

EH36 Series

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 3.3V supply voltage
- LVHCMOS output
- Stability to ± 20 ppm
- Available on tape and reel



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range	1.000MHz to 155.520MHz	
Operating Temperature Range	0°C to 70°C or -40°C to 85°C	
Storage Temperature Range	-55°C to 125°C	
Supply Voltage (V_{DD})	3.3V _{DC} \pm 0.3V _{DC}	
Input Current	35mA Maximum (Unloaded)	
Frequency Tolerance / Stability	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	± 100 ppm, ± 50 ppm, ± 25 ppm, or ± 20 ppm Maximum
Output Voltage Logic High (V_{OH})	2.7V _{DC} Minimum $I_{OH} = -8$ mA	
Output Voltage Logic Low (V_{OL})	0.5V _{DC} Maximum $I_{OL} = +8$ mA	
Rise Time / Fall Time	≤ 70.000 MHz 20% to 80% of Waveform w/HCMOS Load > 70.000 MHz 20% to 80% of Waveform w/HCMOS Load	6 nSeconds Maximum 4 nSeconds Maximum
Load Drive Capability	≤ 70.000 MHz > 70.000 MHz	30pF HCMOS Load Maximum 15pF HCMOS Load Maximum
Duty Cycle (at $V_{DD} = 3.3V_{DC}$)	at 50% of Waveform	50 \pm 10(%) (Standard) or 50 \pm 5(%) (Optional)
Tri-State Input Voltage	V_{IH} : No Connection or $\geq 2.2V_{DC}$ V_{IL} : $\leq 0.8V_{DC}$	Enables Output Disables Output: High Impedance
Aging (at 25°C)	± 5 ppm / year Maximum	
Start Up Time	10mSeconds Maximum	
Period Jitter: Absolute	± 250 pSec Maximum, ± 100 pSec Typical	
Period Jitter: One Sigma	± 50 pSec Maximum, ± 40 pSec 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 (Standard), 45=±50ppm Maximum,
25=±25ppm Maximum, 20=±20ppm Maximum

OPERATING TEMP. RANGE

Blank=0°C to 70°C or
ET=-40°C to 85°C

DUTY CYCLE

Blank=50±10%(%) (Standard)
T=50±5(%)

AVAILABLE OPTIONS

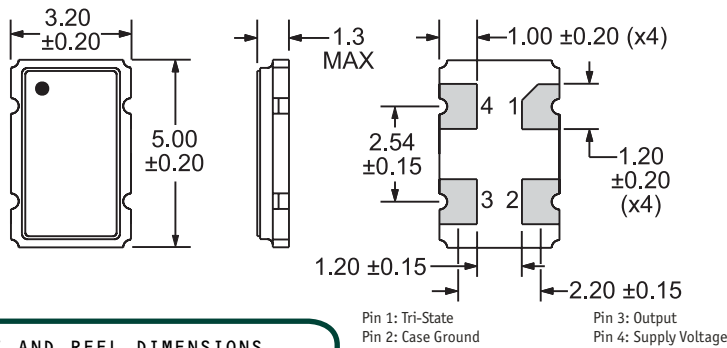
Blank=Bulk (Standard)
TR=Tape and Reel

FREQUENCY

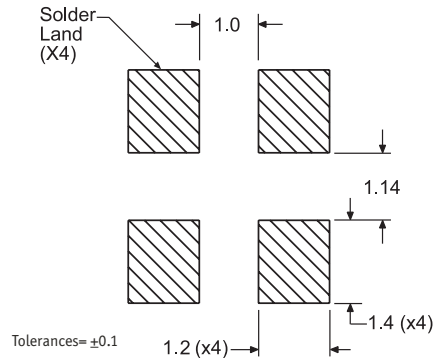
OUTPUT CONTROL FUNCTION

TS=Tri-State

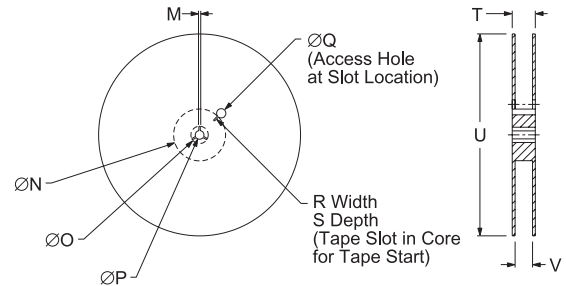
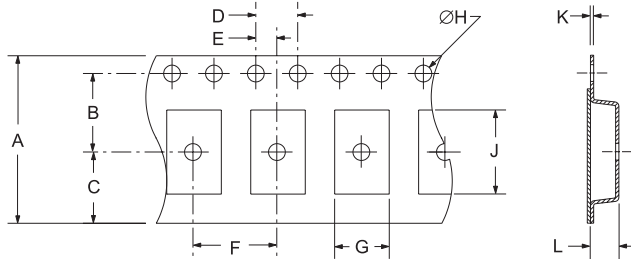
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



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	K0*

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	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-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