

# Power Transistor (−80V, −10A)

## 2SB1675

### ●Features

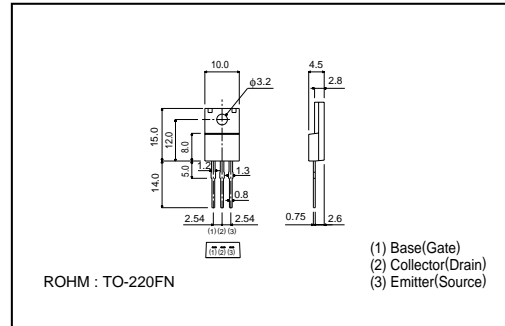
- 1) Darlington connection for high DC current gain.
- 2) Built-in resistor between base and emitter.
- 3) Built-in damper diode.

### ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V <sub>CB0</sub>	-80	V
Collector-emitter voltage	V <sub>CE0</sub>	-80	V
Emitter-base voltage	V <sub>EB0</sub>	-7	V
Collector current	I <sub>c</sub>	-10	A(DC)
		-20	A(Pulse) *
Collector power dissipation	P <sub>c</sub>	2	W
		30	W(Tc=25°C)
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55~+150	°C

\* Single pulse, P<sub>w</sub>=100ms

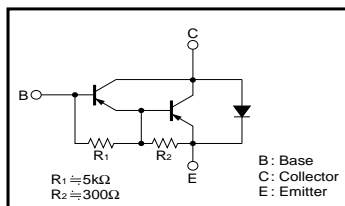
### ●External dimensions (Units : mm)



### ●Packaging specifications and h<sub>FE</sub>

Type	2SB1675
Package	TO-220FN
h <sub>FE</sub>	1k~20k
Code	-
Basic ordering unit (pieces)	500

### ●Circuit diagram



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV <sub>CB0</sub>	-80	-	-	V	I <sub>c</sub> =-50μA
Collector-emitter breakdown voltage	BV <sub>CE0</sub>	-80	-	-	V	I <sub>c</sub> =-5mA
Collector cutoff current	I <sub>c0</sub>	-	-	-10	μA	V <sub>CB</sub> =-80V
Emitter cutoff current	I <sub>e0</sub>	-	-	-3	mA	V <sub>EB</sub> =-5V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	-	-1	-1.5	V	I <sub>c</sub> /I <sub>e</sub> =-3A/-6mA
DC current transfer ratio	h <sub>FE</sub>	1000	-	20000	-	V <sub>CE</sub> /I <sub>c</sub> =-3V/-5A
Transition frequency	f <sub>r</sub>	-	12	-	MHz	V <sub>CE</sub> =-5V, I <sub>E</sub> =0.5A, f=10MHz
Output capacitance	C <sub>ob</sub>	-	90	-	pF	V <sub>CB</sub> =-10V, I <sub>E</sub> =0A, f=1MHz

\*1 Measured using pulse current.

\*2 Transition frequency of the device.