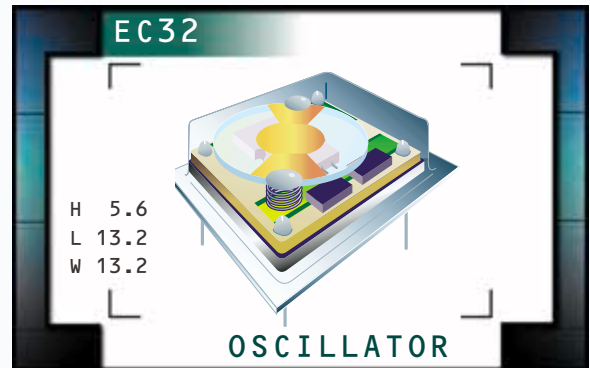


# EC32 Series

- Voltage Controlled Crystal Oscillator (VCX0)
- 3.3V Supply Voltage
- HCMOS/TTL output
- 8 pin DIP package
- Stability to 20ppm
- Wide frequency and pull range



## NOTES

### ELECTRICAL SPECIFICATIONS

<b>Frequency Range</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 HCMOS Load Maximum
<b>Start Up Time</b>		10 mSeconds Maximum
<b>Frequency Deviation / Pin 1 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/HCMOS 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/HCMOS 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/HCMOS 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 0S47	REV. DATE 01/01
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## PART NUMBERING GUIDE

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

#### FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)  
 45=±50ppm Maximum, 25=±25ppm Maximum  
 20=±20ppm Maximum

#### PACKAGE

HS=Half Size 8 Pin DIP

#### DUTY CYCLE

Blank=50±10(%) (Standard), T=50±5(%)

#### FREQUENCY DEVIATION

Blank=±50ppm Minimum (Standard)  
 A=±100ppm Minimum

#### PACKAGING OPTIONS

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

#### AVAILABLE OPTIONS

Blank=None (Standard)  
 CLXX=Custom Lead Length (See Page 123)  
 G=Half Size Gull Wing (See Page 122)  
 G2=Alternate Half Size Gull Wing (See Page 122)

#### FREQUENCY

#### OPERATING TEMP. RANGE

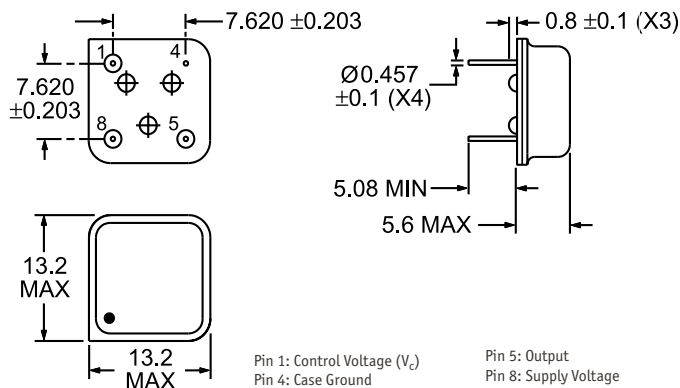
Blank=0°C to 70°C (Standard)  
 ET=-40°C to 85°C

#### LINEARITY

Blank=20% Maximum (Standard)  
 15=15% Maximum, 10=10% Maximum

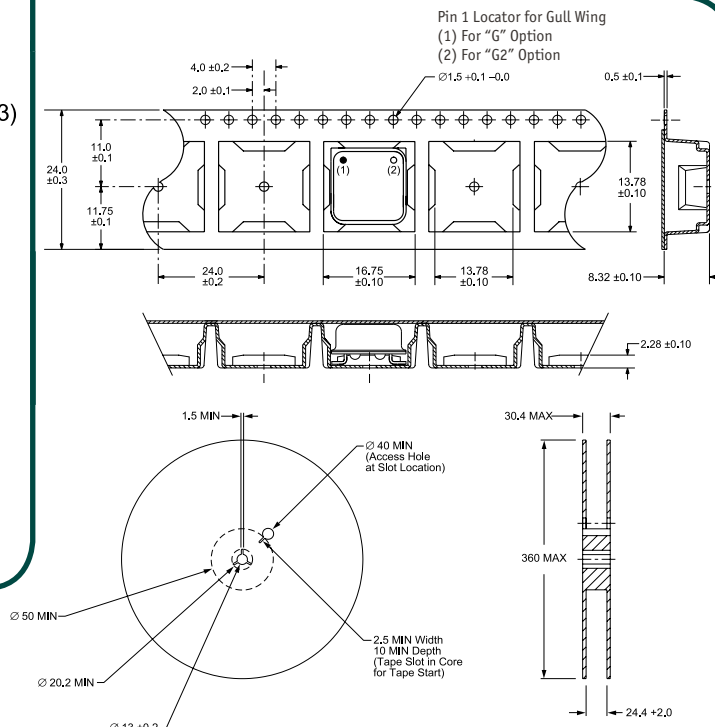
#### MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



#### TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



#### 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.

250 Pieces Per Reel  
 Compliant to EIA-481A

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC32	8 pin DIP	3.3V	OS47	01/01