

R3306

VCXO Ultra Low Jitter 3.3V

5x7mm SMD, HCMOS/TTL



Features

- <0.15ps RMS Jitter over 12KHz to 20MHz
- APR min ± 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		± 30		ppm	
Aging		First Year After First Year		3 1		ppm ppm	
Operating Temperature	T		0° -40°		+70° +85°	°C	
Supply Voltage	V _{CC}		3.0	3.30	3.6	V	
Supply Current	I _{CC}	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 _{DD} -0.4		0.4	V	
Rise & Fall Times		CMOS, 15pF, 20% to 80%		3.0	4.0	ns	
Jitter RMS 12KHz to 20MHz	1 σ			<0.15		ps	
Phase Noise		100Hz 1kHz 10kHz 100kHz 1MHz		-94 -120 -142 -155 -160		dBc/Hz	@74.25MHz
Input Impedance		Pad 1, V _C	100			kOhm	15 MOhms available
Start-up Time	T _s				5	ms	
Duty Cycle		CMOS @50% V _{DD}		48/52	45/55	%	

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Parameter	Symbol	Condition	Min	Typ	Max	Unit	Note
Control Voltage	V_C		0		3.3	V	
Modulation Bandwidth	F_C	$V_C: 1.65V \pm 1.65V$	20			kHz	
Pulling Linearity	F_{LIN}			5	10	%	
APR		$V_C 1.65 \pm 1.65$	± 100	± 110		ppm	
Tristate	Input HIGH (>2.5V) or floating: ACTIVE Input LOW (<0.5V): 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 5×10^{-8} atm.cc/s of helium
Marking	Epoxy ink or laser engraved

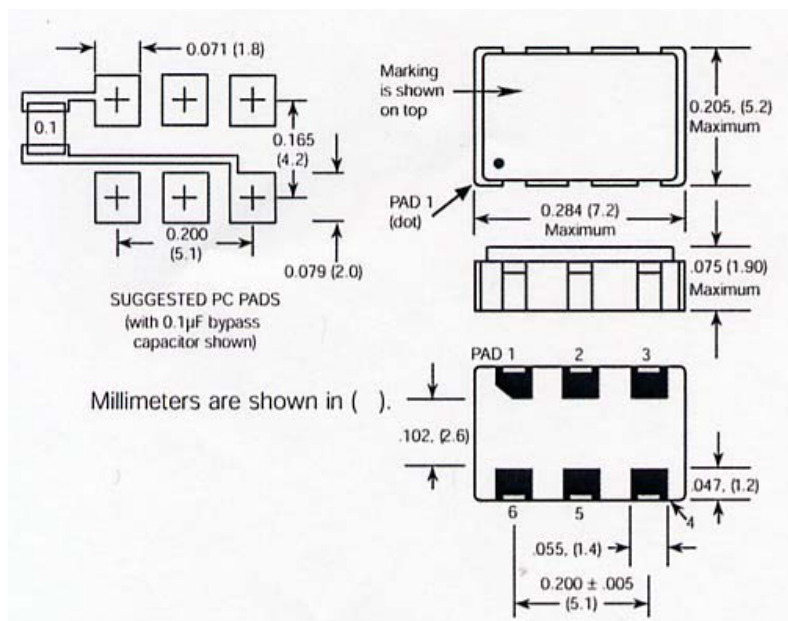
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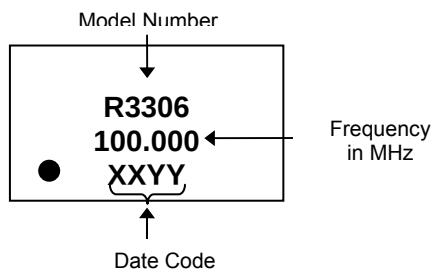
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Pin #	Connections
1	V _C
2	Tristate
3	Ground, Case
4	Output
5	N/C
6	V _{CC}

Model	Marking Letter ID
R3306-B	VW
R3306-G	VZ



Marking Specification



How to Order

R3306 - - FREQUENCY

Temperature Range

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