

2SC3942

Silicon NPN triple diffusion planar type

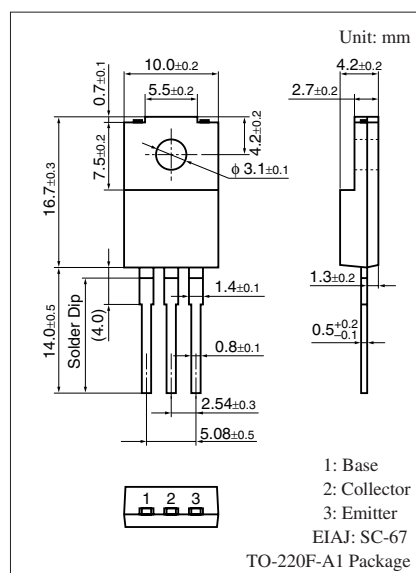
For color TV chroma output

■ Features

- High collector-emitter voltage (Base open) V_{CEO}
- Small collector output capacitance (Common base, input open circuited) C_{ob}
- Full-pack package which can be installed to the heat sink with one screw

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

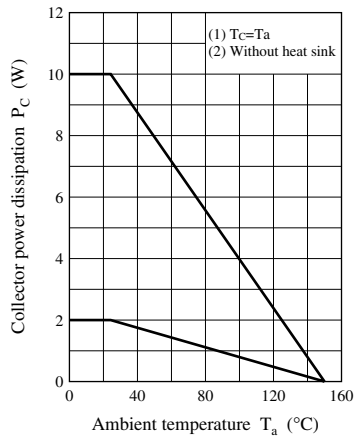
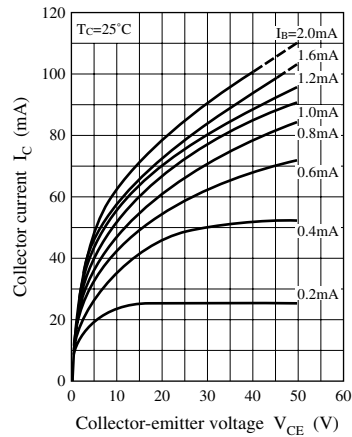
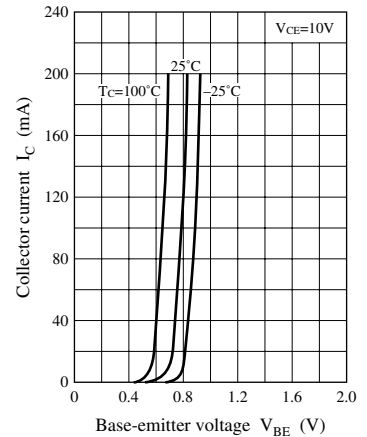
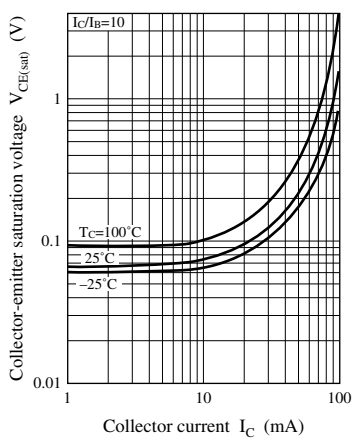
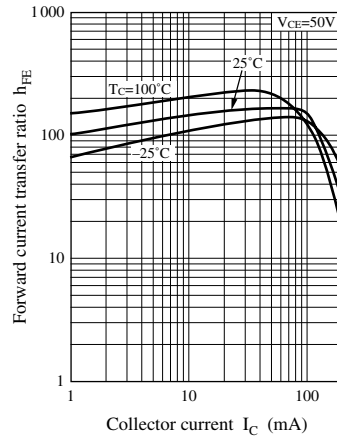
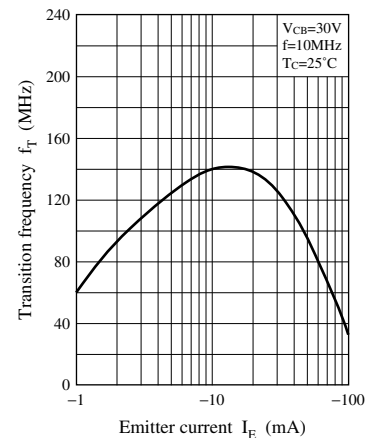
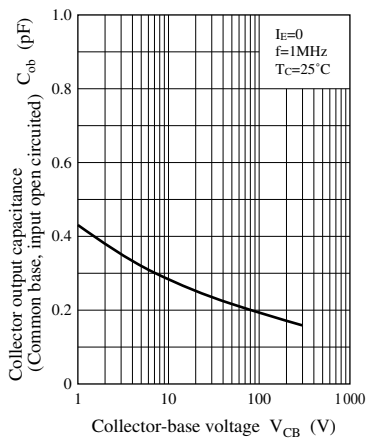
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	300	V
Collector-emitter voltage (Base open)	V_{CEO}	300	V
Emitter-base voltage (Collector open)	V_{EBO}	7	V
Collector current	I_C	0.1	A
Peak collector current	I_{CP}	0.2	A
Collector power dissipation $T_C = 25^\circ\text{C}$	P_C	10	W
		2	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



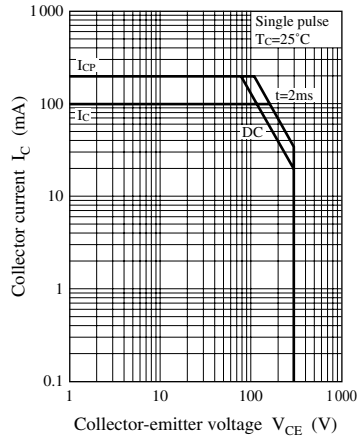
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10\ \mu\text{A}, I_E = 0$	300			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 1\ \text{mA}, I_B = 0$	300			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10\ \mu\text{A}, I_C = 0$	7			V
Base-emitter voltage	V_{BE}	$V_{CE} = 10\ \text{V}, I_C = 30\ \text{mA}$			1.2	V
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = 200\ \text{V}, I_B = 0$			10	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 50\ \text{V}, I_C = 5\ \text{mA}$	50		250	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 30\ \text{mA}, I_B = 3\ \text{mA}$			1.5	V
Transition frequency	f_T	$V_{CE} = 30\ \text{V}, I_C = 20\ \text{mA}, f = 10\ \text{MHz}$	70	140		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 30\ \text{V}, I_E = 0, f = 1\ \text{MHz}$		2.7		pF

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

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 

Safe operation area



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