

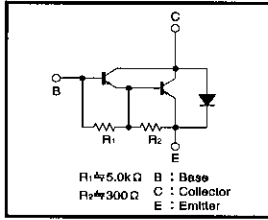
Power Transistor (−120V, −6A)

2SB1340

●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 2SD1889.

●Circuit schematic



●Absolute maximum ratings (T_a=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	−120	V
Collector-emitter voltage	V _{CE0}	−120	V
Emitter-base voltage	V _{EB0}	−6	V
Collector current	I _c	−6	A (DC)
		−10	A (Pulse) *
Collector 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 h_{FE}

Type	2SB1340
Package	TO-220FP
h _{FE}	2k~20k
Code	—
Basic ordering unit (pieces)	500

●Electrical characteristics (T_a=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	−120	—	—	V	I _c =−50 μA
Collector-emitter breakdown voltage	BV _{CE0}	−120	—	—	V	I _c =−5mA
Collector cutoff current	I _{CB0}	—	—	−100	μA	V _{CB} =−120V
Emitter cutoff current	I _{EB0}	—	—	−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}	2k	—	20k	—	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}	—	70	—	pF	V _{CB} =−10V, I _E =0A, f=1MHz

*1 Measured using pulse current.

*2 Transition frequency of mounted transistor.

(96-650-888)

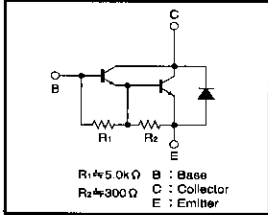
Power Transistor (120V, 6A)

2SD1889

●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 2SB1340.

●Circuit schematic



●Absolute maximum ratings (T_a=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	120	V
Collector-emitter voltage	V _{CE0}	120	V
Emitter-base voltage	V _{EB0}	6	V
Collector current	I _c	6	A (DC)
		10	A (Pulse) *
Collector 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 h_{FE}

Type	2SD1889
Package	TO-220FP
h _{FE}	2k~20k
Code	—
Basic ordering unit (pieces)	500

●Electrical characteristics (T_a=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	120	—	—	V	I _c =50 μA
Collector-emitter breakdown voltage	BV _{CE0}	120	—	—	V	I _c =5mA
Collector cutoff current	I _{CB0}	—	—	100	μA	V _{CB} =120V
Emitter cutoff current	I _{EB0}	—	—	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}	2k	—	20k	—	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.

(96-765-086)

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