Ordering number:ENN1369C

Monolithic Digital IC

LB1245

Active-Low Input Fluorescent Display Tube Driver

Overview

The LB1245 has been designed for interfacing low-level digital devices to fluorescent display tubes. Its 8-circuit independent Darlington output stage is used for digit and segment drivers. Equivalent pull-down resistors are built in ; externally connected resistors to prevent ghosts are no longer required. Output is activated when input voltages are at a low level, making the IC and ideal interface for N-channel MOS devices. (V_{DD}, V_{SS} of IC can be made common to V_{DD}, V_{SS} of the LB1245.)

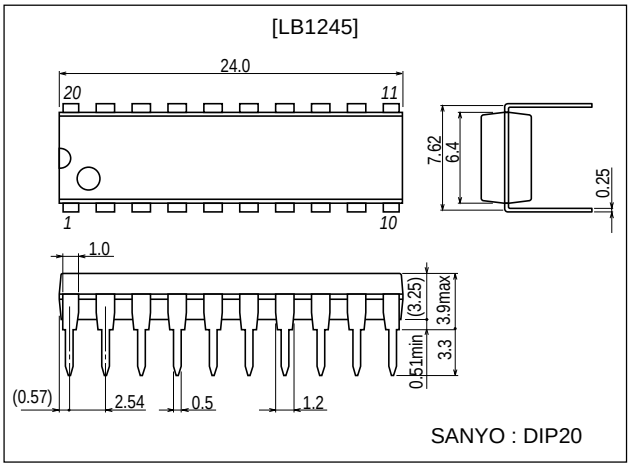
Features

- 8-channel independent Darlington driver.
- Capable of driving digits or segments.
- Built-in pull-down sink current.
- Rated at 55V/30mA

Package Dimensions

unit:mm

3021C-DIP20



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		–0.3 to +55.0	V
	V_{DD} max	$V_{DD} \leq V_{CC}$–2.0V	–0.3 to +10.0	V
Output supply voltage	V_{OUT} max		–0.3 to V_{CC}	V
Input supply voltage	V_{IN} max	$V_{IN} \geq 0$	V_{CC}–10 to V_{DD}	V
Maximum output current	I_{OUT} max		30	mA
Allowable power dissipation	Pd max		1.13	mW
Operating temperature	Topr		–20 to +75	˚C
Storage temperature	Tstg		–40 to +150	˚C

Allowable Operating Ranges at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V_{CC}		5.5 to 55	V
	V_{DD}	$V_{DD} \leq V_{CC}$–2.0V	3.5 to 10	V
Input ON level voltage	V_{ION}	$V_{IN} \geq 0$, I_{OUT}=–30mA	V_{DD}–10 to V_{DD}–3.2	V
Input OFF level voltage	V_{IOFF}	$I_{OUT} \geq$ –30μA	V_{DD}–0.4 to V_{DD}	V

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Electrical Characteristics at Ta = 25°C, V_{CC}=55V, V_{DD}=5.0V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current drain	I_{CCL}	All inputs : open			2.0	mA
	I_{CCH}	All inputs : $V_{IN}=V_{DD}-5V$			14	mA
	I_{DDH}	All inputs : $V_{IN}=V_{DD}-5V$			6.5	mA
Output voltage	V_{OL}	$V_{IN}=V_{DD}-0.4V$, I_{OUT}=0mA			200	mV
	V_{OH}	$V_{IN}=V_{DD}-5V$, I_{OUT}=–30mA	$V_{CC}-2$			V
Pull-down current	I_{OPL}	$V_{OUT}=V_{CC}$	0.2	0.4	1.0	mA
Input current	$I_{IN}1$	$V_{IN}=V_{DD}-5V$	–0.8			mA
	$I_{IN}2$	V_{DD}=10V, $V_{IN}=V_{DD}-10V$	–1.9			mA
Output leakage current	I_{OL}	$V_{IN}=V_{DD}-0.4V$, V_{OUT}=0.5V	–30			µA

Equivalent Circuit

Unit (resistance: Ω)