

R1800, R1801, R1802 R3800, R3801, R3802 5X7 mm Surface Mount HCMOS 1.8V 850KHz to 165 MHz

Features

- Fixed frequency or tristate
- Very low power when tristated
- Start up time less than 5 ms.
- Stability options from +/-100 ppm to +/-25ppm
- Guaranteed start-up with ramping DC supply

Typical Applications

 Any surface mount PCB that requires a standard HCMOS/TTL 1.8V clock, including microprocessors and microcontrollers



Description

Valpey Fisher's R models surface mount (SMD) oscillators provide clock waveforms needed to clock standard HCMOS circuits.

CONNECTIONS

	Fixed Output Models	Tristate Models	
Pad 1	NOT USED	Floating or 1: Oscillator runs Ground or 0: Tristate	
Pad 2	Ground and Case		
Pad 3	Output		
Pad 4	+1.8V, V _{DD}		





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ELECTRICAL SPECIFICATIONS

Frequency Range 850 KHz to 165 MHz

Frequency Stability Includes calibration at 25°C, operating temperature change of input voltage, change of load, shock and vibration

Input Voltage	MIN 1.7	TYP 1.8	MAX 1.9	UNITS volts
Load			15	pf
Input Current 850 KHz to 70 MHz, with 15pf 1 70.1 to 165.0 MHz with 15pf loa	load ad	7.0 15.0	10.0 18.0	mA mA
Output Levels "0" Level "1" Level	90% V _{DI})	10% V _{DD}	volts volts
Rise and Fall Times Jitter From positive edge to positive edge			5 10	ns ps RMS
Symmetry 850 KHz to 70MHz, @ 50% V _{DD} 70.1 to 165.0 MHz, @ 50% V _{DD}		48/52 45/55	45/55 40/60	percent percent
Aging First year After first year		3 1		ppm ppm/yr

Input Requirements for Pin 1:

"1": On-Pin 1 may float or 90% V_{DD} min. "0": Tristate-Pin 1 requires 10% V_{DD}



ENVIRONMENTAL SPECIFICATIONS

Temperature	
*Operating	0° to 70°C
Storage	-55°to +125°C
Shock-1000 Gs, 0.35 m	ns, ¹ / ₂ sine wave, 3 shocks in each plane
Vibration- 10-2000 Hz	c of .06" d.a. or20 Gs, whichever is less
Humidity-Resistant to	85° R.H. at 85°C
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MECHANICAL SPECIFICATIONS

Leak- MIL STD 883, Method 1014, Condition A1
Case- Hermetically sealed package
Pads- 60 microinch of gold over nickel
Marking- Epoxy ink or laser engraved
Resistance to solvents- MIL STD 202, Method 215

*Operating -40 to +85°C also available.

NON-TRISTATE		TRISTATE	
MODEL	Frequency Stability	MODEL	Frequency Stability
R1800	+/-100ppm	R3800	+/-100ppm
R1801	+/-25ppm	R3801	+/-25ppm
R1802	+/-50ppm	R3802	+/-50ppm

*See Marking Specification

MARKING SPECIFICATION

The format for the marking is:

