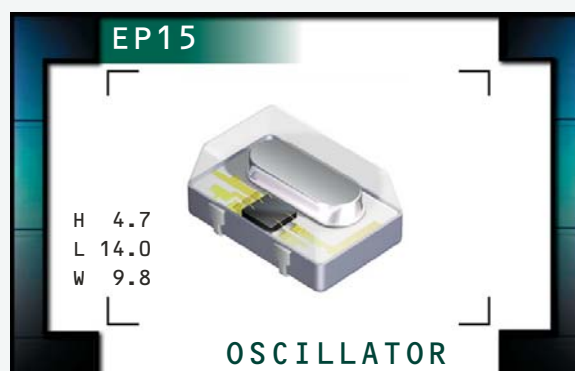


EP15 Series

- EPO™ Programmable Oscillator
- 3.3V supply voltage
- HCMOS/TTL output
- Plastic surface mount package
- Stability to 50ppm
- Available on tape and reel



ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 106.250MHz
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})		3.3V _{DC} ±0.3V _{DC}
Input Current		28mA Maximum (Unloaded)
Disable Current (TS Option)		16mA Maximum (Pin 1=Ground)
Standby Current (PD Option)		20µA Maximum (Pin 1=Ground)
Frequency Tolerance / Stability		Inclusive of all conditions: Calibration Tolerance at 25°C, ±100ppm or ±50ppm Maximum Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration
Output Voltage Logic High (V_{OH})		$V_{DD} - 0.4V_{DC}$ Minimum $I_{OH} = -8mA$
Output Voltage Logic Low (V_{OL})		0.4V _{DC} Maximum $I_{OL} = +8mA$
Rise Time / Fall Time	20% to 80% of waveform	4 nSeconds Maximum
Duty Cycle	at 50% of waveform	50 ±10% (Standard)
	at 50% of waveform (≤50.000MHz Only)	50 ±5% (Optional)
Load Drive Capability	≤50.000MHz	30pF HCMOS Load Maximum
	>50.000MHz	15pF HCMOS Load Maximum
Output Control Function	TS	Tri-State
	PD	Power Down
Output Control Function Input Voltage		Enables Output Disable Output: High Impedance Disable Output: Logic Low
V_{IH} : No Connection or ≥70% of V_{DD} V_{IL} : (TS Option) ≤20% of V_{DD} V_{IL} : (PD Option) ≤20% of V_{DD}		
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
Period Jitter: Absolute	≤33.000MHz	±250pSec Maximum, ±100pSec Typical
	>33.000MHz	±125pSec Maximum, ±75pSec Typical
Period Jitter: One Sigma	≤33.000MHz	±50pSec Maximum
	>33.000MHz	±40pSec Maximum

PART NUMBERING GUIDE

EP15 00 SJ ET TS - 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(%)

PACKAGING OPTIONS

Blank=Bulk

TR=Tape and Reel (Standard)

FREQUENCY

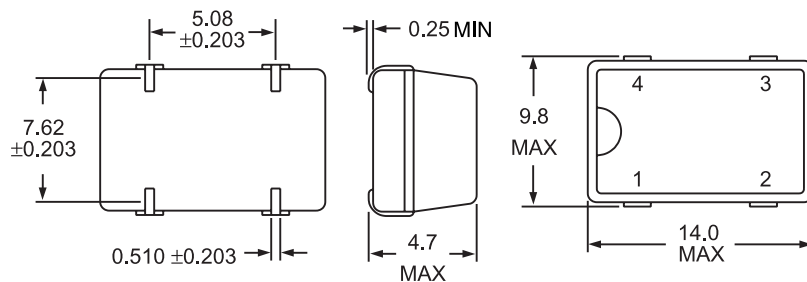
OUTPUT CONTROL FUNCTION

TS=Tri-State

PD=Power Down

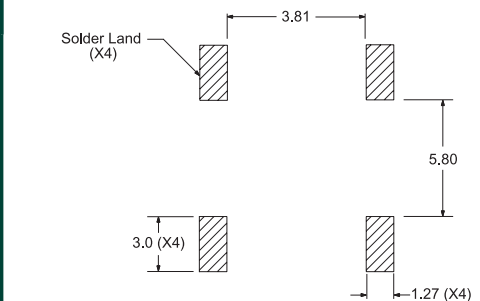
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



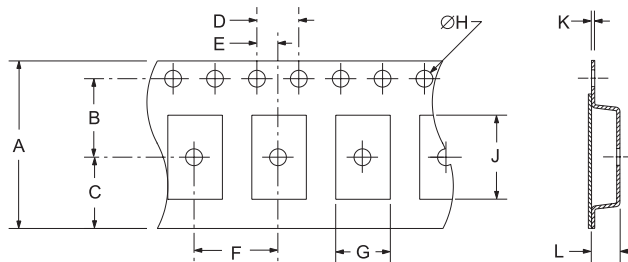
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

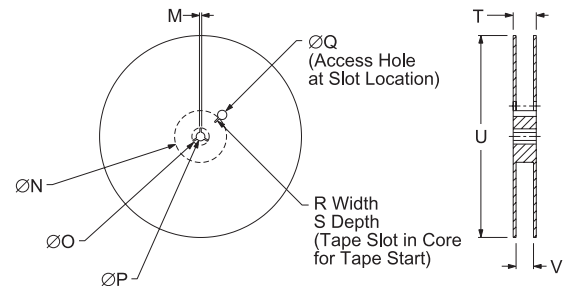


TAPE AND REEL DIMENSIONS

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

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
Eclipse Manufacturing Identifier
Configuration Designator

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP15	PLASTIC	3.3V	OS49	02/04