2SC5779

Silicon NPN epitaxial planar type

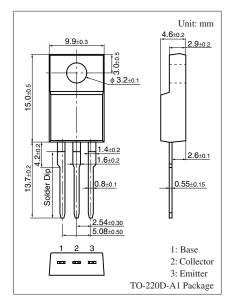
Power supply for Audio & Visual equipments such as TVs and VCRs Industrial equipments such as DC-DC converters

Features

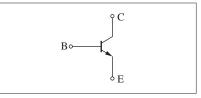
- High-speed switching (t_{stg}: storage time/t_f: fall time is short)
- \bullet Low collector-emitter saturation voltage $V_{CE(\text{sat})}$
- \bullet Superior forward current transfer ratio $h_{F\!E}$ linearity
- TO-220D built-in: Excellent package with withstand voltage 5 kV guaranteed

.								
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	А					
Peak collector current	I _{CP}	20	А					
Collector power dissipation	P _C	25	W					
$T_a = 25^{\circ}C$		2.0						
Junction temperature	Tj	150	°C					
Storage temperature	T _{stg}	-55 to +150	°C					

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



Internal Connection

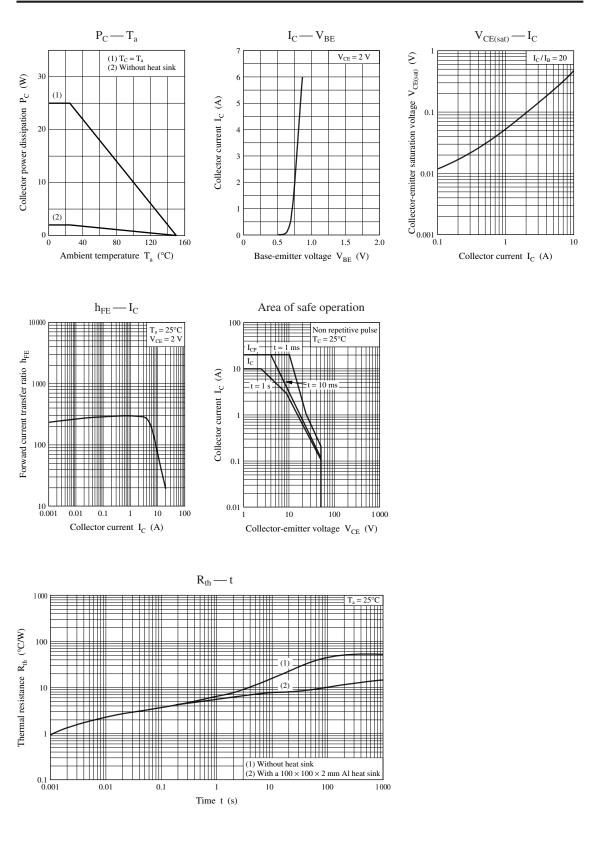


Electrical Characteristics $T_C = 25^{\circ}C \pm 3^{\circ}C$

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = 10 \text{ mA}, I_{\rm B} = 0$	50			V
Collector-base cutoff current (Emitter open)	I _{CBO}	$V_{CB} = 50 \text{ V}, I_E = 0$			100	μΑ
Collector-emitter cutoff current (Base open)	I _{CEO}	$V_{CE} = 50 \text{ V}, I_B = 0$			100	μΑ
Emitter-base cutoff current (Collector open)	I _{EBO}	$V_{EB} = 6 V, I_C = 0$			1	mA
Forward current transfer ratio	h _{FE1}	$V_{CE} = 2 V, I_C = 1 A$	200			
	h _{FE2}	$V_{CE} = 2 V, I_C = 7 A$	100			
Collector-emitter saturation voltage	V _{CE(sat)}	$I_{\rm C} = 5 \text{ A}, I_{\rm B} = 250 \text{ mA}$			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}	$I_C = 4$ A, 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	$V_{CC} = 40 V$			0.15	μs

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

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