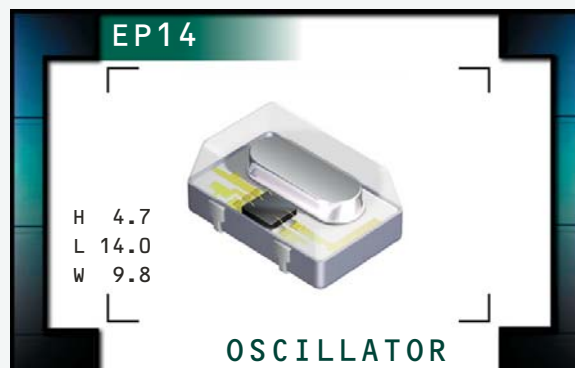


EP14 Series

- 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	50pF HCMOS Load Maximum
	>50.000MHz	15pF HCMOS Load Maximum
Load Drive Capability / Output Type-TTL	≤40.000MHz	10TTL Load Maximum
	>40.000MHz	5TTL Load Maximum
Output Control Function	TS	Tri-State
	PD	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	±250pSec Maximum, ±100pSec Typical
	>33.000MHz	±100pSec Maximum, ±50pSec Typical
Period Jitter: One Sigma	≤33.000MHz	±50pSec Maximum
	>33.000MHz	±30pSec Maximum

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

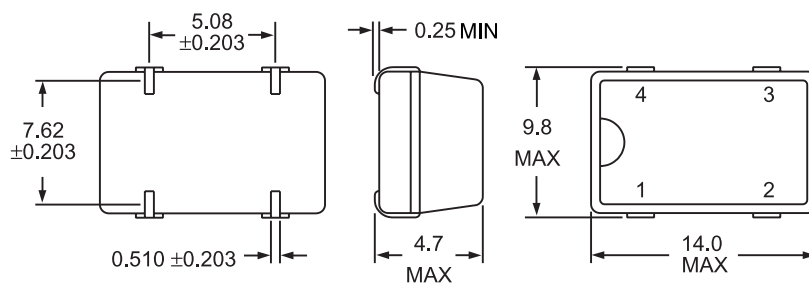
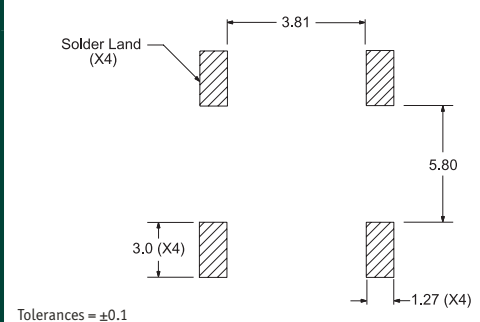
FREQUENCY

OUTPUT TYPE

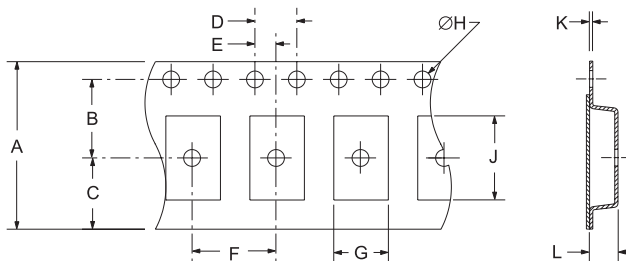
L=TTL, C=HCMOS

OUTPUT CONTROL FUNCTION

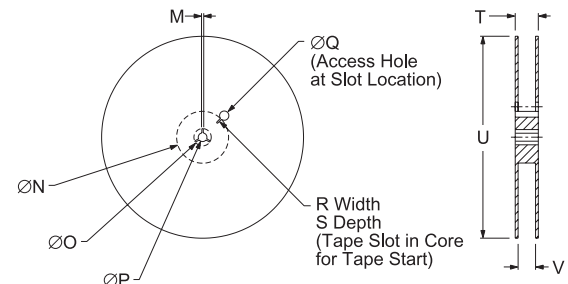
TS=Tri-State, PD=Power Down

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERSPin 1: Tri-State or Power Down
Pin 2: Case GroundPin 3: Output
Pin 4: Supply VoltageSUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS

Tolerances = ±0.1

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



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

*Compliant to EIA 481A

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: 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