

TO-3P Plastic-Encapsulate Transistors

2SA1943 TRANSISTOR (PNP)

FEATURES

- High Collector Current Capability
- High Power Dissipation
- High Frequency
- High Voltage
- Complement to 2SA5200

APPLICATIONS

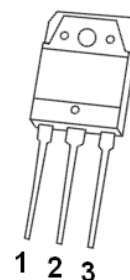
- High-Fidelity Audio Output Amplifier
- General Purpose Power Amplifier

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-230	V
V_{CEO}	Collector-Emitter Voltage	-230	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-15	A
P_C	Collector Power Dissipation	3.5	W
P_{CM}	Collector Power Dissipation ($T_c=25^\circ\text{C}$)	150	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	36	$^\circ\text{C/W}$
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^\circ\text{C}$

TO - 3P

1. BASE
2. COLLECTOR
3. EMITTER



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-0.1\text{mA}, I_E=0$	-230			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=-50\text{mA}, I_B=0$	-230			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-0.1\text{mA}, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-230\text{V}, I_E=0$			-5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-5	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=-5\text{V}, I_C=-1\text{A}$	55		160	
	$h_{FE(2)}^*$	$V_{CE}=-5\text{V}, I_C=-7\text{A}$	35			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-8\text{A}, I_B=-0.8\text{A}$			-3	V
Base-emitter voltage	V_{BE}	$V_{CE}=-5\text{V}, I_C=-7\text{A}$			-1.5	V
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		360		pF
Transition frequency	f_T	$V_{CE}=-5\text{V}, I_C=-1\text{A}$		30		MHz

*Pulse test

CLASSIFICATION OF $h_{FE(1)}$

RANK	R	O
RANGE	55-110	80-160