

PNP POWER DARLINGTON TRANSISTOR

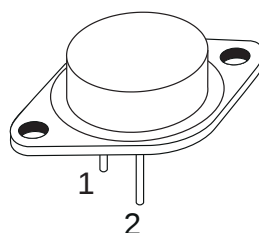
- INTEGRATED ANTIPARALLEL COLLECTOR-EMITTER DIODE

APPLICATIONS

- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

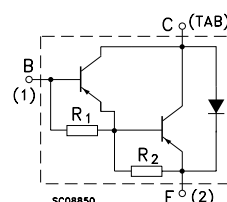
DESCRIPTION

The FW26025A1 is a silicon Epitaxial-Base PNP power transistor in monolithic Darlington configuration mounted in Jedec TO-3 metal case. It is intended for general purpose amplifier and low frequency switching applications.



TO-3

INTERNAL SCHEMATIC DIAGRAM



R_1 Typ. = 8 K Ω

R_2 Typ. = 60 Ω

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	100	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	100	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	5	V
I_C	Collector Current	20	A
I_{CM}	Collector Peak Current	40	A
I_B	Base Current	0.5	A
P_{tot}	Total Dissipation at $T_c \leq 25$ °C	160	W
T_{stg}	Storage Temperature	-65 to 200	°C
T_j	Max. Operating Junction Temperature	200	°C

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.09	$^{\circ}\text{C/W}$
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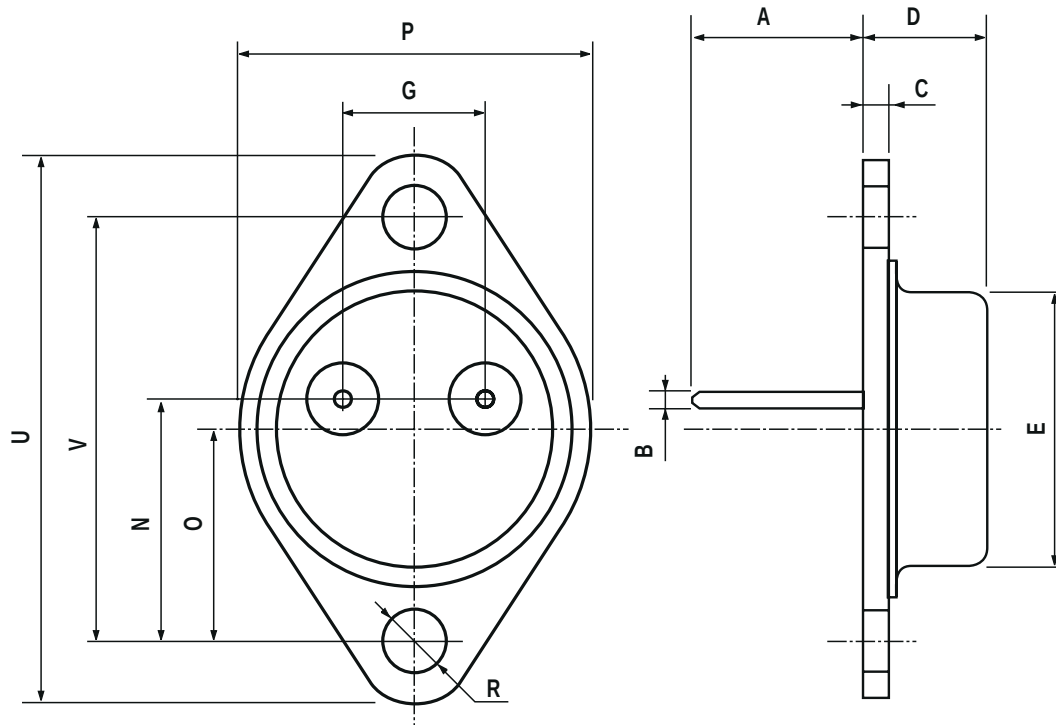
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEV}	Collector Cut-off Current ($V_{BE} = -1.5\text{V}$)	$V_{CE} = 100\text{ V}$ $V_{CE} = 100\text{ V}$ $T_C = 150^{\circ}\text{C}$			0.5 5	mA mA
I_{CEO}	Collector Cut-off Current ($I_B = 0$)	$V_{CE} = 50\text{ V}$			1	mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 5\text{ V}$			2	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = 2\text{ mA}$ $I_C = 100\text{ mA}$	90 100			V V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = 10\text{ A}$ $I_B = 40\text{ mA}$ $I_C = 20\text{ A}$ $I_B = 200\text{ mA}$			2 3	V V
$V_{BE(sat)}^*$	Base-Emitter Saturation Voltage	$I_C = 20\text{ A}$ $I_B = 200\text{ mA}$			4	V
V_{BE}^*	Base-Emitter Voltage	$I_C = 10\text{ A}$ $V_{CE} = 3\text{ V}$			2.8	V
h_{FE}^*	DC Current Gain	$I_C = 2\text{ A}$ $V_{CE} = 3\text{ V}$ $I_C = 10\text{ A}$ $V_{CE} = 3\text{ V}$ $I_C = 30\text{ A}$ $V_{CE} = 3\text{ V}$	5000 750 200		18000	
h_{fe}	Small Signal Current Gain	$I_C = 3\text{ A}$ $V_{CE} = 10\text{ V}$ $f = 1\text{KHz}$	300			
C_{CBO}	Collector Base Capacitance	$I_E = 0$ $V_{CB} = 10\text{ V}$ $f = 100\text{KHz}$			600	pF

* Pulsed: Pulse duration = 300 μs , duty cycle 1.5 %

TO-3 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



P003F

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