



# TIP107

## PNP SILICON TRANSISTOR

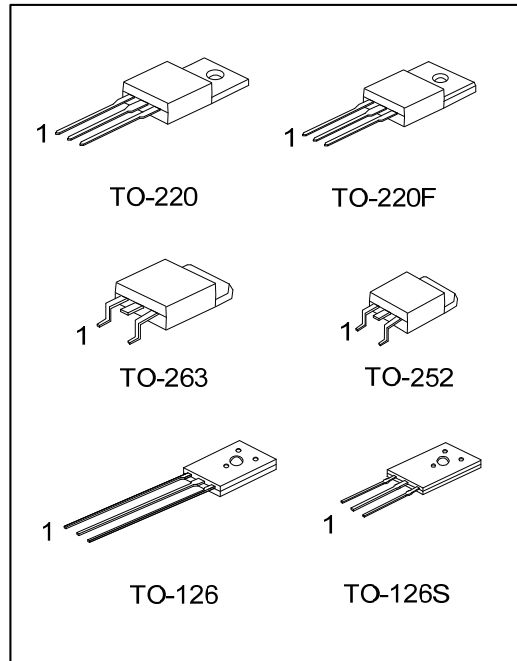
### PNP EPITAXIAL TRANSISTOR

■ DESCRIPTION

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

■ FEATURES

- \* Low  $V_{CE(SAT)}$
- \* High Current Gain
- \* Complementary to TIP102



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TIP107L-TA3-T	TIP107G-TA3-T	TO-220	B	C	E	Tube
TIP107L-TF3-T	TIP107G-TF3-T	TO-220F	B	C	E	Tube
TIP107L-TN3-R	TIP107G-TN3-R	TO-252	B	C	E	Tape Reel
TIP107L-TQ2-T	TIP107G-TQ2-T	TO-263	B	C	E	Tube
TIP107L-TQ2-R	TIP107G-TQ2-R	TO-263	B	C	E	Tape Reel
TIP107L-T60-K	TIP107G-T60-K	TO-126	E	C	B	Bulk
TIP107L-T6S-K	TIP107G-T6S-K	TO-126S	E	C	B	Bulk

Note: Pin Assignment: B: Base C: Collector E: Emitter

<p>TIP107G-TA3-T</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel, T: Tube, K: Bulk (2) TA3: TO-220, TF3: TO-220F, TN3: TO-252 TQ2: TO-263, T60: TO-126, T6S: TO-126S (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

TO-220 / TO-220F / TO-252 / TO-263	TO-126 / TO-126S

■ ABSOLUTE MAXIMUM RATING ( $T_C=25^\circ\text{C}$ , unless otherwise specified)

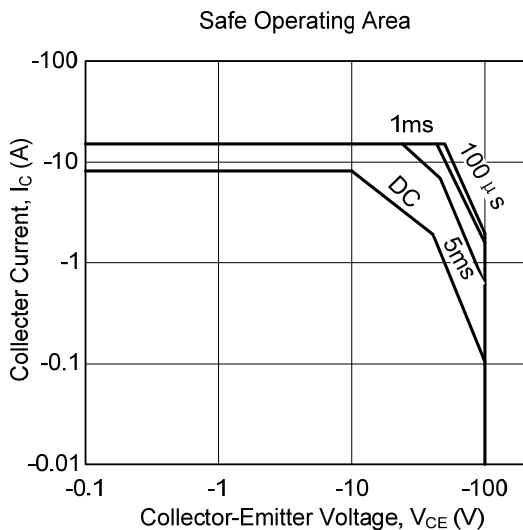
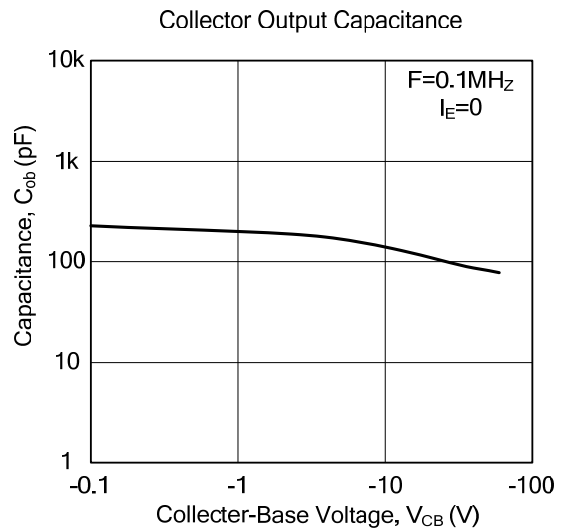
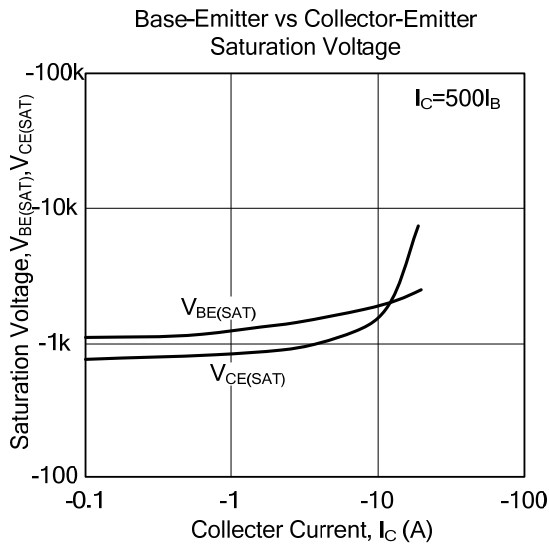
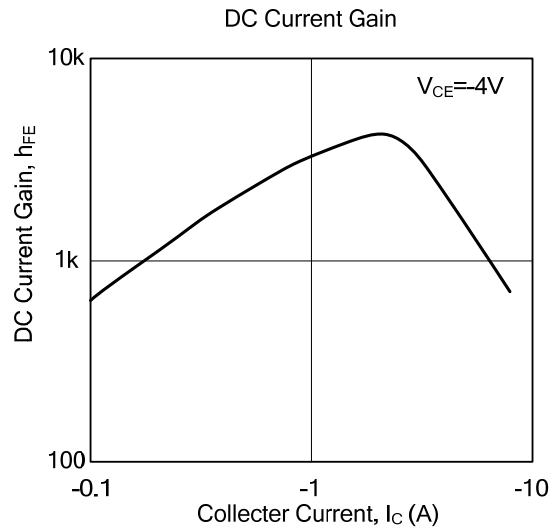
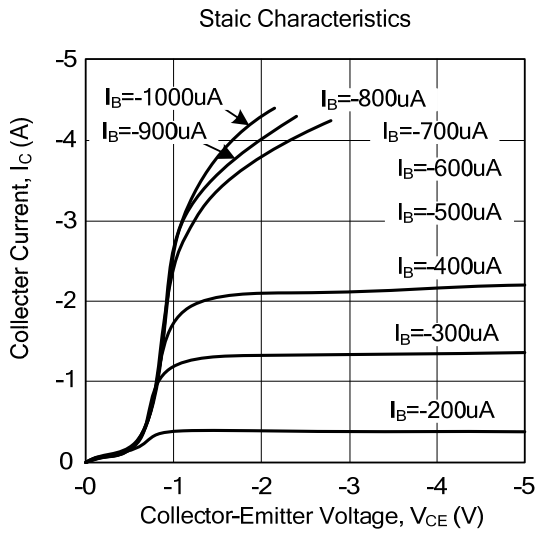
PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CBO}$	-100	V
Collector-Emitter Voltage		$V_{CES}$	-100	V
Emitter-Base Voltage		$V_{EBO}$	-5	V
Collector Current	DC	$I_C$	-8	A
	Pulse	$I_{CP}$	-15	A
Base Current	DC	$I_B$	-1	A
Collector Power Dissipation	TO-220/TO-263	$P_C$	80	W
	TO-220F			
	TO-252		41	W
	TO-126/TO-126S		10	W
Junction Temperature		$T_J$	+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-65 ~ +150	$^\circ\text{C}$

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C=-30\text{mA}$ , $I_B=0\text{A}$	-100			V
Collector-Base Cut-Off Current	$I_{CBO}$	$V_{CB}=-100\text{V}$ , $I_E=0\text{A}$			-50	$\mu\text{A}$
Collector-Emitter Cut-Off Current	$I_{CEO}$	$V_{CE}=-50\text{V}$ , $I_B=0\text{A}$			50	$\mu\text{A}$
Emitter-Base Cut-Off Current	$I_{EBO}$	$V_{EB}=-5\text{V}$ , $I_C=0\text{A}$			-2	mA
<b>ON CHARACTERISTICS</b>						
DC Current Gain	$h_{FE1}$	$V_{CE}=-4\text{V}$ , $I_C=-3\text{A}$	1000		20000	
	$h_{FE2}$	$V_{CE}=-4\text{V}$ , $I_C=-8\text{A}$	200			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-3\text{A}$ , $I_B=-6\text{mA}$			-2	V
		$I_C=-8\text{A}$ , $I_B=-80\text{mA}$			-2.5	V
Base-Emitter ON Voltage	$V_{BE(ON)}$	$V_{CE}=-4\text{V}$ , $I_C=-8\text{A}$			-2.8	V
<b>SMALL-SIGNAL CHARACTERISTICS</b>						
Output Capacitance	$C_{ob}$	$V_{CB}=-10\text{V}$ , $I_E=0\text{A}$ , $f=0.1\text{MHZ}$			300	pF

## ■ TYPICAL CHARACTERISTICS



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