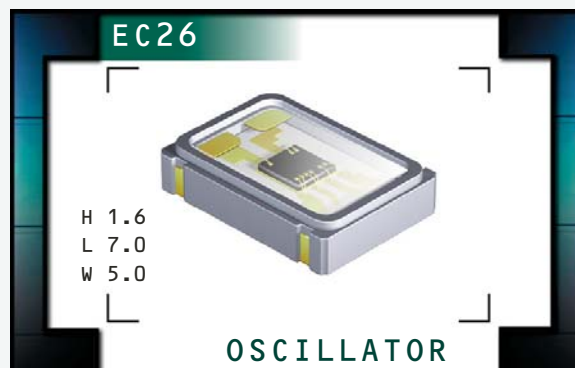


EC26 Series

- 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 3.3Vdc > 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

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EC26

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
OS30

REV. DATE
01/06

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

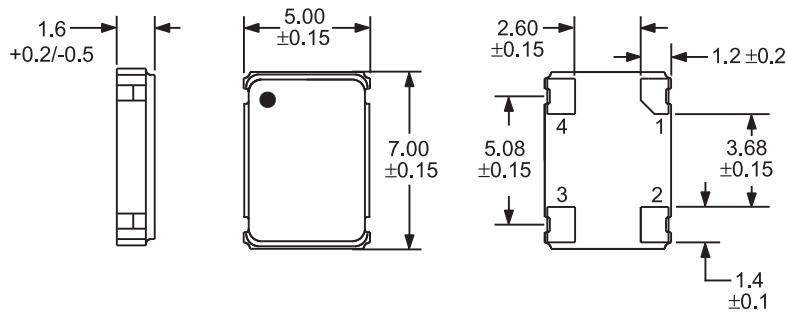
TS=Tri-State

DUTY CYCLE

Blank=50±10% (Standard), T=50±5%

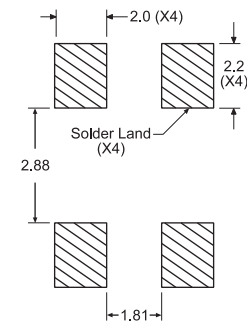
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



SUGGESTED SOLDER PAD LAYOUT

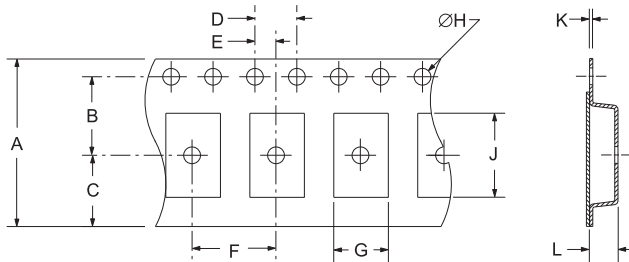
ALL DIMENSIONS IN MILLIMETERS



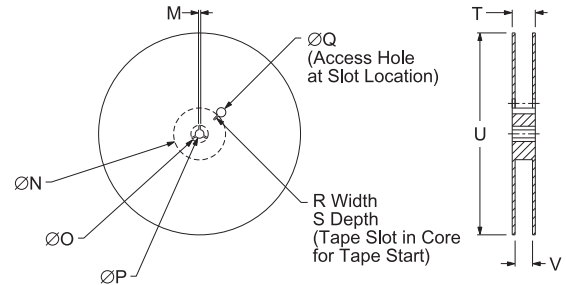
Tolerances = ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	16±.3	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	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC26	CERAMIC	3.3V	OS30	01/06



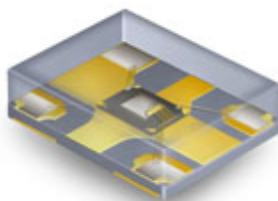
ECLIPTEK[®]
CORPORATION

Ecliptek
MEMS Oscillators

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](#).