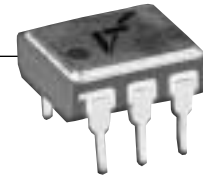
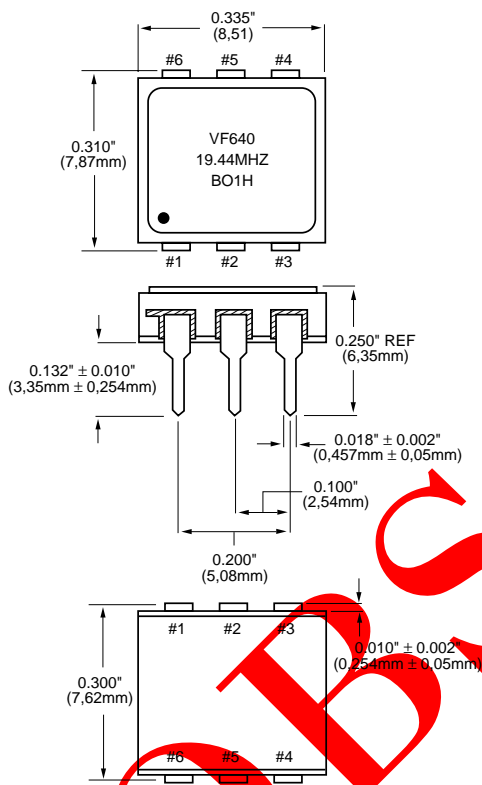


## VF640

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: ACTIVE Input LOW (<0.5V): INFINITE IMPEDANCE							
Enable/Disable Time	T <sub>e</sub> /T <sub>d</sub>					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 #2-Tristate Control Pin #3-Ground, Case      Pin #4-Output Pin #5-N/C      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.