



# TIP42C

## PNP PLANAR TRANSISTOR

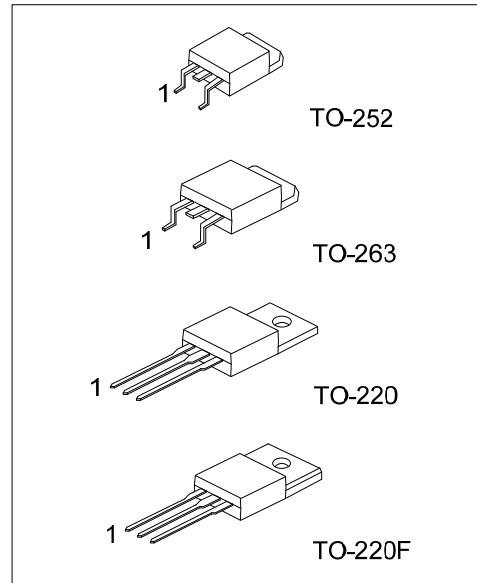
### PNP EPITAXIAL PLANAR TRANSISTOR

■ DESCRIPTION

The UTC **TIP42C** is a PNP epitaxial planar transistor, designed for using in general purpose amplifier and switching applications.

■ FEATURES

\* Complement to TIP41C



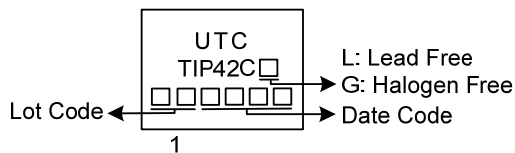
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TIP42CL-x-TA3-T	TIP42CG-x-TA3-T	TO-220	B	C	E	Tube
TIP42CL-x-TF3-T	TIP42CG-x-TF3-T	TO-220F	B	C	E	Tube
TIP42CL-x-TN3-R	TIP42CG-x-TN3-R	TO-252	B	C	E	Tape Reel
TIP42CL-x-TN3-T	TIP42CG-x-TN3-T	TO-252	B	C	E	Tube
TIP42CL-x-TQ2-R	TIP42CG-x-TQ2-R	TO-263	B	C	E	Tape Reel
TIP42CL-x-TQ2-T	TIP42CG-x-TQ2-T	TO-263	B	C	E	Tube

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

<p>TIP42CG-x-TA3-T</p>	<p>(1) T: Tube, R: Tape Reel                  (2) TA3: TO-220, TF3: TO-220F, TN3: TO-252, TQ2: TO-263                  (3) x: refer to Classification of <math>h_{FE2}</math>                  (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING



■ ABSOLUTE MAXIMUM RATING (unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector Base Voltage		$V_{CBO}$	-100	V
Collector to Emitter Voltage		$V_{CEO}$	-100	V
Emitter-Base Voltage		$V_{EBO}$	-5	V
Collector Current (DC)		$I_C$	-6	A
Collector Current (Pulse)		$I_C$	-10	A
Base Current		$I_B$	-2	A
Collector Dissipation ( $T_C=25^\circ\text{C}$ )	TO-220/TO-263	$P_C$	65	W
	TO-220F		22	
	TO-252		20	
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 ( $T_C=25^\circ\text{C}$ )

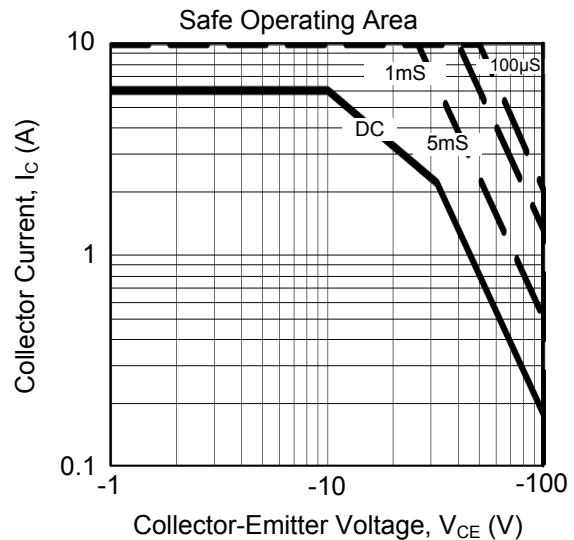
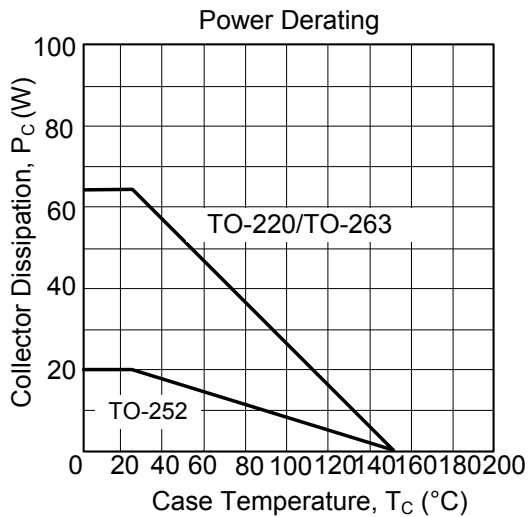
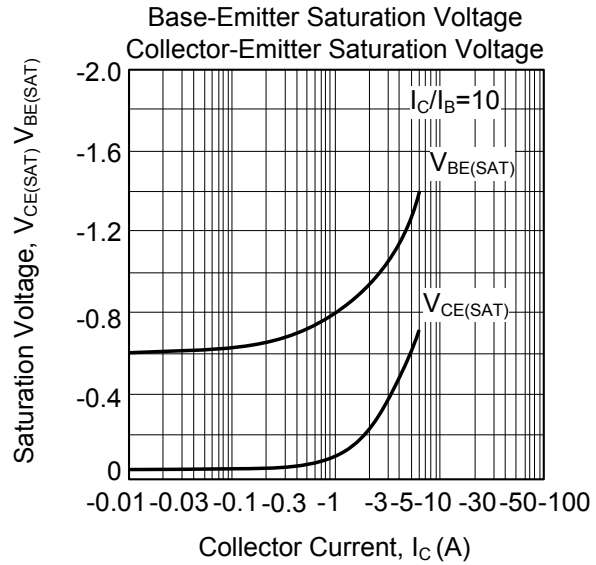
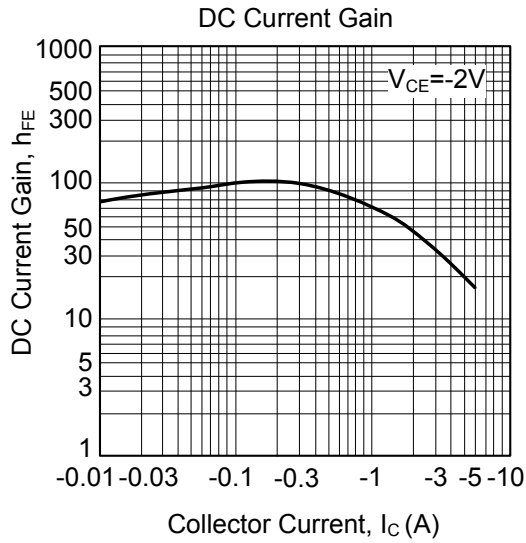
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage (Note)	$BV_{CEO}$	$I_C=-30\text{mA}, I_B=0$	-100			V
Collector Cutoff Current	$I_{CEO}$	$V_{CE}=-60\text{V}, I_B=0$			-0.7	mA
Collector Cutoff Current	$I_{CES}$	$V_{CE}=-100\text{V}, V_{EB}=0$			-400	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{BE}=-5\text{V}, I_C=0$			-1	mA
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)}$	$I_C=-6\text{A}, I_B=-600\text{mA}$			-1.5	V
Base-Emitter on Voltage (Note)	$V_{BE(ON)}$	$V_{CE}=-4\text{V}, I_C=-6\text{A}$			-2.0	V
DC Current Gain (Note)	$h_{FE1}$	$V_{CE}=-4\text{V}, I_C=-300\text{mA}$	30			
	$h_{FE2}$	$V_{CE}=-4\text{V}, I_C=-3\text{A}$	15		75	
Current Gain Bandwidth Product	$f_T$	$V_{CE}=-10\text{V}, I_C=-500\text{mA}, f=1\text{MHz}$	3			MHz

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

■ CLASSIFICATION OF  $h_{FE2}$

RANK	A	B	C
RANGE	15~30	28~48	45~75

### TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.