

EH35 Series

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



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

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH35

PACKAGE
CERAMIC

VOLTAGE
5.0V

CLASS
OS89

REV. DATE
01/04

PART NUMBERING GUIDE

EH35 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

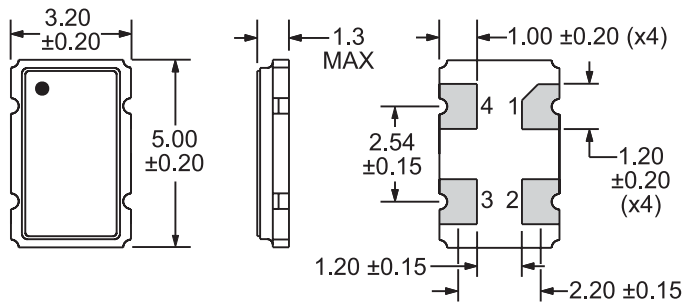
Blank=Bulk (Standard)
TR=Tape and Reel

FREQUENCY

OUTPUT CONTROL FUNCTION

TS=Tri-State

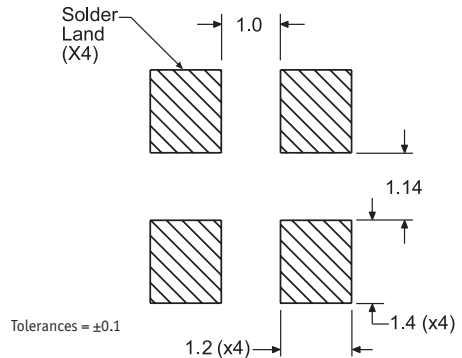
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



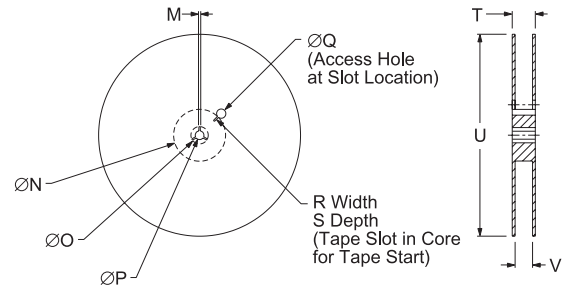
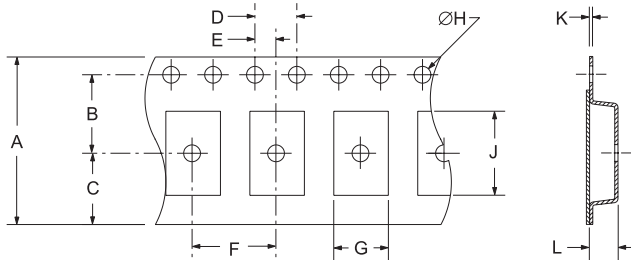
Pin 1: Tri-State
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



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
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	EH35	CERAMIC	5.0V	OS89	01/04