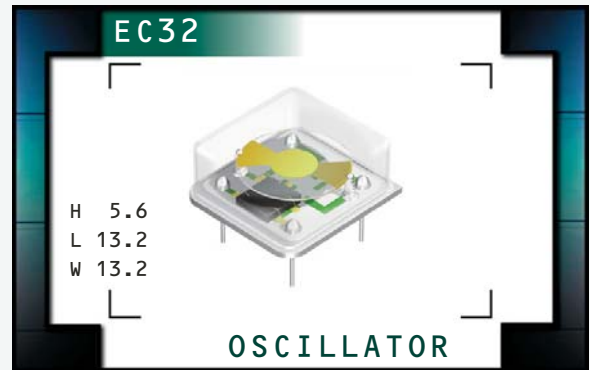


# EC32 Series



ECLIPTEK<sup>®</sup>  
CORPORATION

- Voltage Controlled Crystal Oscillators (VCX0)
- CMOS/TTL Output
- +3.3V Supply Voltage
- External Voltage Control Function
- Custom Lead Length & Gull Wing Options
- 8 pin DIP Metal Package
- RoHS Compliant (Pb-free)



## NOTES

### ELECTRICAL SPECIFICATIONS

<b>Frequency Range (MHz)</b>	1.000MHz to 44.736MHz	
<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> ±10%	
<b>Aging (at 25°C)</b>	±5ppm / year Maximum	
<b>Load Drive Capability</b>	2TTL Load or 15pF LVCMOS Load Maximum	
<b>Start Up Time</b>	10 mSeconds Maximum	
<b>Frequency Deviation / Control Voltage</b>	1.65V <sub>DC</sub> ±1.65V <sub>DC</sub> Positive Transfer Characteristic, or 1.65V <sub>DC</sub> ±1.65V <sub>DC</sub> Positive Transfer Characteristic	±50ppm Minimum ±100ppm Minimum
<b>Linearity</b>	±20% Maximum, ±15% Maximum, or 10% Maximum	
<b>Input Current</b>	1.000MHz to 20.000MHz 20.001MHz to 44.736MHz	10mA Maximum 20mA Maximum
<b>Frequency Tolerance / Stability</b>	Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum (0°C to 70°C Only)
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>	w/TTL Load w/LVCMOS Load	2.4V <sub>DC</sub> Minimum 2.7V <sub>DC</sub> Minimum
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>	w/TTL Load or w/LVCMOS Load	0.4V <sub>DC</sub> Maximum
<b>Duty Cycle</b>	at 50% of Waveform at 50% of Waveform	50 ±10(%) (Standard) 50 ±5(%) (Optional)
<b>Rise Time / Fall Time</b>	0.4V <sub>DC</sub> to 2.4V <sub>DC</sub> w/TTL Load; 20% to 80% of Waveform w/LVCMOS Load	5 nSeconds Maximum
<b>Period Jitter: Absolute</b>	±100pSeconds Maximum	
<b>Period Jitter: One Sigma</b>	±25pSeconds Maximum	

MANUFACTURER  
ECLIPTEK CORP.

CATEGORY  
OSCILLATOR

SERIES  
EC32

PACKAGE  
8 pin DIP

VOLTAGE  
3.3V

CLASS  
0547

REV. DATE  
08/06

## PART NUMBERING GUIDE

### EC32 00 HST A 15 ET - 24.000M - G TR

#### FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum  
 45=±50ppm Maximum, 25=±25ppm Maximum  
 20=±20ppm Maximum

#### PACKAGE

HS=Half Size 8 Pin DIP

#### DUTY CYCLE

Blank=50±10(%), T=50±5(%)

#### FREQUENCY DEVIATION

Blank=±50ppm Minimum  
 A=±100ppm Minimum

#### PACKAGING OPTIONS

Blank=Bulk  
 TR=Tape & Reel (only offered with  
 Half Size G and Half Size G2 Options)

#### AVAILABLE OPTIONS

Blank=None (Standard)  
 CLXX=Custom Lead Length  
 G=Half Size Gull Wing  
 G2=Alternate Half Size Gull Wing

#### FREQUENCY

#### OPERATING TEMP. RANGE

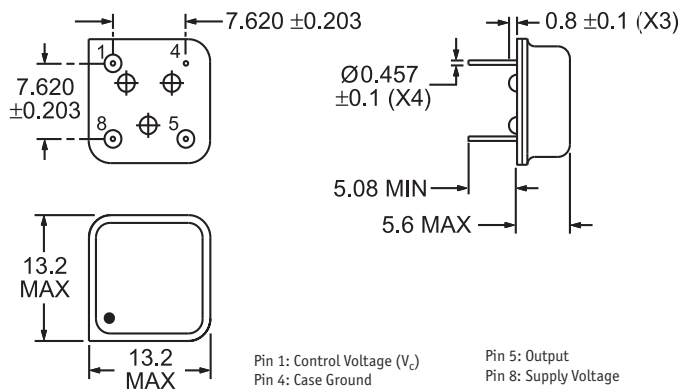
Blank=0°C to 70°C  
 ET=-40°C to 85°C

#### LINEARITY

Blank=20% Maximum  
 15=15% Maximum, 10=10% Maximum

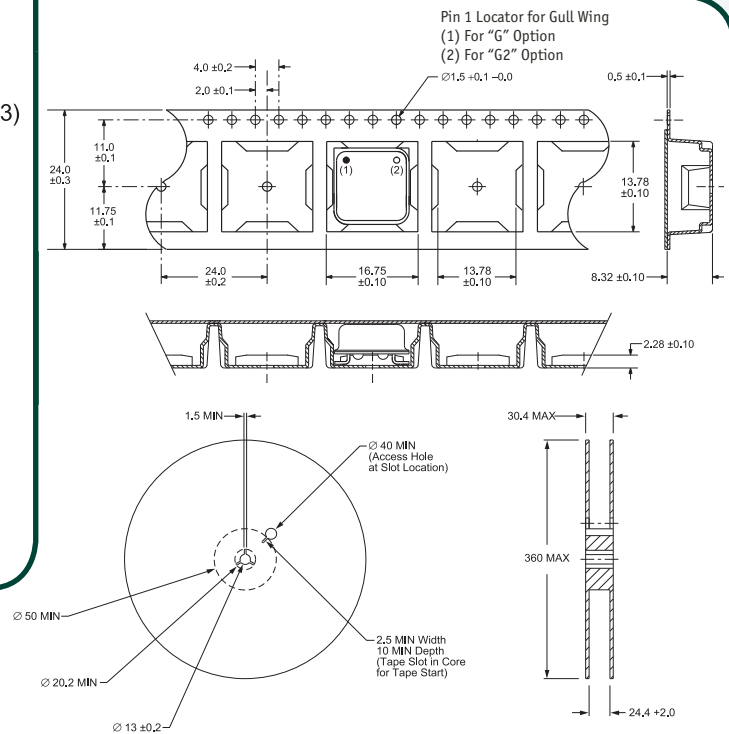
#### MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



#### TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



250 Pieces Per Reel  
 Compliant to EIA-481A

#### MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: EC32

Series Designator

Line 3: XX.XXX M

Frequency in MHz  
 (5 Digits Maximum + Decimal)

Line 4: XX Y ZZ

Week of Year  
 Last Digit of Year  
 Ecliptek Manufacturing Identifier

#### ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Seal Integrity	Bubble test in Perfluorocarbon at +125°C ±5°C for 60 seconds minimum.
Solderability	Sn63 Solder dip at +230°C ±5°C for 5 seconds/95% coverage.
Marking Permanency	10 Strokes with brush after 1 minute soak in solvent, 3 times.
Shock	Random drop on hard wooden plate 3 times from a height of 20cm.
Vibration	Frequency with an amplitude of 1.5mm sweeping between 10Hz to 55Hz within 1 minute (approximately) for 2 hours minimum on each axis (X, Y and Z) for a total of 6 hours.

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC32	8 pin DIP	3.3V	OS47	08/06