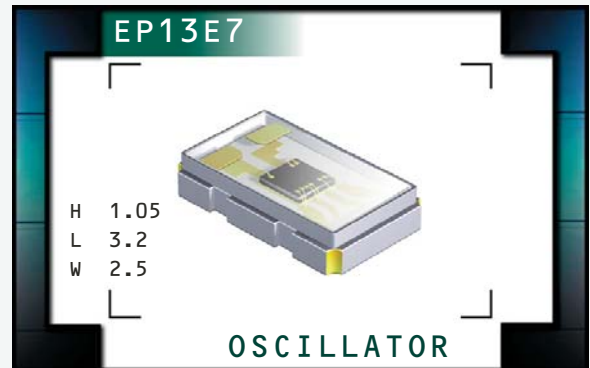


EP13E7 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-Free)
- EPO™ Programmable Oscillators
- Ceramic Surface Mount Package
- LVHCMOS Output
- 3.3V Supply Voltage
- Stability to ±25ppm
- Available on Tape & Reel
- Tri-State and Power Down Functions Available



ELECTRICAL SPECIFICATIONS

Nominal Frequency	3.300MHz, 3.6864MHz, 5.000MHz, 6.000MHz, 6.144MHz, 7.000MHz, 8.000MHz, 9.000MHz, 10.000MHz, 12.000MHz, 14.7456MHz, 16.000MHz, 20.000MHz, 24.000MHz, 25.000MHz, 26.000MHz, 27.000MHz, 30.000MHz, 32.000MHz, 33.000MHz, 33.330MHz, 33.333MHz, 37.500MHz, 40.000MHz, 48.000MHz, 50.000MHz, 52.000MHz, 54.000MHz, 55.000MHz, 66.000MHz, 70.000MHz, 75.000MHz, 80.000MHz, 83.000MHz, 88.000MHz, 96.000MHz, and 100.000MHz	
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})	3.3V _{DC} ±5%	
Input Current	3.300MHz to 25.000MHz	12mA Maximum
	25.001MHz to 75.000MHz	17mA Maximum
	75.001MHz to 90.000MHz	22mA Maximum
	90.001MHz to 100.000MHz	25mA 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	6nSeconds Maximum
	50.001MHz to 75.000MHz, 20% to 80% of waveform	4nSeconds Maximum
	75.001MHz to 100.000MHz, 20% to 80% of waveform	2nSeconds Maximum
Duty Cycle	at 50% of waveform	50 ±5(%)
Load Drive Capability	3.300MHz to 50.000MHz	30pF HCMOS Load Maximum
	50.001MHz to 100.000MHz	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)	30µA Maximum
Disable Current	Disabled Output (High Impedance)	8mA Maximum
Absolute Clock Jitter	3.300MHz to 24.999999MHz	350pSec Maximum
	25.000MHz to 100.000MHz	200pSec Maximum
Aging at 25°	±5ppm/Year Maximum	
Start Up Time	10mSec Maximum	

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EP13E7

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
055N

REV. DATE
06/08

PART NUMBERING GUIDE

EP13E7 H 2 H - 50.000M 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

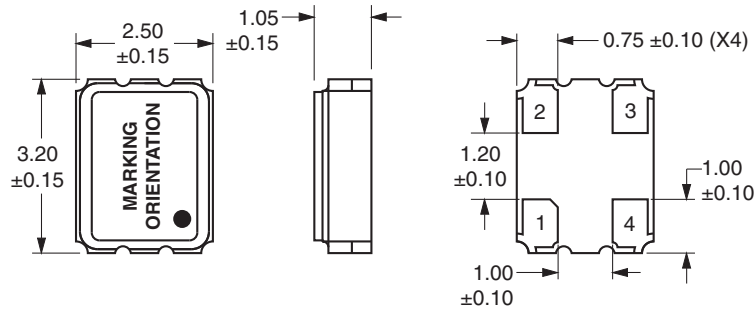
Blank=Bulk
 TR=Tape and Reel (Standard)

FREQUENCY

LOGIC CONTROL/ADDITIONAL OUTPUT

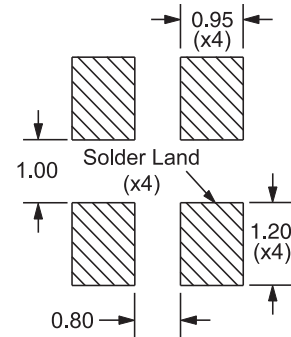
H=Tri-State
 J=Power Down

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



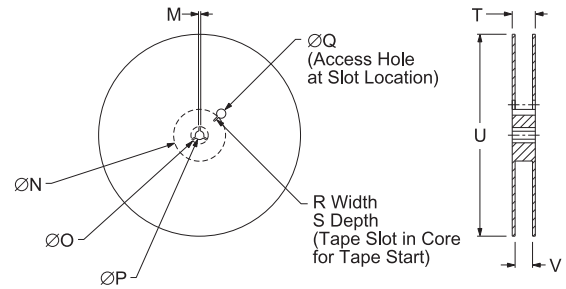
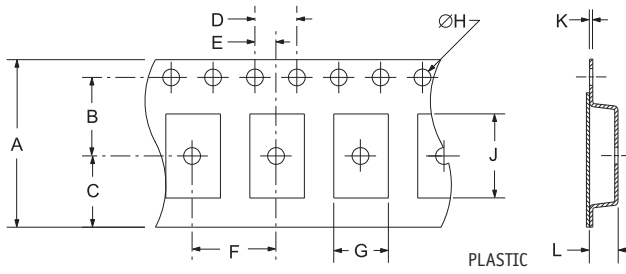
Pin 1: Tri-State or Power Down Pin 2: Case Ground
 Pin 3: Output Pin 4: Supply Voltage

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

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

MEMS First™ is a registered trademark of SiTime Corporation.

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EP13E7	PACKAGE CERAMIC	VOLTAGE 3.3V	CLASS OS5N	REV. DATE 06/08
--------------------------------	------------------------	------------------	--------------------	-----------------	---------------	--------------------