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## Silicon NPN Power Transistor

## 2SC2594

### DESCRIPTION

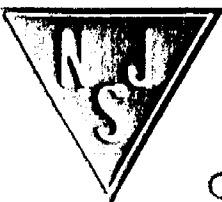
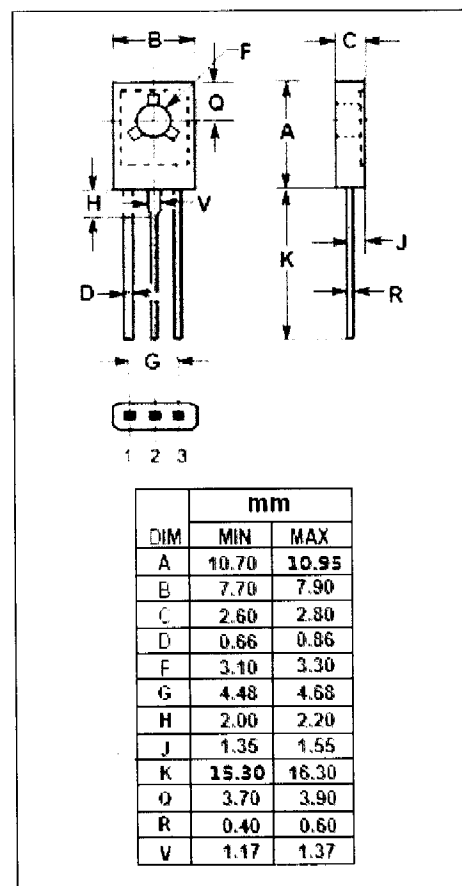
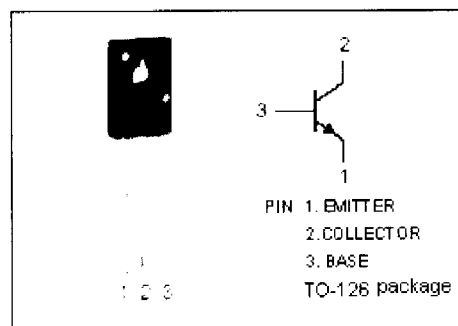
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 20V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Low Collector Saturation Voltage

### APPLICATIONS

- AF power amplifier
- For electronic flash unit
- Converter

### ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	5	A
$I_{CM}$	Collector Current-Peak	8	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	10	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

**Quality Semi-Conductors**

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## ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1\text{mA}; I_B=0$	20			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu\text{A}; I_C=0$	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.1\text{A}$			1.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=10\text{V}; I_E=0$			0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$			0.1	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=2\text{V}$	140		450	
$h_{FE-2}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	70			
$f_T$	Current-Gain—Bandwidth Product	$I_E=-50\text{mA}; V_{CB}=6\text{V}$		150		MHz
$C_{OB}$	Output Capacitance	$I_E=0; V_{CB}=20\text{V}; f_{test}=1\text{MHz}$			50	pF