

# 2SC4212

## Silicon NPN triple diffusion planar type

For color TV horizontal deflection driver

### ■ Features

- High collector to emitter voltage  $V_{CEO}$
- TO-126B package which requires no insulation plate for installation to the heat sink

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

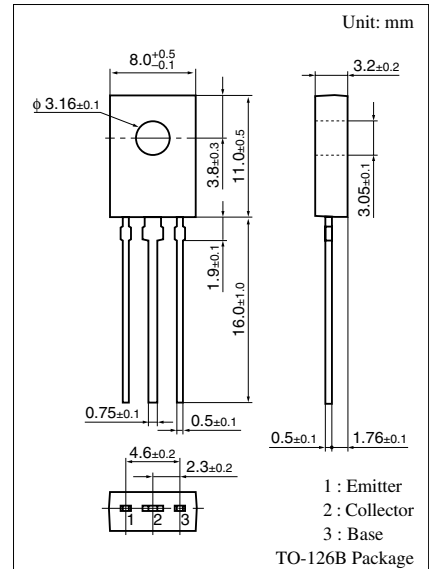
Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	350	V
Collector to emitter voltage	$V_{CEO}$	300	V
Emitter to base voltage	$V_{EBO}$	7.5	V
Peak collector current	$I_{CP}$	400	mA
Collector current	$I_C$	200	mA
Collector power dissipation	$P_C$	1.2 *1 5 *2	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Note) \*1: Without heat sink

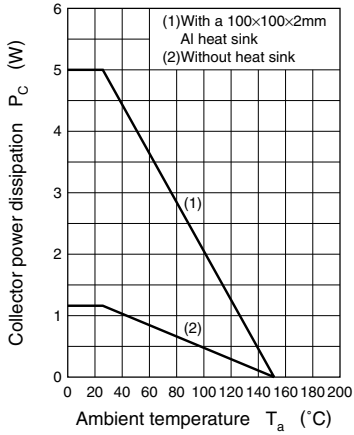
\*2: With a  $100 \times 100 \times 2$  mm A1 heat sink

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

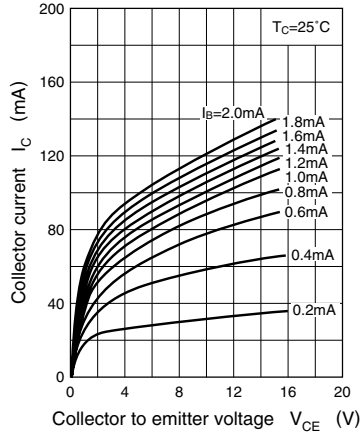
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 200 \text{ V}, I_E = 0$			2	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5 \text{ V}, I_C = 0$			2	$\mu\text{A}$
Collector to base voltage	$V_{CBO}$	$I_C = 100 \mu\text{A}, I_E = 0$	350			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 5 \text{ mA}, I_B = 0$	300			V
Emitter to base voltage	$V_{EBO}$	$I_E = 100 \mu\text{A}, I_C = 0$	7.5			V
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$	40		250	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50 \text{ mA}, I_B = 5 \text{ mA}$			1	V
Transition frequency	$f_T$	$V_{CB} = 30 \text{ V}, I_E = -10 \text{ mA}, f = 200 \text{ MHz}$	50			MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 50 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			4.5	pF



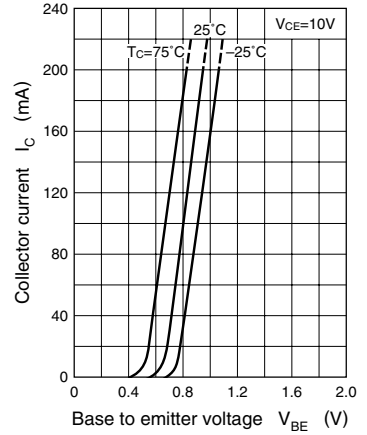
$P_C - T_a$



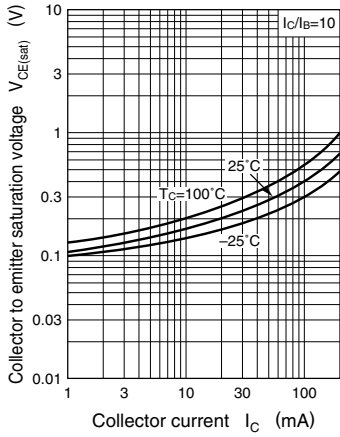
$I_C - V_{CE}$



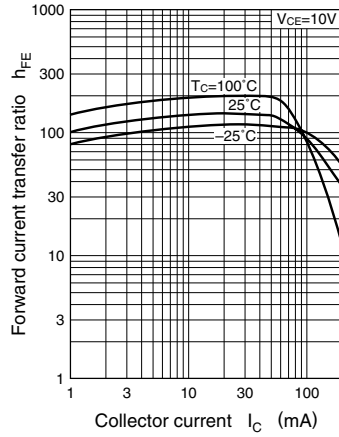
$I_C - V_{BE}$



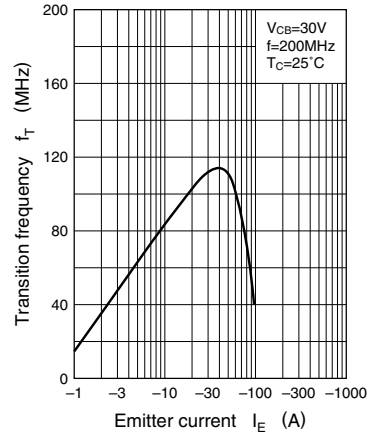
$V_{CE(sat)} - I_C$



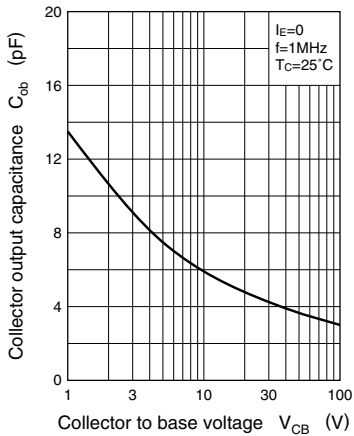
$h_{FE} - I_C$



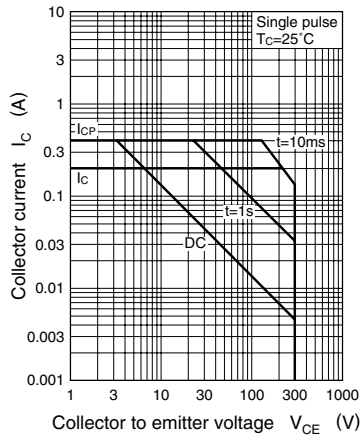
$f_T - I_E$



$C_{ob} - V_{CB}$



Area of safe operation (ASO)



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