

2SB954, 2SB954A

Silicon PNP epitaxial planar type

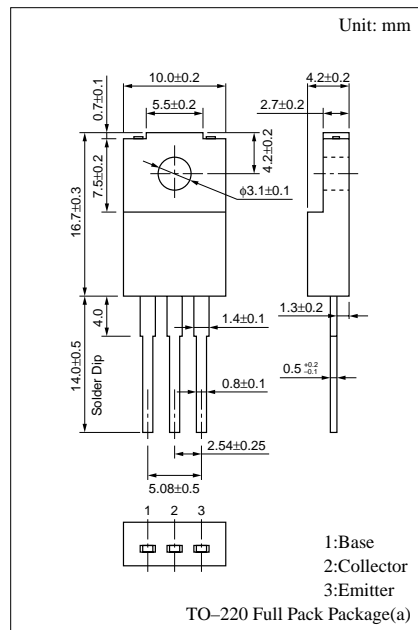
For power amplification

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 ($T_C=25^\circ C$)

Parameter	Symbol	Ratings	Unit	
Collector to base voltage	2SB954	V_{CBO}	-60	V
Collector to emitter voltage	2SB954	V_{CEO}	-60	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	P_C	$T_C=25^\circ C$	30	W
		$T_a=25^\circ C$	2	
Junction temperature	T_j	150	$^\circ C$	
Storage temperature	T_{stg}	-55 to +150	$^\circ C$	



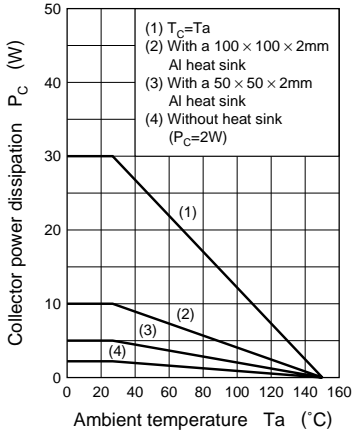
Electrical Characteristics ($T_C=25^\circ C$)

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

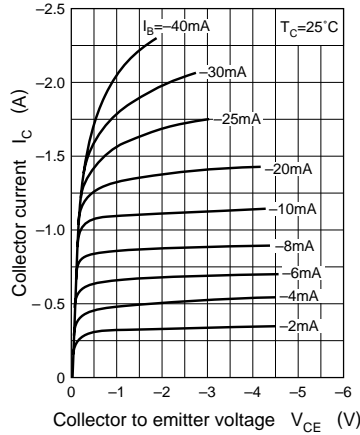
* h_{FE1} Rank classification

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

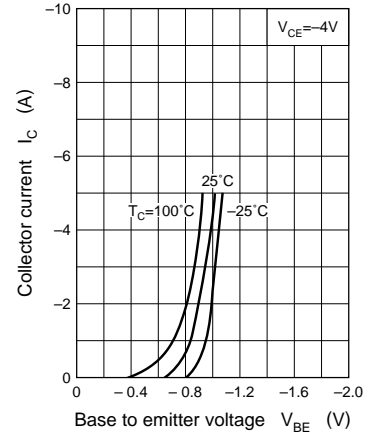
$P_C - T_a$



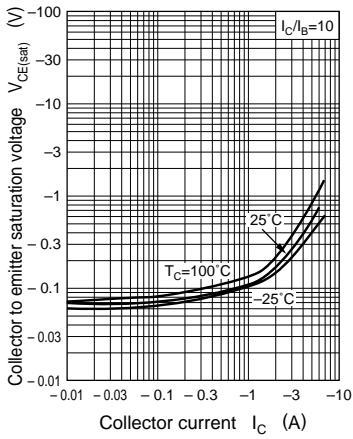
$I_C - V_{CE}$



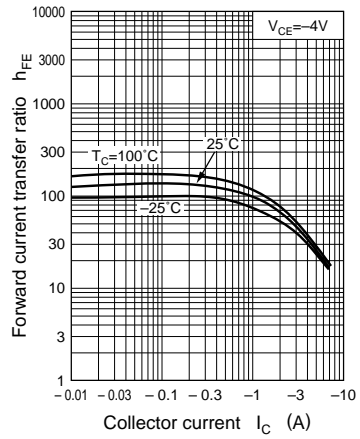
$I_C - V_{BE}$



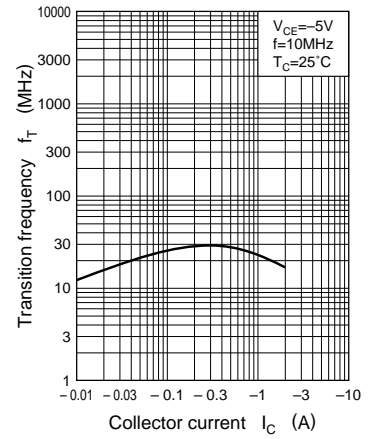
$V_{CE(sat)} - I_C$



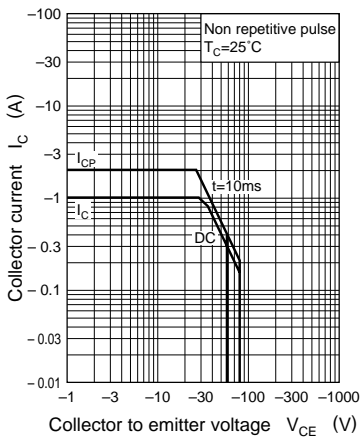
$h_{FE} - I_C$



$f_T - I_C$



Area of safe operation (ASO)



$R_{th(t)} - t$

