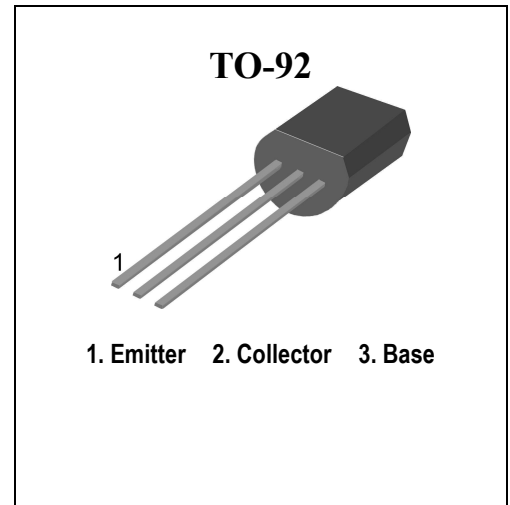


NPN Silicon Transistor

**FEATURES**

- Collector-Base Voltage  $V_{CBO} = 60V$
- Complement to SM733



**ABSOLUTE MAXIMUM RATINGS** (TA=25°C)

Characteristic	Symbol	SM945	Unit
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Bias Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	150	mA
Collector Power Dissipation	$P_C$	400	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{stg}$	-55 to +150	°C

**ORDERING INFORMATION**

Part Number	Operating Temperature Range	Package Type
SM945P	-55°C~+150°C	TO-92

**$h_{FE}$  Classification**

Classification	R	Q	P	K
$h_{FE}$	90-180	135-270	200-400	300-600

NPN Silicon Transistor

**ELECTRICAL CHARACTERISTICS** ( $T_A=+25^{\circ}\text{C}$ ).

Characteristics	Symbol	SM945			Unit
		Min	Typ	Max	
Collector-Base Breakdown Voltage $I_C=100\ \mu\text{A}$	$V_{CB0}$	60			V
Collector-Emitter Breakdown Voltage $I_C=1\ \text{mA}$	$V_{CEO}$	50			
Emitter-Base Breakdown Voltage $I_E=100\ \mu\text{A}$	$V_{EBO}$	5			
Collector Cut-Off Current $V_{CB}=60\text{V}, I_E=0$	$I_{CBO}$			0.1	$\mu\text{A}$
Emitter Cut-Off Current $V_{EB}=5\text{V}, I_C=0$	$I_{EBO}$			0.1	
DC Current Gain $V_{CE}=6\text{V}, I_C=2\text{mA}$	$h_{FE}$	90		600	
Collector-Emitter Saturation Voltage $I_C=100\text{mA}, I_B=10\text{mA}$	$V_{CE(SAT)}$		0.1	0.25	V
Base-Emitter Saturation Voltage $I_C=100\text{mA}, I_B=10\text{mA}$	$V_{BE(SAT)}$			1.0	
Transition Frequency $V_{CE}=10\text{V}, I_E=-10\text{mA}$	$f_T$	80	150		MHz
Collector Output Capacitance $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	$C_{ob}$		2.0	3.0	pf
Noise Figure $V_{CE}=6\text{V}, I_C=0.1\text{mA}$ $R_g=10\text{K}\ \Omega, f=1\text{KHz}$	NF		1.0	10	dB