

VF230V

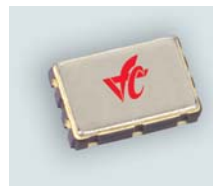
VCXO Low Jitter 3.3V

5x7mm SMD, LVPECL / LVDS



Features

- Tristate
- 750KHz to 800MHz Frequency Range
- 5ps RMS Jitter over 12KHz to 20MHz
- APR to ± 150 ppm



RoHS Status



Applications

- Optical Networking, SONET / SDH
- 10 Gigabit Ethernet
- Broadband Access

Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		0.750		800	MHz	
Frequency Stability	$\Delta F/F$	Vs. Operating Temperature			± 50 ± 25	ppm	
		Vs. Supply Voltage		± 1.5	± 3	ppm/V	First Year After first year
		Vs. Aging / Year		± 3 ± 1		ppm/y	
Operating Temperature	T		0° -40°		+70° +85°	°C	Order Code A Order Code B
Supply Voltage	Vcc		3.15	3.3	3.45	V	
Voltage Control	Vc		0.3 0		3 3.3	V	Order codes A,B Order codes C,D
APR				100	150	ppm	
Input Impedance				50		KOhm	
Period Jitter RMS		19.44MHz 77.76 MHz 155.52 MHz 622.08 MHz		5 8 9 10		ps	
Integrated Jitter RMS 12KHz to 20MHz		155.52MHz		3	5	ps	



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Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Symmetry		$(V_{DD}-1.3) V_{DC}$ $1.25V_{DC}$	40 40	50 50	60 60	%	PECL LVDS
Phase Noise		10Hz 100Hz 1KHz 10KHz 100KHz		-60 -90 -112 -140 -140		dBc/Hz	@19.44MHz
		10Hz 100Hz 1KHz 10KHz 100KHz		-60 -90 -112 -127 -125		dBc/Hz	@106.25MHz
		10Hz 100Hz 1KHz 10KHz 100KHz		-60 -90 -112 -125 -123		dBc/Hz	@155.52MHz
		10Hz 100Hz 1KHz 10KHz 100KHz		-60 -90 -109 -110 -109		dBc/Hz	@622.08MHz
Supply Current	I_{CC}	0.75 – 24MHz 24 – 160MHz 160 – 800MHz			25 65 100	mA	PECL
		0.75 – 24MHz 24 – 96MHz 96 – 800MHz			25 45 80	mA	LVDS
Load	50 Ohm to $V_{DD}-2V$ (PECL) 100 Ohm (LVDS)						
Output High Voltage	V_{OH}			$V_{DD}-1.025$ 1.4	1.6	V	PECL LVDS
Output Low Voltage	V_{OL}		0.9	1.1	$V_{DD}-1.620$	V	PECL LVDS
Output Differential Voltage	V_{OD}		247	355	454	mV	LVDS
Offset Voltage	V_{OS}		1.125	1.2	1.375	V	LVDS
Rise / Fall Time	T_r/T_f	20% to 80%		0.3 0.3	0.35 0.4	ns	PECL LVDS
Tristate	"1": On-Pin 1 may float or 2.8V min "0": Tristate – Pin 1 requires 0.4V max						



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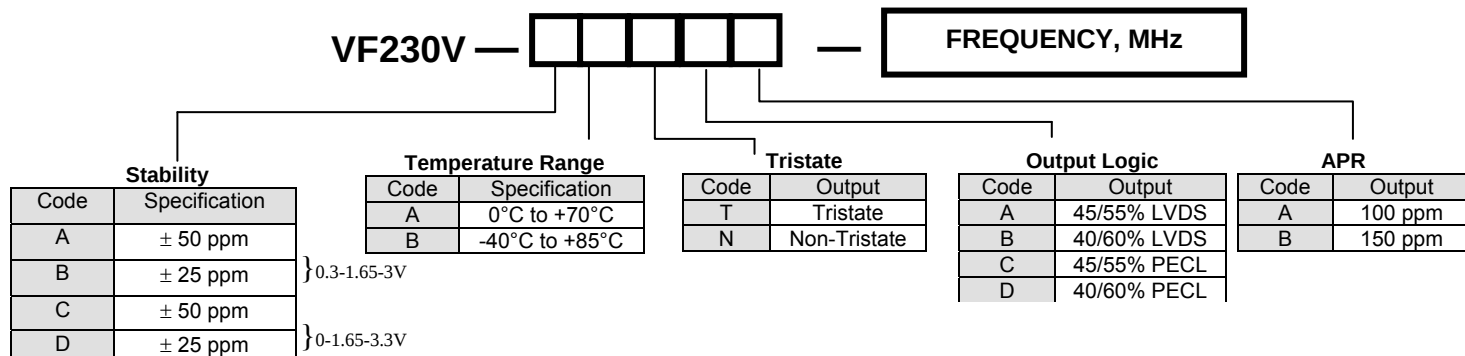
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Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Lead Temperature		Soldering, 10s max			260	°C	
Storage Temperature	Ts		-55		+125°	°C	
Junction Temperature	Tj				+125°	°C	
Supply Voltage	Vc		-1		4.6	V	
ESD Protection		Human Body Model			2	kV	

How to Order



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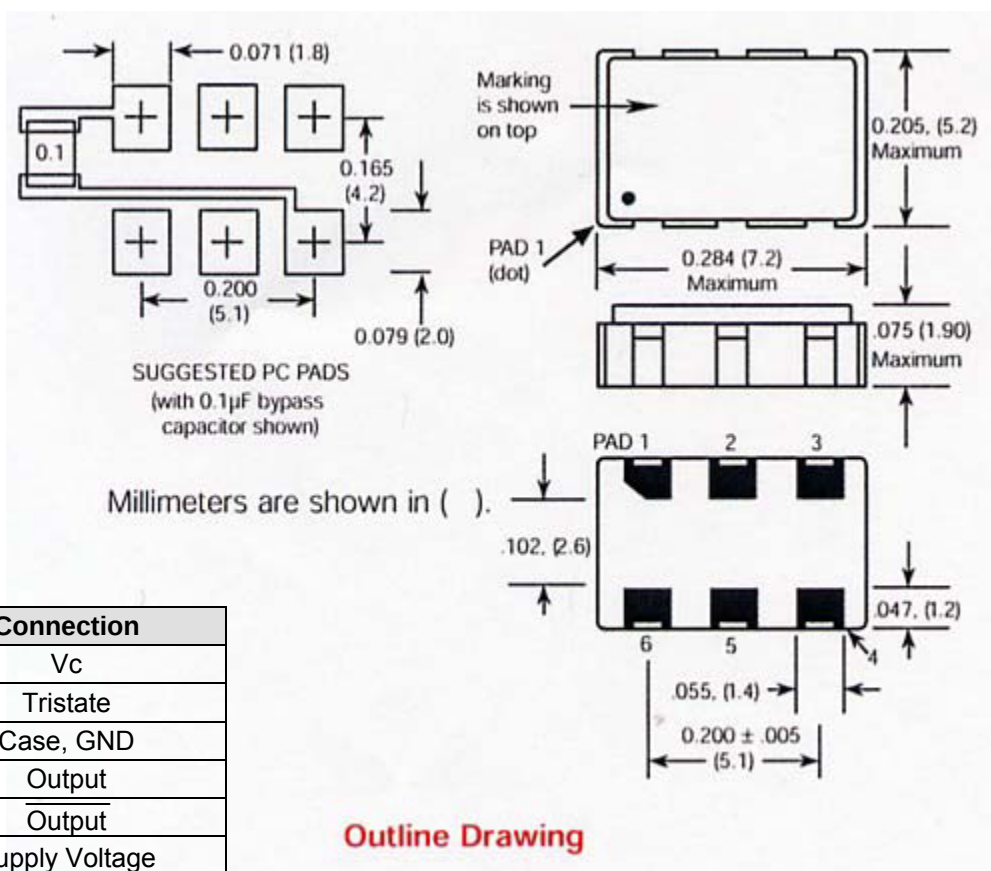
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Environmental and Mechanical Conditions

Parameter	Specification
Shock	1000 Gs, 0.35ms, ½ sine wave, 3 shocks in each plane
Humidity	Resistant to 85 °R.H. at 85 °C
Vibration	10-2000 Hz of 0.06" d.a. or 20 Gs, whichever is less
Leak	MIL STD 883, Method 1014, Condition A1
Case	Ceramic with hermetic resistance-welded metal lid
Pads	Solderable gold over nickel
Marking	Epoxy ink or laser engraved
Resistance to Solvents	MIL STD 202, Method 215



Pin #	Connection
1	Vc
2	Tristate
3	Case, GND
4	Output
5	Output
6	Supply Voltage

