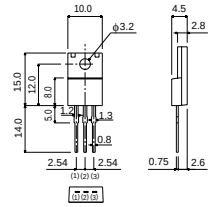
Power Transistor (100V, 8A)

2SD2607

●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 2SB1668.

●External dimensions (Units: mm)



ROHM : TO-220FN

(1) Base(Gate)
(2) Collector(Drain)
(3) Emitter(Source)

●Absolute maximum ratings (Ta = 25°C)

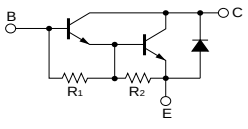
Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	100	V
Emitter-base voltage	V_{EBO}	7	V
Collector current	I_C	8	A (DC)
		10	A (Pulse) *
Power dissipation	P_C	2	W
		30	W (Tc = 25°C)
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55~+150	°C

* Single pulse, Pw = 10ms

●Packaging specifications and h_{FE}

Type	2SD2607
Package	TO-220FN
h_{FE}	1k~20k
Code	-
Basic ordering unit (pieces)	500

●Circuit diagram



R1≒ 5kΩ
R2≒ 300kΩ

B : Base
C : Collector
E : Emitter

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	100	-	-	V	I_C = 50μA
Collector-emitter breakdown voltage	BV_{CEO}	100	-	-	V	I_C = 5mA
Collector cutoff current	I_{CBO}	-	-	10	μA	V_{CB} = 100V
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 *1
DC current transfer ratio	h_{FE}	1000	-	20000	-	V_{CE}/I_C = 3V/2A *1
Transition frequency	f_T	-	40	-	MHz	V_{CE} = 5V , I_E = –0.2A , f = 10MHz *2
Output capacitance	Cob	-	50	-	pF	V_{CB} = 10V , I_E = 0A , f = 1MHz

*1 Measured using pulse current. *2 Transition frequency of the device.