

## ELECTRICAL CHARACTERISTICS

The ● denotes the specifications which apply over the full operating junction temperature range, otherwise specifications are at  $T_A = 25^\circ\text{C}$ .  $V_A^+ = V_D^+ = V_{IN}^+ = V_{OUT0}^+ = V_{OUT1}^+ = V_{OUT2}^+ = 3.3\text{V}$ , unless otherwise specified. All voltages are with respect to GND. (Note 2)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS	
<b>LVDS Clock Outputs</b>							
$f_{OUT}$	Frequency	Differential Termination = 100 $\Omega$ , 3.5mA Mode	●		800	MHz	
		Differential Termination = 50 $\Omega$ , 7mA Mode	●		1400	MHz	
$ V_{OD} $	Differential Voltage (Output Static)	Differential Termination = 100 $\Omega$ , 3.5mA Mode	●	290	370	450	mV <sub>PK</sub>
		Differential Termination = 50 $\Omega$ , 7mA Mode	●	290	370	450	mV <sub>PK</sub>
$ \Delta V_{OD} $	Delta $V_{OD}$ (Output Static)	Differential Termination = 100 $\Omega$ , 3.5mA Mode	●	-30		30	mV
		Differential Termination = 50 $\Omega$ , 7mA Mode	●	-30		30	mV
$V_{OS}$	Offset Voltage (Output Static)	Differential Termination = 100 $\Omega$ , 3.5mA Mode	●	1.16	1.23	1.32	V
		Differential Termination = 50 $\Omega$ , 7mA Mode	●	1.15	1.23	1.32	V
$ \Delta V_{OS} $	Delta $V_{OS}$ (Output Static)	Differential Termination = 100 $\Omega$ , 3.5mA Mode	●	-15		15	mV
		Differential Termination = 50 $\Omega$ , 7mA Mode	●	-15		15	mV
$t_{RISE}$	Rise Time, 20% to 80%	Differential Termination = 100 $\Omega$ , 3.5mA Mode			240	ps	
		Differential Termination = 50 $\Omega$ , 7mA Mode			120	ps	
$t_{FALL}$	Fall Time, 80% to 20%	Differential Termination = 100 $\Omega$ , 3.5mA Mode			240	ps	
		Differential Termination = 50 $\Omega$ , 7mA Mode			120	ps	
$ I_{SA} ,  I_{SB} $	Short-Circuit Current to Common	Shorted to GND, 3.5mA Mode			16	mA	
		Shorted to GND, 7mA Mode			25	mA	
$ I_{SAB} $	Short-Circuit Current to Complementary	3.5mA Mode			4	mA	
		7mA Mode			8	mA	
$DC_{LVDS}$	Duty Cycle	$Mx[5:0] = 1$			$DC_{IN}$	%	
		$Mx[5:0] > 1$ (Even or Odd)	●	45	50	55	%
<b>Output Propagation Delays</b>							
$t_{PD(LVPECL)}$	Propagation Delay From IN to Any LVPECL Output	$Mx[5:0] = 1$	●	<del>290</del> 250	360	480	ps
		$Mx[5:0] > 1$	●	<del>360</del> 320	430	550	ps
	Temperature Variation of the Propagation Delay From IN to Any LVPECL Output	$Mx[5:0] = 1$	●	<del>320</del> 305	0.65		ps/ $^\circ\text{C}$
		$Mx[5:0] > 1$	●	<del>305</del> 305	0.68		ps/ $^\circ\text{C}$
$t_{pd(LVDS)}$	Propagation Delay From IN to Any LVDS Output, LVCSx = 1 (7mA Mode)	$Mx[5:0] = 1$	●	<del>350</del> 370	420	545	ps
		$Mx[5:0] > 1$	●	<del>415</del> 370	480	625	ps
	Temperature Variation of the Propagation Delay From IN to Any LVDS Output, LVCSx = 1 (7mA Mode)	$Mx[5:0] = 1$	●		0.8		ps/ $^\circ\text{C}$
		$Mx[5:0] > 1$	●		0.85		ps/ $^\circ\text{C}$
	Propagation Delay From IN to Any LVDS Output, LVCSx = 0 (3.5mA Mode)	$Mx[5:0] = 1$			480		ps
		$Mx[5:0] > 1$			550		ps
Temperature Variation of the Propagation Delay From IN to Any LVDS Output, LVCSx = 0 (3.5mA Mode)	$Mx[5:0] = 1$	●		0.8		ps/ $^\circ\text{C}$	
	$Mx[5:0] > 1$	●		0.85		ps/ $^\circ\text{C}$	
$t_{pd(CMOS)}$	Propagation Delay From IN to Any CMOS Output, Complementary Outputs (CMSINVx = 1)	$Mx[5:0] = 1$			1.25	ns	
		$Mx[5:0] > 1$			1.32	ns	
	Temperature Variation of the Propagation Delay From IN to Any CMOS Output (CMSINVx = 1)	$Mx[5:0] = 1$	●		1.3		ps/ $^\circ\text{C}$
		$Mx[5:0] > 1$	●		1.4		ps/ $^\circ\text{C}$

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