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## Silicon NPN Power Transistor

## 2SC5296

### DESCRIPTION

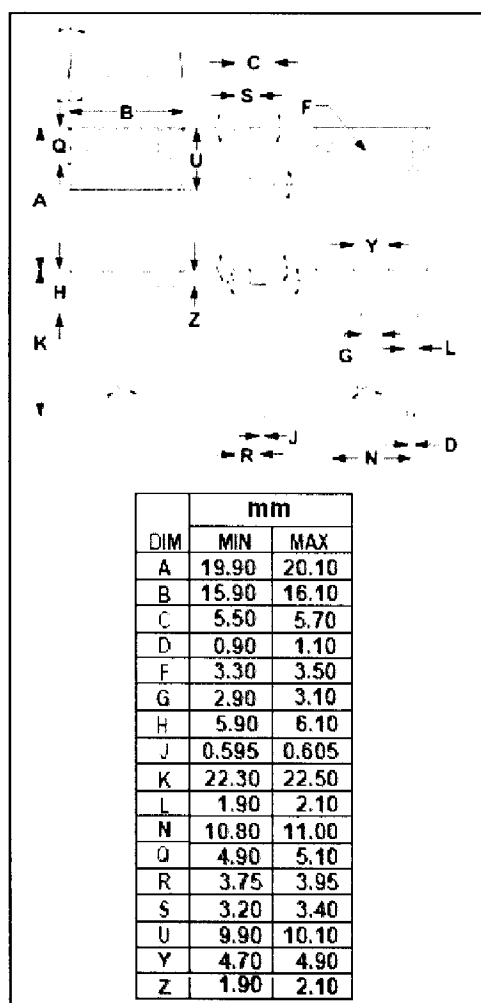
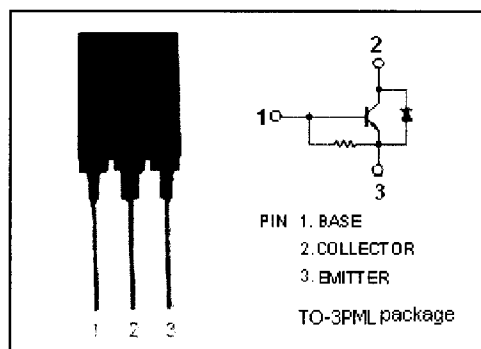
- High Breakdown Voltage-  
:  $V_{CBO} = 1500V$  (Min)
- High Switching Speed
- High Reliability
- Built-in Damper Diode

### APPLICATIONS

- Designed for ultrahigh-definition CRT display horizontal deflection output applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emitter Voltage	800	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current- Continuous	8	A
$I_{CP}$	Collector Current-Pulse	16	A
$P_C$	Collector Power Dissipation @ $T_a = 25^\circ C$	3.0	W
	Collector Power Dissipation @ $T_c = 25^\circ C$	60	
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



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
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; I_B=0$	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.25\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.25\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=800\text{V}; I_E=0$			10	$\mu\text{A}$
$I_{CES}$	Collector Cutoff Current	$V_{CE}=1500\text{V}; R_{BE}=0$			1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$	40		130	mA
$h_{FE-1}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	15		25	
$h_{FE-2}$	DC Current Gain	$I_C=5\text{A}; V_{CE}=5\text{V}$	4		7	

Switching times; Resistive load

$t_{stg}$	Storage Time	$I_C=4\text{A}; I_{B1}=0.8\text{A}; I_{B2}=-1.6\text{A}$ $R_L=50\Omega$			3.0	$\mu\text{s}$
$t_f$	Fall Time				0.2	$\mu\text{s}$