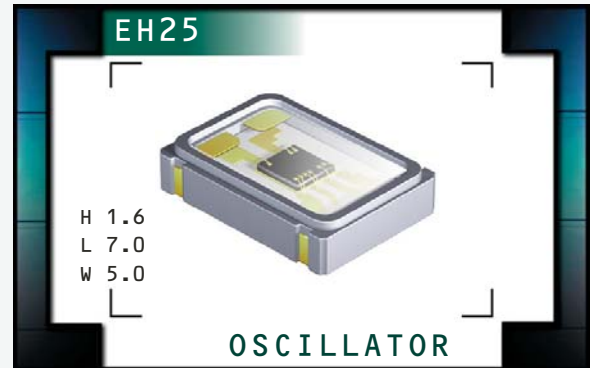


# EH25 Series

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 5.0V supply voltage
- HCMOS/TTL output
- Stability to  $\pm 20$ ppm
- Available on tape and reel



ECLIPTEK<sup>®</sup>  
CORPORATION



## ELECTRICAL SPECIFICATIONS

<b>Frequency Range</b>	1.000MHz to 155.520MHz		
<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>DD</sub>)</b>	5.0V <sub>DC</sub> $\pm 10\%$		
<b>Input Current</b>	50mA Maximum (Unloaded)		
<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, First Year Aging at 25°C, Shock, and Vibration		
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>	w/TTL Load	2.4V <sub>DC</sub> Minimum	I <sub>OH</sub> = -16mA
	w/HCMOS Load	V <sub>DD</sub> -0.4V <sub>DC</sub> Minimum	I <sub>OH</sub> = -16mA
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>	w/TTL Load	0.4V <sub>DC</sub> Maximum	I <sub>OL</sub> = +16mA
	w/HCMOS Load	0.5V <sub>DC</sub> Maximum	I <sub>OL</sub> = +16mA
<b>Duty Cycle (V<sub>DD</sub>=5.0V<sub>DC</sub>)</b>	at 1.4V <sub>DC</sub> w/TTL Load; at 50% of waveform w/HCMOS Load ( $\leq 70.000$ MHz)	50 $\pm 10$ (%) (Standard)	
	at 50% of waveform w/ TTL Load or w/HCMOS Load ( $> 70.000$ MHz)	50 $\pm 10$ (%) (Standard)	
	at 50% of waveform w/TTL Load or w/HCMOS Load	50 $\pm 5$ (%) (Optional)	
<b>Rise Time / Fall Time</b>	0.8V <sub>DC</sub> to 2.0V <sub>DC</sub> w/TTL Load or 20% to 80% of Waveform w/HCMOS Load ( $\leq 70.000$ MHz)	6 nSeconds Maximum	
	0.8V <sub>DC</sub> to 2.0V <sub>DC</sub> w/TTL Load or 20% to 80% of Waveform w/HCMOS Load ( $> 70.000$ MHz)	4 nSeconds Maximum	
<b>Tri-State Input Voltage</b>	V <sub>IH</sub> :No Connection	Enables Output	
	V <sub>IH</sub> : $\geq 2.2V_{DC}$	Enables Output	
	V <sub>IL</sub> : $\leq 0.8V_{DC}$	Disables Output: High Impedance	
<b>Aging (at 25°C)</b>	$\pm 5$ ppm / year Maximum		
<b>Start Up Time</b>	10 mSeconds Maximum		
<b>Load Drive Capability</b>	$\leq 70.000$ MHz	10TTL Load or 50pF HCMOS Load Maximum	
	$> 70.000$ MHz	5TTL Load or 15pF HCMOS Load Maximum	
<b>Period Jitter: Absolute</b>	$\pm 250$ pSec Maximum, $\pm 100$ pSec Typical		
<b>Period Jitter: One Sigma</b>	$\pm 50$ pSec Maximum, $\pm 30$ pSec Typical		

MANUFACTURER  
ECLIPTEK CORP.

CATEGORY  
OSCILLATOR

SERIES  
EH25

PACKAGE  
CERAMIC

VOLTAGE  
5.0V

CLASS  
OS48

REV. DATE  
07/08

## PART NUMBERING GUIDE

### EH25 00 ET TS - 24.000M TR

#### FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard), 45=±50ppm Maximum, 25=±25ppm Maximum, 20=±20ppm 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(%)

#### AVAILABLE OPTIONS

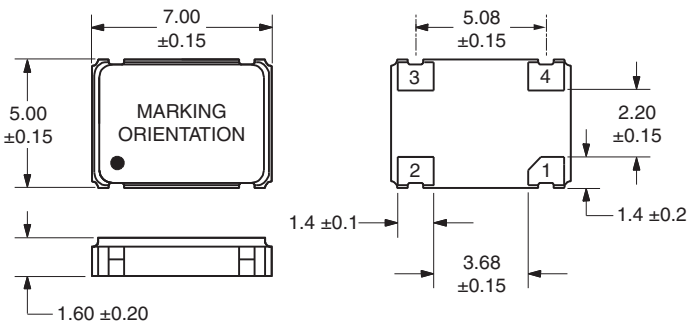
Blank=Bulk (Standard)  
TR=Tape and Reel

#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

TS=Tri-State

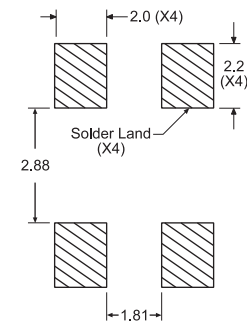
#### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



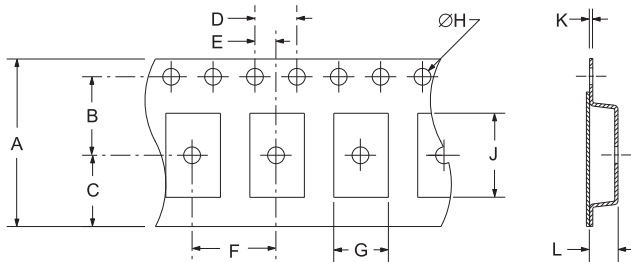
Pin 1: Tri-State  
Pin 2: Case Ground

Pin 3: Output  
Pin 4: Supply Voltage

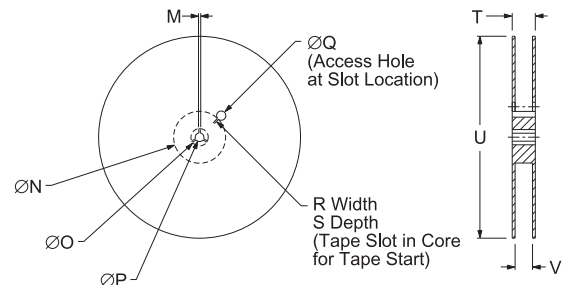
#### SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



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



REEL	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
	2.5 MIN	10 MIN	22.4 MAX	360 MAX	16.4+2-0
					QTY/REEL
					1,000

\*Compliant to EIA 481A

#### ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

#### MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M

Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: P XX Y ZZ

Week of Year  
Last Digit of Year  
Ecliptek Manufacturing Identifier  
Configuration Designator

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH25	CERAMIC	5.0V	OS48	07/08