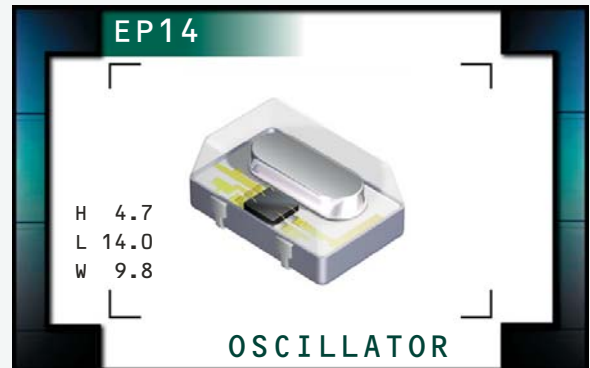


EP14 Series

- EPO™ Programmable Oscillators
- 5.0V supply voltage
- HCMOS/TTL output
- Plastic surface mount package
- Stability to 50ppm



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	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 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 20% to 80% of waveform w/HCMOS Load	4 nSeconds Max
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 at 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 Disable Output: High Impedence Disable 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	±50pSec Maximum ±30pSec Maximum

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EP14	PACKAGE PLASTIC	VOLTAGE 5.0V	CLASS OS49	REV. DATE 02/04
--------------------------------	------------------------	----------------	--------------------	-----------------	---------------	--------------------

PART NUMBERING GUIDE

EP14 00 SJ ET TTS L - 24.000M TR

FREQUENCY TOLERANCE / STABILITY

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

OPERATING TEMP. RANGE

Blank=-20°C to 70°C
ET=-40°C to 85°C

DUTY CYCLE

Blank=50±10%(%) (Standard)
T=50±5(%)

AVAILABLE OPTIONS

Blank=Bulk (Standard)
TR=Tape and Reel

FREQUENCY

OUTPUT TYPE

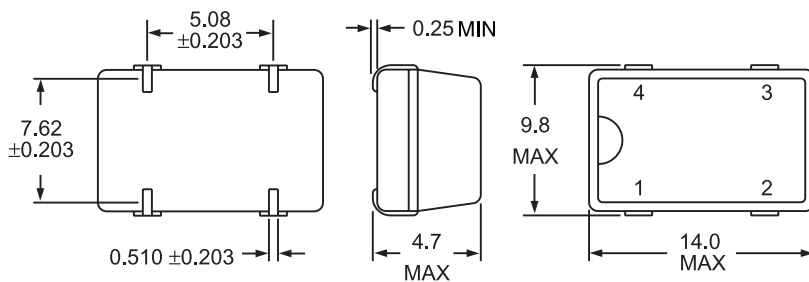
L=TTL, C=HCMOS

OUTPUT CONTROL FUNCTION

TS=Tri-State, PD=Power Down

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

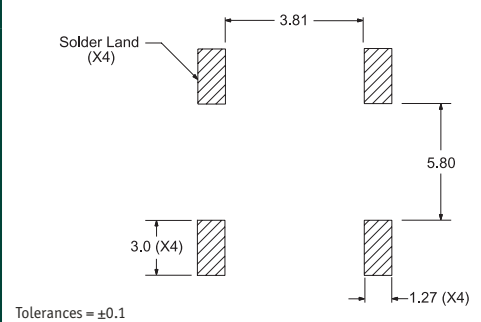


Pin 1: Tri-State or Power Down
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

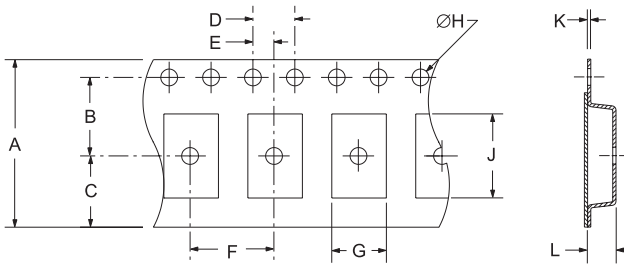
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

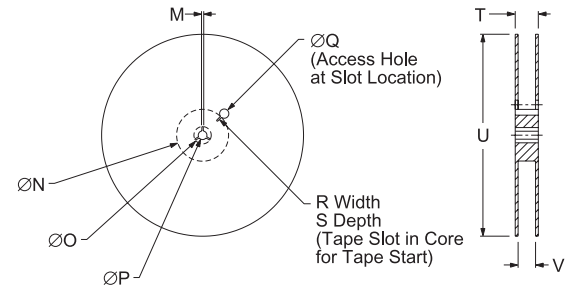


TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	24±.3	11.5±.1	10.75±.1	4±.2	2±.1
F	G	H	J	K	L
12±.2	B0*	1.5+1-0	A0*	.3±.1	K0*



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13±.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	30.4 MAX	360 MAX	24.4+2-0	1000

*Compliant to EIA 481A

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

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M
Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: P XX Y ZZ
Week of Year
Last Digit of Year
Ecliptek Manufacturing Identifier
Configuration Designator

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP14	PLASTIC	5.0V	OS49	02/04