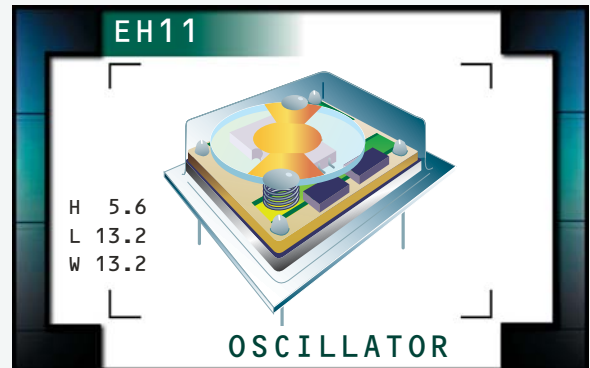


# EH11 Series

- HCMOS/TTL output
- 5.0V supply voltage
- 8 pin DIP package
- Stability to 20ppm
- Custom lead length, gull wing options available



## NOTES

### ELECTRICAL SPECIFICATIONS

<b>Frequency Range</b>	1.000MHz to 155.520MHz	
<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 (<math>V_{DD}</math>)</b>	5.0V <sub>DC</sub> ±10%	
<b>Input Current</b>	50mA Maximum (Unloaded)	
<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 (<math>I_{OH}</math>)</b>	w/TTL Load	2.4V <sub>DC</sub> Minimum $I_{OH} = -16mA$
	w/HCMOS Load	$V_{DD} - 0.4V_{DC}$ Minimum $I_{OH} = -16mA$
<b>Output Voltage Logic Low (<math>V_{OL}</math>)</b>	w/TTL Load	0.4V <sub>DC</sub> Maximum $I_{OL} = +16mA$
	w/HCMOS Load	0.5V <sub>DC</sub> Maximum $I_{OL} = +16mA$
<b>Duty Cycle (<math>V_{DD}=5.0V_{DC}</math>)</b>	at 1.4V <sub>DC</sub> 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)
<b>Rise Time / Fall Time</b>	0.8V <sub>DC</sub> to 2.0V <sub>DC</sub> w/TTL Load or 20% to 80% of Waveform w/HCMOS Load (≤70.000MHz)	6 nSeconds Maximum
	0.8V <sub>DC</sub> to 2.0V <sub>DC</sub> w/TTL Load or 20% to 80% of Waveform w/HCMOS Load (>70.000MHz)	4 nSeconds Maximum
<b>Tri-State Input Voltage</b>	$V_{IH}$ : No Connection	Enables Output
	$V_{IH}$ : ≥2.2V <sub>DC</sub>	Enables Output
	$V_{IL}$ : ≤0.8V <sub>DC</sub>	Disables Output: High Impedance
<b>Aging (at 25°C)</b>	±5ppm / year Maximum	
<b>Start Up Time</b>	10 mSeconds Maximum	
<b>Load Drive Capability</b>	≤70.000MHz	10TTL Load Maximum or 50pF HCMOS Load Max
	>70.000MHz	5TTL Load Maximum or 15pF HCMOS Load Max
<b>Period Jitter: Absolute</b>	±250pSec Maximum, ±100pSec Typical	
<b>Period Jitter: One Sigma</b>	±50pSec Maximum, ±30pSec Typical	

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EH11	PACKAGE 14 Pin DIP	VOLTAGE 5.0V	CLASS OS45	REV. DATE 03/02
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## PART NUMBERING GUIDE

### EH11 00 HS ET TS - 70.000M - G TR

#### FREQUENCY TOLERANCE / STABILITY

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

#### PACKAGE

HS=Half Size 8 Pin DIP

#### OPERATING TEMP. RANGE

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

#### DUTY CYCLE

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

#### PACKAGING OPTIONS

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

#### AVAILABLE OPTIONS

Blank=None (Standard)  
CLXXX=Custom Lead Length (See Page 133)  
G=Half Size Gull Wing (See Page 132)  
G2=Half Size Gull Wing (See Page 132)

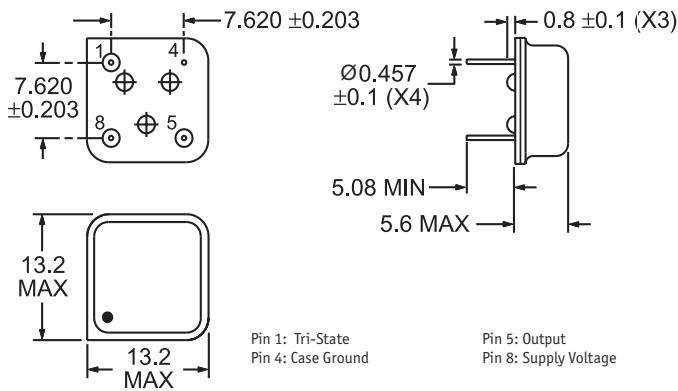
#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

TS=Tri-State Enable High

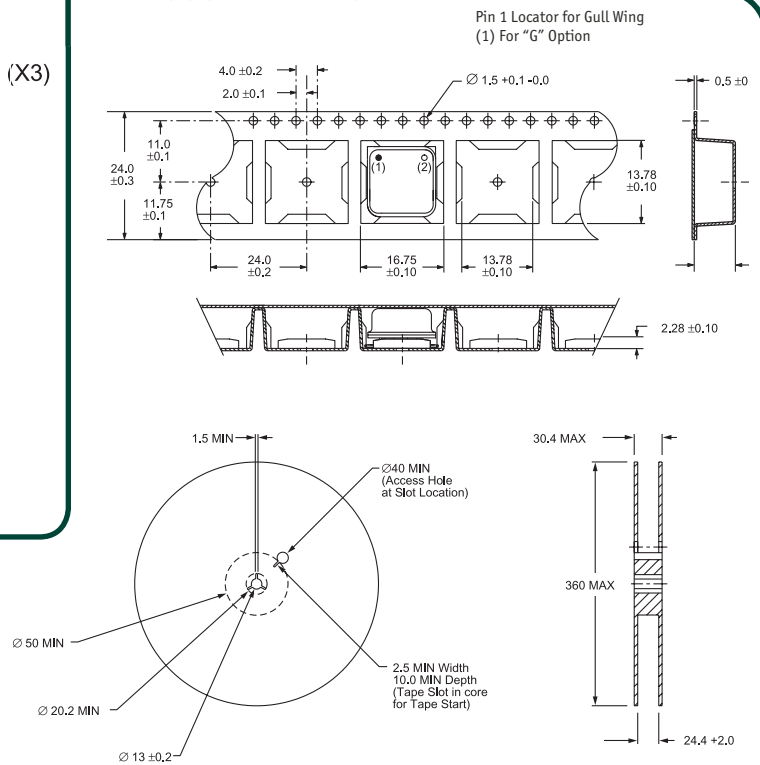
#### MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



#### TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



#### MARKING SPECIFICATIONS

Line 1: ECLIPTEK  
Line 2: EH11 TS  
Line 3: XX.XXX M  
Line 4: XX Y ZZ

Series Designator  
Frequency in MHz  
(5 Digits Maximum + Decimal)  
Week of Year  
Last Digit of Year  
Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

#### 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	EH11	8 pin DIP	5.0V	OS45	03/02