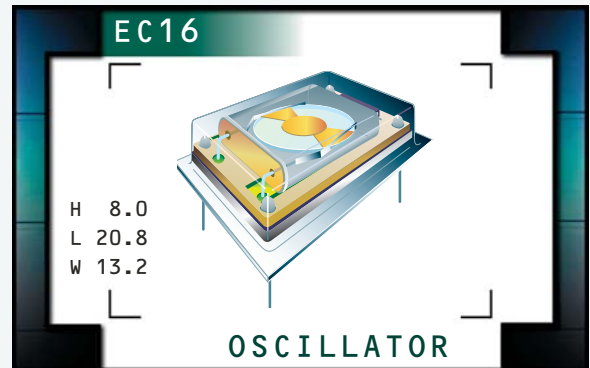


EC16 Series

- HCMOS/TTL output
- 5.0V supply voltage
- 14 pin DIP package
- Stability to 5ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range		1.000MHz to 46.000MHz	
Operating Temperature Range		Per Table 1	
Storage Temperature Range		-55°C to 125°C	
Supply Voltage (V_{DD})		5.0V _{DC} ±10%	
Input Current	1.000MHz to 20.000MHz	15mA Maximum	
	20.001MHz to 46.000MHz	40mA Maximum	
Frequency Tolerance / Stability		vs. Operating Temperature Range	Per Table 1
		vs. Input Voltage ($V_{DD} \pm 5\%$)	±2.0ppm Maximum
		vs. Load ($\pm 2pF \pm 1TTL$)	±1.0ppm Maximum
Internal Trim (Top of Can)		±5ppm Minimum	
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V _{DC} Minimum	$I_{OH} = -16mA$
	w/HCMOS Load	$V_{DD} - 0.5V_{DC}$ Minimum	$I_{OH} = -16mA$
Output Voltage Logic Low (V_{OL})	w/TTL Load	0.4 V _{DC} Maximum	$I_{OL} = +16mA$
	w/HCMOS Load	0.5V _{DC} Maximum	$I_{OL} = +16mA$
Rise Time / Fall Time		at 50% of Waveform w/HCMOS Load or at 1.4V _{DC} w/TTL Load	6 nSeconds Maximum
Duty Cycle		at 1.4V _{DC} w/HCMOS Load or w/TTL Load	50 ±10(%) (Standard)
		10% to 90% of Waveform w/HCMOS Load or 0.4V _{DC} to 2.4V _{DC} w/TTL Load	50 ±5(%) (Optional)
Load Drive Capability		10TTL Load or 50pF HCMOS Load	
Tri-State Input Voltage	V_{IH} : No Connection	Enables Output	
	V_{IH} : ≥2.2V _{DC}	Enables Output	
	V_{IL} : ≤0.8V _{DC}	Disables Output: High Impedance	
Aging (at 25°C)		±1ppm / year Maximum	
Start Up Time		10 mSeconds Maximum	
Period Jitter: Absolute		±100pSeconds Maximum	
Period Jitter: One Sigma		±25pSeconds Maximum	

MANUFACTURER ECLIPTEK CORP.	CATEGORY OSCILLATOR	SERIES EC16	PACKAGE 14 pin DIP	VOLTAGE 5.0V	CLASS OS34	REV. DATE 03/02
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PART NUMBERING GUIDE

EC16 07 A R TS - 24.000M - CL125

FREQUENCY STABILITY

2 Digit Code Per Table 1

OPERATING TEMPERATURE RANGE

1 Letter Code Per Table 1

INTERNAL TRIM OPTIONS

Blank=No Internal Trim

R=±5ppm Minimum (Top of Can)

DUTY CYCLE

Blank=50 ±10(%) (Standard)

T=50 ±5(%)

AVAILABLE OPTIONS

Blank=None (Standard)

CLXXX=Custom Lead Length (See Page 133)

G=Full Size Gull Wing (See Page 132)

FREQUENCY

OUTPUT CONTROL FUNCTION

Blank=None (No Connection on Pin 1)

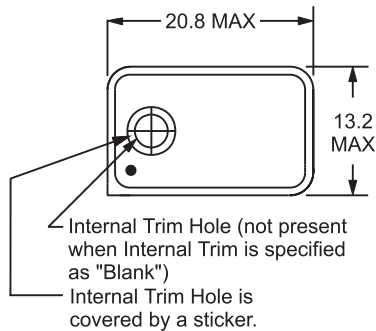
TS=Tri-State Enable High

TABLE 1: PART NUMBERING CODES

Operating Temperature Range	Code	Frequency Stability				
		X = Availability with Internal Trim Option "Blank" Y = Availability with Internal Trim Option "R"				
		±5ppm	±7ppm	±10ppm	±15ppm	±20ppm
		05	07	10	15	20
0°C to +50°C	A	Y	X, Y	X, Y	X, Y	X, Y
-10°C to +60°C	B		X, Y	X, Y	X, Y	X, Y
-20°C to +70°C	C			X, Y	X, Y	X, Y
-40°C to +85°C	D					X, Y

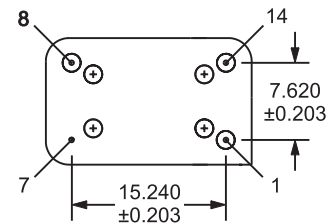
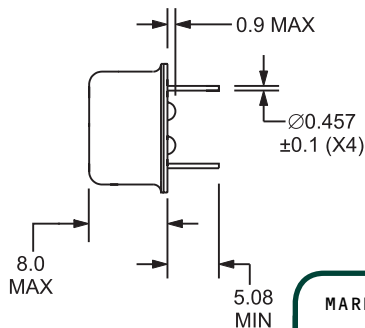
MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



Pin 1: No Connect or Tri-State
Pin 7: Case Ground

Pin 8: Output
Pin 14: Supply Voltage



MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: EC16 TS

Output Control Function

Blank = None (No Connection on Pin 1)

TS = Tri-State Enable High

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

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.

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EC16

PACKAGE
14 pin DIP

VOLTAGE
5.0V

CLASS
OS34

REV. DATE
03/02