

Power Transistor (100V , 2A)

2SD2195 / 2SD1980 / 2SD1867 / 2SD2398

●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 / 2SB1567.

●Absolute maximum ratings (Ta = 25°C)

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

*1 Single pulse Pw=100ms

*2 When mounted on a 40 x 40 x 0.7 mm ceramic board.

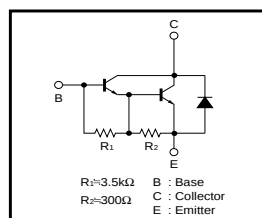
*3 Printed circuit board, 1.7mm thick, collector plating 100mm² or larger.

●Packaging specifications and h_{FE}

Type	2SD2195	2SD1980	2SD1867	2SD2398
Package	MPT3	CPT3	ATV	TO-220FN
h _{FE}	1k ~ 10k	1k ~ 10k	1k ~ 10k	1k ~ 10k
Marking	DP *	—	—	—
Code	T100	TL	TV2	—
Basic ordering unit (pieces)	1000	2500	2500	500

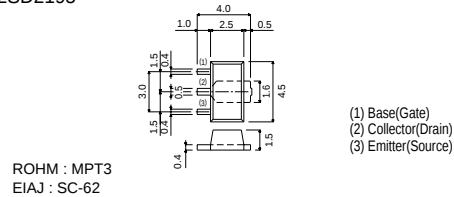
* Denotes h_{FE}

●Circuit schematic

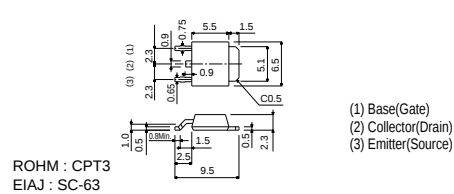


●External dimensions (Units : mm)

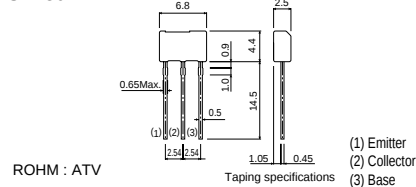
2SD2195



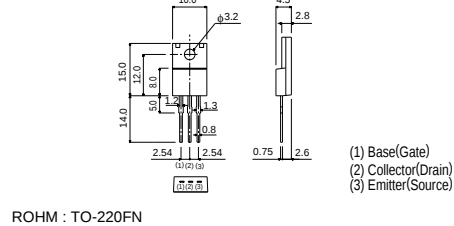
2SD1980



2SD1867



2SD2398



●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CEO}	100	—	—	V	I _C = 50μA
Collector-emitter breakdown voltage	BV _{CE0}	100	—	—	V	I _C = 5mA
Collector cutoff current	I _{CBO}	—	—	10	μA	V _{CE} = 100V
Emitter cutoff current	I _{EB0}	—	—	3	mA	V _{EB} = 5V
Collector-emitter saturation voltage	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 _{CE} = 10V, I _E = 0A, f = 1MHz

* Measured using pulse current.