

isc Silicon NPN Transistor

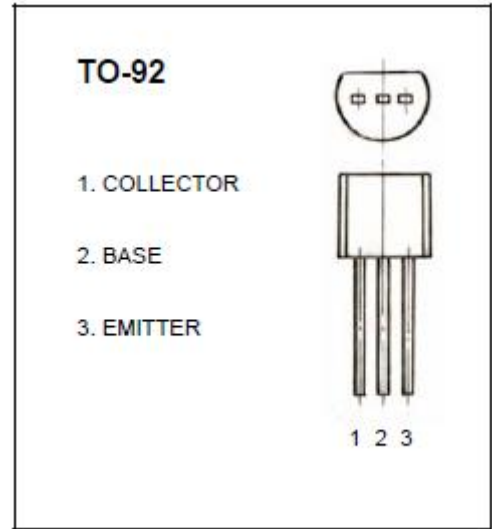
2SC945

DESCRIPTION

- High Voltage
- Excellent h_{FE} linearity

APPLICATIONS

- Designed for use in driver stage of AF amplifier and low speed switching



ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

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	100	mA
I_B	Base Current-Continuous	20	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	250	mW
T_J	Junction Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~125	$^\circ\text{C}$

isc Silicon NPN Transistor**2SC945****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}; I_B=10\text{mA}$		0.15	0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=100\text{mA}; I_B=10\text{mA}$		0.86	1.0	V
V_{BE}	Base -Emitter Voltage	$I_C=1.0\text{mA}; V_{CE}=6\text{V}$	0.55		0.65	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=60\text{V}; I_E=0$			0.1	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			0.1	μA
h_{FE1}	DC Current Gain	$I_C=0.1\text{mA}; V_{CE}=6\text{V}$	50	185		
h_{FE2}	DC Current Gain	$I_C=1.0\text{mA}; V_{CE}=6\text{V}$	90	200	600	
f_T	Current-Gain—Bandwidth Product	$I_C=10\text{mA}; V_{CE}=6\text{V};$	150	250	450	MHz
C_{ob}	Collector-Base Capacitance	$V_{CB}=6\text{V}; I_E=0; f=1.0\text{MHz}$		3	4	pF
NF	Noise Figure	$I_C=0.1\text{mA}; V_{CE}=6\text{V}, f=1\text{kHz}; R_G=2\text{k}\Omega$		0.8	15	dB

◆ **h_{FE2} Classifications**

R	O	P	K
90-180	135-270	200-400	300-600