

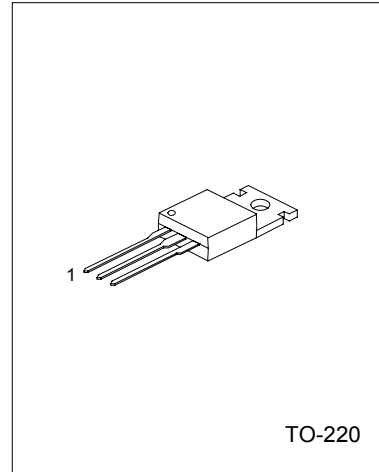
## PNP EPITAXIAL TRANSISTOR

## DESCRIPTION

The UTC TIP107 is designed for using in general purpose amplifier and switching applications.

## FEATURE

- \*Low  $V_{CE(sat)}$
- \*High current gain
- \*Complementary to TIP102



1:BASE 2:COLLECTOR 3:EMITTER

Absolute Maximum Ratings( $T_c=25^\circ\text{C}$ )

Parameter	Symbol	Value	Units
Collector-Base Voltage	$V_{CBO}$	-100	V
Collector-Emitter Voltage	$V_{CEO}$	-100	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current (DC)	$I_C$	-8	A
Collector Current (Pulse)	$I_{CP}$	-15	A
Base Current (DC)	$I_B$	-1	A
Collector Dissipation	$P_C$	80	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	- 65~150	$^\circ\text{C}$

Electrical Characteristics( $T_c=25^\circ\text{C}$ )

Parameter	Symbol	TEST CONDITIONS	MIN.	MAX.	UNIT
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C = -30\text{mA}, I_B = 0$	-100		V
Collector Cut-off Current	$I_{CEO}$	$V_{CE} = -50\text{V}, I_B = 0$		50	$\mu\text{A}$
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -100\text{V}, I_E = 0$		-50	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{BE} = -5\text{V}, I_C = 0$		-2	mA
DC Current Gain	$h_{FE}$	$V_{CE} = -4\text{V}, I_C = -3\text{A}$ $V_{CE} = -4\text{V}, I_C = -8\text{A}$	1000 200	20000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -3\text{A}, I_B = -6\text{mA}$ $I_C = -8\text{A}, I_B = -80\text{mA}$		-2 -2.5	V
Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = -4\text{V}, I_C = -8\text{A}$		-2.8	V
Output Capacitance	$C_{ob}$	$V_{CB} = -10\text{V}, I_E = 0, f = 0.1\text{MHz}$		300	pF

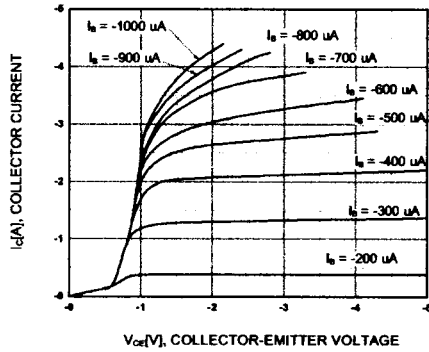


Figure 1. Static Characteristic

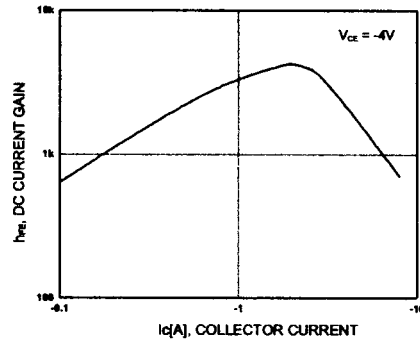


Figure 2. DC current Gain

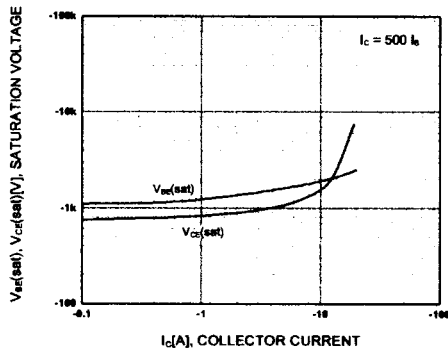


Figure 3. Collector-Emitter Saturation Voltage  
Base-Emitter Saturation Voltage

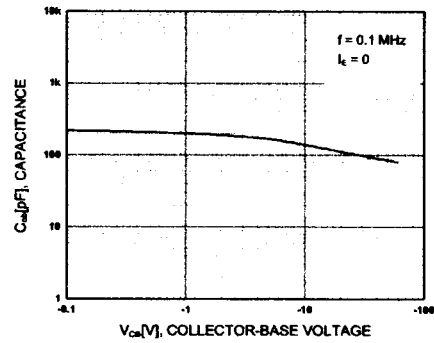


Figure 4. Collector Output Capacitance

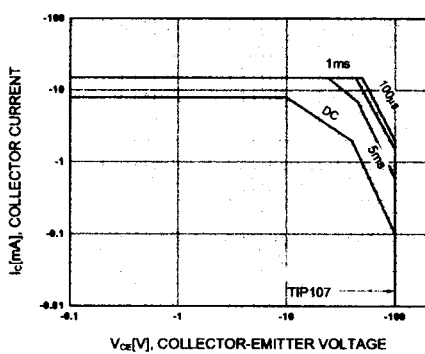


Figure 5. Safe Operating Area

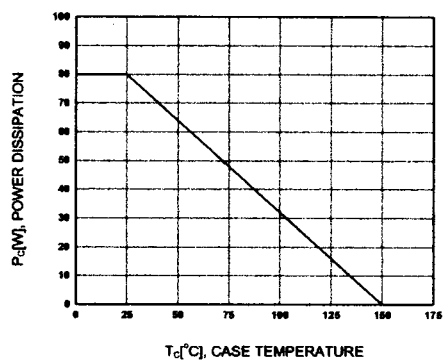


Figure 6. Power Derating

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