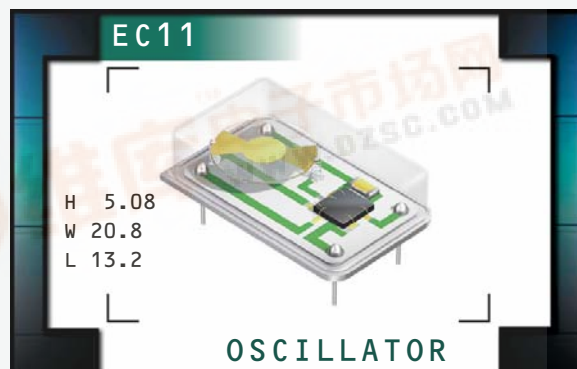


EC11 Series

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



ECLIPTEK®
CORPORATION



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} $\pm 10\%$	
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	$\pm 100\text{ppm}$, $\pm 50\text{ppm}$, $\pm 25\text{ppm}$, or $\pm 20\text{ppm}$ 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 $\pm 10\%$ (Standard)
	at 1.4V _{DC} w/TTL Load or w/HCMOS Load $\leq 70.000\text{MHz}$	50 $\pm 5\%$ (Optional)
	at 50% of Waveform w/TTL Load or w/HCMOS Load $> 70.000\text{MHz}$	50 $\pm 5\%$ (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} : $\geq 2.2V_{DC}$	Enables Output
	V_{IL} : $\leq 0.8V_{DC}$	Disables Output: High Impedance
Aging (at 25°C)	$\pm 5\text{ppm}$ / year Maximum	
Start Up Time	10mSeconds Maximum	
Period Jitter: Absolute	$\pm 100\text{pSeconds}$ Maximum	
Period Jitter: One Sigma	$\pm 25\text{pSeconds}$ Maximum	



PART NUMBERING GUIDE

EC11 00 ETTTS - 60.000M - G

FREQUENCY TOLERANCE / STABILITY

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

OPERATING TEMP. RANGE

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

DUTY CYCLE

Blank= $50 \pm 10(\%)$ (Standard), T= $50 \pm 5(\%)$

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

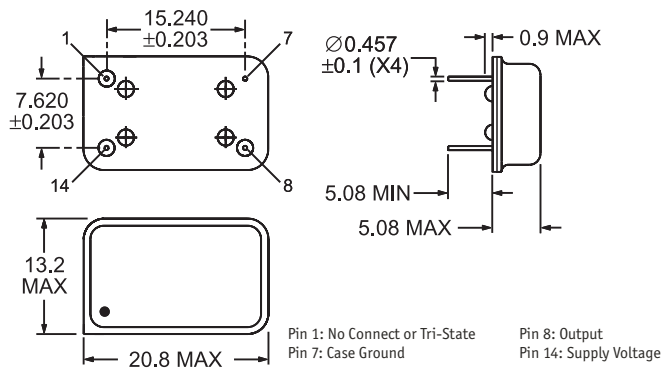
OUTPUT CONTROL FUNCTION

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

NOTES

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



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

Fine Leak Test

Gross Leak Test

Mechanical Shock

Vibration

Lead Integrity

Specification

MIL-STD-883, Method 1014, Condition A

MIL-STD-883, Method 1014, Condition C

MIL-STD-202, Method 213, Condition C

MIL-STD-883, Method 2007, Condition A

MIL-STD-883, Method 2004

Characteristic

Solderability

Temperature Cycling

Resistance to Soldering Heat

Resistance to Solvents

Specification

MIL-STD-883, Method 2002

MIL-STD-883, Method 1010

MIL-STD-883, Method 210

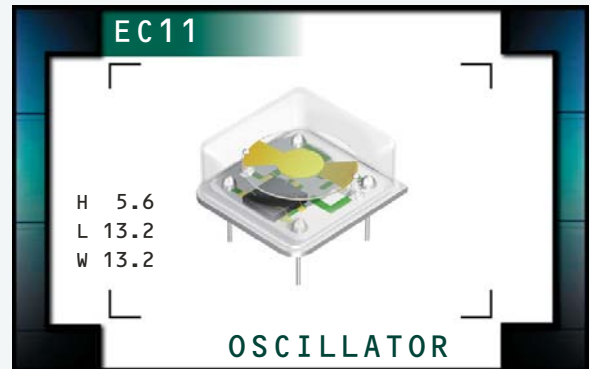
MIL-STD-883, Method 215

EC11 Series

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



ECLIPTEK®
CORPORATION



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} $\pm 10\%$
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	± 100 ppm, ± 50 ppm, ± 25 ppm, or ± 20 ppm 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 ≤ 70.000 MHz	50 ± 5 (%) (Optional)
	at 50% of Waveform w/TTL Load or w/HCMOS Load > 70.000 MHz	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} : $\geq 2.2V_{DC}$	Enables Output
	V_{IL} : $\leq 0.8V_{DC}$	Disables Output: High Impedance
Aging (at 25°C)		± 5 ppm / year Maximum
Start Up Time		10mSeconds Maximum
Period Jitter: Absolute		± 100 Seconds Maximum
Period Jitter: One Sigma		± 25 Seconds Maximum

PART NUMBERING GUIDE

EC11 00 HS ET 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

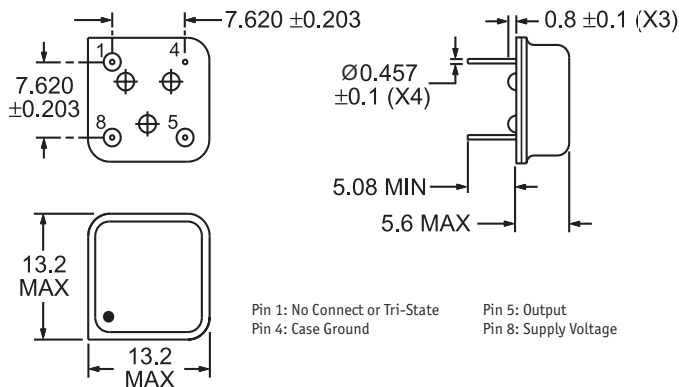
Blank=None (Standard)
CLXXX=Custom Lead Length (See Page 133)
G=Half Size Gull Wing (See Page 132)
G2=Half Size Gull Wing (See Page 132)

FREQUENCY

K=kHz, M=MHz

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



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

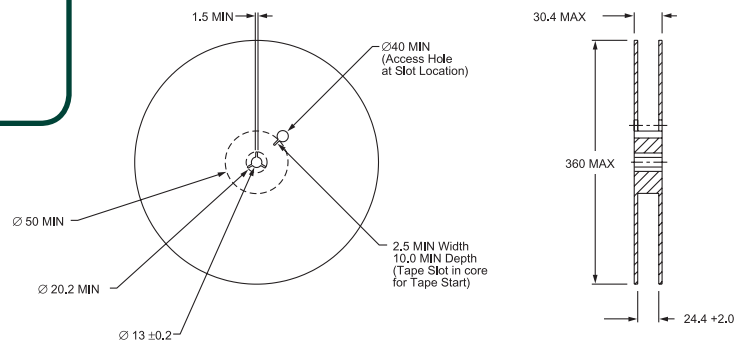
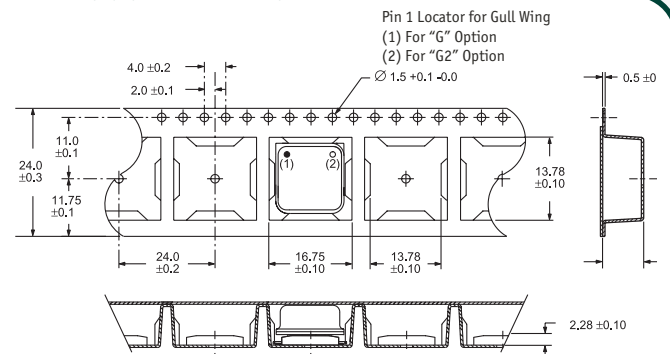
Last Digit of Year

Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



700 Pieces Per Reel
Compliant to EIA-481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test
Gross Leak Test
Mechanical Shock
Vibration
Lead Integrity
Solderability
Temperature Cycling
Resistance to Soldering Heat
Resistance to Solvents

Specification

MIL-STD-883, Method 1014, Condition A
MIL-STD-883, Method 1014, Condition C
MIL-STD-202, Method 213, Condition C
MIL-STD-883, Method 2007, Condition A
MIL-STD-883, Method 2004
MIL-STD-883, Method 2002
MIL-STD-883, Method 1010
MIL-STD-883, Method 210
MIL-STD-883, Method 215