



# TIP32C

## PNP SILICON TRANSISTOR

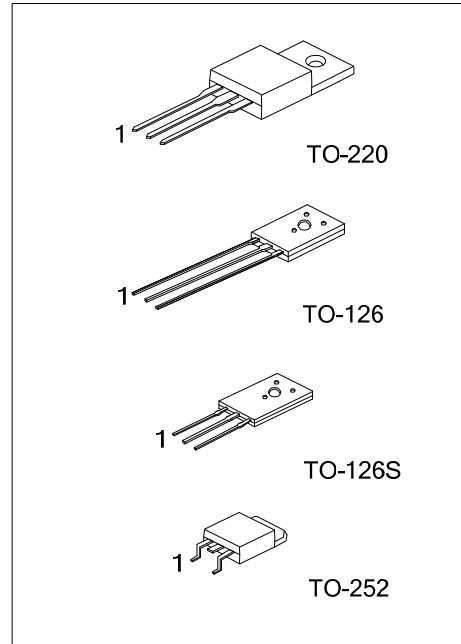
### PNP EXPITAXIAL PLANAR TRANSISTOR

■ DESCRIPTION

The UTC **TIP32C** is a PNP epitaxial planar transistor, designed for using in general purpose amplifier and switching applications.

■ FEATURES

\* Complement to TIP31C



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TIP32CL-TA3-T	TIP32CG-TA3-T	TO-220	B	C	E	Tube
TIP32CL-T60-K	TIP32CG-T60-K	TO-126	B	C	E	Bulk
TIP32CL-T60-A-K	TIP32CG-T60-A-K	TO-126	E	C	B	Bulk
TIP32CL-T6S-K	TIP32CG-T6S-K	TO-126S	B	C	E	Bulk
TIP32CL-TN3-R	TIP32CG-TN3-R	TO-252	B	C	E	Tape Reel

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

<p>TIP32CG-T60-A-K</p> <p>(1)Packing Type (2)Pin Assignment (3)Package Type (4)Green Package</p>	<p>(1) T: Tube, K: Bulk, R: Tape Reel (2) Refer to Pin Assignment (3) TA3: TO-220, T60: TO-126, T6S: TO-126S TN3: TO-252 (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

TO-220 / TO-252	TO-126 / TO-126S
<p>UTC TIP32C □ □ □ □ □ □ □ □ □ Lot Code ← → Date Code</p> <p>L: Lead Free G: Halogen Free</p>	<p>UTC □ □ □ □ TIP32C □ 1 → Date Code → L: Lead Free → G: Halogen Free</p>

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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CB0}$	-100	V
Emitter-Base Voltage		$V_{EB0}$	-5	V
Collector Current	DC	$I_C$	-3	A
	Pulse	$I_{CM}$	-5	A
Base Current		$I_B$	-1	A
Power Dissipation	TO-220	$P_D$	2	W
	TO-126/TO-126S		0.9	W
	TO-252		1.25	W
Junction Temperature		$T_J$	+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-40 ~ +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.

■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	TO-220	$\theta_{JA}$	62.5	$^\circ\text{C/W}$
	TO-126/TO-126S		138.9	$^\circ\text{C/W}$
	TO-252		100	$^\circ\text{C/W}$

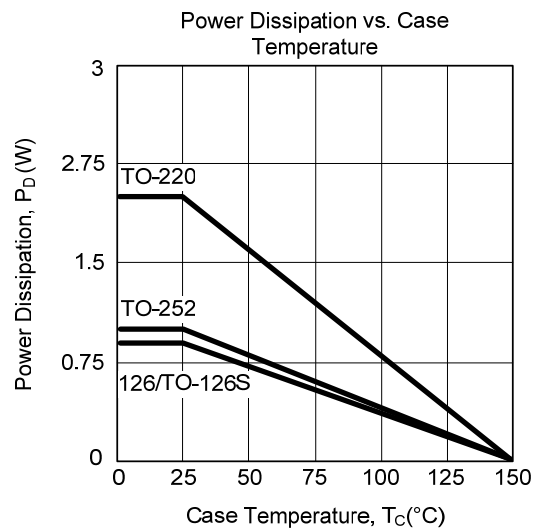
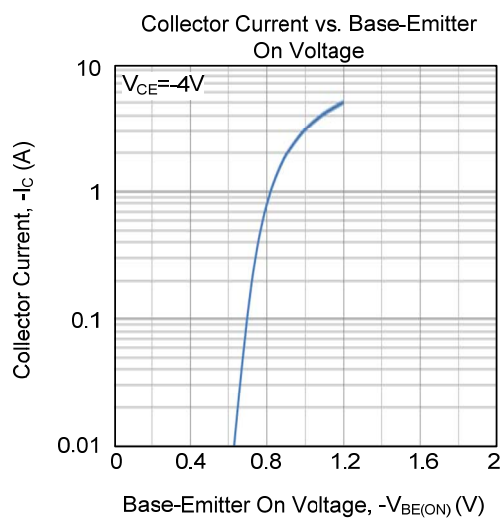
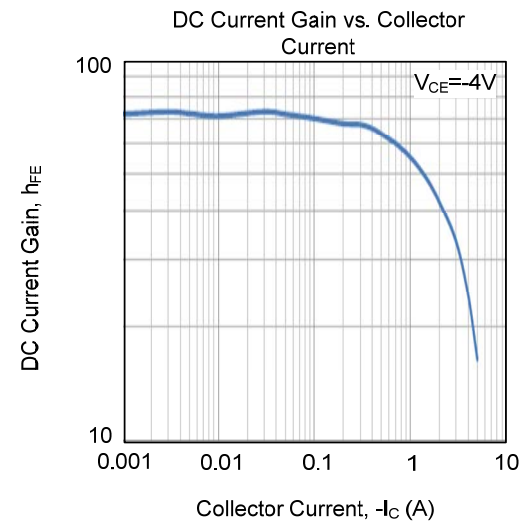
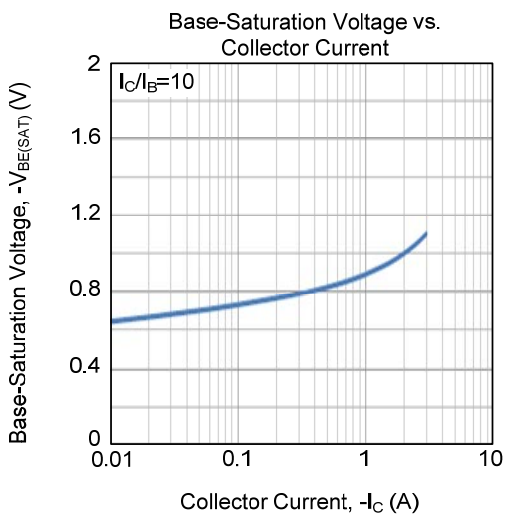
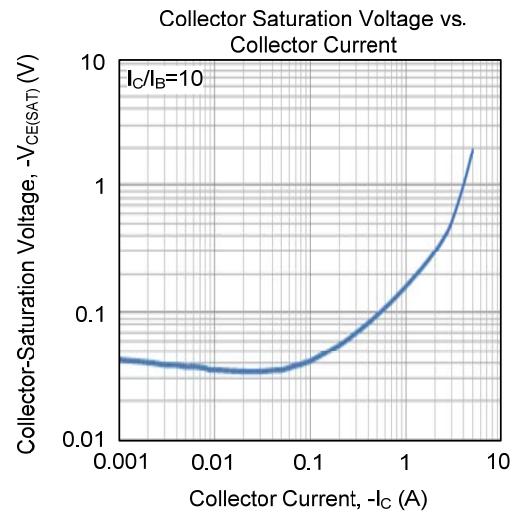
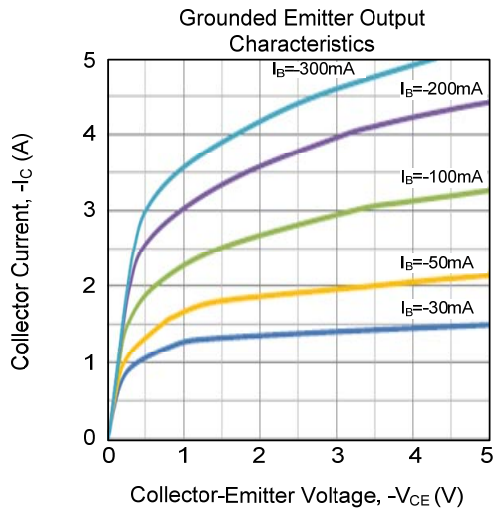
Note: Device mounted on FR-4 substrate  $P_c$  board, 2oz copper, with 1inch square copper plate.

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

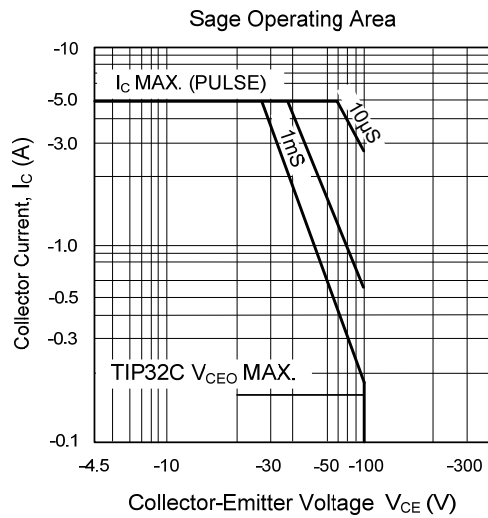
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Sustaining Voltage (Note)	$BV_{CEO}$	$I_C=-30\text{mA}, I_B=0$	-100			V
Collector Cutoff Current	$I_{CES}$	$V_{CE}=-100\text{V}, V_{BE}=0$			-20	$\mu\text{A}$
Collector Cutoff Current	$I_{CEO}$	$V_{CE}=-60\text{V}, I_B=0$			-50	$\mu\text{A}$
Emitter Cutoff current	$I_{EBO}$	$V_{EB}=-5\text{V}, I_C=0$			-1	mA
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)}$	$I_C=-3\text{A}, I_B=-375\text{mA}$			-1.2	V
Base-Emitter On Voltage	$V_{BE(ON)}$	$I_C=-3\text{A}, V_{CE}=-4\text{A}$			-1.8	V
DC Current Gain (Note)	$h_{FE}$	$I_C=-1\text{A}, V_{CE}=-4\text{V}$	25			
		$I_C=-3\text{A}, V_{CE}=-4\text{V}$	10		50	
Current Gain Bandwidth Product	$f_T$	$I_C=-0.5\text{A}, V_{CE}=-10\text{V}, f=1\text{MHz}$	3			MHz

Note: Pulse Test:  $P_W \leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

## TYPICAL CHARACTERISTICS



### ■ TYPICAL CHARACTERISTICS



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