

For Power amplification (–100V, –8A)

2SB1668

●Structure

PNP Silicon Epitaxial Planar Transistor
(Darlington connection)

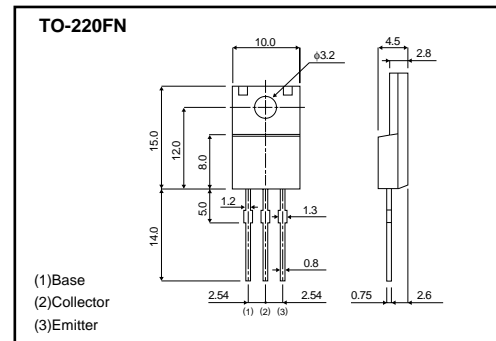
●Features

- 1) High h_{FE} by darlington connection.
- 2) Built-in resistors between base and emitter.
- 3) Damper diode is incorporated.

●Applications

Relay drive
Motor drive

●External dimensions (Unit : mm)



●Complements

PNP	NPN
2SB1668	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	DC	I_C	–8 A
	Pulse	I_{CP}	–10 A *1
Power dissipation	P_C	2	W(Ta=25°C)
		30	W(Tc=25°C)
Junction temperature	T_J	150	°C
Range of storage temperature	T_{stg}	–55 to +150	°C

*1 $t=100ms$

●Packaging specifications and h_{FE}

Type	Package	Taping
	Code	–
	Basic ordering unit (pieces)	500
2SB1668		○

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	–100	–	–	V	$I_C=-5mA$
Collector-base breakdown voltage	BV_{CBO}	–100	–	–	V	$I_C=-50\mu A$
Emitter-base breakdown voltage	BV_{EBO}	–7	–	–	V	$I_E=-5mA$
Collector cut-off current	I_{CBO}	–	–	–10	μA	$V_{CB}=-100V$
Emitter cut-off current	I_{EBO}	–	–	–3	mA	$V_{EB}=-5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	1.5	V	$I_C/I_B=-3A/-6mA$
DC current gain	h_{FE}	1	–	20	K	$V_{CE}=-3V, I_C=-2A$
Transition frequency	f_T	–	12	–	MHz	$V_{CE}=-5V, I_E=0.5A, f=10MHz$
Collector output capacitance	C_{ob}	–	90	–	pF	$V_{CB}=-10V, I_E=0A, f=1MHz$

Notes

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