

UTC TIP31C NPN EXPITAXIAL PLANAR TRANSISTOR

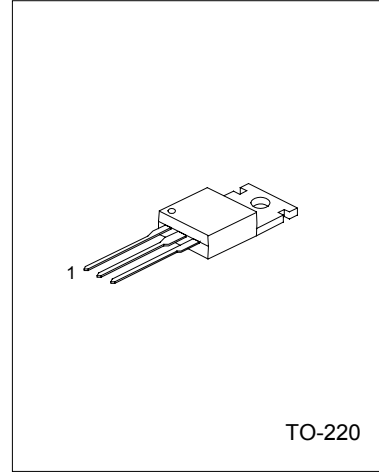
NPN EXPITAXIAL PLANAR TRANSISTOR

DESCRIPTION

The UTC TIP31C is a NPN epitaxial planar transistor, designed for using in general purpose amplifier and switching applications.

FEATURE

*Complement to tip32C



1:BASE 2:COLLECTOR 3:EMITTER

ABSOLUTE MAXIMUM RATINGS

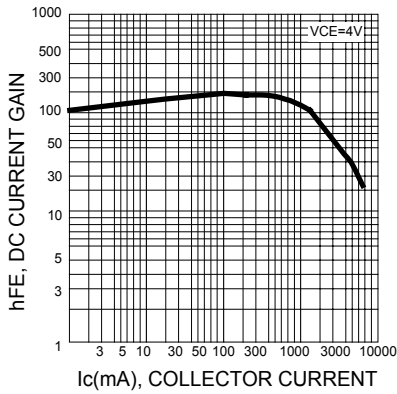
PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	V _{CB0}	100	V
Collector to Emitter Voltage	V _{CEO}	100	V
Emitter To Base Voltage	V _{EB0}	5	V
Collector Current(DC)	I _c	3	A
Collector Current(Pulse)	I _c	5	A
Base Current	I _B	1	A
Collector Dissipation(T _c =25°C)	P _c	40	W
Collector Dissipation(T _a =25°C)	P _c	2	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-65 ~ +150	°C

ELECTRICAL CHARACTERISTICS (T_c=25°C)

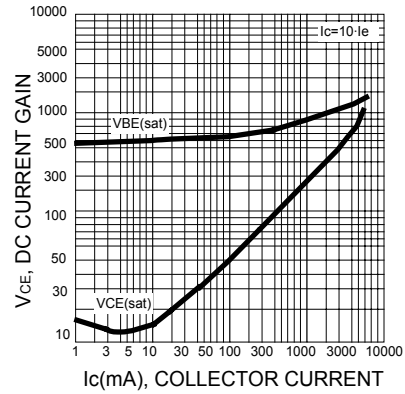
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Sustaining Voltage(*)	BV _{CEO}	I _c =30mA, I _B =0	100			V
Collect Cutoff Current	I _{CES}	V _{CB} =100V, V _{EB} =0			200	μA
Collector Cutoff Current	I _{CEO}	V _{CE} =60V, I _B =0			0.3	mA
Emitter Cutoff Current	I _{EBO}	V _{BE} =5V, I _c =0			1	mA
Collector-Emitter Saturation Voltage(*)	V _{CE(sat)}	I _c =3A, I _B =375mA			1.2	V
Base-Emitter On Voltage(*)	V _{BE(on)}	I _c =3A, V _{CE} =4V			1.8	V
DC Current Gain(*)	h _{FE}	I _c =1A, V _{CE} =4V	25			
		I _c =3A, V _{CE} =4V	10		50	
Current Gain Bandwidth Product	f _T	I _c =0.5A, V _{CE} =10V f=1MHz	3			MHz

*Pulse Test: PW<=300μs, Duty Cycle<=2%

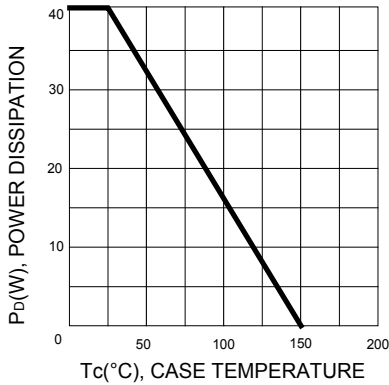
DC CURRENT GAIN



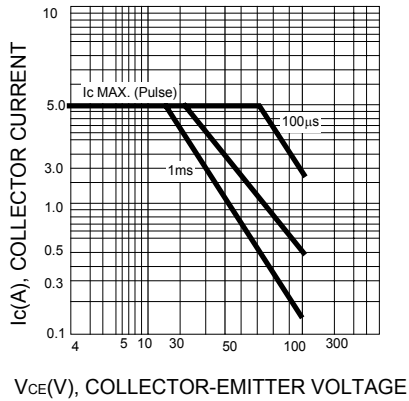
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



POWER DERATING



SAFE OPERATING AREA



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