2SC2688

NPN EPITAXIAL SILICON TRANSISTOR

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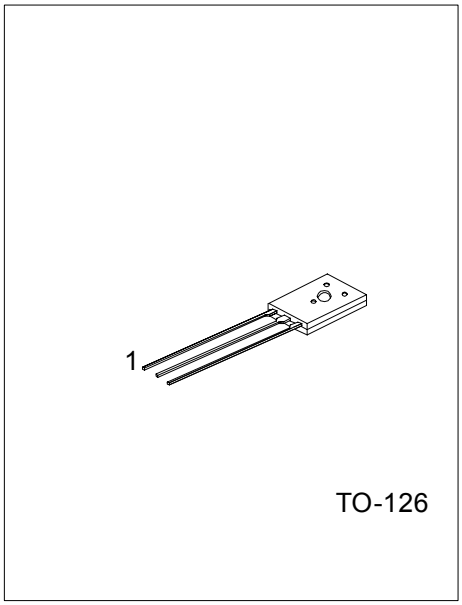


*Pb-free plating product number: 2SC2688L

■ 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} ≤3.0 pF (V_{CB}=30V)
  f_T ≥50MHz (V_{CE}=30V, I_E=-10mA)

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
2SC2688-x-T60-A-K	2SC2688L-x-T60-A-K	TO-126	E	C	B	Bulk

2SC2688L-x-T60-A-K

(1)Packing Type	(1) K: Bulk
(2)Pin Assignment	(2) refer to Pin Assignment
(3)Package Type	(3) T60: TO-126
(4)Rank	(4) x: refer to Classification of h_{FE}
(5)Lead Plating	(5) L: Lead Free Plating, Blank: Pb/Sn

■ 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	Ta=25℃	P_D	1.25	W
	T_C=25℃		10	W
Junction Temperature		T_J	150	℃
Storage Temperature		T_{STG}	-55 ~ +150	℃

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℃)

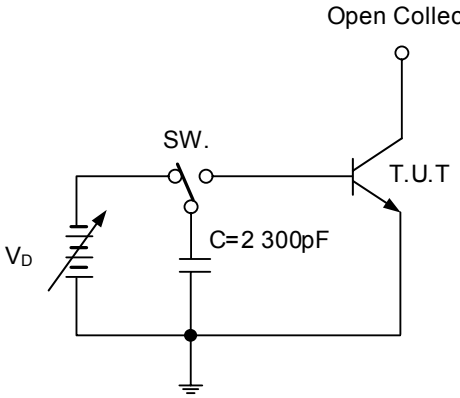
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Saturation Voltage	$V_{CE(SAT)}$	I_C=20mA, I_B=5.0mA			1.5	V
Collector Cutoff Current	I_{CBO}	V_{CB}=200V, I_E=0			100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5.0V, I_C=0			100	nA
DC Current Gain	h_{FE}	V_{CE}=10V, I_C=10mA	40	80	250	
Gain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

Note 1. * Pulsed PW ≤ 350μs, Duty Cycle ≤ 2%

■ CLASSIFICATION OF h_{FE}

Rank	N	M	L	K
Range	40 ~ 80	60 ~ 120	100 ~ 200	16 ~ 250

■ BURNOUT TEST CIRCUIT BY DISCHARGE OF CAPACITOR

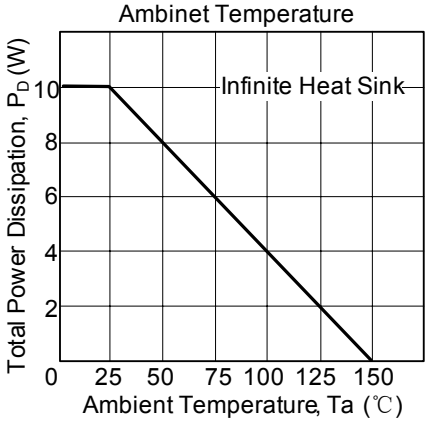


TEST CONDITION
1. E-B reverse bias
2.C=2300pF
3. Apply on shot pulse to T.U.T.
(Transistor Under the Test) by SW.

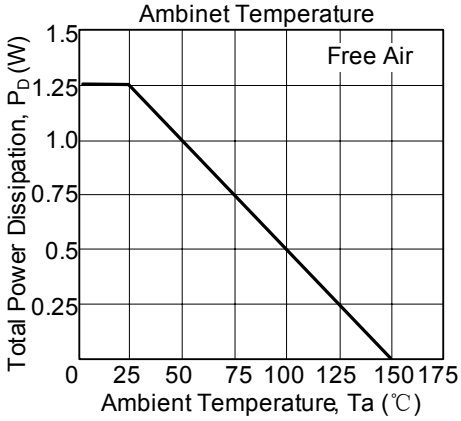
JUDGEMENT
Reject; BV_{EBO} waveform defect
As a result if T.U.T. is not rejected, apply higher voltage to capacitor and test again.

■ TYPICAL CHARACTERISTICS (Ta=25℃)

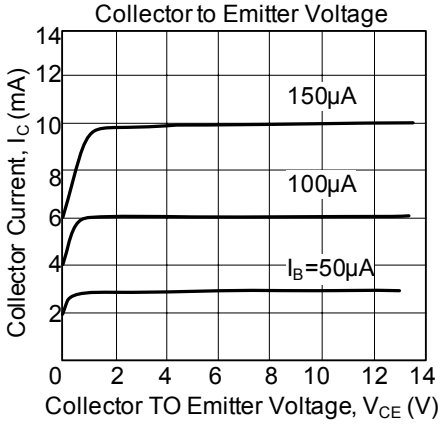
Total Power Dissipation Vs Ambinet Temperature



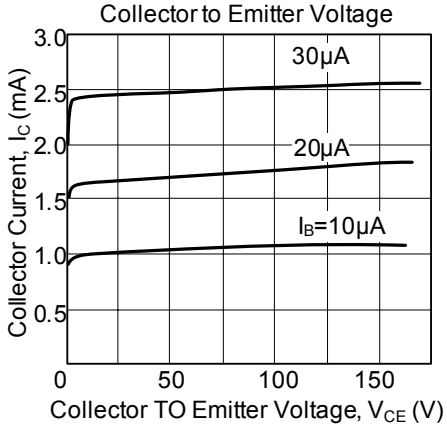
Total Power Dissipation Vs Ambinet Temperature



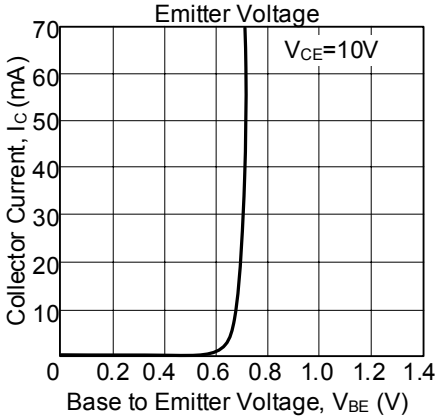
Collector Currentvs. Collector to Emitter Voltage



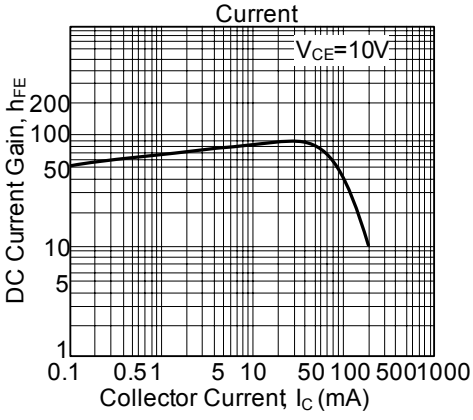
Collector Currentvs. Collector to Emitter Voltage



Collector Currentvs. Base to Emitter Voltage



DC Current Gain vs. Collector Current



■ TYPICAL CHARACTERISTICS