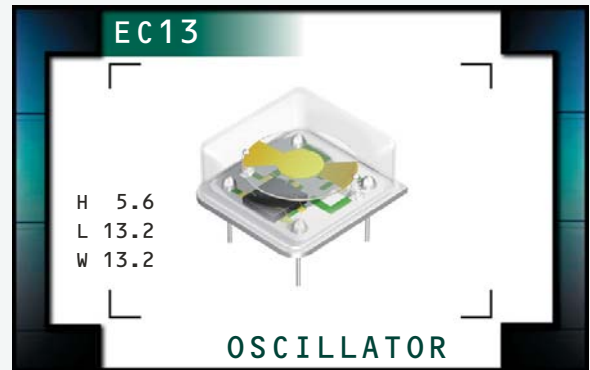


EC13 Series



ECLIPTEK[®]
CORPORATION

- RoHS Compliant (Pb-free)
- HCMOS/TTL output
- 3.3V supply voltage
- 8 pin DIP package
- Stability to ± 20 ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)	1.544, 1.8432, 2.048, 3.6864, 4.000, 4.096, 4.915, 10.000, 12.000, 12.288, 14.318, 16.000, 16.384, 20.000, 20.480, 24.000, 24.576, 25.000, 27.000, 32.000, 33.000, 33.333, 37.056, 40.000, 44.736, 48.000, 50.000, 60.000, 66.000, 66.667, 77.760, 80.000MHz	
Operating Temperature Range	0°C to 70°C -40°C to 85°C	
Storage Temperature Range	-55°C to 125°C	
Supply Voltage (V_{DD})	3.3V _{DC} ± 0.3 V _{DC}	
Input Current	1.544MHz to 24.000MHz	10mA Maximum
	24.001MHz to 70.000MHz	25mA Maximum
	70.001MHz to 80.000MHz	45mA Maximum
Frequency Tolerance / Stability	Inclusive of all conditions: Calibration Tolerance at 25°C, ± 100 ppm, ± 50 ppm, ± 25 ppm, or Frequency Stability over the Operating Temperature Range, ± 20 ppm Maximum (0°C to 70°C Only) Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration	
Output Voltage Logic High (V_{OH})	w/ TTL Load	2.4V _{DC} Minimum
	w/ HCMOS Load	2.7V _{DC} Minimum
Output Voltage Logic Low (V_{OL})	w/ TTL Load	0.4V _{DC} Maximum
	w/ HCMOS Load	0.5V _{DC} Maximum
Rise Time / Fall Time	10% to 90% of Waveform w/HCMOS Load or 0.4V _{DC} to 2.4V _{DC} w/TTL Load	10 nSeconds Max. ≤ 24.000 MHz 10 nSeconds Max. ≤ 24.000 MHz
	10% to 90% of Waveform w/HCMOS Load	6 nSeconds Max. 24.000MHz to 70.000MHz
	10% to 90% of Waveform w/HCMOS Load	4 nSeconds Max. 70.001MHz to 80.000MHz
Duty Cycle	at 50% of Waveform	50 ± 10 (%) (Standard) or 50 ± 5 (%) (Optional)
Load Drive Capability	≤ 24.000 MHz	2TTL or 15pF HCMOS Load
	> 24.000 MHz	15pF HCMOS Load
Tri-State Input Voltage	V _{IH} : No Connection	Enables Output
	V _{IH} : ≥ 2.2 V _{DC}	Enables Output
	V _{IL} : ≤ 0.8 V _{DC}	Disables Output: High Impedance
Aging (at 25°C)	± 5 ppm / year Maximum	
Start Up Time	10 mSeconds Maximum	
Period Jitter: Absolute	± 100 pSeconds Maximum	
Period Jitter: One Sigma	± 25 pSeconds Maximum	

MANUFACTURER
ECLIPTEK CORP.

CATEGORY
OSCILLATOR

SERIES
EC13

PACKAGE
8 pin DIP

VOLTAGE
3.3V

CLASS
OS21

REV. DATE
05/06

PART NUMBERING GUIDE

EC13 00 HS ET TTS - 50.000M - G TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum (Standard)
 45=±50ppm Maximum, 25=±25ppm Maximum
 20=±20ppm Maximum

PACKAGE

HS=Half Size 8 Pin DIP

OPERATING TEMP. RANGE

Blank=0°C to 70°C (Standard), ET=-40°C to 85°C

DUTY CYCLE

Blank=50 ±10(%) (Standard), T=50 ±5(%)

PACKAGING OPTIONS

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

AVAILABLE OPTIONS

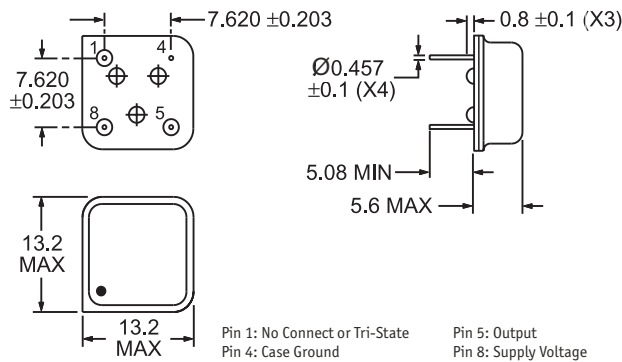
Blank=None (Standard)
 CLXX=Custom Lead Length
 G=Half Size Gull Wing
 G2=Half Size Gull Wing

FREQUENCY

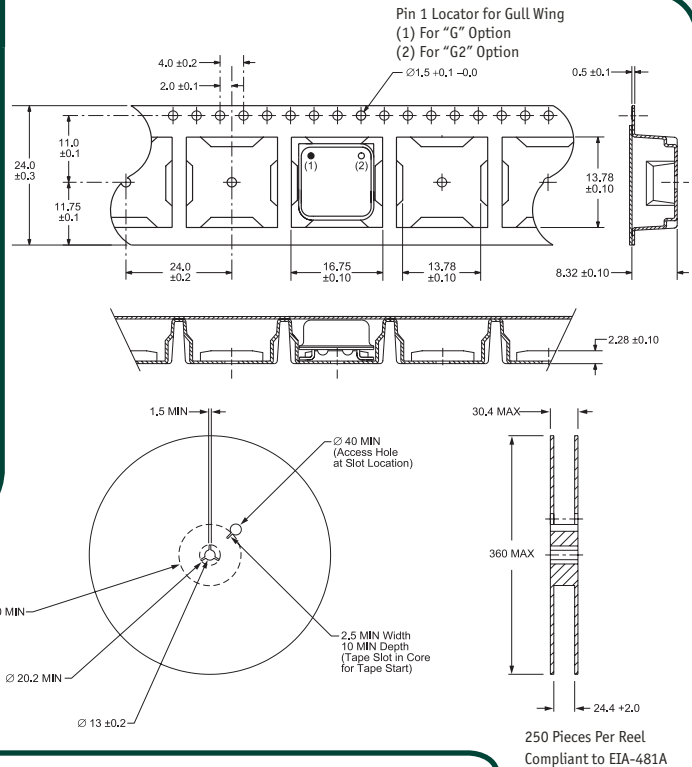
OUTPUT CONTROL FUNCTION

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

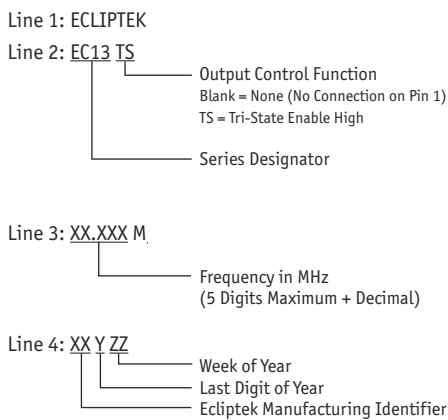
MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



TAPE AND REEL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



MARKING SPECIFICATIONS



Note: Pin 1 shall be designated with a dot

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
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

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC13	8 pin DIP	3.3V	OS21	05/06