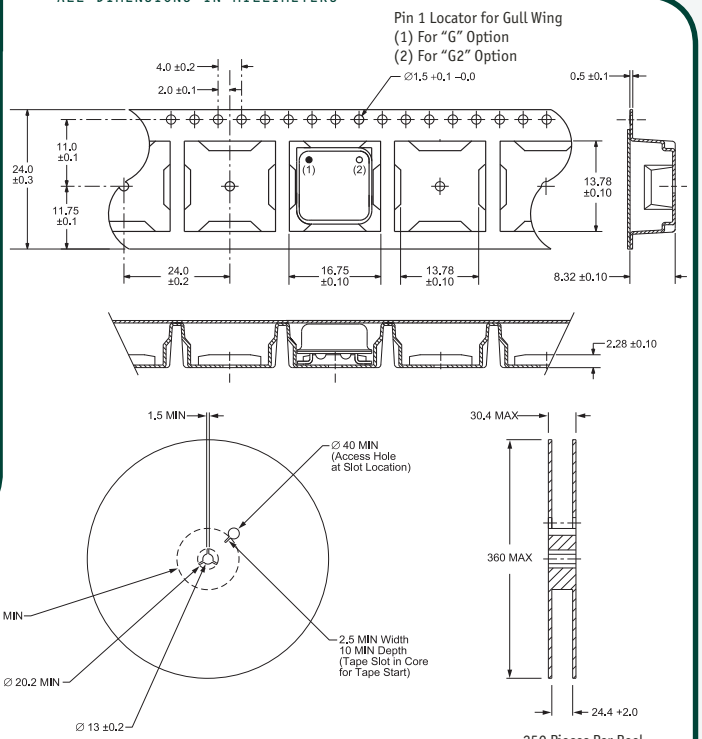
MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



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: EC28 TS
- TS = Tri-State Enable High → Output Control Function
- EC28 → Series Designator

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

Line 4: XX Y ZZ
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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
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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	EC28	8 pin DIP	2.5V	OS54	08/06