

EB13C5 Series

- RoHS Compliant (Pb-Free)
- Ceramic SMD package
- 3.3V supply voltage
- Low input current
- LVHCMOS output
- Stability to $\pm 20\text{ppm}$
- Standby Function
- Available in tube or tape and reel



ECLIPTEK
CORPORATION
www.DataSheet4U.com



ELECTRICAL SPECIFICATIONS

Frequency Range		6.144MHz to 44.736MHz	
Operating Temperature Range		0°C to 70°C -40°C to 85°C	
Storage Temperature Range		-55°C to 125°C	
Supply Voltage (V_{DD})		3.3V _{DC} $\pm 10\%$	
Input Current	6.144MHz to 10.000MHz	2mA Maximum	
	10.001MHz to 25.000MHz	3mA Maximum	
	25.001MHz to 40.000MHz	5mA Maximum	
	40.001MHz to 44.736MHz	12mA 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	
Output Voltage Logic High (V_{OH})	$\leq 40.000\text{MHz}$	90% of V_{DD} Min.	(-1.6mA)
	$> 40.000\text{MHz}$		(-8mA)
Output Voltage Logic Low (V_{OL})	$\leq 40.000\text{MHz}$	10% of V_{DD} Max.	(+1.6mA)
	$> 40.000\text{MHz}$		(+8mA)
Rise / Fall Time	$\leq 25.000\text{MHz}$ 20% to 80% of Waveform	6 nSeconds Maximum	
	$> 25.000\text{MHz}$ 20% to 80% of Waveform	4 nSeconds Maximum	
Duty Cycle	at 50% of Waveform	50 $\pm 10\%$ (Standard)	
	at 50% of Waveform	50 $\pm 5\%$ (Optional)	
Load Drive Capability		15pF HCMOS Load Maximum	
Tri-State Input Voltage	No Connection	Enables Output	
	$V_{IH} \geq 90\%$ of V_{DD}	Enables Output	
	$V_{IL} \leq 10\%$ of V_{DD}	Disables Output: High Impedance	
Standby Current		Disabled Output: High Impedance	
Start Up Time		10 mSeconds Maximum	
Period Jitter: One Sigma		25pSeconds Maximum	

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EB13C5	PACKAGE CERAMIC	VOLTAGE 3.3V	CLASS OS1K	REV. DATE 03/03
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www.DataSheet4U.com

800-ECLIPTEK www.ecliptek.com for latest revision

Specifications subject to change without notice.

PART NUMBERING GUIDE

www.DataSheet4U.com

EB13C5 F 2 H - 40.000M TR

FREQUENCY TOLERANCE / STABILITY

C=±100ppm Maximum over 0°C to +70°C
D=±50ppm Maximum over 0°C to +70°C
E=±25ppm Maximum over 0°C to +70°C
F=±20ppm Maximum over 0°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
K=±20ppm Maximum over -40°C to +85°C

PACKAGING OPTIONS

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

FREQUENCY

OUTPUT CONTROL FUNCTION

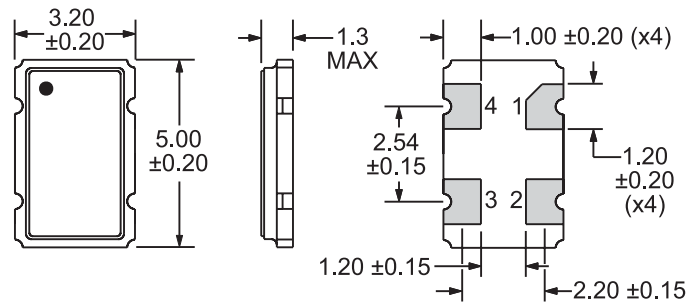
H=Tri-State

DUTY CYCLE

1=50±10(%)
2=50±5(%)

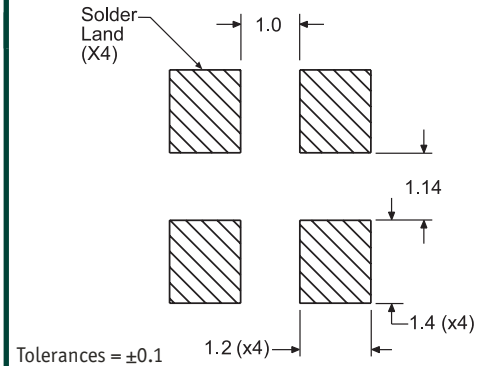
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



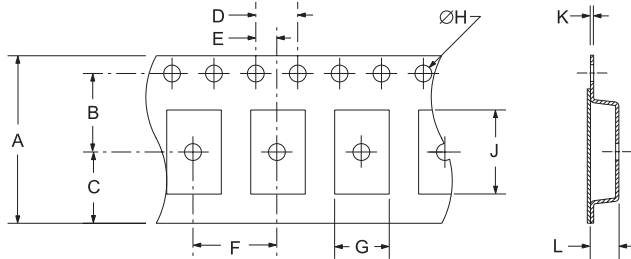
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

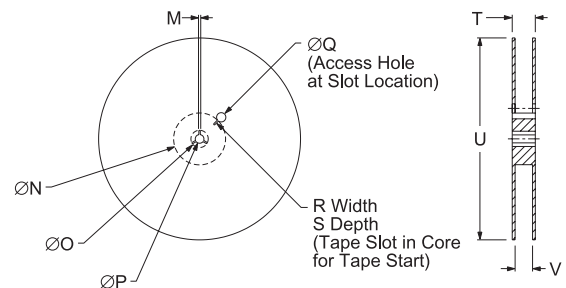


TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	12.0±0.2	5.5±0.1	6.5±0.1	4.0±0.1	2.0±0.1
F	G	H	J	K	L
8.0±0.1	B0*	1.5+0.1-0.0	A0*	0.30±0.05	K0*



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	18.4 MAX	180 MAX	12.4+2-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test
Gross Leak Test
Mechanical Shock
Vibration
Solderability
Temperature Cycling
Resistance to Soldering Heat
Resistance to Solvents

Specification

MIL-STD-883, Method 1014, Condition A
MIL-STD-883, Method 1014, Condition C
MIL-STD-202, Method 213, Condition C
MIL-STD-883, Method 2007, Condition A
MIL-STD-883, Method 2002
MIL-STD-883, Method 1010
MIL-STD-202, Method 210
MIL-STD-202, Method 215

MARKING SPECIFICATIONS

Line 1: E XX.XXX

Frequency in MHz (5 Digits Maximum + Decimal)

Line 2: XX YY ZZ

Week of Year
Last Digit of Year
Eclipse Manufacturing Identifier

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EB13C5

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
OS1K

REV. DATE
03/03