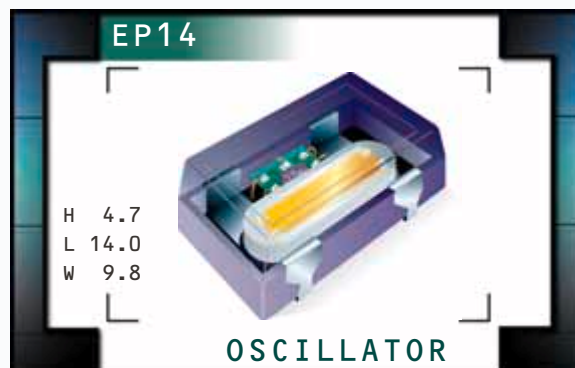


EP14 Series

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

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

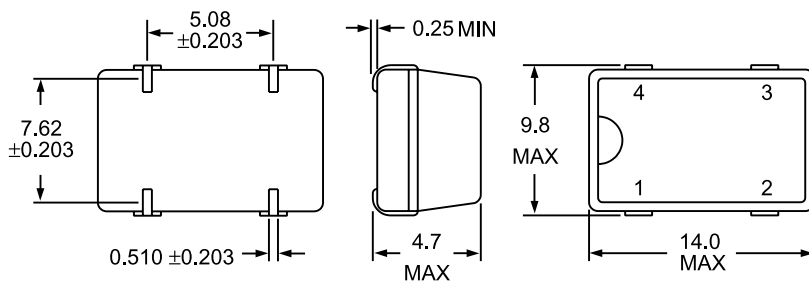
L=TTL, C=HCMOS

PIN 1 CONNECTION

TS=Tri-State, PD=Power Down

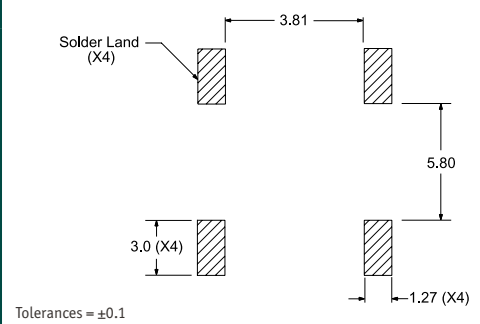
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



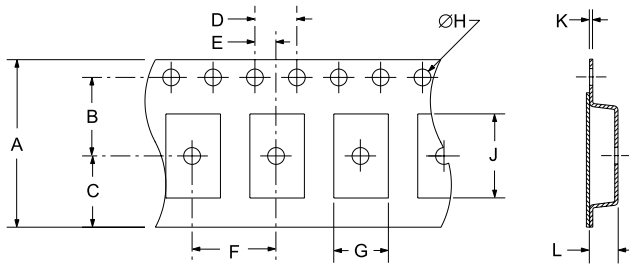
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

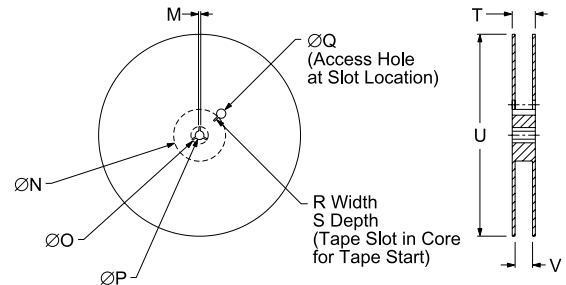


TAPE AND REEL DIMENSIONS

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
Seal Integrity	Bubble test in Perfluorocarbon at +125°C ±5°C for 60 seconds minimum (internal crystal only).
Solderability	Sn63 Solder dip at +230°C ±5°C for 5 seconds/95% coverage.
Marking Permanency	10 Strokes with brush after 1 minute soak in solvent, 3 times.
Shock	Random drop on hard wooden plate 3 times from a height of 20cm.
Vibration	Frequency with an amplitude of 1.5mm sweeping between 10Hz to 55Hz within 1 minute (approximately) for 2 hours minimum on each axis (X, Y and Z) for a total of 6 hours.

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M

Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ

Week of Year

Last Digit of Year

Eclipse Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP14	PLASTIC	5.0V	OS49	06/00