TO-92 Plastic-Encapsulate Transistors

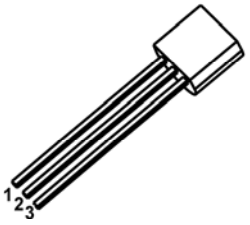
2SC945 TRANSISTOR (NPN)

TO-92

1.EMITTER

2.COLLECTOR

3. BASE



FEATURE

- Excellent h_{FE} linearity
- Low noise
- Complementary to A733

MAXIMUM RATINGS (T_a=25℃ 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	5	V
I_C	Collector Current -Continuous	150	mA
P_C	Collector Power Dissipation	400	mW
T_J	Junction Temperature	125	℃
T_{stg}	Storage Temperature	-55-125	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=1mA , I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=100μA , I_B=0	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100 μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=60V, I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=45V, I_B=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V ,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=6V , I_C=1mA	70		700	
	$h_{FE(2)}$	V_{CE}=6V , I_C=0.1mA	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B=10mA			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=100mA, I_B=10mA			1	V
Transition frequency	f_T	V_{CE}=6V,I_C=10mA,f=30MHz	200			MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz			3.0	pF
Noise figure	NF	VCE=6V,IC=0.1mA RG=10kΩ,f=1MHz			10	dB

CLASSIFICATION OF $h_{FE(1)}$

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700