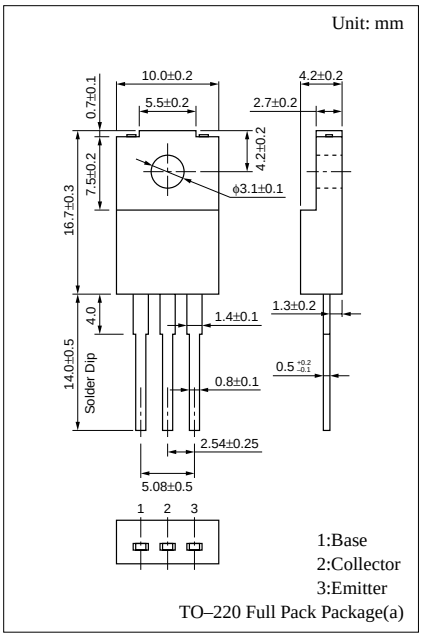
2SA1535, 2SA1535A

Silicon PNP epitaxial planar type

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



Features

- Satisfactory foward 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˚C)

Parameter		Symbol	Ratings	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
	Ta=25°C		2.0	
Junction temperature		T_j	150	˚C
Storage temperature		T_{stg}	–55 to +150	˚C

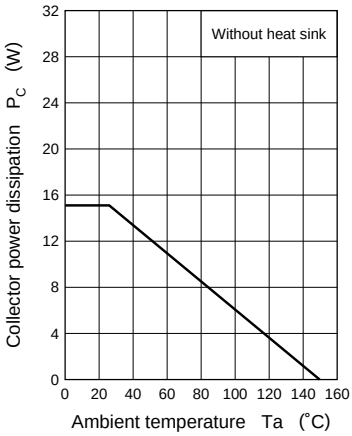
Electrical Characteristics (T_C=25˚C)

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

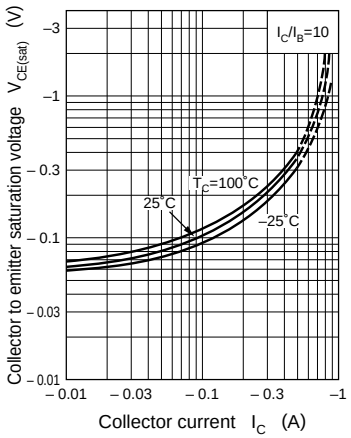
*h_{FE1} Rank classification

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

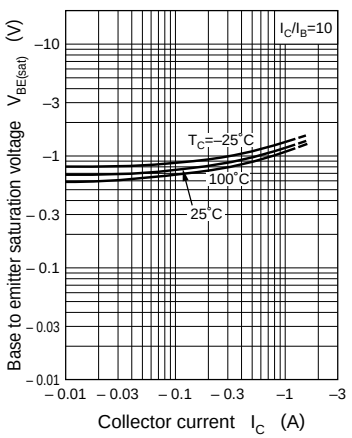
P_C — Ta



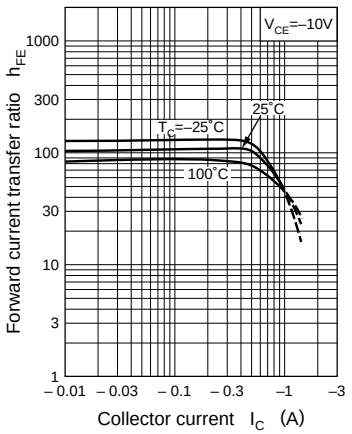
$V_{CE(sat)}$ — I_C



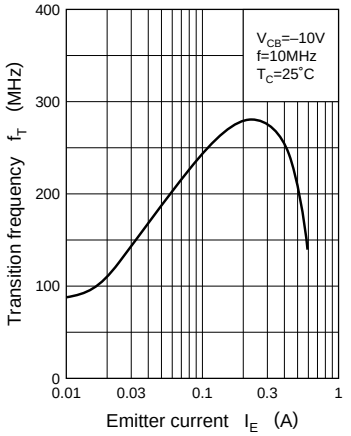
$V_{BE(sat)}$ — I_C



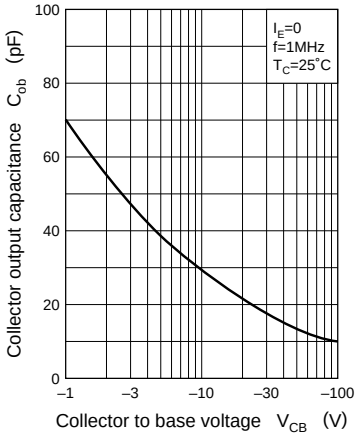
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



Area of safe operation (ASO)