

## Marketing Bulletin

**DATE:** September 20<sup>th</sup>, 2006

**TO:** All Sales Personnel

**FROM:** Isaac Gonzalez

**RE:** Product Termination

To all concerned parties,

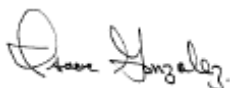
This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective September 20<sup>th</sup>, 2006:

<b>Series</b>	<b>Description</b>	<b>Recommended Replacement</b>
EC33	2.5V 4 pad SMD Plastic Oscillator	<a href="#">EC27</a> or <a href="#">EC37</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 March 31<sup>st</sup>, 2007, with delivery to conclude by September 30<sup>th</sup>, 2007.

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

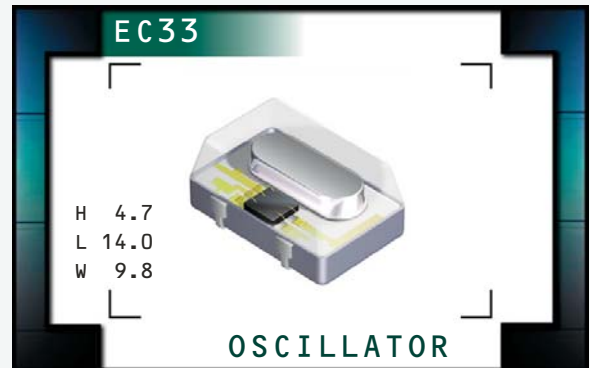
Best Regards,



Isaac Gonzalez  
Configuration Manager  
Ecliptek Corporation

# EC33 Series

- Plastic surface mount package
- 2.5V supply voltage
- HCMOS output
- Stability to  $\pm 50$ ppm
- Available on tape and reel



## NOTES

OBSOLETE

### ELECTRICAL SPECIFICATIONS

<b>Frequency Range (MHz)</b>		1.544MHz to 32.768MHz
<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 (<math>V_{DD}</math>)</b>		2.5V <sub>DC</sub> $\pm 5\%$
<b>Aging (at 25°C)</b>		$\pm 5$ ppm / year Maximum
<b>Input Current</b>	$\leq 24.000$ MHz	10mA Maximum
	$> 24.000$ MHz	20mA Maximum
<b>Frequency Tolerance / Stability*</b>	Inclusive of Operating Temperature Range, Supply Voltage, and Load	$\pm 100$ ppm Maximum or $\pm 50$ ppm Maximum (0°C to 70°C only)
<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</b>	$\leq 24.000$ MHz 20% to 80% of Waveform	6 nSec Maximum
	$> 24.000$ MHz 20% to 80% of Waveform	4 nSec Maximum
<b>Duty Cycle</b>	at 50% of Waveform	50 $\pm 10$ (%) (Standard) or 50 $\pm 5$ (%) (Optional)
<b>Load Drive Capability</b>		15pF HCMOS Load Maximum
<b>Tri-State Input Voltage</b>	No Connection	Enables Output
	$V_{IH} \geq 90\%$ of $V_{DD}$	Enables Output
	$V_{IL} \leq 10\%$ of $V_{DD}$	Disables Output: High Impedance
<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	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC33	PLASTIC	2.5V	OS93	08/06

## PART NUMBERING GUIDE

### EC33 00 SJ ET TS - 25.000M TR

#### FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)  
45=±50ppm Maximum

#### OPERATING TEMP. RANGE

Blank=0°C to 70°C  
ET=-40°C to 85°C

#### DUTY CYCLE

Blank=50 ±10% (Standard)  
T=50 ±5%

#### PACKAGING OPTIONS

Blank=Bulk  
TR=Tape and Reel (Standard)

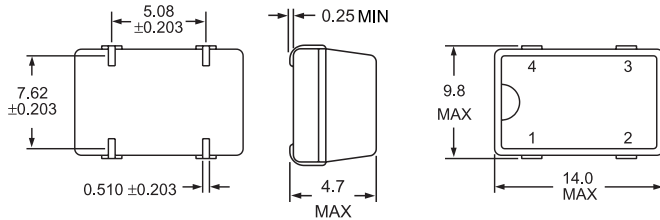
#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

TS=Tri-State Enable High

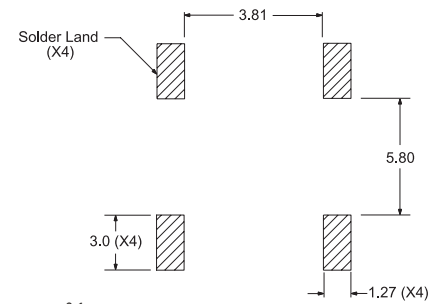
# OBSOLETE

#### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



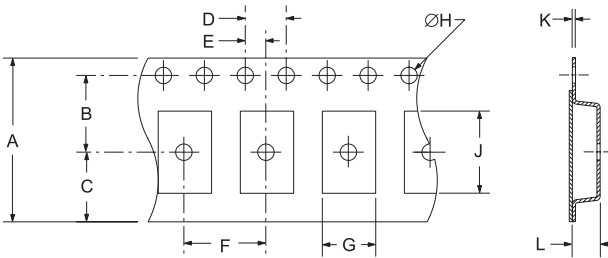
Pin 1: Tri-State  
Pin 2: Case Ground  
Pin 3: Output  
Pin 4: Supply Voltage

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

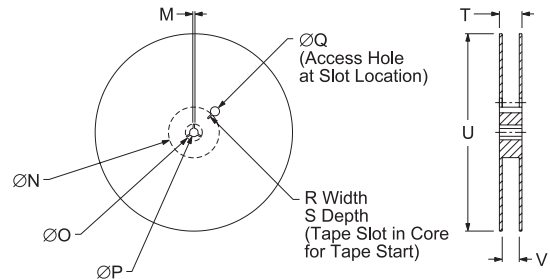


Tolerances = ±0.1

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



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

\*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  
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC33	PLASTIC	2.5V	OS93	08/06