

**SANYO**

NO.790C

**LB1275****7-Unit, Darlington Transistor Array**

This LB1275, 7-unit Darlington transistor array using NPN transistors, is specially designed for printer driver, lamp or relay driver. Protector diodes against negative input are used by which it is easy to design drive circuits of a calculator with a printer using indicator or a cash register.

**Features**

- . 7-unit version (DIP-16) of LB1274 (6-unit DIP-14)
- . Protector diodes against negative input ( $V_{IN} = -40$  to  $+20$  V).
- . Spark killer diodes for inductive load.
- . Suitable for 85mA type printer mechanism ( $I_{OUTmax} = 100$ mA DC).

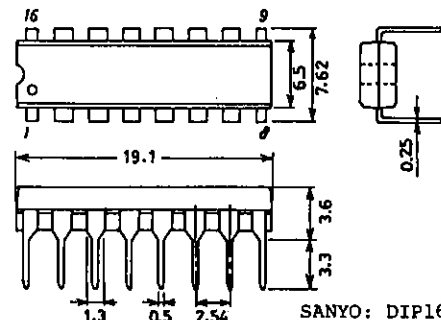
Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$ , voltage at pin 8=0V.

|   |            |   | unit           |
|---|------------|---|----------------|
| Output Supply Voltage                   | $V_{OUT}$  | -0.3 to +22                             | V              |
| Input Supply Voltage                    | $V_{IN}$   | -40 to +20                              | V              |
| Pin 8 Supply Voltage                    | $V_{8P}$   | -0.3 to +20                             | V              |
| Output Flow-in Current                  | $I_{OUT}$  | per unit                                | 0 to 100 mA    |
| Instantaneous Output Flow-in Current    | $I_{OP}$   | per unit, duty=10%, pulse width < 20ms  | 0 to 150 mA    |
| Forward Current of Spark Killer Diode   | $I_{F(S)}$ | per diode, duty=10%, pulse width < 20ms | 150 to 0 mA    |
| Flow-out Current at GND Pin             | $I_8$      |   | -900 to 0 mA   |
| Instantaneous Flow-out Current at Pin 8 | $I_{8P}$   | duty=10%, pulse width < 20ms            | -500 to 0 mA   |
| Instantaneous Flow-out Current at Pin 9 | $I_{9P}$   | duty=10%, pulse width < 20ms            | -900 to 0 mA   |
| Allowable Power Dissipation             | $P_{Dmax}$ |   | 900 mW         |
| Operating Temperature                   | $T_{opr}$  |   | -20 to +80 °C  |
| Storage Temperature                     | $T_{stg}$  |   | -40 to +125 °C |

Allowable Operating Conditions at  $T_a = 25^\circ\text{C}$ , voltage at pin 8=0V

|                         |           |                          | unit        |
|-------------------------|-----------|--------------------------|-------------|
| Output Supply Voltage   | $V_{OUT}$ |                          | 22 V min.   |
| Input 'H' Level Voltage | $V_{IH}$  | output pin current=100mA | +9 to +20 V |
| Input 'L' Level Voltage | $V_{IL}$  | output pin current=100uA | -35 to +1 V |
| Load Inductance         | $L_L$     | with protector diode     | 100mH min.  |

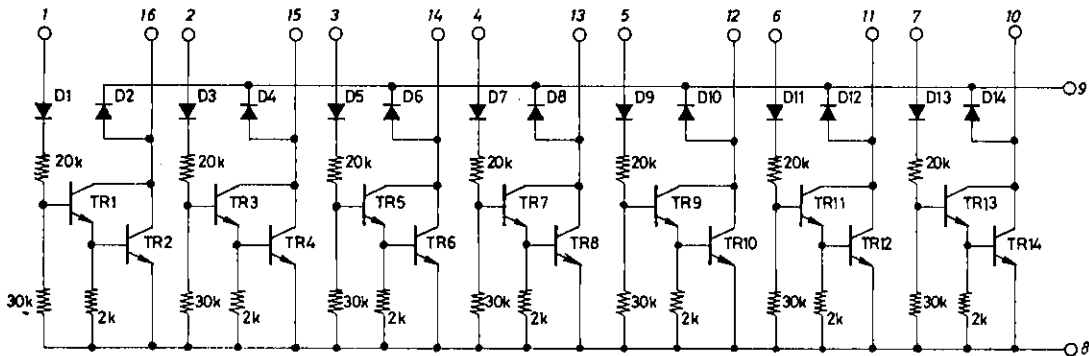
Package Dimensions 3064-D16TR  
(unit : mm)



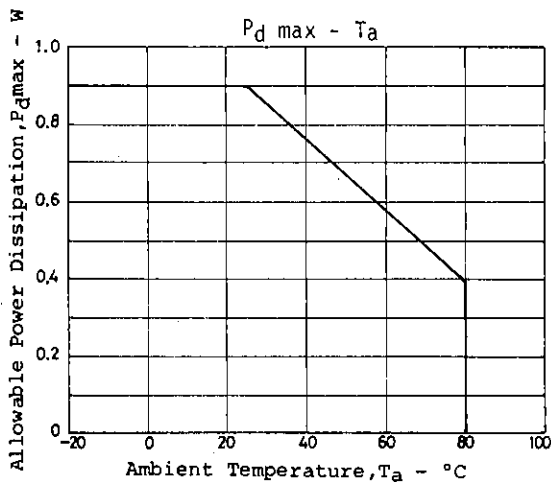
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| Electrical Characteristics at $T_a=25^\circ\text{C}$ , voltage at pin 8=0V |                      | min  | typ | max | unit          |
|--|----------------------|--|-----|-----|---------------|
| Output Voltage   | $V_{\text{OUT}}(1)$  | $V_{\text{IN}}=9.0\text{V}, I_{\text{OUT}}=150\text{mA}$ |     | 1.7 | V             |
|  | $V_{\text{OUT}}(2)$  | $V_{\text{IN}}=9.0\text{V}, I_{\text{OUT}}=100\text{mA}$ |     | 1.4 | V             |
| Output Sustain Voltage   | $V_{\text{OUT}}(s)$  | $V_{\text{IN}}=\text{open}$ , applied time               | 22  |     | V             |
|  |                      | $< 10\mu\text{s}, I_{\text{OUT}}=150\text{mA}$           |     |     |               |
| Output Leak Current  | $I_{\text{off}}$     | $V_{\text{IN}}=1.0\text{V}, V_{\text{OUT}}=22\text{V}$   |     | 100 | $\mu\text{A}$ |
| Input Current  | $I_{\text{IN}}(1)$   | $V_{\text{IN}}=18\text{V}$                               |     | 1.8 | mA            |
|  | $I_{\text{IN}}(2)$   | $V_{\text{IN}}=9\text{V}$                                |     | 0.8 | mA            |
| Output Current   | $I_{\text{OUT}}$     | $I_{\text{IN}}=0.3\text{mA}, V_{\text{OUT}}=1.4\text{V}$ |     | 100 | mA            |
| Input Leak Current   | $I_{\text{leak}}$    | $V_{\text{IN}}=-35\text{V}$                              |     | -10 | $\mu\text{A}$ |
| Leak current at Spark  | $I_{\text{leak}}(s)$ | $V_{\text{OUT}}=0\text{V}, \text{pin } 8=20\text{V}$     |     | 30  | $\mu\text{A}$ |
| Killer Diode   |                      |  |     |     |               |
| Forward Voltage at Spark   | $V_{\text{F}}(s)$    | $I_{\text{F}}(s)=150\text{mA}$                           |     | 1.7 | V             |
| Killer Diode   |                      |  |     |     |               |

Equivalent Circuit



Unit (resistance:  $\Omega$ )



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