



TIP122

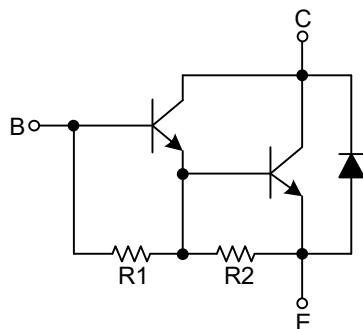
NPN SILICON TRANSISTOR

NPN EPITAXIAL TRANSISTOR

DESCRIPTION

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

EQUIVALENT TEST



($R_1 \approx 7k\Omega$, $R_2 \approx 0.2k\Omega$)

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TIP122L-T60-K	TIP122G-T60-K	TO-126	E	C	B	Bulk
TIP122L-TA3-T	TIP122G-TA3-T	TO-220	B	C	E	Tube
TIP122L-TF3-T	TIP122G-TF3-T	TO-220F	B	C	E	Tube
TIP122L-T80-T	TIP122G-T80-T	TO-220HJ	B	C	E	Tube
TIP122L-TN3-R	TIP122G-TN3-R	TO-252	B	C	E	Tape Reel

Note: Pin Assignment: E: Emitter C: Collector B: Base

TIP122G-T60-K (1) Packing Type (2) Package Type (3) Green Package	(1) K: Bulk, T: Tube, R: Tape Reel (2) T60: TO-126, TA3: TO-220, TF3: TO-220F T80: TO-220HJ, TN3: TO-252 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

TO-220 / TO-220F / TO-220HJ / TO-252	TO-126
 UTC TIP122 Lot Code L: Lead Free G: Halogen Free Date Code	 UTC TIP122 Date Code L: Lead Free G: Halogen Free

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

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
IC Collector Current		I_C	5	A
Power Dissipation ($T_C=25^{\circ}\text{C}$)	TO-126	P_D	10	W
	TO-220		65	W
	TO-220HJ			
	TO-220F		30	W
	TO-252		38	W
Junction Temperature		T_J	+150	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-55 ~ +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.

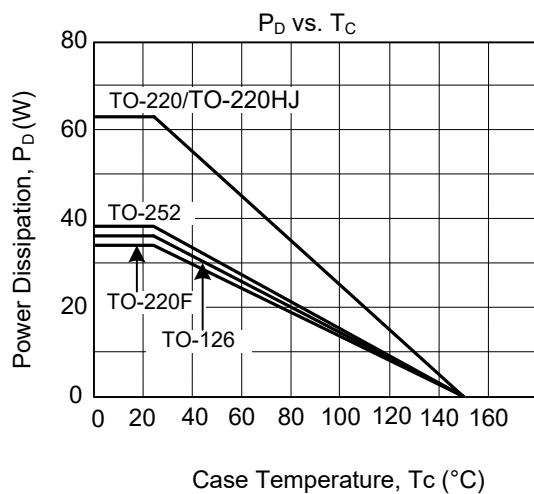
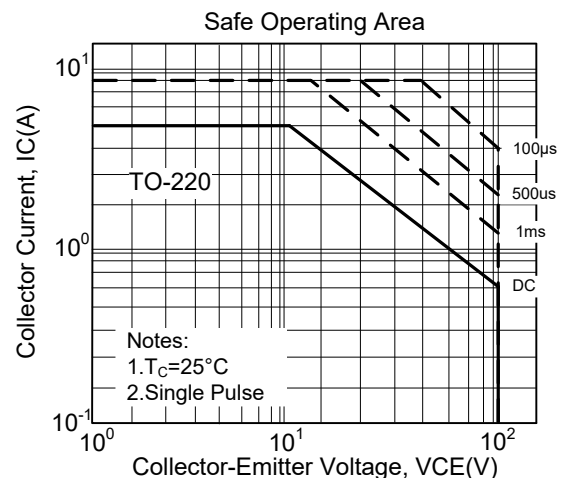
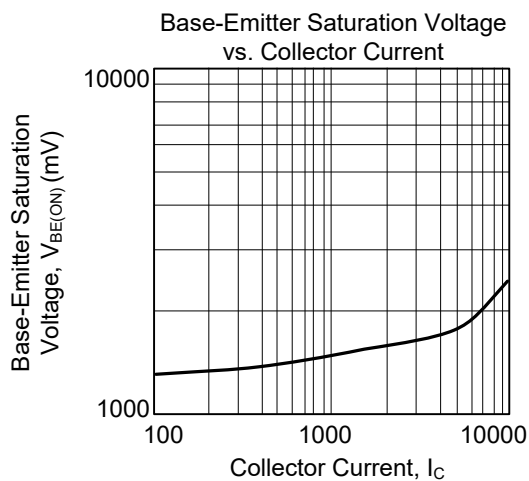
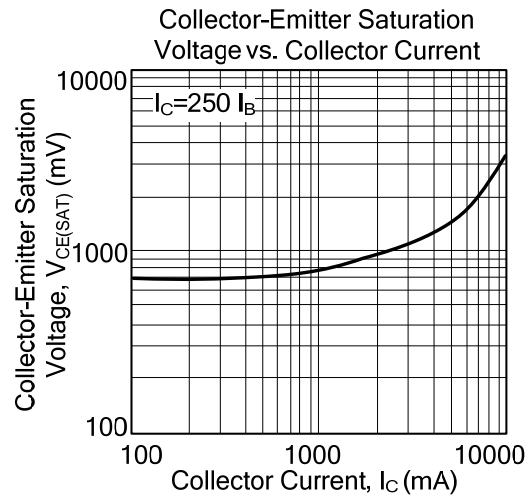
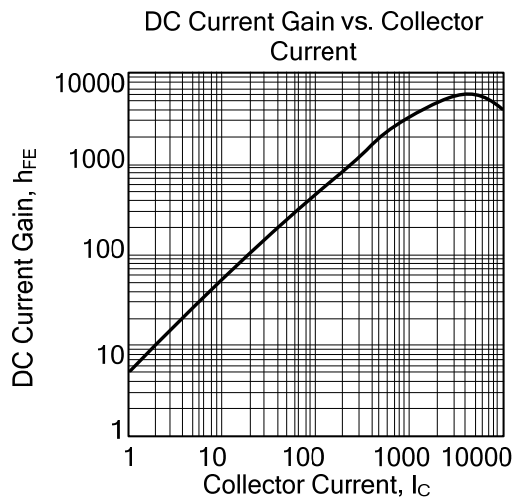
■ THERMAL DATA

PARAMETER		SYMBOL	RATING	UNIT
Junction to Ambient	TO-126	θ_{JA}	89	$^{\circ}\text{C/W}$
	TO-220		62.5	$^{\circ}\text{C/W}$
	TO-220F			
	TO-220HJ			
	TO-252		80	$^{\circ}\text{C/W}$
Junction to Case	TO-126	θ_{JC}	12.5	$^{\circ}\text{C/W}$
	TO-220		1.92	$^{\circ}\text{C/W}$
	TO-220HJ			
	TO-220F			
	TO-252		3.29	$^{\circ}\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

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

TYPICAL CHARACTERISTICS



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