

# EH36 Series

- Crystal Clock Oscillators
- LVCMOS Output
- +3.3V Supply Voltage
- Tri-State Output Function
- 4 Pad Ceramic SMD Package
- RoHS Compliant (Pb-Free)



## NOTES

### 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>		3.3V <sub>DC</sub> ±0.3V <sub>DC</sub>
<b>Input Current</b>		35mA 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	±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>		2.7V <sub>DC</sub> Minimum I <sub>OH</sub> = -8mA
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>		0.5V <sub>DC</sub> Maximum I <sub>OL</sub> = +8mA
<b>Rise Time / Fall Time</b>	≤70.000MHz 20% to 80% of Waveform	6 nSeconds Maximum
	>70.000MHz 20% to 80% of Waveform	4 nSeconds Maximum
<b>Load Drive Capability</b>	≤70.000MHz	30pF Maximum
	>70.000MHz	15pF Maximum
<b>Duty Cycle (at V<sub>DD</sub>=3.3V<sub>DC</sub>)</b>	at 50% of Waveform	50 ±10(%) (Standard) or 50 ±5(%) (Optional)
<b>Tri-State Input Voltage</b>	V <sub>IH</sub> : No Connection or ≥2.2V <sub>DC</sub> V <sub>IL</sub> : ≤0.8V <sub>DC</sub>	Enables Output Disables Output: High Impedance
<b>Aging (at 25°C)</b>		±5ppm / year Maximum
<b>Start Up Time</b>		10mSeconds Maximum
<b>Period Jitter: Absolute</b>		±250pSec Maximum, ±100pSec Typical
<b>Period Jitter: One Sigma</b>		±50pSec Maximum, ±40pSec Typical

MANUFACTURER  
ECLIPTEK CORP.

CATEGORY  
OSCILLATOR

SERIES  
EH36

PACKAGE  
CERAMIC

VOLTAGE  
3.3V

CLASS  
0S89

REV. DATE  
01/04

## PART NUMBERING GUIDE

### EH36 00 ET TS - 24.000M TR

#### FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum, 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(%)  
T=50±5(%)

#### AVAILABLE OPTIONS

Blank=Bulk  
TR=Tape & Reel

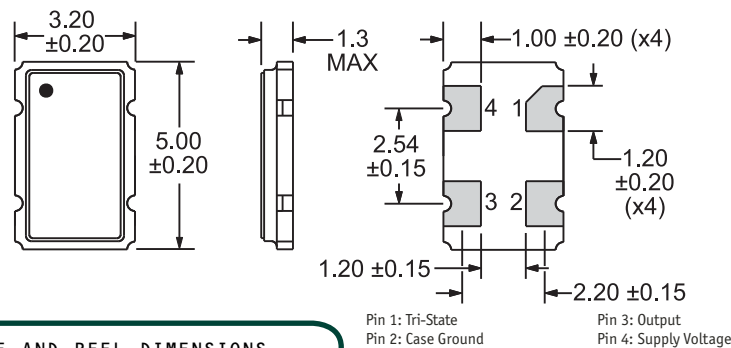
#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

TS=Tri-State

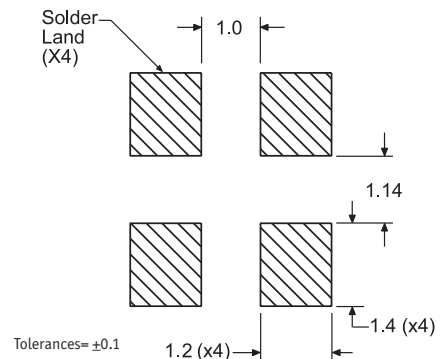
#### MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



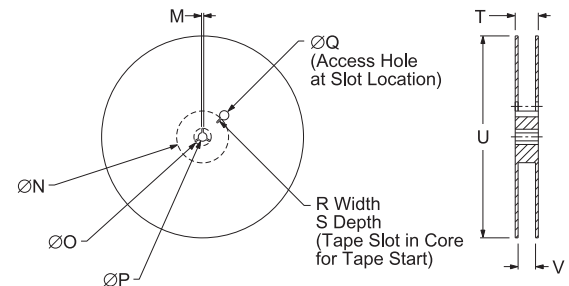
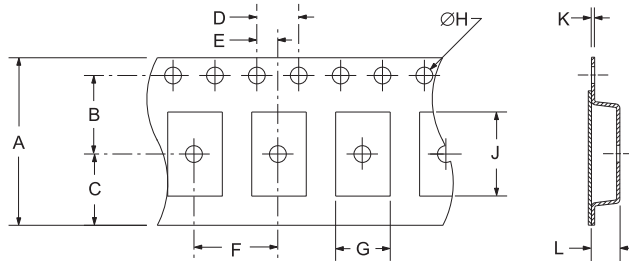
#### SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS



#### TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	12.0±0.2	5.5±0.1	6.5±0.1	4.0±0.1	2.0±0.1
F	G	H	J	K	L
	8.0±0.1	B0*	1.5+0.1-0.0	A0*	0.30±0.05

REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.2	40 MIN
R	S	T	U	V	QTY/REEL
	2.5 MIN	10 MIN	18.4 MAX	180 MAX	12.4+2-0

\*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-202, Method 210
Resistance to Solvents	MIL-STD-202, Method 215

#### MARKING SPECIFICATIONS

Line 1: E XX.XXX — Frequency in MHz (5 Digits Maximum + Decimal)

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH36	CERAMIC	3.3V	OS89	01/04