

Medium Power Transistor (Motor, Relay drive) (–80V, –4A)

2SB1676

●Features

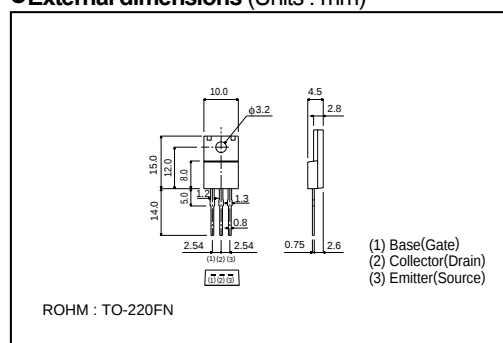
- 1) Darlington connection for a high h_{FE} .
- 2) Built-in resistor between base and emitter.
- 3) Built-in damper diode.
- 4) Complements the 2SD2618.

●Absolute maximum ratings (Ta = 25°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
	I_{CP}	–6	A(Pulse) *
Collector power dissipation	P_C	2	W(Ta = 25°C)
		30	W(Tc = 25°C)
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	–55~+150	°C

* Single pulse, Pw = 100ms

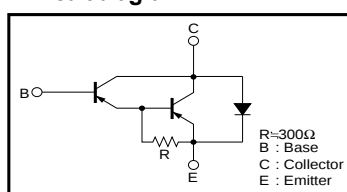
●External dimensions (Units : mm)



●Packaging specifications and h_{FE}

Type	2SB1676
Package	TO-220FN
h_{FE}	1k~10k
Code	-
Basic ordering unit (pieces)	500

●Circuit diagram



●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	–80	-	-	V	$I_C = -1mA$
Collector-base breakdown voltage	BV_{CBO}	–80	-	-	V	$I_C = -50\mu A$
Emitter-base breakdown voltage	BV_{EBO}	–7	-	-	V	$I_E = -50\mu A$
Collector cutoff current	I_{CBO}	-	-	–10	μA	$V_{CB} = -80V$
Emitter cutoff current	I_{EBO}	-	-	–10	μA	$V_{EB} = -5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	–1.5	V	$I_C/I_E = -2A/-4mA$ *1
DC current transfer ratio	h_{FE}	1000	-	10000	-	$V_{CE}/I_C = -3V/-2A$ *1
Transition frequency	f_T	-	20	-	MHz	$V_{CE} = -5V, I_E = 0.5A, f = 10MHz$ *2
Output capacitance	C_{ob}	-	22	-	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

*1 Measured using pulse current. *2 Transition frequency of the device.