

UTC TIP42C

NPNEPITAXIAL PLANAR TRANSISTOR

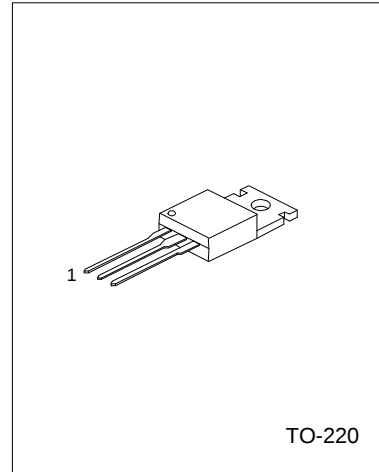
NPN EXPITAXIAL PLANAR TRANSISTOR

DESCRIPTION

The UTC TIP42C is a NPN expitaxial planar transistor, designed for using in general purpose amplifier and switching applications.

FEATURE

*Complement to tip41C



1:BASE 2:COLLECTOR 3:EMITTER

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	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
Collector Dissipation($T_A=25^{\circ}\text{C}$)	P_C	2	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-65 ~ +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS($T_C=25^{\circ}\text{C}$)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Sustaining voltage(*)	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	μA
Emitter Cutoff current	I_{EBO}	$V_{BE}=-5\text{V}, I_C=0$			-1	mA
Collector-Emitter Saturation Voltage(*)	$V_{CE(sat)}$	$I_C=-6\text{A}, I_B=-600\text{mA}$			-1.5	V
Base-Emitter On Voltage(*)	$V_{BE(on)}$	$I_C=-6\text{A}, V_{CE}=-4\text{V}$			-2.0	V
DC Current Gain(*)	h_{FE}	$I_C=-300\text{mA}, V_{CE}=-4\text{V}$ $I_C=-3\text{A}, V_{CE}=-4\text{V}$	30 15		75	
Current gain Bandwidth Product	f_T	$V_{CE}=-10\text{V}, I_C=-500\text{mA}, f=1\text{MHz}$	3			MHz

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

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