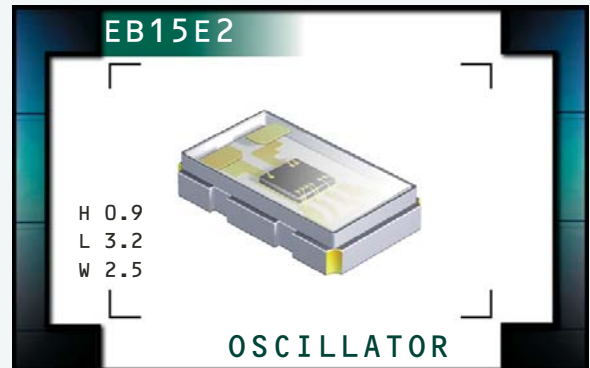


EB15E2 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 2.5V Supply Voltage
- LVCMOS output
- Stability to ± 25 ppm
- Standby Function
- Available on tape and reel



ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)	2.000, 2.048, 2.500, 3.000, 3.072, 3.125, 3.250, 3.579545, 3.750, 4.000, 4.096, 4.125, 4.500, 5.000, 6.000, 6.144, 6.250, 6.500, 6.750, 7.159, 8.000, 8.192, 8.250, 9.000, 10.000, 12.000, 12.288, 12.500, 13.000, 13.500, 14.3181, 14.31818, 15.000, 16.000, 16.384, 16.6666, 16.66667, 16.6667, 16.9344, 18.000, 18.432, 20.000, 24.000, 24.576, 25.000, 26.000, 27.000, 28.636363, 30.000, 32.000, 32.768, 33.000, 33.330, 33.333, 33.3333, 36.000, 38.400, 40.000, 48.000, 50.000, 50.720, 54.000, 58.000, 66.666, 72.000, 98.304, or 100.000MHz
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Operating Temperature Range (OTR)	-20°C to 70°C -40°C to 85°C
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Storage Temperature Range (STR)	-55°C to 125°C
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Supply Voltage (V_{DD})	2.5V _{DC} $\pm 5\%$
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Input Current (I_{DD})	2.000MHz to 9.999MHz 10.000MHz to 19.999MHz 20.000MHz to 39.999MHz 40.000MHz to 50.000MHz 50.001MHz to 58.000MHz 58.001MHz to 70.000MHz 70.001MHz to 100.000MHz	3mA Maximum 4mA Maximum 5mA Maximum 6mA Maximum 7mA Maximum 10mA Maximum 12mA Maximum
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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
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Output Voltage Logic High (V_{OH})	90% of V _{DD} Minimum (I _{OH} = -4mA)
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Output Voltage Logic Low (V_{OL})	10% of V _{DD} Maximum (I _{OL} = +4mA)
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Rise Time / Fall Time (T_R/T_F)	20% to 80% of Waveform, 2MHz to 24MHz 20% to 80% of Waveform, 24.001MHz to 50MHz 20% to 80% of Waveform, 50.001MHz to 100MHz	5nSeconds Maximum 4nSeconds Maximum 3nSeconds Maximum
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Duty Cycle (SYM)	at 50% of Waveform	50 ± 5 (%)
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Load Drive Capability (C_{LOAD})	15pF Maximum
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Tri-State Input Voltage	No Connection V _{IH} : $\geq 80\%$ of V _{DD} V _{IL} : $\leq 20\%$ of V _{DD}	Enables Output Enables Output Disables Output: High Impedance
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Standby Current	Disabled Output: High Impedance	10 μ A Maximum
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Start Up Time (T_S)	10 mSeconds Maximum
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RMS Phase Jitter	F _J = 12kHz to 20MHz	1 pSeconds Maximum
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MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EB15E2	PACKAGE CERAMIC	VOLTAGE 2.5V	CLASS 0S4Z	REV. DATE 08/09
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PART NUMBERING GUIDE

EB15E2 E 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
 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
 J=±25ppm Maximum over -40°C to +85°C

PACKAGING OPTIONS

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

FREQUENCY

OUTPUT CONTROL FUNCTION

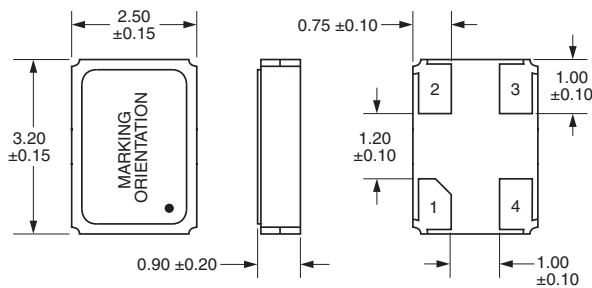
H=Tri-State

DUTY CYCLE

2=50 ±5(%)

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

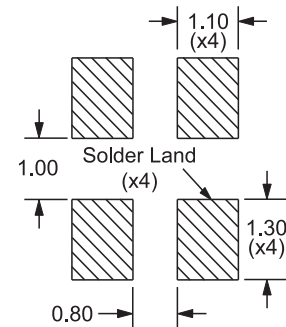


Pin 1: Tri-State
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

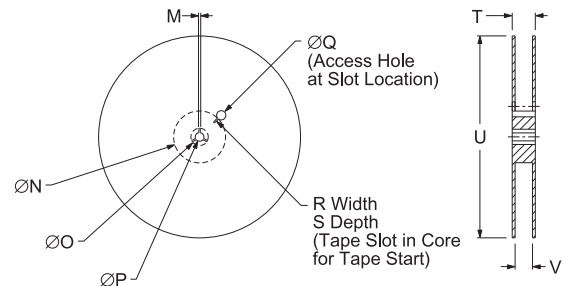
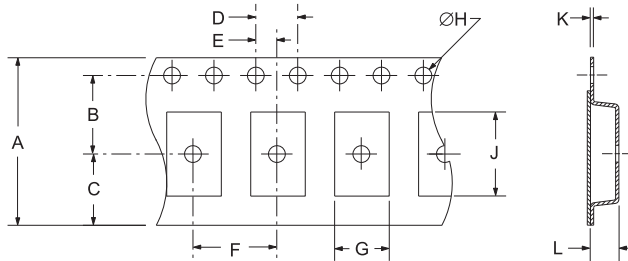
ALL DIMENSIONS IN MILLIMETERS



Tolerances= ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



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	EB15E2	CERAMIC	2.5V	OS4Z	08/09