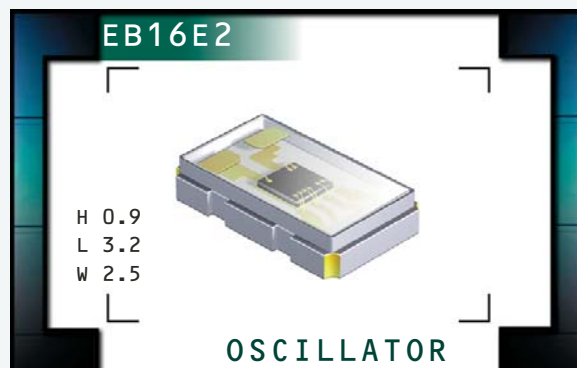


EB16E2 Series

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 1.8V Supply Voltage
- LVHCMOS output
- Stability to ± 50 ppm
- Standby Function
- Available on Tape and Reel



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CORPORATION



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (F_0)	12.288MHz, 13MHz, 13.5MHz, 16MHz, 16.9344MHz, 20MHz, 22.1184MHz, 24.576MHz, 25MHz, 26MHz, 27MHz, 30MHz, 32MHz, 40MHz, 48MHz, 50MHz	
Operating Temperature Range (OTR)	-20°C to 70°C -40°C to 85°C	
Storage Temperature Range (STR)	-55°C to 125°C	
Supply Voltage (V_{DD})	1.8V _{DC} $\pm 5\%$	
Input Current (I_{DD})	12.288MHz to 20.000MHz	2.5mA Maximum
	20.001MHz to 50.000MHz	3.0mA 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 or ± 50 ppm Maximum	
Output Voltage Logic High (V_{OH})	90% of V_{DD} Minimum ($I_{OH} = -4$ mA)	
Output Voltage Logic Low (V_{OL})	10% of V_{DD} Maximum ($I_{OL} = +4$ mA)	
Rise Time / Fall Time (T_R/T_F)	20% to 80% of Waveform	5nSeconds Maximum
Duty Cycle (SYM)	at 50% of Waveform	50 ± 5 (%)
Load Drive Capability (C_{LOAD})	15pF HCMOS Load Maximum	
Tri-State Input Voltage	No Connection	Enables Output
	$V_{IH} \geq 80\%$ of V_{DD}	Enables Output
	$V_{IL} \leq 20\%$ of V_{DD}	Disables Output: High Impedance
Standby Current	Disabled Output: High Impedance	10 μ A Maximum
Start Up Time (T_S)	10mSeconds Maximum	
RMS Phase Jitter	$F_J = 12$ kHz to 20MHz	1pSeconds Maximum

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EB16E2

PACKAGE
CERAMIC

VOLTAGE
1.8V

CLASS
OS5E

REV. DATE
12/07

PART NUMBERING GUIDE

EB16E2 D 2 H - 40.000M TR

FREQUENCY TOLERANCE / STABILITY

C=±100ppm Maximum over -20°C to +70°C

D=±50ppm 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

PACKAGING OPTIONS

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

FREQUENCY

OUTPUT CONTROL FUNCTION

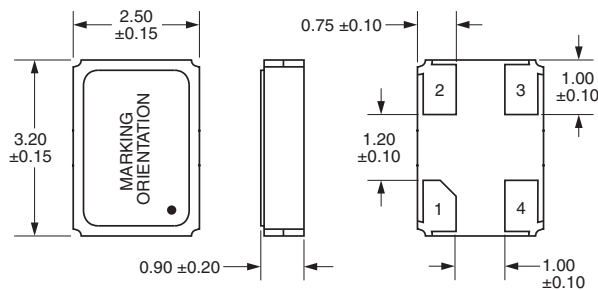
H=Tri-State

DUTY CYCLE

2=50 ±5(%)

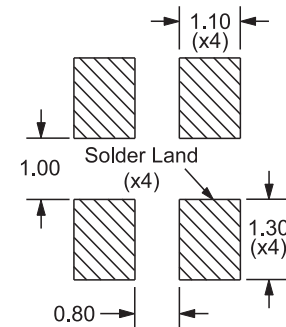
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

Pin 1: Tri-State
Pin 2: Case GroundPin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

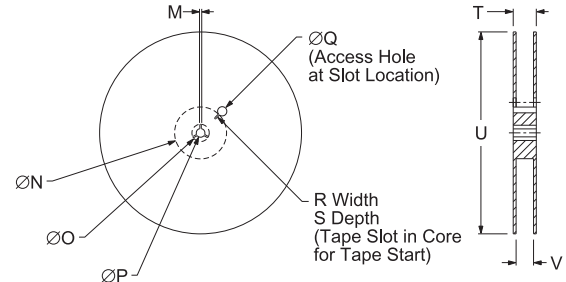
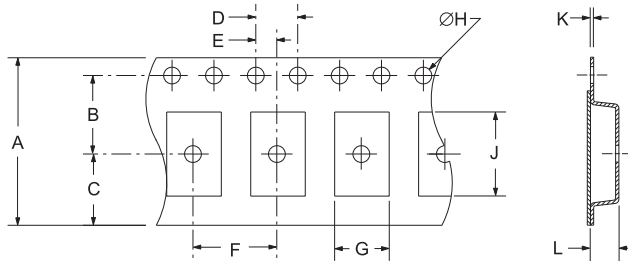
ALL DIMENSIONS IN MILLIMETERS



Tolerances=±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	8.0±0.2	3.5±0.1	2.75±0.1	4.0±0.1	2.0±0.1
F	G	H	J	K	L
4.0±0.1	2.7±.1	1.55±0.5	3.4±.1	0.25 ±0.05	1.4±.1

REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.5	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	14.4 MAX	180 MAX	8.4+1.5-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

PARAMETER

Specification

ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
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
Vibration	MIL-STD-883, Method 2007, Condition A

MARKING SPECIFICATIONS

Line 1: E XX.X

Frequency in MHz (3 Digits Maximum + Decimal)

Line 2: XX Y ZZ

Week of Year

Last Digit of Year

Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB16E2	CERAMIC	1.8V	055E	12/07