



# TO-92 Plastic-Encapsulate Transistors

## **BC307** TRANSISTOR ( NPN )

### FEATURES

Power dissipation

$$P_{CM}: 0.350 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

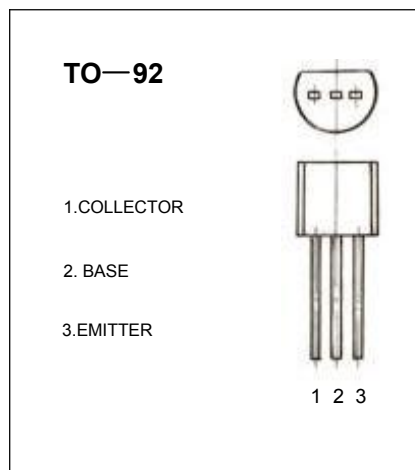
$$I_{CM}: 0.5 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 50 \text{ V}$$

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	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=20 \text{ mA}, I_B=0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-45 \text{ V}, I_E=0$			-15	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5 \text{ V}, I_C=0$			-15	$\mu A$
DC current gain(note)	$V_{CE(sat)}$	$V_{CE}=10 \text{ V}, I_C=2 \text{ mA}$	120		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10 \text{ mA}, I_B=0.5 \text{ mA}$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10 \text{ mA}, I_B=0.5 \text{ mA}$			-0.75	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=5 \text{ V}, I_C=2 \text{ mA}$	-0.55		-0.75	V
Transition frequency	$f_T$	$V_{CE}=5 \text{ V}, I_C=10 \text{ mA}$ $f=50 \text{ MHz}$		130		MHz

### CLASSIFICATION HFE

Rank	1	2	3
Range	100-300	300-500	500-800