

2SC5505

Silicon NPN epitaxial planar type

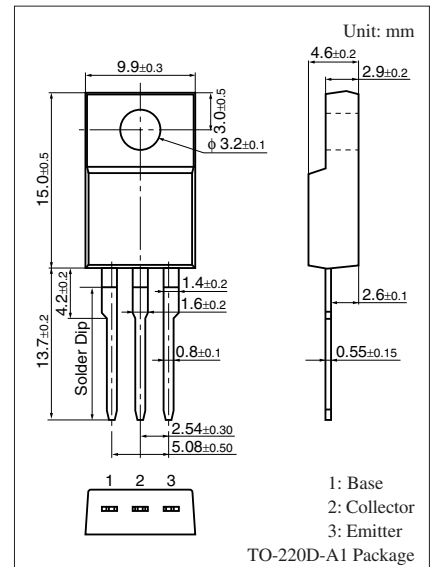
For power amplification

■ Features

- High-speed switching
- 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}	60	V
Collector-emitter voltage (Base open)	V_{CEO}	60	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	8	A
Peak collector current	I_{CP}	16	A
Collector power dissipation	P_C	20	W
	$T_a = 25^\circ\text{C}$	2.0	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

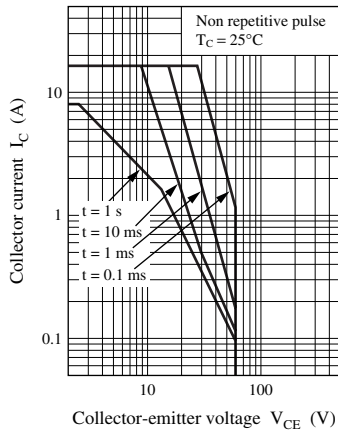


■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

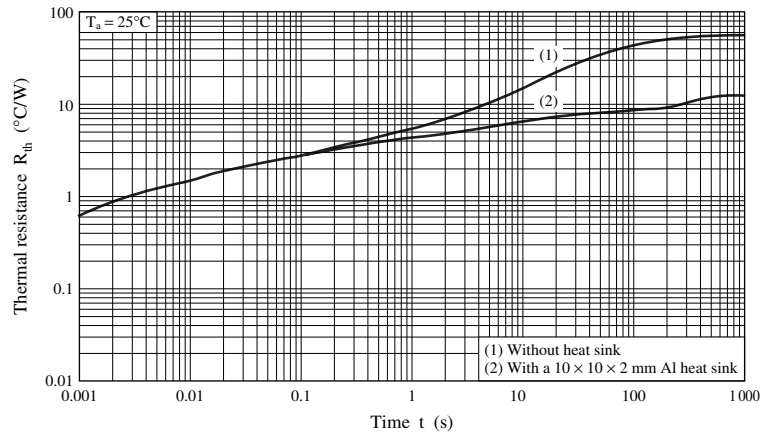
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 10 \text{ mA}, I_B = 0$	60			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 60 \text{ V}, I_E = 0$			100	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 60 \text{ V}, I_B = 0$			100	μA
Forward current transfer ratio	h_{FE1}	$V_{CE} = 2 \text{ V}, I_C = 1 \text{ A}$	80		280	—
	h_{FE2}	$V_{CE} = 2 \text{ V}, I_C = 5 \text{ A}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5 \text{ A}, I_B = 0.25 \text{ A}$			1.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 5 \text{ A}, I_B = 0.25 \text{ A}$			1.7	V
Turn-on time	t_{on}	$I_C = 4 \text{ A}$		0.2	0.5	μs
Storage time	t_{stg}	$I_{B1} = 400 \text{ mA}, I_{B2} = -400 \text{ mA}$		0.5	1.0	μs
Fall time	t_f	$V_{CC} = 50 \text{ V}$		0.10	0.15	μs

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

Area of safe operation



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