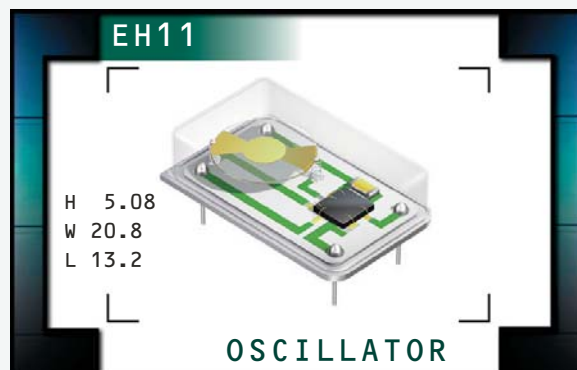


EH11 Series

- RoHS Compliant (Pb-free)
- HCMOS/TTL output
- 5.0V supply voltage
- 14 pin DIP package
- Stability to 20ppm
- Custom lead length, gull wing options available



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	
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
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH11

PACKAGE
14 Pin DIP

VOLTAGE
5.0V

CLASS
OS44

REV. DATE
12/05

PART NUMBERING GUIDE

EH11 00 ET TS - 70.000M - G

FREQUENCY TOLERANCE / STABILITY

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

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(%)

AVAILABLE OPTIONS

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

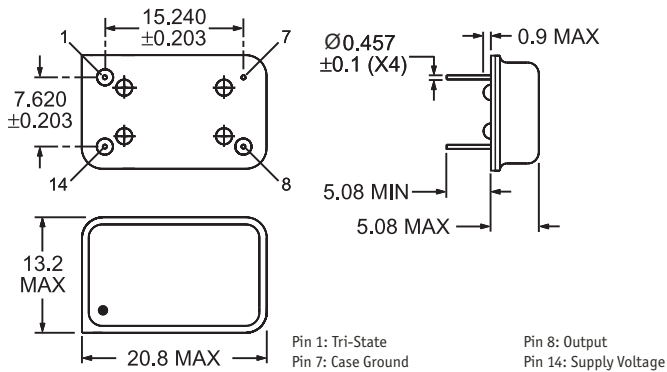
FREQUENCY

OUTPUT CONTROL FUNCTION

TS=Tri-State Enable High

NOTES

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: EH11 TS

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
Eclipse Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test

Gross Leak Test

Mechanical Shock

Vibration

Lead Integrity

Specification

MIL-STD-883, Method 1014, Condition A

MIL-STD-883, Method 1014, Condition C

MIL-STD-202, Method 213, Condition C

MIL-STD-883, Method 2007, Condition A

MIL-STD-883, Method 2004

Characteristic

Solderability

Temperature Cycling

Resistance to Soldering Heat

Resistance to Solvents

Specification

MIL-STD-883, Method 2002

MIL-STD-883, Method 1010

MIL-STD-883, Method 210

MIL-STD-883, Method 215

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH11

PACKAGE
14 Pin DIP

VOLTAGE
5.0V

CLASS
OS44

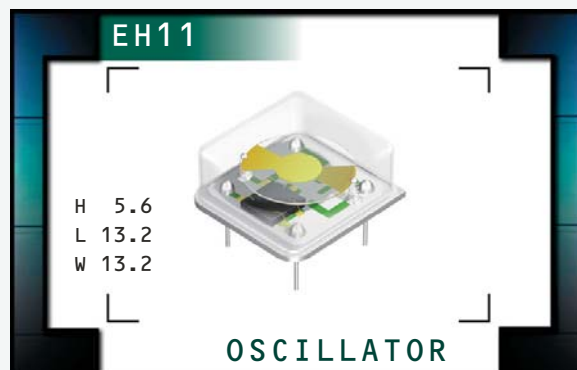
REV. DATE
12/05

EH11 Series

- RoHS Compliant (Pb-free)
- HCMOS/TTL Output
- 5.0V Supply Voltage
- 8 Pin DIP Package
- Stability to 20ppm
- Custom Lead Length and Gull Wing Options Available



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	
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
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH11

PACKAGE
8 Pin DIP

VOLTAGE
5.0V

CLASS
OS45

REV. DATE
08/05

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)

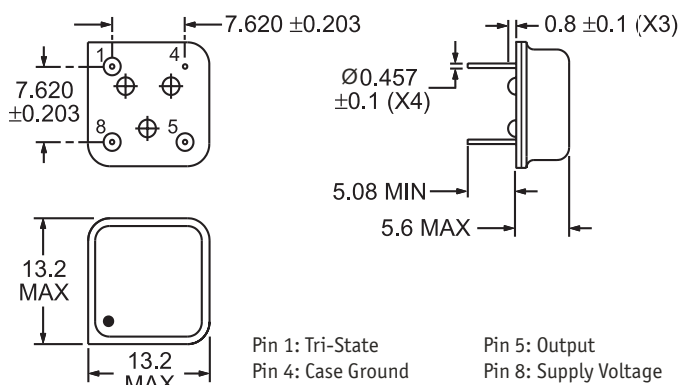
FREQUENCY

OUTPUT CONTROL FUNCTION

TS=Tri-State Enable High

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: EH11 TS

Series Designator

Line 3: XX.XXX M

Frequency in MHz
(5 Digits Maximum + Decimal)

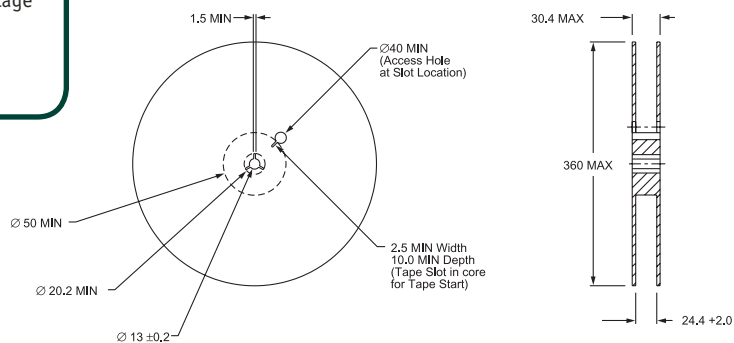
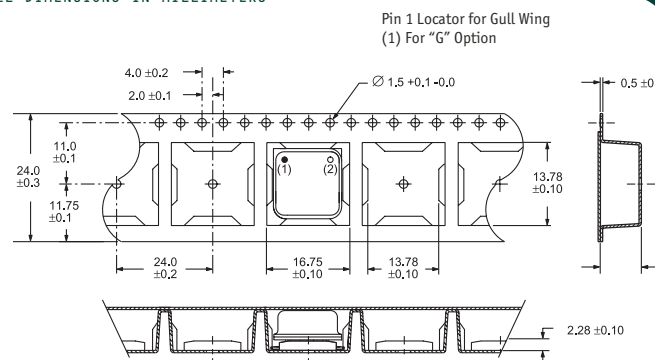
Line 4: XX Y ZZ

Week of Year
Last Digit of Year
Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



700 Pieces Per Reel
Compliant to EIA-481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test
Gross Leak Test
Mechanical Shock
Vibration
Lead Integrity
Solderability
Temperature Cycling
Resistance to Soldering Heat
Resistance to Solvents

Specification

MIL-STD-883, Method 1014, Condition A
MIL-STD-883, Method 1014, Condition C
MIL-STD-202, Method 213, Condition C
MIL-STD-883, Method 2007, Condition A
MIL-STD-883, Method 2004
MIL-STD-883, Method 2002
MIL-STD-883, Method 1010
MIL-STD-883, Method 210
MIL-STD-883, Method 215

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH11	8 pin DIP	5.0V	OS45	08/05