



Features and Benefits

- Frequency Range 8 MHz to 250 MHz
- 5.0 mm x 3.2 mm ceramic hermetically sealed package
- ± 50 ppm total stability over -20°C to +70°C
- Available ± 25 ppm total stability over -40°C to +85°C (depends on operating frequency)
- Low phase jitter: < 1 pS (0.6 pS, typical) RMS
- CMOS outputs
- 2.5V or 3.3V supply
- Tri-state enable / disable

Typical Applications

- Fiber Channel, Storage Area Network, High-Speed Gigabit Ethernet, SONET
- Smart Grid
- Enterprise Server, SAS / SATA
- Microprocessor / DSP / FPGA
- Broadband Access

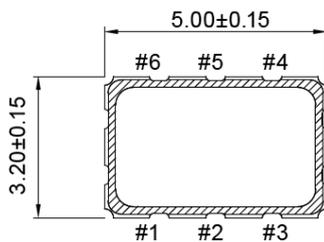
Description

A new generation of low jitter clock oscillators with the latest low noise integrated circuit topologies.

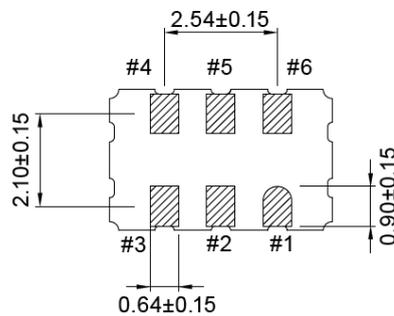
Mechanical Drawing & Pin Connections

Drawing No: MD160023-1

[TOP VIEW]

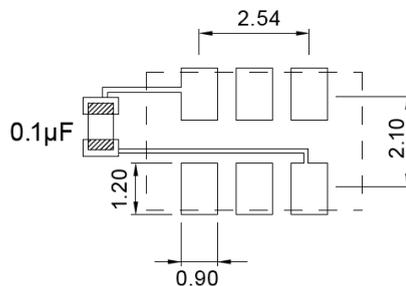
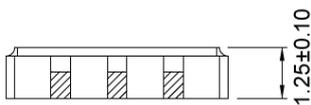


[BOTTOM VIEW]



Pin#	Function
1	Tri-State/NC
2	NC/Tri-State
3	GND
4	Output
5	NC
6	VDD

[SIDE VIEW]



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.



Specifications

General Specifications				
Output Logic Type	CMOS			
Parameter	2.5V		3.3V	
	Min.	Max.	Min.	Max.
Frequency Range	8 MHz	250 MHz	8 MHz	250 MHz
Standard Frequency	106.25MHz, 125.00MHz, 133.33MHz, 150.00MHz, 155.52MHz, 158.25MHz, 187.50MHz, 212.50MHz			
Power Supply Voltage (V _{DD}) ±5%	2.375V	2.625V	3.135V	3.465V.
Supply Current 8 MHz ≤ Fo ≤ 250 MHz	-	30 mA	-	30 mA
Output “High” Voltage; V _{OH}	2.25V	-	2.97V	-
Output “Low” Voltage; V _{OL}	-	0.25V	-	0.33V
Tri-State (Input to Pin 2 or Pin 1) Enable (High voltage or floating) Disable (Low voltage or GND)	1.75V -	- 0.75V	2.31V -	- 0.99V
Phase Noise @ 125 MHz	100 Hz	-	-75 dBc/Hz	-75 dBc/Hz
	1 kHz	-	-105 dBc/Hz	-105 dBc/Hz
	10 kHz	-	-120 dBc/Hz	-120 dBc/Hz
Storage Temp. Range	-55°C	+125°C	-55°C	+125°C
RMS Phase Jitter (Integrated 12 kHz – 20 MHz)	1.0 pS max			
Frequency Stability	±50 ppm over -20°C to +70°C or -40°C to +85°C ±25 ppm over -20°C to +70°C ±25 ppm over -40°C to +85°C (depends on operating frequency; case by case)			
Rise Time (Tr)/Fall Time (Tf) (20% V _{DD} – 80% V _{DD})	1.5 nS Max.			
Start-up Time	10 mS max.			
Aging (first year at 25°C)	±3 ppm max.			

Stability vs. Temperature Range Availability		
	Temperature Range	
Stability in ppm	-20°C to +70°C	-40°C to +85°C
±50	Available	Available
±25	Available	Conditional (depends on operating frequency; case by case)

Note: Other customized specifications may be available. Please contact Dynamic Engineers, Inc. for further details.