

**SANYO**

NO.1831C

**LB1205****High-Voltage,  
High-Current Darlington Driver****Functions and Features**

- 4-unit, high-voltage (65V), high-current (1.5A) Darlington driver
- PNP input type (Low active)
- On-chip spark killer diodes
- On-chip input protection diodes
- Capable of being driven directly from 5V-operated CMOS, TTL

**Absolute Maximum Ratings at Ta=25°C**

|                                    |                               |                               | unit |
|------------------------------------|-------------------------------|-------------------------------|------|
| Maximum Supply Voltage             | $V_{DDmax}$                   | 7.0                           | V    |
|                                    | $V_{CCmax}$                   | 62                            | V    |
| Output Supply Voltage              | $V_{Omax}$                    | 65                            | V    |
| Input Supply Voltage               | $V_{INmax}$ $V_{IN} \geq Gnd$ | $V_{DD}-7.0$ to $V_{DD}+10.0$ | V    |
| Output Current                     | $I_{Omax}$                    | 1.5                           | A    |
| Spark Killer Diode Forward Current | $I_{Fs}$                      | 1.5                           | A    |
| Allowable Power Dissipation        | $P_{dmax}^*$                  | *1.9                          | W    |
| Operating Temperature              | $T_{opr}$                     | -20 to +75                    | °C   |
| Storage Temperature                | $T_{stg}$                     | -55 to +150                   | °C   |
|                                    |                               | 2.6                           | W    |

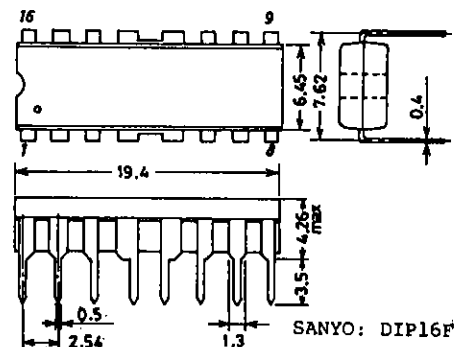
\*Mounted on the recommended printed circuit board

**Allowable Operating Conditions at Ta=25°C**

|                           |                                        |                               | unit |
|---------------------------|----------------------------------------|-------------------------------|------|
| Supply Voltage Range      | $V_{DD}$                               | 3.0 to 7.0                    | V    |
| Input "ON" Level Voltage  | $V_{INon}$ $V_{IN} \geq Gnd, I_o=1.0A$ | $V_{DD}-7.0$ to $V_{DD}-2.6$  | V    |
| Input "OFF" Level Voltage | $V_{INoff}$ $I_o=30\mu A$              | $V_{DD}-0.3$ to $V_{DD}+10.0$ | V    |

**Electrical Characteristics at Ta=25°C,  $V_{DD}=5.0V$** 

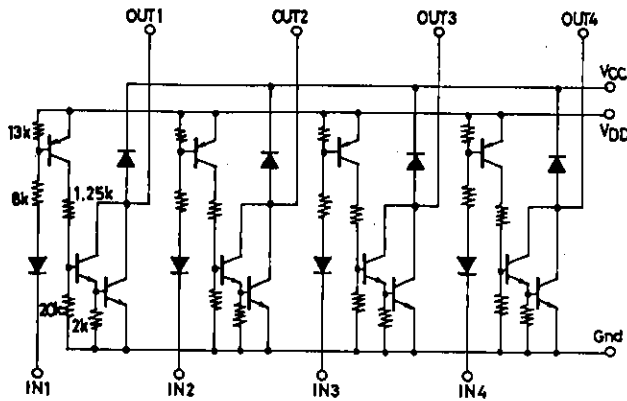
|                                    |                                            | min | typ | max | unit    |
|------------------------------------|--------------------------------------------|-----|-----|-----|---------|
| Output Saturation Voltage          | $V_{osat1}$ $V_{IN}=V_{DD}-5.0V, I_o=0.5A$ |     |     | 1.2 | V       |
|                                    | $V_{osat2}$ " $I_o=1.0A$                   |     |     | 1.5 | V       |
|                                    | $V_{osat3}$ " $I_o=1.5A$                   |     |     | 2.0 | V       |
| Output Sustain Voltage             | $V_{osus}$ $I_o=100mA$                     | 65  |     |     | V       |
| Input Current                      | $I_{IN}$ $V_{DD}=7.0V, V_{IN}=V_{DD}-7.0V$ |     |     | 1.0 | mA      |
| Spark Killer Diode Forward Voltage | $V_{Fs}$ $I_{Fs}=1.5A$                     |     |     | 3.0 | V       |
| Spark Killer Diode Reverse Current | $I_{Rs}$ $V_{CC}=62V, V_o=0V$              |     |     | 30  | $\mu A$ |

**Package Dimensions 3054A  
(unit: mm)****SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

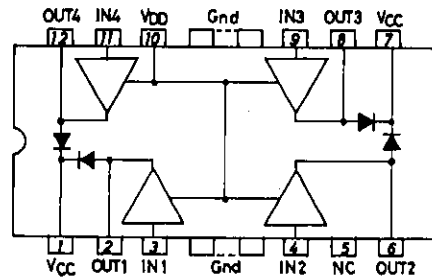
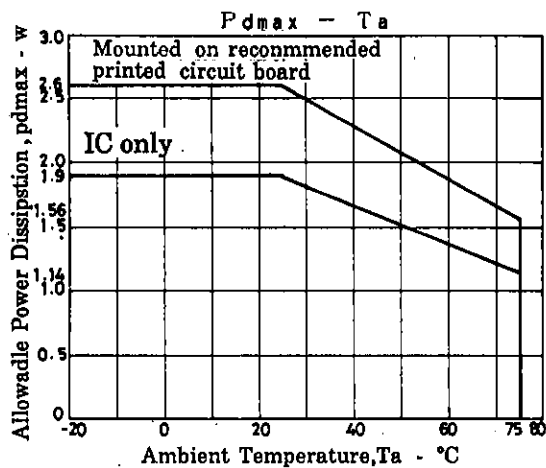
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

O1995YK/ 7097KI/ 6265KI/ D203KI, TS No.1831-1/2

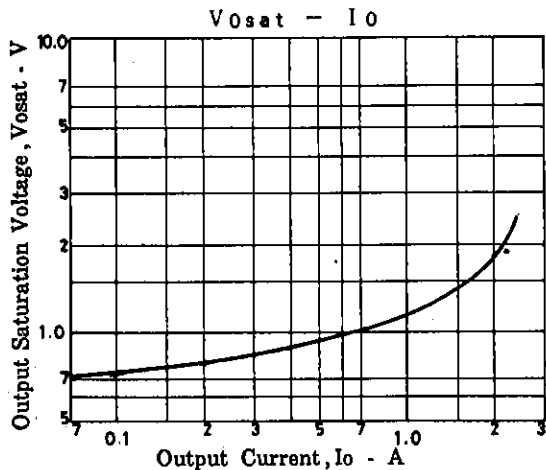
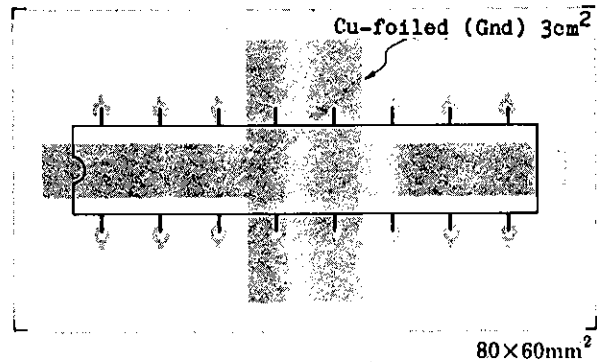
## Equivalent Circuit

Unit (resistance :  $\Omega$ )

## Pin Assignment

(Note)  $V_{CC}$  (pins 1,9) is shorted internally.

## Recommended Printed Circuit Pattern



- 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.