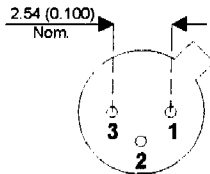
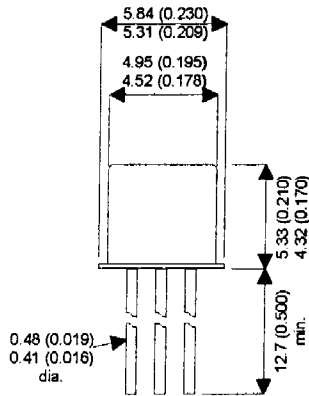


MECHANICAL DATA

Dimensions in mm (inches)

2N2896



TO-18 METAL PACKAGE

Underside View

PIN 1 – Emitter PIN 2 – Base PIN 3 – Collector

NPN SILICON TRANSISTOR

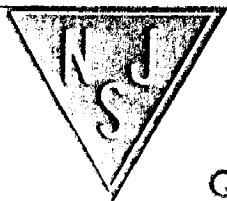
FEATURES

- NPN High Voltage Planar Transistor
- Hermetic TO18 Package
- Full Screening Options Available

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector – Base Voltage	140V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	90V
V_{CER}	Collector - Emitter Voltage	140V
V_{EBO}	Emitter – Base Voltage ($I_B = 0$)	7V
I_C	Collector Current	1A
P_D	Total Device Dissipation $T_A = 25^{\circ}C$	0.5W
	Derate above $25^{\circ}C$	2.86mW / $^{\circ}C$
P_D	Total Device Dissipation $T_C = 25^{\circ}C$	1.8W
	Derate above $25^{\circ}C$	10.3mW / $^{\circ}C$
T_{stg}	Storage Temperature	-65 to $200^{\circ}C$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	$350^{\circ}C/W$
$R_{\theta JC}$	Thermal Resistance Junction to Case	$97^{\circ}C/W$

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.



ELECTRICAL CHARACTERISTICS Continued ($T_A = 25^\circ\text{C}$ unless otherwise stated)

Parameter		Test Conditions	Min.	Typ.	Max.	Unit.
$V_{(BR)CER}$	Collector - Emitter Breakdown Voltage (1)	$I_C = 100\text{mA}, R_{BE} = 10\Omega$	140			V
$V_{CEO(sus)}$	Collector - Emitter Sustaining Voltage (1)	$I_C = 100\text{mA}, I_B = 0$	90			V
$V_{(BR)CBO}$	Collector - Base Breakdown Voltage	$I_C = 0.1\text{mA}, I_E = 0$	140			V
$V_{(BR)EBO}$	Emitter - Base Breakdown Voltage	$I_E = 0.1\text{mA}, I_C = 0$	7			V
I_{CBO}	Collector Cut Off Current	$V_{CB} = 60\text{V}, I_E = 0$			0.01	μA
		$V_{CB} = 90\text{V}, I_E = 0$			0.01	
		$V_{CB} = 90\text{V}, I_E = 0, T_A = 150^\circ\text{C}$			10	
I_{EBO}	Emitter Cut Off Current	$V_{EB} = 5\text{V}, I_C = 0$			0.01	μA
h_{FE}	DC Current	$I_C = 1\text{mA}, V_{CE} = 10\text{V}$	35			
		$I_C = 10\text{mA}, V_{CE} = 10\text{V}, T_A = -55^\circ\text{C}$	20			
		$I_C = 150\text{mA}, V_{CE} = 10\text{V}$	60		200	
$V_{CE(sat)}$	Collector - Emitter Saturation Voltage (1)	$I_C = 150\text{mA}, I_B = 15\text{mA}$			0.6	V
$V_{BE(sat)}$	Base - Emitter Saturation Voltage (1)	$I_C = 150\text{mA}, I_B = 15\text{A}$			1.2	V
f_T	Current Gain - Bandwith Product	$I_C = 50\text{mA}, V_{CE} = 10\text{V}, f = 100\text{ MHz}$	120			MHz
C_{obo}	Output Capacitance	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{ MHz}$			15	pF
C_{ibo}	Input Capacitance	$V_{EB} = 0.5\text{V}, I_C = 0, f = 1\text{ MHz}$			80	pF
h_{FE}	Small-Signal Current Gain	$I_C = 5\text{mA}, V_{CE} = 5\text{V}, f = 1\text{ KHz}$	50		275	