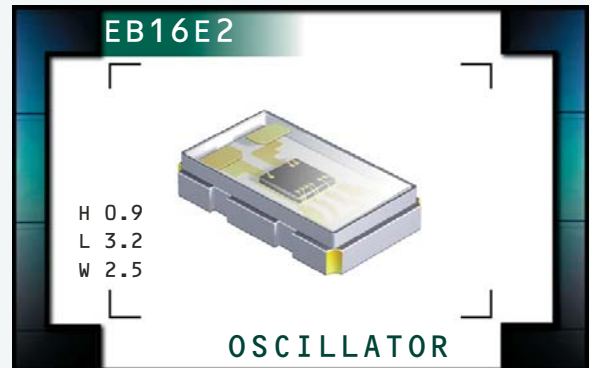


EB16E2 Series



- Crystal Clock Oscillators
- LVCMOS Output
- +1.8V Supply Voltage
- Tri-State Output Function
- 4 Pad Ceramic SMD Package
- Low Stand-by Current
- RoHS Compliant (Pb-Free)



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

Storage Temperature Range (STR)

-55°C to +125°C

Supply Voltage (V_{DD})

1.8V_{DC} ±5%

Input Current (I_{DD})

2.000MHz to 9.999MHz

3mA Maximum

10.000MHz to 39.999MHz

4mA Maximum

40.000MHz to 50.000MHz

5mA Maximum

50.001MHz to 58.000MHz

6mA Maximum

58.001MHz to 70.000MHz

8mA Maximum

70.001MHz to 100.000MHz

10mA 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

Output Voltage Logic High (V_{OH})

90% of V_{DD} Minimum (I_{OH} = -4mA)

Output Voltage Logic Low (V_{OL})

10% of V_{DD} Maximum (I_{OL} = +4mA)

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

20% to 80% of Waveform, 50.001MHz to 100MHz

3nSeconds Maximum

Duty Cycle (SYM)

at 50% of Waveform

50 ±5(%)

Load Drive Capability (C_{LOAD})

15pF Maximum

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

Start Up Time (T_S)

10mSeconds Maximum

RMS Phase Jitter

F_J = 12kHz to 20MHz

1pSeconds Maximum

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EB16E2

PACKAGE
CERAMIC

VOLTAGE
1.8V

CLASS
OS5E

REV. DATE
08/09

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 & Reel

FREQUENCY

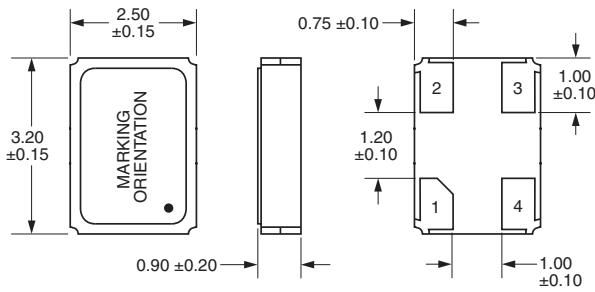
OUTPUT CONTROL FUNCTION

H=Tri-State

DUTY CYCLE

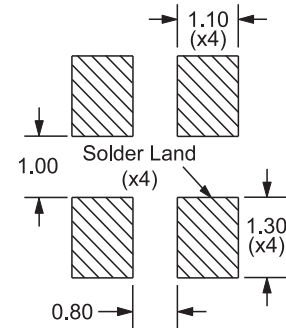
2=50 ±5(%)

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



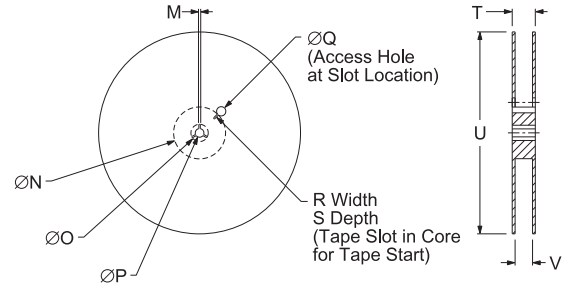
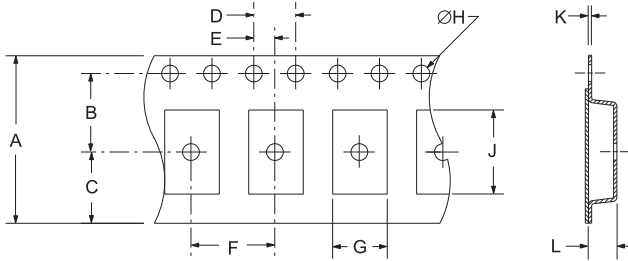
Pin 1: Tri-State
 Pin 2: Case Ground
 Pin 3: Output
 Pin 4: Supply Voltage

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

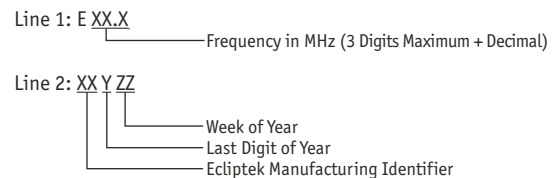
REEL	M	N	O	P	Q	
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.5	40 MIN	
R	S	T	U	V	QTY/REEL	
	2.5 MIN	10 MIN	14.4 MAX	180 MAX	8.4+1.5-0	1,000

*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	EB16E2	CERAMIC	1.8V	OS5E	08/09