

Power Transistor (160V , 1.5A)

2SD2211 / 2SD1918 / 2SD1857A

●Features

- 1) High breakdown voltage.($V_{CE0} = 160V$)
- 2) Low collector output capacitance.
(Typ. 20pF at $V_{CB} = 10V$)
- 3) High transition frequency.($f_T = 80MHz$)
- 4) Complements the 2SB1275 / 2SB1236A.

●Absolute maximum ratings ($T_a = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	160	V
Collector-emitter voltage	V_{CEO}	160	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	1.5	A(DC)
		3	A(Pulse) *1
		1	W *2
Collector power dissipation	P_C	2	W
		1	W
		10	W($T_C = 25^\circ C$)
Junction temperature	T_J	150	$^\circ C$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ C$

* 1 Single pulse $P_w = 100ms$ * 2 Printed circuit board 1.7mm thick, collector plating 1cm² or larger.

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

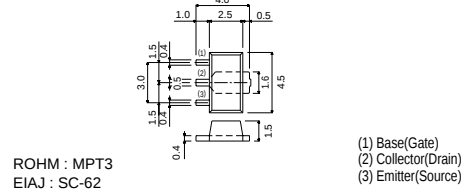
●Packaging specifications and h_{FE}

Type	2SD2211	2SD1918	2SD1857A
Package	MPT3	CPT3	ATV
h_{FE}	QR	Q	PQ
Marking	DQ*	—	—
Code	T100	TL	TV2
Basic ordering unit (pieces)	1000	2500	2500

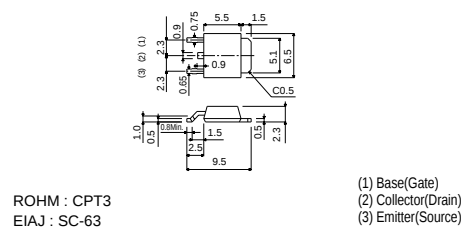
* Denotes h_{FE}

●External dimensions (Units : mm)

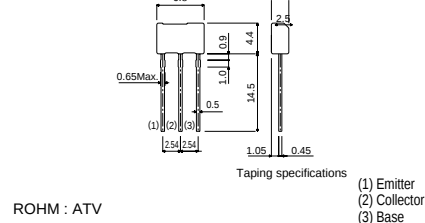
2SD2211



2SD1918



2SD1857A



●Electrical characteristics ($T_a = 25^\circ C$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	V_{CBO}	160	—	—	V	$I_C = 50\mu A$
Collector-emitter breakdown voltage	V_{CEO}	160	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	V_{EBO}	5	—	—	V	$I_E = 50\mu A$
Collector cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 120V$
Emitter cutoff current	I_{EBO}	—	—	1	μA	$V_{EB} = 4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	2	V	$I_C/I_E = 1A/0.1A$ *
Base-emitter saturation voltage	$V_{BE(sat)}$	—	—	1.5	V	$I_C/I_E = 1A/0.1A$ *
DC current transfer ratio	h_{FE}	120	—	390	—	$V_{CE}/I_C = 5V/0.1A$
		82	—	270	—	
Transition frequency	f_T	—	80	—	MHz	$V_{CE} = 5V, I_E = -0.1A, f = 30MHz$
Output capacitance	C_{ob}	—	20	—	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$

* Measured using pulse current.