MC100LVELT20

3.3 V LVTTL/LVCMOS to Differential LVPECL Translator

Description

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Features

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MARKING DIAGRAM

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A = Assembly Location
L = Wafer Lot
Y = Year
W = Work Week
▪ = Pb-Free Package

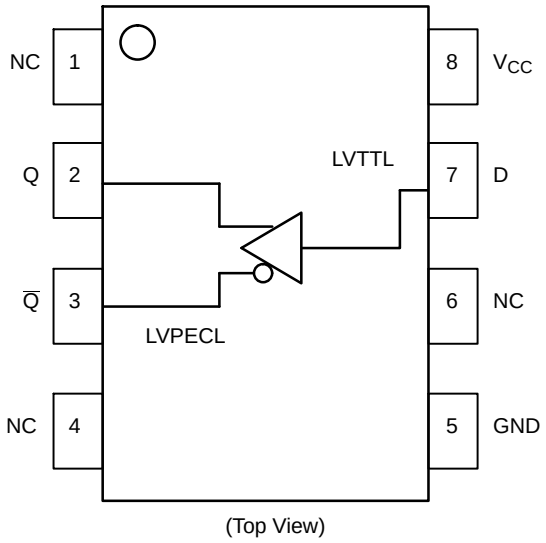

Figure 1. 8-Lead Pinout and Logic Diagram

Table 1. PIN DESCRIPTION

Pin	Function
Q, $\overline{Q}$	Differential PECL Outputs
D	LVTTL Input
V_{CC}	Positive Supply
GND	Ground
NC	No Connect

Table 2. ATTRIBUTES

Table 4. LVTTL INPUT DC CHARACTERISTICS (V_{CC} = 3.3 V, GND = 0 V, T_A = −40°C to +85°C)

Symbol	Characteristic	Min	Typ	Max	Unit
I_{IH}	Input HIGH Current (V_{in} = 2.7 V)			20	μA
I_{IHH}	Input HIGH Current MAX (V_{in} = 6.0 V)			100	μA
I_{IL}	Input LOW Current (V_{in} = 0.5 V)			−0.6	mA
V_{IK}	Input Clamp Voltage (I_{in} = −18 mA)			−1.2	V
V_{IH}	Input HIGH Voltage	2.0			V
V_{IL}	Input LOW Voltage			0.8	V

NOTE: Device will meet the specifications after thermal equilibrium has been established when mounted in a test socket or printed circuit board with maintained transverse airflow greater than 500 lfpm. Electrical parameters are guaranteed only over the declared operating temperature range. Functional operation of the device exceeding these conditions is not implied. Device specification limit values are applied individually under normal operating conditions and not valid simultaneously.

Table 5. 100LVELT PECL OUTPUT DC CHARACTERISTICS (V_{CC} = 3.3 V, GND = 0 V (Note 1))

		−40°C			25°C			85°C			
Symbol	Characteristic	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Unit
I_{CC}	Negative Power Supply Current	20	25	30	22	27	32	23	28	33	mA
V_{OH}	Output HIGH Voltage (Note 2)	2155	2280	2405						2405	

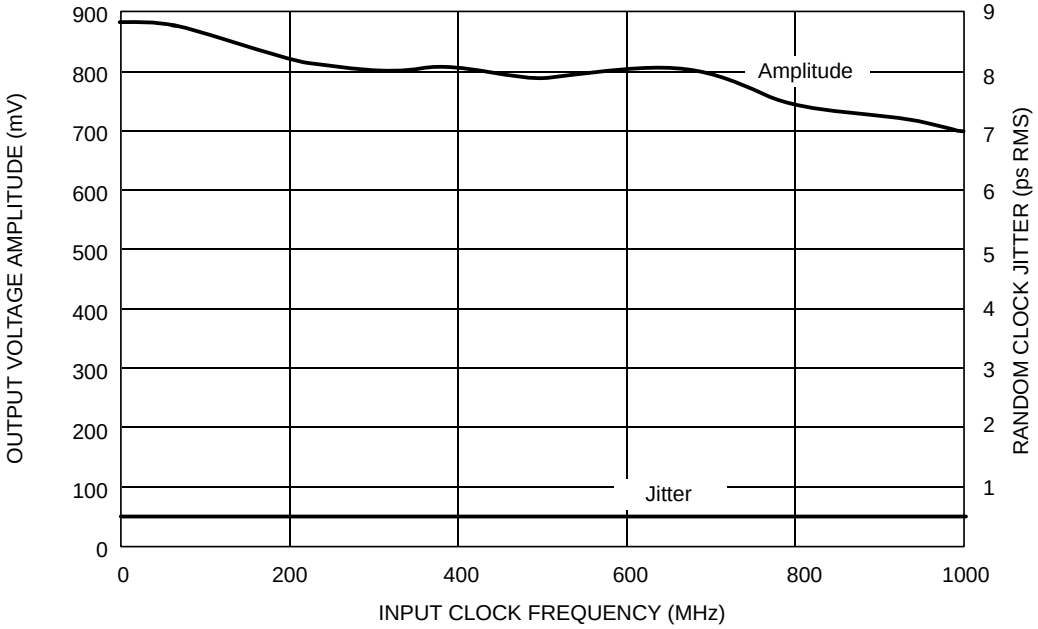

Figure 2. Output Voltage Amplitude (V_{OUTpp})/RMS Jitter vs. Input Clock Frequency at Ambient Temperature

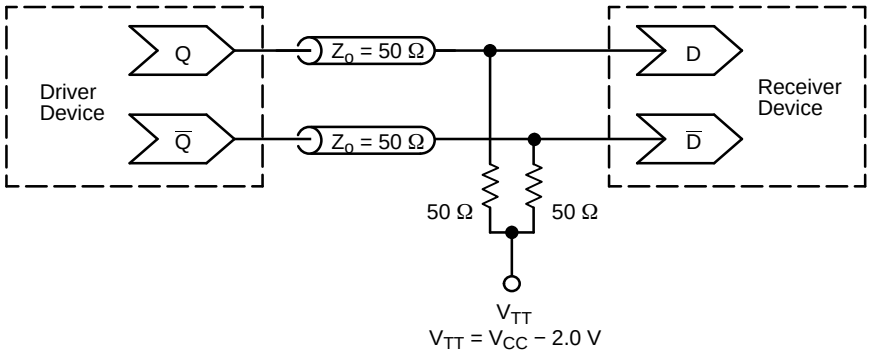

Figure 3. Typical Termination for Output Driver and Device Evaluation (See Application Note AND8020/D − Termination of ECL Logic Devices.)

Resource Reference of Application Notes

AN1405/D − ECL Clock Distribution Techniques **AN1465/D**

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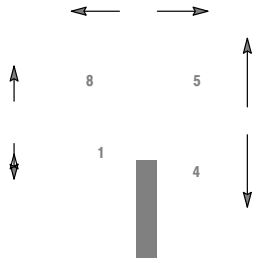

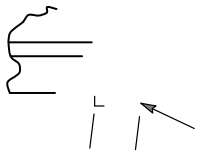

SEATING
PLANE