



## TIP112

## NPN SILICON TRANSISTOR

### NPN EPITAXIAL SILICON DARLINGTON TRANSISTOR

#### DESCRIPTION

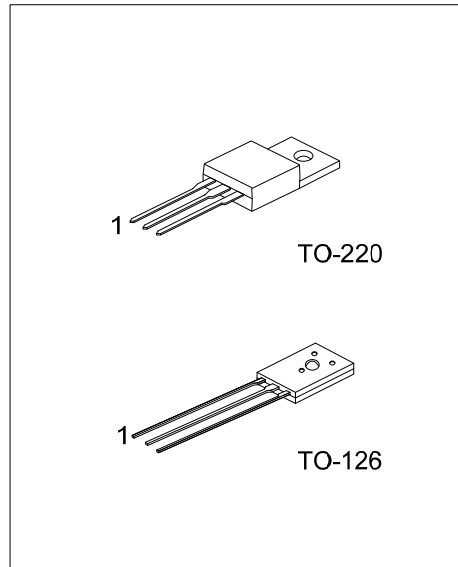
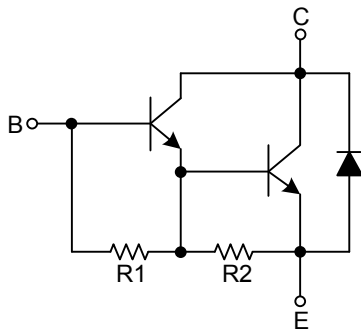
The UTC **TIP112** is designed for such applications as: DC/DC converters supply line switching, battery charger, LCD backlighting, peripheral drivers, Driver in low supply voltage applications (e.g. lamps and LEDs) and inductive load driver (e.g. relays, buzzers and motors).

#### 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 (2) Package Type (3) Lead Plating</p>	<p>(1) K: Bulk, T: Tube (2) T60: TO-126, TA3: TO-220 (3) G: Halogen Free, L: Lead Free</p>
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### ■ ABSOLUTE MAXIMUM RATING (Ta=25°C)

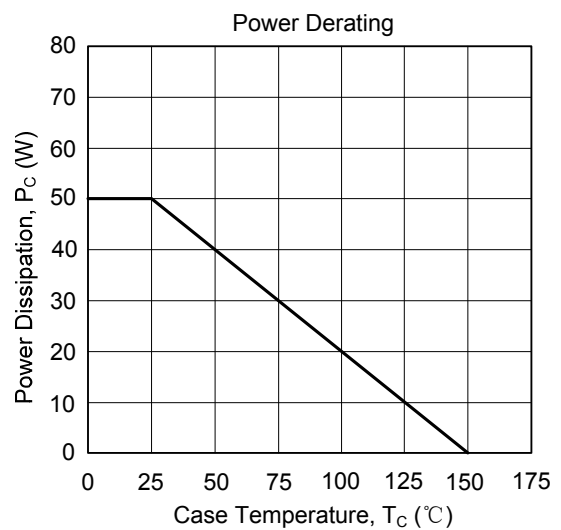
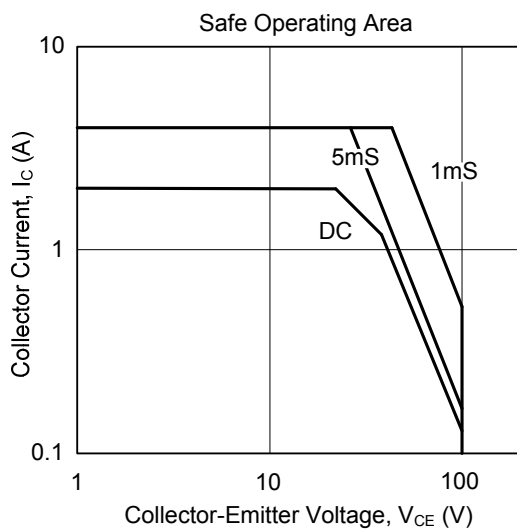
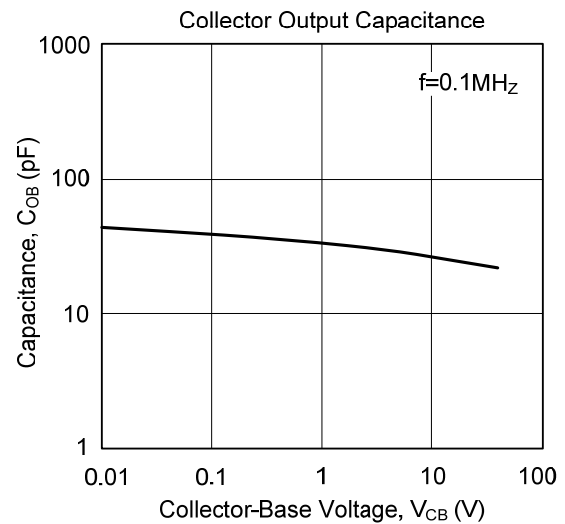
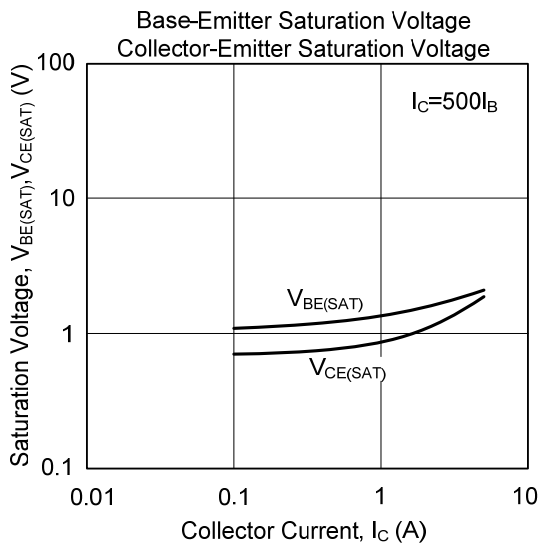
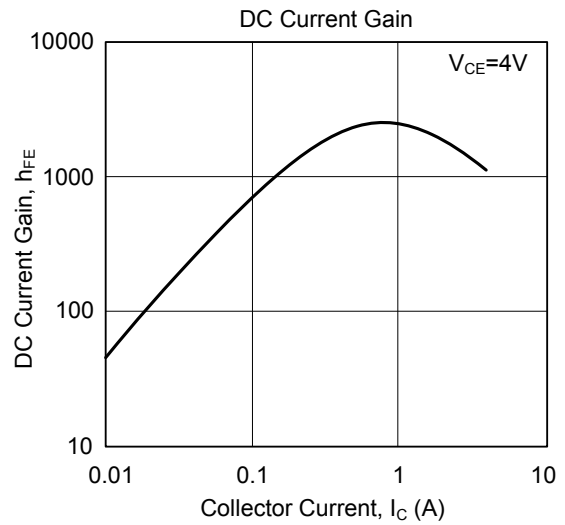
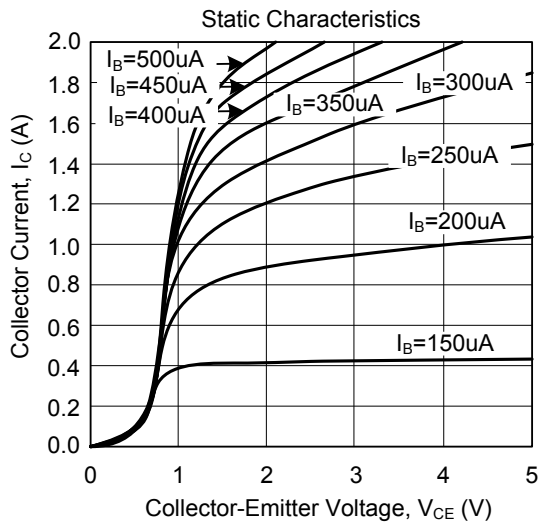
PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	$V_{CBO}$	100	V
Collector to Emitter Voltage	$V_{CEO}$	100	V
Emitter to Base Voltage	$V_{EBO}$	5	V
Collector Current	DC	$I_C$	2
	Peak	$I_{CM}$	4
Base Current (DC)	$I_B$	50	mA
Collector Dissipation	Ta=25°C	$P_C$	2
	Tc=25°C		50
Junction Temperature	$T_J$	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



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