



TO-92S Plastic-Encapsulate Transistors

2SA1317 TRANSISTOR (PNP)

FEATURES

- Large Current Capacity and Wide ASO

TO – 92S

1. EMITTER
2. COLLECTOR
3. BASE



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-0.2	A
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	417	$^\circ\text{C/W}$
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-0.01\text{mA}, I_E=0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-0.01\text{mA}, I_C=0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB}=-40\text{V}, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=-6\text{V}, I_C=-1\text{mA}$	100		560	
	$h_{FE(2)}$	$V_{CE}=-6\text{V}, I_C=-0.1\text{mA}$	70			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$			-1	V
Collector output capacitance	C_{ob}	$V_{CB}=-6\text{V}, I_E=0, f=1\text{MHz}$		4		pF
Transition frequency	f_T	$V_{CE}=-6\text{V}, I_C=-10\text{mA}$		200		MHz

CLASSIFICATION OF $h_{FE(1)}$

RANK	R	S	T	U
RANGE	100-200	140-280	200-400	280-560