

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

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

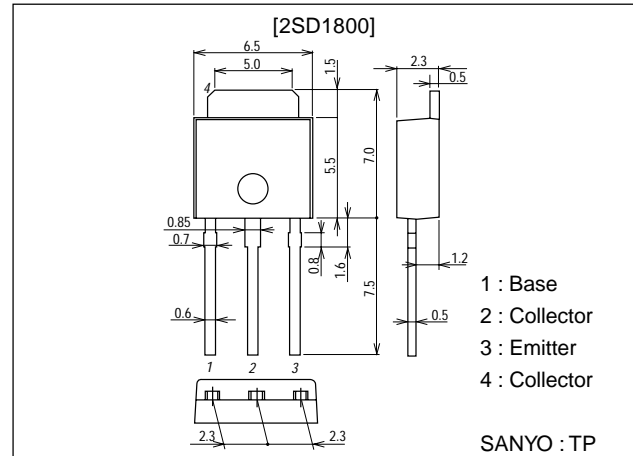
Features

- 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

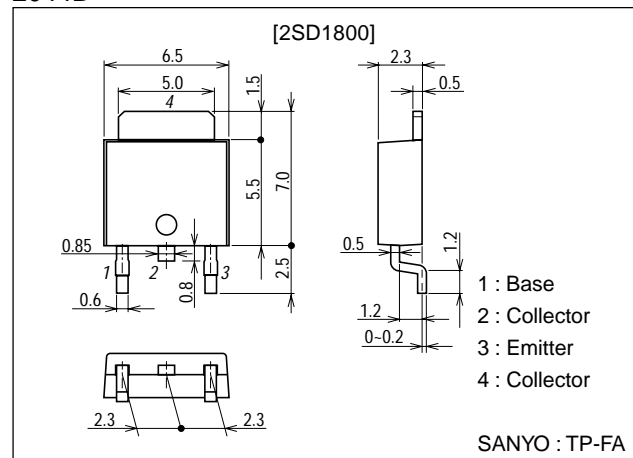
unit:mm

2045B



unit:mm

2044B



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2SD1800

Specifications

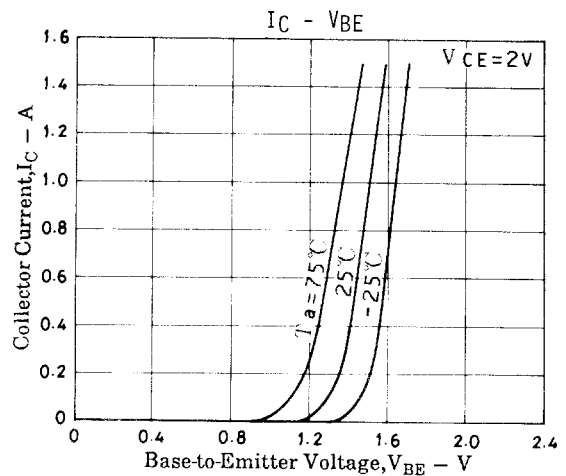
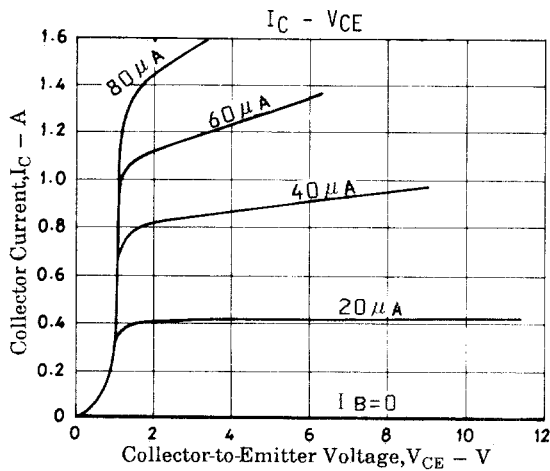
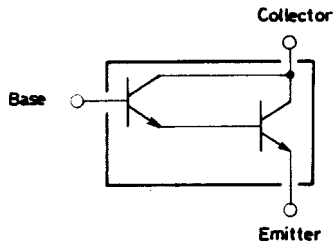
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		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	$^\circ\text{C}$

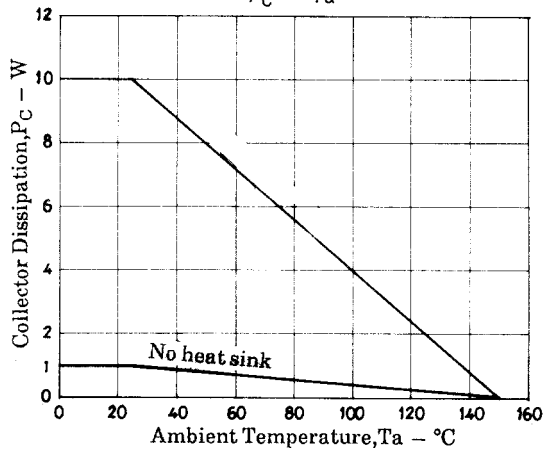
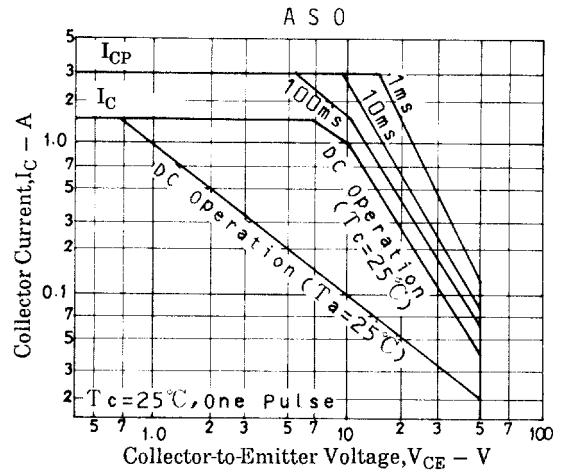
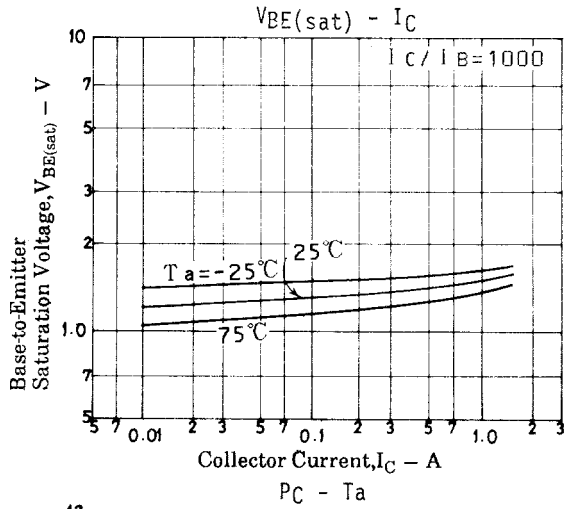
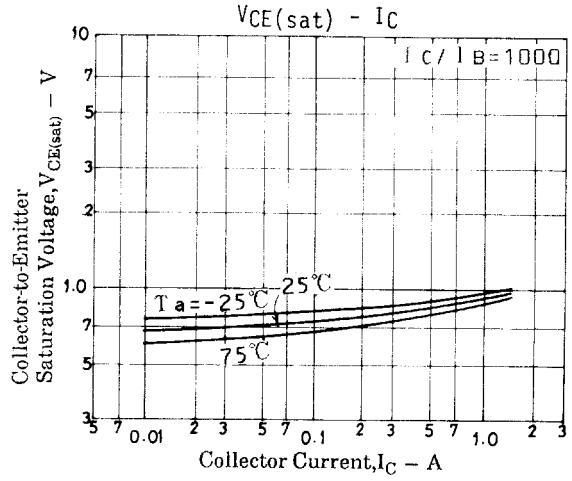
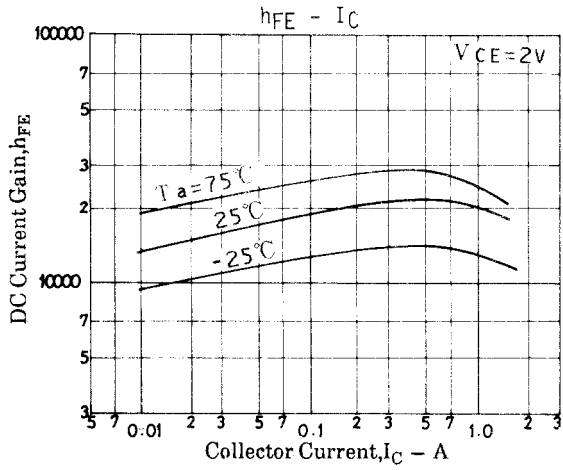
Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CB0}	$V_{CB}=40\text{V}, I_E=0$			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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