



## TIP42C-Q

## PNP PLANAR TRANSISTOR

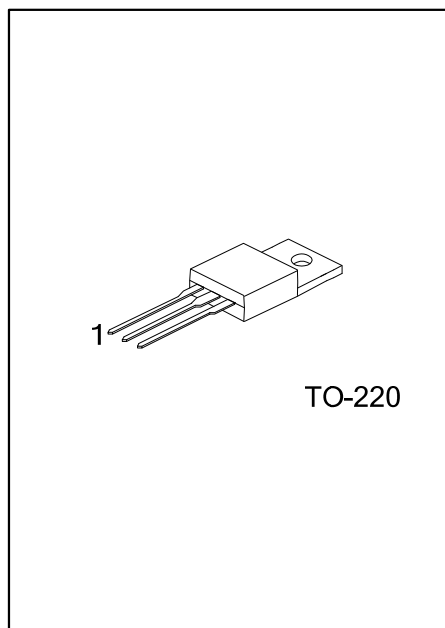
### PNP EPITAXIAL PLANAR TRANSISTOR

#### DESCRIPTION

The UTC **TIP42C-Q** 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-Q-x-TA3-T	TIP42CG-Q-x-TA3-T	TO-220	B	C	E	Tube

<p>TIP42CL-Q-x-TA3-T</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Rank</p> <p>(4) Lead Free</p>	<p>(1) T: Tube</p> <p>(2) TA3: TO-220</p> <p>(3) x: refer to Classification of <math>h_{FE2}</math></p> <p>(4) L: Lead Free, G: Halogen Free</p>
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#### MARKING INFORMATION

PACKAGE	MARKING
TO-220	<p>UTC</p> <p>TIP42C</p> <p>Lot Code</p> <p>1</p> <p>L: Lead Free</p> <p>G: Halogen Free</p> <p>Data Code</p>

■ 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 ( $T_C=25^\circ\text{C}$ )	$P_C$	65	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 ( $T_C=25^\circ\text{C}$ )

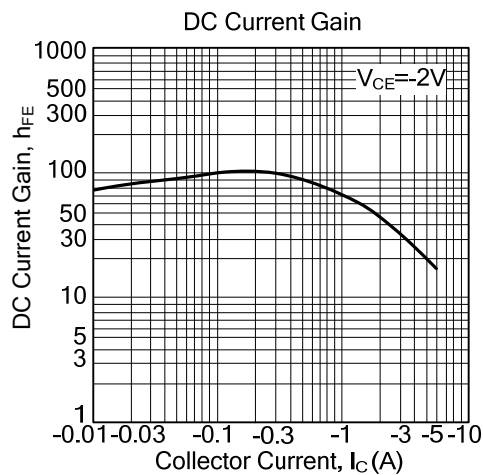
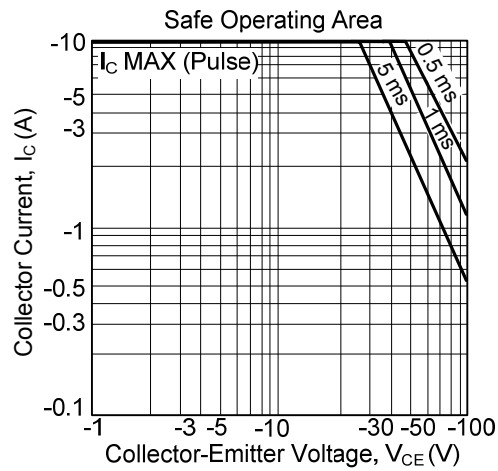
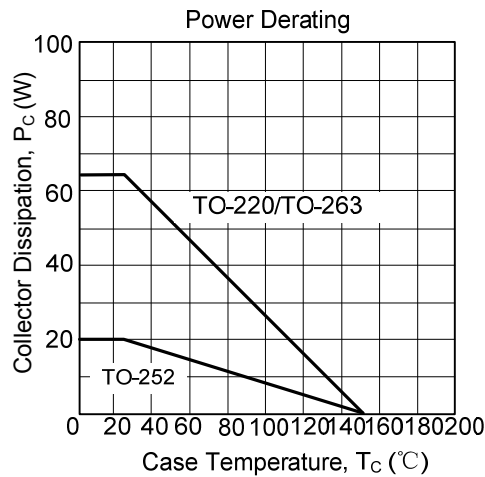
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage (Note)	$BV_{CEO}$	$I_C=-1\text{mA}$ , $I_B=0$	-100			V
Collector Cutoff Current	$I_{CEO}$	$V_{CE}=-60\text{V}$ , $I_B=0$			-0.7	mA
Collector Cutoff Current	$I_{CES}$	$V_{CE}=-100\text{V}$ , $V_{EB}=0$			-400	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{BE}=-5\text{V}$ , $I_C=0$			-1	mA
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)}$	$I_C=-6\text{A}$ , $I_B=-600\text{mA}$			-2.2	V
Base-Emitter on Voltage (Note)	$V_{BE(ON)}$	$V_{CE}=-4\text{V}$ , $I_C=-6\text{A}$			-2.4	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



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