

SILICON TRANSISTOR

2SC2802

NPN SILICON TRIPLE DIFFUSED TRANSISTOR

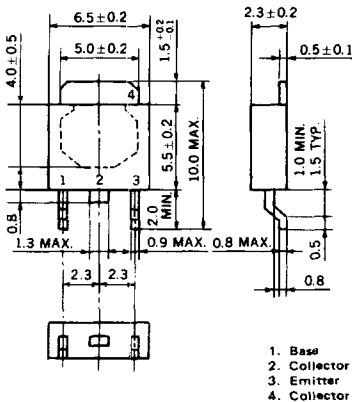
MP-3

DESCRIPTION

2SC2802 is designed for Color TV Chroma Output, especially in Hybrid Integrated Circuits.

PACKAGE DIMENSIONS

in millimeters



FEATURES

- High Voltage $V_{CEO} = 300 \text{ V}$
- High Electrostatic Discharge Resistant $V_{ESDR} = \text{TYP. } 1\,000 \text{ V}$
(E-B reverse bias, $C = 2\,300 \text{ pF}$)

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Current ($T_a = 25^\circ \text{C}$)

Collector to Base Voltage	V_{CBO}	300	V
Collector to Emitter Voltage	V_{CEO}	300	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	200	mA

Maximum Power Dissipation

Total Power Dissipation at 25°C Ambient Temperature*	P_T	2.0	W
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Maximum Temperatures

Junction Temperature	T_j	150	$^\circ \text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ \text{C}$

*When mounted on ceramic substrate of $7.5 \text{ cm}^2 \times 0.7 \text{ mm}$

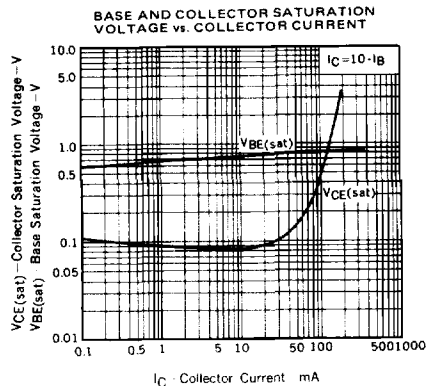
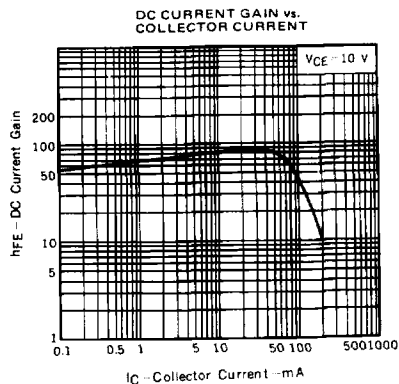
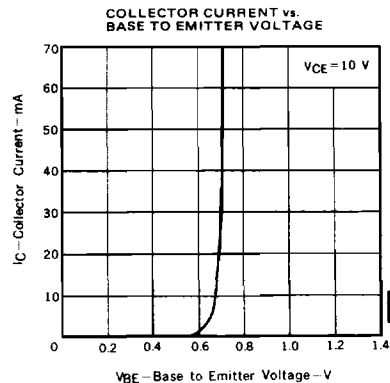
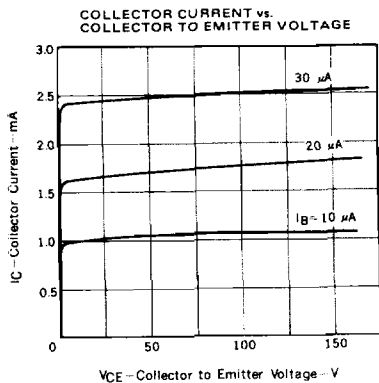
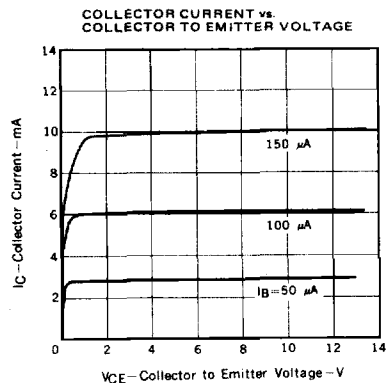
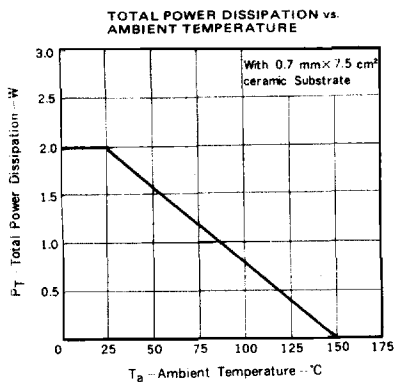
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ \text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			100	nA	$V_{CB} = 200 \text{ V}, I_E = 0$
Emitter Cutoff Current	I_{EBO}			100	nA	$V_{EB} = 4.0 \text{ V}, I_C = 0$
DC Current Gain	h_{FE}^{**}	40		250		$V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$
Collector Saturation Voltage	$V_{CE(sat)}^{**}$			1.5	V	$I_C = 50 \text{ mA}, I_B = 5.0 \text{ mA}$
Gain Bandwidth Product	f_T	50	80		MHz	$V_{CE} = 30 \text{ V}, I_E = -10 \text{ mA}$
Output Capacitance	C_{ob}			3.0	pF	$V_{CB} = 30 \text{ V}, I_E = 0, f = 1.0 \text{ MHz}$

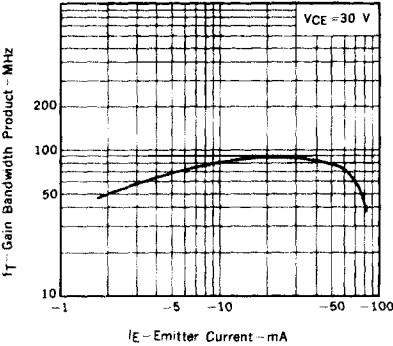
**Pulsed: $PW \leq 350 \mu\text{s}$, Duty Cycle $\leq 2\%$

h_{FE} Classification

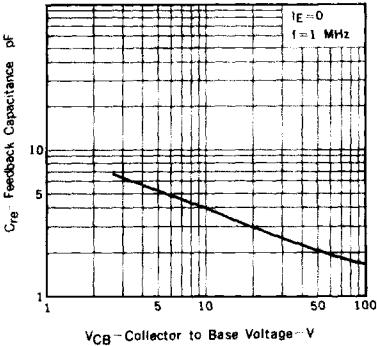
MARKING	N	M	L	K
h_{FE}	40 to 80	60 to 120	100 to 200	160 to 250

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

GAIN BANDWIDTH PRODUCT vs.
EMITTER CURRENT



FEEDBACK CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



ELECTROSTATIC DISCHARGE
RESISTANT TEST CIRCUIT

