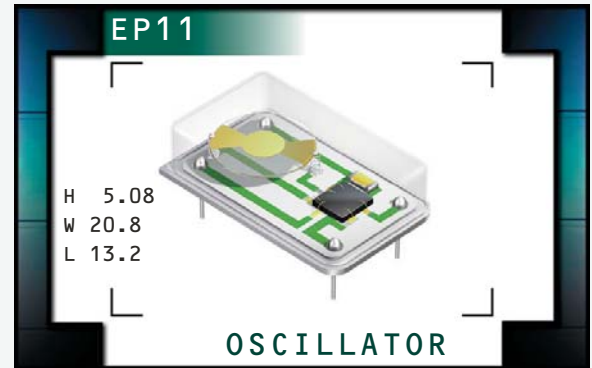


EP11 Series

- EPO™ Programmable Oscillators
- 5.0V supply voltage
- HCMOS/TTL output
- 14 pin DIP package
- Stability to 50ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 125.000MHz
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})		5.0V _{DC} ±10%
Input Current		45mA Maximum (Unloaded)
Disable Current (TS Option)		30mA Maximum (Pin 1=Ground)
Standby Current (PD Option)		50µA 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/TTL Load w/HCMOS Load	2.4V _{DC} Minimum I _{OH} =-16mA V _{DD} -0.4V _{DC} Minimum I _{OH} =-16mA
Output Voltage Logic Low (V_{OL})	w/TTL Load or w/HCMOS Load	0.4V _{DC} Maximum I _{OL} =+16mA
Rise Time / Fall Time	0.8V _{DC} to 2.0 V _{DC} w/TTL Load or 20% to 80% of Waveform w/HCMOS Load	4 nSeconds Maximum
Duty Cycle	at 1.4V _{DC} w/TTL Load; at 50% of waveform w/HCMOS Load at 1.4V _{DC} w/TTL Load (≤27.000MHz only), or 50% of waveform w/HCMOS Load (≤50.000MHz only)	50 ±10(%) (Standard) 50 ±5(%) (Optional)
Load Drive Capability / Output Type-HCMOS	≤50.000MHz >50.000MHz	50pF HCMOS Load Maximum 15pF HCMOS Load Maximum
Load Drive Capability / Output Type-TTL	≤40.000MHz >40.000MHz	10TTL Load Maximum 5TTL Load Maximum
Output Control Function	TS PD	Tri-State Power Down
Output Control Function Input Voltage	V _{IH} : No Connection or ≥2.0V _{DC} V _{IL} : (TS Option) ≤0.8V _{DC} V _{IL} : (PD Option) ≤0.8V _{DC}	Enables Output Disables Output: High Impedence Disables Output: Logic Low
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
Period Jitter: Absolute	≤33.000MHz >33.000MHz	±250pSec Maximum, ±100pSec Typical ±100pSec Maximum, ±50pSec Typical
Period Jitter: One Sigma	≤33.000MHz >33.000MHz	±50pSeconds Maximum ±30pSeconds Maximum

PART NUMBERING GUIDE

EP11 00 ET TTS L - 24.000M - CL125

FREQUENCY TOLERANCE / STABILITY

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

OPERATING TEMP. RANGE

Blank=-20°C to 70°C (Standard), ET=-40°C to 85°C

DUTY CYCLE

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

OUTPUT CONTROL FUNCTION

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

AVAILABLE OPTIONS

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

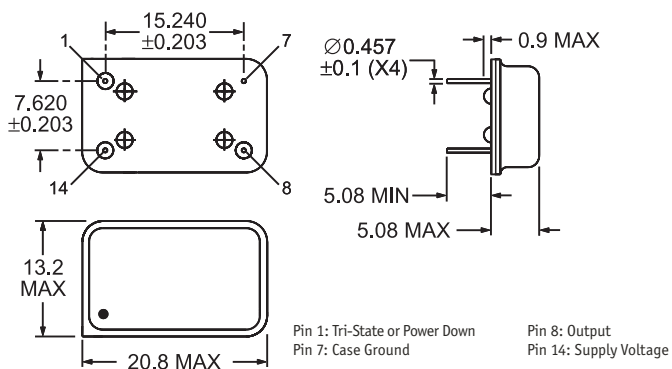
FREQUENCY

OUTPUT TYPE

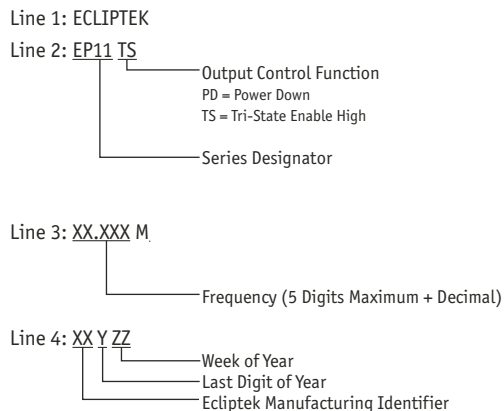
L=TTL, C=HCMOS

NOTES

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS



Note: Pin 1 shall be designated with a dot

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

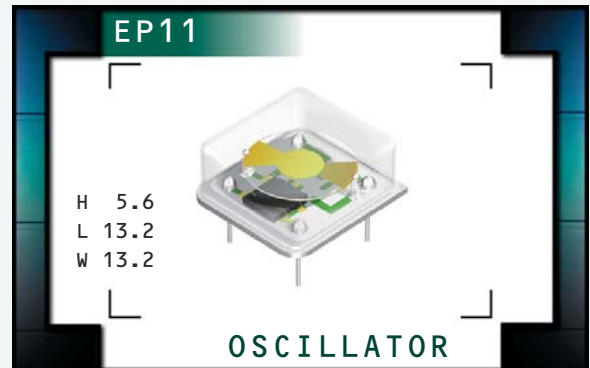
Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Lead Integrity	MIL-STD-883, Method 2004

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	08/03

EP11 Series

- EPO TM Programmable Oscillators
- 5.0V supply voltage
- HCMOS/TTL output
- 8 pin DIP package
- Stability to 50ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 125.000MHz
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})		5.0V _{DC} ±10%
Input Current		45mA Maximum (Unloaded)
Disable Current (TS Option)		30mA Maximum (Pin 1=Ground)
Standby Current (PD Option)		50µA 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/TTL Load w/HCMOS Load	2.4V _{DC} Minimum I _{OH} =-16mA V _{DD} -0.4V _{DC} Minimum I _{OH} =-16mA
Output Voltage Logic Low (V_{OL})	w/TTL Load or w/HCMOS Load	0.4V _{DC} Maximum I _{OL} =+16mA
Rise Time / Fall Time	0.8V _{DC} to 2.0 V _{DC} w/TTL Load or 20% to 80% of Waveform w/HCMOS Load	4 nSeconds Maximum
Duty Cycle	at 1.4V _{DC} w/TTL Load; at 50% of waveform w/HCMOS Load at 1.4V _{DC} w/TTL Load (≤27.000MHz only), or 50% of waveform w/HCMOS Load (≤50.000MHz only)	50 ±10(%) (Standard) 50 ±5(%) (Optional)
Load Drive Capability / Output Type-HCMOS	≤50.000MHz >50.000MHz	50pF HCMOS Load Maximum 15pF HCMOS Load Maximum
Load Drive Capability / Output Type-TTL	≤40.000MHz >40.000MHz	10TTL Load Maximum 5TTL Load Maximum
Output Control Function	TS PD	Tri-State Power Down
Output Control Function Input Voltage	V _{IH} : No Connection or ≥2.0V _{DC} V _{IL} : (TS Option) ≤0.8V _{DC} V _{IL} : (PD Option) ≤0.8V _{DC}	Enables Output Disables Output: High Impedence Disables Output: Logic Low
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
Period Jitter: Absolute	≤33.000MHz >33.000MHz	±250pSec Maximum, ±100pSec Typical ±100pSec Maximum, ±50pSec Typical
Period Jitter: One Sigma	≤33.000MHz >33.000MHz	±50pSeconds Maximum ±30pSeconds Maximum

PART NUMBERING GUIDE

EP11 00 HS ET TTS L - 24.000M - CL125 TR

FREQUENCY TOLERANCE / STABILITY

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

PACKAGE

HS=Half Size 8 Pin DIP

OPERATING TEMP. RANGE

Blank=-20°C to 70°C (Standard), ET=-40°C to 85°C

DUTY CYCLE

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

OUTPUT CONTROL FUNCTION

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

PACKAGING OPTIONS

Blank=Bulk (Standard)
TR=Tape & Reel (only offered with Half Size G and Half Size G2 Options)

AVAILABLE OPTIONS

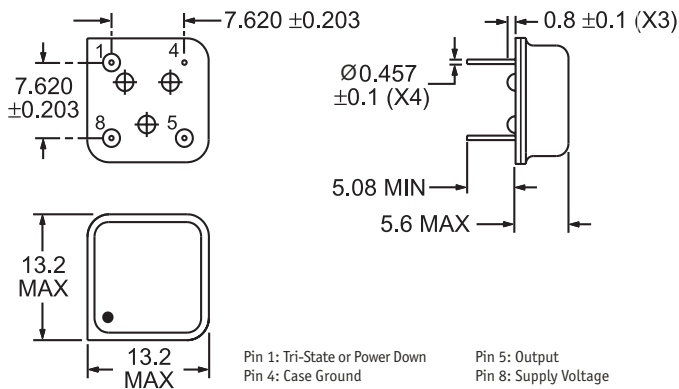
Blank=None (Standard)
CLXXX=Custom Lead Length (See Page 133)
G=Half Size Gull Wing (See Page 132)
G2=Half Size Gull Wing (See Page 132)

FREQUENCY

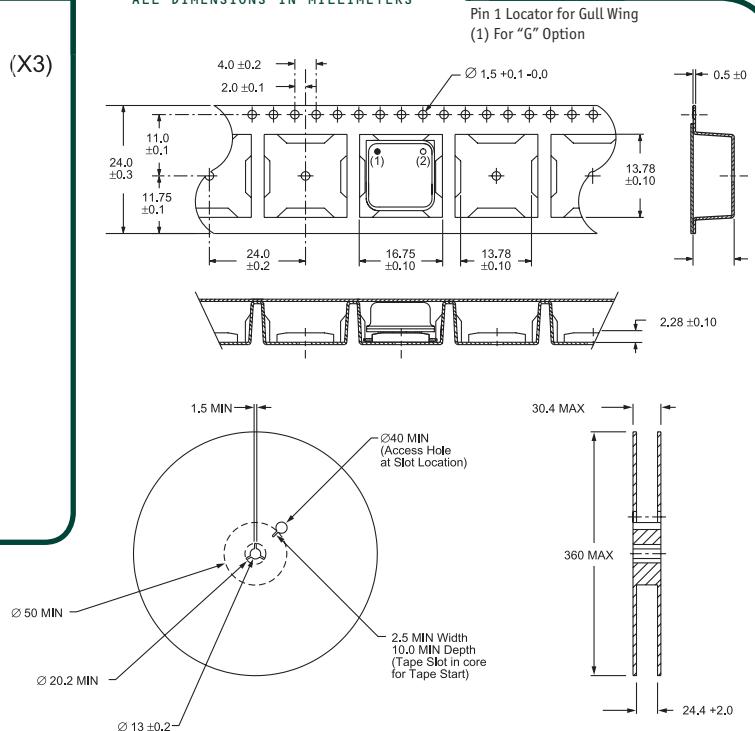
OUTPUT TYPE

L=TTL, C=CMOS

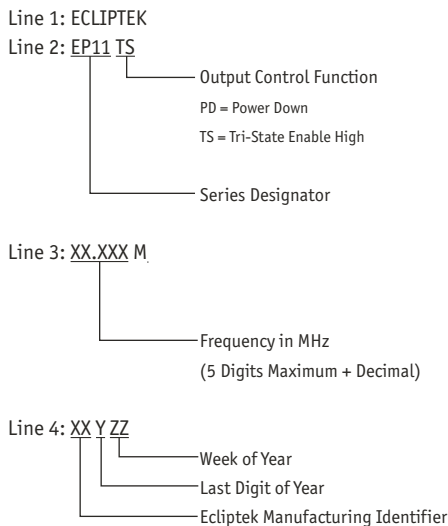
MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



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

700 Pieces Per Reel
Compliant to EIA-481A

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP11	8 pin DIP	5.0V	OS45	08/03