



# 133.33 MHz LVDS Oscillator

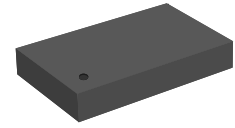
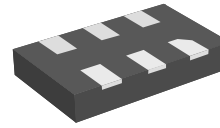
High Performance Differential Oscillator

4MA133330Z4

## ADVANCE DATASHEET

### Features

- Frequency: 133.33 MHz
- Output Type: LVDS
- Frequency Stability:  $\pm 50$ 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



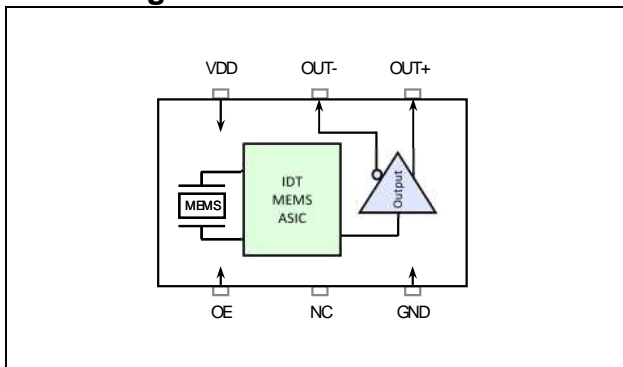
This product is rated "Green", please contact IDT for environmental compliancy information

### Specification

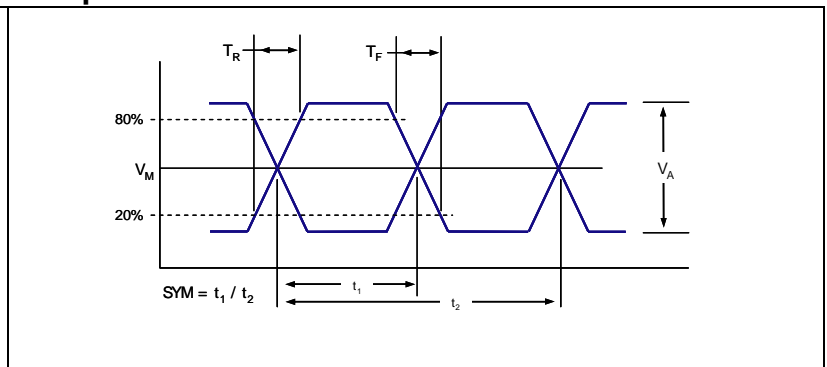
Parameter	2.5 V Specifications			3.3 V Specifications			Units	Conditions
	Min	Typ	Max	Min	Typ	Max		
Supply Voltage ( $V_{DD}$ )		2.50			3.30		V	
Output Frequency		133.33			133.33		MHz	
Frequency Stability			$\pm 50$			$\pm 50$	ppm	-40 to 85°C
Supply Current		95			95		mA	No load
Input LOW level			$0.3V_{DD}$			$0.3V_{DD}$	V	At OE pin
Input HIGH level	$0.7V_{DD}$			$0.7V_{DD}$			V	At OE pin
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 Jtter		5			5		ps	Measured over 10k cycles, rms
Phase Jtter			1			1	ps	12k to 20MHz, rms
Aging			$\pm 5$			$\pm 5$	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	4MA133330Z4AACTGI
	2.5 V	4MA133330Z4BACTGI
7.0 x 5.0 mm	3.3 V	4MA133330Z4AACUGI
	2.5 V	4MA133330Z4BACUGI

