

Extended Temperature/COTS XO, 5.0V 20KHz to 100MHz

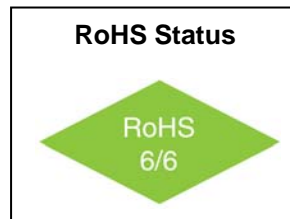


Features

- Tiny 5 x 7 SMD form factor
- Hermetically sealed for rugged environmental conditions
- Extremely wide operating temperature range accommodates harsh environments
- All crystals are processed in-house with tight angle control to assure best frequency-temperature characteristics
- All units are vacuum baked before sealing at 175°C for 16 hours to eliminate moisture traces and pre-age units for superior stability

Applications

- Dawn-hole PCB applications that require an HCMOS/TTL 5V clock and that might be exposed to extremely harsh environmental conditions.



Description

Owing to their small size, light weight, and rugged characteristics, these 5V HCMOS extended temperature/COTS oscillators fulfill tasks not previously feasible. They are used in applications that take advantage of their extended temperature range and high performance. Twenty four different models (with and without tristate) cover -55°C to +200°C operation and provide frequency selection from 20 KHz to 100 MHz. They combine excellent long-term reliability, loading characteristics, and superior startup performance.

Electrical Specifications

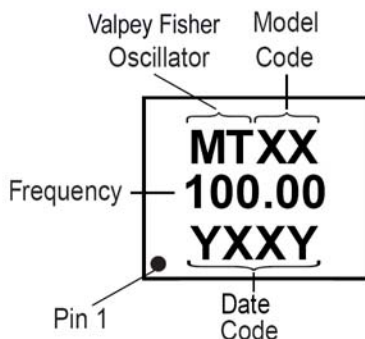
Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note	
Frequency Range	F		0.02		100	MHz		
Frequency Stability	$\Delta F/F$	Overall including calibration, temperature, voltage and load variation	± 75		± 500	ppm	See Chart	
Operating Temperature	T		-55°		+200°	°C	See Chart	
Aging		First Year After First Year		3 1		ppm ppm/yr		
Supply Voltage	V _{cc}		4.5	5.0	5.5	V		
Supply Current					40	mA		
Output		All units, full range Loads 3 TLL loads, or 10 LSTTL loads, or 15pF CMOS						
Symmetry		TTL and LSTTL @ 1.4V CMOS, @ 50% V _{DD}		40/60 40/60		%		
Rise and Fall Times		TTL and LSTTL from 0.4 to 2.4V CMOS, 15 pF, from 0.4 to (V _{DD} -0.4) V CMOS, 30 pF, from 0.4 to (V _{DD} -0.4) V			8 8 10	ns		
Input requirement for pin.1		Output enable - Output disable (Tristate)	pin 1 may float or 2.8V min pin 1 requires 0.4V max					



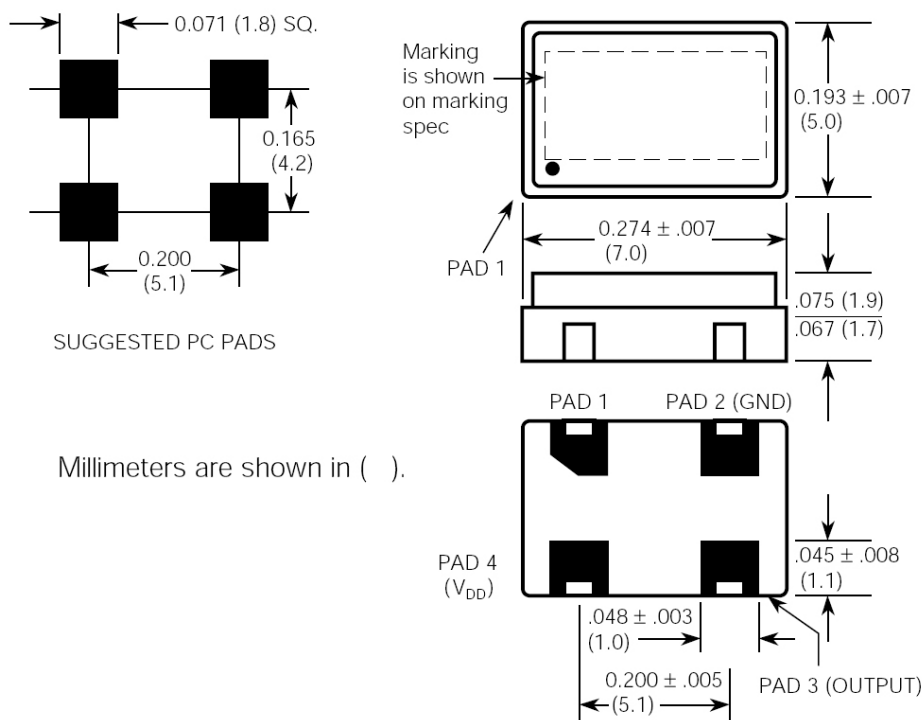
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Marking Specifications

The format for the marking is:



Package Outline



Pin	Non-Tristate Models	Tristate Models
1	NOT USED	Floating or 1 : Oscillator runs Ground or 0 : Disable or Tristate
2		Ground and Case
3		Output
4		+5.0V, V _{DD}