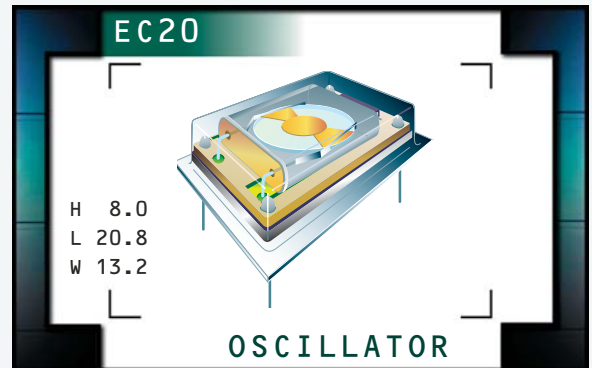


EC20 Series

- HCMOS output
- 3.3V supply voltage
- 14 pin DIP package
- Stability to 5ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range	1.000MHz to 50.000MHz		
Operating Temperature Range	Per Table 1		
Storage Temperature Range	-55°C to 125°C		
Supply Voltage (V_{DD})	3.3V _{DC} ±10%		
Input Current	1.000MHz to 20.000MHz	10mA Maximum	
	20.001MHz to 50.000MHz	20mA Maximum	
Frequency Tolerance / Stability	vs. Operating Temperature Range	Per Table 1	
	vs. Input Voltage (V _{DD} ±5%)	±2.0ppm Maximum	
	vs. Load (±2pF)	±1.0ppm Maximum	
Internal Trim (Top of Can)	±5ppm Minimum		
Output Voltage Logic High (V_{OH})	w/HCMOS Load	2.7V _{DC} Minimum	I _{OH} = -8mA
Output Voltage Logic Low (V_{OL})	w/HCMOS Load	0.5V _{DC} Maximum	I _{OL} = +8mA
Rise Time / Fall Time	10% to 90% of Waveform ≤ 20.000MHz	10 nSeconds Maximum	
	10% to 90% of Waveform > 20.000MHz	6 nSeconds Maximum	
Duty Cycle	at 50% of Waveform	50 ±10(%) (Standard) or 50 ±5(%) (Optional)	
Load Drive Capability	15pF 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 EC20	PACKAGE 14 pin DIP	VOLTAGE 3.3V	CLASS 0561	REV. DATE 03/02
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PART NUMBERING GUIDE

EC20 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)

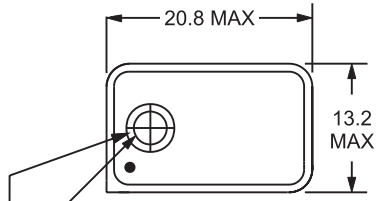
FREQUENCY

OUTPUT CONTROL FUNCTION

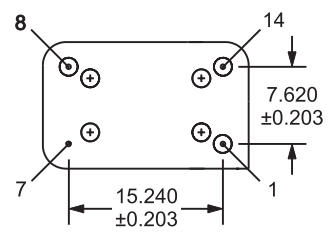
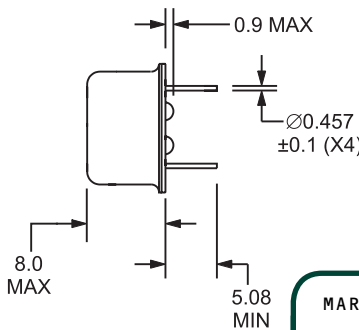
Blank=None (No Connection on Pin 1)
TS=Tri-State Enable High

		Frequency Stability				
		±5ppm	±7ppm	±10ppm	±15ppm	±20ppm
Operating Temperature Range	Code	05	07	10	15	20
	0°C to +50°C	A	Y	X, Y	X, Y	X, Y
	-10°C to +60°C	B		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



Internal Trim Hole (not present when Internal Trim is specified as "Blank")
Internal Trim Hole is covered by a sticker.



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: EC20 TS
Line 3: XX.XXX M
Line 4: XX Y ZZ

Output Control Function
Blank = None (No Connection on Pin 1)
TS = Tri-State Enable High

Series Designator

Frequency in MHz
(5 Digits Maximum + Decimal)

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	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC20	14 pin DIP	3.3V	OS61	03/02