



# 2SD1853

## Driver Applications

### Applications

- Motor drivers, hammer drivers, relay drivers.

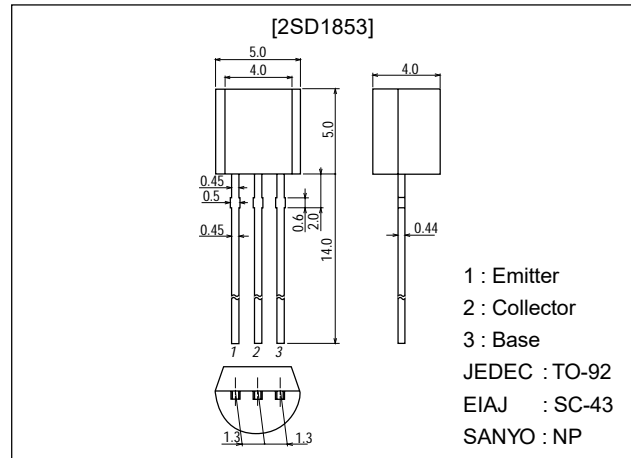
### Features

- High DC current gain.
- Low saturation voltage.

### Package Dimensions

unit:mm

2003B



### Specifications

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		80	V
Collector-to-Emitter Voltage	$V_{CEO}$		60	V
Emitter-to-Base Voltage	$V_{EBO}$		6	V
Collector Current	$I_C$		1.5	A
Collector Current (Pulse)	$I_{CP}$		3	A
Collector Dissipation	$P_C$		0.7	W
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

#### Electrical Characteristics at Ta = 25°C

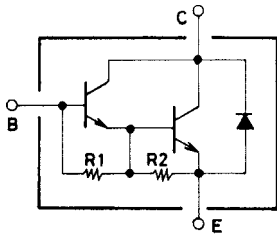
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			10	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			2.5	mA
DC Current Gain	$h_{FE1}$	$V_{CE}=2V, I_C=0.5A$	1000			
	$h_{FE2}$	$V_{CE}=2V, I_C=1A$	2000			
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=2mA$			1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A, I_B=2mA$			2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=25mA, R_{BE}=\infty$	60			V

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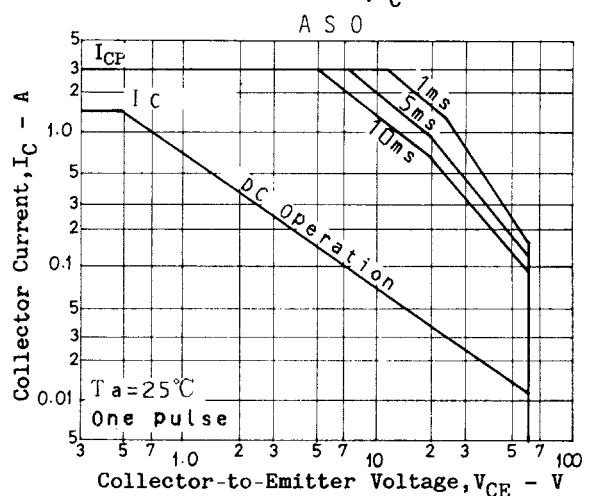
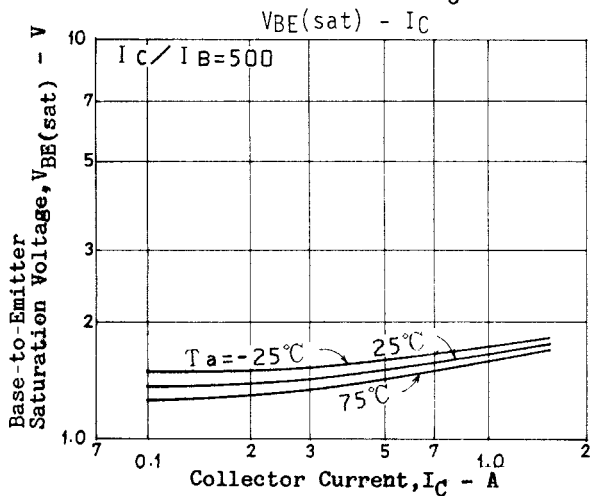
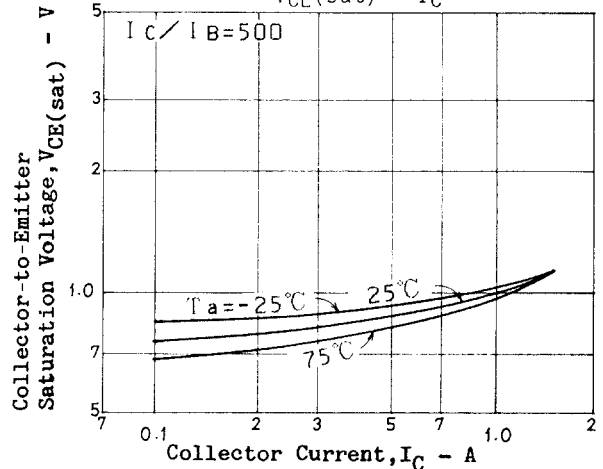
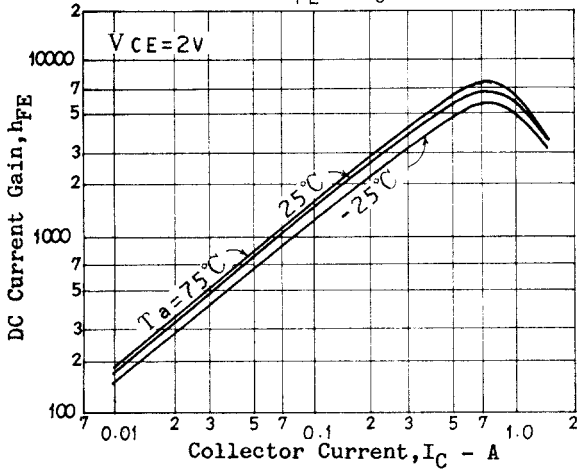
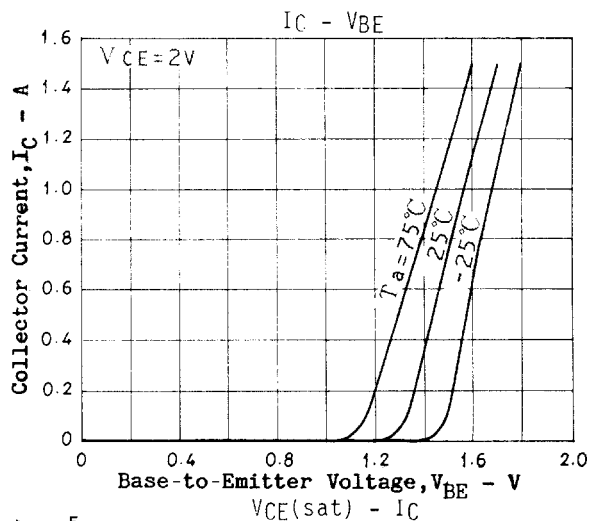
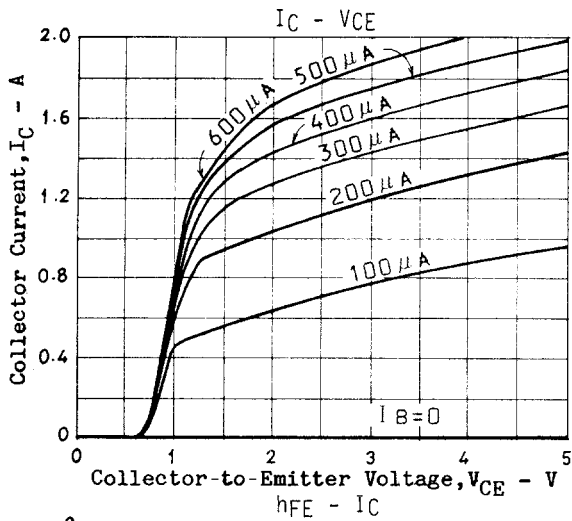
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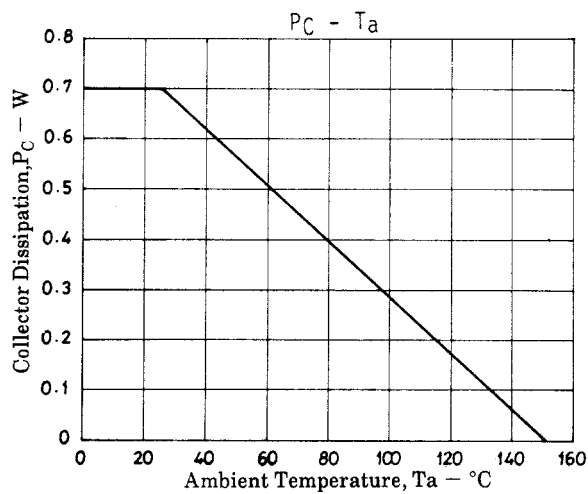
## Electrical Connection



$R1 \approx 5k\Omega$   
 $R2 \approx 500\Omega$



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