

# 2SC4986

## Silicon NPN triple diffusion planar type

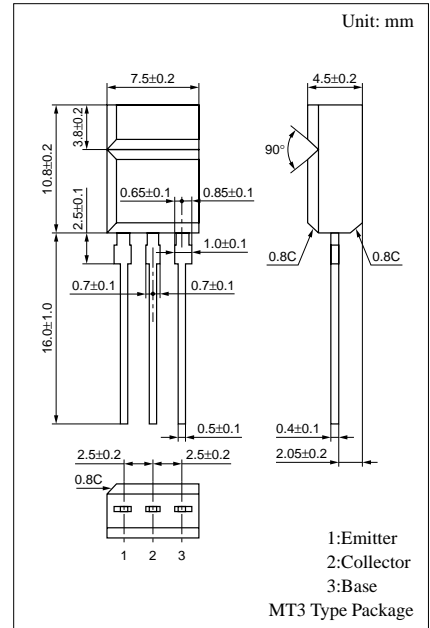
For high breakdown voltage high-speed switching

### Features

- High collector to base voltage  $V_{CBO}$
- High collector to emitter  $V_{CEO}$
- Allowing automatic insertion with radial taping

### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ )

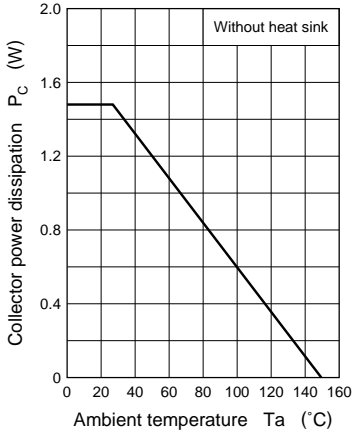
Parameter	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	500	V
Collector to emitter voltage	$V_{CEO}$	400	V
Emitter to base voltage	$V_{EBO}$	7	V
Peak collector current	$I_{CP}$	4	A
Collector current	$I_C$	2	A
Collector power dissipation	$P_C$	1.5	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



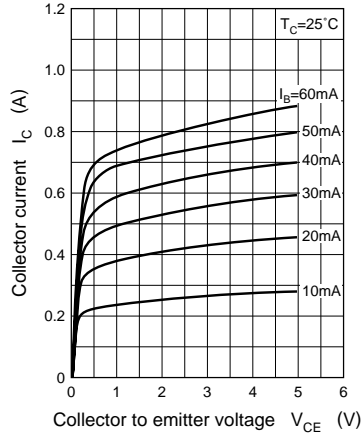
### Electrical Characteristics ( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 500\text{V}, I_E = 0$			100	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$			100	$\mu\text{A}$
Forward current transfer ratio	$h_{FE1}$	$V_{CE} = 5\text{V}, I_C = 100\text{mA}$	15			
	$h_{FE2}$	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	8			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 0.2\text{A}$			1	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1\text{A}, I_B = 0.2\text{A}$			1.5	V
Transition frequency	$f_T$	$V_{CB} = 10\text{V}, I_E = -200\text{mA}, f = 200\text{MHz}$		120		MHz
Turn-on time	$t_{on}$	$I_C = 1\text{A}, I_{B1} = 0.2\text{A}, I_{B2} = -0.2\text{A}, V_{CC} = 150\text{V}$			1	$\mu\text{s}$
Storage time	$t_{stg}$				3	$\mu\text{s}$
Fall time	$t_f$				1	$\mu\text{s}$

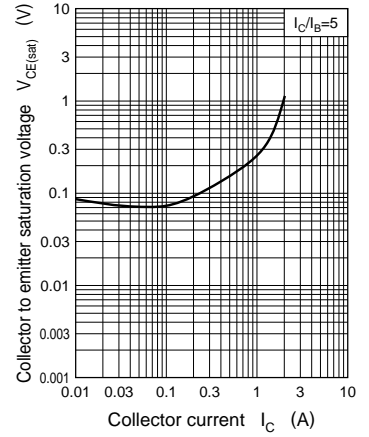
$P_C - T_a$



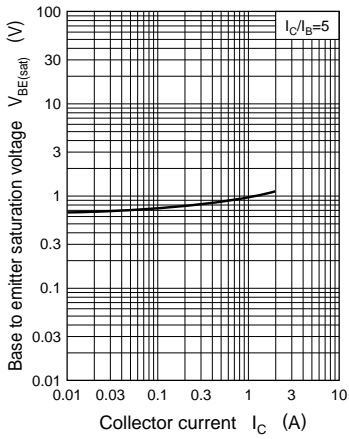
$I_C - V_{CE}$



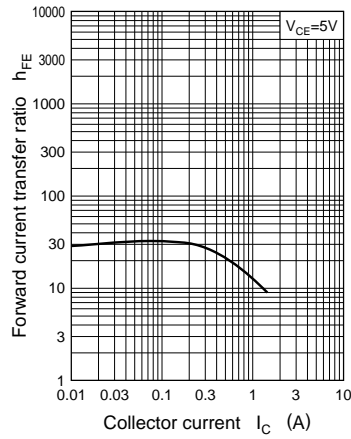
$V_{CE(sat)} - I_C$



$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



$C_{ob} - V_{CB}$

