



3.3V Differential LVPECL/LVDS/CML to LVTTL/LVCMOS Translator

MC100EPT21

The MC100EPT21 is a Differential LVPECL/LVDS/CML to LVTTL/LVCMOS translator. Because LVPECL (Positive ECL), LVDS, and positive CML input levels and LVTTL/LVCMOS output levels are used, only +3.3 V and ground are required. The small outline 8 lead SOIC package makes the EPT21 ideal for applications which require the translation of a clock or data signal.

The V_{BB} output allows this EPT21 to be cap coupled in either single ended or differential input mode. When single ended cap coupled, V_{BB} output is tied to the \bar{D} input and D is driven for a non inverting buffer, or V_{BB} output is tied to the D input and \bar{D} is driven for an inverting buffer. When cap coupled differentially, V_{BB} output is connected through a resistor to each input pin. If used, the V_{BB} pin should be bypassed to V_{CC} via a 0.01 μF capacitor. For additional information see AND8020/D. For a single ended direct connection use an external voltage reference source such as a resistor divider. Do not use V_{BB} for a single ended direct connection or port to another device.

1.4 ns Typical Propagation Delay

Maximum Frequency > 275 MHz Typical

LVPECL/LVDS/CML Inputs, LVTTL/LVCMOS Outputs

24 mA TTL outputs

Operating Range: $V_{CC} = 3.0 \text{ V to } 3.6 \text{ V}$ with $\text{GND} = 0 \text{ V}$

The 100 Series Contains Temperature Compensation

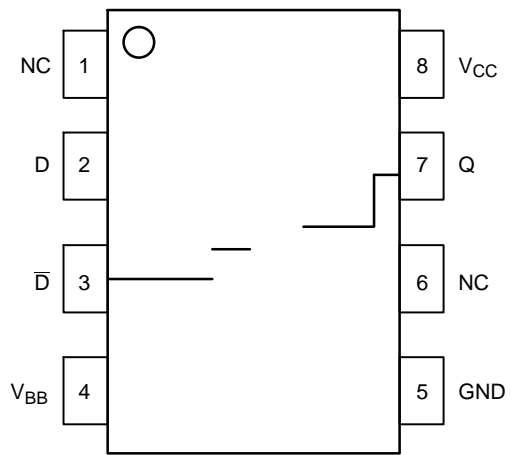
V_{BB} Output

These Devices are Pb Free and are RoHS Compliant



KA21
ALYW▪

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



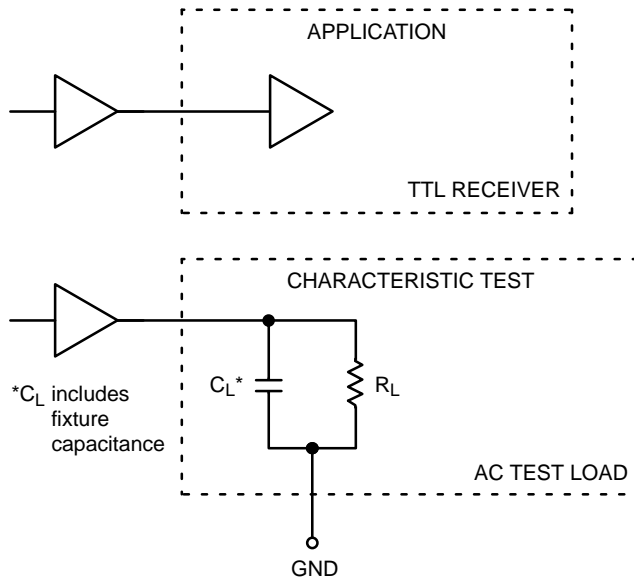
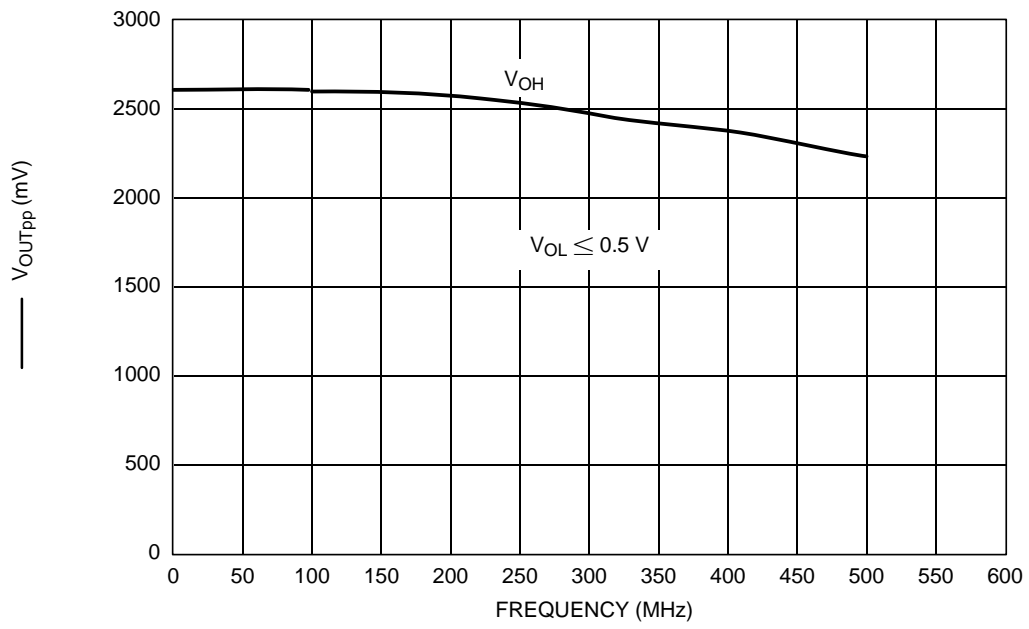
(Top View)



V_{CC}	PECL Power Supply	GND = 0 V		3.8	V
V_{IN}	PECL Input Voltage	GND = 0 V	$V_I \leq V_{CC}$	0 to 3.8	V
I_{BB}	V_{BB} Sink/Source			0.5	mA
T_A	Operating Temperature Range			-40 to +85	C
T_{stg}	Storage Temperature Range			-65 to +150	C
θ_{JA}	Thermal Resistance (Junction-to-Ambient)	0 lfpm 500 lfpm	SO-8 SO-8	190 130	C/W C/W q

$V_{CC} = 3.3 \text{ V}$, $GND = 0.0 \text{ V}$, $T_A = -40 \text{ C to } 85 \text{ C}$

V_{OH}	Output HIGH Voltage	$I_{OH} = -3.0 \text{ mA}$	2.4			V
V_{OL}	Output LOW Voltage	$I_{OL} = 24 \text{ mA}$			0.5	V
I_{CCH}	Power Supply Current	Outputs set to HIGH	5	17	25	mA
I_{CCL}	Power Supply Current	Outputs set to LOW	8	21	30	mA
I_{OS}	Output Short Circuit Current		-130		-80	mA

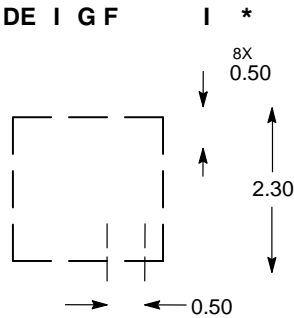




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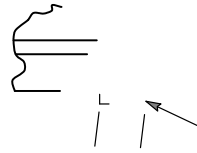
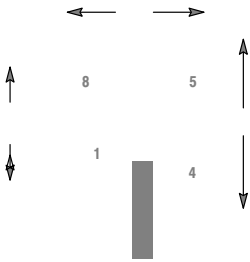


DIMENSIONS: MILLIMETERS

*For additional information on our Pb-Free strategy and soldering details, please download the [m\] □ Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.](#)

SOIC 8 NB
CASE 751-07
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SEATING
PLANE



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