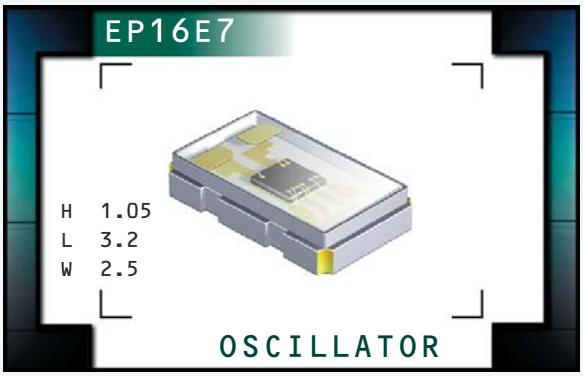
EP16E7 Series

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



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} ±5%
Input Current	3.300MHz to 25.000MHz 25.001MHz to 50.000MHz 50.001MHz to 75.000MHz	8mA Maximum 9mA Maximum 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	±25ppm, 50ppm or ±100ppm Maximum
Output Voltage Logic High (V_{OH})	I_{OH} = -8mA	90% of V_{DD} Minimum
Output Voltage Logic Low (V_{OL})	I_{OL} = +8mA	10% of V_{DD} Maximum
Rise Time / Fall Time	3.300MHz to 50.000MHz, 20% to 80% of waveform 50.001MHz to 75.000MHz, 20% to 80% of waveform	6nSeconds Maximum 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 No Connection V_{IL} of 10% of V_{DD} Maximum	Enables Output Enables Output Disables Output
Standby Current	Disabled Output (Logic Low)	30µA Maximum
Disable Current	Disabled Output (High Impedance)	4mA Maximum
Absolute Clock Jitter	3.300MHz to 24.999999MHz 25.000MHz to 75.000MHz	350pSec Maximum 200pSec Maximum
Aging at 25°		±5ppm/Year Maximum
Start Up Time		10mSec Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP16E7	CERAMIC	1.8V	OS5N	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

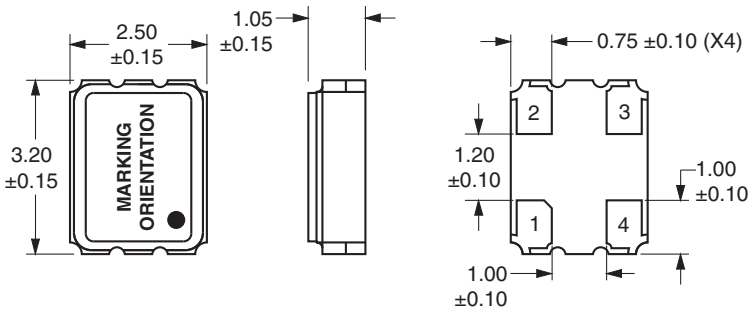
DUTY CYCLE
2=50% ±5%

AVAILABLE OPTIONS
Blank=Bulk
TR=Tape and Reel (Standard)

FREQUENCY

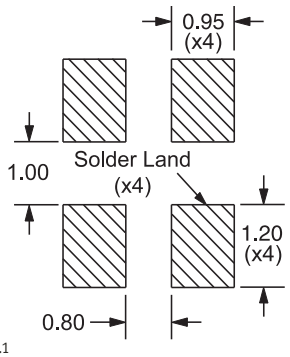
LOGIC CONTROL/ADDITIONAL OUTPUT
H=Tri-State
J=Power Down

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



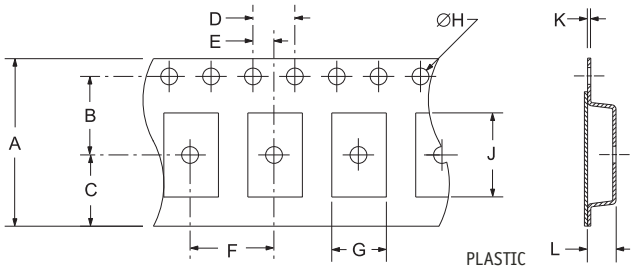
Pin 1: Tri-State or Power Down
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

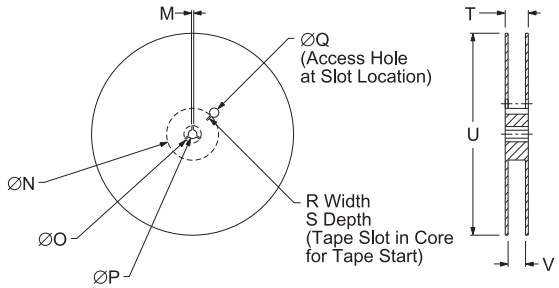
SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS



Tolerances= ±0.1

TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS





	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	Specification
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500Vdc
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
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
Thermal Shock	MIL-STD-883, Method 1011, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

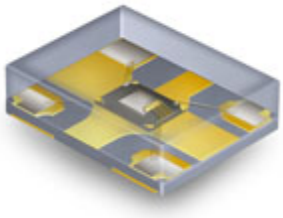
MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV - DATE
ECLIPTEK CORP.	OSCILLATOR	EP16E7	CERAMIC	1.8V	OS5N	10/07

ECLIPTEK® CORPORATION

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.