

SANYO

NO.535C

LB1274

6-Unit, Darlington Transistor Array

Circuit structure of this IC is a 6-unit Darlington transistor array with NPN transistors. The IC is ideal for driving printers, relays, and lamps. Protective diodes guard against negative inputs. Thus it has advantages when designing circuits to drive printer-calculators that use display tubes, cash registers, and the like.

FEATURES

- Ideal for 18-digit printers (because it has 6 units.)
- Protective diodes are incorporated against negative inputs ($V_{IN} = -40 \sim +20$ V).
- Ideal for printers, with 85-mA load current ($I_{OUT\ max} = 100$ mA DC).
- Spark-killer diodes accommodate L-loads.

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

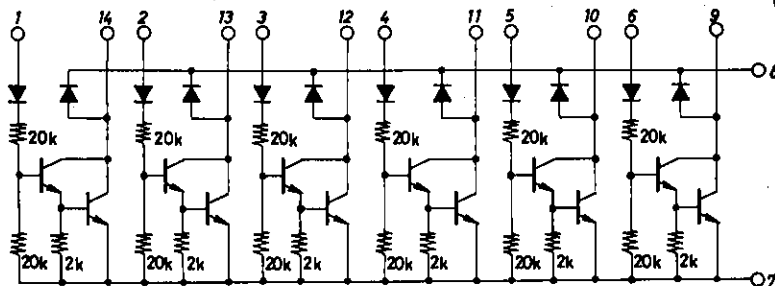
Parameter	Symbol	Value	Unit
Output supply voltage	V_{OUT}	-0.3 ~ +22	V
Input supply voltage	V_{IN}	-40 ~ +20	V
Pin-8 supply voltage	V_8	-0.3 ~ +20	V
Output inflow current	I_{OUT}	Per unit: 0 ~ 100	mA
Instantaneous output inflow current	I_{OP}	Per unit: duty \leq 10%, Pulse width < 20 ms	0 ~ 150 mA
Spark killer diode forward current	$I_{F(s)}$	Per diode: duty \leq 10%, Pulse width < 20 ms	0 ~ 150 mA
GND-pin outflow current	I_7	-700 ~ 0	mA
Pin-8 instantaneous outflow current	I_{8p}	duty \leq 10%, Pulse width < 20 ms	-500 ~ 0 mA
Allowable power dissipation	$P_d\ max$	1.15	W
Junction temperature	T_j	125	$^\circ\text{C}$
Operating ambient temperature	T_{opr}	-20 ~ +80	$^\circ\text{C}$
Storage ambient temperature	T_{stg}	-40 ~ +125	$^\circ\text{C}$

ALLOWABLE OPERATING CONDITIONS/ $T_a = 25^\circ\text{C}$, pin 7 = 0 V

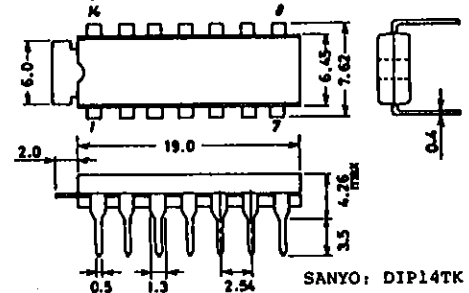
Parameter	Symbol	Value	Unit
Output supply voltage	V_{OUT}	22	V or less
Input high-level voltage	V_{IH}	Output terminal current = 100 mA	9 ~ 20 V
Input low-level voltage	V_{IL}	Output terminal current = 100 μA	-35 ~ +1 V
Load inductance	L_L	Protective diodes employed	100 mH or less

EQUIVALENT CIRCUIT

Unit (resistance: Ω)

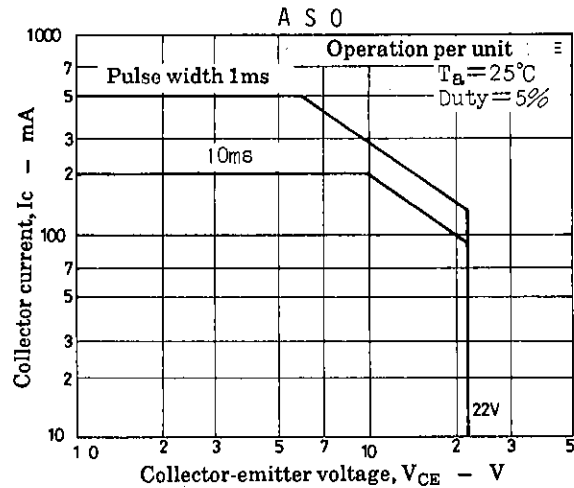
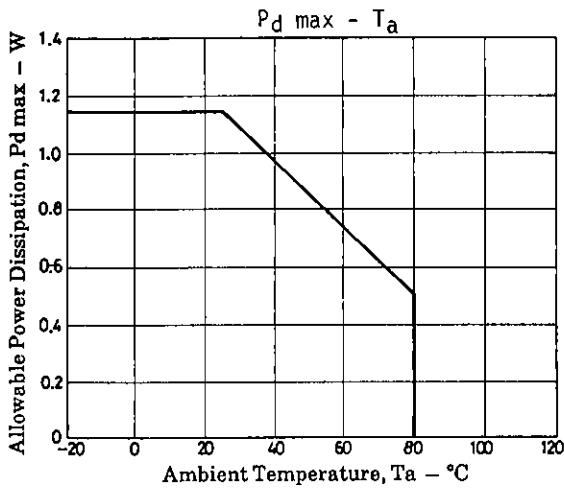


Package Dimensions 3004A-D14TKIC
(unit : mm)



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ELECTRICAL CHARACTERISTICS/ $T_a = 25^\circ\text{C}$, pin 7 = 0 V			min	typ	max	unit
Output voltage	$V_{OUT}(1)$	$V_{IN} = 9.0\text{ V}, I_{OUT} = 150\text{ mA}$			1.7	V
	$V_{OUT}(2)$	$V_{IN} = 9.0\text{ V}, I_{OUT} = 100\text{ mA}$			1.4	V
Output sustaining voltage	$V_{OUT}(s)$	$V_{IN} = \text{open}, I_{OUT} = 150\text{ mA}$ Applied time $< 10\ \mu\text{s}$	22			V
Output leakage current	I_{off}	$V_{IN} = 1.0\text{ V}, V_{OUT} = 22\text{ V}$			100	μA
Input current	$I_{IN}(1)$	$V_{IN} = 18\text{ V}$			1.8	mA
	$I_{IN}(2)$	$V_{IN} = 9.0\text{ V}$			0.8	mA
Output current	I_{OUT}	$I_{IN} = 0.3\text{ mA}, V_{OUT} = 1.4\text{ V}$	100			mA
Input leakage current	I_{leak}	$V_{IN} = -35\text{ V}$	-10			μA
Spark killer diode leakage current	$I_{leak}(s)$	$V_{OUT} = 0\text{ V}, \text{pin } 8 = 20\text{ V}$			30	μA
Spark killer diode forward voltage	$V_F(s)$	$I_F(s) = 150\text{ mA}$			1.7	V



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