EP25 Series

- RoHS Compliant (Pb-Free)
- EPO™Programmable Oscillators
- 5.0V supply voltage
- HCMOS/TTL output
- Ceramic SMD package
- Stability to 50ppm
- Available on tape and reel

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 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 or ±50ppm Maximum
Output Voltage Logic High (V_{OH})	w/TTL Load w/HCMOS Load	2.4V_{DC} Minimum I_{OH}=-16mA V_{DD}-0.4V_{DC} Minimum I_{OH}=-16mA
Output Voltage Logic Low (V_{OL})	w/TTL Load or w/HCMOS Load	0.4V_{DC} Maximum I_{OL}=+16mA
Rise Time / Fall Time	at 0.8V_{DC} to 2.0V_{DC} w/TTL Load at 20% to 80% of waveform w/HCMOS Load	4 nSec Maximum 4 nSec Maximum
Duty Cycle	at 1.4V_{DC} w/TTL Load; at 50% of waveform w/HCMOS Load at 1.4V_{DC} w/TTL Load (≤27.000MHz only), or at 50% of waveform w/HCMOS Load (≤50.000MHz Only)	50 ±10(%) (Standard) 50 ±5(%) (Optional)
Load Drive Capability / Output Type-HCMOS	≤50.000MHz >50.000MHz	50pF HCMOS Load Maximum 15pF HCMOS Load Maximum
Load Drive Capability / Output Type-TTL	≤40.000MHz >40.000MHz	10TTL Load Maximum 5TTL Load Maximum
Output Control Function	TS PD	Tri-State Power Down
Output Control Function Input Voltage	V_{IH}: No Connection or ≥2.0V_{DC} V_{IL}: (TS Option) ≤0.8V_{DC} V_{IL}: (PD Option) ≤0.8V_{DC}	Enables Output Disable Output: High Impedance Disable Output: Logic Low
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
Period Jitter: Absolute	≤33.000MHz >33.000MHz	±250pSec Maximum, ±100pSec Typical ±100pSec Maximum, ±50pSec Typical
Period Jitter: One Sigma	≤33.000MHz >33.000MHz	±50pSec Maximum ±30pSec Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP25	CERAMIC	5.0V	OS48	02/04

PART NUMBERING GUIDE

EP25 00 ET T TS L - 24.000M TR

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

OPERATING TEMP. RANGE
Blank=-20°C to 70°C (Standard)
ET=-40°C to 85°C

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

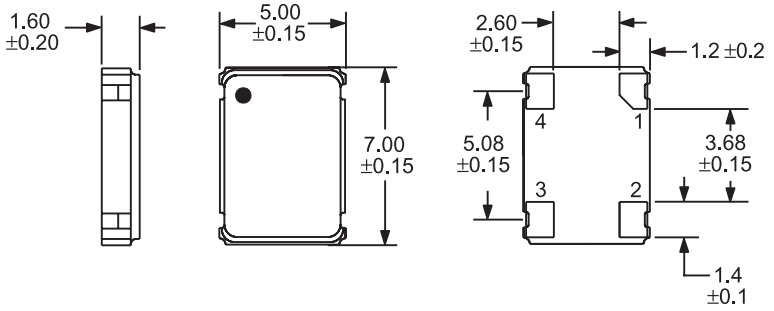
OUTPUT CONTROL FUNCTION
TS=Tri-State, PD=Power Down

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

FREQUENCY

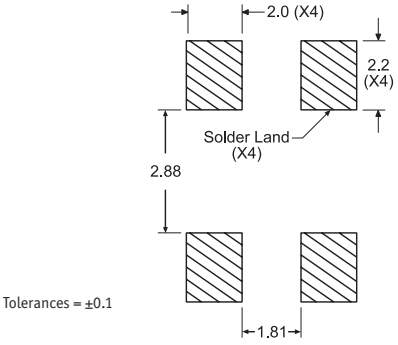
OUTPUT TYPE
L=TTL, C=HCMOS

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



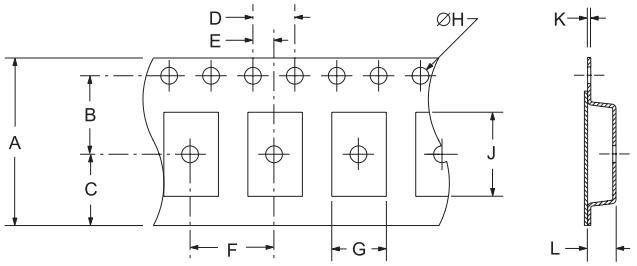
Pin 1: Tri-State or Power Down
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

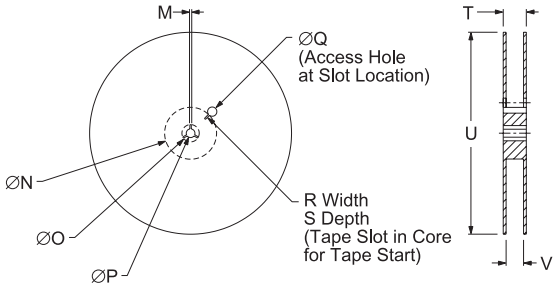
SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS



Tolerances = ±0.1

TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS





TAPE	A	B	C	D	E
	16+.3-.1	7.5±.1	6.75±.1	4 ±.1	2±.1
F	G	H	J	K	L
8±.1	B0*	1.5 +.1-0	A0*	.3 ±.05	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	22.4 MAX	360 MAX	16.4+2-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	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	EP25	CERAMIC	5.0V	OS48	02/04