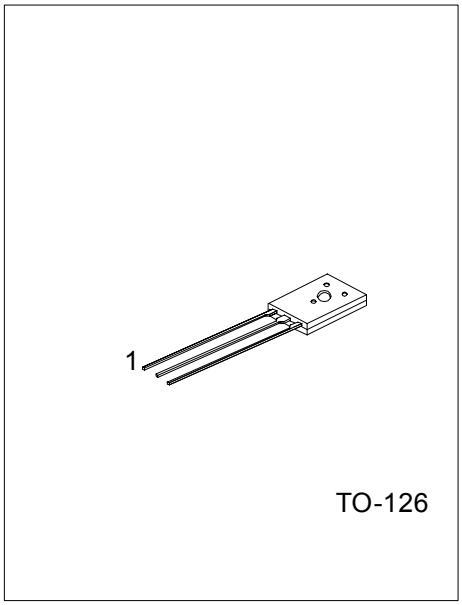
2SC2688

NPN EPITAXIAL SILICON TRANSISTOR

NPN SILICON TRANSISTOR



*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

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■ 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℃)

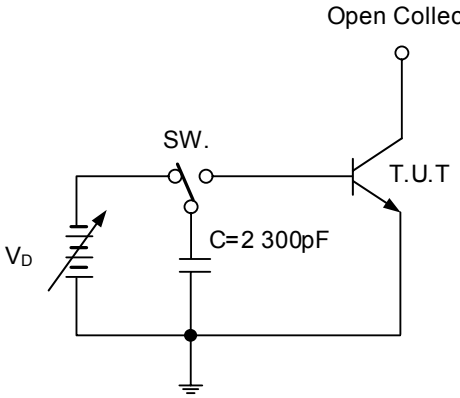
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Saturation Voltage	$V_{CE(SAT)}$	I_C=20mA, I_B=5.0mA			1.5	V
Collector Cutoff Current	I_{CBO}	V_{CB}=200V, I_E=0			100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=5.0V, I_C=0			100	nA
DC Current Gain	h_{FE}	V_{CE}=10V, I_C=10mA	40	80	250	
Gain 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

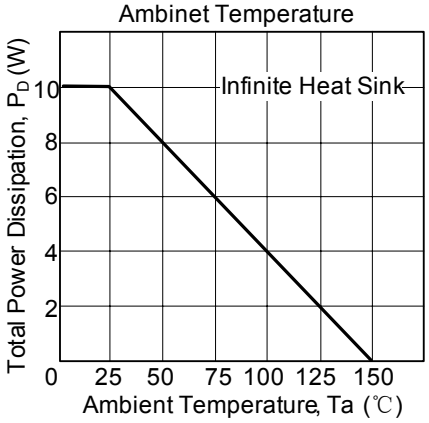


TEST CONDITION
1. E-B reverse bias
2.C=2300pF
3. Apply on shot pulse to T.U.T.
(Transistor Under the Test) by SW.

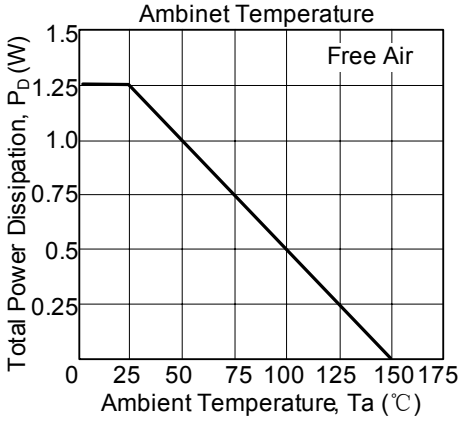
JUDGEMENT
Reject; BV_{EBO} waveform defect
As a result if T.U.T. is not rejected, apply higher voltage to capacitor and test again.

■ TYPICAL CHARACTERISTICS (Ta=25℃)

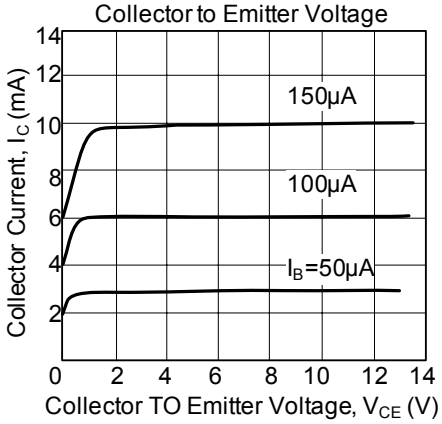
Total Power Dissipation Vs Ambinet Temperature



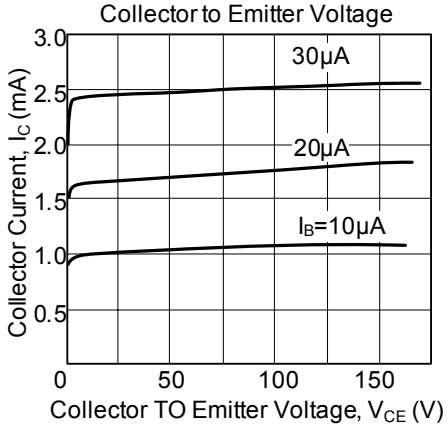
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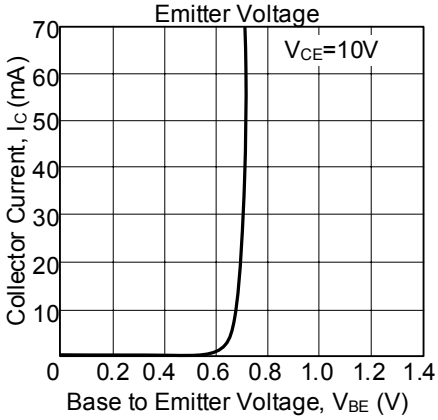
Collector Currentvs. Collector to Emitter Voltage



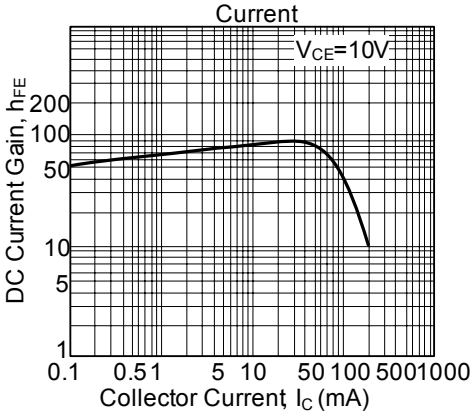
Collector Currentvs. Collector to Emitter Voltage



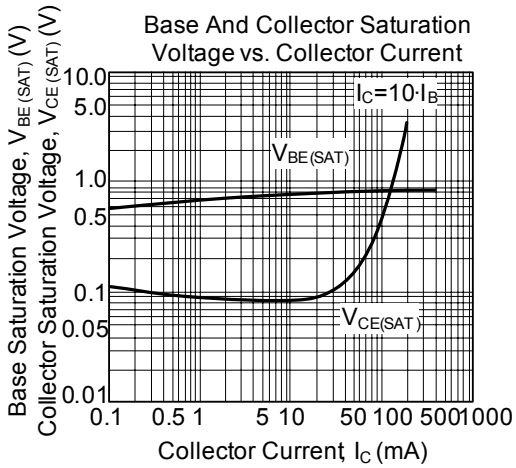
Collector Currentvs. Base to Emitter Voltage

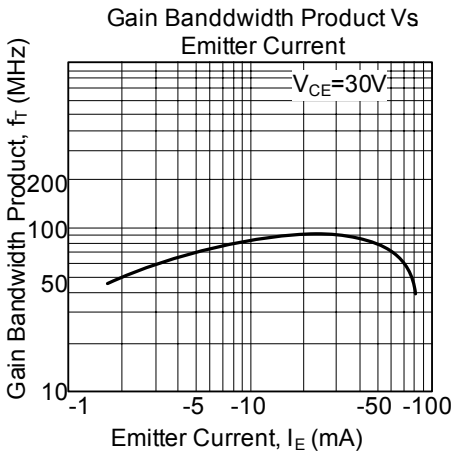


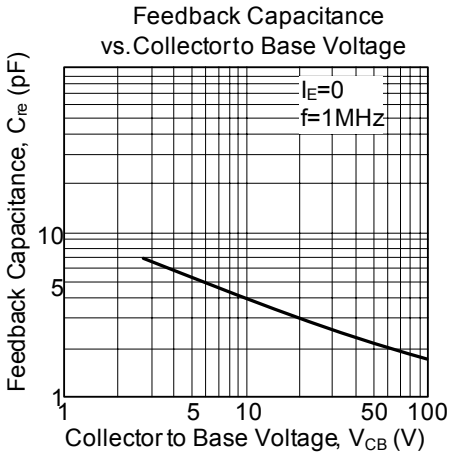
DC Current Gain vs. Collector Current



■ TYPICAL CHARACTERISTICS







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