

## Marketing Bulletin

**DATE:** November 7<sup>th</sup>, 2007  
**TO:** All Sales Personnel  
**FROM:** Isaac Gonzalez  
**RE:** Product Termination

To all concerned parties,

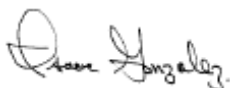
This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective November 7<sup>th</sup>, 2007:

<b>Series</b>	<b>Description</b>	<b>Recommended Replacement</b>
EB14E2	3.0V 4 Pad SMD Ceramic Oscillator	<a href="#">EPS13D2</a> or <a href="#">EB15E2</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 May 31<sup>th</sup>, 2008, with delivery to conclude by November 30<sup>th</sup>, 2008.

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

Best Regards,



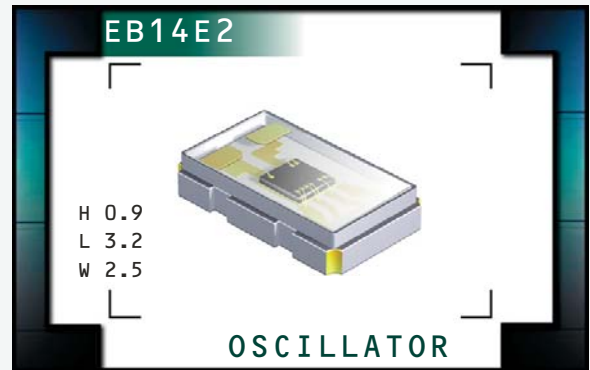
Isaac Gonzalez  
Configuration Manager  
Ecliptek Corporation

# EB14E2 Series



ECLIPTEK<sup>®</sup>  
CORPORATION

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 3.0V Supply Voltage
- LVHCMOS output
- Stability to  $\pm 25$ ppm
- Standby Function
- Available on Tape and Reel



## NOTES

**OBSOLETE**

## ELECTRICAL SPECIFICATIONS

<b>Frequency Range (<math>F_0</math>)</b>	1.8432MHz, 3.5795MHz, 3.6864MHz, 4.000MHz, 6.000MHz, 7.3728MHz, 8.000MHz, 8.2944MHz, 11.2896MHz, 12.000MHz, 12.288MHz, 12.800MHz, 16.000MHz, 16.9344MHz, 20.000MHz, 22.000MHz, 22.1184MHz, 24.000MHz, 24.576MHz, 25.000MHz, 26.000MHz, 27.000MHz, 28.375MHz, 28.636MHz, 29.4912MHz, 30.000MHz, 32.000MHz, 33.000MHz, 33.333MHz, 40.000MHz, 41.010MHz, 44.000MHz, 48.000MHz, 50.000MHz, 54.000MHz, 64.000MHz, 66.000MHz, 66.6666MHz, 72.000MHz, and 75.000MHz
<b>Operating Temperature Range (OTR)</b>	-20°C to 70°C -40°C to 85°C
<b>Storage Temperature Range (STR)</b>	-55°C to 125°C
<b>Supply Voltage (<math>V_{DD}</math>)</b>	3.0V <sub>DC</sub> $\pm 5\%$
<b>Input Current (<math>I_{DD}</math>)</b>	1.8432MHz to 20.000MHz: 6mA Maximum 20.001MHz to 40.000MHz: 11mA Maximum 40.001MHz to 60.000MHz: 16mA Maximum 60.001MHz to 75.000MHz: 20mA Maximum
<b>Frequency Tolerance/Stability</b>	Inclusive of all conditions: Calibration Tolerance at 25°C, $\pm 100$ ppm, $\pm 50$ ppm, or $\pm 25$ ppm Frequency Stability over the Operating Temperature Range, Maximum Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration
<b>Output Voltage Logic High (<math>V_{OH}</math>)</b>	90% of $V_{DD}$ Minimum ( $I_{OH} = -4$ mA)
<b>Output Voltage Logic Low (<math>V_{OL}</math>)</b>	10% of $V_{DD}$ Maximum ( $I_{OL} = +4$ mA)
<b>Rise Time / Fall Time (<math>T_R/T_F</math>)</b>	20% to 80% of Waveform: 10 nSeconds Maximum
<b>Duty Cycle (SYM)</b>	at 50% of Waveform: 50 $\pm 5$ (%)
<b>Load Drive Capability (<math>C_{LOAD}</math>)</b>	15pF HCMOS Load Maximum
<b>Tri-State Input Voltage</b>	No Connection: Enables Output $V_{IH} \geq 80\%$ of $V_{DD}$ : Enables Output $V_{IL} \leq 20\%$ of $V_{DD}$ : Disables Output: High Impedance
<b>Standby Current</b>	Disabled Output: High Impedance: 10 $\mu$ A Maximum
<b>Start Up Time (<math>T_S</math>)</b>	10 mSeconds Maximum
<b>RMS Phase Jitter</b>	$F_J = 12$ kHz to 20MHz: 1 pSeconds Maximum

MANUFACTURER  
ECLIPTEK CORP.

CATEGORY  
OSCILLATOR

SERIES  
EB14E2

PACKAGE  
CERAMIC

VOLTAGE  
3.0V

CLASS  
OS5B

REV. DATE  
02/06

## PART NUMBERING GUIDE

### EB14E2 E 2 H - 40.000M TR

#### FREQUENCY TOLERANCE / STABILITY

C=±100ppm Maximum over -20°C to +70°C  
 D=±50ppm Maximum over -20°C to +70°C  
 E=±25ppm Maximum over -20°C to +70°C  
 G=±100ppm Maximum over -40°C to +85°C  
 H=±50ppm Maximum over -40°C to +85°C  
 J=±25ppm Maximum over -40°C to +85°C

#### PACKAGING OPTIONS

Blank=Bulk, TR=Tape and Reel (Standard)

#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

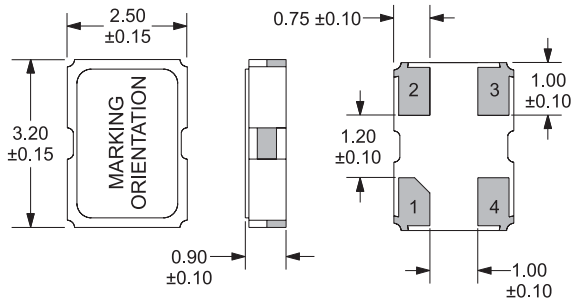
H=Tri-State

#### DUTY CYCLE

50%

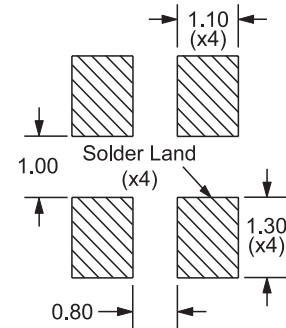
# OBSOLETE

#### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



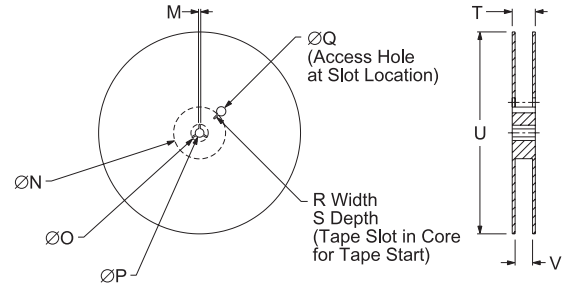
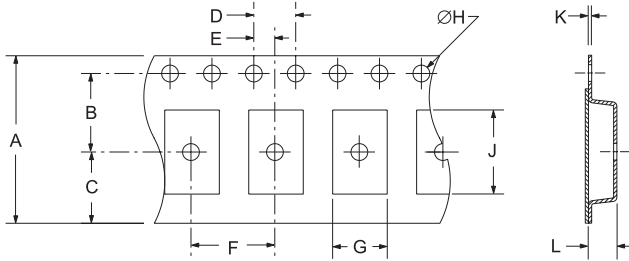
Pin 1: Tri-State  
 Pin 2: Case Ground  
 Pin 3: Output  
 Pin 4: Supply Voltage

#### SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



Tolerances= ±0.1

#### TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E	
	8.0±0.2	3.5±0.1	2.75±0.1	4.0±0.1	2.0±0.1	
F	G	H	J	K	L	
	4.0±0.1	2.7±.1	1.55+0.5	3.4±.1	0.25±0.05	1.4±.1

REEL	M	N	O	P	Q	
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.5	40 MIN	
R	S	T	U	V	QTY/REEL	
	2.5 MIN	10 MIN	14.4 MAX	180 MAX	8.4+1.5-0	1,000

\*Compliant to EIA 481A

#### ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

PARAMETER	Specification
Fine Leak Test	JIS C 6701 10.6 Leak Rate: $2.1 \times 10^{-9}$ Pa-m <sup>3</sup> /6 Maximum.
Gross Leak Test	JIS C 6701 10.6 Leak Rate: $1.27 \times 10^{-5}$ Pa-m <sup>3</sup> /8 Maximum.
Mechanical Shock	Random drop on rigid hard wood surface 3 times at heights of 75cm.
High Temperature Storage	JIS C 7021 B-10: at 85°C for 1000 hours.
Low Temperature Storage	JIS C 7021 B-12: at -40°C for 1000 hours.
Moisture Resistance	JIS C 7021 B-11: at 85°C and 90% humidity for 1000 hours.
Solder Thermal Stabilit	Recommended Solder Reflow profile 1 time.
Thermal Shock	100 cycles over -40°C to +85°C for 30 minutes
Vibration	JIS C 6701 10.26: at 10Hz to 55Hz, 1.5mm amplitude for 1 minute. Test time: X, Y, Z each direction for 2 hours.

#### MARKING SPECIFICATIONS

Line 1: E XX.X  
 Frequency in MHz (3 Digits Maximum + Decimal)

Line 2: XX Y ZZ  
 Week of Year  
 Last Digit of Year  
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB14E2	CERAMIC	3.0V	OS5B	02/06