

Power Transistor (160V , 1.5A)

2SD2211 / 2SD1918 / 2SD1857A

●Features

- 1) High breakdown voltage.($BV_{CEO} = 160V$)
- 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 (Ta = 25°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 *3
		1	W
		10	W($T_C=25^{\circ}C$)
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

*1 Single pulse Pw=100ms

*2 Printed circuit board 1.7mm thick, collector plating 1cm² or larger.

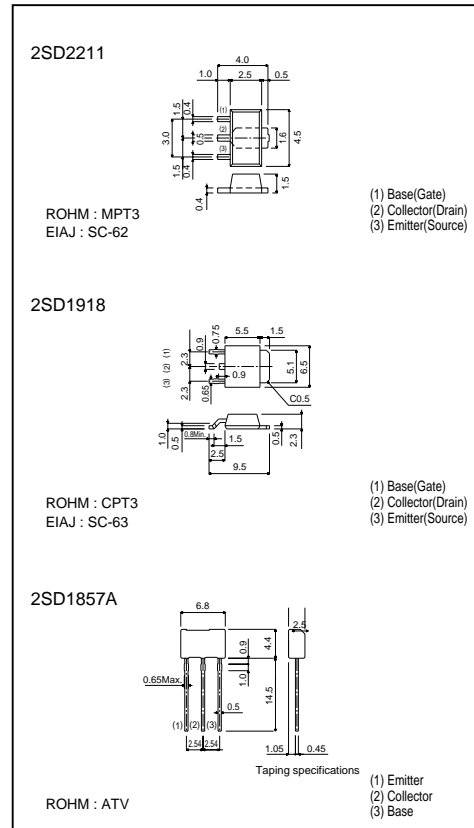
*3 When mounted on a 40 x 40 x 0.7mm ceramic board.

●Packaging specifications and hFE

Type	2SD2211	2SD1918	2SD1857A
Package	MPT3	CPT3	ATV
hFE	QR	Q	PQ
Marking	DQ*	-	-
Code	T100	TL	TV2
Basic ordering unit (pieces)	1000	2500	2500

* Denotes hFE

●External dimensions (Units : mm)



●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions	
Collector-base breakdown voltage	BV_{CBO}	160	-	-	V	$I_C = 50\mu A$	
Collector-emitter breakdown voltage	BV_{CEO}	160	-	-	V	$I_C = 1mA$	
Emitter-base breakdown voltage	BV_{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	$I_C/I_B = 1A/0.1A$	
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	1.5	V	$I_C/I_B = 1A/0.1A$	
DC current transfer ratio	hFE	2SD2211, 2SD1918	120	-	390	-	$V_{CE}/I_C = 5V/0.1A$
		2SD1857A	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.