



Features and Benefits

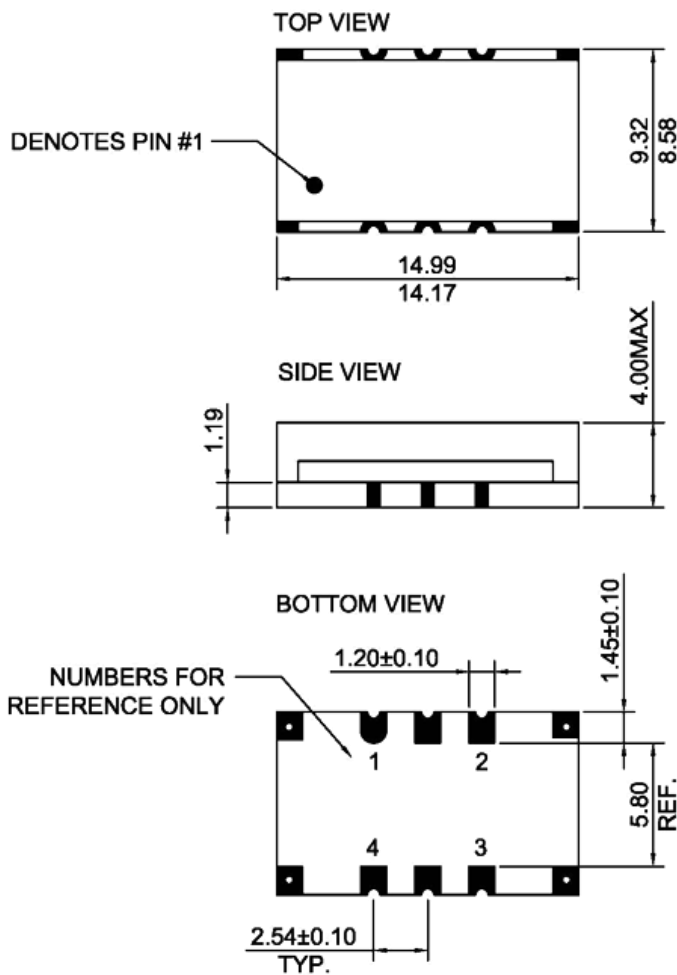
Frequency 16.384MHz
3.3V supply; 4.0mA maximum
Tri-state Enable / Disable Function
CMOS output

Typical Applications

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Mechanical Drawing & Pin Connections

Drawing No: MD140048-1



PIN CONNECTIONS

1	VOLTAGE CONTROL OR N.C.
2	GROUND
3	OUTPUT
4	+Vdc

Unit : mm



Specifications

Oscillator Specification		Sym	Condition	Value			Unit	Note
				Min.	Typ.	Max.		
Nominal Frequency		F _{nom}		16.384000			MHz	
CMOS	Logic Level 1			90%Vdd			V	
	Logic Level 0					10%Vdd	V	
	Rise / Fall Time		CMOS logic output at 10% to 90%			8.0	ns	
	Duty Cycle		Measured at 50% VDD trigger level	45	50	55	%	
	Duty			45		55	%	
	Start Time					2.0	ms	
	Load Capacitance		Operating range			15	pF	
Tri-State		Output Active		2.31			V	
		Output in High-Impedance				0.99	V	
Power Supply								
Supply Voltage		V _{cc}		2.97	3.3	3.63	V	
Supply Current			At maximum supply voltage			4.0	mA	
Frequency Control*								
Control Voltage Range		V _c		0.5	1.5	2.5	V	
Tuning Range			Vcon=0.5	-15.0		-5.0	ppm	
			Vcon=2.5	5.0		15.0	ppm	
Vcon Input Impedance			Measured between VCON and GND pin	100			KOhm	
Linearity						10.0	%	
Frequency Stability								
VS. Temperature			0°C to +55°C, ref 25°C	-0.1		+0.1	ppm	
			-20°C to 0°C, ref 25°C	-0.15		+0.15	ppm	
Tolerance At 25°C			Frequency @25C, 1hour after reflow.	-2.0		+2.0	ppm	
VS. Supply Voltage			Supply voltage varied +/-5% at 25C	-0.1		+0.1	ppm	
VS. Load Change			+10% load change	-0.1		+0.1	ppm	
First Year Aging			First year at 25C	-1.0		+1.0	ppm	
SSB Phase noise (typ.)			1Hz			-50	dBc/Hz	
			10 Hz			-80		
			100 Hz			-117		
			1 KHz			-135		
			10 KHz			-145		
			100 KHz			-150		
Environmental Conditions								
Parameter		Reference Std.			Test Condition			
Operating temperature range		-20°C to +55°C						
Storage temperature range		-40°C to +85°C						
Mechanical Shock		MIL-STD-883 2002 Condition B JESD22-B104 Condition B			1500G, half-sine, 0.5ms, each axis for 3 times			
Vibration		MIL-STD-883 2007 Condition A JESD22-B103 Condition 1			10-2000Hz, 1.52mm, 20G, each axis for 4hrs			
Thermal Shock		MIL-STD-883 1010 Condition B JESD22-A104 Condition B			-55°C, 125°C; soak time is 10 mins, with total 200 cycles.			

Output Waveform

