

# HCMOS/TTL OSCILLATOR

## J-Lead Plastic Surface Mount EC14 Series 5.0V<sub>DC</sub>



### PART NUMBERING GUIDE

<b>EC14 00 SJ ET I TS - 50.000M TR</b>	
<b>FREQUENCY TOLERANCE / STABILITY</b> 00=±100ppm Maximum (Standard) 45=±50ppm Maximum	<b>PACKAGING OPTIONS</b> Blank=Bulk TR=Tape and Reel (Standard) (pg. L1)
<b>OPERATING TEMP. RANGE</b> Blank=0°C to 70°C ET=-40°C to 85°C	<b>FREQUENCY</b>
<b>DUTY CYCLE</b> Blank=50 ±10(%) (Standard) T=50 ±5(%)	<b>PIN 1 CONNECTION</b> Blank=No Connection (Standard) TS=Tri-State Enable High

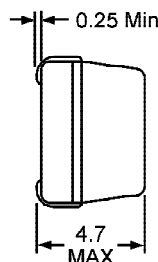
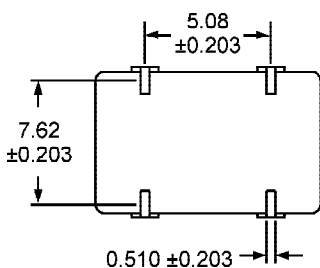
### ELECTRICAL SPECIFICATIONS

Marking Specifications See pg. G2, Group I

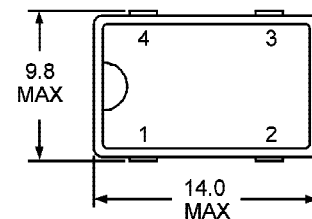
<b>Frequency Range</b>	1.000MHz to 66.667MHz		
<b>Operating Temperature Range</b>	0°C to 70°C or -40°C to 85°C		
<b>Storage Temperature Range</b>	-55°C to 125°C		
<b>Supply Voltage (V<sub>DD</sub>)</b>	5.0V <sub>DC</sub> ±10%		
<b>Aging (at 25°C)</b>	±5ppm / year Maximum		
<b>Pin 1 Tri-State Input Voltage</b>	No Connection	Enables Output	
	V <sub>IH</sub>	+2.0V <sub>DC</sub> Minimum to Enable Output	
	V <sub>IL</sub>	+0.8V <sub>DC</sub> Maximum to Disable Output	
<b>Start Up Time</b>	1.000MHz to 26.000MHz	4 mSeconds Maximum	
	26.001MHz to 66.667MHz	10 mSeconds Maximum	
<b>Frequency Tolerance / Stability</b>	Inclusive of Operating Temperature Range, Supply Voltage, and Load	±100ppm Maximum or ±50ppm Maximum (0°C to 70°C Only)	
<b>Input Current</b>	1.000MHz to 27.000MHz	23mA Maximum	
	27.001MHz to 30.000MHz	30mA Maximum	
	30.001MHz to 50.000MHz	35mA Maximum	
	50.001MHz to 66.667MHz	45mA Maximum	
<b>Load Drive Capability</b>	1.000MHz to 50.000MHz	10TTL Load or 50pF HCMOS Load	
	50.001MHz to 66.667MHz	30pF HCMOS Load	
<b>Output Voltage Logic High (V<sub>OH</sub>)</b>	≤50.000MHz w/TTL Load	2.4V <sub>DC</sub> Minimum	I <sub>OH</sub> = -4mA
	≤50.000MHz w/HCMOS Load	V <sub>DD</sub> - 0.5V <sub>DC</sub> Minimum	I <sub>OH</sub> = -400μA
	>50.000MHz w/HCMOS Load	V <sub>DD</sub> - 0.5V <sub>DC</sub> Minimum	I <sub>OH</sub> = -8mA
<b>Output Voltage Logic Low (V<sub>OL</sub>)</b>	≤30.000MHz w/TTL Load	0.4V <sub>DC</sub> Maximum	I <sub>OL</sub> = 16mA
	30.001MHz to 50.000MHz w/TTL Load	0.5V <sub>DC</sub> Maximum	I <sub>OL</sub> = 16mA
	≤50.000MHz w/HCMOS Load	0.5V <sub>DC</sub> Maximum	I <sub>OL</sub> = 16mA
	>50.001MHz w/HCMOS Load	0.5V <sub>DC</sub> Maximum	I <sub>OL</sub> = 8mA
<b>Duty Cycle</b>	≤50.000MHz at 50% of waveform w/HCMOS Load and at 1.4V <sub>DC</sub> w/TTL Load	50 ±10(%) (Standard)	
	>50.000MHz at 50% of Waveform w/HCMOS Load	50 ±10(%) (Standard)	
	≤50.000MHz at 1.4V <sub>DC</sub> w/TTL Load	50 ±5(%) (Optional)	
	>50.000MHz at 50% of Waveform w/HCMOS Load	50 ±5(%) (Optional)	
<b>Rise Time / Fall Time</b>	≤50.000MHz 20% to 80% of waveform w/HCMOS Load, 0.4V <sub>DC</sub> to 2.4V <sub>DC</sub> w/TTL Load	8 nSeconds Maximum	
	>50.000MHz 20% to 80% of waveform w/HCMOS Load	7 nSeconds Maximum	
<b>Absolute Clock Jitter</b>	±100pSeconds Maximum		
<b>One Sigma Clock Period Jitter</b>	±25pSeconds Maximum		

### MECHANICAL DIMENSIONS

Environmental / Mechanical Specifications See pg. H1, Group C



Pin 1: No Connect or Tri-State  
Pin 2: Case Ground  
Pin 3: Output  
Pin 4: Supply Voltage



Dimensions in mm