

# 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 $T_a = 25^\circ\text{C}$

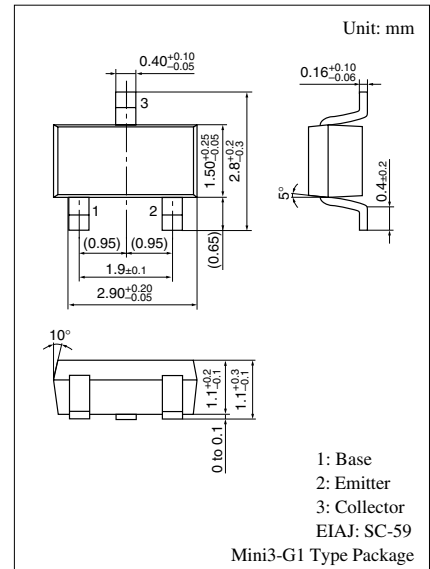
Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	15	V
Collector to emitter voltage	$V_{CEO}$	10	V
Emitter to base voltage	$V_{EBO}$	10	V
Peak collector current	$I_{CP}$	9	A
Collector current	$I_C$	5	A
Collector power dissipation *	$P_C$	750	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$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

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

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

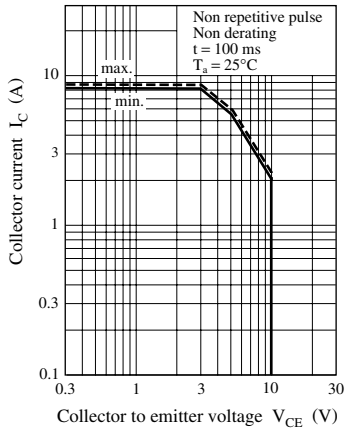
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 10 \text{ V}, I_E = 0$			0.1	$\mu\text{A}$
	$I_{CEO}$	$V_{CE} = 5 \text{ V}, I_B = 0$			1.0	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5 \text{ V}, I_C = 0$			0.1	$\mu\text{A}$
Collector to emitter 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

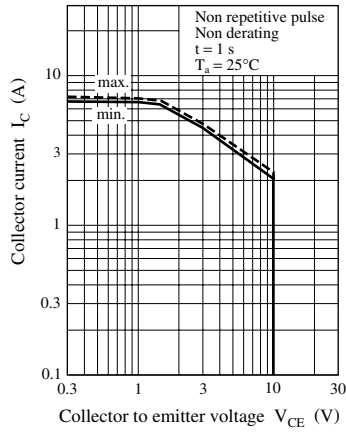


Marking Symbol: 3C

Area of safe operation (ASO)



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$R_{th(t)} - t$

