



Features and Benefits

Frequency Range 10 MHz to 1450 MHz
7.0 mm x 5.0 mm 6 pads ceramic SMD package
±50 ppm total stability over -40°C to +85°C
LVDS outputs
3.3V supply
Integrated phase jitter of 1.0pS RMS

Typical Applications

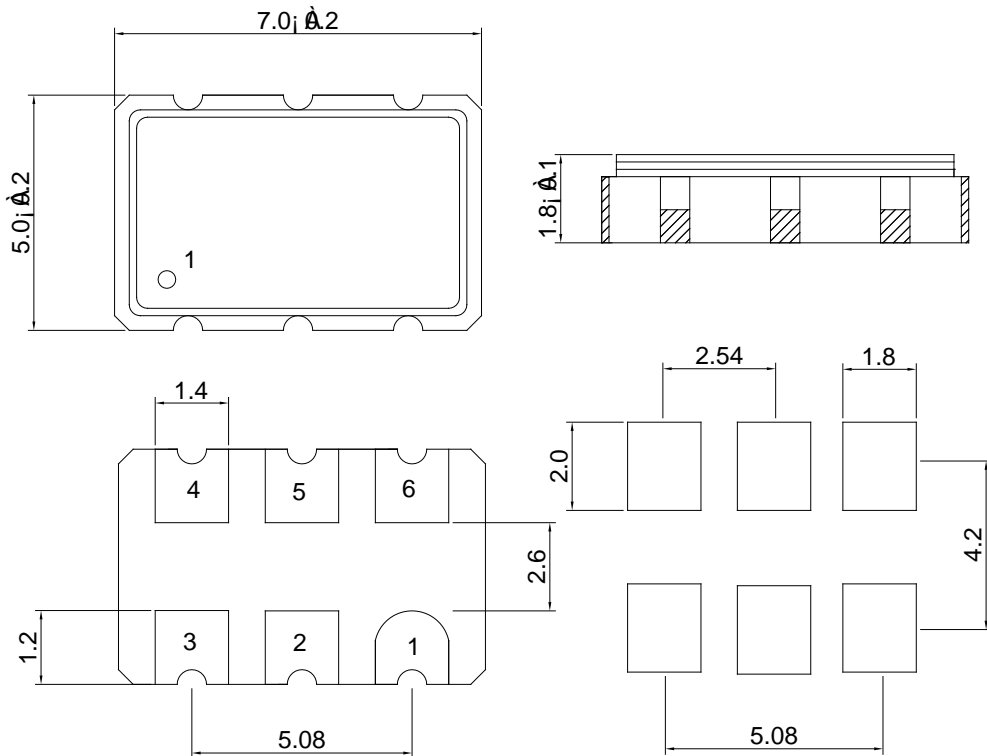
WiMax/WLAN
xDSL/VoIP, cable modem
Set-top Box, HDTV

Description

A new generation of voltage controlled oscillators with the latest tight symmetry topologies.

Mechanical Drawing & Pin Connections

Drawing No:MD160041-1



Pin Connection

Pad 1	Control Voltage
Pad 2	Tri-state
Pad 3	Ground
Pad 4	Differential
Pad 5	Complementary
Pad 6	Supply Voltage

Unit : mm
1mm=0.0394inch



Specifications

General Specifications			
Output Logic Type	LVDS		
Parameter	3.3V		
	Min.	Typical	Max
Frequency Range	10MHz	-	1450MHz
Load	Differential		
Current Consumption (V _{DD} = +3.3V)	100MHz : 25mA		750MHz : 39mA
	250MHz: 30mA		1GHz : 43mA
	500MHz: 35mA		1.35GHz : 47mA
Output Level Output "High" Voltage; V _{OH} Output "Low" Voltage; V _{OL}	-	1.4V	1.6V
	0.9V	1.1V	-
Current with Output	16mA typical		
Phase Noise	125MHz		1000MHz
	10Hz	-69dBc / Hz	-46dBc / Hz
	100Hz	-97dBc / Hz	-80dBc / Hz
	1 kHz	-114dBc / Hz	-96dBc / Hz
	10 kHz	-124dBc / Hz	-105dBc / Hz
	100KHz	-129dBc / Hz	-108dBc / Hz
	1MHz	-136dBc / Hz	-116dBc / Hz
10MHz	-154dBc / Hz	-135dBc / Hz	
Phase Jitter (12KHz ~ 20MHz, RMS)	0.5pS		0.7pS
Rise Time (Tr)/Fall Time (Tf) Tr/Tf: 20% – 80% waveform	0.2nS		0.4nS
Duty Cycle	50% ±5%		
Start-up Time	-		10ms max
Aging at Ta = +25°C	First year at 25°C	-	±2 ppm
	Over 10 years	-	±10 ppm
Storage Temp. Range	-55°C to +150°C		



Control Voltage Function on Pad 1

Supply Voltage (V_{DD})	$V_{DD} = +3.3V$; V_{con} Center = +1.65V
Vcontrol Range	+0.3V ~ +3.0V
Frequency Pulling Range	$\pm 100ppm$ (min). Up to $\pm 200ppm$ (min.) available
Absolute Voltage	4.0V max. for 3.3V V_{DD}
Linearity	$\pm 5\%$ typical. $\pm 10\%$ max.
Input Impedance	1M Ω typical
Bandwidth	10KHz min. measured at -3dB
Transfer Function	Positive Transfer

Output Enable Function

OE Control on Pad 1	0.7 of V_{DD} (min.) or no connection to enable output. 0.3 of V_{DD} (max.) to disable output (high impedance)
Output Enable Time / Disable Time	200 nS. Max / 50 nS. Max.
Integrated Phase Jitter	0.6 pS typical (12 KHz to 20 MHz) ; <100 fS (1.875 KHz to 20 MHz)

Stability vs. Temperature Range Availability

	Temperature Range	
Stability in ppm	-10°C to +70°C	-40°C to +85°C
± 100	Available	Available
± 50	Available	Available

Other customized specifications maybe available. Please contact Dynamic Engineers Inc. for further details.