

2SA1535, 2SA1535A

Silicon PNP epitaxial planar type

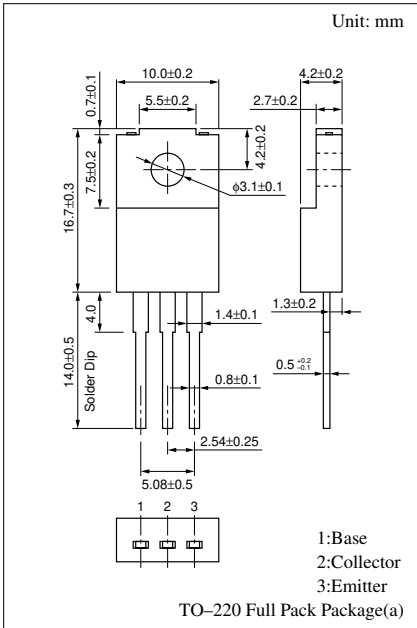
For low-frequency driver and high power amplification
Complementary to 2SC3944 and 2SC3944A

■ Features

- Satisfactory forward current transfer ratio h_{FE} vs. collector current I_C characteristics
- High transition frequency f_T
- Makes up a complementary pair with 2SC3944 and 2SC3944A, which is optimum for the driver-stage of a 60 to 100W output amplifier.

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

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	2SA1535 -150	V
2SA1535A		-180	
Collector to emitter voltage	V_{CEO}	2SA1535 -150	V
2SA1535A		-180	
Emitter to base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-1.5	A
Collector current	I_C	-1	A
Collector power dissipation	P_C	$T_C=25^\circ\text{C}$ 15	W
$T_a=25^\circ\text{C}$		2.0	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



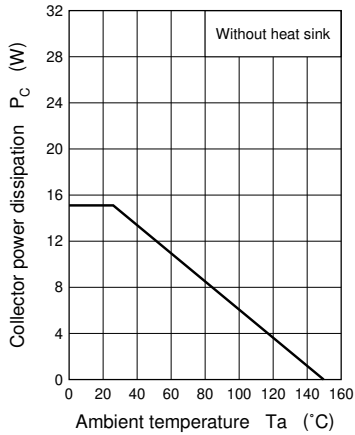
■ Electrical Characteristics ($T_C=25^\circ\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	2SA1535 I_{CBO}	$V_{CB} = -150\text{V}, I_E = 0$			-10	μA
Collector to emitter voltage	2SA1535 2SA1535A V_{CEO}	$I_C = -1\text{mA}, I_B = 0$	-150			V
		$I_C = -100\mu\text{A}, I_B = 0$	-180			
Emitter to base voltage	V_{EBO}	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = -10\text{V}, I_C = -150\text{mA}$	90	160	220	
	h_{FE2}	$V_{CE} = -5\text{V}, I_C = -500\text{mA}$	50	100		
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-0.5	-2.0	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-1.0	-2.0	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -50\text{mA}, f = 10\text{MHz}$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		30	50	pF

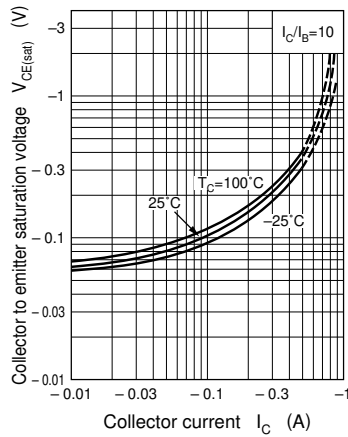
* h_{FE1} Rank classification

Rank	Q	R
h_{FE1}	90 to 155	130 to 220

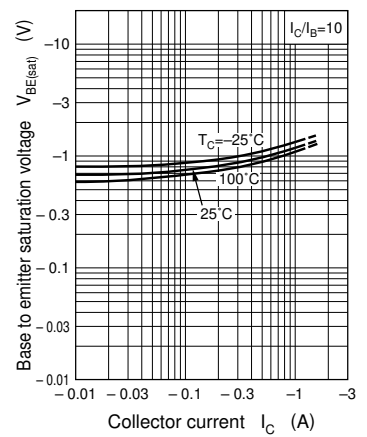
$P_C - T_a$



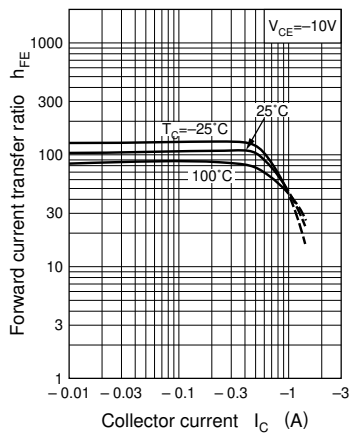
$V_{CE(sat)} - I_C$



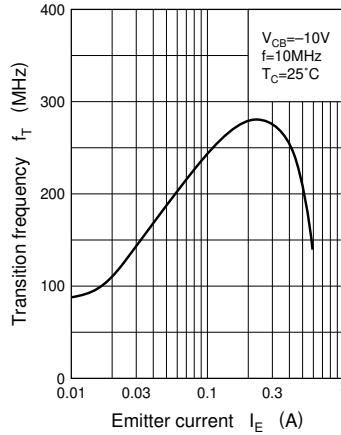
$V_{BE(sat)} - I_C$



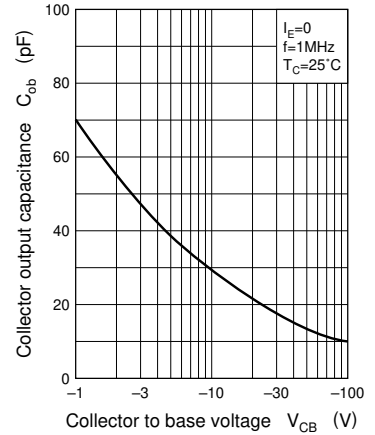
$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$



Area of safe operation (ASO)

