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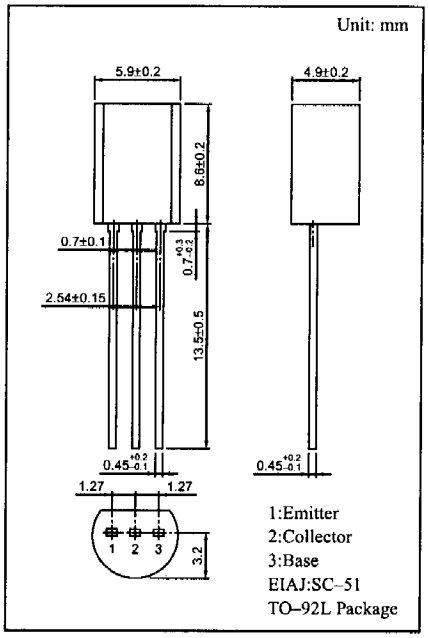
2SC1509

Silicon NPN epitaxial planer type

For low-frequency driver amplification
Complementary to 2SA777



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 (Ta=25°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	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 ~ +150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 20V, I_E = 0			0.1	μA
Collector to base voltage	V_{CBO}	I_C = 10μA, I_E = 0	80			V
Collector to emitter voltage	V_{CEO}	I_C = 100μA, I_B = 0	80			V
Emitter to base voltage	V_{EBO}	I_E = 10μA, I_C = 0	5			V
Forward current transfer ratio	h_{FE1} *1	V_{CE} = 10V, I_C = 150mA*2	130		330	
	h_{FE2}	V_{CE} = 5V, I_C = 500mA*2	50	100		
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 300mA, I_B = 30mA*2		0.2	0.4	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = 300mA, I_B = 30mA*2		0.85	1.2	V
Transition frequency	f_T	V_{CB} = 10V, I_E = −50mA, f = 100MHz		120		MHz
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz		11	20	pF

*2 Pulse measurement

*1 h_{FE1} Rank classification

Rank	R	S
h_{FE1}	130 ~ 220	185 ~ 330