

2SC1501

Silicon PNP Triple-Diffused Planar Type

Medium Power Amplifier

■ Features

- High collector-emitter voltage (resistance between B and E) (V_{CER})
- Large collector power dissipation (P_C)

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

Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	300	V
Collector-emitter voltage ($R_{BE} \leq 3 \text{ k}\Omega$)	V_{CER}	300	V
Emitter-base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	150	mA
Collector current	I_C	100	mA
Collector power dissipation ($T_c=25^\circ\text{C}$)	P_C	10	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

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

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB}=300 \text{ V}, I_E=0$			100	μA
	I_{CER}	$V_{CE}=300 \text{ V}, R_{BE}=3 \text{ k}\Omega$			1	mA
Emitter-base voltage	V_{EBO}	$I_E=0.1 \text{ mA}, I_C=0$	5			V
DC current gain	h_{FE1}	$V_{CE}=10 \text{ V}, I_C=10 \text{ mA}$	30			
	h_{FE2}^*	$V_{CE}=10 \text{ V}, I_C=50 \text{ mA}$	30		200	
Base-emitter voltage	V_{BE}	$V_{CE}=10 \text{ V}, I_C=50 \text{ mA}$			1.2	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100 \text{ mA}, I_B=10 \text{ mA}$			5	V
Base resistance	r_{bb}	$V_{CB}=50 \text{ V}, I_C=20 \text{ mA}$		10		Ω
Transition frequency	f_T	$V_{CB}=30 \text{ V}, I_E=-20 \text{ mA}, f=200 \text{ MHz}$		55		MHz
Collector output capacitance	C_{ob}	$V_{CB}=30 \text{ V}, I_E=0, f=1 \text{ MHz}$		8		pF

* h_{FE2} Classifications

Class	P	Q	R	S
h_{FE2}	30~60	50~100	80~150	100~200

■ Package Dimensions

