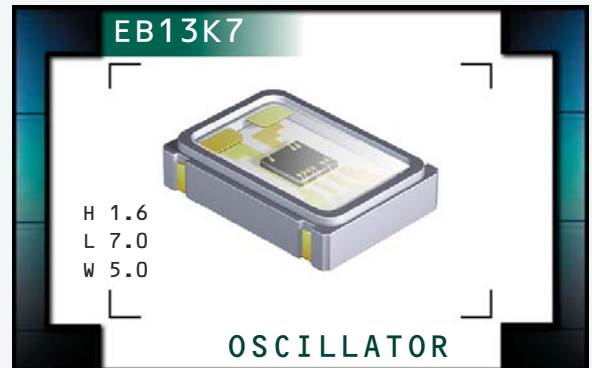


EB13K7 Series



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)



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		32.768kHz
Operating Temperature Range		0°C to +70°C or -40°C to +85°C
Storage Temperature Range		-55°C to +125°C
Supply Voltage (V_{DD})		3.3V _{DC} ±5%
Input Current		1mA 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 ±20ppm Maximum
Output Voltage Logic High (V_{OH})		90% of V _{DD} Minimum I _{OH} = -2mA
Output Voltage Logic Low (V_{OL})		10% of V _{DD} Maximum I _{OL} = +2mA
Rise Time / Fall Time	20% to 80% of Waveform	0.5µSeconds Maximum
Load Drive Capability		15pF Maximum
Duty Cycle	at 50% of Waveform	50 ±5(%)
Tri-State Input Voltage	V _{IH} : ≥90% of V _{DD} or No Connection V _{IL} : ≤10% of V _{DD}	Enables Output Disables Output: High Impedance
Standby Current	Disabled Output: High Impedance	10µA Maximum
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10mSeconds Maximum

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EB13K7

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
057F

REV. DATE
08/09

PART NUMBERING GUIDE

EB13K7 F 2 H - 32.768K 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

DUTY CYCLE

2 = 50 ±5(%)

AVAILABLE OPTIONS

Blank = Bulk
 TR = Tape & Reel

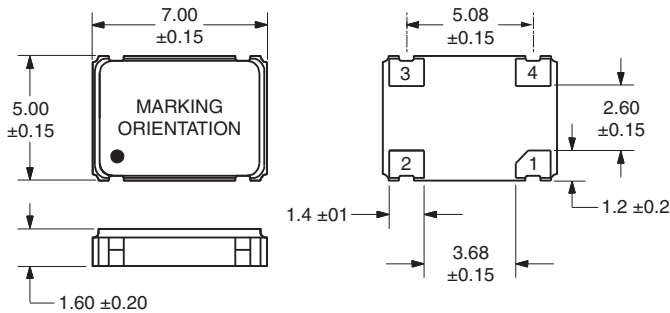
FREQUENCY

OUTPUT CONTROL FUNCTION

H = Tri-State (High Impedance)

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

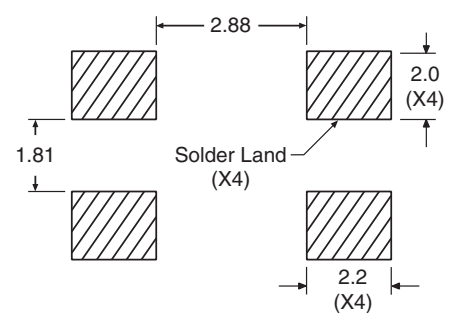


Pin 1: Tri-State
 Pin 2: Case Ground

Pin 3: Output
 Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

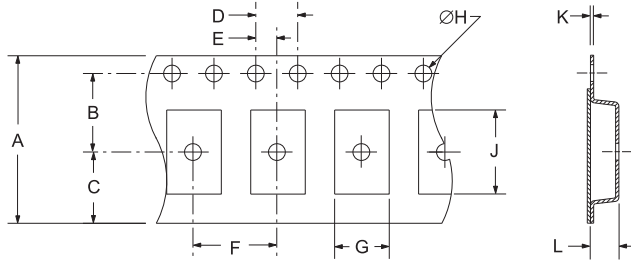
ALL DIMENSIONS IN MILLIMETERS



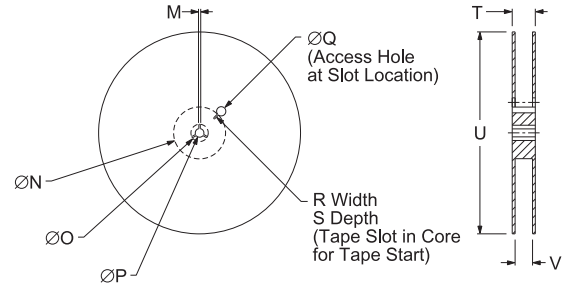
Tolerances = ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



REEL	A	B	C	D	E
	16+0.3-0.1	7.5±0.1	6.75±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*	0.3±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	22.4 MAX	360 MAX	16.4+2-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	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: ECLIPTEK
 Line 2: XX.XXX K
 Frequency in MHz (5 Digits Maximum + Decimal)
 Line 3: XXXXX
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB13K7	CERAMIC	3.3V	OS7F	08/09