VF540

XO 3.3V, 5.0V

9x14mm SMD, HCMOS/TTL

DESIGN FEATURES

- Very Low Phase Jitter at all Frequencies
- Extended Temperature available
- Tight Duty Cycle available
- Tristate Control Standard
- EMI Shielded

RoHS Status

RoHS 6/6

Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		1.5		130	MHz	
Frequency Stability	ΔF/F	Overall conditions of : calibration, temp., 10 years aging, shock, vibration			± 20 ± 25 ± 50 ± 100 ± 500	ppm	See “How to Order” chart
Operating Temperature	T		0 -40 -55		+70 +85 +125	°C	
Output	HCMOS / TTL						
Load	10 TTL gates or 50pF max.						
Supply Voltage	V_{CC}		4.75 3.15	5.00 3.30	5.25 3.45	V	See “How to Order” chart
Supply Current	I_{CC}	15pF load, 50MHz			40	mA	Load & Frequency dependent
Duty Cycle		@1.4V	40	50	60	%	5%, 2.5% available
Rise / Fall Time	T_R/T_F	0.4V to 2.4V 20% to 80%			1.5 4.0	ns	
Logic “1” Level	V_{OH}	Max Load	$0.9V_{CC}$			V	
Logic “0” Level	V_{OL}	Max Load			$0.1V_{CC}$	V	
Start-up Time	T_S			2	10	ms	
Phase Jitter		1σ			1	ps	fj>1kHz

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Tristate Function

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Enable/Disable Time	T_E/T_D				100	ns	
Tristate Function	Input HIGH (>2.5V) or floating: ACTIVE Input LOW (<0.5V): INFINITE IMPEDANCE						

Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Supply Voltage	V_{CC}		-0.5		7.0	V	
Storage Temperature	Ts		-55		+125°	°C	

Environmental and Mechanical Conditions

Parameter	Condition
Mechanical Shock	Per MIL-STD-202, Method 213, Condition E
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Vibration	Per MIL-STD-883, Method 2007, Condition A
Soldering Conditions	260°C for 10s max 230°C for 90s max.
Hermetic Seal	Leak rate less than $5x10^{-8}$ atm.cc/s of helium

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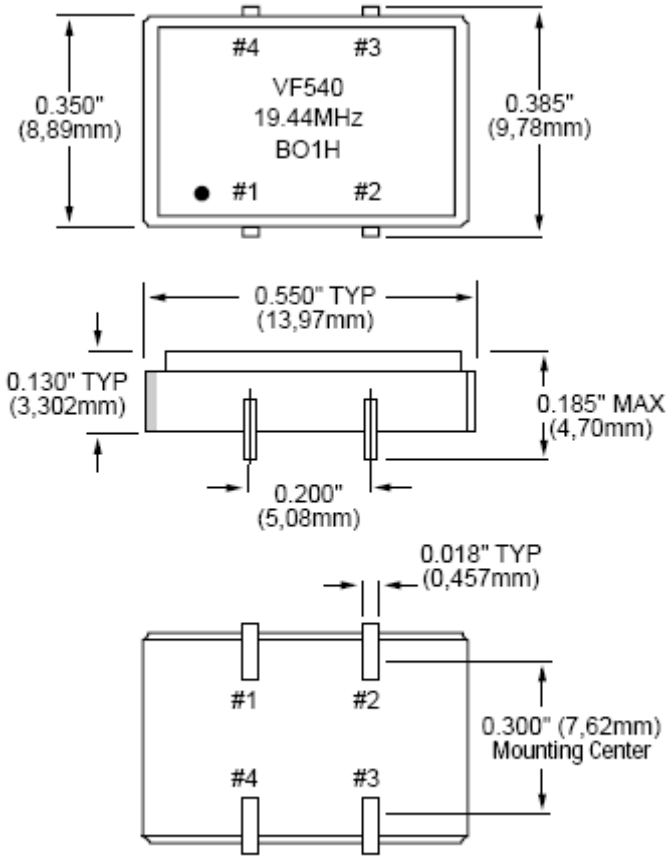
Pin Connections

Pin #	Connection
1	Tristate Control
2	Case/GND
3	Output
4	V_{CC}

Package Dimensions



All dimensions are typical unless otherwise specified.

ORDERING INFORMATION

VF540 XXX X XXXX.XXXXMHz

FREQUENCY, MHz

Stability

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

Duty Cycle

Code	Specification
HH	±2.5%
H	±5%
	±10% (std.)

Supply Voltage

Code	Output
L	3.3V
	5.0V (std.)

Temp. Range

Code	Specification
	0°C to +70°C std.
1	-40°C to +85°C
2	-55°C to +125°C*

*Not always available

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