

isc Silicon NPN Transistor

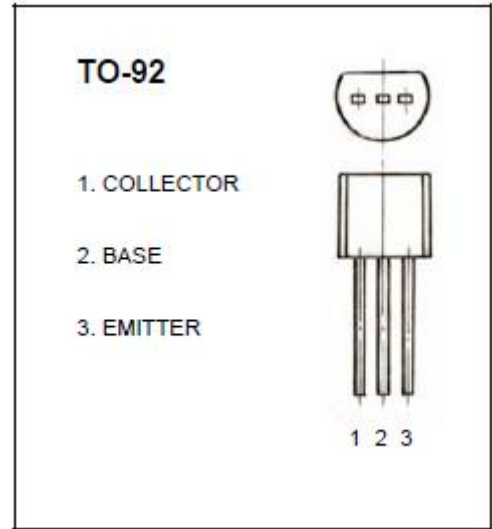
2SC945

**DESCRIPTION**

- High Voltage
- Excellent  $h_{FE}$  linearity

**APPLICATIONS**

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



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

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 @ $T_c=25^{\circ}C$	250	mW
$T_J$	Junction Temperature	125	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~125	$^{\circ}C$

**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	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			0.1	$\mu\text{A}$
$h_{FE1}$	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