

Monolithic Digital IC

**SANYO**

NO.1369C

**LB1245****Active-Low Input Fluorescent  
Display Tube Driver**

The LB1245 has been designed for interfacing low-level digital devices to fluorescent display tubes. Its 8-channel 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 an ideal interface for N-channel MOS devices. ( $V_{DD}$ ,  $V_{SS}$  of LSI 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.

**Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$** 

			unit
Maximum Power Supply Voltage	$V_{CCmax}$	-0.3 to +55.0	V
	$V_{DDmax}$	$V_{DD} \leq V_{CC} - 2.0V$	-0.3 to +10.0
Output Supply Voltage	$V_{OUTmax}$	-0.3 to $V_{CC}$	V
Input Supply Voltage	$V_{INmax}$	$V_{IN} \geq 0$	$V_{DD} - 10$ to $V_{DD}$
Maximum Output Current	$I_{OUTmax}$		30 mA
Allowable Power Dissipation	$P_{dmax}$		1.13 W
Operating Temperature	$T_{opr}$		-20 to +75 $^\circ\text{C}$
Storage Temperature	$T_{stg}$		-40 to +150 $^\circ\text{C}$

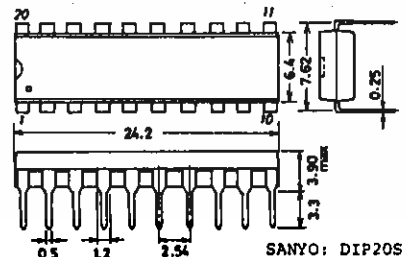
**Allowable Operating Conditions at  $T_a=25^\circ\text{C}$** 

				unit
Supply Voltage	$V_{CC}$	$V_{DD} \leq V_{CC} - 2.0V$	5.5 to 55	V
	$V_{DD}$	$V_{IN} \geq 0, I_{OUT} = -30\text{mA}$	3.5 to 10	V
Input "ON" Level Voltage	$V_{ION}$	$V_{DD} - 10$ to $V_{DD} - 3.2$		V
Input "OFF" Level Voltage	$V_{IOFF}$	$V_{DD} - 0.4$ to $V_{DD}$		V

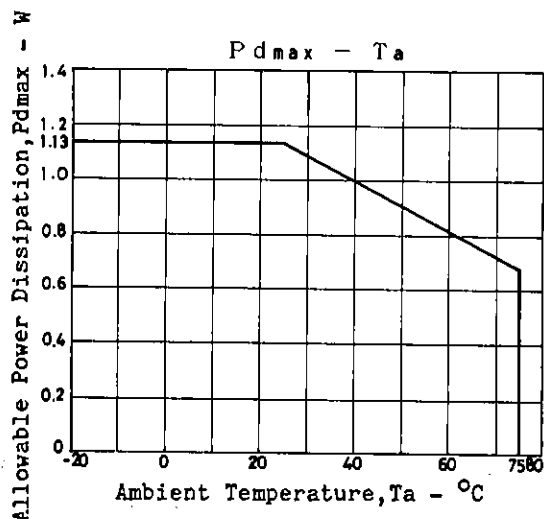
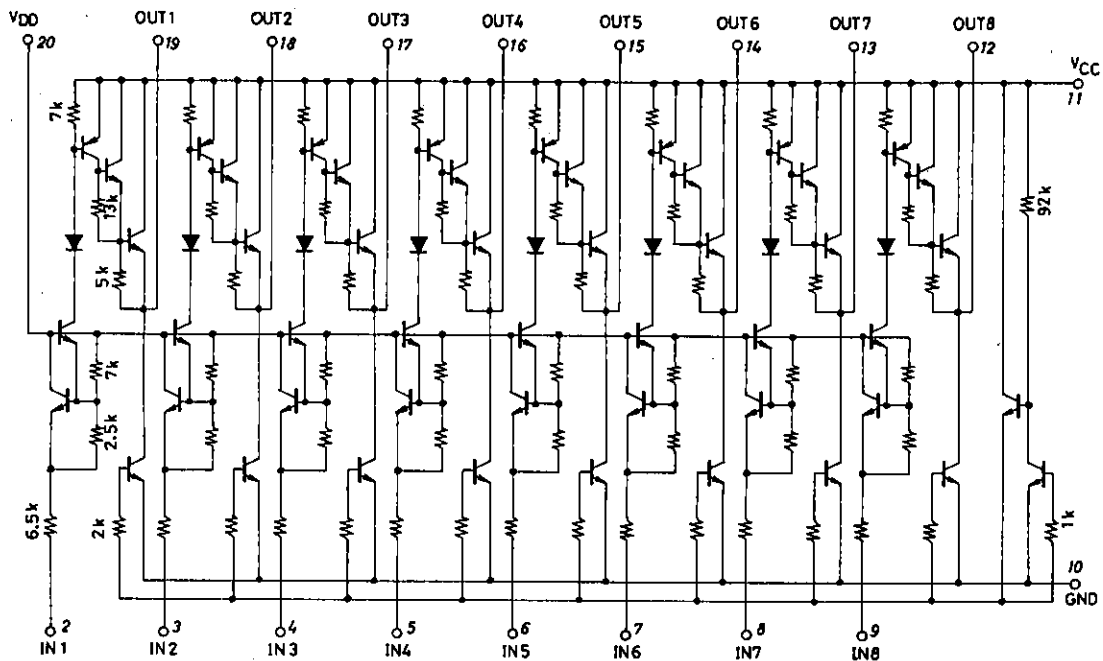
**Electrical Characteristics at  $T_a=25^\circ\text{C}, V_{CC}=55V, V_{DD}=5.0V$** 

			min	typ	max	unit
Power Supply Current	$I_{CCL}$	All inputs: open			2.0	mA
	$I_{CCH}$	All inputs: $V_{IN} = V_{DD} - 5V$			14	mA
	$I_{DDH}$	All inputs:			6.5	mA
Output Voltage	$V_{OL}$	$V_{IN} = V_{DD} - 0.4V, I_{OUT} = 0$			200	mV
	$V_{OH}$	$V_{IN} = V_{DD} - 5V, I_{OUT} = -30\text{mA}$	$V_{CC} - 2$			V
Pull-down Current	$I_{OPL}$	$V_{OUT} = V_{CC}$	0.2	0.4	1.0	mA
Input Current	$I_{IN1}$	$V_{IN} = V_{DD} - 5V$	-0.8			mA
	$I_{IN2}$	$V_{DD} = 10V, V_{IN} = V_{DD} - 10V$	-1.9			mA
Output Leakage Current	$I_{OL}$	$V_{IN} = V_{DD} - 0.4V, V_{OUT} = 0.5V$	-30			$\mu\text{A}$

Package Dimensions 3021B-D20SIC  
(unit: mm)



## Equivalent Circuit

Unit (resistance:  $\Omega$ )

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