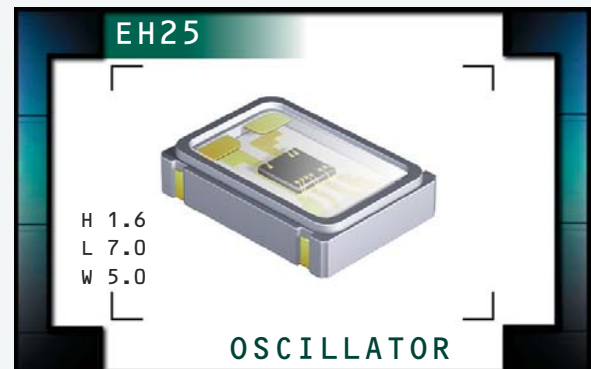


# EH25 Series

- Pb-free ceramic SMD package
- 5.0V supply voltage
- HCMOS/TTL output
- Stability to 20ppm
- Available on tape and reel



## 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> ±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 (≤70.000MHz)	50 ±10(%) (Standard)	
	at 50% of waveform w/ TTL Load or w/HCMOS Load (>70.000MHz)	50 ±10(%) (Standard)	
	at 50% of waveform w/TTL Load or w/HCMOS Load	50 ±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 (≤70.000MHz)	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 (>70.000MHz)	4 nSeconds Maximum	
<b>Tri-State Input Voltage</b>	V <sub>IH</sub> :No Connection	Enables Output	
	V <sub>IH</sub> :≥2.2V <sub>DC</sub>	Enables Output	
	V <sub>IL</sub> :≤0.8V <sub>DC</sub>	Disables Output: High Impedance	
<b>Aging (at 25°C)</b>	±5ppm / year Maximum		
<b>Start Up Time</b>	10 mSeconds Maximum		
<b>Load Drive Capability</b>	≤70.000MHz	10TTL Load or 50pF HCMOS Load Maximum	
	>70.000MHz	5TTL Load or 15pF HCMOS Load Maximum	
<b>Period Jitter: Absolute</b>	±250pSec Maximum, ±100pSec Typical		
<b>Period Jitter: One Sigma</b>	±50pSec Maximum, ±30pSec Typical		

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EH25	PACKAGE CERAMIC	VOLTAGE 5.0V	CLASS OS48	REV. DATE 02/04
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## 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

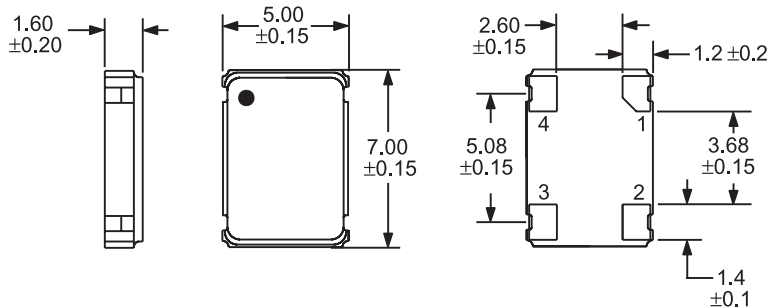
#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

TS=Tri-State

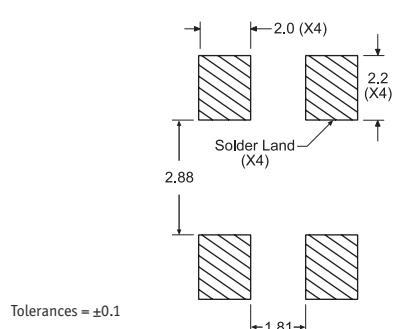
#### MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



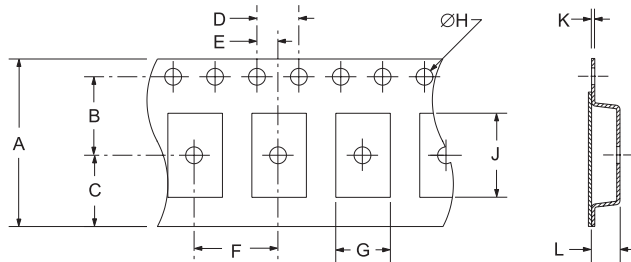
#### SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

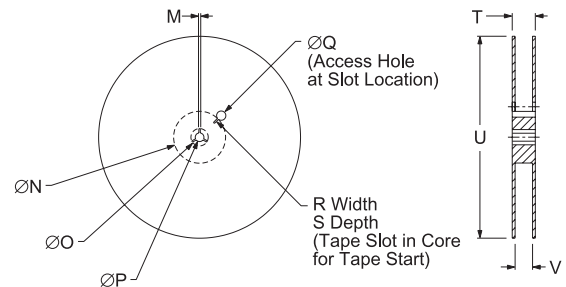


#### TAPE AND REEL DIMENSIONS

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	QTY/REEL
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
Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

#### MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M  
Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: P XX Y ZZ  
P: Week of Year  
XX: Last Digit of Year  
Y: Ecliptek Manufacturing Identifier  
ZZ: Configuration Designator

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH25	CERAMIC	5.0V	OS48	02/04