

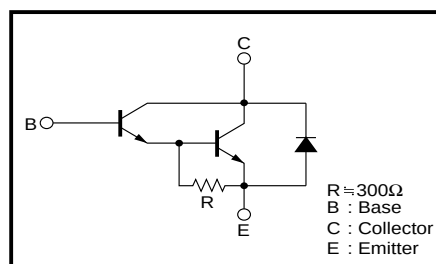
Power Transistor (80V, 4A)

2SD2618

●Features

- 1) Darlington connection for a high h_{FE} .
- 2) Built-in resistor between base and emitter.
- 3) Built-in damper diode.
- 4) Complements the 2SB1676.

●Circuit diagram



●Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	80	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	4	A (DC)
	I_{CP}	6	A ($t = 100\text{ms}$)
Collector power dissipation	P_C	2	W
		30	W ($T_C = 25^\circ\text{C}$)
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

●Packaging specifications and h_{FE}

Type	2SD2618
Package	TO-220FN
h_{FE}	1k~10k
Code	-
Basic ordering unit (pieces)	500

●Electrical characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	80	-	-	V	$I_C = 50\mu\text{A}$
Collector-emitter breakdown voltage	BV_{CEO}	80	-	-	V	$I_C = -1\text{mA}$
Collector cutoff current	I_{CBO}	-	-	100	μA	$V_{CB} = 80\text{V}$
Emitter cutoff current	I_{EBO}	-	-	10	μA	$V_{EB} = 5\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	1.5	V	$I_C/I_B = 2\text{A}/4\text{mA}$ *1
DC current transfer ratio	h_{FE}	1000	-	10000	-	$V_{CE}/I_C = 3\text{V}/2\text{A}$ *1
Transition frequency	f_T	-	40	-	MHz	$V_{CE} = 5\text{V}$, $I_E = -0.2\text{A}$, $f = 10\text{MHz}$ *2
Output capacitance	C_{ob}	-	35	-	pF	$V_{CB} = 10\text{V}$, $I_E = 0\text{A}$, $f = 1\text{MHz}$

*1 Measured using pulse current.

*2 Transition frequency of the device.