

## Marketing Bulletin

**DATE:** April 20<sup>th</sup>, 2010  
**TO:** All Sales Personnel  
**FROM:** Isaac Gonzalez  
**RE:** Product Termination

To all concerned parties,

This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective April 20<sup>th</sup>, 2010:

<b>Series</b>	<b>Description</b>	<b>Recommended Replacement</b>
EC13	RoHS Compliant (Pb-free) 3.3V 14 Pin DIP Metal Thru-Hole LVCMOS/TTL Oscillator	<a href="#">EH13</a>
EC13HS	RoHS Compliant (Pb-free) 3.3V 8 Pin DIP Metal Thru-Hole LVCMOS/TTL Oscillator	<a href="#">EH13HS</a>

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 September 1<sup>st</sup>, 2010, with delivery to conclude by December 1<sup>st</sup>, 2010.

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

Best Regards,



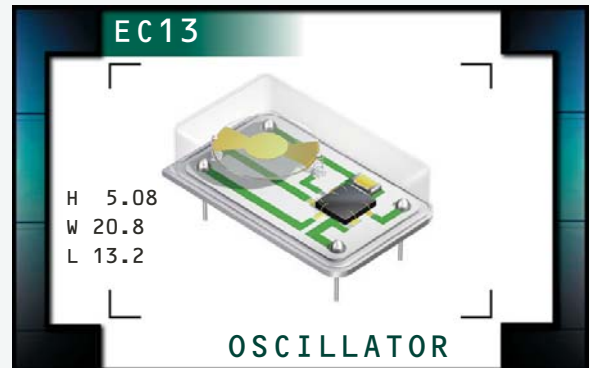
Isaac Gonzalez  
Configuration Manager  
Ecliptek Corporation

# EC13 Series

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



ECLIPTEK<sup>®</sup>  
CORPORATION



## ELECTRICAL SPECIFICATIONS

<b>Frequency Range (MHz)</b>		0.250MHz to 125.000MHz
<b>Operating Temperature Range</b>		0°C to 70°C -40°C to 85°C
<b>Storage Temperature Range</b>		-55°C to 125°C
<b>Supply Voltage (V<sub>DD</sub>)</b>		3.3V <sub>DC</sub> $\pm 0.3$ V <sub>DC</sub>
<b>Input Current</b>	0.250MHz to 24.000MHz	10mA Maximum
	24.001MHz to 70.000MHz	25mA Maximum
	70.001MHz to 125.000MHz	45mA Maximum
<b>Frequency Tolerance / Stability</b>	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	$\pm 100$ ppm, $\pm 50$ ppm, $\pm 25$ ppm, or $\pm 20$ ppm Maximum (0°C to 70°C Only)
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>	w/ TTL Load w/ LVCMOS Load	2.4V <sub>DC</sub> Minimum 2.7V <sub>DC</sub> Minimum
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>	w/ TTL Load w/ LVCMOS Load	0.4V <sub>DC</sub> Maximum 0.5V <sub>DC</sub> Maximum
<b>Rise Time / Fall Time</b>	10% to 90% of Waveform w/LVCMOS Load or 0.4V <sub>DC</sub> to 2.4V <sub>DC</sub> w/TTL Load	10 nSeconds Max. $\leq 24.000$ MHz 10 nSeconds Max. $\leq 24.000$ MHz
	10% to 90% of Waveform w/LVCMOS Load 10% to 90% of Waveform w/LVCMOS Load	6 nSeconds Max. 24.000MHz to 70.000MHz 4 nSeconds Max. 70.001MHz to 125.000MHz
<b>Duty Cycle</b>	at 50% of Waveform	50 $\pm 10$ (%) (Standard) or 50 $\pm 5$ (%) (Optional)
<b>Load Drive Capability</b>	$\leq 24.000$ MHz > 24.000MHz	2TTL or 15pF LVCMOS Load 15pF LVCMOS Load
<b>Tri-State Input Voltage</b>	V <sub>IH</sub> : No Connection V <sub>IH</sub> : $\geq 2.2$ V <sub>DC</sub> V <sub>IL</sub> : $\leq 0.8$ V <sub>DC</sub>	Enables Output Enables Output Disables Output: High Impedance
<b>Aging (at 25°C)</b>		$\pm 5$ ppm / year Maximum
<b>Start Up Time</b>		10 mSeconds Maximum
<b>Period Jitter: Absolute</b>		$\pm 100$ pSeconds Maximum
<b>Period Jitter: One Sigma</b>		$\pm 25$ 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

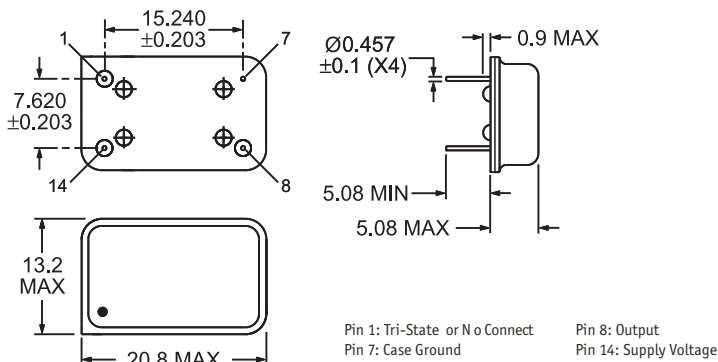
### FREQUENCY

### OUTPUT CONTROL FUNCTION

Blank = No Connect  
 TS=Tri-State Enable High

## NOTES

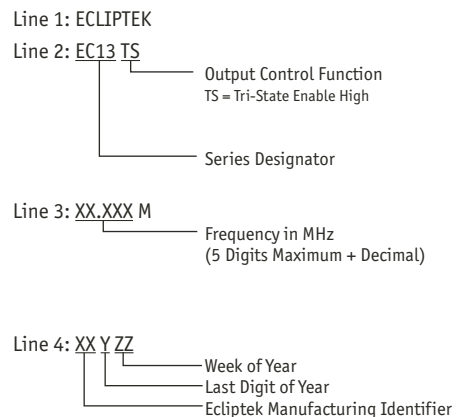
### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



### 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



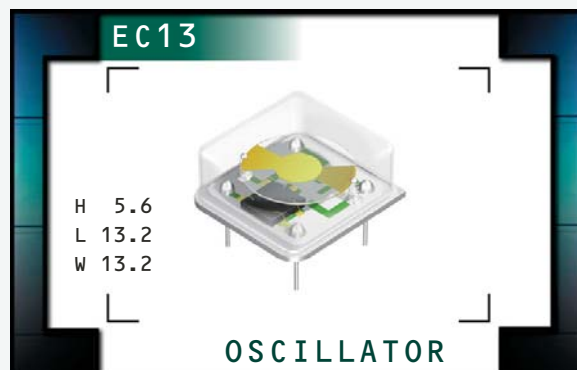
Note: Pin 1 shall be designated with a dot

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

# EC13 Series



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



## ELECTRICAL SPECIFICATIONS

<b>Frequency Range (MHz)</b>	0.250MHz to 125.000MHz	
<b>Operating Temperature Range</b>	0°C to 70°C -40°C to 85°C	
<b>Storage Temperature Range</b>	-55°C to 125°C	
<b>Supply Voltage (<math>V_{DD}</math>)</b>	3.3V <sub>DC</sub> $\pm$ 0.3V <sub>DC</sub>	
<b>Input Current</b>	0.250MHz to 24.000MHz	10mA Maximum
	24.001MHz to 70.000MHz	25mA Maximum
	70.001MHz to 125.000MHz	45mA Maximum
<b>Frequency Tolerance / Stability</b>	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	$\pm 100$ ppm, $\pm 50$ ppm, $\pm 25$ ppm, or $\pm 20$ ppm Maximum (0°C to 70°C Only)
<b>Output Voltage Logic High (<math>V_{OH}</math>)</b>	w/ TTL Load	2.4V <sub>DC</sub> Minimum
	w/ HCMOS Load	2.7V <sub>DC</sub> Minimum
<b>Output Voltage Logic Low (<math>V_{OL}</math>)</b>	w/ TTL Load	0.4V <sub>DC</sub> Maximum
	w/ LVCMOS Load	0.5V <sub>DC</sub> Maximum
<b>Rise Time / Fall Time</b>	10% to 90% of Waveform w/LVCMOS Load or 0.4V <sub>DC</sub> to 2.4V <sub>DC</sub> 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
<b>Duty Cycle</b>	at 50% of Waveform	50 $\pm$ 10(%) (Standard) or 50 $\pm$ 5(%) (Optional)
<b>Load Drive Capability</b>	$\leq$ 24.000MHz	2TTL or 15pF LVCMOS Load
	$>$ 24.000MHz	15pF LVCMOS Load
<b>Tri-State Input Voltage</b>	$V_{IH}$ : No Connection	Enables Output
	$V_{IH}$ : $\geq 2.2V_{DC}$	Enables Output
	$V_{IL}$ : $\leq 0.8V_{DC}$	Disables Output: High Impedance
<b>Aging (at 25°C)</b>	$\pm 5$ ppm / year Maximum	
<b>Start Up Time</b>	10 mSeconds Maximum	
<b>Period Jitter: Absolute</b>	$\pm 100$ pSeconds Maximum	
<b>Period Jitter: One Sigma</b>	$\pm 25$ 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

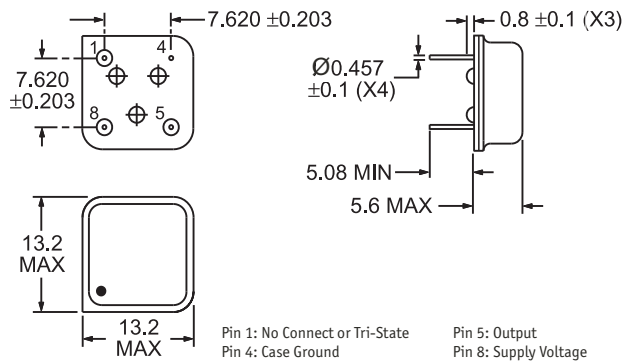
Blank=None (Standard)  
 CLXXX=Custom Lead Length  
 G=Half Size Gull Wing  
 G2=Half Size Gull Wing

### FREQUENCY

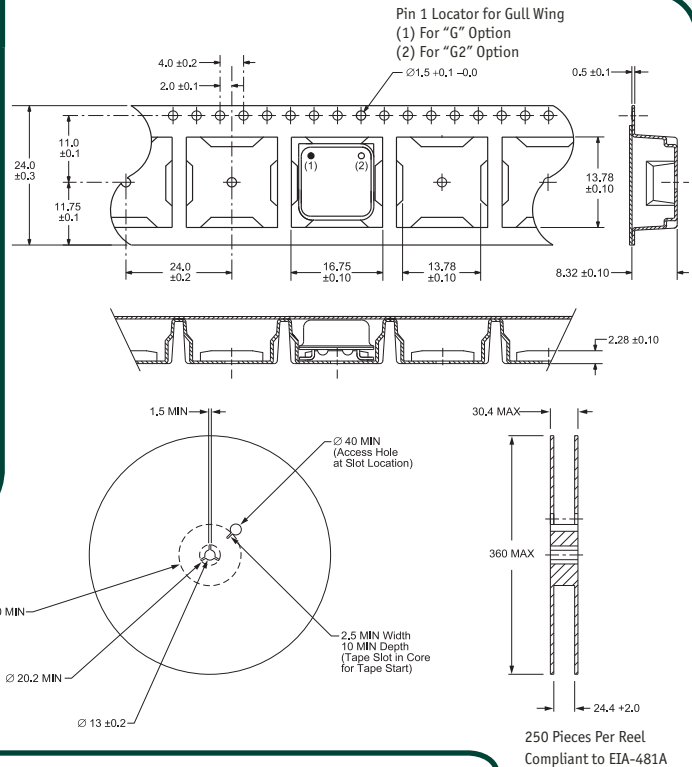
### OUTPUT CONTROL FUNCTION

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

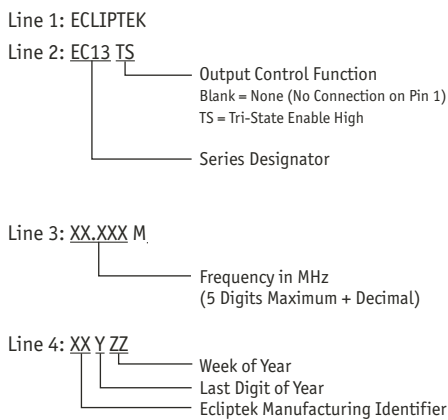
### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



### 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