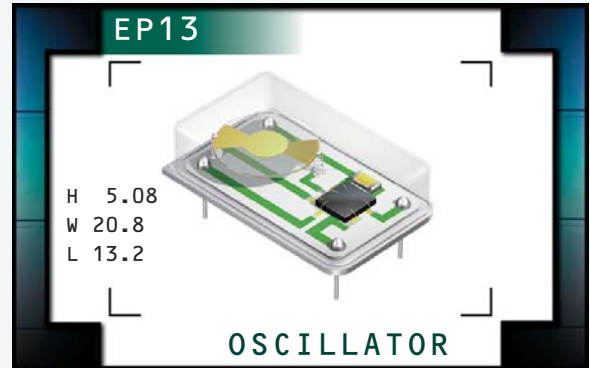


EP13 Series



ECLIPTEK[®]
CORPORATION

- 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



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 at 50% of waveform w/HCMOS Load (≤50.000MHz Only)	50 ±10(%) (Standard) 50 ±5(%) (Optional)
Load Drive Capability	≤50.000MHz >50.000MHz	30pF HCMOS Load Maximum 15pF HCMOS Load Maximum
Output Control Function	TS PD	Tri-State 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 ≥12.000MHz	50pSec Maximum, 15pSec Typical 13pSec Maximum, 10pSec Typical
Peak to Peak Jitter	<12.000MHz ≥12.000MHz	500pSec Maximum, 100pSec Typical 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=±100ppm Maximum (Standard)
45=±50ppm Maximum

OPERATING TEMP. RANGE

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

DUTY CYCLE

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

AVAILABLE OPTIONS

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

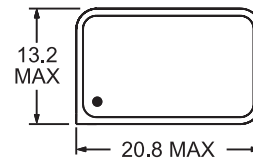
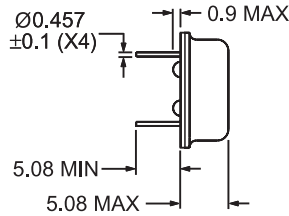
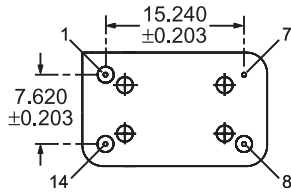
FREQUENCY

OUTPUT CONTROL FUNCTION

TS=Tri-State, PD=Power Down

NOTES

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



Pin 1: Tri-State or Power Down Pin 8: Output
Pin 7: Ground/Case Ground 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 ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EP13	PACKAGE 14 pin DIP	VOLTAGE 3.3V	CLASS OS44	REV. DATE 12/05
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