EH35 Series

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

ECLIPTEK CORPORATION

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

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH35	CERAMIC	5.0V	OS89	01/04

PART NUMBERING GUIDE

EH35 00 ET T TS - 24.000M TR

FREQUENCY TOLERANCE / STABILITY
00=±100ppm Maximum (Standard), 45=±50ppm Maximum, 25=±25ppm Maximum, 20=±20ppm Maximum

OPERATING TEMP. RANGE
Blank =0ºC to 70ºC, ET=-40°C to 85°C

DUTY CYCLE
Blank=50 ±10(%) (Standard), T=50 ±5(%)

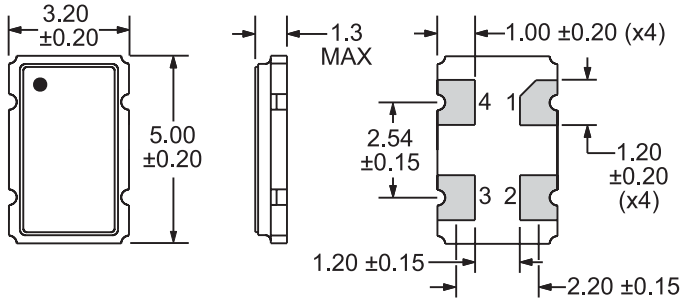
AVAILABLE OPTIONS
Blank=Bulk (Standard)
TR=Tape and Reel

FREQUENCY

OUTPUT CONTROL FUNCTION
TS=Tri-State

MECHANICAL DIMENSIONS

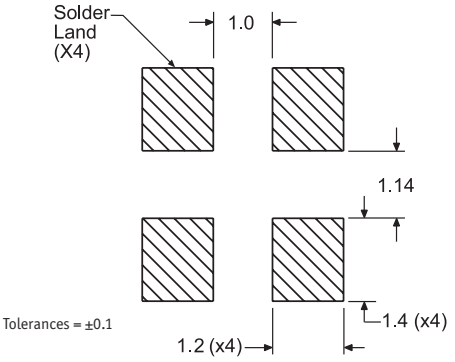
ALL DIMENSIONS IN MILLIMETERS



Pin 1: Tri-State
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

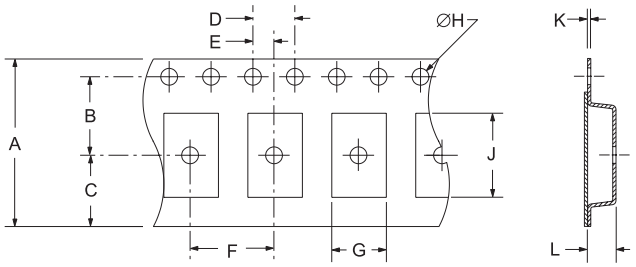
SUGGESTED SOLDER PAD LAYOUT

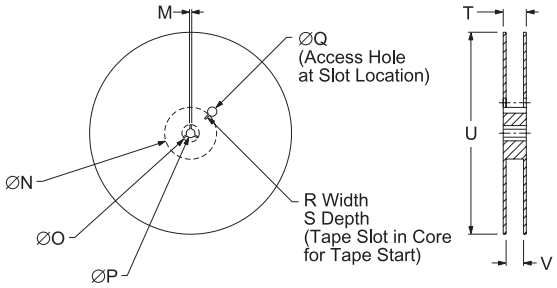
ALL DIMENSIONS IN MILLIMETERS



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)

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ECLIPTEK CORP.	OSCILLATOR	EH35	CERAMIC	5.0V	OS89	01/04