

## TO-92 Plastic-Encapsulated Transistors

### 2N6517 TRANSISTOR (NPN)

#### FEATURES

Power dissipation

$$P_{CM} : 625 \text{ mW (Tamb=25°C)}$$

Collector current

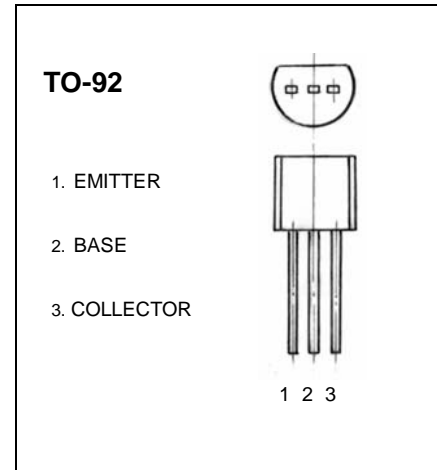
$$I_{CM} : 500 \text{ mA}$$

Collector-base voltage

$$V_{(BR)CBO} : 350 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^\circ\text{C to } +150^\circ\text{C}$$



#### ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100 \mu\text{A}, I_E=0$	350			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1 \text{ mA}, I_B=0$	350			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10 \mu\text{A}, I_C=0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=250 \text{ V}, I_E=0$			50	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5 \text{ V}, I_C=0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=10 \text{ V}, I_C=1 \text{ mA}$	20			
	$h_{FE(2)}$	$V_{CE}=10 \text{ V}, I_C=10 \text{ mA}$	30			
	$h_{FE(3)}$	$V_{CE}=10 \text{ V}, I_C=30 \text{ mA}$	30		200	
	$h_{FE(4)}$	$V_{CE}=10 \text{ V}, I_C=50 \text{ mA}$	20		200	
	$h_{FE(5)}$	$V_{CE}=10 \text{ V}, I_C=100 \text{ mA}$	15			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=10 \text{ mA}, I_B=1 \text{ mA}$			0.3	V
	$V_{CE(sat)(2)}$	$I_C=20 \text{ mA}, I_B=2 \text{ mA}$			0.35	V
	$V_{CE(sat)(3)}$	$I_C=30 \text{ mA}, I_B=3 \text{ mA}$			0.5	V
	$V_{CE(sat)(4)}$	$I_C=50 \text{ mA}, I_B=5 \text{ mA}$			1	V
Base-emitter saturation voltage	$V_{BE(sat)(1)}$	$I_C=10 \text{ mA}, I_B=1 \text{ mA}$			0.75	V
	$V_{BE(sat)(2)}$	$I_C=20 \text{ mA}, I_B=2 \text{ mA}$			0.85	V
	$V_{BE(sat)(3)}$	$I_C=30 \text{ mA}, I_B=3 \text{ mA}$			0.9	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=20 \text{ V}, I_C=10 \text{ mA}$				
Transition frequency	$f_T$	$V_{CE}=10 \text{ V}, I_C=100 \text{ mA}$	40		200	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=20 \text{ V}, I_E=0, f=1 \text{ MHz}$			6	pF