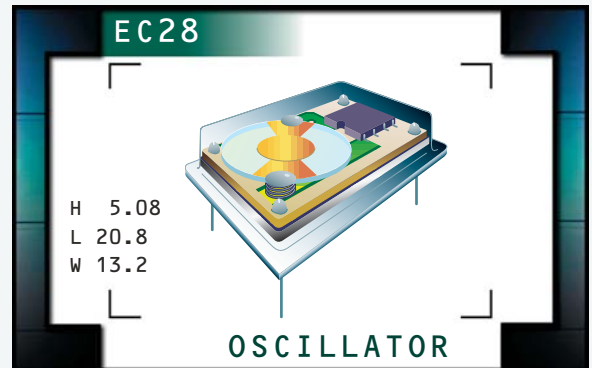


EC28 Series

- HCMOS output
- 2.5V supply voltage
- 14 pin DIP package
- Stability to 20ppm
- Custom lead length, gull wing options available



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range (F_0)		1.544MHz to 50.000MHz
Operating Temperature Range (OTR)	$\pm 100\text{ppm}, \pm 50\text{ppm}, \text{ or } 25\text{ppm}$	$0^\circ\text{C to } 70^\circ\text{C or } -40^\circ\text{C to } 85^\circ\text{C}$
	$\pm 20\text{ppm}$	$0^\circ\text{C to } 70^\circ\text{C}$
Storage Temperature Range (STR)		$-55^\circ\text{C to } 125^\circ\text{C}$
Supply Voltage (V_{DD})		$2.5V_{DC} \pm 10\%$
Input Current (I_{DD})	$\leq 24.000\text{MHz}$	10mA Maximum
	$> 24.000\text{MHz}$	20mA Maximum
Frequency Tolerance / Stability		Inclusive of Operating Temperature Range, Supply Voltage, and Load $\pm 100\text{ppm}, \pm 50\text{ppm}, \pm 25\text{ppm}, \text{ or } \pm 20\text{ppm Maximum } (0^\circ\text{C to } 70^\circ\text{C Only})$
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum $I_{OH} = -4\text{mA}$
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Minimum $I_{OL} = +4\text{mA}$
Rise Time / Fall Time (T_R/T_F)	20% to 80% of Waveform $\leq 24.000\text{MHz}$	6 nSeconds Maximum
	20% to 80% of Waveform $> 24.000\text{MHz}$	4 nSeconds Maximum
Duty Cycle (SYM)		at 50% of Waveform $50 \pm 10(\%)$ (Standard) or $50 \pm 5(\%)$ (Optional)
Load Drive Capability (C_{LOAD})		15pF HCMOS Load
Tri-State Input Voltage	V_{IH} : No Connection	Enables Output
	$V_{IH} \geq 90\%$ of V_{DD}	Enables Output
	$V_{IL} \leq 10\%$ of V_{DD}	Disables Output: High Impedance
Aging (at 25°C)		$\pm 5\text{ppm / year Maximum}$
Start Up Time (T_s)		10 mSeconds Maximum
Period Jitter: Absolute		$\pm 100\text{pSeconds Maximum}$
Period Jitter: One Sigma		$\pm 25\text{pSeconds Maximum}$

PART NUMBERING GUIDE

EC28 00 ET TS - 50.000M - G

FREQUENCY TOLERANCE / STABILITY

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

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)

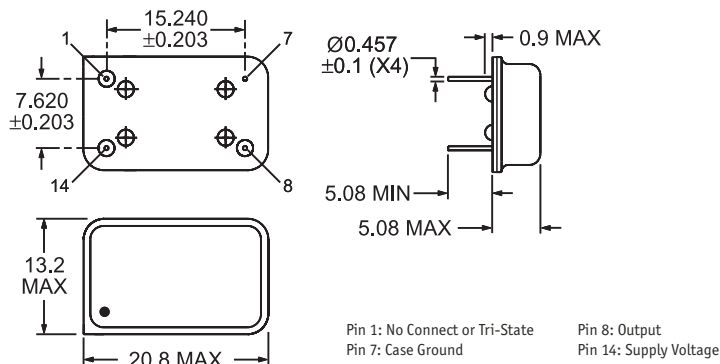
FREQUENCY

OUTPUT CONTROL FUNCTION

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

NOTES

MECHANICAL DIMENSIONS ALL DIMENSIONS IN MILLIMETERS



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.

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: EC28 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
Eclipse Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EC28	14 pin DIP	2.5V	OS53	03/02