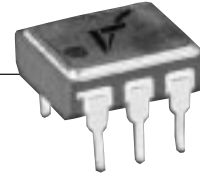


VF946 Series

HCMOS/TTL Compatible Tri-State Hybrid VCXO 6 Pin Ceramic Package

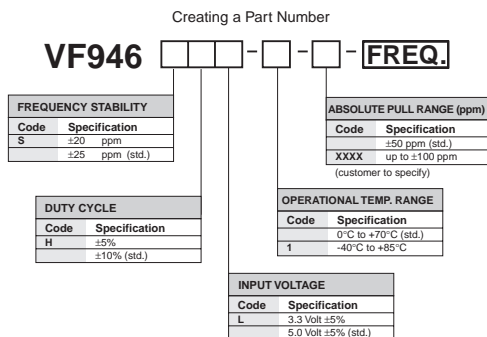


FEATURES

- Tristate Output Standard
- Small 6 Pin DIP
- Compatible with the popular S-type VCXO
- Industrial Temperature Range Available
- Very Low Phase Jitter
- High Reliability
- Frequencies to 52 MHz

Parameter	Symb	Condition	Min	Typ	Max	Unit	Note	
Absolute Max. Ratings	Input Break Down Voltage	Vcc	-0.5		7.0	V		
	Storage Temp.	Ts	-55		+125	°C		
	Control Voltage	Vc	-1		9	V		
Electrical	Frequency Range	F	1.5		52	MHz		
	Frequency Stability	$\Delta F/F$	vs. Temp., Vcc			± 25	ppm	
	Input Voltage	Vcc		4.75 3.15	5.00 3.30	5.25 3.45	V	Std. LV Opt.
	Input Current	Icc	No load			30	mA	1
	Load	10 TTL gates or 50pF						
	Duty Cycle		@1.4V	40	50	60	%	2
	Rise/Fall Time	Tr/Tf	10% to 90% 0.4V to 2.4V			6 4	ns	
	Logic "1" Level	Voh	Max. Load	0.9Vcc			V	
	Logic "0" Level	Vol	Max. Load			0.1Vcc	V	
	Start-up Time	Ts			2	10	ms	
	Phase Jitter		1 σ			1	ps	fj>1KHz
	Modulation BW		@Vc = 2.5V	10			KHz	@-3db
	Input Impedance		fm<10KHz	50			KOhm	
	Control Voltage	Vc	Vcc = 5.0V Vcc = 3.3V	0.00 0.00	2.50 1.65	5.00 3.30	V	3
	Absolute Pull Range (guaranteed capture range)		Overall, includes stability over temp.	± 50			ppm	
	Deviation Slope		Monotonic, posit.		50		ppm/V	4
	Linearity					± 20	%	
Setability (Vc for center freq)	Vc0	@25°C, Fnominal	2.00 1.25	2.50 1.65	3.00 2.05	V	Std LV opt.	
Tristate Function	Input HIGH (>2.5V) or floating: ACTIVE Input LOW (<0.5V): INFINITE IMPEDANCE							
Enable/Disable Time					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.						
Electrical Connections	Hermetic Seal	Leak rate less than 5 x 10 ⁻⁸ atm.cc/s of helium						
	Pin Out	Pin #1- Voltage Control Pin #3- Case, Ground Pin #5- N/C		Pin #2- Tristate Control Pin #4- Output Pin #6- Vcc				

All dimensions are typical unless otherwise specified.



Example: VF946HL-1-75-44.736MHz: Frequency Stability ± 25 ppm, Duty Cycle $\pm 5\%$, Input Voltage 3.3 Volt $\pm 5\%$, Operating Temperature -40°C to +85°C, APR ± 75 ppm, Frequency 44.736MHz.

Notes:

1. Frequency dependent.
2. Tighter duty cycle available.
3. 0V to 5V control voltage available for Vcc 3.3V. Nominal control voltage is 2.5V and setability is ± 0.5 V in this case.
4. Frequency dependent, 30 ppm at F>40MHz.
5. Surface mount available, see VF946G, VF946L.