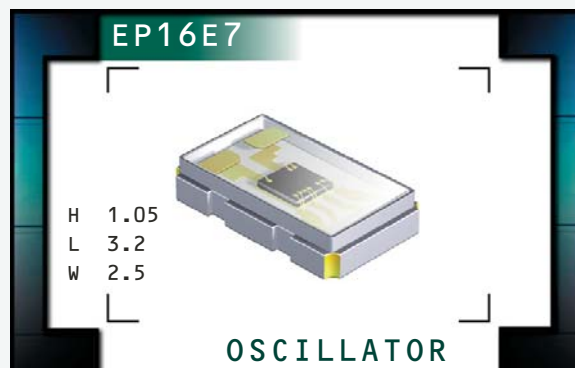


EP16E7 Series

- RoHS Compliant (Pb-Free)
- EPO™ Programmable Oscillators
- Ceramic Surface Mount Package
- LVHCMOS Output
- 1.8V Supply Voltage
- Stability to ± 25 ppm
- Available on Tape & Reel
- Tri-State and Power Down Functions Available



www.DataSheet4U.com®
ECLIPTEK
CORPORATION



ELECTRICAL SPECIFICATIONS

Nominal Frequency	3.300MHz, 3.6864MHz, 5.000MHz, 6.000MHz, 7.000MHz, 8.000MHz, 9.000MHz, 10.000MHz, 12.000MHz, 16.000MHz, 24.000MHz, 25.000MHz, 26.000MHz, 32.000MHz, 33.000MHz, 33.333MHz, 37.500MHz, 52.000MHz, 64.000MHz, 66.000MHz, 67.000MHz, 70.000MHz, and 75.000MHz	
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})	1.8V _{DC} $\pm 5\%$	
Input Current	3.300MHz to 25.000MHz	8mA Maximum
	25.001MHz to 50.000MHz	9mA Maximum
	50.001MHz to 75.000MHz	12mA 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, 1st Year Aging at 25°C, 260°C Reflow, Shock, and Vibration	
	± 25 ppm, 50ppm or ± 100 ppm Maximum	
Output Voltage Logic High (V_{OH})	$I_{OH} = -8$ mA	90% of V_{DD} Minimum
Output Voltage Logic Low (V_{OL})	$I_{OL} = +8$ mA	10% of V_{DD} Maximum
Rise Time / Fall Time	3.300MHz to 50.000MHz, 20% to 80% of waveform	6nSeconds Maximum
	50.001MHz to 75.000MHz, 20% to 80% of waveform	4nSeconds Maximum
Duty Cycle	at 50% of waveform	50 ± 5 (%)
Load Drive Capability	15pF HCMOS Load Maximum	
Pad 1 Connection	Tri-State or Power Down	
Pad 1 Input Voltage	V_{IH} of 90% of V_{DD} Minimum	Enables Output
	No Connection	Enables Output
	V_{IL} of 10% of V_{DD} Maximum	Disables Output
Standby Current	Disabled Output (Logic Low)	30 μ A Maximum
Disable Current	Disabled Output (High Impedance)	4mA Maximum
Absolute Clock Jitter	3.300MHz to 24.999999MHz	350pSec Maximum
	25.000MHz to 75.000MHz	200pSec Maximum
Aging at 25°	± 5 ppm/Year Maximum	
Start Up Time	10mSec Maximum	

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EP16E7

PACKAGE
CERAMIC

VOLTAGE
1.8V

CLASS
055N

REV. DATE
10/07

PART NUMBERING GUIDE

EP16E7 H 2 H - 32.000M TR

FREQUENCY TOLERANCE & STABILITY/
OPERATING TEMPERATURE RANGE

C=±100ppm Maximum over -20°C to +70°C

D=±50ppm Maximum over -20°C to +70°C

E=±25ppm Maximum over -20°C to +70°C

G=±100ppm Maximum over -40°C to +85°C

H=±50ppm Maximum over -40°C to +85°C

DUTY CYCLE

2=50% ±5%

AVAILABLE OPTIONS

Blank=Bulk

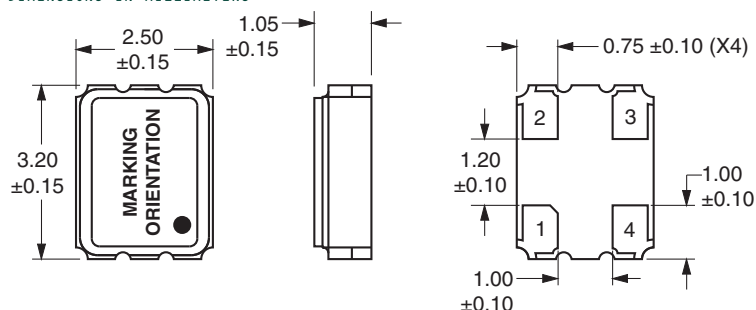
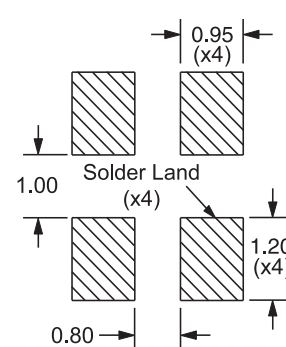
TR=Tape and Reel (Standard)

FREQUENCY

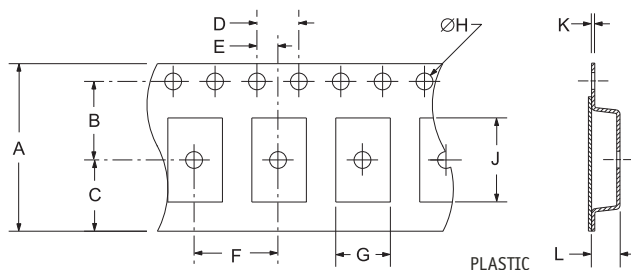
LOGIC CONTROL/ADDITIONAL OUTPUT

H=Tri-State

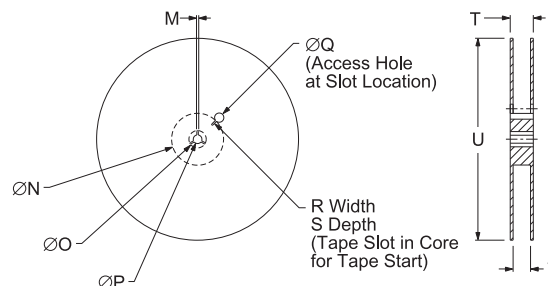
J=Power Down

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERSPin 1: Tri-State or Power Down
Pin 2: Case GroundPin 3: Output
Pin 4: Supply VoltageSUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS

Tolerances=±0.1

TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS

A		B	C	D	E
12.0 ±0.3		5.5 ±0.05	4.75 ±0.1	4.0 ±0.1	2.00 ±0.05
F	G	H	J	K	L
4.0 ±0.1	A0*	1.5 + 1/-0	B0*	0.6 MAX	K0*



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13+5/-2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	18.4 MAX	332 MAX	12.4+2/-0	1,000

*Compliant to EIA 481C

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

ESD Susceptibility
Fine Leak Test
Gross Leak Test
Mechanical Shock
Moisture Resistance
Moisture Sensitivity
Resistance to Soldering Heat
Resistance to Solvents
Solderability
Temperature Cycling
Thermal Shock
Vibration

Specification

MIL-STD-883, Method 3015, Class 1, HBM: 1500Vdc
MIL-STD-883, Method 1014, Condition A
MIL-STD-883, Method 1014, Condition C
MIL-STD-883, Method 2002, Condition B
MIL-STD-883, Method 1004
J-STD-020, MSL 1
MIL-STD-202, Method 210, Condition K
MIL-STD-202, Method 215
MIL-STD-883, Method 2003
MIL-STD-883, Method 1010, Condition B
MIL-STD-883, Method 1011, Condition B
MIL-STD-883, Method 2007, Condition A

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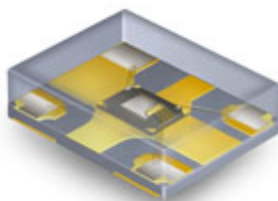
MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP16E7	CERAMIC	1.8V	OSSN	10/07



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](#).