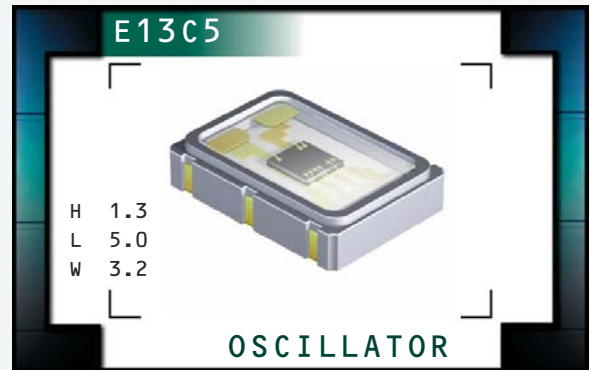


E13C5 Series



ECLIPTEK[®]
CORPORATION

- Crystal Clock Oscillators
- LVPECL Output
- +3.3V Supply Voltage
- Complementary Output
- Tri-State Output Function
- 6 Pad Ceramic SMD Package
- Low Stand-by Current
- RoHS Compliant (Pb-Free)



ELECTRICAL SPECIFICATIONS

Nominal Frequency (MHz)	74.25MHz, 77.76MHz, 78.125MHz, 80MHz, 80.157MHz, 85MHz, 87.125MHz, 90MHz, 100MHz, 106.25MHz, 110MHz, 119MHz, 120MHz, 122.888MHz, 124.4MHz, 125MHz, 127MHz, 128MHz, 131.072MHz, 133MHz, 133.33MHz, 133.333MHz, 135MHz, 137.472MHz, 150MHz, 155.52MHz, 156.25MHz, 159.375MHz, or 161.1328MHz	
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_{CC})	3.3V _{DC} ±5%	
Input Current	75mA 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	±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum
Output Voltage Logic High (V_{OH})	0°C to 85°C -40°C to 0°C	V _{CC} -1.025V _{DC} Minimum V _{CC} -1.085V _{DC} Minimum
Output Voltage Logic Low (V_{OL})	0°C to 85°C -40°C to 0°C	V _{CC} -1.620V _{DC} Maximum V _{CC} -1.555V _{DC} Maximum
Rise Time / Fall Time	20% to 80% of waveform	300pSec Typical, 700pSec Maximum
Duty Cycle	at 50% of waveform	50 ±5(%)
Load Drive Capability	50 Ohms into V _{CC} -2.0V _{DC}	
Logic Control / Additional Output	Tri-State and Complementary Output	
Tri-State Input Voltage	V _{IH} of 70% of V _{CC} Minimum No Connection V _{IL} of 30% of V _{CC} Maximum	Enables Output Enables Output Disables Output: High Impedance
Standby Current	Without Load	30µA Maximum
Start Up Time	10 mSeconds Maximum	
RMS Phase Jitter	FJ = 12kHz to 20MHz	0.4pSec Typical, 1 pSec Maximum
Typical Phase Noise	F ₀ =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
E13C5

PACKAGE
CERAMIC

VOLTAGE
3.3V

CLASS
OS6V

REV. DATE
07/09

PART NUMBERING GUIDE

E13C5 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=Bulk
 TR=Tape & Reel

FREQUENCY

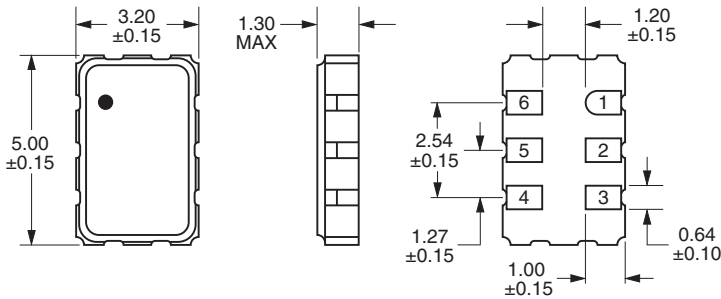
LOGIC CONTROL/ADDITIONAL OUTPUT

F=Tri-State and Complementary Output

DUTY CYCLE

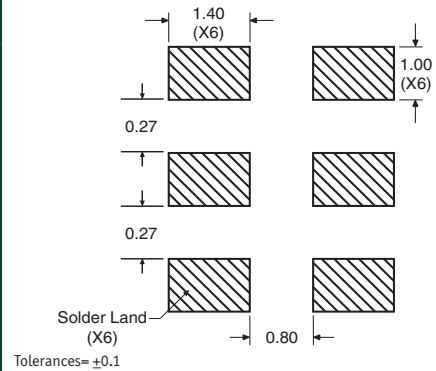
2=50±5(%)

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS

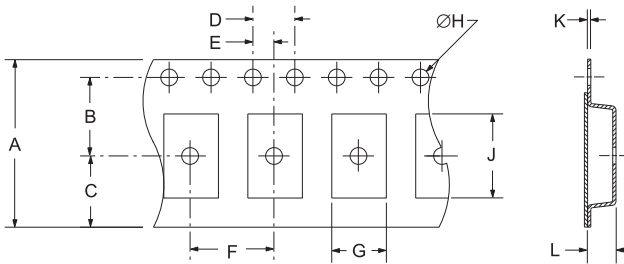


Pin 1: Tri-State
 Pin 2: No Connect
 Pin 3: Case Ground
 Pin 4: Output
 Pin 5: Complementary Output
 Pin 6: Supply Voltage

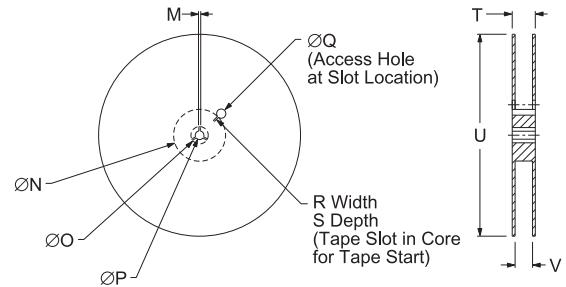
SUGGESTED SOLDER PAD LAYOUT ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	16±0.3	7.5±0.1	6.75±0.1	4±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±0.1



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

*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: EXX.XXX — Frequency in MHz (5 Digits Maximum + Decimal)

Line 2: XX Y ZZ
 — Week of Year
 — Last Digit of Year
 — Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	E13C5	CERAMIC	3.3V	OS6V	07/09