

2SC3941

Silicon NPN triple diffusion planer type

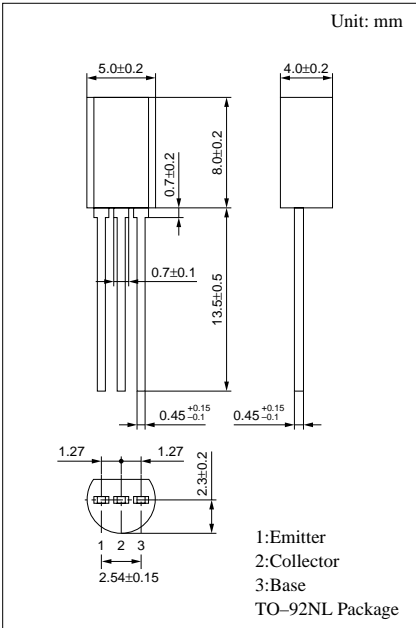
For high breakdown voltage general amplification
 For small TV video output
 Complementary to 2SB1221

Features

- High collector to emitter voltage V_{CEO} .
- High transition frequency f_T .
- Allowing supply with the radial taping.

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

Parameter	Symbol	Ratings	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}	100	mA
Collector current	I_C	70	mA
Collector power dissipation	P_C	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

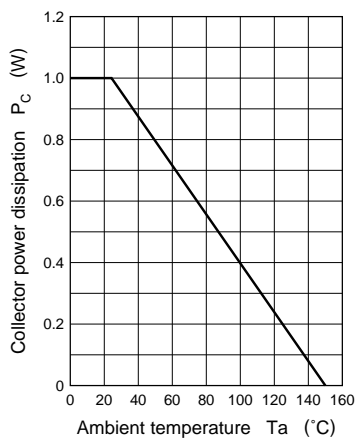
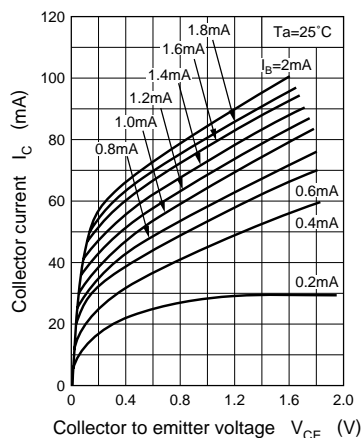
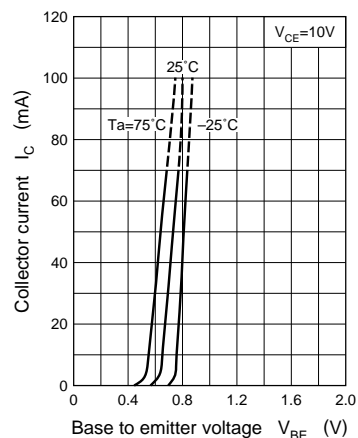
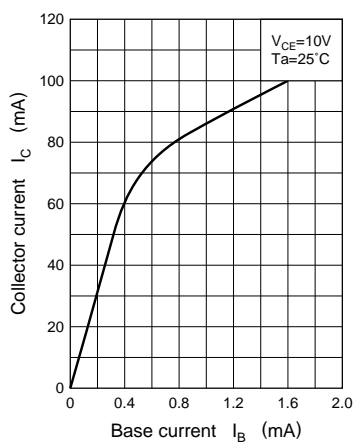
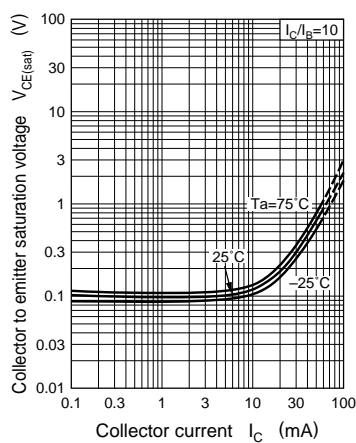
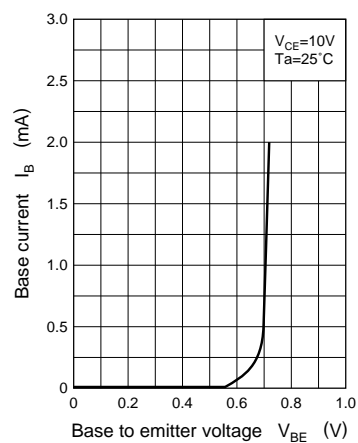
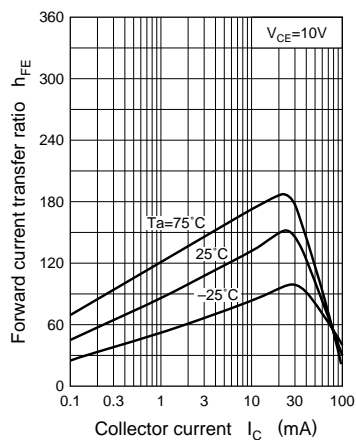
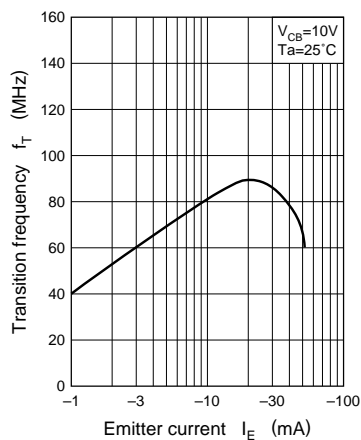


Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 100\text{V}, I_E = 0$			2	μA
Collector to emitter voltage	V_{CEO}	$I_C = 100\mu\text{A}, I_B = 0$	300			V
Emitter to base voltage	V_{EBO}	$I_E = 1\mu\text{A}, I_C = 0$	7			V
Forward current transfer ratio	h_{FE}^*	$V_{CB} = 10\text{V}, I_C = 5\text{mA}$	30		220	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CB} = 10\text{V}, I_E = -10\text{mA}, f = 200\text{MHz}$	50	80		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		4	8	pF

* h_{FE} Rank classification

Rank	P	Q	R
h_{FE}	30 ~ 100	60 ~ 150	100 ~ 220

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