

SANYO	No.2111B	2SD1800
		NPN Epitaxial Planar Silicon Transistor
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

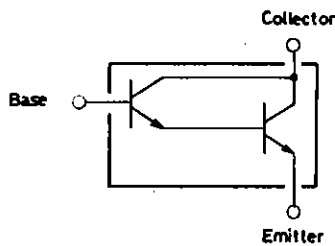
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

			unit
Collector to Base Voltage	V_{CB0}	80	V
Collector to Emitter Voltage	V_{CE0}	50	V
Emitter to Base Voltage	V_{EB0}	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
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	- 55 to + 150	$^\circ\text{C}$

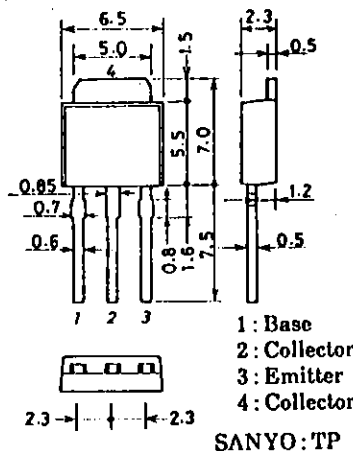
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
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	$h_{FE}(1)$	$V_{CE} = 2\text{V}, I_C = 500\text{mA}$	4000			
	$h_{FE}(2)$	$V_{CE} = 2\text{V}, I_C = 10\text{mA}$	3000			
Gain-Bandwidth Product	f_T	$V_{CE} = 10\text{V}, I_C = 50\text{mA}$		120		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 0.5\text{mA}$	0.9	1.5		V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}, I_B = 0.5\text{mA}$	1.5	2.0		V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}, I_E = 0$	80			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	50			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}, I_C = 0$	10			V

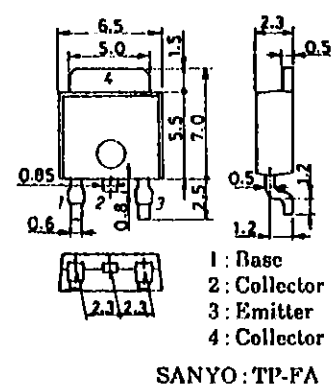
Electrical Connection



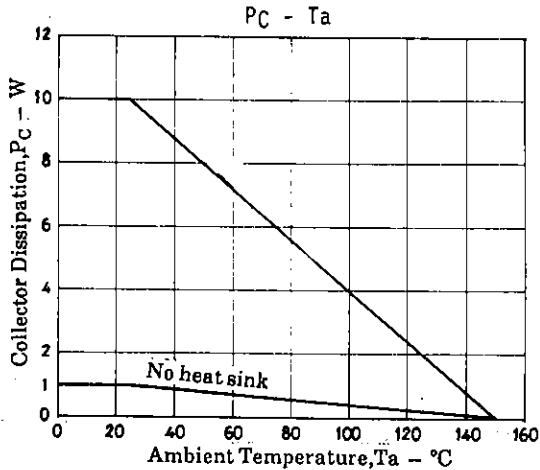
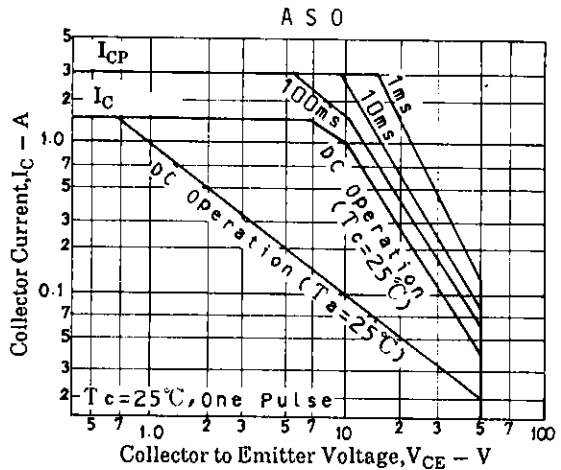
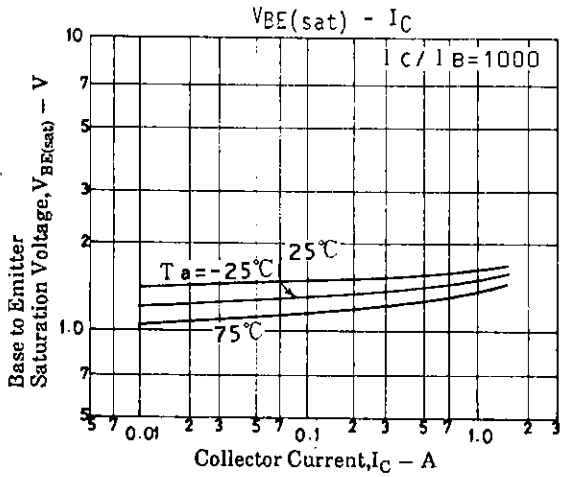
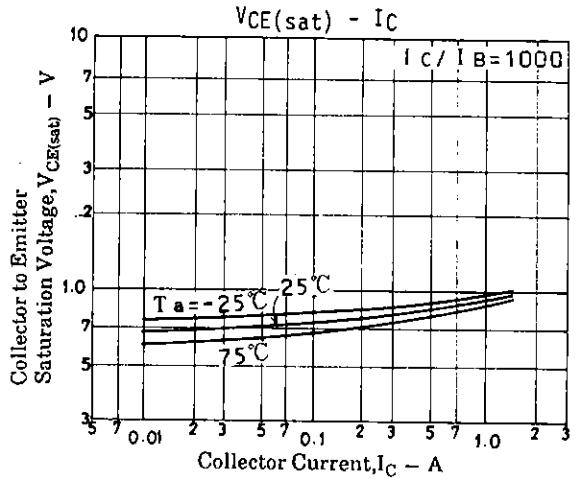
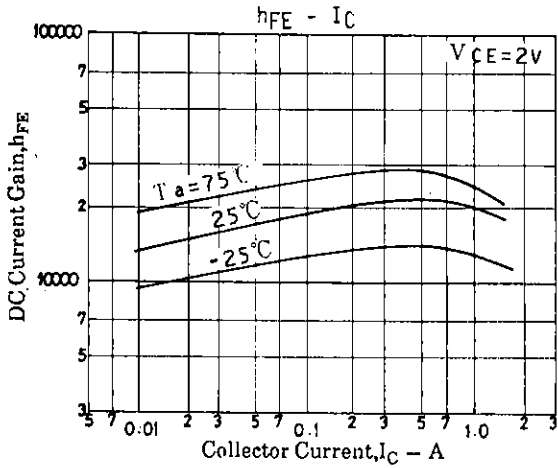
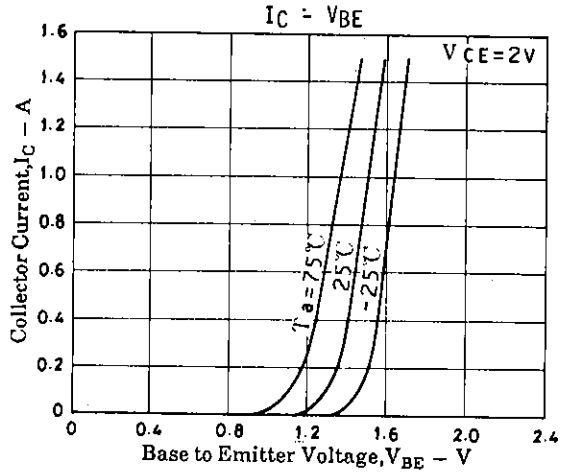
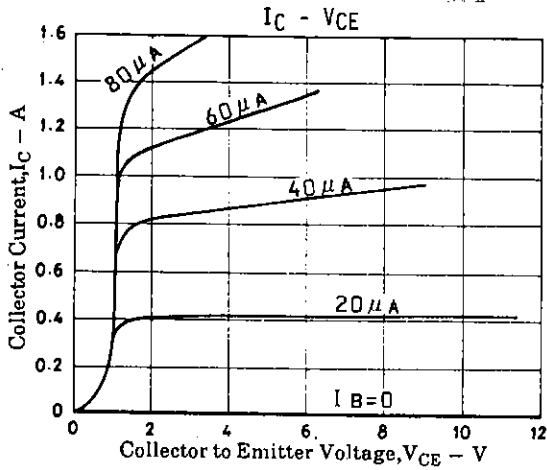
Package Dimensions 2045B (unit : mm)



Package Dimensions 2044B (unit : mm)



2SD1800



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