

2SC5779

Silicon NPN epitaxial planar type

Power supply for Audio & Visual equipments
such as TVs and VCRs

Industrial equipments such as DC-DC converters

■ Features

- High-speed switching (t_{stg} : storage time/ t_f : fall time is short)
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- Superior forward current transfer ratio h_{FE} linearity
- TO-220D built-in: Excellent package with withstand voltage 5 kV guaranteed

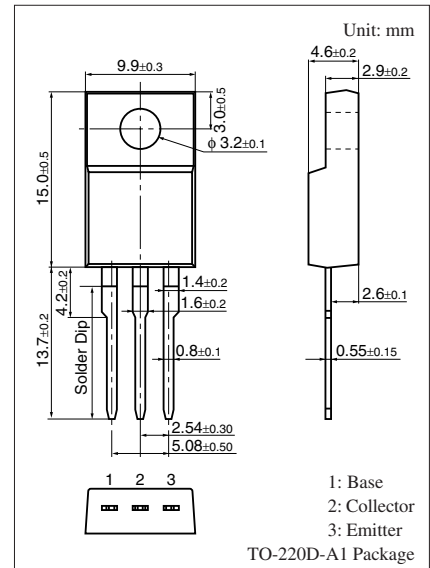
■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	50	V
Collector-emitter voltage (Base open)	V_{CEO}	50	V
Emitter-base voltage (Collector open)	V_{EBO}	6	V
Collector current	I_C	10	A
Peak collector current	I_{CP}	20	A
Collector power dissipation	P_C	25	W
	$T_a = 25^\circ\text{C}$	2.0	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

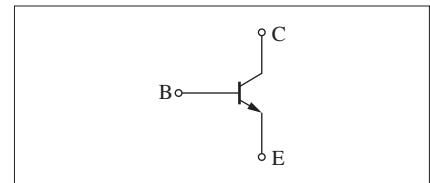
■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

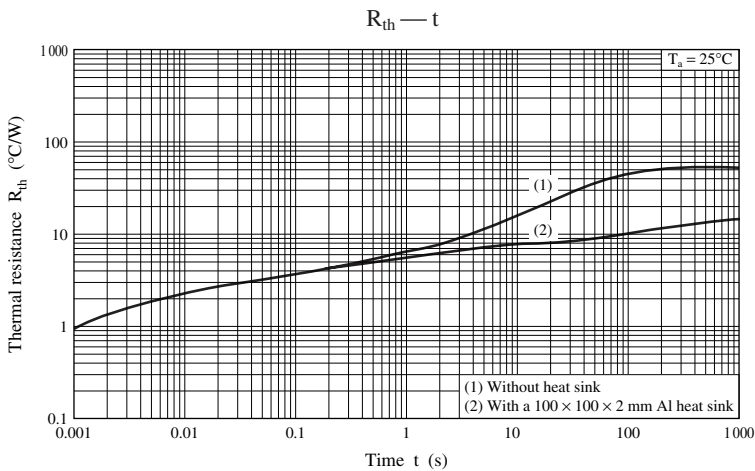
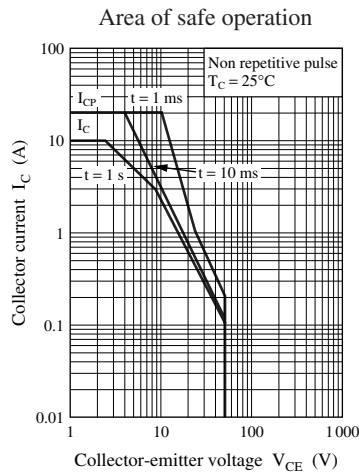
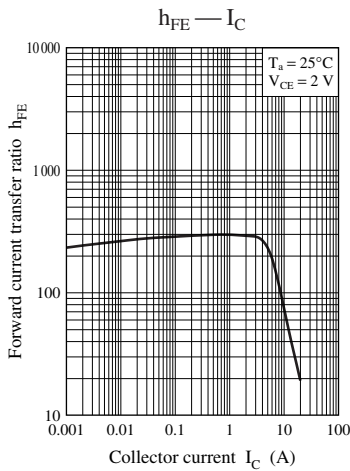
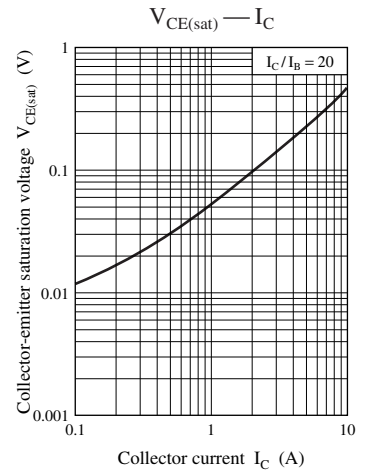
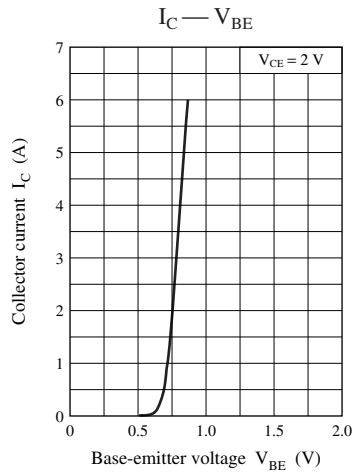
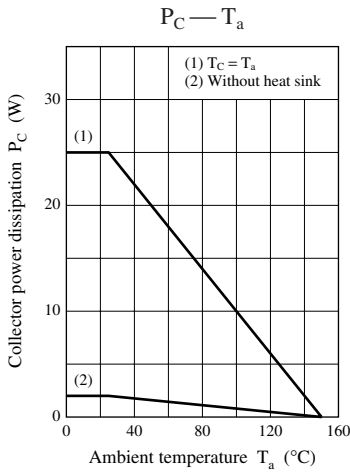
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 10 \text{ mA}, I_B = 0$	50			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 50 \text{ V}, I_E = 0$			100	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 50 \text{ V}, I_B = 0$			100	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 6 \text{ V}, I_C = 0$			1	mA
Forward current transfer ratio	h_{FE1}	$V_{CE} = 2 \text{ V}, I_C = 1 \text{ A}$	200			—
	h_{FE2}	$V_{CE} = 2 \text{ V}, I_C = 7 \text{ A}$	100			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5 \text{ A}, I_B = 250 \text{ mA}$			0.5	V
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ A}, f = 10 \text{ MHz}$		150		MHz
Turn-on time	t_{on}	$I_C = 4 \text{ A}, \text{Resistance loaded}$			0.5	μs
Storage time	t_{stg}	$I_{B1} = 0.4 \text{ A}, I_{B2} = -0.4 \text{ A}$			1.0	μs
Fall time	t_f	$V_{CC} = 40 \text{ V}$			0.15	μs

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



Internal Connection





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