



NPN/PNP POWER DARLINGTON TRANSISTOR ARRAY

D76FY2D

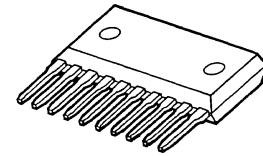
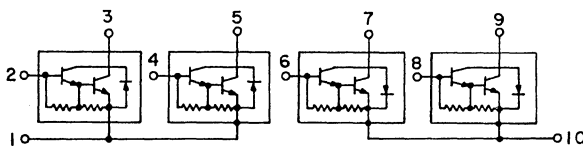
**80 VOLTS
2 AMP, 4.0 WATTS**

Designed for high power switching applications, hammer drive, pulse motor drive and inductive load drive applications.

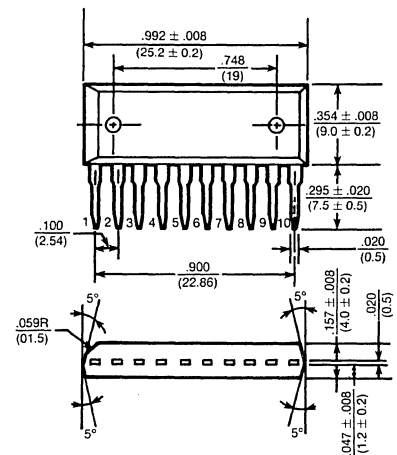
Features:

- High reliability small-sized available (4 in 1)
- Epoxy single-inline package (10 pin)
- Zener diode included between collector and base
- High collector power dissipation: $P_D = 4.0W @ T_A = 25^\circ C$ (Four device action)
- High collector current: $I_C = \pm 2A$ (Max.)
- High DC current gain:
 $h_{FE} = 2000$ (Min.) @ $V_{CE} = \pm 2V, I_C = \pm 1A$

ARRAY CONFIGURATION



CASE STYLE SIP-10 PIN
DIMENSIONS ARE IN INCHES AND (MILLIMETERS)



maximum ratings ($T_A = 25^\circ C$) (unless otherwise specified)

RATING	SYMBOL	D76FY2D	UNITS
Collector-Emitter Voltage	V_{CEO}	80	Volts
Collector-Base Voltage	V_{CBO}	80	Volts
Emitter Base Voltage	V_{EBO}	8	Volts
Collector Current — Continuous	I_C	2	A
Peak	I_{CM}	3	
Base Current — Continuous	I_B	0.5	A
Collector Power Dissipation (One Device Action, $T_A = 25^\circ C$)	P_D	2.0	Watts
Collector Power Dissipation (Four Device Action, $T_A = 25^\circ C$)	P_D	4.0	Watts
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

thermal characteristics

Thermal Resistance, Junction to Ambient (Four Device Action)	$\Sigma R_{\theta JA}$	31.3	$^\circ C/W$
Maximum Lead Temperature for Soldering Purpose: 1/8" from Case for 5 Seconds	T_L	260	$^\circ C$

electrical characteristics ($T_A = 25^\circ\text{C}$) (unless otherwise specified)

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT
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off characteristics

Collector-Emitter Breakdown Voltage ($I_C = 10\text{mA}$, $I_B = 0$)	$V_{BR(CEO)}$	80	—	—	Volts
Collector-Base Breakdown Voltage ($I_C = 1\text{mA}$, $I_E = 0$)	$V_{BR(CBO)}$	80	—	—	Volts
Collector Cutoff Current ($V_{CB} = 80\text{V}$, $I_E = 0$)	I_{CBO}	—	—	10	μA
Collector Cutoff Current ($V_{CE} = 80\text{V}$, $I_B = 0$)	I_{CEO}	—	—	50	μA
Emitter Cutoff Current ($V_{EB} = 8\text{V}$, $I_C = 0$)	I_{EBO}	—	—	4	mA

on characteristics

DC Current Gain ($I_C = 1\text{A}$, $V_{CE} = 1\text{V}$)	h_{FE}	2000	—	—	—
Collector-Emitter Saturation Voltage ($I_C = 1\text{A}$, $I_B = 1\text{mA}$)	$V_{CE(sat)}$	—	—	1.5	Volts
Base-Emitter Saturation Voltage ($I_C = 1\text{A}$, $I_B = 1\text{mA}$)	$V_{BE(sat)}$	—	—	2.0	Volts

switching characteristics

Turn-on Time	$V_{CC} = 30\text{V}$ $I_{B1} = -I_{B2} = 1\text{mA}$ Duty Cycle = 1%	t_{on}	—	0.4	—	μs
Storage Time		t_{stg}	—	4.0	—	
Fall Time		t_f	—	0.6	—	

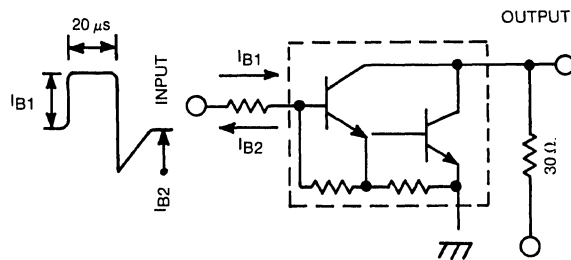


FIG. 1 SWITCHING TIME TEST CIRCUIT