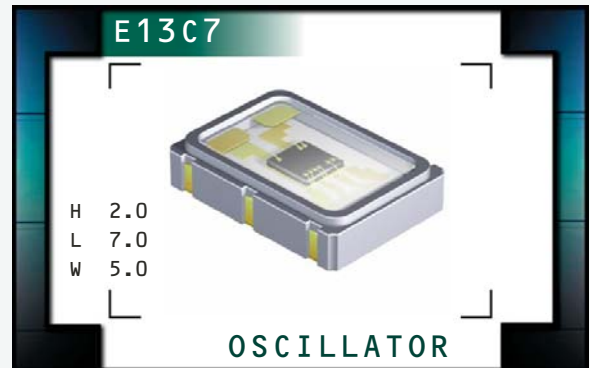


E13C7 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-Free)
- LVPECL Output Oscillators
- 3.3V Supply Voltage
- Ceramic 6-pad SMD Package
- Stability to ± 20 ppm
- Tri-State Output
- Complementary Output
- Available on Tape and Reel
- Wide Range of Available Frequencies



ELECTRICAL SPECIFICATIONS

Nominal Frequency (MHz)	77.76, 78.125, 80, 80.157, 85, 87.125, 90, 100, 106.25, 110, 119, 120, 122.888, 124.4, 125, 127, 128, 131.072, 133, 133.33, 133.333, 135, 137.472, 150, 155.52, 156.25, 159.375, 161.1328, 162.5, 163.84, 164.355, 164.355469, 166, 166.67, 167.3316, 170, 173.3705, 175, 176.83816, 187.5, 187.509375, 187.5103, 200, 212.5, 240, 250, or 312MHz
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Operating Temperature Range	0°C to 70°C, or -40°C to +85°C
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Storage Temperature Range	-55°C to 125°C
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Supply Voltage (V_{CC})	3.3V _{DC} $\pm 5\%$
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Input Current	77.76MHz to 159.999999MHz	75mA Maximum
	160MHz to 312.5MHz	100mA 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, 1st Year Aging at 25°C, Shock, and Vibration	± 100 ppm, ± 50 ppm, ± 25 ppm, or ± 20 ppm Maximum
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Output Voltage Logic High (V_{OH})	0°C to 85°C	V _{CC} -1.025V _{DC} Minimum
	-40°C to 0°C	V _{CC} -1.085V _{DC} Minimum

Output Voltage Logic Low (V_{OL})	0°C to 85°C	V _{CC} -1.620V _{DC} Maximum
	-40°C to 0°C	V _{CC} -1.555V _{DC} Maximum

Rise Time / Fall Time	20% to 80% of waveform	300pSec Typical, 700pSec Maximum
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Duty Cycle	at 50% of waveform	50 ± 5 (%)
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Load Drive Capability		50 Ohms into V _{CC} -2.0V _{DC}
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Logic Control / Additional Output		Tri-State and Complementary Output
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Tri-State Input Voltage	V _{IH} of 70% of V _{CC} Minimum	Enables Output
	No Connection	Enables Output
	V _{IL} of 30% of V _{CC} Maximum	Disables Output: High Impedance

Standby Current	Without Load	30 μ A Maximum
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Start Up Time		10 mSeconds Maximum
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RMS Phase Jitter	FJ = 12kHz to 20MHz	0.4pSec Typical, 1 pSec Maximum
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Typical Phase Noise	Fo=156.250MHz	-60dBc/Hz at 10Hz Offset
		-95dBc/Hz at 100Hz Offset
		-125dBc/Hz at 1kHz Offset
		-143dBc/Hz at 10kHz Offset
		-145dBc/Hz at 100kHz Offset
		-145dBc/Hz at 1MHz Offset
		-146dBc/Hz at 10MHz Offset

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
E13C7

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
OS1M

REV. DATE
01/09

PART NUMBERING GUIDE

E13C7 E 2 F - 155.520M TR

FREQUENCY TOLERANCE & STABILITY/ OPERATING TEMPERATURE RANGE

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 (*)

AVAILABLE OPTIONS

Blank= Tubes
 TR= Tape and Reel (Standard)

FREQUENCY

LOGIC CONTROL/ADDITIONAL OUTPUT

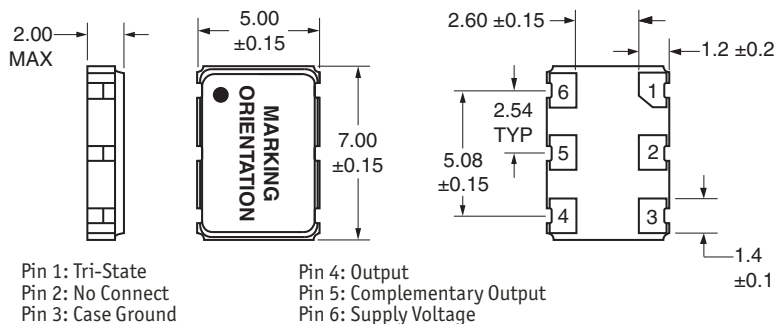
F= Tri-State and Complementary Output

DUTY CYCLE

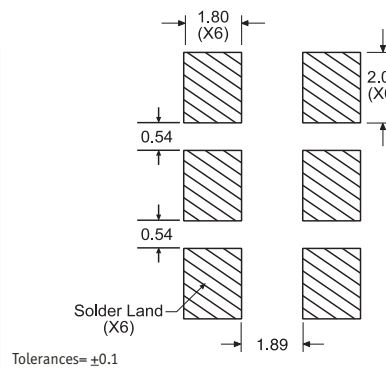
2= 50 ±5 (%)

(*) Not available over Nominal Frequency range of 212.500001MHz to 312.500MHz

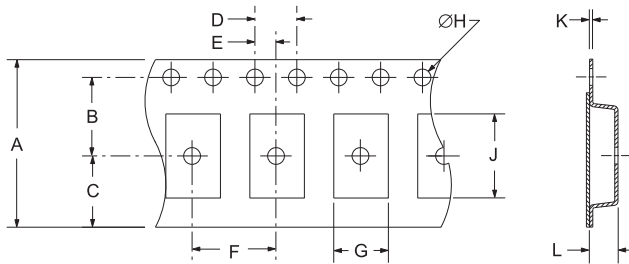
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



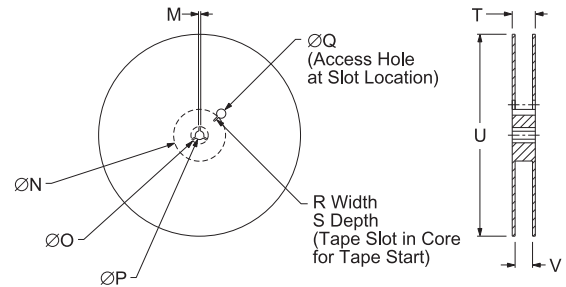
SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E	
	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	K0*



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	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-202, Method 210
Resistance to Solvents	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	E13C7	CERAMIC	3.3V	OS1M	01/09