2SA1300 TRANSISTOR (PNP)

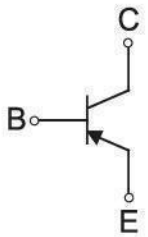
TO-92

1. EMITTER
2. COLLECTOR
3. BASE

FEATURES

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

Equivalent Circuit



MAXIMUM RATINGS (T_a=25℃ 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_D	Collector Power Dissipation	750	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	166	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

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

CLASSIFICATION OF h_{FE}

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