

## Marketing Bulletin

**DATE:** August 25, 2005  
**TO:** All Sales Personnel  
**FROM:** Mark Stoner  
**RE:** Product Termination

To all concerned parties,

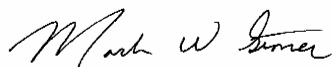
This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective August 25<sup>th</sup>, 2005:

<b>Series</b>	<b>Description</b>	<b>Recommended Replacement</b>
E31J2	5V 6 pad SMD LVPECL VCXO	E32D1
E32J2	3.3V 6 pad SMD LVPECL VCXO	E32D1

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 November 25<sup>th</sup>, 2005, with delivery to conclude by February 25<sup>th</sup> 2006.

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

Best Regards,

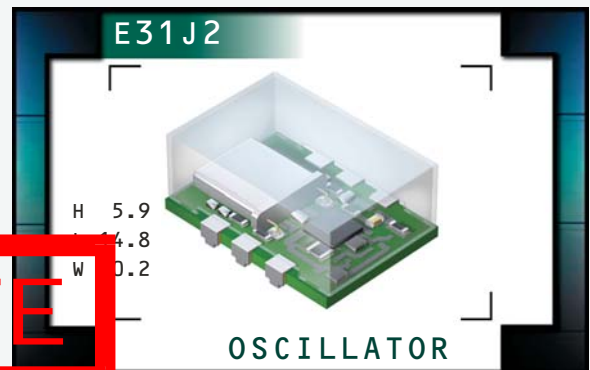


Mark W. Stoner  
Director of Marketing  
Ecliptek Corporation

# E31J2 Series

- PECL Output VCXO
- 5.0V supply voltage
- 6 pad PCB SMD package with J-leads
- Stability to 20ppm
- Output Enable/Disable available
- Complementary Output available
- Available on Tape and Reel

**OBSOLETE**



## ELECTRICAL SPECIFICATIONS

Frequency Range		19.440MHz to 212.500MHz
Operating Temperature Range		0°C to 70°C or -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage ( $V_{CC}$ )		5.0V <sub>DC</sub> ±5%
Input Current		100mA Maximum
Logic Type		100KH
Frequency Tolerance / Stability		Inclusive of Operating Temp Range, Supply Voltage, Load, and Aging @25°C over 10 years ±50ppm, ±25ppm, or ±20ppm Maximum
Output Voltage Logic High ( $V_{OH}$ )		$V_{CC}-1.025V_{DC}$ Minimum
Output Voltage Logic Low ( $V_{OL}$ )		$V_{CC}-1.620V_{DC}$ Maximum
Rise Time / Fall Time		20% to 80% of waveform 2 nSeconds Maximum
Duty Cycle		at 50% of waveform 50 ±10(%) 50 ±5(%)
Load Drive Capability		50 Ohms into $V_{CC}-2.0V_{DC}$
Additional Output / Logic Control		No Connect and Single Output Enable/Disable and Single Output No Connect and Complementary Output or Enable/Disable and Complementary Output
Enable/Disable Input Voltage	$V_{IL}$ of $V_{CC}-1.475V_{DC}$ Maximum	Enables Output
	No Connection	Enables Output
	$V_{IH}$ of $V_{CC}-1.165V_{DC}$ Minimum	Disables Output: Logic Low Disables Complementary Output: Logic High
Start Up Time		10 mSeconds Maximum
RMS Phase Jitter		FJ = 12kHz to 20MHz 1 pSec Maximum
Absolute Pull Range (APR)		Inclusive of Operating Temp Range, Supply Voltage, Load, and Aging @25°C over 10 years ±50ppm Minimum
Linearity		20%, 15%, or 10% Maximum
Control Voltage ( $V_C$ ): Test Conditions for APR		$2.5V_{DC} \pm 2.0V_{DC}$
Control Voltage Range ( $V_{CR}$ )		0.0V <sub>DC</sub> to $V_{CC}$
Center Control Voltage		2.5V <sub>DC</sub>
Transfer Function		Positive Transfer Characteristic
Input Impedance		50kOhms Typical
Modulation Bandwidth		at -3dB with Control Voltage of +2.5V <sub>DC</sub> 10kHz Minimum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	E31J2	6-PCB-J	5.0V	OS74	01/03

# OBSOLETE

## PART NUMBERING GUIDE

E31J2 F 3 A 2 C - 155.520M TR

### FREQUENCY TOLERANCE & STABILITY/ OPERATING TEMPERATURE RANGE

D=±50ppm Maximum over 0°C to +70°C  
E=±25ppm Maximum over 0°C to +70°C  
F=±20ppm Maximum over 0°C to +70°C  
H=±50ppm Maximum over -40°C to +85°C

### APR

3=±50ppm Minimum

### LINEARITY

A=20%  
B=15%  
C=10%

### AVAILABLE OPTIONS

Blank=Tubes  
TR = Tape and Reel (Standard)

### FREQUENCY

### ADDITIONAL OUTPUT/LOGIC CONTROL

A=No Connect and Single Output  
B=Enable/Disable and Single Output  
C=No Connect and Complementary Output  
D=Enable/Disable and Complementary Output

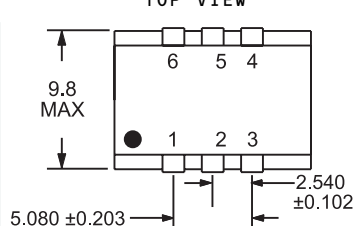
### DUTY CYCLE

1=50 ±10(%), 2=50 ±5(%)

### MECHANICAL DIMENSIONS

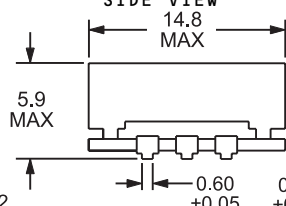
ALL DIMENSIONS IN MILLIMETERS

#### TOP VIEW



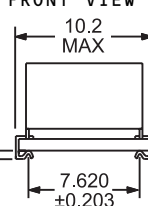
Pin 1: Voltage Control  
Pin 2: Enable/Disable or No Connect  
Pin 3: Case Ground

#### SIDE VIEW



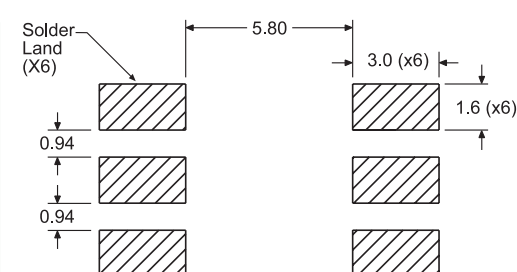
Pin 4: Output  
Pin 5: Complementary Output or No Connect  
Pin 6: Supply Voltage

#### FRONT VIEW



### SUGGESTED SOLDER PAD LAYOUT

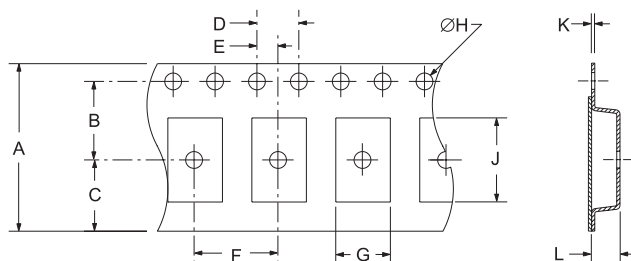
ALL DIMENSIONS IN MILLIMETERS



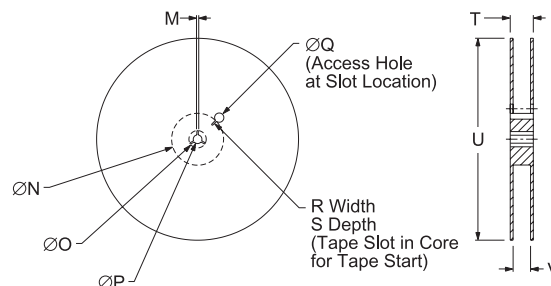
Tolerances = ±0.1

### TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	24 ±.3	11.5 ±.1	10.75 ±.1	4 ±.2	2 ±.1
F	G	H	J	K	L
	12 ±.1	B0*	1.5 +.1-.0	A0*	.4 ±.05



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13 ±.2	40 MIN
R	S	T	U	V	QTY/REEL
	2.5 MIN	10 MIN	30.4 MAX	360 MAX	24.4+2-0

\*Compliant to EIA 481A

### ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Seal Integrity	Bubble test in Perfluorocarbon at +125°C ±5°C for 60 seconds minimum (internal crystal only).
Solderability	Sn63 Solder dip at +230°C ±5°C for 5 seconds/95% coverage.
Marking Permanency	10 Strokes with brush after 1 minute soak in solvent, 3 times.
Shock	Random drop on hard wooden plate 3 times from a height of 20cm.
Vibration	Frequency with an amplitude of 1.5mm sweeping between 10Hz to 55Hz within 1 minute (approximately) for 2 hours minimum on each axis (X, Y and Z) for a total of 6 hours.

### MARKING SPECIFICATIONS

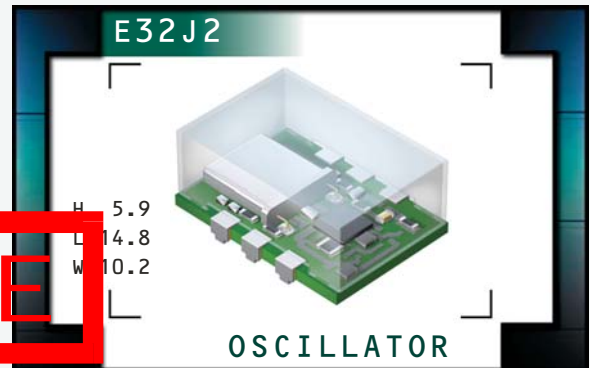
Line 1: ECLIPTEK
Line 2: XX.XXX M
Frequency in MHz (5 Digits Maximum + Decimal)
Line 3: XX Y ZZ
Week of Year
Last Digit of Year
Eclipse Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	E31J2	6-PCB-J	5.0V	0574	01/03

# E32J2 Series

- PECL Output VCXO
- 3.3V supply voltage
- 6 pad PCB SMD package with J-leads
- Stability to 20nm
- Output Enable/Disable available
- Complementary Output available
- Available on Tape and Reel

**OBSOLETE**



## ELECTRICAL SPECIFICATIONS

Frequency Range		19.440MHz to 212.500MHz
Operating Temperature Range		0°C to 70°C or -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage ( $V_{CC}$ )		3.3V <sub>DC</sub> ±5%
Input Current		75mA Maximum
Logic Type		100KH
Frequency Tolerance / Stability		Inclusive of Operating Temp Range, Supply Voltage, Load, and Aging @25°C over 10 years ±50ppm, ±25ppm, or ±20ppm Maximum
Output Voltage Logic High ( $V_{OH}$ )		$V_{CC}-1.025V_{DC}$ Minimum
Output Voltage Logic Low ( $V_{OL}$ )		$V_{CC}-1.620V_{DC}$ Maximum
Rise Time / Fall Time		20% to 80% of waveform 2 nSeconds Maximum
Duty Cycle		at 50% of waveform 50 ±10(%) 50 ±5(%)
Load Drive Capability		50 Ohms into $V_{CC}-2.0V_{DC}$
Additional Output / Logic Control		No Connect and Single Output Enable/Disable and Single Output No Connect and Complementary Output or Enable/Disable and Complementary Output
Enable/Disable Input Voltage		$V_{IL}$ of $V_{CC}-1.475V_{DC}$ Maximum No Connection $V_{IH}$ of $V_{CC}-1.165V_{DC}$ Minimum Enables Output Enables Output Disables Output: Logic Low Disables Complementary Output: Logic High
Start Up Time		10 mSeconds Maximum
RMS Phase Jitter		FJ = 12kHz to 20MHz 1 pSec Maximum
Absolute Pull Range (APR)		Inclusive of Operating Temp Range, Supply Voltage, Load, and Aging @25°C over 10 years ±50ppm Minimum
Linearity		20%, 15%, or 10% Maximum
Control Voltage ( $V_C$ ): Test Conditions for APR		1.65V <sub>DC</sub> ±1.35V <sub>DC</sub>
Control Voltage Range ( $V_{CR}$ )		0.0V <sub>DC</sub> to $V_{CC}$
Center Control Voltage		1.65V <sub>DC</sub>
Transfer Function		Positive Transfer Characteristic
Input Impedance		50kOhms Typical
Modulation Bandwidth		at -3dB with Control Voltage of +1.65V <sub>DC</sub> 10kHz Minimum

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES E32J2	PACKAGE 6-PCB-J	VOLTAGE 3.3V	CLASS OS73	REV. DATE 01/03
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# OBSOLETE

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E32J2 F 3 A 2 C - 155.520M TR

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### APR

3=±50ppm Minimum

### LINEARITY

A=20%  
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### AVAILABLE OPTIONS

Blank=Tubes  
TR = Tape and Reel (Standard)

### FREQUENCY

### ADDITIONAL OUTPUT/LOGIC CONTROL

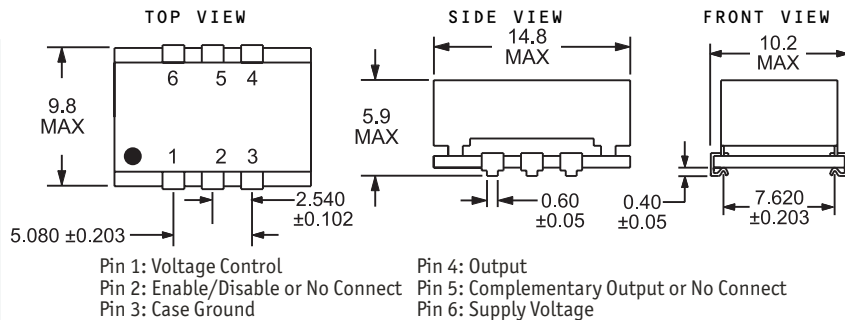
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B=Enable/Disable and Single Output  
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### DUTY CYCLE

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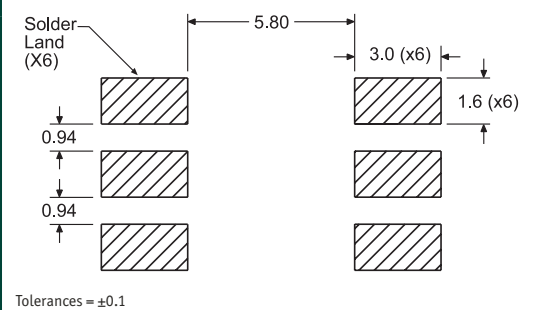
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ALL DIMENSIONS IN MILLIMETERS



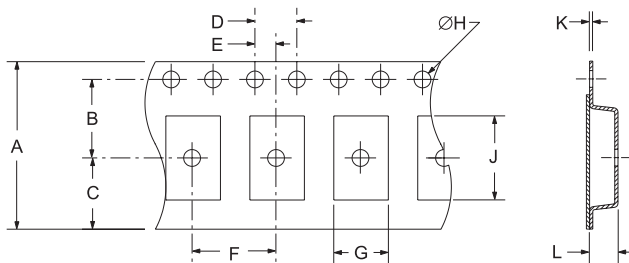
### SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

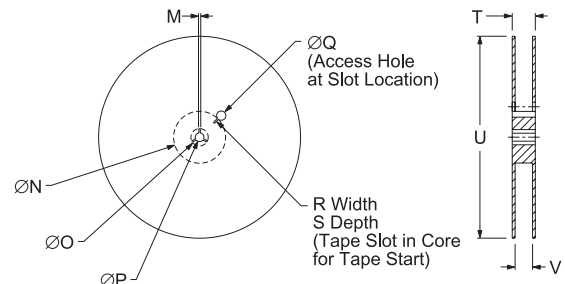


### TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



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	24 ±3	11.5 ±1	10.75 ±1	4 ±2	2 ±1
F	G	H	J	K	L
12 ±1	B0*	1.5 ±1-0	A0*	.4 ±.05	K0*



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13 ±2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	30.4 MAX	360 MAX	24.4 ±2-0	1000

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ECLIPTEK CORP.	OSCILLATOR	E32J2	6-PCB-J	3.3V	0573	01/03