



2SC2688

NPN SILICON TRANSISTOR

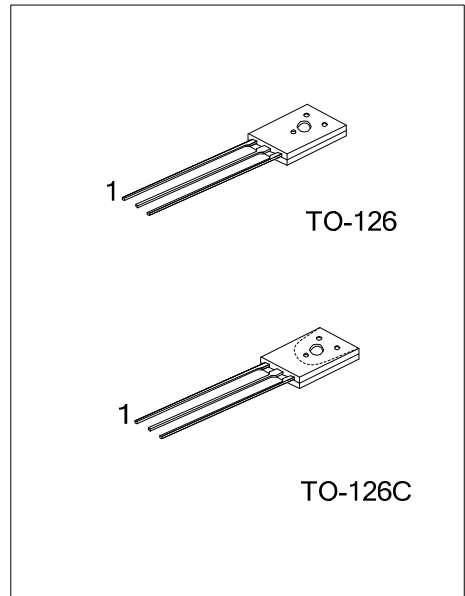
NPN SILICON TRANSISTOR

DESCRIPTION

The UTC 2SC2688 is designed for use in Color TV chroma output circuits.

FEATURES

- * High Electrostatic-Discharge-Resistance.
ESDR: 1000V TYP. (E-B reverse bias, C=2300pF)
- * Low C_{re} , High f_T
 $C_{re} \leq 3.0$ pF ($V_{CB}=30V$)
 $f_T \geq 50$ MHz ($V_{CE}=30V, I_E=-10mA$)



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SC2688L-x-T60-K	2SC2688G-x-T60-K	TO-126	E	C	B	Bulk
2SC2688L-x-T6C-K	2SC2688G-x-T6C-K	TO-126C	E	C	B	Bulk

<p>2SC2688L-x-T60-K</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Free</p>	<p>(1) K: Bulk (2) T60: TO-126, T6C: TO-126C (3) x: refer to Classification of h_{FE} (4) G: Halogen Free, L: Lead Free</p>
-------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------

■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT	
Collector to Base Voltage	V_{CBO}	300	V	
Collector to Emitter Voltage	V_{CEO}	300	V	
Emitter to Base Voltage	V_{EBO}	5.0	V	
Collector Current	I_C	200	mA	
Total Power Dissipation	P_D	$T_a=25^\circ\text{C}$	1.25	W
		$T_C=25^\circ\text{C}$	10	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.

■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

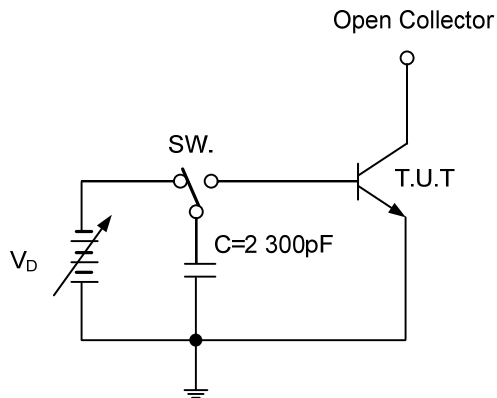
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Saturation Voltage	$V_{CE(SAT)}$	$I_C=20\text{mA}, I_B=5.0\text{mA}$			1.5	V
Collector Cutoff Current	I_{CBO}	$V_{CB}=200\text{V}, I_E=0$			100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5.0\text{V}, I_C=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$ (Note 1)	40	80	250	
Gain Bandwidth Product	f_T	$V_{CE}=30\text{V}, I_E=-10\text{mA}$	50	80		MHz
Feedback Capacitance	C_{re}	$V_{CB}=30\text{V}, I_E=0, f=1.0\text{MHz}$			3	pF

Note 1. * Pulsed PW $\leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$

■ CLASSIFICATION OF h_{FE}

Rank	N	M	L	K
Range	40 ~ 80	60 ~ 120	100 ~ 200	160 ~ 250

■ BURNOUT TEST CIRCUIT BY DISCHARGE OF CAPACITOR



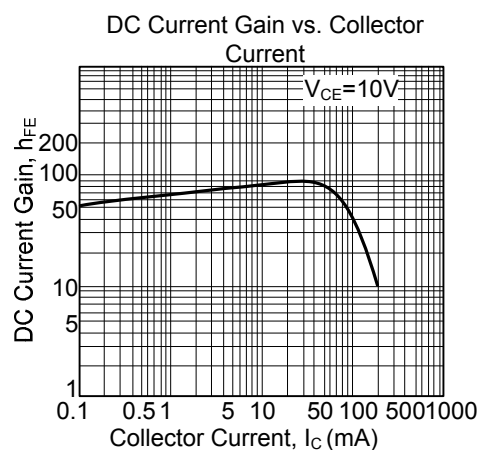
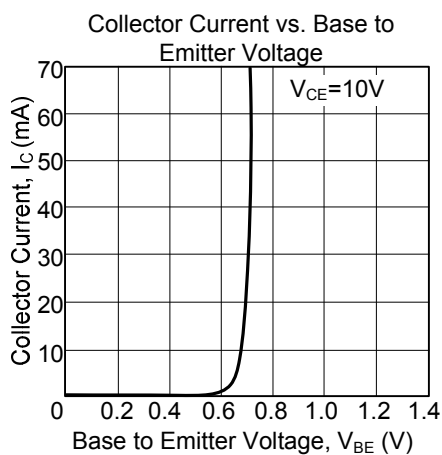
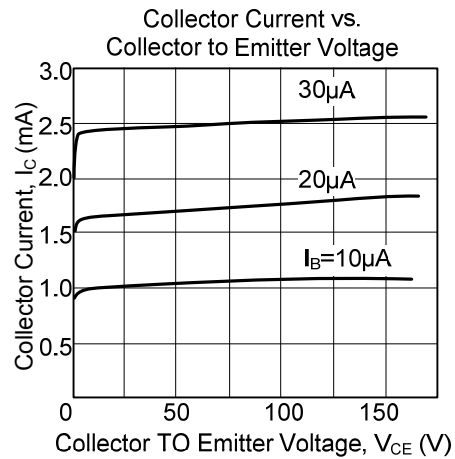
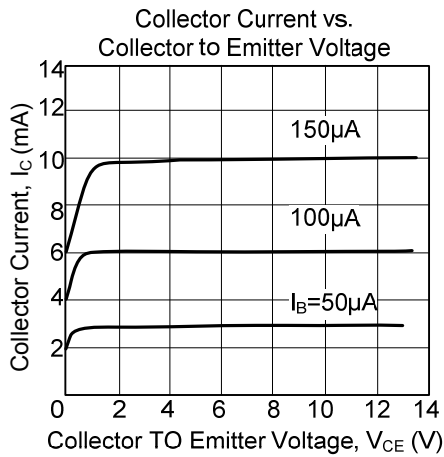
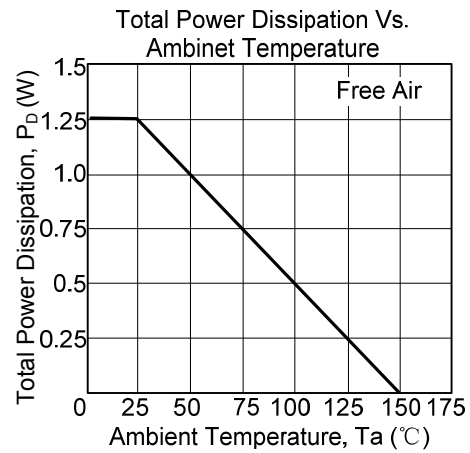
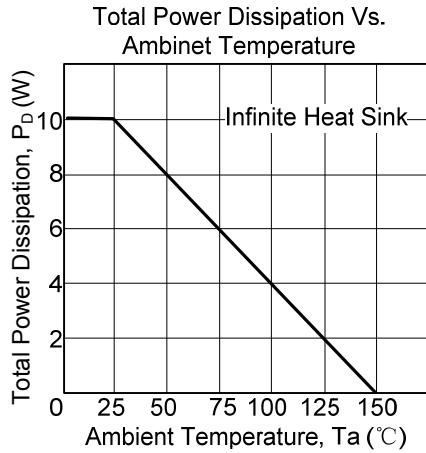
TEST CONDITION

1. E-B reverse bias
2. $C=2300\text{pF}$
3. Apply on shot pulse to T.U.T. (Transistor Under the Test) by SW.

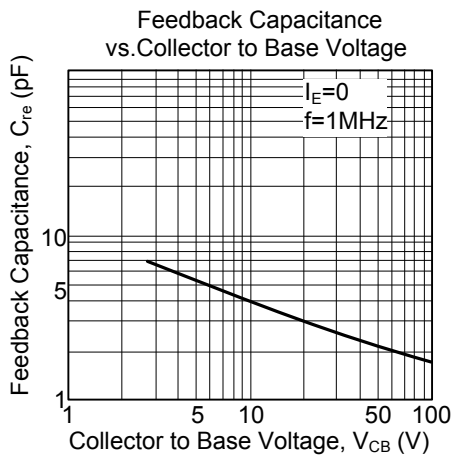
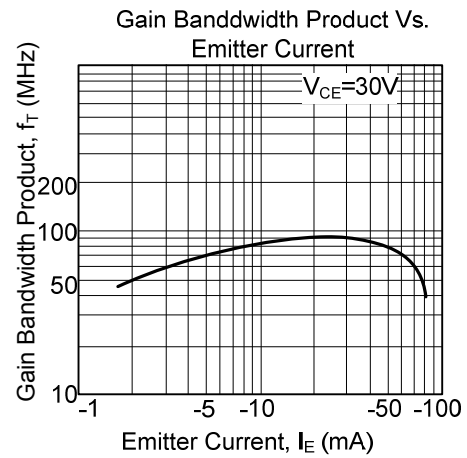
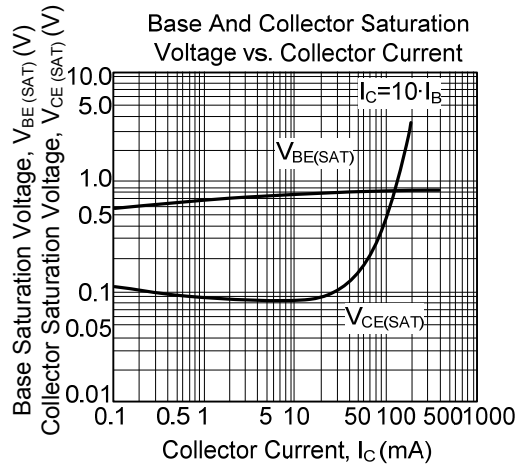
JUDGEMENT

Reject; BV_{EBO} waveform defect
As a result if T.U.T. is not rejected, apply higher voltage to capacitor and test again.

■ TYPICAL CHARACTERISTICS (Ta=25°C)



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.