

Medium power transistor (80V, 0.7A)

2SD1767 / 2SD1859

●Features

- 1) High breakdown voltage, $BV_{CEO}=80V$, 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 2SD1859	P_C	2	W *2
			1	W *3
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.

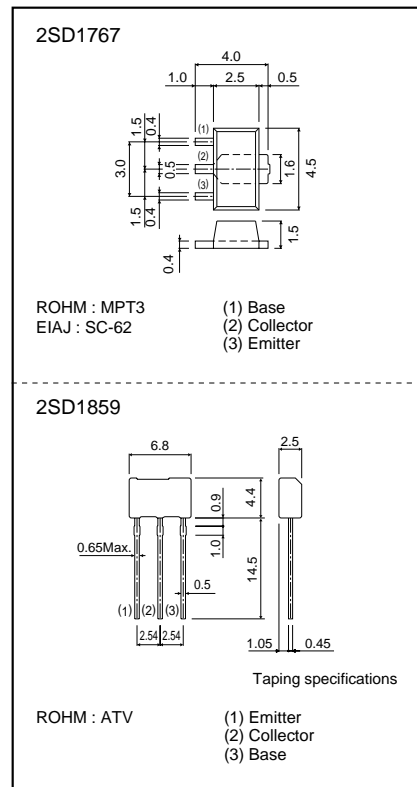
*3 Printed circuit board 1.7 mm thick, collector plating 1cm² or larger.

●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	μA	$V_{CB}=50V$	
Emitter cutoff current	I_{EBO}	-	-	0.5	μA	$V_{EB}=4V$	
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	0.2	0.4	V	$I_C/I_E=500mA/50mA$	
DC current transfer ratio	2SD1767 2SD1859	h_{FE}	82	-	390	-	$V_{CE}/I_C=3V/0.1A$
			120	-	390	-	
Transition frequency	f_T	-	120	-	MHz	$V_{CE}=10V, I_E=-50mA, f=100MHz$	
Output capacitance	C_{ob}	-	10	-	pF	$V_{CE}=10V, I_E=0A, f=1MHz$	