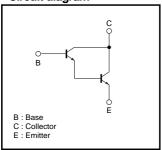
# Medium Power Transistor (60V, 1A) 2SD1834

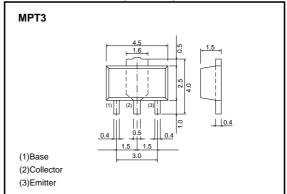
#### Features

- 1) Darlington connection for high DC current gain (typically, DC current gain = 15000 at Vce = 3V, Ic =
- 2) High input impedance.

### Circuit diagram



# ●External dimensions (Unit : mm)



### ● Absolute maximum ratings (Ta=25°C)

Symbol	Limits	Unit
Vсво	60	V
Vces	60	V *2
VEBO	7	V
la.	1	A(DC)
IC IC	2	A(Pulse) *1
D-	0.5	W
PC	2 *3	, vv
Tj	150	°C
Tstg	-55 to +150	°C
	VCBO VCES VEBO IC PC Tj	VCBO         60           VCES         60           VEBO         7           Ic         1           2         0.5           Pc         2 *3           Tj         150

# ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions	
Collector-base breakdown voltage	ВУсво	60	-	-	V	Ic=50μA	
Collector-emitter breakdown voltage	BVceo	60	-	-	V	Ic=100μA , R <sub>BE</sub> =0Ω	
Emitter-base breakdown voltage	ВУево	7	-	-	V	Iε=50μA	
Collector cutoff current	Ісво	-	-	1	μΑ	Vcb=60V	
Emitter cutoff current	Ієво	-	-	1	μА	V <sub>EB</sub> =6V	
DC current transfer ratio	hfE	2000	-	-	-	Vce/lc=3V/500mA	*
Collector-emitter saturation voltage	VcE(sat)	-	0.9	1.5	V	Ic/Iв=500mA/500μA	
Transition frequency	f⊤	-	150	-	MHz	Vc=5V , I==-10mA , f=100MHz	
Output capacitance	Cob	-	7	-	pF	Vce=10V , Ie=0A , f=1MHz	

<sup>\*</sup> Measured using pulse current.

<sup>\*1</sup> Single pulse Pw=100ms \*2 Rb= $0\Omega$  \*3 Mounted on a  $40\times40\times^10.7$ mm ceramic substrate

## ●Packaging specifications and hFE

2SD1834
MPT3
2k~
DE*
T100
1000

\*Denotes hre

### •Electrical characteristics curves

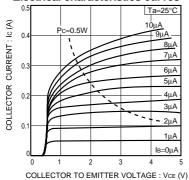


Fig.1 Ground emitter output characteristics

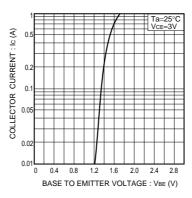


Fig.2 Ground emitter propagation characteristics

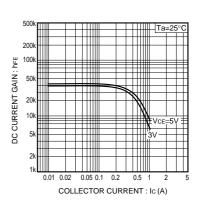


Fig.3 DC current gain vs. collector current

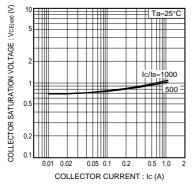


Fig.4 Collector-emitter saturation voltage vs. collector current

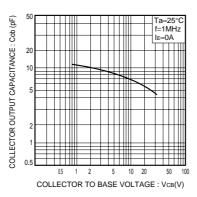


Fig.5 Collector output capacitance vs. collector-base voltage

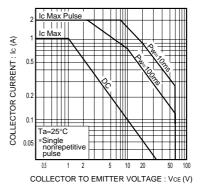


Fig.6 Safe operating area

Rev.A

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