

2SB954, 2SB954A

Silicon PNP epitaxial planar type

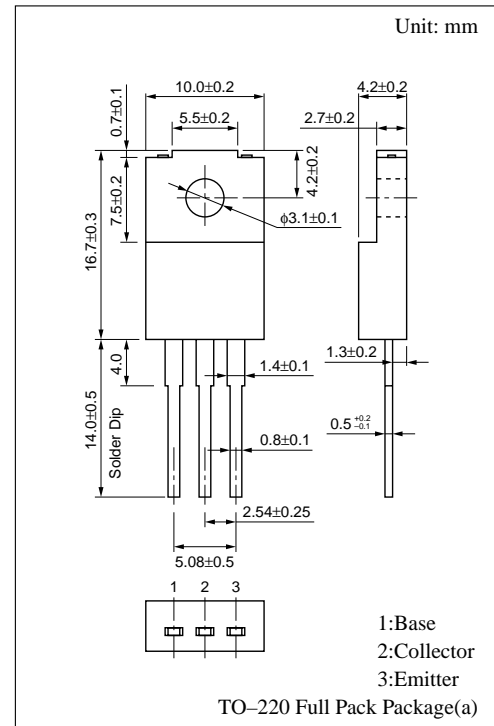
For power amplification

Features

- High forward current transfer ratio h_{FE} which has satisfactory linearity
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Full-pack package which can be installed to the heat sink with one screw

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

Parameter	Symbol	Ratings	Unit	
Collector to base voltage	2SB954 2SB954A	V_{CBO}	-60 -80	V
Collector to emitter voltage	2SB954 2SB954A	V_{CEO}	-60 -80	V
Emitter to base voltage		V_{EBO}	-5	V
Peak collector current		I_{CP}	-2	A
Collector current		I_C	-1	A
Collector power dissipation	$T_C=25^\circ\text{C}$ $T_a=25^\circ\text{C}$	P_C	30 2	W
Junction temperature		T_j	150	$^\circ\text{C}$
Storage temperature		T_{stg}	-55 to +150	$^\circ\text{C}$



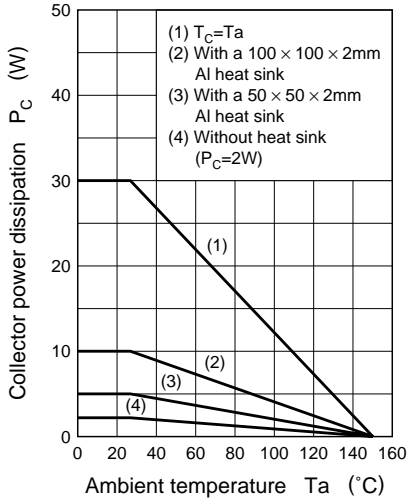
Electrical Characteristics ($T_C=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	2SB954	I_{CEO}	$V_{CE} = -30\text{V}, I_B = 0$		-300	μA
	2SB954A					
Collector cutoff current	2SB954	I_{CES}	$V_{CE} = -60\text{V}, V_{BE} = 0$		-200	μA
	2SB954A					
Emitter cutoff current		I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$		-1	mA
Collector to emitter voltage	2SB954	V_{CEO}	$I_C = -30\text{mA}, I_B = 0$		-60	V
	2SB954A				-80	
Forward current transfer ratio		h_{FE1}^*	$V_{CE} = -4\text{V}, I_C = -0.2\text{A}$	70	250	
		h_{FE2}	$V_{CE} = -4\text{V}, I_C = -1\text{A}$	15		
Collector to emitter saturation voltage		$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -0.125\text{A}$		-1	V
Base to emitter voltage		V_{BE}	$V_{CE} = -4\text{V}, I_C = -1\text{A}$		-1.3	V
Transition frequency		f_T	$V_{CE} = -5\text{V}, I_C = -0.2\text{A}, f = 10\text{MHz}$		30	MHz
Turn-on time		t_{on}	$I_C = -1\text{A}, I_{B1} = -0.1\text{A}, I_{B2} = 0.1\text{A}, V_{CC} = -50\text{V}$		0.5	μs
Storage time		t_{stg}			1.2	μs
Fall time		t_f			0.3	μs

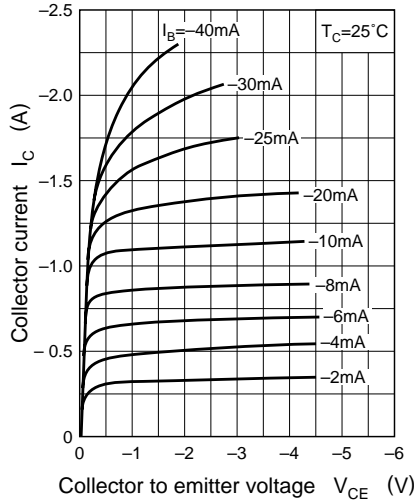
* h_{FE1} Rank classification

Rank	Q	P
h_{FE1}	70 to 150	120 to 250

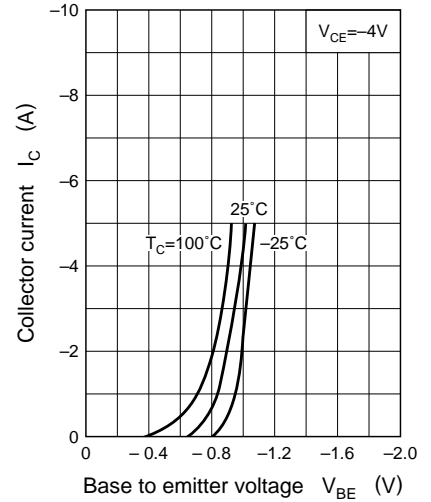
$P_C - T_a$



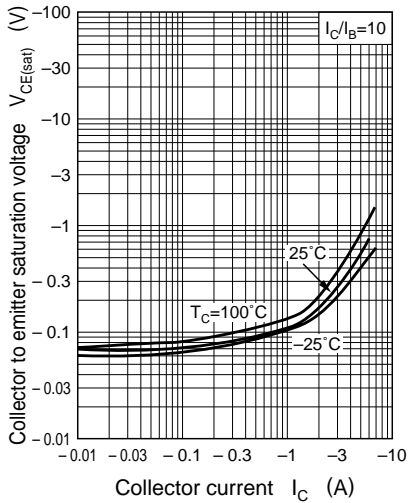
$I_C - V_{CE}$



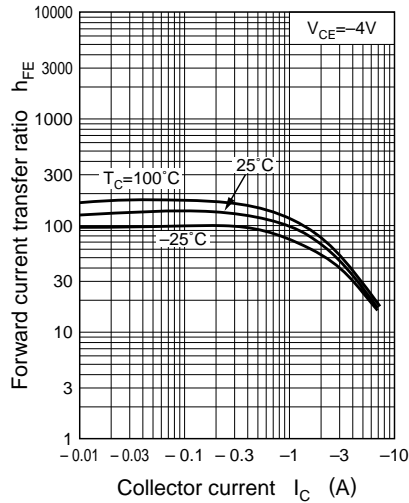
$I_C - V_{BE}$



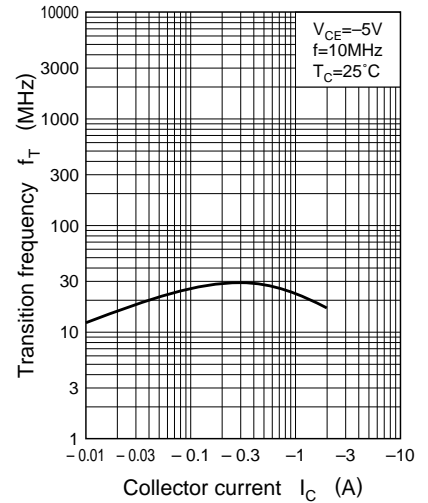
$V_{CE(sat)} - I_C$



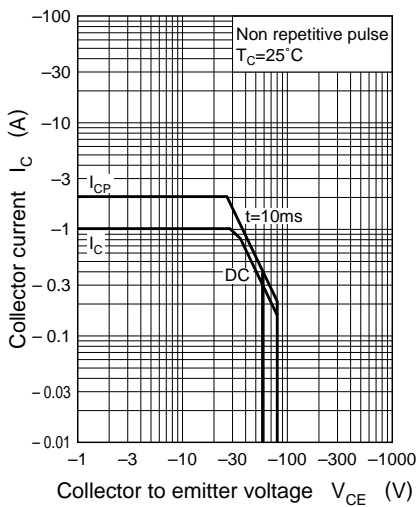
$h_{FE} - I_C$



$f_T - I_C$



Area of safe operation (ASO)



$R_{th(t)} - t$

