

MC Series

9X14 mm, 5.0 or 3.3 Volt, HCMOS/TTL, Clock Oscillators

ELECTRICAL SPECIFICATIONS	PARAMETER	Min.	Typ.	Max.	Units	Condition
	Frequency Stability	±10	±25	±100	ppm	
	Frequency Range	1.0000		160.0000	MHz	
	Operating Temperature	(See Ordering Information)			°C	
	Storage Temperature	-55		+125	°C	
	Input Voltage, V _{DD}	4.5	5.0	5.5	V	MC50A
		3.135	3.3	3.465	V	MC33A
	Input Current			85	mA	MC50A
				35	mA	MC33A
	Symmetry (Duty Cycle)	(See Ordering Information)				
	Load MC50A			10/50 10/15	TTL/pF TTL/pF	1.000 to 80.000 MHz 80.001 to 160.000 MHz
	MC33A			10/15	TTL/pF	1.000 to 160.000 MHz
	Rise and Fall Time 1.000 to 40.000 MHz 40.001 to 160.000MHz			7/6 5/4	ns ns	MC50A/MC33A MC50A/MC33A
	Logic '1' Lever	90% V _{dd} -0.5			V _{dd} V	HCMOS load TTL load
	Logic '0' Lever			10% 0.5	V _{dd} V	HCMOS load TTL load
	Cycle to Cycle Jitter (1 Sigma)		5 40	20 100	ps RMS ps RMS	1.000 to 80.000 MHz 80.001 to 160.000 MHz

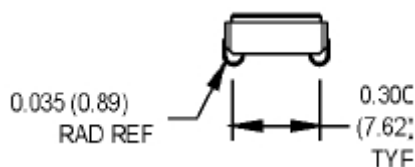
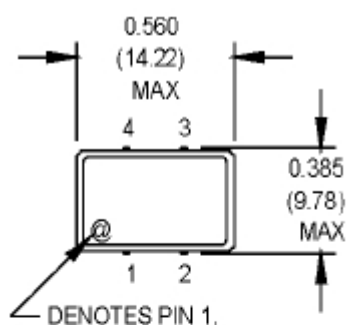
Environmental And Mechanical	Operating Temperature Range	-55°C to +125°C
	Shock	MIL-STD-883, Method 2002, Test Condition B
	Vibration	MIL-STD-883, Method 2007, Test Condition A
	Humidity	MIL-STD-883, Method 1014, Test Condition C
Tri-state Operation	Logic 1 or NC=Oscillation Logic 0 or GND=High Impedance	

Description

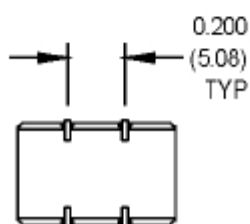
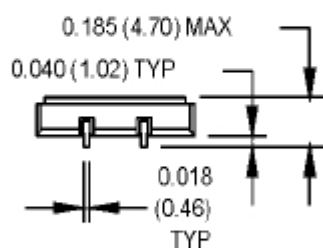
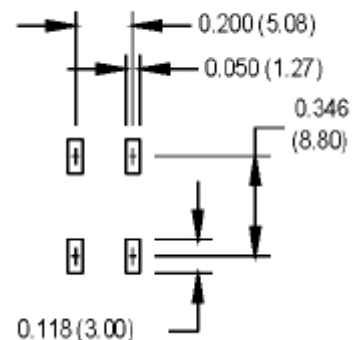
These high reliability oscillators provide HCMOS clock waveforms for applications subjected to the most stringent environmental conditions. They are mechanically robust and have a hermetic seal, thus ensuring the integrity of each oscillator. Each oscillator is burned-in at 125°C for 168 hours, temperature cycled and centrifuged then fully tested in accordance with MIL-STD-883B. Reliability tests are performed per MIL-STD-883B. The calculated MTBF is 3.8×10^6 hours at 125°C

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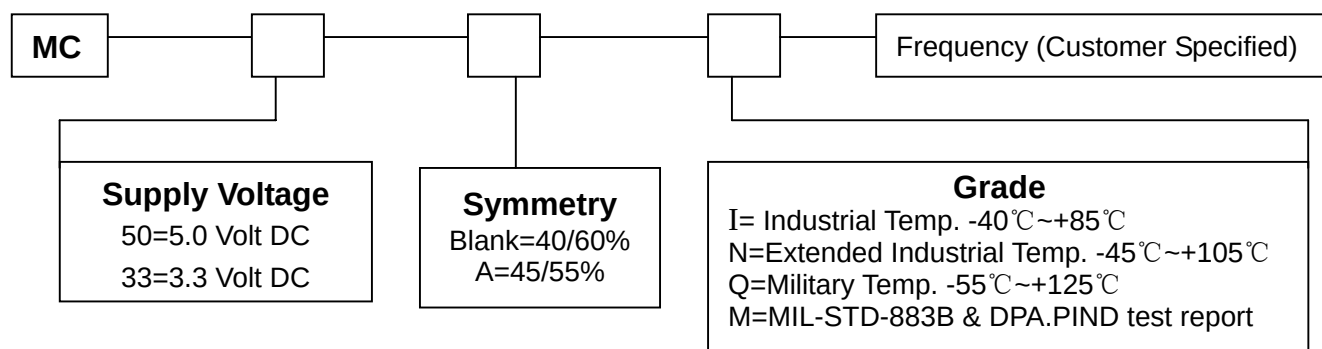


SUGGESTED SOLDER PAD LAYOUT



Pin Connections	Pin 1: Tri-State Pin 2: Ground/Case Pin 3: Output Pin 4: Supply Voltage
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Part Numbering Guide



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