

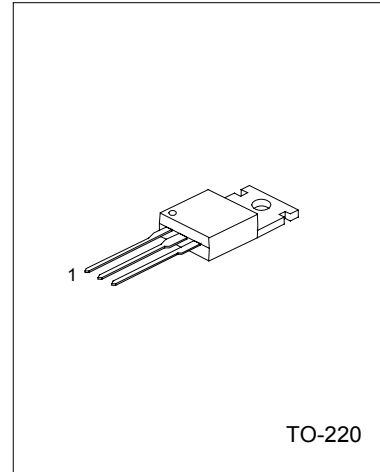
PNP EPITAXIAL TRANSISTOR

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	μA
Collector Cut-off Current	I_{CBO}	$V_{CB} = -100\text{V}$, $I_E = 0$		-50	μA
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 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

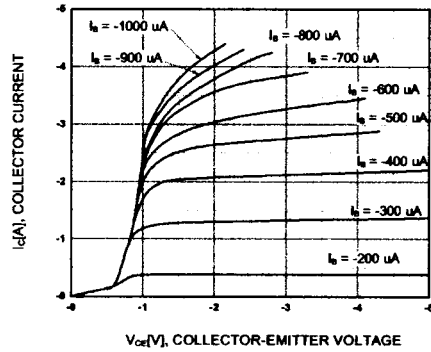


Figure 1. Static Characteristic

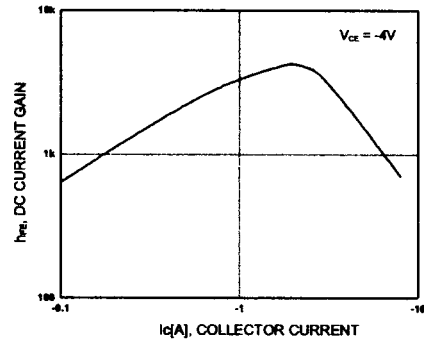


Figure 2. DC current Gain

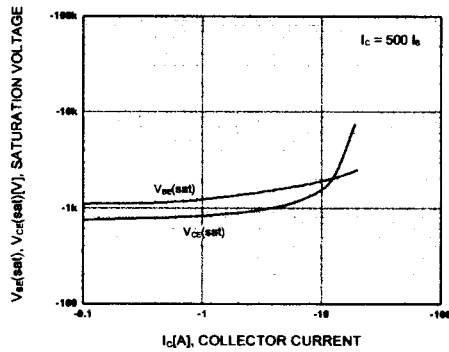


Figure 3. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

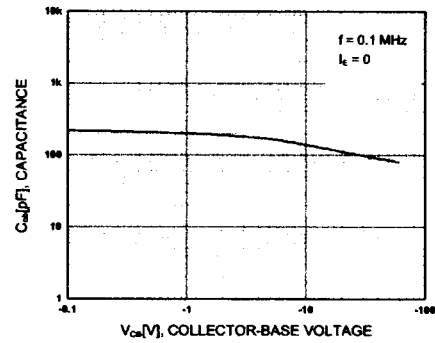


Figure 4. Collector Output Capacitance

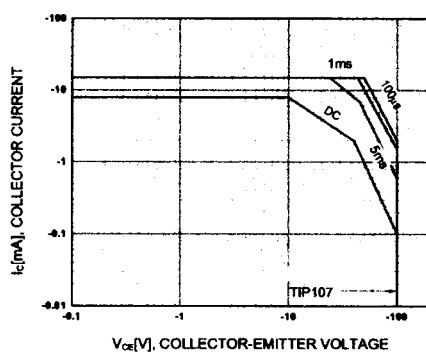


Figure 5. Safe Operating Area

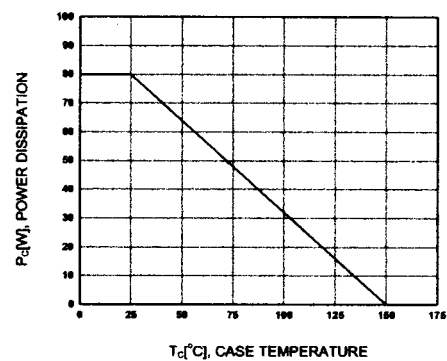


Figure 6. Power Derating

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