

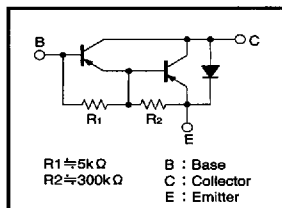
Power Transistor (−100V, −8A)

2SB1344

●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 2SD2025.

●Circuit schematic



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{ceo}	−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 (T _c =25°C)
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	−55~150	°C

* Single pulse P_w=100ms

●Packaging specifications and hfe

Type	2SB1344
Package	TO-220FP
hfe	1k~20k
Code	—
Basic ordering unit (pieces)	500

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{ceo}	−100	—	—	V	I _c =−50 μA
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)}	—	−1.0	−1.5	V	I _c /I _e =−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=1MHz

*1 Measured using pulse current.

*2 Transition frequency of mounted transistor.

(94L-374-B403)

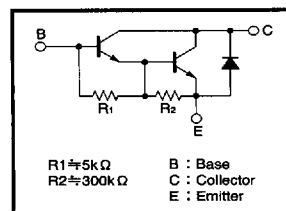
Power Transistor (100V, 8A)

2SD2025

●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 2SB1344.

●Circuit schematic



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{ceo}	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 (T _c =25°C)
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	−55~150	°C

* Single pulse P_w=10ms

●Packaging specifications and hfe

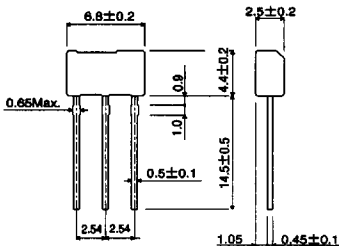
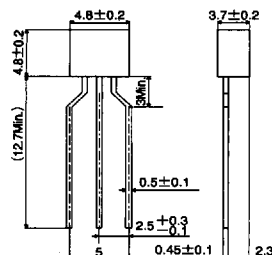
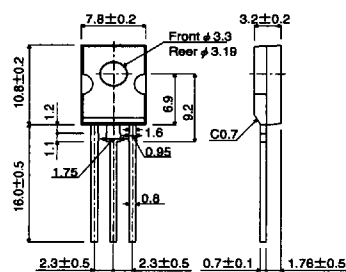
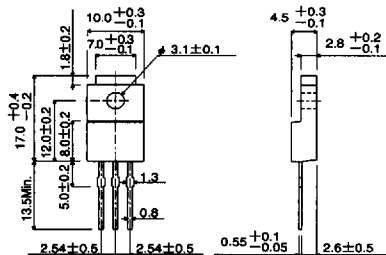
Type	2SD2025
Package	TO-220FP
hfe	1k~20k
Code	—
Basic ordering unit (pieces)	500

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{ceo}	100	—	—	V	I _c =50 μA
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 _e =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	C _{ob}	—	50	—	pF	V _{CB} =10V, I _e =0A, f=1MHz

*1 Measured using pulse current.

*2 Transition frequency of mounted transistor.

Type	External dimensions (Units : mm)	Features
ATV		The ATV is a radial tapping version of the highly popular ATR. This enables automatic high-density mounting with a radial insertion machine.
TO-92 (SC-43 type)		The SC-43 is for general purpose small signals.
TO-126FP		The TO-126FP is an isolation type package based on a TO-126 full mold. In addition to the features of the TO-126, molded heat sink fins allow easy isolation of the heat sink.
TO-220FP (SC-67 type)		The TO-220FP is an isolation type package based on a TO-220 full mold. In addition to the features of the TO-126 and TO-220, molded heat sink fins allow easy isolation of the heat sink.