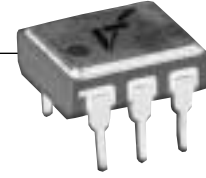


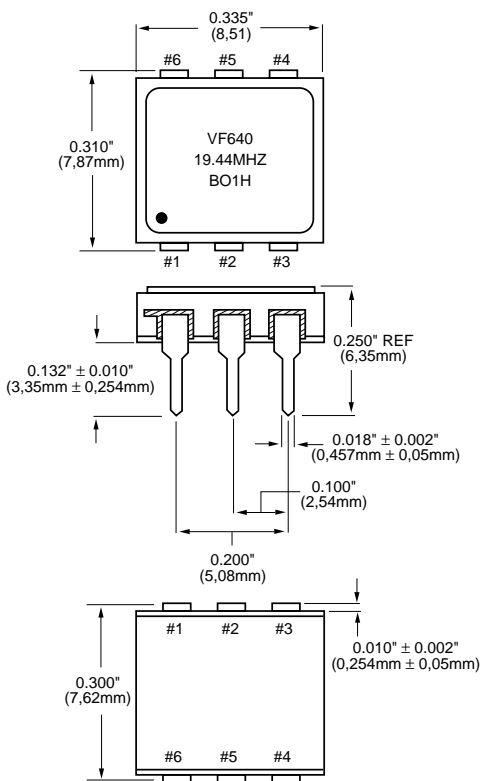
# VF640

## CMOS/TTL Compatible Clock Oscillator Miniature 6 Pin Ceramic Package



### FEATURES

- Very Low Phase Jitter
- Tristate Output Control
- Tight Duty Cycle Available



All dimensions are typical unless otherwise specified.

Creating a Part Number

**VF640** [ ] [ ] - [ ] - **FREQ.**

#### FREQUENCY STABILITY

Code	Specification
S	±20 ppm
A	±25 ppm
B	±50 ppm
	±100 ppm (std.)
C	±500 ppm

#### DUTY CYCLE

Code	Specification
H	±5%
	±10% (std.)

#### OPERATIONAL TEMP. RANGE

Code	Specification
1	0°C to +70°C (std.) -40°C to +85°C

#### INPUT VOLTAGE

Code	Specification
L	3.3 Volt
	5.0 Volt (std.)

Example: VF640BHL-1-19.44MHz: Frequency Stability ±25ppm, Duty Cycle ±1.5%, Input Voltage 3.3 Volt ±5%, Operating Temperature -40°C to +85°C, Frequency 19.44MHz.

		Parameter	Symb	Condition	Min	Typ	Max	Unit	Note	
Absolute Max. Ratings	Input Break Down Voltage	V <sub>cc</sub>			-0.5		7.0	V		
	Storage Temp.	T <sub>s</sub>			-55		+125	°C		
Electrical	Frequency Range	F			2.0		130	MHz		
	Frequency Stability	ΔF/F		Overall conditions including: calibration, temp., aging 10 yrs, shock, vibration			±100	ppm	1	
	Input Voltage	V <sub>cc</sub>			4.75 3.15	5.00 3.30	5.25 3.45	V	Std. LV Opt.	
	Input Current	I <sub>cc</sub>	15pF load, 50MHz				40	mA	2	
	Load	10 TTL gates or 50pF Max								
	Duty Cycle		@1.4V		40	50	60	%	3	
	Rise/Fall Time	Tr/Tf	20% to 80% 0.4V to 2.4V				4.0 1.5	ns		
	Logic "1" Level	V <sub>oh</sub>	Max Load		0.9V <sub>cc</sub>			V		
	Logic "0" Level	V <sub>ol</sub>	Max Load				0.1V <sub>cc</sub>	V		
	Start-up Time	T <sub>s</sub>				2	10	ms		
	Phase Jitter		1σ				1	ps	f <sub>j</sub> >1KHz	
	Tristate Function	Input HIGH (>2.5V) or floating: Input LOW (<0.5V):				ACTIVE INFINITE IMPEDANCE				
Enable/Disable Time	Te/Td					100	ns			
Environmental and Mechanical	Operating Temperature Range	0°C to +70°C (-40°C to +85°C available)								
	Mechanical Shock	Per MIL-STD-202, Method 213, Cond. E								
	Thermal Shock	Per MIL-STD-883, Method 1011, Cond. A								
	Vibration	Per MIL-STD-883, Method 2007, Cond. A								
	Soldering Conditions	260°C, for 10s, Max. or 230°C for 90s, Max								
	Hermetic Seal	Leak rate less than 5 x 10 <sup>-8</sup> atm.cc/s of helium								
Electrical Connections	Pin Out	Pin #1-N/C Pin #3-Ground, Case Pin #5-N/C		Pin #2-Tristate Control Pin #4-Output Pin #6-V <sub>cc</sub>						

Notes:

1. Standard frequency stability, others available.
2. Current is load and frequency dependent.
3. Standard symmetry, tighter available.
4. Surface mount available, see VF640-G, VF640-L.

All specifications are subject to change without notice.