

2SA777

Silicon PNP epitaxial planer type

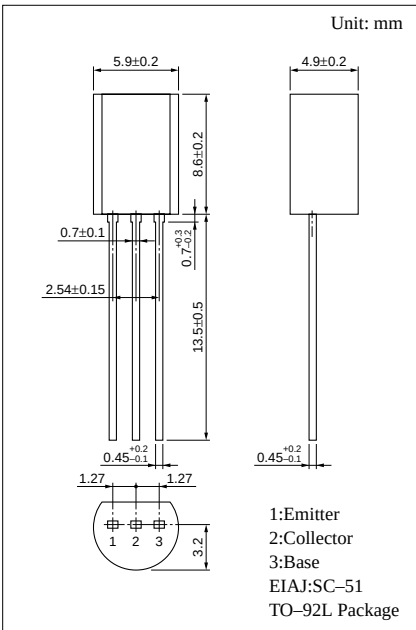
For low-frequency driver amplification
Complementary to 2SC1509

■ Features

- High collector to emitter voltage V_{CEO} .
- Optimum for the driver stage of a low-frequency and 25 to 30W output amplifier.

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

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-80	V
Collector to emitter voltage	V_{CEO}	-80	V
Emitter to base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-1	A
Collector current	I_C	-0.5	A
Collector power dissipation	P_C	750	mW
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^{\circ}\text{C}$



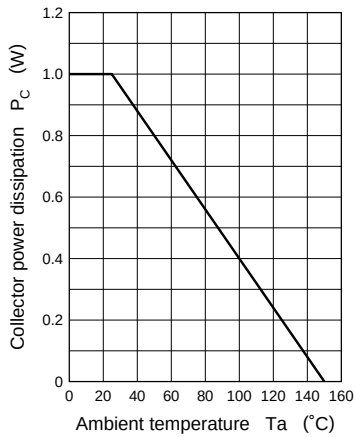
■ Electrical Characteristics ($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20\text{V}, I_E = 0$			-0.1	μA
Collector to base voltage	V_{CBO}	$I_C = -10\mu\text{A}, I_E = 0$	-80			V
Collector to emitter voltage	V_{CEO}	$I_C = -100\mu\text{A}, I_B = 0$	-80			V
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		220	
	h_{FE2}	$V_{CE} = -5\text{V}, I_C = -500\text{mA}$	50	100		
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -300\text{mA}, I_B = -30\text{mA}$		-0.2	-0.4	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -300\text{mA}, I_B = -30\text{mA}$		-0.85	-1.2	V
Transition frequency	f_T	$V_{CB} = -10\text{V}, I_E = 50\text{mA}, f = 100\text{MHz}$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		11	20	pF

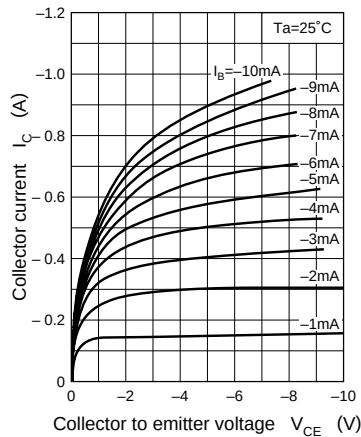
* h_{FE1} Rank classification

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

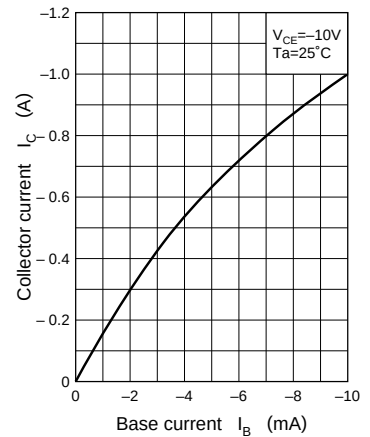
$P_C - T_a$



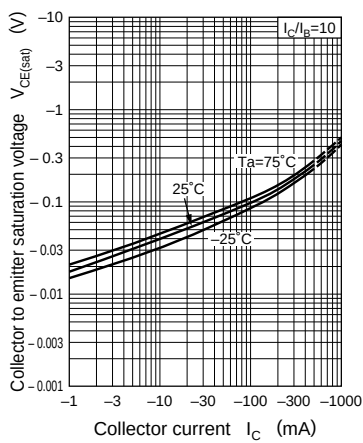
$I_C - V_{CE}$



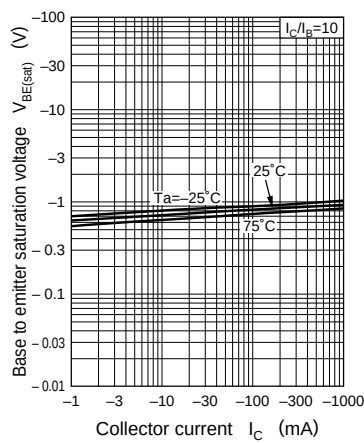
$I_C - I_B$



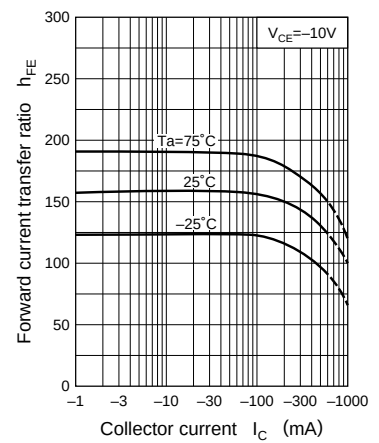
$V_{CE(sat)} - I_C$



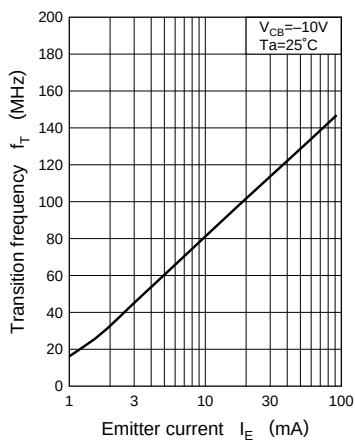
$V_{BE(sat)} - I_C$



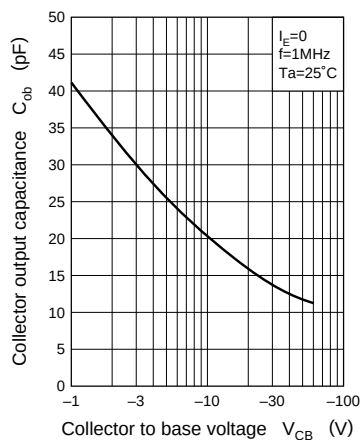
$h_{FE} - I_C$



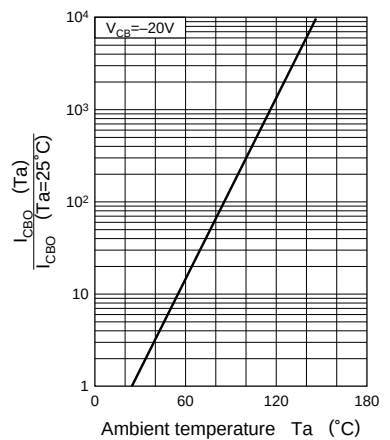
$f_T - I_E$



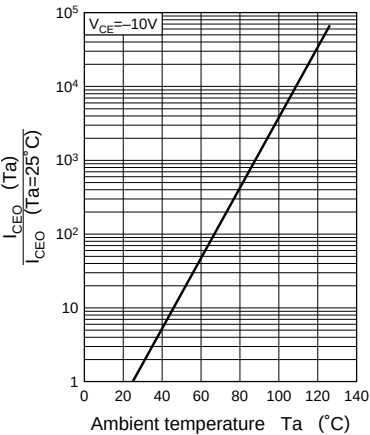
$C_{ob} - V_{CB}$



$I_{CBO} - T_a$



$I_{CEO} - T_a$



Area of safe operation (ASO)

