

TO-92 Plastic-Encapsulate Transistors

2SC1318A TRANSISTOR (NPN)

FEATURES

- Collector Output Capacitance :

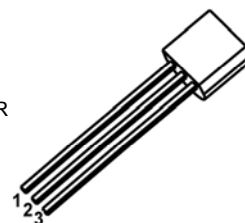
$C_{ob}=11$ pF (TYP), 20 pF (MAX)

MAXIMUM RATINGS ($T_a=25$ °C unless otherwise note)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	70	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	500	mA
P_C	Collector Power Dissipation	750	mW
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55-150	°C

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



ELECTRICAL CHARACTERISTICS ($T_a=25$ °C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=2mA, I_B=0$	70			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20V, I_E=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=10V, I_C=150mA$	85		340	
	$h_{FE(2)}$	$V_{CE}=10V, I_C=500mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=300mA, I_B=30mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=300mA, I_B=30mA$			1.5	V
Transition frequency	f_T	$V_{CE}=10V, I_C=50mA, f=200MHz$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		11	20	pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R	S
Range	85-170	120-240	170-340