

TO-92 Plastic-Encapsulate Transistors

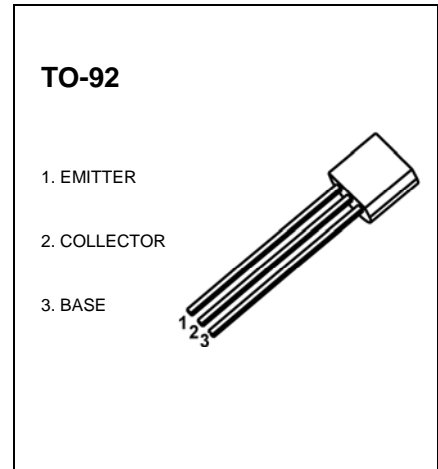
2SA1300 TRANSISTOR (PNP)

FEATURES

- High DC Current Gain and Excellent h_{FE} Linearity
- Low Saturation Voltage

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-20	V
V_{CEO}	Collector-Emitter Voltage	-10	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current -Continuous	-2	A
P_C	Collector Power Dissipation	0.75	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~ +15	$^\circ\text{C}$



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-1\text{mA}$, $I_E=0$	-20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10\text{mA}$, $I_B=0$	-10			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-1\text{mA}$, $I_C=0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB}=-20\text{V}$, $I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-6\text{V}$, $I_C=0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE}=-1\text{V}$, $I_C=-0.5\text{A}$	140		600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-2\text{A}$, $I_B=-100\text{mA}$			-0.82	V
Base-emitter voltage	V_{BE}	$I_C=-2\text{A}$, $V_{CE}=-1\text{V}$			-1.5	V
Transition frequency	f_T	$V_{CE}=-1\text{V}$, $I_C=-0.5\text{A}$ $f=30\text{MHz}$		140		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $I_E=0$ $f=1\text{MHz}$		50		pF

CLASSIFICATION OF h_{FE}

Rank	Y	GR	BL
Range	140-280	200-400	300-600