



## TIP112

## NPN SILICON TRANSISTOR

### NPN EPITAXIAL SILICON DARLINGTON TRANSISTOR

#### DESCRIPTION

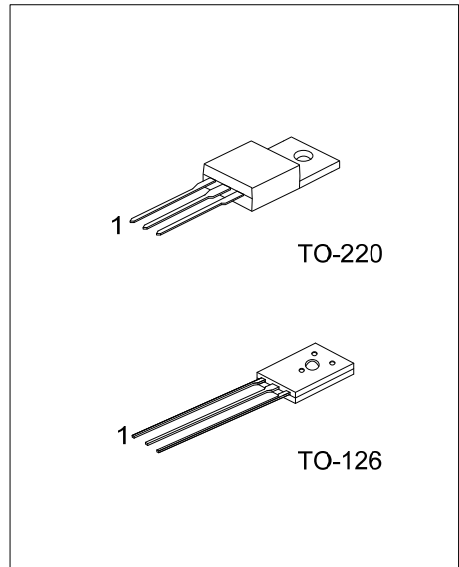
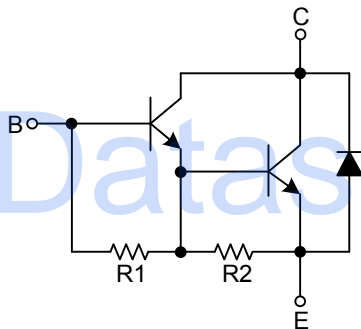
The UTC **TIP112** is designed for such applications as: DC/DC converters supply line switching, battery charger, LCD backlighting, peripheral drivers, Driver in low supply voltage applications (e.g. lamps and LEDs) and inductive load driver (e.g. relays, buzzers and motors).

#### FEATURES

\* High DC current gain :  $h_{FE} = 1000$  @  $V_{CE} = 4V$ ,  $I_C = 1A$  (Min)

\* Low collector-emitter saturation voltage

#### EQUIVALENT TEST ( $R_1 \approx 10k\Omega$ , $R_2 \approx 0.6k\Omega$ )



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
TIP112L-T60-K	TIP112G-T60-K	TO-126	E	C	B	Bulk
TIP112L-TA3-T	TIP112G-TA3-T	TO-220	B	C	E	Tube

<p>TIP112L-T60-K</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Plating</p>	<p>(1) K: Bulk, T: Tube</p> <p>(2) T60: TO-126, TA3: TO-220</p> <p>(3) G: Halogen Free, L: Lead Free</p>
---	--

■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

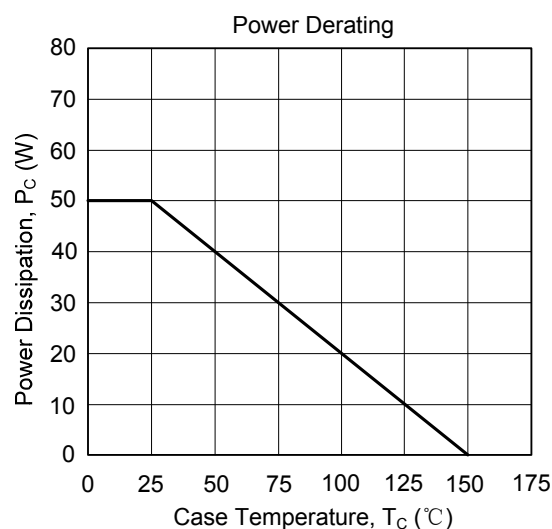
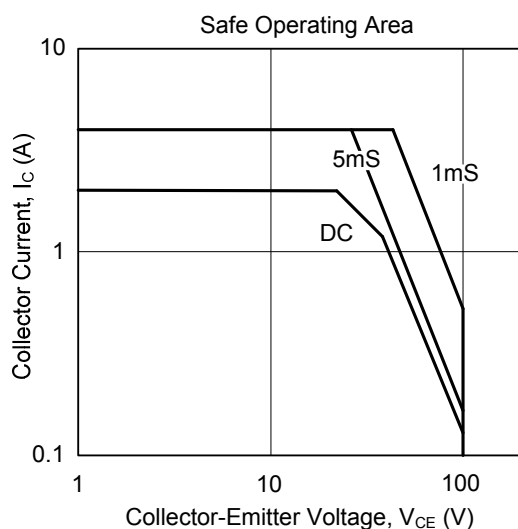
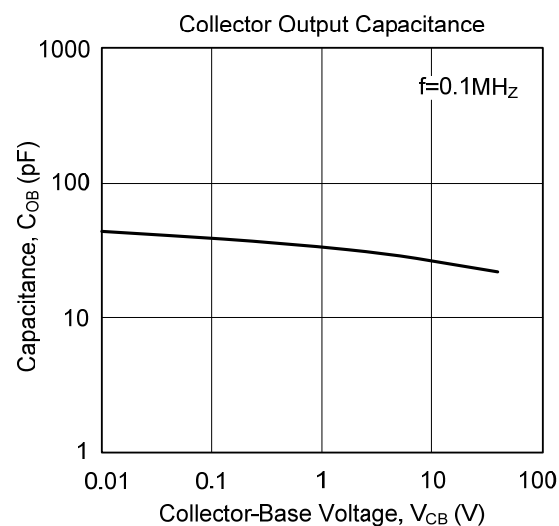
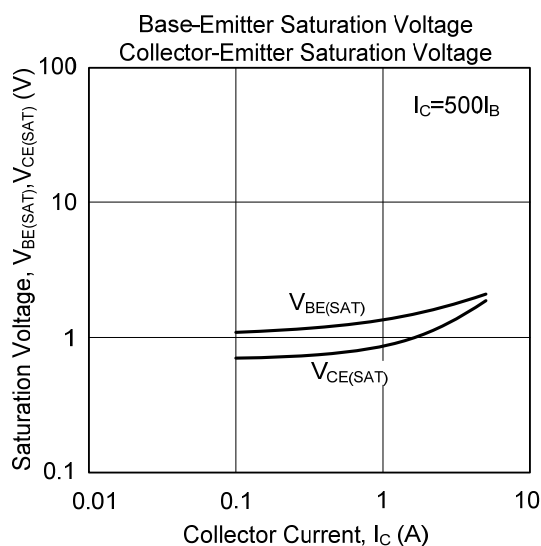
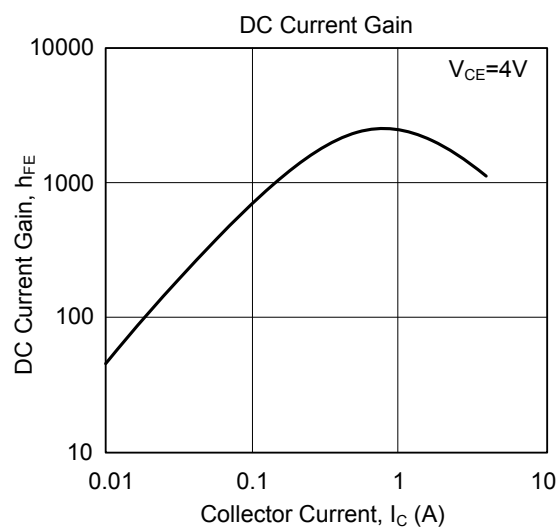
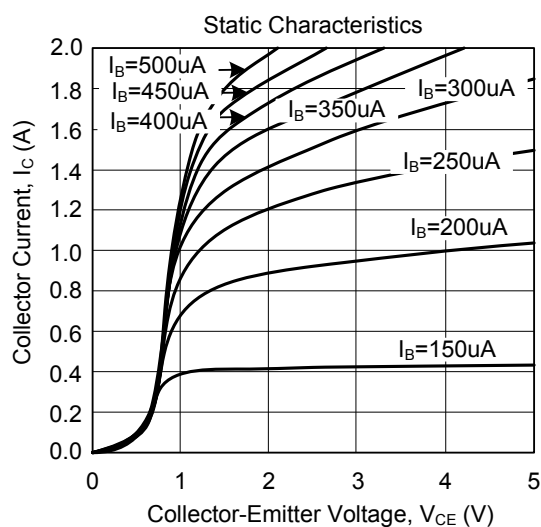
PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	$V_{CBO}$	100	V
Collector to Emitter Voltage	$V_{CEO}$	100	V
Emitter to Base Voltage	$V_{EBO}$	5	V
Collector Current	DC	$I_C$	A
	Peak	$I_{CM}$	
Base Current (DC)	$I_B$	50	mA
Collector Dissipation	Ta=25°C	2	W
	Tc=25°C	50	
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{STG}$	-65~+150	°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 (Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	$V_{CEO(SUS)}$	$I_C=30mA, I_B=0A$	100			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=2A, I_B=8mA$			2.5	V
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	$V_{CE}=4V, I_C=2A$			2.8	
Collector-Base Cut-Off Current	$I_{CBO}$	$V_{CB}=100V, I_E=0A$			1	mA
Collector-Emitter Cut-Off Current	$I_{CEO}$	$V_{CE}=50V, V_B=0A$			2	mA
Emitter-Base Cut-Off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0A$			2	mA
DC Current Gain	$h_{FE}$	$V_{CE}=4V, I_C=1A$	1000			
		$V_{CE}=4V, I_C=2A$	500			
Collector Capacitance	$C_{OB}$	$V_{CB}=10V, I_E=0A, f=0.1MHz$			100	pF

# TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.