

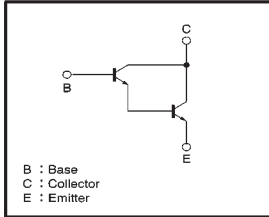
# Medium Power Transistor (60V, 1A)

## 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.

### ●Circuit diagram



### ●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
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55~+150	°C

\*1 Single pulse  $P_w=100ms$   
\*2  $R_{\theta E}=0\Omega$

### ●Packaging specifications and hFE

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

\* Denotes hFE

### ●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	$\mu A$	$V_{CE}=60V$
Emitter cutoff current	$I_{EBO}$	—	—	1	$\mu A$	$V_{EB}=6V$
DC current transfer ratio	hFE	2000	—	—	—	$V_{CE}/I_C=3V/500mA$ *
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.9	1.5	V	$I_C/I_E=500mA/500\mu A$
Output capacitance	$C_{ob}$	—	7	—	pF	$V_{CE}=10V$ , $I_E=0A$ , $f=1MHz$

\* Measured using pulse current.

(94S-340-D64)

# Muting Transistor (15V, 1A)

## 2SD1468S / 2SD1865

### ●Features

- 1) Low saturation voltage, typically  $V_{CE(sat)}=0.006V$  at  $I_C/I_E=1mA/0.1mA$ .
- 2) Ideal for low voltage, high current drives.
- 3) High DC current gain and high current.

### ●Packaging specifications and hFE

Type	2SD1468S	2SD1865
Package	SPT	ATV
hFE	QRS	QR
Code	TP	TV2
Basic ordering unit (pieces)	5000	2500

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

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	30	V
Collector-emitter voltage	$V_{CEO}$	15	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	1	A
Collector power dissipation	2SD1468S	0.3	W
	2SD1865	0.6	
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55~+150	°C

### ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	30	—	—	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	15	—	—	V	$I_C=1mA$
Emitter-base breakdown voltage	$BV_{EBO}$	5	—	—	V	$I_E=50\mu A$
Collector cutoff current	$I_{CBO}$	—	—	0.5	$\mu A$	$V_{CE}=20V$
Emitter cutoff current	$I_{EBO}$	—	—	0.5	$\mu A$	$V_{EB}=4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	0.08	0.4	V	$I_C/I_E=0.5A/50mA$
DC current transfer ratio	2SD1468S	120	—	560	—	$V_{CE}/I_C=3V/0.1A$
	2SD1865	120	—	390	—	
Transition frequency	$f_T$	50	150	—	MHz	$V_{CE}=5V$ , $I_E=-50mA$ , $f=100MHz$
Output capacitance	$C_{ob}$	—	15	30	pF	$V_{CE}=10V$ , $I_E=0A$ , $f=1MHz$

(94L-767-D65)