

2N2895 (SILICON)

2N2896

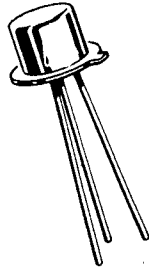
2N2897



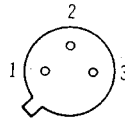
SOLID STATE INC.

46 FARRAND STREET
BLOOMFIELD, NEW JERSEY 07003

www.solidstateinc.com



NPN silicon annular transistors designed for small-signal amplifier and general purpose switching applications.



PIN 1. EMITTER
2. BASE
3. COLLECTOR

(TO-18)

*MAXIMUM RATINGS

Rating	Symbol	2N2895	2N2896	2N2897	Unit
Collector-Emitter Voltage	V_{CEO}	65	90	45	Vdc
Collector-Emitter Voltage	V_{CER}	80	140	60	Vdc
Collector-Base Voltage	V_{CB}	120	140	60	Vdc
Emitter-Base Voltage	V_{EB}	← 7.0 →			Vdc
Collector Current	I_C	← 1.0 →			Adc
Total Device Dissipation @ $T_A = 25^\circ C$ Derate above $25^\circ C$	P_D	← 0.5 →			Watt
		← 2.86 →			mW/ $^\circ C$
Total Device Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	P_D	← 1.8 →			Watts
		← 10.3 →			mW/ $^\circ C$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	← -65 to +200 →			$^\circ C$

*Indicates JEDEC Registered Data

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

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Sustaining Voltage ⁽¹⁾ ($I_C = 100 \text{ mAdc}$, $I_B = 0$)	2N2895 2N2896 2N2897	$BV_{CEO(sus)}$	65 90 45	- - -	Vdc
Collector-Emitter Breakdown Voltage ⁽¹⁾ ($I_C = 100 \text{ mAdc}$, $R_{BE} = 10 \text{ ohms}$)	2N2895 2N2896 2N2897	BV_{CER}	80 140 60	- - -	Vdc
Collector-Base Breakdown Voltage ($I_C = 0.1 \text{ mAdc}$, $I_E = 0$)	2N2895 2N2896 2N2897	BV_{CBO}	120 140 60	- - -	Vdc
Emitter-Base Breakdown Voltage ($I_E = 0.1 \text{ mAdc}$, $I_C = 0$)		BV_{EBO}	7.0	-	Vdc
Collector Cutoff Current ($V_{CB} = 60 \text{ Vdc}$, $I_E = 0$)	2N2895 2N2896 2N2897	I_{CBO}	- - -	0.002 0.01 0.05	$\mu\text{A dc}$
($V_{CB} = 90 \text{ Vdc}$, $I_E = 0$)	2N2896		-	0.01	
Emitter Cutoff Current ($V_{BE} = 5.0 \text{ Vdc}$, $I_C = 0$)	2N2895 2N2896 2N2897	I_{EBO}	- - -	0.002 0.01 0.05	$\mu\text{A dc}$

ON CHARACTERISTICS

DC Current Gain ($I_C = 10 \mu\text{A dc}$, $V_{CE} = 10 \text{ Vdc}$)	2N2895	h_{FE}	10	-	-
($I_C = 100 \mu\text{A dc}$, $V_{CE} = 10 \text{ Vdc}$)	2N2895		20	-	
($I_C = 1.0 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$)	2N2896, 2N2897		35	-	
($I_C = 10 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$)	2N2895		35	-	
($I_C = 150 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$) ⁽¹⁾	2N2895 2N2896 2N2897		40 60 50	120 200 200	
($I_C = 500 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$) ⁽¹⁾	2N2895		25	-	
Collector-Emitter Saturation Voltage ⁽¹⁾ ($I_C = 150 \text{ mAdc}$, $I_B = 15 \text{ mAdc}$)	2N2895, 2N2896 2N2897	$V_{CE(sat)}$	- -	0.6 1.0	Vdc
Base-Emitter Saturation Voltage ⁽¹⁾ ($I_C = 150 \text{ mAdc}$, $I_B = 15 \text{ mAdc}$)	2N2895, 2N2896 2N2897	$V_{BE(sat)}$	- -	1.2 1.3	Vdc

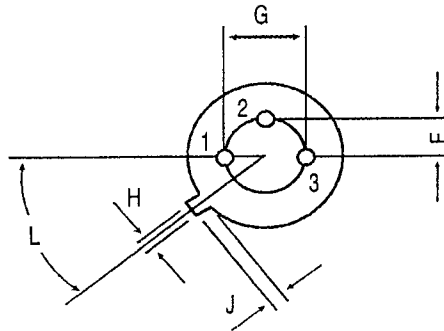
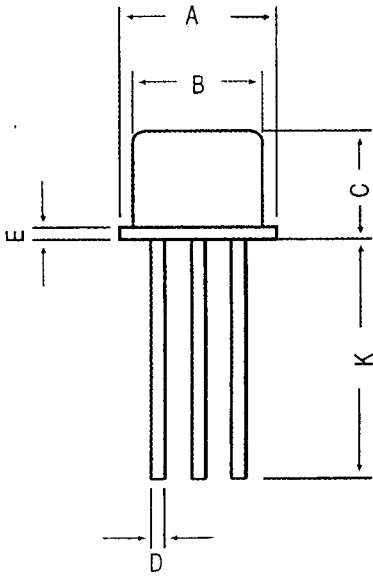
DYNAMIC CHARACTERISTICS

Current-Gain-Bandwidth Product ($I_C = 50 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$, $f = 20 \text{ MHz}$)	2N2895, 2N2896 2N2897	f_T	120 100	- -	MHz
Output Capacitance ($V_{CB} = 10 \text{ Vdc}$, $I_E = 0$, $f = 100 \text{ kHz}$)		C_{ob}	-	15	pF
Input Capacitance ($V_{BE} = 0.5 \text{ Vdc}$, $I_C = 0$, $f = 100 \text{ kHz}$)		C_{ib}	-	80	pF
Small-Signal Current Gain ($I_C = 5.0 \text{ mAdc}$, $V_{CE} = 5.0 \text{ Vdc}$, $f = 1.0 \text{ kHz}$)	2N2895 2N2896, 2N2897	h_{fe}	50 50	200 275	-
Noise Figure ($I_C = 0.3 \text{ mAdc}$, $V_{CE} = 10 \text{ Vdc}$, $R_S = 500 \text{ ohms}$, $f = 1.0 \text{ kHz}$, $BW = 15 \text{ kHz}$)	2N2895	NF	-	8.0	dB

(1) Pulse Test: Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 1.8\%$.

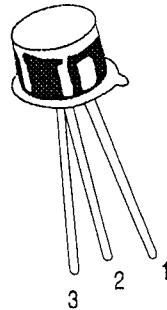
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TO-18 Metal Can Package



All dimensions in mm.

DIM	MIN	MAX
A	5.24	5.84
B	4.52	4.97
C	4.31	5.33
D	0.40	0.53
E	—	0.76
F	—	1.27
G	—	2.97
H	0.91	1.17
J	0.71	1.21
K	12.70	—
L	45 DEG	



PIN CONFIGURATION

1. EMITTER
2. BASE
3. COLLECTOR