

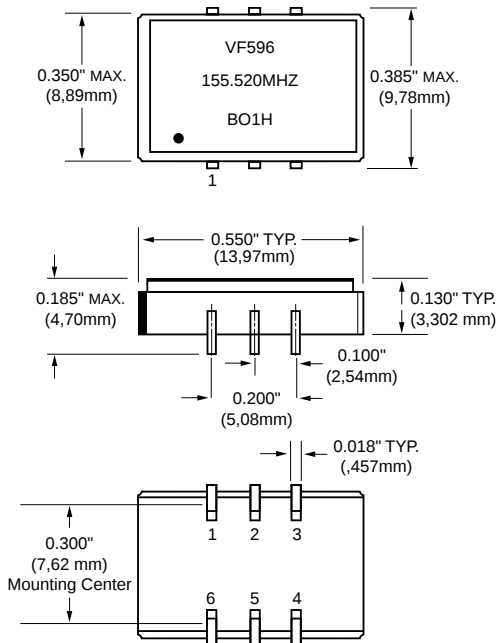
VF596



PECL 10KH Compatible Surface Mount VCXO

FEATURES

- Wide and High Frequency Range
- Wide Pull Range Available
- No Frequency Multiplication is Used: Very Low Phase Jitter
- Complementary Output Standard



All dimensions are typical unless otherwise specified.

Creating a Part Number

VF596 [] - [] - [] - **[FREQ.]**

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

ABSOLUTE PULL RANGE (ppm)	
Code	Specification
	±50 ppm MIN. (std.)
XXX	Specify Deviation MIN. (up to ±500 ppm MAX.)

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

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

Example: VF596L-1-150-125MHz: Frequency Stability ±25ppm, Duty Cycle ±5.0%, Input Voltage 3.3 Volt ±5%, Operational Temperature -45°C to +85°C, Complementary Output, APR ±150ppm, Frequency 125.000MHz.

Parameter	Symb	Condition	Min	Typ	Max	Unit	Note
Input Break Down Voltage	V _{cc}		-0.5		7.0	V	
Storage Temp.	T _s		-40		+85	°C	
Control Voltage	V _c		-1		9	V	
Frequency Range	F		19.44		200	MHz	
Frequency Stability	ΔF/F	vs., Temp., V _{cc}			±25	ppm	
Input Voltage	V _{cc}		4.75 3.15	5.00 3.30	5.25 3.45	V	Std. LV Opt.
Input Current	I _{cc}	50 Ohm Load			65	mA	
Load		50 Ohm to V _{cc} -2V or Thevenin Equiv. Bias Required					
Duty Cycle		@50%	45	50	55	%	
Rise/Fall Time	Tr/Tf	20% to 80%			1.50	ns	
Logic "1" Level	V _{oh}	@V _{cc} = 5.0V	4.04		4.19	V	
Logic "0" Level	V _{ol}	@V _{cc} = 5.0V	3.15		3.25	V	
Start-up Time	T _s			2	10	ms	
Phase Jitter		1σ			1	ps	fj>1KHz
Modulation BW		@V _c = 2.5V	10			KHz	@-3db
Input Impedance		f<10KHz	50			KOhm	
Control Voltage	V _c	V _{cc} = 5.0V V _{cc} = 3.3V	0 0		5.00 3.30	V	1
Deviation		V _c = 0V to 5V, 25°C		±100		ppm	
Absolute Usable Pull Range	APR	Overall	±50			ppm	
Deviation Slope		Monotonic, positive		50		ppm/V	2
Linearity					±20	%	3
Setability (V _c for center freq)	V _{c0}	@25°C, F _{nominal}	2.00 1.20	2.50 1.65	3.00 2.10	V	Std. LV Opt.
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 ⁻⁸ atm.cc/s of helium					
Pin Out		Pin #1-Voltage Control Pin #2-N/C Pin #3-Ground, Case Pin #4-Output Pin #5-Complementary Output Pin #6-V _{cc}					

Notes:

1. 0V to 5V control voltage available for V_{cc} 3.3V. Nominal Control Voltage is 2.5V and Setability is ±0.5V in this case.
2. Negative slope and supply voltage available in true ECL applications.
3. Tighter linearity specification available.

All specifications are subject to change without notice.