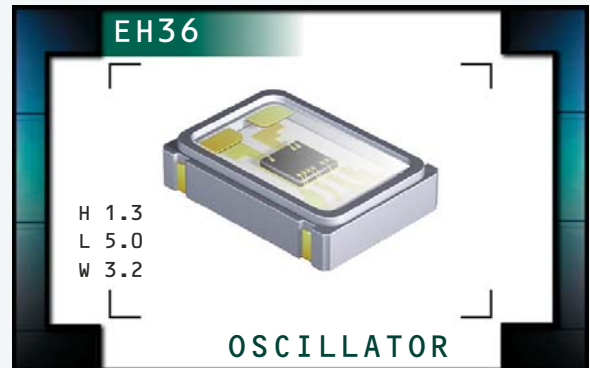


# EH36 Series

- 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 >70.000MHz 20% to 80% of Waveform	6 nSeconds Maximum 4 nSeconds Maximum
<b>Load Drive Capability</b>	≤70.000MHz >70.000MHz	30pF Maximum 15pF Maximum
<b>Output Logic Type</b>	CMOS	
<b>Duty Cycle (at V<sub>DD</sub>=3.3V<sub>DC</sub>)</b>	at 50% of Waveform	50 ±10(%) 50 ±5(%)
<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  
10/11

## 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

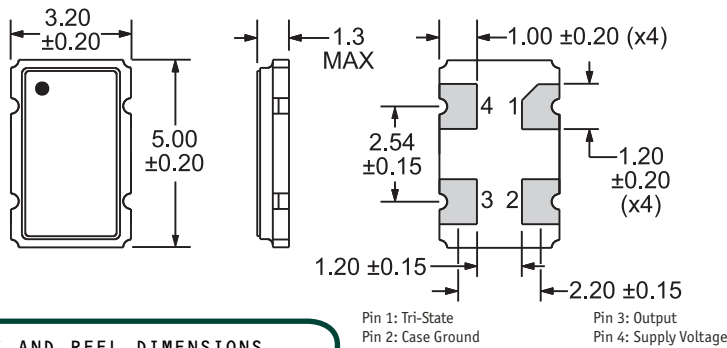
Blank = Bulk  
 TR = Tape & Reel

#### FREQUENCY

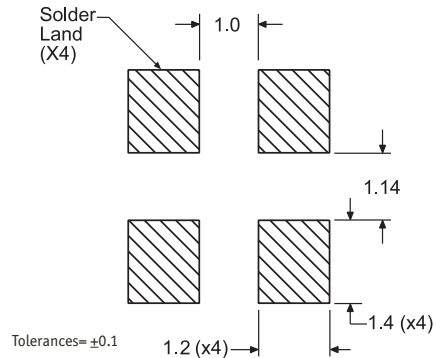
#### OUTPUT CONTROL FUNCTION

TS = Tri-State

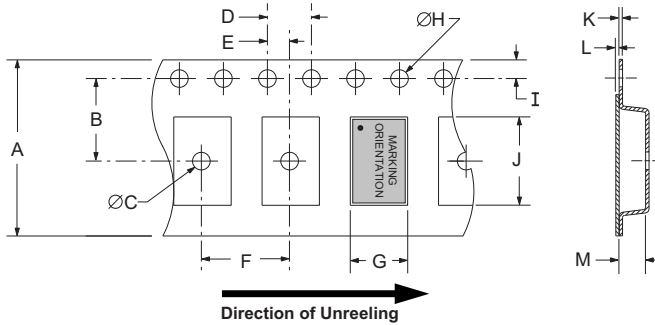
#### MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



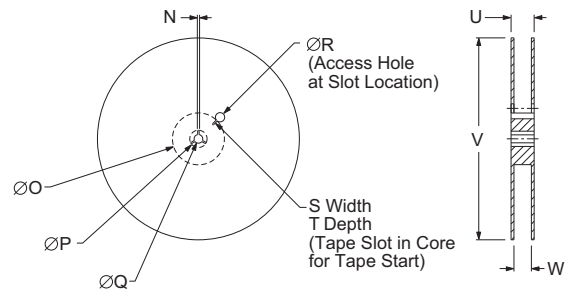
#### SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



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



TAPE	A	B	C	D	E	F
	16.0 ±0.3	7.5 ±0.1	1.50 MIN	4.0 ±0.1	2.0 ±0.1	8.0 ±0.1
G	H	I	J	K	L	M
A0	1.5 +0.1/-0.0	1.75 ±0.10	B0	0.60 MAX	0.10 MAX	K0



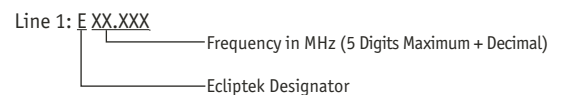
REEL	N	O	P	Q	R	
	1.5 MIN	50 MIN	20.2 MIN	13.0 ±0.2	40 MIN	
S	T	U	V	W	QTY/REEL	
	2.5 MIN	10 MIN	22.4 MAX	180 MAX	16.4 +2.0/-0.0	1,000

Note: Compliant to EIA-481

#### 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



MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH36	CERAMIC	3.3V	OS89	10/11