

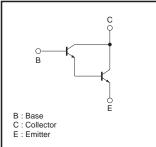
Medium Power Transistor (60V, 1A)

2SD1834

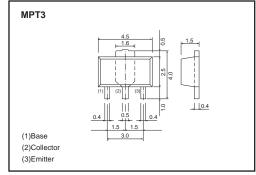
Features

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

Inner circuit



•Dimensions (Unit : mm)



•Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	Vсво	60	V
Collector-emitter voltage	VCES	60	V *2
Emitter-base voltage	Vebo	7	V
Collector current	lc	1	A(DC)
Collector current		2	A(Pulse) *1
Collector power dissipation	Pc	0.5	W
Collector power dissipation	PC	2 *3	vv
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C
Storage temperature	Tstg	-55 to +150	°C

*1 Single pulse Pw=100ms *2 R_{BE=0\Omega} *3 Mounted on a 40×40×10.7mm ceramic substrate

•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 , Ree=0Ω	
Emitter-base breakdown voltage	ВVево	7	-	-	V	Ιε=50μΑ	
Collector cutoff current	Ісво	-	-	1	μΑ	Vcb=60V	
Emitter cutoff current	Іево	-	-	1	μΑ	VEB=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	fт	-	150	-	MHz	Vce=5V , Ie= -10mA , f=100MHz	
Output capacitance	Cob	-	7	-	pF	Vce=10V, Ie=0A, f=1MHz	

* Measured using pulse current.

Ta=2

• Packaging specifications and h_{FE}

Туре	2SD1834
Package	MPT3
hfe	2k~
Marking	DE*
Code	T100
Basic ordering unit (pieces)	1000

*Denotes hFE

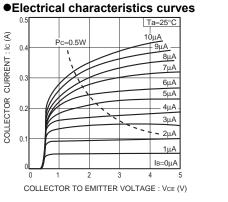


Fig.1 Ground emitter output characteristics

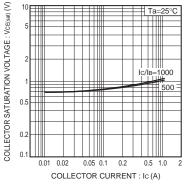
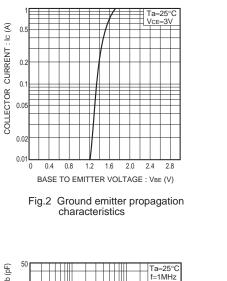


Fig.4 Collector-emitter saturation voltage vs. collector current



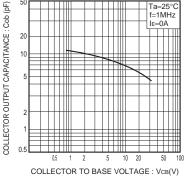
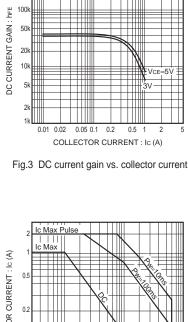


Fig.5 Collector output capacitance vs. collector-base voltage



500

200

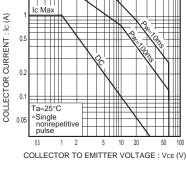


Fig.6 Safe operating area

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