



Product EOL Announcement

The Product EOL Announcement signifies that a product series has entered the final phase of the Ecliptek Product Life Cycle, and serves as advance notice of product termination per the Ecliptek End of Life (EOL) policy.

Ecliptek Corporation announces End of Life initiation for the following product series with the intent of discontinuing its availability.

EOL Series	Description
EB51F5	5.0Vdc 14-Pin DIP HCMOS TCXO

EOL Timeline

The last date Ecliptek will accept orders (Stage 2) and the last date orders may be scheduled for shipment (Stage 3) are listed in the table below.

Stage 1 EOL Announce Date	Stage 2 Last Date to Order	Stage 3 Last Date to Ship
10-May-2011	28-February-2012	31-May-2012

Alternative Products

In order to fulfill your requirements beyond this product's discontinuation, we invite you to evaluate alternative Ecliptek products. Because this series does not have a recommended alternative Ecliptek product series, please contact one of our Global Customer Support Executives to assist you with finding the best Ecliptek product for your application.

Automated EOL Notification

Ecliptek offers automated notification of Product EOL Announcements. Place part numbers for which you'd like to receive EOL Notifications into your personalized [Parts List](#) on our website and we'll email you when EOL is announced.

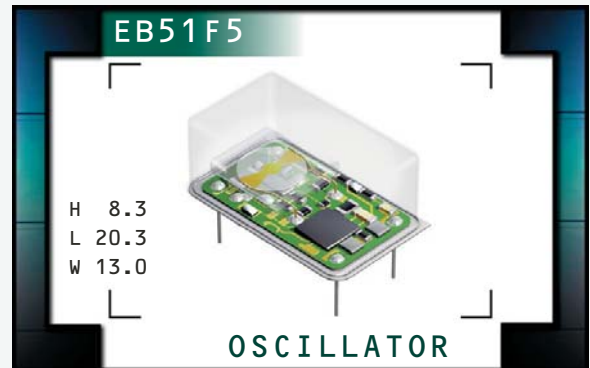
Please do not hesitate to contact us if you have any questions or need further assistance.

Ecliptek Global Customer Support Team
(800) 433-1280 x300
customersupport@ecliptek.com

All product warranties for discontinued products will be honored in full according to Ecliptek [Terms and Conditions of Sale](#).

EB51F5 Series

- Temperature Compensated Crystal Oscillators (TCXO)
- HCMOS/TTL Output
- +5.0V Supply Voltage
- Internal Mechanical Trim Function
- External Voltage Control Option
- Custom Lead Length & Gull Wing Options
- 14 pin DIP Metal Package



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		1.544MHz to 44.736MHz
Operating Temperature Range		See Table 1
Storage Temperature Range		-55°C to 125°C
Supply Voltage (V_{DD})		5.0V _{DC} ±5%
Input Current	Measured at Steady State at 25°C, at Nominal V _{DD} , at Nominal V _C	15mA Maximum ≤ 20.000MHz, 30mA Maximum > 20.000MHz
Frequency Stability	vs. Initial Frequency Tolerance vs. Operating Temperature Range vs. Input Voltage (V _{DD} ±5%) vs. Load (±10%)	±1.0ppm (at Nominal V _{DD} and V _C , at 25°C) See Table 1 (at Nominal V _{DD} and V _C) ±0.3ppm Maximum ±0.2ppm Maximum
Aging (at 25°C)		±1ppm / year Maximum
Output Voltage Logic High (V_{OH})		V _{DD} - 0.5V _{DC} Minimum
Output Voltage Logic Low (V_{OL})		0.5V _{DC} Maximum
Rise Time / Fall Time	20% to 80% of Waveform	6 nSeconds Maximum
Duty Cycle	at 50% of Waveform	50 ±5(%)
Load Drive Capability		30pF Maximum
Control Voltage Range		0.0V _{DC} to V _{DD}
Control Voltage (External)	Positive Transfer Characteristic	2.5V _{DC} ±2.0V _{DC}
Frequency Deviation	Referenced to F ₀ at V _C = 2.5V _{DC} , V _{DD} = 5.0V _{DC}	±7ppm Minimum, ±20ppm Maximum
Linearity		±10% Maximum
Internal Trim	Measured at 25°C, V _{DD} = 5.0V _{DC} , V _C = 2.5V _{DC}	±3ppm Minimum (Top Access)
Input Impedance		10kOhms Typical
Phase Noise (at 19.440MHz)	Measured at 25°C, at Nominal V _{DD} , at Nominal V _C	
	at 10Hz Offset	-70dBc/Hz Typical
	at 100Hz Offset	-100dBc/Hz Typical
	at 1kHz Offset	-130dBc/Hz Typical
	at 10kHz Offset	-140dBc/Hz Typical
	at 100kHz Offset	-145dBc/Hz Typical

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EB51F5	PACKAGE 14-PIN DIP	VOLTAGE 5.0V	CLASS OS3A	REV. DATE 06/04
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PART NUMBERING GUIDE

EB51F5 G 15 A V - 12.800M - G

INITIAL TOLERANCE
G=±1.0ppm Maximum

FREQUENCY STABILITY
Two Digit Code Per Table 1

OPERATING TEMP. RANGE
One Letter Code Per Table 1

AVAILABLE OPTIONS

Blank=None
 CB=Cut Leads to 2.540 ±0.500 (0.100" ±0.020")
 CC=Cut Leads to 3.175 ±0.500 (0.125" ±0.020")
 CD=Cut Leads to 3.810 ±0.500 (0.150" ±0.020")
 CE=Cut Leads to 4.445 ±0.500 (0.175" ±0.020")
 G=Full Size Gull Wing

FREQUENCY

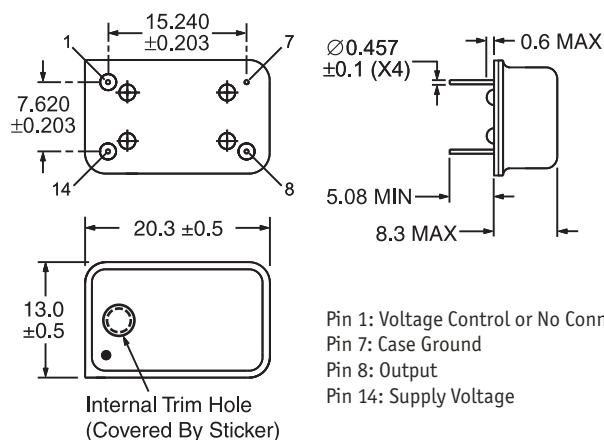
EXTERNAL TRIM

N=None (No Connection on Pin 1)
 V=Voltage Control on Pin 1

TABLE 1: PART NUMBERING CODES

Operating Temperature Range	Frequency Stability				
	Code	X = Available from 1.544MHz to 32.768MHz Y = Available at any Frequency			
		±1.5ppm	±2.0ppm	±3.0ppm	±5.0ppm
0°C to +50°C	A	Y	Y	Y	Y
0°C to 70°C	B	X	Y	Y	Y
-20°C to +70°C	C	X	X	Y	Y
-30°C to +75°C	D		X	Y	Y
-40°C to +85°C	E			X	Y

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M
 M=MHz
 Frequency (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ
 Week of Year
 Last Digit of Year
 Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A (Internal Crystal Only)
Gross Leak Test	MIL-STD-883, Method 1014, Condition C (Internal Crystal Only)
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Lead Integrity	MIL-STD-883, Method 2004
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-883, Method 210
Resistance to Solvents	MIL-STD-883, Method 215

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