



VDSGLD @ 38.88 MHz

Voltage Controlled Crystal Oscillator

Pin Information

Pin	Symbol	Function
1	V _C	Control Voltage
2	Tri-State	TTL logic low disables output TTL logic high enables output waveform
3	GND	Case Ground
4	Output	Output waveform
5	TTL/CMOS	TTL logic low for CMOS optimized symmetry TTL logic high or no connection for TTL optimized symmetry
6	V _{CC}	Power Supply Voltage (3.3 V ±10%)

Performance Characteristics

Parameter	Symbol	Minimum	Typical	Maximum	Units
Nominal Output Frequency	f ₀	-	38.88	-	MHz
Supply Voltage ¹	V _{DD}	2.97	3.3	3.63	V
Operating Temperature Range	T _O	-40		85	°C
Supply Current	I _{DD}			20	mA
Output Voltage Levels Output Logic High Output Logic Low	V _{OH} V _{OL}	0.9*V _{DD}		0.1*V _{DD}	V
Output Rise/Fall Time ²	T _R /T _F			5	nS
Output Duty Cycle or Symmetry ³	D	45	50	55	%
Absolute Pull Range, V _c = 1.0 to 2.0 V	APR	±5			ppm
Absolute Pull Range, V _c = 0.3 to 3.0 V	APR	±50			ppm
Initial Accuracy (V _c = 1.65V @25°C)		-20		+20	ppm
Linearity				20	%
Start up time (To reach 90% of final amplitude)				10	ms
Control Voltage Input Impedance		10			MΩ
Control Voltage Leakage Current				100	nA
Control Voltage Bandwidth (-3 dB, V _C = 1.65 V)	BW	10			KHz
Output Load				15	pf

1. A 0.1 μF low frequency tantalum bypass capacitor in parallel with a 0.01 μF high frequency ceramic capacitor is recommended.
2. Figure 1 defines these parameters. Figure 2 illustrates the operating conditions.
3. Duty cycle is defined as (on time/period) per Figure 1.
4. Maximum control Voltage Leakage Current is by design.

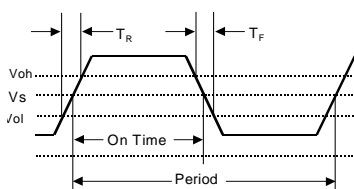


Figure 1. Output Waveform

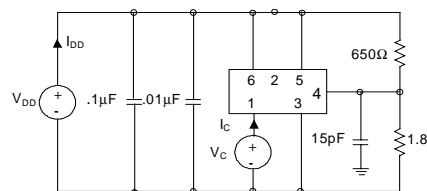


Figure 2. Output Test Conditions (25±5°C)

Outline Diagram

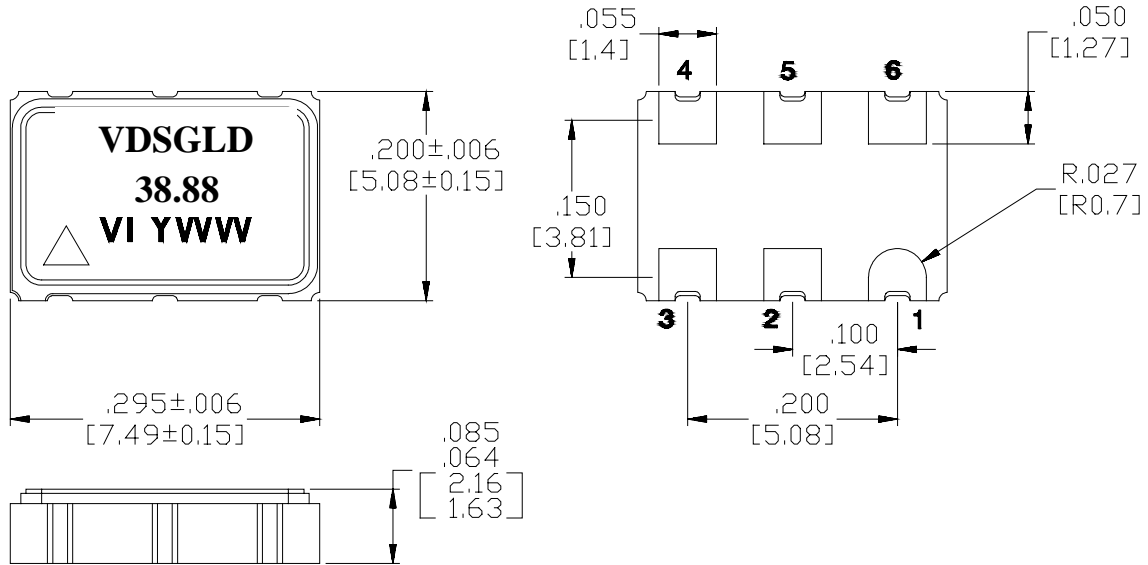


Figure 3. Outline Diagram

Table 3. Ordering Information

V	D	S	G	L	D	38.88
Package	Supply Voltage (V)	Oscillator Type & Special Requirements	APR	Operating Temperature	Duty Cycle Min/Max	Frequency (MHz)
6 Pin Ceramic Leadless Chip Carrier	$3.3 \pm 10\%$	Initial Accuracy $V_c = 1.65V$ @ 25°C	$\pm 50ppm$	-40°C to +85°C	45/55% Tri-State on Pin # 2	Nominal Output Frequency

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