



159.375 MHz LVDS Oscillator

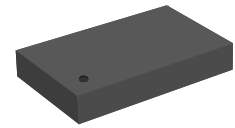
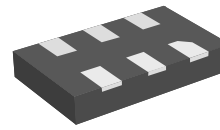
High Performance Differential Oscillator

4MA159375Z4

ADVANCE DATASHEET

Features

- Frequency: 159.375 MHz
- Output Type: LVDS
- Frequency Stability: ± 50 ppm
- Supply Voltage: 2.5V & 3.3V
- Standard Packages: 5.0 x 3.2 mm; 7.0 x 5.0 mm
- RMS phase jitter: 0.7ps typical (12k to 20MHz)
- Operating Temperature: -40 to 85 °C



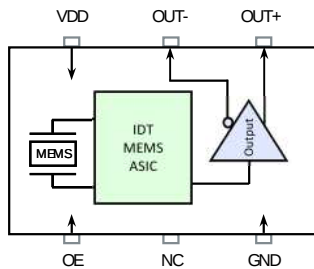
This product is rated "Green", please contact IDT for environmental compliancy information

Specification

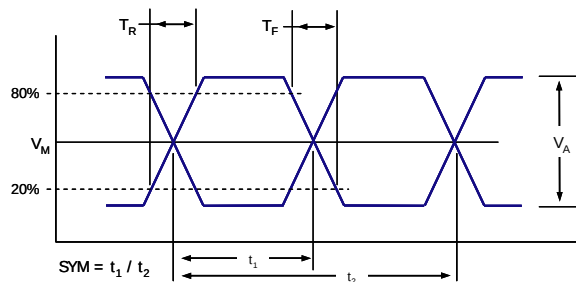
Parameter	2.5 V Specifications			3.3 V Specifications			Units	Conditions
	Min	Typ	Max	Min	Typ	Max		
Supply Voltage (V_{DD})		2.50			3.30		V	
Output Frequency		159.375			159.375		MHz	
Frequency Stability			± 50			± 50	ppm	-40 to 85°C
Supply Current		95			95		mA	No load
Input LOW level			$0.3V_{DD}$			$0.3V_{DD}$	V	At OEpin
Input HIGH level	$0.7V_{DD}$			$0.7V_{DD}$			V	At OEpin
Output LOW level		1.075			1.075		V	
Output HIGH level		1.425			1.425		V	
Amplitude (V_A)		0.35			0.35		V	Single Ended output swing (Pk-Pk)
Mid Level (V_M)		1.25			1.25		V	
Rise Time (T_R)		400			400		ps	Maximum; 20/80% of V_A ; Output load (C_L) = 2pF
Fall Time (T_F)		400			400		ps	Maximum; 20/80% of V_A ; Output load (C_L) = 2pF
Symmetry (SYM)	45		55	45		55	%	Worst case; measured at 50% of waveform
Period Jitter		5			5		ps	Measured over 10k cycles, rms
Phase Jitter			1			1	ps	12k to 20MHz, rms
Aging			± 5			± 5	ppm	25°C, 10 years

Note: Above specifications are typical at room temperature (25°C) unless otherwise specified. Frequency stability includes initial frequency tolerance, temperature variation, supply voltage variation, reflow drift, and aging (+25 °C, 10 years).

Block Diagram

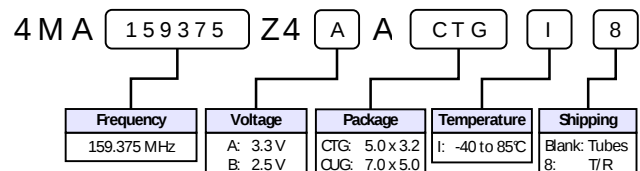


Output Waveform

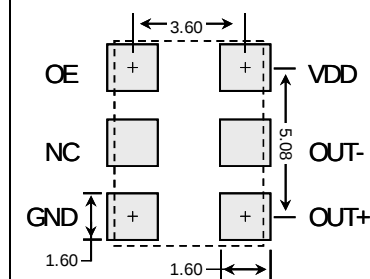


Part Ordering Information

Package Size	Voltage	Ordering Code
5.0 x 3.2 mm	3.3 V	4MA159375Z4AACTGI
	2.5 V	4MA159375Z4BACTGI
7.0 x 5.0 mm	3.3 V	4MA159375Z4AACUGI
	2.5 V	4MA159375Z4BACUGI



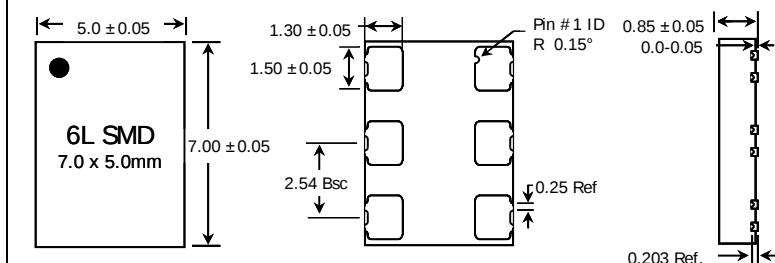
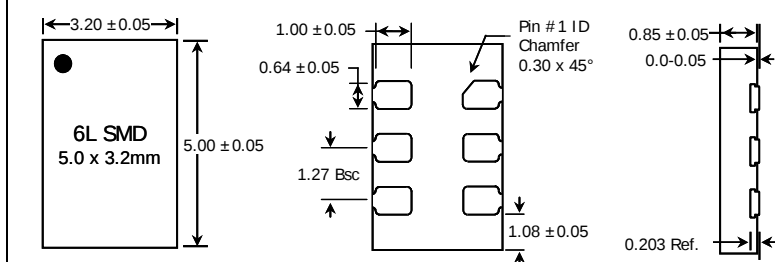
Pin 16 and 17 location diagram showing OE, NC, and GND pins with dimensions 2.60, 2.54, 0.90, and 1.50.



Pin	Name	Description
1	OE	Output Enable*
2	NC	No Connect
3	GND	Ground
4	OUT+	Output
5	OUT-	Output
6	VDD	Power

* internally pulled high

Unit: (mm)



Sales
+1 408-284-8200
Fax: 408-360-1738

Technical Support
MEMS_Support@idt.com
www.idt.com/go/MEMS

Integrated Device Technology, IDT and the IDT logo are registered trademarks of IDT. Other trademarks and service marks used herein, including protected names, logos and designs, are the property of IDT or their respective third party owners.
Copyright 2010, 2011, 2012. All rights reserved.