

# 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 (Ta=25°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 <sup>*1</sup>
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 to +150	°C

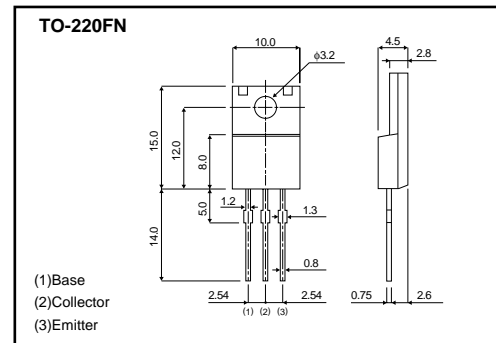
\*1  $t=100ms$

### ●Electrical characteristics (Ta=25°C)

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

\*1 Pulse test \*2 Transition frequency of the device

### ●External dimensions (Unit : mm)



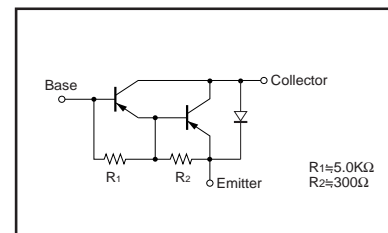
### ●Complements

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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