

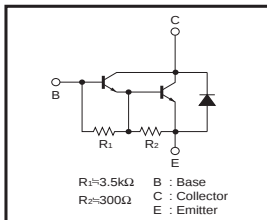
Power Transistor (100V, 2A)

2SD1980 / 2SD1867

●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 2SB1316.

●inner circuit



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	VCBO	100	V
Collector-emitter voltage	VCEO	100	V
Emitter-base voltage	VEBO	6	V
Collector current	IC	2	A(DC)
		3 *1	A(Pulse)
		1	W
Collector power dissipation	2SD1980	PC	W(Tc=25°C)
	2SD1867		
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

*1 Single pulse Pw=100ms

 *2 Printed circuit board, 1.7mm thick, collector plating 100mm² or larger.

●Packaging specifications and hFE

Type	2SD1980	2SD1867
Package	CPT3	ATV
hFE	1k to 10k	1k to 10k
Marking	—	—
Code	TL	TV2
Basic ordering unit (pieces)	2500	2500

* Denotes hFE

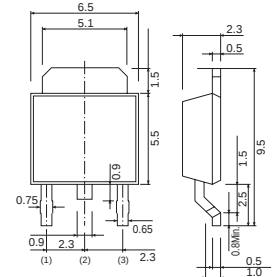
●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	100	—	—	V	IC=50μA
Collector-emitter breakdown voltage	BVCEO	100	—	—	V	IC=5mA
Emitter-base breakdown voltage	VEBO	6	—	—	V	IE=5mA
Collector cutoff current	ICBO	—	—	10	μA	VCE=100V
Emitter cutoff current	IEBO	—	—	3	mA	VEB=5V
Collector-emitter saturation voltage	VCE(sat)	—	—	1.5	V	IC=1A, IB=1mA *
Base-Emitter saturation voltage	VEB(sat)	—	—	2.0	V	IC/IB=1A/1mA
DC current transfer ratio	hFE	1000	—	10000	—	VCE=2V, IC=1A *
Transition frequency	fr	—	80	—	MHz	VCE=5V, IE=-0.1A, f=30MHz
Output capacitance	Cob	—	25	—	pF	VCE=10V, IE=0A, f=1MHz

* Measured using pulse current.

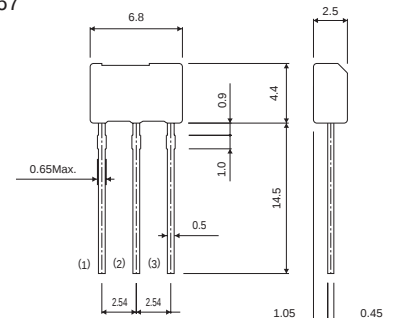
●Dimensions (Unit : mm)

2SD1980


 ROHM : CPT3
 EIAJ : SC-63

 (1) Base
 (2) Collector
 (3) Emitter

2SD1867



ROHM : ATV

Taping specifications

 (1) Emitter
 (2) Collector
 (3) Base

Electrical characteristic curves

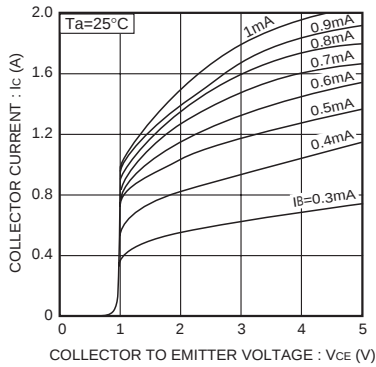


Fig.1 Grounded emitter output characteristics

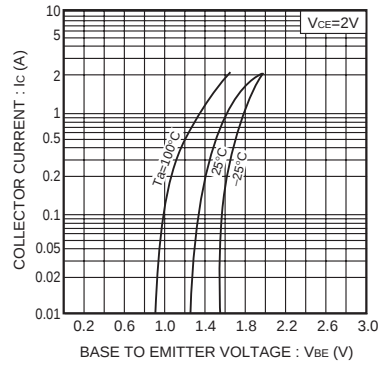


Fig.2 Grounded emitter propagation characteristics

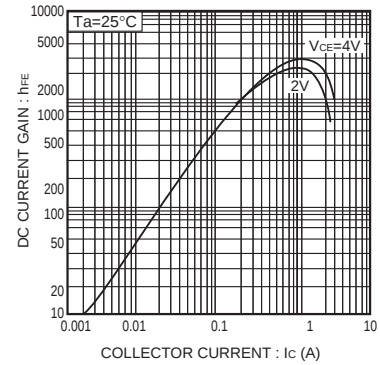


Fig.3 DC current gain vs. collector current

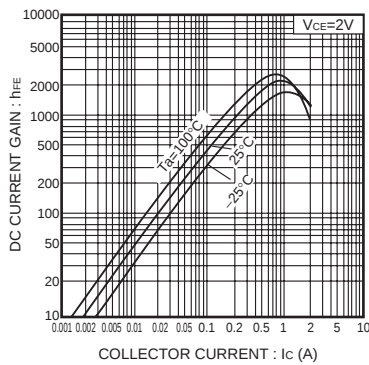


Fig.4 DC current gain vs. collector current

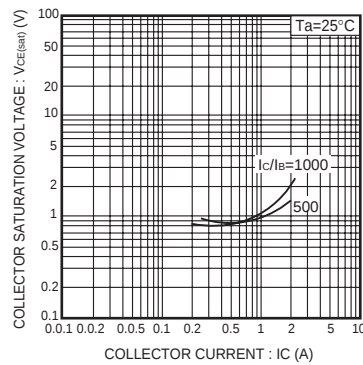


Fig.5 Collector-emitter saturation voltage vs. collector current

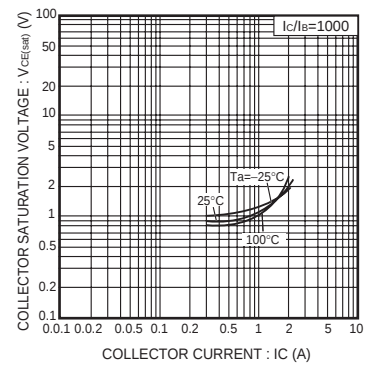


Fig.6 Collector-emitter saturation voltage vs. collector current

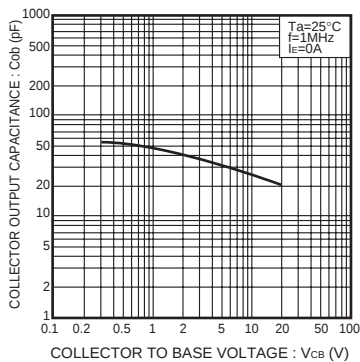


Fig.7 Collector output capacitance vs. collector-base voltage

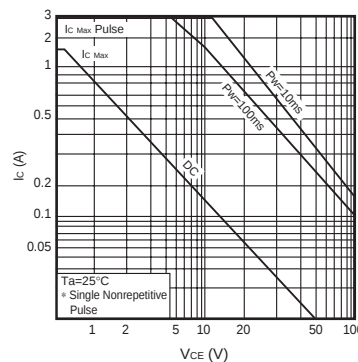


Fig.8 Safe operating area(2SD1867)

Notes

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