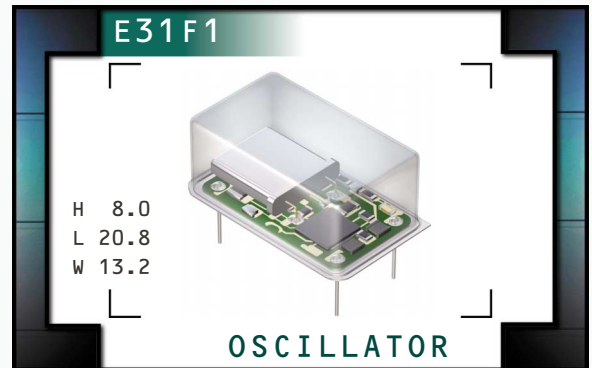


E31F1 Series

- PECL Output VCXO
- 5.0V supply voltage
- 14 pin DIP package (4 pin)
- Stability to 20ppm
- Custom lead length



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range	19.440MHz to 180.000MHz
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})	5.0V _{DC} ±5%
Input Current	100mA Maximum
Logic Type	100KH
Frequency Tolerance / Stability	Inclusive of Operating Temp Range, Supply Voltage, Load, and Aging @25°C over 10 years ±50ppm, ±25ppm, or ±20ppm 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 2 nSeconds Maximum
Duty Cycle	at 50% of waveform 50 ±10(%) 50 ±5(%)
Load Drive Capability	50 Ohms into $V_{CC}-2.0V_{DC}$
Start Up Time	10 mSeconds Maximum
RMS Phase Jitter	FJ = 12kHz to 20MHz 1 pSec Maximum
Absolute Pull Range (APR)	Inclusive of Operating Temp Range, Supply Voltage, Load, and Aging @25°C over 10 years ±50ppm Minimum
Linearity	20%, 15%, or 10% Maximum
Control Voltage (V_C): Test Conditions for APR	2.5V _{DC} ±2.0V _{DC}
Control Voltage Range (V_{CR})	0.0V _{DC} to V_{CC}
Center Control Voltage	2.5V _{DC}
Transfer Function	Positive Transfer Characteristic
Input Impedance	50kOhms Typical
Modulation Bandwidth	at -3dB with Control Voltage of +2.5V _{DC} 10kHz Minimum

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES E31F1	PACKAGE 14 pin DIP	VOLTAGE 5.0V	CLASS OS84	REV. DATE 11/01
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PART NUMBERING GUIDE

E31F1 F 3 A 2 A - 155.520M - CL125

FREQUENCY TOLERANCE & STABILITY/ OPERATING TEMPERATURE RANGE

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
H=±50ppm Maximum over -40°C to +85°C

APR

3=±50ppm Minimum

AVAILABLE OPTIONS

Blank=None (Standard)
CLXX=Custom Lead Length (See Page 153)
G=Full Size Gull Wing (See Page 152)

FREQUENCY

DUTY CYCLE

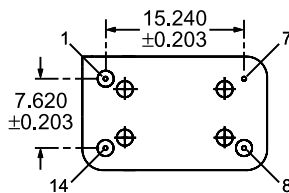
1=50 ±10(%), 2=50 ±5(%)

LINEARITY

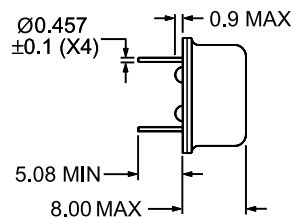
A=20%
B=15%
C=10%

NOTES

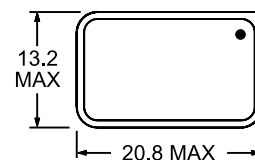
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



Pin 1: Voltage Control
Pin 2: Case Ground



Pin 3: Output
Pin 4: Supply Voltage



ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Seal Integrity	Bubble test in Perfluorocarbon at +125°C ±5°C for 60 seconds minimum.
Solderability	Sn63 Solder dip at +230°C ±5°C for 5 seconds/95% coverage.
Marking Permanency	10 Strokes with brush after 1 minute soak in solvent, 3 times.
Shock	Random drop on hard wooden plate 3 times from a height of 20cm.
Vibration	Frequency with an amplitude of 1.5mm sweeping between 10Hz to 55Hz within 1 minute (approximately) for 2 hours minimum on each axis (X, Y and Z) for a total of 6 hours.

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
Eclipse Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	E31F1	14 pin DIP	5.0V	OS84	11/01