

Power Transistor (−100V, −8A)

2SB1668

●Features

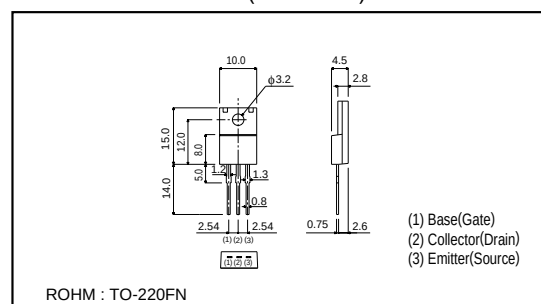
- 1) Darlington connection for high DC current gain.
- 2) Built-in resistor between base and emitter.
- 3) Built-in damper diode.
- 4) Complements the 2SD2607.

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	−100	V
Collector-emitter voltage	V _{CE0}	−100	V
Emitter-base voltage	V _{EB0}	−7	V
Collector current	I _C	−8	A (DC)
		−10	A (Pulse) *
Power dissipation	P _C	2	W
		30	W (T _C = 25°C)
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	−55 ~ +150	°C

* Single pulse, P_w = 100ms

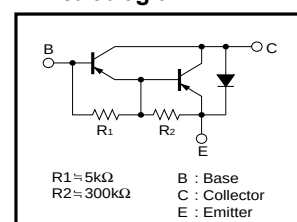
●External dimensions (Units : mm)



●Packaging specifications and h_{FE}

Type	2SB1668
Package	TO-220FN
h _{FE}	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 _{CB0}	−100	—	—	V	I _C = −50μA
Collector-emitter breakdown voltage	BV _{CE0}	−100	—	—	V	I _C = −5mA
Collector cutoff current	I _{CB0}	—	—	−10	μA	V _{CB} = −100V
Emitter cutoff current	I _{EB0}	—	—	−3	mA	V _{EB} = −5V
Collector-emitter saturation voltage	V _{CE(sat)}	—	−1.0	−1.5	V	I _C /I _B = −3A/−6mA *1
DC current transfer ratio	h _{FE}	1000	10000	20000	—	V _{CE} /I _C = −3V/−2A *1
Transition frequency	f _T	—	12	—	MHz	V _{CE} = −5V, I _E = 0.5A, f = 10MHz *2
Output capacitance	C _{ob}	—	90	—	pF	V _{CB} = −10V, I _E = 0A, f = MHz *2

*1 Measured using pulse current.

*2 Transition frequency of the device.