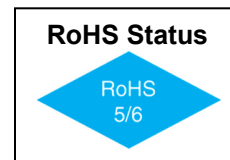


VF940–T Series
Tristate VCXO, 3.3V or 5.0V
12.62 x 20.32 mm, HCMOS/TTL



Features

- Wide pull range – up to $\pm 1,000$ ppm for some frequencies
- Fundamental crystal design
- Hermetically sealed package



Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		1.54		200	MHz	
Frequency Stability	$\Delta F/F$	Vs. Operating Temperature, V_{CC}			± 25	ppm	
Operating Temperature	T		-40		+85	°C	
Supply Voltage	V_{CC}		4.75 3.15	5.0 3.3	5.25 3.45	V	
Supply Current	I_{CC}	No load		20		mA	@ 20MHz
Load		10 TTL gates or 50 pF max., AC coupled 50 Ohms termination recommended for F > 52MHz					
Duty Cycle		@ 1.4V	40	50	60	%	Note 1
Rise & Fall Times	T_R/T_F	20% to 80%			6 3	ns	F < 54MHz F > 54MHz
Output Levels	V_{OH}	Max load	0.9 V_{CC}				
	V_{OH}	Max load			0.1 V_{CC}		
Start-up Time	T_S			2	10	ms	
Phase Jitter		1 σ			1	ps	fj > 1kHz

Note 1: $\pm 5\%$ symmetry available, contact factory for tighter requirements.

VF940–T Series
Tristate VCXO, 3.3V or 5.0V
12.62 x 20.32 mm, HCMOS/TTL



Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Modulation Bandwidth	fm	@ $V_C = 2.5V$	10			kHz	@ -3dB
Input Impedance		fm < 10kHz	50			kOhm	
Absolute Pull Range	APR	Overall	±50			ppm	Note 2
Deviation Slope		Monotonic, positive		±50 ±75		ppm/V	5.0V 3.3V
Linearity					±20	%	Note 3
Setability (V_C for center frequency)	V_{C0}	@ 25°C, F_{NOM}	2.00 1.25	2.50 1.65	3.00 2.05	V	Standard LV Option

Note 2: Up to ±1,000 ppm pull range available at some frequencies.

Note 3: ±10% and ±5% linearity available.

Note 4: 0 to 5V control voltage available for V_{CC} 3.3V. Nominal control voltage is 2.5V and setability is ±0.5V in this case.

Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Input Break Down Voltage	V_{CC}		-0.5		+7.0	V	
Storage Temperature	T_S		-40		+85	°C	
Control Voltage	V_C		-1		+9	V	

Environmental and Mechanical Conditions

Parameter	Condition
Mechanical Shock	MIL STD 202, Method 213, Condition E
Thermal Shock	MIL STD 883, Method 1011, Condition A
Vibration	MIL STD 883, Method 2007, Condition A
Soldering Conditions	260°C, for 10s max
Hermetic Seal	Leak rate less than 5×10^{-8} atm.cc/s of helium
Marking	Epoxy ink or laser engraved

VF940-T Series

Tristate **VCXO**, 3.3V or 5.0V

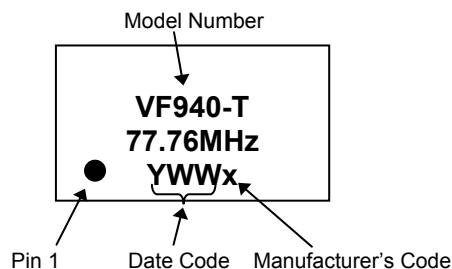
12.62 x 20.32 mm, HCMOS/TTL



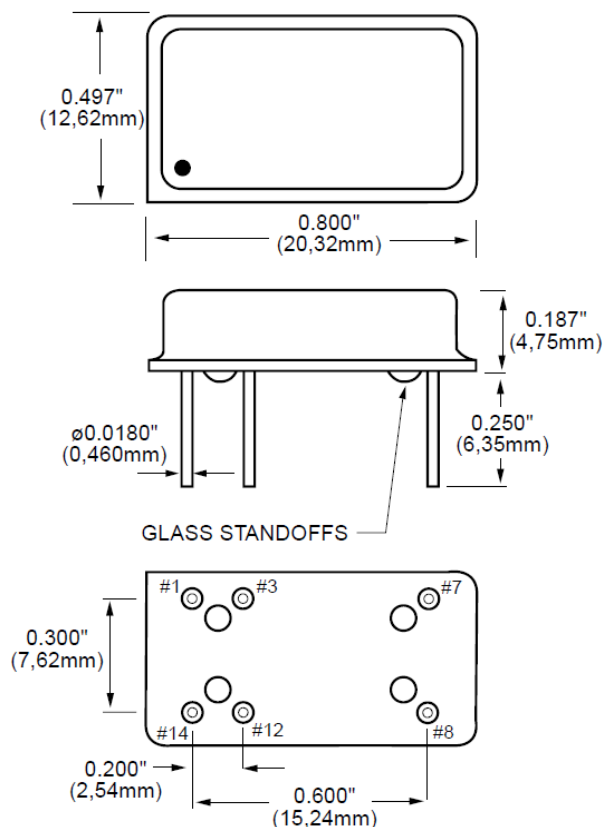
Pin Assignments

Pin #	Connection
1	V _{CONTROL}
3	Tristate
7	Ground, Case
8	Output
12	N/C
14	V _{CC}

Marking Specification



Package



How to Order

VF940										FREQUENCY, MHz	
Stability		Duty Cycle		Supply Voltage		Operating Temperature Range		Lead Configuration		Absolute Pull Range	
Code	Specification*	Code	Specification	Code	Specification	Code	Specification	Code	Specification	Code	Specification
S	±20 ppm	H	±5%	L	3.3V		0°C to +70°C (std.)	G	Gull Wing		±50 ppm min. (std.)
	±25 ppm		±10% (std.)		5.0V (std.)	1	-40°C to +85°C		Through Hole (std.)	XXXX	Up to ±1,000 ppm max.

*Old code A is ±25 ppm. See new code above.