

# 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.( $f_r = 80MHz$ )
- 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
Collector power dissipation	$P_c$	1	W *2
		2	W
		1	W
Storage temperature	$T_{stg}$	-55 ~ +150	°C

- \*1 Single pulse  $P_w=100ms$
- \*2 Printed circuit board 1.7mm thick, collector plating 1cm<sup>2</sup> 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)

2SD2211

ROHM : MPT3  
EIAJ : SC-62

(1) Base(Gate)  
(2) Collector(Drain)  
(3) Emitter(Source)

2SD1918

ROHM : CPT3  
EIAJ : SC-63

(1) Base(Gate)  
(2) Collector(Drain)  
(3) Emitter(Source)

2SD1857A

ROHM : ATV

Taping specifications  
(1) Emitter  
(2) Collector  
(3) Base

### ●Electrical characteristics (Ta = 25°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	$\mu A$	$V_{CB} = 120V$
Emitter cutoff current	$I_{EBO}$	-	-	1	$\mu A$	$V_{EB} = 4V$
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	$h_{FE}$	120	-	390	-	$V_{CE}/I_c = 5V/0.1A$
		82	-	270	-	
Transition frequency	$f_r$	-	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.