

# Medium power transistor (80V, 0.7A)

## 2SD1767 / 2SD1859

### ●Features

- 1) High breakdown voltage,  $BV_{CE0}=80V$ , and high current,  $I_C=0.7A$ .
- 2) Complements the 2SB1189 / 2SB1238.

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

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CB0}$	80	V
Collector-emitter voltage	$V_{CE0}$	80	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current	$I_C$	0.7	A(DC)
		1	A(Pulse) *1
		0.5	
Collector power dissipation	2SD1767	2	W *2
	2SD1859		
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55~+150	$^\circ C$

\*1  $P_w=10ms$ ,  $duty=1/2$ 

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

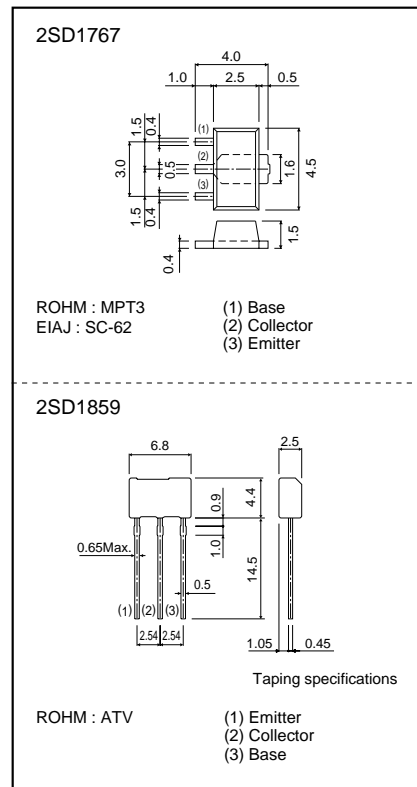
\*3 Printed circuit board 1.7 mm thick, collector plating 1cm<sup>2</sup> or larger.

### ●Packaging specifications and $h_{FE}$

Type	2SD1767	2SD1859
Package	MPT3	ATV
$h_{FE}$	PQR	QR
Marking	DC*	-
Code	T100	TV2
Basic ordering unit (pieces)	1000	2500

\*Denotes  $h_{FE}$ 

### ●External dimensions (Units : mm)



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions	
Collector-base breakdown voltage	$BV_{CB0}$	80	-	-	V	$I_C=50\mu A$	
Collector-emitter breakdown voltage	$BV_{CE0}$	80	-	-	V	$I_C=2mA$	
Emitter-base breakdown voltage	$BV_{EB0}$	5	-	-	V	$I_E=50\mu A$	
Collector cutoff current	$I_{CBO}$	-	-	0.5	$\mu A$	$V_{CB}=50V$	
Emitter cutoff current	$I_{EBO}$	-	-	0.5	$\mu A$	$V_{EB}=4V$	
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	0.2	0.4	V	$I_C/I_B=500mA/50mA$	
DC current transfer ratio	2SD1767	$h_{FE}$	82	-	390	-	$V_{CE}/I_C=3V/0.1A$
	2SD1859		120	-	390	-	
Transition frequency	$f_r$	-	120	-	MHz	$V_{CE}=10V, I_E=-50mA, f=100MHz$	
Output capacitance	$C_{ob}$	-	10	-	pF	$V_{CE}=10V, I_E=0A, f=1MHz$	