

Monolithic Digital IC

SANYO

NO.1173C

LB1241**Fluorescent Display Tube Driver**

The LB1241 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 an ideal interface for N-channel MOS devices.

FEATURES

- 8 circuit independent Darlington driver.
- Capable of driving digits or segments.
- Built-in pull-down sink current.
- Rated at 45 V/30 mA
- Large pull-down current and capable of preventing ghost effectively.

ABSOLUTE MAXIMUM RATINGS/ $T_a = 25^\circ\text{C}$

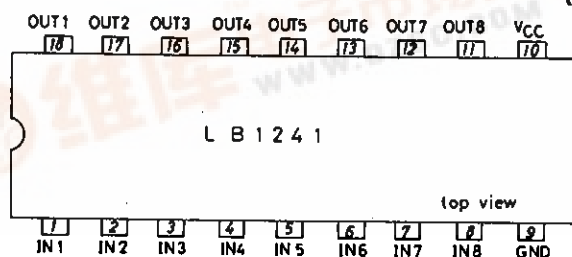
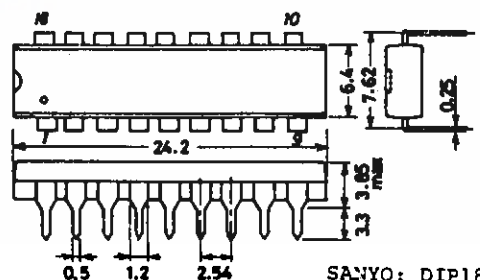
			unit
Maximum power supply voltage	V_{CC} max	-0.3 ~ 45	V
Output supply voltage	V_{OUT}	-0.3 ~ V_{CC}	V
Input supply voltage	V_{IN} $GND < V_{IN}$	$V_{CC} - 10 \sim V_{CC}$	V
Maximum output current	I_{OUT}	-30	mA
Allowable power dissipation	P_d max	1130	mW
Operating temperature	T_{opr}	-20 ~ +75	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 ~ +150	$^\circ\text{C}$

ALLOWABLE OPERATING CONDITIONS/ $T_a = 25^\circ\text{C}$

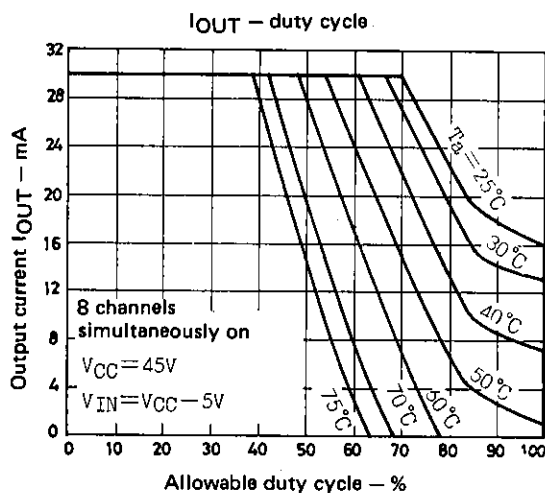
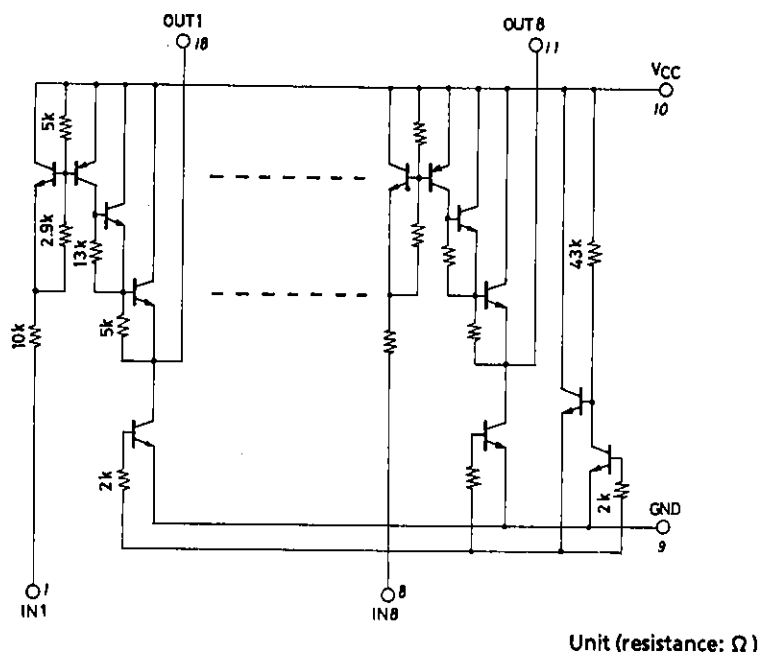
			unit
Supply voltage	V_{CC}	4.75 ~ 45	V
Input "H" level voltage	V_{IH} $GND < V_{IN}, I_{OUT} = -30 \text{ mA}$	$V_{CC} - 10 \sim V_{CC} - 2.8$	V
Input "L" level voltage	V_{IL} $I_{OUT} \leq -30 \mu\text{A}$	$V_{CC} - 0.45 \sim V_{CC}$	V

ELECTRICAL CHARACTERISTICS/ $T_a = 25^\circ\text{C}, V_{CC} = 45 \text{ V}$

			min	typ	max	unit
Supply current	I_{CCL}	All inputs: open	0.6	1.3	2.3	mA
	I_{CCH}	All inputs: $V_{IN} = V_{CC} - 5 \text{ V}$	7.0	10	16	mA
Output voltage	V_{OL}	$V_{IN} = V_{CC} - 0.3 \text{ V}, I_{OUT} = 0 \text{ mA}$			200	mV
	V_{OH}	$V_{IN} = V_{CC} - 5 \text{ V}, I_{OUT} = -30 \text{ mA}$	$V_{CC} - 2.0$	$V_{CC} - 1.6$		V
Pull-down current	I_{OPL}	$V_{OUT} = V_{CC}$	0.6	1.0	1.8	mA
Input current	I_{IN1}	$V_{IN} = V_{CC} - 5 \text{ V}$	0.2	0.4	0.6	mA
	I_{IN2}	$V_{IN} = V_{CC} - 10 \text{ V}$	0.6	0.9	1.3	mA
Output leakage current	I_{OL}	$V_{IN} = V_{CC} - 0.3 \text{ V}, V_{OUT} = 0.5 \text{ V}$	-30			μA

PIN ASSIGNMENT**Package Dimensions 3007A-D18IC
(unit : mm)**

EQUIVALENT CIRCUIT



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