

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
EV31C3	RoHS Compliant (Pb-free) 5.0V 6 Pad 5mm x 7mm Ceramic SMD HCMOS/TTL VCXO (Tri-State Pad 5)

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
5-April-2011	31-December-2011	31-March-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](#).

EV31C3 Series



ECLIPTEK[®]
CORPORATION

- Voltage Controlled Crystal Oscillators (VCXO)
- HCMOS/TTL Output
- +5.0V Supply Voltage
- Tri-State Output Function (Pad 5)
- External Voltage Control Function
- 6 Pad Ceramic SMD Package
- RoHS Compliant (Pb-Free)



ELECTRICAL SPECIFICATIONS

Frequency Range (F _o)	1.544MHz, 2.000MHz, 2.048MHz, 3.088MHz, 3.580MHz, 3.686MHz, 4.000MHz, 4.032MHz, 4.096MHz, 4.434MHz, 5.000MHz, 6.144MHz, 6.176MHz, 6.312MHz, 6.400MHz, 8.000MHz, 8.192MHz, 8.448MHz, 10.000MHz, 12.000MHz, 12.288MHz, 12.352MHz, 12.960MHz, 13.000MHz, 13.500MHz, 14.318MHz, 15.360MHz, 15.440MHz, 16.000MHz, 16.384MHz, 16.660MHz, 17.664MHz, 18.432MHz, 19.200MHz, 19.440MHz, 20.000MHz, 20.480MHz, 24.000MHz, 24.576MHz, 24.704MHz, 25.920MHz, 26.000MHz, 27.000MHz, 28.636MHz, 30.000MHz, 30.720MHz, 32.000MHz, 32.768MHz, 34.368MHz, 35.328MHz, 36.864MHz, 38.880MHz, 40.000MHz, 40.960MHz, 44.736MHz, 50.000MHz, 51.840MHz, 52.000MHz, 62.208MHz, 65.536MHz, 74.250MHz, 77.760MHz	
Operating Temperature Range (OTR)	0°C to 70°C or -40°C to 85°C	
Storage Temperature Range (STR)	-55°C to 125°C	
Supply Voltage (V _{DD})	5.0V _{DC} ±10%	
Input Current (I _{DD})	≤ 27.000MHz	25mA Maximum
	> 27.000MHz	35mA 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, Shock, and Vibration ±50ppm Maximum	
Output Voltage Logic High (V _{OH})	I _{OH} = -4mA	90% of V _{DD} Minimum
Output Voltage Logic Low (V _{OL})	I _{OL} = +4mA	10% of V _{DD} Maximum
Rise Time / Fall Time (T _R /T _F)	20% to 80% of Waveform w/CMOS Load or w/TTL Load 5 nSeconds Maximum	
Duty Cycle (SYM)	at 50% of Waveform 50 ±5(%) Typical, 50 ±10(%) Max.	
Load Drive Capability (C _{LOAD})	10TTL Load or 30pF CMOS Load Max.	
Aging (at 25°C)	±2ppm/1st year Typical, ±10ppm/10 years Max.	
Start Up Time (T _S)	10 mSeconds Maximum	
Tri-State Input Voltage	V _{IH} : No Connection V _{IH} : ≥0.9V _{DD} V _{IL} : ≤0.1V _{DD}	Enables Output Enables Output Disables Output: High Impedance
RMS Phase Jitter	F _J =12kHz to 20MHz	1pSec Maximum
Absolute Pull Range (APR)	Inclusive of All Conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, Shock, Vibration, and Aging over Control Voltage (V _c) ±50ppm Minimum ±80ppm Minimum ≤ 51.840MHz only ±100ppm Minimum ≤ 36.000MHz only	
Linearity	10% Typical, 20% Maximum	
Control Voltage (V _c): Test Conditions for APR	0.5V _{DC} to 4.5V _{DC}	
Control Voltage Range (V _{CR})	0.0V _{DC} to V _{DD}	
Transfer Function	Positive Transfer Characteristic	
Input Impedance (Z _i)	50kOhms Minimum	
Input Leakage Current	10µA Maximum	
Modulation Bandwidth (MBW)	-3dB, V _c = 2.5V _{DC} 10kHz Minimum	
Typical Phase Noise (Fo = 27.000MHz)	At offset of 10Hz At offset of 100Hz At offset of 1kHz At offset of 10kHz At offset of 100kHz -70dBc/Hz -100dBc/Hz -130dBc/Hz -147dBc/Hz -152dBc/Hz	

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EV31C3

PACKAGE
CERAMIC

VOLTAGE
5.0V

CLASS
OS57

REV. DATE
11/06

PART NUMBERING GUIDE

EV31C3 B 3 A 1 - 35.328M TR

OPERATING TEMPERATURE RANGE

A=0°C to 70°C,
B=-40°C to 85°C

ABSOLUTE PULL RANGE (APR)

3=±50ppm Minimum,
4=±80ppm Minimum,
5=±100ppm Minimum

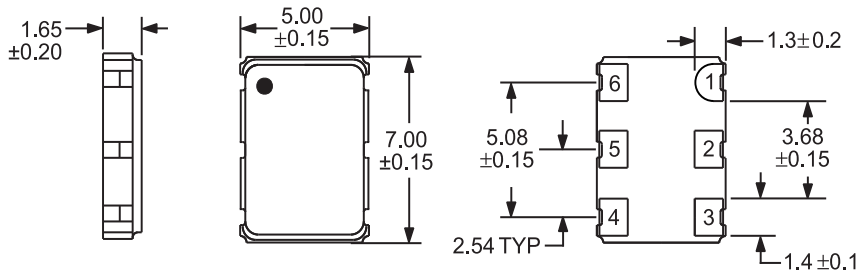
AVAILABLE OPTIONS

Blank=Bulk
TR=Tape & Reel

FREQUENCY

MECHANICAL DIMENSIONS

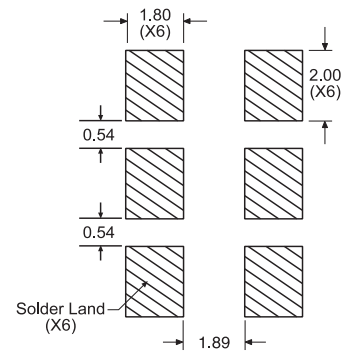
ALL DIMENSIONS IN MILLIMETERS



Pin 1: Control Voltage (V_c)
Pin 2: No Connect
Pin 3: Case Ground
Pin 4: Output
Pin 5: Tri-State
Pin 6: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT

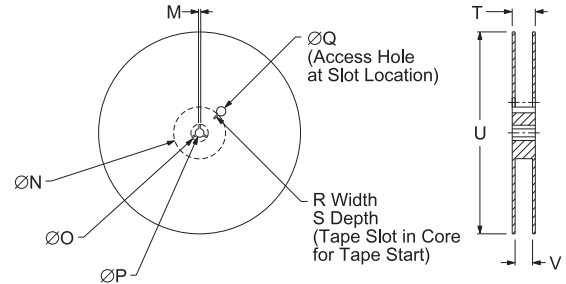
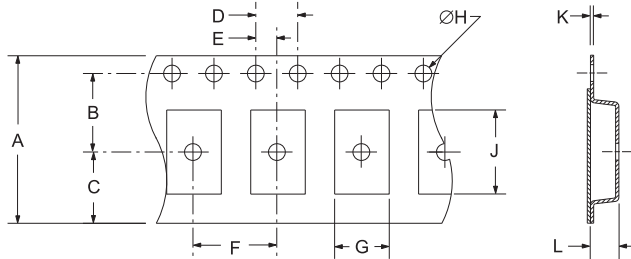
ALL DIMENSIONS IN MILLIMETERS



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: XXY ZZ

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

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EV31C3	CERAMIC	5.0V	OS57	11/06