



TIP42C-Q

PNP PLANAR TRANSISTOR

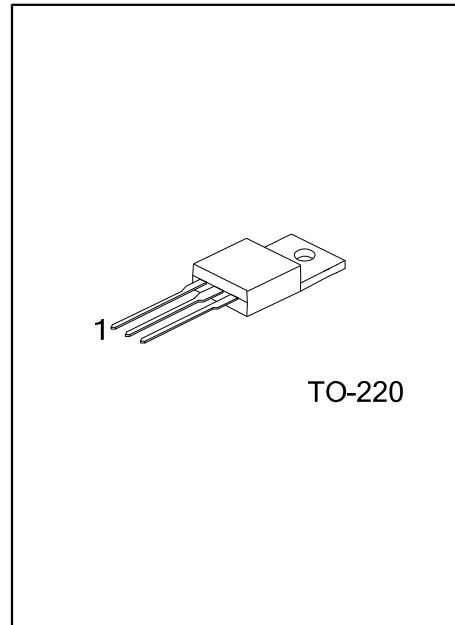
PNP EPITAXIAL PLANAR TRANSISTOR

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

PACKAGE	MARKING
TO-220	<p>UTC TIP42C □ □□□□□□ □ Lot Code ← → Data Code</p> <p>L: Lead Free G: Halogen Free</p> <p>1</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 ($T_C=25^\circ\text{C}$)

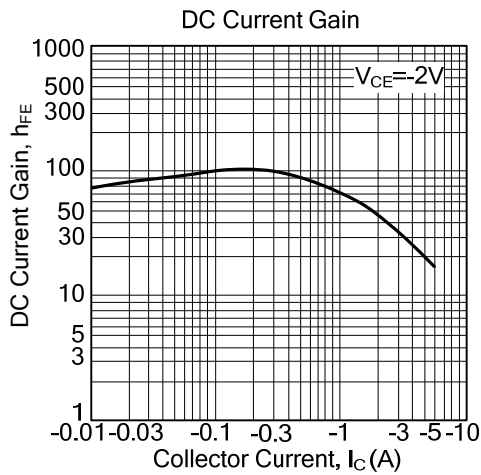
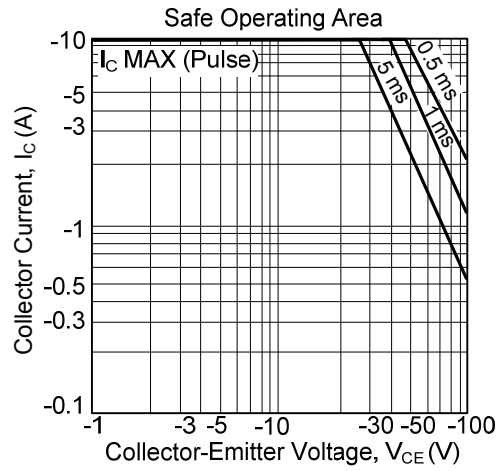
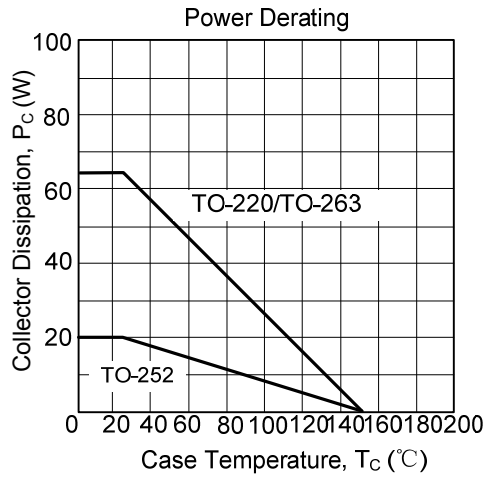
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage (Note)	BV_{CEO}	$I_C=-1\text{mA}, I_B=0$	-100			V
Collector Cutoff Current	I_{CEO}	$V_{CE}=-60\text{V}, I_B=0$			-0.7	mA
Collector Cutoff Current	I_{CES}	$V_{CE}=-100\text{V}, V_{EB}=0$			-400	μA
Emitter Cutoff Current	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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