

EC26 Series

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 3.3V supply voltage
- LVHCMOS/TTL output
- Stability to 20ppm
- Standby Function
- Available in tube or tape and reel



ECLIPTEK®
CORPORATION



ELECTRICAL SPECIFICATIONS

Frequency Range	1.544MHz to 125.000MHz and 125.009MHz, 125.00937MHz, 125.010MHz, 127MHz, 128MHz, 130MHz, 132MHz, 133MHz, 133.333MHz, 137.472MHz, 142.850MHz, 150MHz, 155.520MHz and 156.250MHz	
Operating Temperature Range	Frequency Tolerance/Stability options of ± 100 ppm, ± 50 ppm, ± 25 ppm, ± 20 ppm available Frequency Tolerance/Stability options of ± 100 ppm, ± 50 ppm, ± 25 ppm available Frequency Tolerance/Stability option of ± 20 ppm available from 1.544MHz to 106.250MHz	-10°C to 70°C -40°C to 85°C -40°C to 85°C
Storage Temperature Range		-55°C to 125°C
Supply Voltage (V_{DD})		3.3V _{DC} $\pm 10\%$
Input Current	1.544MHz to 32.000MHz 32.000001MHz to 50.000MHz 50.000001MHz to 70.000MHz 70.000001MHz to 125.000MHz 125.009MHz to 156.250MHz	10mA Maximum 18mA Maximum 20mA Maximum 40mA Maximum 60mA Maximum
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	± 100 ppm Maximum ± 50 ppm Maximum ± 25 ppm Maximum ± 20 ppm Maximum
Output Voltage Logic High (V_{OH})	w/HCMOS or TTL Load, $I_{OH} = -8$ mA	90% of V_{DD} Minimum
Output Voltage Logic Low (V_{OL})	w/HCMOS or TTL Load, $I_{OL} = +8$ mA	10% of V_{DD} Maximum
Rise / Fall Time	10% to 90% of Waveform w/15pF HCMOS Load or 0.4V _{DC} to 2.4V _{DC} w/10LSTTL Load ≤ 35.000 MHz 10% to 90% of Waveform w/30pF HCMOS Load or 0.4V _{DC} to 2.4V _{DC} w/10TTL Load ≤ 35.000 MHz 10% to 90% of Waveform w/HCMOS Load or 0.4V _{DC} to 2.4V _{DC} w/TTL Load 35.001MHz to 125.000MHz 10% to 90% of Waveform w/HCMOS Load > 125.009 MHz	5 nSeconds Maximum 7 nSeconds Maximum 5 nSeconds Maximum 3 nSeconds Maximum
Duty Cycle	at 50% of Waveform w/HCMOS Load or 1.4V _{DC} w/TTL Load ≤ 70.000 MHz at 50% of Waveform w/HCMOS Load > 70.000 MHz at 50% of waveform w/HCMOS Load or w/TTL Load ≤ 125.000 MHz at 50% of waveform w/HCMOS Load, at 25°C, at 3.3V _{DC} > 125.000 MHz	50 ± 10 (%) (Standard) 50 ± 10 (%) (Standard) 50 ± 5 (%) (Optional) 50 ± 5 (%) (Optional)
Load Drive Capability	≤ 35.000 MHz 35.000001MHz to 70.000MHz > 70.000001 MHz	10TTL or 30pF HCMOS Load Max. 10TTL or 15pF HCMOS Load Max. 15pF HCMOS Load Maximum
Tri-State Input Voltage	No Connection $V_{IH} \geq 70\%$ of V_{DD} $V_{IL} \leq 30\%$ of V_{DD}	Enables Output Enables Output Disables Output: High Impedance
Standby Current	Disabled Output: High Impedance	10 μ A Maximum
Start Up Time		10 mSeconds Maximum
RMS Phase Jitter	12kHz to 20MHz offset frequency	1pSeconds Maximum



PART NUMBERING GUIDE

EC26 00 ET TS - 40.000M TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)
45=±50ppm Maximum, 25=±25ppm Maximum
20=±20ppm Maximum

OPERATING TEMPERATURE RANGE

Blank=-10°C to 70°C (Standard)
ET=-40°C to 85°C

PACKAGING OPTIONS

Blank=Bulk, TR=Tape and Reel (Standard)

FREQUENCY

OUTPUT CONTROL FUNCTION

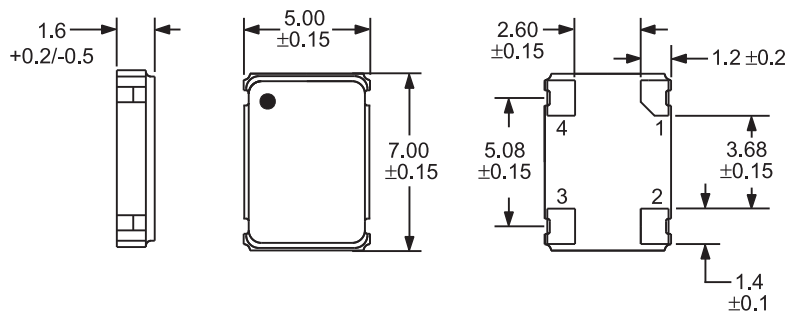
TS=Tri-State

DUTY CYCLE

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

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

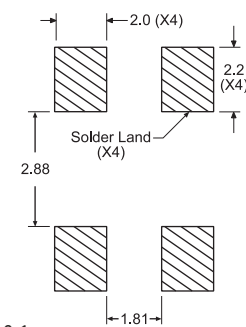


Pin 1: Tri-State
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

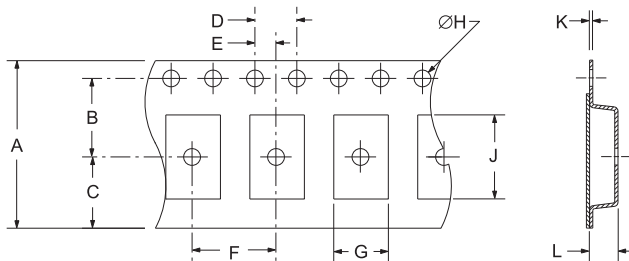
ALL DIMENSIONS IN MILLIMETERS



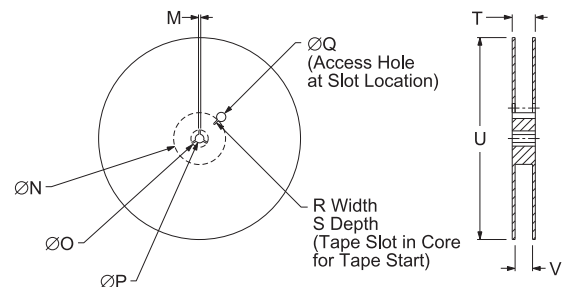
Tolerances = ±0.1

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

Fine Leak Test
Gross Leak Test
Mechanical Shock
Vibration
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 2002
MIL-STD-883, Method 1010
MIL-STD-202, Method 210
MIL-STD-202, Method 215

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M

Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ

Week of Year
Last Digit of Year
Eclipse Manufacturing Identifier

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EC26

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
OS30

REV. DATE
01/06



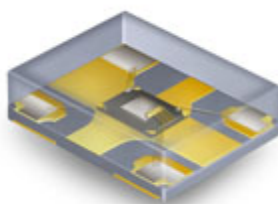
ECLIPTEK[®]
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Ecliptek MEMS Oscillators

- 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 _{DC})	Package Dimensions (all dimensions in millimeters)			
	5 x 7	3.2 x 5	2.5 x 3.2	2 x 2.5
1.8	EMK11	EMK21	EMK31	EMK41
2.5	EMK12	EMK22	EMK32	EMK42
3.3	EMK13	EMK23	EMK33	EMK43

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](#).