

2SD2504

Silicon NPN epitaxial planer type

For low-frequency power amplification

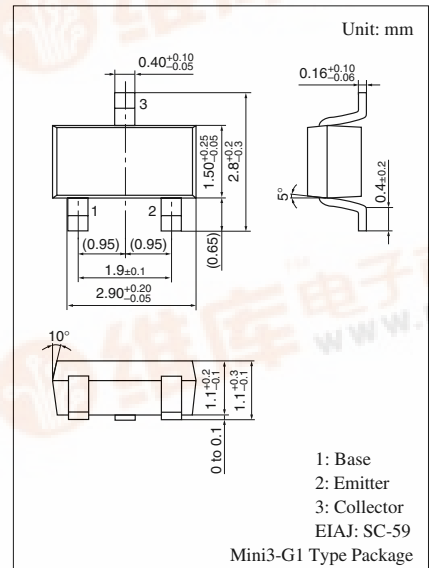
■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Mini3-G1 type package, allowing downsizing and thinning of the equipment and automatic insertion through the tape packing

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	15	V
Collector to emitter voltage	V_{CEO}	10	V
Emitter to base voltage	V_{EBO}	10	V
Peak collector current	I_{CP}	9	A
Collector current	I_C	5	A
Collector power dissipation *	P_C	750	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note) *: $t = 380 \mu\text{sec}$



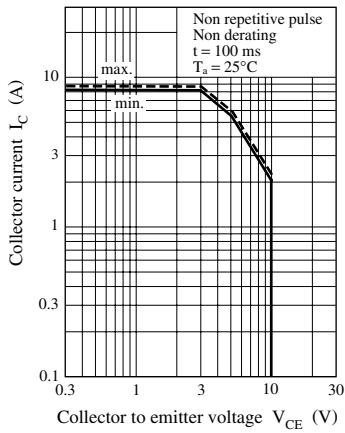
Marking Symbol: 3C

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

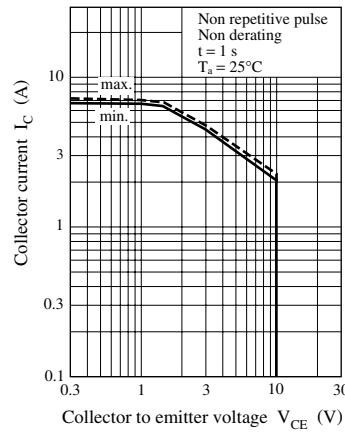
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 10 \text{ V}, I_E = 0$			0.1	μA
	I_{CEO}	$V_{CE} = 5 \text{ V}, I_B = 0$			1.0	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$			0.1	μA
Collector to emitter voltage	V_{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	10			V
Emitter to base voltage	V_{EBO}	$I_E = 10 \mu\text{A}, I_C = 0$	10			V
Forward current transfer ratio *	h_{FE1}	$V_{CE} = 2 \text{ V}, I_C = 0.5 \text{ A}$	300		800	
	h_{FE2}	$V_{CE} = 2 \text{ V}, I_C = 2 \text{ A}$	195			
Collector to emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 3 \text{ A}, I_B = 0.1 \text{ A}$		0.28	0.5	V
Collector output capacitance	C_{ob}	$V_{CB} = 20 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		45	65	pF
Transition frequency	f_T	$V_{CB} = 6 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		170		MHz

Note) *: Pulse measurement

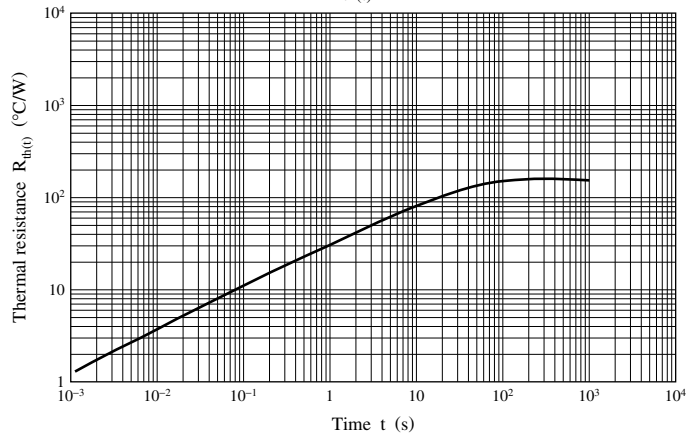
Area of safe operation (ASO)



Area of safe operation (ASO)



$R_{th(t)} - t$



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