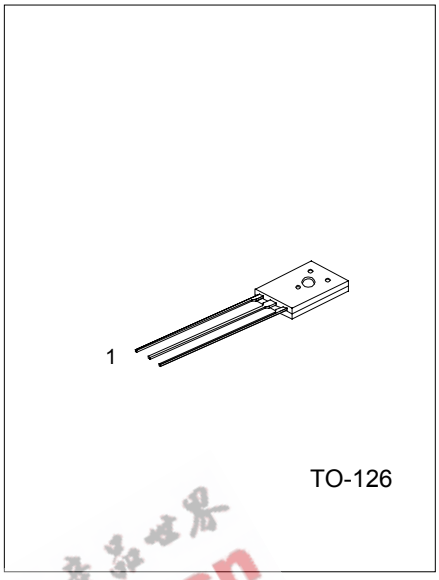
NPN EPITAXIAL TRANSISTOR

DESCRIPTION

The UTC TIP122 is a NPN epitaxial transistor, designed for use in general purpose amplifier low-speed switching applications.



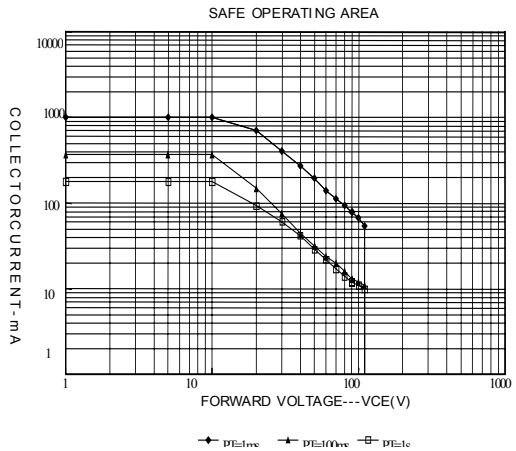
1:EMITTER 2:COLLECTOR 3:BASE

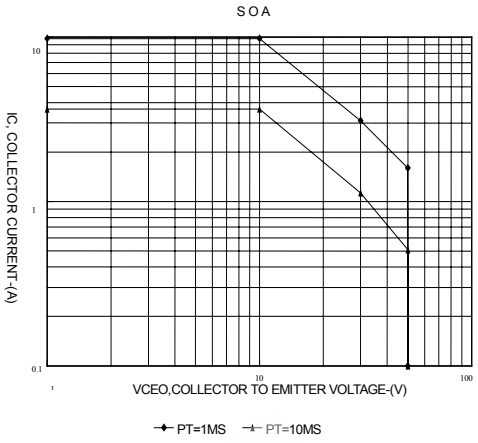
ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

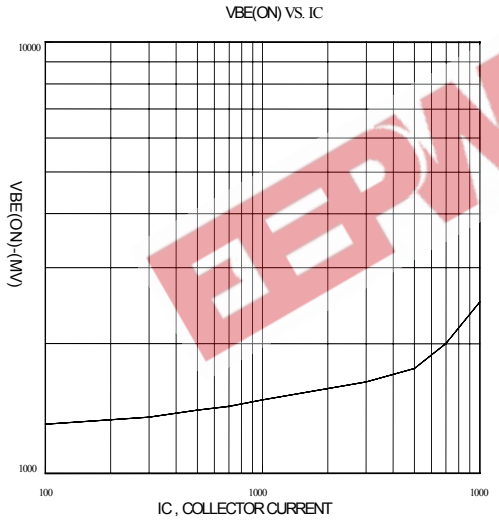
PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	100	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	Ic	5	A
Collector Dissipation (Tc=25℃)	P_C	40	W
Storage Temperature	Tstg	-55 ~ +150	°C
Junction Temperature	Tj	150	°C

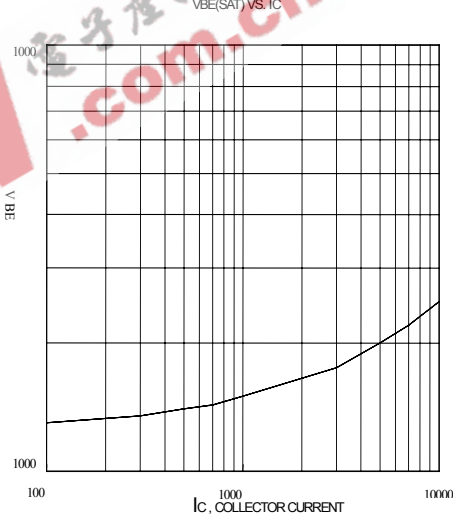
ELECTRICAL CHARACTERISTICS(Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=100mA	100			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=100V			200	uA
Collector-Cut-Off Current	I_{CEO}	V_{CE}=50V			500	uA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5V			2	mA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)1}$	I_C=3A, I_B=12mA			2	V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)2}$	I_C=5A, I_B=20mA			4	V
Base-Emitter Saturation Voltage	$V_{BE(ON)}$	V_{CE}=3V, I_C=3A			2.5	V
DC Current Gain	h_{FE}	I_C=500mA, V_{CE}=3V I_C=3A, V_{CE}=3V	1000 1000			


SAFE OPERATING AREA
COLLECTOR CURRENT-mA
10000
1000
100
10
1
1
10
100
1000
FORWARD VOLTAGE---VCE(V)


SOA
IC, COLLECTOR CURRENT-(A)
10
1
0.1
1
10
100
VCEO,COLLECTOR TO EMITTER VOLTAGE-(V)
PT=1MS
PT=10MS


VBE(ON) VS. IC
VBE(ON)-(MV)
10000
1000
100
1000
1000
IC , COLLECTOR CURRENT


VBE(SAT) VS. IC
V BE
1000
1000
100
1000
10000
IC , COLLECTOR CURRENT