

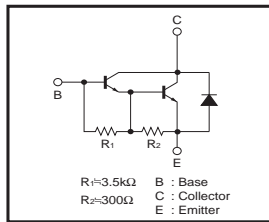
Power Transistor (100V, 2A)

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	V _{CB0}	100	V
Collector-emitter voltage	V _{CEO}	100	V
Emitter-base voltage	V _{EBO}	6	V
Collector current	I _C	2	A(DC)
		3 *1	A(Pulse)
		1	W
Collector power dissipation	PC	10	W(T _c =25°C)
		1 *2	W
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

*1 Single pulse P_w=100ms

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

●Packaging specifications and h_{FE}

Type	2SD1980	2SD1867
Package	CPT3	ATV
h _{FE}	1k to 10k	1k to 10k
Marking	-	-
Code	TL	TV2
Basic ordering unit (pieces)	2500	2500

* Denotes h_{FE}

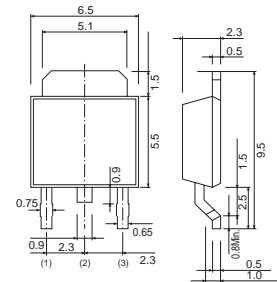
●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	V _{CB0}	100	-	-	V	I _c =50μA
Collector-emitter breakdown voltage	V _{CEO}	100	-	-	V	I _c =5mA
Emitter-base breakdown voltage	V _{EBO}	6	-	-	V	I _E =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 =1A, I _B =1mA
Base-Emitter saturation voltage	V _{BE(sat)}	-	-	2.0	V	I _c /I _B =1A/1mA
DC current transfer ratio	h _{FE}	1000	-	10000	-	V _{CE} =2V, I _c =1A
Transition frequency	f _T	-	80	-	MHz	V _{CE} =5V, I _E =-0.1A, f=30MHz
Output capacitance	C _{ob}	-	25	-	pF	V _{CB} =10V, I _E =0A, f=1MHz

* Measured using pulse current.

●Dimensions (Unit : mm)

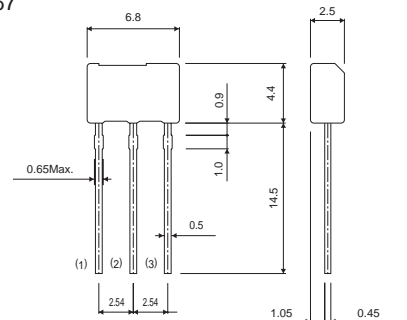
2SD1980



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

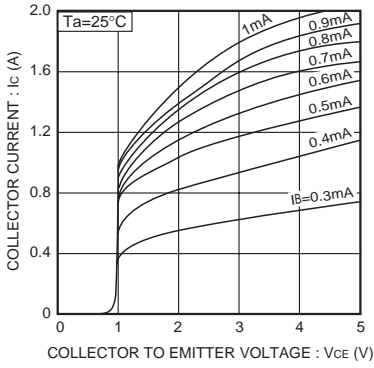


Fig.1 Grounded emitter output characteristics

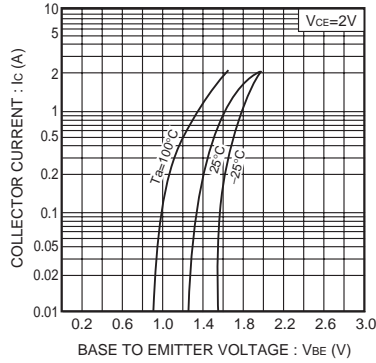


Fig.2 Grounded emitter propagation characteristics

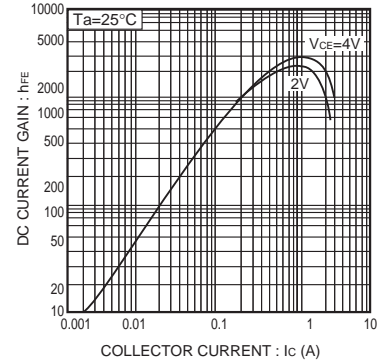


Fig.3 DC current gain vs. collector current

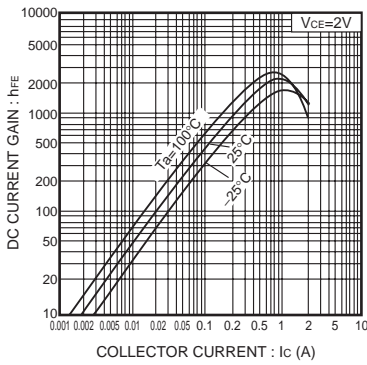


Fig.4 DC current gain vs. collector current

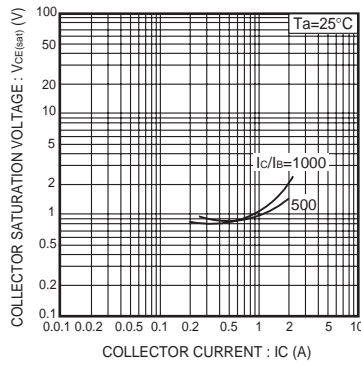


Fig.5 Collector-emitter saturation voltage vs. collector current

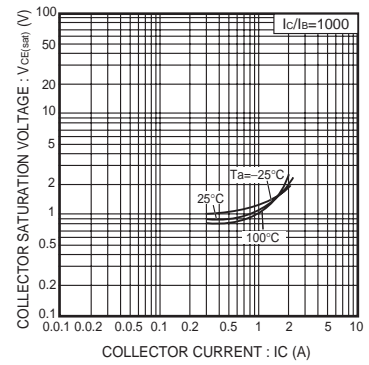


Fig.6 Collector-emitter saturation voltage vs. collector current

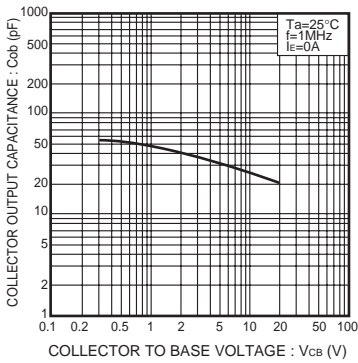


Fig.7 Collector output capacitance vs. collector-base voltage

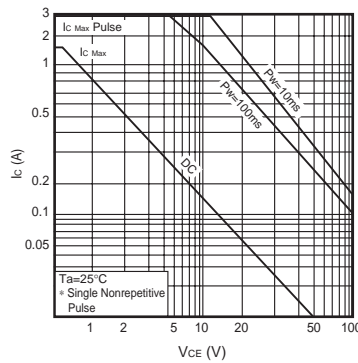


Fig.8 Safe operating area(2SD1867)

Notes

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