

<b>SANYO</b>	No.843E	Monolithic Digital IC
		<b>LB1240</b>

**Fluorescent Display Tube Driver**

The LB1240 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 55 V/30 mA

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

			unit
Maximum power supply voltage	$V_{CC}$ max	-0.3 ~ +55.0	V
Output supply voltage	$V_{OUT}$	-0.3 ~ $V_{CC}$	V
Input supply voltage	$V_{IN}$ $V_{IN} > \text{GND}$	$V_{CC} - 10 \sim V_{CC}$	V
Maximum output current	$I_{OUT}$	-30	mA
Allowable power dissipation	$P_d$ max	1.13	W
Operating ambient temperature	$T_{opr}$	-20 ~ +75	$^\circ\text{C}$
Storage ambient temperature	$T_{stg}$	-40 ~ +150	$^\circ\text{C}$

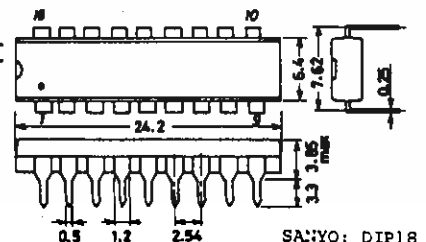
#### ALLOWABLE OPERATING CONDITIONS/ $T_a = 25^\circ\text{C}$

			unit
Power supply voltage	$V_{CC}$	4.75 ~ 55.0	V
Input (H) level voltage	$V_{IH}$ $V_{IN} > \text{GND},$ $I_{OUT} = -30 \text{ mA}$	$V_{CC} - 10 \sim V_{CC} - 2.8$	V
Input (L) level voltage	$V_{IL}$ $I_{OUT} \leq -30 \mu\text{A}$	$V_{CC} - 0.45 \sim V_{CC}$	V

#### ELECTRICAL CHARACTERISTICS/ $T_a = 25^\circ\text{C}, V_{CC} = 55 \text{ V}$

			min	typ	max	unit
Power supply current	$I_{CCH}$	All inputs, $V_{IN} = V_{CC} - 10 \text{ V}$		5.0	8.0	mA
	$I_{CCL}$	All inputs open	0.3	1.0	1.6	mA
Output voltage	$V_{OH}$	$V_{IN} = V_{CC} - 10 \text{ V},$ $I_{OUT} = -30 \text{ mA}$	$V_{CC} - 2.0$	$V_{CC} - 1.6$		V
	$V_{OL}$	$V_{IN} = V_{CC} - 0.3 \text{ V},$ $I_{OUT} = 0 \text{ mA}$			200	mV
Output leakage current	$I_{OL}$	$V_{IN} = V_{CC} - 0.3 \text{ V}, V_{OUT} = 0.5 \text{ V}$	-30			$\mu\text{A}$
Pull-down current	$I_{OPL}$	$V_{OUT} = V_{CC}$	0.2	0.4	1.0	mA
Input current	$I_{INH}$	$V_{IN} = V_{CC} - 10 \text{ V}$	0.6	0.9	1.3	mA

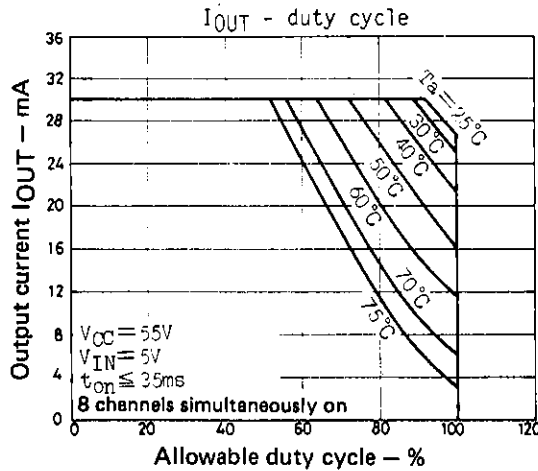
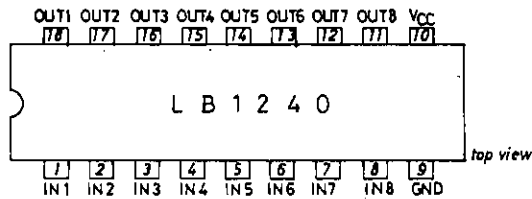
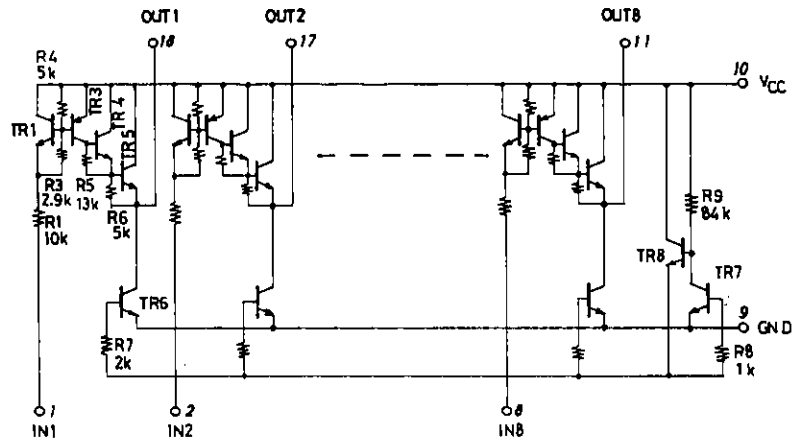
Package Dimensions 3007A-D18IC  
(unit : mm)



# LB1240

## Equivalent circuit and pin assignment

Unit (resistance:  $\Omega$ )



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
  - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.