

## Marketing Bulletin

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

**TO:** All Sales Personnel

**FROM:** Mark Stoner

**RE:** Product Termination

To all concerned parties,

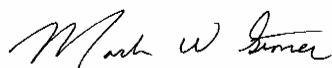
This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective September 20<sup>th</sup>, 2006:

<b>Series</b>	<b>Description</b>	<b>Recommended Replacement</b>
EC33	2.5V 4 pad SMD Plastic Oscillator	EC27 or EC37

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.

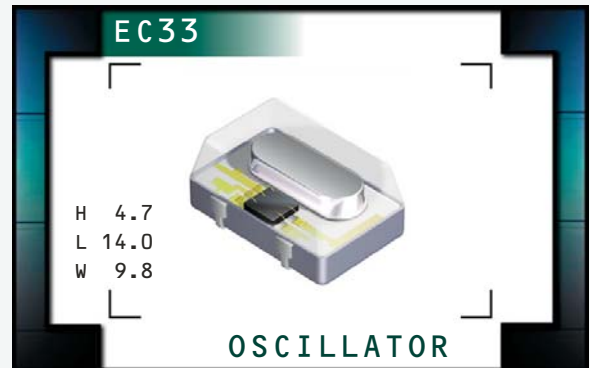
Best Regards,



Mark W. Stoner  
Vice President of Marketing  
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 ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EC33	PACKAGE PLASTIC	VOLTAGE 2.5V	CLASS OS93	REV. DATE 08/06
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## 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)

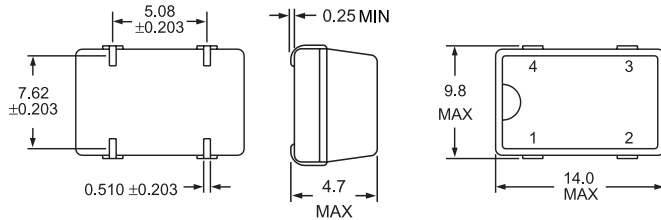
#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

TS=Tri-State Enable High

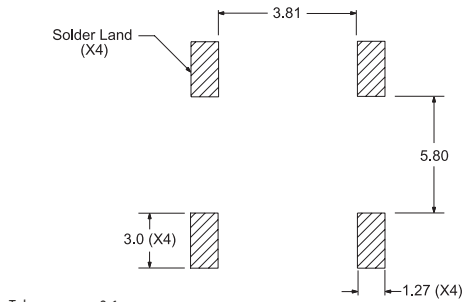
OBSOLETE

#### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



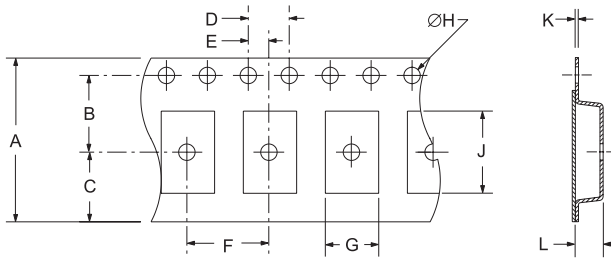
Pin 1: Tri-State  
Pin 2: Case Ground  
Pin 3: Output  
Pin 4: Supply Voltage

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

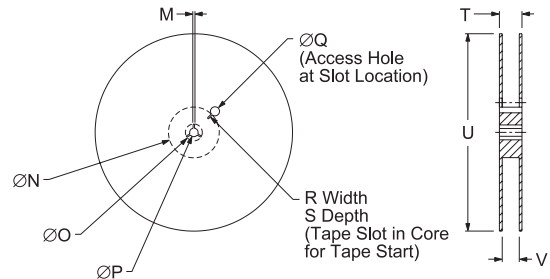


Tolerances = ±0.1

#### 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