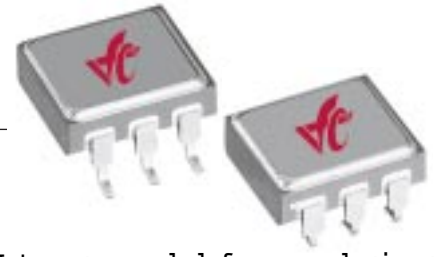


VF946J/G Series

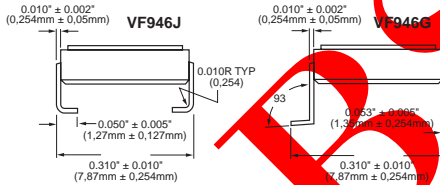
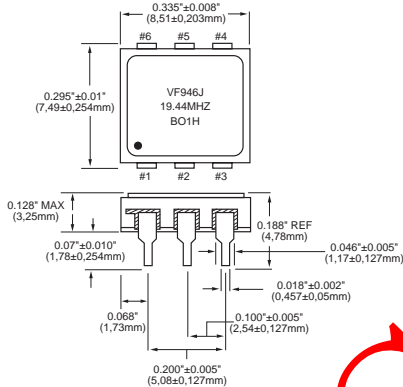
HCMOS/TTL Compatible Tri-State Hybrid VCXO 6 Pin Ceramic Package



*Not recommended for new designs

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



All dimensions are typical unless otherwise specified.

Creating a Part Number

VF946 [] - [] - [] - **FREQ.**

FREQUENCY STABILITY	
Code	Specification
S	±20 ppm
	±25 ppm (std.)

ABSOLUTE PULL RANGE (ppm)	
Code	Specification
	±50 ppm (std.)
XXX	up to ±100 ppm (customer to specify)

DUTY CYCLE	
Code	Specification
H	±5%
	±10% (std.)

PIN CONFIGURATION	
Code	Specification
J	"J" Bend
G	Gull Wing

INPUT VOLTAGE	
Code	Specification
L	3.3 Volt ±5%
	5.0 Volt ±5% (std.)

OPERATIONAL TEMP. RANGE	
Code	Specification
	0 C to +70 C (std.)
1	-40 C to +85 C

Example: VF946SHL-1G-75-44.736MHz: Frequency Stability ±20ppm, Duty Cycle ±5%, Input Voltage 3.3 Volt ±5%, Operating Temperature -40 C to +85 C, APR ±75ppm, Frequency 44.736MHz. Pin Configuration Gull Wing

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	³F/F	vs. Temp., Vcc		±25	ppm		
	Input Voltage	Vcc	No load	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				15	ms	
	Phase Jitter		1s			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					

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 ±0.5V in this case.
4. Frequency dependent, 30 ppm at F>40MHz.
5. Surface mount available, see VF946G, VF946L.