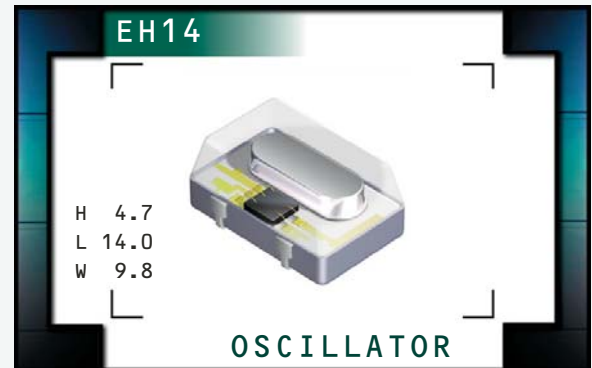


EH14 Series

- Crystal Clock Oscillators
- CMOS/TTL Output
- +5.0V Supply Voltage
- Tri-State Output Function
- 4 Pad Plastic SMD Package
- RoHS Compliant



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 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, ±50ppm, ±25ppm, or ±20ppm Maximum	
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V _{DC} Minimum	I _{OH} = -16mA
	w/CMOS 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/CMOS 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/CMOS Load (≤70.000MHz)	50 ±10(%) (Standard)	
	at 50% of waveform w/ TTL Load or w/CMOS Load (>70.000MHz)	50 ±10(%) (Standard)	
	at 50% of waveform w/TTL Load or w/CMOS Load	50 ±5(%) (Optional)	
Rise Time / Fall Time	0.8V _{DC} to 2.0V _{DC} w/TTL Load or 20% to 80% of Waveform w/CMOS Load (≤70.000MHz)	6 nSeconds Maximum	
	0.8V _{DC} to 2.0V _{DC} w/TTL Load or 20% to 80% of Waveform w/CMOS Load (>70.000MHz)	4 nSeconds Maximum	
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 or 50pF CMOS Load Maximum	
	>70.000MHz	5TTL Load or 15pF CMOS Load Maximum	
Period Jitter: Absolute	±250pSec Maximum, ±100pSec Typical		
Period Jitter: One Sigma	±50pSec Maximum, ±30pSec Typical		

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH14

PACKAGE
PLASTIC

VOLTAGE
5.0V

CLASS
OS49

REV. DATE
6/10

PART NUMBERING GUIDE

EH14 00 SJ ETTTS - 24.000M TR

FREQUENCY TOLERANCE / STABILITY

00=100 ppm Maximum
 45=±50ppm Maximum, 25=±25ppm Maximum
 20=±20ppm Maximum

OPERATING TEMP. RANGE

Blank=0°C to +70°C, ET=-40°C to +85°C

DUTY CYCLE

Blank=50 ±10(%)
 T=50 ±5(%)

AVAILABLE OPTIONS

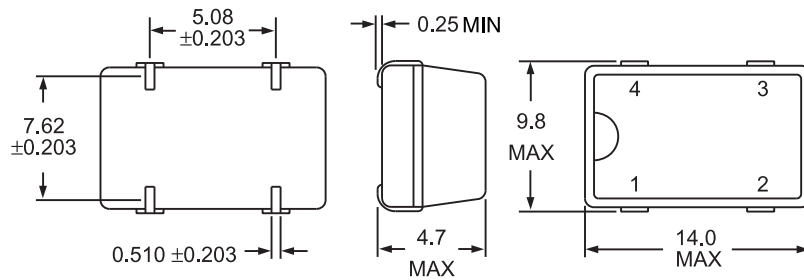
Blank=Bulk
 TR=Tape & Reel

FREQUENCY

OUTPUT CONTROL FUNCTION

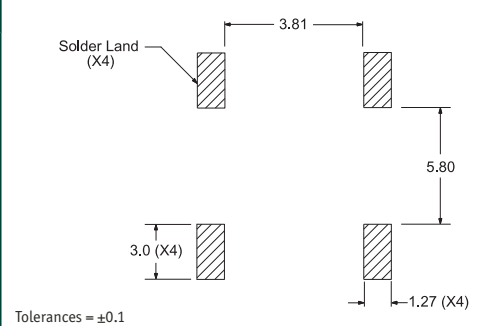
TS=Tri-State

MECHANICAL DIMENSIONS
 ALL DIMENSIONS IN MILLIMETERS



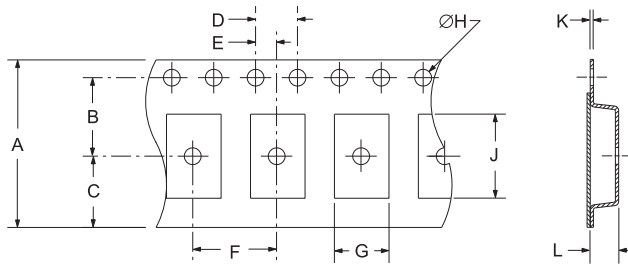
Pin 1: Tri-State
 Pin 2: Case Ground
 Pin 3: Output
 Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT
 ALL DIMENSIONS IN MILLIMETERS

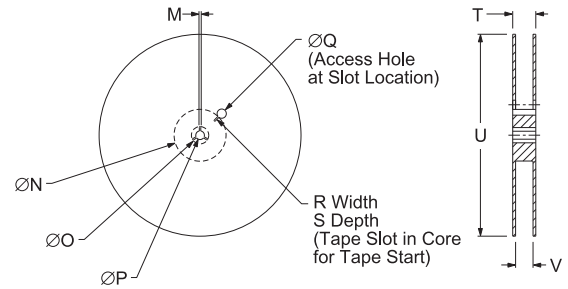


Tolerances = ±0.1

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
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A (Internal Crystal Only)
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C (Internal Crystal Only)
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Moisture Resistance	MIL-STD-883, Method 1004
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

MARKING SPECIFICATIONS

Line 1: ECLIPTEK
 Line 2: XX.XXX M — Frequency in MHz (5 Digits Maximum + Decimal)
 Line 3: XXXXXX — Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EH14	PLASTIC	5.0V	0549	06/10