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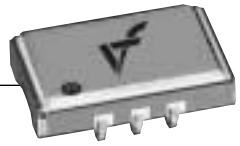
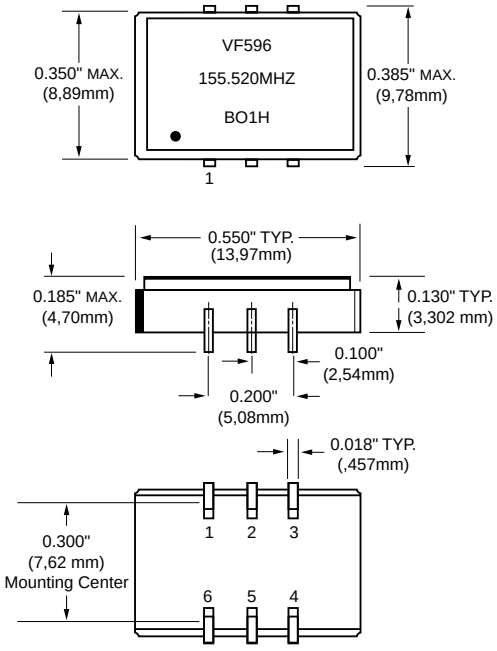
VF596



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
	±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
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: 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
Absolute Max. Ratings	Input Break Down Voltage	Vcc		-0.5		7.0	V	
	Storage Temp.	Ts		-40		+85	°C	
	Control Voltage	Vc		-1		9	V	
Electrical	Frequency Range	F		19.44		200	MHz	
	Frequency Stability	ΔF/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	50 Ohm Load			65	mA	
	Load	50 Ohm to Vcc-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	Voh	@Vcc = 5.0V	4.04		4.19	V	
	Logic "0" Level	Vol	@Vcc = 5.0V	3.15		3.25	V	
	Start-up Time	Ts			2	10	ms	
	Phase Jitter		1σ			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 0		5.00 3.30	V	1
	Deviation		Vc = 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 (Vc for center freq)	Vc0	@25°C, Fnominal	2.00 1.20	2.50 1.65	3.00 2.10	V	Std. LV Opt.
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., or 230°C for 90s Max.						
	Hermetic Seal	Leak rate less than 5 x 10^{-8} atm.cc/s of helium						
Electrical Connections	Pin Out	Pin #1–Voltage Control Pin #3–Ground, Case Pin #5–Complementary Output		Pin #2–N/C Pin #4–Output Pin #6–Vcc				

Notes:
1. 0V to 5V control voltage available for Vcc 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.

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