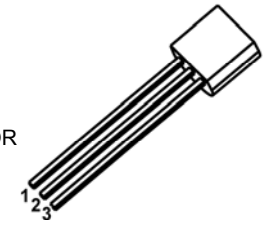
TO-92 Plastic-Encapsulate Transistors

TSC1417 TRANSISTOR (NPN)

TO – 92

1. EMITTER
2. COLLECTOR
3. BASE



FEATURES

- General Purpose Switching and Amplification.

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	20	V
V_{CEO}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current	30	mA
P_C	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	200	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.1mA,I_E=0	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	15			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=0.1mA,I_C=0	3			V
Collector cut-off current	I_{CBO}	V_{CB}=10V,I_E=0			1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=2V,I_C=0			1	μA
DC current gain	h_{FE}	V_{CE}=6V, I_C=1mA	29		270	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA,I_B=1mA			0.5	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$	I_C=10mA,I_B=1mA			1.42	V
Transition frequency	f_T	V_{CE}=6V,I_C=1mA		300		MHz

CLASSIFICATION OF h_{FE}

RANK	D	E	F	G	H	I	J
RANGE	29-45	39-60	54-80	72-108	97-146	132-198	180-270