

## Marketing Bulletin

**DATE:** March 24<sup>th</sup>, 2006  
**TO:** All Sales Personnel  
**FROM:** Mark Stoner  
**RE:** Product Termination

To all concerned parties,

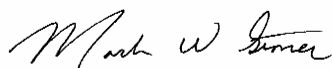
This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective March 24<sup>th</sup>, 2006:

<b>Series</b>	<b>Description</b>	<b>Recommended Replacement</b>
E13C9	3.3V 5 x 7mm SMD LVPECL Oscillator	E13C7 or E13D8

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 July 1<sup>st</sup>, 2006, with delivery to conclude by October 1<sup>st</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

# E13C9 Series



- RoHS Compliant (Pb-Free)
- LVPECL Output Oscillators
- 3.3V Supply Voltage
- AT-Cut Fundamental Mode Inverted Mesa Crystal
- Ceramic 6-pad SMD Package
- Stability to 25ppm
- Tri-State Enable High and Enable Low Options Available on Pad 1 or Pad 2
- Complementary Output
- Wide Range of Available Frequencies



**OBSOLETE**

## ELECTRICAL SPECIFICATIONS

<b>Nominal Frequency</b>	19.440MHz to 200.000MHz	
<b>Operating Temperature Range</b>	0°C to 70°C, or -40°C to +85°C	
<b>Storage Temperature Range</b>	-55°C to 125°C	
<b>Supply Voltage (V<sub>CC</sub>)</b>	3.3V <sub>DC</sub> ±5%	
<b>Input Current</b>	75mA 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, 1st Year Aging at 25°C, Shock, and Vibration	±100ppm, ±50ppm, or ±25ppm Maximum
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>	V <sub>CC</sub> -1.025V <sub>DC</sub> Minimum	
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>	V <sub>CC</sub> -1.620V <sub>DC</sub> Maximum	
<b>Rise Time / Fall Time</b>	20% to 80% of waveform	1.5 nSeconds Maximum, 600 pSec Typical
<b>Duty Cycle</b>	at 50% of waveform	50 ±10(%) 50 ±5(%)
<b>Load Drive Capability</b>	50 Ohms into V <sub>CC</sub> -2.0V <sub>DC</sub>	
<b>Logic Control / Additional Output</b>	No Connect and Complementary Output or Tri-State and Complementary Output	
<b>Enable High Tri-State Input Voltage</b>	Enable High or Enable Low V <sub>IH</sub> of 70% of V <sub>CC</sub> Minimum No Connection V <sub>IL</sub> of 30% of V <sub>CC</sub> Maximum	Enables Output Enables Output Disables Output: High Impedance
<b>Enable Low Tri-State Input Voltage</b>	V <sub>IH</sub> of 70% of V <sub>CC</sub> Minimum No Connection V <sub>IL</sub> of 30% of V <sub>CC</sub> Maximum	Disables Output: High Impedance Enables Output Enables Output
<b>Output Disable Current</b>	25mA Maximum	
<b>Start Up Time</b>	10 mSeconds Maximum	
<b>RMS Phase Jitter</b>	< 44.736MHz; F <sub>J</sub> = 12kHz to 20MHz ≥ 44.736MHz, < 77.760MHz; F <sub>J</sub> = 12kHz to 20MHz ≥ 77.760MHz; F <sub>J</sub> = 12kHz to 20MHz	5 pSec Maximum 2 pSec Maximum 1 pSec Maximum
<b>Phase Noise (at 155.520MHz)</b>	at 10Hz Offset at 100Hz Offset at 1kHz Offset at 10kHz Offset at 100kHz Offset	-75dBc/Hz Typical -95dBc/Hz Typical -125dBc/Hz Typical -140dBc/Hz Typical -145dBc/Hz Typical

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES E13C9	PACKAGE CERAMIC	VOLTAGE 3.3V	CLASS OS1T	REV. DATE 06/04
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# OBSOLETE

## PART NUMBERING GUIDE

### E13C9 E 2 F - 155.520M TR

#### FREQUENCY TOLERANCE & STABILITY/ OPERATING TEMPERATURE RANGE

C=±100ppm Maximum over 0°C to +70°C  
 D=±50ppm Maximum over 0°C to +70°C  
 E=±25ppm Maximum over 0°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

#### DUTY CYCLE

1=50% ±10%, 2=50% ±5%

#### AVAILABLE OPTIONS

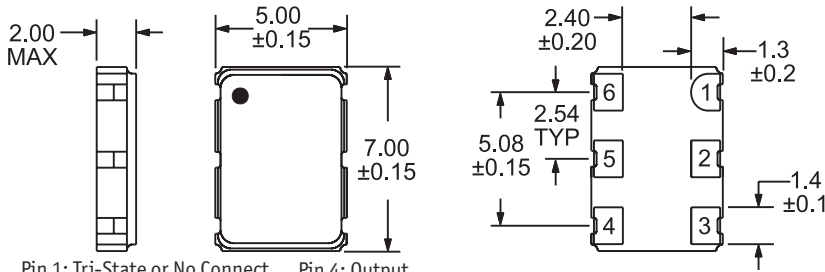
Blank=Tubes  
 TR=Tape and Reel (Standard)

#### FREQUENCY

#### LOGIC CONTROL/ADDITIONAL OUTPUT

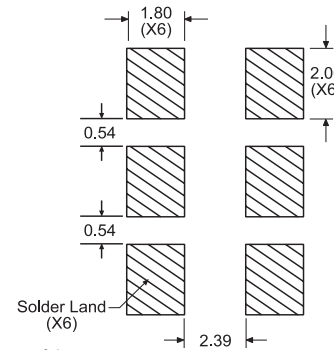
C=No Connect and Complementary Output  
 F=Tri-State (Enable High) on Pad 1 and Complementary Output  
 H=Tri-State (Enable High) on Pad 2 and Complementary Output  
 J=Tri-State (Enable Low) on Pad 1 and Complementary Output  
 K=Tri-State (Enable Low) on Pad 2 and Complementary Output

#### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



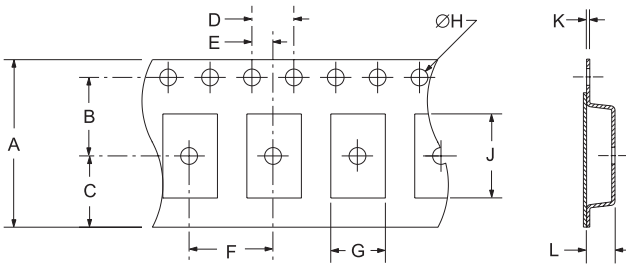
Pin 1: Tri-State or No Connect Pin 4: Output  
 Pin 2: Tri-State or No Connect Pin 5: Complementary Output  
 Pin 3: Case Ground Pin 6: Supply Voltage

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

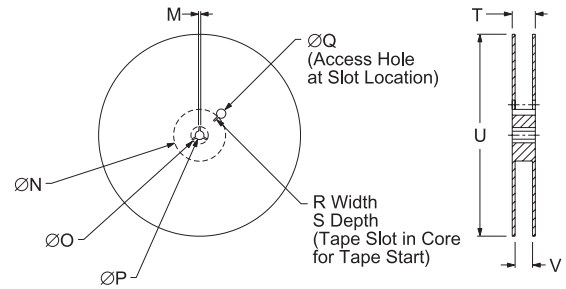


Tolerances=±0.1

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



TAPE	A	B	C	D	E	
	16±.3-1	7.5±.1	6.75±.1	4 ±.1	2±.1	
	F	G	H	J	K	L
	8±.1	B0*	1.5 +.1-0	A0*	.3±.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	W	X	Y	Z
	2.5 MIN	10 MIN	22.4 MAX	360 MAX	16.4±2-0	1,000			

\*Compliant to EIA 481A

#### 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
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-202, Method 210
Resistance to Solvents	MIL-STD-202, Method 215

#### 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  
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	E13C9	CERAMIC	3.3V	OS1T	06/04