

Power Transistor (100V , 2A)

2SD2195 / 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 2SB1580 / 2SB1316.

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	100	V
Collector-emitter voltage	V _{CE0}	100	V
Emitter-base voltage	V _{EB0}	6	V
Collector current	I _c	2	A(DC)
		3	A(Pulse) *1
		2	W *2
Collector power dissipation	P _c	1	W(T _c =25°C)
		10	
		1	W *3
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55→+150	°C

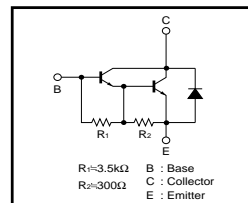
*1 Single pulse P_w=100ms
 *2 When mounted on a 40 x 40 x 0.7 mm ceramic board.
 *3 Printed circuit board, 1.7mm thick, collector plating 100mm² or larger.

●Packaging specifications and hFE

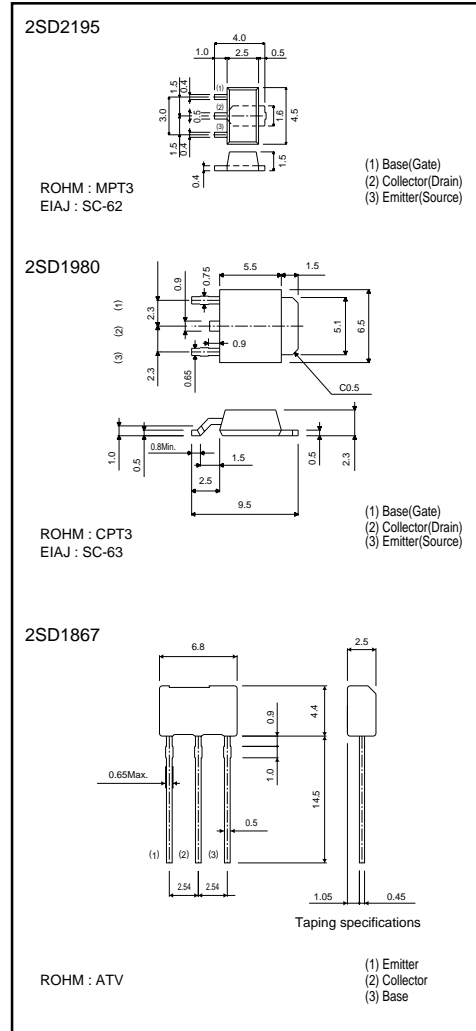
Type	2SD2195	2SD1980	2SD1867
Package	MPT3	CPT3	ATV
hFE	1k~10k	1k~10k	1k~10k
Marking	DP*	-	-
Code	T100	TL	TV2
Basic ordering unit (pieces)	1000	2500	2500

*Denotes hFE

●Equivalent circuit



●External dimensions (Units : mm)



●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	100	-	-	V	I _c = 50μA
Collector-emitter breakdown voltage	BV _{CE0}	100	-	-	V	I _c = 5mA
Collector cutoff current	I _{CEO}	-	-	10	μA	V _{CB} = 100V
Emitter cutoff current	I _{EB0}	-	-	3	mA	V _{EB} = 5V
Collector-emitter saturation voltag	V _{CE(sat)}	-	-	1.5	V	I _c = 1A, I _b = 1mA
DC current transfer ratio	h _{FE}	1000	-	10000	-	V _{CE} = 2V, I _c = 1A
Output capacitance	C _{ob}	-	25	-	pF	V _{CB} = 10V, I _E = 0A, f = 1MHz

*Measured using pulse current.