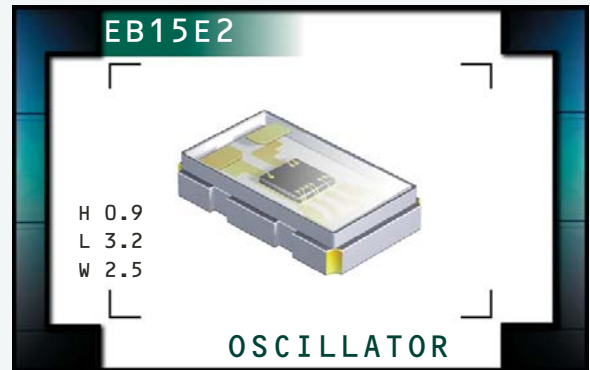


EB15E2 Series



ECLIPTEK[®]
CORPORATION

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



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (F_0)	2MHz, 2.048MHz, 2.5MHz, 3MHz, 3.072MHz, 3.125MHz, 3.25MHz, 3.579545MHz, 3.75MHz, 4MHz, 4.096MHz, 4.125MHz, 4.5MHz, 5MHz, 6MHz, 6.144MHz, 6.25MHz, 6.5MHz, 6.75MHz, 7.159MHz, 8MHz, 8.192MHz, 8.25MHz, 9MHz, 10MHz, 12MHz, 12.288MHz, 12.5MHz, 13MHz, 13.5MHz, 14.3181MHz, 14.31818MHz, 15MHz, 16MHz, 16.384MHz, 16.6666MHz, 16.66667MHz, 16.6667MHz, 16.9344MHz, 18MHz, 18.432MHz, 20MHz, 24MHz, 24.576MHz, 25MHz, 26MHz, 27MHz, 28.636363MHz, 30MHz, 32MHz, 32.768MHz, 33MHz, 33.33MHz, 33.333MHz, 33.3333MHz, 36MHz, 38.4MHz, 40MHz, 48MHz, and 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})	2.5V _{DC} $\pm 5\%$
Input Current (I_{DD})	2.000MHz to 9.999MHz: 3mA Maximum 10.000MHz to 19.999MHz: 4mA Maximum 20.000MHz to 39.999MHz: 5mA Maximum 40.000MHz to 50.000MHz: 6mA Maximum
Frequency Tolerance/Stability	Inclusive of all conditions: Calibration Tolerance at 25°C, ± 100 ppm, ± 50 ppm, or ± 25 ppm Maximum Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration
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, 2MHz to 24MHz: 5nSeconds Maximum 20% to 80% of Waveform, 24.001MHz to 50MHz: 4nSeconds 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)	10 mSeconds Maximum
RMS Phase Jitter	$F_j = 12$ kHz to 20MHz: 1 pSeconds Maximum

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EB15E2

PACKAGE
CERAMIC

VOLTAGE
2.5V

CLASS
0S4Z

REV. DATE
03/09

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

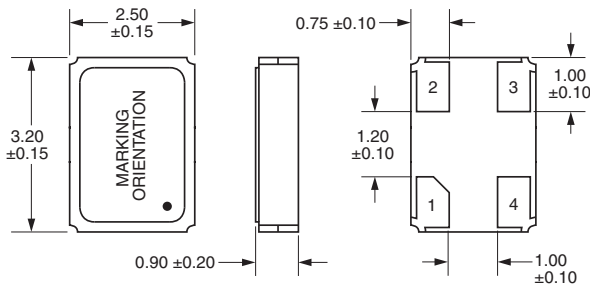
H=Tri-State

DUTY CYCLE

2=50 ±5(%)

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

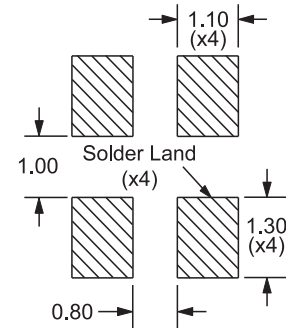


Pin 1: Tri-State
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

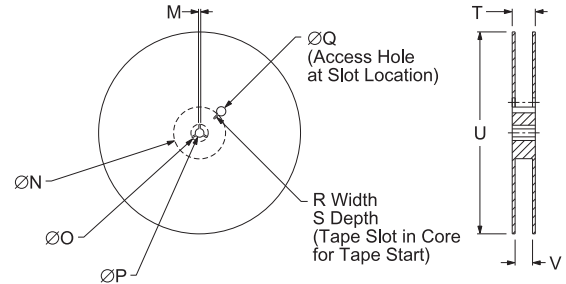
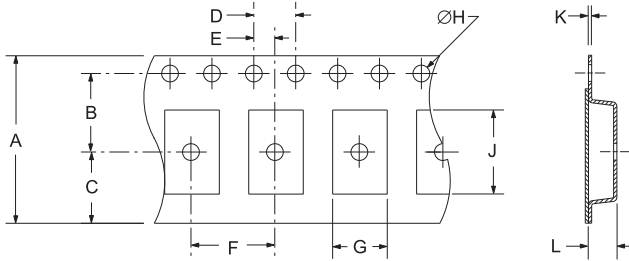
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS



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

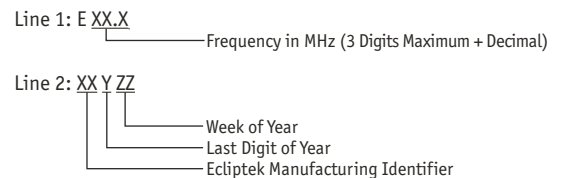
REEL	M	N	O	P	Q	
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.5	40 MIN	
R	S	T	U	V	QTY/REEL	
	2.5 MIN	10 MIN	14.4 MAX	180 MAX	8.4+1.5-0	1,000

*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



MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB15E2	CERAMIC	2.5V	OS4Z	03/09