

# EP26 Series



ECLIPTEK<sup>®</sup>  
CORPORATION

- Programmable Crystal Oscillators
- LVCMOS Output
- +3.3V Supply Voltage
- Tri-State and Power Down Options
- 4 Pad Ceramic SMD Package
- RoHS Compliant (Pb-Free)



## ELECTRICAL SPECIFICATIONS

<b>Frequency Range</b>		1.000MHz to 106.250MHz
<b>Operating Temperature Range</b>		-20°C to 70°C or -40°C to 85°C
<b>Storage Temperature Range</b>		-55°C to 125°C
<b>Supply Voltage (V<sub>DD</sub>)</b>		3.3V <sub>DC</sub> ±0.3V <sub>DC</sub>
<b>Input Current</b>		28mA Maximum (Unloaded)
<b>Disable Current (TS Option)</b>		16mA Maximum (Pin 1=Ground)
<b>Standby Current (PD Option)</b>		20µA Maximum (Pin 1=Ground)
<b>Frequency Tolerance / Stability</b>	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
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>		V <sub>DD</sub> -0.4V <sub>DC</sub> Minimum I <sub>OH</sub> =-8mA
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>		0.4V <sub>DC</sub> Maximum I <sub>OL</sub> =+8mA
<b>Rise Time / Fall Time</b>	20% to 80% of waveform	4 nSeconds Maximum
<b>Duty Cycle</b>	at 50% of waveform	50 ±10(%) (Standard)
	at 50% of waveform (≤50.000MHz Only)	50 ±5(%) (Optional)
<b>Load Drive Capability</b>	≤50.000MHz	30pF Maximum
	>50.000MHz	15pF Maximum
<b>Output Control Function</b>	TS	Tri-State
	PD	Power Down
<b>Output Control Function Input Voltage</b>	V <sub>IH</sub> : No Connection or ≥70% of V <sub>DD</sub> V <sub>IL</sub> : (TS Option) ≤20% of V <sub>DD</sub> V <sub>IL</sub> : (PD Option) ≤20% of V <sub>DD</sub>	Enables Output Disable Output: High Impedance Disable Output: Logic Low
<b>Aging (at 25°C)</b>		±5ppm / year Maximum
<b>Start Up Time</b>		10 mSeconds Maximum
<b>Period Jitter: Absolute</b>	≤33.000MHz	±250pSec Maximum, ±100pSec Typical
	>33.000MHz	±125pSec Maximum, ±75pSec Typical
<b>Period Jitter: One Sigma</b>	≤33.000MHz	±50pSec Maximum
	>33.000MHz	±40pSec Maximum

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EP26	PACKAGE CERAMIC	VOLTAGE 3.3V	CLASS 0548	REV. DATE 07/08
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## PART NUMBERING GUIDE

### EP26 00 ET TS - 24.000M TR

#### FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum  
45=±50ppm Maximum

#### OPERATING TEMP. RANGE

Blank=-20°C to 70°C or  
ET=-40°C to 85°C

#### DUTY CYCLE

Blank=50 ±10(%)  
T=50 ±5(%)

#### AVAILABLE OPTIONS

Blank=Bulk  
TR=Tape & Reel

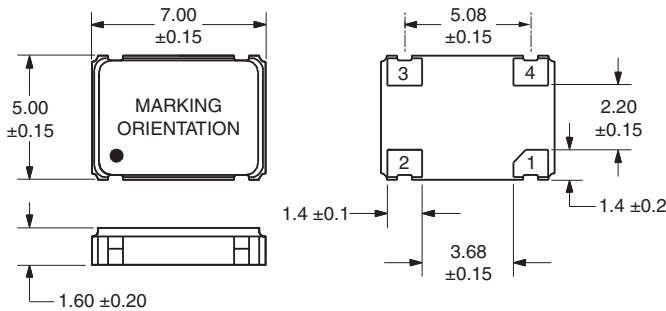
#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

TS=Tri-State  
PD=Power Down

#### MECHANICAL DIMENSIONS

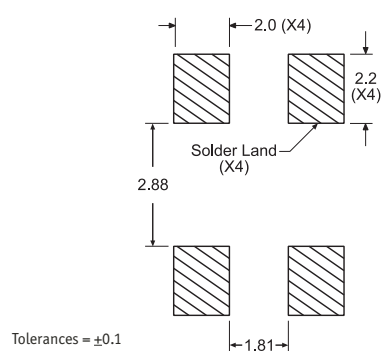
ALL DIMENSIONS IN MILLIMETERS



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

#### SUGGESTED SOLDER PAD LAYOUT

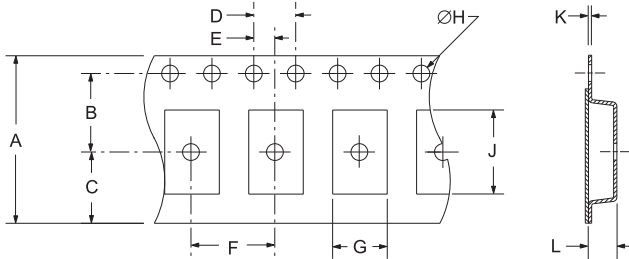
ALL DIMENSIONS IN MILLIMETERS



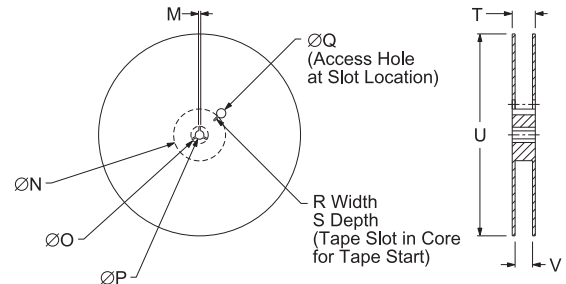
Tolerances = ±0.1

#### 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  
 P: Week of Year  
 XX: Last Digit of Year  
 Y: Ecliptek Manufacturing Identifier  
 ZZ: Configuration Designator

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP26	CERAMIC	3.3V	OS48	07/08