

EH15 Series

- Plastic surface mount package
- 3.3V supply voltage
- HCMOS output
- Stability to 20ppm
- Available on 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})		3.3V _{DC} ±0.3V _{DC}
Input Current		35mA 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})		2.7V _{DC} Minimum $I_{OH} = -8mA$
Output Voltage Logic Low (V_{OL})		0.5V _{DC} Maximum $I_{OL} = +8mA$
Rise Time / Fall Time	≤70.000MHz 20% to 80% of Waveform w/HCMOS Load	6 nSeconds Maximum
	>70.000MHz 20% to 80% of Waveform w/HCMOS Load	4 nSeconds Maximum
Load Drive Capability	≤70.000MHz	30pF HCMOS Load Maximum
	>70.000MHz	15pF HCMOS Load Maximum
Duty Cycle (at $V_{DD}=3.3V_{DC}$)		at 50% of Waveform 50 ±10(%) (Standard) or 50 ±5(%) (Optional)
Tri-State Input Voltage	V_{IH} : No Connection or ≥2.2V _{DC}	Enables Output
	V_{IL} : ≤0.8V _{DC}	Disables Output: High Impedance
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10mSeconds Maximum
Period Jitter: Absolute		±250pSec Maximum, ±100pSec Typical
Period Jitter: One Sigma		±50pSec Maximum, ±40pSec Typical

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EH15

PACKAGE
PLASTIC

VOLTAGE
3.3V

CLASS
OS49

REV. DATE
02/04

PART NUMBERING GUIDE

EH15 00 SJ ET 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 =0°C to 70°C
 ET=-40°C to 85°C

DUTY CYCLE

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

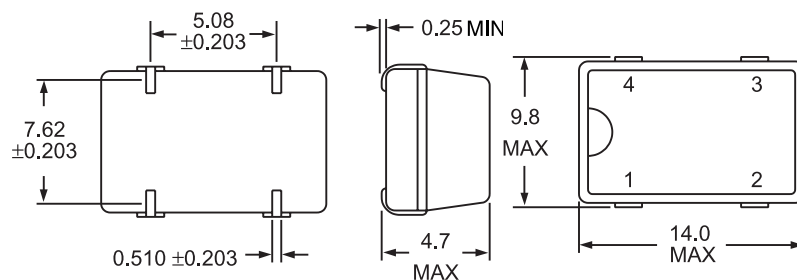
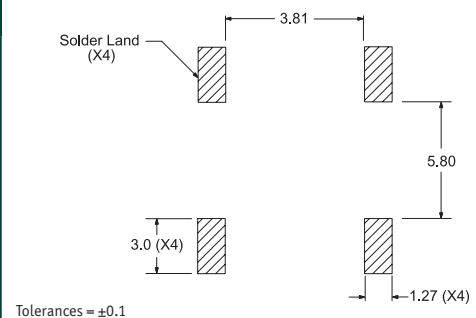
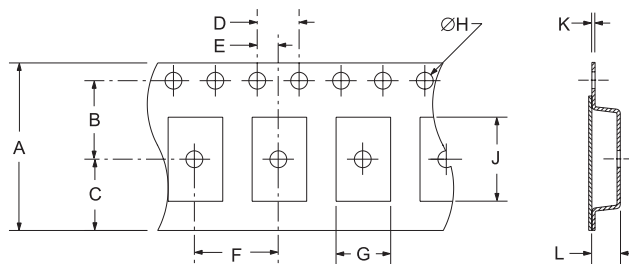
PACKAGING OPTIONS

Blank=Bulk
 TR=Tape and Reel (Standard)

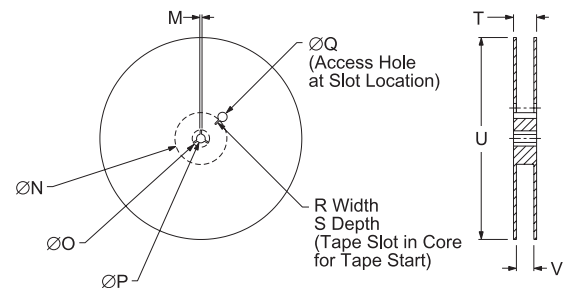
FREQUENCY

OUTPUT CONTROL FUNCTION

TS=Tri-State

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERSSUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERSTAPE 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	EH15	PLASTIC	3.3V	OS49	02/04