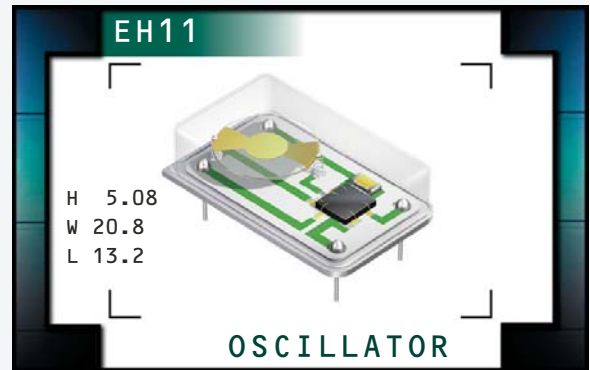


EH11 Series



ECLIPTEK[®]
CORPORATION

- 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



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, ±100ppm, ±50ppm, ±25ppm, or Frequency Stability over the Operating Temperature Range, ±20ppm Maximum 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)

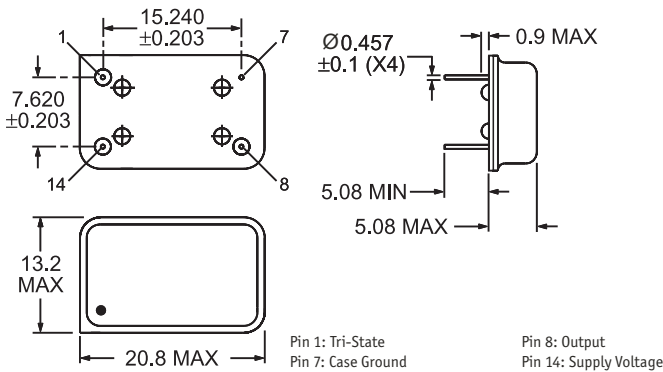
FREQUENCY

OUTPUT CONTROL FUNCTION

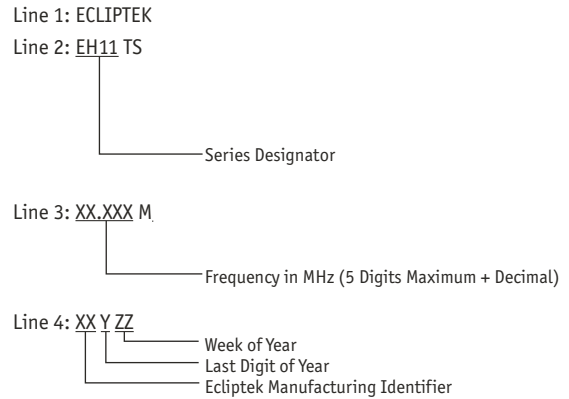
TS=Tri-State Enable High

NOTES

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS



Note: Pin 1 shall be designated with a dot

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
Lead Integrity	MIL-STD-883, Method 2004

Characteristic	Specification
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

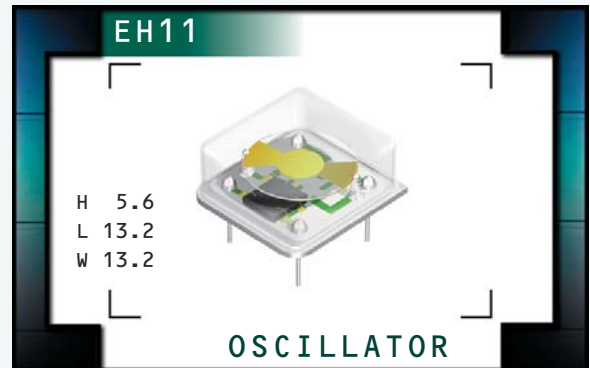
MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH11	14 Pin DIP	5.0V	OS44	12/05

EH11 Series



ECLIPTEK[®]
CORPORATION

- 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



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

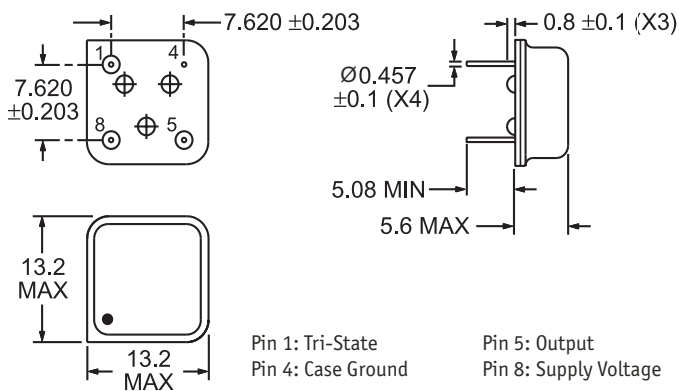
Blank=None (Standard)
CLXX=Custom Lead Length (See Page 133)
G=Half Size Gull Wing (See Page 132)
G2=Half Size Gull Wing (See Page 132)

FREQUENCY

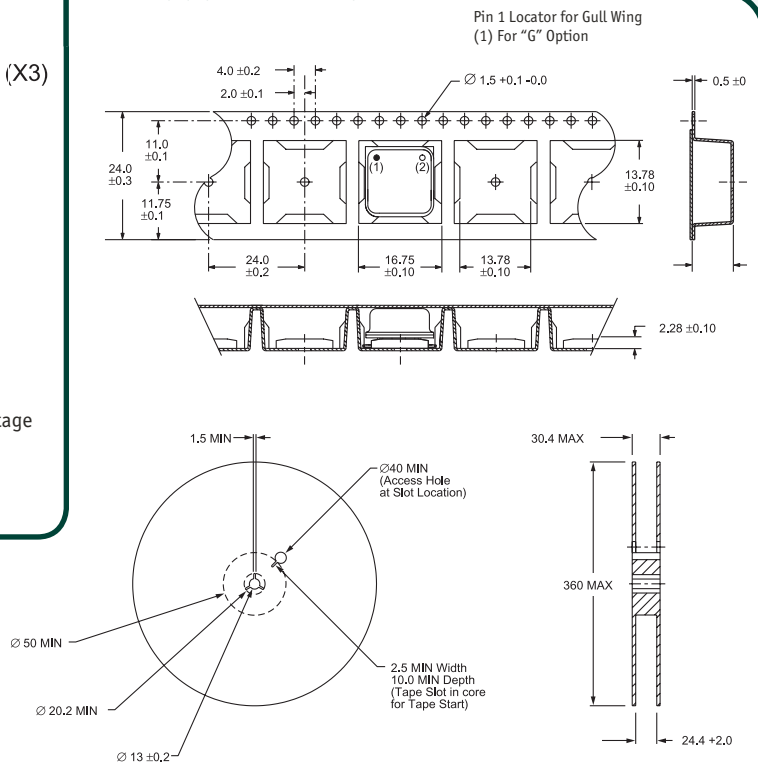
OUTPUT CONTROL FUNCTION

TS=Tri-State Enable High

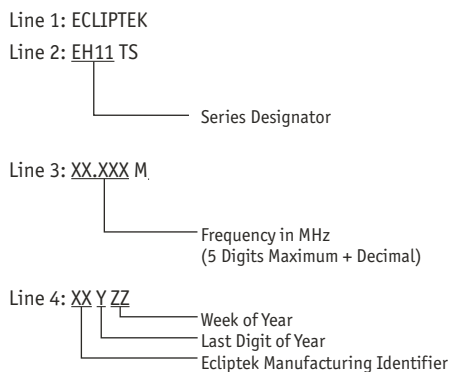
MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS



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
Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	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