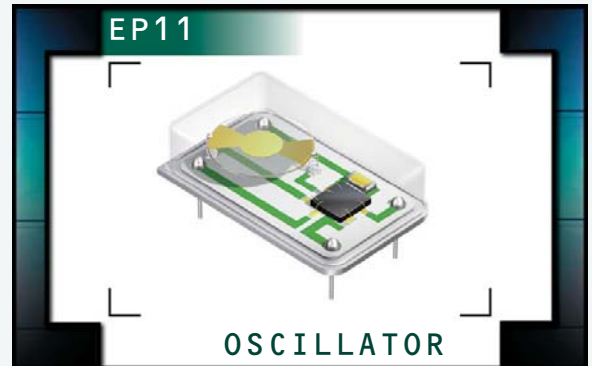


# EP11 Series



- Programmable Crystal Oscillators
- HCMOS/TTL Output
- +5.0V Supply Voltage
- Tri-State and Power Down Options
- Custom Lead Length & Gull Wing Options
- 14 pin DIP Metal Package
- RoHS Compliant (Pb-free)



## ELECTRICAL SPECIFICATIONS

<b>Frequency Range</b>		1.000MHz to 125.000MHz
<b>Operating Temperature Range</b>		-20°C to 70°C or -40°C to 85°C
<b>Storage Temperature Range</b>		-55°C to 125°C
<b>Supply Voltage (V<sub>DD</sub>)</b>		5.0V <sub>DC</sub> ±10%
<b>Input Current</b>		45mA Maximum (Unloaded)
<b>Disable Current (TS Option)</b>		30mA Maximum (Pin 1=Ground)
<b>Standby Current (PD Option)</b>		50µA Maximum (Pin 1=Ground)
<b>Frequency Tolerance / Stability</b>	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
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>	w/TTL Load w/CMOS Load	2.4V <sub>DC</sub> Minimum I <sub>OH</sub> =-16mA V <sub>DD</sub> -0.4V <sub>DC</sub> Minimum I <sub>OH</sub> =-16mA
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>	w/TTL Load or w/CMOS Load	0.4V <sub>DC</sub> Maximum I <sub>OL</sub> =+16mA
<b>Rise Time / Fall Time</b>	0.8V <sub>DC</sub> to 2.0 V <sub>DC</sub> w/TTL Load or 20% to 80% of Waveform w/CMOS Load	4 nSeconds Maximum
<b>Duty Cycle</b>	at 1.4V <sub>DC</sub> w/TTL Load; at 50% of waveform w/CMOS Load at 1.4V <sub>DC</sub> w/TTL Load (≤27.000MHz only), or 50% of waveform w/CMOS Load (≤50.000MHz only)	50 ±10(%) (Standard) 50 ±5(%) (Optional)
<b>Load Drive Capability / Output Type-CMOS</b>	≤50.000MHz >50.000MHz	50pF CMOS Load Maximum 15pF CMOS Load Maximum
<b>Load Drive Capability / Output Type-TTL</b>	≤40.000MHz >40.000MHz	10TTL Load Maximum 5TTL Load Maximum
<b>Output Control Function</b>	TS PD	Tri-State Power Down
<b>Output Control Function Input Voltage</b>	V <sub>IH</sub> : No Connection or ≥2.0V <sub>DC</sub> V <sub>IL</sub> : (TS Option) ≤0.8V <sub>DC</sub> V <sub>IL</sub> : (PD Option) ≤0.8V <sub>DC</sub>	Enables Output Disables Output: High Impedence Disables Output: Logic Low
<b>Aging (at 25°C)</b>		±5ppm / year Maximum
<b>Start Up Time</b>		10 mSeconds Maximum
<b>RMS Jitter</b>	<12.000MHz ≥12.000MHz	50pSec Maximum, 13pSec Typical 13pSec Maximum, 8pSec Typical
<b>Peak to Peak Jitter</b>	<12.000MHz ≥12.000MHz	500pSec Maximum, 90pSec Typical 100pSec Maximum, 50pSec Typical

MANUFACTURER  
ECLIPTEK CORP.

CATEGORY  
OSCILLATOR

SERIES  
EP11

PACKAGE  
14 pin DIP

VOLTAGE  
5.0V

CLASS  
0S44

REV. DATE  
12/05

## PART NUMBERING GUIDE

### EP11 00 ET TTS L - 24.000M - CL125

**FREQUENCY TOLERANCE / STABILITY**

00=±100ppm Maximum  
45=±50ppm Maximum

**OPERATING TEMP. RANGE**

Blank=-20°C to 70°C, ET=-40°C to 85°C

**DUTY CYCLE**

Blank=50 ±10(%) , T=50 ±5(%)

**OUTPUT CONTROL FUNCTION**

TS=Tri-State Enable High, PD=Power Down

**AVAILABLE OPTIONS**

Blank=None  
CLXXX=Custom Lead Length  
G=Full Size Gull Wing

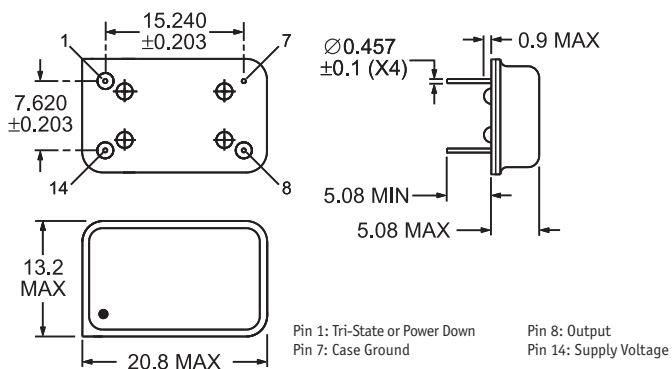
**FREQUENCY**

**OUTPUT TYPE**

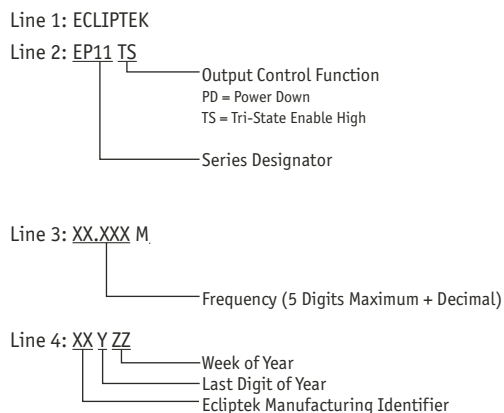
L=TTL, C=CMOS

### 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	EP11	14 pin DIP	5.0V	OS44	12/05