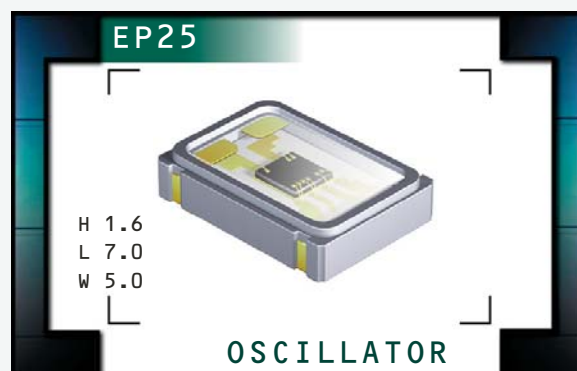


EP25 Series

- Programmable Crystal Oscillators
- HCMOS/TTL Output
- +5.0V Supply Voltage
- Tri-State and Power Down Options
- 4 Pad Ceramic SMD Package
- RoHS Compliant (Pb-Free)



ECLIPTEK
CORPORATION



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

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EP25

PACKAGE
CERAMIC

VOLTAGE
5.0V

CLASS
OS48

REV. DATE
07/08

PART NUMBERING GUIDE

EP25 00 ET TTS L - 24.000M TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Max, 45=±50ppm Maximum

OPERATING TEMP. RANGE

Blank=-20°C to 70°C

ET=-40°C to 85°C

DUTY CYCLE

Blank=50±10(%) T=50±5(%)

OUTPUT CONTROL FUNCTION

TS=Tri-State, PD=Power Down

AVAILABLE OPTIONS

Blank=Bulk

TR=Tape & Reel

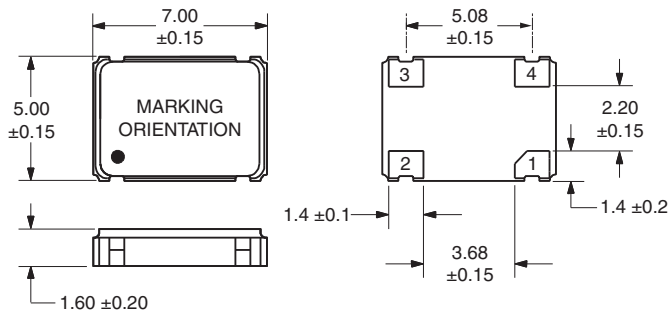
FREQUENCY

OUTPUT TYPE

L=TTL, C=CMOS

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

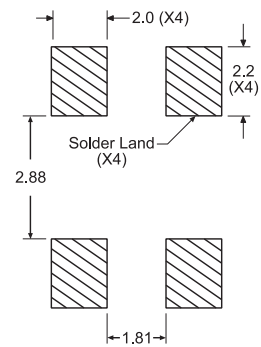


Pin 1: Tri-State or Power Down
 Pin 2: Case Ground

Pin 3: Output
 Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

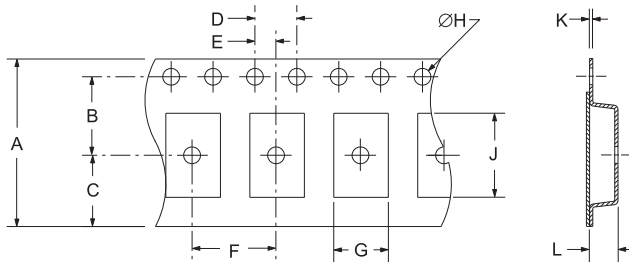
ALL DIMENSIONS IN MILLIMETERS



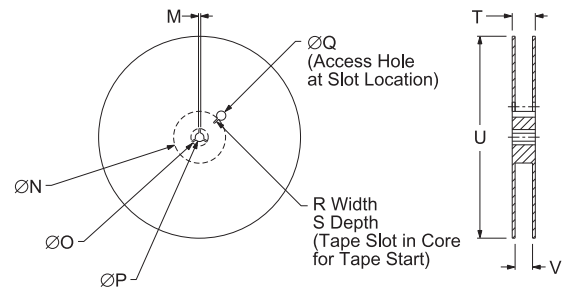
Tolerances = ±0.1

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
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
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: 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	EP25	CERAMIC	5.0V	OS48	07/08