

Transistors

For Motor / Relay drive (-120V, -6A)

2SB1674

●Structure

PNP Silicon Epitaxial Planar Transistor
(Darlington connection)

●Features

- 1) Darlington connection, high h_{FE} .
- 2) Resistor inbetween base-emitter.
- 3) Built-in damper diode.

●Applications

Relay drive
Motor drive

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

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	-120	V
Collector-emitter voltage	V_{CE0}	-120	V
Emitter-base voltage	V_{EB0}	-7	V
Collector current	DC	I_C	-6 A
	Pulse	I_{CP}	-10 A ^{*1}
Collector power dissipation	P_C	2	W($T_a=25^\circ\text{C}$)
		30	W($T_c=25^\circ\text{C}$)
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

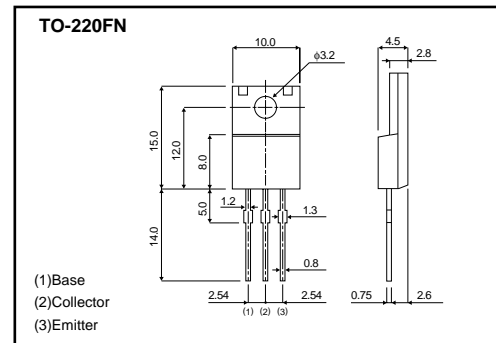
*1 $t=100\text{ms}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CE0}	-120	-	-	V	$I_C=-5\text{mA}$
Collector-base breakdown voltage	BV_{CB0}	-120	-	-	V	$I_C=-50\mu\text{A}$
Emitter-base breakdown voltage	BV_{EB0}	-7	-	-	V	$I_E=-5\text{mA}$
Collector cutoff current	I_{CB0}	-	-	-100	μA	$V_{CB}=-120\text{V}$
Emitter cutoff current	I_{EB0}	-	-	-3	mA	$V_{EB}=-5\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-1.5	V	$I_C/I_B=-3A/-6\text{mA}$ ^{*1}
DC current gain	h_{FE}	2k	-	20k	-	$V_{CE}=-3\text{V}$, $I_C=-2\text{A}$ ^{*1}
Transition frequency	f_T	-	12	-	MHz	$V_{CE}=-5\text{V}$, $I_E=0.5\text{A}$, $f=10\text{MHz}$ ^{*2}
Collector output capacitance	C_{ob}	-	70	-	pF	$V_{CB}=-10\text{V}$, $I_E=0\text{A}$, $f=1\text{MHz}$

*1 Pulse test *2 Transition frequency of the device

●External dimensions (Unit : mm)



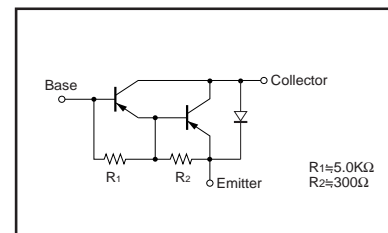
●Complements

PNP	NPN
2SB1674	2SD2615

●Packaging specifications and h_{FE}

Type	h_{FE}	Package	Taping
		Code	-
		Basic ordering unit (pieces)	500
2SB1674			○

●Equivalent circuit



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