

New Jersey Semi-Conductor Products, Inc.

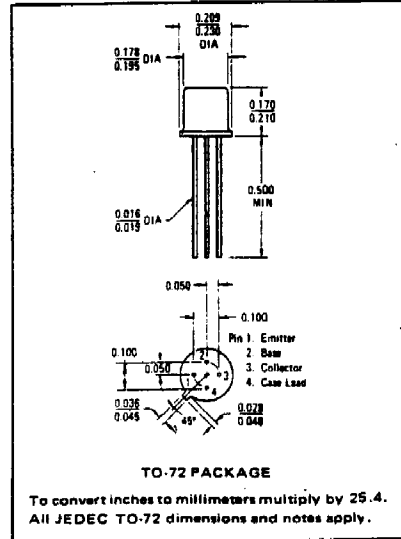
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**2N918**  
NPN SILICON ANNULAR TRANSISTOR

*MAXIMUM RATINGS			
Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CE0}$	15	Vdc
Collector-Base Voltage	$V_{CB}$	30	Vdc
Emitter-Base Voltage	$V_{EB}$	3.0	Vdc
Collector Current - Continuous	$I_C$	50	mAdc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	200	mW
		1.14	mW/ $^\circ\text{C}$
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	300	mW
		1.71	mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +200	$^\circ\text{C}$

\*Indicates JEDEC Registered Data



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

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Collector-Emitter Sustaining Voltage ( $I_C = 3.0 \text{ mAdc}, I_B = 0$ )	$V_{CE0(sus)}$	15	-	Vdc
Collector-Base Breakdown Voltage ( $I_C = 1.0 \mu\text{Adc}, I_E = 0$ )	$BV_{CBO}$	30	-	Vdc
Emitter-Base Breakdown Voltage ( $I_E = 10 \mu\text{Adc}, I_C = 0$ )	$BV_{EBO}$	3.0	-	Vdc
Collector Cutoff Current ( $V_{CB} = 15 \text{ Vdc}, I_E = 0$ ) ( $V_{CB} = 15 \text{ Vdc}, I_E = 0, T_A = 150^\circ\text{C}$ )	$I_{CBO}$	-	.010 1.0	$\mu\text{Adc}$ $\mu\text{Adc}$
<b>ON CHARACTERISTICS</b>				
DC Current Gain ( $I_C = 3.0 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$ )	$h_{FE}$	20	-	-
Collector-Emitter Saturation Voltage ( $I_C = 10 \text{ mAdc}, I_B = 1.0 \text{ mAdc}$ )	$V_{CE(sat)}$	-	0.4	Vdc
Base-Emitter Saturation Voltage ( $I_C = 10 \text{ mAdc}, I_B = 1.0 \text{ mAdc}$ )	$V_{BE(sat)}$	-	1.0	Vdc
<b>DYNAMIC CHARACTERISTICS</b>				
Current-Gain - Bandwidth Product (1) ( $I_C = 4.0 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 100 \text{ MHz}$ )	$f_T$	600	-	MHz
Output Capacitance ( $V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 140 \text{ kHz}$ ) ( $V_{CB} = 0, I_E = 0, f = 140 \text{ kHz}$ )	$C_{ob}$	-	1.7 3.0	pF
Input Capacitance ( $V_{EB} = 0.5 \text{ Vdc}, I_C = 0, f = 140 \text{ kHz}$ )	$C_{ib}$	-	2.0	pF
Noise Figure ( $I_C = 1.0 \text{ mAdc}, V_{CE} = 6.0 \text{ Vdc}, R_G = 400 \text{ Ohms}, f = 60 \text{ MHz}$ )	NF	-	6.0	dB
<b>FUNCTIONAL TEST</b>				
Amplifier Power Gain (Figure 1) ( $V_{CB} = 12 \text{ Vdc}, I_C = 6.0 \text{ mAdc}, f = 200 \text{ MHz}$ )	$G_{pe}$	15	-	dB
Power Output (Figure 2) ( $V_{CB} = 15 \text{ Vdc}, I_C = 8.0 \text{ mAdc}, f = 500 \text{ MHz}$ )	$P_{out}$	30	-	mW
Collector Efficiency (Figure 2) ( $V_{CB} = 15 \text{ Vdc}, I_C = 8.0 \text{ mAdc}, f = 500 \text{ MHz}$ )	$\eta$	25	-	%

\*Indicates JEDEC Registered Data.