

EB13C3 Series



- Crystal Clock Oscillators
- LVCMOS Output
- +3.3V Supply Voltage
- Tri-State Output Function
- Low Stand-by Current
- Low Input Current
- 4 Pad Ceramic SMD Package



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} ±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	±100ppm, ±50ppm, ±25ppm or ±20ppm Max.
Output Voltage Logic High (V_{OH})	≤40.000MHz	90% of V _{DD} Min. (-1.6mA)
	>40.000MHz	(-8mA)
Output Voltage Logic Low (V_{OL})	≤40.000MHz	10% of V _{DD} Max. (+1.6mA)
	>40.000MHz	(+8mA)
Rise / Fall Time	≤25.000MHz 20% to 80% of Waveform	6nSeconds Maximum
	>25.000MHz 20% to 80% of Waveform	4nSeconds Maximum
Duty Cycle	at 50% of Waveform	50 ±10% (Standard)
	at 50% of Waveform	50 ±5% (Optional)
Load Drive Capability		15pF Maximum
Tri-State Input Voltage	No Connection	Enables Output
	V _{IH} : ≥90% of V _{DD}	Enables Output
	V _{IL} : ≤10% of V _{DD}	Disables Output: High Impedance
Standby Current	Disabled Output: High Impedance	10µA Maximum
Start Up Time		10 mSeconds Maximum
Period Jitter: One Sigma		25pSeconds Maximum

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EB13C3	PACKAGE CERAMIC	VOLTAGE 3.3V	CLASS OS1I	REV. DATE 03/03
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PART NUMBERING GUIDE

EB13C3 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 & Reel

FREQUENCY

OUTPUT CONTROL FUNCTION

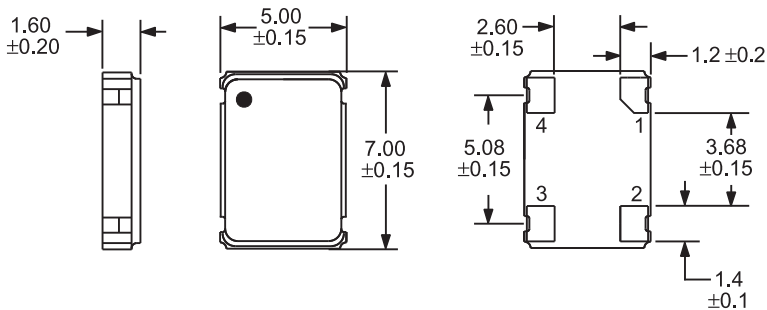
H=Tri-State

DUTY CYCLE

1=50 ±10(%)
 2=50 ±5(%)

MECHANICAL DIMENSIONS

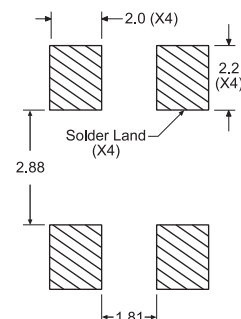
ALL DIMENSIONS IN MILLIMETERS



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

SUGGESTED SOLDER PAD LAYOUT

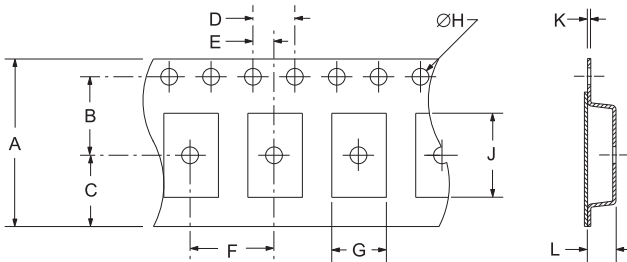
ALL DIMENSIONS IN MILLIMETERS



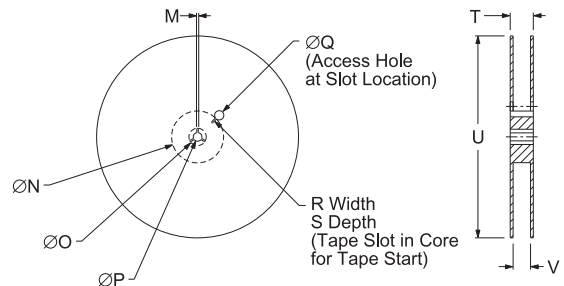
Tolerances = ±0.1

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	16+3-.1	7.5±.1	6.75±.1	4±.1	2±.1
F	G	H	J	K	L
	8±.1	B0*	1.5+1.0	A0*	.3±.05



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13±.2	40 MIN
R	S	T	U	V	QTY/REEL
	2.5 MIN	10 MIN	22.4 MAX	360 MAX	16.4+2-0

*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: ECLIPTEK

Line 2: XX.XXX M

Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ

Week of Year
 Last Digit of Year
 Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EB13C3	CERAMIC	3.3V	OS1I	03/03