

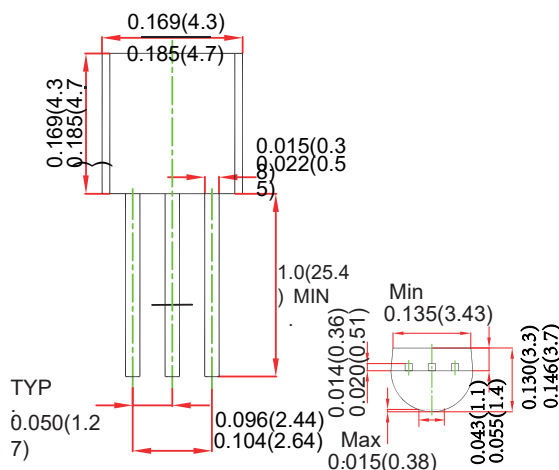
TO-92 Plastic-Encapsulate Transistors

FEATURES

- TRANSISTOR (NPN)
- Complementary to S9012
- Excellent hFE linearity

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.5	A
P	Collector Power Dissipation	625	mW
θ_{JA}	Thermal Resistance from Junction to Ambient	200	°C /W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$, $I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=40\text{V}$, $I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=20\text{V}$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}$, $I_C=50\text{mA}$	64		400	
	$h_{FE(2)}$	$V_{CE}=1\text{V}$, $I_C=500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$			0.6	V
Base-emitter voltage	$V_{BE(sat)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE}=6\text{V}$, $I_C=20\text{mA}$, $f=30\text{MHz}$	150			MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	D	E	F	G	H	I	J
Range	64-91	78-112	96-135	112-166	144-202	190-300	300-400

RATINGS AND CHARACTERISTIC CURVES

Typical Characteristics

