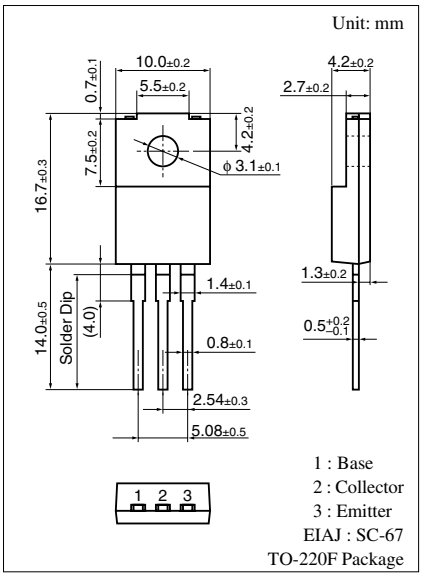
2SC3942

Silicon NPN triple diffusion planar type

For color TV chroma output



■ Features

- High collector to emitter voltage V_{CEO}
- Small collector output capacitance C_{ob}
- Full-pack package which can be installed to the heat sink with one screw

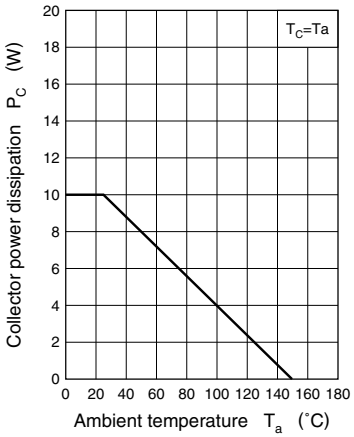
■ Absolute Maximum Ratings $T_C = 25°C$

Parameter		Symbol	Rating	Unit
Collector to base voltage		V_{CBO}	300	V
Collector to emitter voltage		V_{CEO}	300	V
Emitter to base voltage		V_{EBO}	7	V
Peak collector current		I_{CP}	200	mA
Collector current		I_C	100	mA
Collector power dissipation	$T_C = 25°C$	P_C	10	W
	$T_a = 25°C$		2.0	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

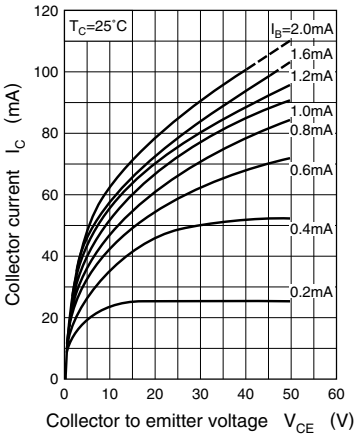
■ Electrical Characteristics $T_C = 25°C$

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

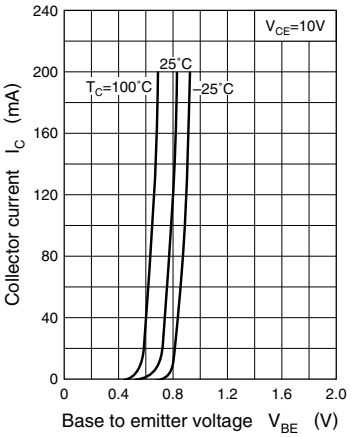
P_C — T_a



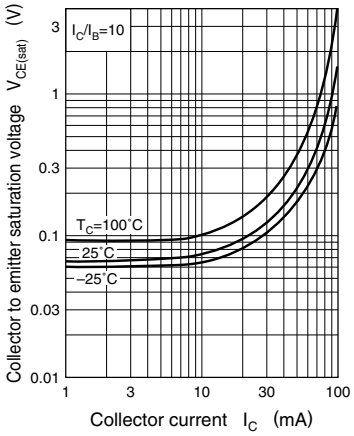
I_C — V_{CE}



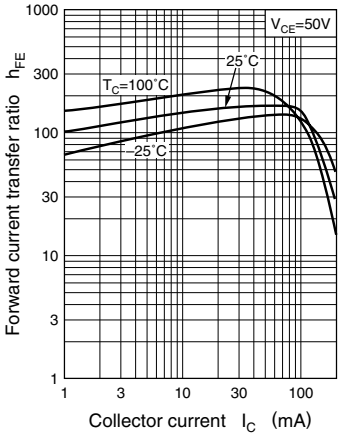
I_C — V_{BE}



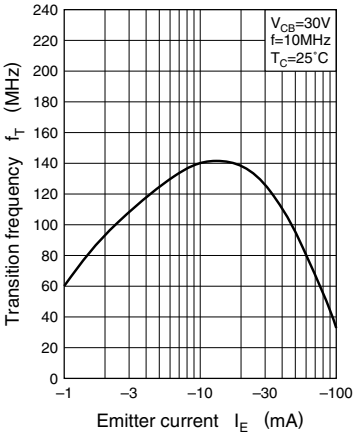
$V_{CE(sat)}$ — I_C



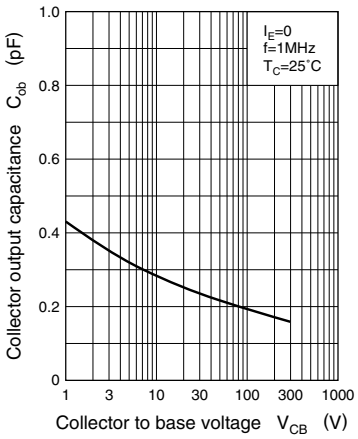
h_{FE} — I_C



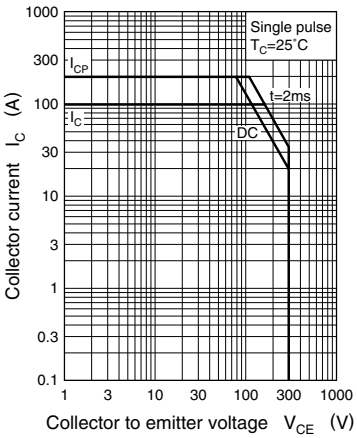
f_T — I_E



C_{ob} — V_{CB}



Area of safe operation (ASO)



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