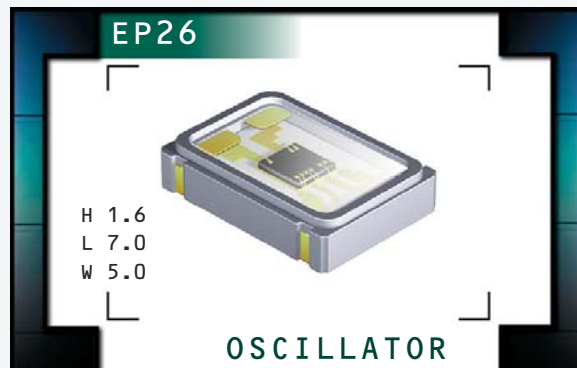


# EP26 Series

- RoHS Compliant (Pb-Free)
- EPO™ Programmable Oscillators
- 3.3V supply voltage
- LVHCMOS output
- Ceramic SMD package
- Stability to 50ppm
- Available on tape and reel



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ECLIPTEK  
CORPORATION



## 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 HCMOS Load Maximum
	>50.000MHz	15pF HCMOS Load 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>	Enables Output
	V <sub>IL</sub> : (TS Option) ≤20% of V <sub>DD</sub>	Disable Output: High Impedance
	V <sub>IL</sub> : (PD Option) ≤20% of V <sub>DD</sub>	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  
02/04

### PART NUMBERING GUIDE

## EP26 00 ETTTS - 24.000M TR

#### FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)  
45=±50ppm Maximum

#### OPERATING TEMP. RANGE

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

#### DUTY CYCLE

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

#### AVAILABLE OPTIONS

Blank=Bulk (Standard)  
TR=Tape and Reel

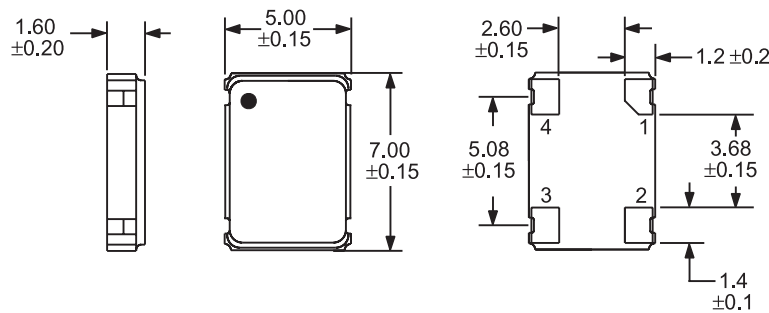
#### FREQUENCY

#### OUTPUT CONTROL FUNCTION

TS=Tri-State  
PD=Power Down

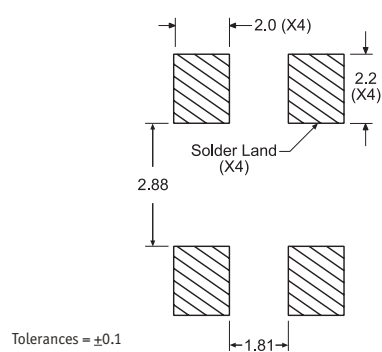
#### MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



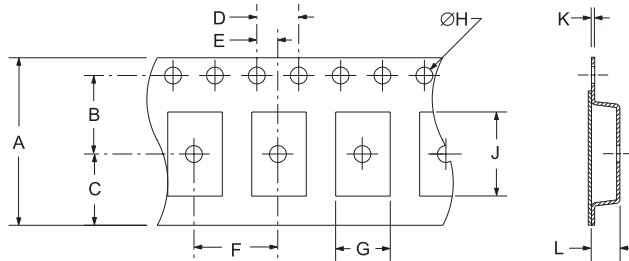
#### SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

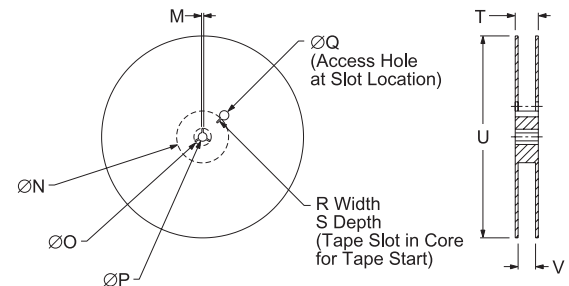


#### TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	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

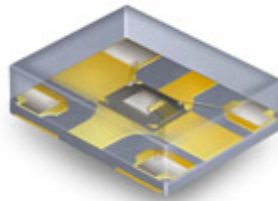
MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP26	CERAMIC	3.3V	OS48	02/04



**Ecliptek MEMS Oscillators**

*- Lower Cost, Quicker Delivery Alternative!*

The EMO™ family of oscillators offers exceptional performance, shorter delivery and significant cost advantages by utilizing a revolutionary new MEMS resonator technology. This important innovation enables Ecliptek to offer the ultimate in flexibility with delivery of 2 days for samples and 5 to 10 days for quantities up to 10,000 pieces on tape and reel.



Supply Voltage (V <sub>DC</sub> )	Package Dimensions (all dimensions in millimeters)			
	5 x 7	3.2 x 5	2.5 x 3.2	2 x 2.5
1.8	<a href="#">EMK11</a>	<a href="#">EMK21</a>	<a href="#">EMK31</a>	<a href="#">EMK41</a>
2.5	<a href="#">EMK12</a>	<a href="#">EMK22</a>	<a href="#">EMK32</a>	<a href="#">EMK42</a>
3.3	<a href="#">EMK13</a>	<a href="#">EMK23</a>	<a href="#">EMK33</a>	<a href="#">EMK43</a>

Would you like to request EMO™ samples or a quotation now?

[Click Here](#)

Want to learn more about the Ecliptek EMO™ family of MEMS oscillators?

[Click Here](#)

**Product Features:**

- Improved frequency stability through the use of a MEMS resonator
- 1.8VDC, 2.5VDC, or 3.3VDC supply voltages
- Frequency range of 1MHz to 125MHz, HCMOS output
- Frequency stability to ±50ppm, -40°C to +85°C operation
- Tri-state or power down functions
- RoHS compliant
- High temperature +260°C reflow capability
- EIA compliant tape and reel packaging
- Four SMD package sizes

If you have any questions or would like additional information regarding the Ecliptek EMO™ family of oscillators, please contact our [Sales Department](#).