

Marketing Bulletin

DATE: April 20th, 2010
TO: All Sales Personnel
FROM: Isaac Gonzalez
RE: Product Termination

To all concerned parties,

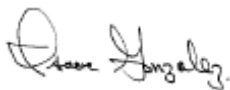
This bulletin is to notify all customers of the discontinuation of the following Ecliptek series effective April 20th, 2010:

Series	Description	Recommended Replacement
EC31	RoHS Compliant (Pb-free) 5.0V 14 Pin DIP Metal Thru-Hole HCMOS/TTL VCXO	EV31C3 , EV31C6
EC31HS	RoHS Compliant (Pb-free) 5.0V 8 Pin DIP Metal Thru-Hole HCMOS/TTL VCXO	EV31C3 , EV31C6

In compliance with our End of Life (EOL) policy, this will serve as advanced notice of product termination. New orders will not be accepted after September 1st, 2010, with delivery to conclude by December 1st, 2010.

If there are any questions pertaining to this bulletin, please feel free to contact me. Thank you again for your cooperation.

Best Regards,

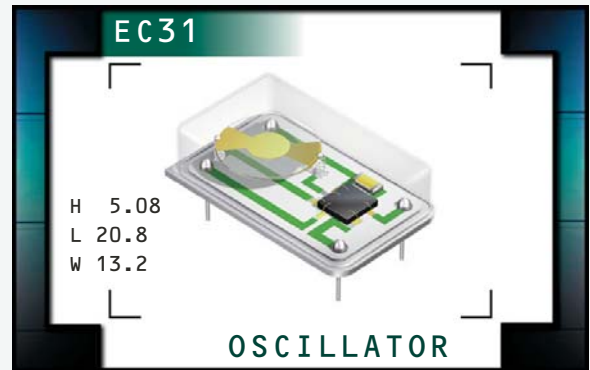


Isaac Gonzalez
Configuration Manager
Ecliptek Corporation

EC31 Series



- Voltage Controlled Crystal Oscillators (VCX0)
- HCMOS/TTL Output
- +5.0V Supply Voltage
- External Voltage Control Function
- Custom Lead Length & Gull Wing Options
- 14 pin DIP Metal Package
- RoHS Compliant (Pb-free)



ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)		1.000MHz to 155.520MHz
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_{DD})		5.0V _{DC} ±5%
Aging (at 25°C)		±5ppm / year Maximum
Load Drive Capability		10TTL Load or 15pF CMOS Load Maximum
Start Up Time		10 mSeconds Maximum
Frequency Deviation / Control Voltage	2.5V _{DC} ±2.0V _{DC} Positive Transfer Characteristic,	±50ppm Minimum
	2.5V _{DC} ±2.0V _{DC} Positive Transfer Characteristic,	±100ppm Minimum
	2.5V _{DC} ±2.0V _{DC} Positive Transfer Characteristic,	±150ppm Minimum
	2.5V _{DC} ±2.5V _{DC} Positive Transfer Characteristic, or	±200ppm Minimum
Linearity		±20%, ±15%, ±10% Maximum, or ±5% Maximum (not avail. w/±200ppm Freq. Dev.)
Input Current	1.000MHz to 20.000MHz	20mA Maximum
	20.001MHz to 30.000MHz	40mA Maximum
	30.001MHz to 155.520MHz	50mA Maximum
Frequency Tolerance / Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum (0°C to 70°C only)
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V _{DC} Minimum
	w/CMOS Load	V _{DD} -0.5V _{DC} Minimum
Output Voltage Logic Low (V_{OL})	w/TTL Load	0.4V _{DC} Maximum
	w/CMOS Load	0.5V _{DC} Maximum
Duty Cycle	at 1.4V _{DC} w/TTL Load; at 50% of Waveform w/CMOS Load	50 ±10(%) (Standard)
	at 1.4V _{DC} w/TTL Load and w/CMOS Load	50 ±5(%) (Optional)
Rise Time / Fall Time	0.4V _{DC} to 2.4V _{DC} w/TTL Load; 20% to 80% of Waveform w/CMOS Load	5 nSeconds Maximum
Period Jitter: Absolute	Freq. Deviation Options Blank, A or B	±100pSeconds Max ≤44.736MHz
	Freq. Deviation Options C	±100pSeconds Max ≤30.000MHz
		±200pSeconds Max >30.000MHz
	Freq. Deviation Options Blank, A or B	±200pSeconds Max >44.736MHz
Period Jitter: One Sigma	Freq. Deviation Options Blank, A or B	±25pSeconds Max ≤44.736MHz
	Freq. Deviation Options C	±25pSeconds Max ≤30.000MHz
		±50pSeconds Max >30.000MHz
	Freq. Deviation options Blank, A or B	±50pSeconds Max >44.736MHz

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EC31	PACKAGE 14 pin DIP	VOLTAGE 5.0V	CLASS 0S13	REV. DATE 08/06
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PART NUMBERING GUIDE

EC31 00 T A 15 ET - 24.000M - G

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum
 45=±50ppm Maximum, 25=±25ppm Maximum
 20=±20ppm Maximum

DUTY CYCLE

Blank=50 ±10(%), T=50 ±5(%)

FREQUENCY DEVIATION

Blank=±50ppm Minimum
 A=±100ppm Minimum
 B=±150ppm Minimum
 C=±200ppm Minimum (2.5V_{DC} ±2.5V_{DC})

AVAILABLE OPTIONS

Blank=None
 CLXXX=Custom Lead Length
 G=Full Size Gull Wing

FREQUENCY

OPERATING TEMP. RANGE

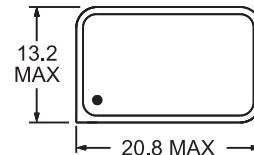
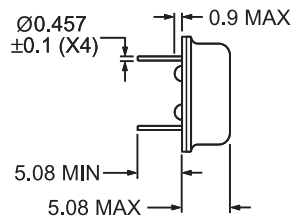
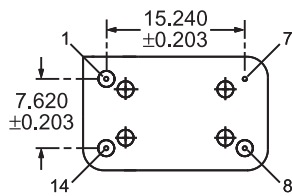
Blank=0°C to 70°C
 ET=-40°C to 85°C

LINEARITY

Blank=20% Maximum
 05=5% Maximum
 10=10% Maximum
 15=15% Maximum

NOTES

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



Pin 1: Control Voltage (V_c)
 Pin 7: Case Ground

Pin 8: Output
 Pin 14: 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: EC31 — Series Designator
 Line 3: XX.XXX M. — Frequency in MHz (5 Digits Maximum + Decimal)
 Line 4: XX Y ZZ — Week of Year, Last Digit of Year, Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

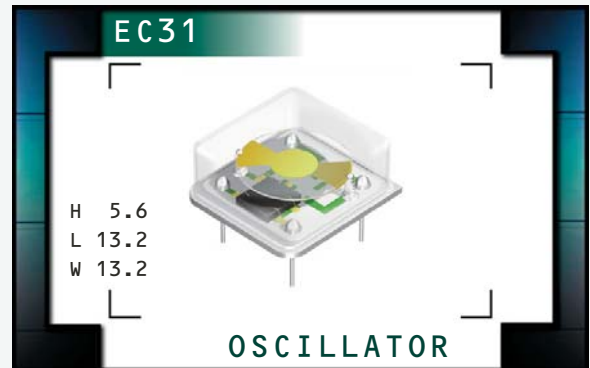
MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC31	14 pin DIP	5.0V	OS13	08/06

EC31 Series



ECLIPTEK[®]
CORPORATION

- Voltage Controlled Crystal Oscillators (VCXO)
- HCMOS/TTL Output
- +5.0V Supply Voltage
- External Voltage Control Function
- Custom Lead Length & Gull Wing Options
- 8 pin DIP Metal Package
- RoHS Compliant (Pb-free)



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)	1.000MHz to 44.736MHz	
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_{DD})	5.0V _{DC} ±5%	
Aging (at 25°C)	±5ppm / year Maximum	
Load Drive Capability	10TTL Load or 15pF CMOS Load Maximum	
Start Up Time	10 mSeconds Maximum	
Frequency Deviation / Control Voltage	2.5V _{DC} ±2.0V _{DC} Positive Transfer Characteristic,	±50ppm Minimum
	2.5V _{DC} ±2.0V _{DC} Positive Transfer Characteristic,	±100ppm Minimum
	2.5V _{DC} ±2.0V _{DC} Positive Transfer Characteristic,	±150ppm Minimum
Linearity	±20%, ±15%, ±10% Maximum, or ±5% Maximum	
Input Current	1.000MHz to 20.000MHz	20mA Maximum
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	30.001MHz to 44.736MHz	50mA Maximum
Frequency Tolerance / Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm, ±50ppm, ±25ppm, or ±20ppm Maximum (0°C to 70°C Only)
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V _{DC} Minimum
	w/CMOS Load	V _{DD} -0.5V _{DC} Minimum
Output Voltage Logic Low (V_{OL})	w/TTL Load	0.4V _{DC} Maximum
	w/CMOS Load	0.5V _{DC} Maximum
Duty Cycle	at 1.4V _{DC} w/TTL Load; at 50% of Waveform w/CMOS Load	50 ±10(%) (Standard)
	at 1.4V _{DC} w/TTL Load and CMOS Load	50 ±5(%) (Optional)
Rise Time / Fall Time	0.4V _{DC} to 2.4V _{DC} w/TTL Load; 20% to 80% of Waveform w/CMOS Load	5 nSeconds Maximum
Period Jitter: Absolute	±100pSeconds Maximum	
Period Jitter: One Sigma	±25pSeconds Maximum	

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EC31

PACKAGE
8 pin DIP

VOLTAGE
5.0V

CLASS
OS18

REV. DATE
08/06

PART NUMBERING GUIDE

EC31 00 HST A 15 ET - 24.000M - G TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum
 45=±50ppm Maximum, 25=±25ppm Maximum
 20=±20ppm Maximum

PACKAGE

HS=Half Size 8 Pin DIP

DUTY CYCLE

Blank=50 ±10(%), T=50 ±5(%)

FREQUENCY DEVIATION

Blank=±50ppm Minimum
 A=±100ppm Minimum
 B=±150ppm Minimum

PACKAGING OPTIONS

Blank=Bulk
 TR=Tape & Reel (only offered with
 Half Size G and Half Size G2 Options)

AVAILABLE OPTIONS

Blank=None
 CLXXX=Custom Lead Length
 G=Half Size Gull Wing
 G2=Alternate Half Size Gull Wing

FREQUENCY

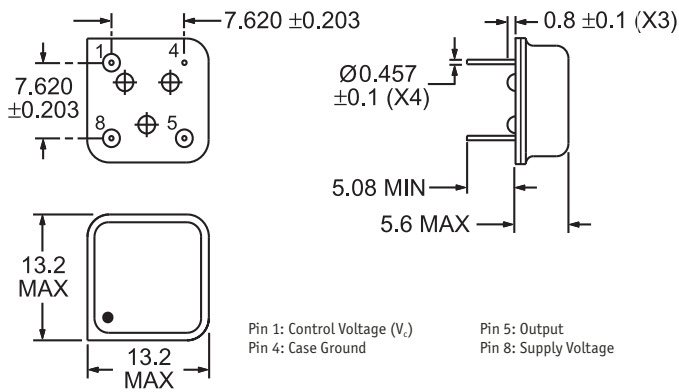
OPERATING TEMP. RANGE

Blank=0°C to 70°C
 ET=-40°C to 85°C

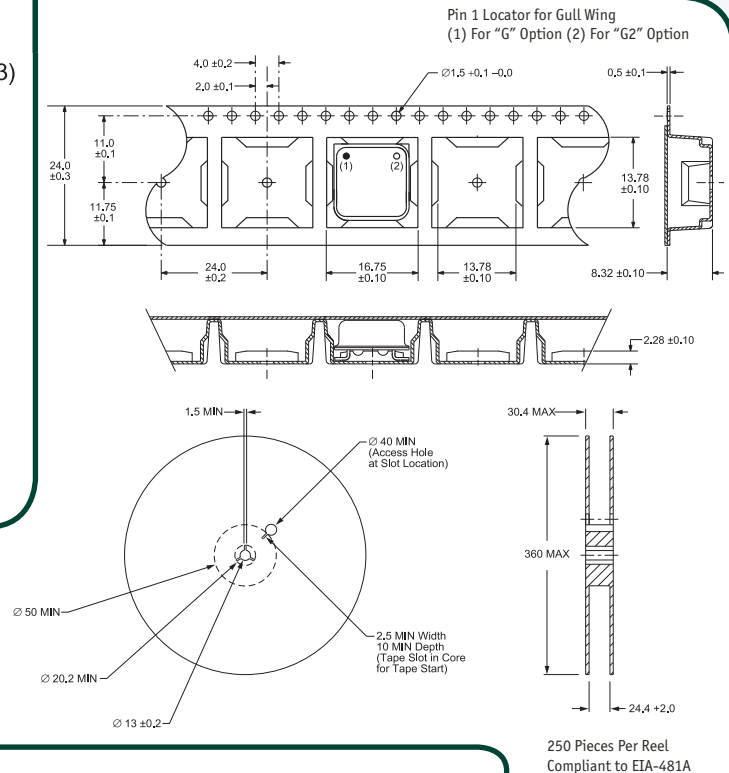
LINEARITY

Blank=20% Maximum
 05=5% Maximum, 10=10% Maximum
 15=15% Maximum

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



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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.

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC31	8 pin DIP	5.0V	OS18	08/06