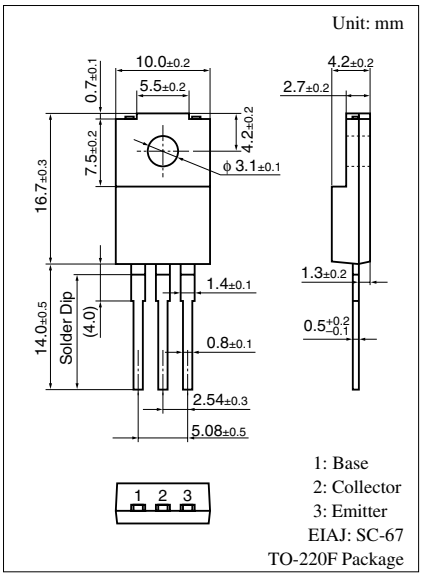
2SA1535, 2SA1535A

Silicon PNP epitaxial planar type

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



■ Features

- Excellent current I_C characteristics of forward current transfer ratio h_{FE} vs. collector
- 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 $T_C = 25°C$

Parameter		Symbol	Rating	Unit
Collector to base voltage	2SA1535	V_{CBO}	−150	V
	2SA1535A		−180	
Collector to emitter voltage	2SA1535	V_{CEO}	−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	$T_C = 25°C$	P_C	15	W
	$T_a = 25°C$		2.0	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +150	°C

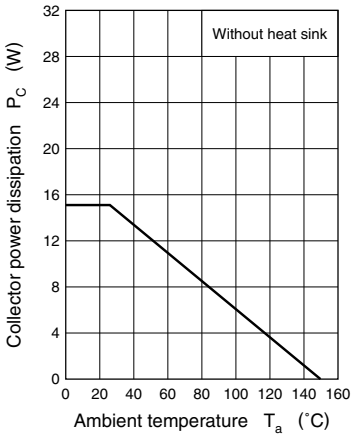
■ Electrical Characteristics $T_C = 25°C$

Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current		I_{CBO}	$V_{CB} = -150$ V, $I_E = 0$			−10	μA
Collector to emitter voltage	2SA1535	V_{CEO}	$I_C = -1$ mA, $I_B = 0$	−150			V
	2SA1535A		$I_C = -100$ μA, $I_B = 0$	−180			
Emitter to base voltage		V_{EBO}	$I_E = -10$ μA, $I_C = 0$	−5			V
Forward current transfer ratio		h_{FE1} *	$V_{CE} = -10$ V, $I_C = -150$ mA	90	160	330	
		h_{FE2}	$V_{CE} = -5$ V, $I_C = -500$ mA	50	100		
Collector to emitter saturation voltage		$V_{CE(sat)}$	$I_C = -500$ mA, $I_B = -50$ mA		− 0.5	−2.0	V
Base to emitter saturation voltage		$V_{BE(sat)}$	$I_C = -500$ mA, $I_B = -50$ mA		−1.0	−2.0	V
Transition frequency		f_T	$V_{CB} = -10$ V, $I_C = -50$ mA, f =10 MHz		200		MHz
Collector output capacitance		C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, f = 1 MHz		30	50	pF

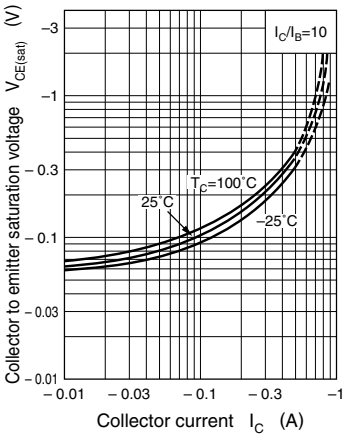
Note) *: Rank classification

Rank	Q	R	S
h_{FE1}	90 to 155	130 to 220	185 to 330

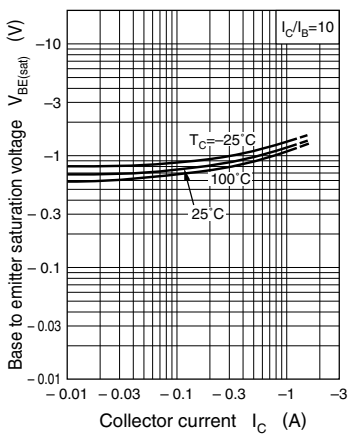
P_C — T_a



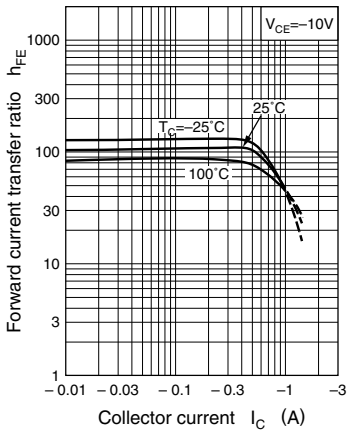
$V_{CE(sat)}$ — I_C



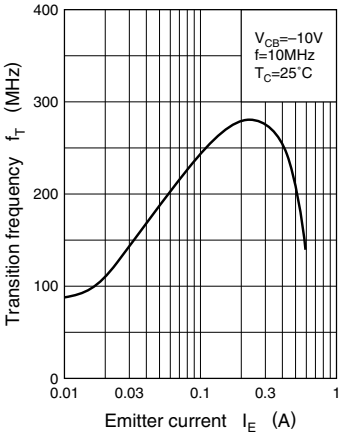
$V_{BE(sat)}$ — I_C



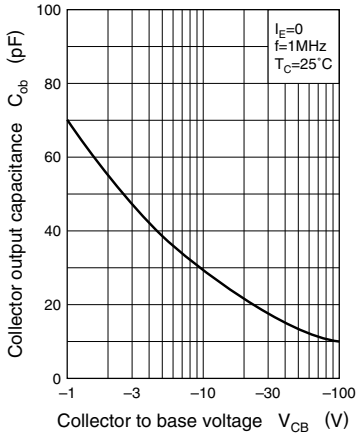
h_{FE} — I_C



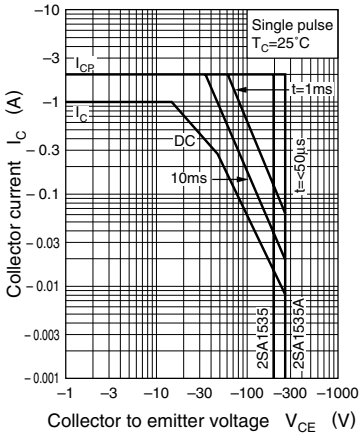
f_T — I_E



C_{ob} — V_{CB}



Area of safe operation (ASO)



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