

# 2SA1535, 2SA1535A

## Silicon PNP epitaxial planar type

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

### ■ Features

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

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

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

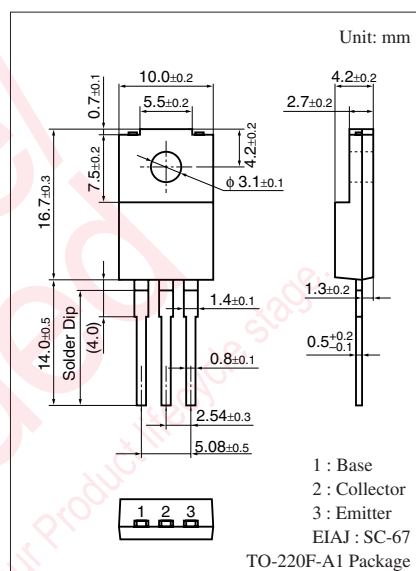
### ■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

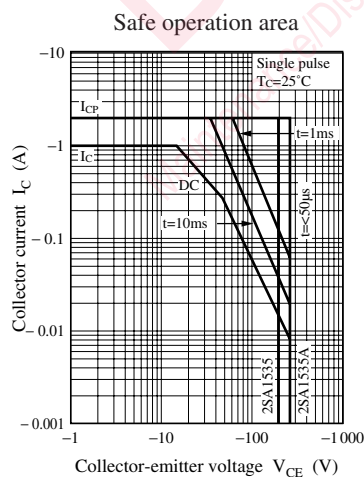
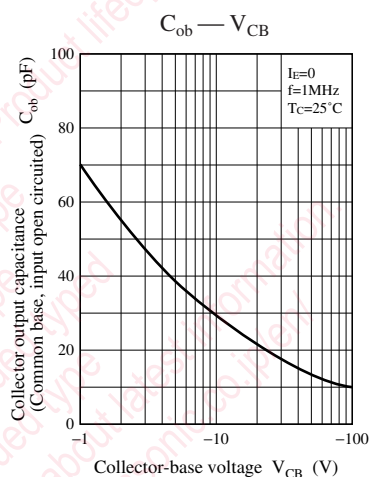
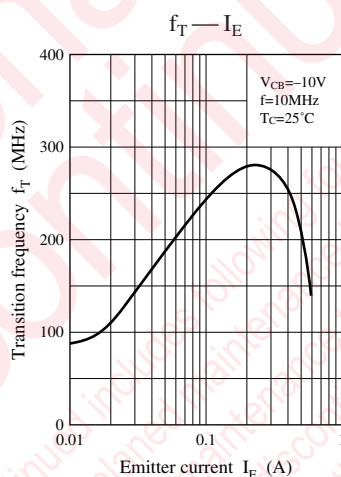
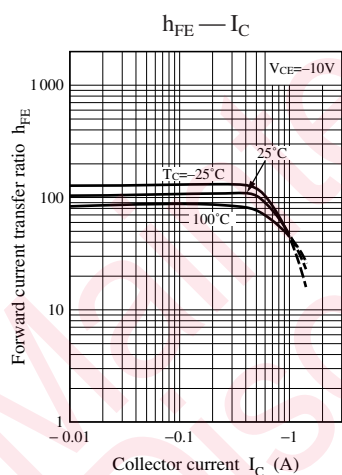
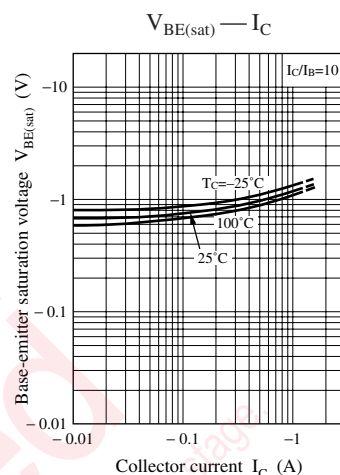
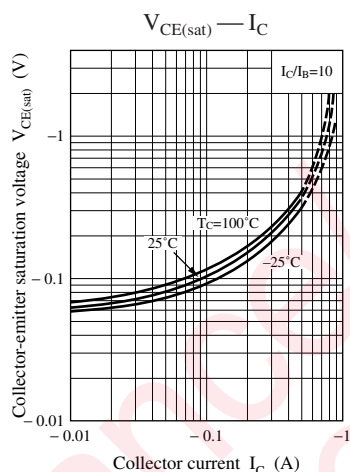
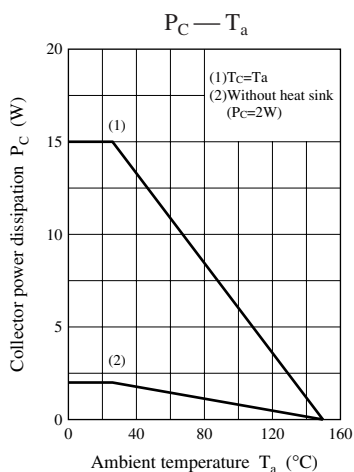
Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	2SA1535	$V_{CEO}$	$I_C = -100\ \mu\text{A}, I_B = 0$	-150			V
	2SA1535A		$I_C = -100\ \mu\text{A}, I_B = 0$	-180			
Emitter-base voltage (Collector open)		$V_{EBO}$	$I_E = -10\ \mu\text{A}, I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	2SA1535	$I_{CBO}$	$V_{CB} = -150\ \text{V}, I_E = 0$			-10	$\mu\text{A}$
Forward current transfer ratio		$h_{FE1}^*$	$V_{CE} = -10\ \text{V}, I_C = -150\ \text{mA}$	65	160	330	—
		$h_{FE2}$	$V_{CE} = -5\ \text{V}, I_C = -500\ \text{mA}$	50	100		
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -500\ \text{mA}, I_B = -50\ \text{mA}$		-0.5	-2.0	V
Base-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 (Common base, input open circuited)		$C_{ob}$	$V_{CB} = -10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$		30	50	pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

Rank	P	Q	R	S
$h_{FE1}$	65 to 110	90 to 155	130 to 220	185 to 330





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