



TIP107

PNP SILICON TRANSISTOR

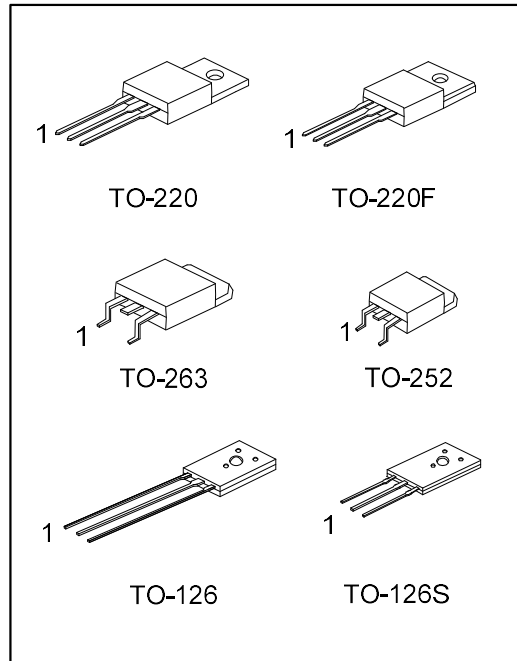
PNP EPITAXIAL TRANSISTOR

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) T: Tube, R: Tape Reel, 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)

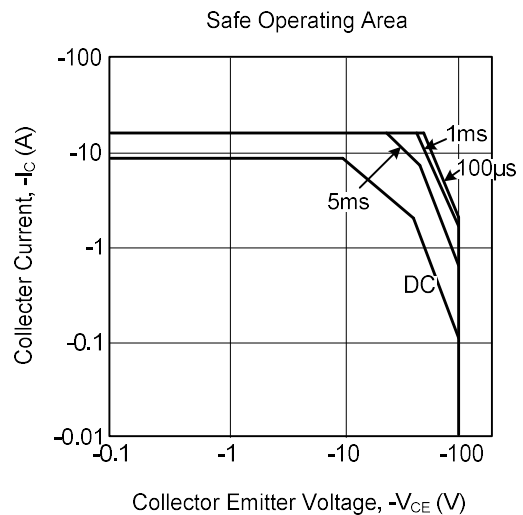
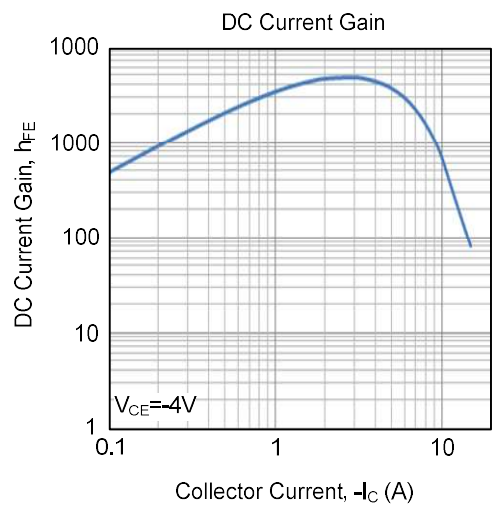
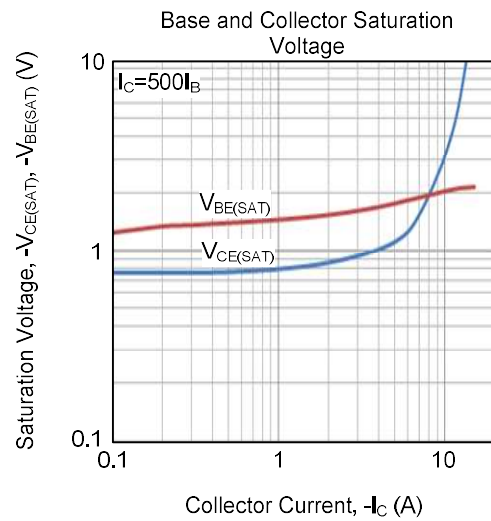
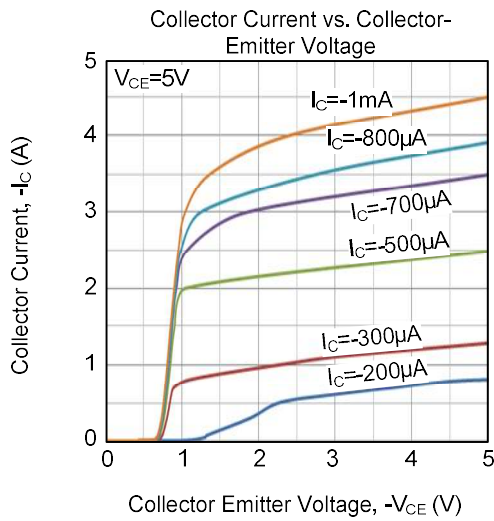
PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CES}	-100	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	DC	I_C	-8
	Pulse	I_{CP}	-15
Base Current	DC	I_B	-1
Collector Power Dissipation	TO-220/TO-263	P_C	80
	TO-220F		
	TO-252		41
	TO-126/TO-126S		10
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	μA
Collector-Emitter Cut-Off Current	I_{CEO}	$V_{CE}=-50\text{V}$, $I_B=0\text{A}$			50	μA
Emitter-Base Cut-Off Current	I_{EBO}	$V_{EB}=-5\text{V}$, $I_C=0\text{A}$			-2	mA
ON CHARACTERISTICS						
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 Saturation Voltage	$V_{BE(SAT)}$	$I_C=-8\text{A}$, $I_B=-80\text{mA}$			-3.5	V
Base-Emitter ON Voltage	$V_{BE(ON)}$	$V_{CE}=-4\text{V}$, $I_C=-8\text{A}$			-2.8	V
RESISTIVE-LOAD-SWITCHING CHARACTERISTICS						
Delay time	t_D	$V_{CC}=-30\text{V}$, $I_C=-5\text{A}$, $I_{B1}=-20\text{mA}$, $I_{B2}=20\text{mA}$, $R_L=6\Omega$		0.25		μs
Rise time	t_R			4.1		μs
Storage time	t_{STG}				1.2	μs
Fall time	t_F				1.7	μs
SMALL-SIGNAL CHARACTERISTICS						
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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