

**2SD1800****Driver Applications****Applications**

- Relay drivers, hammer drivers, lamp drivers, motor drivers.

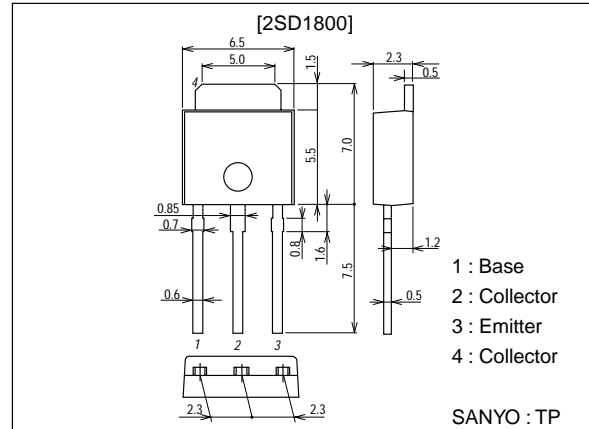
**Features**

- High DC current gain ( $h_{FE} \geq 4000$ ).
- Large current capacity.
- Small and slim package making it easy to make 2SD1800-applied sets smaller.

**Package Dimensions**

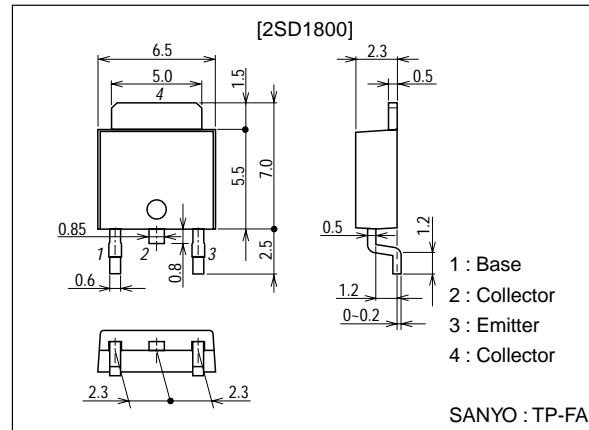
unit:mm

2045B



unit:mm

2044B



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21599TH (KT)/8309MO/D156TA, TS No.2111-1/4

## Specifications

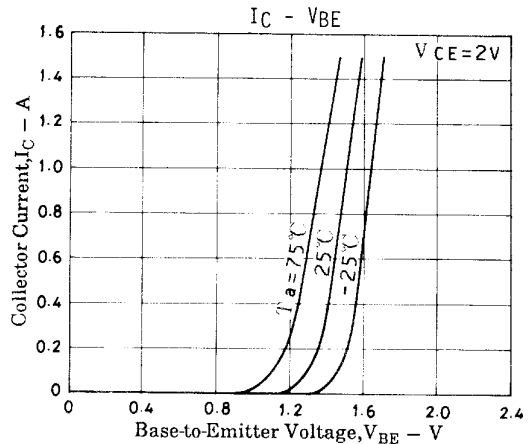
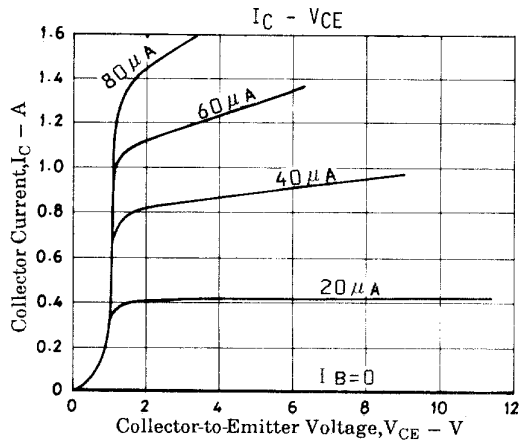
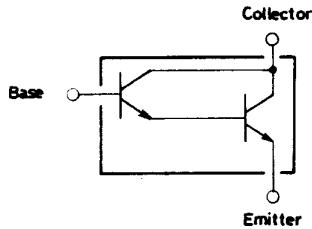
### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CBO}$		80	V
Collector-to-Emitter Voltage	$V_{CEO}$		50	V
Emitter-to-Base Voltage	$V_{EBO}$		10	V
Collector Current	$I_C$		1.5	A
Collector Current (Pulse)	$I_{CP}$		3	A
Collector Dissipation	$P_C$		1	W
		$T_C=25^\circ\text{C}$	10	W
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

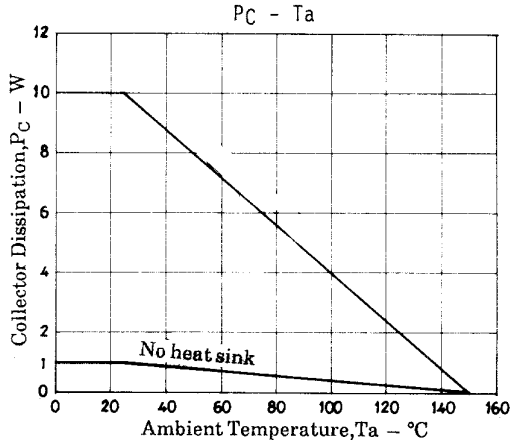
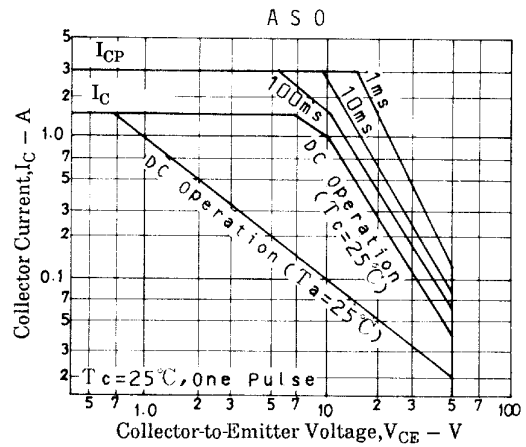
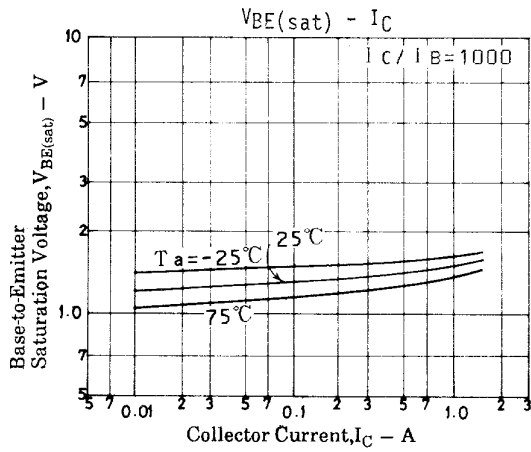
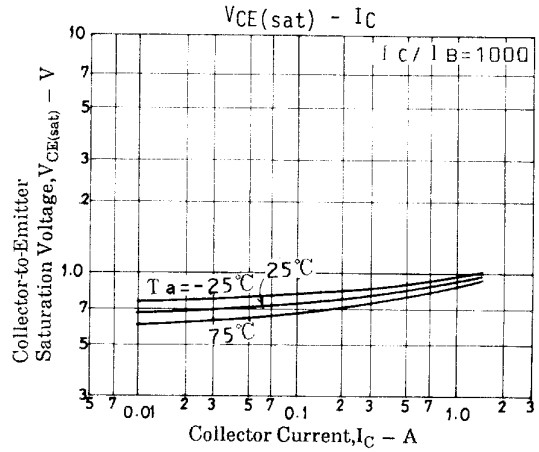
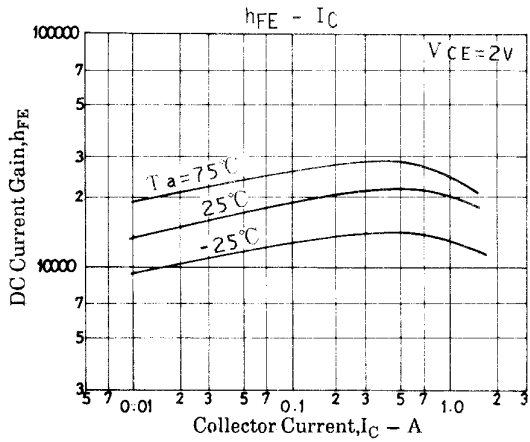
### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=40\text{V}, I_E=0$			100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=8\text{V}, I_C=0$			100	nA
DC Current Gain	$h_{FE1}$	$V_{CE}=2\text{V}, I_C=500\text{mA}$	4000			
	$h_{FE2}$	$V_{CE}=2\text{V}, I_C=10\text{mA}$	3000			
Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}$		120		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=0.5\text{mA}$		0.9	1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=0.5\text{mA}$		1.5	2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	80			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	50			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	10			V

### Electrical Connection



# 2SD1800



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