

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 Ta=25°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 V |
| 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} V |
| Maximum Output Current | I_{OUTmax} | | 30 mA |
| Allowable Power Dissipation | P_{dmax} | | 1.13 W |
| Operating Temperature | T_{opr} | | -20 to +75 °C |
| Storage Temperature | T_{stg} | | -40 to +150 °C |

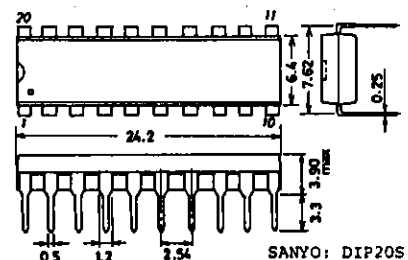
Allowable Operating Conditions at Ta=25°C

| | | | | 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} | $I_{OUT} \geq -30\mu A$ | $V_{DD} - 0.4$ to V_{DD} | V |

Electrical Characteristics at Ta=25°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} | $V_{IN} = V_{DD} - 5V, I_{OUT} = -30mA$ | $V_{CC} - 2$ | | | 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 | | | μA |

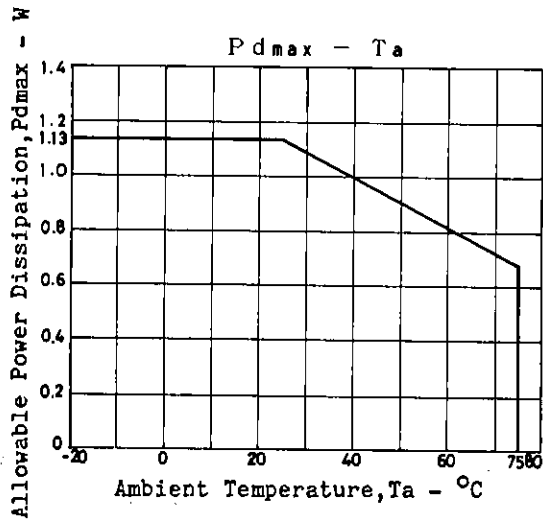
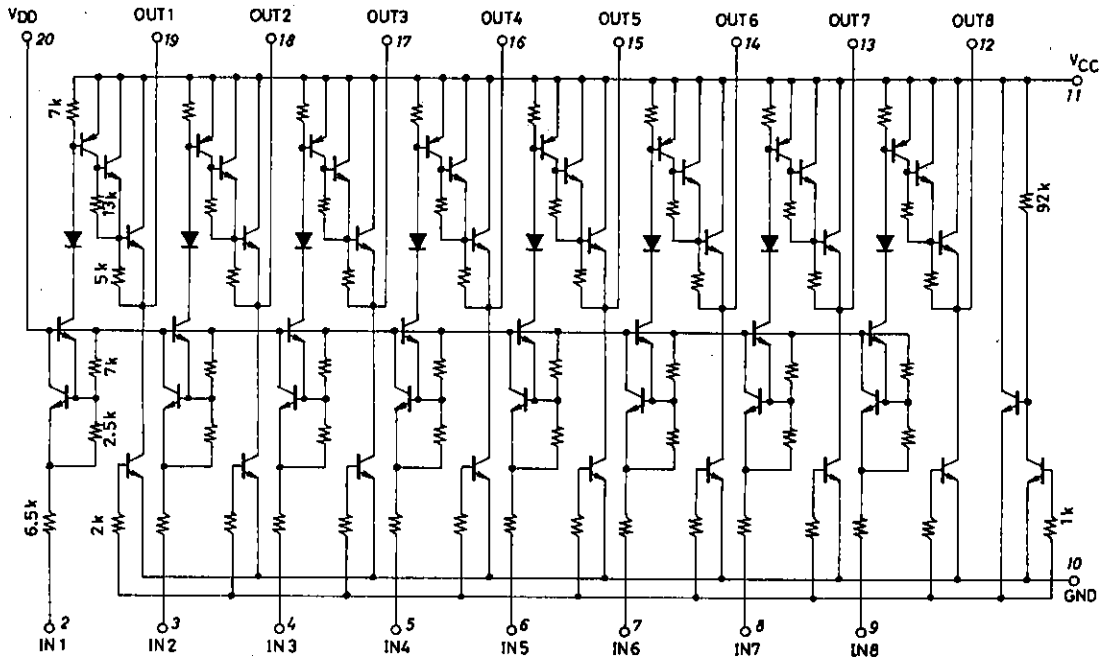
Package Dimensions 3021B-D20SIC
(unit: mm)



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Equivalent Circuit

Unit (resistance: Ω)



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