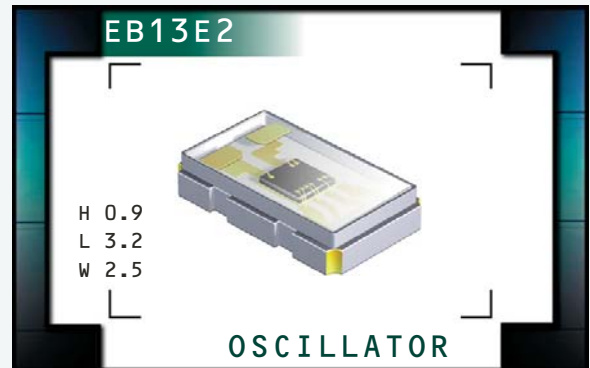


EB13E2 Series



ECLIPTEK[®]
CORPORATION

- Crystal Clock Oscillators
- LVCMOS Output
- +3.3V Supply Voltage
- Tri-State Output Function
- 4 Pad Ceramic SMD Package
- Low Stand-by Current
- RoHS Compliant (Pb-Free)



ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)	1.8463, 2.000, 2.048, 2.4576, 3.6864, 4.000, 4.800, 5.000, 6.000, 7.040, 7.159, 7.3728, 8.000, 8.192, 10.000, 11.0592, 12.000, 12.288, 13.000, 13.1072, 13.500, 14.3181, 14.31818, 14.7456, 15.000, 16.000, 16.384, 16.6666, 16.66667, 16.6667, 18.000, 18.432, 19.200, 19.440, 19.6608, 20.000, 22.1184, 22.400, 24.000, 24.5454, 24.576, 25.000, 26.000, 26.2144, 26.973, 27.000, 28.375, 28.63636, 28.636363, 29.4912, 29.500, 30.000, 32.000, 32.768, 33.000, 33.200, 33.330, 33.333, 33.3333, 36.000, 38.400, 40.000, 40.0908, 48.000, 49.0908, 49.152, 50.000, 54.000, 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})	3.3V _{DC} ±5%
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Input Current (I_{DD})	1.8463MHz 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
	50.001MHz to 54.000MHz	9mA Maximum
	100.000MHz	14mA 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	±100ppm Maximum ±50ppm Maximum ±25ppm 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, 1.8463MHz to 24MHz	5nSeconds Maximum
	20% to 80% of Waveform, 24.001MHz to 50MHz	4nSeconds Maximum
	20% to 80% of Waveform, 50.001MHz to 100MHz	3nSeconds Maximum

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	Enables Output
	V _{IH} : ≥80% of V _{DD}	Enables Output
	V _{IL} : ≤20% of V _{DD}	Disables Output: High Impedance

Standby Current	Disabled Output: High Impedance	10µA 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 EB13E2	PACKAGE CERAMIC	VOLTAGE 3.3V	CLASS OS5A	REV. DATE 10/10
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PART NUMBERING GUIDE

EB13E2 E 2 H - 40.000 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 & Reel

FREQUENCY

OUTPUT CONTROL FUNCTION

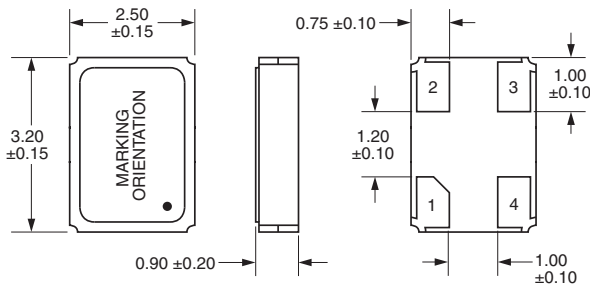
H = Tri-State

DUTY CYCLE

2 = 50 ±5(%)

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

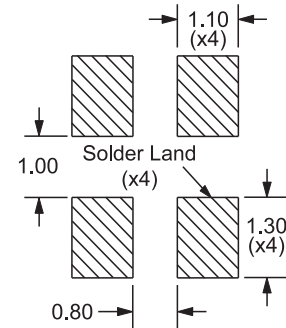


Pin 1: Tri-State
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

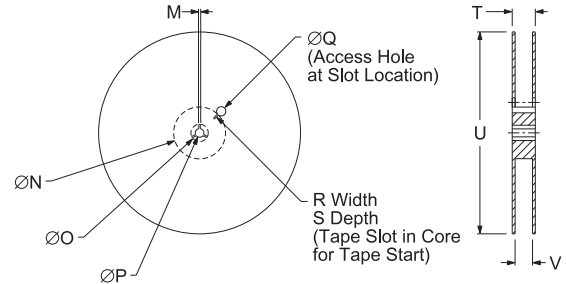
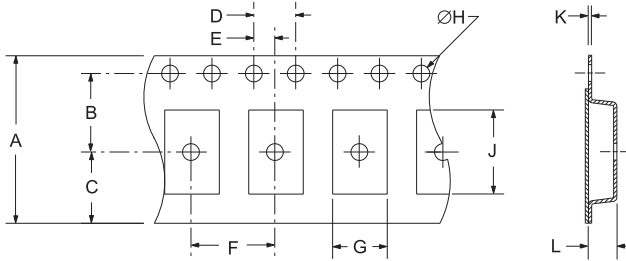
ALL DIMENSIONS IN MILLIMETERS



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

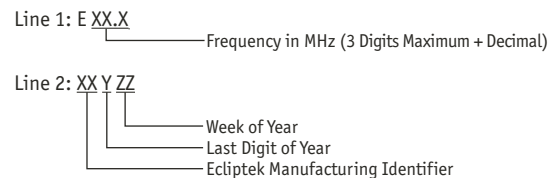
REEL	M	N	O	P	Q	
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.5	40 MIN	
	R	S	T	U	V	QTY/REEL
	2.5 MIN	10 MIN	14.4 MAX	180 MAX	8.4+1.5-0	1,000

*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



MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB13E2	CERAMIC	3.3V	OS5A	10/10