

E13D8 Series



ECLIPTEK
CORPORATION

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



ELECTRICAL SPECIFICATIONS

Nominal Frequency	75MHz, 77.76MHz, 80MHz, 100MHz, 106.25MHz, 125MHz, 150MHz, 155.52MHz, 156.25MHz, 159.375MHz, 187.5MHz, 212.5MHz, 250MHz, 311.04MHz, 312.5MHz
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} $\pm 5\%$
Input Current	With Load 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 ± 50 ppm Maximum, or ± 25 ppm Maximum
Output Voltage Logic High (V_{OH})	$V_{CC} - 1.4V_{DC}$ Minimum, $V_{CC} - 1.2V_{DC}$ Typical, $V_{CC} - 0.9V_{DC}$ Maximum
Output Voltage Logic Low (V_{OL})	$V_{CC} - 1.7V_{DC}$ Minimum, $V_{CC} - 1.85V_{DC}$ Typical, $V_{CC} - 2.0V_{DC}$ Maximum
Peak to Peak Output Voltage Swing	600mVdc Minimum, 800mVdc Typical, 1000mVdc Maximum
Rise Time / Fall Time	20% to 80% of waveform 300pSec Typical, 600pSec 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	Disabled Output, High Impedance, Without Load 600 μ A Maximum
Start Up Time	10 mSeconds Maximum
RMS Phase Jitter	FJ = 12kHz to 20MHz 0.7pSec Typical, 1 pSec Maximum
Typical Phase Noise	Fo=156.250MHz -60dBc/Hz at 10Hz Offset -90dBc/Hz at 100Hz Offset -115dBc/Hz at 1kHz Offset -129dBc/Hz at 10kHz Offset -130dBc/Hz at 100kHz Offset -131dBc/Hz at 1MHz Offset -148dBc/Hz at 10MHz Offset

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES E13D8	PACKAGE CERAMIC	VOLTAGE 3.3V	CLASS OS4N	REV. DATE 10/07
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PART NUMBERING GUIDE

E13D8 D 2 F - 155.520M TR

FREQUENCY TOLERANCE & STABILITY/ OPERATING TEMPERATURE RANGE

C=±25ppm Maximum over 0°C to +70°C
 D=±50ppm Maximum over 0°C to +70°C
 G=±25ppm Maximum over -40°C to +85°C
 H=±50ppm Maximum over -40°C to +85°C

AVAILABLE OPTIONS

Blank= Tubes
 TR= Tape and Reel (Standard)

FREQUENCY

LOGIC CONTROL/ADDITIONAL OUTPUT

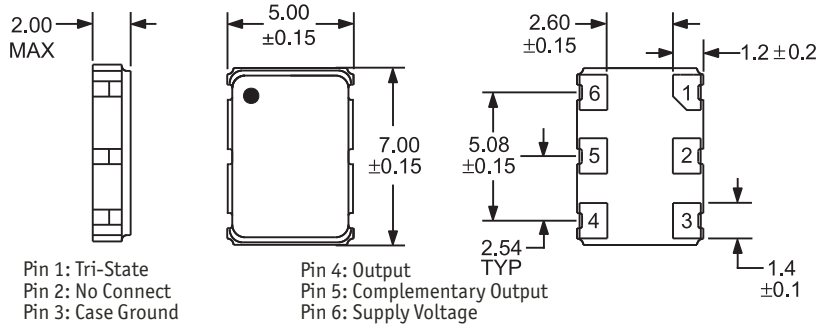
F= Tri-State and Complementary Output

DUTY CYCLE

2= 50 ±5(%)

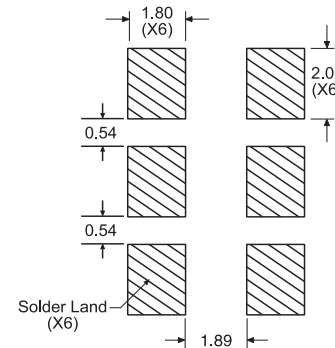
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



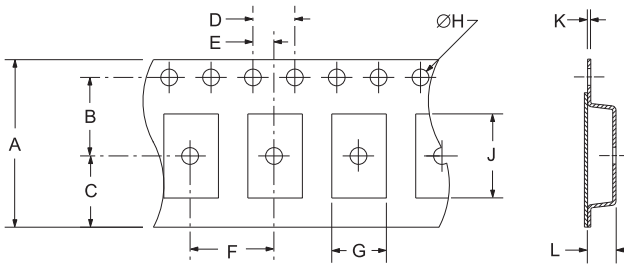
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

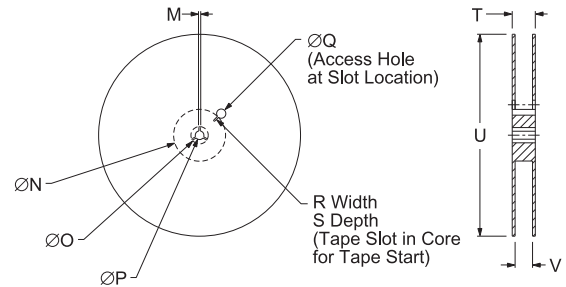


TAPE AND REEL DIMENSIONS

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
 Eclipsetek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	E13D8	CERAMIC	3.3V	OS4N	10/07