

# For Power amplification (100V, 8A)

## 2SD2607

### ●Structure

NPN Silicon Epitaxial Planar Transistor  
(Darlington connection)

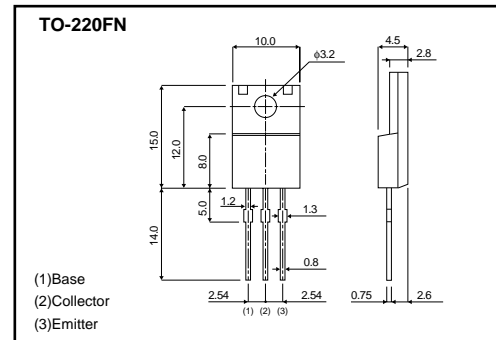
### ●Features

- 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	$V_{CBO}$	100	V
Collector-emitter voltage	$V_{CEO}$	100	V
Emitter-base voltage	$V_{EBO}$	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
2SD2607		○

### ●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	$\mu A$	$V_{CB}=100V$
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	$f_T$	-	40	-	MHz	$V_{CE}=5V, I_E=-0.2A, f=10MHz$
Collector output capacitance	$C_{ob}$	-	70	-	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

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