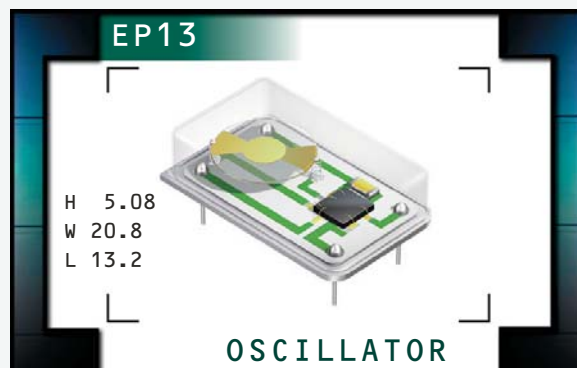


EP13 Series

- RoHS Compliant (Pb-free)
- EPO™ Programmable Oscillators
- 3.3V supply voltage
- 14 pin DIP package
- HCMOS output
- Stability to 50ppm
- Custom lead length, gull wing options available



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ECLIPTEK
CORPORATION



ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 106.250MHz
Operating Temperature Range		-20°C to 70°C or -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage (V_{DD})		3.3V _{DC} ±0.3V _{DC}
Input Current		28mA Maximum (Unloaded)
Disable Current (TS Option)		16mA Maximum (Pin 1=Ground)
Standby Current (PD Option)		20µA Maximum (Pin 1=Ground)
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 or ±50ppm Maximum
Output Voltage Logic High (V_{OH})	w/HCMOS Load	V_{DD} -0.4V _{DC} Minimum I_{OH} =-8mA
Output Voltage Logic Low (V_{OL})	w/HCMOS Load	0.4V _{DC} Maximum I_{OL} =+8mA
Rise Time / Fall Time	20% to 80% of waveform w/HCMOS Load	4 nSeconds Maximum
Duty Cycle	at 50% of waveform w/HCMOS Load	50 ±10% (Standard)
	at 50% of waveform w/HCMOS Load (≤50.000MHz Only)	50 ±5% (Optional)
Load Drive Capability	≤50.000MHz	30pF HCMOS Load Maximum
	>50.000MHz	15pF HCMOS Load Maximum
Output Control Function	TS	Tri-State
	PD	Power Down
Output Control Function Input Voltage V_{IH} : No Connection or ≥70% of V_{DD} V_{IL} : (TS Option) ≤20% of V_{DD} V_{IL} : (PD Option) ≤20% of V_{DD}		Enables Output
		Disable Output: High Impedance
		Disable Output: Logic Low
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
RMS Jitter	<12.000MHz	50pSec Maximum, 15pSec Typical
	≥12.000MHz	13pSec Maximum, 10pSec Typical
Peak to Peak Jitter	<12.000MHz	500pSec Maximum, 100pSec Typical
	≥12.000MHz	100pSec Maximum, 60pSec Typical

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EP13

PACKAGE
14 pin DIP

VOLTAGE
3.3V

CLASS
OS44

REV. DATE
12/05

PART NUMBERING GUIDE

EP13 00 ET TS - 24.000M - CL125

FREQUENCY TOLERANCE / STABILITY

00= ± 100 ppm Maximum (Standard)
 45= ± 50 ppm Maximum

OPERATING TEMP. RANGE

Blank= -20°C to 70°C or ET= -40°C to 85°C

DUTY CYCLE

Blank= $50 \pm 10(\%)$ (Standard), T= $50 \pm 5(\%)$

AVAILABLE OPTIONS

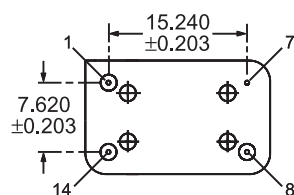
Blank=None (Standard)
 CLXX=Custom Lead Length (See Page 133)
 G=Full Size Gull Wing (See Page 132)

FREQUENCY

OUTPUT CONTROL FUNCTION

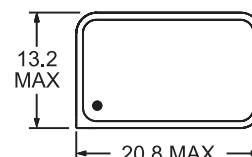
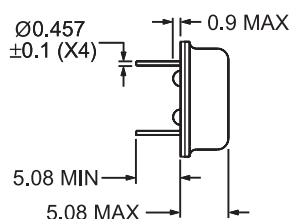
TS=Tri-State, PD=Power Down

NOTES

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS

Pin 1: Tri-State or Power Down
 Pin 7: Ground/Case Ground

Pin 8: Output
 Pin 14: Supply Voltage



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

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: EP13 TS

Output Control Function
 PD = Power Down
 TS = Tri-State Enable High
 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

MANUFACTURER
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