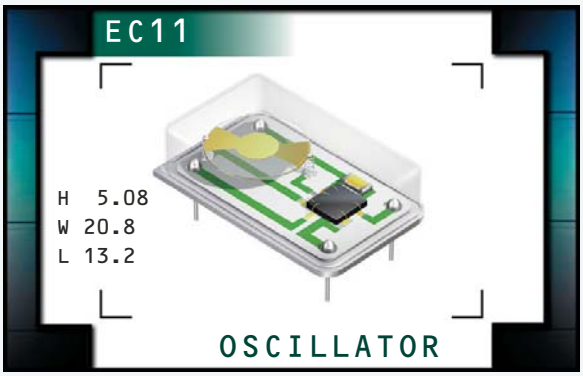
EC11 Series

- RoHS Compliant (Pb-free)
- HCMOS/TTL output
- 5.0V supply voltage
- 14 pin DIP package
- Stability to ±20ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)		0.250MHz to 106.250MHz
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} ±10%
Input Current	250.000kHz to 24.000MHz	45mA Maximum
	24.001MHz to 50.000MHz	55mA Maximum
	50.001MHz to 66.667MHz	65mA Maximum
	66.668MHz to 106.250MHz	85mA Maximum
Frequency Tolerance / Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm, ±50ppm, ±25ppm, or ±20ppm Max. (0°C to 70°C Only)
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V_{DC} Minimum
	w/HCMOS Load	V_{DD}-0.5V_{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	0.4V_{DC} to 2.4V_{DC} w/TTL Load; 20% to 80% of Waveform w/HCMOS Load	6 nSeconds Maximum
Duty Cycle	at 1.4V_{DC} w/TTL Load; at 50% of Waveform w/HCMOS Load	50 ±10(%) (Standard)
	at 1.4V_{DC} w/TTL Load or w/HCMOS Load ≤ 70.000MHz	50 ±5(%) (Optional)
	at 50% of Waveform w/TTL Load or w/HCMOS Load > 70.000MHz	50 ±5(%) (Optional)
Load Drive Capability	250.000kHz to 24.000MHz	10TTL Load or 50pF HCMOS Load
	24.001MHz to 70.000MHz	10TTL Load or 15pF HCMOS Load
	70.001MHz to 106.250MHz	10LSTTL Load or 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)		±5ppm / year Maximum
Start Up Time		10mSeconds Maximum
Period Jitter: Absolute		±100pSeconds Maximum
Period Jitter: One Sigma		±25pSeconds Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC11	14 pin DIP	5.0V	OS04	08/06

PART NUMBERING GUIDE

EC11 00 ET T TS - 60.000M - G

FREQUENCY TOLERANCE / STABILITY
00=±100ppm Max.(Standard), 45=±50ppm Max.
25=±25ppm Max., 20=±20ppm Max.

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(%)

AVAILABLE OPTIONS
Blank=None (Standard)
CLXXX=Custom Lead Length (See Page 133)
G=Full Size Gull Wing (See Page 132)

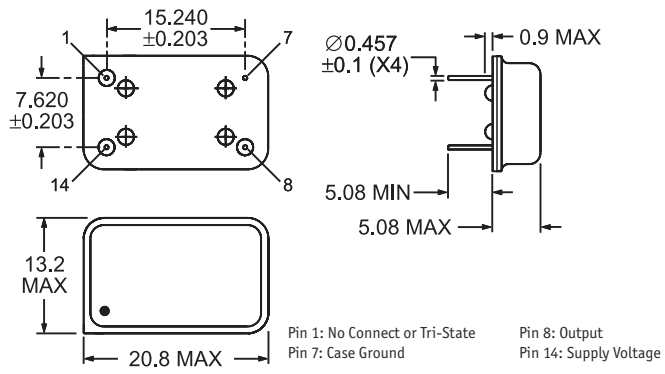
FREQUENCY
K=kHz, M=MHz

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

NOTES

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: EC11 TS
- Output Control Function
  Blank = None (No Connection on Pin 1)
  TS = Tri-State Enable High
- Series Designator

Line 3: XX.XXX M
- M=MHz, K=kHz
- Frequency (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

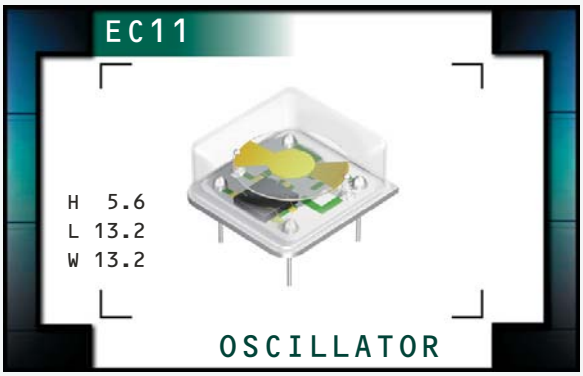
Characteristic	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Lead Integrity	MIL-STD-883, Method 2004

Characteristic	Specification
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	EC11	14 pin DIP	5.0V	OS04	08/06

EC11 Series

- RoHS Compliant (Pb-free)
- HCMOS/TTL output
- 5.0V supply voltage
- 8 pin DIP package
- Stability to ±20ppm
- Custom lead length, gull wing options available



ELECTRICAL SPECIFICATIONS

Frequency Range (MHz)		0.250MHz to 106.250MHz
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} ±10%
Input Current	250.000kHz to 24.000MHz	45mA Maximum
	24.001MHz to 50.000MHz	55mA Maximum
	50.001MHz to 66.667MHz	65mA Maximum
	66.668MHz to 106.250MHz	85mA Maximum
Frequency Tolerance / Stability	Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm, ±50ppm, ±25ppm, or ±20ppm Max. (0°C to 70°C Only)
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V_{DC} Minimum
	w/HCMOS Load	V_{DD}-0.5V_{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	0.4V_{DC} to 2.4V_{DC} w/TTL Load; 20% to 80% of Waveform w/HCMOS Load	6 nSeconds Maximum
Duty Cycle	at 1.4V_{DC} w/TTL Load; at 50% of Waveform w/HCMOS Load	50 ±10(%) (Standard)
	at 1.4V_{DC} w/TTL Load or w/HCMOS Load ≤ 70.000MHz	50 ±5(%) (Optional)
	at 50% of Waveform w/TTL Load or w/HCMOS Load > 70.000MHz	50 ±5(%) (Optional)
Load Drive Capability	250.000kHz to 24.000MHz	10TTL Load or 50pF HCMOS Load
	24.001MHz to 70.000MHz	10TTL Load or 15pF HCMOS Load
	70.001MHz to 106.250MHz	10LSTTL Load or 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)		±5ppm / year Maximum
Start Up Time		10mSeconds Maximum
Period Jitter: Absolute		±100pSeconds Maximum
Period Jitter: One Sigma		±25pSeconds Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC11	8 pin DIP	5.0V	OS05	08/06

PART NUMBERING GUIDE

EC11 00 HS ET T TS - 60.000M - G TR

FREQUENCY TOLERANCE / STABILITY
00=±100ppm Max.(Standard), 45=±50ppm Max.
25=±25ppm Max., 20=±20ppm Max.

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(%)

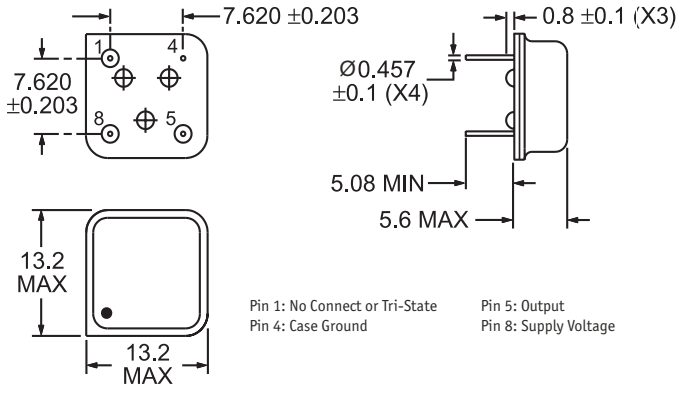
OUTPUT CONTROL FUNCTION
Blank=None (No Connection on Pin 1), TS=Tri-State Enable High

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

AVAILABLE OPTIONS
Blank=None (Standard)
CLXXX=Custom Lead Length (See Page 133)
G=Half Size Gull Wing (See Page 132)
G2=Half Size Gull Wing (See Page 132)

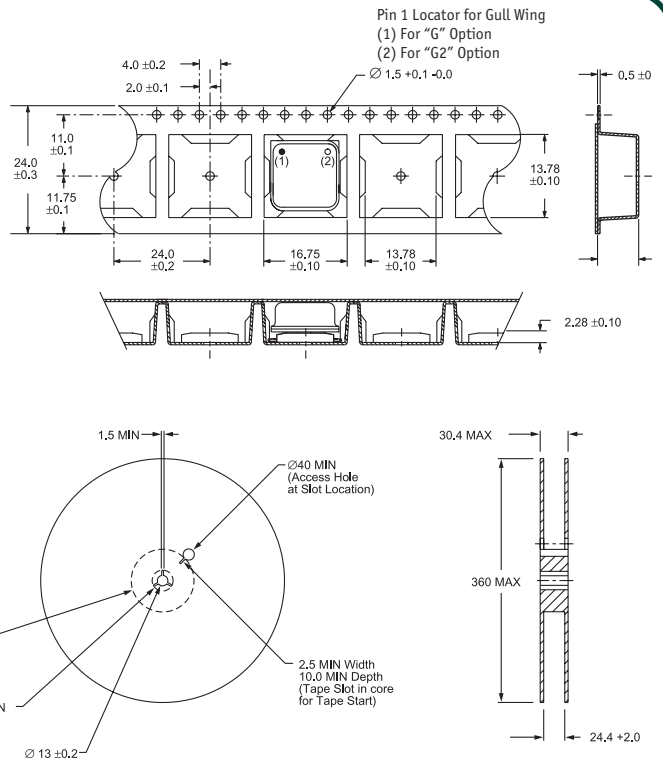
FREQUENCY
K=kHz, M=MHz

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



Pin 1: No Connect or Tri-State
Pin 4: Case Ground
Pin 5: Output
Pin 8: Supply Voltage

TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



700 Pieces Per Reel
Compliant to EIA-481A

MARKING SPECIFICATIONS

Line 1: ECLIPTEK
Line 2: EC11 TS
- Output Control Function
  Blank = None (No Connection on Pin 1)
  TS = Tri-State Enable High
- Series Designator

Line 3: XX.XXX M
- M=MHz, K=kHz
- Frequency (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
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	EC11	8 pin DIP	5.0V	OS05	08/06