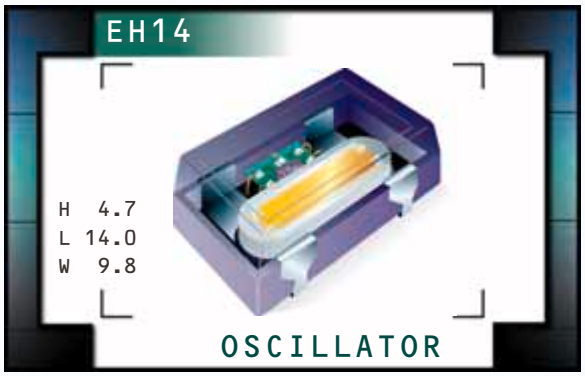
EH14 Series

- Plastic surface mount package
- 5.0V supply voltage
- HCMOS/TTL output
- Stability to 20ppm
- Available in tube or tape and reel



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 155.520MHz
Operating Temperature Range		0°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		50mA Maximum (Unloaded)
Frequency Tolerance / Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum (0°C to 70°C Only)
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	0.4V_{DC} Maximum I_{OL} =+16mA
	w/HCMOS Load	0.5V_{DC} Maximum I_{OL} =+16mA
Duty Cycle (V_{DD}=5.0V_{DC})	at 1.4V_{DC} w/TTL Load; at 50% of waveform w/HCMOS Load (≤70.000MHz)	50 ±10(%) (Standard)
	at 50% of waveform w/ TTL Load or w/HCMOS Load (>70.000MHz)	50 ±10(%) (Standard)
	at 50% of waveform w/TTL Load or w/HCMOS Load	50 ±5(%) (Optional)
Rise Time / Fall Time	0.8V_{DC} to 2.0 V_{DC} w/TTL Load or 20% to 80% of Waveform w/HCMOS Load (≤70.000MHz)	6 nSeconds Maximum
	0.8V_{DC} to 2.0 V_{DC} w/TTL Load or 20% to 80% of Waveform w/HCMOS Load (>70.000MHz)	4 nSeconds Maximum
Pin 1 Tri-State Input Voltage	V_{IH} :No Connection	Enables Output
	V_{IH} :≥2.2V_{DC}	Enables Output
	V_{IL} :≤0.8V_{DC}	Disables Output: High Impedance
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
Load Drive Capability	≤70.000MHz	10TTL Load Maximum or 50pF HCMOS Load Max
	>70.000MHz	5TTL Load Maximum or 15pF HCMOS Load Max
Period Jitter: Absolute		±250pSec Maximum, ±100pSec Typical
Period Jitter: One Sigma		±50pSec Maximum, ±30pSec Typical

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH14	PLASTIC	5.0V	OS49	06/00

PART NUMBERING GUIDE

EH14 00 SJ ET T TS - 24.000M TR

FREQUENCY TOLERANCE / STABILITY
00=100 ppm Maximum (Standard)
45=±50ppm Maximum, 25=±25ppm Maximum
20=±20ppm Maximum

OPERATING TEMP. RANGE
Blank =0ºC to 70ºC, ET=-40°C to 85°C

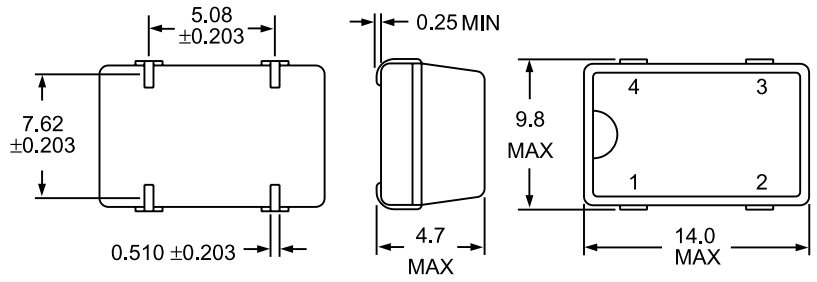
DUTY CYCLE
Blank=50 ±10(%) (Standard)
T=50 ±5(%)

AVAILABLE OPTIONS
Blank=Bulk (Standard)
TR=Tape and Reel

FREQUENCY

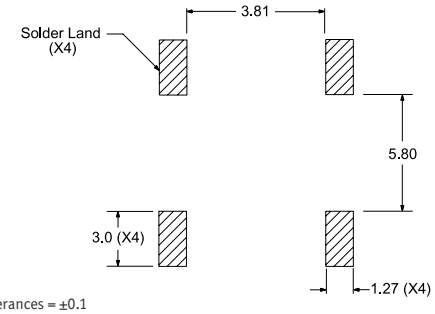
PIN 1 CONNECTION
TS=Tri-State

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



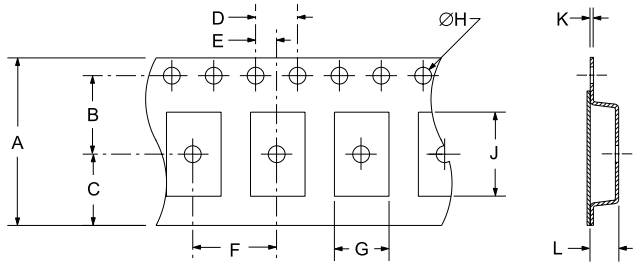
Pin 1: Tri-State
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS

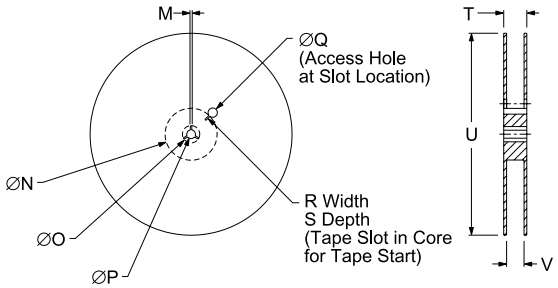


Tolerances = ±0.1

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	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
- Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH14	PLASTIC	5.0V	OS49	06/00