

## STANDARD SPECIFICATIONS

Frequency Range:	9.600MHz to 35.000MHz
Frequency Stability: vs. Input Voltage ( $\pm 5\%$ ) vs. Load ( $\pm 2\text{pF}$ ) vs. Aging (at 25°C)	See Table 1 for Maximum Values (Inclusive of Operating Temperature Range) $\pm 0.3\text{ppm}$ Maximum $\pm 0.3\text{ppm}$ Maximum $\pm 1\text{ppm/year}$ Maximum
Operating/Storage Temp. Range	See Table 1 for Operating Temperature Range / Storage $-40^\circ\text{C}$ to $+85^\circ\text{C}$
Supply Voltage	5.0Vdc $\pm 5\%$
Input Current	30mA Maximum
Output Voltage Logic High	2.4Vdc Min. w/TTL Load, VDD-0.5Vdc Min. w/HCMOS Load
Output Voltage Logic Low	0.4Vdc Max. w/TTL Load, 0.5Vdc Max. w/HCMOS Load
Rise/Fall Time	10nSec (0.4Vdc to 2.4Vdc w/TTL Load, 20% to 80% of waveform w/HCMOS Load)
Duty Cycle	50% $\pm 10\%$ (@ 1.4Vdc w/TTL Load, @ 50% of waveform w/HCMOS Load)
Load Drive Capability	10TTL Load or 15pF HCMOS Load Maximum
Internal Trim (Top of Can)	$\pm 3\text{ppm}$ Minimum
Pin 1 Control Voltage Blank V	No Connect (Pin 1 not present) 2.5Vdc $\pm 2.0\text{Vdc}$ , Positive Transfer Characteristic
Frequency Deviation	$\pm 5\text{ppm}$ Minimum over Control Voltage
Typical Phase Noise	-85dBc/Hz at 10Hz Offset, -115dBc/Hz at 100Hz Offset, -135dBc/Hz at 1kHz Offset, -140dBc/Hz at 10kHz Offset, -145dBc/Hz at 100kHz Offset, -150dBc/Hz at 1MHz Offset

OBSOLETE

## ENVIRONMENTAL & MECHANICAL

Fine Leak Test:	MIL-STD-883, Method 1014, Condition A	Solderability:	MIL-STD-883, Method 2002
Gross Leak Test:	MIL-STD-883, Method 1014, Condition C	Temperature Cycling:	MIL-STD-883, Method 1010
Mechanical Shock:	MIL-STD-202, Method 213, Condition C	Resistance to Soldering Heat:	MIL-STD-202, Method 210
Vibration:	MIL-STD-883, Method 2007, Condition A	Resistance to Solvents:	MIL-STD-202, Method 215
Lead Integrity:	MIL-STD-883, Method 2004		

**TABLE 1: PART NUMBERING CODES**

OPERATING TEMPERATURE		FREQUENCY STABILITY						
		15	20	25	30	35	50	Code
Range		$\pm 1.5\text{ppm}$	$\pm 2.0\text{ppm}$	$\pm 2.5\text{ppm}$	$\pm 3.0\text{ppm}$	$\pm 3.5\text{ppm}$	$\pm 5.0\text{ppm}$	Range
0°C to +50°C	A	Y	Y	Y	Y	Y	Y	
-10°C to +60°C	B	Y	Y	Y	Y	Y	Y	
-20°C to +70°C	C	X	Y	Y	Y	Y	Y	
-30°C to +60°C	D		X	Y	Y	Y	Y	
-30°C to +75°C	E		X	X	Y	Y	Y	
-35°C to +80°C	F			X	X	Y	Y	
-40°C to +85°C	G				X	X	Y	

X Denotes availability from 9.600MHz to 25.000MHz  
Y Denotes availability for any valid frequency.

## MARKING GUIDE

(Line #1) **ECLIPTEK**

(Line #2) **EC51 00 X Y**

Pin 1 Connection  
Blank = No Connect (pin 1 not present)  
V = Control Voltage 2.5Vdc  $\pm 2.0\text{Vdc}$   
Positive Transfer Characteristic

Operating Temperature  
Code Per Table 1

Frequency Stability  
Code Per Table 1

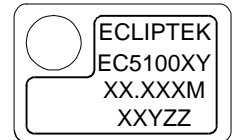
(Line #3) **XX.XXXM**

Frequency

(Line #4) **XX Y ZZ**

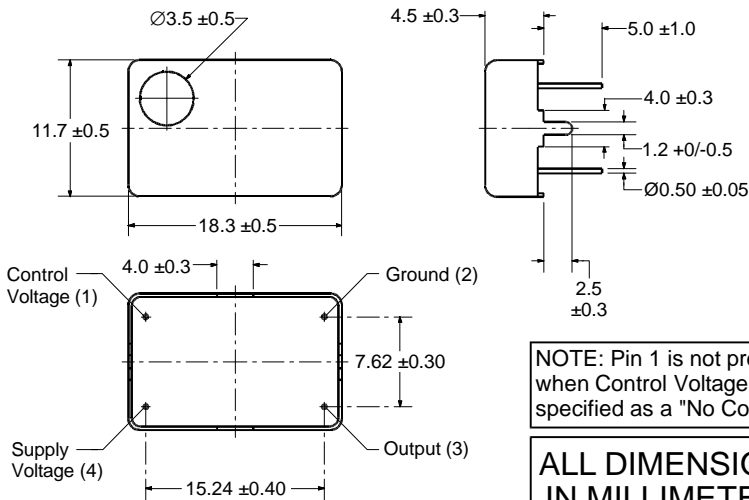
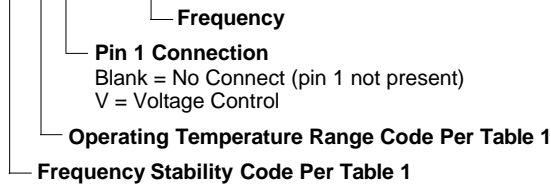
Week of Year  
Last Digit of Year

Ecliptek Manufacturing Code



## PART NUMBERING GUIDE

**EC51 25 E V - 12.800M**



NOTE: Pin 1 is not present when Control Voltage is specified as a "No Connect"

**ALL DIMENSIONS  
IN MILLIMETERS**

**NOTE: Marking shall conform to conditions listed in TQC41-001-000.**

## SPECIFICATION CONTROL DRAWING

		Drawing Number <b>CSC06-010-000</b>	
Title <b>4.5mm HEIGHT THRU-HOLE HCMOS/TTL TCXO</b>			
Revision <b>E</b>		Effectivity Date <b>05-02-03</b>	
ECN Number <b>8395</b>		PAGE 1 OF 2	
Approved By	Date	Released By	Date