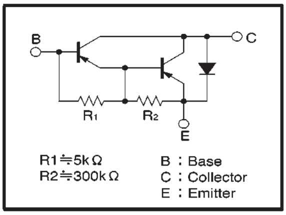
Power Transistor（−100V, −8A）

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 diagram



●Absolute maximum ratings（Ta=25℃）

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℃）
Junction temperature	Tj	150	℃
Storage temperature	Tstg	−55～+150	℃

＊ Single pulse,　Pw=100ms

●Packaging specifications and h_{FE}

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

●Electrical characteristics（Ta=25℃）

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	$V_{CE(sat)}$	—	−1.0	−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	Cob	—	90	—	pF	V_{CB}=−10V , I_E=0A , f=1MHz

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

(94L-374-B403)

Power Transistor（100V, 8A）

2SD2025

●Features

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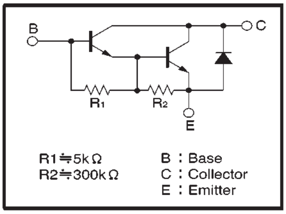
4）Complements the 2SB1344.

●Circuit diagram



●Absolute maximum ratings（Ta=25℃）

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℃）
Junction temperature	Tj	150	℃
Storage temperature	Tstg	−55～+150	℃

＊ Single pulse, Pw=10ms

●Packaging specifications and h_{FE}

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

●Electrical characteristics（Ta=25℃）

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.

(94L-969-D403)