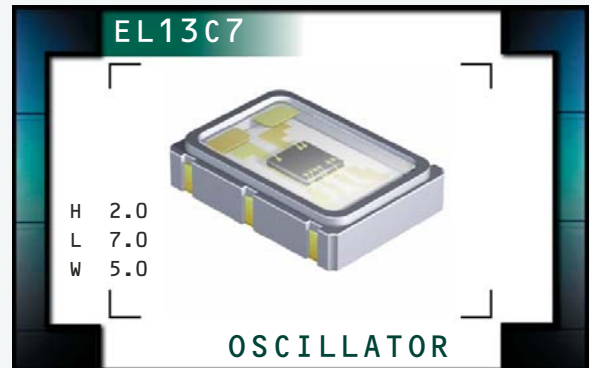


# EL13C7 Series



www.DataSheet4U.com®  
ECLIPTEK  
CORPORATION

- RoHS Compliant (Pb-Free)
- LVDS Output Oscillators
- 3.3V Supply Voltage
- Ceramic 6-pad SMD Package
- Stability to  $\pm 25$ ppm
- Tri-State Output
- Complementary Output
- Available on Tape and Reel
- Wide Range of Available Frequencies



## ELECTRICAL SPECIFICATIONS

Nominal Frequency (MHz)	78.125M, 80M, 80.157M, 85M, 87.125M, 90M, 100M, 106.25M, 110M, 119M, 120M, 122.888M, 124.4M, 125M, 127M, 128M, 133M, 133.333M, 137.472M, 150M, 155.52M, 156.25M, 159.375M, 161.1328M, 162.5M, 166M, 170M, 175M, 176.83816M, 187.5M, 187.509375M, 200M, or 212.5M	
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 <sub>DC</sub> $\pm 5\%$	
Input Current	With Load	65mA 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	$\pm 100$ ppm, $\pm 50$ ppm, or $\pm 25$ ppm Maximum
Output Voltage Logic High ( $V_{OH}$ )	1.43V <sub>DC</sub> Typical, 1.6V <sub>DC</sub> Maximum	
Output Voltage Logic Low ( $V_{OL}$ )	1.1V <sub>DC</sub> Typical, 0.9V <sub>DC</sub> Minimum	
Differential Output Voltage ( $V_{OD}$ )	247mV Minimum, 330mV Typical, 454mV Maximum	
Offset Voltage ( $V_{OS}$ )	1.125V Minimum, 1.250V Typical, 1.375V Maximum	
Rise Time / Fall Time	20% to 80% of waveform	300pSec Typical, 700pSec Maximum
Differential Output Error ( $_{D}V_{OD}$ )	50mV Maximum	
Duty Cycle	at 50% of waveform or at the crossing point	50 $\pm 5$ (%)
Offset Error ( $_{D}V_{OS}$ )	150mV Maximum	
Output Swing ( $_{D}VO_{PP}$ )	350mVdc Minimum	
Load Drive Capability	Between Output and Complementary Output	100 Ohms
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 Outputs Enables Outputs Disables Outputs: High Impedance
Standby Current	Without Load	30 $\mu$ A Maximum
Start Up Time	10 mSeconds Maximum	
RMS Phase Jitter	FJ = 12kHz to 20MHz	0.4pSec Typical, 1 pSec Maximum
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  
EL13C7

PACKAGE  
CERAMIC

VOLTAGE  
3.3V

CLASS  
055G

REV. DATE  
01/07

PART NUMBERING GUIDE

EL13C7 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  
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

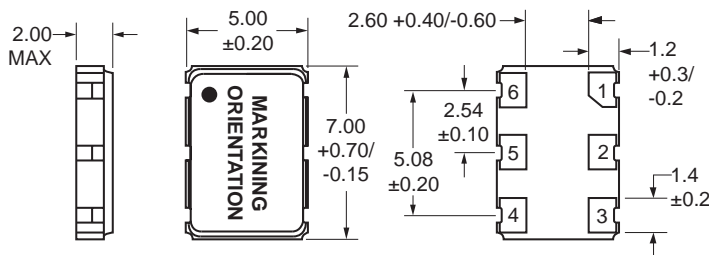
F=Tri-State and Complementary Output

DUTY CYCLE

2=50±5(%)

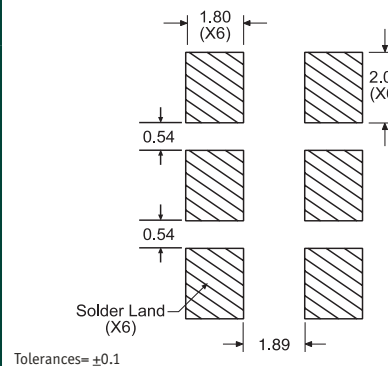
(\*) Not available over Nominal Frequency range of 176.83816MHz to 212.500MHz

MECHANICAL DIMENSIONS  
ALL DIMENSIONS IN MILLIMETERS



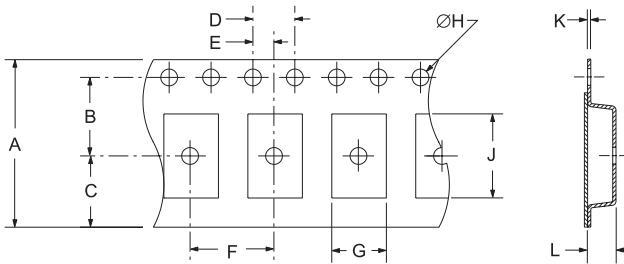
Pin 1: Tri-State  
Pin 2: No Connect  
Pin 3: Case Ground  
Pin 4: Output  
Pin 5: Complementary Output  
Pin 6: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT  
ALL DIMENSIONS IN MILLIMETERS

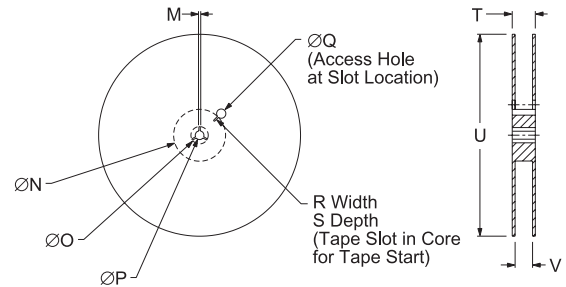


Tolerances=±0.1

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	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  
Line 3: XX Y ZZ

Frequency in MHz (5 Digits Maximum + Decimal)  
Week of Year  
Last Digit of Year  
Eclipse Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EL13C7	CERAMIC	3.3V	OS5G	01/07