

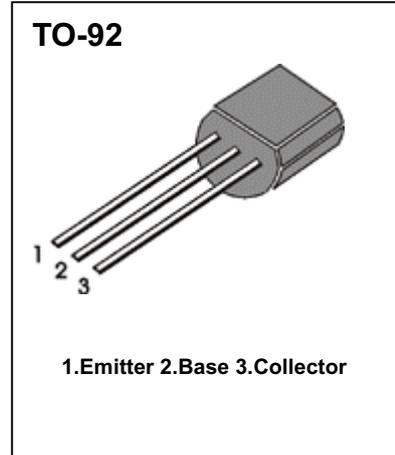
NPN SILICON TRANSISTOR

■ Description

- General Purpose Application
- Switching Transistor

■ Features

- Excellent h_{FE} Linearity.
- Complementary Pair with TIP9012


■ ABSOLUTE MAXIMUM RATINGS

 ($T_A=25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Emitter Current	I_E	-500	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ\text{C}$

■ ELECTRICAL CHARACTERISTICS

 ($T_A=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB}=35\text{V}, I_E=0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=1\text{V}, I_C=50\text{mA}$	96		246	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		0.1	0.25	V
Base-Emitter Voltage	V_{BE}	$I_C=100\text{mA}, V_{CE}=1\text{V}$		0.8	1	V
Transistor Frequency	f_T	$V_{CE}=6\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	140			MHz
Collector Output Capacitance	C_{OB}	$V_{CB}=6\text{V}, I_E=0, f=1\text{MHz}$		7		pF

 h_{FE} CLASSIFICATION

Classification	F	G	H	I
h_{FE}	96-135	118 - 166	144 - 202	176 - 246