

# R3306

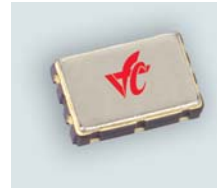
## VCXO Ultra Low Jitter 3.3V

### 5x7mm SMD, HCMOS/TTL



#### Features

- <0.15ps RMS Jitter over 12KHz to 20MHz
- APR min  $\pm 100$ ppm
- Start-up time is less than 5ms
- TRISTATE



#### RoHS Status



#### Applications

- Standard and High Definition Video
- 10 Gbit Ethernet
- Optical Networking

#### Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Frequency Range	F		1.5		100	MHz	
Frequency Stability	$\Delta F/F$	Includes calibration at 25°C, operating temperature, change of input voltage, change of load, shock and vibration		$\pm 30$		ppm	
Aging		First Year After First Year		3 1		ppm ppm	
Operating Temperature	T		0° -40°		+70° +85°	°C	
Supply Voltage	V <sub>cc</sub>		3.0	3.30	3.6	V	
Supply Current	I <sub>cc</sub>	3MHz to 10MHz 10.1 to 20MHz 20.1 to 30MHz 30.1 and above		2.0 3.0 5.0 7.0	3.5 4.0 6.0 8.0	mA	
Output Levels		"0" Level, sinking 16mA "1" Level CMOS, sourcing 8mA	V <sub>DD</sub> -0.4		0.4	V	
Rise & Fall Times		CMOS, 15pF, 20% to 80%		3.0	4.0	ns	
Jitter RMS 12KHz to 20MHz	1 $\sigma$			<0.15		ps	
Phase Noise		100Hz 1KHz 10KHz 100KHz 1MHz		-94 -120 -142 -155 -160		dBc/Hz	@74.25MHz
Input Impedance		Pad 1, V <sub>c</sub>	100			KOhm	15 MOhm available
Start-up Time	T <sub>s</sub>				5	ms	
Duty Cycle		CMOS @50% V <sub>DD</sub>		48/52	45/55	%	



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#### Electrical Specifications

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Control Voltage	Vc	R3306	0		3.3	V	
Modulation Bandwidth	Fc	Vc: 1.65V ± 1.65V	20			KHz	
Pulling Linearity	F <sub>LIN</sub>			5	10	%	
APR		Vc 1.65 +/-1.65	± 100	± 110		ppm	
Tristate	Input HIGH (>2.5V) or floating: Input LOW (<0.5V):		ACTIVE HIGH IMPEDANCE				

#### Environmental and Mechanical Conditions

Parameter	Specification
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
Hermetic Seal	Leak rate less than 5x10 <sup>-8</sup> atm.cc/s of helium

#### How to Order:

R3306 -  - FREQUENCY

#### Temperature Range

Code	Specification
B	0°C to +70°C
G	-40°C to +85°C

Pin #	Connections
1	Vc
2	Tristate
3	Ground, Case
4	Output
5	N/C
6	Vcc

Model	Marking Letter ID
R3306	VW

