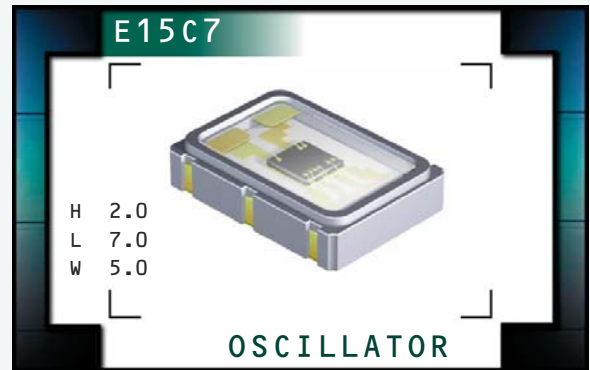


E15C7 Series

- RoHS Compliant (Pb-Free)
- LVPECL output oscillators
- 2.5V supply voltage
- AT-Cut fundamental mode inverted mesa crystal
- Ceramic 6-pad SMD package
- Stability to 25ppm
- Tri-State output
- Complementary output
- Available on tape and reel
- Wide range of available frequencies



ELECTRICAL SPECIFICATIONS

Nominal Frequency	38.880MHz to 77.760MHz, and 78.125MHz, 80 MHz, 80.157MHz, 85MHz, 87.125MHz, 90MHz, 100MHz, 106.25MHz, 110MHz, 119MHz, 120MHz, 122.888MHz, 124.4MHz, 125MHz, 127MHz, 128MHz, 133MHz, 133.333MHz, 137.472MHz, 150MHz, 155.52M, 156.25MHz	
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})	2.5V _{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, or ±25ppm Maximum
Output Voltage Logic High (V_{OH})	V _{CC} -1.025V _{DC} Minimum	
Output Voltage Logic Low (V_{OL})	V _{CC} -1.620V _{DC} Maximum	
Rise Time / Fall Time	20% to 80% of waveform	1 nSeconds Maximum
Duty Cycle	at 50% of waveform	50 ±10(%) 50 ±5(%)
Load Drive Capability	50 Ohms into V _{CC} -2.0V _{DC}	
Logic Control / Additional Output	Complementary Output and Tri-State	
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	10µA Maximum
Start Up Time	10 mSeconds Maximum	
RMS Phase Jitter	< 77.760MHz FJ = 12kHz to 20MHz ≥ 77.760MHz FJ = 12kHz to 20MHz	2 pSec Maximum 1 pSec Maximum
RMS Period Jitter	3 pSec Typical, 5 pSec Maximum	
Typical Phase Noise	Fo=155.520MHz	-60dBc/Hz at 10Hz Offset -95dBc/Hz at 100Hz Offset -124dBc/Hz at 1kHz Offset -143dBc/Hz at 10kHz Offset

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES E15C7	PACKAGE CERAMIC	VOLTAGE 2.5V	CLASS OS1C	REV. DATE 10/04
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PART NUMBERING GUIDE

E15C7 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

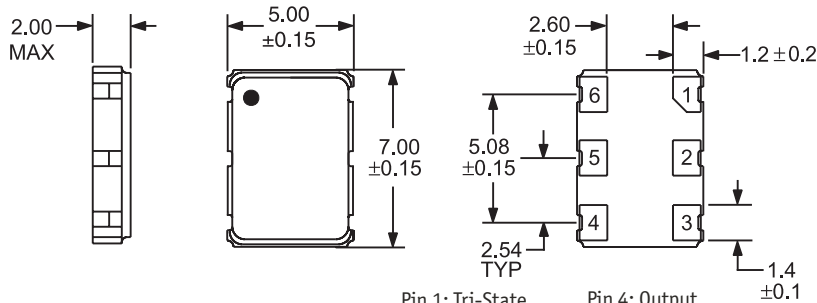
F= Complementary Output and Tri-State

DUTY CYCLE

1=50%±10%, 2=50%±5%

MECHANICAL DIMENSIONS

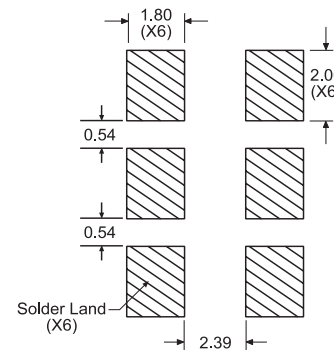
ALL DIMENSIONS IN MILLIMETERS



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

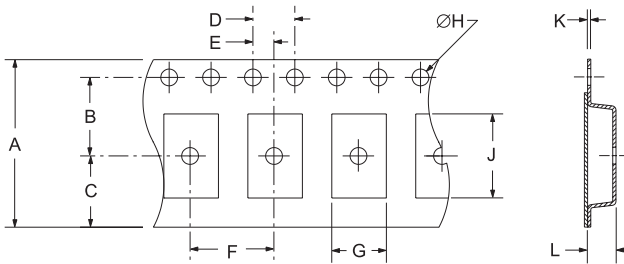
ALL DIMENSIONS IN MILLIMETERS



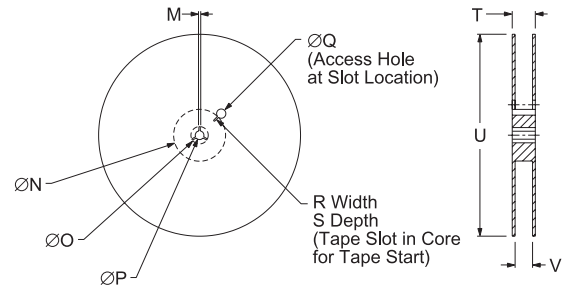
Tolerances=±0.1

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
 Frequency in MHz (5 Digits Maximum + Decimal)
 Line 3: XX Y ZZ
 Week of Year
 Last Digit of Year
 Ecliptek Manufacturing Identifier

PAD TERMINATION INFORMATION

Pad Material Description	Material	Thickness
Sub-Metal	NiCo	
Sub-Metal Plating	Ni	1.27 - 8.89µm
Outer-Metal Plating	Au	0.30 - 1.00µm

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	E15C7	CERAMIC	2.5V	OS1C	10/04