

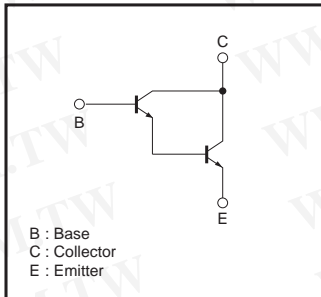
# Medium Power Transistor (60V, 1A)

2SD1834

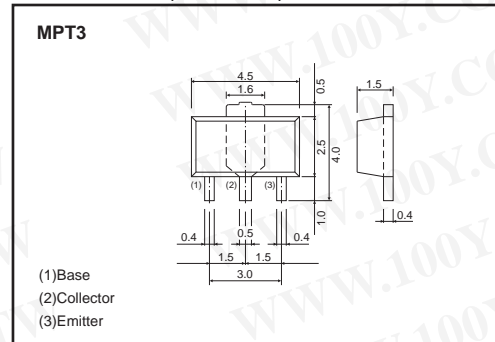
●Features

- 1) Darlington connection for high DC current gain (typically, DC current gain = 15000 at  $V_{CE} = 3V$ ,  $I_C = 0.5A$ )
- 2) High input impedance.

●Inner circuit



●Dimensions (Unit : mm)



勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-34970699  
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●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CES}$	60	V *2
Emitter-base voltage	$V_{EBO}$	7	V
Collector current	$I_C$	1	A(DC)
		2	A(Pulse) *1
Collector power dissipation	$P_C$	0.5	W
		2 *3	
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

\*1 Single pulse  $P_w=100ms$   
 \*2  $R_{\theta E}=0\Omega$   
 \*3 Mounted on a 40x40x10.7mm ceramic substrate

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	60	-	-	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	60	-	-	V	$I_C=100\mu A$ , $R_{\theta E}=0\Omega$
Emitter-base breakdown voltage	$BV_{EBO}$	7	-	-	V	$I_E=50\mu A$
Collector cutoff current	$I_{CBO}$	-	-	1	$\mu A$	$V_{CB}=60V$
Emitter cutoff current	$I_{EBO}$	-	-	1	$\mu A$	$V_{EB}=6V$
DC current transfer ratio	$h_{FE}$	2000	-	-	-	$V_{CE}/I_C=3V/500mA$ *
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	0.9	1.5	V	$I_C/I_B=500mA/500\mu A$
Transition frequency	$f_T$	-	150	-	MHz	$V_{CE}=5V$ , $I_E=-10mA$ , $f=100MHz$
Output capacitance	$C_{ob}$	-	7	-	pF	$V_{CE}=10V$ , $I_E=0A$ , $f=1MHz$

\* Measured using pulse current.

● Packaging specifications and  $h_{FE}$

Type	2SD1834
Package	MPT3
$h_{FE}$	2k~
Marking	DE*
Code	T100
Basic ordering unit (pieces)	1000

\*Denotes  $h_{FE}$

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● Electrical characteristics curves

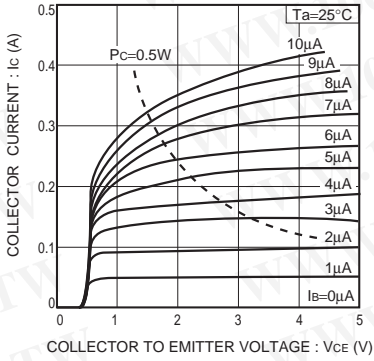


Fig.1 Ground emitter output characteristics

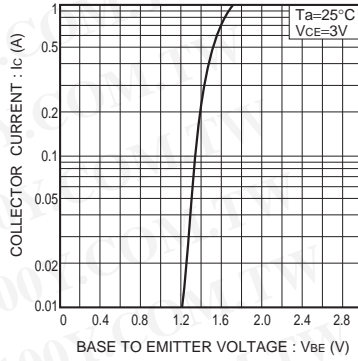


Fig.2 Ground emitter propagation characteristics

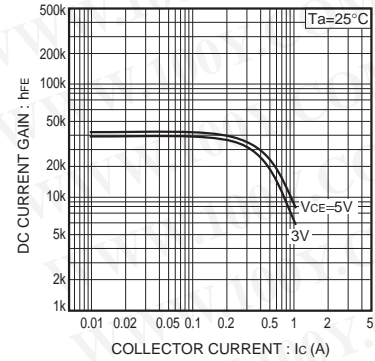


Fig.3 DC current gain vs. collector current

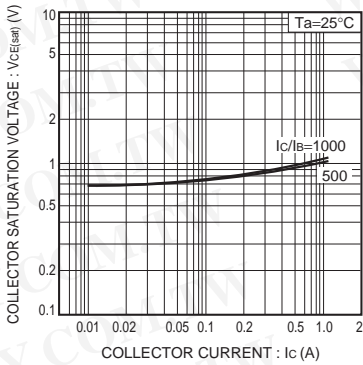


Fig.4 Collector-emitter saturation voltage vs. collector current

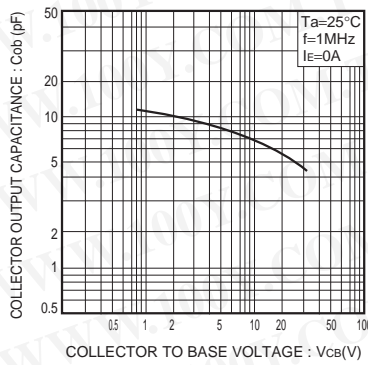


Fig.5 Collector output capacitance vs. collector-base voltage

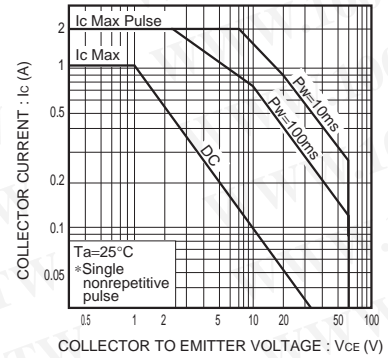


Fig.6 Safe operating area

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